



FCC RF Test Report

APPLICANT : Motorola Mobility LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : XT2603-1, XT2603-2
FCC ID : IHDT56AW1
STANDARD : 47 CFR Part 22
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)
TEST DATE(S) : Mar. 10, 2026 ~ Mar. 13, 2026

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)

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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	6
1.6 Testing Location	6
1.7 Test Software	6
1.8 Applicable Standards	6
1.9 Specification of Accessory	7
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 CONDUCTED TEST ITEMS	11
3.1 Conducted Output Power and ERP	11
4 RADIATED TEST ITEMS	13
4.1 Measuring Instruments	13
4.2 Test Setup	13
4.3 Test Result of Radiated Test	14
4.4 Radiated Spurious Emission	15
5 LIST OF MEASURING EQUIPMENT	16
6 MEASUREMENT UNCERTAINTY	17
APPENDIX A. TEST RESULTS OF RADIATED TEST	
APPENDIX B. TEST SETUP PHOTOGRAPHS	



REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG591906-07	Rev. 01	Initial issue of report	Mar. 18, 2026



SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	§2.1046	Conducted Output Power	Reporting Only	PASS	-
	§22.913(a)(5)	Effective Radiated Power (5G NR n26)	ERP < 7 Watt		
4.4	§2.1053 §22.917(a)	Radiated Spurious Emission (5G NR n26)	< 43+10log ₁₀ (P[Watts])	PASS	Under limit 43.14 dB at 2480 MHz

Note: This is a variant report. For change note, please refer to the XT2603-1, XT2603-2_Operational Description of Product Equality Declaration exhibit separately. According to the change, only the related test cases were verified from original report FG591906K.

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	XT2603-1, XT2603-2
FCC ID	IHDT56AW1
IMEI Code	Conducted /Radiation : 350158880029097
EUT Stage	Identical Prototype

Remark: There are two kinds of EUT, the sample 1(XT2603-2) is P-SIM + eSIM and the sample 2(XT2603-1) is P-SIM +P-SIM. According to the difference, we choose sample 1 to full test.

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	5G NR n26 : 824 MHz ~ 849 MHz
Rx Frequency	5G NR n26 : 869 MHz ~ 894 MHz
Bandwidth	n26: 5MHz / 10MHz / 15MHz / 20MHz
SCS	15kHz
Antenna Gain	<Ant.0>: n26: -4.1 dBi <Ant.1>: n26: -5.6 dBi
Type of Modulation	CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM

Remark:

1. Only the max output power of Ant.0 is shown in the report.
2. The device supports two PAs for 5G NR n26 (main PA for Ant.0 and PA Reference Designator for Ant.1), the maximum ERP is calculated from max output power and max antenna gain, only the worst ERP of Ant.0 is shown in the report.
3. 5G NR n26 support SA mode and NSA mode. According to the maximum power between SA and NSA mode, SA covers NSA mode. The conducted test results of SA mode were referred to the original report.

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 TH01-KS	CN1257	314309

1.7 Test Software

Item	Site	Manufacture	Name	Version
1.	TH01-KS	SPORTON	FCC_5GNR_China_2 01027	1.0
2.	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 22
- ♦ ANSI C63.26-2015
- ♦ FCC KDB 971168 D01 Power Meas License Digital Systems v03r01
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01

Remark:

All test items were verified and recorded according to the standards and without any deviation during the test.

1.9 Specification of Accessory

Specification of Accessory				
AC Adapter 1(US)	Brand Name	Motorola(Salcomp)	Model Name	MC-901
AC Adapter 1(EU)	Brand Name	Motorola(Salcomp)	Model Name	MC-902
AC Adapter 1(UK)	Brand Name	Motorola(Salcomp)	Model Name	MC-903
AC Adapter 1(AU)	Brand Name	Motorola(Salcomp)	Model Name	MC-905
AC Adapter 1(AR)	Brand Name	Motorola(Salcomp)	Model Name	MC-906
AC Adapter 1(BR)	Brand Name	Motorola(Salcomp)	Model Name	MC-907
AC Adapter 1(CHILE)	Brand Name	Motorola(Salcomp)	Model Name	MC-909
AC Adapter 2(US)	Brand Name	Motorola(AOHAI)	Model Name	MC-901
AC Adapter 2(EU)	Brand Name	Motorola(AOHAI)	Model Name	MC-902
AC Adapter 2(UK)	Brand Name	Motorola(AOHAI)	Model Name	MC-903
AC Adapter 2(AU)	Brand Name	Motorola(AOHAI)	Model Name	MC-905
AC Adapter 2(AR)	Brand Name	Motorola(AOHAI)	Model Name	MC-906
AC Adapter 2(BR)	Brand Name	Motorola(AOHAI)	Model Name	MC-907
AC Adapter 2(CHILE)	Brand Name	Motorola(AOHAI)	Model Name	MC-909
AC Adapter 3(IN)	Brand Name	Motorola(AOHAI)	Model Name	MC-904
AC Adapter 3(IN Local)	Brand Name	Motorola(AOHAI)	Model Name	MC-904
AC Adapter 4(IN Local)	Brand Name	Motorola(Salcomp)	Model Name	MC-904
AC Adapter 4(IN)	Brand Name	Motorola(Salcomp)	Model Name	MC-904
Battery	Brand Name	Motorola (ATL)	Model Name	SR52
USB Cable 1	Brand Name	Motorola(SAIBAO)	Model Name	SC18D71644
USB Cable 2	Brand Name	Motorola(Luxshare)	Model Name	SC18E08104
USB Cable 3	Brand Name	Motorola(SAIBAO)	Model Name	SC18D86731
USB Cable 4	Brand Name	Motorola(Luxshare)	Model Name	SC18E08103
USB Cable 5	Brand Name	Motorola(SAIBAO)	Model Name	SC18E46326
USB Cable 6	Brand Name	Motorola(SAIBAO)	Model Name	SC18E59082
Magnetic Protective Cover	Brand Name	Motorola(Topwell)	Model Name	SS68E96654
Stylus	Brand Name	Motorola(Maxeye)	Model Name	XT2604-1

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.

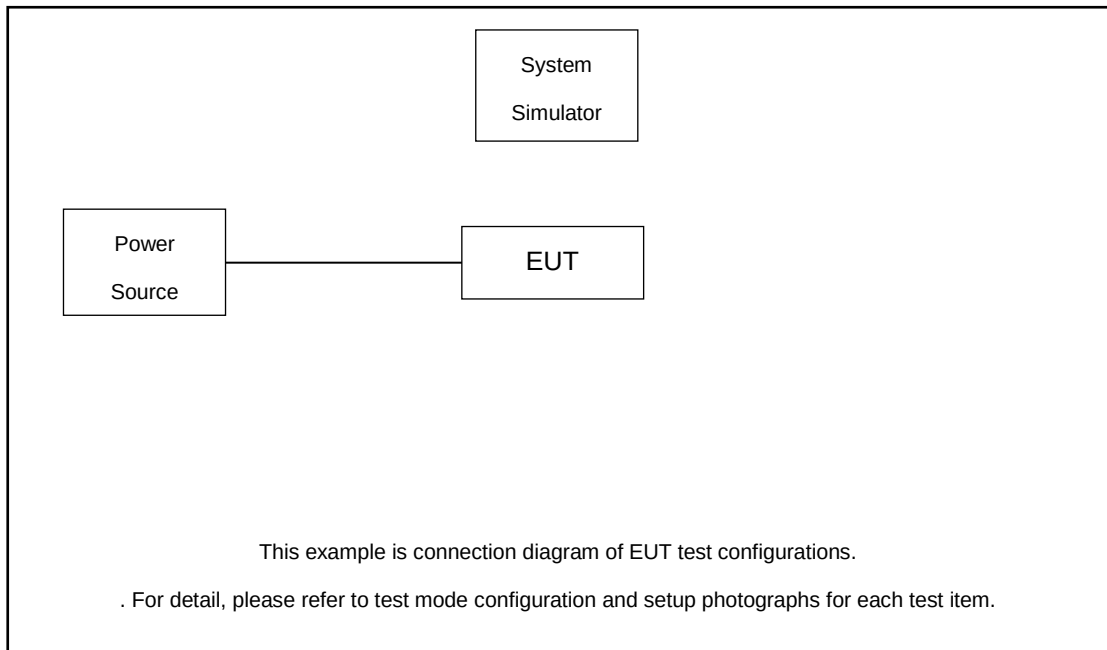
For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Y plane) were recorded in this report.

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	16QAM	64QAM	256QAM	1	Full	L	M	H
Max. Output Power	n26	v	v	v	v	-	-	-	-	-	-	-	-	v						v			v	
Radiated Spurious Emission	n26	Worst Case																					v	
Note	1. The mark “v “ means that this configuration is chosen for testing 2. The mark “-“ means that this bandwidth is not supported. 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																							

2.2 Connection Diagram of Test System



The EUT has been configuration operated in a manner tended to maximize its emission characteristics in a typical application.

2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	DC Power Supply	GW	GPS-3030D	N/A	N/A	Unshielded, 1.8 m
2.	LTE Base Station	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8 m
3.	NR Base Station	Anritsu	MT8000A	N/A	N/A	Unshielded, 1.8 m



2.4 Frequency List of Low/Middle/High Channels

5G NR n26 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	166800	167300	167800
	Frequency	834	836.5	839
15	Channel	166300	167300	168300
	Frequency	831.5	836.5	841.5
10	Channel	165800	167300	168800
	Frequency	829	836.5	844
5	Channel	165300	167300	169300
	Frequency	826.5	836.5	846.5

3 Conducted Test Items

3.1 Conducted Output Power and ERP

3.1.1 Description of the Conducted Output Power Measurement and ERP Measurement

A system simulator was used to establish communication with the EUT. Its parameters were set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

The ERP of mobile transmitters must not exceed 7 Watts for 5G NR n26.

According to KDB 412172 D01 Power Approach,

$EIRP = P_T + G_T - L_C$, $ERP = EIRP - 2.15$, where

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

L_C = signal attenuation in the connecting cable between the transmitter and antenna in dB

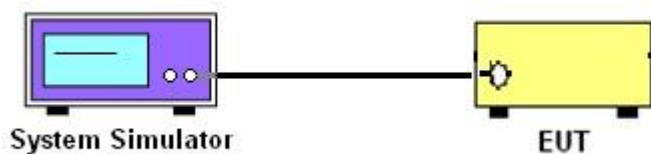
3.1.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2
2. The transmitter output port was connected to the system simulator.
3. Set EUT at maximum power through the system simulator.
4. Select lowest, middle, and highest channels for each band and different modulation.
5. Measure and record the power level from the system simulator.

3.1.3 Measuring Instruments

See list of measuring instruments of this test report.

3.1.4 Test Setup



3.1.5 Test Result

Ant	ENDC combo	LTE config	NR BW	Modulation	RB	Conducted Power	ERP (dBm)	ERP(W)
2+0	DC_7A_n26A	10M 1RB0, 0dBm	MAX BW	DFT-s-OFDM BPSK	1RB1	22.95	16.70	0.0468

Note: Only the test result of the worst antenna combination is shown in the report.

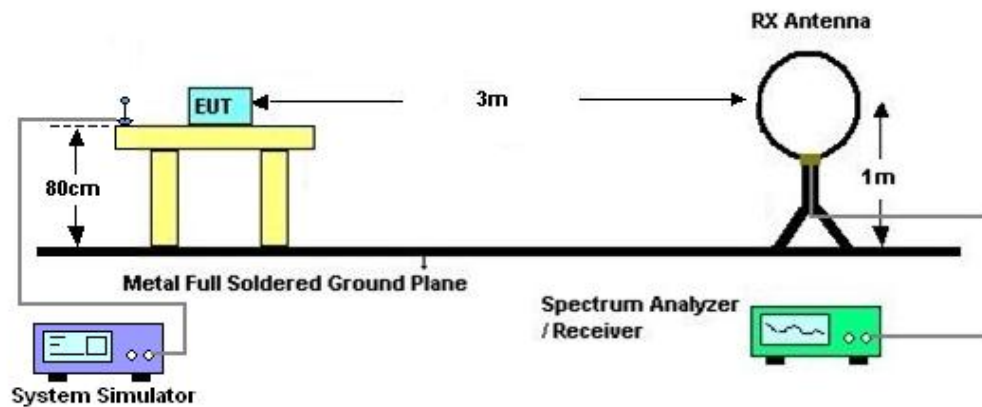
4 Radiated Test Items

4.1 Measuring Instruments

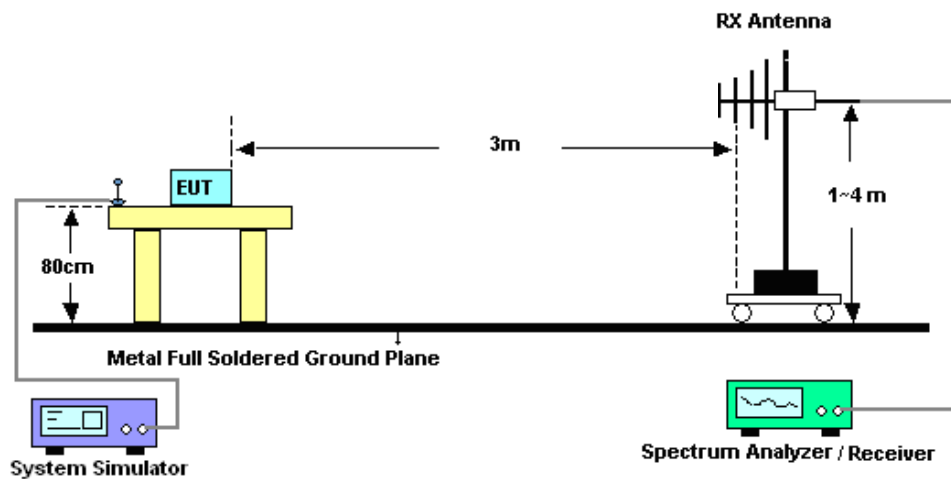
See list of measuring instruments of this test report.

4.2 Test Setup

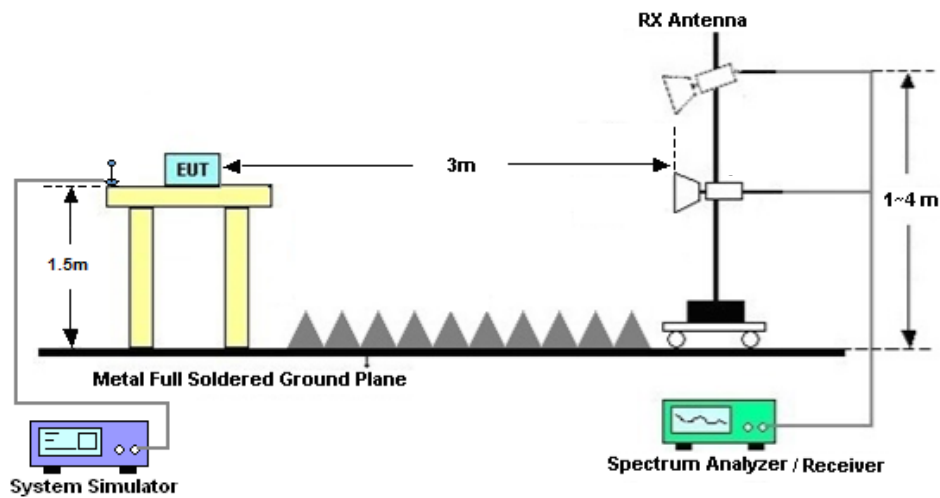
4.2.1 For radiated test below 30MHz



4.2.2 For radiated test from 30MHz to 1GHz



4.2.3 For radiated test above 1GHz



4.3 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 B.

4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI C63.26. 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 $43 + 10 \log (P)$ dB.

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

4.4.2 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.

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)

$$= P(W) - [43 + 10\log(P)] \text{ (dB)}$$

$$= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$$

$$= -13\text{dBm}.$$



5 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	Oct. 10, 2025	Mar. 10, 2026	Oct. 09, 2026	Radiation (03CH04-KS)
Active loop antenna	R&S	HFH2-Z2E	101125	9kHz~30MHz	Aug. 10, 2025	Mar. 10, 2026	Aug. 09, 2026	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	44483	30MHz-1GHz	Nov. 22, 2025	Mar. 10, 2026	Nov. 21, 2026	Radiation (03CH04-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00227860	1GHz~18GHz	Aug. 22, 2025	Mar. 10, 2026	Aug. 21, 2026	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	380826	9KHz-1GHz	Jul. 02, 2025	Mar. 10, 2026	Jul. 01, 2026	Radiation (03CH04-KS)
high gain Amplifier	EM	EM01G18G A	060890	1Ghz-18Ghz	May 23, 2025	Mar. 10, 2026	May 22, 2026	Radiation (03CH04-KS)
Amplifier	EM	EM01G18G A	060892	1Ghz-18Ghz	Oct. 11, 2025	Mar. 10, 2026	Oct. 10, 2026	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Mar. 10, 2026	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Mar. 10, 2026	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Mar. 10, 2026	NCR	Radiation (03CH04-KS)
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Jul. 07, 2025	Mar. 13, 2026	Jul. 06, 2026	Conducted (TH01-KS)

NCR: No Calibration Required



6 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 Conducted Measurement

Conducted Power	±0.90 dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.83dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

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



Appendix A. Test Results of Radiated Test

Radiated Spurious Emission

Test Engineer :	Jake	Temperature :	21~25℃
		Relative Humidity :	51~53%

Note: Pre-scanned harmonic for the different antenna combinations, we choose the worst antenna mode to perform final test.

DC_7A_n26A / LTE 10MHz + NR 20MHz / QPSK/ ANT2+1								
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	1656	-62.53	-13	-49.53	-69.50	1.58	10.70	H
	2480	-58.43	-13	-45.43	-66.68	2.102	12.50	H
	3312	-57.45	-13	-44.45	-66.34	2.856	13.90	H
	1656	-61.68	-13	-48.68	-68.65	1.58	10.70	V
	2480	-56.14	-13	-43.14	-64.39	2.10	12.50	V
	3312	-56.83	-13	-43.83	-65.72	2.86	13.90	V

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