

# ISO/IEC 18745-2:2021-09 (E)

## Test methods for machine readable travel documents (MRTD) and associated devices - Part 2: Test methods for the contactless interface

---

<b>Contents</b>		<b>Page</b>
Foreword .....		v
Introduction .....		vi
1	Scope .....	1
2	Normative references .....	1
3	Terms and definitions .....	2
4	Symbols and abbreviated terms .....	2
5	Test methods for eMRTD .....	3
5.1	General test conditions .....	3
5.1.1	General .....	3
5.1.2	Test environment .....	3
5.1.3	Test conditions for PICC .....	3
5.1.4	Applicant information .....	5
5.1.5	Test report .....	6
5.2.1	Antenna size and PICC Class 1 verification (optional) .....	7
5.2.2	Static electricity .....	7
5.2.3	Alternating magnetic field .....	7
5.3.1	eMRTD transmission .....	8
5.3.2	Operating field strength .....	8
5.3.3	eMRTD reception .....	9
5.3.4	eMRTD maximum loading effect .....	9
5.3.5	eMRTD resonance frequency (optional) .....	9
5.3.6	eMRTD EMD level and low EMD time test (optional) .....	10
5.5	List of the test command sequences .....	11
5.5.1	General .....	11
5.5.2	Test commands for eMRTD supporting only BAC .....	11
5.5.3	Test commands for eMRTD supporting PACE .....	13
5.6	Functionality check test .....	16
5.6.1	General .....	16
5.6.2	Optional procedure 1: Application functionality check test .....	16
5.6.3	Optional procedure 2: Electrical functionality check test .....	17
6	Test methods for eMRTD reader .....	17
6.1	General test conditions .....	17
6.1.1	General .....	17
6.1.2	Test environment .....	18
6.1.3	Test conditions for PCD .....	18
6.1.4	Applicant information .....	18
6.1.5	Test report .....	19
6.1.6	Definition of test positions .....	19
6.2.1	Alternating magnetic field .....	20
6.3.1	Carrier frequency .....	20
6.3.2	eMRTD reader field strength .....	20
6.3.3	Modulation index and waveform .....	21
6.3.4	Load modulation reception .....	21
6.3.5	eMRTD reader EMD immunity test (optional) .....	22

6.3.6	eMRTD reader EMD recovery test (optional) .....	22
6.5	List of test command sequences .....	24
6.5.1	General .....	24
6.5.2	Test commands .....	24
6.5.3	Default test command sequence .....	24
6.5.4	Test_command_sequence_1 .....	25
6.5.5	Test_command_sequence_2 .....	25
6.6	Measurement positions .....	25
7	Specificaccesscontroltestsequences .....	27
7.1	General .....	27
7.2	List of the test command sequences with EAC for eMRTD .....	27
7.2.1	General .....	27
7.2.2	Test commands for eMRTD supporting EAC .....	28
7.2.3	Test commands for eMRTD supporting PACE and EAC .....	29