



USA
EMV™ Test Card Set

Version 1.80

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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

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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	12/2018	12/2018	12/2018
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	v3.3	v3.3	v3.3

	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	12/2018	12/2018	12/2018
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	v3.3	v3.3	v3.3

	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	12/2018	12/2018	12/2025
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	v3.1	v3.1	v3.3

	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	12/2018	12/2018	12/2018
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	v3.2	v3.2	v3.2

	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	12/2018	12/2018	12/2018
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	v3.1	v3.1	v3.3

	Test Card 16
Brand	Interac
AID	A0000002771010
PAN	4506 3644 0003 8106
Expiry Date	12/2018
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	v3.3

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 Tag List

* Tag value changes with card usage

Tag	Element name	Data	v3.3
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 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 20 43 61 72 64 20 30 31 20 20 20 20 20 20 20 20 20 20 20 20 20 20 ('Test Card 01')	
5F 24	Application Expiration Date	18 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	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	v3.3
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	AA 2C 7E D9 F6 F4 0C 63 51 B3 A2 FD 09 A5 2A 93 DE E6 10 C4 93 1A E9 61 BD 40 35 0E D9 07 31 51 DE E5 07 34 B4 EC 8E 71 84 F9 18 B7 64 48 7F C6 6B DD 27 D3 86 6A 35 40 10 5E D4 39 9C 4B CF 33 EA 07 12 5D CD 4E 31 8D A1 46 D7 98 EC 99 EB 78 FF 59 12 4B 07 46 8A 53 C7 7F 68 D7 D1 BE 90 23 A3 D7 FA A4 21 E0 7C 06 68 49 3D 58 FB F1 A3 4A B1 2A 22 BB F3 3F BD F2 20 30 CB 65 CF 17 2B 6C 46 F0 39 D8 AC 56 29 13 D0 FB 7B 59 D4 C1 CE 64 CF 8C 8A 87 AA E3 1B 2C 66 18 ED 1B FF 4F AC BC 09 E7 3A 0D A6 9B 96 00 8D 22 FE 93 42 20 7C 1E	
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 xx 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	

Tag	Element name	Data	v3.3
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	34 0D 94 04 41 AC 2B 6E E0 E7 57 E5 6B F2 FC 62 65 FF 42 AD C1 69 A2 C9 4F BA 33 1E AC F6 74 88 4E 49 AA EC FD E1 D1 7C 88 9D 40 FB 82 30 48 7A F1 B8 5E 2C 0B 9F C8 C2 7E FB 2B 84 DB 45 49 0B EF 22 ED 9D F7 8C AC 76 84 6A 2E FC 56 9F B6 9B F2 D8 95 BA 89 57 6C 12 19 3B FD 42 F7 87 E4 17 31 68 17 69 B9 D3 A8 8C 14 82 5D 9C 9D 7D CE C7 C8 DA E7 2A A4 1B 87 28 2A 74 65 0A C2 99 0D 15 40 6E 75 0A 61 AF 79 A4 EF 83 D8 FF 49 4C C1 3D 26 BE 33 B7 07 AA C8 A0 FC 77 63 8E A8 E7 07 B2 BD 3A 38 FE EB E7 E7 A1 07 F5 3F FA 20 FC BD D1	
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	
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]	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 D0 00	
9F 6D	VLP Reset Threshold [VSDC]	00 00 00 00 00 00	
9F 72	Consecutive Transaction Limit (International-Country) [VSDC]	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	

Tag	Element name	Data	v3.3
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	
BF 56	Counters Data Template	DF 21 01 00 DF 31 01 00 DF 11 01 01	
BF 57	International Counters Data Template	DF 21 01 00 DF 31 01 00 DF 11 01 01 DF 51 01 01 DF 61 01 00	
BF 58	Amounts Data Template	DF 21 06 00 00 00 00 00 00 DF 31 06 00 00 00 00 00 00 DF 11 06 00 00 00 00 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 Tag List

* Tag value changes with card usage

Tag	Element name	Data	v3.3
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 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 20 43 61 72 64 20 30 32 20 20 20 20 20 20 20 20 20 20 20 20 20 20 ('Test Card 02')	
5F 24	Application Expiration Date	18 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	5C 00	
84	Dedicated File (DF) Name	A0 00 00 00 03 10 10	
87	Application Priority Indicator	01	

Tag	Element name	Data	v3.3
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	67 BE 67 3A 5B 6A 95 19 2D 7A BE BD 18 4B CD 4A 90 A0 89 68 08 44 36 69 C8 EA B6 C7 A8 66 83 23 19 DC 81 0C 94 C5 04 58 BF 49 26 F9 BB 34 7A E7 AB BC 9D F0 1E 56 77 D4 C5 75 D9 EB 26 26 81 44 1E 77 18 55 C0 3B 03 2F 85 00 8D A1 44 51 C7 76 10 CF D0 51 FE 5F 93 EB 7D 2C 80 82 29 38 1F 46 E8 1D 56 E9 D3 0C 5E D6 AB 4C 01 62 DE 6D EC 4A F3 A2 A0 2B E1 09 F6 1A AD 8B 33 F8 AD BF BD DB 1E D8 99 DD FC 0E 22 F4 D1 DF 1A F6 DB 0D A8 63 2E FE 0A A2 7F E9 CC B1 98 5D BD 4D F8 85 C7 F4 D2 5A 06 FD D4 CF 93 A0 52 E4 32 7E A3 4E 84 2B	
94	Application File Locator (AFL)	08 01 01 00 08 02 04 01 08 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 xx xx xx xx xx *	
9F 11	Issuer Code Table Index	01	

Tag	Element name	Data	v3.3
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	00 01*	
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	A1 9B 5D 8D 06 D8 B6 36 D4 1E 77 21 8F C0 73 66 E5 64 ED A4 DF DC 95 C6 9A 01 FE 71 F3 26 38 E0 64 EC E8 FF EF D3 D3 37 1C 93 4A 1D A3 E5 3F 8C 23 1C FA AB 12 70 0F 6F 9F B5 B0 42 99 F2 E8 B0 59 9E A7 88 97 92 61 0E 61 23 A4 E1 87 41 B0 B8 D7 2C CD 79 6A 15 B2 76 93 52 0D 03 E6 4B 4D 43 A8 20 2F F4 51 39 2B 24 7C 2C 51 7B D9 01 1B 01 2B 1E 60 2B 9E FF 0B 32 BD 4D ED 6B 8C 0B 17 7C 5E 70 04 3D A1 94 85 D4 60 BB 79 BE 12 DA EB 0F 5E FF 2E A5 FD 5C C0 09 05 7C B9 1B 8A B7 51 68 8C 34 5A 0A 70 22 C5 58 10 15 7E 49 BD DC 84 2E	
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	
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	

Tag	Element name	Data	v3.3
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 72	Consecutive Transaction Limit (International-Country) [VSDC]	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 11 01 00 DF 51 06 00 00 00 00 00 00 DF 61 06 00 00 00 00 00 00 DF 71 06 00 00 00 00 00 00	
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	

1.3 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 Tag List

* Tag value changes with card usage

Tag	Element name	Data	v3.3
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 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 20 43 61 72 64 20 30 33 20 20 20 20 20 20 20 20 20 20 20 20 20 ('Test Card 03')	
5F 24	Application Expiration Date	18 12 31	
5F 25	Application Effective Date	xx xx xx	
5F 28	Issuer Country Code	08 40 (USA)	

Tag	Element name	Data	v3.3
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	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 02 03 02 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	A8 5A 59 24 7C 95 D5 98 87 B4 2A 0D CD 76 49 40 E9 57 67 43 8E 4E 62 66 F6 7F 3A 40 D3 EE 58 7B BA F9 CE 15 DE 28 E3 6C F3 D3 6D 40 AC EE D7 A4 35 19 5A B8 0F E8 63 E3 0C 4E 0C F0 D2 5D D6 EF C3 F5 E9 70 9D C1 54 6E 86 8F 1E 29 AD 8C 09 4B DC 68 7C B3 10 8D AB B8 FD 49 81 A4 E9 64 59 E9 3C 62 6A B3 DA 32 17 85 70 F2 C6 74 14 66 95 6A DB DA 05 6D A8 61 89 6F 4D 18 B9 64 BE D8 60 56 53 51 B1 E8 9E 0C FD A2 DE 93 07 B4 43 66 F7 D2 71 45 67 59 7D CF 92 B3 E3 35 33 3F 16 39 D4 D1 C2 2E 14 7D 90 09 80 6A 8D CE 67 D6 4A 13 88 23	
94	Application File Locator (AFL)	08 01 01 00 08 02 04 01 08 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	v3.3
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 xx 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	04 16 F5 BE 94 E8 EC 9F 8A ED B0 EB 65 0A D4 34 52 1E 93 48 9D 7B 64 48 15 9B BD 45 F7 4F 1F 6A A0 2E 2F 62 76 0F DC 23 6E A8 16 FC 22 5F B0 4B 5B AC BD F6 D5 1F EE 04 FE 56 5E A4 55 E8 E9 D1 20 41 7E 08 D9 5F BA B9 94 14 AA 05 FF EB F7 04 7B 7F 89 18 E1 B4 30 47 A5 CD 30 EB 68 8F C7 6D 22 D7 62 FA E9 10 E6 89 A6 3A CD A0 50 7E 29 66 2D 03 63 6A 8F C4 A1 30 4B D9 3E 23 73 6C 7A D5 C0 AB 98 44 7E 12 73 A0 F0 14 35 5E 6F 3D BD 37 98 D9 60 54 DB 21 94 06 B0 DF E2 22 3D CD 2D EF 68 02 72 DA 4B CD 7D EB 67 31 72 13 D5 2A 15 00	
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	
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	

Tag	Element name	Data	v3.3
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 72	Consecutive Transaction Limit (International-Country) [VSDC]	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 11 01 00 DF 51 06 00 00 00 00 00 00 DF 61 06 00 00 00 00 00 00 DF 71 06 00 00 00 00 00 00	
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	

1.4 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 Tag List

* Tag value changes with card usage

Tag	Element name	Data v3.3
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 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 20 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	18 12 31
5F 25	Application Effective Date	xx xx xx
5F 28	Issuer Country Code	01 24 (Canada)
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	5C 00
84	Dedicated File (DF) Name	A0 00 00 00 03 10 10
87	Application Priority Indicator	81
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	27 5E 35 53 CD 48 E3 CB 59 3E 4D ED 17 D6 1F EE ED B8 CD A9 79 F3 70 80 3C E1 C6 09 64 4C 1F E2 93 E6 D8 5C 31 B1 C7 12 FF DC A0 4E 8C B9 E2 7E B2 4D 7C 0C 27 E3 A5 7E FF DE EA 36 EE F2 F7 CB 48 F3 3E 3E A6 4D

Tag	Element name	Data v3.3
		78 5C 87 A6 89 F4 64 02 6D 92 1F 26 42 95 22 ED 2B 79 28 C4 38 72 C9 61 4F 7F 3D 50 0A A3 BB 32 48 8C 96 81 87 14 0F F1 DC 26 0B 80 13 B8 3B 4A F9 9A BA 90 8D 28 00 0E 17 66 65 BF E8 1F F6 76 EE A0 D5 0E CC A9 A1 E3 CB 3A 0A 44 6F D6 2D 54 E9 F7 38 73 6D A8 11 0D 0B 37 4B 16 D1 8D 72 C2 4A 49 DD A9 45 53 5F 19 A0 B7
94	Application File Locator (AFL)	08 01 01 00 08 02 04 01 08 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 xx 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	15 33 1E EA A0 08 99 23 81 57 9A BF 05 E1 6C 51 C1 62 91 B5 B4 89 CB DA 92 54 5E 7F EE ED DB 32 EA 94 8E 58 68 E5 4A 20 AC DF 62 CA 5A 55 43 73 5D B4 81 71 BA 3D B7 94 11 D5 09 CA 87 2C DE E9 4A DB 19 E1 C2 A6 83 B5 63 E2 41 63 D7 4C B6 81 CE 49 E1 FC 9F EE 5E D5 08 1D 4A A6 71 A2 D8 61 C1 4E 83 84 F2 1F 85 74 5D C4 8E A5 39 60 3D 96 7B 9E EF 47 BA 90 AC 9D 3D E8 CD B0 5F 55 69 3F 3B 2F 8F FE F9 98 73 26 F1 40 3E 91 54 4A 64 21 12 77 89 EB 64 E4 1A 0E 66 EA D1 8A 52 91 0C F6 35 1F AF C2 56 5C FE DA 77 86 7B 9C 3E 10 15 1D
9F 47	ICC Public Key Exponent	03
9F 49	Dynamic Data Authentication Data Object List (DDOL)	9F 37 04

Tag	Element name	Data	v3.3
9F 4A	Static Data Authentication Tag List	82	
9F 51	Application Currency Code [VSDC]	01 24 (CAD - Canadian Dollar)	
9F 52	Application Default Action [VSDC VIS 1.5]	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 (Canada)	
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 72	Consecutive Transaction Limit (International-Country) [VSDC]	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 11 01 00 DF 51 06 00 00 00 00 00 00 DF 61 06 00 00 00 00 00 00 DF 71 06 00 00 00 00 00 00	
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 Tag List

* Tag value changes with card usage

Tag	Element name	Data	v3.3
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 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 20 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	18 12 31	
5F 25	Application Effective Date	xx xx xx	
5F 28	Issuer Country Code	04 84 (Mexico)	
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	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	

Tag	Element name	Data	v3.3
		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	61 DA 8C 67 41 4A 64 6F 46 95 BA 88 EE 7A 54 1D 43 A7 FE 9F A3 D4 E1 60 65 74 03 EA 5F A0 21 DA CE 15 6C 34 C4 19 01 9E 1C B8 9E D7 AA 84 54 13 5A AC F6 89 F9 F3 CB 86 D8 5C F4 92 71 50 CE D9 C8 5D 4F 45 09 3C A4 E5 01 39 81 8C 4B 2C 1F 22 F5 F6 09 51 E7 22 07 3D A1 7C 4F 17 FF D5 0C D5 03 50 3F 42 90 D1 58 56 89 6A 4B D4 8C AA A4 FC 20 30 D6 4D CD 3C 8C F9 C8 11 30 A9 F1 F6 6A 00 76 12 32 B3 9D 93 74 DF 21 13 F7 29 E6 C3 67 7F BD C2 1A C1 52 96 23 8F 76 22 3F FC 28 FB 94 11 63 34 A3 79 E8 26 A9 FA EC 1D A5 17 EE B6 45 0B	
94	Application File Locator (AFL)	08 01 01 00 08 02 04 01 08 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 xx 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 *	
9F 27	Cryptogram Information Data (CID)	80	
9F 32	Issuer Public Key Exponent	03	

Tag	Element name	Data	v3.3
9F 36	Application Transaction Counter (ATC)	xx xx *	
9F 44	Application Currency Exponent	02	
9F 46	ICC Public Key Certificate	29 D0 78 7D 88 A0 2C 1A 80 13 03 73 0A E4 B2 DB F9 17 0E E0 EF 36 69 8F 58 E1 74 E5 C4 8E 8B A2 95 65 78 27 12 80 6E 91 EE 63 A6 3B 12 B4 2A 66 3D 84 47 30 41 8A 4F 8F E5 1F 65 08 EE CA 95 E9 C7 F0 C4 75 E1 90 1B BC A9 39 44 EB 24 5F 48 93 2F 02 9C 5F 6B 98 9D 21 1E 0E 6B 6A D7 A8 02 A7 F1 B6 F2 F9 91 44 7B BE 1B 82 B0 10 99 49 CE 0B 04 74 D4 54 05 F4 0B 1C EC B3 BE CE A7 5D C5 42 5F AD E1 07 99 C5 4B A7 3D 02 59 70 C0 1C 36 E3 79 4B CC 97 5B 9E 04 EC 9E 69 30 DA 27 27 EC E3 D2 7E 74 35 10 22 A3 33 53 CD 20 F6 1C F9 61 E6	
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	
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 (Mexico)	
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 72	Consecutive Transaction Limit (International-Country) [VSDC]	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 11 01 00 DF 51 06 00 00 00 00 00 00 DF 61 06 00 00 00 00 00 00 DF 71 06 00 00 00 00 00 00	
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	

Tag	Element name	Data	v3.3
		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 Tag List

* Tag value changes with card usage

Tag	Element name	Data	v3.3
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 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 20 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	18 12 31	
5F 25	Application Effective Date	xx xx xx	
5F 28	Issuer Country Code	04 84 (Mexico)	
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	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	

Tag	Element name	Data	v3.3
		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	61 DA 8C 67 41 4A 64 6F 46 95 BA 88 EE 7A 54 1D 43 A7 FE 9F A3 D4 E1 60 65 74 03 EA 5F A0 21 DA CE 15 6C 34 C4 19 01 9E 1C B8 9E D7 AA 84 54 13 5A AC F6 89 F9 F3 CB 86 D8 5C F4 92 71 50 CE D9 C8 5D 4F 45 09 3C A4 E5 01 39 81 8C 4B 2C 1F 22 F5 F6 09 51 E7 22 07 3D A1 7C 4F 17 FF D5 0C D5 03 50 3F 42 90 D1 58 56 89 6A 4B D4 8C AA A4 FC 20 30 D6 4D CD 3C 8C F9 C8 11 30 A9 F1 F6 6A 00 76 12 32 B3 9D 93 74 DF 21 13 F7 29 E6 C3 67 7F BD C2 1A C1 52 96 23 8F 76 22 3F FC 28 FB 94 11 63 34 A3 79 E8 26 A9 FA EC 1D A5 17 EE B6 45 0B	
94	Application File Locator (AFL)	08 01 01 00 08 02 04 01 08 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 xx 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	xx xx *	

Tag	Element name	Data	v3.3
	(ATC) Register		
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 *	
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	75 2F F9 B6 EF A1 CF 84 1B C4 3B 3A AC AB 5D 8E 95 D2 00 33 A1 16 F5 F4 DF 3B 3A A6 C6 3B C8 D3 0B B0 BF A1 60 EF 72 C2 3B CD EA E9 58 3E AD 77 70 AD 03 1A A7 6A BF FC 84 38 03 8F 4B B2 BF C9 BE 8F 31 18 1B 97 C9 C1 EE 87 CB A3 C6 DF 98 95 0E E6 29 5B 05 17 B4 1A FB 74 AE 22 10 E6 05 0E 32 6E 22 ED AA 11 17 5A 0F E2 5A 81 EC 0D 9B B3 04 CE 0D 34 66 F4 FF 0B 87 C8 3B F4 F8 8D D1 A7 DB 1E CC D9 45 8E 57 80 E5 16 E5 6B 7E 16 14 57 7E DA 6B 65 ED 37 E0 41 BB 7C 21 29 43 6C 9C FD F9 C5 EB BF AC 0E C0 CF 25 7E 19 F8 B4 3C 98 9B	
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 - Mexican Peso)	
9F 52	Application Default Action [VSDC VIS 1.5]	40 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 (Mexico)	
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 72	Consecutive Transaction Limit (International-Country) [VSDC]	00	
9F 77	VLP Funds Limit [VSDC]	00 00 00 00 00 00	

Tag	Element name	Data	v3.3
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 11 01 00 DF 51 06 00 00 00 00 00 00 DF 61 06 00 00 00 00 00 00 DF 71 06 00 00 00 00 00 00	
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 Tag List

* Tag value changes with card usage

Tag	Element name	Data	v3.3
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 51 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	25 12 31	
5F 25	Application Effective Date	xx xx xx	
5F 28	Issuer Country Code	08 40 (USA)	
5F 2D	Language Preference	65 6E ('en' - English)	
5F 30	Service Code	02 01	
5F 34	Application PAN Sequence Number	01	
82	Application Interchange Profile	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	

Tag	Element name	Data	v3.3
		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 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 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	62 8A 20 EB 91 DA D7 AB 02 05 2E 32 B1 76 0B C1 66 19 CE D9 8E 8E 21 5F C2 D8 DF 7A 28 3C 8B 25 A1 F8 48 97 99 E2 FB 5A EF 40 7A 6B D6 BD BA 07 06 B3 4D 6F 07 F3 3D F8 AD 41 C9 E6 38 01 5D 00 E2 AC CC CB 71 66 FF 36 06 85 2A 2D BC 4F 83 00 C2 A1 16 B9 25 8A 4E B8 D5 1E B1 74 91 50 8F CD 29 5A C9 EA 73 82 14 70 81 05 0E 95 F7 75 97 05	
9F 47	ICC Public Key Exponent	03	
9F 48	ICC Public Key Remainder	1B 26 44 67 48 2D F8 7A 6A 48 0B D4 1B 80 23 FE 24 02 EB AB 80 65 C7 BF 74 E8 C4 DF A0 84 C6 EB 47 C8 C8 9C C7 6D 8E 31 E7 41	
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	45 2B AA 16 0C D7 D6 D8 14 25 CE 19 B9 F5 E5 4D E9 A2 F3 10 2B 2D 90 1C 97 3A D0 50 6D 9C 05 F1 EF 08 EC B7 FB F9 A5 04 D3 B4 7F 8E 5F BA 59 3D 64 64 80 DE EA 98 59 6E F8 68 E6 8D 63 DD 0F 25 99 D7 9C D5 E1 BC B6 95 FC 83 0A 95 4D A3 8D 10 EF FD 76 C0 0D 1F 4E 7C 7B 97 8E E0 38 76 29 6B 37 DC 27 F2	

Tag	Element name	Data v3.3
		DC 61 B3 38 F4 C0 06 59 9C BB 67 64
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]	06 58 00
C5	Card Issuer Action Code - Online [MasterCard]	06 F8 00
C7	CDOL1 Related Data Length [MasterCard]	2B
C8	CRM Country Code [MasterCard]	08 40 (USA)
C9	CRM Currency Code [M/Chip4]	08 40 (USD)
CA	Lower Cumulative Offline Transaction Amount [M/Chip]	00 00 00 00 00 00
CB	Upper Cumulative Offline Transaction Amount [M/Chip]	00 00 00 00 00 00
D1	Currency Conversion Table [M/Chip]	08 40 00 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
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 Tag List

* Tag value changes with card usage

Tag	Element name	Data	v3.2
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 D1 81 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	18 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	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	v3.2
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 xx 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	63 17 8F 5C 82 42 DF F3 23 67 2A BD 9F 9D 92 5E 54 A1 9B C1 A5 38 10 9E 36 49 E2 55 17 29 24 A1 7D 08 2A 3E BB 0E 76 F4 47 68 2D F7 DE 36 00 9A 0E 57 D3 70 97 FF 9E 2D 9C 4D 51 D1 D2 BE F7 F1 1E D3 1F C1 5E 44 C0 B7 A4 76 CA 99 C2 7C A4 4E 76 0C 8D 24 B5 1F 94 4C 3E 5E D2 94 D9 18 EE B8 DF 8E DD 8A 8C 76 86 00 68 AC 60 F3 87 C9 4A A1	
9F 47	ICC Public Key Exponent	03	

Tag	Element name	Data	v3.2
9F 48	ICC Public Key Remainder	67 A9 02 72 3C FC 3F 81 19 3D 23 2C 9B 4C 5E BC 6F 74 6A DF 26 51 3C B5 35 31 CF 8B C5 89 D7 92 02 05 0E 72 8E 45 6D DC DF E3	
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	68 E7 BC C8 73 AC E3 9B E5 7A B4 D4 6A E3 F2 7F 63 B4 95 AB 08 BF 87 75 2C 65 DB 76 47 EA 80 88 5D 54 C5 A7 99 59 95 E9 57 DF 11 FE 0E 27 4B DF FA A4 67 30 B2 AE 16 60 25 39 14 B5 73 60 4C D8 83 2E 60 A4 99 51 9E C0 C2 60 25 3B AB 2D 1C B9 05 66 8C 85 FB CE 98 BE 72 64 61 DB 38 74 FF 5D 4D 47 DD 96 1B 0D 09 61 9F 14 F8 76 6E D5 DC F4	
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	
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	
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 (Magstripe-Grade)	
D6	Default ARPC Response Code [M/Chip4]	00 10	
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 Tag List

* Tag value changes with card usage

Tag	Element name	Data	v3.2
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 D1 81 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 ('Test/Card 11')	
5F 24	Application Expiration Date	18 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	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 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	

Tag	Element name	Data	v3.2
		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 xx 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	2C 79 E4 F3 EF A6 B4 0C 65 79 D6 B0 2C CC C6 DF DC BC 9E AA 71 27 86 E6 84 D5 2D 9B 63 12 6C 7F A6 92 2C 6E C8 D9 C8 FC 86 B4 97 79 8A E9 AA 80 73 5B 45 26 58 8A 57 1F C0 6E C6 08 8A 86 94 CE 36 C7 65 91 80 7E 73 04 B6 29 57 E4 5F 93 F0 16 15 7D 8E 65 6A 0E 08 C0 70 0B 6C E8 CC 26 07 40 FC B7 EB 13 0C 27 84 1B 4C 46 25 1C AC 3C 99 96	
9F 47	ICC Public Key Exponent	03	
9F 48	ICC Public Key Remainder	27 64 2D 9B 80 AF 48 F8 1A E3 A8 D2 A1 73 6B 5B 75 D5 07 5D A2 1E F5 1F DE A0 94 E0 81 D0 9B 4C EF 0D 4E 63 C4 46 49 8F D8 D9	
9F 49	Dynamic Data Authentication Data Object List	9F 37 04	

Tag	Element name	Data	v3.2
	(DDOL)		
9F 4A	Static Data Authentication Tag List	82	
9F 4B	Signed Dynamic Application Data	DA AA 8F 6A FC 59 D1 38 0B 5A F9 20 BB 69 1E 3B B8 E2 23 E3 29 6F 6B 54 61 71 26 2A C1 9D 01 3E 0A 3B BF F0 2D 4D 11 B2 22 CE D1 61 60 7B D0 1C CB A1 9A B3 55 81 2A E1 E2 35 EC BC BF 25 17 8E AF DC D0 26 C5 68 55 DB DE 97 7C 56 13 D0 08 87 B3 D1 17 CA 48 39 6A 5D 15 B7 F9 71 8A 53 83 FF 1D 8D 83 0E 59 67 9D BC E6 B1 55 DD 1A CB D9 FA	
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	
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	
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 (Magstripe-Grade)	
D6	Default ARPC Response Code [M/Chip4]	00 10	
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 Tag List

* Tag value changes with card usage

Tag	Element name	Data	v3.2
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 D1 81 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 20 ('Test/Card 12')	
5F 24	Application Expiration Date	18 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	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	

Tag	Element name	Data	v3.2
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 xx 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	56 F2 31 26 D3 7E 5E 4D 2C D6 90 B1 66 86 DB E3 40 50 2D 37 60 95 F6 BF 2E A9 D9 C1 18 7B C1 FA DE 3B 6F 56 49 DB 1B 6E B2 9C 7E FD 8E DD 63 0C 36 7E 99 A4 57 1F 73 90 A9 BE 62 C0 E1 FD 40 FC A9 9B D8 C0 2C 16 01 55 1E 93 9B B3 1D 0A 95 BB A4 86 EB 10 DB B6 8B 28 EE 99 63 B3 1B AE EF 48 53 55 93 E7 80 2E DA F3 5A 34 92 D7 C4 1A C0 ED	
9F 47	ICC Public Key Exponent	03	

Tag	Element name	Data	v3.2
9F 48	ICC Public Key Remainder	25 6F 94 E0 37 D1 A2 56 2E 43 16 DF 58 3D A6 60 41 72 2A FB 66 05 05 2F B4 CC 05 C3 A4 DD 63 96 7C 89 BD 0A 12 84 C7 44 59 6D	
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	B5 4B DB E8 B9 11 4C 59 9B 4E C5 0A F1 AB BC 23 90 56 F4 50 1D 01 77 BC E0 A8 8C EB B7 61 5E BD 1B FE FD AB 73 CF A5 24 2F 07 DD 5A 0C 71 FF BE B8 1F E8 3B 4C 70 82 1A 4E E3 77 4E E1 11 D0 E4 01 24 25 15 DA 65 FB EF DC 46 AA 55 FA 0A 7C 5D F7 D5 C0 FB BC 18 35 94 7B 42 30 E7 57 BB A3 C9 00 92 46 26 09 FC 9B C6 CB C4 9B E8 48 FF A9 B1	
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	
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	
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 (Magstripe-Grade)	
D6	Default ARPC Response Code [M/Chip4]	00 10	
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 Tag List

* Tag value changes with card usage

Tag	Element name	Data	v3.3
50	Application Label	49 6E 74 65 72 61 63 (`Interac`)	
57	Track 2 Equivalent Data	45 06 44 50 06 93 19 33 D1 81 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 20 43 61 72 64 20 31 35 20 20 20 20 20 20 20 20 20 20 20 20 (`Test Card 15 `)	
5F 24	Application Expiration Date	18 12 31	
5F 25	Application Effective Date	xx xx xx	
5F 28	Issuer Country Code	01 24 (Canada)	
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	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	

Tag	Element name	Data	v3.3
		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	A7 88 5B 93 51 F3 49 66 EB 4C 3C A3 BD 6A 84 4A 80 93 A5 EA A3 5C E5 9D EB 57 FE 23 AD 47 55 EF F2 DE 69 12 AF C5 64 F5 3E 5F 28 54 7C 1E E1 A0 CF 7B CC 8F E2 04 06 46 01 80 79 EE BA B4 71 FC DA 15 5E 17 68 19 97 64 74 49 BC 8E B2 1F 4C 33 95 3F D3 28 67 04 72 01 C3 03 E2 C8 E9 4F BB F0 CC A3 C5 73 2D 8B 4A 74 50 2A 81 97 5C D0 68 FF B0 7F 63 66 FD 24 97 62 B8 3C CD 74 A3 8C 8C E4 E1 56 30 AA 6E C7 5D 6E FD 53 64 B7 36 15 70 47	
94	Application File Locator (AFL)	08 01 01 00 08 02 04 01 08 06 06 00 B0 01 01 00	
9F 07	Application Usage Control	AB 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 10 D8 00 00	
9F 0F	Issuer Action Code - Online	FC 78 24 F8 80	
9F 10	Issuer Application Data [VSDC]	xx xx xx 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 *	
9F 27	Cryptogram Information Data (CID)	80	
9F 32	Issuer Public Key Exponent	03	
9F 36	Application Transaction Counter (ATC)	xx xx *	

Tag	Element name	Data	v3.3
9F 44	Application Currency Exponent	02	
9F 46	ICC Public Key Certificate	6A BD DD 2D D0 A9 AD 76 DE 9E 7A 9B 2E D9 36 8D 35 8D 01 25 F2 1B 15 E2 A9 11 96 FB 17 38 1E C7 2D 66 D7 9F 70 00 3B 32 48 89 DB CD 43 0F C1 9A 03 07 37 68 45 43 A4 E7 2D 2F 5D AB F7 48 E7 F6 99 4E 53 09 F4 54 FE F2 DC D6 86 16 08 57 AE 04 C2 DC 53 3A FA DA 4C 8A AC 55 B5 D0 E1 8E 76 91 D8 56 22 E6 F6 79 AC FE 10 0F 9E 25 D5 E4 CE EC 7C 7D 94 9D D3 7C 34 4C 14 07 47 D1 FD A8 CC 0E 5D 13 25 C5 93 97 A5 2B 95 62 41 B2 07 CC 8E 98	
9F 47	ICC Public Key Exponent	03	
9F 48	ICC Public Key Remainder	10 1D 13 EF 51 87 45 78 3B A9 5F 90 26 C7 86 8D CC 73 4F 8C 05 9A 20 A3 2E CF	
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 - Canadian Dollar)	
9F 52	Application Default Action [VSDC VIS 1.4]	C3 38 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 (Canada)	
9F 58	Lower Consecutive Offline Limit (Card Check) [VSDC]	00	
9F 59	Upper Consecutive Offline Limit (Card Check) [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 2.0.2]	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 79	VLP Available Funds [VSDC]	00 00 00 00 00 00	
9F 7D	Application Code Level [VSDC]	30 38 30 33 31 32 20 56 53 44 43 20 32 38 31 41 4D 32	

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 Tag List

* Tag value changes with card usage

Tag	Element name	Data	v3.3
50	Application Label	49 6E 74 65 72 61 63 (`Interac`)	
57	Track 2 Equivalent Data	45 06 36 44 00 03 81 06 D1 81 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 20 43 61 72 64 20 31 36 20 20 20 20 20 20 20 20 20 20 20 20 20 (`Test Card 16 `)	
5F 24	Application Expiration Date	18 12 31	
5F 25	Application Effective Date	xx xx xx	
5F 28	Issuer Country Code	01 24 (Canada)	
5F 2D	Language Preference	66 72 (`fr` - French)	
5F 30	Service Code	02 20	
5F 34	Application PAN Sequence Number	01	
82	Application Interchange Profile	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	

Tag	Element name	Data v3.3
		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	39 32 CA 4D 7F B6 76 B3 74 17 C5 FC 7D C2 11 15 56 A9 7C DE C5 C4 C1 93 10 15 EC 51 78 0B 3E F1 DD 21 38 7E 6F 2D B3 45 5A E3 70 1A A1 10 80 BC 2B FC E3 18 62 26 05 97 C2 CB E4 A0 6C 3A 6B 5F 3A CA C6 6D 9B 09 95 9F 70 FD 9D 4E 81 7E 48 BD 5B AD 14 F0 5F D2 58 10 18 DF E2 99 E7 6F 09 7C F8 7F B2 1E 45 D8 E2 F0 79 D7 30 7D BB FA 59 1F 2B FD B8 51 83 D4 FC 4B 8A E9 CD 0F AF 21 DF F4 6B DD 88 88 25 AD 13 FE E1 68 58 F4 AE 74 87 40
94	Application File Locator (AFL)	08 01 01 00 08 02 04 01 08 06 06 00 B0 01 01 00
9F 07	Application Usage Control	AB 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 10 D8 00 00
9F 0F	Issuer Action Code - Online	FC 78 24 F8 80
9F 10	Issuer Application Data [VSDC]	xx xx xx 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 *
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	F7 93 39 DC F3 77 5D 43 D8 D8 82 15 81 B6 13 5E 6D D5 06 3E 37 EE 42 48 06 25 5E 4B 5E AA 42 5D F6 40 F1 46 FB 65 04 DF AC 13 15 C1 85 D2 80 BF 67 D3 01 92 39 4B 1F A3 90 83 88 3C 01 10 54 B6 90 F7 12 15 72 9D ED 96 B3 4C D4 AE F1 6E F8 A2 FD D7 20 BB 44 77 64 A2 3C 94 1D 8B CE C3 FF ED AA DE 04 F2 7D AE 3D 52 7A 3B 89 40 69 A6 20 64 A5 4C D2 DA F5 79 98 AA F9 C5 C1 77 40 2D 14 9E FA FC DF BA 52 8D F3 9C 44 01 D4 D8 ED 66 C1 77
9F 47	ICC Public Key Exponent	03

Tag	Element name	Data	v3.3
9F 48	ICC Public Key Remainder	BD 60 1B 80 83 D7 7D FE 80 2B 69 5C 4F 7C B5 A6 D8 D4 E5 A5 EC 29 94 63 58 6B	
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 - Canadian Dollar)	
9F 52	Application Default Action [VSDC VIS 1.4]	C3 38 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 (Canada)	
9F 58	Lower Consecutive Offline Limit (Card Check) [VSDC]	00	
9F 59	Upper Consecutive Offline Limit (Card Check) [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 2.0.2]	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 79	VLP Available Funds [VSDC]	00 00 00 00 00 00	
9F 7D	Application Code Level [VSDC]	30 38 30 33 31 32 20 56 53 44 43 20 32 38 31 41 4D 32	

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				