FCC TEST REPORT

(PART 24)

Applicant:	Borqs BeiJing Ltd.
Address:	Tower A, Building B23, Universal Business Park, No. 10 Jiuxianqiao Road, Chaoyang District Beijing, 100015 China

Manufacturer or Supplier:	Borqs BeiJing Ltd.
Address:	Tower A, Building B23, Universal Business Park, No. 10 Jiuxianqiao Road, Chaoyang District Beijing, 100015 China
Product:	Ecoport AC LTE-LP
Brand Name:	SkyCentrics
Model Name:	US08Ba
Serial Model Name:	US08B
FCC ID:	2ABDK-US08B
Date of tests:	Mar. 13, 2023 ~ Apr. 03, 2023

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

☒ **FCC PART 24, Subpart E** ☒ **FCC PART 2**
☒ **ANSI/TIA/EIA-603-D** ☒ **ANSI/TIA/EIA-603-E** ☒ **ANSI C63.26-2015**

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

Prepared by Simon Wang Engineer / Mobile Department	Approved by Luke Lu Manager / Mobile Department
Simon Wang Date: Apr. 03, 2023	Luke Lu Date: Apr. 03, 2023

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
W7L-230313W001RF02	Original release	Apr. 03, 2023

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1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 24 & Part 2		
STANDARD SECTION	**TEST TYPE**	**RESULT**
§2.1046	Conducted Output Power	Compliance
§24.232(c)	Equivalent Isotropic Radiated Power	Compliance
§2.1055 §24.235	Frequency Stability	See Note
§2.1049	Occupied Bandwidth	See Note
§24.232(d)	Peak to average ratio	See Note
§24.238(a)(b)	Band Edge Measurements	See Note
§2.1051 §24.238(a)(b)	Conducted Spurious Emissions	See Note
§2.1053 §24.238(a)(b)	Radiated Spurious Emissions	Compliance

NOTE: Refer to Module report R1907A0448-R2V2/ R1907A0448-R5V2, FCC ID: XMR2020BG95M2.

1.1 MEASUREMENT UNCERTAINTY

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

MEASUREMENT	UNCERTAINTY
Frequency Stability	±76.97Hz
Radiated emissions (9KHz~30MHz)	±2.68dB
Radiated emissions & Radiated Power (30MHz~1GHz)	±4.98dB
Radiated emissions & Radiated Power (1GHz ~6GHz)	±4.70dB
Radiated emissions (6GHz ~18GHz)	±4.60dB
Radiated emissions (18GHz ~40GHz)	±4.12dB
Conducted emissions	±4.01dB
Occupied Channel Bandwidth	±43.58KHz
Conducted Output power	±2.06dB
Band Edge Measurements	±4.70dB
Peak to average ratio	±0.76dB

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

1.2 TEST SITE AND INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Feb. 20,23	Feb. 19,24
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	May.14,22	May.13,23
Loop Antenna	Schwarzbeck	FMZB 1519B	00173	Sep.03,22	Sep.02,23
Bilog Antenna	ETS-LINDGREN	3143B	00161965	Feb. 18,23	Feb. 17,24
Horn Antenna	ETS-LINDGREN	3117	00168692	Feb. 18,23	Feb. 17,24
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-40-K-SG/QMS-00361	15433	Sep.04, 22	Sep.03, 23
Radio Communication Analyzer	ANRITSU	MT8820C	6201465426	Feb. 14,23	Feb. 13,24
Signal Pre-Amplifier	EMSI	EMC 9135	980249	May.12,22	May.11,23
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	May.12,22	May.11,23
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Feb. 17,23	Feb.16,24
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	Euroshieldpn-CT0001143-1216	May. 19,20	May. 18,23
Test Software	E3	V 9.160323	N/A	N/A	N/A
Test Software	JS1120	3.1.36	N/A	N/A	N/A
10dB Attenuator	JFW/USA	50HF-010-SMA	1505	May. 07,22	May. 06,23
Power Meter	Anritsu	ML2495A	1506002	Feb. 14,23	Feb. 13,24
Power Sensor	Anritsu	MA2411B	1339352	Feb. 14,23	Feb. 13,24
Temperature Chamber	ESPEC	SH-242	93000855	May. 12,22	May. 11,23
MXG Analog Microvave Signal Generator	KEYSIGHT	N5183A	MY50143024	Feb. 14,23	Feb. 13,24
Base station R&S CMW500	Rohde&Schwarz	CMW500	153085	May.12,22	May.11,23
DC Source	Kikusui/JP	PMX18-5A	N/A	Aug. 12,22	Aug. 11,23

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

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

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

4. The FCC Site Registration No. is 525120; The Designation No. is CN1171.

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Ecoport AC LTE-LP		
BRAND NAME	SkyCentrics		
MODEL NAME	US08Ba		
SERIAL MODEL NAME	US08B		
NOMINAL VOLTAGE	120V(adapter or host equipment) 3.0Vdc (Li-ion, battery)		
MODULATION TYPE	**LTE CAT-M1/NB-IOT:** QPSK, 16QAM, BPSK		
FREQUENCY RANGE	**LTE CAT-M1**	**LTE Band 2 Channel Bandwidth: 1.4MHz**	1850.7MHz ~ 1909.3MHz
		LTE Band 2 Channel Bandwidth: 3MHz	1851.5MHz ~ 1908.5MHz
		LTE Band 2 Channel Bandwidth: 5MHz	1852.5MHz ~ 1907.5MHz
		LTE Band 2 Channel Bandwidth: 10MHz	1855.0MHz ~ 1905.0MHz
		LTE Band 2 Channel Bandwidth: 15MHz	1857.5MHz ~ 1902.5MHz
		LTE Band 2 Channel Bandwidth: 20MHz	1860.0MHz ~ 1900.0MHz
		LTE Band 25 Channel Bandwidth: 1.4MHz	1850.7MHz ~ 1914.3MHz
		LTE Band 25 Channel Bandwidth: 3MHz	1851.5MHz ~ 1913.5MHz
		LTE Band 25 Channel Bandwidth: 5MHz	1852.5MHz ~ 1912.5MHz
		LTE Band 25 Channel Bandwidth: 10MHz	1855.0MHz ~ 1910.0MHz
		LTE Band 25 Channel Bandwidth: 15MHz	1857.5MHz ~ 1907.5MHz

FREQUENCY RANGE	**LTE CAT-M1**	**LTE Band 25 Channel Bandwidth: 20MHz**	1860.0MHz ~ 1905.0MHz
	LTE NB-IOT	**LTE Band 2 (SUB-CARRIER SPEACING: 3.75KHz)**	1850.2MHz ~ 1909.8MHz
		LTE Band 2 (SUB-CARRIER SPEACING: 15KHz)	1850.2MHz ~ 1909.8MHz
		LTE Band 25 (SUB-CARRIER SPEACING: 3.75KHz)	1850.2MHz ~ 1914.8MHz
		LTE Band 25 (SUB-CARRIER SPEACING: 15KHz)	1850.2MHz ~ 1914.8MHz
MAX. EIRP POWER	**LTE CAT-M1**	**LTE Band 2 Channel Bandwidth: 1.4MHz**	179.06mW
		LTE Band 2 Channel Bandwidth: 3MHz	178.65mW
		LTE Band 2 Channel Bandwidth: 5MHz	176.6mW
		LTE Band 2 Channel Bandwidth: 10MHz	178.65mW
		LTE Band 2 Channel Bandwidth: 15MHz	176.6mW
		LTE Band 2 Channel Bandwidth: 20MHz	179.47mW
		LTE Band 25 Channel Bandwidth: 1.4MHz	172.98mW
		LTE Band 25 Channel Bandwidth: 3MHz	172.19mW
		LTE Band 25 Channel Bandwidth: 5MHz	172.19mW
		LTE Band 25 Channel Bandwidth: 10MHz	171.4mW
		LTE Band 25 Channel Bandwidth: 15MHz	173.38mW

MAX. EIRP POWER	LTE CAT-M1	LTE Band 25 Channel Bandwidth: 20MHz	173.78mW
	LTE NB-IOT	LTE Band 2 (SUB-CARRIER SPEACING: 3.75KHz)	204.64mW
		LTE Band 2 (SUB-CARRIER SPEACING: 15KHz)	193.64mW
		LTE Band 25 (SUB-CARRIER SPEACING: 3.75KHz)	176.6mW
		LTE Band 25 (SUB-CARRIER SPEACING: 15KHz)	169.82mW
EMISSION DESIGNATOR	LTE CAT-M1	LTE Band 2 Channel Bandwidth: 1.4MHz	QPSK: 1M11G7D
			16QAM: 943KW7D
			64QAM: /
		LTE Band 2 Channel Bandwidth: 3MHz	QPSK: 1M11G7D
			16QAM: 950KW7D
			64QAM: /
		LTE Band 2 Channel Bandwidth: 5MHz	QPSK: 1M11G7D
			16QAM: 954KW7D
			64QAM: /
		LTE Band 2 Channel Bandwidth: 10MHz	QPSK: 1M12G7D
			16QAM: 961KW7D
			64QAM: /
		LTE Band 2 Channel Bandwidth: 15MHz	QPSK: 1M13G7D
			16QAM: 964KW7D
			64QAM: /
		LTE Band 2 Channel Bandwidth: 20MHz	QPSK: 1M13G7D
			16QAM: 967KW7D
			64QAM: /
		LTE Band 25 Channel Bandwidth: 1.4MHz	QPSK: 1M11G7D
			16QAM: 943KW7D
			64QAM: /

EMISSION DESIGNATOR	**LTE CAT-M1**	**LTE Band 25 Channel Bandwidth: 3MHz**	QPSK: 1M11G7D
			16QAM: 952KW7D
			64QAM: /
		LTE Band 25 Channel Bandwidth: 5MHz	QPSK: 1M11G7D
			16QAM: 951KW7D
			64QAM: /
		LTE Band 25 Channel Bandwidth: 10MHz	QPSK: 1M11G7D
			16QAM: 964KW7D
			64QAM: /
		LTE Band 25 Channel Bandwidth: 15MHz	QPSK: 1M12G7D
			16QAM: 957KW7D
			64QAM: /
		LTE Band 25 Channel Bandwidth: 20MHz	QPSK: 1M13G7D
			16QAM: 959KW7D
			64QAM: /
	LTE NB-IOT	**LTE Band 2 (SUB-CARRIER SPEACING: 3.75KHz)**	BPSK: 62K8G7D
			QPSK: 71K9G7D
		LTE Band 2 (SUB-CARRIER SPEACING: 15KHz)	BPSK: 130KG7D
			QPSK: 184KG7D
		LTE Band 25 (SUB-CARRIER SPEACING: 3.75KHz)	BPSK: 64K6G7D
			QPSK: 71K4G7D
		LTE Band 25 (SUB-CARRIER SPEACING: 15KHz)	BPSK: 130KG7D
			QPSK: 184KG7D
ANTENNA TYPE	US08Ba: Internal Antenna with 2.02dBi gain for LTE B2/ LTE B25 US08Ba: External Antenna with 0.39dBi gain for LTE B2/ LTE B25 US08B: Internal Antenna with 2.02dBi gain for LTE B2/ LTE B25		
HW VERSION	DVT		
SW VERSION	PICO_SPARROW_20230315		
I/O PORTS	Refer to user's manual		
CABLE SUPPLIED	N/A		
EXTREME TEMPERATURE	-20-50 ℃		
EXTREME VOLTAGE	110V - 240V		

NOTE:

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

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

MODULATION MODE	TX FUNCTION
LTE	1TX/1RX

3. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.

4. US08Ba and US08B Difference description:

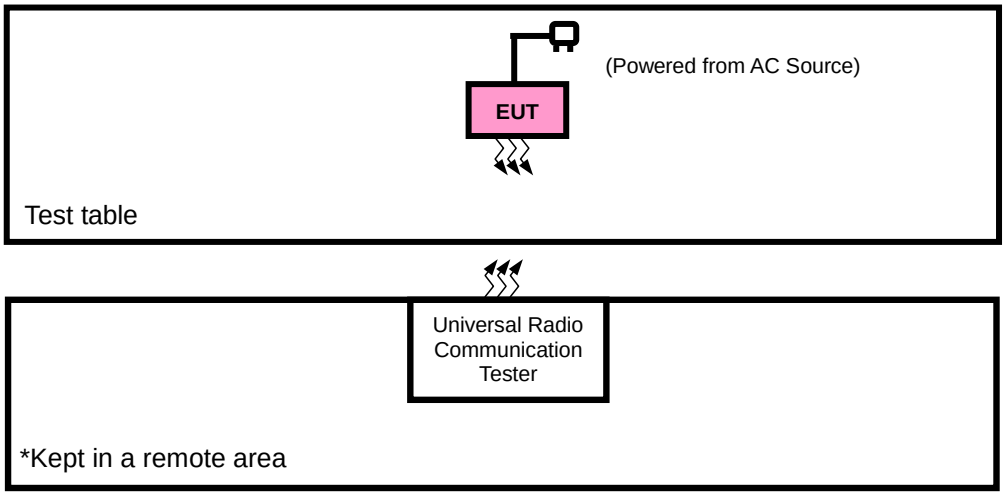
No	Model ID	Difference Description
1	US08B (Verified sample)	Only supports Internal Antenna
2	US08Ba (Mainly tested Sample)	Supports both Internal Antenna and External Antenna There is an additional Sub board which is connected with main board by RF cable for External antenna assembly.

List of Accessory:

ACCESSORIES	BRAND	MANUFACTURER	MODEL	SPECIFICATION
Battery	CHAOCHUANG	N/A	CR2032	Capacity：3.0Vdc, 210mAh

2.2 CONFIGURATION OF SYSTEM UNDER TEST

FOR RADIATION EMISSION TEST



2.3 DESCRIPTION OF SUPPORT UNITS

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

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	N/A	N/A	N/A	N/A	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	AC Line: Unshielded, Detachable 1m

2.4 TEST ITEM AND TEST CONFIGURATION

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

EUT CONFIGURE MODE	DESCRIPTION
A	**EUT + Adapter with LTE link**

LTE CAT-M1

LTE BAND 2 MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	EIRP	18607 to 19193	18607, 18900, 19193	1.4MHz	QPSK,16QAM	1 RB / 0 RB Offset
		18615 to 19185	18615, 18900, 19185	3MHz	QPSK,16QAM	1 RB / 0 RB Offset
		18625 to 19175	18625, 18900, 19175	5MHz	QPSK,16QAM	1 RB / 0 RB Offset
		18650 to 19150	18650, 18900, 19150	10MHz	QPSK,16QAM	1 RB / 0 RB Offset
		18675 to 19125	18675, 18900, 19125	15MHz	QPSK,16QAM	1 RB / 0 RB Offset
		18700 to 19100	18700, 18900, 19100	20MHz	QPSK,16QAM	1 RB / 0 RB Offset

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

2. LTE Band 2 are covered by LTE Band 25, Because it is a subset of LTE Band 25, So the RSE test data please refer to LTE Band 25.

LTE BAND 25 MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	EIRP	26047 to 26683	26047, 26365, 26683	1.4MHz	QPSK,16QAM	1 RB / 0 RB Offset
		26055 to 26675	26055, 26365, 26675	3MHz	QPSK,16QAM	1 RB / 0 RB Offset
		26065 to 26665	26065, 26365, 26665	5MHz	QPSK,16QAM	1 RB / 0 RB Offset
		26090 to 26640	26090, 26365 26640	10MHz	QPSK,16QAM	1 RB / 0 RB Offset
		26115 to 26615	26115, 26365, 26615	15MHz	QPSK,16QAM	1 RB / 0 RB Offset
		26140 to 26590	26140, 26365, 26590	20MHz	QPSK,16QAM	1 RB / 0 RB Offset
A	RADIATED EMISSION	26047 to 26683	26365	1.4MHz	QPSK	1 RB / 0 RB Offset
		26055 to 26675	26365	3MHz	QPSK	1 RB / 0 RB Offset
		26065 to 26665	26365	5MHz	QPSK	1 RB / 0 RB Offset
		26090 to 26640	26090, 26365, 26640	10MHz	QPSK	1 RB / 0 RB Offset
		26115 to 26615	26365	15MHz	QPSK	1 RB / 0 RB Offset
		26140 to 26590	26365	20MHz	QPSK	1 RB / 0 RB Offset

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

LTE NB-IOT

LTE BAND 2 MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	SUBCARRIER SPACING	MODULATION	MODE
A	EIRP	18602 to 19198	18602, 18900, 19198	3.75KHz	BPSK,QPSK,	1 RB / 0 RB Offset
		18602 to 19198	18602, 18900, 19198	15KHz	BPSK,QPSK,	1 RB / 0 RB Offset

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

2. LTE Band 2 are covered by LTE Band 25, Because it is a subset of LTE Band 25, So the RSE test data please refer to LTE Band 25.

LTE BAND 25 MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	SUBCARRIER SPACING	MODULATION	MODE
A	EIRP	26042 to 26688	26042, 26365, 26688	3.75KHz	BPSK,QPSK,	1 RB / 0 RB Offset
		26042 to 26688	26042, 26365, 26688	15KHz	BPSK,QPSK,	1 RB / 0 RB Offset
A	RADIATED EMISSION	26042 to 26688	26042, 26365, 26688	3.75KHz	QPSK,	1 RB / 0 RB Offset
		26042 to 26688	26365	15KHz	QPSK,	1 RB / 0 RB Offset

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

TEST CONDITION:

TEST ITEM	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
EIRP	25deg. C, 57%RH	120Vac/60Hz	Jace Hu
RADIATED EMISSION	23deg. C, 70%RH	120Vac/60Hz	Jace Hu

2.5 EUT OPERATING CONDITIONS

The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency

2.6 GENERAL DESCRIPTION OF APPLIED STANDARDS

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

FCC 47 CFR Part 2

FCC 47 CFR Part 24

KDB 971168 D01 Power Meas License Digital Systems v03r01

ANSI/TIA/EIA-603-D

ANSI/TIA/EIA-603-E

ANSI C63.26-2015

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

3 TEST TYPES AND RESULTS

3.1 OUTPUT POWER MEASUREMENT

3.1.1 LIMITS OF OUTPUT POWER MEASUREMENT

Mobile and portable stations are limited to 2 watts EIRP.

3.1.2 TEST PROCEDURES

EIRP MEASUREMENT:

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

ERP or EIRP = $P_{Meas} + G_T – L_C$

Where:

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

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

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

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

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

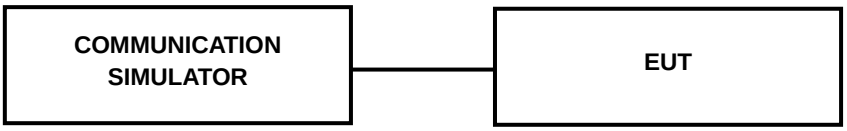
CONDUCTED POWER MEASUREMENT:

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

3.1.3 TEST SETUP

EIRP / ERP Measurement:

CONDUCTED POWER MEASUREMENT:



3.1.4 TEST RESULTS

CONDUCTED OUTPUT POWER (dBm)

LTE CAT-M1

LTE BAND 2

Band/BW	Modulation	RB Size	RB Offset	Low CH 18607	Mid CH 18900	High CH 19193
				Frequency 1850.7 MHz	Frequency 1880 MHz	Frequency 1909.3 MHz
2/ 1.4	QPSK	1	0	20.39	20.26	20.35
		1	5	20.19	20.18	20.18
		3	0	20.29	20.29	20.31
		3	3	20.20	20.20	20.19
		6	0	20.31	20.36	20.29
	16QAM	1	0	20.42	20.51	20.47
		1	5	20.35	20.28	20.17
		3	0	20.39	20.44	20.37
		3	3	20.30	20.31	20.31
		6	0	20.45	20.40	20.25

Band/BW	Modulation	RB Size	RB Offset	Low CH 18615	Mid CH 18900	High CH 19185
				Frequency 1851.5 MHz	Frequency 1880 MHz	Frequency 1908.5 MHz
2/ 3	QPSK	1	0	20.37	20.22	20.33
		1	5	20.20	20.21	20.14
		3	0	20.28	20.31	20.34
		3	3	20.21	20.18	20.16
		6	0	20.32	20.33	20.33
	16QAM	1	0	20.42	20.50	20.43
		1	5	20.31	20.32	20.23
		3	0	20.43	20.40	20.31
		3	3	20.27	20.35	20.33
		6	0	20.43	20.43	20.18

Band/BW	Modulation	RB Size	RB Offset	Low CH 18625	Mid CH 18900	High CH 19175
				Frequency 1852.5 MHz	Frequency 1880 MHz	Frequency 1907.5 MHz
2/ 5	QPSK	1	0	20.35	20.15	20.34
		1	5	20.16	20.14	20.13
		3	0	20.26	20.23	20.34
		3	3	20.17	20.18	20.11
		6	0	20.24	20.32	20.28
	16QAM	1	0	20.38	20.45	20.43
		1	5	20.31	20.23	20.18
		3	0	20.32	20.34	20.29
		3	3	20.21	20.32	20.24
		6	0	20.40	20.32	20.23

Band/BW	Modulation	RB Size	RB Offset	Low CH 18650	Mid CH 18900	High CH 19150
				Frequency 1855 MHz	Frequency 1880 MHz	Frequency 1905 MHz
2/ 10	QPSK	1	0	20.41	20.23	20.36
		1	5	20.18	20.22	20.15
		3	0	20.31	20.31	20.35
		3	3	20.21	20.23	20.16
		6	0	20.32	20.33	20.33
	16QAM	1	0	20.42	20.50	20.44
		1	5	20.37	20.25	20.23
		3	0	20.39	20.39	20.31
		3	3	20.29	20.34	20.29
		6	0	20.42	20.40	20.25

Band/BW	Modulation	RB Size	RB Offset	Low CH 18675	Mid CH 18900	High CH 19125
				Frequency 1857.5 MHz	Frequency 1880 MHz	Frequency 1902.5 MHz
2/ 15	QPSK	1	0	20.40	20.21	20.36
		1	5	20.23	20.17	20.18
		3	0	20.33	20.29	20.31
		3	3	20.21	20.17	20.19
		6	0	20.38	20.36	20.27
	16QAM	1	0	20.45	20.44	20.43
		1	5	20.38	20.27	20.23
		3	0	20.42	20.38	20.34
		3	3	20.33	20.28	20.33
		6	0	20.42	20.40	20.25

Band/BW	Modulation	RB Size	RB Offset	Low CH 18700	Mid CH 18900	High CH 19100
				Frequency 1860 MHz	Frequency 1880 MHz	Frequency 1900 MHz
2/ 20	QPSK	1	0	20.45	20.28	20.41
		1	5	20.26	20.23	20.20
		3	0	20.35	20.36	20.36
		3	3	20.27	20.25	20.21
		6	0	20.39	20.38	20.35
	16QAM	1	0	20.50	**20.52**	20.49
		1	5	20.39	20.33	20.25
		3	0	20.47	20.45	20.39
		3	3	20.35	20.36	20.35
		6	0	20.47	20.48	20.26

LTE BAND 25

Band/BW	Modulation	RB Size	RB Offset	Low CH 26047	Mid CH 26365	High CH 26683
				Frequency 1850.7 MHz	Frequency 1882.5 MHz	Frequency 1914.3 MHz
25/ 1.4	QPSK	1	0	20.02	20.08	20.08
		1	5	19.92	19.87	19.94
		3	0	19.99	20.03	20.06
		3	3	19.84	19.93	19.97
		6	0	19.95	20.01	20.06
	16QAM	1	0	19.87	20.27	19.87
		1	5	19.72	20.00	19.73
		3	0	19.96	20.36	20.10
		3	3	19.82	20.20	19.98
		6	0	19.86	20.14	20.13

Band/BW	Modulation	RB Size	RB Offset	Low CH 26055	Mid CH 26365	High CH 26675
				Frequency 1851.5 MHz	Frequency 1882.5 MHz	Frequency 1913.5 MHz
25/ 3	QPSK	1	0	20.08	20.02	20.08
		1	5	19.90	19.84	19.93
		3	0	20.04	20.03	20.03
		3	3	19.86	19.90	19.93
		6	0	20.02	19.97	20.09
	16QAM	1	0	19.84	20.33	19.82
		1	5	19.78	19.98	19.80
		3	0	19.94	20.34	20.11
		3	3	19.87	20.17	19.99
		6	0	19.84	20.20	20.16

Band/BW	Modulation	RB Size	RB Offset	Low CH 26065	Mid CH 26365	High CH 26665
				Frequency 1852.5 MHz	Frequency 1882.5 MHz	Frequency 1912.5 MHz
25/ 5	QPSK	1	0	20.04	20.02	20.08
		1	5	19.89	19.87	19.93
		3	0	19.97	20.03	20.05
		3	3	19.83	19.97	19.97
		6	0	19.99	19.98	20.03
	16QAM	1	0	19.81	20.34	19.87
		1	5	19.75	20.01	19.77
		3	0	20.00	20.30	20.15
		3	3	19.81	20.21	19.95
		6	0	19.89	20.15	20.16

Band/BW	Modulation	RB Size	RB Offset	Low CH 26090	Mid CH 26365	High CH 26640
				Frequency 1855 MHz	Frequency 1882.5 MHz	Frequency 1910 MHz
25/ 10	QPSK	1	0	20.03	20.04	20.11
		1	5	19.88	19.90	19.90
		3	0	20.03	19.97	20.09
		3	3	19.83	19.92	19.91
		6	0	19.97	20.01	20.05
	16QAM	1	0	19.84	20.27	19.88
		1	5	19.76	20.01	19.76
		3	0	19.94	20.32	20.08
		3	3	19.87	20.17	19.98
		6	0	19.87	20.13	20.17

Band/BW	Modulation	RB Size	RB Offset	Low CH 26115	Mid CH 26365	High CH 26615
				Frequency 1857.5 MHz	Frequency 1882.5 MHz	Frequency 1907.5 MHz
25/ 15	QPSK	1	0	20.09	20.07	20.05
		1	5	19.91	19.84	19.89
		3	0	20.04	19.99	20.09
		3	3	19.86	19.91	19.94
		6	0	20.01	19.95	20.09
	16QAM	1	0	19.84	20.27	19.88
		1	5	19.76	20.01	19.76
		3	0	19.94	20.37	20.11
		3	3	19.85	20.20	19.99
		6	0	19.86	20.19	20.13

Band/BW	Modulation	RB Size	RB Offset	Low CH 26140	Mid CH 26365	High CH 26590
				Frequency 1860 MHz	Frequency 1882.5 MHz	Frequency 1905 MHz
25/ 20	QPSK	1	0	20.10	20.09	20.13
		1	5	19.96	19.92	19.95
		3	0	20.05	20.05	20.11
		3	3	19.91	19.98	19.99
		6	0	20.03	20.03	20.11
	16QAM	1	0	19.89	20.35	19.89
		1	5	19.80	20.06	19.81
		3	0	20.02	**20.38**	20.16
		3	3	19.89	20.25	20.00
		6	0	19.92	20.21	20.18

LTE NB-IOT

LTE BAND 2

Band/Sub-carrier Speacing (KHz)	Modulation	RB Size	RB Offset	Low CH 18602	Mid CH 18900	High CH 19198
				Frequency 1850.2 MHz	Frequency 1880 MHz	Frequency 1909.8 MHz
2/ 3.75	BPSK	1	0	20.80	20.94	20.83
		1	47	20.76	20.89	20.76
	QPSK	1	0	20.83	**21.09**	20.80
		1	47	20.76	20.99	20.81

Band/Sub-carrier Speacing (KHz)	Modulation	RB Size	RB Offset	Low CH 18602	Mid CH 18900	High CH 19198
				Frequency 1850.2 MHz	Frequency 1880 MHz	Frequency 1909.8 MHz
2/ 15	BPSK	1	0	20.50	20.72	20.60
		1	11	20.43	20.69	20.53
	QPSK	1	0	20.45	20.85	20.73
		1	11	20.44	20.83	20.61
		12	0	18.41	18.47	18.14

LTE BAND 25

Band/Sub-carrier Speacing (KHz)	Modulation	RB Size	RB Offset	Low CH 26042	Mid CH 26365	High CH 26688
				Frequency 1850.2 MHz	Frequency 1882.5 MHz	Frequency 1914.8 MHz
25/ 3.75	BPSK	1	0	20.32	20.26	20.22
		1	47	20.29	20.18	20.13
	QPSK	1	0	**20.45**	20.33	20.27
		1	47	20.31	20.28	20.22

Band/Sub-carrier Speacing (KHz)	Modulation	RB Size	RB Offset	Low CH 26042	Mid CH 26365	High CH 26688
				Frequency 1850.2 MHz	Frequency 1882.5 MHz	Frequency 1914.8 MHz
25/ 15	BPSK	1	0	20.20	20.15	20.19
		1	11	20.11	20.06	20.15
	QPSK	1	0	20.08	20.22	20.28
		1	11	20.23	20.15	20.17
		12	0	18.20	18.18	18.77

EIRP POWER (dBm)
Internal Antenna:

LTE CAT-M1

LTE BAND 2

CHANNEL BANDWIDTH: 1.4MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18607	1850.7	20.39	2.02	22.41	174.18	2
18900	1880.0	20.36	2.02	22.38	172.98	2
19193	1909.3	20.35	2.02	22.37	172.58	2

CHANNEL BANDWIDTH: 1.4MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18607	1850.7	20.45	2.02	22.47	176.6	2
18900	1880.0	20.51	2.02	22.53	179.06	2
19193	1909.3	20.47	2.02	22.49	177.42	2

CHANNEL BANDWIDTH: 3MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18615	1851.5	20.37	2.02	22.39	173.38	2
18900	1880.0	20.33	2.02	22.35	171.79	2
19185	1908.5	20.34	2.02	22.36	172.19	2

CHANNEL BANDWIDTH: 3MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18615	1851.5	20.43	2.02	22.45	175.79	2
18900	1880.0	20.5	2.02	22.52	178.65	2
19185	1908.5	20.43	2.02	22.45	175.79	2

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18625	1852.5	20.35	2.02	22.37	172.58	2
18900	1880.0	20.32	2.02	22.34	171.4	2
19175	1907.5	20.34	2.02	22.36	172.19	2

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18625	1852.5	20.4	2.02	22.42	174.58	2
18900	1880.0	20.45	2.02	22.47	176.6	2
19175	1907.5	20.43	2.02	22.45	175.79	2

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18650	1855.0	20.41	2.02	22.43	174.98	2
18900	1880.0	20.33	2.02	22.35	171.79	2
19150	1905.0	20.36	2.02	22.38	172.98	2

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18650	1855.0	20.42	2.02	22.44	175.39	2
18900	1880.0	20.5	2.02	22.52	178.65	2
19150	1905.0	20.44	2.02	22.46	176.2	2

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18675	1857.5	20.4	2.02	22.42	174.58	2
18900	1880.0	20.36	2.02	22.38	172.98	2
19125	1902.5	20.36	2.02	22.38	172.98	2

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18675	1857.5	20.45	2.02	22.47	176.6	2
18900	1880.0	20.44	2.02	22.46	176.2	2
19125	1902.5	20.43	2.02	22.45	175.79	2

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18700	1860	20.45	2.02	22.47	176.6	2
18900	1880	20.38	2.02	22.4	173.78	2
19100	1900	20.41	2.02	22.43	174.98	2

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18700	1860	20.5	2.02	22.52	178.65	2
18900	1880	20.52	2.02	22.54	179.47	2
19100	1900	20.49	2.02	22.51	178.24	2

LTE BAND 25

CHANNEL BANDWIDTH: 1.4MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26047	1850.7	20.02	2.02	22.04	159.96	2
26365	1882.5	20.08	2.02	22.1	162.18	2
26683	1914.3	20.08	2.02	22.1	162.18	2

CHANNEL BANDWIDTH: 1.4MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26047	1850.7	19.96	2.02	21.98	157.76	2
26365	1882.5	20.36	2.02	22.38	172.98	2
26683	1914.3	20.13	2.02	22.15	164.06	2

CHANNEL BANDWIDTH: 3MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26055	1851.5	20.08	2.02	22.1	162.18	2
26365	1882.5	20.03	2.02	22.05	160.32	2
26675	1913.5	20.09	2.02	22.11	162.55	2

CHANNEL BANDWIDTH: 3MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26055	1851.5	19.94	2.02	21.96	157.04	2
26365	1882.5	20.34	2.02	22.36	172.19	2
26675	1913.5	20.16	2.02	22.18	165.2	2

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26065	1852.5	20.04	2.02	22.06	160.69	2
26365	1882.5	20.03	2.02	22.05	160.32	2
26665	1912.5	20.08	2.02	22.1	162.18	2

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26065	1852.5	20	2.02	22.02	159.22	2
26365	1882.5	20.34	2.02	22.36	172.19	2
26665	1912.5	20.16	2.02	22.18	165.2	2

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26090	1855	20.03	2.02	22.05	160.32	2
26365	1882.5	20.04	2.02	22.06	160.69	2
26640	1910	20.11	2.02	22.13	163.31	2

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26090	1855	19.94	2.02	21.96	157.04	2
26365	1882.5	20.32	2.02	22.34	171.4	2
26640	1910	20.17	2.02	22.19	165.58	2

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26115	1857.5	20.09	2.02	22.11	162.55	2
26365	1882.5	20.07	2.02	22.09	161.81	2
26615	1907.5	20.09	2.02	22.11	162.55	2

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26115	1857.5	19.94	2.02	21.96	157.04	2
26365	1882.5	20.37	2.02	22.39	173.38	2
26615	1907.5	20.13	2.02	22.15	164.06	2

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26140	1860	20.1	2.02	22.12	162.93	2
26365	1882.5	20.09	2.02	22.11	162.55	2
26590	1905	20.13	2.02	22.15	164.06	2

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26140	1860	20.02	2.02	22.04	159.96	2
26365	1882.5	20.38	2.02	22.4	173.78	2
26590	1905	20.18	2.02	22.2	165.96	2

LTE NB-IOT

LTE BAND 2

SUBCARRIER SPACING: 3.75KHz BPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18602	1850.2	20.8	2.02	22.82	191.43	2
18900	1880	20.94	2.02	22.96	197.7	2
19198	1909.8	20.83	2.02	22.85	192.75	2

SUBCARRIER SPACING: 3.75KHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18602	1850.2	20.83	2.02	22.85	192.75	2
18900	1880	21.09	2.02	23.11	204.64	2
19198	1909.8	20.81	2.02	22.83	191.87	2

SUBCARRIER SPACING: 15KHz BPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18602	1850.2	20.5	2.02	22.52	178.65	2
18900	1880	20.72	2.02	22.74	187.93	2
19198	1909.8	20.6	2.02	22.62	182.81	2

SUBCARRIER SPACING: 15KHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18602	1850.2	20.45	2.02	22.47	176.6	2
18900	1880	20.85	2.02	22.87	193.64	2
19198	1909.8	20.73	2.02	22.75	188.36	2

LTE BAND 25

SUBCARRIER SPACING: 3.75KHz BPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26042	1850.2	20.32	2.02	22.34	171.4	2
26365	1882.5	20.26	2.02	22.28	169.04	2
26688	1914.8	20.22	2.02	22.24	167.49	2

SUBCARRIER SPACING: 3.75KHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26042	1850.2	20.45	2.02	22.47	176.6	2
26365	1882.5	20.33	2.02	22.35	171.79	2
26688	1914.8	20.27	2.02	22.29	169.43	2

SUBCARRIER SPACING: 15KHz BPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26042	1850.2	20.2	2.02	22.22	166.72	2
26365	1882.5	20.15	2.02	22.17	164.82	2
26688	1914.8	20.19	2.02	22.21	166.34	2

SUBCARRIER SPACING: 15KHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26042	1850.2	20.23	2.02	22.25	167.88	2
26365	1882.5	20.22	2.02	22.24	167.49	2
26688	1914.8	20.28	2.02	22.3	169.82	2

External Antenna:

LTE CAT-M1

LTE BAND 2

CHANNEL BANDWIDTH: 1.4MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18607	1850.7	20.39	0.39	20.78	119.67	2
18900	1880.0	20.36	0.39	20.75	118.85	2
19193	1909.3	20.35	0.39	20.74	118.58	2

CHANNEL BANDWIDTH: 1.4MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18607	1850.7	20.45	0.39	20.84	121.34	2
18900	1880.0	20.51	0.39	20.9	123.03	2
19193	1909.3	20.47	0.39	20.86	121.9	2

CHANNEL BANDWIDTH: 3MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18615	1851.5	20.37	0.39	20.76	119.12	2
18900	1880.0	20.33	0.39	20.72	118.03	2
19185	1908.5	20.34	0.39	20.73	118.3	2

CHANNEL BANDWIDTH: 3MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18615	1851.5	20.43	0.39	20.82	120.78	2
18900	1880.0	20.5	0.39	20.89	122.74	2
19185	1908.5	20.43	0.39	20.82	120.78	2

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18625	1852.5	20.35	0.39	20.74	118.58	2
18900	1880.0	20.32	0.39	20.71	117.76	2
19175	1907.5	20.34	0.39	20.73	118.3	2

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18625	1852.5	20.4	0.39	20.79	119.95	2
18900	1880.0	20.45	0.39	20.84	121.34	2
19175	1907.5	20.43	0.39	20.82	120.78	2

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18650	1855.0	20.41	0.39	20.8	120.23	2
18900	1880.0	20.33	0.39	20.72	118.03	2
19150	1905.0	20.36	0.39	20.75	118.85	2

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18650	1855.0	20.42	0.39	20.81	120.5	2
18900	1880.0	20.5	0.39	20.89	122.74	2
19150	1905.0	20.44	0.39	20.83	121.06	2

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18675	1857.5	20.4	0.39	20.79	119.95	2
18900	1880.0	20.36	0.39	20.75	118.85	2
19125	1902.5	20.36	0.39	20.75	118.85	2

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18675	1857.5	20.45	0.39	20.84	121.34	2
18900	1880.0	20.44	0.39	20.83	121.06	2
19125	1902.5	20.43	0.39	20.82	120.78	2

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18700	1860	20.45	0.39	20.84	121.34	2
18900	1880	20.38	0.39	20.77	119.4	2
19100	1900	20.41	0.39	20.8	120.23	2

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18700	1860	20.5	0.39	20.89	122.74	2
18900	1880	20.52	0.39	20.91	123.31	2
19100	1900	20.49	0.39	20.88	122.46	2

LTE BAND 25

CHANNEL BANDWIDTH: 1.4MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26047	1850.7	20.02	0.39	20.41	109.9	2
26365	1882.5	20.08	0.39	20.47	111.43	2
26683	1914.3	20.08	0.39	20.47	111.43	2

CHANNEL BANDWIDTH: 1.4MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26047	1850.7	19.96	0.39	20.35	108.39	2
26365	1882.5	20.36	0.39	20.75	118.85	2
26683	1914.3	20.13	0.39	20.52	112.72	2

CHANNEL BANDWIDTH: 3MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26055	1851.5	20.08	0.39	20.47	111.43	2
26365	1882.5	20.03	0.39	20.42	110.15	2
26675	1913.5	20.09	0.39	20.48	111.69	2

CHANNEL BANDWIDTH: 3MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26055	1851.5	19.94	0.39	20.33	107.89	2
26365	1882.5	20.34	0.39	20.73	118.3	2
26675	1913.5	20.16	0.39	20.55	113.5	2

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26065	1852.5	20.04	0.39	20.43	110.41	2
26365	1882.5	20.03	0.39	20.42	110.15	2
26665	1912.5	20.08	0.39	20.47	111.43	2

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26065	1852.5	20	0.39	20.39	109.4	2
26365	1882.5	20.34	0.39	20.73	118.3	2
26665	1912.5	20.16	0.39	20.55	113.5	2

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26090	1855	20.03	0.39	20.42	110.15	2
26365	1882.5	20.04	0.39	20.43	110.41	2
26640	1910	20.11	0.39	20.5	112.2	2

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26090	1855	19.94	0.39	20.33	107.89	2
26365	1882.5	20.32	0.39	20.71	117.76	2
26640	1910	20.17	0.39	20.56	113.76	2

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26115	1857.5	20.09	0.39	20.48	111.69	2
26365	1882.5	20.07	0.39	20.46	111.17	2
26615	1907.5	20.09	0.39	20.48	111.69	2

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26115	1857.5	19.94	0.39	20.33	107.89	2
26365	1882.5	20.37	0.39	20.76	119.12	2
26615	1907.5	20.13	0.39	20.52	112.72	2

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26140	1860	20.1	0.39	20.49	111.94	2
26365	1882.5	20.09	0.39	20.48	111.69	2
26590	1905	20.13	0.39	20.52	112.72	2

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26140	1860	20.02	0.39	20.41	109.9	2
26365	1882.5	20.38	0.39	20.77	119.4	2
26590	1905	20.18	0.39	20.57	114.02	2

LTE NB-IOT

LTE BAND 2

SUBCARRIER SPACING: 3.75KHz BPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18602	1850.2	20.8	0.39	21.19	131.52	2
18900	1880	20.94	0.39	21.33	135.83	2
19198	1909.8	20.83	0.39	21.22	132.43	2

SUBCARRIER SPACING: 3.75KHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18602	1850.2	20.83	0.39	21.22	132.43	2
18900	1880	21.09	0.39	21.48	140.6	2
19198	1909.8	20.81	0.39	21.2	131.83	2

SUBCARRIER SPACING: 15KHz BPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18602	1850.2	20.5	0.39	20.89	122.74	2
18900	1880	20.72	0.39	21.11	129.12	2
19198	1909.8	20.6	0.39	20.99	125.6	2

SUBCARRIER SPACING: 15KHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18602	1850.2	20.45	0.39	20.84	121.34	2
18900	1880	20.85	0.39	21.24	133.05	2
19198	1909.8	20.73	0.39	21.12	129.42	2

LTE BAND 25

SUBCARRIER SPACING: 3.75KHz BPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26042	1850.2	20.32	0.39	20.71	117.76	2
26365	1882.5	20.26	0.39	20.65	116.14	2
26688	1914.8	20.22	0.39	20.61	115.08	2

SUBCARRIER SPACING: 3.75KHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26042	1850.2	20.45	0.39	20.84	121.34	2
26365	1882.5	20.33	0.39	20.72	118.03	2
26688	1914.8	20.27	0.39	20.66	116.41	2

SUBCARRIER SPACING: 15KHz BPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26042	1850.2	20.2	0.39	20.59	114.55	2
26365	1882.5	20.15	0.39	20.54	113.24	2
26688	1914.8	20.19	0.39	20.58	114.29	2

SUBCARRIER SPACING: 15KHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26042	1850.2	20.23	0.39	20.62	115.35	2
26365	1882.5	20.22	0.39	20.61	115.08	2
26688	1914.8	20.28	0.39	20.67	116.68	2

3.2 FREQUENCY STABILITY MEASUREMENT

3.2.1 LIMITS OF FREQUENCY STABILIITY MEASUREMENT

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

3.2.2 TEST PROCEDURE

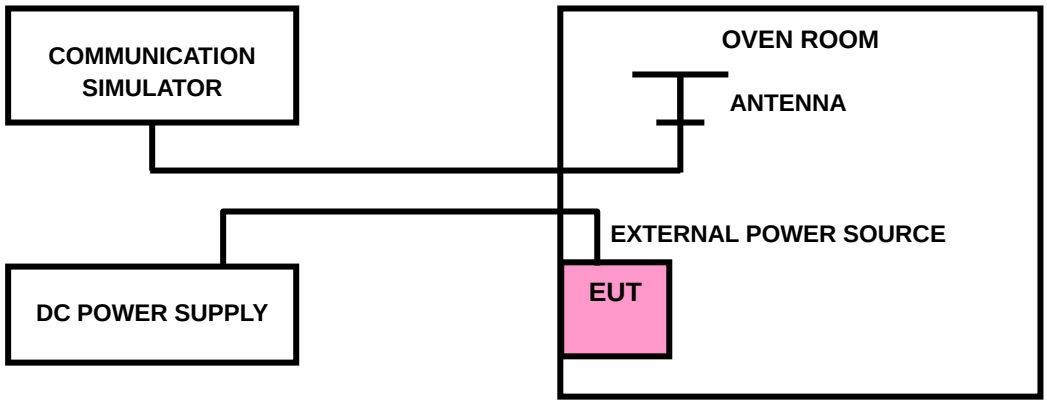
a. Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.

b. EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.

c. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the ±0.5℃ during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

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

3.2.3 TEST SETUP



3.2.4 TEST RESULTS

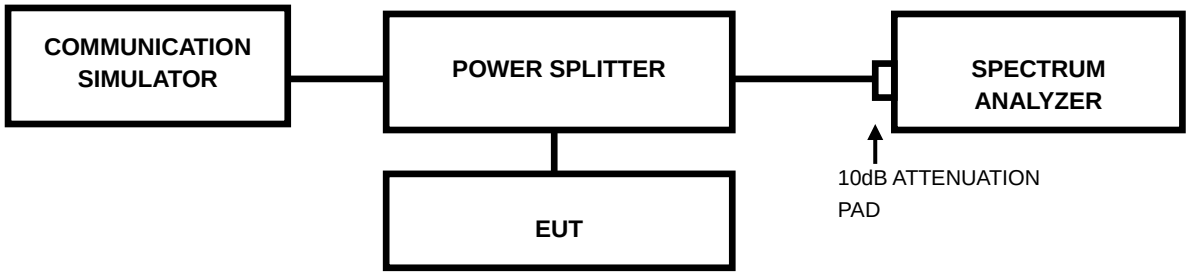
Please Refer to Module report R1907A0448-R2V2/ R1907A0448-R5V2.

3.3 OCCUPIED BANDWIDTH MEASUREMENT

3.3.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT

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

3.3.2 TEST SETUP



3.3.3 TEST PROCEDURES

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

3.3.4 TEST RESULTS

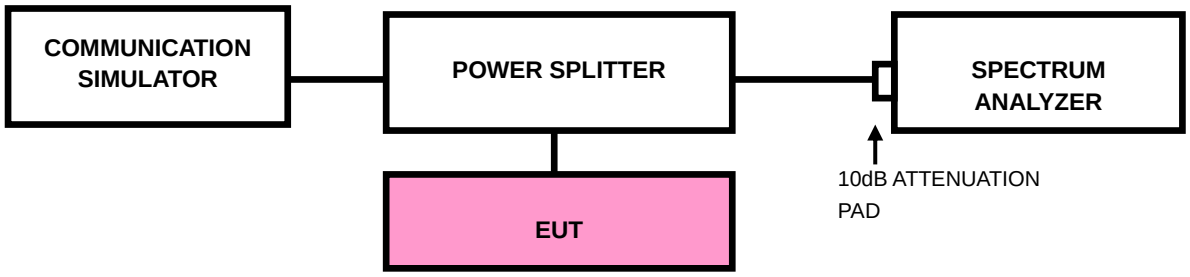
Please Refer to Module report R1907A0448-R2V2/ R1907A0448-R5V2.

3.4 BAND EDGE MEASUREMENTC

3.4.1 LIMITS OF BAND EDGE MEASUREMENT

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

3.4.2 TEST SETUP



3.4.3 TEST PROCEDURES

a) All measurements were done at low and high operational frequency range

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

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

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

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

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

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

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

i) Use auto-coupled sweep time.

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

k) The RF fundamental frequency should be excluded against the limit line in the operating frequency band and use RBW is 10KHz or 100KHz.

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

3.4.4. TEST RESULTS

Please Refer to Module report R1907A0448-R2V2/ R1907A0448-R5V2.

3.5 CONDUCTED SPURIOUS EMISSIONS

3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

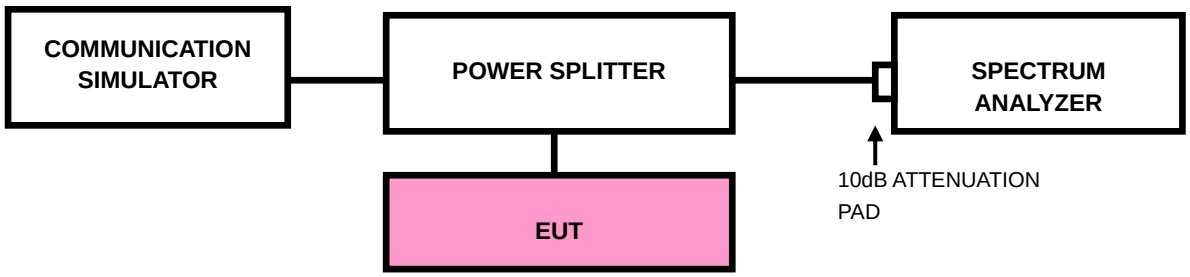
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to –13dBm.

3.5.2 TEST PROCEDURE

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

b. Measuring frequency range is from 30MHz up to a frequency including its 10^{th} harmonic. 10dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement.

3.5.3 TEST SETUP



3.5.4 TEST RESULTS

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

Please Refer to Module report R1907A0448-R2V2/ R1907A0448-R5V2.

3.6 RADIATED EMISSION MEASUREMENT

3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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. The emission limit equal to –13dBm.

3.6.2 TEST PROCEDURES

a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.

b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value “ of step a. Record the power level of S.G

c. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn.

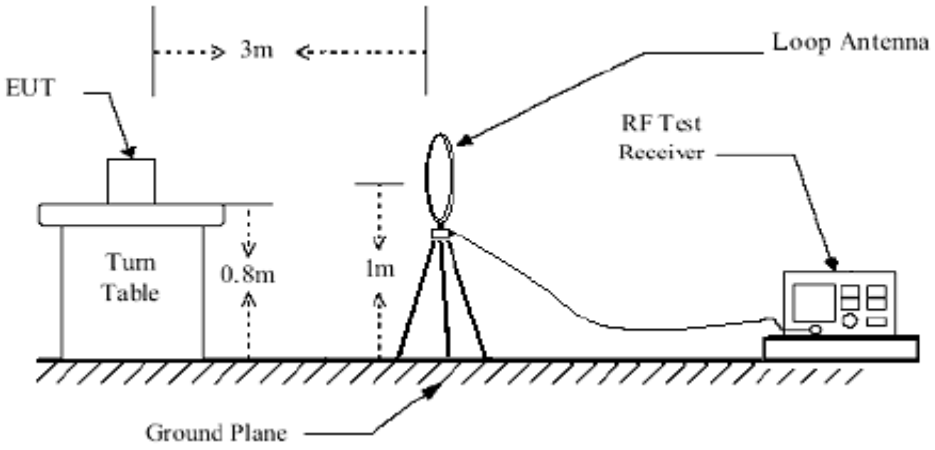
NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

3.6.3 DEVIATION FROM TEST STANDARD

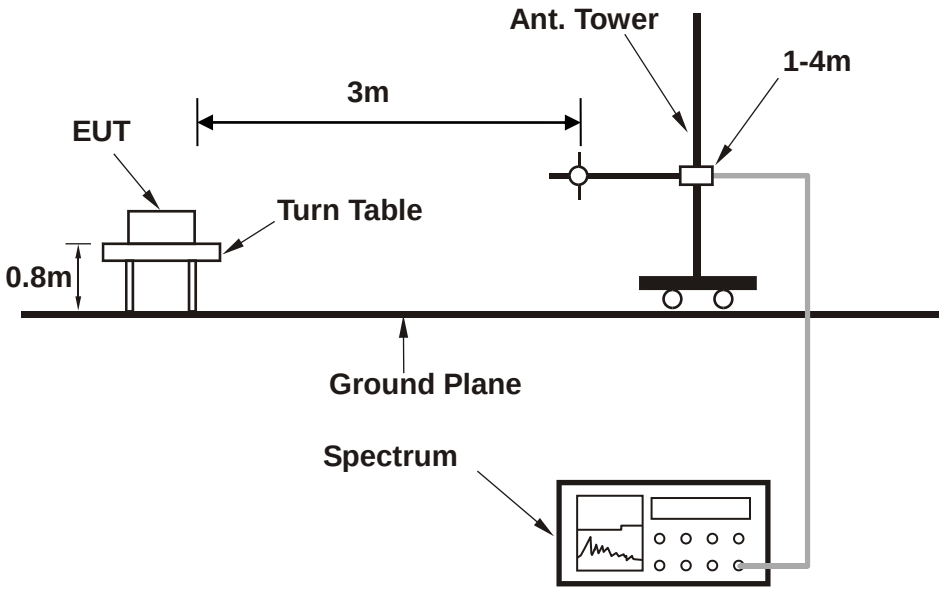
No deviation

3.6.4 TEST SETUP

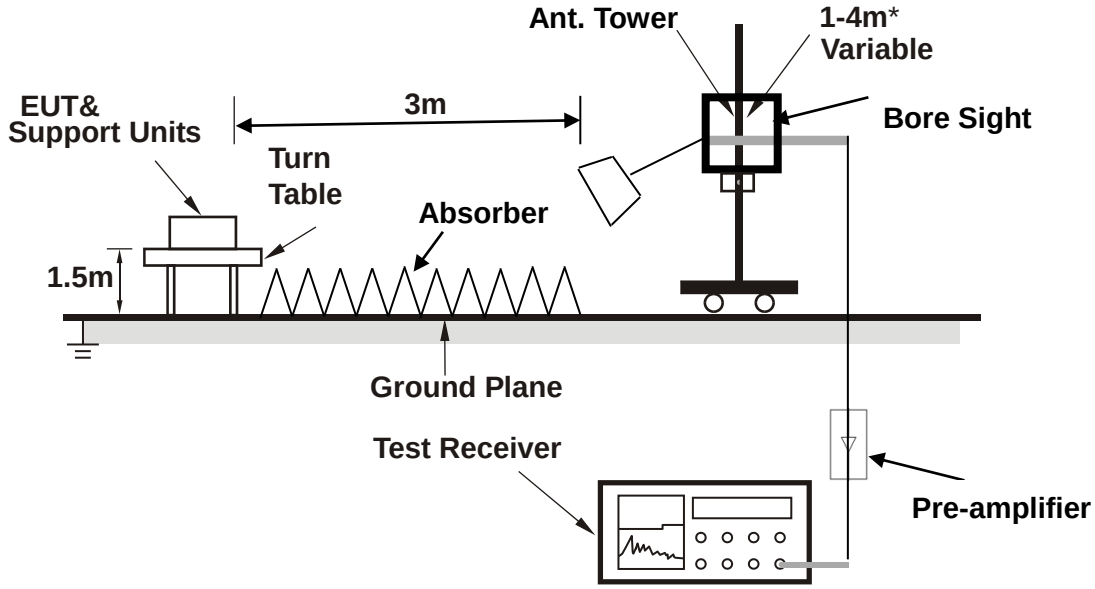
< Frequency Range below 30MHz >



< Frequency Range 30MHz~1GHz >



<Frequency Range above 1GHz>



Note: Above 1G is a directional antenna

Depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

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

3.6.5 TEST RESULTS

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

Internal Antenna:

LTE CAT-M1

BELOW 1GHz WORST-CASE DATA

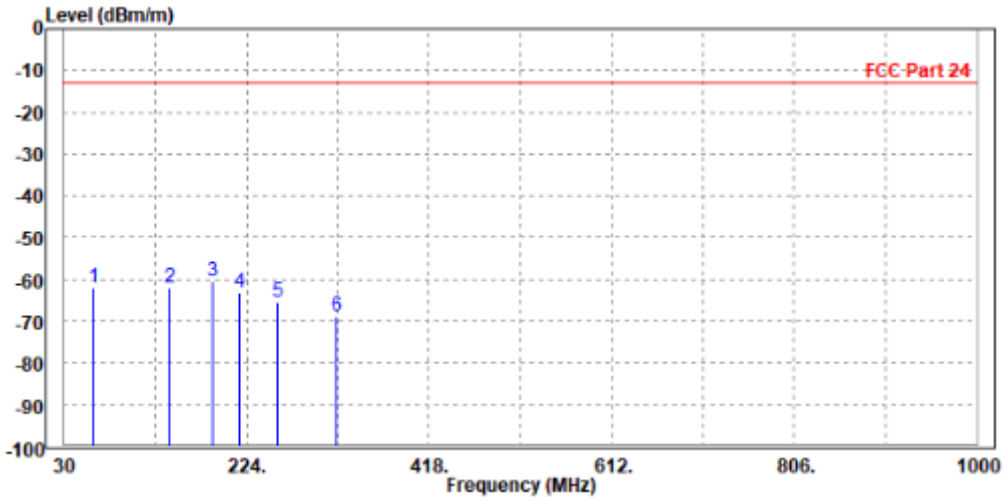
30 MHz – 1GHz data:

LTE Band 25:

CHANNEL BANDWIDTH: 1.4MHz / QPSK

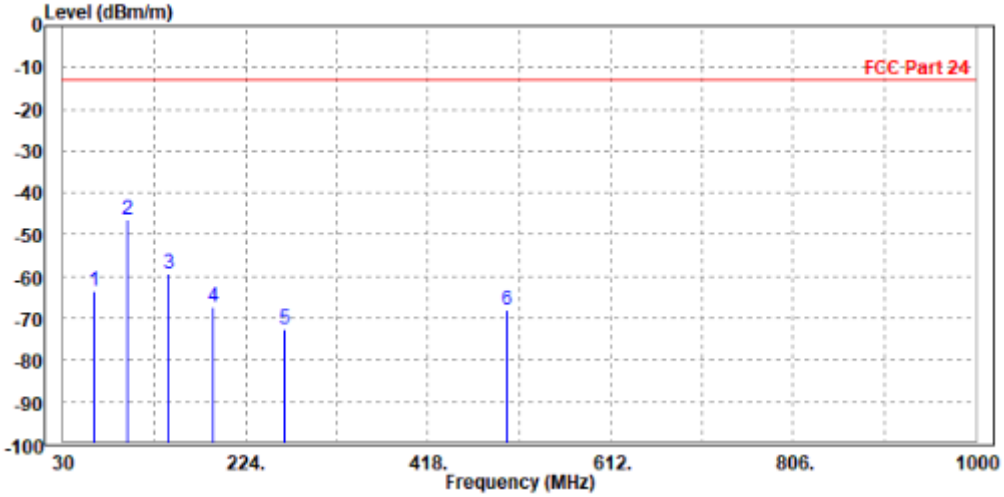
MODE	TX channel 26365	**FREQUENCY RANGE**	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1		60.928	-61.92	-42.92	-13.00	-48.92	-19.00	Peak	Horizontal
2		142.464	-62.16	-42.91	-13.00	-49.16	-19.25	Peak	Horizontal
3	PP	187.449	-60.41	-41.81	-13.00	-47.41	-18.60	Peak	Horizontal
4		216.971	-63.13	-47.73	-13.00	-50.13	-15.40	Peak	Horizontal
5		256.333	-65.35	-53.77	-13.00	-52.35	-11.58	Peak	Horizontal
6		319.594	-69.00	-57.01	-13.00	-56.00	-11.99	Peak	Horizontal



MODE	TX channel 26365	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1		62.333	-63.56	-40.59	-13.00	-50.56	-22.97	Peak	Vertical
2	PP	98.884	-46.28	-38.87	-13.00	-33.28	-7.41	Peak	Vertical
3		142.464	-59.29	-45.06	-13.00	-46.29	-14.23	Peak	Vertical
4		188.855	-67.39	-48.65	-13.00	-54.39	-18.74	Peak	Vertical
5		266.174	-72.75	-60.05	-13.00	-59.75	-12.70	Peak	Vertical
6		500.942	-68.14	-60.08	-13.00	-55.14	-8.06	Peak	Vertical



ABOVE 1GHz DATA

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

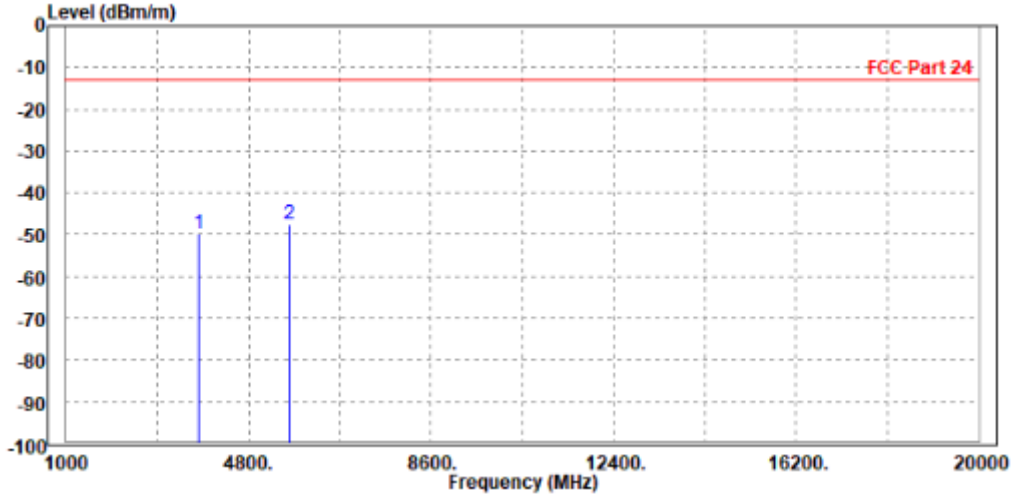
WORST-CASE DATA

LTE Band 25

CHANNEL BANDWIDTH: 1.4MHz / QPSK

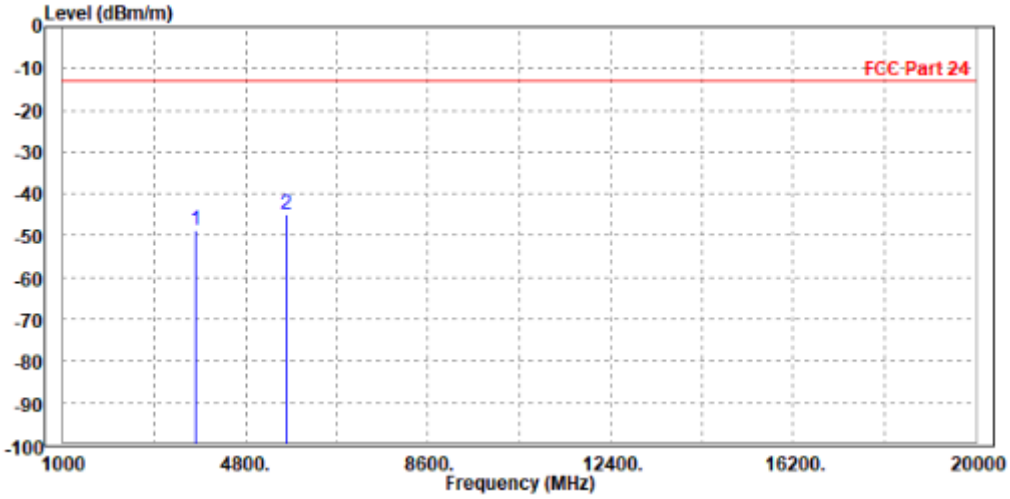
MODE	TX channel 26365	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3765.000	-49.74	-57.74	-13.00	-36.74	8.00	Peak	Horizontal
2 PP	5655.000	-47.53	-58.30	-13.00	-34.53	10.77	Peak	Horizontal



MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

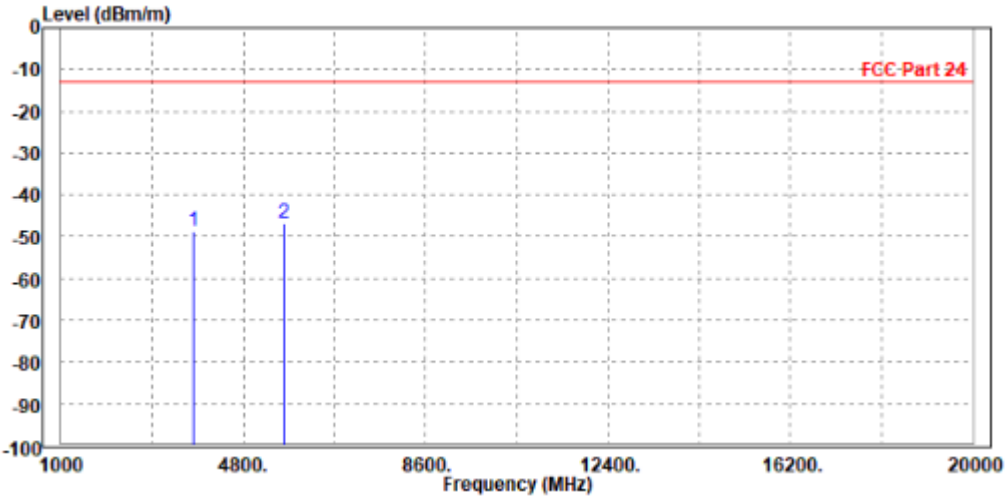
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3774.000	-48.74	-56.46	-13.00	-35.74	7.72	Peak	Vertical
2 PP	5647.500	-44.86	-56.01	-13.00	-31.86	11.15	Peak	Vertical



CHANNEL BANDWIDTH: 3MHz / QPSK

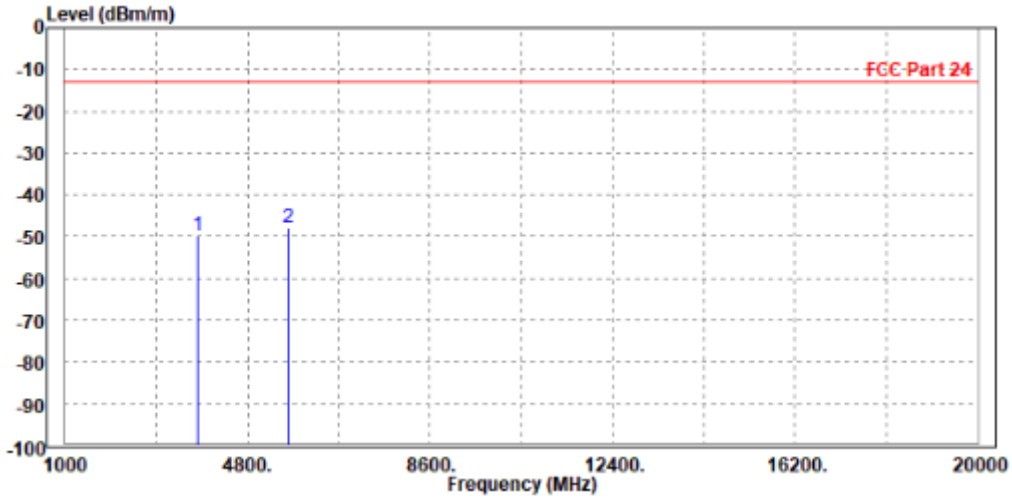
MODE	TX channel 26365	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3765.000	-48.80	-56.80	-13.00	-35.80	8.00	Peak	Horizontal
2 PP	5655.000	-46.61	-57.38	-13.00	-33.61	10.77	Peak	Horizontal



MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

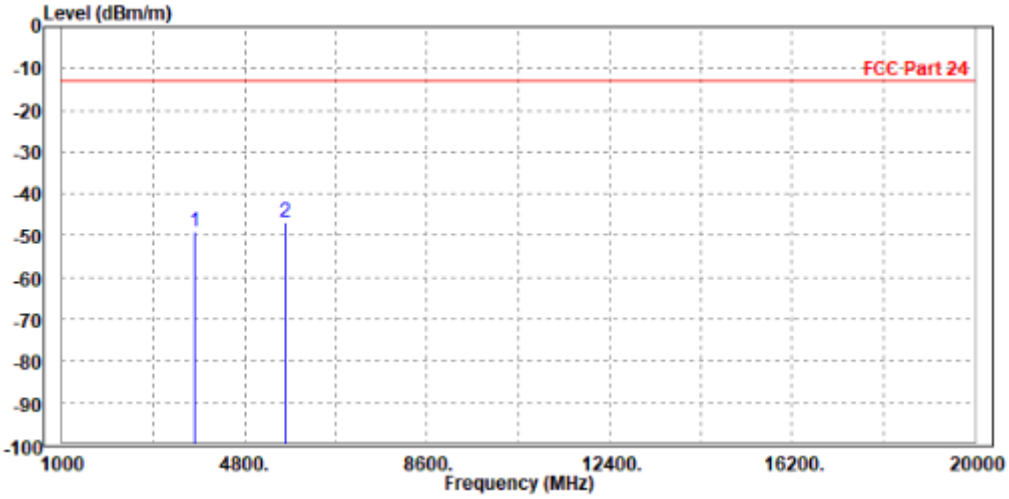
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3774.000	-49.67	-57.39	-13.00	-36.67	7.72	Peak	Vertical
2 PP	5647.500	-47.89	-59.04	-13.00	-34.89	11.15	Peak	Vertical



CHANNEL BANDWIDTH: 5MHz / QPSK

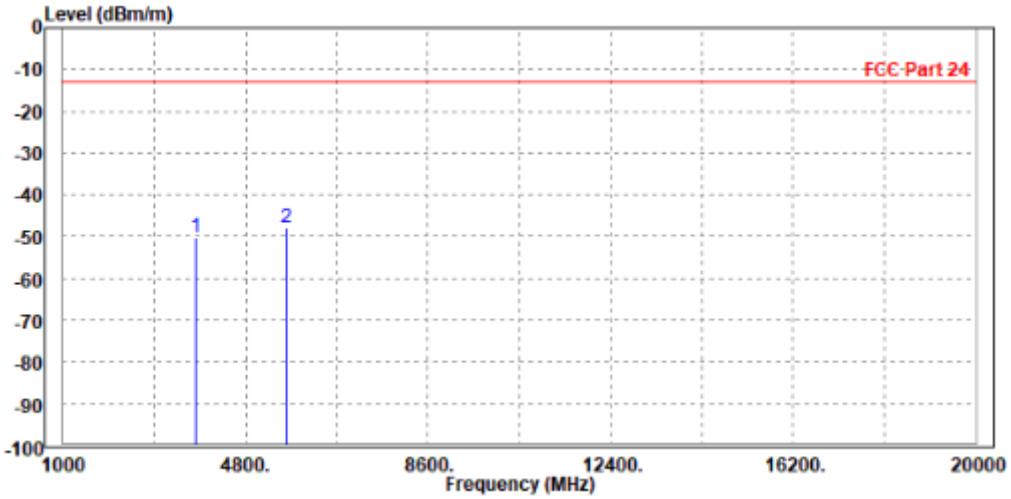
MODE	TX channel 26365	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3774.000	-48.97	-56.99	-13.00	-35.97	8.02	Peak	Horizontal
2 PP	5647.500	-46.61	-57.37	-13.00	-33.61	10.76	Peak	Horizontal



MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3765.000	-50.35	-58.05	-13.00	-37.35	7.70	Peak	Vertical
2 PP	5655.000	-47.83	-59.00	-13.00	-34.83	11.17	Peak	Vertical

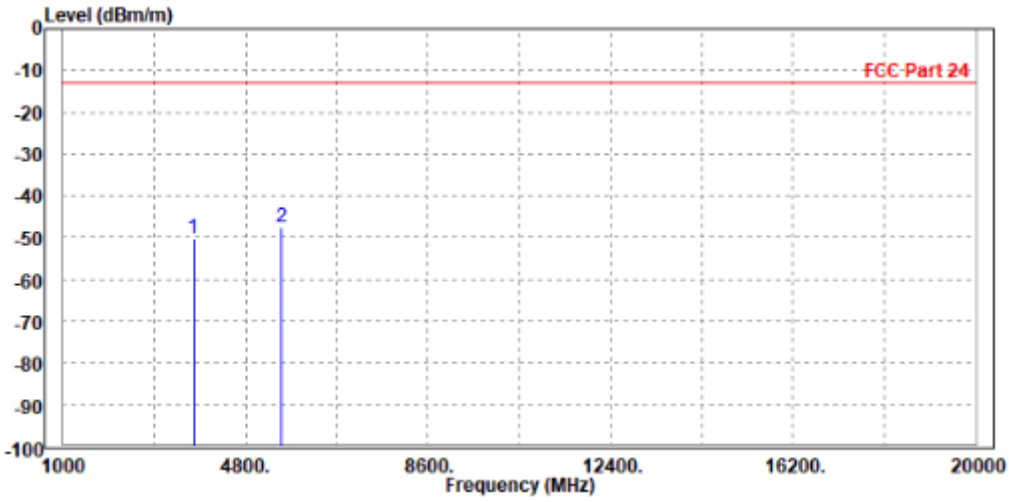


CHANNEL BANDWIDTH: 10MHz / QPSK

CH26090

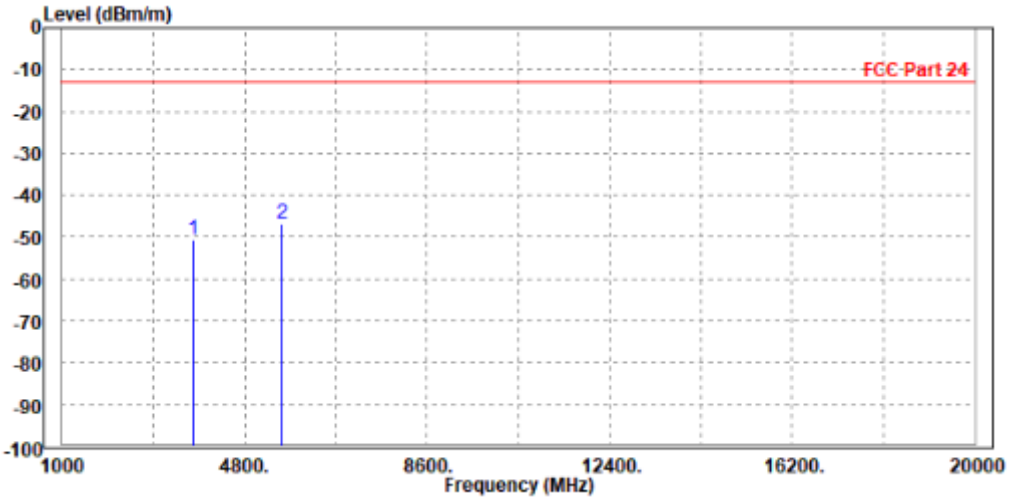
MODE	TX channel 26090	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3710.000	-50.09	-57.95	-13.00	-37.09	7.86	Peak	Horizontal
2 PP	5560.000	-47.41	-58.00	-13.00	-34.41	10.59	Peak	Horizontal



MODE	TX channel 26090	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

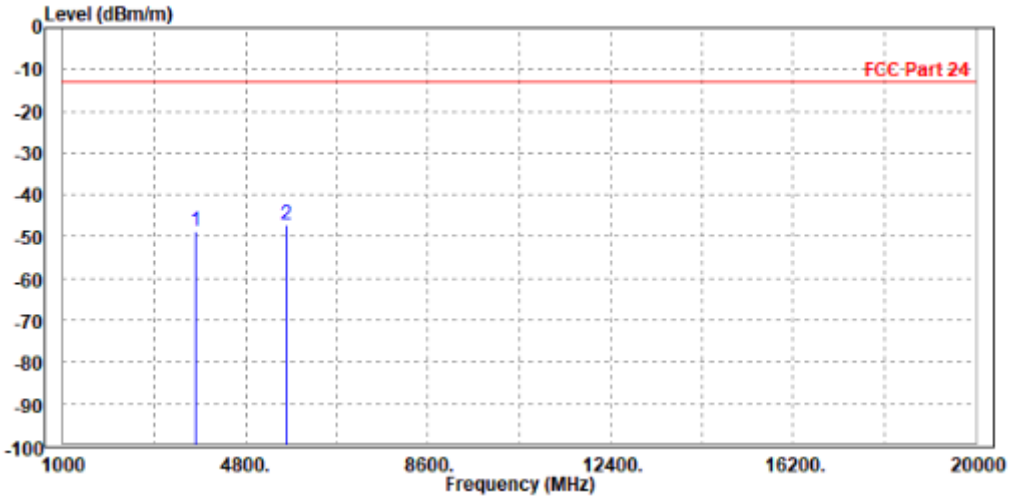
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3717.000	-50.39	-58.02	-13.00	-37.39	7.63	Peak	Vertical
2 PP	5565.000	-46.63	-57.54	-13.00	-33.63	10.91	Peak	Vertical



CH26365

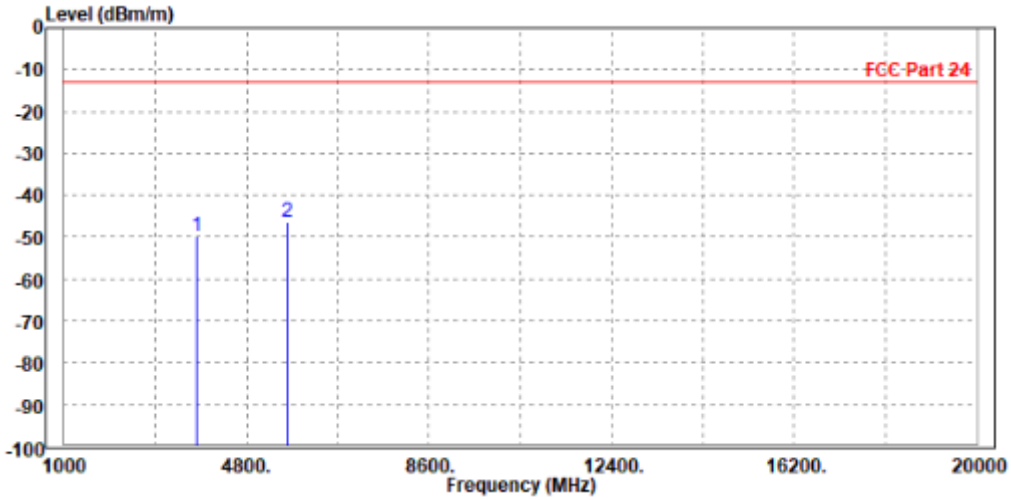
MODE	TX channel 26365	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3765.000	-48.60	-56.60	-13.00	-35.60	8.00	Peak	Horizontal
2 PP	5655.000	-47.01	-57.78	-13.00	-34.01	10.77	Peak	Horizontal



MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

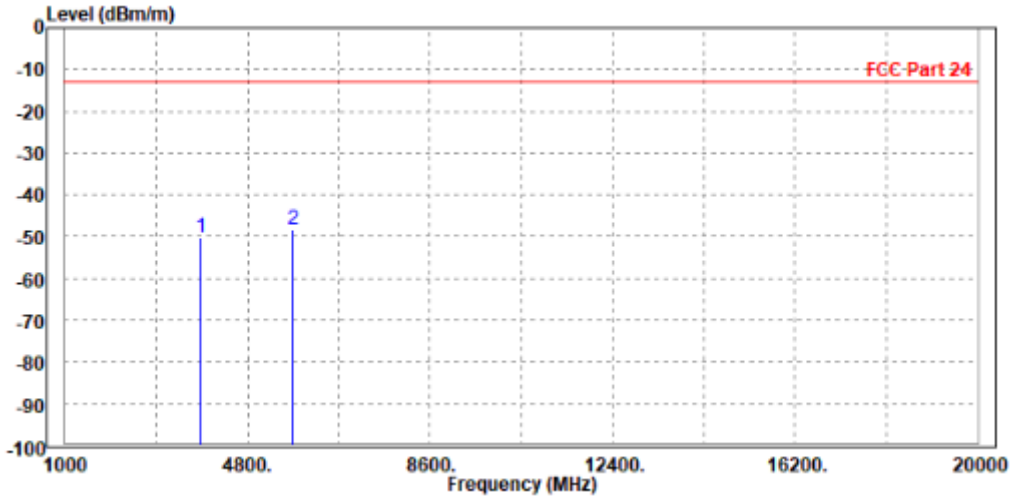
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3774.000	-49.99	-57.71	-13.00	-36.99	7.72	Peak	Vertical
2 PP	5647.500	-46.44	-57.59	-13.00	-33.44	11.15	Peak	Vertical



CH26640

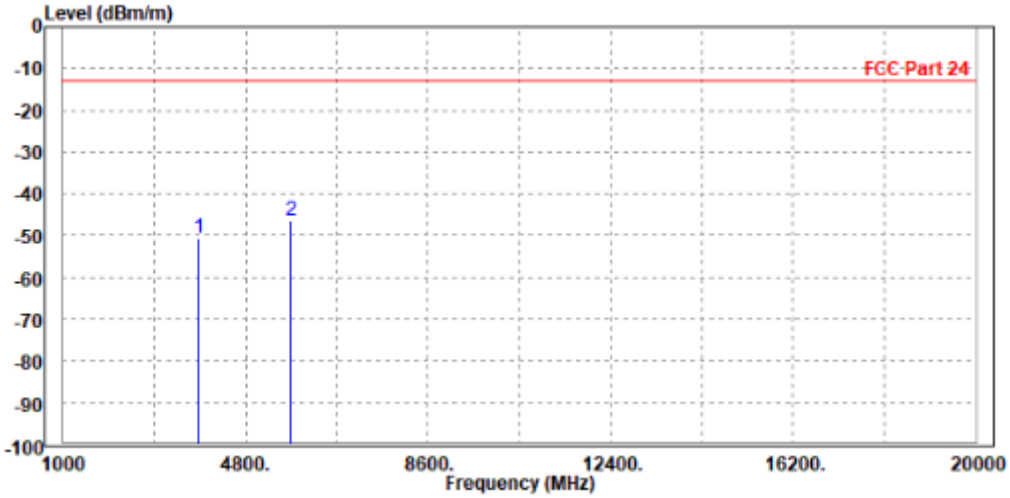
MODE	TX channel 26640	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3812.000	-50.03	-58.15	-13.00	-37.03	8.12	Peak	Horizontal
2 PP	5730.000	-48.12	-59.03	-13.00	-35.12	10.91	Peak	Horizontal



MODE	TX channel 26640	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

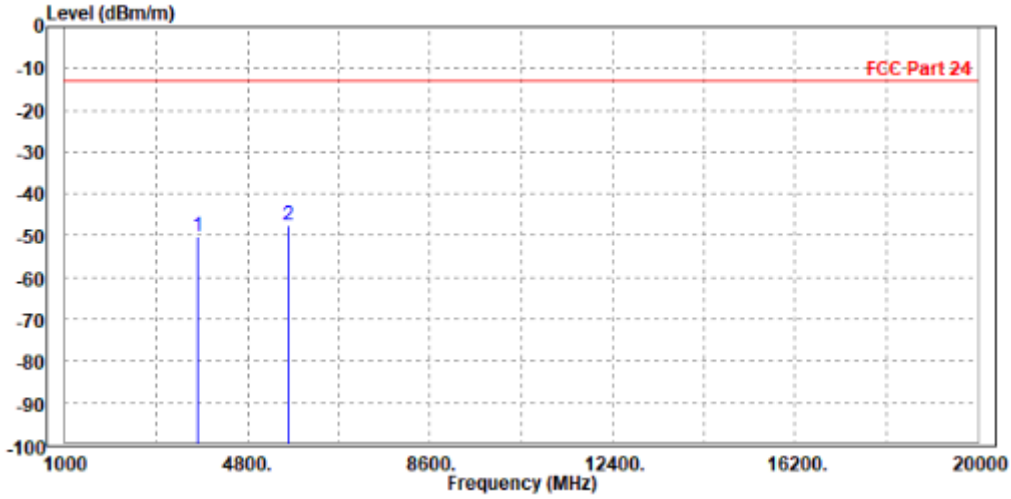
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3820.000	-50.51	-58.29	-13.00	-37.51	7.78	Peak	Vertical
2 PP	5731.000	-46.31	-57.70	-13.00	-33.31	11.39	Peak	Vertical



CHANNEL BANDWIDTH: 15MHz / QPSK

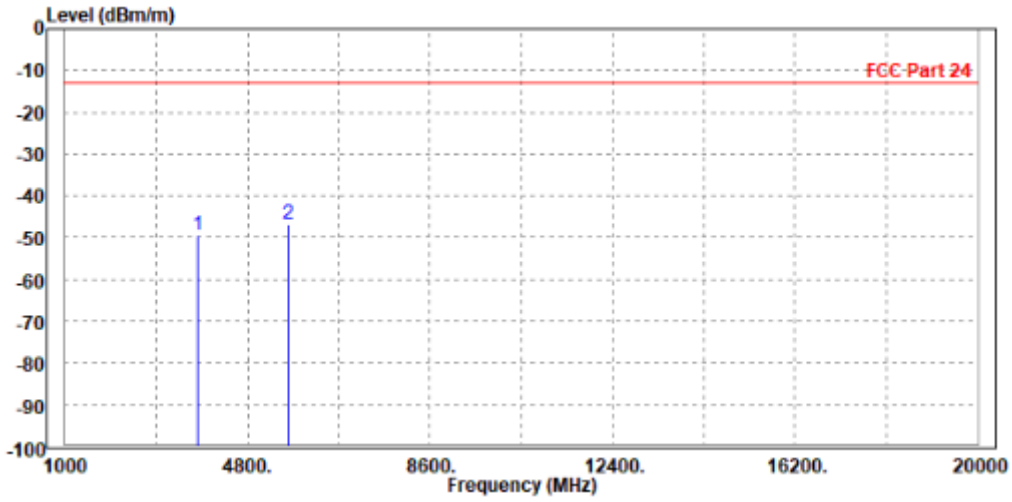
MODE	TX channel 26365	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3765.000	-50.32	-58.32	-13.00	-37.32	8.00	Peak	Horizontal
2 PP	5655.000	-47.44	-58.21	-13.00	-34.44	10.77	Peak	Horizontal



MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

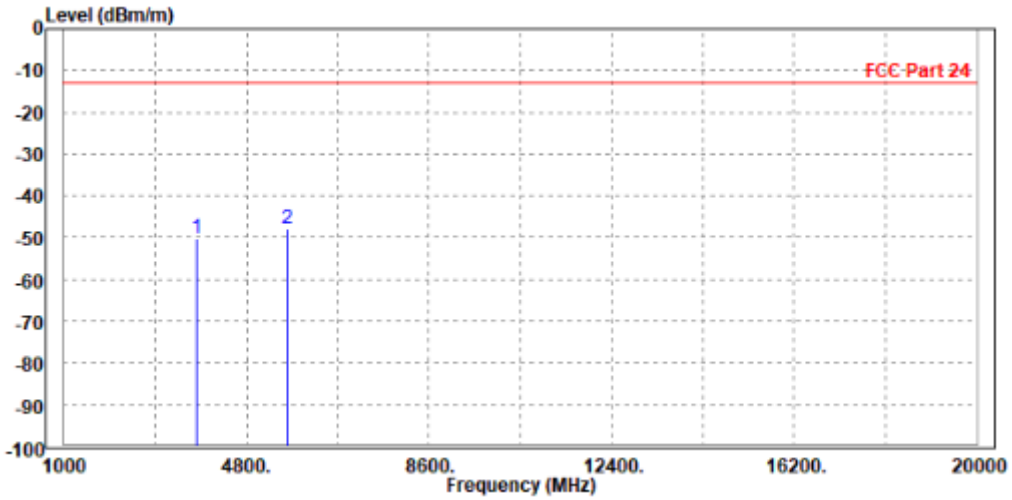
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3774.000	-49.33	-57.05	-13.00	-36.33	7.72	Peak	Vertical
2 PP	5647.500	-46.81	-57.96	-13.00	-33.81	11.15	Peak	Vertical



CHANNEL BANDWIDTH: 20MHz / QPSK

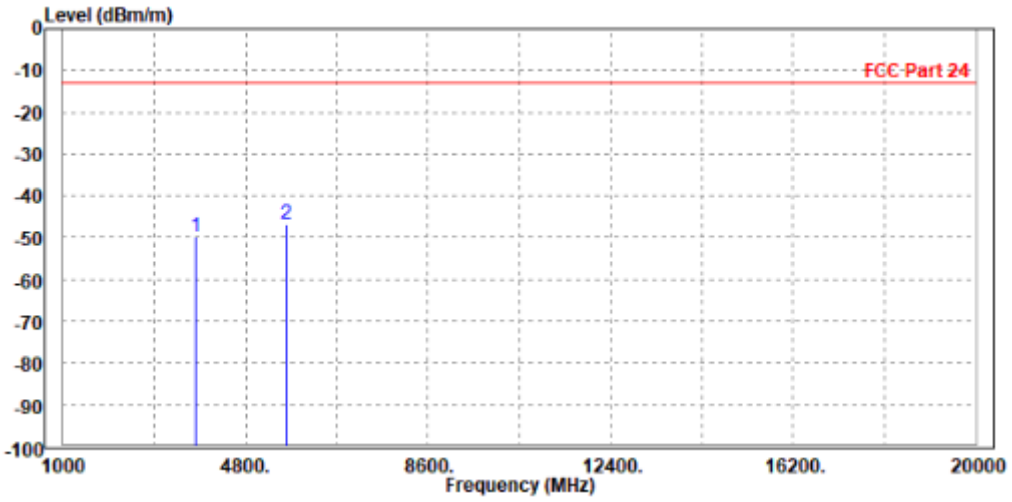
MODE	TX channel 26365	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3774.000	-50.26	-58.28	-13.00	-37.26	8.02	Peak	Horizontal
2 PP	5647.500	-48.07	-58.83	-13.00	-35.07	10.76	Peak	Horizontal



MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3765.000	-49.95	-57.65	-13.00	-36.95	7.70	Peak	Vertical
2 PP	5655.000	-46.77	-57.94	-13.00	-33.77	11.17	Peak	Vertical



LTE NB-IOT

BELOW 1GHz WORST-CASE DATA

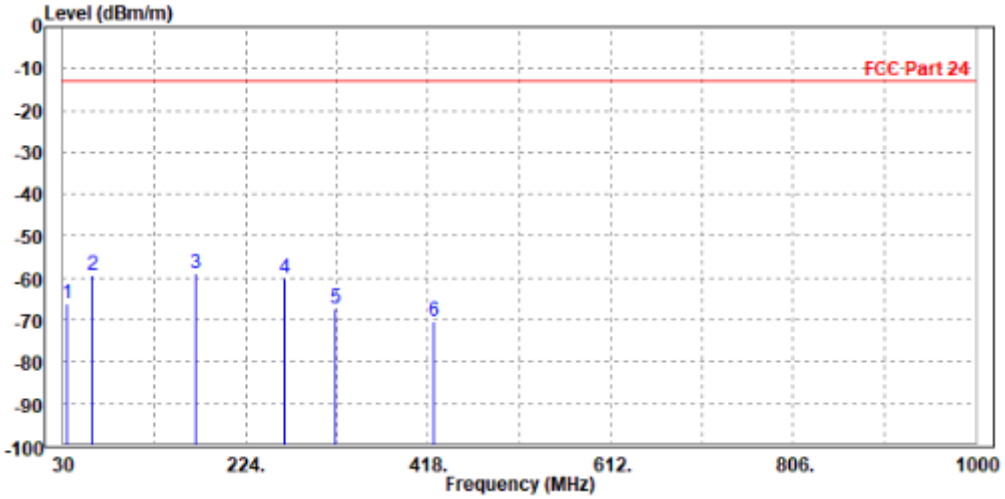
30 MHz – 1GHz data:

LTE Band 25:

SUBCARRIER SPACING: 3.75KHz / QPSK

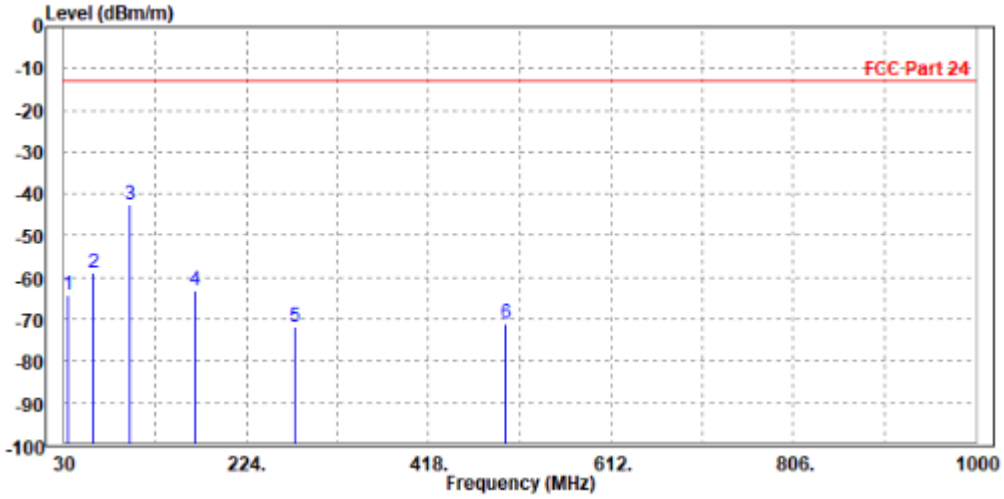
MODE	TX channel 26365	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC12V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1		33.880	-66.22	-54.99	-13.00	-53.22	-11.23	Peak	Horizontal
2		62.010	-59.27	-40.02	-13.00	-46.27	-19.25	Peak	Horizontal
3	PP	170.650	-59.08	-42.55	-13.00	-46.08	-16.53	Peak	Horizontal
4		265.710	-60.16	-48.39	-13.00	-47.16	-11.77	Peak	Horizontal
5		320.030	-67.21	-55.23	-13.00	-54.21	-11.98	Peak	Horizontal
6		423.820	-70.30	-60.70	-13.00	-57.30	-9.60	Peak	Horizontal



MODE	TX channel 26365	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC12V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	33.880	-64.36	-44.60	-13.00	-51.36	-19.76	Peak	Vertical
2	62.010	-58.88	-35.89	-13.00	-45.88	-22.99	Peak	Vertical
3 PP	99.840	-42.44	-35.93	-13.00	-29.44	-6.51	Peak	Vertical
4	168.710	-62.95	-45.40	-13.00	-49.95	-17.55	Peak	Vertical
5	275.410	-71.78	-59.60	-13.00	-58.78	-12.18	Peak	Vertical
6	500.450	-70.93	-62.86	-13.00	-57.93	-8.07	Peak	Vertical



ABOVE 1GHz DATA

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

WORST-CASE DATA

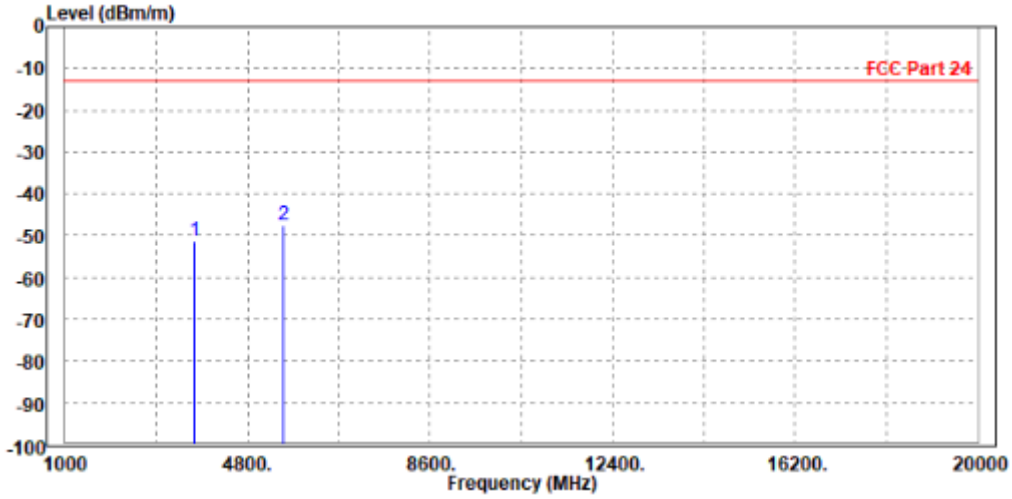
LTE Band 25

SUBCARRIER SPACING: 3.75KHz / QPSK

CH26042

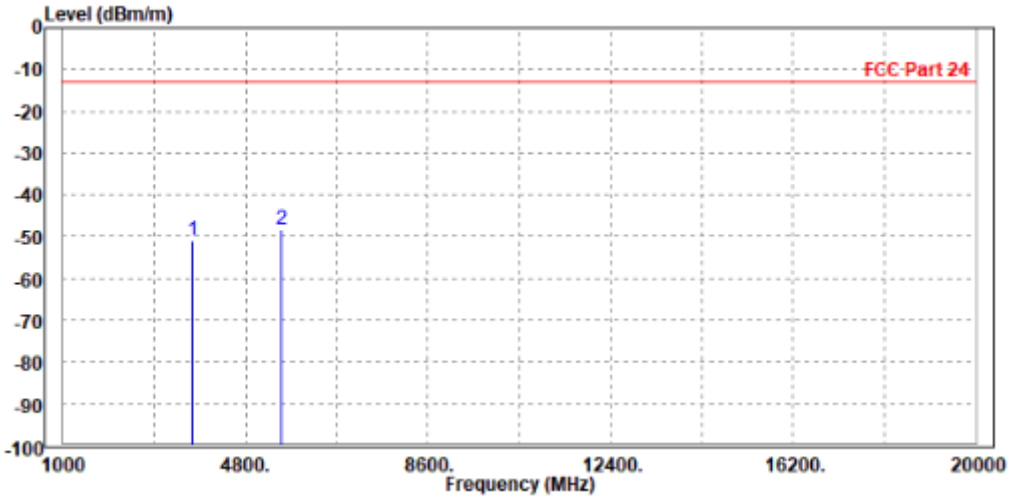
MODE	TX channel 26042	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	DC12V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3698.000	-51.14	-58.97	-13.00	-38.14	7.83	Peak	Horizontal
2 PP	5550.600	-47.52	-58.09	-13.00	-34.52	10.57	Peak	Horizontal



MODE	TX channel 26042	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC12V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

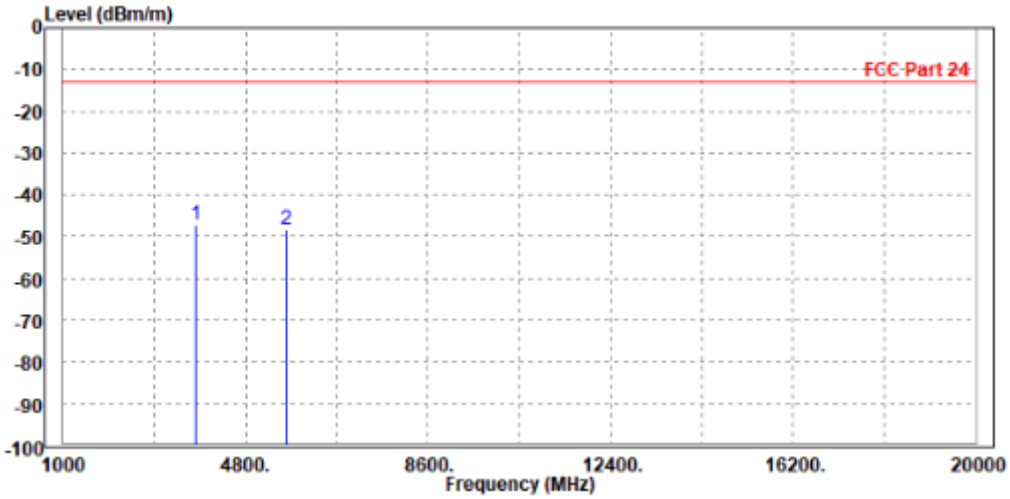
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3700.400	-51.04	-58.65	-13.00	-38.04	7.61	Peak	Vertical
2 PP	5560.000	-48.13	-59.03	-13.00	-35.13	10.90	Peak	Vertical



CH26365

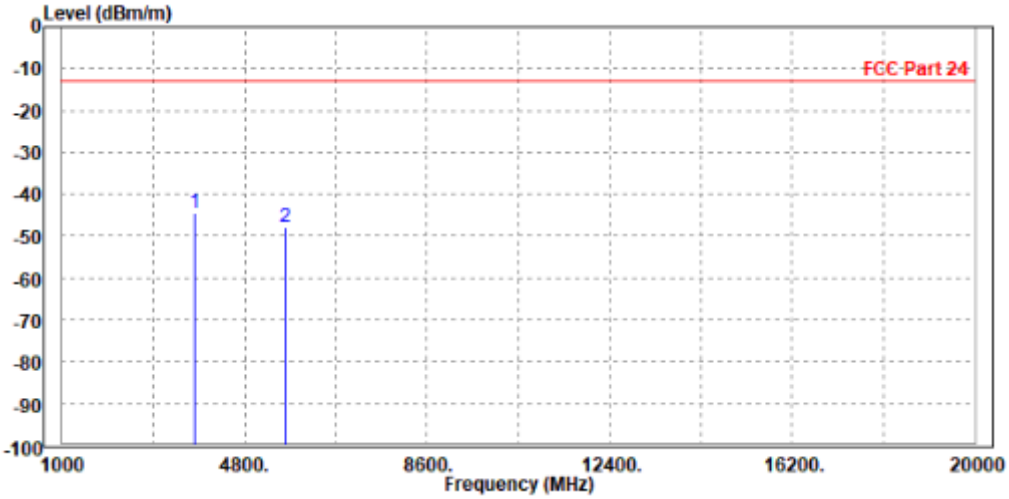
MODE	TX channel 26365	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	DC12V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	3774.000	-47.06	-55.08	-13.00	-34.06	8.02	Peak	Horizontal
2	5647.500	-48.47	-59.23	-13.00	-35.47	10.76	Peak	Horizontal



MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC12V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

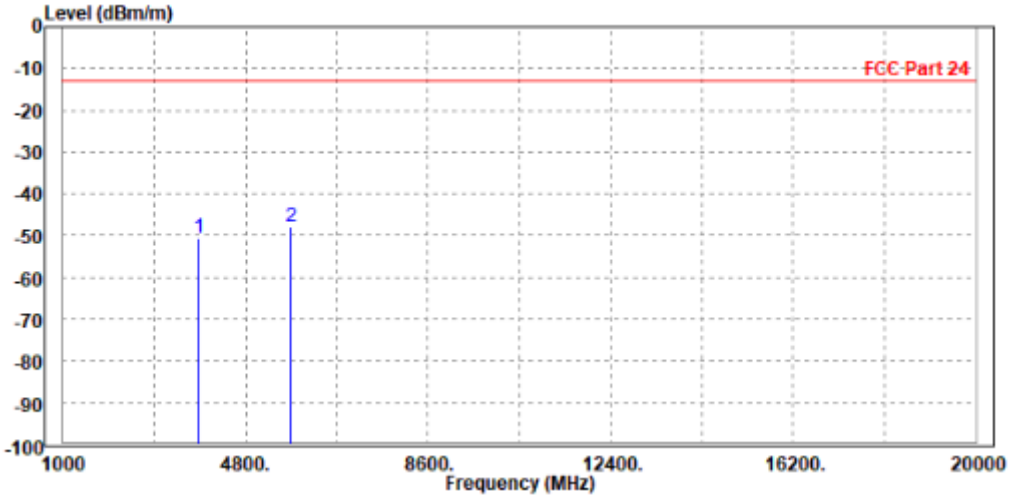
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	3765.000	-44.49	-52.19	-13.00	-31.49	7.70	Peak	Vertical
2	5655.000	-47.95	-59.12	-13.00	-34.95	11.17	Peak	Vertical



CH26688

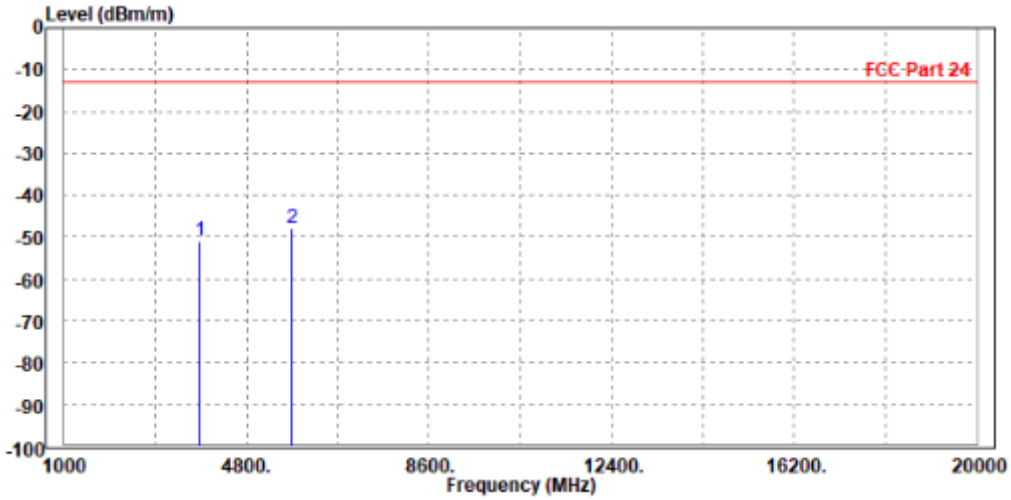
MODE	TX channel 26688	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC12V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3829.600	-50.46	-58.63	-13.00	-37.46	8.17	Peak	Horizontal
2 PP	5750.000	-48.08	-59.03	-13.00	-35.08	10.95	Peak	Horizontal



MODE	TX channel 26688	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC12V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

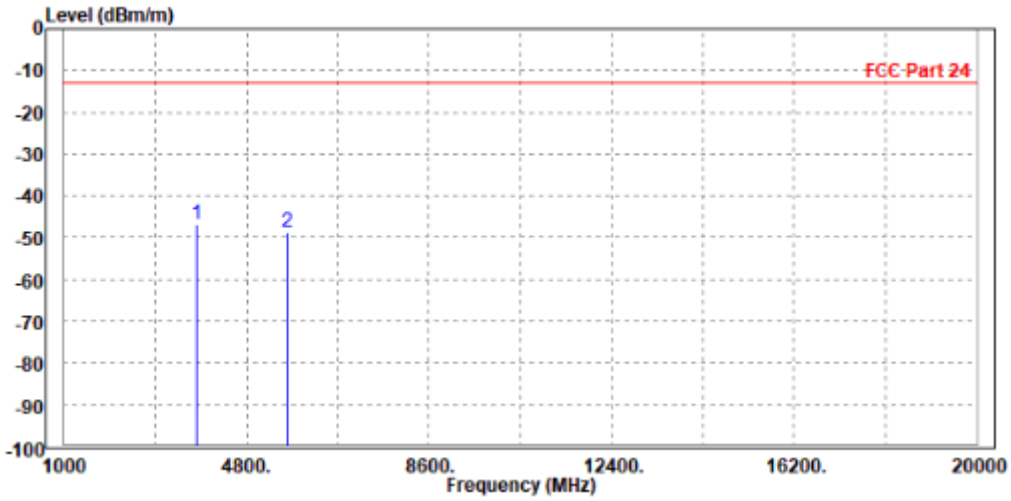
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3831.000	-50.96	-58.76	-13.00	-37.96	7.80	Peak	Vertical
2 PP	5744.400	-47.93	-59.36	-13.00	-34.93	11.43	Peak	Vertical



SUBCARRIER SPACING: 15KHz / QPSK

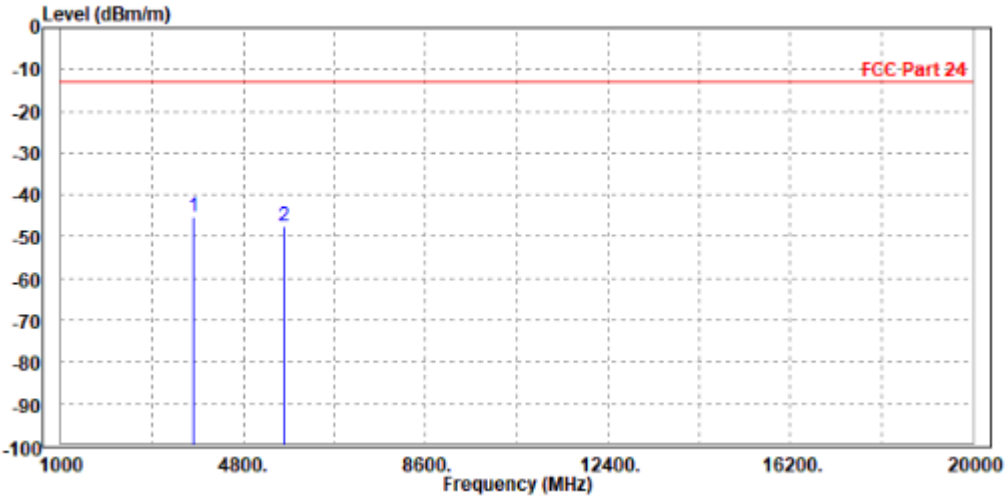
MODE	TX channel 26365	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	DC12V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3765.000	-46.86	-54.86	-13.00	-33.86	8.00	Peak	Horizontal
2	5655.000	-48.52	-59.29	-13.00	-35.52	10.77	Peak	Horizontal



MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC12V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	3774.000	-45.24	-52.96	-13.00	-32.24	7.72	Peak	Vertical
2	5647.500	-47.56	-58.71	-13.00	-34.56	11.15	Peak	Vertical



External Antenna:
LTE CAT-M1

BELOW 1GHz WORST-CASE DATA

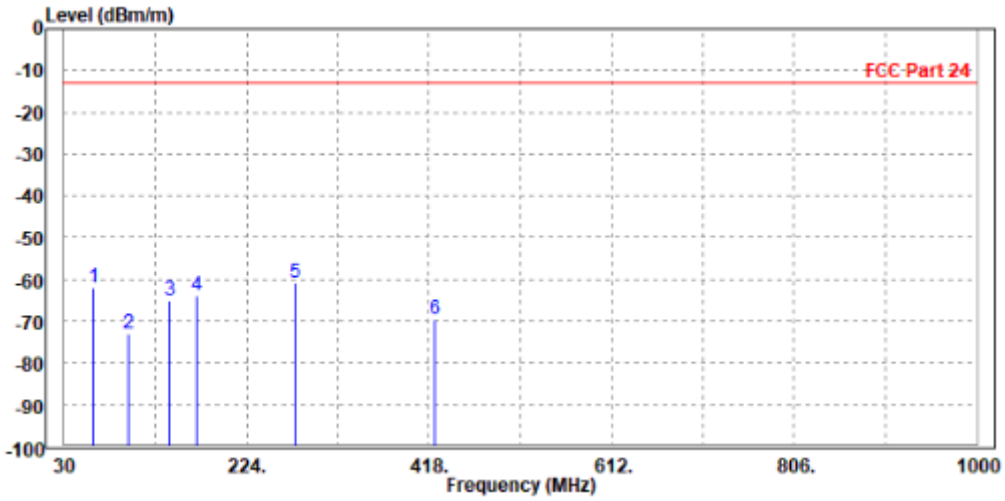
30 MHz – 1GHz data:

LTE Band 25:

CHANNEL BANDWIDTH: 3MHz / QPSK

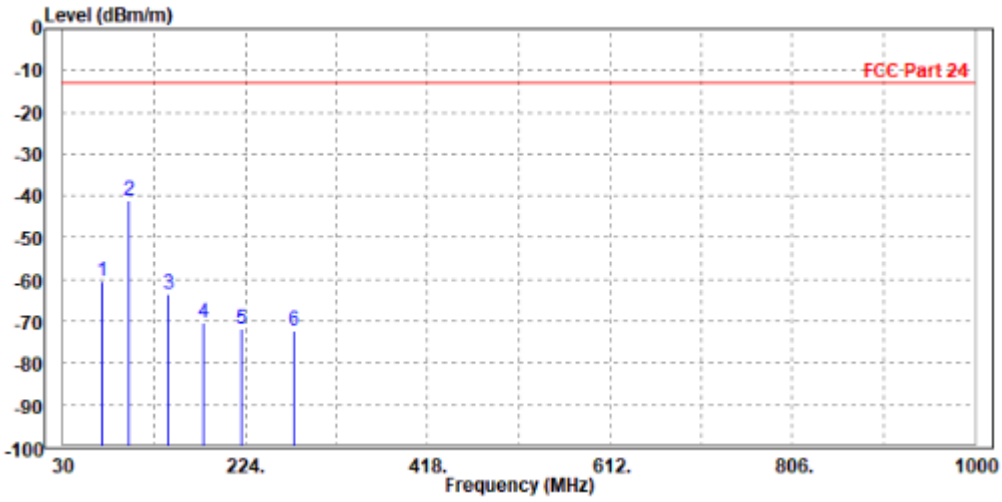
MODE	TX channel 26055	**FREQUENCY RANGE**	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1		62.010	-61.97	-42.72	-13.00	-48.97	-19.25	Peak	Horizontal
2		98.870	-72.91	-51.28	-13.00	-59.91	-21.63	Peak	Horizontal
3		141.550	-65.14	-45.88	-13.00	-52.14	-19.26	Peak	Horizontal
4		171.620	-63.69	-47.01	-13.00	-50.69	-16.68	Peak	Horizontal
5	PP	275.410	-60.80	-48.83	-13.00	-47.80	-11.97	Peak	Horizontal
6		423.820	-69.58	-59.98	-13.00	-56.58	-9.60	Peak	Horizontal



MODE	TX channel 26055	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	70.740	-60.36	-37.94	-13.00	-47.36	-22.42	Peak	Vertical
2 PP	99.840	-40.91	-34.40	-13.00	-27.91	-6.51	Peak	Vertical
3	141.550	-63.37	-49.63	-13.00	-50.37	-13.74	Peak	Vertical
4	179.380	-70.50	-51.82	-13.00	-57.50	-18.68	Peak	Vertical
5	219.150	-71.98	-55.65	-13.00	-58.98	-16.33	Peak	Vertical
6	275.410	-72.21	-60.03	-13.00	-59.21	-12.18	Peak	Vertical



ABOVE 1GHz DATA

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

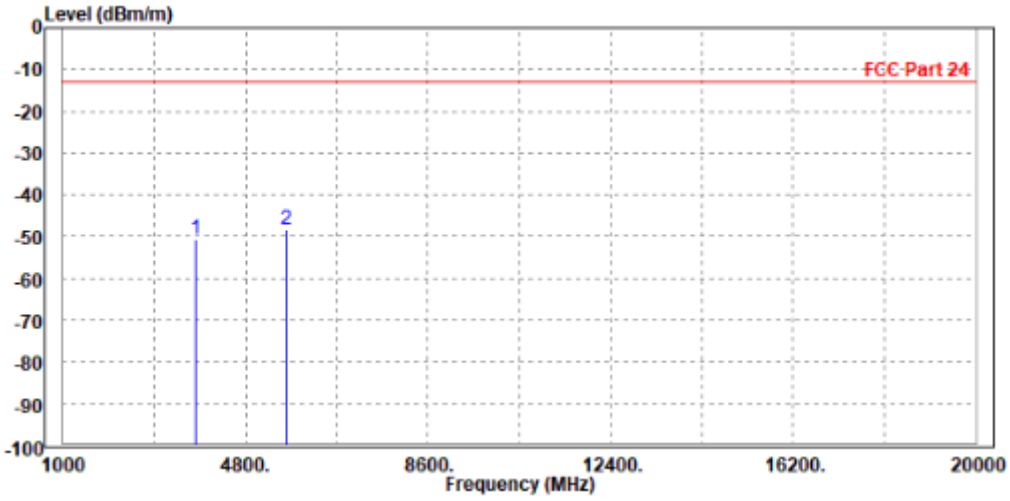
WORST-CASE DATA

LTE Band 25

CHANNEL BANDWIDTH: 1.4MHz / QPSK

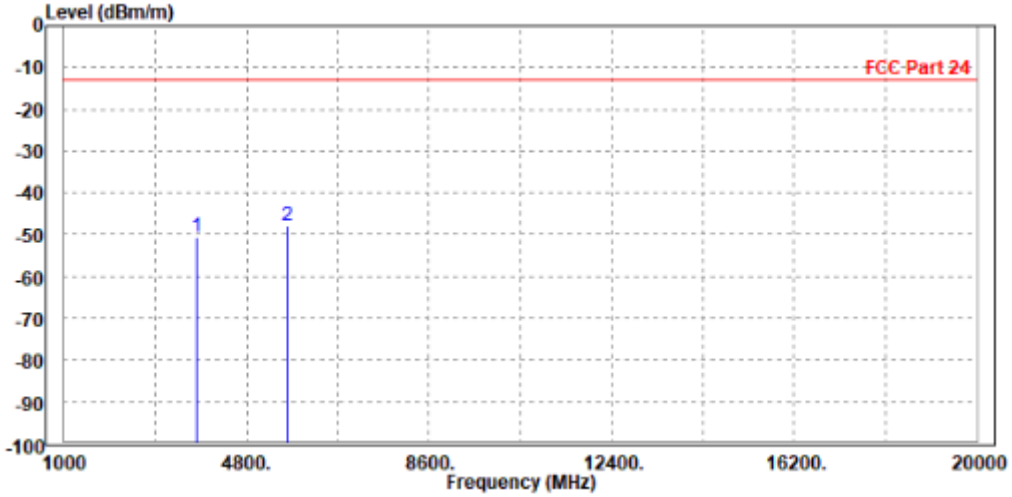
MODE	TX channel 26365	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3774.000	-50.44	-58.46	-13.00	-37.44	8.02	Peak	Horizontal
2 PP	5647.500	-48.44	-59.20	-13.00	-35.44	10.76	Peak	Horizontal



MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3765.000	-50.46	-58.16	-13.00	-37.46	7.70	Peak	Vertical
2 PP	5655.000	-47.78	-58.95	-13.00	-34.78	11.17	Peak	Vertical

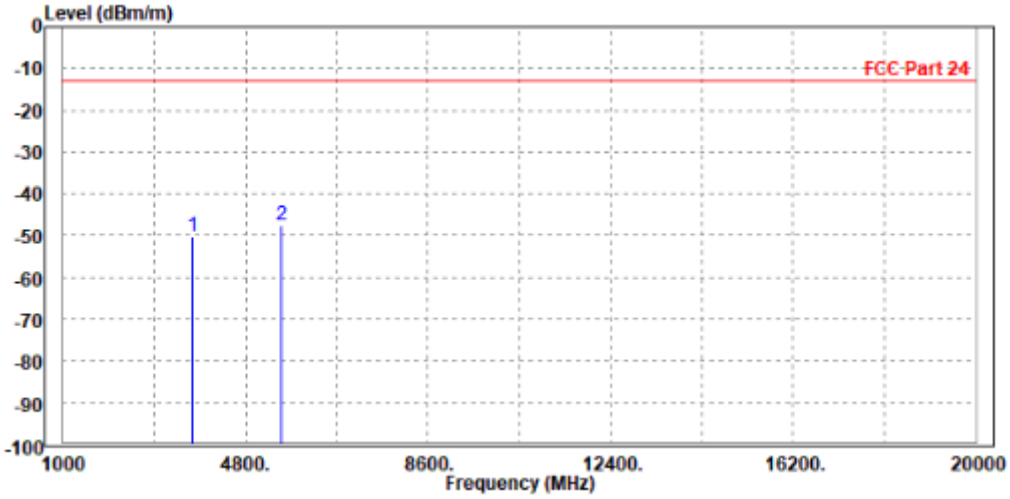


CHANNEL BANDWIDTH: 3MHz / QPSK

CH26055

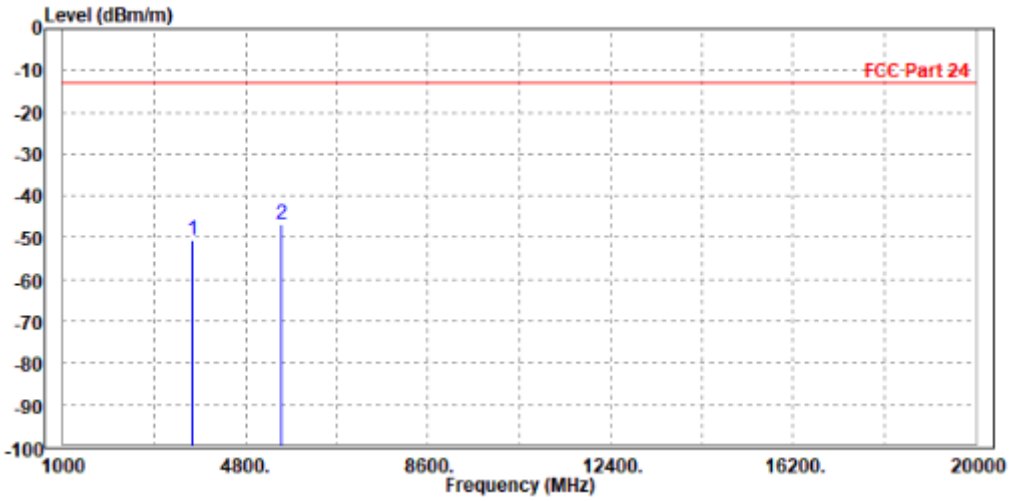
MODE	TX channel 26055	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3703.000	-50.12	-57.96	-13.00	-37.12	7.84	Peak	Horizontal
2 PP	5560.000	-47.46	-58.05	-13.00	-34.46	10.59	Peak	Horizontal



MODE	TX channel 26055	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

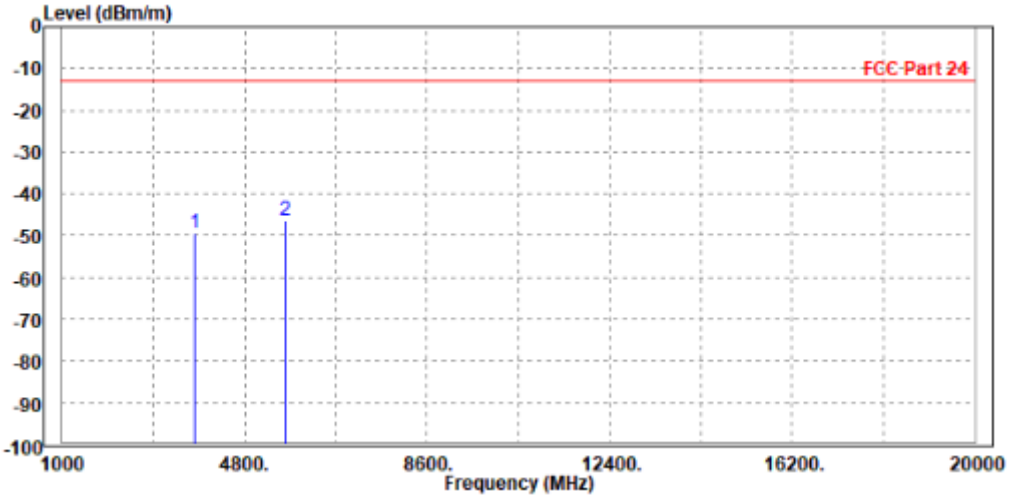
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3698.000	-50.66	-58.27	-13.00	-37.66	7.61	Peak	Vertical
2 PP	5554.500	-46.59	-57.47	-13.00	-33.59	10.88	Peak	Vertical



CH26365

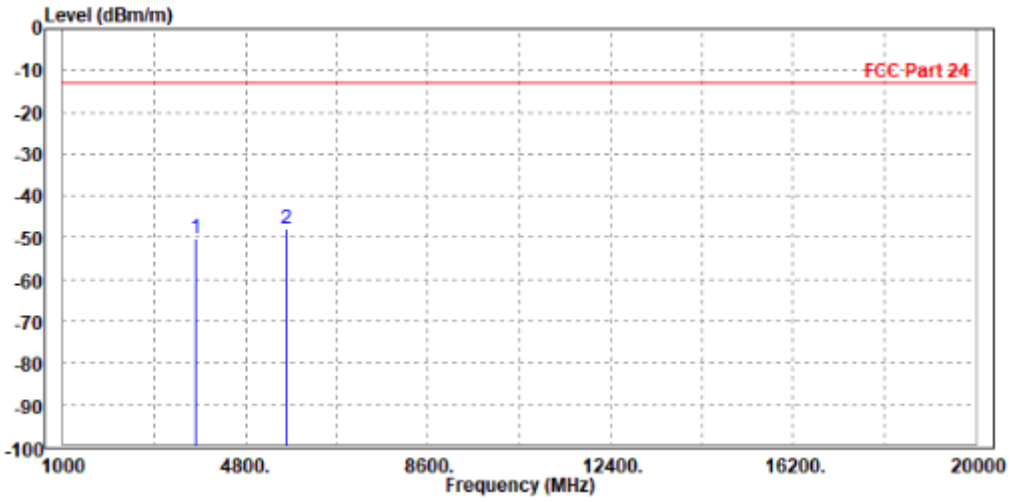
MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3765.000	-49.50	-57.50	-13.00	-36.50	8.00	Peak	Horizontal
2 PP	5655.000	-46.39	-57.16	-13.00	-33.39	10.77	Peak	Horizontal



MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

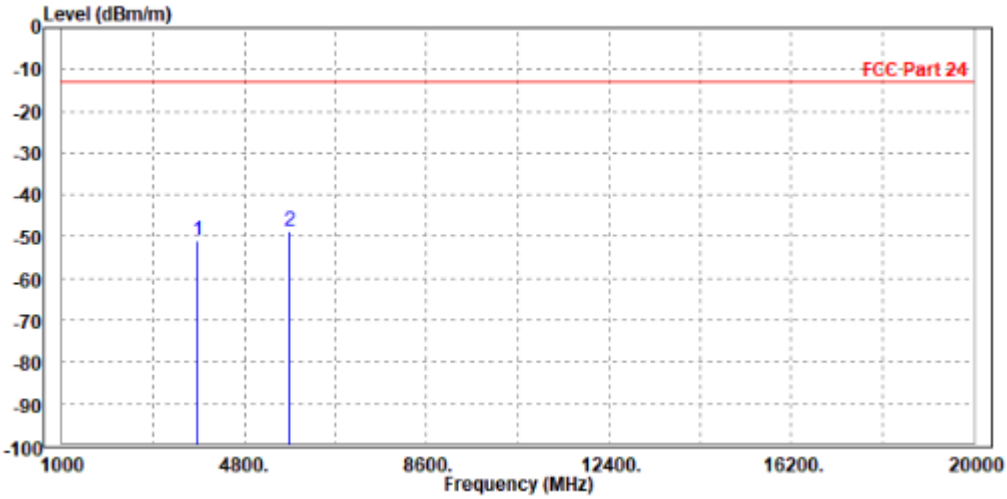
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3774.000	-50.04	-57.76	-13.00	-37.04	7.72	Peak	Vertical
2 PP	5647.500	-47.99	-59.14	-13.00	-34.99	11.15	Peak	Vertical



CH26675

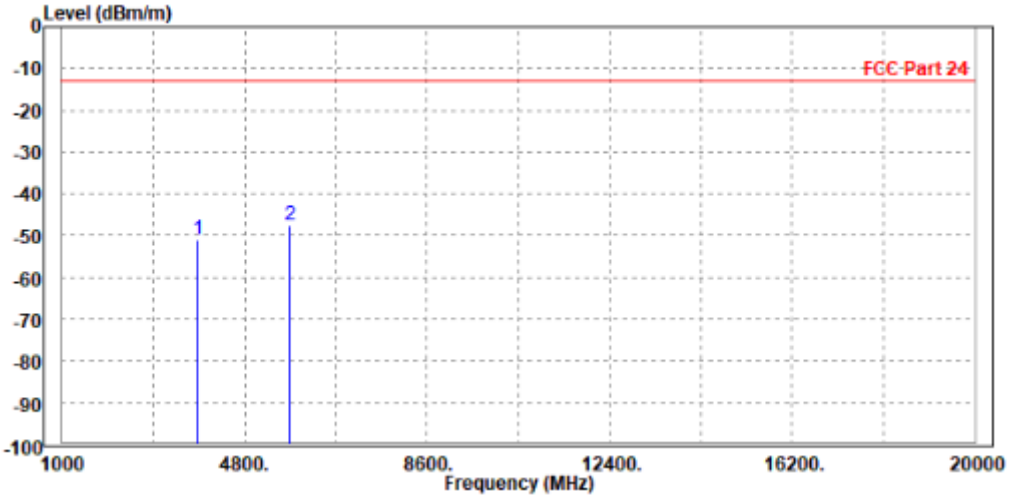
MODE	TX channel 26675	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3831.000	-50.76	-58.93	-13.00	-37.76	8.17	Peak	Horizontal
2 PP	5740.500	-48.75	-59.68	-13.00	-35.75	10.93	Peak	Horizontal



MODE	TX channel 26675	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

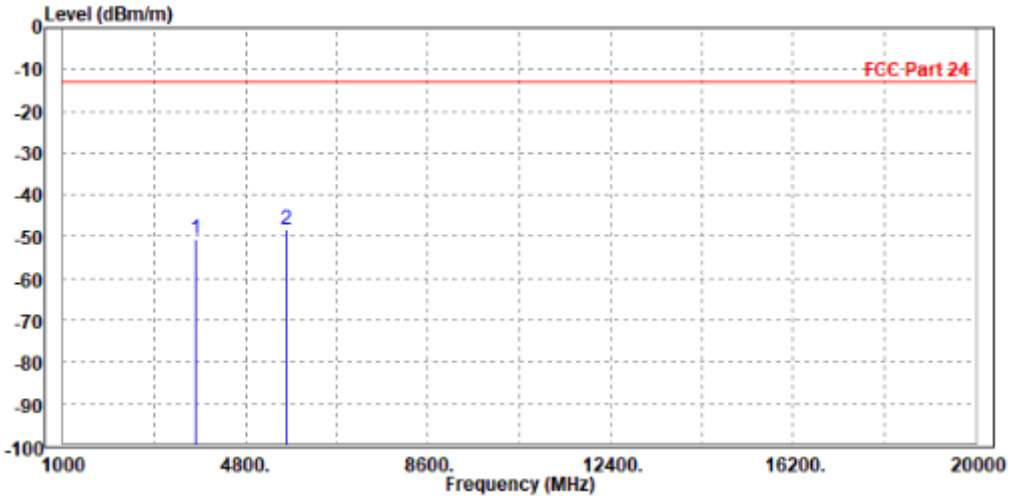
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3831.000	-50.97	-58.77	-13.00	-37.97	7.80	Peak	Vertical
2 PP	5740.500	-47.46	-58.87	-13.00	-34.46	11.41	Peak	Vertical



CHANNEL BANDWIDTH: 5MHz / QPSK

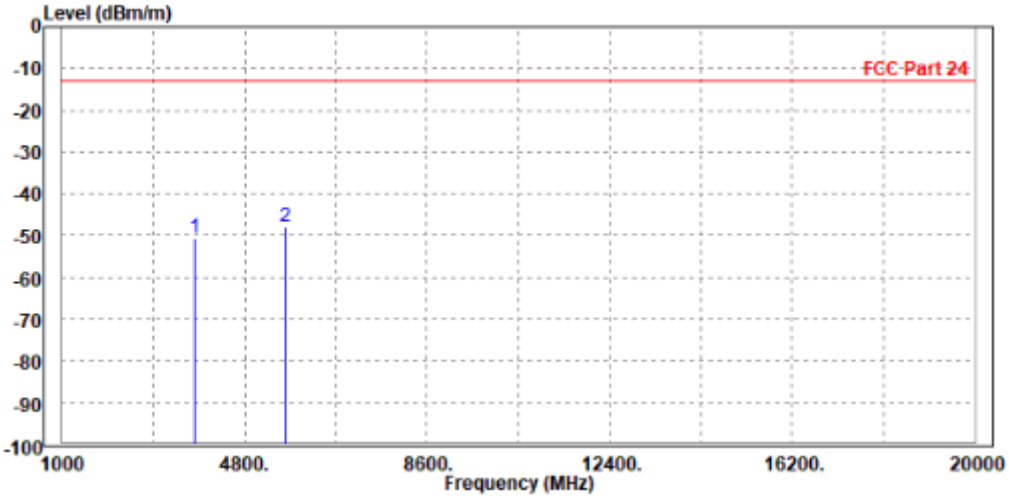
MODE	TX channel 26365	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3774.000	-50.67	-58.69	-13.00	-37.67	8.02	Peak	Horizontal
2 PP	5647.500	-48.32	-59.08	-13.00	-35.32	10.76	Peak	Horizontal



MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

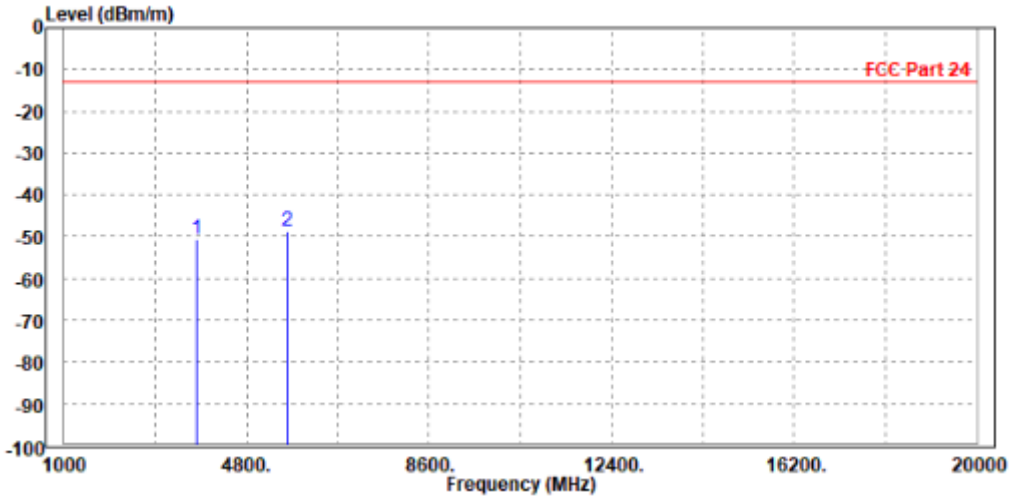
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3765.000	-50.74	-58.44	-13.00	-37.74	7.70	Peak	Vertical
2 PP	5655.000	-47.88	-59.05	-13.00	-34.88	11.17	Peak	Vertical



CHANNEL BANDWIDTH: 10MHz / QPSK

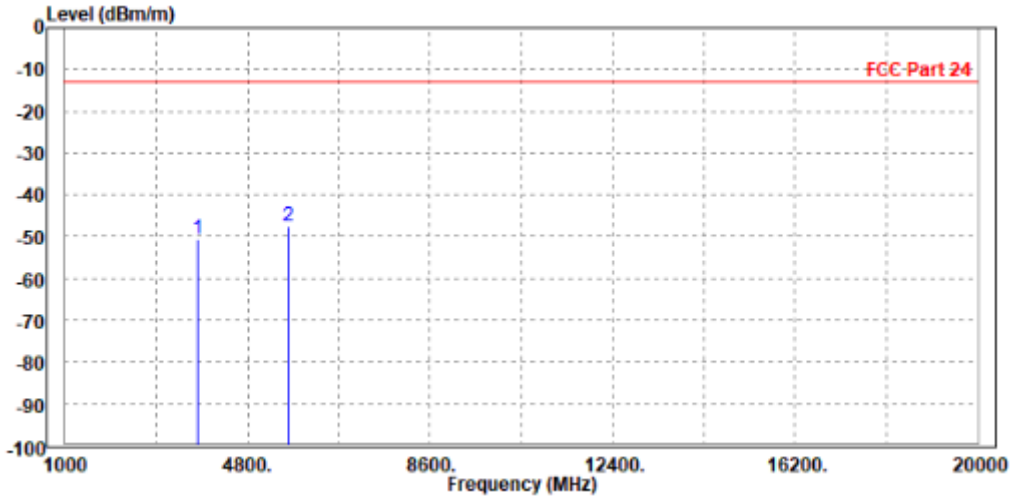
MODE	TX channel 26365	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3774.000	-50.39	-58.41	-13.00	-37.39	8.02	Peak	Horizontal
2 PP	5647.500	-48.70	-59.46	-13.00	-35.70	10.76	Peak	Horizontal



MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

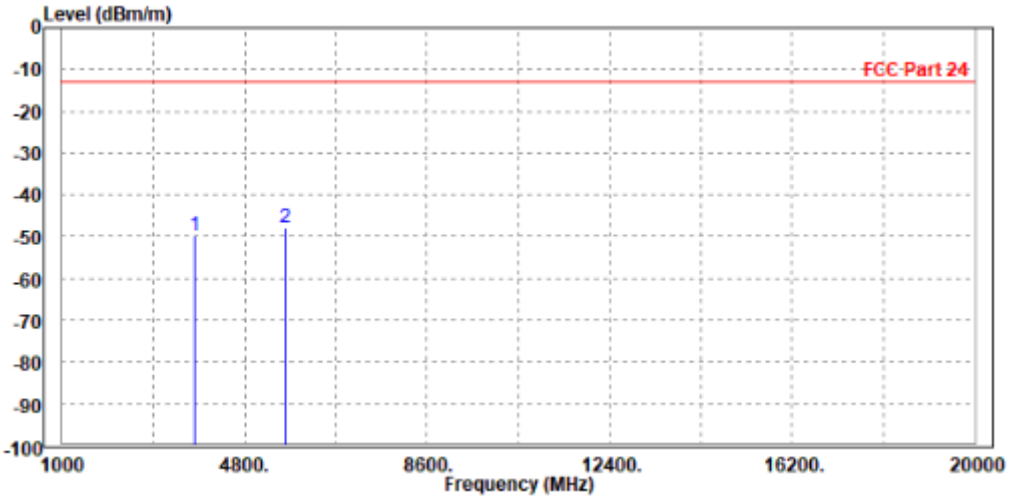
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3765.000	-50.73	-58.43	-13.00	-37.73	7.70	Peak	Vertical
2 PP	5655.000	-47.63	-58.80	-13.00	-34.63	11.17	Peak	Vertical



CHANNEL BANDWIDTH: 15MHz / QPSK

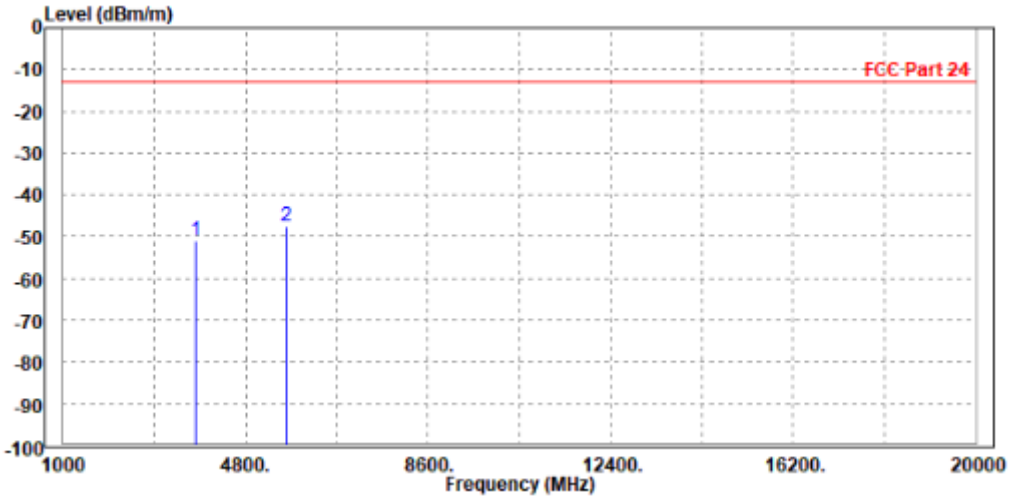
MODE	TX channel 26365	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3765.000	-49.72	-57.72	-13.00	-36.72	8.00	Peak	Horizontal
2 PP	5655.000	-47.93	-58.70	-13.00	-34.93	10.77	Peak	Horizontal



MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

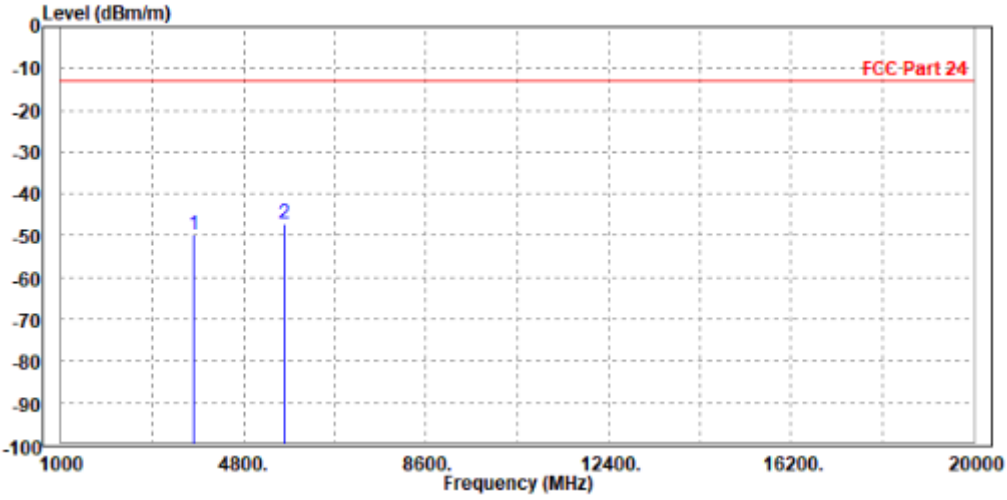
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3774.000	-50.94	-58.66	-13.00	-37.94	7.72	Peak	Vertical
2 PP	5647.500	-47.44	-58.59	-13.00	-34.44	11.15	Peak	Vertical



CHANNEL BANDWIDTH: 20MHz / QPSK

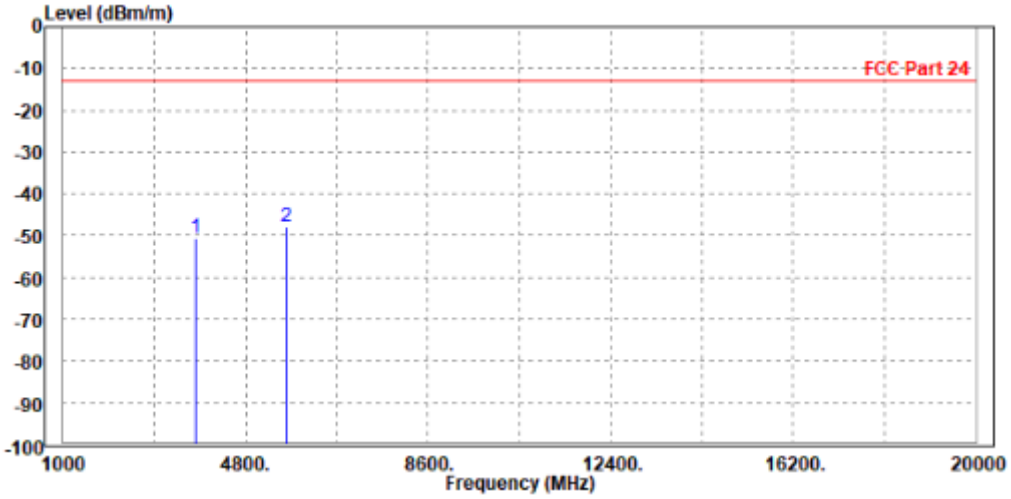
MODE	TX channel 26365	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3774.000	-49.81	-57.83	-13.00	-36.81	8.02	Peak	Horizontal
2 PP	5647.500	-47.26	-58.02	-13.00	-34.26	10.76	Peak	Horizontal



MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3765.000	-50.42	-58.12	-13.00	-37.42	7.70	Peak	Vertical
2 PP	5655.000	-47.84	-59.01	-13.00	-34.84	11.17	Peak	Vertical



LTE NB-IOT

BELOW 1GHz WORST-CASE DATA

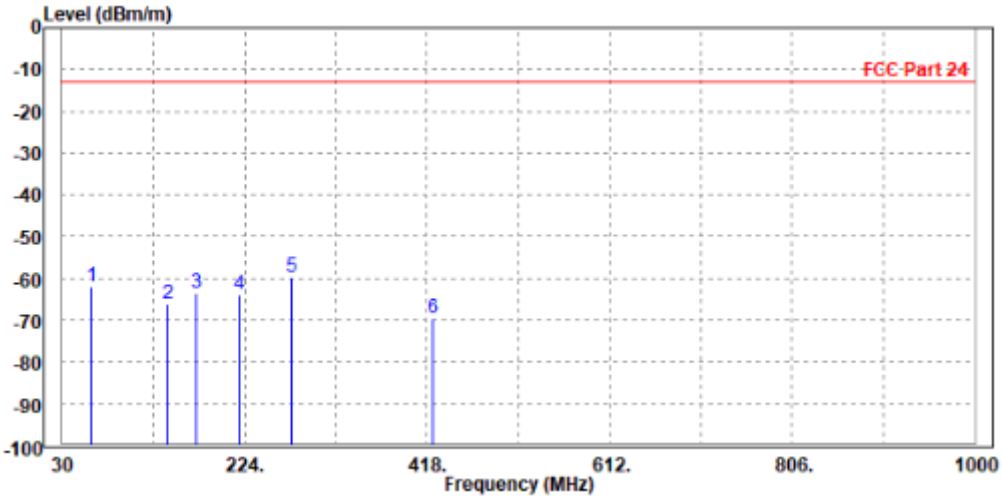
30 MHz – 1GHz data:

LTE Band 25:

SUBCARRIER SPACING: 3.75KHz / QPSK

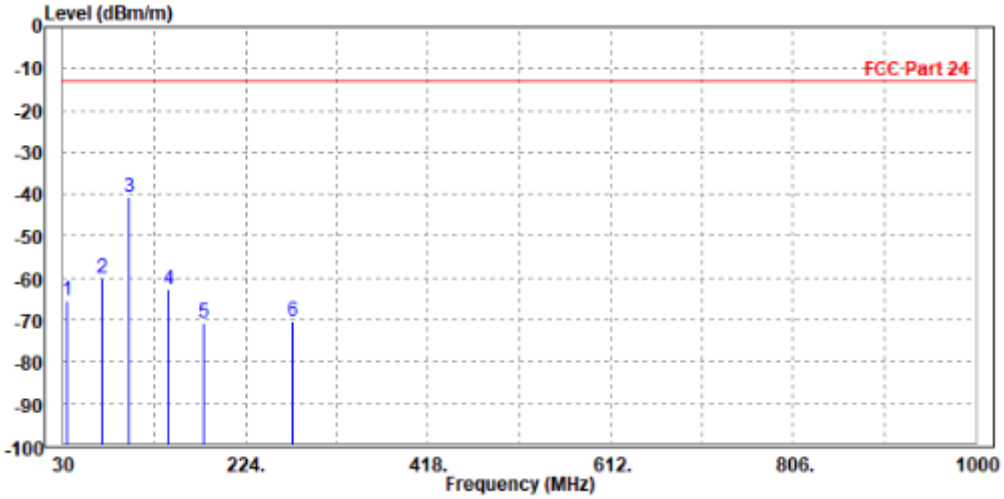
MODE	TX channel 26688	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC12V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1		62.010	-62.09	-42.84	-13.00	-49.09	-19.25	Peak	Horizontal
2		141.550	-66.32	-47.06	-13.00	-53.32	-19.26	Peak	Horizontal
3		172.590	-63.42	-46.58	-13.00	-50.42	-16.84	Peak	Horizontal
4		218.180	-63.71	-48.46	-13.00	-50.71	-15.25	Peak	Horizontal
5	PP	274.440	-59.84	-47.89	-13.00	-46.84	-11.95	Peak	Horizontal
6		423.820	-69.45	-59.85	-13.00	-56.45	-9.60	Peak	Horizontal



MODE	TX channel 26688	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC12V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	33.880	-65.49	-45.73	-13.00	-52.49	-19.76	Peak	Vertical
2	70.740	-60.21	-37.79	-13.00	-47.21	-22.42	Peak	Vertical
3 PP	99.840	-40.59	-34.08	-13.00	-27.59	-6.51	Peak	Vertical
4	141.550	-62.62	-48.88	-13.00	-49.62	-13.74	Peak	Vertical
5	179.380	-70.59	-51.91	-13.00	-57.59	-18.68	Peak	Vertical
6	274.440	-70.20	-57.96	-13.00	-57.20	-12.24	Peak	Vertical



ABOVE 1GHz DATA

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

WORST-CASE DATA

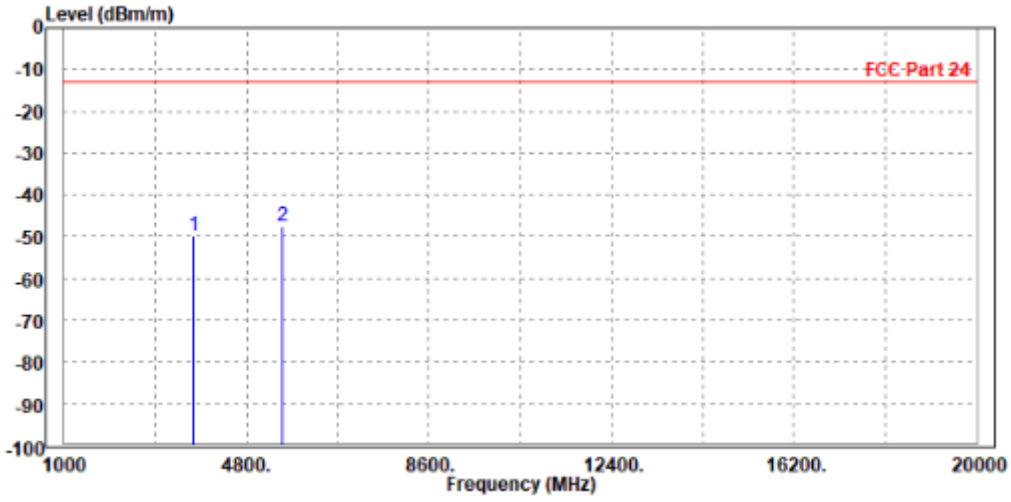
LTE Band 25

SUBCARRIER SPACING: 3.75KHz / QPSK

CH26042

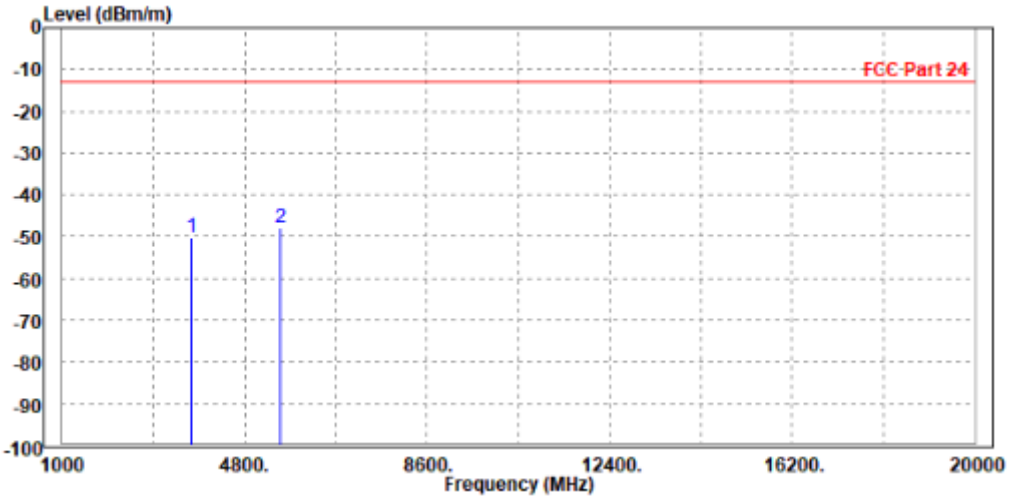
MODE	TX channel 26042	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	DC12V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3698.000	-49.94	-57.77	-13.00	-36.94	7.83	Peak	Horizontal
2 PP	5550.600	-47.37	-57.94	-13.00	-34.37	10.57	Peak	Horizontal



MODE	TX channel 26042	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC12V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

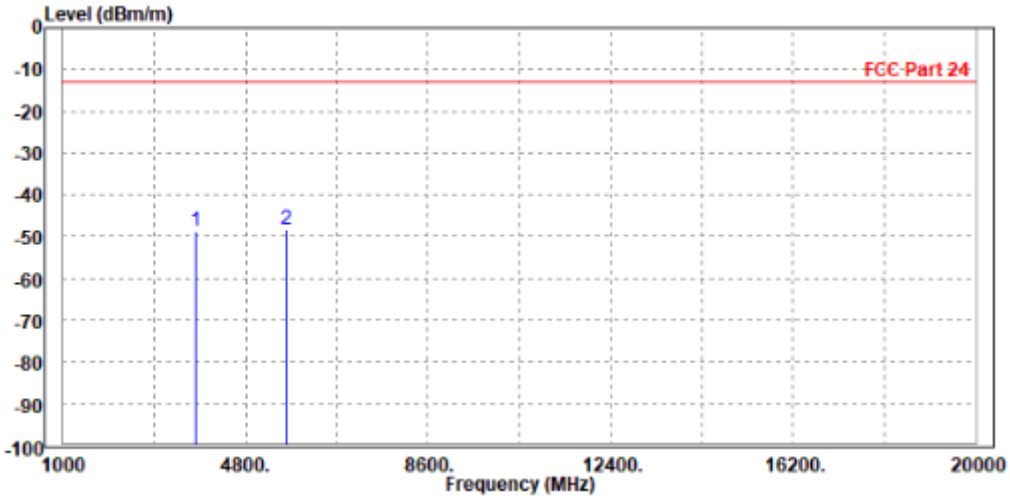
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3698.000	-50.29	-57.90	-13.00	-37.29	7.61	Peak	Vertical
2 PP	5560.000	-47.99	-58.89	-13.00	-34.99	10.90	Peak	Vertical



CH26365

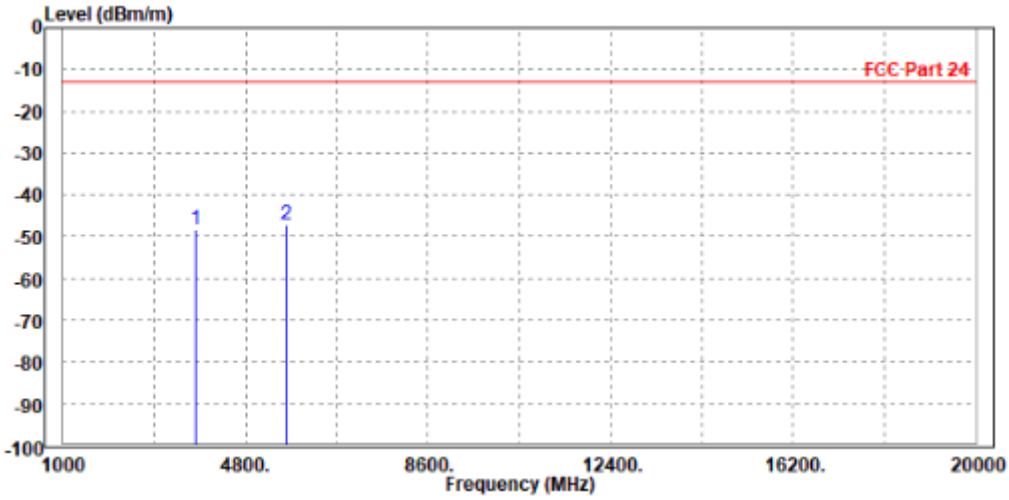
MODE	TX channel 26365	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	DC12V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3774.000	-48.55	-56.57	-13.00	-35.55	8.02	Peak	Horizontal
2 PP	5647.500	-48.10	-58.86	-13.00	-35.10	10.76	Peak	Horizontal



MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC12V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

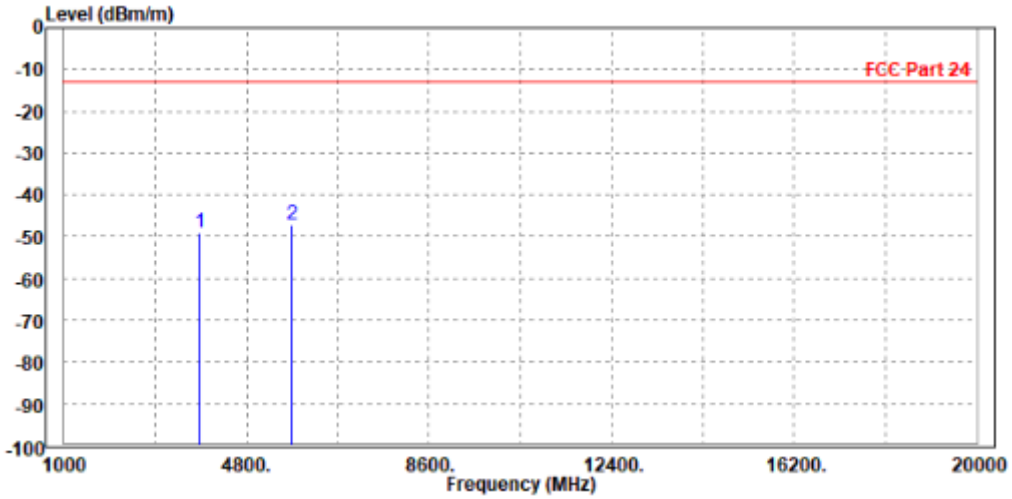
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3765.000	-48.40	-56.10	-13.00	-35.40	7.70	Peak	Vertical
2 PP	5655.000	-47.18	-58.35	-13.00	-34.18	11.17	Peak	Vertical



CH26688

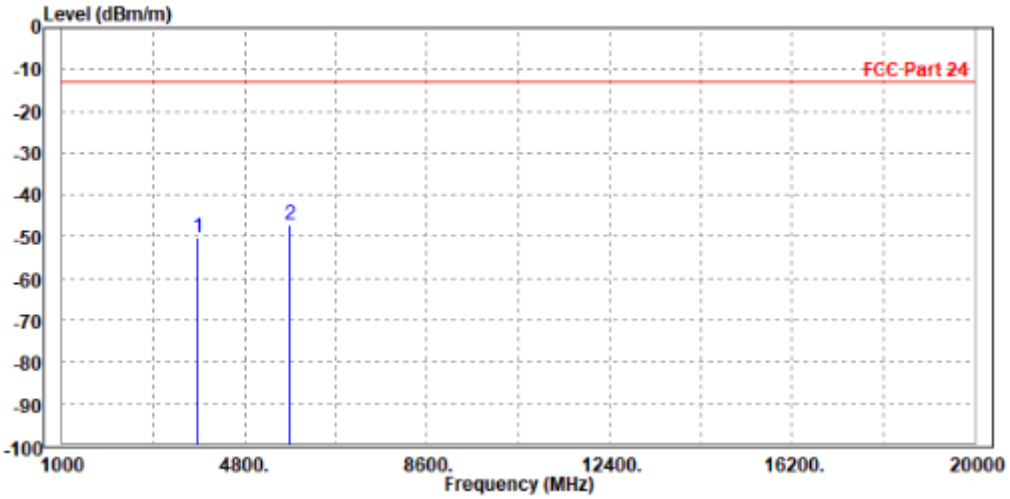
MODE	TX channel 26688	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	DC12V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3831.000	-49.17	-57.34	-13.00	-36.17	8.17	Peak	Horizontal
2 PP	5744.400	-47.06	-58.00	-13.00	-34.06	10.94	Peak	Horizontal



MODE	TX channel 26688	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC12V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

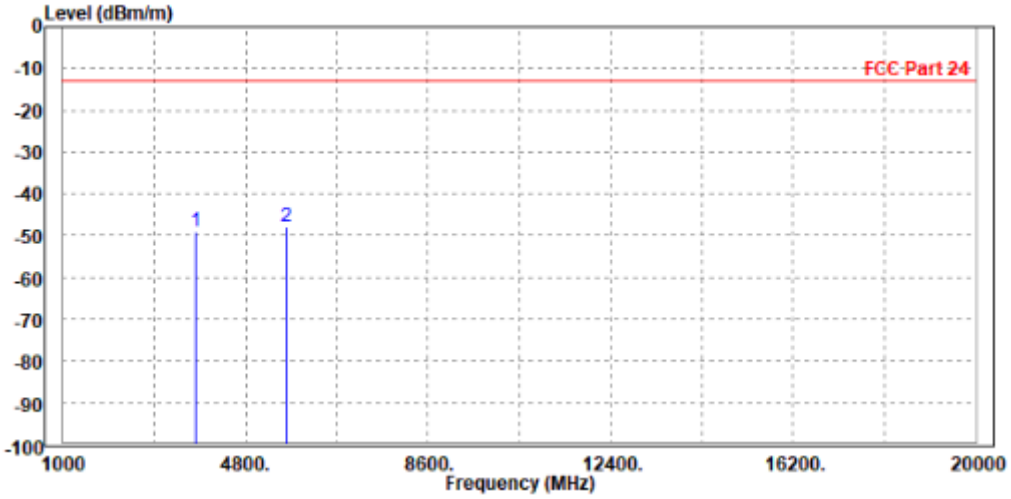
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3829.600	-50.07	-57.87	-13.00	-37.07	7.80	Peak	Vertical
2 PP	5750.000	-47.10	-58.54	-13.00	-34.10	11.44	Peak	Vertical



SUBCARRIER SPACING: 15KHz / QPSK

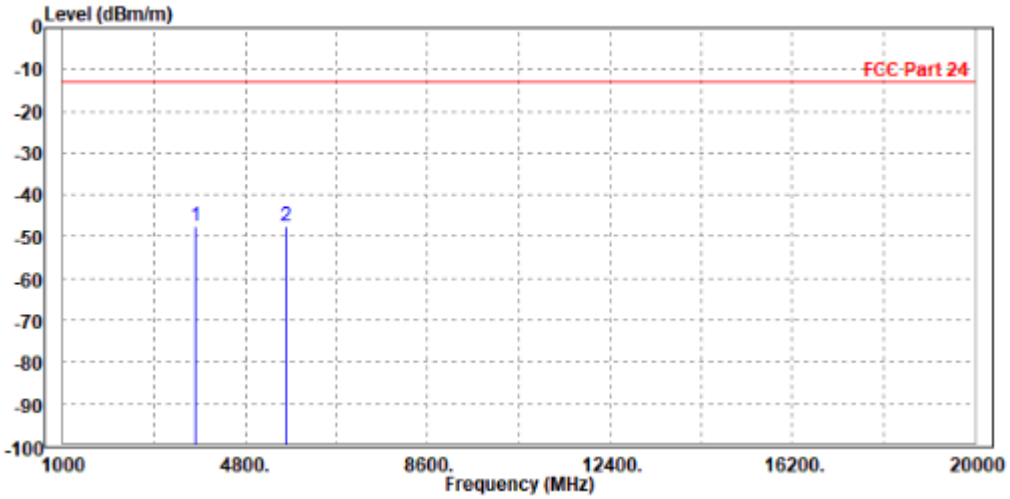
MODE	TX channel 26365	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	DC12V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3774.000	-49.11	-57.13	-13.00	-36.11	8.02	Peak	Horizontal
2 PP	5647.500	-47.76	-58.52	-13.00	-34.76	10.76	Peak	Horizontal



MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC12V
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3765.000	-47.54	-55.24	-13.00	-34.54	7.70	Peak	Vertical
2 PP	5655.000	-47.46	-58.63	-13.00	-34.46	11.17	Peak	Vertical

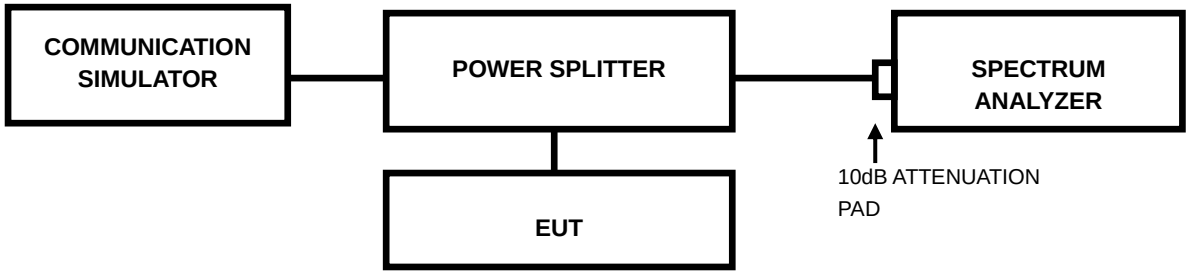


3.7 PEAK TO AVERAGE RATIO

3.7.1 LIMITS OF PEAK TO AVERAGE RATIO MEASUREMENT

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB

3.7.2 TEST SETUP



3.7.3 TEST PROCEDURES

1. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Record the maximum PAPR level associated with a probability of 0.1%.

3.7.4 TEST RESULTS

Please Refer to Module report R1907A0448-R2V2/ R1907A0448-R5V2.

4 INFORMATION ON THE TESTING LABORATORIES

We, BV 7LAYERS COMMUNICATIONS TECHNOLOGY (SHENZHEN) CO. LTD., were founded in 2015 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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Fax: +86-755-88696577

Email: customerservice.sw@bureauveritas.com
Web Site: www.adt.com.tw

The address and road map of all our labs can be found in our web site also.

5 MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.

---END---