



FCC RF Test Report

APPLICANT : Motorola Mobility LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : XT2657-1
FCC ID : IHDT56AR8
STANDARD : 47 CFR Part 27
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)
TEST DATE(S) : Nov. 11, 2025

We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.26-2015 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (Kunshan), the test report shall not be reproduced except in full.

Jason Jia

Approved by: Jason Jia



Sporton International Inc. (Kunshan)

**No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300
People's Republic of China**



TABLE OF CONTENTS

REVISION HISTORY	3
SUMMARY OF TEST RESULT	4
1 GENERAL DESCRIPTION	5
1.1 Applicant	5
1.2 Manufacturer	5
1.3 Product Feature of Equipment Under Test	5
1.4 Product Specification of Equipment Under Test	5
1.5 Modification of EUT	5
1.6 Testing Location	6
1.7 Test Software	6
1.8 Applicable Standards	6
2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST	8
2.1 Test Mode	8
2.2 Connection Diagram of Test System	9
2.3 Support Unit used in test configuration and system	9
2.4 Frequency List of Low/Middle/High Channels	10
3 RADIATED TEST ITEMS	11
3.1 Measuring Instruments	11
3.2 Test Setup	11
3.3 Test Result of Radiated Test	12
3.4 Radiated Spurious Emission	13
4 LIST OF MEASURING EQUIPMENT	14
5 MEASUREMENT UNCERTAINTY	15
APPENDIX A. TEST RESULTS OF RADIATED TEST	
APPENDIX B. TEST SETUP PHOTOGRAPHS	



REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG5O2401C	Rev. 01	Initial issue of report	Nov. 27, 2025



SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (5G NR n41)	$< 55 + 10 \log_{10}(P[\text{Watts}])$	PASS	Under limit 10.82 dB at 7626.00 MHz

Note: This is a variant report, the change note could be referred to the XT2657-1_Operational Description of Product Equality Declaration which is exhibit separately. According to the change, only the related test cases from original test report (Sporton Report Number 422203-01) were verified for the differences.

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacture who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section "Measurement Uncertainty"

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.



1 General Description

1.1 Applicant

Motorola Mobility LLC

222 W,Merchandise Mart Plaza, Chicago IL 60654 USA

1.2 Manufacturer

Motorola Mobility LLC

222 W,Merchandise Mart Plaza, Chicago IL 60654 USA

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2657-1
FCC ID	IHDT56AR8
IMEI Code	Radiation: 356743630003437
HW Version	DVT1
SW Version	WWC36.17
EUT Stage	Identical Prototype

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	5G NR n41 : 2496 MHz ~ 2690 MHz
Rx Frequency	5G NR n41 : 2496 MHz ~ 2690 MHz
Type of Modulation	CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM

1.5 Modification of EUT

No modifications are made to the EUT during all test items.



1.6 Testing Location

Sporton International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH04-KS	CN1257	314309

1.7 Test Software

Item	Site	Manufacture	Name	Version
1.	03CH04-KS	AUDIX	E3	210616

1.8 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR Part 27
- ANSI C63.26-2015
- FCC KDB 971168 D01 Power Meas License Digital Systems v03r01
- FCC KDB 412172 D01 Determining ERP and EIRP v01r01

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.



1.9 Specification of Accessory

Specification of Accessory				
AC Adapter 1(US)	Brand Name	Motorola(Salcomp)	Model Name	MC-331L
AC Adapter 1(EU)	Brand Name	Motorola(Salcomp)	Model Name	MC-332L
AC Adapter 1(UK)	Brand Name	Motorola(Salcomp)	Model Name	MC-333L
AC Adapter 1(AR)	Brand Name	Motorola(Salcomp)	Model Name	MC-336L
AC Adapter 1(BR)	Brand Name	Motorola(Salcomp)	Model Name	MC-337L
AC Adapter 1(CHILE)	Brand Name	Motorola(Salcomp)	Model Name	MC-339L
AC Adapter 2(US)	Brand Name	Motorola(Chenyang)	Model Name	MC-331L
AC Adapter 2(EU)	Brand Name	Motorola(Chenyang)	Model Name	MC-332L
AC Adapter 2(UK)	Brand Name	Motorola(Chenyang)	Model Name	MC-333L
AC Adapter 2(AR)	Brand Name	Motorola(Chenyang)	Model Name	MC-336L
AC Adapter 2(BR)	Brand Name	Motorola(Chenyang)	Model Name	MC-337L
Battery 1	Brand Name	Motorola	Model Name	SM12
Battery 2	Brand Name	Motorola	Model Name	SM36
USB Cable 1	Brand Name	Motorola(Saibao)	Model Name	SC18D22297
USB Cable 2	Brand Name	Motorola(Cabletech)	Model Name	SC18D22298
USB Cable 3	Brand Name	Motorola(Saibao)	Model Name	SC18D86732
USB Cable 4	Brand Name	Motorola(Cabletech)	Model Name	SC18E05246

2 Test Configuration of Equipment Under Test

2.1 Test Mode

Antenna port conducted and radiated test items are performed according to KDB 971168 D01 Power Meas License Digital Systems v03r01 with maximum output power.

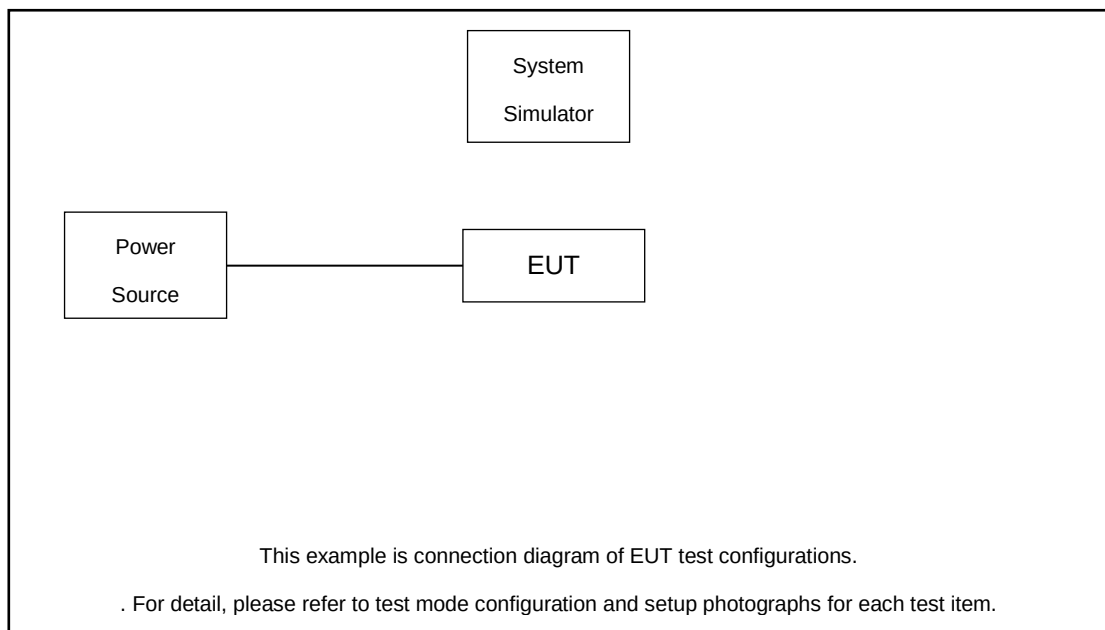
For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Y plane) were recorded in this report.

The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.

Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			

Test Items	5G NR	Bandwidth (MHz)													Modulation					RB #		Test Channel			
		5	10	15	20	25	30	40	50	60	70	80	90	100	PI/2 BPSK	QPSK	16 QAM	64 QAM	256 QAM	1	Full	L	M	H	
Radiated Spurious Emission	n41	Worst Case																					v		
Note	<div>1. The mark “v” means that this configuration is chosen for testing</div> <div>2. The mark “-” means that this bandwidth is not supported.</div> <div>3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.</div>																								

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	NR Base Station	Anritsu	MT8000A	N/A	N/A	Unshielded, 1.8 m



2.4 Frequency List of Low/Middle/High Channels

5G NR n41 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
100	Channel	509202	518598	528000
	Frequency	2546.01	2592.99	2640
90	Channel	508200	518598	528996
	Frequency	2541	2592.99	2644.98
80	Channel	507204	518598	529998
	Frequency	2536.02	2592.99	2649.99
70	Channel	506202	518598	531000
	Frequency	2531.01	2592.99	2655
60	Channel	505200	518598	531996
	Frequency	2526	2592.99	2659.98
50	Channel	504204	518598	532998
	Frequency	2521.02	2592.99	2664.99
45	Channel	503700	518598	533496
	Frequency	2518.5	2592.99	2667.48
40	Channel	503202	518598	534000
	Frequency	2516.01	2592.99	2670
35	Channel	502704	518598	534498
	Frequency	2513.52	2592.99	2672.49
30	Channel	502200	518598	534996
	Frequency	2511	2592.99	2674.98
25	Channel	501702	518598	535500
	Frequency	2508.51	2592.99	2677.5
20	Channel	501204	518598	535998
	Frequency	2506.02	2592.99	2679.99
15	Channel	500700	518598	536496
	Frequency	2503.5	2592.99	2682.48
10	Channel	500202	518598	537000
	Frequency	2501.01	2592.99	2685

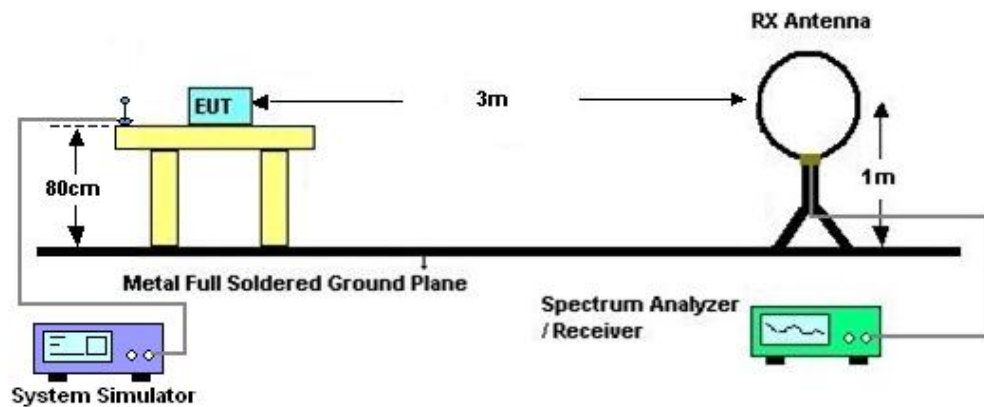
3 Radiated Test Items

3.1 Measuring Instruments

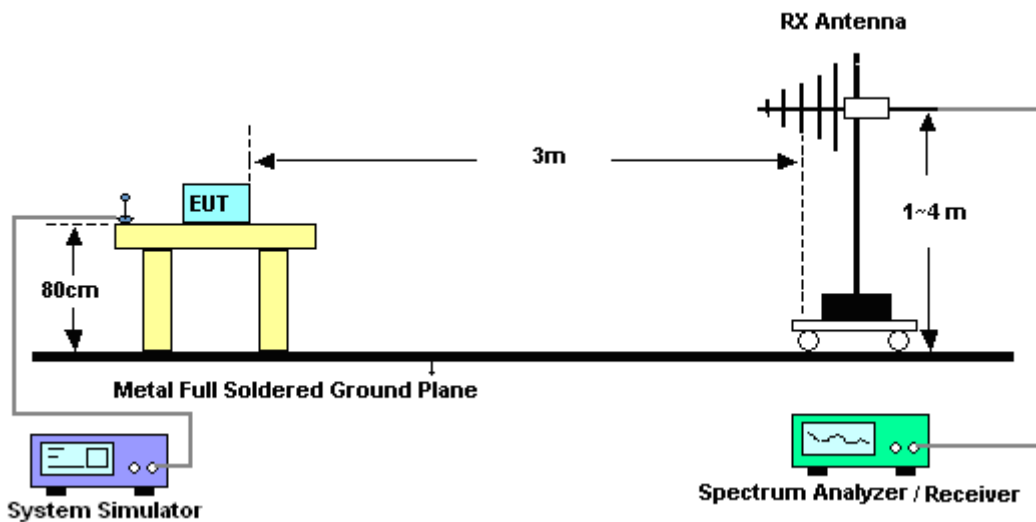
See list of measuring instruments of this test report.

3.2 Test Setup

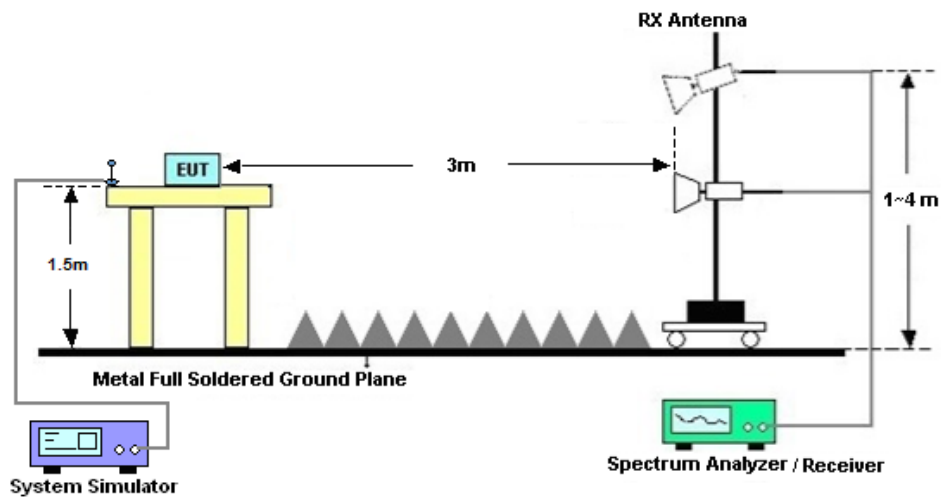
3.2.1 For radiated test below 30MHz



3.2.2 For radiated test from 30MHz to 1GHz



3.2.3 For radiated test above 1GHz



3.3 Test Result of Radiated Test

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

Please refer to Appendix A.

3.4 Radiated Spurious Emission

3.4.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI C63.26.

For 5G NR n41:

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $55 + 10 \log (P)$ dB.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

3.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.5
2. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
6. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
7. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
8. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
9. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
10. $EIRP \text{ (dBm)} = S.G. \text{ Power} - Tx \text{ Cable Loss} + Tx \text{ Antenna Gain}$
11. $ERP \text{ (dBm)} = EIRP - 2.15$
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EXA Spectrum Analyzer	Keysight	N9010A	MY55370528	10Hz-44G,MAX 30dB	Dec. 03, 2024	Nov. 11, 2025	Dec. 02, 2025	Radiation (03CH04-KS)
Active loop antenna	R&S	HFH2-Z2E	101125	9kHz~30MHz	Aug. 10, 2025	Nov. 11, 2025	Aug. 09, 2026	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	44483	30MHz-1GHz	Nov. 23, 2024	Nov. 11, 2025	Nov. 22, 2025	Radiation (03CH04-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00227860	1GHz~18GHz	Aug. 22, 2025	Nov. 11, 2025	Aug. 21, 2026	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 11, 2025	Nov. 11, 2025	Jan. 10, 2026	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	380826	9KHz-1GHz	Jul. 02, 2025	Nov. 11, 2025	Jul. 01, 2026	Radiation (03CH04-KS)
Amplifier	EM	EM18G40G A	060852	18~40GHz	Jan. 03, 2025	Nov. 11, 2025	Jan. 02, 2026	Radiation (03CH04-KS)
high gain Amplifier	EM	EM01G18G A	060890	1Ghz-18Ghz	May 23, 2025	Nov. 11, 2025	May 22, 2026	Radiation (03CH04-KS)
Amplifier	EM	EM01G18G A	060892	1Ghz-18Ghz	Oct. 11, 2025	Nov. 11, 2025	Oct. 10, 2026	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Nov. 11, 2025	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Nov. 11, 2025	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Nov. 11, 2025	NCR	Radiation (03CH04-KS)

NCR: No Calibration Required



5 Measurement Uncertainty

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.26-2015. All the measurement uncertainty value were shown with a coverage $K=2$ to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.83 dB
---	---------

Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.83 dB
---	---------

Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.82dB
---	--------

----- THE END -----



Appendix A. Test Results of Radiated Test

Radiated Spurious Emission

Test Engineer :	Chris	Temperature :	21~25°C
		Relative Humidity :	51~53%

Pre-scanned harmonic for the different antenna combinations, we choose the worst antenna mode to perform final test and record in the report.

n41 UL MIMO SA / NR 100MHz / QPSK(ANT1+3)								
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	5092	-54.83	-25	-29.83	-65.04	3.03	13.24	H
	7626	-58.15	-25	-33.15	-67.60	3.56	13.01	H
	10188	-59.16	-25	-34.16	-68.68	3.92	13.44	H
	5092	-55.36	-25	-30.36	-65.57	3.03	13.24	V
	7626	-35.82	-25	-10.82	-45.27	3.56	13.01	V
	10188	-59.42	-25	-34.42	-68.94	3.92	13.44	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.