



**First Data
EMV[™] Test Card Set**

Version 1.30

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Revision History

Version	Date	Updated By	Revisions
1.20	August 30, 2016	B2PS	Initial document creation
1.30	January 5, 2018	B2PS	<ul style="list-style-type: none">• TC02 - Approval Amount changed to \$120. Descriptive text wrt Host processing added• “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 - First Data EMV Test Card Profiles

This Test Card Set contains four cards, defined as follows:

	Test Card 01	Test Card 02	Test Card 03
Brand	Visa	Mastercard	Visa
Type	Credit	Credit	Credit
AID	A0000000031010	A0000000041010	A0000000031010
PAN	4761 7390 0101 0010	5413 3300 8901 0434	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	See card definition	See card definition	See card definition
Approval Amount	\$10.00	\$120.00	\$10.00
Online / Offline	Online Only	Online Only	Online Only
Issuer Country Code	840 (USA)	840 (USA)	124 (CAN)
Application Currency Code	840 (USD)	840 (USD)	124 (CAD)
Language	'en' – English	'en' – English	'en' – English
Application Confirmation	No	No	No
Card Purpose	Visa Signature Card	ARPC validation fails and chip decline reversal should be generated	Visa Offline PIN Card
Card Version	v2.1	v2.1	v2.1

	Test Card 04
Brand	Interac
Type	Debit
AID	A0000002771010
PAN	4506 4450 0693 1933
Expiry Date	12/2018
Service Code	220
Interface	Contact, MSR

	Test Card 04
CVM	See card definition
Approval Amount	\$10.00
Online / Offline	Online Only
Issuer Country Code	124 (CAN)
Application Currency Code	124 (CAD)
Language	'en' – English
Application Confirmation	No
Card Purpose	Interac Canadian Debit Card
Card Version	v2.1

1.1 Test Card 01 – Visa, Credit, English, USA, USD

A Visa credit card with Issuer Country Code of 'USA' and Currency Code of '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	v2.1
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 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	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	v2.1
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 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	

Tag	Element name	Data	v2.1
9F 36	Application Transaction Counter (ATC)	xx xx *	
9F 44	Application Currency Exponent	02	
9F 46	ICC Public Key Certificate	42 D2 FD A4 44 0E 28 09 E1 31 AD 7E 95 C7 40 DB A9 74 A9 00 CF 49 03 EF 1D 46 28 31 5B F9 A8 11 7D 93 80 A7 C7 2A CD 7E 7A CC CB AE 33 A1 51 14 C6 94 AB E0 39 B8 D3 6E E8 B7 53 5B 4C 3A 7F 6F 6E EE 84 1A 1B 94 BA DA EF 8C 0C A5 2B B8 85 ED 8F 04 0C EE 20 E9 B1 D0 FD F1 B9 D9 11 4E 14 91 5F B9 56 DB A5 BF AE 06 04 71 D2 15 25 A9 D7 6C E1 8D 39 0C 4B 95 EC D5 6B 38 AC 36 C9 24 87 2F 69 BF D6 02 D0 4B C9 70 08 54 BF 65 5B D2 2F 9E BE 8D 24 FD 53 BD 2F CB 43 A6 30 57 7C AD A7 8B 14 26 7F 2C 97 F5 48 A2 ED F6 0E 3D EA A1 74 AD	
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 02 DF 21 01 03 DF 31 01 07	
BF 57	International Counters Data Template	DF 11 01 02 DF 21 01 03 DF 31 01 07 DF 51 01 02	
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 – Mastercard, Credit, English, USA, USD

A Mastercard credit card with Issuer Country Code of 'USA' and Application Currency Code of '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.

1.2.1 Cardholder Verification Method List – AID (A0000000041010)

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

1.2.2 Application Tag data

* Tag value changes with card usage

Tag	Element name	Data	v2.1
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 11 43 87 80 89 02 9F	
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 30 32 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	01 24 - Canada	
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 01 00	
8F	Certification Authority Public Key Index	FA	

Tag	Element name	Data	v2.1
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	0F	
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	01 24 - CAD	
9F 44	Application Currency Exponent	02	
9F 46	ICC Public Key Certificate	19 70 BB 7A 02 B1 92 0C 11 D7 F7 9C 54 34 DE C8 83 15 F1 52 8C 0D 4A 7D 58 56 7C 54 BC 10 00 28 75 0F 1B 54 E3 6D 16 21 70 D0 26 59 15 F4 C4 14 53 53 1E 66 1E 22 BA 0F 5C B4 11 B4 3A 7F BA 62 6F 3C EB A0 D2 85 E7 04 6A 06 94 44 92 95 08 53 B1 FC 5E 87 0E 7A 8E 91 86 0D A5 26 E1 AA 96 75 BF 0C 05 32 CC 19 97 86 9B E6 9F 0F 9A C4 C3 7A	
9F 47	ICC Public Key Exponent	03	
9F 48	ICC Public Key Remainder	25 04 93 51 A1 2D 61 13 77 05 F8 7B 7C 99 87 DF 88 6E F5 5B 40 34 BE 4C E3 69 98 68 2B EE B4 EA A4 1E 91 78 BF B1 51 A9 BE 25	

Tag	Element name	Data	v2.1
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	C5 01 37 D1 BA BA EB 0F F4 43 79 6E D1 B5 06 6E D4 2B A8 4A 59 E8 AE B1 73 2D 04 92 93 E9 FC E7 02 68 D3 84 E2 1D E8 86 B5 D5 9C EA DB ED 56 F0 BE E6 DA 2F DC AA ED 4A 3C 95 A0 34 CC DD 4D 3C 91 F7 82 C6 FB 2D 63 63 9F B8 EF 2C E5 68 13 8D 42 E4 06 B2 72 47 0A B3 39 94 B0 D2 8E F7 42 CB BB AC 9D 27 84 7B BD 1D 26 D2 EB F7 F3 05 7C D0	
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]	01 24 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]	01 24 - Canada	
C9	CRM Currency Code [M/Chip4]	01 24 - CAD	
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]	01 24 00 00 00 01 24 00 00 00 01 24 00 00 00 01 24 00 00 00 01 24 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	

1.3 Test Card 03 – Visa, Credit, English, CAN, CAD

A Visa credit card with Issuer Country Code of 'CAN' and Currency Code of 'CAD'.

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 ('0103 1E03 1F00')			
CVMr	Verification Method	Conditions	If unsuccessful
1	Offline Plaintext PIN	Terminal supports CVM type	Fail
2	Signature (paper)	Terminal supports CVM type	Fail
3	No CVM required	Always	Fail

1.3.2 Application Tag data

* Tag value changes with card usage

Tag	Element name	Data	v2.1
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 2F 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	01 24 - Canada	
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 01 03 1E 03 1F 00	
8F	Certification Authority Public Key Index	92	

Tag	Element name	Data	v2.1
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	6F 72 29 95 54 16 D6 7C 87 28 45 23 D6 83 29 48 46 5B A4 EA 0A 5C 9F A2 79 00 65 B3 0C F7 BC 2B 53 04 B0 3A C7 1B 85 CA F8 FB 4C 6B E0 91 D6 42 3E DC 35 36 F0 91 79 EB E6 2C D1 9E 37 7A A9 81 4D EC 66 41 80 E3 E4 92 8C F9 19 AE 8F F0 D0 44 EE FE 0E BE ED 3C 1D CF 4F AD A6 1E CA AC 1C A5 62 5C 14 8A 88 13 BE 28 90 C2 24 B9 31 09 BE 24 4C 4F EE A7 41 2D DC 7D AB F9 29 66 1F 34 5D 07 9E E9 22 81 E3 11 6B 93 6B E3 03 66 AA 10 12 77 C1 54 B3 1D 4B 09 5D 6C 73 49 AD 17 E0 F8 EE DF 9B 98 DA 08 88 72 BB E5 FD E6 27 6F 49 53 B0 63	
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'	
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	

Tag	Element name	Data	v2.1
9F 36	Application Transaction Counter (ATC)	xx xx *	
9F 44	Application Currency Exponent	02	
9F 46	ICC Public Key Certificate	82 2B 15 BD 58 46 98 B8 A9 EB 15 06 30 01 62 51 22 37 41 0F EB 79 FB 07 99 30 30 59 13 BA 95 5D D6 1B B4 A5 96 8E B9 B9 66 D4 A9 F9 61 52 50 01 AD 06 73 B4 3F D4 F2 0D 60 FD A4 2B 51 12 EB 48 C4 13 DE 55 14 50 55 DA 69 2F 13 CA 41 11 51 62 A2 B5 B0 13 2F 34 55 D5 FE CD 0A 86 2E BB B3 A3 AC C7 95 7F 29 1D 2D DB D2 1F B5 B8 45 CF D9 5F CC 23 A6 1E BF A7 C2 5F 5E B4 6A 37 22 2D B4 CD 53 9C 02 09 08 C5 B9 59 7F 95 2F AD AF 1C E4 59 B4 FB 08 C2 D1 2B 90 85 08 58 33 10 08 CB F5 65 4E 3E 04 C3 C6 1D 3D 32 DB 40 25 7C B1 F5 A1 24	
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]	80	
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 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 03 DF 21 01 03 DF 31 01 07	
BF 57	International Counters Data Template	DF 11 01 03 DF 21 01 03 DF 31 01 07 DF 51 01 03	
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 – Interac, Debit, English, CAN, CAD

An Interac (Canadian) debit card with Issuer Country Code of 'CAN' and Currency Code of 'CAD'.

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

1.4.1 Cardholder Verification Method List – AID (A0000002771010)

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

1.4.2 Application Tag data

* Tag value changes with card usage

Tag	Element name	Data	v2.1
50	Application Label	49 6E 74 65 72 61 6354 - '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 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	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 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	

Tag	Element name	Data	v2.1
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	B3 71 F5 C7 60 F2 6E 02 F5 FA 01 E0 F6 A6 41 D7 B8 28 17 5B DD 99 1E 29 1D 80 FC B3 05 D4 4D 27 C9 8D C8 0E D1 0B 45 14 60 DF 8B A2 3C E0 B6 44 4D 15 1C 3A 60 78 CF B9 EF 1D 00 B3 7C 17 35 6F 92 F8 BA 5F E1 CE 96 EB 46 0A 99 A4 D2 21 66 6F F8 03 26 03 DA 4A 27 D1 CF CC C8 5F 22 DD B2 D2 40 86 81 93 05 85 FB E6 A7 C5 0F 16 77 CF E9 5D 70 C2 2A 35 3E 91 3A 69 CB A3 B8 8A D9 30 4D B1 4F E1 30 26 E9 26 A0 09 86 D3 94 2F A9 A0 C1 29	
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	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 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	BB 32 BA 09 08 DF B5 B5 35 65 8B FE 0C E8 DE 62 B5 4C A8 29 27 07 2E C1 AF F3 FE 2D 11 A6 5C 62 A5 F2 BF AB C5 B5 4A 2D CE D9 C2 0F 92 2C C7 5E A2 21 5D 9C FC 71 37 72 E2 04 BD 9A 86 70 94 ED AB 72 9F 10 FE 44 92 05 EB 59 A5 A6 5E AF 4D AC 94 FE EF 93 17 10 FE 01 1D 6C 4F A0 34 AA 37 33 74 AC 6B D8 6E C0 8F 29 74 70 CA 2A 20 C7 55 59 CA 30 21 6C F6 F9 CE 3D 2C 72 62 78 88 62 8C 68 B4 C4 80 B1 55 CD B0 E3 BC 95 21 C3 DB AF 66 60	
9F 47	ICC Public Key Exponent	03	
9F 48	ICC Public Key Remainder	97 53 A7 3A 03 1C 97 EF 46 4D BA 5A AE 40 20 A5 7A B6 70 9C 72 23 E4 97 EC 11	

Tag	Element name	Data	v2.1
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 1.4]	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 - 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 78	VLP Single Transaction Limit [VSDC]	00 00 00 00 00 00	
9F 79	VLP Available Funds [VSDC]	00 00 00 00 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				