



FCC RF Test Report

APPLICANT : Motorola Mobility LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : XT2435-2
FCC ID : IHDT56AM5
STANDARD : 47 CFR Part 2, 27 Subpart O (3700-3980MHz)
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)
TEST DATE(S) : May 23, 2024 ~ Jun. 03, 2024

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**



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG352916-19B	Rev. 01	Initial issue of report	Jun. 24, 2024



SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
	§27.50(j)(3)	Equivalent Isotropic Radiated Power (5G NR n77)	EIRP < 1Watt		
4.4	§2.1053 §27.53(l)(2)	Radiated Spurious Emission (5G NR n77)	< 43+10log ₁₀ (P[Watts])	PASS	Under limit 45.59 dB at 15184.00 MHz

Note:

This is a variant report for XT2435-2. The change note could be referred to the XT2435-2_Operational Description of Product Equality Declaration which is exhibit separately. Based on the similarity between current and previous project, only the output power and RSE of ENDC_7A_n77A were verified for the differences, all the other test results are leveraged from original test report (Sporton Report Number FG352916-01C).

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/manufacturer 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	XT2435-2
FCC ID	IHDT56AM5
IMEI Code	Conducted: 352159390002390/352159390002408 Radiation: 352159390003232/352159390003240
HW Version	DVT1
SW Version	U3UT34.4
EUT Stage	Identical Prototype

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Frequency	5G NR n77: 3700 MHz ~ 3980 MHz
SCS	15kHz, 30kHz
Bandwidth	n77(15kHz): 10 / 15 / 20 / 30 / 40 / 50MHz n77(30kHz): 10 / 15 / 20 / 30 / 40 / 50 / 60 / 70 / 80 / 90 / 100MHz
Antenna Gain	<Ant. 1> n77: -3.7 dBi <Ant. 2> n77: -3.5 dBi <Ant. 5> n77: -3.71 dBi <Ant. 7> n77: -5.6 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 of Ant.5 is shown in the report.
2. The device supports n77(1T4R) SRS resources on Ant.1/2/5/7, only the conducted test results of worst Ant.5 is showed in the report according to the maximum power.
3. 5G NR n77 SA support HPUE (PC2), NSA support PC3.
4. The EN-DC mode combination could be referred to the product spec.



1.5 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 (BR)	Brand Name	Motorola(Salcomp)	Model Name	MC-337L
AC Adapter 2 (US)	Brand Name	Motorola(Chenyang)	Model Name	MC-331
AC Adapter 2 (EU)	Brand Name	Motorola(Chenyang)	Model Name	MC-332
AC Adapter 2 (BR)	Brand Name	Motorola(Chenyang)	Model Name	MC-337
Battery 1	Brand Name	Motorola(Jiade)	Model Name	QA50
USB Cable 1	Brand Name	Motorola (WASHIN)	Model Name	S928D92375
USB Cable 2	Brand Name	Motorola (Saibao)	Model Name	S928D95755

1.6 Modification of EUT

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



1.7 Maximum EIRP and Emission Designator

5G NR n77 NSA for SCS 15kHz EN DC_7A-n77A		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)
10	3705.00 ~ 3975.00	0.0855	-	0.0741	-
15	3705.505 ~ 3972.495	0.0871	-	0.0776	-
20	3710.01 ~ 3969.99	0.0871	-	0.0700	-
30	3715.005 ~ 3964.98	0.0824	-	0.0682	-
40	3720.00 ~ 3960.00	0.0798	-	0.0640	-
50	3725.01 ~ 3954.99	0.0918	-	0.0718	-
5G NR n77 NSA for SCS 30kHz EN DC_7A-n77A		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)
10	3705.00 ~ 3975.00	0.0885	-	0.0687	-
15	3705.52 ~ 3972.48	0.0859	-	0.0664	-
20	3710.01 ~ 3969.99	0.0855	-	0.0689	-
30	3715.02 ~ 3964.98	0.0817	-	0.0637	-
40	3720.00 ~ 3960.00	0.0800	-	0.0617	-
50	3725.01 ~ 3954.99	0.0834	-	0.0643	-
60	3730.02 ~ 3949.98	0.0818	-	0.0635	-
70	3735.00 ~ 3945.00	0.0813	-	0.0627	-
80	3740.01 ~ 3939.99	0.0783	-	0.0622	-
90	3745.02 ~ 3934.98	0.0800	-	0.0778	-
100	3750.00 ~ 3930.00	0.0897	-	0.0719	-

Note: All modulations have been tested, and only the worst test results of PSK & QAM are shown in the report.



1.8 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

1.9 Test Software

Item	Site	Manufacture	Name	Version
1.	TH01-KS	SPORTON	FCC_5GNR_China_2 01027	1.0
2.	03CH04-KS	AUDIX	E3	210616

1.10 Applicable Standards

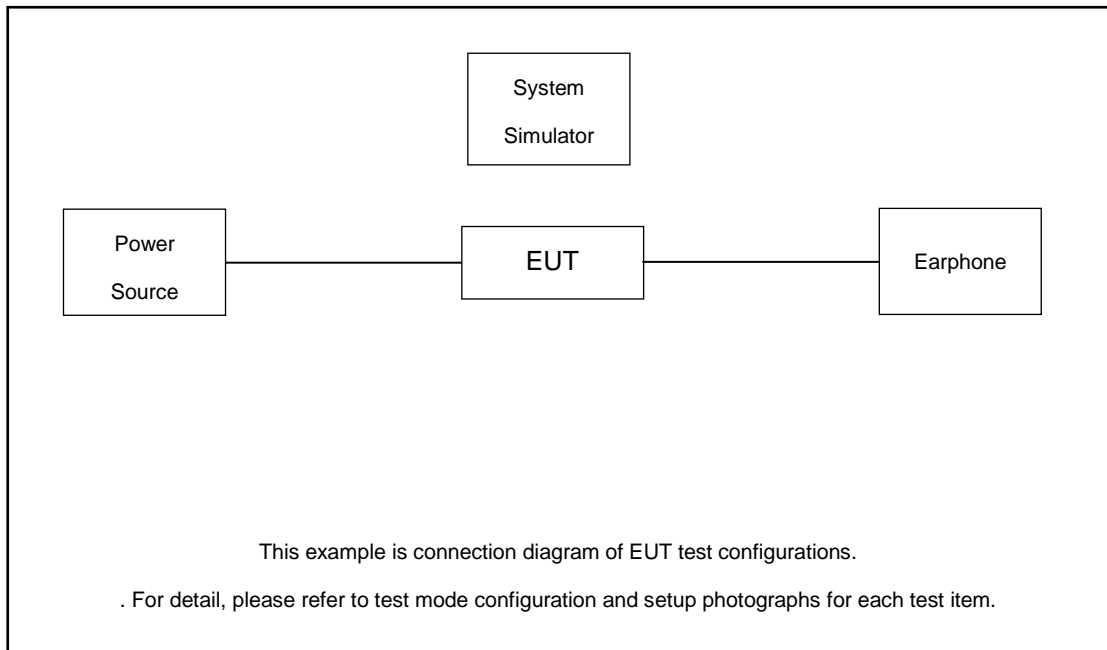
According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR Part 2, 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:

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

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.	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 n77 (15kHz) Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
50	Channel	648334	656000	663666
	Frequency	3725.01	3840	3954.99
40	Channel	648000	656000	664000
	Frequency	3720	3840	3960
30	Channel	647667	656000	664332
	Frequency	3715.005	3840	3964.98
20	Channel	647334	656000	664666
	Frequency	3710.01	3840	3969.99
15	Channel	647167	656000	664833
	Frequency	3707.505	3840	3972.495
10	Channel	647000	656000	665000
	Frequency	3705	3840	3975

5G n77 (30kHz) Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
100	Channel	650000	656000	662000
	Frequency	3750	3840	3930
90	Channel	649668	656000	662332
	Frequency	3745.02	3840	3934.98
80	Channel	649334	656000	662666
	Frequency	3740.01	3840	3939.99
70	Channel	649000	656000	663000
	Frequency	3735	3840	3945
60	Channel	648668	656000	663332
	Frequency	3730.02	3840	3949.98
50	Channel	648334	656000	663666
	Frequency	3725.01	3840	3954.99
40	Channel	648000	656000	664000
	Frequency	3720	3840	3960
30	Channel	647668	656000	664332
	Frequency	3715.02	3840	3964.98
20	Channel	647334	656000	664666
	Frequency	3710.01	3840	3969.99
15	Channel	647168	656000	664832
	Frequency	3707.52	3840	3972.48
10	Channel	647000	656000	665000
	Frequency	3705	3840	3975

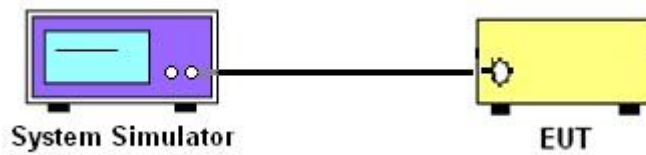
3 Conducted Test Items

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 and EIRP

3.4.1 Description of the Conducted Output Power Measurement and EIRP 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 EIRP of mobile transmitters must not exceed 1 Watts for 5G NR n77

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

3.4.2 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.

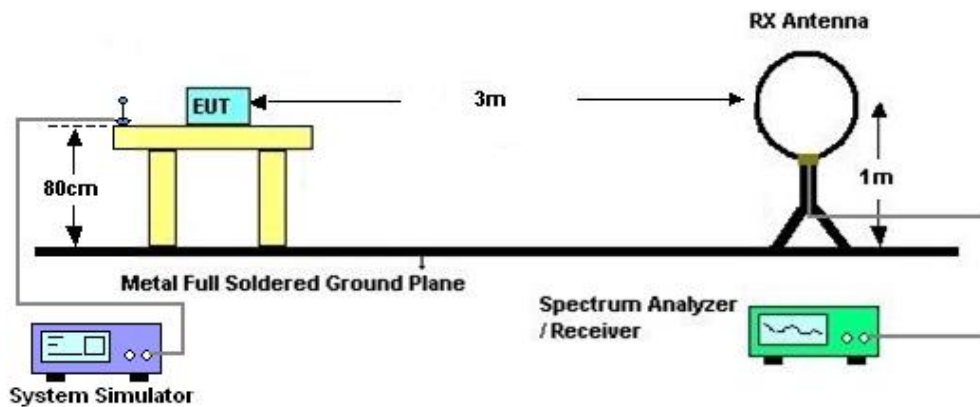
4 Radiated Test Items

4.1 Measuring Instruments

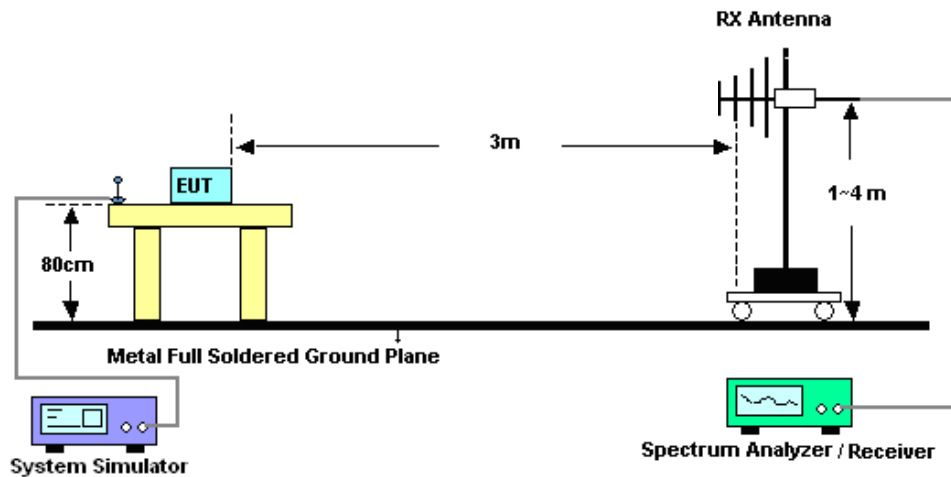
See list of measuring instruments of this test report.

4.2 Test Setup

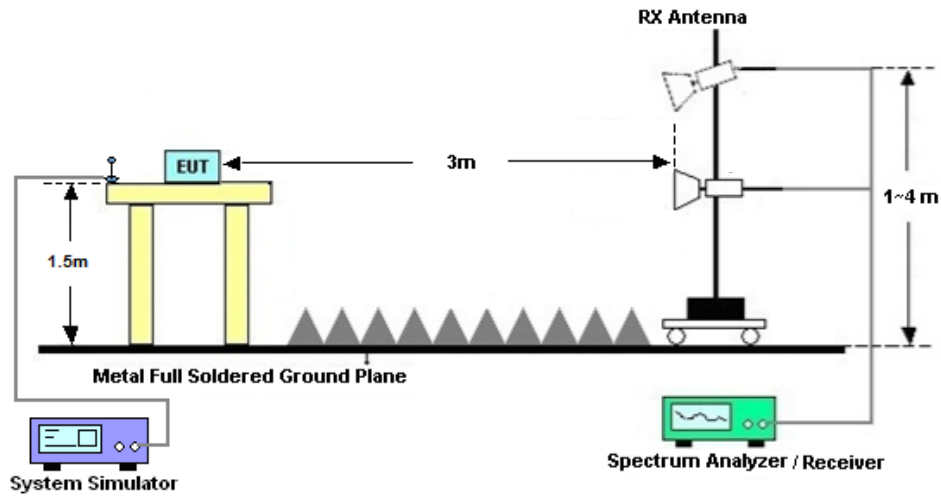
4.2.1 For radiated test below 30MHz



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
1. 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.
2. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
5. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
9. $EIRP \text{ (dBm)} = S.G. \text{ Power} - Tx \text{ Cable Loss} + Tx \text{ Antenna Gain}$
10. $ERP \text{ (dBm)} = EIRP - 2.15$
11. 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)
= $P(W) - [43 + 10\log(P)] \text{ (dB)}$
= $[30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$
= -13dBm.



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. 11, 2023	Jun. 03, 2024	Oct. 10, 2024	Conducted (TH01-KS)
Power divider	STI	STI08-0055	-	0.5~40GHz	NCR	Jun. 03, 2024	NCR	Conducted (TH01-KS)
Temperature & humidity chamber	Hongzhan	LP-150U	H2014011440	-40~+150°C 20%~95%RH	Jul. 06, 2023	Jun. 03, 2024	Jul. 05, 2024	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010B	MY57471079	10Hz~44G,MAX 30dB	Oct. 10, 2023	May 23, 2024	Oct. 09, 2024	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2E	101125	9kHz~30MHz	Sep. 11 2023	May 23, 2024	Sep. 10, 2024	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	59913	30MHz~1GHz	Aug. 19, 2023	May 23, 2024	Aug. 18, 2024	Radiation (03CH04-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00251694	1GHz~18GHz	Jul. 12, 2023	May 23, 2024	Jul. 11, 2024	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 05, 2024	May 23, 2024	Jan. 04, 2025	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	380827	9KHz-1GHz	Jul. 06, 2023	May 23, 2024	Jul. 05, 2024	Radiation (03CH04-KS)
Amplifier	MITEQ	EM18G40G GA	060728	18~40GHz	Jan. 05, 2024	May 23, 2024	Jan. 04, 2025	Radiation (03CH04-KS)
high gain Amplifier	EM	EM01G18G A	060840	1Ghz-18Ghz	Oct. 10, 2023	May 23, 2024	Oct. 09, 2024	Radiation (03CH04-KS)
Amplifier	Agilent	8449B	3008A02370	1Ghz-18Ghz	Oct. 10, 2023	May 23, 2024	Oct. 09, 2024	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	May 23, 2024	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	May 23, 2024	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	May 23, 2024	NCR	Radiation (03CH04-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 Spurious Emission & Bandedge	±2.26 dB
Occupied Channel Bandwidth	±0.1%
Conducted Power	±0.46 dB
Peak to Average Ratio	±0.46 dB
Frequency Stability	±0.4 Hz

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

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



Appendix A. Test Results of Conducted Test

Test Engineer :	Smile Wang	Temperature :	22~23°C
		Relative Humidity :	40~42%

FR1 N77(DC_7A-n77A)_SCS 15K

Transmitter Conducted Output Power And EIRP, (G_T - L_C)=-3.71dBi

NR Band	SCS	BandWidth	Arfcn	Freq(MHz)	Modulation	RB	Conducted Power(dBm)	EIRP(dBm)	EIRP(W)
77	15	50	648334	3725.01	DFT-s-OFDM PI/2 BPSK	135@67	23.34	19.63	0.0918
77	15	50	648334	3725.01	DFT-s-OFDM PI/2 BPSK	1@1	22.82	19.11	0.0815
77	15	50	648334	3725.01	DFT-s-OFDM PI/2 BPSK	1@268	22	18.29	0.0675
77	15	50	648334	3725.01	DFT-s-OFDM QPSK	135@67	23	19.29	0.0849
77	15	50	648334	3725.01	DFT-s-OFDM QPSK	1@1	22.8	19.09	0.0811
77	15	50	648334	3725.01	DFT-s-OFDM QPSK	1@268	21.94	18.23	0.0665
77	15	50	648334	3725.01	DFT-s-OFDM 16 QAM	135@67	22.06	18.35	0.0684
77	15	50	648334	3725.01	DFT-s-OFDM 16 QAM	1@1	21.84	18.13	0.0650
77	15	50	648334	3725.01	DFT-s-OFDM 16 QAM	1@268	21.07	17.36	0.0545
77	15	50	648334	3725.01	DFT-s-OFDM 64 QAM	135@67	20.57	16.86	0.0485
77	15	50	648334	3725.01	DFT-s-OFDM 64 QAM	1@1	20.46	16.75	0.0473
77	15	50	648334	3725.01	DFT-s-OFDM 64 QAM	1@268	19.63	15.92	0.0391
77	15	50	648334	3725.01	DFT-s-OFDM 256 QAM	135@67	18.54	14.83	0.0304
77	15	50	648334	3725.01	DFT-s-OFDM 256 QAM	1@1	18.53	14.82	0.0303
77	15	50	648334	3725.01	DFT-s-OFDM 256 QAM	1@268	17.64	13.93	0.0247
77	15	50	648334	3725.01	CP-OFDM QPSK	135@67	21.6	17.89	0.0615
77	15	50	648334	3725.01	CP-OFDM QPSK	1@1	21.31	17.6	0.0575
77	15	50	648334	3725.01	CP-OFDM QPSK	1@268	20.5	16.79	0.0478
77	15	50	656000	3840	DFT-s-OFDM PI/2 BPSK	135@67	23.24	19.53	0.0897
77	15	50	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	22.83	19.12	0.0817
77	15	50	656000	3840	DFT-s-OFDM PI/2 BPSK	1@268	23.09	19.38	0.0867
77	15	50	656000	3840	DFT-s-OFDM QPSK	135@67	23.23	19.52	0.0895
77	15	50	656000	3840	DFT-s-OFDM QPSK	1@1	22.76	19.05	0.0804
77	15	50	656000	3840	DFT-s-OFDM QPSK	1@268	22.97	19.26	0.0843
77	15	50	656000	3840	DFT-s-OFDM 16 QAM	135@67	22.27	18.56	0.0718
77	15	50	656000	3840	DFT-s-OFDM 16 QAM	1@1	21.86	18.15	0.0653
77	15	50	656000	3840	DFT-s-OFDM 16 QAM	1@268	21.94	18.23	0.0665
77	15	50	656000	3840	DFT-s-OFDM 64 QAM	135@67	20.77	17.06	0.0508
77	15	50	656000	3840	DFT-s-OFDM 64 QAM	1@1	20.43	16.72	0.0470
77	15	50	656000	3840	DFT-s-OFDM 64 QAM	1@268	20.72	17.01	0.0502
77	15	50	656000	3840	DFT-s-OFDM 256 QAM	135@67	18.84	15.13	0.0326
77	15	50	656000	3840	DFT-s-OFDM 256 QAM	1@1	18.51	14.8	0.0302
77	15	50	656000	3840	DFT-s-OFDM 256 QAM	1@268	18.66	14.95	0.0313
77	15	50	656000	3840	CP-OFDM QPSK	135@67	21.73	18.02	0.0634
77	15	50	656000	3840	CP-OFDM QPSK	1@1	21.36	17.65	0.0582
77	15	50	656000	3840	CP-OFDM QPSK	1@268	21.51	17.8	0.0603
77	15	50	663666	3954.99	DFT-s-OFDM PI/2 BPSK	135@67	23.23	19.52	0.0895
77	15	50	663666	3954.99	DFT-s-OFDM PI/2 BPSK	1@1	22.92	19.21	0.0834
77	15	50	663666	3954.99	DFT-s-OFDM PI/2 BPSK	1@268	23.05	19.34	0.0859
77	15	50	663666	3954.99	DFT-s-OFDM QPSK	135@67	23.19	19.48	0.0887

77	15	50	663666	3954.99	DFT-s-OFDM QPSK	1@1	22.93	19.22	0.0836
77	15	50	663666	3954.99	DFT-s-OFDM QPSK	1@268	22.96	19.25	0.0841
77	15	50	663666	3954.99	DFT-s-OFDM 16 QAM	135@67	22.23	18.52	0.0711
77	15	50	663666	3954.99	DFT-s-OFDM 16 QAM	1@1	21.96	18.25	0.0668
77	15	50	663666	3954.99	DFT-s-OFDM 16 QAM	1@268	21.87	18.16	0.0655
77	15	50	663666	3954.99	DFT-s-OFDM 64 QAM	135@67	20.79	17.08	0.0511
77	15	50	663666	3954.99	DFT-s-OFDM 64 QAM	1@1	20.53	16.82	0.0481
77	15	50	663666	3954.99	DFT-s-OFDM 64 QAM	1@268	20.62	16.91	0.0491
77	15	50	663666	3954.99	DFT-s-OFDM 256 QAM	135@67	18.82	15.11	0.0324
77	15	50	663666	3954.99	DFT-s-OFDM 256 QAM	1@1	18.59	14.88	0.0308
77	15	50	663666	3954.99	DFT-s-OFDM 256 QAM	1@268	18.67	14.96	0.0313
77	15	50	663666	3954.99	CP-OFDM QPSK	135@67	21.73	18.02	0.0634
77	15	50	663666	3954.99	CP-OFDM QPSK	1@1	21.45	17.74	0.0594
77	15	50	663666	3954.99	CP-OFDM QPSK	1@268	21.4	17.69	0.0587
77	15	10	647000	3705	DFT-s-OFDM PI/2 BPSK	1@1	22.8	19.09	0.0811
77	15	10	647000	3705	DFT-s-OFDM QPSK	1@1	22.8	19.09	0.0811
77	15	10	647000	3705	DFT-s-OFDM 16 QAM	1@1	22.01	18.3	0.0676
77	15	10	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	22.96	19.25	0.0841
77	15	10	656000	3840	DFT-s-OFDM QPSK	1@1	23	19.29	0.0849
77	15	10	656000	3840	DFT-s-OFDM 16 QAM	1@1	22.23	18.52	0.0711
77	15	10	665000	3975	DFT-s-OFDM PI/2 BPSK	1@1	23.02	19.31	0.0853
77	15	10	665000	3975	DFT-s-OFDM QPSK	1@1	23.03	19.32	0.0855
77	15	10	665000	3975	DFT-s-OFDM 16 QAM	1@1	22.41	18.7	0.0741
77	15	15	647167	3707.505	DFT-s-OFDM PI/2 BPSK	1@1	22.87	19.16	0.0824
77	15	15	647167	3707.505	DFT-s-OFDM QPSK	1@1	22.87	19.16	0.0824
77	15	15	647167	3707.505	DFT-s-OFDM 16 QAM	1@1	22	18.29	0.0675
77	15	15	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	23.11	19.4	0.0871
77	15	15	656000	3840	DFT-s-OFDM QPSK	1@1	23.11	19.4	0.0871
77	15	15	656000	3840	DFT-s-OFDM 16 QAM	1@1	22.61	18.9	0.0776
77	15	15	664833	3972.495	DFT-s-OFDM PI/2 BPSK	1@1	23.04	19.33	0.0857
77	15	15	664833	3972.495	DFT-s-OFDM QPSK	1@1	23.01	19.3	0.0851
77	15	15	664833	3972.495	DFT-s-OFDM 16 QAM	1@1	22.13	18.42	0.0695
77	15	20	647334	3710.01	DFT-s-OFDM PI/2 BPSK	1@1	22.83	19.12	0.0817
77	15	20	647334	3710.01	DFT-s-OFDM QPSK	1@1	22.85	19.14	0.0820
77	15	20	647334	3710.01	DFT-s-OFDM 16 QAM	1@1	21.87	18.16	0.0655
77	15	20	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	22.99	19.28	0.0847
77	15	20	656000	3840	DFT-s-OFDM QPSK	1@1	22.97	19.26	0.0843
77	15	20	656000	3840	DFT-s-OFDM 16 QAM	1@1	22.05	18.34	0.0682
77	15	20	664666	3969.99	DFT-s-OFDM PI/2 BPSK	1@1	23.11	19.4	0.0871
77	15	20	664666	3969.99	DFT-s-OFDM QPSK	1@1	23.04	19.33	0.0857
77	15	20	664666	3969.99	DFT-s-OFDM 16 QAM	1@1	22.16	18.45	0.0700
77	15	30	647667	3715.005	DFT-s-OFDM PI/2 BPSK	1@1	22.73	19.02	0.0798
77	15	30	647667	3715.005	DFT-s-OFDM QPSK	1@1	22.64	18.93	0.0782
77	15	30	647667	3715.005	DFT-s-OFDM 16 QAM	1@1	21.69	17.98	0.0628
77	15	30	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	22.77	19.06	0.0805
77	15	30	656000	3840	DFT-s-OFDM QPSK	1@1	22.71	19	0.0794
77	15	30	656000	3840	DFT-s-OFDM 16 QAM	1@1	21.77	18.06	0.0640
77	15	30	664332	3964.98	DFT-s-OFDM PI/2 BPSK	1@1	22.87	19.16	0.0824

77	15	30	664332	3964.98	DFT-s-OFDM QPSK	1@1	22.82	19.11	0.0815
77	15	30	664332	3964.98	DFT-s-OFDM 16 QAM	1@1	22.05	18.34	0.0682
77	15	40	648000	3720	DFT-s-OFDM PI/2 BPSK	1@1	22.48	18.77	0.0753
77	15	40	648000	3720	DFT-s-OFDM QPSK	1@1	22.44	18.73	0.0746
77	15	40	648000	3720	DFT-s-OFDM 16 QAM	1@1	21.52	17.81	0.0604
77	15	40	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	22.5	18.79	0.0757
77	15	40	656000	3840	DFT-s-OFDM QPSK	1@1	22.47	18.76	0.0752
77	15	40	656000	3840	DFT-s-OFDM 16 QAM	1@1	21.51	17.8	0.0603
77	15	40	664000	3960	DFT-s-OFDM PI/2 BPSK	1@1	22.73	19.02	0.0798
77	15	40	664000	3960	DFT-s-OFDM QPSK	1@1	22.64	18.93	0.0782
77	15	40	664000	3960	DFT-s-OFDM 16 QAM	1@1	21.77	18.06	0.0640

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Transmitter Conducted Output Power And EIRP, (G_T - L_C)=-3.71dBi.

NR Band	SCS	BandWidth	Arfcn	Freq(MHz)	Modulation	RB	Conducted Power(dBm)	EIRP(dBm)	EIRP(W)
77	30	100	650000	3750	DFT-s-OFDM PI/2 BPSK	135@67	22.93	19.22	0.0836
77	30	100	650000	3750	DFT-s-OFDM PI/2 BPSK	1@1	22.66	18.95	0.0785
77	30	100	650000	3750	DFT-s-OFDM PI/2 BPSK	1@271	22.71	19	0.0794
77	30	100	650000	3750	DFT-s-OFDM QPSK	135@67	22.95	19.24	0.0839
77	30	100	650000	3750	DFT-s-OFDM QPSK	1@1	22.69	18.98	0.0791
77	30	100	650000	3750	DFT-s-OFDM QPSK	1@271	22.71	19	0.0794
77	30	100	650000	3750	DFT-s-OFDM 16 QAM	135@67	21.98	18.27	0.0671
77	30	100	650000	3750	DFT-s-OFDM 16 QAM	1@1	21.6	17.89	0.0615
77	30	100	650000	3750	DFT-s-OFDM 16 QAM	1@271	21.66	17.95	0.0624
77	30	100	650000	3750	DFT-s-OFDM 64 QAM	135@67	20.49	16.78	0.0476
77	30	100	650000	3750	DFT-s-OFDM 64 QAM	1@1	20.46	16.75	0.0473
77	30	100	650000	3750	DFT-s-OFDM 64 QAM	1@271	20.49	16.78	0.0476
77	30	100	650000	3750	DFT-s-OFDM 256 QAM	135@67	18.51	14.8	0.0302
77	30	100	650000	3750	DFT-s-OFDM 256 QAM	1@1	18.3	14.59	0.0288
77	30	100	650000	3750	DFT-s-OFDM 256 QAM	1@271	18.24	14.53	0.0284
77	30	100	650000	3750	CP-OFDM QPSK	137@68	21.5	17.79	0.0601
77	30	100	650000	3750	CP-OFDM QPSK	1@1	21.2	17.49	0.0561
77	30	100	650000	3750	CP-OFDM QPSK	1@271	21.22	17.51	0.0564
77	30	100	656000	3840	DFT-s-OFDM PI/2 BPSK	135@67	23.16	19.45	0.0881
77	30	100	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	22.49	18.78	0.0755
77	30	100	656000	3840	DFT-s-OFDM PI/2 BPSK	1@271	22.44	18.73	0.0746
77	30	100	656000	3840	DFT-s-OFDM QPSK	135@67	23.16	19.45	0.0881
77	30	100	656000	3840	DFT-s-OFDM QPSK	1@1	22.51	18.8	0.0759
77	30	100	656000	3840	DFT-s-OFDM QPSK	1@271	22.42	18.71	0.0743
77	30	100	656000	3840	DFT-s-OFDM 16 QAM	135@67	22.18	18.47	0.0703
77	30	100	656000	3840	DFT-s-OFDM 16 QAM	1@1	21.42	17.71	0.0590
77	30	100	656000	3840	DFT-s-OFDM 16 QAM	1@271	21.35	17.64	0.0581
77	30	100	656000	3840	DFT-s-OFDM 64 QAM	135@67	20.69	16.98	0.0499
77	30	100	656000	3840	DFT-s-OFDM 64 QAM	1@1	20.24	16.53	0.0450
77	30	100	656000	3840	DFT-s-OFDM 64 QAM	1@271	20.13	16.42	0.0439
77	30	100	656000	3840	DFT-s-OFDM 256 QAM	135@67	18.73	15.02	0.0318
77	30	100	656000	3840	DFT-s-OFDM 256 QAM	1@1	18.06	14.35	0.0272
77	30	100	656000	3840	DFT-s-OFDM 256 QAM	1@271	17.98	14.27	0.0267
77	30	100	656000	3840	CP-OFDM QPSK	137@68	21.68	17.97	0.0627
77	30	100	656000	3840	CP-OFDM QPSK	1@1	21	17.29	0.0536
77	30	100	656000	3840	CP-OFDM QPSK	1@271	20.92	17.21	0.0526
77	30	100	662000	3930	DFT-s-OFDM PI/2 BPSK	135@67	23.24	19.53	0.0897
77	30	100	662000	3930	DFT-s-OFDM PI/2 BPSK	1@1	22.45	18.74	0.0748
77	30	100	662000	3930	DFT-s-OFDM PI/2 BPSK	1@271	22.69	18.98	0.0791
77	30	100	662000	3930	DFT-s-OFDM QPSK	135@67	23.23	19.52	0.0895

77	30	100	662000	3930	DFT-s-OFDM QPSK	1@1	22.45	18.74	0.0748
77	30	100	662000	3930	DFT-s-OFDM QPSK	1@271	22.68	18.97	0.0789
77	30	100	662000	3930	DFT-s-OFDM 16 QAM	135@67	22.28	18.57	0.0719
77	30	100	662000	3930	DFT-s-OFDM 16 QAM	1@1	21.36	17.65	0.0582
77	30	100	662000	3930	DFT-s-OFDM 16 QAM	1@271	21.64	17.93	0.0621
77	30	100	662000	3930	DFT-s-OFDM 64 QAM	135@67	20.77	17.06	0.0508
77	30	100	662000	3930	DFT-s-OFDM 64 QAM	1@1	20.17	16.46	0.0443
77	30	100	662000	3930	DFT-s-OFDM 64 QAM	1@271	20.36	16.65	0.0462
77	30	100	662000	3930	DFT-s-OFDM 256 QAM	135@67	18.78	15.07	0.0321
77	30	100	662000	3930	DFT-s-OFDM 256 QAM	1@1	18.02	14.31	0.0270
77	30	100	662000	3930	DFT-s-OFDM 256 QAM	1@271	18.08	14.37	0.0274
77	30	100	662000	3930	CP-OFDM QPSK	137@68	21.77	18.06	0.0640
77	30	100	662000	3930	CP-OFDM QPSK	1@1	20.9	17.19	0.0524
77	30	100	662000	3930	CP-OFDM QPSK	1@271	21.15	17.44	0.0555
77	30	15	647168	3707.52	DFT-s-OFDM PI/2 BPSK	1@1	22.83	19.12	0.0817
77	30	15	647168	3707.52	DFT-s-OFDM QPSK	1@1	22.82	19.11	0.0815
77	30	15	647168	3707.52	DFT-s-OFDM 16 QAM	1@1	21.78	18.07	0.0641
77	30	15	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	23.05	19.34	0.0859
77	30	15	656000	3840	DFT-s-OFDM QPSK	1@1	23.05	19.34	0.0859
77	30	15	656000	3840	DFT-s-OFDM 16 QAM	1@1	21.93	18.22	0.0664
77	30	15	664832	3972.48	DFT-s-OFDM PI/2 BPSK	1@1	23.05	19.34	0.0859
77	30	15	664832	3972.48	DFT-s-OFDM QPSK	1@1	23	19.29	0.0849
77	30	15	664832	3972.48	DFT-s-OFDM 16 QAM	1@1	21.9	18.19	0.0659
77	30	20	647334	3710.01	DFT-s-OFDM PI/2 BPSK	1@1	22.76	19.05	0.0804
77	30	20	647334	3710.01	DFT-s-OFDM QPSK	1@1	22.75	19.04	0.0802
77	30	20	647334	3710.01	DFT-s-OFDM 16 QAM	1@1	21.72	18.01	0.0632
77	30	20	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	23	19.29	0.0849
77	30	20	656000	3840	DFT-s-OFDM QPSK	1@1	22.95	19.24	0.0839
77	30	20	656000	3840	DFT-s-OFDM 16 QAM	1@1	22.02	18.31	0.0678
77	30	20	664666	3969.99	DFT-s-OFDM PI/2 BPSK	1@1	23.03	19.32	0.0855
77	30	20	664666	3969.99	DFT-s-OFDM QPSK	1@1	23	19.29	0.0849
77	30	20	664666	3969.99	DFT-s-OFDM 16 QAM	1@1	22.09	18.38	0.0689
77	30	30	647668	3715.02	DFT-s-OFDM PI/2 BPSK	1@1	22.73	19.02	0.0798
77	30	30	647668	3715.02	DFT-s-OFDM QPSK	1@1	22.72	19.01	0.0796
77	30	30	647668	3715.02	DFT-s-OFDM 16 QAM	1@1	21.59	17.88	0.0614
77	30	30	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	22.8	19.09	0.0811
77	30	30	656000	3840	DFT-s-OFDM QPSK	1@1	22.77	19.06	0.0805
77	30	30	656000	3840	DFT-s-OFDM 16 QAM	1@1	21.64	17.93	0.0621
77	30	30	664332	3964.98	DFT-s-OFDM PI/2 BPSK	1@1	22.83	19.12	0.0817
77	30	30	664332	3964.98	DFT-s-OFDM QPSK	1@1	22.83	19.12	0.0817
77	30	30	664332	3964.98	DFT-s-OFDM 16 QAM	1@1	21.75	18.04	0.0637
77	30	40	648000	3720	DFT-s-OFDM PI/2 BPSK	1@1	22.5	18.79	0.0757
77	30	40	648000	3720	DFT-s-OFDM QPSK	1@1	22.48	18.77	0.0753
77	30	40	648000	3720	DFT-s-OFDM 16 QAM	1@1	21.37	17.66	0.0583
77	30	40	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	22.54	18.83	0.0764
77	30	40	656000	3840	DFT-s-OFDM QPSK	1@1	22.51	18.8	0.0759
77	30	40	656000	3840	DFT-s-OFDM 16 QAM	1@1	21.38	17.67	0.0585
77	30	40	664000	3960	DFT-s-OFDM PI/2 BPSK	1@1	22.74	19.03	0.0800

77	30	40	664000	3960	DFT-s-OFDM QPSK	1@1	22.72	19.01	0.0796
77	30	40	664000	3960	DFT-s-OFDM 16 QAM	1@1	21.61	17.9	0.0617
77	30	50	648334	3725.01	DFT-s-OFDM PI/2 BPSK	1@1	22.83	19.12	0.0817
77	30	50	648334	3725.01	DFT-s-OFDM QPSK	1@1	22.79	19.08	0.0809
77	30	50	648334	3725.01	DFT-s-OFDM 16 QAM	1@1	21.69	17.98	0.0628
77	30	50	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	22.87	19.16	0.0824
77	30	50	656000	3840	DFT-s-OFDM QPSK	1@1	22.81	19.1	0.0813
77	30	50	656000	3840	DFT-s-OFDM 16 QAM	1@1	21.7	17.99	0.0630
77	30	50	663666	3954.99	DFT-s-OFDM PI/2 BPSK	1@1	22.92	19.21	0.0834
77	30	50	663666	3954.99	DFT-s-OFDM QPSK	1@1	22.9	19.19	0.0830
77	30	50	663666	3954.99	DFT-s-OFDM 16 QAM	1@1	21.79	18.08	0.0643
77	30	60	648668	3730.02	DFT-s-OFDM PI/2 BPSK	1@1	22.74	19.03	0.0800
77	30	60	648668	3730.02	DFT-s-OFDM QPSK	1@1	22.7	18.99	0.0793
77	30	60	648668	3730.02	DFT-s-OFDM 16 QAM	1@1	21.6	17.89	0.0615
77	30	60	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	22.76	19.05	0.0804
77	30	60	656000	3840	DFT-s-OFDM QPSK	1@1	22.71	19	0.0794
77	30	60	656000	3840	DFT-s-OFDM 16 QAM	1@1	21.59	17.88	0.0614
77	30	60	663332	3949.98	DFT-s-OFDM PI/2 BPSK	1@1	22.84	19.13	0.0818
77	30	60	663332	3949.98	DFT-s-OFDM QPSK	1@1	22.83	19.12	0.0817
77	30	60	663332	3949.98	DFT-s-OFDM 16 QAM	1@1	21.74	18.03	0.0635
77	30	70	649000	3735	DFT-s-OFDM PI/2 BPSK	1@1	22.75	19.04	0.0802
77	30	70	649000	3735	DFT-s-OFDM QPSK	1@1	22.77	19.06	0.0805
77	30	70	649000	3735	DFT-s-OFDM 16 QAM	1@1	21.65	17.94	0.0622
77	30	70	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	22.72	19.01	0.0796
77	30	70	656000	3840	DFT-s-OFDM QPSK	1@1	22.73	19.02	0.0798
77	30	70	656000	3840	DFT-s-OFDM 16 QAM	1@1	21.6	17.89	0.0615
77	30	70	663000	3945	DFT-s-OFDM PI/2 BPSK	1@1	22.81	19.1	0.0813
77	30	70	663000	3945	DFT-s-OFDM QPSK	1@1	22.79	19.08	0.0809
77	30	70	663000	3945	DFT-s-OFDM 16 QAM	1@1	21.68	17.97	0.0627
77	30	80	649334	3740.01	DFT-s-OFDM PI/2 BPSK	1@1	22.62	18.91	0.0778
77	30	80	649334	3740.01	DFT-s-OFDM QPSK	1@1	22.61	18.9	0.0776
77	30	80	649334	3740.01	DFT-s-OFDM 16 QAM	1@1	21.52	17.81	0.0604
77	30	80	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	22.65	18.94	0.0783
77	30	80	656000	3840	DFT-s-OFDM QPSK	1@1	22.64	18.93	0.0782
77	30	80	656000	3840	DFT-s-OFDM 16 QAM	1@1	21.65	17.94	0.0622
77	30	80	662666	3939.99	DFT-s-OFDM PI/2 BPSK	1@1	22.54	18.83	0.0764
77	30	80	662666	3939.99	DFT-s-OFDM QPSK	1@1	22.53	18.82	0.0762
77	30	80	662666	3939.99	DFT-s-OFDM 16 QAM	1@1	21.57	17.86	0.0611
77	30	90	649668	3745.02	DFT-s-OFDM PI/2 BPSK	1@1	22.74	19.03	0.0800
77	30	90	649668	3745.02	DFT-s-OFDM QPSK	1@1	22.72	19.01	0.0796
77	30	90	649668	3745.02	DFT-s-OFDM 16 QAM	1@1	22.62	18.91	0.0778
77	30	90	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	22.59	18.88	0.0773
77	30	90	656000	3840	DFT-s-OFDM QPSK	1@1	22.59	18.88	0.0773
77	30	90	656000	3840	DFT-s-OFDM 16 QAM	1@1	21.55	17.84	0.0608
77	30	90	662332	3934.98	DFT-s-OFDM PI/2 BPSK	1@1	22.46	18.75	0.0750
77	30	90	662332	3934.98	DFT-s-OFDM QPSK	1@1	22.43	18.72	0.0745
77	30	90	662332	3934.98	DFT-s-OFDM 16 QAM	1@1	21.35	17.64	0.0581
77	30	10	647000	3705	DFT-s-OFDM PI/2 BPSK	1@1	22.92	19.21	0.0834

77	30	10	647000	3705	DFT-s-OFDM QPSK	1@1	22.89	19.18	0.0828
77	30	10	647000	3705	DFT-s-OFDM 16 QAM	1@1	22.06	18.35	0.0684
77	30	10	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	23.12	19.41	0.0873
77	30	10	656000	3840	DFT-s-OFDM QPSK	1@1	23.09	19.38	0.0867
77	30	10	656000	3840	DFT-s-OFDM 16 QAM	1@1	22.08	18.37	0.0687
77	30	10	665000	3975	DFT-s-OFDM PI/2 BPSK	1@1	23.18	19.47	0.0885
77	30	10	665000	3975	DFT-s-OFDM QPSK	1@1	23.14	19.43	0.0877
77	30	10	665000	3975	DFT-s-OFDM 16 QAM	1@1	22.05	18.34	0.0682



Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

Test Engineer :	Bruce	Temperature :	23~25°C
		Relative Humidity :	41~42%

RSE pre-scanned harmonic for different antennas, choose the worst antenna perform final test and record in the report.

EN-DC_7A_n77A / LTE 20MHz + NR 100MHz / QPSK(1+5)								
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	7583	-60.46	-13	-47.46	-70.67	3.03	13.24	H
	11389	-61.01	-13	-48.01	-70.46	3.56	13.01	H
	15184	-58.59	-13	-45.59	-68.11	3.92	13.44	H
	7583	-60.46	-13	-47.46	-70.67	3.03	13.24	V
	11389	-61.01	-13	-48.01	-70.46	3.56	13.01	V
	15184	-58.59	-13	-45.59	-68.11	3.92	13.44	V

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