



**First Data  
DCC Dual AID EMV Test Card Set**

**Version 1.00**

**May, 2018**

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## Revision History

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**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 \*\*\***

## Chapter 1 - First Data Dual AID EMV Test Card Set Profiles

This First Data (Dynamic Currency Conversion) Test Card Set contains 2 cards with one card from each of the following two card brands.



	Test Card 01	Test Card 02
<b>Brand</b>	Visa	Mastercard
<b>Type</b>	Debit	Debit
<b>Description</b>	Dual AID	Dual AID
<b>IIN</b>	407264	558257
<b>AIDs</b>	A0000000031010, A0000000033010	A0000000041010, A0000000043060
<b>PAN</b>	4072 6400 0000 0008	5582 5700 0000 0007
<b>Expiry Date</b>	12/2022	12/2022
<b>Service Code</b>	201	201, 220
<b>Interface</b>	Contact, MSR	Contact, MSR
<b>CVM</b>	<a href="#">See card definition</a>	<a href="#">See card definition</a>
<b>Approval Amount</b>	\$10.00	\$20.00
<b>Issuer Country Code</b>	036 (AUS - Australia)	250 (FRA - France)
<b>Application Currency Code</b>	036	978
<b>Currency Description</b>	Australian Dollar	Euro
<b>Language</b>	'en' – English	'en' – English
<b>Card Version</b>	v2.0	v2.0

## 1.1 Test Card 01 – Visa, CO, Debit, Dual AID, English, AUS, AUD

A Visa credit card with two AIDs, Issuer Country Code of 'Australia' and Currency Code of 'AUD'.

The recommended transaction amount to generate a host approval is \$10.00.

### 1.1.1 Cardholder Verification Method List (Contact) - AID1 A0000000031010

Cardholder Verification Method List('4201 4204 5E03 1F00')			
CVM	Verification Method	Conditions	If unsuccessful
1	Online PIN	Unattended Cash	Next CVM
2	Online PIN	Manual Cash	Next CVM
3	Signature (paper)	Terminal supports CVM type	Next CVM
4	No CVM required	Always	Fail

### 1.1.2 Application Tag data (Contact I/F)

\* Tag value changes with card usage

Tag	Element name	Data	v2.0
42	Issuer Identification Number (IIN)	40 72 64	
50	Application Label	43 52 45 44 - 'CRED'	
57	Track 2 Equivalent Data	40 72 64 00 00 00 00 08 D2 21 22 21 13 50 61 46 89 00 0E'	
5A	Application Primary Account Number (PAN)	40 72 64 00 00 00 00 08	
5F 20	Cardholder Name	44 43 43 20 44 75 61 6C 41 49 44 2F 54 65 73 74 20 43 61 72 64 20 30 31 20 20 - 'DCC DualAID/Test Card 01'	
5F 24	Application Expiration Date	22 12 31	
5F 28	Issuer Country Code	00 36 - AUS	
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)	41 55	
82	Application Interchange Profile [VSDC]	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 using External Authenticate command b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - Mag-stripe mode NOT supported b7 - Is NOT Mobile phone	
84	Dedicated File (DF) Name	A0 00 00 00 03 10 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	
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 00 42 01 42 04 5E 03 1F 00	
94	Application File Locator (AFL)	08 02 02 00 08 03 04 02	
9F 07	Application Usage Control	FF 00	
9F 08	Application Version Number	00 96	



Tag	Element name	Data	v2.0
5F 20	Cardholder Name	44 43 43 20 44 75 61 6C 41 49 44 2F 54 65 73 74 20 43 61 72 64 20 30 31 20 20 - 'DCC DualAID/Test Card 01'	
5F 24	Application Expiration Date	22 12 31	
5F 28	Issuer Country Code	00 36 - AUS	
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)	41 55	
82	Application Interchange Profile [VSDC]	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 using External Authenticate command b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - Mag-stripe mode NOT supported b7 - Is NOT Mobile phone	
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 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	
94	Application File Locator (AFL)	08 02 02 00 08 03 03 01 08 05 05 01	
9F 07	Application Usage Control	FF C0	
9F 08	Application Version Number	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	49 4E 54 45 52 4C 49 4E 4B - 'INTERLINK'	
9F 13	Last Online Application Transaction Counter (ATC) Register	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 06 06	
9F 44	Application Currency Exponent	02	
9F 4A	Static Data Authentication Tag List	82	
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]	00 36	
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]	00 36	
BF 55	Contactless Counters Data Template		
BF 56	Counters Data Template		



Tag	Element name	Data	v2.0
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 00 DF 12 0B 20 00 00 00 00 00 00 00 00 00 00 00	
BF 5A	AIP/AFL Entries Template	DF 11 0B 1C 00 08 08 02 02 00 08 03 04 02 DF 12 0F 1C 00 0C 08 02 02 00 08 03 03 01 08 05 05 01	
BF 5B	Application Internal Data Template	DF 01 02 C0 00 DF 02 01 F1	

## 1.2 Test Card 02 – Mastercard, CO, Debit, Dual AID, English, FRA, EUR

A Mastercard debit card with Issuer Country Code of 'France' and Currency Code of 'EUR'.

The recommended transaction amount to generate a host approval is \$20.00.

### 1.2.1 Cardholder Verification Method List (Contact) - AID1 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	Next CVM
5	Fail CVM Processing	Always	Fail

### 1.2.2 Application Tag data (Contact I/F)

\* Tag value changes with card usage

Tag	Element name	Data	v2.0
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	55 82 57 00 00 00 00 07 D2 21 22 01 79 36 08 05 00 0F	
5A	Application Primary Account Number (PAN)	55 82 57 00 00 00 00 07	
5F 20	Cardholder Name	44 43 43 20 44 75 61 6C 41 49 44 2F 54 65 73 74 20 43 61 72 64 20 30 32 20 20 - 'DCC DualAID/Test Card 02'	
5F 24	Application Expiration Date	22 12 31	
5F 25	Application Effective Date	xx xx xx	
5F 28	Issuer Country Code	02 50 - FRA	
5F 2D	Language Preference	65 6E - 'en' (English)	
5F 30	Service Code	02 01	
5F 34	Application PAN Sequence Number	11	

Tag	Element name	Data	v2.0
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 using External Authenticate command b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - Mag-stripe mode NOT supported b7 - Is NOT Mobile phone	
84	Dedicated File (DF) Name	A0 00 00 00 04 10 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 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 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	
9F 08	Application Version Number	00 02	
9F 0A	Application Selection Registered Proprietary Data	00 01 01 02	
9F 0D	Issuer Action Code - Default	FC 50 A0 00 00	
9F 0E	Issuer Action Code - Denial	00 00 00 00 00	
9F 0F	Issuer Action Code - Online	F8 70 A4 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	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 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	

Tag	Element name	Data	v2.0
C7	CDOL1 Related Data Length [Mastercard]	42	
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	
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]	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 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 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	

Tag	Element name	Data	v2.0
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	

### 1.2.3 Cardholder Verification Method List (Contact) - AID2 A0000000043060

Cardholder Verification Method List('4103 4203 5E03 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	Fail CVM Processing	Always	Fail

### 1.2.4 Application Tag data (Contact I/F)

\* Tag value changes with card usage

Tag	Element name	Data	v2.0
50	Application Label	4D 41 45 53 54 52 4F 20 20 20 20 20 20 20 20 - 'MAESTRO'	
57	Track 2 Equivalent Data	67 99 99 89 00 00 02 00 05 1D 22 12 22 07 93 60 80 05 0F	
5A	Application Primary Account Number (PAN)	67 99 99 89 00 00 02 00 05 1F	
5F 20	Cardholder Name	44 43 43 20 44 75 61 6C 41 49 44 2F 54 65 73 74 20 43 61 72 64 20 30 32 20 20 - 'DCC DualAID/Test Card 02'	
5F 24	Application Expiration Date	22 12 31	
5F 25	Application Effective Date	xx xx xx	
5F 28	Issuer Country Code	02 50 - FRA	

Tag	Element name	Data	v2.0
5F 2D	Language Preference	65 6E - 'en' (English)	
5F 30	Service Code	02 20	
5F 34	Application PAN Sequence Number	12	
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 using External Authenticate command b1 - Combined DDA / GEN AC NOT supported BYTE 2: b8 - Mag-stripe mode NOT supported b7 - Is NOT Mobile phone	
84	Dedicated File (DF) Name	A0 00 00 00 04 30 60	
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 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 00	
9F 08	Application Version Number	00 02	
9F 0A	Application Selection Registered Proprietary Data	00 01 01 01	
9F 0D	Issuer Action Code - Default	FC 50 A0 00 00	
9F 0E	Issuer Action Code - Denial	00 00 00 00 00	
9F 0F	Issuer Action Code - Online	F8 70 A4 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 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	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 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	

Tag	Element name	Data	v2.0
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	
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	
D3	Additional Check Table [Mastercard]	00 00 00 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 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	

Tag	Element name	Data	v2.0
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	

## Chapter 2 - ASCII Character Conversion Chart

Dec	Bin	Hex	Char	Dec	Bin	Hex	Char	Dec	Bin	Hex	Char
00	00000000	00	<b>NUL</b>	44	00101100	2C	,	88	01011000	58	<b>X</b>
01	00000001	01	<b>SOH</b>	45	00101101	2D	-	89	01011001	59	<b>Y</b>
02	00000010	02	<b>STX</b>	46	00101110	2E	.	90	01011010	5A	<b>Z</b>
03	00000011	03	<b>ETX</b>	47	00101111	2F	/	91	01011011	5B	[
04	00000100	04	<b>EOT</b>	48	00110000	30	<b>0</b>	92	01011100	5C	\
05	00000101	05	<b>ENQ</b>	49	00110001	31	<b>1</b>	93	01011101	5D	]
06	00000110	06	<b>ACK</b>	50	00110010	32	<b>2</b>	94	01011110	5E	^
07	00000111	07	<b>BEL</b>	51	00110011	33	<b>3</b>	95	01011111	5F	_
08	00001000	08	<b>BS</b>	52	00110100	34	<b>4</b>	96	01100000	60	`
09	00001001	09	<b>HT</b>	53	00110101	35	<b>5</b>	97	01100001	61	<b>a</b>
10	00001010	0A	<b>LF</b>	54	00110110	36	<b>6</b>	98	01100010	62	<b>b</b>
11	00001011	0B	<b>VT</b>	55	00110111	37	<b>7</b>	99	01100011	63	<b>c</b>
12	00001100	0C	<b>FF</b>	56	00111000	38	<b>8</b>	100	01100100	64	<b>d</b>
13	00001101	0D	<b>CR</b>	57	00111001	39	<b>9</b>	101	01100101	65	<b>e</b>
14	00001110	0E	<b>SO</b>	58	00111010	3A	:	102	01100110	66	<b>f</b>
15	00001111	0F	<b>SI</b>	59	00111011	3B	;	103	01100111	67	<b>g</b>
16	00010000	10	<b>DLE</b>	60	00111100	3C	<	104	01101000	68	<b>h</b>
17	00010001	11	<b>DC1</b>	61	00111101	3D	=	105	01101001	69	<b>i</b>
18	00010010	12	<b>DC2</b>	62	00111110	3E	>	106	01101010	6A	<b>j</b>
19	00010011	13	<b>DC3</b>	63	00111111	3F	?	107	01101011	6B	<b>k</b>
20	00010100	14	<b>DC4</b>	64	01000000	40	@	108	01101100	6C	<b>l</b>
21	00010101	15	<b>NAK</b>	65	01000001	41	<b>A</b>	109	01101101	6D	<b>m</b>
22	00010110	16	<b>SYM</b>	66	01000010	42	<b>B</b>	110	01101110	6E	<b>n</b>
23	00010111	17	<b>ETB</b>	67	01000011	43	<b>C</b>	111	01101111	6F	<b>o</b>
24	00011000	18	<b>CAN</b>	68	01000100	44	<b>D</b>	112	01110000	70	<b>p</b>
25	00011001	19	<b>EM</b>	69	01000101	45	<b>E</b>	113	01110001	71	<b>q</b>
26	00011010	1A	<b>SUB</b>	70	01000110	46	<b>F</b>	114	01110010	72	<b>r</b>
27	00011011	1B	<b>ESC</b>	71	01000111	47	<b>G</b>	115	01110011	73	<b>s</b>
28	00011100	1C	<b>FS</b>	72	01001000	48	<b>H</b>	116	01110100	74	<b>t</b>
29	00011101	1D	<b>GS</b>	73	01001001	49	<b>I</b>	117	01110101	75	<b>u</b>
30	00011110	1E	<b>RS</b>	74	01001010	4A	<b>J</b>	118	01110110	76	<b>v</b>
31	00011111	1F	<b>US</b>	75	01001011	4B	<b>K</b>	119	01110111	77	<b>w</b>
32	00100000	20	<b>SP</b>	76	01001100	4C	<b>L</b>	120	01111000	78	<b>x</b>
33	00100001	21	!	77	01001101	4D	<b>M</b>	121	01111001	79	<b>y</b>
34	00100010	22	"	78	01001110	4E	<b>N</b>	122	01111010	7A	<b>z</b>
35	00100011	23	#	79	01001111	4F	<b>O</b>	123	01111011	7B	{
36	00100100	24	\$	80	01010000	50	<b>P</b>	124	01111100	7C	
37	00100101	25	%	81	01010001	51	<b>Q</b>	125	01111101	7D	}
38	00100110	26	&	82	01010010	52	<b>R</b>	126	01111110	7E	~
39	00100111	27	'	83	01010011	53	<b>S</b>	127	01111111	7F	<b>DEL</b>
40	00101000	28	(	84	01010100	54	<b>T</b>				
41	00101001	29	)	85	01010101	55	<b>U</b>				
42	00101010	2A	*	86	01010110	56	<b>V</b>				
43	00101011	2B	+	87	01010111	57	<b>W</b>				