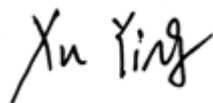


# RF TEST REPORT

**Applicant** MeiG Smart Technology Co., Ltd  
**FCC ID** 2APJ4-MT504  
**Product** 4G Mobile WiFi  
**Brand** MEIGLink  
**Model** MT504;  
MT5XX (XX can be 05-19, 61-64)  
**Report No.** R2209A0873-R2V2  
**Issue Date** February 21, 2023

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC CFR47 Part 2 (2022)/ FCC CFR 47 Part 24E (2022)**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.



Prepared by: Xu Ying



Approved by: Xu Kai

---

**TA Technology (Shanghai) Co., Ltd.**

Building 3, No.145, Jintang Rd, Pudong Shanghai, P.R.China

TEL: +86-021-50791141/2/3

FAX: +86-021-50791141/2/3-8000

# TABLE OF CONTENT

1. Test Laboratory .....	5
1.1. Notes of the test report .....	5
1.2. Test facility .....	5
1.3. Testing Location .....	5
2. General Description of Equipment under Test .....	6
2.1. Applicant and Manufacturer Information .....	6
2.2. General information .....	6
3. Applied Standards .....	8
4. Test Configuration .....	9
5. Test Case .....	11
5.1. RF Power Output and Effective Isotropic Radiated Power .....	11
5.2. Occupied Bandwidth .....	12
5.3. Band Edge Compliance .....	13
5.4. Peak-to-Average Power Ratio (PAPR) .....	14
5.5. Frequency Stability .....	15
5.6. Spurious Emissions at Antenna Terminals .....	17
5.7. Radiated Spurious Emission .....	18
6. Test Results .....	21
6.1. RF Power Output and Effective Isotropic Radiated Power .....	21
6.2. Occupied Bandwidth .....	29
6.3. Band Edge Compliance .....	38
6.4. Peak-to-Average Power Ratio (PAPR) .....	47
6.5. Frequency Stability .....	49
6.6. Spurious Emissions at Antenna Terminals .....	52
6.7. Radiated Spurious Emission .....	56
7. Main Test Instruments .....	58
ANNEX A: The EUT Appearance .....	59
ANNEX B: Test Setup Photos .....	60

Version	Revision description	Issue Date
Rev.0	Initial issue of report.	February 3, 2023
Rev.1	Update information.	February 9, 2023
Rev.2	Update data.	February 21, 2023
<p>Note: This revised report (Report No.: R2209A0873-R2V2) supersedes and replaces the previously issued report (Report No.: R2209A0873-R2V1). Please discard or destroy the previously issued report and dispose of it accordingly.</p>		

### Summary of measurement results

No.	Test Case	Clause in FCC rules	Verdict
1	RF Power Output and Effective Isotropic Radiated Power	2.1046 24.232(c)	PASS
2	Occupied Bandwidth	2.1049	PASS
3	Band Edge Compliance	2.1051 /24.238(a)	PASS
4	Peak-to-Average Power Ratio	24.232/KDB 971168 D01(5.7)	PASS
5	Frequency Stability	2.1055 / 24.235	PASS
6	Spurious Emissions at Antenna Terminals	2.1051 / 24.238(a)	PASS
7	Radiated Spurious Emission	2.1053 / 24.238(a)	PASS
Date of Testing: October 12, 2022 ~ December 4, 2022 Date of Sample Received: October 10, 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.			

## 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.  
Address: Building 3, No.145, Jintang Rd, Pudong Shanghai, P.R.China  
City: Shanghai  
Post code: 201201  
Country: P. R. China  
Contact: Xu Kai  
Telephone: +86-021-50791141/2/3  
Fax: +86-021-50791141/2/3-8000  
Website: <http://www.ta-shanghai.com>  
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	MeiG Smart Technology Co., Ltd
Applicant address	2nd Floor,Office Building,No.5 Lingxia Road,Fenghuang,Fuyong Street,Bao'an District,Shenzhen, China.
Manufacturer	MeiG Smart Technology Co., Ltd
Manufacturer address	2nd Floor,Office Building,No.5 Lingxia Road,Fenghuang,Fuyong Street,Bao'an District,Shenzhen, China.

### 2.2. General information

EUT Description			
Model	MT504; MT5XX (XX can be 05-19, 61-64)		
IMEI	864630067885086		
Hardware Version	MT562_MB_V1.00_B_PCB		
Software Version	MT562_EQ001_5F3270E_221129_T18		
Power Supply	AC Adapter/ Battery		
Antenna Type	PIFA Antenna		
Antenna Gain	Band	Gain	
	WCDMA Band II	1.84 dBi	
	LTE Band 2	1.84 dBi	
Test Mode(s)	WCDMA Band II; LTE Band 2;		
Test Modulation	(WCDMA) BPSK, QPSK; (LTE) QPSK, 16QAM;		
HSDPA UE Category	8		
HSUPA UE Category	8		
LTE Category	6		
Maximum E.I.R.P	WCDMA Band II:	24.19 dBm	
	LTE Band 2:	25.69 dBm	
Rated Power Supply Voltage	3.8V		
Operating Voltage	Minimum: 3.5V Maximum: 4.2V		
Operating Temperature	Lowest: 0°C Highest: +45°C		
Testing Temperature	Lowest: -30°C Highest: +50°C		
Operating Frequency Range(s)	Band	Tx (MHz)	Rx (MHz)
	WCDMA Band II	1850 ~ 1910	1930 ~ 1990
	LTE Band 2	1850 ~ 1910	1930 ~ 1990
EUT Accessory			
Adapter	Manufacturer: Dongguan Sunun Power Co., Ltd Model: SA68-050100U		

Battery	Manufacturer: Shenzhen Aerospace Electronic Co.,Ltd. Model: /
USB Cable 1	Manufacturer: DONGGUAN GAOHANG ELECTRONIC CO.,LTD Model: USB A/M TO MICRO USB 5P/M Black PVC(Data+charging) 55cm Cable, Shielded
USB Cable 2	Manufacturer: DONGGUAN GAOHANG ELECTRONIC CO.,LTD Model: USB A/M TO MICRO USB 5P/M Black PVC(charging) 55cm Cable, Shielded
USB Cable 3	Manufacturer: DONGGUAN GAOHANG ELECTRONIC CO.,LTD Model: USB A/M TO MICRO USB 5P/M Black PVC(Date+charging) 20cm Cable, Shielded
USB Cable 4	Manufacturer: DONGGUAN GAOHANG ELECTRONIC CO.,LTD Model: USB A/M TO MICRO USB 5P/M Black PVC(charging) 20cm Cable, Shielded
USB Cable 5	Manufacturer: DONGGUAN GAOHANG ELECTRONIC CO.,LTD Model: USB Type C to Micro USB(connetct MIFI) (Date+charging,OTG) 55cm Cable, Shielded
USB Cable 6	Manufacturer: DONGGUAN GAOHANG ELECTRONIC CO.,LTD Model: USB Type C to Micro USB(connect MIFI) (Date+charging,OTG) 100cm Cable, Shielded
USB Cable 7	Manufacturer: DONGGUAN GAOHANG ELECTRONIC CO.,LTD Model: USB Type A to Micro USB(connect MIFI) (Date+charging) 100cm Cable, Shielded
USB Cable 8	Manufacturer: DONGGUAN GAOHANG ELECTRONIC CO.,LTD Model: USB Type C to Micro USB(connect MIFI) (Date+charging) 20cm Cable, Shielded
<b>Note:</b> <ol style="list-style-type: none"> <li>1. The EUT is sent from the applicant to TA and the information of the EUT is declared by the applicant.</li> <li>2. There is more than one USB cable, each one should be applied throughout t</li> <li>3. The compliance test respectively, and however, only the worst case (USB cable 7) will be recorded in this report.</li> <li>4. MT504 and MT5XX (XX can be 05-19, 61-64) differ only in model number and the other is the same. The internal name of the XX range will be changed differently due to the consideration of different customer needs later. MT504 were tested in this report.</li> </ol>	

### 3. Applied Standards

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

**Test standards:**

**FCC CFR 47 Part 24E (2022)**

**FCC CFR47 Part 2 (2022)**

**Reference standard:**

**ANSI C63.26-2015**

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



## 4. Test Configuration

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, horizontal polarization for WCDMA Band; Z axis, vertical polarization for 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 WCDMA/LTE is set based on the maximum RF Output Power.

Test modes are chosen to be reported as the worst case configuration below:

Test items	Modes/Modulation
	WCDMA Band II
RF Power Output and Effective Isotropic Radiated Power	RMC HSDPA/HSUPA DC-HSDPA
Occupied Bandwidth	RMC
Band Edge Compliance	RMC
Peak-to-Average Power Ratio	RMC
Frequency Stability	RMC
Spurious Emissions at Antenna Terminals	RMC
Radiated Spurious Emission	RMC

Test modes are chosen to be reported as the worst case configuration below for LTE Band 2:

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

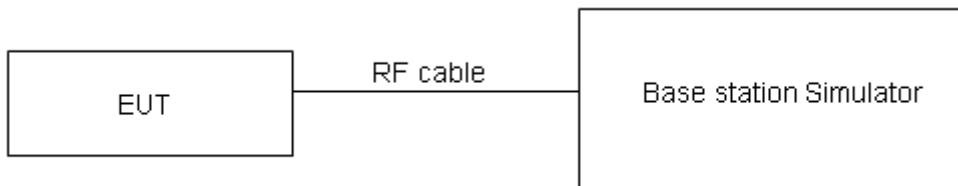
ERP can then be calculated as follows:

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

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

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

#### Test Setup



#### Limits

No specific RF power output requirements in part 2.1046.

Rule Part 24.232(c) Mobile and portable stations are limited to 2 watts EIRP.

Rule Part 24.232(e) Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage.

Limit	$\leq 2 \text{ W}$ (33 dBm)
-------	-----------------------------

#### Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor  $k = 2$ ,  $U = 0.4 \text{ dB}$  for RF power output,  $k = 2$ ,  $U = 1.19 \text{ dB}$  for 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

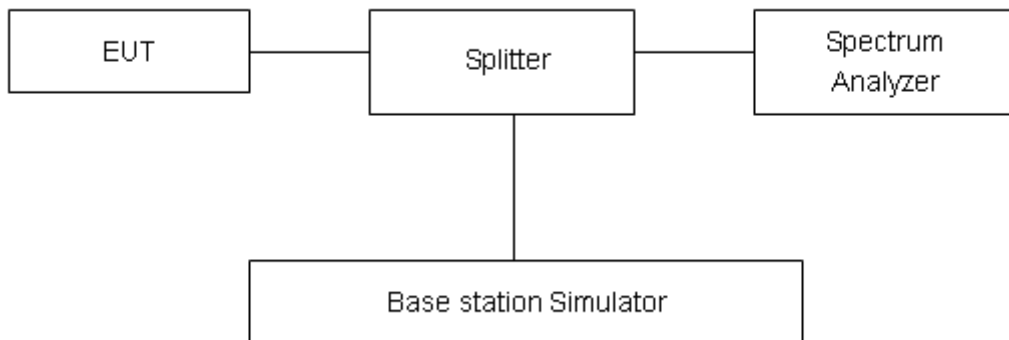
### Method of Measurement

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

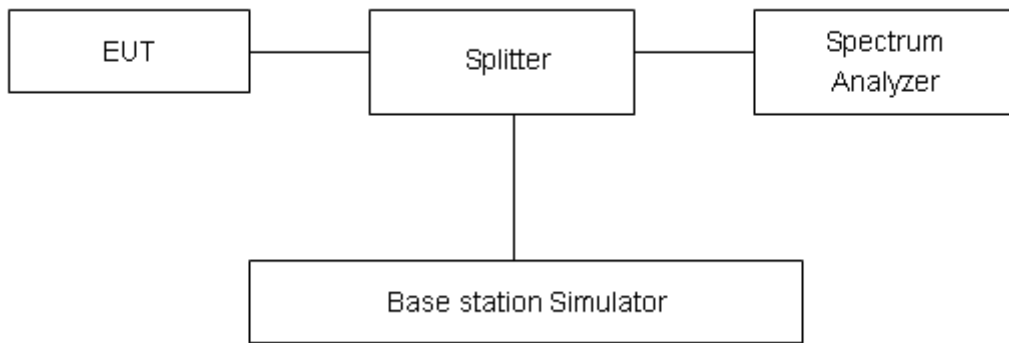
Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

#### 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 Average detector is used and RBW is set to  $\geq 1\%EBW$ , VBW is set to 3x RBW.

Spectrum analyzer plots are included on the following pages.

#### Test Setup



#### Limits

Rule Part 24.238(a) specifies that “on any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least  $43 + 10 \log_{10} (P)$  dB.”

Limit	-13 dBm
-------	---------

#### Measurement Uncertainty

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

#### Test Results

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

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

#### Ambient condition

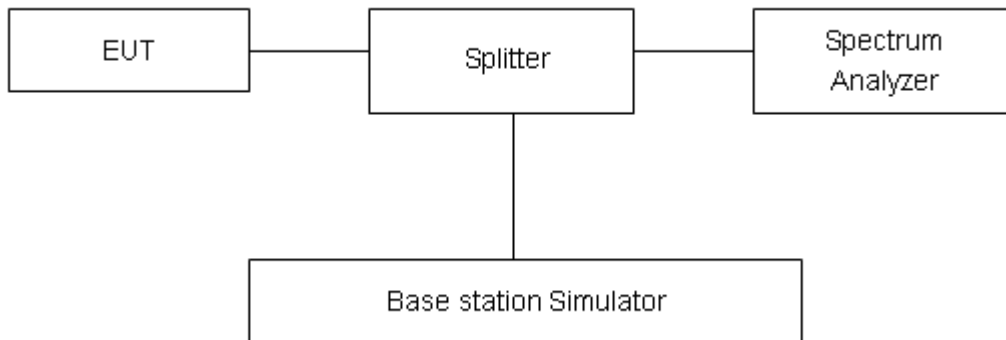
Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

#### 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:

$$PAPR (dB) = PPK (dBm) - PAvg (dBm).$$

#### Test Setup



#### Limits

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 in 24.232(d).

#### 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 0°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.

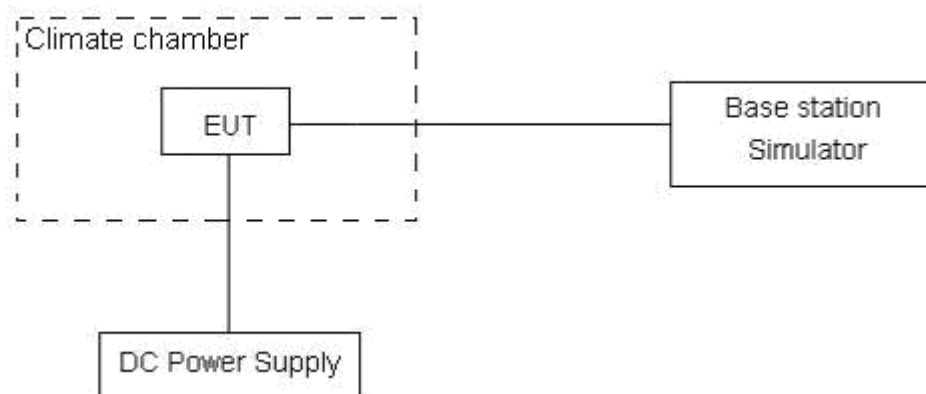
#### Frequency Stability (Voltage Variation)

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 3.5 V and 4.2 V, with a nominal voltage of 3.8V.

### Test setup



**Limits**

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

**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)

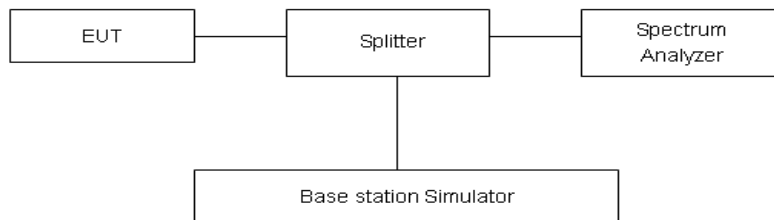
RBW is set to 100 kHz (30MHz~1000 MHz)

RBW is set to 1000 kHz (above 1000MHz)

Sweep is set to ATUO.

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

### Test setup



### Limits

Rule Part 24.238(a) specifies that “on any frequency outside a licensee’s frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least  $43 + 10 \log_{10} (P)$  dB.”

Limit	-13 dBm

### 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-20GHz	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 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=1MHz, VBW=3MHz, 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:  

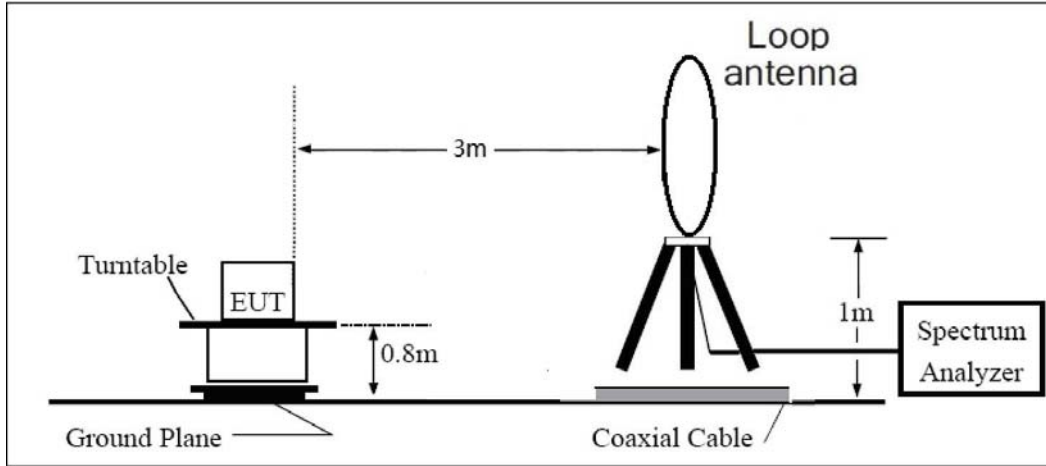
$$\text{Power(EIRP)} = \text{PMea} - \text{Pcl} + \text{Ga}$$
8. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dB) and known input power. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP

= EIRP-2.15dB.

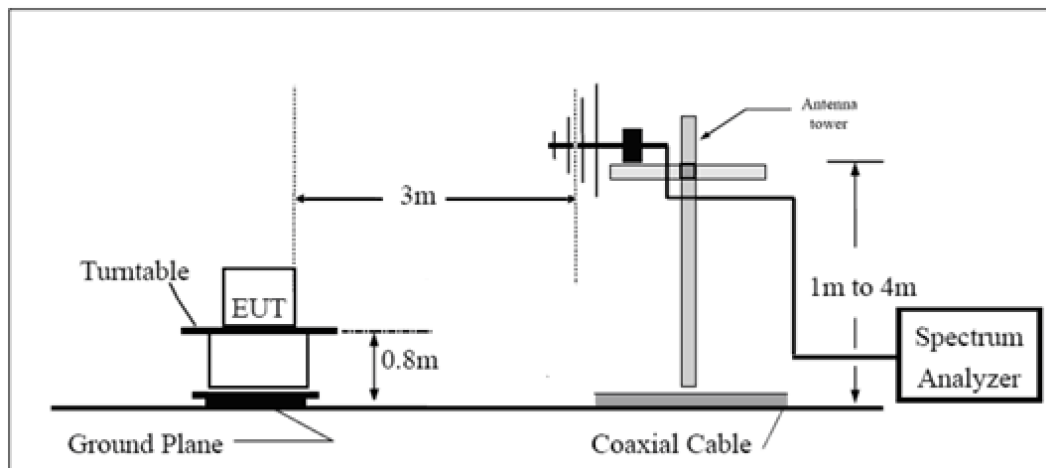
The modulation mode and RB allocation refer to section 5.1, using the maximum output power configuration.

**Test setup**

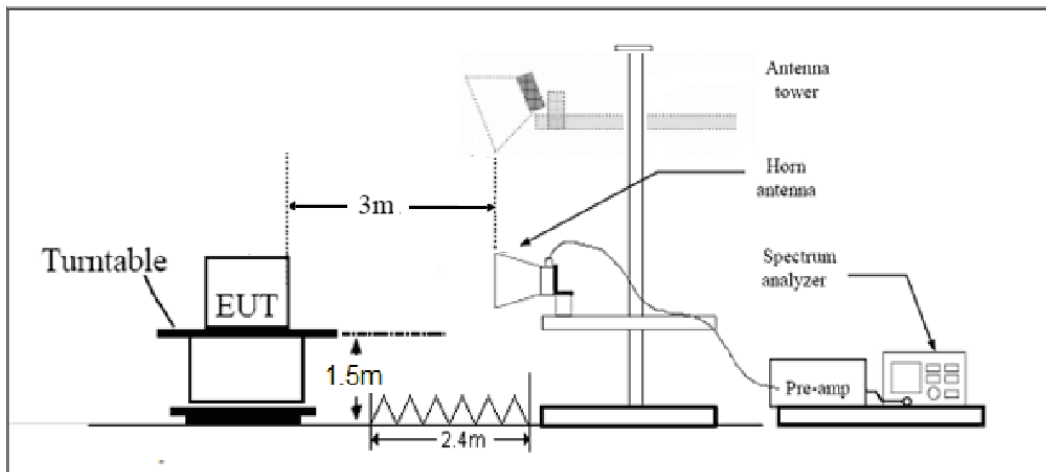
**9KHz~ 30MHz**



**30MHz~ 1GHz**



**Above 1GHz**



Note: Area side: 2.4mX3.6m

**Limits**

Rule Part 24.238(a) specifies that “on any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least  $43 + 10 \log_{10} (P)$  dB.”

Limit	-13 dBm
-------	---------

**Measurement Uncertainty**

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

WCDMA Band II		Maximum Output Power (dBm)			EIRP(dBm)		
		Channel/Frequency			Channel/Frequency		
		9262/1852.4	9400/1880	9538/1907.6	9262/1852.4	9400/1880	9538/1907.6
RMC	12.2k	22.35	22.32	22.15	24.19	24.16	23.99
HSDPA	Subtest 1	21.77	21.74	21.57	23.61	23.58	23.41
	Subtest 2	21.76	21.73	21.56	23.60	23.57	23.40
	Subtest 3	21.25	21.22	21.05	23.09	23.06	22.89
	Subtest 4	21.24	21.21	21.04	23.08	23.05	22.88
HSUPA	Subtest 1	20.73	20.70	20.53	22.57	22.54	22.37
	Subtest 2	18.72	18.69	18.52	20.56	20.53	20.36
	Subtest 3	19.70	19.68	19.51	21.54	21.52	21.35
	Subtest 4	18.69	18.67	18.50	20.53	20.51	20.34
	Subtest 5	22.18	22.16	21.99	24.02	24.00	23.83
DC-HSDPA	Subtest 1	21.69	21.68	21.49	23.53	23.52	23.33
	Subtest 2	21.68	21.67	21.48	23.52	23.51	23.32
	Subtest 3	21.26	21.16	20.99	23.10	23.00	22.83
	Subtest 4	21.25	21.15	20.98	23.09	22.99	22.82

LTE Band 2						
Bandwidth (MHz)	UL Channel	RB Size	RB Position	Modulation	Power (dBm)	EIRP (dBm)
1.4	18607	1	#0	QPSK	23.77	25.61
1.4	18607	1	#Mid	QPSK	23.75	25.59
1.4	18607	1	#Max	QPSK	23.77	25.61
1.4	18607	3	#0	QPSK	23.72	25.56
1.4	18607	3	#Mid	QPSK	23.72	25.56
1.4	18607	3	#Max	QPSK	23.69	25.53
1.4	18607	6	#0	QPSK	22.56	24.40
1.4	18607	1	#0	16QAM	23.27	25.11
1.4	18607	1	#Mid	16QAM	23.28	25.12
1.4	18607	1	#Max	16QAM	23.29	25.13
1.4	18607	3	#0	16QAM	22.60	24.44
1.4	18607	3	#Mid	16QAM	22.57	24.41
1.4	18607	3	#Max	16QAM	22.60	24.44
1.4	18607	6	#0	16QAM	21.82	23.66
1.4	18900	1	#0	QPSK	23.63	25.47
1.4	18900	1	#Mid	QPSK	23.56	25.40
1.4	18900	1	#Max	QPSK	23.51	25.35
1.4	18900	3	#0	QPSK	23.71	25.55
1.4	18900	3	#Mid	QPSK	23.70	25.54
1.4	18900	3	#Max	QPSK	23.70	25.54
1.4	18900	6	#0	QPSK	22.60	24.44
1.4	18900	1	#0	16QAM	23.21	25.05
1.4	18900	1	#Mid	16QAM	23.15	24.99
1.4	18900	1	#Max	16QAM	23.13	24.97
1.4	18900	3	#0	16QAM	22.60	24.44
1.4	18900	3	#Mid	16QAM	22.60	24.44
1.4	18900	3	#Max	16QAM	22.63	24.47
1.4	18900	6	#0	16QAM	21.75	23.59
1.4	19193	1	#0	QPSK	23.55	25.39
1.4	19193	1	#Mid	QPSK	23.61	25.45
1.4	19193	1	#Max	QPSK	23.63	25.47
1.4	19193	3	#0	QPSK	23.64	25.48
1.4	19193	3	#Mid	QPSK	23.64	25.48
1.4	19193	3	#Max	QPSK	23.72	25.56
1.4	19193	6	#0	QPSK	22.56	24.40
1.4	19193	1	#0	16QAM	22.30	24.14

## RF Test Report

Report No.: R2209A0873-R2V2

1.4	19193	1	#Mid	16QAM	22.30	24.14
1.4	19193	1	#Max	16QAM	22.36	24.20
1.4	19193	3	#0	16QAM	22.66	24.50
1.4	19193	3	#Mid	16QAM	22.68	24.52
1.4	19193	3	#Max	16QAM	22.63	24.47
1.4	19193	6	#0	16QAM	22.02	23.86
3	18615	1	#0	QPSK	23.54	25.38
3	18615	1	#Mid	QPSK	23.55	25.39
3	18615	1	#Max	QPSK	23.55	25.39
3	18615	8	#0	QPSK	22.60	24.44
3	18615	8	#Mid	QPSK	22.61	24.45
3	18615	8	#Max	QPSK	22.57	24.41
3	18615	15	#0	QPSK	22.62	24.46
3	18615	1	#0	16QAM	22.47	24.31
3	18615	1	#Mid	16QAM	22.47	24.31
3	18615	1	#Max	16QAM	22.47	24.31
3	18615	8	#0	16QAM	21.80	23.64
3	18615	8	#Mid	16QAM	21.81	23.65
3	18615	8	#Max	16QAM	21.72	23.56
3	18615	15	#0	16QAM	21.72	23.56
3	18900	1	#0	QPSK	23.65	25.49
3	18900	1	#Mid	QPSK	23.54	25.38
3	18900	1	#Max	QPSK	23.62	25.46
3	18900	8	#0	QPSK	22.65	24.49
3	18900	8	#Mid	QPSK	22.64	24.48
3	18900	8	#Max	QPSK	22.59	24.43
3	18900	15	#0	QPSK	22.55	24.39
3	18900	1	#0	16QAM	23.14	24.98
3	18900	1	#Mid	16QAM	23.09	24.93
3	18900	1	#Max	16QAM	23.07	24.91
3	18900	8	#0	16QAM	21.86	23.70
3	18900	8	#Mid	16QAM	21.87	23.71
3	18900	8	#Max	16QAM	21.93	23.77
3	18900	15	#0	16QAM	21.74	23.58
3	19185	1	#0	QPSK	23.62	25.46
3	19185	1	#Mid	QPSK	23.64	25.48
3	19185	1	#Max	QPSK	23.65	25.49
3	19185	8	#0	QPSK	22.58	24.42
3	19185	8	#Mid	QPSK	22.61	24.45
3	19185	8	#Max	QPSK	22.58	24.42

## RF Test Report

Report No.: R2209A0873-R2V2

3	19185	15	#0	QPSK	22.63	24.47
3	19185	1	#0	16QAM	22.28	24.12
3	19185	1	#Mid	16QAM	22.33	24.17
3	19185	1	#Max	16QAM	22.31	24.15
3	19185	8	#0	16QAM	21.97	23.81
3	19185	8	#Mid	16QAM	21.99	23.83
3	19185	8	#Max	16QAM	21.92	23.76
3	19185	15	#0	16QAM	21.82	23.66
5	18625	1	#0	QPSK	23.43	25.27
5	18625	1	#Mid	QPSK	23.44	25.28
5	18625	1	#Max	QPSK	23.46	25.30
5	18625	12	#0	QPSK	22.68	24.52
5	18625	12	#Mid	QPSK	22.68	24.52
5	18625	12	#Max	QPSK	22.70	24.54
5	18625	25	#0	QPSK	22.63	24.47
5	18625	1	#0	16QAM	22.15	23.99
5	18625	1	#Mid	16QAM	22.18	24.02
5	18625	1	#Max	16QAM	22.16	24.00
5	18625	12	#0	16QAM	21.69	23.53
5	18625	12	#Mid	16QAM	21.70	23.54
5	18625	12	#Max	16QAM	21.62	23.46
5	18625	25	#0	16QAM	21.80	23.64
5	18900	1	#0	QPSK	23.70	25.54
5	18900	1	#Mid	QPSK	23.68	25.52
5	18900	1	#Max	QPSK	23.70	25.54
5	18900	12	#0	QPSK	22.54	24.38
5	18900	12	#Mid	QPSK	22.60	24.44
5	18900	12	#Max	QPSK	22.63	24.47
5	18900	25	#0	QPSK	22.56	24.40
5	18900	1	#0	16QAM	22.78	24.62
5	18900	1	#Mid	16QAM	22.67	24.51
5	18900	1	#Max	16QAM	22.68	24.52
5	18900	12	#0	16QAM	21.62	23.46
5	18900	12	#Mid	16QAM	21.59	23.43
5	18900	12	#Max	16QAM	21.78	23.62
5	18900	25	#0	16QAM	21.62	23.46
5	19175	1	#0	QPSK	23.47	25.31
5	19175	1	#Mid	QPSK	23.47	25.31
5	19175	1	#Max	QPSK	23.50	25.34
5	19175	12	#0	QPSK	22.56	24.40



5	19175	12	#Mid	QPSK	22.58	24.42
5	19175	12	#Max	QPSK	22.59	24.43
5	19175	25	#0	QPSK	22.56	24.40
5	19175	1	#0	16QAM	22.43	24.27
5	19175	1	#Mid	16QAM	22.50	24.34
5	19175	1	#Max	16QAM	22.65	24.49
5	19175	12	#0	16QAM	21.75	23.59
5	19175	12	#Mid	16QAM	21.72	23.56
5	19175	12	#Max	16QAM	21.74	23.58
5	19175	25	#0	16QAM	21.57	23.41
10	18650	1	#0	QPSK	23.55	25.39
10	18650	1	#Mid	QPSK	23.56	25.40
10	18650	1	#Max	QPSK	23.57	25.41
10	18650	25	#0	QPSK	22.64	24.48
10	18650	25	#Mid	QPSK	22.65	24.49
10	18650	25	#Max	QPSK	22.53	24.37
10	18650	50	#0	QPSK	22.69	24.53
10	18650	1	#0	16QAM	22.52	24.36
10	18650	1	#Mid	16QAM	22.42	24.26
10	18650	1	#Max	16QAM	22.45	24.29
10	18650	25	#0	16QAM	21.73	23.57
10	18650	25	#Mid	16QAM	21.72	23.56
10	18650	25	#Max	16QAM	21.83	23.67
10	18650	50	#0	16QAM	21.79	23.63
10	18900	1	#0	QPSK	23.54	25.38
10	18900	1	#Mid	QPSK	23.56	25.40
10	18900	1	#Max	QPSK	23.63	25.47
10	18900	25	#0	QPSK	22.58	24.42
10	18900	25	#Mid	QPSK	22.58	24.42
10	18900	25	#Max	QPSK	22.67	24.51
10	18900	50	#0	QPSK	22.62	24.46
10	18900	1	#0	16QAM	22.74	24.58
10	18900	1	#Mid	16QAM	22.69	24.53
10	18900	1	#Max	16QAM	22.69	24.53
10	18900	25	#0	16QAM	21.79	23.63
10	18900	25	#Mid	16QAM	21.76	23.60
10	18900	25	#Max	16QAM	21.71	23.55
10	18900	50	#0	16QAM	21.75	23.59
10	19150	1	#0	QPSK	23.67	25.51
10	19150	1	#Mid	QPSK	23.64	25.48

## RF Test Report

Report No.: R2209A0873-R2V2

10	19150	1	#Max	QPSK	23.72	25.56
10	19150	25	#0	QPSK	22.61	24.45
10	19150	25	#Mid	QPSK	22.61	24.45
10	19150	25	#Max	QPSK	22.68	24.52
10	19150	50	#0	QPSK	22.55	24.39
10	19150	1	#0	16QAM	22.01	23.85
10	19150	1	#Mid	16QAM	21.92	23.76
10	19150	1	#Max	16QAM	22.05	23.89
10	19150	25	#0	16QAM	21.71	23.55
10	19150	25	#Mid	16QAM	21.71	23.55
10	19150	25	#Max	16QAM	21.84	23.68
10	19150	50	#0	16QAM	21.63	23.47
15	18675	1	#0	QPSK	23.57	25.41
15	18675	1	#Mid	QPSK	23.54	25.38
15	18675	1	#Max	QPSK	23.51	25.35
15	18675	36	#0	QPSK	22.57	24.41
15	18675	36	#Mid	QPSK	22.61	24.45
15	18675	36	#Max	QPSK	22.61	24.45
15	18675	75	#0	QPSK	22.61	24.45
15	18675	1	#0	16QAM	22.70	24.54
15	18675	1	#Mid	16QAM	22.69	24.53
15	18675	1	#Max	16QAM	22.62	24.46
15	18675	36	#0	16QAM	21.66	23.50
15	18675	36	#Mid	16QAM	21.70	23.54
15	18675	36	#Max	16QAM	21.71	23.55
15	18675	75	#0	16QAM	21.89	23.73
15	18900	1	#0	QPSK	23.50	25.34
15	18900	1	#Mid	QPSK	23.41	25.25
15	18900	1	#Max	QPSK	23.42	25.26
15	18900	36	#0	QPSK	22.63	24.47
15	18900	36	#Mid	QPSK	22.61	24.45
15	18900	36	#Max	QPSK	22.55	24.39
15	18900	75	#0	QPSK	22.63	24.47
15	18900	1	#0	16QAM	23.04	24.88
15	18900	1	#Mid	16QAM	22.96	24.80
15	18900	1	#Max	16QAM	23.05	24.89
15	18900	36	#0	16QAM	21.68	23.52
15	18900	36	#Mid	16QAM	21.75	23.59
15	18900	36	#Max	16QAM	21.70	23.54
15	18900	75	#0	16QAM	21.65	23.49

## RF Test Report

Report No.: R2209A0873-R2V2

15	19125	1	#0	QPSK	23.62	25.46
15	19125	1	#Mid	QPSK	23.60	25.44
15	19125	1	#Max	QPSK	23.64	25.48
15	19125	36	#0	QPSK	22.51	24.35
15	19125	36	#Mid	QPSK	22.54	24.38
15	19125	36	#Max	QPSK	22.63	24.47
15	19125	75	#0	QPSK	22.55	24.39
15	19125	1	#0	16QAM	22.65	24.49
15	19125	1	#Mid	16QAM	22.61	24.45
15	19125	1	#Max	16QAM	22.64	24.48
15	19125	36	#0	16QAM	21.84	23.68
15	19125	36	#Mid	16QAM	21.84	23.68
15	19125	36	#Max	16QAM	21.83	23.67
15	19125	75	#0	16QAM	21.76	23.60
20	18700	1	#0	QPSK	23.74	25.58
20	18700	1	#Mid	QPSK	23.65	25.49
20	18700	1	#Max	QPSK	23.66	25.50
20	18700	50	#0	QPSK	22.68	24.52
20	18700	50	#Mid	QPSK	22.71	24.55
20	18700	50	#Max	QPSK	22.65	24.49
20	18700	100	#0	QPSK	22.50	24.34
20	18700	1	#0	16QAM	22.79	24.63
20	18700	1	#Mid	16QAM	22.75	24.59
20	18700	1	#Max	16QAM	22.76	24.60
20	18700	50	#0	16QAM	21.84	23.68
20	18700	50	#Mid	16QAM	21.76	23.60
20	18700	50	#Max	16QAM	21.87	23.71
20	18700	100	#0	16QAM	21.74	23.58
20	18900	1	#0	QPSK	23.85	25.69
20	18900	1	#Mid	QPSK	23.84	25.68
20	18900	1	#Max	QPSK	23.81	25.65
20	18900	50	#0	QPSK	22.61	24.45
20	18900	50	#Mid	QPSK	22.67	24.51
20	18900	50	#Max	QPSK	22.63	24.47
20	18900	100	#0	QPSK	22.66	24.50
20	18900	1	#0	16QAM	22.31	24.15
20	18900	1	#Mid	16QAM	22.28	24.12
20	18900	1	#Max	16QAM	22.23	24.07
20	18900	50	#0	16QAM	21.81	23.65
20	18900	50	#Mid	16QAM	21.80	23.64

20	18900	50	#Max	16QAM	21.73	23.57
20	18900	100	#0	16QAM	21.73	23.57
20	19100	1	#0	QPSK	23.75	25.59
20	19100	1	#Mid	QPSK	23.69	25.53
20	19100	1	#Max	QPSK	23.73	25.57
20	19100	50	#0	QPSK	22.66	24.50
20	19100	50	#Mid	QPSK	22.65	24.49
20	19100	50	#Max	QPSK	22.55	24.39
20	19100	100	#0	QPSK	22.69	24.53
20	19100	1	#0	16QAM	22.49	24.33
20	19100	1	#Mid	16QAM	22.42	24.26
20	19100	1	#Max	16QAM	22.47	24.31
20	19100	50	#0	16QAM	21.74	23.58
20	19100	50	#Mid	16QAM	21.75	23.59
20	19100	50	#Max	16QAM	21.77	23.61
20	19100	100	#0	16QAM	21.93	23.77

### 6.2.Occupied Bandwidth

Mode	Channel	Frequency (MHz)	99% Power Bandwidth (MHz)	-26dBc Bandwidth(MHz)
<b>WCDMA Band II (RMC)</b>	9262	1852.4	4.136	4.637
	9400	1880	4.164	4.649
	9538	1907.6	4.165	4.714

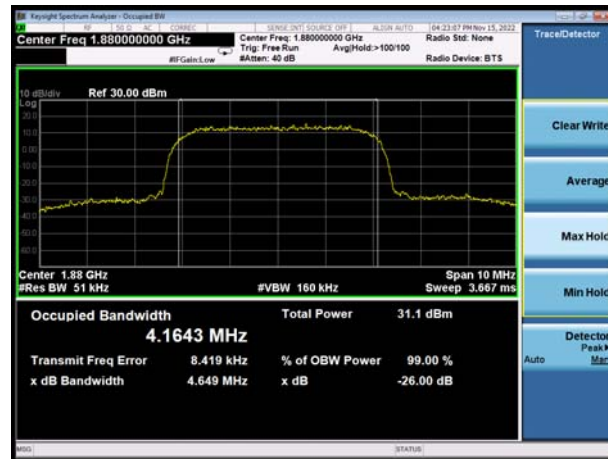
LTE Band 2						
RB	Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	99% Power Bandwidth(MHz)	-26dBc Bandwidth(MHz)
100%	QPSK	1.4	18607	1850.7	1.097	1.247
			18900	1880.0	1.092	1.254
			19193	1909.3	1.096	1.257
		3	18615	1851.5	2.709	3.055
			18900	1880	2.721	2.999
			19185	1908.5	2.704	3.058
		5	18625	1852.5	4.509	4.964
			18900	1880	4.513	4.972
			19175	1907.5	4.494	4.912
		10	18650	1855	8.994	9.918
			18900	1880	9.003	9.785
			19150	1905	8.968	9.789
		15	18675	1857.5	13.481	14.761
			18900	1880	13.416	14.901
			19125	1902.5	13.484	14.926
		20	18700	1860	18.025	19.555
			18900	1880	17.998	19.599
			19100	1900	18.004	19.582
	16QAM	1.4	18607	1850.7	1.103	1.254
			18900	1880.0	1.104	1.261
			19193	1909.3	1.097	1.256
		3	18615	1851.5	2.712	3.055
			18900	1880	2.708	3.026
			19185	1908.5	2.717	3.052
5		18625	1852.5	4.510	4.970	
		18900	1880	4.500	4.946	
		19175	1907.5	4.506	4.940	
10		18650	1855	8.981	9.804	

			18900	1880	9.016	9.789
			19150	1905	8.979	9.831
		15	18675	1857.5	13.464	14.826
			18900	1880	13.448	14.797
			19125	1902.5	13.414	14.840
		20	18700	1860	18.032	19.740
			18900	1880	18.018	19.516
			19100	1900	18.009	19.542

### WCDMA Band II RMC CH-LOW

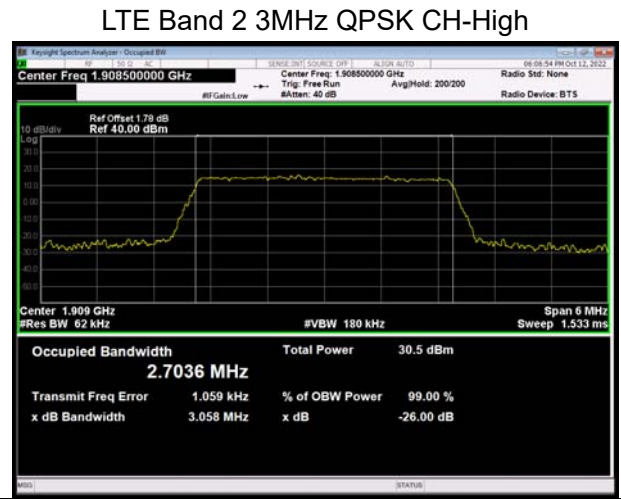
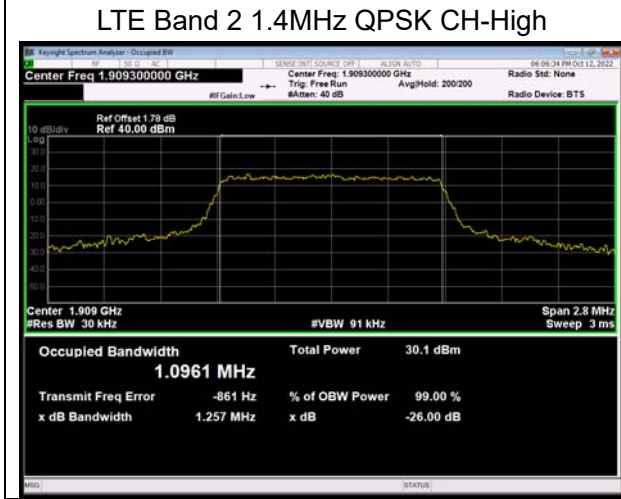
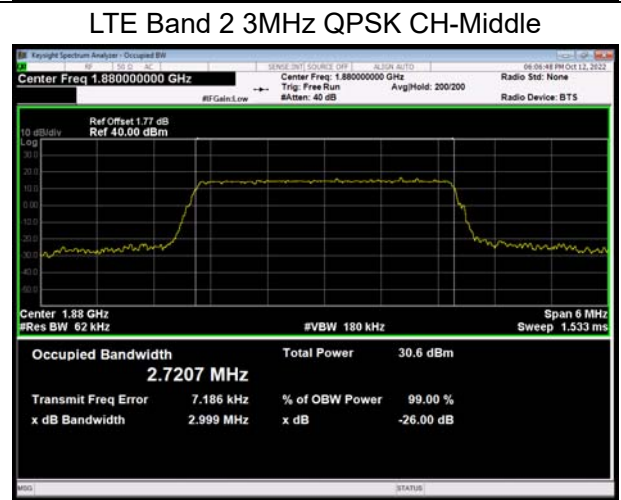
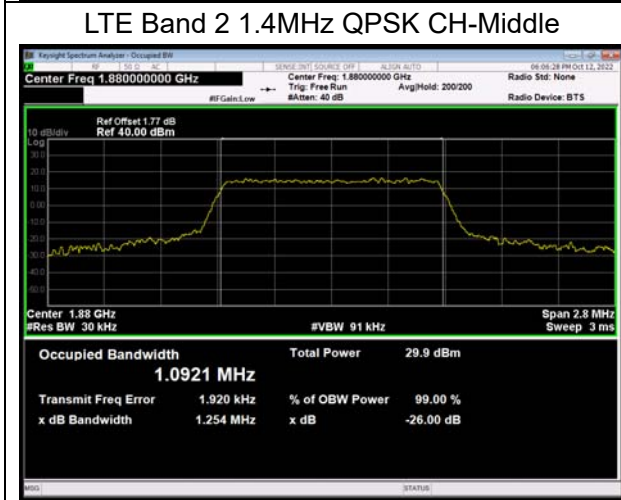
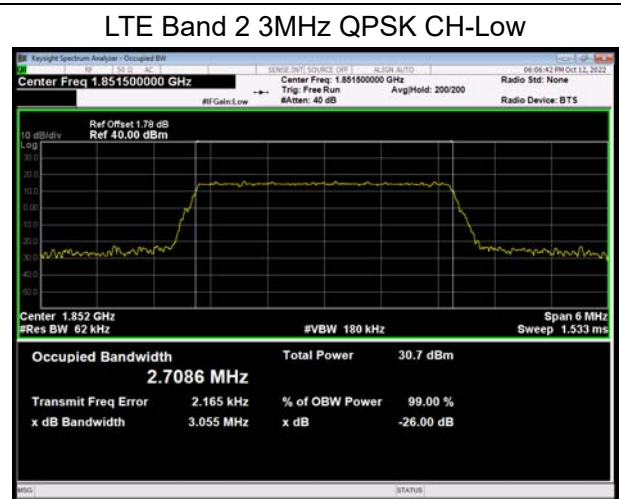
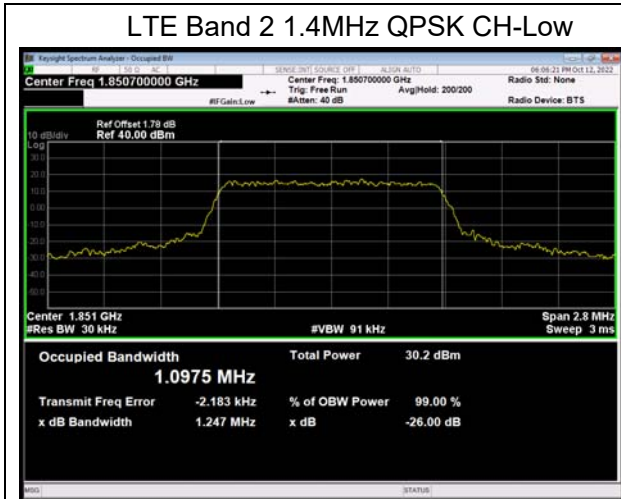


### WCDMA Band II RMC CH-Middle

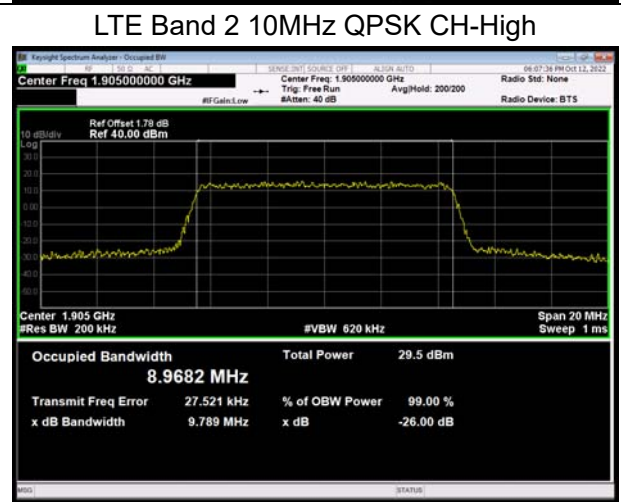
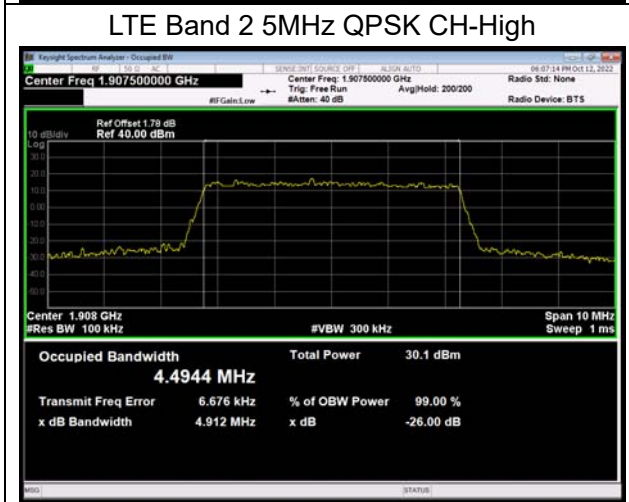
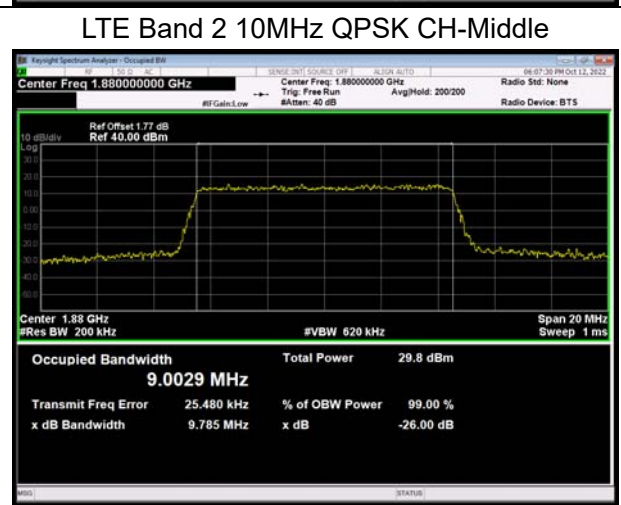
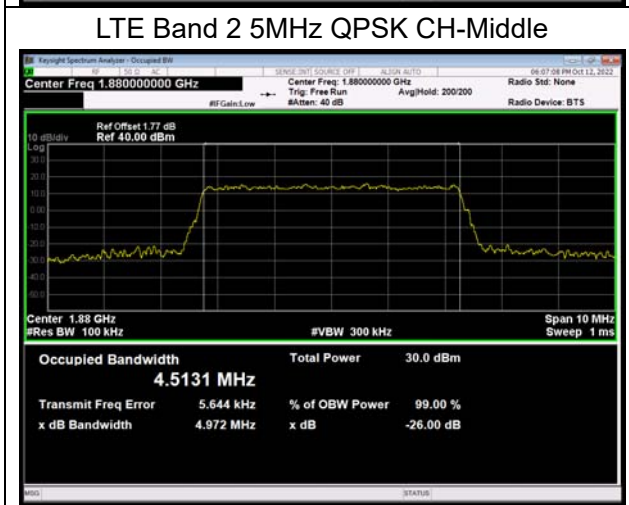
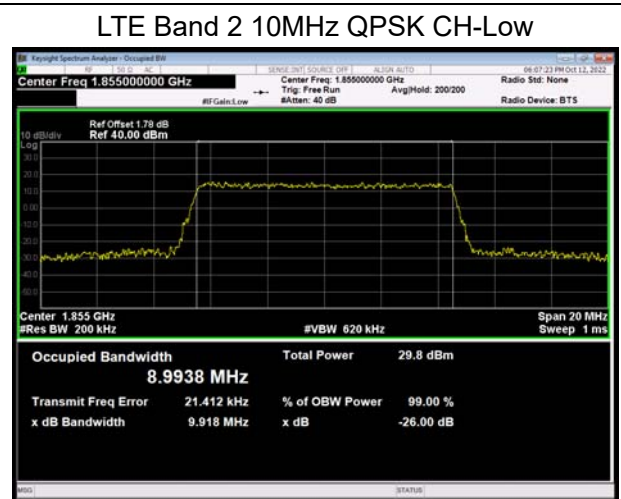
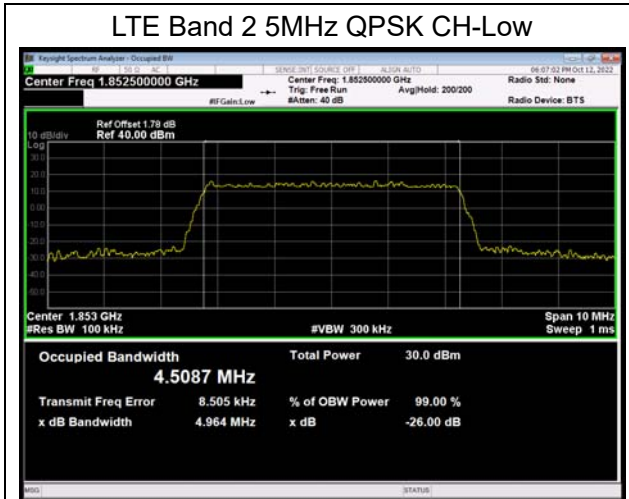


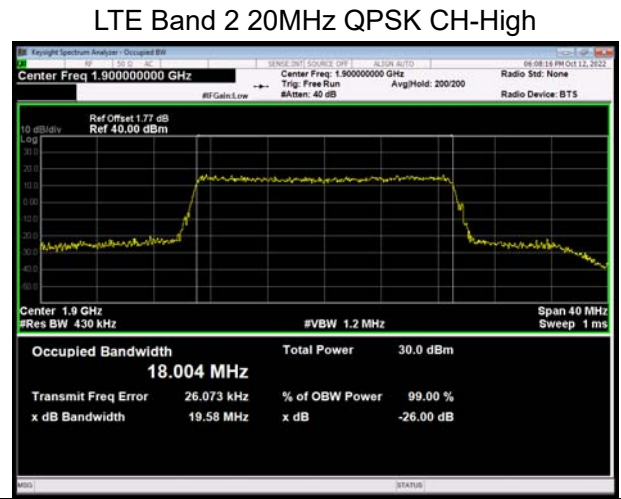
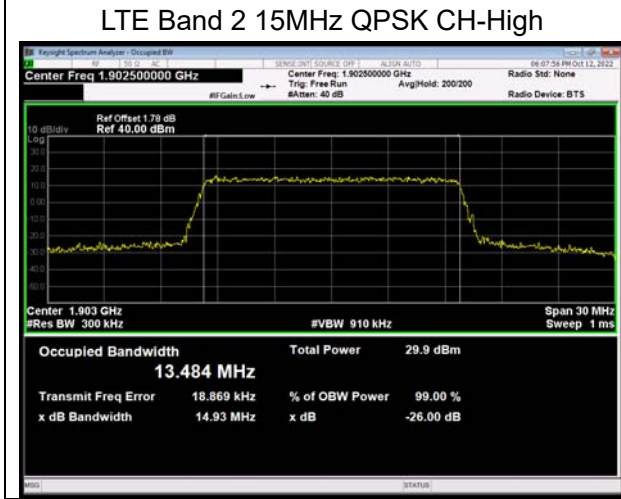
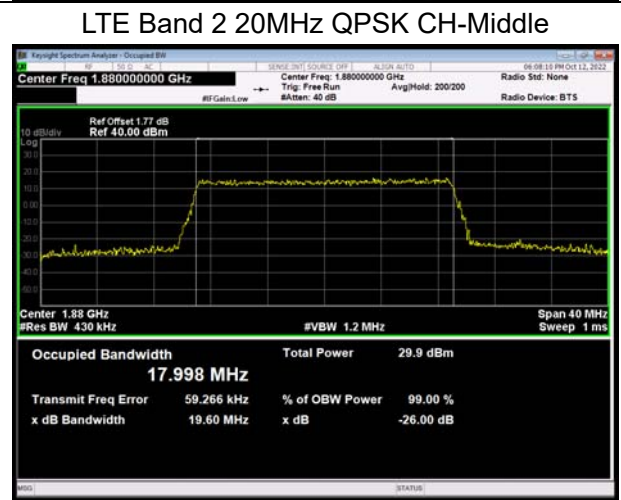
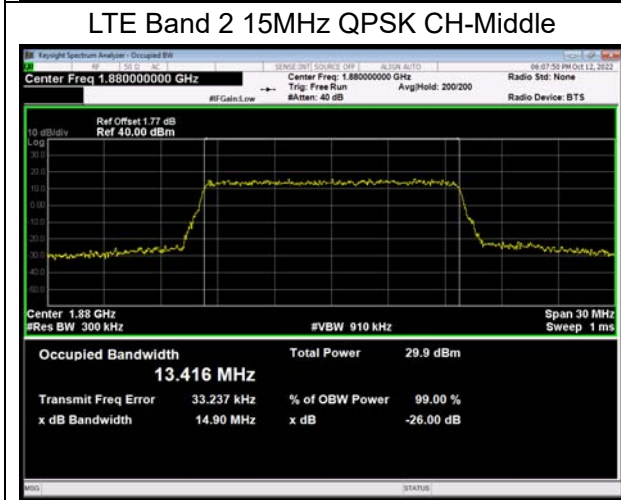
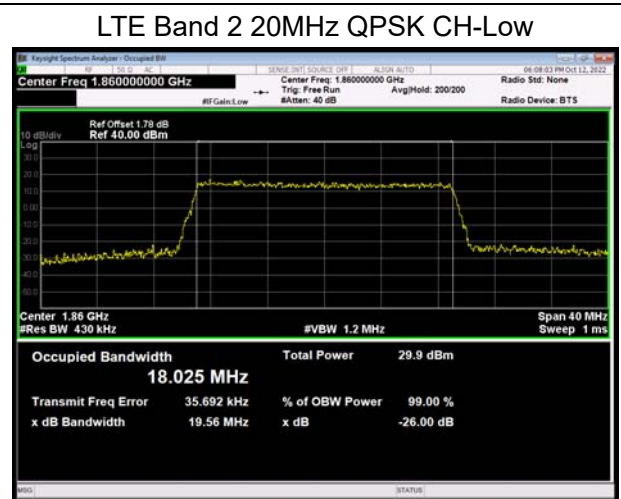
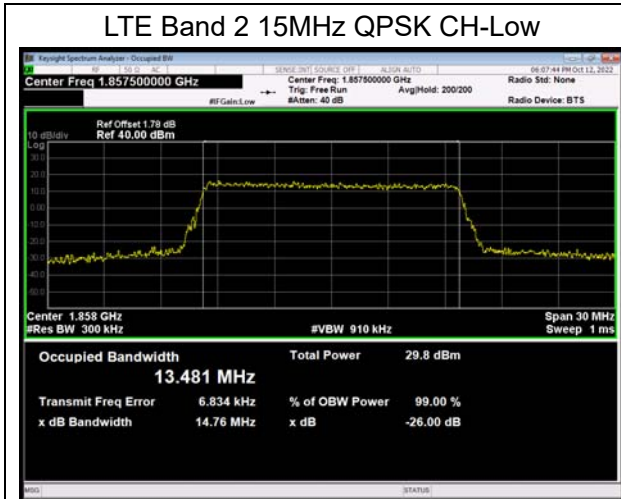
### WCDMA Band II RMC CH-High



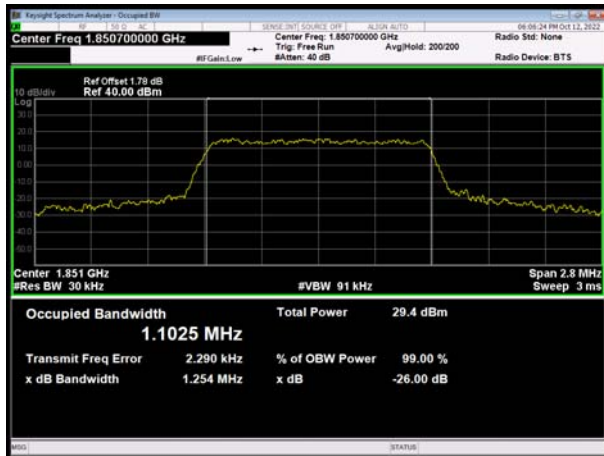




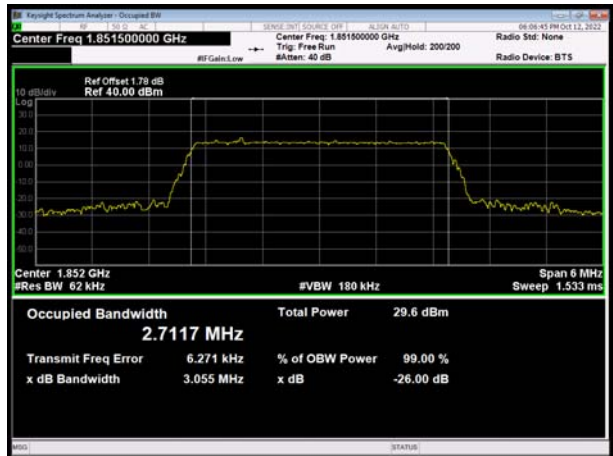




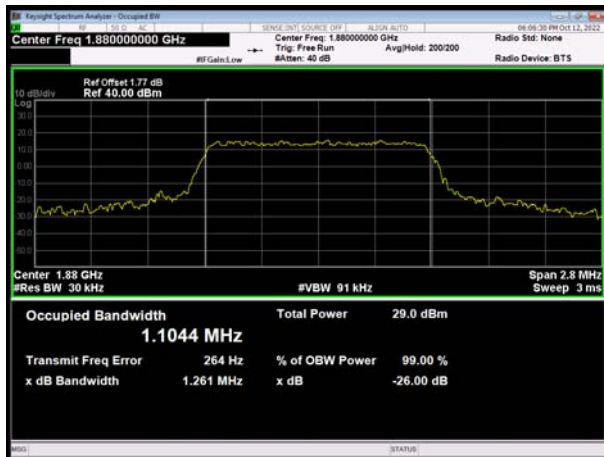
LTE Band 2 1.4MHz 16QAM CH-Low



LTE Band 2 3MHz 16QAM CH-Low



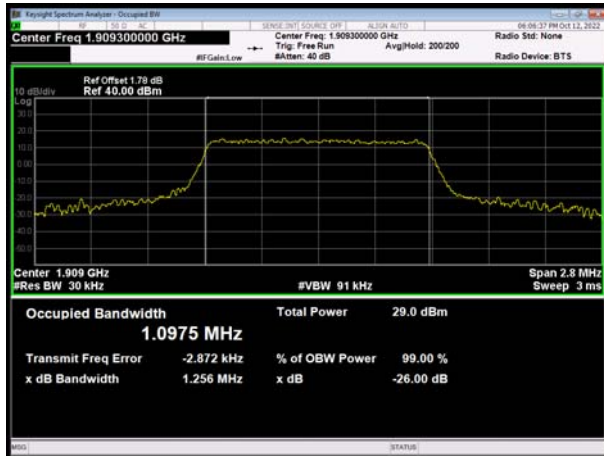
LTE Band 2 1.4MHz 16QAM CH-Middle



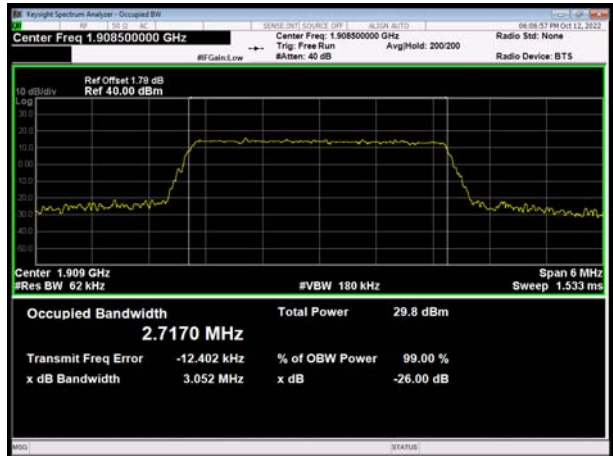
LTE Band 2 3MHz 16QAM CH-Middle

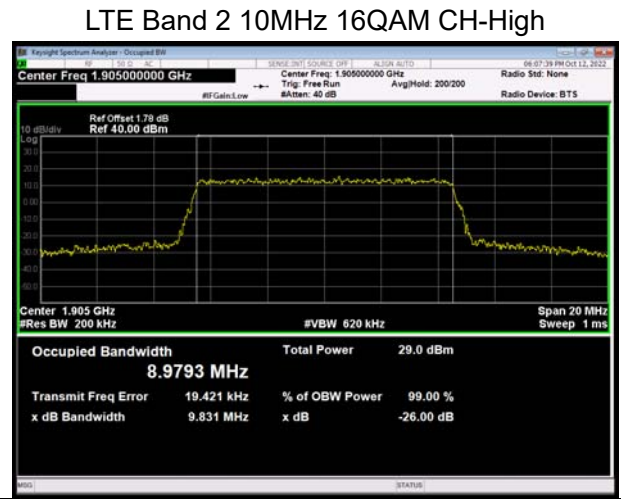
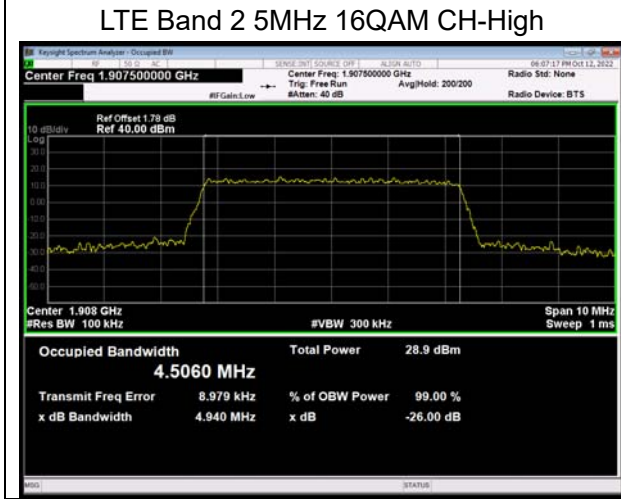
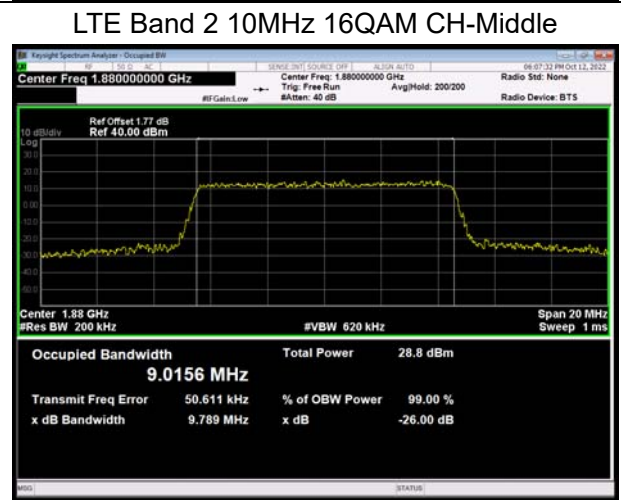
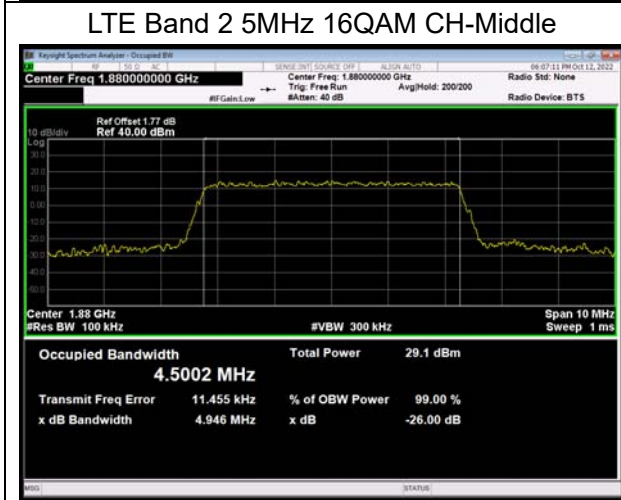
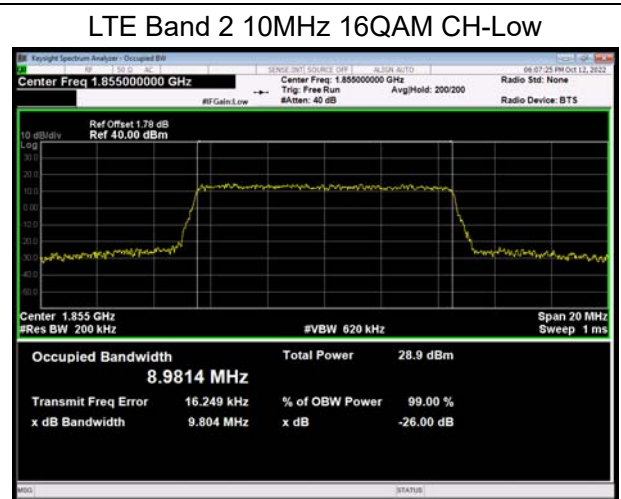
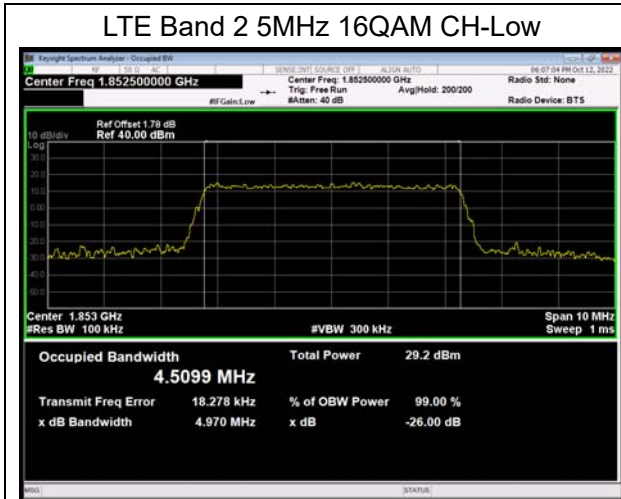


LTE Band 2 1.4MHz 16QAM CH-High

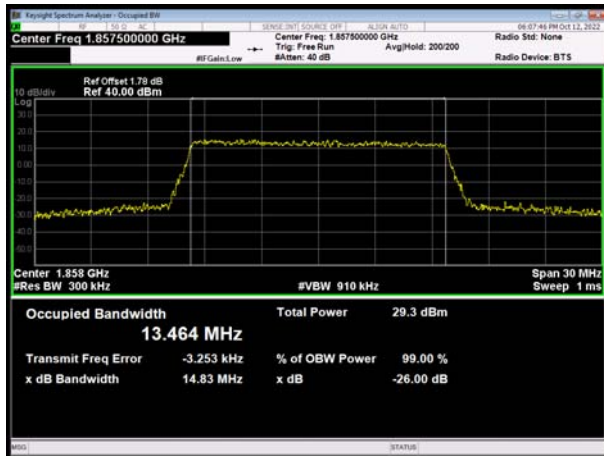


LTE Band 2 3MHz 16QAM CH-High

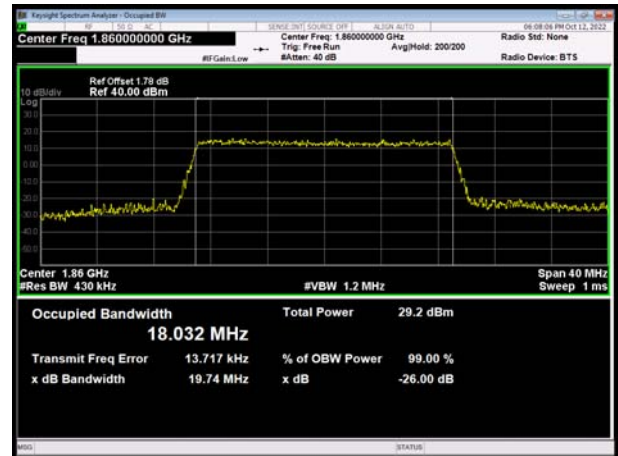




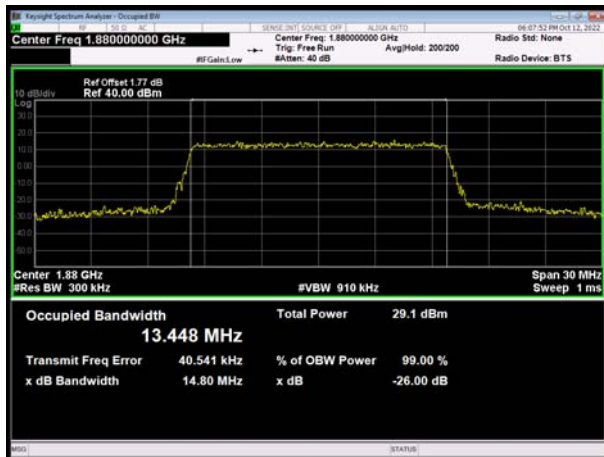
LTE Band 2 15MHz 16QAM CH-Low



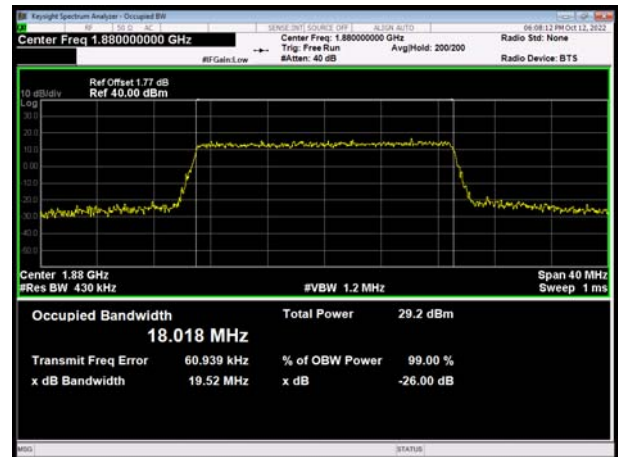
LTE Band 2 20MHz 16QAM CH-Low



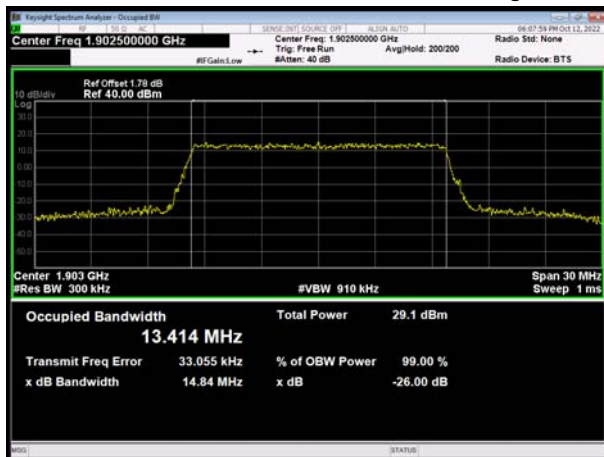
LTE Band 2 15MHz 16QAM CH-Middle



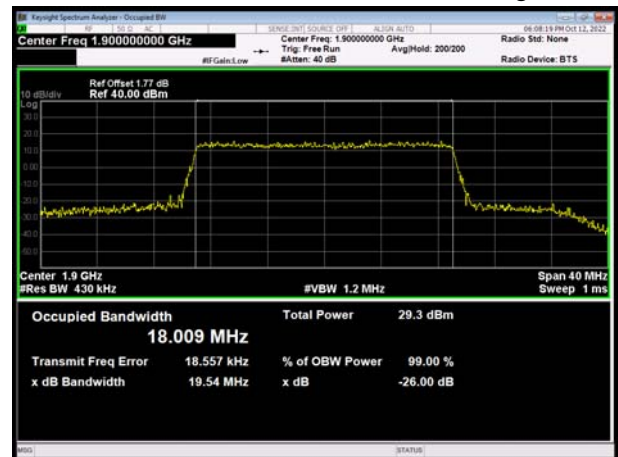
LTE Band 2 20MHz 16QAM CH-Middle



LTE Band 2 15MHz 16QAM CH-High

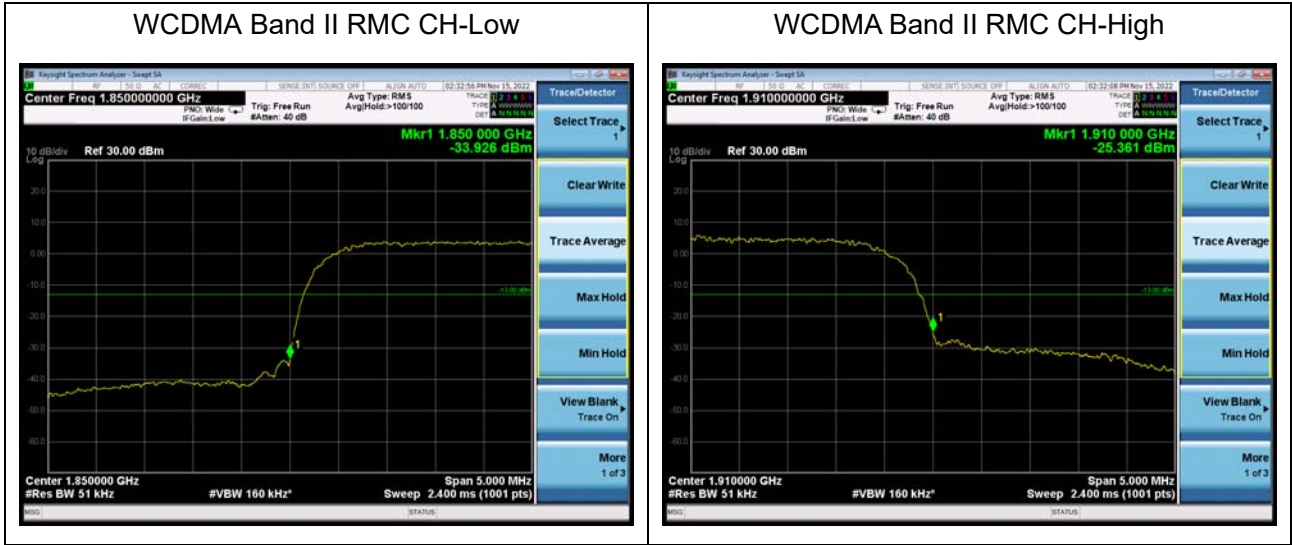


LTE Band 2 20MHz 16QAM CH-High

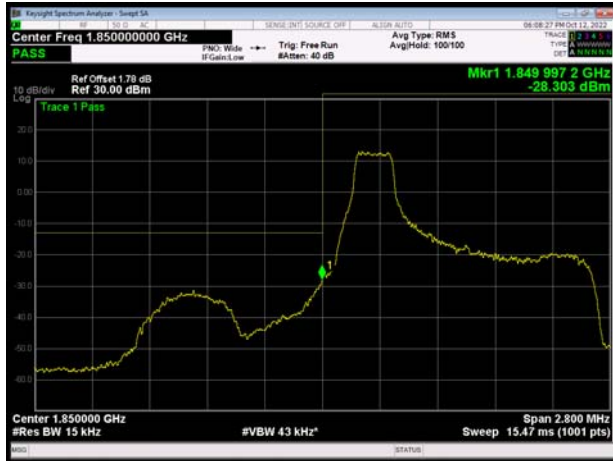




### 6.3. Band Edge Compliance



LTE Band 2 1.4MHz QPSK 1RB CH-Low



LTE Band 2 1.4MHz QPSK 1RB CH-High



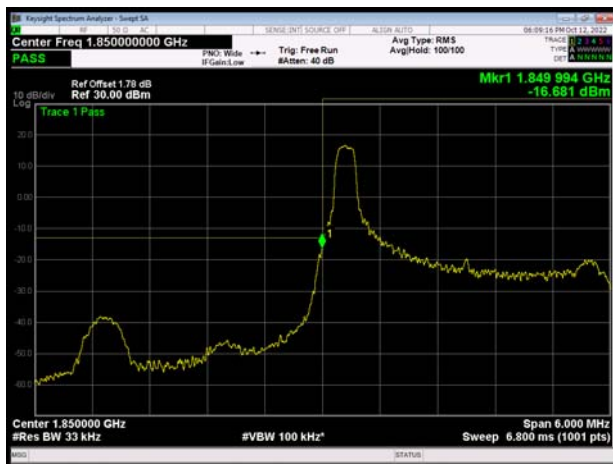
LTE Band 2 1.4MHz QPSK 100%RB CH-Low



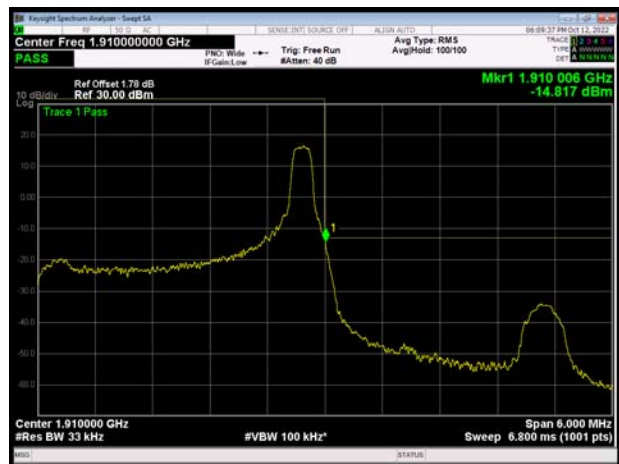
LTE Band 2 1.4MHz QPSK 100%RB CH-High



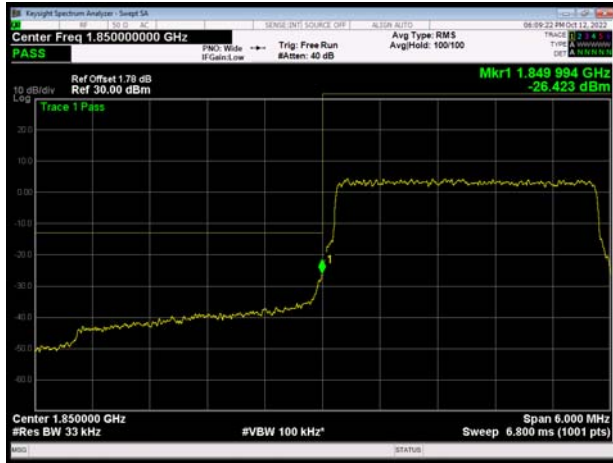
LTE Band 2 3MHz QPSK 1RB CH-Low



LTE Band 2 3MHz QPSK 1RB CH-High



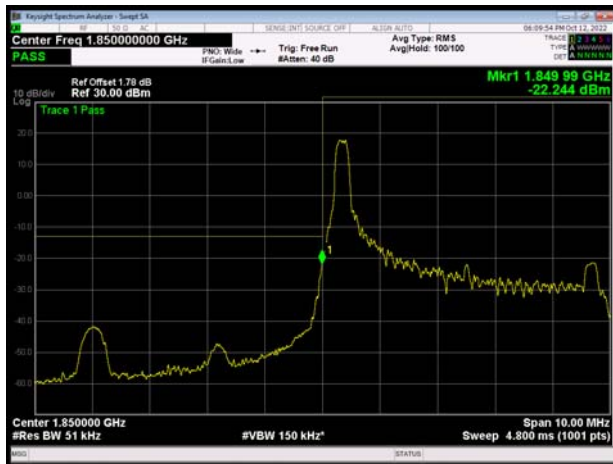
LTE Band 2 3MHz QPSK 100%RB CH-Low



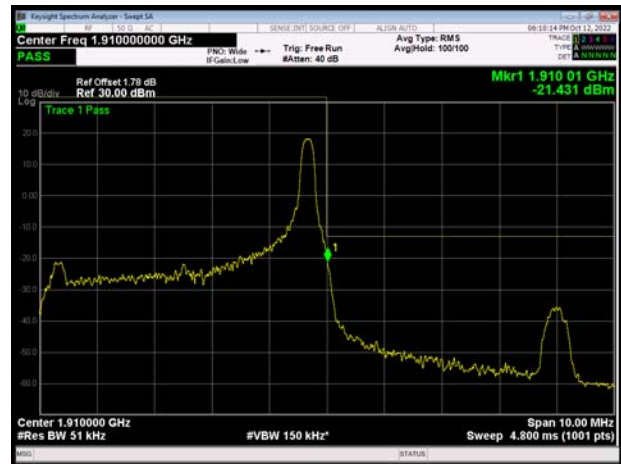
LTE Band 2 3MHz QPSK 100%RB CH-High



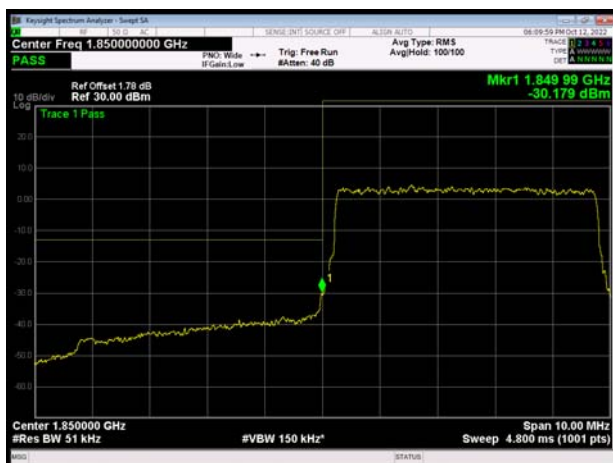
LTE Band 2 5MHz QPSK 1RB CH-Low



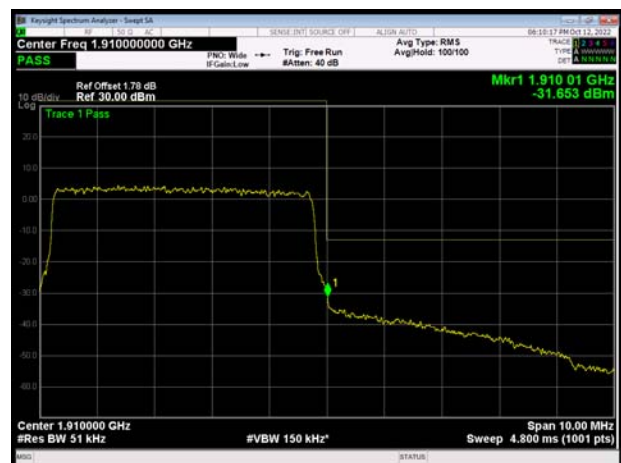
LTE Band 2 5MHz QPSK 1RB CH-High



LTE Band 2 5MHz QPSK 100%RB CH-Low

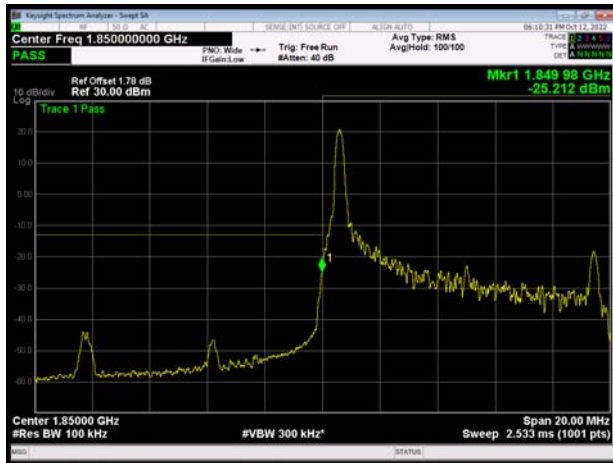


LTE Band 2 5MHz QPSK 100%RB CH-High

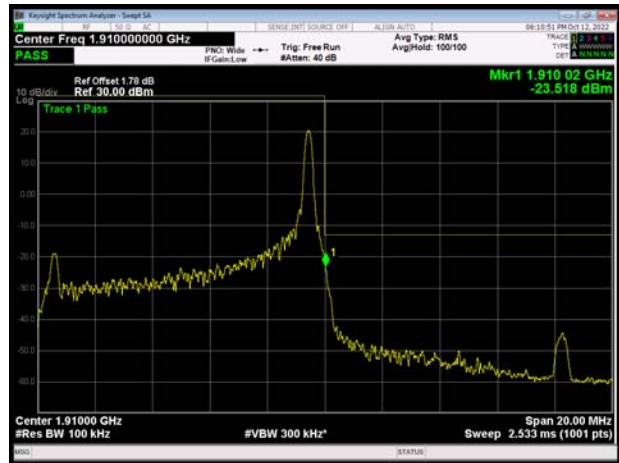




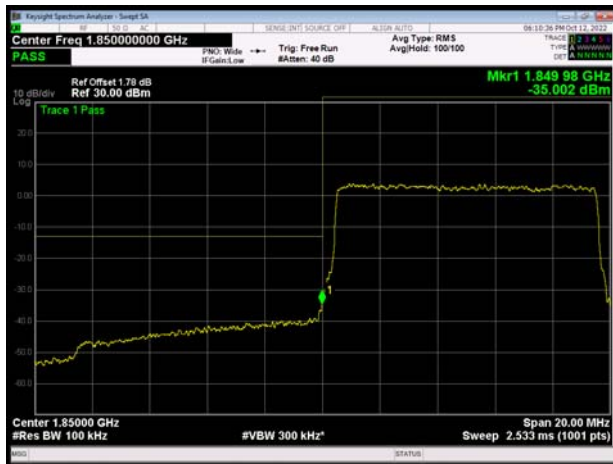
LTE Band 2 10MHz QPSK 1RB CH-Low



LTE Band 2 10MHz QPSK 1RB CH-High



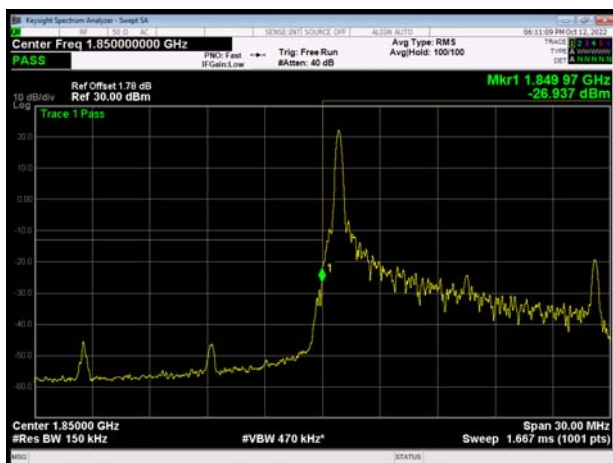
LTE Band 2 10MHz QPSK 100%RB CH-Low



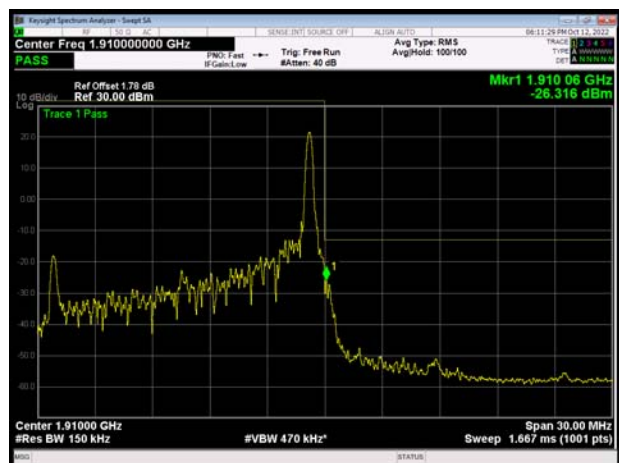
LTE Band 2 10MHz QPSK 100%RB CH-High



LTE Band 2 15MHz QPSK 1RB CH-Low



LTE Band 2 15MHz QPSK 1RB CH-High



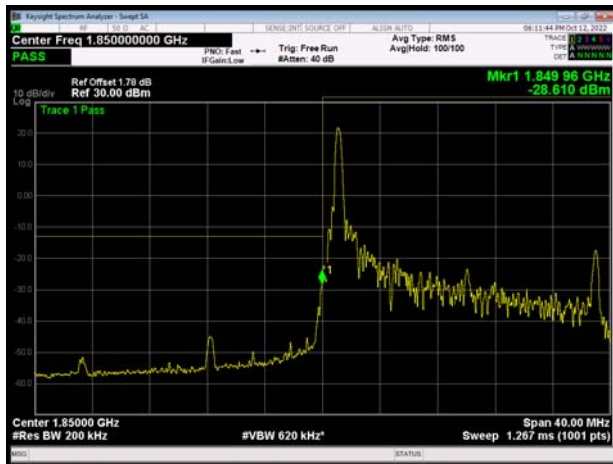
LTE Band 2 15MHz QPSK 100%RB CH-Low



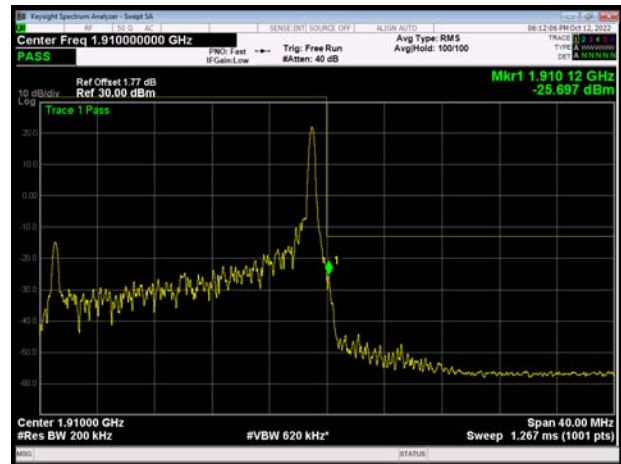
LTE Band 2 15MHz QPSK 100%RB CH-High



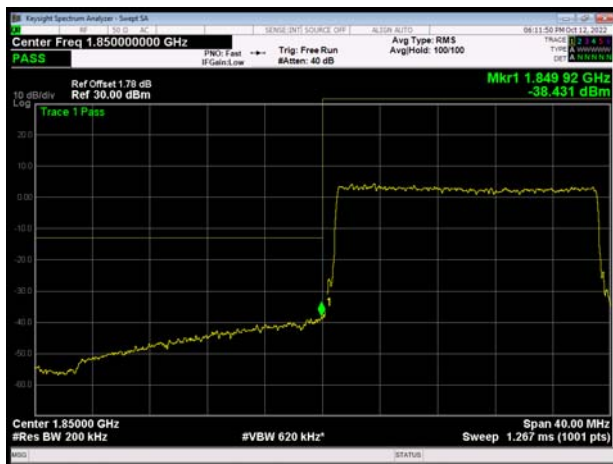
LTE Band 2 20MHz QPSK 1RB CH-Low



LTE Band 2 20MHz QPSK 1RB CH-High



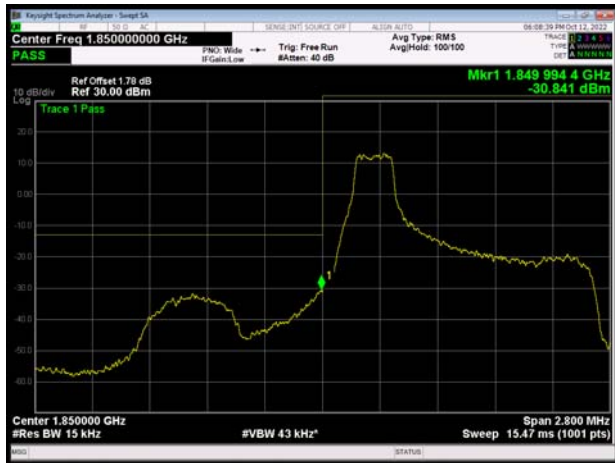
LTE Band 2 20MHz QPSK 100%RB CH-Low



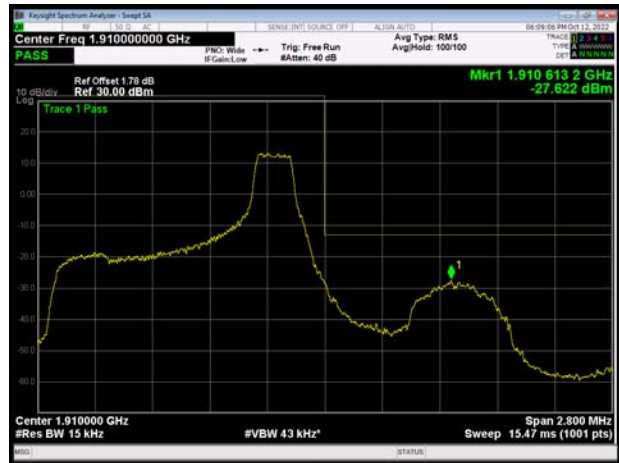
LTE Band 2 20MHz QPSK 100%RB CH-High



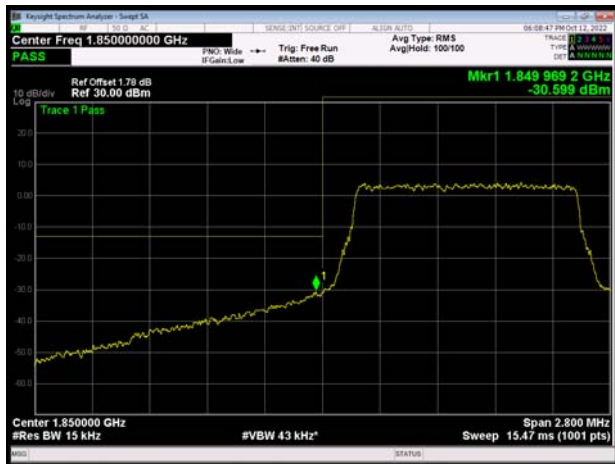
LTE Band 2 1.4MHz 16QAM 1RB CH-Low



LTE Band 2 1.4MHz 16QAM 1RB CH-High



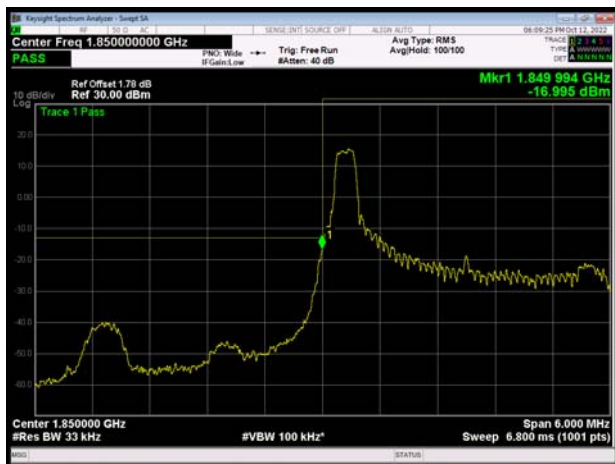
LTE Band 2 1.4MHz 16QAM 100%RB CH-Low



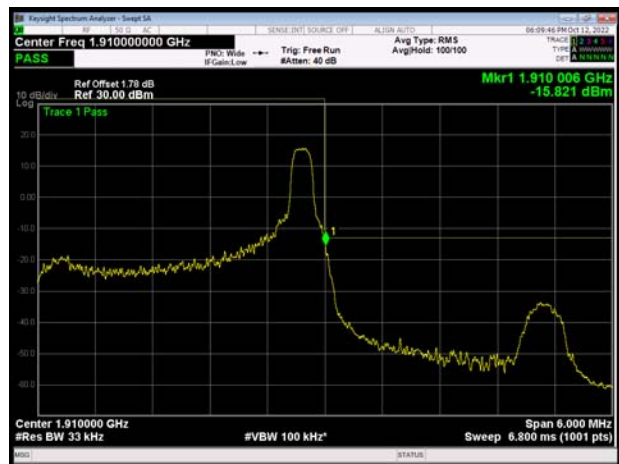
LTE Band 2 1.4MHz 16QAM 100%RB CH-High



LTE Band 2 3MHz 16QAM 1RB CH-Low



LTE Band 2 3MHz 16QAM 1RB CH-High



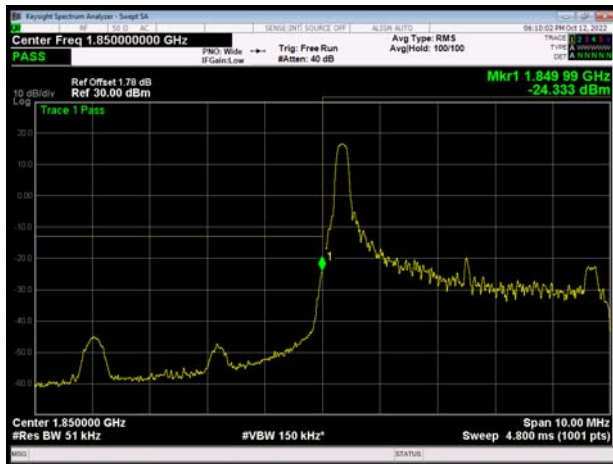
LTE Band 2 3MHz 16QAM 100%RB CH-Low



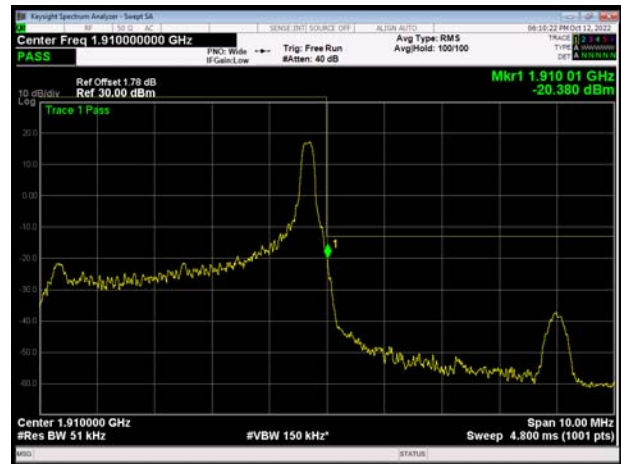
LTE Band 2 3MHz 16QAM 100%RB CH-High



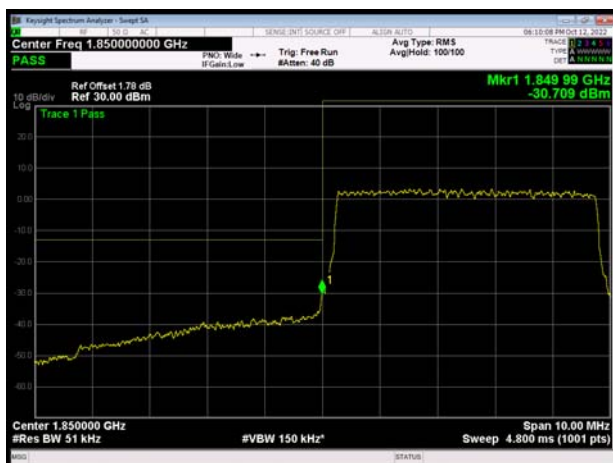
LTE Band 2 5MHz 16QAM 1RB CH-Low



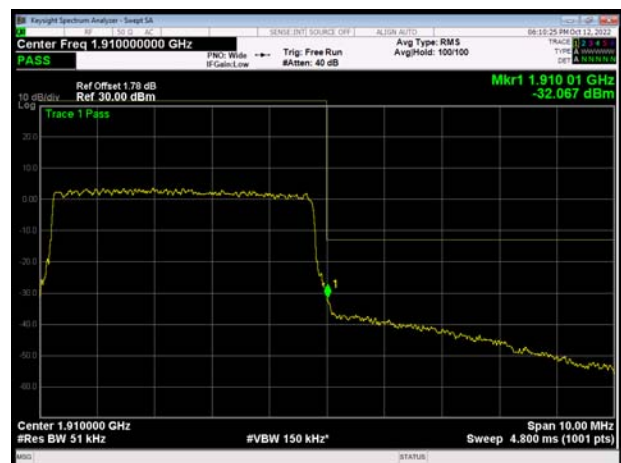
LTE Band 2 5MHz 16QAM 1RB CH-High



LTE Band 2 5MHz 16QAM 100%RB CH-Low

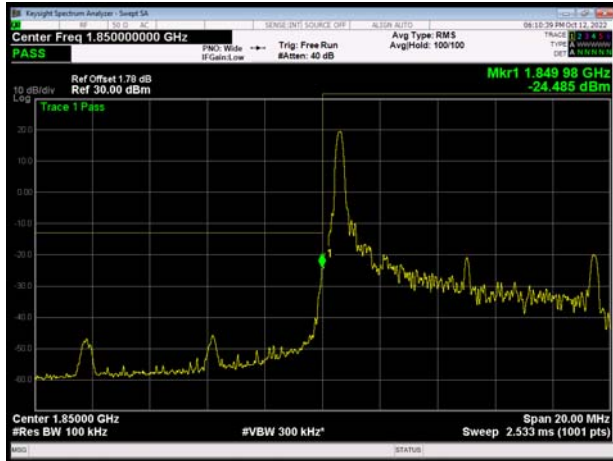


LTE Band 2 5MHz 16QAM 100%RB CH-High

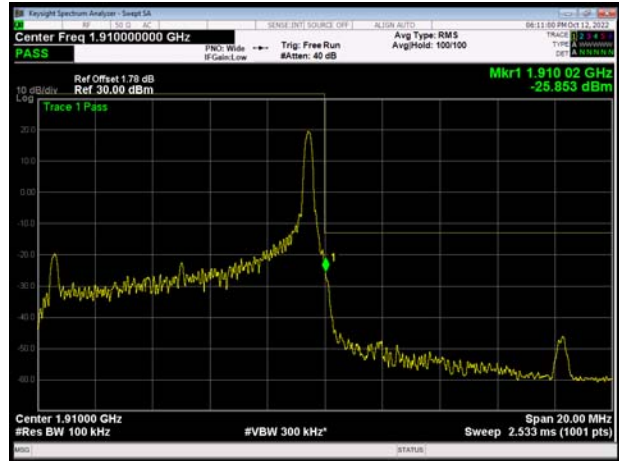




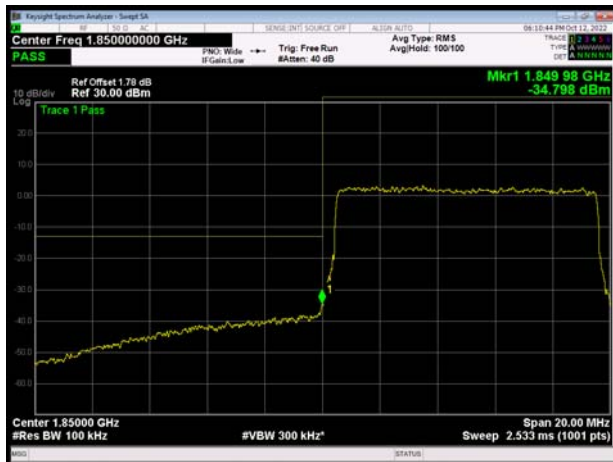
LTE Band 2 10MHz 16QAM 1RB CH-Low



LTE Band 2 10MHz 16QAM 1RB CH-High



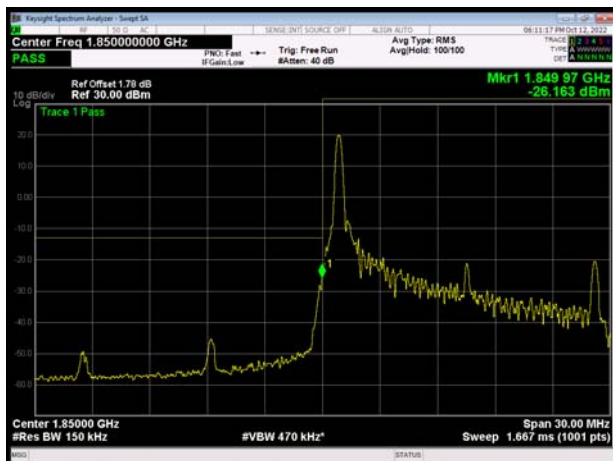
LTE Band 2 10MHz 16QAM 100%RB CH-Low



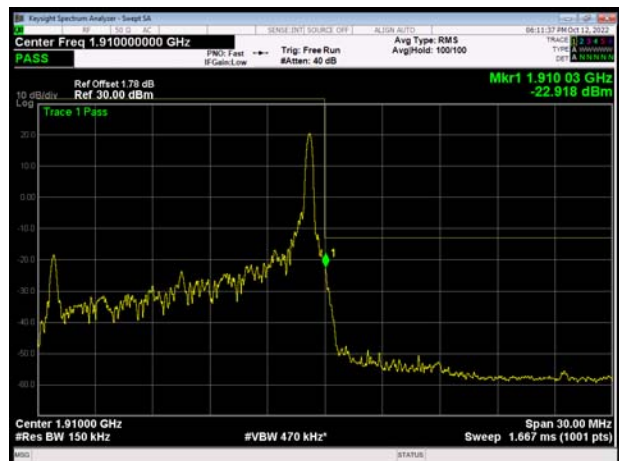
LTE Band 2 10MHz 16QAM 100%RB CH-High



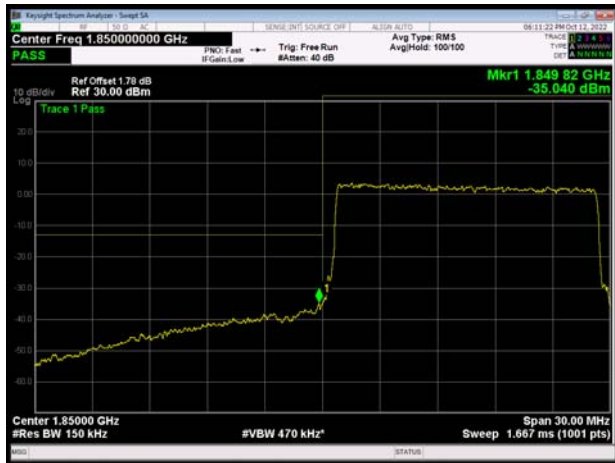
LTE Band 2 15MHz 16QAM 1RB CH-Low



LTE Band 2 15MHz 16QAM 1RB CH-High



LTE Band 2 15MHz 16QAM 100%RB CH-Low



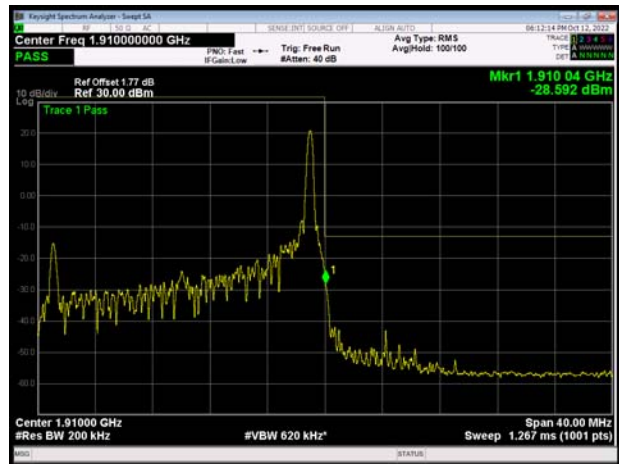
LTE Band 2 15MHz 16QAM 100%RB CH-High



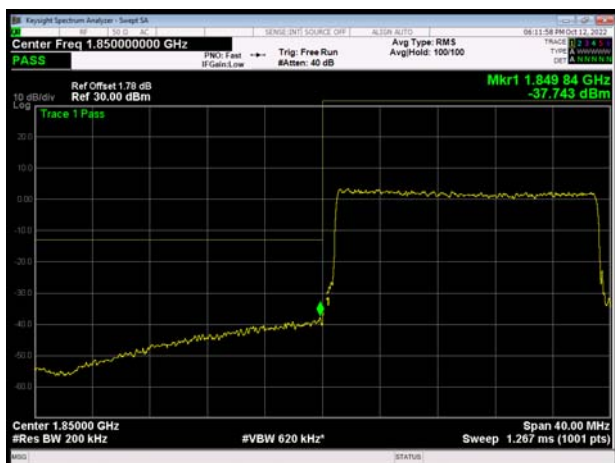
LTE Band 2 20MHz 16QAM 1RB CH-Low



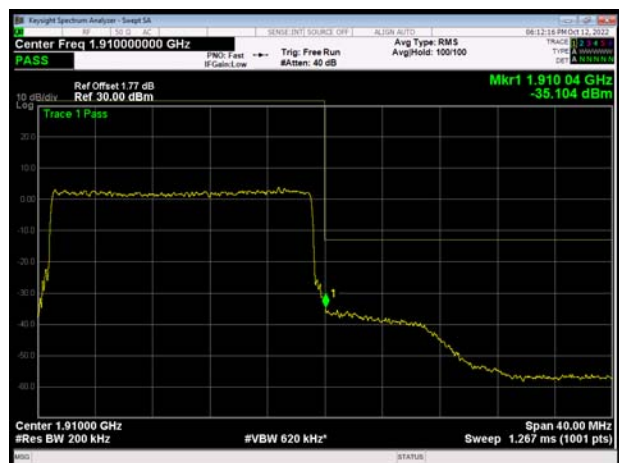
LTE Band 2 20MHz 16QAM 1RB CH-High



LTE Band 2 20MHz 16QAM 100%RB CH-Low



LTE Band 2 20MHz 16QAM 100%RB CH-High



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

Mode	Channel	Frequency (MHz)	Peak(dBm)	Avg(dBm)	PAPR(dB)	Limit(dB)	Conclusion
WCDMA Band II (RMC)	9262	1852.4	25.09	22.16	2.93	≤13	PASS
	9400	1880	25.10	22.26	2.84	≤13	PASS
	9538	1907.6	27.78	22.98	4.80	≤13	PASS

LTE Band 2									
Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	Peak (dBm)	Avg (dBm)	PAPR (dB)	Limit (dB)	Conclusion	
QPSK	1.4	18607	1850.7	27.28	22.03	5.25	≤13	PASS	
		18900	1880.0	27.28	21.98	5.30	≤13	PASS	
		19193	1909.3	27.19	22.04	5.15	≤13	PASS	
	3	18615	1851.5	27.29	21.92	5.37	≤13	PASS	
		18900	1880	27.26	22.05	5.21	≤13	PASS	
		19185	1908.5	27.08	21.95	5.13	≤13	PASS	
	5	18625	1852.5	27.30	21.94	5.36	≤13	PASS	
		18900	1880	27.27	21.99	5.28	≤13	PASS	
		19175	1907.5	26.98	21.92	5.06	≤13	PASS	
	10	18650	1855	27.41	21.87	5.54	≤13	PASS	
		18900	1880	27.29	22.00	5.29	≤13	PASS	
		19150	1905	27.08	21.98	5.10	≤13	PASS	
	15	18675	1857.5	27.84	22.01	5.83	≤13	PASS	
		18900	1880	27.62	21.98	5.64	≤13	PASS	
		19125	1902.5	27.58	22.02	5.56	≤13	PASS	
	20	18700	1860	27.65	22.00	5.65	≤13	PASS	
		18900	1880	27.53	22.04	5.49	≤13	PASS	
		19100	1900	27.61	22.04	5.57	≤13	PASS	
	16QAM	1.4	18607	1850.7	27.08	21.04	6.04	≤13	PASS
			18900	1880.0	27.18	21.17	6.01	≤13	PASS
			19193	1909.3	27.23	21.44	5.79	≤13	PASS
		3	18615	1851.5	27.20	21.03	6.17	≤13	PASS
			18900	1880	27.09	21.06	6.03	≤13	PASS
			19185	1908.5	27.10	21.16	5.94	≤13	PASS
5		18625	1852.5	27.13	21.08	6.05	≤13	PASS	
		18900	1880	27.05	21.09	5.96	≤13	PASS	
		19175	1907.5	26.93	21.09	5.84	≤13	PASS	
10		18650	1855	27.18	20.99	6.19	≤13	PASS	
		18900	1880	27.09	21.09	6.00	≤13	PASS	
		19150	1905	26.98	21.11	5.87	≤13	PASS	

RF Test Report

Report No.: R2209A0873-R2V2

	15	18675	1857.5	27.56	21.28	6.28	≤13	PASS
		18900	1880	27.19	21.03	6.16	≤13	PASS
		19125	1902.5	27.11	21.06	6.05	≤13	PASS
	20	18700	1860	27.36	21.05	6.31	≤13	PASS
		18900	1880	27.27	21.10	6.17	≤13	PASS
		19100	1900	27.52	21.33	6.19	≤13	PASS



### 6.5. Frequency Stability

WCDMA Band II						
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
Temperature	Voltage	BPSK	QPSK	BPSK	QPSK	
Normal (25°C)	Normal	17.27	8.81	0.00919	0.00469	PASS
Extreme (50°C)		15.19	3.60	0.00808	0.00191	PASS
Extreme (40°C)		2.97	11.25	0.00158	0.00598	PASS
Extreme (30°C)		15.62	5.17	0.00831	0.00275	PASS
Extreme (20°C)		7.69	2.85	0.00409	0.00152	PASS
Extreme (10°C)		11.61	12.65	0.00617	0.00673	PASS
Extreme (0°C)		7.83	7.57	0.00416	0.00403	PASS
Extreme (-10°C)		10.28	2.99	0.00547	0.00159	PASS
Extreme (-20°C)		15.73	14.70	0.00837	0.00782	PASS
Extreme (-30°C)		8.73	10.61	0.00464	0.00565	PASS
25°C	LV	11.69	16.23	0.00622	0.00863	PASS
	HV	11.47	13.07	0.00610	0.00695	PASS

LTE Band 2						
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	1.4MHz	16QAM	QPSK	16QAM	QPSK	
Temperature	Voltage	16QAM	QPSK	16QAM	QPSK	
Normal (25°C)	Normal	1.89	12.90	0.00101	0.00686	PASS
Extreme (50°C)		8.90	16.37	0.00473	0.00871	PASS
Extreme (40°C)		3.04	15.48	0.00162	0.00823	PASS
Extreme (30°C)		1.86	16.05	0.00099	0.00854	PASS
Extreme (20°C)		4.93	3.29	0.00262	0.00175	PASS
Extreme (10°C)		13.19	7.23	0.00702	0.00384	PASS
Extreme (0°C)		2.07	12.27	0.00110	0.00653	PASS
Extreme (-10°C)		8.03	10.35	0.00427	0.00551	PASS
Extreme (-20°C)		12.79	2.16	0.00681	0.00115	PASS
Extreme (-30°C)		14.92	15.33	0.00794	0.00816	PASS
25°C	LV	11.57	5.59	0.00615	0.00297	PASS
	HV	14.18	10.15	0.00754	0.00540	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	3MHz	16QAM	QPSK	16QAM	QPSK	
Temperature	Voltage	16QAM	QPSK	16QAM	QPSK	
Normal (25°C)	Normal	11.07	3.89	0.00589	0.00207	PASS

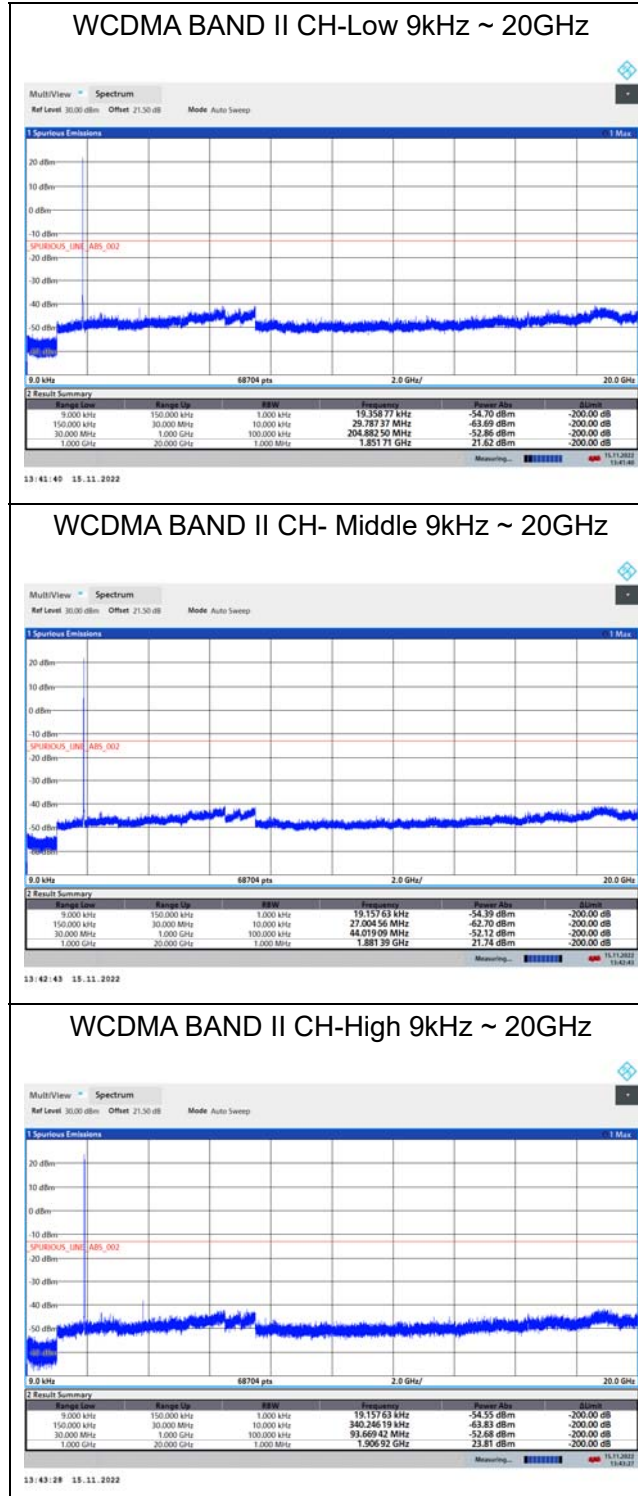
Extreme (50°C)		7.91	4.86	0.00421	0.00258	PASS
Extreme (40°C)		11.35	4.57	0.00604	0.00243	PASS
Extreme (30°C)		5.48	9.89	0.00291	0.00526	PASS
Extreme (20°C)		6.23	1.17	0.00332	0.00062	PASS
Extreme (10°C)		15.41	15.73	0.00820	0.00837	PASS
Extreme (0°C)		14.36	6.00	0.00764	0.00319	PASS
Extreme (-10°C)		2.43	17.11	0.00129	0.00910	PASS
Extreme (-20°C)		9.49	14.30	0.00505	0.00761	PASS
Extreme (-30°C)		4.80	5.30	0.00256	0.00282	PASS
25°C	LV	7.05	10.24	0.00375	0.00545	PASS
	HV	4.17	2.50	0.00222	0.00133	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	5MHz					
Temperature	Voltage	16QAM	QPSK	16QAM	QPSK	
Normal (25°C)	Normal	11.18	1.68	0.00595	0.00090	
Extreme (50°C)		3.56	8.48	0.00189	0.00451	PASS
Extreme (40°C)		4.57	11.75	0.00243	0.00625	PASS
Extreme (30°C)		10.28	7.32	0.00547	0.00390	PASS
Extreme (20°C)		10.51	16.73	0.00559	0.00890	PASS
Extreme (10°C)		3.00	17.03	0.00160	0.00906	PASS
Extreme (0°C)		3.16	10.10	0.00168	0.00537	PASS
Extreme (-10°C)		7.03	14.71	0.00374	0.00783	PASS
Extreme (-20°C)		8.75	17.58	0.00466	0.00935	PASS
Extreme (-30°C)		14.59	2.14	0.00776	0.00114	PASS
25°C	LV	8.89	13.48	0.00473	0.00717	PASS
	HV	2.65	2.03	0.00141	0.00108	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	10MHz					
Temperature	Voltage	16QAM	QPSK	16QAM	QPSK	
Normal (25°C)	Normal	9.23	3.10	0.00491	0.00165	
Extreme (50°C)		11.78	2.96	0.00626	0.00157	PASS
Extreme (40°C)		6.42	1.70	0.00341	0.00091	PASS
Extreme (30°C)		13.81	11.61	0.00735	0.00617	PASS
Extreme (20°C)		12.65	14.09	0.00673	0.00749	PASS
Extreme (10°C)		6.83	10.74	0.00363	0.00571	PASS
Extreme (0°C)		12.72	16.89	0.00677	0.00898	PASS
Extreme (-10°C)		13.96	10.05	0.00743	0.00534	PASS
Extreme (-20°C)		17.48	5.56	0.00930	0.00296	PASS
Extreme (-30°C)		7.82	11.95	0.00416	0.00635	PASS

25°C	LV	6.90	2.40	0.00367	0.00127	PASS
	HV	8.26	2.08	0.00439	0.00110	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	15MHz					
Temperature	Voltage	16QAM	QPSK	16QAM	QPSK	
Normal (25°C)	Normal	13.89	8.92	0.00739	0.00474	PASS
Extreme (50°C)		10.61	11.39	0.00564	0.00606	PASS
Extreme (40°C)		2.53	7.98	0.00134	0.00424	PASS
Extreme (30°C)		7.26	7.75	0.00386	0.00412	PASS
Extreme (20°C)		4.55	7.18	0.00242	0.00382	PASS
Extreme (10°C)		8.80	12.45	0.00468	0.00662	PASS
Extreme (0°C)		12.85	2.87	0.00684	0.00153	PASS
Extreme (-10°C)		10.24	10.29	0.00544	0.00547	PASS
Extreme (-20°C)		8.83	17.73	0.00470	0.00943	PASS
Extreme (-30°C)		6.19	15.21	0.00329	0.00809	PASS
25°C		LV	8.58	5.95	0.00456	0.00317
	HV	1.81	4.79	0.00096	0.00255	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	20MHz					
Temperature	Voltage	16QAM	QPSK	16QAM	QPSK	
Normal (25°C)	Normal	4.18	5.62	0.00223	0.00299	PASS
Extreme (50°C)		16.91	7.86	0.00899	0.00418	PASS
Extreme (40°C)		15.08	8.89	0.00802	0.00473	PASS
Extreme (30°C)		9.62	1.80	0.00512	0.00096	PASS
Extreme (20°C)		8.06	17.57	0.00429	0.00935	PASS
Extreme (10°C)		14.08	13.47	0.00749	0.00716	PASS
Extreme (0°C)		8.15	9.37	0.00433	0.00498	PASS
Extreme (-10°C)		13.45	16.28	0.00715	0.00866	PASS
Extreme (-20°C)		5.15	17.84	0.00274	0.00949	PASS
Extreme (-30°C)		14.12	6.40	0.00751	0.00340	PASS
25°C		LV	12.71	14.99	0.00676	0.00798
	HV	12.28	11.14	0.00653	0.00593	PASS

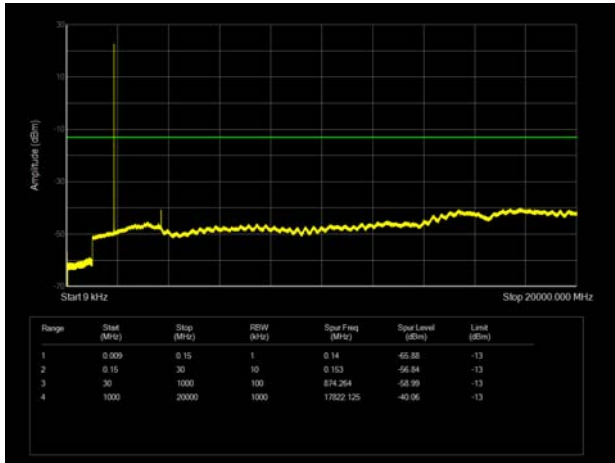
### 6.6. Spurious Emissions at Antenna Terminals

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.

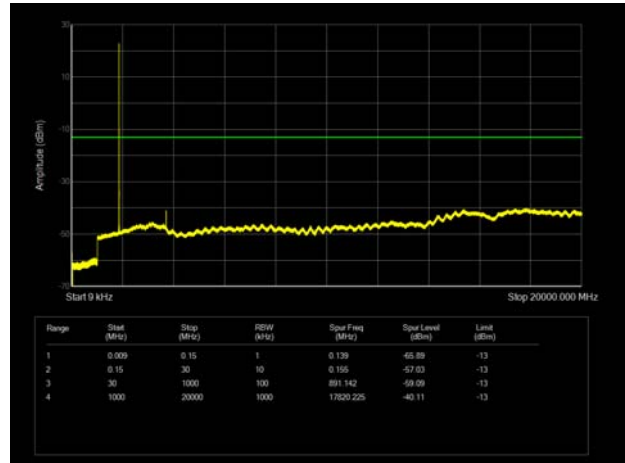
The signal beyond the limit is carrier.



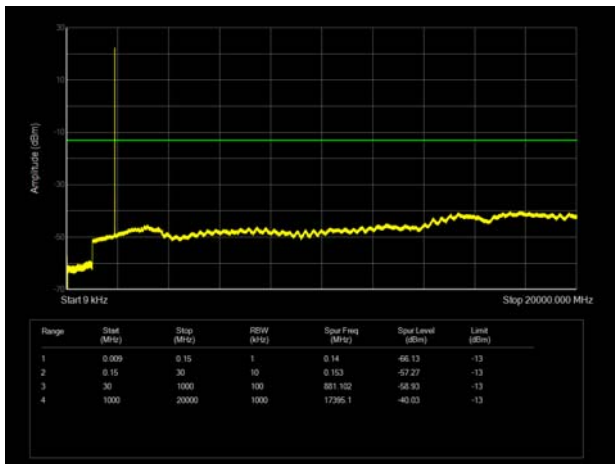
LTE Band 2 1.4MHz CH-Low 9kHz~20GHz



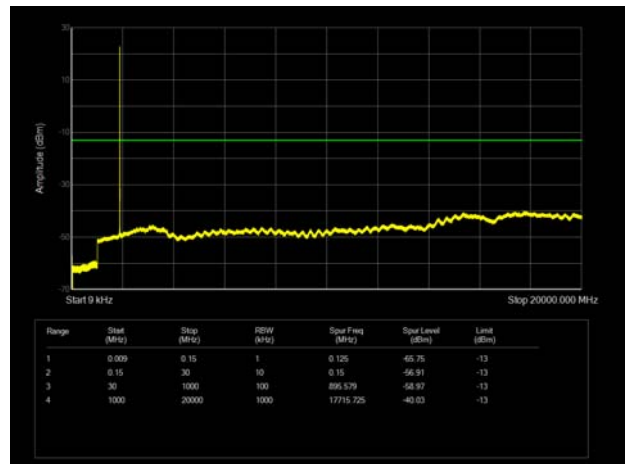
LTE Band 2 3MHz CH-Low 9kHz~20GHz



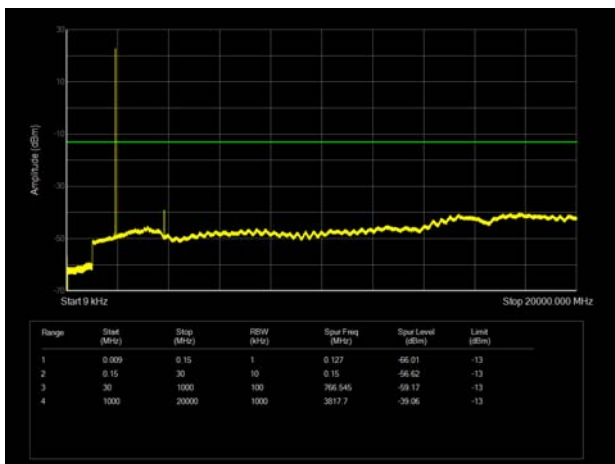
LTE Band 2 1.4MHz CH-Middle 9kHz~20GHz



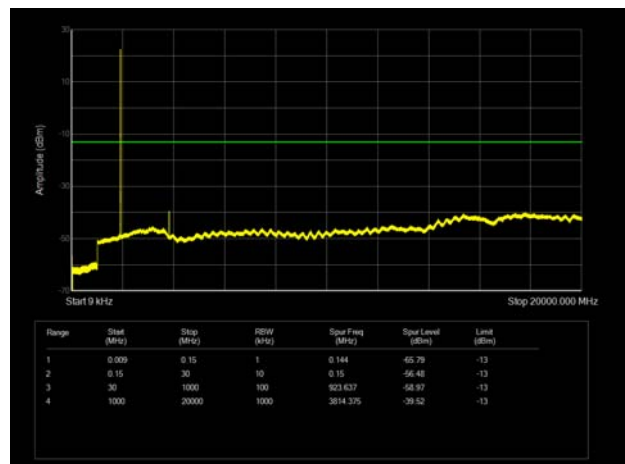
LTE Band 2 3MHz CH-Middle 9kHz~20GHz



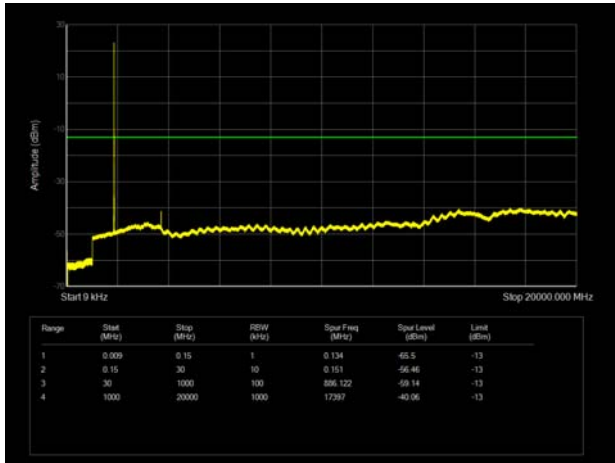
LTE Band 2 1.4MHz CH-High 9kHz~20GHz



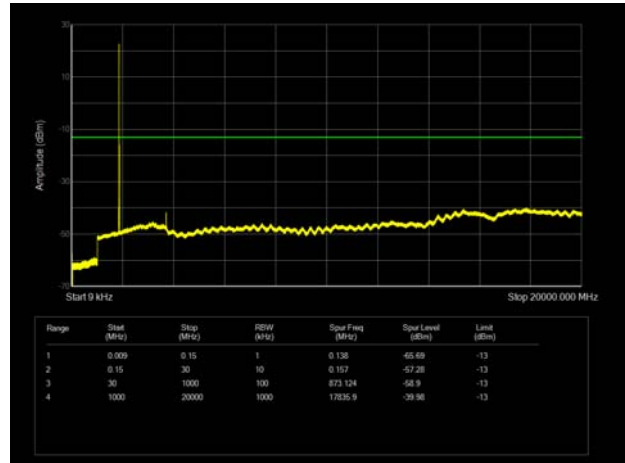
LTE Band 2 3MHz CH-High 9kHz~20GHz



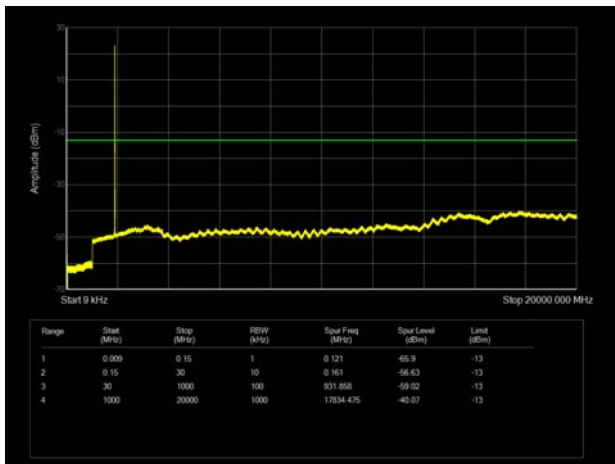
LTE Band 2 5MHz CH-Low 9kHz~20GHz



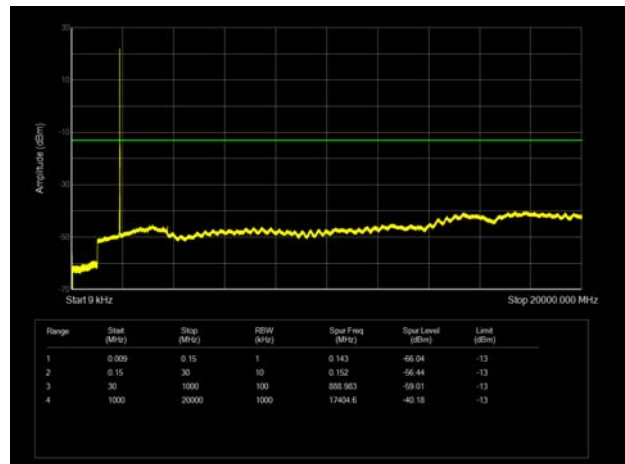
LTE Band 2 10MHz CH-Low 9kHz~20GHz



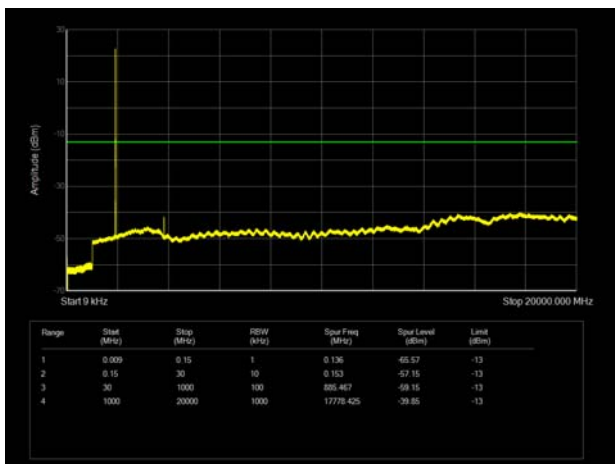
LTE Band 2 5MHz CH-Middle 9kHz~20GHz



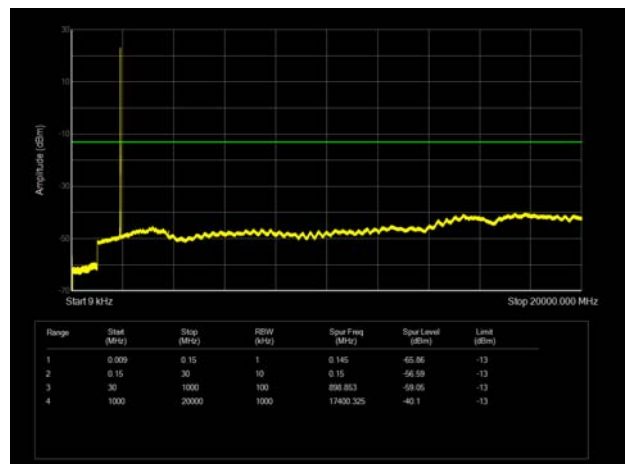
LTE Band 2 10MHz CH-Middle 9kHz~20GHz



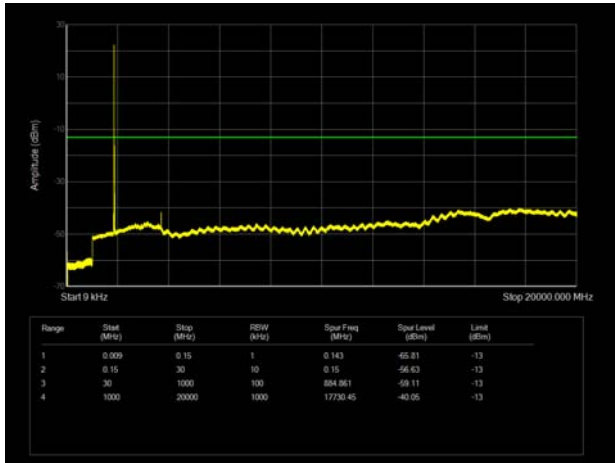
LTE Band 2 5MHz CH-High 9kHz~20GHz



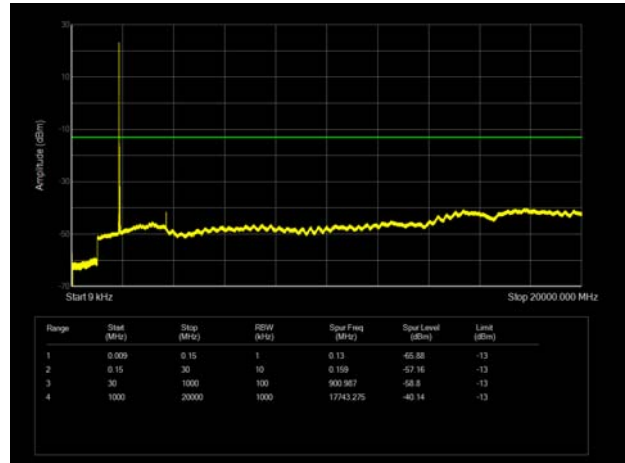
LTE Band 2 10MHz CH-High 9kHz~20GHz



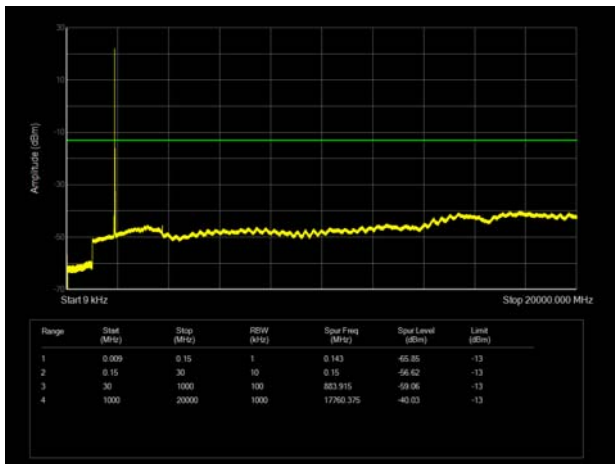
LTE Band 2 15MHz CH-Low 9kHz~20GHz



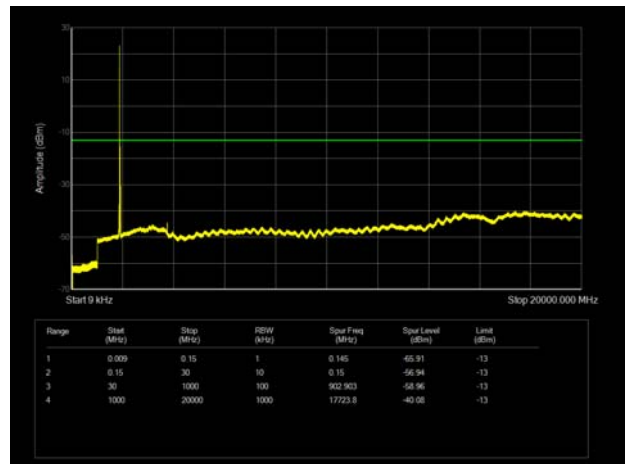
LTE Band 2 20MHz CH-Low 9kHz~20GHz



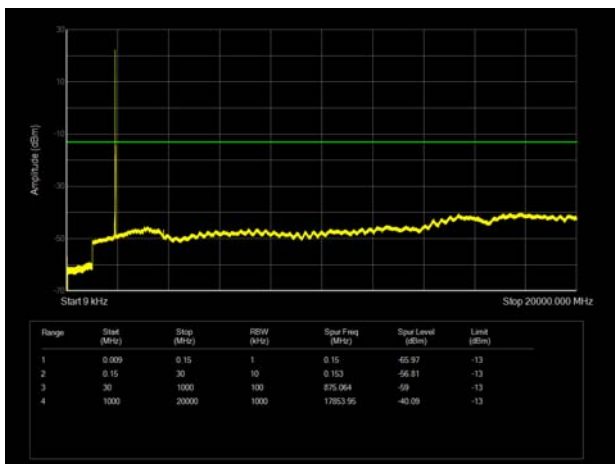
LTE Band 2 15MHz CH-Middle 9kHz~20GHz



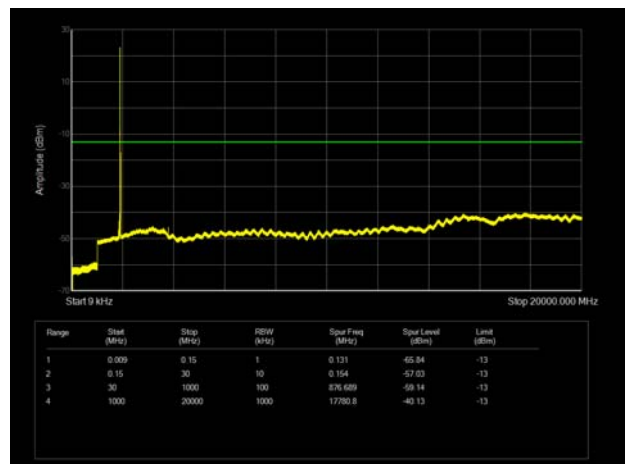
LTE Band 2 20MHz CH-Middle 9kHz~20GHz



LTE Band 2 15MHz CH-High 9kHz~20GHz



LTE Band 2 20MHz CH-High 9kHz~20GHz





### 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.

WCDMA Band II CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	2087.93	-58.63	2.60	12.50	Horizontal	-48.73	-13.00	35.73	148
3	3762.00	-31.62	3.30	12.50	Horizontal	-22.42	-13.00	9.42	98
4	5637.10	-42.21	4.20	12.20	Horizontal	-34.21	-13.00	21.21	165
5	7520.00	-48.72	4.30	11.10	Horizontal	-41.92	-13.00	28.92	301
6	9400.00	-52.77	5.90	11.90	Horizontal	-46.77	-13.00	33.77	45
7	11280.00	-52.94	5.70	14.00	Horizontal	-44.64	-13.00	31.64	106
8	13160.00	-50.65	5.80	13.10	Horizontal	-43.35	-13.00	30.35	214
9	15040.00	-53.80	6.10	14.60	Horizontal	-45.30	-13.00	32.30	33
10	16920.00	-	-	-	-	-	-	-	-

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 Horizontal position.

LTE Band 2 1.4MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3759.10	-28.96	2.60	12.50	Vertical	-19.06	-13.00	6.06	62
3	5637.90	-32.35	3.30	12.50	Vertical	-23.15	-13.00	10.15	181
4	7517.20	-40.22	4.20	12.20	Vertical	-32.22	-13.00	19.22	69
5	9396.50	-50.93	4.30	11.10	Vertical	-44.13	-13.00	31.13	88
6	11275.80	-44.21	5.90	11.90	Vertical	-38.21	-13.00	25.21	51
7	13155.10	-48.93	5.70	14.00	Vertical	-40.63	-13.00	27.63	134
8	15034.40	-51.05	5.80	13.10	Vertical	-43.75	-13.00	30.75	257
9	16913.70	-50.63	6.10	14.60	Vertical	-42.13	-13.00	29.13	182
10	18800.00	-	-	-	-	-	-	-	-

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 2 5MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3755.00	-30.40	2.60	12.50	Vertical	-20.50	-13.00	7.50	65
3	5632.50	-34.31	3.30	12.50	Vertical	-25.11	-13.00	12.11	2
4	7510.00	-39.20	4.20	12.20	Vertical	-31.20	-13.00	18.20	12
5	9387.50	-50.42	4.30	11.10	Vertical	-43.62	-13.00	30.62	137
6	11265.00	-45.35	5.90	11.90	Vertical	-39.35	-13.00	26.35	221
7	13142.50	-51.21	5.70	14.00	Vertical	-42.91	-13.00	29.91	16
8	15020.00	-51.80	5.80	13.10	Vertical	-44.50	-13.00	31.50	87
9	16897.50	-50.24	6.10	14.60	Vertical	-41.74	-13.00	28.74	96
10	18800.00	-	-	-	-	-	-	-	-

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 2 20MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3740.00	-32.00	2.60	12.50	Vertical	-22.10	-13.00	9.10	289
3	5610.00	-35.80	3.30	12.50	Vertical	-26.60	-13.00	13.60	55
4	7480.00	-39.03	4.20	12.20	Vertical	-31.03	-13.00	18.03	3
5	9350.00	-48.67	4.30	11.10	Vertical	-41.87	-13.00	28.87	47
6	11220.00	-50.18	5.90	11.90	Vertical	-44.18	-13.00	31.18	65
7	13090.00	-49.84	5.70	14.00	Vertical	-41.54	-13.00	28.54	204
8	14960.00	-51.44	5.80	13.10	Vertical	-44.14	-13.00	31.14	17
9	16830.00	-50.37	6.10	14.60	Vertical	-41.87	-13.00	28.87	31
10	18800.00	-	-	-	-	-	-	-	-

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
Universal Radio Communication Tester	Key sight	E5515C	GB44400275	2021-12-12	2022-12-11
Signal Analyzer	R&S	FSV30	104028	2021-12-12	2022-12-11
Signal Analyzer	R&S	FSV3030	101411	2021-12-12	2022-12-11
TRILOG Broadband Antenna	Schwarzbeck	VULB 9163	1023	2020-05-05	2023-05-04
Climatic Chamber	ESPEC	SU-242	93000506	2021-12-12	2022-12-11
Horn Antenna	Schwarzbeck	BBHA 9120D	1594	2020-12-17	2023-12-16
Software	R&S	EMC32	10.35.10	--	--

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

## **ANNEX A: The EUT Appearance**

**The EUT Appearance is submitted separately.**

## **ANNEX B: Test Setup Photos**

**The Test Setup Photos is submitted separately.**