



RF TEST REPORT

Applicant Xiaomi Communications Co., Ltd.
FCC ID 2AFZZNC4L
Product Mobile Phone
Brand Redmi
Model 2212ARNC4L
Report No. R2209A0813-R3V1
Issue Date November 18, 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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Version	Revision description	Issue Date
Rev.0	Initial issue of report.	November 14, 2022
Rev.1	Update description.	November 18, 2022

Note: This revised report (Report No. R2209A0813-R3V1) supersedes and replaces the previously issued report (Report No. R2209A0813-R3). Please discard or destroy the previously issued report and dispose of it accordingly.



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(d)(4) /27.50(b)(10) /27.50(h)(2)	PASS
2	Occupied Bandwidth	2.1049	PASS
3	Band Edge Compliance	27.53(h) /27.53(f) /27.53(c) /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(h) /27.53(f) /27.53(c) /27.53(m)	PASS
7	Radiated Spurious Emission	2.1053 /27.53(h) /27.53(f) /27.53(c) /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.			



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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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	2212ARNC4L		
IMEI	IMEI1:861591060034168 IMEI2:861591060034176		
Hardware Version	P1.1		
Software Version	MIUI 13		
Antenna Type	PIFA Antenna		
Antenna Gain	Band	Low Antenna	Upper Antenna
	WCDMA Band IV:	0.8 dBi	-2.5 dBi
	LTE Band 4	0.8 dBi	-2.5 dBi
	LTE Band 7	-0.4 dBi	-1.7 dBi
	LTE Band 13	-5.9 dBi	-3.6 dBi
	LTE Band 38	-1.0 dBi	-1.4 dBi
	LTE Band 41	-0.8dBi	-1.7 dBi
	LTE Band 66	0.7 dBi	-3.2 dBi
Test Mode(s)	WCDMA Band IV; LTE Band 4/7/13/38/41/66;		
Test Modulation	(WCDMA) BPSK, QPSK, 16QAM; (LTE) QPSK, 16QAM, 64QAM;		
HSDPA UE Category	4		
HSUPA UE Category	5		
LTE Category	5		
Maximum E.I.R.P./ E.R.P.	WCDMA Band IV:	24.24dBm	
	LTE Band 4:	24.25 dBm	
	LTE Band 7:	23.10 dBm	
	LTE Band 13:	17.45 dBm	
	LTE Band 38:	22.41 dBm	
	LTE Band 41:	22.75 dBm	



	LTE Band 66:	24.14 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)
	WCDMA Band IV	1710 ~ 1755	2110 ~ 2155
	LTE Band 4	1710 ~1755	2110~2155
	LTE Band 7	2500 ~ 2570	2620 ~ 2690
	LTE Band 13	777 ~ 787	746 ~ 756
	LTE Band 38	2570 ~ 2620	2570 ~ 2620
	LTE Band 41	2496 ~ 2690	2496 ~ 2690
	LTE Band 66	1710 ~ 1780	2110 ~ 2180
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 Upperantenna 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 WCDMA/LTE Band; X axis, horizontal polarization for Low Antenna WCDMA 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 WCDMA/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:

Test items	Modes/Modulation
	WCDMA Band IV
RF Power Output and Effective Isotropic Radiated Power	RMC/AMR 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

4/7/13/38/41/66:

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 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LTE 7	-	-	0	0	0	0	0	0	0	0	0	0	0	0
	LTE 13	-	-	0	0	-	-	0	0	0	0	0	0	0	0
	LTE 38	-	-	0	0	0	0	0	0	0	0	0	0	0	0
	LTE 41	-	-	0	0	0	0	0	0	0	0	0	0	0	0
	LTE 66	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Occupied Bandwidth	LTE 4	0	0	0	0	0	0	0	0	-	-	0	0	0	0
	LTE 7	-	-	0	0	0	0	0	0	-	-	0	0	0	0
	LTE 13	-	-	0	0	-	-	0	0	-	-	0	0	0	0
	LTE 38	-	-	0	0	0	0	0	0	-	-	0	0	0	0
	LTE 41	-	-	0	0	0	0	0	0	-	-	0	0	0	0
	LTE 66	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Band Edge Compliance	LTE 4	0	0	0	0	0	0	0	0	0	-	0	0	-	0
	LTE 7	-	-	0	0	0	0	0	0	0	-	0	0	-	0
	LTE 13	-	-	0	0	-	-	0	0	0	-	0	0	-	0
	LTE 38	-	-	0	0	0	0	0	0	0	-	0	0	-	0
	LTE 41	-	-	0	0	0	0	0	0	0	-	0	0	-	0
	LTE 66	0	0	0	0	0	0	0	0	0	-	0	0	0	0
Peak-to-Average Power Ratio	LTE 4	0	0	0	0	0	0	0	0	-	-	0	0	0	0
	LTE 7	-	-	0	0	0	0	0	0	-	-	0	0	0	0
	LTE 13	-	-	0	0	-	-	0	0	-	-	0	0	0	0
	LTE 38	-	-	0	0	0	0	0	0	-	-	0	0	0	0
	LTE 41	-	-	0	0	0	0	0	0	-	-	0	0	0	0
	LTE 66	0	0	0	0	0	0	0	0	-	-	0	0	0	0
Frequency Stability	LTE 4	0	0	0	0	0	0	0	0	0	-	-	-	0	-
	LTE 7	-	-	0	0	0	0	0	0	0	-	-	-	0	-
	LTE 13	-	-	0	0	-	-	0	0	0	-	-	-	0	-
	LTE 38	-	-	0	0	0	0	0	0	0	-	-	-	0	-
	LTE 41	-	-	0	0	0	0	0	0	0	-	-	-	0	-
	LTE 66	0	0	0	0	0	0	0	0	0	-	-	-	0	-
Spurious Emissions at Antenna Terminals	LTE 4	0	0	0	0	0	0	0	-	0	-	-	0	0	0
	LTE 7	-	-	0	0	0	0	0	-	0	-	-	0	0	0
	LTE 13	-	-	0	0	-	-	0	-	0	-	-	0	0	0
	LTE 38	-	-	0	0	0	0	0	-	0	-	-	0	0	0
	LTE 41	-	-	0	0	0	0	0	-	0	-	-	0	0	0



	LTE 66	O	O	O	O	O	O	O	O	O	-	-	O	O	O
Radiated Spurious Emission	LTE 4	O	-	O	-	-	O	O	-	O	-	-	-	O	-
	LTE 7	-	-	O	-	-	O	O	-	O	-	-	-	O	-
	LTE 13	-	-	O	O	-	-	O	-	O	-	-	-	O	-
	LTE 38	-	-	O	-	-	O	O	-	O	-	-	-	O	-
	LTE 41	-	-	O	-	-	O	O	-	O	-	-	-	O	-
	LTE 66	O	-	O	-	-	O	O	-	O	-	-	-	O	-
Note	<p>1. The mark "O" means that this configuration is chosen for testing.</p> <p>2. The mark "-" means that this configuration is not testing.</p>														

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.

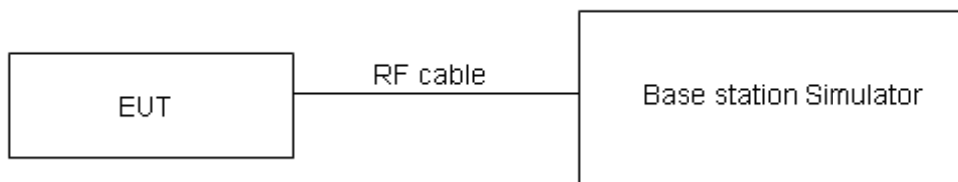
ERP can then be calculated as follows:

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

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 27.50(b) (10) specifies that “Portable stations (hand-held devices) transmitting in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands are limited to 3 watts ERP”

Rule Part 27.50(d) (4) specifies that “Fixed, mobile and portable (hand-held) stations operating in the 1710–1755 MHz band are limited to 1 watt EIRP”

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(b)(10)Limit	$\leq 3 \text{ W}$ (34.77 dBm)
Part 27.50(d)(4)Limit	$\leq 1 \text{ W}$ (30 dBm)
Part 27.50(h)(2) 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 $k = 2$, $U=0.4$ 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

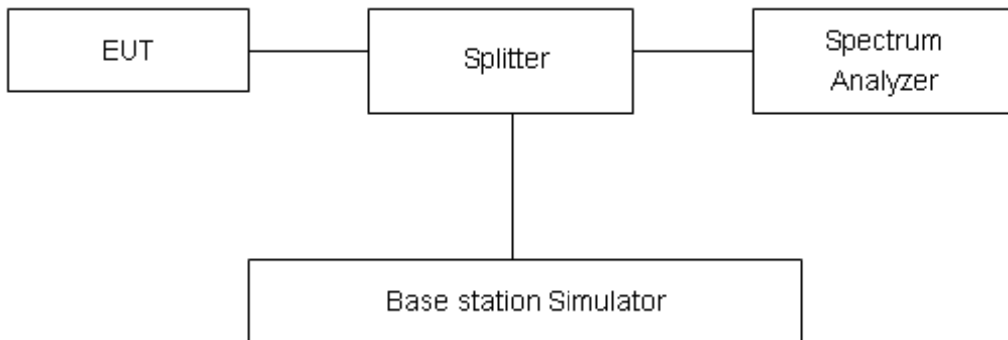
Method of Measurement

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 D01v03r01 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.

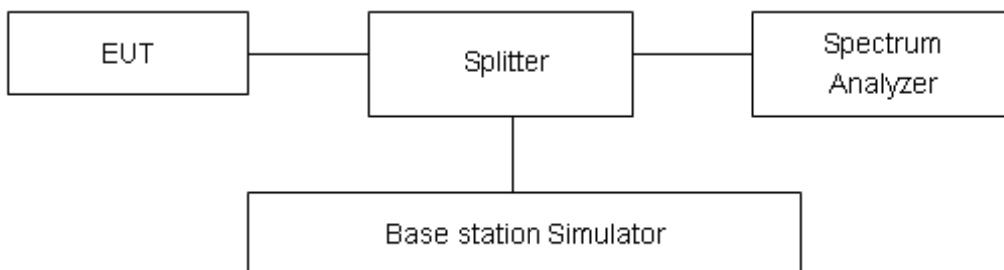
For LTE Band 41 the middle channel, high channel set RBW \geq 1% EBW in the 1MHz band immediately outside and adjacent to the band edge. Beyond the 1 MHz band from the band edge, RBW=1MHz was used; Low channel set RBW \geq 2% EBW in the 1MHz band immediately outside and adjacent to the band edge. Beyond 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(i) By a factor of not less than $43 + 10 \log(P)$ dB on all frequencies between 2305 and 2320 MHz.

Rule Part 27.53(h) specifies that “ for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB”

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.

Rule Part 27.53(f) For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

Rule Part 27.53 (c) For operations in the 746-758 MHz band and the 776-788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

- (1) On any frequency outside the 746-758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB;
- (2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB;
- (3) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $76 + 10 \log (P)$ dB in a 6.25 kHz band segment, for base and fixed stations;
- (4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $65 + 10 \log (P)$ dB in a 6.25 kHz band segment, for mobile and portable stations;
- (5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;



Measurement Uncertainty

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

Test Results

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

5.4 Peak-to-Average Power Ratio (PAPR)

Ambient condition

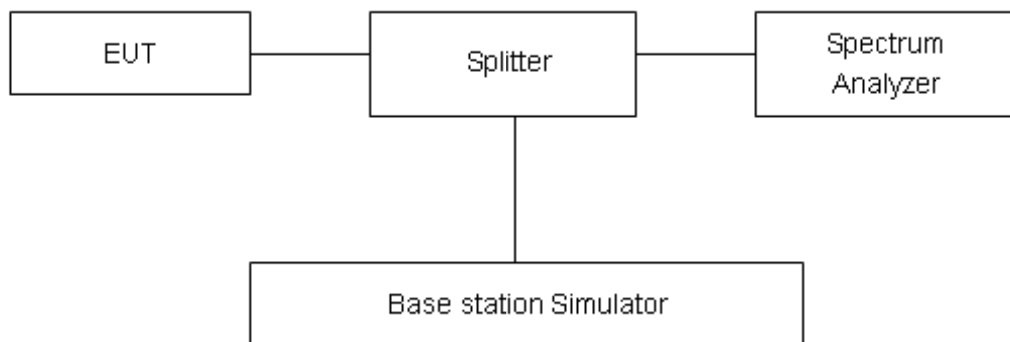
Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

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:

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

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.

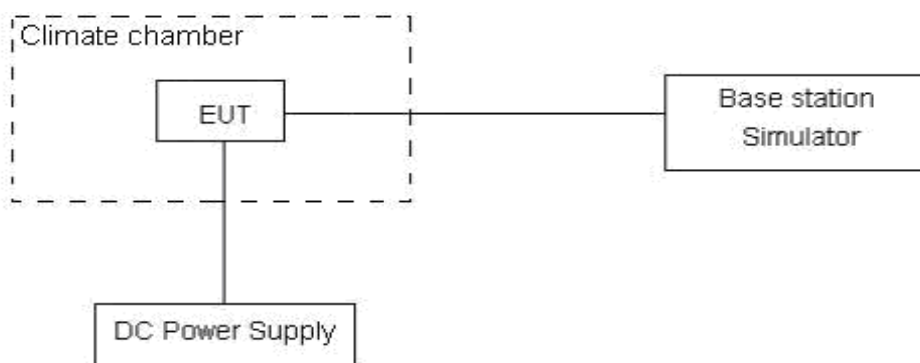
Frequency Stability (Voltage Variation)

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 Vand 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)

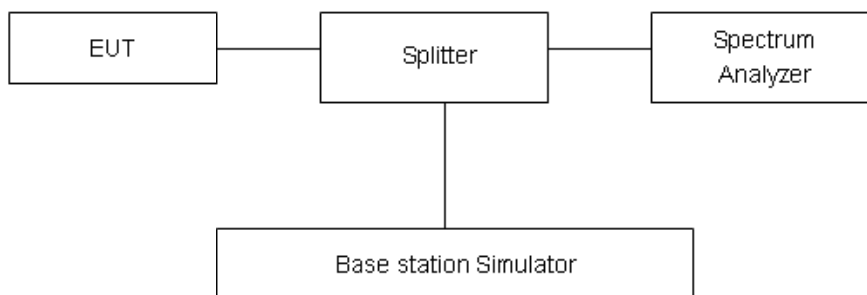
RBW is set to 1000 kHz (above 1000MHz)

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(h) specifies that “for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB.”

Rule Part 27.53(f) For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to –70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and –80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

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 (c) For operations in the 746-758 MHz band and the 776-788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

- (1) On any frequency outside the 746-758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB;
- (2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB;
- (3) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $76 + 10 \log (P)$ dB in a 6.25 kHz band segment, for base and fixed stations;
- (4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $65 + 10 \log (P)$ dB in a 6.25 kHz band segment, for mobile and portable stations;
- (5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;

Part 27.53(h) Limit		-13 dBm
Part 27.53(f) Limit	Limit out of the band 1559-1610 MHz	-13 dBm
	Limit in the band 1559-1610 MHz	-40 dBm
Part 27.53(m) Limit		-25 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-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

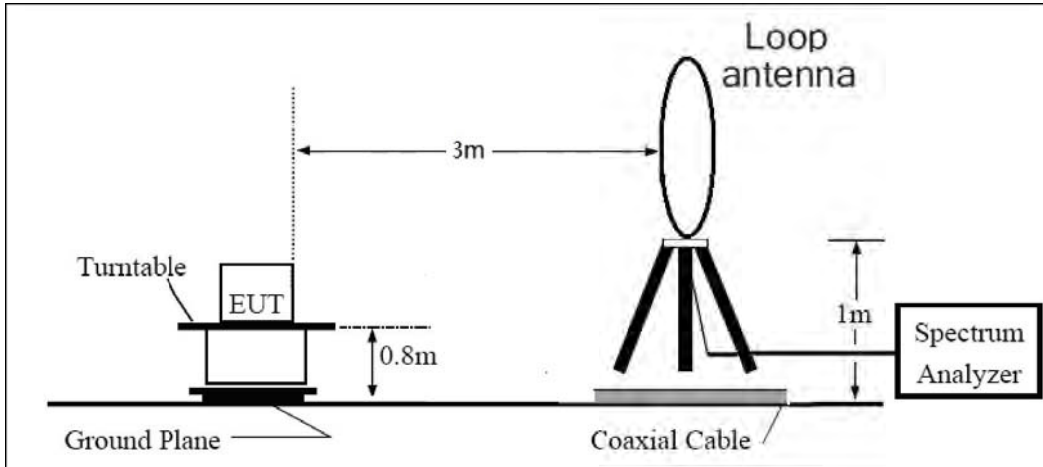
- The testing follows FCC KDB 971168 D01 v03r01 Section 5.8 and ANSI C63.26-2015.
- Below 1GHz: The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable 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).
- 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.
- 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).
- 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 (P_{Mea}) 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 (P_{Mea}) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
- 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 (P_{cl}), the Substitution Antenna Gain (G_a) and the Amplifier Gain (P_{Ag}) should be recorded after test.
- The measurement results are obtained as described below:
 $Power(EIRP) = P_{Mea} - P_{Ag} - P_{cl} + G_a$
 The measurement results are amend as described below:
 $Power(EIRP) = P_{Mea} - P_{cl} + G_a$
- 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.

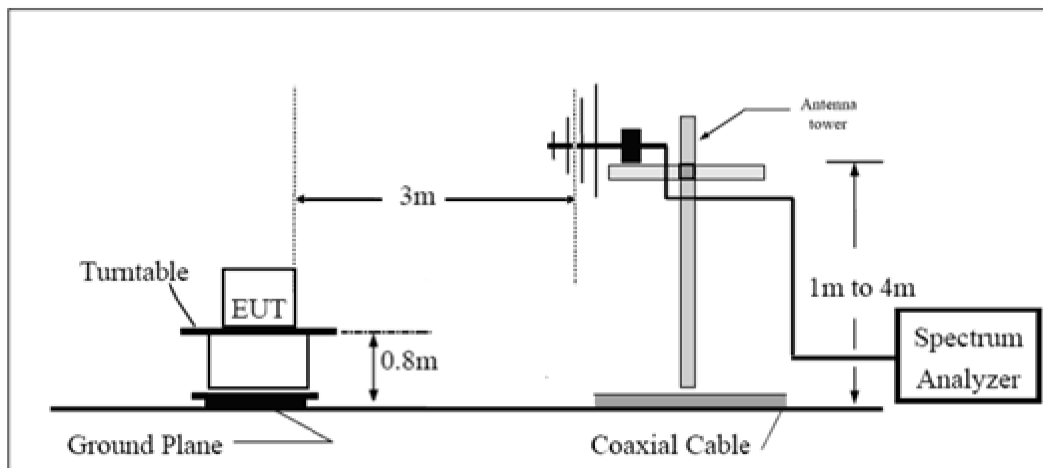
The modulation mode and RB allocation refer to section 5.1, using the maximum output power configuration.

Test setup

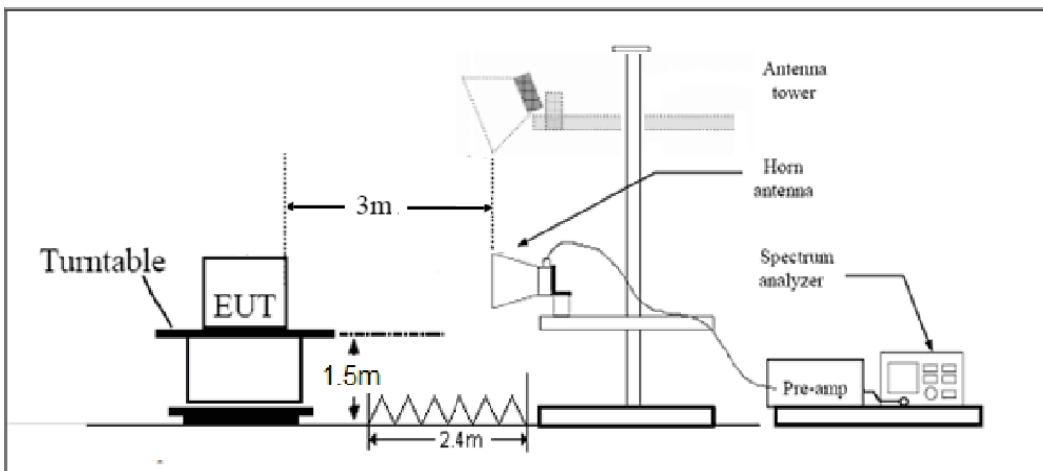
9KHz~ 30MHz



30MHz~ 1GHz



Above 1GHz



Note: Area side:2.4mX3.6m

**Limits**

Rule Part 27.53(h) specifies that “for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB.”

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.

Rule Part 27.53(f) For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

Part 27.53 (c) For operations in the 746-758 MHz band and the 776-788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

- (1) On any frequency outside the 746-758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB;
- (2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB;
- (3) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $76 + 10 \log(P)$ dB in a 6.25 kHz band segment, for base and fixed stations;
- (4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $65 + 10 \log(P)$ dB in a 6.25 kHz band segment, for mobile and portable stations;
- (5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;

Part 27.53 (h)/(g) Limit		-13 dBm
Part 27.53(f) Limit	Limit out of the band 1559-1610 MHz	-13 dBm
	Limit in the band 1559-1610 MHz	-40 dBm
Part 27.53(m) Limit		-25 dBm

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

WCDMA Band IV Low Antenna		Maximum Output Power (dBm)			EIRP (dBm)		
		Channel/Frequency(MHz)			Channel/Frequency(MHz)		
		1312/1712.4	1413/1732.6	1513/1752.6	1312/1712.4	1413/1732.6	1513/1752.6
RMC	12.2k	23.30	23.40	23.31	24.00	24.10	24.01
AMR	12.2k	23.36	23.54	23.15	24.06	24.24	23.85
HSDPA	Subtest 1	22.18	22.50	22.23	22.88	23.20	22.93
	Subtest 2	22.38	22.56	22.27	23.08	23.26	22.97
	Subtest 3	21.76	21.98	21.69	22.46	22.68	22.39
	Subtest 4	21.84	22.00	21.85	22.54	22.70	22.55
HSUPA	Subtest 1	20.72	20.86	20.69	21.42	21.56	21.39
	Subtest 2	20.20	20.48	20.29	20.90	21.18	20.99
	Subtest 3	20.66	20.74	20.71	21.36	21.44	21.41
	Subtest 4	19.80	19.80	19.81	20.50	20.50	20.51
	Subtest 5	21.18	21.50	21.43	21.88	22.20	22.13
DC-HSDPA	Subtest 1	22.28	22.50	22.33	22.98	23.20	23.03
	Subtest 2	22.36	22.40	22.45	23.06	23.10	23.15
	Subtest 3	21.92	21.76	21.71	22.62	22.46	22.41
	Subtest 4	21.66	21.80	21.75	22.36	22.50	22.45

WCDMA Band IV Upper Antenna		Maximum Output Power (dBm)			EIRP (dBm)		
		Channel/Frequency(MHz)			Channel/Frequency(MHz)		
		1312/1712.4	1413/1732.6	1513/1752.6	1312/1712.4	1413/1732.6	1513/1752.6
RMC	12.2k	23.37	23.47	23.36	20.17	20.27	20.16
AMR	12.2k	23.29	23.55	23.36	20.09	20.35	20.16
HSDPA	Subtest 1	22.35	22.45	22.36	19.15	19.25	19.16
	Subtest 2	22.35	22.45	22.22	19.15	19.25	19.02
	Subtest 3	21.83	21.85	21.88	18.63	18.65	18.68
	Subtest 4	21.89	21.81	21.98	18.69	18.61	18.78
HSUPA	Subtest 1	20.87	21.13	20.98	17.67	17.93	17.78
	Subtest 2	20.35	20.33	20.32	17.15	17.13	17.12
	Subtest 3	20.77	21.05	20.74	17.57	17.85	17.54
	Subtest 4	19.77	19.89	19.86	16.57	16.69	16.66
	Subtest 5	21.37	21.47	21.50	18.17	18.27	18.30
DC-HSDPA	Subtest 1	22.21	22.49	22.24	19.01	19.29	19.04
	Subtest 2	22.35	22.33	22.36	19.15	19.13	19.16
	Subtest 3	21.91	22.03	21.94	18.71	18.83	18.74
	Subtest 4	22.03	22.13	21.80	18.83	18.93	18.60



LTE Band 4Low Antenna				Maximum Output Power (dBm)			EIRP (dBm)		
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				19957/1710.7	20175/1732.5	20393/1754.3	19957/1710.7	20175/1732.5	20393/1754.3
1.4MHz	QPSK	1	0	23.23	23.29	23.23	24.03	24.09	24.03
		1	2	23.44	23.40	23.40	24.24	24.20	24.20
		1	5	23.06	23.08	23.13	23.86	23.88	23.93
		3	0	23.29	23.32	23.39	24.09	24.12	24.19
		3	2	23.32	23.34	23.36	24.12	24.14	24.16
		3	3	23.31	23.19	23.24	24.11	23.99	24.04
		6	0	22.38	22.35	22.39	23.18	23.15	23.19
	16QAM	1	0	22.66	22.64	22.62	23.46	23.44	23.42
		1	2	22.89	22.80	22.76	23.69	23.60	23.56
		1	5	22.46	22.42	22.47	23.26	23.22	23.27
		3	0	22.29	22.30	22.36	23.09	23.10	23.16
		3	2	22.41	22.34	22.38	23.21	23.14	23.18
		3	3	22.29	22.23	22.20	23.09	23.03	23.00
		6	0	21.38	21.36	21.38	22.18	22.16	22.18
	64QAM	1	0	21.53	21.45	21.56	22.33	22.25	22.36
		1	2	21.71	21.60	21.67	22.51	22.40	22.47
		1	5	21.22	21.30	21.39	22.02	22.10	22.19
		3	0	21.24	21.29	21.39	22.04	22.09	22.19
		3	2	21.37	21.32	21.37	22.17	22.12	22.17
		3	3	21.27	21.23	21.22	22.07	22.03	22.02
		6	0	20.36	20.32	20.37	21.16	21.12	21.17
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				19965/1711.5	20175/1732.5	20385/1753.5	19965/1711.5	20175/1732.5	20385/1753.5
3MHz	QPSK	1	0	23.25	23.33	23.26	24.05	24.13	24.06
		1	7	23.42	23.43	23.44	24.22	24.23	24.24
		1	14	23.09	23.13	23.17	23.89	23.93	23.97
		8	0	22.39	22.44	22.52	23.19	23.24	23.32
		8	4	22.44	22.44	22.48	23.24	23.24	23.28
		8	7	22.41	22.30	22.34	23.21	23.10	23.14
		15	0	22.38	22.39	22.42	23.18	23.19	23.22
	16QAM	1	0	22.66	22.66	22.65	23.46	23.46	23.45
		1	7	22.89	22.80	22.80	23.69	23.60	23.60
		1	14	22.48	22.46	22.50	23.28	23.26	23.30
		8	0	21.40	21.43	21.48	22.20	22.23	22.28
		8	4	21.52	21.47	21.50	22.32	22.27	22.30
		8	7	21.39	21.35	21.33	22.19	22.15	22.13
		15	0	21.41	21.40	21.41	22.21	22.20	22.21



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)			
				19975/ 1712.5	20175/ 1732.5	20375/ 1752.5	19975/ 1712.5	20175/ 1732.5	20375/ 1752.5	
	64QAM	1	0	21.56	21.47	21.59	22.36	22.27	22.39	
		1	7	21.74	21.60	21.69	22.54	22.40	22.49	
		1	14	21.24	21.29	21.42	22.04	22.09	22.22	
		8	0	20.35	20.42	20.51	21.15	21.22	21.31	
		8	4	20.48	20.45	20.49	21.28	21.25	21.29	
		8	7	20.37	20.35	20.35	21.17	21.15	21.15	
		15	0	20.39	20.36	20.40	21.19	21.16	21.20	
5MHz	QPSK	1	0	23.22	23.31	23.22	24.02	24.11	24.02	
		1	13	23.40	23.39	23.41	24.20	24.19	24.21	
		1	24	23.06	23.08	23.13	23.86	23.88	23.93	
		12	0	22.36	22.39	22.48	23.16	23.19	23.28	
		12	6	22.42	22.40	22.43	23.22	23.20	23.23	
		12	13	22.39	22.28	22.30	23.19	23.08	23.10	
		25	0	22.38	22.38	22.40	23.18	23.18	23.20	
	16QAM	1	0	22.66	22.62	22.62	23.46	23.42	23.42	
		1	13	22.89	22.78	22.77	23.69	23.58	23.57	
		1	24	22.45	22.44	22.46	23.25	23.24	23.26	
		12	0	21.38	21.39	21.45	22.18	22.19	22.25	
		12	6	21.49	21.42	21.46	22.29	22.22	22.26	
		12	13	21.36	21.30	21.29	22.16	22.10	22.09	
		25	0	21.39	21.36	21.36	22.19	22.16	22.16	
	64QAM	1	0	21.53	21.47	21.56	22.33	22.27	22.36	
		1	13	21.71	21.62	21.66	22.51	22.42	22.46	
		1	24	21.25	21.27	21.38	22.05	22.07	22.18	
		12	0	20.33	20.38	20.52	21.13	21.18	21.32	
		12	6	20.45	20.40	20.45	21.25	21.20	21.25	
		12	13	20.34	20.30	20.31	21.14	21.10	21.11	
		25	0	20.37	20.32	20.35	21.17	21.12	21.15	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
					20000/ 1715	20175/ 1732.5	20350/ 1750	20000/ 1715	20175/ 1732.5	20350/ 1750
	10MHz	QPSK	1	0	23.24	23.32	23.25	24.04	24.12	24.05
			1	25	23.43	23.44	23.45	24.23	24.24	24.25
			1	49	23.08	23.12	23.16	23.88	23.92	23.96
			25	0	22.39	22.44	22.52	23.19	23.24	23.32
			25	13	22.45	22.45	22.47	23.25	23.25	23.27
25			25	22.41	22.32	22.35	23.21	23.12	23.15	
50			0	22.42	22.40	22.44	23.22	23.20	23.24	
16QAM		1	0	22.70	22.65	22.64	23.50	23.45	23.44	
		1	25	22.93	22.82	22.80	23.73	23.62	23.60	



		1	49	22.48	22.46	22.49	23.28	23.26	23.29	
		25	0	21.41	21.44	21.49	22.21	22.24	22.29	
		25	13	21.51	21.46	21.49	22.31	22.26	22.29	
		25	25	21.39	21.35	21.33	22.19	22.15	22.13	
		50	0	21.42	21.41	21.40	22.22	22.21	22.20	
	64QAM	1	0	21.55	21.46	21.58	22.35	22.26	22.38	
		1	25	21.74	21.62	21.69	22.54	22.42	22.49	
		1	49	21.24	21.29	21.41	22.04	22.09	22.21	
		25	0	20.36	20.43	20.52	21.16	21.23	21.32	
		25	13	20.47	20.44	20.48	21.27	21.24	21.28	
		25	25	20.37	20.35	20.35	21.17	21.15	21.15	
		50	0	20.40	20.37	20.39	21.20	21.17	21.19	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
					20025/ 1717.5	20175/ 1732.5	20325/ 1747.5	20025/ 1717.5	20175/ 1732.5	20325/ 1747.5
15MHz	QPSK	1	0	23.23	23.28	23.23	24.03	24.08	24.03	
		1	38	23.41	23.43	23.42	24.21	24.23	24.22	
		1	74	23.05	23.07	23.12	23.85	23.87	23.92	
		36	0	22.37	22.40	22.49	23.17	23.20	23.29	
		36	18	22.42	22.40	22.43	23.22	23.20	23.23	
		36	39	22.38	22.29	22.31	23.18	23.09	23.11	
		75	0	22.40	22.36	22.39	23.20	23.16	23.19	
	16QAM	1	0	22.68	22.63	22.62	23.48	23.43	23.42	
		1	38	22.91	22.79	22.78	23.71	23.59	23.58	
		1	74	22.46	22.42	22.46	23.26	23.22	23.26	
		36	0	21.38	21.42	21.46	22.18	22.22	22.26	
		36	18	21.48	21.41	21.45	22.28	22.21	22.25	
		36	39	21.37	21.31	21.30	22.17	22.11	22.10	
		75	0	21.39	21.36	21.36	22.19	22.16	22.16	
	64QAM	1	0	21.50	21.44	21.56	22.30	22.24	22.36	
		1	38	21.72	21.59	21.67	22.52	22.39	22.47	
		1	74	21.25	21.28	21.42	22.05	22.08	22.22	
		36	0	20.35	20.45	20.53	21.15	21.25	21.33	
		36	18	20.45	20.41	20.47	21.25	21.21	21.27	
		36	39	20.35	20.31	20.32	21.15	21.11	21.12	
		75	0	20.37	20.32	20.35	21.17	21.12	21.15	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)			
				20050/ 1720	20175/ 1732.5	20300/ 1745	20050/ 1720	20175/ 1732.5	20300/ 1745	
20MHz	QPSK	1	0	23.20	23.24	23.20	24.00	24.04	24.00	
		1	50	23.40	23.39	23.40	24.20	24.19	24.20	
		1	99	23.03	23.06	23.09	23.83	23.86	23.89	
		50	0	22.34	22.35	22.45	23.14	23.15	23.25	



		50	25	22.40	22.36	22.40	23.20	23.16	23.20			
		50	50	22.35	22.24	22.27	23.15	23.04	23.07			
		100	0	22.37	22.31	22.35	23.17	23.11	23.15			
	16QAM		1	0	22.65	22.59	22.57	23.45	23.39	23.37		
			1	50	22.88	22.77	22.74	23.68	23.57	23.54		
			1	99	22.43	22.39	22.44	23.23	23.19	23.24		
			50	0	21.35	21.38	21.43	22.15	22.18	22.23		
			50	25	21.45	21.39	21.42	22.25	22.19	22.22		
			50	50	21.34	21.26	21.26	22.14	22.06	22.06		
			100	0	21.37	21.32	21.33	22.17	22.12	22.13		
			64QAM		1	0	21.48	21.40	21.51	22.28	22.20	22.31
					1	50	21.68	21.57	21.63	22.48	22.37	22.43
	1	99			21.19	21.22	21.36	21.99	22.02	22.16		
	50	0			20.30	20.37	20.46	21.10	21.17	21.26		
	50	25			20.41	20.37	20.41	21.21	21.17	21.21		
	50	50			20.32	20.26	20.28	21.12	21.06	21.08		
	100	0			20.35	20.28	20.32	21.15	21.08	21.12		

LTE Band 4Upper Antenna				Maximum Output Power (dBm)			EIRP (dBm)			
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)			
				19957/ 1710.7	20175/ 1732.5	20393/ 1754.3	19957/ 1710.7	20175/ 1732.5	20393/ 1754.3	
1.4MHz	QPSK	1	0	23.37	23.38	23.36	20.87	20.88	20.86	
		1	2	23.60	23.53	23.49	21.10	21.03	20.99	
		1	5	23.23	23.21	23.22	20.73	20.71	20.72	
		3	0	23.38	23.52	23.51	20.88	21.02	21.01	
		3	2	23.48	23.51	23.51	20.98	21.01	21.01	
		3	3	23.45	23.36	23.34	20.95	20.86	20.84	
		6	0	22.47	22.52	22.51	19.97	20.02	20.01	
	16QAM		1	0	22.76	22.83	22.80	20.26	20.33	20.30
			1	2	22.92	22.90	22.89	20.42	20.40	20.39
			1	5	22.59	22.61	22.51	20.09	20.11	20.01
			3	0	22.39	22.47	22.49	19.89	19.97	19.99
			3	2	22.53	22.51	22.50	20.03	20.01	20.00
			3	3	22.45	22.35	22.34	19.95	19.85	19.84
			6	0	21.50	21.51	21.54	19.00	19.01	19.04
	64QAM		1	0	21.55	21.65	21.70	19.05	19.15	19.20
			1	2	21.73	21.77	21.90	19.23	19.27	19.40
			1	5	21.39	21.53	21.48	18.89	19.03	18.98
			3	0	21.40	21.44	21.47	18.90	18.94	18.97
			3	2	21.53	21.49	21.47	19.03	18.99	18.97
			3	3	21.41	21.34	21.34	18.91	18.84	18.84
			6	0	20.50	20.50	20.51	18.00	18.00	18.01



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				19965/ 1711.5	20175/ 1732.5	20385/ 1753.5	19965/ 1711.5	20175/ 1732.5	20385/ 1753.5
3MHz	QPSK	1	0	23.39	23.42	23.39	20.89	20.92	20.89
		1	7	23.58	23.56	23.53	21.08	21.06	21.03
		1	14	23.26	23.26	23.26	20.76	20.76	20.76
		8	0	22.48	22.64	22.64	19.98	20.14	20.14
		8	4	22.60	22.61	22.63	20.10	20.11	20.13
		8	7	22.55	22.47	22.44	20.05	19.97	19.94
		15	0	22.47	22.56	22.54	19.97	20.06	20.04
	16QAM	1	0	22.76	22.85	22.83	20.26	20.35	20.33
		1	7	22.92	22.90	22.93	20.42	20.40	20.43
		1	14	22.61	22.65	22.54	20.11	20.15	20.04
		8	0	21.50	21.60	21.61	19.00	19.10	19.11
		8	4	21.64	21.64	21.62	19.14	19.14	19.12
		8	7	21.55	21.47	21.47	19.05	18.97	18.97
		15	0	21.53	21.55	21.57	19.03	19.05	19.07
	64QAM	1	0	21.58	21.67	21.73	19.08	19.17	19.23
		1	7	21.76	21.77	21.92	19.26	19.27	19.42
		1	14	21.41	21.52	21.51	18.91	19.02	19.01
		8	0	20.51	20.57	20.59	18.01	18.07	18.09
		8	4	20.64	20.62	20.59	18.14	18.12	18.09
		8	7	20.51	20.46	20.47	18.01	17.96	17.97
		15	0	20.53	20.54	20.54	18.03	18.04	18.04
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				19975/ 1712.5	20175/ 1732.5	20375/ 1752.5	19975/ 1712.5	20175/ 1732.5	20375/ 1752.5
5MHz	QPSK	1	0	23.36	23.40	23.35	20.86	20.90	20.85
		1	13	23.56	23.52	23.50	21.06	21.02	21.00
		1	24	23.23	23.21	23.22	20.73	20.71	20.72
		12	0	22.45	22.59	22.60	19.95	20.09	20.10
		12	6	22.58	22.57	22.58	20.08	20.07	20.08
		12	13	22.53	22.45	22.40	20.03	19.95	19.90
		25	0	22.47	22.55	22.52	19.97	20.05	20.02
	16QAM	1	0	22.76	22.81	22.80	20.26	20.31	20.30
		1	13	22.92	22.88	22.90	20.42	20.38	20.40
		1	24	22.58	22.63	22.50	20.08	20.13	20.00
		12	0	21.48	21.56	21.58	18.98	19.06	19.08
		12	6	21.61	21.59	21.58	19.11	19.09	19.08
		12	13	21.52	21.42	21.43	19.02	18.92	18.93
		25	0	21.51	21.51	21.52	19.01	19.01	19.02
	64QAM	1	0	21.55	21.67	21.70	19.05	19.17	19.20
1		13	21.73	21.79	21.89	19.23	19.29	19.39	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)			
				20000/ 1715	20175/ 1732.5	20350/ 1750	20000/ 1715	20175/ 1732.5	20350/ 1750	
		1	24	21.42	21.50	21.47	18.92	19.00	18.97	
		12	0	20.49	20.53	20.60	17.99	18.03	18.10	
		12	6	20.61	20.57	20.55	18.11	18.07	18.05	
		12	13	20.48	20.41	20.43	17.98	17.91	17.93	
		25	0	20.51	20.50	20.49	18.01	18.00	17.99	
10MHz	QPSK	1	0	23.38	23.41	23.38	20.88	20.91	20.88	
		1	25	23.59	23.57	23.54	21.09	21.07	21.04	
		1	49	23.25	23.25	23.25	20.75	20.75	20.75	
		25	0	22.48	22.64	22.64	19.98	20.14	20.14	
		25	13	22.61	22.62	22.62	20.11	20.12	20.12	
		25	25	22.55	22.49	22.45	20.05	19.99	19.95	
		50	0	22.51	22.57	22.56	20.01	20.07	20.06	
	16QAM	1	0	22.80	22.84	22.82	20.30	20.34	20.32	
		1	25	22.96	22.92	22.93	20.46	20.42	20.43	
		1	49	22.61	22.65	22.53	20.11	20.15	20.03	
		25	0	21.51	21.61	21.62	19.01	19.11	19.12	
		25	13	21.63	21.63	21.61	19.13	19.13	19.11	
		25	25	21.55	21.47	21.47	19.05	18.97	18.97	
		50	0	21.54	21.56	21.56	19.04	19.06	19.06	
	64QAM	1	0	21.57	21.66	21.72	19.07	19.16	19.22	
		1	25	21.76	21.79	21.92	19.26	19.29	19.42	
		1	49	21.41	21.52	21.50	18.91	19.02	19.00	
		25	0	20.52	20.58	20.60	18.02	18.08	18.10	
		25	13	20.63	20.61	20.58	18.13	18.11	18.08	
		25	25	20.51	20.46	20.47	18.01	17.96	17.97	
		50	0	20.54	20.55	20.53	18.04	18.05	18.03	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
					20025/ 1717.5	20175/ 1732.5	20325/ 1747.5	20025/ 1717.5	20175/ 1732.5	20325/ 1747.5
	15MHz	QPSK	1	0	23.37	23.37	23.36	20.87	20.87	20.86
			1	38	23.57	23.56	23.51	21.07	21.06	21.01
			1	74	23.22	23.20	23.21	20.72	20.70	20.71
			36	0	22.46	22.60	22.61	19.96	20.10	20.11
			36	18	22.58	22.57	22.58	20.08	20.07	20.08
36			39	22.52	22.46	22.41	20.02	19.96	19.91	
75			0	22.49	22.53	22.51	19.99	20.03	20.01	
16QAM		1	0	22.78	22.82	22.80	20.28	20.32	20.30	
		1	38	22.94	22.89	22.91	20.44	20.39	20.41	
		1	74	22.59	22.61	22.50	20.09	20.11	20.00	
		36	0	21.48	21.59	21.59	18.98	19.09	19.09	



		36	18	21.60	21.58	21.57	19.10	19.08	19.07
		36	39	21.53	21.43	21.44	19.03	18.93	18.94
		75	0	21.51	21.51	21.52	19.01	19.01	19.02
	64QAM	1	0	21.52	21.64	21.70	19.02	19.14	19.20
		1	38	21.74	21.76	21.90	19.24	19.26	19.40
		1	74	21.42	21.51	21.51	18.92	19.01	19.01
		36	0	20.51	20.60	20.61	18.01	18.10	18.11
		36	18	20.61	20.58	20.57	18.11	18.08	18.07
		36	39	20.49	20.42	20.44	17.99	17.92	17.94
		75	0	20.51	20.50	20.49	18.01	18.00	17.99
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				20050/1720	20175/1732.5	20300/1745	20050/1720	20175/1732.5	20300/1745
20MHz	QPSK	1	0	23.34	23.33	23.33	20.84	20.83	20.83
		1	50	23.56	23.52	23.49	21.06	21.02	20.99
		1	99	23.20	23.19	23.18	20.70	20.69	20.68
		50	0	22.43	22.55	22.57	19.93	20.05	20.07
		50	25	22.56	22.53	22.55	20.06	20.03	20.05
		50	50	22.49	22.41	22.37	19.99	19.91	19.87
		100	0	22.46	22.48	22.47	19.96	19.98	19.97
	16QAM	1	0	22.75	22.78	22.75	20.25	20.28	20.25
		1	50	22.91	22.87	22.87	20.41	20.37	20.37
		1	99	22.56	22.58	22.48	20.06	20.08	19.98
		50	0	21.45	21.55	21.56	18.95	19.05	19.06
		50	25	21.57	21.56	21.54	19.07	19.06	19.04
		50	50	21.50	21.38	21.40	19.00	18.88	18.90
		100	0	21.49	21.47	21.49	18.99	18.97	18.99
	64QAM	1	0	21.50	21.60	21.65	19.00	19.10	19.15
		1	50	21.70	21.74	21.86	19.20	19.24	19.36
		1	99	21.36	21.45	21.45	18.86	18.95	18.95
		50	0	20.46	20.52	20.54	17.96	18.02	18.04
		50	25	20.57	20.54	20.51	18.07	18.04	18.01
		50	50	20.46	20.37	20.40	17.96	17.87	17.90
		100	0	20.49	20.46	20.46	17.99	17.96	17.96



LTE Band 7Low 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



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	
				1	0	21.39	21.50	21.49	20.99	21.10
		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	
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 7Upper 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



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				20850/2510	21100/2535	21350/2560	20850/2510	21100/2535	21350/2560
		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
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 13Low Antenna				Maximum Output Power (dBm)			ERP (dBm)		
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				23205/779.5	23230/782	23255/784.5	23205/779.5	23230/782	2325/784.5
5MHz	QPSK	1	0	23.43	23.44	23.43	15.38	15.39	15.38
		1	13	23.57	23.60	23.58	15.52	15.55	15.53
		1	24	23.51	23.50	23.52	15.46	15.45	15.47
		12	0	22.56	22.58	22.57	14.51	14.53	14.52
		12	6	22.58	22.60	22.59	14.53	14.55	14.54
		12	13	22.48	22.50	22.49	14.43	14.45	14.44
		25	0	22.53	22.55	22.54	14.48	14.5	14.49
	16QAM	1	0	22.69	22.70	22.71	14.64	14.65	14.66
		1	13	22.88	22.87	22.89	14.83	14.82	14.84



		1	24	22.81	22.81	22.80	14.76	14.76	14.75	
		12	0	21.53	21.54	21.53	13.48	13.49	13.48	
		12	6	21.55	21.54	21.55	13.50	13.49	13.50	
		12	13	21.49	21.51	21.50	13.44	13.46	13.45	
		25	0	21.52	21.54	21.53	13.47	13.49	13.48	
	64QAM	1	0	21.56	21.58	21.59	13.51	13.53	13.54	
		1	13	21.80	21.78	21.80	13.75	13.73	13.75	
		1	24	21.68	21.68	21.68	13.63	13.63	13.63	
		12	0	20.59	20.62	20.61	12.54	12.57	12.56	
		12	6	20.60	20.60	20.62	12.55	12.55	12.57	
		12	13	20.52	20.54	20.53	12.47	12.49	12.48	
		25	0	20.54	20.56	20.55	12.49	12.51	12.50	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
					/	23230 /782	/	/	23230 /782	/
10MHz	QPSK	1	0	/	23.40	/	/	15.35	/	
		1	25	/	23.56	/	/	15.51	/	
		1	49	/	23.49	/	/	15.44	/	
		25	0	/	22.53	/	/	14.48	/	
		25	13	/	22.56	/	/	14.51	/	
		25	25	/	22.45	/	/	14.40	/	
		50	0	/	22.50	/	/	14.45	/	
	16QAM	1	0	/	22.66	/	/	14.61	/	
		1	25	/	22.85	/	/	14.80	/	
		1	49	/	22.78	/	/	14.73	/	
		25	0	/	21.50	/	/	13.45	/	
		25	13	/	21.52	/	/	13.47	/	
		25	25	/	21.46	/	/	13.41	/	
		50	0	/	21.50	/	/	13.45	/	
	64QAM	1	0	/	21.54	/	/	13.49	/	
		1	25	/	21.76	/	/	13.71	/	
		1	49	/	21.62	/	/	13.57	/	
		25	0	/	20.54	/	/	12.49	/	
		25	13	/	20.56	/	/	12.51	/	
		25	25	/	20.49	/	/	12.44	/	
		50	0	/	20.52	/	/	12.47	/	



LTE Band 13Upper Antenna				Maximum Output Power (dBm)			ERP (dBm)		
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				23205/ 779.5	23230/ 782	23255/ 784.5	23205/ 779.5	23230/ 782	23255/ 784.5
5MHz	QPSK	1	0	23.09	23.10	23.09	17.34	17.35	17.34
		1	13	23.17	23.20	23.18	17.42	17.45	17.43
		1	24	23.06	23.05	23.07	17.31	17.30	17.32
		12	0	22.12	22.14	22.13	16.37	16.39	16.38
		12	6	22.13	22.15	22.14	16.38	16.40	16.39
		12	13	22.14	22.16	22.15	16.39	16.41	16.40
		25	0	22.11	22.13	22.12	16.36	16.38	16.37
	16QAM	1	0	22.20	22.21	22.22	16.45	16.46	16.47
		1	13	22.41	22.40	22.42	16.66	16.65	16.67
		1	24	22.29	22.29	22.28	16.54	16.54	16.53
		12	0	21.11	21.12	21.11	15.36	15.37	15.36
		12	6	21.13	21.12	21.13	15.38	15.37	15.38
		12	13	21.14	21.16	21.15	15.39	15.41	15.40
		25	0	21.09	21.11	21.10	15.34	15.36	15.35
	64QAM	1	0	21.10	21.12	21.13	15.35	15.37	15.38
		1	13	21.34	21.32	21.34	15.59	15.57	15.59
		1	24	21.24	21.24	21.24	15.49	15.49	15.49
		12	0	20.18	20.21	20.20	14.43	14.46	14.45
		12	6	20.21	20.21	20.23	14.46	14.46	14.48
		12	13	20.18	20.20	20.19	14.43	14.45	14.44
		25	0	20.12	20.14	20.13	14.37	14.39	14.38
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				/	23230/ 782	/	/	23230/ 782	/
10MHz	QPSK	1	0	/	23.06	/	/	17.31	/
		1	25	/	23.16	/	/	17.41	/
		1	49	/	23.04	/	/	17.29	/
		25	0	/	22.09	/	/	16.34	/
		25	13	/	22.11	/	/	16.36	/
		25	25	/	22.11	/	/	16.36	/
		50	0	/	22.08	/	/	16.33	/
	16QAM	1	0	/	22.17	/	/	16.42	/
		1	25	/	22.38	/	/	16.63	/
		1	49	/	22.26	/	/	16.51	/
		25	0	/	21.08	/	/	15.33	/
		25	13	/	21.10	/	/	15.35	/
		25	25	/	21.11	/	/	15.36	/
		50	0	/	21.07	/	/	15.32	/



64QAM	1	0	/	21.08	/	/	15.33	/
	1	25	/	21.30	/	/	15.55	/
	1	49	/	21.18	/	/	15.43	/
	25	0	/	20.13	/	/	14.38	/
	25	13	/	20.17	/	/	14.42	/
	25	25	/	20.15	/	/	14.40	/
	50	0	/	20.10	/	/	14.35	/

LTE Band 38Low 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



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
	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
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 38Upper 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



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)			
				37800/ 2575	38000/ 2595	38200/ 2615	37800/ 2575	38000/ 2595	38200/ 2615	
10MHz	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	
	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	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)			
				37850/2580	38000/2595	38150/2610	37850/2580	38000/2595	38150/2610	
		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	
	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 41Upper 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

LTE Band 66Low Antenna				Maximum Output Power (dBm)			EIRP (dBm)		
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				131979/1710.7	132322/1745	132665/1779.3	131979/1710.7	132322/1745	132665/1779.3
1.4MHz	QPSK	1	0	23.22	23.25	23.24	23.92	23.95	23.94
		1	2	23.38	23.40	23.38	24.08	24.10	24.08
		1	5	23.04	23.11	23.15	23.74	23.81	23.85
		3	0	23.24	23.38	23.34	23.94	24.08	24.04
		3	2	23.29	23.36	23.38	23.99	24.06	24.08
		3	3	23.29	23.22	23.21	23.99	23.92	23.91
		6	0	22.28	22.38	22.38	22.98	23.08	23.08
	16QAM	1	0	22.64	22.62	22.62	23.34	23.32	23.32
		1	2	22.79	22.72	22.73	23.49	23.42	23.43



		1	5	22.52	22.47	22.35	23.22	23.17	23.05	
		3	0	22.25	22.34	22.35	22.95	23.04	23.05	
		3	2	22.37	22.36	22.39	23.07	23.06	23.09	
		3	3	22.32	22.23	22.25	23.02	22.93	22.95	
		6	0	21.34	21.38	21.38	22.04	22.08	22.08	
	64QAM	1	0	21.49	21.43	21.57	22.19	22.13	22.27	
		1	2	21.66	21.56	21.63	22.36	22.26	22.33	
		1	5	21.30	21.32	21.40	22.00	22.02	22.10	
		3	0	21.22	21.33	21.30	21.92	22.03	22.00	
		3	2	21.31	21.35	21.38	22.01	22.05	22.08	
		3	3	21.23	21.23	21.15	21.93	21.93	21.85	
		6	0	20.29	20.38	20.35	20.99	21.08	21.05	
				Channel/Frequency(MHz)			Channel/Frequency(MHz)			
Bandwidth	Modulation	RB allocation	offset	131987/ 1711.5	132322/ 1745	132657/ 1778.5	131987/ 1711.50	132322/ 1745	132657/ 1778.5	
3MHz	QPSK	1	0	23.24	23.29	23.27	23.94	23.99	23.97	
		1	7	23.36	23.43	23.42	24.06	24.13	24.12	
		1	14	23.07	23.16	23.19	23.77	23.86	23.89	
		8	0	22.34	22.50	22.47	23.04	23.20	23.17	
		8	4	22.41	22.46	22.50	23.11	23.16	23.20	
		8	7	22.39	22.33	22.31	23.09	23.03	23.01	
		15	0	22.28	22.42	22.41	22.98	23.12	23.11	
	16QAM	1	0	22.64	22.64	22.65	23.34	23.34	23.35	
		1	7	22.79	22.72	22.77	23.49	23.42	23.47	
		1	14	22.54	22.51	22.38	23.24	23.21	23.08	
		8	0	21.36	21.47	21.47	22.06	22.17	22.17	
		8	4	21.48	21.49	21.51	22.18	22.19	22.21	
		8	7	21.42	21.35	21.38	22.12	22.05	22.08	
		15	0	21.37	21.42	21.41	22.07	22.12	22.11	
	64QAM	1	0	21.52	21.45	21.60	22.22	22.15	22.30	
		1	7	21.69	21.56	21.65	22.39	22.26	22.35	
		1	14	21.32	21.31	21.43	22.02	22.01	22.13	
		8	0	20.33	20.46	20.42	21.03	21.16	21.12	
		8	4	20.42	20.48	20.50	21.12	21.18	21.20	
		8	7	20.33	20.35	20.28	21.03	21.05	20.98	
		15	0	20.32	20.42	20.38	21.02	21.12	21.08	
			Channel/Frequency(MHz)			Channel/Frequency(MHz)				
	Bandwidth	Modulation	RB allocation	offset	131997/ 1712.5	132322/ 1745	132647/ 1777.5	131997/ 1712.5	132322/ 1745	132647/ 1777.5
	5MHz	QPSK	1	0	23.21	23.27	23.23	23.91	23.97	23.93
1			13	23.34	23.39	23.39	24.04	24.09	24.09	
1			24	23.04	23.11	23.15	23.74	23.81	23.85	
12			0	22.31	22.45	22.43	23.01	23.15	23.13	



		12	6	22.39	22.42	22.45	23.09	23.12	23.15	
		12	13	22.37	22.31	22.27	23.07	23.01	22.97	
		25	0	22.28	22.41	22.39	22.98	23.11	23.09	
	16QAM	1	0	22.64	22.60	22.62	23.34	23.30	23.32	
		1	13	22.79	22.70	22.74	23.49	23.40	23.44	
		1	24	22.51	22.49	22.34	23.21	23.19	23.04	
		12	0	21.34	21.43	21.44	22.04	22.13	22.14	
		12	6	21.45	21.44	21.47	22.15	22.14	22.17	
		12	13	21.39	21.30	21.34	22.09	22.00	22.04	
		25	0	21.35	21.38	21.36	22.05	22.08	22.06	
		64QAM	1	0	21.49	21.45	21.57	22.19	22.15	22.27
			1	13	21.66	21.58	21.62	22.36	22.28	22.32
	1		24	21.33	21.29	21.39	22.03	21.99	22.09	
	12		0	20.31	20.42	20.43	21.01	21.12	21.13	
	12		6	20.39	20.43	20.46	21.09	21.13	21.16	
	12		13	20.30	20.30	20.24	21.00	21.00	20.94	
	25		0	20.30	20.38	20.33	21.00	21.08	21.03	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
132022/ 1715					132322/ 1745	132622/ 1775	132022/ 1715	132322/ 1745	132622/ 1775	
10MHz	QPSK	1	0	23.23	23.28	23.26	23.93	23.98	23.96	
		1	25	23.37	23.44	23.43	24.07	24.14	24.13	
		1	49	23.06	23.15	23.18	23.76	23.85	23.88	
		25	0	22.34	22.50	22.47	23.04	23.20	23.17	
		25	13	22.42	22.47	22.49	23.12	23.17	23.19	
		25	25	22.39	22.35	22.32	23.09	23.05	23.02	
		50	0	22.32	22.43	22.43	23.02	23.13	23.13	
	16QAM	1	0	22.68	22.63	22.64	23.38	23.33	23.34	
		1	25	22.83	22.74	22.77	23.53	23.44	23.47	
		1	49	22.54	22.51	22.37	23.24	23.21	23.07	
		25	0	21.37	21.48	21.48	22.07	22.18	22.18	
		25	13	21.47	21.48	21.50	22.17	22.18	22.20	
		25	25	21.42	21.35	21.38	22.12	22.05	22.08	
		50	0	21.38	21.43	21.40	22.08	22.13	22.10	
	64QAM	1	0	21.51	21.44	21.59	22.21	22.14	22.29	
		1	25	21.69	21.58	21.65	22.39	22.28	22.35	
		1	49	21.32	21.31	21.42	22.02	22.01	22.12	
		25	0	20.34	20.47	20.43	21.04	21.17	21.13	
		25	13	20.41	20.47	20.49	21.11	21.17	21.19	
		25	25	20.33	20.35	20.28	21.03	21.05	20.98	
		50	0	20.33	20.43	20.37	21.03	21.13	21.07	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				132047/ 1717.5	132322/ 1745	132597/ 1772.5	132047/ 1717.5	132322/ 1745	132597/ 1772.5
15MHz	QPSK	1	0	23.22	23.24	23.24	23.92	23.94	23.94
		1	38	23.35	23.43	23.40	24.05	24.13	24.10
		1	74	23.03	23.10	23.14	23.73	23.80	23.84
		36	0	22.32	22.46	22.44	23.02	23.16	23.14
		36	18	22.39	22.42	22.45	23.09	23.12	23.15
		36	39	22.36	22.32	22.28	23.06	23.02	22.98
		75	0	22.30	22.39	22.38	23.00	23.09	23.08
	16QAM	1	0	22.66	22.61	22.62	23.36	23.31	23.32
		1	38	22.81	22.71	22.75	23.51	23.41	23.45
		1	74	22.52	22.47	22.34	23.22	23.17	23.04
		36	0	21.34	21.46	21.45	22.04	22.16	22.15
		36	18	21.44	21.43	21.46	22.14	22.13	22.16
		36	39	21.40	21.31	21.35	22.10	22.01	22.05
		75	0	21.35	21.38	21.36	22.05	22.08	22.06
	64QAM	1	0	21.46	21.42	21.57	22.16	22.12	22.27
		1	38	21.67	21.55	21.63	22.37	22.25	22.33
		1	74	21.33	21.30	21.43	22.03	22.00	22.13
		36	0	20.33	20.49	20.44	21.03	21.19	21.14
		36	18	20.39	20.44	20.48	21.09	21.14	21.18
		36	39	20.31	20.31	20.25	21.01	21.01	20.95
		75	0	20.30	20.38	20.33	21.00	21.08	21.03
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				132072/ 1720	132322/ 1745	132572/ 1770	132072/ 1720	132322/ 1745	132572/ 1770
20MHz	QPSK	1	0	23.19	23.20	23.21	23.89	23.90	23.91
		1	50	23.34	23.39	23.38	24.04	24.09	24.08
		1	99	23.01	23.09	23.11	23.71	23.79	23.81
		50	0	22.29	22.41	22.40	22.99	23.11	23.10
		50	25	22.37	22.38	22.42	23.07	23.08	23.12
		50	50	22.33	22.27	22.24	23.03	22.97	22.94
		100	0	22.27	22.34	22.34	22.97	23.04	23.04
	16QAM	1	0	22.63	22.57	22.57	23.33	23.27	23.27
		1	50	22.78	22.69	22.71	23.48	23.39	23.41
		1	99	22.49	22.44	22.32	23.19	23.14	23.02
		50	0	21.31	21.42	21.42	22.01	22.12	22.12
		50	25	21.41	21.41	21.43	22.11	22.11	22.13
		50	50	21.37	21.26	21.31	22.07	21.96	22.01
		100	0	21.33	21.34	21.33	22.03	22.04	22.03
	64QAM	1	0	21.44	21.38	21.52	22.14	22.08	22.22
1		50	21.63	21.53	21.59	22.33	22.23	22.29	



	1	99	21.27	21.24	21.37	21.97	21.94	22.07
	50	0	20.28	20.41	20.37	20.98	21.11	21.07
	50	25	20.35	20.40	20.42	21.05	21.10	21.12
	50	50	20.28	20.26	20.21	20.98	20.96	20.91
	100	0	20.28	20.34	20.30	20.98	21.04	21.00

LTE Band 66Upper Antenna				Maximum Output Power (dBm)			EIRP (dBm)			
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)			
				131979/1710.7	132322/1745	132665/1779.3	131979/1710.7	132322/1745	132665/1779.3	
1.4MHz	QPSK	1	0	23.33	23.39	23.33	20.13	20.19	20.13	
		1	2	23.57	23.52	23.39	20.37	20.32	20.19	
		1	5	23.25	23.17	23.13	20.05	19.97	19.93	
		3	0	23.39	23.52	23.44	20.19	20.32	20.24	
		3	2	23.45	23.50	23.45	20.25	20.30	20.25	
		3	3	23.40	23.36	23.27	20.20	20.16	20.07	
	16QAM	6	0	22.42	22.48	22.45	19.22	19.28	19.25	
		1	0	22.77	22.75	22.73	19.57	19.55	19.53	
		1	2	22.95	22.86	22.77	19.75	19.66	19.57	
		1	5	22.61	22.55	22.49	19.41	19.35	19.29	
		3	0	22.38	22.50	22.44	19.18	19.30	19.24	
		3	2	22.51	22.50	22.48	19.31	19.30	19.28	
	64QAM	3	3	22.42	22.41	22.26	19.22	19.21	19.06	
		6	0	21.47	21.53	21.45	18.27	18.33	18.25	
		1	0	21.70	21.57	21.51	18.50	18.37	18.31	
		1	2	21.82	21.86	21.74	18.62	18.66	18.54	
		1	5	21.49	21.56	21.46	18.29	18.36	18.26	
		3	0	21.36	21.46	21.40	18.16	18.26	18.20	
	3MHz	QPSK	3	2	21.49	21.48	21.43	18.29	18.28	18.23
			3	3	21.42	21.37	21.24	18.22	18.17	18.04
			6	0	20.45	20.52	20.43	17.25	17.32	17.23
1			0	23.35	23.43	23.36	20.15	20.23	20.16	
1			7	23.55	23.55	23.43	20.35	20.35	20.23	
1			14	23.28	23.22	23.17	20.08	20.02	19.97	
16QAM		8	0	22.49	22.64	22.57	19.29	19.44	19.37	
	8	4	22.57	22.60	22.57	19.37	19.40	19.37		
		8	7	22.50	22.47	22.37	19.30	19.27	19.17	
		15	0	22.42	22.52	22.48	19.22	19.32	19.28	
		1	0	22.77	22.77	22.76	19.57	19.57	19.56	



		1	7	22.95	22.86	22.81	19.75	19.66	19.61
		1	14	22.63	22.59	22.52	19.43	19.39	19.32
		8	0	21.49	21.63	21.56	18.29	18.43	18.36
		8	4	21.62	21.63	21.60	18.42	18.43	18.40
		8	7	21.52	21.53	21.39	18.32	18.33	18.19
		15	0	21.50	21.57	21.48	18.30	18.37	18.28
		15	7	21.50	21.57	21.48	18.30	18.37	18.28
	64QAM	1	0	21.73	21.59	21.54	18.53	18.39	18.34
		1	7	21.85	21.86	21.76	18.65	18.66	18.56
		1	14	21.51	21.55	21.49	18.31	18.35	18.29
		8	0	20.47	20.59	20.52	17.27	17.39	17.32
		8	4	20.60	20.61	20.55	17.40	17.41	17.35
		8	7	20.52	20.49	20.37	17.32	17.29	17.17
		15	0	20.48	20.56	20.46	17.28	17.36	17.26
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				131997/ 1712.5	132322/ 1745	132647/ 1777.5	131997/ 1712.5	132322/ 1745	132647/ 1777.5
5MHz	QPSK	1	0	23.32	23.41	23.32	20.12	20.21	20.12
		1	13	23.53	23.51	23.40	20.33	20.31	20.20
		1	24	23.25	23.17	23.13	20.05	19.97	19.93
		12	0	22.46	22.59	22.53	19.26	19.39	19.33
		12	6	22.55	22.56	22.52	19.35	19.36	19.32
		12	13	22.48	22.45	22.33	19.28	19.25	19.13
		25	0	22.42	22.51	22.46	19.22	19.31	19.26
	16QAM	1	0	22.77	22.73	22.73	19.57	19.53	19.53
		1	13	22.95	22.84	22.78	19.75	19.64	19.58
		1	24	22.60	22.57	22.48	19.40	19.37	19.28
		12	0	21.47	21.59	21.53	18.27	18.39	18.33
		12	6	21.59	21.58	21.56	18.39	18.38	18.36
		12	13	21.49	21.48	21.35	18.29	18.28	18.15
		25	0	21.48	21.53	21.43	18.28	18.33	18.23
	64QAM	1	0	21.70	21.59	21.51	18.50	18.39	18.31
		1	13	21.82	21.88	21.73	18.62	18.68	18.53
		1	24	21.52	21.53	21.45	18.32	18.33	18.25
		12	0	20.45	20.55	20.53	17.25	17.35	17.33
		12	6	20.57	20.56	20.51	17.37	17.36	17.31
		12	13	20.49	20.44	20.33	17.29	17.24	17.13
		25	0	20.46	20.52	20.41	17.26	17.32	17.21
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				132022/ 1715	132322/ 1745	132622/ 1775	132022/ 1715	132322/ 1745	132622/ 1775
10MHz	QPSK	1	0	23.34	23.42	23.35	20.14	20.22	20.15
		1	25	23.56	23.56	23.44	20.36	20.36	20.24
		1	49	23.27	23.21	23.16	20.07	20.01	19.96



		25	0	22.49	22.64	22.57	19.29	19.44	19.37	
		25	13	22.58	22.61	22.56	19.38	19.41	19.36	
		25	25	22.50	22.49	22.38	19.30	19.29	19.18	
		50	0	22.46	22.53	22.50	19.26	19.33	19.30	
	16QAM	1	0	22.81	22.76	22.75	19.61	19.56	19.55	
		1	25	22.99	22.88	22.81	19.79	19.68	19.61	
		1	49	22.63	22.59	22.51	19.43	19.39	19.31	
		25	0	21.50	21.64	21.57	18.30	18.44	18.37	
		25	13	21.61	21.62	21.59	18.41	18.42	18.39	
		25	25	21.52	21.53	21.39	18.32	18.33	18.19	
		50	0	21.51	21.58	21.47	18.31	18.38	18.27	
	64QAM	1	0	21.72	21.58	21.53	18.52	18.38	18.33	
		1	25	21.85	21.88	21.76	18.65	18.68	18.56	
		1	49	21.51	21.55	21.48	18.31	18.35	18.28	
		25	0	20.48	20.60	20.53	17.28	17.40	17.33	
		25	13	20.59	20.60	20.54	17.39	17.40	17.34	
		25	25	20.52	20.49	20.37	17.32	17.29	17.17	
		50	0	20.49	20.57	20.45	17.29	17.37	17.25	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
					132047/ 1717.5	132322/ 1745	132597/ 1772.5	132047/ 1717.5	132322/ 1745	132597/ 1772.5
	15MHz	QPSK	1	0	23.33	23.38	23.33	20.13	20.18	20.13
1			38	23.54	23.55	23.41	20.34	20.35	20.21	
1			74	23.24	23.16	23.12	20.04	19.96	19.92	
36			0	22.47	22.60	22.54	19.27	19.40	19.34	
36			18	22.55	22.56	22.52	19.35	19.36	19.32	
36			39	22.47	22.46	22.34	19.27	19.26	19.14	
75			0	22.44	22.49	22.45	19.24	19.29	19.25	
16QAM		1	0	22.79	22.74	22.73	19.59	19.54	19.53	
		1	38	22.97	22.85	22.79	19.77	19.65	19.59	
		1	74	22.61	22.55	22.48	19.41	19.35	19.28	
		36	0	21.47	21.62	21.54	18.27	18.42	18.34	
		36	18	21.58	21.57	21.55	18.38	18.37	18.35	
		36	39	21.50	21.49	21.36	18.30	18.29	18.16	
		75	0	21.48	21.53	21.43	18.28	18.33	18.23	
64QAM		1	0	21.67	21.56	21.51	18.47	18.36	18.31	
		1	38	21.83	21.85	21.74	18.63	18.65	18.54	
		1	74	21.52	21.54	21.49	18.32	18.34	18.29	
		36	0	20.47	20.62	20.54	17.27	17.42	17.34	
		36	18	20.57	20.57	20.53	17.37	17.37	17.33	
		36	39	20.50	20.45	20.34	17.30	17.25	17.14	
		75	0	20.46	20.52	20.41	17.26	17.32	17.21	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Channel/Frequency(MHz)		
				132072/ 1720	132322/ 1745	132572/ 1770	132072/ 1720	132322/ 1745	132572/ 1770
20MHz	QPSK	1	0	23.30	23.34	23.30	20.10	20.14	20.10
		1	50	23.53	23.51	23.39	20.33	20.31	20.19
		1	99	23.22	23.15	23.09	20.02	19.95	19.89
		50	0	22.44	22.55	22.50	19.24	19.35	19.30
		50	25	22.53	22.52	22.49	19.33	19.32	19.29
		50	50	22.44	22.41	22.30	19.24	19.21	19.10
		100	0	22.41	22.44	22.41	19.21	19.24	19.21
	16QAM	1	0	22.76	22.70	22.68	19.56	19.50	19.48
		1	50	22.94	22.83	22.75	19.74	19.63	19.55
		1	99	22.58	22.52	22.46	19.38	19.32	19.26
		50	0	21.44	21.58	21.51	18.24	18.38	18.31
		50	25	21.55	21.55	21.52	18.35	18.35	18.32
		50	50	21.47	21.44	21.32	18.27	18.24	18.12
		100	0	21.46	21.49	21.40	18.26	18.29	18.20
	64QAM	1	0	21.65	21.52	21.46	18.45	18.32	18.26
		1	50	21.79	21.83	21.70	18.59	18.63	18.50
		1	99	21.46	21.48	21.43	18.26	18.28	18.23
		50	0	20.42	20.54	20.47	17.22	17.34	17.27
		50	25	20.53	20.53	20.47	17.33	17.33	17.27
		50	50	20.47	20.40	20.30	17.27	17.20	17.10
		100	0	20.44	20.48	20.38	17.24	17.28	17.18



6.2 Occupied Bandwidth

Mode	Channel	Frequency (MHz)	99% Power Bandwidth(MHz)	-26dBc Bandwidth(MHz)
WCDMA Band IV (RMC)	1312	1712.4	4.1669	4.6950
	1413	1732.6	4.1676	4.6790
	1513	1752.6	4.1768	4.6800

LTE Band 4						
RB	Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	99% Power Bandwidth(MHz)	-26dBc Bandwidth(MHz)
100%	QPSK	1.4	19957	1710.7	1.1009	1.2820
			20175	1732.5	1.0889	1.2800
			20393	1754.3	1.0947	1.2880
		3	19965	1711.5	2.6865	2.9130
			20175	1732.5	2.6923	2.9210
			20385	1753.5	2.6957	2.9330
		5	19975	1712.5	4.5171	4.9050
			20175	1732.5	4.4946	4.9040
			20375	1752.5	4.5017	4.8730
		10	20000	1715	8.9831	9.8460
			20175	1732.5	8.9865	9.5700
			20350	1750	8.9805	9.7500
	15	20025	1717.5	13.4810	15.2860	
		20175	1732.5	13.4480	14.5680	
		20325	1747.5	13.4570	14.4220	
	20	20050	1720	17.9550	19.3590	
		20175	1732.5	17.9950	19.4190	
		20300	1745	17.9150	19.2490	
	16QAM	1.4	19957	1710.7	1.0957	1.2920
			20175	1732.5	1.1025	1.2810
			20393	1754.3	1.0905	1.2790
		3	19965	1711.5	2.7005	2.9170
			20175	1732.5	2.6929	2.9210
			20385	1753.5	2.6867	2.9230
5		19975	1712.5	4.5067	5.0280	
		20175	1732.5	4.5092	4.9120	
		20375	1752.5	4.5028	4.9190	
10		20000	1715	8.9897	9.6830	



			20175	1732.5	8.9634	9.6440	
			20350	1750	8.9798	9.5980	
		15	20025	1717.5	13.5310	14.4460	
			20175	1732.5	13.4820	14.5380	
			20325	1747.5	13.4910	14.4430	
		20	20050	1720	17.9130	19.2810	
			20175	1732.5	17.9580	19.4760	
			20300	1745	17.9510	19.1310	
		64QAM	1.4	19957	1710.7	1.0927	1.2730
				20175	1732.5	1.0973	1.3050
				20393	1754.3	1.0886	1.2660
			3	19965	1711.5	2.6859	2.8970
				20175	1732.5	2.6981	2.9210
				20385	1753.5	2.6870	2.9270
			5	19975	1712.5	4.4967	4.8670
	20175			1732.5	4.5030	4.9150	
	20375			1752.5	4.5123	4.9290	
	10		20000	1715	8.9718	9.7410	
			20175	1732.5	8.9938	9.6240	
			20350	1750	8.9873	9.7500	
	15		20025	1717.5	13.4160	14.3910	
			20175	1732.5	13.4660	14.3380	
			20325	1747.5	13.4750	14.5270	
	20		20050	1720	17.9220	19.3280	
			20175	1732.5	17.9130	19.4690	
			20300	1745	17.9410	19.3140	

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 13							
RB	Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	99% Power Bandwidth(MHz)	-26dBc Bandwidth(MHz)	
100%	QPSK	5	23205	779.5	4.5113	5.0560	
			23230	782	4.5485	5.1930	
			23255	784.5	4.5247	5.1110	
	16QAM	5	10	23230	782	8.9838	10.0210
				23205	779.5	4.5060	5.1150
				23230	782	4.5114	5.1010
	64QAM	5	10	23255	784.5	4.5327	5.1300
				23230	782	8.9801	10.0720
				23205	779.5	4.5178	5.1220
				23230	782	4.5058	4.9790



		23255	784.5	4.5338	5.1410
	10	23230	782	8.9865	10.0380

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 66						
RB	Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	99% Power Bandwidth(MHz)	-26dBc Bandwidth(MHz)
100%	QPSK	1.4	131979	1710.7	1.0952	1.2760
			132322	1745	1.0900	1.2640
			132665	1779.3	1.0930	1.2890
		3	131987	1711.5	2.6821	2.8870
			132322	1745	2.6883	2.9020
			132657	1778.5	2.6866	2.9170
		5	131997	1712.5	4.5192	5.1370
			132322	1745	4.5325	5.0470
			132647	1777.5	4.5250	5.1130
		10	132022	1715	8.9806	9.9900
			132322	1745	8.9927	9.8810
			132622	1775	9.0213	9.9570
		15	132047	1717.5	13.5060	16.5040
			132322	1745	13.5130	14.6440
			132597	1772.5	13.4700	14.7770
		20	132072	1720	18.0050	19.6480
			132322	1745	17.9810	19.5420
			132572	1770	17.9540	19.6830
	16QAM	1.4	131979	1710.7	1.0941	1.2950
			132322	1745	1.0926	1.3080
			132665	1779.3	1.0872	1.2710
		3	131987	1711.5	2.6963	2.9150
			132322	1745	2.6915	2.9330
			132657	1778.5	2.6839	2.8930
5		131997	1712.5	4.5401	5.1260	
		132322	1745	4.5115	5.1990	
		132647	1777.5	4.5242	5.0990	
10		132022	1715	9.0065	9.9320	
		132322	1745	8.9901	9.9520	
		132622	1775	9.0266	10.0150	
15		132047	1717.5	13.4780	14.8730	
		132322	1745	13.4970	14.7720	
		132597	1772.5	13.4910	14.7310	
20		132072	1720	18.0030	19.4690	



			132322	1745	17.9860	19.4460
			132572	1770	17.9620	19.6480
64QAM	1.4		131979	1710.7	1.0958	1.2850
			132322	1745	1.0962	1.3050
			132665	1779.3	1.0898	1.2740
	3		131987	1711.5	2.6947	2.9060
			132322	1745	2.6889	2.9220
			132657	1778.5	2.6873	2.9310
	5		131997	1712.5	4.5092	5.0680
			132322	1745	4.5208	5.1340
			132647	1777.5	4.5299	5.1340
	10		132022	1715	9.0007	9.8960
			132322	1745	8.9927	9.9850
			132622	1775	8.9919	9.8660
	15		132047	1717.5	13.4940	14.6550
			132322	1745	13.4450	15.0280
			132597	1772.5	13.4740	14.7910
	20		132072	1720	17.9780	19.5080
			132322	1745	17.9450	19.5550
			132572	1770	18.0000	19.5200



WCDMA Band IV CH-Low



WCDMA Band IV CH Middle

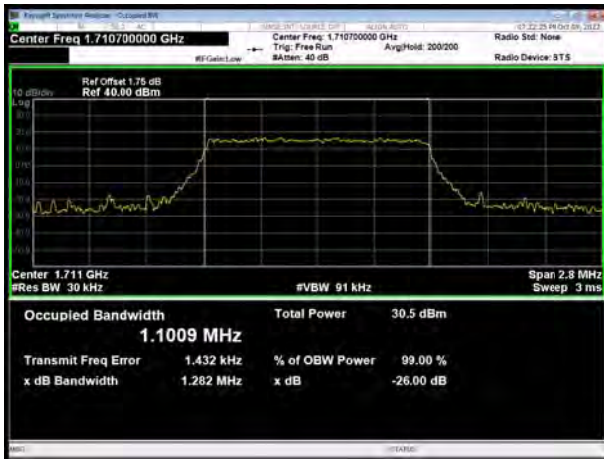


WCDMA Band IV CH High

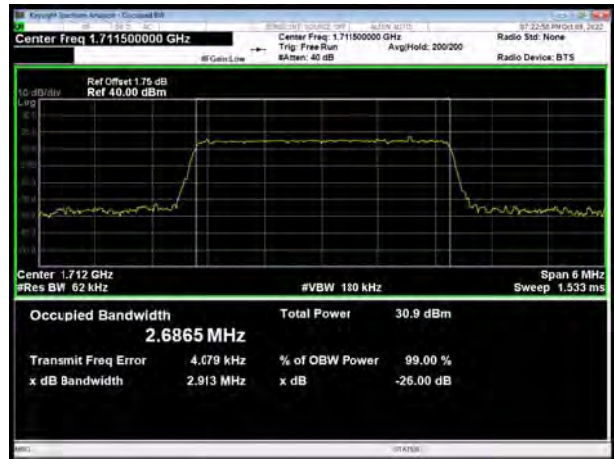




LTE Band 4 QPSK 1.4MHz CH-Low



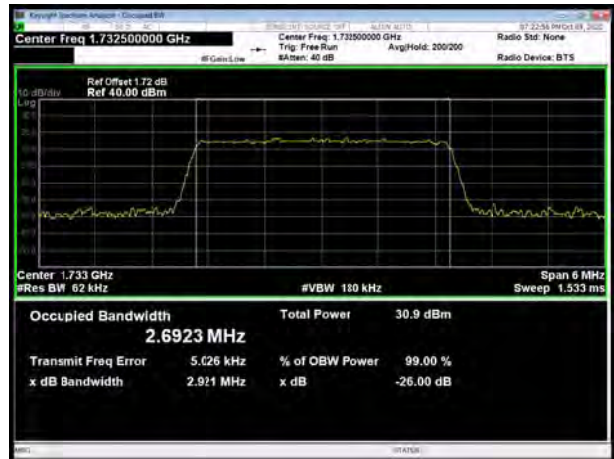
LTE Band 4 QPSK 3MHz CH-Low



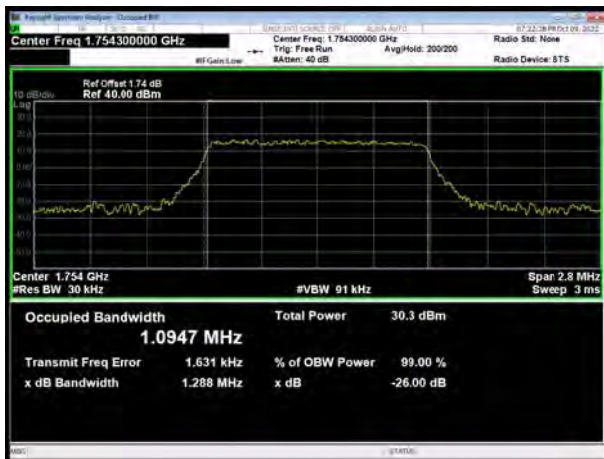
LTE Band 4 QPSK 1.4MHz CH-Middle



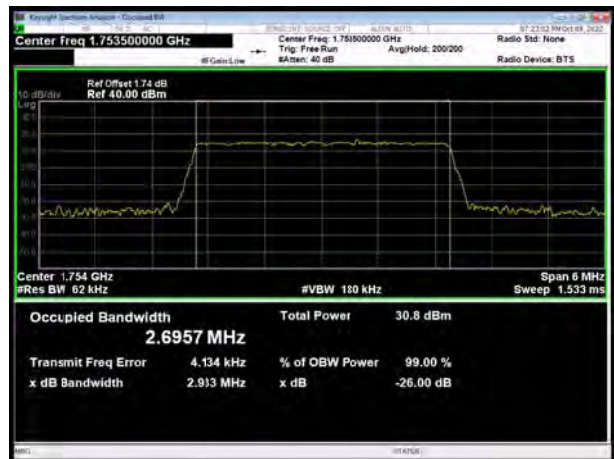
LTE Band 4 QPSK 3MHz CH-Middle



LTE Band 4 QPSK 1.4MHz CH-High

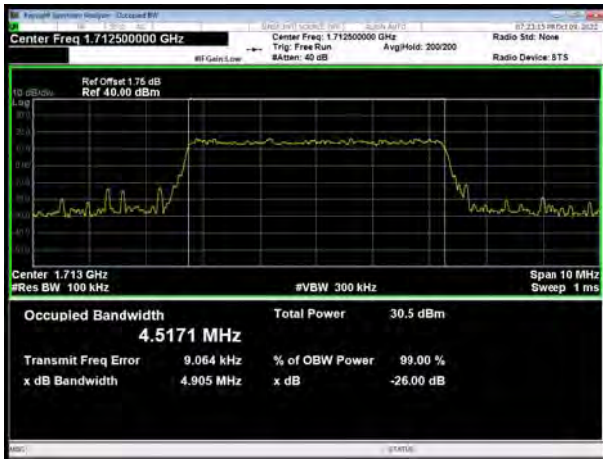


LTE Band 4 QPSK 3MHz CH-High

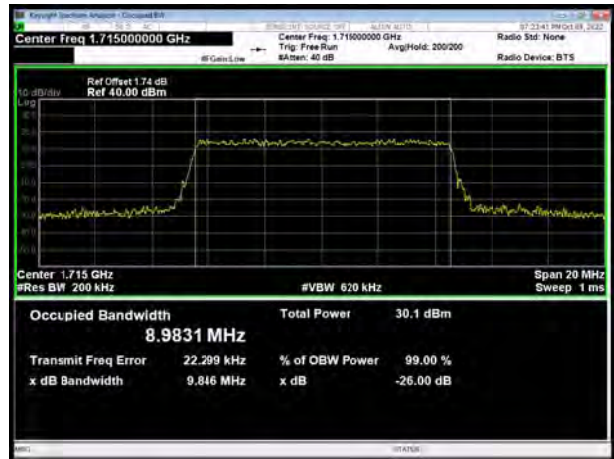




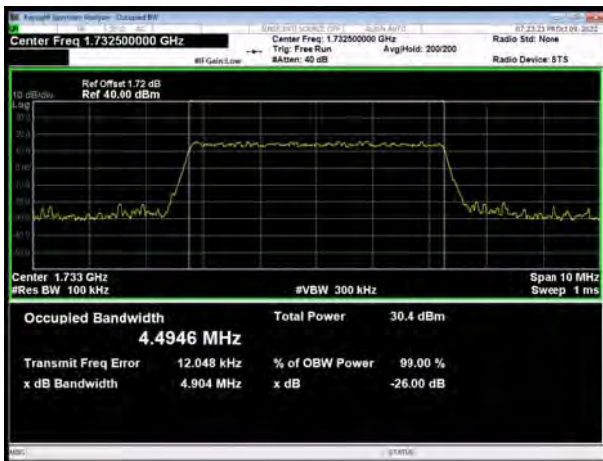
LTE Band 4 QPSK 5MHz CH-Low



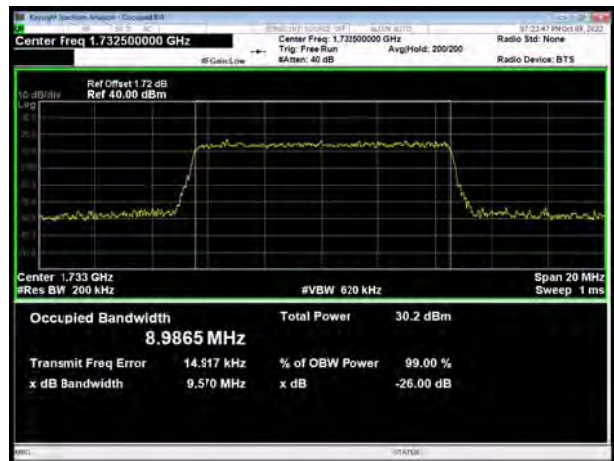
LTE Band 4 QPSK 10MHz CH-Low



LTE Band 4 QPSK 5MHz CH-Middle



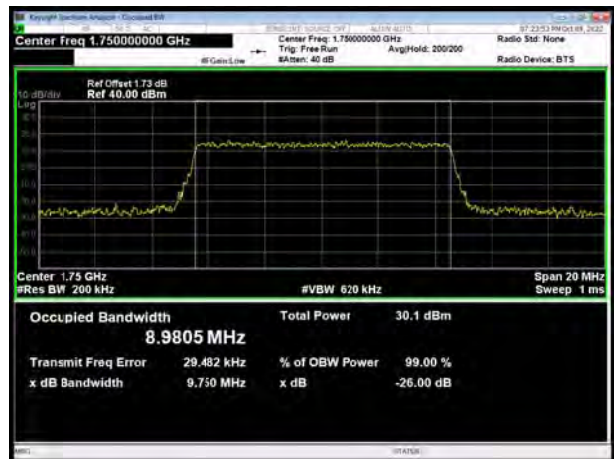
LTE Band 4 QPSK 10MHz CH-Middle



LTE Band 4 QPSK 5MHz CH-High

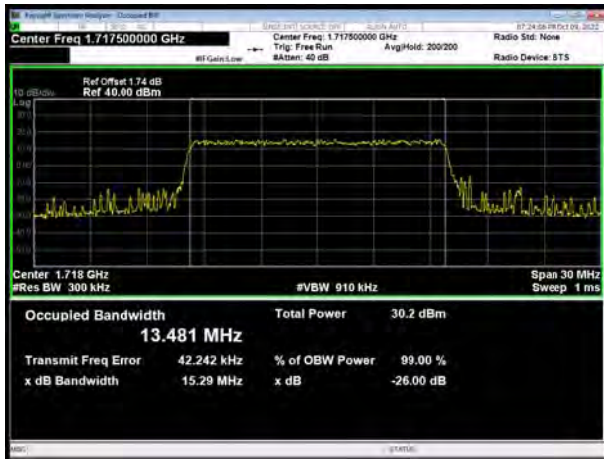


LTE Band 4 QPSK 10MHz CH-High

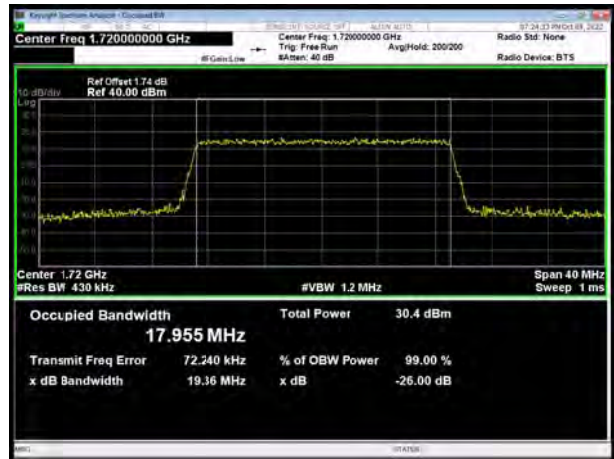




LTE Band 4 QPSK 15MHz CH-Low



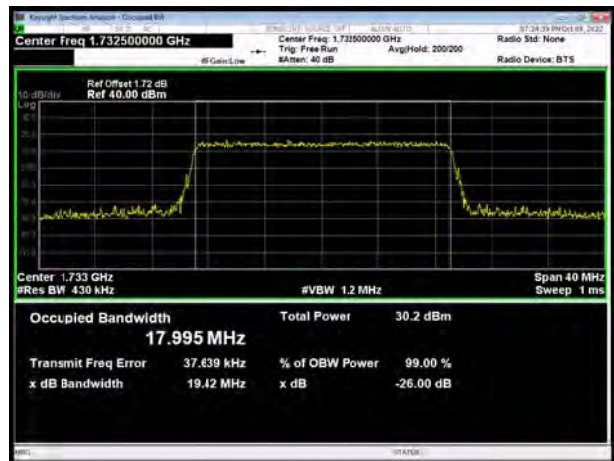
LTE Band 4 QPSK 20MHz CH-Low



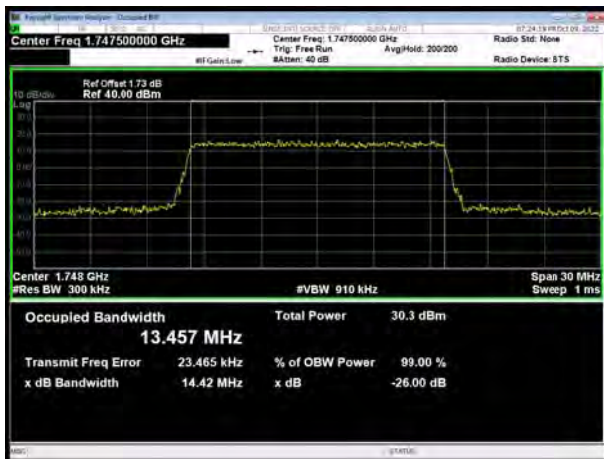
LTE Band 4 QPSK 15MHz CH-Middle



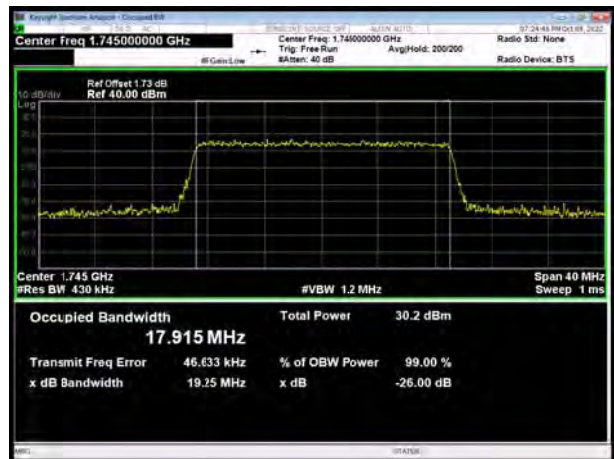
LTE Band 4 QPSK 20MHz CH-Middle



LTE Band 4 QPSK 15MHz CH-High

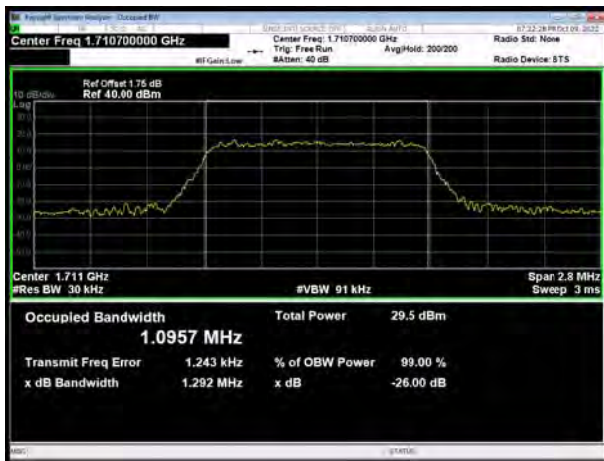


LTE Band 4 QPSK 20MHz CH-High

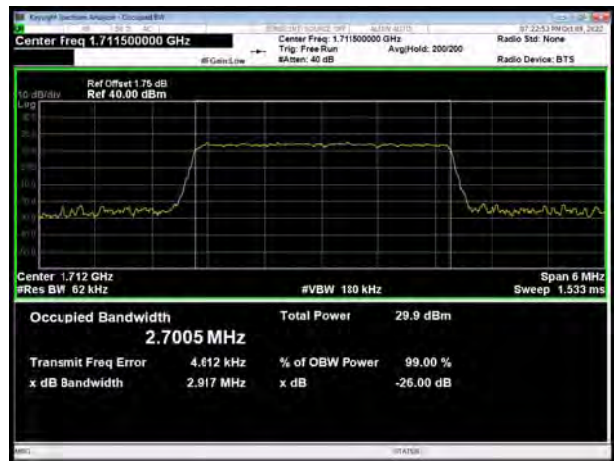




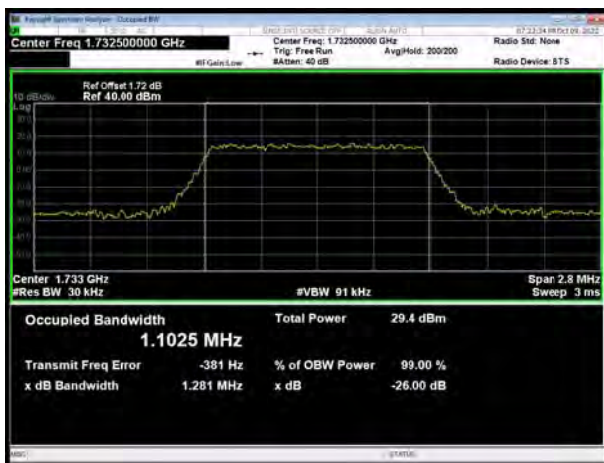
LTE Band 4 16QAM 1.4MHz CH-Low



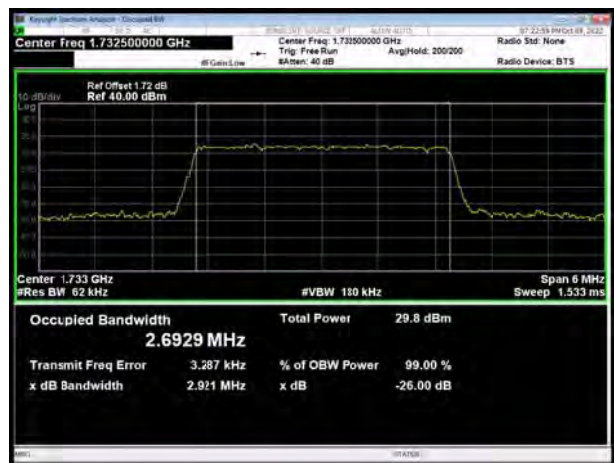
LTE Band 4 16QAM 3MHz CH-Low



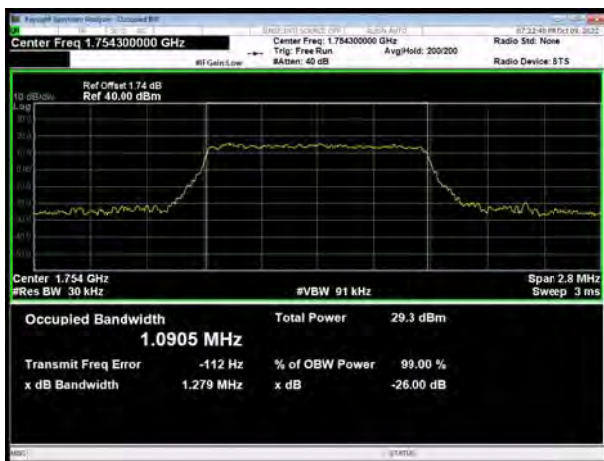
LTE Band 4 16QAM 1.4MHz CH-Middle



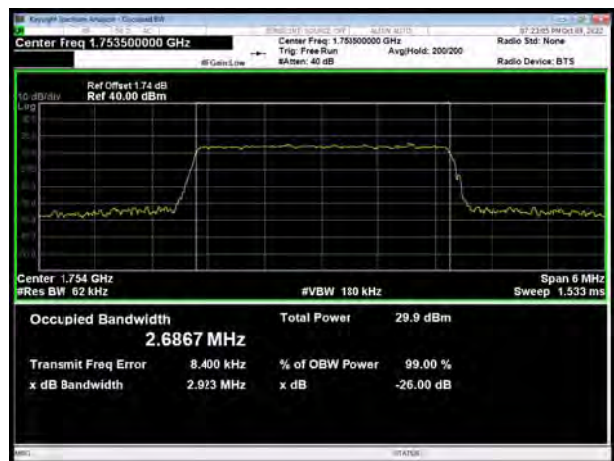
LTE Band 4 16QAM 3MHz CH-Middle



LTE Band 4 16QAM 1.4MHz CH-High

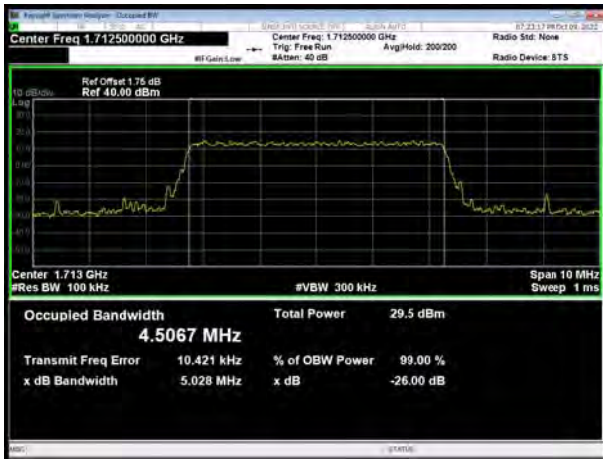


LTE Band 4 16QAM 3MHz CH-High

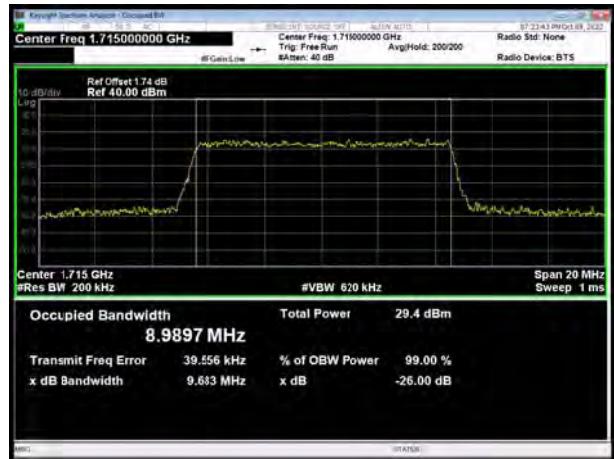




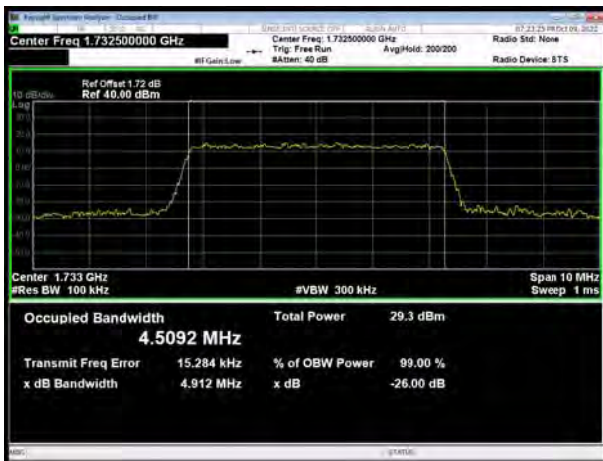
LTE Band 4 16QAM 5MHz CH-Low



LTE Band 4 16QAM 10MHz CH-Low



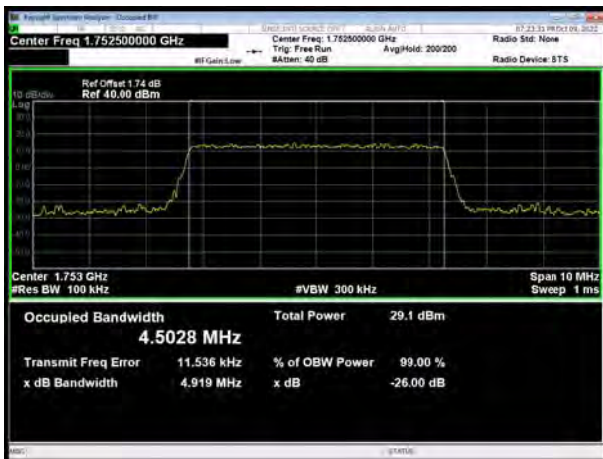
LTE Band 4 16QAM 5MHz CH-Middle



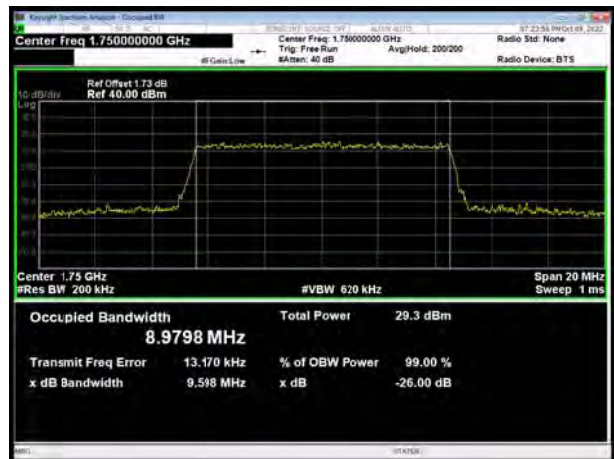
LTE Band 4 16QAM 10MHz CH-Middle



LTE Band 4 16QAM 5MHz CH-High

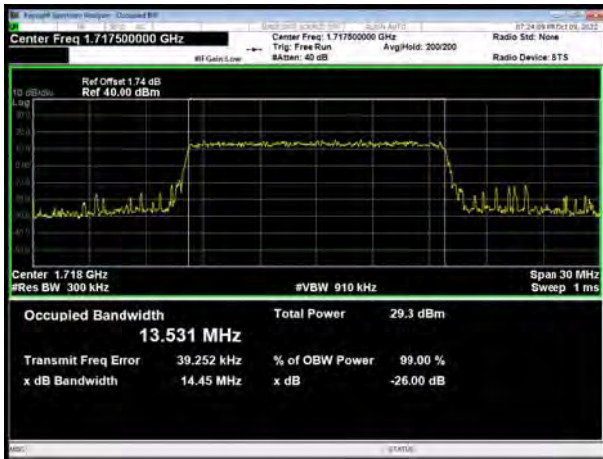


LTE Band 4 16QAM 10MHz CH-High

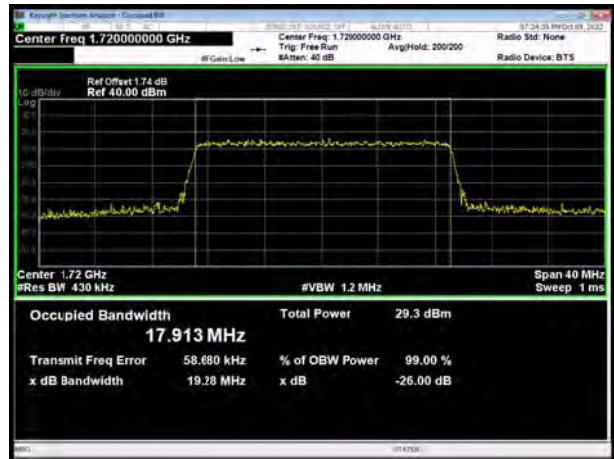




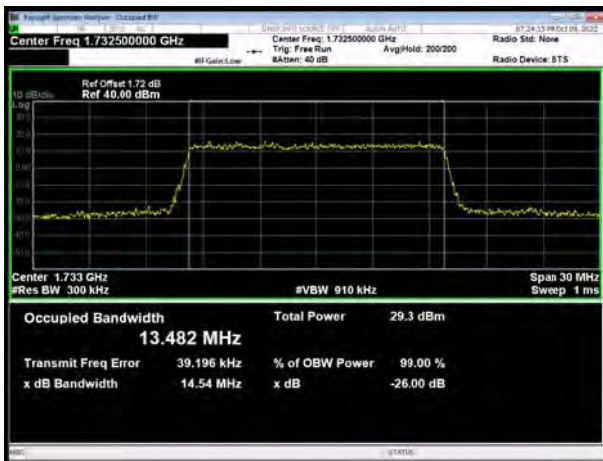
LTE Band 4 16QAM 15MHz CH-Low



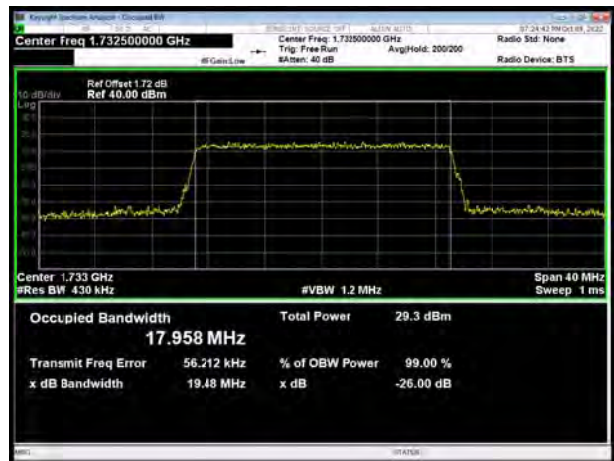
LTE Band 4 16QAM 20MHz CH-Low



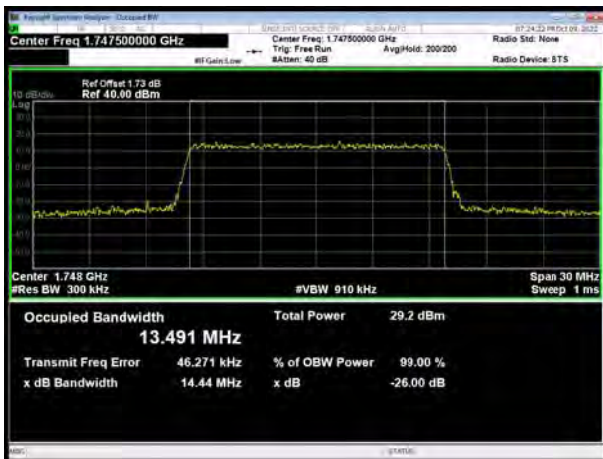
LTE Band 4 16QAM 15MHz CH-Middle



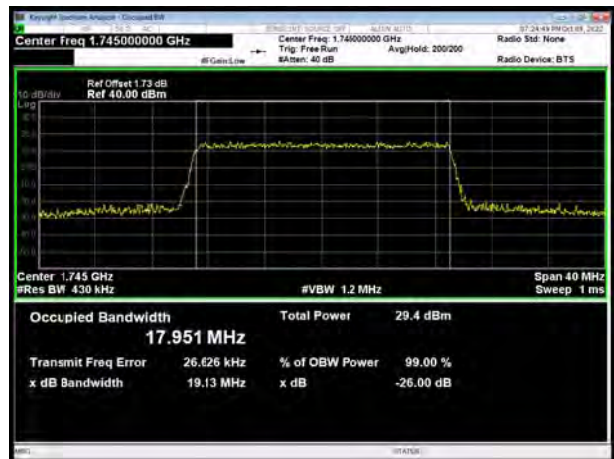
LTE Band 4 16QAM 20MHz CH-Middle



LTE Band 4 16QAM 15MHz CH-High



LTE Band 4 16QAM 20MHz CH-High

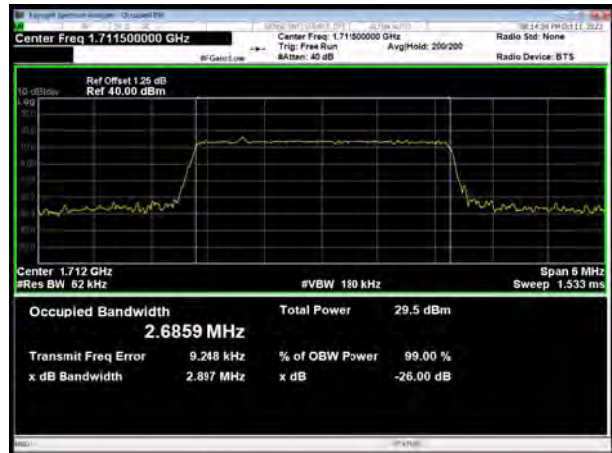




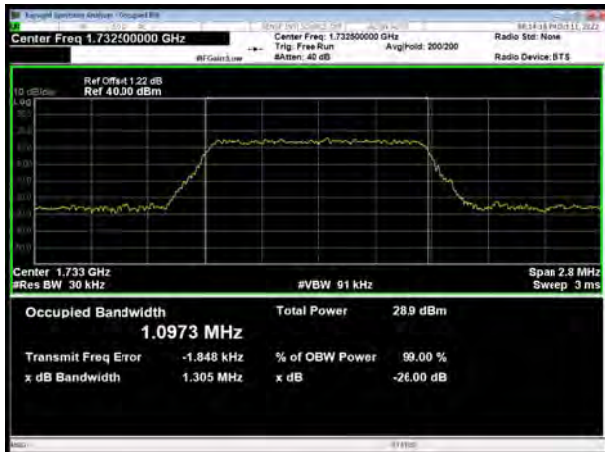
LTE Band 4 1.4MHz64QAMCH-Low



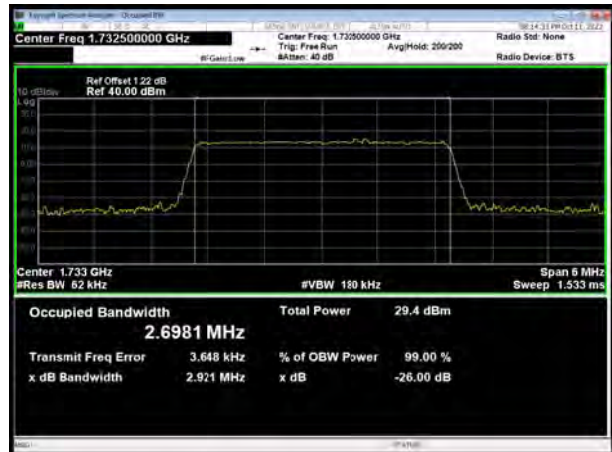
LTE Band 43MHz64QAMCH-Low



LTE Band 4 1.4MHz64QAM CH-Middle



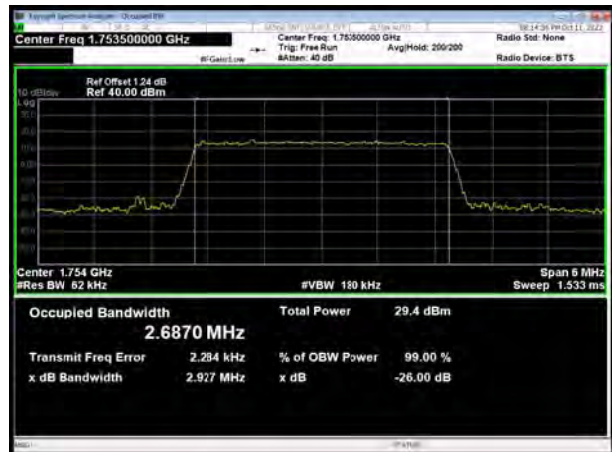
LTE Band 43MHz64QAMCH-Middle



LTE Band 4 1.4MHz64QAM CH-High

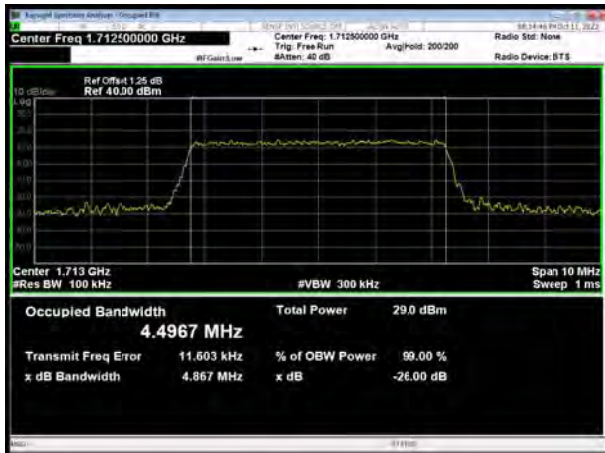


LTE Band 43MHz64QAMCH-High

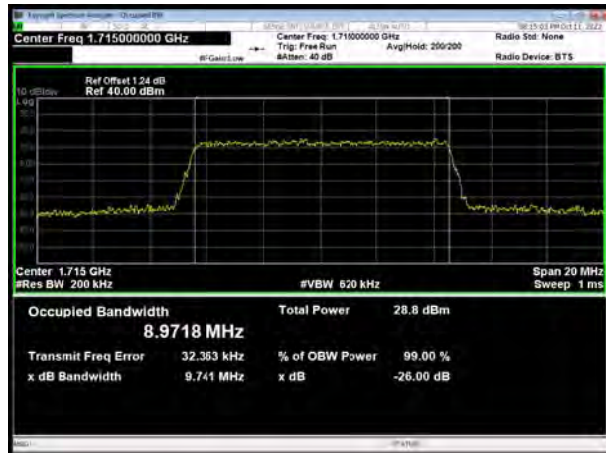




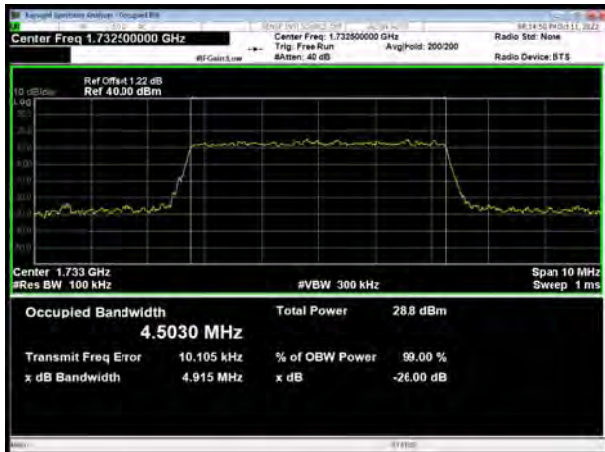
LTE Band 45MHz64QAMCH-Low



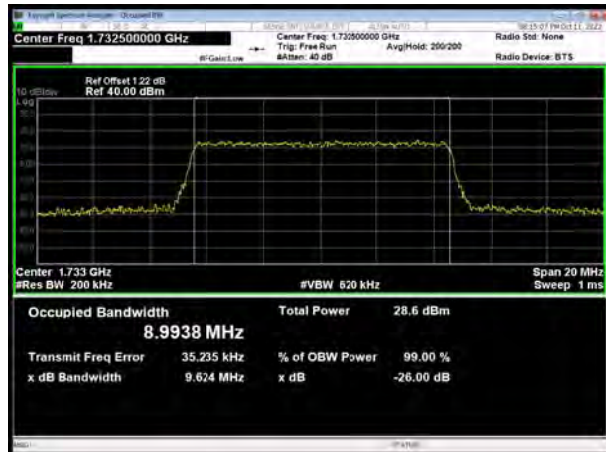
LTE Band 410MHz64QAMCH-Low



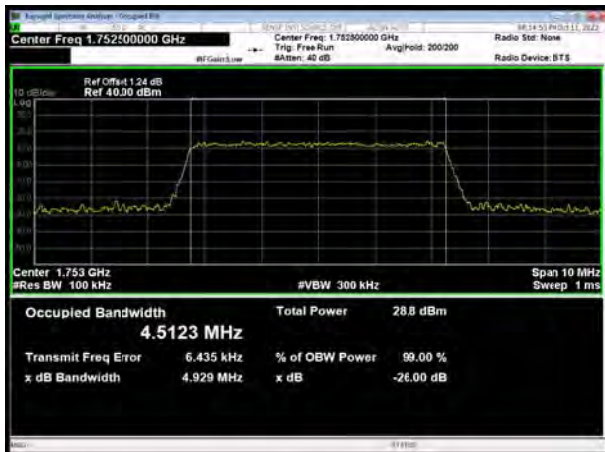
LTE Band 45MHz64QAMCH-Middle



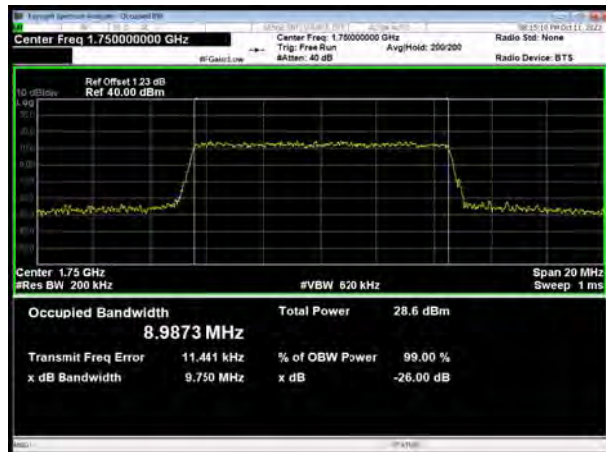
LTE Band 410MHz64QAMCH-Middle



LTE Band 45MHz64QAMCH-High

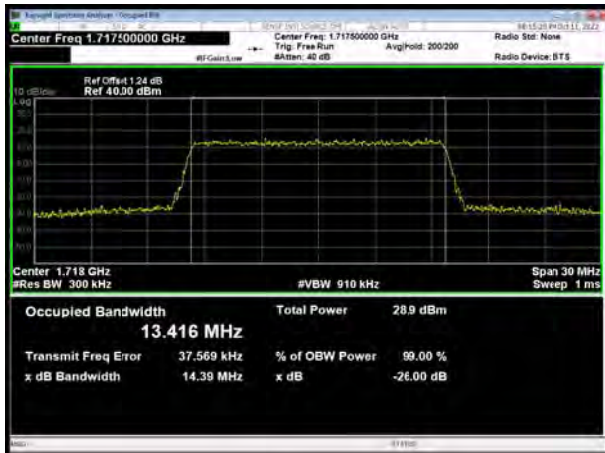


LTE Band 410MHz64QAMCH-High

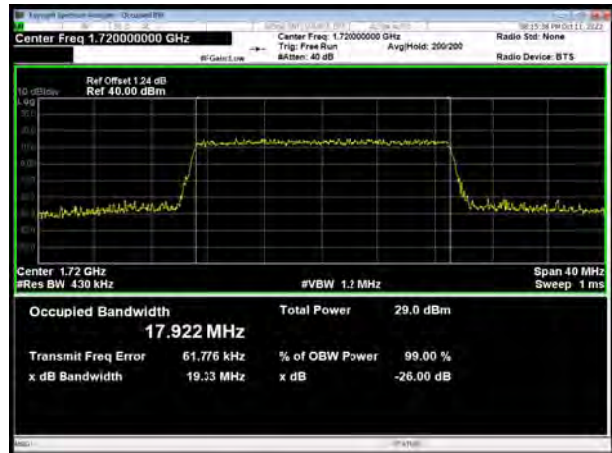




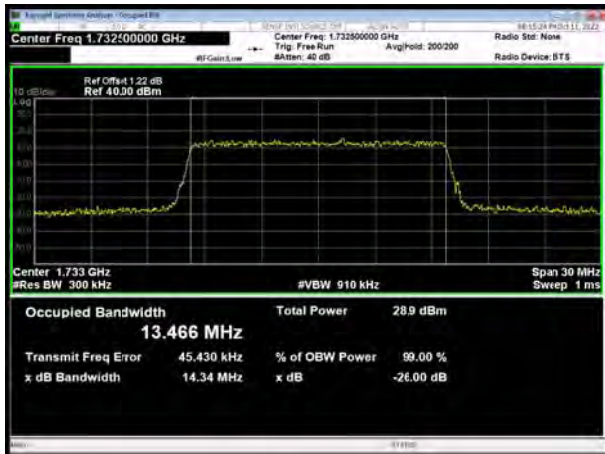
LTE Band 415MHz64QAMCH-Low



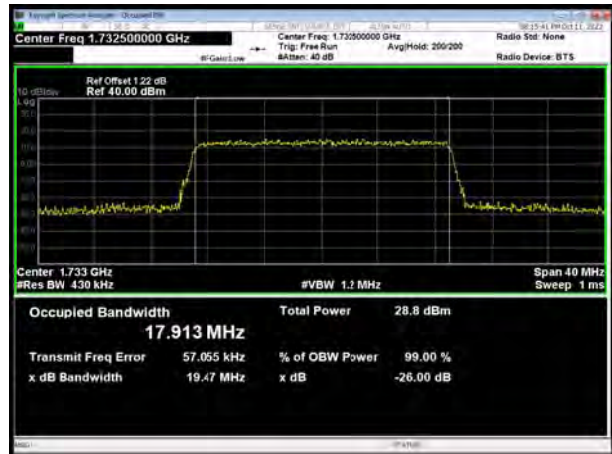
LTE Band 420MHz64QAMCH-Low



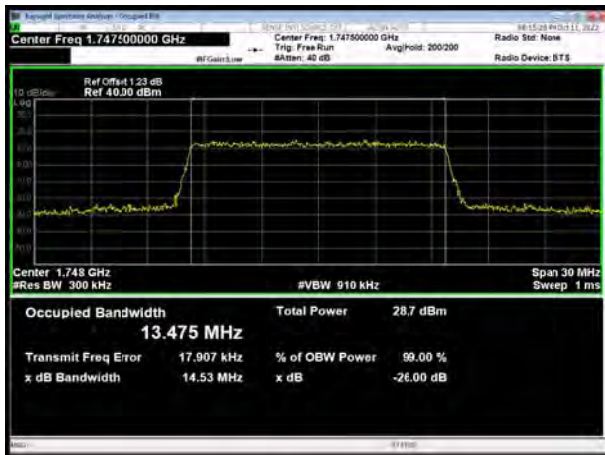
LTE Band 415MHz64QAMCH-Middle



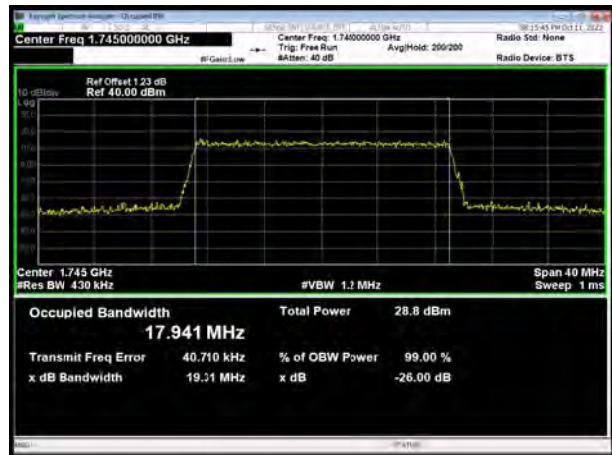
LTE Band 420MHz64QAMCH-Middle



LTE Band 415MHz64QAMCH-High

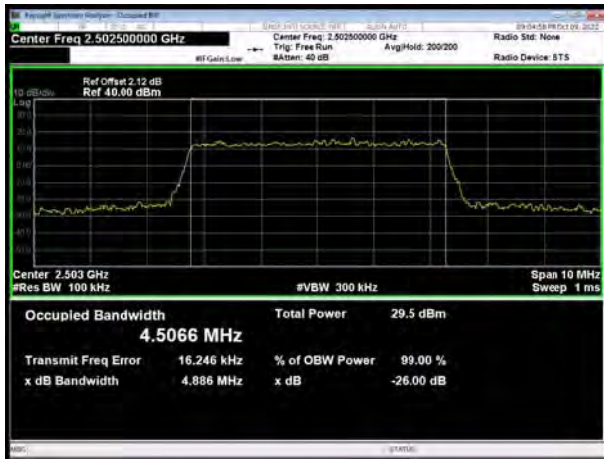


LTE Band 420MHz64QAMCH-High

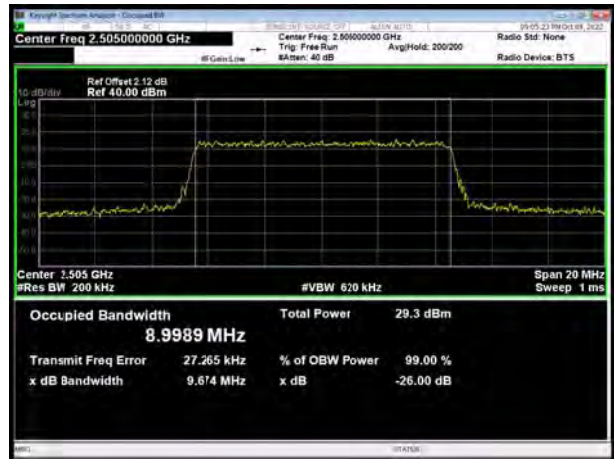




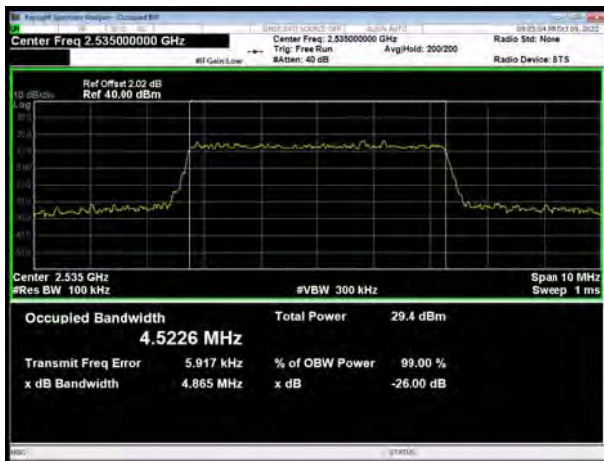
LTE Band 7 QPSK 5MHz CH-Low



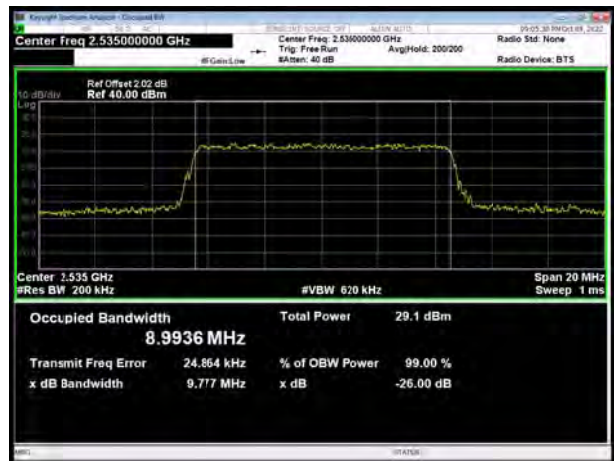
LTE Band 7 QPSK 10MHz CH-Low



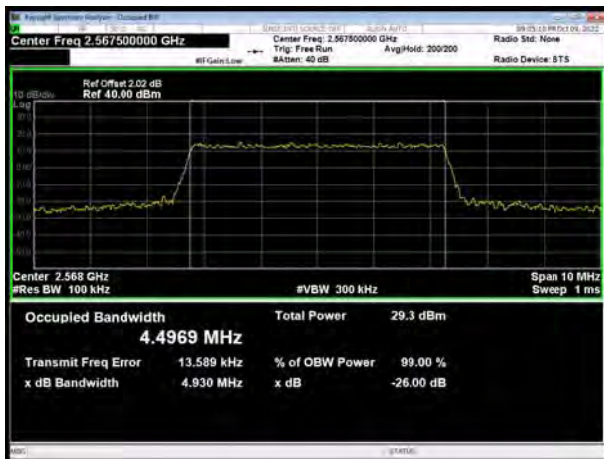
LTE Band 7 QPSK 5MHz CH-Middle



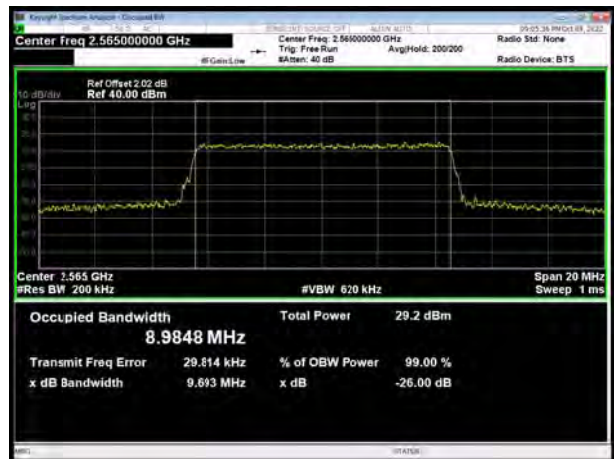
LTE Band 7 QPSK 10MHz CH-Middle



LTE Band 7 QPSK 5MHz CH-High

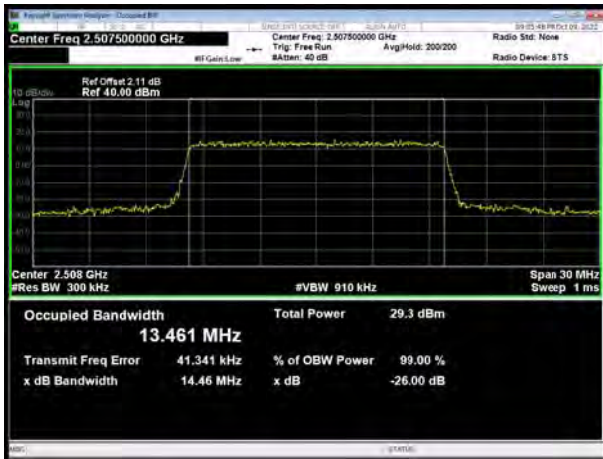


LTE Band 7 QPSK 10MHz CH-High

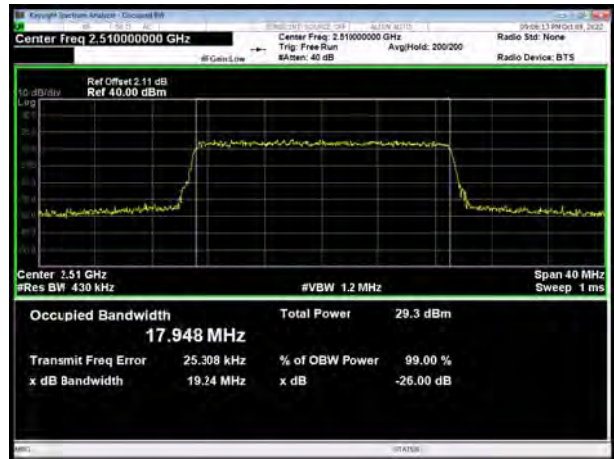




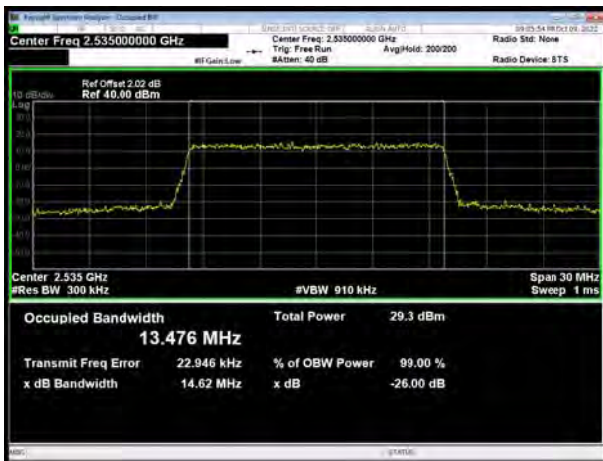
LTE Band 7 QPSK 15MHz CH-Low



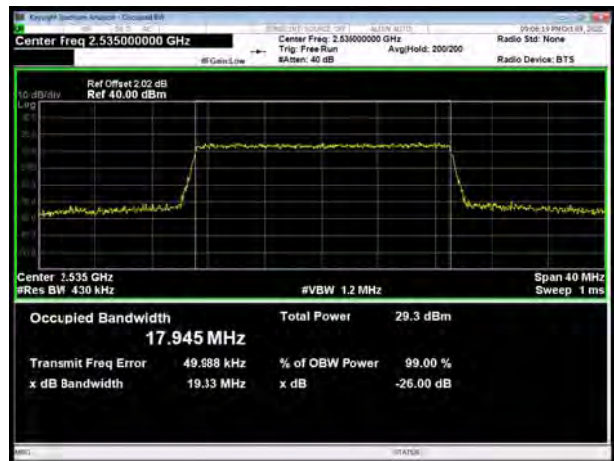
LTE Band 7 QPSK 20MHz CH-Low



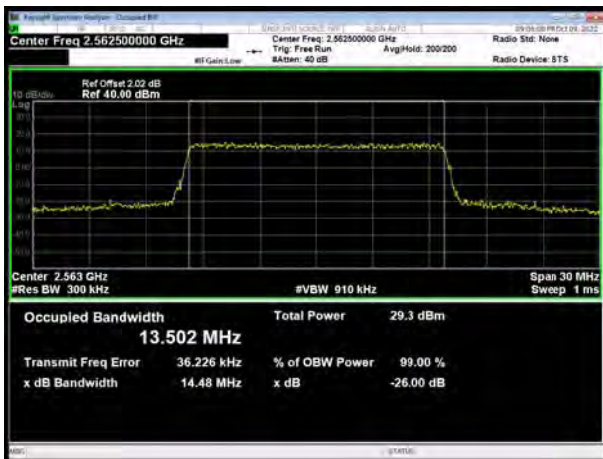
LTE Band 7 QPSK 15MHz CH-Middle



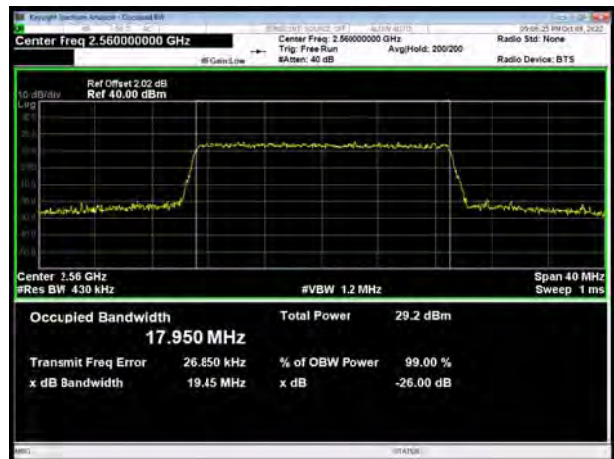
LTE Band 7 QPSK 20MHz CH-Middle



LTE Band 7 QPSK 15MHz CH-High

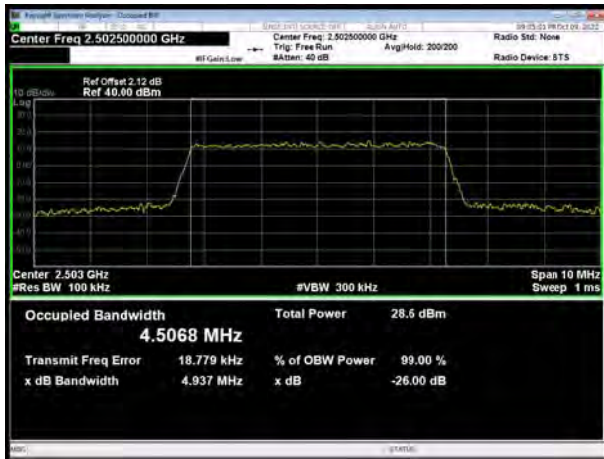


LTE Band 7 QPSK 20MHz CH-High

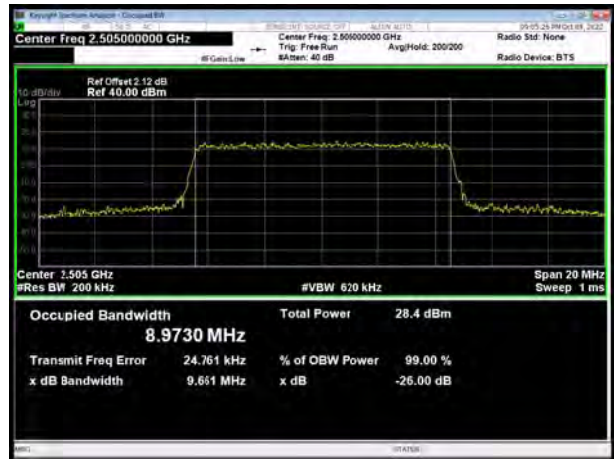




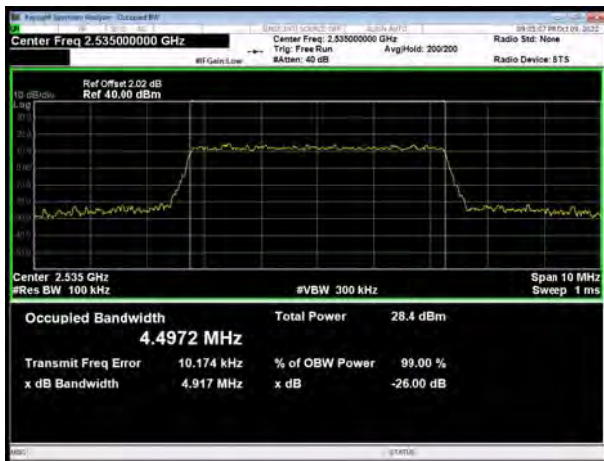
LTE Band 7 16QAM 5MHz CH-Low



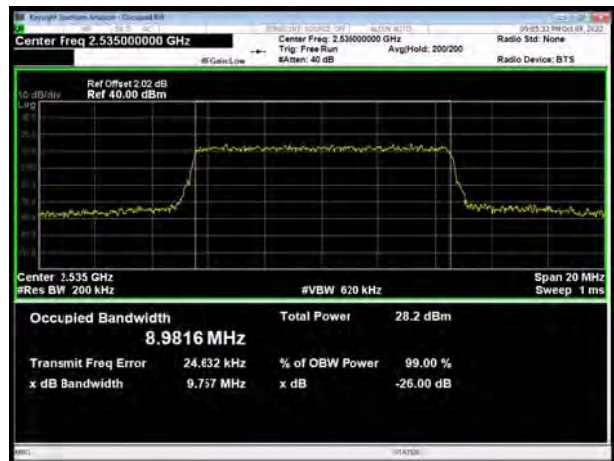
LTE Band 7 16QAM 10MHz CH-Low



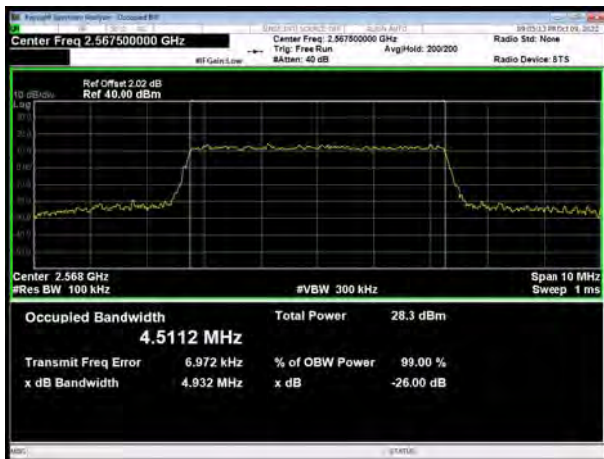
LTE Band 7 16QAM 5MHz CH-Middle



LTE Band 7 16QAM 10MHz CH-Middle



LTE Band 7 16QAM 5MHz CH-High



LTE Band 7 16QAM 10MHz CH-High

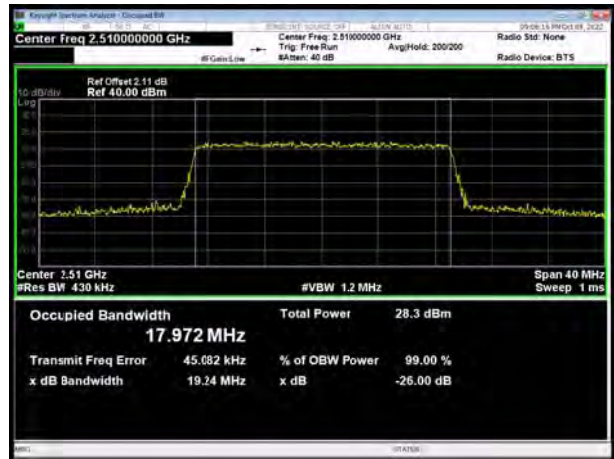




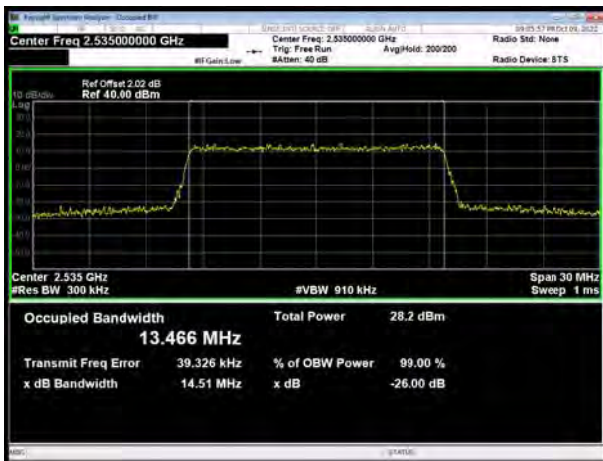
LTE Band 7 16QAM 15MHz CH-Low



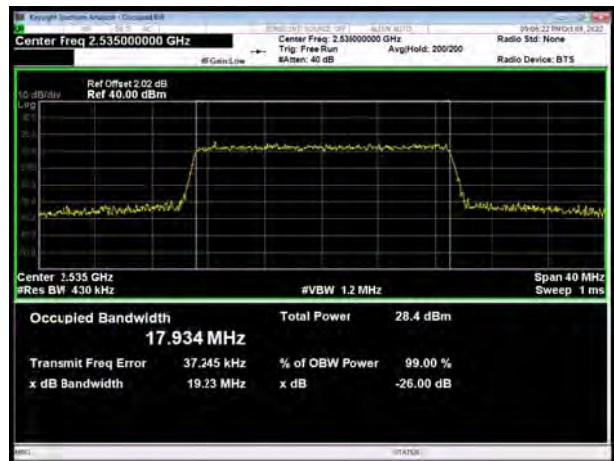
LTE Band 7 16QAM 20MHz CH-Low



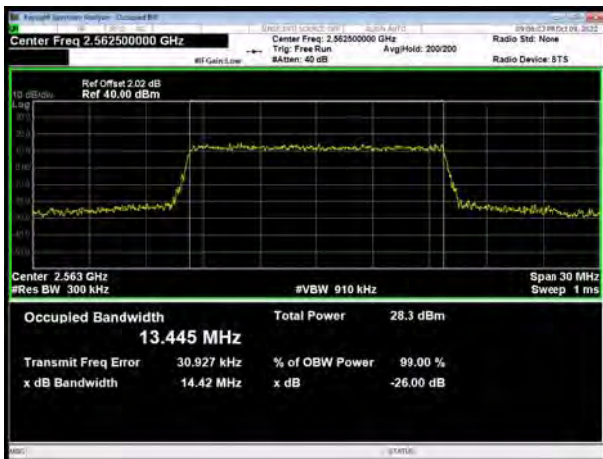
LTE Band 7 16QAM 15MHz CH-Middle



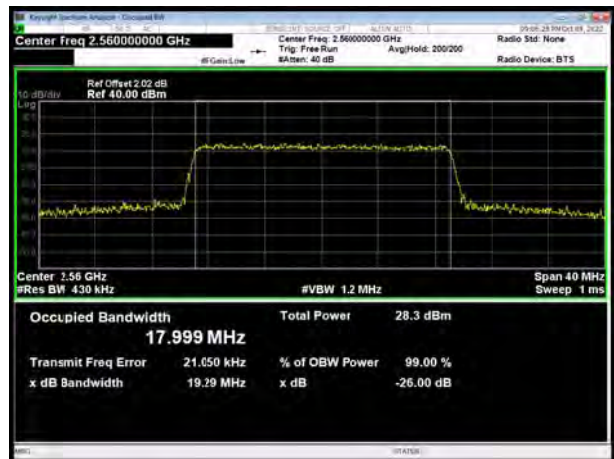
LTE Band 7 16QAM 20MHz CH-Middle



LTE Band 7 16QAM 15MHz CH-High

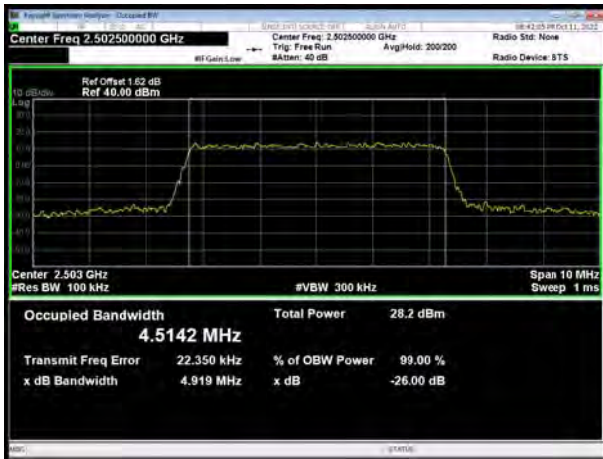


LTE Band 7 16QAM 20MHz CH-High

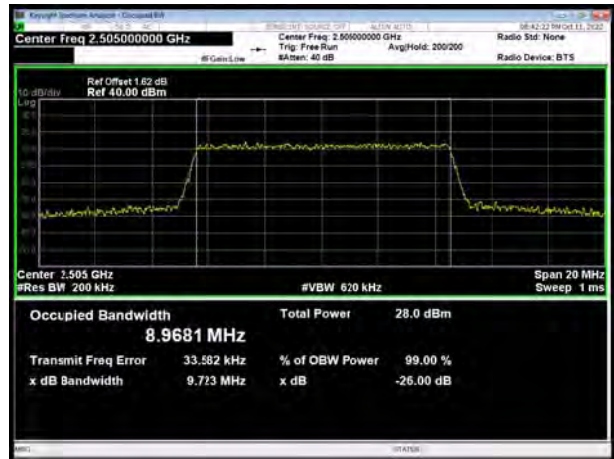




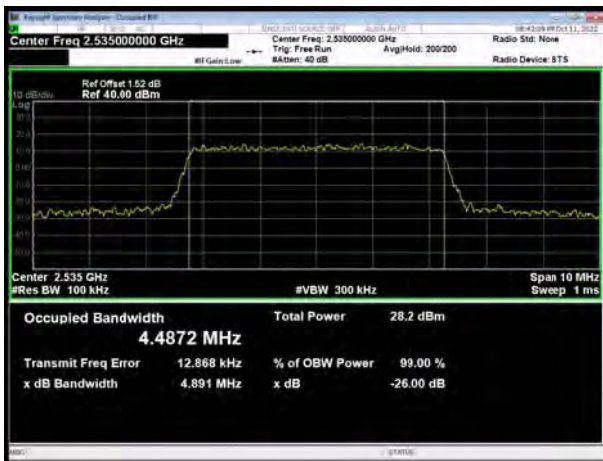
LTE Band 7 64QAM 5MHz CH-Low



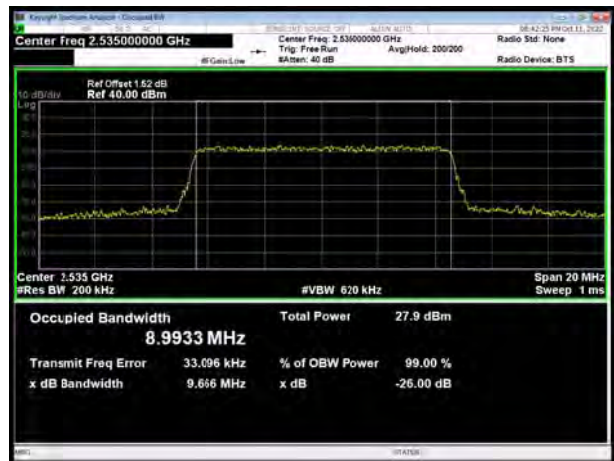
LTE Band 7 64QAM 10MHz CH-Low



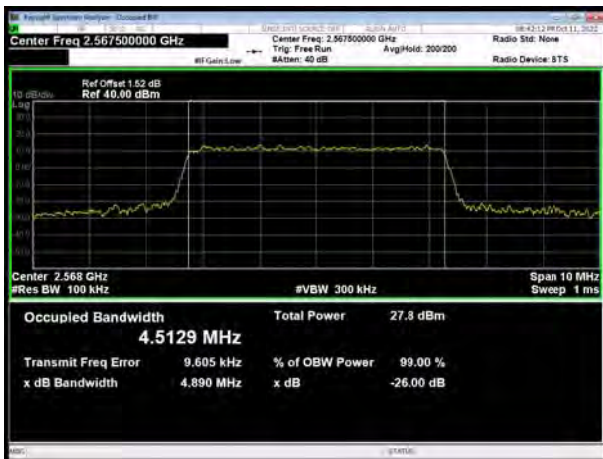
LTE Band 7 64QAM 5MHz CH-Middle



LTE Band 7 64QAM 10MHz CH-Middle



LTE Band 7 64QAM 5MHz CH-High

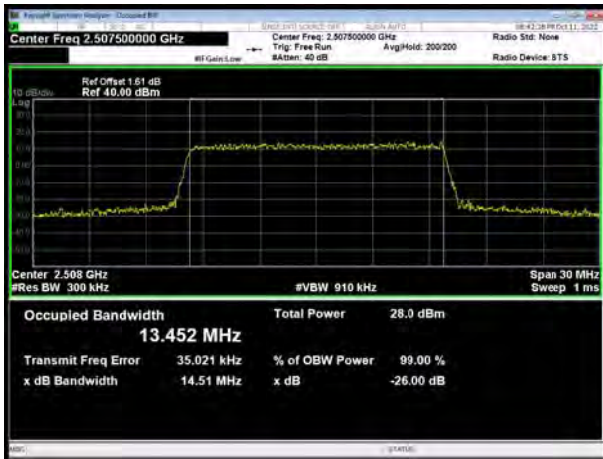


LTE Band 7 64QAM 10MHz CH-High

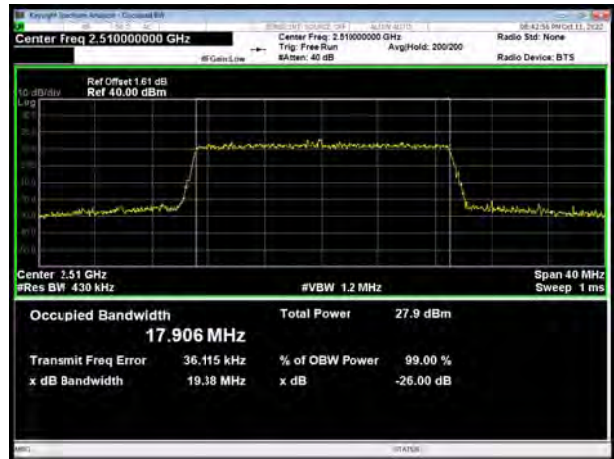




LTE Band 7 64QAM 15MHz CH-Low



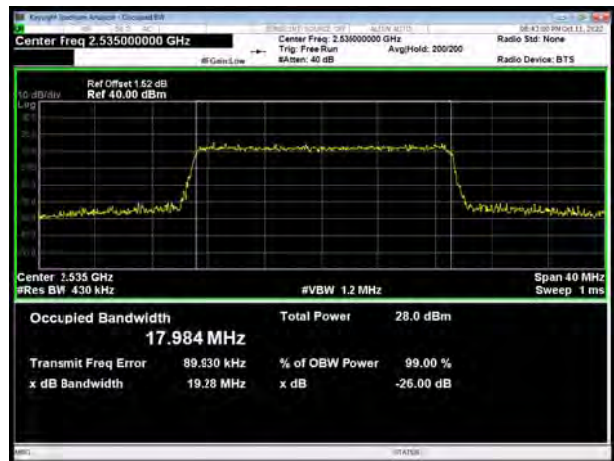
LTE Band 7 64QAM 20MHz CH-Low



LTE Band 7 64QAM 15MHz CH-Middle



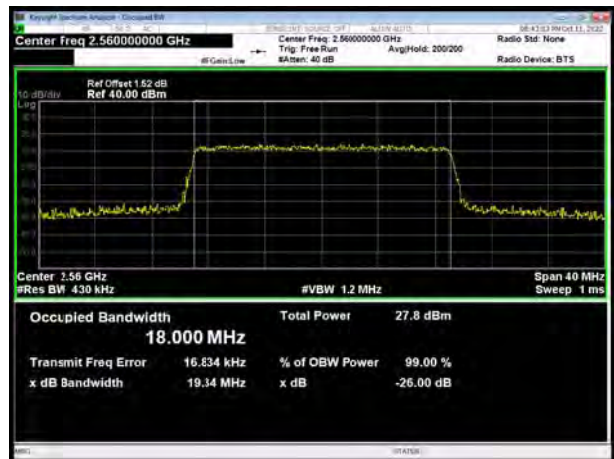
LTE Band 7 64QAM 20MHz CH-Middle



LTE Band 7 64QAM 15MHz CH-High

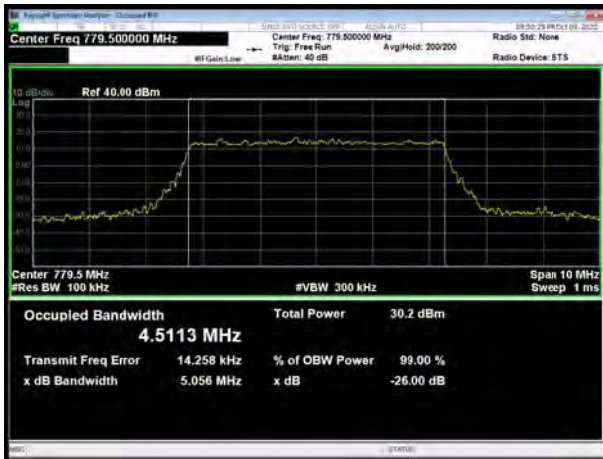


LTE Band 7 64QAM 20MHz CH-High

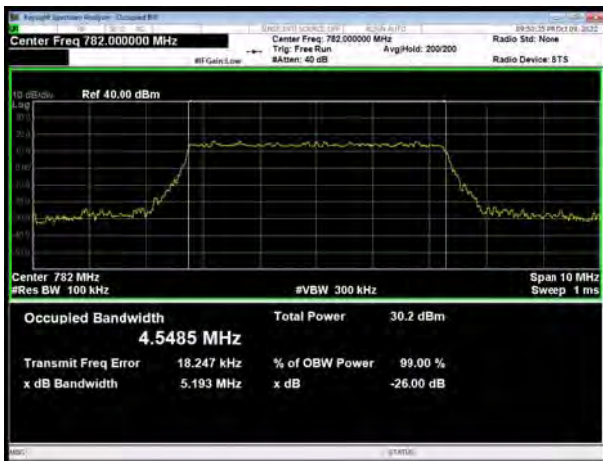




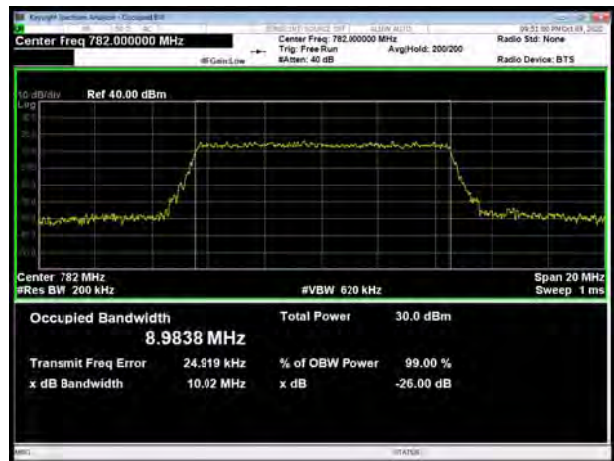
LTE Band 13 QPSK 5MHz CH-Low



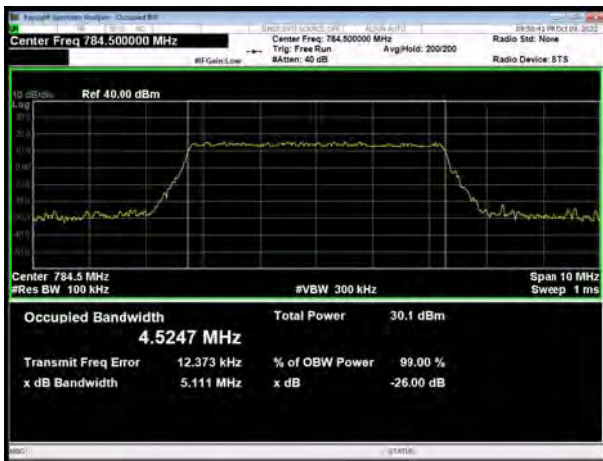
LTE Band 13 QPSK 5MHz CH-Middle



LTE Band 13 QPSK 10MHz CH-Middle

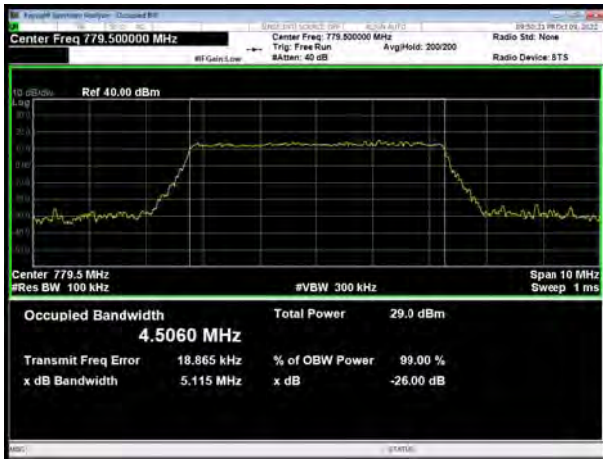


LTE Band 13 QPSK 5MHz CH-High

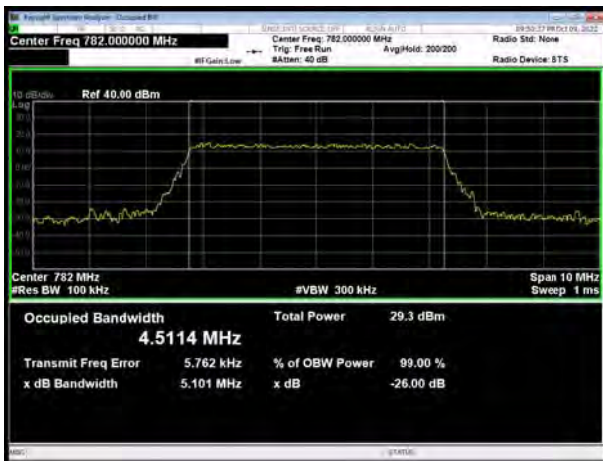




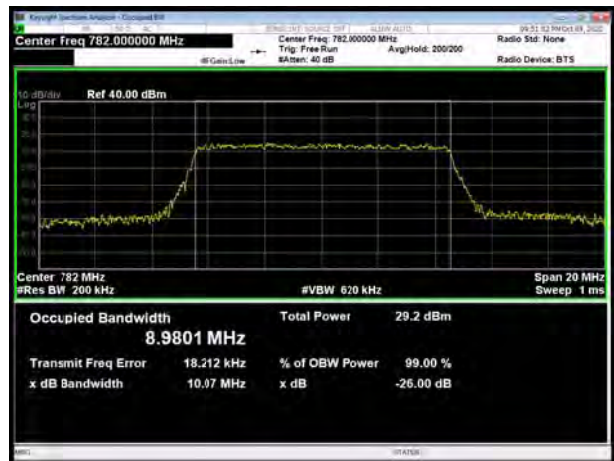
LTE Band 13 16QAM 5MHz CH-Low



LTE Band 13 16QAM 5MHz CH-Middle



LTE Band 13 16QAM 10MHz CH-Middle

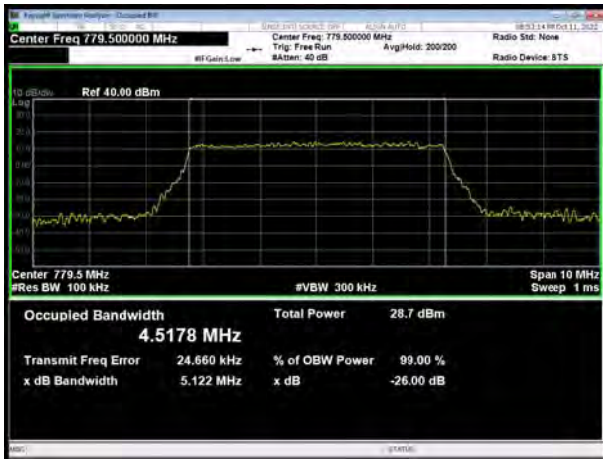


LTE Band 13 16QAM 5MHz CH-High

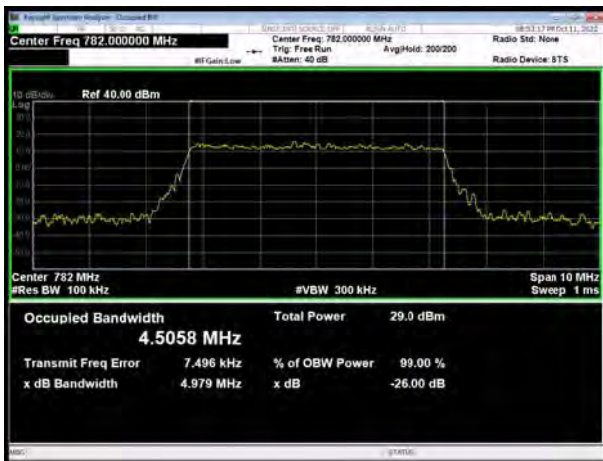




LTE Band 13 64QAM 5MHz CH-Low



LTE Band 13 64QAM 5MHz CH-Middle



LTE Band 13 64QAM 10MHz CH-Middle

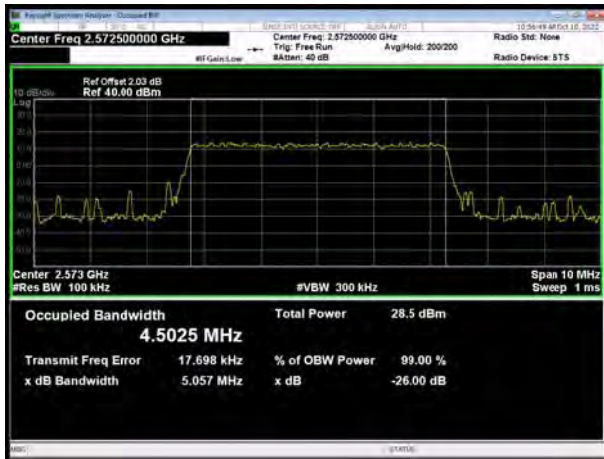


LTE Band 13 64QAM 5MHz CH-High

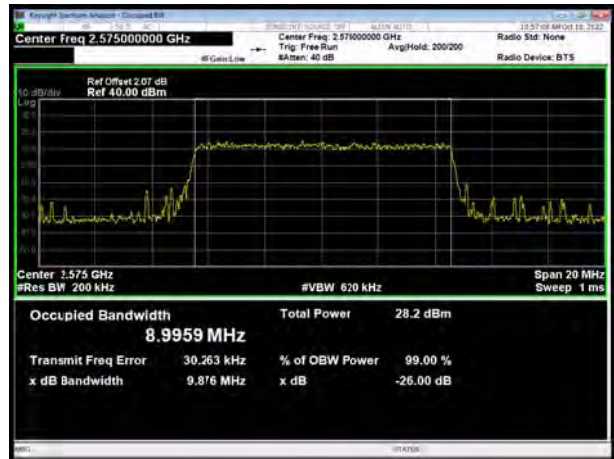




LTE Band 38 QPSK 5MHz CH-Low



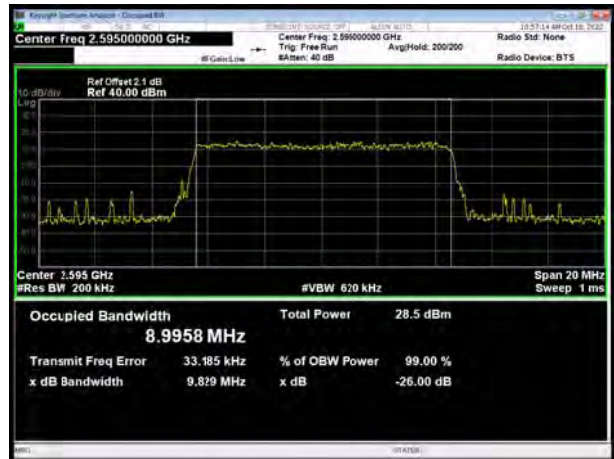
LTE Band 38 QPSK 10MHz CH-Low



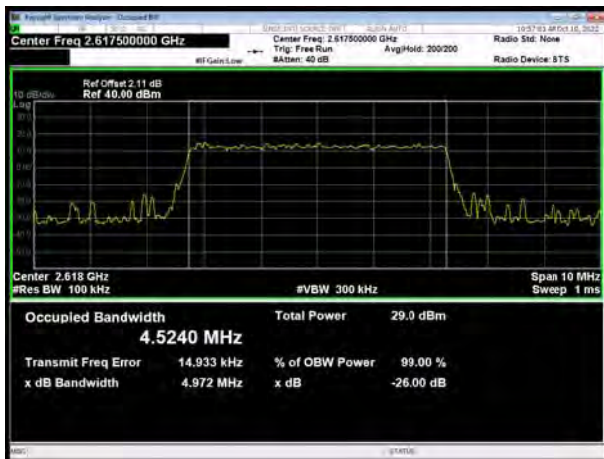
LTE Band 38 QPSK 5MHz CH-Middle



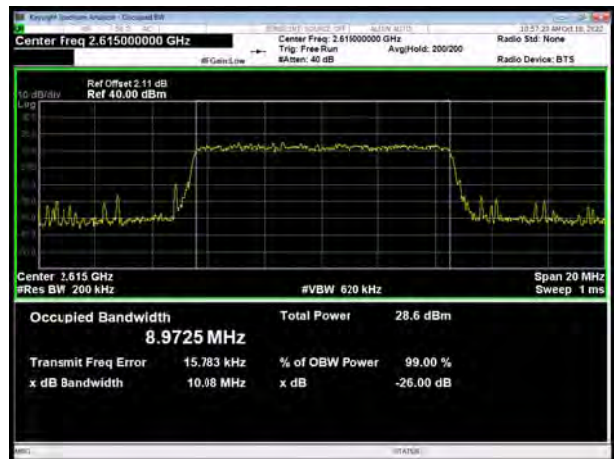
LTE Band 38 QPSK 10MHz CH-Middle



LTE Band 38 QPSK 5MHz CH-High



LTE Band 38 QPSK 10MHz CH-High

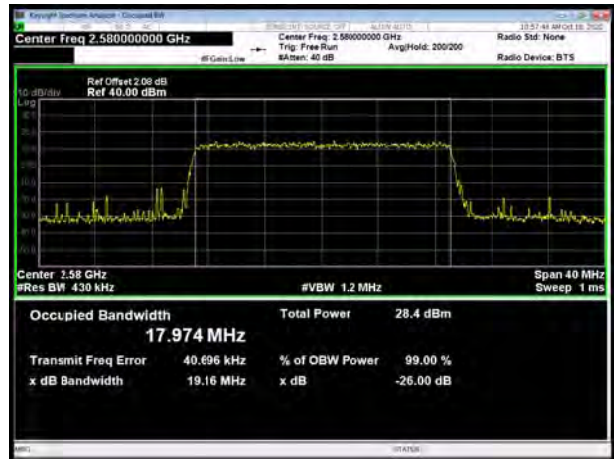




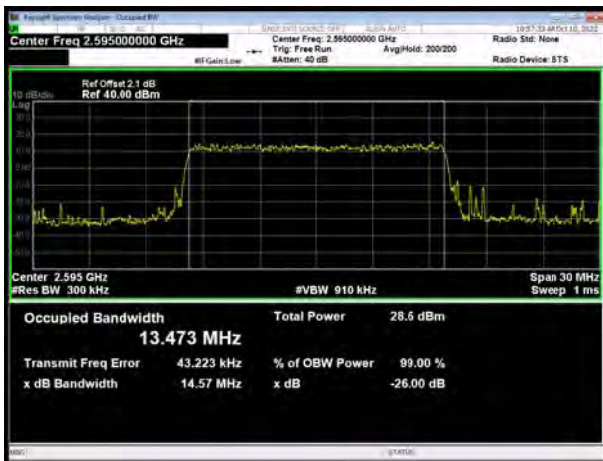
LTE Band 38 QPSK 15MHz CH-Low



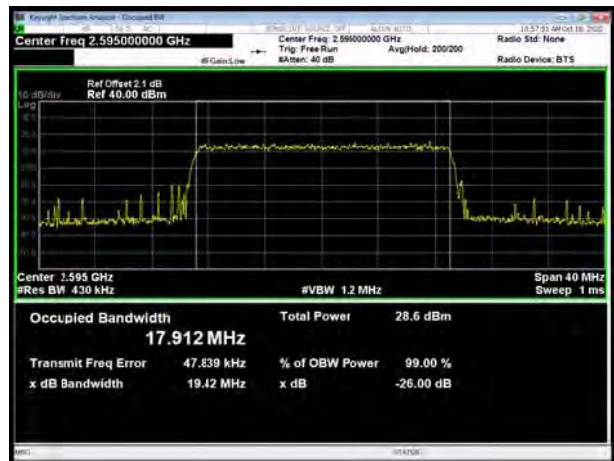
LTE Band 38 QPSK 20MHz CH-Low



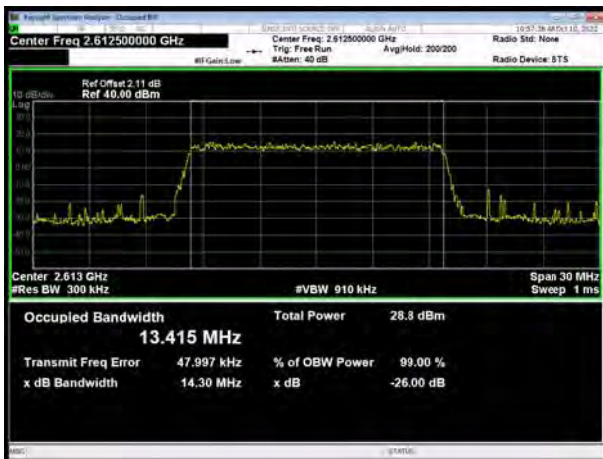
LTE Band 38 QPSK 15MHz CH-Middle



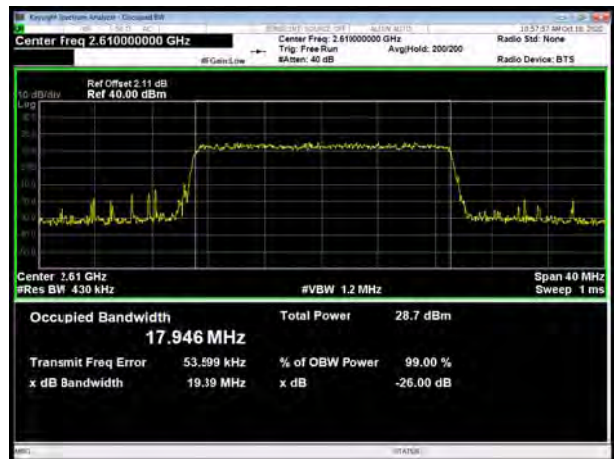
LTE Band 38 QPSK 20MHz CH-Middle



LTE Band 38 QPSK 15MHz CH-High

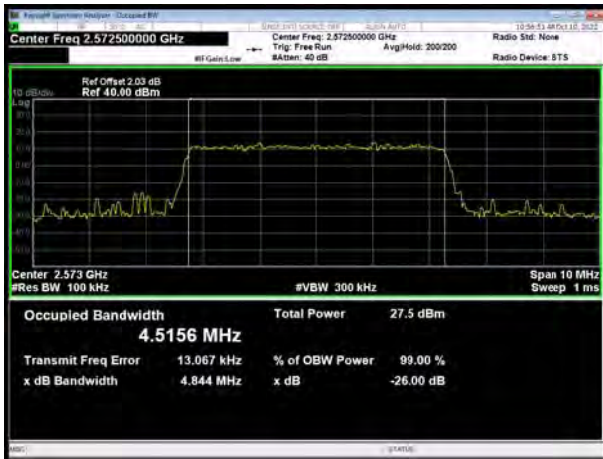


LTE Band 38 QPSK 20MHz CH-High

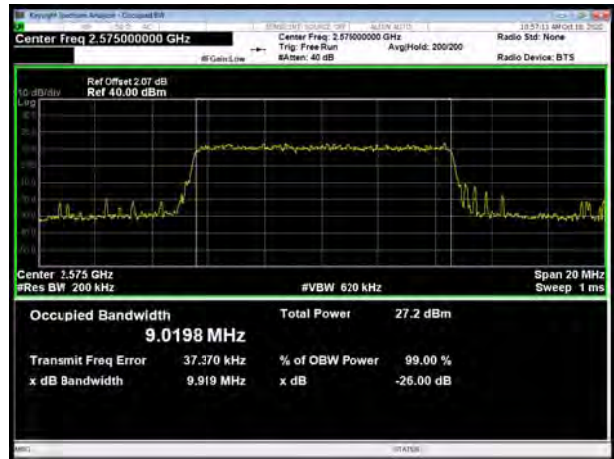




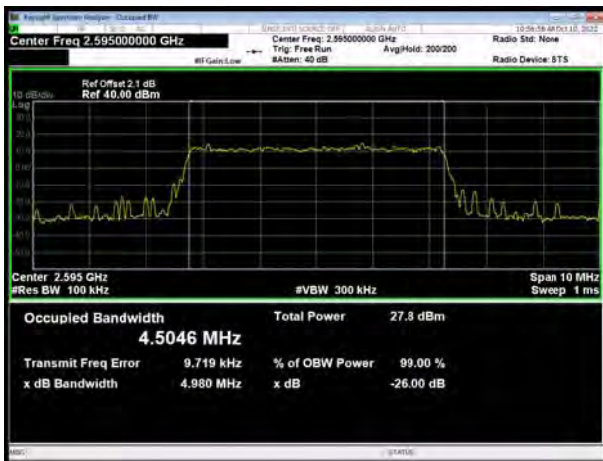
LTE Band 38 16QAM 5MHz CH-Low



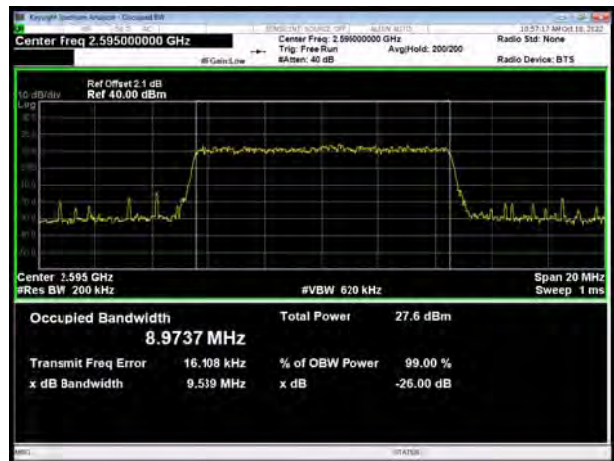
LTE Band 38 16QAM 10MHz CH-Low



LTE Band 38 16QAM 5MHz CH-Middle



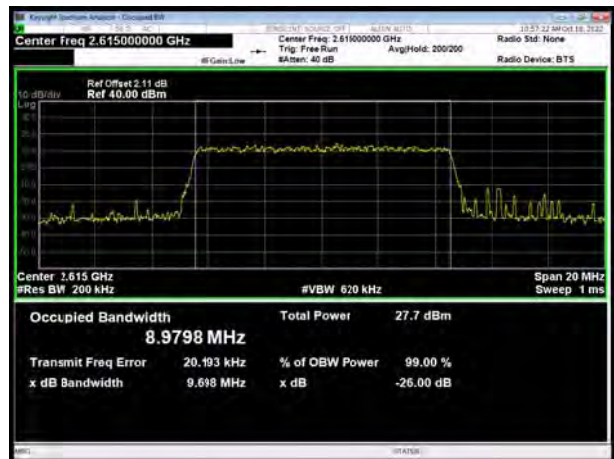
LTE Band 38 16QAM 10MHz CH-Middle



LTE Band 38 16QAM 5MHz CH-High

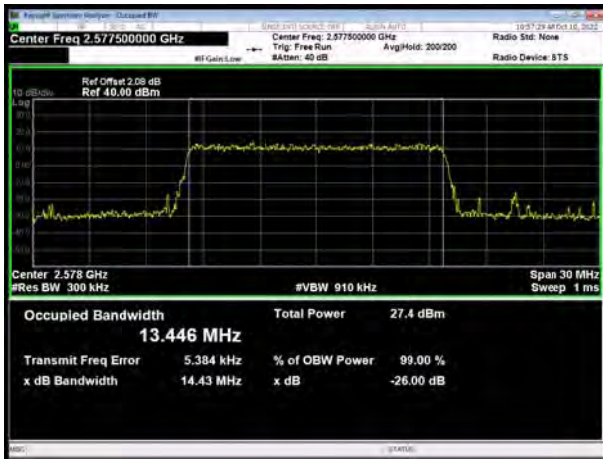


LTE Band 38 16QAM 10MHz CH-High

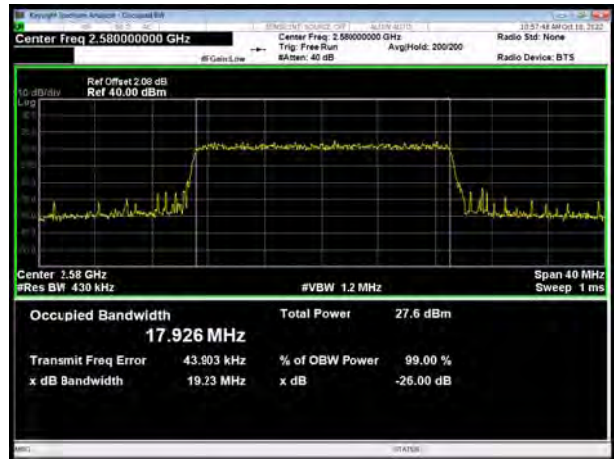




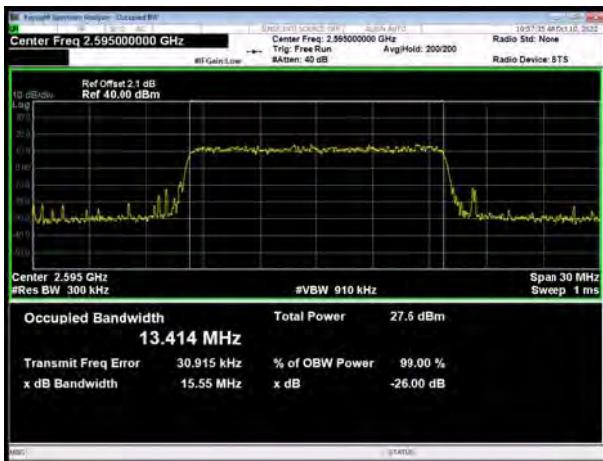
LTE Band 38 16QAM 15MHz CH-Low



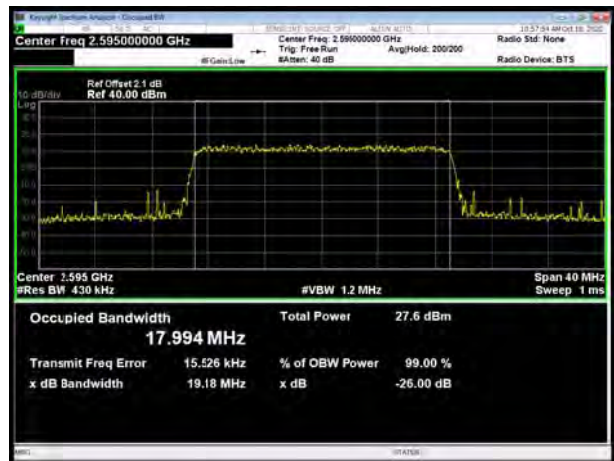
LTE Band 38 16QAM 20MHz CH-Low



LTE Band 38 16QAM 15MHz CH-Middle



LTE Band 38 16QAM 20MHz CH-Middle



LTE Band 38 16QAM 15MHz CH-High

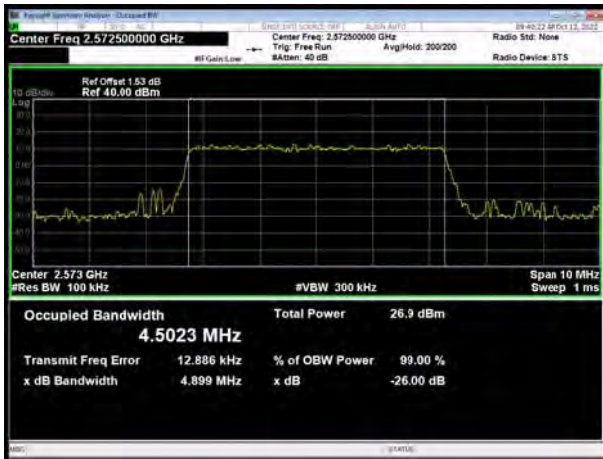


LTE Band 38 16QAM 20MHz CH-High

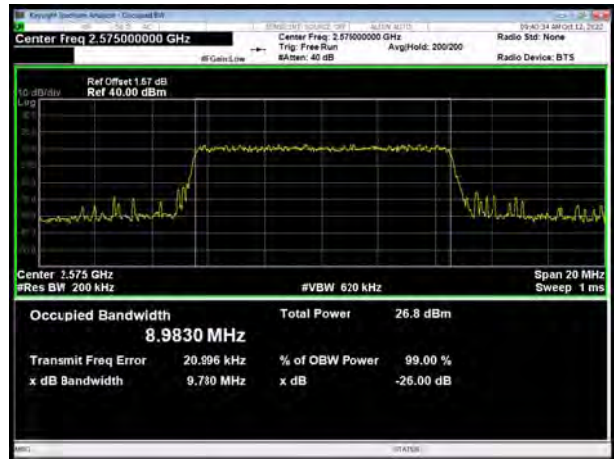




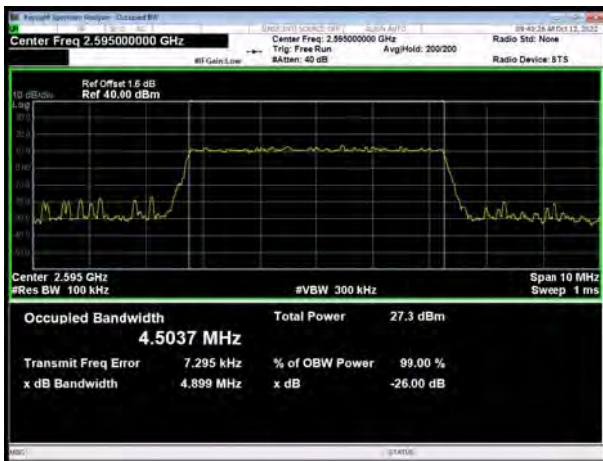
LTE Band 38 64QAM 5MHz CH-Low



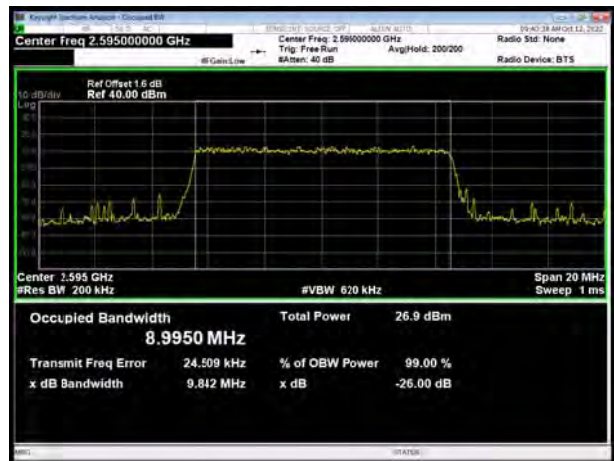
LTE Band 38 64QAM 10MHz CH-Low



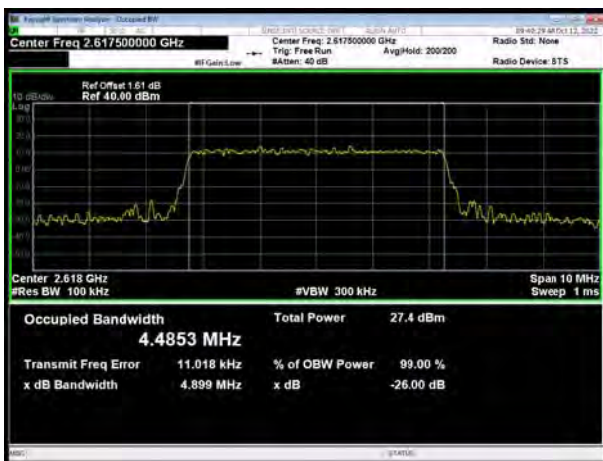
LTE Band 38 64QAM 5MHz CH-Middle



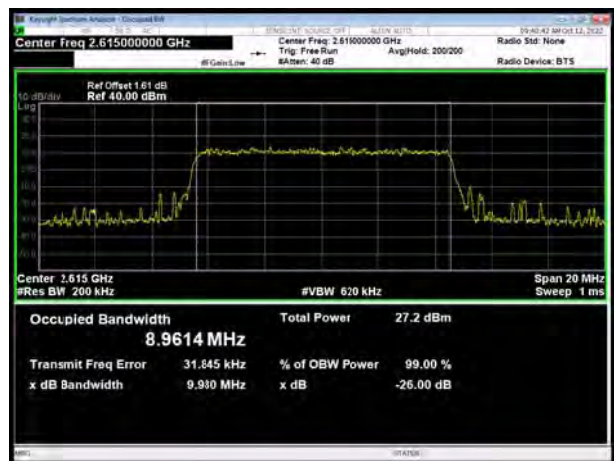
LTE Band 38 64QAM 10MHz CH-Middle



LTE Band 38 64QAM 5MHz CH-High

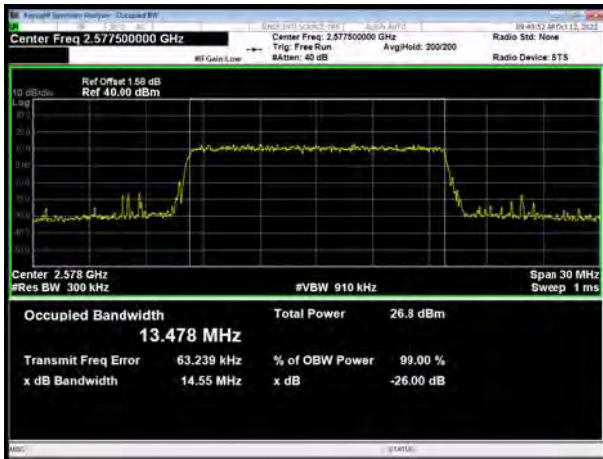


LTE Band 38 64QAM 10MHz CH-High

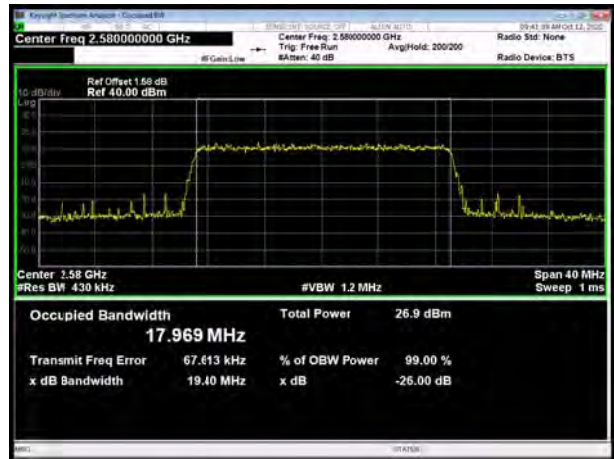




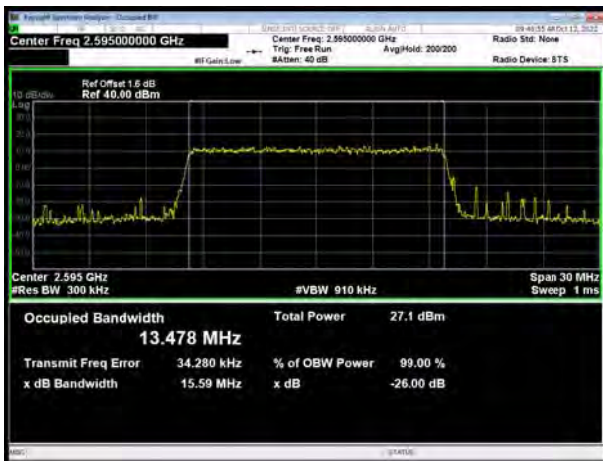
LTE Band 38 64QAM 15MHz CH-Low



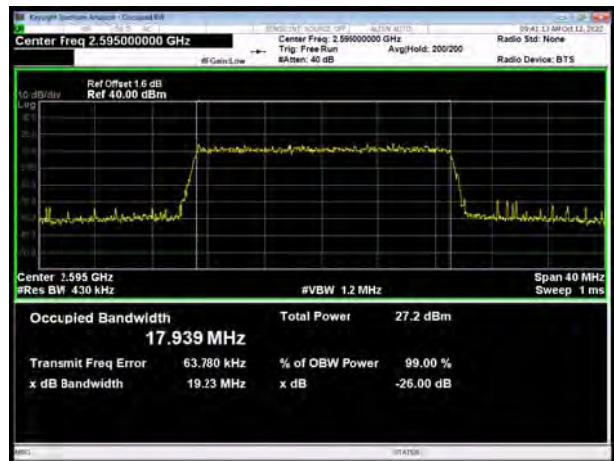
LTE Band 38 64QAM 20MHz CH-Low



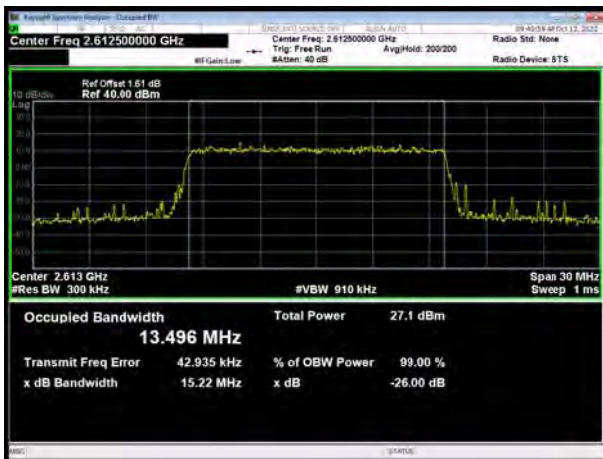
LTE Band 38 64QAM 15MHz CH-Middle



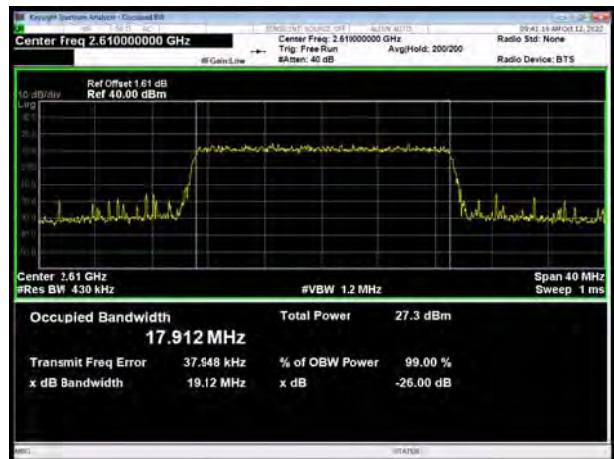
LTE Band 38 64QAM 20MHz CH-Middle



LTE Band 38 64QAM 15MHz CH-High

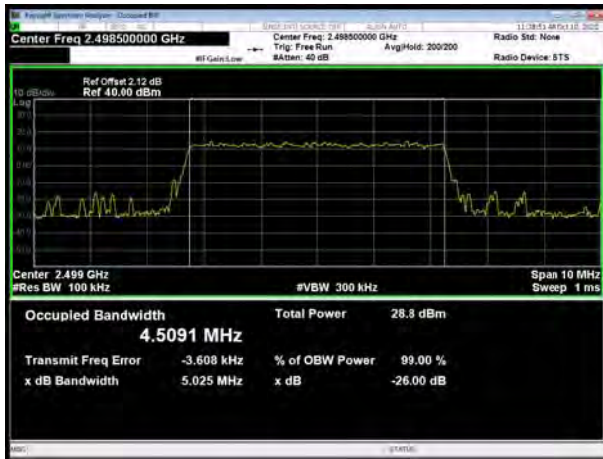


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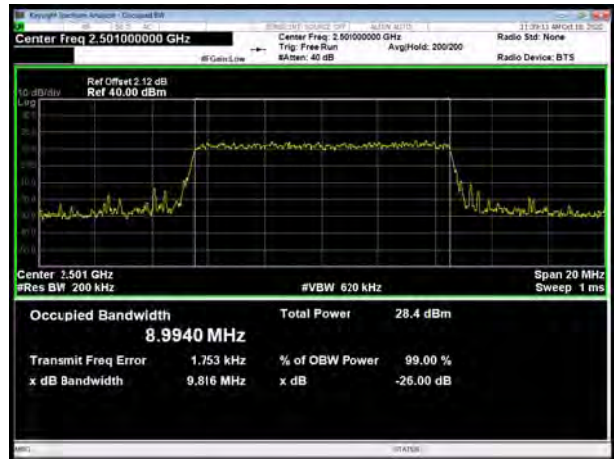




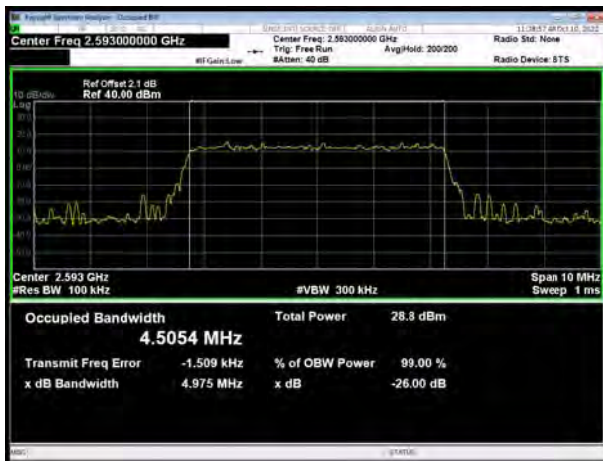
LTE Band 41 QPSK 5MHz CH-Low



LTE Band 41 QPSK 10MHz CH-Low



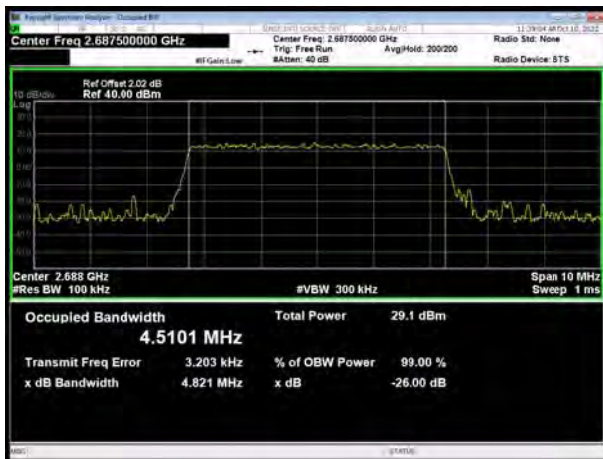
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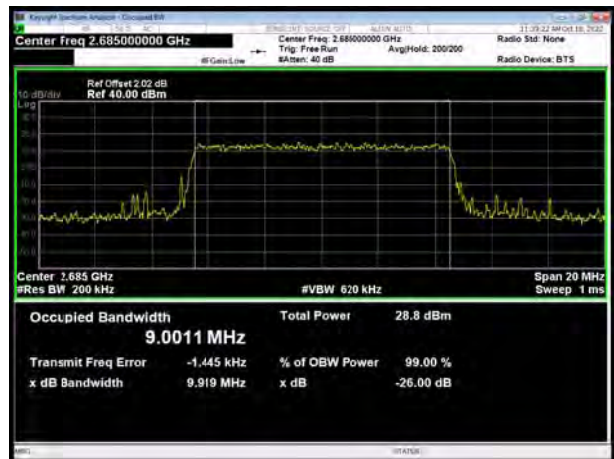
LTE Band 41 QPSK 10MHz CH-Middle



LTE Band 41 QPSK 5MHz CH-High

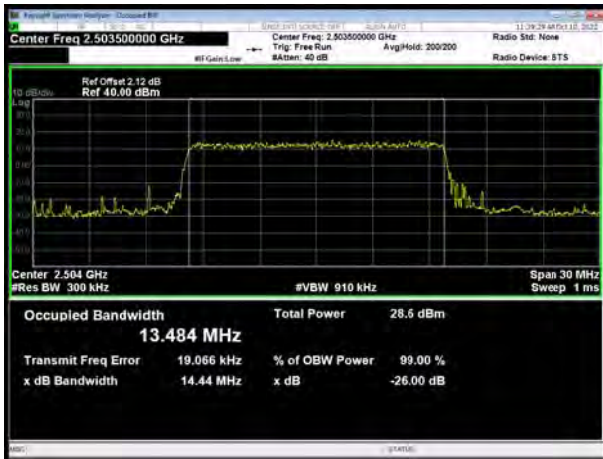


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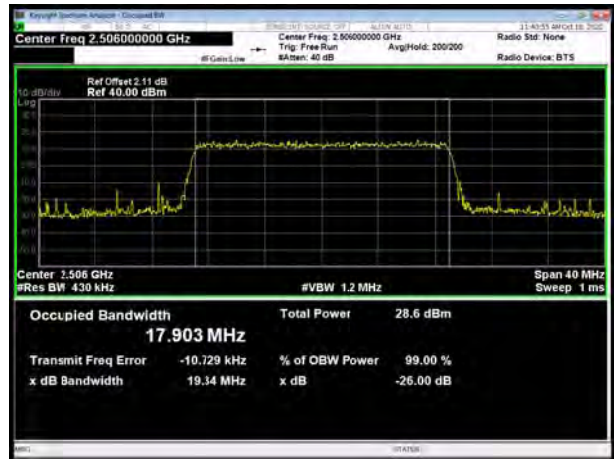




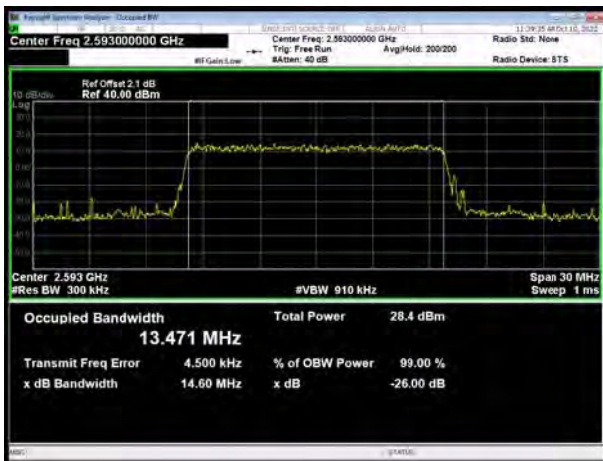
LTE Band 41 QPSK 15MHz CH-Low



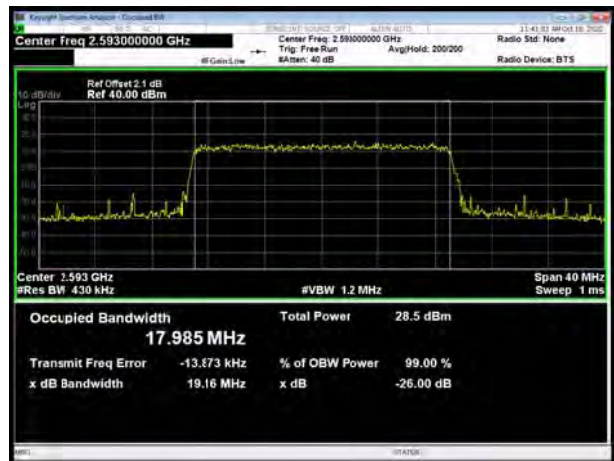
LTE Band 41 QPSK 20MHz CH-Low



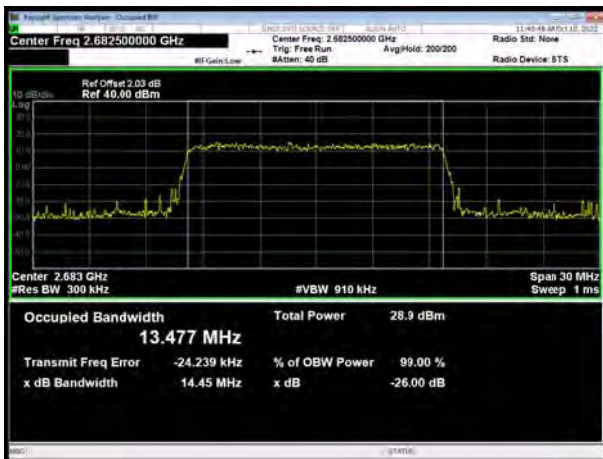
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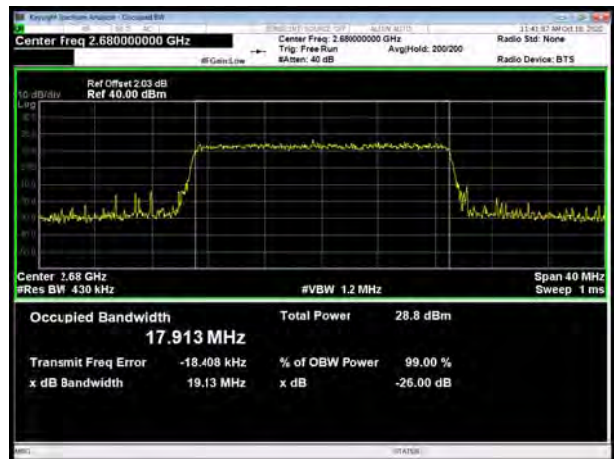
LTE Band 41 QPSK 20MHz CH-Middle



LTE Band 41 QPSK 15MHz CH-High

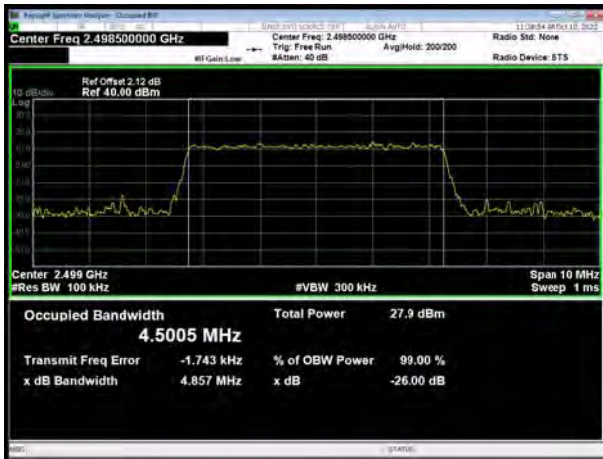


LTE Band 41 QPSK 20MHz CH-High

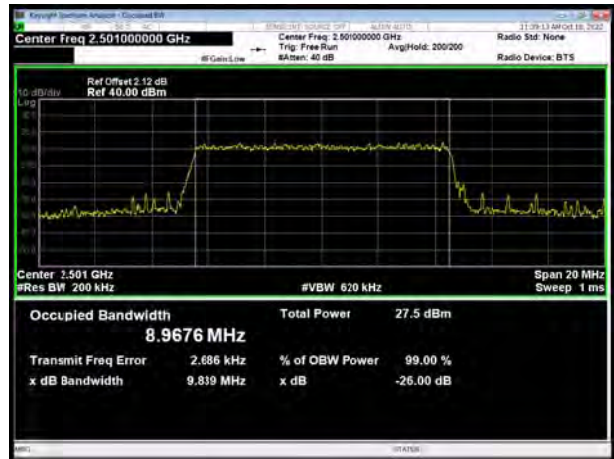




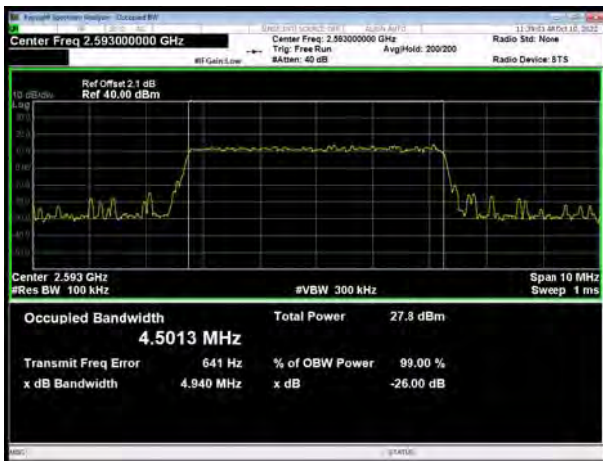
LTE Band 41 16QAM 5MHz CH-Low



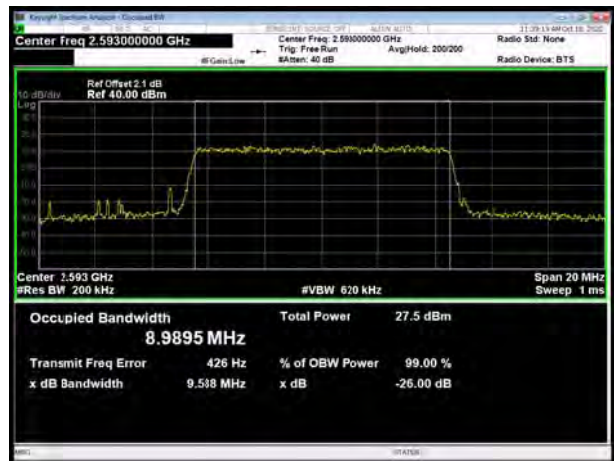
LTE Band 41 16QAM 10MHz CH-Low



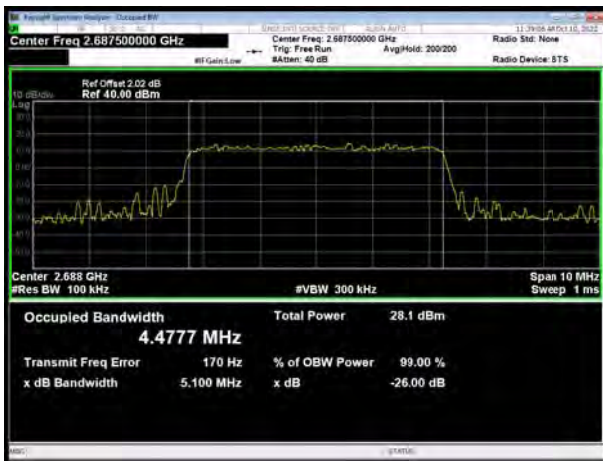
LTE Band 41 16QAM 5MHz CH-Middle



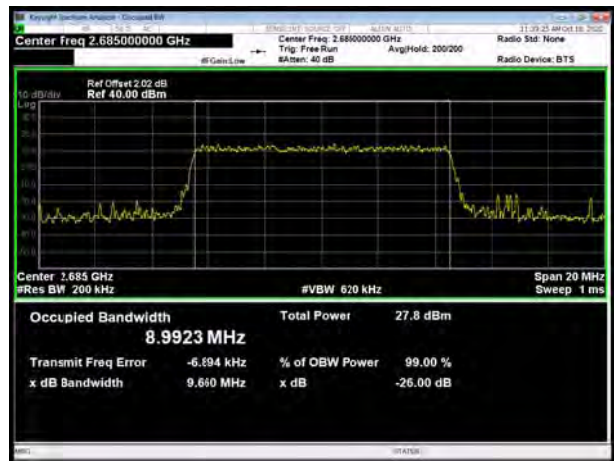
LTE Band 41 16QAM 10MHz CH-Middle



LTE Band 41 16QAM 5MHz CH-High

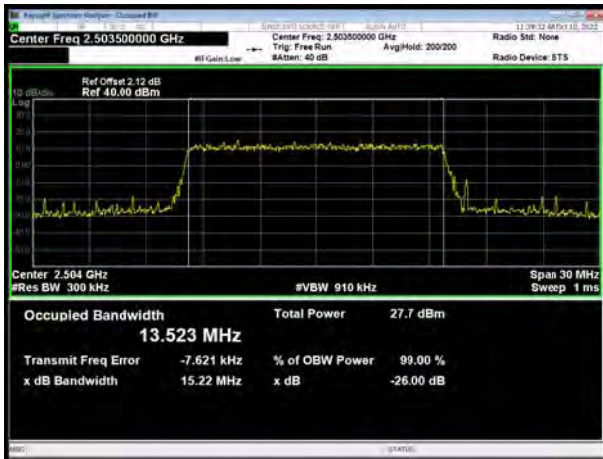


LTE Band 41 16QAM 10MHz CH-High

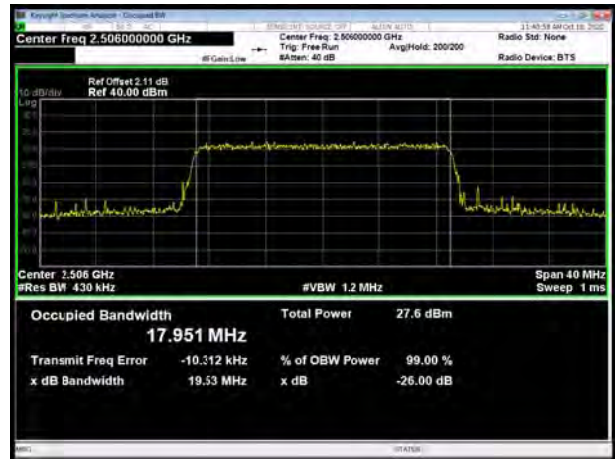




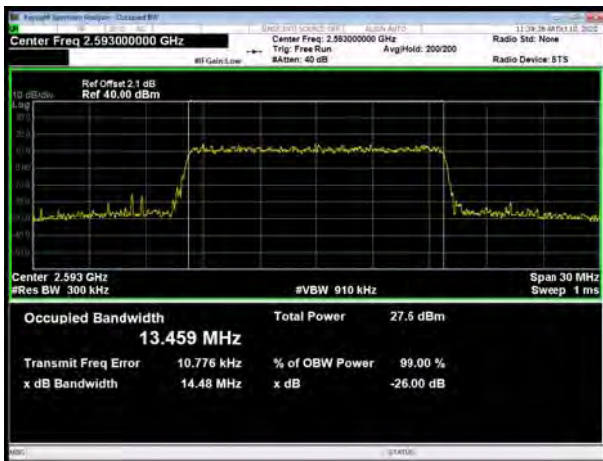
LTE Band 41 16QAM 15MHz CH-Low



LTE Band 41 16QAM 20MHz CH-Low



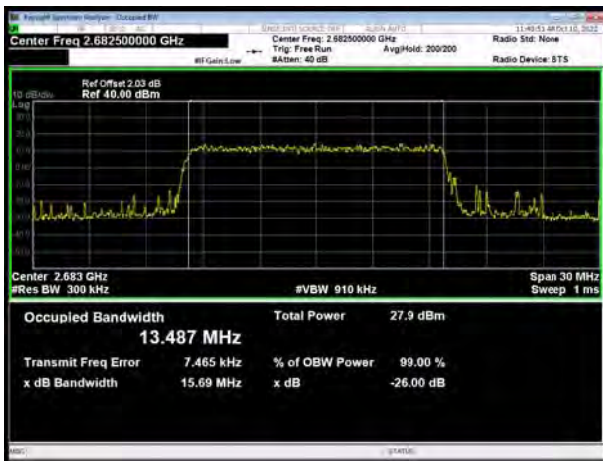
LTE Band 41 16QAM 15MHz CH-Middle



LTE Band 41 16QAM 20MHz CH-Middle



LTE Band 41 16QAM 15MHz CH-High

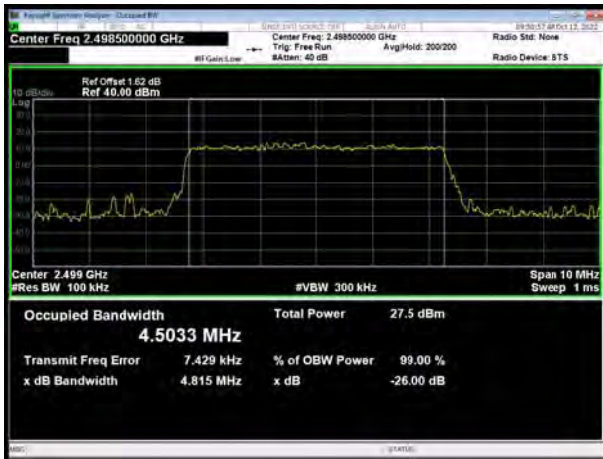


LTE Band 41 16QAM 20MHz CH-High

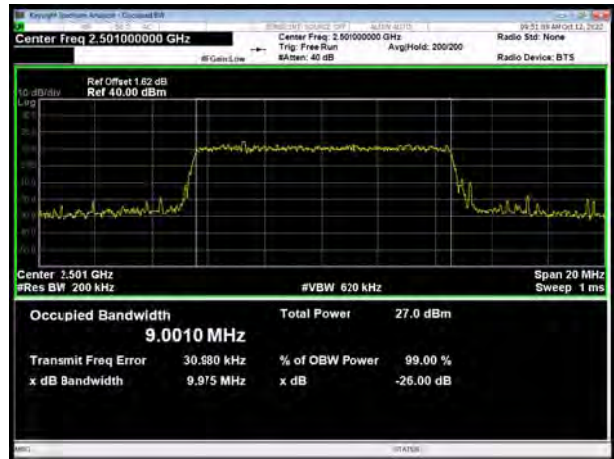




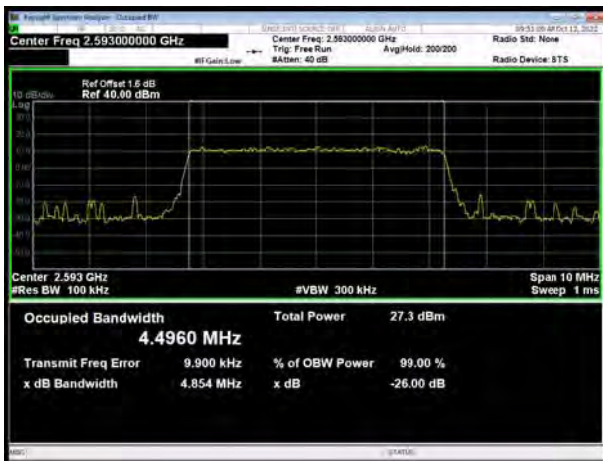
LTE Band 41 64QAM 5MHz CH-Low



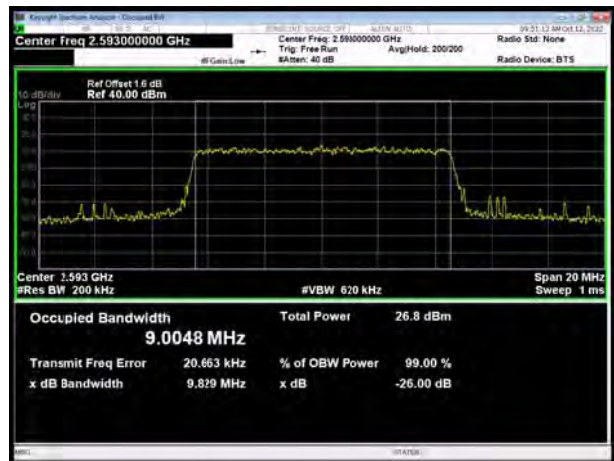
LTE Band 41 64QAM 10MHz CH-Low



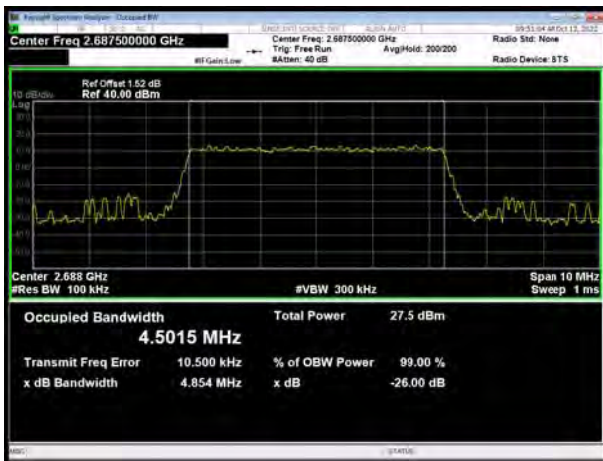
LTE Band 41 64QAM 5MHz CH-Middle



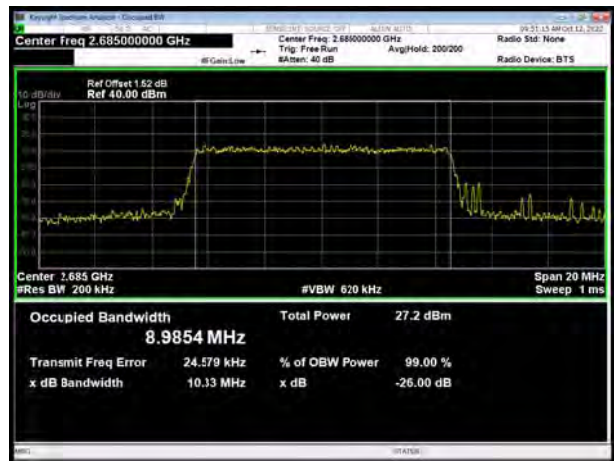
LTE Band 41 64QAM 10MHz CH-Middle



LTE Band 41 64QAM 5MHz CH-High

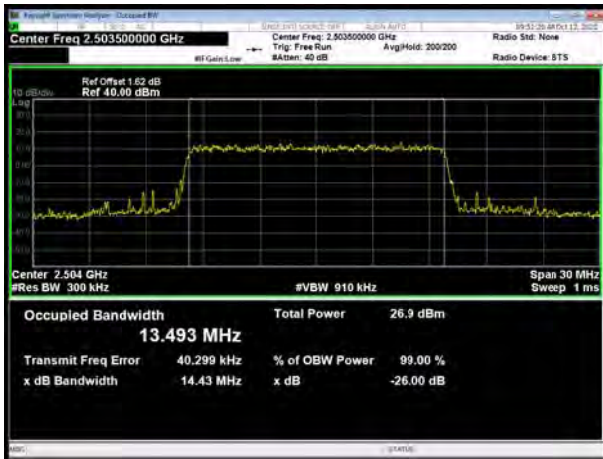


LTE Band 41 64QAM 10MHz CH-High

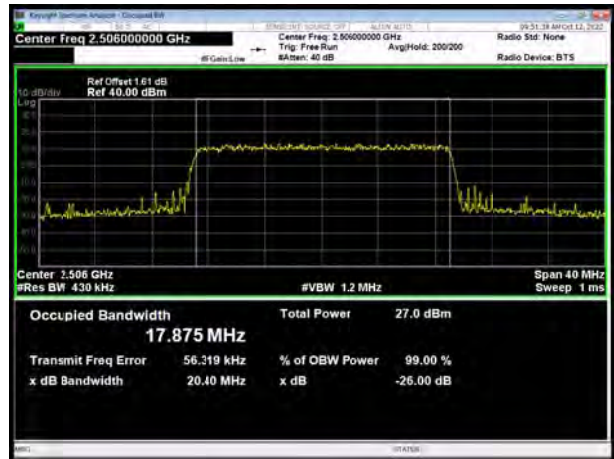




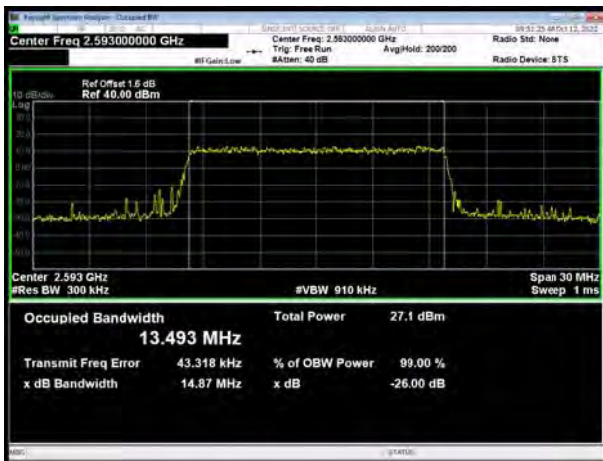
LTE Band 41 64QAM 15MHz CH-Low



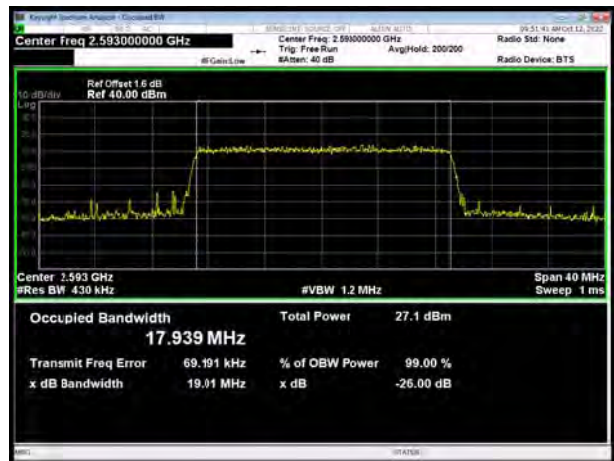
LTE Band 41 64QAM 20MHz CH-Low



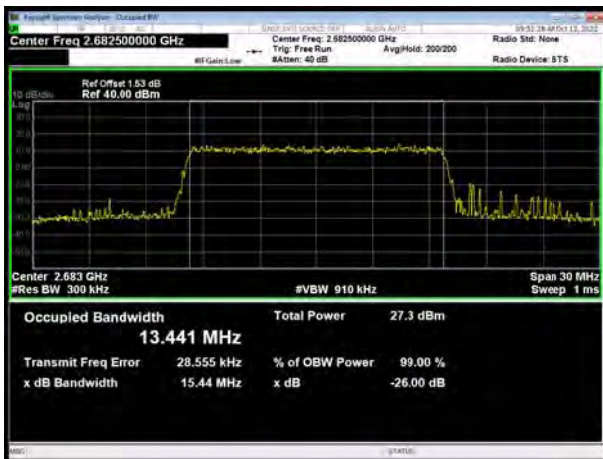
LTE Band 41 64QAM 15MHz CH-Middle



LTE Band 41 64QAM 20MHz CH-Middle



LTE Band 41 64QAM 15MHz CH-High

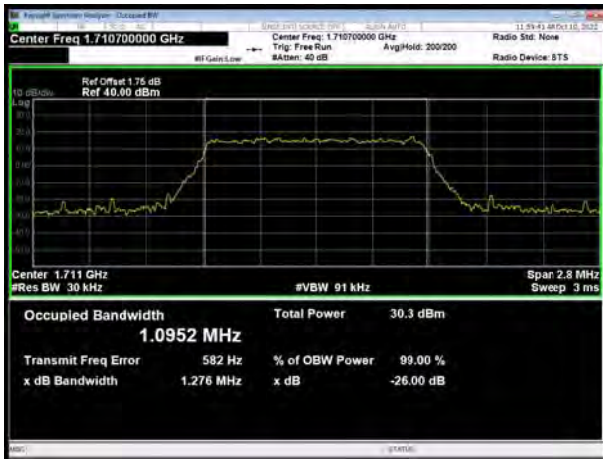


LTE Band 41 64QAM 20MHz CH-High

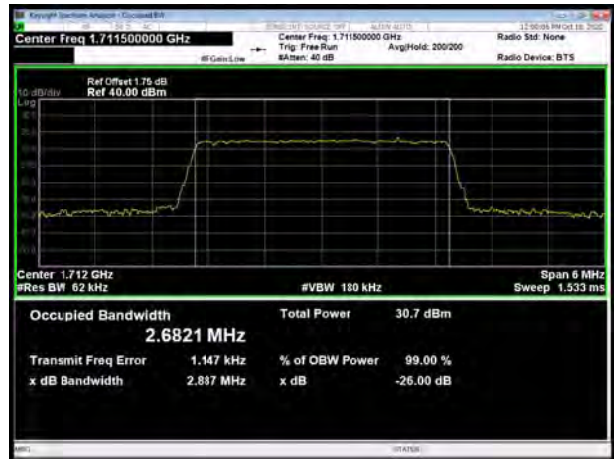




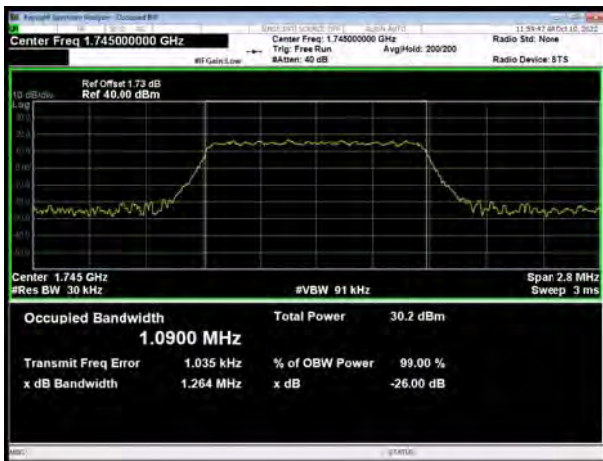
LTE Band 66 QPSK 1.4MHz CH-Low



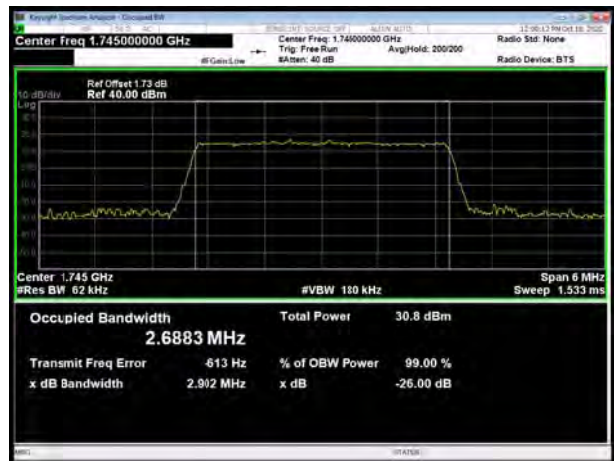
LTE Band 66 QPSK 3MHz CH-Low



LTE Band 66 QPSK 1.4MHz CH-Middle



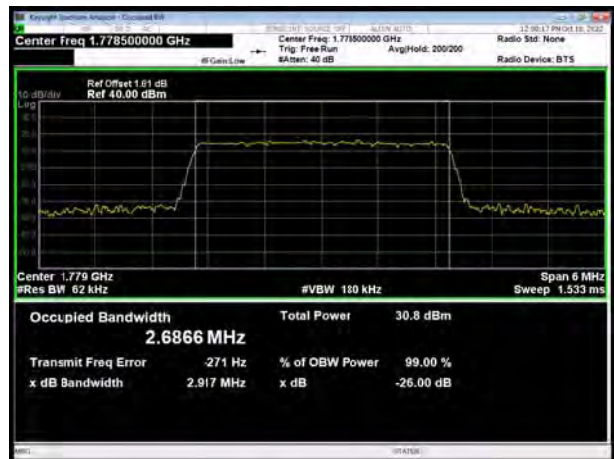
LTE Band 66 QPSK 3MHz CH-Middle



LTE Band 66 QPSK 1.4MHz CH-High

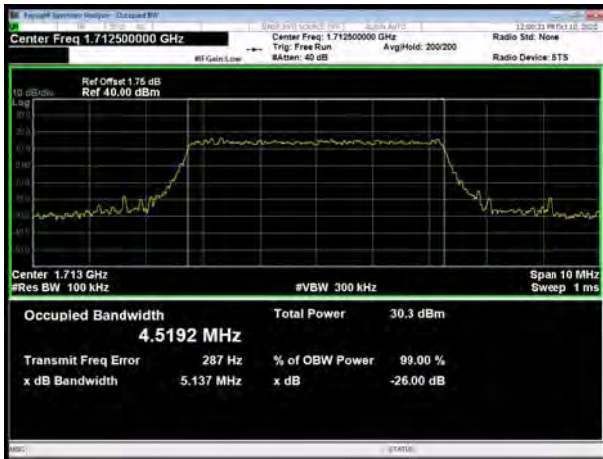


LTE Band 66 QPSK 3MHz CH-High

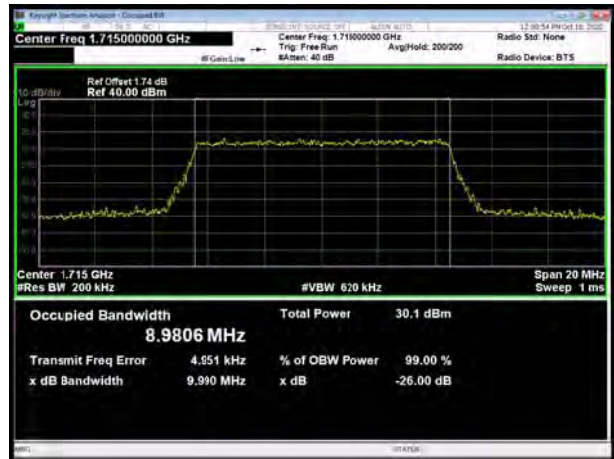




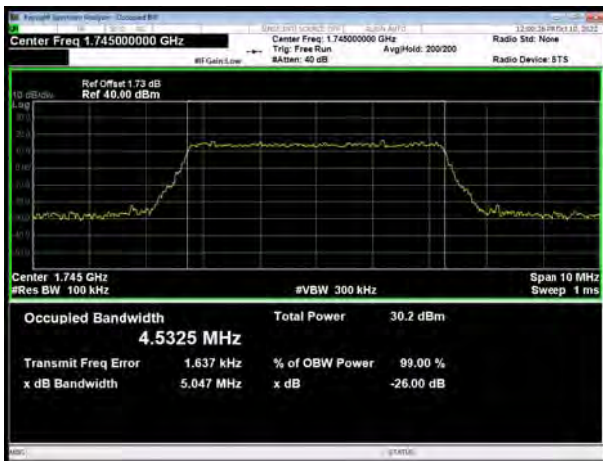
LTE Band 66 QPSK 5MHz CH-Low



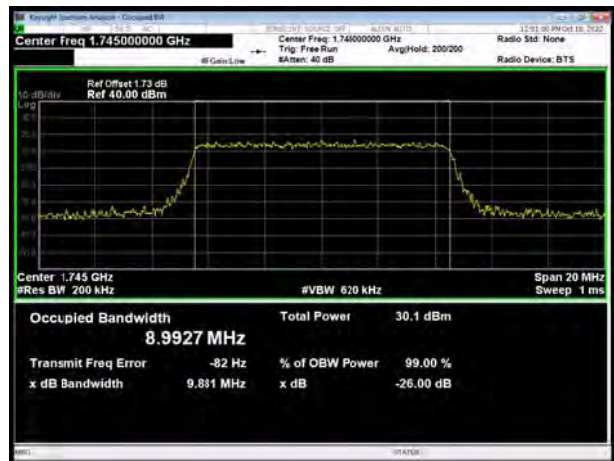
LTE Band 66 QPSK 10MHz CH-Low



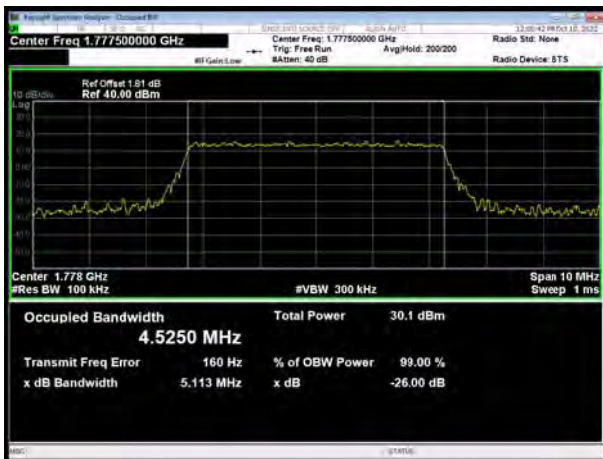
LTE Band 66 QPSK 5MHz CH-Middle



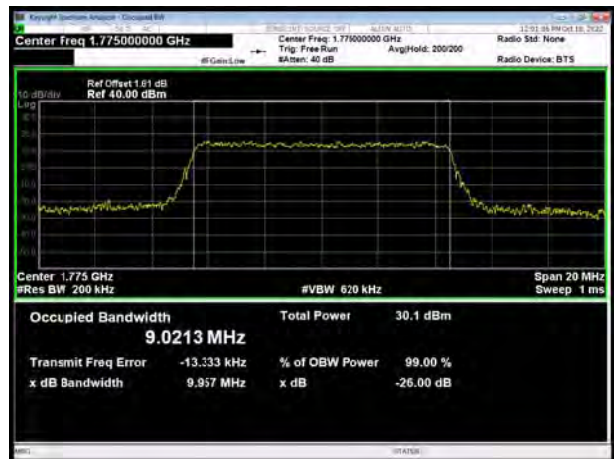
LTE Band 66 QPSK 10MHz CH-Middle



LTE Band 66 QPSK 5MHz CH-High

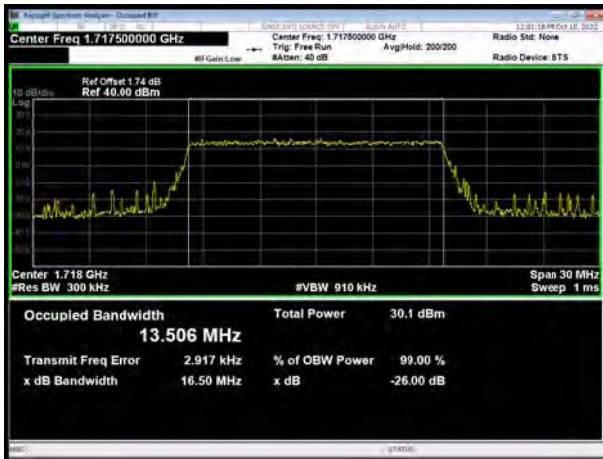


LTE Band 66 QPSK 10MHz CH-High

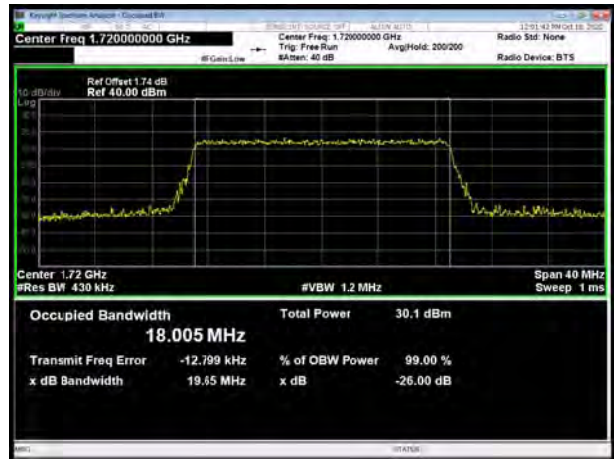




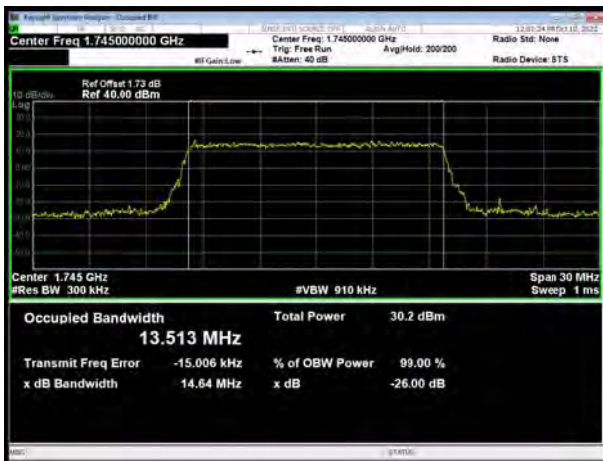
LTE Band 66 QPSK 15MHz CH-Low



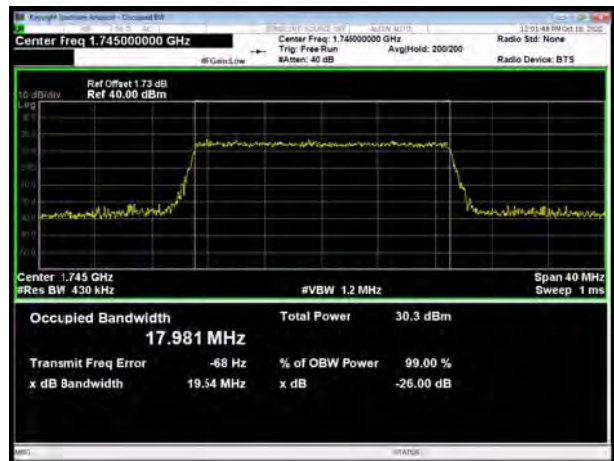
LTE Band 66 QPSK 20MHz CH-Low



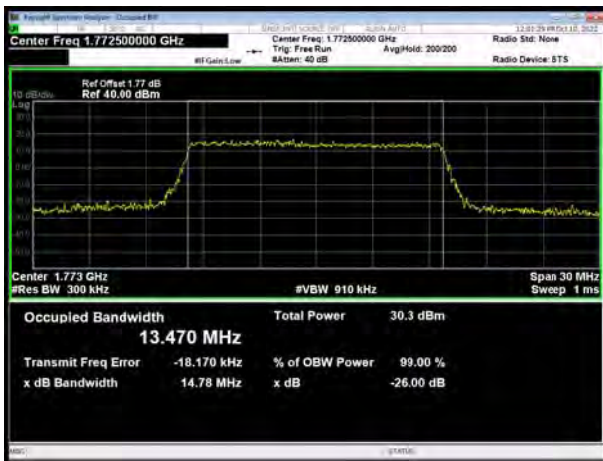
LTE Band 66 QPSK 15MHz CH-Middle



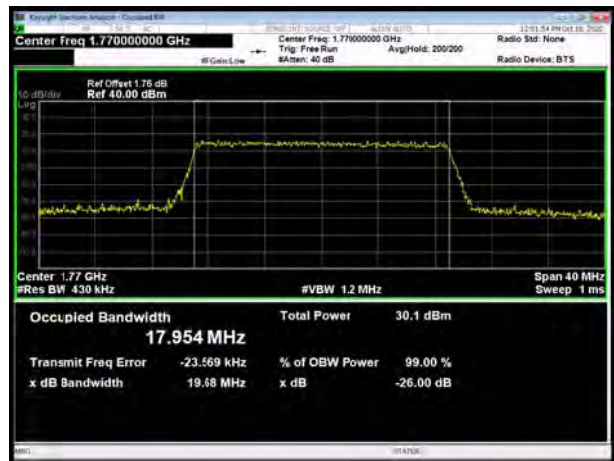
LTE Band 66 QPSK 20MHz CH-Middle



LTE Band 66 QPSK 15MHz CH-High

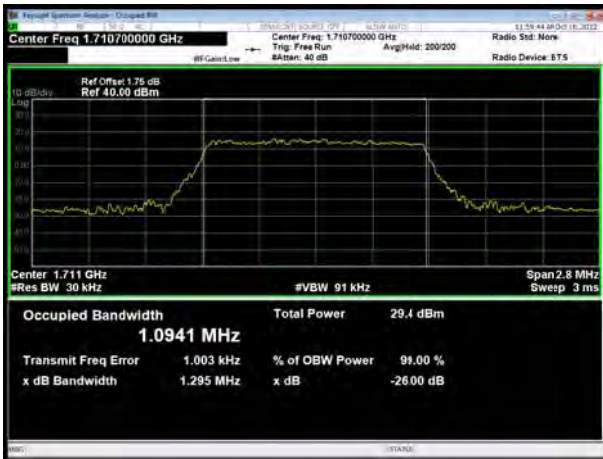


LTE Band 66 QPSK 20MHz CH-High

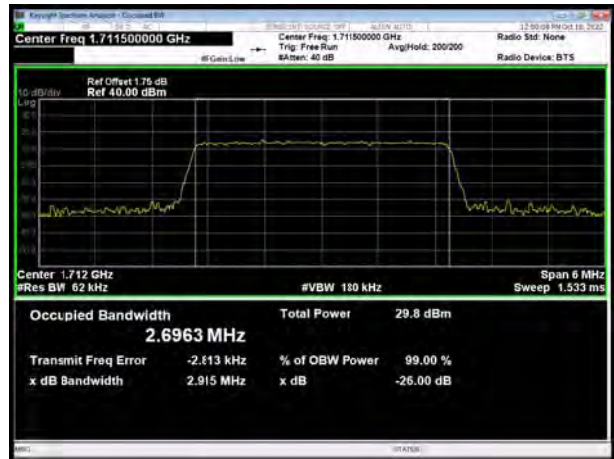




LTE Band 66 16QAM 1.4MHz CH-Low



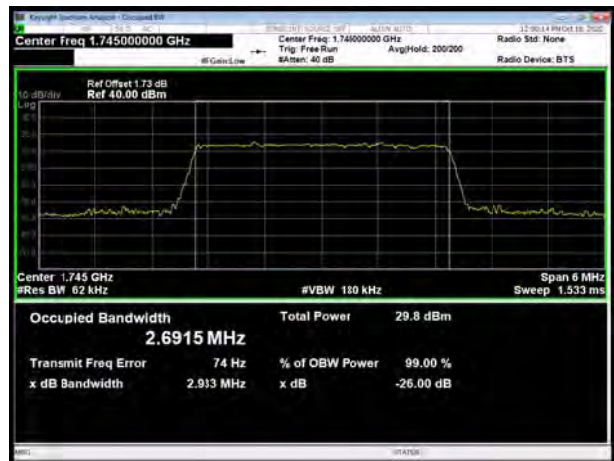
LTE Band 66 16QAM 3MHz CH-Low



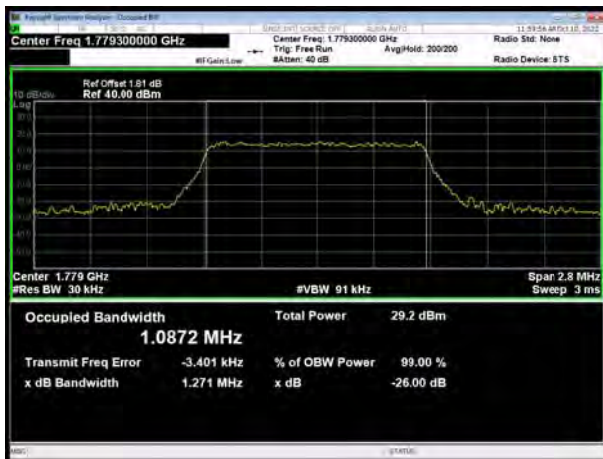
LTE Band 66 16QAM 1.4MHz CH-Middle



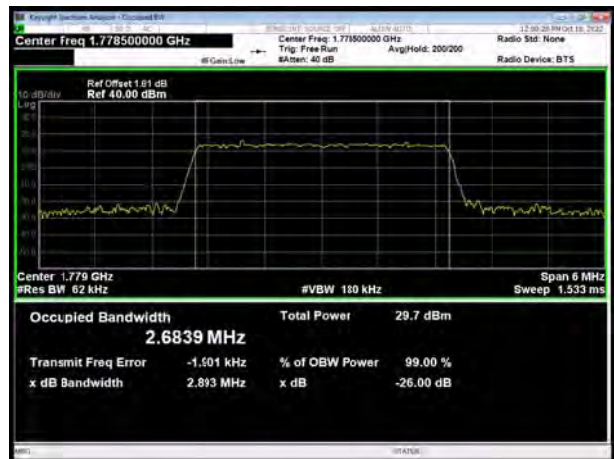
LTE Band 66 16QAM 3MHz CH-Middle



LTE Band 66 16QAM 1.4MHz CH-High

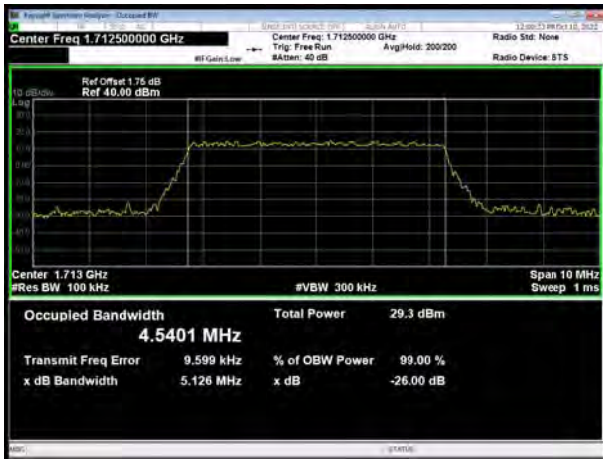


LTE Band 66 16QAM 3MHz CH-High

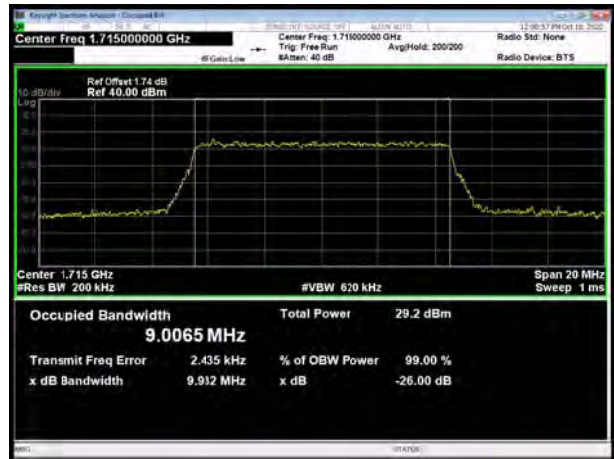




LTE Band 66 16QAM 5MHz CH-Low



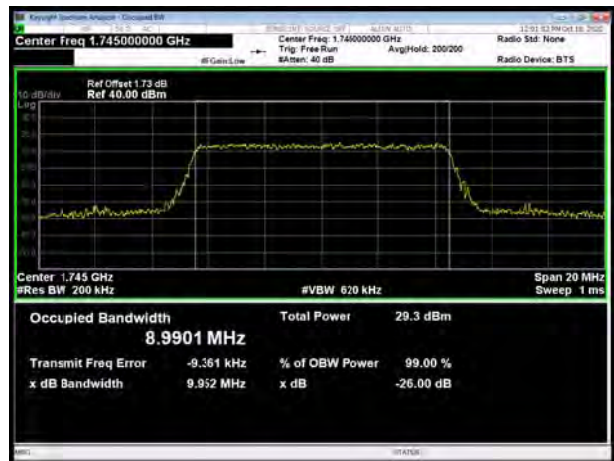
LTE Band 66 16QAM 10MHz CH-Low



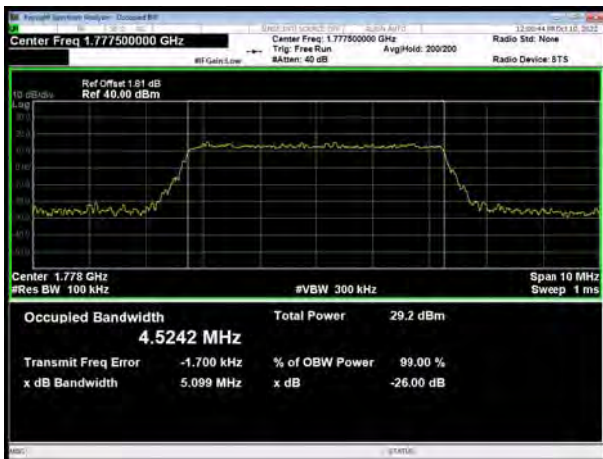
LTE Band 66 16QAM 5MHz CH-Middle



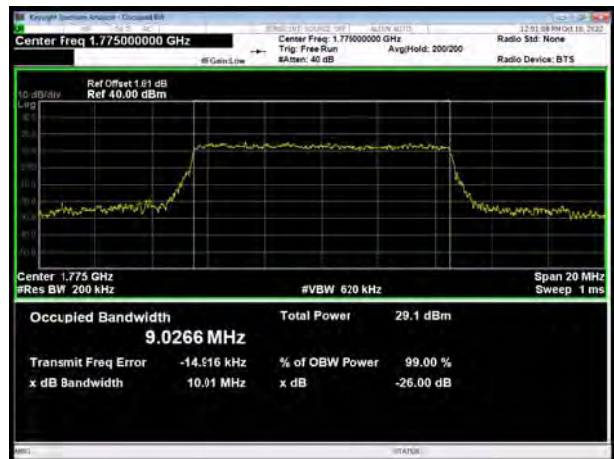
LTE Band 66 16QAM 10MHz CH-Middle



LTE Band 66 16QAM 5MHz CH-High

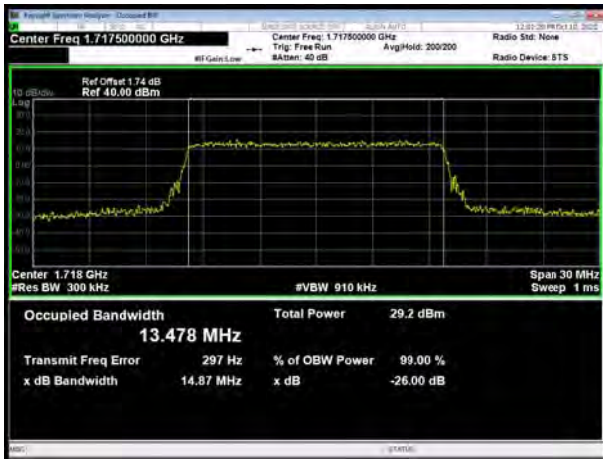


LTE Band 66 16QAM 10MHz CH-High

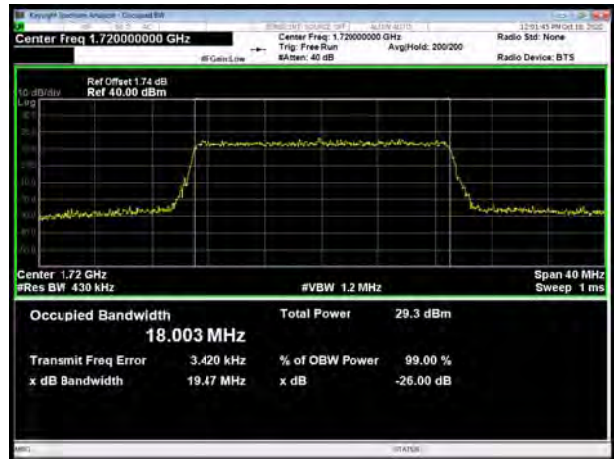




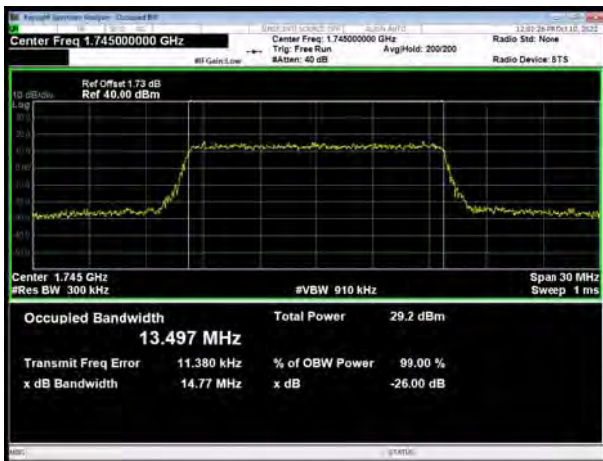
LTE Band 66 16QAM 15MHz CH-Low



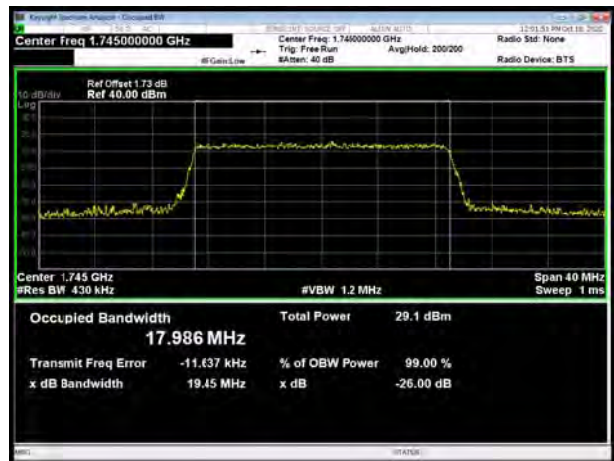
LTE Band 66 16QAM 20MHz CH-Low



LTE Band 66 16QAM 15MHz CH-Middle



LTE Band 66 16QAM 20MHz CH-Middle



LTE Band 66 16QAM 15MHz CH-High



LTE Band 66 16QAM 20MHz CH-High

