Certificate #6613.01

FCC RF TEST REPORT

Applicant:	HMD Global Oy
Address:	Bertel Jungin aukio 9, 02600 Espoo, Finland

Manufacturer or Supplier:	HMD Global Oy
Address:	Bertel Jungin aukio 9, 02600 Espoo, Finland
Product:	Mobile phone
Brand Name:	HMD
Model Name:	H1702V
FCC ID:	2AJOTTA-1702
Date of tests:	Jan, 13, 2025 ~ Mar. 13, 2025

The tests have been carried out according to the requirements of the following standard:

☒ **FCC PART 22, Subpart H** ☒ **FCC PART 24, Subpart E** ☒ **FCC Part 27, Subpart C, M** ☒ **ANSI/TIA/EIA-603-D**	☒ **FCC Part 2** ☒ **ANSI/TIA/EIA-603-E** ☒ **ANSI C63.26-2015**

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Prepared by Hanwen Xu Engineer / Mobile Department	Approved by Peibo Sun Manager / Mobile Department
Xu Hanwen	Sun Peibo
Date: Mar. 13, 2025	Date: Mar. 13, 2025

This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/ and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
PSU-NQN2412090110RF12	Original release	Mar. 13, 2025

1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 22/24/27 & PART 2			
STANDARD SECTION	**TEST TYPE AND LIMIT**	**RESULT**	**TEST LAB***
§2.1046	Conducted Output Power	Compliance	A
§24.232(c) §27.50(d)(4) §27.50(j)(3) §27.50(k)(3)	Equivalent Isotropically Radiated Power (5G NR n2, n66, n77)	Compliance	A
§22.913 (a)	Equivalent Radiated Power (5G NR n5)	Compliance	A
§2.1055 §22.355 §24.235 §27.54	Frequency Stability	Compliance	A
§2.1049	Occupied Bandwidth	Compliance	A
§2.1051 §22.917(a) §24.238(a) §27.53(h) §27.53(l)(2) §27.53(n)(2)	Band Edge Measurements	Compliance	A
§2.1051 §22.917(a) §24.238(a) §27.53(h) §27.53(l)(2) §27.53(n)(2)	Conducted Spurious Emissions	Compliance	A

§2.1051 §22.917(a) §24.238(a) §27.53(h) §27.53(l)(2) §27.53(n)(2)	Radiated Spurious Emissions	Compliance	A
§22.913(d) n5 §24.232(d) n2 §27.50(d)(5) §27.50(k)(4)	Peak-to-Average Ratio	Compliance	A

***Test Lab Information Reference**

Lab A:

Huarui 7Layers High Technology (Suzhou) Co., Ltd.

Lab Address:

Tower N, Innovation Center, 88 Zuyi Road, High-tech District, Suzhou City, Anhui Province

Accredited Test Lab Cert 6613.01

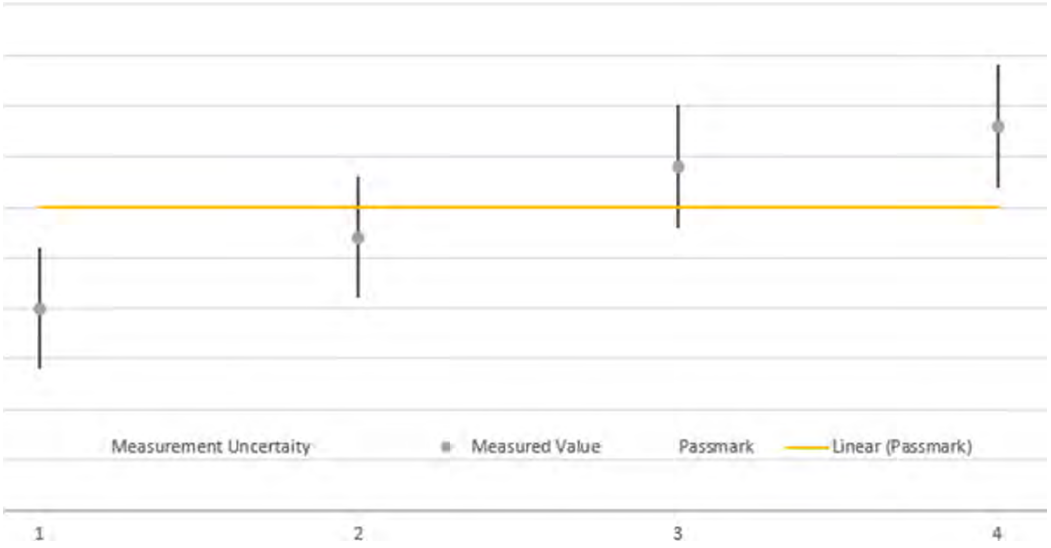
The FCC Site Registration No. is 434559; The Designation No. is CN1325.

1.1 MEASREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	UNCERTAINTY
Frequency Stability	±76.97Hz
Radiated emissions (9KHz~30MHz)	±2.68dB
Radiated emissions & Radiated Power (30MHz~1GHz)	±4.98dB
Radiated emissions & Radiated Power (1GHz ~6GHz)	±4.70dB
Radiated emissions (6GHz ~18GHz)	±4.60dB
Radiated emissions (18GHz ~40GHz)	±4.12dB
Conducted emissions	±4.01dB
Occupied Channel Bandwidth	±43.58KHz
Conducted Output power	±2.06dB
Band Edge Measurements	±4.70dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.



The verdicts in this test report are given according the above diagram:

Case	Measured Value	Uncertainty Range	Verdict
1	below pass mark	below pass mark	Passed
2	below pass mark	within pass mark	Passed
3	above pass mark	within pass mark	Failed
4	above pass mark	above pass mark	Failed

That means, the laboratory applies, as decision rule (see ISO/IEC 17025:2017), the so-called shared risk principle.

1.2 TEST SITE AND INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Pre-Amplifier	R&S	SCU18F1	100815	Aug.30,23	Aug.29,25
Pre-Amplifier	R&S	SCU08F1	101028	Jan.22,24	Jan.21,26
Vector Signal Generator	R&S	SMBV100B	102176	Mar.29,24	Mar.28,26
Signal Generator	R&S	SMB100A	182185	Mar.29,24	Mar.28,26
3m Fully-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC-01Chamber	Nov.25,22	Nov.24,25
3m Semi-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC-02Chamber	Nov.25,22	Nov.24,25
EMI TEST Receiver	R&S	ESR26	101734	Mar.28,24	Mar.27,26
EMI TEST Receiver	R&S	ESW44	101973	Mar.28,24	Mar.27,26
Bilog Antenna	SCHWARZBECK	VULB 9163	1264	Dec.26,23	Dec.25,25
Horn Antenna	ETS-LINDGREN	3117	227836	Aug.22,23	Aug.21,25
Horn Antenna (18GHz-40GHz)	Steatite Q-par Antennas	QMS 00880	23486	Jul.15,24	Jul.14,26
Horn Antenna	Steatite Q-par Antennas	QMS 00208	23485	Aug.22,23	Aug.21,25
Loop Antenna	SCHWARZ	HFH2-Z2/Z2E	100976	Feb.23,23	Feb.22,25
Loop Antenna	SCHWARZ	HFH2-Z2/Z2E	100976	Feb.22,25	Feb.21,27
WIDEBANDRADIO COMMUNICATION TESTER	R&S	CMW500	169399	Jun.19,24	Jun.18,26
Test Software	EMC32	EMC32	N/A	N/A	N/A
6DB attenuator	Tonscend Technology Co., Ltd	N/A	23062787	N/A	N/A
Test Software	ELEKTRA	ELEKTRA4.32	N/A	N/A	N/A
Open Switch and Control Unit	R&S	OSP220	101964	N/A	N/A
DC Source	HYELEC	HY3010B	551016	Aug.31,23	Aug.30,25
Hygrothermograph	DELI	20210528	SZ014	Sep.06,23	Sep.05,25
PC	LENOVO	E14	HRSW0024	N/A	N/A
TMC-AMI18843A(CABLE)	R&S	HF290-NMNM-7.00M	N/A	N/A	N/A
TMC-AMI18843A(CABLE)	R&S	HF290-NMNM-4.00M	N/A	N/A	N/A
CABLE	R&S	W13.02	N/A	Apr.27,24	Apr.26,25
CABLE	R&S	W12.14	N/A	Apr.27,24	Apr.26,25
CABLE	R&S	J12J103539-00-1	SEP-03-20-069	Apr.27,24	Apr.26,25
CABLE	R&S	J12J103539-00-1	SEP-03-20-070	Apr.27,24	Apr.26,25

Temperature Chamber	votsch	VT4002	585660781000 50	May.30,24	May.29,26

NOTE: 1. The calibration interval of the above test instruments is 12 / 24/ 36 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

2. The test was performed in 3m Semi-anechoic Chamber and RF Oven Room.

3. The horn antenna is used only for the measurement of emission frequency above 1GHz if tested.

4. The FCC Site Registration No. is 434559; The Designation No. is CN1325.

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT*	Mobile phone	
BRAND NAME*	HMD	
MODEL NAME*	H1702V	
NOMINAL VOLTAGE*	3.87Vdc (Li-ion, battery)	
MODULATION TECHNOLOGY	**5G NR**	DFT-s-OFDM(Pi/2BPSK,QPSK,16QAM,64QAM,256QAM); CP-OFDM(QPSK,16QAM,64QAM,256QAM);
LTE ANCHOR BAND FOR NR BAND	**NR Band n2**	LTE Band 5/13/66
	NR Band n5	LTE Band 2/48/66
	NR Band n66	LTE Band 2/5/13
	NR Band n77(Part27Q)	LTE Band 2/5/13/66
	NR Band n77(Part27O)	LTE Band 2/5/13/66
FREQUENCY RANGE	**NR Band n2**	1852.5MHz ~ 1907.5MHz
	NR Band n5	826.5MHz ~ 846.5MHz
	NR Band n66	1712.5MHz ~ 1777.5MHz
	NR Band n77(Part27Q)	3455.01MHz ~ 3544.98MHz
	NR Band n77(Part27O)	3705MHz ~ 3974.97MHz
	ENDC	DC 2A-n5A DC 2A-n66A DC 2A-n77A DC 5A-n2A DC 5A-n66A DC 5A-n77A DC 13A-n2A DC 13A-n66A DC 13A-n77A DC 48A-n5A DC 66A-n2A DC 66A-n5A DC 66A-n77A

EMISSION DESIGNATOR	**NR Band n2 Channel Bandwidth: 5MHz**	QPSK: 4M54G7D 16QAM: 4M55W7D 64QAM: 4M53W7D 256QAM: 4M53W7D Pi/2BPSK: 4M54G7D
	NR Band n2 Channel Bandwidth: 10MHz	QPSK: 9M07G7D 16QAM: 9M03W7D 64QAM: 9M09W7D 256QAM:9M04G7D Pi/2BPSK: 9M04G7D
	NR Band n2 Channel Bandwidth: 15MHz	QPSK: 13M5G7D 16QAM: 13M8W7D 64QAM: 13M5W7D 256QAM: 13M6W7D Pi/2BPSK: 13M6G7D
	NR Band n2 Channel Bandwidth: 20MHz	QPSK: 18M5G7D 16QAM: 18M1W7D 64QAM: 18M1W7D 256QAM: 18M1G7D Pi/2BPSK: 18M2G7D
	NR Band n5 Channel Bandwidth: 5MHz	QPSK: 4M52G7D 16QAM: 4M55W7D 64QAM: 4M52W7D 256QAM: 4M52W7D Pi/2BPSK: 4M54G7D
	NR Band n5 Channel Bandwidth: 10MHz	QPSK: 9M00G7D 16QAM: 8M99W7D 64QAM: 9M03W7D 256QAM:9M00G7D Pi/2BPSK: 9M01G7D
	NR Band n5 Channel Bandwidth: 15MHz	QPSK: 13M5G7D 16QAM: 13M5W7D 64QAM: 13M5W7D 256QAM: 13M5W7D Pi/2BPSK: 13M5G7D
	NR Band n5 Channel Bandwidth: 20MHz	QPSK: 18M1G7D 16QAM: 18M1W7D 64QAM: 18M0W7D 256QAM: 17M9G7D Pi/2BPSK: 18M0G7D
	NR Band n66 Channel Bandwidth: 5MHz	QPSK: 4M54G7D 16QAM: 4M52W7D 64QAM: 4M52W7D 256QAM: 4M54W7D Pi/2BPSK: 4M53G7D

EMISSION DESIGNATOR	**NR Band n66 Channel Bandwidth: 10MHz**	QPSK: 9M03G7D 16QAM: 9M02W7D 64QAM: 9M10W7D 256QAM: 9M03W7D Pi/2BPSK: 9M03G7D
	NR Band n66 Channel Bandwidth: 15MHz	QPSK: 13M5G7D 16QAM: 13M5W7D 64QAM: 13M5W7D 256QAM: 13M5W7D Pi/2BPSK: 13M6G7D
	NR Band n66 Channel Bandwidth: 20MHz	QPSK: 18M1G7D 16QAM: 18M1W7D 64QAM: 18M1W7D 256QAM: 18M0W7D Pi/2BPSK: 18M1G7D
	NR Band n66 Channel Bandwidth: 25MHz	QPSK: 23M0G7D 16QAM: 23M0W7D 64QAM: 23M0W7D 256QAM: 23M0W7D Pi/2BPSK: 22M9G7D
	NR Band n66 Channel Bandwidth: 30MHz	QPSK: 28M8G7D 16QAM: 28M7W7D 64QAM: 28M6W7D 256QAM: 28M7W7D Pi/2BPSK: 28M6G7D
	NR Band n66 Channel Bandwidth: 40MHz	QPSK: 39M0G7D 16QAM: 38M8W7D 64QAM: 38M8W7D 256QAM: 38M8G7D Pi/2BPSK: 38M9G7D
	NR Band 77(Part27Q) Channel Bandwidth: 10MHz	QPSK: 8M77G7D 16QAM: 8M76W7D 64QAM: 8M75W7D 256QAM: 8M69W7D Pi/2BPSK: 8M71G7D
	NR Band 77(Part27Q) Channel Bandwidth: 15MHz	QPSK: 13M1G7D 16QAM: 13M1W7D 64QAM: 13M1W7D 256QAM: 13M0W7D Pi/2BPSK: 13M1G7D
	NR Band 77(Part27Q) Channel Bandwidth: 20MHz	QPSK: 18M2G7D 16QAM: 18M2W7D 64QAM: 18M2W7D 256QAM: 18M1W7D Pi/2BPSK: 18M1G7D

EMISSION DESIGNATOR	**NR Band 77(Part27Q) Channel Bandwidth: 30MHz**	QPSK: 27M0G7D 16QAM: 27M0W7D 64QAM: 27M0W7D 256QAM: 27M1W7D Pi/2BPSK: 27M0G7D
	NR Band 77(Part27Q) Channel Bandwidth: 40MHz	QPSK: 36M2G7D 16QAM: 36M1W7D 64QAM: 36M1W7D 256QAM: 36M0W7D Pi/2BPSK: 36M2G7D
	NR Band 77(Part27Q) Channel Bandwidth: 50MHz	QPSK: 46M1G7D 16QAM: 46M0W7D 64QAM: 46M1W7D 256QAM: 46M1W7D Pi/2BPSK: 46M1G7D
	NR Band 77(Part27Q) Channel Bandwidth: 60MHz	QPSK: 58M1G7D 16QAM: 58M1W7D 64QAM: 58M2W7D 256QAM: 58M1W7D Pi/2BPSK: 58M1G7D
	NR Band 77(Part27Q) Channel Bandwidth: 70MHz	QPSK: 64M7G7D 16QAM: 64M5W7D 64QAM: 64M7W7D 256QAM: 64M7W7D Pi/2BPSK: 64M7G7D
	NR Band 77(Part27Q) Channel Bandwidth: 80MHz	QPSK: 77M7G7D 16QAM: 77M8W7D 64QAM: 77M9W7D 256QAM: 77M9W7D Pi/2BPSK: 78M0G7D
	NR Band 77(Part27Q) Channel Bandwidth: 90MHz	QPSK: 86M3G7D 16QAM: 86M3W7D 64QAM: 87M3W7D 256QAM: 86M3W7D Pi/2BPSK: 86M4G7D
	NR Band 77(Part27Q) Channel Bandwidth: 100MHz	QPSK: 97M1G7D 16QAM: 97M0W7D 64QAM: 96M9W7D 256QAM: 96M9W7D Pi/2BPSK: 97M0G7D

EMISSION DESIGNATOR	**NR Band 77(Part27O) Channel Bandwidth: 10MHz**	QPSK: 8M75G7D 16QAM: 8M73W7D 64QAM: 8M72W7D 256QAM: 8M68W7D Pi/2BPSK: 8M70G7D
	NR Band 77(Part27O) Channel Bandwidth: 15MHz	QPSK: 13M1G7D 16QAM: 13M1W7D 64QAM: 13M1W7D 256QAM: 13M1W7D Pi/2BPSK: 13M1G7D
	NR Band 77(Part27O) Channel Bandwidth: 20MHz	QPSK: 18M2G7D 16QAM: 18M1W7D 64QAM: 18M2W7D 256QAM: 18M1W7D Pi/2BPSK: 18M2G7D
	NR Band 77(Part27O) Channel Bandwidth: 30MHz	QPSK: 27M0G7D 16QAM: 27M0W7D 64QAM: 27M0W7D 256QAM: 27M1W7D Pi/2BPSK: 27M0G7D
	NR Band 77(Part27O) Channel Bandwidth: 40MHz	QPSK: 36M2G7D 16QAM: 36M2W7D 64QAM: 36M1W7D 256QAM: 36M1W7D Pi/2BPSK: 36M2G7D
	NR Band 77(Part27O) Channel Bandwidth: 50MHz	QPSK: 46M1G7D 16QAM: 46M0W7D 64QAM: 46M1W7D 256QAM: 46M1W7D Pi/2BPSK: 46M1G7D
	NR Band 77(Part27O) Channel Bandwidth: 60MHz	QPSK: 58M2G7D 16QAM: 58M1W7D 64QAM: 58M1W7D 256QAM: 58M2W7D Pi/2BPSK: 58M1G7D
	NR Band 77(Part27O) Channel Bandwidth: 70MHz	QPSK: 64M7G7D 16QAM: 64M6W7D 64QAM: 64M7W7D 256QAM: 64M7W7D Pi/2BPSK: 64M7G7D

EMISSION DESIGNATOR	NR Band 77(Part27O) Channel Bandwidth: 80MHz	QPSK: 77M8G7D 16QAM: 77M9W7D 64QAM: 77M9W7D 256QAM: 77M9W7D Pi/2BPSK: 78M0G7D
	NR Band 77(Part27O) Channel Bandwidth: 90MHz	QPSK: 86M3G7D 16QAM: 86M2W7D 64QAM: 87M3W7D 256QAM: 86M4W7D Pi/2BPSK: 86M3G7D
	NR Band 77(Part27O) Channel Bandwidth: 100MHz	QPSK: 97M2G7D 16QAM: 96M9W7D 64QAM: 96M9W7D 256QAM: 96M8W7D Pi/2BPSK: 97M1G7D
5G SA MAX. EIRP /ERP POWER	NR Band n2 Channel Bandwidth: 5MHz	190.99mW
	NR Band n2 Channel Bandwidth: 10MHz	190.11mW
	NR Band n2 Channel Bandwidth: 15MHz	191.43mW
	NR Band n2 Channel Bandwidth: 20MHz	192.75mW
	NR Band n5 Channel Bandwidth: 5MHz	65.77mW
	NR Band n5 Channel Bandwidth: 10MHz	66.22mW
	NR Band n5 Channel Bandwidth: 15MHz	67.30 mW
	NR Band n5 Channel Bandwidth: 20MHz	67.61mW
	NR Band n66 Channel Bandwidth: 5MHz	162.18mW

5G SA MAX. EIRP /ERP POWER	NR Band n66 Channel Bandwidth: 10MHz	158.49mW
	NR Band n66 Channel Bandwidth: 15MHz	157.04mW
	NR Band n66 Channel Bandwidth: 20MHz	162.18mW
	NR Band n66 Channel Bandwidth: 25MHz	160.69mW
	NR Band n66 Channel Bandwidth: 30MHz	164.06mW
	NR Band n66 Channel Bandwidth: 40MHz	167.11mW
	NR Band 77(Part27Q) Channel Bandwidth: 10MHz	233.35mW
	NR Band 77(Part27Q) Channel Bandwidth: 15MHz	237.68mW
	NR Band 77(Part27Q) Channel Bandwidth: 20MHz	234.42mW
	NR Band 77(Part27Q) Channel Bandwidth: 30MHz	236.59mW
	NR Band 77(Part27Q) Channel Bandwidth: 40MHz	235.50mW
	NR Band 77(Part27Q) Channel Bandwidth: 50MHz	235.50mW
	NR Band 77(Part27Q) Channel Bandwidth: 60MHz	233.88mW
	NR Band 77(Part27Q) Channel Bandwidth: 70MHz	231.74mW
	NR Band 77(Part27Q) Channel Bandwidth: 80MHz	232.81mW

5G SA MAX. EIRP /ERP POWER	NR Band 77(Part27Q) Channel Bandwidth: 90MHz	238.78mW
	NR Band 77(Part27Q) Channel Bandwidth: 100MHz	239.88mW
	NR Band 77(Part27Q)(HPUE) Channel Bandwidth: 10MHz	467.74mW
	NR Band 77(Part27Q) (HPUE) Channel Bandwidth: 15MHz	469.89mW
	NR Band 77(Part27Q) (HPUE) Channel Bandwidth: 20MHz	465.59mW
	NR Band 77(Part27Q) (HPUE) Channel Bandwidth: 30MHz	473.15mW
	NR Band 77(Part27Q) (HPUE) Channel Bandwidth: 40MHz	474.24mW
	NR Band 77(Part27Q) (HPUE) Channel Bandwidth: 50MHz	475.34mW
	NR Band 77(Part27Q) (HPUE) Channel Bandwidth: 60MHz	473.15mW
	NR Band 77(Part27Q) (HPUE) Channel Bandwidth: 70MHz	467.74mW
	NR Band 77(Part27Q) (HPUE) Channel Bandwidth: 80MHz	467.74mW
	NR Band 77(Part27Q) (HPUE) Channel Bandwidth: 90MHz	476.43mW
	NR Band 77(Part27Q) (HPUE) Channel Bandwidth: 100MHz	478.63mW

5G SA MAX. EIRP /ERP POWER	NR Band 77(Part27O) Channel Bandwidth: 10MHz	277.33mW
	NR Band 77(Part27O) Channel Bandwidth: 15MHz	276.69mW
	NR Band 77(Part27O) Channel Bandwidth: 20MHz	281.19mW
	NR Band 77(Part27O) Channel Bandwidth: 30MHz	285.10mW
	NR Band 77(Part27O) Channel Bandwidth: 40MHz	285.10mW
	NR Band 77(Part27O) Channel Bandwidth: 50MHz	280.54mW
	NR Band 77(Part27O) Channel Bandwidth: 60MHz	279.25mW
	NR Band 77(Part27O) Channel Bandwidth: 70MHz	276.06mW
	NR Band 77(Part27O) Channel Bandwidth: 80MHz	284.45mW
	NR Band 77(Part27O) Channel Bandwidth: 90MHz	283.79mW
	NR Band 77(Part27O) Channel Bandwidth: 100MHz	286.42mW
	NR Band 77(Part27O) (HPUE) Channel Bandwidth: 10MHz	566.24mW
	NR Band 77(Part27O) (HPUE) Channel Bandwidth: 15MHz	554.63mW
	NR Band 77(Part27O) (HPUE) Channel Bandwidth: 20MHz	564.94mW
	NR Band 77(Part27O) (HPUE) Channel Bandwidth: 30MHz	561.05mW

5G SA MAX. EIRP /ERP POWER	NR Band 77(Part27O) (HPUE) Channel Bandwidth: 40MHz	554.63mW
	NR Band 77(Part27O) (HPUE) Channel Bandwidth: 50MHz	553.35mW
	NR Band 77(Part27O) (HPUE) Channel Bandwidth: 60MHz	562.34mW
	NR Band 77(Part27O) (HPUE) Channel Bandwidth: 70MHz	558.47mW
	NR Band 77(Part27O) (HPUE) Channel Bandwidth: 80MHz	561.05mW
	NR Band 77(Part27O) (HPUE) Channel Bandwidth: 90MHz	563.64mW
	NR Band 77(Part27O) (HPUE) Channel Bandwidth: 100MHz	572.80mW
ANTENNA TYPE*	5G SA PIFA Antenna with -0.76dBi gain for NR Band n2 PIFA Antenna with -3.19 dBi gain for NR Band n5 PIFA Antenna with -1.31dBi gain for NR Band n66 PIFA Antenna with 0.62 dBi gain for NR Band n77	
HW VERSION*	V1.0	
SW VERSION*	000T_0_310	
I/O PORTS*	Refer to user's manual	
CABLE SUPPLIED*	USB cable: non-shielded cable, with w/o ferrite core, 1.0meter	
EXTREME TEMPERATURE*	-10℃ ~ 55℃	
EXTREME VOLTAGE*	3.6V ~ 4.5V	

NOTE:

1. *Since the above data and/or information is provided by the client relevant results or conclusions of this report are only made for these data and/or information , Test Lab is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.

2. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

3. The EUT incorporates a SISO function. Physically, the EUT provides one completed transmitter and four receiver.

MODULATION MODE	TX FUNCTION
5G NR	1TX/1RX

4. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
5. Max ERP/EIRP is according to Max conducted power calculate for SA.

6. The differences between the sample 1 and sample 2 as Listings below, others are the same. And only the worst case was shown in the test report.

Raptor 5G(H1702V)

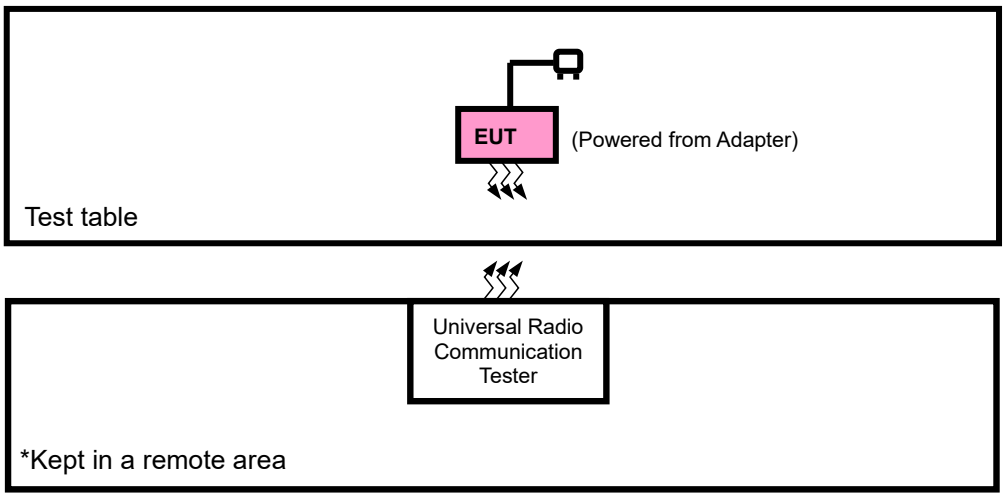
Object	**Sample 1** **1st source**		**Sample 2** **2nd source**	
	Specifications	**Supplier**	**Specifications**	**Supplier**
Display	Y92232	DZX	TD-TCHJ6615-5D	CDOT
Memory	LPDDR4X 6GB FLXC4006G-49	Longsys	BWCC4X32N2A-48G-X	Biwin
	128GB eMMC5.1 MEMDNN128G-M1D03	Longsys	MEMDNN128G-M1D03	Biwin
Motor	C0830H-C138ZN-021	KunWang	CY0830-05-FPC-182	Chaoying
Mic	SM2718B381YR2-01	Rayking	S150B381-155	Goertek
Charger IC	UPM6720	Unisemi	SC8541CFFR	Southchip

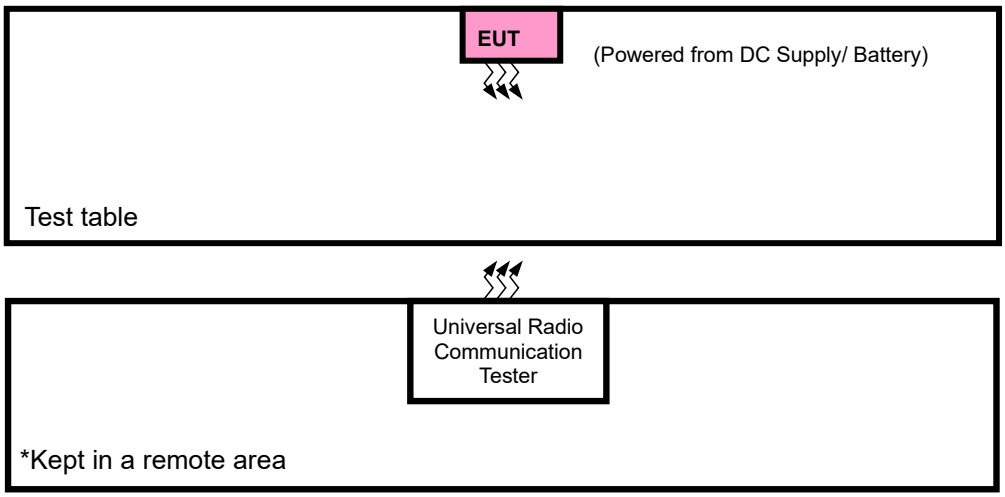
7. List of Accessory:

ACCESSORIES	BRAND	MANUFACTURER	MODEL	SPECIFICATION
Battery	HMD	HuiZhou GanFeng LiEnergy Battery Technology Co., Ltd.	HBA-5033AA	Capacity：3.87Vdc, 4900mAh
USB Cable	Saibao	Saibao (Jiangxi) Industry Co.,Ltd.	SZN-A047A	Signal Line,1.0meter

2.2 CONFIGURATION OF SYSTEM UNDER TEST

FOR RADIATION EMISSION TEST





2.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Adapter	N/A	N/A	N/A	N/A
2	DC Source	HYELEC	HY3010B	551016	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	USB Line: Shielded, Detachable 1.0m;
2	DC Line: Unshielded, Detachable, 1.0m;

2.4 TEST ITEM AND TEST CONFIGURATION

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports The worst case was found when positioned on Y-plane for EIRP and X-axis for radiated emission. Following channel(s) was (were) selected for the final test as listed below:

EUT CONFIGURE MODE	DESCRIPTION
A	EUT + Adapter + USB Cable with 5G NR link
B	EUT + DC Supply / Battery with 5G NR link

5G NR n2 MODE (SA_n2)

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CP-OFDM CHANNEL	AVAILABLE DFT-S-OFDM CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(DFT-S-OFDM) (INCLUDE CP-OFDM)
A	EIRP	370500 to 381500	370500 to 381500	Low, Middle, High	5MHz	QPSK	1RB/ 0RB Offset
		371000 to 381000	371000 to 381000	Low, Middle, High	10MHz	QPSK	1RB/ 0RB Offset
		371500 to 380500	371500 to 380500	Low, Middle, High	15MHz	QPSK	1RB/ 0RB Offset
		372000 to 513500	372000 to 513500	Low, Middle, High	20MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	1RB/ 0RB Offset
B	FREQUENCY STABILITY	372000 to 513500	372000 to 513500	Middle	20MHz	QPSK	Outer_ Full
A	PEAK TO AVERAGE RATIO	372000 to 513500	372000 to 513500	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
							Outer_ Full
A	OCCUPIED BANDWIDTH	370500 to 381500	370500 to 381500	Middle	5MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		371000 to 381000	371000 to 381000	Middle	10MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		371500 to 380500	371500 to 380500	Middle	15MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		372000 to 513500	372000 to 513500	Middle	20MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
A	BAND EDGE	370500 to 381500	370500 to 381500	Low	5MHz	QPSK	1RB/ 0RB Offset
							Outer_ Full
				High	5MHz	QPSK	1RB/ 24RB Offset
							Outer_ Full
		371000 to 381000	371000 to 381000	Low	10MHz	QPSK	1RB/ 0RB Offset
							Outer_ Full
				High	10MHz	QPSK	1RB/ 51RB Offset
							Outer_ Full
		371500 to 380500	371500 to 380500	Low	15MHz	QPSK	1RB/ 0RB Offset
							1RB/ 78RB Offset
				High	15MHz	QPSK	Outer_ Full
							1RB/ 0RB Offset
		372000 to 513500	372000 to 513500	Low	20MHz	QPSK	1RB/ 0RB Offset
							Outer_ Full
				High	20MHz	QPSK	1RB/ 105RB Offset
							Outer_ Full

A	CONDUCTED EMISSION	370500 to 381500	370500 to 381500	Low, Middle, High	5MHz	QPSK	1RB/ 0RB Offset
		371000 to 381000	371000 to 381000	Low, Middle, High	10MHz	QPSK	1RB/ 0RB Offset
		371500 to 380500	371500 to 380500	Low, Middle, High	15MHz	QPSK	1RB/ 0RB Offset
		372000 to 513500	372000 to 513500	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
A	RADIATED EMISSION	370500 to 381500	370500 to 381500	Middle,	5MHz	QPSK	1RB/ 0RB Offset
		371000 to 381000	371000 to 381000	Low, Middle, High	10MHz	QPSK	1RB/ 0RB Offset
		371500 to 380500	371500 to 380500	Middle,	15MHz	QPSK	1RB/ 0RB Offset
		372000 to 513500	372000 to 513500	Middle,	20MHz	QPSK	1RB/ 0RB Offset

Note: 1.This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

2. The EIRP calculate presented in the report from worst SA n2.

5G NR n5 MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CP-OFDM CHANNEL	AVAILABLE DFT-S-OFDM CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(DFT-S-OFDM) (INCLUDE CP-OFDM)
A	ERP	165300 to 169300	165300 to 169300	Low, Middle, High	5MHz	QPSK	1RB/ 0RB Offset
		165800 to 168800	165800 to 168800	Low, Middle, High	10MHz	QPSK	1RB/ 0RB Offset
		166300 to 168300	166300 to 168300	Low, Middle, High	15MHz	QPSK	1RB/ 0RB Offset
		166800 to 167800	166800 to 167800	Low, Middle, High	20MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	1RB/ 0RB Offset
B	FREQUENCY STABILITY	166800 to 167800	166800 to 167800	Middle	20MHz	QPSK	Outer_ Full
A	PEAK TO AVERAGE RATIO	166800 to 167800	166800 to 167800	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset Outer_ Full
A	OCCUPIED BANDWIDTH	165300 to 169300	165300 to 169300	Middle	5MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		165800 to 168800	165800 to 168800	Middle	10MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		166300 to 168300	166300 to 168300	Middle	15MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		166800 to 167800	166800 to 167800	Middle	20MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
A	BAND EDGE	165300 to 169300	165300 to 169300	Low	5MHz	QPSK	1RB/ 0RB Offset

							Outer_ Full
				High	5MHz	QPSK	1RB/ 24RB Offset
							Outer_ Full
		165800 to 168800	165800 to 168800	Low	10MHz	QPSK	1RB/ 0RB Offset
							Outer_ Full
				High	10MHz	QPSK	1RB/ 51RB Offset
							Outer_ Full
		166800 to 167800	166800 to 167800	Low	20MHz	QPSK	1RB/ 0RB Offset
							Outer_ Full
				High	20MHz	QPSK	1RB/ 105RB Offset
							Outer_ Full
A	CONDUCTED EMISSION	165300 to 169300	165300 to 169300	Low, Middle, High	5MHz	QPSK	1RB/ 0RB Offset
		165800 to 168800	165800 to 168800	Low, Middle, High	10MHz	QPSK	1RB/ 0RB Offset
		166800 to 167800	166800 to 167800	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
A	RADIATED EMISSION	165300 to 169300	165300 to 169300	Low, Middle, High	5MHz	QPSK	1RB/ 0RB Offset
		165800 to 168800	165800 to 168800	Middle,	10MHz	QPSK	1RB/ 0RB Offset
		166300 to 168300	166300 to 168300	Middle,	15MHz	QPSK	1RB/ 0RB Offset
		166800 to 167800	166800 to 167800	Middle,	20MHz	QPSK	1RB/ 0RB Offset

Note: 1.This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

2. The test data presented in the report from worst SA _n5.

5G NR n66 MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CP-OFDM CHANNEL	AVAILABLE DFT-S-OFDM CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(DFT-S-OFDM) (INCLUDE CP-OFDM)
A	EIRP	342500 to 355500	342500 to 355500	Low, Middle, High	5MHz	QPSK	1RB/ 0RB Offset
		343000 to 355000	343000 to 355000	Low, Middle, High	10MHz	QPSK	1RB/ 0RB Offset
		343500 to 354500	343500 to 354500	Low, Middle, High	15MHz	QPSK	1RB/ 0RB Offset

		344000 to 354000	344000 to 354000	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
		346000 to 352000	346000 to 352000	Low, Middle, High	40MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	1RB/ 0RB Offset
A	FREQUENCY STABILITY	346000 to 352000	346000 to 352000	Middle	40MHz	QPSK	Outer_ Full
A	PEAK TO AVERAGE RATIO	346000 to 352000	346000 to 352000	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
							Outer_ Full
A	OCCUPIED BANDWIDTH	342500 to 355500	342500 to 355500	Middle	5MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		343000 to 355000	343000 to 355000	Middle	10MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		343500 to 354500	343500 to 354500	Middle	15MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		344000 to 354000	344000 to 354000	Middle	20MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		346000 to 352000	346000 to 352000	Middle	40MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
A	BAND EDGE	502008 to 535998	502008 to 535998	Low	5MHz	QPSK	1RB/ 0RB Offset
							Outer_ Full
				High	5MHz	QPSK	1RB/ 24RB Offset
							Outer_ Full
		505008 to 532998	505008 to 532998	Low	20MHz	QPSK	1RB/ 0RB Offset
							Outer_ Full
				High	20MHz	QPSK	1RB/ 105RB Offset
							Outer_ Full
		508002 to 529998	508002 to 529998	Low	40MHz	QPSK	1RB/ 0RB Offset
							Outer_ Full
				High	40MHz	QPSK	1RB/ 215RB Offset
							Outer_ Full
A	CONDUCTED EMISSION	342500 to 355500	342500 to 355500	Low, Middle, High	5MHz	QPSK	1RB/ 0RB Offset
		344000 to 354000	344000 to 354000	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
		346000 to 352000	346000 to 352000	Low, Middle, High	40MHz	QPSK	1RB/ 0RB Offset
A	RADIATED EMISSION	342500 to 355500	342500 to 355500	Middle	5MHz	QPSK	1RB/ 0RB Offset
		343000 to 355000	343000 to 355000	Low, Middle, High	10MHz	QPSK	1RB/ 0RB Offset
		343500 to 354500	343500 to 354500	Middle	15MHz	QPSK	1RB/ 0RB Offset
		344000 to 354000	344000 to 354000	Middle	20MHz	QPSK	1RB/ 0RB Offset
		346000 to 352000	346000 to 352000	Middle	40MHz	QPSK	1RB/ 0RB Offset

Note: 1.This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

2. The test data presented in the report from worst SA_n66.

5G NR n77(Part27Q)

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CP-OFDM CHANNEL	AVAILABLE DFT-S-OFDM CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(DFT-S-OFDM) (INCLUDE CP-OFDM)
A	EIRP	630334 to 636332	630334 to 636332	Low, Middle, High	10MHz	QPSK	1RB/ 0RB Offset
		630500 to 636166	630500 to 636166	Low, Middle, High	15MHz	QPSK	1RB/ 0RB Offset
		630668 to 636000	630668 to 636000	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
		631000 to 635666	631000 to 635666	Low, Middle, High	30MHz	QPSK	1RB/ 0RB Offset
		631334 to 635332	631334 to 635332	Low, Middle, High	40MHz	QPSK	1RB/ 0RB Offset
		631668 to 635000	631668 to 635000	Low, Middle, High	50MHz	QPSK	1RB/ 0RB Offset
		632000 to 634666	632000 to 634666	Low, Middle, High	60MHz	QPSK	1RB/ 0RB Offset
		632334 to 634332	632334 to 634332	Low, Middle, High	70MHz	QPSK	1RB/ 0RB Offset
		632668 to 634000	632668 to 634000	Low, Middle, High	80MHz	QPSK	1RB/ 0RB Offset
		633000 to 633666	633000 to 633666	Low, Middle, High	90MHz	QPSK	1RB/ 0RB Offset
		633334	633334	Middle	100MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	1RB/ 0RB Offset
A	FREQUENCY STABILITY	630668 to 636000	630668 to 636000	Middle	20MHz	QPSK	Outer_ Full
A	PEAK TO AVERAGE RATIO	630668 to 636000	630668 to 636000	Low, Middle, High	20MHz	QPSK	Outer_ Full
A	OCCUPIED BANDWIDTH	630334 to 636332	630334 to 636332	Middle	10MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		630500 to 636166	630500 to 636166	Middle	15MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		630668 to 636000	630668 to 636000	Middle	20MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		631000 to 635666	631000 to 635666	Middle	30MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		631334 to 635332	631334 to 635332	Middle	40MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		631668 to 635000	631668 to 635000	Middle	50MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		632000 to 634666	632000 to 634666	Middle	60MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		632334 to 634332	632334 to 634332	Middle	70MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		632668 to 634000	632668 to 634000	Middle	80MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		633000 to 633666	633000 to 633666	Middle	90MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full

		633334	633334	Low, Middle, High	100MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
A	BAND EDGE	630668 to 636000	630668 to 636000	Low	20MHz	QPSK	1RB/ 0RB Offset
							Outer_ Full
				High	20MHz	QPSK	1RB/ 50RB Offset
							Outer_ Full
		632000 to 634666	632000 to 634666	Low	60MHz	QPSK	1RB/ 0RB Offset
							Outer_ Full
				High	60MHz	QPSK	1RB/ 161RB Offset
							Outer_ Full
		633334	633334	Low	100MHz	QPSK	1RB/ 0RB Offset
							Outer_ Full
				High	100MHz	QPSK	1RB/ 272RB Offset
							Outer_ Full
A	CONDUCTED EMISSION	630668 to 636000	630668 to 636000	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
		632000 to 634666	632000 to 634666	Low, Middle, High	60MHz	QPSK	1RB/ 0RB Offset
		633334	633334	Low, Middle, High	100MHz	QPSK	1RB/ 0RB Offset
A	RADIATED EMISSION	630334 to 636332	630334 to 636332	Low, Middle, High	10MHz	QPSK	1RB/ 0RB Offset
		630500 to 636166	630500 to 636166	Middle	15MHz	QPSK	1RB/ 0RB Offset
		630668 to 636000	630668 to 636000	Middle	20MHz	QPSK	1RB/ 0RB Offset
		631000 to 635666	631000 to 635666	Middle	30MHz	QPSK	1RB/ 0RB Offset
		631334 to 635332	631334 to 635332	Middle	40MHz	QPSK	1RB/ 0RB Offset
		631668 to 635000	631668 to 635000	Middle	50MHz	QPSK	1RB/ 0RB Offset
		632000 to 634666	632000 to 634666	Middle	60MHz	QPSK	1RB/ 0RB Offset
		632334 to 634332	632334 to 634332	Middle	70MHz	QPSK	1RB/ 0RB Offset
		632668 to 634000	632668 to 634000	Middle	80MHz	QPSK	1RB/ 0RB Offset
		633000 to 633666	633000 to 633666	Middle	90MHz	QPSK	1RB/ 0RB Offset
		633334	633334	Middle	100MHz	QPSK	1RB/ 0RB Offset

Note: 1.This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

2. The EIRP calculate presented in the report from worst SA n77(Part27Q).

5G NR n77(Part27O)

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CP-OFDM CHANNEL	AVAILABLE DFT-S-OFDM CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(DFT-S-OFDM) (INCLUDE CP-OFDM)
A	EIRP	647000 to 665000	647000 to 665000	Low, Middle, High	10MHz	QPSK	1RB/ 0RB Offset
		647168 to 664832	647168 to 664832	Low, Middle, High	15MHz	QPSK	1RB/ 0RB Offset
		647334 to 664666	647334 to 664666	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
		647668 to 664332	647668 to 664332	Low, Middle, High	30MHz	QPSK	1RB/ 0RB Offset
		648000 to 664000	648000 to 664000	Low, Middle, High	40MHz	QPSK	1RB/ 0RB Offset
		648334 to 663666	648334 to 663666	Low, Middle, High	50MHz	QPSK	1RB/ 0RB Offset
		648668 to 663332	648668 to 663332	Low, Middle, High	60MHz	QPSK	1RB/ 0RB Offset
		649000 to 663000	649000 to 663000	Low, Middle, High	70MHz	QPSK	1RB/ 0RB Offset
		649334 to 662666	649334 to 662666	Low, Middle, High	80MHz	QPSK	1RB/ 0RB Offset
		649668 to 662332	649668 to 662332	Low, Middle, High	90MHz	QPSK	1RB/ 0RB Offset
		650000 to 662000	650000 to 662000	Low, Middle, High	100MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	1RB/ 0RB Offset
A	FREQUENCY STABILITY	647334 to 664666	647334 to 664666	Middle	20MHz	QPSK	Outer_ Full
A	PEAK TO AVERAGE RATIO	647334 to 664666	647334 to 664666	Low, Middle, High	20MHz	QPSK	Outer_ Full
A	OCCUPIED BANDWIDTH	647000 to 665000	647000 to 665000	Middle	10MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		647168 to 664832	647168 to 664832	Middle	15MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		647334 to 664666	647334 to 664666	Middle	20MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		647668 to 664332	647668 to 664332	Middle	30MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		648000 to 664000	648000 to 664000	Middle	40MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		648334 to 663666	648334 to 663666	Middle	50MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		648668 to 663332	648668 to 663332	Middle	60MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		649000 to 663000	649000 to 663000	Middle	70MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		649334 to 662666	649334 to 662666	Middle	80MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		649668 to 662332	649668 to 662332	Middle	90MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		650000 to 662000	650000 to 662000	Low, Middle, High	100MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
A	BAND EDGE	647334 to 664666	647334 to 664666	Low	20MHz	QPSK	1RB/ 0RB Offset
							Outer_ Full

				High	20MHz	QPSK	1RB/ 50RB Offset
							Outer_ Full
		648668 to 663332	648668 to 663332	Low	60MHz	QPSK	1RB/ 0RB Offset
							Outer_ Full
				High	60MHz	QPSK	1RB/ 161RB Offset
							Outer_ Full
		650000 to 662000	650000 to 662000	Low	100MHz	QPSK	1RB/ 0RB Offset
							Outer_ Full
				High	100MHz	QPSK	1RB/ 272RB Offset
							Outer_ Full
A	CONDUCTED EMISSION	647334 to 664666	647334 to 664666	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
		648668 to 663332	648668 to 663332	Low, Middle, High	60MHz	QPSK	1RB/ 0RB Offset
		650000 to 662000	650000 to 662000	Low, Middle, High	100MHz	QPSK	1RB/ 0RB Offset
A	RADIATED EMISSION	647000 to 665000	647000 to 665000	Low, Middle, High	10MHz	QPSK	1RB/ 0RB Offset
		647168 to 664832	647168 to 664832	Middle	15MHz	QPSK	1RB/ 0RB Offset
		647334 to 664666	647334 to 664666	Middle	20MHz	QPSK	1RB/ 0RB Offset
		647668 to 664332	647668 to 664332	Middle	30MHz	QPSK	1RB/ 0RB Offset
		648000 to 664000	648000 to 664000	Middle	40MHz	QPSK	1RB/ 0RB Offset
		648334 to 663666	648334 to 663666	Middle	50MHz	QPSK	1RB/ 0RB Offset
		648668 to 663332	648668 to 663332	Middle	60MHz	QPSK	1RB/ 0RB Offset
		649000 to 663000	649000 to 663000	Middle	70MHz	QPSK	1RB/ 0RB Offset
		649334 to 662666	649334 to 662666	Middle	80MHz	QPSK	1RB/ 0RB Offset
		649668 to 662332	649668 to 662332	Middle	90MHz	QPSK	1RB/ 0RB Offset
		650000 to 662000	650000 to 662000	Middle	100MHz	QPSK	1RB/ 0RB Offset

Note: 1.This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

2. The test data presented in the report from worst SA_n77(Part 27O).

TEST CONDITION:

TEST ITEM	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
ERP	23deg. C, 70%RH	DC 5V By Adapter	Hanwen Xu
FREQUENCY STABILITY	23deg. C, 70%RH	DC 3.6V/ 3.87V/ 4.45V By DC Source	Hanwen Xu
OCCUPIED BANDWIDTH	23deg. C, 70%RH	DC 5V By Adapter	Hanwen Xu
BAND EDGE	23deg. C, 70%RH	DC 5V By Adapter	Hanwen Xu
CONDCUDETED EMISSION	23deg. C, 70%RH	DC 5V By Adapter	Hanwen Xu
RADIATED EMISSION	23deg. C, 70%RH	DC 5V By Adapter	Hanwen Xu
PEAK TO AVERAGE RATIO	23deg. C, 70%RH	DC 5V By Adapter	Hanwen Xu

2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC 47 CFR Part 2

FCC 47 CFR Part 22/24/27

KDB 971168 D01 Power Meas License Digital Systems v03r01

ANSI/TIA/EIA-603-D

ANSI/TIA/EIA-603-E

ANSI C63.26-2015

NOTE: All test items have been performed and recorded as per the above standards.

3 TEST TYPES AND RESULTS

3.1 OUTPUT POWER MEASUREMENT

3.1.1 LIMITS OF OUTPUT POWER MEASUREMENT

Mobile / Portable station are limited to 7 watts e.r.p. (n5)

Mobile and portable stations are limited to 2 watts EIRP. (n2)

Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP(n66)

According to the specific rule Part 27.50(j)(4) and Part 27.50(k)(3) ,Mobile and portable stations are limited to 1 Watt EIRP. Mobile and portable stations operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.(n77)

3.1.2 TEST PROCEDURES

EIRP / ERP MEASUREMENT:

Per KDB 971168 D01 Power Meas License Digital Systems v03r01 or subclause 5.2.5.5 of ANSI C63.26-2015, the relevant equation for determing the ERP or EIRP from the conducted RF output power measured using the guidance provided above is:

ERP or EIRP = $P_{Meas} + G_T - L_C$

Where:

ERP or EIRP = effective radiated power or equivalent isotropically radiated power, respectively

(expressed in the same units as P_{Meas}, typically dBW or dBm);

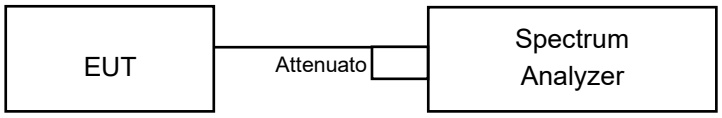
P_{Meas} = measured transmitter output power or PSD, in dBm or dBW;

G_T = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

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

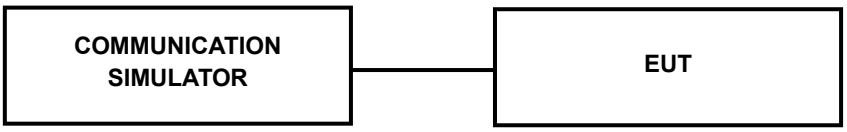
CONDUCTED POWER MEASUREMENT:

a. The EUT was set up for the maximum power with LTE link data modulation and link up with simulator.
b. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.



3.1.3 TEST SETUP

CONDUCTED POWER MEASUREMENT:



1. Connect the DUT transmitter output to the spectrum analyzer via coaxial cable while ensuring proper impedance matching.
2. Time the analyzer to the nominal center frequency of the emission bandwidth (EBW).
3. Set the span to twice the nominal EBW (span = 2 x EBW).
4. Set the resolution bandwidth (RBW) to approximately 1% of EBW.
5. Set the video bandwidth (VBW) to ≧ 3 x RBW
6. Select the average power (RMS) display detector.
7. Set the number of measurement points to ≧1001.
8. Use auto-coupled sweep time.
9. Perform measurement over an interval of time when the transmission is continuous and at its maximum power level.
10. Utilize trace averaging over 100 traces in the power averaging mode.
11. Use the Band/Channel Power function to determine the integrated power over the full EBW.
12. Record the band power level.
13. Adjust the recorded level by applying appropriate correction factors for the measurement set-up.
14. Determine the EIRP by adding the effective antenna gain to the adjusted power level.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

3.1.4 TEST RESULTS

CONDUCTED OUTPUT POWER (dBm)

5G SA

N2

n2 (SCS 15 kHz) (Ant1)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		372000	376000	380000
		Frequence (MHz)		1860	1880	1900
20M	DFT-s-OFDM Pi/2 BPSK	1	1	23.44	23.41	23.47
		1	53	23.36	23.37	23.41
		1	104	23.38	23.31	23.35
		50	0	23.47	23.54	23.53
		50	28	23.46	23.46	23.55
		50	56	23.60	23.48	23.53
		100	0	23.48	23.54	23.49
	DFT-s-OFDM QPSK	1	1	23.61	23.55	23.57
		1	53	23.46	23.36	23.43
		1	104	23.11	23.47	23.32
		50	0	22.98	23.01	22.93
		50	28	23.58	23.50	23.44
		50	56	23.04	22.97	22.58
		100	0	22.98	22.95	22.93
	DFT-s-OFDM 16QAM	1	1	22.93	22.93	23.19
	DFT-s-OFDM 64QAM	1	1	21.63	21.65	21.06
	DFT-s-OFDM 256QAM	1	1	18.99	19.04	19.06
BW	MCS Index	Channel		371500	376000	380500
		Frequence (MHz)		1857.5	1880	1902.5
15M	DFT-s-OFDM QPSK	1	1	23.58	23.47	23.48
BW	MCS Index	Channel		371000	376000	381000
		Frequence (MHz)		1855	1880	1905
10M	DFT-s-OFDM QPSK	1	1	23.55	23.45	23.44
BW	MCS Index	Channel		370500	376000	381500
		Frequence (MHz)		1852.5	1880	1907.5
5M	DFT-s-OFDM QPSK	1	1	23.57	23.41	23.55

N5

n5 (SCS 15 kHz) (Ant2)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		166800	167300	167800
		Frequence (MHz)		834	836.5	839
20M	DFT-s-OFDM Pi/2 BPSK	1	1	23.42	23.38	23.46
		1	53	23.48	23.51	23.45
		1	104	23.40	23.53	23.41
		50	0	23.51	23.58	23.52
		50	28	23.43	23.55	23.52
		50	56	23.50	23.53	23.56
		100	0	23.47	23.56	23.57
	DFT-s-OFDM QPSK	1	1	23.57	23.64	23.55
		1	53	23.38	23.42	23.48
		1	104	23.41	23.43	23.42
		50	0	23.52	23.58	23.50
		50	28	23.46	23.59	23.49
		50	56	23.53	23.61	23.51
		100	0	23.50	23.57	23.54
	DFT-s-OFDM 16QAM	1	1	23.32	23.43	23.39
	DFT-s-OFDM 64QAM	1	1	21.68	22.15	22.04
	DFT-s-OFDM 256QAM	1	1	19.98	19.53	19.54
BW	MCS Index	Channel		166300	167300	168300
		Frequence (MHz)		831.5	836.5	841.5
15M	DFT-s-OFDM QPSK	1	1	23.49	23.62	23.53
BW	MCS Index	Channel		165800	167300	168800
		Frequence (MHz)		829	836.5	844
10M	DFT-s-OFDM QPSK	1	1	23.50	23.55	23.44
BW	MCS Index	Channel		165300	167300	169300
		Frequence (MHz)		826.5	836.5	846.5
5M	DFT-s-OFDM QPSK	1	1	23.43	23.51	23.52

N66

n66 (SCS 15 kHz) (Ant1)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		346000	349000	352000
		Frequence (MHz)		1730	1745	1760
40M	DFT-s-OFDM Pi/2 BPSK	1	1	23.43	23.44	23.41
		1	108	23.47	23.36	23.37
		1	214	23.42	23.29	23.24
		108	0	23.21	22.80	22.57
		108	54	23.01	22.88	23.51
		108	108	23.12	22.47	22.41
		216	0	23.09	22.50	22.50
	DFT-s-OFDM QPSK	1	1	23.51	23.54	23.33
		1	108	23.47	23.34	23.27
		1	214	23.39	23.31	23.18
		108	0	22.58	22.57	22.43
		108	54	23.25	23.49	23.30
		108	108	22.67	22.57	22.30
		216	0	22.51	22.56	22.35
	DFT-s-OFDM 16QAM	1	1	22.45	22.07	22.63
	DFT-s-OFDM 64QAM	1	1	21.18	20.94	20.53
	DFT-s-OFDM 256QAM	1	1	18.45	18.86	18.43
BW	MCS Index	Channel		345000	349000	353000
		Frequence (MHz)		1725	1745	1765
30M	DFT-s-OFDM QPSK	1	1	23.21	23.36	23.46
BW	MCS Index	Channel		344500	349000	353500
		Frequence (MHz)		1722.5	1745	1767.5
25M	DFT-s-OFDM QPSK	1	1	23.37	23.24	23.15
BW	MCS Index	Channel		344000	349000	354000
		Frequence (MHz)		1720	1745	1770
20M	DFT-s-OFDM QPSK	1	1	23.29	23.41	23.35

BW	MCS Index	Channel		343500	349000	354500
		Frequence (MHz)		1717.5	1745	1772.5
15M	DFT-s-OFDM QPSK	1	1	23.18	23.27	23.17
BW	MCS Index	Channel		343000	349000	355000
		Frequence (MHz)		1715	1745	1775
10M	DFT-s-OFDM QPSK	1	1	23.09	23.22	23.31
BW	MCS Index	Channel		342500	349000	355500
		Frequence (MHz)		1712.5	1745	1777.5
5M	DFT-s-OFDM QPSK	1	1	23.23	23.41	23.36

N77(Part 27Q)PC3

n77 (SCS 30 kHz)_3450~3550MHz (Ant4) for FCC						
BW	MCS Index	RB Size	RB Offset	/	/	/
		Channel		/	633334	/
		Frequence (MHz)		/	3500.01	/
100M	DFT-s-OFDM Pi/2 BPSK	1	1	/	23.10	/
		1	137	/	22.95	/
		1	271	/	22.94	/
		135	0	/	23.07	/
		135	69	/	23.04	/
		135	138	/	23.00	/
		270	0	/	23.03	/
	DFT-s-OFDM QPSK	1	1	/	23.18	/
		1	137	/	22.99	/
		1	271	/	22.98	/
		135	0	/	23.08	/
		135	69	/	23.04	/
		135	138	/	23.10	/
		270	0	/	23.05	/
	DFT-s-OFDM 16QAM	1	1	/	23.07	/
	DFT-s-OFDM 64QAM	1	1	/	22.75	/
	DFT-s-OFDM 256QAM	1	1	/	21.12	/
BW	MCS Index	Channel		633000	633334	633666
		Frequence (MHz)		3495	3500.01	3504.99
90M	DFT-s-OFDM QPSK	1	1	23.09	23.16	23.14
BW	MCS Index	Channel		632668	633334	634000
		Frequence (MHz)		3490.02	3500.01	3510
80M	DFT-s-OFDM QPSK	1	1	23.05	23.05	22.99
BW	MCS Index	Channel		632334	633334	634332
		Frequence (MHz)		3485.01	3500.01	3514.98
70M	DFT-s-OFDM QPSK	1	1	23.03	23.03	23.02
BW	MCS Index	Channel		632000	633334	634666
		Frequence (MHz)		3480	3500.01	3519.99
60M	DFT-s-OFDM QPSK	1	1	23.07	23.02	23.05

BW	MCS Index	Channel		631668	633334	635000
		Frequence (MHz)		3475.02	3500.01	3525
50M	DFT-s-OFDM QPSK	1	1	23.03	23.02	23.10
BW	MCS Index	Channel		631334	633334	635332
		Frequence (MHz)		3470.01	3500.01	3529.98
40M	DFT-s-OFDM QPSK	1	1	23.00	23.10	23.02
BW	MCS Index	Channel		631000	633334	635666
		Frequence (MHz)		3465	3500.01	3534.99
30M	DFT-s-OFDM QPSK	1	1	22.96	23.07	23.12
BW	MCS Index	Channel		630668	633334	636000
		Frequence (MHz)		3460.02	3500.01	3540
20M	DFT-s-OFDM QPSK	1	1	22.96	23.07	23.08
BW	MCS Index	Channel		630500	633334	636166
		Frequence (MHz)		3457.5	3500.01	3542.49
15M	DFT-s-OFDM QPSK	1	1	23.01	23.14	22.99
BW	MCS Index	Channel		630334	633334	636332
		Frequence (MHz)		3455.01	3500.01	3544.98
10M	DFT-s-OFDM QPSK	1	1	22.94	23.03	23.06

PC2_n77 (SCS 30 kHz)_3450~3550MHz (Ant4) for FCC						
BW	MCS Index	RB Size	RB Offset	/	Mid	/
		Channel		/	633334	/
		Frequence (MHz)		/	3500.01	/
100M	DFT-s-OFDM Pi/2 BPSK	1	1	/	26.13	/
		1	137	/	25.89	/
		1	271	/	25.96	/
		135	0	/	25.50	/
		135	69	/	25.97	/
		135	138	/	25.45	/
		270	0	/	25.49	/
	DFT-s-OFDM QPSK	1	1	/	26.18	/
		1	137	/	25.82	/
		1	271	/	25.91	/
		135	0	/	25.11	/
		135	69	/	25.95	/
		135	138	/	24.92	/
		270	0	/	25.05	/
	DFT-s-OFDM 16QAM	1	1	/	24.98	/
	DFT-s-OFDM 64QAM	1	1	/	23.49	/
	DFT-s-OFDM 256QAM	1	1	/	21.44	/
BW	MCS Index	Channel		633000	633334	633666
		Frequence (MHz)		3495	3500.01	3504.99
90M	DFT-s-OFDM QPSK	1	1	26.16	26.14	26.12
BW	MCS Index	Channel		632668	633334	634000
		Frequence (MHz)		3490.02	3500.01	3510
80M	DFT-s-OFDM QPSK	1	1	26.08	26.07	26.02
BW	MCS Index	Channel		632334	633334	634332
		Frequence (MHz)		3485.01	3500.01	3514.98
70M	DFT-s-OFDM QPSK	1	1	26.02	26.08	26.07
BW	MCS Index	Channel		632000	633334	634666
		Frequence (MHz)		3480	3500.01	3519.99
60M	DFT-s-OFDM QPSK	1	1	26.10	26.13	25.99

BW	MCS Index	Channel		631668	633334	635000
		Frequence (MHz)		3475.02	3500.01	3525
50M	DFT-s-OFDM QPSK	1	1	26.15	26.12	26.07
BW	MCS Index	Channel		631334	633334	635332
		Frequence (MHz)		3470.01	3500.01	3529.98
40M	DFT-s-OFDM QPSK	1	1	26.14	26.13	26.02
BW	MCS Index	Channel		631000	633334	635666
		Frequence (MHz)		3465	3500.01	3534.99
30M	DFT-s-OFDM QPSK	1	1	26.13	26.12	26.00
BW	MCS Index	Channel		630668	633334	636000
		Frequence (MHz)		3460.02	3500.01	3540
20M	DFT-s-OFDM QPSK	1	1	26.06	26.03	26.06
BW	MCS Index	Channel		630500	633334	636166
		Frequence (MHz)		3457.5	3500.01	3542.49
15M	DFT-s-OFDM QPSK	1	1	26.01	26.10	26.02
BW	MCS Index	Channel		630334	633334	636332
		Frequence (MHz)		3455.01	3500.01	3544.98
10M	DFT-s-OFDM QPSK	1	1	26.04	26.08	25.99

N77(Part 27O)PC3

n77 (SCS 30 kHz)_3700~3980MHz (Ant4) for FCC						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		650000	656000	662000
		Frequence (MHz)		3750	3840	3930
100M	DFT-s-OFDM Pi/2 BPSK	1	1	23.28	23.75	23.84
		1	137	23.25	23.29	23.76
		1	271	23.31	23.55	23.91
		135	0	23.26	23.39	23.70
		135	69	23.29	23.47	23.75
		135	138	23.34	23.42	23.83
		270	0	23.28	23.38	23.74
	DFT-s-OFDM QPSK	1	1	23.35	23.92	23.95
		1	137	23.25	23.75	23.72
		1	271	23.27	23.80	23.82
		135	0	23.23	23.70	23.74
		135	69	23.28	23.69	23.71
		135	138	23.29	23.77	**23.82**
		270	0	23.24	23.73	23.77
	DFT-s-OFDM 16QAM	1	1	23.26	23.43	23.37
	DFT-s-OFDM 64QAM	1	1	23.27	23.25	23.30
	DFT-s-OFDM 256QAM	1	1	21.88	21.48	21.51
BW	MCS Index	Channel		649668	656000	662332
		Frequence (MHz)		3745.02	3840	3934.98
90M	DFT-s-OFDM QPSK	1	1	23.34	23.90	23.91
BW	MCS Index	Channel		649334	656000	662666
		Frequence (MHz)		3740.01	3840	3939.99
80M	DFT-s-OFDM QPSK	1	1	23.32	23.85	23.92
BW	MCS Index	Channel		649000	656000	663000
		Frequence (MHz)		3735	3840	3945
70M	DFT-s-OFDM QPSK	1	1	23.25	23.76	23.79

BW	MCS Index	Channel		648668	656000	663332
		Frequence (MHz)		3730.02	3840	3949.98
60M	DFT-s-OFDM QPSK	1	1	23.28	23.76	23.84
BW	MCS Index	Channel		648334	656000	663666
		Frequence (MHz)		3725.01	3840	3954.99
50M	DFT-s-OFDM QPSK	1	1	23.31	23.80	23.86
BW	MCS Index	Channel		648000	656000	664000
		Frequence (MHz)		3720	3840	3960
40M	DFT-s-OFDM QPSK	1	1	23.19	23.88	23.93
BW	MCS Index	Channel		647668	656000	664332
		Frequence (MHz)		3715.02	3840	3964.98
30M	DFT-s-OFDM QPSK	1	1	23.24	23.83	23.93
BW	MCS Index	Channel		647334	656000	664666
		Frequence (MHz)		3710.01	3840	3969.99
20M	DFT-s-OFDM QPSK	1	1	23.31	23.78	23.87
BW	MCS Index	Channel		647168	656000	664832
		Frequence (MHz)		3707.52	3840	3972.48
15M	DFT-s-OFDM QPSK	1	1	23.25	23.75	23.80
BW	MCS Index	Channel		647000	656000	665000
		Frequence (MHz)		3705	3840	3975
10M	DFT-s-OFDM QPSK	1	1	23.20	23.77	23.81

N77(Part 27O)PC2

PC2_n77 (SCS 30 kHz)_3700~3980MHz (Ant4) for FCC						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		650000	656000	662000
		Frequence (MHz)		3750	3840	3930
100M	DFT-s-OFDM Pi/2 BPSK	1	1	26.43	26.51	26.82
		1	137	26.28	26.36	26.79
		1	271	26.40	26.61	26.76
		135	0	25.80	25.83	26.22
		135	69	26.27	26.32	26.60
		135	138	25.93	26.00	26.41
		270	0	25.88	25.97	26.30
	DFT-s-OFDM QPSK	1	1	26.50	26.67	26.96
		1	137	26.33	26.41	26.75
		1	271	26.40	26.61	26.95
		135	0	25.41	25.57	25.73
		135	69	26.31	26.40	**26.78**
		135	138	25.43	25.68	25.90
		270	0	25.32	25.46	25.78
	DFT-s-OFDM 16QAM	1	1	25.23	25.53	25.50
	DFT-s-OFDM 64QAM	1	1	23.48	23.49	23.81
	DFT-s-OFDM 256QAM	1	1	21.20	21.36	21.53
BW	MCS Index	Channel		649668	656000	662332
		Frequence (MHz)		3745.02	3840	3934.98
90M	DFT-s-OFDM QPSK	1	1	26.37	26.62	26.89
BW	MCS Index	Channel		649334	656000	662666
		Frequence (MHz)		3740.01	3840	3939.99
80M	DFT-s-OFDM QPSK	1	1	26.48	26.58	26.87
BW	MCS Index	Channel		649000	656000	663000
		Frequence (MHz)		3735	3840	3945
70M	DFT-s-OFDM QPSK	1	1	26.40	26.57	26.85

BW	MCS Index	Channel		648668	656000	663332
		Frequence (MHz)		3730.02	3840	3949.98
60M	DFT-s-OFDM QPSK	1	1	26.45	26.58	26.88
BW	MCS Index	Channel		648334	656000	663666
		Frequence (MHz)		3725.01	3840	3954.99
50M	DFT-s-OFDM QPSK	1	1	26.46	26.52	26.81
BW	MCS Index	Channel		648000	656000	664000
		Frequence (MHz)		3720	3840	3960
40M	DFT-s-OFDM QPSK	1	1	26.40	26.52	26.82
BW	MCS Index	Channel		647668	656000	664332
		Frequence (MHz)		3715.02	3840	3964.98
30M	DFT-s-OFDM QPSK	1	1	26.43	26.57	26.87
BW	MCS Index	Channel		647334	656000	664666
		Frequence (MHz)		3710.01	3840	3969.99
20M	DFT-s-OFDM QPSK	1	1	26.48	26.65	26.90
BW	MCS Index	Channel		647168	656000	664832
		Frequence (MHz)		3707.52	3840	3972.48
15M	DFT-s-OFDM QPSK	1	1	26.49	26.62	26.82
BW	MCS Index	Channel		647000	656000	665000
		Frequence (MHz)		3705	3840	3975
10M	DFT-s-OFDM QPSK	1	1	26.48	26.65	26.91

SRS POWER
N77(Part 27Q)_ANT3

n77 (SCS 30 kHz)_3450~3550MHz (Ant3) for FCC						
BW	**MCS Index**	**RB Size**	**RB Offset**	**/**	**Mid**	**/**
		Channel		**/**	**633334**	**/**
		Frequence (MHz)		**/**	**3500.01**	**/**
100M	DFT-s-OFDM Pi/2 BPSK	1	1	/	21.98	/
		1	137	/	21.82	/
		1	271	/	21.93	/
		135	0	/	22.14	/
		135	69	/	21.99	/
		135	138	/	21.90	/
		270	0	/	21.94	/
	DFT-s-OFDM QPSK	1	1	/	22.19	/
		1	137	/	22.01	/
		1	271	/	21.91	/
		135	0	/	20.00	/
		135	69	/	**22.03**	/
		135	138	/	22.01	/
		270	0	/	**22.09**	/
	DFT-s-OFDM 16QAM	1	1	/	22.00	/
	DFT-s-OFDM 64QAM	1	1	/	21.62	/
	DFT-s-OFDM 256QAM	1	1	/	20.13	/
BW	**MCS Index**	**Channel**		**633000**	**633334**	**633666**
		Frequence (MHz)		**3495**	**3500.01**	**3504.99**
90M	DFT-s-OFDM QPSK	1	1	22.08	22.18	22.14
BW	**MCS Index**	**Channel**		**632668**	**633334**	**634000**
		Frequence (MHz)		**3490.02**	**3500.01**	**3510**
80M	DFT-s-OFDM QPSK	1	1	22.02	22.11	22.11
BW	**MCS Index**	**Channel**		**632334**	**633334**	**634332**
		Frequence (MHz)		**3485.01**	**3500.01**	**3514.98**
70M	DFT-s-OFDM QPSK	1	1	22.06	22.13	22.04

BW	MCS Index	Channel		632000	633334	634666
		Frequence (MHz)		3480	3500.01	3519.99
60M	DFT-s-OFDM QPSK	1	1	22.07	22.15	22.06
BW	MCS Index	Channel		631668	633334	635000
		Frequence (MHz)		3475.02	3500.01	3525
50M	DFT-s-OFDM QPSK	1	1	22.06	22.13	22.04
BW	MCS Index	Channel		631334	633334	635332
		Frequence (MHz)		3470.01	3500.01	3529.98
40M	DFT-s-OFDM QPSK	1	1	22.05	22.16	22.13
BW	MCS Index	Channel		631000	633334	635666
		Frequence (MHz)		3465	3500.01	3534.99
30M	DFT-s-OFDM QPSK	1	1	21.97	22.05	22.04
BW	MCS Index	Channel		630668	633334	636000
		Frequence (MHz)		3460.02	3500.01	3540
20M	DFT-s-OFDM QPSK	1	1	21.96	22.16	22.11
BW	MCS Index	Channel		630500	633334	636166
		Frequence (MHz)		3457.5	3500.01	3542.49
15M	DFT-s-OFDM QPSK	1	1	21.97	22.05	22.04
BW	MCS Index	Channel		630334	633334	636332
		Frequence (MHz)		3455.01	3500.01	3544.98
10M	DFT-s-OFDM QPSK	1	1	21.96	22.16	22.11

N77(Part 27Q)_ANT6

n77 (SCS 30 kHz)_3450~3550MHz (Ant6) for FCC						
BW	**MCS Index**	**RB Size**	**RB Offset**	**/**	**Mid**	**/**
		Channel		**/**	**633334**	**/**
		Frequence (MHz)		**/**	**3500.01**	**/**
100M	DFT-s-OFDM Pi/2 BPSK	1	1	/	20.62	/
		1	137	/	20.52	/
		1	271	/	20.64	/
		135	0	/	20.93	/
		135	69	/	20.75	/
		135	138	/	20.66	/
		270	0	/	20.59	/
	DFT-s-OFDM QPSK	1	1	/	20.95	/
		1	137	/	20.80	/
		1	271	/	20.64	/
		135	0	/	20.71	/
		135	69	/	**20.77**	/
		135	138	/	20.71	/
		270	0	/	**20.73**	/
	DFT-s-OFDM 16QAM	1	1	/	20.62	/
	DFT-s-OFDM 64QAM	1	1	/	20.22	/
	DFT-s-OFDM 256QAM	1	1	/	19.00	/
BW	**MCS Index**	**Channel**		**633000**	**633334**	**633666**
		Frequence (MHz)		**3495**	**3500.01**	**3504.99**
90M	DFT-s-OFDM QPSK	1	1	20.91	20.95	20.87
BW	**MCS Index**	**Channel**		**632668**	**633334**	**634000**
		Frequence (MHz)		**3490.02**	**3500.01**	**3510**
80M	DFT-s-OFDM QPSK	1	1	20.89	20.88	20.82
BW	**MCS Index**	**Channel**		**632334**	**633334**	**634332**
		Frequence (MHz)		**3485.01**	**3500.01**	**3514.98**
70M	DFT-s-OFDM QPSK	1	1	20.82	20.87	20.84
BW	**MCS Index**	**Channel**		**632000**	**633334**	**634666**
		Frequence (MHz)		**3480**	**3500.01**	**3519.99**
60M	DFT-s-OFDM QPSK	1	1	20.89	20.88	20.82

BW	MCS Index	Channel		631668	633334	635000
		Frequence (MHz)		3475.02	3500.01	3525
50M	DFT-s-OFDM QPSK	1	1	20.85	20.84	20.86
BW	MCS Index	Channel		631334	633334	635332
		Frequence (MHz)		3470.01	3500.01	3529.98
40M	DFT-s-OFDM QPSK	1	1	20.82	20.87	20.84
BW	MCS Index	Channel		631000	633334	635666
		Frequence (MHz)		3465	3500.01	3534.99
30M	DFT-s-OFDM QPSK	1	1	20.89	20.88	20.82
BW	MCS Index	Channel		630668	633334	636000
		Frequence (MHz)		3460.02	3500.01	3540
20M	DFT-s-OFDM QPSK	1	1	20.86	20.91	20.85
BW	MCS Index	Channel		630500	633334	636166
		Frequence (MHz)		3457.5	3500.01	3542.49
15M	DFT-s-OFDM QPSK	1	1	20.82	20.85	20.76
BW	MCS Index	Channel		630334	633334	636332
		Frequence (MHz)		3455.01	3500.01	3544.98
10M	DFT-s-OFDM QPSK	1	1	20.86	20.91	20.85

N77(Part 27Q)_ANT8

n77 (SCS 30 kHz)_3450~3550MHz (Ant8) for FCC						
BW	**MCS Index**	**RB Size**	**RB Offset**	**/**	**Mid**	**/**
		Channel		**/**	**633334**	**/**
		Frequence (MHz)		**/**	**3500.01**	**/**
100M	DFT-s-OFDM Pi/2 BPSK	1	1	/	18.86	/
		1	137	/	18.75	/
		1	271	/	18.86	/
		135	0	/	19.20	/
		135	69	/	19.05	/
		135	138	/	18.88	/
		270	0	/	18.80	/
	DFT-s-OFDM QPSK	1	1	/	19.21	/
		1	137	/	19.05	/
		1	271	/	18.84	/
		135	0	/	18.99	/
		135	69	/	**19.12**	/
		135	138	/	18.95	/
		270	0	/	**19.05**	/
	DFT-s-OFDM 16QAM	1	1	/	18.91	/
	DFT-s-OFDM 64QAM	1	1	/	18.72	/
	DFT-s-OFDM 256QAM	1	1	/	17.30	/
BW	**MCS Index**	**Channel**		**633000**	**633334**	**633666**
		Frequence (MHz)		**3495**	**3500.01**	**3504.99**
90M	DFT-s-OFDM QPSK	1	1	19.17	19.20	19.18
BW	**MCS Index**	**Channel**		**632668**	**633334**	**634000**
		Frequence (MHz)		**3490.02**	**3500.01**	**3510**
80M	DFT-s-OFDM QPSK	1	1	19.04	19.09	19.08
BW	**MCS Index**	**Channel**		**632334**	**633334**	**634332**
		Frequence (MHz)		**3485.01**	**3500.01**	**3514.98**
70M	DFT-s-OFDM QPSK	1	1	19.10	19.05	19.06
BW	**MCS Index**	**Channel**		**632000**	**633334**	**634666**
		Frequence (MHz)		**3480**	**3500.01**	**3519.99**
60M	DFT-s-OFDM QPSK	1	1	19.13	19.06	19.15

BW	MCS Index	Channel		631668	633334	635000
		Frequence (MHz)		3475.02	3500.01	3525
50M	DFT-s-OFDM QPSK	1	1	19.07	19.07	19.16
BW	MCS Index	Channel		631334	633334	635332
		Frequence (MHz)		3470.01	3500.01	3529.98
40M	DFT-s-OFDM QPSK	1	1	19.11	19.14	19.03
BW	MCS Index	Channel		631000	633334	635666
		Frequence (MHz)		3465	3500.01	3534.99
30M	DFT-s-OFDM QPSK	1	1	19.06	19.05	19.03
BW	MCS Index	Channel		630668	633334	636000
		Frequence (MHz)		3460.02	3500.01	3540
20M	DFT-s-OFDM QPSK	1	1	19.16	19.09	19.15
BW	MCS Index	Channel		630500	633334	636166
		Frequence (MHz)		3457.5	3500.01	3542.49
15M	DFT-s-OFDM QPSK	1	1	19.13	19.17	19.11
BW	MCS Index	Channel		630334	633334	636332
		Frequence (MHz)		3455.01	3500.01	3544.98
10M	DFT-s-OFDM QPSK	1	1	19.06	19.05	19.03

N77(Part 27O)_ANT3

n77 (SCS 30 kHz)_3700~3980MHz (Ant3) for FCC						
BW	**MCS Index**	**RB Size**	**RB Offset**	**Low**	**Mid**	**High**
		Channel		**650000**	**656000**	**662000**
		Frequence (MHz)		**3750**	**3840**	**3930**
100M	DFT-s-OFDM Pi/2 BPSK	1	1	21.94	22.45	22.56
		1	137	21.88	22.15	22.60
		1	271	22.05	22.27	22.72
		135	0	22.06	22.07	22.37
		135	69	22.01	22.23	22.50
		135	138	22.15	22.10	22.44
		270	0	22.14	22.00	22.45
	DFT-s-OFDM QPSK	1	1	22.17	22.71	22.73
		1	137	22.00	22.55	22.41
		1	271	22.02	22.47	22.46
		135	0	22.07	22.51	22.49
		135	69	22.09	22.53	**22.58**
		135	138	22.05	22.50	22.43
		270	0	21.91	22.50	22.54
	DFT-s-OFDM 16QAM	1	1	22.02	22.22	22.05
	DFT-s-OFDM 64QAM	1	1	21.96	22.07	22.06
	DFT-s-OFDM 256QAM	1	1	20.75	20.23	20.20
BW	**MCS Index**	**Channel**		**649668**	**656000**	**662332**
		Frequence (MHz)		**3745.02**	**3840**	**3934.98**
90M	DFT-s-OFDM QPSK	1	1	22.08	22.70	22.58
BW	**MCS Index**	**Channel**		**649334**	**656000**	**662666**
		Frequence (MHz)		**3740.01**	**3840**	**3939.99**
80M	DFT-s-OFDM QPSK	1	1	21.95	22.65	22.48
BW	**MCS Index**	**Channel**		**649000**	**656000**	**663000**
		Frequence (MHz)		**3735**	**3840**	**3945**
70M	DFT-s-OFDM QPSK	1	1	22.06	22.55	22.55
BW	**MCS Index**	**Channel**		**648668**	**656000**	**663332**
		Frequence (MHz)		**3730.02**	**3840**	**3949.98**
60M	DFT-s-OFDM QPSK	1	1	21.95	22.65	22.48

BW	MCS Index	Channel		648334	656000	663666
		Frequence (MHz)		3725.01	3840	3954.99
50M	DFT-s-OFDM QPSK	1	1	22.03	22.61	22.57
BW	MCS Index	Channel		648000	656000	664000
		Frequence (MHz)		3720	3840	3960
40M	DFT-s-OFDM QPSK	1	1	21.96	22.67	22.51
BW	MCS Index	Channel		647668	656000	664332
		Frequence (MHz)		3715.02	3840	3964.98
30M	DFT-s-OFDM QPSK	1	1	22.03	22.61	22.57
BW	MCS Index	Channel		647334	656000	664666
		Frequence (MHz)		3710.01	3840	3969.99
20M	DFT-s-OFDM QPSK	1	1	21.96	22.67	22.51
BW	MCS Index	Channel		647168	656000	664832
		Frequence (MHz)		3707.52	3840	3972.48
15M	DFT-s-OFDM QPSK	1	1	22.03	22.61	22.57
BW	MCS Index	Channel		647000	656000	665000
		Frequence (MHz)		3705	3840	3975
10M	DFT-s-OFDM QPSK	1	1	21.96	22.67	22.51

N77(Part 27O)_ANT6

n77 (SCS 30 kHz)_3700~3980MHz (Ant6) for FCC						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		650000	656000	662000
		Frequence (MHz)		3750	3840	3930
100M	DFT-s-OFDM Pi/2 BPSK	1	1	20.64	20.35	19.95
		1	137	20.60	20.13	19.73
		1	271	20.73	20.24	19.91
		135	0	20.29	20.11	20.05
		135	69	20.45	20.16	19.93
		135	138	20.33	20.08	20.05
		270	0	20.48	20.05	19.99
	DFT-s-OFDM QPSK	1	1	20.78	20.65	20.14
		1	137	20.47	20.48	19.99
		1	271	20.40	20.44	20.02
		135	0	20.49	20.50	20.01
		135	69	**20.55**	20.52	20.15
		135	138	20.43	20.48	19.99
		270	0	20.42	20.40	19.85
	DFT-s-OFDM 16QAM	1	1	20.08	20.10	19.98
	DFT-s-OFDM 64QAM	1	1	20.02	20.06	19.83
	DFT-s-OFDM 256QAM	1	1	18.13	18.31	18.72
BW	MCS Index	Channel		649668	656000	662332
		Frequence (MHz)		3745.02	3840	3934.98
90M	DFT-s-OFDM QPSK	1	1	20.69	20.63	20.06
BW	MCS Index	Channel		649334	656000	662666
		Frequence (MHz)		3740.01	3840	3939.99
80M	DFT-s-OFDM QPSK	1	1	20.77	20.55	20.06
BW	MCS Index	Channel		649000	656000	663000
		Frequence (MHz)		3735	3840	3945
70M	DFT-s-OFDM QPSK	1	1	20.77	20.58	20.13
BW	MCS Index	Channel		648668	656000	663332
		Frequence (MHz)		3730.02	3840	3949.98
60M	DFT-s-OFDM QPSK	1	1	20.76	20.56	20.06

BW	MCS Index	Channel		648334	656000	663666
		Frequence (MHz)		3725.01	3840	3954.99
50M	DFT-s-OFDM QPSK	1	1	20.63	20.55	20.03
BW	MCS Index	Channel		648000	656000	664000
		Frequence (MHz)		3720	3840	3960
40M	DFT-s-OFDM QPSK	1	1	20.63	20.62	20.06
BW	MCS Index	Channel		647668	656000	664332
		Frequence (MHz)		3715.02	3840	3964.98
30M	DFT-s-OFDM QPSK	1	1	20.67	20.57	20.10
BW	MCS Index	Channel		647334	656000	664666
		Frequence (MHz)		3710.01	3840	3969.99
20M	DFT-s-OFDM QPSK	1	1	20.70	20.51	20.06
BW	MCS Index	Channel		647168	656000	664832
		Frequence (MHz)		3707.52	3840	3972.48
15M	DFT-s-OFDM QPSK	1	1	20.69	20.51	20.12
BW	MCS Index	Channel		647000	656000	665000
		Frequence (MHz)		3705	3840	3975
10M	DFT-s-OFDM QPSK	1	1	20.65	20.60	20.13

N77(Part 27O)_ANT8

n77 (SCS 30 kHz)_3700~3980MHz (Ant8) for FCC						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		650000	656000	662000
		Frequence (MHz)		3750	3840	3930
100M	DFT-s-OFDM Pi/2 BPSK	1	1	19.99	19.65	19.35
		1	137	20.04	19.60	19.26
		1	271	20.09	19.70	19.40
		135	0	19.55	19.54	19.47
		135	69	19.73	19.57	19.49
		135	138	19.71	19.55	19.56
		270	0	19.95	19.35	19.55
	DFT-s-OFDM QPSK	1	1	20.13	20.05	19.65
		1	137	19.83	19.83	19.44
		1	271	19.66	19.91	19.31
		135	0	19.90	19.94	19.39
		135	69	19.94	19.74	19.45
		135	138	**19.99**	19.83	19.48
		270	0	19.88	19.84	19.44
	DFT-s-OFDM 16QAM	1	1	19.39	19.39	19.45
	DFT-s-OFDM 64QAM	1	1	19.45	19.41	19.21
	DFT-s-OFDM 256QAM	1	1	17.55	17.56	18.08
BW	MCS Index	Channel		649668	656000	662332
		Frequence (MHz)		3745.02	3840	3934.98
90M	DFT-s-OFDM QPSK	1	1	20.09	19.98	19.52
BW	MCS Index	Channel		649334	656000	662666
		Frequence (MHz)		3740.01	3840	3939.99
80M	DFT-s-OFDM QPSK	1	1	20.06	19.90	19.59
BW	MCS Index	Channel		649000	656000	663000
		Frequence (MHz)		3735	3840	3945
70M	DFT-s-OFDM QPSK	1	1	20.06	19.91	19.50
BW	MCS Index	Channel		648668	656000	663332
		Frequence (MHz)		3730.02	3840	3949.98
60M	DFT-s-OFDM QPSK	1	1	20.03	19.98	19.62

BW	MCS Index	Channel		648334	656000	663666
		Frequence (MHz)		3725.01	3840	3954.99
50M	DFT-s-OFDM QPSK	1	1	20.04	19.96	19.51
BW	MCS Index	Channel		648000	656000	664000
		Frequence (MHz)		3720	3840	3960
40M	DFT-s-OFDM QPSK	1	1	20.08	20.01	19.61
BW	MCS Index	Channel		647668	656000	664332
		Frequence (MHz)		3715.02	3840	3964.98
30M	DFT-s-OFDM QPSK	1	1	20.00	19.92	19.64
BW	MCS Index	Channel		647334	656000	664666
		Frequence (MHz)		3710.01	3840	3969.99
20M	DFT-s-OFDM QPSK	1	1	20.01	19.97	19.57
BW	MCS Index	Channel		647168	656000	664832
		Frequence (MHz)		3707.52	3840	3972.48
15M	DFT-s-OFDM QPSK	1	1	20.10	19.93	19.59
BW	MCS Index	Channel		647000	656000	665000
		Frequence (MHz)		3705	3840	3975
10M	DFT-s-OFDM QPSK	1	1	20.06	19.97	19.54

EIRP /ERP

N2

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
370500	1852.5	23.57	-0.76	22.81	190.99	2
376000	1880	23.41	-0.76	22.65	184.08	2
381500	1907.5	23.55	-0.76	22.79	190.11	2

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
371000	1855	23.55	-0.76	22.79	190.11	2
376000	1880	23.45	-0.76	22.69	185.78	2
381000	1905	23.44	-0.76	22.68	185.35	2

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
371500	1857.5	23.58	-0.76	22.82	191.43	2
376000	1880	23.47	-0.76	22.71	186.64	2
380500	1902.5	23.48	-0.76	22.72	187.07	2

CHANNEL BANDWIDTH: 20MHz Pi/2 BPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
372000	1860	23.60	-0.76	22.84	192.31	2
376000	1880	23.54	-0.76	22.78	189.67	2
380000	1900	23.55	-0.76	22.79	190.11	2

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
372000	1860	23.61	-0.76	22.85	192.75	2
376000	1880	23.55	-0.76	22.79	190.11	2
380000	1900	23.57	-0.76	22.81	190.99	2

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
372000	1860	22.93	-0.76	22.17	164.82	2
376000	1880	22.93	-0.76	22.17	164.82	2
380000	1900	23.19	-0.76	22.43	174.98	2

CHANNEL BANDWIDTH: 20MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
372000	1860	21.63	-0.76	20.87	122.18	2
376000	1880	21.65	-0.76	20.89	122.74	2
380000	1900	21.06	-0.76	20.30	107.15	2

CHANNEL BANDWIDTH: 20MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
372000	1860	18.99	-0.76	18.23	66.53	2
376000	1880	19.04	-0.76	18.28	67.30	2
380000	1900	19.06	-0.76	18.30	67.61	2

REMARKS: EIRP Output Power (dBm) = EIRP (dBm) -2.15(dB).

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CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
165300	826.5	23.43	-3.19	18.09	64.42	7
167300	836.5	23.51	-3.19	18.17	65.61	7
169300	846.5	23.52	-3.19	18.18	65.77	7

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
165800	829	23.50	-3.19	18.16	65.46	7
167300	836.5	23.55	-3.19	18.21	66.22	7
168800	844	23.44	-3.19	18.10	64.57	7

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
166300	831.5	23.49	-3.19	18.15	65.31	7
167300	836.5	23.62	-3.19	18.28	67.30	7
168300	841.5	23.53	-3.19	18.19	65.92	7

CHANNEL BANDWIDTH: 20MHz Pi/2 BPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
166800	834	23.51	-3.19	18.17	65.61	7
167300	836.5	23.58	-3.19	18.24	66.68	7
167800	839	23.57	-3.19	18.23	66.53	7

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
166800	834	23.57	-3.19	18.23	66.53	7
167300	836.5	23.64	-3.19	18.30	67.61	7
167800	839	23.55	-3.19	18.21	66.22	7

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
166800	834	23.32	-3.19	17.98	62.81	7
167300	836.5	23.43	-3.19	18.09	64.42	7
167800	839	23.39	-3.19	18.05	63.83	7

CHANNEL BANDWIDTH: 20MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
166800	834	21.68	-3.19	16.34	43.05	7
167300	836.5	22.15	-3.19	16.81	47.97	7
167800	839	22.04	-3.19	16.70	46.77	7

CHANNEL BANDWIDTH: 20MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
166800	834	19.98	-3.19	14.64	29.11	7
167300	836.5	19.53	-3.19	14.19	26.24	7
167800	839	19.54	-3.19	14.20	26.30	7

REMARKS: ERP Output Power (dBm) = ERP (dBm) -2.15(dB).

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CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
342500	1712.5	23.23	-1.31	21.92	155.60	1
349000	1745	23.41	-1.31	22.10	162.18	1
355500	1777.5	23.36	-1.31	22.05	160.32	1

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
343000	1715	23.09	-1.31	21.78	150.66	1
349000	1745	23.22	-1.31	21.91	155.24	1
355000	1775	23.31	-1.31	22.00	158.49	1

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
343500	1717.5	23.18	-1.31	21.87	153.82	1
349000	1745	23.27	-1.31	21.96	157.04	1
354500	1772.5	23.17	-1.31	21.86	153.46	1

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
344000	1720	23.29	-1.31	21.98	157.76	1
349000	1745	23.41	-1.31	22.10	162.18	1
354000	1770	23.35	-1.31	22.04	159.96	1

CHANNEL BANDWIDTH: 25MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
344500	1722.5	23.37	-1.31	22.06	160.69	1
349000	1745	23.24	-1.31	21.93	155.96	1
353500	1767.5	23.15	-1.31	21.84	152.76	1

CHANNEL BANDWIDTH: 30MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
345000	1725	23.21	-1.31	21.90	154.88	1
349000	1745	23.36	-1.31	22.05	160.32	1
353000	1765	23.46	-1.31	22.15	164.06	1

CHANNEL BANDWIDTH: 40MHz Pi/2 BPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
346000	1730	23.47	-1.31	22.16	164.44	1
349000	1745	23.44	-1.31	22.13	163.31	1
352000	1760	23.51	-1.31	22.20	165.96	1

CHANNEL BANDWIDTH: 40MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
346000	1730	23.51	-1.31	22.20	165.96	1
349000	1745	23.54	-1.31	22.23	167.11	1
352000	1760	23.33	-1.31	22.02	159.22	1

CHANNEL BANDWIDTH: 40MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
346000	1730	22.45	-1.31	21.14	130.02	1
349000	1745	22.07	-1.31	20.76	119.12	1
352000	1760	22.63	-1.31	21.32	135.52	1

CHANNEL BANDWIDTH: 40MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
346000	1730	21.18	-1.31	19.87	97.05	1
349000	1745	20.94	-1.31	19.63	91.83	1
352000	1760	20.53	-1.31	19.22	83.56	1

CHANNEL BANDWIDTH: 40MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
346000	1730	18.45	-1.31	17.14	51.76	1
349000	1745	18.86	-1.31	17.55	56.89	1
352000	1760	18.43	-1.31	17.12	51.52	1

REMARKS: ERP Output Power (dBm) = EIRP (dBm) -2.15(dB).

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
630334	3455.01	22.94	0.62	23.56	226.99	1
633334	3500.01	23.03	0.62	23.65	231.74	1
636332	3544.98	23.06	0.62	23.68	233.35	1

CHANNEL BANDWIDTH:15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
630500	3457.5	23.01	0.62	23.63	230.67	1
633334	3500.01	23.14	0.62	23.76	237.68	1
636166	3542.49	22.99	0.62	23.61	229.61	1

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
630668	3460.02	22.96	0.62	23.58	228.03	1
633334	3500.01	23.07	0.62	23.69	233.88	1
636000	3540	23.08	0.62	23.70	234.42	1

CHANNEL BANDWIDTH: 30MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
631000	3465	22.96	0.62	23.58	228.03	1
633334	3500.01	23.07	0.62	23.69	233.88	1
635666	3534.99	23.12	0.62	23.74	236.59	1

CHANNEL BANDWIDTH: 40MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
631334	3470.01	23.00	0.62	23.62	230.14	1
633334	3500.01	23.10	0.62	23.72	235.50	1
635332	3529.98	23.02	0.62	23.64	231.21	1

CHANNEL BANDWIDTH: 50MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
631668	3475.02	23.03	0.62	23.65	231.74	1
633334	3500.01	23.02	0.62	23.64	231.21	1
635000	3525	23.10	0.62	23.72	235.50	1

CHANNEL BANDWIDTH: 60MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
632000	3480	23.07	0.62	23.69	233.88	1
633334	3500.01	23.02	0.62	23.64	231.21	1
634666	3519.99	23.05	0.62	23.67	232.81	1

CHANNEL BANDWIDTH: 70MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
632334	3485.01	23.03	0.62	23.65	231.74	1
633334	3500.01	23.03	0.62	23.65	231.74	1
634332	3514.98	23.02	0.62	23.64	231.21	1

CHANNEL BANDWIDTH: 80MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
632668	3490.02	23.05	0.62	23.67	232.81	1
633334	3500.01	23.05	0.62	23.67	232.81	1
634000	3510	22.99	0.62	23.61	229.61	1

CHANNEL BANDWIDTH: 90MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
633000	3495	23.09	0.62	23.71	234.96	1
633334	3500.01	23.16	0.62	23.78	238.78	1
633666	3504.99	23.14	0.62	23.76	237.68	1

CHANNEL BANDWIDTH: 100MHz Pi/2 BPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
633334	3500.01	23.10	0.62	23.72	235.50	1

CHANNEL BANDWIDTH: 100MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
633334	3500.01	23.18	0.62	23.80	239.88	1

CHANNEL BANDWIDTH: 100MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
633334	3500.01	23.07	0.62	23.69	233.88	1

CHANNEL BANDWIDTH: 100MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
633334	3500.01	22.75	0.62	23.37	217.27	1

CHANNEL BANDWIDTH: 100MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
633334	3500.01	21.12	0.62	21.74	149.28	1

REMARKS: ERP Output Power (dBm) = EIRP (dBm) -2.15(dB).

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
630334	3455.01	26.04	0.62	26.66	463.45	1
633334	3500.01	26.08	0.62	26.70	467.74	1
636332	3544.98	25.99	0.62	26.61	458.14	1

CHANNEL BANDWIDTH:15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
630500	3457.5	26.01	0.62	26.63	460.26	1
633334	3500.01	26.10	0.62	26.72	469.89	1
636166	3542.49	26.02	0.62	26.64	461.32	1

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
630668	3460.02	26.06	0.62	26.68	465.59	1
633334	3500.01	26.03	0.62	26.65	462.38	1
636000	3540	26.06	0.62	26.68	465.59	1

CHANNEL BANDWIDTH: 30MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
631000	3465	26.13	0.62	26.75	473.15	1
633334	3500.01	26.12	0.62	26.74	472.06	1
635666	3534.99	26.00	0.62	26.62	459.20	1

CHANNEL BANDWIDTH: 40MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
631334	3470.01	26.14	0.62	26.76	474.24	1
633334	3500.01	26.13	0.62	26.75	473.15	1
635332	3529.98	26.02	0.62	26.64	461.32	1

CHANNEL BANDWIDTH: 50MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
631668	3475.02	26.15	0.62	26.77	475.34	1
633334	3500.01	26.12	0.62	26.74	472.06	1
635000	3525	26.07	0.62	26.69	466.66	1

CHANNEL BANDWIDTH: 60MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
632000	3480	26.10	0.62	26.72	469.89	1
633334	3500.01	26.13	0.62	26.75	473.15	1
634666	3519.99	25.99	0.62	26.61	458.14	1

CHANNEL BANDWIDTH: 70MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
632334	3485.01	26.02	0.62	26.64	461.32	1
633334	3500.01	26.08	0.62	26.70	467.74	1
634332	3514.98	26.07	0.62	26.69	466.66	1

CHANNEL BANDWIDTH: 80MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
632668	3490.02	26.08	0.62	26.70	467.74	1
633334	3500.01	26.07	0.62	26.69	466.66	1
634000	3510	26.02	0.62	26.64	461.32	1

CHANNEL BANDWIDTH: 90MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
633000	3495	26.16	0.62	26.78	476.43	1
633334	3500.01	26.14	0.62	26.76	474.24	1
633666	3504.99	26.12	0.62	26.74	472.06	1

CHANNEL BANDWIDTH: 100MHz Pi/2 BPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
633334	3500.01	26.13	0.62	26.75	473.15	1

CHANNEL BANDWIDTH: 100MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
633334	3500.01	26.18	0.62	26.80	478.63	1

CHANNEL BANDWIDTH: 100MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
633334	3500.01	24.98	0.62	25.60	363.08	1

CHANNEL BANDWIDTH: 100MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
633334	3500.01	23.49	0.62	24.11	257.63	1

CHANNEL BANDWIDTH: 100MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
633334	3500.01	21.44	0.62	22.06	160.69	1

REMARKS: ERP Output Power (dBm) = EIRP (dBm) -2.15(dB).

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
647000	3705	23.20	0.62	23.82	240.99	1
656000	3840	23.77	0.62	24.39	274.79	1
665000	3975	23.81	0.62	24.43	277.33	1

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
647168	3707.52	23.25	0.62	23.87	243.78	1
656000	3840	23.75	0.62	24.37	273.53	1
664832	3972.48	23.80	0.62	24.42	276.69	1

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
647334	3710.01	23.31	0.62	23.93	247.17	1
656000	3840	23.78	0.62	24.40	275.42	1
664666	3969.99	23.87	0.62	24.49	281.19	1

CHANNEL BANDWIDTH: 30MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
647668	3715.02	23.24	0.62	23.86	243.22	1
656000	3840	23.83	0.62	24.45	278.61	1
664332	3964.98	23.93	0.62	24.55	285.10	1

CHANNEL BANDWIDTH: 40MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
648000	3720	23.19	0.62	23.81	240.44	1
656000	3840	23.88	0.62	24.50	281.84	1
664000	3960	23.93	0.62	24.55	285.10	1

CHANNEL BANDWIDTH: 50MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
648334	3725.01	23.31	0.62	23.93	247.17	1
656000	3840	23.80	0.62	24.42	276.69	1
663666	3954.99	23.86	0.62	24.48	280.54	1

CHANNEL BANDWIDTH: 60MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
648668	3730.02	23.28	0.62	23.90	245.47	1
656000	3840	23.76	0.62	24.38	274.16	1
663332	3949.98	23.84	0.62	24.46	279.25	1

CHANNEL BANDWIDTH: 70MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
649000	3735	23.25	0.62	23.87	243.78	1
656000	3840	23.76	0.62	24.38	274.16	1
663000	3945	23.79	0.62	24.41	276.06	1

CHANNEL BANDWIDTH: 80MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
649334	3740.01	23.32	0.62	23.94	247.74	1
656000	3840	23.85	0.62	24.47	279.90	1
662666	3939.99	23.92	0.62	24.54	284.45	1

CHANNEL BANDWIDTH: 90MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
649668	3745.02	23.34	0.62	23.96	248.89	1
656000	3840	23.90	0.62	24.52	283.14	1
662332	3934.98	23.91	0.62	24.53	283.79	1

CHANNEL BANDWIDTH: 100MHz Pi/2 BPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
650000	3750	23.34	0.62	23.96	248.89	1
656000	3840	23.75	0.62	24.37	273.53	1
662000	3930	23.91	0.62	24.53	283.79	1

CHANNEL BANDWIDTH: 100MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
650000	3750	23.35	0.62	23.97	249.46	1
656000	3840	23.92	0.62	24.54	284.45	1
662000	3930	23.95	0.62	24.57	286.42	1

CHANNEL BANDWIDTH: 100MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
650000	3750	23.26	0.62	23.88	244.34	1
656000	3840	23.43	0.62	24.05	254.10	1
662000	3930	23.37	0.62	23.99	250.61	1

CHANNEL BANDWIDTH: 100MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
650000	3750	23.27	0.62	23.89	244.91	1
656000	3840	23.25	0.62	23.87	243.78	1
662000	3930	23.30	0.62	23.92	246.60	1

CHANNEL BANDWIDTH: 100MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
650000	3750	21.88	0.62	22.50	177.83	1
656000	3840	21.48	0.62	22.10	162.18	1
662000	3930	21.51	0.62	22.13	163.31	1

REMARKS: ERP Output Power (dBm) = EIRP (dBm) -2.15(dB).

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
647000	3705	26.48	0.62	27.10	512.86	1
656000	3840	26.65	0.62	27.27	533.33	1
665000	3975	26.91	0.62	27.53	566.24	1

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
647168	3707.52	26.49	0.62	27.11	514.04	1
656000	3840	26.62	0.62	27.24	529.66	1
664832	3972.48	26.82	0.62	27.44	554.63	1

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
647334	3710.01	26.48	0.62	27.10	512.86	1
656000	3840	26.65	0.62	27.27	533.33	1
664666	3969.99	26.90	0.62	27.52	564.94	1

CHANNEL BANDWIDTH: 30MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
647668	3715.02	26.43	0.62	27.05	506.99	1
656000	3840	26.57	0.62	27.19	523.60	1
664332	3964.98	26.87	0.62	27.49	561.05	1

CHANNEL BANDWIDTH: 40MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
648000	3720	26.40	0.62	27.02	503.50	1
656000	3840	26.52	0.62	27.14	517.61	1
664000	3960	26.82	0.62	27.44	554.63	1

CHANNEL BANDWIDTH: 50MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
648334	3725.01	26.46	0.62	27.08	510.50	1
656000	3840	26.52	0.62	27.14	517.61	1
663666	3954.99	26.81	0.62	27.43	553.35	1

CHANNEL BANDWIDTH: 60MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
648668	3730.02	26.45	0.62	27.07	509.33	1
656000	3840	26.58	0.62	27.20	524.81	1
663332	3949.98	26.88	0.62	27.50	562.34	1

CHANNEL BANDWIDTH: 70MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
649000	3735	26.40	0.62	27.02	503.50	1
656000	3840	26.57	0.62	27.19	523.60	1
663000	3945	26.85	0.62	27.47	558.47	1

CHANNEL BANDWIDTH: 80MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
649334	3740.01	26.48	0.62	27.10	512.86	1
656000	3840	26.58	0.62	27.20	524.81	1
662666	3939.99	26.87	0.62	27.49	561.05	1

CHANNEL BANDWIDTH: 90MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
649668	3745.02	26.37	0.62	26.99	500.03	1
656000	3840	26.62	0.62	27.24	529.66	1
662332	3934.98	26.89	0.62	27.51	563.64	1

CHANNEL BANDWIDTH: 100MHz Pi/2 BPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
650000	3750	26.43	0.62	27.05	506.99	1
656000	3840	26.61	0.62	27.23	528.45	1
662000	3930	26.82	0.62	27.44	554.63	1

CHANNEL BANDWIDTH: 100MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
650000	3750	26.50	0.62	27.12	515.23	1
656000	3840	26.67	0.62	27.29	535.80	1
662000	3930	26.96	0.62	27.58	572.80	1

CHANNEL BANDWIDTH: 100MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
650000	3750	25.23	0.62	25.85	384.59	1
656000	3840	25.53	0.62	26.15	412.10	1
662000	3930	25.50	0.62	26.12	409.26	1

CHANNEL BANDWIDTH: 100MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
650000	3750	23.48	0.62	24.10	257.04	1
656000	3840	23.49	0.62	24.11	257.63	1
662000	3930	23.81	0.62	24.43	277.33	1

CHANNEL BANDWIDTH: 100MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
650000	3750	21.20	0.62	21.82	152.05	1
656000	3840	21.36	0.62	21.98	157.76	1
662000	3930	21.53	0.62	22.15	164.06	1

REMARKS: ERP Output Power (dBm) = EIRP (dBm) -2.15(dB).
After evaluation, ant4 N77 HPUE mode has the highest power, so EIRP only reflects ant4 data calculation.

3.2 FREQUENCY STABILITY MEASUREMENT

3.2.1 LIMITS OF FREQUENCY STABILIITY MEASUREMENT

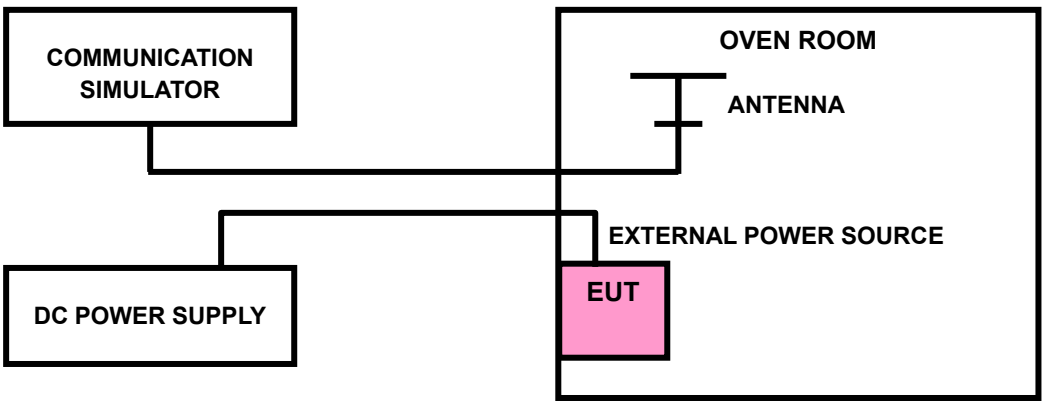
The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

3.2.2 TEST PROCEDURE

a. Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
b. EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
c. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the ±0.5℃ during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

NOTE: The frequency error was recorded frequency error from the communication simulator.

3.2.3 TEST SETUP



3.2.4 TEST RESULTS

Please Refer to Appendix A Of this test report.

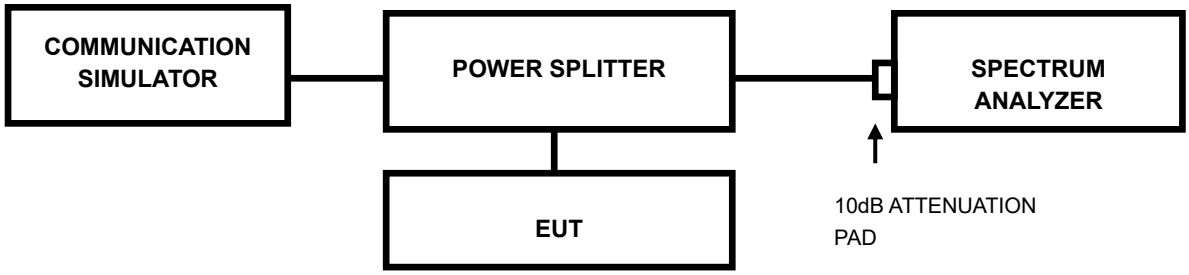
Note: VL = Low voltage(3.6V); VN/NV = Normal voltage(3.87V); VH = High voltage(4.45V);
NT = Normal temperature (25℃)

3.3 OCCUPIED BANDWIDTH MEASUREMENT

3.3.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT

The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 %of the total mean power of a given emission.

3.3.2 TEST SETUP



3.3.3 TEST PROCEDURES

a. The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
b. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

3.3.4 TEST RESULTS

Please Refer to Appendix A Of this test report.

3.4 BAND EDGE MEASUREMENT

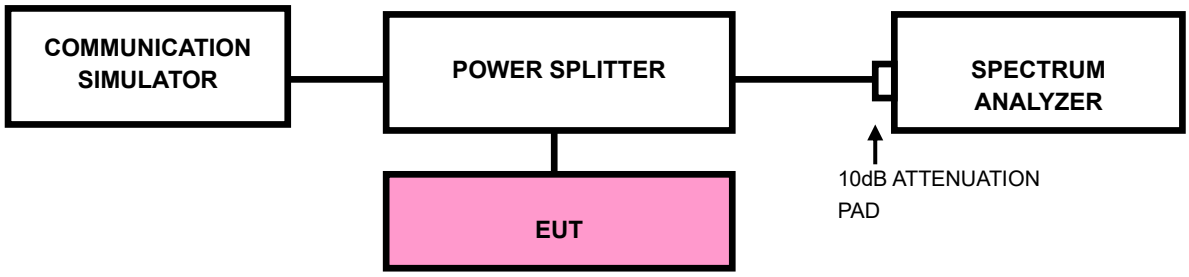
3.4.1 LIMITS OF BAND EDGE MEASUREMENT

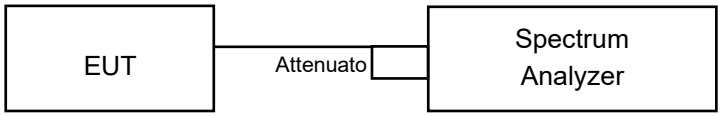
Power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.(n2/n5/ n66)

According to FCC 27.53(l)(2) specified that For mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz. Compliance with this paragraph (l)(2) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be either one percent of the emission bandwidth of the fundamental emission of the transmitter or 350 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz.(n77/n78)

According to FCC 27.53(n)(2) specified that For mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz. Compliance with this paragraph (n)(2) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed, but limited to a maximum of 200 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. (n77)

3.4.2 TEST SETUP





3.4.3 TEST PROCEDURES

a) Connect the transmitter to the spectrum analyzer via coaxial cable while ensuring proper impedance matching.

b) Tune the analyzer to the nominal center frequency of the emission bandwidth (EBW).

c) Set the resolution bandwidth (RBW) ≧ 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.

d) Beyond the 1MHz band from the band edge, RBW=1MHz was used.

e) Set the video bandwidth (VBW) to ≧3 x RBW.

f) Select the average power (RMS) display detector.

g) Set the number of measurement points to ≧ 1001.

h) Use auto-coupled sweep time.

i) Perform the measurement over an interval of time when the transmission is continuous and at its maximum power level.

j) The RF fundamental frequency should be excluded against the limit line in the operating frequency band and use RBW is10KHz or 100KHz.

k) Record the max trace plot into the test report.

3.4.4 TEST RESULTS

Please Refer to Appendix A Of this test report.

3.5 CONDUCTED SPURIOUS EMISSIONS

3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

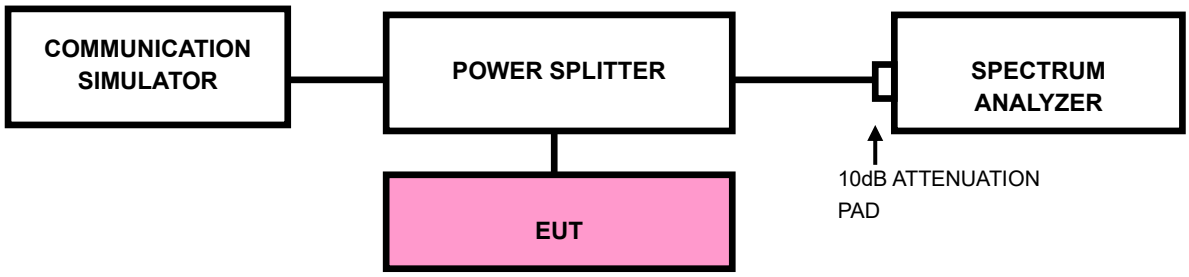
The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 +10 log10(P) dB. The limit of emission is equal to -13dBm.

3.5.2 TEST PROCEDURE

a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.

b. Measuring frequency range is from 9kHz up to a frequency including its 10th harmonic. 10dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement.

3.5.3 TEST SETUP



3.5.4 TEST RESULTS

NOTE： The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

Please Refer to Appendix A Of this test report.

3.6 RADIATED EMISSION MEASUREMENT

3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 +10 log10(P) dB. The limit of emission is equal to -13dBm.

3.6.2 TEST PROCEDURES

a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.
b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value “ of step a. Record the power level of S.G.
c. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn.
d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.P.R power - 2.15dBi.

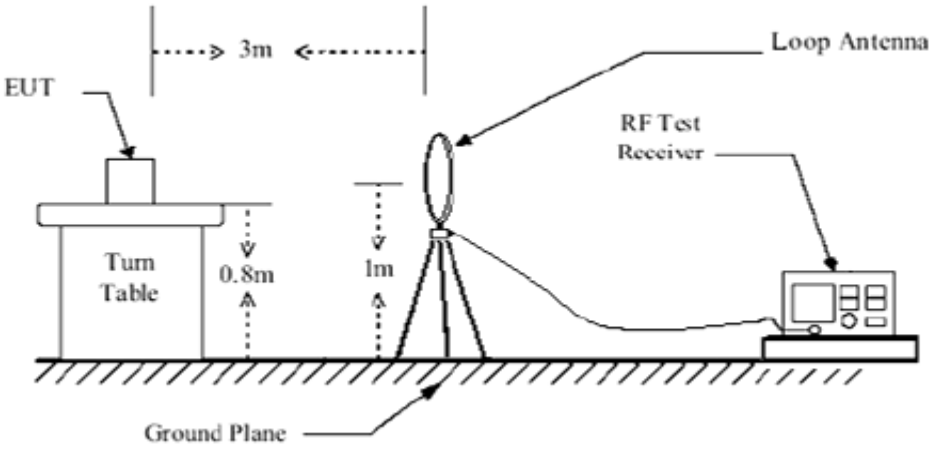
NOTE: The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

3.6.3 DEVIATION FROM TEST STANDARD

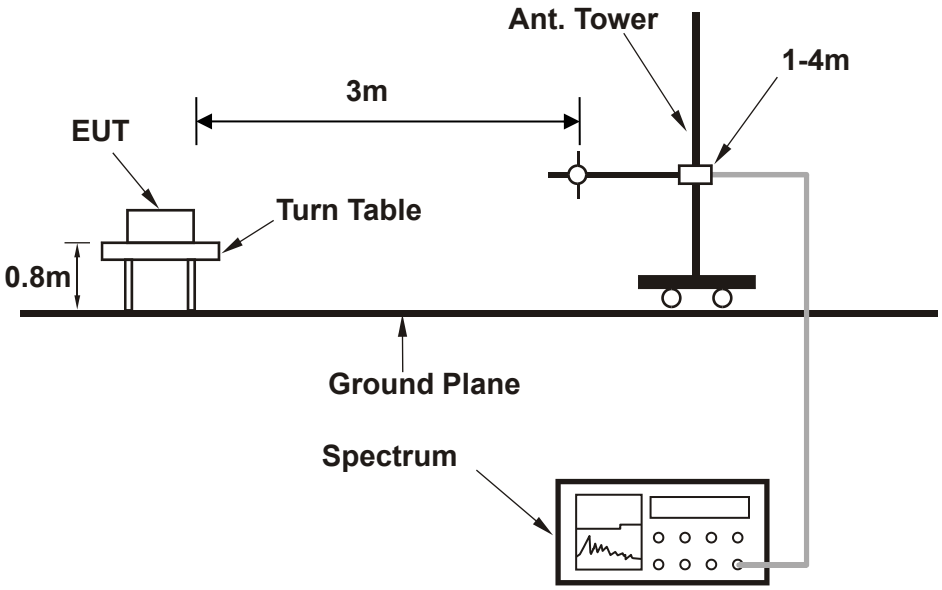
No deviation

3.6.4 TEST SETUP

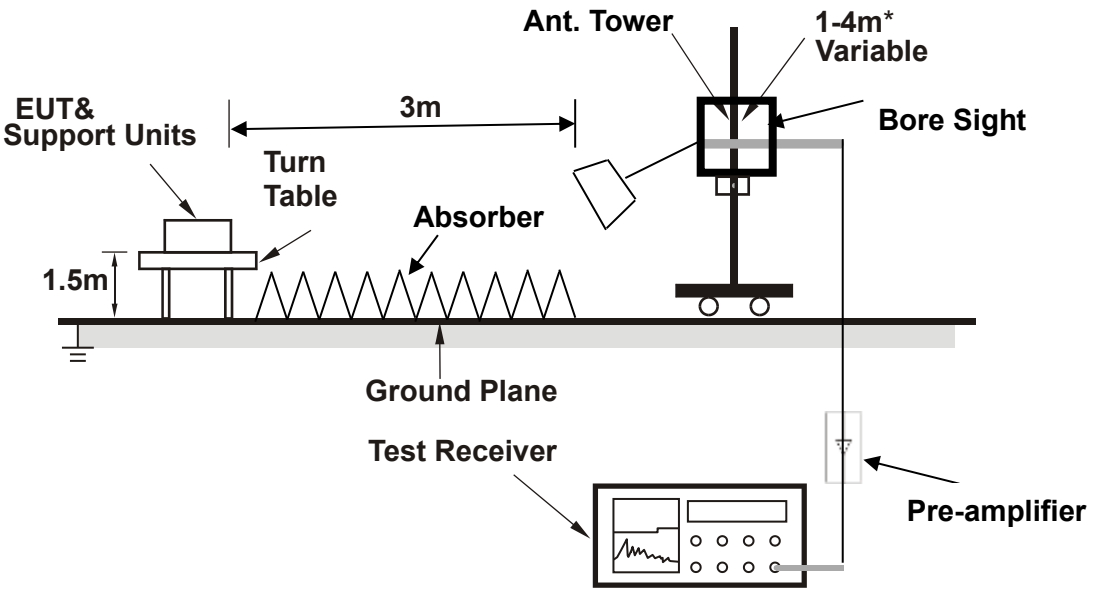
< Frequency Range below 30MHz >



< Frequency Range 30MHz~1GHz >



<Frequency Range above 1GHz>



Note: Above 1G is a directional antenna depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

3.6.5 TEST RESULTS

NOTE： The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

5G SA BELOW 1GHz WORST-CASE DATA

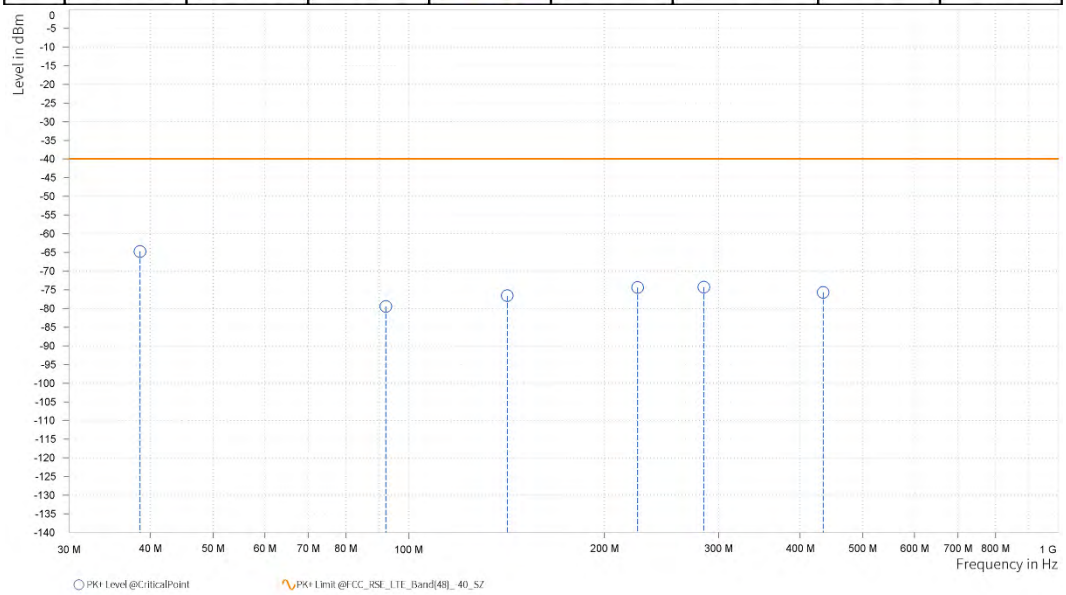
30 MHz – 1GHz data:

DC_48A_n5A

CHANNEL BANDWIDTH: (20+20) MHz / QPSK

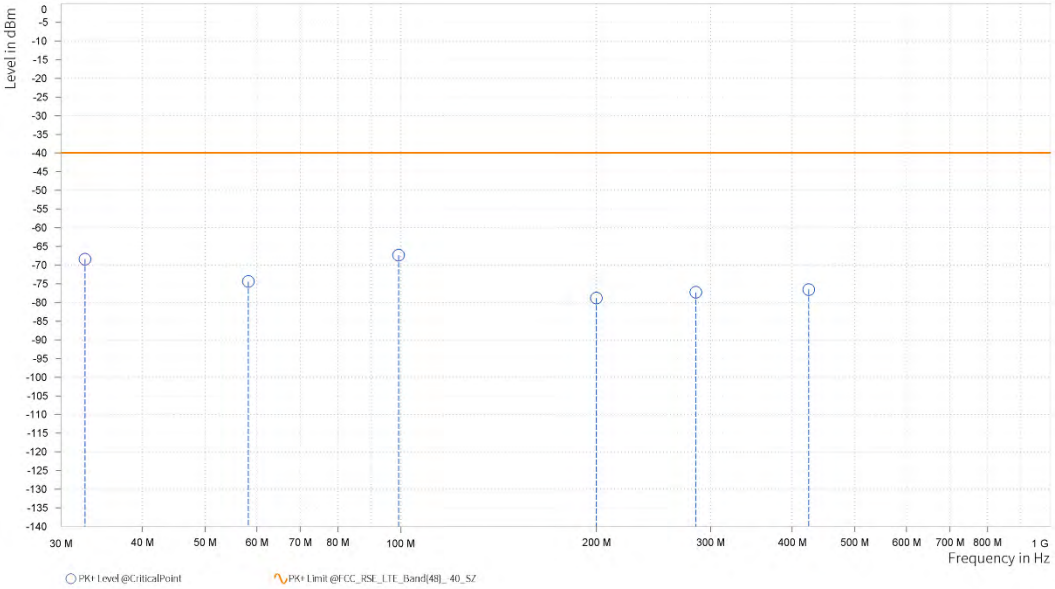
MODE	TX channel 55990/167300	**FREQUENCY RANGE**	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	DC12V
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	38.550	-64.73	-40.00	24.73	-0.85	H	167.8	1.00
1	92.150	-79.48	-40.00	39.48	-11.00	H	20.5	2.00
1	141.800	-76.60	-40.00	36.60	-14.50	H	109.6	2.00
1	225.050	-74.41	-40.00	34.41	-0.86	H	256.2	1.00
1	284.600	-74.26	-40.00	34.26	-2.12	H	80.5	1.00
1	434.050	-75.71	-40.00	35.71	2.30	H	4.9	1.00



MODE	TX channel 55990/167300	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	32.650	-68.42	-40.00	28.42	-7.41	V	32	2.00
1	58.250	-74.40	-40.00	34.40	-3.44	V	157	1.00
1	99.250	-67.36	-40.00	27.36	5.03	V	4.3	1.00
1	200.000	-78.86	-40.00	38.86	-6.57	V	4.3	1.00
1	284.600	-77.28	-40.00	37.28	-1.17	V	72.7	2.00
1	424.500	-76.55	-40.00	36.55	0.66	V	359.1	1.00



ABOVE 1GHz

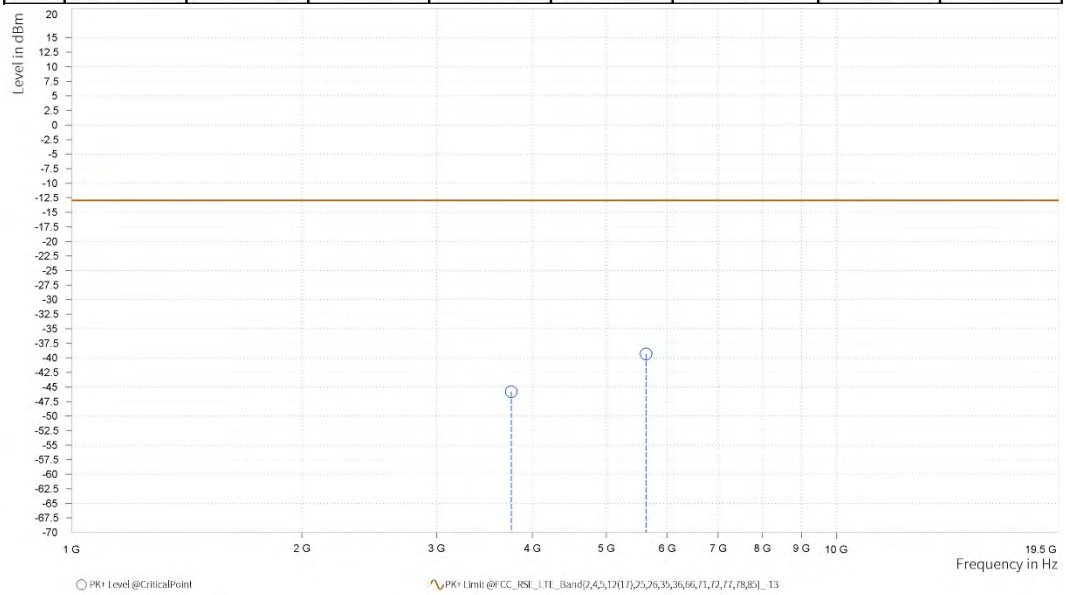
Note: For higher frequency, the emission is too low to be detected.

N2

CHANNEL BANDWIDTH: 5MHz / QPSK

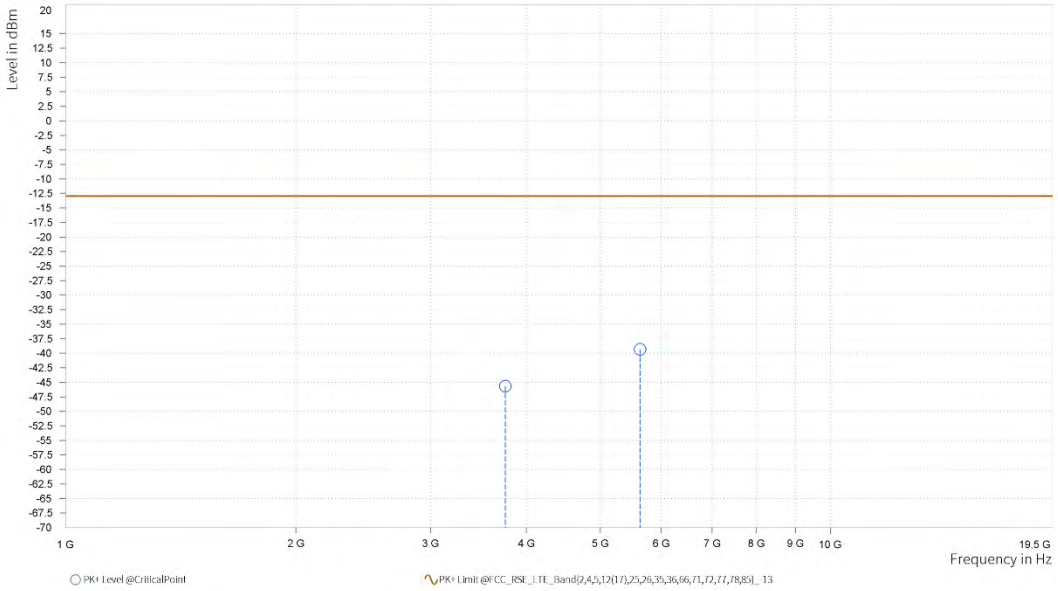
MODE	TX channel 376000	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,755.500	-45.81	-13.00	32.81	27.58	H	359.1	1.00
4	5,633.250	-39.33	-13.00	26.33	35.57	H	1	1.00



MODE	TX channel 376000	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,755.500	-45.69	-13.00	32.69	27.28	V	359.1	1.00
4	5,633.250	-39.35	-13.00	26.35	35.31	V	0.9	2.00

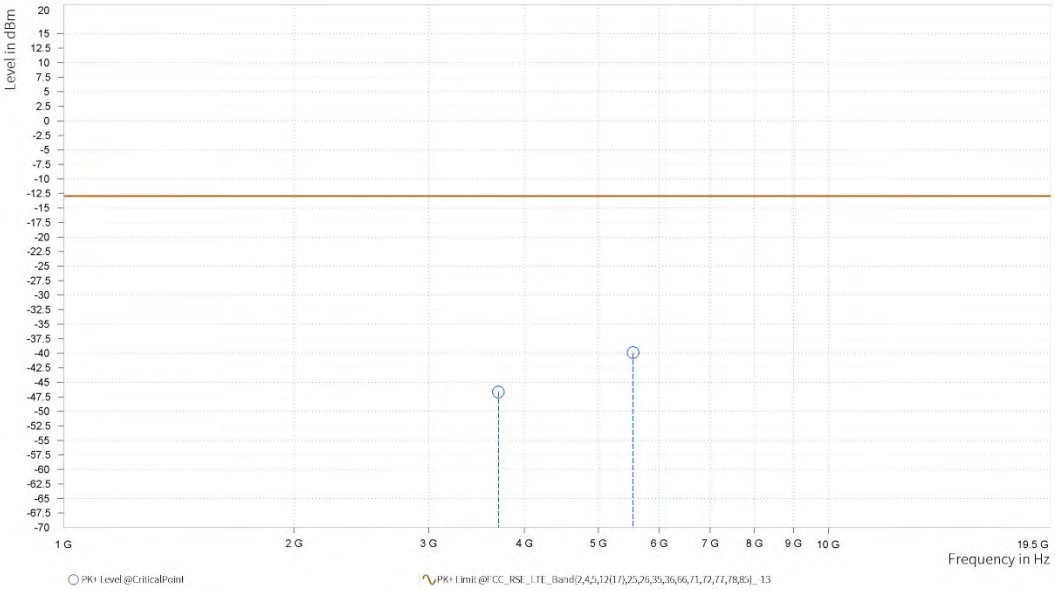


CHANNEL BANDWIDTH: 10MHz / QPSK

CH 371000

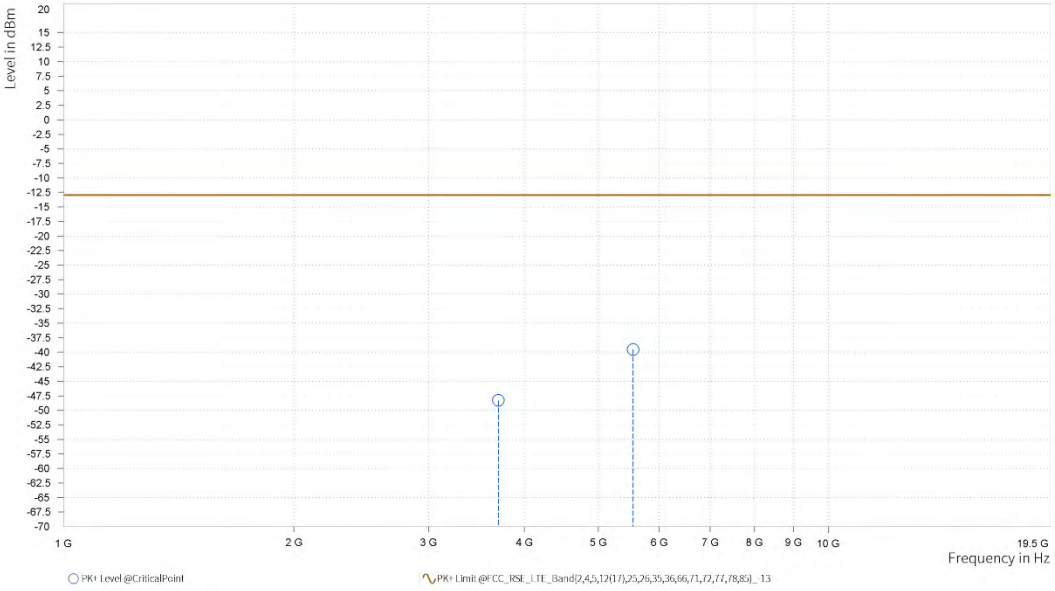
MODE	TX channel 371000	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,701.000	-46.65	-13.00	33.65	26.35	H	359	1.00
4	5,551.500	-39.90	-13.00	26.90	34.57	H	359	2.00

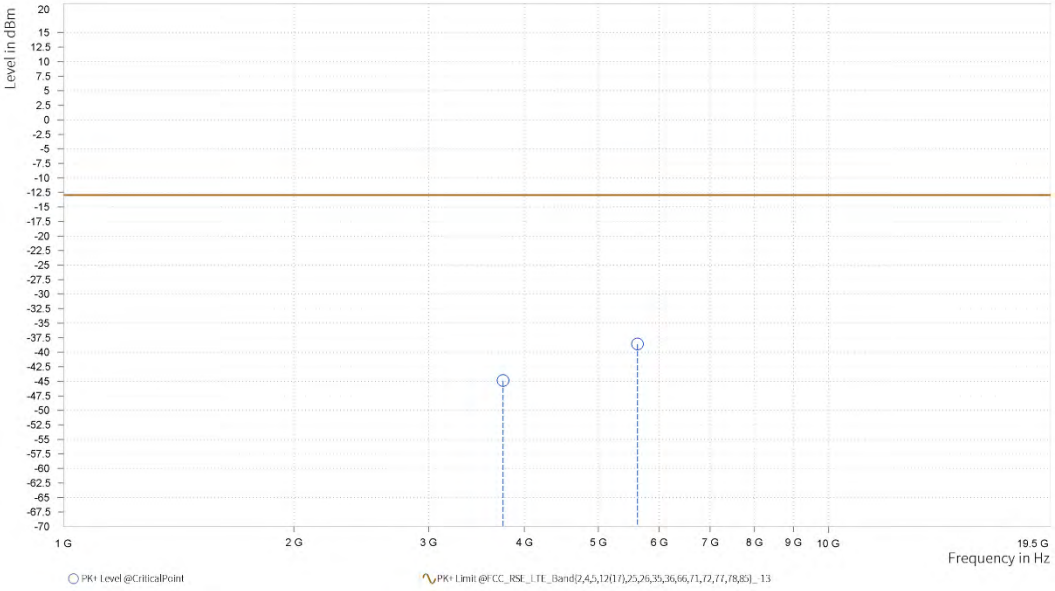


MODE	TX channel 371000	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,701.000	-48.28	-13.00	35.28	26.17	V	1	1.00
4	5,551.500	-39.51	-13.00	26.51	34.32	V	359.1	1.00



CH37600

MODE	TX channel 376000	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,751.000	-44.87	-13.00	31.87	26.95	H	0.9	2.00
4	5,626.500	-38.59	-13.00	25.59	35.71	H	95.2	2.00