



EMV® Terminal Type Approval Bulletin No. 255
Second Edition November 2022

IFM Level 1 Renewal Process

This Bulletin updates the IFM Level 1 renewal testing in v4.3d

Applicability

This Bulletin applies to:

- Contact Terminal Level 1 Type Approval Process

Related Documents

This Bulletin should be read in conjunction with:

- EMV® Integrated Circuit Card Specifications for Payment Systems – Book 1 – Application Independent ICC to Terminal Interface Requirements, version 4.3, November 2011.
- Specification Bulletin 114 – Case 4 Command Processing with Warning Condition, First Edition, February 2013.
- Specification Bulletin 202 – Contact Card – Transients on Current drawn from VCC, First Edition, August 2018.
- Specification Bulletin 216 – Contact – Terminology removal for Vpp, Third Edition, March 2020.
- Specification Bulletin 218 – Contact – ATR parameter requirements, Second Edition, April 2020.
- Specification Bulletin 219 – Contact – Terminal clock signal frequency (CLK), Second Edition, October 2022.
- Specification Bulletin 247 – Contact – Communication Performance Enhancement, Second Edition, July 2021.
- EMV® – Terminal Type Approval IFM Level 1 – Administrative Process, version 4.3d, December 2021.
- EMV® – Contact Terminal Level 1 Type Approval – IFM Mechanical and Electrical Test Cases, version 4.3d, December 2021.
- EMV® – Contact Terminal Level 1 Type Approval – IFM Protocol Test Cases, version 4.3d, December 2021.
- EMV® – Contact Terminal Level 1 Type Approval – Loopback Upper Tester Specification, version 4.3d, December 2021.
- EMV® Terminal Type Approval Bulletin No.211 – IFM Level 1 Type Approval Renewal Update, Second Edition, August 2019
- EMV® Terminal Type Approval Bulletin No. 250 – Contact Terminal Level 1 Type Approval v4.3d Release, Second Edition, December 2021.

Effective Date

- Immediately
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Description

The First Edition of this Bulletin introduced the Contact Terminal Type Approval Renewal for version 4.3d.

This Second Edition introduces the following modifications to the First Edition:

- **Electrical Test Cases:** As per SB-219, 2nd Edition, the Section 3.2 decreases for the Test Case 1CB.013.0x the minimum limit that is acceptable for approved terminals that are due for renewal.
- **Protocol Test Cases:** The section 3.3 clarifies what the laboratory should do with the verdicts for some test cases under the v4.3d renewal with specific conditions, and by including test case 1705.DTSxy in the list of test cases that could be FAIL due to the timing restrictions introduced by SB-247.

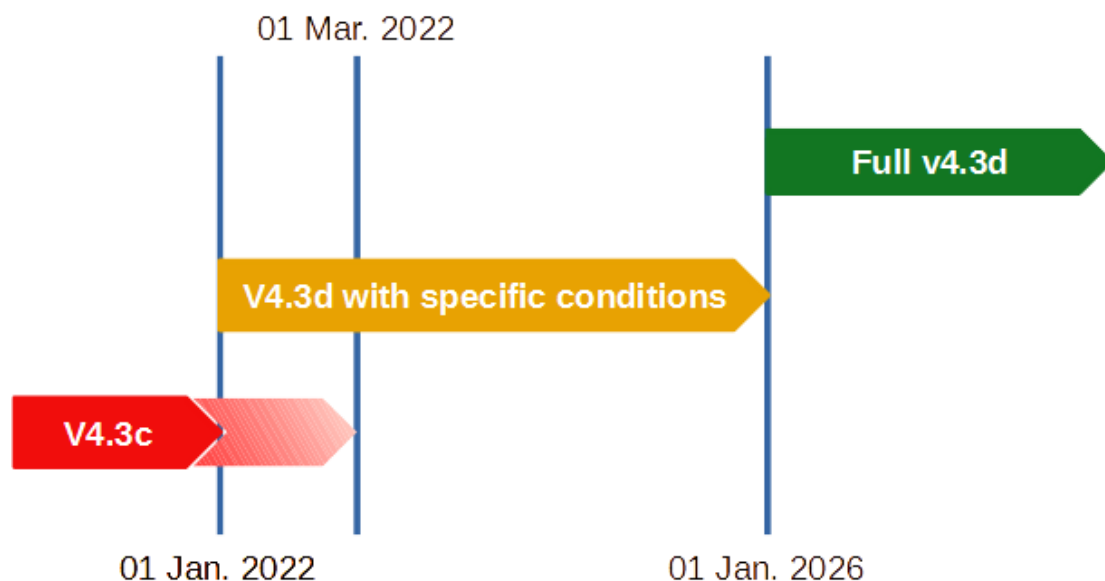
1. Introduction

With the Terminal Type Approval Bulletin No.250, EMVCo introduced the version 4.3d of IFM Level 1 Type Approval process. Accordingly, the present Bulletin introduces the Renewal Process for IFMs that were initially approved in version 4.3c or older, and are submitted for Renewal testing.

As defined in the IFM Administrative Process, Renewal testing shall be performed using the applicable version of the Test Plan **at the date of starting the Renewal tests**.

However, considering specific issues impacting the transition between versions 4.3c and 4.3d, EMVCo defined an intermediate period during which v4.3d Renewal testing will be applicable with specific conditions (See below for further details).

Therefore, the applicable Test Plan for Renewal testing is as follows:



2. Full v4.3d renewal

Starting from January 1st 2026, the v4.3d test plan will be fully applied for renewal.



3. v4.3d with specific conditions renewal

3.1. Rationale

IFMs initially approved against version 4.3c or older that are tested with the IFM Level 1 v4.3d Test Plan **are expected to fail some Test Cases**. Therefore, EMVCo defined specific requirements in the Specification Bulletins 216, 218, 219 and 247, allowing these IFMs to be submitted for Renewal testing.

These conditions are applicable **only between January 2022 and end December 2025**.

3.2. Electrical tests

The following Test Cases shall be performed with specific conditions:

Test Case 1CB.013.0x:

As per SB-219, 2nd Edition, when the v4.3d acceptance criteria " $(4.7\text{ MHz} - \epsilon\text{Hz}) \leq \text{CLK average frequency} \leq (5\text{MHz} + \epsilon\text{Hz})$ " yields a FAIL verdict, the Laboratory shall perform this Test Case again using the acceptance criteria " $(2.8\text{ MHz} - \epsilon\text{Hz}) \leq \text{CLK average frequency} \leq (5\text{MHz} + \epsilon\text{Hz})$ ", and retain the corresponding verdict as final conclusion for this Test Case. This final PASS verdict will be accepted as appropriate, whereas a FAIL verdict will lead to the rejection of the Renewal, without any possible Restricted Renewal submission.

3.3. Protocol tests

The following Test Cases shall be performed with specific conditions:

- Test Cases 1755.01 to .08 and 1727.20:
As per SB-216, these Test Cases shall not be performed and the laboratory shall indicate in the test report that they are N/A, including the following comment: "This test case is not applicable for renewal as per TTA Bulletin 255, Second Edition".
The reasons for this exception are that IFMs initially approved in v4.3c or older shall accept only an ATR containing TB1 = '00', and shall reject an ATR containing TB2.
- Test Cases 1767.230, 1767.240, 1800.112, 1800.212, 1800.113 and 1800.213:
As per SB-218, these Test Cases shall not be performed and the laboratory shall indicate in the test report that they are N/A including the following comment: "This test case is not applicable for renewal as per TTA Bulletin 255, Second Edition".
The reason for this exception is that IFMs initially approved in v4.3c or older shall reject an ATR with $2^{\wedge}\text{CWI} = (\text{N} + 1)$.
- Test Cases 1705.DTSxy, 1717.DTSxy and 1727.DTSxy:
As per SB-247, when the Test Case yields a FAIL verdict that is ONLY due to the inter-character delay being longer than the maximum inter-character timing, the Laboratory shall change this verdict to PASS. The laboratory shall also add the following comment in the test report: "The verdict has been turned to PASS as per TTA Bulletin 255, Second Edition".
The reason for this exception is that IFMs initially approved in v4.3c or older had no maximum inter-character timing.

4. v4.3c Renewal

As a reminder, the v4.3c Renewal was possible until February 28th, 2022 (end of the migration period for new IFMs). Please refer to The Terminal Type Approval Bulletin No.211, 2nd edition.



5. General Renewal requirements

5.1. Loopback

To start a v4.3d renewal process, an IFM shall include a Loopback Upper Tester application that is compliant to v4.3a, 4.3c or v4.3d. In case an update of the Loopback Upper Tester application is necessary for the Renewal testing, no change shall be performed on the Level 1 part of the IFM, neither hardware nor software.

5.2. Applicable Test Cases

For the renewal of all IFMs:

- The mechanical tests are not mandatory;
- All the electrical tests are mandatory under all conditions ⁽¹⁾;
- All the protocol tests are mandatory.

Test Cases	Required renewal tests
Mechanical tests 1CA.00x.0y	Not mandatory
Electrical tests 1CB.0xx.0y and 1CC.00x.0y	All Test Cases At all temperatures ⁽¹⁾ Using all parameters
Protocol tests	All Test Cases

5.3. Renewal Process

The Administrative process for Renewals remains unchanged. Additional details about the renewal process can be found in the Contact Terminal Level 1 Administrative Process document.

For additional information, please contact EMVCo CATA Secretariat.

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⁽¹⁾ Please note that, as stated in the Test Cases definition, the Test Cases 1CB.001.0x and 1CB.002.0x shall be performed at normal temperature only.



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