ACCREDITED
Certificate # 3939.01

FCC TEST REPORT

(PART 27)

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

Manufacturer or Supplier:	HMD Global Oy
Address:	Bertel Jungin aukio 9, 02600 Espoo, Finland
Product:	GSM/WCDMA/LTE Mobile Phone
Brand Name:	Nokia
Model Name:	TA-1316
FCC ID:	2AJOTTA-1316
Date of tests:	Jul. 07, 2020 ~ Jul. 20, 2020

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

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

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

Prepared by Alex Chen Engineer / Mobile Department	Approved by Luke Lu Manager / Mobile Department
Alex	Luke Lu
Date: Jul. 30, 2020	Date: Jul. 30, 2020

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF200706W004-3	Original release	Jul. 30, 2020

1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 27 & Part 2		
STANDARD SECTION	**TEST TYPE AND LIMIT**	**RESULT**
2.1046 27.50(h)(2)	Equivalent Isotropically Radiated Power	Compliance
2.1055 27.54	Frequency Stability	Compliance
2.1049 27.53(m)(6)	Occupied Bandwidth	Compliance
2.1051 27.53(m)(4)(6)	Band Edge Measurements	Compliance
2.1051 27.53(m)(4)(6)	Conducted Spurious Emissions	Compliance
2.1053 27.53(m)(4)(6)	Radiated Spurious Emissions	Compliance

1.1 MEASREMENT UNCERTAINTY

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

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

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

1.2 TEST SITE AND INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Apr. 27,20	Apr. 26,21
EXA Signal Analyzer	KEYSIGHT	N9010A-526	MY54510322	Feb. 26,20	Feb. 25,21
Bilog Antenna	ETS-LINDGREN	3143B	00161965	Mar. 27,20	Mar. 26,21
Horn Antenna (1GHz-18GHz)	ETS-LINDGREN	3117	00168692	Mar. 27,20	Mar. 26,21
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-40-K-SG/QMS-00361	15433	Nov. 24, 19	Nov. 23, 20
Radio Communication Analyzer	ANRITSU	MT8820C	6201465426	Feb. 27,20	Feb. 26,21
Signal Pre-Amplifier	EMSI	EMC 9135	980249	Jun. 02,20	Jun. 01,21
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	Jun. 02,20	Jun. 01,21
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Apr. 30,20	Apr. 29,21
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	ADT	ADT_Radiated_V7.6.15.9.2	N/A	N/A	N/A
10dB Attenuator	JFW/USA	50HF-010-SMA	1505	Jun. 03,20	Jun. 02,21
Power Meter	Anritsu	ML2495A	1506002	Feb. 26,20	Feb. 25,21
Power Sensor	Anritsu	MA2411B	1339352	Feb. 26,20	Feb. 25,21
Humid & Temp Programmable Tester	Juyi	ITH-120-45-CP-AR	IAA1504-001	Jun. 02,20	Jun. 01,21
MXG Analog Microvave Signal Generator	KEYSIGHT	N5183A	MY50143024	Mar. 11,20	Mar. 10,21
Power Divider	MCLI/USA	PS2-15	24880	N/A	N/A

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	GSM/WCDMA/LTE Mobile Phone	
BRAND NAME	Nokia	
MODEL NAME	TA-1316	
POWER SUPPLY	5.0Vdc (adapter or host equipment) 3.7Vdc (Li-ion, battery)	
MODULATION TECHNOLOGY	**LTE**	QPSK, 16QAM
FREQUENCY RANGE	**LTE Band 7 Channel Bandwidth: 5MHz**	2502.5MHz ~ 2567.5MHz
	LTE Band 7 Channel Bandwidth: 10MHz	2505MHz ~ 2565MHz
	LTE Band 7 Channel Bandwidth: 15MHz	2507.5MHz ~ 2562.5MHz
	LTE Band 7 Channel Bandwidth: 20MHz	2510MHz ~ 2560MHz
	LTE Band 38 Channel Bandwidth: 5MHz	2572.5MHz ~ 2617.5MHz
	LTE Band 38 Channel Bandwidth: 10MHz	2575MHz ~ 2615MHz
	LTE Band 38 Channel Bandwidth: 15MHz	2577.5MHz ~ 2612.5MHz
	LTE Band 38 Channel Bandwidth: 20MHz	2580MHz ~ 2610MHz
EMISSION DESIGNATOR	**LTE Band 7 Channel Bandwidth: 5MHz**	QPSK: 4M49G7D
		16QAM: 4M48W7D
	LTE Band 7 Channel Bandwidth: 10MHz	QPSK: 8M96G7D
		16QAM: 8M96W7D
	LTE Band 7 Channel Bandwidth: 15MHz	QPSK: 13M4G7D
		16QAM: 13M5W7D
	LTE Band 7 Channel Bandwidth: 20MHz	QPSK: 17M9G7D
		16QAM: 17M9W7D
	LTE Band 38 Channel Bandwidth: 5MHz	QPSK: 4M49G7D
		16QAM: 4M48W7D
	LTE Band 38 Channel Bandwidth: 10MHz	QPSK: 8M96G7D
		16QAM: 8M95W7D
	LTE Band 38 Channel Bandwidth: 15MHz	QPSK: 13M4G7D
		16QAM: 13M4W7D
	LTE Band 38 Channel Bandwidth: 20MHz	QPSK: 17M9G7D
		16QAM: 17M9W7D

MAX. EIRP POWER	**LTE Band 7 Channel Bandwidth: 5MHz**	73mW
	LTE Band 7 Channel Bandwidth: 10MHz	75mW
	LTE Band 7 Channel Bandwidth: 15MHz	76mW
	LTE Band 7 Channel Bandwidth: 20MHz	76mW
	LTE Band 38 Channel Bandwidth: 5MHz	93mW
	LTE Band 38 Channel Bandwidth: 10MHz	93mW
	LTE Band 38 Channel Bandwidth: 15MHz	92mW
	LTE Band 38 Channel Bandwidth: 20MHz	94mW
ANTENNA TYPE	Fixed Internal Antenna with -2.41dBi gain	
HW VERSION	0215	
SW VERSION	0.2026.11.10	
I/O PORTS	Refer to user's manual	
CABLE SUPPLIED	USB cable: non-shielded, detachable,1meter Earphone: non-shielded, detachable, 1.5meter	

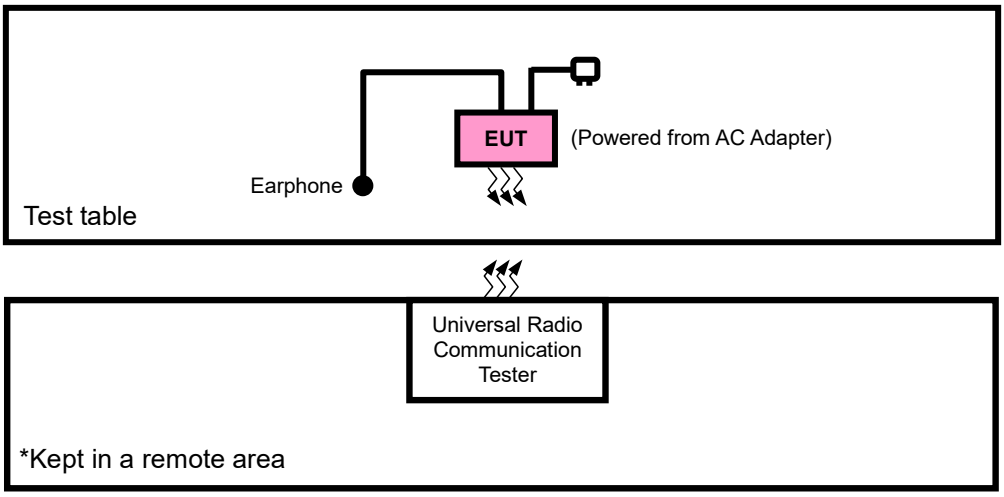
NOTE:
1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.

List of Accessory:

ACCESSORIES	BRAND	MODEL	MANUFACTURER	SPECIFICATION
Battery 1	Nokia	BL-4WL	TM	Power Rating:3.7 Vdc, 1150 mAh
AC Adapter 1	Nokia	AC-18U	DVE	I/P: 100 - 240 Vac, 100mA, O/P: 5Vdc, 550 mA
AC Adapter 2	Nokia	AC-18U	Aohai	I/P: 100 - 240 Vac, 100mA, O/P: 5Vdc, 550 mA
Earphone 1	Nokia	WH-108	RTF	1.5m non-shielded cable w/ core
USB Cable 1	Nokia	CA-190CD	RTF	1m non-shielded cable w/ core

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	DC source	LONG WEI	PS-6403D	010934269	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	DC Line: Unshielded, Detachable 1.8m

2.4 TEST ITEM AND TEST CONFIGURATION

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

EUT CONFIGURE MODE	DESCRIPTION
A	**EUT + Adapter + USB Cable with LTE link**
B	EUT + Battery with **LTE link**

LTE BAND 7 MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
B	EIRP	20775 to 21425	20775, 21100, 21425	5MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		20800 to 21400	20800, 21100, 21400	10MHz	QPSK, 16QAM	1 RB / 0RB Offset
		20825 to 21375	20825, 21100, 21375	15MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		20850 to 21350	20850, 21100, 21350	20MHz	QPSK, 16QAM	1 RB / 0 RB Offset
B	FREQUENCY STABILITY	20775 to 21425	20775, 21425	5MHz	QPSK	1 RB / 0 RB Offset
		20800 to 21400	20800, 21400	10MHz	QPSK	1 RB / 0RB Offset
		20825 to 21375	20825, 21375	15MHz	QPSK	1 RB / 0 RB Offset
		20850 to 21350	20850, 21350	20MHz	QPSK	1 RB / 0 RB Offset
B	OCCUPIED BANDWIDTH	20775 to 21425	20775, 21100, 21425	5MHz	QPSK, 16QAM	25 RB / 0 RB Offset
		20800 to 21400	20800, 21100, 21400	10MHz	QPSK, 16QAM	50 RB / 0 RB Offset
		20825 to 21375	20825, 21100, 21375	15MHz	QPSK, 16QAM	75 RB / 0 RB Offset
		20850 to 21350	20850, 21100, 21350	20MHz	QPSK, 16QAM	100 RB / 0 RB Offset
B	BAND EDGE	20775 to 21425	20775	5MHz	QPSK, 16QAM	1 RB / 0 RB Offset
						25 RB / 0 RB Offset
			21425	5MHz	QPSK, 16QAM	1 RB / 24 RB Offset
						25 RB / 0 RB Offset
		20800 to 21400	20800	10MHz	QPSK, 16QAM	1 RB / 0 RB Offset
						50 RB / 0 RB Offset
			21400	10MHz	QPSK, 16QAM	1 RB / 49 RB Offset
						50 RB / 0 RB Offset
		20825 to 21375	20825	15MHz	QPSK, 16QAM	1 RB / 0 RB Offset
						75 RB / 0 RB Offset
			21375	15MHz	QPSK, 16QAM	1 RB / 74 RB Offset
						75 RB / 0 RB Offset
		20850 to 21350	20850	20MHz	QPSK, 16QAM	1 RB / 0 RB Offset
						100 RB / 0 RB Offset
			21350	20MHz	QPSK, 16QAM	1 RB / 99 RB Offset
						100 RB / 0 RB Offset
B	CONDCUDETED EMISSION	20775 to 21425	20775, 21100, 21425	5MHz	QPSK	1 RB / 0 RB Offset
		20800 to 21400	20800, 21100, 21400	10MHz	QPSK	1 RB / 0RB Offset
		20825 to 21375	20825, 21100, 21375	15MHz	QPSK	1 RB / 0 RB Offset
		20850 to 21350	20850, 21100, 21350	20MHz	QPSK	1 RB / 0 RB Offset
A	RADIATED EMISSION	20775 to 21425	21100	5MHz	QPSK	1 RB / 0 RB Offset
		20800 to 21400	21100	10MHz	QPSK	1 RB / 0 RB Offset
		20825 to 21375	21100	15MHz	QPSK	1 RB / 0 RB Offset
		20850 to 21350	20850, 21100, 21350	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 BAND 38 MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
B	EIRP	37775 to 38225	37775, 38000, 38225	5MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		37800 to 38200	37800, 38000, 38200	10MHz	QPSK, 16QAM	1 RB / 0RB Offset
		37825 to 38175	37825, 38000, 38175	15MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		37850 to38150	37850, 38000, 38150	20MHz	QPSK, 16QAM	1 RB / 0 RB Offset
B	FREQUENCY STABILITY	37775 to 38225	37775, 38225	5MHz	QPSK	1 RB / 0 RB Offset
		37800 to 38200	37800, 38200	10MHz	QPSK	1 RB / 0RB Offset
		37825 to 38175	37825, 38175	15MHz	QPSK	1 RB / 0 RB Offset
		37850 to38150	37850, 38150	20MHz	QPSK	1 RB / 0 RB Offset
B	OCCUPIED BANDWIDTH	37775 to 38225	37775, 38000, 38225	5MHz	QPSK, 16QAM	25 RB / 0 RB Offset
		37800 to 38200	37800, 38000, 38200	10MHz	QPSK, 16QAM	50 RB / 0 RB Offset
		37825 to 38175	37825, 38000, 38175	15MHz	QPSK, 16QAM	75 RB / 0 RB Offset
		37850 to38150	37850, 38000, 38150	20MHz	QPSK, 16QAM	100 RB / 0 RB Offset
B	BAND EDGE	37775 to 38225	37775	5MHz	QPSK, 16QAM	1 RB / 0 RB Offset
						25 RB / 0 RB Offset
			38825	5MHz	QPSK, 16QAM	1 RB / 24 RB Offset
						25 RB / 0 RB Offset
		37800 to 38200	37800	10MHz	QPSK, 16QAM	1 RB / 0 RB Offset
						50 RB / 0 RB Offset
			38200	10MHz	QPSK, 16QAM	1 RB / 49 RB Offset
						50 RB / 0 RB Offset
		37825 to 38175	37825	15MHz	QPSK, 16QAM	1 RB / 0 RB Offset
						75 RB / 0 RB Offset
			38175	15MHz	QPSK, 16QAM	1 RB / 74 RB Offset
						75 RB / 0 RB Offset
		37850 to38150	37850	20MHz	QPSK, 16QAM	1 RB / 0 RB Offset
						100 RB / 0 RB Offset
			38150	20MHz	QPSK, 16QAM	1 RB / 99 RB Offset
						100 RB / 0 RB Offset
B	CONDCUDETED EMISSION	37775 to 38225	37775, 38000, 38225	5MHz	QPSK	1 RB / 0 RB Offset
		37800 to 38200	37800, 38000, 38200	10MHz	QPSK	1 RB / 0RB Offset
		37825 to 38175	37825, 38000, 38175	15MHz	QPSK	1 RB / 0 RB Offset
		37850 to38150	37850, 38000, 38150	20MHz	QPSK	1 RB / 0 RB Offset
A	RADIATED EMISSION	37775 to 38225	38000	5MHz	QPSK	1 RB / 0 RB Offset
		37800 to 38200	37800, 38000, 38200	10MHz	QPSK	1 RB / 0RB Offset
		37825 to 38175	38000	15MHz	QPSK	1 RB / 0 RB Offset
		37850 to38150	38000	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.

TEST CONDITION:

TEST ITEM	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
EIRP	23deg. C, 70%RH	DC 5V By Adapter	Star Le
FREQUENCY STABILITY	23deg. C, 70%RH	DC 3.6V/3.7V/4.2V	Kevin Zhang
OCCUPIED BANDWIDTH	23deg. C, 70%RH	DC 3.7V By Battery	Kevin Zhang
BAND EDGE	23deg. C, 70%RH	DC 3.7V By Battery	Kevin Zhang
CONDCUDETED EMISSION	23deg. C, 70%RH	DC 3.7V By Battery	Kevin Zhang
RADIATED EMISSION	23deg. C, 70%RH	DC 5V By Adapter	Star Le

2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

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

FCC 47 CFR Part 2

FCC 47 CFR Part 27

KDB 971168 D01 Power Meas License Digital Systems v03r01

ANSI/TIA/EIA-603-D

ANSI/TIA/EIA-603-E

ANSI C63.26-2015

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

3 TEST TYPES AND RESULTS

3.1 OUTPUT POWER MEASUREMENT

3.1.1 LIMITS OF OUTPUT POWER MEASUREMENT

The radiated peak output power shall be according to the specific rule Part 27.50(h)(2) that “User stations are limited to 2 watts” and 27.50(i) specific that “Peak transmit power must be measure over any interval of continuous transmission using instrumentation calibration in terms of rms-equivalent voltage.”

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);

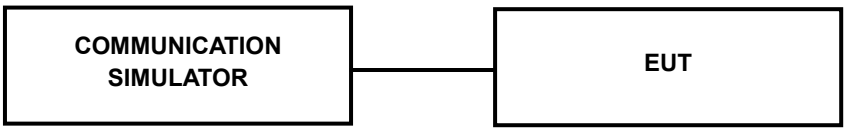
L_C = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

CONDUCTED POWER MEASUREMENT:

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

3.1.3 TEST SETUP

CONDUCTED POWER MEASUREMENT:



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

3.1.4 TEST RESULTS

AVERAGE CONDUCTED OUTPUT POWER (dBm)

LTE band 7

Band/BW	Modulation	RB Size	RB Offset	Low CH 20775 Frequency 2502.5 MHz	Mid CH 21100 Frequency 2535 MHz	High CH 21425 Frequency 2567.5 MHz	MPR
7/ 5	QPSK	1	0	20.89	21.10	20.98	0
		1	12	20.97	21.14	21.06	0
		1	24	20.76	20.96	20.89	0
		12	0	19.93	20.15	20.01	1
		12	6	19.95	20.25	20.07	1
		12	13	19.86	20.08	19.98	1
		25	0	19.92	20.19	20.02	1
	16QAM	1	0	20.29	20.54	20.43	1
		1	12	20.21	20.50	20.33	1
		1	24	20.12	20.29	20.21	1
		12	0	19.60	19.85	19.69	2
		12	6	19.53	19.80	19.62	2
		12	13	19.49	19.74	19.63	2
		25	0	19.60	19.82	19.70	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 20800 Frequency 2505 MHz	Mid CH 21100 Frequency 2535 MHz	High CH 21400 Frequency 2565 MHz	MPR
7/ 10	QPSK	1	0	20.86	21.13	20.98	0
		1	24	20.97	21.14	21.07	0
		1	49	20.73	21.00	20.85	0
		25	0	19.94	20.14	20.04	1
		25	12	20.01	20.19	20.07	1
		25	25	19.84	20.05	19.97	1
		50	0	19.97	20.19	19.99	1
	16QAM	1	0	20.29	20.51	20.39	1
		1	24	20.26	20.46	20.36	1
		1	49	20.12	20.30	20.18	1
		25	0	19.62	19.83	19.75	2
		25	12	19.57	19.74	19.67	2
		25	25	19.48	19.75	19.60	2
		50	0	19.64	19.81	19.74	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 20825 Frequency 2507.5 MHz	Mid CH 21100 Frequency 2535 MHz	High CH 21375 Frequency 2562.5 MHz	MPR
7/ 15	QPSK	1	0	20.93	21.13	20.95	0
		1	37	20.95	21.19	21.02	0
		1	74	20.79	21.03	20.86	0
		36	0	19.91	20.15	20.05	1
		36	19	20.02	20.24	20.07	1
		36	39	19.82	20.06	19.97	1
		75	0	19.97	20.17	20.04	1
	16QAM	1	0	20.33	20.58	20.39	1
		1	37	20.25	20.47	20.36	1
		1	74	20.08	20.35	20.20	1
		36	0	19.66	19.83	19.76	2
		36	19	19.51	19.78	19.63	2
		36	39	19.53	19.73	19.63	2
		75	0	19.65	19.84	19.67	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 20850 Frequency 2510 MHz	Mid CH 21100 Frequency 2535 MHz	High CH 21350 Frequency 2560 MHz	MPR
7/ 20	QPSK	1	0	20.94	21.17	21.03	0
		1	50	20.99	**21.22**	21.08	0
		1	99	20.81	21.04	20.90	0
		50	0	19.97	20.20	20.06	1
		50	25	20.03	20.26	20.12	1
		50	50	19.90	20.13	19.99	1
		100	0	19.98	20.21	20.07	1
	16QAM	1	0	20.36	20.59	20.45	1
		1	50	20.29	20.52	20.38	1
		1	99	20.14	20.37	20.23	1
		50	0	19.68	19.91	19.77	2
		50	25	19.59	19.82	19.68	2
		50	50	19.56	19.79	19.65	2
		100	0	19.66	19.89	19.75	2

LTE band 38

Band/BW	Modulation	RB Size	RB Offset	Low CH 37775 Frequency 2572.5 MHz	Mid CH 38000 Frequency 2595 MHz	High CH 38225 Frequency 2617.5MHz	MPR
38/ 5	QPSK	1	0	21.78	21.92	22.10	0
		1	12	21.77	21.87	22.09	0
		1	24	21.71	21.84	22.07	0
		12	0	20.85	21.00	21.16	1
		12	6	20.77	21.00	21.12	1
		12	13	20.78	20.93	21.13	1
		25	0	20.80	21.00	21.13	1
	16QAM	1	0	21.24	21.42	21.61	1
		1	12	21.26	21.48	21.61	1
		1	24	21.23	21.33	21.55	1
		12	0	19.96	20.14	20.28	2
		12	6	20.03	20.23	20.35	2
		12	13	19.92	20.10	20.29	2
		25	0	19.95	20.10	20.28	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 37800 Frequency 2575 MHz	Mid CH 38000 Frequency 2595 MHz	High CH 38200 Frequency 2615 MHz	MPR
38/ 10	QPSK	1	0	21.75	21.95	22.10	0
		1	24	21.77	21.87	22.10	0
		1	49	21.68	21.88	22.03	0
		25	0	20.86	20.99	21.19	1
		25	12	20.83	20.94	21.12	1
		25	25	20.76	20.90	21.12	1
		50	0	20.85	21.00	21.10	1
	16QAM	1	0	21.24	21.39	21.57	1
		1	24	21.31	21.44	21.64	1
		1	49	21.23	21.34	21.52	1
		25	0	19.98	20.12	20.34	2
		25	12	20.07	20.17	20.40	2
		25	25	19.91	20.11	20.26	2
		50	0	19.99	20.09	20.32	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 37825 Frequency 2577.5 MHz	Mid CH 38000 Frequency 2595 MHz	High CH 38175 Frequency 2612.5MHz	MPR
38/ 15	QPSK	1	0	21.82	21.95	22.07	0
		1	37	21.75	21.92	22.05	0
		1	74	21.74	21.91	22.04	0
		36	0	20.83	21.00	21.20	1
		36	19	20.84	20.99	21.12	1
		36	39	20.74	20.91	21.12	1
		75	0	20.85	20.98	21.15	1
	16QAM	1	0	21.28	21.46	21.57	1
		1	37	21.30	21.45	21.64	1
		1	74	21.19	21.39	21.54	1
		36	0	20.02	20.12	20.35	2
		36	19	20.01	20.21	20.36	2
		36	39	19.96	20.09	20.29	2
		75	0	20.00	20.12	20.25	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 37850 Frequency 2580 MHz	Mid CH 38000 Frequency 2595 MHz	High CH 38150 Frequency 2610 MHz	MPR
38/ 20	QPSK	1	0	21.83	21.99	**22.15**	0
		1	50	21.79	21.95	22.11	0
		1	99	21.76	21.92	22.08	0
		50	0	20.89	21.05	21.21	1
		50	25	20.85	21.01	21.17	1
		50	50	20.82	20.98	21.14	1
		100	0	20.86	21.02	21.18	1
	16QAM	1	0	21.31	21.47	21.63	1
		1	50	21.34	21.50	21.66	1
		1	99	21.25	21.41	21.57	1
		50	0	20.04	20.20	20.36	2
		50	25	20.09	20.25	20.41	2
		50	50	19.99	20.15	20.31	2
		100	0	20.01	20.17	20.33	2

EIRP

LTE BAND 7
CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20775	2502.5	20.97	-2.41	18.56	71.78	1
21100	2535.0	21.04	-2.41	18.63	72.95	1
21425	2567.5	21.06	-2.41	18.65	**73.28**	1

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20775	2502.5	20.29	-2.41	17.88	61.38	1
21100	2535.0	20.54	-2.41	18.13	65.01	1
21425	2567.5	20.43	-2.41	18.02	63.39	1

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20800	2505.0	20.97	-2.41	18.56	71.78	1
21100	2535.0	21.14	-2.41	18.73	**74.64**	1
21400	2565.0	21.07	-2.41	18.66	73.45	1

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20800	2505.0	20.29	-2.41	17.88	61.38	1
21100	2535.0	20.51	-2.41	18.10	64.57	1
21400	2565.0	20.39	-2.41	17.98	62.81	1

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20825	2507.5	20.95	-2.41	18.54	71.45	1
21100	2535.0	21.19	-2.41	18.78	**75.51**	1
21375	2562.5	21.02	-2.41	18.61	72.61	1

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20825	2507.5	20.33	-2.41	17.92	61.94	1
21100	2535.0	20.58	-2.41	18.17	65.61	1
21375	2562.5	20.39	-2.41	17.98	62.81	1

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20850	2510.0	20.99	-2.41	18.58	72.11	1
21100	2535.0	21.22	-2.41	18.81	**76.03**	1
21350	2560.0	21.08	-2.41	18.67	73.62	1

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20850	2510.0	20.36	-2.41	17.95	62.37	1
21100	2535.0	20.59	-2.41	18.18	65.77	1
21350	2560.0	20.45	-2.41	18.04	63.68	1

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

LTE BAND 38

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37775	2572.5	21.78	-2.41	19.37	86.50	2
38000	2595.0	21.92	-2.41	19.51	89.33	2
38225	2617.5	22.10	-2.41	19.69	**93.11**	2

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37775	2572.5	21.26	-2.41	18.85	76.74	2
38000	2595.0	21.48	-2.41	19.07	80.72	2
38225	2617.5	21.61	-2.41	19.20	83.18	2

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37800	2575.0	21.77	-2.41	19.36	86.30	2
38000	2595.0	21.95	-2.41	19.54	89.95	2
38200	2615.0	22.10	-2.41	19.69	**93.11**	2

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37800	2575.0	21.31	-2.41	18.90	77.62	2
38000	2595.0	21.44	-2.41	19.03	79.98	2
38200	2615.0	21.64	-2.41	19.23	83.75	2

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37825	2577.5	21.82	-2.41	19.41	87.30	2
38000	2595.0	21.95	-2.41	19.54	89.95	2
38175	2612.5	22.07	-2.41	19.66	**92.47**	2

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37825	2577.5	21.30	-2.41	18.89	77.45	2
38000	2595.0	21.46	-2.41	19.05	80.35	2
38175	2612.5	21.64	-2.41	19.23	83.75	2

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37850	2580.0	21.83	-2.41	19.42	87.50	2
38000	2595.0	21.99	-2.41	19.58	90.78	2
38150	2610.0	22.15	-2.41	19.74	**94.19**	2

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37850	2580.0	21.34	-2.41	18.93	78.16	2
38000	2595.0	21.50	-2.41	19.09	81.10	2
38150	2610.0	21.66	-2.41	19.25	84.14	2

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

3.2 FREQUENCY STABILITY MEASUREMENT

3.2.1 LIMITS OF FREQUENCY STABILIITY MEASUREMENT

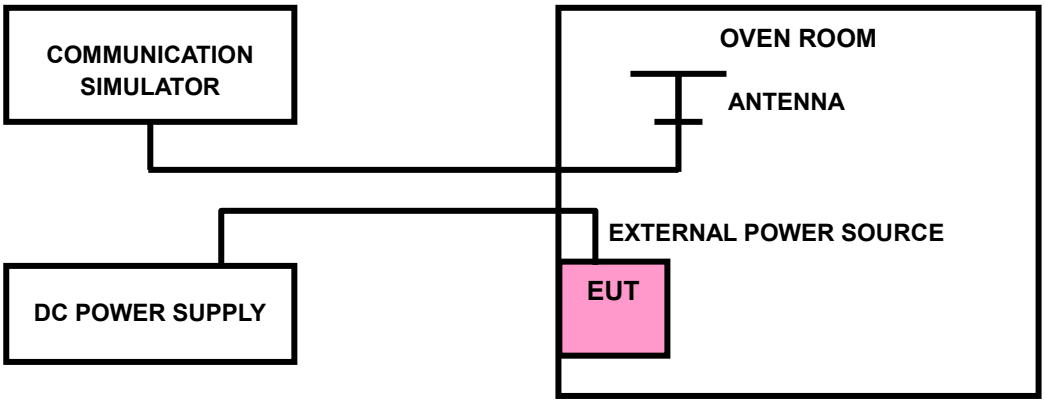
The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

3.2.2 TEST PROCEDURE

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

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

3.2.3 TEST SETUP



3.2.4 TEST RESULTS

LTE BAND 7

FREQUENCY ERROR VS. VOLTAGE

VOLTAGE (Volts)	5MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
V_{nor}	0.0021	0.0025	2.5
V_{min}	-0.0023	-0.0030	2.5
V_{max}	0.0021	0.0021	2.5

NOTE: The applicant defined the normal working voltage of the battery is from V_{min} Vdc to V_{max} Vdc.

FREQUENCY ERROR vs. TEMPERATURE.

TEMP. (℃)	5MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
-30	-0.0120	-0.0118	2.5
-20	-0.0100	-0.0105	2.5
-10	-0.0084	-0.0081	2.5
0	-0.0075	-0.0073	2.5
10	-0.0052	-0.0049	2.5
20	-0.0039	-0.0039	2.5
30	-0.0035	-0.0035	2.5
40	-0.0020	-0.0017	2.5
50	-0.0002	-0.0003	2.5

FREQUENCY ERROR VS. VOLTAGE

VOLTAGE (Volts)	10MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
V_{nor}	0.0026	0.0024	2.5
V_{min}	-0.0031	-0.0030	2.5
V_{max}	0.0025	0.0026	2.5

NOTE: The applicant defined the normal working voltage of the battery is from V_{min} Vdc to V_{max} Vdc.

FREQUENCY ERROR vs. TEMPERATURE.

TEMP. (℃)	10MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
-30	-0.0117	-0.0111	2.5
-20	-0.0103	-0.0101	2.5
-10	-0.0086	-0.0081	2.5
0	-0.0075	-0.0074	2.5
10	-0.0052	-0.0047	2.5
20	-0.0042	-0.0038	2.5
30	-0.0034	-0.0038	2.5
40	-0.0019	-0.0021	2.5
50	-0.0004	-0.0004	2.5

FREQUENCY ERROR VS. VOLTAGE

VOLTAGE (Volts)	15MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
V_{nor}	0.0026	0.0024	2.5
V_{min}	-0.0031	-0.0031	2.5
V_{max}	0.0025	0.0025	2.5

NOTE: The applicant defined the normal working voltage of the battery is from V_{min} Vdc to V_{max} Vdc.

FREQUENCY ERROR vs. TEMPERATURE.

TEMP. (℃)	15MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
-30	-0.0122	-0.0114	2.5
-20	-0.0100	-0.0108	2.5
-10	-0.0084	-0.0083	2.5
0	-0.0075	-0.0074	2.5
10	-0.0046	-0.0052	2.5
20	-0.0042	-0.0038	2.5
30	-0.0035	-0.0029	2.5
40	-0.0017	-0.0019	2.5
50	-0.0003	-0.0002	2.5

FREQUENCY ERROR VS. VOLTAGE

VOLTAGE (Volts)	20MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
V_{nor}	0.0026	0.0024	2.5
V_{min}	-0.0031	-0.0030	2.5
V_{max}	0.0024	0.0024	2.5

NOTE: The applicant defined the normal working voltage of the battery is from V_{min} Vdc to V_{max} Vdc.

FREQUENCY ERROR vs. TEMPERATURE.

TEMP. (℃)	20MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
-30	-0.0123	-0.0115	2.5
-20	-0.0109	-0.0104	2.5
-10	-0.0082	-0.0080	2.5
0	-0.0075	-0.0076	2.5
10	-0.0045	-0.0046	2.5
20	-0.0044	-0.0044	2.5
30	-0.0031	-0.0026	2.5
40	-0.0021	-0.0020	2.5
50	-0.0002	-0.0002	2.5

LTE BAND 38

FREQUENCY ERROR VS. VOLTAGE

VOLTAGE (Volts)	5MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
V_{nor}	0.0009	0.0011	2.5
V_{min}	-0.0008	-0.0012	2.5
V_{max}	0.0009	0.0009	2.5

NOTE: The applicant defined the normal working voltage of the battery is from V_{min} Vdc to V_{max} Vdc.

FREQUENCY ERROR vs. TEMPERATURE.

TEMP. (℃)	5MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
-30	-0.0058	-0.0049	2.5
-20	-0.0050	-0.0043	2.5
-10	-0.0044	-0.0037	2.5
0	-0.0037	-0.0031	2.5
10	-0.0031	-0.0026	2.5
20	-0.0023	-0.0019	2.5
30	-0.0015	-0.0012	2.5
40	-0.0010	-0.0009	2.5
50	-0.0002	-0.0002	2.5

FREQUENCY ERROR VS. VOLTAGE

VOLTAGE (Volts)	10MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
V_{nor}	0.0009	0.0013	2.5
V_{min}	-0.0011	-0.0012	2.5
V_{max}	0.0009	0.0009	2.5

NOTE: The applicant defined the normal working voltage of the battery is from V_{min} Vdc to V_{max} Vdc.

FREQUENCY ERROR vs. TEMPERATURE.

TEMP. (℃)	10MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
-30	-0.0057	-0.0049	2.5
-20	-0.0050	-0.0042	2.5
-10	-0.0043	-0.0037	2.5
0	-0.0033	-0.0028	2.5
10	-0.0027	-0.0023	2.5
20	-0.0021	-0.0018	2.5
30	-0.0014	-0.0012	2.5
40	-0.0008	-0.0007	2.5
50	-0.0002	-0.0002	2.5

FREQUENCY ERROR VS. VOLTAGE

VOLTAGE (Volts)	15MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
V_{nor}	0.0010	0.0010	2.5
V_{min}	-0.0013	-0.0013	2.5
V_{max}	0.0009	0.0011	2.5

NOTE: The applicant defined the normal working voltage of the battery is from V_{min} Vdc to V_{max} Vdc.

FREQUENCY ERROR vs. TEMPERATURE.

TEMP. (℃)	15MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
-30	-0.0056	-0.0048	2.5
-20	-0.0048	-0.0041	2.5
-10	-0.0042	-0.0036	2.5
0	-0.0032	-0.0028	2.5
10	-0.0026	-0.0022	2.5
20	-0.0019	-0.0016	2.5
30	-0.0013	-0.0011	2.5
40	-0.0009	-0.0008	2.5
50	-0.0002	-0.0002	2.5

FREQUENCY ERROR VS. VOLTAGE

VOLTAGE (Volts)	20MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
V_{nor}	0.0011	0.0013	2.5
V_{min}	-0.0012	-0.0012	2.5
V_{max}	0.0010	0.0012	2.5

NOTE: The applicant defined the normal working voltage of the battery is from V_{min} Vdc to V_{max} Vdc.

FREQUENCY ERROR vs. TEMPERATURE.

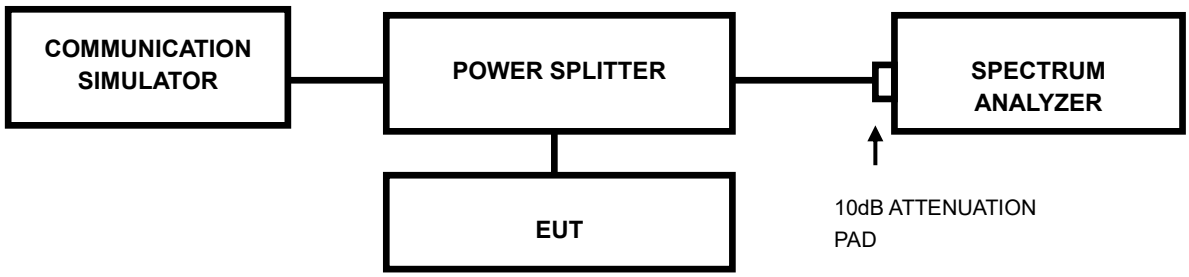
TEMP. (℃)	20MHz		LIMIT (ppm)
	FREQUENCY ERROR (ppm)		
	Low Channel	High Channel	
-30	-0.0052	-0.0044	2.5
-20	-0.0043	-0.0037	2.5
-10	-0.0040	-0.0034	2.5
0	-0.0033	-0.0028	2.5
10	-0.0025	-0.0022	2.5
20	-0.0019	-0.0017	2.5
30	-0.0011	-0.0009	2.5
40	-0.0005	-0.0005	2.5
50	-0.0002	-0.0002	2.5

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

LTE BAND 7					
CHANNEL BANDWIDTH: 5MHz					
CHANNEL	FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH (MHz)		26dB BANDWIDTH (MHz)	
		QPSK	16QAM	QPSK	16QAM
20775	2502.5	4.49	4.48	4.92	4.93
21100	2535	4.47	4.47	4.87	4.91
21425	2567.5	4.49	4.47	4.92	4.85

SPECTRUM PLOT OF WORST VALUE	
5MHz / QPSK	5MHz / 16QAM

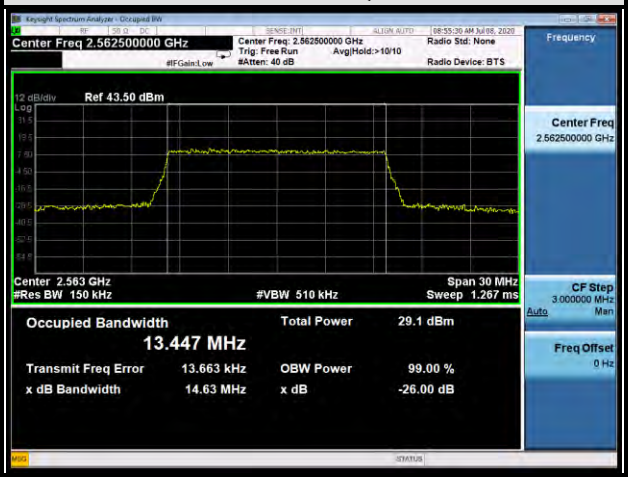
LTE BAND 7					
CHANNEL BANDWIDTH: 10MHz					
CHANNEL	FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH (MHz)		26dB BANDWIDTH (MHz)	
		QPSK	16QAM	QPSK	16QAM
20800	2505	8.96	8.96	9.77	9.77
21100	2535	8.95	8.96	9.73	9.74
21400	2565	8.95	8.94	9.72	9.74

SPECTRUM PLOT OF WORST VALUE

10MHz / QPSK

10MHz / 16QAM

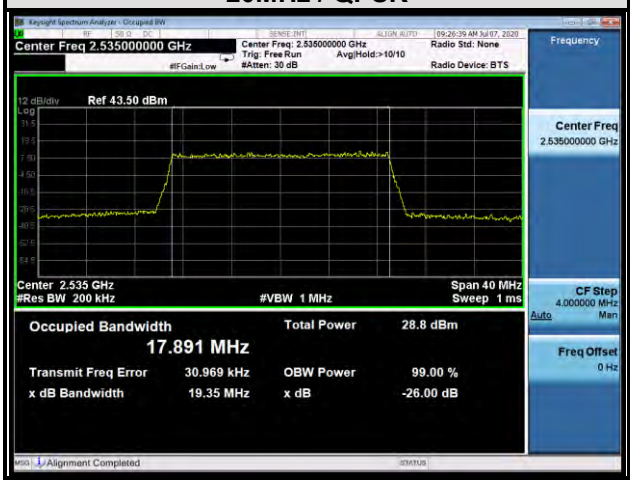
LTE BAND 7					
CHANNEL BANDWIDTH: 15MHz					
CHANNEL	FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH (MHz)		26dB BANDWIDTH (MHz)	
		QPSK	16QAM	QPSK	16QAM
20825	2507.5	13.41	13.43	14.74	14.66
21100	2535	13.40	13.44	14.67	14.83
21375	2562.5	13.42	13.45	14.63	14.63

SPECTRUM PLOT OF WORST VALUE	
15MHz / QPSK	15MHz / 16QAM
	

LTE BAND 7					
CHANNEL BANDWIDTH: 20MHz					
CHANNEL	FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH (MHz)		26dB BANDWIDTH (MHz)	
		QPSK	16QAM	QPSK	16QAM
20850	2510	17.87	17.92	19.25	19.50
21100	2535	17.89	17.92	19.35	19.57
21350	2560	17.92	17.92	19.40	19.40

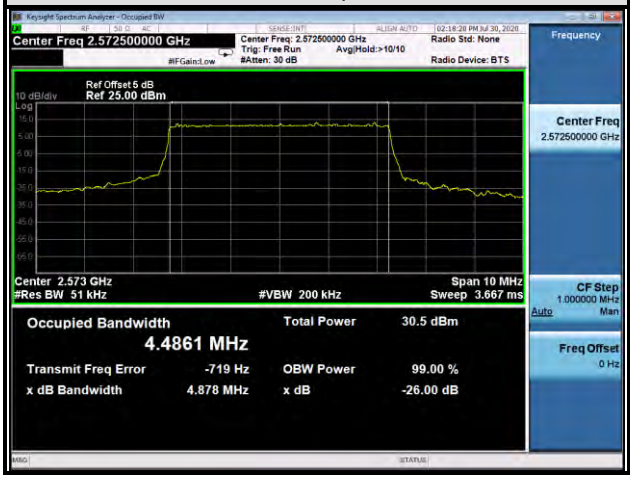
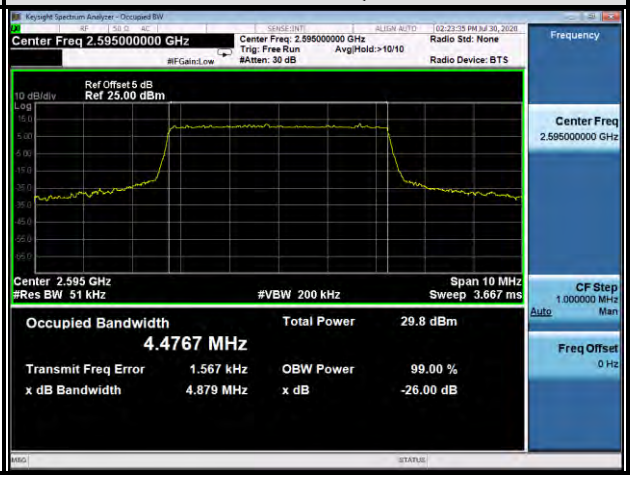
SPECTRUM PLOT OF WORST VALUE

20MHz / QPSK



20MHz / 16QAM

LTE BAND 38					
CHANNEL BANDWIDTH:5MHz					
CHANNEL	FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH (MHz)		26dB BANDWIDTH (MHz)	
		QPSK	16QAM	QPSK	16QAM
37775	2572.5	4.49	4.47	4.88	4.91
38000	2595	4.46	4.48	4.86	4.88
38225	2617.5	4.47	4.46	4.94	4.91

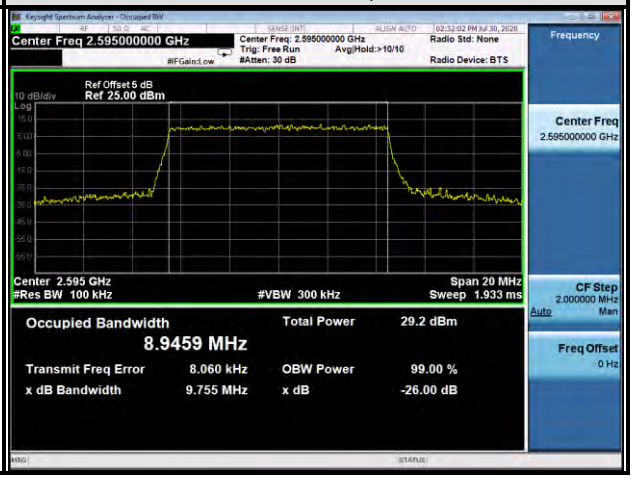
SPECTRUM PLOT OF WORST VALUE	
5MHz / QPSK	5MHz / 16QAM
	

LTE BAND 38					
CHANNEL BANDWIDTH: 10MHz					
CHANNEL	FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH (MHz)		26dB BANDWIDTH (MHz)	
		QPSK	16QAM	QPSK	16QAM
37800	2575	8.95	8.94	9.81	9.74
38000	2595	8.96	8.95	9.91	9.76
38200	2615	8.96	8.94	9.93	9.68

SPECTRUM PLOT OF WORST VALUE

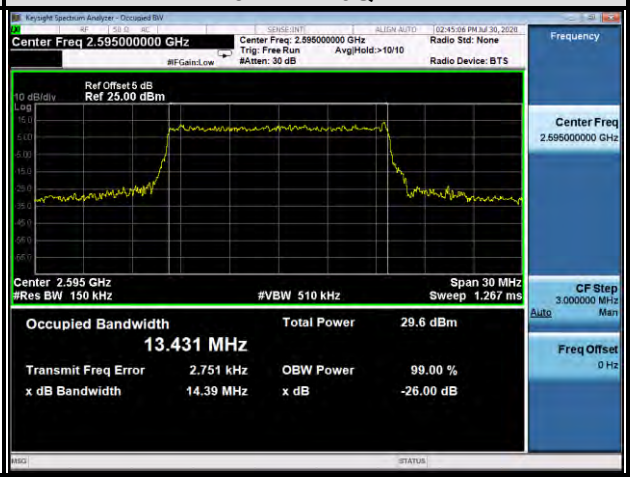
10MHz / QPSK

10MHz / 16QAM



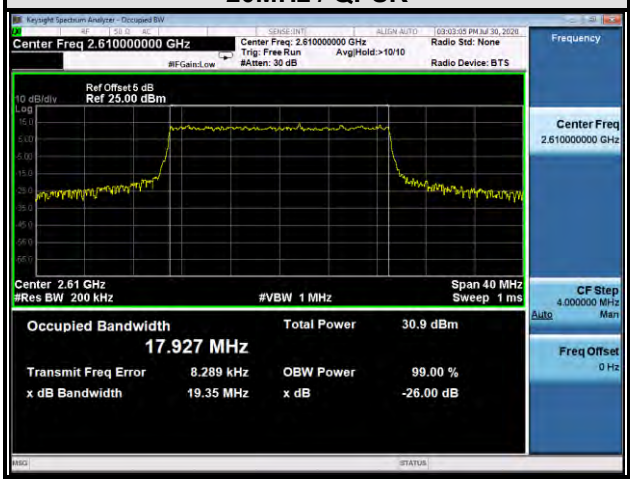
LTE BAND 38					
CHANNEL BANDWIDTH: 15MHz					
CHANNEL	FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH (MHz)		26dB BANDWIDTH (MHz)	
		QPSK	16QAM	QPSK	16QAM
37825	2577.5	13.41	13.43	14.60	14.69
38000	2595	13.43	13.43	14.58	14.39
38175	2612.5	13.43	13.43	14.60	14.67

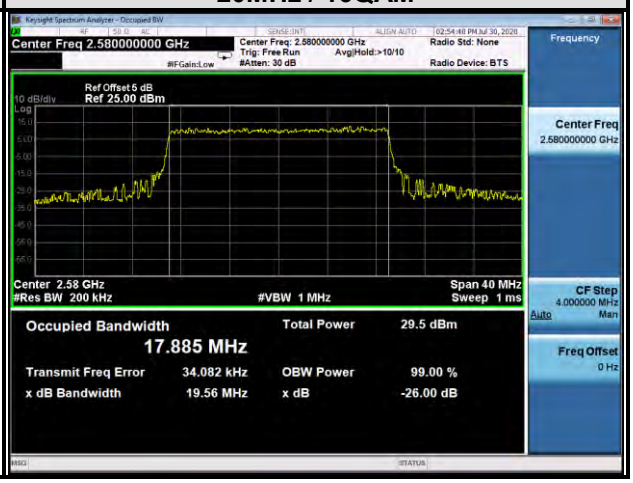
SPECTRUM PLOT OF WORST VALUE	
15MHz / QPSK	15MHz / 16QAM



LTE BAND 38					
CHANNEL BANDWIDTH: 20MHz					
CHANNEL	FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH (MHz)		26dB BANDWIDTH (MHz)	
		QPSK	16QAM	QPSK	16QAM
37850	2580	17.89	17.89	19.32	19.56
38000	2595	17.89	17.87	19.25	19.47
38150	2610	17.93	17.89	19.35	19.40

SPECTRUM PLOT OF WORST VALUE	
20MHz / QPSK	20MHz / 16QAM



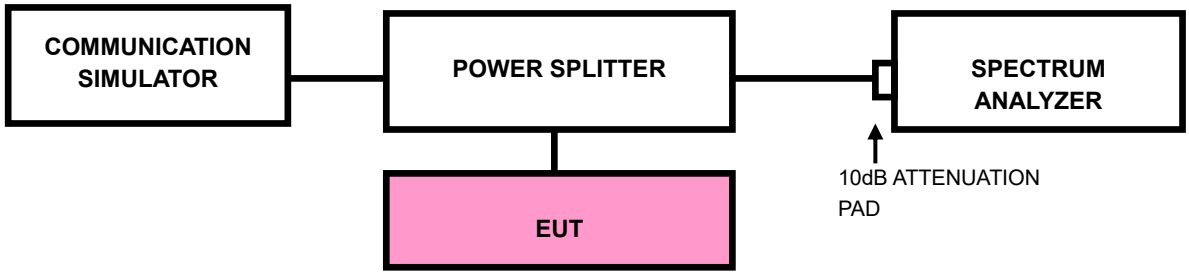


3.4 BAND EDGE MEASUREMENT

2.4.1 LIMITS OF BAND EDGE MEASUREMENT

According to FCC 27.53(m)(4) specified that For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees. For mobile digital stations, in the 1 megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed.

2.4.2 TEST SETUP



2.4.3 TEST PROCEDURES

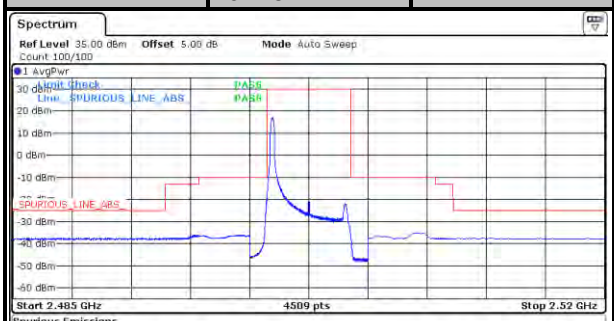
a. The EUT was set up for the maximum peak power with LTE link data modulation. The power was measured with R&S Spectrum Analyzer. All measurements were done at 2 channels (low and high operational frequency range.).
b. The band edge measurement used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
c. The center frequency of spectrum is the band edge frequency and span is 35MHz. RBW of the spectrum is 100kHz and VBW of the spectrum is 300kHz (Channel bandwidth 5MHz).
d. The center frequency of spectrum is the band edge frequency and span is 50MHz. RBW of the spectrum is 200kHz and VBW of the spectrum is 1MHz (Channel bandwidth 10MHz).
e. The center frequency of spectrum is the band edge frequency and span is 60MHz. RBW of the spectrum is 300kHz and VBW of the spectrum is 1MHz (Channel bandwidth 15MHz).
f. The center frequency of spectrum is the band edge frequency and span is 80MHz. RBW of the spectrum is 500kHz and VBW of the spectrum is 2MHz (Channel bandwidth 20MHz).
g. Record the max trace plot into the test report.

2.4.4 TEST RESULTS

LTE BAND 7

Channel Bandwidth: 5MHz / QPSK

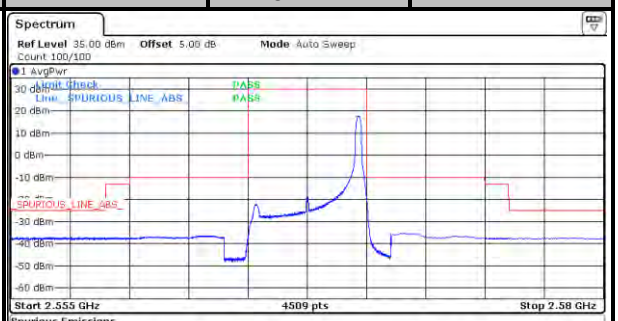
CHANNEL	20775	1 RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.485 GHz	2.494 GHz	1.000 MHz	2.49051 GHz	-37.38 dBm	-12.38 dB
2.494 GHz	2.496 GHz	1.000 MHz	2.49596 GHz	-36.15 dBm	-23.15 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49861 GHz	-35.04 dBm	-26.04 dB
2.499 GHz	2.500 GHz	100.000 kHz	2.50000 GHz	-20.51 dBm	-10.51 dB
2.500 GHz	2.505 GHz	100.000 kHz	2.50037 GHz	16.94 dBm	-13.06 dB
2.505 GHz	2.506 GHz	100.000 kHz	2.50500 GHz	-37.25 dBm	-27.25 dB
2.506 GHz	2.510 GHz	1.000 MHz	2.50895 GHz	-35.07 dBm	-25.07 dB
2.510 GHz	2.511 GHz	1.000 MHz	2.51034 GHz	-37.52 dBm	-24.52 dB
2.511 GHz	2.520 GHz	1.000 MHz	2.51434 GHz	-37.56 dBm	-12.56 dB

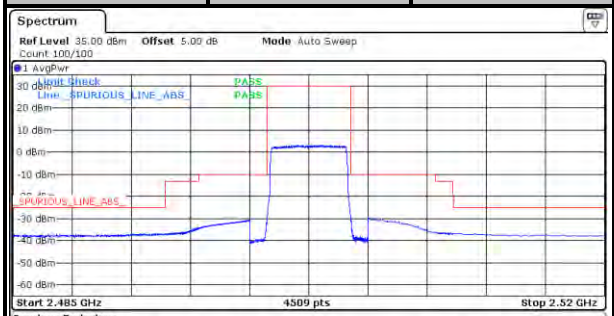
CHANNEL	21425	1 RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.555 GHz	2.559 GHz	1.000 MHz	2.55521 GHz	-37.15 dBm	-12.15 dB
2.559 GHz	2.560 GHz	1.000 MHz	2.55929 GHz	-37.27 dBm	-24.27 dB
2.560 GHz	2.564 GHz	1.000 MHz	2.56351 GHz	-35.50 dBm	-26.50 dB
2.564 GHz	2.565 GHz	100.000 kHz	2.56499 GHz	-37.05 dBm	-27.05 dB
2.565 GHz	2.570 GHz	100.000 kHz	2.56963 GHz	17.72 dBm	-12.28 dB
2.570 GHz	2.571 GHz	100.000 kHz	2.57000 GHz	-19.46 dBm	-9.46 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57142 GHz	-35.27 dBm	-25.27 dB
2.575 GHz	2.576 GHz	1.000 MHz	2.57506 GHz	-37.49 dBm	-24.49 dB
2.576 GHz	2.580 GHz	1.000 MHz	2.57859 GHz	-37.41 dBm	-12.41 dB

CHANNEL	20775	Full RB

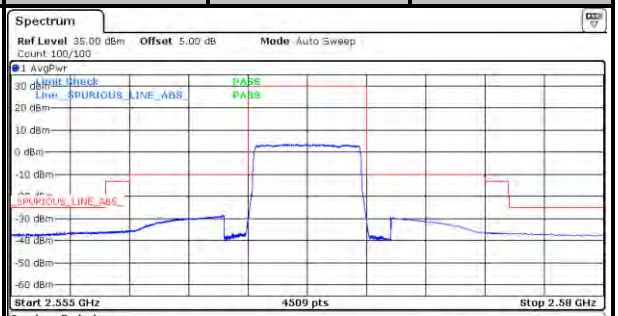


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.485 GHz	2.494 GHz	1.000 MHz	2.49335 GHz	-36.71 dBm	-11.71 dB
2.494 GHz	2.496 GHz	1.000 MHz	2.49595 GHz	-33.98 dBm	-20.98 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49899 GHz	-30.66 dBm	-20.66 dB
2.499 GHz	2.500 GHz	100.000 kHz	2.50000 GHz	-31.70 dBm	-21.70 dB
2.500 GHz	2.505 GHz	100.000 kHz	2.50187 GHz	3.26 dBm	-26.74 dB
2.505 GHz	2.506 GHz	100.000 kHz	2.50500 GHz	-30.25 dBm	-20.25 dB
2.506 GHz	2.510 GHz	1.000 MHz	2.50602 GHz	-29.48 dBm	-19.48 dB
2.510 GHz	2.511 GHz	1.000 MHz	2.51002 GHz	-36.23 dBm	-23.23 dB
2.511 GHz	2.520 GHz	1.000 MHz	2.51113 GHz	-36.71 dBm	-11.71 dB

Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

CHANNEL	21425	Full RB



Spurious Emissions

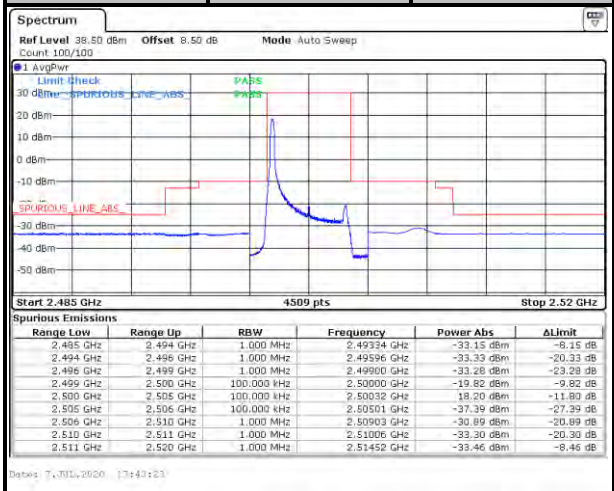
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.555 GHz	2.559 GHz	1.000 MHz	2.55878 GHz	-35.87 dBm	-10.87 dB
2.559 GHz	2.560 GHz	1.000 MHz	2.55991 GHz	-35.40 dBm	-22.40 dB
2.560 GHz	2.564 GHz	1.000 MHz	2.56391 GHz	-28.54 dBm	-18.54 dB
2.564 GHz	2.565 GHz	100.000 kHz	2.56499 GHz	-29.98 dBm	-19.98 dB
2.565 GHz	2.570 GHz	100.000 kHz	2.56664 GHz	3.53 dBm	-26.47 dB
2.570 GHz	2.571 GHz	100.000 kHz	2.57000 GHz	-32.12 dBm	-22.12 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57102 GHz	-29.39 dBm	-19.39 dB
2.575 GHz	2.576 GHz	1.000 MHz	2.57501 GHz	-36.40 dBm	-23.40 dB
2.576 GHz	2.580 GHz	1.000 MHz	2.57669 GHz	-36.80 dBm	-11.80 dB

Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

LTE BAND 7

Channel Bandwidth: 5MHz / 16QAM

CHANNEL	20775	1 RB

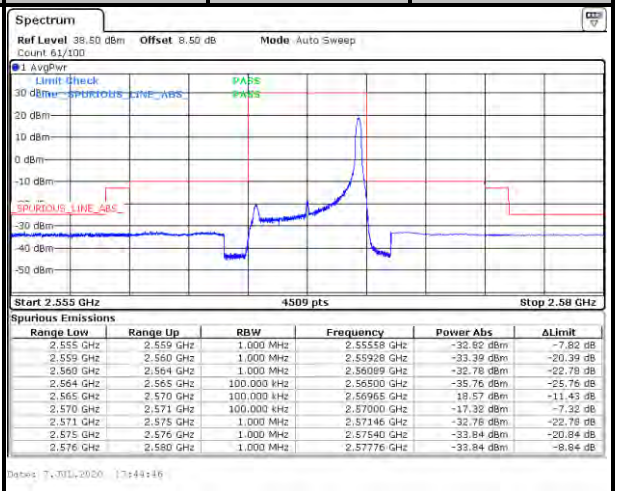


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.485 GHz	2.494 GHz	1.000 MHz	2.49334 GHz	-33.15 dBm	-8.15 dB
2.494 GHz	2.496 GHz	1.000 MHz	2.49596 GHz	-33.33 dBm	-20.33 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49900 GHz	-33.28 dBm	-23.28 dB
2.499 GHz	2.500 GHz	100.000 kHz	2.50000 GHz	-19.82 dBm	-9.82 dB
2.500 GHz	2.505 GHz	100.000 kHz	2.50032 GHz	18.20 dBm	-11.80 dB
2.505 GHz	2.506 GHz	100.000 kHz	2.50501 GHz	-37.39 dBm	-27.39 dB
2.506 GHz	2.510 GHz	1.000 MHz	2.50903 GHz	-30.89 dBm	-20.89 dB
2.510 GHz	2.511 GHz	1.000 MHz	2.51006 GHz	-33.30 dBm	-20.30 dB
2.511 GHz	2.520 GHz	1.000 MHz	2.51452 GHz	-33.46 dBm	-8.46 dB

Date: 7.JUL.2020 17:43:23

CHANNEL	21425	1 RB

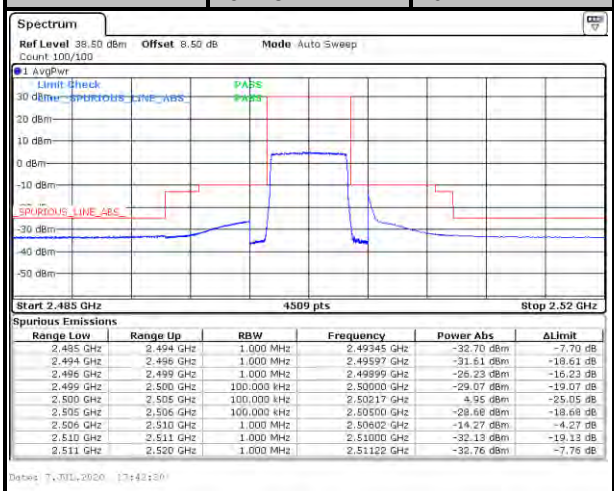


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.555 GHz	2.559 GHz	1.000 MHz	2.55558 GHz	-32.82 dBm	-7.82 dB
2.559 GHz	2.560 GHz	1.000 MHz	2.55928 GHz	-33.39 dBm	-20.39 dB
2.560 GHz	2.564 GHz	1.000 MHz	2.56089 GHz	-32.78 dBm	-22.78 dB
2.564 GHz	2.565 GHz	100.000 kHz	2.56500 GHz	-35.76 dBm	-25.76 dB
2.565 GHz	2.570 GHz	100.000 kHz	2.56965 GHz	18.57 dBm	-11.43 dB
2.570 GHz	2.571 GHz	100.000 kHz	2.57000 GHz	-17.32 dBm	-7.32 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57146 GHz	-32.78 dBm	-22.78 dB
2.575 GHz	2.576 GHz	1.000 MHz	2.57540 GHz	-33.84 dBm	-20.84 dB
2.576 GHz	2.580 GHz	1.000 MHz	2.57776 GHz	-33.84 dBm	-8.84 dB

Date: 7.JUL.2020 17:44:46

CHANNEL	20775	Full RB



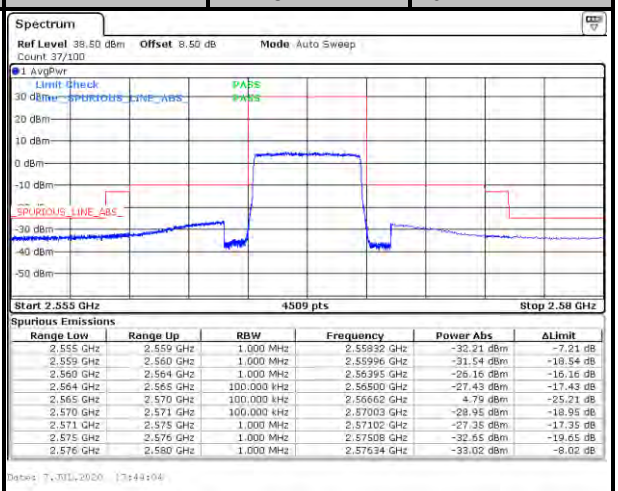
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.485 GHz	2.494 GHz	1.000 MHz	2.49345 GHz	-32.70 dBm	-7.70 dB
2.494 GHz	2.496 GHz	1.000 MHz	2.49597 GHz	-31.61 dBm	-18.61 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49899 GHz	-26.23 dBm	-16.23 dB
2.499 GHz	2.500 GHz	100.000 kHz	2.50000 GHz	-29.07 dBm	-19.07 dB
2.500 GHz	2.505 GHz	100.000 kHz	2.50217 GHz	4.95 dBm	-25.05 dB
2.505 GHz	2.506 GHz	100.000 kHz	2.50500 GHz	-28.68 dBm	-18.68 dB
2.506 GHz	2.510 GHz	1.000 MHz	2.50602 GHz	-14.27 dBm	-4.27 dB
2.510 GHz	2.511 GHz	1.000 MHz	2.51000 GHz	-32.13 dBm	-19.13 dB
2.511 GHz	2.520 GHz	1.000 MHz	2.51122 GHz	-32.76 dBm	-7.76 dB

Date: 7.JUL.2020 17:42:30

Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

CHANNEL	21425	Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.555 GHz	2.559 GHz	1.000 MHz	2.55832 GHz	-32.21 dBm	-7.21 dB
2.559 GHz	2.560 GHz	1.000 MHz	2.55996 GHz	-31.54 dBm	-18.54 dB
2.560 GHz	2.564 GHz	1.000 MHz	2.56395 GHz	-26.16 dBm	-16.16 dB
2.564 GHz	2.565 GHz	100.000 kHz	2.56500 GHz	-27.43 dBm	-17.43 dB
2.565 GHz	2.570 GHz	100.000 kHz	2.56662 GHz	4.79 dBm	-25.21 dB
2.570 GHz	2.571 GHz	100.000 kHz	2.57003 GHz	-28.95 dBm	-18.95 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57102 GHz	-27.35 dBm	-17.35 dB
2.575 GHz	2.576 GHz	1.000 MHz	2.57508 GHz	-32.65 dBm	-19.65 dB
2.576 GHz	2.580 GHz	1.000 MHz	2.57634 GHz	-33.02 dBm	-8.02 dB

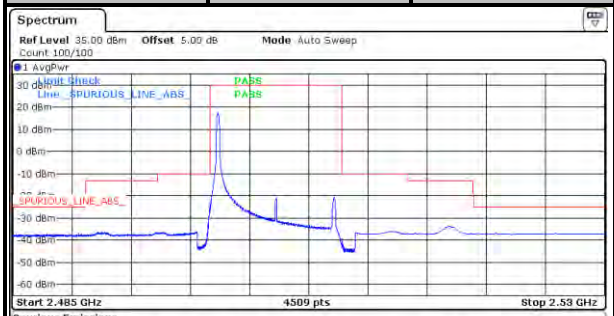
Date: 7.JUL.2020 17:44:04

Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

LTE BAND 7

Channel Bandwidth: 10MHz / QPSK

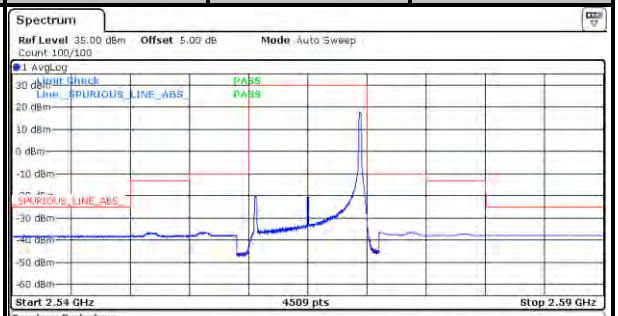
CHANNEL	20800	1 RB	CHANNEL	21400	1 RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.485 GHz	2.490 GHz	1.000 MHz	2.49002 GHz	-37.03 dBm	-12.03 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49147 GHz	-36.24 dBm	-23.24 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49893 GHz	-36.25 dBm	-26.25 dB
2.499 GHz	2.500 GHz	200.000 kHz	2.50000 GHz	-21.92 dBm	-11.92 dB
2.500 GHz	2.510 GHz	100.000 kHz	2.50061 GHz	17.37 dBm	-12.63 dB
2.510 GHz	2.511 GHz	200.000 kHz	2.51000 GHz	-39.15 dBm	-29.15 dB
2.511 GHz	2.515 GHz	1.000 MHz	2.51375 GHz	-36.01 dBm	-26.01 dB
2.515 GHz	2.520 GHz	1.000 MHz	2.51829 GHz	-33.68 dBm	-20.68 dB
2.520 GHz	2.530 GHz	1.000 MHz	2.52173 GHz	-37.00 dBm	-12.00 dB

Date: 6.JUL.2020 10:08:02

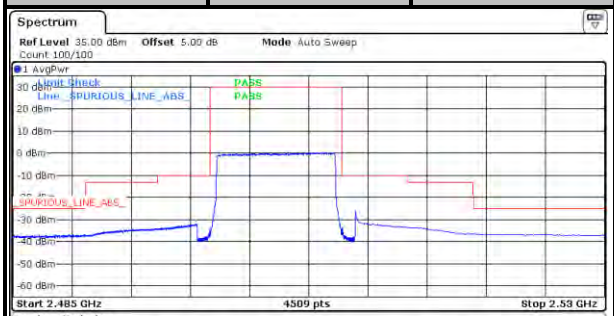


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.540 GHz	2.550 GHz	1.000 MHz	2.54556 GHz	-37.82 dBm	-12.82 dB
2.550 GHz	2.555 GHz	1.000 MHz	2.55149 GHz	-36.50 dBm	-23.50 dB
2.555 GHz	2.559 GHz	1.000 MHz	2.55587 GHz	-35.44 dBm	-26.44 dB
2.559 GHz	2.560 GHz	200.000 kHz	2.55999 GHz	-43.49 dBm	-33.49 dB
2.560 GHz	2.570 GHz	100.000 kHz	2.56941 GHz	17.86 dBm	-12.14 dB
2.570 GHz	2.571 GHz	200.000 kHz	2.57000 GHz	-32.84 dBm	-22.84 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57351 GHz	-36.49 dBm	-26.49 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57824 GHz	-37.13 dBm	-24.13 dB
2.580 GHz	2.590 GHz	1.000 MHz	2.58153 GHz	-37.69 dBm	-12.69 dB

Date: 6.JUL.2020 10:14:58

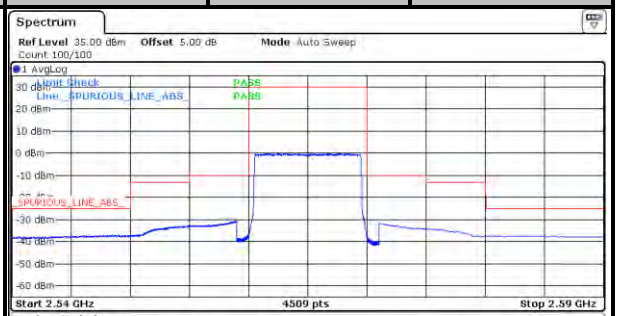
CHANNEL	20800	Full RB	CHANNEL	21400	Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.485 GHz	2.490 GHz	1.000 MHz	2.49033 GHz	-36.82 dBm	-11.82 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49580 GHz	-34.05 dBm	-21.05 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49997 GHz	-32.09 dBm	-22.09 dB
2.499 GHz	2.500 GHz	200.000 kHz	2.50000 GHz	-33.40 dBm	-23.40 dB
2.500 GHz	2.510 GHz	100.000 kHz	2.50800 GHz	0.26 dBm	-29.74 dB
2.510 GHz	2.511 GHz	200.000 kHz	2.51001 GHz	-33.60 dBm	-23.60 dB
2.511 GHz	2.515 GHz	1.000 MHz	2.51102 GHz	-26.15 dBm	-16.15 dB
2.515 GHz	2.520 GHz	1.000 MHz	2.51507 GHz	-33.60 dBm	-20.60 dB
2.520 GHz	2.530 GHz	1.000 MHz	2.52015 GHz	-36.59 dBm	-11.59 dB

Date: 6.JUL.2020 10:06:04



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.540 GHz	2.550 GHz	1.000 MHz	2.54998 GHz	-36.95 dBm	-11.95 dB
2.550 GHz	2.555 GHz	1.000 MHz	2.55500 GHz	-32.79 dBm	-19.79 dB
2.555 GHz	2.559 GHz	1.000 MHz	2.55895 GHz	-30.51 dBm	-20.51 dB
2.559 GHz	2.560 GHz	200.000 kHz	2.56000 GHz	-36.56 dBm	-26.56 dB
2.560 GHz	2.570 GHz	100.000 kHz	2.56386 GHz	0.03 dBm	-29.97 dB
2.570 GHz	2.571 GHz	200.000 kHz	2.57001 GHz	-37.28 dBm	-27.28 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57110 GHz	-31.70 dBm	-21.70 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57512 GHz	-34.12 dBm	-21.12 dB
2.580 GHz	2.590 GHz	1.000 MHz	2.58045 GHz	-37.37 dBm	-12.37 dB

Date: 6.JUL.2020 10:12:34

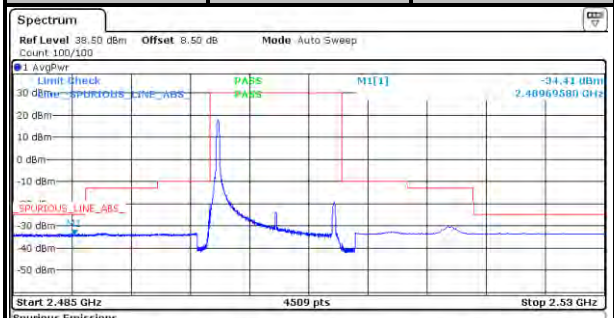
Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

LTE BAND 7

Channel Bandwidth: 10MHz / 16QAM

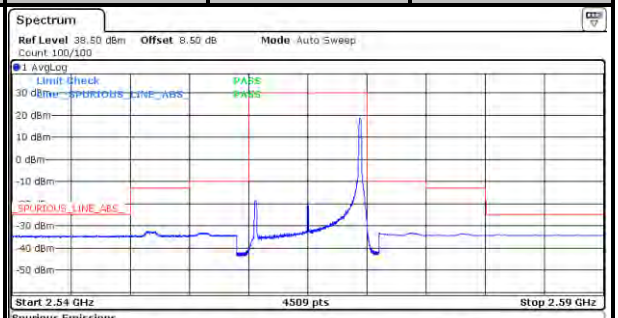
CHANNEL	20800	1 RB	CHANNEL	21400	1 RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.485 GHz	2.490 GHz	1.000 MHz	2.48993 GHz	-33.66 dBm	-8.66 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49145 GHz	-33.42 dBm	-20.42 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49892 GHz	-33.25 dBm	-23.25 dB
2.499 GHz	2.500 GHz	200.000 kHz	2.49999 GHz	-20.88 dBm	-10.88 dB
2.500 GHz	2.510 GHz	100.000 kHz	2.50062 GHz	17.62 dBm	-12.38 dB
2.510 GHz	2.511 GHz	200.000 kHz	2.51000 GHz	-38.13 dBm	-28.13 dB
2.511 GHz	2.515 GHz	1.000 MHz	2.51359 GHz	-32.81 dBm	-22.81 dB
2.515 GHz	2.520 GHz	1.000 MHz	2.51809 GHz	-30.19 dBm	-17.19 dB
2.520 GHz	2.530 GHz	1.000 MHz	2.52203 GHz	-33.41 dBm	-8.41 dB

Date: 7.JUL.2020 13:46:29

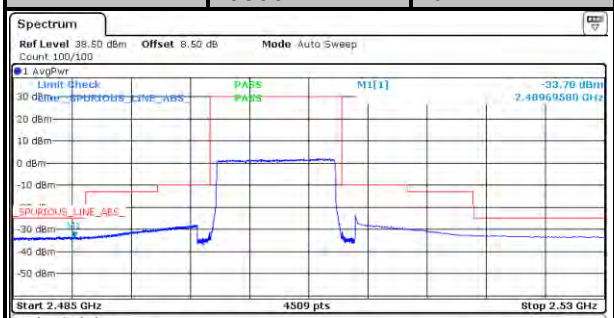


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.540 GHz	2.550 GHz	1.000 MHz	2.54606 GHz	-34.33 dBm	-9.33 dB
2.550 GHz	2.555 GHz	1.000 MHz	2.55138 GHz	-32.54 dBm	-19.54 dB
2.555 GHz	2.559 GHz	1.000 MHz	2.55595 GHz	-33.23 dBm	-23.23 dB
2.559 GHz	2.560 GHz	200.000 kHz	2.56000 GHz	-40.61 dBm	-30.61 dB
2.560 GHz	2.570 GHz	100.000 kHz	2.56945 GHz	18.58 dBm	-11.42 dB
2.570 GHz	2.571 GHz	200.000 kHz	2.57000 GHz	-31.22 dBm	-21.22 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57351 GHz	-33.32 dBm	-23.32 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57800 GHz	-33.40 dBm	-20.40 dB
2.580 GHz	2.590 GHz	1.000 MHz	2.58114 GHz	-34.12 dBm	-9.12 dB

Date: 7.JUL.2020 13:48:34

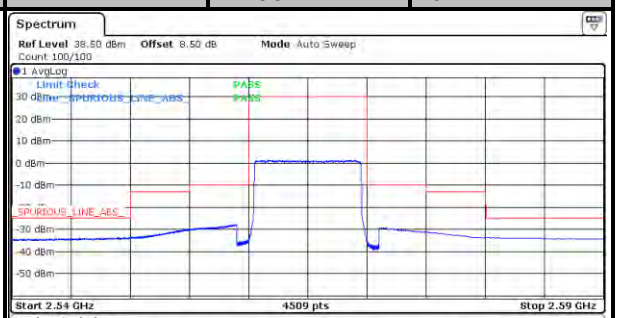
CHANNEL	20800	Full RB	CHANNEL	21400	Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.485 GHz	2.490 GHz	1.000 MHz	2.48966 GHz	-33.24 dBm	-8.24 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49592 GHz	-30.19 dBm	-17.19 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49872 GHz	-28.19 dBm	-18.19 dB
2.499 GHz	2.500 GHz	200.000 kHz	2.49999 GHz	-31.22 dBm	-21.22 dB
2.500 GHz	2.510 GHz	100.000 kHz	2.50904 GHz	2.01 dBm	-27.99 dB
2.510 GHz	2.511 GHz	200.000 kHz	2.51000 GHz	-31.11 dBm	-21.11 dB
2.511 GHz	2.515 GHz	1.000 MHz	2.51102 GHz	-23.62 dBm	-13.62 dB
2.515 GHz	2.520 GHz	1.000 MHz	2.51502 GHz	-29.91 dBm	-16.91 dB
2.520 GHz	2.530 GHz	1.000 MHz	2.52005 GHz	-32.73 dBm	-7.73 dB

Date: 7.JUL.2020 13:46:02



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.540 GHz	2.550 GHz	1.000 MHz	2.54894 GHz	-33.62 dBm	-8.62 dB
2.550 GHz	2.555 GHz	1.000 MHz	2.55481 GHz	-29.98 dBm	-16.98 dB
2.555 GHz	2.559 GHz	1.000 MHz	2.55896 GHz	-27.83 dBm	-17.83 dB
2.559 GHz	2.560 GHz	200.000 kHz	2.55998 GHz	-34.41 dBm	-24.41 dB
2.560 GHz	2.570 GHz	100.000 kHz	2.56182 GHz	1.32 dBm	-28.68 dB
2.570 GHz	2.571 GHz	200.000 kHz	2.57000 GHz	-35.34 dBm	-25.34 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57110 GHz	-29.25 dBm	-19.25 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57517 GHz	-31.28 dBm	-18.28 dB
2.580 GHz	2.590 GHz	1.000 MHz	2.58035 GHz	-33.77 dBm	-8.77 dB

Date: 7.JUL.2020 13:47:49

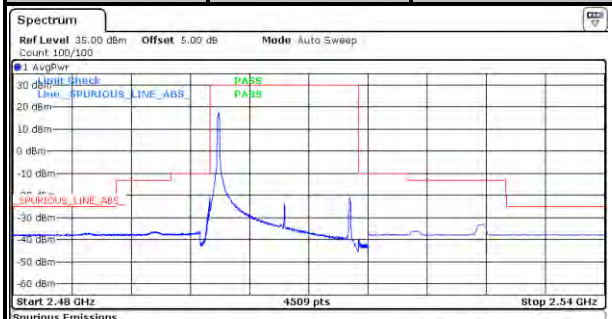
Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

LTE BAND 7

Channel Bandwidth: 15MHz / QPSK

CHANNEL	20825	1 RB

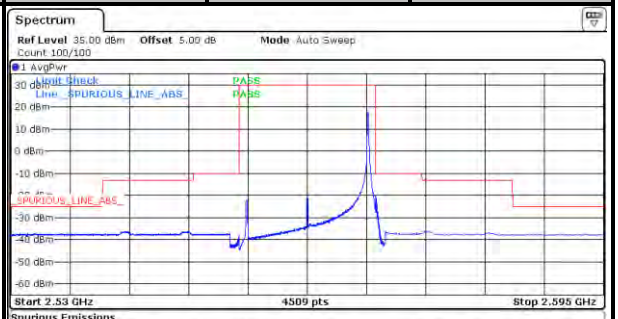


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.480 GHz	2.490 GHz	1.000 MHz	2.48771 GHz	-36.95 dBm	-11.95 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49451 GHz	-36.31 dBm	-23.31 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49999 GHz	-36.51 dBm	-26.51 dB
2.499 GHz	2.500 GHz	300.000 kHz	2.49999 GHz	-20.94 dBm	-10.94 dB
2.500 GHz	2.515 GHz	100.000 kHz	2.50085 GHz	17.28 dBm	-12.72 dB
2.515 GHz	2.516 GHz	300.000 kHz	2.51506 GHz	-40.03 dBm	-30.03 dB
2.516 GHz	2.520 GHz	1.000 MHz	2.51788 GHz	-37.39 dBm	-27.39 dB
2.520 GHz	2.530 GHz	1.000 MHz	2.52767 GHz	-33.20 dBm	-20.20 dB
2.530 GHz	2.540 GHz	1.000 MHz	2.53639 GHz	-37.62 dBm	-12.62 dB

Date: 6.JUL.2020 10:19:45

CHANNEL	21375	1 RB

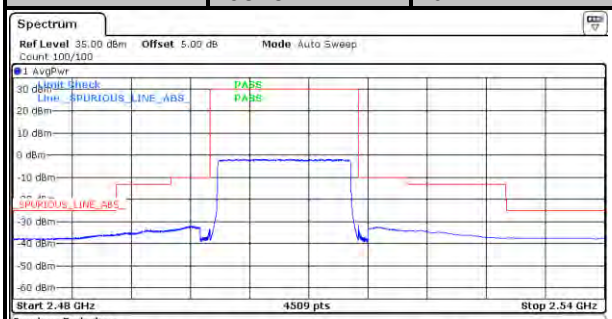


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.530 GHz	2.540 GHz	1.000 MHz	2.53549 GHz	-37.26 dBm	-12.26 dB
2.540 GHz	2.550 GHz	1.000 MHz	2.54255 GHz	-36.19 dBm	-23.19 dB
2.550 GHz	2.554 GHz	1.000 MHz	2.55367 GHz	-37.30 dBm	-27.30 dB
2.554 GHz	2.555 GHz	300.000 kHz	2.55500 GHz	-38.12 dBm	-28.12 dB
2.555 GHz	2.570 GHz	100.000 kHz	2.56918 GHz	17.80 dBm	-12.20 dB
2.570 GHz	2.571 GHz	300.000 kHz	2.57001 GHz	-20.05 dBm	-10.05 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57102 GHz	-36.40 dBm	-26.40 dB
2.575 GHz	2.585 GHz	1.000 MHz	2.57554 GHz	-36.20 dBm	-23.20 dB
2.585 GHz	2.595 GHz	1.000 MHz	2.58743 GHz	-37.57 dBm	-12.57 dB

Date: 6.JUL.2020 10:21:02

CHANNEL	20825	Full RB

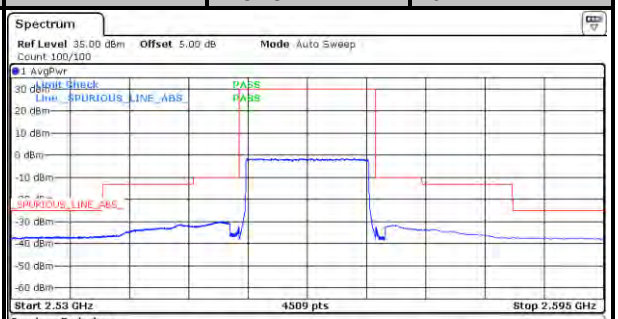


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.480 GHz	2.490 GHz	1.000 MHz	2.48992 GHz	-35.83 dBm	-10.83 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49578 GHz	-33.76 dBm	-20.76 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49821 GHz	-32.04 dBm	-22.04 dB
2.499 GHz	2.500 GHz	300.000 kHz	2.49998 GHz	-33.33 dBm	-23.33 dB
2.500 GHz	2.515 GHz	100.000 kHz	2.51133 GHz	-1.76 dBm	-31.76 dB
2.515 GHz	2.516 GHz	300.000 kHz	2.51500 GHz	-31.94 dBm	-21.94 dB
2.516 GHz	2.520 GHz	1.000 MHz	2.51673 GHz	-32.48 dBm	-22.48 dB
2.520 GHz	2.530 GHz	1.000 MHz	2.52134 GHz	-33.87 dBm	-20.87 dB
2.530 GHz	2.540 GHz	1.000 MHz	2.53074 GHz	-37.29 dBm	-12.29 dB

Date: 6.JUL.2020 10:17:03

CHANNEL	21375	Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.530 GHz	2.540 GHz	1.000 MHz	2.53971 GHz	-36.65 dBm	-11.65 dB
2.540 GHz	2.550 GHz	1.000 MHz	2.54852 GHz	-31.19 dBm	-18.19 dB
2.550 GHz	2.554 GHz	1.000 MHz	2.55286 GHz	-30.01 dBm	-20.01 dB
2.554 GHz	2.555 GHz	300.000 kHz	2.55498 GHz	-32.28 dBm	-22.28 dB
2.555 GHz	2.570 GHz	100.000 kHz	2.56761 GHz	-1.40 dBm	-31.40 dB
2.570 GHz	2.571 GHz	300.000 kHz	2.57005 GHz	-32.54 dBm	-22.54 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57189 GHz	-31.62 dBm	-21.62 dB
2.575 GHz	2.585 GHz	1.000 MHz	2.57614 GHz	-33.55 dBm	-20.55 dB
2.585 GHz	2.595 GHz	1.000 MHz	2.58515 GHz	-37.31 dBm	-12.31 dB

Date: 6.JUL.2020 10:21:54

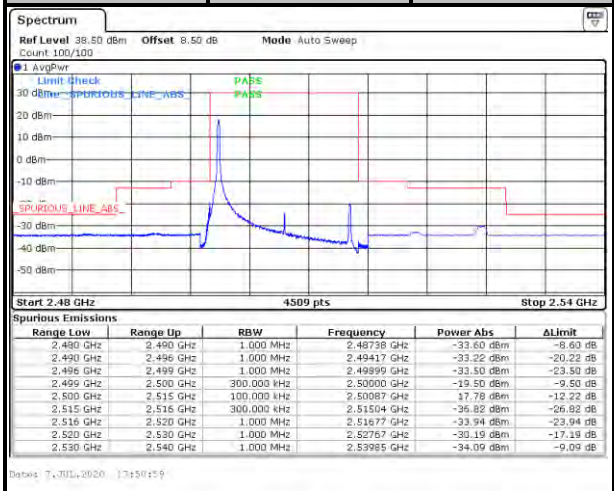
Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

LTE BAND 7

Channel Bandwidth: 15MHz / 16QAM

CHANNEL	20825	1 RB

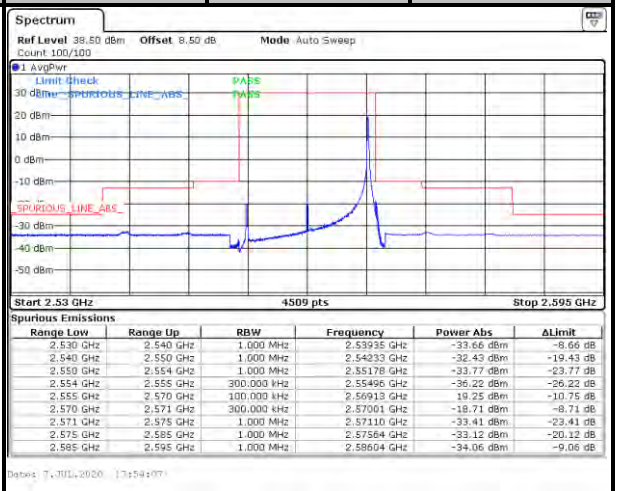


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.480 GHz	2.490 GHz	1.000 MHz	2.48738 GHz	-33.60 dBm	-8.60 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49417 GHz	-33.22 dBm	-20.22 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49899 GHz	-33.50 dBm	-23.50 dB
2.499 GHz	2.500 GHz	300.000 kHz	2.50000 GHz	-19.50 dBm	-9.50 dB
2.500 GHz	2.515 GHz	100.000 kHz	2.50087 GHz	17.78 dBm	-12.22 dB
2.515 GHz	2.516 GHz	300.000 kHz	2.51504 GHz	-36.82 dBm	-26.82 dB
2.516 GHz	2.520 GHz	1.000 MHz	2.51677 GHz	-33.94 dBm	-23.94 dB
2.520 GHz	2.530 GHz	1.000 MHz	2.52767 GHz	-30.19 dBm	-17.19 dB
2.530 GHz	2.540 GHz	1.000 MHz	2.53985 GHz	-34.09 dBm	-9.09 dB

Date: 7.JUL.2020 13:50:59

CHANNEL	21375	1 RB

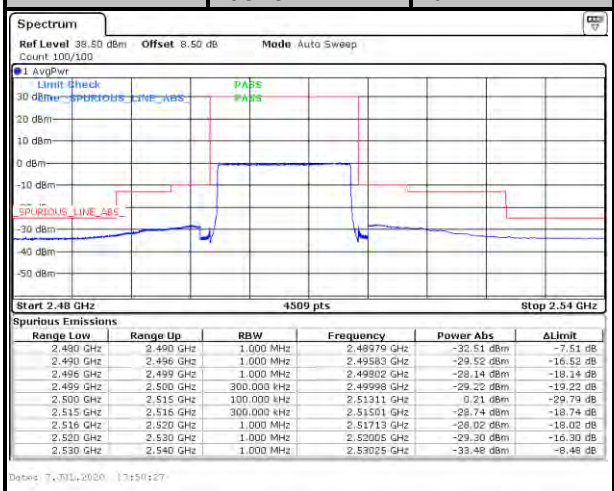


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.530 GHz	2.540 GHz	1.000 MHz	2.53935 GHz	-33.66 dBm	-8.66 dB
2.540 GHz	2.550 GHz	1.000 MHz	2.54233 GHz	-32.43 dBm	-19.43 dB
2.550 GHz	2.554 GHz	1.000 MHz	2.55178 GHz	-33.77 dBm	-23.77 dB
2.554 GHz	2.555 GHz	300.000 kHz	2.55496 GHz	-36.22 dBm	-26.22 dB
2.555 GHz	2.570 GHz	100.000 kHz	2.56913 GHz	19.25 dBm	-10.75 dB
2.570 GHz	2.571 GHz	300.000 kHz	2.57001 GHz	-18.71 dBm	-8.71 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57110 GHz	-33.41 dBm	-23.41 dB
2.575 GHz	2.585 GHz	1.000 MHz	2.57564 GHz	-33.12 dBm	-20.12 dB
2.585 GHz	2.595 GHz	1.000 MHz	2.58604 GHz	-34.06 dBm	-9.06 dB

Date: 7.JUL.2020 13:54:07

CHANNEL	20825	Full RB

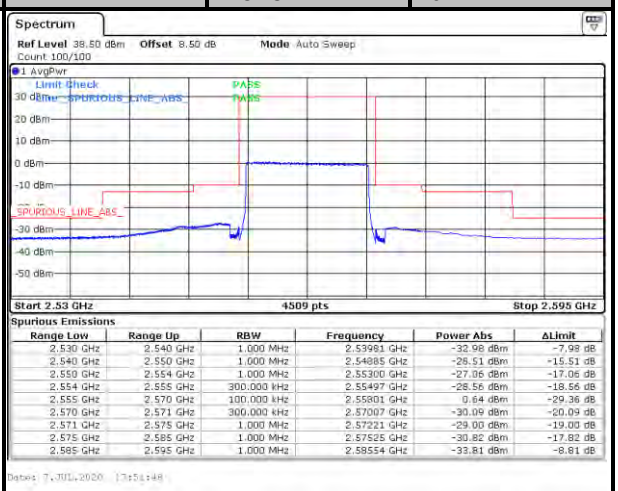


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.480 GHz	2.490 GHz	1.000 MHz	2.48979 GHz	-32.51 dBm	-7.51 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49583 GHz	-29.52 dBm	-16.52 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49802 GHz	-28.14 dBm	-18.14 dB
2.499 GHz	2.500 GHz	300.000 kHz	2.49998 GHz	-29.22 dBm	-19.22 dB
2.500 GHz	2.515 GHz	100.000 kHz	2.51311 GHz	0.21 dBm	-29.79 dB
2.515 GHz	2.516 GHz	300.000 kHz	2.51501 GHz	-28.74 dBm	-18.74 dB
2.516 GHz	2.520 GHz	1.000 MHz	2.51713 GHz	-26.02 dBm	-18.02 dB
2.520 GHz	2.530 GHz	1.000 MHz	2.52005 GHz	-29.30 dBm	-16.30 dB
2.530 GHz	2.540 GHz	1.000 MHz	2.53025 GHz	-33.48 dBm	-8.48 dB

Date: 7.JUL.2020 13:50:27

CHANNEL	21375	Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.530 GHz	2.540 GHz	1.000 MHz	2.53981 GHz	-32.98 dBm	-7.98 dB
2.540 GHz	2.550 GHz	1.000 MHz	2.54885 GHz	-28.51 dBm	-15.51 dB
2.550 GHz	2.554 GHz	1.000 MHz	2.55300 GHz	-27.06 dBm	-17.06 dB
2.554 GHz	2.555 GHz	300.000 kHz	2.55497 GHz	-28.56 dBm	-18.56 dB
2.555 GHz	2.570 GHz	100.000 kHz	2.55801 GHz	0.64 dBm	-29.36 dB
2.570 GHz	2.571 GHz	300.000 kHz	2.57007 GHz	-30.09 dBm	-20.09 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57221 GHz	-29.00 dBm	-19.00 dB
2.575 GHz	2.585 GHz	1.000 MHz	2.57525 GHz	-30.82 dBm	-17.82 dB
2.585 GHz	2.595 GHz	1.000 MHz	2.58554 GHz	-33.81 dBm	-8.81 dB

Date: 7.JUL.2020 13:54:48

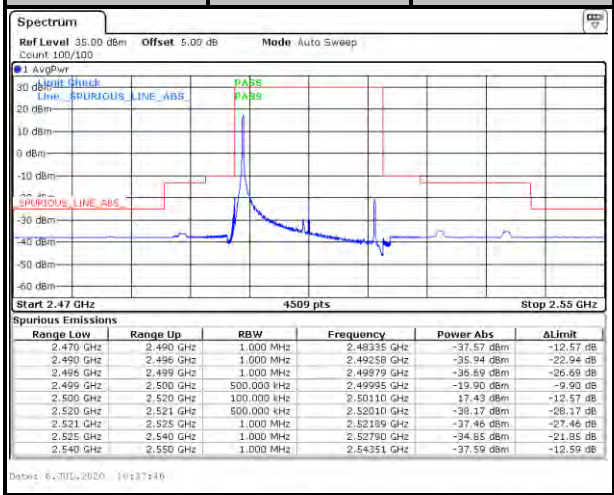
Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

LTE BAND 7

Channel Bandwidth: 20MHz / QPSK

CHANNEL	20850	1 RB

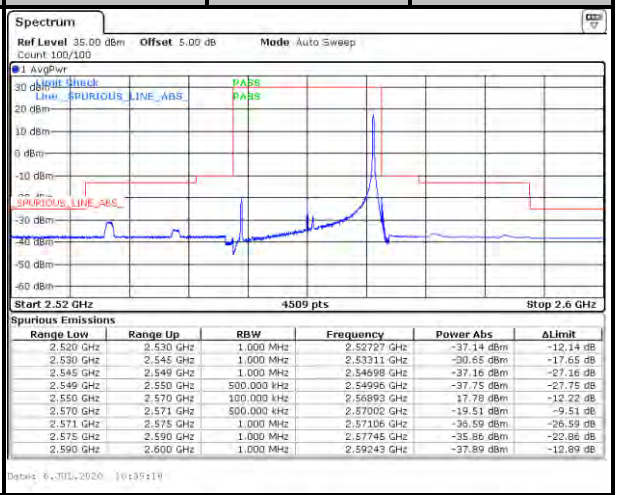


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.470 GHz	2.490 GHz	1.000 MHz	2.48335 GHz	-37.57 dBm	-12.57 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49258 GHz	-35.94 dBm	-22.94 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49879 GHz	-36.69 dBm	-26.69 dB
2.499 GHz	2.500 GHz	500.000 kHz	2.49995 GHz	-19.90 dBm	-9.90 dB
2.500 GHz	2.520 GHz	100.000 kHz	2.50110 GHz	17.43 dBm	-12.57 dB
2.520 GHz	2.521 GHz	500.000 kHz	2.52010 GHz	-38.17 dBm	-28.17 dB
2.521 GHz	2.525 GHz	1.000 MHz	2.52189 GHz	-37.46 dBm	-27.46 dB
2.525 GHz	2.540 GHz	1.000 MHz	2.52790 GHz	-34.85 dBm	-21.85 dB
2.540 GHz	2.550 GHz	1.000 MHz	2.54351 GHz	-37.59 dBm	-12.59 dB

Date: 6.JUL.2020 10:37:46

CHANNEL	21350	1 RB

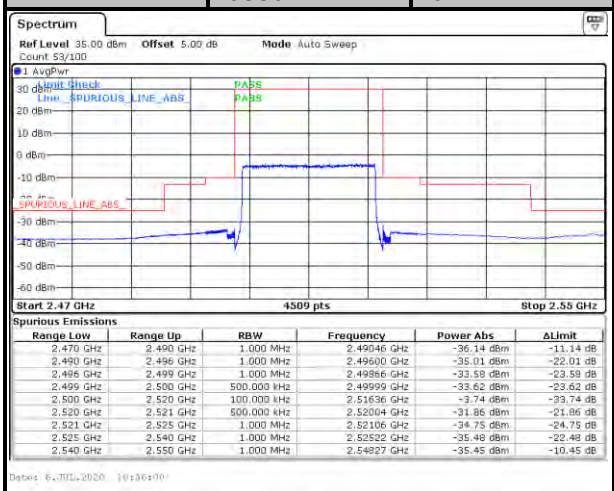


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.520 GHz	2.530 GHz	1.000 MHz	2.52727 GHz	-37.14 dBm	-12.14 dB
2.530 GHz	2.545 GHz	1.000 MHz	2.53311 GHz	-30.65 dBm	-17.65 dB
2.545 GHz	2.549 GHz	1.000 MHz	2.54698 GHz	-37.16 dBm	-27.16 dB
2.549 GHz	2.550 GHz	500.000 kHz	2.54996 GHz	-37.75 dBm	-27.75 dB
2.550 GHz	2.570 GHz	100.000 kHz	2.56893 GHz	17.78 dBm	-12.22 dB
2.570 GHz	2.571 GHz	500.000 kHz	2.57002 GHz	-19.51 dBm	-9.51 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57106 GHz	-36.59 dBm	-26.59 dB
2.575 GHz	2.590 GHz	1.000 MHz	2.57745 GHz	-35.86 dBm	-22.86 dB
2.590 GHz	2.600 GHz	1.000 MHz	2.59243 GHz	-37.89 dBm	-12.89 dB

Date: 6.JUL.2020 10:39:18

CHANNEL	20850	Full RB



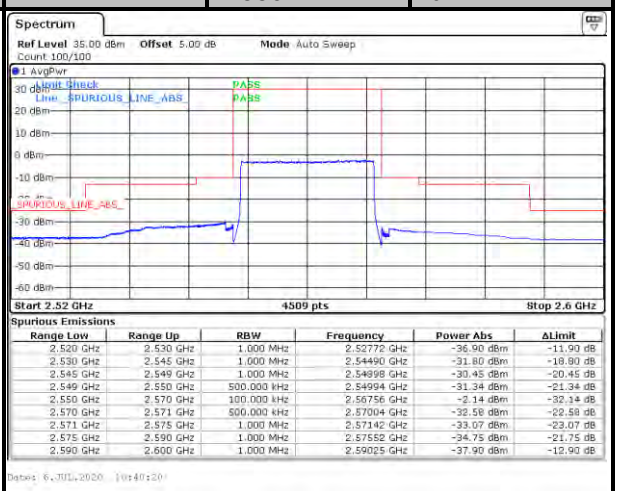
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.470 GHz	2.490 GHz	1.000 MHz	2.49046 GHz	-36.14 dBm	-11.14 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49600 GHz	-35.01 dBm	-22.01 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49866 GHz	-33.58 dBm	-23.58 dB
2.499 GHz	2.500 GHz	500.000 kHz	2.49999 GHz	-33.62 dBm	-23.62 dB
2.500 GHz	2.520 GHz	100.000 kHz	2.51636 GHz	-3.74 dBm	-33.74 dB
2.520 GHz	2.521 GHz	500.000 kHz	2.52004 GHz	-31.86 dBm	-21.86 dB
2.521 GHz	2.525 GHz	1.000 MHz	2.52106 GHz	-34.75 dBm	-24.75 dB
2.525 GHz	2.540 GHz	1.000 MHz	2.52522 GHz	-35.48 dBm	-22.48 dB
2.540 GHz	2.550 GHz	1.000 MHz	2.54827 GHz	-35.45 dBm	-10.45 dB

Date: 6.JUL.2020 10:36:00

Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

CHANNEL	21350	Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.520 GHz	2.530 GHz	1.000 MHz	2.52772 GHz	-36.90 dBm	-11.90 dB
2.530 GHz	2.545 GHz	1.000 MHz	2.54490 GHz	-31.80 dBm	-18.80 dB
2.545 GHz	2.549 GHz	1.000 MHz	2.54898 GHz	-30.45 dBm	-20.45 dB
2.549 GHz	2.550 GHz	500.000 kHz	2.54994 GHz	-31.34 dBm	-21.34 dB
2.550 GHz	2.570 GHz	100.000 kHz	2.56756 GHz	-2.14 dBm	-32.14 dB
2.570 GHz	2.571 GHz	500.000 kHz	2.57004 GHz	-32.58 dBm	-22.58 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57142 GHz	-33.07 dBm	-23.07 dB
2.575 GHz	2.590 GHz	1.000 MHz	2.57552 GHz	-34.75 dBm	-21.75 dB
2.590 GHz	2.600 GHz	1.000 MHz	2.59025 GHz	-37.90 dBm	-12.90 dB

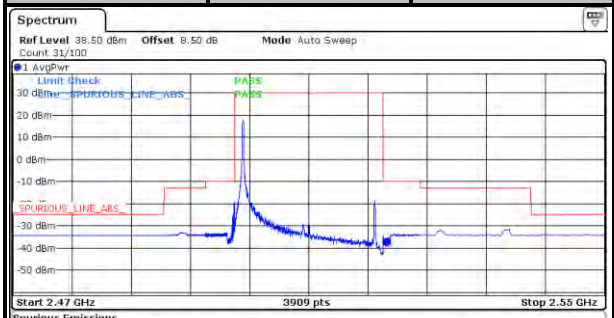
Date: 6.JUL.2020 10:40:20

Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

LTE BAND 7

Channel Bandwidth: 20MHz / 16QAM

CHANNEL	20850	1 RB

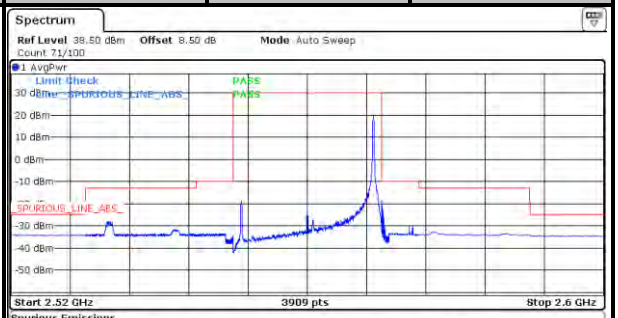


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.470 GHz	2.490 GHz	1.000 MHz	2.48857 GHz	-34.28 dBm	-9.28 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49260 GHz	-33.11 dBm	-20.11 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49541 GHz	-33.21 dBm	-23.21 dB
2.499 GHz	2.500 GHz	500.000 kHz	2.49999 GHz	-19.01 dBm	-9.01 dB
2.500 GHz	2.520 GHz	100.000 kHz	2.50113 GHz	17.89 dBm	-12.11 dB
2.520 GHz	2.521 GHz	500.000 kHz	2.52003 GHz	-33.98 dBm	-23.98 dB
2.521 GHz	2.525 GHz	1.000 MHz	2.52284 GHz	-33.74 dBm	-23.74 dB
2.525 GHz	2.540 GHz	1.000 MHz	2.53710 GHz	-31.69 dBm	-18.69 dB
2.540 GHz	2.550 GHz	1.000 MHz	2.54757 GHz	-33.84 dBm	-8.84 dB

Date: 7.JUL.2020 13:57:00

CHANNEL	21350	1 RB

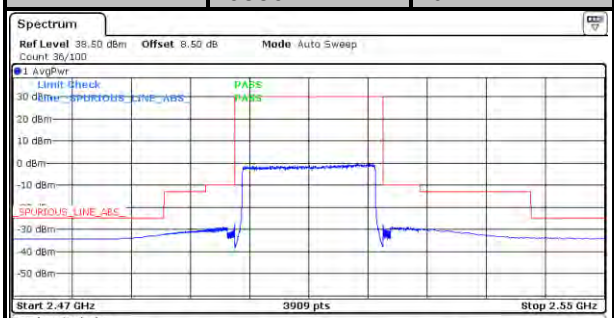


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.520 GHz	2.530 GHz	1.000 MHz	2.52936 GHz	-34.01 dBm	-9.01 dB
2.530 GHz	2.545 GHz	1.000 MHz	2.53318 GHz	-27.80 dBm	-14.80 dB
2.545 GHz	2.549 GHz	1.000 MHz	2.54810 GHz	-33.55 dBm	-23.55 dB
2.549 GHz	2.550 GHz	500.000 kHz	2.54998 GHz	-34.18 dBm	-24.18 dB
2.550 GHz	2.570 GHz	100.000 kHz	2.56893 GHz	19.51 dBm	-10.49 dB
2.570 GHz	2.571 GHz	500.000 kHz	2.57003 GHz	-18.49 dBm	-8.49 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57379 GHz	-29.81 dBm	-19.81 dB
2.575 GHz	2.590 GHz	1.000 MHz	2.57745 GHz	-32.65 dBm	-19.65 dB
2.590 GHz	2.600 GHz	1.000 MHz	2.59163 GHz	-34.48 dBm	-9.48 dB

Date: 7.JUL.2020 13:58:13

CHANNEL	20850	Full RB

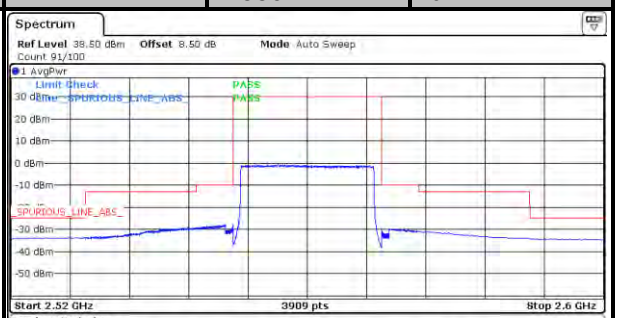


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.470 GHz	2.490 GHz	1.000 MHz	2.49040 GHz	-32.35 dBm	-7.35 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49597 GHz	-30.51 dBm	-17.51 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49833 GHz	-28.91 dBm	-18.91 dB
2.499 GHz	2.500 GHz	500.000 kHz	2.50000 GHz	-27.51 dBm	-17.51 dB
2.500 GHz	2.520 GHz	100.000 kHz	2.51642 GHz	-0.39 dBm	-30.39 dB
2.520 GHz	2.521 GHz	500.000 kHz	2.52001 GHz	-27.93 dBm	-17.93 dB
2.521 GHz	2.525 GHz	1.000 MHz	2.52375 GHz	-28.84 dBm	-18.84 dB
2.525 GHz	2.540 GHz	1.000 MHz	2.52522 GHz	-29.96 dBm	-16.96 dB
2.540 GHz	2.550 GHz	1.000 MHz	2.54332 GHz	-33.65 dBm	-8.65 dB

Date: 7.JUL.2020 13:56:51

CHANNEL	21350	Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.520 GHz	2.530 GHz	1.000 MHz	2.52866 GHz	-33.67 dBm	-8.67 dB
2.530 GHz	2.545 GHz	1.000 MHz	2.54386 GHz	-29.08 dBm	-16.08 dB
2.545 GHz	2.549 GHz	1.000 MHz	2.54883 GHz	-28.00 dBm	-18.00 dB
2.549 GHz	2.550 GHz	500.000 kHz	2.54999 GHz	-27.47 dBm	-17.47 dB
2.550 GHz	2.570 GHz	100.000 kHz	2.55601 GHz	-0.78 dBm	-30.78 dB
2.570 GHz	2.571 GHz	500.000 kHz	2.57002 GHz	-29.65 dBm	-19.65 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57146 GHz	-29.83 dBm	-19.83 dB
2.575 GHz	2.590 GHz	1.000 MHz	2.57537 GHz	-31.00 dBm	-18.00 dB
2.590 GHz	2.600 GHz	1.000 MHz	2.59084 GHz	-34.26 dBm	-9.26 dB

Date: 7.JUL.2020 13:57:45

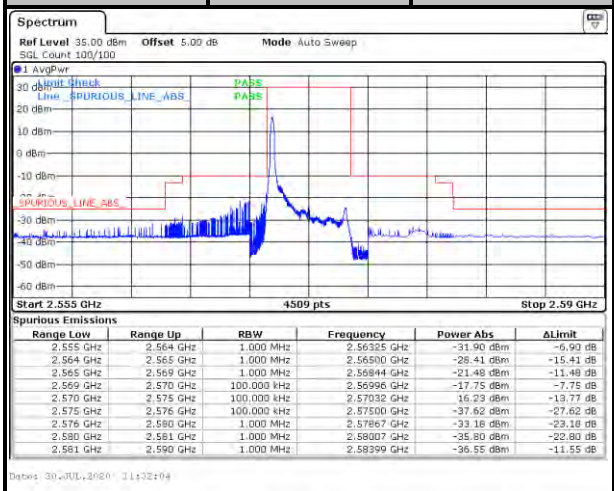
Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

LTE BAND 38

Channel Bandwidth: 5MHz / QPSK

CHANNEL	37775	1 RB

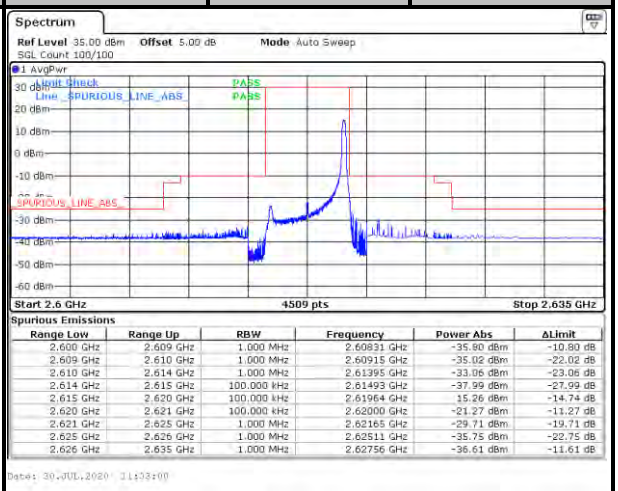


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.555 GHz	2.564 GHz	1.000 MHz	2.56325 GHz	-31.90 dBm	-6.90 dB
2.564 GHz	2.565 GHz	1.000 MHz	2.56500 GHz	-26.41 dBm	-15.41 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56844 GHz	-21.48 dBm	-11.48 dB
2.569 GHz	2.570 GHz	100.000 kHz	2.56996 GHz	-17.75 dBm	-7.75 dB
2.570 GHz	2.575 GHz	100.000 kHz	2.57032 GHz	16.23 dBm	-13.77 dB
2.575 GHz	2.576 GHz	100.000 kHz	2.57500 GHz	-37.62 dBm	-27.62 dB
2.576 GHz	2.580 GHz	1.000 MHz	2.57867 GHz	-33.18 dBm	-23.18 dB
2.580 GHz	2.581 GHz	1.000 MHz	2.58007 GHz	-35.80 dBm	-22.80 dB
2.581 GHz	2.590 GHz	1.000 MHz	2.58399 GHz	-36.55 dBm	-11.55 dB

Date: 30.JUL.2020 11:32:04

CHANNEL	38225	1 RB

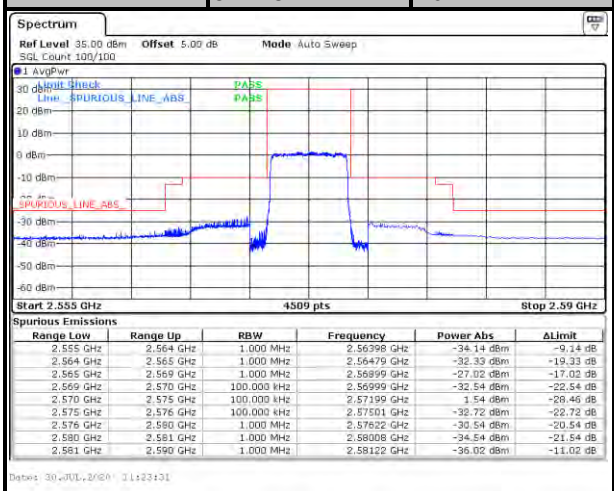


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.600 GHz	2.609 GHz	1.000 MHz	2.60831 GHz	-35.80 dBm	-10.80 dB
2.609 GHz	2.610 GHz	1.000 MHz	2.60915 GHz	-35.02 dBm	-22.02 dB
2.610 GHz	2.614 GHz	1.000 MHz	2.61395 GHz	-33.06 dBm	-23.06 dB
2.614 GHz	2.615 GHz	100.000 kHz	2.61493 GHz	-37.99 dBm	-27.99 dB
2.615 GHz	2.620 GHz	100.000 kHz	2.61964 GHz	15.26 dBm	-14.74 dB
2.620 GHz	2.621 GHz	100.000 kHz	2.62000 GHz	-21.27 dBm	-11.27 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62165 GHz	-29.71 dBm	-19.71 dB
2.625 GHz	2.626 GHz	1.000 MHz	2.62511 GHz	-35.75 dBm	-22.75 dB
2.626 GHz	2.635 GHz	1.000 MHz	2.62756 GHz	-36.61 dBm	-11.61 dB

Date: 30.JUL.2020 11:33:00

CHANNEL	37775	Full RB

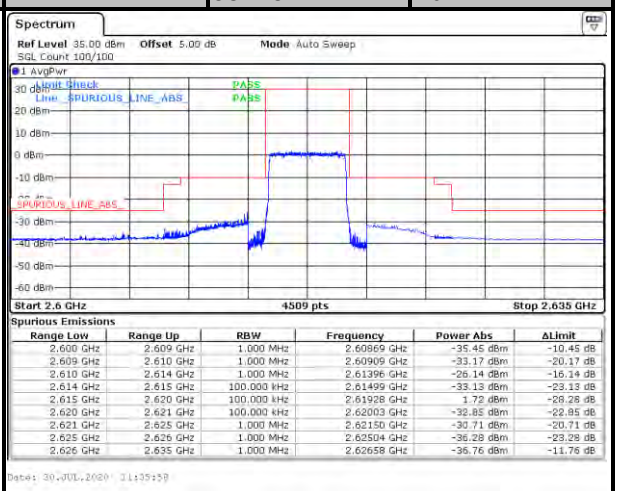


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.555 GHz	2.564 GHz	1.000 MHz	2.56398 GHz	-34.14 dBm	-9.14 dB
2.564 GHz	2.565 GHz	1.000 MHz	2.56479 GHz	-32.33 dBm	-19.33 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56899 GHz	-27.02 dBm	-17.02 dB
2.569 GHz	2.570 GHz	100.000 kHz	2.56999 GHz	-32.54 dBm	-22.54 dB
2.570 GHz	2.575 GHz	100.000 kHz	2.57199 GHz	1.54 dBm	-28.46 dB
2.575 GHz	2.576 GHz	100.000 kHz	2.57501 GHz	-32.72 dBm	-22.72 dB
2.576 GHz	2.580 GHz	1.000 MHz	2.57622 GHz	-30.54 dBm	-20.54 dB
2.580 GHz	2.581 GHz	1.000 MHz	2.58008 GHz	-34.54 dBm	-21.54 dB
2.581 GHz	2.590 GHz	1.000 MHz	2.58122 GHz	-36.02 dBm	-11.02 dB

Date: 30.JUL.2020 11:23:31

CHANNEL	38225	Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.600 GHz	2.609 GHz	1.000 MHz	2.60869 GHz	-35.45 dBm	-10.45 dB
2.609 GHz	2.610 GHz	1.000 MHz	2.60909 GHz	-33.17 dBm	-20.17 dB
2.610 GHz	2.614 GHz	1.000 MHz	2.61396 GHz	-26.14 dBm	-16.14 dB
2.614 GHz	2.615 GHz	100.000 kHz	2.61499 GHz	-33.13 dBm	-23.13 dB
2.615 GHz	2.620 GHz	100.000 kHz	2.61928 GHz	1.72 dBm	-28.28 dB
2.620 GHz	2.621 GHz	100.000 kHz	2.62003 GHz	-32.85 dBm	-22.85 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62150 GHz	-30.71 dBm	-20.71 dB
2.625 GHz	2.626 GHz	1.000 MHz	2.62504 GHz	-36.28 dBm	-23.28 dB
2.626 GHz	2.635 GHz	1.000 MHz	2.62658 GHz	-36.76 dBm	-11.76 dB

Date: 30.JUL.2020 11:35:59

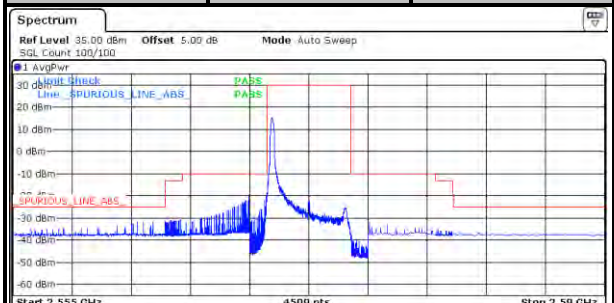
Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

LTE BAND 38

Channel Bandwidth: 5MHz / 16QAM

CHANNEL	37775	1 RB

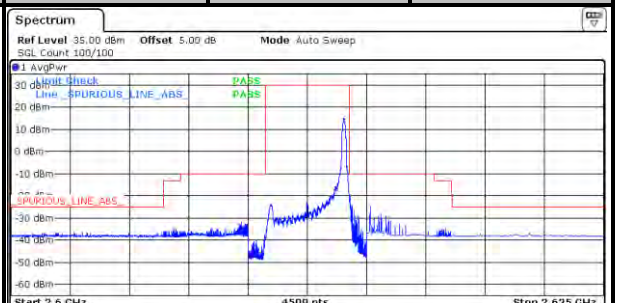


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.555 GHz	2.564 GHz	1.000 MHz	2.56398 GHz	-31.30 dBm	-6.30 dB
2.564 GHz	2.565 GHz	1.000 MHz	2.56492 GHz	-30.91 dBm	-17.91 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56897 GHz	-20.34 dBm	-10.34 dB
2.569 GHz	2.570 GHz	100.000 kHz	2.57000 GHz	-19.66 dBm	-9.66 dB
2.570 GHz	2.575 GHz	100.000 kHz	2.57030 GHz	15.01 dBm	-14.99 dB
2.575 GHz	2.576 GHz	100.000 kHz	2.57500 GHz	-37.15 dBm	-27.15 dB
2.576 GHz	2.580 GHz	1.000 MHz	2.57610 GHz	-32.24 dBm	-22.24 dB
2.580 GHz	2.581 GHz	1.000 MHz	2.58005 GHz	-35.36 dBm	-22.36 dB
2.581 GHz	2.590 GHz	1.000 MHz	2.58256 GHz	-36.66 dBm	-11.66 dB

Date: 30.JUL.2020 11:30:21

CHANNEL	38225	1 RB

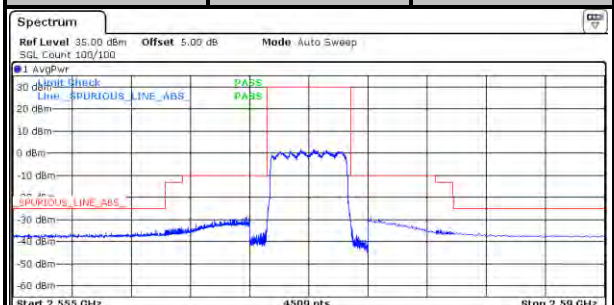


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.600 GHz	2.609 GHz	1.000 MHz	2.60899 GHz	-36.18 dBm	-11.18 dB
2.609 GHz	2.610 GHz	1.000 MHz	2.60961 GHz	-34.99 dBm	-21.99 dB
2.610 GHz	2.614 GHz	1.000 MHz	2.61361 GHz	-31.69 dBm	-21.69 dB
2.614 GHz	2.615 GHz	100.000 kHz	2.61498 GHz	-37.43 dBm	-27.43 dB
2.615 GHz	2.620 GHz	100.000 kHz	2.61964 GHz	14.97 dBm	-15.03 dB
2.620 GHz	2.621 GHz	100.000 kHz	2.62000 GHz	-20.06 dBm	-10.06 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62122 GHz	-24.77 dBm	-14.77 dB
2.625 GHz	2.626 GHz	1.000 MHz	2.62564 GHz	-34.45 dBm	-21.45 dB
2.626 GHz	2.635 GHz	1.000 MHz	2.63059 GHz	-37.01 dBm	-12.01 dB

Date: 30.JUL.2020 11:34:04

CHANNEL	37775	Full RB

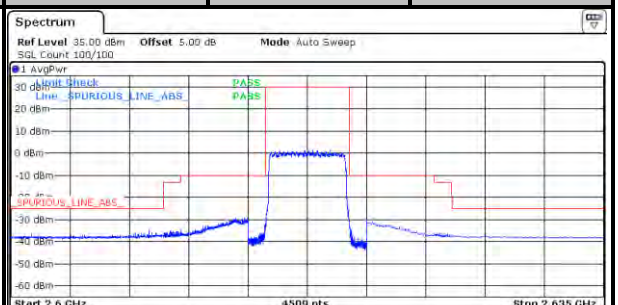


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.555 GHz	2.564 GHz	1.000 MHz	2.56343 GHz	-35.09 dBm	-10.09 dB
2.564 GHz	2.565 GHz	1.000 MHz	2.56449 GHz	-33.79 dBm	-20.79 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56884 GHz	-28.53 dBm	-18.53 dB
2.569 GHz	2.570 GHz	100.000 kHz	2.57000 GHz	-34.65 dBm	-24.65 dB
2.570 GHz	2.575 GHz	100.000 kHz	2.57001 GHz	1.79 dBm	-28.21 dB
2.575 GHz	2.576 GHz	100.000 kHz	2.57500 GHz	-33.00 dBm	-23.00 dB
2.576 GHz	2.580 GHz	1.000 MHz	2.57618 GHz	-26.83 dBm	-16.83 dB
2.580 GHz	2.581 GHz	1.000 MHz	2.58026 GHz	-34.46 dBm	-21.46 dB
2.581 GHz	2.590 GHz	1.000 MHz	2.58122 GHz	-35.84 dBm	-10.84 dB

Date: 30.JUL.2020 11:26:52

CHANNEL	38225	Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.600 GHz	2.609 GHz	1.000 MHz	2.60817 GHz	-34.75 dBm	-9.75 dB
2.609 GHz	2.610 GHz	1.000 MHz	2.61000 GHz	-34.81 dBm	-21.81 dB
2.610 GHz	2.614 GHz	1.000 MHz	2.61393 GHz	-29.24 dBm	-19.24 dB
2.614 GHz	2.615 GHz	100.000 kHz	2.61500 GHz	-32.74 dBm	-22.74 dB
2.615 GHz	2.620 GHz	100.000 kHz	2.61810 GHz	1.12 dBm	-28.88 dB
2.620 GHz	2.621 GHz	100.000 kHz	2.62000 GHz	-32.72 dBm	-22.72 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62102 GHz	-30.43 dBm	-20.43 dB
2.625 GHz	2.626 GHz	1.000 MHz	2.62523 GHz	-36.24 dBm	-23.24 dB
2.626 GHz	2.635 GHz	1.000 MHz	2.62622 GHz	-37.34 dBm	-12.34 dB

Date: 30.JUL.2020 11:35:22

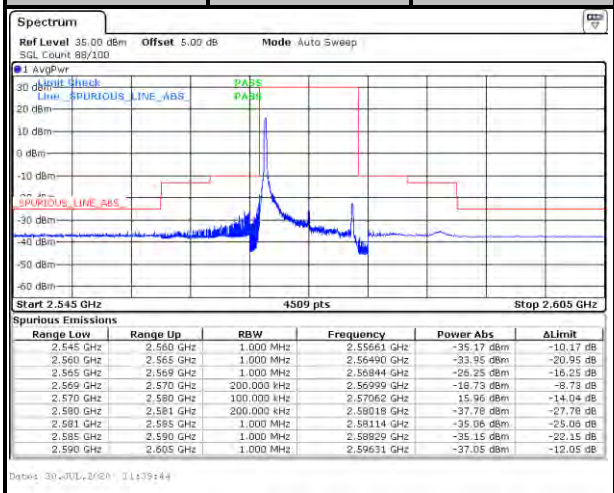
Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

LTE BAND 38

Channel Bandwidth: 10MHz / QPSK

CHANNEL	37800	1 RB

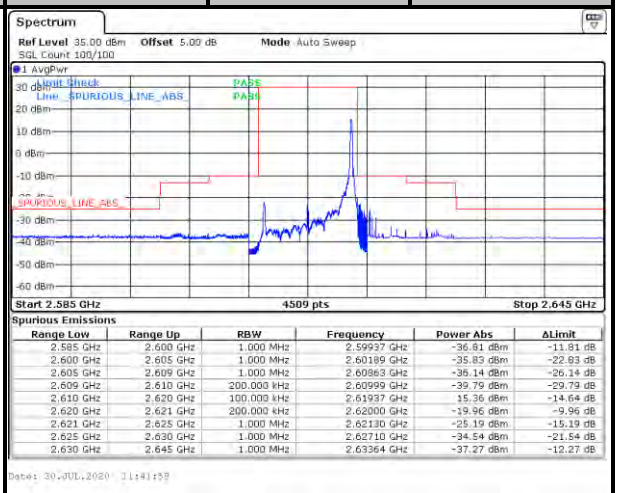


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.545 GHz	2.560 GHz	1.000 MHz	2.55661 GHz	-35.17 dBm	-10.17 dB
2.560 GHz	2.565 GHz	1.000 MHz	2.56490 GHz	-33.95 dBm	-20.95 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56844 GHz	-26.25 dBm	-16.25 dB
2.569 GHz	2.570 GHz	200.000 kHz	2.56999 GHz	-18.73 dBm	-8.73 dB
2.570 GHz	2.580 GHz	100.000 kHz	2.57062 GHz	15.96 dBm	-14.04 dB
2.580 GHz	2.581 GHz	200.000 kHz	2.58018 GHz	-37.78 dBm	-27.78 dB
2.581 GHz	2.585 GHz	1.000 MHz	2.58114 GHz	-35.06 dBm	-25.06 dB
2.585 GHz	2.590 GHz	1.000 MHz	2.58829 GHz	-35.15 dBm	-22.15 dB
2.590 GHz	2.605 GHz	1.000 MHz	2.59631 GHz	-37.05 dBm	-12.05 dB

Date: 30.JUL.2020 11:39:44

CHANNEL	38200	1 RB

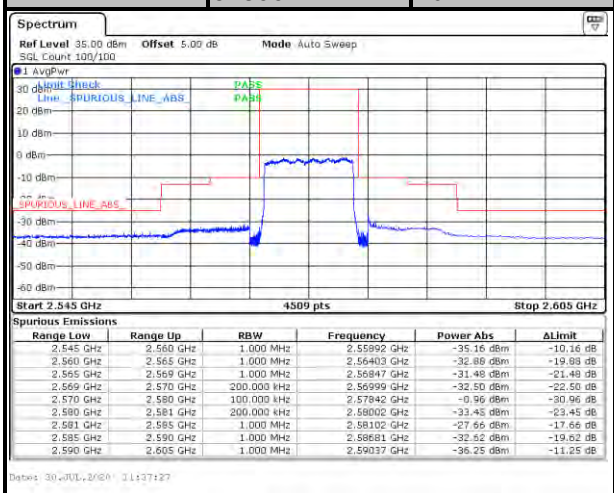


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.585 GHz	2.600 GHz	1.000 MHz	2.59937 GHz	-36.81 dBm	-11.81 dB
2.600 GHz	2.605 GHz	1.000 MHz	2.60189 GHz	-35.83 dBm	-22.83 dB
2.605 GHz	2.609 GHz	1.000 MHz	2.60863 GHz	-36.14 dBm	-26.14 dB
2.609 GHz	2.610 GHz	200.000 kHz	2.60999 GHz	-39.79 dBm	-29.79 dB
2.610 GHz	2.620 GHz	100.000 kHz	2.61937 GHz	15.36 dBm	-14.64 dB
2.620 GHz	2.621 GHz	200.000 kHz	2.62000 GHz	-19.96 dBm	-9.96 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62130 GHz	-25.19 dBm	-15.19 dB
2.625 GHz	2.630 GHz	1.000 MHz	2.62710 GHz	-34.54 dBm	-21.54 dB
2.630 GHz	2.645 GHz	1.000 MHz	2.63364 GHz	-37.27 dBm	-12.27 dB

Date: 30.JUL.2020 11:41:59

CHANNEL	37800	Full RB

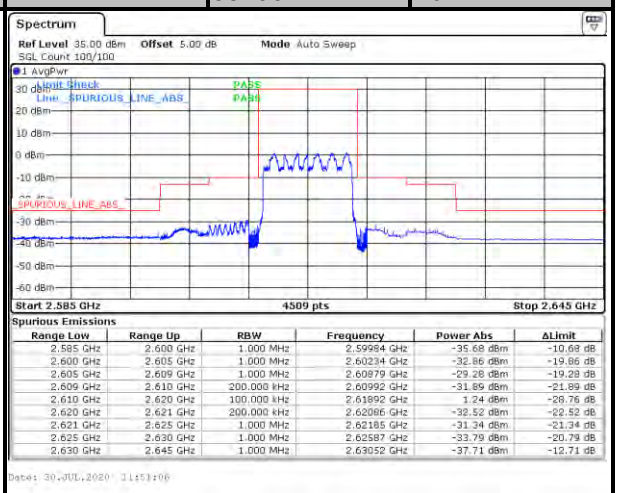


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.545 GHz	2.560 GHz	1.000 MHz	2.55892 GHz	-35.16 dBm	-10.16 dB
2.560 GHz	2.565 GHz	1.000 MHz	2.56403 GHz	-32.88 dBm	-19.88 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56847 GHz	-31.48 dBm	-21.48 dB
2.569 GHz	2.570 GHz	200.000 kHz	2.56999 GHz	-32.50 dBm	-22.50 dB
2.570 GHz	2.580 GHz	100.000 kHz	2.57842 GHz	-0.96 dBm	-30.96 dB
2.580 GHz	2.581 GHz	200.000 kHz	2.58002 GHz	-33.45 dBm	-23.45 dB
2.581 GHz	2.585 GHz	1.000 MHz	2.58102 GHz	-27.66 dBm	-17.66 dB
2.585 GHz	2.590 GHz	1.000 MHz	2.58681 GHz	-32.62 dBm	-19.62 dB
2.590 GHz	2.605 GHz	1.000 MHz	2.59037 GHz	-36.25 dBm	-11.25 dB

Date: 30.JUL.2020 11:37:27

CHANNEL	38200	Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.585 GHz	2.600 GHz	1.000 MHz	2.59984 GHz	-35.68 dBm	-10.68 dB
2.600 GHz	2.605 GHz	1.000 MHz	2.60234 GHz	-32.86 dBm	-19.86 dB
2.605 GHz	2.609 GHz	1.000 MHz	2.60879 GHz	-29.28 dBm	-19.28 dB
2.609 GHz	2.610 GHz	200.000 kHz	2.60992 GHz	-31.89 dBm	-21.89 dB
2.610 GHz	2.620 GHz	100.000 kHz	2.61892 GHz	1.24 dBm	-28.76 dB
2.620 GHz	2.621 GHz	200.000 kHz	2.62086 GHz	-32.52 dBm	-22.52 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62185 GHz	-31.34 dBm	-21.34 dB
2.625 GHz	2.630 GHz	1.000 MHz	2.62587 GHz	-33.79 dBm	-20.79 dB
2.630 GHz	2.645 GHz	1.000 MHz	2.63052 GHz	-37.71 dBm	-12.71 dB

Date: 30.JUL.2020 11:53:06

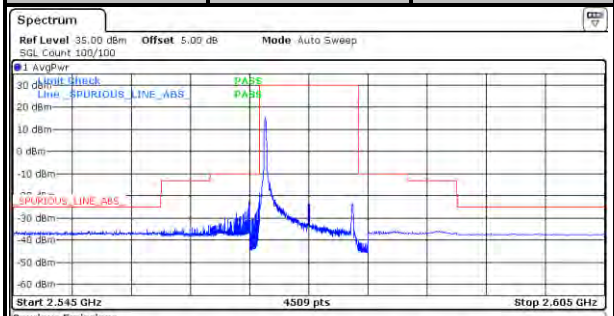
Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

LTE BAND 38

Channel Bandwidth: 10MHz / 16QAM

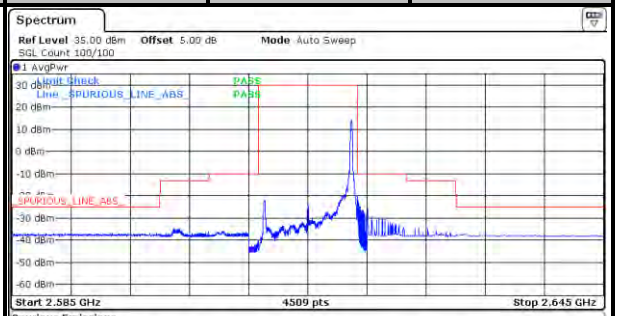
CHANNEL	37800	1 RB	CHANNEL	38200	1 RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.545 GHz	2.560 GHz	1.000 MHz	2.55862 GHz	-35.17 dBm	-10.17 dB
2.560 GHz	2.565 GHz	1.000 MHz	2.56498 GHz	-33.39 dBm	-20.39 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56891 GHz	-22.53 dBm	-12.53 dB
2.569 GHz	2.570 GHz	200.000 kHz	2.56999 GHz	-18.56 dBm	-8.56 dB
2.570 GHz	2.580 GHz	100.000 kHz	2.57056 GHz	15.21 dBm	-14.79 dB
2.580 GHz	2.581 GHz	200.000 kHz	2.58003 GHz	-40.08 dBm	-30.08 dB
2.581 GHz	2.585 GHz	1.000 MHz	2.58359 GHz	-35.39 dBm	-25.39 dB
2.585 GHz	2.590 GHz	1.000 MHz	2.58824 GHz	-35.76 dBm	-22.76 dB
2.590 GHz	2.605 GHz	1.000 MHz	2.59349 GHz	-37.15 dBm	-12.15 dB

Date: 30.JUL.2020 11:39:23

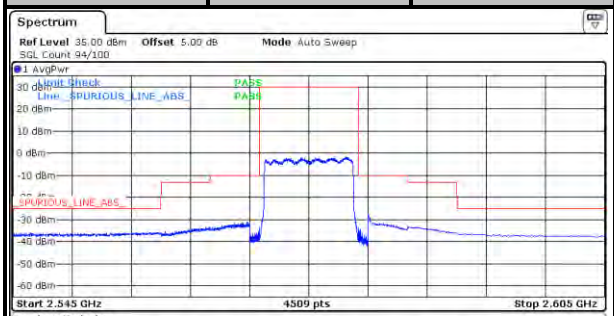


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.585 GHz	2.600 GHz	1.000 MHz	2.59967 GHz	-36.76 dBm	-11.76 dB
2.600 GHz	2.605 GHz	1.000 MHz	2.60143 GHz	-34.72 dBm	-21.72 dB
2.605 GHz	2.609 GHz	1.000 MHz	2.60826 GHz	-36.25 dBm	-26.25 dB
2.609 GHz	2.610 GHz	200.000 kHz	2.60999 GHz	-40.07 dBm	-30.07 dB
2.610 GHz	2.620 GHz	100.000 kHz	2.61944 GHz	14.29 dBm	-15.71 dB
2.620 GHz	2.621 GHz	200.000 kHz	2.62001 GHz	-19.78 dBm	-9.78 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62110 GHz	-26.04 dBm	-16.04 dB
2.625 GHz	2.630 GHz	1.000 MHz	2.62626 GHz	-34.48 dBm	-21.48 dB
2.630 GHz	2.645 GHz	1.000 MHz	2.63097 GHz	-37.31 dBm	-12.31 dB

Date: 30.JUL.2020 11:43:26

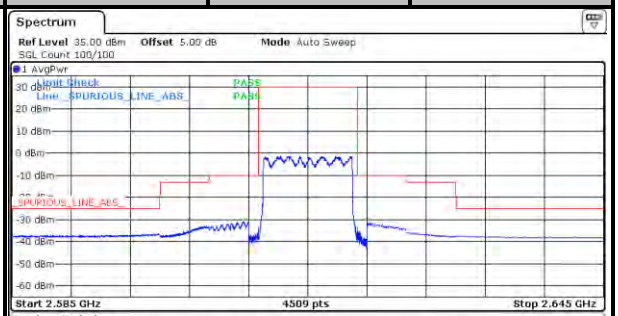
CHANNEL	37800	Full RB	CHANNEL	38200	Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.545 GHz	2.560 GHz	1.000 MHz	2.55950 GHz	-35.71 dBm	-10.71 dB
2.560 GHz	2.565 GHz	1.000 MHz	2.56461 GHz	-33.57 dBm	-20.57 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56869 GHz	-31.05 dBm	-21.05 dB
2.569 GHz	2.570 GHz	200.000 kHz	2.57000 GHz	-33.76 dBm	-23.76 dB
2.570 GHz	2.580 GHz	100.000 kHz	2.57875 GHz	-1.46 dBm	-21.46 dB
2.580 GHz	2.581 GHz	200.000 kHz	2.58002 GHz	-33.96 dBm	-23.96 dB
2.581 GHz	2.585 GHz	1.000 MHz	2.58102 GHz	-27.23 dBm	-17.23 dB
2.585 GHz	2.590 GHz	1.000 MHz	2.58517 GHz	-33.14 dBm	-20.14 dB
2.590 GHz	2.605 GHz	1.000 MHz	2.59097 GHz	-36.37 dBm	-11.37 dB

Date: 30.JUL.2020 11:38:45



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.585 GHz	2.600 GHz	1.000 MHz	2.59973 GHz	-36.37 dBm	-11.37 dB
2.600 GHz	2.605 GHz	1.000 MHz	2.60478 GHz	-32.94 dBm	-19.94 dB
2.605 GHz	2.609 GHz	1.000 MHz	2.60899 GHz	-30.64 dBm	-20.64 dB
2.609 GHz	2.610 GHz	200.000 kHz	2.61000 GHz	-33.78 dBm	-23.78 dB
2.610 GHz	2.620 GHz	100.000 kHz	2.61320 GHz	-1.25 dBm	-21.25 dB
2.620 GHz	2.621 GHz	200.000 kHz	2.62004 GHz	-33.63 dBm	-23.63 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62146 GHz	-31.33 dBm	-21.33 dB
2.625 GHz	2.630 GHz	1.000 MHz	2.62502 GHz	-35.79 dBm	-22.79 dB
2.630 GHz	2.645 GHz	1.000 MHz	2.63067 GHz	-37.43 dBm	-12.43 dB

Date: 30.JUL.2020 11:50:30

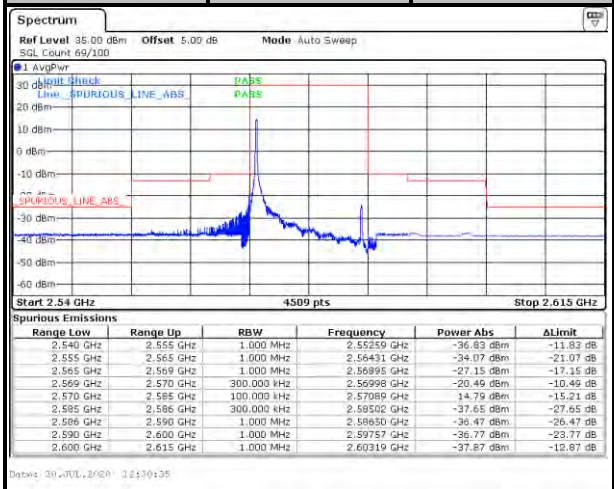
Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

LTE BAND 38

Channel Bandwidth: 15MHz / QPSK

CHANNEL	37825	1 RB

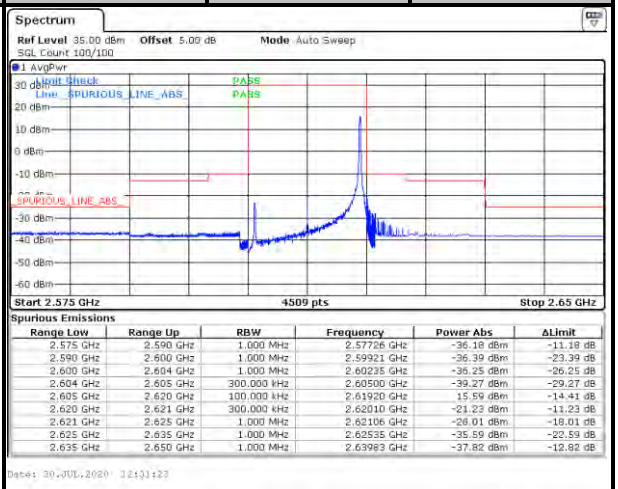


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.540 GHz	2.555 GHz	1.000 MHz	2.55259 GHz	-36.83 dBm	-11.83 dB
2.555 GHz	2.565 GHz	1.000 MHz	2.56431 GHz	-34.07 dBm	-21.07 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56895 GHz	-27.15 dBm	-17.15 dB
2.569 GHz	2.570 GHz	300.000 kHz	2.56998 GHz	-20.49 dBm	-10.49 dB
2.570 GHz	2.585 GHz	100.000 kHz	2.57089 GHz	14.79 dBm	-15.21 dB
2.585 GHz	2.586 GHz	300.000 kHz	2.58502 GHz	-37.65 dBm	-27.65 dB
2.586 GHz	2.590 GHz	1.000 MHz	2.58650 GHz	-36.47 dBm	-26.47 dB
2.590 GHz	2.600 GHz	1.000 MHz	2.59757 GHz	-36.77 dBm	-23.77 dB
2.600 GHz	2.615 GHz	1.000 MHz	2.60319 GHz	-37.87 dBm	-12.87 dB

Date: 30.JUL.2020 12:30:35

CHANNEL	38175	1 RB

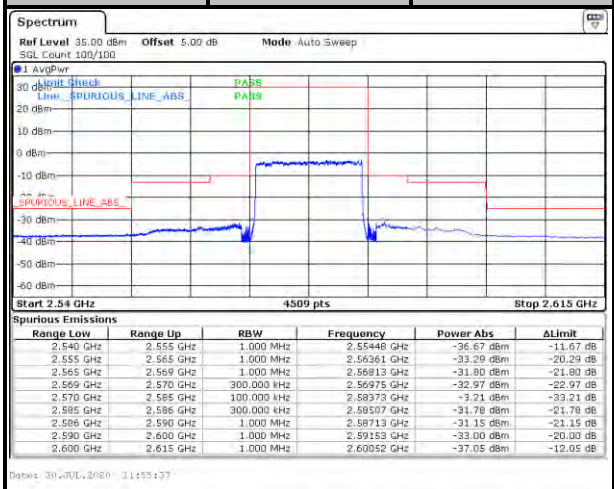


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.575 GHz	2.590 GHz	1.000 MHz	2.57726 GHz	-36.18 dBm	-11.18 dB
2.590 GHz	2.600 GHz	1.000 MHz	2.59921 GHz	-36.39 dBm	-23.39 dB
2.600 GHz	2.604 GHz	1.000 MHz	2.60235 GHz	-35.25 dBm	-26.25 dB
2.604 GHz	2.605 GHz	300.000 kHz	2.60500 GHz	-39.27 dBm	-29.27 dB
2.605 GHz	2.620 GHz	100.000 kHz	2.61920 GHz	15.59 dBm	-14.41 dB
2.620 GHz	2.621 GHz	300.000 kHz	2.62010 GHz	-21.23 dBm	-11.23 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62106 GHz	-28.01 dBm	-18.01 dB
2.625 GHz	2.635 GHz	1.000 MHz	2.62535 GHz	-35.59 dBm	-22.59 dB
2.635 GHz	2.650 GHz	1.000 MHz	2.63983 GHz	-37.82 dBm	-12.82 dB

Date: 30.JUL.2020 12:31:23

CHANNEL	37825	Full RB

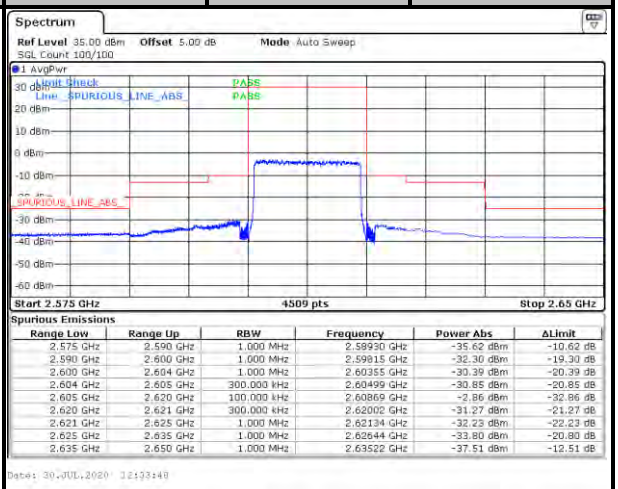


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.540 GHz	2.555 GHz	1.000 MHz	2.55448 GHz	-36.67 dBm	-11.67 dB
2.555 GHz	2.565 GHz	1.000 MHz	2.56361 GHz	-33.29 dBm	-20.29 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56813 GHz	-31.80 dBm	-21.80 dB
2.569 GHz	2.570 GHz	300.000 kHz	2.56975 GHz	-32.97 dBm	-22.97 dB
2.570 GHz	2.585 GHz	100.000 kHz	2.58373 GHz	-3.21 dBm	-33.21 dB
2.585 GHz	2.586 GHz	300.000 kHz	2.58507 GHz	-31.78 dBm	-21.78 dB
2.586 GHz	2.590 GHz	1.000 MHz	2.58713 GHz	-31.15 dBm	-21.15 dB
2.590 GHz	2.600 GHz	1.000 MHz	2.59153 GHz	-33.00 dBm	-20.00 dB
2.600 GHz	2.615 GHz	1.000 MHz	2.60052 GHz	-37.05 dBm	-12.05 dB

Date: 30.JUL.2020 11:55:37

CHANNEL	38175	Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.575 GHz	2.590 GHz	1.000 MHz	2.58930 GHz	-35.62 dBm	-10.62 dB
2.590 GHz	2.600 GHz	1.000 MHz	2.59815 GHz	-32.30 dBm	-19.30 dB
2.600 GHz	2.604 GHz	1.000 MHz	2.60355 GHz	-30.39 dBm	-20.39 dB
2.604 GHz	2.605 GHz	300.000 kHz	2.60499 GHz	-30.85 dBm	-20.85 dB
2.605 GHz	2.620 GHz	100.000 kHz	2.60869 GHz	-2.86 dBm	-32.86 dB
2.620 GHz	2.621 GHz	300.000 kHz	2.62002 GHz	-31.27 dBm	-21.27 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62134 GHz	-32.23 dBm	-22.23 dB
2.625 GHz	2.635 GHz	1.000 MHz	2.62644 GHz	-33.80 dBm	-20.80 dB
2.635 GHz	2.650 GHz	1.000 MHz	2.63522 GHz	-37.51 dBm	-12.51 dB

Date: 30.JUL.2020 12:33:40

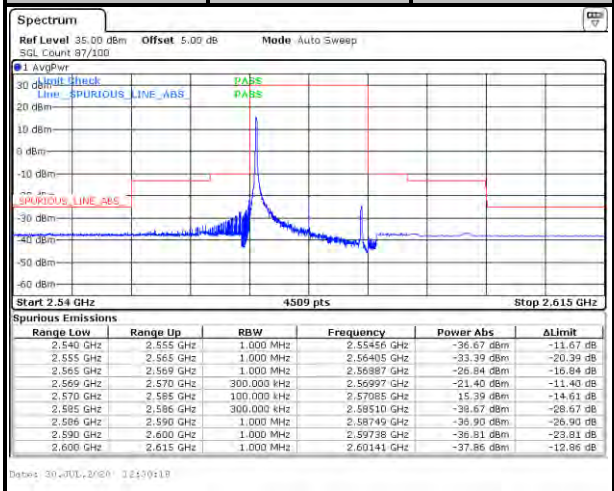
Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

LTE BAND 38

Channel Bandwidth: 15MHz / 16QAM

CHANNEL	37825	1 RB

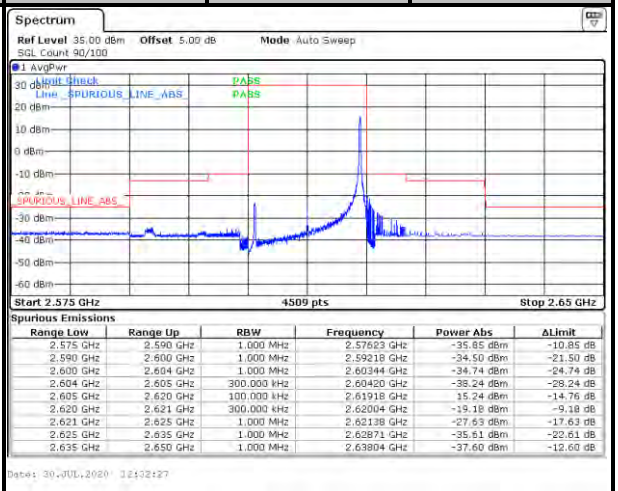


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.540 GHz	2.555 GHz	1.000 MHz	2.55456 GHz	-36.67 dBm	-11.67 dB
2.555 GHz	2.565 GHz	1.000 MHz	2.56405 GHz	-33.39 dBm	-20.39 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56987 GHz	-26.84 dBm	-16.84 dB
2.569 GHz	2.570 GHz	300.000 kHz	2.56997 GHz	-21.40 dBm	-11.40 dB
2.570 GHz	2.585 GHz	100.000 kHz	2.57085 GHz	15.39 dBm	-14.61 dB
2.585 GHz	2.586 GHz	300.000 kHz	2.58510 GHz	-38.67 dBm	-28.67 dB
2.586 GHz	2.590 GHz	1.000 MHz	2.58749 GHz	-36.90 dBm	-26.90 dB
2.590 GHz	2.600 GHz	1.000 MHz	2.59738 GHz	-36.81 dBm	-23.81 dB
2.600 GHz	2.615 GHz	1.000 MHz	2.60141 GHz	-37.86 dBm	-12.86 dB

Date: 30.JUL.2020 12:30:18

CHANNEL	38175	1 RB

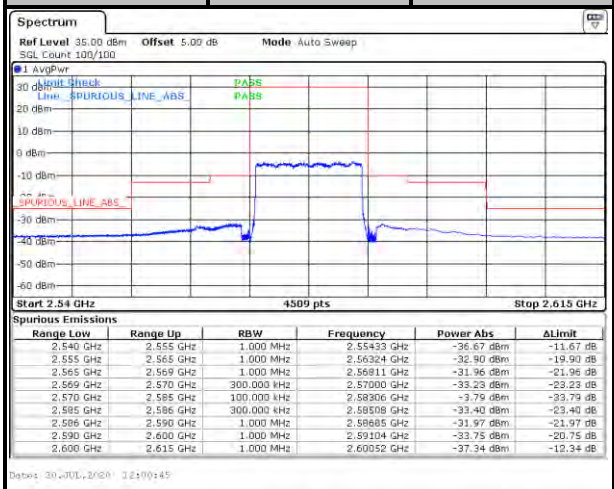


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.575 GHz	2.590 GHz	1.000 MHz	2.57623 GHz	-35.85 dBm	-10.85 dB
2.590 GHz	2.600 GHz	1.000 MHz	2.59218 GHz	-34.50 dBm	-21.50 dB
2.600 GHz	2.604 GHz	1.000 MHz	2.60344 GHz	-34.74 dBm	-24.74 dB
2.604 GHz	2.605 GHz	300.000 kHz	2.60420 GHz	-38.24 dBm	-28.24 dB
2.605 GHz	2.620 GHz	100.000 kHz	2.61918 GHz	15.24 dBm	-14.76 dB
2.620 GHz	2.621 GHz	300.000 kHz	2.62004 GHz	-19.18 dBm	-9.18 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62138 GHz	-27.63 dBm	-17.63 dB
2.625 GHz	2.635 GHz	1.000 MHz	2.62871 GHz	-35.61 dBm	-22.61 dB
2.635 GHz	2.650 GHz	1.000 MHz	2.63804 GHz	-37.60 dBm	-12.60 dB

Date: 30.JUL.2020 12:32:27

CHANNEL	37825	Full RB

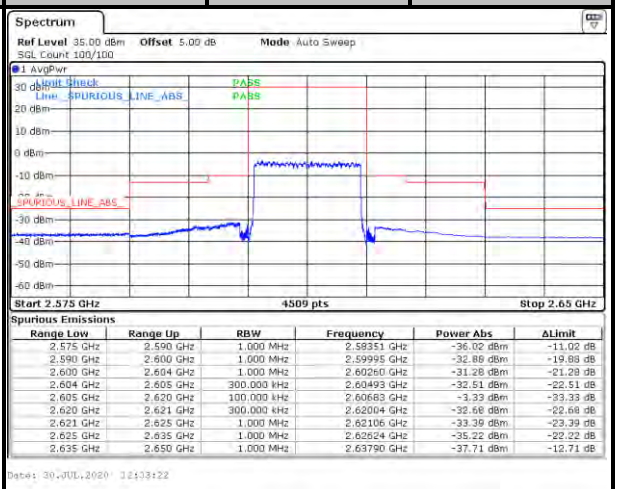


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.540 GHz	2.555 GHz	1.000 MHz	2.55433 GHz	-36.67 dBm	-11.67 dB
2.555 GHz	2.565 GHz	1.000 MHz	2.56324 GHz	-32.90 dBm	-19.90 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56811 GHz	-31.96 dBm	-21.96 dB
2.569 GHz	2.570 GHz	300.000 kHz	2.57000 GHz	-33.23 dBm	-23.23 dB
2.570 GHz	2.585 GHz	100.000 kHz	2.58306 GHz	-3.79 dBm	-23.79 dB
2.585 GHz	2.586 GHz	300.000 kHz	2.58508 GHz	-33.40 dBm	-23.40 dB
2.586 GHz	2.590 GHz	1.000 MHz	2.58685 GHz	-31.97 dBm	-21.97 dB
2.590 GHz	2.600 GHz	1.000 MHz	2.59104 GHz	-33.75 dBm	-20.75 dB
2.600 GHz	2.615 GHz	1.000 MHz	2.60052 GHz	-37.34 dBm	-12.34 dB

Date: 30.JUL.2020 12:00:45

CHANNEL	38175	Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.575 GHz	2.590 GHz	1.000 MHz	2.58351 GHz	-36.02 dBm	-11.02 dB
2.590 GHz	2.600 GHz	1.000 MHz	2.59995 GHz	-32.88 dBm	-19.88 dB
2.600 GHz	2.604 GHz	1.000 MHz	2.60260 GHz	-31.28 dBm	-21.28 dB
2.604 GHz	2.605 GHz	300.000 kHz	2.60493 GHz	-32.51 dBm	-22.51 dB
2.605 GHz	2.620 GHz	100.000 kHz	2.60683 GHz	-3.33 dBm	-33.33 dB
2.620 GHz	2.621 GHz	300.000 kHz	2.62004 GHz	-32.68 dBm	-22.68 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62106 GHz	-33.39 dBm	-23.39 dB
2.625 GHz	2.635 GHz	1.000 MHz	2.62624 GHz	-35.22 dBm	-22.22 dB
2.635 GHz	2.650 GHz	1.000 MHz	2.63790 GHz	-37.71 dBm	-12.71 dB

Date: 30.JUL.2020 12:33:22

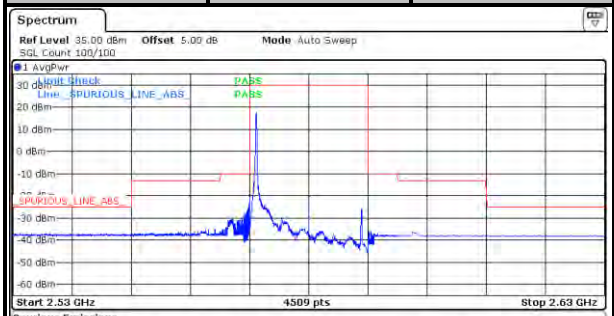
Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

LTE BAND 38

Channel Bandwidth: 20MHz / QPSK

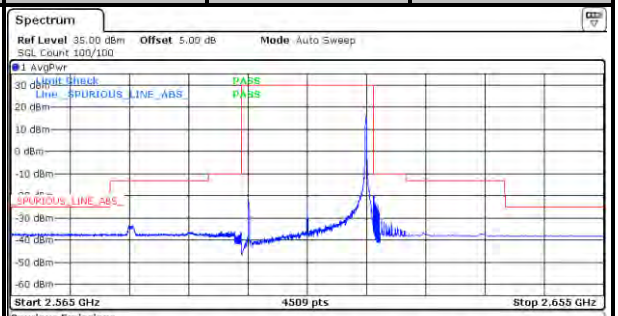
CHANNEL	37850	1 RB	CHANNEL	38150	1 RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.530 GHz	2.550 GHz	1.000 MHz	2.54488 GHz	-37.06 dBm	-12.06 dB
2.550 GHz	2.565 GHz	1.000 MHz	2.56403 GHz	-35.20 dBm	-22.20 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56875 GHz	-29.95 dBm	-19.95 dB
2.569 GHz	2.570 GHz	500.000 kHz	2.56995 GHz	-21.09 dBm	-11.09 dB
2.570 GHz	2.590 GHz	100.000 kHz	2.57110 GHz	17.35 dBm	-12.65 dB
2.590 GHz	2.591 GHz	500.000 kHz	2.59049 GHz	-35.85 dBm	-25.85 dB
2.591 GHz	2.595 GHz	1.000 MHz	2.59118 GHz	-37.30 dBm	-27.30 dB
2.595 GHz	2.610 GHz	1.000 MHz	2.59775 GHz	-36.62 dBm	-23.62 dB
2.610 GHz	2.630 GHz	1.000 MHz	2.61822 GHz	-38.01 dBm	-13.01 dB

Date: 30.JUL.2020 12:38:39

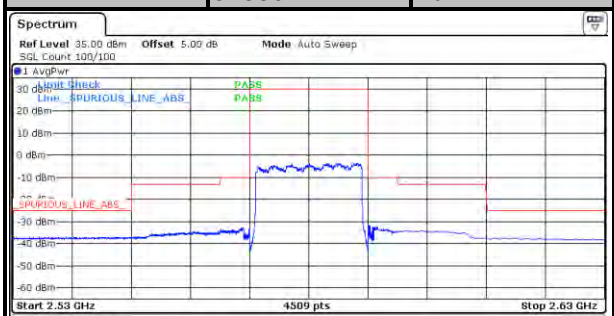


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.565 GHz	2.580 GHz	1.000 MHz	2.57652 GHz	-37.12 dBm	-12.12 dB
2.580 GHz	2.595 GHz	1.000 MHz	2.58294 GHz	-33.23 dBm	-20.23 dB
2.595 GHz	2.599 GHz	1.000 MHz	2.59842 GHz	-36.12 dBm	-26.12 dB
2.599 GHz	2.600 GHz	500.000 kHz	2.59996 GHz	-36.59 dBm	-26.59 dB
2.600 GHz	2.620 GHz	100.000 kHz	2.61893 GHz	15.96 dBm	-14.04 dB
2.620 GHz	2.621 GHz	500.000 kHz	2.62000 GHz	-20.01 dBm	-10.01 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62126 GHz	-30.85 dBm	-20.85 dB
2.625 GHz	2.640 GHz	1.000 MHz	2.62760 GHz	-36.59 dBm	-23.59 dB
2.640 GHz	2.655 GHz	1.000 MHz	2.64304 GHz	-37.96 dBm	-12.96 dB

Date: 30.JUL.2020 12:45:01

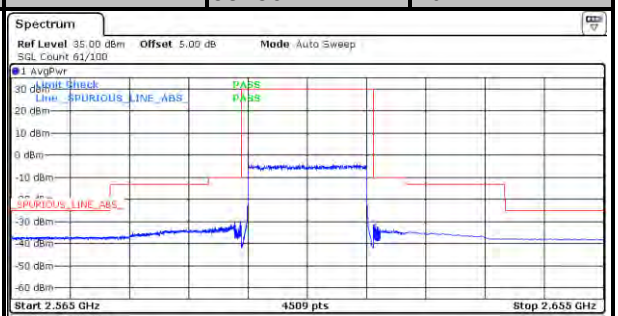
CHANNEL	37850	Full RB	CHANNEL	38150	Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.530 GHz	2.550 GHz	1.000 MHz	2.54733 GHz	-36.98 dBm	-11.98 dB
2.550 GHz	2.565 GHz	1.000 MHz	2.56056 GHz	-34.43 dBm	-21.43 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56886 GHz	-32.73 dBm	-22.73 dB
2.569 GHz	2.570 GHz	500.000 kHz	2.56994 GHz	-33.62 dBm	-23.62 dB
2.570 GHz	2.590 GHz	100.000 kHz	2.58508 GHz	-3.52 dBm	-23.52 dB
2.590 GHz	2.591 GHz	500.000 kHz	2.59012 GHz	-31.67 dBm	-21.67 dB
2.591 GHz	2.595 GHz	1.000 MHz	2.59134 GHz	-32.15 dBm	-22.15 dB
2.595 GHz	2.610 GHz	1.000 MHz	2.59686 GHz	-34.05 dBm	-21.05 dB
2.610 GHz	2.630 GHz	1.000 MHz	2.61030 GHz	-37.55 dBm	-12.55 dB

Date: 30.JUL.2020 12:36:17



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.565 GHz	2.580 GHz	1.000 MHz	2.57909 GHz	-36.77 dBm	-11.77 dB
2.580 GHz	2.595 GHz	1.000 MHz	2.59441 GHz	-33.67 dBm	-20.67 dB
2.595 GHz	2.599 GHz	1.000 MHz	2.59892 GHz	-30.41 dBm	-20.41 dB
2.599 GHz	2.600 GHz	500.000 kHz	2.59988 GHz	-30.26 dBm	-20.26 dB
2.600 GHz	2.620 GHz	100.000 kHz	2.61756 GHz	-4.04 dBm	-34.04 dB
2.620 GHz	2.621 GHz	500.000 kHz	2.62040 GHz	-31.18 dBm	-21.18 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62153 GHz	-33.69 dBm	-23.69 dB
2.625 GHz	2.640 GHz	1.000 MHz	2.62567 GHz	-34.92 dBm	-21.92 dB
2.640 GHz	2.655 GHz	1.000 MHz	2.64022 GHz	-37.77 dBm	-12.77 dB

Date: 30.JUL.2020 12:48:33

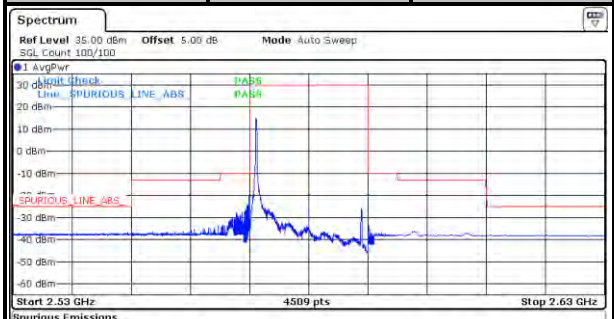
Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

LTE BAND 38

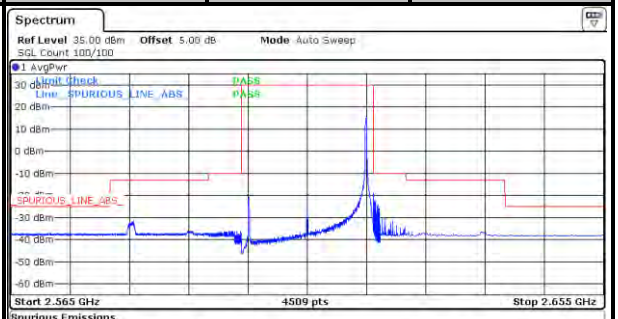
Channel Bandwidth: 20MHz /16QAM

CHANNEL	37850	1 RB	CHANNEL	38150	1 RB



Spurious Emissions

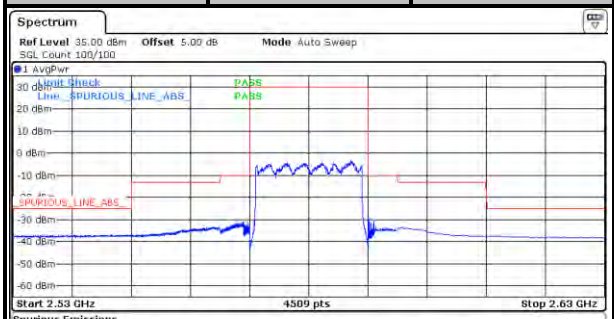
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.530 GHz	2.550 GHz	1.000 MHz	2.54939 GHz	-36.98 dBm	-11.98 dB
2.550 GHz	2.555 GHz	1.000 MHz	2.56473 GHz	-33.94 dBm	-20.94 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56879 GHz	-27.76 dBm	-17.76 dB
2.569 GHz	2.570 GHz	500.000 kHz	2.56990 GHz	-20.46 dBm	-10.46 dB
2.570 GHz	2.590 GHz	100.000 kHz	2.57113 GHz	14.65 dBm	-15.35 dB
2.590 GHz	2.591 GHz	500.000 kHz	2.59015 GHz	-33.59 dBm	-23.59 dB
2.591 GHz	2.595 GHz	1.000 MHz	2.59225 GHz	-36.98 dBm	-26.98 dB
2.595 GHz	2.610 GHz	1.000 MHz	2.59790 GHz	-36.32 dBm	-23.32 dB
2.610 GHz	2.630 GHz	1.000 MHz	2.61010 GHz	-37.96 dBm	-12.96 dB



Spurious Emissions

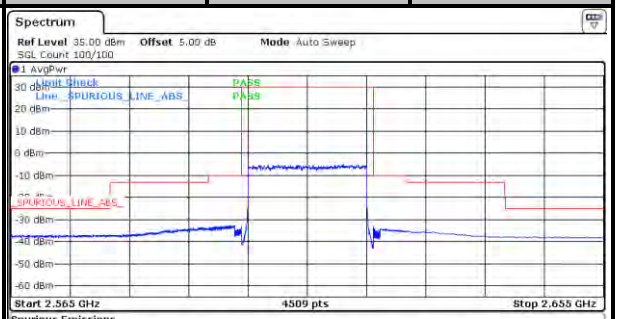
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.565 GHz	2.580 GHz	1.000 MHz	2.56730 GHz	-37.03 dBm	-12.03 dB
2.580 GHz	2.595 GHz	1.000 MHz	2.58356 GHz	-31.45 dBm	-18.45 dB
2.595 GHz	2.599 GHz	1.000 MHz	2.59820 GHz	-35.86 dBm	-25.86 dB
2.599 GHz	2.600 GHz	500.000 kHz	2.59991 GHz	-36.02 dBm	-26.02 dB
2.600 GHz	2.620 GHz	100.000 kHz	2.61896 GHz	15.26 dBm	-14.74 dB
2.620 GHz	2.621 GHz	500.000 kHz	2.62001 GHz	-18.79 dBm	-8.79 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62138 GHz	-30.27 dBm	-20.27 dB
2.625 GHz	2.640 GHz	1.000 MHz	2.62582 GHz	-36.50 dBm	-23.50 dB
2.640 GHz	2.655 GHz	1.000 MHz	2.65463 GHz	-37.94 dBm	-12.94 dB

CHANNEL	37850	Full RB	CHANNEL	38150	Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.530 GHz	2.550 GHz	1.000 MHz	2.54545 GHz	-36.97 dBm	-11.97 dB
2.550 GHz	2.565 GHz	1.000 MHz	2.56381 GHz	-33.31 dBm	-20.31 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56889 GHz	-31.20 dBm	-21.20 dB
2.569 GHz	2.570 GHz	500.000 kHz	2.56979 GHz	-31.03 dBm	-21.03 dB
2.570 GHz	2.590 GHz	100.000 kHz	2.58713 GHz	-3.26 dBm	-33.26 dB
2.590 GHz	2.591 GHz	500.000 kHz	2.59000 GHz	-29.42 dBm	-19.42 dB
2.591 GHz	2.595 GHz	1.000 MHz	2.59102 GHz	-33.20 dBm	-23.20 dB
2.595 GHz	2.610 GHz	1.000 MHz	2.59582 GHz	-33.61 dBm	-20.61 dB
2.610 GHz	2.630 GHz	1.000 MHz	2.61030 GHz	-37.38 dBm	-12.38 dB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.565 GHz	2.580 GHz	1.000 MHz	2.57451 GHz	-36.97 dBm	-11.97 dB
2.580 GHz	2.595 GHz	1.000 MHz	2.59400 GHz	-33.56 dBm	-20.56 dB
2.595 GHz	2.599 GHz	1.000 MHz	2.59852 GHz	-32.74 dBm	-22.74 dB
2.599 GHz	2.600 GHz	500.000 kHz	2.59995 GHz	-33.00 dBm	-23.00 dB
2.600 GHz	2.620 GHz	100.000 kHz	2.61548 GHz	-4.94 dBm	-34.94 dB
2.620 GHz	2.621 GHz	500.000 kHz	2.62000 GHz	-33.29 dBm	-23.29 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62126 GHz	-34.04 dBm	-24.04 dB
2.625 GHz	2.640 GHz	1.000 MHz	2.62522 GHz	-35.32 dBm	-22.32 dB
2.640 GHz	2.655 GHz	1.000 MHz	2.64082 GHz	-37.85 dBm	-12.85 dB

Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

Note: Limit has been adjusted by 10*log(RBW) to reflect a 1MHz measurement bandwidth.

2.5 CONDUCTED SPURIOUS EMISSIONS

3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

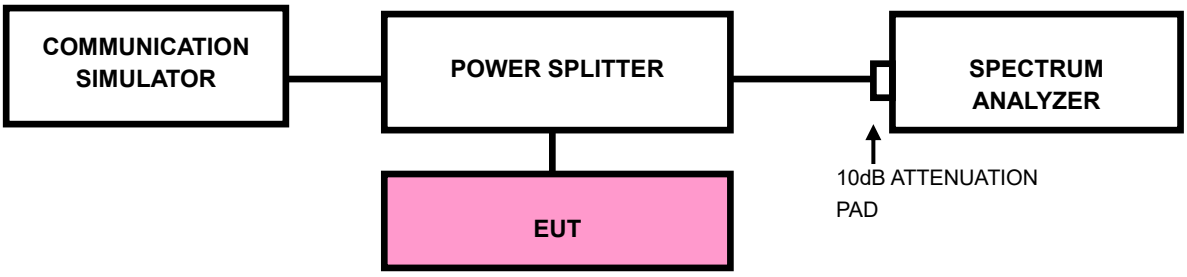
The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 55 +10 log10(P) dB. The limit of emission is equal to -25dBm.

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~26GHz for LTE Band 7 & 30MHz~27GHz for LTE Band 38. 10dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz are used for conducted emission measurement.

3.5.3 TEST SETUP



3.5.4 TEST RESULTS

LTE BAND 7

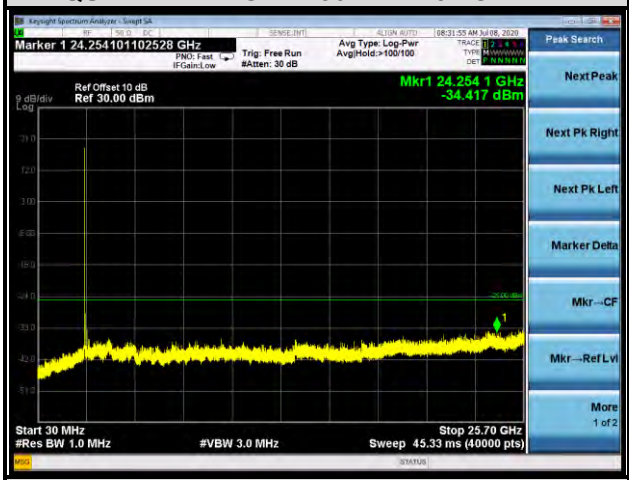
5MHz / QPSK

CHANNEL 20775	CHANNEL 21100
FREQUENCY RANG2E : 30MHz~25.7GHz	FREQUENCY RANG2E : 30MHz~25.7GHz
CHANNEL 21425	
FREQUENCY RANG2E : 30MHz~25.7GHz	

10MHz / QPSK

CHANNEL 20800

FREQUENCY RANG2E : 30MHz~25.7GHz



CHANNEL 21100

FREQUENCY RANG2E : 30MHz~25.7GHz

CHANNEL 21400

FREQUENCY RANG2E : 30MHz~25.7GHz

15MHz / QPSK

CHANNEL 20825

FREQUENCY RANG2E : 30MHz~25.7GHz

CHANNEL 21100

FREQUENCY RANG2E : 30MHz~25.7GHz

CHANNEL 21375

FREQUENCY RANG2E : 30MHz~25.7GHz

20MHz / QPSK

CHANNEL 20850

FREQUENCY RANG2E : 30MHz~25.7GHz

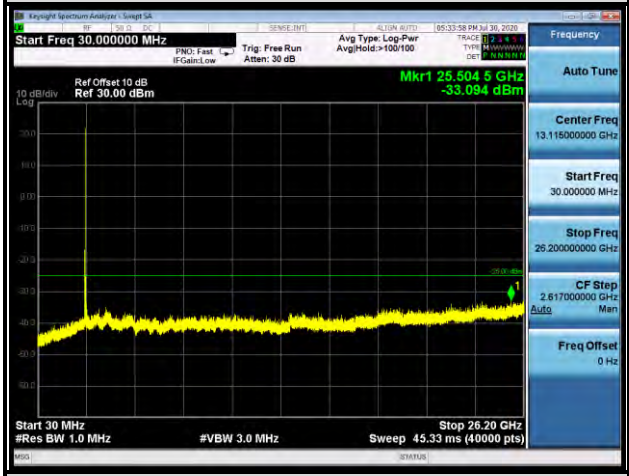
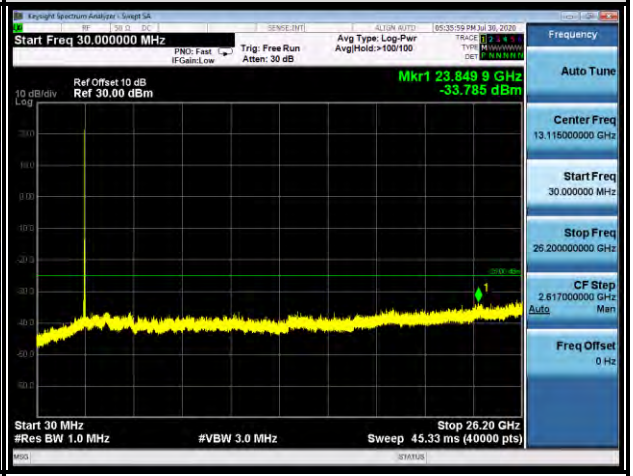
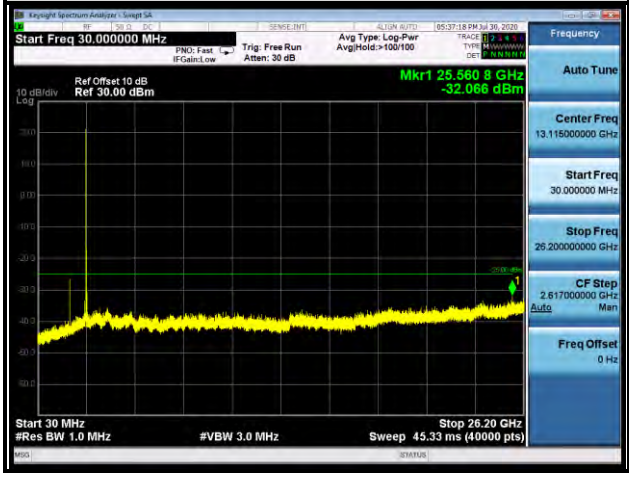
CHANNEL 21100

FREQUENCY RANG2E : 30MHz~25.7GHz

CHANNEL 21350

FREQUENCY RANG2E : 30MHz~25.7GHz

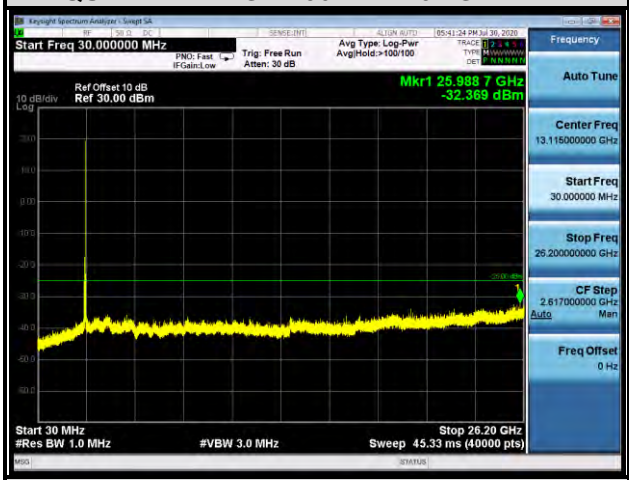
LTE BAND 38

5MHz / QPSK	
CHANNEL 37775	CHANNEL 38000
FREQUENCY RANGE : 30MHz~26.2GHz	FREQUENCY RANGE : 30MHz~26.2GHz
	
CHANNEL 38225	
FREQUENCY RANGE : 30MHz~26.2GHz	
	

10MHz / QPSK

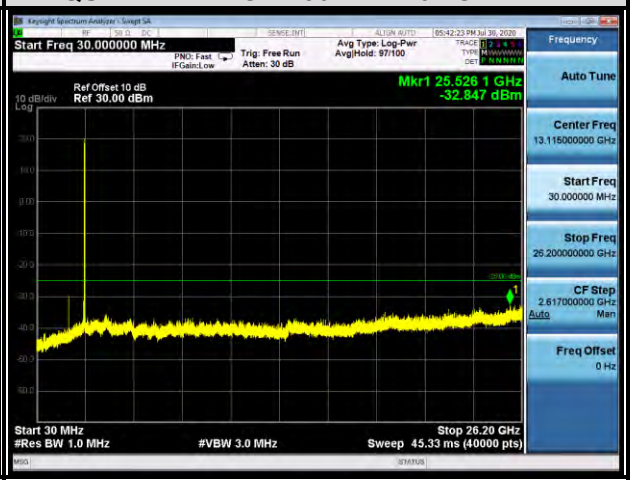
CHANNEL 37800

FREQUENCY RANGE : 30MHz~26.2GHz



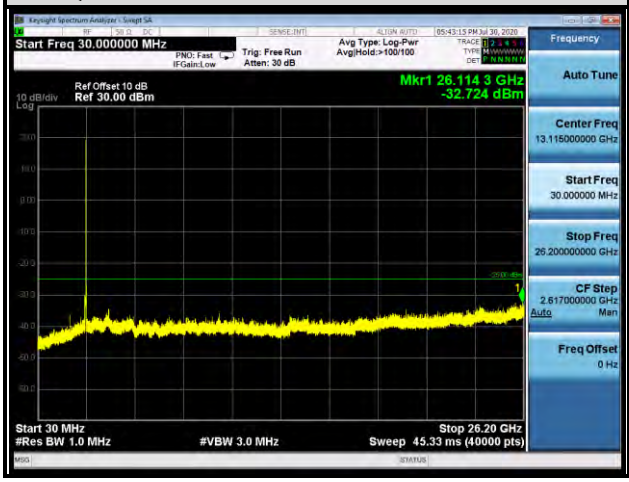
CHANNEL 38000

FREQUENCY RANGE : 30MHz~26.2GHz



CHANNEL 38200

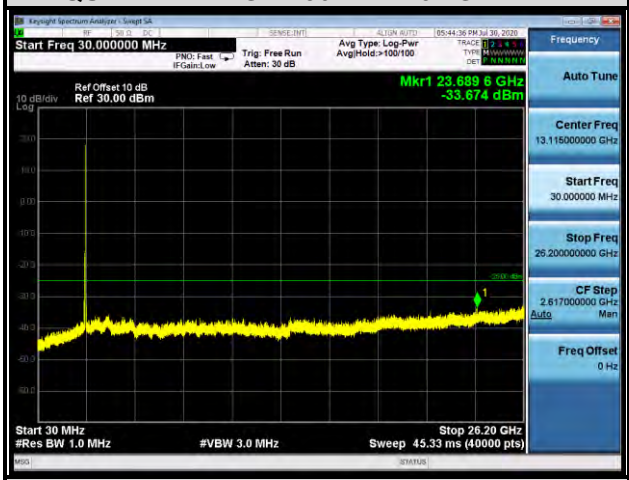
FREQUENCY RANGE : 30MHz~26.2GHz



15MHz / QPSK

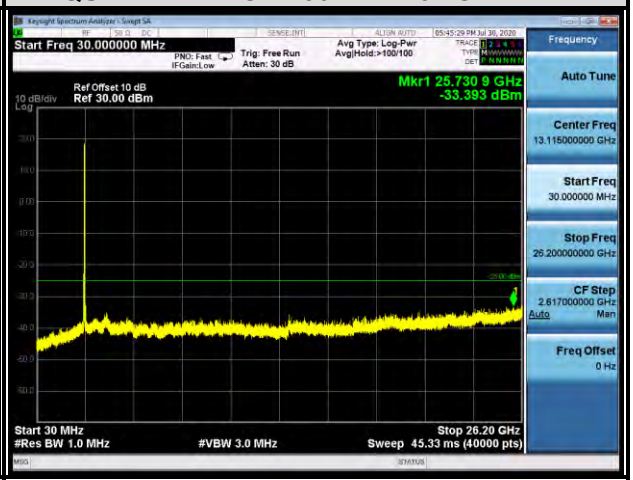
CHANNEL 37825

FREQUENCY RANGE : 30MHz~26.2GHz



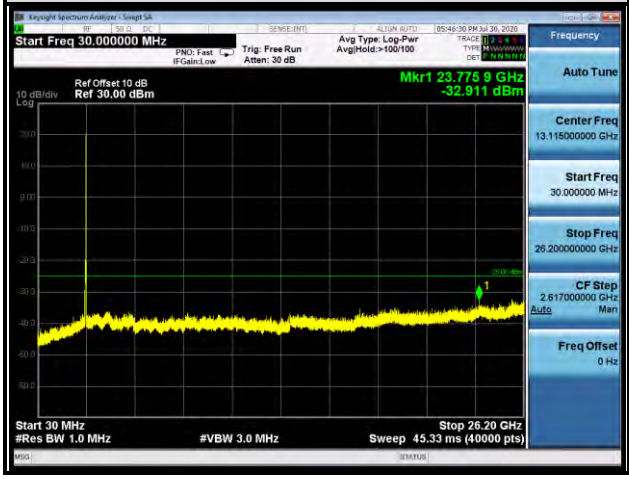
CHANNEL 38000

FREQUENCY RANGE : 30MHz~26.2GHz



CHANNEL 38175

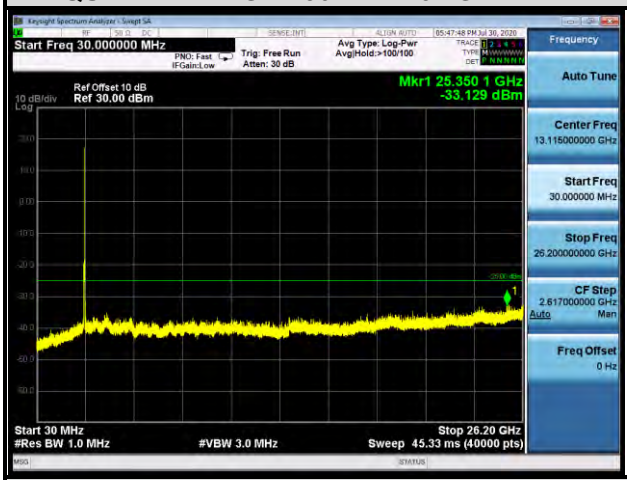
FREQUENCY RANGE : 30MHz~26.2GHz



20MHz / QPSK

CHANNEL 37850

FREQUENCY RANGE : 30MHz~26.2GHz

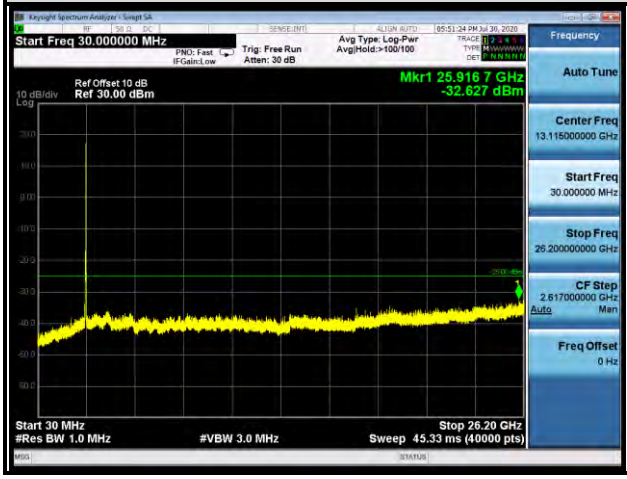


CHANNEL 38000

FREQUENCY RANGE : 30MHz~26.2GHz

CHANNEL 38150

FREQUENCY RANGE : 30MHz~26.2GHz



3.6 RADIATED EMISSION MEASUREMENT

3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 55 +10 log10(P) dB. The limit of emission is equal to -25dBm.

3.6.2 TEST PROCEDURES

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

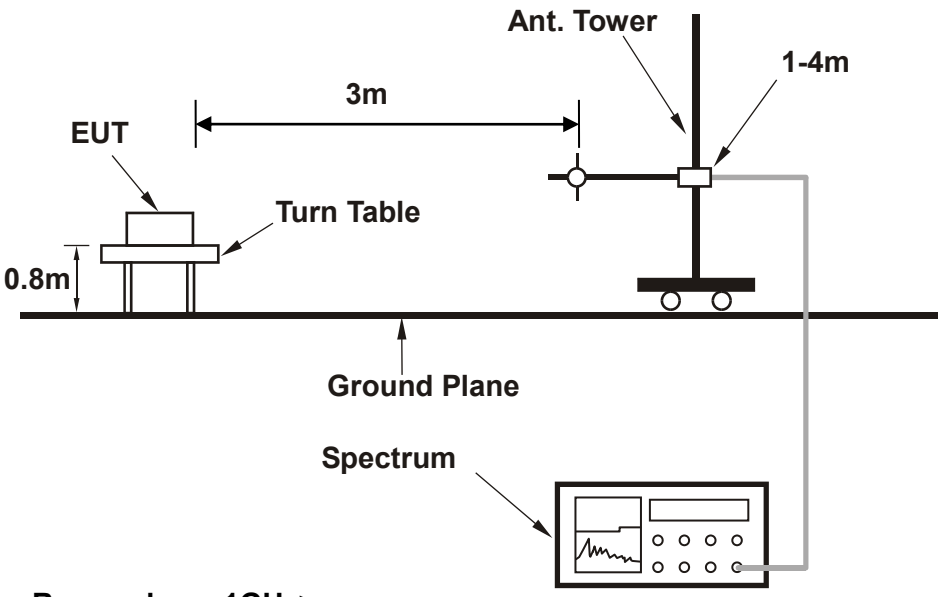
NOTE: The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

3.6.3 DEVIATION FROM TEST STANDARD

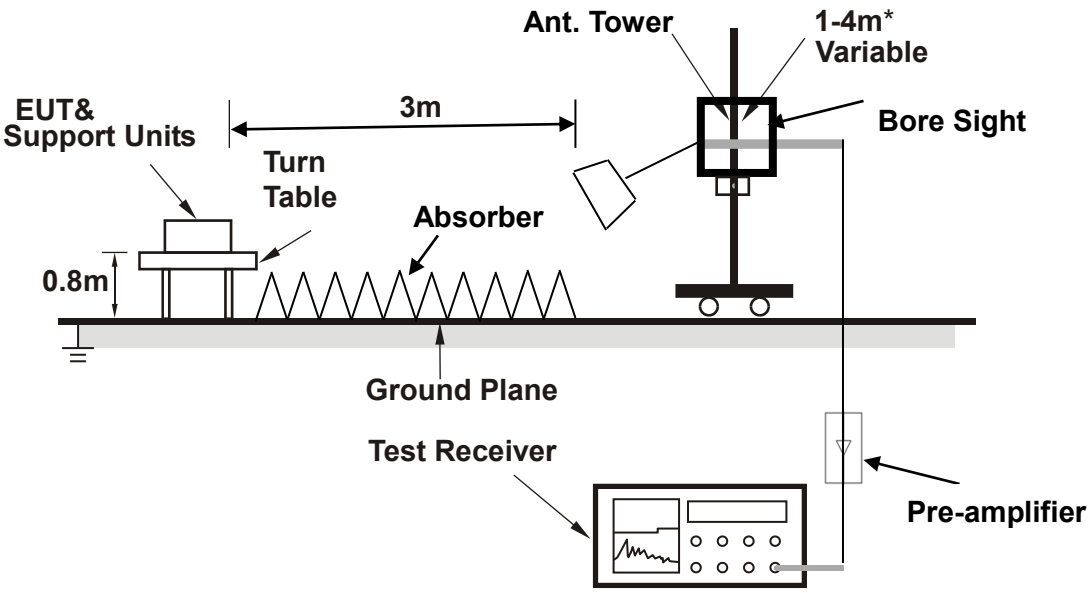
No deviation

3.6.4 TEST SETUP

< Frequency Range 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).

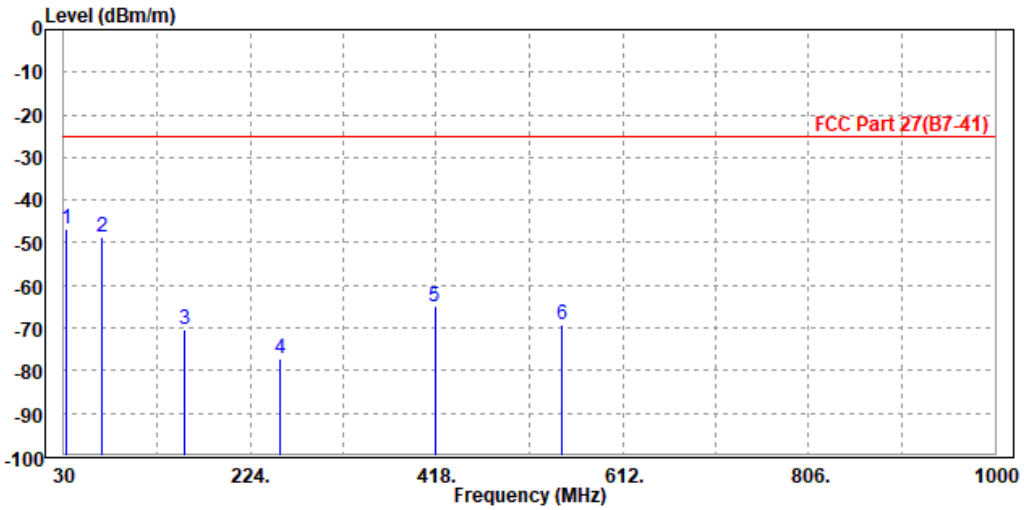
3.6.5 TEST RESULTS

BELOW 1GHz WORST-CASE DATA

LTE Band 38
CHANNEL BANDWIDTH: 10MHz / QPSK

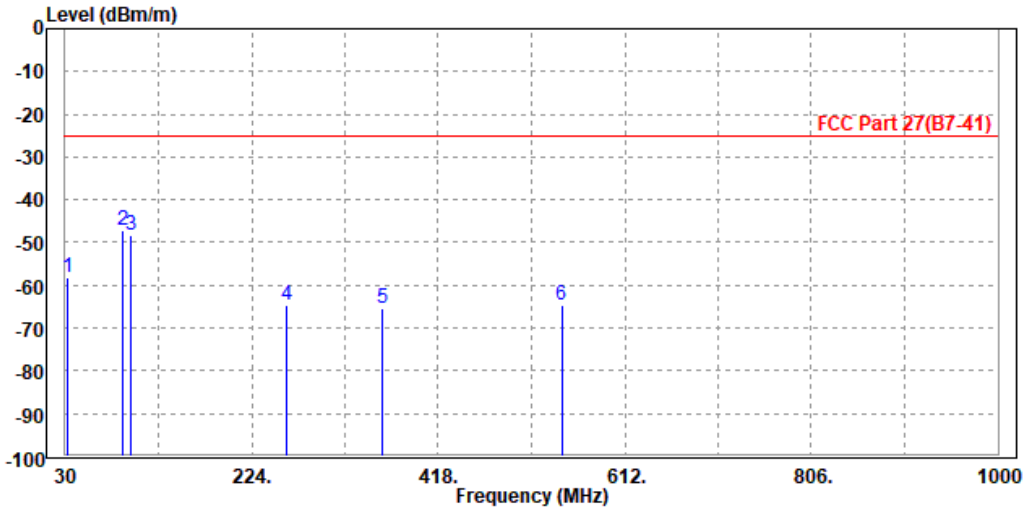
MODE	TX channel 38000	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5Vfrom adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	32.120	-46.79	-63.22	-25.00	-21.79	16.43	Peak	Horizontal
2		70.250	-48.80	-36.55	-25.00	-23.80	-12.25	Peak	Horizontal
3		156.120	-70.41	-51.69	-25.00	-45.41	-18.72	Peak	Horizontal
4		256.020	-77.20	-61.22	-25.00	-52.20	-15.98	Peak	Horizontal
5		416.330	-65.03	-54.58	-25.00	-40.03	-10.45	Peak	Horizontal
6		549.360	-69.20	-59.65	-25.00	-44.20	-9.55	Peak	Horizontal



MODE	TX channel 38000	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5Vfrom adapter
TESTED BY	Star Le		
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		33.020	-58.29	-59.60	-25.00	-33.29	1.31	Peak	Vertical
2	PP	90.010	-46.99	-36.45	-25.00	-21.99	-10.54	Peak	Vertical
3		98.550	-48.34	-37.69	-25.00	-23.34	-10.65	Peak	Vertical
4		259.650	-64.73	-53.25	-25.00	-39.73	-11.48	Peak	Vertical
5		360.150	-65.22	-54.14	-25.00	-40.22	-11.08	Peak	Vertical
6		546.220	-64.54	-57.25	-25.00	-39.54	-7.29	Peak	Vertical



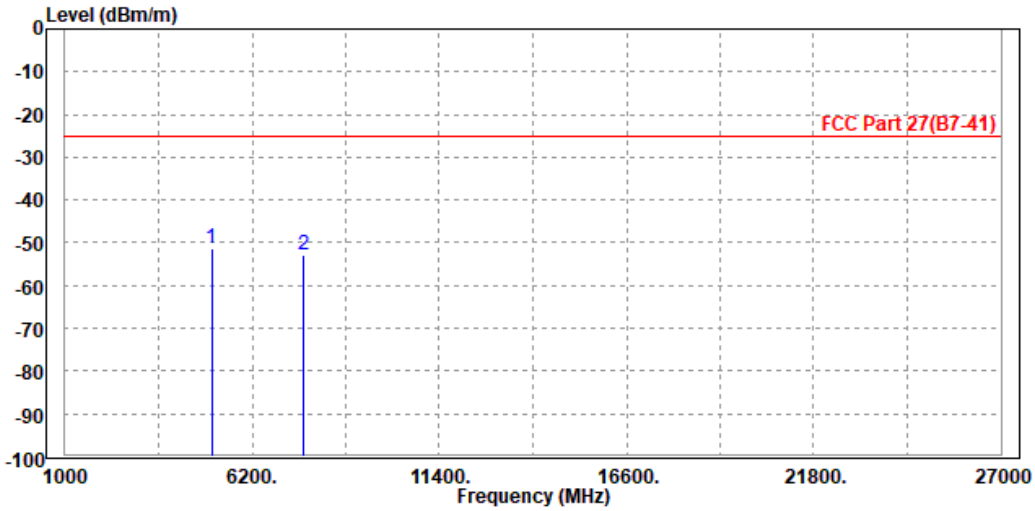
ABOVE 1GHz

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

LTE Band 7
CHANNEL BANDWIDTH: 5MHz / QPSK

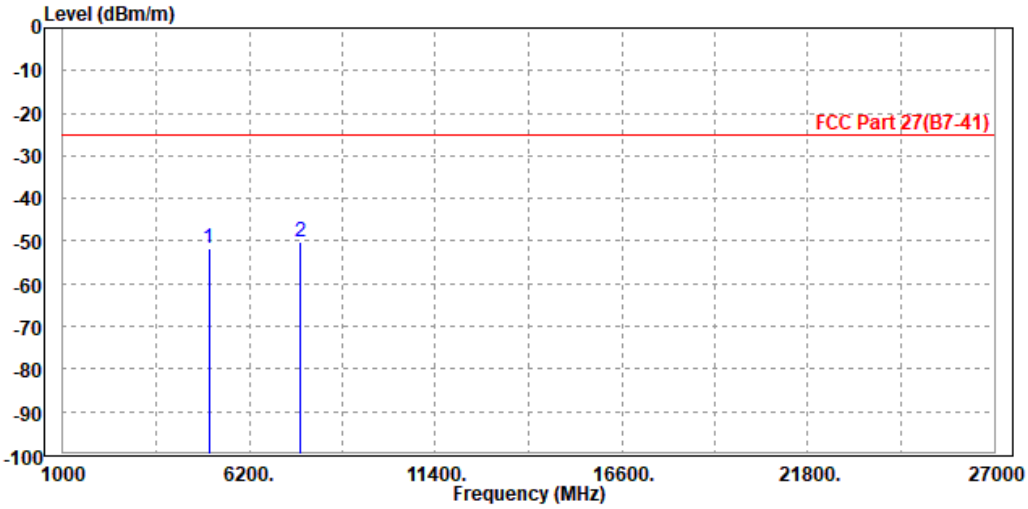
MODE	TX channel 21100	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	5070.000	-51.29	-60.02	-25.00	-26.29	8.73	Peak	Horizontal
2		7605.000	-53.00	-64.40	-25.00	-28.00	11.40	Peak	Horizontal



MODE	TX channel 21100	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V from adapter
TESTED BY	Star Le		
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		5070.000	-51.56	-61.43	-25.00	-26.56	9.87	Peak	Vertical
2	PP	7604.000	-50.33	-63.11	-25.00	-25.33	12.78	Peak	Vertical

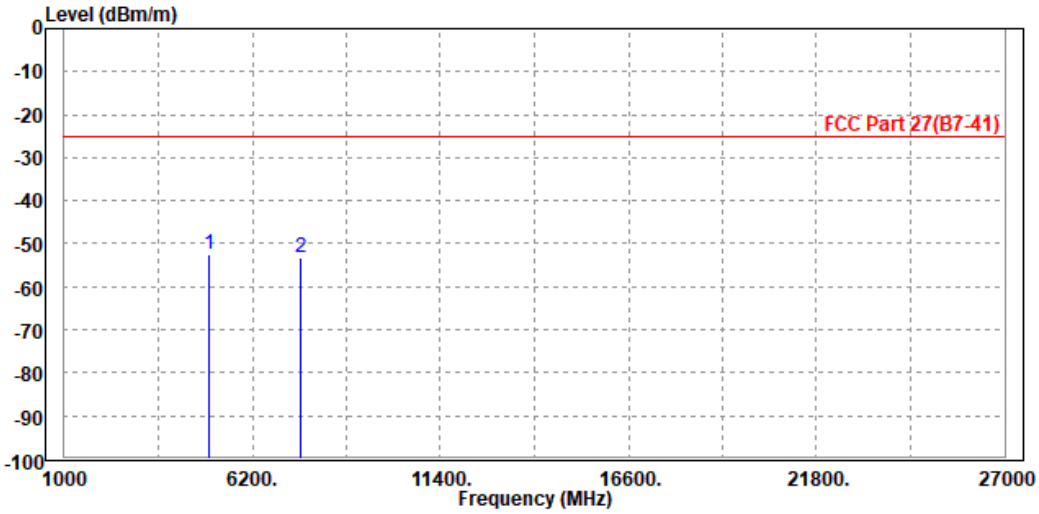


CHANNEL BANDWIDTH: 10MHz / QPSK

CH 20800

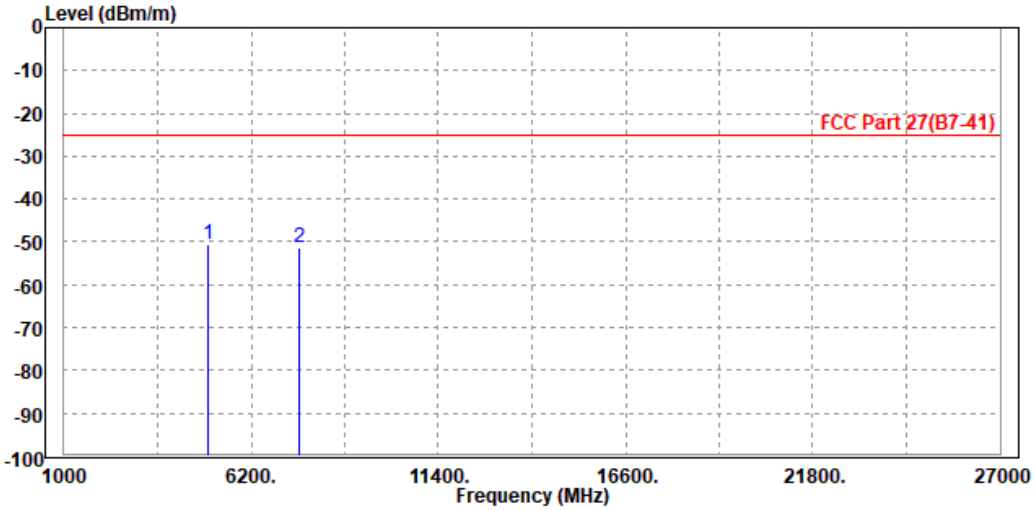
MODE	TX channel 20800	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	5004.000	-52.61	-61.15	-25.00	-27.61	8.54	Peak	Horizontal
2	7515.000	-53.40	-64.77	-25.00	-28.40	11.37	Peak	Horizontal



MODE	TX channel 20800	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

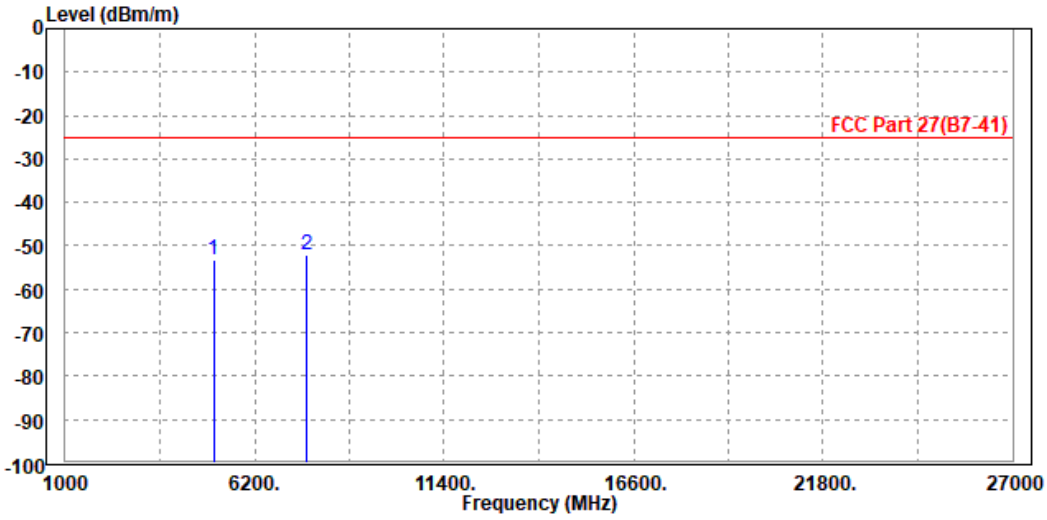
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	5004.000	-50.66	-60.56	-25.00	-25.66	9.90	Peak	Vertical
2	7515.000	-51.14	-63.88	-25.00	-26.14	12.74	Peak	Vertical



CH 21100

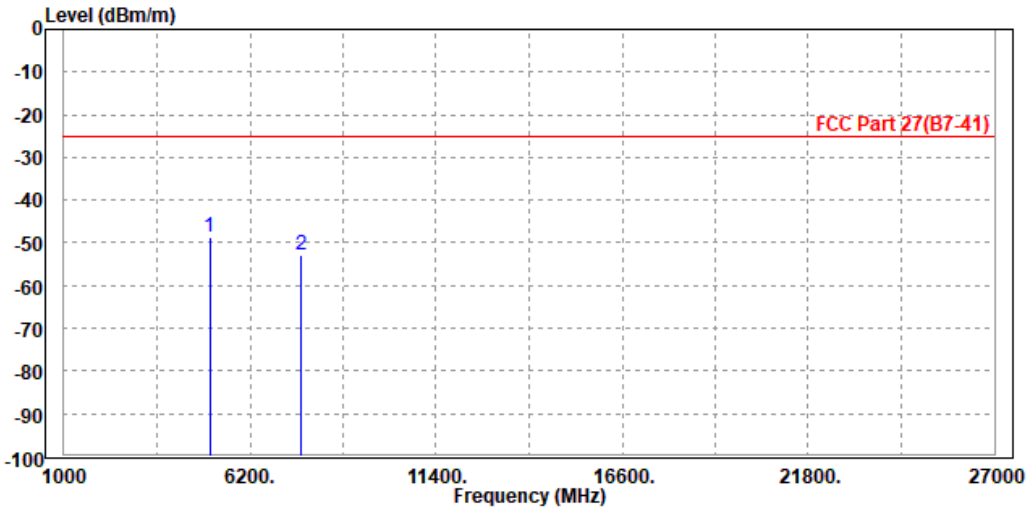
MODE	TX channel 21100	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	5070.000	-53.31	-62.04	-25.00	-28.31	8.73	Peak	Horizontal
2 PP	7605.000	-52.15	-63.55	-25.00	-27.15	11.40	Peak	Horizontal



MODE	TX channel 21100	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

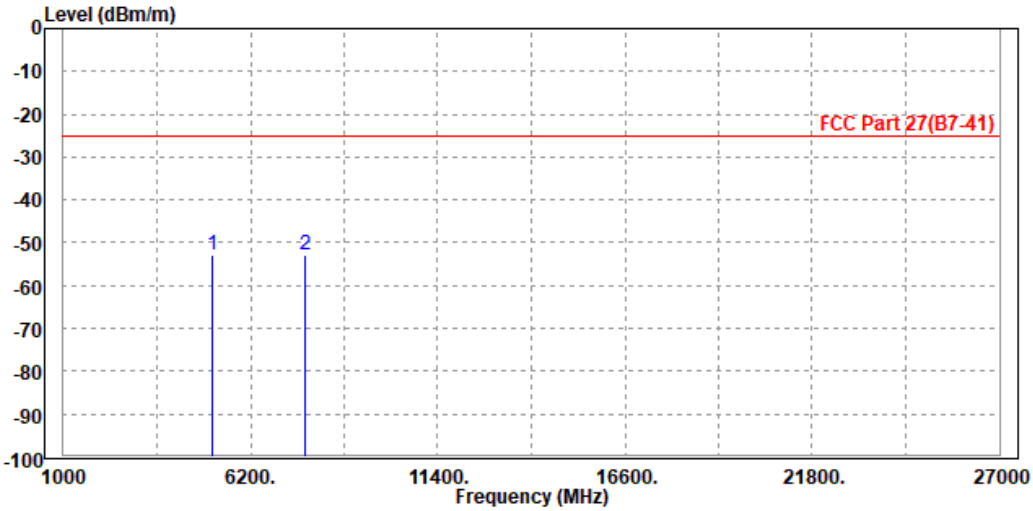
		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	5070.000	-48.67	-58.54	-25.00	-23.67	9.87	Peak	Vertical
2		7604.000	-52.66	-65.44	-25.00	-27.66	12.78	Peak	Vertical



CH 21400

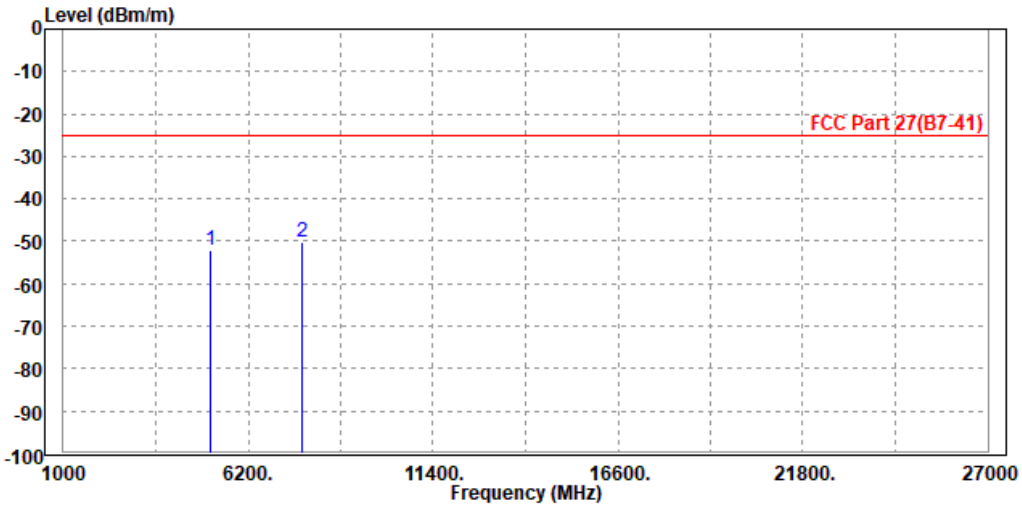
MODE	TX channel 21400	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	5134.000	-52.72	-61.65	-25.00	-27.72	8.93	Peak	Horizontal
2		7695.000	-52.85	-64.29	-25.00	-27.85	11.44	Peak	Horizontal



MODE	TX channel 21400	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

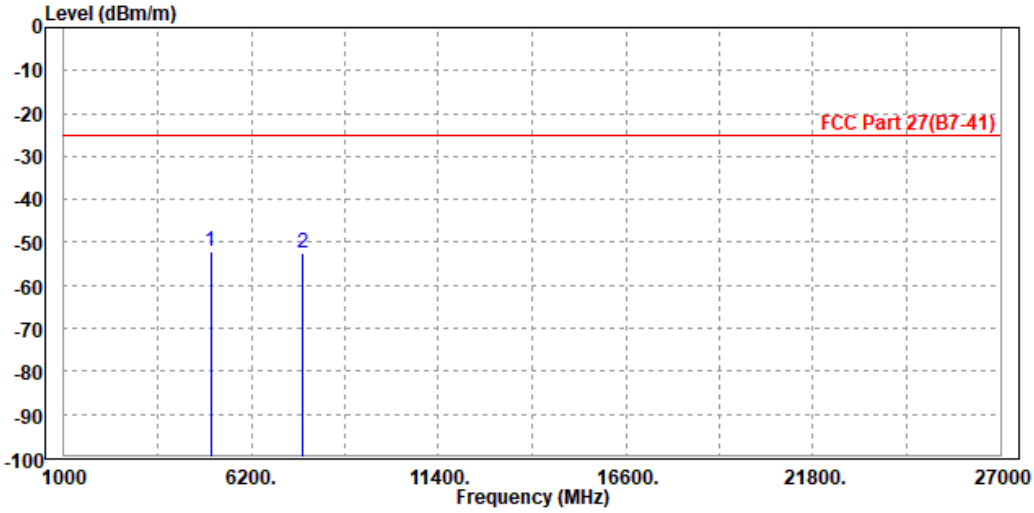
		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1		5134.000	-51.94	-61.79	-25.00	-26.94	9.85	Peak	Vertical
2	PP	7695.000	-50.15	-62.96	-25.00	-25.15	12.81	Peak	Vertical



CHANNEL BANDWIDTH: 15MHz / QPSK

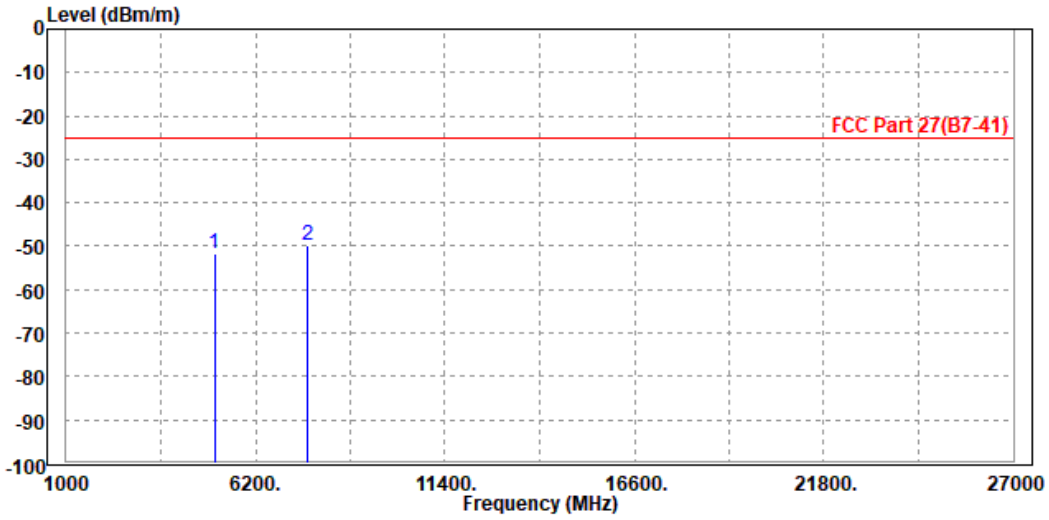
MODE	TX channel 21100	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	5070.000	-51.94	-60.67	-25.00	-26.94	8.73	Peak	Horizontal
2	7604.000	-52.31	-63.71	-25.00	-27.31	11.40	Peak	Horizontal



MODE	TX channel 21100	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

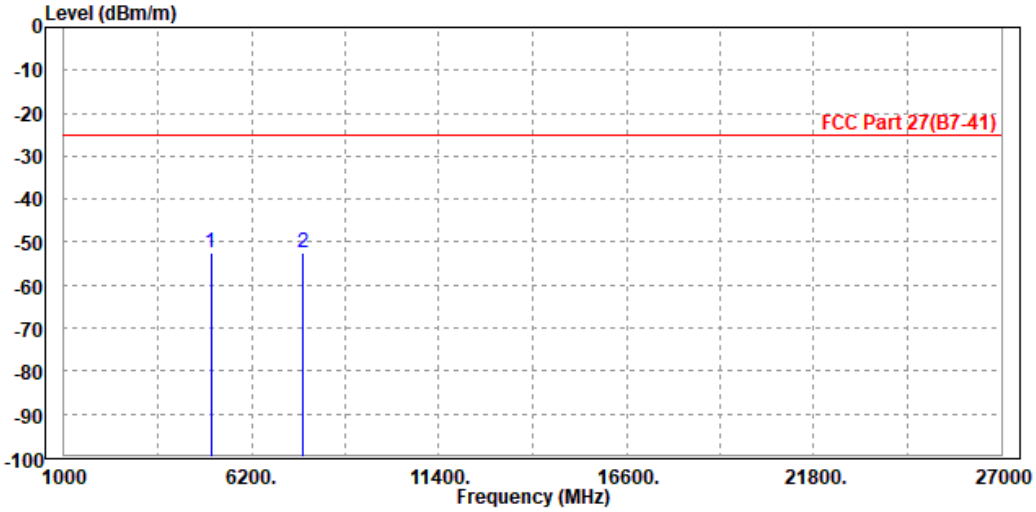
		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1		5070.000	-51.84	-61.71	-25.00	-26.84	9.87	Peak	Vertical
2	PP	7605.000	-49.73	-62.51	-25.00	-24.73	12.78	Peak	Vertical



CHANNEL BANDWIDTH: 20MHz / QPSK

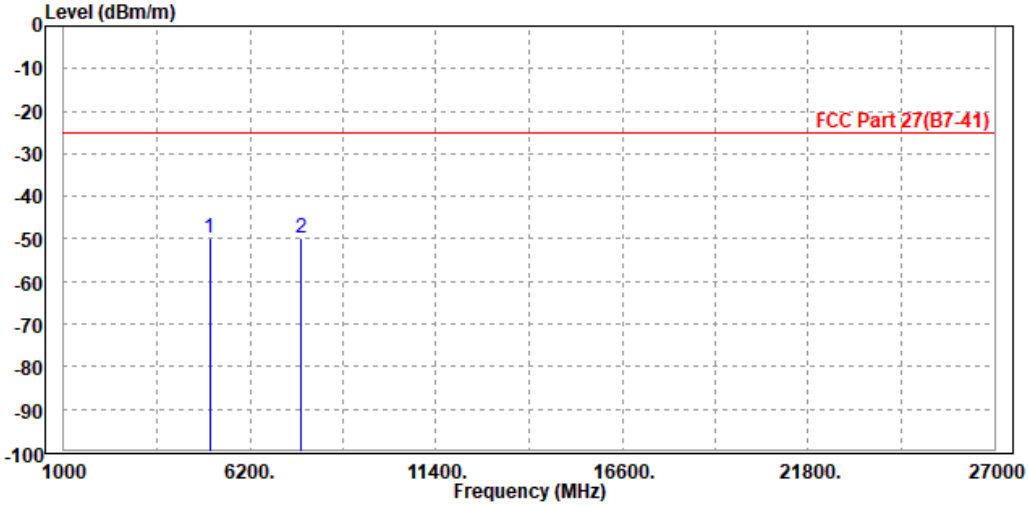
MODE	TX channel 21100	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5Vfrom adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	5070.000	-52.47	-61.20	-25.00	-27.47	8.73	Peak	Horizontal
2 PP	7605.000	-52.33	-63.73	-25.00	-27.33	11.40	Peak	Horizontal



MODE	TX channel 21100	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5Vfrom adapter
TESTED BY	Star Le		
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	5070.000	-49.65	-59.52	-25.00	-24.65	9.87	Peak	Vertical
2		7605.000	-49.89	-62.67	-25.00	-24.89	12.78	Peak	Vertical

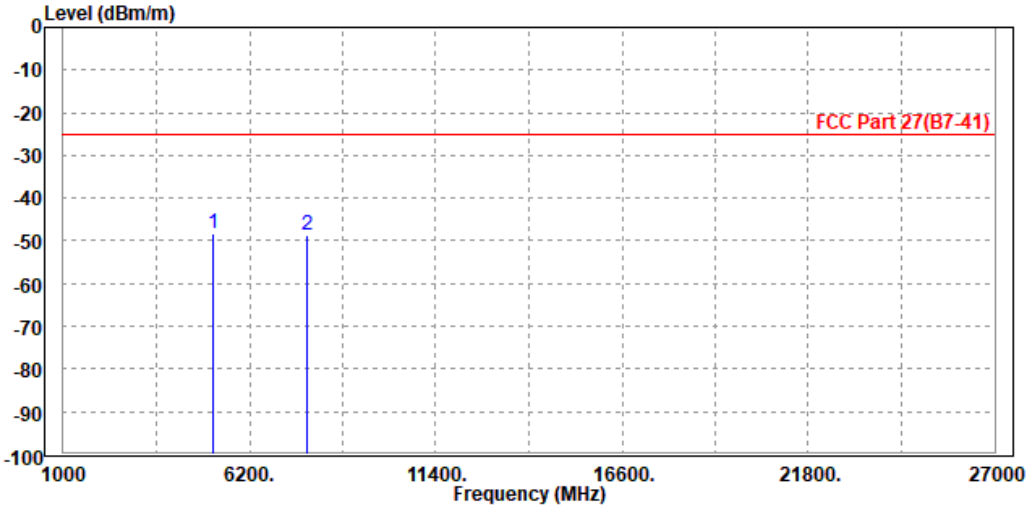


LTE Band 38

CHANNEL BANDWIDTH: 5MHz / QPSK

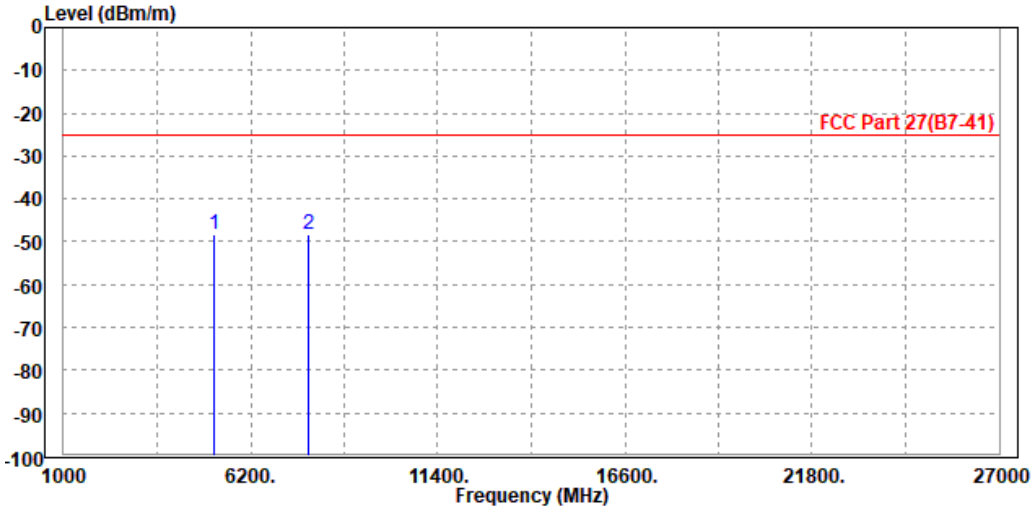
MODE	TX channel 38000	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	5186.000	-48.37	-57.45	-25.00	-23.37	9.08	Peak	Horizontal
2		7785.000	-48.58	-60.06	-25.00	-23.58	11.48	Peak	Horizontal



MODE	TX channel 38000	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V from adapter
TESTED BY	Star Le		
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		5186.000	-48.47	-58.30	-25.00	-23.47	9.83	Peak	Vertical
2	PP	7785.000	-48.25	-61.10	-25.00	-23.25	12.85	Peak	Vertical

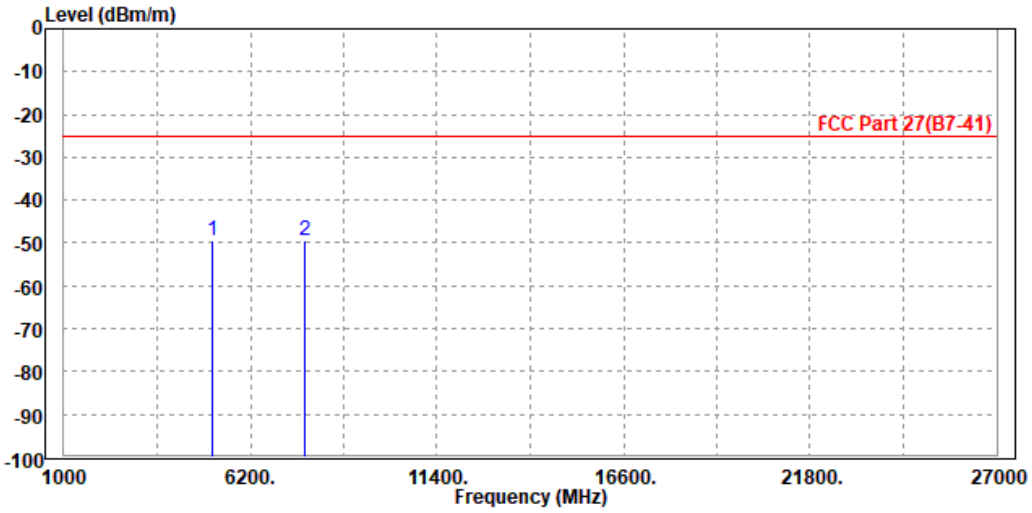


CHANNEL BANDWIDTH: 10MHz / QPSK

CH 37800

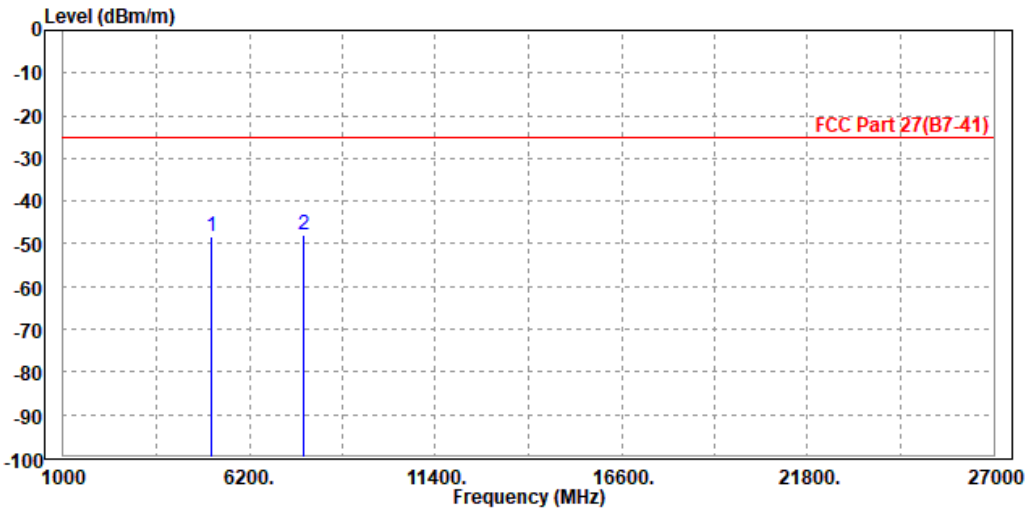
MODE	TX channel 37800	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	5160.000	-49.26	-58.26	-25.00	-24.26	9.00	Peak	Horizontal
2	7725.000	-49.37	-60.82	-25.00	-24.37	11.45	Peak	Horizontal



MODE	TX channel 37800	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

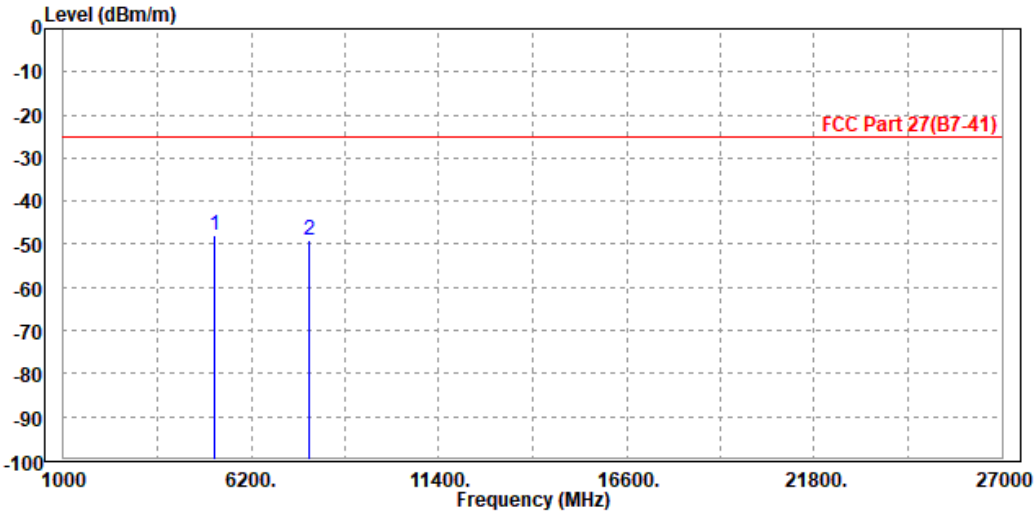
		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1		5160.000	-48.40	-58.24	-25.00	-23.40	9.84	Peak	Vertical
2	PP	7725.000	-47.77	-60.60	-25.00	-22.77	12.83	Peak	Vertical



CH 38000

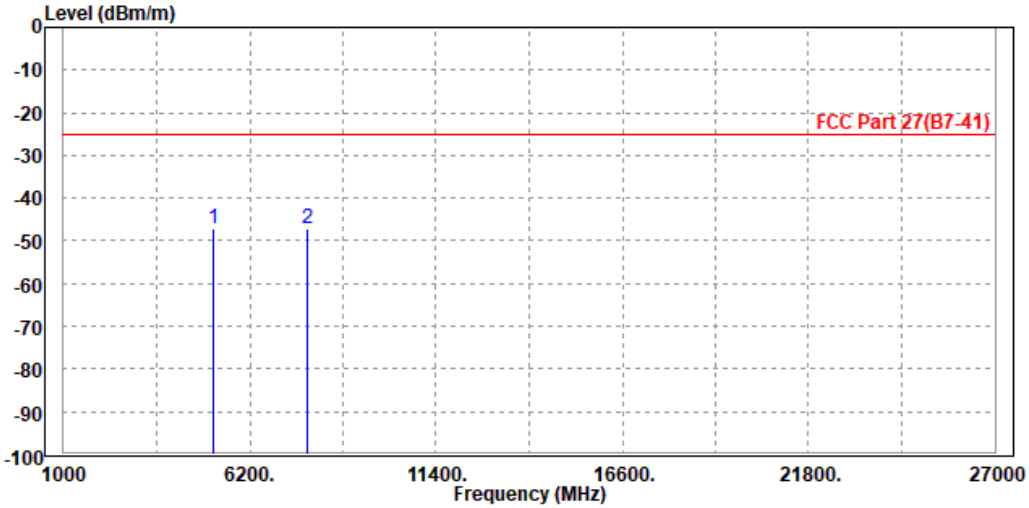
MODE	TX channel 38000	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	5186.000	-48.07	-57.15	-25.00	-23.07	9.08	Peak	Horizontal
2		7785.000	-48.99	-60.47	-25.00	-23.99	11.48	Peak	Horizontal



MODE	TX channel 38000	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

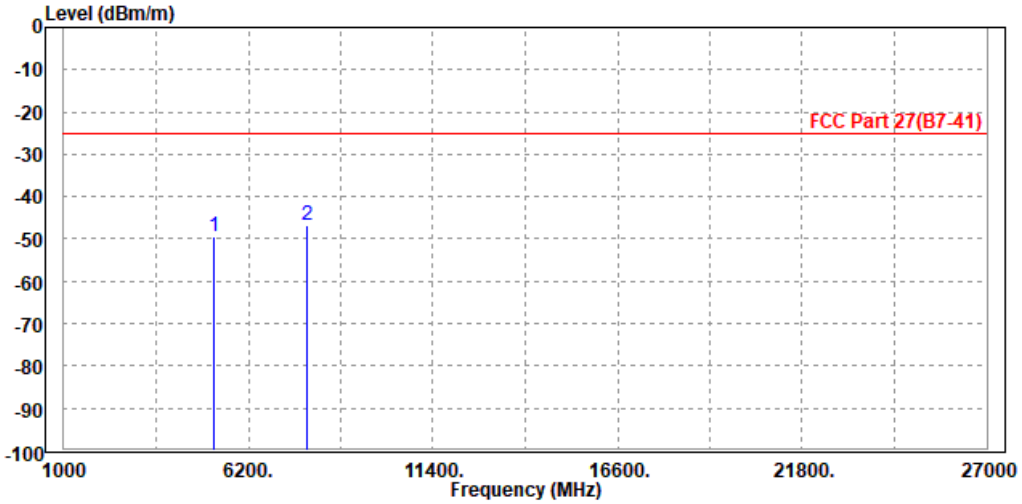
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	5186.000	-47.12	-56.95	-25.00	-22.12	9.83	Peak	Vertical
2	7785.000	-47.15	-60.00	-25.00	-22.15	12.85	Peak	Vertical



CH 38200

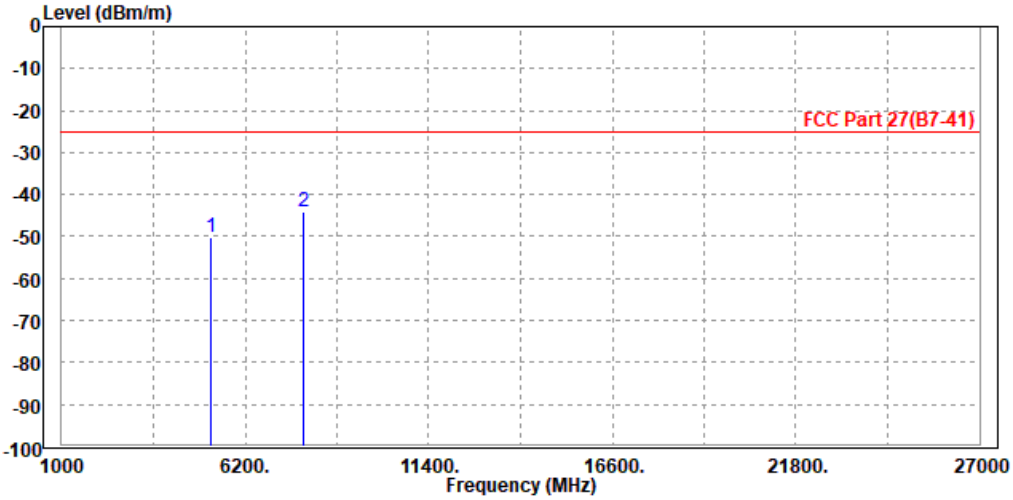
MODE	TX channel 38200	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1		5238.000	-49.33	-58.57	-25.00	-24.33	9.24	Peak	Horizontal
2	PP	7845.000	-46.86	-58.36	-25.00	-21.86	11.50	Peak	Horizontal



MODE	TX channel 38200	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

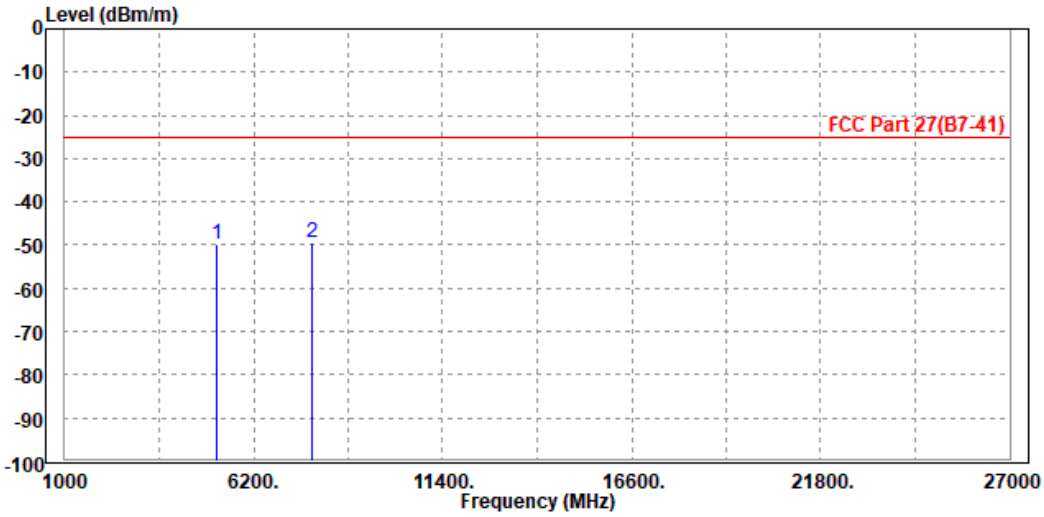
		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1		5238.000	-50.12	-59.93	-25.00	-25.12	9.81	Peak	Vertical
2	PP	7845.000	-44.17	-57.04	-25.00	-19.17	12.87	Peak	Vertical



CHANNEL BANDWIDTH: 15MHz / QPSK

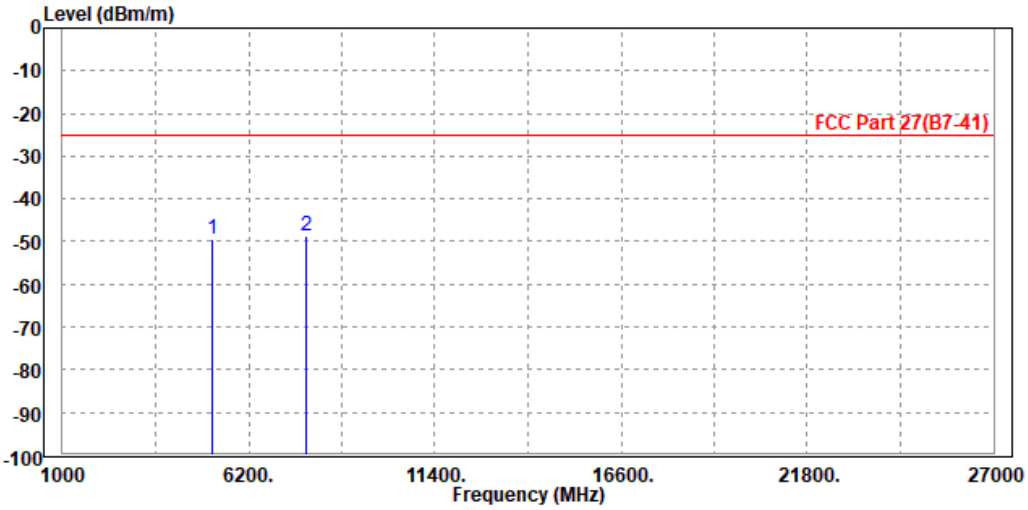
MODE	TX channel 38000	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	5186.000	-49.83	-58.91	-25.00	-24.83	9.08	Peak	Horizontal
2 PP	7785.000	-49.42	-60.90	-25.00	-24.42	11.48	Peak	Horizontal



MODE	TX channel 38000	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

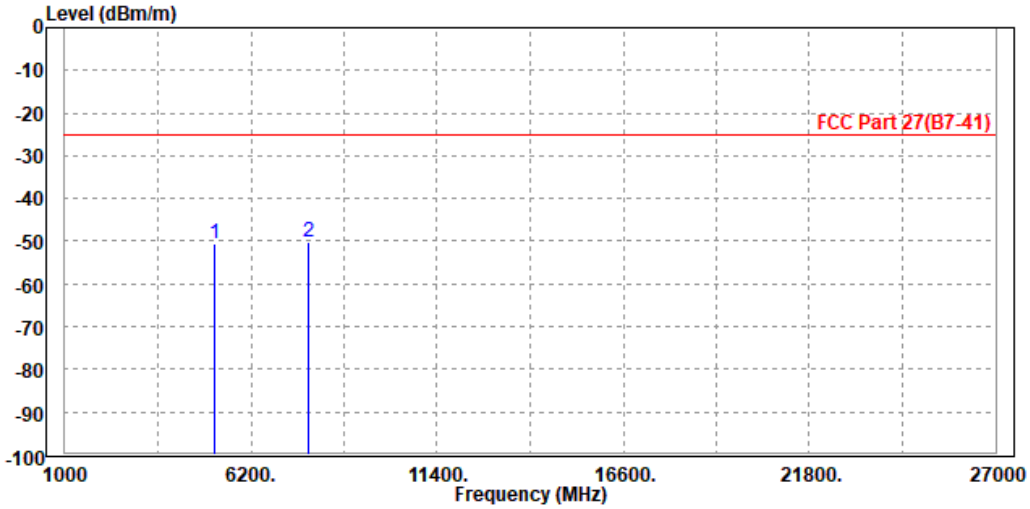
		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1		5186.000	-49.55	-59.38	-25.00	-24.55	9.83	Peak	Vertical
2	PP	7785.000	-48.57	-61.42	-25.00	-23.57	12.85	Peak	Vertical



CHANNEL BANDWIDTH: 20MHz / QPSK

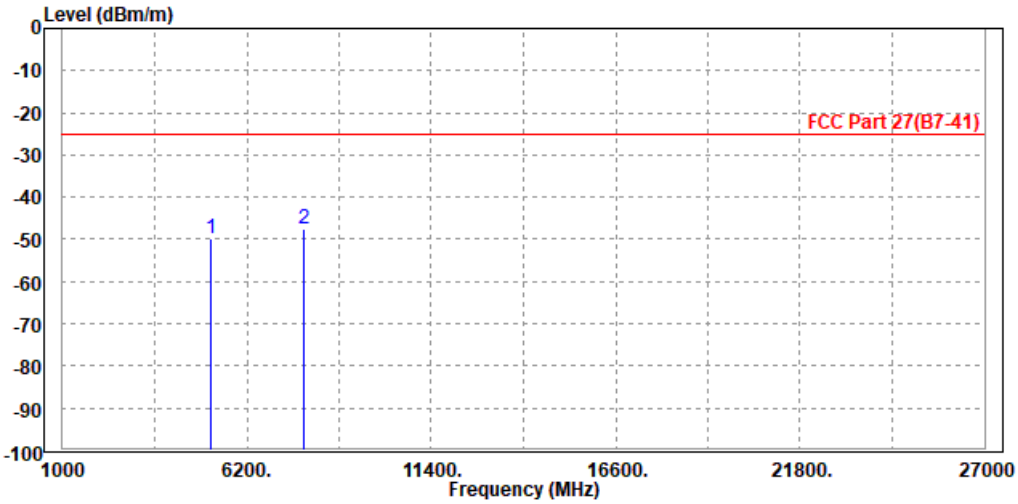
MODE	TX channel 38000	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V from adapter
TESTED BY	Star Le		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1		5186.000	-50.61	-59.69	-25.00	-25.61	9.08	Peak	Horizontal
2	PP	7785.000	-50.12	-61.60	-25.00	-25.12	11.48	Peak	Horizontal



MODE	TX channel 38000	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5V from adapter
TESTED BY	Star Le		
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		5186.000	-49.69	-59.52	-25.00	-24.69	9.83	Peak	Vertical
2	PP	7785.000	-47.35	-60.20	-25.00	-22.35	12.85	Peak	Vertical



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

5 APPENDIX A – 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---