

FCC PART 27
FCC PART 22H, PART 24E
TEST REPORT

For

Shenzhen Huafurui Technology Co., Ltd

Unit 1401 14/F, Jin qi zhi gu mansion Liu xian street, Xili, Nan shan district, Shenzhen, China

FCC ID:2AHZ5KK7

Report Type: Original Report	Product Type: Smartphone
Report Number: SZ1210507-15650E-00D	
Report Date: 2021-06-25	
Reviewed By: RF Engineer	Candy Li 
Prepared By: Shenzhen Accurate Technology Co., Ltd. 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China Tel: (0755) 26503290 Fax: (0755) 26503396 Http://www.atc-lab.com	

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

Shenzhen Accurate Technology Co., Ltd. is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with an asterisk '*'. Customer model name, addresses, names, trademarks etc. are not considered data.

This report cannot be reproduced except in full, without prior written approval of the Company. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

TABLE OF CONTENTS

GENERAL INFORMATION	3
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	3
OBJECTIVE	4
TEST METHODOLOGY	4
MEASUREMENT UNCERTAINTY	4
TEST FACILITY	5
SYSTEM TEST CONFIGURATION	6
DESCRIPTION OF TEST CONFIGURATION	6
EQUIPMENT MODIFICATIONS	7
SUPPORT EQUIPMENT LIST AND DETAILS	7
SUPPORT CABLE DESCRIPTION	7
BLOCK DIAGRAM OF TEST SETUP	8
SUMMARY OF TEST RESULTS	9
TEST EQUIPMENT LIST	10
FCC §1.1307(B) & §2.1093 - RF EXPOSURE INFORMATION	12
FCC §2.1047 - MODULATION CHARACTERISTIC	13
FCC §2.1046, §22.913 (A) & §24.232 (C); §27.50 (B) (C) (D) (H) - RF OUTPUT POWER	14
APPLICABLE STANDARD	14
TEST PROCEDURE	14
TEST DATA	15
FCC §2.1049, §22.917, §22.905 & §24.238 & §27.53 - OCCUPIED BANDWIDTH	55
APPLICABLE STANDARD	55
TEST PROCEDURE	55
TEST DATA	55
FCC §2.1051, §22.917(A) & §24.238(A) & §27.53 - SPURIOUS EMISSIONS AT ANTENNA TERMINALS ..	56
APPLICABLE STANDARD	56
TEST PROCEDURE	56
TEST DATA	56
FCC §2.1053; §22.917 (A); §24.238 (A); §27.53 - SPURIOUS RADIATED EMISSIONS	57
APPLICABLE STANDARD	57
TEST PROCEDURE	57
TEST DATA	57
FCC §22.917 (A); §24.238 (A); §27.53 (C)(H)(M) - BAND EDGES	64
APPLICABLE STANDARD	64
TEST PROCEDURE	64
TEST DATA	65
FCC §2.1055; §22.355; §24.235; §27.54 - FREQUENCY STABILITY	66
APPLICABLE STANDARD	66
TEST PROCEDURE	66
TEST DATA	67

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product	Smartphone
Trademark	CUBOT
Tested Model	KINGKONG 7
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 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 17: 704-716 MHz (TX); 734-746 MHz (RX) LTE Band 26: 824-849MHz(TX); 869-894MHz(RX) LTE Band 66: 1710-1780 MHz(TX); 2110-2200 MHz(RX) LTE Band 38: 2570-2620 MHz(TX & RX) LTE Band 40: 2305-2315 MHz/2350-2360 MHz(TX & RX) LTE Band 41: 2555-2655 MHz(TX & RX)
Maximum Output Power (Conducted power)	GSM 850: 28.56dBm(GMSK), 25.21 dBm(8PSK) PCS 1900: 24.48dBm(GMSK), 23.64dBm (8PSK) WCDMA Band 2: 22.51dBm; WCDMA Band 5:22.99dBm LTE Band 2:22.96dBm; LTE Band 4:22.98dBm; LTE Band 5:22.89dBm; LTE Band 7:22.90dBm; LTE Band 17:22.49dBm; LTE Band 26:24.18dBm; LTE Band 66:22.95Bm; LTE Band 38:22.40dBm; LTE Band 40:22.48dBm; LTE Band 41:22.69dBm
Modulation Technique	2G: GMSK/8PSK 3G: BPSK, QPSK, 16QAM 4G: QPSK, 16QAM
Antenna Specification*	Internal Antenna (provided by the applicant): GSM 850: 0.53 dBi* PCS 1900: 0.72 dBi* WCDMA Band 2: 0.72dBi*; WCDMA Band 5: 0.53dBi* LTE Band 2: 0.72dBi *; LTE Band 4: 0.61dBi *; LTE Band 5: 0.53dBi *; LTE Band 7: 0.77dBi *; LTE Band 17: 0.42dBi *; LTE Band 26: 0.53 dBi *; LTE Band 66: 0.61dBi *; LTE Band 38: 0.77dBi *; LTE Band 40: 0.67dBi *; LTE Band 41: 0.77dBi *;
Voltage Range	DC3.85V by battery or DC 5V from adapter.
Date of Test	2021-05-21 to 2021-06-24
Sample serial number	SZ1210507-15650E-RF- S_4NF (Assigned by ATC)
Received date	2021-05-20
Sample/EUT Status	Good condition
Adapter information	Model: HJ-0502000W2-US Input: AC 100-240V, 50/60Hz, 0.3A Output: DC 5.0V, 2.0A

Objective

This test report is in accordance with Part 2-Subpart J, Part 22-Subpart H, Part 24-Subpart E, and Subpart 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.

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°C
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 429 7.01.

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.

The test items were performed with the EUT operating at testing mode. Test was performed with channels as below table:

Band	Channel Bandwidth	Frequency
GSM 850	0.3 MHz	824.2MHz, 836.6MHz, 848.8MHz
PCS 1900	0.3 MHz	1850.2MHz, 1880.0MHz, 1909.8MHz;
WCDMA Band 2	4.2 MHz	1852.4MHz, 1880.0MHz, 1907.6MHz;
WCDMA Band 5	4.2 MHz	826.4MHz, 836.6MHz, 846.6MHz
LTE Band 2	1.4 MHz	1850.7MHz, 1880.0 MHz, 1909.3 MHz;
	3.0 MHz	1851.5MHz, 1880.0 MHz, 1908.5 MHz;
	5.0 MHz	1852.5MHz, 1880.0 MHz, 1907.5 MHz;
	10.0 MHz	1855MHz, 1880.0 MHz, 1905 MHz;
	15.0 MHz	1857.5MHz, 1880.0 MHz, 1902.5 MHz;
	20.0 MHz	1860MHz, 1880.0 MHz, 1900MHz;
LTE Band 4	1.4 MHz	1710.7MHz, 1732.5MHz, 1754.3MHz;
	3.0 MHz	1711.5MHz, 1732.5MHz, 1753.5MHz
	5.0 MHz	1712.5MHz, 1732.5MHz, 1752.5MHz
	10.0 MHz	1715MHz, 1732.5MHz, 1750MHz
	15.0 MHz	1717.5MHz, 1732.5MHz, 1747.5MHz
	20.0 MHz	1720MHz, 1732.5MHz, 1745MHz
LTE Band 5	1.4 MHz	824.7MHz, 836.5MHz, 848.3MHz
	3.0 MHz	825.5MHz, 836.5MHz, 847.5MHz
	5.0 MHz	826.5MHz, 836.5MHz, 846.5MHz
	10.0 MHz	829MHz, 836.5MHz, 844MHz
LTE Band 7	5.0 MHz	2502.5MHz, 2535.0MHz, 2567.5MHz
	10.0 MHz	2505MHz, 2535.0MHz, 2565MHz
	15.0 MHz	2507.5MHz, 2535.0MHz, 2562.5MHz
	20.0 MHz	2510MHz, 2535.0MHz, 2560MHz
LTE Band 17	5.0 MHz	706.5MHz, 710.0MHz, 713.5MHz
	10.0 MHz	709.0MHz, 710.0MHz, 711.0MHz
LTE Band 26	15.0 MHz	831.5MHz, 836.5MHz, 841.5MHz
LTE Band 66	1.4 MHz	1710.7MHz, 1745.0MHz, 1779.3MHz
	3.0 MHz	1711.5MHz, 1745.0MHz, 1778.5MHz
	5.0 MHz	1712.5MHz, 1745.0MHz, 1777.5MHz
	10.0 MHz	1715.0MHz, 1745.0MHz, 1775.0MHz
	15.0 MHz	1717.5MHz, 1745.0MHz, 1772.5MHz
	20.0 MHz	1720.0MHz, 1745.0MHz, 1770.0MHz
LTE Band 38	5.0 MHz	2572.5MHz, 2595.0MHz, 2617.5MHz
	10.0 MHz	2575.0MHz, 2595.0MHz, 2615.0MHz
	15.0 MHz	2577.5MHz, 2595.0MHz, 2612.5MHz
	20.0 MHz	2580.0MHz, 2595.0MHz, 2610.0MHz
LTE B40 Lower	5.0 MHz	2307.5MHz, 2310.0MHz, 2312.5MHz

	10.0 MHz	2310.0MHz
LTE B40 Upper	5.0 MHz	2352.5MHz, 2355.0MHz, 2357.5MHz
	10.0 MHz	2355.0MHz
LTE Band 41	5.0 MHz	2557.5MHz, 2605.0MHz, 2652.5MHz
	10.0 MHz	2560.0MHz, 2605.0MHz, 2650.0MHz
	15.0 MHz	2562.5MHz, 2605.0MHz, 2647.5MHz
	20.0 MHz	2565.0MHz, 2605.0MHz, 2645.0MHz

Equipment Modifications

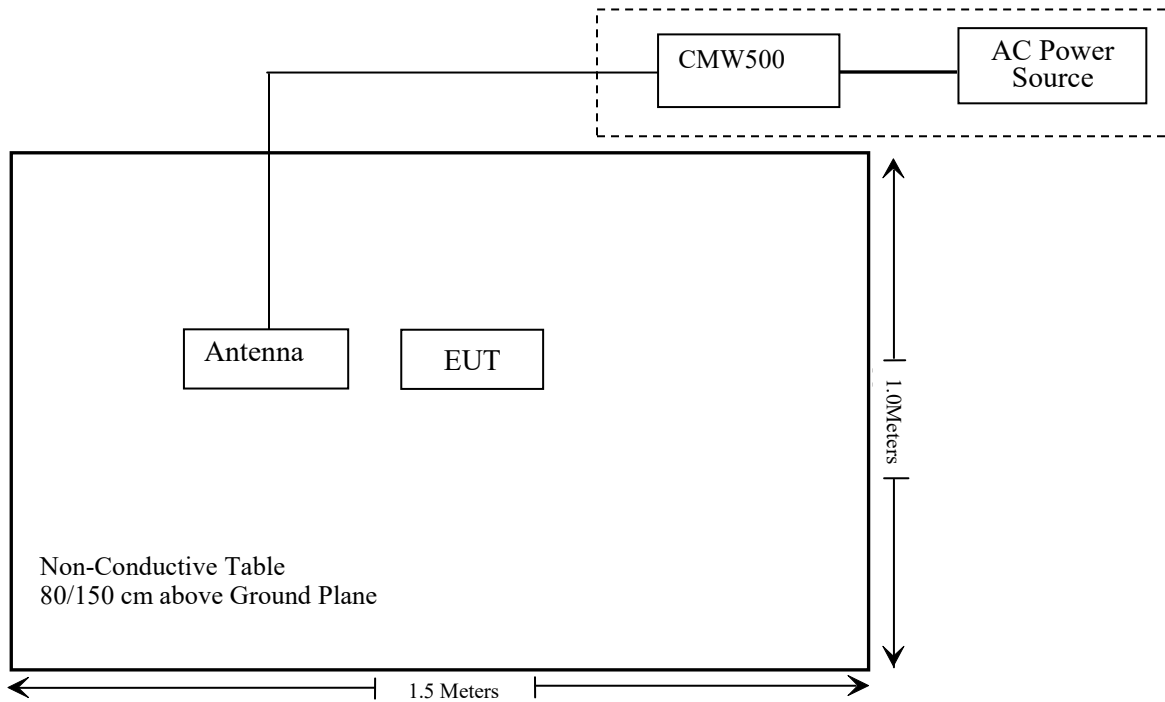
No modification was made to the EUT.

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
/	/	/	/

Block Diagram of Test Setup

SUMMARY OF TEST RESULTS

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

Note: * Please refer to SAR report number: SZ1210506-15265E-SAA.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test					
Rohde & Schwarz	Spectrum Analyzer	FSV-40	101495	2020/12/24	2021/12/23
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	154606	2020/12/25	2021/12/24
Vector Signal Generator	AGILENT	N5182A	MY50143401	2020/12/25	2021/12/24
V.R. of Signal Generators	Anritsu	68369B	004114	2020/07/31	2020/07/30
Schwarzbeck	Horn Antenna	BBHA9120D	9120D-1067	2020/01/05	2023/01/04
SCHWARZBECK	HORN ANTENNA	BBHA9120D	9120D-655	2020/01/05	2023/01/04
Schwarzbeck	HORN ANTENNA	BBHA9170	9170-359	2020/01/05	2023/01/04
Ducommun Technologies	Horn antenna	ARH-4223-02	1007726-01 1304	2020/12/06	2023/12/05
A.H. Systems, inc.	Preamplifier	PAM-0118P	531	2020/07/08	2021/07/07
Quinstar	Amplifier	QLW-184055 36-J0	15964001002	2020/11/28	2021/11/27
Rohde& Schwarz	Test Receiver	ESR	101817	2020/12/24	2021/12/23
SONOMA INSTRUMENT	Amplifier	310 N	186131	2020/12/25	2021/12/24
Anritsu Corp	50 Coaxial Switch	MP59B	6100237248	2020/12/25	2021/12/24
Schwarzbeck	Bilog Antenna	VULB9163	9163-323	2020/01/05	2023/01/04
Schwarzbeck	Bilog Antenna	VULB9163	9163-194	2020/01/05	2023/01/04
RF Coaxial Cable	Unknown	N-5m	No.1	2020/12/25	2021/12/24
RF Coaxial Cable	Unknown	N-1m	No.6	2020/12/25	2021/12/24
RF Coaxial Cable	Unknown	N-6m	No.10	2020/12/25	2021/12/24
RF Coaxial Cable	Unknown	N-2m	No.11	2020/12/25	2021/12/24
RF Coaxial Cable	Unknown	N-8m	No.15	2020/12/25	2021/12/24

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test					
Unknown	Band Reject Filter	MSF1850-191 0MS-1148	201706003	2020/12/25	2021/12/24
Unknown	Band Reject Filter	MSF1710-178 5MS-1150	201706003	2020/12/25	2021/12/24
Unknown	Band Reject Filter	MSF824-862 MS-1147	201706003	2020/12/25	2021/12/24
Unknown	Band Reject Filter	MSF700-800 MS-1153	201706003	2020/12/25	2021/12/24
Unknown	High Pass Filter	HPM-1.2/18G -60	110	2020/12/25	2021/12/24
RF Conducted Test					
Rohde & Schwarz	Spectrum Analyzer	FSV-40	101495	2020/12/24	2021/12/23
Rohde & Schwarz	Test Receiver	ESR	101817	2020/12/24	2021/12/23
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	154606	2020/12/25	2021/12/24
Fluke	Desktop Multi Meter	45	7664009	2020/12/25	2021/12/24
Mini-Circuits	Power Splitter	DC-18000MH z	SF10944151S	2020/12/25	2021/12/24
UNI-T	DC Power Supply	UTP8305B	10584	NCR	NCR
Gongwen	Temp. & Humid. Chamber	HSD-500	109	2020/12/25	2021/12/24
Fluke	Desktop Multi Meter	45	7664009	2020/12/25	2021/12/24
WEINSCHL	10dB Attenuator	5324	AU 3842	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

Compliance, please refer to the SAR report: SZ1210506-15265E-SAA.

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) & §24.232 (c); §27.50(a) (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(a), (3) Mobile and portable stations. (i) For mobile and portable stations transmitting in the 2305-2315 MHz band or the 2350-2360 MHz band, the average EIRP must not exceed 50 milliwatts within any 1 megahertz of authorized bandwidth, except that for mobile and portable stations compliant with 3GPP LTE standards or another advanced mobile broadband protocol that avoids concentrating energy at the edge of the operating band the average EIRP must not exceed 250 milliwatts within any 5 megahertz of authorized bandwidth but may exceed 50 milliwatts within any 1 megahertz of authorized bandwidth. For mobile and portable stations using time division duplexing (TDD) technology, the duty cycle must not exceed 38 percent in the 2305-2315 MHz and 2350-2360 MHz bands. Mobile and portable stations using FDD technology are restricted to transmitting in the 2305-2315 MHz band. Power averaging shall not include intervals in which the transmitter is off.

According to §27.50(b), Control stations and mobile stations transmitting in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands and fixed stations transmitting in the 787-788 MHz and 805-806 MHz bands are limited to 30 watts ERP.

According to §27.50(c), Control and mobile stations in the 698-746 MHz band are limited to 30 watts ERP. And 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.

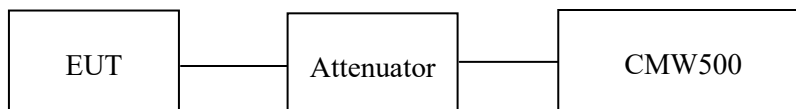
According to §27.50(d), Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

According to §27.50(h), the maximum EIRP must not exceed 2Watts (33dBm) for 2500-2570MHz.

Test Procedure

Conducted method:

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



Radiated method:

ANSI C63.26-2015 Section 5.5.

Test Data**Environmental Conditions**

Temperature:	28~29.3 °C
Relative Humidity:	50~58 %
ATM Pressure:	101.0~101.1 kPa

The testing was performed by Fan Yang on 2021-6-18 and 2021-06-24.

Conducted Power**Cellular Band (Part 22H)**

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	ERP(dBm)	Limit (dBm)
GSM	128	824.2	28.56	26.44	38.45
	190	836.6	28.34	26.22	38.45
	251	848.8	28.16	26.04	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	28.16	27.49	26.71	25.75	26.04	25.37	24.59	23.63	38.45
	190	836.6	28.04	27.45	26.40	25.21	25.92	25.33	24.28	23.09	38.45
	251	848.8	28.01	27.23	26.22	25.05	25.89	25.11	24.1	22.93	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	25.07	24.15	23.04	22.81	22.95	22.03	20.92	20.69	38.45
	190	836.6	25.21	24.21	23.18	22.45	23.09	22.09	21.06	20.33	38.45
	251	848.8	25.05	24.04	23.62	22.67	22.93	21.92	21.5	20.55	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		22.64	22.50	22.46	20.52	20.38	20.34
	HSDPA	1	22.44	22.45	22.56	20.32	20.33	20.44
		2	22.65	22.57	22.44	20.53	20.45	20.32
		3	22.27	22.23	22.40	20.15	20.11	20.28
		4	22.93	22.30	22.92	20.81	20.18	20.8
	HSUPA	1	22.20	22.96	22.49	20.08	20.84	20.37
		2	22.14	22.60	22.05	20.02	20.48	19.93
		3	22.99	22.28	22.60	20.87	20.16	20.48
		4	22.23	22.34	22.94	20.11	20.22	20.82
		5	22.48	22.72	22.12	20.36	20.6	20
	HSPA+	1	22.76	22.81	22.85	20.64	20.69	20.73

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) - Cable loss(dB)

For GSM850 / WCDMA Band5: Antenna Gain= 0.53dBi = -1.62dBd (0dBd=2.15dBi)

For 600-1000MHz, Cable Loss=0.5dB* (provided by the applicant)

Limit: ERP≤38.45dBm

PCS Band (Part 24E)

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	EIRP(dBm)	Limit (dBm)
GSM	512	1850.2	24.48	24.4	33
	661	1880.0	24.32	24.24	33
	810	1909.8	24.18	24.1	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	24.45	23.54	22.77	21.45	24.37	23.46	22.69	21.37	33
	661	1880.0	24.29	23.37	22.31	21.42	24.21	23.29	22.23	21.34	33
	810	1909.8	24.18	23.07	22.04	21.19	24.1	22.99	21.96	21.11	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	23.64	22.42	21.78	20.19	23.56	22.34	21.7	20.11	33
	661	1880.0	23.51	22.39	21.56	19.91	23.43	22.31	21.48	19.83	33
	810	1909.8	23.27	22.15	21.31	19.52	23.19	22.07	21.23	19.44	33

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 2)	RMC12.2k		20.72	20.49	20.25	20.64	20.41	20.17
	HSDPA	1	20.01	20.40	20.09	19.93	20.32	20.01
		2	20.03	20.74	20.44	19.95	20.66	20.36
		3	20.70	20.75	20.77	20.62	20.67	20.69
		4	20.79	20.78	20.74	20.71	20.7	20.66
	HSUPA	1	20.97	20.05	20.47	20.89	19.97	20.39
		2	20.67	20.46	20.31	20.59	20.38	20.23
		3	20.28	20.87	20.94	20.2	20.79	20.86
		4	20.44	20.80	20.69	20.36	20.72	20.61
		5	20.07	20.66	20.27	19.99	20.58	20.19
	HSPA+	1	22.51	22.35	22.49	22.43	22.27	22.41

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)

For PCS1900 / WCDMA Band2: Antenna Gain =0.72dBi

For 1000-3000MHz, Cable Loss=0.8dB*(provided by the applicant)

Limit: EIRP≤33dBm

Peak-to-average ratio (PAR)**Cellular Band**

Mode	Channel	PAR (dB)	Limit (dB)
GSM	Low	2.45	13
	Middle	2.19	13
	High	3.06	13

Mode	Channel	PAR (dB)	Limit (dB)
EGPRS	Low	3.16	13
	Middle	3.32	13
	High	3.85	13

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	2.54	13
	Middle	3.80	13
	High	3.18	13
HSDPA (16QAM)	Low	3.21	13
	Middle	2.35	13
	High	3.44	13
HSUPA (BPSK)	Low	3.75	13
	Middle	3.41	13
	High	2.86	13
HSPA+ (16QAM)	Low	3.64	13
	Middle	3.83	13
	High	2.96	13

PCS Band

Mode	Channel	PAR (dB)	Limit (dB)
GSM	Low	3.14	13
	Middle	2.91	13
	High	3.07	13

Mode	Channel	PAR (dB)	Limit (dB)
EGPRS	Low	3.00	13
	Middle	3.17	13
	High	3.75	13

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	3.28	13
	Middle	2.84	13
	High	3.28	13
HSDPA (16QAM)	Low	2.54	13
	Middle	2.93	13
	High	2.97	13
HSUPA (BPSK)	Low	3.24	13
	Middle	2.95	13
	High	3.31	13
HSPA+ (16QAM)	Low	3.59	13
	Middle	3.73	13
	High	2.47	13

LTE Band 2:**Maximum Output Power**

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	22.18	22.09	22.09	22.1	22.01	22.01
		RB1#2	22.91	22.09	22.70	22.83	22.01	22.62
		RB1#5	22.71	22.00	22.53	22.63	21.92	22.45
		RB3#0	22.31	22.23	22.44	22.23	22.15	22.36
		RB3#1	22.01	22.68	22.53	21.93	22.6	22.45
		RB3#2	22.33	22.83	22.42	22.25	22.75	22.34
		RB6#0	21.93	22.49	22.26	21.85	22.41	22.18
	16QAM	RB1#0	22.85	22.64	22.80	22.77	22.56	22.72
		RB1#2	22.64	22.12	22.66	22.56	22.04	22.58
		RB1#5	22.50	22.83	22.80	22.42	22.75	22.72
		RB3#0	22.25	22.93	22.30	22.17	22.85	22.22
		RB3#1	22.62	22.60	22.40	22.54	22.52	22.32
		RB3#2	22.79	22.87	22.40	22.71	22.79	22.32
		RB6#0	22.82	21.99	22.58	22.74	21.91	22.5
3.0	QPSK	RB1#0	22.17	22.91	22.36	22.09	22.83	22.28
		RB1#7	22.83	22.52	22.07	22.75	22.44	21.99
		RB1#14	21.95	22.62	22.66	21.87	22.54	22.58
		RB8#0	22.59	21.94	22.52	22.51	21.86	22.44
		RB8#4	22.11	22.45	22.13	22.03	22.37	22.05
		RB8#7	21.97	22.52	22.59	21.89	22.44	22.51
		RB15#0	22.34	22.76	22.69	22.26	22.68	22.61
	16QAM	RB1#0	22.73	22.23	22.88	22.65	22.15	22.8
		RB1#7	22.74	22.31	21.99	22.66	22.23	21.91
		RB1#14	22.28	22.76	21.97	22.2	22.68	21.89
		RB8#0	22.08	22.69	22.37	22	22.61	22.29
		RB8#4	22.15	22.80	22.69	22.07	22.72	22.61
		RB8#7	22.30	22.77	21.90	22.22	22.69	21.82
		RB15#0	22.12	22.13	22.69	22.04	22.05	22.61

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	22.02	22.96	22.01	21.94	22.88	21.93
		RB1#12	22.13	22.03	22.87	22.05	21.95	22.79
		RB1#24	21.97	22.75	22.57	21.89	22.67	22.49
		RB12#0	22.77	22.93	22.86	22.69	22.85	22.78
		RB12#6	22.12	22.33	22.06	22.04	22.25	21.98
		RB12#11	22.65	22.49	21.97	22.57	22.41	21.89
		RB25#0	22.78	22.47	22.55	22.7	22.39	22.47
	16QAM	RB1#0	22.21	22.52	22.71	22.13	22.44	22.63
		RB1#12	22.19	22.71	22.89	22.11	22.63	22.81
		RB1#24	21.96	22.41	22.88	21.88	22.33	22.8
		RB12#0	22.85	22.78	22.27	22.77	22.7	22.19
		RB12#6	22.69	22.74	22.04	22.61	22.66	21.96
		RB12#11	22.61	22.59	22.13	22.53	22.51	22.05
		RB25#0	22.57	22.87	22.12	22.49	22.79	22.04
10.0	QPSK	RB1#0	21.97	22.23	22.79	21.89	22.15	22.71
		RB1#24	22.17	22.77	22.01	22.09	22.69	21.93
		RB1#49	22.40	22.60	22.85	22.32	22.52	22.77
		RB25#0	22.31	22.67	22.69	22.23	22.59	22.61
		RB25#12	22.01	22.31	21.99	21.93	22.23	21.91
		RB25#24	22.29	22.95	22.29	22.21	22.87	22.21
		RB50#0	21.96	22.67	22.53	21.88	22.59	22.45
	16QAM	RB1#0	21.95	22.09	22.00	21.87	22.01	21.92
		RB1#24	22.90	22.14	22.26	22.82	22.06	22.18
		RB1#49	22.38	22.89	22.56	22.3	22.81	22.48
		RB25#0	22.37	22.31	22.03	22.29	22.23	21.95
		RB25#12	21.93	22.74	22.88	21.85	22.66	22.8
		RB25#24	22.21	22.45	22.84	22.13	22.37	22.76
		RB50#0	21.94	21.91	22.20	21.86	21.83	22.12

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	21.23	21.16	21.15	21.15	21.08	21.07
		RB1#37	20.86	21.99	21.48	20.78	21.91	21.4
		RB1#74	21.44	21.86	21.89	21.36	21.78	21.81
		RB36#0	21.12	21.92	21.64	21.04	21.84	21.56
		RB36#18	21.97	21.16	21.18	21.89	21.08	21.1
		RB36#37	21.75	21.51	21.20	21.67	21.43	21.12
		RB75#0	21.93	21.50	21.56	21.85	21.42	21.48
	16QAM	RB1#0	21.53	21.97	21.90	21.45	21.89	21.82
		RB1#37	21.12	20.96	21.24	21.04	20.88	21.16
		RB1#74	20.86	22.00	21.34	20.78	21.92	21.26
		RB36#0	21.99	21.15	21.82	21.91	21.07	21.74
		RB36#18	21.21	21.27	21.47	21.13	21.19	21.39
		RB36#37	21.78	21.59	21.04	21.7	21.51	20.96
		RB75#0	21.90	21.56	21.25	21.82	21.48	21.17
20.0	QPSK	RB1#0	21.10	21.21	21.07	21.02	21.13	20.99
		RB1#49	21.58	20.81	21.35	21.5	20.73	21.27
		RB1#99	20.98	20.81	21.81	20.9	20.73	21.73
		RB50#0	21.20	21.45	21.21	21.12	21.37	21.13
		RB50#24	21.02	21.19	20.86	20.94	21.11	20.78
		RB50#49	21.59	21.15	21.74	21.51	21.07	21.66
		RB100#0	21.95	21.34	20.85	21.87	21.26	20.77
	16QAM	RB1#0	21.71	21.89	21.86	21.63	21.81	21.78
		RB1#49	21.89	21.03	21.57	21.81	20.95	21.49
		RB1#99	21.25	21.45	21.27	21.17	21.37	21.19
		RB50#0	21.08	21.14	20.93	21	21.06	20.85
		RB50#24	20.96	21.36	20.82	20.88	21.28	20.74
		RB50#49	21.47	21.99	21.84	21.39	21.91	21.76
		RB100#0	21.25	21.42	21.02	21.17	21.34	20.94

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)

For Band2: Antenna Gain = 0.72dBi

For 1000-3000MHz, Cable Loss=0.8dB*(provided by the applicant)

Limit: EIRP≤33dBm

Peak-to-average ratio (PAR)**20MHz Bandwidth**

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	3.91	4.04	3.99	13	Pass
QPSK (100RB Size)	6.41	5.68	5.15	13	Pass
16QAM (1RB Size)	4.66	4.87	4.58	13	Pass
16QAM (100RB Size)	6.37	6.57	6.29	13	Pass

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	22.96	22.44	22.62	22.77	22.25	22.43
		RB1#2	22.54	22.46	22.73	22.35	22.27	22.54
		RB1#5	22.74	22.06	22.57	22.55	21.87	22.38
		RB3#0	22.62	22.31	22.23	22.43	22.12	22.04
		RB3#1	22.91	22.84	22.63	22.72	22.65	22.44
		RB3#2	22.12	22.61	22.90	21.93	22.42	22.71
		RB6#0	22.30	22.69	22.71	22.11	22.5	22.52
	16QAM	RB1#0	22.14	22.24	22.98	21.95	22.05	22.79
		RB1#2	22.67	22.66	22.09	22.48	22.47	21.9
		RB1#5	22.37	22.85	22.51	22.18	22.66	22.32
		RB3#0	22.02	22.88	22.42	21.83	22.69	22.23
		RB3#1	22.25	22.74	22.89	22.06	22.55	22.7
		RB3#2	22.28	22.26	22.30	22.09	22.07	22.11
		RB6#0	22.48	22.43	22.02	22.29	22.24	21.83
3.0	QPSK	RB1#0	22.18	22.76	22.02	21.99	22.57	21.83
		RB1#7	22.01	22.96	22.88	21.82	22.77	22.69
		RB1#14	22.87	22.16	22.09	22.68	21.97	21.9
		RB8#0	22.58	22.12	22.29	22.39	21.93	22.1
		RB8#4	22.49	22.45	22.01	22.3	22.26	21.82
		RB8#7	22.39	22.12	22.11	22.2	21.93	21.92
		RB15#0	22.45	22.14	22.36	22.26	21.95	22.17
	16QAM	RB1#0	22.61	21.96	22.17	22.42	21.77	21.98
		RB1#7	22.89	22.70	22.20	22.7	22.51	22.01
		RB1#14	22.71	22.73	22.79	22.52	22.54	22.6
		RB8#0	22.51	21.93	22.77	22.32	21.74	22.58
		RB8#4	21.99	22.16	21.95	21.8	21.97	21.76
		RB8#7	22.81	22.59	22.96	22.62	22.4	22.77
		RB15#0	21.99	22.61	21.93	21.8	22.42	21.74

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	22.22	22.90	21.90	22.03	22.71	21.71
		RB1#12	22.26	22.19	22.98	22.07	22	22.79
		RB1#24	22.76	22.84	22.19	22.57	22.65	22
		RB12#0	22.73	21.99	22.88	22.54	21.8	22.69
		RB12#6	22.33	22.54	22.37	22.14	22.35	22.18
		RB12#11	22.86	22.68	22.81	22.67	22.49	22.62
		RB25#0	21.99	21.91	22.76	21.8	21.72	22.57
	16QAM	RB1#0	22.17	21.92	22.08	21.98	21.73	21.89
		RB1#12	21.96	22.21	22.77	21.77	22.02	22.58
		RB1#24	21.99	22.88	21.92	21.8	22.69	21.73
		RB12#0	21.91	22.80	22.75	21.72	22.61	22.56
		RB12#6	22.31	22.70	22.49	22.12	22.51	22.3
		RB12#11	22.85	22.39	22.79	22.66	22.2	22.6
		RB25#0	22.81	22.50	22.28	22.62	22.31	22.09
10.0	QPSK	RB1#0	22.02	22.12	22.21	21.83	21.93	22.02
		RB1#24	22.86	22.42	22.59	22.67	22.23	22.4
		RB1#49	22.18	22.21	22.59	21.99	22.02	22.4
		RB25#0	22.86	22.61	22.71	22.67	22.42	22.52
		RB25#12	21.96	22.98	22.62	21.77	22.79	22.43
		RB25#24	22.20	22.20	22.67	22.01	22.01	22.48
		RB50#0	21.92	22.37	22.54	21.73	22.18	22.35
	16QAM	RB1#0	22.18	22.50	22.43	21.99	22.31	22.24
		RB1#24	22.65	22.37	22.93	22.46	22.18	22.74
		RB1#49	22.39	22.82	22.31	22.2	22.63	22.12
		RB25#0	22.30	22.32	22.63	22.11	22.13	22.44
		RB25#12	22.35	22.54	22.89	22.16	22.35	22.7
		RB25#24	22.26	22.66	22.14	22.07	22.47	21.95
		RB50#0	22.74	22.50	22.01	22.55	22.31	21.82

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	22.49	22.45	22.70	22.3	22.26	22.51
		RB1#37	22.23	22.66	22.57	22.04	22.47	22.38
		RB1#74	22.17	22.59	22.07	21.98	22.4	21.88
		RB36#0	22.90	22.66	22.11	22.71	22.47	21.92
		RB36#18	22.14	22.67	22.65	21.95	22.48	22.46
		RB36#37	22.44	22.97	22.60	22.25	22.78	22.41
		RB75#0	22.69	22.44	22.55	22.5	22.25	22.36
	16QAM	RB1#0	22.97	22.04	22.51	22.78	21.85	22.32
		RB1#37	22.93	22.58	22.71	22.74	22.39	22.52
		RB1#74	22.68	22.61	22.78	22.49	22.42	22.59
		RB36#0	21.96	22.29	22.44	21.77	22.1	22.25
		RB36#18	22.29	22.74	22.73	22.1	22.55	22.54
		RB36#37	22.18	21.92	22.83	21.99	21.73	22.64
		RB75#0	22.66	22.64	22.39	22.47	22.45	22.2
20.0	QPSK	RB1#0	22.00	22.43	22.76	21.81	22.24	22.57
		RB1#49	22.93	22.43	22.34	22.74	22.24	22.15
		RB1#99	22.61	22.91	22.85	22.42	22.72	22.66
		RB50#0	22.42	22.96	22.98	22.23	22.77	22.79
		RB50#24	22.42	22.44	22.41	22.23	22.25	22.22
		RB50#49	22.89	22.68	22.37	22.7	22.49	22.18
		RB100#0	22.51	22.28	22.78	22.32	22.09	22.59
	16QAM	RB1#0	22.80	22.11	22.20	22.61	21.92	22.01
		RB1#49	22.48	22.84	22.16	22.29	22.65	21.97
		RB1#99	22.36	22.43	22.48	22.17	22.24	22.29
		RB50#0	22.98	22.94	22.09	22.79	22.75	21.9
		RB50#24	22.16	21.93	22.17	21.97	21.74	21.98
		RB50#49	22.68	21.93	22.80	22.49	21.74	22.61
		RB100#0	22.71	22.76	22.20	22.52	22.57	22.01

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)

For Band4: Antenna Gain = 0.61dBi*

For 1000-3000MHz, Cable Loss=0.8dB*(provided by the applicant)

Limit: EIRP≤30dBm

Peak-to-average ratio (PAR)**20MHz Bandwidth**

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.58	4.82	3.65	13	Pass
QPSK (100RB Size)	5.34	5.31	6.01	13	Pass
16QAM (1RB Size)	5.48	4.65	4.85	13	Pass
16QAM (100RB Size)	5.76	5.82	5.50	13	Pass

LTE Band 5(LTE Band 26):**Maximum Output Power**

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	22.11	22.82	22.32	19.99	20.7	20.2
		RB1#2	22.41	22.52	22.51	20.29	20.4	20.39
		RB1#5	22.33	22.51	22.89	20.21	20.39	20.77
		RB3#0	22.27	22.48	22.36	20.15	20.36	20.24
		RB3#1	22.17	22.55	22.33	20.05	20.43	20.21
		RB3#2	21.98	22.48	21.99	19.86	20.36	19.87
		RB6#0	22.02	22.83	22.42	19.9	20.71	20.3
	16QAM	RB1#0	22.81	22.15	22.50	20.69	20.03	20.38
		RB1#2	22.80	22.60	22.73	20.68	20.48	20.61
		RB1#5	22.33	22.09	22.85	20.21	19.97	20.73
		RB3#0	22.34	22.01	22.48	20.22	19.89	20.36
		RB3#1	22.47	22.71	22.10	20.35	20.59	19.98
		RB3#2	22.89	22.28	22.63	20.77	20.16	20.51
		RB6#0	21.96	22.73	22.13	19.84	20.61	20.01
3.0	QPSK	RB1#0	22.33	22.50	22.56	20.21	20.38	20.44
		RB1#7	22.73	22.69	22.75	20.61	20.57	20.63
		RB1#14	22.45	22.14	22.62	20.33	20.02	20.5
		RB8#0	22.68	22.23	22.40	20.56	20.11	20.28
		RB8#4	22.78	22.01	22.48	20.66	19.89	20.36
		RB8#7	22.17	21.91	22.03	20.05	19.79	19.91
		RB15#0	22.22	22.35	22.06	20.1	20.23	19.94
	16QAM	RB1#0	22.34	22.00	22.69	20.22	19.88	20.57
		RB1#7	22.25	22.02	22.72	20.13	19.9	20.6
		RB1#14	22.35	22.02	22.01	20.23	19.9	19.89
		RB8#0	22.58	22.68	22.54	20.46	20.56	20.42
		RB8#4	21.93	22.66	22.80	19.81	20.54	20.68
		RB8#7	22.25	22.79	22.31	20.13	20.67	20.19
		RB15#0	21.98	22.46	22.18	19.86	20.34	20.06

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	22.22	22.26	22.29	20.1	20.14	20.17
		RB1#12	21.98	22.10	22.12	19.86	19.98	20
		RB1#24	22.09	22.16	22.18	19.97	20.04	20.06
		RB12#0	22.20	22.34	21.96	20.08	20.22	19.84
		RB12#6	22.62	22.24	22.03	20.5	20.12	19.91
		RB12#11	22.27	22.44	22.37	20.15	20.32	20.25
		RB25#0	22.85	22.51	22.75	20.73	20.39	20.63
	16QAM	RB1#0	22.54	22.52	22.24	20.42	20.4	20.12
		RB1#12	22.07	22.79	22.25	19.95	20.67	20.13
		RB1#24	22.02	22.83	22.32	19.9	20.71	20.2
		RB12#0	22.18	22.43	22.41	20.06	20.31	20.29
		RB12#6	21.94	22.37	22.31	19.82	20.25	20.19
		RB12#11	22.40	22.04	21.94	20.28	19.92	19.82
		RB25#0	22.87	22.71	22.39	20.75	20.59	20.27
10.0	QPSK	RB1#0	22.63	22.89	22.14	20.51	20.77	20.02
		RB1#24	22.39	22.49	22.27	20.27	20.37	20.15
		RB1#49	21.93	22.31	22.10	19.81	20.19	19.98
		RB25#0	22.54	22.82	22.45	20.42	20.7	20.33
		RB25#12	22.51	22.24	22.66	20.39	20.12	20.54
		RB25#24	22.43	22.87	22.44	20.31	20.75	20.32
		RB50#0	22.46	21.95	21.92	20.34	19.83	19.8
	16QAM	RB1#0	22.57	21.99	21.91	20.45	19.87	19.79
		RB1#24	21.91	22.53	22.61	19.79	20.41	20.49
		RB1#49	22.73	22.56	22.00	20.61	20.44	19.88
		RB25#0	22.27	22.84	22.01	20.15	20.72	19.89
		RB25#12	22.14	22.47	22.23	20.02	20.35	20.11
		RB25#24	22.69	22.40	22.48	20.57	20.28	20.36
		RB50#0	22.30	22.58	22.63	20.18	20.46	20.51

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable Loss(dB)

For Band 5 & Band 26: Antenna Gain =0.53dBi =-1.62dBd (0dBd=2.15dBi)

Cable Loss=0.5dB*(provided by the applicant)

Limit: EIRP ≤38.45dBm

LTE Band 26 (15MHz)

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	23.99	24.04	24.09	21.87	21.92	21.97
		RB1#38	24.11	24.17	24.18	21.99	22.05	22.06
		RB1#74	24.02	24.07	24.16	21.9	21.95	22.04
		RB36#0	23.13	23.21	23.26	21.01	21.09	21.14
		RB36#39	23.21	23.23	23.26	21.09	21.11	21.14
		RB75#0	23.17	23.26	23.25	21.05	21.14	21.13
	16QAM	RB1#0	23.53	23.19	23.48	21.41	21.07	21.36
		RB1#38	23.66	23.35	23.48	21.54	21.23	21.36
		RB1#74	23.60	23.23	23.43	21.48	21.11	21.31
		RB36#0	22.09	22.20	22.18	19.97	20.08	20.06
		RB36#39	22.21	22.22	22.18	20.09	20.1	20.06
		RB75#0	22.16	22.23	22.18	20.04	20.11	20.06

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable Loss(dB)
 For Band 26: Antenna Gain =0.53dBi =-1.62dBd (0dBd=2.15dBi)
 Cable Loss=0.5dB*(provided by the applicant)
 Limit: EIRP≤38.45dBm

Peak-to-average ratio (PAR)**10MHz bandwidth**

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	3.82	4.30	4.27	13	Pass
QPSK (50RB Size)	5.15	5.74	5.18	13	Pass
16QAM (1RB Size)	5.22	4.83	5.00	13	Pass
16QAM (50RB Size)	6.30	6.23	6.18	13	Pass

LTE Band 7:**Maximum Output Power**

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	22.35	22.04	22.50	22.32	22.01	22.47
		RB1#12	22.35	22.71	22.43	22.32	22.68	22.4
		RB1#24	22.47	22.72	22.17	22.44	22.69	22.14
		RB12#0	22.48	22.03	22.79	22.45	22	22.76
		RB12#6	22.29	22.00	22.11	22.26	21.97	22.08
		RB12#11	21.95	22.72	21.98	21.92	22.69	21.95
		RB25#0	21.99	22.39	22.80	21.96	22.36	22.77
	16QAM	RB1#0	22.28	22.23	22.68	22.25	22.2	22.65
		RB1#12	22.86	22.61	21.98	22.83	22.58	21.95
		RB1#24	22.36	22.20	22.01	22.33	22.17	21.98
		RB12#0	22.43	22.00	22.62	22.4	21.97	22.59
		RB12#6	22.14	22.05	22.34	22.11	22.02	22.31
		RB12#11	22.87	21.93	22.43	22.84	21.9	22.4
		RB25#0	22.64	22.04	22.42	22.61	22.01	22.39
10.0	QPSK	RB1#0	22.54	22.31	21.92	22.51	22.28	21.89
		RB1#24	22.30	22.13	22.75	22.27	22.1	22.72
		RB1#49	22.35	21.96	22.12	22.32	21.93	22.09
		RB25#0	22.33	22.10	22.25	22.3	22.07	22.22
		RB25#12	22.43	22.43	22.28	22.4	22.4	22.25
		RB25#24	22.00	22.87	22.05	21.97	22.84	22.02
		RB50#0	22.07	22.63	22.75	22.04	22.6	22.72
	16QAM	RB1#0	22.86	21.96	22.65	22.83	21.93	22.62
		RB1#24	22.49	21.96	22.45	22.46	21.93	22.42
		RB1#49	22.21	22.31	22.18	22.18	22.28	22.15
		RB25#0	22.24	22.86	22.64	22.21	22.83	22.61
		RB25#12	22.15	22.60	22.76	22.12	22.57	22.73
		RB25#24	22.33	22.77	22.49	22.3	22.74	22.46
		RB50#0	22.10	22.78	22.00	22.07	22.75	21.97

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	22.40	22.62	22.14	22.37	22.59	22.11
		RB1#37	22.81	22.01	22.21	22.78	21.98	22.18
		RB1#74	22.62	21.91	22.47	22.59	21.88	22.44
		RB36#0	22.45	22.60	22.57	22.42	22.57	22.54
		RB36#18	22.53	22.88	22.11	22.5	22.85	22.08
		RB36#37	22.03	22.26	22.65	22	22.23	22.62
		RB75#0	22.69	21.98	22.53	22.66	21.95	22.5
	16QAM	RB1#0	22.54	22.22	22.87	22.51	22.19	22.84
		RB1#37	22.53	22.82	22.38	22.5	22.79	22.35
		RB1#74	22.22	22.85	22.87	22.19	22.82	22.84
		RB36#0	22.23	22.77	21.95	22.2	22.74	21.92
		RB36#18	22.62	22.28	22.30	22.59	22.25	22.27
		RB36#37	22.66	22.53	21.97	22.63	22.5	21.94
		RB75#0	22.60	22.36	22.16	22.57	22.33	22.13
20.0	QPSK	RB1#0	22.15	22.50	22.47	22.12	22.47	22.44
		RB1#49	22.62	21.94	22.80	22.59	21.91	22.77
		RB1#99	22.09	21.98	22.15	22.06	21.95	22.12
		RB50#0	22.66	22.03	22.20	22.63	22	22.17
		RB50#24	22.33	22.75	22.83	22.3	22.72	22.8
		RB50#49	21.92	22.30	22.43	21.89	22.27	22.4
		RB100#0	22.09	22.06	22.28	22.06	22.03	22.25
	16QAM	RB1#0	22.81	21.98	22.78	22.78	21.95	22.75
		RB1#49	22.09	22.53	22.69	22.06	22.5	22.66
		RB1#99	21.97	22.26	22.71	21.94	22.23	22.68
		RB50#0	22.90	22.18	22.11	22.87	22.15	22.08
		RB50#24	22.79	21.95	22.74	22.76	21.92	22.71
		RB50#49	22.76	22.80	22.36	22.73	22.77	22.33
		RB100#0	22.04	22.29	22.83	22.01	22.26	22.8

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)

For Band7: Antenna Gain = 0.77dBi

For 2500-2570MHz, Cable Loss=0.8dB*(provided by the applicant)

Limit: EIRP≤33dBm

Peak-to-average ratio (PAR)**20MHz bandwidth**

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.17	3.85	4.27	13	Pass
QPSK (100RB Size)	5.30	5.00	5.54	13	Pass
16QAM (1RB Size)	4.77	5.34	3.99	13	Pass
16QAM (100RB Size)	6.75	6.03	5.65	13	Pass

LTE Band 17**Maximum Output Power**

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	21.69	21.99	22.24	19.46	19.76	20.01
		RB1#12	21.68	22.05	22.44	19.45	19.82	20.21
		RB1#24	22.24	21.85	22.12	20.01	19.62	19.89
		RB12#0	22.41	21.59	22.43	20.18	19.36	20.20
		RB12#6	21.80	21.92	21.75	19.57	19.69	19.52
		RB12#11	22.10	22.28	21.83	19.87	20.05	19.60
		RB25#0	21.76	22.43	22.32	19.53	20.20	20.09
	16QAM	RB1#0	22.00	22.23	22.15	19.77	20.00	19.92
		RB1#12	21.63	22.38	22.45	19.40	20.15	20.22
		RB1#24	21.93	21.89	22.42	19.70	19.66	20.19
		RB12#0	22.38	21.83	22.29	20.15	19.60	20.06
		RB12#6	22.39	22.35	22.00	20.16	20.12	19.77
		RB12#11	21.80	22.49	21.75	19.57	20.26	19.52
		RB25#0	22.34	21.73	21.75	20.11	19.50	19.52
10.0	QPSK	RB1#0	21.52	21.89	21.73	19.29	19.66	19.50
		RB1#24	22.30	21.83	22.30	20.07	19.60	20.07
		RB1#49	21.82	21.71	21.80	19.59	19.48	19.57
		RB25#0	21.86	22.34	22.22	19.63	20.11	19.99
		RB25#12	21.74	21.91	22.48	19.51	19.68	20.25
		RB25#24	21.78	22.16	22.31	19.55	19.93	20.08
		RB50#0	22.11	21.58	22.37	19.88	19.35	20.14
	16QAM	RB1#0	22.06	21.67	21.84	19.83	19.44	19.61
		RB1#24	21.78	21.80	21.58	19.55	19.57	19.35
		RB1#49	22.44	22.26	21.54	20.21	20.03	19.31
		RB25#0	22.03	22.37	22.00	19.80	20.14	19.77
		RB25#12	22.49	22.09	22.36	20.26	19.86	20.13
		RB25#24	22.21	21.90	21.97	19.98	19.67	19.74
		RB50#0	21.89	22.49	21.86	19.66	20.26	19.63

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) - Cable loss(dB)

For Band17: Antenna Gain =0.42dBi = -1.73dBd (0dBd=2.15dBi)

For 600-1000MHz, Cable Loss=0.5dB*(provided by the applicant)

Limit: ERP≤44.77dBm

Peak-to-average ratio (PAR)**10MHz bandwidth**

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	3.71	4.09	4.40	13	Pass
QPSK (50RB Size)	5.49	5.85	5.12	13	Pass
16QAM (1RB Size)	5.17	5.15	5.05	13	Pass
16QAM (50RB Size)	6.37	6.19	6.14	13	Pass

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	22.80	22.11	22.82	22.61	21.92	22.63
		RB1#2	22.23	22.55	22.93	22.04	22.36	22.74
		RB1#5	22.77	22.42	22.17	22.58	22.23	21.98
		RB3#0	22.31	21.93	22.84	22.12	21.74	22.65
		RB3#1	22.65	22.24	22.15	22.46	22.05	21.96
		RB3#2	22.55	22.17	22.69	22.36	21.98	22.50
		RB6#0	22.13	22.94	22.17	21.94	22.75	21.98
	16QAM	RB1#0	21.95	22.06	22.80	21.76	21.87	22.61
		RB1#2	22.39	22.06	22.55	22.20	21.87	22.36
		RB1#5	22.00	22.59	22.69	21.81	22.40	22.50
		RB3#0	22.64	22.49	22.49	22.45	22.30	22.30
		RB3#1	21.90	22.85	21.98	21.71	22.66	21.79
		RB3#2	22.67	22.54	21.98	22.48	22.35	21.79
		RB6#0	22.89	22.63	22.49	22.70	22.44	22.30
3.0	QPSK	RB1#0	22.55	21.91	22.54	22.36	21.72	22.35
		RB1#7	22.15	22.22	22.25	21.96	22.03	22.06
		RB1#14	22.81	22.24	22.13	22.62	22.05	21.94
		RB8#0	22.78	22.11	22.80	22.59	21.92	22.61
		RB8#4	22.10	22.44	22.75	21.91	22.25	22.56
		RB8#7	22.04	22.65	22.17	21.85	22.46	21.98
		RB15#0	22.46	21.98	22.22	22.27	21.79	22.03
	16QAM	RB1#0	22.39	21.95	22.01	22.20	21.76	21.82
		RB1#7	22.43	22.85	22.27	22.24	22.66	22.08
		RB1#14	22.21	22.02	22.19	22.02	21.83	22.00
		RB8#0	22.34	22.54	22.86	22.15	22.35	22.67
		RB8#4	22.40	22.65	22.88	22.21	22.46	22.69
		RB8#7	22.47	22.72	22.02	22.28	22.53	21.83
		RB15#0	22.56	22.47	22.30	22.37	22.28	22.11

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	22.87	22.40	22.76	22.68	22.21	22.57
		RB1#12	22.75	22.88	22.51	22.56	22.69	22.32
		RB1#24	22.03	22.73	22.53	21.84	22.54	22.34
		RB12#0	22.09	22.78	22.93	21.90	22.59	22.74
		RB12#6	22.87	22.41	21.93	22.68	22.22	21.74
		RB12#11	22.01	21.95	22.84	21.82	21.76	22.65
		RB25#0	22.38	22.03	22.85	22.19	21.84	22.66
	16QAM	RB1#0	22.75	22.73	22.82	22.56	22.54	22.63
		RB1#12	22.48	22.07	22.69	22.29	21.88	22.50
		RB1#24	22.50	21.98	22.74	22.31	21.79	22.55
		RB12#0	22.20	22.80	22.79	22.01	22.61	22.60
		RB12#6	22.63	22.73	22.35	22.44	22.54	22.16
		RB12#11	22.00	22.40	22.39	21.81	22.21	22.20
		RB25#0	22.02	22.11	22.91	21.83	21.92	22.72
10.0	QPSK	RB1#0	22.49	22.48	22.90	22.30	22.29	22.71
		RB1#24	22.43	22.83	22.68	22.24	22.64	22.49
		RB1#49	22.91	22.74	21.94	22.72	22.55	21.75
		RB25#0	22.67	22.79	22.10	22.48	22.60	21.91
		RB25#12	22.90	22.24	22.79	22.71	22.05	22.60
		RB25#24	22.27	22.55	22.39	22.08	22.36	22.20
		RB50#0	22.04	22.29	22.74	21.85	22.10	22.55
	16QAM	RB1#0	22.37	22.04	22.93	22.18	21.85	22.74
		RB1#24	22.66	22.78	22.09	22.47	22.59	21.90
		RB1#49	22.84	22.42	22.39	22.65	22.23	22.20
		RB25#0	22.41	22.79	22.64	22.22	22.60	22.45
		RB25#12	22.08	22.82	22.84	21.89	22.63	22.65
		RB25#24	22.57	21.94	22.29	22.38	21.75	22.10
		RB50#0	22.73	22.38	22.05	22.54	22.19	21.86

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	22.71	22.25	22.56	22.52	22.06	22.37
		RB1#37	22.50	21.97	22.42	22.31	21.78	22.23
		RB1#74	21.92	22.23	22.54	21.73	22.04	22.35
		RB36#0	22.47	22.31	22.88	22.28	22.12	22.69
		RB36#18	22.73	22.07	22.33	22.54	21.88	22.14
		RB36#37	22.03	22.77	22.34	21.84	22.58	22.15
		RB75#0	22.35	21.95	22.75	22.16	21.76	22.56
	16QAM	RB1#0	22.00	22.57	21.97	21.81	22.38	21.78
		RB1#37	22.73	22.81	22.82	22.54	22.62	22.63
		RB1#74	22.64	22.28	22.52	22.45	22.09	22.33
		RB36#0	22.78	22.25	22.36	22.59	22.06	22.17
		RB36#18	21.90	22.94	22.39	21.71	22.75	22.20
		RB36#37	22.20	22.02	22.94	22.01	21.83	22.75
		RB75#0	22.64	22.18	22.05	22.45	21.99	21.86
20.0	QPSK	RB1#0	22.95	22.16	22.60	22.76	21.97	22.41
		RB1#49	22.76	22.21	22.22	22.57	22.02	22.03
		RB1#99	22.39	22.83	22.67	22.20	22.64	22.48
		RB50#0	22.92	22.32	22.60	22.73	22.13	22.41
		RB50#24	22.32	22.86	22.46	22.13	22.67	22.27
		RB50#49	22.45	21.90	22.06	22.26	21.71	21.87
		RB100#0	22.45	22.02	21.97	22.26	21.83	21.78
	16QAM	RB1#0	22.53	21.92	22.69	22.34	21.73	22.50
		RB1#49	22.38	22.90	22.10	22.19	22.71	21.91
		RB1#99	22.55	22.89	22.60	22.36	22.70	22.41
		RB50#0	22.62	22.46	21.91	22.43	22.27	21.72
		RB50#24	22.44	22.39	22.90	22.25	22.20	22.71
		RB50#49	22.08	22.44	22.41	21.89	22.25	22.22
		RB100#0	22.31	22.07	22.25	22.12	21.88	22.06

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)

For Band 66: Antenna Gain = 0.61dBi

For 1000-3000MHz, Cable Loss=0.8dB*(provided by the applicant)

Limit: EIRP≤30dBm

Peak-to-average ratio (PAR)**20MHz Bandwidth**

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.14	4.59	3.84	13	Pass
QPSK (100RB Size)	4.67	5.70	6.41	13	Pass
16QAM (1RB Size)	5.26	4.73	4.75	13	Pass
16QAM (100RB Size)	5.73	5.92	5.90	13	Pass

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	21.78	22.16	21.86	21.75	22.13	21.83
		RB1#12	21.87	22.01	22.12	21.84	21.98	22.09
		RB1#24	21.68	21.58	22.36	21.65	21.55	22.33
		RB12#0	21.56	22.08	21.81	21.53	22.05	21.78
		RB12#6	22.11	21.62	21.51	22.08	21.59	21.48
		RB12#11	22.32	21.74	22.22	22.29	21.71	22.19
		RB25#0	22.23	21.74	22.09	22.20	21.71	22.06
	16QAM	RB1#0	21.54	22.06	21.91	21.51	22.03	21.88
		RB1#12	21.85	22.23	22.26	21.82	22.20	22.23
		RB1#24	21.75	22.30	21.57	21.72	22.27	21.54
		RB12#0	21.78	21.86	22.22	21.75	21.83	22.19
		RB12#6	22.38	22.00	21.75	22.35	21.97	21.72
		RB12#11	21.51	22.23	21.76	21.48	22.20	21.73
		RB25#0	22.07	21.99	21.74	22.04	21.96	21.71
10.0	QPSK	RB1#0	21.85	22.12	22.24	21.82	22.09	22.21
		RB1#24	22.19	22.11	22.09	22.16	22.08	22.06
		RB1#49	22.04	21.69	21.83	22.01	21.66	21.80
		RB25#0	22.19	21.60	21.76	22.16	21.57	21.73
		RB25#12	22.12	22.38	22.26	22.09	22.35	22.23
		RB25#24	22.14	21.54	21.58	22.11	21.51	21.55
		RB50#0	22.39	21.78	21.71	22.36	21.75	21.68
	16QAM	RB1#0	21.87	21.95	22.26	21.84	21.92	22.23
		RB1#24	22.31	21.61	22.01	22.28	21.58	21.98
		RB1#49	22.27	21.78	21.81	22.24	21.75	21.78
		RB25#0	22.08	22.01	21.81	22.05	21.98	21.78
		RB25#12	22.11	21.90	21.53	22.08	21.87	21.50
		RB25#24	21.97	22.02	21.52	21.94	21.99	21.49
		RB50#0	22.17	21.89	22.32	22.14	21.86	22.29

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	21.73	22.30	22.31	21.70	22.27	22.28
		RB1#37	21.68	21.85	22.06	21.65	21.82	22.03
		RB1#74	21.82	21.82	21.54	21.79	21.79	21.51
		RB36#0	21.96	21.99	21.95	21.93	21.96	21.92
		RB36#18	22.21	21.93	22.12	22.18	21.90	22.09
		RB36#37	21.60	21.70	22.27	21.57	21.67	22.24
		RB75#0	21.51	22.22	22.38	21.48	22.19	22.35
	16QAM	RB1#0	21.81	21.89	21.81	21.78	21.86	21.78
		RB1#37	21.56	21.77	21.53	21.53	21.74	21.50
		RB1#74	21.70	22.16	21.79	21.67	22.13	21.76
		RB36#0	21.64	22.37	21.78	21.61	22.34	21.75
		RB36#18	21.66	22.06	21.60	21.63	22.03	21.57
		RB36#37	21.68	21.97	21.93	21.65	21.94	21.90
		RB75#0	22.36	21.77	21.56	22.33	21.74	21.53
20.0	QPSK	RB1#0	21.54	22.17	21.85	21.51	22.14	21.82
		RB1#49	21.92	22.38	21.69	21.89	22.35	21.66
		RB1#99	21.72	22.39	21.63	21.69	22.36	21.60
		RB50#0	21.75	22.33	21.86	21.72	22.30	21.83
		RB50#24	22.17	21.92	21.78	22.14	21.89	21.75
		RB50#49	22.25	22.36	21.59	22.22	22.33	21.56
		RB100#0	21.60	21.87	21.56	21.57	21.84	21.53
	16QAM	RB1#0	22.33	22.40	21.90	22.30	22.37	21.87
		RB1#49	21.74	22.13	22.01	21.71	22.10	21.98
		RB1#99	22.11	21.94	22.04	22.08	21.91	22.01
		RB50#0	21.79	22.12	21.63	21.76	22.09	21.60
		RB50#24	21.86	21.82	22.27	21.83	21.79	22.24
		RB50#49	22.26	21.56	21.52	22.23	21.53	21.49
		RB100#0	22.15	21.87	21.54	22.12	21.84	21.51

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)

For Band 38: Antenna Gain = 0.77dBi

For 1000-3000MHz, Cable Loss=0.8dB*(provided by the applicant)

Limit: EIRP≤33dBm

Peak-to-average ratio (PAR)**20MHz Bandwidth**

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	3.76	4.45	3.84	13	Pass
QPSK (100RB Size)	4.32	5.32	6.41	13	Pass
16QAM (1RB Size)	5.00	4.79	4.75	13	Pass
16QAM (100RB Size)	5.25	5.78	5.90	13	Pass

LTE Band 40 Lower:

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	22.17	21.53	21.73	22.04	21.40	21.60
		RB1#12	21.82	21.78	21.56	21.69	21.65	21.43
		RB1#24	22.08	21.75	21.63	21.95	21.62	21.50
		RB12#0	22.29	22.28	21.67	22.16	22.15	21.54
		RB12#6	21.54	21.79	21.81	21.41	21.66	21.68
		RB12#11	21.82	21.84	21.96	21.69	21.71	21.83
		RB25#0	21.57	21.78	22.01	21.44	21.65	21.88
	16QAM	RB1#0	21.84	21.87	22.03	21.71	21.74	21.90
		RB1#12	22.01	21.53	22.12	21.88	21.40	21.99
		RB1#24	21.86	22.15	22.26	21.73	22.02	22.13
		RB12#0	22.12	22.11	22.01	21.99	21.98	21.88
		RB12#6	21.62	21.68	22.24	21.49	21.55	22.11
		RB12#11	22.08	22.05	21.51	21.95	21.92	21.38
		RB25#0	22.29	21.96	21.90	22.16	21.83	21.77
10.0	QPSK	RB1#0		22.16			22.03	
		RB1#24		21.74			21.61	
		RB1#49		22.03			21.90	
		RB25#0		21.59			21.46	
		RB25#12		22.34			21.21	
		RB25#24		22.09			21.96	
		RB50#0		21.80			21.67	
	16QAM	RB1#0		21.98			21.85	
		RB1#24		21.89			21.76	
		RB1#49		21.51			21.38	
		RB25#0		21.63			21.50	
		RB25#12		21.82			21.69	
		RB25#24		22.12			21.99	
		RB50#0		21.93			21.80	

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)

For Band 40: Antenna Gain = 0.67dBi

For 1000-3000MHz, Cable Loss=0.8dB*(provided by the applicant)

Limit: EIRP $\leq$ 24dBm/5MHz

For 5MHz mode, the channel power is equal to the test result in dBm/5MHz

For 10MHz mode, the channel power is sum of 10MHz bandwidth, the result is less than 24dBm, so in any 5MHz bandwidth, it will not exceed the limit

Peak-to-average ratio (PAR)

10MHz Bandwidth

Modulation	Middle channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.51	13	Pass
QPSK (100RB Size)	5.56	13	Pass
16QAM (1RB Size)	4.94	13	Pass
16QAM (100RB Size)	5.93	13	Pass

Duty cycle

Modulation	Bandwidth (MHz)	Ton (ms)	Ton+Toff (ms)	Duty cycle (%)	Limit (%)
QPSK	5	3.167	10.013	31.63	38
	10	3.167	10.077	31.43	38
16QAM	5	3.167	10.013	31.63	38
	10	3.167	9.987	31.71	38

The screenshot displays a spectrum analyzer interface. At the top, a red 'A' icon is visible. The main display area shows a signal with a peak level of 16.4 dBm, indicated by a red horizontal line labeled 'TRG 16.4 dBm'. The signal is centered at 2.31 GHz. The frequency scale ranges from 2.30 GHz to 2.32 GHz. The time scale is set to 4 ms. The signal is characterized by a series of sharp, narrow peaks. The peak level is also indicated by a green horizontal line at 19.907692 ms. The signal is identified as 'Marker 1 [T1]' and 'Marker 2 [T1]'. The signal is labeled '1 PK' and 'CLAW'. The signal is also labeled '3DB' and 'LVL'. The signal is identified as 'SGL' and 'TRG'.

Date: 1.JUN.2021 15:47:07

RBW 20 MHz Delta 2 [T1]
 * VBW 30 MHz 0.15 dB
 * Att 30 dB SWT 40 ms 10.012821 ms

Ref 37 dBm

Offset 7 dB

Marker 1 [T1]
 -36.34 dBm
 9.907692 ms

1 PK *
 CLAWR

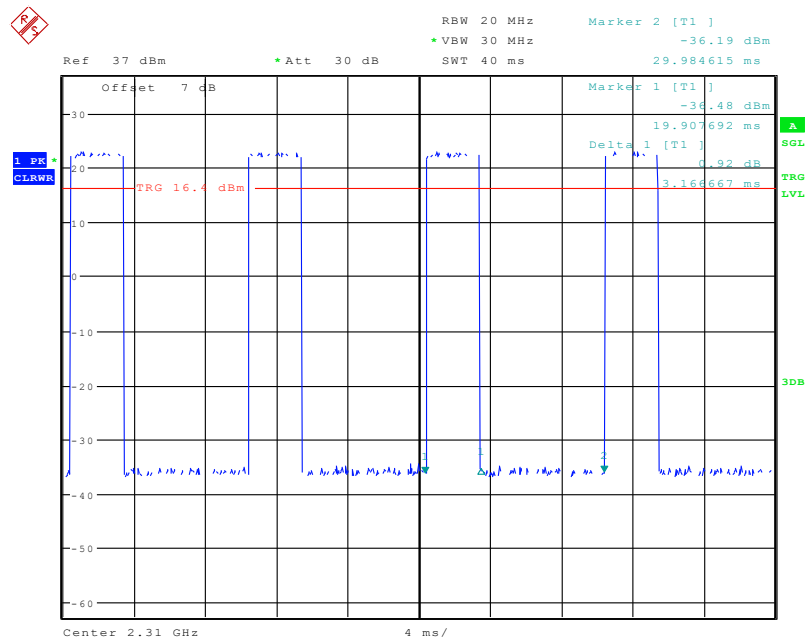
TRG 16.4 dBm

3.166667 ms

Center 2.31 GHz 4 ms/

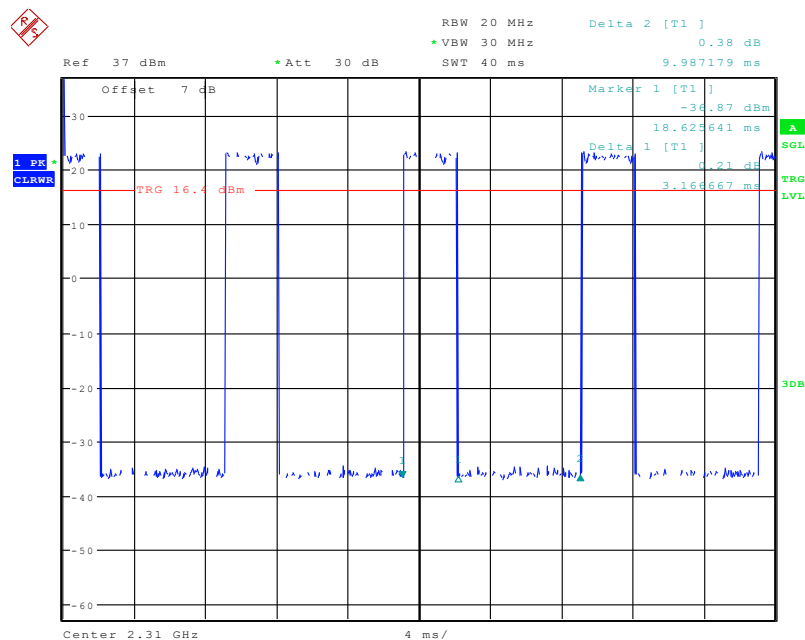
Date: 1.JUN.2021 15:40:08

10MHz, QPSK



Date: 1.JUN.2021 15:46:03

10MHz, 16QAM



Date: 1.JUN.2021 15:45:02

LTE Band 40 Upper:

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	21.90	22.46	21.72	21.77	22.33	21.59
		RB1#12	22.39	22.25	21.55	22.26	22.12	21.42
		RB1#24	22.13	21.65	22.39	22.00	21.52	22.26
		RB12#0	21.93	21.84	21.77	21.80	21.71	21.64
		RB12#6	21.51	22.43	21.72	21.38	22.30	21.59
		RB12#11	22.19	21.81	21.52	22.06	21.68	21.39
		RB25#0	22.45	22.13	21.65	22.32	22.00	21.52
	16QAM	RB1#0	21.64	22.41	22.39	21.51	22.28	22.26
		RB1#12	22.00	22.10	22.36	21.87	21.97	22.23
		RB1#24	22.19	21.80	21.80	22.06	21.67	21.67
		RB12#0	21.78	21.80	22.19	21.65	21.67	22.06
		RB12#6	22.47	21.65	21.65	22.34	21.52	21.52
		RB12#11	22.37	21.91	22.42	22.24	21.78	22.29
		RB25#0	21.76	22.41	21.69	21.63	22.28	21.56
10.0	QPSK	RB1#0	/	22.16	/	/	22.03	/
		RB1#24	/	22.44	/	/	22.31	/
		RB1#49	/	21.67	/	/	21.54	/
		RB25#0	/	21.72	/	/	21.59	/
		RB25#12	/	22.26	/	/	22.13	/
		RB25#24	/	21.77	/	/	21.64	/
		RB50#0	/	22.25	/	/	22.12	/
	16QAM	RB1#0	/	22.03	/	/	21.90	/
		RB1#24	/	22.24	/	/	22.11	/
		RB1#49	/	22.17	/	/	22.04	/
		RB25#0	/	22.48	/	/	22.35	/
		RB25#12	/	22.36	/	/	22.23	/
		RB25#24	/	21.79	/	/	21.66	/
		RB50#0	/	22.19	/	/	22.06	/

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)

For Band 40: Antenna Gain = 0.67dBi

For 1000-3000MHz, Cable Loss=0.8dB*(provided by the applicant)

Limit: EIRP≤24dBm/5MHz

For 5MHz mode, the channel power is equal to the test result in dBm/5MHz
 For 10MHz mode, the channel power is sum of 10MHz bandwidth, the result is less then 24dBm, so in any 5MHz bandwidth, it will not exceed the limit.

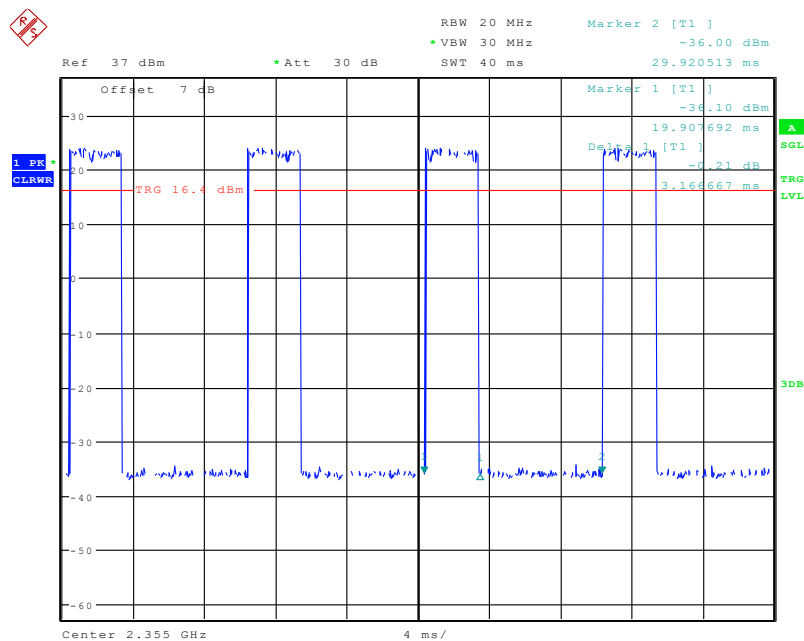
Peak-to-average ratio (PAR)**10MHz Bandwidth**

Modulation	Middle channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	5.48	13	Pass
QPSK (100RB Size)	5.98	13	Pass
16QAM (1RB Size)	5.41	13	Pass
16QAM (100RB Size)	6.05	13	Pass

Duty cycle

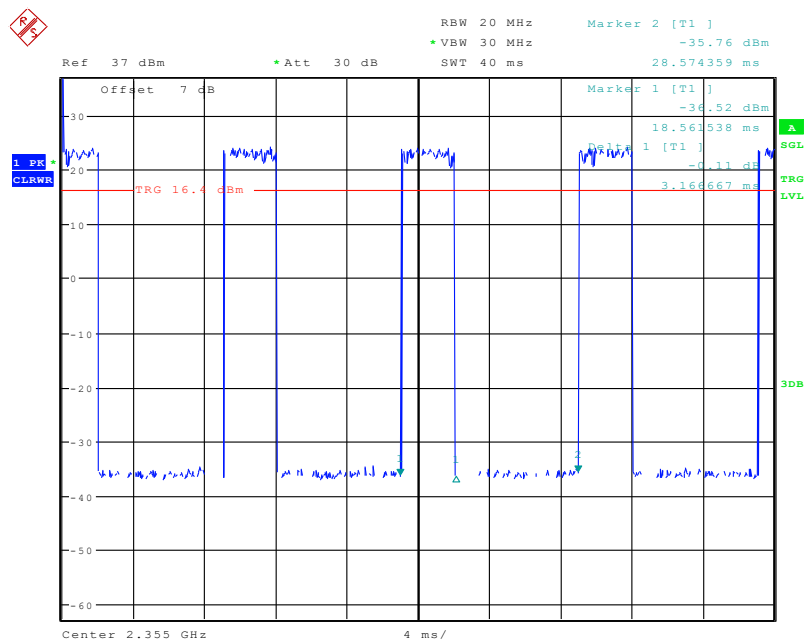
Modulation	Bandwidth (MHz)	Ton (ms)	Ton+Toff (ms)	Duty cycle (%)	Limit (%)
QPSK	5	3.167	10.013	31.63	38
	10	3.167	10.077	31.43	38
16QAM	5	3.167	10.013	31.63	38
	10	3.167	10.013	31.63	38

5MHz, QPSK



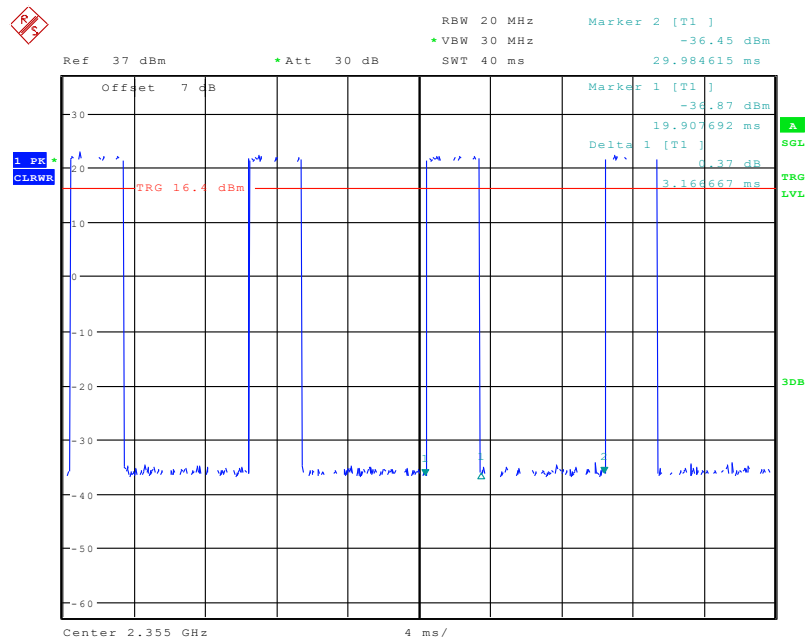
Date: 1.JUN.2021 15:53:27

5MHz, 16QAM



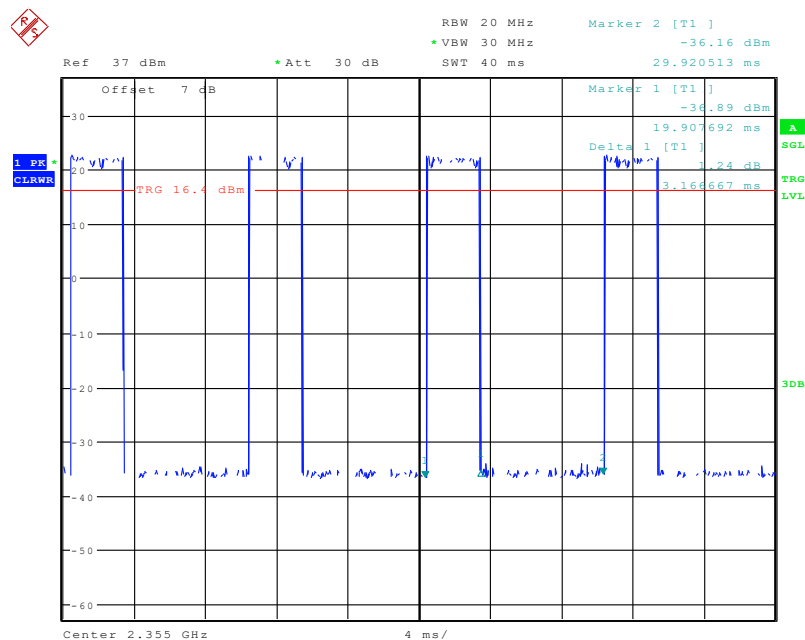
Date: 1.JUN.2021 15:51:27

10MHz, QPSK



Date: 1.JUN.2021 16:02:31

10MHz, 16QAM



Date: 1.JUN.2021 15:55:38

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	21.90	21.69	22.36	21.87	21.66	22.33
		RB1#12	21.57	21.59	22.40	21.54	21.56	22.37
		RB1#24	21.87	21.58	22.16	21.84	21.55	22.13
		RB12#0	22.22	21.77	21.72	22.19	21.74	21.69
		RB12#6	22.38	22.35	21.68	22.35	22.32	21.65
		RB12#11	22.29	22.18	21.75	22.26	22.15	21.72
		RB25#0	21.65	22.05	21.75	21.62	22.02	21.72
	16QAM	RB1#0	21.50	22.39	22.45	21.47	22.36	22.42
		RB1#12	21.65	21.60	21.88	21.62	21.57	21.85
		RB1#24	21.74	21.73	22.06	21.71	21.70	22.03
		RB12#0	22.34	21.75	22.42	22.31	21.72	22.39
		RB12#6	22.28	22.42	22.11	22.25	22.39	22.08
		RB12#11	21.66	22.41	22.40	21.63	22.38	22.37
		RB25#0	22.36	21.63	21.72	22.33	21.60	21.69
10.0	QPSK	RB1#0	21.87	21.87	22.26	21.84	21.84	22.23
		RB1#24	22.27	22.07	21.62	22.24	22.04	21.59
		RB1#49	22.19	22.08	22.26	22.16	22.05	22.23
		RB25#0	22.28	22.16	22.33	22.25	22.13	22.30
		RB25#12	22.01	21.96	21.70	21.98	21.93	21.67
		RB25#24	21.68	22.24	21.84	21.65	22.21	21.81
		RB50#0	22.41	21.83	22.48	22.38	21.80	22.45
	16QAM	RB1#0	22.03	21.77	22.03	22.00	21.74	22.00
		RB1#24	21.99	21.60	22.49	21.96	21.57	22.46
		RB1#49	22.43	22.14	22.05	22.40	22.11	22.02
		RB25#0	22.18	22.03	22.36	22.15	22.00	22.33
		RB25#12	22.16	21.67	22.38	22.13	21.64	22.35
		RB25#24	22.49	22.44	22.00	22.46	22.41	21.97
		RB50#0	22.27	21.78	22.24	22.24	21.75	22.21

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	21.78	22.67	21.71	21.75	22.64	21.68
		RB1#37	22.64	22.46	22.13	22.61	22.43	22.10
		RB1#74	21.95	21.63	21.53	21.92	21.60	21.50
		RB36#0	21.84	21.93	22.27	21.81	21.90	22.24
		RB36#18	21.63	22.36	21.84	21.60	22.33	21.81
		RB36#37	22.13	21.64	22.64	22.10	21.61	22.61
		RB75#0	22.51	22.20	22.08	22.48	22.17	22.05
	16QAM	RB1#0	22.17	21.50	22.35	22.14	21.47	22.32
		RB1#37	21.55	22.55	22.57	21.52	22.52	22.54
		RB1#74	21.98	22.61	22.28	21.95	22.58	22.25
		RB36#0	21.99	21.76	22.15	21.96	21.73	22.12
		RB36#18	22.23	22.39	21.65	22.20	22.36	21.62
		RB36#37	22.66	21.56	21.58	22.63	21.53	21.55
		RB75#0	22.66	21.82	21.79	22.63	21.79	21.76
20.0	QPSK	RB1#0	22.02	21.93	21.79	21.99	21.90	21.76
		RB1#49	21.96	22.35	21.88	21.93	22.32	21.85
		RB1#99	22.53	21.79	22.20	22.50	21.76	22.17
		RB50#0	21.86	22.48	21.68	21.83	22.45	21.65
		RB50#24	22.32	21.54	21.51	22.29	21.51	21.48
		RB50#49	21.51	21.58	21.52	21.48	21.55	21.49
		RB100#0	21.59	22.10	22.51	21.56	22.07	22.48
	16QAM	RB1#0	21.79	22.23	22.53	21.76	22.20	22.50
		RB1#49	22.20	22.14	22.49	22.17	22.11	22.46
		RB1#99	21.58	21.73	21.54	21.55	21.70	21.51
		RB50#0	22.01	22.44	22.19	21.98	22.41	22.16
		RB50#24	21.66	21.87	22.44	21.63	21.84	22.41
		RB50#49	22.69	22.58	21.82	22.66	22.55	21.79
		RB100#0	22.14	21.64	21.90	22.11	21.61	21.87

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)

For Band 41: Antenna Gain = 0.77dBi

For 1000-3000MHz, Cable Loss=0.8dB*(provided by the applicant)

Limit: EIRP≤33dBm

Peak-to-average ratio (PAR)**20MHz Bandwidth**

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.06	4.60	3.84	13	Pass
QPSK (100RB Size)	4.70	5.81	6.41	13	Pass
16QAM (1RB Size)	5.48	4.96	4.75	13	Pass
16QAM (100RB Size)	5.54	6.02	5.90	13	Pass

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

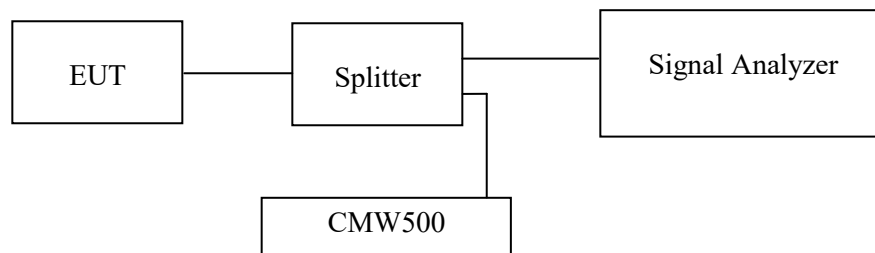
Applicable Standard

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



Test Data

Environmental Conditions

Temperature:	23 - 25 °C
Relative Humidity:	51- 55 %
ATM Pressure:	100.8 - 101.3 kPa

The testing was performed by Fan Yang from 2021-05-21 to 2021-06-24

EUT operation mode: Transmitting

Test Result: Pass

Test plots refer to the Appendix A.

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

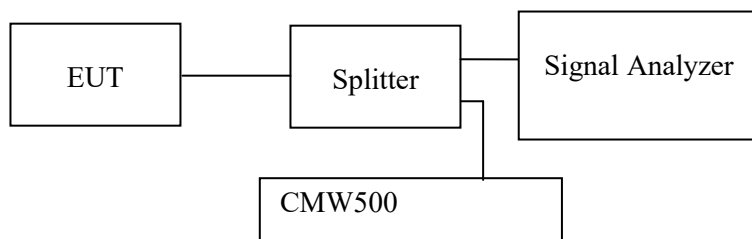
Applicable Standard

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.



Test Data

Environmental Conditions

Temperature:	23-25 °C
Relative Humidity:	51-55 %
ATM Pressure:	100.8 - 101.0 kPa

The testing was performed by Fan Yang from 2021-05-27 to 2021-06-24

EUT operation mode: Transmitting

Test result: Pass

Test plots 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:	28 °C
Relative Humidity:	50 %
ATM Pressure:	101.0 kPa

The testing was performed by Fan Yang on 2021-06-20.

EUT operation mode: Transmitting (Worst case record in the reports)

The worst case is as below:

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
	Reading (dBm)	PK/QP/ Ave.		Height (m)	Polar (H/V)				
GSM850,Low Channel									
31.17	-62.05	PK	223	1.6	H	3.12	-58.93	-13	45.93
33.09	-56.68	PK	52	1.6	V	-3.89	-60.57	-13	47.57
2472.6	-50.52	PK	55	2.0	H	-5.11	-55.63	-13	42.63
2472.6	-48.59	PK	98	1.7	V	-5.09	-53.68	-13	40.68
GSM850, Middle Channel									
31.17	-62.21	PK	161	2.2	H	3.12	-59.09	-13	46.09
33.09	-57.26	PK	13	1.9	V	-3.89	-61.15	-13	48.15
2509.5	-50.64	PK	260	2.2	H	-5.16	-55.80	-13	42.80
2509.5	-48.99	PK	13	1.9	V	-5.04	-54.03	-13	41.03
3346.4	-56.09	PK	91	1.0	H	-1.28	-57.37	-13	44.37
3346.4	-53.75	PK	69	1.8	V	-1.25	-55.00	-13	42.00
GSM850, High Channel									
31.17	-62.08	PK	97	1.2	H	3.12	-58.96	-13	45.96
33.09	-57.02	PK	191	1.6	V	-3.89	-60.91	-13	47.91
2546.4	-50.89	PK	302	2.0	H	-4.76	-55.65	-13	42.65
2546.4	-49.41	PK	241	1.3	V	-4.74	-54.15	-13	41.15
PCS1900, Low Channel									
31.17	-61.54	PK	14	1.0	H	3.12	-58.42	-13	45.42
33.09	-55.43	PK	307	2.1	V	-3.89	-59.32	-13	46.32
3700.4	-60.91	PK	11	1.0	H	4.72	-56.19	-13	43.19
3700.4	-59.86	PK	352	1.3	V	4.61	-55.25	-13	42.25
PCS1900, Middle Channel									
31.17	-60.10	PK	59	2.0	H	3.12	-56.98	-13	43.98
33.09	-55.32	PK	160	1.6	V	-3.89	-59.21	-13	46.21
3760	-61.93	PK	218	2.1	H	4.94	-56.99	-13	43.99
3760	-58.90	PK	242	1.7	V	4.85	-54.05	-13	41.05
PCS1900, High Channel									
31.17	-60.58	PK	164	2.0	H	3.12	-57.46	-13	44.46
33.09	-55.38	PK	126	1.8	V	-3.89	-59.27	-13	46.27
3819.6	-62.10	PK	88	1.6	H	5.25	-56.85	-13	43.85
3819.6	-59.61	PK	287	1.8	V	5.08	-54.53	-13	41.53
3G BAND2, Low Channel									
31.17	-60.32	PK	210	1.1	H	3.12	-57.20	-13	44.20
33.09	-55.22	PK	37	2.1	V	-3.89	-59.11	-13	46.11
3704.8	-49.53	PK	76	1.0	H	4.75	-44.78	-13	31.78
3704.8	-53.49	PK	164	1.4	V	4.62	-48.87	-13	35.87

3G BAND2, Middle Channel									
31.17	-60.25	PK	30	1.5	H	3.12	-57.13	-13	44.13
33.09	-54.94	PK	279	1.1	V	-3.89	-58.83	-13	45.83
3760	-49.90	PK	25	2.1	H	4.94	-44.96	-13	31.96
3760	-53.10	PK	220	1.6	V	4.85	-48.25	-13	35.25
3G BAND2, High Channel									
31.17	-60.52	PK	113	2.2	H	3.12	-57.40	-13	44.40
33.09	-55.09	PK	121	1.6	V	-3.89	-58.98	-13	45.98
3815.2	-49.70	PK	110	1.0	H	5.22	-44.48	-13	31.48
3815.2	-52.49	PK	39	1.5	V	5.05	-47.44	-13	34.44
3G BAND5, Low Channel									
31.17	-60.27	PK	145	1.9	H	3.12	-57.15	-13	44.15
33.09	-55.15	PK	194	1.6	V	-3.89	-59.04	-13	46.04
1652.8	-42.62	PK	150	1.6	H	-2.32	-44.94	-13	31.94
1652.8	-46.54	PK	49	2.0	V	-2.29	-48.83	-13	35.83
3G BAND5, Middle Channel									
31.17	-60.25	PK	67	1.1	H	3.12	-57.13	-13	44.13
33.09	-55.37	PK	280	1.8	V	-3.89	-59.26	-13	46.26
1673.2	-42.18	PK	127	1.5	H	-2.34	-44.52	-13	31.52
1673.2	-46.94	PK	342	1.8	V	-2.31	-49.25	-13	36.25
3G BAND5, High Channel									
31.17	-60.32	PK	128	1.8	H	3.12	-57.20	-13	44.20
33.09	-55.13	PK	91	2.1	V	-3.89	-59.02	-13	46.02
1693.2	-41.13	PK	351	2.2	H	-2.38	-43.51	-13	30.51
1693.2	-42.91	PK	82	1.0	V	-2.34	-45.25	-13	32.25
4G BAND2, Low Channel									
31.17	-60.08	PK	147	1.5	H	3.12	-56.96	-13	43.96
33.09	-55.09	PK	32	1.6	V	-3.89	-58.98	-13	45.98
3701.4	-47.64	PK	271	1.2	H	4.72	-42.92	-13	29.92
3701.4	-50.56	PK	104	2.2	V	4.61	-45.95	-13	32.95
4G BAND2, Middle Channel									
31.17	-60.41	PK	159	2.2	H	3.12	-57.29	-13	44.29
33.09	-55.13	PK	9	2.0	V	-3.89	-59.02	-13	46.02
3760	-48.87	PK	83	1.9	H	4.94	-43.93	-13	30.93
3760	-50.01	PK	247	1.2	V	4.85	-45.16	-13	32.16
4G BAND2, High Channel									
31.17	-60.46	PK	128	1.9	H	3.12	-57.34	-13	44.34
33.09	-55.24	PK	45	1.7	V	-3.89	-59.13	-13	46.13
3818.6	-49.29	PK	14	1.4	H	5.25	-44.04	-13	31.04
3818.6	-53.31	PK	28	1.6	V	5.08	-48.23	-13	35.23

4G BAND4, Low Channel									
31.17	-60.51	PK	303	1.8	H	3.12	-57.39	-13	44.39
33.09	-54.96	PK	229	1.8	V	-3.89	-58.85	-13	45.85
3421.4	-45.01	PK	345	1.6	H	2.72	-42.29	-13	29.29
3421.4	-48.51	PK	258	2.1	V	2.59	-45.92	-13	32.92
4G BAND4, Middle Channel									
31.17	-60.29	PK	248	1.8	H	3.12	-57.17	-13	44.17
33.09	-54.97	PK	327	2.0	V	-3.89	-58.86	-13	45.86
3465	-46.77	PK	104	1.6	H	3.09	-43.68	-13	30.68
3465	-47.99	PK	359	2.1	V	2.97	-45.02	-13	32.02
4G BAND4, High Channel									
31.17	-60.26	PK	134	1.3	H	3.12	-57.14	-13	44.14
33.09	-55.04	PK	324	1.7	V	-3.89	-58.93	-13	45.93
3508.6	-48.28	PK	222	1.7	H	3.44	-44.84	-13	31.84
3508.6	-49.76	PK	223	1.9	V	3.31	-46.45	-13	33.45
4G BAND5(BAND26), Low Channel									
31.17	-60.45	PK	226	1.6	H	3.12	-57.33	-13	44.33
33.09	-55.17	PK	326	2.1	V	-3.89	-59.06	-13	46.06
1649.4	-38.66	PK	21	1.5	H	-2.79	-41.45	-13	28.45
1649.4	-42.85	PK	343	2.2	V	-2.73	-45.58	-13	32.58
4G BAND5(BAND26), Middle Channel									
31.17	-60.52	PK	148	1.8	H	3.12	-57.40	-13	44.40
33.09	-54.95	PK	68	1.1	V	-3.89	-58.84	-13	45.84
1673	-37.57	PK	108	2.0	H	-2.74	-40.31	-13	27.31
1673	-40.92	PK	37	1.6	V	-2.69	-43.61	-13	30.61
4G BAND5(BAND26), High Channel									
31.17	-60.39	PK	64	2.1	H	3.12	-57.27	-13	44.27
33.09	-55.14	PK	239	1.6	V	-3.89	-59.03	-13	46.03
1696.6	-38.49	PK	354	1.2	H	-2.7	-41.19	-13	28.19
1696.6	-41.91	PK	76	1.2	V	-2.65	-44.56	-13	31.56
4G BAND7, Low Channel									
31.17	-54.01	PK	128	1.7	H	3.12	-50.89	-25	25.89
33.09	-42.55	PK	95	1.4	V	-3.89	-46.44	-25	21.44
5005	-53.45	PK	163	1.0	H	8.82	-44.63	-25	19.63
5005	-54.67	PK	91	1.4	V	8.53	-46.14	-25	21.14
4G BAND7, Middle Channel									
31.17	-53.98	PK	203	1.4	H	3.12	-50.86	-25	25.86
33.09	-42.64	PK	278	2.1	V	-3.89	-46.53	-25	21.53
5070	-52.76	PK	237	1.9	H	9.18	-43.58	-25	18.58
5070	-54.15	PK	166	1.6	V	8.56	-45.59	-25	20.59

4G BAND7, High Channel									
31.17	-53.96	PK	63	2.1	H	3.12	-50.84	-25	25.84
33.09	-42.76	PK	113	1.0	V	-3.89	-46.65	-25	21.65
5135	-49.65	PK	263	2.1	H	9.47	-40.18	-25	15.18
5135	-52.51	PK	341	1.8	V	8.65	-43.86	-25	18.86
4G BAND17, Low Channel									
31.17	-60.51	PK	225	2.1	H	3.12	-57.39	-13	44.39
33.09	-55.31	PK	28	1.8	V	-3.89	-59.20	-13	46.20
1413	-40.01	PK	34	2.1	H	-0.65	-40.66	-13	27.66
1413	-41.38	PK	250	1.1	V	-0.87	-42.25	-13	29.25
4G BAND17, Middle Channel									
31.17	-60.55	PK	132	2.0	H	3.12	-57.43	-13	44.43
33.09	-55.30	PK	244	2.1	V	-3.89	-59.19	-13	46.19
1420	-39.56	PK	212	1.3	H	-0.67	-40.23	-13	27.23
1420	-41.37	PK	81	2.1	V	-0.91	-42.28	-13	29.28
4G BAND17, High Channel									
31.17	-60.22	PK	58	1.8	H	3.12	-57.10	-13	44.10
33.09	-54.95	PK	194	1.5	V	-3.89	-58.84	-13	45.84
1427	-40.17	PK	310	2.1	H	-0.71	-40.88	-13	27.88
1427	-41.88	PK	287	1.2	V	-0.94	-42.82	-13	29.82
4G BAND B66, Low Channel									
31.17	-60.34	PK	326	1.6	H	3.12	-57.22	-13	44.22
33.09	-55.18	PK	276	1.8	V	-3.89	-59.07	-13	46.07
3241.4	-43.23	PK	217	1.6	H	2.72	-40.51	-13	27.51
3241.4	-48.55	PK	130	1.9	V	2.61	-45.94	-13	32.94
4G BAND B66, Middle Channel									
31.17	-60.25	PK	97	1.9	H	3.12	-57.13	-13	44.13
33.09	-55.03	PK	135	1.0	V	-3.89	-58.92	-13	45.92
3490	-43.68	PK	192	1.3	H	3.52	-40.16	-13	27.16
3490	-40.72	PK	170	2.0	V	3.46	-37.26	-13	24.26
4G BAND B66, High Channel									
31.17	-60.27	PK	17	1.6	H	3.12	-57.15	-13	44.15
33.09	-55.21	PK	129	1.0	V	-3.89	-59.10	-13	46.10
3558.6	-44.49	PK	174	1.2	H	3.87	-40.62	-13	27.62
3558.6	-46.59	PK	223	2.2	V	3.8	-42.79	-13	29.79
4G BAND38, Low Channel									
31.17	-59.50	PK	126	1.5	H	3.12	-56.38	-25	31.38
33.09	-53.36	PK	347	1.0	V	-3.89	-57.25	-25	32.25
5145	-53.01	PK	336	1.3	H	9.64	-43.37	-25	18.37
5145	-55.66	PK	125	1.9	V	8.71	-46.95	-25	21.95

4G BAND38, Middle Channel									
31.17	-59.43	PK	204	1.6	H	3.12	-56.31	-25	31.31
33.09	-53.26	PK	324	1.8	V	-3.89	-57.15	-25	32.15
5190	-52.73	PK	327	1.1	H	9.75	-42.98	-25	17.98
5190	-54.94	PK	100	1.1	V	8.73	-46.21	-25	21.21
4G BAND38, High Channel									
31.17	-58.57	PK	194	1.2	H	3.12	-55.45	-25	30.45
33.09	-52.99	PK	208	1.4	V	-3.89	-56.88	-25	31.88
5235	-52.31	PK	164	2.0	H	9.83	-42.48	-25	17.48
5235	-55.36	PK	65	1.8	V	8.91	-46.45	-25	21.45
4G BAND40 2305-2315MHz, Low Channel									
31.17	-59.19	PK	216	1.1	H	3.12	-56.07	-40	16.07
33.09	-53.10	PK	152	2.1	V	-3.89	-56.99	-40	16.99
4615	-52.73	PK	3	2.0	H	8.88	-43.85	-40	3.85
4615	-54.87	PK	314	1.9	V	8.28	-46.59	-40	6.59
4G BAND40 2305-2315MHz, Middle Channel									
31.17	-59.04	PK	210	1.3	H	3.12	-55.92	-40	15.92
33.09	-52.85	PK	253	1.9	V	-3.89	-56.74	-40	16.74
4620	-51.99	PK	294	1.4	H	8.88	-43.11	-40	3.11
4620	-55.13	PK	87	1.3	V	8.28	-46.85	-40	6.85
4G BAND40 2305-2315MHz, High Channel									
31.17	-58.91	PK	98	1.9	H	3.12	-55.79	-40	15.79
33.09	-52.31	PK	218	1.8	V	-3.89	-56.20	-40	16.20
4625	-52.28	PK	330	1.4	H	8.89	-43.39	-40	3.39
4625	-55.76	PK	124	1.4	V	8.28	-47.48	-40	7.48
4G BAND40 2350-2360MHz, Low Channel									
31.17	-59.19	PK	170	1.8	H	3.12	-56.07	-40	16.07
33.09	-54.10	PK	266	1.3	V	-3.89	-57.99	-40	17.99
4705	-52.87	PK	342	1.4	H	9.02	-43.85	-40	3.85
4705	-54.88	PK	104	1.9	V	8.29	-46.59	-40	6.59
4G BAND40 2350-2360MHz, Middle Channel									
31.17	-59.04	PK	112	1.0	H	3.12	-55.92	-40	15.92
33.09	-52.85	PK	235	1.2	V	-3.89	-56.74	-40	16.74
4710	-52.14	PK	246	1.6	H	9.03	-43.11	-40	3.11
4710	-55.14	PK	234	1.5	V	8.29	-46.85	-40	6.85
4G BAND40 2350-2360MHz, High Channel									
31.17	-58.91	PK	20	1.1	H	3.12	-55.79	-40	15.79
33.09	-52.31	PK	153	1.1	V	-3.89	-56.20	-40	16.20
4715	-52.43	PK	73	1.2	H	9.04	-43.39	-40	3.39
4715	-55.77	PK	99	1.6	V	8.29	-47.48	-40	7.48

4G BAND41, Low Channel									
31.17	-54.52	PK	170	1.8	H	3.12	-51.40	-25	26.40
33.09	-48.13	PK	266	1.3	V	-3.89	-52.02	-25	27.02
3701.4	-46.05	PK	342	1.4	H	4.69	-41.36	-25	16.36
3701.4	-49.51	PK	104	1.9	V	4.6	-44.91	-25	19.91
4G BAND41, Middle Channel									
31.17	-52.11	PK	112	1.0	H	3.12	-48.99	-25	23.99
33.09	-46.91	PK	235	1.2	V	-3.89	-50.80	-25	25.80
3765	-47.33	PK	246	1.6	H	5.05	-42.28	-25	17.28
3765	-49.07	PK	234	1.5	V	4.95	-44.12	-25	19.12
4G BAND41, High Channel									
31.17	-52.32	PK	20	1.1	H	3.12	-49.20	-25	24.20
33.09	-47.25	PK	153	1.1	V	-3.89	-51.14	-25	26.14
3828.6	-47.49	PK	73	1.2	H	5.41	-42.08	-25	17.08
3828.6	-50.04	PK	99	1.6	V	5.32	-44.72	-25	19.72

Note:

Absolute Level = Reading Level + Substituted Factor

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

Margin = Limit - Absolute Level

FCC § 22.917 (a); § 24.238 (a); § 27.53 (c)(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:

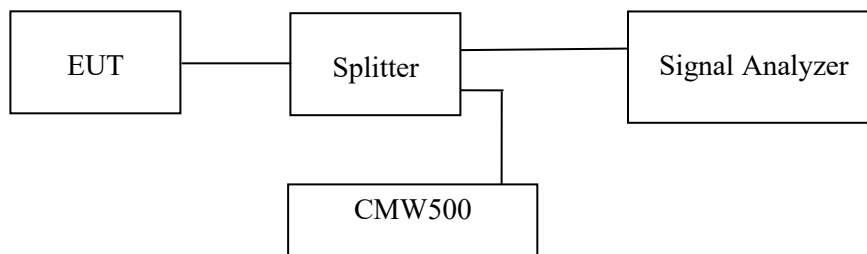
- (1) On any frequency outside the 746-758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB;
- (2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below 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 (h)(m), 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.

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



Test Data**Environmental Conditions**

Temperature:	23-25 °C
Relative Humidity:	50-55 %
ATM Pressure:	100.8- 101.3 kPa

The testing was performed by Fan Yang from 2021-05-21 to 2021-06-24.

EUT operation mode: Transmitting (Worst case)

Test Result: Pass

Test plots 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

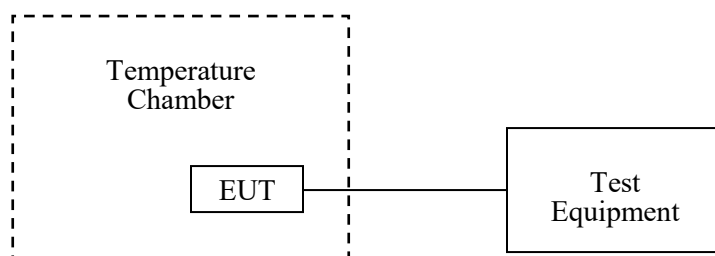
According to § 24.235 & § 27.54, the frequency stability shall be sufficient to ensure that the fundamental emissions stays within the authorized frequency block.

Test Procedure

Frequency Stability vs. Temperature: The equipment under test was connected to an external AC 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 AC 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:	20 °C
Relative Humidity:	55 %
ATM Pressure:	101.0 kPa

The testing was performed by Fan Yang on 2021-06-21.

EUT operation mode: Transmitting

Test Result: Pass

Please refer to the following tables.

Cellular Band (Part 22H)**GSM Mode**

Middle Channel, $f_0 = 836.6\text{MHz}$				
Temperature (°C)	Voltage Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	3.85	-5	-0.0060	2.5
-20		6	0.0072	2.5
-10		-4	-0.0048	2.5
0		2	0.0024	2.5
10		3	0.0036	2.5
20		5	0.0060	2.5
30		6	0.0072	2.5
40		5	0.0060	2.5
50		6	0.0072	2.5
20	V min.= 3.47	3	0.0036	2.5
	V max.= 4.24	5	0.0060	2.5

EDGE Mode

Middle Channel, $f_0 = 836.6\text{MHz}$				
Temperature (°C)	Voltage Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	3.85	4	0.0048	2.5
-20		-3	-0.0036	2.5
-10		-2	-0.0024	2.5
0		4	0.0048	2.5
10		3	0.0036	2.5
20		6	0.0072	2.5
30		5	0.0060	2.5
40		7	0.0084	2.5
50		3	0.0036	2.5
20	V min.= 3.47	5	0.0060	2.5
	V max.= 4.24	4	0.0048	2.5

WCDMA Mode

Middle Channel, $f_0 = 836.6\text{MHz}$				
Temperature (°C)	Voltage Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	3.85	-3	-0.0036	2.5
-20		3	0.0036	2.5
-10		-4	-0.0048	2.5
0		5	0.0060	2.5
10		3	0.0036	2.5
20		5	0.0060	2.5
30		7	0.0084	2.5
40		5	0.0060	2.5
50		6	0.0072	2.5
20	V min.= 3.47	6	0.0072	2.5
	V max.= 4.24	8	0.0096	2.5

PCS Band (Part 24E)**GSM Mode**

Middle Channel, $f_o = 1880.0$ MHz				
Temperature (°C)	Voltage Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Result
-30	3.85	6	0.0032	pass
-20		3	0.0016	pass
-10		5	0.0027	pass
0		4	0.0021	pass
10		6	0.0032	pass
20		7	0.0037	pass
30		4	0.0021	pass
40		8	0.0043	pass
50		6	0.0032	pass
20	V min.= 3.47	2	0.0011	pass
	V max.= 4.24	5	0.0027	pass

EDGE Mode

Middle Channel, $f_o = 1880.0$ MHz				
Temperature (°C)	Voltage Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Result
-30	3.85	4	0.0021	pass
-20		5	0.0027	pass
-10		3	0.0016	pass
0		4	0.0021	pass
10		5	0.0027	pass
20		7	0.0037	pass
30		6	0.0032	pass
40		7	0.0037	pass
50		3	0.0016	pass
20	V min.= 3.47	4	0.0021	pass
	V max.= 4.24	3	0.0016	pass

WCDMA Mode

Middle Channel, $f_o = 1880.0$ MHz				
Temperature (°C)	Voltage Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Result
-30	3.85	5	0.0027	pass
-20		4	0.0021	pass
-10		7	0.0037	pass
0		4	0.0021	pass
10		7	0.0037	pass
20		9	0.0048	pass
30		3	0.0016	pass
40		5	0.0027	pass
50		7	0.0037	pass
20	V min.= 3.47	3	0.0016	pass
	V max.= 4.24	4	0.0021	pass

LTE:
QPSK:
Band 2:

20 MHz Middle Channel				
Temperature (°C)	Voltage Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Result
-30	3.85	-7	-0.0037	pass
-20		-6	-0.0032	pass
-10		8	0.0043	pass
0		8	0.0043	pass
10		9	0.0048	pass
20		7	0.0037	pass
30		-5	-0.0027	pass
40		6	0.0032	pass
50		6	0.0032	pass
20	V min.= 3.47	-9	-0.0048	pass
	V max.= 4.24	7	0.0037	pass

Band 4:

20 MHz Bandwidth					
Temperature (°C)	Voltage Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	3.85	1710.0344	1754.9669	1710	1755
-20		1710.0392	1754.9629	1710	1755
-10		1710.0347	1754.9665	1710	1755
0		1710.0324	1754.9621	1710	1755
10		1710.0330	1754.9657	1710	1755
20		1710.0347	1754.9671	1710	1755
30		1710.0394	1754.9671	1710	1755
40		1710.0328	1754.9665	1710	1755
50		1710.0387	1754.9675	1710	1755
20	V min.= 3.47	1710.0422	1754.9701	1710	1755
	V max.= 4.24	1710.0299	1754.9673	1710	1755

Band 5 & Band 26:

10.0 MHz Middle Channel, $f_o = 836.5\text{MHz}$				
Temperature (°C)	Voltage Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	3.85	-4	-0.0048	2.5
-20		4	0.0048	2.5
-10		-6	-0.0072	2.5
0		3	0.0036	2.5
10		8	0.0096	2.5
20		5	0.0060	2.5
30		7	0.0084	2.5
40		6	0.0072	2.5
50		4	0.0048	2.5
20	V min.= 3.47	7	0.0084	2.5
	V max.= 4.24	3	0.0036	2.5

Band 7:

20 MHz Bandwidth					
Temperature (°C)	Voltage Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	3.85	2500.0977	2570.9692	2500	2570
-20		2500.1092	2570.9677	2500	2570
-10		2500.1030	2570.9721	2500	2570
0		2500.1078	2570.9704	2500	2570
10		2500.0988	2570.9684	2500	2570
20		2500.0994	2570.9718	2500	2570
30		2500.1059	2570.9677	2500	2570
40		2500.0958	2570.9710	2500	2570
50		2500.1040	2570.9672	2500	2570
20	V min.= 3.47	2500.1043	2570.9643	2500	2570
	V max.= 4.24	2500.1006	2570.9637	2500	2570

Band 17:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	3.85	704.0737	715.9284	704	716
-20		704.0755	715.9280	704	716
-10		704.0783	715.9284	704	716
0		704.0778	715.9260	704	716
10		704.0818	715.9308	704	716
20		704.0815	715.9324	704	716
30		704.0801	715.9343	704	716
40		704.0861	715.9297	704	716
50		704.0799	715.9298	704	716
20	V min.= 3.47	704.0771	715.9282	704	716
	V max.= 4.24	704.0840	715.9234	704	716

Band 66:

20 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	3.85	1710.0566	1779.9364	1710	1780
-20		1710.0575	1779.9359	1710	1780
-10		1710.0584	1779.9396	1710	1780
0		1710.0577	1779.9375	1710	1780
10		1710.0552	1779.9433	1710	1780
20		1710.0590	1779.9384	1710	1780
30		1710.0587	1779.9372	1710	1780
40		1710.0592	1779.9401	1710	1780
50		1710.0568	1779.9369	1710	1780
20	V min.= 3.47	1710.0605	1779.9383	1710	1780
	V max.= 4.24	1710.0601	1779.9411	1710	1780

Band 38:

20 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	3.85	2570.0501	2619.9271	2570	2620
-20		2570.0510	2619.9294	2570	2620
-10		2570.0484	2619.9331	2570	2620
0		2570.0486	2619.9275	2570	2620
10		2570.0479	2619.9342	2570	2620
20		2570.0520	2619.9311	2570	2620
30		2570.0534	2619.9302	2570	2620
40		2570.0499	2619.9348	2570	2620
50		2570.0516	2619.9276	2570	2620
20	V min.= 3.47	2570.0518	2619.9331	2570	2620
	V max.= 4.24	2570.0539	2619.9324	2570	2620

Band 40 Lower:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	3.85	2305.0430	2314.9181	2305	2315
-20		2305.0458	2314.9223	2305	2315
-10		2305.0399	2314.9279	2305	2315
0		2305.0415	2314.9190	2305	2315
10		2305.0390	2314.9271	2305	2315
20		2305.0443	2314.9222	2305	2315
30		2305.0445	2314.9225	2305	2315
40		2305.0419	2314.9259	2305	2315
50		2305.0421	2314.9196	2305	2315
20	V min.= 3.47	2305.0464	2314.9236	2305	2315
	V max.= 4.24	2305.0449	2314.9270	2305	2315

Band 40 Upper:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	3.85	2350.0437	2359.9173	2350	2360
-20		2350.0466	2359.9217	2350	2360
-10		2350.0406	2359.9273	2350	2360
0		2350.0425	2359.9181	2350	2360
10		2350.0399	2359.9264	2350	2360
20		2350.0452	2359.9214	2350	2360
30		2350.0455	2359.9215	2350	2360
40		2350.0424	2359.9252	2350	2360
50		2350.0426	2359.9190	2350	2360
20	V min.= 3.47	2350.0470	2359.9228	2350	2360
	V max.= 4.24	2350.0455	2359.9264	2350	2360

Band 41:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	3.85	2555.0367	2654.9110	2555	2655
-20		2555.0401	2654.9160	2555	2655
-10		2555.0318	2654.9222	2555	2655
0		2555.0356	2654.9109	2555	2655
10		2555.0308	2654.9212	2555	2655
20		2555.0346	2654.9140	2555	2655
30		2555.0380	2654.9128	2555	2655
40		2555.0367	2654.9194	2555	2655
50		2555.0334	2654.9144	2555	2655
20	V min.= 3.47	2555.0397	2654.9149	2555	2655
	V max.= 4.24	2555.0393	2654.9203	2555	2655

16QAM:**Band 2:**

20 MHz Middle Channel, $f_o = 1880\text{MHz}$				
Temperature (°C)	Power Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Result
-30	3.85	-8	-0.0044	pass
-20		-7	-0.0039	pass
-10		14	0.0078	pass
0		-9	-0.0050	pass
10		10	0.0056	pass
20		-10	-0.0056	pass
30		-8	-0.0044	pass
40		-9	-0.0050	pass
50		7	0.0039	pass
20	V min.= 3.47	8	0.0044	pass
	V max.= 4.24	8	0.0044	pass

Band 4:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V_{DC})	F_L (MHz)	F_H (MHz)	F_L Limit (MHz)	F_H Limit (MHz)
-30	3.85	1710.0297	1754.9566	1710	1755
-20		1710.0308	1754.9553	1710	1755
-10		1710.0279	1754.9607	1710	1755
0		1710.0250	1754.9579	1710	1755
10		1710.0243	1754.9534	1710	1755
20		1710.0364	1754.9564	1710	1755
30		1710.0290	1754.9602	1710	1755
40		1710.0261	1754.9593	1710	1755
50		1710.0274	1754.9594	1710	1755
20	V min.= 3.47	1710.0336	1754.9581	1710	1755
	V max.= 4.24	1710.0256	1754.9605	1710	1755

Band 5(Band 26):

10.0 MHz Middle Channel, $f_0 = 836.5\text{MHz}$				
Temperature (°C)	Power Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	3.85	-7	-0.0084	2.5
-20		8	0.0096	2.5
-10		-8	-0.0096	2.5
0		9	0.0108	2.5
10		-7	-0.0084	2.5
20		6	0.0072	2.5
30		8	0.0096	2.5
40		-7	-0.0084	2.5
50		-8	-0.0096	2.5
20	V min.= 3.47	9	0.0108	2.5
	V max.= 4.24	-9	-0.0108	2.5

Band 7:

20 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	3.85	2500.0991	2569.9695	2500	2570
-20		2500.1092	2569.9691	2500	2570
-10		2500.1012	2569.9721	2500	2570
0		2500.1061	2569.9686	2500	2570
10		2500.0978	2569.9667	2500	2570
20		2500.1017	2569.9708	2500	2570
30		2500.1016	2569.9700	2500	2570
40		2500.0939	2569.9667	2500	2570
50		2500.1074	2569.9653	2500	2570
20	V min.= 3.47	2500.1051	2569.9677	2500	2570
	V max.= 4.24	2500.0976	2569.9645	2500	2570

Band 17:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	3.85	704.0663	715.9199	704	716
-20		704.0662	715.9206	704	716
-10		704.0686	715.9191	704	716
0		704.0707	715.9163	704	716
10		704.0729	715.9237	704	716
20		704.0749	715.9235	704	716
30		704.0742	715.9277	704	716
40		704.0773	715.9238	704	716
50		704.0743	715.9210	704	716
20	V min.= 3.47	704.0675	715.9226	704	716
	V max.= 4.24	704.0746	715.9138	704	716

Band 66:

20 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	3.85	1710.0473	1779.9289	1710	1780
-20		1710.0503	1779.9266	1710	1780
-10		1710.0493	1779.9324	1710	1780
0		1710.0509	1779.9284	1710	1780
10		1710.0497	1779.9365	1710	1780
20		1710.0520	1779.9329	1710	1780
30		1710.0508	1779.9302	1710	1780
40		1710.0495	1779.9322	1710	1780
50		1710.0480	1779.9272	1710	1780
20	V min.= 3.47	1710.0531	1779.9295	1710	1780
	V max.= 4.24	1710.0547	1779.9337	1710	1780

Band 38:

20 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	3.85	2570.0408	2619.9172	2570	2620
-20		2570.0442	2619.9201	2570	2620
-10		2570.0388	2619.9263	2570	2620
0		2570.0390	2619.9179	2570	2620
10		2570.0425	2619.9246	2570	2620
20		2570.0452	2619.9257	2570	2620
30		2570.0484	2619.9234	2570	2620
40		2570.0428	2619.9298	2570	2620
50		2570.0445	2619.9205	2570	2620
20	V min.= 3.47	2570.0451	2619.9260	2570	2620
	V max.= 4.24	2570.0471	2619.9257	2570	2620

Band 40 lower:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	3.85	2305.0343	2314.9123	2305	2315
-20		2305.0394	2314.9136	2305	2315
-10		2305.0328	2314.9215	2305	2315
0		2305.0325	2314.9119	2305	2315
10		2305.0305	2314.9181	2305	2315
20		2305.0356	2314.9137	2305	2315
30		2305.0355	2314.9138	2305	2315
40		2305.0351	2314.9169	2305	2315
50		2305.0332	2314.9128	2305	2315
20	V min.= 3.47	2305.0396	2314.9147	2305	2315
	V max.= 4.24	2305.0355	2314.9202	2305	2315

Band 40 Upper:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	3.85	2350.0438	2359.9173	2350	2360
-20		2350.0463	2359.9213	2350	2360
-10		2350.0405	2359.9273	2350	2360
0		2350.0423	2359.9185	2350	2360
10		2350.0397	2359.9264	2350	2360
20		2350.0449	2359.9212	2350	2360
30		2350.0455	2359.9215	2350	2360
40		2350.0429	2359.9252	2350	2360
50		2350.0430	2359.9188	2350	2360
20	V min.= 3.47	2350.0471	2359.9230	2350	2360
	V max.= 4.24	2350.0456	2359.9261	2350	2360

Band 41:

10 MHz Bandwidth					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	3.85	2555.0268	2654.9052	2555	2655
-20		2555.0301	2654.9061	2555	2655
-10		2555.0238	2654.9122	2555	2655
0		2555.0275	2654.9029	2555	2655
10		2555.0231	2654.9131	2555	2655
20		2555.0260	2654.9063	2555	2655
30		2555.0286	2654.9042	2555	2655
40		2555.0310	2654.9100	2555	2655
50		2555.0234	2654.9087	2555	2655
20	V min.= 3.47	2555.0347	2654.9049	2555	2655
	V max.= 4.24	2555.0319	2654.9153	2555	2655

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