USA Debit
EMV™ Test Plan

Version 12.00

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Powered by B2

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Revision History

Version	Date	Revisions
1.00	December 09, 2017	• Initial document release
1.10	December 14, 2017	• Recommended transaction $value updated for cards 13, 15, 16
1.20	May 30, 2018	• Renumbered Test Cases: CD.MMCL.C03-T01 corrected to CD.MCCL.C03-T01 CD.MMCL.C03-T02 became CD.MCCL.C03-T03 • Updated Test Cases: CD.MCCL.C03-T01 CD.MCCL.C08-T01 CD.MCCL.C11-T01 CD.MCCL.C11-T03 • New Test Cases: CD.MCCL.C03-T02
1.30	June 1, 2018	• Removed Test Cases: CD.MCCL.C08-T03 CD.MCCL.C12-T03 CD.MCCL.C12-T04 • Renumbered Test cases: CD.MCCL.C08-T04 became CD.MCCL.C08-T03 • Updated Test Cases: CD.MCCL.C08-T02 CD.MCCL.C08-T03 CD.MCCL.C09-T01 • Card version numbers (profile table, Tag data) updated to match physical card version - all are currently v4.0. • Tags 82, 9F07, 9F69: interpretation of bit values added
2.00	August 20, 2018	• TC03: updated to v5.0 - Tag 57 modified
3.00	September 27, 2018	• Tag 82 (AIP) updated on non-Visa cards • Discover cards (TC12, TC13) - Expiry date changed to 23/12 • DNA Card (TC14) - Expiry date changed to 25/12
3.10	December 13, 2018	• TC03: documentation updated to reflect Dual-Funding
4.00	March 11, 2019	• TC03: updated to v6.0 - Discretionary data modified
4.01	June 7, 2019	• Card set on which tests are based renamed to "USA Debit EMV Test Card Set". No change to cards themselves.
5.00	June 21, 2019	• TC16: updated to v5.0 - Language indicator modified
6.00	July 7, 2020	• TC10: Support for new physical cardstock added. No discernible change to EMV tags

Version	Date	Revisions
6.10	February 18, 2021	• TC15: MTI (Contactless) tags 9F52, 9F54, 9F55, 9F56, 9F57 revealed.
7.00	March 23, 2021	• TC05-TC11: (Mastercard/Maestro) change Expiry Date to 25/12
8.00	December 14, 2021	• TC01-TC04: card expiry date updated • TC01, TC05: PAR (Tag 9F 24) added • TC15: replaced with updated DI card (Interac Flash BIN '00') • TC16: Interac card replaced with Mastercard Credit/Debit/ U.S. Maestro card
9.00	March 18, 2022	• TC15: new BIN, PAN, DES keys
10.00	August 15, 2022	• TC12-13 – Discover cards change Expiry Date to 05/26. New PANs assigned. • TC14 – DNA card. Support for new cardstock. No change to functionality
11.00	December 14, 2022	• TC12– Tag 57 updated ('Final char is 'F')
12.00	March 15, 2023	• TC10 – Becomes DI Card • TC15 - change cardstock – NO change to functionality

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Chapter 1 - Overview

1.1 USA Debit EMV Test Plan - Purpose

This test plan is designed for clients who wish to utilize the USA Debit EMV Test Card Set, provided by B2, to perform internal testing, training and/or User Acceptance Testing (UAT) with U.S. processors.

The test plan benefits are derived from having a defined and repeatable testing methodology. In addition, the test plan includes test cases that test many functions which are required from a practical standpoint when releasing a debit-capable EMV POS Solution into the U.S. marketplace.

1.2 Target Audience

This document is intended for integrators, developers, POS vendors and merchants who wish to develop an EMV POS Solution that supports EMV contact and contactless debit functionality.

This document assumes that the user has a good understanding of POS credit and debit transaction processing in the U.S. and a general understanding of EMV and contactless smartcard concepts.

1.3 System Requirements

This is a standalone document that may be used with any POS architecture - e.g. standalone, semi-integrated or fully-integrated.

Chapter 2 -   Implementing U.S. Debit

2.1   U.S. Common Debit Scenarios

To meet the requirements of the Durbin amendment to the Dodd–Frank Wall Street Reform and Consumer Protection Act ("Durbin regulations"), and to provide merchants and/or acquirers the choice to route transactions from debit and prepaid card programs via unaffiliated networks; Visa, Mastercard, Discover and Debit Network Alliance (DNA) have introduced the following AIDs (commonly referred to as the "U.S. Common Debit AIDs").

U.S. Common Debit AIDs

Brand	Scheme	AID
Discover	U.S. Common Debit	A0000001524010
DNA	U.S. Common Debit	A0000006200620
Mastercard	U.S. Maestro	A0000000042203
Visa	Visa Common Debit	A0000000980840

Other individual debit networks (in addition to DNA) may offer their own U.S. Debit AIDs that will reside on non-Visa, non-Mastercard and non-Discover branded cards.

Visa, Mastercard and Discover branded chip cards, issued in the U.S. under debit and prepaid card programs, will support both a U.S. Common Debit AID and a Global Debit AID (either standard Visa AID, standard Mastercard AID, Maestro AID or standard Discover AID).

- If a Global Debit AID (Visa, Interlink, Mastercard, Maestro or Discover) is used to initiate the chip transaction, the transaction must be routed via the corresponding card brand network. The network used is based on the AID selected.
- If a U.S. Common Debit AID is used to initiate a chip transaction, the resulting transaction may be routed via any of the card brand networks, or any unaffiliated network that has executed the necessary access agreement with Visa, Mastercard or Discover.

For both contact and contactless transactions, EMV POS Solutions may use the standard Application Selection process described for all EMV transactions. However, the merchant may filter the resulting Candidate List to remove multiple AIDs which access the same underlying funding account, such that only one AID per unique funding account remains. EMV POS Solutions must <u>not</u> assume that if a U.S. Common Debit AID is present, that this AID can be automatically selected to the exclusion of all other AIDs on the card, as those AIDs may relate to alternative products which the cardholder may wish to use (e.g. a credit product which is issued together with a debit product).

All AIDs which relate to debit or prepaid programs can be identified in the data read during Application Selection. The presence of the following two data elements identifies the AID as relating to a U.S. Debit or prepaid program:

- **Issuer Country Code (Tag 5F55)** - Two alpha digits with a value of 0x5553 ("US")
- **Issuer Identification Number (Tag 42)** – Contains the Bank Identification Number (BIN) (i.e. the first 6 digits of the PAN).

There are three possible situations that must be handled:

1. The card has two AIDs where these data elements are present and the values of the Issuer Identification Number (IIN) are the same for both AIDs (**Scenario One below**):
   - The EMV POS Solution should assume that the AIDs with the same IIN access the same underlying funding account and therefore can remove one of those AIDs from the Candidate List.
   - For contact and contactless transactions, where there are only 2 AIDs present in

the card (1 Global AID and 1 U.S. Common AID), the EMV POS Solution may automatically select the single remaining AID in the Candidate List in accordance with Final Selection processing (section 2.5 Final Selection Processing below). The card has more than 2 AIDs where these data elements are present and 2 of the AIDs have the same value for the Issuer Identification Number (IIN). In this scenario there will also be one or more other AID(s) present on the card that have either no IIN or a different IIN from the pair of AIDs with the same IIN **(Scenario Two below)**:

- The EMV POS Solution should assume that the AIDs with the same IIN access the same underlying funding account and therefore can remove one of those AIDs from the Candidate List.
- For contact transactions, the EMV POS Solution should present the remaining Candidate List choices to the cardholder in accordance with Final Selection processing (section 1.4.3 below).
- For contactless transactions, the EMV POS Solution should automatically select the AID in the Candidate List that has the highest Application Priority Indicator (Tag 87) value.

2. When a card has two or more pairs of AIDs where these data elements are present and for each pair, both AIDs have the same IIN **(Scenario Three below)**:

- For each pair of AIDs with the same IIN, the EMV POS Solution should assume that the AIDs with the same IIN access the same underlying funding account and therefore can remove one of those AIDs from the Candidate List - leaving only one AID for each IIN.
- For contact transactions, the EMV POS Solution should present the remaining Candidate List choices to the cardholder in accordance with Final Selection processing (section 1.4.3 below).
- For contactless transactions, the EMV POS Solution should automatically select the AID in the Candidate List that has the highest Application Priority Indicator (Tag 87) value.

U.S. Common Debit Scenarios

Scenario	AID	Country Code Tag 5F55	IIN Tag 42	Candidate List Choice for the Merchant
One	**Card accesses single debit funding account:** **USA Debit Test Cards 01, 05,12**			
Global Debit AID	TC 01 - A0000000031010 TC 05 - A0000000041010 TC 12 - A0000000153010	US	TC 01 - 476173 TC 05 - 541333 TC 12 - 651000	Merchant may decide which AID to select based on their preferred routing choice: ▪ Global AID – may only be routed to Visa, Mastercard or Discover (any supported CVM may be used) ▪ U.S. Common Debit AID – may be routed to any of the global networks or any of the supported debit networks (any supported CVM may be used)
U.S. Common Debit AID	TC 01 - A0000000980840 TC 05 - A0000000042203 TC 12 - A0000000154010	US	TC 01 - 476173 TC 05 - 541333 TC 12 - 651000	
Two	**Combo card accessing a credit account and a single funding debit account:** **USA Debit Test Cards 03, 09**			
Global Credit AID	TC 03 - A000000003101001 TC 09 - A0000000041010	n/a	n/a	Global Credit AID will remain in the Candidate List for cardholder selection.

U.S. Common Debit Scenarios

Scenario	AID	Country Code Tag 5F55	IIN Tag 42	Candidate List Choice for the Merchant
Global Debit AID	TC 03 - A000000003101002 TC 09 - A0000000043060	US	TC 03 - 476173 TC 09 - 679999	Merchant should decide on either the Global AID or the U.S. Common Debit AID based on their preferred routing choice: ▪ Global AID – may only be routed to Visa, Mastercard or Discover (any supported CVM may be used) ▪ U.S. Common Debit AID – may be routed to any of the global networks or any of the supported debit networks (any supported CVM may be used)
U.S. Common Debit AID	TC 03 - A0000000980840 TC 09 - A0000000042203	US	TC 03 - 476173 TC 09 - 679999	
Three	Card accesses two debit funding accounts – Accounts have different IINs: USA Debit Test Card 11			
Global Debit AID 1	TC 11 - A0000000043060	US	5413333	Merchant should choose either the 2 Global AIDs or the 2 U.S. Common Debit AIDs based on their preferred routing choice: ▪ Global AIDs – may only be routed to Visa, Mastercard or Discover (any supported CVM may be used) ▪ U.S. Common Debit AIDs – may be routed to any of the global networks or any of the supported debit networks (any supported CVM may be used)
U.S. Common Debit AID 1	TC 11 - A000000004220301	US	541333	
Global Debit AID 2	TC 11 - A0000000041010	US	679999	
U.S. Common Debit AID 2	TC 11 - A0000000004220302	US	679999	

2.2 Application Selection for U.S. Debit with Cardholder Verification Handling

For traditional magstripe debit transactions, merchants can decide when selecting the card type what cardholder verification to use for a debit transaction. This may be either to:

1. Prompt the cardholder to enter the PIN (commonly referred to as "PIN Preferring Merchants"). The cardholder can, in some implementations, bypass the PIN to allow for a signature transaction.

2. Prompt the cardholder to select either 'Credit' or 'Debit' (commonly referred to as "Credit/Debit Prompting merchants"). In this situation:

- **Credit** – means perform a Signature Debit transaction
- **Debit** – means perform a PIN Debit transaction

This section describes how to perform Application Selection for EMV U.S. Debit so that the routing choice of the merchant is retained, and the expected cardholder verification is performed based on merchant and/or cardholder preferences. This section has been split between; PIN Preferring merchants and Credit/Debit Prompting merchants.

2.3 PIN Preferring Merchants:

The following assumptions have been made when describing the U.S. Debit Application Selection process for PIN Preferring Merchants:

1. Solutions supporting U.S. Debit will have two kernel configurations:
   - **All CVM Configuration** – Terminal Capabilities (Tag 9F33) is set to support all CVMs the merchant wishes to support (e.g. PIN - offline/online, Signature and NO CVM).
   - **NO CVM Configuration** – Terminal Capabilities (Tag 9F33) is set to support only the NO CVM option.

2. When using a configurable kernel, the Terminal Type (Tag 9F35) and Additional Terminal Capabilities (Tag 9F40) values may remain the same regardless of the value used for Terminal Capabilities (Tag 9F33).

3. PIN Bypass is supported by all PIN supporting kernel configurations.

4. The payment application supports a NO CVM limit for all payment products.

The steps required to filter the Candidate List to fully support U.S. Debit are:

1. For each transaction the final amount for the transaction must be known prior to filtering the Candidate List.

2. Once the final amount is known and the Candidate List is created, the card type will be identified based on the list of AIDs in the Candidate List. There are two options:
   - The Candidate List does not contain any U.S. Common Debit AIDs – This is either an international or domestic credit card or an international debit card (USA Debit Test Cards 04, 06, 07, 15 and 16). In this case there are no additional steps required to filter the Candidate List and the application can continue to the Final Selection Process (section 1.4.3 below).
   - The Candidate List contains one or more U.S. Common Debit AIDs – This is a U.S. Debit card (USA Debit Test Cards 01, 02, 03, 05, 08, 09, 10, 11, 12, 13 and 14).

3. For U.S. Debit cards, the EMV POS Solution must determine which AIDs should remain in the Candidate List, based on the three scenarios described in Table 02 (above). Depending on the number of AIDs remaining in the Candidate List, one the following should be performed:
   - Candidate List only contains one AID – Continue to step 4.
   - Candidate List contains more than one AID – Continue to the Final Selection Process (section 1.4.3 below).

4. If the Candidate List only contains a single U.S. Common Debit AID, the EMV POS Solution must determine if the transaction is under or over the NO CVM limit:
   - Transaction is under the NO CVM limit – Set Terminal Capabilities (Tag 9F33) to "NO CVM Only Configuration" and continue with Final Selection Process (section 1.4.3 below).
   - Transaction is over the NO CVM limit – continue to step 5.

5. If the Candidate List contains a single U.S. Common Debit AID and the transaction is over the NO CVM limit for U.S. Debit, then set the Terminal Capabilities (Tag 9F33) to All CVM Configuration. Later during Cardholder Verification, the application will prompt for PIN and may allow the cardholder to bypass the PIN.

2.4   Credit/Debit Prompting Merchants:

The following assumptions have been made when describing the Application Selection process for merchants supporting Credit/Debit Prompting for U.S. Debit:

1. Solutions supporting U.S. Debit will have three kernel configurations:
   - **All CVM Configuration** – Terminal Capabilities (Tag 9F33) is set to support all CVMs the merchant wishes to support (e.g. PIN - offline/online, Signature and NO CVM).
   - **Signature and No CVM Configuration** – Terminal Capabilities (Tag 9F33) is set to support only Signature and the NO CVM option.
   - **NO CVM Configuration** – Terminal Capabilities (Tag 9F33) is set to support only the NO CVM option.

2. When using a configurable kernel, the Terminal Type (Tag 9F35) and Additional Terminal Capabilities (Tag 9F40) values may remain the same regardless of the value used for Terminal Capabilities (Tag 9F33).

3. PIN Bypass is supported in all PIN supporting kernel configurations.

4. The payment application supports a NO CVM limit for all payment products.

The steps required to filter the Candidate List to fully support U.S. Debit are:

1. For each transaction the final amount for the transaction must be known prior to filtering the Candidate List.

2. For each transaction the cardholder must select either Credit or Debit.

3. Once the final amount is known, the cardholder has selected either Debit or Credit, the Candidate List is created, the card type will be identified based on the list of AIDs in the Candidate List. There are two options:
   - The Candidate List does not contain any U.S. Common Debit AIDs – This is either an international or domestic credit card or an international debit card (USA Debit Test Cards 04, 06, 07, 15 and 16). In this case there are no additional steps required in relation to filtering the Candidate List and the application can continue to the Final Selection Process (section 1.4.3 below).
   - The Candidate List contains one or more U.S. Common Debit AIDs – This is a U.S. Debit card (USA Debit Test Cards 01, 02, 03, 05, 08, 09, 10, 11, 12, 13 and 14).

4. For U.S. Debit cards, the EMV POS Solution must determine which AIDs should remain in the Candidate List, based on the three scenarios described in Table 02 (above). For each of the scenarios described in Table 02 the AIDs to be removed from the Candidate List will also be based on the button selected by the cardholder (Credit/Debit):
   - **Credit Button Selected** – Remove all U.S. Common AIDs that share an IIN with a Global AID.
   - **Debit Button Selected** – Remove all Global AIDs that share an IIN with a U.S. Common AID.

   Depending on the number of AIDs remaining in the Candidate List, one the following should be performed:
   - Candidate List only contains one AID – Continue to step 5.

- Candidate List contains more than one AID – Continue to the Final Selection Process (section 1.4.3 below).

5. If the Candidate List only contains a single U.S. Common Debit AID, the EMV POS Solution must determine if the transaction is under or over the NO CVM limit:

- Transaction is under the NO CVM limit – Set Terminal Capabilities (Tag 9F33) to "NO CVM Only Configuration" and continue with Final Selection Process (section 1.4.3 below).

If the Candidate List only contains a single Global Debit AID, the EMV POS Solution must determine if the transaction is under or over the NO CVM limit:

- Transaction is under the NO CVM limit – Set Terminal Capabilities (Tag 9F33) to "NO CVM Only Configuration" and continue with Final Selection Process (section 1.4.3 below).
- If the Transaction is over the NO CVM limit – Continue to step 6.

6. If the Candidate List contains a single U.S. Common Debit AID and the transaction is over the U.S. Debit CVM limit for U.S. Debit, the following should be performed:

- Transaction is over the NO CVM limit – Set Terminal Capabilities (Tag 9F33) to "All CVM Configuration" and continue with Final Selection Process (section 1.4.3 below). PIN Bypass may still be allowed during EMV Cardholder Verification.

If the Candidate List contains a single Global Debit AID and the transaction is over the NO CVM limit for the Global Debit AID, the following should be performed:

- Transaction is over the NO CVM limit – Set Terminal Capabilities (Tag 9F33) to "All CVM Configuration" and continue with Final Selection Process (section 1.4.3 below). As the transaction is over the NO CVM limit and the only CVM supported by the terminal is Signature - the application should print a signature line on the receipt.

2.5 Final Selection Processing

Once the Candidate List has been built and U.S. Common Debit processing has been performed, Final Selection can begin. During this process the AID to be used for the transaction is selected.

If the Candidate List only contains one AID it is automatically selected, Final Selection ends and Cardholder Application Confirmation may be performed.

- Cardholder Application Confirmation is only required when the Application Priority Indicator - Cardholder Confirmation Indicator (Tag 87 bit-8) is set to '1'.
- If cardholder confirmation is required, the cardholder must be prompted to confirm that the application may be used. To do this the Application Preferred Name (Tag 9F12) or the Application Label (Tag 50) is displayed to the cardholder who must then confirm the selection.

If the Candidate List contains two or more mutually supported applications (AIDs), the application list should be presented to the cardholder for selection. However, EMV POS Solutions may auto-select the U.S. Common Debit AID (if present). In a Credit/Debit Prompting configuration, Application Selection may occur after Credit/Debit Selection. This means that it may be necessary to prompt again for Credit or Debit based on the Application Label or Preferred Name of the AIDs in the candidate list.

When presenting the Candidate List for selection, the application names may be displayed all on one screen or with one application name per screen, using navigation buttons to traverse the list (e.g. 'Next' and 'Previous'). Regardless of the method used to display the Candidate List, the

application names displayed are determined as follows:

- Display the Application Preferred Name (Tag 9F12) if it is stored in a character set supported by the display. This can be determined by checking the Issuer Code Table Index (Tag 9F11). A value of '1' indicates that the Application Preferred Name is encoded using the Latin character set (i.e. contains standard English alphabetic characters).

Display the Application Label (Tag 50) if the Application Preferred Name is not present or cannot be displayed.
If the Application Preferred Name and Application Label are not present or cannot be displayed, display a default' application name assigned to the AID by the EMV POS Solution.

Once the AID to be used for the transaction has been chosen, the kernel may relay the application information back to the payment' application, so the following can be performed:

Set the Terminal Capabilities (Tag 9F33) – This will be based on the NO CVM limit for the card type based on the merchant environment (Credit/Debit) or PIN Preferring and the AID that has been selected (either the "All CVM Configuration", "Signature and NO CVM Configuration" or the "NO CVM Only Configuration"):

Global Debit AID:
- Transaction is over the NO CVM limit:
- PIN Preferring Merchant - Select the "All CVM Configuration"
- Credit/Debit Prompting Merchant – Select the "Signature and NO CVM Configuration"
- Transaction is under the NO CVM limit (for both PIN Preferring and Credit/Debit) – Select the "NO CVM Only Configuration"

U.S. Common Debit AID:
- Transaction is over the NO CVM limit (for both PIN Preferring and Credit/Debit) - Select the "All CVM Configuration"
- Transaction is under the NO CVM limit (for both PIN Preferring and Credit/Debit) – Select the "NO CVM Only Configuration"

Set the Processing Code:
- International/Global AID selected – a credit Processing Code should be used
- U.S. Common Debit AID, Interlink, Maestro or Interac selected – a debit Processing Code should be used

The kernel can now select the AID on the chip and Final Selection ends.

In some implementations it may not be feasible to perform cardholder Application Selection. For these cases, an EMV transaction should not be performed if the chip card contains multiple applications, unless there is a method to inform the cardholder which application is being used.

2.6   U.S. Debit Processing Flowchart PIN Preferring Merchants

```
                          ┌──────────────┐
                          │  Chip Reader │
                          └──────┬───────┘
                                 │
                            ◇ Is amt < CVM
                   Yes ─────   Limit?   ───── No
                    │                          │
           ┌────────┴────────┐      ┌──────────┴──────┐
           │ Use No CVM Config│      │ Use All CVM Config│
           └────────┬────────┘      └──────────┬──────┘
                    └──────────┬───────────────┘
                               │
                      ┌────────┴────────┐
                      │ Get Candidate List│
                      └────────┬────────┘
                               │
                         ◇ Is there more
                           then 1 AID?
                               │ Yes
                         ◇ Do any AIDs have
                           Tags 5F55 & 42?
                               │ Yes
                      ┌────────┴────────┐
                      │Remove Global Debit AIDs│
                      └────────┬────────┘
                               │
                         ◇ Is there more
                           then 1 AID?
                               │ Yes
                      ┌────────┴────────┐
                      │ Display AID Selection to│
                      │ Cardholder to select AID│
                      └────────┬────────┘
                               │
                      ┌────────┴────────┐
                      │ Final Selection using│
                      │ selected/remaining AID│
                      └─────────────────┘
```
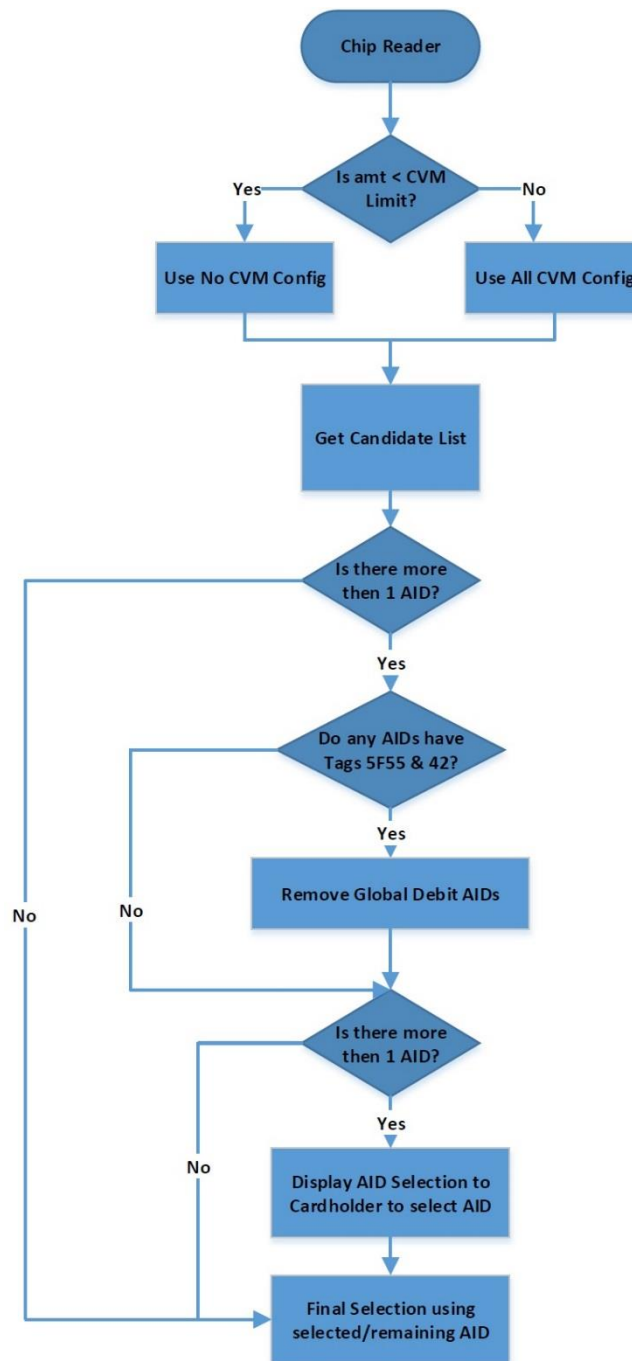
2.7 U.S. Debit Processing Flowchart - Credit/Debit Prompting Merchants
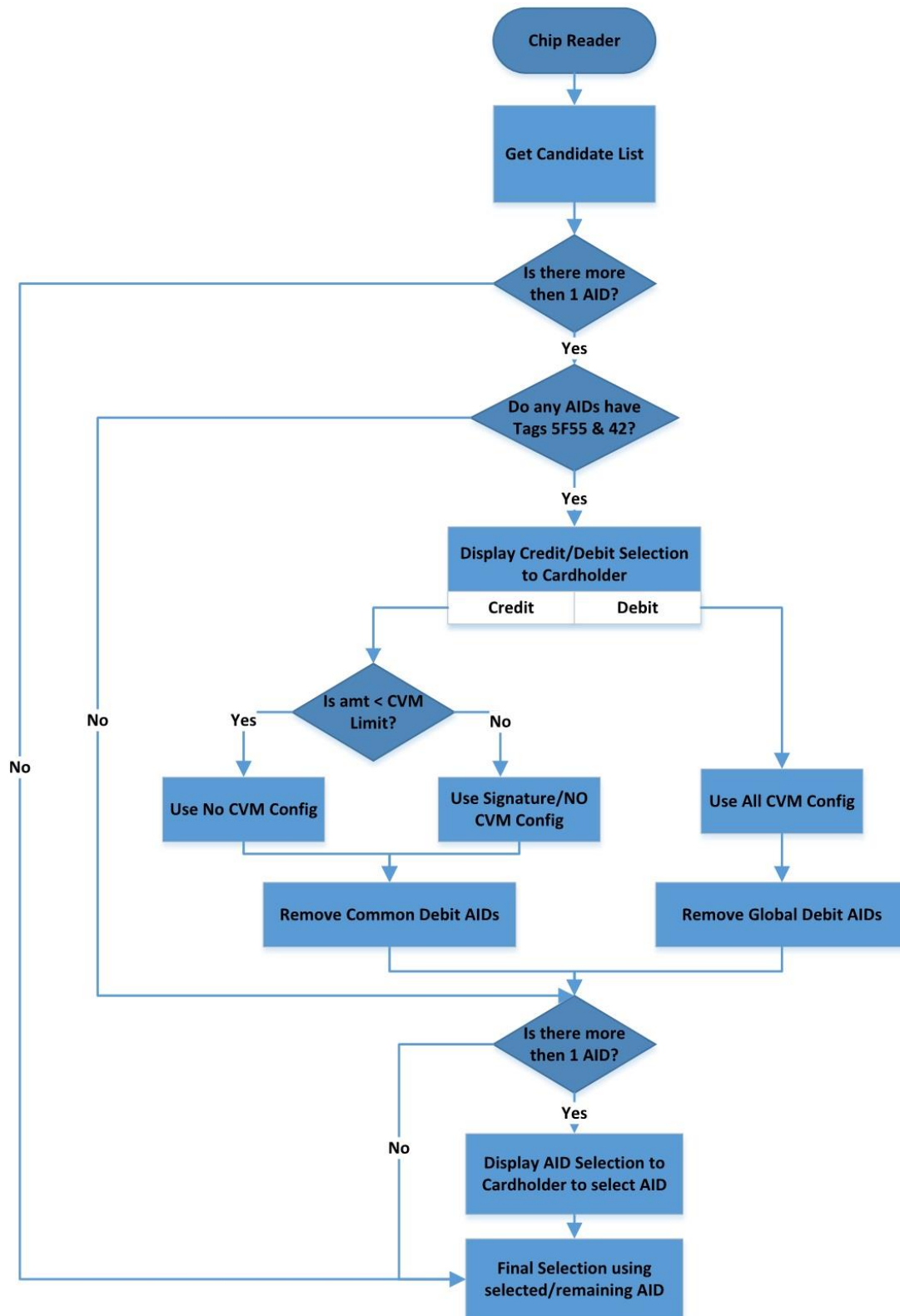
Chapter 3 -   USA Debit EMV Test Plan

3.1   Test Case Outline

To perform the tests defined in this section you will require the USA Debit EMV Test Card Set provided by B2. The card numbers ('TCxx') used throughout will be consistent with that set. See <u>USA Debit EMV Test Card Set Profiles</u> in this document.

Types of Merchant Configuration include:
- PIN Preferring (PP)
- Credit/Debit Prompting (CD)

For test cards that have more than one AID, Application Selection methods include:
- Merchant-Controlled Candidate List (MCCL)
  Also referred to as 'filtering the candidate list' in the Chapter 2, entitled Implementing U.S. Debit
- Standard EMV Application Selection (SEAS)

Note - the short forms (in brackets, above) will be used in the naming of test cases.

Test cases are organized into categories by 'Merchant Configuration'.
The test cases for each of these cards are ordered according to type of merchant and (where applicable) the method used to select the application (where the card has more than a single AID).

3.2   Selecting Applicable Test Cases

The test cases have been organized into four categories based on merchant configuration. Users of this document should select the relevant configuration and only use test cases applicable to that configuration:
- <u>PIN Preferring, Merchant Controlled Candidate List</u>
- <u>PIN Preferring, Standard EMV Application Selection</u>
- <u>Credit/Debit Prompting, Merchant Controlled Candidate List</u>
- <u>Credit/Debit Prompting, Standard EMV Application Selection</u>

3.3   USA Debit EMV Test Cases

Important Assumption: All EMV Floor limits are set to $0.00.

Important Notes:
- **As of Version 8.00 of this document, Test Card 15 v4.0 was replaced with v5.0 and Test Card 16 v5.0 was replaced with v6.0. There are significant changes to these two cards.**
  ==**TC 16 test cases have NOT been updated to reflect the changes. When that occurs, this notification will be removed.**==
- When the application prompts for Cashback, outcomes (Approval / Declined) may differ from one terminal configuration or host to another. It is advised that, if possible, Cashback be disabled.
- As of Version 6.0 of Test Card 15, this Interac Flash card has a BIN range of '001203'. These cards are supported by all Canadian processors but are not necessarily supported by all U.S. and International processors. Check with your acquirer account representative to determine if the Interac Flash BIN '001203' range is supported by their development host. If your processor does not yet support Interac Flash, the card will function properly at the POS but it will not obtain a host approval.

The format used for the Test Case naming is as follows.

DD*.*AAAA*.C*xx*-T*yy, where:

- ■   ***DD*** is:
  PP - PIN Preferring
  CD - Credit/Debit
- ■   ***AAAA*** is:
  MCCL - Merchant Controlled Candidate List)
  SEAS - Standard EMV Application Selection
- ■   C*xx* is:
  The <u>C</u>ard Number (01-16)
- ■   T*yy* is:
  The Test Number (resets to "01" for each card)

e.g.

PP.MCCL.C01-T01 – uses USA Debit Test Card 01 and would be run if the merchant is PIN Preferring and uses the Merchant-Controlled Candidate List method to choose the application. In this category there are four test cases and T01 is the first test case.

CD.SEAS.C03-T05 – uses USA Debit Test Card 03 and would be run if the merchant supports Credit/Debit Prompting and uses the Standard EMV Application Selection method to choose the application. In this category there are five test cases and T05 is the fifth test case.

3.3.1   Test Case ID and Title

PP.MCCL.C01-T01	PIN Preferring, Merchant Controlled Candidate List Card 01, Test 01

The first section is the Test Case ID followed by the test Title. The Title is intended to be as brief and concise as possible. In some situations, the test case Purpose and the test case number and suffix are required to distinguish the test from other similar test cases.

3.3.2   Type

Type: Contact

The second section identifies the test case Type. Two Types are supported – 'Contact' and 'Contactless'

3.3.3   Purpose

Purpose:

Test that when a Visa card with more than one AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'US Debit' AID

The third section is the test case Purpose – this defines what is being tested by the test case.

3.3.4   Pre-Requisites

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Merchant Controlled Candidate List
3. Terminal supports the following AIDs: A0000000031010, A0000000980840

The fourth section identifies any Pre-Requisites that must be completed prior to running the test case. Each test Type will have a standard set of pre-requisites, documented at the beginning of the test section.

3.3.5   Steps

Steps:

1. Start a Purchase transaction for $10.00
2. When prompted for card entry, insert Test Card xx

The fifth section contains the Steps required to run the test case. Each step is a simple one action process. In most cases, only the steps applicable to the test being performed are documented, not all steps required to run the complete transaction.

3.3.6   Pass Criteria

Pass Criteria:

1. "Chip" – indicates the card was inserted
2. "A0000000980840" – AID selected was 'US Debit'

The sixth section identifies the test case Pass Criteria. This may range from a simple prompt or message on a screen, to contents of a receipt. Receipt information shown is required, but the exact receipt text may differ based on your specific merchant implementation and/or processor requirements.

3.3.7   Comments

Comments:

The last section identifies any general Comments. This section is intended to provide guidance or information that does not fit easily into any of the sections above. For most test cases this section is blank.

3.3.8   Complete list of AIDs used in USA Debit EMV Test Card Set

AIDs that should be loaded in the acceptance device when testing using the USA Debit EMV Test Plan are seen in the table below.

Cards 01 - 11 contents: Application AID, Credit/Debit, Label, PAN

Card	Application 1	Application 2	Application 3	Application 4
01	A0000000031010	A0000000980840		
	Debit	Debit		
	Visa Debit	US Debit		
	4761739001010135	4761739001010135		
02	A0000000980840			
	Debit			
	US Debit			
	4761739001010135			
03	A000000003101001	A000000003101002	A0000000980840	
	Credit	Debit	Debit	
	Visa Credit	Visa Debit	US Debit	
	4761739001010176	4761739001010135	4761739001010135	
04	A0000000033010			
	Debit			
	Interlink			
	4761731000000084			
05	A0000000041010	A0000000042203		
	Debit	Debit		
	Mastercard Debit	US Maestro		
	5413330089099130	5413330089099130		
06	A0000000043060 D0561111	A0000000043060 D0562222		
	Debit	Debit		
	Maestro1	Maestro2		
	67999989000002010	67999989000002028		
07	A0000000041010	A0000000043060		
	Credit	Debit		
	Mastercard	Maestro		
	5413330089020060	6799998900000200051		
08	A0000000042203 D0561111	A0000000042203 D0562222		
	Debit	Debit		
	US Checking	US Savings		
	5413330089099007	5413330089099015		
09	A0000000041010	A0000000043060	A0000000042203	
	Credit	Debit	Debit	
	Mastercard	Maestro	US Maestro	
	5413330089020060	6799998900000200051	6799998900000200051	
10	A0000000042203			
	Debit			
	US Maestro			
	5413330089099130			
11	A0000000041010	A000000004220301	A0000000043060	A000000004220302
	Debit	Debit	Debit	Debit
	Mastercard Debit	US Checking	Maestro	US Savings
	5413330089020060	5413330089020060	6799998900000200051	6799998900000200051

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Cards 12 - 16 contents: Application AID, Credit/Debit, Label, PAN

Card	Application 1	Application 2	Application 3	Application 4
12	A0000001524010	A0000001523010		
	Debit	Debit		
	US Debit	Discover Debit		
	6011973700000005	6011973700000005		
13	A0000001524010			
	Debit			
	US Debit			
	6011973700000005			
14	A0000006200620			
	Debit			
	DNA			
	4000000000000028			
15	A0000002771010	A0000002771010		
	Debit	Debit		
	Interac	Interac Flash		
	0012020000001	0012020000001		
16*	A000000004101001	A000000004101002	A000000000042203	
	Credit	Debit	Debit	
	Mastercard	Mastercard	US Maestro	
	5413330089020060	5413330089099130	5413330089099130	

3.3.9   PIN Preferring, Merchant Controlled Candidate List – Test Cases

3.3.9.1   PP.MCCL.C01-T01

PP.MCCL.C01-T01	PIN Preferring, Merchant Controlled Candidate List Card 01 - Test 01

Type: Contact

Purpose:

Test that when a Visa card with more than one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'US Debit' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AIDs: A0000000031010, A0000000980840

Steps:

1. Start a Purchase transaction for $10.00
2. When prompted for card entry, insert Test Card 01
3. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'US Debit' application is automatically selected
4. The transaction is approved
5. Receipt shows:
   a. "Chip" – indicates the card was inserted
   b. "A0000000980840" – AID selected was 'US Debit'
   c. "0135" – last 4 digits of the PAN
   d. "Verified by PIN" – PIN CVM was used

Comments:

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PP.MCCL.C01-T02	PIN Preferring, Merchant Controlled Candidate List Card 01 - Test 02

Type: Contact

Purpose:

Test that when a Visa card with more than one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'US Debit' application
4. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AIDs: A0000000031010, A0000000980840
4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $10.00
2. When prompted for card entry, insert Test Card 01
3. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'US Debit' application is automatically selected
4. When a PIN is not entered, transaction continues with No CVM or Signature
5. The transaction is approved
6. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000000980840" – AID selected was 'US Debit'
    c. "0135" – last 4 digits of the PAN
    d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

3.3.9.3   PP.MCCL.C01-T03

PP.MCCL.C01-T03	PIN Preferring, Merchant Controlled Candidate List Card 01 - Test 03

Type: Contactless

Purpose:

Test that when a Visa card with more than one Debit AID is tapped, the application:

1.   Does not prompt for Credit or Debit

2.   Does not prompt for Application Selection

3.   Automatically selects the 'US Debit' application

4.   Prompts the user to enter a PIN

Pre-Requisites:

1.   Application is configured as PIN Preferring

2.   Application Selection is Merchant Controlled by filtering the Candidate List

3.   Terminal supports the following AIDs: A0000000031010, A0000000980840

4.   Contactless CVM Floor limit is $0

Steps:

1.   Start a Purchase transaction for $10.00

2.   When prompted for card entry, tap Test Card 01

3.   Enter PIN ("1234") when prompted

Pass Criteria:

1.   User is not prompted to select 'Credit' or 'Debit'

2.   User is not prompted to select an application

3.   The 'US Debit' application is automatically selected

4.   The transaction is approved

5.   Receipt shows:
     a.   "Contactless" – indicates card was tapped
     b.   "A0000000980840" – AID selected was 'US Debit'
     c.   "0135" – last 4 digits of the PAN
     d.   "Verified by PIN" – PIN CVM was used

Comments:

B2»

PP.MCCL.C01-T04   PIN Preferring, Merchant Controlled Candidate List
Card 01 - Test 04

Type: Contactless

Purpose:

Test that when a Visa card with more than one Debit AID is tapped, the application:

1. Does <u>not</u> prompt for Credit or Debit

2. Does <u>not</u> prompt for Application Selection

3. Automatically selects the 'US Debit' application

4. Does <u>not</u> prompt for PIN as the transaction amount is under the Contactless CVM Floor Limit

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Merchant Controlled by filtering the Candidate List

3. Terminal supports the following AIDs: A0000000031010, A0000000980840

4. Contactless CVM Floor limit is above $10

Steps:

1. Start a Purchase transaction for $10.00

2. When prompted for card entry, tap Test Card 01

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is <u>not</u> prompted to select an application

3. User is <u>not</u> prompted to enter a PIN

4. The 'US Debit' application is automatically selected

5. The transaction is approved

6. Receipt shows:
   a. "Contactless" – indicates card was tapped
   b. "A0000000980840" – AID selected was 'US Debit'
   c. "0135" – last 4 digits of the PAN
   d. "No signature required" – No CVM was used

Comments:

3.3.9.5 PP.MCCL.C02-T01

PP.MCCL.C02-T01	PIN Preferring, Merchant Controlled Candidate List Card 02 - Test 01

Type: Contact

Purpose:

Test that when a Visa card with only one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'US Debit' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AID: A0000000980840

Steps:

1. Start a Purchase transaction for $10.00
2. When prompted for card entry, insert Test Card 02
3. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'US Debit' application is automatically selected
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000000980840" – AID selected was 'US Debit'
    c. "0135" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.9.6   PP.MCCL.C02-T02

<table>
<tr><td>PP.MCCL.C02-T02</td><td>PIN Preferring, Merchant Controlled Candidate List
Card 02 - Test 02</td></tr>
</table>

Type: Contact

Purpose:

Test that when a Visa card with only one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'US Debit' application
4. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AID: A0000000980840
4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $10.00
2. When prompted for card entry, insert Test Card 02
3. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'US Debit' application is automatically selected
4. When a PIN is not entered, transaction continues with No CVM or Signature
5. The transaction is approved
6. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000000980840" – AID selected was 'US Debit'
    c. "0135" – last 4 digits of the PAN
    d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

3.3.9.7   **PP.MCCL.C03-T01**

PP.MCCL.C03-T01	PIN Preferring, Merchant Controlled Candidate List Card 03 - Test 01

Type: Contact

Purpose:

Test that when a Visa card with a Credit AID and more than one Debit AID is inserted, the application:

1. Prompts the user for Application Selection by displaying 'Visa Credit' and 'US Debit' only
2. Allows the user to select the 'Visa Credit' application
3. Uses Signature/No CVM as the CVM for the transaction

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AIDs: A0000000031010, A0000000980840

Steps:

1. Start a Purchase transaction for $10.00
2. When prompted for card entry, insert Test Card 03
3. Select 'Visa Credit' application when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is prompted to select 'Visa Credit' and 'US Debit' only
3. User is able to select 'Visa Credit'
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A000000003101001" – AID selected was 'Visa Credit'
    c. "0176" – last 4 digits of the PAN
    d. "Signature panel" or "No signature required" – Signature or No CVM was used

Comments:

3.3.9.8   PP.MCCL.C03-T02

PP.MCCL.C03-T02	PIN Preferring, Merchant Controlled Candidate List Card 03 - Test 02

Type: Contact

Purpose:

Test that when a Visa card with a Credit AID and more than one Debit AID is inserted, the application:

1. Prompts the user for Application Selection by displaying 'Visa Credit' and 'US Debit' only
2. Allows the user to select the 'US Debit' application
3. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AIDs: A0000000031010, A0000000980840

Steps:

1. Start a Purchase transaction for $10.00
2. When prompted for card entry, insert Test Card 03
3. Select 'US Debit' application when prompted
4. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is prompted to select 'Visa Credit' and 'US Debit' only
3. User is able to select 'US Debit'
4. The transaction is approved
5. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A0000000980840" – AID selected was 'US Debit'
   c. "0135" – last 4 digits of the PAN
   d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.9.9   PP.MCCL.C03-T03

PP.MCCL.C03-T03	PIN Preferring, Merchant Controlled Candidate List Card 03 - Test 03

Type: Contact

Purpose:

Test that when a Visa card with a Credit AID and more than one Debit AID is inserted, the application:

1. Prompts the user for Application Selection by displaying 'Visa Credit' and 'US Debit' only
2. Allows the user to select the 'US Debit' application
3. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AIDs: A0000000031010, A0000000980840
4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $10.00
2. When prompted for card entry, insert Test Card 03
3. Select 'US Debit' application when prompted
4. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is prompted to select 'Visa Credit' and 'US Debit' only
3. User is able to select 'US Debit'
4. When PIN is <u>not</u> entered the transaction continues with No CVM or Signature
5. The transaction is approved
6. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000980840" – AID selected was 'US Debit'
    c. "0135" – last 4 digits of the PAN
    d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

B2»

3.3.9.10   PP.MCCL.C04-T01

PP.MCCL.C04-T01	PIN Preferring, Merchant Controlled Candidate List Card 04 - Test 01

Type: Contact

Purpose:

Test that when a Visa card with only the Interlink AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'Interlink' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AID: A0000000033010

Steps:

1. Start a Purchase transaction for $10.00
2. When prompted for card entry, insert Test Card 04
3. Enter PIN ("1234") when prompted

Pass Criteria:

4. User is <u>not</u> prompted to select 'Credit' or 'Debit'
5. User is <u>not</u> prompted to select an application
6. The Interlink application is automatically selected
7. The transaction is approved
8. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000000033010" – AID selected was 'Interlink'
    c. "0671" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.9.11   PP.MCCL.C05-T01

PP.MCCL.C05-T01	PIN Preferring, Merchant Controlled Candidate List Card 05 - Test 01

Type: Contact

Purpose:

Test that when a Mastercard card with more than one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'US Maestro' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AIDs: A0000000041010, A0000000042203

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 05
3. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'US Maestro' application is automatically selected
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000000042203" – AID selected was 'US Maestro'
    c. "9130" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

B2»

3.3.9.12   PP.MCCL.C05-T02

PP.MCCL.C05-T02	PIN Preferring, Merchant Controlled Candidate List Card 05 - Test 02

Type: Contact

Purpose:

Test that when a Mastercard card with more than one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'US Maestro' application
4. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AIDs: A0000000041010, A0000000042203
4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 05
3. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'US Maestro' application is automatically selected
4. When a PIN is not entered, transaction continues with No CVM or Signature
5. The transaction is approved
6. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000000042203" – AID selected was 'US Maestro'
    c. "9130" – last 4 digits of the PAN
    d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

3.3.9.13   PP.MCCL.C05-T03

PP.MCCL.C05-T03	PIN Preferring, Merchant Controlled Candidate List Card 05 - Test 03

Type: Contactless

Purpose:

Test that when a Mastercard card with more than one Debit AID is tapped, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'US Maestro' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AIDs: A0000000041010, A0000000042203
4. Contactless CVM Floor limit is $0

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, tap Test Card 05
3. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'US Maestro' application is automatically selected
4. The transaction is approved
5. Receipt shows:
    a. "Contactless" – indicates card was tapped
    b. "A0000000042203" – AID selected was 'US Maestro'
    c. "9130" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

B2》

3.3.9.14   PP.MCCL.C05-T04

PP.MCCL.C05-T04	PIN Preferring, Merchant Controlled Candidate List Card 05 - Test 04

Type: Contactless

Purpose:

Test that when a Mastercard card with more than one Debit AID is tapped, the application:

1.   Does <u>not</u> prompt for Credit or Debit

2.   Does <u>not</u> prompt for Application Selection

3.   Automatically selects the 'US Maestro' application

4.   Does <u>not</u> prompt for PIN as the transaction amount is under the Contactless CVM Floor Limit

Pre-Requisites:

1.   Application is configured as PIN Preferring

2.   Application Selection is Merchant Controlled by filtering the Candidate List

3.   Terminal supports the following AIDs: A0000000041010, A0000000042203

4.   Contactless CVM Floor limit is above $20

Steps:

1.   Start a Purchase transaction for $20.00

2.   When prompted for card entry, tap Test Card 05

Pass Criteria:

1.   User is <u>not</u> prompted to select 'Credit' or 'Debit'

2.   User is <u>not</u> prompted to select an application

3.   User is <u>not</u> prompted to enter a PIN

4.   The 'US Maestro' application is automatically selected

5.   The transaction is approved

6.   Receipt shows:
    a.   "Contactless" – indicates card was tapped
    b.   "A0000000042203" – AID selected was 'US Maestro'
    c.   "9130" – last 4 digits of the PAN
    d.   "No signature required" – No CVM was used

Comments:

3.3.9.15   PP.MCCL.C06-T01

PP.MCCL.C06-T01   PIN Preferring, Merchant Controlled Candidate List
Card 06 - Test 01

Type: Contact

Purpose:

Test that when a Maestro card with more than one Maestro AID is inserted, the application:

1. Prompts the user for Application Selection by displaying 'Maestro1' and 'Maestro2'

2. Allows the user to select the 'Maestro1' application

3. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Merchant Controlled by filtering the Candidate List

3. Terminal supports the following AID: A0000000043060

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 06

3. Select 'Maestro1' application when prompted

4. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select 'Maestro1' and 'Maestro2'

3. User is able to select 'Maestro1'

4. The transaction is approved

5. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A0000000043060D0561111" – AID selected was 'Maestro1'
   c. "2010" – last 4 digits of the PAN
   d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.9.16   PP.MCCL.C06-T02

PP.MCCL.C06-T02	PIN Preferring, Merchant Controlled Candidate List Card 06 - Test 02

Type: Contact

Purpose:

Test that when a Maestro card with more than one Maestro AID is inserted, the application:

1. Prompts the user for Application Selection by displaying 'Maestro1' and 'Maestro2'
2. Allows the user to select the 'Maestro2' application
3. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AID: A0000000043060

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 06
3. Select 'Maestro2' application when prompted
4. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is prompted to select 'Maestro1' and 'Maestro2'
3. User is able to select 'Maestro2'
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000043060D0562222" – AID selected was 'Maestro2'
    c. "2028" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.9.17   PP.MCCL.C07-T01

PP.MCCL.C07-T01	PIN Preferring, Merchant Controlled Candidate List Card 07 - Test 01

Type: Contact

Purpose:

Test that when a Mastercard card with a Credit AID and a Debit AID is inserted, the application:

1. Prompts the user for Application Selection by displaying 'Mastercard' and 'Maestro'

2. Allows the user to select the 'Mastercard' application

3. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Merchant Controlled by filtering the Candidate List

3. Terminal supports the following AIDs: A0000000041010, A0000000043060

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 07

3. Select 'Mastercard' application when prompted

4. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select 'Mastercard' and 'Maestro'

3. User is able to select 'Mastercard'

4. The transaction is approved

5. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A0000000041010" – AID selected was 'Mastercard'
   c. "0060" - last 4 digits of the PAN
   d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.9.18   PP.MCCL.C07-T02

PP.MCCL.C07-T02	PIN Preferring, Merchant Controlled Candidate List Card 07 - Test 02

Type: Contact

Purpose:

Test that when a Mastercard card with a Credit AID and a Debit AID is inserted, the application:

1. Prompts the user for Application Selection by displaying 'Mastercard' and 'Maestro'
2. Allows the user to select the 'Mastercard' application
3. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AIDs: A0000000041010, A0000000043060
4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 07
3. Select 'Mastercard' application when prompted
4. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is prompted to select 'Mastercard' and 'Maestro'
3. User is able to select 'Mastercard'
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000041010" – AID selected was 'Mastercard'
    c. "0060" - last 4 digits of the PAN
    d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

3.3.9.19   PP.MCCL.C07-T03

PP.MCCL.C07-T03	PIN Preferring, Merchant Controlled Candidate List Card 07 - Test 03

Type: Contact

Purpose:

Test that when a Mastercard card with a Credit AID and a Debit AID is inserted, the application:

1. Prompts the user for Application Selection by displaying 'Mastercard' and 'Maestro'
2. Allows the user to select the 'Maestro' application
3. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AIDs: A0000000041010, A0000000043060

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 07
3. Select 'Maestro' application when prompted
4. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is prompted to select 'Mastercard' and 'Maestro'
3. User is able to select 'Maestro'
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000043060" – AID selected was Maestro
    c. "0051" - last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.9.20   PP.MCCL.C08-T01

PP.MCCL.C08-T01   PIN Preferring, Merchant Controlled Candidate List
Card 08 - Test 01

Type: Contact

Purpose:

Test that when a U.S. Maestro card with more than one U.S. Maestro AID is inserted, the application:

1. Prompts the user for Application Selection by displaying 'US Checking' and 'US Savings' only

2. Allows the user to select the 'US Checking' application

3. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Merchant Controlled by filtering the Candidate List

3. Terminal supports the following AID: A0000000042203

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 08

3. Select 'US Checking' application when prompted

4. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select 'US Checking' and 'US Savings' only

3. User is able to select 'US Checking'

4. The transaction is approved

5. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A0000000042203D0561111" – AID selected was 'US Checking'
   c. "9007" – last 4 digits of the PAN
   d. "Verified by PIN" – PIN CVM was used

Comments:

B2»

3.3.9.21   PP.MCCL.C08-T02

PP.MCCL.C08-T02	PIN Preferring, Merchant Controlled Candidate List Card 08 - Test 02

Type: Contact

Purpose:

Test that when a U.S. Maestro card with more than one U.S. Maestro AID is inserted, the application:

1. Prompts the user for Application Selection by displaying 'US Checking' and 'US Savings' only
2. Allows the user to select the 'US Checking' application
3. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AID: A0000000042203
4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 08
3. Select 'US Checking' application when prompted
4. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is prompted to select 'US Checking' and 'US Savings' only
3. User is able to select 'US Checking'
4. When a PIN is not entered, transaction continues with No CVM or Signature
5. The transaction is approved
6. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A0000000042203D0561111" – AID selected was 'US Checking'
   c. "9007" – last 4 digits of the PAN
   d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

3.3.9.22   PP.MCCL.C08-T03

PP.MCCL.C08-T03	PIN Preferring, Merchant Controlled Candidate List Card 08 - Test 03

Type: Contact

Purpose:

Test that when a U.S. Maestro card with more than one U.S. Maestro AID is inserted, the application:

1. Prompts the user for Application Selection by displaying 'US Checking' and 'US Savings' only
2. Allows the user to select the 'US Savings' application
3. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AID: A0000000042203

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 08
3. Select 'US Savings' application when prompted
4. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is prompted to select 'US Checking' and 'US Savings' only
3. User is able to select 'US Savings'
4. The transaction is approved
5. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A0000000042203D0562222" – AID selected was 'US Savings'
   c. "9015" – last 4 digits of the PAN
   d. "Verified by PIN" – PIN CVM was used

Comments:

B2»

3.3.9.23   PP.MCCL.C08-T04

<table>
<tr><td>PP.MCCL.C08-T04</td><td>PIN Preferring, Merchant Controlled Candidate List
Card 08 - Test 04</td></tr>
</table>

Type: Contact

Purpose:

Test that when a U.S. Maestro card with more than one U.S. Maestro AID is inserted, the application:

1. Prompts the user for Application Selection by displaying 'US Checking' and 'US Savings' only
2. Allows the user to select the 'US Savings' application
3. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AID: A0000000042203
4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 08
3. Select 'US Savings' application when prompted
4. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is prompted to select 'US Checking' and 'US Savings' only
3. User is able to select 'US Savings'
4. When a PIN is not entered, transaction continues with No CVM or Signature
5. The transaction is approved
6. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A0000000042203D0562222" – AID selected was 'US Savings'
   c. "9015" – last 4 digits of the PAN
   d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

3.3.9.24   PP.MCCL.C09-T01

PP.MCCL.C09-T01   PIN Preferring, Merchant Controlled Candidate List
Card 09 - Test 01

Type: Contact

Purpose:

Test that when a Mastercard card with a Credit AID and more than one Debit AID is inserted, the application:

1. Prompts the user for Application Selection by displaying 'Mastercard' and 'US Maestro' only

2. Allows the user to select the 'Mastercard' application

3. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Merchant Controlled by filtering the Candidate List

3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 09

3. Select 'Mastercard' application when prompted

4. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select 'Mastercard' and 'US Maestro' only

3. User is able to select 'Mastercard'

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000041010" – AID selected was 'Mastercard'
    c. "0060" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.9.25   PP.MCCL.C09-T02

PP.MCCL.C09-T02   PIN Preferring, Merchant Controlled Candidate List
Card 09 - Test 02

Type: Contact

Purpose:

Test that when a Mastercard card with a Credit AID and more than one Debit AID is
inserted, the application:

1. Prompts the user for Application Selection by displaying 'Mastercard' and 'US
   Maestro' only
2. Allows the user to select the 'Mastercard' application
3. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AIDs: A0000000041010, A0000000043060
   and A0000000042203
4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 09
3. Select 'Mastercard' application when prompted
4. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is prompted to select 'Mastercard' and 'US Maestro' only
3. User is able to select 'Mastercard'
4. When PIN is <u>not</u> entered the transaction continues with No CVM or Signature
5. The transaction is approved
6. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A0000000041010" – AID selected was 'Mastercard'
   c. "0060" – last 4 digits of the PAN
   d. "No signature required" or "Signature panel" – No CVM or Signature
      CVM was used

Comments:

PP.MCCL.C09-T03   PIN Preferring, Merchant Controlled Candidate List
Card 09 - Test 03

Type: Contact

Purpose:

Test that when a Mastercard card with a Credit AID and more than one Debit AID is inserted, the application:

1. Prompts the user for Application Selection by displaying 'Mastercard' and 'US Maestro' only

2. Allows the user to select the 'US Maestro' application

3. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Merchant Controlled by filtering the Candidate List

3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 09

3. Select 'US Maestro' application when prompted

4. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select 'Mastercard' and 'US Maestro' only

3. User is able to select 'US Maestro'

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000042203" – AID selected was 'US Maestro'
    c. "0051" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

B2》

3.3.9.27   PP.MCCL.C09-T04

PP.MCCL.C09-T04	PIN Preferring, Merchant Controlled Candidate List Card 09 - Test 04

Type: Contact

Purpose:

Test that when a Mastercard card with a Credit AID and more than one Debit AID is inserted, the application:

1. Prompts the user for Application Selection by displaying 'Mastercard' and 'US Maestro' only

2. Allows the user to select the 'US Maestro' application

3. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Merchant Controlled by filtering the Candidate List

3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 09

3. Select 'US Maestro' application when prompted

4. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select 'Mastercard' and 'US Maestro' only

3. User is able to select 'US Maestro'

4. When PIN is <u>not</u> entered the transaction continues with No CVM or Signature

5. The transaction is approved

6. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000042203" – AID selected was 'US Maestro'
    c. "0051" – last 4 digits of the PAN
    d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

PP.MCCL.C10-T01	PIN Preferring, Merchant Controlled Candidate List Card 10 - Test 01

Type: Contact

Purpose:

Test that when a Mastercard card with only one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit

2. Does <u>not</u> prompt for Application Selection

3. Automatically selects the 'US Maestro' application

4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Merchant Controlled by filtering the Candidate List

3. Terminal supports the following AID: A0000000042203

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 10

3. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is <u>not</u> prompted to select an application

3. The 'US Maestro' application is automatically selected

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000000042203" – AID selected was 'US Maestro'
    c. "9130" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

B2》

3.3.9.29   PP.MCCL.C10-T02

PP.MCCL.C10-T02   PIN Preferring, Merchant Controlled Candidate List
Card 10 - Test 02

Type: Contact

Purpose:

Test that when a Mastercard card with only one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'US Maestro' application
4. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AID: A0000000042203
4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 10
3. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'US Maestro' application is automatically selected
4. When a PIN is not entered, transaction continues with No CVM or Signature
5. The transaction is approved
6. Receipt shows:
   a. "Chip" – indicates the card was inserted
   b. "A0000000042203" – AID selected was 'US Maestro'
   c. "9130" – last 4 digits of the PAN
   d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

3.3.9.30 PP.MCCL.C11-T01

PP.MCCL.C11-T01	PIN Preferring, Merchant Controlled Candidate List Card 11 - Test 01

Type: Contact

Purpose:

Test that when a Mastercard Debit card with 2 pairs of U.S. Debit AIDs is inserted, the application:

1. Prompts the user for Application Selection by displaying 'US Checking' and 'US Savings' only
2. Allows the user to select the 'US Checking' application
3. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 11
3. Select 'US Checking' application when prompted
4. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is prompted to select 'US Checking' and 'US Savings' only
3. User is able to select 'US Checking'
4. The transaction is approved
5. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A000000004220301" – AID selected was 'US Checking'
   c. "0060" – last 4 digits of the PAN
   d. "Verified by PIN" – PIN CVM was used

Comments:

B2》

3.3.9.31   PP.MCCL.C11-T02

PP.MCCL.C11-T02	PIN Preferring, Merchant Controlled Candidate List Card 11 - Test 02

Type: Contact

Purpose:

Test that when a Mastercard Debit card with 2 pairs of U.S. Debit AIDs is inserted, the application:

1. Prompts the user for Application Selection by displaying 'US Checking' and 'US Savings' only
2. Allows the user to select the 'US Checking' application
3. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203
4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 11
3. Select 'US Checking' application when prompted
4. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is prompted to select 'US Checking' and 'US Savings' only
3. User is able to select 'US Checking'
4. When a PIN is not entered, transaction continues with No CVM or Signature
5. The transaction is approved
6. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A000000004220301" – AID selected was 'US Checking'
   c. "0060" – last 4 digits of the PAN
   d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

B2》

3.3.9.32   PP.MCCL.C11-T03

PP.MCCL.C11-T03	PIN Preferring, Merchant Controlled Candidate List Card 11 - Test 03

Type: Contact

Purpose:

Test that when a Mastercard Debit card with 2 pairs of U.S. Debit AIDs is inserted, the application:

1. Prompts the user for Application Selection by displaying 'US Checking' and 'US Savings' only

2. Allows the user to select the 'US Savings' application

3. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Merchant Controlled by filtering the Candidate List

3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 11

3. Select 'US Savings' application when prompted

4. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select 'US Checking' and 'US Savings' only

3. User is able to select 'US Savings'

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A000000004220302" – AID selected was 'US Savings'
    c. "0051" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.9.33   PP.MCCL.C11-T04

PP.MCCL.C11-T04	PIN Preferring, Merchant Controlled Candidate List Card 11 - Test 04

Type: Contact

Purpose:

Test that when a Mastercard Debit card with 2 pairs of U.S. Debit AIDs is inserted, the application:

1. Prompts the user for Application Selection by displaying 'US Checking' and 'US Savings' only

2. Allows the user to select the 'US Savings' application

3. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Merchant Controlled by filtering the Candidate List

3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 11

3. Select 'US Savings' application when prompted

4. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select 'US Checking' and 'US Savings' only

3. User is able to select 'US Savings'

4. When a PIN is not entered, transaction continues with No CVM or Signature

5. The transaction is approved

6. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A000000004220302" – AID selected was 'US Savings'
    c. "0051" – last 4 digits of the PAN
    d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

B2»

3.3.9.34   PP.MCCL.C12-T01

<table>
<tr><td>PP.MCCL.C12-T01   PIN Preferring, Merchant Controlled Candidate List
Card 12 - Test 01</td></tr>
</table>

Type: Contact

Purpose:

Test that when a Discover card with more than one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'US Debit' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AIDs: A0000001524010, A0000001523010

Steps:

1. Start a Purchase transaction for $79.00
2. When prompted for card entry, insert Test Card 12
3. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'US Debit' application is automatically selected
4. The transaction is approved
5. Receipt shows:
   a. "Chip" – indicates the card was inserted
   b. "A0000001524010" – AID selected was 'US Debit'
   c. "0005" – last 4 digits of the PAN
   d. "Verified by PIN" – PIN CVM was used

Comments:

PP.MCCL.C12-T02	PIN Preferring, Merchant Controlled Candidate List Card 12 - Test 02

Type: Contact

Purpose:

Test that when a Discover card with more than one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit

2. Does <u>not</u> prompt for Application Selection

3. Automatically selects the 'US Debit' application

4. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Merchant Controlled by filtering the Candidate List

3. Terminal supports the following AIDs: A0000001524010, A0000001523010

4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $79.00

2. When prompted for card entry, insert Test Card 12

3. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is <u>not</u> prompted to select an application

3. The 'US Debit' application is automatically selected

4. When a PIN is not entered, transaction continues with No CVM or Signature

5. The transaction is approved

6. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000001524010" – AID selected was 'US Debit'
    c. "0005" – last 4 digits of the PAN
    d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

PP.MCCL.C12-T03	PIN Preferring, Merchant Controlled Candidate List Card 12 - Test 03

Type: Contactless

Purpose:

Test that when a Discover card with more than one Debit AID is tapped, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'US Debit' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AIDs: A0000001524010, A0000001523010
4. Contactless CVM Floor limit is $0

Steps:

1. Start a Purchase transaction for $79.00
2. When prompted for card entry, tap Test Card 12
3. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'US Debit' application is automatically selected
4. The transaction is approved
5. Receipt shows:
    a. "Contactless" – indicates card was tapped
    b. "A0000001524010" – AID selected was 'US Debit'
    c. "0005" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.9.37   PP.MCCL.C12-T04

PP.MCCL.C12-T04   PIN Preferring, Merchant Controlled Candidate List
Card 12 - Test 04

Type: Contactless

Purpose:

Test that when a Discover card with more than one Debit AID is tapped, the application:

1. Does <u>not</u> prompt for Credit or Debit

2. Does <u>not</u> prompt for Application Selection

3. Automatically selects the 'US Debit' application

4. Does <u>not</u> prompt for PIN as the transaction amount is under the Contactless CVM Floor Limit

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Merchant Controlled by filtering the Candidate List

3. Terminal supports the following AIDs: A0000001524010, A0000001523010

4. Contactless CVM Floor limit is above $79

Steps:

1. Start a Purchase transaction for $79.00

2. When prompted for card entry, tap Test Card 12

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is <u>not</u> prompted to select an application

3. User is <u>not</u> prompted to enter a PIN

4. The 'US Debit' application is automatically selected

5. The transaction is approved

6. Receipt shows:
   a. "Contactless" – indicates card was tapped
   b. "A0000001524010" – AID selected was 'US Debit'
   c. "0005" – last 4 digits of the PAN
   d. "No signature required" – No CVM was used

Comments:

B2》

3.3.9.38   PP.MCCL.C13-T01

PP.MCCL.C13-T01	PIN Preferring, Merchant Controlled Candidate List Card 13 - Test 01

Type: Contact

Purpose:

Test that when a Discover card with only one Debit AID is inserted, the application:

1.   Does <u>not</u> prompt for Credit or Debit

2.   Does <u>not</u> prompt for Application Selection

3.   Automatically selects the 'US Debit' application

4.   Prompts the user to enter a PIN

Pre-Requisites:

1.   Application is configured as PIN Preferring

2.   Application Selection is Merchant Controlled by filtering the Candidate List

3.   Terminal supports the following AID: A0000001524010

Steps:

1.   Start a Purchase transaction for $79.00

2.   When prompted for card entry, insert Test Card 13

3.   Enter PIN ("1234") when prompted

Pass Criteria:

1.   User is <u>not</u> prompted to select 'Credit' or 'Debit'

2.   User is <u>not</u> prompted to select an application

3.   The 'US Debit' application is automatically selected

4.   The transaction is approved

5.   Receipt shows:
    a.   "Chip" – indicates the card was inserted
    b.   "A0000001524010" – AID selected was 'US Debit'
    c.   "0005" – last 4 digits of the PAN
    d.   "Verified by PIN" – PIN CVM was used

Comments:

B2》

PP.MCCL.C13-T02   PIN Preferring, Merchant Controlled Candidate List
Card 13 - Test 02

Type: Contact

Purpose:

Test that when a Discover card with only one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'US Debit' application
4. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AID: A0000001524010
4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $79.00
2. When prompted for card entry, insert Test Card 13
3. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'US Debit' application is automatically selected
4. When a PIN is not entered, transaction continues with No CVM or Signature
5. The transaction is approved
6. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000001524010" – AID selected was 'US Debit'
    c. "0005" – last 4 digits of the PAN
    d. "No signature required" or "Signature panel" – No CVM or Signature
        CVM was used

Comments:

3.3.9.40   PP.MCCL.C14-T01

PP.MCCL.C14-T01   PIN Preferring, Merchant Controlled Candidate List Card 14 - Test 01

Type: Contact

Purpose:

Test that when a DNA card with only one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'DNA' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AID: A0000006200620

Steps:

1. Start a Purchase transaction for $10.00
2. When prompted for card entry, insert Test Card 14
3. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is <u>not</u> prompted to select an application
3. The DNA application is automatically selected
4. The transaction is approved / declined *
5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000006200620" – AID selected was 'DNA'
    c. "0028" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

* Final disposition (Approved / Declined) is outside the scope of this document. For this test case to be successful, the transaction should go online but as the cryptogram doesn't need to be valid, the host may approve or decline.

3.3.9.41   PP.MCCL.C15-T01

PP.MCCL.C15-T01	PIN Preferring, Merchant Controlled Candidate List Card 15 - Test 01

Type: Contact

Purpose:

Test that when an Interac Flash card with only one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'Interac' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AID: A0000002771010

Steps:

1. Start a Purchase transaction for $30.00
2. When prompted for card entry, insert Test Card 15
3. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'Interac' application is automatically selected
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000002771010" – AID selected was 'Interac'
    c. "8644" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

Account selection prompting (Chequing/Savings) is not a requirement for terminals deployed in the USA.

3.3.9.42   PP.MCCL.C16-T01

PLEASE READ IMPORTANT NOTES AT THE BEGINING OF SECTION 3.3

PP.MCCL.C16-T01	PIN Preferring, Merchant Controlled Candidate List Card 16 - Test 01

Type: Contact

Purpose:

Test that when an Interac card with only one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit

2. Does <u>not</u> prompt for Application Selection

3. Automatically selects the 'Interac' application

4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Merchant Controlled by filtering the Candidate List

3. Terminal supports the following AID: A0000002771010

Steps:

1. Start a Purchase transaction for $30.00

2. When prompted for card entry, insert Test Card 16

3. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is <u>not</u> prompted to select an application

3. The 'Interac' application is automatically selected

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000002771010" – AID selected was 'Interac'
    c. "1933" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

Account selection prompting (Chequing/Savings) is not a requirement for terminals deployed in the USA.

3.3.10   PIN Preferring, Standard EMV Application Selection – Test Cases

3.3.10.1   PP.SEAS.C01-T01

PP.SEAS.C01-T01   PIN Preferring, Standard EMV Application Selection Card 01 - Test 01

Type: Contact

Purpose:

Test that when a Visa card with more than one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit

2. Prompts the user for Application Selection by displaying 'Visa Debit' and 'US Debit'

3. Allows the user to select the 'Visa Debit' application

4. Uses Signature/No CVM as the CVM for the transaction

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000000031010, A0000000980840

Steps:

1. Start a Purchase transaction for $10.00

2. When prompted for card entry, insert Test Card 01

3. Select 'Visa Debit' application when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select 'Visa Debit' and 'US Debit'

3. User is able to select 'Visa Debit'

4. The transaction is approved

5. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A0000000031010" – AID selected was 'Visa Debit'
   c. "0135" – last 4 digits of the PAN
   d. "Signature panel" or "No signature required" – Signature or No CVM was used

Comments:

B2》

PP.SEAS.C01-T02	PIN Preferring, Standard EMV Application Selection Card 01 - Test 02

Type: Contact

Purpose:

Test that when a Visa card with more than one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit

2. Prompts the user for Application Selection by displaying 'Visa Debit' and 'US Debit'

3. Allows the user to select the 'US Debit' application

4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000000031010, A0000000980840

Steps:

1. Start a Purchase transaction for $10.00

2. When prompted for card entry, insert Test Card 01

3. Select 'US Debit' application when prompted

4. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select 'Visa Debit' and 'US Debit'

3. User is able to select 'US Debit'

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000980840" – AID selected was 'US Debit'
    c. "0135" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.10.3   PP.SEAS.C01-T03

**PP.SEAS.C01-T03   PIN Preferring, Standard EMV Application Selection
Card 01 - Test 03**

Type: Contact

Purpose:

Test that when a Visa card with more than one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit

2. Prompts the user for Application Selection by displaying 'Visa Debit' and 'US Debit'

3. Allows the user to select the 'US Debit' application

4. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Standard EMV Application Selection

3. Terminal supports AID A0000000031010, A0000000980840

4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $10.00

2. When prompted for card entry, insert Test Card 01

3. Select 'US Debit' application when prompted

4. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select 'Visa Debit' and 'US Debit'

3. User is able to select 'US Debit'

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b.   "A0000000980840" – AID selected was 'US Debit'
    c. "0135" – last 4 digits of the PAN
    d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

3.3.10.4   PP.SEAS.C01-T04

PP.SEAS.C01-T04	PIN Preferring, Standard EMV Application Selection Card 01 - Test 04

Type: Contactless

Purpose:

Test that when a Visa card with more than one Debit AID is tapped, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'Visa Debit' application
4. Uses Signature as the CVM for the transaction

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Standard EMV Application Selection
3. Terminal supports AID A0000000031010, A0000000980840
4. Contactless CVM Floor limit is $0

Steps:

1. Start a Purchase transaction for $10.00
2. When prompted for card entry, tap Test Card 01

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'Visa Debit' application is automatically selected
4. The transaction is approved
5. Receipt shows:
    a. "Contactless" – indicates card was tapped
    b. "A0000000031010" – AID selected was 'Visa Debit'
    c. "0135" – last 4 digits of the PAN
    d. "Signature panel" – Signature CVM was used

Comments:

3.3.10.5   PP.SEAS.C01-T05

PP.SEAS.C01-T05	PIN Preferring, Standard EMV Application Selection Card 01 - Test 05

Type: Contactless

Purpose:

Test that when a Visa card with more than one Debit AID is tapped, the application:

1. Does <u>not</u> prompt for Credit or Debit

2. Does <u>not</u> prompt for Application Selection

3. Automatically selects the 'Visa Debit' application

4. Does <u>not</u> require a Signature as the transaction amount is under the Contactless CVM Floor Limit

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Standard EMV Application Selection

3. Terminal supports AID A0000000031010, A0000000980840

4. Contactless CVM Floor limit is above $10

Steps:

1. Start a Purchase transaction for $10.00

2. When prompted for card entry, tap Test Card 01

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is <u>not</u> prompted to select an application

3. The 'Visa Debit' application is automatically selected

4. The transaction is approved

5. Receipt shows:
    a. "Contactless" – indicates card was tapped
    b. "A0000000031010" – AID selected was 'Visa Debit'
    c. "0135" – last 4 digits of the PAN
    d. "No Signature Required" – No CVM was used

Comments:

3.3.10.6   PP.SEAS.C02-T01

PP.SEAS.C02-T01	PIN Preferring, Standard EMV Application Selection Card 02 - Test 01

Type: Contact

Purpose:

Test that when a Visa card with only one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'US Debit' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AID: A0000000980840

Steps:

1. Start a Purchase transaction for $10.00
2. When prompted for card entry, insert Test Card 02
3. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'US Debit' application is automatically selected
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000000980840" – AID selected was 'US Debit'
    c. "0135" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.10.7   PP.SEAS.C02-T02

PP.SEAS.C02-T02   PIN Preferring, Standard EMV Application Selection
Card 02 - Test 02

Type: Contact

Purpose:

Test that when a Visa card with only one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'US Debit' application
4. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AID: A0000000980840
4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $10.00
2. When prompted for card entry, insert Test Card 02
3. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'US Debit' application is automatically selected
4. When a PIN is not entered, transaction continues with No CVM or Signature
5. The transaction is approved
6. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000000980840" – AID selected was 'US Debit'
    c. "0135" – last 4 digits of the PAN
    d. "No signature required" or "Signature panel" – No CVM or Signature
       CVM was used

Comments:

B2》

3.3.10.8   PP.SEAS.C03-T01

PP.SEAS.C03-T01	PIN Preferring, Standard EMV Application Selection Card 03 - Test 01

Type: Contact

Purpose:

Test that when a Visa card with a Credit and more than one Debit AID is inserted, the application:

1.   Prompts the user for Application Selection by displaying all of the following applications: 'Visa Credit', 'Visa Debit' and 'US Debit'

2.   Allows the user to select the 'Visa Credit' application

3.   Uses Signature/No CVM as the CVM for the transaction

Pre-Requisites:

1.   Application is configured as PIN Preferring

2.   Application Selection is Standard EMV Application Selection

3.   Terminal supports the following AIDs: A0000000031010, A0000000980840

Steps:

1.   Start a Purchase transaction for $10.00

2.   When prompted for card entry, insert Test Card 03

3.   Select 'Visa Credit' application when prompted

Pass Criteria:

1.   User is <u>not</u> prompted to select 'Credit' or 'Debit'

2.   User is prompted to select all of the following applications: 'Visa Credit', 'Visa Debit' and 'US Debit'

3.   User is able to select 'Visa Credit'

4.   The transaction is approved

5.   Receipt shows:
   a.   "Chip" – indicates card was inserted
   b.   "A000000003101001" – AID selected was 'Visa Credit'
   c.   '0176' – last 4 digits of the PAN
   d.   "Signature panel" or "No signature required" – Signature or No CVM was used

Comments:

B2》

3.3.10.9 PP.SEAS.C03-T02

PP.SEAS.C03-T02	PIN Preferring, Standard EMV Application Selection Card 03 - Test 02

Type: Contact

Purpose:

Test that when a Visa card with a Credit and more than one Debit AID is inserted, the application:

1. Prompts the user for Application Selection by displaying all of the following applications: 'Visa Credit', 'Visa Debit' and 'US Debit'
2. Allows the user to select the 'Visa Debit' application
3. Uses Signature/No CVM as the CVM for the transaction

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AIDs: A0000000031010, A0000000980840

Steps:

1. Start a Purchase transaction for $10.00
2. When prompted for card entry, insert Test Card 03
3. Select 'Visa Debit' application when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is prompted to select all of the following applications: 'Visa Credit', 'Visa Debit' and 'US Debit'
3. User is able to select 'Visa Debit'
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A000000003101002" – AID selected was 'Visa Debit'
    c. '0135' – last 4 digits of the PAN
    d. "Signature panel" or "No signature required" – Signature or No CVM was used

Comments:

3.3.10.10   PP.SEAS.C03-T03

PP.SEAS.C03-T03	PIN Preferring, Standard EMV Application Selection Card 03 - Test 03

Type: Contact

Purpose:

Test that when a Visa card with a Credit and more than one Debit AID is inserted, the application:

1. Prompts the user for Application Selection by displaying all of the following applications: 'Visa Credit', 'Visa Debit' and 'US Debit'

2. Allows the user to select the 'US Debit' application

3. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000000031010, A0000000980840

Steps:

1. Start a Purchase transaction for $10.00

2. When prompted for card entry, insert Test Card 03

3. Select 'US Debit' application when prompted

4. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select all of the following applications: 'Visa Credit', 'Visa Debit' and 'US Debit'

3. User is able to select 'US Debit'

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000980840" – AID selected was 'US Debit'
    c. '0135 – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.10.11   PP.SEAS.C03-T04

PP.SEAS.C03-T04	PIN Preferring, Standard EMV Application Selection Card 03 - Test 04

Type: Contact

Purpose:

Test that when a Visa card with a Credit and more than one Debit AID is inserted, the application:

1. Prompts the user for Application Selection by displaying all of the following applications: 'Visa Credit', 'Visa Debit' and 'US Debit'

2. Allows the user to select the 'US Debit' application

3. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000000031010, A0000000980840

4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $10.00

2. When prompted for card entry, insert Test Card 03

3. Select 'US Debit' application when prompted

4. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select all of the following applications: 'Visa Credit', 'Visa Debit' and 'US Debit'

3. User is able to select 'US Debit'

4. The transaction is approved

5. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A0000000980840" – AID selected was 'US Debit'
   c. '0135' – last 4 digits of the PAN
   d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

B2》

3.3.10.12   PP.SEAS.C04-T01

PP.SEAS.C04-T01	PIN Preferring, Standard EMV Application Selection Card 04 - Test 01

Type: Contact

Purpose:

Test that when a Visa card with only the Interlink AID is inserted, the application:

1.   Does <u>not</u> prompt for Credit or Debit

2.   Does <u>not</u> prompt for Application Selection

3.   Automatically selects the 'Interlink' application

4.   Prompts the user to enter a PIN

Pre-Requisites:

1.   Application is configured as PIN Preferring

2.   Application Selection is Standard EMV Application Selection

3.   Terminal supports the following AID: A0000000033010

Steps:

1.   Start a Purchase transaction for $10.00

2.   When prompted for card entry, insert Test Card 04

3.   Enter PIN ("1234") when prompted

Pass Criteria:

1.   User is <u>not</u> prompted to select 'Credit' or 'Debit'

2.   User is <u>not</u> prompted to select an application

3.   The 'Interlink' application is automatically selected

4.   The transaction is approved

5.   Receipt shows:
     a.   "Chip" – indicates the card was inserted
     b.   "A0000000033010" – AID selected was 'Interlink'
     c.   "0671" – last 4 digits of the PAN
     d.   "Verified by PIN" – PIN CVM was used

Comments:

3.3.10.13   PP.SEAS.C05-T01

<table>
<tr><td colspan="2">PP.SEAS.C05-T01   PIN Preferring, Standard EMV Application Selection
Card 05 - Test 01</td></tr>
</table>

Type: Contact

Purpose:

Test that when a Mastercard card with more than one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit

2. Prompts the user for Application Selection by displaying 'Mastercard Debit' and 'US Maestro'

3. Allows the user to select the 'Mastercard Debit' application

4. Uses Signature/No CVM as the CVM for the transaction

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000000041010, A0000000042203

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 05

3. Select 'Mastercard Debit' application when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select 'Mastercard and 'US Maestro'

3. User is able to select 'Mastercard Debit'

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000041010" – AID selected was 'Mastercard Debit'
    c. "9130" – last 4 digits of the PAN
    d. "Signature panel" or "No signature required" – Signature or No CVM was used

Comments:

3.3.10.14   PP.SEAS.C05-T02

PP.SEAS.C05-T02	PIN Preferring, Standard EMV Application Selection Card 05 - Test 02

Type: Contact

Purpose:

Test that when a Mastercard card with more than one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit

2. Prompts the user for Application Selection by displaying 'Mastercard Debit' and 'US Maestro'

3. Allows the user to select the 'US Maestro' application

4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000000041010, A0000000042203

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 05

3. Select 'US Maestro' application when prompted

4. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select 'Mastercard Debit' and 'US Maestro'

3. User is able to select 'US Maestro'

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000042203" – AID selected was 'US Maestro'
    c. "9130" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

PP.SEAS.C05-T03	PIN Preferring, Standard EMV Application Selection Card 05 - Test 03

Type: Contact

Purpose:

Test that when a Mastercard card with more than one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit

2. Prompts the user for Application Selection by displaying 'Mastercard Debit' and 'US Maestro'

3. Allows the user to select the 'US Maestro' application

4. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000000041010, A0000000042203

4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, tap Test Card 05

3. Select 'US Maestro' application when prompted

4. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select 'Mastercard Debit' and 'US Maestro'

3. User is able to select 'US Maestro'

4. The transaction is approved

5. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A0000000042203" – AID selected was 'US Maestro'
   c. "9130" – last 4 digits of the PAN
   d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

B2»

3.3.10.16   PP.SEAS.C05-T04

<table>
<tr>
<td>PP.SEAS.C05-T04</td>
<td>PIN Preferring, Standard EMV Application Selection
Card 05 - Test 04</td>
</tr>
</table>

Type: Contactless

Purpose:

Test that when a Mastercard card with more than one Debit AID is tapped, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'Mastercard Debit' application
4. Uses Signature as the CVM for the transaction

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AIDs: A0000000041010, A0000000042203
4. Contactless CVM Floor limit is $0

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, tap Test Card 05

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'Mastercard Debit' application is automatically selected
4. The transaction is approved
5. Receipt shows:
    a. "Contactless" – indicates card was tapped
    b. "A0000000041010" – AID selected was 'Mastercard Debit'
    c. "9130" – last 4 digits of the PAN
    d. "Signature Panel" – Signature CVM was used

Comments:

3.3.10.17   PP.SEAS.C05-T05

<table>
<tr><td>PP.SEAS.C05-T05</td><td>PIN Preferring, Standard EMV Application Selection
Card 05 - Test 05</td></tr>
</table>

Type: Contactless

Purpose:

Test that when a Mastercard card with more than one Debit AID is tapped, the application:

1. Does <u>not</u> prompt for Credit or Debit

2. Does <u>not</u> prompt for Application Selection

3. Automatically selects the 'Mastercard Debit' application

4. Does <u>not</u> require a Signature as the transaction amount is under the Contactless CVM Floor Limit

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000000041010, A0000000042203

4. Contactless CVM Floor limit is above $20

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, tap Test Card 05

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is <u>not</u> prompted to select an application

3. The 'Mastercard Debit' application is automatically selected

4. The transaction is approved

5. Receipt shows:
    a. "Contactless" – indicates card was tapped
    b. "A0000000041010" – AID selected was 'Mastercard Debit'
    c. "9130" – last 4 digits of the PAN
    d. "No Signature Required" – No CVM was used

Comments:

B2》

3.3.10.18   PP.SEAS.C06-T01

PP.SEAS.C06-T01	PIN Preferring, Standard EMV Application Selection Card 06 - Test 01

Type: Contact

Purpose:

Test that when a Maestro card with more than one Maestro AID is inserted, the application:

1. Prompts the user for Application Selection by displaying 'Maestro1' and 'Maestro2'
2. Allows the user to select the 'Maestro1' application
3. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AID: A0000000043060

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 06
3. Select 'Maestro1' application when prompted
4. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is prompted to select 'Maestro1' and 'Maestro2'
3. User is able to select 'Maestro1'
4. The transaction is approved
5. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A0000000043060D0561111" – AID selected was 'Maestro1'
   c. "2010" – last 4 digits of the PAN
   d. "Verified by PIN" – PIN CVM was used

Comments:

B2》

3.3.10.19   PP.SEAS.C06-T02

PP.SEAS.C06-T02   PIN Preferring, Standard EMV Application Selection
Card 06 - Test 02

Type: Contact

Purpose:

Test that when a Maestro card with more than one Maestro AID is inserted, the application:

1. Prompts the user for Application Selection by displaying 'Maestro1' and 'Maestro2'

2. Allows the user to select the 'Maestro2' application

3. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AID: A0000000043060

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 06

3. Select 'Maestro2' application when prompted

4. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select 'Maestro1' and 'Maestro2'

3. User is able to select 'Maestro2'

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000043060D0562222" – AID selected was 'Maestro2'
    c. "2028" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.10.20   PP.SEAS.C07-T01

PP.SEAS.C07-T01	PIN Preferring, Standard EMV Application Selection Card 07 - Test 01

Type: Contact

Purpose:

Test that when a Mastercard card with a Credit and a Debit AID is inserted, the application:

1.   Prompts the user for Application Selection by displaying 'Mastercard' and 'Maestro'

2.   Allows the user to select the 'Mastercard' application

3.   Prompts the user to enter a PIN

Pre-Requisites:

1.   Application is configured as PIN Preferring

2.   Application Selection is Standard EMV Application Selection

3.   Terminal supports the following AIDs: A0000000041010, A0000000043060

Steps:

1.   Start a Purchase transaction for $20.00

2.   When prompted for card entry, insert Test Card 07

3.   Select 'Mastercard' application when prompted

4.   Enter PIN ("4315") when prompted

Pass Criteria:

1.   User is <u>not</u> prompted to select 'Credit' or 'Debit'

2.   User is prompted to select 'Mastercard' and 'Maestro'

3.   User is able to select 'Mastercard'

4.   The transaction is approved

5.   Receipt shows:
     a.   "Chip" – indicates card was inserted
     b.   "A0000000041010" – AID selected was 'Mastercard'
     c.   "0060" – last 4 digits of the PAN
     d.   "Verified by PIN" – PIN CVM was used

Comments:

3.3.10.21   PP.SEAS.C07-T02

PP.SEAS.C07-T02   PIN Preferring, Standard EMV Application Selection
Card 07 - Test 02

Type: Contact

Purpose:

Test that when a Mastercard card with a Credit and a Debit AID is inserted, the application:

1. Prompts the user for Application Selection by displaying 'Mastercard' and 'Maestro'
2. Allows the user to select the 'Mastercard' application
3. Allows the user to bypass the PIN

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AIDs: A0000000041010, A0000000043060
4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 07
3. Select 'Mastercard' application when prompted
4. When prompted for PIN, press Enter/Cancel to bypass the PIN entry

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is prompted to select 'Mastercard' and 'Maestro'
3. User is able to select 'Mastercard'
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000041010" – AID selected was 'Mastercard'
    c. "0060" – last 4 digits of the PAN
    d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

3.3.10.22   PP.SEAS.C07-T03

PP.SEAS.C07-T03	PIN Preferring, Standard EMV Application Selection Card 07 - Test 03

Type: Contact

Purpose:

Test that when a Mastercard card with a Credit and a Debit AID is inserted, the application:

1. Prompts the user for Application Selection by displaying 'Mastercard' and 'Maestro'
2. Allows the user to select the 'Maestro' application
3. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AIDs: A0000000041010, A0000000043060

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 07
3. Select 'Maestro' application when prompted
4. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is prompted to select 'Mastercard' and 'Maestro'
3. User is able to select 'Maestro'
4. The transaction is approved
5. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A0000000043060" – AID selected was Maestro
   c. "0051" – last 4 digits of the PAN
   d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.10.23   PP.SEAS.C08-T01

<table>
<tr><td>**PP.SEAS.C08-T01**</td><td>PIN Preferring, Standard EMV Application Selection
Card 08 - Test 01</td></tr>
</table>

Type: Contact

Purpose:

Test that when a U.S. Maestro card with more than one U.S. Maestro AID is inserted, the application:

1. Prompts the user for Application Selection by displaying 'US Checking' and 'US Savings'

2. Allows the user to select the 'US Checking' application

3. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AID: A0000000042203

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 08

3. Select 'US Checking' application when prompted

4. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select 'US Checking' and 'US Savings'

3. User is able to select 'US Checking'

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000042203D0561111" – AID selected was 'US Checking'
    c. "9007" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.10.24   PP.SEAS.C08-T02

PP.SEAS.C08-T02	PIN Preferring, Standard EMV Application Selection Card 08 - Test 02

Type: Contact

Purpose:

Test that when a U.S. Maestro card with more than one U.S. Maestro AID is inserted, the application:

1. Prompts the user for Application Selection by displaying 'US Checking' and 'US Savings'
2. Allows the user to select the 'US Checking' application
3. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AID: A0000000042203
4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 08
3. Select 'US Checking' application when prompted
4. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is prompted to select 'US Checking' and 'US Savings'
3. User is able to select 'US Checking'
4. When a PIN is not entered, transaction continues with No CVM or Signature
5. The transaction is approved
6. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000042203D0561111" – AID selected was 'US Checking'
    c. "9007" – last 4 digits of the PAN
    d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

3.3.10.25   PP.SEAS.C08-T03

PP.SEAS.C08-T03	PIN Preferring, Standard EMV Application Selection Card 08 - Test 03

Type: Contact

Purpose:

Test that when a U.S. Maestro card with more than one U.S. Maestro AID is inserted, the application:

1. Prompts the user for Application Selection by displaying 'US Checking' and 'US Savings'

2. Allows the user to select the 'US Savings' application

3. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AID: A0000000042203

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 08

3. Select 'US Savings' application when prompted

4. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select 'US Checking' and 'US Savings'

3. User is able to select 'US Savings'

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000042203D0562222" – AID selected was 'US Savings'
    c. "9015" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.10.26   PP.SEAS.C08-T04

PP.SEAS.C08-T04	PIN Preferring, Standard EMV Application Selection Card 08 - Test 04

Type: Contact

Purpose:

Test that when a U.S. Maestro card with more than one U.S. Maestro AID is inserted, the application:

1. Prompts the user for Application Selection by displaying 'US Checking' and 'US Savings'
2. Allows the user to select the 'US Savings' application
3. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AID: A0000000042203
4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 08
3. Select 'US Savings' application when prompted
4. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is prompted to select 'US Checking' and 'US Savings'
3. User is able to select 'US Savings'
4. When a PIN is not entered, transaction continues with No CVM or Signature
5. The transaction is approved
6. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A0000000042203D0562222" – AID selected was 'US Savings'
   c. "9015" – last 4 digits of the PAN
   d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

B2»

3.3.10.27   PP.SEAS.C09-T01

PP.SEAS.C09-T01	PIN Preferring, Standard EMV Application Selection Card 09 - Test 01

Type: Contact

Purpose:

Test that when a Mastercard card with a Credit AID and more than one Debit AID is inserted, the application:

1. Prompts the user for Application Selection by displaying all of the following applications: 'Mastercard', 'Maestro' and 'US Maestro'

2. Allows the user to select the 'Mastercard' application

3. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 09

3. Select 'Mastercard' application when prompted

4. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select all of the following applications: 'Mastercard', 'Maestro' and 'US Maestro'

3. User is able to select 'Mastercard'

4. The transaction is approved

5. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A0000000041010" – AID selected was 'Mastercard'
   c. "0060" – last 4 digits of the PAN
   d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.10.28 PP.SEAS.C09-T02

PP.SEAS.C09-T02 PIN Preferring, Standard EMV Application Selection
Card 09 - Test 02

Type: Contact

Purpose:

Test that when a Mastercard card with a Credit AID and more than one Debit AID is inserted, the application:

1. Prompts the user for Application Selection by displaying all of the following applications: 'Mastercard', 'Maestro' and 'US Maestro'

2. Allows the user to select the 'Mastercard' application

3. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 09

3. Select 'Mastercard' application when prompted

4. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select all of the following applications: 'Mastercard', 'Maestro' and 'US Maestro'

3. User is able to select 'Mastercard'

4. When PIN is <u>not</u> entered the transaction continues with No CVM or Signature

5. The transaction is approved

6. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000041010" – AID selected was 'Mastercard'
    c. "0060" – last 4 digits of the PAN
    d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

3.3.10.29   PP.SEAS.C09-T03

PP.SEAS.C09-T03	PIN Preferring, Standard EMV Application Selection Card 09 - Test 03

Type: Contact

Purpose:

Test that when a Mastercard card with a Credit AID and more than one Debit AID is inserted, the application:

1. Prompts the user for Application Selection by displaying all of the following applications: 'Mastercard', 'Maestro' and 'US Maestro'

2. Allows the user to select the 'Maestro' application

3. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 09

3. Select 'Maestro' application when prompted

4. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select all of the following applications: 'Mastercard', 'Maestro' and 'US Maestro'

3. User is able to select 'Maestro'

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000043060" – AID selected was 'Maestro'
    c. "0051" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

B2》

3.3.10.30   PP.SEAS.C09-T04

PP.SEAS.C09-T04   PIN Preferring, Standard EMV Application Selection Card 09 - Test 04

Type: Contact

Purpose:

Test that when a Mastercard card with a Credit AID and more than one Debit AID is inserted, the application:

1. Prompts the user for Application Selection by displaying all of the following applications: 'Mastercard', 'Maestro' and 'US Maestro'

2. Allows the user to select the 'US Maestro' application

3. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 09

3. Select 'US Maestro' application when prompted

4. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select all of the following applications: 'Mastercard', 'Maestro' and 'US Maestro'

3. User is able to select 'US Maestro'

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000042203" – AID selected was 'US Maestro'
    c. "0051" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

B2〉〉

3.3.10.31   PP.SEAS.C09-T05

PP.SEAS.C09-T05	PIN Preferring, Standard EMV Application Selection Card 09 - Test 05

Type: Contact

Purpose:

Test that when a Mastercard card with a Credit AID and more than one Debit AID is inserted, the application:

1. Prompts the user for Application Selection by displaying all of the following applications: 'Mastercard', 'Maestro' and 'US Maestro'

2. Allows the user to select the 'US Maestro' application

3. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 09

3. Select 'US Maestro' application when prompted

4. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select all of the following applications: 'Mastercard', 'Maestro' and 'US Maestro'

3. User is able to select 'US Maestro'

4. When PIN is <u>not</u> entered the transaction continues with No CVM or Signature

5. The transaction is approved

6. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000042203" – AID selected was 'US Maestro'
    c. "0051" – last 4 digits of the PAN
    d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

3.3.10.32   PP.SEAS.C10-T01

PP.SEAS.C10-T01	PIN Preferring, Standard EMV Application Selection Card 10 - Test 01

Type: Contact

Purpose:

Test that when a Mastercard card with only one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit

2. Does <u>not</u> prompt for Application Selection

3. Automatically selects the 'US Maestro' application

4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AID: A0000000042203

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 10

3. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is <u>not</u> prompted to select an application

3. The 'US Maestro' application is automatically selected

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000000042203" – AID selected was 'US Maestro'
    c. "9130" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.10.33   PP.SEAS.C10-T02

PP.SEAS.C10-T02	PIN Preferring, Standard EMV Application Selection Card 10 - Test 02

Type: Contact

Purpose:

Test that when a Mastercard card with only one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'US Maestro' application
4. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AID: A0000000042203
4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 10
3. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'US Maestro' application is automatically selected
4. When a PIN is not entered, transaction continues with No CVM or Signature
5. The transaction is approved
6. Receipt shows:
   a. "Chip" – indicates the card was inserted
   b. "A0000000042203" – AID selected was 'US Maestro'
   c. "9130" – last 4 digits of the PAN
   d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

3.3.10.34   PP.SEAS.C11-T01

<table>
<tr><td>PP.SEAS.C11-T01</td><td>PIN Preferring, Standard EMV Application Selection
Card 11 - Test 01</td></tr>
</table>

Type: Contact

Purpose:

Test that when a Mastercard Debit card with 2 pairs of U.S. Debit AIDs is inserted, the application:

1. Prompts the user for Application Selection by displaying all of the following applications: 'Mastercard Debit', 'US Checking', 'Maestro' and 'US Savings'

2. Allows the user to select the 'Mastercard Debit' application

3. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 11

3. Select 'Mastercard Debit' application when prompted

4. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select all of the following applications: 'Mastercard Debit', 'US Checking', 'Maestro' and 'US Savings'

3. User is able to select 'Mastercard Debit'

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000041010" – AID selected was 'Mastercard Debit'
    c. "0060" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.10.35 PP.SEAS.C11-T02

PP.SEAS.C11-T02	PIN Preferring, Standard EMV Application Selection Card 11 - Test 02

Type: Contact

Purpose:

Test that when a Mastercard Debit card with 2 pairs of U.S. Debit AIDs is inserted, the application:

1. Prompts the user for Application Selection by displaying all of the following applications: 'Mastercard Debit', 'US Checking', 'Maestro' and 'US Savings'

2. Allows the user to select the 'Mastercard Debit' application

3. Allows the user to bypass PIN entry

Pre-Requisites:

4. Application is configured as PIN Preferring

5. Application Selection is Standard EMV Application Selection

6. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

7. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 11

3. Select 'Mastercard Debit' application when prompted

4. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select all of the following applications: 'Mastercard Debit', 'US Checking', 'Maestro' and 'US Savings'

3. User is able to select 'Mastercard Debit'

4. When a PIN is not entered, transaction continues with No CVM or Signature

5. The transaction is approved

6. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A0000000041010" – AID selected was 'Mastercard Debit'
   c. "0060" – last 4 digits of the PAN
   d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

3.3.10.36   PP.SEAS.C11-T03

PP.SEAS.C11-T03   PIN Preferring, Standard EMV Application Selection
Card 11 - Test 03

Type: Contact

Purpose:

Test that when a Mastercard Debit card with 2 pairs of U.S. Debit AIDs is inserted, the application:

1. Prompts the user for Application Selection by displaying all of the following applications: 'Mastercard Debit', 'US Checking', 'Maestro' and 'US Savings'

2. Allows the user to select the 'US Checking' application

3. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 11

3. Select 'US Checking' application when prompted

4. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select all of the following applications: 'Mastercard Debit', 'US Checking', 'Maestro' and 'US Savings'

3. User is able to select 'US Checking'

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A000000004220301" – AID selected was 'US Checking'
    c. "0060" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.10.37   PP.SEAS.C11-T04

PP.SEAS.C11-T04	PIN Preferring, Standard EMV Application Selection Card 11 - Test 04

Type: Contact

Purpose:

Test that when a Mastercard Debit card with 2 pairs of U.S. Debit AIDs is inserted, the application:

1. Prompts the user for Application Selection by displaying all of the following applications: 'Mastercard Debit', 'US Checking', 'Maestro' and 'US Savings'

2. Allows the user to select the 'US Checking' application

3. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 11

3. Select 'US Checking' application when prompted

4. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select all of the following applications: 'Mastercard Debit', 'US Checking', 'Maestro' and 'US Savings'

3. User is able to select 'US Checking'

4. When a PIN is not entered, transaction continues with No CVM or Signature

5. The transaction is approved

6. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A000000004220301" – AID selected was 'US Checking'
   c. "0060" – last 4 digits of the PAN
   d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

3.3.10.38 PP.SEAS.C11-T05

PP.SEAS.C11-T05	PIN Preferring, Standard EMV Application Selection Card 11 - Test 05

Type: Contact

Purpose:

Test that when a Mastercard Debit card with 2 pairs of U.S. Debit AIDs is inserted, the application:

1. Prompts the user for Application Selection by displaying all of the following applications: 'Mastercard Debit', 'US Checking', 'Maestro' and 'US Savings'

2. Allows the user to select the 'Maestro' application

3. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 11

3. Select 'Maestro' application when prompted

4. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select all of the following applications: 'Mastercard Debit', 'US Checking', 'Maestro' and 'US Savings'

3. User is able to select 'Maestro'

4. The transaction is approved

5. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A0000000043060" – AID selected was 'Maestro'
   c. "0051" – last 4 digits of the PAN
   d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.10.39   PP.SEAS.C11-T06

PP.SEAS.C11-T06	PIN Preferring, Standard EMV Application Selection Card 11 - Test 06

Type: Contact

Purpose:

Test that when a Mastercard Debit card with 2 pairs of U.S. Debit AIDs is inserted, the application:

1. Prompts the user for Application Selection by displaying all of the following applications: 'Mastercard Debit', 'US Checking', 'Maestro' and 'US Savings'

2. Allows the user to select the 'US Savings' application

3. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 11

3. Select 'US Savings' application when prompted

4. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select all of the following applications: 'Mastercard Debit', 'US Checking', 'Maestro' and 'US Savings'

3. User is able to select 'US Savings'

4. The transaction is approved

5. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A000000004220302" – AID selected was 'US Savings'
   c. "0051" – last 4 digits of the PAN
   d. "Verified by PIN" – PIN CVM was used

Comments:

PP.SEAS.C11-T07	PIN Preferring, Standard EMV Application Selection Card 11 - Test 07

Type: Contact

Purpose:

Test that when a Mastercard Debit card with 2 pairs of U.S. Debit AIDs is inserted, the application:

1. Prompts the user for Application Selection by displaying all of the following applications: 'Mastercard Debit', 'US Checking', 'Maestro' and 'US Savings'

2. Allows the user to select the 'US Savings' application

3. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 11

3. Select 'US Savings' application when prompted

4. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select all of the following applications: 'Mastercard Debit', 'US Checking', 'Maestro' and 'US Savings'

3. User is able to select 'US Savings'

4. When a PIN is not entered, transaction continues with No CVM or Signature

5. The transaction is approved

6. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A000000004220302" – AID selected was 'US Savings'
   c. "0051" – last 4 digits of the PAN
   d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

3.3.10.41   PP.SEAS.C12-T01

PP.SEAS.C12-T01	PIN Preferring, Standard EMV Application Selection Card 12 - Test 01

Type: Contact

Purpose:

Test that when a Discover card with more than one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Prompts the user for Application Selection by displaying 'US Debit' and 'Discover Debit'
3. Allows the user to select the 'US Debit' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AIDs: A0000001524010, A0000001523010

Steps:

1. Start a Purchase transaction for $79.00
2. When prompted for card entry, insert Test Card 12
3. Select 'US Debit' application when prompted
4. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is prompted to select 'US Debit' and 'Discover Debit'
3. User is able to select 'US Debit'
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000001524010" – AID selected was 'US Debit'
    c. "0005" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.10.42   PP.SEAS.C12-T02

<table>
<tr><td>PP.SEAS.C12-T02</td><td>PIN Preferring, Standard EMV Application Selection
Card 12 - Test 02</td></tr>
</table>

Type: Contact

Purpose:

Test that when a Discover card with more than one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Prompts the user for Application Selection by displaying 'US Debit' and 'Discover Debit'
3. Allows the user to select the 'US Debit' application
4. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AIDs: A0000001524010, A0000001523010
4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $79.00
2. When prompted for card entry, insert Test Card 12
3. Select 'US Debit' application when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is prompted to select 'US Debit' and 'Discover Debit'
3. User is able to select 'US Debit'
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000001524010" – AID selected was 'US Debit'
    c. "0005" – last 4 digits of the PAN
    d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

3.3.10.43   PP.SEAS.C12-T03

PP.SEAS.C12-T03	PIN Preferring, Standard EMV Application Selection Card 12 - Test 03

Type: Contact

Purpose:

Test that when a Discover card with more than one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit

2. Prompts the user for Application Selection by displaying 'US Debit' and 'Discover Debit'

3. Allows the user to select the 'Discover Debit' application

4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000001524010, A0000001523010

Steps:

1. Start a Purchase transaction for $79.00

2. When prompted for card entry, insert Test Card 12

3. Select 'Discover Debit' application when prompted

4. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is prompted to select 'US Debit' and 'Discover Debit'

3. User is able to select 'Discover Debit'

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000001523010" – AID selected was 'Discover Debit'
    c. "0005" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.10.44   PP.SEAS.C12-T04

PP.SEAS.C12-T04	PIN Preferring, Standard EMV Application Selection Card 12 - Test 04

Type: Contact

Purpose:

Test that when a Discover card with more than one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Prompts the user for Application Selection by displaying 'US Debit' and 'Discover Debit'
3. Allows the user to select the 'Discover Debit' application
4. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AIDs: A0000001524010, A0000001523010
4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $79.00
2. When prompted for card entry, insert Test Card 12
3. Select 'Discover Debit' application when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is prompted to select 'US Debit' and 'Discover Debit'
3. User is able to select 'Discover Debit'
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000001523010" – AID selected was 'Discover Debit'
    c. "0005" – last 4 digits of the PAN
    d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

PP.SEAS.C12-T05	PIN Preferring, Standard EMV Application Selection Card 05 - Test 05

Type: Contactless

Purpose:

Test that when a Discover card with more than one Debit AID is tapped, the application:

1. Does <u>not</u> prompt for Credit or Debit

2. Does <u>not</u> prompt for Application Selection

3. Automatically selects the 'US Debit' application

4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000001524010, A0000001523010

4. Contactless CVM Floor limit is $0

Steps:

1. Start a Purchase transaction for $79.00

2. When prompted for card entry, tap Test Card 12

3. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is <u>not</u> prompted to select an application

3. The 'US Debit' application is automatically selected

4. The transaction is approved

5. Receipt shows:
    a. "Contactless" – indicates card was tapped
    b. "A0000001524010" – AID selected was 'US Debit'
    c. "0005" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.10.46   PP.SEAS.C12-T06

PP.SEAS.C12-T06	PIN Preferring, Standard EMV Application Selection Card 12 - Test 06

Type: Contactless

Purpose:

Test that when a Discover card with more than one Debit AID is tapped, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'US Debit' application
4. Does <u>not</u> prompt for PIN as the transaction amount is under the Contactless CVM Floor Limit

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AIDs: A0000001524010, A0000001523010
4. Contactless CVM Floor limit is above $79

Steps:

1. Start a Purchase transaction for $79.00
2. When prompted for card entry, tap Test Card 12

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'US Debit' application is automatically selected
4. The transaction is approved
5. Receipt shows:
    a. "Contactless" – indicates card was tapped
    b. "A0000001524010" – AID selected was 'US Debit'
    c. "0005" – last 4 digits of the PAN
    d. "No Signature Required" – No CVM was used

Comments:

3.3.10.47   PP.SEAS.C13-T01

PP.SEAS.C13-T01	PIN Preferring, Standard EMV Application Selection Card 13 - Test 01

Type: Contact

Purpose:

Test that when a Discover card with only one Debit AID is inserted, the application:

1.   Does <u>not</u> prompt for Credit or Debit

2.   Does <u>not</u> prompt for Application Selection

3.   Automatically selects the 'US Debit' application

4.   Prompts the user to enter a PIN

Pre-Requisites:

1.   Application is configured as PIN Preferring

2.   Application Selection is Standard EMV Application Selection

3.   Terminal supports the following AID: A0000001524010

Steps:

1.   Start a Purchase transaction for $79.00

2.   When prompted for card entry, insert Test Card 13

3.   Enter PIN ("1234") when prompted

Pass Criteria:

1.   User is <u>not</u> prompted to select 'Credit' or 'Debit'

2.   User is <u>not</u> prompted to select an application

3.   The 'US Debit' application is automatically selected

4.   The transaction is approved

5.   Receipt shows:
     a.   "Chip" – indicates the card was inserted
     b.   "A0000001524010" – AID selected was 'US Debit'
     c.   "0005" – last 4 digits of the PAN
     d.   "Verified by PIN" – PIN CVM was used

Comments:

3.3.10.48   PP.SEAS.C13-T02

PP.SEAS.C13-T02	PIN Preferring, Standard EMV Application Selection Card 13 - Test 02

Type: Contact

Purpose:

Test that when a Discover card with only one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'US Debit' application
4. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as PIN Preferring
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AID: A0000001524010
4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $79.00
2. When prompted for card entry, insert Test Card 13
3. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'US Debit' application is automatically selected
4. When a PIN is not entered, transaction continues with No CVM or Signature
5. The transaction is approved
6. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000001524010" – AID selected was 'US Debit'
    c. "0005" – last 4 digits of the PAN
    d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

B2》

3.3.10.49   PP.SEAS.C14-T01

PP.SEAS.C14-T01   PIN Preferring, Standard EMV Application Selection
Card 14 - Test 01

Type: Contact

Purpose:

Test that when a DNA card with only one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit

2. Does <u>not</u> prompt for Application Selection

3. Automatically selects the 'DNA' application

4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as PIN Preferring

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AID: A0000006200620

Steps:

1. Start a Purchase transaction for $10.00

2. When prompted for card entry, insert Test Card 14

3. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is <u>not</u> prompted to select an application

3. The 'DNA' application is automatically selected

4. The transaction is approved *

5. Receipt shows:
   a. "Chip" – indicates the card was inserted
   b. "A0000006200620" – AID selected was 'DNA'
   c. "0028" – last 4 digits of the PAN
   d. "Verified by PIN" – PIN CVM was used

Comments:

* Final disposition (Approved / Declined) is outside the scope of this document.
For this test case to be successful, the transaction should go online but as the
cryptogram doesn't need to be valid, the host may approve or decline.

3.3.10.50   PP.SEAS.C15-T01

PP.SEAS.C15-T01	PIN Preferring, Standard EMV Application Selection Card 15 - Test 01

Type: Contact

Purpose:

Test that when an Interac Flash card with only one Debit AID is inserted, the application:

1.   Does <u>not</u> prompt for Credit or Debit

2.   Does <u>not</u> prompt for Application Selection

3.   Automatically selects the 'Interac' application

4.   Prompts the user to enter a PIN

Pre-Requisites:

1.   Application is configured as PIN Preferring

2.   Application Selection is Standard EMV Application Selection

3.   Terminal supports the following AID: A0000002771010

Steps:

1.   Start a Purchase transaction for $30.00

2.   When prompted for card entry, insert Test Card 15

3.   Enter PIN ("1234") when prompted

Pass Criteria:

1.   User is <u>not</u> prompted to select 'Credit' or 'Debit'

2.   User is <u>not</u> prompted to select an application

3.   The 'Interac' application is automatically selected

4.   The transaction is approved

5.   Receipt shows:
    a.   "Chip" – indicates the card was inserted
    b.   "A0000002771010" – AID selected was 'Interac'
    c.   "8644" – last 4 digits of the PAN
    d.   "Verified by PIN" – PIN CVM was used

Comments:

   Account selection prompting (Chequing/Savings) is not a requirement for terminals deployed in the USA.

3.3.10.51   PP.SEAS.C16-T01

PLEASE READ IMPORTANT NOTES AT THE BEGINING OF SECTION 3.3

PP.SEAS.C16-T01   PIN Preferring, Standard EMV Application Selection Card 16 - Test 01

Type: Contact

Purpose:

Test that when an Interac card with only one Debit AID is inserted, the application:

1.   Does <u>not</u> prompt for Credit or Debit

2.   Does <u>not</u> prompt for Application Selection

3.   Automatically selects the 'Interac' application

4.   Prompts the user to enter a PIN

Pre-Requisites:

1.   Application is configured as PIN Preferring

2.   Application Selection is Standard EMV Application Selection

3.   Terminal supports the following AID: A0000002771010

Steps:

1.   Start a Purchase transaction for $30.00

2.   When prompted for card entry, insert Test Card 16

3.   Enter PIN ("1234") when prompted

Pass Criteria:

1.   User is <u>not</u> prompted to select 'Credit' or 'Debit'

2.   User is <u>not</u> prompted to select an application

3.   The 'Interac' application is automatically selected

4.   The transaction is approved

5.   Receipt shows:
    a.   "Chip" – indicates the card was inserted
    b.   "A0000002771010" – AID selected was 'Interac'
    c.   "1933" – last 4 digits of the PAN
    d.   "Verified by PIN" – PIN CVM was used

Comments:

Account selection prompting (Chequing/Savings) is not a requirement for terminals deployed in the USA.

3.3.11 Credit/Debit Prompting, Merchant Controlled Candidate List – Test Cases

3.3.11.1 CD.MCCL.C01-T01

CD.MCCL.C01-T01 Credit/Debit Prompting, Merchant Controlled Candidate List Card 01 - Test 01

Type: Contact

Purpose:

Test that when a Visa card with more than one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'US Debit' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AIDs: A0000000031010, A0000000980840

Steps:

1. Start a Purchase transaction for $10.00
2. When prompted for card entry, insert Test Card 01
3. When prompted, select 'Debit'
4. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'US Debit' application is automatically selected
4. The transaction is approved
5. Receipt shows:
   a. "Chip" – indicates the card was inserted
   b. "A0000000980840" – AID selected was 'US Debit'
   c. "0135" – last 4 digits of the PAN
   d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.11.2 CD.MCCL.C01-T02

CD.MCCL.C01-T02	Credit/Debit Prompting, Merchant Controlled Candidate List Card 01 - Test 02

Type: Contact

Purpose:

Test that when a Visa card with more than one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Credit')
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'Visa Debit' application
4. Uses Signature/No CVM as the CVM for the transaction

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AIDs: A0000000031010, A0000000980840

Steps:

1. Start a Purchase transaction for $10.00
2. When prompted for card entry, insert Test Card 01
3. When prompted, select 'Credit'

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'Visa Debit' application is automatically selected
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000000031010" – AID selected was 'Visa Debit'
    c. "0135" – last 4 digits of the PAN
    d. "Signature panel" or "No signature required" – Signature or No CVM was used

Comments:

3.3.11.3   CD.MCCL.C01-T03

CD.MCCL.C01-T03	Credit/Debit Prompting, Merchant Controlled Candidate List Card 01 - Test 03

Type: Contactless

Purpose:

Test that when a Visa card with more than one Debit AID is tapped, the application:

1. Does <u>not</u> prompt for Credit or Debit

2. Does <u>not</u> prompt for Application Selection

3. Automatically selects the 'US Debit' application

4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting

2. Application Selection is Merchant Controlled by filtering the Candidate List

3. Terminal supports the following AIDs: A0000000031010, A0000000980840

4. Contactless CVM Floor limit is $0

Steps:

1. Start a Purchase transaction for $10.00

2. When prompted for card entry, tap Test Card 01

3. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is <u>not</u> prompted to select an application

3. The 'US Debit' application is automatically selected

4. The transaction is approved

5. Receipt shows:
    a. "Contactless" – indicates card was tapped
    b. "A0000000980840" – AID selected was 'US Debit'
    c. "0135" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.11.4   CD.MCCL.C01-T04

CD.MCCL.C01-T04	Credit/Debit Prompting, Merchant Controlled Candidate List Card 01 - Test 04

Type: Contactless

Purpose:

Test that when a Visa card with more than one Debit AID is tapped, the application:

1. Does <u>not</u> prompt for Credit or Debit

2. Does <u>not</u> prompt for Application Selection

3. Automatically selects the 'US Debit' application

4. Does <u>not</u> prompt for PIN as the transaction amount is under the Contactless CVM Floor Limit

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting

2. Application Selection is Merchant Controlled by filtering the Candidate List

3. Terminal supports the following AIDs: A0000000031010, A0000000980840

4. Contactless CVM Floor limit is above $10

Steps:

1. Start a Purchase transaction for $10.00

2. When prompted for card entry, tap Test Card 01

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is <u>not</u> prompted to select an application

3. User is <u>not</u> prompted to enter a PIN

4. The 'US Debit' application is automatically selected

5. The transaction is approved

6. Receipt shows:
   a. "Contactless" – indicates card was tapped
   b. "A0000000980840" – AID selected was 'US Debit'
   c. "0135" – last 4 digits of the PAN
   d. "No signature required" – No CVM was used

Comments:

3.3.11.5   **CD.MCCL.C02-T01**

CD.MCCL.C02-T01	Credit/Debit Prompting, Merchant Controlled Candidate List Card 02 - Test 01

Type: Contact

Purpose:

Test that when a Visa card with only one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'US Debit' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AID: A0000000980840

Steps:

1. Start a Purchase transaction for $10.00
2. When prompted for card entry, insert Test Card 02
3. When prompted, select 'Debit'
4. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'US Debit' application is automatically selected
4. The transaction is approved
5. Receipt shows:
   a. "Chip" – indicates the card was inserted
   b. "A0000000980840" – AID selected was 'US Debit'
   c.
   d. "0135" – last 4 digits of the PAN
   e. "Verified by PIN" – PIN CVM was used

Comments:

3.3.11.6   CD.MCCL.C02-T02

CD.MCCL.C02-T02	Credit/Debit Prompting, Merchant Controlled Candidate List Card 02 - Test 02

Type: Contact

Purpose:

Test that when a Visa card with only one Debit AID is inserted, the application:

1.   Prompts for Credit and Debit (user selects 'Credit')

2.   Does not prompt for Application Selection

3.   Automatically selects the 'US Debit' application

4.   Uses Signature/No CVM as the CVM for the transaction

Pre-Requisites:

1.   Application is configured as Credit/Debit Prompting

2.   Application Selection is Merchant Controlled by filtering the Candidate List

3.   Terminal supports the following AID: A0000000980840

Steps:

1.   Start a Purchase transaction for $10.00

2.   When prompted for card entry, insert Test Card 02

3.   When prompted, select 'Credit'

Pass Criteria:

1.   User is prompted to select 'Credit' and 'Debit'

2.   User is not prompted to select an application

3.   The 'US Debit' application is automatically selected

4.   The transaction is approved

5.   Receipt shows:
     a.   "Chip" – indicates the card was inserted
     b.   "A0000000980840" – AID selected was 'US Debit'
     c.   "0135" – last 4 digits of the PAN
     d.   "Signature panel" or "No signature required" – Signature or No CVM was used

Comments:

3.3.11.7   CD.MCCL.C03-T01

CD.MCCL.C03-T01	Credit/Debit Prompting, Merchant Controlled Candidate List Card 03 - Test 01

Type: Contact

Purpose:

Test that when a Visa card with a Credit AID and more than one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Credit')

2. Prompts the user for Application Selection by displaying the following applications: 'Visa Credit' and 'Visa Debit'

3. Allows the user to select the 'Visa Credit' application

4. Uses Signature/No CVM as the CVM for the transaction

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting

2. Application Selection is Merchant Controlled by filtering the Candidate List

3. Terminal supports the following AIDs: A0000000031010, A0000000980840

Steps:

1. Start a Purchase transaction for $10.00

2. When prompted for card entry, insert Test Card 03

3. When prompted, select 'Credit'

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'

2. User is prompted to select all of the following applications: 'Visa Credit' and 'Visa Debit'

3. User is able to select 'Visa Credit'

4. The transaction is approved

5. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A000000003101001" – AID selected was 'Visa Credit'
   c. "0176" – last 4 digits of the PAN
   d. "Signature panel" or "No signature required" – Signature or No CVM was used

Comments:

3.3.11.8   CD.MCCL.C03-T02

CD.MCCL.C03-T02	Credit/Debit Prompting, Merchant Controlled Candidate List Card 03 - Test 02

Type: Contact

Purpose:

Test that when a Visa card with a Credit AID and more than one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Credit)

2. Prompts the user for Application Selection by displaying the following applications: 'Visa Credit' and 'Visa Debit'

3. Allows the user to select the 'Visa Debit' application

4. Uses Signature/No CVM as the CVM for the transaction

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting

2. Application Selection is Merchant Controlled by filtering the Candidate List

3. Terminal supports the following AIDs: A0000000031010, A0000000980840

Steps:

1. Start a Purchase transaction for $10.00

2. When prompted for card entry, insert Test Card 03

3. When prompted, select 'Credit'

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'

2. User is prompted to select all of the following applications: 'Visa Credit' and 'Visa Debit'

3. User is able to select 'Visa Debit'

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A000000003101002" – AID selected was 'Visa Debit'
    c. "0135" – last 4 digits of the PAN
    d. "Signature panel" or "No signature required" – Signature or No CVM was used

Comments:

3.3.11.9   CD.MCCL.C03-T03

CD.MCCL.C03-T03   Credit/Debit Prompting, Merchant Controlled Candidate List
Card 03 - Test 03

Type: Contact

Purpose:

Test that when a Visa card with a Credit AID and more than one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')
2. Does not prompt for Application Selection
3. Automatically selects the 'US Debit' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AIDs: A0000000031010, A0000000980840

Steps:

1. Start a Purchase transaction for $10.00
2. When prompted for card entry, insert Test Card 03
3. When prompted, select 'Debit'
4. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is not prompted to select an application
3. The 'US Debit' application is automatically selected
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000000980840" – AID selected was 'US Debit'
    c. "0135" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.11.10 CD.MCCL.C04-T01

CD.MCCL.C04-T01 Credit/Debit Prompting, Merchant Controlled Candidate List Card 04 - Test 01

Type: Contact

Purpose:

Test that when a Visa card with only the Interlink AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'Interlink' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AID: A0000000033010

Steps:

1. Start a Purchase transaction for $10.00
2. When prompted for card entry, insert Test Card 04
3. When prompted, select 'Debit'
4. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'Interlink' application is automatically selected
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000000033010" – AID selected was 'Interlink'
    c. "0671" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.11.11 CD.MCCL.C05-T01

CD.MCCL.C05-T01	Credit/Debit Prompting, Merchant Controlled Candidate List Card 05 - Test 01

Type: Contact

Purpose:

Test that when a Mastercard card with more than one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'US Maestro' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AIDs: A0000000041010, A0000000042203

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 05
3. When prompted, select 'Debit'
4. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'US Maestro' application is automatically selected
4. The transaction is approved
5. Receipt shows:
   a. "Chip" – indicates the card was inserted
   b. "A0000000042203" – AID selected was 'US Maestro'
   c. "9130" – last 4 digits of the PAN
   d. "Verified by PIN" – PIN CVM was used

Comments:

B2»

3.3.11.12   CD.MCCL.C05-T02

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CD.MCCL.C05-T02   Credit/Debit Prompting, Merchant Controlled Candidate List
Card 05 - Test 02

Type: Contact

Purpose:

Test that when a Mastercard card with more than one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Credit')
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'Mastercard Debit' application
4. Uses Signature/No CVM as the CVM for the transaction

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AIDs: A0000000041010, A0000000042203

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 05
3. When prompted, select 'Credit'

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'Mastercard Debit' application is automatically selected
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000000041010" – AID selected was 'Mastercard Debit'
    c. "9130" – last 4 digits of the PAN
    d. "Signature panel" or "No signature required" – Signature or No CVM was used

Comments:

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3.3.11.13   CD.MCCL.C05-T03

CD.MCCL.C05-T03	Credit/Debit Prompting, Merchant Controlled Candidate List Card 05 - Test 03

Type: Contactless

Purpose:

Test that when a Mastercard card with more than one Debit AID is tapped, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'US Maestro' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AIDs: A0000000041010, A0000000042203
4. Contactless CVM Floor limit is $0

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, tap Test Card 05
3. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'US Maestro' application is automatically selected
4. The transaction is approved
5. Receipt shows:
    a. "Contactless" – indicates card was tapped
    b. "A0000000042203" – AID selected was 'US Maestro'
    c. "9130" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.11.14   CD.MCCL.C05-T04

CD.MCCL.C05-T04	Credit/Debit Prompting, Merchant Controlled Candidate List Card 05 - Test 04

Type: Contactless

Purpose:

Test that when a Mastercard card with more than one Debit AID is tapped, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'US Maestro' application
4. Does <u>not</u> prompt for PIN as the transaction amount is under the Contactless CVM Floor Limit

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AIDs: A0000000041010, A0000000042203
4. Contactless CVM Floor limit is above $10

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, tap Test Card 05

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is <u>not</u> prompted to select an application
3. User is <u>not</u> prompted to enter a PIN
4. The 'US Maestro' application is automatically selected
5. The transaction is approved
6. Receipt shows:
   a. "Contactless" – indicates card was tapped
   b. "A0000000042203" – AID selected was 'US Maestro'
   c. "9130" – last 4 digits of the PAN
   d. "No signature required" – No CVM was used

Comments:

B2»

3.3.11.15 CD.MCCL.C06-T01

CD.MCCL.C06-T01	Credit/Debit Prompting, Merchant Controlled Candidate List Card 06 - Test 01

Type: Contact

Purpose:

Test that when a Maestro card with more than one Maestro AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')
2. Prompts the user for Application Selection by displaying 'Maestro1' and 'Maestro2'
3. Allows the user to select the 'Maestro1' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AID: A0000000043060

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 06
3. When prompted, select 'Debit'
4. Select 'Maestro1' application when prompted
5. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is prompted to select 'Maestro1' and 'Maestro2'
3. User is able to select 'Maestro1'
4. The transaction is approved
5. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A0000000043060D0561111" – AID selected was 'Maestro1'
   c. "2010" – last 4 digits of the PAN
   d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.11.16   CD.MCCL.C06-T02

CD.MCCL.C06-T02	Credit/Debit Prompting, Merchant Controlled Candidate List Card 06 - Test 02

Type: Contact

Purpose:

Test that when a Maestro card with more than one Maestro AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')
2. Prompts the user for Application Selection by displaying 'Maestro1' and 'Maestro2'
3. Allows the user to select the 'Maestro2' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Merchant Controlled by filtering the Candidate List
1. Terminal supports the following AID: A0000000043060

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 06
3. When prompted, select 'Debit'
4. Select 'Maestro2' application when prompted
5. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is prompted to select 'Maestro1' and 'Maestro2'
3. User is able to select 'Maestro2'
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000043060D0562222" – AID selected was 'Maestro2'
    c. "2028" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.11.17   CD.MCCL.C07-T01

CD.MCCL.C07-T01   Credit/Debit Prompting, Merchant Controlled Candidate List
                       Card 07 - Test 01

Type: Contact

Purpose:

Test that when a Mastercard card with a Credit AID and a Debit AID is inserted, the
application:

1. Prompts for Credit and Debit (user selects 'Credit')

2. Prompts the user for Application Selection by displaying 'Mastercard' and
    'Maestro'

3. Allows the user to select the 'Mastercard' application

4. Uses Signature/No CVM as the CVM for the transaction

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting

2. Application Selection is Merchant Controlled by filtering the Candidate List

3. Terminal supports the following AIDs: A0000000041010, A0000000043060

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 07

3. When prompted, select 'Credit'

4. Select 'Mastercard' application when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'

2. User is prompted to select 'Mastercard' and 'Maestro'

3. User is able to select 'Mastercard'

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000041010" – AID selected was 'Mastercard'
    c. "0060" - last 4 digits of the PAN
    d. "Signature panel" or "No signature required" – Signature or No CVM was
        used

Comments:

3.3.11.18   CD.MCCL.C07-T02

CD.MCCL.C07-T02	Credit/Debit Prompting, Merchant Controlled Candidate List Card 07 - Test 02

Type: Contact

Purpose:

Test that when a Mastercard card with a Credit AID and a Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')
2. Prompts the user for Application Selection by displaying 'Mastercard' and 'Maestro'
3. Allows the user to select the 'Mastercard' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AIDs: A0000000041010, A0000000043060

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 07
3. When prompted, select 'Debit'
4. Select 'Mastercard' application when prompted
5. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is prompted to select 'Mastercard' and 'Maestro'
3. User is able to select 'Mastercard'
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000041010" – AID selected was 'Mastercard'
    c. "0060" - last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.11.19   CD.MCCL.C07-T03

CD.MCCL.C07-T03   Credit/Debit Prompting, Merchant Controlled Candidate List
Card 07 - Test 03

Type: Contact

Purpose:

Test that when a Mastercard card with a Credit AID and a Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')

2. Prompts the user for Application Selection by displaying 'Mastercard' and 'Maestro'

3. Allows the user to select the 'Maestro' application

4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting

2. Application Selection is Merchant Controlled by filtering the Candidate List

3. Terminal supports the following AIDs: A0000000041010, A0000000043060

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 07

3. When prompted, select 'Debit'

4. Select 'Maestro' application when prompted

5. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'

2. User is prompted to select 'Mastercard' and 'Maestro'

3. User is able to select 'Maestro'

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000043060" – AID selected was 'Maestro'
    c. "0051" - last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.11.20   CD.MCCL.C08-T01

CD.MCCL.C08-T01	Credit/Debit Prompting, Merchant Controlled Candidate List Card 08 - Test 01

Type: Contact

Purpose:

Test that when a U.S. Maestro card with more than one U.S. Maestro AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Credit')

2. Gives an error for an 'Empty Candidate List' outcome.

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting

2. Application Selection is Merchant Controlled by filtering the Candidate List

3. Terminal supports the following AID: A0000000042203

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 08

3. When prompted, select 'Credit'

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'

2. User is prompted with an error message relevant for an 'Empty Candidate List' outcome

3. The transaction is not processed as a chip transaction

Comments:

   Fallback processing is out of scope of this test plan

B2》

3.3.11.21 CD.MCCL.C08-T02

CD.MCCL.C08-T02	Credit/Debit Prompting, Merchant Controlled Candidate List Card 08 - Test 02

Type: Contact

Purpose:

Test that when a U.S. Maestro card with more than one U.S. Maestro AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')
2. Prompts the user for Application Selection by displaying 'US Checking' and 'US Savings' only
3. Allows the user to select the 'US Checking' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AID: A0000000042203

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 08
3. When prompted, select 'Debit'
4. Select 'US Checking' application when prompted
5. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is prompted to select 'US Checking' and 'US Savings' only
3. User is able to select 'US Checking'
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000000042203D0561111" – AID selected was 'US Checking'
    c. "9007" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

B2»

3.3.11.22   CD.MCCL.C08-T03

CD.MCCL.C08-T03	Credit/Debit Prompting, Merchant Controlled Candidate List Card 08 - Test 03

Type: Contact

Purpose:

Test that when a U.S. Maestro card with more than one U.S. Maestro AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')
2. Prompts the user for Application Selection by displaying 'US Checking' and 'US Savings' only
3. Allows the user to select the 'US Savings' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AID: A0000000042203

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 08
3. When prompted, select 'Debit'
4. Select 'US Savings' application when prompted
5. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is prompted to select 'US Checking' and 'US Savings' only
3. User is able to select 'US Savings'
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000000042203D0562222" – AID selected was 'US Savings'
    c. "9015" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

B2》

3.3.11.23   CD.MCCL.C09-T01

CD.MCCL.C09-T01   Credit/Debit Prompting, Merchant Controlled Candidate List Card 09 - Test 01

Type: Contact

Purpose:

Test that when a Mastercard card with a Credit AID and more than one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Credit')

2. Prompts the user for Application Selection by displaying the following applications: 'Mastercard' and 'Maestro'

3. Allows the user to select the 'Mastercard' application

4. Uses Signature/No CVM as the CVM for the transaction

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting

2. Application Selection is Merchant Controlled by filtering the Candidate List

3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 09

3. When prompted, select 'Credit'

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'

2. User is prompted to select all of the following applications: 'Mastercard' and 'Maestro'

3. User is able to select 'Mastercard'

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000041010" – AID selected was 'Mastercard'
    c. "0060" – last 4 digits of the PAN
    d. "Signature panel" or "No signature required" – Signature or No CVM was used

Comments:

3.3.11.24   CD.MCCL.C09-T02

CD.MCCL.C09-T02   Credit/Debit Prompting, Merchant Controlled Candidate List
Card 09 - Test 02

Type: Contact

Purpose:

Test that when a Mastercard card with a Credit AID and more than one Debit AID is inserted, the application:

1.   Prompts for Credit and Debit (user selects 'Debit')

2.   Does <u>not</u> prompt for Application Selection

3.   Automatically selects the 'US Maestro' application

4.   Prompts the user to enter a PIN

Pre-Requisites:

1.   Application is configured as Credit/Debit Prompting

2.   Application Selection is Merchant Controlled by filtering the Candidate List

3.   Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

Steps:

1.   Start a Purchase transaction for $20.00

2.   When prompted for card entry, insert Test Card 09

3.   When prompted, select 'Debit'

4.   Enter PIN ("4315") when prompted

Pass Criteria:

1.   User is prompted to select 'Credit' and 'Debit'

2.   User is <u>not</u> prompted to select an application

3.   The 'US Maestro' application is automatically selected

4.   The transaction is approved

5.   Receipt shows:
    a.   "Chip" – indicates the card was inserted
    b.   "A0000000042203" – AID selected was 'US Maestro'
    c.   "0051" – last 4 digits of the PAN
    d.   "Verified by PIN" – PIN CVM was used

Comments:

3.3.11.25   CD.MCCL.C10-T01

CD.MCCL.C10-T01	Credit/Debit Prompting, Merchant Controlled Candidate List Card 10 - Test 01

Type: Contact

Purpose:

Test that when a Mastercard card with only one Debit AID is inserted, the application:

1.   Prompts for Credit and Debit (user selects 'Debit')
2.   Does <u>not</u> prompt for Application Selection
3.   Automatically selects the 'US Maestro' application
4.   Prompts the user to enter a PIN

Pre-Requisites:

1.   Application is configured as Credit/Debit Prompting
2.   Application Selection is Merchant Controlled by filtering the Candidate List
3.   Terminal supports the following AID: A0000000042203

Steps:

1.   Start a Purchase transaction for $20.00
2.   When prompted for card entry, insert Test Card 10
3.   When prompted, select 'Debit'
4.   Enter PIN ("4315") when prompted

Pass Criteria:

1.   User is prompted to select 'Credit' and 'Debit'
2.   User is <u>not</u> prompted to select an application
3.   The 'US Maestro' application is automatically selected
4.   The transaction is approved
5.   Receipt shows:
     a.   "Chip" – indicates the card was inserted
     b.   "A0000000042203" – AID selected was 'US Maestro'
     c.   "9130" – last 4 digits of the PAN
     d.   "Verified by PIN" – PIN CVM was used

Comments:

B2》

3.3.11.26   CD.MCCL.C10-T02

CD.MCCL.C10-T02	Credit/Debit Prompting, Merchant Controlled Candidate List Card 10 - Test 02

Type: Contact

Purpose:

Test that when a Mastercard card with only one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Credit')
2. Does not prompt for Application Selection
3. Automatically selects the 'US Maestro' application
4. Uses Signature/No CVM as the CVM for the transaction

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AID: A0000000042203

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 10
3. When prompted, select 'Credit'

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is not prompted to select an application
3. The 'US Maestro' application is automatically selected
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000000042203" – AID selected was 'US Maestro'
    c. "9130" – last 4 digits of the PAN
    d. "Signature panel" or "No signature required" – Signature or No CVM was used

Comments:

CD.MCCL.C11-T01	Credit/Debit Prompting, Merchant Controlled Candidate List Card 11 - Test 01

Type: Contact

Purpose:

Test that when a Mastercard Debit card with 2 pairs of U.S. Debit AIDs is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Credit')
2. Prompts the user for Application Selection by displaying 'Mastercard Debit' and 'Maestro' only
3. Allows the user to select the 'Mastercard Debit' application
4. Uses Signature/No CVM as the CVM for the transaction

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 11
3. When prompted, select 'Credit'
4. Select 'Mastercard Debit' application when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is prompted to select 'Mastercard Debit' and 'Maestro' only
3. User is able to select 'Mastercard Debit'
4. The transaction is approved
5. Receipt shows:
   a. "Chip" – indicates the card was inserted
   b. "A0000000041010" – AID selected was 'Mastercard Debit'
   c. "0060" – last 4 digits of the PAN
   d. "Signature panel" or "No signature required" – Signature or No CVM was used

Comments:

3.3.11.28   CD.MCCL.C11-T02

CD.MCCL.C11-T02   Credit/Debit Prompting, Merchant Controlled Candidate List
Card 11 - Test 02

Type: Contact

Purpose:

Test that when a Mastercard Debit card with 2 pairs of U.S. Debit AIDs is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')

2. Prompts the user for Application Selection by displaying 'US Checking' and 'US Savings' only

3. Allows the user to select the 'US Checking' application

4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting

2. Application Selection is Merchant Controlled by filtering the Candidate List

3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 11

3. When prompted, select 'Debit'

4. Select 'US Checking' application when prompted

5. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'

2. User is prompted to select 'US Checking' and 'US Savings' only

3. User is able to select 'US Checking'

4. The transaction is approved

5. Receipt shows:
   a. "Chip" – indicates the card was inserted
   b. "A000000004220301" – AID selected was 'US Checking'
   c. "0060" – last 4 digits of the PAN
   d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.11.29   CD.MCCL.C11-T03

CD.MCCL.C11-T03	Credit/Debit Prompting, Merchant Controlled Candidate List Card 11 - Test 03

Type: Contact

Purpose:

Test that when a Mastercard Debit card with 2 pairs of U.S. Debit AIDs is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Credit')

2. Prompts the user for Application Selection by displaying 'Mastercard Debit' and 'Maestro' only

3. Allows the user to select the 'Maestro' application

4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting

2. Application Selection is Merchant Controlled by filtering the Candidate List

3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 11

3. When prompted, select 'Credit'

4. Select 'Maestro' application when prompted

5. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'

2. User is prompted to select 'Mastercard Debit' and 'Maestro' only

3. User is able to select 'Maestro'

4. The transaction is approved

5. Receipt shows:
   a. "Chip" – indicates the card was inserted
   b. "A0000000043060" – AID selected was 'Maestro'
   c. "0051" – last 4 digits of the PAN
   d.   "Verified by PIN" – PIN CVM was used

Comments:

3.3.11.30   CD.MCCL.C11-T04

CD.MCCL.C11-T04	Credit/Debit Prompting, Merchant Controlled Candidate List Card 11 - Test 04

Type: Contact

Purpose:

Test that when a Mastercard Debit card with 2 pairs of U.S. Debit AIDs is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')

2. Prompts the user for Application Selection by displaying 'US Checking' and 'US Savings' only

3. Allows the user to select the 'US Savings' application

4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting

2. Application Selection is Merchant Controlled by filtering the Candidate List

3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 11

3. When prompted, select 'Debit'

4. Select 'US Savings' application when prompted

5. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'

2. User is prompted to select 'US Checking' and 'US Savings' only

3. User is able to select 'US Savings'

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A000000004220302" – AID selected was 'US Savings'
    c. "0051" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.11.31   CD.MCCL.C12-T01

CD.MCCL.C12-T01   Credit/Debit Prompting, Merchant Controlled Candidate List Card 12 - Test 01

Type: Contact

Purpose:

Test that when a Discover card with more than one Debit AID is inserted, the application:

1.   Prompts for Credit and Debit (user selects 'Debit')

2.   Does <u>not</u> prompt for Application Selection

3.   Automatically selects the 'US Debit' application

4.   Prompts the user to enter a PIN

Pre-Requisites:

1.   Application is configured as Credit/Debit Prompting

2.   Application Selection is Merchant Controlled by filtering the Candidate List

3.   Terminal supports the following AIDs: A0000001524010, A0000001523010

Steps:

1.   Start a Purchase transaction for $79.00

2.   When prompted for card entry, insert Test Card 12

3.   When prompted, select 'Debit'

4.   Enter PIN ("1234") when prompted

Pass Criteria:

1.   User is prompted to select 'Credit' and 'Debit'

2.   User is <u>not</u> prompted to select an application

3.   The 'US Debit' application is automatically selected

4.   The transaction is approved

5.   Receipt shows:
    a.   "Chip" – indicates the card was inserted
    b.   "A0000001524010" – AID selected was 'US Debit'
    c.   "0005" – last 4 digits of the PAN
    d.   "Verified by PIN" – PIN CVM was used

Comments:

3.3.11.32   CD.MCCL.C12-T02

CD.MCCL.C12-T02   Credit/Debit Prompting, Merchant Controlled Candidate List
Card 12 - Test 02

Type: Contact

Purpose:

Test that when a Discover card with more than one Debit AID is inserted, the
application:

1. Prompts for Credit and Debit (user selects 'Credit')
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'Discover Debit' application
4. Uses Signature/No CVM as the CVM for the transaction

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AIDs: A0000001524010, A0000001523010

Steps:

1. Start a Purchase transaction for $79.00
2. When prompted for card entry, insert Test Card 12
3. When prompted, select 'Credit'

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'Discover Debit' application is automatically selected
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000001523010" – AID selected was 'Discover Debit'
    c. "0005" – last 4 digits of the PAN
    d. "Signature panel" or "No signature required" – Signature or No CVM was
        used

Comments:

B2»

CD.MCCL.C13-T01	Credit/Debit Prompting, Merchant Controlled Candidate List Card 13 - Test 01

Type: Contact

Purpose:

Test that when a Discover card with only one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')

2. Does <u>not</u> prompt for Application Selection

3. Automatically selects the 'US Debit' application

4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting

2. Application Selection is Merchant Controlled by filtering the Candidate List

3. Terminal supports the following AID: A0000001524010

Steps:

1. Start a Purchase transaction for $79.00

2. When prompted for card entry, insert Test Card 13

3. When prompted, select 'Debit'

4. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'

2. User is <u>not</u> prompted to select an application

3. The 'US Debit' application is automatically selected

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000001524010" – AID selected was 'US Debit'
    c. "0005" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.11.34   CD.MCCL.C13-T02

CD.MCCL.C13-T02	Credit/Debit Prompting, Merchant Controlled Candidate List Card 13 - Test 02

Type: Contact

Purpose:

Test that when a Discover card with only one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Credit')
2. Does not prompt for Application Selection
3. Automatically selects the 'US Debit' application
4. Uses Signature/No CVM as the CVM for the transaction

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Merchant Controlled by filtering the Candidate List
3. Terminal supports the following AID: A0000001524010

Steps:

1. Start a Purchase transaction for $79.00
2. When prompted for card entry, insert Test Card 13
3. When prompted, select 'Credit'

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is not prompted to select an application
3. The 'US Debit' application is automatically selected
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000001524010" – AID selected was 'US Debit'
    c. "0005" – last 4 digits of the PAN
    d. "Signature panel" or "No signature required" – Signature or No CVM was used

Comments:

3.3.11.35 CD.MCCL.C14-T01

CD.MCCL.C14-T01 Credit/Debit Prompting, Merchant Controlled Candidate List Card 14 - Test 01

Type: Contact

Purpose:

Test that when a DNA card with only one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')

2. Does <u>not</u> prompt for Application Selection

3. Automatically selects the 'DNA' application

4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting

2. Application Selection is Merchant Controlled by filtering the Candidate List

3. Terminal supports the following AID: A0000006200620

Steps:

1. Start a Purchase transaction for $10.00

2. When prompted for card entry, insert Test Card 14

3. When prompted, select 'Debit'

4. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'

2. User is <u>not</u> prompted to select an application

3. The 'DNA' application is automatically selected

4. The transaction is approved *

5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000006200620" – AID selected was 'DNA'
    c. "0028" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

* Final disposition (Approved / Declined) is outside the scope of this document. For this test case to be successful, the transaction should go online but as the cryptogram doesn't need to be valid, the host may approve or decline.

CD.MCCL.C15-T01	Credit/Debit Prompting, Merchant Controlled Candidate List Card 15 - Test 01

Type: Contact

Purpose:

Test that when an Interac Flash card with only one Debit AID is inserted, the application:

1.   Prompts for Credit and Debit (user selects 'Debit')

2.   Does <u>not</u> prompt for Application Selection

3.   Automatically selects the 'Interac' application

4.   Prompts the user to enter a PIN

Pre-Requisites:

1.   Application is configured as Credit/Debit Prompting

2.   Application Selection is Merchant Controlled by filtering the Candidate List

3.   Terminal supports the following AID: A0000002771010

Steps:

1.   Start a Purchase transaction for $30.00

2.   When prompted for card entry, insert Test Card 15

3.   When prompted, select 'Debit'

4.   Enter PIN ("1234") when prompted

Pass Criteria:

1.   User is prompted to select 'Credit' and 'Debit'

2.   User is <u>not</u> prompted to select an application

3.   The 'Interac' application is automatically selected

4.   The transaction is approved

5.   Receipt shows:
   a.   "Chip" – indicates the card was inserted
   b.   "A0000002771010" – AID selected was 'Interac'
   c.   "8644" – last 4 digits of the PAN
   d.   "Verified by PIN" – PIN CVM was used

Comments:

Account selection prompting (Chequing/Savings) is not a requirement for terminals deployed in the USA.

3.3.11.37   CD.MCCL.C16-T01

PLEASE READ IMPORTANT NOTES AT THE BEGINING OF SECTION 3.3

CD.MCCL.C16-T01	Credit/Debit Prompting, Merchant Controlled Candidate List Card 16 - Test 01

Type: Contact

Purpose:

Test that when an Interac card with only one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')

2. Does <u>not</u> prompt for Application Selection

3. Automatically selects the 'Interac' application

4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting

2. Application Selection is Merchant Controlled by filtering the Candidate List

3. Terminal supports the following AID: A0000002771010

Steps:

1. Start a Purchase transaction for $30.00

2. When prompted for card entry, insert Test Card 16

3. When prompted, select 'Debit'

4. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'

2. User is <u>not</u> prompted to select an application

3. The 'Interac' application is automatically selected

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000002771010" – AID selected was 'Interac'
    c. "1933" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

Account selection prompting (Chequing/Savings) is not a requirement for terminals deployed in the USA.

3.3.12 Credit/Debit Selection, Standard EMV Application Selection – Test Cases

3.3.12.1 CD.SEAS.C01-T01

CD.SEAS.C01-T01	Credit/Debit Prompting, Standard EMV Application Selection Card 01 - Test 01

Type: Contact

Purpose:

Test that when a Visa card with more than one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Credit')
2. Prompts the user for Application Selection by displaying 'Visa Debit' and 'US Debit'
3. Allows the user to select the 'Visa Debit' application
4. Uses Signature/No CVM as the CVM for the transaction

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AIDs: A0000000031010, A0000000980840

Steps:

1. Start a Purchase transaction for $10.00
2. When prompted for card entry, insert Test Card 01
3. When prompted, select 'Credit'

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is prompted to select 'Visa Debit' and 'US Debit'
3. User is able to select 'Visa Debit'
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000031010" – AID selected was 'Visa Debit'
    c. "0135" – last 4 digits of the PAN
    d. "Signature panel" or "No signature required" – Signature or No CVM was used

Comments:

B2

CD.SEAS.C01-T02	Credit/Debit Prompting, Standard EMV Application List Card 01 - Test 02

Type: Contact

Purpose:

Test that when a Visa card with more than one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')

2. Prompts the user for Application Selection by displaying 'Visa Debit' and 'US Debit'

3. Allows the user to select the 'US Debit' application

4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000000031010, A0000000980840

Steps:

1. Start a Purchase transaction for $10.00

2. When prompted for card entry, insert Test Card 01

3. When prompted, select 'Debit'

4. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'

2. User is prompted to select 'Visa Debit' and 'US Debit'

3. User is able to select 'US Debit'

4. The transaction is approved

5. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A0000000980840" – AID selected was 'US Debit'
   c. "0135" – last 4 digits of the PAN
   d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.12.3   CD.SEAS.C01-T03

CD.SEAS.C01-T03   Credit/Debit Prompting, Standard EMV Application List
Card 01 - Test 03

Type: Contactless

Purpose:

Test that when a Visa card with more than one Debit AID is tapped, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'Visa Debit' application
4. Uses Signature as the CVM for the transaction

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Standard EMV Application Selection
3. Terminal supports AID A0000000031010, A0000000980840
4. Contactless CVM Floor limit is $0

Steps:

1. Start a Purchase transaction for $10.00
2. When prompted for card entry, tap Test Card 01

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'Visa Debit' application is automatically selected
4. The transaction is approved
5. Receipt shows:
    a. "Contactless" – indicates card was tapped
    b. "A0000000031010" – AID selected was 'Visa Debit'
    c.
    d. "0135" – last 4 digits of the PAN
    e. "Signature panel" – Signature CVM was used

Comments:

B2》

CD.SEAS.C01-T04	Credit/Debit Prompting, Standard EMV Application Selection Card 01 - Test 04

Type: Contactless

Purpose:

Test that when a Visa card with more than one Debit AID is tapped, the application:

1. Does <u>not</u> prompt for Credit or Debit

2. Does <u>not</u> prompt for Application Selection

3. Automatically selects the 'Visa Debit' application

4. Does <u>not</u> require a Signature as the transaction amount is under the Contactless CVM Floor Limit

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting

2. Application Selection is Standard EMV Application Selection

3. Terminal supports AID A0000000031010, A0000000980840

4. Contactless CVM Floor limit is above $10

Steps:

1. Start a Purchase transaction for $10.00

2. When prompted for card entry, tap Test Card 01

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is <u>not</u> prompted to select an application

3. The 'Visa Debit' application is automatically selected

4. The transaction is approved

5. Receipt shows:
   a. "Contactless" – indicates card was tapped
   b. "A0000000031010" – AID selected was 'Visa Debit'
   c. "0135" – last 4 digits of the PAN
   d. "No Signature Required" – No CVM was used

Comments:

3.3.12.5   CD.SEAS.C02-T01

CD.SEAS.C02-T01	Credit/Debit Prompting, Standard EMV Application Selection Card 02 - Test 01

Type: Contact

Purpose:

Test that when a Visa card with only one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'US Debit' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AID: A0000000980840

Steps:

1. Start a Purchase transaction for $10.00
2. When prompted for card entry, insert Test Card 02
3. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'US Debit' application is automatically selected
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000000980840" – AID selected was 'US Debit'
    c. "0135" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

B2»

3.3.12.6   CD.SEAS.C02-T02

CD.SEAS.C02-T02   Credit/Debit Prompting, Standard EMV Application Selection Card 02 - Test 02

Type: Contact

Purpose:

Test that when a Visa card with only one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Credit')
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'US Debit' application
4. Uses Signature/No CVM as the CVM for the transaction

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AID: A0000000980840

Steps:

1. Start a Purchase transaction for $10.00
2. When prompted for card entry, insert Test Card 02
3. When prompted, select 'Credit'

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'US Debit' application is automatically selected
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000000980840" – AID selected was 'US Debit'
    c. "0135" – last 4 digits of the PAN
    d. "Signature panel" or "No signature required" – Signature or No CVM was used

Comments:

3.3.12.7 CD.SEAS.C03-T01

CD.SEAS.C03-T01	Credit/Debit Prompting, Standard EMV Application Selection Card 03 - Test 01

Type: Contact

Purpose:

Test that when a Visa card with a Credit AID and more than one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Credit')

2. Prompts the user for Application Selection by displaying all of the following applications: 'Visa Credit', 'Visa Debit' and 'US Debit'

3. Allows the user to select the 'Visa Credit' application

4. Uses Signature/No CVM as the CVM for the transaction

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000000031010, A0000000980840

Steps:

1. Start a Purchase transaction for $10.00

2. When prompted for card entry, insert Test Card 03

3. When prompted, select 'Credit'

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'

2. User is prompted to select all of the following applications: 'Visa Credit', 'Visa Debit' and 'US Debit'

3. User is able to select 'Visa Credit'

4. The transaction is approved

5. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A000000003101001" – AID selected was 'Visa Credit'
   c. '0176' – last 4 digits of the PAN
   d. "Signature panel" or "No signature required" – Signature or No CVM was used

Comments:

3.3.12.8   CD.SEAS.C03-T02

CD.SEAS.C03-T02	Credit/Debit Prompting, Standard EMV Application List Card 03 - Test 02

Type: Contact

Purpose:

Test that when a Visa card with a Credit and more than one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Credit')
2. Prompts the user for Application Selection by displaying all of the following applications: 'Visa Credit', 'Visa Debit' and 'US Debit'
3. Allows the user to select the 'Visa Debit' application
4. Uses Signature/No CVM as the CVM for the transaction

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AIDs: A0000000031010, A0000000980840

Steps:

1. Start a Purchase transaction for $10.00
2. When prompted for card entry, insert Test Card 03
3. When prompted, select 'Credit'
4. Select 'Visa Debit' application when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is prompted to select all of the following applications: 'Visa Credit', 'Visa Debit' and 'US Debit'
3. User is able to select 'Visa Debit'
4. The transaction is approved
5. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A000000003101002" – AID selected was 'Visa Debit'
   c. '0135' – last 4 digits of the PAN
   d. "Signature panel" or "No signature required" – Signature or No CVM was used

Comments:

3.3.12.9   CD.SEAS.C03-T03

CD.SEAS.C03-T03	Credit/Debit Prompting, Standard EMV Application Selection Card 03 - Test 03

Type: Contact

Purpose:

Test that when a Visa card with a Credit and more than one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')

2. Prompts the user for Application Selection by displaying all of the following applications: 'Visa Credit', 'Visa Debit' and 'US Debit'

3. Allows the user to select the 'US Debit' application

4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000000031010, A0000000980840

Steps:

1. Start a Purchase transaction for $10.00

2. When prompted for card entry, insert Test Card 03

3. When prompted, select 'Debit'

4. Select 'US Debit' application when prompted

5. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'

2. User is prompted to select all of the following applications: 'Visa Credit', 'Visa Debit' and 'US Debit'

3. User is able to select 'US Debit'

4. The transaction is approved

5. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A0000000980840" – AID selected was 'US Debit'
   c. '0135 – last 4 digits of the PAN
   d. "Verified by PIN" – PIN CVM was used

Comments:

B2》

3.3.12.10   CD.SEAS.C04-T01

CD.SEAS.C04-T01	Credit/Debit Prompting, Standard EMV Application Selection Card 04 - Test 01

Type: Contact

Purpose:

Test that when a Visa card with only the Interlink AID is inserted, the application:

1.   Prompts for Credit and Debit (user selects 'Debit')

2.   Does not prompt for Application Selection

3.   Automatically selects the 'Interlink' application

4.   Prompts the user to enter a PIN

Pre-Requisites:

1.   Application is configured as Credit/Debit Prompting

2.   Application Selection is Standard EMV Application Selection

3.   Terminal supports the following AID: A0000000033010

Steps:

1.   Start a Purchase transaction for $10.00

2.   When prompted for card entry, insert Test Card 04

3.   When prompted, select 'Debit'

4.   Enter PIN ("1234") when prompted

Pass Criteria:

1.   User is prompted to select 'Credit' and 'Debit'

2.   User is not prompted to select an application

3.   The 'Interlink' application is automatically selected

4.   The transaction is approved

5.   Receipt shows:
   a.   "Chip" – indicates the card was inserted
   b.   "A0000000033010" – AID selected was 'Interlink'
   c.   "0671" – last 4 digits of the PAN
   d.   "Verified by PIN" – PIN CVM was used

Comments:

3.3.12.11 CD.SEAS.C05-T01

CD.SEAS.C05-T01	Credit/Debit Prompting, Standard EMV Application List Card 05 - Test 01

Type: Contact

Purpose:

Test that when a Mastercard card with more than one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Credit')
2. Prompts the user for Application Selection by displaying 'Mastercard Debit' and 'US Maestro'
3. Allows the user to select the 'Mastercard Debit' application
4. Uses Signature/No CVM as the CVM for the transaction

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AIDs: A0000000041010, A0000000042203

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 05
3. When prompted, select 'Credit'
4. Select 'Mastercard' application when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is prompted to select 'Mastercard Debit' and 'US Maestro'
3. User is able to select 'Mastercard'
4. The transaction is approved
5. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A0000000041010" – AID selected was 'Mastercard Debit'
   c.
   d. "9130" – last 4 digits of the PAN
   e. "Signature panel" or "No signature required" – Signature or No CVM was used

Comments:

3.3.12.12   CD.SEAS.C05-T02

CD.SEAS.C05-T02   Credit/Debit Prompting, Standard EMV Application List
Card 05 - Test 02

Type: Contact

Purpose:

Test that when a Mastercard card with more than one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')
2. Prompts the user for Application Selection by displaying 'Mastercard Debit' and 'US Maestro'
3. Allows the user to select the 'US Maestro' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AIDs: A0000000041010, A0000000042203

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 05
3. When prompted, select 'Debit'
4. Select 'US Maestro' application when prompted
5. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is prompted to select 'Mastercard Debit' and 'US Maestro'
3. User is able to select 'US Maestro'
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000042203" – AID selected was 'US Maestro'
    c. "9130" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.12.13   CD.SEAS.C05-T03

CD.SEAS.C05-T03	Credit/Debit Prompting, Standard EMV Application Selection Card 05 - Test 03

Type: Contactless

Purpose:

Test that when a Mastercard card with more than one Debit AID is tapped, the application:

1.   Does <u>not</u> prompt for Credit or Debit

2.   Does <u>not</u> prompt for Application Selection

3.   Automatically selects the 'Mastercard Debit' application

4.   Uses Signature as the CVM for the transaction

Pre-Requisites:

1.   Application is configured as Credit/Debit Prompting

2.   Application Selection is Standard EMV Application Selection

3.   Terminal supports the following AIDs: A0000000041010, A0000000042203

4.   Contactless CVM Floor limit is $0

Steps:

1.   Start a Purchase transaction for $20.00

2.   When prompted for card entry, tap Test Card 05

Pass Criteria:

1.   User is <u>not</u> prompted to select 'Credit' or 'Debit'

2.   User is <u>not</u> prompted to select an application

3.   The 'Mastercard Debit' application is automatically selected

4.   The transaction is approved

5.   Receipt shows:
     a.   "Contactless" – indicates card was tapped
     b.   "A0000000041010" – AID selected was 'Mastercard Debit'
     c.   "9130" – last 4 digits of the PAN
     d.   "Signature Panel" – Signature CVM was used

Comments:

B2»

3.3.12.14   CD.SEAS.C05-T04

CD.SEAS.C05-T04	Credit/Debit Prompting, Standard EMV Application Selection Card 05 - Test 04

Type: Contactless

Purpose:

Test that when a Mastercard card with more than one Debit AID is tapped, the application:

1. Does <u>not</u> prompt for Credit or Debit

2. Does <u>not</u> prompt for Application Selection

3. Automatically selects the 'Mastercard Debit' application

4. Does <u>not</u> require a Signature as the transaction amount is under the Contactless CVM Floor Limit

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000000041010, A0000000042203

4. Contactless CVM Floor limit is above $20

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, tap Test Card 05

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is <u>not</u> prompted to select an application

3. The 'Mastercard Debit' application is automatically selected

4. The transaction is approved

5. Receipt shows:
    a. "Contactless" – indicates card was tapped
    b. "A0000000041010" – AID selected was 'Mastercard Debit'
    c. "9130" – last 4 digits of the PAN
    d. "No Signature Required" – No CVM was used

Comments:

B2»

3.3.12.15   CD.SEAS.C06-T01

CD.SEAS.C06-T01   Credit/Debit Prompting, Standard EMV Application List
Card 06 - Test 01

Type: Contact

Purpose:

Test that when a Maestro card with more than one Maestro AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')
2. Prompts the user for Application Selection by displaying 'Maestro1' and 'Maestro2'
3. Allows the user to select the 'Maestro1' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AID: A0000000043060

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 06
3. When prompted, select 'Debit'
4. Select 'Maestro1' application when prompted
5. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is prompted to select 'Maestro1' and 'Maestro2'
3. User is able to select 'Maestro1'
4. The transaction is approved
5. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A0000000043060D0561111" – AID selected was 'Maestro1'
   c. "2010" – last 4 digits of the PAN
   d. "Verified by PIN" – PIN CVM was used

Comments:

B2»

3.3.12.16   CD.SEAS.C06-T02

CD.SEAS.C06-T02	Credit/Debit Prompting, Standard EMV Application List Card 06 - Test 02

Type: Contact

Purpose:

Test that when a Maestro card with more than one Maestro AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')
2. Prompts the user for Application Selection by displaying 'Maestro1' and 'Maestro2'
3. Allows the user to select the 'Maestro2' application

Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AID: A0000000043060

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 06
3. When prompted, select 'Debit'
4. Select 'Maestro2' application when prompted
5. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is prompted to select 'Maestro1' and 'Maestro2'
3. User is able to select 'Maestro2'
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000043060D0562222" – AID selected was 'Maestro2'
    c. "2028" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.12.17   CD.SEAS.C07-T01

CD.SEAS.C07-T01   Credit/Debit Prompting, Standard EMV Application List
Card 07 - Test 01

Type: Contact

Purpose:

Test that when a Mastercard card with a Credit AID and a Debit AID is inserted, the application:

1.   Prompts for Credit and Debit (user selects 'Credit')
2.   Prompts the user for Application Selection by displaying 'Mastercard' and 'Maestro'
3.   Allows the user to select the 'Mastercard' application
4.   Uses Signature/No CVM as the CVM for the transaction

Pre-Requisites:

1.   Application is configured as Credit/Debit Prompting
2.   Application Selection is Standard EMV Application Selection
3.   Terminal supports the following AIDs: A0000000041010, A0000000043060

Steps:

1.   Start a Purchase transaction for $20.00
2.   When prompted for card entry, insert Test Card 07
3.   When prompted, select 'Credit'
4.   Select 'Mastercard' application when prompted

Pass Criteria:

1.   User is prompted to select 'Credit' and 'Debit'
2.   User is prompted to select 'Mastercard' and 'Maestro'
3.   User is able to select 'Mastercard'
4.   The transaction is approved
5.   Receipt shows:
    a.   "Chip" – indicates card was inserted
    b.   "A0000000041010" – AID selected was 'Mastercard'
    c.   "0060" - last 4 digits of the PAN
    d.   "Signature panel" or "No signature required" – Signature or No CVM was used

Comments:

3.3.12.18   CD.SEAS.C07-T02

CD.SEAS.C07-T02	Credit/Debit Prompting, Standard EMV Application List Card 07 - Test 02

Type: Contact

Purpose:

Test that when a Mastercard card with a Credit AID and a Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')
2. Prompts the user for Application Selection by displaying 'Mastercard' and 'Maestro'
3. Allows the user to select the 'Mastercard' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AIDs: A0000000041010, A0000000043060

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 07
3. When prompted, select 'Debit'
4. Select 'Mastercard' application when prompted
5. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is prompted to select 'Mastercard' and 'Maestro'
3. User is able to select 'Mastercard'
4. The transaction is approved
5. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A0000000041010" – AID selected was 'Mastercard'
   c. "0060" - last 4 digits of the PAN
   d. "Verified by PIN" – PIN CVM was used

Comments:

B2》

3.3.12.19   CD.SEAS.C07-T03

CD.SEAS.C07-T03   Credit/Debit Prompting, Standard EMV Application List
Card 07 - Test 03

Type: Contact

Purpose:

Test that when a Mastercard card with a Credit AID and a Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')
2. Prompts the user for Application Selection by displaying 'Mastercard' and 'Maestro'
3. Allows the user to select the 'Maestro' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AIDs: A0000000041010, A0000000043060

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 07
3. When prompted, select 'Debit'
4. Select 'Maestro' application when prompted
5. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is prompted to select 'Mastercard' and 'Maestro'
3. User is able to select 'Maestro'
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000043060" – AID selected was 'Maestro'
    c. "0051" - last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.12.20   CD.SEAS.C08-T01

CD.SEAS.C08-T01	Credit/Debit Prompting, Standard EMV Application Selection Card 08 - Test 01

Type: Contact

Purpose:

Test that when a U.S. Maestro card with more than one U.S. Maestro AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Credit')
2. Prompts the user for Application Selection by displaying 'US Checking' and 'US Savings'
3. Allows the user to select the 'US Checking' application
4. Uses Signature/No CVM as the CVM for the transaction

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AID: A0000000042203

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 08
3. When prompted, select 'Credit'
4. Select 'US Checking' application when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is prompted to select 'US Checking' and 'US Savings'
3. User is able to select 'US Checking'
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000000042203D0561111" – AID selected was 'US Checking'
    c. "9007" – last 4 digits of the PAN
    d. "Signature panel" or "No signature required" – Signature or No CVM was used

Comments:

3.3.12.21   CD.SEAS.C08-T02

CD.SEAS.C08-T02	Credit/Debit Prompting, Standard EMV Application Selection Card 08 - Test 02

Type: Contact

Purpose:

Test that when a Mastercard card with more than one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')
2. Prompts the user for Application Selection by displaying 'US Checking' and 'US Savings'
3. Allows the user to select the 'US Checking' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AID: A0000000042203

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 08
3. When prompted, select 'Debit'
4. Select 'US Checking' application when prompted
5. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is prompted to select 'US Checking' and 'US Savings'
3. User is able to select 'US Checking'
4. The transaction is approved
5. Receipt shows:
   a. "Chip" – indicates the card was inserted
   b. "A0000000042203D0561111" – AID selected was 'US Checking'
   c. "9007" – last 4 digits of the PAN
   d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.12.22 CD.SEAS.C08-T03

CD.SEAS.C08-T03 Credit/Debit Prompting, Standard EMV Application Selection Card 08 - Test 03

Type: Contact

Purpose:

Test that when a U.S. Maestro card with more than one U.S. Maestro AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Credit')
2. Prompts the user for Application Selection by displaying 'US Checking' and 'US Savings'
3. Allows the user to select the 'US Savings' application
4. Uses Signature/No CVM as the CVM for the transaction

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AID: A0000000042203

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 08
3. When prompted, select 'Credit'
4. Select 'US Savings' application when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is prompted to select 'US Checking' and 'US Savings'
3. User is able to select 'US Savings'
4. The transaction is approved
5. Receipt shows:
   a. "Chip" – indicates the card was inserted
   b. "A0000000042203D0562222" – AID selected was 'US Savings'
   c. "9015" – last 4 digits of the PAN
   d. "Signature panel" or "No signature required" – Signature or No CVM was used

Comments:

3.3.12.23   CD.SEAS.C08-T04

CD.SEAS.C08-T04   Credit/Debit Prompting, Standard EMV Application Selection
Card 08 - Test 04

Type: Contact

Purpose:

Test that when a Mastercard card with more than one Debit AID is inserted, the
application:

1. Prompts for Credit and Debit (user selects 'Debit')
2. Prompts the user for Application Selection by displaying 'US Checking' and
   'US Savings'
3. Allows the user to select the 'US Savings' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AID: A0000000042203

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 08
3. When prompted, select 'Debit'
4. Select 'US Savings' application when prompted
5. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is prompted to select 'US Checking' and 'US Savings'
3. User is able to select 'US Savings'
4. The transaction is approved
5. Receipt shows:
   a. "Chip" – indicates the card was inserted
   b. "A0000000042203D0562222" – AID selected was 'US Savings'
   c. "9015" – last 4 digits of the PAN
   d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.12.24   CD.SEAS.C09-T01

CD.MCCL.C09-T01	Credit/Debit Prompting, Standard EMV Application Selection Card 09 - Test 01

Type: Contact

Purpose:

Test that when a Mastercard card with a Credit AID and more than one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Credit')

2. Prompts the user for Application Selection by displaying all of the following applications: 'Mastercard', 'Maestro' and 'US Maestro'

3. Allows the user to select the 'Mastercard' application

4. Uses Signature/No CVM as the CVM for the transaction

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 09

3. When prompted, select 'Credit'

4. Select 'Mastercard' application when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'

2. User is prompted to select all of the following applications: 'Mastercard', 'Maestro' and 'US Maestro'

3. User is able to select 'Mastercard'

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000041010" – AID selected was 'Mastercard'
    c. "0060" – last 4 digits of the PAN
    d. "Signature panel" or "No signature required" – Signature or No CVM was used

Comments:

3.3.12.25   CD.SEAS.C09-T02

CD.SEAS.C09-T02	Credit/Debit Prompting, Standard EMV Application Selection Card 09 - Test 02

Type: Contact

Purpose:

Test that when a Mastercard card with a Credit AID and more than one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')
2. Prompts the user for Application Selection by displaying all of the following applications: 'Mastercard', 'Maestro' and 'US Maestro'
3. Allows the user to select the 'Maestro' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 09
3. When prompted, select 'Debit'
4. Select 'Maestro' application when prompted
5. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is prompted to select all of the following applications: 'Mastercard', 'Maestro' and 'US Maestro'
3. User is able to select 'Maestro'
4. The transaction is approved
5. Receipt shows:
   a. "Chip" – indicates the card was inserted
   b. "A0000000043060" – AID selected was 'Maestro'
   c. "0051" – last 4 digits of the PAN
   d. "Verified by PIN" – PIN CVM was used

Comments:

B2»

CD.SEAS.C09-T03	Credit/Debit Prompting, Standard EMV Application Selection Card 09 - Test 03

Type: Contact

Purpose:

Test that when a Mastercard card with a Credit AID and more than one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')
2. Prompts the user for Application Selection by displaying all of the following applications: 'Mastercard', 'Maestro' and 'US Maestro'
3. Allows the user to select the 'US Maestro' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 09
3. When prompted, select 'Debit'
4. Select 'US Maestro' application when prompted
5. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is prompted to select all of the following applications: 'Mastercard', 'Maestro' and 'US Maestro'
3. User is able to select 'US Maestro'
4. The transaction is approved
5. Receipt shows:
   a. "Chip" – indicates the card was inserted
   b. "A0000000042203" – AID selected was 'US Maestro'
   c. "0051" – last 4 digits of the PAN
   d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.12.27   CD.SEAS.C10-T01

CD.SEAS.C10-T01   Credit/Debit Prompting, Standard EMV Application Selection Card 10 - Test 01

Type: Contact

Purpose:

Test that when a Mastercard card with only one Debit AID is inserted, the application:

1. Does <u>not</u> prompt for Credit or Debit
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'US Maestro' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AID: A0000000042203

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 10
3. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'US Maestro' application is automatically selected
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000000042203" – AID selected was 'US Maestro'
    c. "9130" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.12.28 CD.SEAS.C10-T02

CD.SEAS.C10-T02	Credit/Debit Prompting, Standard EMV Application Selection Card 10 - Test 02

Type: Contact

Purpose:

Test that when a Mastercard card with only one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Credit')
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'US Maestro' application
4. Uses Signature/No CVM as the CVM for the transaction

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AID: A0000000042203

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 10
3. When prompted, select 'Credit'

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'US Maestro' application is automatically selected
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000000042203" – AID selected was 'US Maestro'
    c. "9130" – last 4 digits of the PAN
    d. "Signature panel" or "No signature required" – Signature or No CVM was used

Comments:

3.3.12.29   CD.SEAS.C11-T01

CD.SEAS.C11-T01	Credit/Debit Prompting, Standard EMV Application Selection Card 11 - Test 01

Type: Contact

Purpose:

Test that when a Mastercard Debit card with 2 pairs of U.S. Debit AIDs is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')

2. Prompts the user for Application Selection by displaying all of the following applications: 'Mastercard Debit', 'US Checking', 'Maestro' and 'US Savings'

3. Allows the user to select the 'Mastercard Debit' application

4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 11

3. When prompted, select 'Debit'

4. Select 'Mastercard Debit' application when prompted

5. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'

2. User is prompted to select all of the following applications: 'Mastercard Debit', 'US Checking', 'Maestro' and 'US Savings'

3. User is able to select 'Mastercard Debit'

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000041010" – AID selected was 'Mastercard Debit'
    c. "0060" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.12.30   CD.SEAS.C11-T02

<table>
<tr><td>**CD.SEAS.C11-T02**</td><td>Credit/Debit Prompting, Standard EMV Application Selection Card 11 - Test 02</td></tr>
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Type: Contact

Purpose:

Test that when a Mastercard Debit card with 2 pairs of U.S. Debit AIDs is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Credit')
2. Prompts the user for Application Selection by displaying all of the following applications: 'Mastercard Debit', 'US Checking', 'Maestro' and 'US Savings'
3. Allows the user to select the 'Mastercard Debit' application
4. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203
4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 11
3. When prompted, select 'Credit'
4. Select 'Mastercard Debit' application when prompted
5. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is prompted to select all of the following applications: 'Mastercard Debit', 'US Checking', 'Maestro' and 'US Savings'
3. User is able to select 'Mastercard Debit'
4. When a PIN is not entered, transaction continues with No CVM or Signature
5. The transaction is approved
6. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000000041010" – AID selected was 'Mastercard Debit'
    c. "0060" – last 4 digits of the PAN
    d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

3.3.12.31   CD.SEAS.C11-T03

CD.SEAS.C11-T03   Credit/Debit Prompting, Standard EMV Application Selection
Card 11 - Test 03

Type: Contact

Purpose:

Test that when a Mastercard Debit card with 2 pairs of U.S. Debit AIDs is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')
2. Prompts the user for Application Selection by displaying all of the following applications: 'Mastercard Debit', 'US Checking', 'Maestro' and 'US Savings'
3. Allows the user to select the 'US Checking' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 11
3. When prompted, select 'Debit'
4. Select 'US Checking' application when prompted
5. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is prompted to select all of the following applications: 'Mastercard Debit', 'US Checking', 'Maestro' and 'US Savings'
3. User is able to select 'US Checking'
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A000000004220301" – AID selected was 'US Checking'
    c. "0060" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.12.32 CD.SEAS.C11-T04

CD.SEAS.C11-T04 Credit/Debit Prompting, Standard EMV Application Selection Card 11 - Test 04

Type: Contact

Purpose:

Test that when a Mastercard Debit card with 2 pairs of U.S. Debit AIDs is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Credit')
2. Prompts the user for Application Selection by displaying all of the following applications: 'Mastercard Debit', 'US Checking', 'Maestro' and 'US Savings'
3. Allows the user to select the 'US Checking' application
4. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203
4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $20.00
2. When prompted for card entry, insert Test Card 11
3. When prompted, select 'Credit'
4. Select 'US Checking' application when prompted
5. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is prompted to select all of the following applications: 'Mastercard Debit', 'US Checking', 'Maestro' and 'US Savings'
3. User is able to select 'US Checking'
4. When a PIN is not entered, transaction continues with No CVM or Signature
5. The transaction is approved
6. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A000000004220301" – AID selected was 'US Checking'
    c. "0060" – last 4 digits of the PAN
    d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

3.3.12.33   CD.SEAS.C11-T05

CD.SEAS.C11-T05	Credit/Debit Prompting, Standard EMV Application Selection Card 11 - Test 05

Type: Contact

Purpose:

Test that when a Mastercard Debit card with 2 pairs of U.S. Debit AIDs is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')

2. Prompts the user for Application Selection by displaying all of the following applications: 'Mastercard Debit', 'US Checking', 'Maestro' and 'US Savings'

3. Allows the user to select the 'Maestro' application

4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 11

3. When prompted, select 'Debit'

4. Select 'Maestro' application when prompted

5. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'

2. User is prompted to select all of the following applications: 'Mastercard Debit', 'US Checking', 'Maestro' and 'US Savings'

3. User is able to select 'Maestro'

4. The transaction is approved

5. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A0000000043060" – AID selected was 'Maestro'
   c. "0051" – last 4 digits of the PAN
   d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.12.34   CD.SEAS.C11-T06

CD.SEAS.C11-T06	Credit/Debit Prompting, Standard EMV Application Selection Card 11 - Test 06

Type: Contact

Purpose:

Test that when a Mastercard Debit card with 2 pairs of U.S. Debit AIDs is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')

2. Prompts the user for Application Selection by displaying all of the following applications: 'Mastercard Debit', 'US Checking', 'Maestro' and 'US Savings'

3. Allows the user to select the 'US Savings' application

4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 11

3. When prompted, select 'Debit'

4. Select 'US Savings' application when prompted

5. Enter PIN ("4315") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'

2. User is prompted to select all of the following applications: 'Mastercard Debit', 'US Checking', 'Maestro' and 'US Savings'

3. User is able to select 'US Savings'

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A000000004220302" – AID selected was 'US Savings'
    c. "0051" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.12.35   CD.SEAS.C11-T07

CD.SEAS.C11-T07	Credit/Debit Prompting, Standard EMV Application Selection Card 11 - Test 07

Type: Contact

Purpose:

Test that when a Mastercard Debit card with 2 pairs of U.S. Debit AIDs is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Credit')

2. Prompts the user for Application Selection by displaying all of the following applications: 'Mastercard Debit', 'US Checking', 'Maestro' and 'US Savings'

3. Allows the user to select the 'US Savings' application

4. Allows the user to bypass PIN entry

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000000041010, A0000000043060 and A0000000042203

4. PIN Bypass is supported

Steps:

1. Start a Purchase transaction for $20.00

2. When prompted for card entry, insert Test Card 11

3. When prompted, select 'Credit'

4. Select 'US Savings' application when prompted

5. When prompted for PIN, press Enter/Cancel to bypass PIN entry

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'

2. User is prompted to select all of the following applications: 'Mastercard Debit', 'US Checking', 'Maestro' and 'US Savings'

3. User is able to select 'US Savings'

4. When a PIN is not entered, transaction continues with No CVM or Signature

5. The transaction is approved

6. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A000000004220302" – AID selected was 'US Savings'
    c. "0051" – last 4 digits of the PAN
    d. "No signature required" or "Signature panel" – No CVM or Signature CVM was used

Comments:

3.3.12.36   CD.SEAS.C12-T01

CD.SEAS.C12-T01	Credit/Debit Prompting, Standard EMV Application List Card 12 - Test 01

Type: Contact

Purpose:

Test that when a Discover card with more than one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Credit')
2. Prompts the user for Application Selection by displaying 'US Debit' and 'Discover Debit'
3. Allows the user to select the 'Discover Debit' application
4. Uses Signature/No CVM as the CVM for the transaction

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AIDs: A0000001524010, A0000001523010

Steps:

1. Start a Purchase transaction for $79.00
2. When prompted for card entry, insert Test Card 12
3. When prompted, select 'Credit'
4. Select 'Discover Debit' application when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is prompted to select 'US Debit' and 'Discover Debit'
3. User is able to select 'Discover Debit'
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000001523010" – AID selected was 'Discover Debit'
    c. "0005" – last 4 digits of the PAN
    d. Signature panel" or "No signature required" – Signature or No CVM was used

Comments:

3.3.12.37   CD.SEAS.C12-T02

CD.SEAS.C12-T02   Credit/Debit Prompting, Standard EMV Application List
Card 12 - Test 02

Type: Contact

Purpose:

Test that when a Discover card with more than one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')
2. Prompts the user for Application Selection by displaying 'US Debit' and 'Discover Debit'
3. Allows the user to select the 'US Debit' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AIDs: A0000001524010, A0000001523010

Steps:

1. Start a Purchase transaction for $79.00
2. When prompted for card entry, insert Test Card 12
3. When prompted, select 'Debit'
4. Select 'US Debit' application when prompted
5. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is prompted to select 'US Debit' and 'Discover Debit'
3. User is able to select 'US Debit'
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates card was inserted
    b. "A0000001524010" – AID selected was 'US Debit'
    c. "0005" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.12.38 CD.SEAS.C12-T03

CD.SEAS.C12-T03	Credit/Debit Prompting, Standard EMV Application List Card 12 - Test 03

Type: Contact

Purpose:

Test that when a Discover card with more than one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')
2. Prompts the user for Application Selection by displaying 'US Debit' and 'Discover Debit'
3. Allows the user to select the 'Discover Debit' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AIDs: A0000001524010, A0000001523010

Steps:

1. Start a Purchase transaction for $79.00
2. When prompted for card entry, insert Test Card 12
3. When prompted, select 'Debit'
4. Select 'Discover Debit' application when prompted
5. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is prompted to select 'US Debit' and 'Discover Debit'
3. User is able to select 'Discover Debit'
4. The transaction is approved
5. Receipt shows:
   a. "Chip" – indicates card was inserted
   b. "A0000001523010" – AID selected was 'Discover Debit'
   c. "0005" – last 4 digits of the PAN
   d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.12.39   CD.SEAS.C12-T04

CD.SEAS.C12-T04	Credit/Debit Prompting, Standard EMV Application List Card 12 - Test 04

Type: Contactless

Purpose:

Test that when a Discover card with more than one Debit AID is tapped, the application:

1. Does <u>not</u> prompt for Credit or Debit

2. Does <u>not</u> prompt for Application Selection

3. Automatically selects the 'US Debit' application

4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000001524010, A0000001523010

4. Contactless CVM Floor limit is $0

Steps:

1. Start a Purchase transaction for $79.00

2. When prompted for card entry, tap Test Card 12

3. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is <u>not</u> prompted to select an application

3. The 'US Debit' application is automatically selected

4. The transaction is approved

5. Receipt shows:
    a. "Contactless" – indicates card was tapped
    b. "A0000001524010" – AID selected was 'US Debit'
    c. "0005" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

3.3.12.40   CD.SEAS.C12-T05

<table>
<tr><td>CD.SEAS.C12-T05</td><td>Credit/Debit Prompting, Standard EMV Application List
Card 12 - Test 05</td></tr>
</table>

Type: Contactless

Purpose:

Test that when a Discover card with more than one Debit AID is tapped, the application:

1. Does <u>not</u> prompt for Credit or Debit

2. Does <u>not</u> prompt for Application Selection

3. Automatically selects the 'US Debit' application

4. Does <u>not</u> prompt for PIN as the transaction amount is under the Contactless CVM Floor Limit

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AIDs: A0000001524010, A0000001523010

4. Contactless CVM Floor limit is above $79

Steps:

1. Start a Purchase transaction for $79.00

2. When prompted for card entry, tap Test Card 12

Pass Criteria:

1. User is <u>not</u> prompted to select 'Credit' or 'Debit'

2. User is <u>not</u> prompted to select an application

3. User is <u>not</u> prompted to enter a PIN

4. The 'US Debit' application is automatically selected

5. The transaction is approved

6. Receipt shows:
    a. "Contactless" – indicates card was tapped
    b. "A0000001524010" – AID selected was 'US Debit'
    c. "0005" – last 4 digits of the PAN
    d. "No signature required" – No CVM was used

Comments:

3.3.12.41   CD.SEAS.C13-T01

CD.SEAS.C13-T01	Credit/Debit Prompting, Standard EMV Application List Card 13 - Test 01

Type: Contact

Purpose:

Test that when a Discover card with only one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'US Debit' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AID: A0000001524010

Steps:

1. Start a Purchase transaction for $79.00
2. When prompted for card entry, insert Test Card 13
3. When prompted, select 'Debit'
4. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'US Debit' application is automatically selected
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000001524010" – AID selected was 'US Debit'
    c. "0005" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

B2»

CD.SEAS.C13-T02	Credit/Debit Prompting, Standard EMV Application List Card 13 - Test 02

Type: Contact

Purpose:

Test that when a Discover card with only one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Credit')
2. Does <u>not</u> prompt for Application Selection
3. Automatically selects the 'US Debit' application
4. Uses Signature/No CVM as the CVM for the transaction

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AID: A0000001524010

Steps:

1. Start a Purchase transaction for $79.00
2. When prompted for card entry, insert Test Card 13
3. When prompted, select 'Credit'

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is <u>not</u> prompted to select an application
3. The 'US Debit' application is automatically selected
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000001524010" – AID selected was 'US Debit'
    c. "0005" – last 4 digits of the PAN
    d. "Signature panel" or "No signature required" – Signature or No CVM was used

Comments:

B2》

3.3.12.43   CD.SEAS.C14-T01

CD.SEAS.C14-T01	Credit/Debit Prompting, Standard EMV Application List Card 14 - Test 01

Type: Contact

Purpose:

Test that when a DNA card with only one Debit AID is inserted, the application:

1.   Prompts for Credit and Debit (user selects 'Debit')
2.   Does not prompt for Application Selection
3.   Automatically selects the 'DNA' application
4.   Prompts the user to enter a PIN

Pre-Requisites:

1.   Application is configured as Credit/Debit Prompting
2.   Application Selection is Standard EMV Application Selection
3.   Terminal supports the following AID: A0000006200620

Steps:

1.   Start a Purchase transaction for $10.00
2.   When prompted for card entry, insert Test Card 14
3.   When prompted, select 'Debit'
4.   Enter PIN ("1234") when prompted

Pass Criteria:

1.   User is prompted to select 'Credit' and 'Debit'
2.   User is not prompted to select an application
3.   The 'DNA' application is automatically selected
4.   The transaction is approved *
5.   Receipt shows:
     a.   "Chip" – indicates the card was inserted
     b.   "A0000006200620" – AID selected was 'DNA'
     c.   "0028" – last 4 digits of the PAN
     d.   "Verified by PIN" – PIN CVM was used

Comments:

* Final disposition (Approved / Declined) is outside the scope of this document. For this test case to be successful, the transaction should go online but as the cryptogram doesn't need to be valid, the host may approve or decline.

3.3.12.44   CD.SEAS.C15-T01

CD.SEAS.C15-T01	Credit/Debit Prompting, Standard EMV Application List Card 15 - Test 01

Type: Contact

Purpose:

Test that when an Interac Flash card with only one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')
2. Does not prompt for Application Selection
3. Automatically selects the 'Interac' application
4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting
2. Application Selection is Standard EMV Application Selection
3. Terminal supports the following AID: A0000002771010

Steps:

1. Start a Purchase transaction for $30.00
2. When prompted for card entry, insert Test Card 15
3. When prompted, select 'Debit'
4. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'
2. User is not prompted to select an application
3. The 'Interac' application is automatically selected
4. The transaction is approved
5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000002771010" – AID selected was 'Interac'
    c. "8644" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

Account selection prompting (Chequing/Savings) is not a requirement for terminals deployed in the USA.

3.3.12.45   CD.SEAS.C16-T01

PLEASE READ IMPORTANT NOTES AT THE BEGINING OF SECTION 3.3

CD.SEAS.C16-T01	Credit/Debit Prompting, Standard EMV Application List Card 16 - Test 01

Type: Contact

Purpose:

Test that when an Interac card with only one Debit AID is inserted, the application:

1. Prompts for Credit and Debit (user selects 'Debit')

2. Does not prompt for Application Selection

3. Automatically selects the 'Interac' application

4. Prompts the user to enter a PIN

Pre-Requisites:

1. Application is configured as Credit/Debit Prompting

2. Application Selection is Standard EMV Application Selection

3. Terminal supports the following AID: A0000002771010

Steps:

1. Start a Purchase transaction for $30.00

2. When prompted for card entry, insert Test Card 16

3. When prompted, select 'Debit'

4. Enter PIN ("1234") when prompted

Pass Criteria:

1. User is prompted to select 'Credit' and 'Debit'

2. User is not prompted to select an application

3. The 'Interac' application is automatically selected

4. The transaction is approved

5. Receipt shows:
    a. "Chip" – indicates the card was inserted
    b. "A0000002771010" – AID selected was 'Interac'
    c. "1933" – last 4 digits of the PAN
    d. "Verified by PIN" – PIN CVM was used

Comments:

Account selection prompting (Chequing/Savings) is not a requirement for terminals deployed in the USA.

Chapter 4 -   USA Debit EMV Test Card Set Profiles

CAUTION

Multiple consecutive incorrect PIN entry attempts may result in the card being blocked.
This is known as being 'PIN Blocked'.
If this occurs, it will no longer be possible to enter an Offline PIN,
which will cause all future transactions to be declined.

*** It is not possible to unblock a 'PIN Blocked' card ***

NOTICE

Interac Flash card has a '001203' BIN range. These cards are supported by all Canadian processors but are not yet supported by all U.S. and international processors.

*** Check with your acquirer account representative to determine if the Interac Flash BIN range is supported by their development host. If your processor does not yet support Interac Flash, the card will function properly at the POS but it will not obtain a host approval. ***

RECOMMENDATION

For those that are relatively new to EMV and seek assistance in understanding 'the basics'...
Consider B2's online courses – eLearning and Virtual Training.
Learn from the comfort and convenience of your office (or home-office), at your own pace.

Visit: b2ps.com/b2-university

The B2 USA Debit Test Card Set contains 16 cards with at least one card from each of the following card brands.

	Test Card 01	Test Card 02	Test Card 03
Brand	Visa	Visa	Visa
Description (Card - Types)	Global / U.S. Common	U.S. Common	Credit / Debit / U.S. Common, Dual-Funding
AID list	A0000000031010 A0000000980840	A0000000980840	A000000003101001 A000000003101002 A0000000980840
PAN on plastic	4761 7390 0101 0135	4761 7390 0101 0135	4761 7390 0101 0176
Expiry Date	12/2024	12/2024	12/2024
Service Code	201	201	201
Interface	Contact, Contactless, MSR	Contact, MSR	Contact, MSR
CVM (Contact) **Default Condition:** *Terminal Supports CVM*	Online PIN (ATM) Online PIN (MCash) Signature (MCash) Online PIN (CBack) Signature Online PIN **See card definition**	Online PIN (ATM) Fail CVM Processing (MCash) Online PIN (CBack) Online PIN No CVM required See card definition	Online PIN (ATM) Online PIN (MCash) Signature (MCash) Fail CVM Processing (CBack) Signature No CVM required Fail CVM Processing See card definition
Approval Amount	$10.00	$10.00	$10.00
Issuer Country Code	840 - USA	840 - USA	840 - USA
Application Currency Code	840 - USD	840 - USD	840 - USD
Language	'en' - English	'en' - English	'en' - English
Card Version	v5.x	v5.x	v7.x

	Test Card 04	Test Card 05	Test Card 06
Brand	Visa	Mastercard	Mastercard
Description (Card + types)	Interlink	Global / Common	Maestro Dual-Funding
AID list	A0000000033010	A0000000041010 A0000000042203	A0000000043060 D0561111 A0000000043060 D05621222
PAN on plastic	4761 7310 0000 0084	5413 3300 8909 9130	67999 9890 0000 2010
Expiry Date	12/2024	12/2025	12/2025
Service Code	221	201	220
Interface	Contact, MSR	Contact, Contactless, MSR	Contact, MSR
CVM (Contact) Default Condition: *Terminal Supports CVM*	Online PIN No CVM required See card definition	Online PIN (ATM) Online PIN (CBack) Signature Online PIN No CVM required See card definition	Offline Plaintext PIN Online PIN (CBack) Fail CVM Processing See card definition
Approval Amount	$10.00	$20.00	$20.00
Issuer Country Code	840 - USA	840 - USA	528 - NLD
Application Currency Code	840 - USD	840 - USD	978 - EUR
Language	'en' - English	'en' - English	'en' - English
Card Version	v5.x	v6.x	v5.x

	Test Card 07	Test Card 08	Test Card 09
Brand	Mastercard	Mastercard	Mastercard
Description	Credit / Int'l	U.S. Maestro - Dual-Funding	Credit / Global / U.S. Common
AID list	A0000000041010 A00000000043060	A0000000042203 D0561111 A0000000042203 D0562222	A0000000041010 A0000000043060 A0000000042203
PAN on plastic	5413 3300 8902 0060	5413 3300 8909 9007	5413 3300 8902 0060
Expiry Date	12/2025	12/2025	12/2025
Service Code	201	220	201
Interface	Contact, MSR	Contact, MSR	Contact, MSR
CVM (Contact) Default Condition: *Terminal Supports CVM*	Offline Plaintext PIN Online PIN Signature No CVM required Fail CVM Processing See card definition	Online PIN (CBack) Online PIN No CVM required Fail CVM Processing See card definition	Offline Plaintext PIN Online PIN Signature No CVM required Fail CVM Processing See card definition
Approval Amount	$20.00	$20.00	$20.00
Issuer Country Code	826 - GBR	840 - USA	840 - USA
Application Currency Code	826 - GBP	840 - USD	840 - USD
Language	'en' - English	'en' - English	'en' - English
Card Version	v5.x	v5.x	v5.x

	Test Card 10	Test Card 11	Test Card 12
Brand	Mastercard	Mastercard	Discover
Description	U.S. Maestro	MC+U.S. Maestro / Maestro+U.S. Maestro	Discover U.S. Debit / Discover
AID list	A0000000042203	A0000000041010 A000000004220301 A0000000043060 A000000004220302	A0000001524010 A0000001523010
PAN on plastic	5413 3300 8909 9130	5413 3300 8902 0060	6011 9737 0000 0138
Expiry Date	12/2025	12/2025	05/2026
Service Code	220	201	201
Interface	Contact, Contactless, MSR	Contact, MSR	Contactless, Contact, MSR
CVM (Contact) Default Condition: *Terminal Supports CVM*	Online PIN (CBack) Online PIN No CVM required See card definition	Online PIN (CBack) Offline Plaintext PIN Online PIN Signature (paper) No CVM required See card definition	Online PIN No CVM required See card definition
Approval Amount	$20.00	$20.00	$79.00
Issuer Country Code	840 - USA	840 - USA	840 - USA
Application Currency Code	840 - USD	840 - USD	840 - USD
Language	'en' - English	'en' - English	'enesfr' (English, Spanish, French)
Card Version	v7.x	v5.x	v7.x

	Test Card 13	Test Card 14	Test Card 15
Brand	Discover	DNA	Interac
Description	Single AID	Debit Network Alliance	Canadian Debit
AID list	A0000001524010	A0000006200620	A0000002771010
PAN on plastic	6011 9737 0000 0120	4000 0000 0000 0028	0012 0300 0000 0003
Expiry Date	05/2026	12/2025	12/2028
Service Code	201	201	220
Interface	Contact, MSR	Contact, MSR	Contactless, Contact, MSR
CVM (Contact) Default Condition: *Terminal Supports CVM*	Online PIN No CVM required See card definition	Online PIN (ATM) Online PIN (MCash) Online PIN No CVM required See card definition	Offline Enciphered PIN Offline Plaintext PIN Online PIN See card definition
Approval Amount	$79.00	$10.00	$30.00
Issuer Country Code	840 - USA	840 - USA	124 - CAN
Application Currency Code	840 - USD	840 - USD	124 -CAD
Language	'en' - English	'en' - English	'en' - English
Card Version	v6.x	v6.x	v7.x

	Test Card 16
Brand	Mastercard
Description	Credit / Debit / U.S. Maestro
AID list	A000000004101001 A000000004101002 A0000000042203
PAN on plastic	5413 3300 8902 0060
Expiry Date	12/2025
Service Code	201
Interface	Contact, MSR
CVM (Contact) Default Condition: *Terminal Supports CVM*	Offline Plaintext PIN Online PIN Signature No CVM required Fail CVM Processing See card definition
Approval Amount	$20.00
Issuer Country Code	840 - USA
Application Currency Code	840 - USD
Language	'en' - English
Card Version	v6.x

4.1   Test Card 01 - Visa, DI, 2-AID (Visa Debit+US Debit), English, USA, USD

A Dual Interface (Contact+Contactless) 2-AID Visa debit card with an Issuer Country Code of 'USA' and Currency Code of 'USD'.

The recommended transaction amount to generate a host approval is $10.00.

4.1.1   Contact: CVM List - Visa Debit, AID A0000000031010

Cardholder Verification Method List ('0201 4204 1E04 0205 5E00 4200 1F00')			
CVM	**Verification Method**	**Conditions**	**If unsuccessful**
1	Online PIN	Unattended Cash	Fail
2	Online PIN	Manual Cash	Next CVM
3	Signature (paper)	Manual Cash	Fail
4	Online PIN	Purchase with Cashback	Fail
5	Signature (paper)	Always	Next CVM
6	Online PIN	Always	Next CVM
7	No CVM required	Always	Fail

4.1.2   Contact: Application Tag data, AID A0000000031010

Tag	Element name	Data Card v5.x
42	Issuer Identification Number (IIN)	`47 61 73`
50	Application Label	`56 49 53 41 20 44 45 42 49 54 20 20` `20 20 20 20` - 'VISA DEBIT'
57	Track 2 Equivalent Data	`47 61 73 90 01 01 01 35 D2 41 22 01` `19 55 94 58 00 00 0F`
5A	Application Primary Account Number (PAN)	`47 61 73 90 01 01 01 35`
5F 20	Cardholder Name	`55 53 41 20 44 45 42 49 54 2F 54 65` `73 74 20 43 61 72 64 20 30 31 20 20` `20 20` - 'USA DEBIT/Test Card 01'
5F 24	Application Expiration Date	`24 12 31`
5F 25	Application Effective Date	`xx xx xx *`
5F 28	Issuer Country Code	`08 40` - USA
5F 2D	Language Preference	`65 6E` - 'en' (English)
5F 30	Service Code	`02 01`
5F 34	Application PAN Sequence Number	`01`
5F 55	Issuer Country Code (alpha2 format)	`55 53` - 'US'
82	Application Interchange Profile [VIS]	`18 00` BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported via EXTERNAL AUTH command b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - Use for Visa NOT supported b7 - Is NOT Mobile handset
84	Dedicated File (DF) Name	`A0 00 00 00 03 10 10`
87	Application Priority Indicator	`01`
8C	Card Risk Management Data Object List 1 (CDOL1)	`9F 02 06 9F 03 06 9F 1A 02 95 05 5F` `2A 02 9A 03 9C 01 9F 37 04`

Tag	Element name	Data	Card v5.x
8D	Card Risk Management Data Object List 2 (CDOL2)	8A 02 9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04 91 0A	
8E	Cardholder Verification Method (CVM) List	00 00 00 00 00 00 00 00 02 01 42 04 1E 04 02 05 5E 00 42 00 1F 00	
94	Application File Locator (AFL)	08 01 02 00	
9F 07	Application Usage Control	FF 80 BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions valid b6 - Domestic goods valid b5 - International goods valid b4 - Domestic services valid b3 - International services valid b2 - ATMs valid b1 - non-ATM terminals valid BYTE 2: b8 - Domestic cashback allowed b7 - International cashback NOT allowed	
9F 08	Application Version Number [VIS]	00 96	
9F 0D	Issuer Action Code - Default	FC 50 AC 88 00	
9F 0E	Issuer Action Code - Denial	00 00 00 00 00	
9F 0F	Issuer Action Code - Online	FC 70 BC 98 00	
9F 10	Issuer Application Data [VSDC]	xx xx 0A xx xx xx xx *	
9F 11	Issuer Code Table Index	01	
9F 12	Application Preferred Name	56 69 73 61 20 44 65 62 69 74 20 20 20 20 20 20 - 'Visa Debit'	
9F 13	Last Online Application Transaction Counter (ATC) Register	xx xx *	
9F 17	Personal Identification Number (PIN) Try Counter	03	
9F 24	Payment Account Reference (PAR)	56 30 30 31 30 30 31 33 30 31 36 31 37 33 31 30 36 36 39 33 30 33 37 34 38 39 33 30 33	
9F 26	Application Cryptogram (AC)	C4 87 AB 1C 1A 67 97 B7	
9F 27	Cryptogram Information Data (CID)	80	
9F 36	Application Transaction Counter (ATC)	xx xx *	
9F 42	Application Currency Code	08 40 - USD	
9F 44	Application Currency Exponent	02	
9F 4F	Transaction Log Format	9F 02 06 5F 2A 02 9A 03 9F 36 02 9F 1A 02 95 05 9C 01 9F 27 01	
9F 51	Application Currency Code [VSDC]	08 40 - USD	
9F 52	Application Default Action [VSDC VIS 1.5]	00 00 00 00 00 00	
9F 56	Issuer Authentication Indicator [VSDC]	80	
9F 57	Issuer Country Code [VSDC]	08 40 - USA	
9F 5D	Available Offline Spending Amount [VSDC]	00 00 00 00 00 00	
9F 68	Card Additional Processes [qVSDC VCPS 2.1]	10 00 10 00	
BF 55	Contactless Counters Data Template		
BF 56	Counters Data Template		
BF 57	International Counters Data Template		
BF 58	Amounts Data Template		
BF 59	Profile Controls Template		
BF 5A	AIP/AFL Entries Template		
BF 5B	Application Internal Data Template	DF 01 02 00 00	

* Tag value changes with card usage

4.1.3 Contact: CVM List - U.S. Debit, AID A0000000980840

CVM	Verification Method	Conditions	If unsuccessful
Cardholder Verification Method List ('0201 0205 4200 1F00 0000')			
1	Online PIN	Unattended Cash	Fail
2	Online PIN	Purchase with Cashback	Fail
3	Online PIN	Always	Next CVM
4	No CVM required	Always	Fail
5	Fail CVM Processing	Always	Fail

4.1.4 Contact: Application Tag data, AID A0000000980840

Tag	Element name	Data	Card v5.x
42	Issuer Identification Number (IIN)	`47 61 73`	
50	Application Label	`55 53 20 44 45 42 49 54 20 20 20 20 20 20 20 20` - 'US DEBIT'	
57	Track 2 Equivalent Data	`47 61 73 90 01 01 01 35 D2 41 22 01 19 55 94 58 00 00 0F`	
5A	Application Primary Account Number (PAN)	`47 61 73 90 01 01 01 35`	
5F 20	Cardholder Name	`55 53 41 20 44 45 42 49 54 2F 54 65 73 74 20 43 61 72 64 20 30 31 20 20 20 20` - 'USA DEBIT/Test Card 01'	
5F 24	Application Expiration Date	`24 12 31`	
5F 25	Application Effective Date	`xx xx xx *`	
5F 28	Issuer Country Code	`08 40` - USA	
5F 2D	Language Preference	`65 6E` - 'en' (English)	
5F 30	Service Code	`02 01`	
5F 34	Application PAN Sequence Number	`01`	
5F 55	Issuer Country Code (alpha2 format)	`55 53` - 'US'	
82	Application Interchange Profile [VIS]	`18 00` BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported via EXTERNAL AUTH command b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - Use for Visa NOT supported b7 - Is NOT Mobile handset	
84	Dedicated File (DF) Name	`A0 00 00 00 98 08 40`	
87	Application Priority Indicator	`02`	
8C	Card Risk Management Data Object List 1 (CDOL1)	`9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04`	
8D	Card Risk Management Data Object List 2 (CDOL2)	`8A 02 9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04 91 0A`	
8E	Cardholder Verification Method (CVM) List	`00 00 00 00 00 00 00 00 02 01 02 05 42 00 1F 00 00 00 00 00`	
94	Application File Locator (AFL)	`08 01 02 00`	

9F 07	Application Usage Control	AB 80 BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions NOT valid b6 - Domestic goods valid b5 - International goods NOT valid b4 - Domestic services valid b3 - International services NOT valid b2 - ATMs valid b1 - non-ATM terminals valid BYTE 2: b8 - Domestic cashback allowed b7 - International cashback NOT allowed
9F 08	Application Version Number [VIS]	00 96
9F 0D	Issuer Action Code - Default	FC 50 AC 88 00
9F 0E	Issuer Action Code - Denial	00 00 00 00 00
9F 0F	Issuer Action Code - Online	FC 70 BC 98 00
9F 10	Issuer Application Data [VSDC]	xx xx 0A xx xx xx xx *
9F 11	Issuer Code Table Index	01
9F 12	Application Preferred Name	55 53 20 44 65 62 69 74 20 20 20 20 20 20 20 20 - 'US Debit'
9F 13	Last Online Application Transaction Counter (ATC) Register	xx xx *
9F 17	Personal Identification Number (PIN) Try Counter	03
9F 24	Payment Account Reference (PAR)	56 30 30 31 30 30 31 33 30 31 36 31 37 33 31 30 36 36 39 33 30 33 37 34 38 39 33 30 33
9F 26	Application Cryptogram (AC)	xx xx xx xx xx xx xx xx *
9F 27	Cryptogram Information Data (CID)	80
9F 36	Application Transaction Counter (ATC)	xx xx *
9F 38	Processing Options Data Object List (PDOL)	9F 06 05
9F 42	Application Currency Code	08 40 - USD
9F 44	Application Currency Exponent	02
9F 4F	Transaction Log Format	9F 02 06 5F 2A 02 9A 03 9F 36 02 9F 1A 02 95 05 9C 01 9F 27 01
9F 51	Application Currency Code [VSDC]	08 40 - USD
9F 52	Application Default Action [VSDC VIS 1.5]	00 00 00 00 00 00
9F 56	Issuer Authentication Indicator [VSDC]	80
9F 57	Issuer Country Code [VSDC]	08 40 - USA
9F 5D	Available Offline Spending Amount [VSDC]	00 00 00 00 00 00
9F 68	Card Additional Processes [qVSDC VCPS 2.1]	10 00 80 00
BF 55	Contactless Counters Data Template	
BF 56	Counters Data Template	
BF 57	International Counters Data Template	
BF 58	Amounts Data Template	
BF 59	Profile Controls Template	
BF 5A	AIP/AFL Entries Template	
BF 5B	Application Internal Data Template	DF 01 02 00 00

* Tag value changes with card usage

4.1.5 CTLS: Application Tag data, AID A0000000031010, (qVSDC, online, ODA)

Tag	Element name	Data	Card v5.x
42	Issuer Identification Number (IIN)	47 61 73	
50	Application Label	56 49 53 41 20 44 45 42 49 54 20 20 20 20 20 20 - 'VISA DEBIT'	
57	Track 2 Equivalent Data	47 61 73 90 01 01 01 35 D2 41 22 01 19 55 94 58 00 00 1F	
5A	Application Primary Account Number (PAN)	47 61 73 90 01 01 01 35	
5F 24	Application Expiration Date	24 12 31	
5F 28	Issuer Country Code	08 40	
5F 2D	Language Preference	65 6E	
5F 34	Application PAN Sequence Number	01	
5F 55	Issuer Country Code (alpha2 format)	55 53 - 'US'	
82	Application Interchange Profile [VCPS]	00 00 BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification NOT supported b4 - Terminal risk mgmt NOT to be performed b3 - Issuer authentication NOT supported via EXTERNAL AUTH command b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - Use for Visa NOT supported b7 - Is NOT Mobile handset	
84	Dedicated File (DF) Name	A0 00 00 00 03 10 10	
87	Application Priority Indicator	01	
94	Application File Locator (AFL)	08 03 03 00	
9F 07	Application Usage Control [VCPS]	C0 80 BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions valid b6 - Domestic goods NOT valid b5 - International goods NOT valid b4 - Domestic services NOT valid b3 - International services NOT valid b2 - ATMs NOT valid b1 - non-ATM terminals NOT valid BYTE 2: b8 - Domestic cashback allowed b7 - International cashback NOT allowed	
9F 10	Issuer Application Data [VCPS 2.2]	xx xx 12 xx xx xx xx *	
9F 11	Issuer Code Table Index	01	
9F 12	Application Preferred Name	56 69 73 61 20 44 65 62 69 74 20 20 20 20 20 - 'Visa Debit'	
9F 13	Last Online Application Transaction Counter (ATC) Register	xx xx *	
9F 17	Personal Identification Number (PIN) Try Counter	03	
9F 24	Payment Account Reference (PAR)	56 30 30 31 30 30 31 33 30 31 36 31 37 33 31 30 36 36 39 33 30 33 37 34 38 39 33 30 33	
9F 26	Application Cryptogram (AC)	xx xx xx xx xx xx xx xx *	
9F 27	Cryptogram Information Data (CID)	80	
9F 36	Application Transaction Counter (ATC)	xx xx *	
9F 38	Processing Options Data Object List (PDOL)	9F 66 04 9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04	
9F 4F	Transaction Log Format	9F 02 06 5F 2A 02 9A 03 9F 36 02 9F 1A 02 95 05 9C 01 9F 27 01	
9F 51	Application Currency Code [VSDC]	08 40 - USD	

9F 52	Application Default Action [VSDC VIS 1.6]	`00 00 00 00`
9F 57	Issuer Country Code [VSDC]	`08 40` - USA
9F 5A	Application Program Identifier	`11 08 40 08 40`
9F 5D	Available Offline Spending Amount [VSDC]	`00 00 00 00 00 00`
9F 68	Card Additional Processes [qVSDC VCPS 2.2]	`10 00 10 00`
9F 69	Card Authentication Related Data [qVSDC]	`01 00 00 00 00 00 00` BYTE 1: b8 - Online PIN NOT required b7 - Signature NOT required b6 - Do NOT go online if Offline Data Authentication fails and Reader is online capable b5 - Do NOT switch interface if Offline Data Authentication fails and Reader supports contact chip b4 - Do NOT go Online if Application Expired b3 - Do NOT switch interface for Cash Transactions b2 - Do NOT switch interface for Cashback Transactions b1 - Is valid for contactless ATM transactions BYTE 2: b8 - Consumer Device CVM NOT performed b7 - Card does NOT Support Issuer Update Processing at POS
9F 6C	Card Transaction Qualifiers [qVSDC VCPS 2.2]	`00 00`
9F 6E	Form Factor Indicator [qVSDC]	`20 70 00 00`
BF 55	Contactless Counters Data Template	
BF 56	Counters Data Template	
BF 57	International Counters Data Template	
BF 58	Amounts Data Template	
BF 59	Profile Controls Template	
BF 5A	AIP/AFL Entries Template	
BF 5B	Application Internal Data Template	`DF 01 02 00 00`

* Tag value changes with card usage

4.1.6   CTLS: Application Tag data, AID A0000000980840, (qVSDC, offline)

Tag	Element name	Data Card v4.x
42	Issuer Identification Number (IIN)	`47 61 73`
50	Application Label	`56 49 53 41 20 44 45 42 49 54 20 20` `20 20 20 20` - 'VISA DEBIT'
57	Track 2 Equivalent Data	`47 61 73 90 01 01 01 35 D2 41 22 01` `19 55 94 58 00 00 1F`

5F 20	Cardholder Name	`43 41 52 44 48 4F 4C 44 45 52 2F 56`
		`49 53 41 20 20 20 20 20 20 20 20 20`
		`20 20` - 'CARDHOLDER/VISA'

5F 2D	Language Preference	`65 6E`
5F 34	Application PAN Sequence Number	`01`
5F 55	Issuer Country Code (alpha2 format)	`55 53` - 'US'

82	Application Interchange Profile [VCPS]	`00 00` BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification NOT supported b4 - Terminal risk mgmt NOT to be performed b3 - Issuer authentication NOT supported via EXTERNAL AUTH command b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - Use for Visa NOT supported b7 - Is NOT Mobile handset
84	Dedicated File (DF) Name	`A0 00 00 00 03 10 10`
87	Application Priority Indicator	`01`
9F 10	Issuer Application Data [VSDC]	`xx xx 12 xx xx xx xx *`
9F 11	Issuer Code Table Index	`01`
9F 12	Application Preferred Name	`56 69 73 61 20 44 65 62 69 74 20 20 20 20 20` - 'Visa Debit'
9F 13	Last Online Application Transaction Counter (ATC) Register	`xx xx *`
9F 17	Personal Identification Number (PIN) Try Counter	`03`
9F 26	Application Cryptogram (AC)	`xx xx xx xx xx xx xx xx *`
9F 27	Cryptogram Information Data (CID)	`80`
9F 36	Application Transaction Counter (ATC)	`xx xx *`
9F 38	Processing Options Data Object List (PDOL)	`9F 66 04 9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04`
9F 4F	Transaction Log Format	`9F 02 06 5F 2A 02 9A 03 9F 36 02 9F 1A 02 95 05 9C 01 9F 27 01`
9F 51	Application Currency Code [VSDC]	`08 40` - USD
9F 52	Application Default Action [VSDC VIS 1.5]	`00 00 00 00`
9F 57	Issuer Country Code [VSDC]	`08 40` - USA
9F 5A	Application Program Identifier	`11 08 40 08 40`
9F 5D	Available Offline Spending Amount [VSDC]	`00 00 00 00 00 00`
9F 68	Card Additional Processes [qVSDC VCPS 2.1]	`10 00 10 00`
9F 6C	Card Transaction Qualifiers [qVSDC VCPS 2.1]	`00 00`
9F 6E	Form Factor Indicator [qVSDC]	`20 70 00 00`
BF 55	Contactless Counters Data Template	
BF 56	Counters Data Template	
BF 57	International Counters Data Template	
BF 58	Amounts Data Template	
BF 59	Profile Controls Template	
BF 5A	AIP/AFL Entries Template	
BF 5B	Application Internal Data Template	`DF 01 02 00 00`

* Tag value changes with card usage

4.2   Test Card 02 - Visa, CO, 1-AID (US Debit), English, USA, USD

A contact-only, single-AID Visa debit card with an Issuer Country Code of 'USA' and Currency Code of 'USD'.

The recommended transaction amount to generate a host approval is $10.00.

4.2.1   Contact: CVM List - US Debit, AID - A0000000980840

Cardholder Verification Method List ('0201 0004 0205 4200 1F00')			
CVM	**Verification Method**	**Conditions**	**If unsuccessful**
1	Online PIN	Unattended Cash	Fail
2	Fail CVM Processing	Manual Cash	Fail
3	Online PIN	Purchase with Cashback	Fail
4	Online PIN	Always	Next CVM
5	No CVM required	Always	Fail

4.2.2   Contact: Application Tag data, AID A0000000980840

Tag	Element name	Data Card v5.x
42	Issuer Identification Number (IIN)	`47 61 73`
50	Application Label	`55 53 20 44 45 42 49 54` - 'US DEBIT'
57	Track 2 Equivalent Data	`47 61 73 90 01 01 01 35 D2 41 22 01 19 55 94 58 00 00 0F`
5A	Application Primary Account Number (PAN)	`47 61 73 90 01 01 01 35`
5F 20	Cardholder Name	`55 53 41 20 44 45 42 49 54 2F 54 65 73 74 20 43 61 72 64 20 30 32 20 20 20` - 'USA DEBIT/Test Card 02'
5F 24	Application Expiration Date	`24 12 31`
5F 25	Application Effective Date	`xx xx xx *`
5F 28	Issuer Country Code	`08 40` - USA
5F 2D	Language Preference	`65 6E` - 'en' (English)
5F 30	Service Code	`02 01`
5F 34	Application PAN Sequence Number	`01`
5F 55	Issuer Country Code (alpha2 format)	`55 53` - 'US'
82	Application Interchange Profile [VIS]	`18 00` BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported via EXTERNAL AUTH command b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - Use for Visa NOT supported b7 - Is NOT Mobile handset
84	Dedicated File (DF) Name	`A0 00 00 00 98 08 40`
87	Application Priority Indicator	`02`
8C	Card Risk Management Data Object List 1 (CDOL1)	`9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04`
8D	Card Risk Management Data Object List 2 (CDOL2)	`8A 02 9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04`
8E	Cardholder Verification Method (CVM) List	`00 00 00 00 00 00 00 00 02 01 00 04 02 05 42 00 1F 00`
8F	Certification Authority Public Key Index	`92`

90	Issuer Public Key Certificate	3C 96 F7 65 8F BC 29 A2 02 F1 91 46 BD E9 21 66 B0 F6 22 1B BC CB 02 E3 26 71 0B 9E 22 9D 16 FA E9 AD 0C 87 4C 06 85 91 6E 19 F0 E3 26 93 EE 20 1B CE 23 59 50 9A 6D 65 72 F8 EC 3F C3 73 12 6B 34 3F 9C B8 15 3D 61 B7 EA B2 D4 2D E1 9D 56 08 31 85 A0 3D D1 4C 26 8D 40 DF 08 35 C5 5E AB FA 38 ED 28 BC E4 2C D0 01 3D A9 4F 80 05 18 B7 53 C2 46 EF FB A0 8F D2 02 9B AD 5D FC F0 DA F0 7B 7D 80 1C 46 5F FD 25 2C 70 B9 21 53 B3 30 D9 5D CA 2F A1 FA AE 2D 01 68 A4 EA 8B 47 5C D8 05 DC 32 AA 96 4C 17 BF CD 2C D5 D0 30 9A B0 EA 76 1B
92	Issuer Public Key Remainder	50 DA 20 DD A8 95 3B 69 3F ED 84 36 68 31 BA 1E EA 97 F7 8F 79 2A CF 8C B9 8F DF 01 49 A7 B7 8F DA 1C 49 67
94	Application File Locator (AFL)	10 01 01 00 10 02 05 01 B0 01 01 00
9F 07	Application Usage Control	AB 80 BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions NOT valid b6 - Domestic goods valid b5 - International goods NOT valid b4 - Domestic services valid b3 - International services NOT valid b2 - ATMs valid b1 - non-ATM terminals valid BYTE 2: b8 - Domestic cashback allowed b7 - International cashback NOT allowed
9F 08	Application Version Number [VIS]	00 96
9F 0D	Issuer Action Code - Default	FC 50 AC 88 00
9F 0E	Issuer Action Code - Denial	00 00 00 00 00
9F 0F	Issuer Action Code - Online	FC 70 BC 98 00
9F 10	Issuer Application Data [VSDC]	xx xx 0A xx xx xx xx *
9F 11	Issuer Code Table Index	01
9F 12	Application Preferred Name	55 53 20 44 65 62 69 74 - 'US Debit'
9F 13	Last Online Application Transaction Counter (ATC) Register	xx xx *
9F 17	Personal Identification Number (PIN) Try Counter	03
9F 1F	Track 1 Discretionary Data	20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20
9F 26	Application Cryptogram (AC)	xx xx xx xx xx xx xx xx *
9F 27	Cryptogram Information Data (CID)	80
9F 32	Issuer Public Key Exponent	03
9F 36	Application Transaction Counter (ATC)	xx xx *
9F 44	Application Currency Exponent	02

9F 46	ICC Public Key Certificate	`03 B8 82 2C E3 88 09 BF CE 61 BF 25`
		`91 7B DE FE 32 14 DB 4F E2 71 C7 13`
		`E2 A9 F3 BC 76 B4 5F 24 F1 40 C7 12`
		`96 F0 43 C3 3B FB 9E 53 D3 4A 7C 96`
		`72 A9 A3 67 88 C0 70 3F 1F F9 23 D4`
		`09 FB 1B D6 BC 8B C6 22 D0 65 E7 63`
		`EE 95 BB B3 47 87 B6 BE 70 79 CE 22`
		`1A DA 4D EE 8A 59 E4 54 C2 5B 00 62`
		`8D 4C 6C BA 91 44 33 59 35 2C 1D 70`
		`A4 D3 54 E4 DF 9C 07 1E 9F B8 F2 F3`
		`1B A1 EB 20 1F E0 3F 34 DE 83 5C 4D`
		`68 A8 55 06 50 24 9D 7E 4B FD 8B 43`
		`EB 1B F3 6E 24 42 4E BE F0 E5 BF F3`
		`4C 60 6E E2 C1 78 F7 AC 96 A1 AB 1D`
		`5E EC E9 5E 0F 23 45 F9`

9F 47	ICC Public Key Exponent	`03`
9F 49	Dynamic Data Authentication Data Object List (DDOL)	`9F 37 04`
9F 4A	Static Data Authentication Tag List	`82`
9F 51	Application Currency Code [VSDC]	`08 40` - USD
9F 52	Application Default Action [VSDC VIS 1.5]	`00 00 00 00 00 00`
9F 53	Consecutive Transaction Limit (International) [VSDC]	`00`
9F 54	Cumulative Total Transaction Amount Limit [VSDC]	`00 00 00 00 00 00`
9F 57	Issuer Country Code [VSDC]	`08 40` - USA
9F 58	Consecutive Transaction Counter Limit [VSDC]	`00`
9F 59	Consecutive Transaction Counter Upper Limit [VSDC]	`00`
9F 5C	Cumulative Total Transaction Amount Upper Limit [VSDC]	`00 00 00 00 00 00`
9F 5E	Consecutive Transaction International Upper Limit [VSDC]	`00`
9F 72	Consecutive Transaction Limit (International-Country) [VSDC]	`00`
BF 56	Counters Data Template	`DF 11 01 01 DF 21 01 00 DF 31 01 00`
BF 57	International Counters Data Template	`DF 11 01 00 DF 21 01 00 DF 31 01 00` `DF 51 01 00 DF 61 01 00`

BF 58	Amounts Data Template	`DF 11 06 00 00 00 00 00 00 DF 21 06`
		`00 00 00 00 00 00 DF 31 06 00 00 00`
		`00 00 00`

* Tag value changes with card usage

4.3   Test Card 03 - Visa, CO, 3-AID (Credit+Debit+US Common, 2-Funding), English, USA, USD

A contact-only, 3-AID combination Visa credit & debit card with 2 funding accounts which has an issuer Country Code of 'USA' and Currency Code of 'USD'.

The recommended transaction amount to generate a host approval is $10.00.

4.3.1   Contact: CVM List - Visa Credit, AID - A000000003101001

Cardholder Verification Method List ('0201 4204 1E04 0005 5E00 1F00')			
CVM	**Verification Method**	**Conditions**	**If unsuccessful**
1	Online PIN	Unattended Cash	Fail
2	Online PIN	Manual Cash	Next CVM
3	Signature (paper)	Manual Cash	Fail
4	Fail CVM Processing	Purchase with Cashback	Fail
5	Signature (paper)	Always	Next CVM
6	No CVM required	Always	Fail
7	Fail CVM Processing	Always	Fail

4.3.2   Contact: Application Tag data, AID A000000003101001

Tag	Element name	Data Card v7.x
50	Application Label	`56 49 53 41 20 43 52 45 44 49 54 20` `20 20 20 20` - 'VISA CREDIT'
57	Track 2 Equivalent Data	`47 61 73 90 01 01 01 76 D2 41 22 01` `14 83 53 94 00 00 0F`
5A	Application Primary Account Number (PAN)	`47 61 73 90 01 01 01 76`
5F 20	Cardholder Name	`55 53 41 20 44 45 42 49 54 2F 54 65` `73 74 20 43 61 72 64 20 30 33 20 20` `20 20` - 'USA DEBIT/Test Card 03'
5F 24	Application Expiration Date	`24 12 31`
5F 28	Issuer Country Code	`08 40`
5F 2D	Language Preference	`65 6E`
5F 30	Service Code	`02 01`
5F 34	Application PAN Sequence Number	`01`
82	Application Interchange Profile [VIS]	`18 00` BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported via EXTERNAL AUTH command b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - Use for Visa NOT supported b7 - Is NOT Mobile handset
84	Dedicated File (DF) Name	`A0 00 00 00 03 10 10 01`
87	Application Priority Indicator	`01`
8C	Card Risk Management Data Object List 1 (CDOL1)	`9F 02 06 9F 03 06 9F 1A 02 95 05 5F` `2A 02 9A 03 9C 01 9F 37 04`
8D	Card Risk Management Data Object List 2 (CDOL2)	`8A 02 9F 02 06 9F 03 06 9F 1A 02 95` `05 5F 2A 02 9A 03 9C 01 9F 37 04 91` `0A`
8E	Cardholder Verification Method (CVM) List	`00 00 00 00 00 00 00 00 02 01 42 04` `1E 04 00 05 5E 00 1F 00 00 00`

Tag	Element name	Data	Card v7.x
94	Application File Locator (AFL)	`08 01 01 00 10 01 01 01`	
9F 07	Application Usage Control	`FF 00` BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions valid b6 - Domestic goods valid b5 - International goods valid b4 - Domestic services valid b3 - International services valid b2 - ATMs valid b1 - non-ATM terminals valid BYTE 2: b8 - Domestic cashback NOT allowed b7 - International cashback NOT allowed	
9F 08	Application Version Number [VIS]	`00 96`	
9F 0D	Issuer Action Code - Default	`FC 50 AC 88 00`	
9F 0E	Issuer Action Code - Denial	`00 00 00 00 00`	
9F 0F	Issuer Action Code - Online	`FC 70 BC 98 00`	
9F 10	Issuer Application Data [VSDC]	`xx xx 0A xx xx xx xx *`	
9F 11	Issuer Code Table Index	`01`	
9F 12	Application Preferred Name	`56 69 73 61 20 43 72 65 64 69 74 20` `20 20 20 20` - 'Visa Credit'	
9F 13	Last Online Application Transaction Counter (ATC) Register	`xx xx *`	
9F 17	Personal Identification Number (PIN) Try Counter	`00`	
9F 26	Application Cryptogram (AC)	`xx xx xx xx xx xx xx xx *`	
9F 27	Cryptogram Information Data (CID)	`80`	
9F 36	Application Transaction Counter (ATC)	`xx xx *`	
9F 38	Processing Options Data Object List (PDOL)	`9F 06 07`	
9F 44	Application Currency Exponent	`02`	
9F 4F	Transaction Log Format	`9F 02 06 5F 2A 02 9A 03 9F 36 02 9F` `1A 02 95 05 9C 01 9F 27 01`	
9F 51	Application Currency Code [VSDC]	`08 40` - USD	
9F 52	Application Default Action [VSDC VIS 1.5]	`00 00 00 00 00 00`	
9F 56	Issuer Authentication Indicator [VSDC]	`00`	
9F 57	Issuer Country Code [VSDC]	`08 40` - USA	
BF 55	Contactless Counters Data Template		
BF 56	Counters Data Template		
BF 57	International Counters Data Template		
BF 58	Amounts Data Template		

BF 59	Profile Controls Template	`DF 11 0B 10 00 00 00 00 00 00 00 00`
		`00 00 DF 12 0B 20 00 00 00 00 00 00`
		`00 00 00 00`	

BF 5A	AIP/AFL Entries Template	`DF 11 0B 18 00 08 08 01 01 00 10 01` `01 01`	
BF 5B	Application Internal Data Template	`DF 01 02 C0 00 DF 02 01 F1`	

* Tag value changes with card usage

4.3.3 Contact: CVM List - Visa Debit, AID A000000003101002

CVM	Verification Method	Conditions	If unsuccessful
Cardholder Verification Method List ('0201 4204 1E04 0005 5E00 1F00 0000')			
1	Online PIN	Unattended Cash	Fail
2	Online PIN	Manual Cash	Next CVM
3	Signature (paper)	Manual Cash	Fail
4	Fail CVM Processing	Purchase with Cashback	Fail
5	Signature (paper)	Always	Next CVM
6	No CVM required	Always	Fail
7	Fail CVM Processing	Always	Fail

4.3.4 Contact: Application Tag data, AID A000000003101002

Tag	Element name	Data	Card v7.x
42	Issuer Identification Number (IIN)	47 61 73	
50	Application Label	56 49 53 41 20 44 45 42 49 54 20 20 20 20 20 20 - 'VISA DEBIT'	
57	Track 2 Equivalent Data	47 61 73 90 01 01 01 35 D2 41 22 01 14 83 53 94 00 00 0F	
5A	Application Primary Account Number (PAN)	47 61 73 90 01 01 01 35	
5F 20	Cardholder Name	55 53 41 20 44 45 42 49 54 2F 54 65 73 74 20 43 61 72 64 20 30 33 20 20 20 20 - 'USA DEBIT/Test Card 03'	
5F 24	Application Expiration Date	24 12 31	
5F 28	Issuer Country Code	08 40	
5F 2D	Language Preference	65 6E	
5F 30	Service Code	02 01	
5F 34	Application PAN Sequence Number	01	
5F 55	Issuer Country Code (alpha2 format)	55 53 - 'US'	
82	Application Interchange Profile [VIS]	18 00 BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported via EXTERNAL AUTH command b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - Use for Visa NOT supported b7 - Is NOT Mobile handset	
84	Dedicated File (DF) Name	A0 00 00 00 03 10 10 02	
87	Application Priority Indicator	02	
8C	Card Risk Management Data Object List 1 (CDOL1)	9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04	
8D	Card Risk Management Data Object List 2 (CDOL2)	8A 02 9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04 91 0A	
8E	Cardholder Verification Method (CVM) List	00 00 00 00 00 00 00 00 02 01 42 04 1E 04 02 05 5E 00 42 00 1F 00 00 00	
94	Application File Locator (AFL)	08 01 01 00 10 01 01 00	

Tag	Element name	Data	Card v7.x
9F 07	Application Usage Control	FF 80 BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions valid b6 - Domestic goods valid b5 - International goods valid b4 - Domestic services valid b3 - International services valid b2 - ATMs valid b1 - non-ATM terminals valid BYTE 2: b8 - Domestic cashback allowed b7 - International cashback NOT allowed	
9F 08	Application Version Number [VIS]	00 96	
9F 0D	Issuer Action Code - Default	FC 50 AC 88 00	
9F 0E	Issuer Action Code - Denial	00 00 00 00 00	
9F 0F	Issuer Action Code - Online	FC 70 BC 98 00	
9F 10	Issuer Application Data [VSDC]	xx xx 0A xx xx xx xx *	
9F 11	Issuer Code Table Index	01	
9F 12	Application Preferred Name	56 69 73 61 20 44 65 62 69 74 20 20 20 20 20 20 - 'Visa Debit'	
9F 13	Last Online Application Transaction Counter (ATC) Register	xx xx *	
9F 17	Personal Identification Number (PIN) Try Counter	00	
9F 26	Application Cryptogram (AC)	xx xx xx xx xx xx xx xx *	
9F 27	Cryptogram Information Data (CID)	80	
9F 36	Application Transaction Counter (ATC)	xx xx *	
9F 38	Processing Options Data Object List (PDOL)	9F 06 07	
9F 44	Application Currency Exponent	02	
9F 4F	Transaction Log Format	9F 02 06 5F 2A 02 9A 03 9F 36 02 9F 1A 02 95 05 9C 01 9F 27 01	
9F 51	Application Currency Code [VSDC]	08 40 - USD	
9F 52	Application Default Action [VSDC VIS 1.5]	00 00 00 00 00 00	
9F 56	Issuer Authentication Indicator [VSDC]	00	
9F 57	Issuer Country Code [VSDC]	08 40 - USA	
BF 55	Contactless Counters Data Template		
BF 56	Counters Data Template		
BF 57	International Counters Data Template		
BF 58	Amounts Data Template		
BF 59	Profile Controls Template	DF 11 0B 10 00 00 00 00 00 00 00 00 00 00 DF 12 0B 20 00 00 00 00 00 00 00 00 00 00	
BF 5A	AIP/AFL Entries Template	DF 11 0B 18 00 08 08 01 01 00 10 01 01 00 DF 12 0B 18 00 08 08 01 01 00 10 02 02 00	
BF 5B	Application Internal Data Template	DF 01 02 C0 00 DF 02 01 F1	

* Tag value changes with card usage

4.3.5   Contact: CVM List - U.S. Common Debit, AID A00000000980840

Cardholder Verification Method List ('0201 0004 0205 4200 1F00 0000')			
CVM	**Verification Method**	**Conditions**	**If unsuccessful**
1	Online PIN	Unattended Cash	Fail
2	Fail CVM Processing	Manual Cash	Fail
3	Online PIN	Purchase with Cashback	Fail
4	Online PIN	Always	Next CVM
5	No CVM required	Always	Fail

4.3.6   Contact: Application Tag data, AID A0000000980840

Tag	Element name	Data Card v7.x
42	Issuer Identification Number (IIN)	`47 61 73`
50	Application Label	`55 53 20 44 45 42 49 54 20 20 20 20` `20 20 20 20` - 'US DEBIT'
57	Track 2 Equivalent Data	`47 61 73 90 01 01 01 35 D2 41 22 01` `14 83 53 94 00 00 0F`
5A	Application Primary Account Number (PAN)	`47 61 73 90 01 01 01 35`
5F 20	Cardholder Name	`55 53 41 20 44 45 42 49 54 2F 54 65` `73 74 20 43 61 72 64 20 30 33 20 20` `20 20` - 'USA DEBIT/Test Card 03'
5F 24	Application Expiration Date	`24 12 31`
5F 28	Issuer Country Code	`08 40`
5F 2D	Language Preference	`65 6E`
5F 30	Service Code	`02 01`
5F 34	Application PAN Sequence Number	`01`
5F 55	Issuer Country Code (alpha2 format)	`55 53` - 'US'
82	Application Interchange Profile [VIS]	`18 00` BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported via EXTERNAL AUTH command b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - Use for Visa NOT supported b7 - Is NOT Mobile handset
84	Dedicated File (DF) Name	`A0 00 00 00 98 08 40`
87	Application Priority Indicator	`03`
8C	Card Risk Management Data Object List 1 (CDOL1)	`9F 02 06 9F 03 06 9F 1A 02 95 05 5F` `2A 02 9A 03 9C 01 9F 37 04`
8D	Card Risk Management Data Object List 2 (CDOL2)	`8A 02 9F 02 06 9F 03 06 9F 1A 02 95` `05 5F 2A 02 9A 03 9C 01 9F 37 04 91` `0A`
8E	Cardholder Verification Method (CVM) List	`00 00 00 00 00 00 00 00 02 01 00 04` `02 05 42 00 1F 00 00 00`
94	Application File Locator (AFL)	`08 01 01 00 10 02 02 00`

Tag	Element name	Data Card v7.x
9F 07	Application Usage Control	`AB 80` BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions NOT valid b6 - Domestic goods valid b5 - International goods NOT valid b4 - Domestic services valid b3 - International services NOT valid b2 - ATMs valid b1 - non-ATM terminals valid BYTE 2: b8 - Domestic cashback allowed b7 - International cashback NOT allowed
9F 08	Application Version Number [VIS]	`00 96`
9F 0D	Issuer Action Code - Default	`FC 50 AC 88 00`
9F 0E	Issuer Action Code - Denial	`00 00 00 00 00`
9F 0F	Issuer Action Code - Online	`FC 70 BC 98 00`
9F 10	Issuer Application Data [VSDC]	`xx xx 0A xx xx xx xx *`
9F 11	Issuer Code Table Index	`01`
9F 12	Application Preferred Name	`55 53 20 44 65 62 69 74 20 20 20 20` `20 20 20 20` - 'US Debit'
9F 13	Last Online Application Transaction Counter (ATC) Register	`xx xx *`
9F 17	Personal Identification Number (PIN) Try Counter	`00`
9F 26	Application Cryptogram (AC)	`xx xx xx xx xx xx xx xx *`
9F 27	Cryptogram Information Data (CID)	`80`
9F 36	Application Transaction Counter (ATC)	`xx xx *`
9F 38	Processing Options Data Object List (PDOL)	`9F 06 07`
9F 44	Application Currency Exponent	`02`
9F 4F	Transaction Log Format	`9F 02 06 5F 2A 02 9A 03 9F 36 02 9F` `1A 02 95 05 9C 01 9F 27 01`
9F 51	Application Currency Code [VSDC]	`08 40` - USD
9F 52	Application Default Action [VSDC VIS 1.5]	`00 00 00 00 00 00`
9F 56	Issuer Authentication Indicator [VSDC]	`00`
9F 57	Issuer Country Code [VSDC]	`08 40` - USA
BF 55	Contactless Counters Data Template	
BF 56	Counters Data Template	
BF 57	International Counters Data Template	
BF 58	Amounts Data Template	

BF 59	Profile Controls Template	`DF 11 0B 10 00 00 00 00 00 00 00 00`
		`00 00 DF 12 0B 20 00 00 00 00 00 00`
		`00 00 00 00`

BF 5A	AIP/AFL Entries Template	`DF 11 0B 18 00 08 08 01 01 00 10 01`
		`01 00 DF 12 0B 18 00 08 08 01 01 00`
		`10 02 02 00`

BF 5B	Application Internal Data Template	`DF 01 02 C0 00 DF 02 01 F1`

* Tag value changes with card usage

4.4   Test Card 04 - Visa, CO, 1-AID (Interlink), English, USA, USD

A contact-only, single-AID Visa Interlink debit card with an issuer Country Code of 'USA' and Currency Code of 'USD'.

The recommended transaction amount to generate a host approval is $10.00.

4.4.1   Contact: CVM List - Visa Interlink, AID A0000000033010

Cardholder Verification Method List ('0203 1F03')			
CVM	Verification Method	Conditions	If unsuccessful
1	Online PIN	Terminal supports CVM Type	Fail
2	No CVM required	Terminal supports CVM Type	Fail

4.4.2   Contact: Application Tag data, AID A0000000033010

Tag	Element name	Data	Card v5.x
50	Application Label	`49 4E 54 45 52 4C 49 4E 4B` - 'INTERLINK'	
57	Track 2 Equivalent Data	`47 61 73 10 00 00 00 84 D2 41 22 21 13 50 61 46 89 00 0F`	
5A	Application Primary Account Number (PAN)	`47 61 73 10 00 00 00 84`	
5F 20	Cardholder Name	`55 53 41 20 44 45 42 49 54 2F 54 65 73 74 20 43 61 72 64 20 30 34 20 20 20 20` - 'USA DEBIT/Test Card 04'	
5F 24	Application Expiration Date	`24 12 31`	
5F 25	Application Effective Date	`xx xx xx *`	
5F 28	Issuer Country Code	`08 40` - USA	
5F 2D	Language Preference	`65 6E` - 'en' (English)	
5F 30	Service Code	`02 21`	
5F 34	Application PAN Sequence Number	`01`	
82	Application Interchange Profile [VIS]	`1C 00` BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication supported via EXTERNAL AUTH command b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - Use for Visa NOT supported b7 - Is NOT Mobile handset	
84	Dedicated File (DF) Name	`A0 00 00 00 03 30 10`	
87	Application Priority Indicator	`01`	
8C	Card Risk Management Data Object List 1 (CDOL1)	`9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04`	
8D	Card Risk Management Data Object List 2 (CDOL2)	`8A 02 9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04`	
8E	Cardholder Verification Method (CVM) List	`00 00 00 00 00 00 00 00 02 03 1F 03`	
8F	Certification Authority Public Key Index	`92`	

Tag	Element name	Data	Card v5.x
90	Issuer Public Key Certificate	3C 96 F7 65 8F BC 29 A2 02 F1 91 46 BD E9 21 66 B0 F6 22 1B BC CB 02 E3 26 71 0B 9E 22 9D 16 FA E9 AD 0C 87 4C 06 85 91 6E 19 F0 E3 26 93 EE 20 1B CE 23 59 50 9A 6D 65 72 F8 EC 3F C3 73 12 6B 34 3F 9C B8 15 3D 61 B7 EA B2 D4 2D E1 9D 56 08 31 85 A0 3D D1 4C 26 8D 40 DF 08 35 C5 5E AB FA 38 ED 28 BC E4 2C D0 01 3D A9 4F 80 05 18 B7 53 C2 46 EF FB A0 8F D2 02 9B AD 5D FC F0 DA F0 7B 7D 80 1C 46 5F FD 25 2C 70 B9 21 53 B3 30 D9 5D CA 2F A1 FA AE 2D 01 68 A4 EA 8B 47 5C D8 05 DC 32 AA 96 4C 17 BF CD 2C D5 D0 30 9A B0 EA 76 1B	
92	Issuer Public Key Remainder	50 DA 20 DD A8 95 3B 69 3F ED 84 36 68 31 BA 1E EA 97 F7 8F 79 2A CF 8C B9 8F DF 01 49 A7 B7 8F DA 1C 49 67	
93	Signed Static Application Data	3D 1B F8 22 20 C2 58 AF A2 7D 72 4F 0F E8 74 D7 73 89 E1 61 16 D7 AD 63 C0 57 C0 A7 EA 8B 55 06 45 61 65 E6 DA 6E 3D 87 8F 82 A2 9C 2D 11 F7 D1 35 51 C0 4F CB BE 60 77 8A 26 0B FF E5 69 17 1A 0D 0F 40 12 18 21 33 6C 5B 29 F1 2E 67 4C C3 E8 BD 82 63 8F 2F 75 3D 29 FF C6 1F 7F C9 71 6F 5B 82 A8 13 C8 75 BC 8E 0B 17 BF 13 06 65 94 B6 A5 DC 54 1F 75 58 90 3F 54 22 0F AB 90 3B 84 DC B7 DD 4E 44 3E 05 6F A0 54 96 8E 0F 9F 9D A7 EC 92 D4 B7 AC 52 A3 47 2E E7 6E 19 05 2A B9 30 C5 D4 64 3E 73 21 0B 7F E4 19 31 81 2B 1A 38 36 B6 5D	
94	Application File Locator (AFL)	10 01 01 00 10 02 05 01 10 08 08 00 B0 01 01 00	
9F 07	Application Usage Control	FF C0 BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions valid b6 - Domestic goods valid b5 - International goods valid b4 - Domestic services valid b3 - International services valid b2 - ATMs valid b1 - non-ATM terminals valid BYTE 2: b8 - Domestic cashback allowed b7 - International cashback allowed	
9F 08	Application Version Number [VIS]	00 96	
9F 0D	Issuer Action Code - Default	B0 50 80 88 00	
9F 0E	Issuer Action Code - Denial	00 00 00 00 00	
9F 0F	Issuer Action Code - Online	B0 50 80 98 00	
9F 10	Issuer Application Data [VSDC]	xx xx 0A xx xx xx xx *	
9F 11	Issuer Code Table Index	01	
9F 12	Application Preferred Name	49 6E 74 65 72 6C 69 6E 6B - 'Interlink'	
9F 13	Last Online Application Transaction Counter (ATC) Register	xx xx *	
9F 17	Personal Identification Number (PIN) Try Counter	09	
9F 1F	Track 1 Discretionary Data	31 33 35 30 36 30 30 31 34 36 30 30 30 30 30 30 30 30 30 30 30 30 30 30	
9F 26	Application Cryptogram (AC)	xx xx xx xx xx xx xx xx *	
9F 27	Cryptogram Information Data (CID)	80	

Tag	Element name	Data	Card v5.x
9F 32	Issuer Public Key Exponent	`03`	
9F 36	Application Transaction Counter (ATC)	`xx xx *`	
9F 44	Application Currency Exponent	`02`	

9F 46	ICC Public Key Certificate	`99 78 79 D1 6F BD 5A 24 C6 08 B9 2B`
		`F2 72 36 15 24 EB 92 9C 23 DD 60 FD`
		`65 81 96 DF AA 2B E1 0A 60 9A 72 23`
		`42 0E A5 69 F7 EB 8D 47 64 BF E0 08`
		`1F 62 8D 9B CA 3C 71 0E 11 C6 64 D7`
		`65 FB CF 1D 04 0B 17 42 12 46 C3 14`
		`45 0D 39 31 0B D8 6C D5 C8 23 99 03`
		`A2 75 51 5C D4 6A B0 82 2E BD 47 18`
		`02 30 D9 0D 87 60 A4 1C 94 DC EB A5`
		`15 1A 66 D7 82 27 AF F8 9E AB C0 36`
		`B0 28 18 7F 43 9E 55 85 95 C8 F8 F6`
		`5E 07 1F 93 55 D7 50 3A 4D 8B 5A 7C`
		`B2 A0 3C FD E9 74 73 09 9A 8E 8A AF`
		`D2 37 BB E8 12 3E 4C 7C E9 71 A5 28`
		`F1 FE C3 FD DF B1 E0 6A`	

9F 47	ICC Public Key Exponent	`03`	
9F 49	Dynamic Data Authentication Data Object List (DDOL)	`9F 37 04`	
9F 4A	Static Data Authentication Tag List	`82`	
9F 51	Application Currency Code [VSDC]	`08 40` - USD	
9F 52	Application Default Action [VSDC VIS 1.5]	`C0 00 00 00 00 00`	
9F 53	Consecutive Transaction Limit (International) [VSDC]	`00`	
9F 54	Cumulative Total Transaction Amount Limit [VSDC]	`00 00 00 00 00 00`	
9F 56	Issuer Authentication Indicator [VSDC]	`80`	
9F 57	Issuer Country Code [VSDC]	`08 40` - USA	
9F 58	Consecutive Transaction Counter Limit [VSDC]	`00`	
9F 59	Consecutive Transaction Counter Upper Limit [VSDC]	`00`	
9F 5C	Cumulative Total Transaction Amount Upper Limit [VSDC]	`00 00 00 00 00 00`	
9F 5E	Consecutive Transaction International Upper Limit [VSDC]	`00`	
BF 56	Counters Data Template	`DF 11 01 01 DF 21 01 00 DF 31 01 00`	
BF 57	International Counters Data Template	`DF 11 01 00 DF 21 01 00 DF 31 01 00` `DF 51 01 00`	

BF 58	Amounts Data Template	`DF 11 06 00 00 00 00 00 00 DF 21 06`
		`00 00 00 00 00 00 DF 31 06 00 00 00`
		`00 00 00`	

* Tag value changes with card usage

4.5 Test Card 05 - Mastercard, DI, 2-AID (Mastercard Debit+US Debit), English, USA, USD

A Dual Interface (Contact+Contactless), 2-AID Mastercard debit card with an Issuer Country Code of 'USA' and Currency Code of 'USD'.

The recommended transaction amount to generate a host approval is $20.00.

4.5.1 Contact: CVM List - Mastercard debit, AID A0000000041010

Cardholder Verification Method List ('4201 0205 5E03 4203 1F00')			
CVM	**Verification Method**	**Conditions**	**If unsuccessful**
1	Online PIN	Unattended Cash	Next CVM
2	Online PIN	Purchase with Cashback	Fail
3	Signature (paper)	Terminal supports CVM type	Next CVM
4	Online PIN	Terminal supports CVM type	Next CVM
5	No CVM required	Always	Fail

4.5.2 Contact: Application Tag data, AID A0000000041010

Tag	Element name	Data Card v6.x
42	Issuer Identification Number (IIN)	`54 13 33`
50	Application Label	`4D 41 53 54 45 52 43 41 52 44 20 44 45 42 49 54` - 'MASTERCARD DEBIT'
57	Track 2 Equivalent Data	`54 13 33 00 89 09 91 30 D2 51 22 01 14 83 59 49 00 0F`
5A	Application Primary Account Number (PAN)	`54 13 33 00 89 09 91 30`
5F 20	Cardholder Name	`55 53 41 20 44 45 42 49 54 2F 54 65 73 74 20 43 61 72 64 20 30 35 20 20 20 20` - 'USA DEBIT/Test Card 05'
5F 24	Application Expiration Date	`25 12 31`
5F 25	Application Effective Date	`xx xx xx *`
5F 28	Issuer Country Code	`08 40` - USA
5F 2D	Language Preference	`65 6E` - 'en' (English)
5F 30	Service Code	`02 01`
5F 34	Application PAN Sequence Number	`11`
5F 55	Issuer Country Code (alpha2 format)	`55 53` - 'US'
82	Application Interchange Profile	`18 00` BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported via EXTERNAL AUTH command b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - EMV Contactless NOT supported
84	Dedicated File (DF) Name	`A0 00 00 00 04 10 10`
87	Application Priority Indicator	`01`
8C	Card Risk Management Data Object List 1 (CDOL1)	`9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04 9F 35 01 9F 45 02 9F 4C 08 9F 34 03 9F 21 03 9F 7C 14`
8D	Card Risk Management Data Object List 2 (CDOL2)	`91 0A 8A 02 95 05 9F 37 04 9F 4C 08`
8E	Cardholder Verification Method (CVM) List	`00 00 00 00 00 00 00 00 42 01 02 05 5E 03 42 03 1F 00`

Tag	Element name	Data	Card v6.x
94	Application File Locator (AFL)	`10 01 03 00`	
94	Application File Locator (AFL)	`10 01 03 00`	
9F 07	Application Usage Control	`FF C0` BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions valid b6 - Domestic goods valid b5 - International goods valid b4 - Domestic services valid b3 - International services valid b2 - ATMs valid b1 - non-ATM terminals valid BYTE 2: b8 - Domestic cashback allowed b7 - International cashback allowed	
9F 08	Application Version Number	`00 02`	
9F 0D	Issuer Action Code - Default	`B0 50 9C 88 00`	
9F 0E	Issuer Action Code - Denial	`00 00 00 00 00`	
9F 0F	Issuer Action Code - Online	`B0 70 9C 98 00`	
9F 10	Issuer Application Data [M/Chip Advance]	`xx 10 xx xx xx xx xx xx xx xx xx xx` `xx xx xx xx xx xx *`	
9F 11	Issuer Code Table Index	`01`	
9F 12	Application Preferred Name	`4D 61 73 74 65 72 63 61 72 64 20 44` `65 62 69 74` - 'Mastercard Debit'	
9F 14	Counter 1 Lower Limit [Mastercard]	`00`	
9F 17	Personal Identification Number (PIN) Try Counter	`03`	
9F 23	Counter 1 Upper Limit [Mastercard]	`00`	

9F 24	Payment Account Reference (PAR)	`35 30 30 31 41 42 43 44 45 46 47 48`
		`49 4A 4B 4C 4D 4E 4F 50 51 52 53 54`
		`55 56 57 58 59`	

9F 26	Application Cryptogram (AC)	`xx xx xx xx xx xx xx xx *`	
9F 27	Cryptogram Information Data (CID)	`80`	
9F 36	Application Transaction Counter (ATC)	`00 0F`	
9F 42	Application Currency Code	`08 40` - USD	
9F 4D	Transaction Log Entry	`0B 0A`	

9F 4F	Transaction Log Format	`9F 27 01 9F 02 06 5F 2A 02 9A 03 9F`
		`36 02 9F 52 06 DF 3E 01 9F 21 03 9F`
		`7C 14`	

9F 6E	Third Party Data [Mastercard]	`08 40 00 00 30 30 00`	

9F 7E	Application Life Cycle Data [Mastercard]	`04 10 0B 14 00 01 00 00 50 17 79 00`
		`A0 00 00 00 04 10 10 00 00 00 00 00`
		`00 00 00 00 00 96 00 97 02 00 5A 5A`
		`00 00 00 00 00 00 00 00 00 00 00 00`	

C3	Card Issuer Action Code (Contact) - Decline [M/Chip Advance]	`00 00 00`	
C4	Card Issuer Action Code (Contact) - Default [M/Chip Advance]	`06 50 00`	
C5	Card Issuer Action Code (Contact) - Online [M/Chip Advance]	`06 FB 00`	
C6	PIN Try Limit [M/Chip Advance]	`03`	
C7	CDOL1 Related Data Length [Mastercard]	`42`	
C8	CRM Country Code [Mastercard]	`08 40` - USA	
C9	Accumulator 1 Currency Code [Mastercard]	`08 40` - USD	
CA	Accumulator 1 Lower Limit [Mastercard]	`00 00 00 00 00 00`	
CB	Accumulator 1 Upper Limit [Mastercard]	`00 00 00 00 00 00`	

Tag	Element name	Data	Card v6.x
CD	Card Issuer Action Code (Contactless) - Default [M/Chip Advance]	00 58 00	
CE	Card Issuer Action Code (Contactless) - Online [M/Chip Advance]	06 F8 00	
CF	Card Issuer Action Code (Contactless) - Decline [M/Chip Advance]	08 00 00	
D1	Accumulator 1 Currency Conversion Table [Mastercard]	08 40 00 00 00 08 40 00 00 00 08 40 00 00 00 08 40 00 00 00 08 40 00 00 00	
D3	Additional Check Table [Mastercard]	00 00 00 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF	
D5	Application Control [M/Chip Advance]	80 00 80 00 C6 02	
D6	Default ARPC Response Code [M/Chip Advance]	00 10	
D7	Application Control [M/Chip Advance]	00 00 80 00 E6 02	
D9	Application File Locator (Contactless)	08 01 03 00	
DE	Log Data Table [M/Chip Advance]	00 00 00 00 00 00 00 00 00	
DF 02	Security Limits Status (Contact) [M/Chip Advance]	00	
DF 11	Accumulator 1 Control (Contact) [M/Chip Advance]	C1	
DF 12	Accumulator 1 Control (Contactless) [M/Chip Advance]	C1	
DF 14	Accumulator 2 Control (Contact) [M/Chip Advance]	00	
DF 15	Accumulator 2 Control (Contactless) [M/Chip Advance]	00	
DF 16	Accumulator 2 Currency Code [Mastercard]	08 40 - USD	
DF 17	Accumulator 2 Currency Conversion Table [Mastercard]	08 40 00 00 00 08 40 00 00 00 08 40 00 00 00 08 40 00 00 00 08 40 00 00 00	
DF 18	Accumulator 2 Lower Limit [Mastercard]	00 00 00 00 00 00	
DF 19	Accumulator 2 Upper Limit [Mastercard]	00 00 00 00 00 00	
DF 1A	Counter 1 Control (Contact) [M/Chip Advance]	C1	
DF 1B	Counter 1 Control (Contactless) [M/Chip Advance]	C1	
DF 1D	Counter 2 Control (Contact) [M/Chip Advance]	00	
DF 1E	Counter 2 Control (Contactless) [M/Chip Advance]	00	
DF 1F	Counter 2 Lower Limit [Mastercard]	00	
DF 21	Counter 2 Upper Limit [Mastercard]	00	
DF 22	MTA CVM (Contact) [M/Chip Advance]	00 00 00 00 00 00	
DF 23	MTA CVM (Contactless) [M/Chip Advance]	00 00 00 00 00 00	
DF 24	MTA Currency Code [M/Chip Advance]	08 40	
DF 25	MTA NoCVM (Contact) [M/Chip Advance]	00 00 00 00 00 00	
DF 26	MTA NoCVM (Contactless) [M/Chip Advance]	00 00 00 00 00 00	
DF 27	Number Of Days Offline Limit [M/Chip Advance]	00 00	
DF 28	Accumulator 1 CVR Dependency Data (Contact) [M/Chip Advance]	00 00 00	
DF 29	Accumulator 1 CVR Dependency Data (Contactless) [M/Chip Advance]	00 00 00	

Tag	Element name	Data	Card v6.x
DF 2A	Accumulator 2 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2B	Accumulator 2 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2C	Counter 1 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2D	Counter 1 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2E	Counter 2 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2F	Counter 2 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 30	Interface Enabling Switch [M/Chip Advance]	`03`	
DF 35	Security Limits Status (Contactless) [M/Chip Advance]	`00`	
DF 37	Security Limits Status Common [M/Chip Advance]	`00`	
DF 3C	CVR Issuer Discretionary Data (Contact) [M/Chip Advance]	`00`	
DF 3D	CVR Issuer Discretionary Data (Contactless) [M/Chip Advance]	`01`	
DF 3F	Read Record Filter (Contact) [M/Chip Advance]	`00`	
DF 40	Read Record Filter (Contactless) [M/Chip Advance]	`10 01 01 00`	
DF 41	DS Management Control [M/Chip Advance]	`20`	

* Tag value changes with card usage

4.5.3   Contact: CVM List - U.S. Maestro, AID A0000000042203

Cardholder Verification Method List ('4205 4203 1F03 0000')			
CVM	**Verification Method**	**Conditions**	**If unsuccessful**
1	Online PIN	Purchase with Cashback	Next CVM
2	Online PIN	Terminal supports CVM type	Next CVM
3	No CVM required	Terminal supports CVM type	Fail
4	Fail CVM Processing	Always	Fail

4.5.4   Contact: Application Tag data, AID A0000000042203

Tag	Element name	Data	Card v6.x
42	Issuer Identification Number (IIN)	`54 13 33`	
50	Application Label	`55 53 20 4D 41 45 53 54 4F 20 20 20 20 20 20` - 'US MAESTRO'	
57	Track 2 Equivalent Data	`54 13 33 00 89 09 91 30 D2 51 22 01 14 83 59 49 00 0F`	
5A	Application Primary Account Number (PAN)	`54 13 33 00 89 09 91 30`	
5F 20	Cardholder Name	`55 53 41 20 44 45 42 49 54 2F 54 65 73 74 20 43 61 72 64 20 30 35 20 20 20 20` - 'USA DEBIT/Test Card 05'	
5F 24	Application Expiration Date	`25 12 31`	
5F 25	Application Effective Date	`xx xx xx *`	
5F 28	Issuer Country Code	`08 40` - USA	
5F 2D	Language Preference	`65 6E` - 'en' (English)	
5F 30	Service Code	`02 01`	

Tag	Element name	Data	Card v6.x
5F 34	Application PAN Sequence Number	`11`	
5F 55	Issuer Country Code (alpha2 format)	`55 53` - 'US'	
82	Application Interchange Profile	`18 00` BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported via EXTERNAL AUTH command b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - EMV Contactless NOT supported	
84	Dedicated File (DF) Name	`A0 00 00 00 04 22 03`	
87	Application Priority Indicator	`02`	
8C	Card Risk Management Data Object List 1 (CDOL1)	`9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04 9F 35 01 9F 45 02 9F 4C 08 9F 34 03 9F 21 03 9F 7C 14`	
8D	Card Risk Management Data Object List 2 (CDOL2)	`91 0A 8A 02 95 05 9F 37 04 9F 4C 08`	
8E	Cardholder Verification Method (CVM) List	`00 00 00 00 00 00 00 00 42 05 42 03 1F 03 00 00 00 00`	
94	Application File Locator (AFL)	`10 01 02 00 10 04 04 00`	
94	Application File Locator (AFL)	`10 01 02 00 10 04 04 00`	
9F 07	Application Usage Control	`FF C0` BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions valid b6 - Domestic goods valid b5 - International goods valid b4 - Domestic services valid b3 - International services valid b2 - ATMs valid b1 - non-ATM terminals valid BYTE 2: b8 - Domestic cashback allowed b7 - International cashback allowed	
9F 08	Application Version Number	`00 02`	
9F 0D	Issuer Action Code - Default	`B0 50 9C 88 00`	
9F 0E	Issuer Action Code - Denial	`00 00 00 00 00`	
9F 0F	Issuer Action Code - Online	`B0 70 9C 98 00`	
9F 10	Issuer Application Data [M/Chip Advance]	`xx 10 xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx *`	
9F 11	Issuer Code Table Index	`01`	
9F 12	Application Preferred Name	`55 53 20 4D 61 65 73 74 72 6F 20 20 20 20 20 20` - 'US Maestro'	
9F 14	Counter 1 Lower Limit [Mastercard]	`00`	
9F 17	Personal Identification Number (PIN) Try Counter	`03`	
9F 23	Counter 1 Upper Limit [Mastercard]	`00`	
9F 24	Payment Account Reference (PAR)	`35 30 30 31 41 42 43 44 45 46 47 48 49 4A 4B 4C 4D 4E 4F 50 51 52 53 54 55 56 57 58 59`	
9F 26	Application Cryptogram (AC)	`xx xx xx xx xx xx xx xx *`	
9F 27	Cryptogram Information Data (CID)	`80`	
9F 36	Application Transaction Counter (ATC)	`00 10`	
9F 42	Application Currency Code	`08 40` - USD	
9F 4D	Transaction Log Entry	`0B 0A`	

Tag	Element name	Data	Card v6.x
9F 4F	Transaction Log Format	9F 27 01 9F 02 06 5F 2A 02 9A 03 9F 36 02 9F 52 06 DF 3E 01 9F 21 03 9F 7C 14	
9F 6E	Third Party Data [Mastercard]	08 40 00 00 30 30 00	
9F 7E	Application Life Cycle Data [Mastercard]	04 10 0B 14 00 01 00 00 50 17 79 00 A0 00 00 00 04 10 10 00 00 00 00 00 00 00 00 00 00 96 00 97 02 00 5A 5A 00 00 00 00 00 00 00 00 00 00 00 00	
C3	Card Issuer Action Code (Contact) - Decline [M/Chip Advance]	00 00 00	
C4	Card Issuer Action Code (Contact) - Default [M/Chip Advance]	06 50 00	
C5	Card Issuer Action Code (Contact) - Online [M/Chip Advance]	06 FB 00	
C6	PIN Try Limit [M/Chip Advance]	03	
C7	CDOL1 Related Data Length [Mastercard]	42	
C8	CRM Country Code [Mastercard]	08 40 - USA	
C9	Accumulator 1 Currency Code [Mastercard]	08 40 - USD	
CA	Accumulator 1 Lower Limit [Mastercard]	00 00 00 00 00 00	
CB	Accumulator 1 Upper Limit [Mastercard]	00 00 00 00 00 00	
CD	Card Issuer Action Code (Contactless) - Default [M/Chip Advance]	06 58 00	
CE	Card Issuer Action Code (Contactless) - Online [M/Chip Advance]	06 F8 00	
CF	Card Issuer Action Code (Contactless) - Decline [M/Chip Advance]	08 00 00	
D1	Accumulator 1 Currency Conversion Table [Mastercard]	08 40 00 00 00 08 40 00 00 00 08 40 00 00 00 08 40 00 00 00 08 40 00 00 00	
D3	Additional Check Table [Mastercard]	00 00 00 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF	
D5	Application Control [M/Chip Advance]	80 00 80 00 C6 02	
D6	Default ARPC Response Code [M/Chip Advance]	00 10	
D7	Application Control [M/Chip Advance]	00 00 80 00 E6 02	
D9	Application File Locator (Contactless)	08 01 02 00 08 04 04 00	
DE	Log Data Table [M/Chip Advance]	00 00 00 00 00 00 00 00 00	
DF 02	Security Limits Status (Contact) [M/Chip Advance]	00	
DF 11	Accumulator 1 Control (Contact) [M/Chip Advance]	C1	
DF 12	Accumulator 1 Control (Contactless) [M/Chip Advance]	C1	
DF 14	Accumulator 2 Control (Contact) [M/Chip Advance]	00	
DF 15	Accumulator 2 Control (Contactless) [M/Chip Advance]	00	
DF 16	Accumulator 2 Currency Code [Mastercard]	08 40 - USD	
DF 17	Accumulator 2 Currency Conversion Table [Mastercard]	08 40 00 00 00 08 40 00 00 00 08 40 00 00 00 08 40 00 00 00 08 40 00 00 00	
DF 18	Accumulator 2 Lower Limit [Mastercard]	00 00 00 00 00 00	
DF 19	Accumulator 2 Upper Limit [Mastercard]	00 00 00 00 00 00	
DF 1A	Counter 1 Control (Contact) [M/Chip Advance]	C1	

Tag	Element name	Data	Card v6.x
DF 1B	Counter 1 Control (Contactless) [M/Chip Advance]	`C1`	
DF 1D	Counter 2 Control (Contact) [M/Chip Advance]	`00`	
DF 1E	Counter 2 Control (Contactless) [M/Chip Advance]	`00`	
DF 1F	Counter 2 Lower Limit [Mastercard]	`00`	
DF 21	Counter 2 Upper Limit [Mastercard]	`00`	
DF 22	MTA CVM (Contact) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 23	MTA CVM (Contactless) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 24	MTA Currency Code [M/Chip Advance]	`08 40`	
DF 25	MTA NoCVM (Contact) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 26	MTA NoCVM (Contactless) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 27	Number Of Days Offline Limit [M/Chip Advance]	`00 00`	
DF 28	Accumulator 1 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 29	Accumulator 1 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2A	Accumulator 2 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2B	Accumulator 2 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2C	Counter 1 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2D	Counter 1 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2E	Counter 2 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2F	Counter 2 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 30	Interface Enabling Switch [M/Chip Advance]	`03`	
DF 35	Security Limits Status (Contactless) [M/Chip Advance]	`00`	
DF 37	Security Limits Status Common [M/Chip Advance]	`00`	
DF 3C	CVR Issuer Discretionary Data (Contact) [M/Chip Advance]	`00`	
DF 3D	CVR Issuer Discretionary Data (Contactless) [M/Chip Advance]	`01`	
DF 3F	Read Record Filter (Contact) [M/Chip Advance]	`00`	
DF 40	Read Record Filter (Contactless) [M/Chip Advance]	`10 01 01 00`	
DF 41	DS Management Control [M/Chip Advance]	`20`	

* Tag value changes with card usage

4.5.5 CTLS: CVM List - Mastercard debit, AID A0000000041010 (PayPass)

Cardholder Verification Method List ('0205 5E03 0203 1F03 0000')			
CVM	**Verification Method**	**Conditions**	**If unsuccessful**
1	Online PIN	Purchase with Cashback	Fail
2	Signature (paper)	Terminal supports CVM type	Next CVM
3	Online PIN	Terminal supports CVM type	Fail
4	No CVM required	Terminal supports CVM type	Fail
5	Fail CVM Processing	Always	Fail

4.5.6 CTLS: Application Tag data, AID A0000000041010 (PayPass)

Tag	Element name	Data	Card v6.x
42	Issuer Identification Number (IIN)	54 13 33	
50	Application Label	4D 41 53 54 45 52 43 41 52 44 20 44 45 42 49 54 - 'MASTERCARD DEBIT'	
56	Track 1 Equivalent Data [Mastercard]	42 35 34 31 33 33 33 30 30 38 39 30 39 39 31 33 30 5E 20 2F 5E 32 35 31 32 32 30 31 31 34 38 33 35 39 34 39 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30	
57	Track 2 Equivalent Data	54 13 33 00 89 09 91 30 D2 51 22 01 14 83 59 49 00 0F	
5A	Application Primary Account Number (PAN)	54 13 33 00 89 09 91 30	
5F 24	Application Expiration Date	25 12 31	
5F 25	Application Effective Date	xx xx xx *	
5F 28	Issuer Country Code	08 40 - USA	
5F 2D	Language Preference	65 6E - 'en' (English)	
5F 34	Application PAN Sequence Number	11	
5F 55	Issuer Country Code (alpha2 format)	55 53 - 'US'	
82	Application Interchange Profile	18 80 BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported via EXTERNAL AUTH command b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - EMV Contactless supported	
84	Dedicated File (DF) Name	A0 00 00 00 04 10 10	
87	Application Priority Indicator	01	
8C	Card Risk Management Data Object List 1 (CDOL1)	9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04 9F 35 01 9F 45 02 9F 4C 08 9F 34 03 9F 21 03 9F 7C 14	
8D	Card Risk Management Data Object List 2 (CDOL2)	91 0A 8A 02 95 05 9F 37 04 9F 4C 08	
8E	Cardholder Verification Method (CVM) List	00 00 00 00 00 00 00 00 02 05 5E 03 02 03 1F 03 00 00	
94	Application File Locator (AFL)	08 01 03 00	

Tag	Element name	Data	Card v6.x
9F 07	Application Usage Control	`FF C0` BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions valid b6 - Domestic goods valid b5 - International goods valid b4 - Domestic services valid b3 - International services valid b2 - ATMs valid b1 - non-ATM terminals valid BYTE 2: b8 - Domestic cashback allowed b7 - International cashback allowed	
9F 08	Application Version Number	`00 02`	
9F 0D	Issuer Action Code - Default	`B4 50 84 00 00`	
9F 0E	Issuer Action Code - Denial	`00 00 00 00 00`	
9F 0F	Issuer Action Code - Online	`B4 70 84 80 00`	
9F 10	Issuer Application Data [M/Chip Advance]	`xx 10 xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx *`	
9F 11	Issuer Code Table Index	`01`	
9F 12	Application Preferred Name	`4D 61 73 74 65 72 63 61 72 64 20 44 65 62 69 74` - 'Mastercard Debit'	
9F 14	Counter 1 Lower Limit [Mastercard]	`00`	
9F 17	Personal Identification Number (PIN) Try Counter	`03`	
9F 23	Counter 1 Upper Limit [Mastercard]	`00`	
9F 24	Payment Account Reference (PAR)	`35 30 30 31 41 42 43 44 45 46 47 48 49 4A 4B 4C 4D 4E 4F 50 51 52 53 54 55 56 57 58 59`	
9F 26	Application Cryptogram (AC)	`xx xx xx xx xx xx xx xx *`	
9F 27	Cryptogram Information Data (CID)	`80`	
9F 36	Application Transaction Counter (ATC)	`00 0B`	
9F 42	Application Currency Code	`08 40` - USD	
9F 4A	Static Data Authentication Tag List	`82`	
9F 4D	Transaction Log Entry	`0B 0A`	
9F 4F	Transaction Log Format	`9F 27 01 9F 02 06 5F 2A 02 9A 03 9F 36 02 9F 52 06 DF 3E 01 9F 21 03 9F 7C 14`	
9F 62	Track 1 Bitmap for CVC3 (PCVC3 Track 1) [Mastercard]	`00 00 00 00 00 00`	
9F 63	Track 1 Bitmap for UN and ATC (PUNATC Track 1) [Mastercard]	`00 00 00 00 00 00`	
9F 64	Track 1 Number of ATC Digits (NATC Track 1) [Mastercard]	`00`	
9F 65	Track 2 Bitmap for CVC3 (PCVC3 Track 2) [Mastercard]	`00 00`	
9F 66	Track 2 Bitmap for UN and ATC (PUNATC Track 2) [Mastercard]	`00 00`	
9F 67	Track 2 Number of ATC Digits (NATC Track 2) [Mastercard]	`02`	
9F 6B	Track 2 Equivalent Data [Mastercard]	`54 13 33 00 89 09 91 30 D2 51 22 01 14 83 59 49 00 00 0F`	
9F 6C	Application Version [Mastercard]	`00 01`	
9F 6E	Third Party Data [Mastercard]	`08 40 00 00 30 30 00`	
9F 7E	Application Life Cycle Data [Mastercard]	`04 10 0B 14 00 01 00 00 50 17 79 00 A0 00 00 00 04 10 10 00 00 00 00 00 00 00 00 00 00 96 00 97 02 00 5A 5A 00 00 00 00 00 00 00 00 00 00 00 00 00`	
C3	Card Issuer Action Code (Contact) - Decline [M/Chip Advance]	`00 00 00`	

Tag	Element name	Data	Card v6.x
C4	Card Issuer Action Code (Contact) - Default [M/Chip Advance]	`06 50 00`	
C5	Card Issuer Action Code (Contact) - Online [M/Chip Advance]	`06 FB 00`	
C6	PIN Try Limit [M/Chip Advance]	`03`	
C7	CDOL1 Related Data Length [Mastercard]	`42`	
C8	CRM Country Code [Mastercard]	`08 40` - USA	
C9	Accumulator 1 Currency Code [Mastercard]	`08 40` - USD	
CA	Accumulator 1 Lower Limit [Mastercard]	`00 00 00 00 00 00`	
CB	Accumulator 1 Upper Limit [Mastercard]	`00 00 00 00 00 00`	
CD	Card Issuer Action Code (Contactless) - Default [M/Chip Advance]	`00 58 00`	
CE	Card Issuer Action Code (Contactless) - Online [M/Chip Advance]	`06 F8 00`	
CF	Card Issuer Action Code (Contactless) - Decline [M/Chip Advance]	`08 00 00`	
D1	Accumulator 1 Currency Conversion Table [Mastercard]	`08 40 00 00 00 08 40 00 00 00 08 40 00 00 00 08 40 00 00 00 08 40 00 00 00`	
D3	Additional Check Table [Mastercard]	`00 00 00 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF`	
D5	Application Control [M/Chip Advance]	`80 00 80 00 C6 02`	
D6	Default ARPC Response Code [M/Chip Advance]	`00 10`	
D7	Application Control [M/Chip Advance]	`00 00 80 00 E6 02`	
DF 02	Security Limits Status (Contact) [M/Chip Advance]	`00`	

* Tag value changes with card usage

4.5.7   CTLS: CVM List - U.S. Maestro, AID A0000000042203 (PayPass)

Cardholder Verification Method List ('0205 4203 1F03 0000')			
CVM	**Verification Method**	**Conditions**	**If unsuccessful**
1	Online PIN	Purchase with Cashback	Fail
2	Online PIN	Terminal supports CVM type	Next CVM
3	No CVM required	Terminal supports CVM type	Fail
4	Fail CVM Processing	Always	Fail

4.5.8   CTLS: Application Tag data, AID A0000000042203 (PayPass)

Tag	Element name	Data	Card v5.x
42	Issuer Identification Number (IIN)	`54 13 33`	
50	Application Label	`55 53 20 4D 41 45 53 54 52 4F 20 20 20 20 20 20` - 'US MAESTRO'	
56	Track 1 Equivalent Data [Mastercard]	`42 35 34 31 33 33 33 30 30 38 39 30 39 39 31 33 30 5E 20 2F 5E 32 35 31 32 32 30 31 31 34 38 33 35 39 34 39 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30`	
57	Track 2 Equivalent Data	`54 13 33 00 89 09 91 30 D2 51 22 01 14 83 59 49 00 0F`	
5A	Application Primary Account Number (PAN)	`54 13 33 00 89 09 91 30`	
5F 24	Application Expiration Date	`25 12 31`	
5F 25	Application Effective Date	`xx xx xx *`	

Tag	Element name	Data	Card v5.x
5F 28	Issuer Country Code	`08 40` - USA	
5F 2D	Language Preference	`65 6E` - 'en' (English)	
5F 34	Application PAN Sequence Number	`11`	
5F 55	Issuer Country Code (alpha2 format)	`55 53` - 'US'	
82	Application Interchange Profile	`18 80` BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported via EXTERNAL AUTH command b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - EMV Contactless supported	
84	Dedicated File (DF) Name	`A0 00 00 00 04 22 03`	
87	Application Priority Indicator	`02`	
8C	Card Risk Management Data Object List 1 (CDOL1)	`9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04 9F 35 01 9F 45 02 9F 4C 08 9F 34 03 9F 21 03 9F 7C 14`	
8D	Card Risk Management Data Object List 2 (CDOL2)	`91 0A 8A 02 95 05 9F 37 04 9F 4C 08`	
8E	Cardholder Verification Method (CVM) List	`00 00 00 00 00 00 00 00 02 05 42 03 1F 03 00 00 00 00`	
94	Application File Locator (AFL)	`08 01 02 00 08 04 04 00`	
9F 07	Application Usage Control	`FF C0` BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions valid b6 - Domestic goods valid b5 - International goods valid b4 - Domestic services valid b3 - International services valid b2 - ATMs valid b1 - non-ATM terminals valid BYTE 2: b8 - Domestic cashback allowed b7 - International cashback allowed	
9F 08	Application Version Number	`00 02`	
9F 0D	Issuer Action Code - Default	`B4 50 84 00 00`	
9F 0E	Issuer Action Code - Denial	`00 00 00 00 00`	
9F 0F	Issuer Action Code - Online	`B4 70 84 80 00`	
9F 10	Issuer Application Data [M/Chip Advance]	`xx 10 xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx` *	
9F 11	Issuer Code Table Index	`01`	
9F 12	Application Preferred Name	`55 53 20 4D 61 65 73 74 72 6F 20 20 20 20 20 20` – US Maestro'	
9F 14	Counter 1 Lower Limit [Mastercard]	`00`	
9F 17	Personal Identification Number (PIN) Try Counter	`03`	
9F 23	Counter 1 Upper Limit [Mastercard]	`00`	
9F 24	Payment Account Reference (PAR)	`35 30 30 31 41 42 43 44 45 46 47 48 49 4A 4B 4C 4D 4E 4F 50 51 52 53 54 55 56 57 58 59`	
9F 26	Application Cryptogram (AC)	`xx xx xx xx xx xx xx xx` *	
9F 27	Cryptogram Information Data (CID)	`80`	
9F 36	Application Transaction Counter (ATC)	`00 0D`	
9F 42	Application Currency Code	`08 40` - USD	
9F 4A	Static Data Authentication Tag List	`82`	

Tag	Element name	Data	Card v5.x
9F 4D	Transaction Log Entry	`0B 0A`	

9F 4F	Transaction Log Format	`9F 27 01 9F 02 06 5F 2A 02 9A 03 9F`
		`36 02 9F 52 06 DF 3E 01 9F 21 03 9F`
		`7C 14`	

9F 62	Track 1 Bitmap for CVC3 (PCVC3 Track 1) [Mastercard]	`00 00 00 00 00 00`	
9F 63	Track 1 Bitmap for UN and ATC (PUNATC Track 1) [Mastercard]	`00 00 00 00 00 00`	
9F 64	Track 1 Number of ATC Digits (NATC Track 1) [Mastercard]	`00`	
9F 65	Track 2 Bitmap for CVC3 (PCVC3 Track 2) [Mastercard]	`00 00`	
9F 66	Track 2 Bitmap for UN and ATC (PUNATC Track 2) [Mastercard]	`00 00`	
9F 67	Track 2 Number of ATC Digits (NATC Track 2) [Mastercard]	`02`	
9F 6B	Track 2 Equivalent Data [Mastercard]	`54 13 33 00 89 09 91 30 D2 51 22 01` `14 83 59 49 00 00 0F`	
9F 6C	Application Version [Mastercard]	`00 01`	
9F 6E	Third Party Data [Mastercard]	`08 40 00 00 30 30 00`	

9F 7E	Application Life Cycle Data [Mastercard]	`04 10 0B 14 00 01 00 00 50 17 79 00`
		`A0 00 00 00 04 10 10 00 00 00 00 00`
		`00 00 00 00 00 96 00 97 02 00 5A 5A`
		`00 00 00 00 00 00 00 00 00 00 00 00`	

C3	Card Issuer Action Code (Contact) - Decline [M/Chip Advance]	`00 00 00`	
C4	Card Issuer Action Code (Contact) - Default [M/Chip Advance]	`06 50 00`	
C5	Card Issuer Action Code (Contact) - Online [M/Chip Advance]	`06 FB 00`	
C6	PIN Try Limit [M/Chip Advance]	`03`	
C7	CDOL1 Related Data Length [Mastercard]	`42`	
C8	CRM Country Code [Mastercard]	`08 40` - USA	
C9	Accumulator 1 Currency Code [Mastercard]	`08 40` - USD	
CA	Accumulator 1 Lower Limit [Mastercard]	`00 00 00 00 00 00`	
CB	Accumulator 1 Upper Limit [Mastercard]	`00 00 00 00 00 00`	
CD	Card Issuer Action Code (Contactless) - Default [M/Chip Advance]	`06 58 00`	
CE	Card Issuer Action Code (Contactless) - Online [M/Chip Advance]	`06 F8 00`	
CF	Card Issuer Action Code (Contactless) - Decline [M/Chip Advance]	`08 00 00`	

D1	Accumulator 1 Currency Conversion Table [Mastercard]	`08 40 00 00 00 08 40 00 00 00 08 40`
		`00 00 00 08 40 00 00 00 08 40 00 00`
		`00`	

D3	Additional Check Table [Mastercard]	`00 00 00 FF FF FF FF FF FF FF FF FF` `FF FF FF FF FF FF`	
D5	Application Control [M/Chip Advance]	`80 00 80 00 C6 02`	
D6	Default ARPC Response Code [M/Chip Advance]	`00 10`	
D7	Application Control [M/Chip Advance]	`00 00 80 00 E6 02`	
DF 02	Security Limits Status (Contact) [M/Chip Advance]	`00`	

* Tag value changes with card usage

4.6   Test Card 06 - Maestro, CO, 1-AID (2-Funding), English, NLD, EUR

A contact-only, single-AID Maestro debit card with 2 funding accounts with an Issuer Country Code of 'NLD' and Currency Code of 'EUR'.

The recommended transaction amount to generate a host approval is $20.00.

4.6.1   Contact: CVM List - Maestro Debit, AID A0000000043060D0561111

Cardholder Verification Method List ('4103 0203 0000')			
CVM	**Verification Method**	**Conditions**	**If unsuccessful**
1	Offline Plaintext PIN	Terminal supports CVM type	Next CVM
2	Online PIN	Terminal supports CVM type	Fail
3	Fail CVM Processing	Always	Fail

4.6.2   Contact: Application Tag data, AID A0000000043060D0561111

Tag	Element name	Data Card v5.x
50	Application Label	`4D 41 45 53 54 52 4F 31 20 20 20 20` `20 20 20 20` - 'MAESTRO1'
57	Track 2 Equivalent Data	`67 99 99 89 00 00 02 01 0D 25 12 22` `01 48 35 94 90 0F`
5A	Application Primary Account Number (PAN)	`67 99 99 89 00 00 02 01 0F`
5F 20	Cardholder Name	`55 53 41 20 44 65 62 69 74 2F 54 65` `73 74 20 43 61 72 64 20 30 36 20 20` `20 20` - 'USA DEBIT/Test Card 06'
5F 24	Application Expiration Date	`25 12 31`
5F 25	Application Effective Date	`xx xx xx *`
5F 28	Issuer Country Code	`05 28` - NLD
5F 2D	Language Preference	`65 6E` - 'en' (English)
5F 30	Service Code	`02 20`
5F 34	Application PAN Sequence Number	`31`
82	Application Interchange Profile	`18 00` BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported via External Auth command b2 - On device Cardholder verification NOT supported b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - EMV mode NOT supported
84	Dedicated File (DF) Name	`A0 00 00 00 04 30 60 D0 56 11 11`
87	Application Priority Indicator	`01`
8C	Card Risk Management Data Object List 1 (CDOL1)	`9F 02 06 9F 03 06 9F 1A 02 95 05 5F` `2A 02 9A 03 9C 01 9F 37 04 9F 35 01` `9F 45 02 9F 4C 08 9F 34 03 9F 21 03` `9F 7C 14`
8D	Card Risk Management Data Object List 2 (CDOL2)	`91 0A 8A 02 95 05 9F 37 04 9F 4C 08`
8E	Cardholder Verification Method (CVM) List	`00 00 00 00 00 00 00 00 41 03 02 03` `00 00 00 00`
94	Application File Locator (AFL)	`08 01 01 00`

Tag	Element name	Data	Card v5.x
9F 07	Application Usage Control	FF C0 BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions valid b6 - Domestic goods valid b5 - International goods valid b4 - Domestic services valid b3 - International services valid b2 - ATMs valid b1 - non-ATM terminals valid BYTE 2: b8 - Domestic cashback allowed b7 - International cashback allowed	
9F 08	Application Version Number	00 02	
9F 0A	Application Selection Registered Proprietary Data	00 01 01 01	
9F 0D	Issuer Action Code - Default	B0 50 BC 88 00	
9F 0E	Issuer Action Code - Denial	00 00 00 00 00	
9F 0F	Issuer Action Code - Online	B0 70 BC 98 00	
9F 10	Issuer Application Data [M/Chip Advance]	xx 14 xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx *	
9F 11	Issuer Code Table Index	01	
9F 12	Application Preferred Name	4D 61 65 73 74 6F 31 20 20 20 20 20 20 20 - 'Maestro1'	
9F 14	Counter 1 Lower Limit [Mastercard]	00	
9F 17	Personal Identification Number (PIN) Try Counter	09	
9F 23	Counter 1 Upper Limit [Mastercard]	00	
9F 26	Application Cryptogram (AC)	xx xx xx xx xx xx xx xx *	
9F 27	Cryptogram Information Data (CID)	80	
9F 36	Application Transaction Counter (ATC)	xx xx *	
9F 42	Application Currency Code	09 78 - EUR	
9F 4D	Transaction Log Entry	0B 0A	
9F 4F	Transaction Log Format	9F 27 01 9F 02 06 5F 2A 02 9A 03 9F 36 02 9F 52 06 DF 3E 01 9F 21 03 9F 7C 14	
9F 7E	Application Life Cycle Data [Mastercard]	04 10 0B 14 00 01 00 00 50 17 79 00 A0 00 00 00 04 30 60 17 10 13 00 00 00 00 00 00 00 80 00 88 01 06 A5 5A 00 00 00 00 00 00 00 00 00 00 00 00	
C3	Card Issuer Action Code (Contact) - Decline [M/Chip Advance]	00 00 00	
C4	Card Issuer Action Code (Contact) - Default [M/Chip Advance]	7F 50 00	
C5	Card Issuer Action Code (Contact) - Online [M/Chip Advance]	3F FB 00	
C6	PIN Try Limit [M/Chip Advance]	09	
C7	CDOL1 Related Data Length [Mastercard]	42	
C8	CRM Country Code [Mastercard]	05 28 - NLD	
C9	Accumulator 1 Currency Code [Mastercard]	09 78 - EUR	
CA	Accumulator 1 Lower Limit [Mastercard]	00 00 00 00 00 00	
CB	Accumulator 1 Upper Limit [Mastercard]	00 00 00 00 00 00	
CD	Card Issuer Action Code (Contactless) - Default [M/Chip Advance]	00 00 00	
CE	Card Issuer Action Code (Contactless) - Online [M/Chip Advance]	00 00 00	

Tag	Element name	Data	Card v5.x
CF	Card Issuer Action Code (Contactless) - Decline [M/Chip Advance]	`00 00 00`	
D1	Accumulator 1 Currency Conversion Table [Mastercard]	`09 78 00 00 00 09 78 00 00 00 09 78 00 00 00 09 78 00 00 00 09 78 00 00 00`	
D3	Additional Check Table [Mastercard]	`00 00 00 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF`	
D5	Application Control [M/Chip Advance]	`86 00 80 00 C6 02`	
D6	Default ARPC Response Code [M/Chip Advance]	`00 10`	
D7	Application Control [M/Chip Advance]	`00 00 00 00 00 00`	
D9	Application File Locator (Contactless)		
DE	Log Data Table [M/Chip Advance]	`00 00 00 00 00 00 00 00 00`	
DF 02	Security Limits Status (Contact) [M/Chip Advance]	`00`	
DF 11	Accumulator 1 Control (Contact) [M/Chip Advance]	`C1`	
DF 12	Accumulator 1 Control (Contactless) [M/Chip Advance]	`00`	
DF 14	Accumulator 2 Control (Contact) [M/Chip Advance]	`00`	
DF 15	Accumulator 2 Control (Contactless) [M/Chip Advance]	`00`	
DF 16	Accumulator 2 Currency Code [Mastercard]	`09 99`	
DF 17	Accumulator 2 Currency Conversion Table [Mastercard]	`09 99 00 00 00 09 99 00 00 00 09 99 00 00 00 09 99 00 00 00 09 99 00 00 00`	
DF 18	Accumulator 2 Lower Limit [Mastercard]	`00 00 00 00 00 00`	
DF 19	Accumulator 2 Upper Limit [Mastercard]	`00 00 00 00 00 00`	
DF 1A	Counter 1 Control (Contact) [M/Chip Advance]	`C1`	
DF 1B	Counter 1 Control (Contactless) [M/Chip Advance]	`00`	
DF 1D	Counter 2 Control (Contact) [M/Chip Advance]	`00`	
DF 1E	Counter 2 Control (Contactless) [M/Chip Advance]	`00`	
DF 1F	Counter 2 Lower Limit [Mastercard]	`00`	
DF 21	Counter 2 Upper Limit [Mastercard]	`00`	
DF 22	MTA CVM (Contact) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 23	MTA CVM (Contactless) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 24	MTA Currency Code [M/Chip Advance]	`09 78`	
DF 25	MTA NoCVM (Contact) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 26	MTA NoCVM (Contactless) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 27	Number Of Days Offline Limit [M/Chip Advance]	`00 00`	
DF 28	Accumulator 1 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 29	Accumulator 1 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2A	Accumulator 2 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2B	Accumulator 2 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	

Tag	Element name	Data	Card v5.x
DF 2C	Counter 1 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2D	Counter 1 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2E	Counter 2 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2F	Counter 2 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 30	Interface Enabling Switch [M/Chip Advance]	`01`	
DF 35	Security Limits Status (Contactless) [M/Chip Advance]	`00`	
DF 37	Security Limits Status Common [M/Chip Advance]	`00`	
DF 3C	CVR Issuer Discretionary Data (Contact) [M/Chip Advance]	`00`	
DF 3D	CVR Issuer Discretionary Data (Contactless) [M/Chip Advance]	`00`	
DF 3F	Read Record Filter (Contact) [M/Chip Advance]	`00`	
DF 40	Read Record Filter (Contactless) [M/Chip Advance]	`00`	
DF 41	DS Management Control [M/Chip Advance]	`20`	

* Tag value changes with card usage

4.6.3   Contact: CVM List - Maestro Debit, AID A0000000043060D0562222

Cardholder Verification Method List ('4103 0203 0000')			
CVM	**Verification Method**	**Conditions**	**If unsuccessful**
1	Offline Plaintext PIN	Terminal supports CVM type	Next CVM
2	Online PIN	Terminal supports CVM type	Fail
3	Fail CVM Processing	Always	Fail

4.6.4   Contact: Application Tag data, AID A0000000043060D0562222

Tag	Element name	Data	Card v5.x
50	Application Label	`4D 41 45 53 54 52 4F 32 20 20 20 20` `20 20 20 20` - 'MAESTRO2'	
57	Track 2 Equivalent Data	`67 99 99 89 00 00 02 02 8D 25 12 22` `01 48 35 94 90 0F`	
5A	Application Primary Account Number (PAN)	`67 99 99 89 00 00 02 02 8F`	
5F 20	Cardholder Name	`55 53 41 20 44 65 62 69 74 2F 54 65` `73 74 20 43 61 72 64 20 30 36 20 20` `20 20` - 'USA DEBIT/Test Card 06'	
5F 24	Application Expiration Date	`25 12 31`	
5F 25	Application Effective Date	`xx xx xx` *	
5F 28	Issuer Country Code	`05 28` - NLD	
5F 2D	Language Preference	`65 6E` - 'en' (English)	
5F 30	Service Code	`02 20`	
5F 34	Application PAN Sequence Number	`32`	

Tag	Element name	Data Card v5.x
82	Application Interchange Profile	`18 00` BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported via External Auth command b2 - On device Cardholder verification NOT supported b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - EMV mode NOT supported
84	Dedicated File (DF) Name	`A0 00 00 00 04 30 60 D0 56 22 22`
87	Application Priority Indicator	`02`
8C	Card Risk Management Data Object List 1 (CDOL1)	`9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04 9F 35 01 9F 45 02 9F 4C 08 9F 34 03 9F 21 03 9F 7C 14`
8D	Card Risk Management Data Object List 2 (CDOL2)	`91 0A 8A 02 95 05 9F 37 04 9F 4C 08`
8E	Cardholder Verification Method (CVM) List	`00 00 00 00 00 00 00 00 41 03 02 03 00 00 00 00`
94	Application File Locator (AFL)	`08 01 01 00`
94	Application File Locator (AFL)	`08 01 01 00`
9F 07	Application Usage Control	`FF C0` BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions valid b6 - Domestic goods valid b5 - International goods valid b4 - Domestic services valid b3 - International services valid b2 - ATMs valid b1 - non-ATM terminals valid BYTE 2: b8 - Domestic cashback allowed b7 - International cashback allowed
9F 08	Application Version Number	`00 02`
9F 0A	Application Selection Registered Proprietary Data	`00 01 01 01`
9F 0D	Issuer Action Code - Default	`B0 50 BC 88 00`
9F 0E	Issuer Action Code - Denial	`00 00 00 00 00`
9F 0F	Issuer Action Code - Online	`B0 70 BC 98 00`
9F 10	Issuer Application Data [M/Chip Advance]	`xx 14 xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx *`
9F 11	Issuer Code Table Index	`01`
9F 12	Application Preferred Name	`4D 61 65 73 74 72 6F 32 20 20 20 20 20 20 20` - 'Maestro2'
9F 14	Counter 1 Lower Limit [Mastercard]	`00`
9F 17	Personal Identification Number (PIN) Try Counter	`03`
9F 23	Counter 1 Upper Limit [Mastercard]	`00`
9F 26	Application Cryptogram (AC)	`xx xx xx xx xx xx xx xx *`
9F 27	Cryptogram Information Data (CID)	`80`
9F 36	Application Transaction Counter (ATC)	`xx xx *`
9F 42	Application Currency Code	`09 78` - EUR
9F 4D	Transaction Log Entry	`0B 0A`
9F 4F	Transaction Log Format	`9F 27 01 9F 02 06 5F 2A 02 9A 03 9F 36 02 9F 52 06 DF 3E 01 9F 21 03 9F 7C 14`

Tag	Element name	Data	Card v5.x
9F 7E	Application Life Cycle Data [Mastercard]	04 10 0B 14 00 01 00 00 50 17 79 00 A0 00 00 00 04 30 60 17 10 13 00 00 00 00 00 00 00 80 00 88 01 06 A5 5A 00 00 00 00 00 00 00 00 00 00 00 00	
C3	Card Issuer Action Code (Contact) - Decline [M/Chip Advance]	00 00 00	
C4	Card Issuer Action Code (Contact) - Default [M/Chip Advance]	7F 50 00	
C5	Card Issuer Action Code (Contact) - Online [M/Chip Advance]	3F FB 00	
C6	PIN Try Limit [M/Chip Advance]	03	
C7	CDOL1 Related Data Length [Mastercard]	42	
C8	CRM Country Code [Mastercard]	05 28 - NLD	
C9	Accumulator 1 Currency Code [Mastercard]	09 78 - EUR	
CA	Accumulator 1 Lower Limit [Mastercard]	00 00 00 00 00 00	
CB	Accumulator 1 Upper Limit [Mastercard]	00 00 00 00 00 00	
CD	Card Issuer Action Code (Contactless) - Default [M/Chip Advance]	00 00 00	
CE	Card Issuer Action Code (Contactless) - Online [M/Chip Advance]	00 00 00	
CF	Card Issuer Action Code (Contactless) - Decline [M/Chip Advance]	00 00 00	
D1	Accumulator 1 Currency Conversion Table [Mastercard]	09 78 00 00 00 09 78 00 00 00 09 78 00 00 00 09 78 00 00 00 09 78 00 00 00	
D3	Additional Check Table [Mastercard]	00 00 00 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF	
D5	Application Control [M/Chip Advance]	86 00 80 00 C6 02	
D6	Default ARPC Response Code [M/Chip Advance]	00 10	
D7	Application Control [M/Chip Advance]	00 00 00 00 00 00	
D9	Application File Locator (Contactless)		
DE	Log Data Table [M/Chip Advance]	00 00 00 00 00 00 00 00 00	
DF 02	Security Limits Status (Contact) [M/Chip Advance]	00	
DF 11	Accumulator 1 Control (Contact) [M/Chip Advance]	C1	
DF 12	Accumulator 1 Control (Contactless) [M/Chip Advance]	00	
DF 14	Accumulator 2 Control (Contact) [M/Chip Advance]	00	
DF 15	Accumulator 2 Control (Contactless) [M/Chip Advance]	00	
DF 16	Accumulator 2 Currency Code [Mastercard]	09 99	
DF 17	Accumulator 2 Currency Conversion Table [Mastercard]	09 99 00 00 00 09 99 00 00 00 09 99 00 00 00 09 99 00 00 00 09 99 00 00 00	
DF 18	Accumulator 2 Lower Limit [Mastercard]	00 00 00 00 00 00	
DF 19	Accumulator 2 Upper Limit [Mastercard]	00 00 00 00 00 00	
DF 1A	Counter 1 Control (Contact) [M/Chip Advance]	C1	
DF 1B	Counter 1 Control (Contactless) [M/Chip Advance]	00	
DF 1D	Counter 2 Control (Contact) [M/Chip Advance]	00	

Tag	Element name	Data	Card v5.x
DF 1E	Counter 2 Control (Contactless) [M/Chip Advance]	00	
DF 1F	Counter 2 Lower Limit [Mastercard]	00	
DF 21	Counter 2 Upper Limit [Mastercard]	00	
DF 22	MTA CVM (Contact) [M/Chip Advance]	00 00 00 00 00 00	
DF 23	MTA CVM (Contactless) [M/Chip Advance]	00 00 00 00 00 00	
DF 24	MTA Currency Code [M/Chip Advance]	09 78 - EUR	
DF 25	MTA NoCVM (Contact) [M/Chip Advance]	00 00 00 00 00 00	
DF 26	MTA NoCVM (Contactless) [M/Chip Advance]	00 00 00 00 00 00	
DF 27	Number Of Days Offline Limit [M/Chip Advance]	00 00	
DF 28	Accumulator 1 CVR Dependency Data (Contact) [M/Chip Advance]	00 00 00	
DF 29	Accumulator 1 CVR Dependency Data (Contactless) [M/Chip Advance]	00 00 00	
DF 2A	Accumulator 2 CVR Dependency Data (Contact) [M/Chip Advance]	00 00 00	
DF 2B	Accumulator 2 CVR Dependency Data (Contactless) [M/Chip Advance]	00 00 00	
DF 2C	Counter 1 CVR Dependency Data (Contact) [M/Chip Advance]	00 00 00	
DF 2D	Counter 1 CVR Dependency Data (Contactless) [M/Chip Advance]	00 00 00	
DF 2E	Counter 2 CVR Dependency Data (Contact) [M/Chip Advance]	00 00 00	
DF 2F	Counter 2 CVR Dependency Data (Contactless) [M/Chip Advance]	00 00 00	
DF 30	Interface Enabling Switch [M/Chip Advance]	01	
DF 35	Security Limits Status (Contactless) [M/Chip Advance]	00	
DF 37	Security Limits Status Common [M/Chip Advance]	00	
DF 3C	CVR Issuer Discretionary Data (Contact) [M/Chip Advance]	00	
DF 3D	CVR Issuer Discretionary Data (Contactless) [M/Chip Advance]	00	
DF 3F	Read Record Filter (Contact) [M/Chip Advance]	00	
DF 40	Read Record Filter (Contactless) [M/Chip Advance]	00	
DF 41	DS Management Control [M/Chip Advance]	20	

* Tag value changes with card usage

4.7   Test Card 07 - Mastercard Int'l, CO, 2-AID (Credit+Debit), English, GBR, GBP

A contact-only, 2-AID International Mastercard combination credit & debit card with an Issuer Country Code of 'GBR' and Currency Code of 'GBP'.

The recommended transaction amount to generate a host approval is $20.00.

4.7.1   Contact: CVM List - Mastercard credit, AID A0000000041010

Cardholder Verification Method List ('4103 4203 5E03 5F03 0000')			
CVM	**Verification Method**	**Conditions**	**If unsuccessful**
1	Offline Plaintext PIN	Terminal supports CVM type	Next CVM
2	Online PIN	Terminal supports CVM type	Next CVM
3	Signature (paper)	Terminal supports CVM type	Next CVM
4	No CVM required	Terminal supports CVM type	Fail
5	Fail CVM Processing	Always	Fail

4.7.2   Contact: Application Tag data, AID A0000000041010

Tag	Element name	Data	Card v5.x
50	Application Label	`4D 41 53 54 45 52 43 41 52 44 20 20 20 20 20 20` - 'MASTERCARD'	
57	Track 2 Equivalent Data	`54 13 33 00 89 02 00 60 D2 51 22 01 14 83 59 49 00 0F`	
5A	Application Primary Account Number (PAN)	`54 13 33 00 89 02 00 60`	
5F 20	Cardholder Name	`55 53 41 20 44 65 62 69 74 2F 54 65 73 74 20 43 61 72 64 20 30 37 20 20 20 20` - 'USA DEBIT/Test Card 07'	
5F 24	Application Expiration Date	`25 12 31`	
5F 25	Application Effective Date	`xx xx xx *`	
5F 28	Issuer Country Code	`08 26` - GBR	
5F 2D	Language Preference	`65 6E` - 'en' (English)	
5F 30	Service Code	`02 01`	
5F 34	Application PAN Sequence Number	`11`	
82	Application Interchange Profile	`18 00` BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported via External Auth command b2 - On device Cardholder verification NOT supported b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - EMV mode NOT supported	
84	Dedicated File (DF) Name	`A0 00 00 00 04 10 10`	
87	Application Priority Indicator	`01`	
8C	Card Risk Management Data Object List 1 (CDOL1)	`9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04 9F 35 01 9F 45 02 9F 4C 08 9F 34 03 9F 21 03 9F 7C 14`	
8D	Card Risk Management Data Object List 2 (CDOL2)	`91 0A 8A 02 95 05 9F 37 04 9F 4C 08`	

Tag	Element name	Data	Card v5.x
8E	Cardholder Verification Method (CVM) List	`00 00 00 00 00 00 00 00 41 03 42 03` `5E 03 5F 03 00 00`	
94	Application File Locator (AFL)	`08 01 01 00`	
94	Application File Locator (AFL)	`08 01 01 00`	
9F 07	Application Usage Control	`FF 00` BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions valid b6 - Domestic goods valid b5 - International goods valid b4 - Domestic services valid b3 - International services valid b2 - ATMs valid b1 - non-ATM terminals valid BYTE 2: b8 - Domestic cashback NOT allowed b7 - International cashback NOT allowed	
9F 08	Application Version Number	`00 02`	
9F 0A	Application Selection Registered Proprietary Data	`00 01 01 02`	
9F 0D	Issuer Action Code - Default	`B0 50 BC 88 00`	
9F 0E	Issuer Action Code - Denial	`00 00 00 00 00`	
9F 0F	Issuer Action Code - Online	`B0 70 BC 98 00`	
9F 10	Issuer Application Data [M/Chip Advance]	`xx 10 xx xx xx xx xx xx xx xx xx xx` `xx xx xx xx xx xx *`	
9F 11	Issuer Code Table Index	`01`	
9F 12	Application Preferred Name	`4D 61 73 74 65 72 63 61 72 64 20 20` `20 20 20 20` - 'Mastercard'	
9F 14	Counter 1 Lower Limit [Mastercard]	`00`	
9F 17	Personal Identification Number (PIN) Try Counter	`09`	
9F 23	Counter 1 Upper Limit [Mastercard]	`00`	
9F 26	Application Cryptogram (AC)	`xx xx xx xx xx xx xx xx *`	
9F 27	Cryptogram Information Data (CID)	`80`	
9F 36	Application Transaction Counter (ATC)	`xx xx *`	
9F 42	Application Currency Code	`08 26` - GBP	
9F 4D	Transaction Log Entry	`0B 0A`	

9F 4F	Transaction Log Format	`9F 27 01 9F 02 06 5F 2A 02 9A 03 9F`
		`36 02 9F 52 06 DF 3E 01 9F 21 03 9F`
		`7C 14`	

9F 7E	Application Life Cycle Data [Mastercard]	`04 10 0B 14 00 01 00 00 50 17 79 00`
		`A0 00 00 00 04 10 10 00 00 00 00 00`
		`00 00 00 00 00 80 00 88 01 06 A5 5A`
		`00 00 00 00 00 00 00 00 00 00 00 00`	

C3	Card Issuer Action Code (Contact) - Decline [M/Chip Advance]	`00 00 00`	
C4	Card Issuer Action Code (Contact) - Default [M/Chip Advance]	`06 00 00`	
C5	Card Issuer Action Code (Contact) - Online [M/Chip Advance]	`06 00 00`	
C6	PIN Try Limit [M/Chip Advance]	`09`	
C7	CDOL1 Related Data Length [Mastercard]	`42`	
C8	CRM Country Code [Mastercard]	`08 26` - GBR	
C9	Accumulator 1 Currency Code [Mastercard]	`08 26` - GBP	
CA	Accumulator 1 Lower Limit [Mastercard]	`00 00 00 00 00 00`	
CB	Accumulator 1 Upper Limit [Mastercard]	`00 00 00 00 00 00`	

Tag	Element name	Data	Card v5.x
CD	Card Issuer Action Code (Contactless) - Default [M/Chip Advance]	`00 00 00`	
CE	Card Issuer Action Code (Contactless) - Online [M/Chip Advance]	`00 00 00`	
CF	Card Issuer Action Code (Contactless) - Decline [M/Chip Advance]	`00 00 00`	
D1	Accumulator 1 Currency Conversion Table [Mastercard]	`08 26 00 00 00 08 26 00 00 00 08 26 00 00 00 08 26 00 00 00 08 26 00 00 00`	
D3	Additional Check Table [Mastercard]	`00 00 00 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF`	
D5	Application Control [M/Chip Advance]	`84 00 80 00 C6 02`	
D6	Default ARPC Response Code [M/Chip Advance]	`00 10`	
D7	Application Control [M/Chip Advance]	`00 00 00 00 00 00`	
D9	Application File Locator (Contactless)		
DE	Log Data Table [M/Chip Advance]	`00 00 00 00 00 00 00 00 00`	
DF 02	Security Limits Status (Contact) [M/Chip Advance]	`00`	
DF 11	Accumulator 1 Control (Contact) [M/Chip Advance]	`C1`	
DF 12	Accumulator 1 Control (Contactless) [M/Chip Advance]	`00`	
DF 14	Accumulator 2 Control (Contact) [M/Chip Advance]	`00`	
DF 15	Accumulator 2 Control (Contactless) [M/Chip Advance]	`00`	
DF 16	Accumulator 2 Currency Code [Mastercard]	`09 99`	
DF 17	Accumulator 2 Currency Conversion Table [Mastercard]	`09 99 00 00 00 09 99 00 00 00 09 99 00 00 00 09 99 00 00 00 09 99 00 00 00`	
DF 18	Accumulator 2 Lower Limit [Mastercard]	`00 00 00 00 00 00`	
DF 19	Accumulator 2 Upper Limit [Mastercard]	`00 00 00 00 00 00`	
DF 1A	Counter 1 Control (Contact) [M/Chip Advance]	`C1`	
DF 1B	Counter 1 Control (Contactless) [M/Chip Advance]	`00`	
DF 1D	Counter 2 Control (Contact) [M/Chip Advance]	`00`	
DF 1E	Counter 2 Control (Contactless) [M/Chip Advance]	`00`	
DF 1F	Counter 2 Lower Limit [Mastercard]	`00`	
DF 21	Counter 2 Upper Limit [Mastercard]	`00`	
DF 22	MTA CVM (Contact) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 23	MTA CVM (Contactless) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 24	MTA Currency Code [M/Chip Advance]	`08 26`	
DF 25	MTA NoCVM (Contact) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 26	MTA NoCVM (Contactless) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 27	Number Of Days Offline Limit [M/Chip Advance]	`00 00`	
DF 28	Accumulator 1 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 29	Accumulator 1 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	

Tag	Element name	Data	Card v5.x
DF 2A	Accumulator 2 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2B	Accumulator 2 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2C	Counter 1 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2D	Counter 1 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2E	Counter 2 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2F	Counter 2 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 30	Interface Enabling Switch [M/Chip Advance]	`01`	
DF 35	Security Limits Status (Contactless) [M/Chip Advance]	`00`	
DF 37	Security Limits Status Common [M/Chip Advance]	`00`	
DF 3C	CVR Issuer Discretionary Data (Contact) [M/Chip Advance]	`00`	
DF 3D	CVR Issuer Discretionary Data (Contactless) [M/Chip Advance]	`00`	
DF 3F	Read Record Filter (Contact) [M/Chip Advance]	`00`	
DF 40	Read Record Filter (Contactless) [M/Chip Advance]	`00`	
DF 41	DS Management Control [M/Chip Advance]	`20`	

* Tag value changes with card usage

4.7.3   Contact: CVM List - Maestro debit, AID A0000000043060

Cardholder Verification Method List ('4103 4203 0000')			
CVM	**Verification Method**	**Conditions**	**If unsuccessful**
1	Offline Plaintext PIN	Terminal supports CVM type	Next CVM
2	Online PIN	Terminal supports CVM type	Next CVM
3	Fail CVM Processing	Always	Fail

4.7.4   Contact: Application Tag data, AID A0000000043060

Tag	Element name	Data	Card v5.x
50	Application Label	`4D 41 45 53 54 52 4F 20 20 20 20 20` `20 20 20 20` - 'MAESTRO'	
57	Track 2 Equivalent Data	`67 99 99 89 00 00 02 00 05 1D 25 12` `22 01 48 35 94 90 0F`	
5A	Application Primary Account Number (PAN)	`67 99 99 89 00 00 02 00 05 1F`	
5F 20	Cardholder Name	`55 53 41 20 44 65 62 69 74 2F 54 65` `73 74 20 43 61 72 64 20 30 37 20 20` `20 20` - 'USA DEBIT/Test Card 07'	
5F 24	Application Expiration Date	`25 12 31`	
5F 25	Application Effective Date	`xx xx xx *`	
5F 28	Issuer Country Code	`08 26` - GBR	
5F 2D	Language Preference	`65 6E` - 'en' (English)	
5F 30	Service Code	`02 20`	
5F 34	Application PAN Sequence Number	`12`	

Tag	Element name	Data	Card v5.x
82	Application Interchange Profile	`18 00` BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported via External Auth command b2 - On device Cardholder verification NOT supported b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - EMV mode NOT supported	
84	Dedicated File (DF) Name	`A0 00 00 00 04 30 60`	
87	Application Priority Indicator	`02`	
8C	Card Risk Management Data Object List 1 (CDOL1)	`9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04 9F 35 01 9F 45 02 9F 4C 08 9F 34 03 9F 21 03 9F 7C 14`	
8D	Card Risk Management Data Object List 2 (CDOL2)	`91 0A 8A 02 95 05 9F 37 04 9F 4C 08`	
8E	Cardholder Verification Method (CVM) List	`00 00 00 00 00 00 00 00 41 03 42 03 00 00 00 00`	
94	Application File Locator (AFL)	`08 01 02 00`	
9F 07	Application Usage Control	`FF C0` BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions valid b6 - Domestic goods valid b5 - International goods valid b4 - Domestic services valid b3 - International services valid b2 - ATMs valid b1 - non-ATM terminals valid BYTE 2: b8 - Domestic cashback allowed b7 - International cashback allowed	
9F 08	Application Version Number	`00 02`	
9F 0A	Application Selection Registered Proprietary Data	`00 01 01 01`	
9F 0D	Issuer Action Code - Default	`B0 50 BC 88 00`	
9F 0E	Issuer Action Code - Denial	`00 00 00 00 00`	
9F 0F	Issuer Action Code - Online	`B0 70 BC 98 00`	
9F 10	Issuer Application Data [M/Chip Advance]	`xx 14 xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx *`	
9F 11	Issuer Code Table Index	`01`	
9F 12	Application Preferred Name	`4D 61 65 73 74 72 6F 20 20 20 20 20 20 20 20` - 'Maestro'	
9F 14	Counter 1 Lower Limit [Mastercard]	`00`	
9F 17	Personal Identification Number (PIN) Try Counter	`09`	
9F 23	Counter 1 Upper Limit [Mastercard]	`00`	
9F 26	Application Cryptogram (AC)	`xx xx xx xx xx xx xx xx *`	
9F 27	Cryptogram Information Data (CID)	`80`	
9F 36	Application Transaction Counter (ATC)	`xx xx *`	
9F 42	Application Currency Code	`08 26` - GBP	
9F 4D	Transaction Log Entry	`0B 0A`	
9F 4F	Transaction Log Format	`9F 27 01 9F 02 06 5F 2A 02 9A 03 9F 36 02 9F 52 06 DF 3E 01 9F 21 03 9F 7C 14`	

Tag	Element name	Data	Card v5.x
9F 7E	Application Life Cycle Data [Mastercard]	04 10 0B 14 00 01 00 00 50 17 79 00 A0 00 00 00 04 30 60 00 00 00 00 00 00 00 00 00 00 80 00 88 01 06 A5 5A 00 00 00 00 00 00 00 00 00 00 00 00	
C3	Card Issuer Action Code (Contact) - Decline [M/Chip Advance]	00 00 00	
C4	Card Issuer Action Code (Contact) - Default [M/Chip Advance]	7F 50 00	
C5	Card Issuer Action Code (Contact) - Online [M/Chip Advance]	3F FB 00	
C6	PIN Try Limit [M/Chip Advance]	09	
C7	CDOL1 Related Data Length [Mastercard]	42	
C8	CRM Country Code [Mastercard]	08 26 - GBR	
C9	Accumulator 1 Currency Code [Mastercard]	08 26 - GBP	
CA	Accumulator 1 Lower Limit [Mastercard]	00 00 00 00 00 00	
CB	Accumulator 1 Upper Limit [Mastercard]	00 00 00 00 00 00	
CD	Card Issuer Action Code (Contactless) - Default [M/Chip Advance]	00 00 00	
CE	Card Issuer Action Code (Contactless) - Online [M/Chip Advance]	00 00 00	
CF	Card Issuer Action Code (Contactless) - Decline [M/Chip Advance]	00 00 00	
D1	Accumulator 1 Currency Conversion Table [Mastercard]	08 26 00 00 00 08 26 00 00 00 08 26 00 00 00 08 26 00 00 00 08 26 00 00 00	
D3	Additional Check Table [Mastercard]	00 00 00 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF	
D5	Application Control [M/Chip Advance]	86 00 80 00 C6 02	
D6	Default ARPC Response Code [M/Chip Advance]	00 10	
D7	Application Control [M/Chip Advance]	00 00 00 00 00 00	
D9	Application File Locator (Contactless)		
DE	Log Data Table [M/Chip Advance]	00 00 00 00 00 00 00 00 00	
DF 02	Security Limits Status (Contact) [M/Chip Advance]	00	
DF 11	Accumulator 1 Control (Contact) [M/Chip Advance]	C1	
DF 12	Accumulator 1 Control (Contactless) [M/Chip Advance]	00	
DF 14	Accumulator 2 Control (Contact) [M/Chip Advance]	00	
DF 15	Accumulator 2 Control (Contactless) [M/Chip Advance]	00	
DF 16	Accumulator 2 Currency Code [Mastercard]	09 99	
DF 17	Accumulator 2 Currency Conversion Table [Mastercard]	09 99 00 00 00 09 99 00 00 00 09 99 00 00 00 09 99 00 00 00 09 99 00 00 00	
DF 18	Accumulator 2 Lower Limit [Mastercard]	00 00 00 00 00 00	
DF 19	Accumulator 2 Upper Limit [Mastercard]	00 00 00 00 00 00	
DF 1A	Counter 1 Control (Contact) [M/Chip Advance]	C1	
DF 1B	Counter 1 Control (Contactless) [M/Chip Advance]	00	
DF 1D	Counter 2 Control (Contact) [M/Chip Advance]	00	

Tag	Element name	Data	Card v5.x
DF 1E	Counter 2 Control (Contactless) [M/Chip Advance]	00	
DF 1F	Counter 2 Lower Limit [Mastercard]	00	
DF 21	Counter 2 Upper Limit [Mastercard]	00	
DF 22	MTA CVM (Contact) [M/Chip Advance]	00 00 00 00 00 00	
DF 23	MTA CVM (Contactless) [M/Chip Advance]	00 00 00 00 00 00	
DF 24	MTA Currency Code [M/Chip Advance]	08 26 - GBP	
DF 25	MTA NoCVM (Contact) [M/Chip Advance]	00 00 00 00 00 00	
DF 26	MTA NoCVM (Contactless) [M/Chip Advance]	00 00 00 00 00 00	
DF 27	Number Of Days Offline Limit [M/Chip Advance]	00 00	
DF 28	Accumulator 1 CVR Dependency Data (Contact) [M/Chip Advance]	00 00 00	
DF 29	Accumulator 1 CVR Dependency Data (Contactless) [M/Chip Advance]	00 00 00	
DF 2A	Accumulator 2 CVR Dependency Data (Contact) [M/Chip Advance]	00 00 00	
DF 2B	Accumulator 2 CVR Dependency Data (Contactless) [M/Chip Advance]	00 00 00	
DF 2C	Counter 1 CVR Dependency Data (Contact) [M/Chip Advance]	00 00 00	
DF 2D	Counter 1 CVR Dependency Data (Contactless) [M/Chip Advance]	00 00 00	
DF 2E	Counter 2 CVR Dependency Data (Contact) [M/Chip Advance]	00 00 00	
DF 2F	Counter 2 CVR Dependency Data (Contactless) [M/Chip Advance]	00 00 00	
DF 30	Interface Enabling Switch [M/Chip Advance]	01	
DF 35	Security Limits Status (Contactless) [M/Chip Advance]	00	
DF 37	Security Limits Status Common [M/Chip Advance]	00	
DF 3C	CVR Issuer Discretionary Data (Contact) [M/Chip Advance]	00	
DF 3D	CVR Issuer Discretionary Data (Contactless) [M/Chip Advance]	00	
DF 3F	Read Record Filter (Contact) [M/Chip Advance]	00	
DF 40	Read Record Filter (Contactless) [M/Chip Advance]	00	
DF 41	DS Management Control [M/Chip Advance]	20	

* Tag value changes with card usage

4.8   Test Card 08 - U.S. Maestro, CO, 1-AID (2-Funding), English, USA, USD

A contact-only, single AID Mastercard (U.S. Maestro) debit card with 2 funding accounts with an Issuer Country Code of 'USA' and Currency Code of 'USD'.

The recommended transaction amount to generate a host approval is $20.00.

4.8.1   Contact: CVM List - Mastercard U.S. Checking, AID A0000000042203D0561111

Cardholder Verification Method List ('0205 4203 1F03 0000')			
CVM	**Verification Method**	**Conditions**	**If unsuccessful**
1	Online PIN	Purchase with Cashback	Fail
2	Online PIN	Terminal supports CVM type	Next CVM
3	No CVM required	Terminal supports CVM type	Fail
4	Fail CVM Processing	Always	Fail

4.8.2   Contact: Application Tag data, AID A0000000042203D0561111

Tag	Element name	Data Card v5.x
42	Issuer Identification Number (IIN)	`54 13 33`
50	Application Label	`55 53 20 43 48 45 43 4B 49 4E 47 20 20 20 20 20` - 'US CHECKING'
57	Track 2 Equivalent Data	`54 13 33 00 89 09 90 07 D2 51 22 20 14 83 59 49 00 0F`
5A	Application Primary Account Number (PAN)	`54 13 33 00 89 09 90 07`
5F 20	Cardholder Name	`55 53 41 20 44 65 62 69 74 2F 54 65 73 74 20 43 61 72 64 20 30 38 20 20 20 20` - 'USA DEBIT/Test Card 08'
5F 24	Application Expiration Date	`25 12 31`
5F 25	Application Effective Date	`xx xx xx *`
5F 28	Issuer Country Code	`08 40` - USA
5F 2D	Language Preference	`65 6E` - 'en' (English)
5F 30	Service Code	`02 20`
5F 34	Application PAN Sequence Number	`31`
5F 55	Issuer Country Code (alpha2 format)	`55 53` - 'US'
82	Application Interchange Profile	`18 00` BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported via External Auth command b2 - On device Cardholder verification NOT supported b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - EMV mode NOT supported
84	Dedicated File (DF) Name	`A0 00 00 00 04 22 03 D0 56 11 11`
87	Application Priority Indicator	`01`
8C	Card Risk Management Data Object List 1 (CDOL1)	`9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04 9F 35 01 9F 45 02 9F 4C 08 9F 34 03 9F 21 03 9F 7C 14`
8D	Card Risk Management Data Object List 2 (CDOL2)	`91 0A 8A 02 95 05 9F 37 04 9F 4C 08`
8E	Cardholder Verification Method (CVM) List	`00 00 00 00 00 00 00 00 02 05 42 03 1F 03 00 00`
94	Application File Locator (AFL)	`08 01 01 00`

B2»

Tag	Element name	Data	Card v5.x
9F 07	Application Usage Control	`FF C0` BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions valid b6 - Domestic goods valid b5 - International goods valid b4 - Domestic services valid b3 - International services valid b2 - ATMs valid b1 - non-ATM terminals valid BYTE 2: b8 - Domestic cashback allowed b7 - International cashback allowed	
9F 08	Application Version Number	`00 02`	
9F 0D	Issuer Action Code - Default	`B0 50 9C 88 00`	
9F 0E	Issuer Action Code - Denial	`00 00 00 00 00`	
9F 0F	Issuer Action Code - Online	`B0 70 9C 98 00`	
9F 10	Issuer Application Data [M/Chip Advance]	`xx 10 xx xx xx xx xx xx xx xx xx xx` `xx xx xx xx xx xx *`	
9F 11	Issuer Code Table Index	`01`	
9F 12	Application Preferred Name	`55 53 20 43 68 65 63 6B 69 6E 67 20` `20 20 20 20` - 'US Checking'	
9F 14	Counter 1 Lower Limit [Mastercard]	`00`	
9F 17	Personal Identification Number (PIN) Try Counter	`03`	
9F 23	Counter 1 Upper Limit [Mastercard]	`00`	
9F 26	Application Cryptogram (AC)	`xx xx xx xx xx xx xx xx *`	
9F 27	Cryptogram Information Data (CID)	`80`	
9F 36	Application Transaction Counter (ATC)	`xx xx *`	
9F 42	Application Currency Code	`08 40` - USD	
9F 4D	Transaction Log Entry	`0B 0A`	

9F 4F	Transaction Log Format	`9F 27 01 9F 02 06 5F 2A 02 9A 03 9F`
		`36 02 9F 52 06 DF 3E 01 9F 21 03 9F`
		`7C 14`	

9F 7E	Application Life Cycle Data [Mastercard]	`04 10 0B 14 00 01 00 00 50 17 79 00`
		`A0 00 00 00 04 22 03 00 00 00 00 00`
		`00 00 00 00 00 80 00 88 01 06 A5 5A`
		`00 00 00 00 00 00 00 00 00 00 00 00`	

C3	Card Issuer Action Code (Contact) - Decline [M/Chip Advance]	`00 00 00`	
C4	Card Issuer Action Code (Contact) - Default [M/Chip Advance]	`06 00 00`	
C5	Card Issuer Action Code (Contact) - Online [M/Chip Advance]	`06 00 00`	
C6	PIN Try Limit [M/Chip Advance]	`03`	
C7	CDOL1 Related Data Length [Mastercard]	`42`	
C8	CRM Country Code [Mastercard]	`08 40` - USA	
C9	Accumulator 1 Currency Code [Mastercard]	`08 40` - USD	
CA	Accumulator 1 Lower Limit [Mastercard]	`00 00 00 00 00 00`	
CB	Accumulator 1 Upper Limit [Mastercard]	`00 00 00 00 00 00`	
CD	Card Issuer Action Code (Contactless) - Default [M/Chip Advance]	`00 00 00`	
CE	Card Issuer Action Code (Contactless) - Online [M/Chip Advance]	`00 00 00`	
CF	Card Issuer Action Code (Contactless) - Decline [M/Chip Advance]	`00 00 00`	

Tag	Element name	Data Card v5.x
D1	Accumulator 1 Currency Conversion Table [Mastercard]	08 40 00 00 00 08 40 00 00 00 08 40 00 00 00 08 40 00 00 00 08 40 00 00 00
D3	Additional Check Table [Mastercard]	00 00 00 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
D5	Application Control [M/Chip Advance]	80 00 80 00 C6 02
D6	Default ARPC Response Code [M/Chip Advance]	00 10
D7	Application Control [M/Chip Advance]	00 00 00 00 00 00
D9	Application File Locator (Contactless)	
DE	Log Data Table [M/Chip Advance]	00 00 00 00 00 00 00 00 00
DF 02	Security Limits Status (Contact) [M/Chip Advance]	00
DF 11	Accumulator 1 Control (Contact) [M/Chip Advance]	C1
DF 12	Accumulator 1 Control (Contactless) [M/Chip Advance]	00
DF 14	Accumulator 2 Control (Contact) [M/Chip Advance]	00
DF 15	Accumulator 2 Control (Contactless) [M/Chip Advance]	00
DF 16	Accumulator 2 Currency Code [Mastercard]	09 99
DF 17	Accumulator 2 Currency Conversion Table [Mastercard]	09 99 00 00 00 09 99 00 00 00 09 99 00 00 00 09 99 00 00 00 09 99 00 00 00
DF 18	Accumulator 2 Lower Limit [Mastercard]	00 00 00 00 00 00
DF 19	Accumulator 2 Upper Limit [Mastercard]	00 00 00 00 00 00
DF 1A	Counter 1 Control (Contact) [M/Chip Advance]	C1
DF 1B	Counter 1 Control (Contactless) [M/Chip Advance]	00
DF 1D	Counter 2 Control (Contact) [M/Chip Advance]	00
DF 1E	Counter 2 Control (Contactless) [M/Chip Advance]	00
DF 1F	Counter 2 Lower Limit [Mastercard]	00
DF 21	Counter 2 Upper Limit [Mastercard]	00
DF 22	MTA CVM (Contact) [M/Chip Advance]	00 00 00 00 00 00
DF 23	MTA CVM (Contactless) [M/Chip Advance]	00 00 00 00 00 00
DF 24	MTA Currency Code [M/Chip Advance]	08 40
DF 25	MTA NoCVM (Contact) [M/Chip Advance]	00 00 00 00 00 00
DF 26	MTA NoCVM (Contactless) [M/Chip Advance]	00 00 00 00 00 00
DF 27	Number Of Days Offline Limit [M/Chip Advance]	00 00
DF 28	Accumulator 1 CVR Dependency Data (Contact) [M/Chip Advance]	00 00 00
DF 29	Accumulator 1 CVR Dependency Data (Contactless) [M/Chip Advance]	00 00 00
DF 2A	Accumulator 2 CVR Dependency Data (Contact) [M/Chip Advance]	00 00 00
DF 2B	Accumulator 2 CVR Dependency Data (Contactless) [M/Chip Advance]	00 00 00
DF 2C	Counter 1 CVR Dependency Data (Contact) [M/Chip Advance]	00 00 00

Tag	Element name	Data	Card v5.x
DF 2D	Counter 1 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2E	Counter 2 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2F	Counter 2 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 30	Interface Enabling Switch [M/Chip Advance]	`01`	
DF 35	Security Limits Status (Contactless) [M/Chip Advance]	`00`	
DF 37	Security Limits Status Common [M/Chip Advance]	`00`	
DF 3C	CVR Issuer Discretionary Data (Contact) [M/Chip Advance]	`00`	
DF 3D	CVR Issuer Discretionary Data (Contactless) [M/Chip Advance]	`00`	
DF 3F	Read Record Filter (Contact) [M/Chip Advance]	`00`	
DF 40	Read Record Filter (Contactless) [M/Chip Advance]	`00`	
DF 41	DS Management Control [M/Chip Advance]	`20`	

* Tag value changes with card usage

4.8.3   Contact: CVM List - Mastercard U.S. Savings, AID A0000000042203D0562222

Cardholder Verification Method List (0205 4203 1F03 0000')			
CVM	**Verification Method**	**Conditions**	**If unsuccessful**
1	Online PIN	Purchase with Cashback	Fail
2	Online PIN	Terminal supports CVM type	Next CVM
3	No CVM required	Terminal supports CVM type	Fail
4	Fail CVM Processing	Always	Fail

4.8.4   Contact: Application Tag data, AID A0000000042203D0562222

Tag	Element name	Data	Card v5.x
42	Issuer Identification Number (IIN)	`54 13 33`	
50	Application Label	`55 53 20 53 41 56 49 4E 47 53 20 20 20 20 20 20` - 'US SAVINGS'	
57	Track 2 Equivalent Data	`54 13 33 00 89 09 90 15 D2 51 22 20 14 83 59 49 00 0F`	
5A	Application Primary Account Number (PAN)	`54 13 33 00 89 09 90 15`	
5F 20	Cardholder Name	`55 53 41 20 44 65 62 69 74 2F 54 65 73 74 20 43 61 72 64 20 30 38 20 20 20 20` - 'USA DEBIT/Test Card 08'	
5F 24	Application Expiration Date	`25 12 31`	
5F 25	Application Effective Date	`xx xx xx` *	
5F 28	Issuer Country Code	`08 40` - USA	
5F 2D	Language Preference	`65 6E` - 'en' (English)	
5F 30	Service Code	`02 20`	
5F 34	Application PAN Sequence Number	`32`	
5F 55	Issuer Country Code (alpha2 format)	`55 53` - 'US'	

Tag	Element name	Data	Card v5.x
82	Application Interchange Profile	18 00 BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported via External Auth command b2 - On device Cardholder verification NOT supported b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - EMV mode NOT supported	
84	Dedicated File (DF) Name	A0 00 00 00 04 22 03 D0 56 22 22	
87	Application Priority Indicator	02	
8C	Card Risk Management Data Object List 1 (CDOL1)	9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04 9F 35 01 9F 45 02 9F 4C 08 9F 34 03 9F 21 03 9F 7C 14	
8D	Card Risk Management Data Object List 2 (CDOL2)	91 0A 8A 02 95 05 9F 37 04 9F 4C 08	
8E	Cardholder Verification Method (CVM) List	00 00 00 00 00 00 00 00 02 05 42 03 1F 03 00 00	
94	Application File Locator (AFL)	08 01 01 00	
94	Application File Locator (AFL)	08 01 01 00	
9F 07	Application Usage Control	FF C0 BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions valid b6 - Domestic goods valid b5 - International goods valid b4 - Domestic services valid b3 - International services valid b2 - ATMs valid b1 - non-ATM terminals valid BYTE 2: b8 - Domestic cashback allowed b7 - International cashback allowed	
9F 08	Application Version Number	00 02	
9F 0D	Issuer Action Code - Default	B0 50 9C 88 00	
9F 0E	Issuer Action Code - Denial	00 00 00 00 00	
9F 0F	Issuer Action Code - Online	B0 70 9C 98 00	
9F 10	Issuer Application Data [M/Chip Advance]	xx 10 xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx *	
9F 11	Issuer Code Table Index	01	
9F 12	Application Preferred Name	55 53 20 53 61 76 69 6E 67 73 20 20 20 20 20 20 - 'US Savings'	
9F 14	Counter 1 Lower Limit [Mastercard]	00	
9F 17	Personal Identification Number (PIN) Try Counter	03	
9F 23	Counter 1 Upper Limit [Mastercard]	00	
9F 26	Application Cryptogram (AC)	xx xx xx xx xx xx xx xx *	
9F 27	Cryptogram Information Data (CID)	80	
9F 36	Application Transaction Counter (ATC)	xx xx *	
9F 42	Application Currency Code	08 40 - USD	
9F 4D	Transaction Log Entry	0B 0A	
9F 4F	Transaction Log Format	9F 27 01 9F 02 06 5F 2A 02 9A 03 9F 36 02 9F 52 06 DF 3E 01 9F 21 03 9F 7C 14	

Tag	Element name	Data	Card v5.x
9F 7E	Application Life Cycle Data [Mastercard]	04 10 0B 14 00 01 00 00 50 17 79 00 A0 00 00 00 04 22 03 00 00 00 00 00 00 00 00 00 00 80 00 88 01 06 A5 5A 00 00 00 00 00 00 00 00 00 00 00 00	
C3	Card Issuer Action Code (Contact) - Decline [M/Chip Advance]	00 00 00	
C4	Card Issuer Action Code (Contact) - Default [M/Chip Advance]	06 00 00	
C5	Card Issuer Action Code (Contact) - Online [M/Chip Advance]	06 00 00	
C6	PIN Try Limit [M/Chip Advance]	03	
C7	CDOL1 Related Data Length [Mastercard]	42	
C8	CRM Country Code [Mastercard]	08 40 - USA	
C9	Accumulator 1 Currency Code [Mastercard]	08 40 - USD	
CA	Accumulator 1 Lower Limit [Mastercard]	00 00 00 00 00 00	
CB	Accumulator 1 Upper Limit [Mastercard]	00 00 00 00 00 00	
CD	Card Issuer Action Code (Contactless) - Default [M/Chip Advance]	00 00 00	
CE	Card Issuer Action Code (Contactless) - Online [M/Chip Advance]	00 00 00	
CF	Card Issuer Action Code (Contactless) - Decline [M/Chip Advance]	00 00 00	
D1	Accumulator 1 Currency Conversion Table [Mastercard]	08 40 00 00 00 08 40 00 00 00 08 40 00 00 00 08 40 00 00 00 08 40 00 00 00	
D3	Additional Check Table [Mastercard]	00 00 00 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF	
D5	Application Control [M/Chip Advance]	80 00 80 00 C6 02	
D6	Default ARPC Response Code [M/Chip Advance]	00 10	
D7	Application Control [M/Chip Advance]	00 00 00 00 00 00	
D9	Application File Locator (Contactless)		
DE	Log Data Table [M/Chip Advance]	00 00 00 00 00 00 00 00 00	
DF 02	Security Limits Status (Contact) [M/Chip Advance]	00	
DF 11	Accumulator 1 Control (Contact) [M/Chip Advance]	C1	
DF 12	Accumulator 1 Control (Contactless) [M/Chip Advance]	00	
DF 14	Accumulator 2 Control (Contact) [M/Chip Advance]	00	
DF 15	Accumulator 2 Control (Contactless) [M/Chip Advance]	00	
DF 16	Accumulator 2 Currency Code [Mastercard]	09 99	
DF 17	Accumulator 2 Currency Conversion Table [Mastercard]	09 99 00 00 00 09 99 00 00 00 09 99 00 00 00 09 99 00 00 00 09 99 00 00 00	
DF 18	Accumulator 2 Lower Limit [Mastercard]	00 00 00 00 00 00	
DF 19	Accumulator 2 Upper Limit [Mastercard]	00 00 00 00 00 00	
DF 1A	Counter 1 Control (Contact) [M/Chip Advance]	C1	
DF 1B	Counter 1 Control (Contactless) [M/Chip Advance]	00	
DF 1D	Counter 2 Control (Contact) [M/Chip Advance]	00	

Tag	Element name	Data	Card v5.x
DF 1E	Counter 2 Control (Contactless) [M/Chip Advance]	`00`	
DF 1F	Counter 2 Lower Limit [Mastercard]	`00`	
DF 21	Counter 2 Upper Limit [Mastercard]	`00`	
DF 22	MTA CVM (Contact) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 23	MTA CVM (Contactless) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 24	MTA Currency Code [M/Chip Advance]	`08 40`	
DF 25	MTA NoCVM (Contact) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 26	MTA NoCVM (Contactless) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 27	Number Of Days Offline Limit [M/Chip Advance]	`00 00`	
DF 28	Accumulator 1 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 29	Accumulator 1 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2A	Accumulator 2 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2B	Accumulator 2 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2C	Counter 1 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2D	Counter 1 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2E	Counter 2 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2F	Counter 2 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 30	Interface Enabling Switch [M/Chip Advance]	`01`	
DF 35	Security Limits Status (Contactless) [M/Chip Advance]	`00`	
DF 37	Security Limits Status Common [M/Chip Advance]	`00`	
DF 3C	CVR Issuer Discretionary Data (Contact) [M/Chip Advance]	`00`	
DF 3D	CVR Issuer Discretionary Data (Contactless) [M/Chip Advance]	`00`	
DF 3F	Read Record Filter (Contact) [M/Chip Advance]	`00`	
DF 40	Read Record Filter (Contactless) [M/Chip Advance]	`00`	
DF 41	DS Management Control [M/Chip Advance]	`20`	

* Tag value changes with card usage

4.9 Test Card 09 - Mastercard, CO, 3-AID (Credit+Maestro x2), English, USA, USD

A contact-only, 3-AID combination Mastercard Credit, Maestro and U.S. Maestro with an Issuer Country Code of 'USA' and Currency Code of 'USD'.

The recommended transaction amount to generate a host approval is $20.00.

4.9.1 Contact: CVM List - Mastercard credit, AID A0000000041010

Cardholder Verification Method List ('4103 4203 5E03 1F00 0000')			
CVM	Verification Method	Conditions	If unsuccessful
1	Offline Plaintext PIN	Terminal supports CVM type	Next CVM
2	Online PIN	Terminal supports CVM type	Next CVM
3	Signature (paper)	Terminal supports CVM type	Next CVM
4	No CVM required	Terminal supports CVM type	Fail
5	Fail CVM Processing	Always	Fail

4.9.2 Contact: Application Tag data, AID A0000000041010

Tag	Element name	Data	Card v5.x
50	Application Label	4D 41 53 54 45 52 43 41 52 44 20 20 20 20 20 20 - 'MASTERCARD'	
57	Track 2 Equivalent Data	54 13 33 00 89 02 00 60 D2 51 22 01 14 83 59 49 00 0F	
5A	Application Primary Account Number (PAN)	54 13 33 00 89 02 00 60	
5F 20	Cardholder Name	55 53 41 20 44 65 62 69 74 2F 54 65 73 74 20 43 61 72 64 20 30 39 20 20 20 20 - 'USA DEBIT/Test Card 09'	
5F 24	Application Expiration Date	25 12 31	
5F 25	Application Effective Date	xx xx xx *	
5F 28	Issuer Country Code	08 40 - USA	
5F 2D	Language Preference	65 6E - 'en' (English)	
5F 30	Service Code	02 01	
5F 34	Application PAN Sequence Number	11	
82	Application Interchange Profile	18 00 BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported via External Auth command b2 - On device Cardholder verification NOT supported b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - EMV mode NOT supported	
84	Dedicated File (DF) Name	A0 00 00 00 04 10 10	
87	Application Priority Indicator	01	
8C	Card Risk Management Data Object List 1 (CDOL1)	9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04 9F 35 01 9F 45 02 9F 4C 08 9F 34 03 9F 21 03 9F 7C 14	
8D	Card Risk Management Data Object List 2 (CDOL2)	91 0A 8A 02 95 05 9F 37 04 9F 4C 08	
8E	Cardholder Verification Method (CVM) List	00 00 00 00 00 00 00 00 41 03 42 03 5E 03 1F 00 00 00	

Tag	Element name	Data	Card v5.x
94	Application File Locator (AFL)	`08 01 01 00`	
94	Application File Locator (AFL)	`08 01 01 00`	
9F 07	Application Usage Control	`FF 00` BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions valid b6 - Domestic goods valid b5 - International goods valid b4 - Domestic services valid b3 - International services valid b2 - ATMs valid b1 - non-ATM terminals valid BYTE 2: b8 - Domestic cashback NOT allowed b7 - International cashback NOT allowed	
9F 08	Application Version Number	`00 02`	
9F 0D	Issuer Action Code - Default	`B0 50 BC 88 00`	
9F 0E	Issuer Action Code - Denial	`00 00 00 00 00`	
9F 0F	Issuer Action Code - Online	`B0 70 BC 98 00`	
9F 10	Issuer Application Data [M/Chip Advance]	`xx 14 xx xx xx xx xx xx xx xx xx xx` `xx xx xx xx xx xx *`	
9F 11	Issuer Code Table Index	`01`	
9F 12	Application Preferred Name	`4D 61 73 74 65 72 63 61 72 64 20 20` `20 20 20 20` - 'Mastercard'	
9F 14	Counter 1 Lower Limit [Mastercard]	`00`	
9F 17	Personal Identification Number (PIN) Try Counter	`09`	
9F 23	Counter 1 Upper Limit [Mastercard]	`00`	
9F 26	Application Cryptogram (AC)	`xx xx xx xx xx xx xx xx *`	
9F 27	Cryptogram Information Data (CID)	`80`	
9F 36	Application Transaction Counter (ATC)	`xx xx *`	
9F 42	Application Currency Code	`08 40` - USD	
9F 4D	Transaction Log Entry	`0B 0A`	

9F 4F	Transaction Log Format	`9F 27 01 9F 02 06 5F 2A 02 9A 03 9F`
		`36 02 9F 52 06 DF 3E 01 9F 21 03 9F`
		`7C 14`	

9F 7E	Application Life Cycle Data [Mastercard]	`04 10 0B 14 00 01 00 00 50 17 79 00`
		`A0 00 00 00 04 10 10 00 00 00 00 00`
		`00 00 00 00 00 80 00 88 01 06 A5 5A`
		`00 00 00 00 00 00 00 00 00 00 00 00`	

C3	Card Issuer Action Code (Contact) - Decline [M/Chip Advance]	`00 00 00`	
C4	Card Issuer Action Code (Contact) - Default [M/Chip Advance]	`1F 50 00`	
C5	Card Issuer Action Code (Contact) - Online [M/Chip Advance]	`3F FB 00`	
C6	PIN Try Limit [M/Chip Advance]	`09`	
C7	CDOL1 Related Data Length [Mastercard]	`42`	
C8	CRM Country Code [Mastercard]	`08 40` - USA	
C9	Accumulator 1 Currency Code [Mastercard]	`08 40` - USD	
CA	Accumulator 1 Lower Limit [Mastercard]	`00 00 00 00 00 00`	
CB	Accumulator 1 Upper Limit [Mastercard]	`00 00 00 00 00 00`	
CD	Card Issuer Action Code (Contactless) - Default [M/Chip Advance]	`00 00 00`	
CE	Card Issuer Action Code (Contactless) - Online [M/Chip Advance]	`00 00 00`	

Tag	Element name	Data	Card v5.x
CF	Card Issuer Action Code (Contactless) - Decline [M/Chip Advance]	`00 00 00`	
D1	Accumulator 1 Currency Conversion Table [Mastercard]	`08 40 00 00 00 08 40 00 00 00 08 40 00 00 00 08 40 00 00 00 08 40 00 00 00`	
D3	Additional Check Table [Mastercard]	`00 00 00 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF`	
D5	Application Control [M/Chip Advance]	`86 00 80 00 C6 02`	
D6	Default ARPC Response Code [M/Chip Advance]	`00 10`	
D7	Application Control [M/Chip Advance]	`00 00 00 00 00 00`	
D9	Application File Locator (Contactless)		
DE	Log Data Table [M/Chip Advance]	`00 00 00 00 00 00 00 00 00`	
DF 02	Security Limits Status (Contact) [M/Chip Advance]	`00`	
DF 11	Accumulator 1 Control (Contact) [M/Chip Advance]	`C1`	
DF 12	Accumulator 1 Control (Contactless) [M/Chip Advance]	`00`	
DF 14	Accumulator 2 Control (Contact) [M/Chip Advance]	`00`	
DF 15	Accumulator 2 Control (Contactless) [M/Chip Advance]	`00`	
DF 16	Accumulator 2 Currency Code [Mastercard]	`09 99`	
DF 17	Accumulator 2 Currency Conversion Table [Mastercard]	`09 99 00 00 00 09 99 00 00 00 09 99 00 00 00 09 99 00 00 00 09 99 00 00 00`	
DF 18	Accumulator 2 Lower Limit [Mastercard]	`00 00 00 00 00 00`	
DF 19	Accumulator 2 Upper Limit [Mastercard]	`00 00 00 00 00 00`	
DF 1A	Counter 1 Control (Contact) [M/Chip Advance]	`C1`	
DF 1B	Counter 1 Control (Contactless) [M/Chip Advance]	`00`	
DF 1D	Counter 2 Control (Contact) [M/Chip Advance]	`00`	
DF 1E	Counter 2 Control (Contactless) [M/Chip Advance]	`00`	
DF 1F	Counter 2 Lower Limit [Mastercard]	`00`	
DF 21	Counter 2 Upper Limit [Mastercard]	`00`	
DF 22	MTA CVM (Contact) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 23	MTA CVM (Contactless) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 24	MTA Currency Code [M/Chip Advance]	`08 40`	
DF 25	MTA NoCVM (Contact) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 26	MTA NoCVM (Contactless) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 27	Number Of Days Offline Limit [M/Chip Advance]	`00 00`	
DF 28	Accumulator 1 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 29	Accumulator 1 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2A	Accumulator 2 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2B	Accumulator 2 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	

Tag	Element name	Data	Card v5.x
DF 2C	Counter 1 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2D	Counter 1 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2E	Counter 2 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2F	Counter 2 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 30	Interface Enabling Switch [M/Chip Advance]	`01`	
DF 35	Security Limits Status (Contactless) [M/Chip Advance]	`00`	
DF 37	Security Limits Status Common [M/Chip Advance]	`00`	
DF 3C	CVR Issuer Discretionary Data (Contact) [M/Chip Advance]	`00`	
DF 3D	CVR Issuer Discretionary Data (Contactless) [M/Chip Advance]	`00`	
DF 3F	Read Record Filter (Contact) [M/Chip Advance]	`00`	
DF 40	Read Record Filter (Contactless) [M/Chip Advance]	`00`	
DF 41	DS Management Control [M/Chip Advance]	`20`	

* Tag value changes with card usage

4.9.3 Contact: CVM List - Maestro debit, AID A0000000043060

Cardholder Verification Method List ('4103 0203 0000')			
CVM	Verification Method	Conditions	If unsuccessful
1	Offline Plaintext PIN	Terminal supports CVM type	Next CVM
2	Online PIN	Terminal supports CVM type	Fail
3	Fail CVM Processing	Always	Fail

4.9.4 Contact: Application Tag data, AID A0000000043060

Tag	Element name	Data	Card v5.x
42	Issuer Identification Number (IIN)	`67 99 99`	
50	Application Label	`4D 41 45 53 54 52 4F 20 20 20 20 20 20 20 20 20` - 'MAESTRO'	
57	Track 2 Equivalent Data	`67 99 99 89 00 00 02 00 05 1D 25 12 22 01 48 35 94 90 0F`	
5A	Application Primary Account Number (PAN)	`67 99 99 89 00 00 02 00 05 1F`	
5F 20	Cardholder Name	`55 53 41 20 44 65 62 69 74 2F 54 65 73 74 20 43 61 72 64 20 30 39 20 20 20 20` - 'USA DEBIT/Test Card 09'	
5F 24	Application Expiration Date	`25 12 31`	
5F 25	Application Effective Date	`xx xx xx` *	
5F 28	Issuer Country Code	`08 40` - USA	
5F 2D	Language Preference	`65 6E` - 'en' (English)	
5F 30	Service Code	`02 20`	
5F 34	Application PAN Sequence Number	`12`	
5F 55	Issuer Country Code (alpha2 format)	`55 53` - 'US'	

Tag	Element name	Data	Card v5.x
82	Application Interchange Profile	18 00 BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported via External Auth command b2 - On device Cardholder verification NOT supported b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - EMV mode NOT supported	
84	Dedicated File (DF) Name	A0 00 00 00 04 30 60	
87	Application Priority Indicator	02	
8C	Card Risk Management Data Object List 1 (CDOL1)	9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04 9F 35 01 9F 45 02 9F 4C 08 9F 34 03 9F 21 03 9F 7C 14	
8D	Card Risk Management Data Object List 2 (CDOL2)	91 0A 8A 02 95 05 9F 37 04 9F 4C 08	
8E	Cardholder Verification Method (CVM) List	00 00 00 00 00 00 00 00 41 03 02 03 00 00 00 00 00 00	
94	Application File Locator (AFL)	08 01 02 00	
94	Application File Locator (AFL)	08 01 02 00	
9F 07	Application Usage Control	FF C0 BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions valid b6 - Domestic goods valid b5 - International goods valid b4 - Domestic services valid b3 - International services valid b2 - ATMs valid b1 - non-ATM terminals valid BYTE 2: b8 - Domestic cashback allowed b7 - International cashback allowed	
9F 08	Application Version Number	00 02	
9F 0D	Issuer Action Code - Default	B0 50 BC 88 00	
9F 0E	Issuer Action Code - Denial	00 00 00 00 00	
9F 0F	Issuer Action Code - Online	B0 70 BC 98 00	
9F 10	Issuer Application Data [M/Chip Advance]	xx 10 xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx *	
9F 11	Issuer Code Table Index	01	
9F 12	Application Preferred Name	4D 61 65 73 74 72 6F 20 20 20 20 20 20 20 20 - 'Maestro'	
9F 14	Counter 1 Lower Limit [Mastercard]	00	
9F 17	Personal Identification Number (PIN) Try Counter	03	
9F 23	Counter 1 Upper Limit [Mastercard]	00	
9F 26	Application Cryptogram (AC)	xx xx xx xx xx xx xx xx *	
9F 27	Cryptogram Information Data (CID)	80	
9F 36	Application Transaction Counter (ATC)	xx xx *	
9F 42	Application Currency Code	08 40 - USD	
9F 4D	Transaction Log Entry	0B 0A	
9F 4F	Transaction Log Format	9F 27 01 9F 02 06 5F 2A 02 9A 03 9F 36 02 9F 52 06 DF 3E 01 9F 21 03 9F 7C 14	

Tag	Element name	Data	Card v5.x
9F 7E	Application Life Cycle Data [Mastercard]	04 10 0B 14 00 01 00 00 50 17 79 00 A0 00 00 00 04 30 60 00 00 00 00 00 00 00 00 00 00 00 80 00 88 01 06 A5 5A 00 00 00 00 00 00 00 00 00 00 00 00	
C3	Card Issuer Action Code (Contact) - Decline [M/Chip Advance]	00 00 00	
C4	Card Issuer Action Code (Contact) - Default [M/Chip Advance]	1F 50 00	
C5	Card Issuer Action Code (Contact) - Online [M/Chip Advance]	3F FB 00	
C6	PIN Try Limit [M/Chip Advance]	03	
C7	CDOL1 Related Data Length [Mastercard]	42	
C8	CRM Country Code [Mastercard]	08 40 - USA	
C9	Accumulator 1 Currency Code [Mastercard]	08 40 - USD	
CA	Accumulator 1 Lower Limit [Mastercard]	00 00 00 00 00 00	
CB	Accumulator 1 Upper Limit [Mastercard]	00 00 00 00 00 00	
CD	Card Issuer Action Code (Contactless) - Default [M/Chip Advance]	06 50 00	
CE	Card Issuer Action Code (Contactless) - Online [M/Chip Advance]	06 FB 00	
CF	Card Issuer Action Code (Contactless) - Decline [M/Chip Advance]	00 00 00	
D1	Accumulator 1 Currency Conversion Table [Mastercard]	08 40 00 00 00 08 40 00 00 00 08 40 00 00 00 08 40 00 00 00 08 40 00 00 00	
D3	Additional Check Table [Mastercard]	00 00 00 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF	
D5	Application Control [M/Chip Advance]	84 00 80 00 C6 02	
D6	Default ARPC Response Code [M/Chip Advance]	00 10	
D7	Application Control [M/Chip Advance]	80 00 80 00 C6 02	
D9	Application File Locator (Contactless)	08 01 01 00 08 03 03 00	
DE	Log Data Table [M/Chip Advance]	00 00 00 00 00 00 00 00 00	
DF 02	Security Limits Status (Contact) [M/Chip Advance]	00	
DF 11	Accumulator 1 Control (Contact) [M/Chip Advance]	C1	
DF 12	Accumulator 1 Control (Contactless) [M/Chip Advance]	C1	
DF 14	Accumulator 2 Control (Contact) [M/Chip Advance]	00	
DF 15	Accumulator 2 Control (Contactless) [M/Chip Advance]	00	
DF 16	Accumulator 2 Currency Code [Mastercard]	09 99	
DF 17	Accumulator 2 Currency Conversion Table [Mastercard]	09 99 00 00 00 09 99 00 00 00 09 99 00 00 00 09 99 00 00 00 09 99 00 00 00	
DF 18	Accumulator 2 Lower Limit [Mastercard]	00 00 00 00 00 00	
DF 19	Accumulator 2 Upper Limit [Mastercard]	00 00 00 00 00 00	
DF 1A	Counter 1 Control (Contact) [M/Chip Advance]	C1	
DF 1B	Counter 1 Control (Contactless) [M/Chip Advance]	C1	
DF 1D	Counter 2 Control (Contact) [M/Chip Advance]	00	

Tag	Element name	Data	Card v5.x
DF 1E	Counter 2 Control (Contactless) [M/Chip Advance]	`00`	
DF 1F	Counter 2 Lower Limit [Mastercard]	`00`	
DF 21	Counter 2 Upper Limit [Mastercard]	`00`	
DF 22	MTA CVM (Contact) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 23	MTA CVM (Contactless) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 24	MTA Currency Code [M/Chip Advance]	`08 40`	
DF 25	MTA NoCVM (Contact) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 26	MTA NoCVM (Contactless) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 27	Number Of Days Offline Limit [M/Chip Advance]	`00 00`	
DF 28	Accumulator 1 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 29	Accumulator 1 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2A	Accumulator 2 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2B	Accumulator 2 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2C	Counter 1 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2D	Counter 1 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2E	Counter 2 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2F	Counter 2 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 30	Interface Enabling Switch [M/Chip Advance]	`01`	
DF 35	Security Limits Status (Contactless) [M/Chip Advance]	`00`	
DF 37	Security Limits Status Common [M/Chip Advance]	`00`	
DF 3C	CVR Issuer Discretionary Data (Contact) [M/Chip Advance]	`00`	
DF 3D	CVR Issuer Discretionary Data (Contactless) [M/Chip Advance]	`00`	
DF 3F	Read Record Filter (Contact) [M/Chip Advance]	`00`	
DF 40	Read Record Filter (Contactless) [M/Chip Advance]	`00`	
DF 41	DS Management Control [M/Chip Advance]	`20`	

* Tag value changes with card usage

4.9.5   Contact: CVM List - U.S. Maestro, AID A0000000042203

Cardholder Verification Method List ('0205 4203 1F03')			
CVM	**Verification Method**	**Conditions**	**If unsuccessful**
1	Online PIN	Purchase with Cashback	Fail
2	Online PIN	Terminal supports CVM type	Next CVM
3	No CVM required	Terminal supports CVM type	Fail

4.9.6 Contact: Application Tag data, AID A0000000042203

Tag	Element name	Data	Card v5.x
42	Issuer Identification Number (IIN)	67 99 99	
50	Application Label	55 53 20 4D 41 45 53 54 52 4F 20 20 20 20 20 20 - 'US MAESTRO'	
57	Track 2 Equivalent Data	67 99 99 89 00 00 02 00 05 1D 25 12 22 01 48 35 94 90 0F	
5A	Application Primary Account Number (PAN)	67 99 99 89 00 00 02 00 05 1F	
5F 20	Cardholder Name	55 53 41 20 44 65 62 69 74 2F 54 65 73 74 20 43 61 72 64 20 30 39 20 20 20 20 - 'USA DEBIT/Test Card 09'	
5F 24	Application Expiration Date	25 12 31	
5F 25	Application Effective Date	xx xx xx *	
5F 28	Issuer Country Code	08 40 - USA	
5F 2D	Language Preference	65 6E - 'en' (English)	
5F 30	Service Code	02 20	
5F 34	Application PAN Sequence Number	12	
5F 55	Issuer Country Code (alpha2 format)	55 53 - 'US'	
82	Application Interchange Profile	18 00 BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported via External Auth command b2 - On device Cardholder verification NOT supported b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - EMV mode NOT supported	
84	Dedicated File (DF) Name	A0 00 00 00 04 22 03	
87	Application Priority Indicator	03	
8C	Card Risk Management Data Object List 1 (CDOL1)	9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04 9F 35 01 9F 45 02 9F 4C 08 9F 34 03 9F 21 03 9F 7C 14	
8D	Card Risk Management Data Object List 2 (CDOL2)	91 0A 8A 02 95 05 9F 37 04 9F 4C 08	
8E	Cardholder Verification Method (CVM) List	00 00 00 00 00 00 00 00 02 05 42 03 1F 03 00 00 00 00	
94	Application File Locator (AFL)	08 01 01 00 08 03 03 00	
94	Application File Locator (AFL)	08 01 01 00 08 03 03 00	
9F 07	Application Usage Control	FF C0 BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions valid b6 - Domestic goods valid b5 - International goods valid b4 - Domestic services valid b3 - International services valid b2 - ATMs valid b1 - non-ATM terminals valid BYTE 2: b8 - Domestic cashback allowed b7 - International cashback allowed	
9F 08	Application Version Number	00 02	
9F 0D	Issuer Action Code - Default	B0 50 9C 88 00	
9F 0E	Issuer Action Code - Denial	00 00 00 00 00	
9F 0F	Issuer Action Code - Online	B0 70 9C 98 00	

Tag	Element name	Data	Card v5.x
9F 10	Issuer Application Data [M/Chip Advance]	`xx 10 xx xx xx xx xx xx xx xx xx xx` `xx xx xx xx xx xx *`	
9F 11	Issuer Code Table Index	`01`	
9F 12	Application Preferred Name	`55 53 20 4D 61 65 73 74 72 6F 20 20` `20 20 20 20` - 'US Maestro'	
9F 14	Counter 1 Lower Limit [Mastercard]	`00`	
9F 17	Personal Identification Number (PIN) Try Counter	`03`	
9F 23	Counter 1 Upper Limit [Mastercard]	`00`	
9F 26	Application Cryptogram (AC)	`xx xx xx xx xx xx xx xx *`	
9F 27	Cryptogram Information Data (CID)	`80`	
9F 36	Application Transaction Counter (ATC)	`xx xx *`	
9F 42	Application Currency Code	`08 40` - USD	
9F 4D	Transaction Log Entry	`0B 0A`	

9F 4F	Transaction Log Format	`9F 27 01 9F 02 06 5F 2A 02 9A 03 9F`
		`36 02 9F 52 06 DF 3E 01 9F 21 03 9F`
		`7C 14`	

9F 7E	Application Life Cycle Data [Mastercard]	`04 10 0B 14 00 01 00 00 50 17 79 00`
		`A0 00 00 00 04 30 60 00 00 00 00 00`
		`00 00 00 00 00 80 00 88 01 06 A5 5A`
		`00 00 00 00 00 00 00 00 00 00 00 00`	

C3	Card Issuer Action Code (Contact) - Decline [M/Chip Advance]	`00 00 00`	
C4	Card Issuer Action Code (Contact) - Default [M/Chip Advance]	`06 50 00`	
C5	Card Issuer Action Code (Contact) - Online [M/Chip Advance]	`06 FB 00`	
C6	PIN Try Limit [M/Chip Advance]	`03`	
C7	CDOL1 Related Data Length [Mastercard]	`42`	
C8	CRM Country Code [Mastercard]	`08 40` - USA	
C9	Accumulator 1 Currency Code [Mastercard]	`08 40` - USD	
CA	Accumulator 1 Lower Limit [Mastercard]	`00 00 00 00 00 00`	
CB	Accumulator 1 Upper Limit [Mastercard]	`00 00 00 00 00 00`	
CD	Card Issuer Action Code (Contactless) - Default [M/Chip Advance]	`06 50 00`	
CE	Card Issuer Action Code (Contactless) - Online [M/Chip Advance]	`06 FB 00`	
CF	Card Issuer Action Code (Contactless) - Decline [M/Chip Advance]	`00 00 00`	

D1	Accumulator 1 Currency Conversion Table [Mastercard]	`08 40 00 00 00 08 40 00 00 00 08 40`
		`00 00 00 08 40 00 00 00 08 40 00 00`
		`00`	

D3	Additional Check Table [Mastercard]	`00 00 00 FF FF FF FF FF FF FF FF FF` `FF FF FF FF FF FF`	
D5	Application Control [M/Chip Advance]	`80 00 80 00 C6 02`	
D6	Default ARPC Response Code [M/Chip Advance]	`00 10`	
D7	Application Control [M/Chip Advance]	`80 00 80 00 C6 02`	
D9	Application File Locator (Contactless)	`08 01 01 00 08 03 03 00`	
DE	Log Data Table [M/Chip Advance]	`00 00 00 00 00 00 00 00 00`	
DF 02	Security Limits Status (Contact) [M/Chip Advance]	`00`	
DF 11	Accumulator 1 Control (Contact) [M/Chip Advance]	`C1`	
DF 12	Accumulator 1 Control (Contactless) [M/Chip Advance]	`C1`	

Tag	Element name	Data	Card v5.x
DF 14	Accumulator 2 Control (Contact) [M/Chip Advance]	`00`	
DF 15	Accumulator 2 Control (Contactless) [M/Chip Advance]	`00`	
DF 16	Accumulator 2 Currency Code [Mastercard]	`09 99`	
DF 17	Accumulator 2 Currency Conversion Table [Mastercard]	`09 99 00 00 00 09 99 00 00 00 09 99 00 00 00 09 99 00 00 00 09 99 00 00 00`	
DF 18	Accumulator 2 Lower Limit [Mastercard]	`00 00 00 00 00 00`	
DF 19	Accumulator 2 Upper Limit [Mastercard]	`00 00 00 00 00 00`	
DF 1A	Counter 1 Control (Contact) [M/Chip Advance]	`C1`	
DF 1B	Counter 1 Control (Contactless) [M/Chip Advance]	`C1`	
DF 1D	Counter 2 Control (Contact) [M/Chip Advance]	`00`	
DF 1E	Counter 2 Control (Contactless) [M/Chip Advance]	`00`	
DF 1F	Counter 2 Lower Limit [Mastercard]	`00`	
DF 21	Counter 2 Upper Limit [Mastercard]	`00`	
DF 22	MTA CVM (Contact) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 23	MTA CVM (Contactless) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 24	MTA Currency Code [M/Chip Advance]	`08 40`	
DF 25	MTA NoCVM (Contact) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 26	MTA NoCVM (Contactless) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 27	Number Of Days Offline Limit [M/Chip Advance]	`00 00`	
DF 28	Accumulator 1 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 29	Accumulator 1 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2A	Accumulator 2 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2B	Accumulator 2 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2C	Counter 1 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2D	Counter 1 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2E	Counter 2 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2F	Counter 2 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 30	Interface Enabling Switch [M/Chip Advance]	`01`	
DF 35	Security Limits Status (Contactless) [M/Chip Advance]	`00`	
DF 37	Security Limits Status Common [M/Chip Advance]	`00`	
DF 3C	CVR Issuer Discretionary Data (Contact) [M/Chip Advance]	`00`	
DF 3D	CVR Issuer Discretionary Data (Contactless) [M/Chip Advance]	`00`	

Tag	Element name	Data	Card v5.x
DF 3F	Read Record Filter (Contact) [M/Chip Advance]	`00`	
DF 40	Read Record Filter (Contactless) [M/Chip Advance]	`00`	
DF 41	DS Management Control [M/Chip Advance]	`20`	

<p align="right">* Tag value changes with card usage</p>

4.10 Test Card 10 - Mastercard, DI, 1-AID (US Maestro), English, USA, USD

A Dual Interface (Contact+Contactless), single-AID Mastercard U.S. Maestro debit card with an Issuer Country Code of 'USA' and Currency Code of 'USD'.

The recommended transaction amount to generate a host approval is $20.00.

4.10.1   Contact: CVM List - U.S. Maestro, AID A0000000042203

Cardholder Verification Method List ('0205 4203 1F03')			
CVM	**Verification Method**	**Conditions**	**If unsuccessful**
1	Online PIN	Purchase with Cashback	Fail
2	Online PIN	Terminal supports CVM type	Next CVM
3	No CVM required	Terminal supports CVM type	Fail

4.10.2   Contact: Application Tag data, AID A0000000042203

Tag	Element name	Data	Card v7.x
42	Issuer Identification Number (IIN)	`54 13 33`	
50	Application Label	`55 53 20 4D 41 45 53 54 52 4F` - 'US MAESTRO'	
57	Track 2 Equivalent Data	`54 13 33 00 89 09 91 30 D2 51 22 20 08 08 10 79 00 00 0F`	
5A	Application Primary Account Number (PAN)	`54 13 33 00 89 09 91 30`	
5F 20	Cardholder Name	`55 53 41 20 44 45 42 49 54 2F 54 65 73 74 20 43 61 72 64 20 31 30 20 20 20 20` - 'USA DEBIT/Test Card 10'	
5F 24	Application Expiration Date	`25 12 31`	
5F 25	Application Effective Date	`xx xx xx *`	
5F 28	Issuer Country Code	`08 40` - USA	
5F 2D	Language Preference	`65 6E` - 'en' (English)	
5F 30	Service Code	`02 20`	
5F 34	Application PAN Sequence Number	`13`	
5F 55	Issuer Country Code (alpha2 format)	`55 53` - 'US'	

B2»

Tag	Element name	Data	Card v7.x
82	Application Interchange Profile [M/Chip, PayPass]	`18 00` BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported via External Auth command b2 - On device Cardholder verification NOT supported b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - EMV mode NOT supported	
84	Dedicated File (DF) Name	`A0 00 00 00 04 22 03`	
87	Application Priority Indicator	`01`	
8C	Card Risk Management Data Object List 1 (CDOL1)	`9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04 9F 35 01 9F 45 02 9F 4C 08 9F 34 03`	
8D	Card Risk Management Data Object List 2 (CDOL2)	`91 0A 8A 02 95 05 9F 37 04 9F 4C 08`	
8E	Cardholder Verification Method (CVM) List	`00 00 00 00 00 00 00 00 02 05 42 03 1F 03`	
8F	Certification Authority Public Key Index	`FA`	

90	Issuer Public Key Certificate	`18 89 B9 97 E6 FC E8 4B 4A E7 AB 87`
		`43 1C BD B3 DF 8C 1D 5A 55 A7 F6 0D`
		`29 59 AF 3A 51 04 E7 58 83 17 ED 74`
		`08 66 68 CF 1A 05 47 84 F7 49 3C 6D`
		`74 7F A7 96 EC 14 D3 33 A6 8E C7 E0`
		`08 62 95 9A 0B D0 F0 48 20 80 B7 1A`
		`C1 B7 62 5B 1B 8B 1F 35 A6 69 19 99`
		`BA 78 F5 92 E2 3F 95 E9 96 09 D1 08`
		`CF 1C 0E 30 8A 8B F6 4F BD E8 37 D3`
		`CE 13 8A 50 DC 50 AF 4B 41 EE 53 D9`
		`8A 11 B6 A8 1D DD 44 CC 43 0C 1E F3`
		`BB 9D 1D 75 A0 2F AA 9C 81 4A FC 58`	

92	Issuer Public Key Remainder	`D3 52 41 07`	
94	Application File Locator (AFL)	`08 02 04 01 18 01 01 00 20 01 01 00`	
9F 07	Application Usage Control	`FF C0` BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions valid b6 - Domestic goods valid b5 - International goods valid b4 - Domestic services valid b3 - International services valid b2 - ATMs valid b1 - non-ATM terminals valid BYTE 2: b8 - Domestic cashback allowed b7 - International cashback allowed	
9F 08	Application Version Number	`00 02`	
9F 0D	Issuer Action Code - Default	`B0 50 9C 88 00`	
9F 0E	Issuer Action Code - Denial	`00 00 00 00 00`	
9F 0F	Issuer Action Code - Online	`B0 70 9C 98 00`	
9F 10	Issuer Application Data [M/Chip 4]	`xx 14 xx xx xx xx xx xx xx xx xx` `xx xx xx xx xx xx *`	
9F 11	Issuer Code Table Index	`01`	
9F 12	Application Preferred Name	`55 53 20 4D 61 65 73 74 72 6F` - 'US Maestro'	
9F 14	Lower Consecutive Offline Limit	`00`	
9F 17	Personal Identification Number (PIN) Try Counter	`01`	

Tag	Element name	Data	Card v7.x
9F 1F	Track 1 Discretionary Data	30 36 32 39 33 30 34 32 33 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30	
9F 23	Upper Consecutive Offline Limit	00	
9F 26	Application Cryptogram (AC)	xx xx xx xx xx xx xx xx *	
9F 27	Cryptogram Information Data (CID)	80	
9F 32	Issuer Public Key Exponent	03	
9F 36	Application Transaction Counter (ATC)	xx xx *	
9F 42	Application Currency Code	08 40 - USD	
9F 44	Application Currency Exponent	02	
9F 46	ICC Public Key Certificate	4C BF 13 28 20 81 6C 78 CE AF C1 CB 16 A9 C7 FC B7 22 5E 07 27 F2 71 A9 12 89 4C EE B7 B4 DD 99 54 F1 C8 71 BE 2C 88 37 9A D5 6C 07 3F 2F 3F 05 67 6D 68 26 0A B4 36 30 BD 28 7E 26 1B 42 20 1C 14 F6 FA FE 20 0F 1C 11 3E C6 04 5A 36 CE B8 DF 56 70 C0 6F 06 51 5F D6 88 F2 AF D2 5F B5 D1 38 C3 C3 1F 5E 04 59 92 B9 F4 00 91 CC 03 6C F1 A4	
9F 47	ICC Public Key Exponent	03	
9F 48	ICC Public Key Remainder	F3 25 B3 BD AC FB F2 AD 0D 2C A1 DE FF 97 C7 E4 A6 3C E0 4C 97 FE 9B 6B A9 86 C7 1C 35 71 2E 0E 6C 1D 89 4F 5F 9F D6 99 82 C7	
9F 49	Dynamic Data Authentication Data Object List (DDOL)	9F 37 04	
9F 4A	Static Data Authentication Tag List	82	
9F 4D	Transaction Log Entry	0B 0A	
9F 4F	Transaction Log Format	9F 27 01 9F 02 06 5F 2A 02 9A 03 9F 36 02 9F 52 06	
9F 7E	Application Life Cycle Data [Mastercard]	03 10 0C 12 00 09 00 00 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF 00 04 00 00 02 60 00 00 38 4A 02 11 50 35 43 44 30 37 32 20	
C3	Card Issuer Action Code - Decline [Mastercard]	00 00 00	
C4	Card Issuer Action Code - Default [Mastercard]	06 50 00	
C5	Card Issuer Action Code - Online [Mastercard]	06 FB 00	
C6	Counters [Mastercard]	00 01 00 00 00 00 00 00 00 00	
C7	CDOL1 Related Data Length [Mastercard]	2B	
C8	CRM Country Code [Mastercard]	08 40 - USA	
C9	CRM Currency Code [M/Chip4]	08 40 - USD	
CA	Lower Cumulative Offline Transaction Amount [M/Chip]	00 00 00 00 00 00	
CB	Upper Cumulative Offline Transaction Amount [M/Chip]	00 00 00 00 00 00	
D1	Currency Conversion Table [M/Chip]	08 40 00 01 00 08 40 00 01 00 08 40 00 01 00 08 40 00 01 00 08 40 00 01 00	
D3	Additional Check Table [Mastercard]	00 00 00 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF	
D5	Application Control [M/Chip]	82 00	
D6	Default ARPC Response Code [M/Chip4]	00 10	
DF 02	Security Limits Status [Mastercard]	00	

* Tag value changes with card usage

4.10.3 CTLS: CVM List - U.S. Maestro, AID A0000000042203 (PayPass)

Cardholder Verification Method List ('0205 4203 1F03')			
CVM	**Verification Method**	**Conditions**	**If unsuccessful**
1	Online PIN	Purchase with Cashback	Fail
2	Online PIN	Terminal supports CVM type	Next CVM
3	No CVM required	Terminal supports CVM type	Fail

4.10.4 Contactless: Application Tag data, AID A0000000042203

Tag	Element name	Data Card v7.x
42	Issuer Identification Number (IIN)	`54 13 33`
50	Application Label	`55 53 20 4D 41 45 53 54 52 4F` - 'US MAESTRO'
57	Track 2 Equivalent Data	`54 13 33 00 89 09 91 30 D2 51 22 20 08 08 10 79 00 00 0F`
5A	Application Primary Account Number (PAN)	`54 13 33 00 89 09 91 30`
5F 24	Application Expiration Date	`25 12 31`
5F 25	Application Effective Date	`xx xx xx *`
5F 28	Issuer Country Code	`08 40` - USA
5F 2D	Language Preference	`65 6E` - 'en' (English)
5F 34	Application PAN Sequence Number	`13`
5F 55	Issuer Country Code (alpha2 format)	`55 53` - 'US'
82	Application Interchange Profile	`19 80` BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported via EXTERNAL AUTH command b2 - On device Cardholder verification NOT supported b1 - Combined DDA / GEN AC supported BYTE 2: b8 - EMV Contactless supported
84	Dedicated File (DF) Name	`A0 00 00 00 04 22 03`
87	Application Priority Indicator	`01`
8C	Card Risk Management Data Object List 1 (CDOL1)	`9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04 9F 35 01 9F 45 02 9F 4C 08 9F 34 03 9F 21 03 9F 7C 14`
8D	Card Risk Management Data Object List 2 (CDOL2)	`91 0A 8A 02 95 05 9F 37 04 9F 4C 08`
8E	Cardholder Verification Method (CVM) List	`00 00 00 00 00 00 00 00 02 05 42 03 1F 03`
8F	Certification Authority Public Key Index	`EF`

Tag	Element name	Data Card v7.x
90	Issuer Public Key Certificate	5B 2E 1F EF 4D 7D 2C 16 16 12 21 F7 97 2F E6 99 B7 82 44 E0 73 C8 AC 75 86 CE D1 76 EF 7B 93 AC 19 0B 05 70 40 E1 18 4F 2F 55 AC 70 D2 AA C3 94 BE 22 6A 26 50 D3 CA ED 90 60 88 C5 3A 88 B8 3C 46 1F 37 6D 89 10 B8 51 81 54 F3 08 EE ED 23 BC 15 7C FA BA 6E 51 26 9F 01 6D 59 FE 21 A6 F9 10 F2 85 13 0D EA F6 A4 78 BE 77 9D 2B AD 08 E1 2E D6 A5 93 71 5A 18 72 15 C5 63 28 1C B2 B7 2E 5B 14 05 5D 2D D8 30 4A C2 20 2E 53 96 D0 4C 5C 79 55 0B 4D E9 FA DA CB 35 F3 19 06 C5 A4 42 27 29 D6 A5 A8 F5 E1 4C B9 0D B7 05 49 4B 3D B1 0D E6 19 F3 B0 3E 64 96 FE 79 F4 6E 64 97 2A 46 34 A0 35 EF 7E 50 20 49 40 36 03 E0 BC FC 33 C3 87 BB 6D 72 CF F8 33 89 7E 81 F5 02 3F F4 D6 A9 CC 0C 89 E8 78 3F 07 B7 F0 55 3E 9D D3 59 B6 5B 62 3A F1 CE 27 8D 65 3C 37 07
92	Issuer Public Key Remainder	14 3E 90 B8 B5 E6 2B E5 A9 0D 5A 4E F1 5C 77 40 4D 29 94 48 98 77 85 D7 E8 80 C2 CD
94	Application File Locator (AFL)	10 01 01 01 18 01 01 00 20 01 02 00
94	Application File Locator (AFL)	08 02 04 01 18 01 01 00 20 01 01 00
9F 07	Application Usage Control	FF C0 BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions valid b6 - Domestic goods valid b5 - International goods valid b4 - Domestic services valid b3 - International services valid b2 - ATMs valid b1 - non-ATM terminals valid BYTE 2: b8 - Domestic cashback allowed b7 - International cashback allowed
9F 08	Application Version Number	00 02
9F 0D	Issuer Action Code - Default	B4 50 84 00 00
9F 0E	Issuer Action Code - Denial	00 00 00 00 00
9F 0F	Issuer Action Code - Online	B4 70 84 80 00
9F 10	Issuer Application Data [M/Chip Advance]	01 14 A0 40 03 24 00 00 01 02 00 00 00 00 00 00 00 FF
9F 11	Issuer Code Table Index	01
9F 12	Application Preferred Name	55 53 20 4D 61 65 73 74 72 6F - 'US Maestro'
9F 14	Counter 1 Lower Limit [Mastercard]	00
9F 17	Personal Identification Number (PIN) Try Counter	03
9F 23	Counter 1 Upper Limit [Mastercard]	00
9F 27	Cryptogram Information Data (CID)	80
9F 32	Issuer Public Key Exponent	03
9F 36	Application Transaction Counter (ATC)	xx xx *
9F 42	Application Currency Code	08 40 - USD
9F 44	Application Currency Exponent	02

Tag	Element name	Data	Card v7.x
9F 46	ICC Public Key Certificate	2A 80 55 04 BB DA 53 3A EC 41 FF 8D EB 01 19 8F 31 71 CB 3B BB CF 34 9A C8 47 F5 E4 D7 39 BA 6F 9A 99 01 F7 B9 DF 7C 96 F9 B2 04 CE D7 7D AF 5D 7B B4 2C 86 EF 0A F5 20 D9 BB 45 C1 FE 38 7A CE 7C 50 E1 76 87 8F 7F 8D 24 E3 75 3C 17 90 68 B2 21 1B BC DB 58 F7 EA ED CD 52 55 20 3C 5A F5 A3 86 91 AF 37 50 91 0B DC 1F A2 A1 D9 51 84 DA AC DE AC 5C E0 14 3D 71 26 A2 43 28 D7 F0 1E 6C A8 C6 E6 E1 07 B9 C2 83 90 18 BE 13 65 64 0E 58 B8 A8 93 AE FB 22 E8 DA 6A 4B DA FE C7 E9 3A 45 6F 3E 28 66 9D 52 0E A9 0A A2 C3 95 4E 94 21 EB 33 46 72 61 9B 4B D3 47 DB CB 52 1F C1 B8 1D 79 53 8F 74 02 B5 4A B9 1C 4C EE FE F5 D4 C0 52 04 5F 28 E7 39 BB F3 E9 C3 FF F7 D7 21 A8 93 C6 57 05 07 6E D9 64 F2 D1 DF ED 71 40 65 FA 3B A4 D0 23	
9F 47	ICC Public Key Exponent	03	
9F 4A	Static Data Authentication Tag List	82	
9F 4D	Transaction Log Entry	0B 0A	
9F 4F	Transaction Log Format	9F 27 01 9F 02 06 5F 2A 02 9A 03 9F 36 02 9F 52 06 DF 3E 01 9F 21 03 9F 7C 14	
9F 5D	Application Capabilities Information [M/Chip Advance]	01 00 00	
9F 60	CVC3track1 [Mastercard]	xx xx *	
9F 61	CVC3track2 [Mastercard]	xx xx *	
9F 6E	Third Party Data [Mastercard]	08 40 31 31 30 30 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	
9F 70	Protected Data Envelope 1 [M/Chip Advance]	20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20	
9F 71	Protected Data Envelope 2 [M/Chip Advance]	20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20	
9F 72	Protected Data Envelope 3 [M/Chip Advance]	20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20	
9F 73	Protected Data Envelope 4 [M/Chip Advance]	20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20	
9F 74	Protected Data Envelope 5 [M/Chip Advance]	20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20	
9F 75	Unprotected Data Envelope 1 [M/Chip Advance]	20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20	
9F 76	Unprotected Data Envelope 2 [M/Chip Advance]	20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20	
9F 77	Unprotected Data Envelope 3 [M/Chip Advance]	20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20	
9F 78	Unprotected Data Envelope 4 [M/Chip Advance]	20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20	
9F 79	Unprotected Data Envelope 5 [M/Chip Advance]	20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20	

Tag	Element name	Data Card v7.x

9F 7E	Application Life Cycle Data [Mastercard]	`03 10 0C 12 00 09 00 00 FF FF FF FF`
		`FF FF FF FF FF FF FF FF FF FF FF FF`
		`FF FF FF FF 00 04 00 00 02 60 00 00`
		`38 4A 02 11 50 35 43 44 30 37 32 20`

C3	Card Issuer Action Code (Contact) - Decline [M/Chip Advance]	`00 00 00`
C4	Card Issuer Action Code (Contact) - Default [M/Chip Advance]	`06 50 00`
C5	Card Issuer Action Code (Contact) - Online [M/Chip Advance]	`06 FB 00`
C6	PIN Try Limit [M/Chip Advance]	`03`
C7	CDOL1 Related Data Length [Mastercard]	`42`
C8	CRM Country Code [Mastercard]	`08 40` – USA
C9	Accumulator 1 Currency Code [Mastercard]	`08 40` - USD
CA	Accumulator 1 Lower Limit [Mastercard]	`00 00 00 00 00 00`
CB	Accumulator 1 Upper Limit [Mastercard]	`00 00 00 00 00 00`
CD	Card Issuer Action Code (Contactless) - Default [M/Chip Advance]	`06 58 00`
CE	Card Issuer Action Code (Contactless) - Online [M/Chip Advance]	`06 F8 00`
CF	Card Issuer Action Code (Contactless) - Decline [M/Chip Advance]	`08 00 00`

D1	Accumulator 1 Currency Conversion Table [Mastercard]	`08 40 00 01 00 08 40 00 01 00 08 40`
		`00 01 00 08 40 00 01 00 08 40 00 01`
		`00`

D3	Additional Check Table [Mastercard]	`00 00 00 FF FF FF FF FF FF FF FF FF` `FF FF FF FF FF FF`
D5	Application Control [M/Chip Advance]	`8E 00 80 00 86 02`
D6	Default ARPC Response Code [M/Chip Advance]	`00 10`
D7	Application Control [M/Chip Advance]	`02 00 40 00 86 02`
D9	Application File Locator (Contactless)	`10 01 01 01 18 01 01 00 20 01 02 00`
DE	Log Data Table [M/Chip Advance]	`00 00 00 00 00 00 00 00 00`
DF 02	Security Limits Status (Contact) [M/Chip Advance]	`00`
DF 11	Accumulator 1 Control (Contact) [M/Chip Advance]	`C1`
DF 12	Accumulator 1 Control (Contactless) [M/Chip Advance]	`C1`
DF 14	Accumulator 2 Control (Contact) [M/Chip Advance]	`00`
DF 15	Accumulator 2 Control (Contactless) [M/Chip Advance]	`00`
DF 16	Accumulator 2 Currency Code [Mastercard]	`09 99`

DF 17	Accumulator 2 Currency Conversion Table [Mastercard]	`09 99 00 01 00 09 99 00 01 00 09 99`
		`00 01 00 09 99 00 01 00 09 99 00 01`
		`00`

DF 18	Accumulator 2 Lower Limit [Mastercard]	`00 00 00 00 00 00`
DF 19	Accumulator 2 Upper Limit [Mastercard]	`00 00 00 00 00 00`
DF 1A	Counter 1 Control (Contact) [M/Chip Advance]	`C1`
DF 1B	Counter 1 Control (Contactless) [M/Chip Advance]	`C1`
DF 1D	Counter 2 Control (Contact) [M/Chip Advance]	`00`

Tag	Element name	Data	Card v7.x
DF 1E	Counter 2 Control (Contactless) [M/Chip Advance]	00	
DF 1F	Counter 2 Lower Limit [Mastercard]	00	
DF 21	Counter 2 Upper Limit [Mastercard]	00	
DF 22	MTA CVM (Contact) [M/Chip Advance]	00 00 00 00 00 00	
DF 23	MTA CVM (Contactless) [M/Chip Advance]	00 00 00 00 00 00	
DF 24	MTA Currency Code [M/Chip Advance]	09 99	
DF 25	MTA NoCVM (Contact) [M/Chip Advance]	00 00 00 00 00 00	
DF 26	MTA NoCVM (Contactless) [M/Chip Advance]	00 00 00 00 00 00	
DF 27	Number Of Days Offline Limit [M/Chip Advance]	00 00	
DF 28	Accumulator 1 CVR Dependency Data (Contact) [M/Chip Advance]	00 00 00	
DF 29	Accumulator 1 CVR Dependency Data (Contactless) [M/Chip Advance]	00 00 00	
DF 2A	Accumulator 2 CVR Dependency Data (Contact) [M/Chip Advance]	00 00 00	
DF 2B	Accumulator 2 CVR Dependency Data (Contactless) [M/Chip Advance]	00 00 00	
DF 2C	Counter 1 CVR Dependency Data (Contact) [M/Chip Advance]	00 00 00	
DF 2D	Counter 1 CVR Dependency Data (Contactless) [M/Chip Advance]	00 00 00	
DF 2E	Counter 2 CVR Dependency Data (Contact) [M/Chip Advance]	00 00 00	
DF 2F	Counter 2 CVR Dependency Data (Contactless) [M/Chip Advance]	00 00 00	
DF 30	Interface Enabling Switch [M/Chip Advance]	03	
DF 35	Security Limits Status (Contactless) [M/Chip Advance]	00	
DF 37	Security Limits Status Common [M/Chip Advance]	00	
DF 3C	CVR Issuer Discretionary Data (Contact) [M/Chip Advance]	00	
DF 3D	CVR Issuer Discretionary Data (Contactless) [M/Chip Advance]	00	
DF 3F	Read Record Filter (Contact) [M/Chip Advance]	00 00 00 00	
DF 40	Read Record Filter (Contactless) [M/Chip Advance]	08 03 03 00	
DF 41	DS Management Control [M/Chip Advance]	20	

* Tag value changes with card usage

4.11 Test Card 11 - Mastercard, CO, 4-AID (MC+USM/Maestro+USM), English, USA, USD

A contact-only, 4-AID Mastercard debit card with a pair of multi-funding accounts (Mastercard-U.S. Maestro / Maestro-U.S. Maestro) with an Issuer Country Code of 'USA' and Currency Code of 'USD'.

The recommended transaction amount to generate a host approval is $20.00.

4.11.1   Contact: CVM List - Mastercard debit, AID A0000000041010

Cardholder Verification Method List ('0205 4103 4203 5E03 1F00')			
CVM	**Verification Method**	**Conditions**	**If unsuccessful**
1	Online PIN	Purchase with Cashback	Fail
2	Offline Plaintext PIN	Terminal supports CVM type	Next CVM
3	Online PIN	Terminal supports CVM type	Next CVM
4	Signature (paper)	Terminal supports CVM type	Next CVM
5	No CVM required	Always	Fail

4.11.2   Contact: Application Tag data, AID A0000000041010

Tag	Element name	Data Card v5.x
42	Issuer Identification Number (IIN)	`54 13 33`
50	Application Label	`4D 41 53 54 45 52 43 41 52 44 20 44` `45 42 49 54` - 'MASTERCARD DEBIT'
57	Track 2 Equivalent Data	`54 13 33 00 89 02 00 60 D2 51 22 01` `14 83 59 49 00 0F`
5A	Application Primary Account Number (PAN)	`54 13 33 00 89 02 00 60`

5F 20	Cardholder Name	`55 53 41 20 44 65 62 69 74 2F 54 65`
		`73 74 20 43 61 72 64 20 31 31 20 20`
		`20 20` - 'USA DEBIT/Test Card 11'

5F 24	Application Expiration Date	`25 12 31`
5F 25	Application Effective Date	`xx xx xx *`
5F 28	Issuer Country Code	`08 40` - USA
5F 2D	Language Preference	`65 6E` - 'en' (English)
5F 30	Service Code	`02 01`
5F 34	Application PAN Sequence Number	`11`
5F 55	Issuer Country Code (alpha2 format)	`55 53` - 'US'
82	Application Interchange Profile	`18 00` BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported via External Auth command b2 - On device Cardholder verification NOT supported b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - EMV mode NOT supported
84	Dedicated File (DF) Name	`A0 00 00 00 04 10 10`
87	Application Priority Indicator	`01`

8C	Card Risk Management Data Object List 1 (CDOL1)	`9F 02 06 9F 03 06 9F 1A 02 95 05 5F`
		`2A 02 9A 03 9C 01 9F 37 04 9F 35 01`
		`9F 45 02 9F 4C 08 9F 34 03 9F 21 03`
		`9F 7C 14`

Tag	Element name	Data	Card v5.x
8D	Card Risk Management Data Object List 2 (CDOL2)	`91 0A 8A 02 95 05 9F 37 04 9F 4C 08`	
8E	Cardholder Verification Method (CVM) List	`00 00 00 00 00 00 00 00 02 05 41 03` `42 03 5E 03 1F 00 00 00`	
94	Application File Locator (AFL)	`08 01 02 00`	
9F 07	Application Usage Control	`FF C0` BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions valid b6 - Domestic goods valid b5 - International goods valid b4 - Domestic services valid b3 - International services valid b2 - ATMs valid b1 - non-ATM terminals valid BYTE 2: b8 - Domestic cashback allowed b7 - International cashback allowed	
9F 08	Application Version Number	`00 02`	
9F 0D	Issuer Action Code - Default	`B0 50 BC 88 00`	
9F 0E	Issuer Action Code - Denial	`00 00 00 00 00`	
9F 0F	Issuer Action Code - Online	`B0 70 BC 98 00`	
9F 10	Issuer Application Data [M/Chip Advance]	`xx 10 xx xx xx xx xx xx xx xx xx` `xx xx xx xx xx xx *`	
9F 11	Issuer Code Table Index	`01`	
9F 12	Application Preferred Name	`4D 61 73 74 65 72 63 61 72 64 20 44` `65 62 69 74` - 'Mastercard Debit'	
9F 14	Counter 1 Lower Limit [Mastercard]	`00`	
9F 17	Personal Identification Number (PIN) Try Counter	`09`	
9F 23	Counter 1 Upper Limit [Mastercard]	`00`	
9F 26	Application Cryptogram (AC)	`xx xx xx xx xx xx xx xx *`	
9F 27	Cryptogram Information Data (CID)	`80`	
9F 36	Application Transaction Counter (ATC)	`xx xx *`	
9F 42	Application Currency Code	`08 40` - USD	
9F 4D	Transaction Log Entry	`0B 0A`	

9F 4F	Transaction Log Format	`9F 27 01 9F 02 06 5F 2A 02 9A 03 9F`
		`36 02 9F 52 06 DF 3E 01 9F 21 03 9F`
		`7C 14`	

9F 7E	Application Life Cycle Data [Mastercard]	`04 10 0B 14 00 01 00 00 50 17 79 00`
		`A0 00 00 00 04 10 10 00 00 00 00 00`
		`00 00 00 00 00 80 00 88 01 06 A5 5A`
		`00 00 00 00 00 00 00 00 00 00 00 00`	

C3	Card Issuer Action Code (Contact) - Decline [M/Chip Advance]	`00 00 00`	
C4	Card Issuer Action Code (Contact) - Default [M/Chip Advance]	`06 00 00`	
C5	Card Issuer Action Code (Contact) - Online [M/Chip Advance]	`3F FB 00`	
C6	PIN Try Limit [M/Chip Advance]	`09`	
C7	CDOL1 Related Data Length [Mastercard]	`42`	
C8	CRM Country Code [Mastercard]	`08 40` - USA	
C9	Accumulator 1 Currency Code [Mastercard]	`08 40` - USD	
CA	Accumulator 1 Lower Limit [Mastercard]	`00 00 00 00 00 00`	
CB	Accumulator 1 Upper Limit [Mastercard]	`00 00 00 00 00 00`	
CD	Card Issuer Action Code (Contactless) - Default [M/Chip Advance]	`06 50 00`	

Tag	Element name	Data	Card v5.x
CE	Card Issuer Action Code (Contactless) - Online [M/Chip Advance]	`06 FB 00`	
CF	Card Issuer Action Code (Contactless) - Decline [M/Chip Advance]	`00 00 00`	
D1	Accumulator 1 Currency Conversion Table [Mastercard]	`08 40 00 00 00 08 40 00 00 00 08 40 00 00 00 08 40 00 00 00 08 40 00 00 00`	
D3	Additional Check Table [Mastercard]	`00 00 00 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF`	
D5	Application Control [M/Chip Advance]	`84 00 80 00 C6 02`	
D6	Default ARPC Response Code [M/Chip Advance]	`00 10`	
D7	Application Control [M/Chip Advance]	`80 00 80 00 C6 02`	
D9	Application File Locator (Contactless)	`08 01 01 00 08 03 03 00`	
DE	Log Data Table [M/Chip Advance]	`00 00 00 00 00 00 00 00 00`	
DF 02	Security Limits Status (Contact) [M/Chip Advance]	`00`	
DF 11	Accumulator 1 Control (Contact) [M/Chip Advance]	`C1`	
DF 12	Accumulator 1 Control (Contactless) [M/Chip Advance]	`C1`	
DF 14	Accumulator 2 Control (Contact) [M/Chip Advance]	`00`	
DF 15	Accumulator 2 Control (Contactless) [M/Chip Advance]	`00`	
DF 16	Accumulator 2 Currency Code [Mastercard]	`09 99`	
DF 17	Accumulator 2 Currency Conversion Table [Mastercard]	`09 99 00 00 00 09 99 00 00 00 09 99 00 00 00 09 99 00 00 00 09 99 00 00 00`	
DF 18	Accumulator 2 Lower Limit [Mastercard]	`00 00 00 00 00 00`	
DF 19	Accumulator 2 Upper Limit [Mastercard]	`00 00 00 00 00 00`	
DF 1A	Counter 1 Control (Contact) [M/Chip Advance]	`C1`	
DF 1B	Counter 1 Control (Contactless) [M/Chip Advance]	`C1`	
DF 1D	Counter 2 Control (Contact) [M/Chip Advance]	`00`	
DF 1E	Counter 2 Control (Contactless) [M/Chip Advance]	`00`	
DF 1F	Counter 2 Lower Limit [Mastercard]	`00`	
DF 21	Counter 2 Upper Limit [Mastercard]	`00`	
DF 22	MTA CVM (Contact) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 23	MTA CVM (Contactless) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 24	MTA Currency Code [M/Chip Advance]	`08 40`	
DF 25	MTA NoCVM (Contact) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 26	MTA NoCVM (Contactless) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 27	Number Of Days Offline Limit [M/Chip Advance]	`00 00`	
DF 28	Accumulator 1 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 29	Accumulator 1 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2A	Accumulator 2 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	

Tag	Element name	Data	Card v5.x
DF 2B	Accumulator 2 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2C	Counter 1 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2D	Counter 1 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2E	Counter 2 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2F	Counter 2 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 30	Interface Enabling Switch [M/Chip Advance]	`01`	
DF 35	Security Limits Status (Contactless) [M/Chip Advance]	`00`	
DF 37	Security Limits Status Common [M/Chip Advance]	`00`	
DF 3C	CVR Issuer Discretionary Data (Contact) [M/Chip Advance]	`00`	
DF 3D	CVR Issuer Discretionary Data (Contactless) [M/Chip Advance]	`00`	
DF 3F	Read Record Filter (Contact) [M/Chip Advance]	`00`	
DF 40	Read Record Filter (Contactless) [M/Chip Advance]	`00`	
DF 41	DS Management Control [M/Chip Advance]	`20`	

* Tag value changes with card usage

4.11.3   Contact: CVM List - U.S. checking, AID A000000004220301

Cardholder Verification Method List ('0205 4203 1F03')			
CVM	**Verification Method**	**Conditions**	**If unsuccessful**
1	Online PIN	Purchase with Cashback	Fail
2	Online PIN	Terminal supports CVM type	Next CVM
3	No CVM required	Terminal supports CVM type	Fail

4.11.4   Contact: Application Tag data, AID A000000004220301

Tag	Element name	Data	Card v5.x
42	Issuer Identification Number (IIN)	`54 13 33`	
50	Application Label	`55 53 20 43 48 45 43 4B 49 4E 47 20 20 20 20 20` - 'US CHECKING'	
57	Track 2 Equivalent Data	`54 13 33 00 89 02 00 60 D2 51 22 01 14 83 59 49 00 0F`	
5A	Application Primary Account Number (PAN)	`54 13 33 00 89 02 00 60`	
5F 20	Cardholder Name	`55 53 41 20 44 65 62 69 74 2F 54 65 73 74 20 43 61 72 64 20 31 31 20 20 20 20` - 'USA DEBIT/Test Card 11'	
5F 24	Application Expiration Date	`25 12 31`	
5F 25	Application Effective Date	`xx xx xx *`	
5F 28	Issuer Country Code	`08 40` - USA	
5F 2D	Language Preference	`65 6E` - 'en' (English)	
5F 30	Service Code	`02 01`	
5F 34	Application PAN Sequence Number	`11`	
5F 55	Issuer Country Code (alpha2 format)	`55 53` - 'US'	

Tag	Element name	Data	Card v5.x
82	Application Interchange Profile	`18 00` BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported via External Auth command b2 - On device Cardholder verification NOT supported b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - EMV mode NOT supported	
84	Dedicated File (DF) Name	`A0 00 00 00 04 22 03 01`	
87	Application Priority Indicator	`02`	
8C	Card Risk Management Data Object List 1 (CDOL1)	`9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04 9F 35 01 9F 45 02 9F 4C 08 9F 34 03 9F 21 03 9F 7C 14`	
8D	Card Risk Management Data Object List 2 (CDOL2)	`91 0A 8A 02 95 05 9F 37 04 9F 4C 08`	
8E	Cardholder Verification Method (CVM) List	`00 00 00 00 00 00 00 00 02 05 42 03 1F 03 00 00 00 00`	
94	Application File Locator (AFL)	`08 01 01 00 08 03 03 00`	
9F 07	Application Usage Control	`FF C0` BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions valid b6 - Domestic goods valid b5 - International goods valid b4 - Domestic services valid b3 - International services valid b2 - ATMs valid b1 - non-ATM terminals valid BYTE 2: b8 - Domestic cashback allowed b7 - International cashback allowed	
9F 08	Application Version Number	`00 02`	
9F 0D	Issuer Action Code - Default	`B0 50 9C 88 00`	
9F 0E	Issuer Action Code - Denial	`00 00 00 00 00`	
9F 0F	Issuer Action Code - Online	`B0 70 9C 98 00`	
9F 10	Issuer Application Data [M/Chip Advance]	`xx 10 xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx *`	
9F 11	Issuer Code Table Index	`01`	
9F 12	Application Preferred Name	`55 53 20 43 68 65 63 6B 69 6E 67 20 20 20 20 20` - 'US Checking'	
9F 14	Counter 1 Lower Limit [Mastercard]	`00`	
9F 17	Personal Identification Number (PIN) Try Counter	`09`	
9F 23	Counter 1 Upper Limit [Mastercard]	`00`	
9F 26	Application Cryptogram (AC)	`xx xx xx xx xx xx xx xx *`	
9F 27	Cryptogram Information Data (CID)	`80`	
9F 36	Application Transaction Counter (ATC)	`xx xx *`	
9F 42	Application Currency Code	`08 40` - USD	
9F 4D	Transaction Log Entry	`0B 0A`	
9F 4F	Transaction Log Format	`9F 27 01 9F 02 06 5F 2A 02 9A 03 9F 36 02 9F 52 06 DF 3E 01 9F 21 03 9F 7C 14`	

Tag	Element name	Data	Card v5.x

9F 7E	Application Life Cycle Data [Mastercard]	`04 10 0B 14 00 01 00 00 50 17 79 00`
		`A0 00 00 00 04 10 10 00 00 00 00 00`
		`00 00 00 00 00 80 00 88 01 06 A5 5A`
		`00 00 00 00 00 00 00 00 00 00 00 00`	

C3	Card Issuer Action Code (Contact) - Decline [M/Chip Advance]	`00 00 00`	
C4	Card Issuer Action Code (Contact) - Default [M/Chip Advance]	`06 50 00`	
C5	Card Issuer Action Code (Contact) - Online [M/Chip Advance]	`06 FB 00`	
C6	PIN Try Limit [M/Chip Advance]	`09`	
C7	CDOL1 Related Data Length [Mastercard]	`42`	
C8	CRM Country Code [Mastercard]	`08 40` - USA	
C9	Accumulator 1 Currency Code [Mastercard]	`08 40` - USD	
CA	Accumulator 1 Lower Limit [Mastercard]	`00 00 00 00 00 00`	
CB	Accumulator 1 Upper Limit [Mastercard]	`00 00 00 00 00 00`	
CD	Card Issuer Action Code (Contactless) - Default [M/Chip Advance]	`06 50 00`	
CE	Card Issuer Action Code (Contactless) - Online [M/Chip Advance]	`06 FB 00`	
CF	Card Issuer Action Code (Contactless) - Decline [M/Chip Advance]	`00 00 00`	

D1	Accumulator 1 Currency Conversion Table [Mastercard]	`08 40 00 00 00 08 40 00 00 00 08 40`
		`00 00 00 08 40 00 00 00 08 40 00 00`
		`00`	

D3	Additional Check Table [Mastercard]	`00 00 00 FF FF FF FF FF FF FF FF FF` `FF FF FF FF FF FF`	
D5	Application Control [M/Chip Advance]	`80 00 80 00 C6 02`	
D6	Default ARPC Response Code [M/Chip Advance]	`00 10`	
D7	Application Control [M/Chip Advance]	`80 00 80 00 C6 02`	
D9	Application File Locator (Contactless)	`08 01 01 00 08 03 03 00`	
DE	Log Data Table [M/Chip Advance]	`00 00 00 00 00 00 00 00 00`	
DF 02	Security Limits Status (Contact) [M/Chip Advance]	`00`	
DF 11	Accumulator 1 Control (Contact) [M/Chip Advance]	`C1`	
DF 12	Accumulator 1 Control (Contactless) [M/Chip Advance]	`C1`	
DF 14	Accumulator 2 Control (Contact) [M/Chip Advance]	`00`	
DF 15	Accumulator 2 Control (Contactless) [M/Chip Advance]	`00`	
DF 16	Accumulator 2 Currency Code [Mastercard]	`09 99`	

DF 17	Accumulator 2 Currency Conversion Table [Mastercard]	`09 99 00 00 00 09 99 00 00 00 09 99`
		`00 00 00 09 99 00 00 00 09 99 00 00`
		`00`	

DF 18	Accumulator 2 Lower Limit [Mastercard]	`00 00 00 00 00 00`	
DF 19	Accumulator 2 Upper Limit [Mastercard]	`00 00 00 00 00 00`	
DF 1A	Counter 1 Control (Contact) [M/Chip Advance]	`C1`	
DF 1B	Counter 1 Control (Contactless) [M/Chip Advance]	`C1`	
DF 1D	Counter 2 Control (Contact) [M/Chip Advance]	`00`	

Tag	Element name	Data	Card v5.x
DF 1E	Counter 2 Control (Contactless) [M/Chip Advance]	00	
DF 1F	Counter 2 Lower Limit [Mastercard]	00	
DF 21	Counter 2 Upper Limit [Mastercard]	00	
DF 22	MTA CVM (Contact) [M/Chip Advance]	00 00 00 00 00 00	
DF 23	MTA CVM (Contactless) [M/Chip Advance]	00 00 00 00 00 00	
DF 24	MTA Currency Code [M/Chip Advance]	08 40	
DF 25	MTA NoCVM (Contact) [M/Chip Advance]	00 00 00 00 00 00	
DF 26	MTA NoCVM (Contactless) [M/Chip Advance]	00 00 00 00 00 00	
DF 27	Number Of Days Offline Limit [M/Chip Advance]	00 00	
DF 28	Accumulator 1 CVR Dependency Data (Contact) [M/Chip Advance]	00 00 00	
DF 29	Accumulator 1 CVR Dependency Data (Contactless) [M/Chip Advance]	00 00 00	
DF 2A	Accumulator 2 CVR Dependency Data (Contact) [M/Chip Advance]	00 00 00	
DF 2B	Accumulator 2 CVR Dependency Data (Contactless) [M/Chip Advance]	00 00 00	
DF 2C	Counter 1 CVR Dependency Data (Contact) [M/Chip Advance]	00 00 00	
DF 2D	Counter 1 CVR Dependency Data (Contactless) [M/Chip Advance]	00 00 00	
DF 2E	Counter 2 CVR Dependency Data (Contact) [M/Chip Advance]	00 00 00	
DF 2F	Counter 2 CVR Dependency Data (Contactless) [M/Chip Advance]	00 00 00	
DF 30	Interface Enabling Switch [M/Chip Advance]	01	
DF 35	Security Limits Status (Contactless) [M/Chip Advance]	00	
DF 37	Security Limits Status Common [M/Chip Advance]	00	
DF 3C	CVR Issuer Discretionary Data (Contact) [M/Chip Advance]	00	
DF 3D	CVR Issuer Discretionary Data (Contactless) [M/Chip Advance]	00	
DF 3F	Read Record Filter (Contact) [M/Chip Advance]	00	
DF 40	Read Record Filter (Contactless) [M/Chip Advance]	00	
DF 41	DS Management Control [M/Chip Advance]	20	

* Tag value changes with card usage

4.11.5 Contact: CVM List - Maestro debit, AID A0000000043060

Cardholder Verification Method List ('0205 4103 0203 0000')			
CVM	**Verification Method**	**Conditions**	**If unsuccessful**
1	Online PIN	Purchase with Cashback	Fail
2	Offline Plaintext PIN	Terminal supports CVM type	Next CVM
3	Online PIN	Terminal supports CVM type	Fail
4	No CVM required	Always	Fail

4.11.6 Contact: Application Tag data, AID A0000000043060

Tag	Element name	Data	Card v5.x
42	Issuer Identification Number (IIN)	`67 99 99`	
50	Application Label	`4D 41 45 53 54 52 4F 20 20 20 20 20` `20 20 20 20` - 'MAESTRO'	
57	Track 2 Equivalent Data	`67 99 99 89 00 00 02 00 05 1D 25 12` `22 01 48 35 94 90 0F`	
5A	Application Primary Account Number (PAN)	`67 99 99 89 00 00 02 00 05 1F`	
5F 20	Cardholder Name	`55 53 41 20 44 65 62 69 74 2F 54 65` `73 74 20 43 61 72 64 20 31 31 20 20` `20 20` - 'USA DEBIT/Test Card 11'	
5F 24	Application Expiration Date	`25 12 31`	
5F 25	Application Effective Date	`xx xx xx *`	
5F 28	Issuer Country Code	`08 40` - USA	
5F 2D	Language Preference	`65 6E` - 'en' (English)	
5F 30	Service Code	`02 20`	
5F 34	Application PAN Sequence Number	`12`	
5F 55	Issuer Country Code (alpha2 format)	`55 53` - 'US'	
82	Application Interchange Profile	`18 00` BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported via External Auth command b2 - On device Cardholder verification NOT supported b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - EMV mode NOT supported	
84	Dedicated File (DF) Name	`A0 00 00 00 04 30 60`	
87	Application Priority Indicator	`03`	
8C	Card Risk Management Data Object List 1 (CDOL1)	`9F 02 06 9F 03 06 9F 1A 02 95 05 5F` `2A 02 9A 03 9C 01 9F 37 04 9F 35 01` `9F 45 02 9F 4C 08 9F 34 03 9F 21 03` `9F 7C 14`	
8D	Card Risk Management Data Object List 2 (CDOL2)	`91 0A 8A 02 95 05 9F 37 04 9F 4C 08`	
8E	Cardholder Verification Method (CVM) List	`00 00 00 00 00 00 00 00 02 05 41 03` `02 03 00 00 00 00`	
94	Application File Locator (AFL)	`08 01 02 00`	

Tag	Element name	Data	Card v5.x
9F 07	Application Usage Control	`FF C0` BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions valid b6 - Domestic goods valid b5 - International goods valid b4 - Domestic services valid b3 - International services valid b2 - ATMs valid b1 - non-ATM terminals valid BYTE 2: b8 - Domestic cashback allowed b7 - International cashback allowed	
9F 08	Application Version Number	`00 02`	
9F 0D	Issuer Action Code - Default	`B0 50 BC 88 00`	
9F 0E	Issuer Action Code - Denial	`00 00 00 00 00`	
9F 0F	Issuer Action Code - Online	`B0 70 BC 98 00`	
9F 10	Issuer Application Data [M/Chip Advance]	`xx 10 xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx *`	
9F 11	Issuer Code Table Index	`01`	
9F 12	Application Preferred Name	`4D 61 65 73 74 6F 20 20 20 20 20 20 20 20` - 'Maestro'	
9F 14	Counter 1 Lower Limit [Mastercard]	`00`	
9F 17	Personal Identification Number (PIN) Try Counter	`09`	
9F 23	Counter 1 Upper Limit [Mastercard]	`00`	
9F 26	Application Cryptogram (AC)	`xx xx xx xx xx xx xx xx *`	
9F 27	Cryptogram Information Data (CID)	`80`	
9F 36	Application Transaction Counter (ATC)	`xx xx *`	
9F 42	Application Currency Code	`08 40` - USD	
9F 4D	Transaction Log Entry	`0B 0A`	
9F 4F	Transaction Log Format	`9F 27 01 9F 02 06 5F 2A 02 9A 03 9F 36 02 9F 52 06 DF 3E 01 9F 21 03 9F 7C 14`	
9F 7E	Application Life Cycle Data [Mastercard]	`04 10 0B 14 00 01 00 00 50 17 79 00 A0 00 00 00 04 30 60 00 00 00 00 00 00 00 00 00 00 80 00 88 01 06 A5 5A 00 00 00 00 00 00 00 00 00 00 00 00`	
C3	Card Issuer Action Code (Contact) - Decline [M/Chip Advance]	`00 00 00`	
C4	Card Issuer Action Code (Contact) - Default [M/Chip Advance]	`06 00 00`	
C5	Card Issuer Action Code (Contact) - Online [M/Chip Advance]	`3F FB 00`	
C6	PIN Try Limit [M/Chip Advance]	`09`	
C7	CDOL1 Related Data Length [Mastercard]	`42`	
C8	CRM Country Code [Mastercard]	`08 40` - USA	
C9	Accumulator 1 Currency Code [Mastercard]	`08 40` - USD	
CA	Accumulator 1 Lower Limit [Mastercard]	`00 00 00 00 00 00`	
CB	Accumulator 1 Upper Limit [Mastercard]	`00 00 00 00 00 00`	
CD	Card Issuer Action Code (Contactless) - Default [M/Chip Advance]	`06 50 00`	
CE	Card Issuer Action Code (Contactless) - Online [M/Chip Advance]	`06 FB 00`	
CF	Card Issuer Action Code (Contactless) - Decline [M/Chip Advance]	`00 00 00`	

Tag	Element name	Data	Card v5.x
D1	Accumulator 1 Currency Conversion Table [Mastercard]	08 40 00 00 00 08 40 00 00 00 08 40 00 00 00 08 40 00 00 00 08 40 00 00 00	
D3	Additional Check Table [Mastercard]	00 00 00 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF	
D5	Application Control [M/Chip Advance]	84 00 80 00 C6 02	
D6	Default ARPC Response Code [M/Chip Advance]	00 10	
D7	Application Control [M/Chip Advance]	80 00 80 00 C6 02	
D9	Application File Locator (Contactless)	08 01 01 00 08 03 03 00	
DE	Log Data Table [M/Chip Advance]	00 00 00 00 00 00 00 00 00	
DF 02	Security Limits Status (Contact) [M/Chip Advance]	00	
DF 11	Accumulator 1 Control (Contact) [M/Chip Advance]	C1	
DF 12	Accumulator 1 Control (Contactless) [M/Chip Advance]	C1	
DF 14	Accumulator 2 Control (Contact) [M/Chip Advance]	00	
DF 15	Accumulator 2 Control (Contactless) [M/Chip Advance]	00	
DF 16	Accumulator 2 Currency Code [Mastercard]	09 99	
DF 17	Accumulator 2 Currency Conversion Table [Mastercard]	09 99 00 00 00 09 99 00 00 00 09 99 00 00 00 09 99 00 00 00 09 99 00 00 00	
DF 18	Accumulator 2 Lower Limit [Mastercard]	00 00 00 00 00 00	
DF 19	Accumulator 2 Upper Limit [Mastercard]	00 00 00 00 00 00	
DF 1A	Counter 1 Control (Contact) [M/Chip Advance]	C1	
DF 1B	Counter 1 Control (Contactless) [M/Chip Advance]	C1	
DF 1D	Counter 2 Control (Contact) [M/Chip Advance]	00	
DF 1E	Counter 2 Control (Contactless) [M/Chip Advance]	00	
DF 1F	Counter 2 Lower Limit [Mastercard]	00	
DF 21	Counter 2 Upper Limit [Mastercard]	00	
DF 22	MTA CVM (Contact) [M/Chip Advance]	00 00 00 00 00 00	
DF 23	MTA CVM (Contactless) [M/Chip Advance]	00 00 00 00 00 00	
DF 24	MTA Currency Code [M/Chip Advance]	08 40	
DF 25	MTA NoCVM (Contact) [M/Chip Advance]	00 00 00 00 00 00	
DF 26	MTA NoCVM (Contactless) [M/Chip Advance]	00 00 00 00 00 00	
DF 27	Number Of Days Offline Limit [M/Chip Advance]	00 00	
DF 28	Accumulator 1 CVR Dependency Data (Contact) [M/Chip Advance]	00 00 00	
DF 29	Accumulator 1 CVR Dependency Data (Contactless) [M/Chip Advance]	00 00 00	
DF 2A	Accumulator 2 CVR Dependency Data (Contact) [M/Chip Advance]	00 00 00	
DF 2B	Accumulator 2 CVR Dependency Data (Contactless) [M/Chip Advance]	00 00 00	
DF 2C	Counter 1 CVR Dependency Data (Contact) [M/Chip Advance]	00 00 00	

Tag	Element name	Data	Card v5.x
DF 2D	Counter 1 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2E	Counter 2 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2F	Counter 2 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 30	Interface Enabling Switch [M/Chip Advance]	`01`	
DF 35	Security Limits Status (Contactless) [M/Chip Advance]	`00`	
DF 37	Security Limits Status Common [M/Chip Advance]	`00`	
DF 3C	CVR Issuer Discretionary Data (Contact) [M/Chip Advance]	`00`	
DF 3D	CVR Issuer Discretionary Data (Contactless) [M/Chip Advance]	`00`	
DF 3F	Read Record Filter (Contact) [M/Chip Advance]	`00`	
DF 40	Read Record Filter (Contactless) [M/Chip Advance]	`00`	
DF 41	DS Management Control [M/Chip Advance]	`20`	

* Tag value changes with card usage

4.11.7   Contact: CVM List - U.S. Savings debit, AID A000000004220302

Cardholder Verification Method List ('0205 4203 1F03')			
CVM	**Verification Method**	**Conditions**	**If unsuccessful**
1	Online PIN	Purchase with Cashback	Fail
2	Online PIN	Terminal supports CVM type	Next CVM
3	No CVM required	Terminal supports CVM type	Fail

4.11.8   Contact: Application Tag data, AID A000000004220302

Tag	Element name	Data	Card v4.x
42	Issuer Identification Number (IIN)	`67 99 99`	
50	Application Label	`55 53 20 53 41 56 49 4E 47 53 20 20 20 20 20` - 'US SAVINGS'	
57	Track 2 Equivalent Data	`67 99 99 89 00 00 02 00 05 1D 25 12 22 01 48 35 94 90 0F`	
5A	Application Primary Account Number (PAN)	`67 99 99 89 00 00 02 00 05 1F`	
5F 20	Cardholder Name	`55 53 41 20 44 65 62 69 74 2F 54 65 73 74 20 43 61 72 64 20 31 31 20 20 20 20` - 'USA DEBIT/Test Card 11'	
5F 24	Application Expiration Date	`25 12 31`	
5F 25	Application Effective Date	`xx xx xx *`	
5F 28	Issuer Country Code	`08 40` - USA	
5F 2D	Language Preference	`65 6E` - 'en' (English)	
5F 30	Service Code	`02 20`	
5F 34	Application PAN Sequence Number	`12`	
5F 55	Issuer Country Code (alpha2 format)	`55 53` - 'US'	

Tag	Element name	Data	Card v4.x
82	Application Interchange Profile	`18 00` BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported via External Auth command b2 - On device Cardholder verification NOT supported b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - EMV mode NOT supported	
84	Dedicated File (DF) Name	`A0 00 00 00 04 22 03 02`	
87	Application Priority Indicator	`04`	
8C	Card Risk Management Data Object List 1 (CDOL1)	`9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04 9F 35 01 9F 45 02 9F 4C 08 9F 34 03 9F 21 03 9F 7C 14`	
8D	Card Risk Management Data Object List 2 (CDOL2)	`91 0A 8A 02 95 05 9F 37 04 9F 4C 08`	
8E	Cardholder Verification Method (CVM) List	`00 00 00 00 00 00 00 00 02 05 42 03 1F 03 00 00 00 00`	
94	Application File Locator (AFL)	`08 01 01 00 08 03 03 00`	
9F 07	Application Usage Control	`FF C0` BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions valid b6 - Domestic goods valid b5 - International goods valid b4 - Domestic services valid b3 - International services valid b2 - ATMs valid b1 - non-ATM terminals valid BYTE 2: b8 - Domestic cashback allowed b7 - International cashback allowed	
9F 08	Application Version Number	`00 02`	
9F 0D	Issuer Action Code - Default	`B0 50 9C 88 00`	
9F 0E	Issuer Action Code - Denial	`00 00 00 00 00`	
9F 0F	Issuer Action Code - Online	`B0 70 9C 98 00`	
9F 10	Issuer Application Data [M/Chip Advance]	`xx 10 xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx *`	
9F 11	Issuer Code Table Index	`01`	
9F 12	Application Preferred Name	`55 53 20 53 61 76 69 6E 67 73 20 20 20 20 20` - 'US Savings'	
9F 14	Counter 1 Lower Limit [Mastercard]	`00`	
9F 17	Personal Identification Number (PIN) Try Counter	`09`	
9F 23	Counter 1 Upper Limit [Mastercard]	`00`	
9F 26	Application Cryptogram (AC)	`xx xx xx xx xx xx xx xx *`	
9F 27	Cryptogram Information Data (CID)	`80`	
9F 36	Application Transaction Counter (ATC)	`xx xx *`	
9F 42	Application Currency Code	`08 40` - USD	
9F 4D	Transaction Log Entry	`0B 0A`	
9F 4F	Transaction Log Format	`9F 27 01 9F 02 06 5F 2A 02 9A 03 9F 36 02 9F 52 06 DF 3E 01 9F 21 03 9F 7C 14`	

Tag	Element name	Data	Card v4.x
9F 7E	Application Life Cycle Data [Mastercard]	04 10 0B 14 00 01 00 00 50 17 79 00 A0 00 00 00 04 30 60 00 00 00 00 00 00 00 00 00 00 80 00 88 01 06 A5 5A 00 00 00 00 00 00 00 00 00 00 00 00	
C3	Card Issuer Action Code (Contact) - Decline [M/Chip Advance]	00 00 00	
C4	Card Issuer Action Code (Contact) - Default [M/Chip Advance]	06 50 00	
C5	Card Issuer Action Code (Contact) - Online [M/Chip Advance]	06 FB 00	
C6	PIN Try Limit [M/Chip Advance]	09	
C7	CDOL1 Related Data Length [Mastercard]	42	
C8	CRM Country Code [Mastercard]	08 40 - USA	
C9	Accumulator 1 Currency Code [Mastercard]	08 40 - USD	
CA	Accumulator 1 Lower Limit [Mastercard]	00 00 00 00 00 00	
CB	Accumulator 1 Upper Limit [Mastercard]	00 00 00 00 00 00	
CD	Card Issuer Action Code (Contactless) - Default [M/Chip Advance]	06 50 00	
CE	Card Issuer Action Code (Contactless) - Online [M/Chip Advance]	06 FB 00	
CF	Card Issuer Action Code (Contactless) - Decline [M/Chip Advance]	00 00 00	
D1	Accumulator 1 Currency Conversion Table [Mastercard]	08 40 00 00 00 08 40 00 00 00 08 40 00 00 00 08 40 00 00 00 08 40 00 00 00	
D3	Additional Check Table [Mastercard]	00 00 00 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF	
D5	Application Control [M/Chip Advance]	80 00 80 00 C6 02	
D6	Default ARPC Response Code [M/Chip Advance]	00 10	
D7	Application Control [M/Chip Advance]	80 00 80 00 C6 02	
D9	Application File Locator (Contactless)	08 01 01 00 08 03 03 00	
DE	Log Data Table [M/Chip Advance]	00 00 00 00 00 00 00 00 00	
DF 02	Security Limits Status (Contact) [M/Chip Advance]	00	
DF 11	Accumulator 1 Control (Contact) [M/Chip Advance]	C1	
DF 12	Accumulator 1 Control (Contactless) [M/Chip Advance]	C1	
DF 14	Accumulator 2 Control (Contact) [M/Chip Advance]	00	
DF 15	Accumulator 2 Control (Contactless) [M/Chip Advance]	00	
DF 16	Accumulator 2 Currency Code [Mastercard]	09 99	
DF 17	Accumulator 2 Currency Conversion Table [Mastercard]	09 99 00 00 00 09 99 00 00 00 09 99 00 00 00 09 99 00 00 00 09 99 00 00 00	
DF 18	Accumulator 2 Lower Limit [Mastercard]	00 00 00 00 00 00	
DF 19	Accumulator 2 Upper Limit [Mastercard]	00 00 00 00 00 00	
DF 1A	Counter 1 Control (Contact) [M/Chip Advance]	C1	
DF 1B	Counter 1 Control (Contactless) [M/Chip Advance]	C1	
DF 1D	Counter 2 Control (Contact) [M/Chip Advance]	00	

Tag	Element name	Data	Card v4.x
DF 1E	Counter 2 Control (Contactless) [M/Chip Advance]	`00`	
DF 1F	Counter 2 Lower Limit [Mastercard]	`00`	
DF 21	Counter 2 Upper Limit [Mastercard]	`00`	
DF 22	MTA CVM (Contact) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 23	MTA CVM (Contactless) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 24	MTA Currency Code [M/Chip Advance]	`08 40`	
DF 25	MTA NoCVM (Contact) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 26	MTA NoCVM (Contactless) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 27	Number Of Days Offline Limit [M/Chip Advance]	`00 00`	
DF 28	Accumulator 1 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 29	Accumulator 1 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2A	Accumulator 2 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2B	Accumulator 2 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2C	Counter 1 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2D	Counter 1 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2E	Counter 2 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2F	Counter 2 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 30	Interface Enabling Switch [M/Chip Advance]	`01`	
DF 35	Security Limits Status (Contactless) [M/Chip Advance]	`00`	
DF 37	Security Limits Status Common [M/Chip Advance]	`00`	
DF 3C	CVR Issuer Discretionary Data (Contact) [M/Chip Advance]	`00`	
DF 3D	CVR Issuer Discretionary Data (Contactless) [M/Chip Advance]	`00`	
DF 3F	Read Record Filter (Contact) [M/Chip Advance]	`00`	
DF 40	Read Record Filter (Contactless) [M/Chip Advance]	`00`	
DF 41	DS Management Control [M/Chip Advance]	`20`	

* Tag value changes with card usage

4.12 Test Card 12 - Discover, DI, 2-AID (U.S. Debit, Discover), Eng/Spa/Fre, USA, USD

A Dual Interface (Contact+Contactless), 2-AID Discover debit card with an Issuer Country Code of 'USA' and Currency Code of 'USD'.

The recommended transaction amount to generate a host approval is $79.00.

4.12.1   Contact: CVM List - Discover U.S. Debit, AID A0000001524010

Cardholder Verification Method List ('0203 1F03')			
CVM	Verification Method	Conditions	If unsuccessful
1	Online PIN	Terminal supports CVM Type	Fail
2	No CVM required	Terminal supports CVM Type	Fail

4.12.2   Contact: Application Tag data, AID A0000001524010

Tag	Element name	Data Card v7.x
42	Issuer Identification Number (IIN)	`60 11 97`
50	Application Label	`55 53 20 44 45 42 49 54 20 20 20 20` `20 20 20 20` - 'US DEBIT'
57	Track 2 Data [Discover]	`60 11 97 37 00 00 01 38 D2 60 52 01` `10 00 01 05 00 00 0F`
5A	Application Primary Account Number (PAN)	`60 11 97 37 00 00 01 38`

5F 20	Cardholder Name	`55 41 54 20 44 45 42 49 54 2F 54 65`
		`73 74 20 43 61 72 64 20 31 32 20 20`
		`20 20` - 'USA DEBIT/Test Card 12'

5F 24	Application Expiration Date	`26 05 31`
5F 25	Application Effective Date	`xx xx xx`
5F 28	Issuer Country Code	`08 40` - USA
5F 2D	Language Preference	`65 6E 65 73 66 72` - 'enesfr' (English, Spanish, French)
5F 30	Service Code	`02 01`
5F 34	Application PAN Sequence Number	`01`
5F 55	Issuer Country Code (alpha2 format)	`55 53` - 'US'
82	Application Interchange Profile	`18 00` BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - EMV Contactless NOT supported
84	Dedicated File (DF) Name	`A0 00 00 01 52 40 10`
87	Application Priority Indicator	`01`

8C	Card Risk Management Data Object List 1 (CDOL1)	`9F 02 06 9F 03 06 9F 1A 02 95 05 5F`
		`2A 02 9A 03 9C 01 9F 37 04 9F 35 01`
		`9F 34 03`

8D	Card Risk Management Data Object List 2 (CDOL2)	`91 0A 8A 02 95 05 9F 37 04`
8E	Cardholder Verification Method (CVM) List	`00 00 00 00 00 00 00 00 02 03 1F 03`
94	Application File Locator (AFL)	`08 01 01 00 10 01 01 00 18 01 01 00`
9F 07	Application Usage Control	`FF 00`
9F 08	Application Version Number	`00 01`
9F 0D	Issuer Action Code - Default	`B0 68 C4 E8 00`
9F 0E	Issuer Action Code - Denial	`00 10 00 00 00`

Tag	Element name	Data	Card v7.x
9F 0F	Issuer Action Code - Online	B0 68 C4 F8 00	
9F 10	Issuer Application Data [DPAS]	xx 06 xx xx xx xx xx xx *	
9F 17	Personal Identification Number (PIN) Try Counter	03	
9F 26	Application Cryptogram (AC)	xx xx xx xx xx xx xx xx *	
9F 27	Cryptogram Information Data (CID)	80	
9F 36	Application Transaction Counter (ATC)	xx xx *	
9F 38	Processing Options Data Object List (PDOL)	9F 02 06 9F 1A 02 5F 2A 02 9A 03 9F 35 01	
9F 4D	Transaction Log Entry	0B 0A	
9F 4F	Transaction Log Format	9F 02 06 5F 2A 02 9A 03 9F 36 02 9F 34 03 9F 52 06 9F 1A 02 95 05 9C 01 8A 02 9F 37 04 9F 03 06 9F 53 08 9F 66 04 9F 71 02	
9F 78	Application State [D-PAS]	01	
C1	Application Configuration Options [DPAS]	15 48	
C2	Issuer Life Cycle Data (ILCD) [DPAS]	00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	
C3	Currency Conversion Codes 1 [DPAS]	08 40 00 01 00	
C4	Currency Conversion Codes 2 [DPAS]	08 40 00 01 00	
C5	Card Action Code - Denial [DPAS]	01 00	
C6	Card Action Code - Default [DPAS]	2E 1F	
C7	Card Action Code - Online [DPAS]	FE 1F	
D2	CRM Country Code [DPAS]	08 40	
D3	CRM Currency Code [DPAS]	08 40	
DF 11	PDOL Check Table - Profile (PDOLP) [DPAS]	01 09 41 00 00 41 A0 11 FF 01 01	
DF 20	Transaction Profile Objects(TPO0) [DPAS]	00 18 00 08 01 01 00 10 01 01 00 18 01 01 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 01 00 FE 1F 2E 1F 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	
DF 21	Transaction Profile Objects(TPO1) [DPAS]	E0 10 00 08 01 01 00 10 01 01 00 18 02 02 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 01 00 FE 1F 2E 1F 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	

* Tag value changes with card usage

4.12.3   Contact: CVM List - Discover Debit, AID A0000001523010

Cardholder Verification Method List ('0201 0203 1E03 1F03')			
CVM	**Verification Method**	**Conditions**	**If unsuccessful**
1	Online PIN	Unattended Cash	Next CVM
2	Online PIN	Terminal supports CVM type	Fail
3	Signature (paper)	Terminal supports CVM type	Fail
4	No CVM required	Terminal supports CVM type	Fail

4.12.4 Contact: Application Tag data, AID A0000001523010

Tag	Element name	Data	Card v7.x
42	Issuer Identification Number (IIN)	60 11 97	
50	Application Label	44 49 53 43 4F 56 45 52 20 44 45 42 49 54 20 20 - 'DISCOVER DEBIT'	
57	Track 2 Data [Discover]	60 11 97 37 00 00 01 38 D2 60 52 01 10 00 01 05 00 00 0F	
5A	Application Primary Account Number (PAN)	60 11 97 37 00 00 01 38	
5F 20	Cardholder Name	55 41 54 20 44 45 42 49 54 2F 54 65 73 74 20 43 61 72 64 20 31 32 20 20 20 20 - 'USA DEBIT/Test Card 12'	
5F 24	Application Expiration Date	26 05 31	
5F 25	Application Effective Date	xx xx xx *	
5F 28	Issuer Country Code	08 40 - USA	
5F 2D	Language Preference	65 6E 65 73 66 72 - 'enesfr' (English, Spanish, French)	
5F 30	Service Code	02 01	
5F 34	Application PAN Sequence Number	01	
5F 55	Issuer Country Code (alpha2 format)	55 53 - 'US'	
82	Application Interchange Profile	10 00 BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - EMV Contactless NOT supported	
84	Dedicated File (DF) Name	A0 00 00 01 52 30 10	
87	Application Priority Indicator	02	
8C	Card Risk Management Data Object List 1 (CDOL1)	9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04 9F 35 01 9F 34 03	
8D	Card Risk Management Data Object List 2 (CDOL2)	91 0A 8A 02 95 05 9F 37 04	
8E	Cardholder Verification Method (CVM) List	00 00 00 00 00 00 00 00 02 01 02 03 42 03 1E 03 1F 03	
94	Application File Locator (AFL)	08 01 01 00 10 01 01 00 18 02 02 00	
9F 07	Application Usage Control	FF 00	
9F 08	Application Version Number	00 01	
9F 0D	Issuer Action Code - Default	B0 68 C4 E8 00	
9F 0E	Issuer Action Code - Denial	00 10 00 00 00	
9F 0F	Issuer Action Code - Online	B0 68 C4 F8 00	
9F 10	Issuer Application Data [DPAS]	xx 06 xx xx xx xx xx xx *	
9F 17	Personal Identification Number (PIN) Try Counter	03	
9F 26	Application Cryptogram (AC)	xx xx xx xx xx xx xx xx *	
9F 27	Cryptogram Information Data (CID)	80	
9F 36	Application Transaction Counter (ATC)	xx xx *	
9F 38	Processing Options Data Object List (PDOL)	9F 02 06 9F 1A 02 5F 2A 02 9A 03 9F 35 01	
9F 4D	Transaction Log Entry	0B 0A	
9F 4F	Transaction Log Format	9F 02 06 5F 2A 02 9A 03 9F 36 02 9F 34 03 9F 52 06 9F 1A 02 95 05 9C 01 8A 02 9F 37 04 9F 03 06 9F 53 08 9F 66 04 9F 71 02	
9F 78	Application State [D-PAS]	01	

Tag	Element name	Data	Card v7.x
C1	Application Configuration Options [DPAS]	`15 48`	
C2	Issuer Life Cycle Data (ILCD) [DPAS]	`00 00 00 00 00 00 00 00 00 00 00 00` `00 00 00 00 00 00 00 00 00 00 00 00` `00 00 00 00 00 00 00 00 00 00 00 00` `00 00 00 00 00 00 00 00 00 00 00 00`	
C3	Currency Conversion Codes 1 [DPAS]	`08 40 00 01 00`	
C4	Currency Conversion Codes 2 [DPAS]	`08 40 00 01 00`	
C5	Card Action Code - Denial [DPAS]	`01 00`	
C6	Card Action Code - Default [DPAS]	`2E 1F`	
C7	Card Action Code - Online [DPAS]	`FE 1F`	
D2	CRM Country Code [DPAS]	`08 40`	
D3	CRM Currency Code [DPAS]	`08 40`	
DF 11	PDOL Check Table - Profile (PDOLP) [DPAS]	`01 09 41 00 00 41 A0 11 FF 01 01`	

DF 20	Transaction Profile Objects(TPO0) [DPAS]	`00 18 00 08 01 01 00 10 01 01 00 18`
		`01 01 00 00 00 00 00 00 00 00 00 00`
		`00 00 00 00 00 00 00 00 00 00 00 01`
		`00 FE 1F 2E 1F 00 00 00 00 00 00 00`
		`00 00 00 00 00 00 00 00 00 00 00 00`
		`00 00`	

DF 21	Transaction Profile Objects(TPO1) [DPAS]	`E0 10 00 08 01 01 00 10 01 01 00 18`
		`02 02 00 00 00 00 00 00 00 00 00 00`
		`00 00 00 00 00 00 00 00 00 00 00 01`
		`00 FE 1F 2E 1F 00 00 00 00 00 00 00`
		`00 00 00 00 00 00 00 00 00 00 00 00`
		`00 00`	

* Tag value changes with card usage

4.12.5   CTLS: CVM List - Discover U.S. Debit, AID A0000001524010 (D-PAS EMV, Online)

Cardholder Verification Method List ('0203 1F03')			
CVM	**Verification Method**	**Conditions**	**If unsuccessful**
1	Online PIN	Terminal supports CVM type	Fail
2	No CVM required	Terminal supports CVM type	Fail

4.12.6   CTLS: Application Tag data, AID A0000001524010 (D-PAS EMV, Online)

Tag	Element name	Data	Card v7.x
42	Issuer Identification Number (IIN)	`60 11 97`	
50	Application Label	`55 53 20 44 45 42 49 54 20 20 20 20` `20 20 20 20` - 'US DEBIT'	
57	Track 2 Data [Discover]	`60 11 97 37 00 00 01 38 D2 60 52 01` `10 00 01 05 00 00 0F`	
5A	Application Primary Account Number (PAN)	`60 11 97 37 00 00 01 38`	
5F 20	Cardholder Name	`44 49 53 43 4F 56 45 52 20 43 41 52` `44 4D 45 4D 42 45 52 20` - 'DISCOVER CARDMEMBER'	
5F 24	Application Expiration Date	`26 05 31`	
5F 25	Application Effective Date	`xx xx xx` *	
5F 28	Issuer Country Code	`08 40` - USA	
5F 2D	Language Preference	`65 6E 65 73 66 72` - 'enesfr' (English, Spanish, French)	
5F 30	Service Code	`02 01`	
5F 34	Application PAN Sequence Number	`01`	
5F 55	Issuer Country Code (alpha2 format)	`55 53` - 'US'	

Tag	Element name	Data	Card v7.x
82	Application Interchange Profile [DPAS CL]	`10 00` BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt NOT to be performed b3 - Issuer authentication NOT supported via EXTERNAL AUTH command b1 - Combined DDA / GEN AC NOT supported	
84	Dedicated File (DF) Name	`A0 00 00 01 52 40 10`	
87	Application Priority Indicator	`01`	
8E	Cardholder Verification Method (CVM) List	`00 00 00 00 00 00 00 00 02 03 1F 03`	
94	Application File Locator (AFL)	`08 01 02 00 18 01 01 00`	
9F 07	Application Usage Control	`FF 00`	
9F 08	Application Version Number	`00 01`	
9F 10	Issuer Application Data [DPAS CL]	`xx 15 xx xx xx xx xx xx xx xx *`	
9F 26	Application Cryptogram (AC)	`xx xx xx xx xx xx xx xx *`	
9F 27	Cryptogram Information Data (CID)	`80`	
9F 36	Application Transaction Counter (ATC)	`xx xx *`	
9F 38	Processing Options Data Object List (PDOL)	`9F 66 04 9F 02 06 9F 03 06 9F 1A 02` `5F 2A 02 9A 03 9C 01 9F 37 04`	
9F 4D	Transaction Log Entry	`0B 0A`	

9F 4F	Transaction Log Format	`9F 02 06 5F 2A 02 9A 03 9F 36 02 9F`
		`34 03 9F 52 06 9F 1A 02 95 05 9C 01`
		`8A 02 9F 37 04 9F 03 06 9F 53 08 9F`
		`66 04 9F 71 02`	

9F 71	Card Processing Requirements [DPAS]	`00 89` BYTE 2 (Permanent Data): b8 - Do switch to other interface if unable to process online b7 - Do NOT process online if CDA failed b6 - Do NOT decline/switch other interface if CDA failed b5 - Issuer Update Processing NOT supported b4 - Do process online if card expired b3 - Do NOT decline if card expired b2 - CVM Fallback to Signature NOT allowed b1 - CVM Fallback to 'No CVM' allowed	
9F 78	Application State [D-PAS]	`01`	
BF 51	Contactless D-PAS MS and ZIP Default Profile	`82 02 00 00 94 04 08 01 01 00`	
C0	Contactless Application Configuration Options (CL-ACO)	`03 88`	
C2	Issuer Life Cycle Data (ILCD) [DPAS]	`00 00 00 00 00 00 00 00 00 00 00 00` `00 00 00 00 00 00 00 00 00 00 00 00` `00 00 00 00 00 00 00 00 00 00 00 00` `00 00 00 00 00 00 00 00 00 00 00 00`	
C3	Currency Conversion Codes 1 [DPAS]	`08 40 00 01 00`	
C4	Currency Conversion Codes 2 [DPAS]	`08 40 00 01 00`	
C8	Lower Consecutive Offline Amount (LCOA) Limit [DPAS]	`00 00 00 00 00 00`	
C9	Upper Consecutive Offline Amount Limit (UCOA) [DPAS]	`00 00 00 00 00 00`	
CA	Single Transaction Amount (STA) Limit [DPAS]	`00 00 00 00 00 00`	
CB	Lower Consecutive Offline Limit (LCOL) [DPAS]	`00`	
CC	Upper Consecutive Offline Transaction Limit (UCOL) [DPAS]	`00`	

Tag	Element name	Data	Card v7.x
CD	Number of Consecutive Offline Transactions (NCOT) [DPAS]	`00`	
CE	Cumulative Offline Amount [DPAS]	`00 00 00 00 00 00`	
D1	Offline Balance [DPAS]	`00 00 00 00 00 00`	
D2	CRM Country Code [DPAS]	`08 40` - USA	
D3	CRM Currency Code [DPAS]	`08 40` - USD	
D4	CVM-Accumulator [DPAS]	`00 00 00 00 00 00`	
D5	CVM-Cum limit 1	`00 00 00 00 00 00`	
D6	CVM-Cum limit 2	`00 00 00 00 00 00`	
D7	CVM-STA limit 1	`00 00 00 00 00 00`	
D8	CVM-STA limit 2	`00 00 00 00 00 00`	
D9	CVM-Counter	`00`	
DA	CVM-Cons limit 1	`00`	
DB	CVM-Cons limit 2	`00`	
DE	Counter and Accumulator Control Options (CACO) [D-PAS]	`C1 01 09 01 01 00`	
DF 11	PDOL Check Table - Profile (PDOLP) [DPAS]	`01 09 41 00 00 41 A0 11 FF 01 01`	

DF 21	Transaction Profile Objects(TPO1) [DPAS]	`40 40 00 10 00 08 01 02 00 00 00 00`
		`00 00 00 00 00 00 00 00 00 00 00 00`
		`00 00 00 00 00 00 00 00 00 00 00 00`
		`00 00 00 A0 8B 00 00 00 00 00 00 00`
		`00 00 00 00 00 00 00 00 00 00 00 00`
		`00 00 00 00 00 00 00 00 00 00 00 00`
		`00 00 00 00 00 00 00 00 00 00 00 00`
		`00 00 00 00 00 00 00 00 00 00 00 00`
		`00 00 00 00 00 00 00 00 00 00 00 00`
		`00 00 00 00 00 00 00 00 00 00 00 00`
		`00 00 00 00 00 00 00 00 00 00 00 00`
		`00 00 00 00 00 00 00 00 00 00 00 00`
		`00 00 00 00 00 04 02`	

DF 30	CRM-CAC Switch Interface [D-PAS]	`00 00 00`	
DF 31	CRM-CAC Denial [D-PAS]	`00 00 00`	
DF 32	CRM-CAC Online [D-PAS]	`C8 7E FF`	
DF 33	CRM-CAC Default [D-PAS]	`98 3E EB`	
DF 34	CVM Card Action Codes - Online	`40 80`	
DF 35	CVM Card Action Codes - Signature	`00 80`	
DF 40	CL-Accumulator	`00 00 00 00 00 00`	
DF 41	CL-Cum Limit	`00 00 00 00 00 00`	
DF 42	CL-STA	`00 00 00 00 00 00`	
DF 43	CL-Counter	`00`	
DF 44	CL-Cons Limit	`00`	

* Tag value changes with card usage

4.12.7   CTLS: Application Tag data, AID A0000001523010 (D-PAS EMV, Online)

Tag	Element name	Data	Card v7.x
42	Issuer Identification Number (IIN)	`60 11 97`	
50	Application Label	`44 49 53 43 4F 56 45 52 20 44 45 42` `49 54 20 20` - 'DISCOVER DEBIT'	
57	Track 2 Data [Discover]	`60 11 97 37 00 00 01 38 D2 60 52 01` `10 00 01 05 00 00 0F`	
5A	Application Primary Account Number (PAN)	`60 11 97 37 00 00 01 38`	
5F 20	Cardholder Name	`44 49 53 43 4F 56 45 52 20 43 41 52` `44 4D 45 4D 42 45 52 20` - 'DISCOVER CARDMEMBER'	
5F 24	Application Expiration Date	`26 05 31`	
5F 25	Application Effective Date	`xx xx xx`	
5F 28	Issuer Country Code	`08 40` - USA	

Tag	Element name	Data	Card v7.x
5F 2D	Language Preference	`65 6E 65 73 66 72` - 'enesfr' (English, Spanish, French)	
5F 30	Service Code	`02 01`	
5F 34	Application PAN Sequence Number	`01`	
5F 55	Issuer Country Code (alpha2 format)	`55 53` - 'US'	
82	Application Interchange Profile [DPAS CL]	`10 00` BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt NOT to be performed b3 - Issuer authentication NOT supported via EXTERNAL AUTH command b1 - Combined DDA / GEN AC NOT supported	
84	Dedicated File (DF) Name	`A0 00 00 01 52 30 10`	
87	Application Priority Indicator	`02`	
94	Application File Locator (AFL)	`08 01 02 00`	
9F 07	Application Usage Control	`FF 00`	
9F 08	Application Version Number	`00 01`	
9F 10	Issuer Application Data [DPAS CL]	`xx 15 xx xx xx xx xx xx xx xx *`	
9F 26	Application Cryptogram (AC)	`xx xx xx xx xx xx xx xx *`	
9F 27	Cryptogram Information Data (CID)	`80`	
9F 36	Application Transaction Counter (ATC)	`xx xx *`	
9F 38	Processing Options Data Object List (PDOL)	`9F 66 04 9F 02 06 9F 03 06 9F 1A 02 5F 2A 02 9A 03 9C 01 9F 37 04`	
9F 4D	Transaction Log Entry	`0B 0A`	
9F 4F	Transaction Log Format	`9F 02 06 5F 2A 02 9A 03 9F 36 02 9F 34 03 9F 52 06 9F 1A 02 95 05 9C 01 8A 02 9F 37 04 9F 03 06 9F 53 08 9F 66 04 9F 71 02`	
9F 71	Card Processing Requirements [DPAS]	`00 8B` BYTE 2 (Permanent Data): b8 - Do switch to other interface if unable to process online b7 - Do NOT process online if CDA failed b6 - Do NOT decline/switch other interface if CDA failed b5 - Issuer Update Processing NOT supported b4 - Do process online if card expired b3 - Do NOT decline if card expired b2 - CVM Fallback to Signature allowed b1 - CVM Fallback to 'No CVM' allowed	
9F 78	Application State [D-PAS]	`01`	
BF 51	Contactless D-PAS MS and ZIP Default Profile	`82 02 00 00 94 04 08 01 01 00`	
C0	Contactless Application Configuration Options (CL-ACO)	`03 88`	
C2	Issuer Life Cycle Data (ILCD) [DPAS]	`00 00 00 00 00 00 00 00 00 00 00 00` `00 00 00 00 00 00 00 00 00 00 00 00` `00 00 00 00 00 00 00 00 00 00 00 00` `00 00 00 00 00 00 00 00 00 00 00 00`	
C3	Currency Conversion Codes 1 [DPAS]	`08 40 00 01 00`	
C4	Currency Conversion Codes 2 [DPAS]	`08 40 00 01 00`	
C8	Lower Consecutive Offline Amount (LCOA) Limit [DPAS]	`00 00 00 00 00 00`	
C9	Upper Consecutive Offline Amount Limit (UCOA) [DPAS]	`00 00 00 00 00 00`	
CA	Single Transaction Amount (STA) Limit [DPAS]	`00 00 00 00 00 00`	

Tag	Element name	Data	Card v7.x
CB	Lower Consecutive Offline Limit (LCOL) [DPAS]	00	
CC	Upper Consecutive Offline Transaction Limit (UCOL) [DPAS]	00	
CD	Number of Consecutive Offline Transactions (NCOT) [DPAS]	00	
CE	Cumulative Offline Amount [DPAS]	00 00 00 00 00 00	
D1	Offline Balance [DPAS]	00 00 00 00 00 00	
D2	CRM Country Code [DPAS]	08 40 - USA	
D3	CRM Currency Code [DPAS]	08 40 - USD	
D4	CVM-Accumulator [DPAS]	00 00 00 00 00 00	
D5	CVM-Cum limit 1	00 00 00 00 00 00	
D6	CVM-Cum limit 2	00 00 00 00 00 00	
D7	CVM-STA limit 1	00 00 00 00 00 00	
D8	CVM-STA limit 2	00 00 00 00 00 00	
D9	CVM-Counter	00	
DA	CVM-Cons limit 1	00	
DB	CVM-Cons limit 2	00	
DE	Counter and Accumulator Control Options (CACO) [D-PAS]	C1 01 09 01 01 00	
DF 11	PDOL Check Table - Profile (PDOLP) [DPAS]	01 09 41 00 00 41 A0 11 FF 01 01	
DF 21	Transaction Profile Objects(TPO1) [DPAS]	40 40 00 10 00 08 01 02 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 A0 8B 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 04 02	
DF 30	CRM-CAC Switch Interface [D-PAS]	00 00 00	
DF 31	CRM-CAC Denial [D-PAS]	00 00 00	
DF 32	CRM-CAC Online [D-PAS]	C8 7E FF	
DF 33	CRM-CAC Default [D-PAS]	98 3E EB	
DF 34	CVM Card Action Codes - Online	40 80	
DF 35	CVM Card Action Codes - Signature	00 80	
DF 40	CL-Accumulator	00 00 00 00 00 00	
DF 41	CL-Cum Limit	00 00 00 00 00 00	
DF 42	CL-STA	00 00 00 00 00 00	
DF 43	CL-Counter	00	
DF 44	CL-Cons Limit	00	

* Tag value changes with card usage

4.13 Test Card 13 - Discover, CO, 1-AID (U.S. Debit), English, USA, USD

A contact-only, single-AID Discover debit card with an Issuer Country Code of 'USA' and Currency Code of 'USD'.

The recommended transaction amount to generate a host approval is $79.00.

4.13.1   Contact: CVM List - Discover U.S. Debit, AID A0000001524010

Cardholder Verification Method List ('4203 1F03 0000')			
CVM	**Verification Method**	**Conditions**	**If unsuccessful**
1	Online PIN	Terminal supports CVM type	Next CVM
2	No CVM required	Terminal supports CVM type	Fail
3	No CVM required	Always	Fail

4.13.2   Contact: Application Tag data, AID A0000001524010

Tag	Element name	Data	Card v6.x
42	Issuer Identification Number (IIN)	`60 11 97`	
50	Application Label	`55 53 20 44 45 42 49 54 20 20 20 20 20 20 20 20` - 'US DEBIT'	
57	Track 2 Data [Discover]	`60 11 97 37 00 00 01 20 D2 60 52 01 10 00 01 92 00 00 0F`	
5A	Application Primary Account Number (PAN)	`60 11 97 37 00 00 01 20`	
5F 20	Cardholder Name	`55 53 41 20 44 45 42 49 54 2F 54 65 73 74 20 43 61 72 64 20 31 33 20 20 20 20` - 'USA DEBIT/Test Card 13'	
5F 24	Application Expiration Date	`26 05 31`	
5F 25	Application Effective Date	`xx xx xx *`	
5F 28	Issuer Country Code	`08 40` - USA	
5F 2D	Language Preference	`65 6E` - 'en' (English)	
5F 30	Service Code	`02 01`	
5F 34	Application PAN Sequence Number	`01`	
5F 55	Issuer Country Code (alpha2 format)	`55 53` - 'US'	
82	Application Interchange Profile	`18 00` BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - EMV Contactless NOT supported	
84	Dedicated File (DF) Name	`A0 00 00 01 52 40 10`	
87	Application Priority Indicator	`01`	
8C	Card Risk Management Data Object List 1 (CDOL1)	`9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04 9F 35 01 9F 34 03`	
8D	Card Risk Management Data Object List 2 (CDOL2)	`91 0A 8A 02 95 05 9F 37 04`	
8E	Cardholder Verification Method (CVM) List	`00 00 00 00 00 00 00 00 02 03 1F 03 00 00 00 00`	
94	Application File Locator (AFL)	`08 01 01 00 10 01 02 00 18 01 01 00`	
9F 07	Application Usage Control	`AB 00`	
9F 0D	Issuer Action Code - Default	`B0 68 C4 E8 00`	
9F 0E	Issuer Action Code - Denial	`00 10 00 00 00`	
9F 0F	Issuer Action Code - Online	`B0 68 C4 F8 00`	
9F 10	Issuer Application Data [DPAS]	`xx 06 xx xx xx xx xx xx *`	

Tag	Element name	Data	Card v6.x
9F 11	Issuer Code Table Index	`01`	
9F 12	Application Preferred Name	`55 53 20 44 65 62 69 74 20 20 20 20 20 20 20 20` - 'US Debit	
9F 17	Personal Identification Number (PIN) Try Counter	`03`	
9F 26	Application Cryptogram (AC)	`xx xx xx xx xx xx xx xx *`	
9F 27	Cryptogram Information Data (CID)	`80`	
9F 36	Application Transaction Counter (ATC)	`xx xx *`	
9F 4D	Transaction Log Entry	`0B 0A`	
9F 4F	Transaction Log Format	`9F 02 06 5F 2A 02 9A 03 9F 36 02 9F 34 03 9F 52 06 9F 1A 02 95 05 9C 01 8A 02`	
9F 78	Application State [D-PAS]	`01`	
C1	Application Configuration Options [DPAS]	`15 40`	
C2	Issuer Life Cycle Data (ILCD) [DPAS]	`00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00`	
C3	Currency Conversion Codes 1 [DPAS]	`08 40 00 01 00`	
C4	Currency Conversion Codes 2 [DPAS]	`08 40 00 01 00`	
C5	Card Action Code - Denial [DPAS]	`01 00`	
C6	Card Action Code - Default [DPAS]	`2E 1F`	
C7	Card Action Code - Online [DPAS]	`FE 1F`	
D2	CRM Country Code [DPAS]	`08 40` - USA	
D3	CRM Currency Code [DPAS]	`08 40` - USD	
DF 11	PDOL Check Table - Profile (PDOLP) [DPAS]	`01 09 41 00 00 41 A0 00 0F 01 01`	
DF 20	Transaction Profile Objects(TPO0) [DPAS]	`00 18 00 08 01 01 00 10 01 02 00 18 01 01 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 01 00 FE 1F 2E 1F 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00`	

* Tag value changes with card usage

4.14 Test Card 14 - DNA, CO, 1 AID (DNA), English, USA, USD

A contact-only, single-AID Debit Network Alliance debit card with an Issuer Country Code of 'USA' and Currency Code of 'USD'.

The recommended transaction amount to generate a host approval is $10.00.

4.14.1   Contact: CVM List - DNA, AID A0000006200620

Cardholder Verification Method List ('0201 0204 0203 1F03')			
CVM	**Verification Method**	**Conditions**	**If unsuccessful**
1	Online PIN	Unattended Cash	Fail
2	Online PIN	Manual Cash	Fail
3	Online PIN	Terminal supports CVM type	Fail
4	No CVM required	Always	Fail

4.14.2 Contact: Application Tag data, AID A0000006200620

Tag	Element name	Data	Card v6.x
50	Application Label	44 4E 41 - 'DNA'	
57	Track 2 Data [Discover]	40 00 00 00 00 00 00 28 D2 51 22 01 56 78 00 00 00 35 1F	
5A	Application Primary Account Number (PAN)	40 00 00 00 00 00 00 28	
5F 20	Cardholder Name	55 53 41 20 44 45 42 49 54 2F 54 65 73 74 20 43 61 72 64 20 31 34 20 20 20 20 - 'USA DEBIT/Test Card 14'	
5F 24	Application Expiration Date	25 12 31	
5F 25	Application Effective Date	xx xx xx *	
5F 28	Issuer Country Code	08 40 - USA	
5F 2D	Language Preference	65 6E - 'en' (English)	
5F 30	Service Code	02 01	
5F 34	Application PAN Sequence Number	01	
82	Application Interchange Profile	18 00 BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - EMV Contactless NOT supported	
84	Dedicated File (DF) Name	A0 00 00 06 20 06 20	
87	Application Priority Indicator	01	
8C	Card Risk Management Data Object List 1 (CDOL1)	9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04 9F 35 01 9F 34 03	
8D	Card Risk Management Data Object List 2 (CDOL2)	91 0A 8A 02 95 05 9F 37 04	
8E	Cardholder Verification Method (CVM) List	00 00 00 00 00 00 00 00 02 01 02 04 02 03 1F 03	
94	Application File Locator (AFL)	08 01 01 00 18 01 02 01	
9F 07	Application Usage Control	FF 00 BYTE 1: b8 - Domestic cash transactions valid b7 - Int'l cash transactions valid b6 - Domestic goods valid b5 - International goods valid b4 - Domestic services valid b3 - International services valid b2 - ATMs valid b1- Terminals other than ATMs valid BYTE 2: b8 - Domestic cashback NOT allowed b7 - International cashback NOT allowed	
9F 08	Application Version Number	00 01	
9F 0D	Issuer Action Code - Default	F0 40 E4 28 00	
9F 0E	Issuer Action Code - Denial	00 10 00 00 40	
9F 0F	Issuer Action Code - Online	F0 68 FC F8 00	
9F 10	Issuer Application Data [DPAS]	xx xx A0 xx xx xx xx *	
9F 11	Issuer Code Table Index	01	
9F 12	Application Preferred Name	44 65 62 69 74 - 'Debit'	
9F 17	Personal Identification Number (PIN) Try Counter	03	
9F 26	Application Cryptogram (AC)	xx xx xx xx xx xx xx xx *	
9F 27	Cryptogram Information Data (CID)	80	
9F 36	Application Transaction Counter (ATC)	xx xx *	

Tag	Element name	Data	Card v6.x
9F 4D	Transaction Log Entry	`0B 0A`	
9F 4F	Transaction Log Format	`9F 02 06 5F 2A 02 9A 03 9F 36 02 9F 34 03 9F 52 06 9F 1A 02 95 05 9C 01 8A 02 9F 37 04 9F 03 06 9F 53 08 9F 66 04 9F 71 02 9F 6C 02`	
9F 78	Application State [D-PAS]	`00`	
C1	Application Configuration Options [DPAS]	`15 60`	
C2	Issuer Life Cycle Data (ILCD) [DPAS]	`00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00`	
C3	Currency Conversion Codes 1 [DPAS]	`08 40 00 00 02`	
C4	Currency Conversion Codes 2 [DPAS]	`08 40 00 00 02`	
D0	Issuer Application Data ObjectList (IADOL) [DPAS]		
D2	CRM Country Code [DPAS]	`08 40` - USA	
D3	CRM Currency Code [DPAS]	`08 40` - USD	
DF 20	Transaction Profile Objects(TPO0) [DPAS]	`00 18 00 08 01 01 00 18 01 02 01 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 01 00 F6 1F 22 0B 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00`	

* Tag value changes with card usage

4.15 Test Card 15 - Interac, DI, 1-AID (Interac), English, CAN, CAD

A Dual Interface (Contact+Contactless), 1-AID(Interac) Interac (Canadian) debit card with an Issuer Country Code of 'Canada' and Currency Code of 'CAD'.

All Merchant Type Indicator (MTI) Limits (tags 9F52, 9F54, 9F55, 9F56, 9F57) set to $50.01

The recommended transaction amount to generate a host approval is $30.00.

4.15.1   Contact: CVM List - Interac, AID A0000002771010

Cardholder Verification Method List ('0403 0103 0203')			
CVM	**Verification Method**	**Conditions**	**If unsuccessful**
1	Offline Enciphered PIN	Termina supports CVM type	Fail
2	Offline Plaintext PIN	Termina supports CVM type	Fail
3	Online PIN	Termina supports CVM type	Fail

4.15.2   Contact: Application Tag data, AID A0000002771010

Tag	Element name	Data	Card v7.x
50	Application Label	`49 6E 74 65 72 61 63` - 'Interac'	
57	Track 2 Equivalent Data	`00 12 03 00 00 00 00 03 D2 81 22 20 08 97 74 00 00 00 1F`	
5A	Application Primary Account Number (PAN)	`00 12 03 00 00 00 00 03`	
5F 20	Cardholder Name	`55 53 41 20 44 45 42 49 54 2F 54 65 73 74 20 43 61 72 64 20 31 35 20 20 20 20` - 'USA DEBIT/Test Card 15'	
5F 24	Application Expiration Date	`28 12 31`	

Tag	Element name	Data	Card v7.x
5F 25	Application Effective Date	xx xx xx *	
5F 28	Issuer Country Code	01 24 - CAN	
5F 2D	Language Preference	65 6E 66 72 - 'enfr' (English, French)	
5F 30	Service Code	02 20	
5F 34	Application PAN Sequence Number	01	
5F 56	Issuer Country Code (alpha3 format)	43 41 4E - 'CAN'	
82	Application Interchange Profile	19 00 BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported b1 - Combined DDA / GEN AC supported BYTE 2: b8 - EMV Contactless NOT supported	
84	Dedicated File (DF) Name	A0 00 00 02 77 10 10	
87	Application Priority Indicator	01	
8C	Card Risk Management Data Object List 1 (CDOL1)	9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04 9F 45 02 9F 4C 08 9F 34 03	
8D	Card Risk Management Data Object List 2 (CDOL2)	91 0A 8A 02 95 05 9F 37 04 9F 4C 08	
8E	Cardholder Verification Method (CVM) List	00 00 00 00 00 00 00 00 04 03 01 03 02 03	
8F	Certification Authority Public Key Index	07	
90	Issuer Public Key Certificate	7E 37 FF 15 A4 88 1C 32 6D 5F 61 E4 D7 4A 00 39 24 76 D5 44 80 B9 16 92 4A 70 65 B7 B3 40 F3 1F A4 86 84 E1 99 CE 82 DA 3F F6 0C 77 4A 13 D0 0B C8 46 7B 87 1C 9E 00 40 28 FA 44 D9 55 38 0E D5 50 F9 F0 C8 B0 3B 3F 9A CE 0F FA FA 8B A6 B4 0C F9 69 A9 72 AF C9 D1 EC 56 25 A0 0B B8 0E E0 38 6E 57 22 BD FC 5C 7D 89 0C 71 5F 54 67 4F CE B2 0B 5E 0E 80 E8 77 0B 59 9E A4 E6 15 D8 60 2D 30 37 F4 CB B2 CC 6F 4D B2 99 34 78 FC CE 47 A5 23 59 AA 00 A4 94 C5 87 BB D3 2F 3B 64 A9 2E F8 77 47 25 66 A1 A7 24 F2 0B BB C8 24 26 9C 34 80 22 EF E7 83 85 13 A7 AD 3B DE 7B 2B 3D B8 8F 5F B3 A1 DA 45 B8 38 14 16 A1 0F 77 7E 55 07 B8 05 48 33 D3 99 97 C1 5B 34 34 E0 86 A7 B6 7F 6B B0 29 60 E1 F5 59 20 DC 2E 12 38 91 DA 23 34 03 AA D3 97 75 0F 44 56 09 CD 2A	
94	Application File Locator (AFL)	08 01 04 00 10 01 01 01 18 01 04 01	
9F 07	Application Usage Control	FF 00 BYTE 1: b8 - Domestic cash transactions valid b7 - Int'l cash transactions valid b6 - Domestic goods valid b5 - International goods valid b4 - Domestic services valid b3 - International services valid b2 - ATMs valid b1- Terminals other than ATMs valid BYTE 2: b8 - Domestic cashback NOT allowed b7 - International cashback NOT allowed	
9F 08	Application Version Number	00 02	

B2》

Tag	Element name	Data	Card v7.x
9F 0D	Issuer Action Code - Default	`FC 78 FC A8 40`	
9F 0E	Issuer Action Code - Denial	`00 00 00 00 00`	
9F 0F	Issuer Action Code - Online	`FC F8 FC F8 70`	
9F 10	Issuer Application Data [InteracFlash]	`xx 02 xx xx xx xx xx xx xx xx xx xx` `xx xx xx xx xx xx xx xx xx xx *`	
9F 13	Last Online Application Transaction Counter (ATC) Register	`xx xx *`	
9F 17	Personal Identification Number (PIN) Try Counter	`99`	
9F 27	Cryptogram Information Data (CID)	`80`	
9F 32	Issuer Public Key Exponent	`01 00 01`	
9F 36	Application Transaction Counter (ATC)	`xx xx *`	
9F 42	Application Currency Code	`01 24` - CAD	
9F 44	Application Currency Exponent	`02`	

9F 46	ICC Public Key Certificate	`55 DF E1 E2 CD 4F 10 63 CD CE 9F D8`
		`67 D0 B2 36 E4 FC 13 85 C3 1A 82 1A`
		`DA 2E D9 28 24 52 C8 CB 7A 67 45 5B`
		`B3 B2 38 CD B4 B1 20 17 CE 75 7C 84`
		`E6 FC E8 15 A9 AC 63 0F 98 04 9C 7E`
		`6C 25 F6 47 BB 64 4D C9 97 37 46 2A`
		`A8 EB F2 9E 5E DD 8E 93 DE EA B3 5E`
		`54 FF 2D D8 2A B1 22 F8 BE D8 59 D9`
		`49 20 B0 D1 29 DC 09 1D BD 9A 3A AA`
		`A9 90 CB E9 FB D2 C8 E4 72 9C 7A FB`
		`26 B4 2C 31 6D 09 B0 71 1F 39 4A 16`
		`3D 81 8B C3 66 97 68 66 9C AD 94 69`
		`E9 78 0D 15 C5 60 49 6A 99 D2 1A 1B`
		`C2 56 A0 8E 13 A6 B1 8D 7C 27 59 63`
		`AC E2 CE D0 94 7B 24 02`	

9F 47	ICC Public Key Exponent	`01 00 01`	
9F 48	ICC Public Key Remainder	`4A 69 14 C9 E8 EA 10 F7 E3 7D`	
9F 4A	Static Data Authentication Tag List	`82`	
9F 4D	Transaction Log Entry	`0B 0A`	
9F 4F	Transaction Log Format	`9F 02 06 5F 2A 02 9A 03 9F 36 02 9F` `1A 02 95 05 9C 01 8A 02`	
9F 62	Card Product Code [InteracFlash]	`00 01`	
9F 70	Form Factor Indicator [InteracFlash]	`00`	
DF 62	Application Selection Flag [Canada]	`80 80`	

* Tag value changes with card usage

4.15.3   CTLS: Application Tag data, AID A0000002771010 (Flash)

Tag	Element name	Data	Card v7.x
50	Application Label	`49 6E 74 65 72 61 63` - 'Interac'	
57	Track 2 Equivalent Data	`00 12 03 00 00 00 00 03 D2 81 22 20` `08 97 74 00 00 00 1F`	
5A	Application Primary Account Number (PAN)	`00 12 03 00 00 00 00 03`	
5F 24	Application Expiration Date	`28 12 31`	
5F 25	Application Effective Date	`xx xx xx *`	
5F 28	Issuer Country Code	`01 24` - CAN	
5F 2D	Language Preference	`65 6E 66 72` - 'enfr' (English, French)	
5F 30	Service Code	`02 20`	
5F 34	Application PAN Sequence Number	`01`	
5F 56	Issuer Country Code (alpha3 format)	`43 41 4E` - 'CAN'	

Tag	Element name	Data Card v7.x
82	Application Interchange Profile	01 00 BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification NOT supported b4 - Terminal risk mgmt NOT to be performed b3 - Issuer authentication NOT supported b1 - Combined DDA / GEN AC supported BYTE 2: b8 - EMV Contactless NOT supported
84	Dedicated File (DF) Name	A0 00 00 02 77 10 10
87	Application Priority Indicator	01
8C	Card Risk Management Data Object List 1 (CDOL1)	9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04 9F 45 02 9F 4C 08 9F 34 03
8F	Certification Authority Public Key Index	07
90	Issuer Public Key Certificate	7E 37 FF 15 A4 88 1C 32 6D 5F 61 E4 D7 4A 00 39 24 76 D5 44 80 B9 16 92 4A 70 65 B7 B3 40 F3 1F A4 86 84 E1 99 CE 82 DA 3F F6 0C 77 4A 13 D0 0B C8 46 7B 87 1C 9E 00 40 28 FA 44 D9 55 38 0E D5 50 F9 F0 C8 B0 3B 3F 9A CE 0F FA FA 8B A6 B4 0C F9 69 A9 72 AF C9 D1 EC 56 25 A0 0B B8 0E E0 38 6E 57 22 BD FC 5C 7D 89 0C 71 5F 54 67 4F CE B2 0B 5E 0E 80 E8 77 0B 59 9E A4 E6 15 D8 60 2D 30 37 F4 CB B2 CC 6F 4D B2 99 34 78 FC CE 47 A5 23 59 AA 00 A4 94 C5 87 BB D3 2F 3B 64 A9 2E F8 77 47 25 66 A1 A7 24 F2 0B BB C8 24 26 9C 34 80 22 EF E7 83 85 13 A7 AD 3B DE 7B 2B 3D B8 8F 5F B3 A1 DA 45 B8 38 14 16 A1 0F 77 7E 55 07 B8 05 48 33 D3 99 97 C1 5B 34 34 E0 86 A7 B6 7F 6B B0 29 60 E1 F5 59 20 DC 2E 12 38 91 DA 23 34 03 AA D3 97 75 0F 44 56 09 CD 2A
94	Application File Locator (AFL)	08 01 04 00 10 01 05 03
9F 07	Application Usage Control	FF 00 BYTE 1: b8 - Domestic cash transactions valid b7 - Int'l cash transactions valid b6 - Domestic goods valid b5 - International goods valid b4 - Domestic services valid b3 - International services valid b2 - ATMs valid b1- Terminals other than ATMs valid BYTE 2: b8 - Domestic cashback NOT allowed b7 - International cashback NOT allowed
9F 08	Application Version Number	00 02
9F 0D	Issuer Action Code - Default	FC F8 FC F8 00
9F 0E	Issuer Action Code - Denial	00 00 00 00 00
9F 0F	Issuer Action Code - Online	FC F8 FC F8 00
9F 10	Issuer Application Data [InteracFlash]	xx 02 xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx *
9F 13	Last Online Application Transaction Counter (ATC) Register	xx xx *
9F 17	Personal Identification Number (PIN) Try Counter	99
9F 27	Cryptogram Information Data (CID)	80
9F 32	Issuer Public Key Exponent	01 00 01

Tag	Element name	Data	Card v7.x
9F 36	Application Transaction Counter (ATC)	`xx xx *`	
9F 38	Processing Options Data Object List (PDOL)	`9F 59 03 9F 5A 01 9F 02 06 9F 1A 02` `5F 2A 02 9F 37 04 9F 58 01`	
9F 42	Application Currency Code	`01 24 - CAD`	
9F 44	Application Currency Exponent	`02`	

9F 46	ICC Public Key Certificate	`E8 14 8E 63 62 E5 81 A3 37 9C 7E 26`
		 `05 40 06 1D B9 43 9D A8 B7 B1 E5 B0`
		 `2F EE 26 1A 6B E1 60 BD 65 1F 6D 0E`
		 `86 A8 9B 61 A2 D2 55 40 4C 6A 55 6D`
		 `E5 2D 1C 3F 66 F9 16 9A 77 57 38 B0`
		 `E1 10 0A 9E 09 E4 A0 A8 D9 63 27 85`
		 `86 02 56 44 10 7C 01 90 C5 89 E9 15`
		 `50 62 3D C6 A4 14 4B 62 A9 70 1E 24`
		 `46 59 CB 66 F6 D9 59 10 4D 54 4E 48`
		 `01 55 91 AD 03 72 7A F1 A4 C3 8B A2`
		 `39 FD 64 79 0E 8E 29 64 10 4B 66 7F`
		 `F3 FE 04 00 07 E2 68 48 2E D0 4F BF`
		 `A8 49 7D 08 B3 38 30 F6 32 13 4A 5C`
		 `F8 A8 40 C2 18 44 0B 47 CB DA A6 16`
		 `34 58 1F 2B F6 FD DD ED`	

9F 47	ICC Public Key Exponent	`01 00 01`	
9F 48	ICC Public Key Remainder	`4A 69 14 C9 E8 EA 10 F7 E3 7D`	
9F 4A	Static Data Authentication Tag List	`82`	
9F 4D	Transaction Log Entry	`0B 0A`	
9F 4F	Transaction Log Format	`9F 02 06 5F 2A 02 9A 03 9F 36 02 9F` `1A 02 95 05 9C 01 8A 02`	
9F 52	Merchant Type Indicator Limits 01	`00 00 00 02 50 01 99 99 99 99 99 99`	
9F 54	Merchant Type Indicator Limits 02	`00 00 00 02 50 01 99 99 99 99 99 99`	
9F 55	Merchant Type Indicator Limits 03	`00 00 00 02 50 01 99 99 99 99 99 99`	
9F 56	Merchant Type Indicator Limits 04	`00 00 00 02 50 01 99 99 99 99 99 99`	
9F57	Merchant Type Indicator Limits 05	`00 00 00 02 50 01 99 99 99 99 99 99`	
9F 62	Card Product Code [InteracFlash]	`00 01`	
9F 63	Card Transaction Information [InteracFlash]	`00 10 00 00`	
9F 70	Form Factor Indicator [InteracFlash]	`00`	
DF 62	Application Selection Flag [Canada]	`80 80`	

* Tag value changes with card usage

4.16 Test Card 16 - Mastercard, CO, 3-AID, English, USA, USD

A contact-only, 3-AID Mastercard Credit / Debit card with an Issuer Country Code of 'USA' and Currency Code of 'USD'.

The recommended transaction amount to generate a host approval is $10.00.

4.16.1   Contact: CVM List - Mastercard, AID A000000004101001

Cardholder Verification Method List ('4103 4203 5E03 1F00 0000')			
CVM	**Verification Method**	**Conditions**	**If unsuccessful**
1	Offline Plaintext PIN	Terminal supports CVM type	Next CVM
2	Online PIN	Terminal supports CVM type	Next CVM
3	Signature (Paper)	Terminal supports CVM type	Next CVM
4	No CVM required	Always	Fail
5	Fail CVM Processing	Always	Fail

4.16.2 Contact: Application Tag data, AID A000000004101001

Tag	Element name	Data Card v6.x
50	Application Label	4D 41 53 54 45 52 43 41 52 44 43 52 45 44 49 54 - 'MASTERCARDCREDIT'
57	Track 2 Equivalent Data	54 13 33 00 89 02 00 60 D2 51 22 01 14 83 59 49 00 0F
5A	Application Primary Account Number (PAN)	54 13 33 00 89 02 00 60
5F 20	Cardholder Name	55 53 41 20 44 45 42 49 54 2F 54 65 73 74 20 43 61 72 64 20 31 36 20 20 20 20 - 'USA DEBIT/Test Card 16'
5F 24	Application Expiration Date	25 12 31
5F 25	Application Effective Date	xx xx xx *
5F 28	Issuer Country Code	08 40 - USA
5F 2D	Language Preference	65 6E - 'en' (English)
5F 30	Service Code	02 01
5F 34	Application PAN Sequence Number	01
82	Application Interchange Profile	18 00 BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported via EXTERNAL AUTH command b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - EMV Contactless NOT supported
84	Dedicated File (DF) Name	A0 00 00 00 04 10 10 01
87	Application Priority Indicator	01
8C	Card Risk Management Data Object List 1 (CDOL1)	9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04 9F 35 01 9F 45 02 9F 4C 08 9F 34 03 9F 21 03 9F 7C 14
8D	Card Risk Management Data Object List 2 (CDOL2)	91 0A 8A 02 95 05 9F 37 04 9F 4C 08
8E	Cardholder Verification Method (CVM) List	00 00 00 00 00 00 00 00 41 03 42 03 5E 03 1F 00 00 00
94	Application File Locator (AFL)	08 01 01 00 10 01 02 00
94	Application File Locator (AFL)	08 01 01 00 10 01 02 00
9F 07	Application Usage Control	FF 00 BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions valid b6 - Domestic goods valid b5 - International goods valid b4 - Domestic services valid b3 - International services valid b2 - ATMs valid b1 - non-ATM terminals valid BYTE 2: b8 - Domestic cashback NOT allowed b7 - International cashback NOT allowed
9F 08	Application Version Number	00 02
9F 0D	Issuer Action Code - Default	B0 50 BC 88 00
9F 0E	Issuer Action Code - Denial	00 00 00 00 00
9F 0F	Issuer Action Code - Online	B0 70 BC 98 00
9F 10	Issuer Application Data [M/Chip Advance]	xx 14 xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx *
9F 11	Issuer Code Table Index	01

Tag	Element name	Data	Card v6.x
9F 12	Application Preferred Name	`4D 61 73 74 65 72 63 61 72 64 43 72` `65 64 69 74` - 'MastercardCredit'	
9F 14	Counter 1 Lower Limit [Mastercard]	`00`	
9F 17	Personal Identification Number (PIN) Try Counter	`09`	
9F 23	Counter 1 Upper Limit [Mastercard]	`00`	
9F 26	Application Cryptogram (AC)	`2B FB AF 1A 64 BF F4 32`	
9F 27	Cryptogram Information Data (CID)	`80`	
9F 36	Application Transaction Counter (ATC)	`xx xx *`	
9F 42	Application Currency Code	`08 40` - USD	
9F 4D	Transaction Log Entry	`0B 0A`	

9F 4F	Transaction Log Format	`9F 27 01 9F 02 06 5F 2A 02 9A 03 9F`
		`36 02 9F 52 06 DF 3E 01 9F 21 03 9F`
		`7C 14`	

9F 7E	Application Life Cycle Data [Mastercard]	`04 10 0B 14 00 01 00 00 12 00 02 59`
		`A0 00 00 00 04 10 10 00 00 00 00 00`
		`00 00 00 00 00 00 00 00 00 00 00 00`
		`00 00 00 00 00 00 00 00 00 00 00 00`	

C3	Card Issuer Action Code (Contact) - Decline [M/Chip Advance]	`00 00 00`	
C4	Card Issuer Action Code (Contact) - Default [M/Chip Advance]	`1F 50 00`	
C5	Card Issuer Action Code (Contact) - Online [M/Chip Advance]	`3F FB 00`	
C6	PIN Try Limit [M/Chip Advance]	`09`	
C7	CDOL1 Related Data Length [Mastercard]	`42`	
C8	CRM Country Code [Mastercard]	`08 40` - USA	
C9	Accumulator 1 Currency Code [Mastercard]	`08 40` - USD	
CA	Accumulator 1 Lower Limit [Mastercard]	`00 00 00 00 00 00`	
CB	Accumulator 1 Upper Limit [Mastercard]	`00 00 00 00 00 00`	
CD	Card Issuer Action Code (Contactless) - Default [M/Chip Advance]	`00 00 00`	
CE	Card Issuer Action Code (Contactless) - Online [M/Chip Advance]	`00 00 00`	
CF	Card Issuer Action Code (Contactless) - Decline [M/Chip Advance]	`00 00 00`	

D1	Accumulator 1 Currency Conversion Table [Mastercard]	`08 40 00 01 01 08 40 00 01 01 08 40`
		`00 01 01 08 40 00 01 01 08 40 00 01`
		`01`	

D3	Additional Check Table [Mastercard]	`00 00 00 FF FF FF FF FF FF FF FF FF` `FF FF FF FF FF FF`	
D5	Application Control [M/Chip Advance]	`86 00 80 00 C6 02`	
D6	Default ARPC Response Code [M/Chip Advance]	`00 10`	
D7	Application Control [M/Chip Advance]	`00 00 00 00 00 00`	
D9	Application File Locator (Contactless)		
DE	Log Data Table [M/Chip Advance]	`00 00 00 00 00 00 00 00 00`	
DF 02	Security Limits Status (Contact) [M/Chip Advance]	`00`	
DF 11	Accumulator 1 Control (Contact) [M/Chip Advance]	`C1`	
DF 12	Accumulator 1 Control (Contactless) [M/Chip Advance]	`00`	
DF 14	Accumulator 2 Control (Contact) [M/Chip Advance]	`00`	

Tag	Element name	Data	Card v6.x
DF 15	Accumulator 2 Control (Contactless) [M/Chip Advance]	`00`	
DF 16	Accumulator 2 Currency Code [Mastercard]	`08 40` - USD	
DF 17	Accumulator 2 Currency Conversion Table [Mastercard]	`08 40 00 01 01 08 40 00 01 01 08 40 00 01 01 08 40 00 01 01 08 40 00 01 01`	
DF 18	Accumulator 2 Lower Limit [Mastercard]	`00 00 00 00 00 00`	
DF 19	Accumulator 2 Upper Limit [Mastercard]	`00 00 00 00 00 00`	
DF 1A	Counter 1 Control (Contact) [M/Chip Advance]	`C1`	
DF 1B	Counter 1 Control (Contactless) [M/Chip Advance]	`00`	
DF 1D	Counter 2 Control (Contact) [M/Chip Advance]	`00`	
DF 1E	Counter 2 Control (Contactless) [M/Chip Advance]	`00`	
DF 1F	Counter 2 Lower Limit [Mastercard]	`00`	
DF 21	Counter 2 Upper Limit [Mastercard]	`00`	
DF 22	MTA CVM (Contact) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 23	MTA CVM (Contactless) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 24	MTA Currency Code [M/Chip Advance]	`08 40`	
DF 25	MTA NoCVM (Contact) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 26	MTA NoCVM (Contactless) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 27	Number Of Days Offline Limit [M/Chip Advance]	`99 99`	
DF 28	Accumulator 1 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 29	Accumulator 1 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2A	Accumulator 2 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2B	Accumulator 2 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2C	Counter 1 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2D	Counter 1 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2E	Counter 2 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2F	Counter 2 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 30	Interface Enabling Switch [M/Chip Advance]	`01`	
DF 35	Security Limits Status (Contactless) [M/Chip Advance]	`00`	
DF 37	Security Limits Status Common [M/Chip Advance]	`00`	
DF 3C	CVR Issuer Discretionary Data (Contact) [M/Chip Advance]	`00`	
DF 3D	CVR Issuer Discretionary Data (Contactless) [M/Chip Advance]	`00`	
DF 3F	Read Record Filter (Contact) [M/Chip Advance]	`00`	

Tag	Element name	Data	Card v6.x
DF 40	Read Record Filter (Contactless) [M/Chip Advance]		
DF 41	DS Management Control [M/Chip Advance]	`20`	

* Tag value changes with card usage

4.16.3 Contact: CVM List - Mastercard, AID A000000004101002

Cardholder Verification Method List ('4201 1E03 4203 1F03')			
CVM	**Verification Method**	**Conditions**	**If unsuccessful**
1	Online PIN	Unattended Cash	Next CVM
2	Signature (Paper)	Terminal supports CVM type	Fail
3	Online PIN	Terminal supports CVM type	Next CVM
4	No CVM required	Terminal supports CVM type	Fail

4.16.4 Contact: Application Tag data, AID A000000004101002

Tag	Element name	Data	Card v6.x
42	Issuer Identification Number (IIN)	`54 13 33`	
50	Application Label	`44 45 42 49 54 20 4D 41 53 54 45 52 43 41 52 44` - 'DEBIT MASTERCARD'	
57	Track 2 Equivalent Data	`54 13 33 00 89 09 91 30 D2 51 22 01 14 83 59 49 00 0F`	
5A	Application Primary Account Number (PAN)	`54 13 33 00 89 09 91 30`	
5F 20	Cardholder Name	`55 53 41 20 44 45 42 49 54 2F 54 65 73 74 20 43 61 72 64 20 31 36 20 20 20 20` - 'USA DEBIT/Test Card 16'	
5F 24	Application Expiration Date	`25 12 31`	
5F 25	Application Effective Date	`xx xx xx *`	
5F 28	Issuer Country Code	`08 40` - USA	
5F 2D	Language Preference	`65 6E` - 'en' (English)	
5F 30	Service Code	`02 01`	
5F 34	Application PAN Sequence Number	`01`	
5F 55	Issuer Country Code (alpha2 format)	`55 53` - 'US'	
82	Application Interchange Profile	`18 00` BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported via EXTERNAL AUTH command b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - EMV Contactless NOT supported	
84	Dedicated File (DF) Name	`A0 00 00 00 04 10 10 02`	
87	Application Priority Indicator	`02`	
8C	Card Risk Management Data Object List 1 (CDOL1)	`9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04 9F 35 01 9F 45 02 9F 4C 08 9F 34 03 9F 21 03 9F 7C 14`	
8D	Card Risk Management Data Object List 2 (CDOL2)	`91 0A 8A 02 95 05 9F 37 04 9F 4C 08`	
8E	Cardholder Verification Method (CVM) List	`00 00 00 00 00 00 00 00 42 01 1E 03 42 03 1F 03`	
94	Application File Locator (AFL)	`08 01 01 00 10 01 02 00 18 01 01 00`	
94	Application File Locator (AFL)	`08 01 01 00 10 01 02 00 18 01 01 00`	

Tag	Element name	Data	Card v6.x
9F 07	Application Usage Control	`FF C0` BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions valid b6 - Domestic goods valid b5 - International goods valid b4 - Domestic services valid b3 - International services valid b2 - ATMs valid b1 - non-ATM terminals valid BYTE 2: b8 - Domestic cashback allowed b7 - International cashback allowed	
9F 08	Application Version Number	`00 02`	
9F 0D	Issuer Action Code - Default	`B0 50 9C 88 00`	
9F 0E	Issuer Action Code - Denial	`00 00 00 00 00`	
9F 0F	Issuer Action Code - Online	`B0 70 9C 98 00`	
9F 10	Issuer Application Data [M/Chip Advance]	`xx 10 xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx *`	
9F 11	Issuer Code Table Index	`01`	
9F 12	Application Preferred Name	`44 65 62 69 74 20 4D 61 73 74 65 72 63 61 72 64` - 'Debit Mastercardt'	
9F 14	Counter 1 Lower Limit [Mastercard]	`00`	
9F 17	Personal Identification Number (PIN) Try Counter	`09`	
9F 23	Counter 1 Upper Limit [Mastercard]	`00`	
9F 26	Application Cryptogram (AC)	`xx xx xx xx xx xx xx xx *`	
9F 27	Cryptogram Information Data (CID)	`80`	
9F 36	Application Transaction Counter (ATC)	`xx xx *`	
9F 42	Application Currency Code	`08 40` - USD	
9F 4D	Transaction Log Entry	`0B 0A`	
9F 4F	Transaction Log Format	`9F 27 01 9F 02 06 5F 2A 02 9A 03 9F 36 02 9F 52 06 DF 3E 01 9F 21 03 9F 7C 14`	
9F 7E	Application Life Cycle Data [Mastercard]	`04 10 0B 14 00 01 00 00 12 00 02 59 A0 00 00 00 04 10 10 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00`	
C3	Card Issuer Action Code (Contact) - Decline [M/Chip Advance]	`00 00 00`	
C4	Card Issuer Action Code (Contact) - Default [M/Chip Advance]	`06 50 00`	
C5	Card Issuer Action Code (Contact) - Online [M/Chip Advance]	`06 FB 00`	
C6	PIN Try Limit [M/Chip Advance]	`09`	
C7	CDOL1 Related Data Length [Mastercard]	`42`	
C8	CRM Country Code [Mastercard]	`08 40` - USA	
C9	Accumulator 1 Currency Code [Mastercard]	`08 40` - USD	
CA	Accumulator 1 Lower Limit [Mastercard]	`00 00 00 00 00 00`	
CB	Accumulator 1 Upper Limit [Mastercard]	`00 00 00 00 00 00`	
CD	Card Issuer Action Code (Contactless) - Default [M/Chip Advance]	`00 00 00`	
CE	Card Issuer Action Code (Contactless) - Online [M/Chip Advance]	`00 00 00`	
CF	Card Issuer Action Code (Contactless) - Decline [M/Chip Advance]	`00 00 00`	

Tag	Element name	Data Card v6.x
D1	Accumulator 1 Currency Conversion Table [Mastercard]	`08 40 00 01 01 08 40 00 01 01 08 40 00 01 01 08 40 00 01 01 08 40 00 01 01`
D3	Additional Check Table [Mastercard]	`00 00 00 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF`
D5	Application Control [M/Chip Advance]	`80 00 80 00 C6 02`
D6	Default ARPC Response Code [M/Chip Advance]	`00 10`
D7	Application Control [M/Chip Advance]	`00 00 00 00 00 00`
D9	Application File Locator (Contactless)	
DE	Log Data Table [M/Chip Advance]	`00 00 00 00 00 00 00 00 00`
DF 02	Security Limits Status (Contact) [M/Chip Advance]	`00`
DF 11	Accumulator 1 Control (Contact) [M/Chip Advance]	`C1`
DF 12	Accumulator 1 Control (Contactless) [M/Chip Advance]	`00`
DF 14	Accumulator 2 Control (Contact) [M/Chip Advance]	`00`
DF 15	Accumulator 2 Control (Contactless) [M/Chip Advance]	`00`
DF 16	Accumulator 2 Currency Code [Mastercard]	`08 40` - USD
DF 17	Accumulator 2 Currency Conversion Table [Mastercard]	`08 40 00 01 01 08 40 00 01 01 08 40 00 01 01 08 40 00 01 01 08 40 00 01 01`
DF 18	Accumulator 2 Lower Limit [Mastercard]	`00 00 00 00 00 00`
DF 19	Accumulator 2 Upper Limit [Mastercard]	`00 00 00 00 00 00`
DF 1A	Counter 1 Control (Contact) [M/Chip Advance]	`C1`
DF 1B	Counter 1 Control (Contactless) [M/Chip Advance]	`00`
DF 1D	Counter 2 Control (Contact) [M/Chip Advance]	`00`
DF 1E	Counter 2 Control (Contactless) [M/Chip Advance]	`00`
DF 1F	Counter 2 Lower Limit [Mastercard]	`00`
DF 21	Counter 2 Upper Limit [Mastercard]	`00`
DF 22	MTA CVM (Contact) [M/Chip Advance]	`00 00 00 00 00 00`
DF 23	MTA CVM (Contactless) [M/Chip Advance]	`00 00 00 00 00 00`
DF 24	MTA Currency Code [M/Chip Advance]	`08 40`
DF 25	MTA NoCVM (Contact) [M/Chip Advance]	`00 00 00 00 00 00`
DF 26	MTA NoCVM (Contactless) [M/Chip Advance]	`00 00 00 00 00 00`
DF 27	Number Of Days Offline Limit [M/Chip Advance]	`99 99`
DF 28	Accumulator 1 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`
DF 29	Accumulator 1 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`
DF 2A	Accumulator 2 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`
DF 2B	Accumulator 2 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`
DF 2C	Counter 1 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`

Tag	Element name	Data	Card v6.x
DF 2D	Counter 1 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2E	Counter 2 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2F	Counter 2 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 30	Interface Enabling Switch [M/Chip Advance]	`01`	
DF 35	Security Limits Status (Contactless) [M/Chip Advance]	`00`	
DF 37	Security Limits Status Common [M/Chip Advance]	`00`	
DF 3C	CVR Issuer Discretionary Data (Contact) [M/Chip Advance]	`00`	
DF 3D	CVR Issuer Discretionary Data (Contactless) [M/Chip Advance]	`00`	
DF 3F	Read Record Filter (Contact) [M/Chip Advance]	`00`	
DF 40	Read Record Filter (Contactless) [M/Chip Advance]		
DF 41	DS Management Control [M/Chip Advance]	`20`	

* Tag value changes with card usage

4.16.5 Contact: CVM List - Mastercard, AID A0000000042203

Cardholder Verification Method List ('0205 4203 1F03')			
CVM	**Verification Method**	**Conditions**	**If unsuccessful**
1	Online PIN	Purchase with Cashback	Fail
2	Online PIN	Terminal supports CVM type	Next CVM
3	No CVM required	Terminal supports CVM type	Fail

4.16.6 Contact: Application Tag data, AID A0000000042203

Tag	Element name	Data	Card v6.x
42	Issuer Identification Number (IIN)	`54 13 33`	
50	Application Label	`55 53 20 4D 41 45 53 54 52 4F 20 20 20 20 20 20` – 'US MAESTRO'	
57	Track 2 Equivalent Data	`54 13 33 00 89 09 91 30 D2 51 22 01 14 83 59 49 00 0F`	
5A	Application Primary Account Number (PAN)	`54 13 33 00 89 09 91 30`	
5F 20	Cardholder Name	`55 53 41 20 44 45 42 49 54 2F 54 65 73 74 20 43 61 72 64 20 31 36 20 20 20 20` - 'USA DEBIT/Test Card 16'	
5F 24	Application Expiration Date	`25 12 31`	
5F 25	Application Effective Date	`xx xx xx` *	
5F 28	Issuer Country Code	`08 40` - USA	
5F 2D	Language Preference	`65 6E` - 'en' (English)	
5F 30	Service Code	`02 01`	
5F 34	Application PAN Sequence Number	`01`	
5F 55	Issuer Country Code (alpha2 format)	`55 53` - 'US'	

Tag	Element name	Data	Card v6.x
82	Application Interchange Profile	`18 00` BYTE 1: b7 - Offline SDA NOT supported b6 - Offline DDA NOT supported b5 - Cardholder verification supported b4 - Terminal risk mgmt to be performed b3 - Issuer authentication NOT supported via EXTERNAL AUTH command b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - EMV Contactless NOT supported	
84	Dedicated File (DF) Name	`A0 00 00 00 04 22 03`	
87	Application Priority Indicator	`03`	
8C	Card Risk Management Data Object List 1 (CDOL1)	`9F 02 06 9F 03 06 9F 1A 02 95 05 5F 2A 02 9A 03 9C 01 9F 37 04 9F 35 01 9F 45 02 9F 4C 08 9F 34 03 9F 21 03 9F 7C 14`	
8D	Card Risk Management Data Object List 2 (CDOL2)	`91 0A 8A 02 95 05 9F 37 04 9F 4C 08`	
8E	Cardholder Verification Method (CVM) List	`00 00 00 00 00 00 00 00 02 05 42 03 1F 03`	
94	Application File Locator (AFL)	`08 01 01 00 10 01 02 00 20 01 01 00`	
94	Application File Locator (AFL)	`08 01 01 00 10 01 02 00 20 01 01 00`	
9F 07	Application Usage Control	`FF C0` BYTE 1: b8 - Domestic cash trans. valid b7 - Int'l cash transactions valid b6 - Domestic goods valid b5 - International goods valid b4 - Domestic services valid b3 - International services valid b2 - ATMs valid b1 - non-ATM terminals valid BYTE 2: b8 - Domestic cashback allowed b7 - International cashback allowed	
9F 08	Application Version Number	`00 02`	
9F 0D	Issuer Action Code - Default	`B0 50 9C 88 00`	
9F 0E	Issuer Action Code - Denial	`00 00 00 00 00`	
9F 0F	Issuer Action Code - Online	`B0 70 9C 98 00`	
9F 10	Issuer Application Data [M/Chip Advance]	`xx 10 xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx xx *`	
9F 11	Issuer Code Table Index	`01`	
9F 12	Application Preferred Name	`55 53 20 4D 61 65 73 74 72 6F 20 20 20 20 20 20` - 'US Maestro'	
9F 14	Counter 1 Lower Limit [Mastercard]	`00`	
9F 17	Personal Identification Number (PIN) Try Counter	`09`	
9F 23	Counter 1 Upper Limit [Mastercard]	`00`	
9F 26	Application Cryptogram (AC)	`xx xx xx xx xx xx xx xx *`	
9F 27	Cryptogram Information Data (CID)	`80`	
9F 36	Application Transaction Counter (ATC)	`00 04`	
9F 42	Application Currency Code	`08 40` - USD	
9F 4D	Transaction Log Entry	`0B 0A`	
9F 4F	Transaction Log Format	`9F 27 01 9F 02 06 5F 2A 02 9A 03 9F 36 02 9F 52 06 DF 3E 01 9F 21 03 9F 7C 14`	
9F 7E	Application Life Cycle Data [Mastercard]	`04 10 0B 14 00 01 00 00 12 00 02 59 A0 00 00 00 04 10 10 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00`	

Tag	Element name	Data	Card v6.x
C3	Card Issuer Action Code (Contact) - Decline [M/Chip Advance]	00 00 00	
C4	Card Issuer Action Code (Contact) - Default [M/Chip Advance]	06 50 00	
C5	Card Issuer Action Code (Contact) - Online [M/Chip Advance]	06 FB 00	
C6	PIN Try Limit [M/Chip Advance]	09	
C7	CDOL1 Related Data Length [Mastercard]	42	
C8	CRM Country Code [Mastercard]	08 40 – USA	
C9	Accumulator 1 Currency Code [Mastercard]	08 40 - USD	
CA	Accumulator 1 Lower Limit [Mastercard]	00 00 00 00 00 00	
CB	Accumulator 1 Upper Limit [Mastercard]	00 00 00 00 00 00	
CD	Card Issuer Action Code (Contactless) - Default [M/Chip Advance]	00 00 00	
CE	Card Issuer Action Code (Contactless) - Online [M/Chip Advance]	00 00 00	
CF	Card Issuer Action Code (Contactless) - Decline [M/Chip Advance]	00 00 00	
D1	Accumulator 1 Currency Conversion Table [Mastercard]	08 40 00 01 01 08 40 00 01 01 08 40 00 01 01 08 40 00 01 01 08 40 00 01 01	
D3	Additional Check Table [Mastercard]	00 00 00 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF	
D5	Application Control [M/Chip Advance]	00 00 00 00 00 00	
D6	Default ARPC Response Code [M/Chip Advance]	00 10	
D7	Application Control [M/Chip Advance]	00 00 00 00 00 00	
D9	Application File Locator (Contactless)		
DE	Log Data Table [M/Chip Advance]	00 00 00 00 00 00 00 00 00	
DF 02	Security Limits Status (Contact) [M/Chip Advance]	00	
DF 11	Accumulator 1 Control (Contact) [M/Chip Advance]	C1	
DF 12	Accumulator 1 Control (Contactless) [M/Chip Advance]	00	
DF 14	Accumulator 2 Control (Contact) [M/Chip Advance]	00	
DF 15	Accumulator 2 Control (Contactless) [M/Chip Advance]	00	
DF 16	Accumulator 2 Currency Code [Mastercard]	08 40 - USD	
DF 17	Accumulator 2 Currency Conversion Table [Mastercard]	08 40 00 01 01 08 40 00 01 01 08 40 00 01 01 08 40 00 01 01 08 40 00 01 01	
DF 18	Accumulator 2 Lower Limit [Mastercard]	00 00 00 00 00 00	
DF 19	Accumulator 2 Upper Limit [Mastercard]	00 00 00 00 00 00	
DF 1A	Counter 1 Control (Contact) [M/Chip Advance]	C1	
DF 1B	Counter 1 Control (Contactless) [M/Chip Advance]	00	
DF 1D	Counter 2 Control (Contact) [M/Chip Advance]	00	
DF 1E	Counter 2 Control (Contactless) [M/Chip Advance]	00	
DF 1F	Counter 2 Lower Limit [Mastercard]	00	
DF 21	Counter 2 Upper Limit [Mastercard]	00	

Tag	Element name	Data	Card v6.x
DF 22	MTA CVM (Contact) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 23	MTA CVM (Contactless) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 24	MTA Currency Code [M/Chip Advance]	`08 40`	
DF 25	MTA NoCVM (Contact) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 26	MTA NoCVM (Contactless) [M/Chip Advance]	`00 00 00 00 00 00`	
DF 27	Number Of Days Offline Limit [M/Chip Advance]	`99 99`	
DF 28	Accumulator 1 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 29	Accumulator 1 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2A	Accumulator 2 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2B	Accumulator 2 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2C	Counter 1 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2D	Counter 1 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 2E	Counter 2 CVR Dependency Data (Contact) [M/Chip Advance]	`00 00 00`	
DF 2F	Counter 2 CVR Dependency Data (Contactless) [M/Chip Advance]	`00 00 00`	
DF 30	Interface Enabling Switch [M/Chip Advance]	`01`	
DF 35	Security Limits Status (Contactless) [M/Chip Advance]	`00`	
DF 37	Security Limits Status Common [M/Chip Advance]	`00`	
DF 3C	CVR Issuer Discretionary Data (Contact) [M/Chip Advance]	`00`	
DF 3D	CVR Issuer Discretionary Data (Contactless) [M/Chip Advance]	`00`	
DF 3F	Read Record Filter (Contact) [M/Chip Advance]	`00`	
DF 40	Read Record Filter (Contactless) [M/Chip Advance]		
DF 41	DS Management Control [M/Chip Advance]	`20`	

* Tag value changes with card usage

Chapter 5 - ASCII Character Conversion Chart

Dec	Bin	Hex	Char	Dec	Bin	Hex	Char	Dec	Bin	Hex	Char
00	00000000	00	NUL	44	00101100	2C	,	88	01011000	58	X
01	00000001	01	SOH	45	00101101	2D	-	89	01011001	59	Y
02	00000010	02	STX	46	00101110	2E	.	90	01011010	5A	Z
03	00000011	03	ETX	47	00101111	2F	/	91	01011011	5B	[
04	00000100	04	EOT	48	00110000	30	0	92	01011100	5C	\
05	00000101	05	ENQ	49	00110001	31	1	93	01011101	5D	]
06	00000110	06	ACK	50	00110010	32	2	94	01011110	5E	^
07	00000111	07	BEL	51	00110011	33	3	95	01011111	5F	_
08	00001000	08	BS	52	00110100	34	4	96	01100000	60	`
09	00001001	09	HT	53	00110101	35	5	97	01100001	61	a
10	00001010	0A	LF	54	00110110	36	6	98	01100010	62	b
11	00001011	0B	VT	55	00110111	37	7	99	01100011	63	c
12	00001100	0C	FF	56	00111000	38	8	100	01100100	64	d
13	00001101	0D	CR	57	00111001	39	9	101	01100101	65	e
14	00001110	0E	SO	58	00111010	3A	:	102	01100110	66	f
15	00001111	0F	SI	59	00111011	3B	;	103	01100111	67	g
16	00010000	10	DLE	60	00111100	3C	<	104	01101000	68	h
17	00010001	11	DC1	61	00111101	3D	=	105	01101001	69	i
18	00010010	12	DC2	62	00111110	3E	>	106	01101010	6A	j
19	00010011	13	DC3	63	00111111	3F	?	107	01101011	6B	k
20	00010100	14	DC4	64	01000000	40	@	108	01101100	6C	l
21	00010101	15	NAK	65	01000001	41	A	109	01101101	6D	m
22	00010110	16	SYM	66	01000010	42	B	110	01101110	6E	n
23	00010111	17	ETB	67	01000011	43	C	111	01101111	6F	o
24	00011000	18	CAN	68	01000100	44	D	112	01110000	70	p
25	00011001	19	EM	69	01000101	45	E	113	01110001	71	q
26	00011010	1A	SUB	70	01000110	46	F	114	01110010	72	r
27	00011011	1B	ESC	71	01000111	47	G	115	01110011	73	s
28	00011100	1C	FS	72	01001000	48	H	116	01110100	74	t
29	00011101	1D	GS	73	01001001	49	I	117	01110101	75	u
30	00011110	1E	RS	74	01001010	4A	J	118	01110110	76	v
31	00011111	1F	US	75	01001011	4B	K	119	01110111	77	w
32	00100000	20	SP	76	01001100	4C	L	120	01111000	78	x
33	00100001	21	!	77	01001101	4D	M	121	01111001	79	y
34	00100010	22	"	78	01001110	4E	N	122	01111010	7A	z
35	00100011	23	#	79	01001111	4F	O	123	01111011	7B	{
36	00100100	24	$	80	01010000	50	P	124	01111100	7C		
37	00100101	25	%	81	01010001	51	Q	125	01111101	7D	}
38	00100110	26	&	82	01010010	52	R	126	01111110	7E	~
39	00100111	27	'	83	01010011	53	S	127	01111111	7F	DEL
40	00101000	28	(	84	01010100	54	T				
41	00101001	29	)	85	01010101	55	U				
42	00101010	2A	*	86	01010110	56	V				
43	00101011	2B	+	87	01010111	57	W				