



USA
EMV™ Test Card Set

Version 2.10

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Powered by B2»

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Revision History

Version	Date	Updated By	Revisions
1.30	24-Jun-2014	B2PS	Card Set has 15 cards
1.40	25-Nov-2014	B2PS	<ul style="list-style-type: none"> • Renamed to USA EMV Test Card Set • Updated USA EMV Test Card Profiles section. • Updated Mexican cards to have correct ISO code (484) • Updated card descriptive text to provide additional information
1.41	7-May-2015	B2PS	<ul style="list-style-type: none"> • TC09 marked as “Discontinued”
1.42	23-Sep-2015	B2PS	<ul style="list-style-type: none"> • Improved card descriptive text, miscellaneous Tag corrections to all Visa and Interac cards – now v3.3
1.50	19-Oct-2015	B2PS	<ul style="list-style-type: none"> • Tag updates to all MasterCard cards - now v3.2.
1.51	20-Oct-2015	B2PS	<ul style="list-style-type: none"> • Updated Card Profile tables
1.60	13-Nov-2015	B2PS	<ul style="list-style-type: none"> • TC09 added – Mastercard Set now contains 16 cards.
1.70	24-Aug-2016	B2PS	<ul style="list-style-type: none"> • Transaction Values added • Tag 8E (CVM) data added for each card • TOC formatting adjusted for readability with new CVM data • Title page made consistent with other documents • Layout made suitable for duplex printing • Added PINBlock warning text
1.80	5-Jan-2018	B2PS	<ul style="list-style-type: none"> • TC10, TC11, TC12 - Approval Amount changed to \$120 • “MasterCard” replaced with “Mastercard” where appropriate
2.00	31-Jan-2018	B2PS	<ul style="list-style-type: none"> • Expiry date for all cards set to 2022/12
2.10	7-Jan-2019	B2PS	<ul style="list-style-type: none"> • TC01 plastic corrected to indicate “Signature”. Documentation now reflects this latest (v4.1)

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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 - B2 USA EMV Test Card Profiles

The USA EMV™ Test Card Set contains 16 cards, defined as follows.

	Test Card 01	Test Card 02	Test Card 03
Brand	Visa	Visa	Visa
AID	A0000000031010	A0000000031010	A0000000031010
PAN	4761 7390 0101 0010	4761 7390 0101 0010	4761 7390 0101 0010
Expiry Date	12/2022	12/2022	12/2022
Service Code	201	201	201
Interface	Contact, MSR	Contact, MSR	Contact, MSR
CVM	Signature Online PIN No CVM See Card Definition	Offline Plaintext PIN See Card Definition	Online PIN See Card Definition
Approval Amount	\$10.00	\$10.00	\$10.00
Issuer Country Code	840 (USA)	840 (USA)	840 (USA)
Currency Code	840 (USD)	840 (USD)	840 (USD)
Language	'en' – English	'en' – English	'en' – English
Application Confirmation	No	No	No
Card Purpose	USA Signature Preferring	USA Offline Plaintext PIN Only	USA Online PIN Only
Card Version	v4.1	v4.0	v4.0

	Test Card 04	Test Card 05	Test Card 06
Brand	Visa	Visa	Visa
AID	A0000000031010	A0000000031010	A0000000031010
PAN	4761 7390 0101 0010	4761 7390 0101 0010	4761 7390 0101 0010
Expiry Date	12/2022	12/2022	12/2022
Service Code	201	201	201
Interface	Contact, MSR	Contact, MSR	Contact, MSR
CVM	Signature No CVM See Card Definition	Offline Plaintext PIN See Card Definition	Offline Plaintext PIN See Card Definition
Approval Amount	\$10.00	\$10.00	\$10.00

	Test Card 04	Test Card 05	Test Card 06
Issuer Country Code	124 (Canada)	484 (Mexico)	484 (Mexico)
Currency Code	124 (CAD)	840 (USD)	484 (MXN)
Language	'fr' – French	'es' - Spanish	'es' - Spanish
Application Confirmation	Yes	No	No
Card Purpose	Canadian – French Appl. Confirmation	Mexico – Spanish Currency USD	Mexico – Spanish Currency MXN
Card Version	v4.0	v4.0	v4.0

	Test Card 07	Test Card 08	Test Card 09
Brand	Visa	Visa	Mastercard
AID			A0000000041010
PAN	4761 7390 0101 0010	4761 7390 0101 0010	5413 3300 8960 4111
Expiry Date	12/2022	12/2022	12/2022
Service Code	201	201	201
Interface	Contact, MSR	MSR	Contact, MSR
CVM	-	-	Online PIN, Signature See Card Definition
Approval Amount	\$10.00	\$10.00	\$20.00
Issuer Country Code	-	-	840 (USA)
Currency Code	-	-	840 (USD)
Language	-	-	'en' – English
Application Confirmation	-	-	No
Card Purpose	Fallback Empty Candidate List	Fallback Chip Error	Online PIN
Card Version	v4.0	v4.0	v4.0

	Test Card 10	Test Card 11	Test Card 12
Brand	Mastercard	Mastercard	Mastercard
AID	A0000000041010	A0000000041010	A0000000041010
PAN	5413 3300 8901 0434	5413 3300 8901 0434	5413 3300 8901 0434
Expiry Date	12/2022	12/2022	12/2022
Service Code	201	201	201
Interface	Contact, MSR	Contact, MSR	Contact, MSR
CVM	NO CVM See Card Definition	Offline Plaintext PIN See Card Definition	Online PIN See Card Definition
Approval Amount	\$120.00	\$120.00	\$120.00
Issuer Country Code	840 (USA)	840 (USA)	840 (USA)
Currency Code	840 (USD)	840 (USD)	840 (USD)
Language	'en' – English	'en' – English	'en' – English

	Test Card 10	Test Card 11	Test Card 12
Application Confirmation	No	No	No
Card Purpose	NO CVM ARPC Verify Fails	Offline PIN ARPC Verify Fails	Online PIN ARPC Verify Fails
Card Version	v.4.0	v4.0	v4.0

	Test Card 13	Test Card 14	Test Card 15
Brand	Mastercard	Mastercard	Interac
AID	-	-	A0000002771010
PAN	5413 3300 8901 0434	5413 3300 8901 0434	4506 4450 0693 1933
Expiry Date	12/2022	12/2022	12/2022
Service Code	201	201	220
Interface	Contact, MSR	MSR	Contact, MSR
CVM	-	-	Offline Plaintext PIN See Card Definition
Approval Amount	\$20.00	\$20.00	\$10.00
Issuer Country Code	-	-	124 (Canada)
Currency Code	-	-	124 (CAD)
Language	-	-	'en' – English
Application Confirmation	-	-	No
Card Purpose	Fallback Empty Candidate List	Fallback Chip Error	English Interac Debit
Card Version	v4.0	v4.0	v4.0

	Test Card 16
Brand	Interac
AID	A0000002771010
PAN	4506 3644 0003 8106
Expiry Date	12/2022
Service Code	220
Interface	Contact, MSR
CVM	Offline Plaintext PIN See Card Definition
Approval Amount	\$10.00
Issuer Country Code	124 (Canada)
Currency Code	124 (CAD)
Language	'fr' – French
Application Confirmation	No
Card Purpose	French Interac Debit
Card Version	v4.0

1.1 Test Card 01 – Visa, Signature Preferring, English, USD, USA

USA English Visa, Signature / Online PIN card (Currency=USD).

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

1.1.1 Cardholder Verification Method List – AID (A0000000031010)

Cardholder Verification Method List ('1E03 0203 1F00')			
CVM	Verification Method	Conditions	If unsuccessful
1	Signature (paper)	Terminal supports CVM type	Fail
2	Online PIN	Terminal supports CVM type	Fail
3	No CVM required	Always	Fail

1.1.2 Application Tag Data

* Tag value changes with card usage

Tag	Element name	Data	v4.x
50	Application Label	56 49 53 41 20 43 52 45 44 49 54 - 'VISA CREDIT'	
57	Track 2 Equivalent Data	47 61 73 90 01 01 00 10 D2 21 22 01 11 43 87 80 01 62 9F	
5A	Application Primary Account Number (PAN)	47 61 73 90 01 01 00 10	
5F 20	Cardholder Name	54 65 73 74 2F 43 61 72 64 20 30 31 20 20 20 20 20 20 20 20 20 20 20 20 20 - 'Test/Card 01'	
5F 24	Application Expiration Date	22 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 [VSDC]	5C 00	
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	
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 1E 03 02 03 1F 00	
8F	Certification Authority Public Key Index	92	

Tag	Element name	Data	v4.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	8B 67 1C 1A FB 51 BC 81 B0 BA 20 30 07 30 07 05 5C 01 F2 16 86 B5 99 8C 6C 40 C4 5D 08 CD E7 66 9F 6C 90 89 03 C6 89 D7 2A DF D1 59 B8 5D 1A AA 14 53 36 7B 24 08 DE E4 65 B4 D7 26 FD 8D 56 0E 39 E9 A6 B0 A1 23 02 39 19 FB D0 23 4B F7 BD B1 B3 98 F5 D1 96 D3 D8 BF AA 69 C3 91 3D 1A FE 08 79 CA 6F 56 0A D4 7B 39 CE 2B 5A 12 FA A7 D4 13 AA BA A5 0E 1B DF ED 6D 83 23 54 69 D7 4C 53 AB 74 DD 0A 05 94 F9 6A A0 52 19 8F 8A DB 2F 7E C4 21 7A 22 9E FD 7E DD D7 48 54 EA 6E A9 01 FA 69 77 29 E4 E1 D2 93 4A FC 10 A2 F6 0D 09 C8 27 0D	
94	Application File Locator (AFL)	10 01 01 00 10 02 04 01 10 06 06 00 B0 01 01 00	
9F 07	Application Usage Control	FF 00	
9F 08	Application Version Number	00 96	
9F 0D	Issuer Action Code - Default	F0 40 00 88 00	
9F 0E	Issuer Action Code - Denial	00 10 00 00 00	
9F 0F	Issuer Action Code - Online	F0 40 00 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 - 'Visa Credit'	
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 37 35 38 39 30 30 38 39 33 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	

Tag	Element name	Data	v4.x
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	0C E2 80 44 6E 1C 27 D5 44 6C 8A 02 61 D6 BF 7E 54 5B 19 AA 70 DF 2D 86 B2 E8 51 6D FC D6 7F C9 DD C7 0B 53 CD 85 EB F7 1E 84 9B 7C 94 71 BA 5B 2A 43 7F A5 C5 07 DF CA D3 31 3D C3 AA E9 B8 DF D4 F6 63 38 0A D4 71 4F F1 62 AB 68 70 30 2A 13 AA C3 39 AE 1B 1C 11 8B 72 8B E7 12 F9 EE E0 3B 7B 79 C9 35 FE 5E DF 4C CD 5B 18 34 75 B9 EE 62 B2 71 D1 2F B8 E4 9E 48 B8 82 6F 8F 60 20 93 E8 9A 1F 08 0F D3 A8 D2 8F BF 1B 97 92 38 F8 2E 41 C3 BF A5 35 B7 F2 D1 EC 21 01 6F 39 03 51 70 8D E4 75 79 18 48 57 AE 4E D7 F4 D4 A8 17 7C A3 16	
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]	40 00 00 00 00 00	
9F 53	Consecutive Transaction Limit (International) [VSDC]	03	
9F 54	Cumulative Total Transaction Amount Limit [VSDC]	00 00 00 02 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]	03	
9F 59	Consecutive Transaction Counter Upper Limit [VSDC]	07	
9F 5C	Cumulative Total Transaction Amount Upper Limit [VSDC]	00 00 00 04 00 00	
9F 5E	Consecutive Transaction International Upper Limit [VSDC]	07	
9F 68	Card Additional Processes [qVSDC VCPS 2.1]	10 00 D0 00	
9F 6D	VLP Reset Threshold [VSDC]	00 00 00 00 00 00	
9F 77	VLP Funds Limit [VSDC]	00 00 00 00 00 00	
9F 78	VLP Single Transaction Limit [VSDC]	00 00 00 00 00 00	
9F 79	VLP Available Funds [VSDC]	00 00 00 00 00 00	
BF 55	Contactless Counters Data Template	DF 61 06 00 00 00 00 00 00 DF 71 06 00 00 00 00 00 00 DF 41 06 00 00 00 00 00 00 DF 51 06 00 00 00 00 00 00 DF 11 01 00 DF 21 01 03 DF 31 01 07	
BF 56	Counters Data Template	DF 11 01 01 DF 21 01 03 DF 31 01 07	

Tag	Element name	Data	v4.x
BF 57	International Counters Data Template	DF 11 01 01 DF 21 01 03 DF 31 01 07 DF 51 01 01	
BF 58	Amounts Data Template	DF 11 06 00 00 00 00 00 00 DF 21 06 00 00 00 02 00 00 DF 31 06 00 00 00 04 00 00	
BF 5B	Application Internal Data Template	DF 01 02 00 00	

1.2 Test Card 02 – Visa, Offline PIN=1234, English, USD, USA

USA English Visa, Offline Plaintext PIN Only card (Currency=USD).

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

1.2.1 Cardholder Verification Method List – AID (A0000000031010)

Cardholder Verification Method List ('0103 0100 0000')			
CVM	Verification Method	Conditions	If unsuccessful
1	Offline Plaintext PIN	Terminal supports CVM type	Fail
2	Offline Plaintext PIN	Always	Fail
3	Fail CVM Processing	Always	Fail

1.2.2 Application Tag Data

* Tag value changes with card usage

Tag	Element name	Data	v4.0
50	Application Label	56 49 53 41 20 43 52 45 44 49 54 - 'VISA CREDIT'	
57	Track 2 Equivalent Data	47 61 73 90 01 01 00 10 D2 21 22 01 11 43 87 80 01 62 9F	
5A	Application Primary Account Number (PAN)	47 61 73 90 01 01 00 10	
5F 20	Cardholder Name	54 65 73 74 2F 43 61 72 64 20 30 32 20 20 20 20 20 20 20 20 20 20 20 20 20 - 'Test/Card 02'	
5F 24	Application Expiration Date	22 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 [VSDC]	5C 00	
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	
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 01 03 01 00 00 00	
8F	Certification Authority Public Key Index	92	

Tag	Element name	Data	v4.0
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	06 A4 E7 A2 93 88 36 DB 9A 86 21 7F B7 F7 4C 85 0F 89 DE E2 CF 44 54 E9 E7 83 6B B3 95 8B DB BC 3C CE 40 ED DC 26 9D EB DA B2 E6 30 C6 29 C9 3A 94 FC A4 AD 39 D1 20 31 31 96 9D 79 47 1E 1F 49 C2 61 6F D8 E5 D1 1F 60 51 F4 84 E3 03 4A 00 DC 36 1F 0A 7D 59 9E 2D FD A1 F5 C1 20 CD A0 B2 09 AF C5 20 B6 8C 65 8F 23 AE AC 2B D3 A1 52 76 DA 24 AA 5F DA 4B E4 7C 4D E5 B2 66 4A 84 15 3B EC 14 DC 3E 82 A4 2B 5F BD 6B 82 2A 67 E2 7E 24 9B 78 7E 19 B7 2F 33 FC EE 32 F5 A0 70 77 66 44 D2 F6 E9 04 80 04 2E 70 62 23 8A 71 09 D4 C5 AB F3	
94	Application File Locator (AFL)	10 01 01 00 10 02 04 01 10 06 06 00 B0 01 01 00	
9F 07	Application Usage Control	FF 00	
9F 08	Application Version Number	00 96	
9F 0D	Issuer Action Code - Default	F0 40 00 88 00	
9F 0E	Issuer Action Code - Denial	00 10 00 00 00	
9F 0F	Issuer Action Code - Online	F0 40 00 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 - 'Visa Credit'	
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 37 35 38 39 30 30 38 39 33 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	

Tag	Element name	Data	v4.0
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	2A 25 C9 AC C0 E6 91 CE C4 86 E7 2C 6F 4E 7D 4B 24 BF A9 88 2A D3 6F E8 B8 77 E1 44 A8 4E AD C7 4B 32 C6 F2 13 C9 EB E4 F7 BA 50 F3 A3 0C EE 6C F3 BE DD 9B 3C C9 99 A2 46 76 CC 85 34 C6 BA 7F 0C 11 F5 56 0E CA E5 86 98 16 95 CE 21 B0 1B DA 63 71 19 AC FF 47 DF 4A 9D 67 27 CD D5 43 EB 76 51 A4 71 AA C2 BA 97 F3 81 05 03 10 83 84 7F 0E 10 C7 EE 04 73 49 7F 10 DE E2 BE C0 4E 46 40 9D 35 29 8D 6B 40 5C BD 3E CB 40 D2 58 23 09 47 C2 7F 1A FA 61 39 72 05 B1 B4 2D 14 C3 BE 3B 90 D4 B5 E8 90 7C 07 F7 5C 92 6E F2 89 D9 76 72 7A 1F	
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]	40 00 00 00 00 00	
9F 53	Consecutive Transaction Limit (International) [VSDC]	03	
9F 54	Cumulative Total Transaction Amount Limit [VSDC]	00 00 00 02 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]	03	
9F 59	Consecutive Transaction Counter Upper Limit [VSDC]	07	
9F 5C	Cumulative Total Transaction Amount Upper Limit [VSDC]	00 00 00 04 00 00	
9F 5E	Consecutive Transaction International Upper Limit [VSDC]	07	
9F 68	Card Additional Processes [qVSDC VCPS 2.1]	10 00 D0 00	
9F 6D	VLP Reset Threshold [VSDC]	00 00 00 00 00 00	
9F 77	VLP Funds Limit [VSDC]	00 00 00 00 00 00	
9F 78	VLP Single Transaction Limit [VSDC]	00 00 00 00 00 00	
9F 79	VLP Available Funds [VSDC]	00 00 00 00 00 00	
BF 55	Contactless Counters Data Template	DF 61 06 00 00 00 00 00 00 DF 71 06 00 00 00 00 00 00 DF 41 06 00 00 00 00 00 00 DF 51 06 00 00 00 00 00 00 DF 11 01 00 DF 21 01 03 DF 31 01 07	
BF 56	Counters Data Template	DF 11 01 01 DF 21 01 03 DF 31 01 07	

Tag	Element name	Data	v4.0
BF 57	International Counters Data Template	DF 11 01 01 DF 21 01 03 DF 31 01 07 DF 51 01 01	
BF 58	Amounts Data Template	DF 11 06 00 00 00 00 00 00 DF 21 06 00 00 00 02 00 00 DF 31 06 00 00 00 04 00 00	
BF 5B	Application Internal Data Template	DF 01 02 00 00	

1.3 Test Card 03 – Visa, Online PIN=1234, English, USD, USA

USA English Visa, Online PIN Only card (Currency=USD).

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

1.3.1 Cardholder Verification Method List – AID (A0000000031010)

Cardholder Verification Method List ('0203 0200 0000')			
CVM	Verification Method	Conditions	If unsuccessful
1	Online PIN	Terminal supports CVM type	Fail
2	Online PIN	Always	Fail
3	Fail CVM Processing	Always	Fail

1.3.2 Application Tag Data

* Tag value changes with card usage

Tag	Element name	Data	v4.0
50	Application Label	56 49 53 41 20 43 52 45 44 49 54 - 'VISA CREDIT'	
57	Track 2 Equivalent Data	47 61 73 90 01 01 00 10 D2 21 22 01 11 43 87 80 01 62 9F	
5A	Application Primary Account Number (PAN)	47 61 73 90 01 01 00 10	
5F 20	Cardholder Name	54 65 73 74 2F 43 61 72 64 20 30 33 20 20 20 20 20 20 20 20 20 20 20 20 20 20 - 'Test/Card 03'	
5F 24	Application Expiration Date	22 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 [VSDC]	5C 00	
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	
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 02 00 00 00	
8F	Certification Authority Public Key Index	92	

Tag	Element name	Data	v4.0
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	8D 3E 17 FB 5C C9 50 75 E0 C7 5B 03 3C 20 D0 9C A6 E1 1A C5 0A 6D 3A F6 BA 64 DE 03 F4 F6 55 36 03 49 9F 97 CF 35 76 55 38 5A 16 56 9D 84 B9 53 E4 85 CA 85 04 73 47 3A FC 28 47 C9 E5 A1 C3 4D 69 CE 5B 05 A9 19 B3 A5 21 EC 3A 3F BE 2E 52 70 FA 74 4A 75 7A 97 CE 5E D5 95 7F 50 BA A0 E0 C0 00 87 31 9E AB 92 15 0A BD 6C FB 81 B8 CB 6F C5 DB E3 56 7B 07 06 84 56 A9 35 F3 93 D7 94 F5 0F BB E8 8E A0 33 D0 CF 54 79 4B 4E E1 98 14 92 BC B7 78 EA 05 03 1C D3 1F 7F D5 60 8A 68 25 88 56 AB 3F F3 30 66 C6 06 FC 4E 2E C5 8C 3D 71 E3 49	
94	Application File Locator (AFL)	10 01 01 00 10 02 04 01 10 06 06 00 B0 01 01 00	
9F 07	Application Usage Control	FF 00	
9F 08	Application Version Number	00 96	
9F 0D	Issuer Action Code - Default	F0 40 00 88 00	
9F 0E	Issuer Action Code - Denial	00 10 00 00 00	
9F 0F	Issuer Action Code - Online	F0 40 00 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 - 'Visa Credit'	
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 37 35 38 39 30 30 38 39 33 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	

Tag	Element name	Data	v4.0	
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	13 7D D5 64 32 17 1A 49 12 CC E1 3A 1F D0 FC 83 32 D0 84 BF A3 F7 41 CB 41 79 A2 44 57 D1 19 CB C8 39 1C C8 0E 55 61 78 5B 5A 36 AF 8B EA AF 51 B9 C8 B4 29 21 A3 ED FE BE 57 1F B7 98 BA C0 58 59 4B 61 26 FE B3 8B 46 EC 46 E3 9F 3D C6 D4 F7 D3 F9 56 74 6E 2A 32 A0 A6 17 9F 2E 1A 6B E4 88 AC 40 47 65 6F EF 6E AC 43 43 6A 90 8D 19 1E E9 73 78 7C 2C A4 81 4C 05 9C D2 EA 42 49 0C A1 8C 6E 6B E6 83 92 99 9E F2 E6 00 03 31 23 27 E7 D2 20 21 07 33 CF 69 72 AD 10 9C 19 3D 5C 35 83 6F 3A D7 41 16 24 03 30 4D 7E C2 29 FE 12 70 40 69		
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 - USA		
9F 52	Application Default Action [VSDC VIS 1.5]	40 00 00 00 00 00		
9F 53	Consecutive Transaction Limit (International) [VSDC]	03		
9F 54	Cumulative Total Transaction Amount Limit [VSDC]	00 00 00 02 00 00		
9F 56	Issuer Authentication Indicator [VSDC]	80		
9F 57	Issuer Country Code [VSDC]	08 40 - USD		
9F 58	Consecutive Transaction Counter Limit [VSDC]	03		
9F 59	Consecutive Transaction Counter Upper Limit [VSDC]	07		
9F 5C	Cumulative Total Transaction Amount Upper Limit [VSDC]	00 00 00 04 00 00		
9F 5E	Consecutive Transaction International Upper Limit [VSDC]	07		
9F 68	Card Additional Processes [qVSDC VCPS 2.1]	10 00 D0 00		
9F 6D	VLP Reset Threshold [VSDC]	00 00 00 00 00 00		
9F 77	VLP Funds Limit [VSDC]	00 00 00 00 00 00		
9F 78	VLP Single Transaction Limit [VSDC]	00 00 00 00 00 00		
9F 79	VLP Available Funds [VSDC]	00 00 00 00 00 00		
BF 55	Contactless Counters Data Template	DF 61 06 00 00 00 00 00 00 DF 71 06 00 00 00 00 00 00 DF 41 06 00 00 00 00 00 00 DF 51 06 00 00 00 00 00 00 DF 11 01 00 DF 21 01 03 DF 31 01 07		
BF 56	Counters Data Template	DF 11 01 01 DF 21 01 03 DF 31 01 07		

Tag	Element name	Data	v4.0
BF 57	International Counters Data Template	DF 11 01 01 DF 21 01 03 DF 31 01 07 DF 51 01 01	
BF 58	Amounts Data Template	DF 11 06 00 00 00 00 00 00 DF 21 06 00 00 00 02 00 00 DF 31 06 00 00 00 04 00 00	
BF 5B	Application Internal Data Template	DF 01 02 00 00	

1.4 Test Card 04 – Visa, Signature Only, French, CAD, Canada, Appl Confirm

Canadian French Visa, Signature Only card (Currency=CAD).

This card will prompt the cardholder to confirm the application (Visa Credit).

If French is supported by the POS, French should be auto-selected. If the POS supports only one language and it's not French, the POS language should be auto-selected. If the POS supports multiple languages but not French, the list of POS languages should be displayed for cardholder selection.

Once selected, cardholder prompts and the customer receipt should be in the selected language.

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

1.4.1 Cardholder Verification Method List – AID (A0000000031010)

Cardholder Verification Method List ('1E03 1F03 0000')			
CVM	Verification Method	Conditions	If unsuccessful
1	Signature (Paper)	Terminal supports CVM type	Fail
2	No CVM Required	Terminal supports CVM type	Fail
3	Fail CVM Processing	Always	Fail

1.4.2 Application Tag Data

* Tag value changes with card usage

Tag	Element name	Data	v4.0
50	Application Label	56 49 53 41 20 43 52 45 44 49 54 - 'VISA CREDIT'	
57	Track 2 Equivalent Data	47 61 73 90 01 01 00 10 D2 21 22 01 11 43 87 80 01 62 9F	
5A	Application Primary Account Number (PAN)	47 61 73 90 01 01 00 10	
5F 20	Cardholder Name	54 65 73 74 2F 43 61 72 64 20 30 34 20 20 20 20 20 20 20 20 20 20 20 20 20 - 'Test/Card 04'	
5F 24	Application Expiration Date	22 12 31	
5F 25	Application Effective Date	xx xx xx	
5F 28	Issuer Country Code	01 24 - CAN	
5F 2D	Language Preference	66 72 - 'fr' (French)	
5F 30	Service Code	02 01	
5F 34	Application PAN Sequence Number	01	
82	Application Interchange Profile [VSDC]	5C 00	
84	Dedicated File (DF) Name	A0 00 00 00 03 10 10	
87	Application Priority Indicator	81	

Tag	Element name	Data	v4.0
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 1E 03 1F 03 00 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	
93	Signed Static Application Data	7E 3F 8F 6F 29 91 0B E0 78 02 64 76 8A 4D 86 4A F3 7E 33 A7 D4 A2 10 60 C6 3A E0 61 7E D5 EA 8D B0 76 2A DD F0 0C 80 E5 2C DF A6 A9 01 F5 02 D2 5F B1 C2 02 78 28 84 69 55 53 6D DC B0 C8 E3 27 50 47 B1 9B 3F 27 73 98 0C 16 1D F5 DA 41 12 04 EB 5D E2 53 EC D8 D2 AB 8D EB FE 18 CA E1 C9 1D FC AE 3D 1D AE CF B3 7D 8F EB 31 8C 7B CC 60 67 F9 16 7F 9B 95 CF 68 F3 A5 40 79 22 22 8C 45 DB A5 84 51 C1 CA 51 19 AB 4A 40 C0 5D EE F1 8E C2 C6 53 D0 B9 66 83 BC E7 56 C5 A1 00 6A 55 FB D4 BD BA 74 BB 32 DF C8 0C 2E 49 F4 A9 16 32 D0 B2	
94	Application File Locator (AFL)	10 01 01 00 10 02 04 01 10 06 06 00 B0 01 01 00	
9F 07	Application Usage Control	FF 00	
9F 08	Application Version Number	00 96	
9F 0D	Issuer Action Code - Default	00 00 00 00 00	
9F 0E	Issuer Action Code - Denial	00 00 80 00 00	
9F 0F	Issuer Action Code - Online	00 00 00 00 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 - 'Visa Credit'	

Tag	Element name	Data	v4.0
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 37 35 38 39 30 30 38 39 33 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	
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	3E C9 23 9F DA CB EA 74 9A 2E 01 CD F4 5D E7 A9 88 23 C8 C0 E1 23 46 C1 4B 52 D4 48 46 34 E4 3D 6C 2A 52 1F DF C8 CB BA 8E C2 78 4B 7F EB AC 05 C4 B0 88 9E A8 6A E2 04 DB 2A 41 53 21 E8 37 05 14 8C B3 F1 AD 8B AC 0D E8 97 09 DF 6C 03 A8 C1 39 B7 19 06 41 7D 77 1E 59 9C A1 E2 68 45 7C 75 F3 22 35 DD 4D FC B3 54 08 53 A6 FB AF 4A 86 84 89 FB B1 13 5D A3 65 D0 C3 F3 3F 30 7D F1 35 E8 3A F7 2F 3C B6 A6 AC 4C D7 D9 F7 D7 9C E1 8E F7 FE B6 16 C7 C0 FC C0 E0 35 F5 06 5C 20 FA 0B 71 C2 FD 9B B9 B4 B9 B2 BB 0C 42 74 02 60 3D 2A F5	
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]	01 24 - CAD	
9F 52	Application Default Action [VSDC VIS 1.5]	00 00 00 00 00 00	
9F 53	Consecutive Transaction Limit (International) [VSDC]	03	
9F 54	Cumulative Total Transaction Amount Limit [VSDC]	00 00 00 02 00 00	
9F 56	Issuer Authentication Indicator [VSDC]	00	
9F 57	Issuer Country Code [VSDC]	01 24 - CAN	
9F 58	Consecutive Transaction Counter Limit [VSDC]	03	
9F 59	Consecutive Transaction Counter Upper Limit [VSDC]	07	
9F 5C	Cumulative Total Transaction Amount Upper Limit [VSDC]	00 00 00 04 00 00	
9F 5E	Consecutive Transaction International Upper Limit [VSDC]	07	
9F 68	Card Additional Processes [qVSDC VCPS 2.1]	10 00 D0 00	
9F 6D	VLP Reset Threshold [VSDC]	00 00 00 00 00 00	
9F 77	VLP Funds Limit [VSDC]	00 00 00 00 00 00	

Tag	Element name	Data	v4.0
9F 78	VLP Single Transaction Limit [VSDC]	00 00 00 00 00 00	
9F 79	VLP Available Funds [VSDC]	00 00 00 00 00 00	
BF 55	Contactless Counters Data Template	DF 61 06 00 00 00 00 00 00 DF 71 06 00 00 00 00 00 00 DF 41 06 00 00 00 00 00 00 DF 51 06 00 00 00 00 00 00 DF 11 01 00 DF 21 01 03 DF 31 01 07	
BF 56	Counters Data Template	DF 11 01 01 DF 21 01 03 DF 31 01 07	
BF 57	International Counters Data Template	DF 11 01 01 DF 21 01 03 DF 31 01 07 DF 51 01 01	
BF 58	Amounts Data Template	DF 11 06 00 00 00 00 00 00 DF 21 06 00 00 00 02 00 00 DF 31 06 00 00 00 04 00 00	
BF 5B	Application Internal Data Template	DF 01 02 00 00	

1.5 Test Card 05 – Visa, Offline PIN=1234, Spanish, USD, Mexico

Mexican Spanish Visa, Offline Plaintext PIN Only card (Currency=USD).

If Spanish is supported by the POS, Spanish should be auto-selected. If the POS supports only one language and it's not Spanish, the POS language should be auto-selected. If the POS supports multiple languages but not Spanish, the list of POS languages should be displayed for cardholder selection.

Once selected, cardholder prompts and the customer receipt should be in the selected language.

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

1.5.1 Cardholder Verification Method List – AID (A0000000031010)

Cardholder Verification Method List ('1E03 1F03 0000')			
CVM	Verification Method	Conditions	If unsuccessful
1	Signature (Paper)	Terminal supports CVM type	Fail
2	No CVM Required	Terminal supports CVM type	Fail
3	Fail CVM Processing	Always	Fail

1.5.2 Application Tag Data

* Tag value changes with card usage

Tag	Element name	Data	v4.0
50	Application Label	56 49 53 41 20 43 52 45 44 49 54 - 'VISA CREDIT'	
57	Track 2 Equivalent Data	47 61 73 90 01 01 00 10 D2 21 22 01 11 43 87 80 01 62 9F	
5A	Application Primary Account Number (PAN)	47 61 73 90 01 01 00 10	
5F 20	Cardholder Name	54 65 73 74 2F 43 61 72 64 20 30 35 20 20 20 20 20 20 20 20 20 20 20 20 20 - 'Test/Card 05'	
5F 24	Application Expiration Date	22 12 31	
5F 25	Application Effective Date	xx xx xx	
5F 28	Issuer Country Code	04 84 - MEX	

Tag	Element name	Data	v4.0
5F 2D	Language Preference	65 37 - 'es' (Spanish)	
5F 30	Service Code	02 01	
5F 34	Application PAN Sequence Number	01	
82	Application Interchange Profile [VSDC]	5C 00	
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	
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 01 03 01 00 00 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	
93	Signed Static Application Data	47 E3 C1 7B B3 20 6F 63 40 67 F3 BE 07 AE 58 7D 5C BA CF 2B D0 1B D7 3D AB 84 48 45 91 D8 65 B2 6F 81 D8 3D 84 F3 78 23 A9 4D 57 94 D2 FB 58 13 10 40 76 B2 EB B9 66 FB 75 20 98 65 4B BE 86 16 57 F2 40 C1 83 89 A9 19 42 DD 22 93 49 80 1E AD 01 63 13 78 96 C1 FE 30 C7 D8 A6 E0 F8 F8 22 D1 4F 63 71 DE 35 60 AF F7 D4 5B EE E3 2C AF 2E 26 0B 2D 6D 88 99 E5 93 CB 83 6E 16 1E 7D BF 79 0E 1F E5 09 39 3B 8B 5D BF 82 B3 E9 52 DE EC DA AA 44 43 12 1F 7A E1 C0 29 24 FF 1D 0C 96 1E FE 6E 7D 75 EB BC 34 4D 58 D2 31 25 F2 64 B9 3E 24 22	
94	Application File Locator (AFL)	10 01 01 00 10 02 04 01 10 06 06 00 B0 01 01 00	
9F 07	Application Usage Control	FF 00	
9F 08	Application Version Number	00 96	

Tag	Element name	Data	v4.0
9F 0D	Issuer Action Code - Default	F0 40 00 88 00	
9F 0E	Issuer Action Code - Denial	00 10 00 00 00	
9F 0F	Issuer Action Code - Online	F0 40 00 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 - 'Visa Credit'	
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 37 35 38 39 30 30 38 39 33 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	
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	2C 90 15 63 B5 5D DA 9E 28 88 D3 B4 D8 A0 34 EC 26 52 E8 F6 94 8C F0 27 52 25 4B 38 B9 FA B9 99 2A 3F 7D F0 F8 71 7C 2A 87 46 1F 1C 28 5A A0 EA DD FF 58 DF A0 4A 3C 21 37 0C DF 7E 1E AE E7 09 24 C0 C4 2C 08 B1 23 B7 34 1B AF B4 00 96 12 45 22 2B 49 7A DC 3F BE 61 D8 25 9E 7A F4 63 B0 01 CE 52 32 47 03 21 28 E2 A9 74 2A 57 24 6F 21 0E 30 AF 5D B6 BB 73 70 3C 13 2B 4A 34 6B 88 F5 89 11 4F 0F 03 D8 14 77 AE A1 7F B9 73 98 F7 71 8B A0 3F 0A 11 E1 20 7C 45 B3 5B 48 D1 B5 5C 05 07 59 71 5E BA C4 11 0C 91 EB C6 2D 65 A7 18 50 5B	
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]	40 00 00 00 00 00	
9F 53	Consecutive Transaction Limit (International) [VSDC]	03	
9F 54	Cumulative Total Transaction Amount Limit [VSDC]	00 00 00 02 00 00	
9F 56	Issuer Authentication Indicator [VSDC]	80	
9F 57	Issuer Country Code [VSDC]	04 84 - MEX	
9F 58	Consecutive Transaction Counter Limit [VSDC]	03	
9F 59	Consecutive Transaction Counter Upper Limit [VSDC]	07	
9F 5C	Cumulative Total Transaction Amount Upper	00 00 00 04 00 00	

Tag	Element name	Data	v4.0
	Limit [VSDC]		
9F 5E	Consecutive Transaction International Upper Limit [VSDC]	07	
9F 68	Card Additional Processes [qVSDC VCPS 2.1]	10 00 D0 00	
9F 6D	VLP Reset Threshold [VSDC]	00 00 00 00 00 00	
9F 77	VLP Funds Limit [VSDC]	00 00 00 00 00 00	
9F 78	VLP Single Transaction Limit [VSDC]	00 00 00 00 00 00	
9F 79	VLP Available Funds [VSDC]	00 00 00 00 00 00	
BF 55	Contactless Counters Data Template	DF 61 06 00 00 00 00 00 00 DF 71 06 00 00 00 00 00 00 DF 41 06 00 00 00 00 00 00 DF 51 06 00 00 00 00 00 00 DF 11 01 00 DF 21 01 03 DF 31 01 07	
BF 56	Counters Data Template	DF 11 01 01 DF 21 01 03 DF 31 01 07	
BF 57	International Counters Data Template	DF 11 01 01 DF 21 01 03 DF 31 01 07 DF 51 01 01	
BF 58	Amounts Data Template	DF 11 06 00 00 00 00 00 00 DF 21 06 00 00 00 02 00 00 DF 31 06 00 00 00 04 00 00	
BF 5B	Application Internal Data Template	DF 01 02 00 00	

1.6 Test Card 06 – Visa, Offline PIN=1234, Spanish, MXN, Mexico

Mexican Spanish Visa, Offline Plaintext PIN Only card (Currency=MXN).

If Spanish is supported by the POS, Spanish should be auto-selected. If the POS supports only one language and it's not Spanish, the POS language should be auto-selected. If the POS supports multiple languages but not Spanish, the list of POS languages should be displayed for cardholder selection.

Once selected, cardholder prompts and the customer receipt should be in the selected language.

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

1.6.1 Cardholder Verification Method List – AID (A0000000031010)

Cardholder Verification Method List ('0103 0100 0000')			
CVM	Verification Method	Conditions	If unsuccessful
1	Offline Plaintext PIN	Terminal supports CVM type	Fail
2	Offline Plaintext PIN	Always	Fail
3	Fail CVM Processing	Always	Fail

1.6.2 Application Tag Data

* Tag value changes with card usage

Tag	Element name	Data	v4.0
xxx	xxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	
50	Application Label	56 49 53 41 20 43 52 45 44 49 54 - 'VISA CREDIT'	

Tag	Element name	Data	v4.0
57	Track 2 Equivalent Data	47 61 73 90 01 01 00 10 D1 81 22 01 11 43 87 80 01 62 9F	
5A	Application Primary Account Number (PAN)	47 61 73 90 01 01 00 10	
5F 20	Cardholder Name	54 65 73 74 2F 43 61 72 64 20 30 36 20 20 20 20 20 20 20 20 20 20 20 20 20 20 - 'Test/Card 06'	
5F 24	Application Expiration Date	22 12 31	
5F 25	Application Effective Date	xx xx xx	
5F 28	Issuer Country Code	04 84 - MEX	
5F 2D	Language Preference	65 73 - 'es' (Spanish)	
5F 30	Service Code	02 01	
5F 34	Application PAN Sequence Number	01	
82	Application Interchange Profile [VSDC]	5C 00	
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	
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 01 03 01 00 00 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	
93	Signed Static Application Data	47 E3 C1 7B B3 20 6F 63 40 67 F3 BE 07 AE 58 7D 5C BA CF 2B D0 1B D7 3D AB 84 48 45 91 D8 65 B2 6F 81 D8 3D 84 F3 78 23 A9 4D 57 94 D2 FB 58 13 10 40 76 B2 EB B9 66 FB 75 20 98 65 4B BE 86 16 57 F2 40 C1 83 89 A9 19 42 DD 22 93 49 80 1E AD 01 63 13 78 96 C1 FE 30 C7 D8 A6 E0 F8 F8 22 D1 4F 63 71 DE 35 60 AF F7 D4 5B EE E3 2C AF 2E 26 0B 2D 6D 88 99 E5 93 CB 83 6E 16 1E 7D BF 79 0E 1F E5	

Tag	Element name	Data	v4.0
		09 39 3B 8B 5D BF 82 B3 E9 52 DE EC DA AA 44 43 12 1F 7A E1 C0 29 24 FF 1D 0C 96 1E FE 6E 7D 75 EB BC 34 4D 58 D2 31 25 F2 64 B9 3E 24 22	
94	Application File Locator (AFL)	10 01 01 00 10 02 04 01 10 06 06 00 B0 01 01 00	
9F 07	Application Usage Control	FF 00	
9F 08	Application Version Number	00 96	
9F 0D	Issuer Action Code - Default	F0 40 00 88 00	
9F 0E	Issuer Action Code - Denial	00 10 00 00 00	
9F 0F	Issuer Action Code - Online	F0 40 00 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 - 'Visa Credit'	
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 37 35 38 39 30 30 38 39 33 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	
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	30 4B 6B B4 E2 02 4C 5A 94 6F 3C 64 DB E3 58 57 7B 15 E1 C9 28 3E 60 3C 4C F0 8F 6C 66 17 6A 40 FF 72 53 A4 12 26 99 1B AC 2A F9 7F 38 FD F4 F7 C4 D4 67 D1 E3 6A A1 39 AD A4 FA C6 1D C9 37 19 E8 AD CC 7C F4 A3 F2 AB CC EB F7 54 46 C9 BA 1B 43 26 FC B2 B3 F5 FA 8C 3D 8D 01 B1 86 BD 7D BE 50 68 02 D4 92 57 6F C1 74 33 D8 9E 54 F5 C5 5F 54 71 A9 C4 F0 C5 F9 3F 60 89 29 9B 17 2A EB 33 7D 9D 1C EC 64 13 C8 06 E0 AA AB CB 8D 99 1B BD CA B6 43 23 33 9A 0C 01 17 51 5D 9A 19 EF A2 5C 10 00 D4 09 5F 5B A3 04 9B 16 7D 20 F8 C1 2B 76	
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]	04 84 - MXN	
9F 52	Application Default Action [VSDC VIS 1.5]	40 00 00 00 00 00	
9F 53	Consecutive Transaction Limit (International) [VSDC]	03	
9F 54	Cumulative Total Transaction Amount Limit	00 00 00 02 00 00	

Tag	Element name	Data	v4.0
	[VSDC]		
9F 56	Issuer Authentication Indicator [VSDC]	80	
9F 57	Issuer Country Code [VSDC]	04 84 - MEX	
9F 58	Consecutive Transaction Counter Limit [VSDC]	03	
9F 59	Consecutive Transaction Counter Upper Limit [VSDC]	07	
9F 5C	Cumulative Total Transaction Amount Upper Limit [VSDC]	00 00 00 04 00 00	
9F 5E	Consecutive Transaction International Upper Limit [VSDC]	07	
9F 68	Card Additional Processes [qVSDC VCPS 2.1]	10 00 D0 00	
9F 6D	VLP Reset Threshold [VSDC]	00 00 00 00 00 00	
9F 77	VLP Funds Limit [VSDC]	00 00 00 00 00 00	
9F 78	VLP Single Transaction Limit [VSDC]	00 00 00 00 00 00	
9F 79	VLP Available Funds [VSDC]	00 00 00 00 00 00	
BF 55	Contactless Counters Data Template	DF 61 06 00 00 00 00 00 00 DF 71 06 00 00 00 00 00 00 DF 41 06 00 00 00 00 00 00 DF 51 06 00 00 00 00 00 00 DF 11 01 00 DF 21 01 03 DF 31 01 07	
BF 56	Counters Data Template	DF 11 01 01 DF 21 01 03 DF 31 01 07	
BF 57	International Counters Data Template	DF 11 01 01 DF 21 01 03 DF 31 01 07 DF 51 01 01	
BF 58	Amounts Data Template	DF 11 06 00 00 00 00 00 00 DF 21 06 00 00 00 02 00 00 DF 31 06 00 00 00 04 00 00	
BF 5B	Application Internal Data Template	DF 01 02 00 00	

1.7 Test Card 07 – Visa, Empty Candidate List

Application Selection will fail due to an Empty Candidate List.

This should trigger MSR Fallback processing and the transaction should continue as a magstripe transaction.

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

1.8 Test Card 08 – Visa, Chip Error

This card has a chip image printed on the card but it does not contain an actual chip.

When inserted, a chip error will be detected.

This should trigger Technical Fallback processing and the transaction should continue as a magstripe transaction.

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

1.9 Test Card 09 – Mastercard, Online PIN=4315, English, USD, USA

USA English Mastercard, Online PIN Only card (Currency=USD).

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

1.9.1 Cardholder Verification Method List – AID (A0000000041010)

Cardholder Verification Method List ('4203 1E03 1F03')			
CVM	Verification Method	Conditions	If unsuccessful
1	Online PIN	Terminal supports CVM type	Next CVM
2	Signature (Paper)	Terminal supports CVM type	Fail
3	No CVM required	Terminal supports CVM type	Fail

1.9.2 Application Tag Data

* Tag value changes with card usage

Tag	Element name	Data	v4.0
50	Application Label	4D 61 73 74 65 72 43 61 72 64 - 'MasterCard'	
57	Track 2 Equivalent Data	54 13 33 00 89 60 41 11 D2 21 22 01 01 23 40 91 72 02 9F	
5A	Application Primary Account Number (PAN)	54 13 33 00 89 60 41 11	
5F 20	Cardholder Name	54 65 73 74 2F 43 61 72 64 20 30 39 20 20 20 20 20 20 20 20 20 20 20 20 20 - 'Test/Card 09'	
5F 24	Application Expiration Date	22 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 [M/Chip, PayPass]	38 00	
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	
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 03 1E 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	

Tag	Element name	Data	v4.0
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 00	
9F 08	Application Version Number	00 02	
9F 0D	Issuer Action Code - Default	B8 50 9C 80 00	
9F 0E	Issuer Action Code - Denial	00 00 00 00 00	
9F 0F	Issuer Action Code - Online	B8 70 9C 98 00	
9F 10	Issuer Application Data [M/Chip 4]	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 43 61 72 64 43 72 65 64 69 74 - 'MasterCardCredit'	
9F 14	Lower Consecutive Offline Limit	00	
9F 17	Personal Identification Number (PIN) Try Counter	03	
9F 1F	Track 1 Discretionary Data	20 20	
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	46 1D AE 8F DE 14 0D 43 E3 97 9B 79 D1 72 49 C5 43 4C FE 7E 03 AB 4B 97 28 6B 03 5E D7 CB C5 CF 20 B0 13 CE F7 42 E0 C4 3D 18 9F AE 89 63 62 52 A7 B1 FC 55 F5 B7 DC 92 CF D3 AD F0 58 97 E5 F2 70 33 7C 57 6C FC 55 A0 BC 80 61 40 17 63 87 14 5E 25 68 E3 9A 8B 19 17 49 E3 E3 F0 18 83 46 3B B4 86 22 BD C4 CB 7B 32 3E 54 23 28 09 8D AE 5E	
9F 47	ICC Public Key Exponent	03	
9F 48	ICC Public Key Remainder	CA 0D 54 D4 EA B2 79 33 01 B6 BB 73 6F 3A C8 68 71 EE 9B 4B 9F 90 B2 A6 C0 E8 4C 6A E5 6C B5 56 9D 86 F4 54 0F 46 60 96 BA 39	
9F 49	Dynamic Data Authentication Data Object List (DDOL)	9F 37 04	
9F 4A	Static Data Authentication Tag List	82	
9F 4B	Signed Dynamic Application Data	64 7F 3F B5 D4 A6 E4 00 F3 1F E5 DC B1 1F E6 CC 5E 8F 26 6A DD 3A B9 E7 AB 52 1F 1E 2A 77 79 C2 11 D5 55 A4 25 C6 B4 68 62 67 CD 2B D5 6C 33 E1 CF 00 96 0B CB 61 7C 0E 0B FA 9B A9 9F 66 FB D1 8A 91 72 C8 15 75 40 23 2A 8C 71 5B 06 1D A7 D3 C0 5C 67 E4 D3 A5 7C 0D 98 A8 C2 1A C0 FD 90 EC E5 99 37 E4 64 7D F3 FE 8E 83 79 71 D7 03 FD 50	
9F 4D	Transaction Log Entry	0B 0A	

Tag	Element name	Data	v4.0
9F 4F	Transaction Log Format	9F 27 01 9F 02 06 5F 2A 02 9A 03 9F 36 02 9F 52 06	
9F 6E	Third Party Data [Mastercard]	08 40 00 00 30 30 00	
9F 7E	Application Life Cycle Data [Mastercard]	03 10 0C 12 00 09 00 00 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 58 00	
C5	Card Issuer Action Code - Online [Mastercard]	06 F8 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	
CD	Card Issuer Action Code - Default [PayPass M/Chip]	00 58 00	
CE	Card Issuer Action Code - Online [PayPass M/Chip]	00 F8 00	
CF	Card Issuer Action Code - Denial [PayPass M/Chip]	08 00 00	
D1	Currency Conversion Table [M/Chip]	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	
D5	Application Control [M/Chip]	C4 00	
D6	Default ARPC Response Code [M/Chip4]	00 12	
D7	Application Control [PayPass M/Chip]	40 00 40	
DF 02	Security Limits Status [Mastercard]	00	

1.10 Test Card 10 – Mastercard, NO CVM, English, USD, USA, Bad ARPC

USA English Mastercard, NO CVM card (Currency=USD) that may generate an ACC at the 2nd Gen AC.

If the host returns an Application Response Cryptogram (Tag 91), the ARPC will fail verification causing the card to return an AAC at the 2nd Gen AC. In this case the POS should decline the transaction and send a host reversal.

If the host approves the transaction and an Application Response Cryptogram (Tag 91) is not returned, the transaction should be approved.

The recommended transaction amount to generate a host approval is \$120.00.

Note: This behavior may change if the Mastercard Authorization Simulator (MAS) test cases change.

1.10.1 Cardholder Verification Method List – AID (A0000000041010)

Cardholder Verification Method List ('1F00')			
CVM	Verification Method	Conditions	If unsuccessful
1	No CVM Required	Always	Fail

1.10.2 Application Tag Data

* Tag value changes with card usage

Tag	Element name	Data	v4.0
50	Application Label	4D 61 73 74 65 72 43 61 72 64 -	
		'MasterCard'	
57	Track 2 Equivalent Data	54 13 33 00 89 01 04 34 D2 21	
		22 01 98 82 80 32 90 00 0F	
5A	Application Primary Account Number (PAN)	54 13 33 00 89 01 04 34	
5F 20	Cardholder Name	54 65 73 74 2F 43 61 72 64 20	
		31 30 20 20 20 20 20 20 20	
		20 20 20 20 20 20 - 'Test/Card 10'	
5F 24	Application Expiration Date	22 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	00	
82	Application Interchange Profile [M/Chip, PayPass]	38 00	
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 9B 02	
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 1F 00	
8F	Certification Authority Public Key Index	FA	

Tag	Element name	Data	v4.0
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 00	
9F 08	Application Version Number	00 02	
9F 0D	Issuer Action Code - Default	B8 50 80 00 00	
9F 0E	Issuer Action Code - Denial	00 00 00 00 00	
9F 0F	Issuer Action Code - Online	B8 70 80 98 00	
9F 10	Issuer Application Data [M/Chip 4]	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 43 61 72 64 - 'MasterCard'	
9F 14	Lower Consecutive Offline Limit	00	
9F 17	Personal Identification Number (PIN) Try Counter	0F	
9F 1F	Track 1 Discretionary Data	20 20	
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	2B EF 71 D8 BB 8A FD D4 9F C1 C9 E6 F2 08 29 33 DE CE C3 D7 9A DF 78 71 44 F6 56 4D 4F EF 72 30 81 99 ED 9B 92 DA 04 08 BC E8 E4 C9 81 C7 63 02 B5 21 AE AF 1B F1 8C E7 8C 46 7E 58 CF ED BF 80 F7 AE 8B F0 A1 3E D3 50 C0 B0 D0 F4 B8 75 39 D8 A7 E5 6A 8D 60 94 22 20 B5 34 77 67 12 B3 FD E7 6D D0 25 BB 89 C7 95 0D 59 0C B4 A1 36 84 92 53	
9F 47	ICC Public Key Exponent	03	

Tag	Element name	Data v4.0
9F 48	ICC Public Key Remainder	C1 AD 6F 56 35 0E 31 87 3A 76 3A 83 3C EE 84 6A 34 B1 DC 76 BB 46 28 7B FF C1 AB C9 4F EC 38 FA E1 39 8B 63 20 B5 6A 7C D4 CF
9F 49	Dynamic Data Authentication Data Object List (DDOL)	9F 37 04
9F 4A	Static Data Authentication Tag List	82
9F 4B	Signed Dynamic Application Data	5E DD A7 7C E6 37 3C 94 1A C4 4F 81 E7 1A FC E9 76 4E 9D 87 A3 AE 51 3B 2F F2 28 5D 4A 7F E4 73 E4 7F F7 0F D4 72 2C 15 C4 4B 7C DB 50 9B 22 54 D3 FA 63 67 F9 80 5C 4D 85 32 86 1A 1A 97 F4 71 66 5A 2D 0B BE 06 83 BA BF B9 E6 43 3F B3 70 E1 0B 44 70 6C 3A 31 64 FF D6 59 27 CC B7 0B 9C A1 8D 3B B0 CC F0 F6 F2 76 A2 7D 46 FA 84 0F 6B A8
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 6E	Third Party Data [Mastercard]	08 40 00 00 30 30 00
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 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]	00 00 00
C5	Card Issuer Action Code - Online [Mastercard]	06 FF 03
C6	Counters [Mastercard]	00 01 00 00 00 00 00 00 00 00
C7	CDOL1 Related Data Length [Mastercard]	2D
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
CD	Card Issuer Action Code - Default [PayPass M/Chip]	00 58 00
CE	Card Issuer Action Code - Online [PayPass M/Chip]	00 F8 00
CF	Card Issuer Action Code - Denial [PayPass M/Chip]	00 00 00
D1	Currency Conversion Table [M/Chip]	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

Tag	Element name	Data	v4.0
D5	Application Control [M/Chip]	C4 00	
D6	Default ARPC Response Code [M/Chip4]	00 10	
D7	Application Control [PayPass M/Chip]	40 01 40	
DF 02	Security Limits Status [Mastercard]	00	

1.11 Test Card 11 – Mastercard, Offline PIN=4315, English, USD, USA, Bad ARPC

USA English Mastercard, Offline Plaintext PIN Only card (Currency=USD) that may generate an ACC at the 2nd Gen AC.

If the host returns an Application Response Cryptogram (Tag 91), the ARPC will fail verification causing the card to return an AAC at the 2nd Gen AC. In this case the POS should decline the transaction and send a host reversal.

If the host approves the transaction and an Application Response Cryptogram (Tag 91) is not returned, the transaction should be approved.

The recommended transaction amount to generate a host approval is \$120.00.

Note: This behavior may change if the Mastercard Authorization Simulator (MAS) test cases change.

1.11.1 Cardholder Verification Method List – AID (A0000000041010)

Cardholder Verification Method List ('0100')			
CVM	Verification Method	Conditions	If unsuccessful
1	Offline Plaintext PIN	Always	Fail

1.11.2 Application Tag Data

* Tag value changes with card usage

Tag	Element name	Data	v4.0
50	Application Label	4D 61 73 74 65 72 43 61 72 64 - 'MasterCard'	
57	Track 2 Equivalent Data	54 13 33 00 89 01 04 34 D2 21 22 01 08 82 80 32 90 00 0F	
5A	Application Primary Account Number (PAN)	54 13 33 00 89 01 04 34	
5F 20	Cardholder Name	54 65 73 74 2F 43 61 72 64 20 31 31 20 20 20 20 20 20 20 20 20 20 20 20 20 20 - 'Test/Card 11'	
5F 24	Application Expiration Date	22 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	00	
82	Application Interchange Profile [M/Chip, PayPass]	38 00	
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	9F 02 06 9F 03 06 9F 1A 02 95	

Tag	Element name	Data	v4.0
	(CDOL1)	05 5F 2A 02 9A 03 9C 01 9F 37 04 9F 35 01 9F 45 02 9F 4C 08 9F 34 03 9B 02	
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 01 00	
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 00	
9F 08	Application Version Number	00 02	
9F 0D	Issuer Action Code - Default	B8 50 84 00 00	
9F 0E	Issuer Action Code - Denial	00 00 00 00 00	
9F 0F	Issuer Action Code - Online	B8 70 B8 98 00	
9F 10	Issuer Application Data [M/Chip 4]	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 43 61 72 64 - 'MasterCard'	
9F 14	Lower Consecutive Offline Limit	00	
9F 17	Personal Identification Number (PIN) Try Counter	0F	
9F 1F	Track 1 Discretionary Data	20 20	
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	8E 1C 64 37 48 E8 18 E8 CF 33 67 1C 9A B0 84 80 36 0E E5 FF F1 AD 03 73 B7 04 1C EC D7 7C E5 85 E8 CD EA 33 AD 1D 52 A9 68 51 13 BD 83 96 2A 03 18 F9 8C 30 8E E8 B7 D8 43 5D 8E 3C 14 88 C9 9C 35 AF C8 EE A8 7C 38 B2 3C E7 90 CE 51 FB 87 6D	

Tag	Element name	Data	v4.0
		E4 78 B0 95 FB 11 3F 48 FC 4E 49 2D 2B 8F 3B 53 C2 12 BE E6 9C BF 1E FE C8 22 77 68 58 AB 70 3A	
9F 47	ICC Public Key Exponent	03	
9F 48	ICC Public Key Remainder	48 A3 EE 27 4E 33 86 94 54 4F 18 B8 4F 14 03 82 3B 12 16 E1 83 D5 50 99 59 28 CC 4D 58 22 21 6E 91 DA 89 C3 2E 2D 67 B7 C5 D5	
9F 49	Dynamic Data Authentication Data Object List (DDOL)	9F 37 04	
9F 4A	Static Data Authentication Tag List	82	
9F 4B	Signed Dynamic Application Data	D7 61 BB 34 FE A6 B4 51 ED E7 83 08 18 54 08 A6 35 07 D0 5F 37 9E 94 A2 93 2A 20 79 B5 06 1B 2D 76 20 93 E4 6A AF BC 4B A1 25 1A FA BC 28 3E 42 5B FA B1 F5 80 D3 DD 83 BB C0 81 D3 81 1E 16 03 BA CB 59 A0 1C C0 78 65 27 BE E0 03 CE 5B 4F 21 3B A7 20 F9 31 10 0F 0B 0B FF C5 CA 2B 62 9F F4 D0 43 6E 5D A3 56 5C DD 87 6D 49 52 4D D2 FC C2	
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 6E	Third Party Data [Mastercard]	08 40 00 00 30 30 00	
9F 7E	Application Life Cycle Data [Mastercard]	03 10 0C 12 00 09 00 00 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]	00 00 00	
C5	Card Issuer Action Code - Online [Mastercard]	3F FF 03	
C6	Counters [Mastercard]	00 01 00 00 00 00 00 00 00 00	
C7	CDOL1 Related Data Length [Mastercard]	2D	
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	
CD	Card Issuer Action Code - Default [PayPass M/Chip]	00 58 00	
CE	Card Issuer Action Code - Online [PayPass M/Chip]	00 F8 00	
CF	Card Issuer Action Code - Denial [PayPass M/Chip]	00 00 00	

Tag	Element name	Data	v4.0
D1	Currency Conversion Table [M/Chip]	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	
D5	Application Control [M/Chip]	C4 00	
D6	Default ARPC Response Code [M/Chip4]	00 10	
D7	Application Control [PayPass M/Chip]	40 01 40	
DF 02	Security Limits Status [Mastercard]	00	

1.12 Test Card 12 – Mastercard, Online PIN=4315, English, USD, USA, Bad ARPC

USA English Mastercard, Online PIN Only card (Currency=USD) that may generate an ACC at the 2nd Gen AC.

If the host returns an Application Response Cryptogram (Tag 91), the ARPC will fail verification causing the card to return an AAC at the 2nd Gen AC. In this case the POS should decline the transaction and send a host reversal.

If the host approves the transaction and an Application Response Cryptogram (Tag 91) is not returned, the transaction should be approved.

The recommended transaction amount to generate a host approval is \$120.00.

Note: This behavior may change if the Mastercard Authorization Simulator (MAS) test cases change.

1.12.1 Cardholder Verification Method List – AID (A0000000041010)

Cardholder Verification Method List ('0200')			
CVM	Verification Method	Conditions	If unsuccessful
1	Online PIN	Always	Fail

1.12.2 Application Tag Data

* Tag value changes with card usage

Tag	Element name	Data	v4.0
50	Application Label	4D 61 73 74 65 72 43 61 72 64 - 'MasterCard'	
57	Track 2 Equivalent Data	54 13 33 00 89 01 04 34 D2 21 22 01 08 82 80 32 90 00 0F	
5A	Application Primary Account Number (PAN)	54 13 33 00 89 01 04 34	
5F 20	Cardholder Name	54 65 73 74 2F 43 61 72 64 20 31 32 20 20 20 20 20 20 20 20 20 20 20 20 20 - 'Test/Card 12'	
5F 24	Application Expiration Date	22 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	00	

Tag	Element name	Data	v4.0
82	Application Interchange Profile [M/Chip, PayPass]	38 00	
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 9B 02	
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 00	
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 00	
9F 08	Application Version Number	00 02	
9F 0D	Issuer Action Code - Default	B8 50 84 00 00	
9F 0E	Issuer Action Code - Denial	00 00 00 00 00	
9F 0F	Issuer Action Code - Online	B8 70 9C 98 00	
9F 10	Issuer Application Data [M/Chip 4]	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 43 61 72 64 - 'MasterCard'	
9F 14	Lower Consecutive Offline Limit	00	
9F 17	Personal Identification Number (PIN) Try Counter	0F	
9F 1F	Track 1 Discretionary Data	20 20	
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	5F 50 7D 6F E7 9E 90 DB 91 2B EF 71 5F 4A B1 F3 9C 28 AE 02	

Tag	Element name	Data v4.0
		6D 4C EF EB DF 9C 78 31 D1 27 CE 9D CA 65 60 05 CD 8F 6D 9E FA E6 56 54 27 13 59 1F 49 1F C6 8C 89 28 C0 0C 2F 08 8C 5E 68 AB 95 8B DA 11 EB F3 C1 DF DF 00 19 5E 96 86 7F 68 44 F8 61 CB 7A E9 0B A9 8B D3 FE 36 95 98 6E CE 01 03 67 7B 72 AA 4E F0 C7 3D C7 17 42 CA F3 00 E6 97
9F 47	ICC Public Key Exponent	03
9F 48	ICC Public Key Remainder	D2 A8 3B CB 98 B3 99 9A 9A A9 1B FE 50 24 B5 AE C9 A8 D2 82 BF 4C E6 33 76 4D B0 F0 79 F9 B2 1F 5F FF A9 2D 33 47 A3 C5 EB DF
9F 49	Dynamic Data Authentication Data Object List (DDOL)	9F 37 04
9F 4A	Static Data Authentication Tag List	82
9F 4B	Signed Dynamic Application Data	89 B6 11 84 A0 40 A5 6D 3E B1 FC E8 8A 8A 0F 15 34 BE 55 AD 9A 16 76 7E 52 A2 2A 34 31 B6 B4 7E E0 26 A6 AC 82 62 D6 15 2C C1 34 6F 0F 3D 36 4C 47 35 2A 21 15 0A 4A 8C 47 9A 08 AB 29 6C 9C BA EA 30 9A 56 2B 25 21 71 0B 42 01 82 C8 A9 99 98 6B 79 60 AF 42 9A FC D9 DB FC 9C 4B F9 55 8F 6E 5B 6F D0 13 ED 40 A7 7C 80 DC A4 7B D2 50 C0 E8
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 6E	Third Party Data [Mastercard]	08 40 00 00 30 30 00
9F 7E	Application Life Cycle Data [Mastercard]	03 10 0C 12 00 09 00 00 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]	00 00 00
C5	Card Issuer Action Code - Online [Mastercard]	06 FF 03
C6	Counters [Mastercard]	00 01 00 00 00 00 00 00 00 00
C7	CDOL1 Related Data Length [Mastercard]	2D
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

Tag	Element name	Data	v4.0
CD	Card Issuer Action Code - Default [PayPass M/Chip]	00 58 00	
CE	Card Issuer Action Code - Online [PayPass M/Chip]	00 F8 00	
CF	Card Issuer Action Code - Denial [PayPass M/Chip]	00 00 00	
D1	Currency Conversion Table [M/Chip]	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]	C4 00	
D6	Default ARPC Response Code [M/Chip4]	00 10	
D7	Application Control [PayPass M/Chip]	40 01 40	
DF 02	Security Limits Status [Mastercard]	00	

1.13 Test Card 13 – Mastercard, Empty Candidate List

Application Selection will fail due to an Empty Candidate List.

This should trigger MSR Fallback processing and the transaction should continue as a magstripe transaction.

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

1.14 Test Card 14 – Mastercard, Chip Error

This card has a chip image printed on the card but it does not contain an actual chip. When inserted a chip error will be detected.

This should trigger Technical Fallback processing and the transaction should continue as a magstripe transaction.

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

1.15 Test Card 15 – Interac, Offline PIN=1234, English, CAD, Canada

Canadian English Interac, Offline Plaintext PIN Only debit card (Currency=CAD).

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

1.15.1 Cardholder Verification Method List – AID (A0000002771010)

Cardholder Verification Method List ('0100')			
CVM	Verification Method	Conditions	If unsuccessful
1	Offline Plaintext PIN	Always	Fail

1.15.2 Application Tag Data

* Tag value changes with card usage

Tag	Element name	Data	v4.0
50	Application Label	49 6E 74 65 72 61 63 - 'Interac'	
57	Track 2 Equivalent Data	45 06 44 50 06 93 19 33 D2 21 22 20 01 62 90 70 11 60 1F	
5A	Application Primary Account Number (PAN)	45 06 44 50 06 93 19 33	
5F 20	Cardholder Name	54 65 73 74 2F 43 61 72 64 20 31 35 20 20 20 20 20 20 20 20 20 20 20 20 20 20 - 'Test/Card 15'	
5F 24	Application Expiration Date	22 12 31	
5F 25	Application Effective Date	xx xx xx	
5F 28	Issuer Country Code	01 24 - CAN	
5F 2D	Language Preference	65 6E - 'en' (English)	
5F 30	Service Code	02 20	
5F 34	Application PAN Sequence Number	01	
82	Application Interchange Profile [VSDC]	1C 00	
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	
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 01 00	
8F	Certification Authority Public Key Index	55	
90	Issuer Public Key Certificate	6C 16 73 99 B8 BE 0C CA 2A A9 EF 30 EC F5 14 C4 F4 F1 F0 89 85 8A 46 08 6F 12 F2 80 B6 81 FD CA 40 8C 09 51 C0 D6 BA 64 FD 05 C7 2C 5A 23 B2 66 DA 11 D6 75 BA B2 AC 74 C5 AF E0 41 A6 94 2D 84 FC 19 0D C0 6D 83 CF 17 71 F2 F9 74 B8 31 73 5A A1 30 39 4D 12 DC CF D5 74 61 D1 20 E5 58 F6 35 12 F6 DB 82 46 DD 41 00 9F A1 D9 73 1B 27 42 F9 7E FD 2B C1 16 DF B9 AF 7A 96 6A CF 12 83 A8 49 A7 A9 73 6A 0D 8A E2 63 98 36 BC A6 9B D9 EE 78	
92	Issuer Public Key Remainder	EC A4 19 2A 02 CA AC 0B 75 22 44 EC AE 9F 1A BA 46 15 E7 05 27 AD D0 D8 03 67 54 CA 9F A5 2E 7D 42 16 22 0F	
93	Signed Static Application Data	14 C7 C1 C9 B0 06 C8 53 96 5A 21 50 DF 00 75 B4 AD D7 AA A1	

Tag	Element name	Data	v4.0
		EE AA 51 AF 24 D5 6B 8F 94 4B 3C E3 AC 0B 9A F8 F3 E5 F8 8F EF 7C D2 A8 D8 47 06 52 87 4F 51 17 50 91 2F AA 2B FE ED 35 3F 2C 35 30 46 F6 B6 0C C1 5B 93 C6 95 31 67 F2 8C 1E B6 AA 08 89 BE 5D D2 5C D8 B0 F2 37 A0 22 31 5F 5E F6 F5 8F 79 BF D0 97 FC 91 C9 14 A5 7C 75 BC 67 E4 A7 98 58 46 6A 6C B0 B1 A3 C2 82 EB 08 D6 56 9B 7A 26 31 2E 3B 63 F9 8D 4C 04 22 03 8A 28 D2 A3	
94	Application File Locator (AFL)	10 01 01 00 10 02 04 01 10 06 06 00 B0 01 01 00	
9F 07	Application Usage Control	FF 00	
9F 08	Application Version Number	00 01	
9F 0D	Issuer Action Code - Default	F0 78 FC B8 00	
9F 0E	Issuer Action Code - Denial	00 00 00 00 00	
9F 0F	Issuer Action Code - Online	FC 78 24 F8 80	
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 61 63 - 'Interac'	
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 37 35 38 39 30 30 38 39 33 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	
9F 32	Issuer Public Key Exponent	03	
9F 36	Application Transaction Counter (ATC)	xx xx *	
9F 38	Processing Options Data Object List (PDOL)	9F 02 06 9F 1A 02	
9F 44	Application Currency Exponent	02	
9F 46	ICC Public Key Certificate	3A 10 D2 49 A0 98 A9 61 83 04 66 A6 92 3E DC AD CE 81 13 21 E4 D4 EB 3C 1E D5 E8 29 4E 94 65 4C 07 D0 57 23 84 28 62 1F 0E E8 57 44 F5 BC D1 20 72 63 56 64 EF 1C B4 51 D5 72 DC 32 96 FE 17 56 DF 63 F6 AA 61 79 F8 B9 E2 C5 EE 45 94 1E D1 FC B6 78 76 C5 9A 68 40 5C 62 E6 AB BF 8C 0D 4A E3 EC 73 C4 55 1C BF B1 C2 1C 41 D8 5C A1 1A 99 70 6F E8 1E 7F 4F 41 58 46 05 45 49 6F 71 70 DE 0E 3D A7 84 A8 97 EE F0 C3 F6 27 3F 5D 55 80 BE 70	
9F 47	ICC Public Key Exponent	03	
9F 48	ICC Public Key Remainder	00 76 35 66 B6 AC 65 49 0D 53 21 D0 2E DA D3 25 72 24 35 75 5B D2 BD CB 93 F1	
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]	01 24 - CAD	
9F 52	Application Default Action [VSDC VIS 1.5]	C3 38 00 00 00 00	

Tag	Element name	Data	v4.0
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]	01 24 - CAN	
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 68	Card Additional Processes [qVSDC VCPS 2.1]	10 00 10 00	
9F 6D	VLP Reset Threshold [VSDC]	00 00 00 00 00 00	
9F 77	VLP Funds Limit [VSDC]	00 00 00 00 00 00	
9F 78	VLP Single Transaction Limit [VSDC]	00 00 00 00 00 00	
9F 79	VLP Available Funds [VSDC]	00 00 00 00 00 00	
BF 55	Contactless Counters Data Template	DF 61 06 00 00 00 00 00 00 DF 71 06 00 00 00 00 00 00 DF 41 06 00 00 00 00 00 00 DF 51 06 00 00 00 00 00 00 DF 11 01 00 DF 21 01 00 DF 31 01 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 01 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	
BF 5B	Application Internal Data Template	DF 01 02 00 00	

1.16 Test Card 16 – Interac, Offline PIN=1234, French, CAD, Canada

Canadian French Interac, Offline Plaintext PIN Only debit card (Currency=CAD).

If French is supported by the POS, French should be auto-selected. If the POS supports only one language and it's not French, the POS language should be auto-selected. If the POS supports multiple languages but not French, the list of POS languages should be displayed for cardholder selection.

Once selected, cardholder prompts and the customer receipt should be in the selected language.

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

1.16.1 Cardholder Verification Method List – AID (A0000002771010)

Cardholder Verification Method List ('0100')			
CVM	Verification Method	Conditions	If unsuccessful
1	Offline Plaintext PIN	Always	Fail

1.16.2 Application Tag Data

* Tag value changes with card usage

Tag	Element name	Data	v4.0
50	Application Label	49 6E 74 65 72 61 63 - 'Interac'	
57	Track 2 Equivalent Data	45 06 36 44 00 03 81 06 D2 21 22 20 01 62 90 70 21 60 2F	
5A	Application Primary Account Number (PAN)	45 06 36 44 00 03 81 06	
5F 20	Cardholder Name	54 65 73 74 2F 43 61 72 64 20 31 36 20 20 20 20 20 20 20 20 20 20 20 20 20 20 - 'Test/Card 16'	
5F 24	Application Expiration Date	22 12 31	
5F 25	Application Effective Date	xx xx xx	
5F 28	Issuer Country Code	01 24 - CAN	
5F 2D	Language Preference	65 6E - 'fr' (French)	
5F 30	Service Code	02 20	
5F 34	Application PAN Sequence Number	01	
82	Application Interchange Profile [VSDC]	1C 00	
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	
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 01 00	
8F	Certification Authority Public Key Index	55	
90	Issuer Public Key Certificate	6C 16 73 99 B8 BE 0C CA 2A A9 EF 30 EC F5 14 C4 F4 F1 F0 89 85 8A 46 08 6F 12 F2 80 B6 81 FD CA 40 8C 09 51 C0 D6 BA 64 FD 05 C7 2C 5A 23 B2 66 DA 11 D6 75 BA B2 AC 74 C5 AF E0 41 A6 94 2D 84 FC 19 0D C0 6D 83 CF 17 71 F2 F9 74 B8 31 73 5A A1 30 39 4D 12 DC CF D5 74 61 D1 20 E5 58 F6 35 12 F6 DB 82 46 DD 41 00 9F A1 D9 73 1B 27 42 F9 7E FD 2B C1 16 DF B9 AF 7A 96 6A CF 12 83 A8 49 A7 A9	

Tag	Element name	Data	v4.0
		73 6A 0D 8A E2 63 98 36 BC A6 9B D9 EE 78	
92	Issuer Public Key Remainder	EC A4 19 2A 02 CA AC 0B 75 22 44 EC AE 9F 1A BA 46 15 E7 05 27 AD D0 D8 03 67 54 CA 9F A5 2E 7D 42 16 22 0F	
93	Signed Static Application Data	5F 00 FC 45 F9 34 49 4C 17 B0 4C 9A 70 77 57 4A C6 C5 F9 9A F8 90 97 5E 65 A5 A7 80 EF 8E 54 5A EC AA 9A 50 8B 10 DE B8 24 D8 D9 13 BB 66 A2 C4 BB 82 D5 E3 1B 65 18 E4 B2 97 70 0B 0A 33 B7 AD 79 8C 4E C3 DC 5B 2F E6 00 C4 45 2A B5 54 D7 0B AB B1 8F 3F 77 51 D9 8D 36 C5 FC 26 44 9D 0B 5E 69 62 FC 00 EB 1B BA 58 1D 5C BD CC 1E 9B C4 8B 9E EC 7F CE 16 74 5C FD 98 10 C6 A5 8B 3A 42 C6 01 AE 3F F4 5E DE FE 72 5A EB 09 F0 92 49 37 B8	
94	Application File Locator (AFL)	10 01 01 00 10 02 04 01 10 06 06 00 B0 01 01 00	
9F 07	Application Usage Control	FF 00	
9F 08	Application Version Number	00 01	
9F 0D	Issuer Action Code - Default	F0 78 FC B8 00	
9F 0E	Issuer Action Code - Denial	00 00 00 00 00	
9F 0F	Issuer Action Code - Online	FC 78 24 F8 80	
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 61 63 - 'Interac'	
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 37 35 38 39 30 30 38 39 33 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	
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	69 1E ED ED 0F DE B8 11 31 58 1A 8E 86 D4 B3 59 CE 42 E8 B0 6C 6A C0 00 74 37 5D 90 B0 18 E8 B2 41 EE E8 85 B6 F3 BB E9 74 26 2E 7C 2F B7 6A 29 79 9B 7E 20 2A 67 1D EA 90 54 62 57 9F B7 72 70 A6 3A 76 F1 26 5C F0 8F CC C9 8E 28 C9 BF 98 6B 5A 09 AD 89 39 E3 3A D5 87 0A C4 99 2A 63 38 B1 37 4F F8 89 29 75 43 0A D1 1C 79 C2 60 9E E4 C4 AD BA B2 52 F1 AF 41 0D C2 A4 E9 AE 8C CA 44 8B 90 B9 DF 27 1C 4D 67 64 06 2F 87 78 42 28 86 EA	
9F 47	ICC Public Key Exponent	03	
9F 48	ICC Public Key Remainder	4C 0D 04 B6 B3 F5 20 DB 76 DC C2 87 9F 3A 51 10 A7 FE 82 2B	

Tag	Element name	Data	v4.0
		A2 2D 67 DD EE 2F	
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]	01 24 - CAD	
9F 52	Application Default Action [VSDC VIS 1.5]	c3 38 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]	01 24 - CAN	
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 68	Card Additional Processes [qVSDC VCPS 2.1]	10 00 10 00	
9F 6D	VLP Reset Threshold [VSDC]	00 00 00 00 00 00	
9F 77	VLP Funds Limit [VSDC]	00 00 00 00 00 00	
9F 78	VLP Single Transaction Limit [VSDC]	00 00 00 00 00 00	
9F 79	VLP Available Funds [VSDC]	00 00 00 00 00 00	
BF 55	Contactless Counters Data Template	DF 61 06 00 00 00 00 00 00 DF 71 06 00 00 00 00 00 00 DF 41 06 00 00 00 00 00 00 DF 51 06 00 00 00 00 00 00 DF 11 01 00 DF 21 01 00 DF 31 01 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 01 DF 21 01 00 DF 31 01 00 DF 51 01 01	
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	
BF 5B	Application Internal Data Template	DF 01 02 00 00	

Chapter 2 - 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				