



USA

EMV™ Test Card Set

Version 1.60

November, 2015

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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 | 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 | Test Card 09 marked as "Discontinued" |
| 1.42 | 23-Sep-2015 | B2PS | Improved card descriptive text, miscellaneous Tag corrections to all Visa and Interac cards – now v3.3 |
| 1.50 | 19-Oct-2015 | B2PS | Tag updates to all MasterCard cards - now v3.2. |
| 1.51 | 20-Oct-2015 | B2PS | Updated Card Profile tables |
| 1.60 | 13-Nov-2015 | B2PS | Test Card 09 added – MasterCard Set now contains 16 cards. |

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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 | Test Card 04 |
|---------------------------------|-----------------------------------|--------------------------------------|------------------------|---|
| Brand | Visa | Visa | Visa | Visa |
| AID | A0000000031010 | A0000000031010 | A0000000031010 | A0000000031010 |
| PAN | 4761 7390 0101 0010 | 4761 7390 0101 0010 | 4761 7390 0101 0010 | 4761 7390 0101 0010 |
| Expiry Date | 12/2018 | 12/2018 | 12/2018 | 12/2018 |
| Service Code | 201 | 201 | 201 | 201 |
| Interface | Contact, MSR | Contact, MSR | Contact, MSR | Contact, MSR |
| CVM | Signature Online PIN No CVM | Offline Plaintext PIN | Online PIN | Signature No CVM |
| Issuer Country Code | 840 (USA) | 840 (USA) | 840 (USA) | 124 (Canada) |
| Currency Code | 840 (USD) | 840 (USD) | 840 (USD) | 124 (CAD) |
| Language | 'en' – English | 'en' – English | 'en' – English | 'fr' – French |
| Application Confirmation | No | No | No | Yes |
| Card Purpose | USA Signature Preferring | USA Offline Plaintext PIN Only | USA Online PIN Only | Canadian – French Appl. Confirmation |
| Card Version | v3.3 | v3.3 | v3.3 | v3.3 |

| | Test Card 05 | Test Card 06 | Test Card 07 | Test Card 08 |
|---------------------------------|----------------------------------|----------------------------------|----------------------------------|------------------------|
| Brand | Visa | Visa | Visa | Visa |
| AID | A0000000031010 | A0000000031010 | | |
| PAN | 4761 7390 0101 0010 | 4761 7390 0101 0010 | 4761 7390 0101 0010 | 4761 7390 0101 0010 |
| Expiry Date | 12/2018 | 12/2018 | 12/2018 | 12/2018 |
| Service Code | 201 | 201 | 201 | 201 |
| Interface | Contact, MSR | Contact, MSR | Contact, MSR | MSR |
| CVM | Offline Plaintext PIN | Offline Plaintext PIN | | |
| Issuer Country Code | 484 (Mexico) | 484 (Mexico) | | |
| Currency Code | 840 (USD) | 484 (MXN) | | |
| Language | 'es' - Spanish | 'es' - Spanish | | |
| Application Confirmation | No | No | | |
| Card Purpose | Mexico – Spanish Currency USD | Mexico – Spanish Currency MXN | Fallback Empty Candidate List | Fallback Chip Error |

| | Test Card 05 | Test Card 06 | Test Card 07 | Test Card 08 |
|--------------|--------------|--------------|--------------|--------------|
| Card Version | v3.3 | v3.3 | v3.1 | v3.1 |

| | Test Card 09 | Test Card 10 | Test Card 11 | Test Card 12 |
|--------------------------|-----------------------|-----------------------------|----------------------------------|---------------------------------|
| Brand | MasterCard | MasterCard | MasterCard | MasterCard |
| AID | A0000000041010 | A0000000041010 | A0000000041010 | A0000000041010 |
| PAN | 5413 3300 8960 4111 | 5413 3300 8901 0434 | 5413 3300 8901 0434 | 5413 3300 8901 0434 |
| Expiry Date | 12/2025 | 12/2018 | 12/2018 | 12/2018 |
| Service Code | 201 | 201 | 201 | 201 |
| Interface | Contact, MSR | Contact, MSR | Contact, MSR | Contact, MSR |
| CVM | Online PIN, Signature | NO CVM | Offline Plaintext PIN | Online PIN |
| Issuer Country Code | 840 (USA) | 840 (USA) | 840 (USA) | 840 (USA) |
| Currency Code | 840 (USD) | 840 (USD) | 840 (USD) | 840 (USD) |
| Language | 'en' – English | 'en' – English | 'en' – English | 'en' – English |
| Application Confirmation | No | No | No | No |
| Card Purpose | Online PIN | NO CVM ARPC Verify Fails | Offline PIN ARPC Verify Fails | Online PIN ARPC Verify Fails |
| Card Version | v3.3 | v3.2 | v3.2 | v3.2 |

| | Test Card 13 | Test Card 14 | Test Card 15 | Test Card 16 |
|--------------------------|----------------------------------|------------------------|--------------------------|-------------------------|
| Brand | MasterCard | MasterCard | Interac | Interac |
| AID | | | A0000002771010 | A0000002771010 |
| PAN | 5413 3300 8901 0434 | 5413 3300 8901 0434 | 4506 4450 0693 1933 | 4506 3644 0003 8106 |
| Expiry Date | 12/2018 | 12/2018 | 12/2018 | 12/2018 |
| Service Code | 201 | 201 | 220 | 220 |
| Interface | Contact, MSR | MSR | Contact, MSR | Contact, MSR |
| CVM | | | Offline Plaintext PIN | Offline Plaintext PIN |
| Issuer Country Code | | | 124 (Canada) | 124 (Canada) |
| Currency Code | | | 124 (CAD) | 124 (CAD) |
| Language | | | 'en' – English | 'fr' – French |
| Application Confirmation | | | No | No |
| Card Purpose | Fallback Empty Candidate List | Fallback Chip Error | English Interac Debit | French Interac Debit |
| Card Version | v3.1 | v3.1 | v3.3 | v3.3 |

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

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

* 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 | 15 07 01 | |
| 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 | |
| 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 | |

| Tag | Element name | Data | v3.3 |
|-------|--|---|------|
| 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 | |
| 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 | |

| Tag | Element name | Data | v3.3 |
|-------|--|---|------|
| 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 | |
| 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).

* 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 ('Test Card 02 ') | |
| 5F 24 | Application Expiration Date | 18 12 31 | |
| 5F 25 | Application Effective Date | 15 07 01 | |
| 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 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 | |

| Tag | Element name | Data | v3.3 |
|-------|--|---|------|
| 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 | |
| 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 | |

| Tag | Element name | Data | v3.3 |
|-------|--|--|------|
| 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 | |
| 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).

* 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 20 ('Test Card 03 ') | |
| 5F 24 | Application Expiration Date | 18 12 31 | |
| 5F 25 | Application Effective Date | 15 07 01 | |
| 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 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 | |

| Tag | Element name | Data | v3.3 |
|-------|--|---|------|
| 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 | |
| 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 | |

| Tag | Element name | Data | v3.3 |
|-------|--|--|------|
| 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 | |
| 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.

* 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 20 ('Test Card 04 ') | |
| 5F 24 | Application Expiration Date | 18 12 31 | |
| 5F 25 | Application Effective Date | 15 07 01 | |
| 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 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 | |

| Tag | Element name | Data | v3.3 |
|-------|--|---|------|
| | | 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 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 | |

| Tag | Element name | Data | v3.3 |
|-------|--|--|------|
| 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 1.5] | 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.

* 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 | 15 07 01 | |
| 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 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 | |

| Tag | Element name | Data | v3.3 |
|-------|--|---|------|
| | | 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 | |
| 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) | |

| Tag | Element name | Data | v3.3 |
|-------|--|--|------|
| 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 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.

* 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 ('Test Card 06 ') | |
| 5F 24 | Application Expiration Date | 18 12 31 | |
| 5F 25 | Application Effective Date | 15 07 01 | |
| 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 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 | |

| Tag | Element name | Data | v3.3 |
|-------|--|---|------|
| 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 | |
| 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 | |

| Tag | Element name | Data | v3.3 |
|-------|--|--|------|
| 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 | |
| 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.

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.

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

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

* 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 | 15 11 01 | |
| 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 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 | |

| Tag | Element name | Data | v3.3 |
|-------|--|--|------|
| 9F 17 | Personal Identification Number (PIN) Try Counter | 03 | |
| 9F 1F | Track 1 Discretionary Data | 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 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 | |

| Tag | Element name | Data | v3.3 |
|-------|--|--|------|
| 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.

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

* 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 | 04 01 01 | |
| 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 00 1F 00 | |
| 8F | Certification Authority Public Key Index | FA | |
| 90 | Issuer Public Key Certificate | 18 89 B9 97 E6 FC E8 4B 4A E7 AB 87 43 1C BD B3 DF 8C 1D 5A 55 A7 F6 0D 29 59 AF 3A 51 04 E7 58 83 17 ED 74 08 66 68 CF 1A 05 47 84 F7 49 3C 6D 74 7F A7 96 EC 14 D3 33 A6 8E C7 E0 08 62 95 9A 0B D0 F0 48 20 80 B7 1A C1 B7 62 5B 1B 8B 1F 35 A6 69 19 99 BA 78 F5 92 E2 3F 95 E9 96 09 D1 08 CF 1C 0E 30 8A 8B F6 4F BD E8 37 D3 CE 13 8A 50 DC 50 AF 4B 41 EE 53 D9 8A 11 B6 A8 1D DD 44 CC 43 0C 1E F3 BB 9D 1D 75 A0 2F AA 9C 81 4A FC 58 | |
| 92 | Issuer Public Key Remainder | D3 52 41 07 | |
| 94 | Application File Locator (AFL) | 08 02 04 01 18 01 01 00 20 01 01 00 | |
| 9F 07 | Application Usage Control | FF 00 | |
| 9F 08 | Application Version Number | 00 02 | |
| 9F 0D | Issuer Action Code - Default | B8 50 80 00 00 | |

| Tag | Element name | Data | v3.2 |
|-------|---|--|------|
| 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 | |
| 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 | |
| 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 | |

| Tag | Element name | Data | v3.2 |
|-------|--|--|------|
| 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 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.

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

* 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 | 04 01 01 | |
| 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 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 AB 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 | |

| Tag | Element name | Data | v3.2 |
|-------|---|--|------|
| 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 | |
| 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 (DDOL) | 9F 37 04 | |
| 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 | |

| Tag | Element name | Data | v3.2 |
|-------|--|--|------|
| 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.

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

* 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 (`Test/Card 12`) | |
| 5F 24 | Application Expiration Date | 18 12 31 | |
| 5F 25 | Application Effective Date | 04 01 01 | |
| 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 | |
| 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 AB 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 | |

| Tag | Element name | Data | v3.2 |
|-------|---|--|------|
| 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 | |
| 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 | |
| 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 | |

| Tag | Element name | Data | v3.2 |
|-------|--|--|------|
| 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 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.

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.

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

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

* 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 20 20 (`Test Card 15`) | |
| 5F 24 | Application Expiration Date | 18 12 31 | |
| 5F 25 | Application Effective Date | 07 02 28 | |
| 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 | |
| 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 | |

| Tag | Element name | Data | v3.3 |
|-------|--|--|------|
| 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 | 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 | |

| Tag | Element name | Data | v3.3 |
|-------|-------------------------------|--|------|
| 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.

* 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 | 07 02 28 | |
| 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 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 | |

| Tag | Element name | Data | v3.3 |
|-------|--|--|------|
| | | 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 | |
| 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) | |

| Tag | Element name | Data | v3.3 |
|-------|--|--|------|
| 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 | | | | |