



# RF TEST REPORT

**Applicant**      Xiaomi Communications Co., Ltd.  
**FCC ID**          2AFZZN91Y  
**Product**        Mobile Phone  
**Brand**            Redmi  
**Model**           22126RN91Y  
**Report No.**      R2209A0810-R3  
**Issue Date**      November 21, 2022

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC CFR47 Part 2 (2021)/ FCC CFR47 Part 27C (2021)**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

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## Summary of Measurement Results

Number	Test Case	Clause in FCC rules	Verdict
1	RF Power Output and Effective Isotropic Radiated Power	2.1046 /27.50(h)(2)	PASS
2	Occupied Bandwidth	2.1049	PASS
3	Band Edge Compliance	/27.53(m)	PASS
4	Peak-to-Average Power Ratio	27.50(d)/KDB971168 D01(5.7)	PASS
5	Frequency Stability	2.1055 / 27.54	PASS
6	Spurious Emissions at Antenna Terminals	2.1051 /27.53(m)	PASS
7	Radiated Spurious Emission	2.1053 /27.53(m)	PASS
Date of Testing: October 11, 2022 ~ October 24, 2022			
Date of Sample Received: October 8, 2022			
Note: PASS: The EUT complies with the essential requirements in the standard. FAIL: The EUT does not comply with the essential requirements in the standard. All indications of Pass/Fail in this report are opinions expressed by TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.			

**22126RN91Y (Report No.: R2209A0810-R3) is a variant model of 2212ARNC4L (Report No.: R2209A0813-R3V1). There is only test Radiated Spurious Emission (LTE Band 38 for Upper Antenna; LTE Band 7 for Low Antenna). Radiated Spurious Emission did not worsen, so they were not recorded in the report.**

**The detailed product change description please refers to the Difference Declaration Letter.**



# 1 Test Laboratory

## 1.1 Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of **TA Technology (Shanghai) Co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

## 1.2. Test facility

### **FCC (Designation number: CN1179, Test Firm Registration Number: 446626)**

TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform measurements.

### **A2LA (Certificate Number: 3857.01)**

TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform measurement.

## 1.3 Testing Location

Company: TA Technology (Shanghai) Co., Ltd.  
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E-mail: [xukai@ta-shanghai.com](mailto:xukai@ta-shanghai.com)

## 2 General Description of Equipment under Test

### 2.1 Applicant and Manufacturer Information

Applicant	Xiaomi Communications Co., Ltd.
Applicant address	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085
Manufacturer	Xiaomi Communications Co., Ltd.
Manufacturer address	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

### 2.2 General information

EUT Description			
Model	22126RN91Y		
IMEI	Original (2212ARNC4L)	IMEI 1: 861591060034168 IMEI 2: 861591060034176	
	Variant (22126RN91Y)	IMEI 1: 867932060030141 IMEI 2: 867932060030158	
Hardware Version	P1.1		
Software Version	MIUI 13		
Antenna Type	PIFA Antenna		
Antenna Gain	Band	Low Antenna	Upper Antenna
	LTE Band 7	-0.4 dBi	-1.7 dBi
	LTE Band 38	-1.0 dBi	-1.4 dBi
	LTE Band 41	-0.8 dBi	-1.7 dBi
Test Mode(s)	LTE Band 7/38/41;		
Test Modulation	(LTE) QPSK, 16QAM, 64QAM;		
LTE Category	5		
Maximum E.I.R.P./ E.R.P.	LTE Band 7:	23.10 dBm	
	LTE Band 38:	22.41 dBm	
	LTE Band 41:	22.75 dBm	
Rated Power Supply Voltage	3.85V		
Operating Voltage	Minimum: 3.65V    Maximum: 4.2V		
Operating Temperature	Lowest: 0°C    Highest: +40°C		
Testing Temperature	Lowest: -30°C    Highest: +50°C		
Operating Frequency Range(s)	Mode	Tx (MHz)	Rx (MHz)
	LTE Band 7	2500 ~ 2570	2620 ~ 2690
	LTE Band 38	2570 ~ 2620	2570 ~ 2620
	LTE Band 41	2496 ~ 2690	2496 ~ 2690



Note:

1. The EUT is sent from the applicant to TA and the information of the EUT is declared by the applicant.
2. Low antenna and Upper antenna can't transmit simultaneously.



### 3 Applied Standards

According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

**Test standards:**

**FCC CFR47 Part 27C (2021)**

**FCC CFR47 Part 2 (2021)**

**Reference standard:**

**ANSI C63.26-2015**

**KDB 971168 D01 Power Meas License Digital Systems v03r01**

## 4 Test Configuration

There is more than one SIM card slot, each one should be applied throughout the compliance test respectively, and however, only the worst case (SIM 1) will be recorded in this report

Radiated measurements are performed by rotating the EUT in three different orthogonal test planes. EUT stand-up position (Z axis), lie-down position (X, Y axis). Receiver antenna polarization (horizontal and vertical), the worst emission was found in position (X axis, vertical polarization for Upper Antenna LTE Band; X axis, vertical polarization for Low Antenna LTE Band) and the worst case was recorded.

All mode and data rates and positions and RB size and modulations were investigated.

Subsequently, only the worst case emissions are reported.

The following testing in LTE is set based on the maximum RF Output Power.

The following testing in different Bandwidth is set to detail in the following table:

Test modes are chosen to be reported as the worst case configuration below for LTE Band 7/38/41:

Test items	Modes	Bandwidth (MHz)						Modulation		RB			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM/ 64QAM	1	50%	100%	L	M	H
RF Power Output and Effective Isotropic Radiated Power	LTE 7	-	-	O	O	O	O	O	O	O	O	O	O	O	O
	LTE 38	-	-	O	O	O	O	O	O	O	O	O	O	O	O
	LTE 41	-	-	O	O	O	O	O	O	O	O	O	O	O	O
Occupied Bandwidth	LTE 7	-	-	O	O	O	O	O	O	-	-	O	O	O	O
	LTE 38	-	-	O	O	O	O	O	O	-	-	O	O	O	O
	LTE 41	-	-	O	O	O	O	O	O	-	-	O	O	O	O
Band Edge Compliance	LTE 7	-	-	O	O	O	O	O	O	O	-	O	O	-	O
	LTE 38	-	-	O	O	O	O	O	O	O	-	O	O	-	O
	LTE 41	-	-	O	O	O	O	O	O	O	-	O	O	-	O
Peak-to-Average Power Ratio	LTE 7	-	-	O	O	O	O	O	O	-	-	O	O	O	O
	LTE 38	-	-	O	O	O	O	O	O	-	-	O	O	O	O
	LTE 41	-	-	O	O	O	O	O	O	-	-	O	O	O	O
Frequency Stability	LTE 7	-	-	O	O	O	O	O	O	O	-	-	-	O	-
	LTE 38	-	-	O	O	O	O	O	O	O	-	-	-	O	-
	LTE 41	-	-	O	O	O	O	O	O	O	-	-	-	O	-
Spurious Emissions at Antenna Terminals	LTE 7	-	-	O	O	O	O	O	-	O	-	-	O	O	O
	LTE 38	-	-	O	O	O	O	O	-	O	-	-	O	O	O
	LTE 41	-	-	O	O	O	O	O	-	O	-	-	O	O	O





Radiated Spurious Emission	LTE 7	-	-	O	-	-	O	O	-	O	-	-	-	O	-
	LTE 38	-	-	O	-	-	O	O	-	O	-	-	-	O	-
	LTE 41	-	-	O	-	-	O	O	-	O	-	-	-	O	-
Note	1. The mark "O" means that this configuration is chosen for testing. 2. The mark "-" means that this configuration is not testing.														

## 5 Test Case

### 5.1 RF Power Output and Effective Isotropic Radiated Power

#### Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

#### Methods of Measurement

During the process of the testing, The EUT was connected to the Base Station Simulator with a known loss. The EUT is controlled by the Base Station Simulator test set to ensure max power transmission with proper modulation.

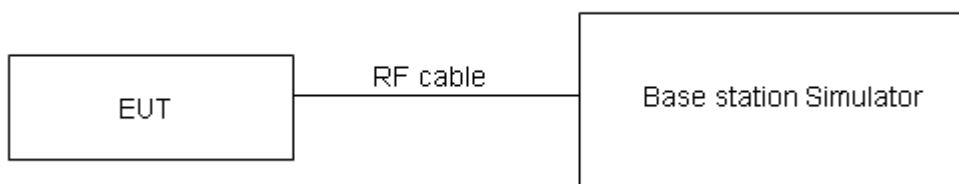
ERP can then be calculated as follows:

$EIRP \text{ (dBm)} = \text{Output Power (dBm)} + \text{Antenna Gain (dBi)}$

where: dBd refers to gain relative to an ideal dipole.

$EIRP \text{ (dBm)} = ERP \text{ (dBm)} + 2.15 \text{ (dB.)}$

#### Test Setup



#### Limits

No specific RF power output requirements in part 2.1046.

Rule Part 27.50(h) (2) specifies that "Mobile and other user stations. Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power."



Part 27.50(h)(2) Limit	$\leq 2 \text{ W}$ (33 dBm)
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### Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor  $k = 2$ ,  $U=0.4$  dB for RF power output,  $k = 2$ ,  $U= 1.19$  dB for ERP/EIRP.

### Test Results

Refer to the section 6.1 of this report for test data.

## 5.2 Occupied Bandwidth

### Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

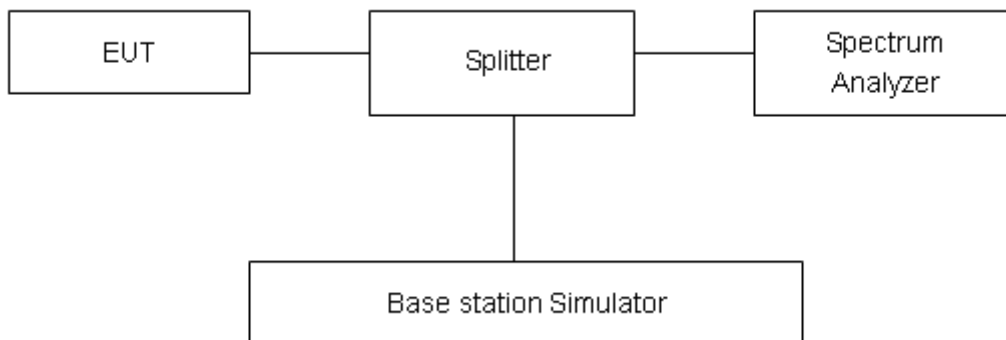
### Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The occupied bandwidth is measured using spectrum analyzer.

RBW is set to  $\geq 1\%EBW$ , VBW is set to 3x RBW.

99% power and -26dBc occupied bandwidths are recorded. Spectrum analyzer plots are included on the following pages.

### Test Setup



### Limits

No specific occupied bandwidth requirements in part 2.1049.

### Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor  $k = 2$ ,  $U=624\text{Hz}$ .

### Test Results

Refer to the section 6.2 of this report for test data.

### 5.3 Band Edge Compliance

#### Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

#### Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The band edge of the lowest and highest channels were measured.

The testing follows KDB 971168 D01 v03r01 Section 6.0

The EUT was connected to spectrum analyzer and system simulator via a power divider.

The band edges of low and high channels for the highest RF powers were measured.

For LTE Band 7/38 set RBW  $\geq 1\%$  EBW in the 1MHz band immediately outside and adjacent to the band edge. Beyond the 1 MHz band from the band edge, RBW=1MHz was used.

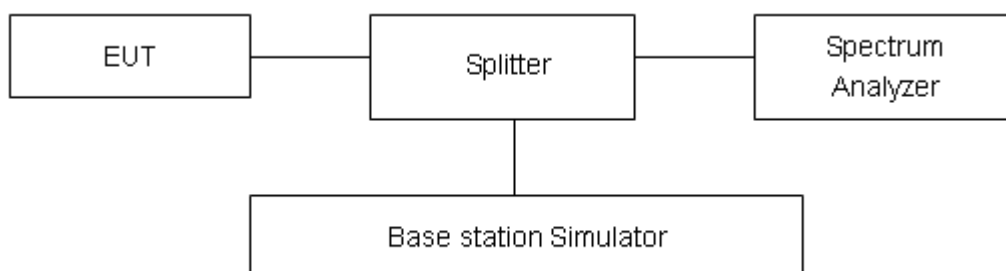
For LTE Band 41 the middle channel, high channel set RBW  $\geq 1\%$  EBW in the 1MHz band immediately outside and adjacent to the band edge. Beyond the 1 MHz band from the band edge, RBW=1MHz was used; Low channel set RBW  $\geq 2\%$  EBW in the 1MHz band immediately outside and adjacent to the band edge. Beyond the 1 MHz band from the band edge, RBW=1MHz was used. RBW is set to  $\geq 1\%$ EBW, VBW is set to 3x RBW on spectrum analyzer.

Set spectrum analyzer with RMS detector.

The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

Checked that all the results comply with the emission limit line.

#### Test Setup



#### Limits

Rule Part 27.53(m) (4) specifies that “for BRS and EBS stations. 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)(4) 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.

Example:

The limit line is derived from  $43 + 10\log(P)$  dB below the transmitter power  $P$  (Watts)

$= P(W) - [43 + 10\log(P)]$  (dB)

$= [30 + 10\log(P)]$  (dBm) -  $[43 + 10\log(P)]$  (dB) = -13dBm.

### Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor  $k = 1.96$ ,  $U=0.684$ dB.

### Test Results

Refer to the section 6.3 of this report for test data.

## 5.4 Peak-to-Average Power Ratio (PAPR)

### Ambient condition

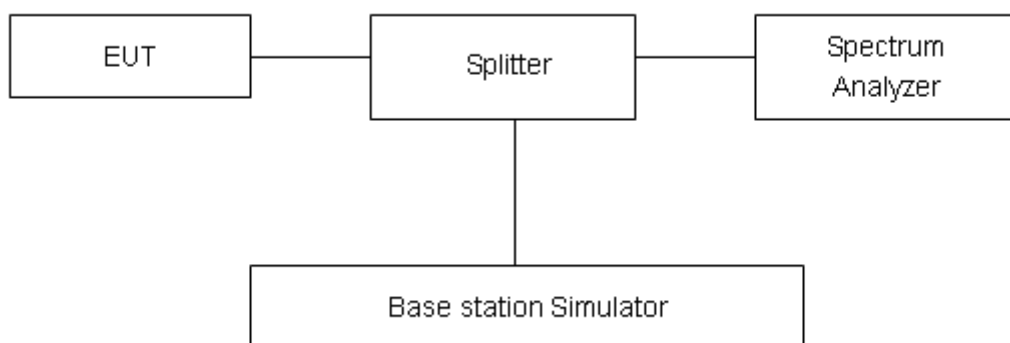
Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

### Methods of Measurement

Measure the total peak power and record as PPk. And measure the total average power and record as PAvg. Both the peak and average power levels must be expressed in the same logarithmic units (e.g., dBm). Determine the PAPR from:

$$\text{PAPR (dB)} = \text{PPk (dBm)} - \text{PAvg (dBm)}.$$

### Test Setup



### Limits

Rule Part 27.50(d)(5) Equipment employed must be authorized in accordance with the provisions of 24.51. Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (d)(6) of this section. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

### Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor  $k = 2$ ,  $U = 0.4$  dB.

### Test Results

Refer to the section 6.4 of this report for test data.

## 5.5 Frequency Stability

### Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

### Method of Measurement

#### Frequency Stability (Temperature Variation)

The temperature inside the climate chamber is varied from -30°C to +50°C in 10°C step size.

(1) With all power removed, the temperature was decreased to -10°C and permitted to stabilize for three hours.

(2) Measure the carrier frequency with the test equipment in a “call mode”. These measurements should be made within 1 minute of powering up the mobile station, to prevent significant self warming.

(3) Repeat the above measurements at 10°C increments from -30°C to +50°C. Allow at least 1.5 hours at each temperature, un-powered, before making measurements.

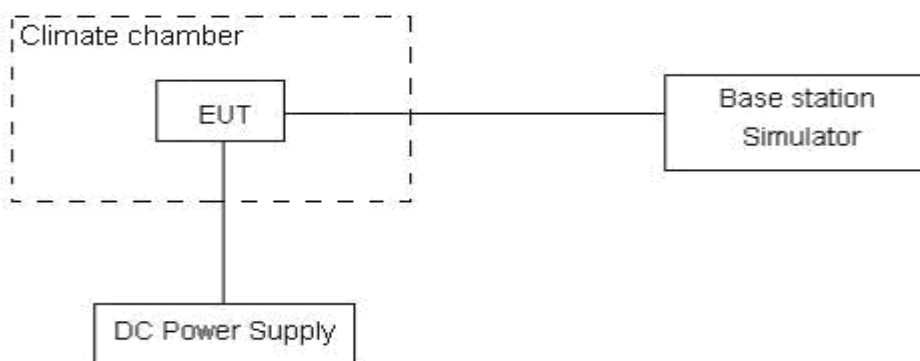
#### Frequency Stability (Voltage Variation)

The frequency stability shall be measured with variation of primary supply voltage as follows:

**Primary Supply Voltage:** The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

This transceiver is specified to operate with an input voltage of between 3.65 V and 4.20 V, with a nominal voltage of 3.85V.

### Test setup



### Limits

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

### Measurement Uncertainty

The assessed measurement uncertainty to ensure 99.75% confidence level for the normal distribution is with the coverage factor  $k = 3$ ,  $U = 0.01\text{ppm}$ .

### Test Results

Refer to the section 6.5 of this report for test data.



## 5.6 Spurious Emissions at Antenna Terminals

### Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

### Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The measurement is carried out using a spectrum analyzer. The spectrum analyzer scans from 9kHz to the 10th harmonic of the carrier. The peak detector is used.

RBW is set to 1 kHz (0.009MHz~ 0.15 MHz),

RBW is set to 10 kHz (0.15 MHz~ 30 MHz)

RBW is set to 100 kHz (30MHz~1000 MHz)

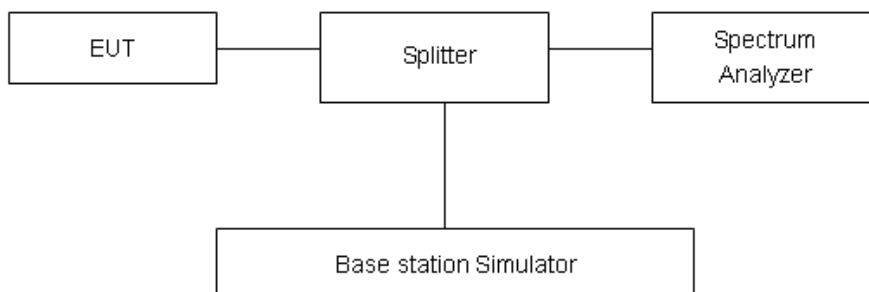
RBW is set to 1000 kHz (above 1000MHz)

Sweep is set to ATUO.

Of those disturbances below (limit – 20 dB), the mark is not required for the EUT.

The modulation mode and RB allocation refer to section 5.1, using the maximum output power configuration.

### Test setup



### Limits

Rule Part 27.53(m)  $55 + 10 \log (P)$  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)(4) of this section.

Part 27.53(m) Limit	-25 dBm
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### Measurement Uncertainty

The assessed measurement uncertainty to ensure 99.75% confidence level for the normal distribution is with the coverage factor  $k = 1.96$ .

Frequency	Uncertainty
9kHz-1GHz	0.684 dB
1GHz-30GHz	1.407 dB

### Test Results

Refer to the section 6.6 of this report for test data.

## 5.7 Radiated Spurious Emission

### Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

### Method of Measurement

1. The testing follows FCC KDB 971168 D01 v03r01 Section 5.8 and ANSI C63.26-2015.
2. Below 1GHz: The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H). Above 1GHz: (Note: the FCC's permission to use 1.5m as an alternative per TCBC Conf call of Dec. 2, 2014.) The EUT is placed on a turntable 1.5 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H).
3. A loop antenna, A log-periodic antenna or horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
4. The EUT is then put into continuously transmitting mode at its maximum power level during the test. Set Test Receiver or Spectrum RBW=100kHz, VBW=300kHz for 30MHz to 1GHz and RBW=1MHz, VBW=3MHz for above 1GHz, and the maximum value of the receiver should be recorded as (Pr).
5. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
6. A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (Pcl) ,the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAG) should be recorded after test.
7. The measurement results are obtained as described below:  

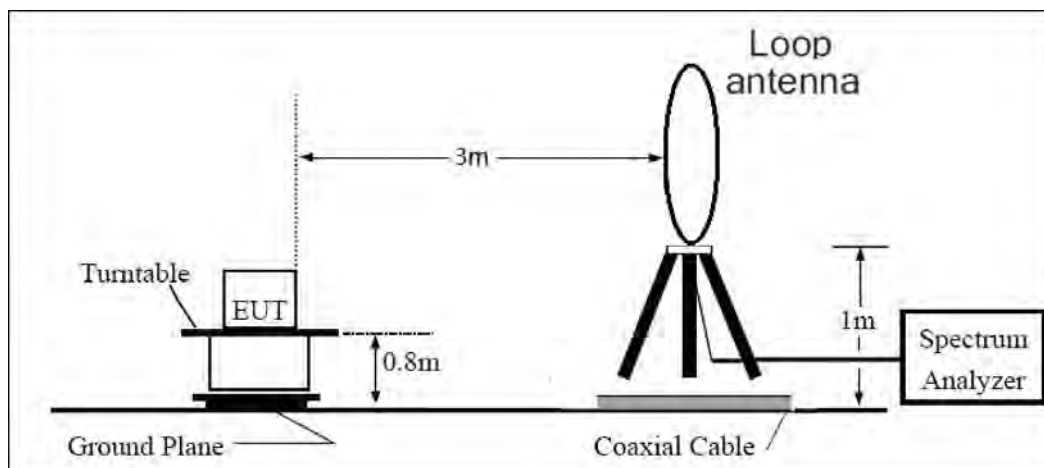
$$\text{Power(EIRP)} = \text{PMea} - \text{PAG} - \text{Pcl} + \text{Ga}$$
The measurement results are amend as described below:  

$$\text{Power(EIRP)} = \text{PMea} - \text{Pcl} + \text{Ga}$$
8. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dB) and known input power. ERP can be calculated from EIRP by subtracting the gain of the dipole,  $\text{ERP} = \text{EIRP} - 2.15\text{dB}$ .

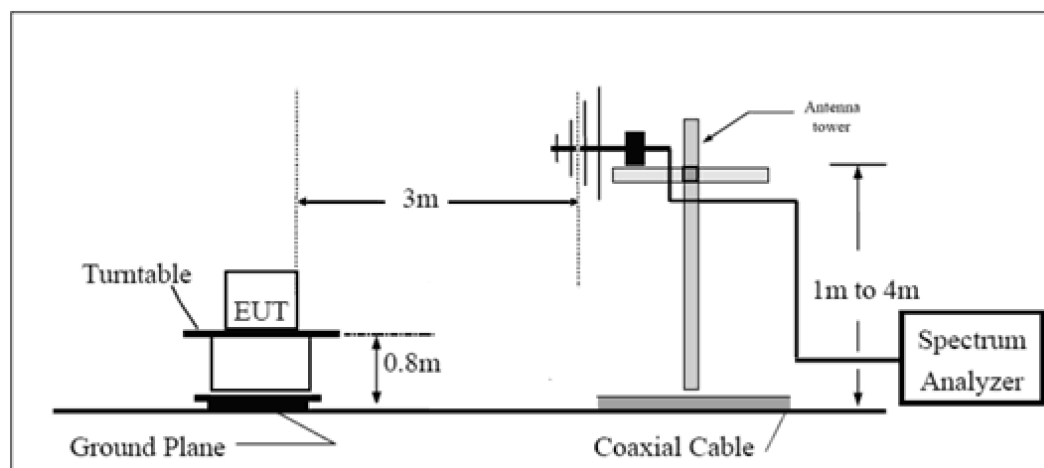
The modulation mode and RB allocation refer to section 5.1, using the maximum output power configuration.

### Test setup

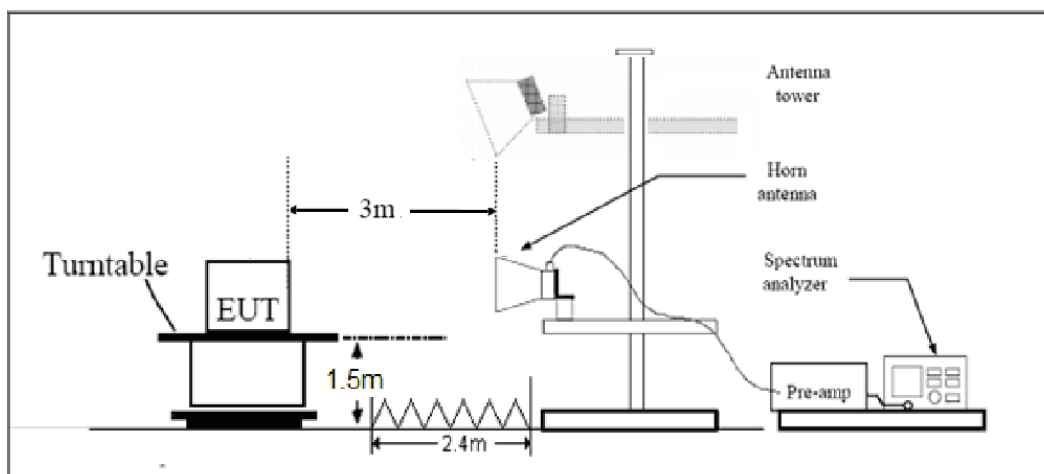
9KHz~ 30MHz



30MHz~ 1GHz



Above 1GHz



Note: Area side:2.4mX3.6m

**Limits**

Rule Part 27.53(m)  $55 + 10 \log (P)$  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)(4) of this section.

Part 27.53(m) Limit	-25 dBm
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**Measurement Uncertainty**

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor  $k = \pm 1.96$ ,  $U = \pm 3.55$  dB.

**Test Results**

Refer to the section 6.7 of this report for test data.

## 6 Test Results

### 6.1 RF Power Output and Effective Isotropic Radiated Power

LTE Band 7 Low Antenna				Maximum Output Power (dBm)			EIRP (dBm)		
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				20775/ 2502.5	21100/ 2535	21425/ 2567.5	20775/ 2502.5	21100/ 2535	21425/ 2567.5
5MHz	QPSK	1	0	23.08	23.19	23.25	22.68	22.79	22.85
		1	13	23.34	23.47	23.49	22.94	23.07	23.09
		1	24	23.27	23.33	23.33	22.87	22.93	22.93
		12	0	22.29	22.59	22.47	21.89	22.19	22.07
		12	6	22.38	22.55	22.57	21.98	22.15	22.17
		12	13	22.48	22.51	22.45	22.08	22.11	22.05
		25	0	22.35	22.55	22.48	21.95	22.15	22.08
	16QAM	1	0	22.45	22.56	22.63	22.05	22.16	22.23
		1	13	22.72	22.75	22.82	22.32	22.35	22.42
		1	24	22.59	22.60	22.63	22.19	22.20	22.23
		12	0	21.27	21.53	21.44	20.87	21.13	21.04
		12	6	21.41	21.55	21.55	21.01	21.15	21.15
		12	13	21.44	21.54	21.45	21.04	21.14	21.05
		25	0	21.32	21.54	21.46	20.92	21.14	21.06
	64QAM	1	0	21.40	21.51	21.50	21.00	21.11	21.10
		1	13	21.72	21.72	21.75	21.32	21.32	21.35
		1	24	21.53	21.59	21.55	21.13	21.19	21.15
		12	0	20.26	20.52	20.43	19.86	20.12	20.03
		12	6	20.42	20.53	20.54	20.02	20.13	20.14
		12	13	20.43	20.52	20.43	20.03	20.12	20.03
		25	0	20.34	20.52	20.45	19.94	20.12	20.05
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				20800/ 2505	21100/ 2535	21400/ 2565	20800/ 2505	21100/ 2535	21400/ 2565
10MHz	QPSK	1	0	23.07	23.18	23.24	22.67	22.78	22.84
		1	25	23.35	23.48	23.50	22.95	23.08	23.10
		1	49	23.26	23.32	23.32	22.86	22.92	22.92
		25	0	22.29	22.59	22.47	21.89	22.19	22.07
		25	13	22.39	22.56	22.56	21.99	22.16	22.16
		25	25	22.48	22.53	22.46	22.08	22.13	22.06
		50	0	22.39	22.56	22.50	21.99	22.16	22.10
	16QAM	1	0	22.49	22.55	22.62	22.09	22.15	22.22
		1	25	22.76	22.77	22.82	22.36	22.37	22.42



		1	49	22.59	22.60	22.62	22.19	22.20	22.22
		25	0	21.28	21.54	21.45	20.88	21.14	21.05
		25	13	21.40	21.54	21.54	21.00	21.14	21.14
		25	25	21.44	21.54	21.45	21.04	21.14	21.05
		50	0	21.33	21.55	21.45	20.93	21.15	21.05
	64QAM	1	0	21.39	21.50	21.49	20.99	21.10	21.09
		1	25	21.72	21.74	21.75	21.32	21.34	21.35
		1	49	21.53	21.59	21.54	21.13	21.19	21.14
		25	0	20.27	20.53	20.44	19.87	20.13	20.04
		25	13	20.41	20.52	20.53	20.01	20.12	20.13
		25	25	20.43	20.52	20.43	20.03	20.12	20.03
		50	0	20.35	20.53	20.44	19.95	20.13	20.04
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				20825/2507.5	21100/2535	21375/2562.5	20825/2507.5	21100/2535	21375/2562.5
15MHz	QPSK	1	0	23.06	23.14	23.22	22.66	22.74	22.82
		1	38	23.33	23.47	23.47	22.93	23.07	23.07
		1	74	23.23	23.27	23.28	22.83	22.87	22.88
		36	0	22.27	22.55	22.44	21.87	22.15	22.04
		36	18	22.36	22.51	22.52	21.96	22.11	22.12
		36	39	22.45	22.50	22.42	22.05	22.10	22.02
		75	0	22.37	22.52	22.45	21.97	22.12	22.05
	16QAM	1	0	22.47	22.53	22.60	22.07	22.13	22.20
		1	38	22.74	22.74	22.80	22.34	22.34	22.40
		1	74	22.57	22.56	22.59	22.17	22.16	22.19
		36	0	21.25	21.52	21.42	20.85	21.12	21.02
		36	18	21.37	21.49	21.50	20.97	21.09	21.10
		36	39	21.42	21.50	21.42	21.02	21.10	21.02
		75	0	21.30	21.50	21.41	20.90	21.10	21.01
	64QAM	1	0	21.34	21.48	21.47	20.94	21.08	21.07
		1	38	21.70	21.71	21.73	21.30	21.31	21.33
		1	74	21.54	21.58	21.55	21.14	21.18	21.15
		36	0	20.26	20.55	20.45	19.86	20.15	20.05
		36	18	20.39	20.49	20.52	19.99	20.09	20.12
		36	39	20.41	20.48	20.40	20.01	20.08	20.00
		75	0	20.32	20.48	20.40	19.92	20.08	20.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				20850/2510	21100/2535	21350/2560	20850/2510	21100/2535	21350/2560
20MHz	QPSK	1	0	23.03	23.10	23.19	22.63	22.70	22.79
		1	50	23.32	23.43	23.45	22.92	23.03	23.05
		1	99	23.21	23.26	23.25	22.81	22.86	22.85
		50	0	22.24	22.50	22.40	21.84	22.10	22.00



		50	25	22.34	22.47	22.49	21.94	22.07	22.09
		50	50	22.42	22.45	22.38	22.02	22.05	21.98
		100	0	22.34	22.47	22.41	21.94	22.07	22.01
	16QAM	1	0	22.44	22.49	22.55	22.04	22.09	22.15
		1	50	22.71	22.72	22.76	22.31	22.32	22.36
		1	99	22.54	22.53	22.57	22.14	22.13	22.17
		50	0	21.22	21.48	21.39	20.82	21.08	20.99
		50	25	21.34	21.47	21.47	20.94	21.07	21.07
		50	50	21.39	21.45	21.38	20.99	21.05	20.98
		100	0	21.28	21.46	21.38	20.88	21.06	20.98
	64QAM	1	0	21.32	21.44	21.42	20.92	21.04	21.02
		1	50	21.66	21.69	21.69	21.26	21.29	21.29
		1	99	21.48	21.52	21.49	21.08	21.12	21.09
		50	0	20.21	20.47	20.38	19.81	20.07	19.98
		50	25	20.35	20.45	20.46	19.95	20.05	20.06
		50	50	20.38	20.43	20.36	19.98	20.03	19.96
		100	0	20.30	20.44	20.37	19.90	20.04	19.97

LTE Band 7 Upper Antenna				Maximum Output Power (dBm)			EIRP (dBm)		
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				20775/ 2502.5	21100/ 2535	21425/ 2567.5	20775/ 2502.5	21100/ 2535	21425/ 2567.5
5MHz	QPSK	1	0	23.23	23.29	23.11	21.53	21.59	21.41
		1	13	23.45	23.45	23.32	21.75	21.75	21.62
		1	24	23.30	23.23	23.13	21.60	21.53	21.43
		12	0	22.37	22.52	22.37	20.67	20.82	20.67
		12	6	22.49	22.51	22.41	20.79	20.81	20.71
		12	13	22.52	22.48	22.31	20.82	20.78	20.61
		25	0	22.41	22.55	22.36	20.71	20.85	20.66
	16QAM	1	0	22.55	22.51	22.49	20.85	20.81	20.79
		1	13	22.81	22.70	22.73	21.11	21.00	21.03
		1	24	22.60	22.57	22.44	20.90	20.87	20.74
		12	0	21.35	21.48	21.36	19.65	19.78	19.66
		12	6	21.51	21.47	21.42	19.81	19.77	19.72
		12	13	21.46	21.51	21.29	19.76	19.81	19.59
		25	0	21.43	21.48	21.29	19.73	19.78	19.59
	64QAM	1	0	21.56	21.54	21.39	19.86	19.84	19.69
		1	13	21.75	21.72	21.60	20.05	20.02	19.90
		1	24	21.56	21.53	21.33	19.86	19.83	19.63
		12	0	20.35	20.45	20.33	18.65	18.75	18.63
		12	6	20.51	20.47	20.38	18.81	18.77	18.68
		12	13	20.47	20.47	20.29	18.77	18.77	18.59
		25	0	20.40	20.48	20.31	18.70	18.78	18.61





Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				20800/ 2505	21100/ 2535	21400/ 2565	20800/ 2505	21100/ 2535	21400/ 2565
10MHz	QPSK	1	0	23.25	23.30	23.14	21.55	21.60	21.44
		1	25	23.48	23.50	23.36	21.78	21.80	21.66
		1	49	23.32	23.27	23.16	21.62	21.57	21.46
		25	0	22.40	22.57	22.41	20.70	20.87	20.71
		25	13	22.52	22.56	22.45	20.82	20.86	20.75
		25	25	22.54	22.52	22.36	20.84	20.82	20.66
		50	0	22.45	22.57	22.40	20.75	20.87	20.70
	16QAM	1	0	22.59	22.54	22.51	20.89	20.84	20.81
		1	25	22.85	22.74	22.76	21.15	21.04	21.06
		1	49	22.63	22.59	22.47	20.93	20.89	20.77
		25	0	21.38	21.53	21.40	19.68	19.83	19.70
		25	13	21.53	21.51	21.45	19.83	19.81	19.75
		25	25	21.49	21.56	21.33	19.79	19.86	19.63
		50	0	21.46	21.53	21.33	19.76	19.83	19.63
	64QAM	1	0	21.58	21.53	21.41	19.88	19.83	19.71
		1	25	21.78	21.72	21.63	20.08	20.02	19.93
		1	49	21.55	21.55	21.36	19.85	19.85	19.66
		25	0	20.38	20.50	20.33	18.68	18.80	18.63
		25	13	20.53	20.51	20.41	18.83	18.81	18.71
		25	25	20.50	20.52	20.33	18.80	18.82	18.63
		50	0	20.43	20.53	20.35	18.73	18.83	18.65
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				20825/ 2507.5	21100/ 2535	21375/ 2562.5	20825/ 2507.5	21100/ 2535	21375/ 2562.5
15MHz	QPSK	1	0	23.24	23.26	23.12	21.54	21.56	21.42
		1	38	23.46	23.49	23.33	21.76	21.79	21.63
		1	74	23.29	23.22	23.12	21.59	21.52	21.42
		36	0	22.38	22.53	22.38	20.68	20.83	20.68
		36	18	22.49	22.51	22.41	20.79	20.81	20.71
		36	39	22.51	22.49	22.32	20.81	20.79	20.62
		75	0	22.43	22.53	22.35	20.73	20.83	20.65
	16QAM	1	0	22.57	22.52	22.49	20.87	20.82	20.79
		1	38	22.83	22.71	22.74	21.13	21.01	21.04
		1	74	22.61	22.55	22.44	20.91	20.85	20.74
		36	0	21.35	21.51	21.37	19.65	19.81	19.67
		36	18	21.50	21.46	21.41	19.80	19.76	19.71
		36	39	21.47	21.52	21.30	19.77	19.82	19.60
		75	0	21.43	21.48	21.29	19.73	19.78	19.59
	64QAM	1	0	21.53	21.51	21.39	19.83	19.81	19.69
		1	38	21.76	21.69	21.61	20.06	19.99	19.91



		1	74	21.56	21.54	21.37	19.86	19.84	19.67
		36	0	20.37	20.52	20.34	18.67	18.82	18.64
		36	18	20.51	20.48	20.40	18.81	18.78	18.70
		36	39	20.48	20.48	20.30	18.78	18.78	18.60
		75	0	20.40	20.48	20.31	18.70	18.78	18.61
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				20850/ 2510	21100/ 2535	21350/ 2560	20850/ 2510	21100/ 2535	21350/ 2560
20MHz	QPSK	1	0	23.21	23.22	23.09	21.51	21.52	21.39
		1	50	23.45	23.41	23.31	21.75	21.71	21.61
		1	99	23.27	23.21	23.09	21.57	21.51	21.39
		50	0	22.35	22.48	22.34	20.65	20.78	20.64
		50	25	22.47	22.47	22.38	20.77	20.77	20.68
		50	50	22.48	22.44	22.28	20.78	20.74	20.58
		100	0	22.40	22.48	22.31	20.70	20.78	20.61
	16QAM	1	0	22.54	22.48	22.44	20.84	20.78	20.74
		1	50	22.80	22.69	22.70	21.10	20.99	21.00
		1	99	22.58	22.52	22.42	20.88	20.82	20.72
		50	0	21.32	21.47	21.34	19.62	19.77	19.64
		50	25	21.47	21.44	21.38	19.77	19.74	19.68
		50	50	21.44	21.47	21.26	19.74	19.77	19.56
		100	0	21.41	21.44	21.26	19.71	19.74	19.56
	64QAM	1	0	21.51	21.47	21.34	19.81	19.77	19.64
		1	50	21.72	21.67	21.57	20.02	19.97	19.87
		1	99	21.50	21.48	21.31	19.80	19.78	19.61
		50	0	20.32	20.44	20.27	18.62	18.74	18.57
		50	25	20.47	20.44	20.34	18.77	18.74	18.64
		50	50	20.45	20.43	20.26	18.75	18.73	18.56
		100	0	20.38	20.44	20.28	18.68	18.74	18.58

LTE Band 38 Low Antenna				Maximum Output Power (dBm)			EIRP (dBm)		
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				37775/ 2572.5	38000/ 2595	38225/ 2617.5	37775/ 2572.5	38000/ 2595	38225/ 2617.5
5MHz	QPSK	1	0	23.12	23.15	23.11	22.12	22.15	22.11
		1	13	23.34	23.34	23.37	22.34	22.34	22.37
		1	24	23.16	23.17	23.16	22.16	22.17	22.16
		12	0	22.22	22.21	22.25	21.22	21.21	21.25
		12	6	22.31	22.28	22.31	21.31	21.28	21.31
		12	13	22.31	22.27	22.25	21.31	21.27	21.25
		25	0	22.26	22.27	22.30	21.26	21.27	21.30
	16QAM	1	0	22.35	22.27	22.32	21.35	21.27	21.32
		1	13	22.59	22.55	22.59	21.59	21.55	21.59



		1	24	22.34	22.34	22.33	21.34	21.34	21.33
		12	0	21.27	21.22	21.27	20.27	20.22	20.27
		12	6	21.40	21.33	21.35	20.40	20.33	20.35
		12	13	21.33	21.31	21.30	20.33	20.31	20.30
		25	0	21.29	21.26	21.28	20.29	20.26	20.28
	64QAM	1	0	21.21	21.18	21.19	20.21	20.18	20.19
		1	13	21.47	21.43	21.43	20.47	20.43	20.43
		1	24	21.23	21.21	21.17	20.23	20.21	20.17
		12	0	20.25	20.25	20.30	19.25	19.25	19.30
		12	6	20.33	20.28	20.37	19.33	19.28	19.37
		12	13	20.27	20.29	20.26	19.27	19.29	19.26
		25	0	20.27	20.28	20.28	19.27	19.28	19.28
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				37800/ 2575	38000/ 2595	38200/ 2615	37800/ 2575	38000/ 2595	38200/ 2615
10MHz	QPSK	1	0	23.14	23.16	23.14	22.14	22.16	22.14
		1	25	23.37	23.39	23.41	22.37	22.39	22.41
		1	49	23.18	23.21	23.19	22.18	22.21	22.19
		25	0	22.25	22.26	22.29	21.25	21.26	21.29
		25	13	22.34	22.33	22.35	21.34	21.33	21.35
		25	25	22.33	22.31	22.30	21.33	21.31	21.30
		50	0	22.30	22.29	22.34	21.30	21.29	21.34
	16QAM	1	0	22.39	22.30	22.34	21.39	21.30	21.34
		1	25	22.63	22.59	22.62	21.63	21.59	21.62
		1	49	22.37	22.36	22.36	21.37	21.36	21.36
		25	0	21.30	21.27	21.31	20.30	20.27	20.31
		25	13	21.42	21.37	21.38	20.42	20.37	20.38
		25	25	21.36	21.36	21.34	20.36	20.36	20.34
		50	0	21.32	21.31	21.32	20.32	20.31	20.32
	64QAM	1	0	21.23	21.17	21.21	20.23	20.17	20.21
		1	25	21.50	21.43	21.46	20.50	20.43	20.46
		1	49	21.22	21.23	21.20	20.22	20.23	20.20
		25	0	20.28	20.30	20.30	19.28	19.30	19.30
		25	13	20.35	20.32	20.40	19.35	19.32	19.40
		25	25	20.30	20.34	20.30	19.30	19.34	19.30
		50	0	20.30	20.33	20.32	19.30	19.33	19.32
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				37825/ 2577.5	38000/ 2595	38175/ 2612.5	37825/ 2577.5	38000/ 2595	38175/ 2612.5
15MHz	QPSK	1	0	23.13	23.12	23.12	22.13	22.12	22.12
		1	38	23.35	23.38	23.38	22.35	22.38	22.38
		1	74	23.15	23.16	23.15	22.15	22.16	22.15
		36	0	22.23	22.22	22.26	21.23	21.22	21.26



		36	18	22.31	22.28	22.31	21.31	21.28	21.31
		36	39	22.30	22.28	22.26	21.30	21.28	21.26
		75	0	22.28	22.25	22.29	21.28	21.25	21.29
	16QAM	1	0	22.37	22.28	22.32	21.37	21.28	21.32
		1	38	22.61	22.56	22.60	21.61	21.56	21.60
		1	74	22.35	22.32	22.33	21.35	21.32	21.33
		36	0	21.27	21.25	21.28	20.27	20.25	20.28
		36	18	21.39	21.32	21.34	20.39	20.32	20.34
		36	39	21.34	21.32	21.31	20.34	20.32	20.31
		75	0	21.29	21.26	21.28	20.29	20.26	20.28
	64QAM	1	0	21.18	21.15	21.19	20.18	20.15	20.19
		1	38	21.48	21.40	21.44	20.48	20.40	20.44
		1	74	21.23	21.22	21.21	20.23	20.22	20.21
		36	0	20.27	20.32	20.31	19.27	19.32	19.31
		36	18	20.33	20.29	20.39	19.33	19.29	19.39
		36	39	20.28	20.30	20.27	19.28	19.30	19.27
		75	0	20.27	20.28	20.28	19.27	19.28	19.28
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				37850/ 2580	38000/ 2595	38150/ 2610	37850/ 2580	38000/ 2595	38150/ 2610
20MHz	QPSK	1	0	23.10	23.08	23.09	22.10	22.08	22.09
		1	50	23.34	23.34	23.36	22.34	22.34	22.36
		1	99	23.13	23.15	23.12	22.13	22.15	22.12
		50	0	22.20	22.17	22.22	21.20	21.17	21.22
		50	25	22.29	22.24	22.28	21.29	21.24	21.28
		50	50	22.27	22.23	22.22	21.27	21.23	21.22
		100	0	22.25	22.20	22.25	21.25	21.20	21.25
	16QAM	1	0	22.34	22.24	22.27	21.34	21.24	21.27
		1	50	22.58	22.54	22.56	21.58	21.54	21.56
		1	99	22.32	22.29	22.31	21.32	21.29	21.31
		50	0	21.24	21.21	21.25	20.24	20.21	20.25
		50	25	21.36	21.30	21.31	20.36	20.30	20.31
		50	50	21.31	21.27	21.27	20.31	20.27	20.27
		100	0	21.27	21.22	21.25	20.27	20.22	20.25
	64QAM	1	0	21.16	21.11	21.14	20.16	20.11	20.14
		1	50	21.44	21.38	21.40	20.44	20.38	20.40
		1	99	21.17	21.16	21.15	20.17	20.16	20.15
		50	0	20.22	20.24	20.24	19.22	19.24	19.24
		50	25	20.29	20.25	20.33	19.29	19.25	19.33
		50	50	20.25	20.25	20.23	19.25	19.25	19.23
		100	0	20.25	20.24	20.25	19.25	19.24	19.25



LTE Band 38 Upper Antenna				Maximum Output Power (dBm)			EIRP (dBm)		
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				37775/ 2572.5	38000/ 2595	38225/ 2617.5	37775/ 2572.5	38000/ 2595	38225/ 2617.5
5MHz	QPSK	1	0	23.05	23.12	23.06	21.65	21.72	21.66
		1	13	23.25	23.22	23.26	21.85	21.82	21.86
		1	24	23.05	23.05	23.07	21.65	21.65	21.67
		12	0	22.14	22.12	22.12	20.74	20.72	20.72
		12	6	22.23	22.19	22.18	20.83	20.79	20.78
		12	13	22.24	22.17	22.15	20.84	20.77	20.75
		25	0	22.16	22.19	22.20	20.76	20.79	20.80
	16QAM	1	0	22.28	22.22	22.26	20.88	20.82	20.86
		1	13	22.49	22.44	22.48	21.09	21.04	21.08
		1	24	22.28	22.27	22.21	20.88	20.87	20.81
		12	0	21.21	21.13	21.16	19.81	19.73	19.76
		12	6	21.27	21.22	21.25	19.87	19.82	19.85
		12	13	21.25	21.21	21.17	19.85	19.81	19.77
		25	0	21.20	21.20	21.20	19.80	19.80	19.80
	64QAM	1	0	21.19	21.11	21.06	19.79	19.71	19.66
		1	13	21.40	21.37	21.33	20.00	19.97	19.93
		1	24	21.13	21.09	21.11	19.73	19.69	19.71
		12	0	20.17	20.13	20.19	18.77	18.73	18.79
		12	6	20.22	20.19	20.25	18.82	18.79	18.85
		12	13	20.21	20.18	20.19	18.81	18.78	18.79
		25	0	20.16	20.17	20.17	18.76	18.77	18.77
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				37800/ 2575	38000/ 2595	38200/ 2615	37800/ 2575	38000/ 2595	38200/ 2615
10MHz	QPSK	1	0	23.08	23.14	23.10	21.68	21.74	21.70
		1	25	23.27	23.26	23.29	21.87	21.86	21.89
		1	49	23.08	23.10	23.11	21.68	21.70	21.71
		25	0	22.17	22.17	22.16	20.77	20.77	20.76
		25	13	22.25	22.23	22.23	20.85	20.83	20.83
		25	25	22.26	22.19	22.19	20.86	20.79	20.79
		50	0	22.16	22.20	22.22	20.76	20.80	20.82
	16QAM	1	0	22.28	22.26	22.29	20.88	20.86	20.89
		1	25	22.49	22.46	22.51	21.09	21.06	21.11
		1	49	22.31	22.29	22.25	20.91	20.89	20.85
		25	0	21.23	21.17	21.19	19.83	19.77	19.79
		25	13	21.30	21.27	21.29	19.90	19.87	19.89
		25	25	21.28	21.26	21.21	19.88	19.86	19.81
		50	0	21.22	21.24	21.25	19.82	19.84	19.85



	64QAM	1	0	21.22	21.11	21.09	19.82	19.71	19.69
		1	25	21.43	21.35	21.36	20.03	19.95	19.96
		1	49	21.12	21.11	21.15	19.72	19.71	19.75
		25	0	20.19	20.17	20.18	18.79	18.77	18.78
		25	13	20.25	20.24	20.29	18.85	18.84	18.89
		25	25	20.24	20.23	20.23	18.84	18.83	18.83
		50	0	20.18	20.21	20.22	18.78	18.81	18.82
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				37825/ 2577.5	38000/ 2595	38175/ 2612.5	37825/ 2577.5	38000/ 2595	38175/ 2612.5
15MHz	QPSK	1	0	23.06	23.09	23.07	21.66	21.69	21.67
		1	38	23.26	23.26	23.27	21.86	21.86	21.87
		1	74	23.04	23.04	23.06	21.64	21.64	21.66
		36	0	22.15	22.13	22.13	20.75	20.73	20.73
		36	18	22.23	22.19	22.18	20.83	20.79	20.78
		36	39	22.23	22.18	22.16	20.83	20.78	20.76
		75	0	22.18	22.17	22.19	20.78	20.77	20.79
	16QAM	1	0	22.30	22.23	22.26	20.90	20.83	20.86
		1	38	22.51	22.45	22.49	21.11	21.05	21.09
		1	74	22.29	22.25	22.21	20.89	20.85	20.81
		36	0	21.21	21.16	21.17	19.81	19.76	19.77
		36	18	21.26	21.21	21.24	19.86	19.81	19.84
		36	39	21.26	21.22	21.18	19.86	19.82	19.78
		75	0	21.20	21.20	21.20	19.80	19.80	19.80
	64QAM	1	0	21.16	21.08	21.06	19.76	19.68	19.66
		1	38	21.41	21.34	21.34	20.01	19.94	19.94
		1	74	21.13	21.10	21.15	19.73	19.70	19.75
		36	0	20.19	20.20	20.20	18.79	18.80	18.80
		36	18	20.22	20.20	20.27	18.82	18.80	18.87
		36	39	20.22	20.19	20.20	18.82	18.79	18.80
		75	0	20.16	20.17	20.17	18.76	18.77	18.77
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				37850/ 2580	38000/ 2595	38150/ 2610	37850/ 2580	38000/ 2595	38150/ 2610
20MHz	QPSK	1	0	23.03	23.05	23.04	21.63	21.65	21.64
		1	50	23.25	23.22	23.25	21.85	21.82	21.85
		1	99	23.02	23.03	23.03	21.62	21.63	21.63
		50	0	22.12	22.08	22.09	20.72	20.68	20.69
		50	25	22.21	22.15	22.15	20.81	20.75	20.75
		50	50	22.20	22.13	22.12	20.80	20.73	20.72
		100	0	22.15	22.12	22.15	20.75	20.72	20.75
	16QAM	1	0	22.27	22.19	22.21	20.87	20.79	20.81
		1	50	22.48	22.43	22.45	21.08	21.03	21.05



		1	99	22.26	22.22	22.19	20.86	20.82	20.79
		50	0	21.18	21.12	21.14	19.78	19.72	19.74
		50	25	21.23	21.19	21.21	19.83	19.79	19.81
		50	50	21.23	21.17	21.14	19.83	19.77	19.74
		100	0	21.18	21.16	21.17	19.78	19.76	19.77
	64QAM	1	0	21.14	21.04	21.01	19.74	19.64	19.61
		1	50	21.37	21.32	21.30	19.97	19.92	19.90
		1	99	21.07	21.04	21.09	19.67	19.64	19.69
		50	0	20.14	20.12	20.13	18.74	18.72	18.73
		50	25	20.18	20.16	20.21	18.78	18.76	18.81
		50	50	20.19	20.14	20.16	18.79	18.74	18.76
		100	0	20.14	20.13	20.14	18.74	18.73	18.74

LTE Band 41 Low Antenna				Maximum Output Power (dBm)			EIRP (dBm)		
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				39675/ 2498.5	40620/ 2593	41565/ 2687.5	39675/ 2498.5	40620/ 2593	41565/ 2687.5
5MHz	QPSK	1	0	23.25	23.09	23.10	22.45	22.29	22.30
		1	13	23.52	23.42	23.34	22.72	22.62	22.54
		1	24	23.28	23.17	23.07	22.48	22.37	22.27
		12	0	22.37	22.26	22.28	21.57	21.46	21.48
		12	6	22.48	22.35	22.35	21.68	21.55	21.55
		12	13	22.47	22.30	22.31	21.67	21.50	21.51
		25	0	22.40	22.32	22.32	21.60	21.52	21.52
	16QAM	1	0	22.41	22.34	22.29	21.61	21.54	21.49
		1	13	22.73	22.61	22.58	21.93	21.81	21.78
		1	24	22.43	22.35	22.34	21.63	21.55	21.54
		12	0	21.41	21.28	21.28	20.61	20.48	20.48
		12	6	21.49	21.36	21.40	20.69	20.56	20.60
		12	13	21.44	21.33	21.33	20.64	20.53	20.53
		25	0	21.41	21.32	21.32	20.61	20.52	20.52
	64QAM	1	0	21.35	21.19	21.21	20.55	20.39	20.41
		1	13	21.61	21.47	21.51	20.81	20.67	20.71
		1	24	21.34	21.22	21.22	20.54	20.42	20.42
		12	0	20.40	20.32	20.24	19.60	19.52	19.44
		12	6	20.49	20.36	20.33	19.69	19.56	19.53
		12	13	20.46	20.37	20.31	19.66	19.57	19.51
		25	0	20.38	20.33	20.27	19.58	19.53	19.47
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				39700/ 2501	40620/ 2593	41540/ 2685	39700/ 2501	40620/ 2593	41540/ 2685
10MHz	QPSK	1	0	23.27	23.12	23.11	22.47	22.32	22.31
		1	25	23.55	23.46	23.39	22.75	22.66	22.59



		1	49	23.30	23.20	23.11	22.50	22.40	22.31
		25	0	22.40	22.30	22.33	21.60	21.50	21.53
		25	13	22.51	22.39	22.40	21.71	21.59	21.60
		25	25	22.49	22.35	22.35	21.69	21.55	21.55
		50	0	22.44	22.36	22.34	21.64	21.56	21.54
	16QAM	1	0	22.45	22.36	22.32	21.65	21.56	21.52
		1	25	22.77	22.64	22.62	21.97	21.84	21.82
		1	49	22.46	22.38	22.36	21.66	21.58	21.56
		25	0	21.44	21.32	21.33	20.64	20.52	20.53
		25	13	21.51	21.39	21.44	20.71	20.59	20.64
		25	25	21.47	21.37	21.38	20.67	20.57	20.58
		50	0	21.44	21.36	21.37	20.64	20.56	20.57
	64QAM	1	0	21.37	21.21	21.20	20.57	20.41	20.40
		1	25	21.64	21.50	21.51	20.84	20.70	20.71
		1	49	21.33	21.25	21.24	20.53	20.45	20.44
		25	0	20.43	20.32	20.29	19.63	19.52	19.49
		25	13	20.51	20.39	20.37	19.71	19.59	19.57
		25	25	20.49	20.41	20.36	19.69	19.61	19.56
		50	0	20.41	20.37	20.32	19.61	19.57	19.52
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				39725/ 2503.5	40620/ 2593	41515/ 2682.5	39725/ 2503.5	40620/ 2593	41515/ 2682.5
15MHz	QPSK	1	0	23.26	23.10	23.07	22.46	22.30	22.27
		1	38	23.53	23.43	23.38	22.73	22.63	22.58
		1	74	23.27	23.16	23.06	22.47	22.36	22.26
		36	0	22.38	22.27	22.29	21.58	21.47	21.49
		36	18	22.48	22.35	22.35	21.68	21.55	21.55
		36	39	22.46	22.31	22.32	21.66	21.51	21.52
		75	0	22.42	22.31	22.30	21.62	21.51	21.50
	16QAM	1	0	22.43	22.34	22.30	21.63	21.54	21.50
		1	38	22.75	22.62	22.59	21.95	21.82	21.79
		1	74	22.44	22.35	22.32	21.64	21.55	21.52
		36	0	21.41	21.29	21.31	20.61	20.49	20.51
		36	18	21.48	21.35	21.39	20.68	20.55	20.59
		36	39	21.45	21.34	21.34	20.65	20.54	20.54
		75	0	21.41	21.32	21.32	20.61	20.52	20.52
	64QAM	1	0	21.32	21.19	21.18	20.52	20.39	20.38
		1	38	21.62	21.48	21.48	20.82	20.68	20.68
		1	74	21.34	21.26	21.23	20.54	20.46	20.43
		36	0	20.42	20.33	20.31	19.62	19.53	19.51
		36	18	20.49	20.38	20.34	19.69	19.58	19.54
		36	39	20.47	20.38	20.32	19.67	19.58	19.52
		75	0	20.38	20.33	20.27	19.58	19.53	19.47





Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				39750/ 2506	40620/ 2593	41490/ 2680	39750/ 2506	40620/ 2593	41490/ 2680
20MHz	QPSK	1	0	23.23	23.07	23.03	22.43	22.27	22.23
		1	50	23.52	23.41	23.34	22.72	22.61	22.54
		1	99	23.25	23.13	23.05	22.45	22.33	22.25
		50	0	22.35	22.23	22.24	21.55	21.43	21.44
		50	25	22.46	22.32	22.31	21.66	21.52	21.51
		50	50	22.43	22.27	22.27	21.63	21.47	21.47
		100	0	22.39	22.27	22.25	21.59	21.47	21.45
	16QAM	1	0	22.40	22.29	22.26	21.60	21.49	21.46
		1	50	22.72	22.58	22.57	21.92	21.78	21.77
		1	99	22.41	22.33	22.29	21.61	21.53	21.49
		50	0	21.38	21.26	21.27	20.58	20.46	20.47
		50	25	21.45	21.32	21.37	20.65	20.52	20.57
		50	50	21.42	21.30	21.29	20.62	20.50	20.49
		100	0	21.39	21.29	21.28	20.59	20.49	20.48
	64QAM	1	0	21.30	21.14	21.14	20.50	20.34	20.34
		1	50	21.58	21.44	21.46	20.78	20.64	20.66
		1	99	21.28	21.20	21.17	20.48	20.40	20.37
		50	0	20.37	20.26	20.23	19.57	19.46	19.43
		50	25	20.45	20.32	20.30	19.65	19.52	19.50
		50	50	20.44	20.34	20.27	19.64	19.54	19.47
		100	0	20.36	20.30	20.23	19.56	19.50	19.43

LTE Band 41 Upper Antenna				Maximum Output Power (dBm)			EIRP (dBm)		
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				39675/ 2498.5	40620/ 2593	41565/ 2687.5	39675/ 2498.5	40620/ 2593	41565/ 2687.5
5MHz	QPSK	1	0	23.29	23.04	23.15	21.59	21.34	21.45
		1	13	23.50	23.31	23.45	21.80	21.61	21.75
		1	24	23.29	23.05	23.19	21.59	21.35	21.49
		12	0	22.43	22.11	22.41	20.73	20.41	20.71
		12	6	22.51	22.21	22.47	20.81	20.51	20.77
		12	13	22.39	22.17	22.43	20.69	20.47	20.73
		25	0	22.46	22.17	22.48	20.76	20.47	20.78
	16QAM	1	0	22.49	22.19	22.43	20.79	20.49	20.73
		1	13	22.72	22.48	22.73	21.02	20.78	21.03
		1	24	22.46	22.23	22.45	20.76	20.53	20.75
		12	0	21.41	21.12	21.45	19.71	19.42	19.75
		12	6	21.54	21.22	21.54	19.84	19.52	19.84
		12	13	21.48	21.20	21.47	19.78	19.50	19.77
		25	0	21.56	21.14	21.47	19.86	19.44	19.77



	64QAM	1	0	21.35	21.07	21.28	19.65	19.37	19.58
		1	13	21.65	21.35	21.61	19.95	19.65	19.91
		1	24	21.35	21.04	21.30	19.65	19.34	19.60
		12	0	20.42	20.17	20.42	18.72	18.47	18.72
		12	6	20.52	20.21	20.47	18.82	18.51	18.77
		12	13	20.46	20.19	20.45	18.76	18.49	18.75
		25	0	20.43	20.15	20.41	18.73	18.45	18.71
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				39700/ 2501	40620/ 2593	41540/ 2685	39700/ 2501	40620/ 2593	41540/ 2685
10MHz	QPSK	1	0	23.31	23.07	23.18	21.61	21.37	21.48
		1	25	23.53	23.35	23.49	21.83	21.65	21.79
		1	49	23.31	23.08	23.22	21.61	21.38	21.52
		25	0	22.46	22.15	22.45	20.76	20.45	20.75
		25	13	22.54	22.25	22.51	20.84	20.55	20.81
		25	25	22.41	22.22	22.48	20.71	20.52	20.78
		50	0	22.50	22.21	22.52	20.80	20.51	20.82
	16QAM	1	0	22.53	22.21	22.45	20.83	20.51	20.75
		1	25	22.76	22.51	22.76	21.06	20.81	21.06
		1	49	22.49	22.26	22.48	20.79	20.56	20.78
		25	0	21.44	21.16	21.49	19.74	19.46	19.79
		25	13	21.56	21.25	21.57	19.86	19.55	19.87
		25	25	21.51	21.24	21.51	19.81	19.54	19.81
		50	0	21.59	21.18	21.51	19.89	19.48	19.81
	64QAM	1	0	21.37	21.09	21.30	19.67	19.39	19.60
		1	25	21.68	21.38	21.64	19.98	19.68	19.94
		1	49	21.34	21.07	21.33	19.64	19.37	19.63
		25	0	20.45	20.17	20.42	18.75	18.47	18.72
		25	13	20.54	20.24	20.50	18.84	18.54	18.80
		25	25	20.49	20.23	20.49	18.79	18.53	18.79
		50	0	20.46	20.19	20.45	18.76	18.49	18.75
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				39725/ 2503.5	40620/ 2593	41515/ 2682.5	39725/ 2503.5	40620/ 2593	41515/ 2682.5
15MHz	QPSK	1	0	23.30	23.05	23.16	21.60	21.35	21.46
		1	38	23.51	23.32	23.46	21.81	21.62	21.76
		1	74	23.28	23.04	23.18	21.58	21.34	21.48
		36	0	22.44	22.12	22.42	20.74	20.42	20.72
		36	18	22.51	22.21	22.47	20.81	20.51	20.77
		36	39	22.38	22.18	22.44	20.68	20.48	20.74
		75	0	22.48	22.16	22.47	20.78	20.46	20.77
	16QAM	1	0	22.51	22.19	22.43	20.81	20.49	20.73
		1	38	22.74	22.49	22.74	21.04	20.79	21.04



		1	74	22.47	22.23	22.45	20.77	20.53	20.75
		36	0	21.41	21.13	21.46	19.71	19.43	19.76
		36	18	21.53	21.21	21.53	19.83	19.51	19.83
		36	39	21.49	21.21	21.48	19.79	19.51	19.78
		75	0	21.56	21.14	21.47	19.86	19.44	19.77
	64QAM	1	0	21.32	21.07	21.28	19.62	19.37	19.58
		1	38	21.66	21.36	21.62	19.96	19.66	19.92
		1	74	21.35	21.08	21.34	19.65	19.38	19.64
		36	0	20.44	20.18	20.43	18.74	18.48	18.73
		36	18	20.52	20.23	20.49	18.82	18.53	18.79
		36	39	20.47	20.20	20.46	18.77	18.50	18.76
		75	0	20.43	20.15	20.41	18.73	18.45	18.71
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				39750/ 2506	40620/ 2593	41490/ 2680	39750/ 2506	40620/ 2593	41490/ 2680
20MHz	QPSK	1	0	23.27	23.02	23.13	21.57	21.32	21.43
		1	50	23.50	23.30	23.44	21.80	21.60	21.74
		1	99	23.26	23.01	23.15	21.56	21.31	21.45
		50	0	22.41	22.08	22.38	20.71	20.38	20.68
		50	25	22.49	22.18	22.44	20.79	20.48	20.74
		50	50	22.35	22.14	22.40	20.65	20.44	20.70
		100	0	22.45	22.12	22.43	20.75	20.42	20.73
	16QAM	1	0	22.48	22.14	22.38	20.78	20.44	20.68
		1	50	22.71	22.45	22.70	21.01	20.75	21.00
		1	99	22.44	22.21	22.43	20.74	20.51	20.73
		50	0	21.38	21.10	21.43	19.68	19.40	19.73
		50	25	21.50	21.18	21.50	19.80	19.48	19.80
		50	50	21.46	21.17	21.44	19.76	19.47	19.74
		100	0	21.54	21.11	21.44	19.84	19.41	19.74
	64QAM	1	0	21.30	21.02	21.23	19.60	19.32	19.53
		1	50	21.62	21.32	21.58	19.92	19.62	19.88
		1	99	21.29	21.02	21.28	19.59	19.32	19.58
		50	0	20.39	20.11	20.36	18.69	18.41	18.66
		50	25	20.48	20.17	20.43	18.78	18.47	18.73
		50	50	20.44	20.16	20.42	18.74	18.46	18.72
		100	0	20.41	20.12	20.38	18.71	18.42	18.68

## 6.2 Occupied Bandwidth

LTE Band 7						
RB	Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	99% Power Bandwidth(MHz)	-26dBc Bandwidth(MHz)
100%	QPSK	5	20775	2502.5	4.5066	4.8860
			21100	2535	4.5226	4.8650
			21425	2567.5	4.4969	4.9300
		10	20800	2505	8.9989	9.6740
			21100	2535	8.9936	9.7770
			21400	2565	8.9848	9.6930
		15	20825	2507.5	13.4610	14.4620
			21100	2535	13.4760	14.6200
			21375	2562.5	13.5020	14.4820
		20	20850	2510	17.9480	19.2400
			21100	2535	17.9450	19.3310
			21350	2560	17.9500	19.4490
	16QAM	5	20775	2502.5	4.5068	4.9370
			21100	2535	4.4972	4.9170
			21425	2567.5	4.5112	4.9320
		10	20800	2505	8.9730	9.6610
			21100	2535	8.9816	9.7570
			21400	2565	8.9847	9.7540
		15	20825	2507.5	13.4570	14.4970
			21100	2535	13.4660	14.5150
			21375	2562.5	13.4450	14.4160
		20	20850	2510	17.9720	19.2390
			21100	2535	17.9340	19.2310
			21350	2560	17.9990	19.2870
	64QAM	5	20775	2502.5	4.5142	4.9190
			21100	2535	4.4872	4.8910
			21425	2567.5	4.5129	4.8900
		10	20800	2505	8.9681	9.7230
			21100	2535	8.9933	9.6660
			21400	2565	8.9986	9.6570
		15	20825	2507.5	13.4520	14.5120
			21100	2535	13.4840	14.5020
			21375	2562.5	13.4690	14.4670
		20	20850	2510	17.9060	19.3820



			21100	2535	17.9840	19.2750
			21350	2560	18.0000	19.3400

LTE Band 38						
RB	Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	99% Power Bandwidth(MHz)	-26dBc Bandwidth(MHz)
100%	QPSK	5	37775	2572.5	4.5025	5.0570
			38000	2595	4.4919	4.9230
			38225	2617.5	4.5240	4.9720
		10	37800	2575	8.9959	9.8760
			38000	2595	8.9958	9.8290
			38200	2615	8.9725	10.0810
		15	37825	2577.5	13.4540	15.5070
			38000	2595	13.4730	14.5740
			38175	2612.5	13.4150	14.2960
		20	37850	2580	17.9740	19.1620
			38000	2595	17.9120	19.4250
			38150	2610	17.9460	19.3870
	16QAM	5	37775	2572.5	4.5156	4.8440
			38000	2595	4.5046	4.9800
			38225	2617.5	4.4895	4.9750
		10	37800	2575	9.0198	9.9190
			38000	2595	8.9737	9.5390
			38200	2615	8.9798	9.6980
		15	37825	2577.5	13.4460	14.4250
			38000	2595	13.4140	15.5490
			38175	2612.5	13.4570	15.5410
		20	37850	2580	17.9260	19.2340
			38000	2595	17.9940	19.1790
			38150	2610	17.9390	19.2200
	64QAM	5	37775	2572.5	4.5023	4.8990
			38000	2595	4.5037	4.8990
			38225	2617.5	4.4853	4.8990
		10	37800	2575	8.9830	9.7800
			38000	2595	8.9950	9.8420
			38200	2615	8.9614	9.9800
		15	37825	2577.5	13.4780	14.5510
			38000	2595	13.4780	15.5920
			38175	2612.5	13.4960	15.2250
		20	37850	2580	17.9690	19.4000



			38000	2595	17.9390	19.2270
			38150	2610	17.9120	19.1190

LTE Band 41						
RB	Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	99% Power Bandwidth(MHz)	-26dBc Bandwidth(MHz)
100%	QPSK	5	39675	2498.5	4.5091	5.0250
			40620	2593	4.5054	4.9750
			41565	2687.5	4.5101	4.8210
		10	39700	2501	8.9940	9.8160
			40620	2593	9.0087	10.1140
			41540	2685	9.0011	9.9190
		15	39725	2503.5	13.4840	14.4360
			40620	2593	13.4710	14.6030
			41515	2682.5	13.4770	14.4530
		20	39750	2506	17.9030	19.3400
			40620	2593	17.9850	19.1630
			41490	2680	17.9130	19.1250
	16QAM	5	39675	2498.5	4.5005	4.8570
			40620	2593	4.5013	4.9400
			41565	2687.5	4.4777	5.1000
		10	39700	2501	8.9676	9.8390
			40620	2593	8.9895	9.5880
			41540	2685	8.9923	9.6600
		15	39725	2503.5	13.5230	15.2150
			40620	2593	13.4590	14.4820
			41515	2682.5	13.4870	15.6910
		20	39750	2506	17.9510	19.5310
			40620	2593	17.9070	19.0780
			41490	2680	17.9090	19.2070
	64QAM	5	39675	2498.5	4.5030	4.8150
			40620	2593	4.4960	4.8540
			41565	2687.5	4.5020	4.8540
		10	39700	2501	9.0010	9.9750
			40620	2593	9.0050	9.8290
			41540	2685	8.9850	10.3270
		15	39725	2503.5	13.4930	14.4330
			40620	2593	13.4930	14.8690
			41515	2682.5	13.4410	15.4400
		20	39750	2506	17.8750	20.3950

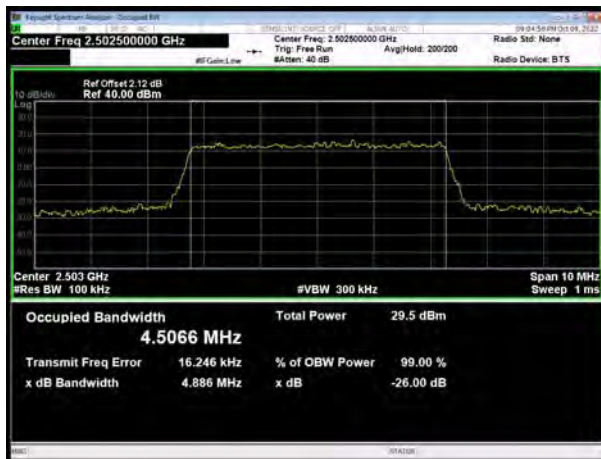


			40620	2593	17.9390	19.0100
			41490	2680	17.9240	19.1600

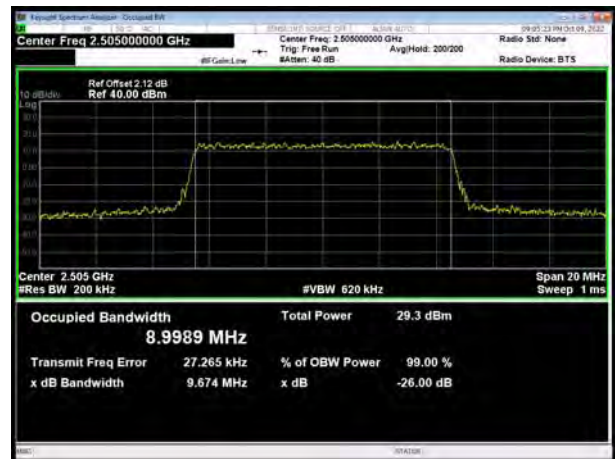




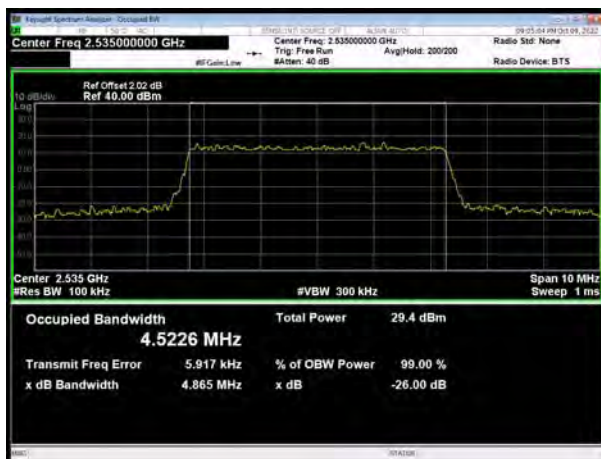
## LTE Band 7 QPSK 5MHz CH-Low



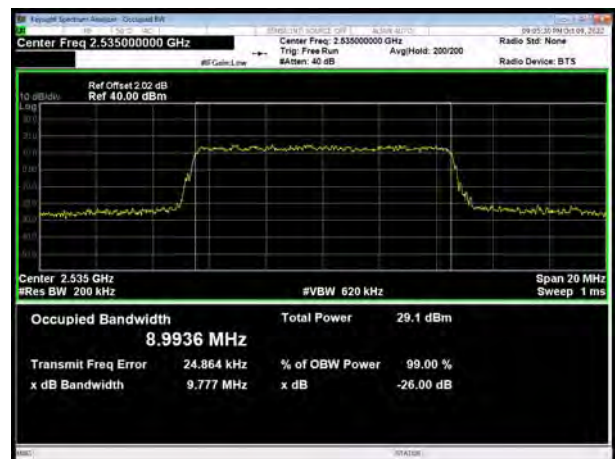
## LTE Band 7 QPSK 10MHz CH-Low



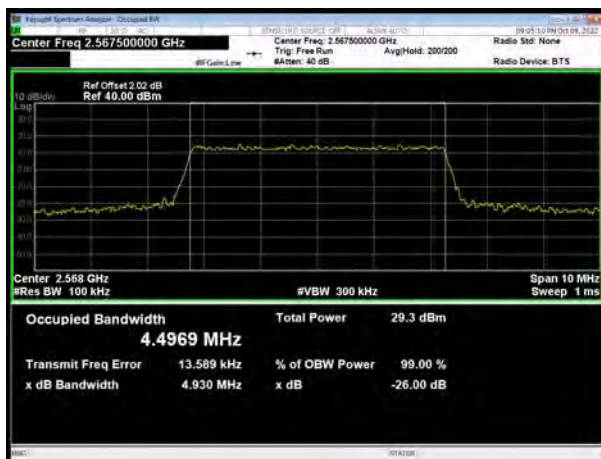
## LTE Band 7 QPSK 5MHz CH-Middle



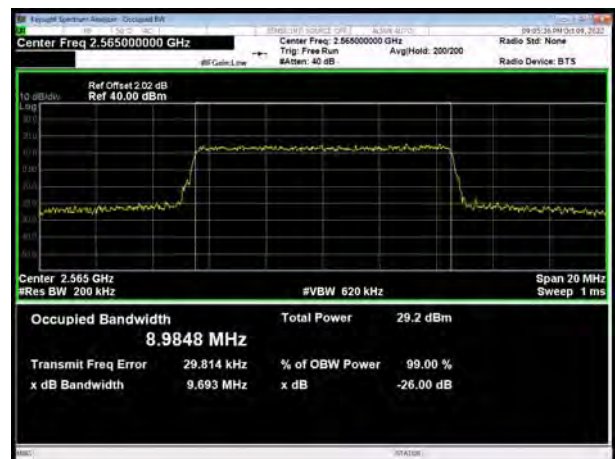
## LTE Band 7 QPSK 10MHz CH-Middle



## LTE Band 7 QPSK 5MHz CH-High



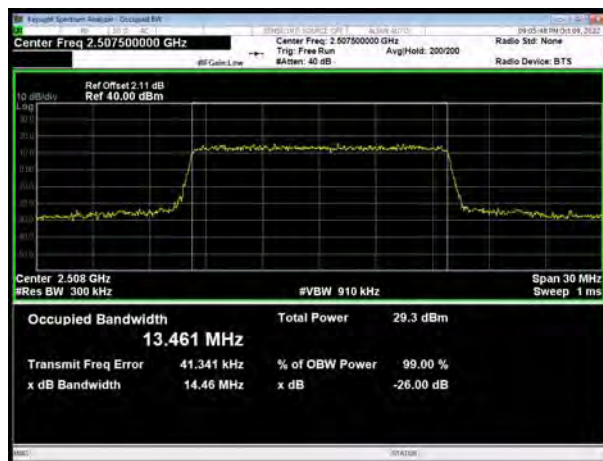
## LTE Band 7 QPSK 10MHz CH-High



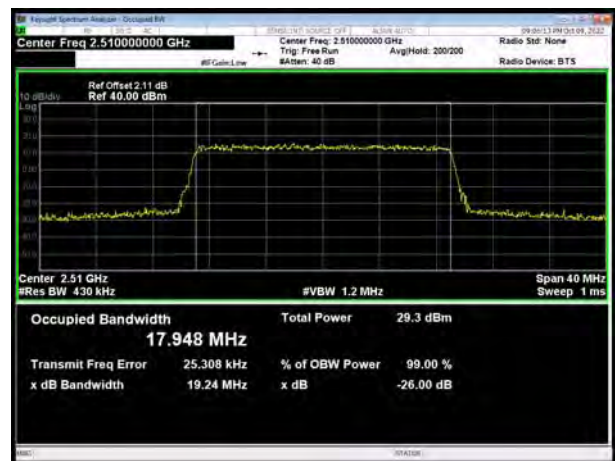




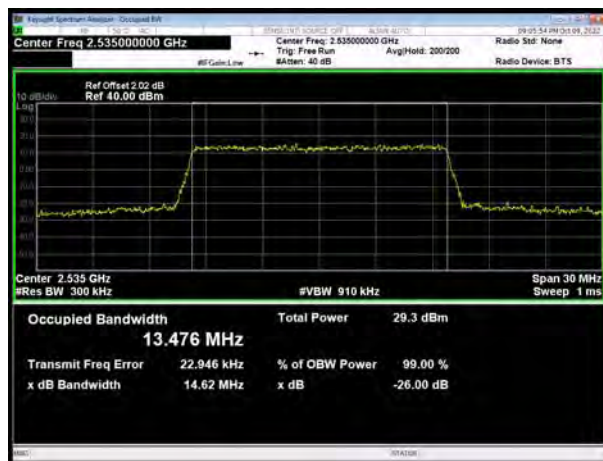
## LTE Band 7 QPSK 15MHz CH-Low



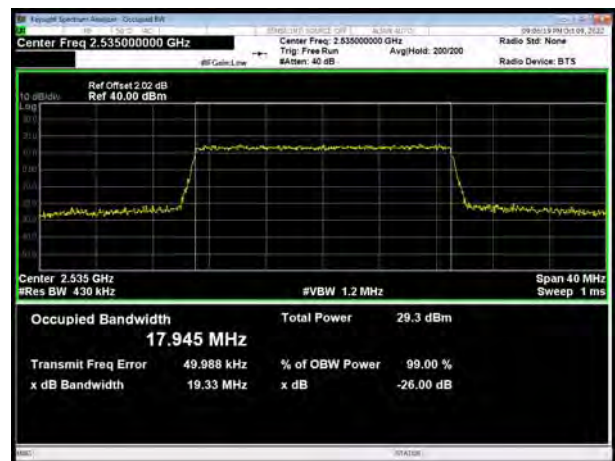
## LTE Band 7 QPSK 20MHz CH-Low



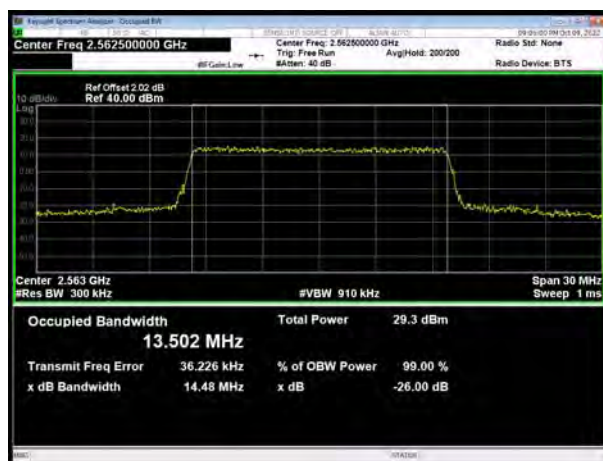
## LTE Band 7 QPSK 15MHz CH-Middle



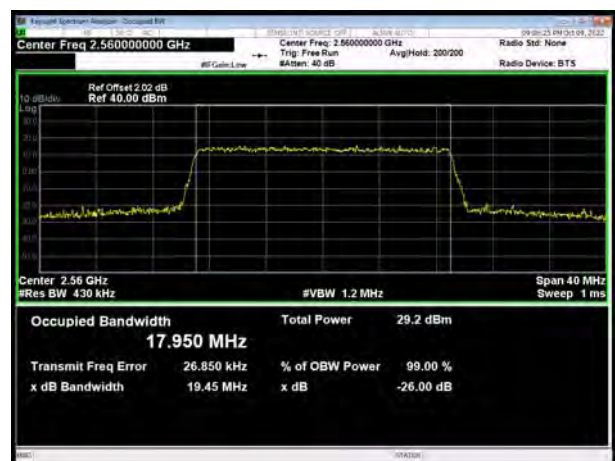
## LTE Band 7 QPSK 20MHz CH-Middle



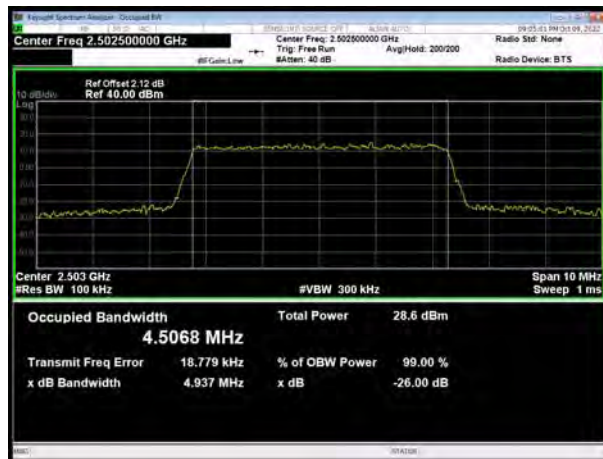
## LTE Band 7 QPSK 15MHz CH-High



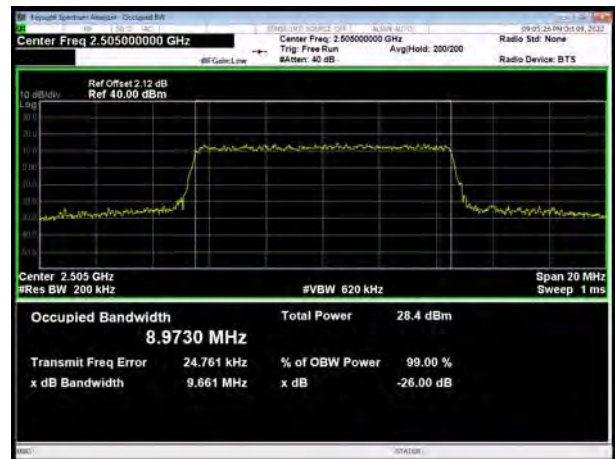
## LTE Band 7 QPSK 20MHz CH-High



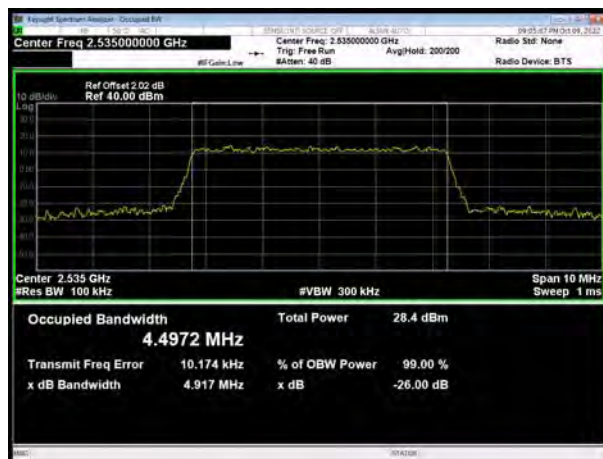
## LTE Band 7 16QAM 5MHz CH-Low



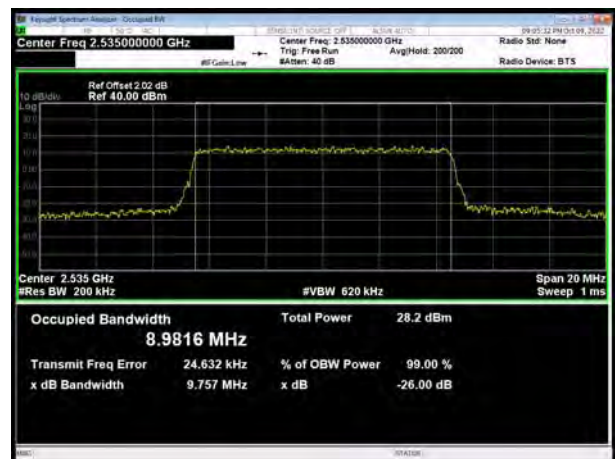
## LTE Band 7 16QAM 10MHz CH-Low



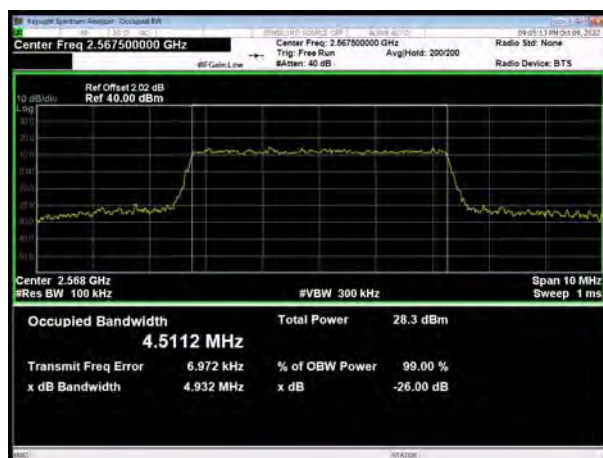
## LTE Band 7 16QAM 5MHz CH-Middle



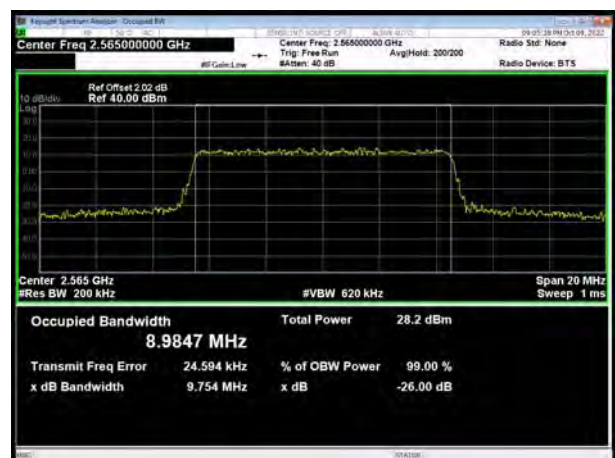
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## LTE Band 7 16QAM 5MHz CH-High



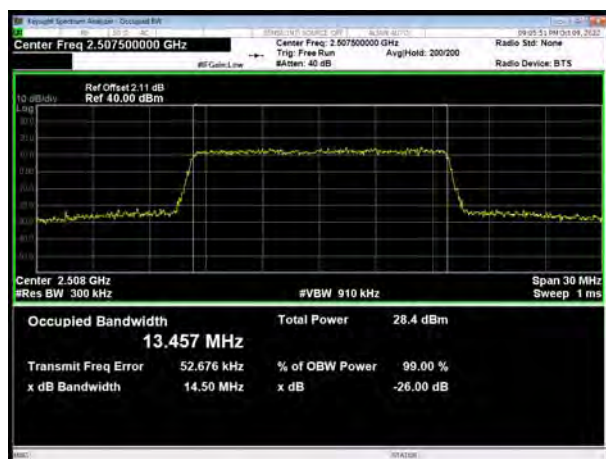
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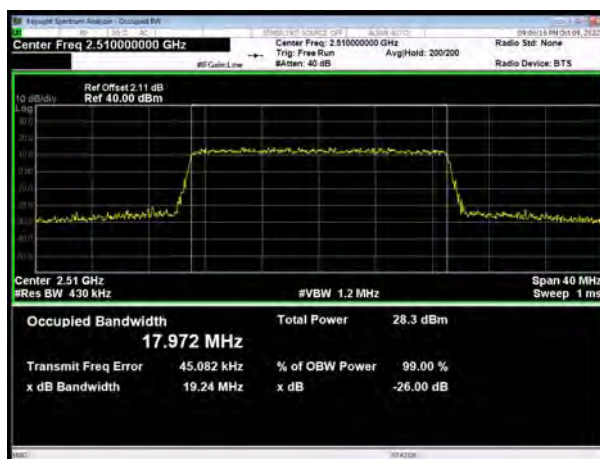




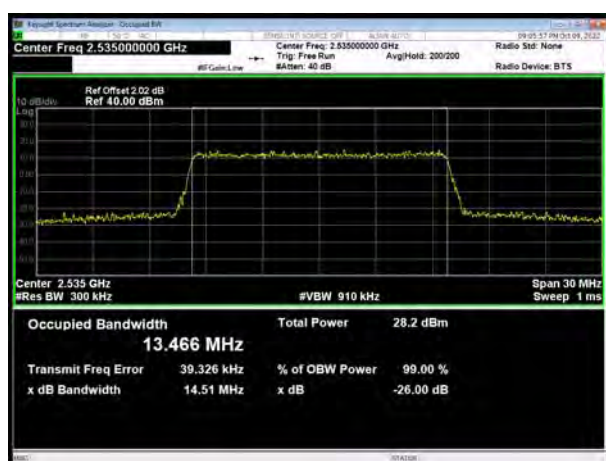
## LTE Band 7 16QAM 15MHz CH-Low



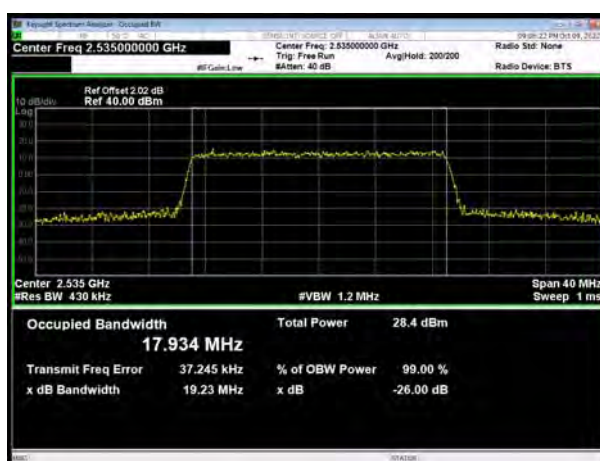
## LTE Band 7 16QAM 20MHz CH-Low



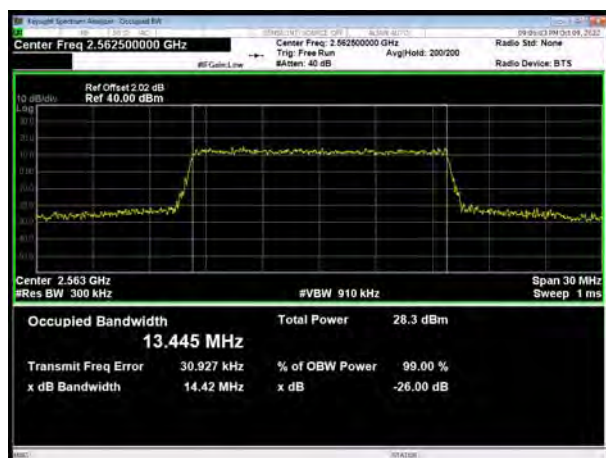
## LTE Band 7 16QAM 15MHz CH-Middle



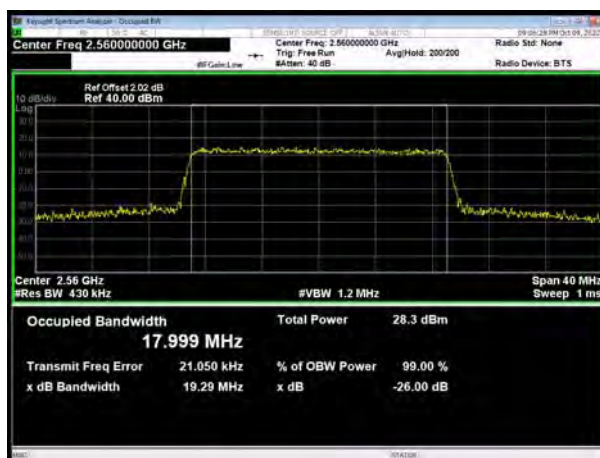
## LTE Band 7 16QAM 20MHz CH-Middle



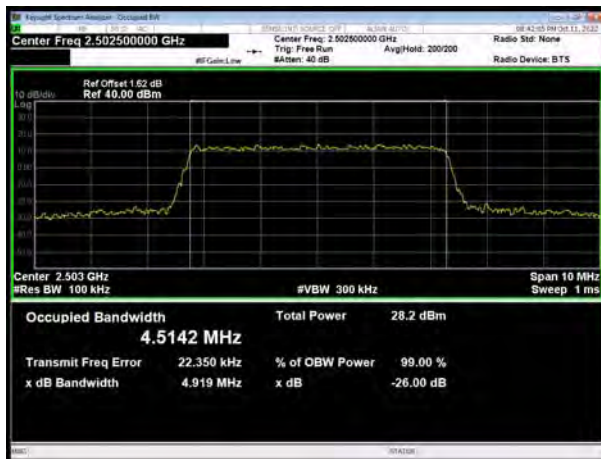
## LTE Band 7 16QAM 15MHz CH-High



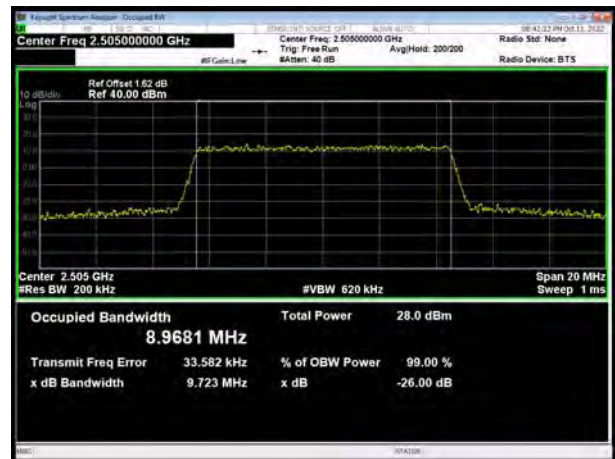
## LTE Band 7 16QAM 20MHz CH-High



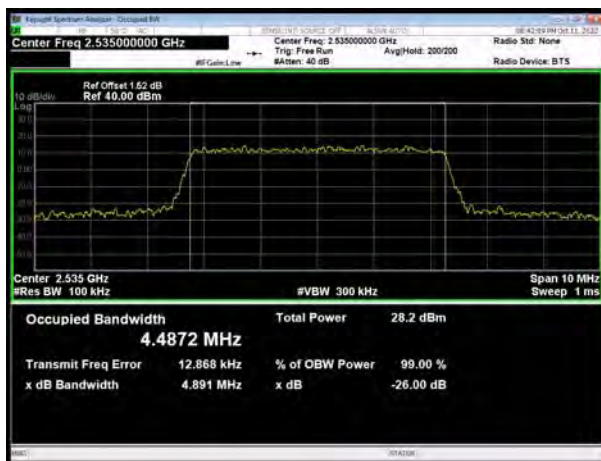
## LTE Band 7 64QAM 5MHz CH-Low



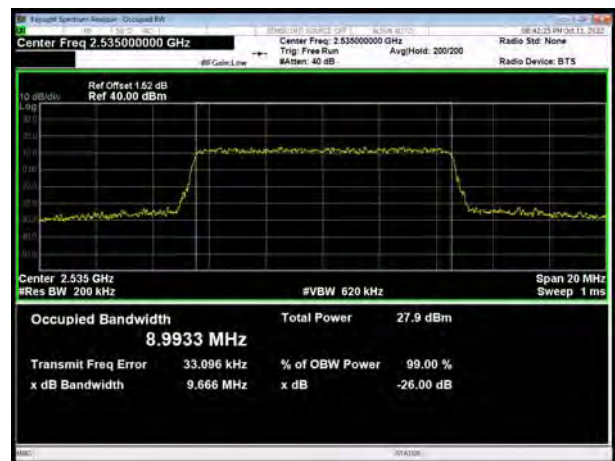
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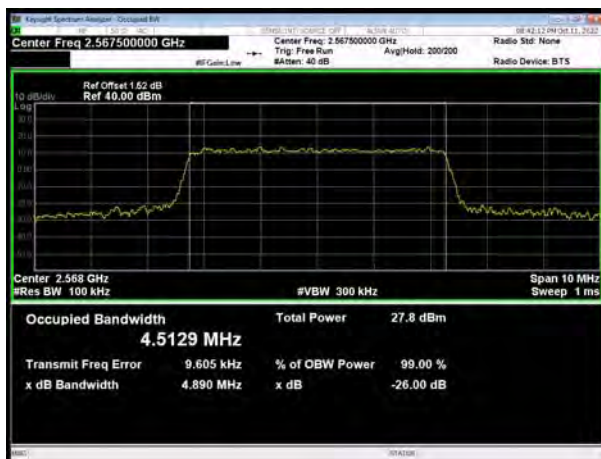
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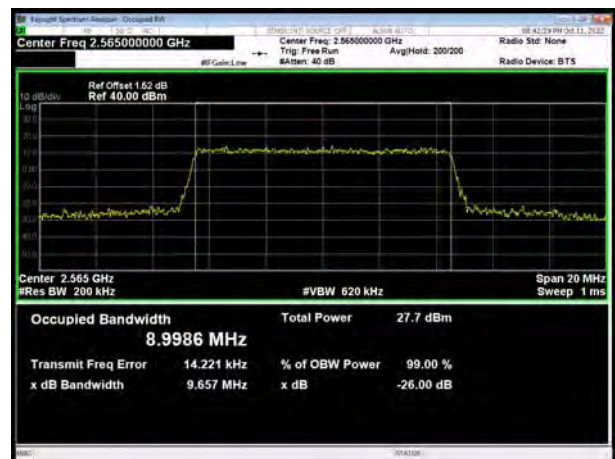
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## LTE Band 7 64QAM 5MHz CH-High



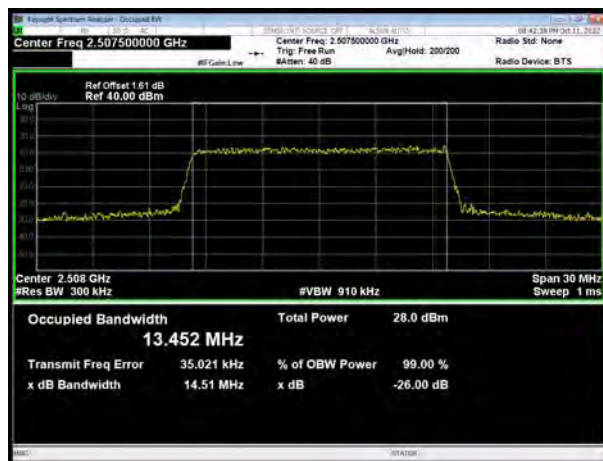
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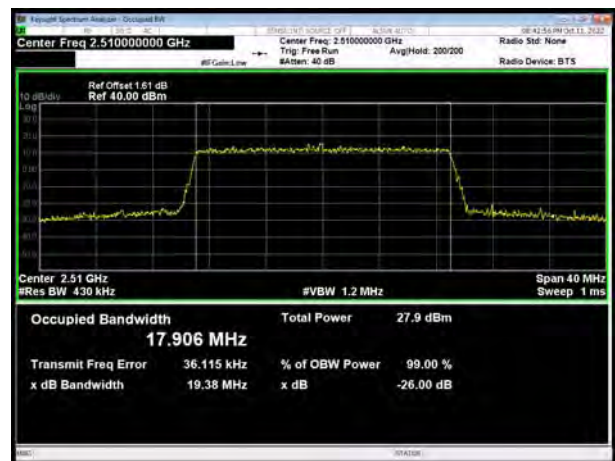




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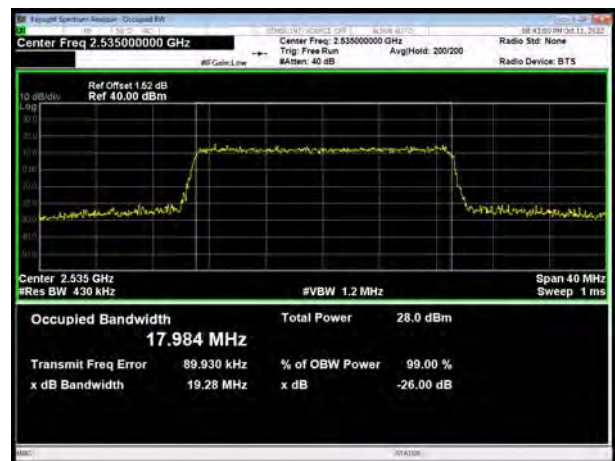
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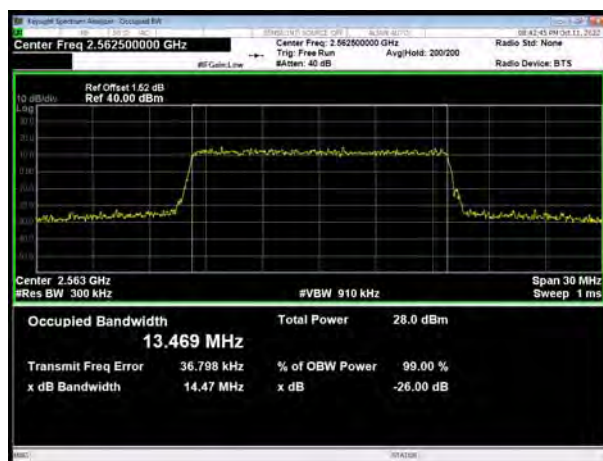
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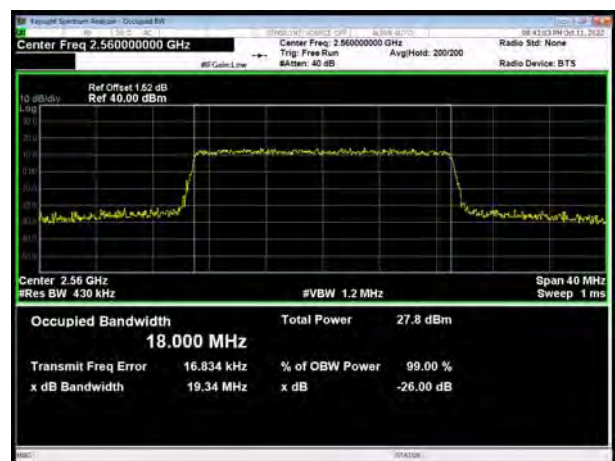
## LTE Band 7 64QAM 20MHz CH-Middle



## LTE Band 7 64QAM 15MHz CH-High



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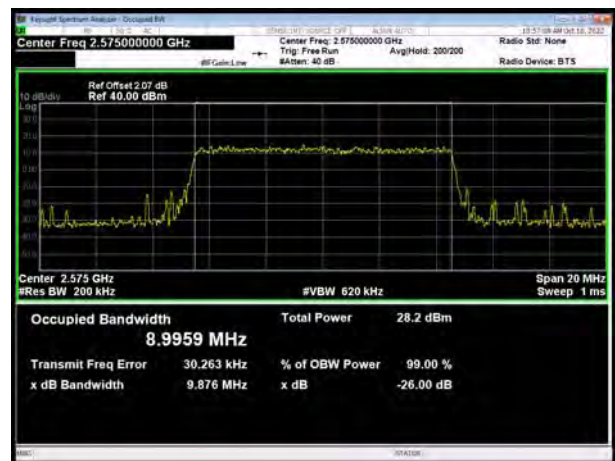




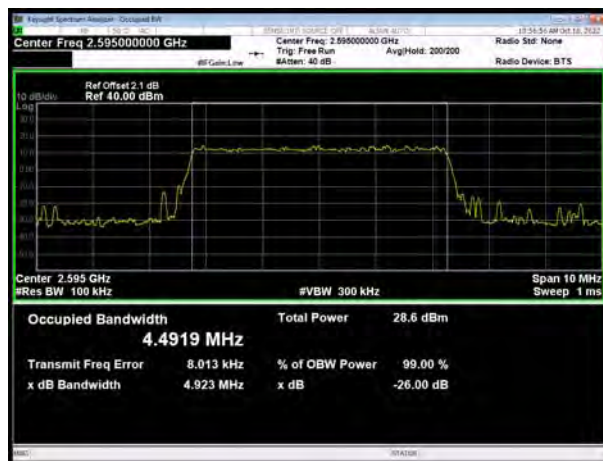
## LTE Band 38 QPSK 5MHz CH-Low



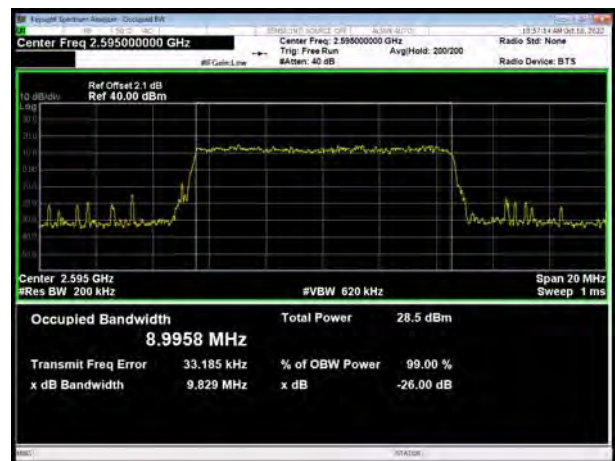
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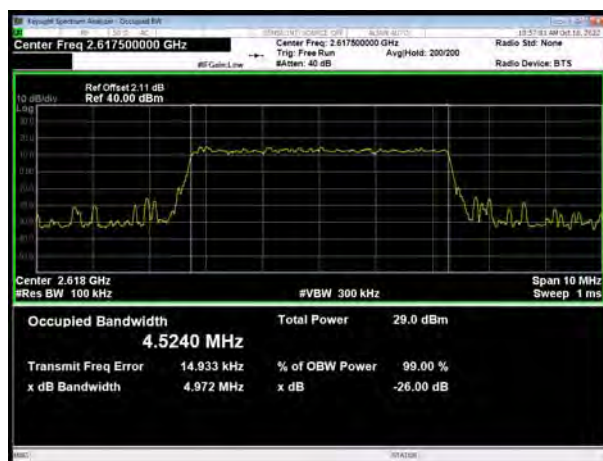
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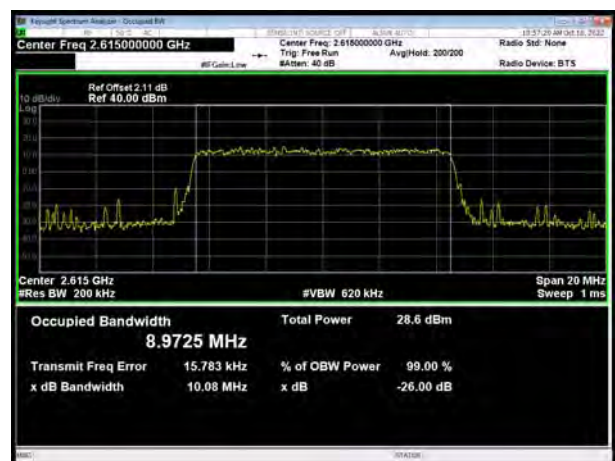
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## LTE Band 38 QPSK 5MHz CH-High



## LTE Band 38 QPSK 10MHz CH-High



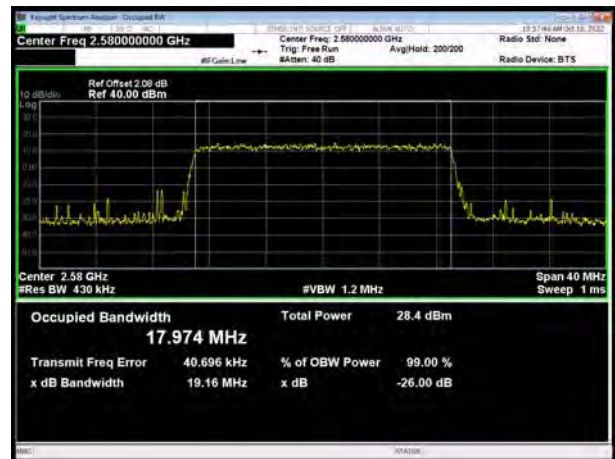




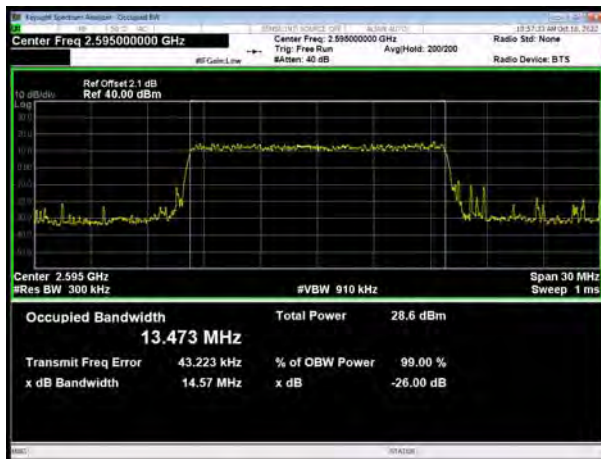
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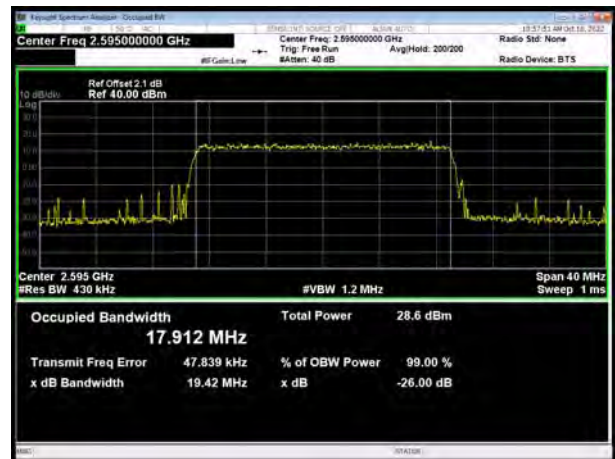
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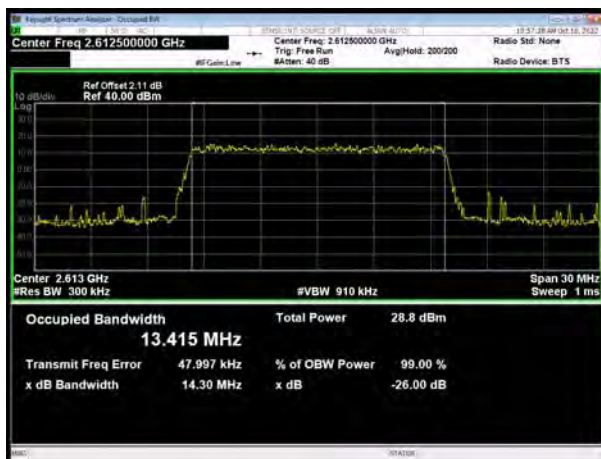
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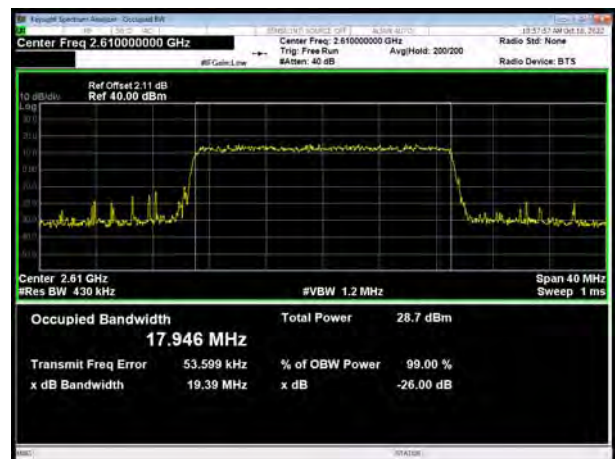
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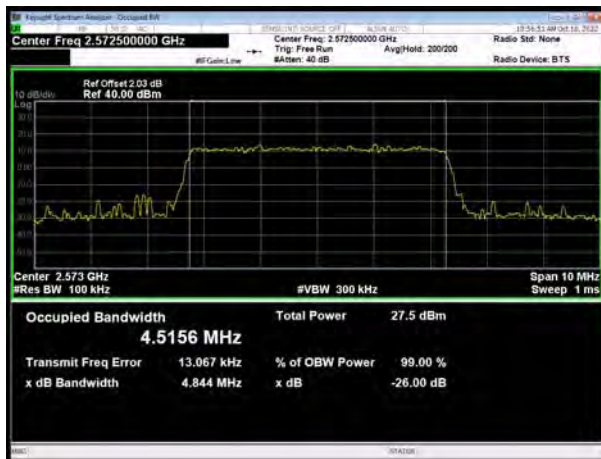
## LTE Band 38 QPSK 15MHz CH-High



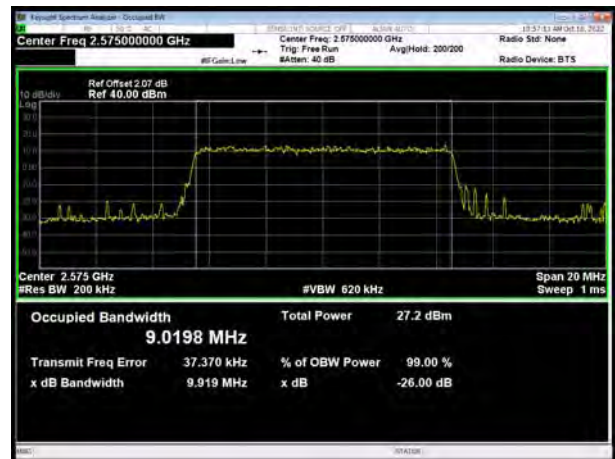
## LTE Band 38 QPSK 20MHz CH-High



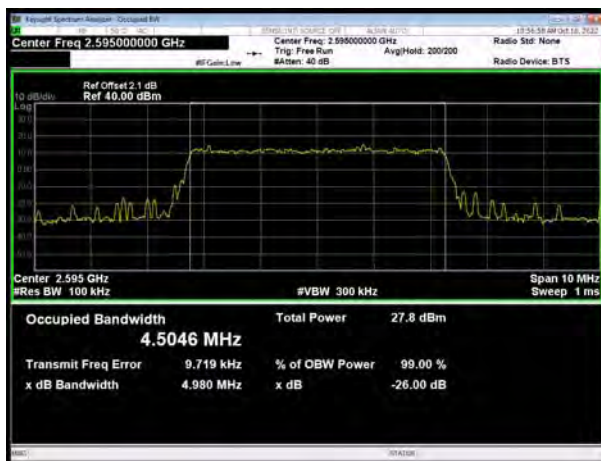
## LTE Band 38 16QAM 5MHz CH-Low



## LTE Band 38 16QAM 10MHz CH-Low



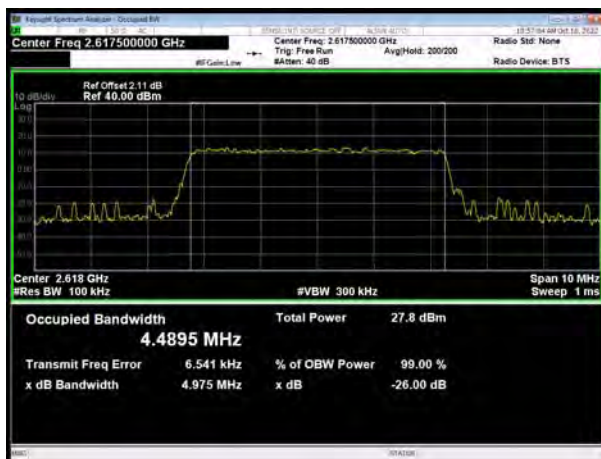
## LTE Band 38 16QAM 5MHz CH-Middle



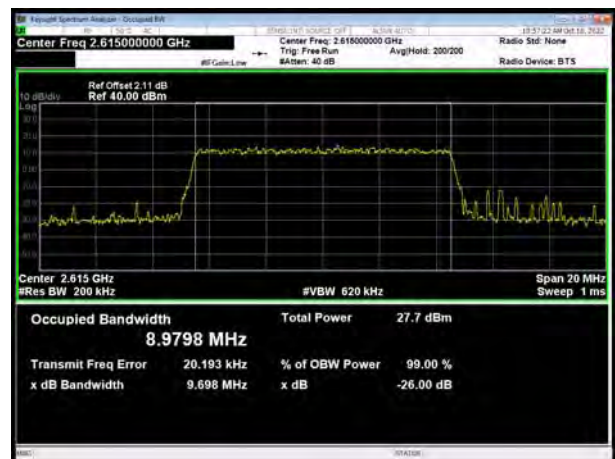
## LTE Band 38 16QAM 10MHz CH-Middle



## LTE Band 38 16QAM 5MHz CH-High

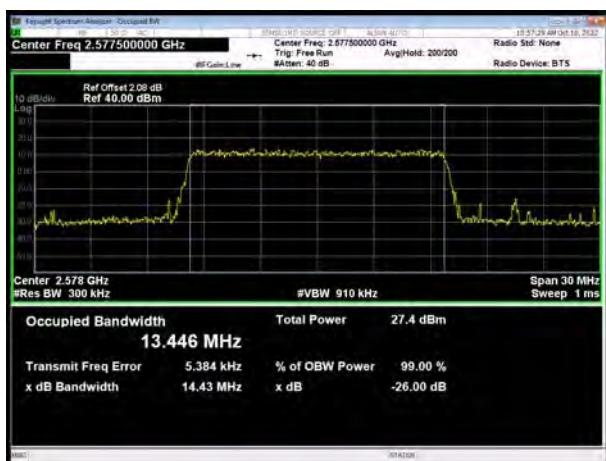


## LTE Band 38 16QAM 10MHz CH-High

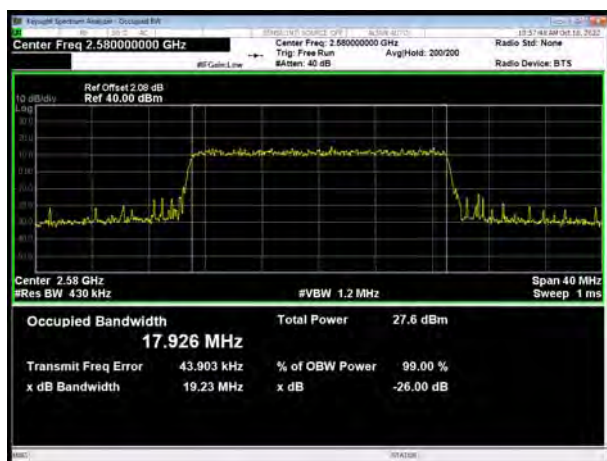




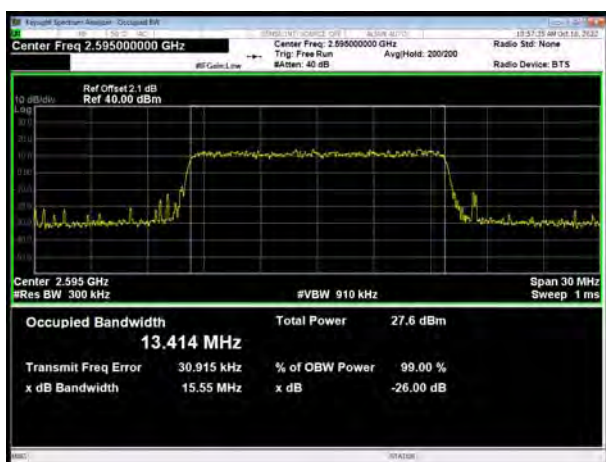
## LTE Band 38 16QAM 15MHz CH-Low



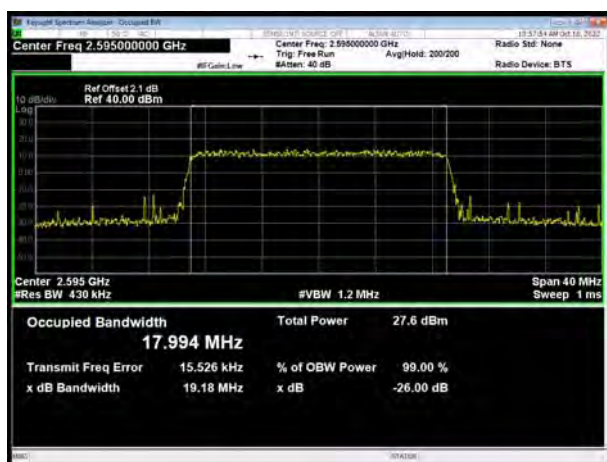
## LTE Band 38 16QAM 20MHz CH-Low



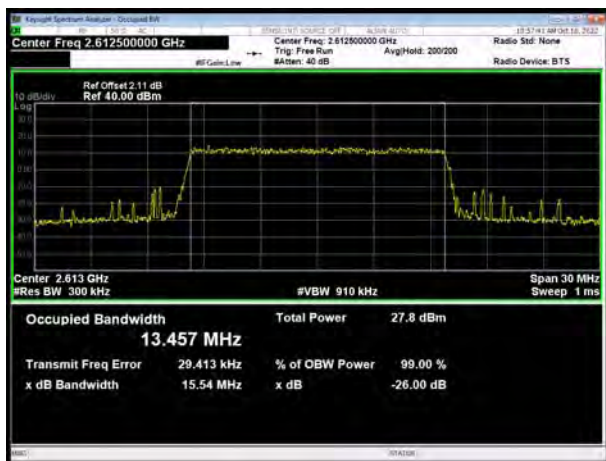
## LTE Band 38 16QAM 15MHz CH-Middle



## LTE Band 38 16QAM 20MHz CH-Middle



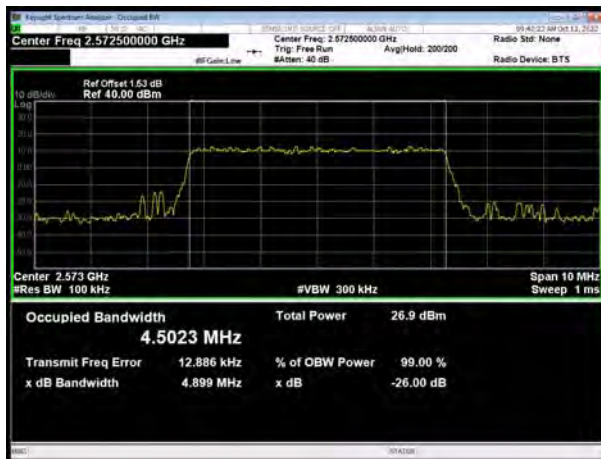
## LTE Band 38 16QAM 15MHz CH-High



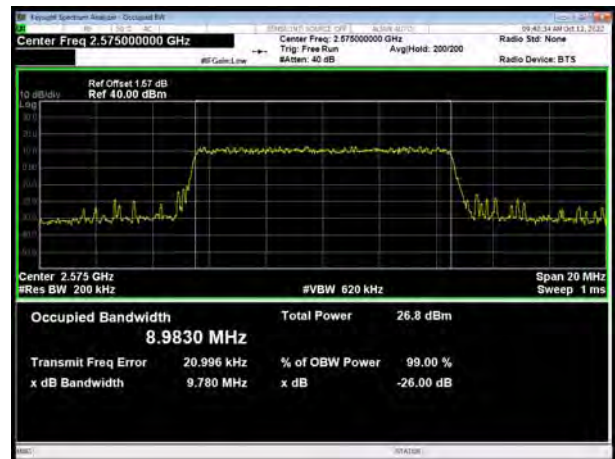
## LTE Band 38 16QAM 20MHz CH-High



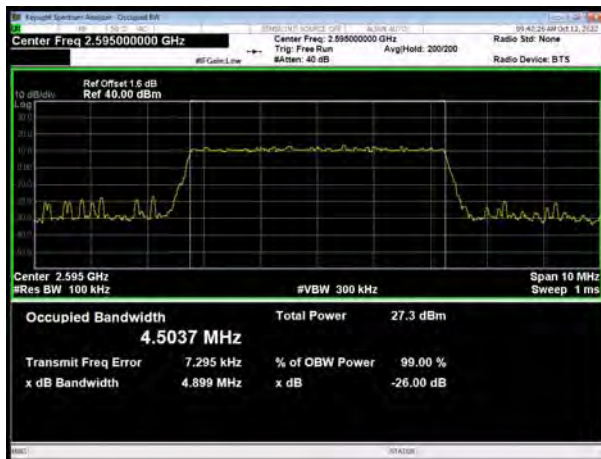
## LTE Band 38 64QAM 5MHz CH-Low



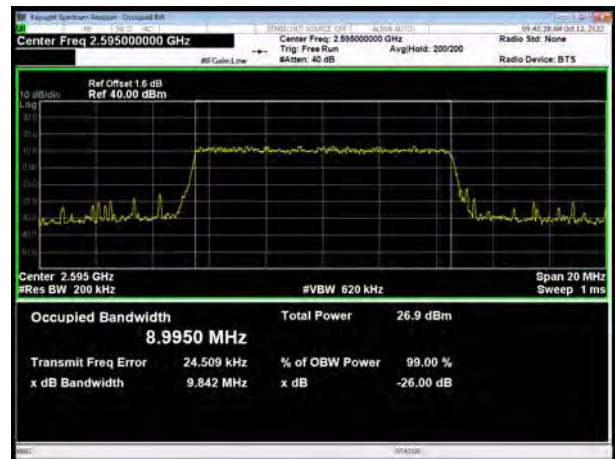
## LTE Band 38 64QAM 10MHz CH-Low



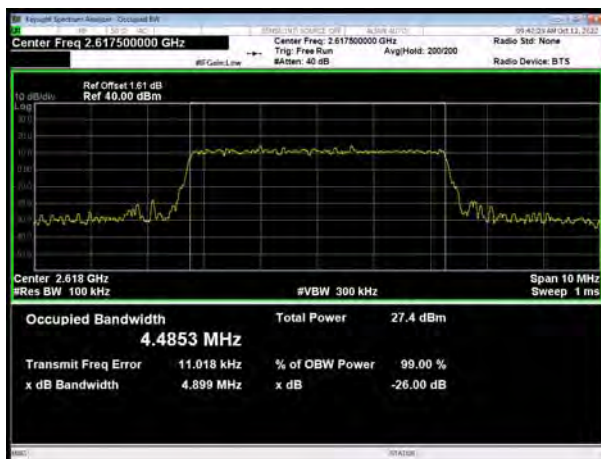
## LTE Band 38 64QAM 5MHz CH-Middle



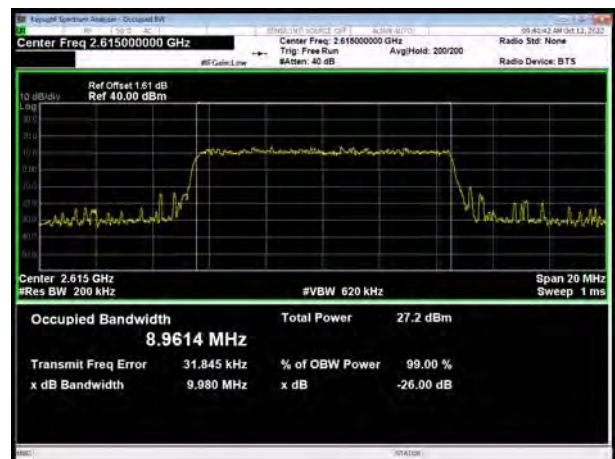
## LTE Band 38 64QAM 10MHz CH-Middle



## LTE Band 38 64QAM 5MHz CH-High

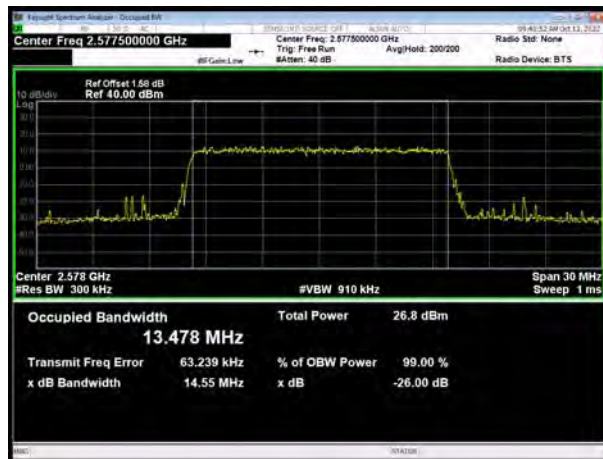


## LTE Band 38 64QAM 10MHz CH-High

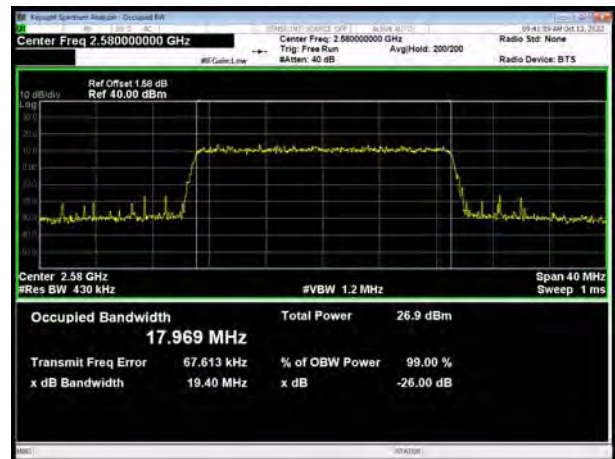




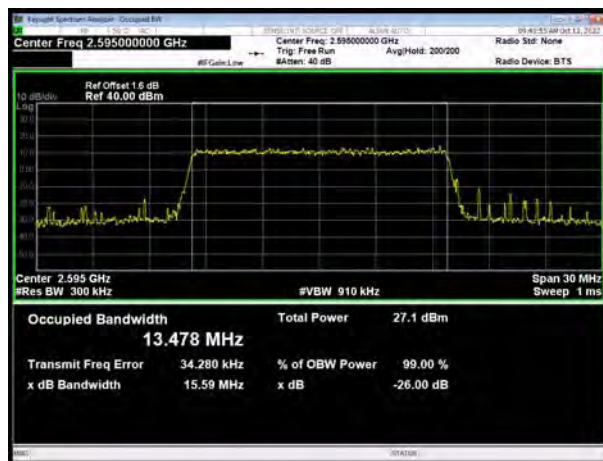
## LTE Band 38 64QAM 15MHz CH-Low



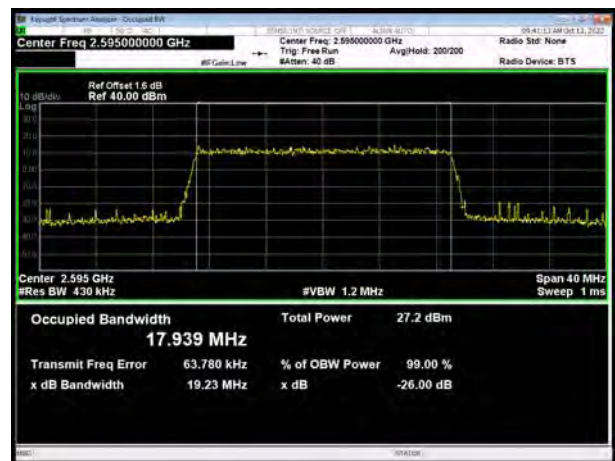
## LTE Band 38 64QAM 20MHz CH-Low



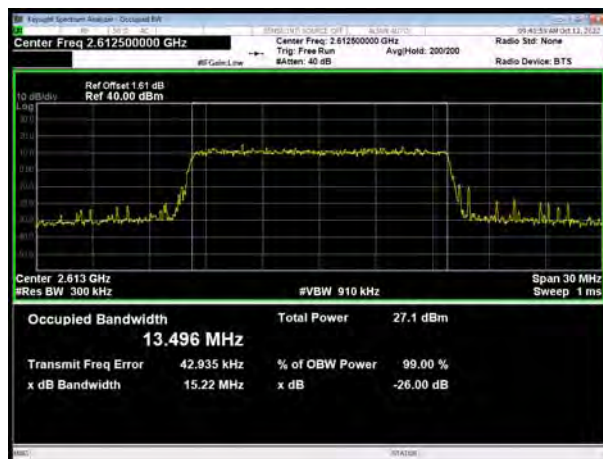
## LTE Band 38 64QAM 15MHz CH-Middle



## LTE Band 38 64QAM 20MHz CH-Middle



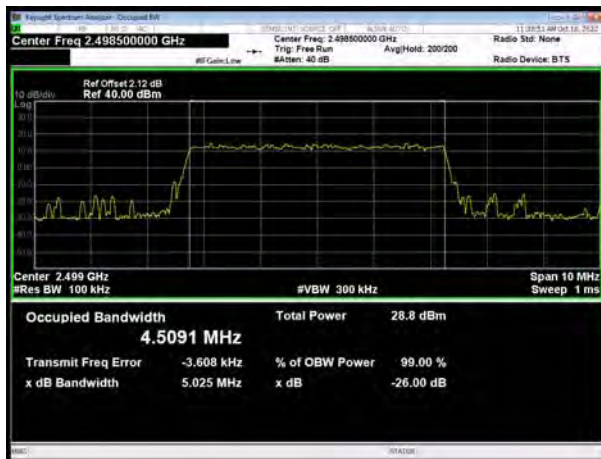
## LTE Band 38 64QAM 15MHz CH-High



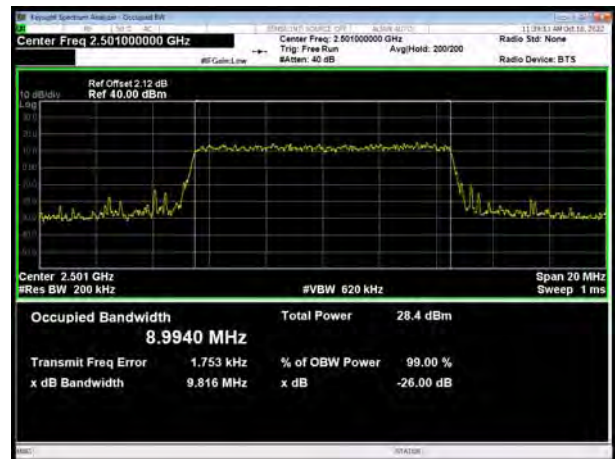
## LTE Band 38 64QAM 20MHz CH-High



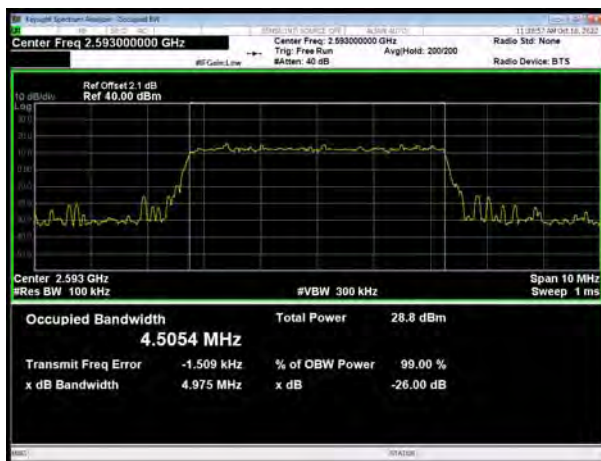
## LTE Band 41 QPSK 5MHz CH-Low



## LTE Band 41 QPSK 10MHz CH-Low



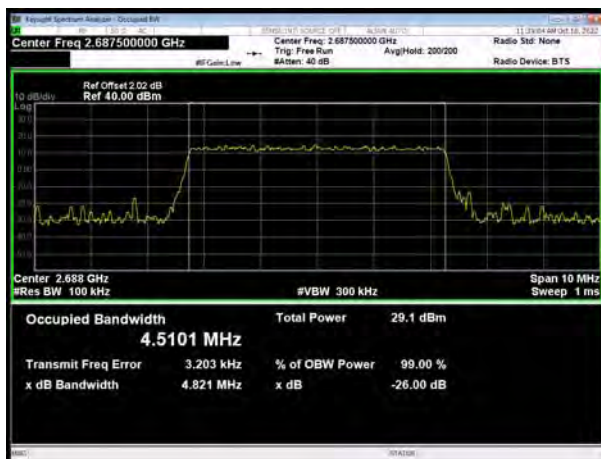
## LTE Band 41 QPSK 5MHz CH-Middle



## LTE Band 41 QPSK 10MHz CH-Middle



## LTE Band 41 QPSK 5MHz CH-High

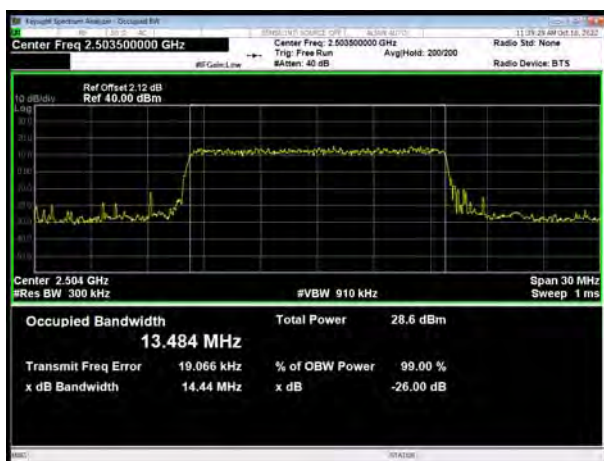


## LTE Band 41 QPSK 10MHz CH-High

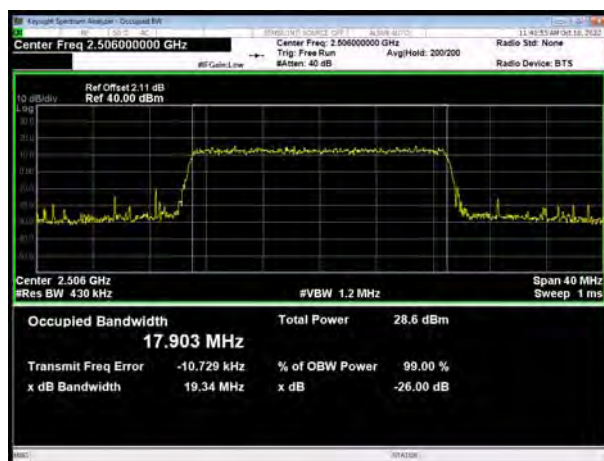




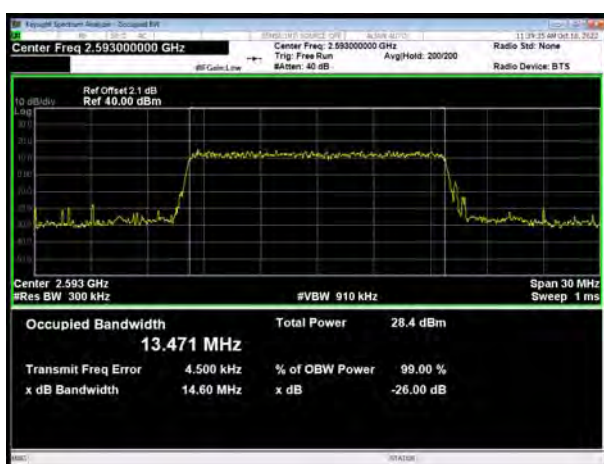
## LTE Band 41 QPSK 15MHz CH-Low



## LTE Band 41 QPSK 20MHz CH-Low



## LTE Band 41 QPSK 15MHz CH-Middle



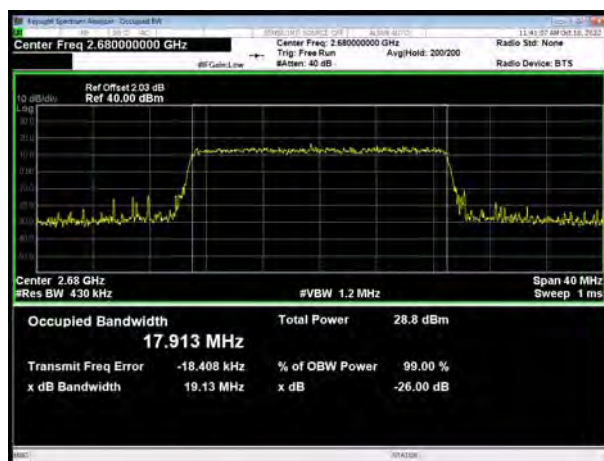
## LTE Band 41 QPSK 20MHz CH-Middle



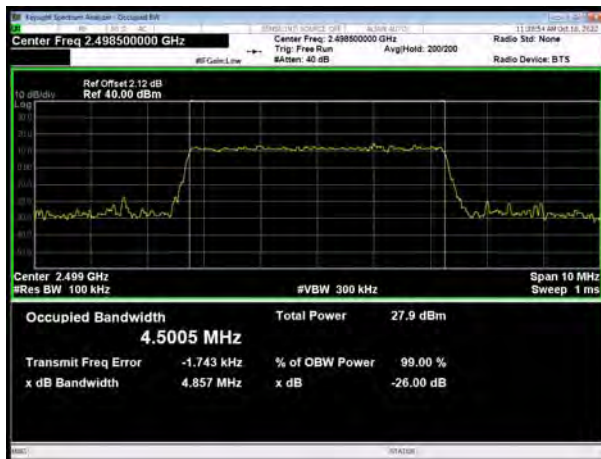
## LTE Band 41 QPSK 15MHz CH-High



## LTE Band 41 QPSK 20MHz CH-High



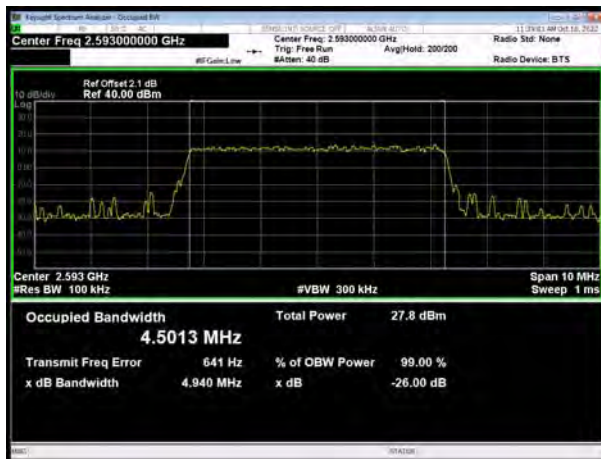
## LTE Band 41 16QAM 5MHz CH-Low



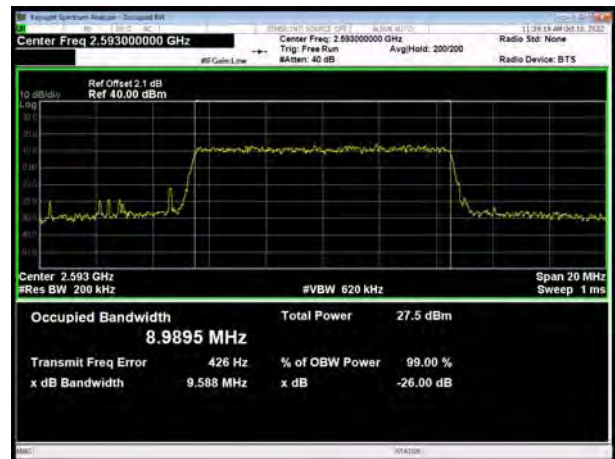
## LTE Band 41 16QAM 10MHz CH-Low



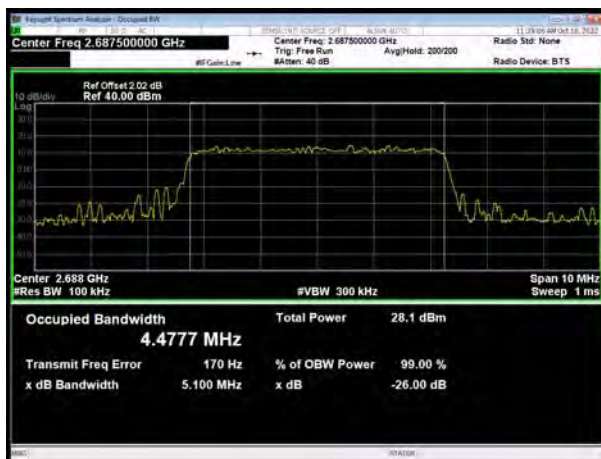
## LTE Band 41 16QAM 5MHz CH-Middle



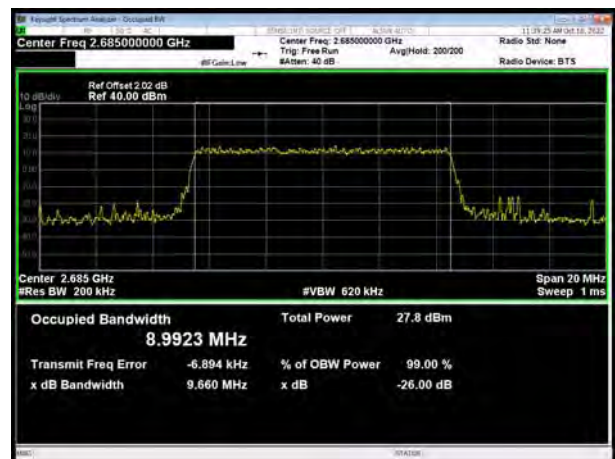
## LTE Band 41 16QAM 10MHz CH-Middle



## LTE Band 41 16QAM 5MHz CH-High



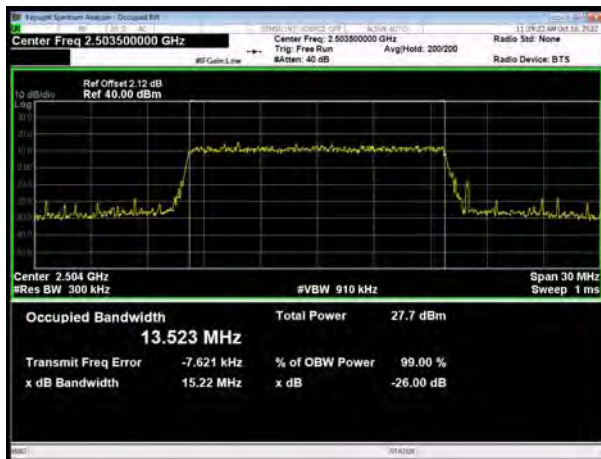
## LTE Band 41 16QAM 10MHz CH-High



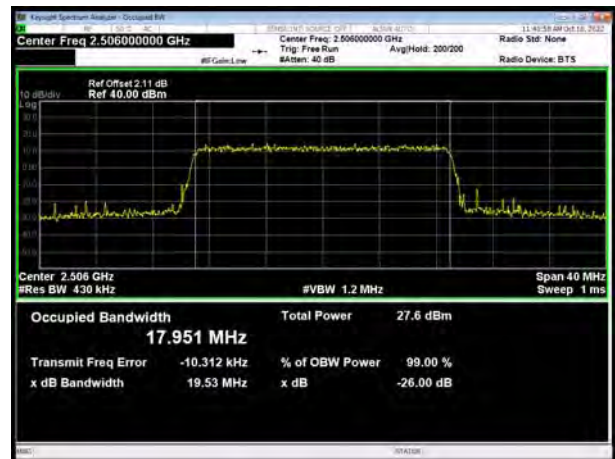




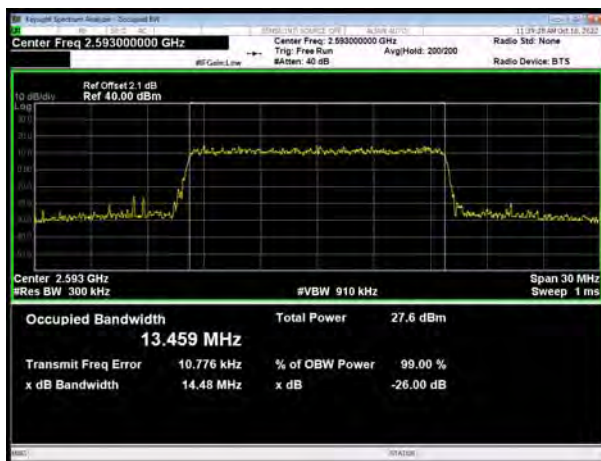
## LTE Band 41 16QAM 15MHz CH-Low



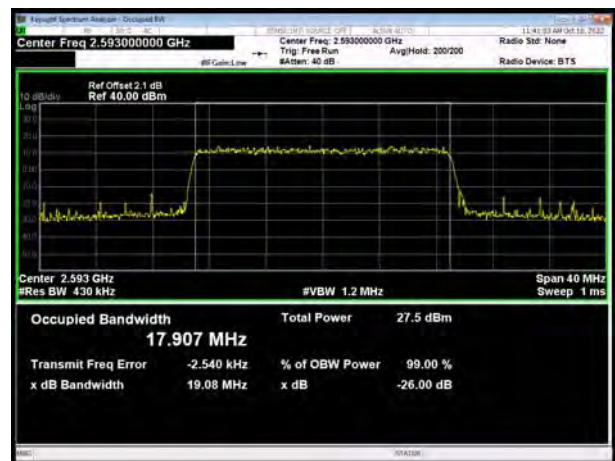
## LTE Band 41 16QAM 20MHz CH-Low



## LTE Band 41 16QAM 15MHz CH-Middle



## LTE Band 41 16QAM 20MHz CH-Middle



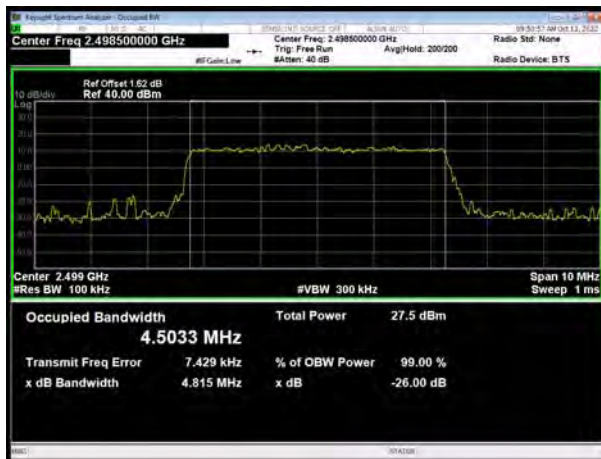
## LTE Band 41 16QAM 15MHz CH-High



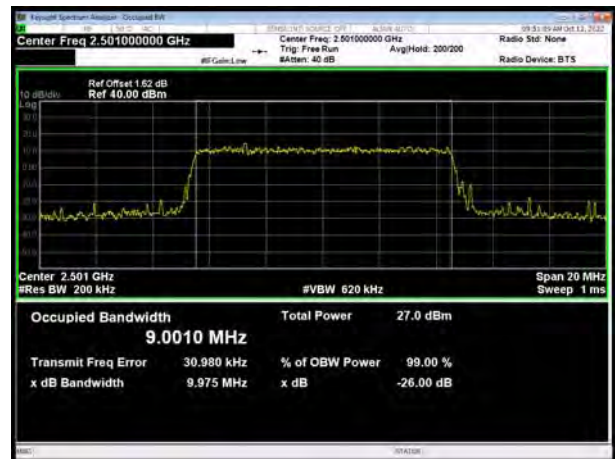
## LTE Band 41 16QAM 20MHz CH-High



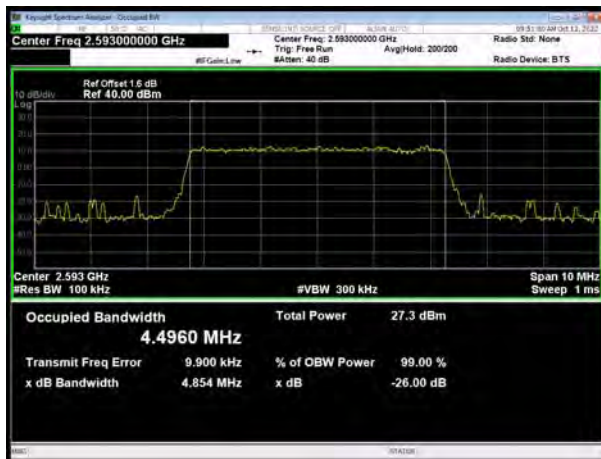
## LTE Band 41 64QAM 5MHz CH-Low



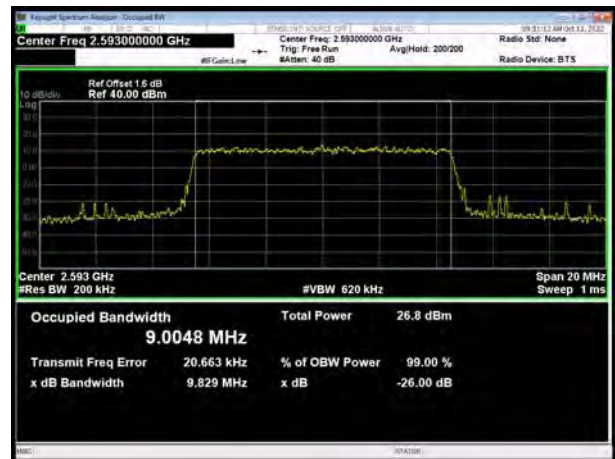
## LTE Band 41 64QAM 10MHz CH-Low



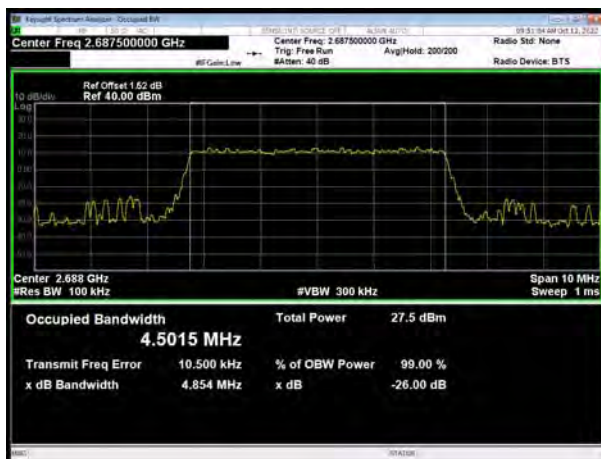
## LTE Band 41 64QAM 5MHz CH-Middle



## LTE Band 41 64QAM 10MHz CH-Middle



## LTE Band 41 64QAM 5MHz CH-High



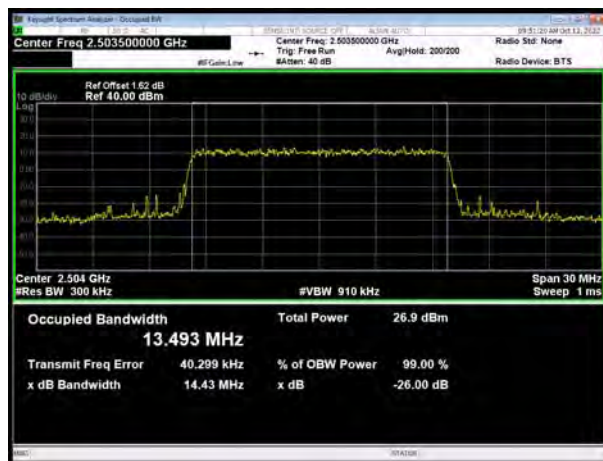
## LTE Band 41 64QAM 10MHz CH-High







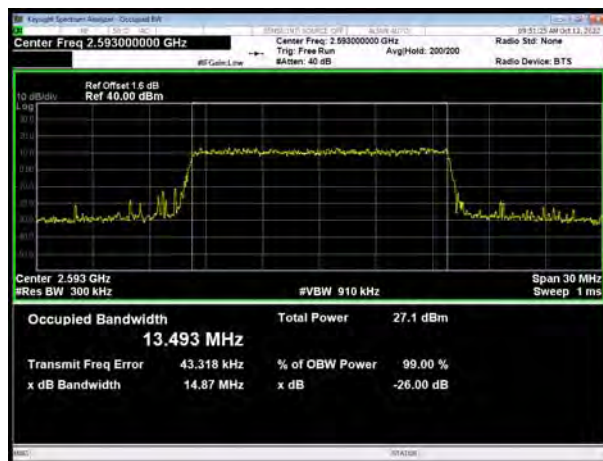
## LTE Band 41 64QAM 15MHz CH-Low



## LTE Band 41 64QAM 20MHz CH-Low



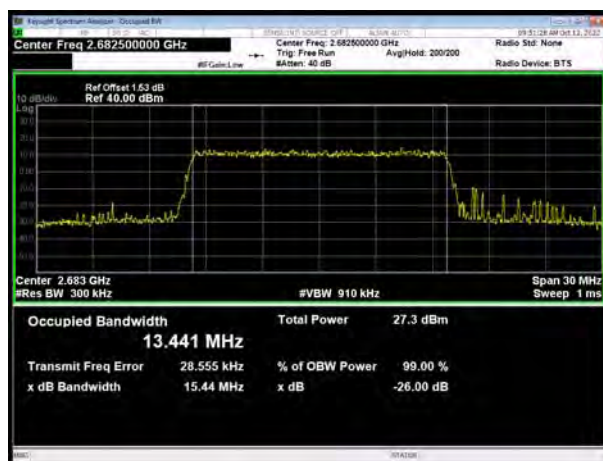
## LTE Band 41 64QAM 15MHz CH-Middle



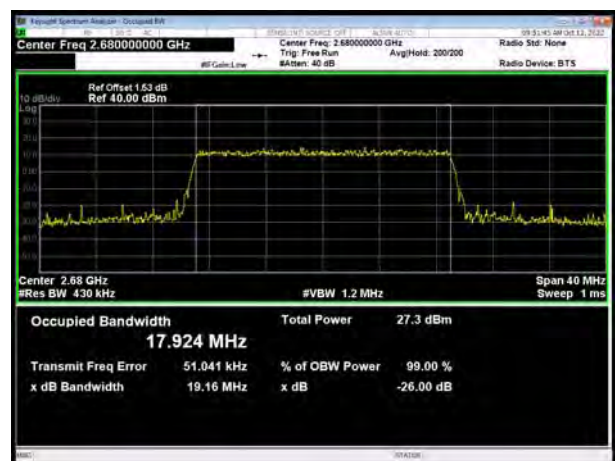
## LTE Band 41 64QAM 20MHz CH-Middle



## LTE Band 41 64QAM 15MHz CH-High



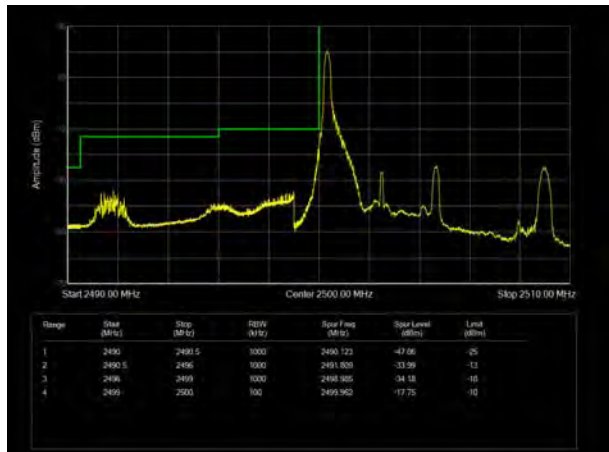
## LTE Band 41 64QAM 20MHz CH-High



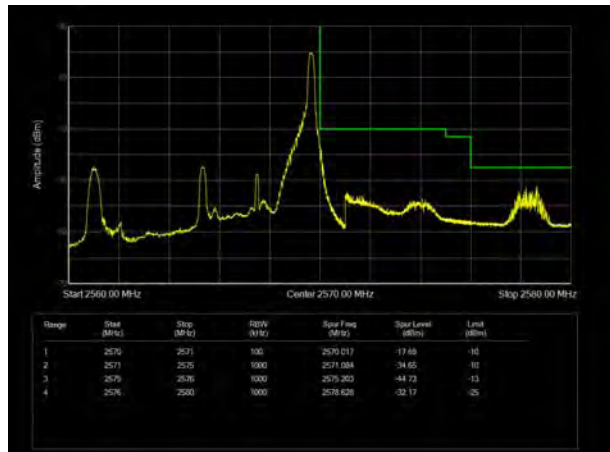
### 6.3 Band Edge Compliance

All the test traces in the plots shows the test results clearly.

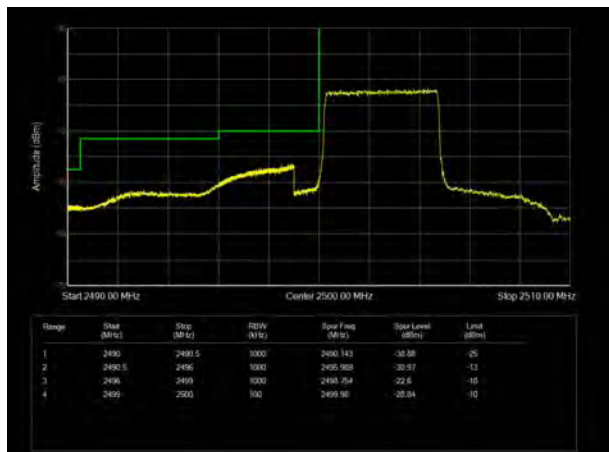
LTE Band 7 QPSK 5MHz CH-Low, 1 RB



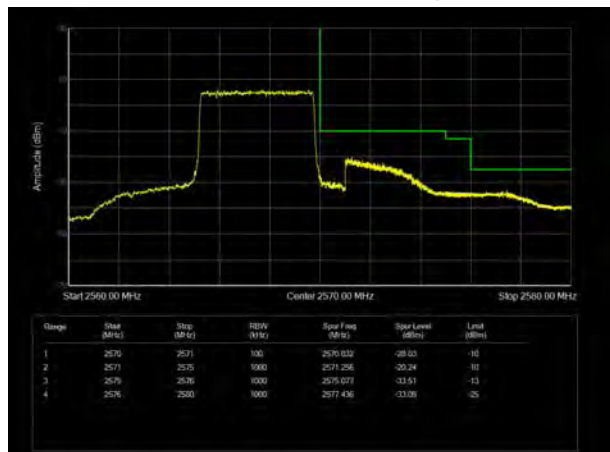
LTE Band 7 QPSK 5MHz CH-High, 1 RB



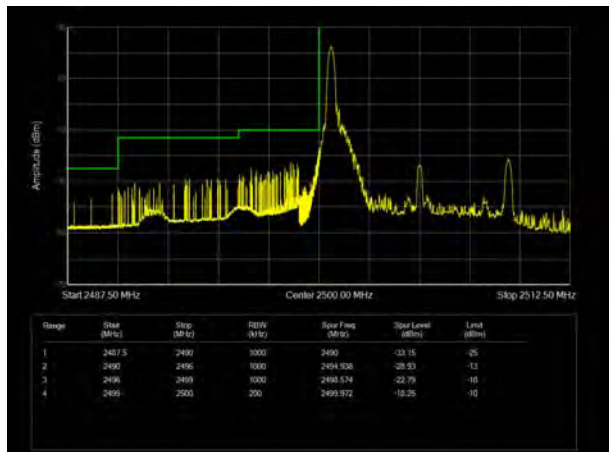
LTE Band 7 QPSK 5MHz CH-Low, 100%RB



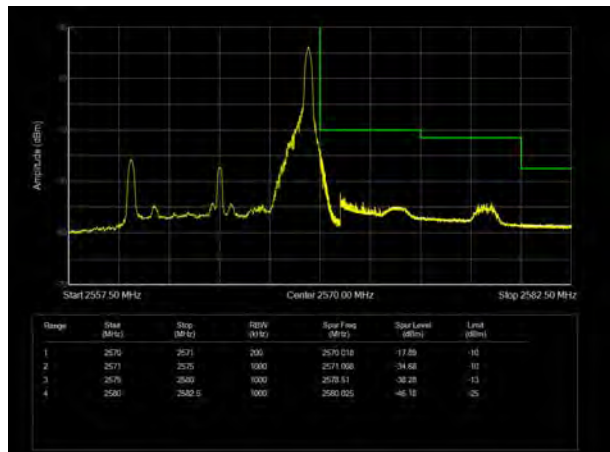
LTE Band 7 QPSK 5MHz CH-High, 100%RB



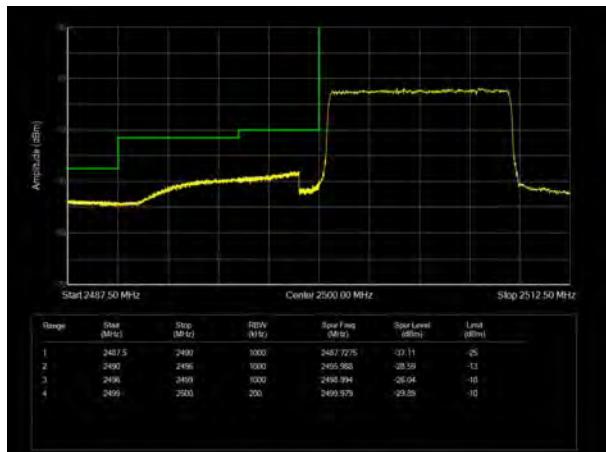
LTE Band 7 QPSK 10MHz CH-Low, 1 RB



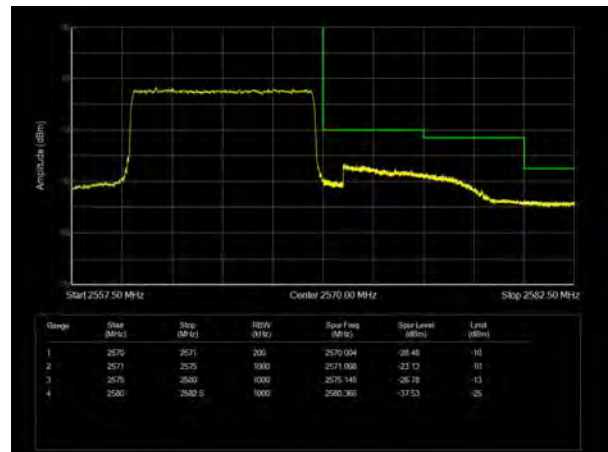
LTE Band 7 QPSK 10MHz CH-High, 1 RB



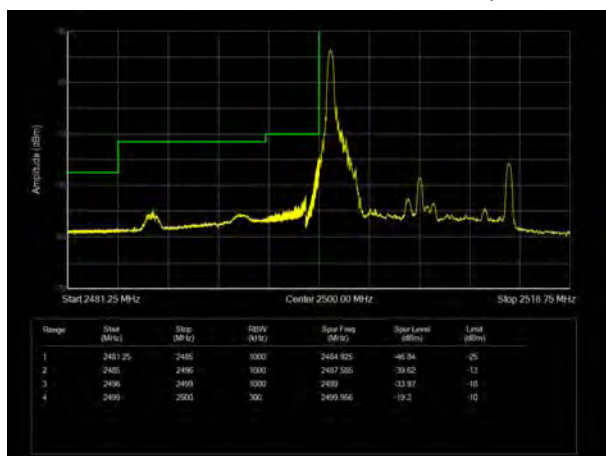
LTE Band 7 QPSK 10MHz CH-Low, 100%RB



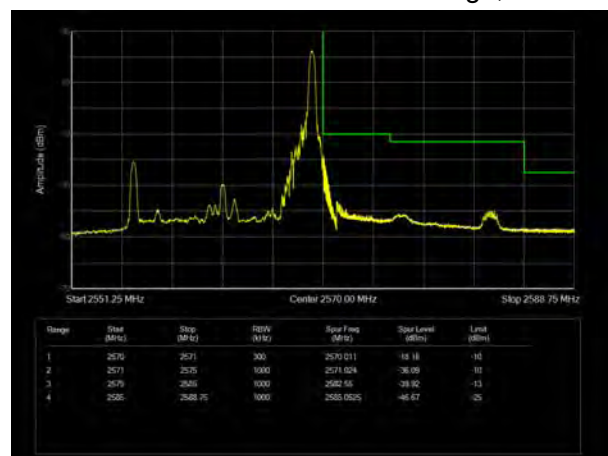
LTE Band 7 QPSK 10MHz CH-High, 100%RB



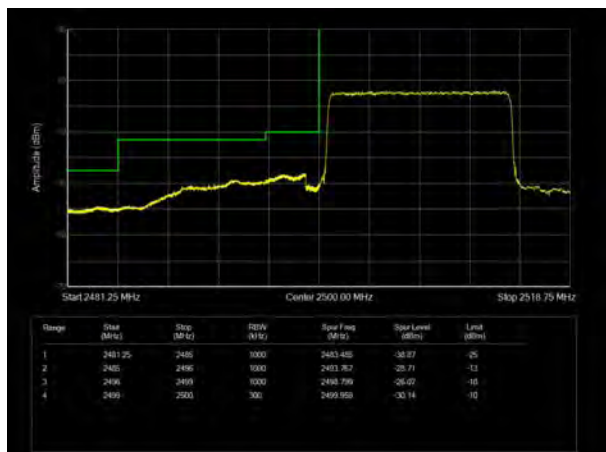
LTE Band 7 QPSK 15MHz CH-Low, 1 RB



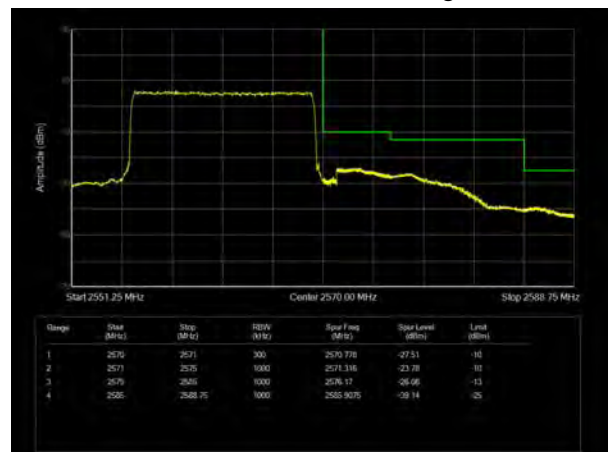
LTE Band 7 QPSK 15MHz CH-High, 1 RB



LTE Band 7 QPSK 15MHz CH-Low, 100%RB

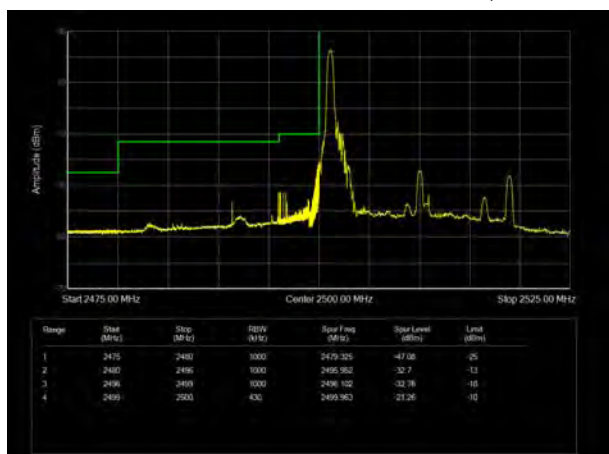


LTE Band 7 QPSK 15MHz CH-High, 100%RB

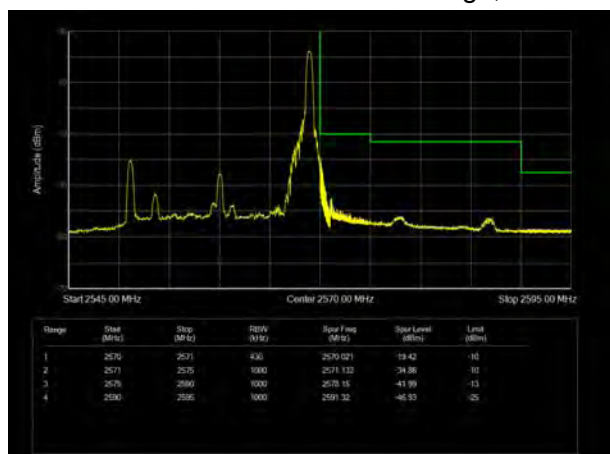




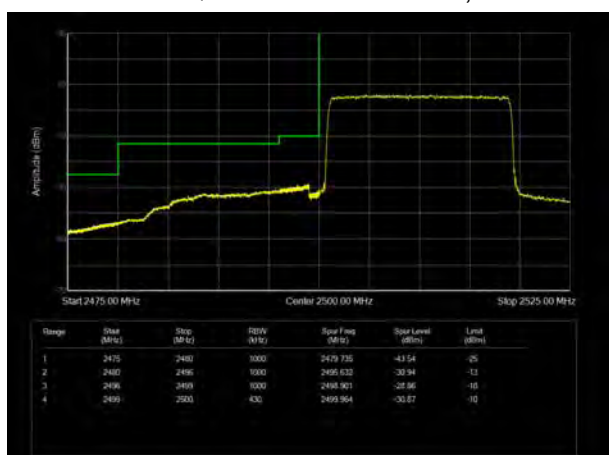
LTE Band 7 QPSK 20MHz CH-Low, 1 RB



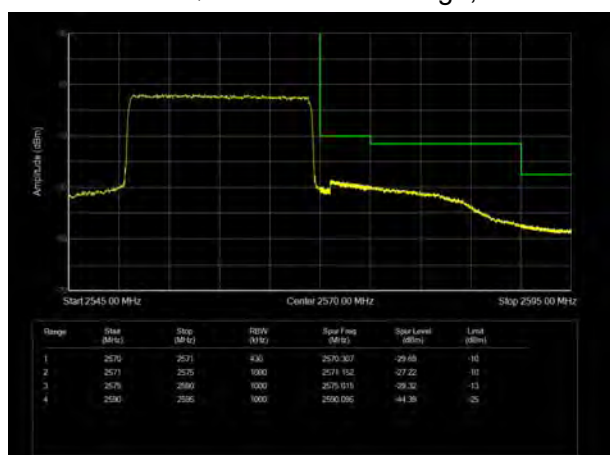
LTE Band 7 QPSK 20MHz CH-High, 1 RB



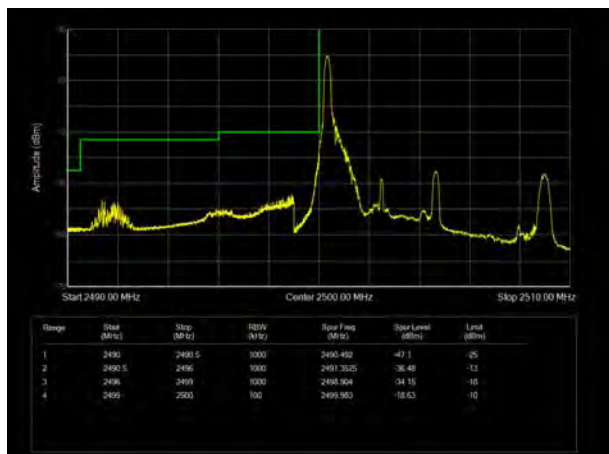
LTE Band 7 QPSK 20MHz CH-Low, 100%RB



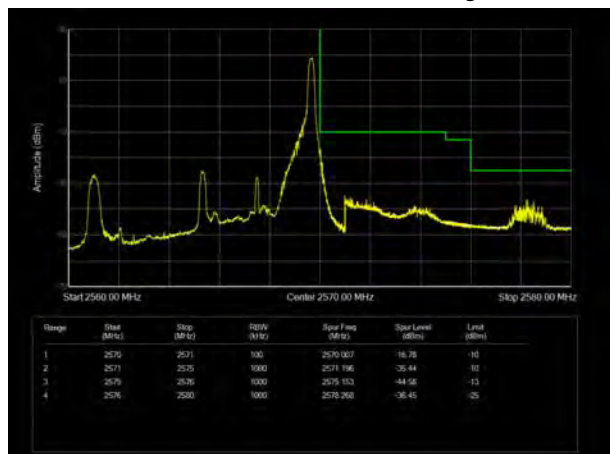
LTE Band 7 QPSK 20MHz CH-High, 100%RB



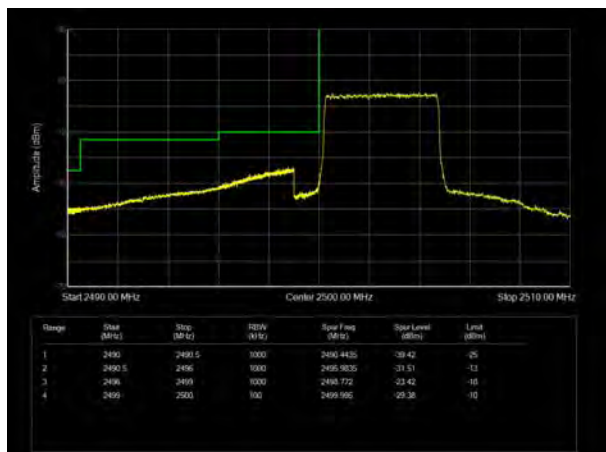
LTE Band 7 16QAM 5MHz CH-Low, 1 RB



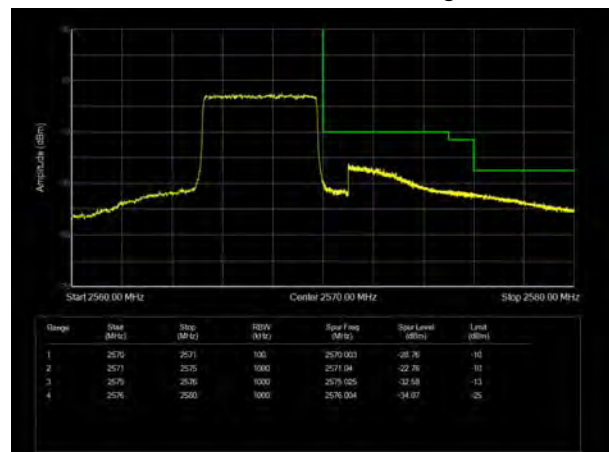
LTE Band 7 16QAM 5MHz CH-High, 1 RB



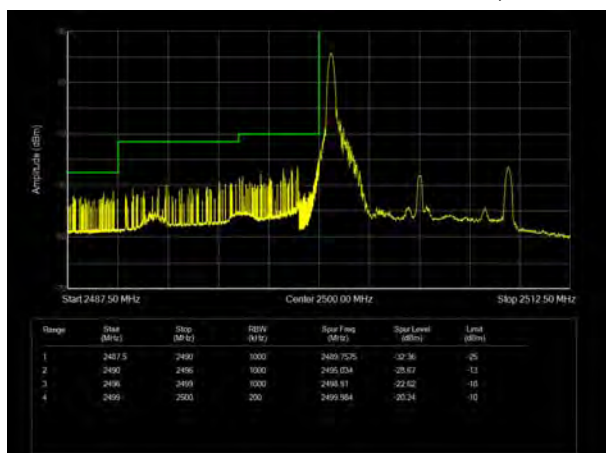
LTE Band 7 16QAM 5MHz CH-Low, 100%RB



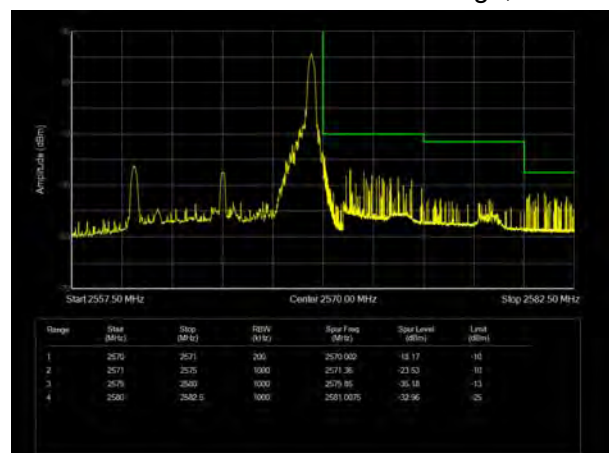
LTE Band 7 16QAM 5MHz CH-High, 100%RB



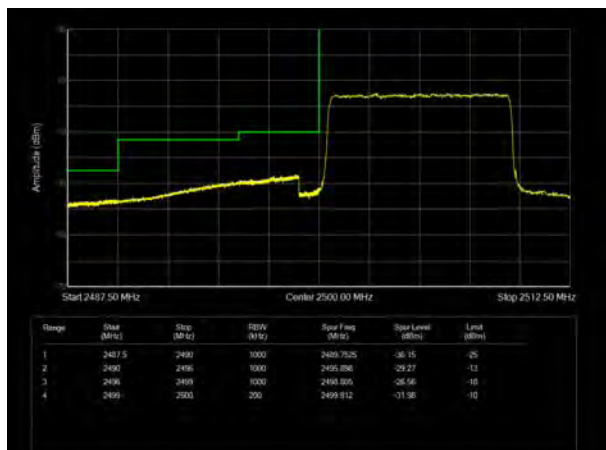
LTE Band 7 16QAM 10MHz CH-Low, 1 RB



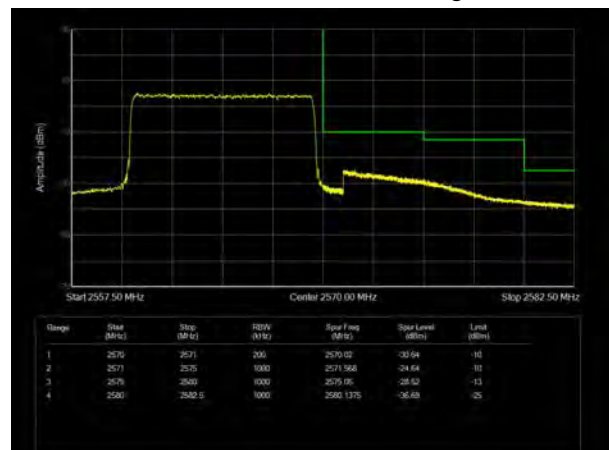
LTE Band 7 16QAM 10MHz CH-High, 1 RB



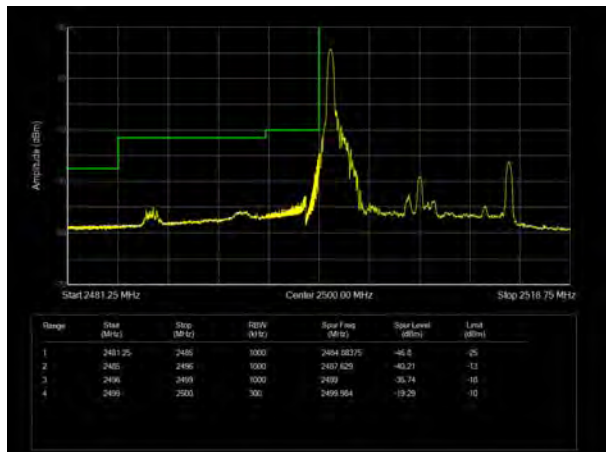
LTE Band 7 16QAM 10MHz CH-Low, 100%RB



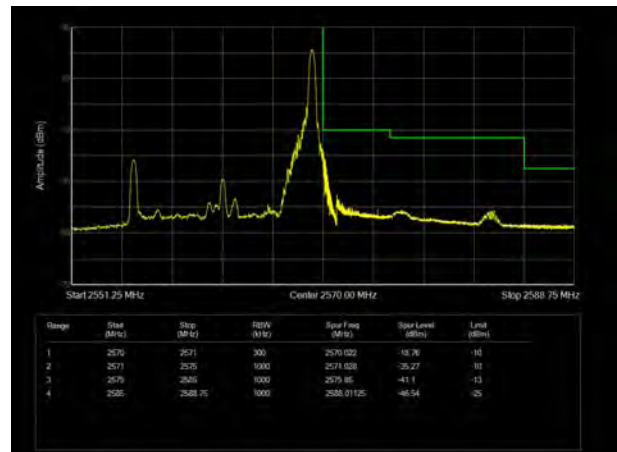
LTE Band 7 16QAM 10MHz CH-High, 100%RB



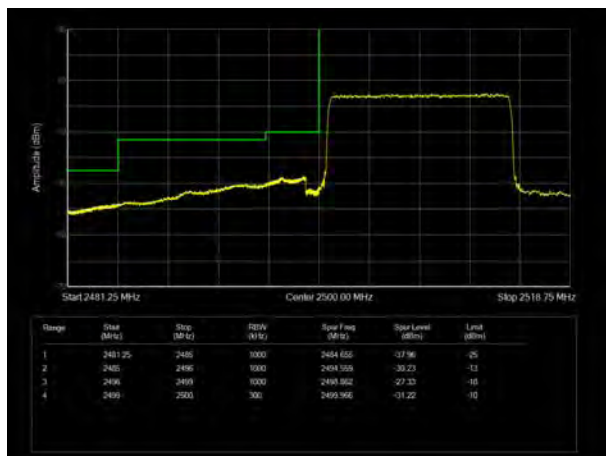
LTE Band 7 16QAM 15MHz CH-Low, 1 RB



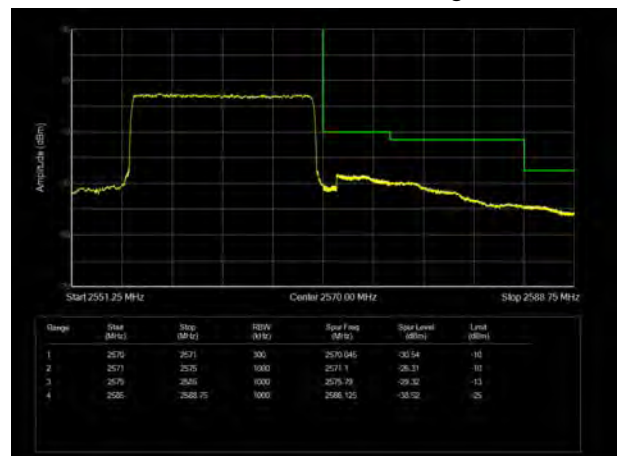
LTE Band 7 16QAM 15MHz CH-High, 1 RB



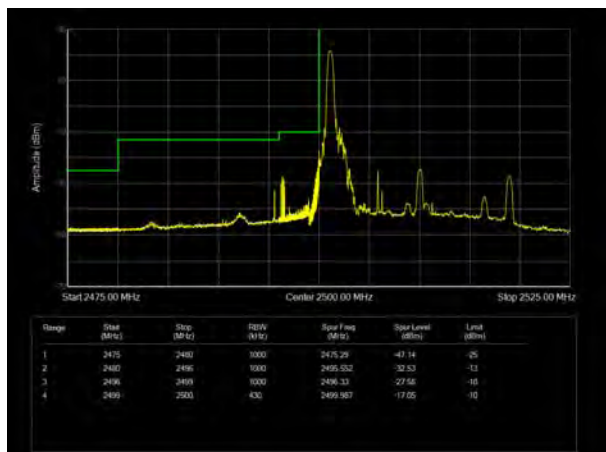
LTE Band 7 16QAM 15MHz CH-Low, 100%RB



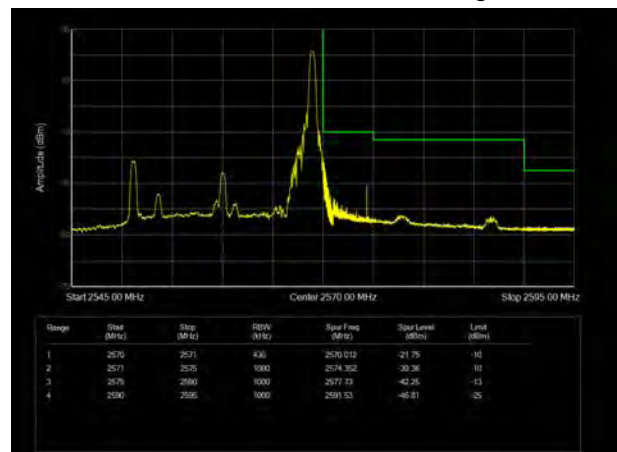
LTE Band 7 16QAM 15MHz CH-High, 100%RB



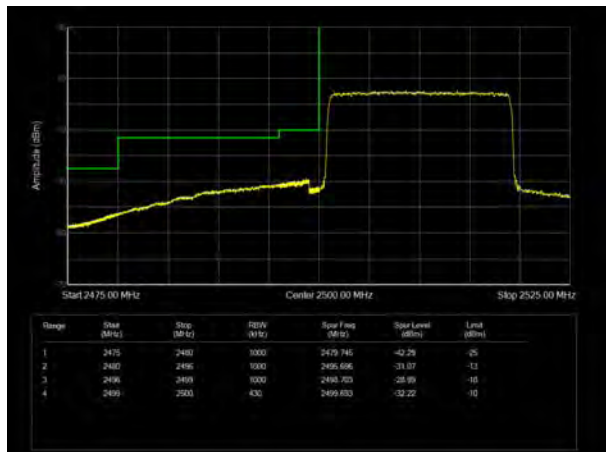
LTE Band 7 16QAM 20MHz CH-Low, 1 RB



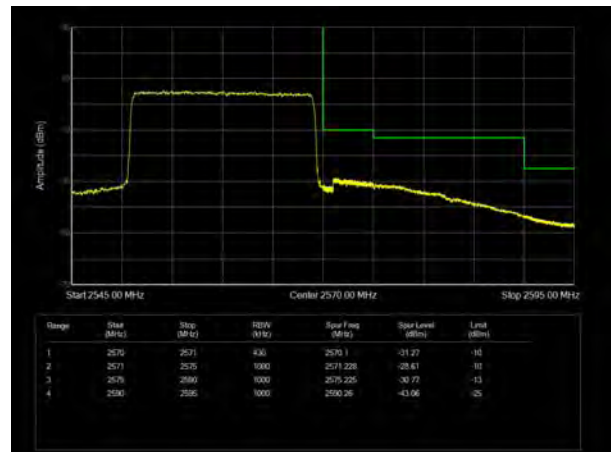
LTE Band 7 16QAM 20MHz CH-High, 1 RB



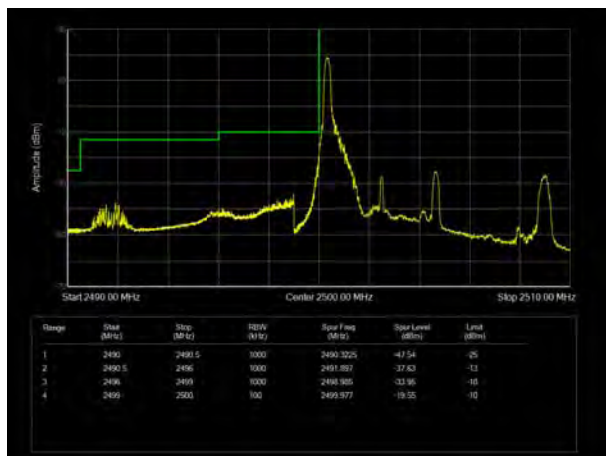
LTE Band 7 16QAM 20MHz CH-Low, 100%RB



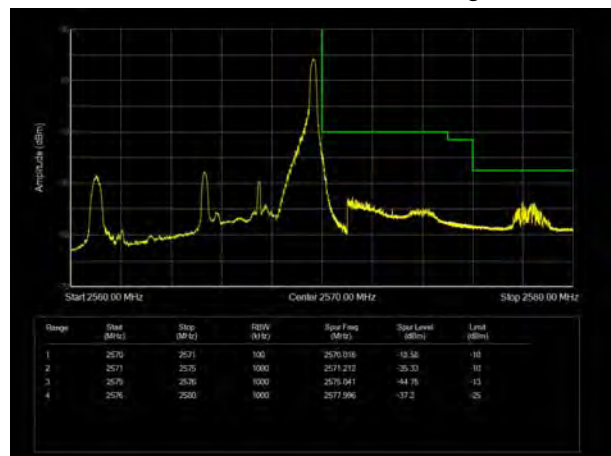
LTE Band 7 16QAM 20MHz CH-High, 100%RB



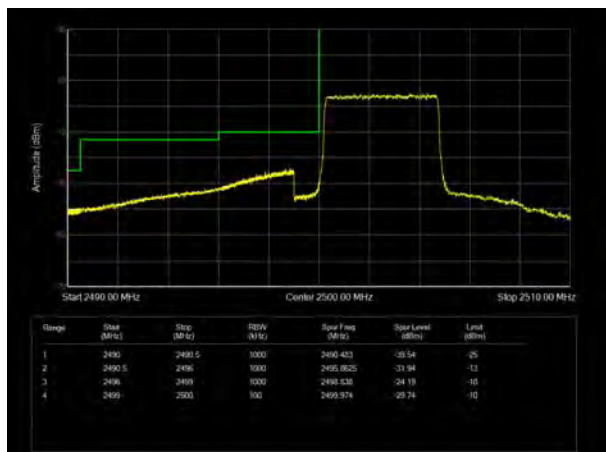
LTE Band 7 64QAM 5MHz CH-Low, 1 RB



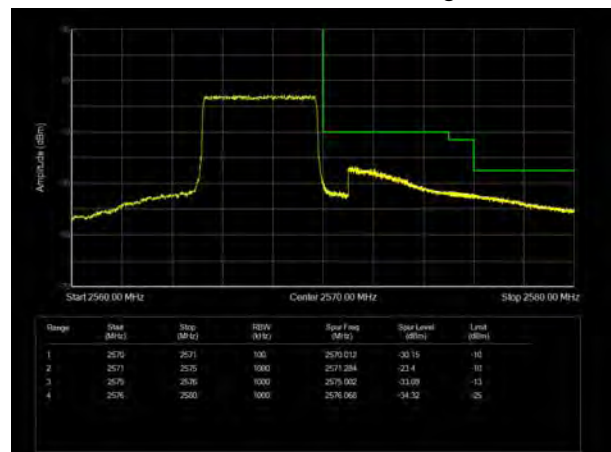
LTE Band 7 64QAM 5MHz CH-High, 1 RB



LTE Band 7 64QAM 5MHz CH-Low, 100%RB

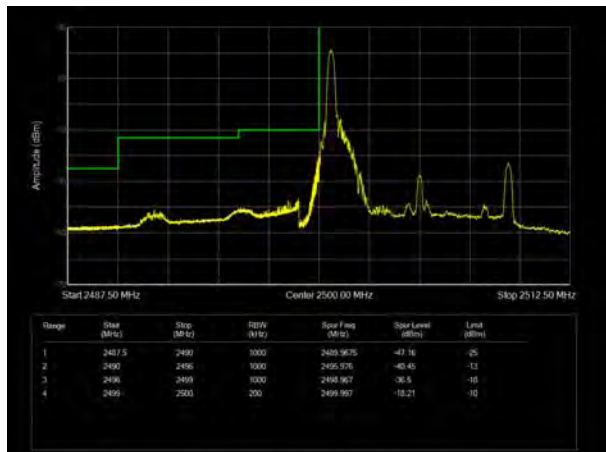


LTE Band 7 64QAM 5MHz CH-High, 100%RB

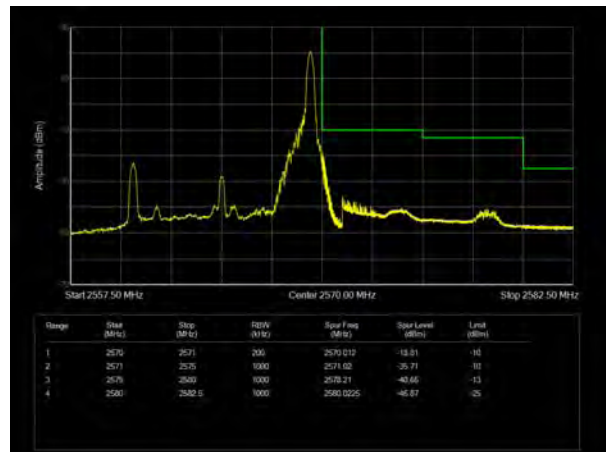




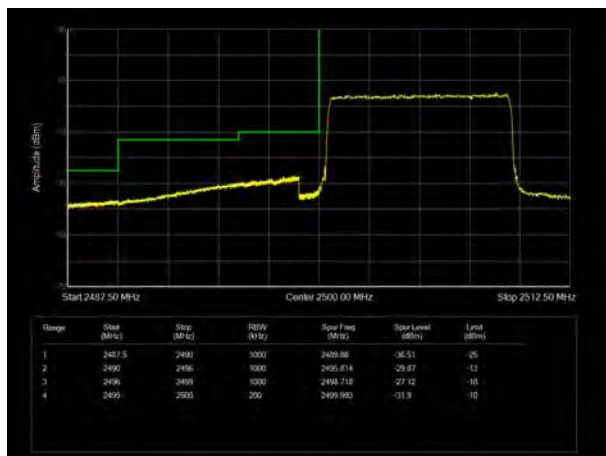
LTE Band 7 64QAM 10MHz CH-Low, 1 RB



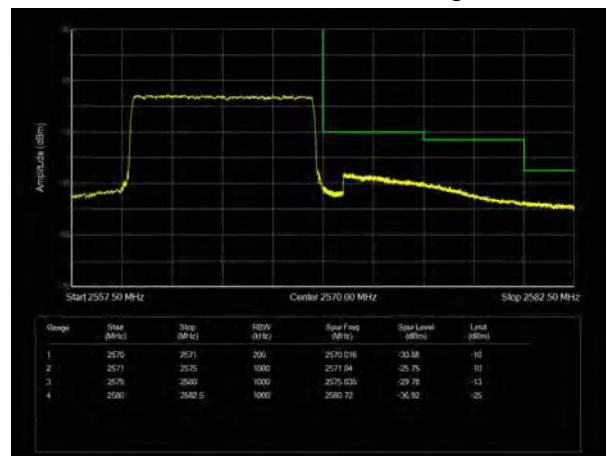
LTE Band 7 64QAM 10MHz CH-High, 1 RB



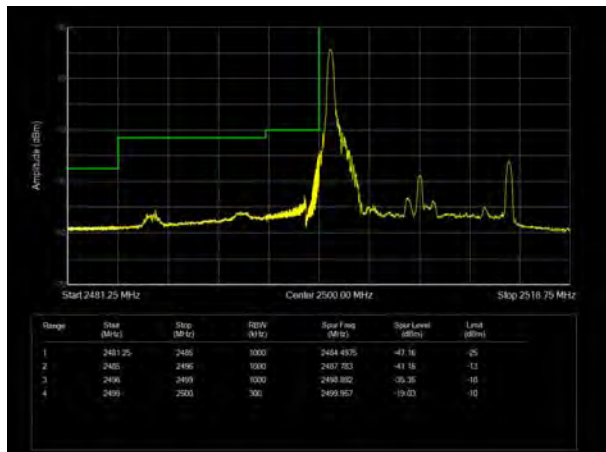
LTE Band 7 64QAM 10MHz CH-Low, 100%RB



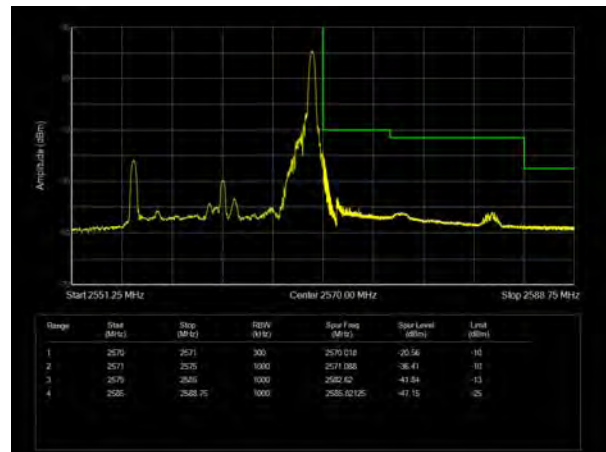
LTE Band 7 64QAM 10MHz CH-High, 100%RB



LTE Band 7 64QAM 15MHz CH-Low, 1 RB

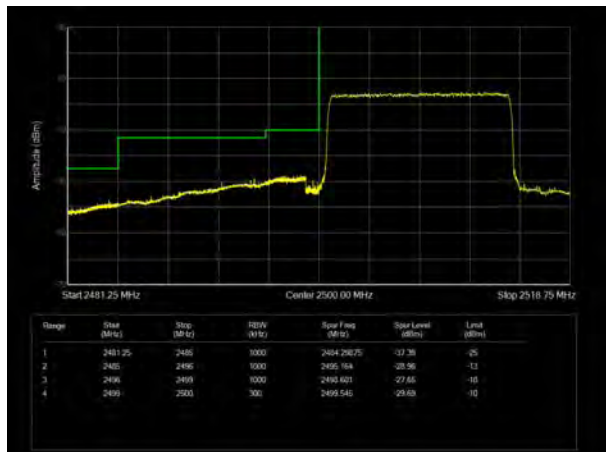


LTE Band 7 64QAM 15MHz CH-High, 1 RB

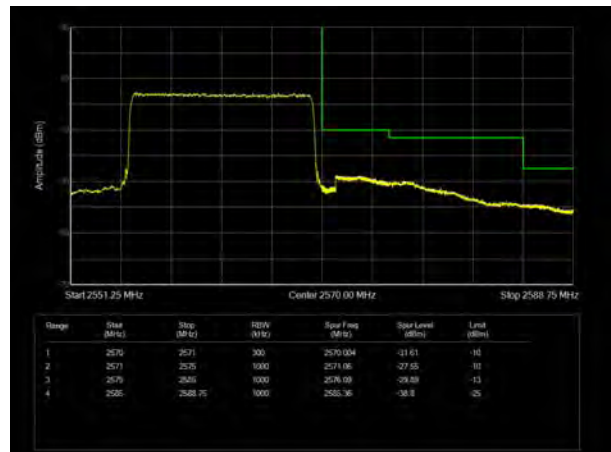




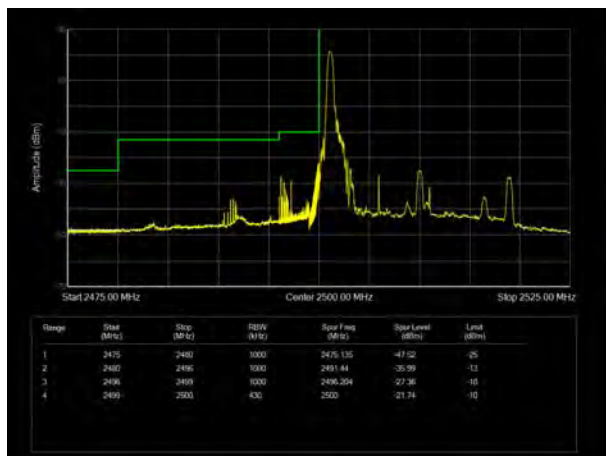
LTE Band 7 64QAM 15MHz CH-Low, 100%RB



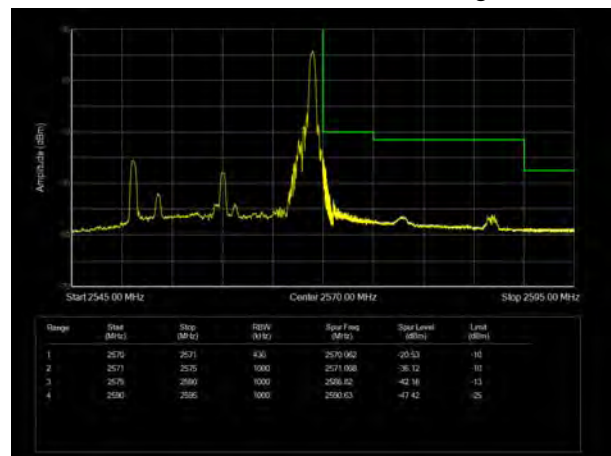
LTE Band 7 64QAM 15MHz CH-High, 100%RB



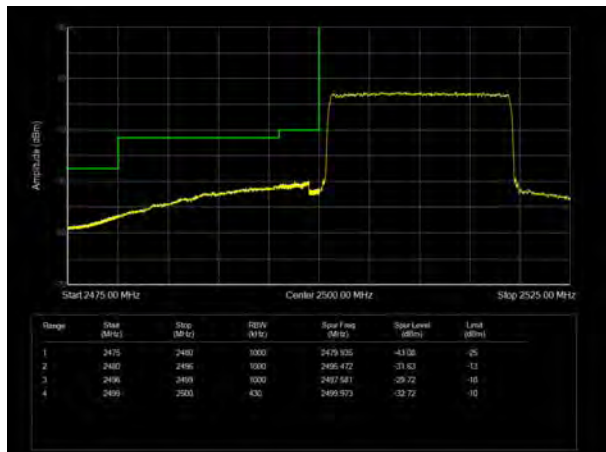
LTE Band 7 64QAM 20MHz CH-Low, 1 RB



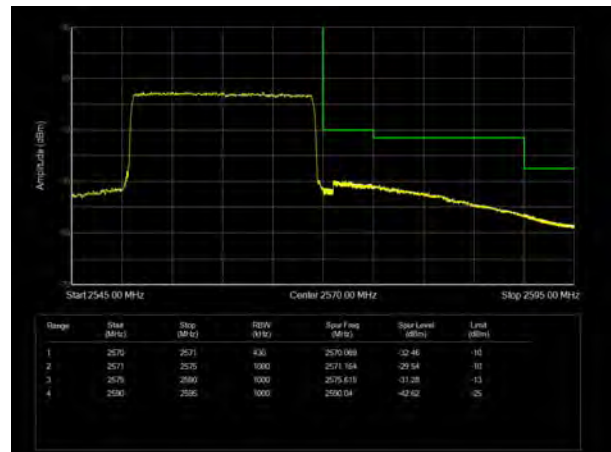
LTE Band 7 64QAM 20MHz CH-High, 1 RB



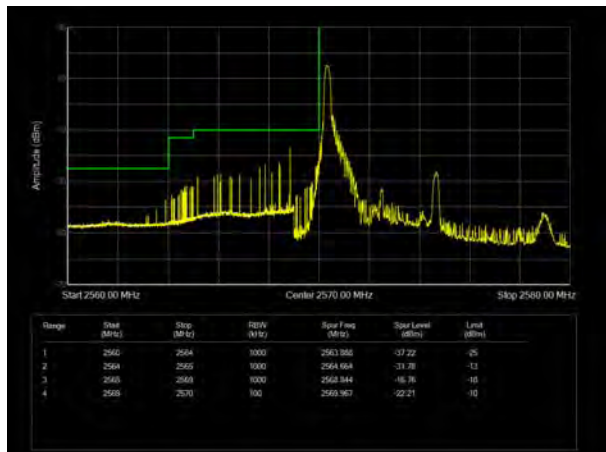
LTE Band 7 64QAM 20MHz CH-Low, 100%RB



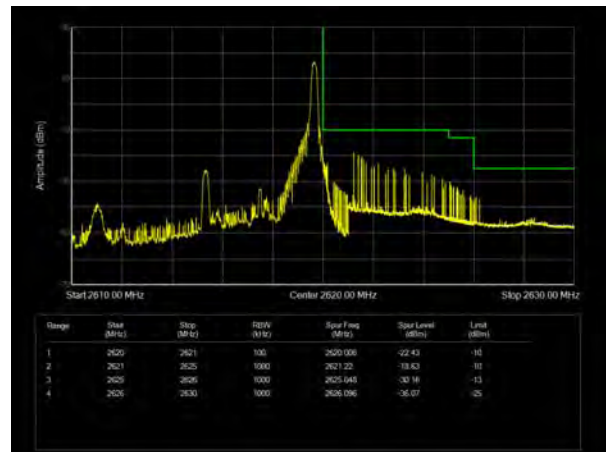
LTE Band 7 64QAM 20MHz CH-High, 100%RB



LTE Band 38 QPSK 5MHz CH-Low, 1 RB



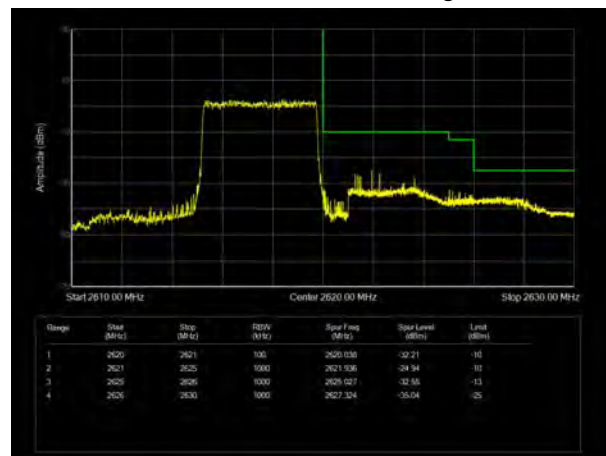
LTE Band 38 QPSK 5MHz CH-High, 1 RB



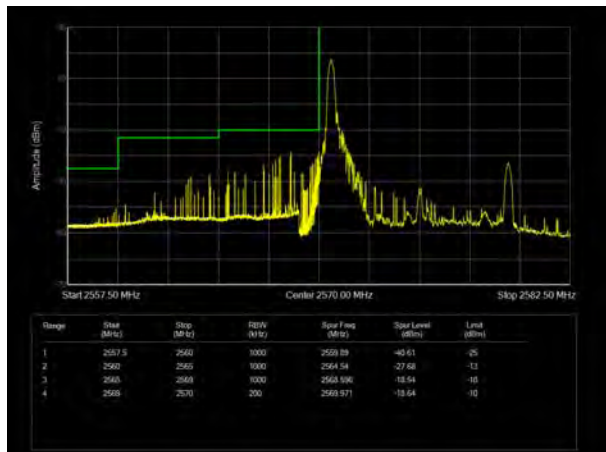
LTE Band 38 QPSK 5MHz CH-Low, 100%RB



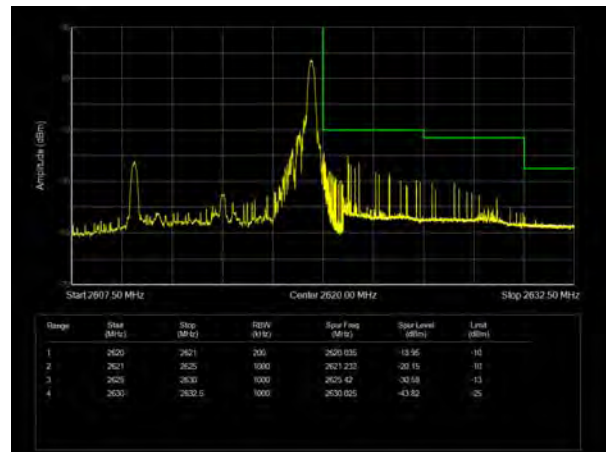
LTE Band 38 QPSK 5MHz CH-High, 100%RB



LTE Band 38 QPSK 10MHz CH-Low, 1 RB



LTE Band 38 QPSK 10MHz CH-High, 1 RB



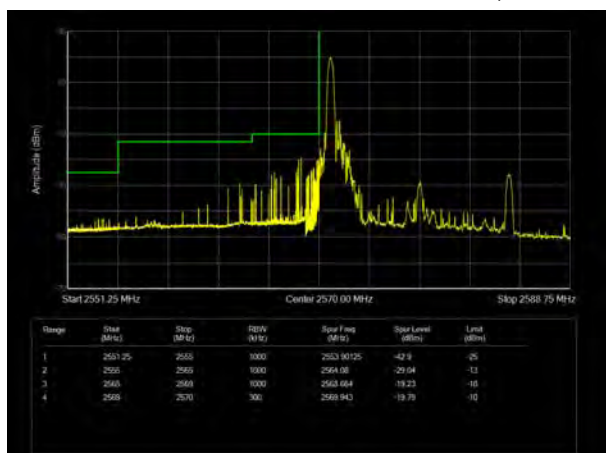
LTE Band 38 QPSK 10MHz CH-Low, 100%RB



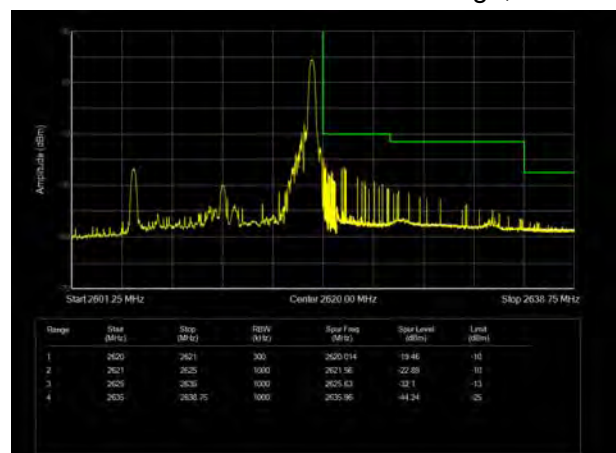
LTE Band 38 QPSK 10MHz CH-High, 100%RB



LTE Band 38 QPSK 15MHz CH-Low, 1 RB



LTE Band 38 QPSK 15MHz CH-High, 1 RB



LTE Band 38 QPSK 15MHz CH-Low, 100%RB

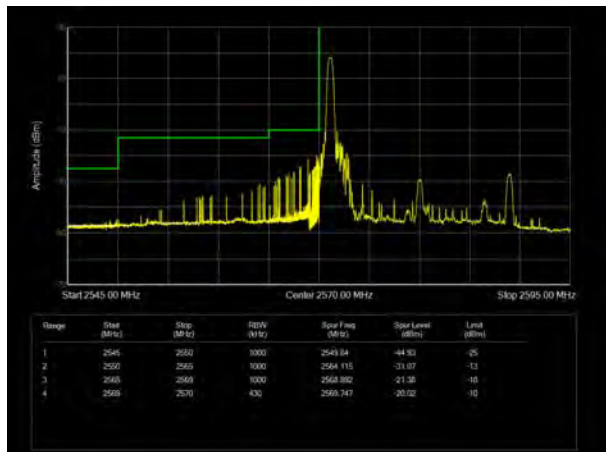


LTE Band 38 QPSK 15MHz CH-High, 100%RB

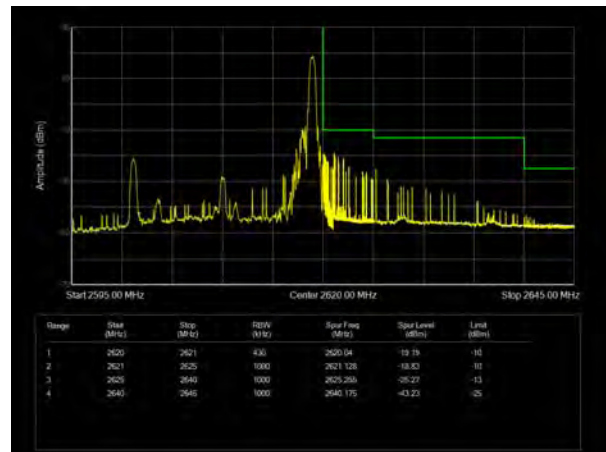




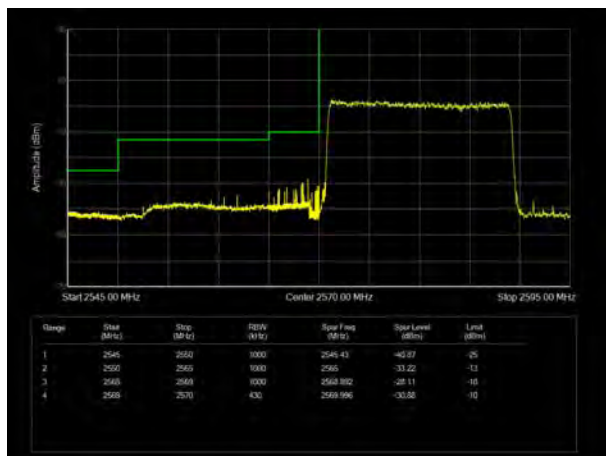
LTE Band 38 QPSK 20MHz CH-Low, 1 RB



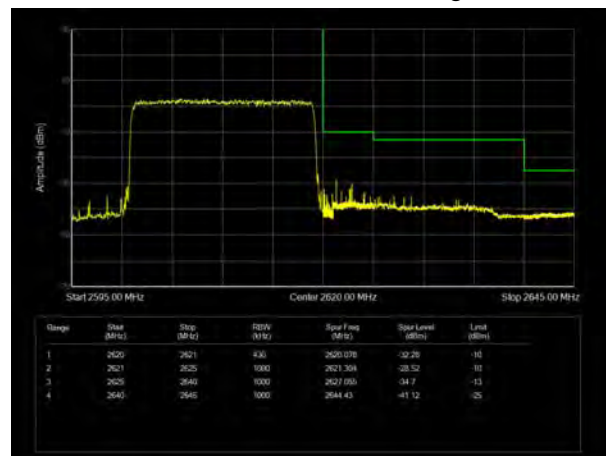
LTE Band 38 QPSK 20MHz CH-High, 1 RB



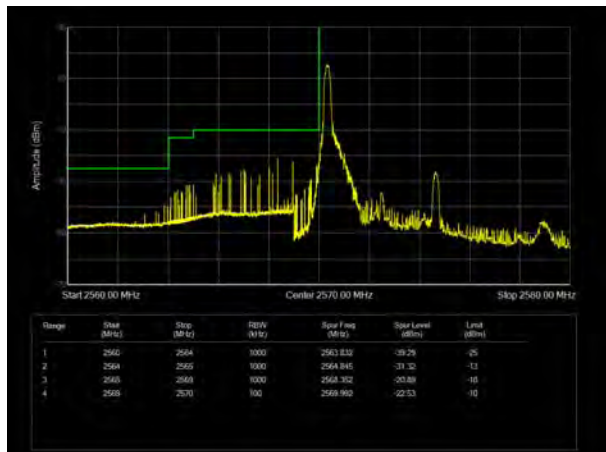
LTE Band 38 QPSK 20MHz CH-Low, 100%RB



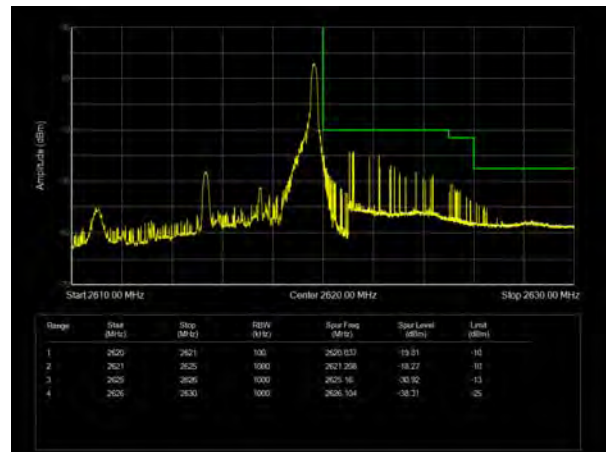
LTE Band 38 QPSK 20MHz CH-High, 100%RB



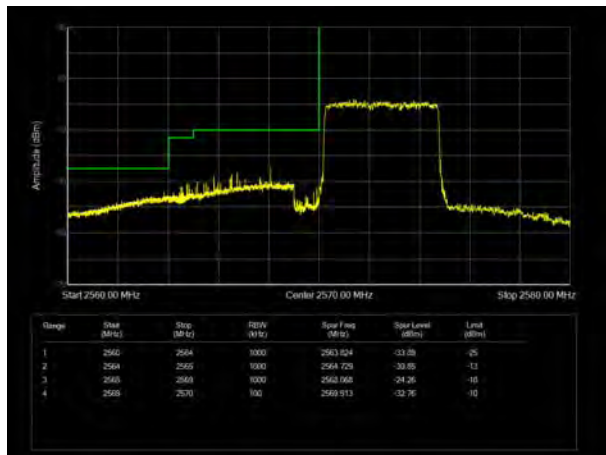
LTE Band 38 16QAM 5MHz CH-Low, 1 RB



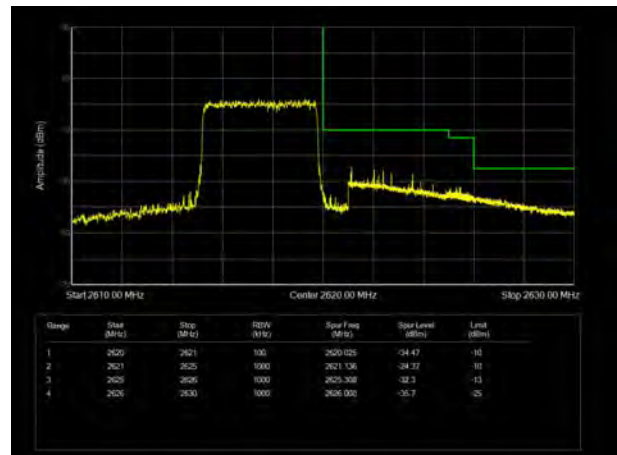
LTE Band 38 16QAM 5MHz CH-High, 1 RB



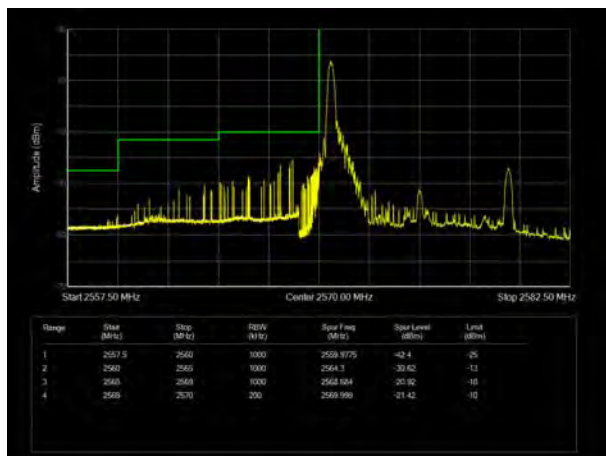
LTE Band 38 16QAM 5MHz CH-Low, 100%RB



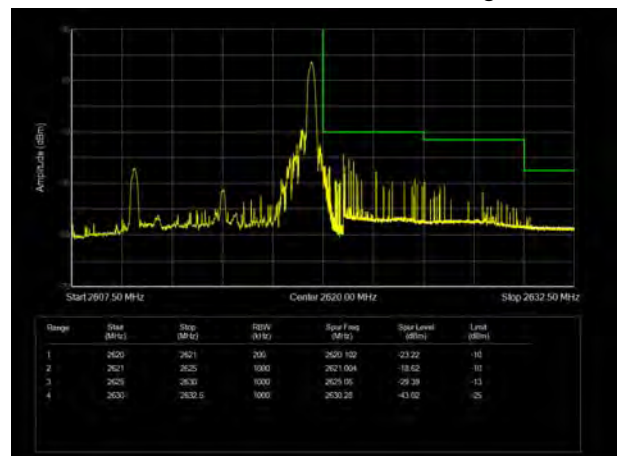
LTE Band 38 16QAM 5MHz CH-High, 100%RB



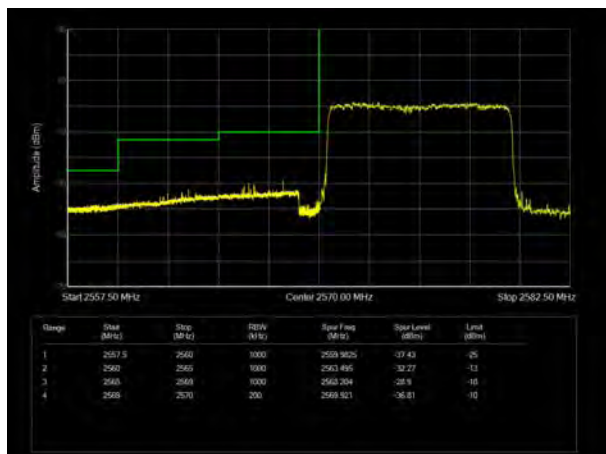
LTE Band 38 16QAM 10MHz CH-Low, 1 RB



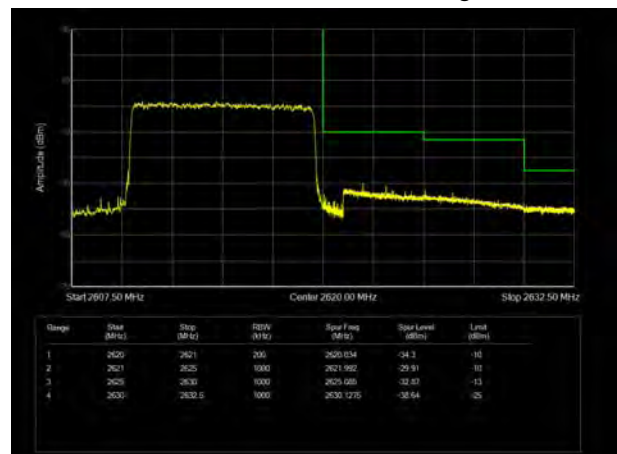
LTE Band 38 16QAM 10MHz CH-High, 1 RB



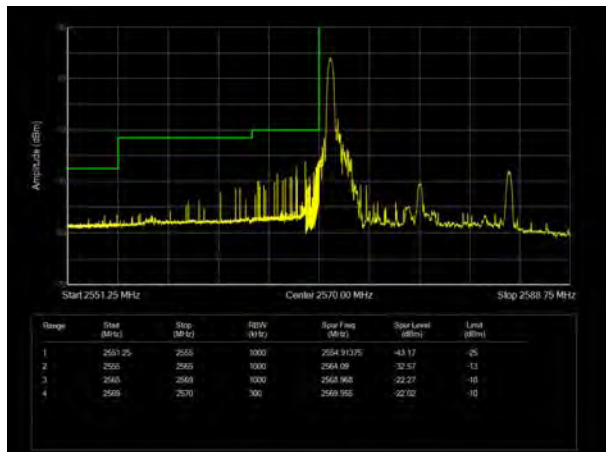
LTE Band 38 16QAM 10MHz CH-Low, 100%RB



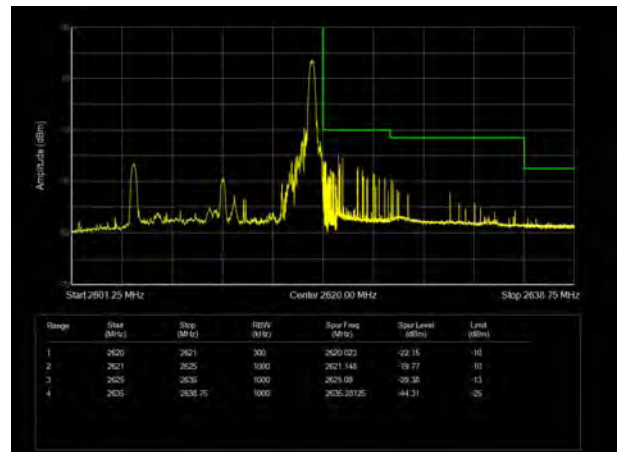
LTE Band 38 16QAM 10MHz CH-High, 100%RB



LTE Band 38 16QAM 15MHz CH-Low, 1 RB



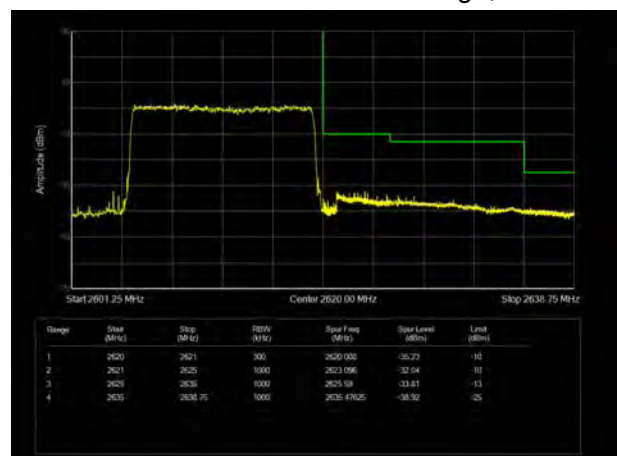
LTE Band 38 16QAM 15MHz CH-High, 1 RB



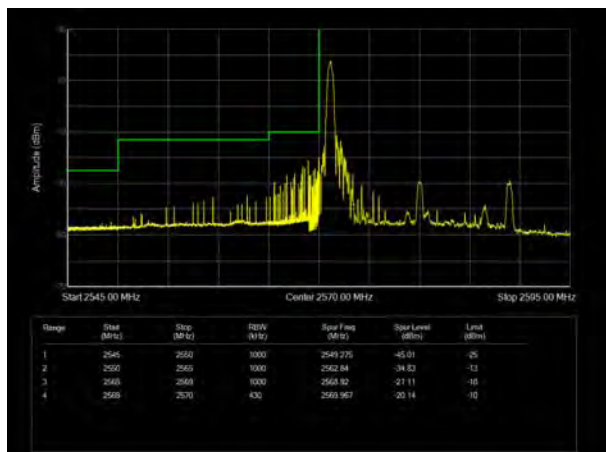
LTE Band 38 16QAM 15MHz CH-Low, 100%RB



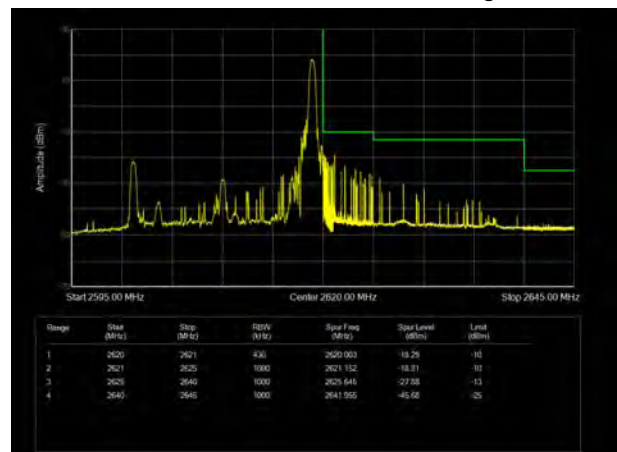
LTE Band 38 16QAM 15MHz CH-High, 100%RB



LTE Band 38 16QAM 20MHz CH-Low, 1 RB

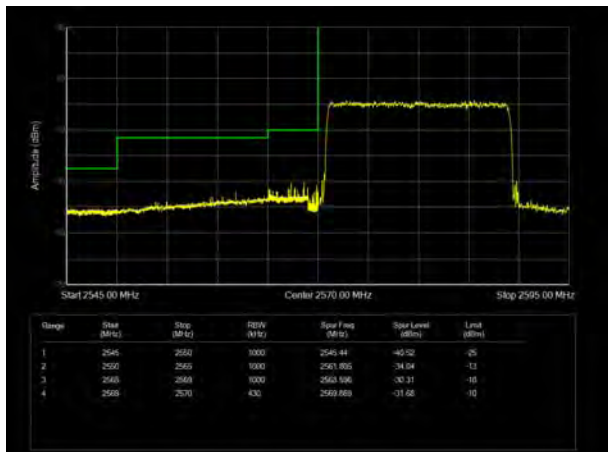


LTE Band 38 16QAM 20MHz CH-High, 1 RB

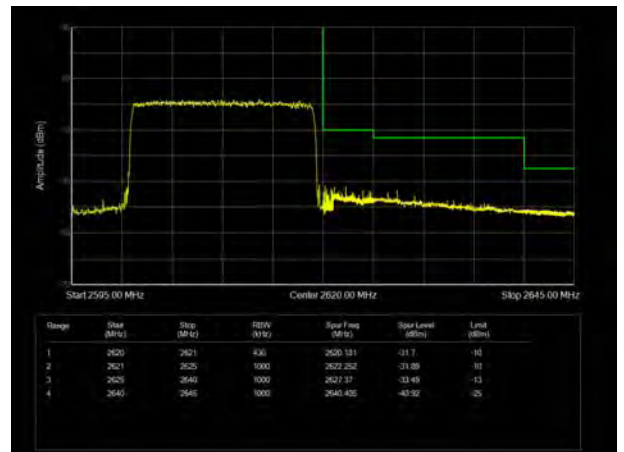




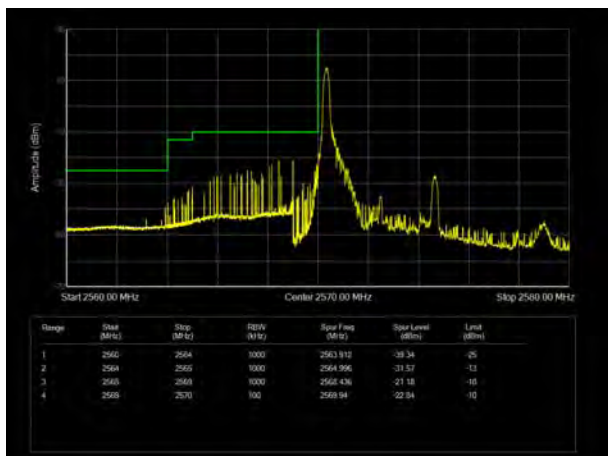
LTE Band 38 16QAM 20MHz CH-Low, 100%RB



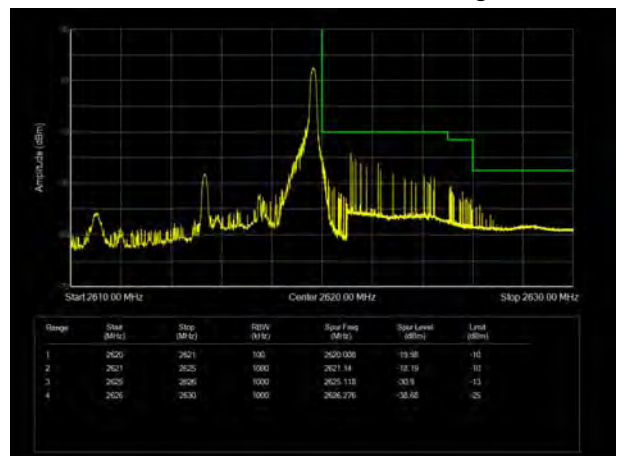
LTE Band 38 16QAM 20MHz CH-High, 100%RB



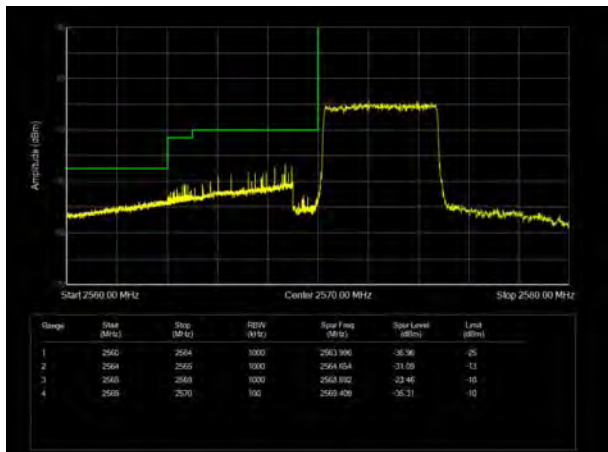
LTE Band 38 64QAM 5MHz CH-Low, 1 RB



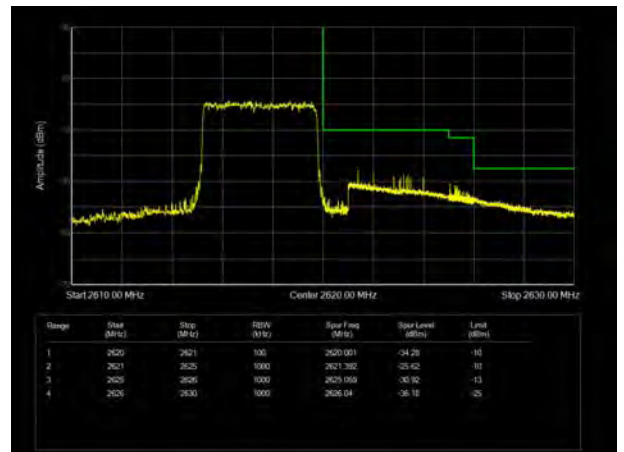
LTE Band 38 64QAM 5MHz CH-High, 1 RB



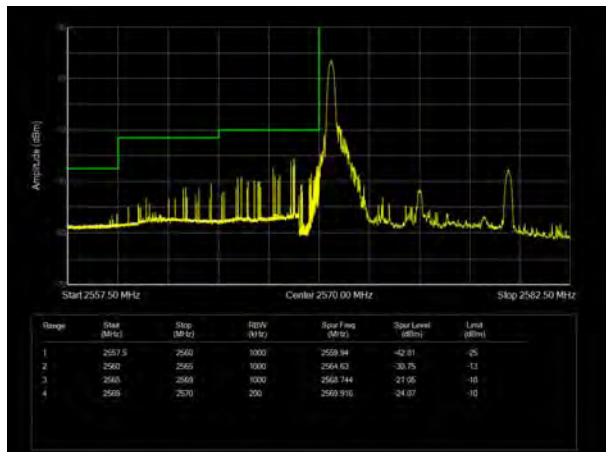
LTE Band 38 64QAM 5MHz CH-Low, 100%RB



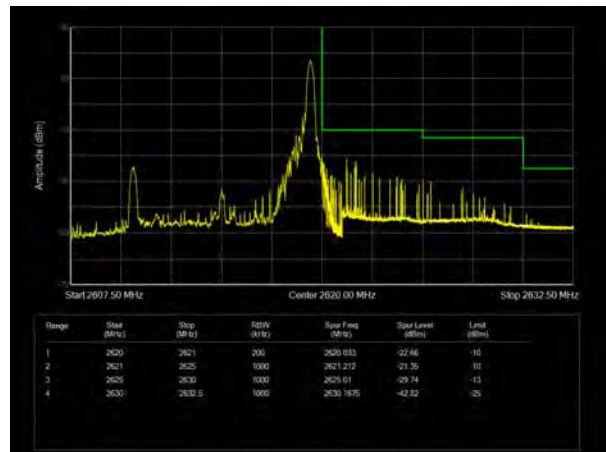
LTE Band 38 64QAM 5MHz CH-High, 100%RB



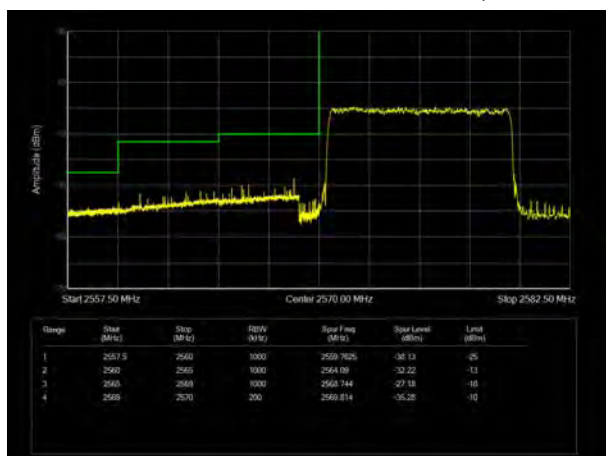
LTE Band 38 64QAM 10MHz CH-Low, 1 RB



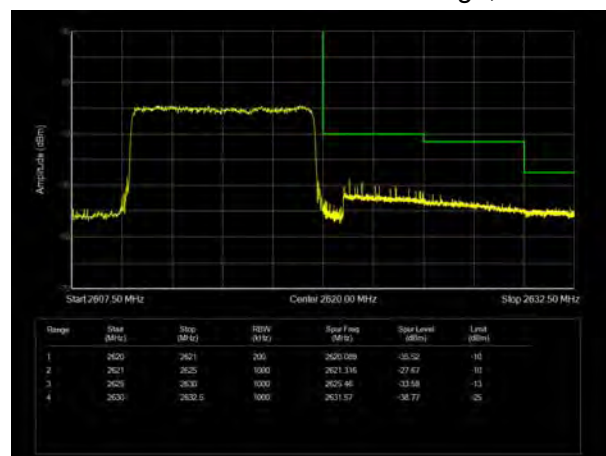
LTE Band 38 64QAM 10MHz CH-High, 1 RB



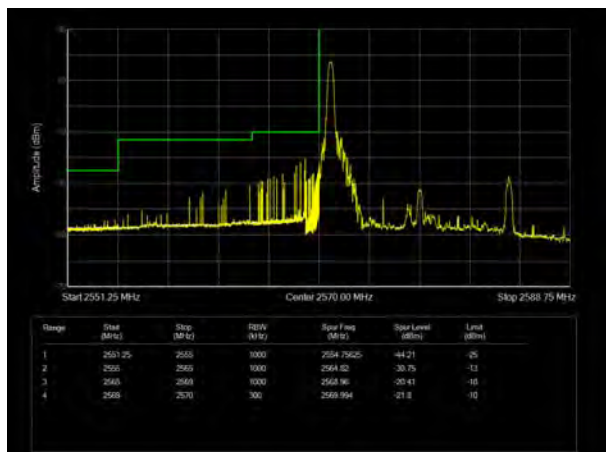
LTE Band 38 64QAM 10MHz CH-Low, 100%RB



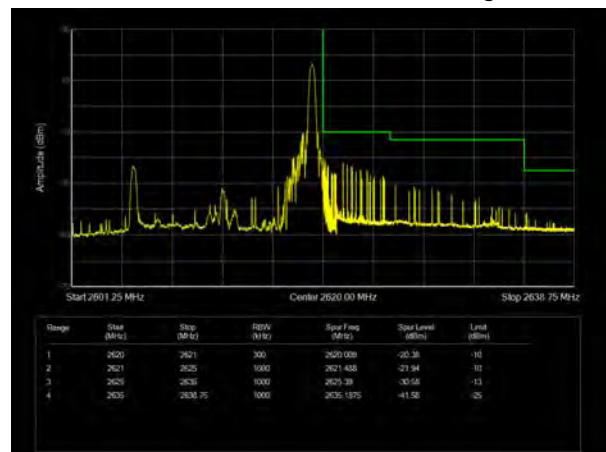
LTE Band 38 64QAM 10MHz CH-High, 100%RB



LTE Band 38 64QAM 15MHz CH-Low, 1 RB

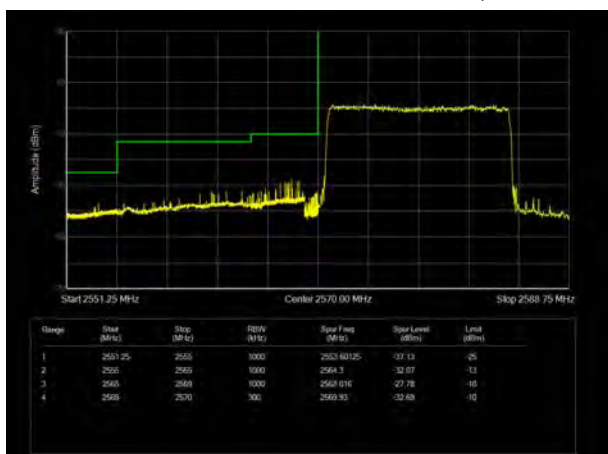


LTE Band 38 64QAM 15MHz CH-High, 1 RB





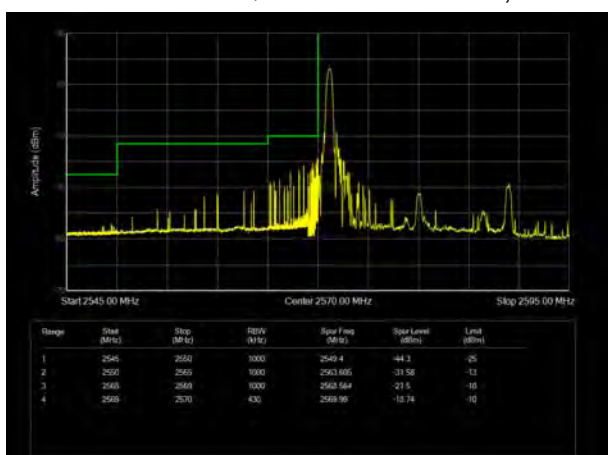
LTE Band 38 64QAM 15MHz CH-Low, 100%RB



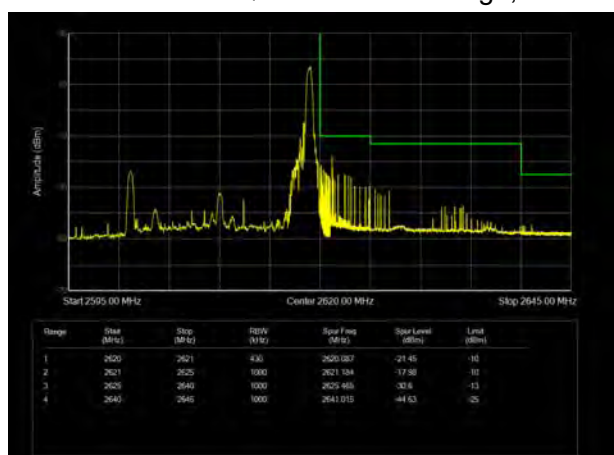
LTE Band 38 64QAM 15MHz CH-High, 100%RB



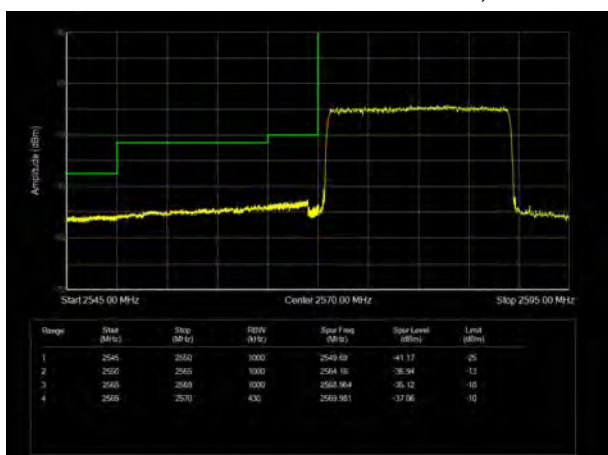
LTE Band 38 64QAM 20MHz CH-Low, 1 RB



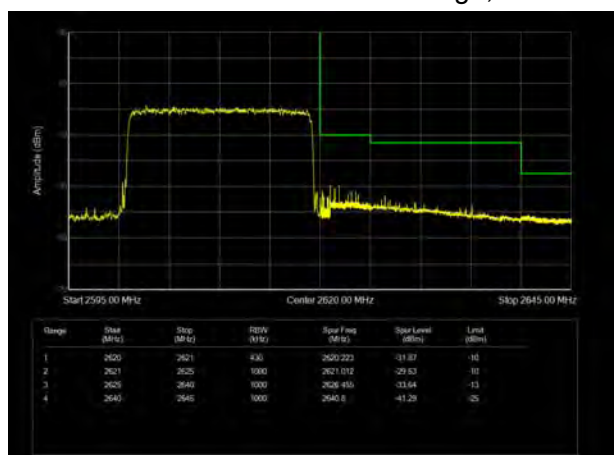
LTE Band 38 64QAM 20MHz CH-High, 1 RB



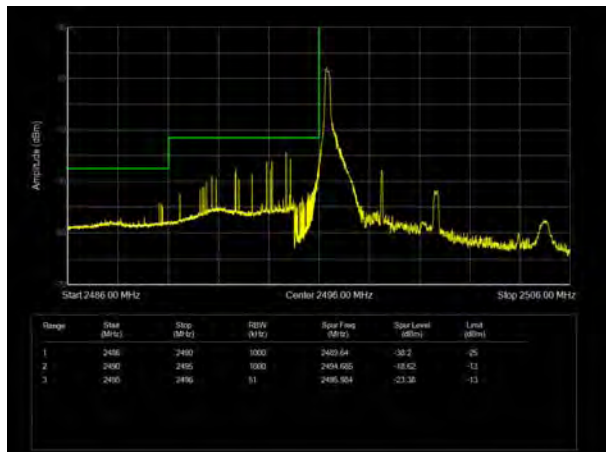
LTE Band 38 64QAM 20MHz CH-Low, 100%RB



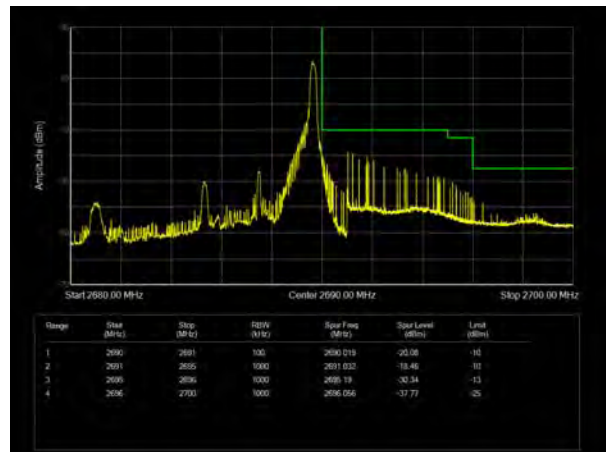
LTE Band 38 64QAM 20MHz CH-High, 100%RB



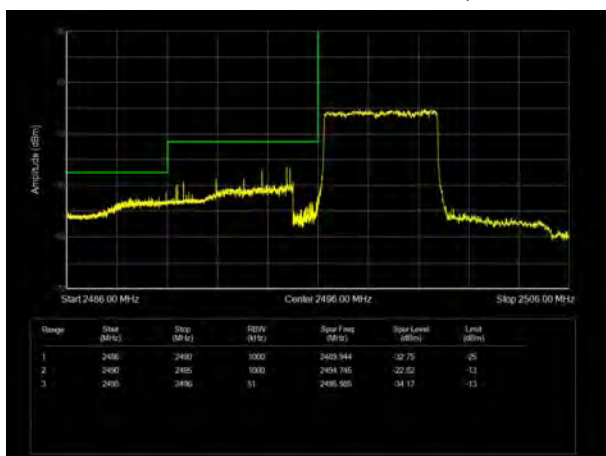
LTE Band 41 QPSK 5MHz CH-Low, 1 RB



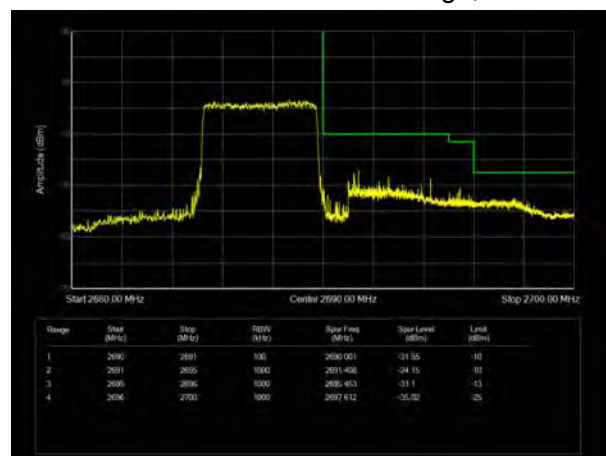
LTE Band 41 QPSK 5MHz CH-High, 1 RB



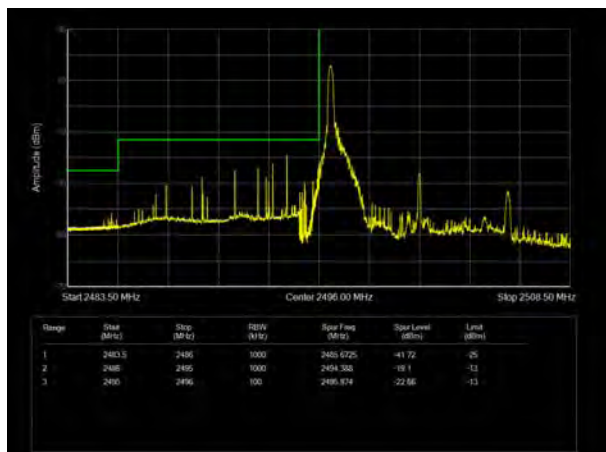
LTE Band 41 QPSK 5MHz CH-Low, 100%RB



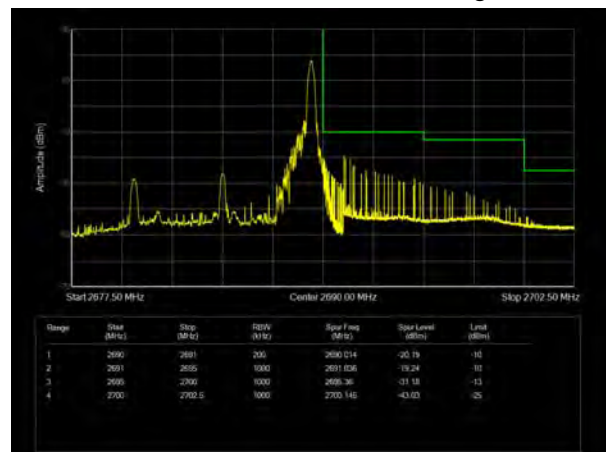
LTE Band 41 QPSK 5MHz CH-High, 100%RB



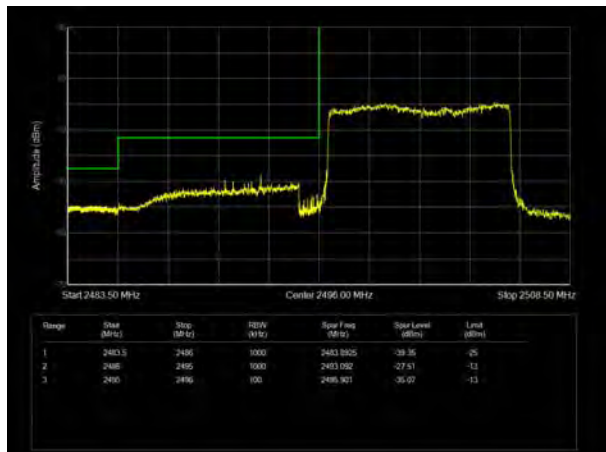
LTE Band 41 QPSK 10MHz CH-Low, 1 RB



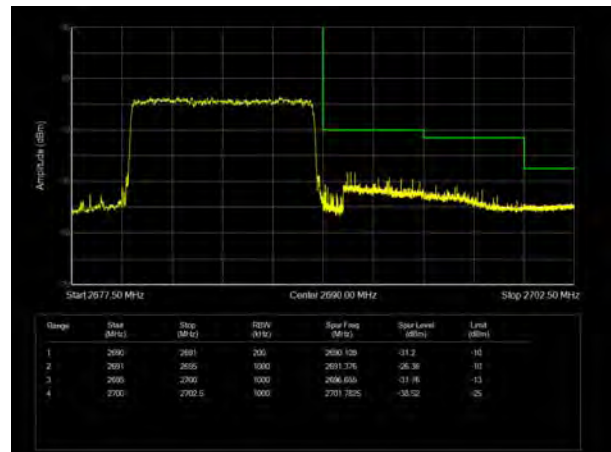
LTE Band 41 QPSK 10MHz CH-High, 1 RB



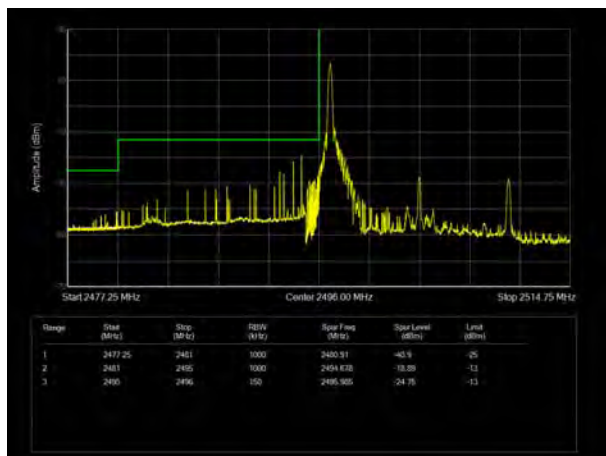
LTE Band 41 QPSK 10MHz CH-Low, 100%RB



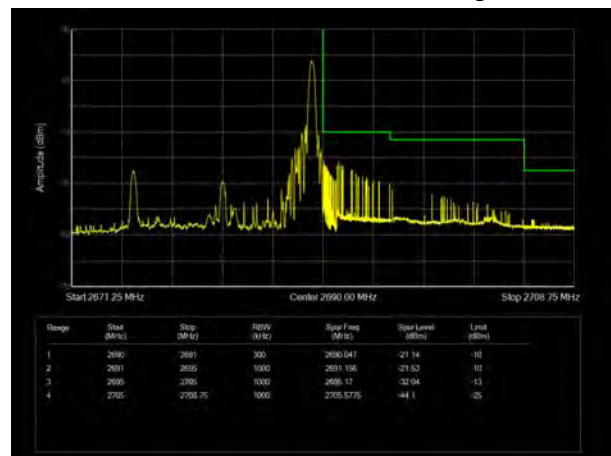
LTE Band 41 QPSK 10MHz CH-High, 100%RB



LTE Band 41 QPSK 15MHz CH-Low, 1 RB



LTE Band 41 QPSK 15MHz CH-High, 1 RB



LTE Band 41 QPSK 15MHz CH-Low, 100%RB

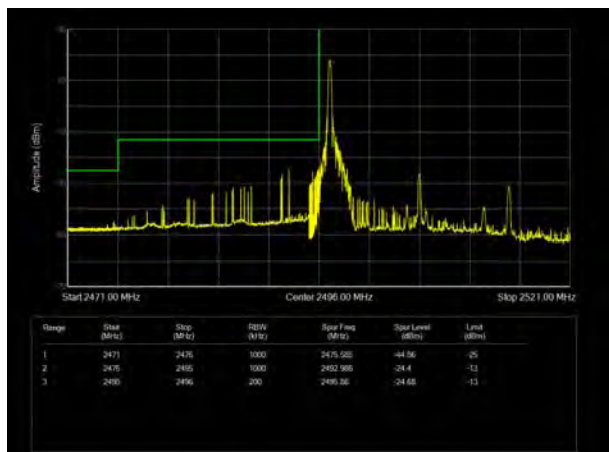


LTE Band 41 QPSK 15MHz CH-High, 100%RB

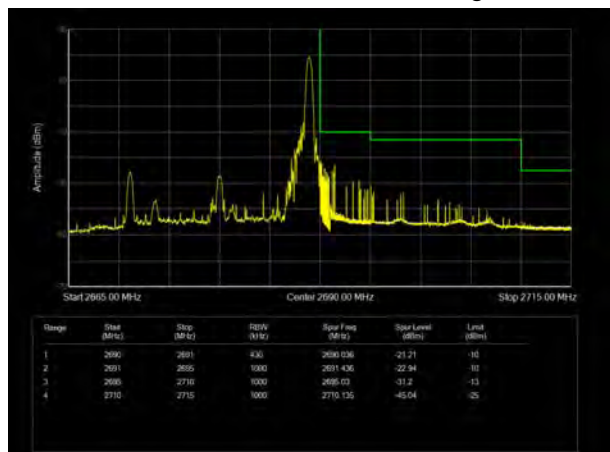




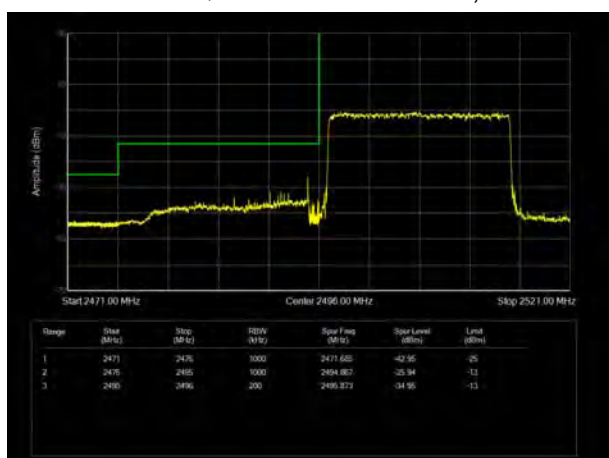
LTE Band 41 QPSK 20MHz CH-Low, 1 RB



LTE Band 41 QPSK 20MHz CH-High, 1 RB



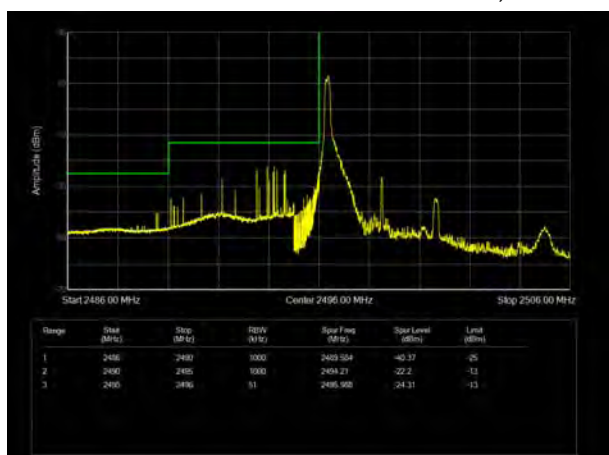
LTE Band 41 QPSK 20MHz CH-Low, 100%RB



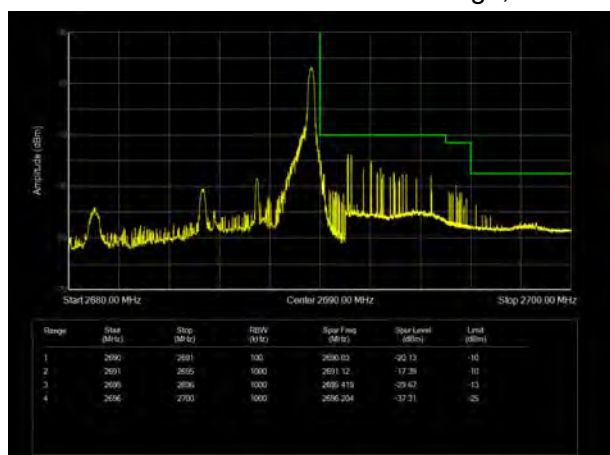
LTE Band 41 QPSK 20MHz CH-High, 100%RB



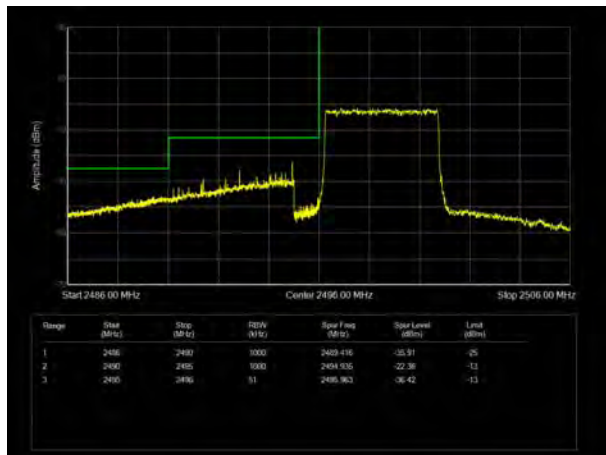
LTE Band 41 16QAM 5MHz CH-Low, 1 RB



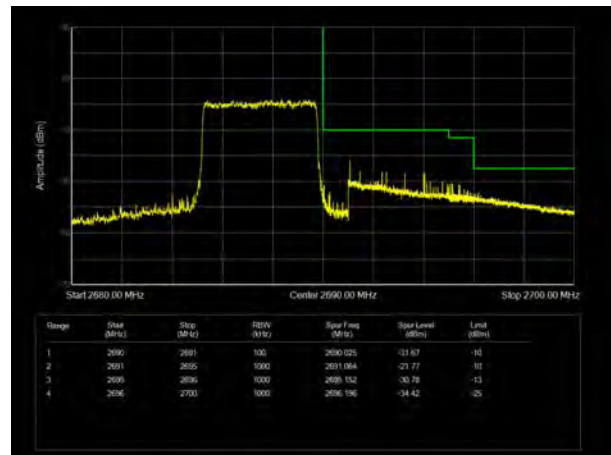
LTE Band 41 16QAM 5MHz CH-High, 1 RB



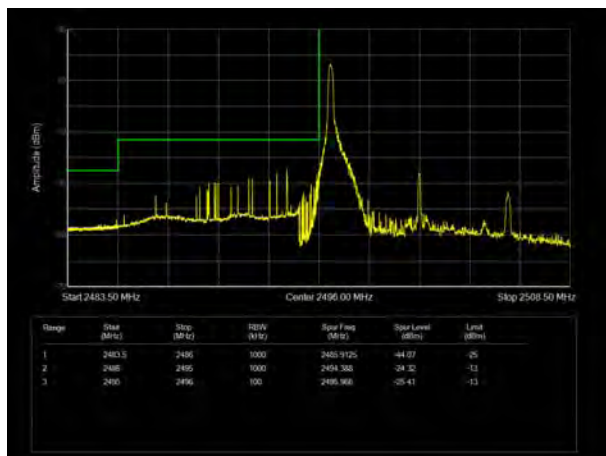
LTE Band 41 16QAM 5MHz CH-Low, 100%RB



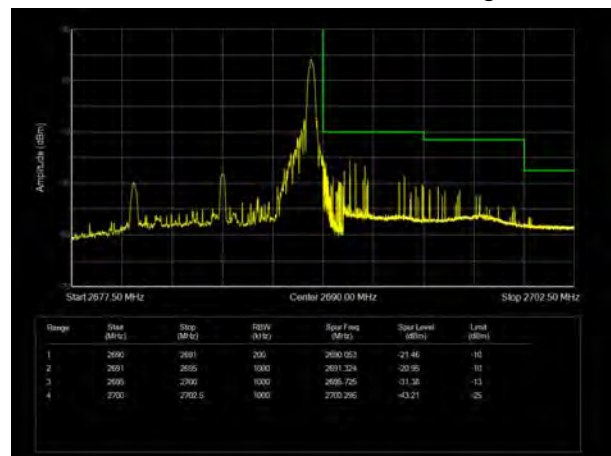
LTE Band 41 16QAM 5MHz CH-High, 100%RB



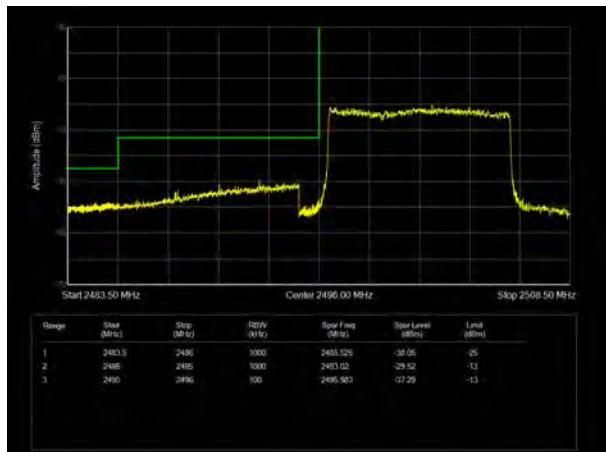
LTE Band 41 16QAM 10MHz CH-Low, 1 RB



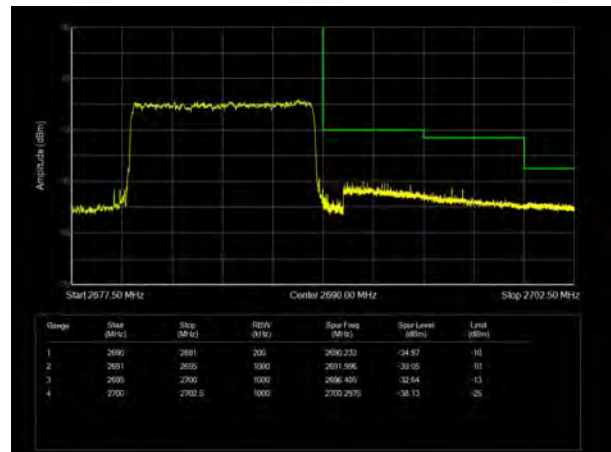
LTE Band 41 16QAM 10MHz CH-High, 1 RB



LTE Band 41 16QAM 10MHz CH-Low, 100%RB

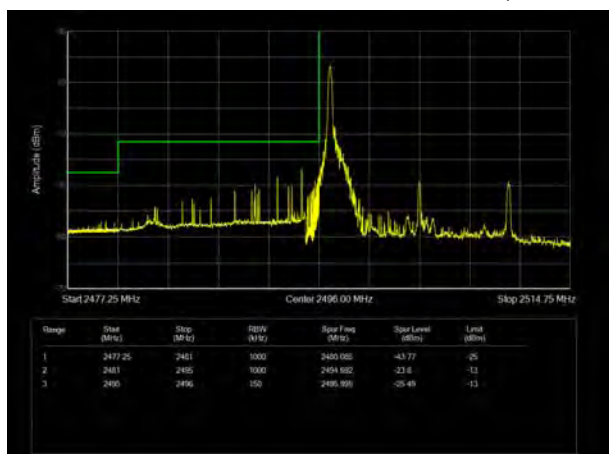


LTE Band 41 16QAM 10MHz CH-High, 100%RB

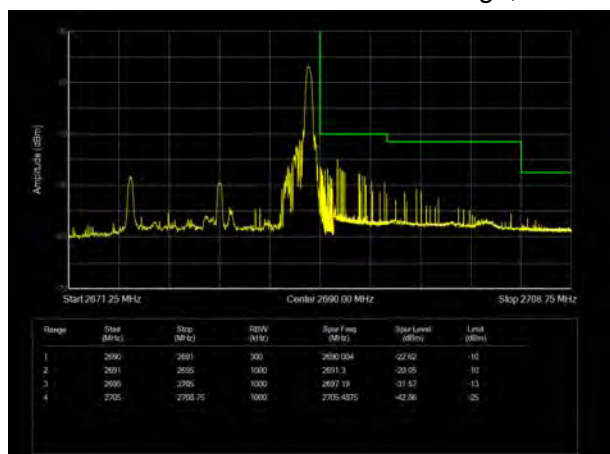




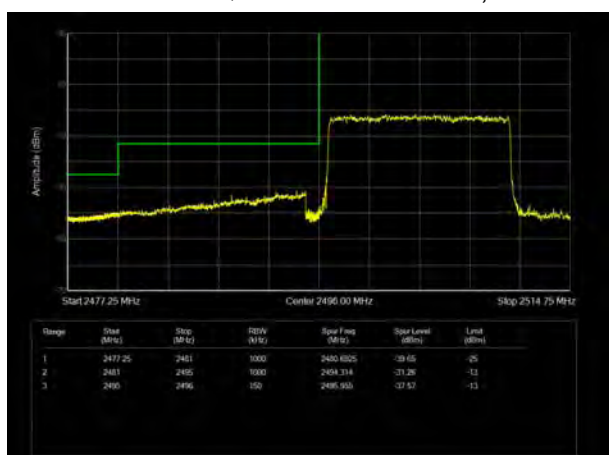
LTE Band 41 16QAM 15MHz CH-Low, 1 RB



LTE Band 41 16QAM 15MHz CH-High, 1 RB



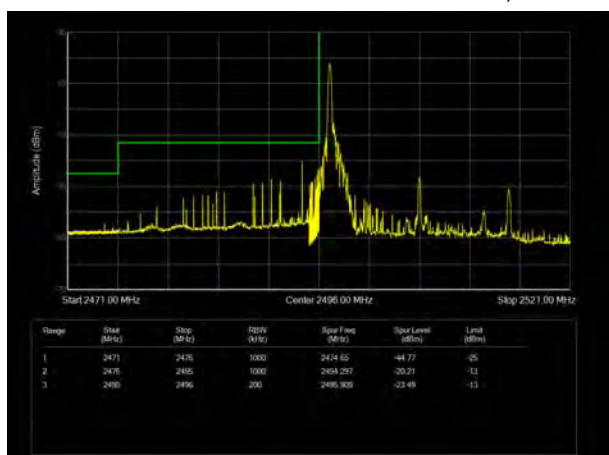
LTE Band 41 16QAM 15MHz CH-Low, 100%RB



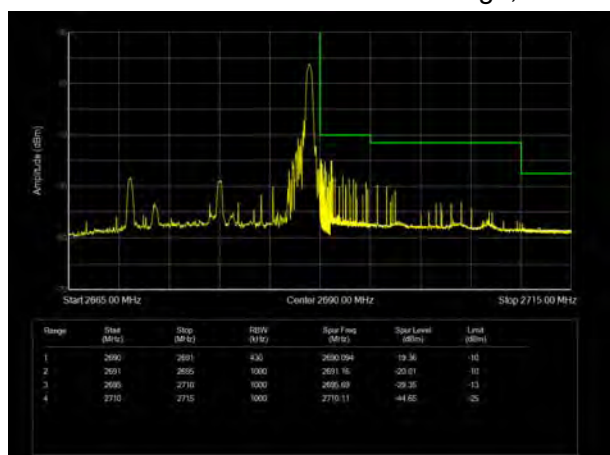
LTE Band 41 16QAM 15MHz CH-High, 100%RB



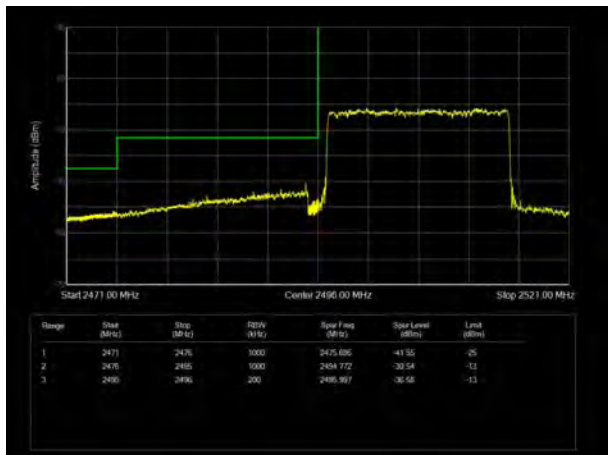
LTE Band 41 16QAM 20MHz CH-Low, RB 1



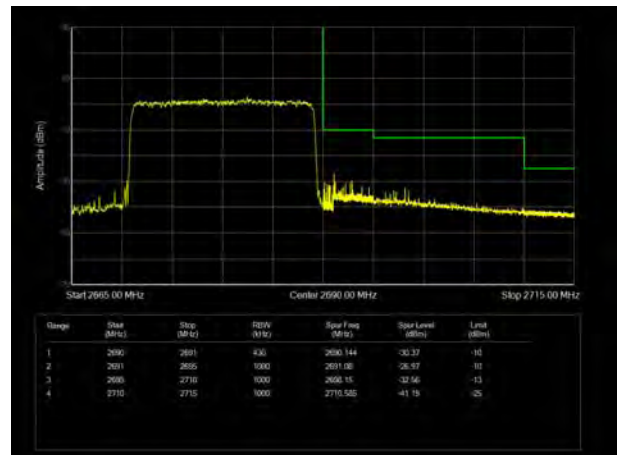
LTE Band 41 16QAM 20MHz CH-High, RB 1



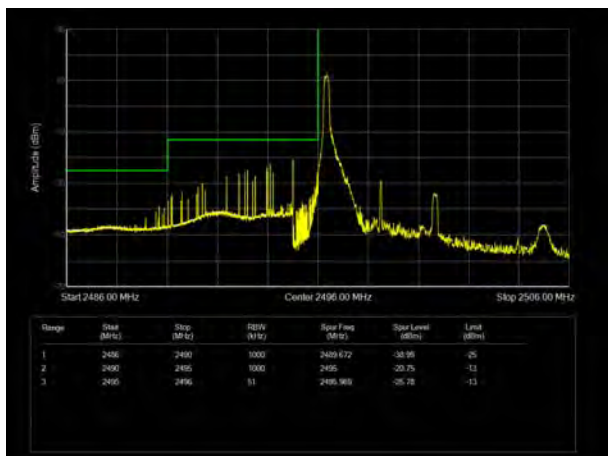
LTE Band 41 16QAM 20MHz CH-Low, 100%RB



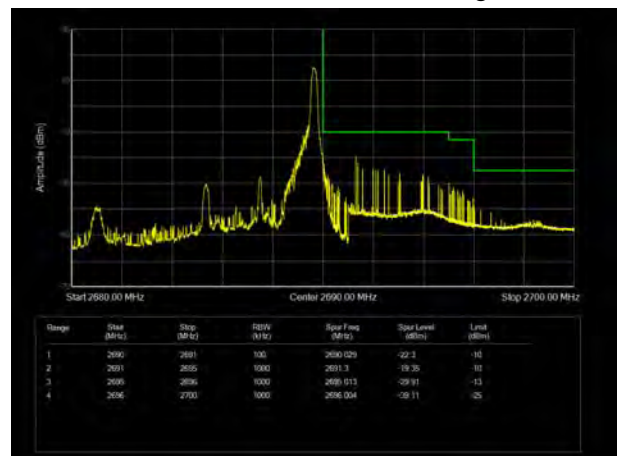
LTE Band 41 16QAM 20MHz CH-High, 100%RB



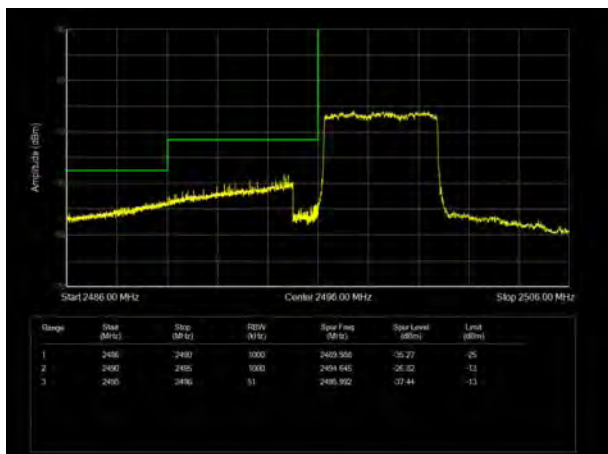
LTE Band 41 64QAM 5MHz CH-Low, 1 RB



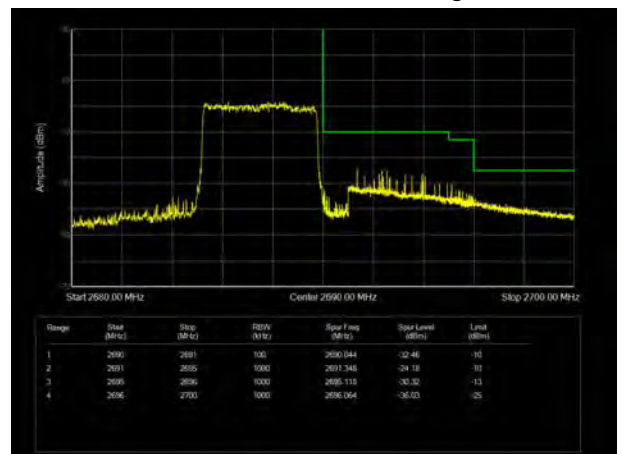
LTE Band 41 64QAM 5MHz CH-High, 1 RB



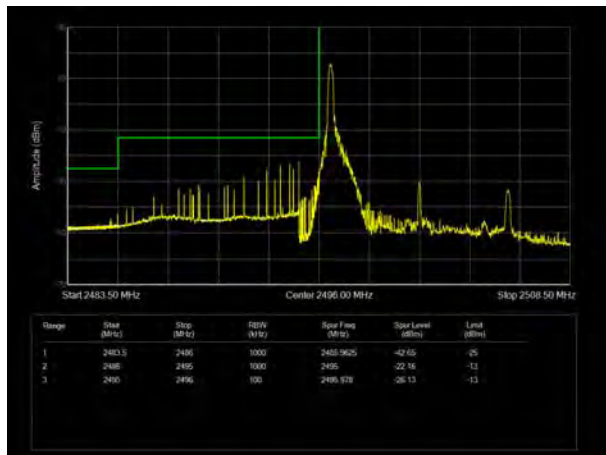
LTE Band 41 64QAM 5MHz CH-Low, 100%RB



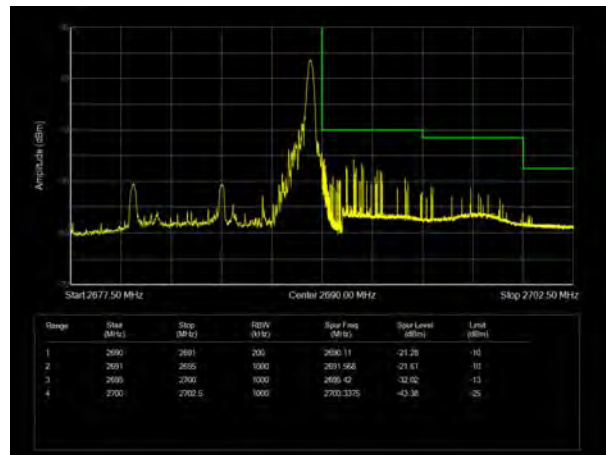
LTE Band 41 64QAM 5MHz CH-High, 100%RB



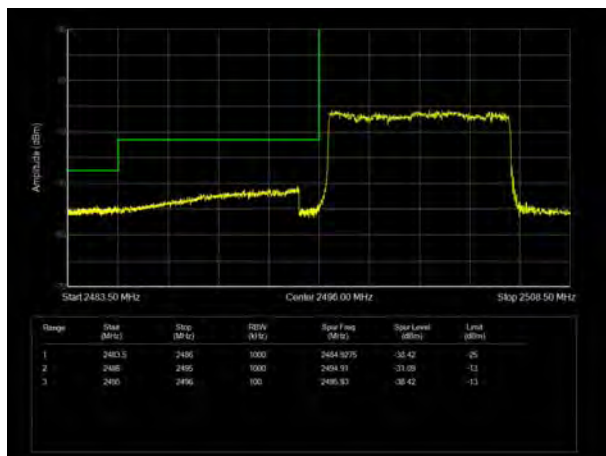
LTE Band 41 64QAM 10MHz CH-Low, 1 RB



LTE Band 41 64QAM 10MHz CH-High, 1 RB



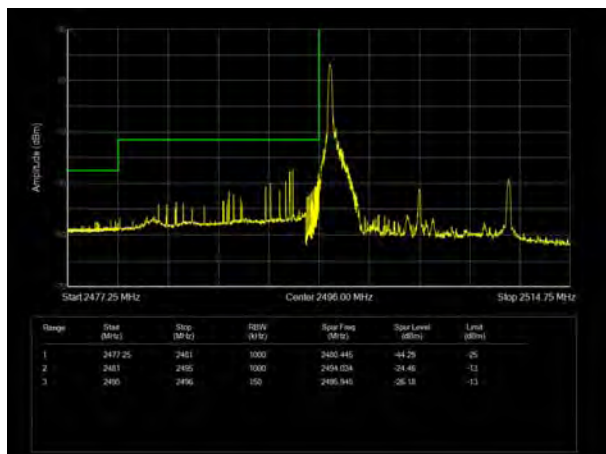
LTE Band 41 64QAM 10MHz CH-Low, 100%RB



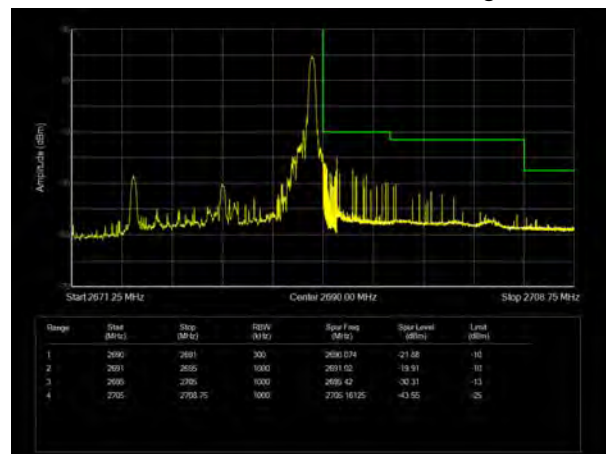
LTE Band 41 64QAM 10MHz CH-High, 100%RB



LTE Band 41 64QAM 15MHz CH-Low, 1 RB



LTE Band 41 64QAM 15MHz CH-High, 1 RB

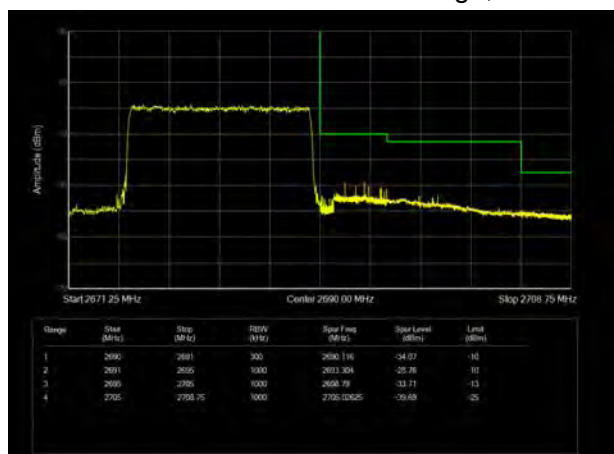




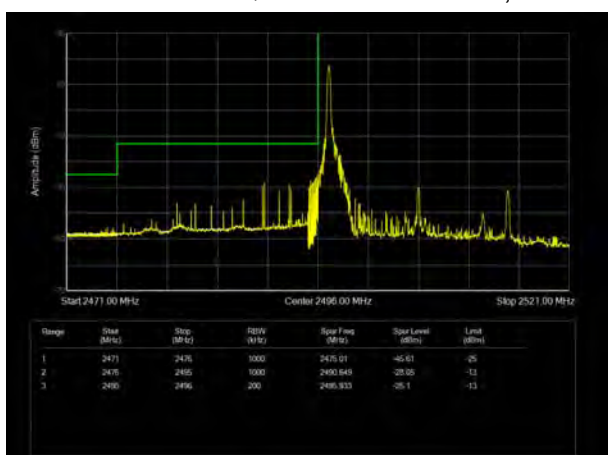
LTE Band 41 64QAM 15MHz CH-Low, 100%RB



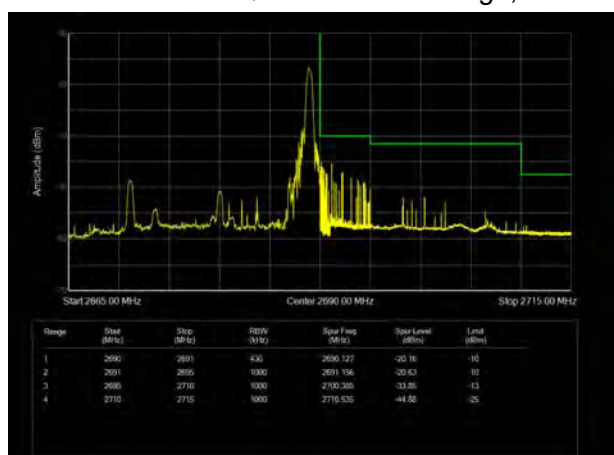
LTE Band 41 64QAM 15MHz CH-High, 100%RB



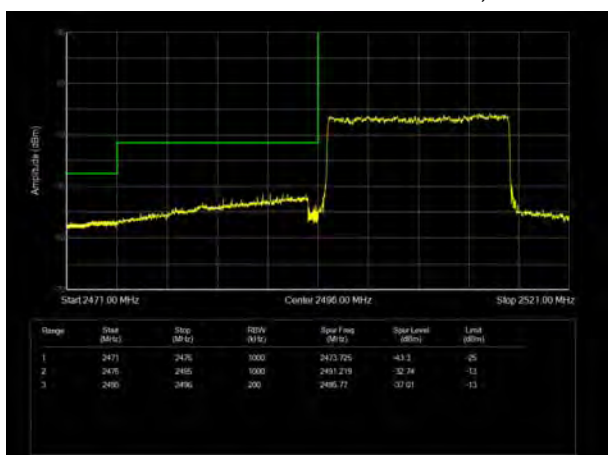
LTE Band 41 64QAM 20MHz CH-Low, 1 RB



LTE Band 41 64QAM 20MHz CH-High, 1 RB



LTE Band 41 64QAM 20MHz CH-Low, 100%RB



LTE Band 41 64QAM 20MHz CH-High, 100%RB



## 6.4 Peak-to-Average Power Ratio (PAPR)

LTE Band 7								
Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	Peak (dBm)	Avg (dBm)	PAPR (dB)	Limit (dB)	Conclusion
QPSK	5	20775	2502.5	26.59	21.54	5.05	≤13	PASS
		21100	2535	26.33	21.33	5.00	≤13	PASS
		21425	2567.5	26.08	21.32	4.76	≤13	PASS
	10	20800	2505	26.62	21.47	5.15	≤13	PASS
		21100	2535	26.34	21.32	5.02	≤13	PASS
		21400	2565	26.23	21.37	4.86	≤13	PASS
	15	20825	2507.5	26.93	21.42	5.51	≤13	PASS
		21100	2535	26.79	21.37	5.42	≤13	PASS
		21375	2562.5	26.70	21.39	5.31	≤13	PASS
	20	20850	2510	26.59	21.28	5.31	≤13	PASS
		21100	2535	26.67	21.28	5.39	≤13	PASS
		21350	2560	26.58	21.31	5.27	≤13	PASS
16QAM	5	20775	2502.5	26.41	20.55	5.86	≤13	PASS
		21100	2535	26.08	20.35	5.73	≤13	PASS
		21425	2567.5	25.92	20.35	5.57	≤13	PASS
	10	20800	2505	26.46	20.49	5.97	≤13	PASS
		21100	2535	26.12	20.33	5.79	≤13	PASS
		21400	2565	26.06	20.37	5.69	≤13	PASS
	15	20825	2507.5	26.44	20.40	6.04	≤13	PASS
		21100	2535	26.33	20.35	5.98	≤13	PASS
		21375	2562.5	26.31	20.37	5.94	≤13	PASS
	20	20850	2510	26.39	20.31	6.08	≤13	PASS
		21100	2535	26.32	20.29	6.03	≤13	PASS
		21350	2560	26.29	20.30	5.99	≤13	PASS
64QAM	5	20775	2502.5	26.06	20.15	5.91	≤13	PASS
		21100	2535	25.74	19.94	5.80	≤13	PASS
		21425	2567.5	25.60	19.93	5.67	≤13	PASS
	10	20800	2505	26.04	20.12	5.92	≤13	PASS
		21100	2535	25.85	19.97	5.88	≤13	PASS





	15	21400	2565	25.75	19.95	5.80	≤13	PASS
		20825	2507.5	26.12	20.03	6.09	≤13	PASS
		21100	2535	26.05	20.00	6.05	≤13	PASS
		21375	2562.5	25.96	19.94	6.02	≤13	PASS
	20	20850	2510	26.01	19.93	6.08	≤13	PASS
		21100	2535	26.03	19.94	6.09	≤13	PASS
		21350	2560	25.96	19.90	6.06	≤13	PASS

LTE Band 38								
Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	Peak (dBm)	Avg (dBm)	PAPR (dB)	Limit (dB)	Conclusion
QPSK	5	37775	2572.5	26.36	16.94	9.42	≤13	PASS
		38000	2595	26.64	18.48	8.16	≤13	PASS
		38225	2617.5	26.73	17.37	9.36	≤13	PASS
	10	37800	2575	26.36	16.93	9.43	≤13	PASS
		38000	2595	26.52	16.90	9.62	≤13	PASS
		38200	2615	26.57	16.24	10.33	≤13	PASS
	15	37825	2577.5	26.70	17.00	9.70	≤13	PASS
		38000	2595	26.91	17.62	9.29	≤13	PASS
		38175	2612.5	27.01	17.29	9.72	≤13	PASS
	20	37850	2580	26.34	17.65	8.69	≤13	PASS
		38000	2595	26.52	17.45	9.07	≤13	PASS
		38150	2610	26.70	17.73	8.97	≤13	PASS
16QAM	5	37775	2572.5	25.86	15.59	10.27	≤13	PASS
		38000	2595	25.99	14.72	11.27	≤13	PASS
		38225	2617.5	26.30	15.66	10.64	≤13	PASS
	10	37800	2575	26.18	17.20	8.98	≤13	PASS
		38000	2595	26.18	15.92	10.26	≤13	PASS
		38200	2615	26.48	17.05	9.43	≤13	PASS
	15	37825	2577.5	26.15	15.67	10.48	≤13	PASS
		38000	2595	26.43	17.14	9.29	≤13	PASS
		38175	2612.5	26.33	13.96	12.37	≤13	PASS
	20	37850	2580	26.05	16.29	9.76	≤13	PASS
		38000	2595	26.13	16.13	10.00	≤13	PASS
		38150	2610	26.50	17.29	9.21	≤13	PASS



64QAM	5	37775	2572.5	25.44	16.38	9.06	≤13	PASS
		38000	2595	25.74	16.18	9.56	≤13	PASS
		38225	2617.5	25.93	16.52	9.41	≤13	PASS
	10	37800	2575	25.46	15.56	9.90	≤13	PASS
		38000	2595	25.77	16.11	9.66	≤13	PASS
		38200	2615	25.92	16.36	9.56	≤13	PASS
	15	37825	2577.5	25.57	14.98	10.59	≤13	PASS
		38000	2595	25.77	15.14	10.63	≤13	PASS
		38175	2612.5	26.12	16.94	9.18	≤13	PASS
	20	37850	2580	25.34	14.40	10.94	≤13	PASS
		38000	2595	25.63	15.27	10.36	≤13	PASS
		38150	2610	26.05	17.87	8.18	≤13	PASS

LTE Band 41								
Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	Peak (dBm)	Avg (dBm)	PAPR (dB)	Limit (dB)	Conclusion
QPSK	5	39675	2498.5	26.50	16.65	9.85	≤13	PASS
		40620	2593	26.51	16.99	9.52	≤13	PASS
		41565	2687.5	26.69	18.66	8.03	≤13	PASS
	10	39700	2501	26.38	17.07	9.31	≤13	PASS
		40620	2593	26.38	17.46	8.92	≤13	PASS
		41540	2685	26.60	17.46	9.14	≤13	PASS
	15	39725	2503.5	26.72	17.51	9.21	≤13	PASS
		40620	2593	26.84	18.11	8.73	≤13	PASS
		41515	2682.5	26.96	17.68	9.28	≤13	PASS
	20	39750	2506	26.23	16.35	9.88	≤13	PASS
		40620	2593	26.56	19.03	7.53	≤13	PASS
		41490	2680	26.57	16.12	10.45	≤13	PASS
16QAM	5	39675	2498.5	26.24	17.03	9.21	≤13	PASS
		40620	2593	26.02	15.03	10.99	≤13	PASS
		41565	2687.5	26.25	16.02	10.23	≤13	PASS
	10	39700	2501	25.79	13.67	12.12	≤13	PASS
		40620	2593	26.07	16.49	9.58	≤13	PASS
		41540	2685	26.40	17.13	9.27	≤13	PASS
	15	39725	2503.5	26.28	17.15	9.13	≤13	PASS



		40620	2593	26.13	15.50	10.63	≤13	PASS
		41515	2682.5	26.36	15.57	10.79	≤13	PASS
	20	39750	2506	26.15	17.34	8.81	≤13	PASS
		40620	2593	26.13	17.13	9.00	≤13	PASS
		41490	2680	26.28	16.10	10.18	≤13	PASS
64QAM	5	39675	2498.5	23.57	14.16	9.41	≤13	PASS
		40620	2593	25.58	14.98	10.60	≤13	PASS
		41565	2687.5	25.66	14.71	10.95	≤13	PASS
	10	39700	2501	25.49	16.20	9.29	≤13	PASS
		40620	2593	25.57	16.17	9.40	≤13	PASS
		41540	2685	25.64	15.23	10.41	≤13	PASS
	15	39725	2503.5	25.45	14.92	10.53	≤13	PASS
		40620	2593	25.78	16.29	9.49	≤13	PASS
		41515	2682.5	25.93	15.64	10.29	≤13	PASS
	20	39750	2506	25.26	14.96	10.30	≤13	PASS
		40620	2593	25.50	15.21	10.29	≤13	PASS
		41490	2680	25.63	15.05	10.58	≤13	PASS



## 6.5 Frequency Stability

LTE Band 7								
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	5MHz							
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	
Normal (25℃)	Normal	1.19	3.37	15.81	0.00047	0.00133	0.00624	PASS
Extreme (50℃)		15.80	9.83	15.28	0.00623	0.00388	0.00603	PASS
Extreme (40℃)		7.50	14.71	10.91	0.00296	0.00580	0.00430	PASS
Extreme (30℃)		2.20	10.19	10.68	0.00087	0.00402	0.00421	PASS
Extreme (20℃)		7.13	7.66	2.57	0.00281	0.00302	0.00101	PASS
Extreme (10℃)		16.53	10.34	3.01	0.00652	0.00408	0.00119	PASS
Extreme (0℃)		6.19	7.94	15.53	0.00244	0.00313	0.00612	PASS
Extreme (-10℃)		4.06	16.21	3.31	0.00160	0.00640	0.00130	PASS
Extreme (-20℃)		1.51	5.85	5.82	0.00059	0.00231	0.00230	PASS
Extreme (-30℃)		8.66	17.65	17.18	0.00342	0.00696	0.00678	PASS
25℃	LV	6.71	10.96	14.06	0.00265	0.00432	0.00555	PASS
	HV	3.37	11.46	12.27	0.00133	0.00452	0.00484	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	10MHz							
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	
Normal (25℃)	Normal	14.35	13.68	7.40	0.00566	0.00540	0.00292	PASS
Extreme (50℃)		3.40	7.85	9.32	0.00134	0.00310	0.00368	PASS
Extreme (40℃)		16.59	12.85	10.52	0.00655	0.00507	0.00415	PASS
Extreme (30℃)		15.11	17.57	5.89	0.00596	0.00693	0.00232	PASS
Extreme (20℃)		9.35	2.05	4.96	0.00369	0.00081	0.00196	PASS
Extreme (10℃)		5.29	3.17	15.31	0.00209	0.00125	0.00604	PASS
Extreme (0℃)		2.27	11.86	4.71	0.00090	0.00468	0.00186	PASS
Extreme (-10℃)		6.12	9.38	15.10	0.00242	0.00370	0.00596	PASS
Extreme (-20℃)		4.19	5.96	6.17	0.00165	0.00235	0.00243	PASS
Extreme (-30℃)		3.80	12.35	3.51	0.00150	0.00487	0.00138	PASS
25℃	LV	4.23	9.56	11.85	0.00167	0.00377	0.00467	PASS
	HV	7.47	16.04	3.01	0.00295	0.00633	0.00119	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	15MHz							
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	



Normal (25℃)	Normal	9.05	17.39	3.71	0.00357	0.00686	0.00146	PASS
Extreme (50℃)		2.72	1.06	16.38	0.00107	0.00042	0.00646	PASS
Extreme (40℃)		6.21	11.21	10.81	0.00245	0.00442	0.00427	PASS
Extreme (30℃)		10.43	10.40	14.03	0.00411	0.00410	0.00554	PASS
Extreme (20℃)		4.83	13.47	6.55	0.00191	0.00531	0.00258	PASS
Extreme (10℃)		4.09	17.31	12.51	0.00161	0.00683	0.00494	PASS
Extreme (0℃)		11.33	10.35	6.62	0.00447	0.00408	0.00261	PASS
Extreme (-10℃)		10.89	15.14	5.43	0.00430	0.00597	0.00214	PASS
Extreme (-20℃)		14.08	7.33	7.12	0.00556	0.00289	0.00281	PASS
Extreme (-30℃)		15.37	13.55	9.83	0.00606	0.00535	0.00388	PASS
25℃	LV	6.92	11.38	11.18	0.00273	0.00449	0.00441	PASS
	HV	2.04	10.77	1.66	0.00081	0.00425	0.00066	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	20MHz							
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	
Normal (25℃)	Normal	11.69	3.65	13.23	0.00461	0.00144	0.00522	
Extreme (50℃)		5.20	16.35	5.36	0.00205	0.00645	0.00212	
Extreme (40℃)		7.76	9.35	2.68	0.00306	0.00369	0.00106	
Extreme (30℃)		1.82	6.77	2.67	0.00072	0.00267	0.00105	
Extreme (20℃)		14.84	11.17	11.18	0.00586	0.00441	0.00441	
Extreme (10℃)		1.12	12.92	14.14	0.00044	0.00510	0.00558	
Extreme (0℃)		1.44	2.06	3.24	0.00057	0.00081	0.00128	
Extreme (-10℃)		3.19	4.05	11.17	0.00126	0.00160	0.00441	
Extreme (-20℃)		10.60	12.29	17.13	0.00418	0.00485	0.00676	
Extreme (-30℃)		15.61	1.06	15.76	0.00616	0.00042	0.00622	
25℃	LV	11.76	11.69	9.59	0.00464	0.00461	0.00378	PASS
	HV	7.07	17.70	6.50	0.00279	0.00698	0.00256	PASS

LTE Band 38								
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	5MHz							
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	
Normal (25℃)	Normal	8.74	15.23	15.45	0.00337	0.00587	0.00595	
Extreme (50℃)		17.38	11.62	7.47	0.00670	0.00448	0.00288	
Extreme (40℃)		13.56	15.55	13.23	0.00523	0.00599	0.00510	
Extreme (30℃)		3.81	2.20	3.00	0.00147	0.00085	0.00115	
Extreme (20℃)		4.66	7.93	2.33	0.00180	0.00305	0.00090	
Extreme (10℃)		3.77	5.36	2.70	0.00145	0.00207	0.00104	
Extreme (0℃)		1.71	9.88	11.72	0.00066	0.00381	0.00452	





Extreme (-10℃)		10.99	17.24	1.56	0.00423	0.00664	0.00060	PASS
Extreme (-20℃)		7.55	10.70	2.76	0.00291	0.00412	0.00107	PASS
Extreme (-30℃)		5.19	4.54	3.11	0.00200	0.00175	0.00120	PASS
25℃	LV	2.76	4.17	5.09	0.00106	0.00161	0.00196	PASS
	HV	9.62	5.70	6.01	0.00371	0.00220	0.00232	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	10MHz							
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	
Normal (25℃)	Normal	17.17	15.75	15.87	0.00661	0.00607	0.00612	PASS
Extreme (50℃)		12.41	13.75	15.46	0.00478	0.00530	0.00596	PASS
Extreme (40℃)		12.93	13.83	17.47	0.00498	0.00533	0.00673	PASS
Extreme (30℃)		4.02	8.16	7.18	0.00155	0.00314	0.00277	PASS
Extreme (20℃)		17.34	16.64	1.14	0.00668	0.00641	0.00044	PASS
Extreme (10℃)		9.54	7.88	16.29	0.00368	0.00304	0.00628	PASS
Extreme (0℃)		8.77	8.74	5.56	0.00338	0.00337	0.00214	PASS
Extreme (-10℃)		12.32	11.14	5.48	0.00475	0.00429	0.00211	PASS
Extreme (-20℃)		12.99	15.75	1.40	0.00500	0.00607	0.00054	PASS
Extreme (-30℃)		6.76	12.31	2.68	0.00260	0.00474	0.00103	PASS
25℃	LV	1.67	13.66	3.24	0.00064	0.00526	0.00125	PASS
	HV	1.12	11.62	12.04	0.00043	0.00448	0.00464	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	15MHz							
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	
Normal (25℃)	Normal	10.32	2.07	5.68	0.00398	0.00080	0.00219	PASS
Extreme (50℃)		3.32	1.39	1.06	0.00128	0.00054	0.00041	PASS
Extreme (40℃)		17.41	6.88	14.15	0.00671	0.00265	0.00545	PASS
Extreme (30℃)		13.14	14.10	5.00	0.00506	0.00543	0.00193	PASS
Extreme (20℃)		7.58	12.46	6.83	0.00292	0.00480	0.00263	PASS
Extreme (10℃)		6.00	1.46	4.57	0.00231	0.00056	0.00176	PASS
Extreme (0℃)		6.53	11.58	5.86	0.00252	0.00446	0.00226	PASS
Extreme (-10℃)		2.66	12.38	1.09	0.00102	0.00477	0.00042	PASS
Extreme (-20℃)		14.29	10.34	13.42	0.00551	0.00399	0.00517	PASS
Extreme (-30℃)		8.93	3.84	13.22	0.00344	0.00148	0.00509	PASS
25℃	LV	3.27	8.87	16.44	0.00126	0.00342	0.00634	PASS
	HV	7.58	14.41	14.08	0.00292	0.00555	0.00543	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	20MHz							
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	



Normal (25℃)	Normal	12.83	8.75	12.98	0.00494	0.00337	0.00500	PASS
Extreme (50℃)		14.01	17.72	6.18	0.00540	0.00683	0.00238	PASS
Extreme (40℃)		15.53	16.46	4.12	0.00598	0.00634	0.00159	PASS
Extreme (30℃)		2.44	8.31	7.13	0.00094	0.00320	0.00275	PASS
Extreme (20℃)		14.01	17.32	6.56	0.00540	0.00668	0.00253	PASS
Extreme (10℃)		15.93	2.96	9.16	0.00614	0.00114	0.00353	PASS
Extreme (0℃)		6.79	2.33	12.37	0.00262	0.00090	0.00477	PASS
Extreme (-10℃)		6.41	8.22	10.07	0.00247	0.00317	0.00388	PASS
Extreme (-20℃)		1.60	13.90	6.19	0.00062	0.00536	0.00238	PASS
Extreme (-30℃)		9.72	13.00	2.26	0.00375	0.00501	0.00087	PASS
25℃	LV	8.79	5.32	9.20	0.00339	0.00205	0.00355	PASS
	HV	3.68	11.52	12.88	0.00142	0.00444	0.00496	PASS

LTE Band 41								
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	5MHz							
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	
Normal (25℃)	Normal	3.32	1.77	11.40	0.00128	0.00068	0.00440	PASS
Extreme (50℃)		10.10	15.20	12.54	0.00390	0.00586	0.00483	PASS
Extreme (40℃)		17.38	10.36	3.07	0.00670	0.00399	0.00118	PASS
Extreme (30℃)		14.22	15.42	8.93	0.00548	0.00595	0.00344	PASS
Extreme (20℃)		4.83	14.55	15.66	0.00186	0.00561	0.00604	PASS
Extreme (10℃)		1.77	14.28	7.68	0.00068	0.00551	0.00296	PASS
Extreme (0℃)		13.54	1.27	5.16	0.00522	0.00049	0.00199	PASS
Extreme (-10℃)		10.82	3.16	10.22	0.00417	0.00122	0.00394	PASS
Extreme (-20℃)		7.22	5.46	5.61	0.00279	0.00210	0.00216	PASS
Extreme (-30℃)		16.66	9.13	1.83	0.00642	0.00352	0.00071	PASS
25℃	LV	2.50	5.77	3.46	0.00096	0.00223	0.00133	PASS
	HV	10.85	16.53	13.10	0.00418	0.00638	0.00505	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	10MHz							
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	
Normal (25℃)	Normal	2.98	13.65	16.70	0.00115	0.00526	0.00644	PASS
Extreme (50℃)		3.83	1.63	4.75	0.00148	0.00063	0.00183	PASS
Extreme (40℃)		1.56	16.84	13.84	0.00060	0.00649	0.00534	PASS
Extreme (30℃)		16.92	11.52	9.65	0.00653	0.00444	0.00372	PASS
Extreme (20℃)		16.12	1.95	3.19	0.00622	0.00075	0.00123	PASS
Extreme (10℃)		7.36	5.19	12.84	0.00284	0.00200	0.00495	PASS
Extreme (0℃)		9.77	11.08	8.27	0.00377	0.00427	0.00319	PASS



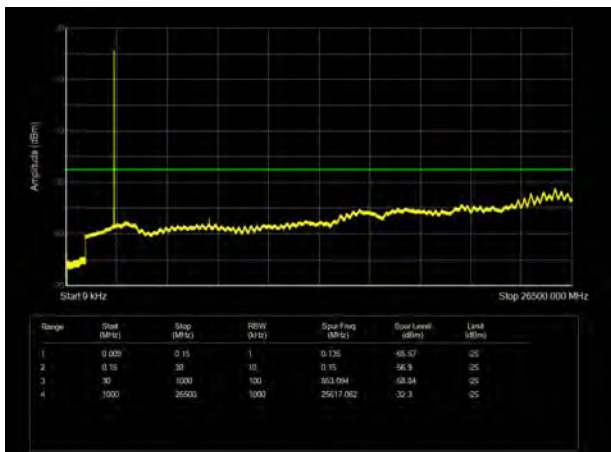
Extreme (-10℃)		14.83	9.44	16.51	0.00572	0.00364	0.00637	PASS
Extreme (-20℃)		16.73	8.55	14.63	0.00645	0.00330	0.00564	PASS
Extreme (-30℃)		8.95	6.95	9.61	0.00345	0.00268	0.00371	PASS
25℃	LV	5.58	12.03	3.24	0.00215	0.00464	0.00125	PASS
	HV	7.81	11.99	9.93	0.00301	0.00462	0.00383	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	15MHz							
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	
Normal (25℃)	Normal	12.35	6.43	10.11	0.00476	0.00248	0.00390	PASS
Extreme (50℃)		7.55	5.43	7.59	0.00291	0.00210	0.00293	PASS
Extreme (40℃)		12.14	5.11	11.66	0.00468	0.00197	0.00450	PASS
Extreme (30℃)		4.09	7.14	17.47	0.00158	0.00275	0.00674	PASS
Extreme (20℃)		11.22	1.12	14.35	0.00433	0.00043	0.00553	PASS
Extreme (10℃)		12.89	13.16	2.65	0.00497	0.00508	0.00102	PASS
Extreme (0℃)		3.92	7.78	4.79	0.00151	0.00300	0.00185	PASS
Extreme (-10℃)		5.53	8.92	16.07	0.00213	0.00344	0.00620	PASS
Extreme (-20℃)		1.21	12.46	13.69	0.00047	0.00480	0.00528	PASS
Extreme (-30℃)		17.19	4.35	13.40	0.00663	0.00168	0.00517	PASS
25℃	LV	6.52	16.60	13.25	0.00251	0.00640	0.00511	PASS
	HV	13.89	17.74	13.86	0.00536	0.00684	0.00535	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	20MHz							
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	
Normal (25℃)	Normal	10.72	8.13	5.78	0.00413	0.00314	0.00223	PASS
Extreme (50℃)		4.17	1.99	1.17	0.00161	0.00077	0.00045	PASS
Extreme (40℃)		15.20	7.14	12.15	0.00586	0.00275	0.00468	PASS
Extreme (30℃)		8.60	14.93	17.53	0.00332	0.00576	0.00676	PASS
Extreme (20℃)		10.06	10.25	17.52	0.00388	0.00395	0.00676	PASS
Extreme (10℃)		1.09	8.07	13.76	0.00042	0.00311	0.00531	PASS
Extreme (0℃)		2.00	2.42	11.22	0.00077	0.00093	0.00433	PASS
Extreme (-10℃)		6.58	13.17	14.56	0.00254	0.00508	0.00561	PASS
Extreme (-20℃)		8.43	15.94	4.51	0.00325	0.00615	0.00174	PASS
Extreme (-30℃)		4.81	12.24	3.02	0.00186	0.00472	0.00117	PASS
25℃	LV	1.86	17.26	17.57	0.00072	0.00665	0.00678	PASS
	HV	17.11	2.18	5.81	0.00660	0.00084	0.00224	PASS

## 6.6 Spurious Emissions at Antenna Terminals

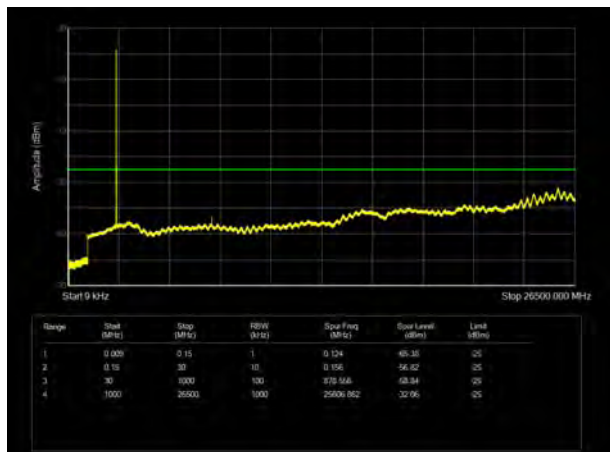
Sweep the whole frequency band through the range from 9kHz to the 10th harmonic of the carrier, the emissions more than 20 dB below the limit are not reported.

The signal beyond the limit is carrier.

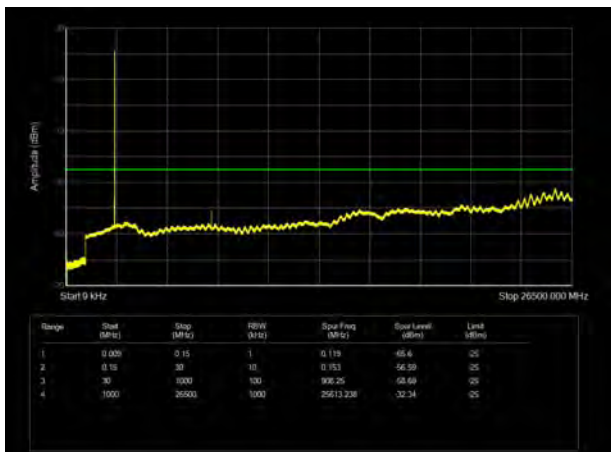
LTE Band 7 5MHz CH- Low 9kHz~26.5GHz



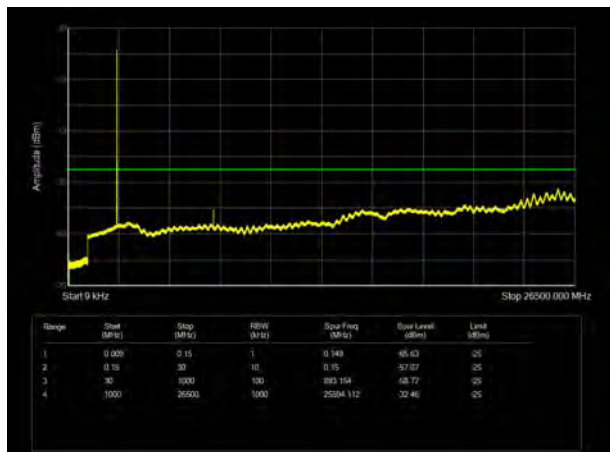
LTE Band 7 10MHz CH-Low 9kHz~26.5GHz



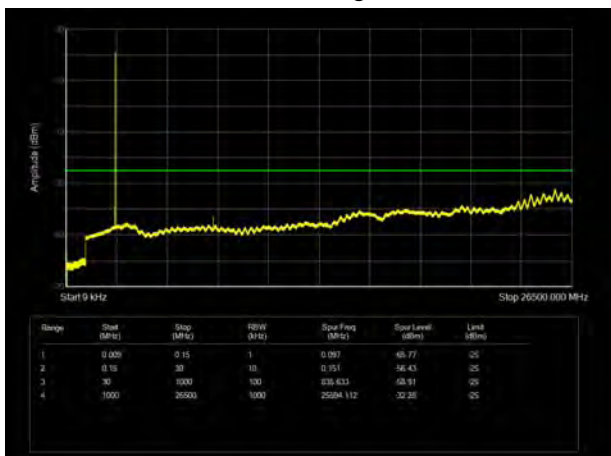
LTE Band 7 5MHz CH- Middle 9kHz~26.5GHz



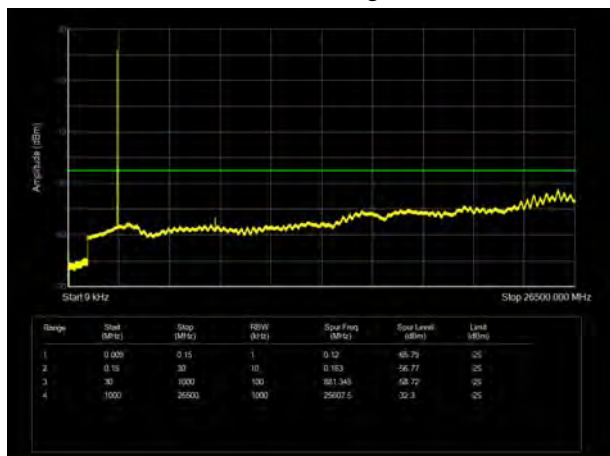
LTE Band 7 10MHz CH- Middle 9kHz~26.5GHz



LTE Band 7 5MHz CH-High 9kHz~26.5GHz

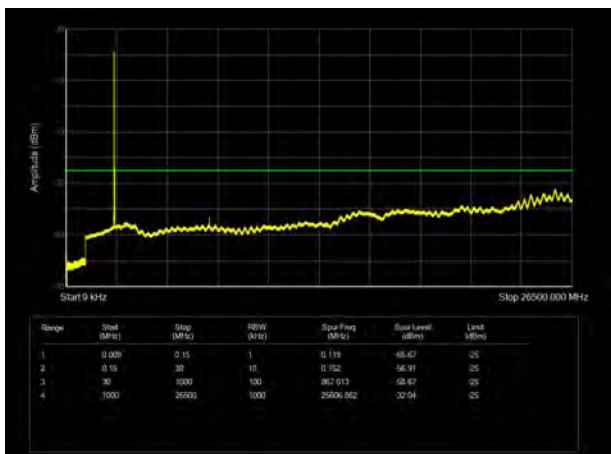


LTE Band 7 10MHz CH- High 9kHz~26.5GHz

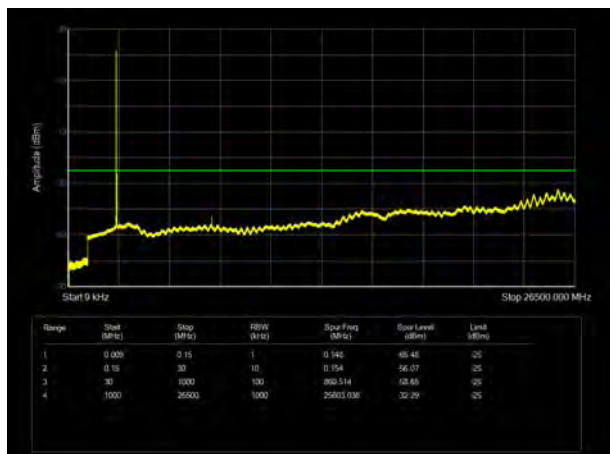




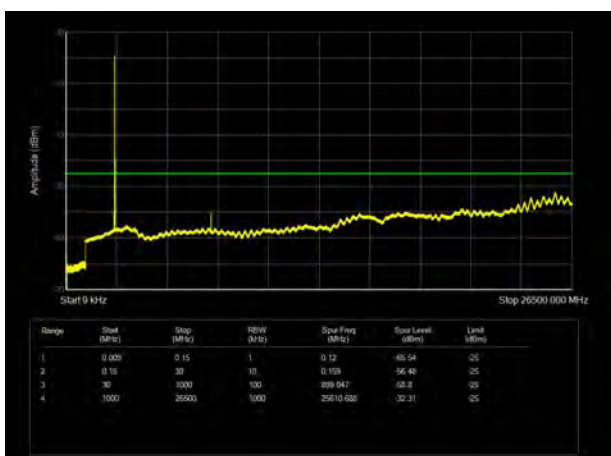
LTE Band 7 15MHz CH- Low 9kHz~26.5GHz



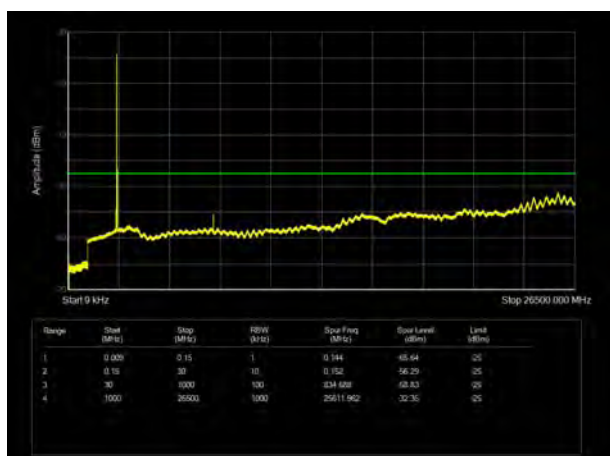
LTE Band 7 20MHz CH-Low 9kHz~26.5GHz



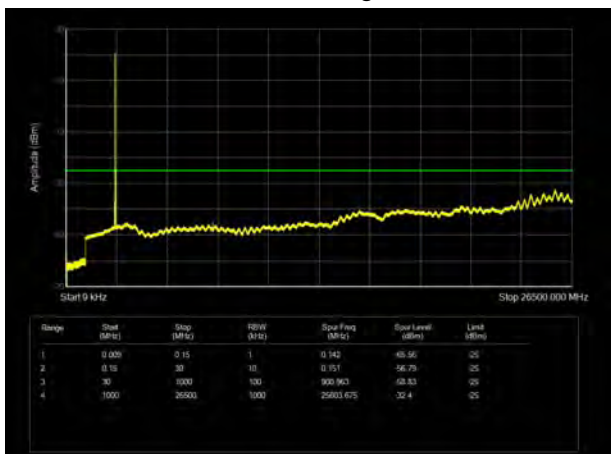
LTE Band 7 15MHz CH- Middle 9kHz~26.5GHz



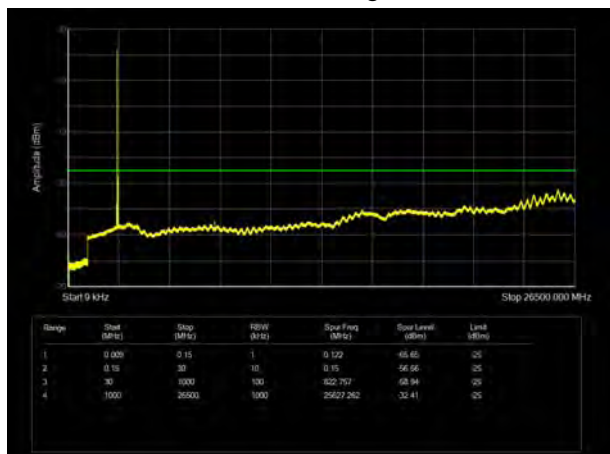
LTE Band 7 20MHz CH- Middle 9kHz~26.5GHz



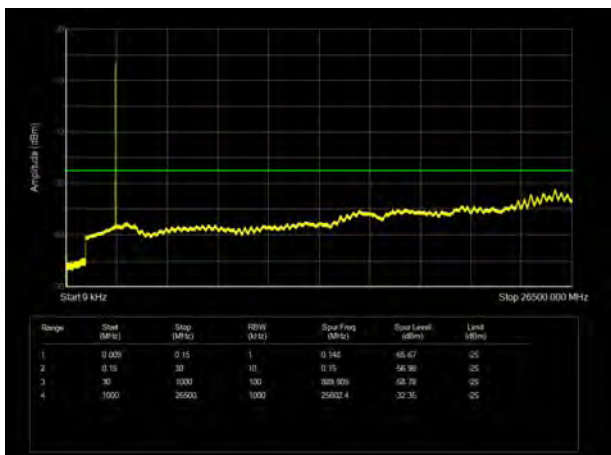
LTE Band 7 15MHz CH-High 9kHz~26.5GHz



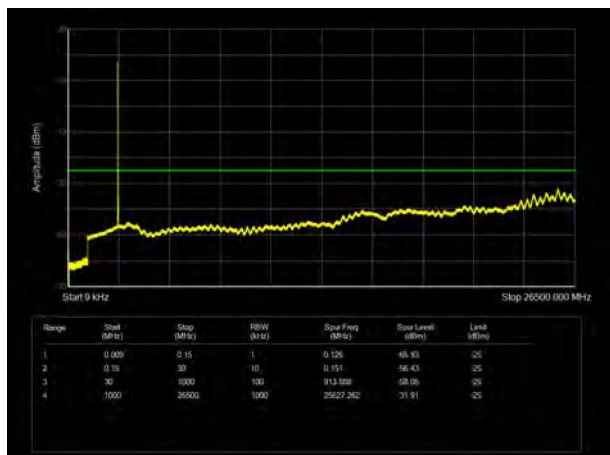
LTE Band 7 20MHz CH- High 9kHz~26.5GHz



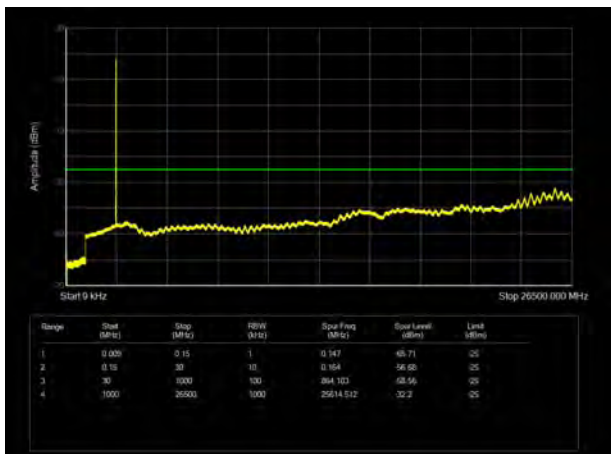
LTE Band 38 5MHz CH- Low 9kHz~26.5GHz



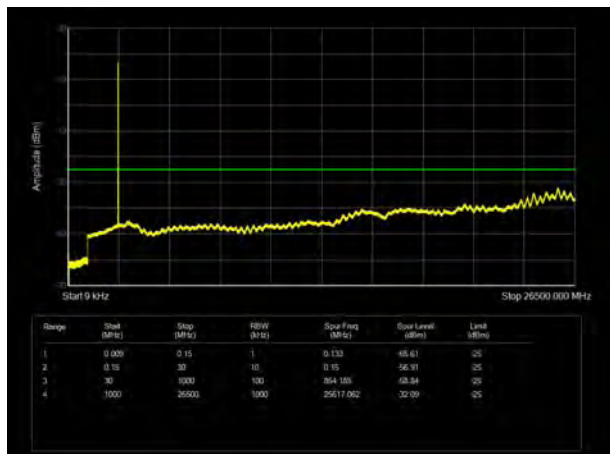
LTE Band 38 10MHz CH- Low 9kHz~26.5GHz



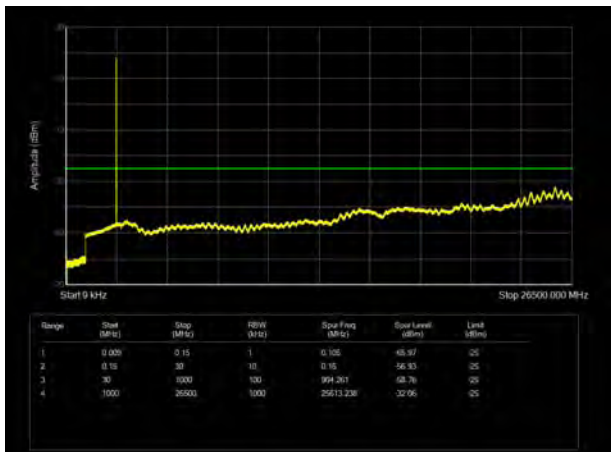
LTE Band 38 5MHz CH- Middle 9kHz~26.5GHz



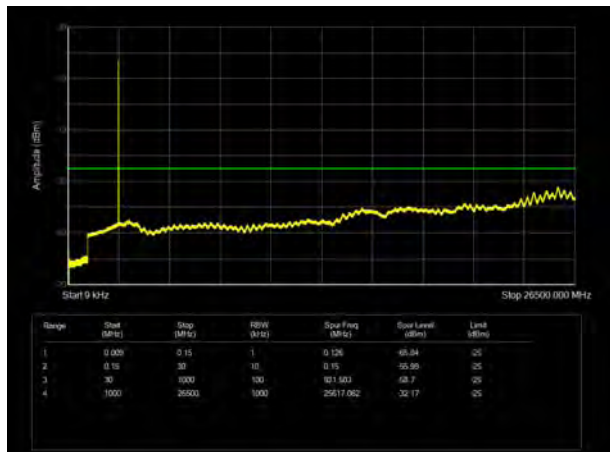
LTE Band 38 10MHz CH- Middle 9kHz~26.5GHz



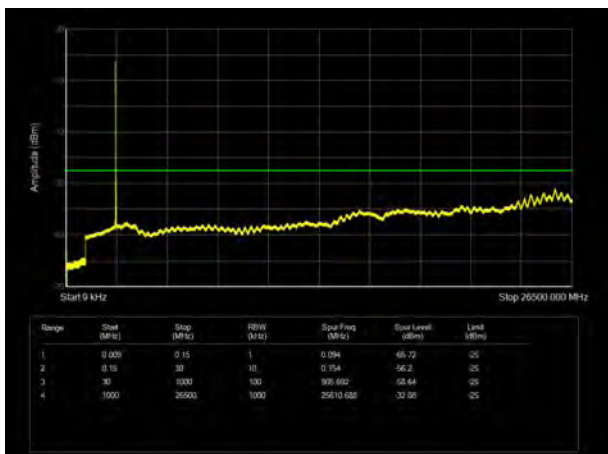
LTE Band 38 5MHz CH-High 9kHz~26.5GHz



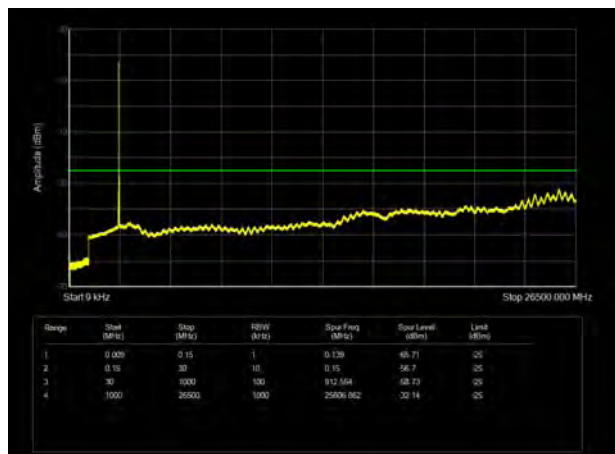
LTE Band 38 10MHz CH-High 9kHz~26.5GHz



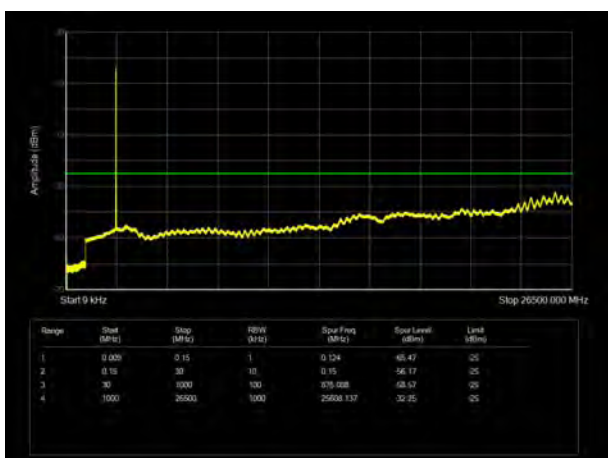
LTE Band 38 15MHz CH- Low 9kHz~26.5GHz



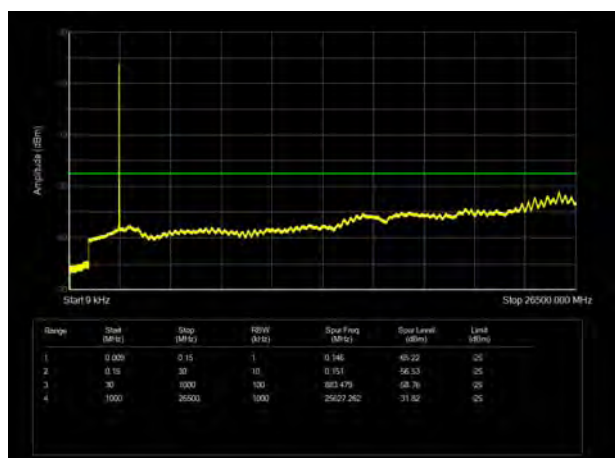
LTE Band 38 20MHz CH-Low 9kHz~26.5GHz



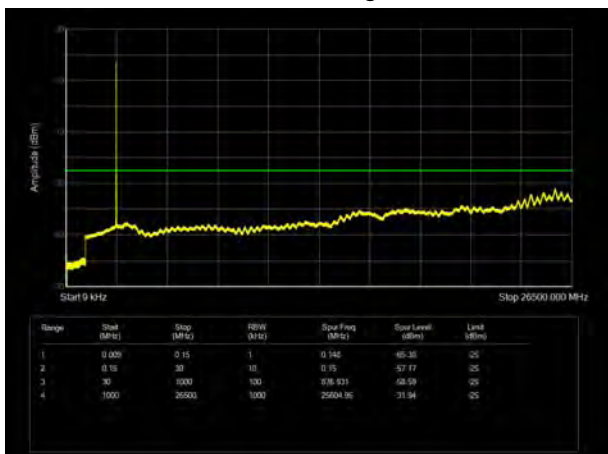
LTE Band 38 15MHz CH- Middle 9kHz~26.5GHz



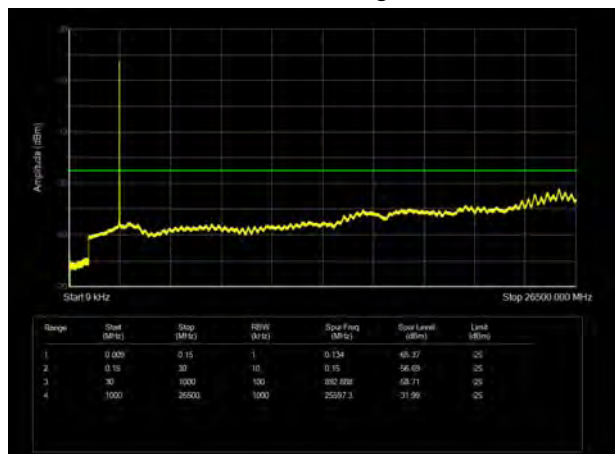
LTE Band 38 20MHz CH- Middle 9kHz~26.5GHz



LTE Band 38 15MHz CH-High 9kHz~26.5GHz



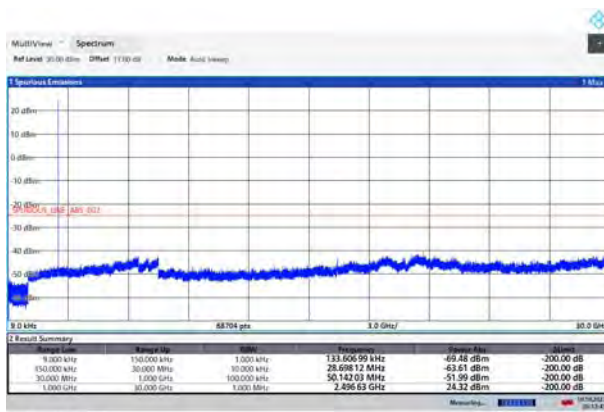
LTE Band 38 20MHz CH- High 9kHz~26.5GHz





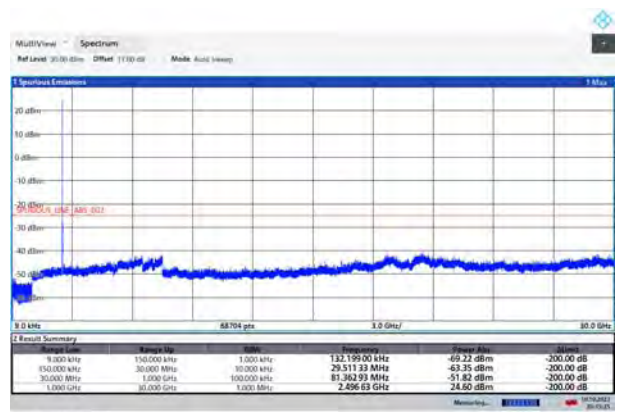


## LTE Band 41 5MHz CH- Low 9kHz~30GHz



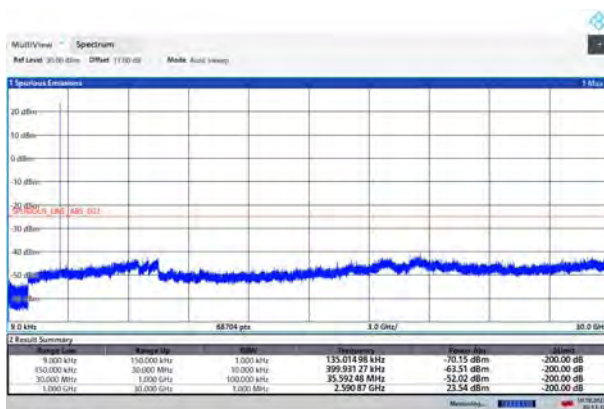
20/12/11 10:10:2022

## LTE Band 41 10MHz CH-Low 9kHz~30GHz



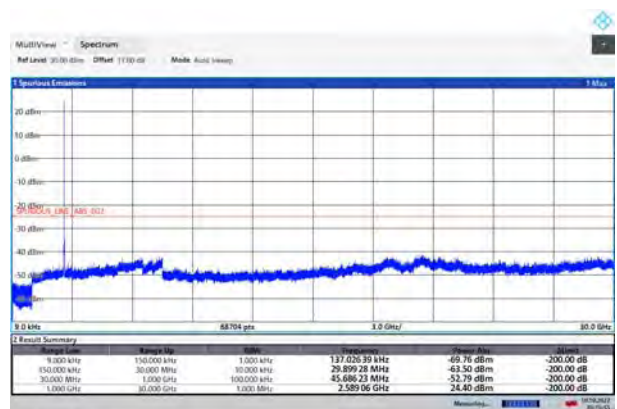
20/12/11 10:10:2022

## LTE Band 41 5MHz CH- Middle 9kHz~30GHz



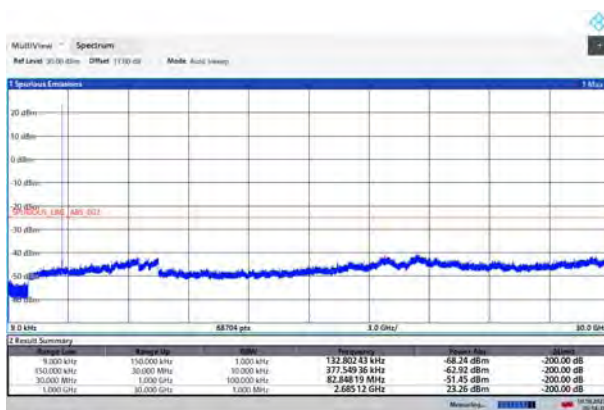
20/12/11 10:10:2022

## LTE Band 41 10MHz CH- Middle 9kHz~30GHz



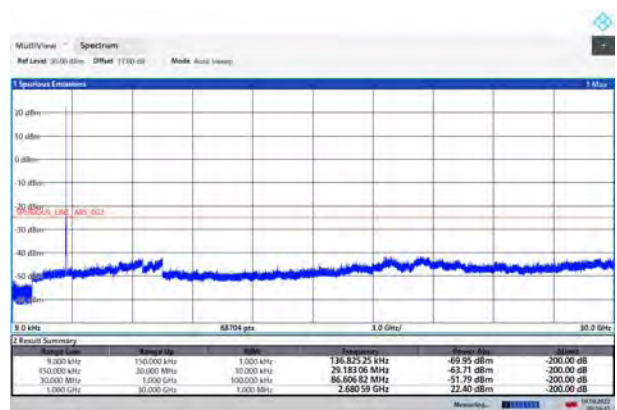
20/12/11 10:10:2022

## LTE Band 41 5MHz CH-High 9kHz~30GHz



20/12/11 10:10:2022

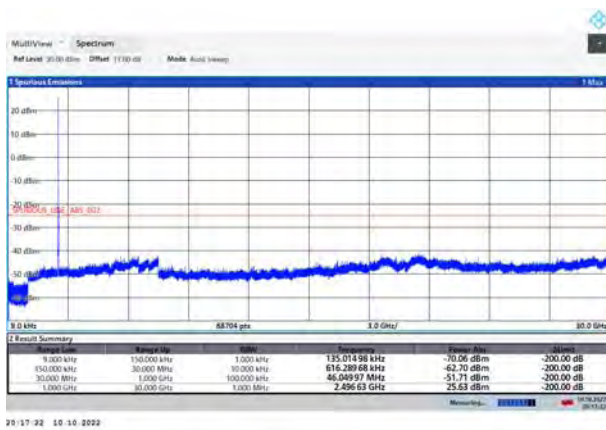
## LTE Band 41 10MHz CH- High 9kHz~30GHz



20/12/11 10:10:2022

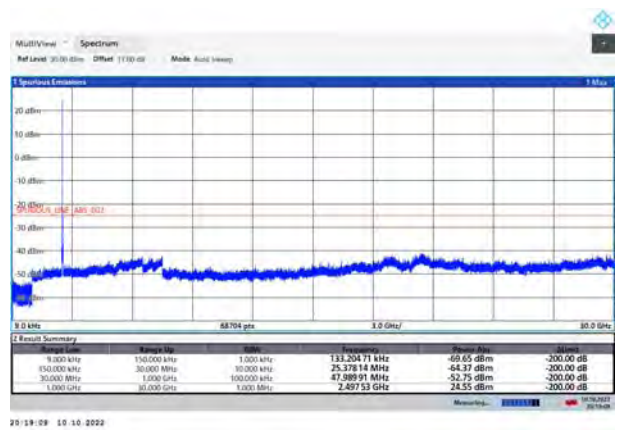


## LTE Band 41 15MHz CH- Low 9kHz~30GHz



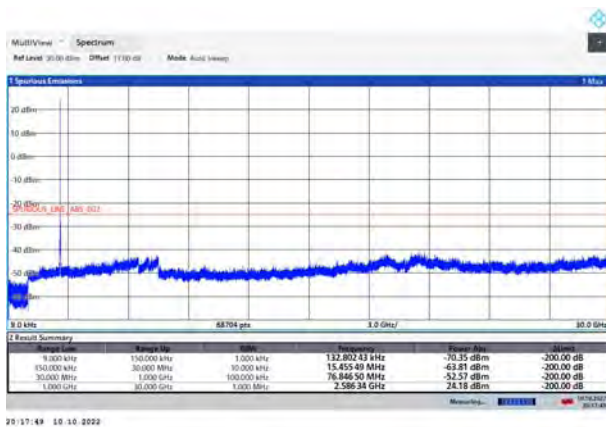
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## LTE Band 41 20MHz CH-Low 9kHz~30GHz



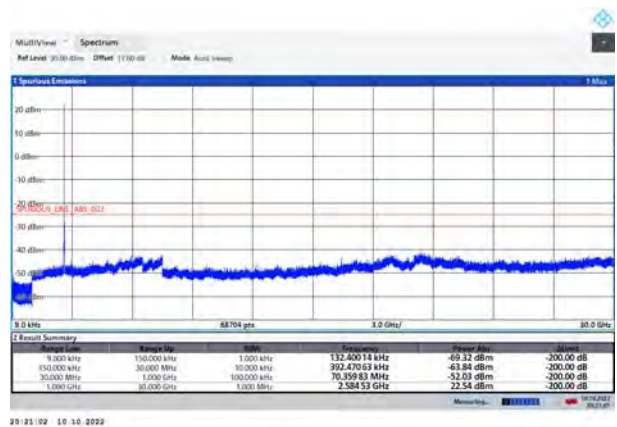
20:19:19 10-10-2022

## LTE Band 41 15MHz CH- Middle 9kHz~30GHz



20:17:49 10-10-2022

## LTE Band 41 20MHz CH- Middle 9kHz~30GHz



20:21:02 10-10-2022

## LTE Band 41 15MHz CH-High 9kHz~30GHz



20:18:34 10-10-2022

## LTE Band 41 20MHz CH- High 9kHz~30GHz



20:21:46 10-10-2022





## 6.7 Radiated Spurious Emission

Sweep the whole frequency band through the range from 9kHz to the 10th harmonic of the carrier, the emissions below the noise floor will not be recorded in the report.

### Upper Antenna

LTE Band 7 QPSK 5MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	5070.00	-63.72	3.40	12.50	Vertical	-54.62	-25.00	29.62	93
3	7605.00	-51.63	4.40	12.20	Vertical	-43.83	-25.00	18.83	46
4	10140.00	-49.81	4.70	11.30	Vertical	-43.21	-25.00	18.21	180
5	12675.00	-52.26	5.40	13.20	Vertical	-44.46	-25.00	19.46	312
6	15210.00	-49.83	6.10	13.10	Vertical	-42.83	-25.00	17.83	190
7	17745.00	-51.68	6.10	14.20	Vertical	-43.58	-25.00	18.58	25
8	20280.00	--	--	--	--	--	--	--	--
9	22815.00	--	--	--	--	--	--	--	--
10	25350.00	--	--	--	--	--	--	--	--

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Vertical position.

LTE Band 7 QPSK 20MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	5050.00	-62.75	3.40	12.50	Vertical	-53.65	-25.00	28.65	115
3	7575.00	-48.41	4.40	12.20	Vertical	-40.61	-25.00	15.61	167
4	10100.00	-48.46	4.70	11.30	Vertical	-41.86	-25.00	16.86	53
5	12625.00	-51.86	5.40	13.20	Vertical	-44.06	-25.00	19.06	94
6	15150.00	-51.18	6.10	13.10	Vertical	-44.18	-25.00	19.18	267
7	17675.00	-51.21	6.10	14.20	Vertical	-43.11	-25.00	18.11	309
8	20200.00	--	--	--	--	--	--	--	--
9	22725.00	--	--	--	--	--	--	--	--
10	25250.00	--	--	--	--	--	--	--	--

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Vertical position.



## LTE Band 38 QPSK 5MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	5185.00	-62.36	3.20	12.50	Vertical	-53.06	-25.00	28.06	19
3	7777.50	-59.44	4.40	12.30	Vertical	-51.54	-25.00	26.54	234
4	10370.00	-52.69	4.70	11.80	Vertical	-45.59	-25.00	20.59	75
5	12962.50	-52.07	5.40	14.00	Vertical	-43.47	-25.00	18.47	36
6	15555.00	-49.61	6.10	16.80	Vertical	-38.91	-25.00	13.91	180
7	18147.50	--	--	--	--	--	--	--	--
8	20740.00	--	--	--	--	--	--	--	--
9	23332.50	--	--	--	--	--	--	--	--
10	25925.00	--	--	--	--	--	--	--	--

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Vertical position.

## LTE Band 38 QPSK 20MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	5170.00	-63.45	3.20	12.50	Vertical	-54.15	-25.00	29.15	270
3	7755.00	-56.81	4.40	12.30	Vertical	-48.91	-25.00	23.91	86
4	10340.00	-48.86	4.70	11.80	Vertical	-41.76	-25.00	16.76	4
5	12925.00	-53.19	5.40	14.00	Vertical	-44.59	-25.00	19.59	31
6	15510.00	-50.59	6.10	16.80	Vertical	-39.89	-25.00	14.89	139
7	18095.00	--	--	--	--	--	--	--	--
8	20680.00	--	--	--	--	--	--	--	--
9	23265.00	--	--	--	--	--	--	--	--
10	25850.00	--	--	--	--	--	--	--	--

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Vertical position.



## LTE Band 41 QPSK 5MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	5181.00	-64.69	3.20	12.50	Vertical	-55.39	-25.00	30.39	190
3	7771.50	-60.03	4.40	12.30	Vertical	-52.13	-25.00	27.13	266
4	10362.00	-46.72	4.70	11.80	Vertical	-39.62	-25.00	14.62	249
5	13952.50	-49.99	5.40	14.00	Vertical	-41.39	-25.00	16.39	38
6	15543.00	-53.04	6.10	16.80	Vertical	-42.34	-25.00	17.34	69
7	18133.50	--	--	--	--	--	--	--	--
8	20653.20	--	--	--	--	--	--	--	--
9	23234.85	--	--	--	--	--	--	--	--
10	25816.50	--	--	--	--	--	--	--	--
Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor. 2. The worst emission was found in the antenna is Vertical position.									

## LTE Band 41 QPSK 20MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	5166.00	-64.45	3.20	12.50	Vertical	-55.15	-25.00	30.15	45
3	7749.00	-59.37	4.40	12.30	Vertical	-51.47	-25.00	26.47	139
4	10332.00	-48.04	4.70	11.80	Vertical	-40.94	-25.00	15.94	76
5	12915.00	-52.14	5.40	14.00	Vertical	-43.54	-25.00	18.54	94
6	15498.00	-54.91	6.10	16.80	Vertical	-44.21	-25.00	19.21	280
7	18023.60	--	--	--	--	--	--	--	--
8	20598.40	--	--	--	--	--	--	--	--
9	23173.20	--	--	--	--	--	--	--	--
10	25748.00	--	--	--	--	--	--	--	--
Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor. 2. The worst emission was found in the antenna is Vertical position.									

**Low Antenna**

LTE Band 7 QPSK 5MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	5070.00	-62.81	3.40	12.50	Vertical	-53.71	-25.00	28.71	333
3	7605.00	-48.48	4.40	12.20	Vertical	-40.68	-25.00	15.68	95
4	10140.00	-47.85	4.70	11.30	Vertical	-41.25	-25.00	16.25	278
5	12675.00	-53.68	5.40	13.20	Vertical	-45.88	-25.00	20.88	44
6	15210.00	-45.50	6.10	13.10	Vertical	-38.50	-25.00	13.50	315
7	17745.00	-50.82	6.10	14.20	Vertical	-42.72	-25.00	17.72	180
8	20280.00	--	--	--	--	--	--	--	--
9	22815.00	--	--	--	--	--	--	--	--
10	25350.00	--	--	--	--	--	--	--	--

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Vertical position.

LTE Band 7 QPSK 20MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	5050.00	-64.65	3.40	12.50	Vertical	-55.55	-25.00	30.55	18
3	7575.00	-49.21	4.40	12.20	Vertical	-41.41	-25.00	16.41	315
4	10100.00	-47.29	4.70	11.30	Vertical	-40.69	-25.00	15.69	22
5	12625.00	-53.08	5.40	13.20	Vertical	-45.28	-25.00	20.28	195
6	15150.00	-52.57	6.10	13.10	Vertical	-45.57	-25.00	20.57	265
7	17675.00	-52.17	6.10	14.20	Vertical	-44.07	-25.00	19.07	33
8	20200.00	--	--	--	--	--	--	--	--
9	22725.00	--	--	--	--	--	--	--	--
10	25250.00	--	--	--	--	--	--	--	--

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Vertical position.





## LTE Band 38 QPSK 5MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	5185.00	-64.74	3.20	12.50	Vertical	-55.44	-25.00	30.44	245
3	7777.50	-59.38	4.40	12.30	Vertical	-51.48	-25.00	26.48	108
4	10370.00	-53.41	4.70	11.80	Vertical	-46.31	-25.00	21.31	311
5	12962.50	-54.51	5.40	14.00	Vertical	-45.91	-25.00	20.91	123
6	15555.00	-55.67	6.10	16.80	Vertical	-44.97	-25.00	19.97	180
7	18147.50	--	--	--	--	--	--	--	--
8	20740.00	--	--	--	--	--	--	--	--
9	23332.50	--	--	--	--	--	--	--	--
10	25925.00	--	--	--	--	--	--	--	--

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Vertical position.

## LTE Band 38 QPSK 20MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	5170.00	-64.11	3.20	12.50	Vertical	-54.81	-25.00	29.81	214
3	7755.00	-60.46	4.40	12.30	Vertical	-52.56	-25.00	27.56	135
4	10340.00	-49.56	4.70	11.80	Vertical	-42.46	-25.00	17.46	275
5	12925.00	-53.56	5.40	14.00	Vertical	-44.96	-25.00	19.96	54
6	15510.00	-56.49	6.10	16.80	Vertical	-45.79	-25.00	20.79	123
7	18095.00	--	--	--	--	--	--	--	--
8	20680.00	--	--	--	--	--	--	--	--
9	23265.00	--	--	--	--	--	--	--	--
10	25850.00	--	--	--	--	--	--	--	--

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Vertical position.



## LTE Band 41 QPSK 5MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	5181.00	-64.03	3.20	12.50	Vertical	-54.73	-25.00	29.73	115
3	7771.50	-59.84	4.40	12.30	Vertical	-51.94	-25.00	26.94	240
4	10362.00	-50.58	4.70	11.80	Vertical	-43.48	-25.00	18.48	112
5	13952.50	-50.96	5.40	14.00	Vertical	-42.36	-25.00	17.36	312
6	15543.00	-55.03	6.10	16.80	Vertical	-44.33	-25.00	19.33	180
7	18133.50	--	--	--	--	--	--	--	--
8	20653.20	--	--	--	--	--	--	--	--
9	23234.85	--	--	--	--	--	--	--	--
10	25816.50	--	--	--	--	--	--	--	--
Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor. 2. The worst emission was found in the antenna is Vertical position.									

## LTE Band 41 QPSK 20MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	5166.00	-64.31	3.20	12.50	Vertical	-55.01	-25.00	30.01	189
3	7749.00	-60.61	4.40	12.30	Vertical	-52.71	-25.00	27.71	166
4	10332.00	-50.45	4.70	11.80	Vertical	-43.35	-25.00	18.35	335
5	12915.00	-53.43	5.40	14.00	Vertical	-44.83	-25.00	19.83	215
6	15498.00	-56.25	6.10	16.80	Vertical	-45.55	-25.00	20.55	180
7	18023.60	--	--	--	--	--	--	--	--
8	20598.40	--	--	--	--	--	--	--	--
9	23173.20	--	--	--	--	--	--	--	--
10	25748.00	--	--	--	--	--	--	--	--
Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor. 2. The worst emission was found in the antenna is Vertical position.									



## 7 Main Test Instruments

Name	Manufacturer	Type	Serial Number	Calibration Date	Expiration Date
Base Station Simulator	R&S	CMW500	150415	2022-05-14	2023-05-13
Spectrum Analyzer	Key sight	N9020A	MY50510203	2021-12-12	2022-12-11
Signal Analyzer	R&S	FSV3030	101411	2021-12-12	2022-12-11
Universal Radio Communication Tester	Key sight	E5515C	GB44400275	2021-12-12	2022-12-11
Climatic Chamber	ESPEC	SU-242	93000506	2021-12-12	2022-12-11
TRILOG Broadband Antenna	SCHWARZBECK	VULB 9163	1023	2020-05-05	2023-05-04
Spectrum Analyzer	R&S	FSV30	104028	2021-12-12	2022-12-11
Horn Antenna	Schwarzbeck	BBHA 9120D	1594	2020-12-17	2023-12-16
Horn Antenna	ETS-Lindgren	3160-09	00102643	2021-10-10	2024-10-09
Software	R&S	EMC32	10.35.10	/	/

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



## ANNEX A: The EUT Appearance

The EUT Appearance are submitted separately.





## ANNEX B: Test Setup Photos

The Test Setup Photos are submitted separately.



## ANNEX C: Product Change Description

The Product Change Description are submitted separately.