

Appendix B Test Plan for TCI/TCI-CL Series02 (without host simulator)

1. Test Cases

1.1. Contact

1.1.1. 211_01

Test Objective

[CT][Purchase]

1) To verify the data listed below is consistent at the following stages: (a) input to Terminal, (b) output to Card.

- Amount, Other (Numeric)=0

- Transaction Type="00"

2) To verify the data listed below is consistent at the following stages: (a) ICS, (b) output to Card.

- Terminal Country Code

- Terminal Type

- Transaction Currency Code

3) To verify following data are correctly printed to Receipt.

-Cardnumber(masked partially)

-Merchant's name

-Transaction Amount in the Transaction Currency

-Currency symbol or words denoting the Transaction Currency

-Authorization Approval Code

-Transaction Date

- AID or other code that identifies the application.

-Cardmember signature(optional)

4) To verify Transaction Amount displayed is same as Amount input.

Test Card

Card_CT_01

Test Procedure

Transaction Type	Purchase
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	Transaction Amount must be displayed
Receipt (if NOT Transit Reader)	i) Printed Transaction Amount must be equal to the input amount. ii) The data listed below must be printed. - Cardnumber - Merchant's name - Transaction Amount in the Transaction Currency - Currency symbol or words denoting the Transaction Currency - Authorization Approval Code* - Transaction Date - AID or other code that identifies the application. *The print value of this data is not required.
Transaction Result (Behaviour)	If Offline only or Offline with online capability terminal: - Transaction must be approved If Online only terminal: - N/A
Card/Terminal Log Validation	
i) The data listed below must be 0.	
- Amount, Other (Numeric)	
ii) The data listed below must be consistent with its value in ICS.	
- Terminal Country Code - Terminal Type - Transaction Currency Code	
iii) The data listed below must be "00 (Purchase)".	
- Transaction Type	

1.1.2. 211_05

Test Objective

[CT][Refund]

1) To verify the data listed below is consistent at the following stages: (a) input to Terminal, (b) output to Card.

- Amount, Other (Numeric)=0
- Transaction Type="20"

Test Card

Card_CT_01

Test Procedure

Transaction Type	Refund
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
i) The data listed below must be 0. - Amount, Other (Numeric)	
ii) The data listed below must be "20 (Refund)". - Transaction Type	

1.1.3. 211_07

Test Objective

[CT][Cash Advance]

- 1) To verify the data listed below is consistent at the following stages: (a) input to Terminal, (b) output to Card.
- Amount, Other (Numeric)=0
- Transaction Type="01"
- 2) To verify the data listed below is consistent at the following stages: (a) ICS, (b) output to Card.
- Terminal Country Code
- Terminal Type
- Transaction Currency Code
- 3) To verify following data are correctly printed to Receipt.
-Cardnumber(masked partially)
-Merchant's name
-Transaction Amount in the Transaction Currency
-Currency symbol or words denoting the Transaction Currency
-Authorization Approval Code
-Transaction Date
- AID or other code that identifies the application.
-Cardmember signature(optional)
- 4) To verify Transaction Amount displayed is same as Amount input.
- 5) To verify Cash Advance transaction requests an Authorisation Approval Code

Test Card

Card_CT_01

Test Procedure

Transaction Type	Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	Transaction Amount (= input value) must be displayed.
Receipt (if NOT Transit Reader)	i) Printed Transaction Amount must be equal to the input amount. ii) The data listed below must be printed. - Cardnumber - Merchant's name - Transaction Amount in the Transaction Currency - Currency symbol or words denoting the Transaction Currency - Authorization Approval Code* - Transaction Date - AID or other code that identifies the application. *The print value of this data is not required.
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
i) The data listed below must be 0.	
- Amount, Other (Numeric)	
ii) The data listed below must be consistent with its value in ICS.	
- Terminal Country Code - Terminal Type - Transaction Currency Code	
iii) The data listed below must be "01 (Cash Advance)".	
- Transaction Type	
iv) The data listed below must be "Minimum Transaction Amount".	
- Amount, Authorised (Numeric) (Tag 9F02)	

1.1.4. 211_09

Test Objective

[CT][Balance Inquiry]

To verify the data listed below is consistent at the following stages: (a) input to Terminal, (b) output to Card.

- Transaction Type="30"

Test Card

Card_CT_01

Test Procedure

Transaction Type	Balance Inquiry
Transaction Amount (Amount, Authorised (Numeric))	N/A
Other Amount (Amount, Other (Numeric))	N/A
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
i) The data listed below must be 0. - Amount, Authorised (Numeric) - Amount, Other (Numeric)	
ii) The data listed below must be "30 (Balance Inquiry)". - Transaction Type	

1.1.5. 213_01

Test Objective

[CT][Non-standard DOL]

1) To verify the data listed below is consistent at the following stages: (a) ICS, (b) output to Card.

- Merchant Category Code (Tag:'9F15')
- Terminal Capabilities (Tag:'9F33')
- Application Version Number (Tag:'9F09')
- Interface Device Serial Number (Tag:'9F1E')

Test Card

Card_CT_19

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
i) If it is possible to retrieve the data listed below, the values must be consistent with the values in ICS. If it is NOT possible to retrieve the data, you will pass this criterion regardless. - Merchant Category Code (Tag:'9F15') - Terminal Capabilities (Tag:'9F33') B1b7 (Magnetic stripe) - Terminal Capabilities (Tag:'9F33') B1b6 (IC with contacts) - Terminal Capabilities (Tag:'9F33') B2b8 (Plaintext PIN for ICC verification) - Terminal Capabilities (Tag:'9F33') B2b7 (Enciphered PIN for online verification) - Terminal Capabilities (Tag:'9F33') B2b6 (Signature (paper)) - Terminal Capabilities (Tag:'9F33') B2b5 (Enciphered PIN for offline verification) - Terminal Capabilities (Tag:'9F33') B2b4 (No CVM Required) - Terminal Capabilities (Tag:'9F33') B3b8 (SDA) - Terminal Capabilities (Tag:'9F33') B3b7 (DDA) - Terminal Capabilities (Tag:'9F33') B3b4 (CDA) - Application Version Number (Tag:'9F09') - Interface Device Serial Number (Tag:'9F1E')	
ii) If it is possible to retrieve the data listed below, the Terminal Capabilities (Tag:'9F33') shows that the value of the following Byte Bit must be; - B1b5-1 = 00000 - B2b3-1 = 000 - B3b5 = 0 - B3b3-1 = 000	

1.1.6. 213_03

Test Objective

[CT][POS Entry Mode]



To verify the data listed below is consistent at the following stages: (a) output to Card.

- Point-of-Service (POS) Entry Mode (Tag:'9F39')="05"

Test Card

Card_CT_18

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
If it is possible to retrieve the data listed below, the values must be "05 (Contact IC Transaction)". If it is NOT possible to retrieve the data, you will pass this criterion regardless. - Point-of-Service (POS) Entry Mode (Tag:'9F39')	

1.1.7. 213_07

Test Objective

[CT][Non-standard DOL][Offline only]

To verify the data listed below is consistent with ICS.

- Merchant Category Code (Tag:'9F15')
- Terminal Capabilities (Tag:'9F33')
- Application Version Number (Tag:'9F09')
- Interface Device Serial Number (Tag:'9F1E')

Test Card

Card_CT_20

Test Procedure

Transaction Type	Purchase or Cash Advance
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Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
i) If it is possible to retrieve the data listed below, the values must be consistent with the values in ICS. If it is NOT possible to retrieve the data, you will pass this criterion regardless. - Merchant Category Code (Tag:'9F15') - Terminal Capabilities (Tag:'9F33') B1b7 (Magnetic stripe) - Terminal Capabilities (Tag:'9F33') B1b6 (IC with contacts) - Terminal Capabilities (Tag:'9F33') B2b8 (Plaintext PIN for ICC verification) - Terminal Capabilities (Tag:'9F33') B2b7 (Enciphered PIN for online verification) - Terminal Capabilities (Tag:'9F33') B2b6 (Signature (paper)) - Terminal Capabilities (Tag:'9F33') B2b5 (Enciphered PIN for offline verification) - Terminal Capabilities (Tag:'9F33') B2b4 (No CVM Required) - Terminal Capabilities (Tag:'9F33') B3b8 (SDA) - Terminal Capabilities (Tag:'9F33') B3b7 (DDA) - Terminal Capabilities (Tag:'9F33') B3b4 (CDA) - Application Version Number (Tag:'9F09') - Interface Device Serial Number (Tag:'9F1E')	
ii) If it is possible to retrieve the data listed below, the Terminal Capabilities (Tag:'9F33') shows that the value of the following Byte Bit must be; - B1b5-1 = 00000 - B2b3-1 = 000 - B3b5 = 0 - B3b3-1 = 000	

1.1.8. 214_01

Test Objective

To verify the data listed below is consistent with ICS.

- Application Identifier (AID) (Tag:'9F06')
- Terminal Floor Limit (Tag:'9F1B')



- Transaction Currency Exponent (Tag:'5F36')

Test Card

Card_CT_21

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if <i>NOT</i> Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
If it is possible to retrieve the data listed below, the values must be consistent with the values in ICS. If it is NOT possible to retrieve the data, you will pass this criterion regardless. - Application Identifier (AID) (Tag:'9F06') - Terminal Floor Limit (Tag:'9F1B') - Transaction Currency Exponent (Tag:'5F36')	

1.1.9. 310_01

Test Objective

[CT]

Transaction approved offline.

Test Card

Card_CT_28

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0



Notes	N/A
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Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	Transaction approved offline
Card/Terminal Log Validation	
N/A	

1.1.10. 320_01a

Test Objective

[CT][CVM][Offline Enciphered PIN][CAPK Index=13]

- 1) To verify the Cardholder Verification Method (CVM) below is consistent with ICS.
- Offline Enciphered PIN
- 2) To verify Certification Authority Public Key (CAPK) is correctly stored in terminal if Terminal supports the CVM below.
- Offline Enciphered PIN

Test Card

Card_CT_04

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	Enter PIN = "1234"

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A

Transaction Result (Behaviour)	If Terminal Type is NOT '14'(Not ATM) and the CVM is supported according to ICS: i) Cardholder Verification Entry Device must be used to enter PIN ii) PIN verification must succeed If Terminal Type is NOT '14'(Not ATM) and the CVM is NOT supported according to ICS: - PIN verification must NOT be performed. If Terminal Type is '14'(ATM) according to ICS: - Transaction must be declined or terminated.
Card/Terminal Log Validation	
If Terminal Type is NOT '14'(Not ATM) and the CVM is supported according to ICS: - The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B3b8 = 0 B3b7 = 0 B3b6 = 0 B3b5 = 0 B3b4 = 0 B3b3 = 0 If Terminal Type is NOT '14'(Not ATM) and the CVM is NOT supported according to ICS: - The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B3b8 = 1	

1.1.11. 320_01b ✖CA Public Key Index 11 is sunset at December 31, 2024. After January 2025, 320_01b does not need to be tested.

Test Objective

[CT][CVM][Offline Enciphered PIN][CAPK Index=11]

- 1) To verify the Cardholder Verification Method (CVM) below is consistent with ICS.
 - Offline Enciphered PIN
- 2) To verify Certification Authority Public Key (CAPK) is correctly stored in terminal if Terminal supports the CVM below.
 - Offline Enciphered PIN

Test Card

Card_CT_03

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0

Notes	Enter PIN = "1234"
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Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	If Terminal Type is NOT '14'(Not ATM) and the CVM is supported according to ICS: i) Cardholder Verification Entry Device must be used to enter PIN ii) PIN verification must succeed If Terminal Type is NOT '14'(Not ATM) and the CVM is NOT supported according to ICS: - PIN verification must NOT be performed. If Terminal Type is '14'(ATM) according to ICS: - Transaction must be declined or terminated.
Card/Terminal Log Validation	
If Terminal Type is NOT '14'(Not ATM) and the CVM is supported according to ICS: - The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B3b8 = 0 B3b7 = 0 B3b6 = 0 B3b5 = 0 B3b4 = 0 B3b3 = 0 If Terminal Type is NOT '14'(Not ATM) and the CVM is NOT supported according to ICS: - The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B3b8 = 1	

1.1.12. 320_02

Test Objective

[CT][CVM][Offline Plaintext PIN]

To verify the Cardholder Verification Method (CVM) below is consistent with ICS.

- Offline Plaintext PIN

Test Card

Card_CT_05

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	Enter PIN = "1234"

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	If Terminal Type is NOT '14'(Not ATM) and the CVM is supported according to ICS: i) Cardholder Verification Entry Device must be used to enter PIN ii) PIN verification must succeed If Terminal Type is NOT '14'(Not ATM) and the CVM is NOT supported according to ICS: - PIN verification must NOT be performed. If Terminal Type is '14'(ATM) according to ICS: - Transaction must be declined or terminated.
Card/Terminal Log Validation	
If Terminal Type is NOT '14'(Not ATM) and the CVM is supported according to ICS: - The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B3b8 = 0 B3b7 = 0 B3b6 = 0 B3b5 = 0 B3b4 = 0 B3b3 = 0 If Terminal Type is NOT '14'(Not ATM) and the CVM is NOT supported according to ICS: - The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B3b8 = 1	

1.1.13. 320_03

Test Objective

[CT][CVM][Online PIN]

To verify the Cardholder Verification Method (CVM) below is consistent with ICS.

- Online PIN

Test Card

Card_CT_02a

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	Enter PIN = "1234"

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	If the CVM is supported according to ICS: i) Cardholder Verification Entry Device must be used to enter PIN ii) PIN verification must be performed If the CVM is NOT supported according to ICS: - PIN verification must NOT be performed.
Card/Terminal Log Validation	
If the CVM is supported according to ICS: - The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B3b8 = 0 B3b7 = 0 B3b6 = 0 B3b5 = 0 B3b4 = 0 B3b3 = 1 If the CVM is NOT supported according to ICS: - The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B3b8 = 1 B3b3 = 0	

1.1.14. 320_05

Test Objective

[CT][CVM][Signature]

To verify the Cardholder Verification Method (CVM) below is consistent with ICS.

- Signature

Test Card

Card_CT_08

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	If Terminal Type is NOT '14'(Not ATM) and the CVM is supported according to ICS: - Signature line must be printed unless an electric device displays it. If Terminal Type is '14'(ATM) or the CVM is NOT supported according to ICS: - N/A
Transaction Result (Behaviour)	If Terminal Type is NOT '14'(Not ATM) and the CVM is supported according to ICS: i) Signature must be required ii) Receipt or an electric device must be used to capture Signature If Terminal Type is NOT '14'(Not ATM) and the CVM is NOT supported according to ICS: - Signature must NOT be required If Terminal Type is '14'(ATM) according to ICS: - Transaction must be declined or terminated.
Card/Terminal Log Validation	

If Terminal Type is NOT '14'(Not ATM) and the CVM is supported according to ICS:

- The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be;

B3b8 = 0

B3b7 = 0

B3b6 = 0

B3b5 = 0

B3b4 = 0

B3b3 = 0

If Terminal Type is NOT '14'(Not ATM) and the CVM is NOT supported according to ICS:

- The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be;

B3b8 = 1

B3b3 = 0

1.1.15. 320_07

Test Objective

[CT][CVM][No CVM]

To verify the Cardholder Verification Method (CVM) below is consistent with ICS.

- No CVM

Test Card

Card_CT_09

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A

Transaction Result (Behaviour)	If Terminal Type is NOT '14'(Not ATM) and the CVM is supported according to ICS: - Cardholder Verification must NOT be conducted If Terminal Type is NOT '14'(Not ATM) and the CVM is NOT supported according to ICS: - Cardholder Verification must NOT be conducted If Terminal Type is '14'(ATM) according to ICS: - Transaction must be declined or terminated.
Card/Terminal Log Validation	
If Terminal Type is NOT '14'(Not ATM) and the CVM is supported according to ICS: - The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B3b8 = 0 B3b7 = 0 B3b6 = 0 B3b5 = 0 B3b4 = 0 B3b3 = 0 If Terminal Type is NOT '14'(Not ATM) and the CVM is NOT supported according to ICS: - The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B3b8 = 1 B3b3 = 0	

1.1.16. 330_01a

Test Objective

[CT][ODA][SDA][CAPK Index=13]

- 1) To verify the Offline Data Authentication (ODA) below is consistent with ICS.
 - Static Data Authentication (SDA)
- 2) To verify Certification Authority Public Key (CAPK) is correctly stored in terminal if Terminal supports ODA below.
 - Static Data Authentication (SDA)

Test Card

Card_CT_01

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
If the ODA is supported according to ICS: - The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B1b8 = 0 B1b7 = 0 B1b6 = 0 B1b4 = 0 B1b3 = 0 B1b2 = 1 If the ODA is NOT supported according to ICS: - The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B1b8 = 1	

1.1.17. 330_01b ✖CA Public Key Index 11 is sunset at December 31, 2024. After January 2025, 330_01b does not need to be tested.

Test Objective

[CT][ODA][SDA][CAPK Index=11]

- 1) To verify the Offline Data Authentication (ODA) below is consistent with ICS.
 - Static Data Authentication (SDA)
- 2) To verify Certification Authority Public Key (CAPK) is correctly stored in terminal if Terminal supports ODA below.
 - Static Data Authentication (SDA)

Test Card

Card_CT_11

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
If the ODA is supported according to ICS: - The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B1b8 = 0 B1b7 = 0 B1b6 = 0 B1b4 = 0 B1b3 = 0 B1b2 = 1 If the ODA is NOT supported according to ICS: - The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B1b8 = 1	

1.1.18. 330_02a

Test Objective

[CT][ODA][DDA][CAPK Index=13]

- 1) To verify the Offline Data Authentication (ODA) below is consistent with ICS.
 - Dynamic Data Authentication (DDA)
- 2) To verify Certification Authority Public Key (CAPK) is correctly stored in terminal if Terminal supports ODA below.
 - Dynamic Data Authentication (DDA)

Test Card

Card_CT_14

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
If the ODA is supported according to ICS: - The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B1b8 = 0 B1b7 = 0 B1b6 = 0 B1b4 = 0 B1b3 = 0 B1b2 = 0 If the ODA is NOT supported according to ICS: - The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B1b8 = 1	

1.1.19. 330_02b ✖CA Public Key Index 11 is sunset at December 31, 2024. After January 2025, 330_02b does not need to be tested.

Test Objective

[CT][ODA][DDA][CAPK Index=11]

- 1) To verify the Offline Data Authentication (ODA) below is consistent with ICS.
 - Dynamic Data Authentication (DDA)
- 2) To verify Certification Authority Public Key (CAPK) is correctly stored in terminal if Terminal supports ODA below.
 - Dynamic Data Authentication (DDA)

Test Card

Card_CT_13

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation

Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
If the ODA is supported according to ICS: - The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B1b8 = 0 B1b7 = 0 B1b6 = 0 B1b4 = 0 B1b3 = 0 B1b2 = 0 If the ODA is NOT supported according to ICS: - The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B1b8 = 1	

1.1.20. 330_03a

Test Objective

[CT][ODA][CDA][CAPK Index=13]

- 1) To verify the Offline Data Authentication (ODA) below is consistent with ICS.
 - Combined Dynamic Data Authentication (CDA)
- 2) To verify Certification Authority Public Key (CAPK) is correctly stored in terminal if Terminal supports ODA below.
 - Combined Dynamic Data Authentication (CDA)

Test Card

Card_CT_17

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A

Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	If the ODA is supported according to ICS and (Offline only or Offline with online capability terminal): - Transaction must be approved If the CVM is NOT supported according to ICS or Online only terminal: - N/A
Card/Terminal Log Validation	
If the ODA is supported according to ICS: - The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B1b8 = 0 B1b7 = 0 B1b6 = 0 B1b4 = 0 B1b3 = 0 B1b2 = 0 If the ODA is NOT supported according to ICS: - The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B1b8 = 1	

1.1.21. 330_03b ✕CA Public Key Index 11 is sunset at December 31, 2024. After January 2025, 330_03b does not need to be tested.

Test Objective

[CT][ODA][CDA][CAPK Index=11]

- 1) To verify the Offline Data Authentication (ODA) below is consistent with ICS.
 - Combined Dynamic Data Authentication (CDA)
- 2) To verify Certification Authority Public Key (CAPK) is correctly stored in terminal if Terminal supports ODA below.
 - Combined Dynamic Data Authentication (CDA)

Test Card

Card_CT_16

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	If the ODA is supported according to ICS and (Offline only or Offline with online capability terminal): - Transaction must be approved If the CVM is NOT supported according to ICS or Online only terminal: - N/A
Card/Terminal Log Validation	
If the ODA is supported according to ICS: - The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B1b8 = 0 B1b7 = 0 B1b6 = 0 B1b4 = 0 B1b3 = 0 B1b2 = 0 If the ODA is NOT supported according to ICS: - The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B1b8 = 1	

1.1.22. 340_01a

Test Objective

[CT][Terminal Floor Limit > Minimum Transaction Amount][Exceed]

To verify the data below is consistent with ICS.

- Terminal Floor Limit

Test Card

Card_CT_01

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Equal to Terminal Floor Limit
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B4b8 = 1	

1.1.23. 340_01b

Test Objective

[CT][Terminal Floor Limit > Minimum Transaction Amount]

To verify the data below is consistent with ICS.

- Terminal Floor Limit

Test Card

Card_CT_01

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Equal to Terminal Floor Limit - 1
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B4b8 = 0	

1.1.24. 340_05

Test Objective

[CT][Terminal Floor Limit =< Minimum Transaction Amount]

To verify the data below is consistent with ICS.

- Terminal Floor Limit

Test Card

Card_CT_01

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B4b8 = 1	

1.1.25. 300_08

Test Objective

[CT][Default DDOL]

To verify the data below is consistent with ICS.

- Default DDOL

Test Card

Card_CT_15

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount

Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B1b8 = 0 B1b4 = 0	

1.1.26. 300_09

Test Objective

[CT][MS Fallback]

To verify the support of MS fallback is consistent with ICS.

Test Card

Card_CT_24

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	If the MS fallback is supported according to ICS: - Card acceptance must be fallen back to Magnetic Stripe interface If the MS fallback is NOT supported according to ICS: - MS transaction must NOT be begun.

Card/Terminal Log Validation

N/A

1.1.27. 300_10

Test Objective

[CT][Prohibition of MS Fallback][Application Block]

To verify chip transaction is not fallen back to Magnetic Stripe when the Application is blocked.

Test Card

Card_CT_25

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	Card Simulator returns AAC

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	Card acceptance must NOT be fallen back to Magnetic Stripe.
Card/Terminal Log Validation	
N/A	

1.1.28. 300_11

Test Objective

[CT][Prohibition of MS Fallback][Card Block]

To verify chip transaction is not fallen back to Magnetic Strip when the Card is blocked.

Test Card

Card_CT_26

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	Card acceptance must NOT be fallen back to Magnetic Stripe.
Card/Terminal Log Validation	
N/A	

1.1.29. 300_12

Test Objective

[CT][Prohibition of MS Fallback][Declined transaction]

To verify chip transaction is not fallen back to Magnetic Strip when chip transaction is declined.

Test Card

Card_CT_27

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	Card Simulator returns AAC

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	Card acceptance must NOT be fallen back to Magnetic Stripe.
Card/Terminal Log Validation	
N/A	

1.1.30. 300_29

Test Objective

[CT][Bypass PIN Entry]

To verify the setting below is identical to ICS.

- Bypass PIN Entry

Test Card

Card_CT_07

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	Bypass PIN entry

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	Signature must be requested as CVM.
Card/Terminal Log Validation	
The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B3b8 = 0 B3b7 = 0 B3b6 = 0 B3b5 = 0 B3b4 = 1 B3b3 = 0	

1.2. Contactless

1.2.1. 211_02

Test Objective

[CL][Purchase]

If Transit Reader, (3) is out of scope of test.

1) To verify the data listed below is consistent at the following stages: (a) input to Terminal, (b) output to Card.

- Amount, Other (Numeric)=0

- Transaction Type="00"

2) To verify the data listed below is consistent at the following stages: (a) ICS, (b) output to Card.

- Terminal Country Code

- Terminal Type

- Transaction Currency Code

3) To verify following data are correctly printed to Receipt.

-Cardnumber(masked partially)

-Merchant's name

-Transaction Amount in the Transaction Currency

-Currency symbol or words denoting the Transaction Currency

-Authorization Approval Code

-Transaction Date

- AID or other code that identifies the application.

-Cardmember signature(optional)

4) To verify Transaction Amount displayed is same as Amount input.

Test Card

Card_CL_01

Test Procedure

Transaction Type	Purchase
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	Transaction Amount must be displayed

Receipt (if NOT Transit Reader)	i) Printed Transaction Amount must be equal to the input amount. ii) The data listed below must be printed. - Cardnumber - Merchant's name - Transaction Amount in the Transaction Currency - Currency symbol or words denoting the Transaction Currency - Authorization Approval Code* - Transaction Date - AID or other code that identifies the application. *The print value of this data is not required.
Transaction Result (Behaviour)	If Offline only or Offline with online capability terminal: - Transaction must be approved If Online only terminal: - N/A
Card/Terminal Log Validation	
i) The data listed below must be 0. - Amount, Other (Numeric)	
ii) The data listed below must be consistent with its value in ICS. - Terminal Country Code - Terminal Type - Transaction Currency Code	
iii) The data listed below must be "00 (Purchase)". - Transaction Type	

1.2.2. 211_08

Test Objective

[CL][Cash Advance]

1) To verify the data listed below is consistent at the following stages: (a) input to Terminal, (b) output to Card.

- Amount, Other (Numeric)=0
- Transaction Type="01"

2) To verify the data listed below is consistent at the following stages: (a) ICS, (b) output to Card.

- Terminal Country Code
- Terminal Type
- Transaction Currency Code

3) To verify following data are correctly printed to Receipt.

- Cardnumber(masked partially)
- Merchant's name
- Transaction Amount in the Transaction Currency
- Currency symbol or words denoting the Transaction Currency
- Authorization Approval Code

- Transaction Date
- AID or other code that identifies the application.
- Cardmember signature(optional)
- 4) To verify Transaction Amount displayed is same as Amount input.
- 5) To verify Cash Advance transaction requests an Authorisation Approval Code

Test Card

Card_CL_01

Test Procedure

Transaction Type	Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	Transaction Amount (= input value) must be displayed.
Receipt (if <i>NOT</i> Transit Reader)	i) Printed Transaction Amount must be equal to the input amount. ii) The data listed below must be printed. - Cardnumber - Merchant's name - Transaction Amount in the Transaction Currency - Currency symbol or words denoting the Transaction Currency - Authorization Approval Code* - Transaction Date - AID or other code that identifies the application. *The print value of this data is not required.
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
i) The data listed below must be 0.	
- Amount, Other (Numeric)	
ii) The data listed below must be consistent with its value in ICS.	
- Terminal Country Code - Terminal Type - Transaction Currency Code	
iii) The data listed below must be "01 (Cash Advance)".	
- Transaction Type	

- iv) The data listed below must be "Minimum Transaction Amount".
- Amount, Authorised (Numeric) (Tag 9F02)

1.2.3. 211_10

Test Objective

[CL][Balance Inquiry]

To verify the data listed below is consistent at the following stages: (a) input to Terminal, (b) output to Card.

- Transaction Type="30"

Test Card

Card_CL_01

Test Procedure

Transaction Type	Balance Inquiry
Transaction Amount (Amount, Authorised (Numeric))	N/A
Other Amount (Amount, Other (Numeric))	N/A
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
i) The data listed below must be 0.	
- Amount, Authorised (Numeric)	
- Amount, Other (Numeric)	
ii) The data listed below must be "30 (Balance Inquiry)".	
- Transaction Type	

1.2.4. 212_01

Test Objective

[CL][Standard DOL]

To verify the data listed below is consistent with ICS.

- Terminal Compatibility Indicator (Tag:'9F52')

- Terminal Interchange Profile (static) (Tag:'9F53')

Test Card

Card_CL_20

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
i) The data listed below must be consistent with its value in ICS. - Terminal Compatibility Indicator B1b2 (EMV Mode Supported) - Terminal Compatibility Indicator B1b1 (Magstripe Mode Supported) - Terminal Interchange Profile B1b7 (Signature supported) - Terminal Interchange Profile B1b6 (Online PIN supported) - Terminal Interchange Profile B1b5 (On-Device CVM supported) - Terminal Interchange Profile B1b3 (Reader is a Transit Reader) - Terminal Interchange Profile B1b2 (EMV contact chip supported) - Terminal Interchange Profile B1b1 ((Contact Chip) Offline PIN supported) - Terminal Interchange Profile B2b8 (Issuer Update supported)	
ii) The Terminal Compatibility Indicator shows that the value of the following Byte Bit must be; - B1b8-3 = 000000	
iii) The Terminal Interchange Profile (TIP) shows that the value of the following Byte Bit must be; - B1b4 = 0 - B2b7-1 = 0000000 - B3b8-1 = 00000000	

1.2.5. 213_02

Test Objective

[CL][Non-standard DOL]

1) To verify the data listed below is consistent at the following stages: (a) ICS, (b) output to Card.

- Merchant Category Code (Tag:'9F15')
- Interface Device Serial Number (Tag:'9F1E')

Test Card

Card_CL_02

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
If it is possible to retrieve the data listed below, the values must be consistent with the values in ICS. If it is NOT possible to retrieve the data, you will pass this criterion regardless.	
- Merchant Category Code (Tag:'9F15') - Interface Device Serial Number (Tag:'9F1E')	

1.2.6. 213_04

Test Objective

[CL][POS Entry Mode - EMV Mode]

To verify the data listed below is consistent at the following stages: (a) output to Card.

- Point-of-Service (POS) Entry Mode (Tag:'9F39')="07"

Test Card

Card_CL_03

Test Procedure

Transaction Type	Purchase or Cash Advance
------------------	--------------------------

Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	EMV mode

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
If it is possible to retrieve the data listed below, the values must be "07 (Contactless IC Transaction)". If it is NOT possible to retrieve the data, you will pass this criterion regardless. - Point-of-Service (POS) Entry Mode (Tag:'9F39')	

1.2.7. 213_05

Test Objective

[CL][POS Entry Mode - Legacy Mode]

To verify the data listed below is consistent at the following stages: (a) output to Card.

- Point-of-Service (POS) Entry Mode (Tag:'9F39')="07"

Test Card

Card_CL_07

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	Legacy mode

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	

If it is possible to retrieve the data listed below, the values must be "07 (Contactless IC Transaction)". If it is NOT possible to retrieve the data, you will pass this criterion regardless.

- Point-of-Service (POS) Entry Mode (Tag:'9F39')

1.2.8. 213_08

Test Objective

[CL][Non-standard DOL][Offline only]

To verify the data listed below is consistent with ICS.

- Merchant Category Code (Tag:'9F15')
- Interface Device Serial Number (Tag:'9F1E')

Test Card

Card_CL_15

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
If it is possible to retrieve the data listed below, the values must be consistent with the values in ICS. If it is NOT possible to retrieve the data, you will pass this criterion regardless. - Merchant Category Code (Tag:'9F15') - Interface Device Serial Number (Tag:'9F1E')	

1.2.9. 214_02

Test Objective

[CL][Non-standard DOL]

To verify the data listed below is consistent with ICS.



- Acquirer Identifier (Tag:'9F01')
- Application Identifier (AID) (Tag:'9F06')
- Transaction Currency Exponent (Tag:'5F36')
- Terminal Interchange Profile (static) (Tag:'9F53')

Test Card

Card_CL_17

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	

- i) If it is possible to retrieve the data listed below, the values must be consistent with the values in ICS. If it is NOT possible to retrieve the data, you will pass this criterion regardless.
- Acquirer Identifier (Tag:'9F01')
 - Application Identifier (AID) (Tag:'9F06')
 - Transaction Currency Exponent (Tag:'5F36')
- ii) The data listed below must be consistent with its value in ICS.
- Terminal Interchange Profile B1b7 (Signature supported)
 - Terminal Interchange Profile B1b6 (Online PIN supported)
 - Terminal Interchange Profile B1b5 (On-Device CVM supported)
 - Terminal Interchange Profile B1b3 (Reader is a Transit Reader)
 - Terminal Interchange Profile B1b2 (EMV contact chip supported)
 - Terminal Interchange Profile B1b1 ((Contact Chip) Offline PIN supported)
 - Terminal Interchange Profile B2b8 (Issuer Update supported)
- iii) The Terminal Interchange Profile (TIP) shows that the value of the following Byte Bit must be;
- B1b4 = 0
 - B2b7-1 = 0000000
 - B3b8-1 = 00000000

1.2.10. 310_02

Test Objective

[CL]

Transaction approved offline.

Test Card

Card_CL_01

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A

Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	Transaction approved offline
Card/Terminal Log Validation	
N/A	

1.2.11. 320_04

Test Objective

[CL][CVM][Online PIN]

To verify the Cardholder Verification Method (CVM) below is consistent with ICS.

- Online PIN

Test Card

Card_CL_10a

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	Enter PIN = "1234"

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	If the CVM is supported according to ICS: i) Cardholder Verification Entry Device must be used to enter PIN ii) PIN verification must be performed If the CVM is NOT supported according to ICS: i) Transaction must be declined offline. ii) PIN verification must NOT be performed.
Card/Terminal Log Validation	
N/A	

1.2.12. 320_06

Test Objective

[CL][CVM][Signature]

To verify the Cardholder Verification Method (CVM) below is consistent with ICS.

- Signature

Test Card

Card_CL_08

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	If the CVM is supported according to ICS: - Signature line must be printed unless an electric device displays it. If the CVM is NOT supported according to ICS: - N/A
Transaction Result (Behaviour)	If the CVM is supported according to ICS: i) Signature must be required ii) Receipt or an electric device must be used to capture Signature If the CVM is NOT supported according to ICS: i) Transaction must be declined offline ii) Signature must NOT be required
Card/Terminal Log Validation	
N/A	

1.2.13. 330_04a

Test Objective

[CL][ODA][CDA][CAPK Index=13]

1) To verify the Offline Data Authentication (ODA) below is consistent with ICS.

- Combined Dynamic Data Authentication (CDA)

2) To verify Certification Authority Public Key (CAPK) is correctly stored in terminal if Terminal supports ODA below.

- Combined Dynamic Data Authentication (CDA)

Test Card

Card_CL_21

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	If the ODA is supported according to ICS and (Offline only or Offline with online capability terminal): - Transaction must be approved If the ODA is NOT supported according to ICS or Online only terminal: - N/A
Card/Terminal Log Validation	
If the ODA is supported according to ICS: - The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B1b8 = 0 B1b7 = 0 B1b6 = 0 B1b4 = 0 B1b3 = 0 B1b2 = 0 If the ODA is NOT supported according to ICS: - The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B1b8 = 1	

1.2.14. 330_04b ✕CA Public Key Index 11 is sunset at December 31, 2024. After January 2025, 330_04b does not need to be tested.

Test Objective

[CL][ODA][CDA][CAPK Index=11]

- 1) To verify the Offline Data Authentication (ODA) below is consistent with ICS.
 - Combined Dynamic Data Authentication (CDA)
- 2) To verify Certification Authority Public Key (CAPK) is correctly stored in terminal if Terminal supports ODA below.
 - Combined Dynamic Data Authentication (CDA)

Test Card

Card_CL_13

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if <i>NOT</i> Transit Reader)	N/A
Transaction Result (Behaviour)	If the ODA is supported according to ICS and (Offline only or Offline with online capability terminal): - Transaction must be approved If the ODA is NOT supported according to ICS or Online only terminal: - N/A
Card/Terminal Log Validation	
If the ODA is supported according to ICS: - The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B1b8 = 0 B1b7 = 0 B1b6 = 0 B1b4 = 0 B1b3 = 0 B1b2 = 0 If the ODA is NOT supported according to ICS: - The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B1b8 = 1	

1.2.15. 340_02a

Test Objective

[CL][Contactless Transaction Limit > Minimum Transaction Amount][Exceed]

To verify the data below is consistent with ICS.

- Contactless Transaction Limit

Test Card

Card_CL_01

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Equal to Contactless Transaction Limit
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	Contactless transaction must be cancelled. If contact interface is supported according to ICS, terminal must be capable of switching to contact transaction.
Card/Terminal Log Validation	
N/A	

1.2.16. 340_02b

Test Objective

[CL][Contactless Transaction Limit > Minimum Transaction Amount]

To verify the data below is consistent with ICS.

- Contactless Transaction Limit

Test Card

Card_CL_01

Test Procedure

Transaction Type	Purchase or Cash Advance
------------------	--------------------------

Transaction Amount (Amount, Authorised (Numeric))	Equal to Contactless Transaction Limit - 1
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	Transaction must be processed in contactless interface
Card/Terminal Log Validation	
N/A	

1.2.17. 340_03a

Test Objective

[CL][CVM Required Limit > Minimum Transaction Amount][Exceed]

To verify the data below is consistent with ICS.

- CVM Required Limit

Test Card

Card_CL_01

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Equal to CVM Required Limit
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	

The Terminal Interchange Profile (TIP) shows that the value of the following Byte Bit must be;
B1b8 = 1

1.2.18. 340_03b

Test Objective

[CL][CVM Required Limit > Minimum Transaction Amount]

To verify the data below is consistent with ICS.

- CVM Required Limit

Test Card

Card_CL_01

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Equal to CVM Required Limit - 1
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
The Terminal Interchange Profile (TIP) shows that the value of the following Byte Bit must be; B1b8 = 0	

1.2.19. 340_23a

Test Objective

[CL][CVM Required Limit > Minimum Transaction Amount][Exceed]

To verify the data below is consistent with ICS.

- CVM Required Limit

Test Card

Card_CL_01

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Equal to CVM Required Limit
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
The Terminal Interchange Profile (TIP) shows that the value of the following Byte Bit must be; B1b8 = 1	

1.2.20. 340_23b

Test Objective

[CL][CVM Required Limit > Minimum Transaction Amount]

To verify the data below is consistent with ICS.

- CVM Required Limit

Test Card

Card_CL_01

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Equal to CVM Required Limit - 1
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A

Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
The Terminal Interchange Profile (TIP) shows that the value of the following Byte Bit must be; B1b8 = 0	

1.2.21. 340_24a

Test Objective

[CL][CVM Required Limit > Minimum Transaction Amount][Exceed]

To verify the data below is consistent with ICS.

- CVM Required Limit

Test Card

Card_CL_01

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Equal to CVM Required Limit
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
The Terminal Interchange Profile (TIP) shows that the value of the following Byte Bit must be; B1b8 = 1	

1.2.22. 340_24b

Test Objective

[CL][CVM Required Limit > Minimum Transaction Amount]

To verify the data below is consistent with ICS.



- CVM Required Limit

Test Card

Card_CL_01

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Equal to CVM Required Limit - 1
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
The Terminal Interchange Profile (TIP) shows that the value of the following Byte Bit must be; B1b8 = 0	

1.2.23. 340_04a

Test Objective

[CL][Contactless Floor Limit > Minimum Transaction Amount][Exceed]

To verify the data below is consistent with ICS.

- Contactless Floor Limit

Test Card

Card_CL_01

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Equal to Contactless Floor Limit
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B4b8 = 1	

1.2.24. 340_04b

Test Objective

[CL][Contactless Floor Limit > Minimum Transaction Amount]

To verify the data below is consistent with ICS.

- Contactless Floor Limit

Test Card

Card_CL_01

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Equal to Contactless Floor Limit - 1
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B4b8 = 0	

1.2.25. 340_13

Test Objective

[CL][Contactless Transaction Limit is not set]
To verify the data below is consistent with ICS.
- Contactless Transaction Limit

Test Card

Card_CL_01

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Equal to Maximum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if <i>NOT</i> Transit Reader)	N/A
Transaction Result (Behaviour)	Transaction must be processed in contactless interface
Card/Terminal Log Validation	
N/A	

1.2.26. 340_14

Test Objective

[CL][CVM Required Limit =< Minimum Transaction Amount]
To verify the data below is consistent with ICS.
- CVM Required Limit

Test Card

Card_CL_01

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount

Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
The Terminal Interchange Profile (TIP) shows that the value of the following Byte Bit must be; B1b8 = 1	

1.2.27. 340_25

Test Objective

[CL][CVM Required Limit =< Minimum Transaction Amount]

To verify the data below is consistent with ICS.

- CVM Required Limit

Test Card

Card_CL_01

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
The Terminal Interchange Profile (TIP) shows that the value of the following Byte Bit must be; B1b8 = 1	

1.2.28. 340_26

Test Objective

[CL][CVM Required Limit =< Minimum Transaction Amount]

To verify the data below is consistent with ICS.

- CVM Required Limit

Test Card

Card_CL_01

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
The Terminal Interchange Profile (TIP) shows that the value of the following Byte Bit must be; B1b8 = 1	

1.2.29. 340_19

Test Objective

[CL][Contactless Floor Limit =< Minimum Transaction Amount]

To verify the data below is consistent with ICS.

- Contactless Floor Limit

Test Card

Card_CL_01

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B4b8 = 1	

1.2.30. 350_02

Test Objective

[CL][MS Mode Support]

To verify the data below is consistent with ICS.

- MS Mode Support

Test Card

Card_CL_05

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	Transaction must be cancelled or declined
Card/Terminal Log Validation	

N/A

1.2.31. 350_03

Test Objective

[CL][Legacy Mode Support]

To verify the data below is consistent with ICS.

- Legacy Mode Support*

*Legacy Mode must be supported.

Test Card

Card_CL_06

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	N/A

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	Transaction must be processed in contactless interface
Card/Terminal Log Validation	
An ARQC must be requested from terminal. (C-APDU P1 = '80')	

1.2.32. 300_06

Test Objective

[CL][Exception File Check]

To verify the data below is consistent with ICS.

- Exception File Check (Combination Options Byte 1 Bit 5)

Test Card

Card_CL_01

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	Set PAN in Exception File as instructed by the Test Tool.

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B1b5 = 1	

1.2.33. 300_07

Test Objective

[CL][Status Check]

To verify the data below is consistent with ICS.

- Status Check (Combination Options Byte 1 Bit 7)

Test Card

Card_CL_01

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	A single unit of currency
Other Amount (Amount, Other (Numeric))	0
Notes	Perform Status Check transaction

Pass Criteria

User Validation	
Display	N/A

Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	N/A
Card/Terminal Log Validation	
The Terminal Verification Results (TVR) shows that the value of the following Byte Bit must be; B4b8 = 1	

1.2.34. 300_22

Test Objective

[CL][Cancellation of Online PIN Entry]

To verify Transaction is declined if Online PIN Entry is cancelled.

Test Card

Card_CL_10a

Test Procedure

Transaction Type	Purchase or Cash Advance
Transaction Amount (Amount, Authorised (Numeric))	Minimum Transaction Amount
Other Amount (Amount, Other (Numeric))	0
Notes	Cancel Online PIN entry

Pass Criteria

User Validation	
Display	N/A
Receipt (if NOT Transit Reader)	N/A
Transaction Result (Behaviour)	i) Terminal must NOT perform other CVM after Online PIN Entry is cancelled. li) Transaction must be declined
Card/Terminal Log Validation	
N/A	

1.3. Applicable Conditions

* The definitions of Online/Offline are shown below.

Online only terminal	1) Terminal Type = "x1" or "x4"; 2) Terminal Type = "x2" or "x5", and Terminal/Contactless Floor Limit =< Minimum Transaction Amount; OR 3) Terminal Type = "x2" or "x5", and Target Percentage to be Used for Biased Random Selection = 99
Offline with online capability terminal	Terminal Type = "x2" or "x5", Terminal/Contactless Floor Limit > Minimum Transaction Amount >= 0, AND Target Percentage to be Used for Biased Random Selection < 99 (if Random Transaction Selection is supported)
Offline only terminal	Terminal Type = "x3" or "x6"

1.3.1. Contact

Test Case	Online/Offline*	Transaction Type	Terminal Floor Limit	Minimum Transaction Amount	CVM	ODA	MS Fallback	Others
211_01	Any	Purchase	Any	Any	Any	Any	Any	N/A
211_05	Any	Refund	Any	Any	Any	Any	Any	N/A
211_07	Any	Cash Advance	Any	Any	Any	Any	Any	N/A
211_09	Any	Balance Inquiry	Any	Any	Any	Any	Any	N/A
213_01	Offline with online capability, Online only	Purchase, Cash Advance	Any	Any	Any	Any	Any	N/A
213_03	Offline with online capability, Online only	Purchase, Cash Advance	Any	Any	Any	Any	Any	N/A
213_07	Offline only	Purchase, Cash Advance	Any	Any	Any	Any	Any	N/A
214_01	Any	Purchase, Cash Advance	Any	Any	Any	Any	Any	N/A
310_01	Offline with online capability, Offline only	Purchase, Cash Advance	Any	Any	Offline Plaintext PIN supported, Offline Enciphered PIN supported, Signature supported or No CVM supported	Any	Any	N/A
320_01a	Any	Purchase, Cash Advance	Any	Any	Any	Any	Any	N/A
320_01b	Any	Purchase, Cash Advance	Any	Any	Any	Any	Any	N/A
320_02	Any	Purchase, Cash Advance	Any	Any	Any	Any	Any	N/A
320_03	Any	Purchase, Cash Advance	Any	Any	Any	Any	Any	N/A
320_05	Any	Purchase, Cash Advance	Any	Any	Any	Any	Any	N/A
320_07	Any	Purchase, Cash Advance	Any	Any	Any	Any	Any	N/A
330_01a	Any	Purchase, Cash Advance	Any	Any	Any	Any	Any	N/A
330_01b	Any	Purchase, Cash Advance	Any	Any	Any	Any	Any	N/A
330_02a	Any	Purchase, Cash Advance	Any	Any	Any	Any	Any	N/A
330_02b	Any	Purchase, Cash Advance	Any	Any	Any	Any	Any	N/A
330_03a	Any	Purchase, Cash Advance	Any	Any	Any	Any	Any	N/A
330_03b	Any	Purchase, Cash Advance	Any	Any	Any	Any	Any	N/A
340_01a	Any	Purchase, Cash Advance	> 0	< Terminal Floor Limit	Any	Any	Any	N/A
340_01b	Any	Purchase, Cash Advance	> 0	< Terminal Floor Limit	Any	Any	Any	N/A
340_05	Online only	Purchase, Cash Advance	Any	>= Terminal Floor Limit	Any	Any	Any	N/A
300_08	Any	Purchase, Cash Advance	Any	Any	Any	DDA supported	Any	N/A
300_09	Any	Purchase, Cash Advance	Any	Any	Any	Any	Any	N/A
300_10	Any	Purchase, Cash Advance	Any	Any	Any	Any	Supported	N/A
300_11	Any	Purchase, Cash Advance	Any	Any	Any	Any	Supported	N/A
300_12	Any	Purchase, Cash Advance	Any	Any	Any	Any	Supported	N/A
300_29	Any	Purchase, Cash Advance	Any	Any	Any	Any	Any	Bypass PIN Entry supported



1.3.2. Contactless

Test Case	Online/Offline*	Transaction Type	Contactless Floor Limit	Contactless Transaction Limit	CVM Required Limit	Minimum Transaction Amount	CVM	Contactless TAC Default	Transaction Mode	Transit Reader	Types of JCB Contactless Transit Transaction	ToM	Others
211_02	Any	Purchase	Any	Any	Any	Any	Any	Any	Any	Any	Any	Any	N/A
211_08	Any	Cash Advance	Any	Any	Any	Any	Any	Any	Any	No	N/A	No	N/A
211_10	Any	Balance Inquiry	Any	Any	Any	Any	Any	Any	Any	No	N/A	Any	N/A
212_01	Any	Purchase, Cash Advance	Any	Any	Any	Any	Any	Any	Any	Any	Any	Any	N/A
213_02	Offline with online capability, Online only	Purchase, Cash Advance	Any	Any	Any	Any	Any	Any	Any	Any	Any	Any	N/A
213_04	Offline with online capability, Online only	Purchase, Cash Advance	Any	Any	Any	Any	Any	Any	EMV mode supported	No	N/A	Any	N/A
213_05	Offline with online capability, Online only	Purchase, Cash Advance	Any	Any	Any	Any	Any	Any	Legacy mode supported	No	N/A	Any	N/A
213_08	Offline only	Purchase, Cash Advance	Any	Any	Any	Any	Any	Any	Any	No	N/A	No	N/A
214_02	Any	Purchase, Cash Advance	Any	Any	Any	Any	Any	Any	Any	Any	Any	Any	N/A
310_02	Offline with online capability, Offline only	Purchase, Cash Advance	Any	Any	Any	Any	Signature supported or On-Device CVM supported	Any	Any	Any	Retail-Like Transaction(Real-Time Authorization)	No	N/A
320_04	Any	Purchase, Cash Advance	Any	Any	Any	Any	Any	Any	Any	No	N/A	Any	N/A
320_06	Any	Purchase, Cash Advance	Any	Any	Any	Any	Any	Any	Any	No	N/A	Any	N/A
330_04a	Any	Purchase, Cash Advance	Any	Any	Any	Any	Any	Any	Any	Any	Any	Any	N/A
330_04b	Any	Purchase, Cash Advance	Any	Any	Any	Any	Any	Any	Any	Any	Any	Any	N/A
340_02a	Any	Purchase, Cash Advance	Any	> 0	Any	< Contactless Transaction Limit	Any	Any	Any	Any	Any	Any	N/A
340_02b	Any	Purchase, Cash Advance	Any	> 0	Any	< Contactless Transaction Limit	Any	Any	Any	Any	Any	Any	N/A
340_03a	Offline with online capability, Online only	Purchase, Cash Advance	Any	Any	> 0	< CVM Required Limit	Any	Any	Any	No	N/A	Any	N/A
340_03b	Offline with online capability, Online only	Purchase, Cash Advance	Any	Any	> 0	< CVM Required Limit	Any	Any	Any	No	N/A	Any	N/A
340_23a	Offline only	Purchase, Cash Advance	> CVM Required Limit	Any	> 0	< CVM Required Limit	Any	Any	Any	No	N/A	No	N/A
340_23b	Offline only	Purchase, Cash Advance	> CVM Required Limit	Any	> 0	< CVM Required Limit	Any	Any	Any	No	N/A	No	N/A
340_24a	Offline only	Purchase, Cash Advance	<= CVM Required Limit	Any	> 0	< CVM Required Limit	Any	B4b8=0	Any	No	N/A	No	N/A
340_24b	Offline only	Purchase, Cash Advance	<= CVM Required Limit	Any	> 0	< CVM Required Limit	Any	B4b8=0	Any	No	N/A	No	N/A
340_04a	Offline with online capability, Offline only	Purchase, Cash Advance	> 0	Any	Any	< Contactless Floor Limit	Any	Any	Any	Any	Retail-Like Transaction(Real-Time	No	N/A



340_04b	Offline with online capability, Offline only	Purchase, Cash Advance	> 0	Any	Any	< Contactless Floor Limit	Any	Any	Any	Any	Authorization) Retail-Like Transaction(Real-Time Authorization)	No	N/A
340_13	Any	Purchase, Cash Advance	Any	None (Not supported)	Any	Any	Any	Any	Any	Any	Any	Any	N/A
340_14	Offline with online capability, Online only	Purchase, Cash Advance	Any	Any	Any	>= CVM Required Limit	Any	Any	Any	No	N/A	Any	N/A
340_25	Offline only	Purchase, Cash Advance	> CVM Required Limit	Any	Any	>= CVM Required Limit	Any	Any	Any	No	N/A	No	N/A
340_26	Offline only	Purchase, Cash Advance	<= CVM Required Limit	Any	Any	>= CVM Required Limit	Any	B4b8=0	Any	No	N/A	No	N/A
340_19	Online only	Purchase, Cash Advance	Any	Any	Any	>= Contactless Floor Limit	Any	Any	Any	Any	Retail-Like Transaction(Real-Time Authorization)	No	N/A
350_02	Any	Purchase, Cash Advance	Any	Any	Any	Any	Any	Any	Any	Any	Any	Any	N/A
350_03	Any	Purchase, Cash Advance	Any	Any	Any	Any	Any	Any	Any	Any	Any	Any	N/A
300_06	Any	Purchase, Cash Advance	Any	Any	Any	Any	Any	Any	EMV mode supported	No	N/A	Any	Exception File Check supported
300_07	Offline with online capability	Purchase, Cash Advance	Any	Any	Any	Any	Any	Any	EMV mode supported	Any	Retail-Like Transaction(Real-Time Authorization)	Any	Status Check supported
300_22	Offline with online capability, Online only	Purchase, Cash Advance	Any	Any	Any	Any	Online PIN supported	Any	Any	No	N/A	No	N/A

2. Test Card Images

2.1. Contact

2.1.1. Default Value

#	Item	Tag	Default Value
1	Protocol	-	T=1
2	File Control Information	6F	6F328407A0000000651010A527500A4A434220437 2656469748701015F2D046A61656E9F1101019F12 0A4A434220437265646974
3	Application File Locator	94	Up to the Tool Developer
4	Application Interchange Profile	82(D8)	5C00
5	Application Expiration Date	5F24	491231
6	Application Version Number	9F08	0200
7	Application PAN	5A	XXXXXXXXXXXX*****
8	Application PAN Sequence Number	5F34	00
9	Cardholder Name	5F20	4A43422F544553542020202020202020202020 2020202020
10	Track 2 Equivalent Data	57	XXXXXXXXXXXX*****D49122010000000000000F
11	Card Risk Management Data Object List 1 (CDOL1)	8C	9F02069F03069F1A0295055F2A029A039C019F370 49F3501
12	Card Risk Management Data Object List 2 (CDOL2)	8D	8A02910A95059F3704
13	Application Usage Control	9F07	FFC0
14	Issuer Country Code	5F28	0392
15	Issuer Action Code - Denial	9F0E	0000000000
16	Issuer Action Code - Online	9F0F	0000000000
17	Issuer Action Code - Default	9F0D	0000000000
18	Cardholder Verification Method (CVM) List	8E	00000000000000001E001F00
			Offline Plaintext PIN
			Online PIN
			Offline Enciphered PIN
			Signature
			No CVM
19	Application Currency Code	9F42	0392
20	PIN Try Limit	-	14
21	Reference PIN Data	-	241234FFFFFFFFFFFF
22	Cryptogram Version Number	-	01
23	Derivation Key Index	-	01
24	Certification Authority Public Key Index	8F	13
25	Dynamic Data Authentication Data Object List (DDOL)	9F49	not set
26	Static Data Authentication (SDA) Tag List	9F4A	82
27	Issuer Public Key (Certificate Expiration Date)	-	204912
28	Issuer Public Key (Length)	-	1408

#	Item	Tag	Default Value
29	Issuer Public Key (Exponent)	-	03
30	ICC Public Key (Certificate Expiration Date)	-	204912
31	ICC Public Key (Length)	-	1280
32	ICC Public Key (Exponent)	-	03
Card Response to Generate AC Command			
33	Cryptogram Information Data	9F27	Same decision as the Terminal makes (e.g.) If the Terminal request TC, then CID value must indicates TC.
34	Others	-	

2.1.2. Card_CT_01

#	Item	Tag	Value
7	Application PAN	5A	*****
10	Track 2 Equivalent Data	57	*****

2.1.3. Card_CT_02a

#	Item	Tag	Value
7	Application PAN	5A	*****
10	Track 2 Equivalent Data	57	*****
18	Cardholder Verification Method (CVM) List	8E	0000000000000000200
			Offline Plaintext PIN
			Online PIN
			Offline Enciphered PIN
			Signature
			No CVM

2.1.4. Card_CT_03

#	Item	Tag	Value
7	Application PAN	5A	*****
10	Track 2 Equivalent Data	57	*****
18	Cardholder Verification Method (CVM) List	8E	0000000000000000400
			Offline Plaintext PIN
			Online PIN
			Offline Enciphered PIN
			Signature
			No CVM
24	Certification Authority Public Key Index	8F	11
34	Others	-	IPK Remainder exists

2.1.5. Card_CT_04

#	Item	Tag	Value
7	Application PAN	5A	*****



10	Track 2 Equivalent Data	57	*****
18	Cardholder Verification Method (CVM) List	8E	0000000000000000400
			Offline Plaintext PIN
			Online PIN
			Offline Enciphered PIN
			Signature
			No CVM

2.1.6. Card_CT_05

#	Item	Tag	Value
7	Application PAN	5A	*****
10	Track 2 Equivalent Data	57	*****
18	Cardholder Verification Method (CVM) List	8E	0000000000000000100
			Offline Plaintext PIN
			Online PIN
			Offline Enciphered PIN
			Signature
			No CVM

2.1.7. Card_CT_07

#	Item	Tag	Value
7	Application PAN	5A	*****
10	Track 2 Equivalent Data	57	*****
18	Cardholder Verification Method (CVM) List	8E	000000000000000410044001E00
			Offline Plaintext PIN
			Online PIN
			Offline Enciphered PIN
			Signature
			No CVM

2.1.8. Card_CT_08

#	Item	Tag	Value
7	Application PAN	5A	*****
10	Track 2 Equivalent Data	57	*****
18	Cardholder Verification Method (CVM) List	8E	00000000000000001E00
			Offline Plaintext PIN
			Online PIN
			Offline Enciphered PIN
			Signature
			No CVM

2.1.9. Card_CT_09

#	Item	Tag	Value
7	Application PAN	5A	*****

10	Track 2 Equivalent Data	57	*****
18	Cardholder Verification Method (CVM) List	8E	0000000000000001F00
			Offline Plaintext PIN
			Online PIN
			Offline Enciphered PIN
			Signature
			No CVM

2.1.10. Card_CT_11

#	Item	Tag	Value
7	Application PAN	5A	*****
10	Track 2 Equivalent Data	57	*****
24	Certification Authority Public Key Index	8F	11
34	Others	-	IPK Remainder exists

2.1.11. Card_CT_13

#	Item	Tag	Value
4	Application Interchange Profile	82(D8)	3C00
7	Application PAN	5A	*****
10	Track 2 Equivalent Data	57	*****
24	Certification Authority Public Key Index	8F	11
25	Dynamic Data Authentication Data Object List (DDOL)	9F49	9F37049F1C089F1A029A03
34	Others	-	IPK Remainder exists

2.1.12. Card_CT_14

#	Item	Tag	Value
4	Application Interchange Profile	82(D8)	3C00
7	Application PAN	5A	*****
10	Track 2 Equivalent Data	57	*****
25	Dynamic Data Authentication Data Object List (DDOL)	9F49	9F37049F1C089F1A029A03

2.1.13. Card_CT_15

#	Item	Tag	Value
4	Application Interchange Profile	82(D8)	3C00
7	Application PAN	5A	*****
10	Track 2 Equivalent Data	57	*****

2.1.14. Card_CT_16

#	Item	Tag	Value
4	Application Interchange Profile	82(D8)	1D00

7	Application PAN	5A	*****
10	Track 2 Equivalent Data	57	*****
24	Certification Authority Public Key Index	8F	11
34	Others	-	IPK Remainder exists

2.1.15. Card_CT_17

#	Item	Tag	Value
4	Application Interchange Profile	82(D8)	1D00
7	Application PAN	5A	*****
10	Track 2 Equivalent Data	57	*****

2.1.16. Card_CT_18

#	Item	Tag	Value
7	Application PAN	5A	*****
10	Track 2 Equivalent Data	57	*****
11	Card Risk Management Data Object List 1 (CDOL1)	8C	9F02069F03069F1A0295055F2A029A039C019F37049F35019F3901

2.1.17. Card_CT_19

#	Item	Tag	Value
7	Application PAN	5A	*****
10	Track 2 Equivalent Data	57	*****
11	Card Risk Management Data Object List 1 (CDOL1)	8C	9F02069F03069F1A0295055F2A029A039C019F37049F35019F34039F15029F33039F09029F1E089F4104

2.1.18. Card_CT_20

#	Item	Tag	Value
7	Application PAN	5A	*****
10	Track 2 Equivalent Data	57	*****
11	Card Risk Management Data Object List 1 (CDOL1)	8C	9F02069F03069F1A0295055F2A029A039C019F37049F35019F15029F33039F09029F1E08

2.1.19. Card_CT_21

#	Item	Tag	Value
7	Application PAN	5A	*****
10	Track 2 Equivalent Data	57	*****
11	Card Risk Management Data Object List 1 (CDOL1)	8C	9F02069F03069F1A0295055F2A029A039C019F37049F35019F06079F1B045F36019F3C029F3D01

2.1.20. Card_CT_24

#	Item	Tag	Value
7	Application PAN	5A	*****
10	Track 2 Equivalent Data	57	*****
34	Others	-	Return incorrect ATR

2.1.21. Card_CT_25

#	Item	Tag	Value
7	Application PAN	5A	*****
10	Track 2 Equivalent Data	57	*****
33	Cryptogram Information Data	9F27	00 (Regardless of the Terminal decision)
34	Others	-	Application Blocked (Return SW=6283 for SELECT command)

2.1.22. Card_CT_26

#	Item	Tag	Value
7	Application PAN	5A	*****
10	Track 2 Equivalent Data	57	*****
34	Others	-	Card Blocked (Return SW=6A81 for SELECT command)

2.1.23. Card_CT_27

#	Item	Tag	Value
7	Application PAN	5A	*****
10	Track 2 Equivalent Data	57	*****
33	Cryptogram Information Data	9F27	00 (Regardless of the Terminal decision)

2.1.24. Card_CT_28

#	Item	Tag	Value
7	Application PAN	5A	*****
10	Track 2 Equivalent Data	57	*****
18	Cardholder Verification Method (CVM) List	8E	0000000000000001E031F0301030403
			Offline Plaintext PIN
			Online PIN
			Offline Enciphered PIN
			Signature
			No CVM

2.2. Contactless

2.2.1. Default Value

#	Item	Tag	Default Value
1	EMV Mode	-	Supported
2	MS Mode	-	Not Supported
3	Legacy Reader Mode	-	Not Supported
4	File Control Information (FCI) - Contactless	6F	6F248407A0000000651010A519500A4A 434220437265646974 9F38039F52015F2D046A61656E
5	File Control Information (FCI) (PPSE)	6F	6F2F840E325041592E5359532E444446 3031A51DBF0C1A 61184F07A0000000651010500A4A4342 20437265646974870101
6	Application File Locator	94	<i>Up to the Tool Developer</i>
7	Application Interchange Profile (AIP) - EMV Mode	82(D5)	1980
8	Application Interchange Profile (AIP) - MS Mode	82(D6)	not set
9	Application Expiration Date	5F24	491231
10	Application Version Number	9F08	0200
11	Application PAN	5A	XXXXXXXXXXXX*
12	Application PAN Sequence Number	5F34	00
13	Cardholder Name	5F20	202F
14	Track 2 Equivalent Data	57	XXXXXXXXXXXX*D49122010000000000 000F
15	Magstripe Track 2 Equivalent Data	57 (DF4D)	not set
16	Card Risk Management Data Object List 1 (CDOL1)	8C	9F02069F03069F1A0295055F2A029A03 9C019F37049F35019F5303
17	Card Risk Management Data Object List 2 (CDOL2)	8D	not set
18	Application Usage Control	9F07	FF00
19	Issuer Country Code	5F28	0392
20	Issuer Action Code - Denial	9F0E	0000000000
21	Issuer Action Code - Online	9F0F	0000000000
22	Issuer Action Code - Default	9F0D	0000000000
23	Cryptogram Version Number	-	01
24	Derivation Key Index	-	01
25	Certification Authority Public Key Index	8F	13
26	ICC Public Key (Certificate Expiration Date)	-	204912
27	ICC Public Key (Length)	-	1280
28	ICC Public Key (Exponent)	-	03
29	Issuer Public Key (Certificate Expiration Date)	-	204912
30	Issuer Public Key (Length)	-	1408
31	Issuer Public Key (Exponent)	-	03
32	Static Data Authentication Tag List - Contactless	9F4A	82
33	Device Information	9F6E	20010000

34	Partner Discretionary Data	9F7C	11FFFF0123456789ABCDEF0123456789ABCDEF01
Card Response to Generate AC Command			
35	Cryptogram Information Data	9F27	<i>Same decision as the Terminal makes (e.g.) If the Terminal request TC, then CID value must indicates TC.</i>
36	Cardholder Verification Status	9F50	- If TIP B1b8=0, then CVS=00 - If TIP B1b8=1 AND B1b5=1, then CVS=31 - If TIP B1b8=1, B1b5=0 AND B1b7=1, then CVS=10 - If TIP B1b8=1, B1b5=0, B1b7=0 AND B1b6=1, then CVS=20
37	Issuer Update Parameter	9F60	00
38	Others	-	

2.2.2. Card_CL_01

#	Item	Tag	Value
11	Application PAN	5A	*****
14	Track 2 Equivalent Data	57	*****

2.2.3. Card_CL_02

#	Item	Tag	Value
11	Application PAN	5A	*****
14	Track 2 Equivalent Data	57	*****
16	Card Risk Management Data Object List 1 (CDOL1)	8C	9F02069F03069F1A0295055F2A029A039C019F37049F35019F53039F34039F15029F1E089F4104

2.2.4. Card_CL_03

#	Item	Tag	Value
11	Application PAN	5A	*****
14	Track 2 Equivalent Data	57	*****
16	Card Risk Management Data Object List 1 (CDOL1)	8C	9F02069F03069F1A0295055F2A029A039C019F37049F35019F53039F3901

2.2.5. Card_CL_05

#	Item	Tag	Value
1	EMV Mode	-	Not Supported
2	MS Mode	-	Supported
6	Application File Locator	94	not set
7	Application Interchange Profile (AIP) - EMV Mode	82(D5)	not set
8	Application Interchange Profile (AIP) - MS Mode	82(D6)	1800

11	Application PAN	5A	*****
14	Track 2 Equivalent Data	57	*****
15	Magstripe Track 2 Equivalent Data	57 (DF4D)	XXXXXXXXX*****D49122010000000000000F

2.2.6. Card_CL_08

#	Item	Tag	Value
11	Application PAN	5A	*****
14	Track 2 Equivalent Data	57	*****
16	Card Risk Management Data Object List 1 (CDOL1)	8C	9F02069F03069F1A0295055F2A029A03 9C019F37049F35019F4E14
36	Cardholder Verification Status	9F50	10

2.2.7. Card_CL_10a

#	Item	Tag	Value
11	Application PAN	5A	*****
14	Track 2 Equivalent Data	57	*****
33	Cryptogram Information Data	9F27	80 (Regardless of the Terminal decision)
34	Cardholder Verification Status	9F50	20

2.2.8. Card_CL_13

#	Item	Tag	Value
10	Application Version Number	9F08	0300
11	Application PAN	5A	*****
13	Cardholder Name	5F20	56414C5545442F435553544F4D 4552202020202020202020202020
14	Track 2 Equivalent Data	57	*****
17	Card Risk Management Data Object List 2 (CDOL2)	8D	8A02910A95059F3704
23	Cryptogram Version Number	-	04
25	Certification Authority Public Key Index	8F	11
35	Device Information	9F6E	21030000
38	Others	-	IPK Remainder exists

2.2.9. Card_CL_15

#	Item	Tag	Value
11	Application PAN	5A	*****
14	Track 2 Equivalent Data	57	*****
16	Card Risk Management Data Object List 1 (CDOL1)	8C	9F02069F03069F1A0295055F2A029A039C019F37049F3501 9F53039F15029F1E08

2.2.10. Card_CL_17

#	Item	Tag	Value
4	File Control Information (FCI) - Contactless	6F	6F288407A0000000651010A51D500B4A434220507265706169649F38069F52019F53035F2D047A68656E
5	File Control Information (FCI) (PPSE)	6F	6F30840E325041592E5359532E4444463031A51EBF0C1B61194F07A0000000651010500B4A43422050726570616964870101
7	Application Interchange Profile (AIP) - EMV Mode	82(D5)	1880
10	Application Version Number	9F08	not set
11	Application PAN	5A	*****
14	Track 2 Equivalent Data	57	*****
16	Card Risk Management Data Object List 1 (CDOL1)	8C	9F02069F03069F1A0295055F2A029A039C019F37049F35019F53039F01069F06079F4E0A5F3601
17	Card Risk Management Data Object List 2 (CDOL2)	8D	8A02911095059F3704
19	Issuer Country Code	5F28	0764
23	Cryptogram Version Number	-	06
25	Certification Authority Public Key Index	8F	not set
26	ICC Public Key (Certificate Expiration Date)	-	not set
27	ICC Public Key (Length)	-	not set
28	ICC Public Key (Exponent)	-	not set
29	Issuer Public Key (Certificate Expiration Date)	-	not set
30	Issuer Public Key (Length)	-	not set
31	Issuer Public Key (Exponent)	-	not set
32	Static Data Authentication Tag List - Contactless	9F4A	not set
33	Device Information	9F6E	21060000

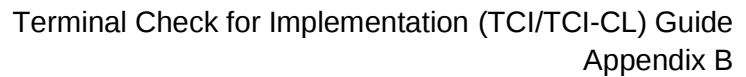
2.2.11. Card_CL_20

#	Item	Tag	Value
4	File Control Information (FCI) - Contactless	6F	6F1C8407A0000000651010A51150094A43422044656269749F38039F5201
5	File Control Information (FCI) (PPSE)	6F	6F2E840E325041592E5359532E4444463031A51CBF0C1961174F07A000000065101050094A4342204465626974870101
11	Application PAN	5A	*****
14	Track 2 Equivalent Data	57	*****
17	Card Risk Management Data Object List 2 (CDOL2)	8D	8A02910A9505
19	Issuer Country Code	5F28	0158



2.2.12. Card_CL_21

#	Item	Tag	Value
11	Application PAN	5A	*****
14	Track 2 Equivalent Data	57	*****
16	Card Risk Management Data Object List 1 (CDOL1)	8C	9F02069F03069F1A0295055F2A029A03 9C019F37049F35019F53039F4E14
17	Card Risk Management Data Object List 2 (CDOL2)	8D	8A0291109505
23	Cryptogram Version Number	-	02



2.3.1. Default Value

2.3.2. Card_CL_06

2.3.3. Card_CL_07

#	Item	Tag	Value
7	Application PAN	5A	*****
10	Track 2 Equivalent Data	57	*****
11	Card Risk Management Data	8C	9F02069F03069F1A0295055F2A029A039C019F37049F3901



	Object List 1 (CDOL1)		
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3. Terminal Setting Data

Please refer to “Implementation Guide for IC Terminals” and configure all settings except live CA Public Key of the IC terminal for TCI and TCI-CL in the same way as for the live environment.

CA Public Key for TCI and TCI-CL

CAPK Index (Hex)	Length (bit)	Exp. (Hex)	Modulus	Hash Value
13	1,984	03	A3270868367E6E29349FC2743EE545AC53BD30297824889 97650108524FD051E3B6EACA6A9A6C1441D28889A5F464 13C8F62F3645AAEB30A1521EEF41FD4F3445BFA1AB29F 9AC1A74D9A16B93293296CB09162B149BAC22F88AD8F3 22D684D6B49A12413FC1B6AC70EDEDB18EC1585519A89 B50B3D03E14063C2CA58B7C2BA7FB22799A33BCDE6AF CBEB4A7D64911D08D18C47F9BD14A9FAD8805A15DE5A 38945A97919B7AB88EFA11A88C0CD92C6EE7DC352AB07 46ABF13585913C8A4E04464B77909C6BD94341A8976C476 9EA6C0D30A60F4EE8FA19E767B170DF4FA80312DBA61D B645D5D1560873E2674E1F620083F30180BD96CA589	54CFAE617 150DFA09D 3F901C9123 524523EBE DF3