

FCC RF Test Report

APPLICANT : Motorola Mobility LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : XT2223-2
FCC ID : IHDT56AE4
STANDARD : 47 CFR Part 2, Part 27 Subpart Q
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)
TEST DATE(S) : Mar. 15, 2022 ~ Mar. 31, 2022

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

Reviewed by: Jason Jia / Supervisor

Alex Wang

Approved by: Alex Wang / Manager



Sporton International Inc. (Kunshan)

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People's Republic of China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG230110-01D	Rev. 01	Initial issue of report	Apr. 18, 2022

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	—	Report Only	-
3.5	§27.50 (k)(3)	EIRP	EIRP < 1W (30dBm)	PASS	-
4.4	§2.1053 §27.53 (n)(2)	Radiated Spurious Emission	-13dBm/MHz	PASS	Under limit 43.70 dB at 6900.000 MHz

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.



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	XT2223-2
FCC ID	IHDT56AE4
IMEI Code	Conducted : 356081330018482/356081330018490 Radiation : 356081330020389
HW Version	DVT2
SW Version	S1SS32.31
EUT Stage	Identical Prototype

1.4 Product Specification of Equipment Under Test

Product Feature	
Tx/Rx Frequency	5G NR n78: 3450 MHz ~ 3550 MHz
Bandwidth	20MHz / 30MHz / 40MHz / 50MHz / 60MHz / 70MHz / 80MHz / 90MHz / 100MHz
SCS	30kHz
Maximum Output Power to Antenna	<Ant. 5> 5G NR n78 : 23.98 dBm
Antenna Gain	<Ant. 0>: n78: -4.00 dBi <Ant. 3>: n78: -0.70 dBi <Ant. 5>: n78: -5.60 dBi <Ant. 8>: n78: -2.30 dBi
Type of Modulation	CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM

Remark:

1. The maximum EIRP is calculated from max output power and max antenna gain, only the maximum

EIRP is shown in the report, 5G NR n78 for Antenna 3.

2. For NSA mode of all EN-DC combination, we only show the combination of the maximum power among all NSA combinations in the report.
3. The EN-DC mode combination could be referred to the product spec.
4. The device supports n78(1T4R) SRS resources on Ant.0/3/5/8, only the test data of worst Ant.5 is showed in the report according to the maximum power.

1.5 Specification of Accessory

Specification of Accessory				
AC Adapter 1(US)	Brand Name	Motorola(Salcomp)	Model Name	MC-101
AC Adapter 1(EU)	Brand Name	Motorola(Salcomp)	Model Name	MC-102
AC Adapter 1(UK)	Brand Name	Motorola(Salcomp)	Model Name	MC-103
AC Adapter 1(AU)	Brand Name	Motorola(Salcomp)	Model Name	MC-105
AC Adapter 1(AR)	Brand Name	Motorola(Salcomp)	Model Name	MC-106
AC Adapter 1(CHILE)	Brand Name	Motorola(Salcomp)	Model Name	MC-109
AC Adapter 2(US)	Brand Name	Motorola(Aohai)	Model Name	MC-101
AC Adapter 2(EU)	Brand Name	Motorola(Aohai)	Model Name	MC-102
AC Adapter 2(UK)	Brand Name	Motorola(Aohai)	Model Name	MC-103
AC Adapter 2(AU)	Brand Name	Motorola(Aohai)	Model Name	MC-105
AC Adapter 2(AR)	Brand Name	Motorola(Aohai)	Model Name	MC-106
AC Adapter 3(US)	Brand Name	Motorola(Chenyang)	Model Name	MC-101
AC Adapter 3(EU)	Brand Name	Motorola(Chenyang)	Model Name	MC-102
AC Adapter 3(UK)	Brand Name	Motorola(Chenyang)	Model Name	MC-103
AC Adapter 3(AU)	Brand Name	Motorola(Chenyang)	Model Name	MC-105
AC Adapter 3(AR)	Brand Name	Motorola(Chenyang)	Model Name	MC-106
AC Adapter 4(US)	Brand Name	Motorola(Chenyang)	Model Name	MC-201
AC Adapter 4(IN)	Brand Name	Motorola(Chenyang)	Model Name	MC-204
AC Adapter 5(US)	Brand Name	Motorola(Acbel)	Model Name	MC-201
AC Adapter 6(IN)	Brand Name	Motorola(AOHAI)	Model Name	MC-204
AC Adapter 7 (BR Local build)	Brand Name	Motorola(Salcomp)	Model Name	MC-207
AC Adapter 8 (BR Local build)	Brand Name	Motorola(Flex)	Model Name	MC-207
Battery	Brand Name	Motorola(ATL)	Model Name	ND50
Earphone 1	Brand Name	Motorola(NLD)	Model Name	MH202
Earphone 2	Brand Name	Motorola(NLD)	Model Name	MH191
Earphone 3	Brand Name	Motorola(Lyand)	Model Name	MH191
Earphone 4	Brand Name	Motorola(LCHSE)	Model Name	MH191
USB Cable 1	Brand Name	Motorola(HX)	Model Name	S928D43190
USB Cable 2	Brand Name	Motorola(NAEE)	Model Name	S928D43191

1.6 Modification of EUT

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

1.7 Re-use of Measured Data

1.7.1 Introduction Section

This application re-uses data collected on a similar device. The subject device of this application (Model: XT2223-2, FCC ID: IHDT56AE4) is electrically identical to the reference device (Model: XT2223-1, FCC ID: IHDT56AE3) for the portions of the circuitry corresponding to the data being re-used, as treated by KDB Publication 484596 D01.

1.7.2 Difference Section

The **main** difference between FCC ID: IHDT56AE3 and FCC ID: IHDT56AE4 is as below:

- Remove WCDMA Band XIX, LTE Band 18/19/20/32/39/43 and 5G NR n8/n20/n38/n41/n77.
- Add LTE Band 66 and 5G NR n66.
- Disable HPUE mode for LTE Band 38/41, 5G NR n78 and Uplink_CA mode for LTE Band 41C/42C.

Other differences and all the details of similarity and difference can be found in the confidential documents (XT2223-2_Operational Description of Product Equality Declaration).

1.7.3 Reference detail Section:

Equipment Class	Reference FCC ID	Folder Test	Report Title/Section
PCE	IHDT56AE3	Part27Q (Report No. FG230110G)	All sections applicable except for conducted Power/EIRP for n78

1.7.4 Spot Check Verification Data Section

Conducted power test against the variant model based on the worst-case condition from the original model was performed in this filing to demonstrate the test data from original model remains representative for the variant model and added RSE testing for EN-DC combinations for n78.

Summary for power spot check for each rule entry and technology is listed as below:

Test Item	Mode	IHDT56AE3 Worst Result	IHDT56AE4 Worst Result	Difference (dB)
Average Conducted Power (dBm)	n78	26.36	23.98	2.38

Conclusion:

We confirm that the test data reuse policy of FCC KDB 484596 D01 Referencing Test Data v01 has been followed and the test data as referenced from the parent model report represents compliance with new FCC ID.

1.8 Maximum EIRP Power

5G NR n78		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
100	3500.01 ~ 3500.01	0.2109	-	0.1429	-

Note: All modulations have been tested, only the maximum bandwidth and the worst modulation test results are shown in the report.

1.9 Testing Site

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 FAX : +86-512-57900958		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH04-KS TH01-KS	CN1257	314309

1.10 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH04-KS	AUDIX	E3	6.2009-8-24a

1.11 Applied Standards

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

- ♦ 47 CFR Part 2, Part 27 Subpart Q
- ♦ ANSI C63.26-2015
- ♦ FCC KDB 971168 Power Meas License Digital Systems D01 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.

2 Test Configuration of Equipment Under Test

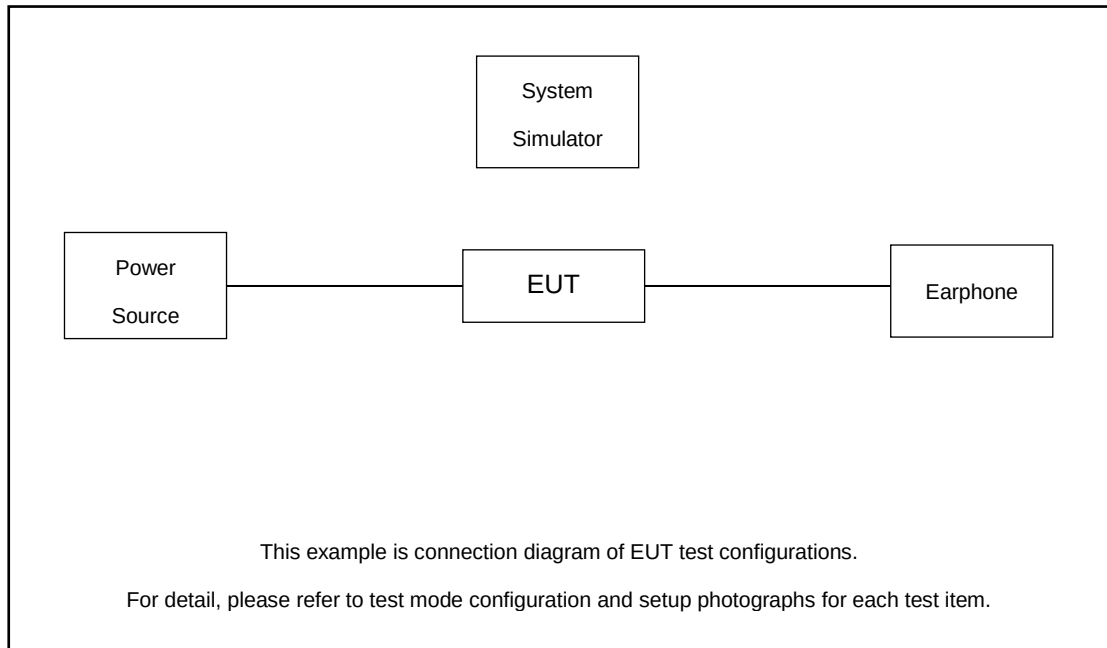
2.1 Test Mode

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

Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission. (Y-Plane)

Test Cases	Band	Bandwidth (MHz)	Modulation	RB #	Test Channel
		eg. 5M, 10M, 15M, 20M	eg. QPSK, 16QAM, 64QAM	1RB, Partial RB, Full RB	L/M/H
Max. Output Power	5G n78	20M, 30M, 40M, 50M, 60M, 70M, 80M, 90M, 100M	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB, Partial RB, Full RB	L, M, H
E.I.R.P	5G n78	20M, 30M, 40M, 50M, 60M, 70M, 80M, 90M, 100M	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB, Partial RB, Full RB	L, M, H
Radiated Spurious Emission	5G n78	Worst case from maximum power			M
Note: 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



2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	LTE Base Station	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8 m
2.	NR Base Station	Anritsu	MT8000A	N/A	N/A	Unshielded, 1.8 m

2.4 Frequency List of Low/Middle/High Channels

5G n78 Channel and Frequency List for SCS 30kHz				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
100	Channel	-	633334	-
	Frequency	-	3500.01	-
90	Channel	633000	633334	633666
	Frequency	3495	3500.01	3504.99
80	Channel	632668	633334	634000
	Frequency	3490.02	3500.01	3510
70	Channel	632334	633334	634332
	Frequency	3485.01	3500.01	3514.98
60	Channel	632000	633334	634666
	Frequency	3480	3500.01	3519.99
50	Channel	631668	633334	635000
	Frequency	3475.02	3500.01	3525
40	Channel	631334	633334	635332
	Frequency	3470.01	3500.01	3529.98
30	Channel	631000	633334	635666
	Frequency	3465	3500.01	3534.99
20	Channel	630668	633334	636000
	Frequency	3460.02	3500.01	3540

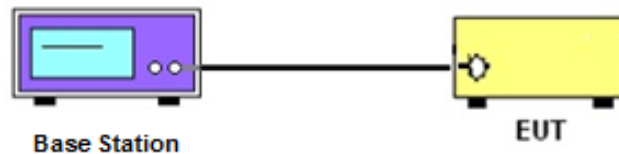
3 Conducted Test Items

3.1 Measuring Instruments

See list of measuring instruments of this test report.

3.2 Test Setup

3.2.1 Conducted Output Power



3.3 Test Result of Conducted Test

Please refer to Appendix A.

3.4 Conducted Output Power Measurement

3.4.1 Description of the Conducted Output Power Measurement

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

3.4.2 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.

3.5 EIRP

3.5.1 Description of EIRP Limit

§ 27.50 (k)(3)

Mobile devices are limited to 1Watt (30 dBm) EIRP. Mobile devices operating in these bands must employ a means for limiting power to the minimum necessary for successful communications

3.5.2 Test Procedures

1. According to KDB 412172 D01 Power Approach,
2. $EIRP = P_T + G_T - L_C$, $ERP = EIRP - 2.15$, 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

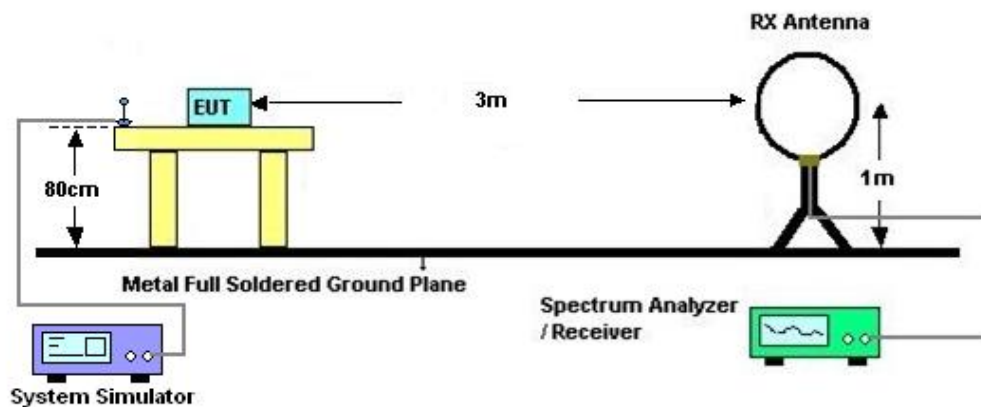
4 Radiated Test Items

4.1 Measuring Instruments

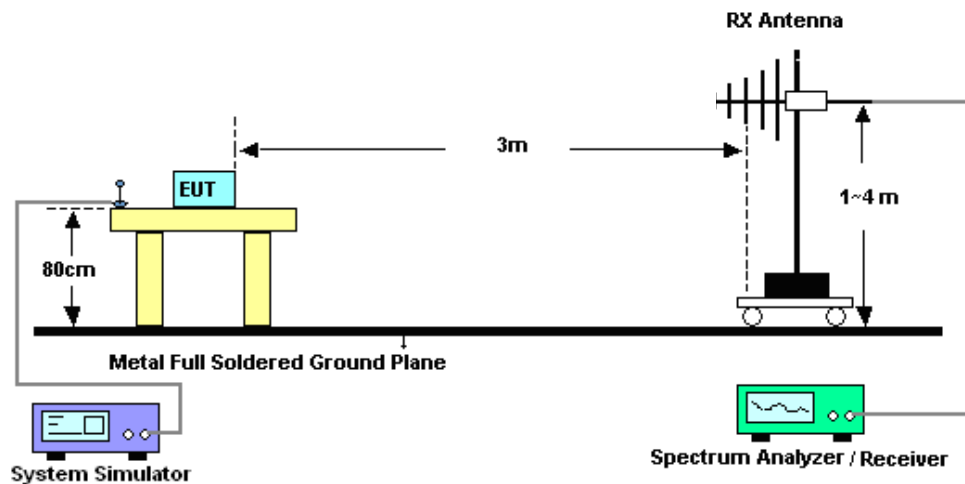
See list of measuring instruments of this test report.

4.2 Test Setup

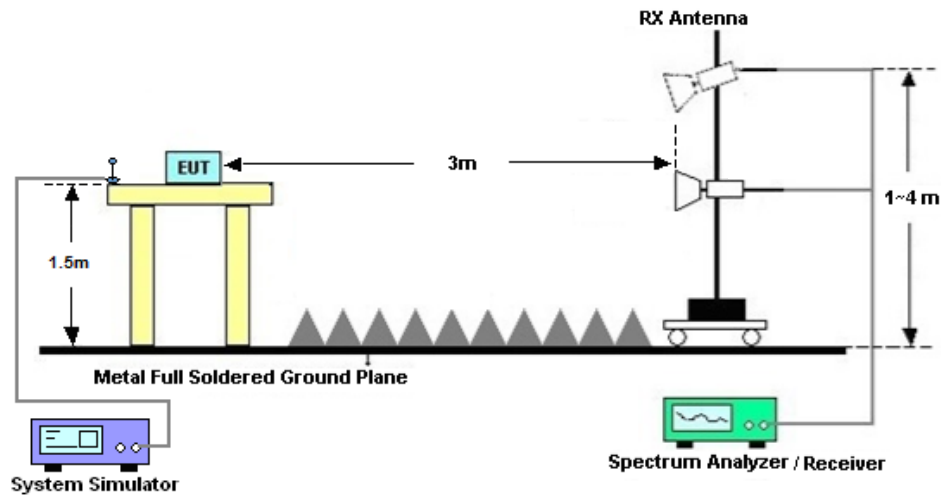
4.2.1 For radiated test below 30MHz



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 Measurement

4.4.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI/TIA-603-E. The power of any emission outside of the authorized operating frequency ranges shall not exceed -13 dBm/MHz.

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.
$$\text{EIRP (dBm)} = \text{S.G. Power} - \text{Tx Cable Loss} + \text{Tx Antenna Gain}$$
$$\text{ERP (dBm)} = \text{EIRP} - 2.15$$
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Oct. 14, 2021	Mar. 15, 2022	Oct. 13, 2022	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz~44G,MAX 30dB	Apr. 13, 2021	Mar. 31, 2022	Apr. 12, 2022	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 30, 2021	Mar. 31, 2022	Oct. 29, 2022	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz~1GHz	May 30, 2021	Mar. 31, 2022	May 29, 2022	Radiation (03CH04-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	218652	1GHz~18GHz	Nov. 01, 2021	Mar. 31, 2022	Oct. 30, 2022	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 05, 2022	Mar. 31, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
Amplifier	Burgeon	BPA-530	102219	0.01MHz ~3000MHz	Nov. 01, 2021	Mar. 31, 2022	Oct. 31, 2022	Radiation (03CH04-KS)
Amplifier	MITEQ	EM18G40G GA	060728	18~40GHz	Jan. 05, 2022	Mar. 31, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
high gain Amplifier	MITEQ	AMF-7D-00 101800-30-1 0P	2025788	1Ghz-18Ghz	Jul. 30, 2021	Mar. 31, 2022	Jul. 29, 2022	Radiation (03CH04-KS)
Amplifier	Keysight	83017A	MY57280106	500MHz~26.5GHz	Oct. 13, 2021	Mar. 31, 2022	Oct. 12, 2022	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Mar. 31, 2022	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Mar. 31, 2022	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Mar. 31, 2022	NCR	Radiation (03CH04-KS)

NCR: No Calibration Required

6 Uncertainty of Evaluation

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

Test Item	Uncertainty
Conducted Power	±0.56 dB
Conducted Emissions	±0.92 dB
Occupied Channel Bandwidth	±0.03 %

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	3.3dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	2.8dB
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	2.8dB
--	-------

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

Appendix A. Test Results of Conducted Test

Test Engineer :	Lex Wu	Temperature :	22~23°C
		Relative Humidity :	40~42%

Conducted Output Power(Average power) and EIRP

5G NR n78:

Ant.5

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Gain	EIRP		
Channel					633334			L	M	H
Frequency (MHz)					3500.01					
100	PI/2 BPSK	1	1		23.98		-5.60		0.0689	
100	PI/2 BPSK	1	137		23.96		-5.60		0.0685	
100	PI/2 BPSK	1	271		23.95		-5.60		0.0684	
100	PI/2 BPSK	135	0		22.69		-5.60		0.0512	
100	PI/2 BPSK	135	67		23.97		-5.60		0.0687	
100	PI/2 BPSK	135	138		22.82		-5.60		0.0527	
100	PI/2 BPSK	270	0		22.79		-5.60		0.0524	
100	QPSK	1	1		23.93		-5.60		0.0681	
100	QPSK	1	137		23.96		-5.60		0.0685	
100	QPSK	1	271		23.95		-5.60		0.0684	
100	QPSK	135	0		22.22		-5.60		0.0459	
100	QPSK	135	67		23.97		-5.60		0.0687	
100	QPSK	135	138		22.33		-5.60		0.0471	
100	QPSK	270	0		22.40		-5.60		0.0479	
100	16QAM	1	1		22.42		-5.60		0.0481	
100	64QAM	1	1		20.48		-5.60		0.0308	
100	256QAM	1	1		18.68		-5.60		0.0203	
Channel				633000	633334	633668	Gain	L	M	H
Frequency (MHz)				3495	3500.01	3505.02				
90	PI/2 BPSK	1	1	23.95	23.94	23.96	-5.60	0.0684	0.0682	0.0685
Channel				632668	633334	634000	Gain	L	M	H
Frequency (MHz)				3490.02	3500.01	3510				
80	PI/2 BPSK	1	1	23.93	23.89	23.91	-5.60	0.0681	0.0675	0.0678
Channel				632334	633334	634334	Gain	L	M	H
Frequency (MHz)				3485.01	3500.01	3515.01				
70	QPSK	1	1	23.94	23.96	23.95	-5.60	0.0682	0.0685	0.0684
Channel				632000	633334	634668	Gain	L	M	H
Frequency (MHz)				3480	3500.01	3520.02				
60	PI/2 BPSK	1	1	23.97	23.91	23.94	-5.60	0.0687	0.0678	0.0682

Channel				631668	633334	635000	Gain	L	M	H
Frequency (MHz)				3475.02	3500.01	3525				
50	PI/2 BPSK	1	1	23.89	23.88	23.91	-5.60	0.0675	0.0673	0.0678
Channel				631334	633334	635334	Gain	L	M	H
Frequency (MHz)				3470.01	3500.01	3530.01				
40	PI/2 BPSK	1	1	23.97	23.96	23.94	-5.60	0.0687	0.0685	0.0682
Channel				631000	633334	635668	Gain	L	M	H
Frequency (MHz)				3465	3500.01	3535.02				
30	PI/2 BPSK	1	1	23.94	23.96	23.97	-5.60	0.0682	0.0685	0.0687
Channel				630668	633334	636000	Gain	L	M	H
Frequency (MHz)				3460.02	3500.01	3540				
20	PI/2 BPSK	1	1	23.96	23.94	23.93	-5.60	0.0685	0.0682	0.0681

Ant.3

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Gain	EIRP		
Channel					633334			L	M	H
Frequency (MHz)					3500.01					
100	PI/2 BPSK	1	1		23.94		-0.70		0.2109	
100	PI/2 BPSK	1	137		23.88		-0.70		0.2080	
100	PI/2 BPSK	1	271		23.89		-0.70		0.2084	
100	PI/2 BPSK	135	0		22.69		-0.70		0.1581	
100	PI/2 BPSK	135	67		23.87		-0.70		0.2075	
100	PI/2 BPSK	135	138		22.82		-0.70		0.1629	
100	PI/2 BPSK	270	0		22.79		-0.70		0.1618	
100	QPSK	1	1		23.90		-0.70		0.2089	
100	QPSK	1	137		23.91		-0.70		0.2094	
100	QPSK	1	271		23.90		-0.70		0.2089	
100	QPSK	135	0		22.22		-0.70		0.1419	
100	QPSK	135	67		23.91		-0.70		0.2094	
100	QPSK	135	138		22.11		-0.70		0.1384	
100	QPSK	270	0		22.15		-0.70		0.1396	
100	16QAM	1	1		22.25		-0.70		0.1429	
100	64QAM	1	1		20.22		-0.70		0.0895	
100	256QAM	1	1		18.55		-0.70		0.0610	

Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

Test Engineer :	Chris Chen	Temperature :	22~23°C
		Relative Humidity :	41~42%

Note: Pre-scanned harmonic for the different antenna combinations for EN-DC mode, we choose the worst combination to test.

EN-DC_66A_n78A / LTE 20MHz + NR 100MHz / QPSK / ANT4(LTE) & ANT5(NR)								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	6900	-56.70	-13	-43.70	-67.18	2.76	13.24	H
	10356	-57.06	-13	-44.06	-66.65	3.42	13.01	H
	13824	-60.44	-13	-47.44	-70.05	3.83	13.44	H
	6900	-58.12	-13	-45.12	-68.56	2.80	13.24	V
	10356	-61.39	-13	-48.39	-70.94	3.46	13.01	V
	13824	-61.37	-13	-48.37	-70.93	3.88	13.44	V

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