

TESTREPORT

Applicant Name : TECNO MOBILE LIMITED
Address : FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25
SHAN MEI STREET FOTAN NT HONGKONG
Report Number: RA230203-04916E-RF-00E
FCC ID: 2ADYY-KI5QS

Test Standard (s)

FCC PART 27; FCC PART 22H; FCC PART 24E

Sample Description

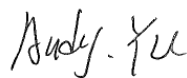
Product Type: Mobile Phone
Model No.: KI5qs
Multiple Model(s) No.: N/A
Trade Mark: TECNO
Date Received: 2023/02/03
Report Date: 2023/02/23

Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards above.

Prepared and Checked By:

Approved By:



Andy Yu
EMC Engineer



Candy Li
EMC Engineer

Note: This report may contain data that are not covered by the A2LA accreditation and are marked with an asterisk "★".

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FCC -2G,3G,4G

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	RA230203-04916E-RF-00E	Original Report	2023/02/23

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Frequency Range	GSM 850: 824-849MHz(TX); 869-894MHz(RX) PCS 1900: 1850-1910MHz(TX); 1930-1990MHz(RX) WCDMA Band 2: 1850-1910MHz(TX); 1930-1990MHz(RX) WCDMA Band 4: 1710-1755MHz(TX); 2110-2155MHz(RX) WCDMA Band 5: 824-849MHz(TX); 869-894MHz(RX) LTE Band 2: 1850-1910MHz(TX); 1930-1990MHz(RX) LTE Band 4: 1710-1755MHz(TX); 2110-2155MHz(RX) LTE Band 5: 824-849MHz(TX); 869-894MHz(RX) LTE Band 7: 2500-2570MHz(TX); 2620-2690MHz(RX) LTE Band 12: 699-716MHz(TX); 729-746MHz(RX) LTE Band 13: 777-787MHz(TX); 746-756MHz(RX) LTE Band 17: 704-716MHz(TX); 734-746MHz(RX) LTE Band 38: 2570-2620MHz(TX/RX) LTE Band 41: 2535-2655MHz(TX/RX) LTE Band 66: 1710-1780MHz(TX); 2110-2180MHz(RX)
Modulation Technique	2G: GMSK, 8PSK 3G: BPSK, QPSK, 16QAM 4G: QPSK, 16QAM
Antenna Specification*	B2/PCS1900: -2.53dBi ; B5/GSM850 :-5.01dBi ; B12/13/17: -7.88dBi ; B7/38/41 :-1.6dBi ; B4/66 :-3.03dBi (provided by the applicant)
Voltage Range	DC 3.85V from battery or DC 5V/7.5V from adapter
Sample serial number	201Q-2 for Radiated Emissions Test 201P-1 for RF Conducted Test (Assigned by ATC)
Sample/EUT Status	Good condition
Extreme condition*	L.V.: Low Voltage 3.45V _{DC} N.V.: Normal Voltage 3.85V _{DC} H.V.: High Voltage 4.4V _{DC} (provided by the applicant)
Adapter information	Model: U180TSA Input: AC 100-240V, 50/60Hz, 0.6A Output: DC 5.0V, 2.4A or DC 7.5V, 2.4A 18.0W Max

Objective

This test report is in accordance with Part 2-Subpart J, Part 22-Subpart H, Part 24-Subpart E, Part 27 of the Federal Communication Commission's rules.

The objective is to determine the compliance of the EUT with FCC rules for output power, modulation characteristic, occupied bandwidth, and spurious emission at antenna terminal, spurious radiated emission, frequency stability and band edge.

Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2-Subpart J as well as the following parts:

Part 22 Subpart H - Public Mobile Services
 Part 24 Subpart E - Personal Communication Services
 Part 27 - Miscellaneous Wireless Communications Services

ANSI C63.26-2015: American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services

All emissions measurement was performed at Shenzhen Accurate Technology Co., Ltd. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Each test item follows test standards and with no deviation.

Measurement Uncertainty

Parameter		Uncertainty
Occupied Channel Bandwidth		±5%
RF output power, conducted		±0.73dB
Unwanted Emission, conducted		±1.6dB
RF Frequency		±0.082*10 ⁻⁷
Emissions, Radiated	30MHz - 1GHz	±4.28dB
	1GHz - 18GHz	±4.98dB
	18GHz - 26.5GHz	±5.06dB
Temperature		±1℃
Humidity		±6%
Supply voltages		±0.4%

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

Test Facility

The Test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 708358, the FCC Designation No.: CN1189. Accredited by American Association for Laboratory Accreditation (A2LA) The Certificate Number is 4297.01.

Listed by Innovation, Science and Economic Development Canada (ISED), the Registration Number is 5077A.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The final qualification test was performed with the EUT operating at normal mode.

Test was performed as below table:

Frequency band	Bandwidth (MHz)	Test Frequency(MHz)		
		Low	Middle	High
GSM850	0.25	824.2	836.6	848.8
PCS1900	0.25	1850.2	1880	1909.8
WCDMA B2	4.2	1852.4	1880	1907.6
WCDMA B4	4.2	1712.4	1732.6	1752.6
WCDMA B5	4.2	826.4	836.4	846.6
LTE B2	1.4	1850.7	1880	1909.3
	3	1851.5	1880	1908.5
	5	1852.5	1880	1907.5
	10	1855	1880	1905
	15	1857.5	1880	1902.5
	20	1860	1880	1900
LTE B4	1.4	1710.7	1732.5	1754.3
	3	1711.5	1732.5	1753.5
	5	1712.5	1732.5	1752.5
	10	1715	1732.5	1750
	15	1717.5	1732.5	1747.5
	20	1720	1732.5	1745
LTE B5	1.4	824.7	836.5	848.3
	3	825.5	836.5	847.5
	5	826.5	836.5	846.5
	10	829	836.5	844
LTE B7	5	2502.5	2535	2567.5
	10	2505	2535	2565
	15	2507.5	2535	2562.5
	20	2510	2535	2560
LTE B12	1.4	699.7	707.5	715.3
	3	700.5	707.5	714.5
	5	701.5	707.5	713.5
	10	704	707.5	711
LTE B13	5	779.5	782	784.5
	10	/	782	/
LTE B17	5	706.5	710	713.5
	10	709	710	711
LTE B38	5	2572.5	2595	2617.5
	10	2575	2595	2615
	15	2577.5	2595	2612.5
	20	2580	2595	2610

Frequency band	Bandwidth (MHz)	Test Frequency(MHz)		
		Low	Middle	High
LTE B41	5	2537.5	2595	2652.5
	10	2540	2595	2650
	15	2542.5	2595	2647.5
	20	2545	2595	2645
LTE B66	1.4	1710.7	1745	1779.3
	3	1711.5	1745	1778.5
	5	1712.5	1745	1777.5
	10	1715	1745	1775
	15	1717.5	1745	1772.5
	20	1720	1745	1770

Equipment Modifications

No modification was made to the EUT.

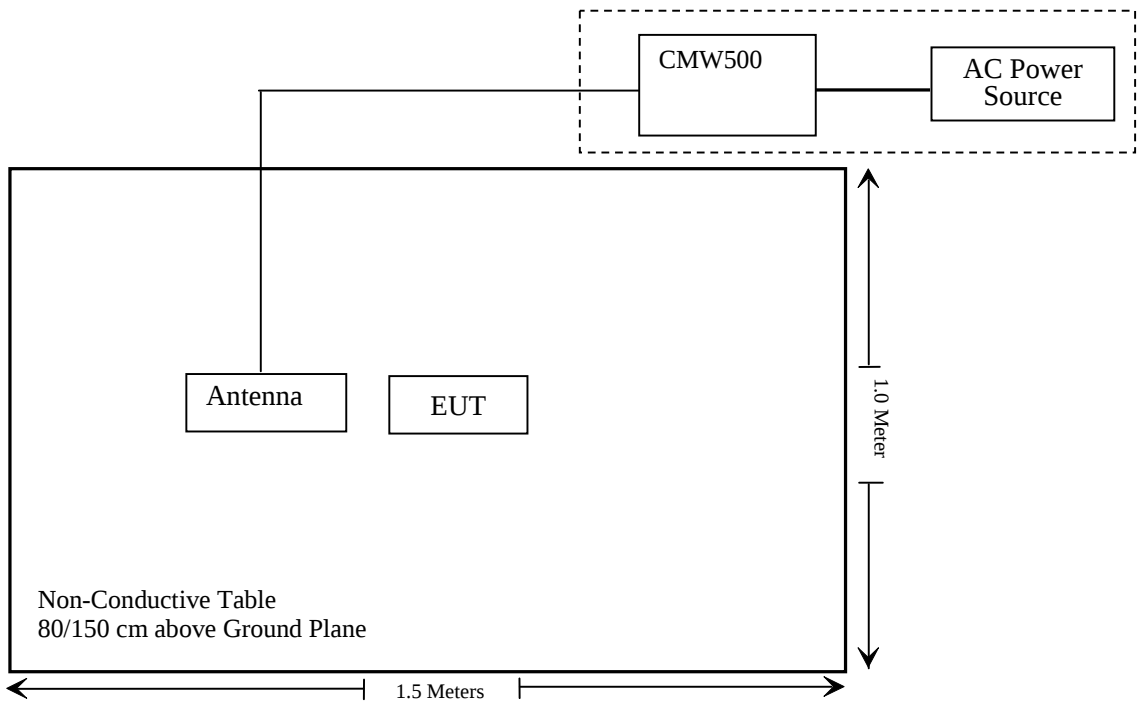
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	154606

Support Cable Description

Cable Description	Length (m)	From / Port	To
Unshielded Un-detachable AC cable	1.2	AC Power	CMW500

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§ 1.1307 ,§2.1093	RF Exposure (SAR)	Compliant
§2.1046; § 22.913 (a) (d); § 24.232 (c) (d); §27.50(b)(c) (d) (h)	RF Output Power	Compliant*
§ 2.1047	Modulation Characteristics	Not Applicable
§ 2.1049; § 22.905; § 22.917; § 24.238; §27.53	Occupied Bandwidth	Compliant*
§ 2.1051; §22.917 (a); § 24.238 (a); §27.53;	Spurious Emissions at Antenna Terminal	Compliant*
§ 2.1053; § 22.917 (a); § 24.238 (a); §27.53	Field Strength of Spurious Radiation	Compliant
§ 22.917 (a); § 24.238 (a); §27.53(c)(g) (h) (m)	Band Edge	Compliant*
§ 2.1055; § 22.355; § 24.235; §27.54;	Frequency stability	Compliant*

Compliant*: the device was changed based on the certified device, model: KI5q (FCC ID: 2ADYY-KI5Q), the changes as below, which was declared by manufacturer:

1. Changed Bluetooth/Wi-Fi/WWAN antenna.
2. Increased the 2.4G Wi-Fi output power by software.
2. Enabled LTE Band 13 by software.

Based on the above differences, it will affect all test data for the new adding band, all the test items for LTE band13 were performed. The test data for other bands please refer to the report RA221206-59345E-RF-00E.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test					
Rohde& Schwarz	Test Receiver	ESR	102725	2022/11/25	2023/11/24
Rohde&Schwarz	Spectrum Analyzer	FSV40	101949	2022/11/25	2023/11/24
SONOMA INSTRUMENT	Amplifier	310 N	186131	2022/11/08	2023/11/07
A.H. Systems, inc.	Preamplifier	PAM-0118P	135	2022/11/08	2023/11/07
Quinstar	Amplifier	QLW-184055 36-J0	15964001002	2022/11/08	2023/11/07
Unknown	RF Coaxial Cable	No.10	N050	2022/11/25	2023/11/24
Unknown	RF Coaxial Cable	No.11	N1000	2022/11/25	2023/11/24
Unknown	RF Coaxial Cable	No.12	N040	2022/11/25	2023/11/24
Unknown	RF Coaxial Cable	No.13	N300	2022/11/25	2023/11/24
Unknown	RF Coaxial Cable	No.14	N800	2022/11/25	2023/11/24
Unknown	RF Coaxial Cable	No.15	N600	2022/11/25	2023/11/24
Unknown	RF Coaxial Cable	No.16	N650	2022/11/25	2023/11/24
Schwarzbeck	Bilog Antenna	VULB9163	9163-194	2022/11/30	2025/11/29
Schwarzbeck	Bilog Antenna	VULB9163	9163-323	2021/07/06	2024/07/05
Schwarzbeck	Horn Antenna	BBHA9120D	9120D-655	2022/12/26	2025/12/25
Schwarzbeck	Horn Antenna	BBHA9120D	9120D-1067	2022/11/30	2025/11/29
PASTERNAK	Horn Antenn	PE9852/2F-20	1120 (ATC-BA-024-1)	2023/01/04	2026/01/03
PASTERNAK	Horn Antenn	PE9852/2F-20	1120 (ATC-BA-025-1)	2023/01/04	2026/01/03
PASTERNAK	Horn Antenn	PE9850/2F-20	720 (ATC-BA-024)	2023/01/04	2026/01/03
PASTERNAK	Horn Antenn	PE9850/2F-20	720 (ATC-BA-025)	2023/01/04	2026/01/03
Unknown	RF Coaxial Cable	No.16	N200	2022/11/25	2023/11/24
Agilent	Signal Generator	N5183A	MY51040755	2022/11/25	2023/11/24
Wainwright	High Pass Filter	WHKX3.6/18 G-10SS	5	2022/11/25	2023/11/24
CD	High Pass Filter	HPM-1.2/18G -60	110	2022/11/25	2023/11/24

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
RF Conducted Test					
SPECTRUM ANALYZER	Rohde & Schwarz	FSU26	200982	2022/07/04	2023/07/03
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	154606	2022/11/25	2023/11/24
Mini-Circuits	Power Splitter	DC-18000MHz	SF10944151S	2022/11/25	2023/11/24
REALE	Temp. & Humid. Chamber	RHP-800BT	R20170318310	2022/11/23	2023/11/22
Fluke	Multi Meter	45	7664009	2022/11/23	2023/11/22
Manson	DC Power Source	KPS-6604	ATCS-205	NCR	NCR
Unknown	RF Coaxial Cable	No.33	RF-03	Each time	Each time

* **Statement of Traceability:** Shenzhen Accurate Technology Co., Ltd. attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC §1.1307(b)&§2.1093 - RF EXPOSURE INFORMATION

Applicable Standard

FCC§1.1310 and §2.1093.

Test Result

Compliant, please refer to the SAR report: RA230203-04916E-SA.

FCC§2.1047 - MODULATION CHARACTERISTIC

According to FCC § 2.1047(d), Part 22H & 24E& 27, there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

FCC §2.1046,§ 22.913 (a) (d)&§ 24.232(c) (d); §27.50(b)(c)(d)(h)- RF OUTPUT POWER

Applicable Standard

According to FCC §2.1046 and §22.913 (a), the ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

According to FCC §2.1046 and §24.232 (c), mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

The peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB.

According to §27.50(b), Portable stations (hand-held devices) transmitting in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands are limited to 3 watts ERP.

According to §27.50(c), Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

According to §27.50(d), 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.

According to §27.50(h), the maximum EIRP must not exceed 2Watts (33dBm) for 2496-2690 MHz.

Test Procedure

Conducted method:

The RF output of the transmitter was connected to the CMW500 through sufficient attenuation.



Note: the path loss (cable loss and attenuator) has included in the result.

Test Data

Environmental Conditions

Temperature:	27.2℃
Relative Humidity:	56.2 %
ATM Pressure:	101.0 kPa

The testing was performed by Glenn Jiang from 2023-02-10 to 2023-02-11.

Note: The RF output power of other bands except LTE Band 13 was spot checked and it's consistently with the original report RA221206-59345E-RF-00E.

Cellular Band (Part 22H)

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	ERP(dBm)	Limit (dBm)
GSM	128	824.2	33.10	25.94	38.45
	190	836.6	33.00	25.84	38.45
	251	848.8	32.90	25.74	38.45

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				ERP(dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	1 slot	2 slots	3 slots	4 slots	
GPRS	128	824.2	32.06	30.92	29.02	27.92	24.90	23.76	21.86	20.76	38.45
	190	836.6	32.43	30.99	29.10	27.84	25.27	23.83	21.94	20.68	38.45
	251	848.8	32.11	30.74	28.93	27.92	24.95	23.58	21.77	20.76	38.45

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				ERP(dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	1 slot	2 slots	3 slots	4 slots	
EGPRS	128	824.2	27.39	26.00	23.42	22.34	20.23	18.84	16.26	15.18	38.45
	190	836.6	27.53	25.86	23.65	22.18	20.37	18.70	16.49	15.02	38.45
	251	848.8	27.64	25.89	23.40	22.19	20.48	18.73	16.24	15.03	38.45

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 5)	RMC12.2k		23.24	23.36	23.29	16.08	16.20	16.13
	HSDPA	1	22.09	22.15	21.86	14.93	14.99	14.70
		2	22.02	21.85	21.84	14.86	14.69	14.68
		3	21.94	21.94	21.68	14.78	14.78	14.52
		4	21.94	22.00	21.60	14.78	14.84	14.44
	HSUPA	1	21.43	21.61	21.04	14.27	14.45	13.88
		2	21.24	21.37	20.95	14.08	14.21	13.79
		3	21.06	21.23	20.70	13.90	14.07	13.54
		4	21.21	21.29	20.84	14.05	14.13	13.68
		5	21.28	21.35	21.03	14.12	14.19	13.87
	HSPA+	1	21.13	21.26	20.93	13.97	14.10	13.77

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd)
 For GSM850/WCDMA B5: Antenna Gain = -5.01dBi = -7.16dBd (0dBd=2.15(dBi))
 Limit: ERP ≤ 38.45dBm

PCS Band (Part 24E)

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	EIRP(dBm)	Limit (dBm)
GSM	512	1850.2	30.71	28.18	33
	661	1880.0	30.80	28.27	33
	810	1909.8	30.52	27.99	33

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				EIRP(dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	1 slot	2 slots	3 slots	4 slots	
GPRS	512	1850.2	29.85	28.65	26.91	25.73	27.32	26.12	24.38	23.20	33
	661	1880.0	29.77	28.55	26.75	25.59	27.24	26.02	24.22	23.06	33
	810	1909.8	29.62	28.49	26.60	25.48	27.09	25.96	24.07	22.95	33

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				EIRP(dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	1 slot	2 slots	3 slots	4 slots	
EGPRS	512	1850.2	27.16	26.15	24.08	22.72	24.63	23.62	21.55	20.19	33
	661	1880.0	26.82	25.88	23.73	22.64	24.29	23.35	21.20	20.11	33
	810	1909.8	26.87	25.77	23.68	22.33	24.34	23.24	21.15	19.80	33

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 2)	RMC12.2k		22.28	22.20	21.99	19.75	19.67	19.46
	HSDPA	1	20.65	20.67	20.26	18.12	18.14	17.73
		2	20.67	20.61	20.36	18.14	18.08	17.83
		3	20.78	20.51	20.56	18.25	17.98	18.03
		4	20.78	20.63	20.55	18.25	18.10	18.02
	HSUPA	1	20.40	20.19	20.05	17.87	17.66	17.52
		2	20.48	20.16	20.24	17.95	17.63	17.71
		3	20.26	20.09	19.94	17.73	17.56	17.41
		4	20.22	19.95	20.01	17.69	17.42	17.48
		5	20.32	20.21	20.00	17.79	17.68	17.47
	HSPA+	1	20.41	20.24	20.11	17.88	17.71	17.58

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
For PCS1900 / WCDMA Band2: Antenna Gain = -2.53dBi
Limit: EIRP ≤ 33dBm

AWS Band

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 4)	RMC12.2k		17.58	17.85	17.49	14.55	14.82	14.46
	HSDPA	1	16.33	16.21	16.55	13.30	13.18	13.52
		2	15.71	16.39	15.94	12.68	13.36	12.91
		3	16.11	16.65	16.24	13.08	13.62	13.21
		4	15.95	15.76	16.25	12.92	12.73	13.22
	HSUPA	1	15.61	15.95	16.09	12.58	12.92	13.06
		2	15.56	16.12	15.44	12.53	13.09	12.41
		3	15.76	15.69	15.30	12.73	12.66	12.27
		4	15.56	16.05	15.50	12.53	13.02	12.47
		5	15.22	16.10	15.69	12.19	13.07	12.66
	HSPA+	1	16.05	15.61	16.10	13.02	12.58	13.07

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)

For Band4: Antenna Gain = -3.03dBi

Limit: EIRP ≤ 30dBm

LTE Band 2

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	18.44	18.13	18.23	15.91	15.60	15.70
		RB1#3	18.46	18.38	18.22	15.93	15.85	15.69
		RB1#5	18.41	18.15	18.02	15.88	15.62	15.49
		RB3#0	18.4	18.27	18.12	15.87	15.74	15.59
		RB3#3	18.35	18.2	18.01	15.82	15.67	15.48
		RB6#0	17.43	17.25	17.24	14.90	14.72	14.71
	16QAM	RB1#0	17.29	17.24	16.9	14.76	14.71	14.37
		RB1#3	17.65	17.38	17.34	15.12	14.85	14.81
		RB1#5	17.37	17.12	17.14	14.84	14.59	14.61
		RB3#0	17.7	17.28	17.5	15.17	14.75	14.97
		RB3#3	17.56	17.31	17.25	15.03	14.78	14.72
		RB6#0	16.44	16.27	16.18	13.91	13.74	13.65
3.0	QPSK	RB1#0	18.28	18.22	18.06	15.75	15.69	15.53
		RB1#8	18.29	18.28	18.03	15.76	15.75	15.50
		RB1#14	18.27	18.37	18.07	15.74	15.84	15.54
		RB6#0	17.42	17.23	17.16	14.89	14.70	14.63
		RB6#9	17.44	17.12	17.12	14.91	14.59	14.59
		RB15#0	17.4	17.22	17.02	14.87	14.69	14.49
	16QAM	RB1#0	18.03	17.26	17.63	15.50	14.73	15.10
		RB1#8	17.55	17.43	17.85	15.02	14.90	15.32
		RB1#14	17.26	17.42	17.77	14.73	14.89	15.24
		RB6#0	16.42	16.18	16.13	13.89	13.65	13.60
		RB6#9	16.41	16.09	16.17	13.88	13.56	13.64
		RB15#0	16.5	16.03	16.13	13.97	13.50	13.60

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	18.34	18.20	18.09	15.81	15.67	15.56
		RB1#13	18.44	18.27	18.25	15.91	15.74	15.72
		RB1#24	18.30	18.04	17.93	15.77	15.51	15.40
		RB15#0	17.42	17.24	17.24	14.89	14.71	14.71
		RB15#10	17.29	17.17	17.09	14.76	14.64	14.56
		RB25#0	17.37	17.18	17.04	14.84	14.65	14.51
	16QAM	RB1#0	17.35	17.55	17.11	14.82	15.02	14.58
		RB1#13	17.27	17.42	16.90	14.74	14.89	14.37
		RB1#24	17.31	17.30	16.96	14.78	14.77	14.43
		RB15#0	16.42	16.18	16.08	13.89	13.65	13.55
		RB15#10	16.54	16.26	16.33	14.01	13.73	13.80
		RB25#0	16.49	16.34	16.29	13.96	13.81	13.76
10.0	QPSK	RB1#0	18.22	18.04	17.84	15.69	15.51	15.31
		RB1#25	18.48	18.49	18.27	15.95	15.96	15.74
		RB1#49	18.08	17.96	17.80	15.55	15.43	15.27
		RB25#0	17.43	17.51	17.09	14.90	14.98	14.56
		RB25#25	17.51	17.11	17.12	14.98	14.58	14.59
		RB50#0	17.50	17.27	17.15	14.97	14.74	14.62
	16QAM	RB1#0	17.47	17.32	17.08	14.94	14.79	14.55
		RB1#25	18.06	17.64	17.50	15.53	15.11	14.97
		RB1#49	17.33	17.22	17.04	14.80	14.69	14.51
		RB25#0	16.68	16.39	16.50	14.15	13.86	13.97
		RB25#25	16.28	16.20	15.99	13.75	13.67	13.46
		RB50#0	16.47	16.36	16.23	13.94	13.83	13.70

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	18.34	18.15	18.02	15.81	15.62	15.49
		RB1#38	18.48	18.24	18.24	15.95	15.71	15.71
		RB1#74	18.25	18.11	18.04	15.72	15.58	15.51
		RB36#0	17.52	17.33	17.14	14.99	14.80	14.61
		RB36#39	17.46	17.17	17.26	14.93	14.64	14.73
		RB75#0	17.33	17.34	17.04	14.80	14.81	14.51
	16QAM	RB1#0	18.03	17.33	17.64	15.50	14.80	15.11
		RB1#38	17.99	17.31	17.74	15.46	14.78	15.21
		RB1#74	17.96	17.36	17.68	15.43	14.83	15.15
		RB36#0	16.39	16.48	16.08	13.86	13.95	13.55
		RB36#39	16.36	16.24	16.01	13.83	13.71	13.48
		RB75#0	16.49	16.37	16.15	13.96	13.84	13.62
20.0	QPSK	RB1#0	18.38	18.11	18.09	15.85	15.58	15.56
		RB1#50	18.50	18.38	18.16	15.97	15.85	15.63
		RB1#99	18.11	18.03	17.91	15.58	15.50	15.38
		RB50#0	17.50	17.38	17.25	14.97	14.85	14.72
		RB50#50	17.48	17.18	17.24	14.95	14.65	14.71
		RB100#0	17.59	17.24	17.39	15.06	14.71	14.86
	16QAM	RB1#0	17.59	17.47	17.26	15.06	14.94	14.73
		RB1#50	17.92	17.68	17.73	15.39	15.15	15.20
		RB1#99	17.31	17.13	17.04	14.78	14.60	14.51
		RB50#0	16.61	16.43	16.42	14.08	13.90	13.89
		RB50#50	16.35	16.10	16.12	13.82	13.57	13.59
		RB100#0	16.46	16.40	16.23	13.93	13.87	13.70

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
 For Band2: Antenna Gain = -2.53dB
 Limit: EIRP ≤ 33dBm

LTE Band 4

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	21.38	21.58	21.10	18.35	18.55	18.07
		RB1#3	21.80	21.54	21.51	18.77	18.51	18.48
		RB1#5	21.43	21.60	21.20	18.40	18.57	18.17
		RB3#0	21.60	21.71	21.41	18.57	18.68	18.38
		RB3#3	21.61	21.63	21.40	18.58	18.60	18.37
		RB6#0	20.65	20.60	20.37	17.62	17.57	17.34
	16QAM	RB1#0	20.59	20.44	20.33	17.56	17.41	17.30
		RB1#3	20.64	20.65	20.28	17.61	17.62	17.25
		RB1#5	20.61	20.51	20.40	17.58	17.48	17.37
		RB3#0	20.62	20.76	20.37	17.59	17.73	17.34
		RB3#3	20.67	20.76	20.30	17.64	17.73	17.27
		RB6#0	19.46	19.68	19.16	16.43	16.65	16.13
3.0	QPSK	RB1#0	21.57	21.62	21.35	18.54	18.59	18.32
		RB1#8	21.55	21.57	21.19	18.52	18.54	18.16
		RB1#14	21.49	21.52	21.15	18.46	18.49	18.12
		RB6#0	20.50	20.73	20.16	17.47	17.70	17.13
		RB6#9	20.51	20.48	20.20	17.48	17.45	17.17
		RB15#0	20.48	20.61	20.30	17.45	17.58	17.27
	16QAM	RB1#0	21.26	20.86	21.03	18.23	17.83	18.00
		RB1#8	21.24	20.66	20.99	18.21	17.63	17.96
		RB1#14	21.12	20.84	20.86	18.09	17.81	17.83
		RB6#0	19.70	19.56	19.47	16.67	16.53	16.44
		RB6#9	19.58	19.72	19.40	16.55	16.69	16.37
		RB15#0	19.64	19.61	19.26	16.61	16.58	16.23

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	21.52	21.59	21.23	18.49	18.56	18.20
		RB1#13	21.61	21.58	21.27	18.58	18.55	18.24
		RB1#24	21.53	21.59	21.18	18.50	18.56	18.15
		RB15#0	20.59	20.75	20.28	17.56	17.72	17.25
		RB15#10	20.73	20.68	20.54	17.70	17.65	17.51
		RB25#0	20.67	20.64	20.45	17.64	17.61	17.42
	16QAM	RB1#0	20.37	20.77	20.12	17.34	17.74	17.09
		RB1#13	20.57	21.00	20.36	17.54	17.97	17.33
		RB1#24	20.59	20.81	20.32	17.56	17.78	17.29
		RB15#0	19.53	19.71	19.25	16.50	16.68	16.22
		RB15#10	19.69	19.67	19.38	16.66	16.64	16.35
		RB25#0	19.72	19.58	19.33	16.69	16.55	16.30
10.0	QPSK	RB1#0	21.49	21.52	21.10	18.46	18.49	18.07
		RB1#25	21.71	21.87	21.42	18.68	18.84	18.39
		RB1#49	21.63	21.61	21.42	18.60	18.58	18.39
		RB25#0	20.62	20.72	20.38	17.59	17.69	17.35
		RB25#25	20.65	20.74	20.30	17.62	17.71	17.27
		RB50#0	20.59	20.58	20.38	17.56	17.55	17.35
	16QAM	RB1#0	21.16	20.82	20.93	18.13	17.79	17.90
		RB1#25	21.42	20.81	21.04	18.39	17.78	18.01
		RB1#49	21.31	20.79	21.00	18.28	17.76	17.97
		RB25#0	19.77	19.65	19.57	16.74	16.62	16.54
		RB25#25	19.65	19.61	19.41	16.62	16.58	16.38
		RB50#0	19.65	19.75	19.39	16.62	16.72	16.36

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	21.35	21.54	21.11	18.32	18.51	18.08
		RB1#38	21.46	21.70	21.17	18.43	18.67	18.14
		RB1#74	21.48	21.46	21.29	18.45	18.43	18.26
		RB36#0	20.70	20.71	20.36	17.67	17.68	17.33
		RB36#39	20.71	20.71	20.38	17.68	17.68	17.35
		RB75#0	20.70	20.71	20.44	17.67	17.68	17.41
	16QAM	RB1#0	21.06	20.64	20.72	18.03	17.61	17.69
		RB1#38	21.23	20.74	20.84	18.20	17.71	17.81
		RB1#74	21.14	20.58	20.93	18.11	17.55	17.90
		RB36#0	19.55	19.69	19.18	16.52	16.66	16.15
		RB36#39	19.74	19.56	19.38	16.71	16.53	16.35
		RB75#0	19.79	19.67	19.55	16.76	16.64	16.52
20.0	QPSK	RB1#0	22.09	22.05	21.79	19.06	19.02	18.76
		RB1#50	22.18	22.05	21.83	19.15	19.02	18.80
		RB1#99	21.99	22.04	21.69	18.96	19.01	18.66
		RB50#0	21.26	21.25	20.91	18.23	18.22	17.88
		RB50#50	21.32	21.26	20.97	18.29	18.23	17.94
		RB100#0	21.39	21.31	21.12	18.36	18.28	18.09
	16QAM	RB1#0	21.30	21.26	21.09	18.27	18.23	18.06
		RB1#50	21.68	21.58	21.36	18.65	18.55	18.33
		RB1#99	21.34	21.19	20.97	18.31	18.16	17.94
		RB50#0	20.36	20.15	20.10	17.33	17.12	17.07
		RB50#50	20.38	20.35	20.11	17.35	17.32	17.08
		RB100#0	20.41	20.16	20.12	17.38	17.13	17.09

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)

For Band4: Antenna Gain = -3.03dBi

Limit: EIRP ≤ 30dBm

LTE Band5

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	22.62	22.63	22.32	15.46	15.47	15.16
		RB1#3	22.82	22.68	22.50	15.66	15.52	15.34
		RB1#5	22.57	22.57	22.26	15.41	15.41	15.10
		RB3#0	22.69	22.77	22.32	15.53	15.61	15.16
		RB3#3	22.73	22.61	22.51	15.57	15.45	15.35
		RB6#0	21.90	21.73	21.52	14.74	14.57	14.36
	16QAM	RB1#0	21.71	21.65	21.44	14.55	14.49	14.28
		RB1#3	21.83	21.81	21.56	14.67	14.65	14.40
		RB1#5	21.78	21.60	21.45	14.62	14.44	14.29
		RB3#0	21.92	21.84	21.55	14.76	14.68	14.39
		RB3#3	21.82	21.82	21.53	14.66	14.66	14.37
		RB6#0	20.81	20.70	20.63	13.65	13.54	13.47
3.0	QPSK	RB1#0	23.12	23.16	22.83	15.96	16.00	15.67
		RB1#8	23.11	23.03	22.79	15.95	15.87	15.63
		RB1#14	23.19	22.92	22.99	16.03	15.76	15.83
		RB6#0	22.25	21.77	22.01	15.09	14.61	14.85
		RB6#9	22.17	22.03	21.86	15.01	14.87	14.70
		RB15#0	22.34	21.77	22.04	15.18	14.61	14.88
	16QAM	RB1#0	22.77	21.77	22.59	15.61	14.61	15.43
		RB1#8	22.71	21.79	22.52	15.55	14.63	15.36
		RB1#14	22.66	21.88	22.26	15.50	14.72	15.10
		RB6#0	21.42	20.81	21.04	14.26	13.65	13.88
		RB6#9	21.32	20.99	21.00	14.16	13.83	13.84
		RB15#0	21.33	20.98	21.10	14.17	13.82	13.94

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	23.18	23.16	22.91	16.02	16.00	15.75
		RB1#13	23.34	23.21	23.15	16.18	16.05	15.99
		RB1#24	23.18	22.87	22.82	16.02	15.71	15.66
		RB15#0	22.33	21.93	22.05	15.17	14.77	14.89
		RB15#10	22.19	21.94	21.93	15.03	14.78	14.77
		RB25#0	22.11	21.84	21.83	14.95	14.68	14.67
	16QAM	RB1#0	22.10	21.81	21.70	14.94	14.65	14.54
		RB1#13	22.23	22.20	22.02	15.07	15.04	14.86
		RB1#24	22.11	21.79	21.88	14.95	14.63	14.72
		RB15#0	21.30	20.82	21.11	14.14	13.66	13.95
		RB15#10	21.18	20.90	20.96	14.02	13.74	13.80
		RB25#0	21.22	20.92	21.02	14.06	13.76	13.86
10.0	QPSK	RB1#0	23.55	23.04	22.98	16.39	15.88	15.82
		RB1#25	23.23	23.08	22.88	16.07	15.92	15.72
		RB1#49	23.15	22.96	22.84	15.99	15.80	15.68
		RB25#0	22.55	22.33	22.22	15.39	15.17	15.06
		RB25#25	22.44	21.86	22.09	15.28	14.70	14.93
		RB50#0	22.18	21.96	21.93	15.02	14.80	14.77
	16QAM	RB1#0	22.51	22.35	22.32	15.35	15.19	15.16
		RB1#25	22.24	22.65	22.05	15.08	15.49	14.89
		RB1#49	22.12	22.49	21.74	14.96	15.33	14.58
		RB25#0	21.33	21.01	21.07	14.17	13.85	13.91
		RB25#25	21.30	21.08	21.04	14.14	13.92	13.88
		RB50#0	21.24	21.01	20.89	14.08	13.85	13.73

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd)
 For Band5: Antenna Gain = -5.01dBi = -7.16dBd (0dBd=2.15dBi)
 Limit: ERP ≤ 38.45dBm

LTE Band 7

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power(dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	21.19	21.22	20.89	19.59	19.62	19.29
		RB1#13	21.24	21.36	20.84	19.64	19.76	19.24
		RB1#24	20.88	21.13	20.61	19.28	19.53	19.01
		RB15#0	20.29	20.43	20.02	18.69	18.83	18.42
		RB15#10	20.25	20.31	20.02	18.65	18.71	18.42
		RB25#0	20.10	20.07	19.77	18.50	18.47	18.17
	16QAM	RB1#0	20.16	19.73	19.86	18.56	18.13	18.26
		RB1#13	20.30	20.18	19.93	18.70	18.58	18.33
		RB1#24	20.16	19.87	19.93	18.56	18.27	18.33
		RB15#0	19.42	19.08	19.10	17.82	17.48	17.50
		RB15#10	19.28	19.30	18.94	17.68	17.70	17.34
		RB25#0	19.30	19.37	18.94	17.70	17.77	17.34
10.0	QPSK	RB1#0	20.77	21.06	20.54	19.17	19.46	18.94
		RB1#25	21.39	21.34	21.06	19.79	19.74	19.46
		RB1#49	20.45	20.66	20.17	18.85	19.06	18.57
		RB25#0	20.13	19.96	19.91	18.53	18.36	18.31
		RB25#25	20.36	19.84	20.08	18.76	18.24	18.48
		RB50#0	20.22	19.69	20.03	18.62	18.09	18.43
	16QAM	RB1#0	19.99	19.92	19.79	18.39	18.32	18.19
		RB1#25	20.46	20.32	20.18	18.86	18.72	18.58
		RB1#49	20.09	19.72	19.88	18.49	18.12	18.28
		RB25#0	19.30	18.69	18.97	17.70	17.09	17.37
		RB25#25	19.25	18.94	18.90	17.65	17.34	17.30
		RB50#0	19.14	18.84	18.91	17.54	17.24	17.31

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power(dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	20.95	21.00	20.76	19.35	19.40	19.16
		RB1#38	21.25	21.03	20.91	19.65	19.43	19.31
		RB1#74	21.06	20.81	20.74	19.46	19.21	19.14
		RB36#0	20.37	20.00	20.07	18.77	18.40	18.47
		RB36#39	20.10	20.04	19.71	18.50	18.44	18.11
		RB75#0	20.33	19.95	19.94	18.73	18.35	18.34
	16QAM	RB1#0	20.44	20.29	20.09	18.84	18.69	18.49
		RB1#38	20.58	20.47	20.23	18.98	18.87	18.63
		RB1#74	20.47	20.52	20.26	18.87	18.92	18.66
		RB36#0	19.38	19.04	19.16	17.78	17.44	17.56
		RB36#39	19.39	19.02	19.06	17.79	17.42	17.46
		RB75#0	19.39	18.97	19.20	17.79	17.37	17.60
20.0	QPSK	RB1#0	21.05	21.01	20.85	19.45	19.41	19.25
		RB1#50	21.36	21.28	21.12	19.76	19.68	19.52
		RB1#99	20.64	20.73	20.38	19.04	19.13	18.78
		RB50#0	19.95	19.67	19.59	18.35	18.07	17.99
		RB50#50	20.23	19.81	19.84	18.63	18.21	18.24
		RB100#0	20.32	19.81	20.08	18.72	18.21	18.48
	16QAM	RB1#0	19.99	19.67	19.67	18.39	18.07	18.07
		RB1#50	20.56	20.73	20.24	18.96	19.13	18.64
		RB1#99	20.13	19.90	19.92	18.53	18.30	18.32
		RB50#0	19.33	18.70	19.09	17.73	17.10	17.49
		RB50#50	19.21	18.74	18.93	17.61	17.14	17.33
		RB100#0	19.17	18.84	18.77	17.57	17.24	17.17

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)

For Band7: Antenna Gain = -1.6dBi

Limit: ERP ≤ 33dBm

LTE Band 12

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	23.17	23.10	23.14	13.14	13.07	13.11
		RB1#3	23.20	23.25	23.38	13.17	13.22	13.35
		RB1#5	23.20	23.10	23.18	13.17	13.07	13.15
		RB3#0	23.34	23.30	23.40	13.31	13.27	13.37
		RB3#3	23.15	23.29	23.33	13.12	13.26	13.30
		RB6#0	22.33	22.19	22.14	12.30	12.16	12.11
	16QAM	RB1#0	21.32	22.46	22.16	11.29	12.43	12.13
		RB1#3	21.66	22.50	22.33	11.63	12.47	12.30
		RB1#5	21.47	22.18	22.14	11.44	12.15	12.11
		RB3#0	21.35	22.43	22.42	11.32	12.40	12.39
		RB3#3	21.43	22.49	22.54	11.40	12.46	12.51
		RB6#0	21.41	21.36	21.38	11.38	11.33	11.35
3.0	QPSK	RB1#0	23.25	23.33	23.18	13.22	13.30	13.15
		RB1#8	23.42	23.31	23.15	13.39	13.28	13.12
		RB1#14	23.31	23.32	23.11	13.28	13.29	13.08
		RB6#0	22.18	22.31	22.23	12.15	12.28	12.20
		RB6#9	22.29	22.16	22.09	12.26	12.13	12.06
		RB15#0	22.42	22.40	22.34	12.39	12.37	12.31
	16QAM	RB1#0	22.39	22.31	22.84	12.36	12.28	12.81
		RB1#8	22.56	22.42	22.75	12.53	12.39	12.72
		RB1#14	22.45	22.30	22.72	12.42	12.27	12.69
		RB6#0	21.33	21.34	21.36	11.30	11.31	11.33
		RB6#9	21.38	21.30	21.29	11.35	11.27	11.26
		RB15#0	21.30	21.38	21.28	11.27	11.35	11.25

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	23.09	23.73	22.90	13.06	13.70	12.87
		RB1#13	23.19	23.58	23.12	13.16	13.55	13.09
		RB1#24	23.40	23.44	23.29	13.37	13.41	13.26
		RB15#0	22.46	22.78	22.30	12.43	12.75	12.27
		RB15#10	22.10	22.71	22.64	12.07	12.68	12.61
		RB25#0	22.31	22.46	22.39	12.28	12.43	12.36
	16QAM	RB1#0	22.39	22.44	22.25	12.36	12.41	12.22
		RB1#13	22.36	23.15	22.27	12.33	13.12	12.24
		RB1#24	22.09	22.90	22.52	12.06	12.87	12.49
		RB15#0	21.30	21.69	21.62	11.27	11.66	11.59
		RB15#10	21.64	21.43	21.47	11.61	11.40	11.44
		RB25#0	21.08	21.37	21.60	11.05	11.34	11.57
10.0	QPSK	RB1#0	23.51	23.25	23.67	13.48	13.22	13.64
		RB1#25	23.41	23.79	23.58	13.38	13.76	13.55
		RB1#49	23.24	23.42	23.22	13.21	13.39	13.19
		RB25#0	22.25	22.92	22.41	12.22	12.89	12.38
		RB25#25	23.07	22.22	22.47	13.04	12.19	12.44
		RB50#0	22.47	22.77	22.12	12.44	12.74	12.09
	16QAM	RB1#0	22.67	22.48	23.21	12.64	12.45	13.18
		RB1#25	22.38	22.24	23.14	12.35	12.21	13.11
		RB1#49	22.38	22.13	22.95	12.35	12.10	12.92
		RB25#0	21.30	21.80	21.58	11.27	11.77	11.55
		RB25#25	21.45	21.50	21.60	11.42	11.47	11.57
		RB50#0	21.82	22.11	21.74	11.79	12.08	11.71

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd)
 For Band12: Antenna Gain = -7.88dBi = -10.03dBd (0dBd=2.15dBi)
 Limit: ERP ≤ 34.77dBm

LTE Band 13

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	23.03	23.10	23.13	13.00	13.07	13.10
		RB1#13	23.13	23.16	23.18	13.10	13.13	13.15
		RB1#24	23.09	23.06	23.12	13.06	13.03	13.09
		RB15#0	22.15	22.16	22.21	12.12	12.13	12.18
		RB15#10	22.19	22.20	22.11	12.16	12.17	12.08
		RB25#0	22.15	22.13	22.12	12.12	12.10	12.09
	16QAM	RB1#0	22.36	22.16	21.91	12.33	12.13	11.88
		RB1#13	22.37	22.18	22.05	12.34	12.15	12.02
		RB1#24	22.33	22.12	22.03	12.30	12.09	12.00
		RB15#0	21.13	21.17	21.24	11.10	11.14	11.21
		RB15#10	21.21	21.21	21.14	11.18	11.18	11.11
		RB25#0	21.16	21.17	21.16	11.13	11.14	11.13
10.0	QPSK	RB1#0	/	23.14	/	/	13.11	/
		RB1#25	/	23.35	/	/	13.32	/
		RB1#49	/	23.13	/	/	13.10	/
		RB25#0	/	22.08	/	/	12.05	/
		RB25#25	/	22.15	/	/	12.12	/
		RB50#0	/	22.12	/	/	12.09	/
	16QAM	RB1#0	/	22.17	/	/	12.14	/
		RB1#25	/	22.29	/	/	12.26	/
		RB1#49	/	22.16	/	/	12.13	/
		RB25#0	/	21.19	/	/	11.16	/
		RB25#25	/	21.18	/	/	11.15	/
		RB50#0	/	21.15	/	/	11.12	/

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd)
 For Band13: Antenna Gain = -7.88dBi = -10.03dBd (0dBd=2.15dBi)
 Limit: ERP≤34.77dBm

LTE Band 17

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	23.13	22.92	23.34	13.10	12.89	13.31
		RB1#13	23.32	23.07	23.57	13.29	13.04	13.54
		RB1#24	23.40	22.51	23.13	13.37	12.48	13.10
		RB15#0	22.46	21.98	21.86	12.43	11.95	11.83
		RB15#10	22.12	21.90	21.52	12.09	11.87	11.49
		RB25#0	22.55	22.53	21.68	12.52	12.50	11.65
	16QAM	RB1#0	22.53	21.96	21.55	12.50	11.93	11.52
		RB1#13	23.00	21.78	22.00	12.97	11.75	11.97
		RB1#24	22.44	21.79	22.31	12.41	11.76	12.28
		RB15#0	21.45	21.59	21.41	11.42	11.56	11.38
		RB15#10	21.56	21.84	21.45	11.53	11.81	11.42
		RB25#0	21.14	20.99	21.73	11.11	10.96	11.70
10.0	QPSK	RB1#0	23.28	23.62	23.57	13.25	13.59	13.54
		RB1#25	23.78	23.25	23.73	13.75	13.22	13.70
		RB1#49	23.01	23.70	22.87	12.98	13.67	12.84
		RB25#0	22.44	22.06	22.88	12.41	12.03	12.85
		RB25#25	22.26	22.48	22.35	12.23	12.45	12.32
		RB50#0	21.98	22.18	21.83	11.95	12.15	11.80
	16QAM	RB1#0	22.89	22.79	22.11	12.86	12.76	12.08
		RB1#25	22.73	23.65	22.38	12.70	13.62	12.35
		RB1#49	22.54	22.38	22.39	12.51	12.35	12.36
		RB25#0	22.12	21.43	21.69	12.09	11.40	11.66
		RB25#25	21.90	21.39	21.61	11.87	11.36	11.58
		RB50#0	21.21	20.89	21.11	11.18	10.86	11.08

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd)
 For Band17: Antenna Gain = -7.88dBi = -10.03dBd (0dBd=2.15dBi)
 Limit: ERP ≤ 34.77dBm

LTE Band 38

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	22.68	22.62	22.67	21.08	21.02	21.07
		RB1#13	22.28	22.60	22.57	20.68	21.00	20.97
		RB1#24	22.49	22.38	22.62	20.89	20.78	21.02
		RB15#0	21.17	21.75	21.73	19.57	20.15	20.13
		RB15#10	22.05	21.70	20.94	20.45	20.10	19.34
		RB25#0	21.61	21.17	21.49	20.01	19.57	19.89
	16QAM	RB1#0	21.59	21.82	21.77	19.99	20.22	20.17
		RB1#13	22.11	21.20	21.15	20.51	19.60	19.55
		RB1#24	22.07	20.89	21.32	20.47	19.29	19.72
		RB15#0	20.82	20.91	20.74	19.22	19.31	19.14
		RB15#10	20.77	20.09	20.12	19.17	18.49	18.52
		RB25#0	20.73	19.96	20.11	19.13	18.36	18.51
10.0	QPSK	RB1#0	22.37	22.62	22.33	20.77	21.02	20.73
		RB1#25	23.10	23.19	22.28	21.50	21.59	20.68
		RB1#49	22.59	22.46	21.57	20.99	20.86	19.97
		RB25#0	21.76	21.99	21.38	20.16	20.39	19.78
		RB25#25	21.15	21.17	21.10	19.55	19.57	19.50
		RB50#0	21.02	21.62	21.79	19.42	20.02	20.19
	16QAM	RB1#0	21.05	21.59	22.14	19.45	19.99	20.54
		RB1#25	22.11	21.33	21.90	20.51	19.73	20.30
		RB1#49	22.00	20.83	20.56	20.40	19.23	18.96
		RB25#0	20.54	20.87	20.51	18.94	19.27	18.91
		RB25#25	21.12	20.94	20.15	19.52	19.34	18.55
		RB50#0	20.76	20.67	20.42	19.16	19.07	18.82

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	22.38	22.08	22.75	20.78	20.48	21.15
		RB1#38	22.31	23.08	22.09	20.71	21.48	20.49
		RB1#74	22.90	22.06	22.21	21.30	20.46	20.61
		RB36#0	21.66	21.44	22.15	20.06	19.84	20.55
		RB36#39	21.41	21.02	21.38	19.81	19.42	19.78
		RB75#0	21.23	22.01	21.36	19.63	20.41	19.76
	16QAM	RB1#0	21.63	21.08	21.68	20.03	19.48	20.08
		RB1#38	21.25	21.55	21.82	19.65	19.95	20.22
		RB1#74	21.68	21.89	20.77	20.08	20.29	19.17
		RB36#0	20.53	21.03	20.27	18.93	19.43	18.67
		RB36#39	20.45	20.21	20.47	18.85	18.61	18.87
		RB75#0	20.92	21.01	20.84	19.32	19.41	19.24
20.0	QPSK	RB1#0	21.97	22.14	22.53	20.37	20.54	20.93
		RB1#50	22.67	22.55	23.21	21.07	20.95	21.61
		RB1#99	22.83	22.68	22.40	21.23	21.08	20.80
		RB50#0	21.37	21.94	21.93	19.77	20.34	20.33
		RB50#50	21.37	20.94	20.91	19.77	19.34	19.31
		RB100#0	21.71	21.61	21.15	20.11	20.01	19.55
	16QAM	RB1#0	21.17	20.90	21.16	19.57	19.30	19.56
		RB1#50	22.19	21.32	21.68	20.59	19.72	20.08
		RB1#99	22.04	21.72	21.45	20.44	20.12	19.85
		RB50#0	20.17	20.72	20.32	18.57	19.12	18.72
		RB50#50	21.02	19.91	20.02	19.42	18.31	18.42
		RB100#0	20.71	20.33	20.95	19.11	18.73	19.35

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
 For Band38: Antenna Gain = -1.6dBi
 Limit: EIRP ≤ 33dBm

LTE Band 41

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	23.25	23.20	22.71	21.65	21.60	21.11
		RB1#13	22.99	23.19	23.32	21.39	21.59	21.72
		RB1#24	23.49	23.29	23.59	21.89	21.69	21.99
		RB15#0	23.02	23.39	23.11	21.42	21.79	21.51
		RB15#10	23.33	23.43	23.33	21.73	21.83	21.73
		RB25#0	23.51	23.51	23.02	21.91	21.91	21.42
	16QAM	RB1#0	23.66	23.75	23.50	22.06	22.15	21.90
		RB1#13	23.35	23.43	23.67	21.75	21.83	22.07
		RB1#24	23.47	23.53	23.01	21.87	21.93	21.41
		RB15#0	23.15	23.67	23.69	21.55	22.07	22.09
		RB15#10	23.10	23.81	23.46	21.50	22.21	21.86
		RB25#0	22.93	23.29	23.05	21.33	21.69	21.45
10.0	QPSK	RB1#0	23.25	23.54	23.42	21.65	21.94	21.82
		RB1#25	23.79	23.40	23.72	22.19	21.80	22.12
		RB1#49	23.45	23.51	23.47	21.85	21.91	21.87
		RB25#0	23.69	23.71	23.10	22.09	22.11	21.50
		RB25#25	23.76	23.76	23.61	22.16	22.16	22.01
		RB50#0	23.19	23.18	23.70	21.59	21.58	22.10
	16QAM	RB1#0	23.02	23.06	22.67	21.42	21.46	21.07
		RB1#25	23.64	23.82	23.67	22.04	22.22	22.07
		RB1#49	23.11	23.68	23.02	21.51	22.08	21.42
		RB25#0	22.84	23.66	22.96	21.24	22.06	21.36
		RB25#25	23.13	23.10	23.35	21.53	21.50	21.75
		RB50#0	23.03	22.92	23.15	21.43	21.32	21.55

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	23.88	23.87	23.75	22.28	22.27	22.15
		RB1#38	23.06	23.80	23.32	21.46	22.20	21.72
		RB1#74	23.69	23.61	22.88	22.09	22.01	21.28
		RB36#0	23.48	23.89	23.59	21.88	22.29	21.99
		RB36#39	23.54	23.46	23.55	21.94	21.86	21.95
		RB75#0	23.11	23.55	23.08	21.51	21.95	21.48
	16QAM	RB1#0	23.49	23.32	23.77	21.89	21.72	22.17
		RB1#38	22.96	24.11	23.85	21.36	22.51	22.25
		RB1#74	23.10	23.25	23.04	21.50	21.65	21.44
		RB36#0	23.77	24.14	23.72	22.17	22.54	22.12
		RB36#39	23.20	23.68	23.73	21.60	22.08	22.13
		RB75#0	23.37	23.76	23.27	21.77	22.16	21.67
20.0	QPSK	RB1#0	22.70	23.90	23.33	21.10	22.30	21.73
		RB1#50	23.35	24.33	23.56	21.75	22.73	21.96
		RB1#99	23.15	23.45	23.61	21.55	21.85	22.01
		RB50#0	23.38	23.81	23.20	21.78	22.21	21.60
		RB50#50	23.55	23.10	23.68	21.95	21.50	22.08
		RB100#0	23.77	23.50	23.35	22.17	21.90	21.75
	16QAM	RB1#0	23.55	23.77	23.65	21.95	22.17	22.05
		RB1#50	23.26	23.38	23.35	21.66	21.78	21.75
		RB1#99	23.75	22.98	23.55	22.15	21.38	21.95
		RB50#0	23.00	23.21	23.58	21.40	21.61	21.98
		RB50#50	23.68	23.18	23.05	22.08	21.58	21.45
		RB100#0	23.02	23.86	23.70	21.42	22.26	22.10

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)

For Band41: Antenna Gain = -1.6dBi

Limit: EIRP ≤ 33dBm

LTE Band 66:

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	22.14	22.14	21.90	19.11	19.11	18.87
		RB1#3	21.77	22.48	22.54	18.74	19.45	19.51
		RB1#5	21.67	21.91	21.84	18.64	18.88	18.81
		RB3#0	20.74	21.17	20.78	17.71	18.14	17.75
		RB3#3	20.76	20.64	20.72	17.73	17.61	17.69
		RB6#0	21.21	21.13	21.65	18.18	18.10	18.62
	16QAM	RB1#0	20.71	20.96	21.27	17.68	17.93	18.24
		RB1#3	20.62	21.23	21.12	17.59	18.20	18.09
		RB1#5	20.49	21.03	20.84	17.46	18.00	17.81
		RB3#0	20.12	19.86	20.68	17.09	16.83	17.65
		RB3#3	19.46	20.07	19.92	16.43	17.04	16.89
		RB6#0	19.43	19.76	19.87	16.40	16.73	16.84
3.0	QPSK	RB1#0	22.23	22.52	21.62	19.20	19.49	18.59
		RB1#8	22.00	21.55	22.37	18.97	18.52	19.34
		RB1#14	22.34	22.14	22.22	19.31	19.11	19.19
		RB6#0	21.05	21.28	20.92	18.02	18.25	17.89
		RB6#9	21.17	20.66	21.37	18.14	17.63	18.34
		RB15#0	20.70	20.62	21.18	17.67	17.59	18.15
	16QAM	RB1#0	21.19	21.07	21.60	18.16	18.04	18.57
		RB1#8	20.71	21.02	21.46	17.68	17.99	18.43
		RB1#14	21.08	21.57	21.86	18.05	18.54	18.83
		RB6#0	19.52	19.49	20.12	16.49	16.46	17.09
		RB6#9	19.86	20.27	20.27	16.83	17.24	17.24
		RB15#0	20.24	19.64	20.42	17.21	16.61	17.39

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	21.36	21.60	22.08	18.33	18.57	19.05
		RB1#13	22.37	22.31	22.18	19.34	19.28	19.15
		RB1#24	21.31	21.97	21.98	18.28	18.94	18.95
		RB15#0	21.11	21.54	21.70	18.08	18.51	18.67
		RB15#10	20.61	20.75	21.00	17.58	17.72	17.97
		RB25#0	20.62	21.63	21.44	17.59	18.60	18.41
	16QAM	RB1#0	21.54	20.56	21.64	18.51	17.53	18.61
		RB1#13	20.63	21.03	21.33	17.60	18.00	18.30
		RB1#24	21.05	21.19	21.15	18.02	18.16	18.12
		RB15#0	20.51	19.88	19.92	17.48	16.85	16.89
		RB15#10	19.85	20.55	20.01	16.82	17.52	16.98
		RB25#0	19.88	20.06	20.41	16.85	17.03	17.38
10.0	QPSK	RB1#0	21.97	21.85	21.97	18.94	18.82	18.94
		RB1#25	21.76	22.40	22.03	18.73	19.37	19.00
		RB1#49	21.80	21.62	21.52	18.77	18.59	18.49
		RB25#0	21.46	20.73	21.50	18.43	17.70	18.47
		RB25#25	20.90	20.53	20.74	17.87	17.50	17.71
		RB50#0	20.75	21.15	20.91	17.72	18.12	17.88
	16QAM	RB1#0	21.51	21.05	21.99	18.48	18.02	18.96
		RB1#25	21.37	21.40	21.34	18.34	18.37	18.31
		RB1#49	20.80	21.11	21.36	17.77	18.08	18.33
		RB25#0	20.25	19.96	20.12	17.22	16.93	17.09
		RB25#25	20.21	20.00	19.98	17.18	16.97	16.95
		RB50#0	20.12	20.60	20.54	17.09	17.57	17.51

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	18.72	19.19	18.62	15.69	16.16	15.59
		RB1#38	18.89	18.78	18.76	15.86	15.75	15.73
		RB1#74	19.02	19.18	18.62	15.99	16.15	15.59
		RB36#0	17.50	18.58	18.74	14.47	15.55	15.71
		RB36#39	18.39	17.70	18.39	15.36	14.67	15.36
		RB75#0	18.51	18.56	18.61	15.48	15.53	15.58
	16QAM	RB1#0	17.75	18.82	18.48	14.72	15.79	15.45
		RB1#38	18.10	18.42	18.83	15.07	15.39	15.80
		RB1#74	18.50	18.51	18.22	15.47	15.48	15.19
		RB36#0	16.67	16.64	17.46	13.64	13.61	14.43
		RB36#39	17.56	16.98	17.33	14.53	13.95	14.30
		RB75#0	17.28	17.01	16.98	14.25	13.98	13.95
20.0	QPSK	RB1#0	18.82	18.42	18.58	15.79	15.39	15.55
		RB1#50	19.20	19.38	19.49	16.17	16.35	16.46
		RB1#99	19.37	18.82	18.85	16.34	15.79	15.82
		RB50#0	18.21	18.61	18.32	15.18	15.58	15.29
		RB50#50	17.66	17.54	18.05	14.63	14.51	15.02
		RB100#0	18.39	17.73	17.86	15.36	14.70	14.83
	16QAM	RB1#0	18.34	18.28	18.33	15.31	15.25	15.30
		RB1#50	18.71	18.27	18.44	15.68	15.24	15.41
		RB1#99	18.13	17.74	18.26	15.10	14.71	15.23
		RB50#0	17.43	17.07	17.27	14.40	14.04	14.24
		RB50#50	16.62	16.72	16.92	13.59	13.69	13.89
		RB100#0	16.95	17.15	16.76	13.92	14.12	13.73

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)

For Band 66: Antenna Gain = -3.03dBi

Limit: EIRP ≤ 30dBm

Peak-to-average ratio (PAR)**LTE Band 13 10MHz Bandwidth**

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	/	4.68	/	13	Pass
QPSK (50RB Size)	/	5.32	/	13	Pass
16QAM (1RB Size)	/	5.71	/	13	Pass
16QAM (50RB Size)	/	6.25	/	13	Pass

FCC §2.1049, §22.917, §22.905 & §24.238&§27.53 - OCCUPIED BANDWIDTH

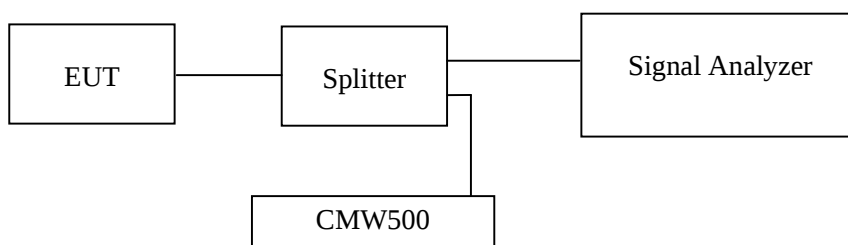
Applicable Standard

FCC 47 §2.1049, §22.917, §22.905, §24.238,§27.53.

Test Procedure

The RF output of the transmitter was connected to the simulator and the spectrum analyzer through sufficient attenuation.

The resolution bandwidth of the spectrum analyzer was set at 1% to 5% of the anticipated emission bandwidth and the 26 dB & 99% bandwidth was recorded.



Note: the worst path loss (cable loss and splitter inset loss) among the test frequency range has included in plot.

Test Data

Environmental Conditions

Temperature:	27.2℃
Relative Humidity:	56.2 %
ATM Pressure:	101.0 kPa

The testing was performed by Glenn Jiang on 2023-02-10.

EUT operation mode: Transmitting

Test Result: Pass

Please refer to the following tables and plots.

LTE Band 13:

Bandwidth	Modulation	Low channel		Middle channel		High channel	
		OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)	OBW (MHz)	26dB EBW (MHz)
5 MHz	QPSK	4.540	5.220	4.520	5.200	4.520	5.180
	16QAM	4.560	5.180	4.540	5.200	4.520	5.080
10 MHz	QPSK	/	/	8.960	9.880	/	/
	16QAM	/	/	8.960	9.800	/	/

The test plots of LTE band please refer to the Appendix A.

FCC §2.1051, §22.917(a) & §24.238(a)& §27.53 - SPURIOUS EMISSIONS AT ANTENNA TERMINALS

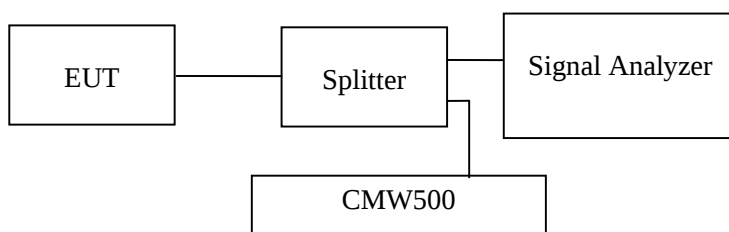
Applicable Standard

FCC §2.1051, §22.917(a) & §24.238(a), §27.53.

The spectrum was to be investigated to the tenth harmonics of the highest fundamental frequency as specified in § 2.1051.

Test Procedure

The RF output of the transceiver was connected to a spectrum analyzer and simulator through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 1MHz. Sufficient scans were taken to show any out of band emissions up to 10th harmonic.



Note: the worst path loss (cable loss and splitter inset loss) among the test frequency range has included in plot.

Test Data

Environmental Conditions

Temperature:	27.2°C
Relative Humidity:	56.2 %
ATM Pressure:	101.0 kPa

The testing was performed by Glenn Jiang from 2023-02-10 to 2023-02-16.

EUT operation mode: Transmitting

Test result: Pass

The test plots of LTE band please refer to the Appendix B.

FCC § 2.1053; § 22.917 (a); § 24.238 (a); § 27.53- SPURIOUS RADIATED EMISSIONS

Applicable Standard

FCC § 2.1053, § 22.917(a) & § 24.238(a) & § 27.53.

Test Procedure

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the receiving antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.

The frequency range up to tenth harmonic of the fundamental frequency was investigated.

Test Data

Environmental Conditions

Temperature:	23~25.5°C
Relative Humidity:	50~52%
ATM Pressure:	101.0 kPa

The testing was performed by Jimi Zheng from 2023-02-07 to 2023-02-22.

Test mode: Transmitting (Pre-scan in the X,Y and Z axes of orientation, the worst case Z-axis of orientation was recorded)

The worst case is as below:

30MHz-10GHz:**Cellular Band (Part 22H)**

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
GSM 850								
Low Channel								
960.32	-60.96	104	1.9	H	10	-50.96	-13	-37.96
960.32	-61.44	329	1.4	V	11.7	-49.74	-13	-36.74
1648.4	-54.10	189	1.1	H	3.5	-50.60	-13	-37.60
1648.4	-55.60	1	1.4	V	3.1	-52.50	-13	-39.50
2472.6	-39.90	85	2.1	H	6.6	-33.30	-13	-20.30
2472.6	-39.40	290	1.2	V	5.8	-33.60	-13	-20.60
3296.8	-50.10	261	1.5	H	6.4	-43.70	-13	-30.70
3296.8	-49.80	7	1.8	V	5.7	-44.10	-13	-31.10
Middle Channel								
959.67	-60.12	158	2.4	H	10	-50.12	-13	-37.12
959.67	-62.59	309	2.3	V	11.7	-50.89	-13	-37.89
1673.2	-52.00	67	1.6	H	3.8	-48.20	-13	-35.20
1673.2	-53.20	291	2.3	V	3.1	-50.10	-13	-37.10
2509.8	-38.60	71	1.9	H	6.2	-32.40	-13	-19.40
2509.8	-37.50	34	2.4	V	5.6	-31.90	-13	-18.90
3346.4	-49.60	288	1	H	6.6	-43.00	-13	-30.00
3346.4	-49.30	95	2.2	V	5.4	-43.90	-13	-30.90
High Channel								
959.72	-59.2	357	2.2	H	10	-49.2	-13	-36.2
959.72	-61.88	350	2.2	V	11.7	-50.18	-13	-37.18
1697.6	-52.10	343	1.3	H	4.1	-48.00	-13	-35.00
1697.6	-52.90	59	2.1	V	3.1	-49.80	-13	-36.80
2546.4	-40.00	96	1.9	H	6.1	-33.90	-13	-20.90
2546.4	-39.70	335	2.1	V	5.8	-33.90	-13	-20.90
3395.2	-48.90	79	1.3	H	6.2	-42.70	-13	-29.70
3395.2	-48.50	24	1.4	V	5.4	-43.10	-13	-30.10

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
WCDMA Band 5								
Low Channel								
960.34	-62.79	353	2.4	H	10	-52.79	-13	-39.79
960.34	-61.84	124	2.2	V	11.7	-50.14	-13	-37.14
1652.8	-55.10	150	2.3	H	3.5	-51.60	-13	-38.60
1652.8	-55.60	262	2.3	V	3.1	-52.50	-13	-39.50
2479.2	-55.10	220	2.4	H	6.5	-48.60	-13	-35.60
2479.2	-53.30	63	2	V	5.7	-47.60	-13	-34.60
3305.6	-49.80	204	1.2	H	6.4	-43.40	-13	-30.40
3305.6	-49.00	330	1.8	V	5.7	-43.30	-13	-30.30
Middle Channel								
960.06	-62.42	277	2.2	H	10	-52.42	-13	-39.42
960.06	-62.14	107	1.4	V	11.7	-50.44	-13	-37.44
1672.8	-55.70	220	2.1	H	3.8	-51.90	-13	-38.90
1672.8	-55.30	164	2	V	3.1	-52.20	-13	-39.20
2509.2	-54.90	249	2.3	H	6.2	-48.70	-13	-35.70
2509.2	-53.80	139	2.4	V	5.6	-48.20	-13	-35.20
3345.6	-50.10	167	1.5	H	6.6	-43.50	-13	-30.50
3345.6	-48.70	139	1.2	V	5.4	-43.30	-13	-30.30
High Channel								
959.09	-62.13	22	1.1	H	10	-52.13	-13	-39.13
959.09	-62.6	168	1	V	11.7	-50.9	-13	-37.9
1693.2	-56.30	8	2.3	H	4	-52.30	-13	-39.30
1693.2	-54.50	208	1.3	V	3.1	-51.40	-13	-38.40
2539.8	-55.00	134	1.2	H	6.1	-48.90	-13	-35.90
2539.8	-53.80	242	1.8	V	5.7	-48.10	-13	-35.10
3386.4	-49.90	57	1	H	6.3	-43.60	-13	-30.60
3386.4	-49.00	18	2.5	V	5.4	-43.60	-13	-30.60

30MHz-20GHz:**PCS Band (Part 24E)**

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
PCS 1900								
Low Channel								
958.75	-62.76	190	1.3	H	10	-52.76	-13	-39.76
958.75	-61.31	305	1.1	V	11.7	-49.61	-13	-36.61
3700.4	-51.00	306	2	H	8.1	-42.90	-13	-29.90
3700.4	-50.70	219	2.3	V	7.6	-43.10	-13	-30.10
5550.6	-47.30	355	1.7	H	9.6	-37.70	-13	-24.70
5550.6	-49.10	226	2.1	V	9.1	-40.00	-13	-27.00
Middle Channel								
959.61	-61.65	121	1.6	H	10	-51.65	-13	-38.65
959.61	-62.11	296	1	V	11.7	-50.41	-13	-37.41
3760.0	-49.80	79	1.6	H	8.8	-41.00	-13	-28.00
3760.0	-50.90	252	1	V	8	-42.90	-13	-29.90
5640.0	-50.20	331	1.1	H	10.2	-40.00	-13	-27.00
5640.0	-50.20	164	1.5	V	9.4	-40.80	-13	-27.80
High Channel								
960.24	-60.23	252	1.8	H	10	-50.23	-13	-37.23
960.24	-62.49	14	1.5	V	11.7	-50.79	-13	-37.79
3819.6	-48.80	197	1.8	H	8.7	-40.10	-13	-27.10
3819.6	-49.60	116	2.1	V	8	-41.60	-13	-28.60
5729.4	-48.90	221	2	H	10.6	-38.30	-13	-25.30
5729.4	-49.70	107	1.7	V	10.2	-39.50	-13	-26.50

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
WCDMA Band 2								
Low Channel								
959.36	-64.15	93	1.7	H	10	-54.15	-13	-41.15
959.36	-61.35	176	1.8	V	11.7	-49.65	-13	-36.65
3704.8	-49.80	170	2.4	H	8.2	-41.60	-13	-28.60
3704.8	-49.30	319	2.3	V	7.6	-41.70	-13	-28.70
5557.2	-49.90	349	1.1	H	9.7	-40.20	-13	-27.20
5557.2	-50.20	17	2.1	V	9.1	-41.10	-13	-28.10
Middle Channel								
959.92	-63.42	231	1.2	H	10	-53.42	-13	-40.42
959.92	-62.07	140	1.4	V	11.7	-50.37	-13	-37.37
3760.0	-50.50	270	2	H	8.8	-41.70	-13	-28.70
3760.0	-49.80	21	1.5	V	8	-41.80	-13	-28.80
5640.0	-50.20	305	1.2	H	10.2	-40.00	-13	-27.00
5640.0	-50.30	36	2	V	9.4	-40.90	-13	-27.90
High Channel								
959.57	-62.61	109	1.9	H	10	-52.61	-13	-39.61
959.57	-62.42	60	1.6	V	11.7	-50.72	-13	-37.72
3815.2	-49.70	156	2	H	8.7	-41.00	-13	-28.00
3815.2	-48.60	188	1.1	V	7.9	-40.70	-13	-27.70
5722.8	-51.10	222	1	H	10.6	-40.50	-13	-27.50
5722.8	-51.10	54	1.8	V	10.1	-41.00	-13	-28.00

AWS Band (Part 27)

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
WCDMA Band 4								
Low Channel								
959.83	-64.44	45	2.5	H	10	-54.44	-13	-41.44
959.83	-61.46	115	1.8	V	11.7	-49.76	-13	-36.76
3424.8	-47.80	83	1.6	H	6.4	-41.40	-13	-28.40
3424.8	-47.70	214	2.1	V	5.7	-42.00	-13	-29.00
5137.2	-51.70	56	1.5	H	11.3	-40.40	-13	-27.40
5137.2	-49.70	182	2.3	V	10.8	-38.90	-13	-25.90
Middle Channel								
959.91	-63.77	155	1.8	H	10	-53.77	-13	-40.77
959.91	-62.12	13	2.1	V	11.7	-50.42	-13	-37.42
3465.2	-49.20	168	1	H	7	-42.20	-13	-29.20
3465.2	-49.50	112	2.4	V	6.2	-43.30	-13	-30.30
5197.8	-52.00	16	1.7	H	10.3	-41.70	-13	-28.70
5197.8	-49.40	257	2	V	9.8	-39.60	-13	-26.60
High Channel								
958.88	-63.04	343	1.6	H	10	-53.04	-13	-40.04
958.88	-62.28	226	2.5	V	11.7	-50.58	-13	-37.58
3505.2	-49.60	133	1.9	H	7.8	-41.80	-13	-28.80
3505.2	-49.50	301	1.2	V	6.5	-43.00	-13	-30.00
5257.8	-50.60	255	2.2	H	9.4	-41.20	-13	-28.20
5257.8	-48.30	250	1.6	V	9	-39.30	-13	-26.30

LTE Band: (Pre-scan with all the bandwidth/modulation, and worst case as below)

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 2								
Test frequency range: 30MHz-20GHz								
1.4MHz bandwidth, QPSK, Low channel								
960.07	-65.01	152	1.7	H	10	-55.01	-13	-42.01
960.07	-61.8	111	1.5	V	11.7	-50.1	-13	-37.1
3701.4	-49.10	75	1.4	H	8.1	-41.00	-13	-28.00
3701.4	-46.60	160	1.6	V	7.6	-39.00	-13	-26.00
5552.1	-47.30	181	2.3	H	9.6	-37.70	-13	-24.70
5552.1	-47.10	327	2.3	V	9.1	-38.00	-13	-25.00
1.4MHz bandwidth, QPSK, Middle channel								
959.66	-64.26	91	1.1	H	10	-54.26	-13	-41.26
959.66	-62.22	76	1.6	V	11.7	-50.52	-13	-37.52
3760.0	-47.80	313	1.4	H	8.8	-39.00	-13	-26.00
3760.0	-46.40	230	1.8	V	8	-38.40	-13	-25.40
5640.0	-48.10	341	2.4	H	10.2	-37.90	-13	-24.90
5640.0	-49.70	215	1.7	V	9.4	-40.30	-13	-27.30
1.4MHz bandwidth, QPSK, High channel								
959.13	-62.92	325	2.2	H	10	-52.92	-13	-39.92
959.13	-62.48	114	1.9	V	11.7	-50.78	-13	-37.78
3818.6	-46.80	95	2.5	H	8.7	-38.10	-13	-25.10
3818.6	-47.10	309	2.4	V	7.9	-39.20	-13	-26.20
5727.9	-45.10	83	2.3	H	10.6	-34.50	-13	-21.50
5727.9	-49.30	75	2.4	V	10.2	-39.10	-13	-26.10

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 4								
Test frequency range: 30MHz-20GHz								
1.4MHz bandwidth, QPSK, Low channel								
959.34	-65.47	41	2.2	H	10	-55.47	-13	-42.47
959.34	-61.41	297	1.7	V	11.7	-49.71	-13	-36.71
3421.4	-46.60	338	1.9	H	6.4	-40.20	-13	-27.20
3421.4	-46.50	61	2.3	V	5.7	-40.80	-13	-27.80
5132.1	-47.70	141	2.1	H	11.3	-36.40	-13	-23.40
5132.1	-45.10	148	1.7	V	10.8	-34.30	-13	-21.30
1.4MHz bandwidth, QPSK, Middle channel								
960.06	-63.66	123	2.1	H	10	-53.66	-13	-40.66
960.06	-62.74	24	2.1	V	11.7	-51.04	-13	-38.04
3465.0	-47.20	225	1.7	H	7	-40.20	-13	-27.20
3465.0	-48.60	153	2.5	V	6.2	-42.40	-13	-29.40
5197.5	-48.90	292	1.2	H	10.4	-38.50	-13	-25.50
5197.5	-46.70	298	1.1	V	9.8	-36.90	-13	-23.90
1.4MHz bandwidth, QPSK, High channel								
958.91	-62.99	116	1.6	H	10	-52.99	-13	-39.99
958.91	-61.94	210	2.5	V	11.7	-50.24	-13	-37.24
3508.6	-49.00	118	1.2	H	7.8	-41.20	-13	-28.20
3508.6	-49.20	75	1	V	6.6	-42.60	-13	-29.60
5262.9	-45.40	132	1.2	H	9.5	-35.90	-13	-22.90
5262.9	-41.30	20	1.6	V	8.9	-32.40	-13	-19.40

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 5								
Test frequency range: 30MHz-10GHz								
1.4MHz bandwidth, QPSK, Low channel								
959.38	-65.9	291	1.1	H	10	-55.9	-13	-42.9
959.38	-61.42	81	2.5	V	11.7	-49.72	-13	-36.72
1649.4	-55.80	17	1.5	H	3.5	-52.30	-13	-39.30
1649.4	-56.40	136	2.1	V	3.1	-53.30	-13	-40.30
2474.1	-53.20	355	1.7	H	6.6	-46.60	-13	-33.60
2474.1	-51.50	50	1.5	V	5.8	-45.70	-13	-32.70
3298.8	-49.60	232	1.7	H	6.4	-43.20	-13	-30.20
3298.8	-49.40	13	1.7	V	5.7	-43.70	-13	-30.70
1.4MHz bandwidth, QPSK, Middle channel								
959.37	-65.05	152	1.4	H	10	-55.05	-13	-42.05
959.37	-62.99	250	2.4	V	11.7	-51.29	-13	-38.29
1673.0	-56.00	160	1.1	H	3.8	-52.20	-13	-39.20
1673.0	-54.40	121	1.3	V	3.1	-51.30	-13	-38.30
2509.5	-51.90	284	1.1	H	6.2	-45.70	-13	-32.70
2509.5	-51.80	313	1.3	V	5.6	-46.20	-13	-33.20
3346.0	-49.10	166	1.4	H	6.6	-42.50	-13	-29.50
3346.0	-48.80	190	1.4	V	5.4	-43.40	-13	-30.40
1.4MHz bandwidth, QPSK, High channel								
960.28	-63.54	124	1.2	H	10	-53.54	-13	-40.54
960.28	-61.96	176	1.3	V	11.7	-50.26	-13	-37.26
1696.6	-56.10	343	2.2	H	4.1	-52.00	-13	-39.00
1696.6	-53.70	311	1.5	V	3.1	-50.60	-13	-37.60
2544.9	-50.10	338	2	H	6.1	-44.00	-13	-31.00
2544.9	-51.50	269	1.6	V	5.8	-45.70	-13	-32.70
3393.2	-49.10	120	2.3	H	6.3	-42.80	-13	-29.80
3393.2	-48.50	272	1.5	V	5.4	-43.10	-13	-30.10

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 7								
Test frequency range: 30MHz-26.5GHz								
5MHz bandwidth, QPSK, Low channel								
959.75	-64.17	348	1.6	H	10	-54.17	-25	-29.17
959.75	-61.6	305	2.4	V	11.7	-49.9	-25	-24.9
5005.0	-49.40	252	2.2	H	10.8	-38.60	-25	-13.60
5005.0	-48.30	161	2	V	10.2	-38.10	-25	-13.10
7507.5	-60.20	22	1.2	H	20.3	-39.90	-25	-14.90
7507.5	-57.70	105	1.7	V	20.1	-37.60	-25	-12.60
5MHz bandwidth, QPSK, Middle channel								
959.65	-62.95	88	1.7	H	10	-52.95	-25	-27.95
959.65	-62.39	165	1	V	11.7	-50.69	-25	-25.69
5070.0	-48.40	15	1.1	H	11.1	-37.30	-25	-12.30
5070.0	-48.40	134	1.4	V	10.8	-37.60	-25	-12.60
7605.0	-62.40	331	1.9	H	21.2	-41.20	-25	-16.20
7605.0	-59.40	186	1.8	V	20.1	-39.30	-25	-14.30
5MHz bandwidth, QPSK, High channel								
961.83	-62.4	331	2	H	10	-52.4	-25	-27.4
961.83	-62.07	358	1.5	V	11.7	-50.37	-25	-25.37
5135.0	-48.00	42	1.4	H	11.3	-36.70	-25	-11.70
5135.0	-48.20	276	2	V	10.8	-37.40	-25	-12.40
7702.5	-61.90	30	1.3	H	21.2	-40.70	-25	-15.70
7702.5	-59.90	7	2.1	V	21	-38.90	-25	-13.90

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 12								
Test frequency range: 30MHz-10GHz								
1.4MHz bandwidth, QPSK, Low channel								
959.64	-64.73	324	1.9	H	10	-54.73	-13	-41.73
959.64	-61.78	298	1.8	V	11.7	-50.08	-13	-37.08
1399.4	-61.30	311	1.9	H	5.9	-55.40	-13	-42.40
1399.4	-61.00	125	1.8	V	5.9	-55.10	-13	-42.10
2099.1	-49.80	212	1.8	H	6.3	-43.50	-13	-30.50
2099.1	-50.50	182	2.3	V	5.1	-45.40	-13	-32.40
2798.8	-55.00	130	1.7	H	6.7	-48.30	-13	-35.30
2798.8	-53.90	224	2.4	V	6.7	-47.20	-13	-34.20
1.4MHz bandwidth, QPSK, Middle channel								
960.16	-63.25	239	1.9	H	10	-53.25	-13	-40.25
960.16	-62.32	49	1.9	V	11.7	-50.62	-13	-37.62
1415.0	-60.80	21	1.5	H	5.7	-55.10	-13	-42.10
1415.0	-60.10	354	1.4	V	5.4	-54.70	-13	-41.70
2122.5	-45.20	198	2.2	H	6.7	-38.50	-13	-25.50
2122.5	-48.20	283	1.8	V	5.8	-42.40	-13	-29.40
2830.0	-54.30	138	1.8	H	7.1	-47.20	-13	-34.20
2830.0	-52.50	177	1.1	V	6.5	-46.00	-13	-33.00
1.4MHz bandwidth, QPSK, High channel								
959.42	-62.73	49	2.2	H	10	-52.73	-13	-39.73
959.42	-62.25	159	1.3	V	11.7	-50.55	-13	-37.55
1430.6	-57.70	18	1.7	H	5.4	-52.30	-13	-39.30
1430.6	-56.80	288	2.3	V	4.8	-52.00	-13	-39.00
2145.9	-47.10	288	1.7	H	7	-40.10	-13	-27.10
2145.9	-47.30	319	1.6	V	6.6	-40.70	-13	-27.70
2861.2	-55.20	161	2.3	H	7.3	-47.90	-13	-34.90
2861.2	-53.00	329	1.4	V	6.3	-46.70	-13	-33.70

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 13								
Test frequency range: 30MHz-10GHz								
5MHz bandwidth, QPSK, Low channel								
959.53	-63.6	350	2.2	H	10	-53.6	-13	-40.6
959.53	-62.2	156	1.8	V	11.7	-50.5	-13	-37.5
1559.0	-59.60	185	1.9	H	4.2	-55.40	-40	-15.40
1559.0	-59.00	98	1.6	V	3.3	-55.70	-40	-15.70
2338.5	-60.80	352	1.4	H	7.3	-53.50	-13	-40.50
2338.5	-60.50	185	1.4	V	6.5	-54.00	-13	-41.00
3118.0	-56.70	324	1.7	H	7.3	-49.40	-13	-36.40
3118.0	-55.30	85	1.2	V	6.5	-48.80	-13	-35.80
5MHz bandwidth, QPSK, Middle channel								
960.29	-62.09	329	2.1	H	10	-52.09	-13	-39.09
960.29	-62.17	71	1.5	V	11.7	-50.47	-13	-37.47
1564.0	-59.90	333	2.2	H	4.2	-55.70	-40	-15.70
1564.0	-59.70	352	1.9	V	3.3	-56.40	-40	-16.40
2346.0	-61.10	237	1.1	H	7.3	-53.80	-13	-40.80
2346.0	-59.10	38	1	V	6.4	-52.70	-13	-39.70
3128.0	-56.80	187	2.4	H	7.3	-49.50	-13	-36.50
3128.0	-55.60	228	1.6	V	6.6	-49.00	-13	-36.00
5MHz bandwidth, QPSK, High channel								
958.83	-60.65	221	2.2	H	10	-50.65	-13	-37.65
958.83	-62.65	226	1.1	V	11.7	-50.95	-13	-37.95
1569.0	-60.40	330	1.1	H	4.2	-56.20	-40	-16.20
1569.0	-58.80	181	1.4	V	3.3	-55.50	-40	-15.50
2353.5	-62.00	287	1.2	H	7.3	-54.70	-13	-41.70
2353.5	-60.00	356	1.7	V	6.4	-53.60	-13	-40.60
3138.0	-56.10	72	2.2	H	7.4	-48.70	-13	-35.70
3138.0	-56.00	253	2.2	V	6.6	-49.40	-13	-36.40

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 17								
Test frequency range: 30MHz-10GHz								
5MHz bandwidth, QPSK, Low channel								
959.49	-62.1	229	1.9	H	10	-52.1	-13	-39.1
959.49	-62.16	186	1	V	11.7	-50.46	-13	-37.46
1413.0	-60.10	62	1.6	H	5.7	-54.40	-13	-41.40
1413.0	-60.80	121	1.2	V	5.4	-55.40	-13	-42.40
2119.5	-46.30	333	2.3	H	6.6	-39.70	-13	-26.70
2119.5	-48.10	283	1	V	5.7	-42.40	-13	-29.40
2826.0	-55.00	220	2	H	7.1	-47.90	-13	-34.90
2826.0	-52.30	193	1.9	V	6.5	-45.80	-13	-32.80
5MHz bandwidth, QPSK, Middle channel								
958.97	-60.88	283	1.8	H	10	-50.88	-13	-37.88
958.97	-62.87	147	1.8	V	11.7	-51.17	-13	-38.17
1420.0	-59.80	175	1.4	H	5.6	-54.20	-13	-41.20
1420.0	-58.90	274	2.1	V	5.2	-53.70	-13	-40.70
2130.0	-49.00	303	2.3	H	6.8	-42.20	-13	-29.20
2130.0	-51.40	139	2	V	6.1	-45.30	-13	-32.30
2840.0	-55.70	207	1.7	H	7.3	-48.40	-13	-35.40
2840.0	-53.70	316	2.4	V	6.5	-47.20	-13	-34.20
5MHz bandwidth, QPSK, High channel								
960.18	-61.06	249	1.7	H	10	-51.06	-13	-38.06
960.18	-62.32	74	1.3	V	11.7	-50.62	-13	-37.62
1427.0	-58.60	325	2	H	5.5	-53.10	-13	-40.10
1427.0	-59.20	65	1.4	V	4.9	-54.30	-13	-41.30
2140.5	-48.00	285	1.4	H	6.9	-41.10	-13	-28.10
2140.5	-48.50	223	1.2	V	6.4	-42.10	-13	-29.10
2854.0	-56.20	42	2.2	H	7.4	-48.80	-13	-35.80
2854.0	-54.00	217	1.4	V	6.4	-47.60	-13	-34.60

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 38								
Test frequency range: 30MHz-26.5GHz								
5MHz bandwidth, QPSK, Low channel								
960.22	-60.75	84	2.2	H	10	-50.75	-25	-25.75
960.22	-61.52	121	1.8	V	11.7	-49.82	-25	-24.82
5145.0	-48.90	241	2.4	H	11.4	-37.50	-25	-12.50
5145.0	-49.40	308	1.4	V	10.7	-38.70	-25	-13.70
7717.5	-61.20	219	2.1	H	20.5	-40.70	-25	-15.70
7717.5	-61.10	214	2	V	20.3	-40.80	-25	-15.80
5MHz bandwidth, QPSK, Middle channel								
959.43	-60.71	1	2	H	10	-50.71	-25	-25.71
959.43	-62.62	47	1.3	V	11.7	-50.92	-25	-25.92
5190.0	-46.20	5	1.4	H	10.5	-35.70	-25	-10.70
5190.0	-47.40	177	1.1	V	10	-37.40	-25	-12.40
7785.0	-58.50	174	1.1	H	18.3	-40.20	-25	-15.20
7785.0	-58.70	46	2.4	V	18	-40.70	-25	-15.70
5MHz bandwidth, QPSK, High channel								
958.74	-60.62	288	2.5	H	10	-50.62	-25	-25.62
958.74	-61.81	84	1.2	V	11.7	-50.11	-25	-25.11
5235.0	-45.50	123	2.1	H	9.7	-35.80	-25	-10.80
5235.0	-45.60	56	1.6	V	9.2	-36.40	-25	-11.40
7852.5	-58.40	205	1.7	H	18.2	-40.20	-25	-15.20
7852.5	-58.50	312	2	V	17.6	-40.90	-25	-15.90

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 41								
Test frequency range: 30MHz-26.55GHz								
5MHz bandwidth, QPSK, Low channel								
960.27	-60.68	315	1.6	H	10	-50.68	-25	-25.68
960.27	-61.68	147	2.5	V	11.7	-49.98	-25	-24.98
5075.0	-48.80	319	1.6	H	11.2	-37.60	-25	-12.60
5075.0	-49.00	90	1.4	V	10.8	-38.20	-25	-13.20
7612.5	-67.00	33	1.3	H	21.2	-45.80	-25	-20.80
7612.5	-64.30	254	1.3	V	20.2	-44.10	-25	-19.10
5MHz bandwidth, QPSK, Middle channel								
959.97	-60.49	246	1.6	H	10	-50.49	-25	-25.49
959.97	-62.85	321	2.5	V	11.7	-51.15	-25	-26.15
5190.0	-47.00	330	1.4	H	10.5	-36.50	-25	-11.50
5190.0	-47.10	168	1.8	V	10	-37.10	-25	-12.10
7785.0	-62.20	19	2.2	H	18.3	-43.90	-25	-18.90
7785.0	-61.70	23	1.8	V	18	-43.70	-25	-18.70
5MHz bandwidth, QPSK, High channel								
960.16	-59.69	213	1.6	H	10	-49.69	-25	-24.69
960.16	-62.37	231	1.8	V	11.7	-50.67	-25	-25.67
5305.0	-43.60	66	1.5	H	9.6	-34.00	-25	-9.00
5305.0	-44.80	352	1.8	V	8.8	-36.00	-25	-11.00
7957.5	-63.30	333	2.5	H	18.9	-44.40	-25	-19.40
7957.5	-62.50	251	2.1	V	18.5	-44.00	-25	-19.00

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 66								
Test frequency range: 30MHz-20GHz								
1.4MHz bandwidth, QPSK, Low channel								
959.21	-61.57	313	1.9	H	10	-51.57	-13	-38.57
959.21	-62.05	30	1.5	V	11.7	-50.35	-13	-37.35
3421.4	-46.20	168	1.5	H	6.4	-39.80	-13	-26.80
3421.4	-46.80	228	1.3	V	5.7	-41.10	-13	-28.10
5132.1	-48.50	198	1.7	H	11.3	-37.20	-13	-24.20
5132.1	-44.70	293	1.9	V	10.8	-33.90	-13	-20.90
1.4MHz bandwidth, QPSK, Middle channel								
959.81	-60.49	165	2.5	H	10	-50.49	-13	-37.49
959.81	-62.2	15	1.9	V	11.7	-50.5	-13	-37.5
3490.0	-47.90	134	2.3	H	7.6	-40.30	-13	-27.30
3490.0	-48.80	281	1.8	V	6.4	-42.40	-13	-29.40
5235.0	-45.40	63	1.9	H	9.7	-35.70	-13	-22.70
5235.0	-40.60	53	2.4	V	9.2	-31.40	-13	-18.40
1.4MHz bandwidth, QPSK, High channel								
960.18	-60.46	282	1.5	H	10	-50.46	-13	-37.46
960.18	-61.69	34	1.2	V	11.7	-49.99	-13	-36.99
3558.6	-48.90	358	2.5	H	7.8	-41.10	-13	-28.10
3558.6	-49.20	203	1.9	V	7	-42.20	-13	-29.20
5337.9	-49.70	260	2.4	H	9.4	-40.30	-13	-27.30
5337.9	-45.50	134	2.2	V	8.7	-36.80	-13	-23.80

Note:

Absolute Level = Reading Level + Substituted Factor

Substituted Factor contains: SG Level - Cable loss+ Antenna Gain

Margin = Absolute Level -Limit

FCC§ 22.917 (a);§ 24.238 (a); §27.53 (c)(g) (h)(m)- BAND EDGES**Applicable Standard**

According to § 22.917(a), the power of any emissions 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.

According to §24.238(a), the power of any emissions 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.

According to FCC §27.53 (c), For operations in the 746-758 MHz band and the 776-788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

- (1) On any frequency outside the 746-758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB;
- (2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB;
- (3) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $76 + 10 \log(P)$ dB in a 6.25 kHz band segment, for base and fixed stations;
- (4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $65 + 10 \log(P)$ dB in a 6.25 kHz band segment, for mobile and portable stations;

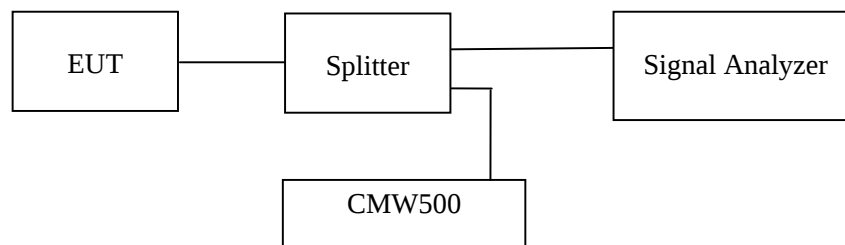
According to FCC §27.53 (g)(h), the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

According to FCC §27.53 (m), the attenuation factor shall be not less than $40 + 10 \log(P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log(P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log(P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in [paragraph \(m\)\(6\)](#) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log(P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log(P)$ dB at or below 2490.5 MHz.

Test Procedure

The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.

The center of the spectrum analyzer was set to block edge frequency



Note: the worst path loss (cable loss and splitter inset loss) among the test frequency range has included in plot.

Test Data**Environmental Conditions**

Temperature:	27.2℃
Relative Humidity:	56.2 %
ATM Pressure:	101.0 kPa

The testing was performed by Glenn Jiang on 2023-02-10.

EUT operation mode: Transmitting (Worst case)

Test Result: Pass

The test plots of LTE bands please refer to the Appendix C.

FCC § 2.1055; § 22.355; § 24.235; §27.54 - FREQUENCY STABILITY

Applicable Standard

FCC § 2.1055, §22.355, §24.235&§27.54 .

According to FCC §2.1055, the frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

According to §22.355, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table below:

Frequency Tolerance for Transmitters in the Public Mobile Services

Frequency Range (MHz)	Base, fixed (ppm)	Mobile ≤ 3 watts (ppm)	Mobile > 3 watts (ppm)
25 to 50	20.0	20.0	50.0
50 to 450	5.0	5.0	50.0
450 to 512	2.5	5.0	5.0
821 to 896	1.5	2.5	2.5
928 to 929.	5.0	N/A	N/A
929 to 960.	1.5	N/A	N/A
2110 to 2220	10.0	N/A	N/A

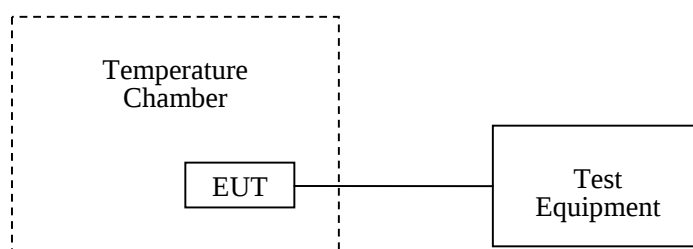
According to §24.235&§27.54, the frequency stability shall be sufficient to ensure that the fundamental emissions stays within the authorized frequency block.

Test Procedure

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and the RF output was connected to communication test set via feed-through attenuators. The EUT was placed inside the temperature chamber. The DC leads and RF output cable exited the chamber through an opening made for the purpose.

After the temperature stabilized for approximately 20 minutes, the frequency output was recorded from the communication test set.

Frequency Stability vs. Voltage: For hand carried, battery powered equipment; reduce primary supply voltage to the battery operating end point which shall be specified by the manufacturer.



Test Data**Environmental Conditions**

Temperature:	27.2℃
Relative Humidity:	56.2 %
ATM Pressure:	101.0 kPa

The testing was performed by Glenn Jiang from 2023-02-10 to 2023-02-11.

EUT operation mode: Transmitting

Test Result: Pass

Please refer to the following tables.

LTE:

For worst case:

QPSK:**Band 13:**

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	777.0792	786.9165	777	787
-20		777.0834	786.9132	777	787
-10		777.0774	786.9144	777	787
0		777.0812	786.9161	777	787
10		777.0817	786.9152	777	787
20		777.0793	786.9181	777	787
30		777.0804	786.9183	777	787
40		777.0792	786.9194	777	787
50		777.0793	786.9153	777	787
20	L.V.	777.0812	786.9164	777	787
	H.V.	777.0795	786.9141	777	787

16QAM:**Band 13:**

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	N.V.	777.0817	786.9212	777	787
-20		777.0765	786.9243	777	787
-10		777.0794	786.9241	777	787
0		777.0816	786.9277	777	787
10		777.0812	786.9232	777	787
20		777.0827	786.9241	777	787
30		777.0828	786.9214	777	787
40		777.0817	786.9246	777	787
50		777.0792	786.9247	777	787
20	L.V.	777.0815	786.9252	777	787
	H.V.	777.0813	786.9217	777	787

***** **END OF REPORT** *****