TEST REPORT

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1. Report No : DRTFCC2009-0282(1)
2. Customer
   - Name : LG Electronics USA, Inc.
   - Address : 111 Sylvan Avenue, North Building Englewood Cliffs, NJ 07632
3. Use of Report : FCC Original Grant
4. Product Name / Model Name : Mobile Phone / LM-F100EMW
   FCC ID : ZNFF100EMW
5. FCC Regulation(s): Part 2, 22, 24, 27
   Test Method Used : KDB971168 D01v03r01, ANSI/TIA-603-E-2016, ANSI C63.26-2015
6. Date of Test : 2020.08.13 ~ 2020.09.03
7. Location of Test : ☒ Permanent Testing Lab ☐ On Site Testing
8. Testing Environment : Refer to appended test report.
9. Test Result : Refer to the attached test result.

The results shown in this test report refer only to the sample(s) tested unless otherwise stated.

Affirmation	Tested by Name : JungWoo Kim (Signature)	Reviewed by Name : GeunKi Son (Signature)

2020 . 09 . 23 .

DT&C Co., Ltd.

Unconnected with KS Q ISO / IEC 17025 and KOLAS accreditation

If this report is required to confirmation of authenticity, please contact to report@dtnc.net

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Test Report Version

Test Report No.	Date	Description	Revised by	Reviewed by
DRTFCC2009-0282	Sep. 10, 2020	Initial issue	JungWoo Kim	GeunKi Son
DRTFCC2009-0282(1)	Sep. 23, 2020	Revised the section 5	JungWoo Kim	GeunKi Son

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1. GENERAL INFORMATION

Applicant Name : LG Electronics USA, Inc.

Address : 111 Sylvan Avenue, North Building Englewood Cliffs, NJ 07632

FCC ID : ZNFF100EMW

FCC Classification : PCS Licensed Transmitter held to ear (PCE)

EUT Type : Mobile Phone

Model Name : LM-F100EMW

Add Model Name : LMF100EMW, F100EMW, LM-F100EM, LMF100EM, F100EM

Supplying power : DC 3.87 V

Antenna Information : PIFA Antenna

Mode	TX Frequency (MHz)	Emission Designator	Modulation	ERP	
				Max power (dBm)	Max power (W)
LTE Band 12, 17	704.0 ~ 711.0	8M93G7D	QPSK	19.60	0.091
LTE Band 12, 17	704.0 ~ 711.0	8M91W7D	16QAM	18.04	0.064
LTE Band 12, 17	704.0 ~ 711.0	8M91W7D	64QAM	16.91	0.049
LTE Band 12, 17	701.5 ~ 713.5	4M47G7D	QPSK	19.41	0.087
LTE Band 12, 17	701.5 ~ 713.5	4M47W7D	16QAM	17.91	0.062
LTE Band 12, 17	701.5 ~ 713.5	4M48W7D	64QAM	16.89	0.049
LTE Band 12	700.5 ~ 714.5	2M68G7D	QPSK	19.26	0.084
LTE Band 12	700.5 ~ 714.5	2M68W7D	16QAM	17.73	0.059
LTE Band 12	700.5 ~ 714.5	2M69W7D	64QAM	16.54	0.045
LTE Band 12	699.7 ~ 715.3	1M08G7D	QPSK	19.36	0.086
LTE Band 12	699.7 ~ 715.3	1M08W7D	16QAM	17.71	0.059
LTE Band 12	699.7 ~ 715.3	1M08W7D	64QAM	16.66	0.046
LTE Band 13	782.0 ~ 782.0	8M92G7D	QPSK	20.62	0.115
LTE Band 13	782.0 ~ 782.0	8M91W7D	16QAM	19.00	0.079
LTE Band 13	782.0 ~ 782.0	8M94W7D	64QAM	18.17	0.066
LTE Band 13	779.5 ~ 784.5	4M48G7D	QPSK	20.59	0.115
LTE Band 13	779.5 ~ 784.5	4M48W7D	16QAM	19.06	0.081
LTE Band 13	779.5 ~ 784.5	4M48W7D	64QAM	17.94	0.062
LTE Band 5	829.0 ~ 844.0	8M93G7D	QPSK	21.35	0.136
LTE Band 5	829.0 ~ 844.0	8M90W7D	16QAM	19.60	0.091
LTE Band 5	829.0 ~ 844.0	8M94W7D	64QAM	18.36	0.069
LTE Band 5	826.5 ~ 846.5	4M47G7D	QPSK	20.84	0.121
LTE Band 5	826.5 ~ 846.5	4M46W7D	16QAM	19.48	0.089
LTE Band 5	826.5 ~ 846.5	4M47W7D	64QAM	18.56	0.072
LTE Band 5	825.5 ~ 847.5	2M68G7D	QPSK	20.93	0.124
LTE Band 5	825.5 ~ 847.5	2M69W7D	16QAM	19.32	0.086
LTE Band 5	825.5 ~ 847.5	2M68W7D	64QAM	18.16	0.065
LTE Band 5	824.7 ~ 848.3	1M08G7D	QPSK	20.79	0.120
LTE Band 5	824.7 ~ 848.3	1M08W7D	16QAM	19.38	0.087
LTE Band 5	824.7 ~ 848.3	1M08W7D	64QAM	18.12	0.065

Mode	TX Frequency (MHz)	Emission Designator	Modulation	EIRP	
				Max power(dBm)	Max power(W)
LTE Band 66, 4	1 720.0 ~ 1 770.0	17M8G7D	QPSK	24.13	0.259
LTE Band 66, 4	1 720.0 ~ 1 770.0	17M8W7D	16QAM	22.95	0.197
LTE Band 66, 4	1 720.0 ~ 1 770.0	17M9W7D	64QAM	22.01	0.159
LTE Band 66, 4	1 717.5 ~ 1 772.5	13M4G7D	QPSK	23.39	0.218
LTE Band 66, 4	1 717.5 ~ 1 772.5	13M4W7D	16QAM	22.60	0.182
LTE Band 66, 4	1 717.5 ~ 1 772.5	13M4W7D	64QAM	21.60	0.145
LTE Band 66, 4	1 715.0 ~ 1 775.0	8M94G7D	QPSK	23.47	0.222
LTE Band 66, 4	1 715.0 ~ 1 775.0	8M92W7D	16QAM	22.72	0.187
LTE Band 66, 4	1 715.0 ~ 1 775.0	8M94W7D	64QAM	21.68	0.147
LTE Band 66, 4	1 712.5 ~ 1 777.5	4M48G7D	QPSK	23.42	0.220
LTE Band 66, 4	1 712.5 ~ 1 777.5	4M47W7D	16QAM	22.60	0.182
LTE Band 66, 4	1 712.5 ~ 1 777.5	4M48W7D	64QAM	21.69	0.148
LTE Band 66, 4	1 711.5 ~ 1 778.5	2M69G7D	QPSK	23.33	0.215
LTE Band 66, 4	1 711.5 ~ 1 778.5	2M68W7D	16QAM	22.57	0.181
LTE Band 66, 4	1 711.5 ~ 1 778.5	2M69W7D	64QAM	21.77	0.150
LTE Band 66, 4	1 710.7 ~ 1 779.3	1M08G7D	QPSK	23.37	0.217
LTE Band 66, 4	1 710.7 ~ 1 779.3	1M08W7D	16QAM	22.64	0.184
LTE Band 66, 4	1 710.7 ~ 1 779.3	1M08W7D	64QAM	21.83	0.152
LTE Band 2	1 860.0 ~ 1 900.0	17M8G7D	QPSK	25.35	0.343
LTE Band 2	1 860.0 ~ 1 900.0	17M8W7D	16QAM	24.33	0.271
LTE Band 2	1 860.0 ~ 1 900.0	17M8W7D	64QAM	23.30	0.214
LTE Band 2	1 857.5 ~ 1 902.5	13M4G7D	QPSK	25.06	0.321
LTE Band 2	1 857.5 ~ 1 902.5	13M4W7D	16QAM	23.57	0.228
LTE Band 2	1 857.5 ~ 1 902.5	13M4W7D	64QAM	22.68	0.185
LTE Band 2	1 855.0 ~ 1 905.0	8M94G7D	QPSK	24.64	0.291
LTE Band 2	1 855.0 ~ 1 905.0	8M94W7D	16QAM	23.75	0.237
LTE Band 2	1 855.0 ~ 1 905.0	8M95W7D	64QAM	22.56	0.180
LTE Band 2	1 852.5 ~ 1 907.5	4M48G7D	QPSK	25.34	0.342
LTE Band 2	1 852.5 ~ 1 907.5	4M47W7D	16QAM	24.30	0.269
LTE Band 2	1 852.5 ~ 1 907.5	4M48W7D	64QAM	23.29	0.213
LTE Band 2	1 851.5 ~ 1 908.5	2M69G7D	QPSK	25.27	0.337
LTE Band 2	1 851.5 ~ 1 908.5	2M68W7D	16QAM	24.42	0.277
LTE Band 2	1 851.5 ~ 1 908.5	2M68W7D	64QAM	23.46	0.222
LTE Band 2	1 850.7 ~ 1 909.3	1M08G7D	QPSK	24.96	0.313
LTE Band 2	1 850.7 ~ 1 909.3	1M08W7D	16QAM	24.15	0.260
LTE Band 2	1 850.7 ~ 1 909.3	1M08W7D	64QAM	23.26	0.212
LTE Band 41	2 506.0 ~ 2 680.0	17M8G7D	QPSK	24.00	0.251
LTE Band 41	2 506.0 ~ 2 680.0	17M6W7D	16QAM	22.86	0.193
LTE Band 41	2 506.0 ~ 2 680.0	17M8W7D	64QAM	22.09	0.162
LTE Band 41	2 503.5 ~ 2 682.5	13M2G7D	QPSK	23.88	0.244
LTE Band 41	2 503.5 ~ 2 682.5	13M3W7D	16QAM	22.86	0.193
LTE Band 41	2 503.5 ~ 2 682.5	13M3W7D	64QAM	21.64	0.146
LTE Band 41	2 501.0 ~ 2 685.0	8M95G7D	QPSK	23.86	0.243
LTE Band 41	2 501.0 ~ 2 685.0	8M91W7D	16QAM	22.74	0.188
LTE Band 41	2 501.0 ~ 2 685.0	8M85W7D	64QAM	21.65	0.146
LTE Band 41	2 498.5 ~ 2 687.5	4M43G7D	QPSK	23.82	0.241
LTE Band 41	2 498.5 ~ 2 687.5	4M48W7D	16QAM	22.66	0.185
LTE Band 41	2 498.5 ~ 2 687.5	4M45W7D	64QAM	21.77	0.150

2. INTRODUCTION

2.1 EUT DESCRIPTION

This EUT contains the following capabilities:
GSM/EDGE 850/1900, WCDMA/HSUPA 850/1900, Multi-band LTE, 802.11b/g/n/ac WLAN(2.4 GHz)
802.11a/n/ac WLAN(5 GHz), Bluetooth(BDR, EDR, LE),NFC,WCP, SWIVEL.

2.2 TESTING ENVIRONMENT

Ambient Condition	
▪ Temperature	+21 ℃ ~ +26 ℃
▪ Relative Humidity	37 % ~ 46 %

2.3 MEASURING INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

2.4 MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with requirements of ANSI C 63.4-2014. All measurement uncertainty values are shown with a coverage factor of *k* = 2 to indicate a 95 % level of confidence.

Parameter	Measurement uncertainty
Radiated Disturbance (Below 1 GHz)	4.9 dB (The confidence level is about 95 %, k = 2)
Radiated Disturbance (1 GHz ~ 18 GHz)	5.1 dB (The confidence level is about 95 %, k = 2)
Radiated Disturbance (Above 18 GHz)	5.3 dB (The confidence level is about 95 %, k = 2)

2.5 TEST FACILITY

DT&C Co., Ltd.

The 3 m test site and conducted measurement facility used to collect the radiated data are located at the 42, Yurim-ro, 154beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea 17042.
The test site comply with the requirements of § 2.948 according to ANSI 63.4-2014.

- FCC & IC MRA Accredited Test Firm No. : KR0034

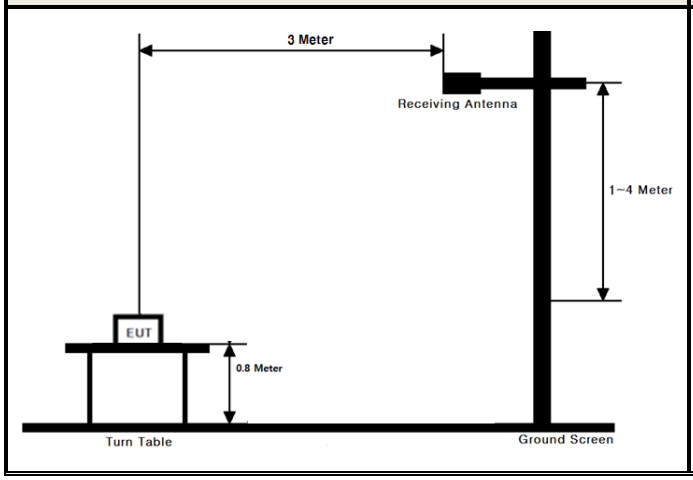
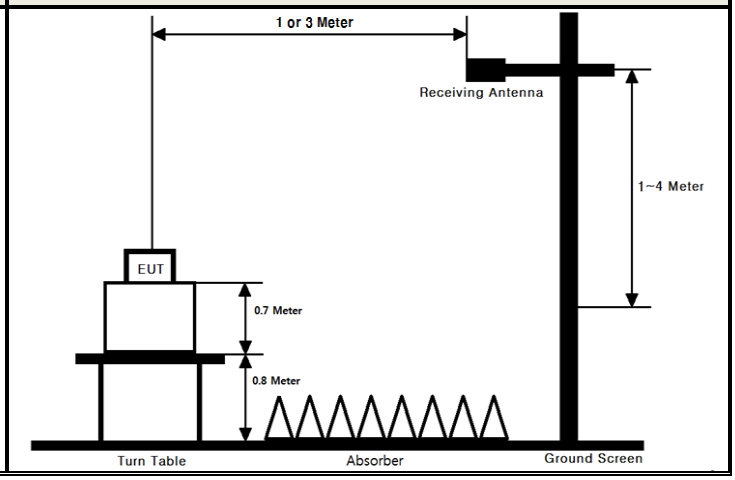
- ISED #: 5740A

www.dtnc.net		
Telephone	:	+ 82-31-321-2664
FAX	:	+ 82-31-321-1664

3. DESCRIPTION OF TESTS

3.1 ERP & EIRP (Effective Radiated Power & Equivalent Isotropic Radiated Power)

Test Set-up

Below 1 GHz	Above 1 GHz
	

These measurements were performed at 3 m test site. The equipment under test is placed on a non-conductive table 0.8 m or 1.5 m above a turntable which is flush with the ground plane and 3 meters from the receive antenna. For measurements above 1 GHz absorbers are placed on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections. For measurements below 1 GHz, the absorbers are removed.

Test Procedure

- **ANSI/TIA-603-E-2016 - Section 2.2.17**
- **KDB971168 D01v03 - Section 5.2.2**
- **ANSI C63.26-2015 – Section 5.2.4.4.1**

<u>Test setting</u>

1. Set span to 2 x to 3 x the OBW.
2. Set RBW = 1 % to 5 % of the OBW.
3. Set VBW ≥ 3 x RBW.
4. Set number of points in sweep ≥ 2 × span / RBW.
5. Sweep time:
   1) Set = auto-couple, or
   2) Set ≥ [10 × (number of points in sweep) × (transmission period)] for single sweep (automation-compatible) measurement. Transmission period is the on and off time of the transmitter.
6. Detector = power averaging (rms).
7. If the EUT can be configured to transmit continuously, then set the trigger to free run.
8. If the EUT cannot be configured to transmit continuously, then use a sweep trigger with the level set to enable triggering only on full power bursts and configure the EUT to transmit at full power for the entire duration of each sweep. Verify that the sweep time is less than or equal to the transmission burst duration. Time gating can also be used under similar constraints (i.e., configured such that measurement data is collected only during active full-power transmissions).
9. Trace average at least 100 traces in power averaging (rms) mode if sweep is set to auto-couple. To accurately determine the average power over multiple symbols, it can be necessary to increase the number of traces to be averaged above 100 or, if using a manually configured sweep time, increase the sweep time.

10. Compute the power by integrating the spectrum across the OBW of the signal using the instrument's band or channel power measurement function, with the band/channel limits set equal to the OBW band edges. If the instrument does not have a band or channel power function, then sum the spectrum levels (in linear power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.

The receiver antenna height and turntable rotations were adjusted for the highest reading on the receive spectrum analyzer.

A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same receive spectrum analyzer reading. The conducted power at the terminal of the substitute antenna is measured.

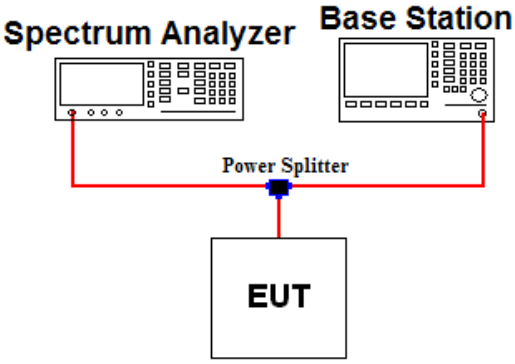
The ERP / EIRP is calculated using the following formula:

ERP / EIRP = The conducted power at the substitute antenna`s terminal [dBm] + Substitute Antenna gain [dBd for ERP , dBi for EIRP]

For readings above 1 GHz, the above procedure is repeated using horn antennas and the difference
Between the gain of the horn antenna and an isotropic antenna are taken into consideration.

3.2 PEAK TO AVERAGE RATIO

Test set-up



Test Procedure

- **KDB971168 D01v03 - Section 5.7.2**
- **ANSI C63.26-2015 – Section 5.2.3.4**

A peak to average ratio measurement is performed at the conducted port of the EUT.
The spectrum analyzers Complementary Cumulative Distribution Function (CCDF) measurement profile is used to determine the largest deviation between the average and the peak power of the EUT in a given bandwidth. The CCDF curve shows how much time the peak waveform spends at or above a given average power level. The present of time the signal spends at or above the level defines the probability for that particular power level.

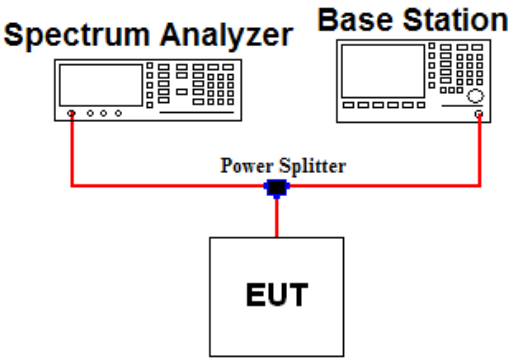
Test setting

The spectrum Analyzer`s CCDF measurement function is enabled.

1. Set resolution/measurement bandwidth ≥ OBW or specified reference bandwidth.
2. Set the number of counts to a value that stabilizes the measured CCDF curve.
3. Set the measurement interval as follows:
   1) For continuous transmissions, set to the greater of [10 × (number of points in sweep) × (transmission symbol period)] or 1 ms.
   2) For burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize. Set the measurement interval to a time that is less than or equal to the burst duration.
   3) If there are several carriers in a single antenna port, the peak power shall be determined for each individual carrier (by disabling the other carriers while measuring the required carrier) and the total peak power calculated from the sum of the individual carrier peak powers.
4. Record the maximum PAPR level associated with a probability of 0.1 %.
5. The peak power level is calculated form the sum of the PAPR value from step d) to the measured average power.

3.3 OCCUPIED BANDWIDTH.

Test set-up



Test Procedure

- **KDB971168 D01v03 - Section 4.3**
- **ANSI C63.26-2015 – Section 5.4.4**

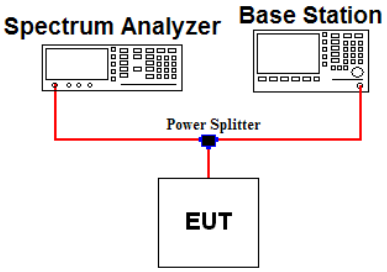
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power of a given emission.

Test setting

1. The signal analyzer`s automatic bandwidth measurement capability was used to perform the 99 % occupied bandwidth and the 26 dB bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. RBW = 1 % ~ 5 % of the expected OBW & VBW ≥ 3 X RBW
3. Detector = Peak
4. Trance mode = Max hold
5. Sweep = Auto couple
6. The trace was allowed to stabilize
7. If necessary, step 2 ~ 6 were repeated after changing the RBW such that it would be within 1 % ~ 5 % of the 99 % occupied bandwidth observed in step 6.

3.4 BAND EDGE EMISSIONS AT ANTENNA TERMINAL

Test set-up



Test Procedure

- **KDB971168 D01v03 - Section 6**
- **ANSI C63.26-2015 – Section 5.7**

All out of band emissions are measured by means of a calibrated spectrum analyzer. The EUT was setup to maximum output power at its lowest and highest channel with all bandwidths, modulations and RB configurations.

The power of any spurious emission shall be attenuated below the transmitter power (P) by at least 43 + 10 log(P) dB.

Test setting

1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. RBW ≥ 1 % of the emission bandwidth
4. VBW ≥ 3 X RBW
5. Detector = RMS & Trace mode = Max hold
6. Sweep time = Auto couple or 1 s for band edge
7. Number of sweep point ≥ 2 X span / RBW
8. The trace was allowed to stabilize

Note 1: Per Part 22.917(b)(1) / 24.238(b) / 27.53(h) in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to demonstrate compliance with the out-of-band emissions limit.
The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.

Note 2: Per Part 27(g) for operations in the 600 MHz band and the 698 MHz - 746 MHz band, compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

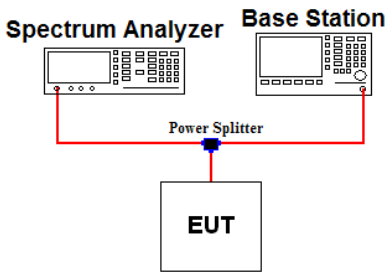
Note 3: For part 27.53(m)(4) the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2 490.5 MHz and 2 496 MHz and 55 + 10 log (P) dB at or below 2 490.5 MHz.

Note 4: Per part 27.53(m)(6) in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed, except when the 1 MHz band is 2 495 MHz – 2 496 MHz, in which case a resolution bandwidth of at least one percent may be employed.

Note 5: Per Part 27.53(c.4) for all frequencies between 763 MHz - 775 MHz and 793 MHz - 805 MHz, the FCC limit is 65 + 10log10(P[Watts])= 35 dBm in a 6.25 kHz bandwidth.

3.5 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL

Test set-up



Test Procedure

- **KDB971168 D01v03 - Section 6**
- **ANSI C63.26-2015 – Section 5.7**

The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The EUT was setup to maximum output power at its low, middle, high channel with all bandwidths, modulations and RB configurations. The spectrum is scanned from 9 kHz up to a frequency including its 10th harmonic.

The power of any spurious emission shall be attenuated below the transmitter power (P) by at least 43 + 10 log(P) dB.

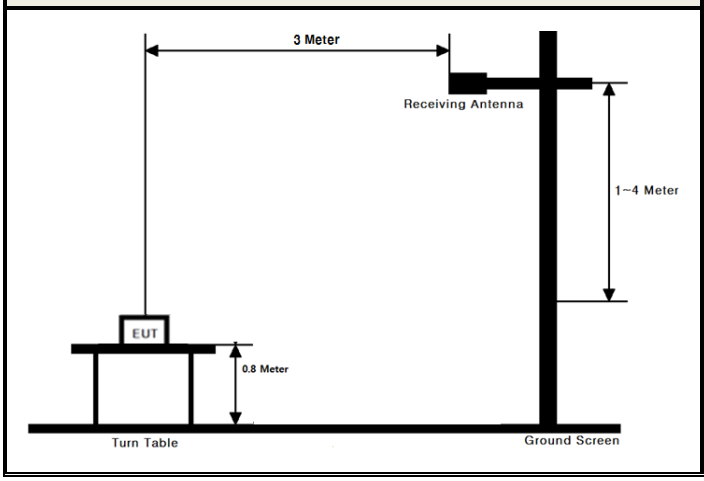
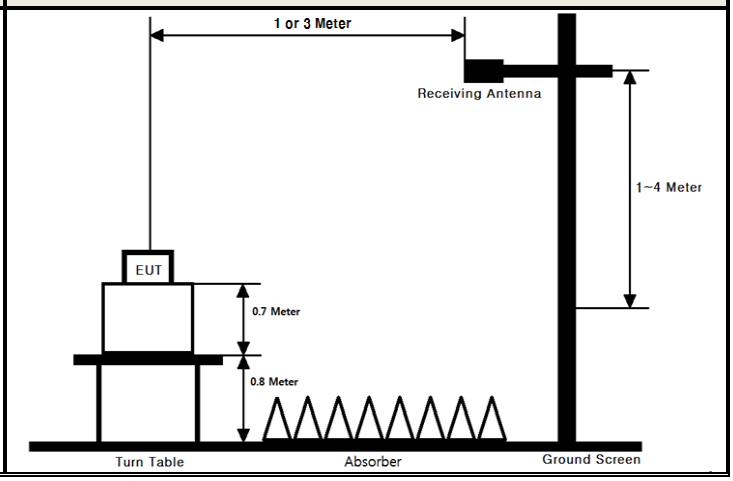
Test setting

1. RBW = 100 kHz (Below 1 GHz) or 1 MHz(Above 1 GHz) & VBW ≥ 3 X RBW (Refer to Note 1)
2. Detector = RMS & Trace mode = Max hold
3. Sweep time = Auto couple
4. Number of sweep point ≥ 2 X span / RBW
5. The trace was allowed to stabilize

Note 1: Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater for frequencies less than 1 GHz and 1 MHz or greater for frequencies greater than 1 GHz.

3.6 UNDESIRABLE EMISSIONS

Test Set-up

Below 1 GHz	Above 1 GHz
	

These measurements were performed at 3 test site. The equipment under test is placed on a non-conductive table 0.8 m or 1.5 m above a turntable which is flush with the ground plane and 3 meters from the receive antenna. For measurements above 1 GHz absorbers are placed on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections. For measurements below 1 GHz, the absorbers are removed.

Test Procedure

- **ANSI/TIA-603-E-2016 - Section 2.2.12**
- **KDB971168 D01v03 - Section 5.8**
- **ANSI C63.26-2015 – Section 5.5**

<u>Test setting</u>

1. RBW = 100 kHz for below 1 GHz and 1 MHz for above 1 GHz / VBW ≥ 3 X RBW
2. Detector = RMS & Trace mode = Max hold
3. Sweep time = Auto couple
4. Number of sweep point ≥ 2 X span / RBW
5. The trace was allowed to stabilize

The receive antenna height and turntable rotations were adjusted for the highest reading on the receive spectrum analyzer.

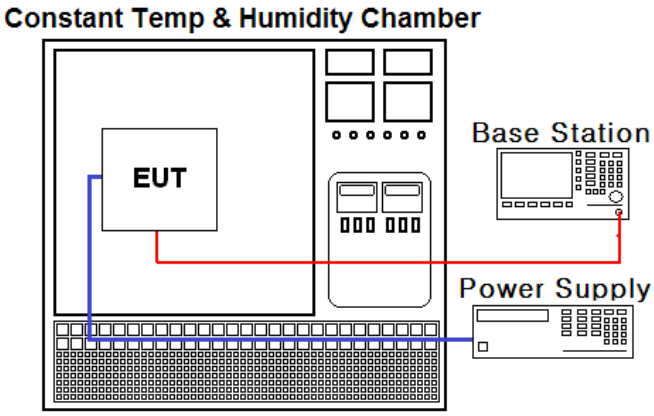
For radiated power measurements below 1 GHz, a half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading.

For radiated power measurements above 1 GHz, a Horn antenna was substituted in place of the EUT. This Horn antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. The difference between the gain of the horn and an isotropic antenna are taken into consideration.

This measurement was performed with the EUT oriented in 3 orthogonal axis.

3.7 FREQUENCY STABILITY

Test Set-up



Test Procedure

- **ANSI/TIA-603-E-2016**
- **KDB971168 D01v03 - Section 9**

The frequency stability of the transmitter is measured by:

a.) **Temperature:**
The temperature is varied from -30 °C to +50 °C using an environmental chamber.

b.) **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.

Specification:

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block for Part 24, 27. The frequency stability of the transmitter shall be maintained within ±0.000 25 % (± 2.5 ppm) of the center frequency for Part 22.

Time Period and Procedure:

1. The carrier frequency of the transmitter is measured at room temperature.
(20 °C to provide a reference)

2. The equipment is turned on in a “standby” condition for one minute before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.

3. Frequency measurements are made at 10 °C intervals ranging from -30 °C to +50 °C.
A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

4. LIST OF TEST EQUIPMENT

Type	Manufacturer	Model	Cal.Date (yy/mm/dd)	Next.Cal. Date (yy/mm/dd)	S/N
Spectrum Analyzer	Agilent Technologies	N9020A	20/06/24	21/06/24	US47360812
Spectrum Analyzer	Agilent Technologies	N9020A	19/12/16	20/12/16	MY48011700
Spectrum Analyzer	Agilent Technologies	N9020A	19/12/16	20/12/16	MY50410357
Spectrum Analyzer	Agilent Technologies	N9030A	19/12/16	20/12/16	MY53310140
DC Power Supply	Agilent Technologies	66332A	20/06/24	21/06/24	US37473422
Power Divider	Weinschel	WA1574	20/06/24	21/06/24	WA1574-4
Multimeter	FLUKE	17B+	19/12/16	20/12/16	36390701WS
Temp & Humi	SJ Science	SJ-TH-S50	20/06/23	21/06/23	U5542113
Radio Communication Analyzer	Anritus	MT8820C	19/12/16	20/12/16	6201274516
Thermohygrometer	BODYCOM	BJ5478	19/12/18	20/12/18	120612-2
Thermohygrometer	BODYCOM	BJ5478	19/12/18	20/12/18	120612-1
Signal Generator	Rohde Schwarz	SMBV100A	19/12/16	20/12/16	255571
Signal Generator	ANRITSU	MG3695C	19/12/16	20/12/16	173501
Loop Antenna	ETS-Lindgren	6502	19/09/18	21/09/18	00226186
Bilog Antenna	Schwarzbeck	VULB 9160	19/04/23	21/04/23	9160-3362
Dipole Antenna	A.H.Systems Inc.	FCC-4	19/03/26	21/03/26	710A
Dipole Antenna	Schwarzbeck	UHA9105	20/04/10	22/04/10	2262
HORN ANT	ETS	3117	20/04/24	21/04/24	00140394
HORN ANT	ETS	3117	20/03/26	21/03/26	00152145
HORN ANT	A.H.Systems	SAS-574	20/06/24	21/06/24	154
HORN ANT	A.H.Systems	SAS-574	20/06/24	21/06/24	155
Amplifier	EMPOWER	BBS3Q7ELU	20/06/24	21/06/24	1020
PreAmplifier	H.P	8447D	19/12/16	20/12/16	2944A07774
PreAmplifier	RFBAY.Inc	MPA-40-40	19/12/16	20/12/16	21151801
PreAmplifier	Agilent	8449B	20/06/24	21/06/24	3008A02108
PreAmplifier	A.H.Systems Inc.	PAM-1840VH	20/06/24	21/06/24	163
PreAmplifier	tsj	MLA-1840-J02-45	20/06/24	21/06/24	16966-10728
High-pass filter	Wainwright	WHKX12-935-1000-15000-40SS	20/06/24	21/06/24	7
High-pass filter	Wainwright	WHKX10-2838-3300-18000-60SS	20/06/24	21/06/24	2
Cable	DTNC	Cable	20/01/16	21/01/16	M-01
Cable	DTNC	Cable	20/01/16	21/01/16	M-02
Cable	Junkosha	MWX315	20/01/16	21/01/16	M-05
Cable	Junkosha	MWX221	20/01/16	21/01/16	M-06
Cable	DTNC	Cable	20/01/16	21/01/16	RF-09

Note1: The measurement antennas were calibrated in accordance to the requirements of ANSI C63.5-2017.
Note2: The cable is not a regular calibration item, so it has been calibrated by DT & C itself.

5. SUMMARY OF TEST RESULTS

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Status Note 1
2.1046	Conducted Output Power	N/A	Conducted	C Note2
2.1049	Occupied Bandwidth	N/A		C
24.232(d) 27.50(d.5)	Peak to Average Ratio	< 13 dB		C
2.1051 22.917(a) 24.238(a) 27.53(c.2) 27.53(c.4) 27.53(g) 27.53(h)	Band Edge / Conducted Spurious Emissions	> 43 + 10log$_{10}$(P) dB at Band edge and for all out-of-band emissions > 65 + 10 log (P) dB in a 6.25 kHz band segment frequencies between 763-775 MHz and 793-805 MHz (Band 13)		C
27.53(m)	Band Edge / Conducted Spurious Emissions	> 40 + 10log10 (P) dB at channel edge and 5 MHz from the channel edge > 43 + 10log10 (P) dB at 5 MHz and X MHz from the channel edge > 55 + 10log10 (P) dB at all frequencies more than X MHz from the channel edge		C
2.1055 22.355 24.235 27.54	Frequency Stability	< 2.5 ppm (Part 22) Fundamental emissions must stay within Authorized frequency block (Part 24, 27)		C
27.50(b.10) 27.50(c.10)	Radiated Output Power (B12, 13, 17)	< 3 Watts max. ERP	Radiated	C
22.913(a.5)	Radiated Output Power (B5)	< 7 Watts max. ERP		C
27.50(d.4)	Radiated Output Power (B66, 4)	< 1 Watts max. EIRP		C
24.232(c)	Radiated Output Power(B2)	< 2 Watts max. EIRP		C
27.50(h.2)	Radiated Output Power (B41)	< 2 Watts max. EIRP		C
2.1053 22.917(a) 24.238(a) 27.53(c.2) 27.53(g) 27.53(h)	Undesirable Emissions	> 43 + 10log$_{10}$(P) dB for all out-of-band emissions		C
27.53(m)	Undesirable Emissions(B41)	> 55 + 10log$_{10}$(P) dB for all out-of-band emissions		C
27.53(f)	Undesirable Emissions in 1 559 MHz ~ 1 610 MHz	< -70 dBW/MHz (for wideband signals) < -80 dBW (for discrete emissions of less than 700 Hz bandwidth)		C

Note 1: **C**=Comply **NC**=Not Comply **NT**=Not Tested **NA**=Not Applicable
Note 2: Refer to RF Exposure Report (Test Report SAR)
Note 3: This test item was performed in each axis and the worst case data was reported.
Note 4: This device supports wireless charging & Can use swivel mode.
So per KDB648474 D03v01r0, the radiated test items were performed all not charging, charging and swivel mode, the handset is placed on the representative charging pad under normal conditions of charging and in a simulated call configuration.

6. SAMPLE CALCULATION

A. Emission Designator

LTE Band 12, 17(QPSK)

Emission Designator = **8M93G7D**
LTE OBW = 8.929 MHz
G = Phase Modulation
7 = Quantized/Digital Info
D = Data Transmission

LTE Band 12, 17(16QAM)

Emission Designator = **8M91W7D**
LTE OBW = 8.910 MHz
W = Amplitude/Angle Modulated
7 = Quantized/Digital Info
D = Data Transmission

LTE Band 12, 17(64QAM)

Emission Designator = **8M91W7D**
LTE OBW = 8.913 MHz
W = Amplitude/Angle Modulated
7 = Quantized/Digital Info
D = Data Transmission

LTE Band 13(QPSK)

Emission Designator = **8M92G7D**
LTE OBW = 8.924 MHz
G = Phase Modulation
7 = Quantized/Digital Info
D = Data Transmission

LTE Band 13(16QAM)

Emission Designator = **8M91W7D**
LTE OBW = 8.909 MHz
W = Amplitude/Angle Modulated
7 = Quantized/Digital Info
D = Data Transmission

LTE Band 13(64QAM)

Emission Designator = **8M94W7D**
LTE OBW = 8.937 MHz
W = Amplitude/Angle Modulated
7 = Quantized/Digital Info
D = Data Transmission

LTE Band 5(QPSK)

Emission Designator = **8M93G7D**
LTE OBW = 8.927 MHz
G = Phase Modulation
7 = Quantized/Digital Info
D = Data Transmission

LTE Band 5(16QAM)

Emission Designator = **8M90W7D**
LTE OBW = 8.902 MHz
W = Amplitude/Angle Modulated
7 = Quantized/Digital Info
D = Data Transmission

LTE Band 5(64QAM)

Emission Designator = **8M94W7D**
LTE OBW = 8.936 MHz
W = Amplitude/Angle Modulated
7 = Quantized/Digital Info
D = Data Transmission

LTE Band 66, 4(QPSK)

Emission Designator = **17M8G7D**
LTE OBW = 17.845 MHz
G = Phase Modulation
7 = Quantized/Digital Info
D = Data Transmission

LTE Band 66, 4(16QAM)

Emission Designator = **17M8W7D**
LTE OBW = 17.846 MHz
W = Amplitude/Angle Modulated
7 = Quantized/Digital Info
D = Data Transmission

LTE Band 66, 4(64QAM)

Emission Designator = **17M9W7D**
LTE OBW = 17.867 MHz
W = Amplitude/Angle Modulated
7 = Quantized/Digital Info
D = Data Transmission

LTE Band 2(QPSK)

Emission Designator =**17M8G7D**
LTE OBW = 17.804 MHz
G = Phase Modulation
7 = Quantized/Digital Info
D = Data Transmission

LTE Band 2(16QAM)

Emission Designator = **18M8W7D**
LTE OBW = 17.827 MHz
W = Amplitude/Angle Modulated
7 = Quantized/Digital Info
D = Data Transmission

LTE Band 2(64QAM)

Emission Designator = **17M9W7D**
LTE OBW = 17.833 MHz
W = Amplitude/Angle Modulated
7 = Quantized/Digital Info
D = Data Transmission

LTE Band 41(QPSK)

Emission Designator = **17M8G7D**
LTE OBW = 17.751 MHz
G = Phase Modulation
7 = Quantized/Digital Info
D = Data Transmission

LTE Band 41(16QAM)

Emission Designator = **17M6W7D**
LTE OBW = 17.648 MHz
W = Amplitude/Angle Modulated
7 = Quantized/Digital Info
D = Data Transmission

LTE Band 41(64QAM)

Emission Designator = **17M8W7D**
LTE OBW = 17.767 MHz
W = Amplitude/Angle Modulated
7 = Quantized/Digital Info
D = Data Transmission

B. For substitution method

1) The EUT was placed on a turntable with 0.8 meter height for frequency below 1 GHz and 1.5 meter height for frequency
above 1 GHz respectively above ground.
2) The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
3) During the test, the turn table is rotated until the maximum signal is found.
4) Record the field strength meter's level. (ex. Spectrum reading level is -8.5 dBm)
5) Replace the EUT with dipole/Horn antenna that is connected to a calibrated signal generator.
6) Increase the signal generator output till the field strength meter's level is equal to the item (4).
(ex. Signal generator level is -18.04 dBm)
7) The gain of the cable and amplifier between the signal generator and terminals of substituted antenna is 46.92 dB at test frequency.
8) Record the level at substituted antenna terminal. (ex. 28.88 dBm)
9) The result is calculated as below;

EIRP(dBm) = LEVLE@ANTENNA TERMINAL + TX Antenna Gain (dBi)

ERP(dBm) = LEVLE@ANTENNA TERMINAL + TX Antenna Gain (dBd)

Where, TX Antenna Gain (dBd) = TX Antenna Gain (dBi) - 2.15 dB

7.TEST DATA

7.1 OCCUPIED BANDWIDTH

- Plots of the EUT's Occupied Bandwidth are shown in Clause 8.1

7.2 PEAK TO AVERAGE RATIO

- Plots of the EUT's Peak- to- Average Ratio are shown in Clause 8.2

7.3 BAND EDEG EMISSIONS (Conducted)

- Plots of the EUT's Band Edge Emissions are shown in Clause 8.3

7.4 SPURIOUS AND HARMONICS EMISSIONS (Conducted)

- Plots of the EUT's Spurious Emissions are shown in Clause 8.4

7.5 ERP & EIRP

- Test Notes

1) This is device was tested under all bandwidths, modulations and RB configurations and the worst case data are reported in the below table.

7.5.1 LTE Band 12, 17

- Measurement data: Without wireless charging pad

Channel Bandwidth (MHz)	Test Frequency (MHz)	Test Mode	RB Size/ Offset	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain (dBd)	ERP (dBm)	ERP (W)
10	704.0	QPSK	1/25	H	20.25	-0.65	19.60	0.091
		16QAM	1/25	H	18.58	-0.65	17.93	0.062
		64QAM	1/25	H	17.56	-0.65	16.91	0.049
	711.0	QPSK	1/25	H	20.16	-0.63	19.53	0.090
		16QAM	1/25	H	18.67	-0.63	18.04	0.064
		64QAM	1/25	H	17.16	-0.63	16.53	0.045
5	701.5	QPSK	1/12	H	19.76	-0.66	19.10	0.081
		16QAM	1/12	H	17.97	-0.66	17.31	0.054
		64QAM	1/12	H	16.92	-0.66	16.26	0.042
	707.5	QPSK	1/12	H	20.05	-0.64	19.41	0.087
		16QAM	1/12	H	18.55	-0.64	17.91	0.062
		64QAM	1/12	H	17.53	-0.64	16.89	0.049
	713.5	QPSK	1/12	H	19.61	-0.62	18.99	0.079
		16QAM	1/12	H	18.12	-0.62	17.50	0.056
		64QAM	1/12	H	17.08	-0.62	16.46	0.044

7.5.2 LTE Band 12

- Measurement data: Without wireless charging pad

Channel Bandwidth (MHz)	Test Frequency (MHz)	Test Mode	RB Size/ Offset	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain (dBd)	ERP (dBm)	ERP (W)
3	700.5	QPSK	1/7	H	19.65	-0.66	18.99	0.079
		16QAM	1/7	H	17.94	-0.66	17.28	0.053
		64QAM	1/7	H	16.83	-0.66	16.17	0.041
	707.5	QPSK	1/7	H	19.90	-0.64	19.26	0.084
		16QAM	1/7	H	18.25	-0.64	17.61	0.058
		64QAM	1/7	H	17.18	-0.64	16.54	0.045
	714.5	QPSK	1/7	H	19.81	-0.62	19.19	0.083
		16QAM	1/7	H	18.35	-0.62	17.73	0.059
		64QAM	1/7	H	17.09	-0.62	16.47	0.044
1.4	699.7	QPSK	1/2	H	19.60	-0.66	18.94	0.078
		16QAM	1/2	H	17.89	-0.66	17.23	0.053
		64QAM	1/2	H	16.80	-0.66	16.14	0.041
	707.5	QPSK	1/2	H	20.00	-0.64	19.36	0.086
		16QAM	1/2	H	18.35	-0.64	17.71	0.059
		64QAM	1/2	H	17.30	-0.64	16.66	0.046
	715.3	QPSK	1/2	H	19.76	-0.62	19.14	0.082
		16QAM	1/2	H	18.30	-0.62	17.68	0.059
		64QAM	1/2	H	17.14	-0.62	16.52	0.045

- Measurement data: non-swiveled position

Channel Bandwidth (MHz)	Test Frequency (MHz)	Test Mode	RB Size/ Offset	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain (dBd)	ERP (dBm)	ERP (W)
10	704.0	QPSK	1/25	H	16.57	-0.65	15.92	0.039
		16QAM	1/25	H	15.08	-0.65	14.43	0.028
		64QAM	1/25	H	13.98	-0.65	13.33	0.022
	711.0	QPSK	1/25	H	16.37	-0.63	15.74	0.037
		16QAM	1/25	H	15.31	-0.63	14.68	0.029
		64QAM	1/25	H	13.83	-0.63	13.20	0.021

- Measurement data: With wireless charging pad

Channel Bandwidth (MHz)	Test Frequency (MHz)	Test Mode	RB Size/ Offset	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain (dBd)	ERP (dBm)	ERP (W)
10	704.0	QPSK	1/25	H	19.95	-0.65	19.30	0.085
		16QAM	1/25	H	18.50	-0.65	17.85	0.061
		64QAM	1/25	H	17.27	-0.65	16.62	0.046
	711.0	QPSK	1/25	H	19.62	-0.63	18.99	0.079
		16QAM	1/25	H	18.22	-0.63	17.59	0.057
		64QAM	1/25	H	16.99	-0.63	16.36	0.043

7.5.3 LTE Band 13

- Measurement data: Without wireless charging pad

Channel Bandwidth (MHz)	Test Frequency (MHz)	Test Mode	RB Size/ Offset	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain (dBd)	ERP (dBm)	ERP (W)
10	782.0	QPSK	1/0	H	21.07	-0.45	20.62	0.115
		16QAM	1/0	H	19.45	-0.45	19.00	0.079
		64QAM	1/0	H	18.62	-0.45	18.17	0.066
5	779.5	QPSK	1/0	H	20.97	-0.45	20.52	0.113
		16QAM	1/0	H	19.47	-0.45	19.02	0.080
		64QAM	1/0	H	18.39	-0.45	17.94	0.062
	784.5	QPSK	1/0	H	21.03	-0.44	20.59	0.115
		16QAM	1/0	H	19.50	-0.44	19.06	0.081
		64QAM	1/0	H	18.35	-0.44	17.91	0.062

- Measurement data: non-swiveled position

Channel Bandwidth (MHz)	Test Frequency (MHz)	Test Mode	RB Size/ Offset	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain (dBd)	ERP (dBm)	ERP (W)
10	782.0	QPSK	1/0	H	17.75	-0.45	17.30	0.054
		16QAM	1/0	H	16.15	-0.45	15.70	0.037
		64QAM	1/0	H	14.89	-0.45	14.44	0.028

- Measurement data: With wireless charging pad

Channel Bandwidth (MHz)	Test Frequency (MHz)	Test Mode	RB Size/ Offset	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain (dBd)	ERP (dBm)	ERP (W)
10	782.0	QPSK	1/0	H	19.69	-0.45	19.24	0.084
		16QAM	1/0	H	18.14	-0.45	17.69	0.059
		64QAM	1/0	H	17.04	-0.45	16.59	0.046

7.5.4 LTE Band 5

- Measurement data: Without wireless charging pad

Channel Bandwidth (MHz)	Test Frequency (MHz)	Test Mode	RB Size/ Offset	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain (dBd)	ERP (dBm)	ERP (W)
10	829.0	QPSK	1/0	H	22.02	-0.67	21.35	0.136
		16QAM	1/0	H	20.27	-0.67	19.60	0.091
		64QAM	1/0	H	19.03	-0.67	18.36	0.069
	836.5	QPSK	1/0	H	21.32	-0.74	20.58	0.114
		16QAM	1/0	H	19.41	-0.74	18.67	0.074
		64QAM	1/0	H	18.39	-0.74	17.65	0.058
	844.0	QPSK	1/0	H	20.56	-0.81	19.75	0.094
		16QAM	1/0	H	18.96	-0.81	18.15	0.065
		64QAM	1/0	H	17.59	-0.81	16.78	0.048
5	826.5	QPSK	1/0	H	21.49	-0.65	20.84	0.121
		16QAM	1/0	H	20.13	-0.65	19.48	0.089
		64QAM	1/0	H	19.21	-0.65	18.56	0.072
	836.5	QPSK	1/0	H	20.58	-0.74	19.84	0.096
		16QAM	1/0	H	18.99	-0.74	18.25	0.067
		64QAM	1/0	H	17.83	-0.74	17.09	0.051
	846.5	QPSK	1/0	H	20.26	-0.83	19.43	0.088
		16QAM	1/0	H	18.86	-0.83	18.03	0.064
		64QAM	1/0	H	17.73	-0.83	16.90	0.049
3	825.5	QPSK	1/0	H	21.57	-0.64	20.93	0.124
		16QAM	1/0	H	19.96	-0.64	19.32	0.086
		64QAM	1/0	H	18.80	-0.64	18.16	0.065
	836.5	QPSK	1/0	H	20.67	-0.74	19.93	0.098
		16QAM	1/0	H	19.16	-0.74	18.42	0.070
		64QAM	1/0	H	17.84	-0.74	17.10	0.051
	847.5	QPSK	1/0	H	20.48	-0.84	19.64	0.092
		16QAM	1/0	H	18.68	-0.84	17.84	0.061
		64QAM	1/0	H	17.78	-0.84	16.94	0.049
1.4	824.7	QPSK	1/0	H	21.42	-0.63	20.79	0.120
		16QAM	1/0	H	20.01	-0.63	19.38	0.087
		64QAM	1/0	H	18.75	-0.63	18.12	0.065
	836.5	QPSK	1/0	H	20.64	-0.74	19.90	0.098
		16QAM	1/0	H	19.41	-0.74	18.67	0.074
		64QAM	1/0	H	18.08	-0.74	17.34	0.054
	848.3	QPSK	1/0	H	20.54	-0.85	19.69	0.093
		16QAM	1/0	H	18.92	-0.85	18.07	0.064
		64QAM	1/0	H	18.17	-0.85	17.32	0.054

- Measurement data: non-swiveled position

Channel Bandwidth (MHz)	Test Frequency (MHz)	Test Mode	RB Size/ Offset	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain (dBd)	ERP (dBm)	ERP (W)
10	829.0	QPSK	1/0	H	18.47	-0.67	17.80	0.060
		16QAM	1/0	H	16.96	-0.67	16.29	0.043
		64QAM	1/0	H	15.83	-0.67	15.16	0.033
	836.5	QPSK	1/0	H	17.00	-0.74	16.26	0.042
		16QAM	1/0	H	15.22	-0.74	14.48	0.028
		64QAM	1/0	H	14.32	-0.74	13.58	0.023
	844.0	QPSK	1/0	H	16.19	-0.81	15.38	0.035
		16QAM	1/0	H	14.67	-0.81	13.86	0.024
		64QAM	1/0	H	13.48	-0.81	12.67	0.018

- Measurement data: With wireless charging pad

Channel Bandwidth (MHz)	Test Frequency (MHz)	Test Mode	RB Size/ Offset	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain (dBd)	ERP (dBm)	ERP (W)
10	829.0	QPSK	1/0	H	20.10	-0.67	19.43	0.088
		16QAM	1/0	H	18.32	-0.67	17.65	0.058
		64QAM	1/0	H	17.39	-0.67	16.72	0.047
	836.5	QPSK	1/0	H	18.20	-0.74	17.46	0.056
		16QAM	1/0	H	16.48	-0.74	15.74	0.037
		64QAM	1/0	H	15.42	-0.74	14.68	0.029
	844.0	QPSK	1/0	H	17.95	-0.81	17.14	0.052
		16QAM	1/0	H	16.40	-0.81	15.59	0.036
		64QAM	1/0	H	15.19	-0.81	14.38	0.027

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- Measurement data: Without wireless charging pad

Channel Bandwidth (MHz)	Test Frequency (MHz)	Test Mode	RB Size/ Offset	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain (dBi)	EIRP (dBm)	EIRP (W)
20	1 720.0	QPSK	1/50	V	19.01	3.13	22.14	0.164
		16QAM	1/50	V	18.19	3.13	21.32	0.136
		64QAM	1/50	V	17.08	3.13	20.21	0.105
	1 745.0	QPSK	1/50	V	20.30	3.23	23.53	0.225
		16QAM	1/50	V	19.49	3.23	22.72	0.187
		64QAM	1/50	V	18.35	3.23	21.58	0.144
	1 770.0	QPSK	1/50	V	20.37	3.05	23.42	0.220
		16QAM	1/50	V	19.51	3.05	22.56	0.180
		64QAM	1/50	V	18.47	3.05	21.52	0.142
15	1 717.5	QPSK	1/36	V	18.62	3.12	21.74	0.149
		16QAM	1/36	V	17.82	3.12	20.94	0.124
		64QAM	1/36	V	17.00	3.12	20.12	0.103
	1 745.0	QPSK	1/36	V	20.16	3.23	23.39	0.218
		16QAM	1/36	V	19.37	3.23	22.60	0.182
		64QAM	1/36	V	18.37	3.23	21.60	0.145
	1 772.5	QPSK	1/36	V	19.67	3.03	22.70	0.186
		16QAM	1/36	V	18.96	3.03	21.99	0.158
		64QAM	1/36	V	18.23	3.03	21.26	0.134
10	1 715.0	QPSK	1/25	V	19.07	3.11	22.18	0.165
		16QAM	1/25	V	18.22	3.11	21.33	0.136
		64QAM	1/25	V	17.33	3.11	20.44	0.111
	1 745.0	QPSK	1/25	V	20.24	3.23	23.47	0.222
		16QAM	1/25	V	19.49	3.23	22.72	0.187
		64QAM	1/25	V	18.45	3.23	21.68	0.147
	1 775.0	QPSK	1/25	V	19.43	3.00	22.43	0.175
		16QAM	1/25	V	18.71	3.00	21.71	0.148
		64QAM	1/25	V	17.88	3.00	20.88	0.122

Channel Bandwidth (MHz)	Test Frequency (MHz)	Test Mode	RB Size/ Offset	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain (dBi)	EIRP (dBm)	EIRP (W)
5	1 712.5	QPSK	1/12	V	18.86	3.10	21.96	0.157
		16QAM	1/12	V	18.05	3.10	21.15	0.130
		64QAM	1/12	V	17.13	3.10	20.23	0.105
	1 745.0	QPSK	1/12	V	20.19	3.23	23.42	0.220
		16QAM	1/12	V	19.37	3.23	22.60	0.182
		64QAM	1/12	V	18.46	3.23	21.69	0.148
	1 777.5	QPSK	1/12	V	19.78	2.98	22.76	0.189
		16QAM	1/12	V	18.91	2.98	21.89	0.155
		64QAM	1/12	V	18.11	2.98	21.09	0.129
3	1 711.5	QPSK	1/7	V	18.77	3.10	21.87	0.154
		16QAM	1/7	V	17.92	3.10	21.02	0.126
		64QAM	1/7	V	16.98	3.10	20.08	0.102
	1 745.0	QPSK	1/7	V	20.10	3.23	23.33	0.215
		16QAM	1/7	V	19.34	3.23	22.57	0.181
		64QAM	1/7	V	18.54	3.23	21.77	0.150
	1 778.5	QPSK	1/7	V	19.89	2.97	22.86	0.193
		16QAM	1/7	V	19.03	2.97	22.00	0.158
		64QAM	1/7	V	18.27	2.97	21.24	0.133
1.4	1 710.7	QPSK	1/2	V	18.79	3.09	21.88	0.154
		16QAM	1/2	V	18.00	3.09	21.09	0.129
		64QAM	1/2	V	17.11	3.09	20.20	0.105
	1 745.0	QPSK	1/2	V	20.14	3.23	23.37	0.217
		16QAM	1/2	V	19.41	3.23	22.64	0.184
		64QAM	1/2	V	18.60	3.23	21.83	0.152
	1 779.3	QPSK	1/2	V	19.69	2.96	22.65	0.184
		16QAM	1/2	V	18.78	2.96	21.74	0.149
		64QAM	1/2	V	17.82	2.96	20.78	0.120

- Measurement data: non-swiveled position

Channel Bandwidth (MHz)	Test Frequency (MHz)	Test Mode	RB Size/ Offset	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain (dBi)	EIRP (dBm)	EIRP (W)
20	1 720.0	QPSK	1/50	H	17.21	5.28	22.49	0.177
		16QAM	1/50	H	16.30	5.28	21.58	0.144
		64QAM	1/50	H	15.09	5.28	20.37	0.109
	1 745.0	QPSK	1/50	H	18.75	5.38	24.13	0.259
		16QAM	1/50	H	17.57	5.38	22.95	0.197
		64QAM	1/50	H	16.34	5.38	21.72	0.149
	1 770.0	QPSK	1/50	H	18.37	5.20	23.57	0.228
		16QAM	1/50	H	17.47	5.20	22.67	0.185
		64QAM	1/50	H	16.49	5.20	21.69	0.148

- Measurement data: With wireless charging pad

Channel Bandwidth (MHz)	Test Frequency (MHz)	Test Mode	RB Size/ Offset	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain (dBi)	EIRP (dBm)	EIRP (W)
20	1 720.0	QPSK	1/50	H	17.30	5.28	22.58	0.181
		16QAM	1/50	H	16.40	5.28	21.68	0.147
		64QAM	1/50	H	15.18	5.28	20.46	0.111
	1 745.0	QPSK	1/50	H	18.51	5.38	23.89	0.245
		16QAM	1/50	H	17.52	5.38	22.90	0.195
		64QAM	1/50	H	16.63	5.38	22.01	0.159
	1 770.0	QPSK	1/50	H	17.34	5.20	22.54	0.179
		16QAM	1/50	H	16.40	5.20	21.60	0.145
		64QAM	1/50	H	15.48	5.20	20.68	0.117

7.5.6 LTE Band 2

- Measurement data: Without wireless charging pad

Channel Bandwidth (MHz)	Test Frequency (MHz)	Test Mode	RB Size/ Offset	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain (dBi)	EIRP (dBm)	EIRP (W)
20	1 860.0	QPSK	1/0	V	19.43	4.80	24.23	0.265
		16QAM	1/0	V	18.62	4.80	23.42	0.220
		64QAM	1/0	V	17.46	4.80	22.26	0.168
	1 880.0	QPSK	1/0	V	20.15	4.60	24.75	0.299
		16QAM	1/0	V	19.39	4.60	23.99	0.251
		64QAM	1/0	V	18.45	4.60	23.05	0.202
	1 900.0	QPSK	1/0	V	20.95	4.40	25.35	0.343
		16QAM	1/0	V	19.93	4.40	24.33	0.271
		64QAM	1/0	V	18.90	4.40	23.30	0.214
15	1 857.5	QPSK	1/0	V	18.82	4.83	23.65	0.232
		16QAM	1/0	V	17.88	4.83	22.71	0.187
		64QAM	1/0	V	17.07	4.83	21.90	0.155
	1 880.0	QPSK	1/0	V	19.47	4.60	24.07	0.255
		16QAM	1/0	V	18.63	4.60	23.23	0.210
		64QAM	1/0	V	17.58	4.60	22.18	0.165
	1 902.5	QPSK	1/0	V	20.65	4.41	25.06	0.321
		16QAM	1/0	V	19.16	4.41	23.57	0.228
		64QAM	1/0	V	18.27	4.41	22.68	0.185
10	1 855.0	QPSK	1/0	V	18.84	4.85	23.69	0.234
		16QAM	1/0	V	17.98	4.85	22.83	0.192
		64QAM	1/0	V	17.15	4.85	22.00	0.158
	1 880.0	QPSK	1/0	V	20.04	4.60	24.64	0.291
		16QAM	1/0	V	19.15	4.60	23.75	0.237
		64QAM	1/0	V	17.96	4.60	22.56	0.180
	1 905.0	QPSK	1/0	V	19.91	4.42	24.33	0.271
		16QAM	1/0	V	19.19	4.42	23.61	0.230
		64QAM	1/0	V	18.08	4.42	22.50	0.178

Channel Bandwidth (MHz)	Test Frequency (MHz)	Test Mode	RB Size/ Offset	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain (dBi)	EIRP (dBm)	EIRP (W)
5	1 852.5	QPSK	1/0	V	18.59	4.88	23.47	0.222
		16QAM	1/0	V	17.79	4.88	22.67	0.185
		64QAM	1/0	V	16.76	4.88	21.64	0.146
	1 880.0	QPSK	1/0	V	19.52	4.60	24.12	0.258
		16QAM	1/0	V	18.62	4.60	23.22	0.210
		64QAM	1/0	V	17.70	4.60	22.30	0.170
	1 907.5	QPSK	1/0	V	20.91	4.43	25.34	0.342
		16QAM	1/0	V	19.87	4.43	24.30	0.269
		64QAM	1/0	V	18.86	4.43	23.29	0.213
3	1 851.5	QPSK	1/0	V	19.09	4.89	23.98	0.250
		16QAM	1/0	V	18.44	4.89	23.33	0.215
		64QAM	1/0	V	17.46	4.89	22.35	0.172
	1 880.0	QPSK	1/0	V	19.56	4.60	24.16	0.261
		16QAM	1/0	V	18.71	4.60	23.31	0.214
		64QAM	1/0	V	17.71	4.60	22.31	0.170
	1 908.5	QPSK	1/0	V	20.84	4.43	25.27	0.337
		16QAM	1/0	V	19.99	4.43	24.42	0.277
		64QAM	1/0	V	19.03	4.43	23.46	0.222
1.4	1 850.7	QPSK	1/0	V	18.90	4.89	23.79	0.239
		16QAM	1/0	V	18.09	4.89	22.98	0.199
		64QAM	1/0	V	17.15	4.89	22.04	0.160
	1 880.0	QPSK	1/0	V	19.37	4.60	23.97	0.249
		16QAM	1/0	V	18.60	4.60	23.20	0.209
		64QAM	1/0	V	17.82	4.60	22.42	0.175
	1 909.3	QPSK	1/0	V	20.52	4.44	24.96	0.313
		16QAM	1/0	V	19.71	4.44	24.15	0.260
		64QAM	1/0	V	18.82	4.44	23.26	0.212

- Measurement data: non-swiveled position

Channel Bandwidth (MHz)	Test Frequency (MHz)	Test Mode	RB Size/ Offset	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain (dBi)	EIRP (dBm)	EIRP (W)
20	1 860.0	QPSK	1/0	V	17.29	4.80	22.09	0.162
		16QAM	1/0	V	16.12	4.80	20.92	0.124
		64QAM	1/0	V	15.39	4.80	20.19	0.104
	1 880.0	QPSK	1/0	V	17.91	4.60	22.51	0.178
		16QAM	1/0	V	17.03	4.60	21.63	0.146
		64QAM	1/0	V	16.09	4.60	20.69	0.117
	1 900.0	QPSK	1/0	V	18.56	4.40	22.96	0.198
		16QAM	1/0	V	17.73	4.40	22.13	0.163
		64QAM	1/0	V	16.39	4.40	20.79	0.120

- Measurement data: With wireless charging pad

Channel Bandwidth (MHz)	Test Frequency (MHz)	Test Mode	RB Size/ Offset	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain (dBi)	EIRP (dBm)	EIRP (W)
20	1 860.0	QPSK	1/0	H	18.08	4.80	22.88	0.194
		16QAM	1/0	H	17.31	4.80	22.11	0.163
		64QAM	1/0	H	16.20	4.80	21.00	0.126
	1 880.0	QPSK	1/0	H	19.18	4.60	23.78	0.239
		16QAM	1/0	H	18.41	4.60	23.01	0.200
		64QAM	1/0	H	17.28	4.60	21.88	0.154
	1 900.0	QPSK	1/0	H	20.43	4.40	24.83	0.304
		16QAM	1/0	H	19.71	4.40	24.11	0.258
		64QAM	1/0	H	18.60	4.40	23.00	0.200

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- Measurement data: Without wireless charging pad

Channel Bandwidth (MHz)	Test Frequency (MHz)	Test Mode	RB Size/ Offset	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain (dBi)	EIRP (dBm)	EIRP (W)
20	2 506.0	QPSK	1/50	H	16.74	5.92	22.66	0.185
		16QAM	1/50	H	15.80	5.92	21.72	0.149
		64QAM	1/50	H	14.63	5.92	20.55	0.114
	2 593.0	QPSK	1/50	H	17.61	6.19	23.80	0.240
		16QAM	1/50	H	16.65	6.19	22.84	0.192
		64QAM	1/50	H	15.53	6.19	21.72	0.149
	2 680.0	QPSK	1/50	H	17.66	6.34	24.00	0.251
		16QAM	1/50	H	16.52	6.34	22.86	0.193
		64QAM	1/50	H	15.75	6.34	22.09	0.162
15	2 503.5	QPSK	1/36	H	16.51	5.91	22.42	0.175
		16QAM	1/36	H	15.43	5.91	21.34	0.136
		64QAM	1/36	H	14.56	5.91	20.47	0.111
	2 593.0	QPSK	1/36	H	17.45	6.19	23.64	0.231
		16QAM	1/36	H	16.57	6.19	22.76	0.189
		64QAM	1/36	H	15.45	6.19	21.64	0.146
	2 682.5	QPSK	1/36	H	17.55	6.33	23.88	0.244
		16QAM	1/36	H	16.53	6.33	22.86	0.193
		64QAM	1/36	H	14.51	6.33	20.84	0.121
10	2 501.0	QPSK	1/25	H	16.51	5.90	22.41	0.174
		16QAM	1/25	H	15.42	5.90	21.32	0.136
		64QAM	1/25	H	14.65	5.90	20.55	0.114
	2 593.0	QPSK	1/25	H	17.37	6.19	23.56	0.227
		16QAM	1/25	H	16.52	6.19	22.71	0.187
		64QAM	1/25	H	15.46	6.19	21.65	0.146
	2 685.0	QPSK	1/25	H	17.54	6.32	23.86	0.243
		16QAM	1/25	H	16.42	6.32	22.74	0.188
		64QAM	1/25	H	15.20	6.32	21.52	0.142
5	2 498.5	QPSK	1/12	H	16.49	5.89	22.38	0.173
		16QAM	1/12	H	15.36	5.89	21.25	0.133
		64QAM	1/12	H	14.68	5.89	20.57	0.114
	2 593.0	QPSK	1/12	H	17.33	6.19	23.52	0.225
		16QAM	1/12	H	16.27	6.19	22.46	0.176
		64QAM	1/12	H	15.19	6.19	21.38	0.137
	2 687.5	QPSK	1/12	H	17.51	6.31	23.82	0.241
		16QAM	1/12	H	16.35	6.31	22.66	0.185
		64QAM	1/12	H	15.46	6.31	21.77	0.150

- Measurement data: non-swiveled position

Channel Bandwidth (MHz)	Test Frequency (MHz)	Test Mode	RB Size/ Offset	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain (dBi)	EIRP (dBm)	EIRP (W)
20	2 506.0	QPSK	1/50	H	14.46	5.92	20.38	0.109
		16QAM	1/50	H	13.45	5.92	19.37	0.086
		64QAM	1/50	H	12.65	5.92	18.57	0.072
	2 593.0	QPSK	1/50	H	14.86	6.19	21.05	0.127
		16QAM	1/50	H	14.02	6.19	20.21	0.105
		64QAM	1/50	H	13.09	6.19	19.28	0.085
	2 680.0	QPSK	1/50	H	15.00	6.34	21.34	0.136
		16QAM	1/50	H	13.95	6.34	20.29	0.107
		64QAM	1/50	H	13.08	6.34	19.42	0.087

- Measurement data: With wireless charging pad

Channel Bandwidth (MHz)	Test Frequency (MHz)	Test Mode	RB Size/ Offset	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain (dBi)	EIRP (dBm)	EIRP (W)
20	2 506.0	QPSK	1/50	H	16.45	5.92	22.37	0.173
		16QAM	1/50	H	15.55	5.92	21.47	0.140
		64QAM	1/50	H	14.32	5.92	20.24	0.106
	2 593.0	QPSK	1/50	H	17.29	6.19	23.48	0.223
		16QAM	1/50	H	16.22	6.19	22.41	0.174
		64QAM	1/50	H	15.33	6.19	21.52	0.142
	2 680.0	QPSK	1/50	H	17.45	6.34	23.79	0.239
		16QAM	1/50	H	16.31	6.34	22.65	0.184
		64QAM	1/50	H	15.49	6.34	21.83	0.152

7.6 UNDESIRABLE EMISSIONS (Radiated)

- Test Notes

1) This device was tested under all bandwidths, modulations and RB configurations and the worst case data are reported.
2) The frequency spectrum is examined from 9 kHz to the 10th harmonic of the fundamental frequency of the transmitter.
   No other spurious and harmonic emissions were reported greater than listed emissions.
3) Limit Calculation for Band 2/4/5/12/13/17/66 = 43 + 10log10 (P[Watts])
4) Limit Calculation for Band 41 = 55 + $10\log_{10}$ (P[Watts])
5) Limit Calculation for 1 559 MHz ~ 1 610 MHz in Band 13 = −70 dBW/MHz (equivalent isotropically radiated power for wideband signals)
6) Radiated tested was performed in swivel mode and non-swiveled position, worst case (swivel mode) data is reported.

7.6.1 LTE Band 12, 17

- Measurement data: Without wireless charging pad

B.W (MHz)	Test Freq. (MHz)	RB Size/ Offset	Test Mode	Freq.(MHz)	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain(dBd)	Result		Limit (dBc)
								(dBm)	(dBc)	
10	704.0	1/25	QPSK	1 408.33	H	-58.51	2.48	-56.03	75.63	32.60
				2 115.34	V	-53.47	3.11	-50.36	69.96	
			16QAM	1 414.93	H	-58.09	2.51	-55.58	73.51	30.93
				2 113.80	V	-53.17	3.11	-50.06	67.99	
			64QAM	1 412.33	H	-58.66	2.50	-56.16	73.07	29.91
				2 124.14	V	-53.09	3.15	-49.94	66.85	
	711.0	1/25	QPSK	1 427.11	H	-57.95	2.56	-55.39	74.92	32.53
				2 133.43	V	-53.07	3.18	-49.89	69.42	
			16QAM	1 414.37	H	-58.62	2.51	-56.11	74.15	31.04
				2 121.62	V	-53.15	3.14	-50.01	68.05	
			64QAM	1 431.70	H	-58.30	2.58	-55.72	72.25	29.53
				2 134.61	V	-53.20	3.19	-50.01	66.54	

- Measurement data: non-swiveled position

B.W (MHz)	Test Freq. (MHz)	RB Size/ Offset	Test Mode	Freq.(MHz)	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain(dBd)	Result		Limit (dBc)
								(dBm)	(dBc)	
10	704.0	1/25	QPSK	1 396.61	H	-57.96	2.38	-55.58	71.60	29.02
				2 112.17	V	-52.19	3.10	-49.09	65.11	

- Measurement data: With wireless charging pad

B.W (MHz)	Test Freq. (MHz)	RB Size/ Offset	Test Mode	Freq.(MHz)	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain(dBd)	Result		Limit (dBc)
								(dBm)	(dBc)	
10	704	1/25	QPSK	1 395.79	H	-58.57	2.37	-56.20	75.50	32.30
				2 114.37	V	-53.29	3.11	-50.18	69.48	

7.6.2 LTE Band 13

- Measurement data: Without wireless charging pad

B.W (MHz)	Test Freq. (MHz)	RB Size/ Offset	Test Mode	Freq.(MHz)	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain(dBd)	Result		Limit (dBc)
								(dBm)	(dBc)	
10	782.0	1/0	QPSK	1 555.01	H	-58.96	4.19	-54.77	75.39	33.62
				2 333.29	V	-52.01	3.62	-48.39	69.01	
			16QAM	1 553.47	H	-58.40	4.18	-54.22	73.22	32.00
				2 332.72	V	-51.58	3.62	-47.96	66.96	
			64QAM	1 547.19	H	-58.74	4.09	-54.65	72.82	31.17
				2 333.14	V	-52.58	3.62	-48.96	67.13	

- Measurement data: non-swiveled position

B.W (MHz)	Test Freq. (MHz)	RB Size/ Offset	Test Mode	Freq.(MHz)	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain(dBd)	Result		Limit (dBc)
								(dBm)	(dBc)	
10	782.0	1/0	QPSK	1 545.82	H	-59.20	4.07	-55.13	72.43	30.30
				2 336.62	V	-51.82	3.62	-48.20	65.50	

- Measurement data: With wireless charging pad

B.W (MHz)	Test Freq. (MHz)	RB Size/ Offset	Test Mode	Freq.(MHz)	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain(dBd)	Result		Limit (dBc)
								(dBm)	(dBc)	
10	782.0	1/0	QPSK	1 552.80	H	-58.86	4.17	-54.69	73.93	32.24
				2 340.90	V	-53.06	3.63	-49.43	68.67	

UNDESIRABLE EMISSIONS IN 1559~1610MHz (LTE Band 13)

- Measurement data: Without wireless charging pad

B.W (MHz)	Test Freq. (MHz)	RB Size/ Offset	Test Mode	Freq.(MHz)	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain(dBi)	Result (dBm/MHz)	Margin (dB)	Limit (dBm/MHz)
10	782.0	1/25	QPSK	1 563.55	H	-58.00	6.41	-51.59	11.59	-40.00
			16QAM	1 564.15	H	-57.84	6.41	-51.43	11.43	
			64QAM	1 563.85	H	-58.43	6.41	-52.02	12.02	
5	779.5	1/12	QPSK	1 558.67	H	-58.86	6.37	-52.49	12.49	
			16QAM	1 557.15	H	-58.36	6.36	-52.00	12.00	
			64QAM	1 560.03	H	-58.43	6.38	-52.05	12.05	
	784.5	1/12	QPSK	1 566.12	H	-58.47	6.43	-52.04	12.04	
			16QAM	1 567.15	H	-58.32	6.44	-51.88	11.88	
			64QAM	1 569.85	H	-57.64	6.46	-51.18	11.18	

- Measurement data: non-swiveled position

B.W (MHz)	Test Freq. (MHz)	RB Size/ Offset	Test Mode	Freq.(MHz)	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain(dBi)	Result (dBm/MHz)	Margin (dB)	Limit (dBm/MHz)
10	782.0	1/25	QPSK	1 543.94	H	-53.14	-57.94	6.18	-51.76	-40.00

- Measurement data: With wireless charging pad

B.W (MHz)	Test Freq. (MHz)	RB Size/ Offset	Test Mode	Freq.(MHz)	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain(dBi)	Result (dBm/MHz)	Margin (dB)	Limit (dBm/MHz)
10	782.0	1/25	QPSK	1 564.39	H	-58.03	6.42	-51.61	11.61	-40.00

7.6.3 LTE Band 5

- Measurement data: Without wireless charging pad

B.W (MHz)	Test Freq. (MHz)	RB Size/ Offset	Test Mode	Freq.(MHz)	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain(dBd)	Result		Limit (dBc)
								(dBm)	(dBc)	
10	829.0	1/0	QPSK	1 648.23	V	-57.95	4.16	-53.79	75.14	34.35
				2 473.90	V	-44.02	3.59	-40.43	61.78	
				3 303.24	V	-54.16	5.26	-48.90	70.25	
			16QAM	1 650.86	V	-57.68	4.13	-53.55	73.15	32.60
				2 473.92	V	-44.33	3.59	-40.74	60.34	
				3 305.74	V	-54.87	5.27	-49.60	69.20	
			64QAM	1 641.20	V	-57.26	4.22	-53.04	71.40	31.36
				2 473.70	V	-45.05	3.59	-41.46	59.82	
				3 295.06	V	-53.94	5.24	-48.70	67.06	
	836.5	1/0	QPSK	1 654.80	V	-57.65	4.04	-53.61	74.19	33.58
				2 496.37	V	-42.69	3.73	-38.96	59.54	
				3 316.77	V	-54.69	5.32	-49.37	69.95	
			16QAM	1 655.12	V	-57.59	4.04	-53.55	72.22	31.67
				2 496.39	V	-42.80	3.73	-39.07	57.74	
				3 331.73	V	-54.77	5.38	-49.39	68.06	
			64QAM	1 660.16	V	-57.28	3.93	-53.35	71.00	30.65
				2 496.25	V	-42.64	3.73	-38.91	56.56	
				3 315.93	V	-54.31	5.31	-49.00	66.65	
	844.0	1/0	QPSK	1 668.97	V	-57.52	3.73	-53.79	73.54	32.75
				2 518.85	V	-43.54	3.83	-39.71	59.46	
				3 364.75	V	-54.58	5.48	-49.10	68.85	
			16QAM	1 685.53	V	-56.61	3.37	-53.24	71.39	31.15
				2 518.56	V	-44.01	3.82	-40.19	58.34	
				3 352.67	V	-55.00	5.46	-49.54	67.69	
			64QAM	1 685.56	V	-57.16	3.37	-53.79	70.57	29.78
				2 518.84	V	-44.47	3.83	-40.64	57.42	
				3 358.52	V	-55.54	5.47	-50.07	66.85	

- Measurement data: non-swiveled position

B.W (MHz)	Test Freq. (MHz)	RB Size/ Offset	Test Mode	Freq.(MHz)	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain(dBd)	Result		Limit (dBc)
								(dBm)	(dBc)	
10	829.0	1/0	QPSK	1 641.72	V	-57.91	4.22	-53.69	71.49	30.80
				2 474.16	V	-52.17	3.59	-48.58	66.38	
				3 295.73	V	-54.42	5.24	-49.18	66.98	

- Measurement data: With wireless charging pad

B.W (MHz)	Test Freq. (MHz)	RB Size/ Offset	Test Mode	Freq.(MHz)	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain(dBd)	Result		Limit (dBc)
								(dBm)	(dBc)	
10	829.0	1/0	QPSK	1 648.34	V	-57.94	4.16	-53.78	73.21	32.43
				2 473.89	V	-52.35	3.59	-48.76	68.19	
				3 289.86	V	-54.37	5.23	-49.14	68.57	

7.6.4 LTE Band 66, 4

- Measurement data: Without wireless charging pad

B.W (MHz)	Test Freq. (MHz)	RB Size/ Offset	Test Mode	Freq.(MHz)	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain(dBi)	Result		Limit (dBc)
								(dBm)	(dBc)	
20	1 720.0	1/50	QPSK	3 460.87	V	-55.48	5.67	-49.81	71.95	35.14
				5 145.46	H	-53.49	8.15	-45.34	67.48	
			16QAM	3 435.65	V	-54.14	5.62	-48.52	69.84	34.32
				5 145.71	H	-54.27	8.15	-46.12	67.44	
			64QAM	3 427.18	V	-55.26	5.60	-49.66	69.87	33.21
				5 167.92	H	-53.88	8.19	-45.69	65.90	
	1 745.0	1/50	QPSK	3 507.36	V	-54.57	5.78	-48.79	72.32	36.53
				5 220.43	H	-52.59	8.21	-44.38	67.91	
			16QAM	3 470.04	V	-55.10	5.69	-49.41	72.13	35.72
				5 226.38	H	-53.47	8.20	-45.27	67.99	
			64QAM	3 476.72	V	-54.06	5.70	-48.36	69.94	34.58
				5 213.42	H	-53.61	8.22	-45.39	66.97	
	1 770.0	1/50	QPSK	3 535.53	V	-54.57	5.89	-48.68	72.10	36.42
				5 324.26	H	-53.38	8.30	-45.08	68.50	
			16QAM	3 533.50	V	-54.71	5.88	-48.83	71.39	35.56
				5 289.21	H	-53.52	8.23	-45.29	67.85	
			64QAM	3 521.58	V	-54.65	5.84	-48.81	70.33	34.52
				5 324.07	H	-53.34	8.30	-45.04	66.56	

- Measurement data: non-swiveled position

B.W (MHz)	Test Freq. (MHz)	RB Size/ Offset	Test Mode	Freq.(MHz)	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain(dBi)	Result		Limit (dBc)
								(dBm)	(dBc)	
20	1 745	1/50	QPSK	3 510.93	V	-54.94	5.79	-49.15	73.28	37.13
				5 221.08	H	-54.26	8.21	-46.05	70.18	

- Measurement data: With wireless charging pad

B.W (MHz)	Test Freq. (MHz)	RB Size/ Offset	Test Mode	Freq.(MHz)	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain(dBi)	Result		Limit (dBc)
								(dBm)	(dBc)	
20	1 745	1/50	QPSK	3 513.33	V	-55.24	5.80	-49.44	73.33	36.89
				5 219.38	H	-53.63	8.21	-45.42	69.31	

7.6.5 LTE Band 2

- Measurement data: Without wireless charging pad

B.W (MHz)	Test Freq. (MHz)	RB Size/ Offset	Test Mode	Freq.(MHz)	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain(dBi)	Result		Limit (dBc)
								(dBm)	(dBc)	
20	1 860.0	1/0	QPSK	3 692.61	V	-54.07	8.30	-45.77	70.00	37.23
				5 553.27	H	-51.84	10.52	-41.32	65.55	
			16QAM	3 701.46	V	-53.86	8.30	-45.56	68.98	36.42
				5 552.99	H	-49.86	10.52	-39.34	62.76	
			64QAM	3 679.44	V	-54.83	8.30	-46.53	68.79	35.26
				5 553.65	H	-50.79	10.52	-40.27	62.53	
	1 880.0	1/0	QPSK	3 748.17	V	-53.95	8.40	-45.55	70.30	37.75
				5 613.15	H	-49.54	10.77	-38.77	63.52	
			16QAM	3 756.91	V	-54.71	8.41	-46.30	70.29	36.99
				5 613.10	H	-48.16	10.77	-37.39	61.38	
			64QAM	3 740.78	V	-55.11	8.38	-46.73	69.78	36.05
				5 612.95	H	-47.61	10.77	-36.84	59.89	
	1 900.0	1/0	QPSK	3 770.56	V	-53.16	8.44	-44.72	70.07	38.35
				5 673.41	H	-52.12	10.65	-41.47	66.82	
			16QAM	3 798.79	V	-54.28	8.50	-45.78	70.11	37.33
				5 673.38	H	-50.03	10.65	-39.38	63.71	
			64QAM	3 772.59	V	-54.40	8.45	-45.95	69.25	36.30
				5 673.62	H	-50.95	10.65	-40.30	63.60	

- Measurement data: non-swiveled position

B.W (MHz)	Test Freq. (MHz)	RB Size/ Offset	Test Mode	Freq.(MHz)	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain(dBi)	Result		Limit (dBc)
								(dBm)	(dBc)	
20	1 900.0	1/0	QPSK	3 772.57	V	-54.71	8.45	-46.26	69.22	35.96
				5 673.38	H	-51.66	10.65	-41.01	63.97	

- Measurement data: With wireless charging pad

B.W (MHz)	Test Freq. (MHz)	RB Size/ Offset	Test Mode	Freq.(MHz)	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain(dBi)	Result		Limit (dBc)
								(dBm)	(dBc)	
20	1 900.0	1/0	QPSK	3 801.51	V	-54.54	8.50	-46.04	70.87	37.83
				5 673.25	V	-51.76	10.65	-41.11	65.94	

7.6.6 LTE Band 41

- Measurement data: Without wireless charging pad

B.W (MHz)	Test Freq. (MHz)	RB Size/ Offset	Test Mode	Freq.(MHz)	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain(dBi)	Result		Limit (dBc)
								(dBm)	(dBc)	
20	2 506.0	1/50	QPSK	5 032.90	H	-53.13	10.27	-42.86	65.52	47.66
				7 518.20	V	-46.79	12.14	-34.65	57.31	
			16QAM	5 028.64	H	-53.46	10.26	-43.20	64.92	46.72
				7 518.11	V	-48.95	12.14	-36.81	58.53	
			64QAM	5 011.97	H	-53.14	10.22	-42.92	63.47	45.55
				7 518.12	V	-51.19	12.14	-39.05	59.60	
	2 593.0	1/50	QPSK	5 186.33	H	-54.00	10.37	-43.63	67.43	48.80
				7 779.20	V	-48.37	12.30	-36.07	59.87	
			16QAM	5 200.32	H	-52.96	10.40	-42.56	65.40	47.84
				7 779.07	V	-45.81	12.30	-33.51	56.35	
			64QAM	5 206.59	H	-53.36	10.39	-42.97	64.69	46.72
				7 778.83	V	-48.82	12.30	-36.52	58.24	
	2 680.0	1/50	QPSK	5 343.20	H	-52.61	10.49	-42.12	66.13	49.00
				8 040.41	V	-49.72	12.58	-37.14	61.14	
			16QAM	5 355.56	H	-53.41	10.49	-42.92	65.78	47.86
				8 044.85	V	-50.75	12.59	-38.16	61.02	
			64QAM	5 366.62	H	-53.56	10.47	-43.09	65.18	47.09
				8 040.40	V	-49.23	12.58	-36.65	58.74	

- Measurement data: non-swiveled position

B.W (MHz)	Test Freq. (MHz)	RB Size/ Offset	Test Mode	Freq.(MHz)	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain(dBi)	Result		Limit (dBc)
								(dBm)	(dBc)	
20	2 680.0	1/50	QPSK	5 374.22	H	-53.39	10.45	-42.94	64.28	46.34
				8 035.05	V	-51.02	12.57	-38.45	59.79	

- Measurement data: With wireless charging pad

B.W (MHz)	Test Freq. (MHz)	RB Size/ Offset	Test Mode	Freq.(MHz)	Ant Pol (H/V)	Level(dBm) @ Ant Terminal	TX Ant Gain(dBi)	Result		Limit (dBc)
								(dBm)	(dBc)	
20	2 680.0	1/50	QPSK	5 366.97	H	-53.85	10.47	-43.38	67.17	48.79
				8 064.08	V	-51.73	12.60	-39.13	62.92	

7.7 FREQUENCY STABILITY

- Test Notes

Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

7.7.1 LTE Band 12, 17

OPERATING FREQUENCY : 707.5 MHz
REFERENCE VOLTAGE : 3.87 VDC
LIMIT : The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

VOLTAGE (%)	POWER (V DC)	TEMP (℃)	FREQUENCY (Hz)	FREQ.Dev (Hz)	Deviation	
					(ppm)	(%)
100 %	3.87	+20(Ref)	707,500,001	+1	+0.001 4	+0.000 000 141
100 %		-30	707,500,010	+10	+0.014 1	+0.000 001 413
100 %		-20	707,500,005	+5	+0.007 1	+0.000 000 707
100 %		-10	707,499,996	-4	-0.005 7	-0.000 000 565
100 %		0	707,500,003	+3	+0.004 2	+0.000 000 424
100 %		+10	707,499,999	-1	-0.001 4	-0.000 000 141
100 %		+20	707,500,001	+1	+0.001 4	+0.000 000 141
100 %		+30	707,500,003	+3	+0.004 2	+0.000 000 424
100 %		+40	707,500,007	+7	+0.009 9	+0.000 000 989
100 %		+50	707,500,008	+8	+0.011 3	+0.000 001 131
115 %	4.45	+20	707,500,013	+13	+0.018 4	+0.000 001 837
BATT.ENDPOINT	2.90	+20	707,499,997	-3	-0.004 2	-0.000 000 424

7.7.2 LTE Band 13

OPERATING FREQUENCY : 782.0 MHz
REFERENCE VOLTAGE : 3.87 VDC
LIMIT : The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

VOLTAGE (%)	POWER (V DC)	TEMP (℃)	FREQUENCY (Hz)	FREQ.Dev (Hz)	Deviation	
					(ppm)	(%)
100 %	3.87	+20(Ref)	782,000,001	+1	+0.001 3	+0.000 000 128
100 %		-30	782,000,005	+5	+0.006 4	+0.000 000 639
100 %		-20	782,000,009	+9	+0.011 5	+0.000 001 151
100 %		-10	782,000,004	+4	+0.005 1	+0.000 000 512
100 %		0	782,000,001	+1	+0.001 3	+0.000 000 128
100 %		+10	782,000,002	+2	+0.002 6	+0.000 000 256
100 %		+20	782,000,001	+1	+0.001 3	+0.000 000 128
100 %		+30	782,000,004	+4	+0.005 1	+0.000 000 512
100 %		+40	781,999,999	-1	-0.001 3	-0.000 000 128
100 %		+50	782,000,007	+7	+0.009 0	+0.000 000 895
115 %	4.45	+20	781,999,995	-5	-0.006 4	-0.000 000 639
BATT.ENDPOINT	2.90	+20	782,000,010	+10	+0.012 8	+0.000 001 279

7.7.3 LTE Band 5

OPERATING FREQUENCY : 836.5 MHz
REFERENCE VOLTAGE : 3.87 VDC
DEVIATION LIMIT : ± 0.000 25 % or 2.5 ppm

VOLTAGE (%)	POWER (V DC)	TEMP (℃)	FREQUENCY (Hz)	FREQ.Dev (Hz)	Deviation	
					(ppm)	(%)
100 %	3.87	+20(Ref)	836,500,004	+4	+0.004 8	+0.000 000 478
100 %		-30	836,500,008	+8	+0.009 6	+0.000 000 956
100 %		-20	836,499,997	-3	-0.003 6	-0.000 000 359
100 %		-10	836,500,004	+4	+0.004 8	+0.000 000 478
100 %		0	836,500,003	+3	+0.003 6	+0.000 000 359
100 %		+10	836,500,007	+7	+0.008 4	+0.000 000 837
100 %		+20	836,500,004	+4	+0.004 8	+0.000 000 478
100 %		+30	836,499,999	-1	-0.001 2	-0.000 000 120
100 %		+40	836,500,003	+3	+0.003 6	+0.000 000 359
100 %		+50	836,500,007	+7	+0.008 4	+0.000 000 837
115 %	4.45	+20	836,500,005	+5	+0.006 0	+0.000 000 598
BATT.ENDPOINT	2.90	+20	836,499,996	-4	-0.004 8	-0.000 000 478

7.7.4 LTE Band 66, 4

OPERATING FREQUENCY : 1 745.0 MHz
REFERENCE VOLTAGE 3.87 VDC
LIMIT : The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

VOLTAGE (%)	POWER (V DC)	TEMP (℃)	FREQUENCY (Hz)	FREQ.Dev (Hz)	Deviation	
					(ppm)	(%)
100 %	3.87	+20(Ref)	1,745,000,001	+1	+0.000 6	+0.000 000 057
100 %		-30	1,745,000,008	+8	+0.004 6	+0.000 000 458
100 %		-20	1,745,000,003	+3	+0.001 7	+0.000 000 172
100 %		-10	1,745,000,008	+8	+0.004 6	+0.000 000 458
100 %		0	1,745,000,004	+4	+0.002 3	+0.000 000 229
100 %		+10	1,744,999,997	-3	-0.001 7	-0.000 000 172
100 %		+20	1,745,000,001	+1	+0.000 6	+0.000 000 057
100 %		+30	1,744,999,999	-1	-0.000 6	-0.000 000 057
100 %		+40	1,744,999,995	-5	-0.002 9	-0.000 000 287
100 %		+50	1,745,000,004	+4	+0.002 3	+0.000 000 229
115 %	4.45	+20	1,745,000,007	+7	+0.004 0	+0.000 000 401
BATT.ENDPOINT	2.90	+20	1,745,000,001	+1	+0.000 6	+0.000 000 057

7.7.5 LTE Band 2

OPERATING FREQUENCY : 1 880.0 MHz
REFERENCE VOLTAGE 3.87 VDC
LIMIT : The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

VOLTAGE (%)	POWER (V DC)	TEMP (℃)	FREQUENCY (Hz)	FREQ.Dev (Hz)	Deviation	
					(ppm)	(%)
100 %	3.87	+20(Ref)	1,880,000,003	+3	+0.001 6	+0.000 000 160
100 %		-30	1,880,000,007	+7	+0.003 7	+0.000 000 372
100 %		-20	1,879,999,999	-1	-0.000 5	-0.000 000 053
100 %		-10	1,880,000,004	+4	+0.002 1	+0.000 000 213
100 %		0	1,879,999,992	-8	-0.004 3	-0.000 000 426
100 %		+10	1,880,000,010	+10	+0.005 3	+0.000 000 532
100 %		+20	1,880,000,003	+3	+0.001 6	+0.000 000 160
100 %		+30	1,880,000,011	+11	+0.005 9	+0.000 000 585
100 %		+40	1,880,000,007	+7	+0.003 7	+0.000 000 372
100 %		+50	1,880,000,005	+5	+0.002 7	+0.000 000 266
115 %	4.45	+20	1,880,000,001	+1	+0.000 5	+0.000 000 053
BATT.ENDPOINT	2.90	+20	1,879,999,998	-2	-0.001 1	-0.000 000 106

7.7.6 LTE Band 41

OPERATING FREQUENCY : 2 593.0 MHz
REFERENCE VOLTAGE 3.87 VDC
LIMIT : The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

VOLTAGE (%)	POWER (V DC)	TEMP (℃)	FREQUENCY (Hz)	FREQ.Dev (Hz)	Deviation	
					(ppm)	(%)
100 %	3.87	+20(Ref)	2,593,000,004	+4	+0.001 5	+0.000 000 154
100 %		-30	2,593,000,007	+7	+0.002 7	+0.000 000 270
100 %		-20	2,592,999,995	-5	-0.001 9	-0.000 000 193
100 %		-10	2,592,999,997	-3	-0.001 2	-0.000 000 116
100 %		0	2,592,999,993	-7	-0.002 7	-0.000 000 270
100 %		+10	2,592,999,996	-4	-0.001 5	-0.000 000 154
100 %		+20	2,593,000,004	+4	+0.001 5	+0.000 000 154
100 %		+30	2,593,000,001	+1	+0.000 4	+0.000 000 039
100 %		+40	2,593,000,004	+4	+0.001 5	+0.000 000 154
100 %		+50	2,593,000,014	+14	+0.005 4	+0.000 000 540
115 %	4.45	+20	2,592,999,997	-3	-0.001 2	-0.000 000 116
BATT.ENDPOINT	2.90	+20	2,593,000,007	+7	+0.002 7	+0.000 000 270

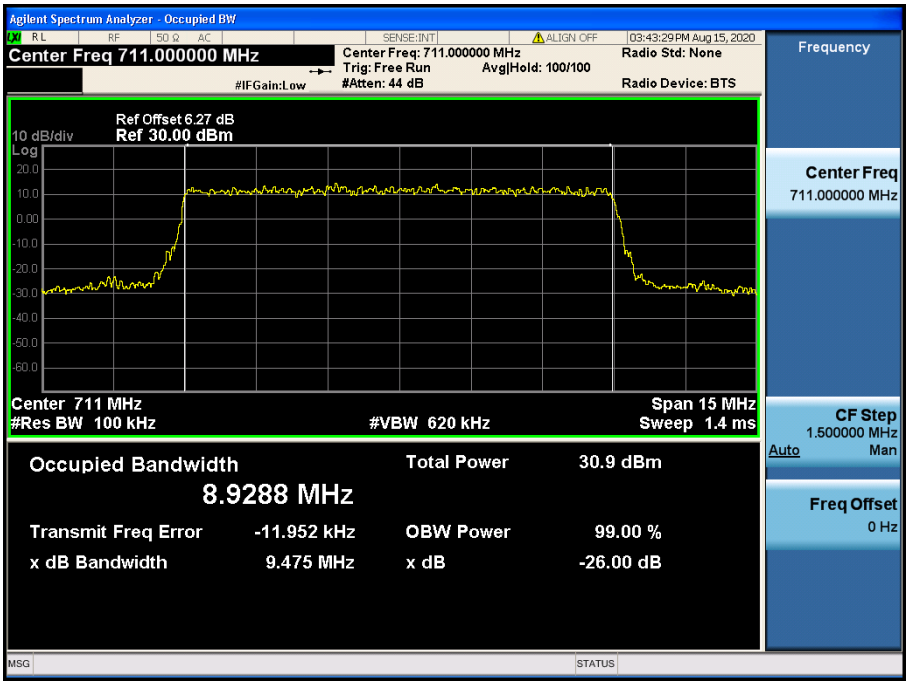
8. TEST PLOTS

- Test Notes:

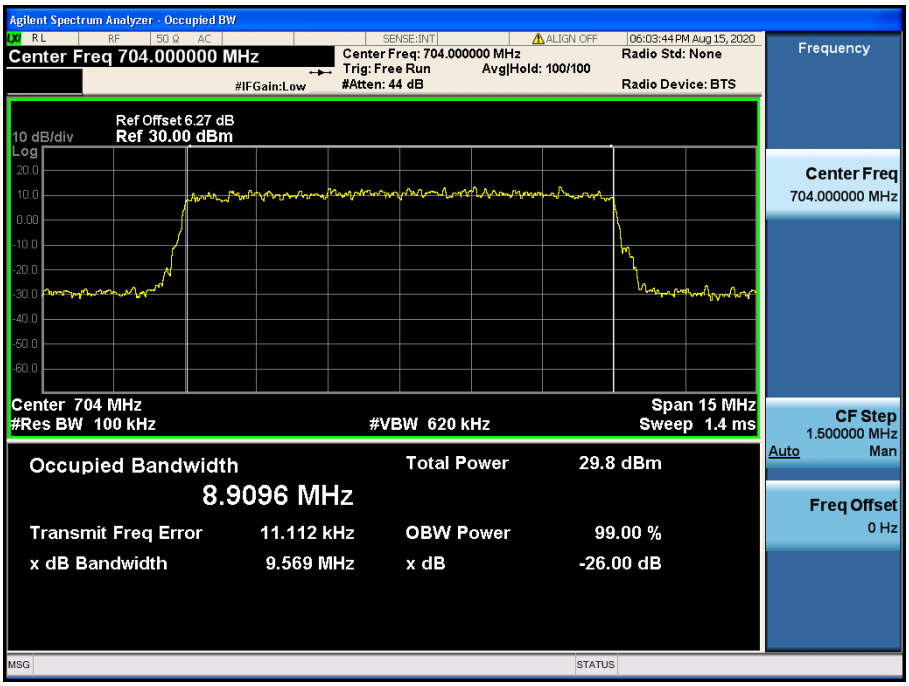
All bandwidths, RB configurations, and modulations were investigated.
The worst case test results are reported.

8.1 OCCUPIED BANDWIDTH

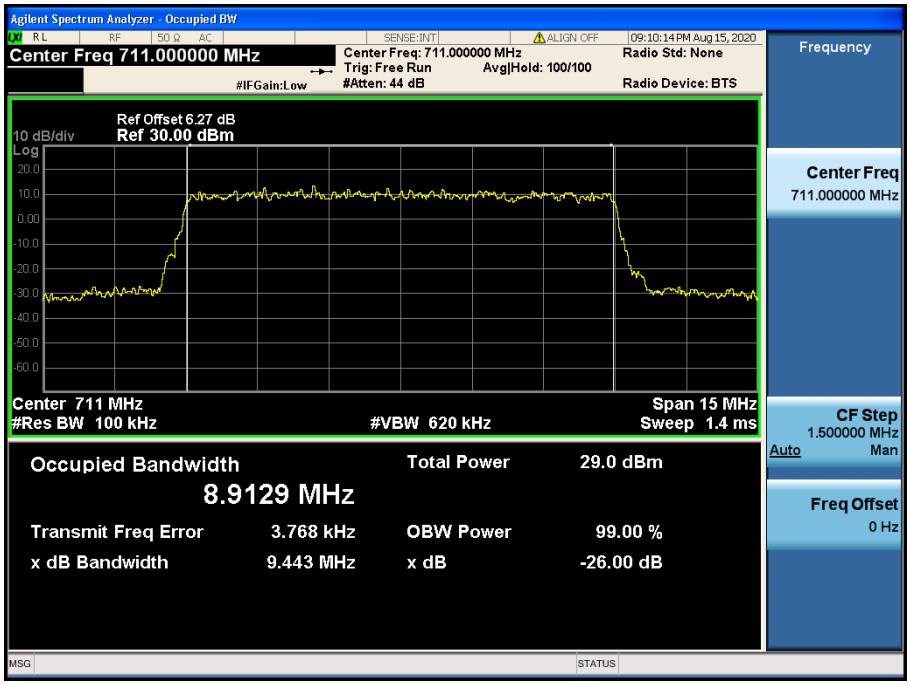
8.1.1 LTE Band 12, 17



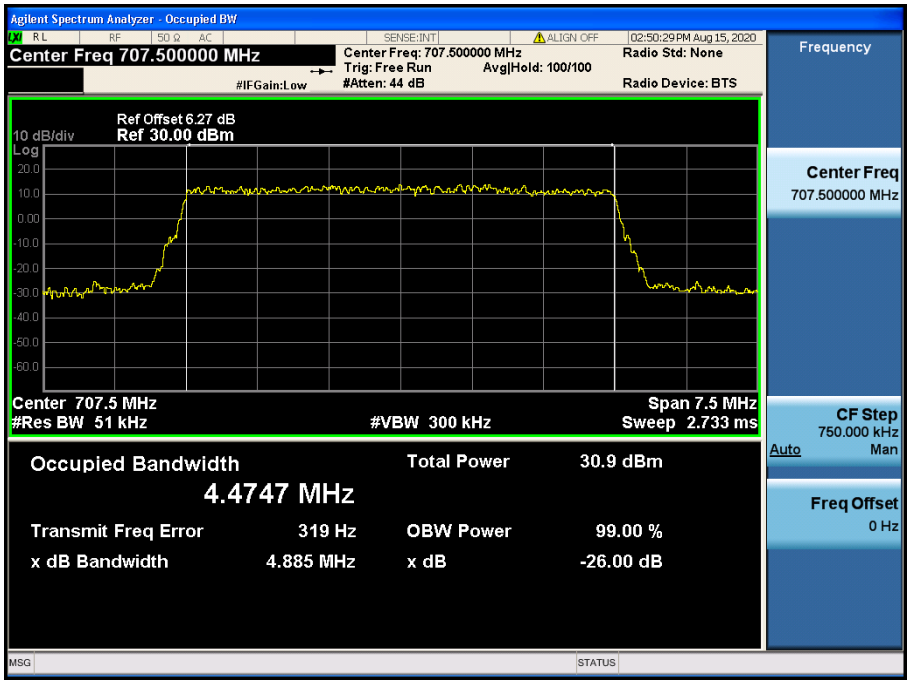
LTE Band 12, 17 / 10 MHz / QPSK - RB Size 50



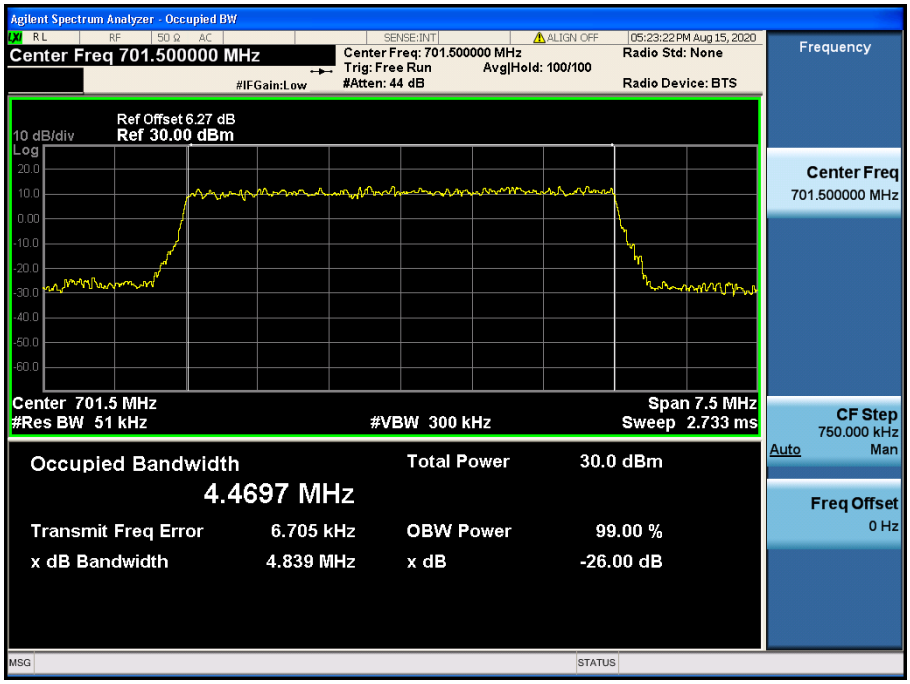
LTE Band 12, 17 / 10 MHz / 16QAM - RB Size 50



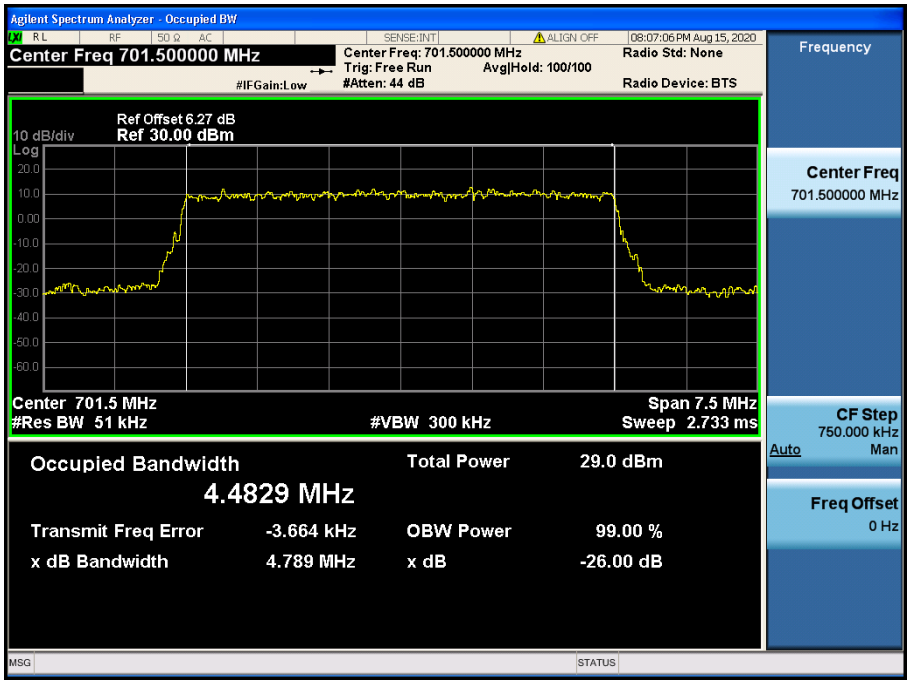
LTE Band 12, 17 / 10 MHz / 64QAM- RB Size 50



LTE Band 12, 17 / 5 MHz / QPSK - RB Size 25

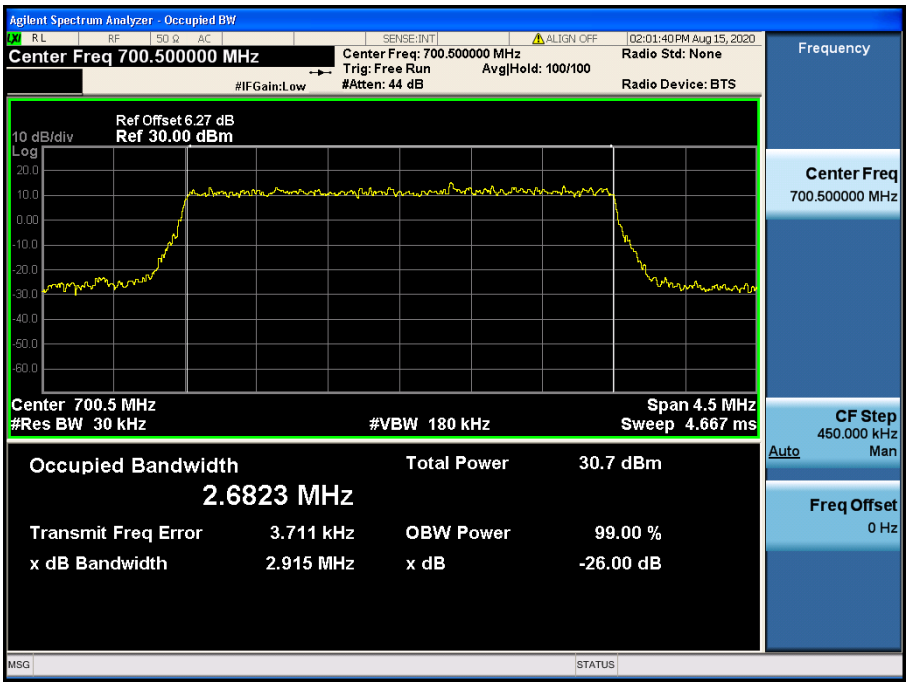


LTE Band 12, 17 / 5 MHz / 16QAM - RB Size 25

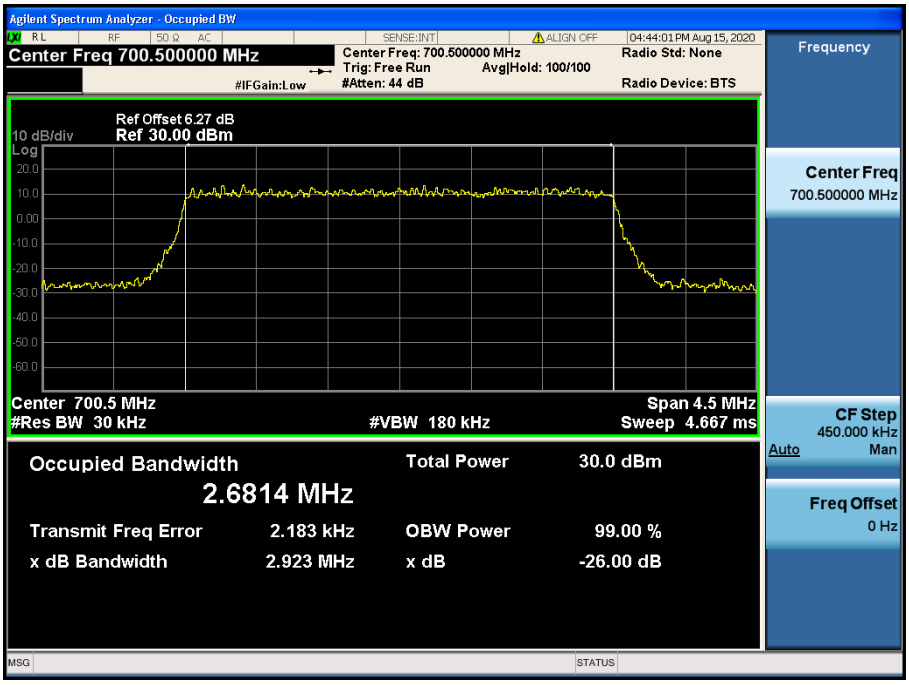


LTE Band 12, 17 / 5 MHz / 64QAM - RB Size 25

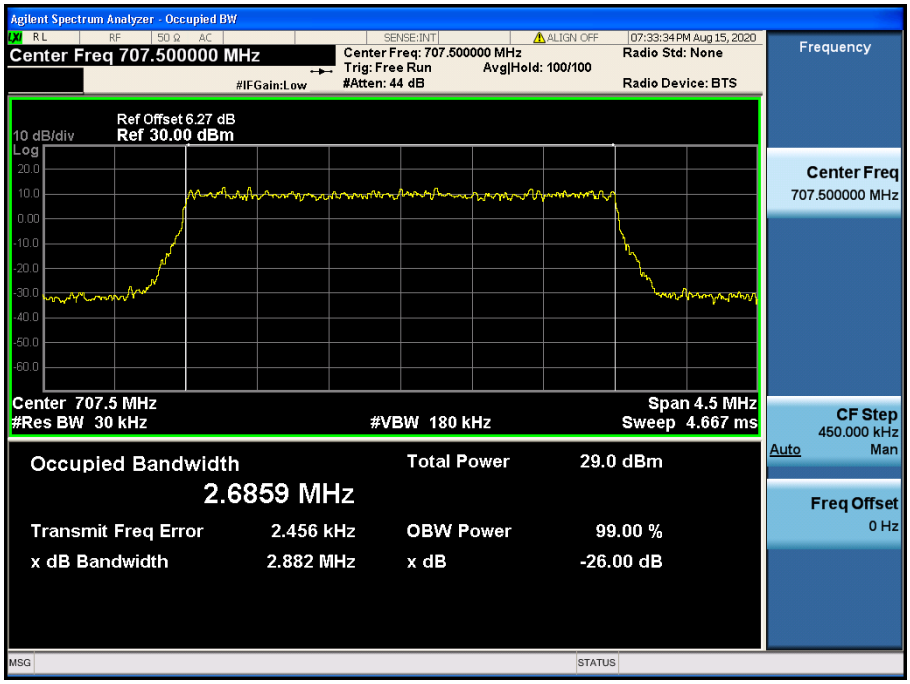
8.1.2 LTE Band 12



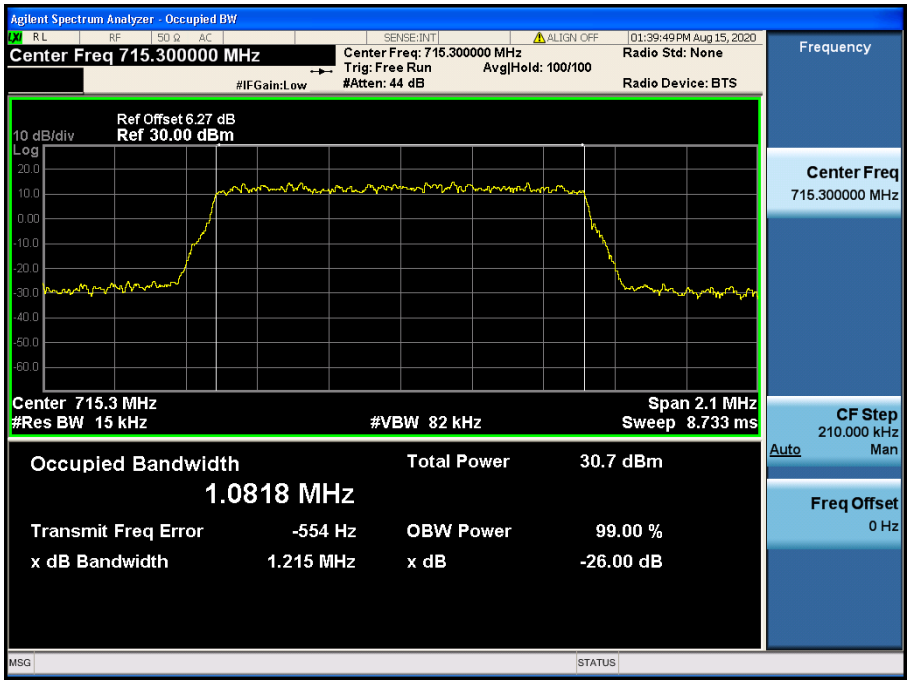
LTE Band 12 / 3 MHz / QPSK - RB Size 15



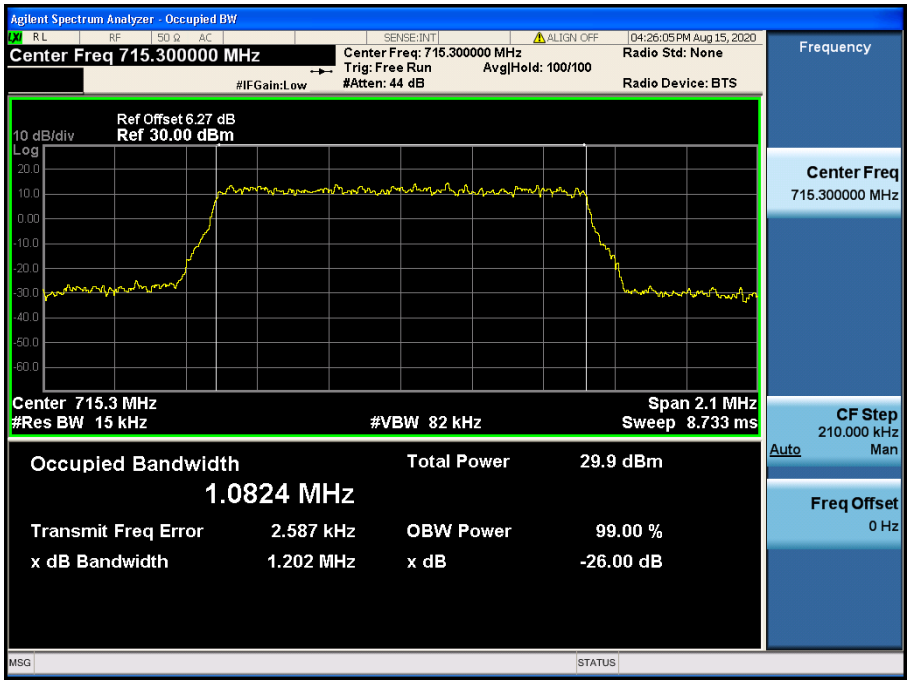
LTE Band 12 / 3 MHz / 16QAM - RB Size 15



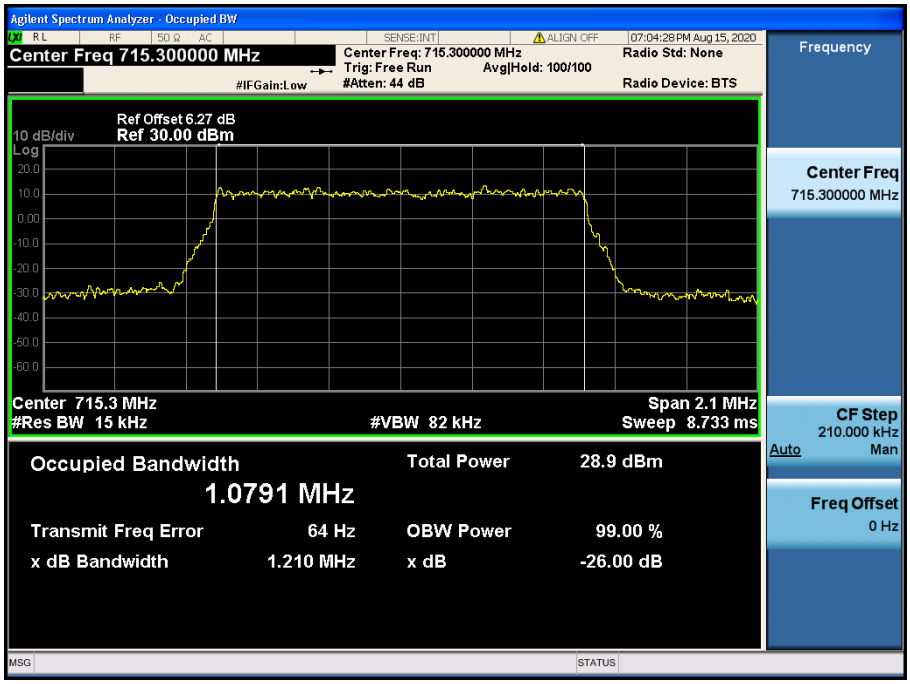
LTE Band 12 / 3 MHz / 64QAM - RB Size 15



LTE Band 12 / 1.4 MHz / QPSK - RB Size 6

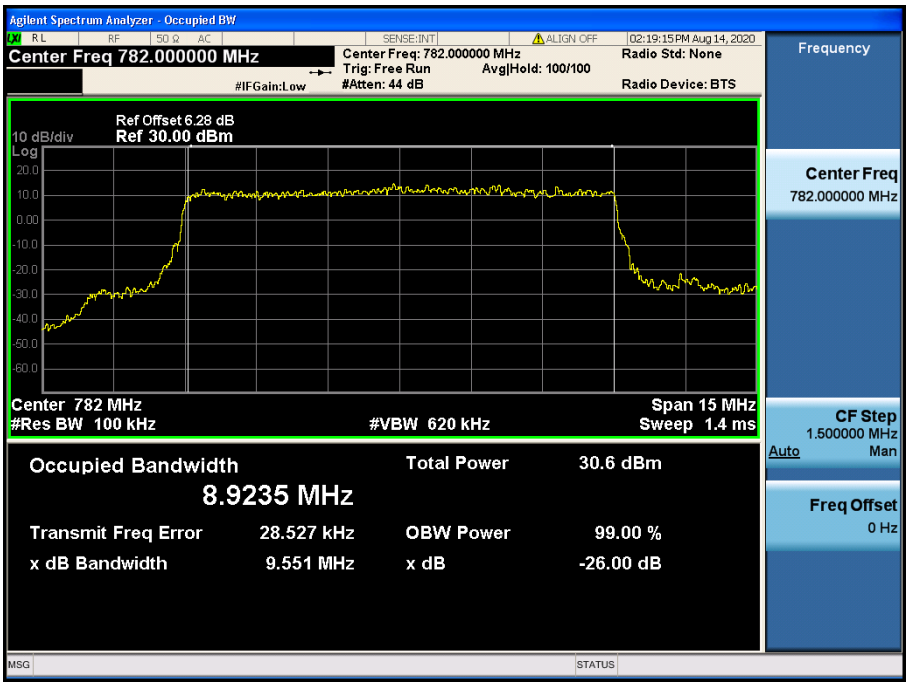


LTE Band 12 / 1.4 MHz / 16QAM - RB Size 6

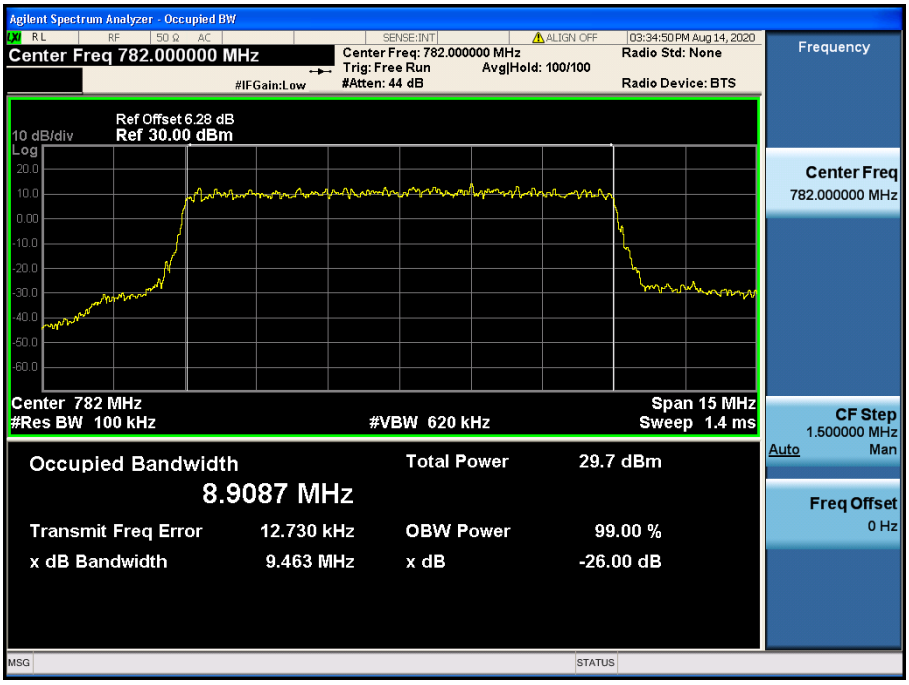


LTE Band 12 / 1.4 MHz / 64QAM - RB Size 6

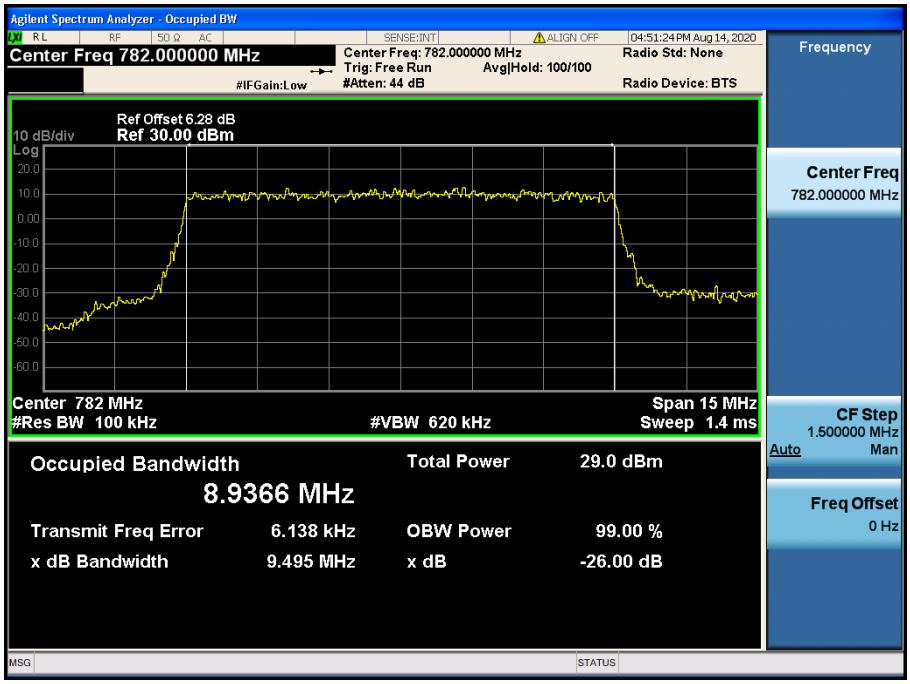
8.1.3 LTE Band 13



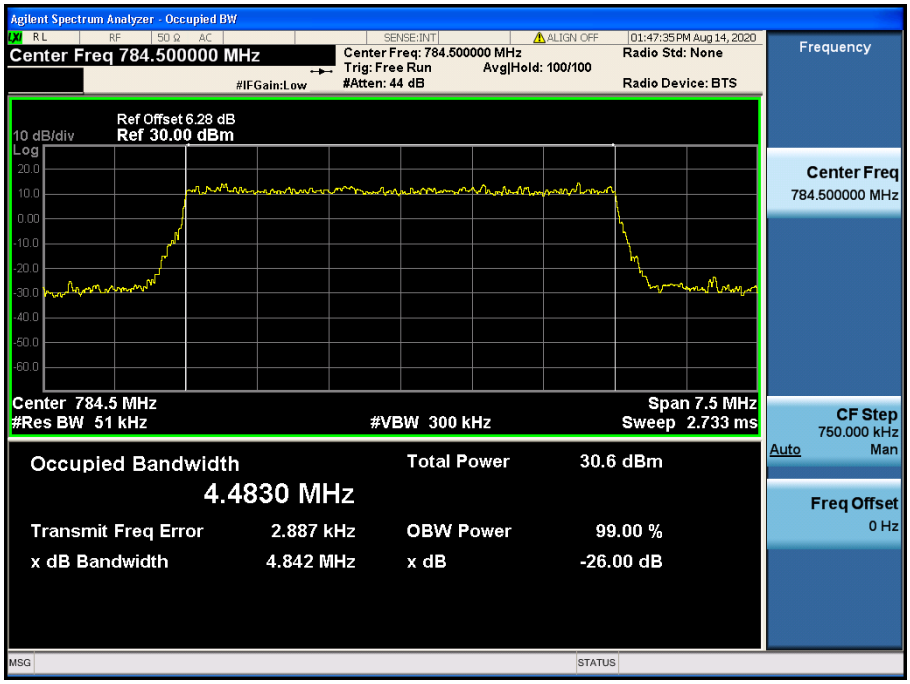
LTE Band 13 / 10 MHz / QPSK - RB Size 50



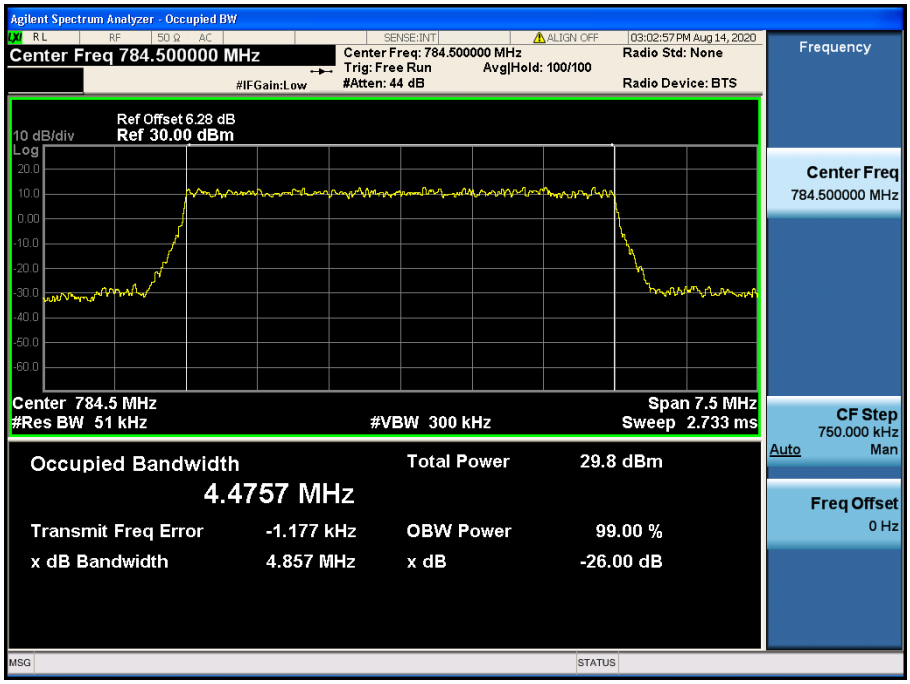
LTE Band 13 / 10 MHz / 16QAM - RB Size 50



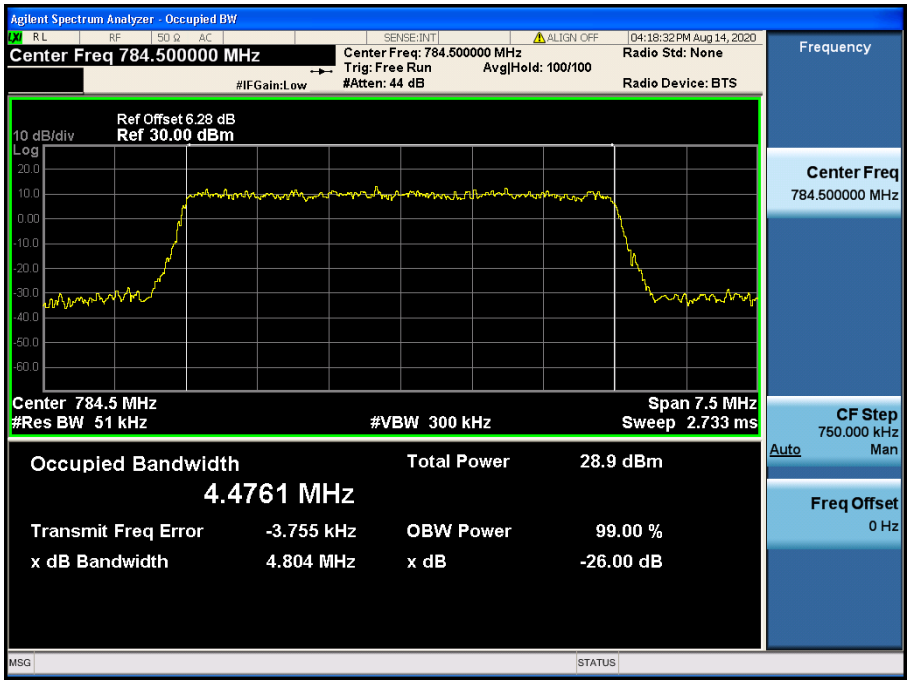
LTE Band 13 / 10 MHz / 64QAM - RB Size 50



LTE Band 13 / 5 MHz / QPSK - RB Size 25

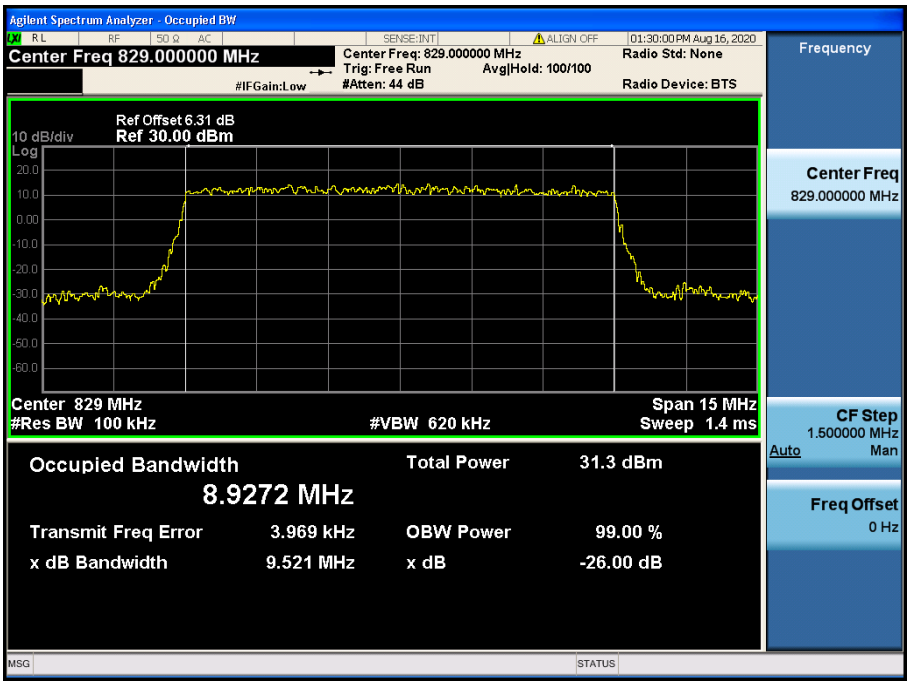


LTE Band 13 / 5 MHz / 16QAM - RB Size 25

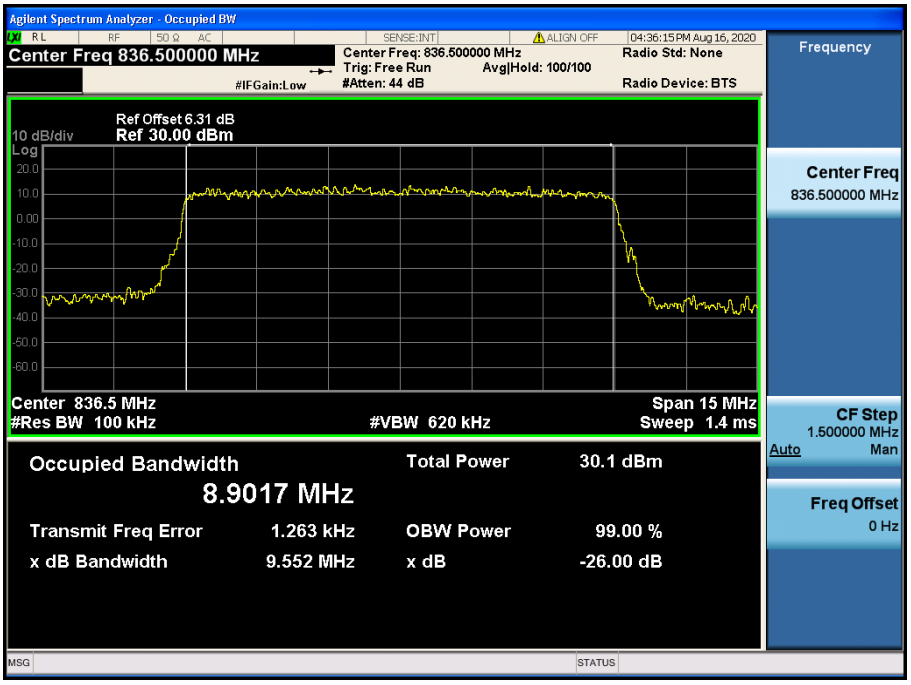


LTE Band 13 / 5 MHz / 64QAM - RB Size 25

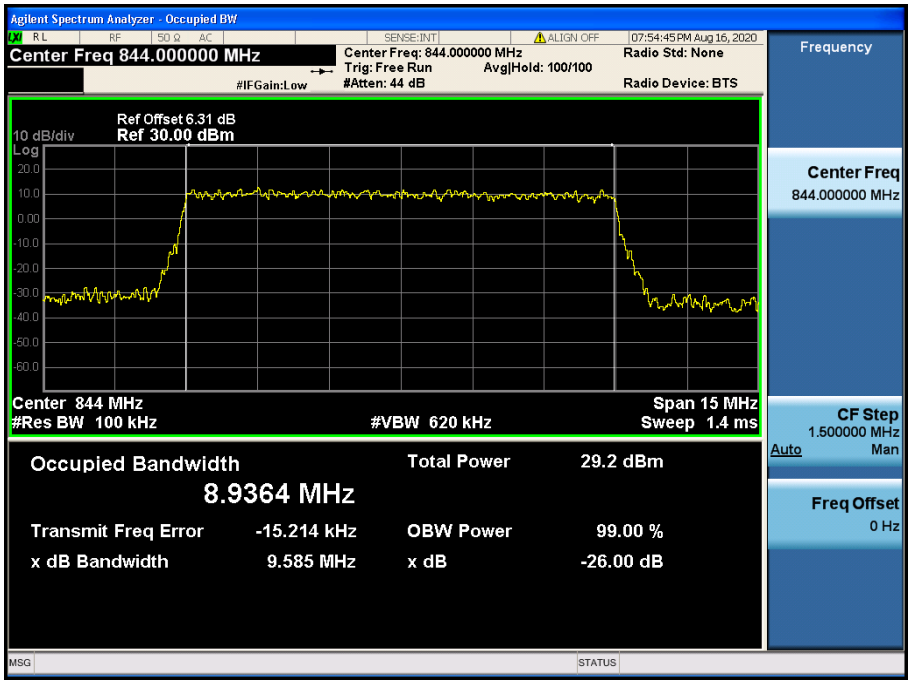
8.1.4 LTE Band 5



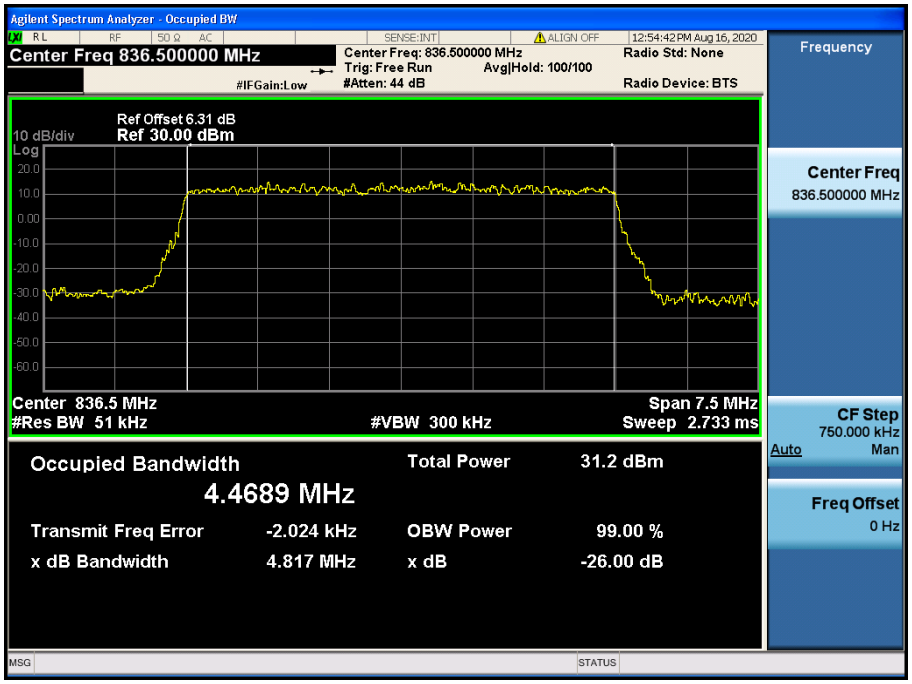
LTE Band 5 / 10 MHz / QPSK - RB Size 50



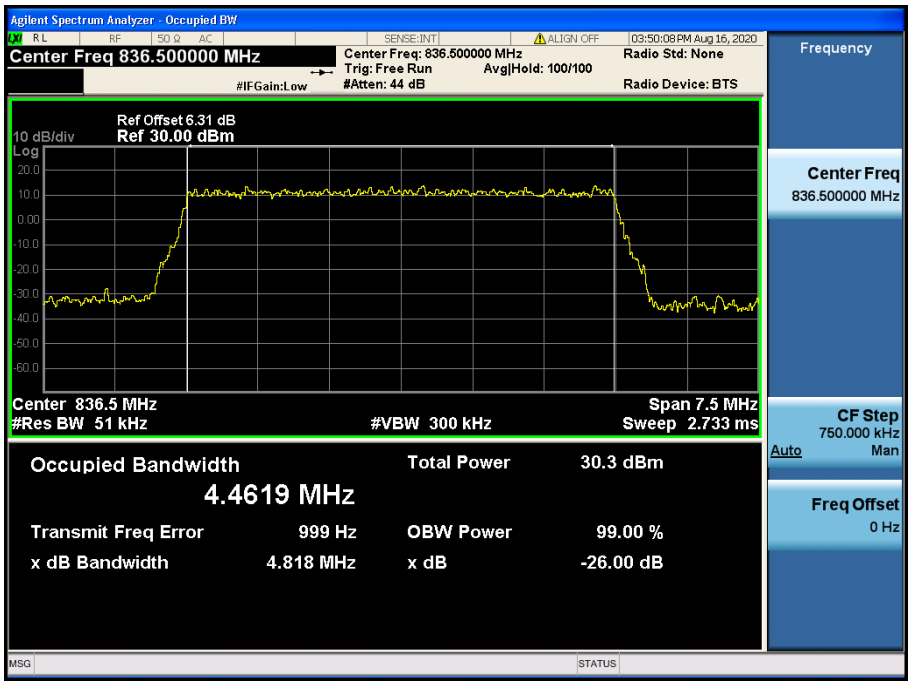
LTE Band 5 / 10 MHz / 16QAM - RB Size 50



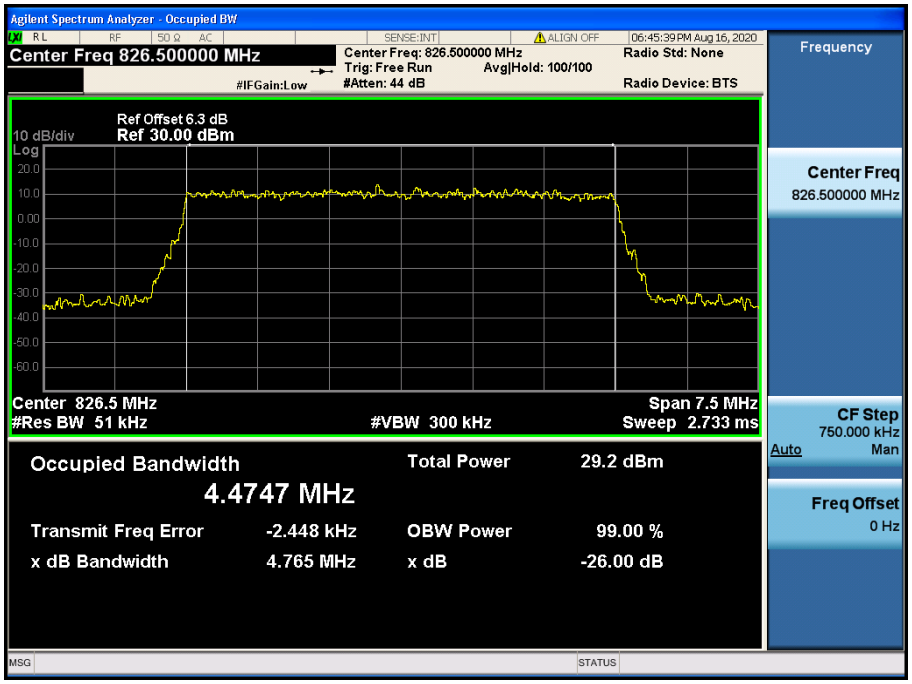
LTE Band 5 / 10 MHz / 64QAM - RB Size 50



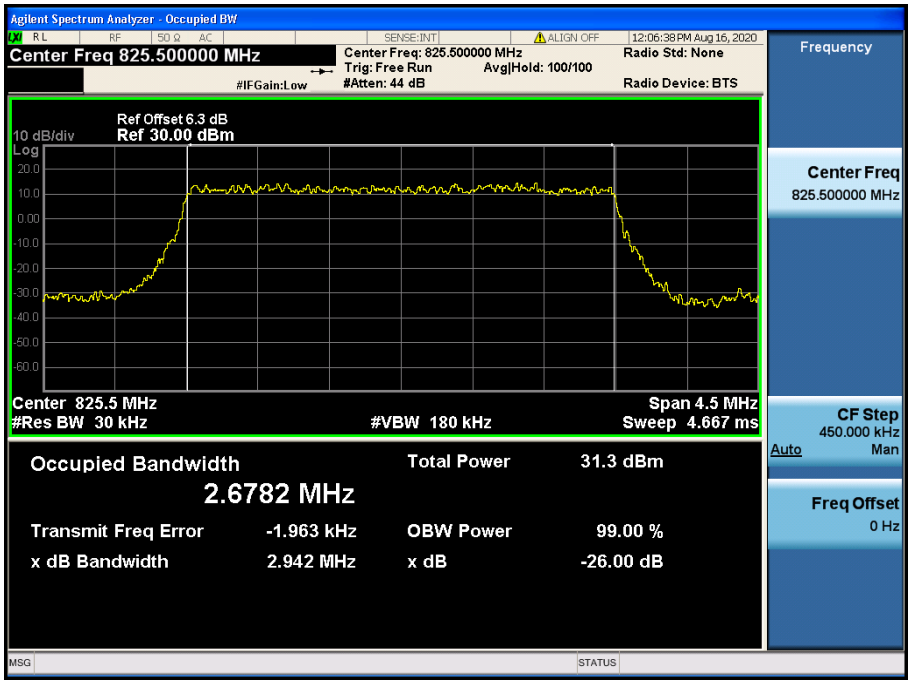
LTE Band 5 / 5 MHz / QPSK - RB Size 25



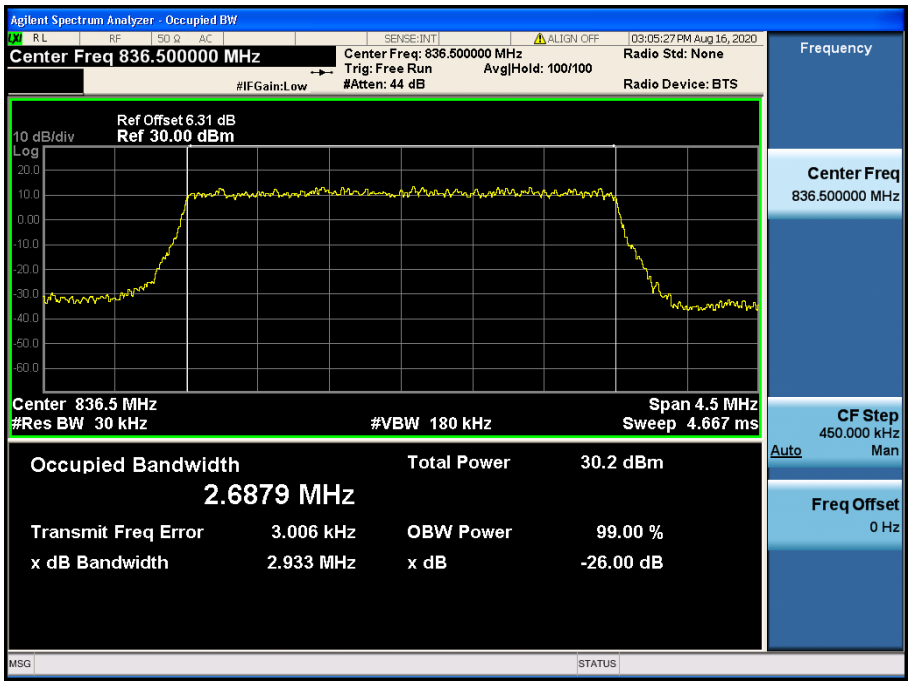
LTE Band 5 / 5 MHz / 16QAM - RB Size 25



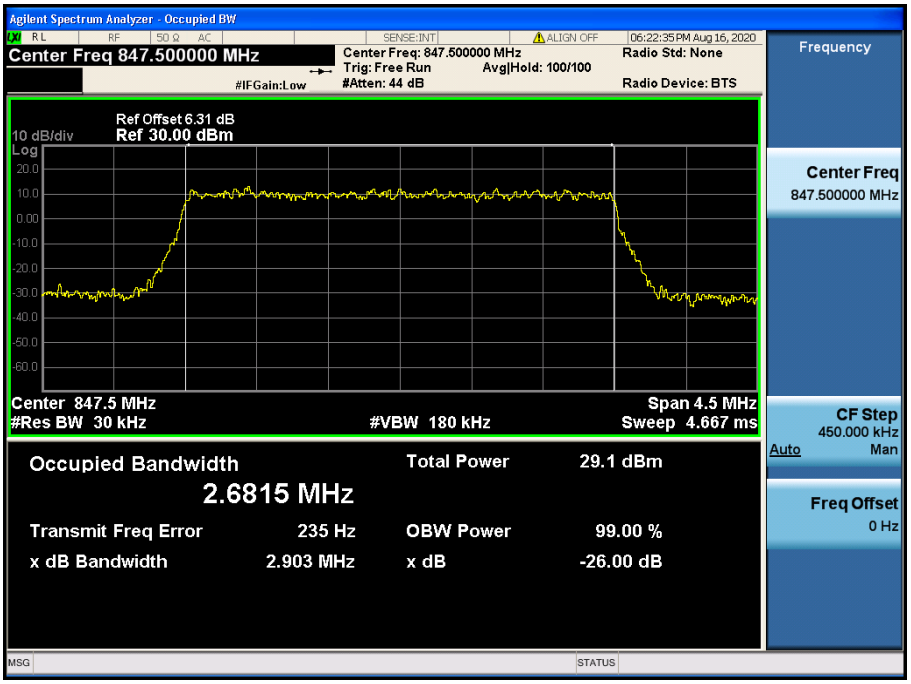
LTE Band 5 / 5 MHz / 64QAM - RB Size 25



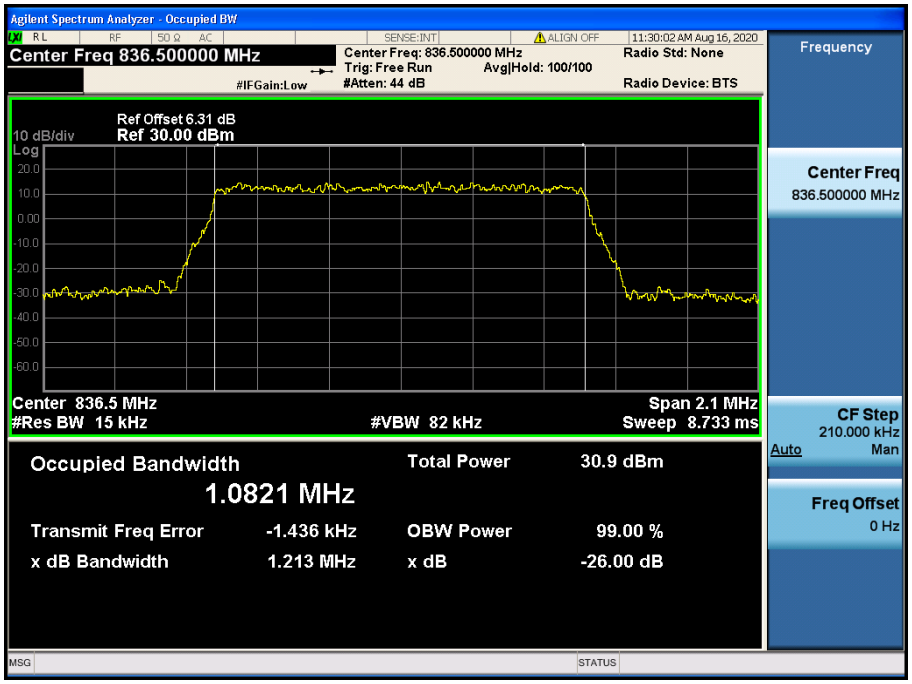
LTE Band 5 / 3 MHz / QPSK - RB Size 15



LTE Band 5 / 3 MHz / 16QAM - RB Size 15

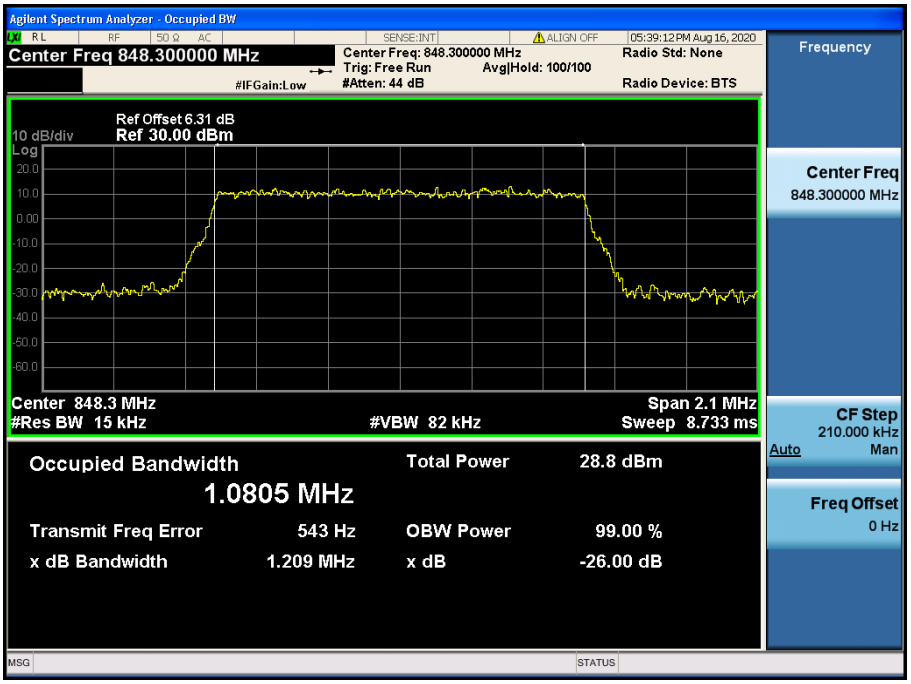


LTE Band 5 / 3 MHz / 64QAM - RB Size 15



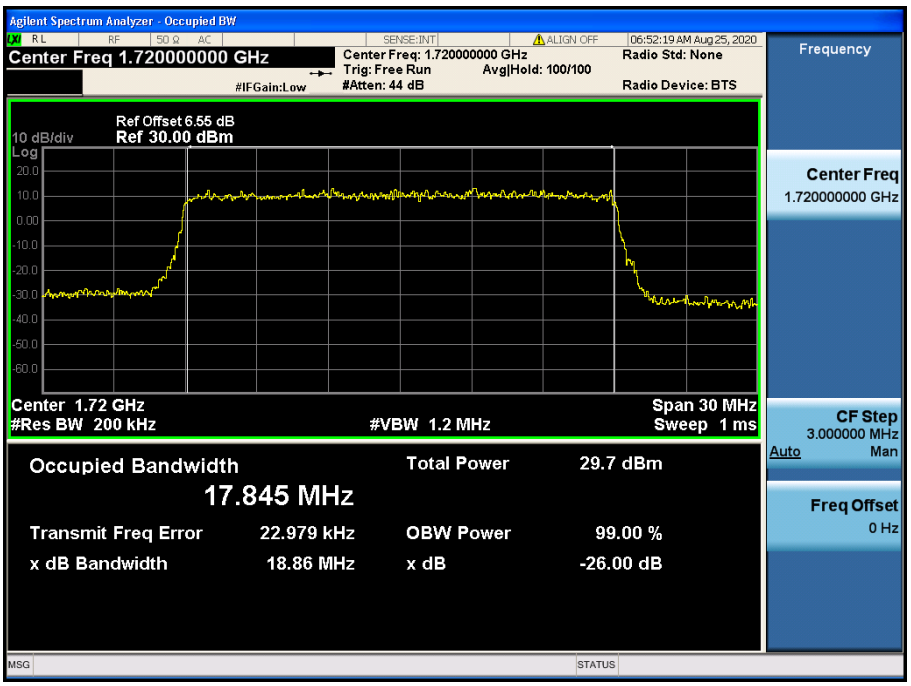
LTE Band 5 / 1.4 MHz / QPSK - RB Size 6

LTE Band 5 / 1.4 MHz / 16QAM - RB Size 6

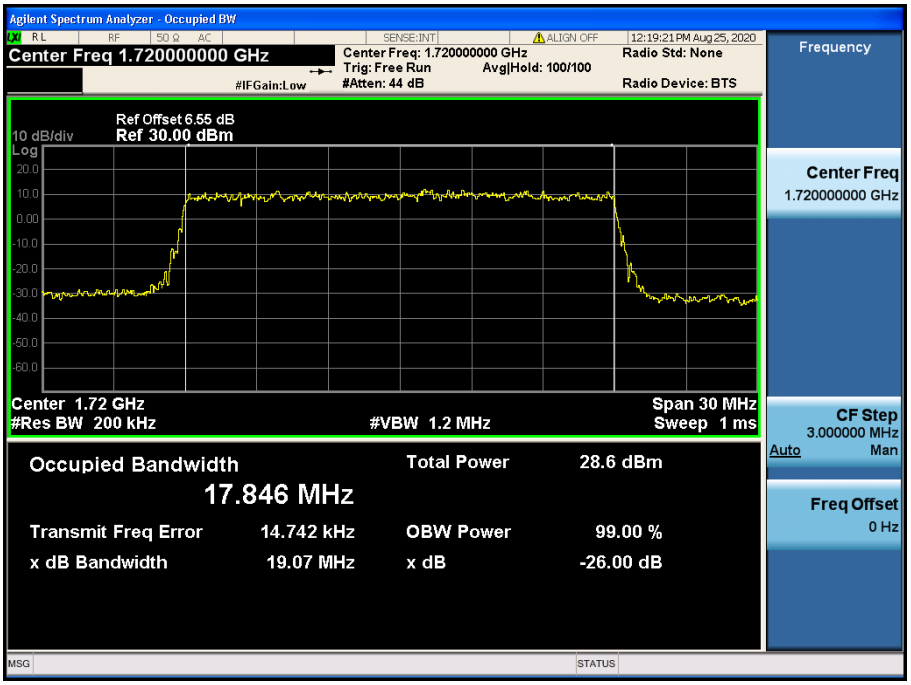


LTE Band 5 / 1.4 MHz / 64QAM - RB Size 6

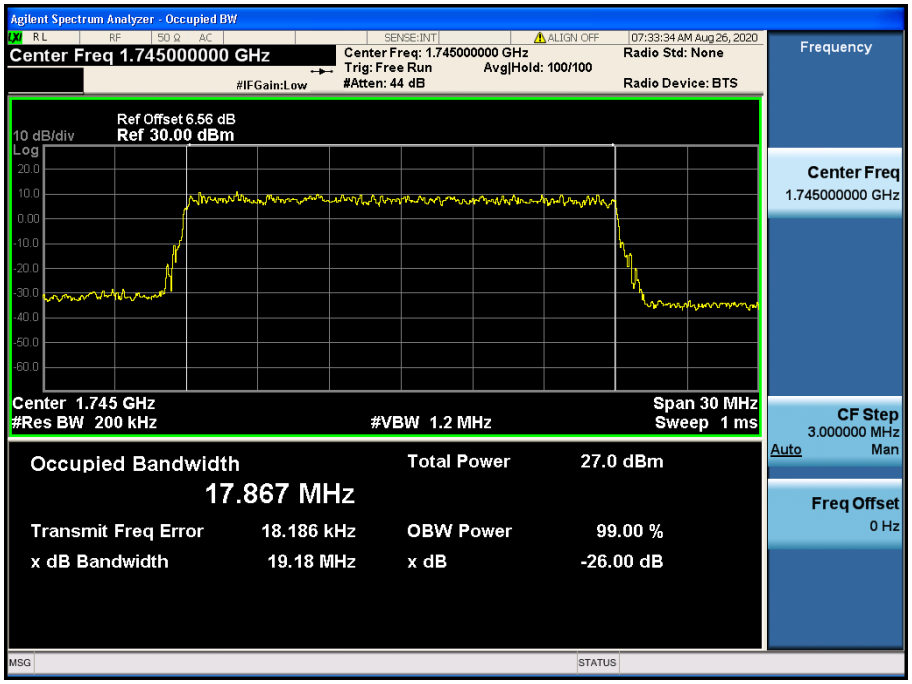
8.1.5 LTE Band 66, 4



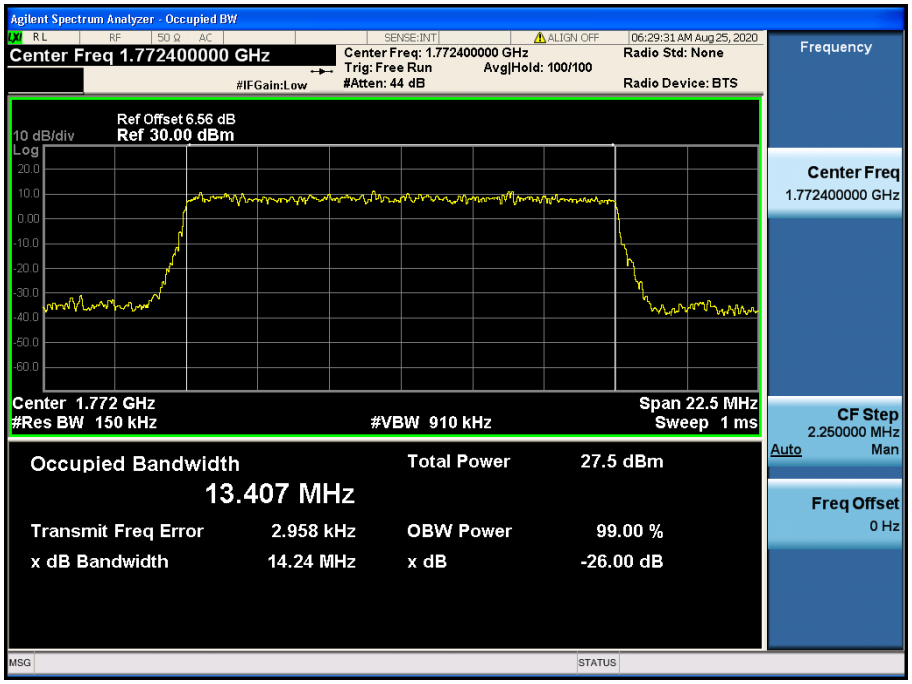
LTE Band 66, 4 / 20 MHz / QPSK - RB Size 100



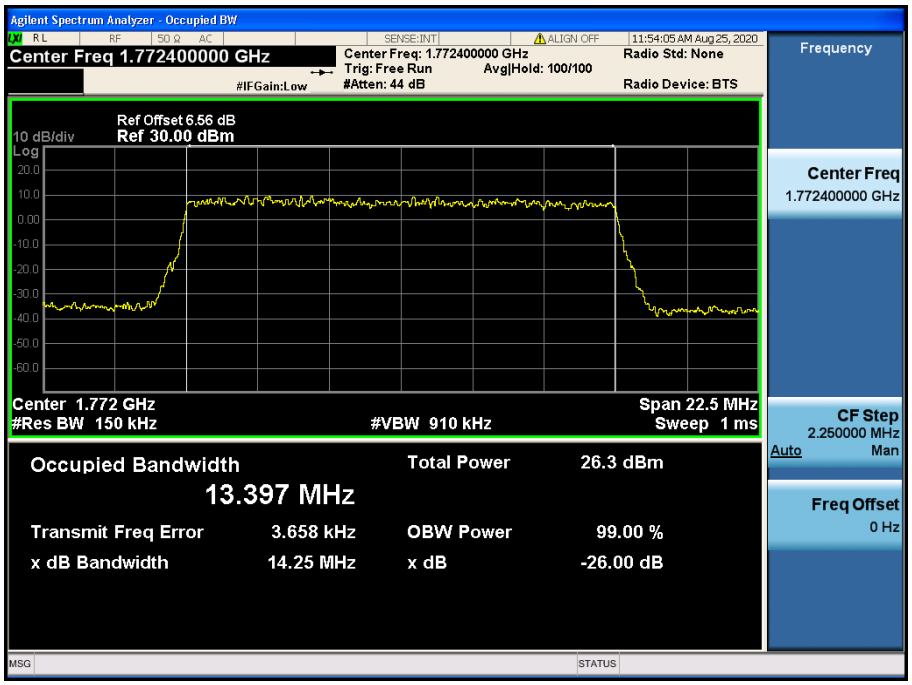
LTE Band 66, 4 / 20 MHz / 16QAM - RB Size 100



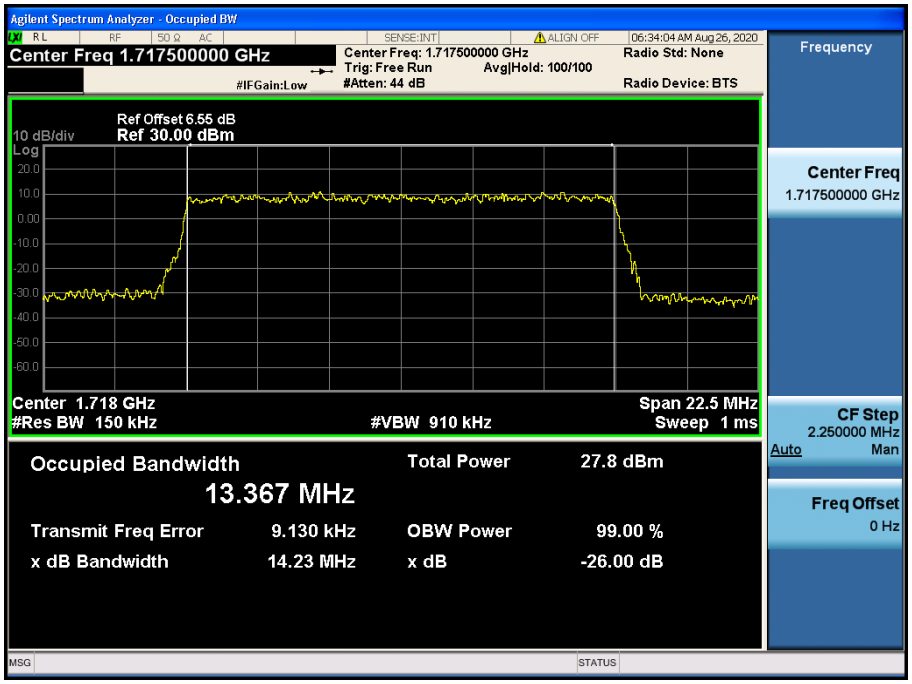
LTE Band 66, 4 / 20 MHz / 64QAM - RB Size 100



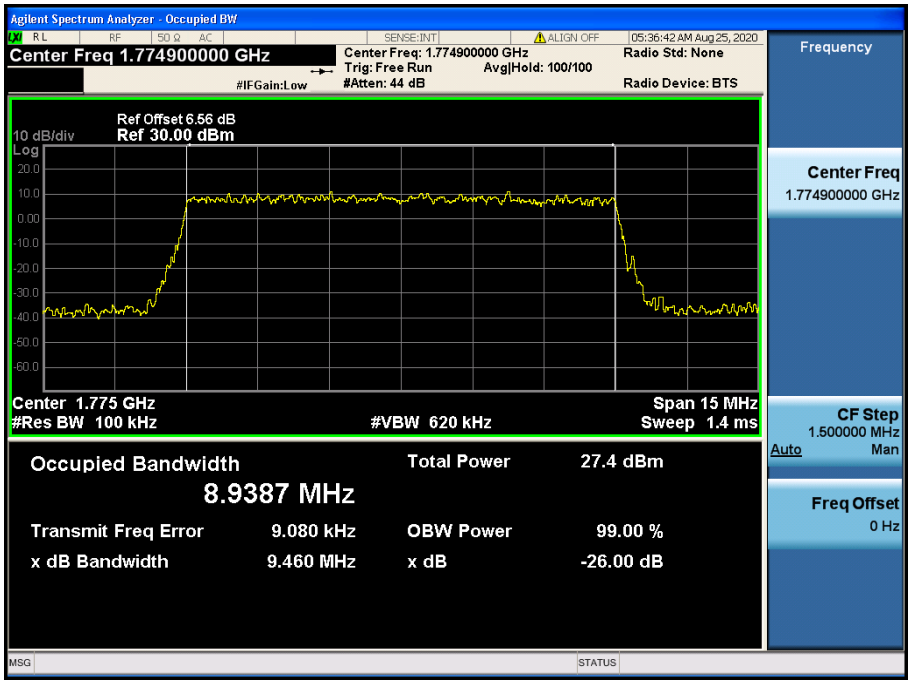
LTE Band 66, 4 / 15 MHz / QPSK - RB Size 75



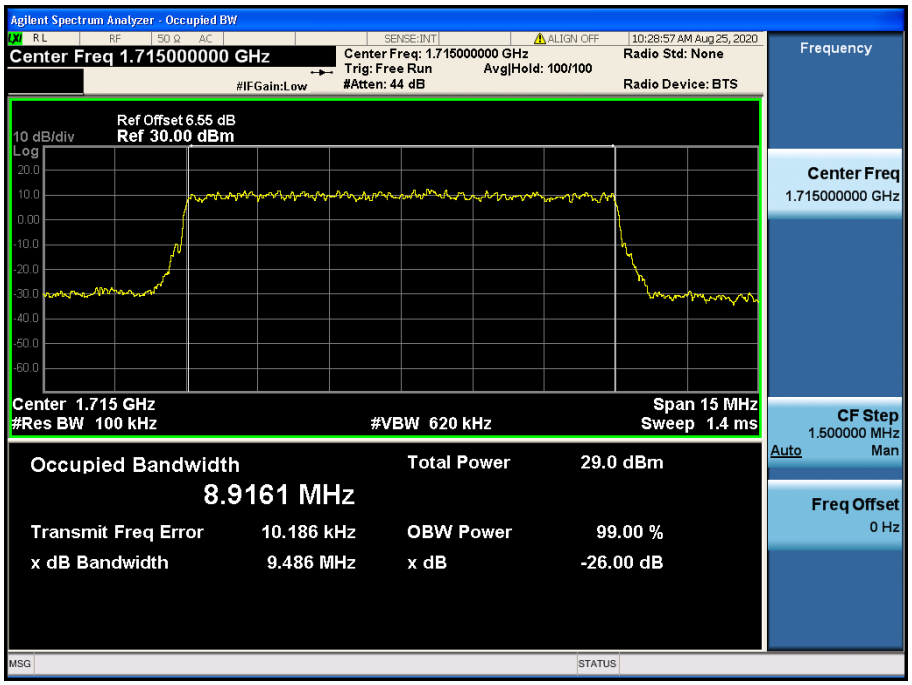
LTE Band 66, 4 / 15 MHz / 16QAM - RB Size 75



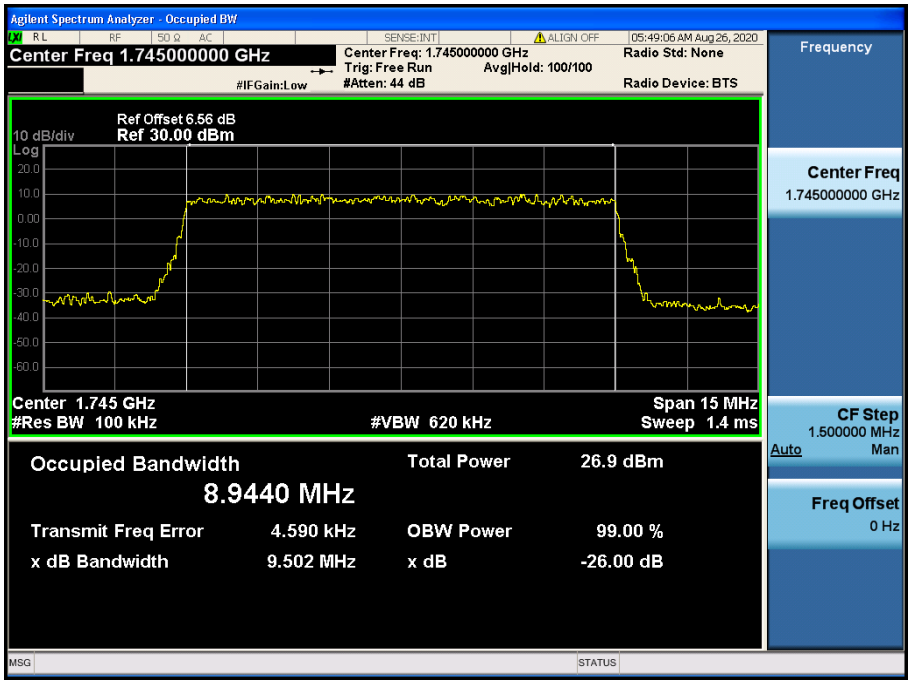
LTE Band 66, 4 / 15 MHz / 64QAM - RB Size 75



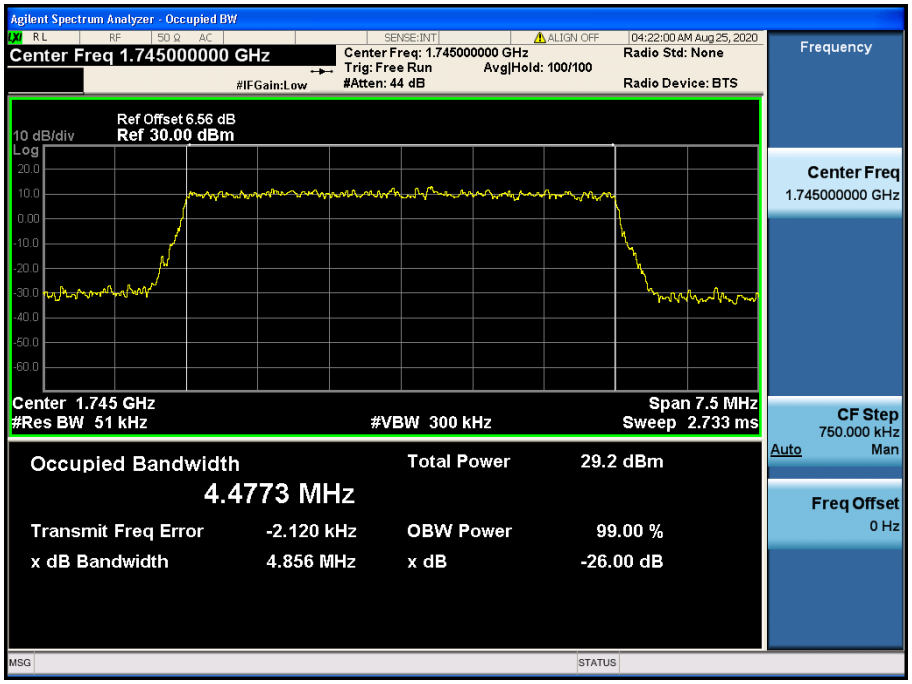
LTE Band 66, 4 / 10 MHz / QPSK - RB Size 50



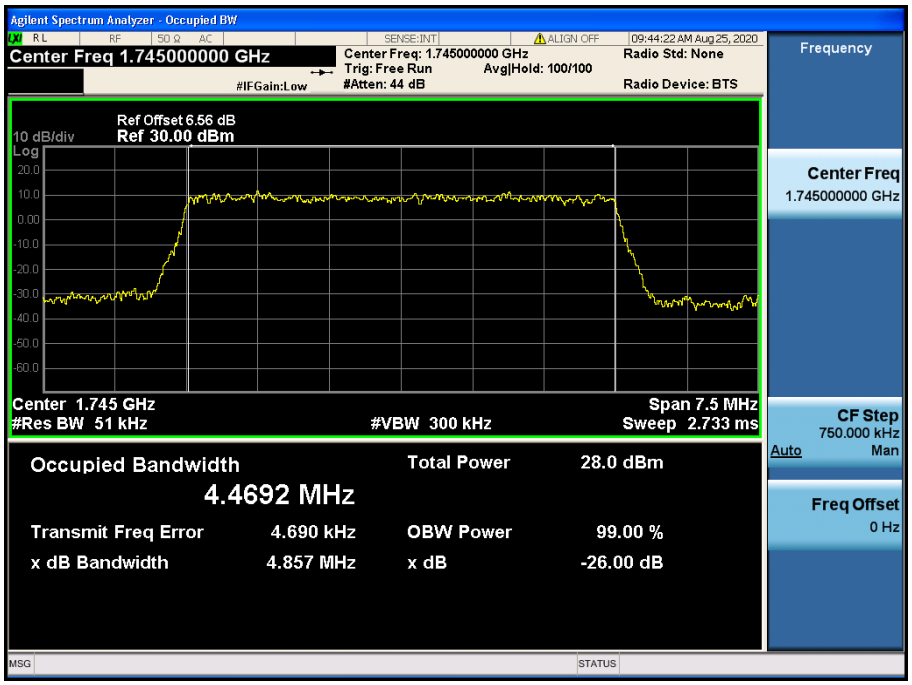
LTE Band 66, 4 / 10 MHz / 16QAM - RB Size 50



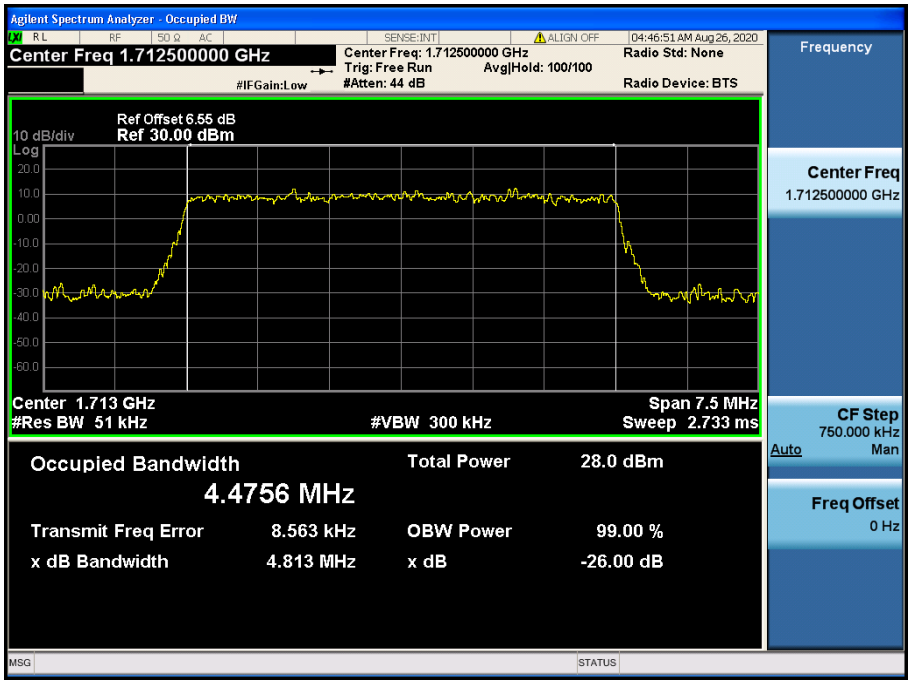
LTE Band 66, 4 / 10 MHz / 64QAM - RB Size 50



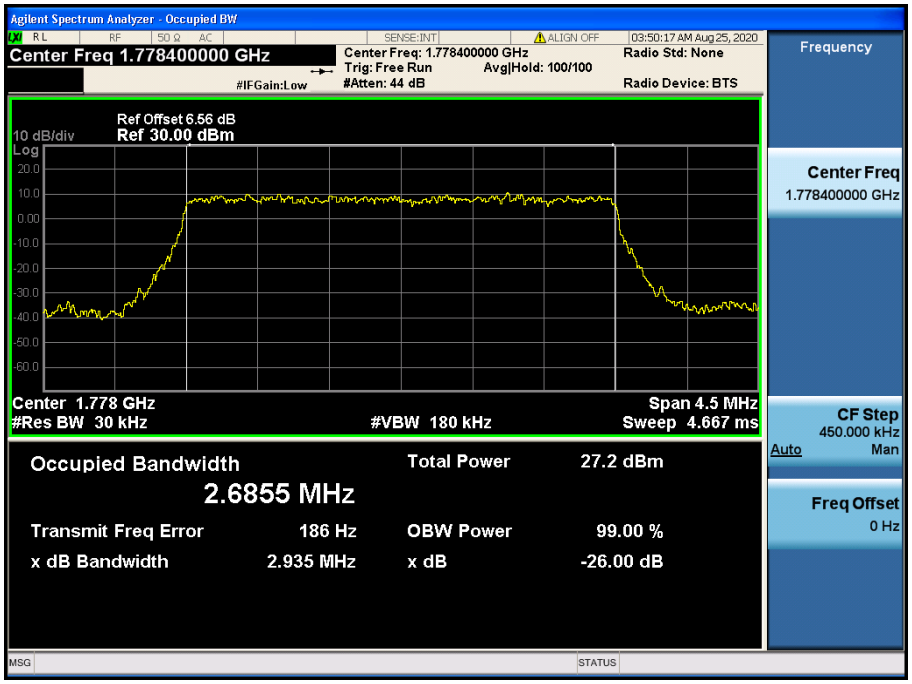
LTE Band 66, 4 / 5 MHz / QPSK - RB Size 25



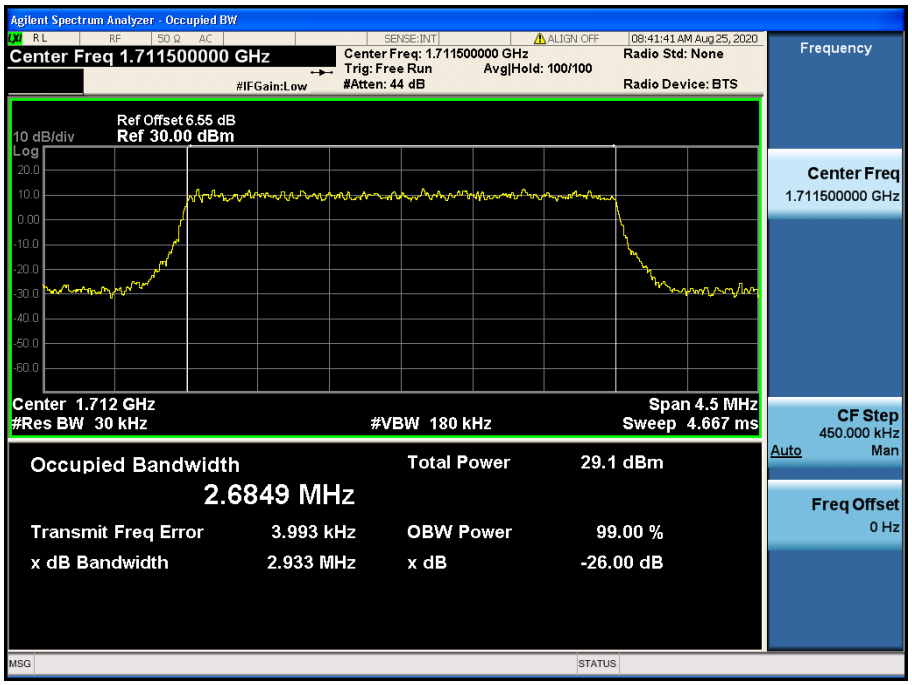
LTE Band 66, 4 / 5 MHz / 16QAM - RB Size 25



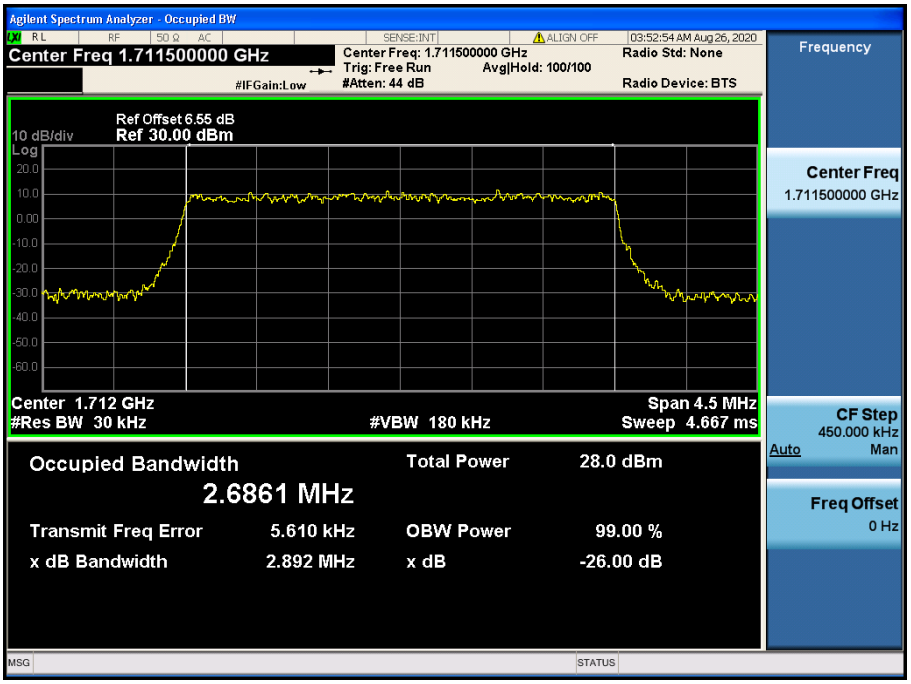
LTE Band 66, 4 / 5 MHz / 64QAM - RB Size 25



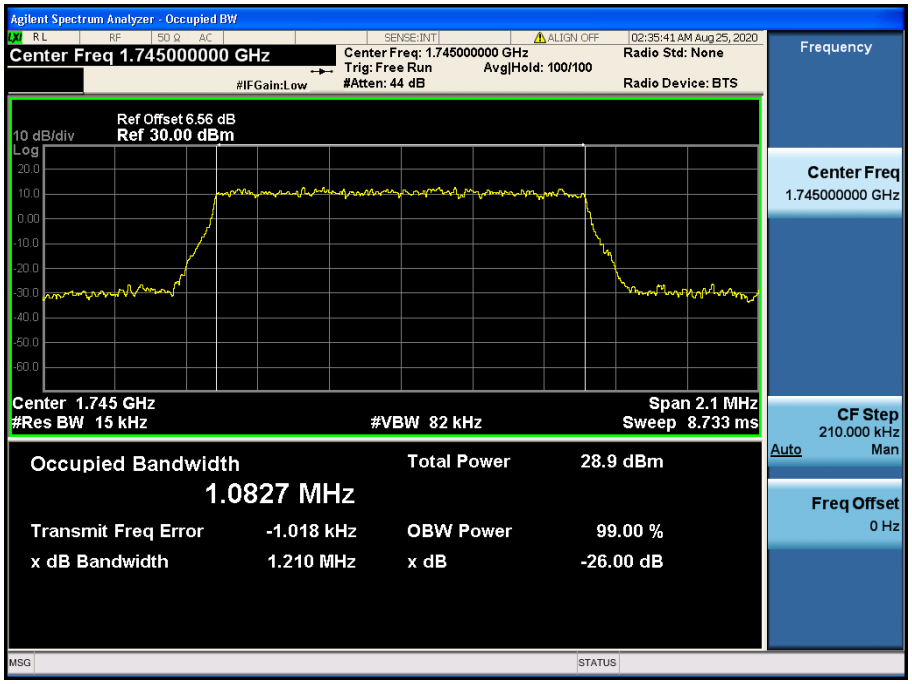
LTE Band 66, 4 / 3 MHz / QPSK - RB Size 15



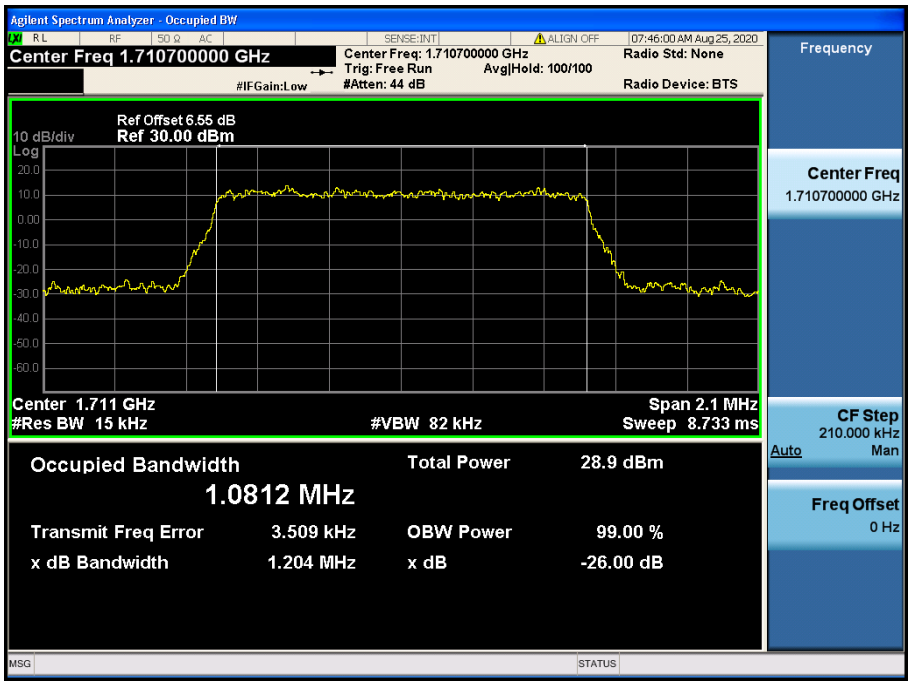
LTE Band 66, 4 / 3 MHz / 16QAM - RB Size 15



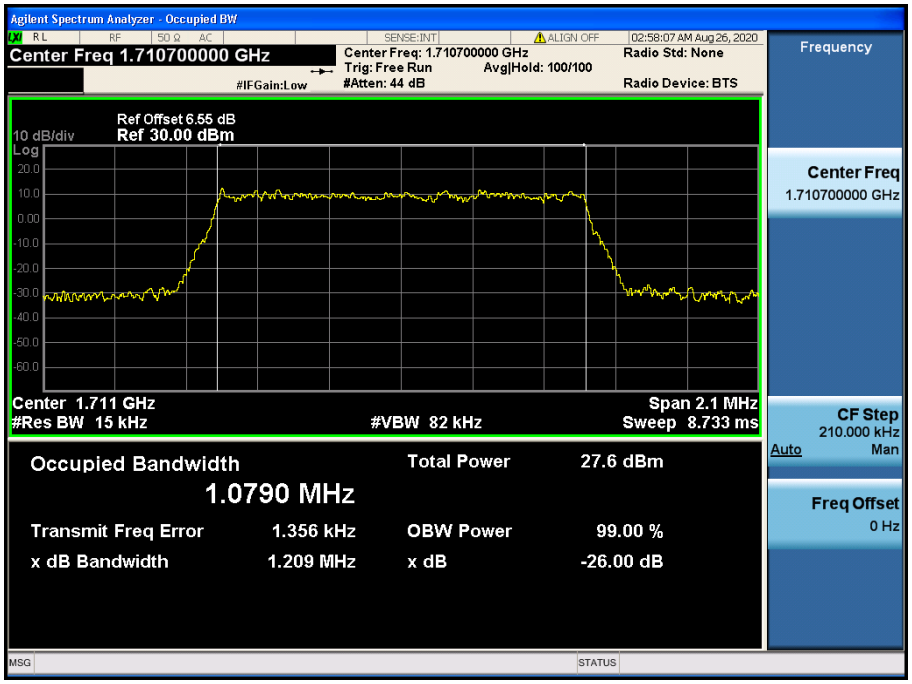
LTE Band 66, 4 / 3 MHz / 64QAM - RB Size 15



LTE Band 66, 4 / 1.4 MHz / QPSK - RB Size 6

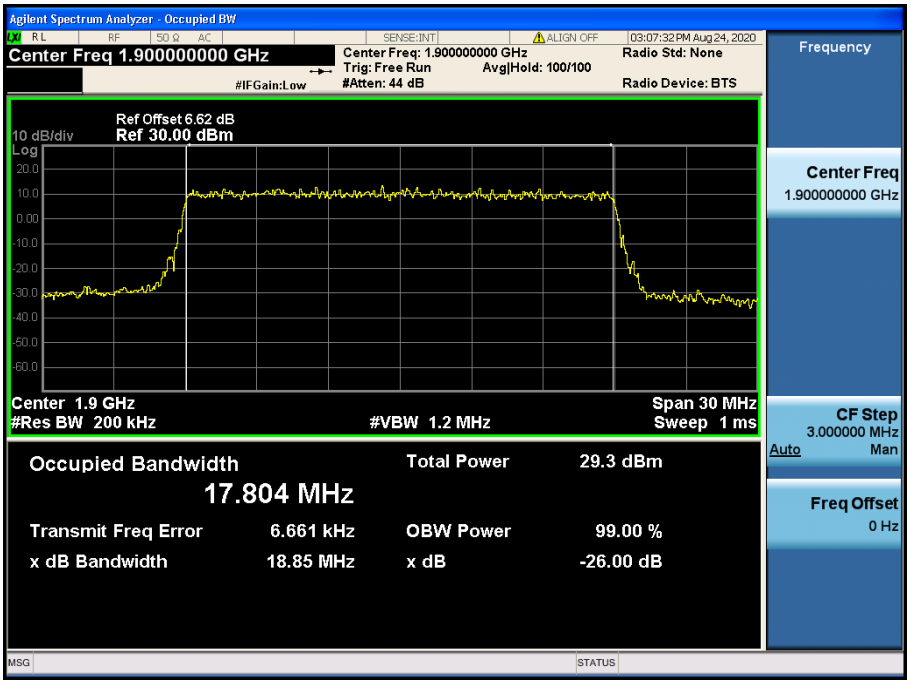


LTE Band 66, 4 / 1.4 MHz / 16QAM - RB Size 6

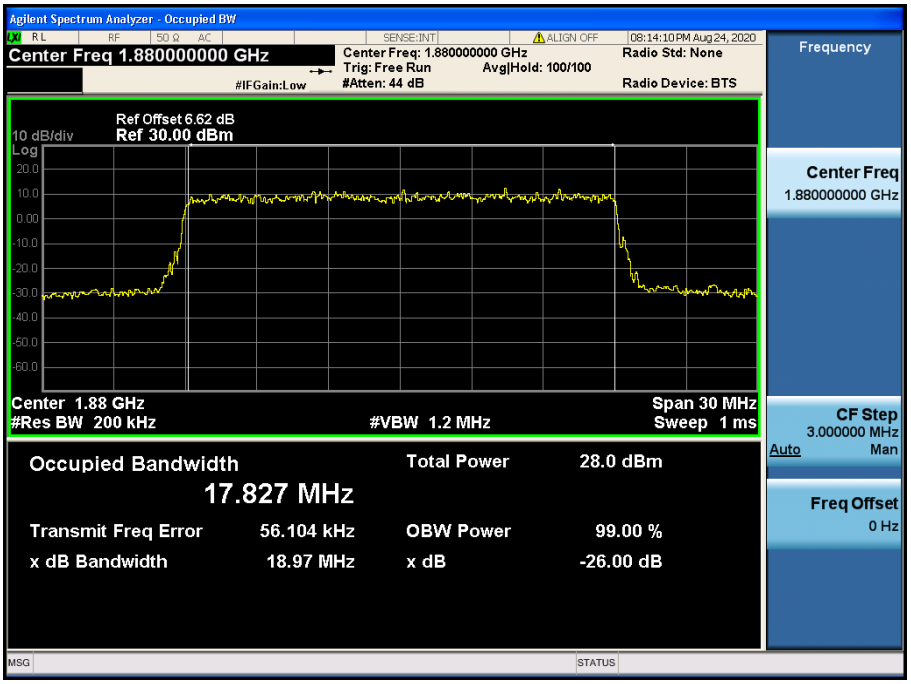


LTE Band 66,4 / 1.4 MHz / 64QAM - RB Size 6

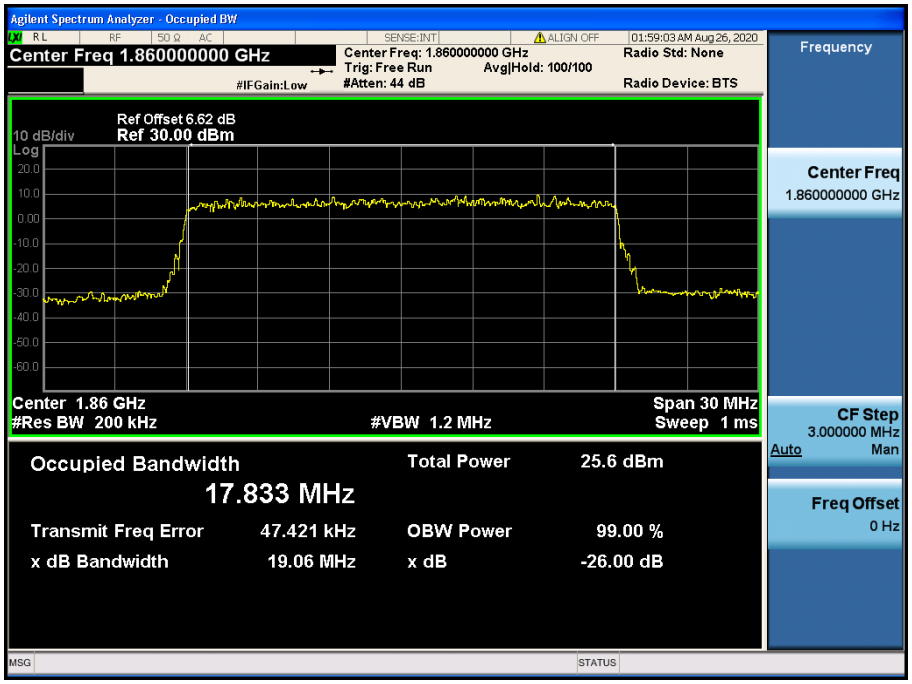
8.1.6 LTE Band 2



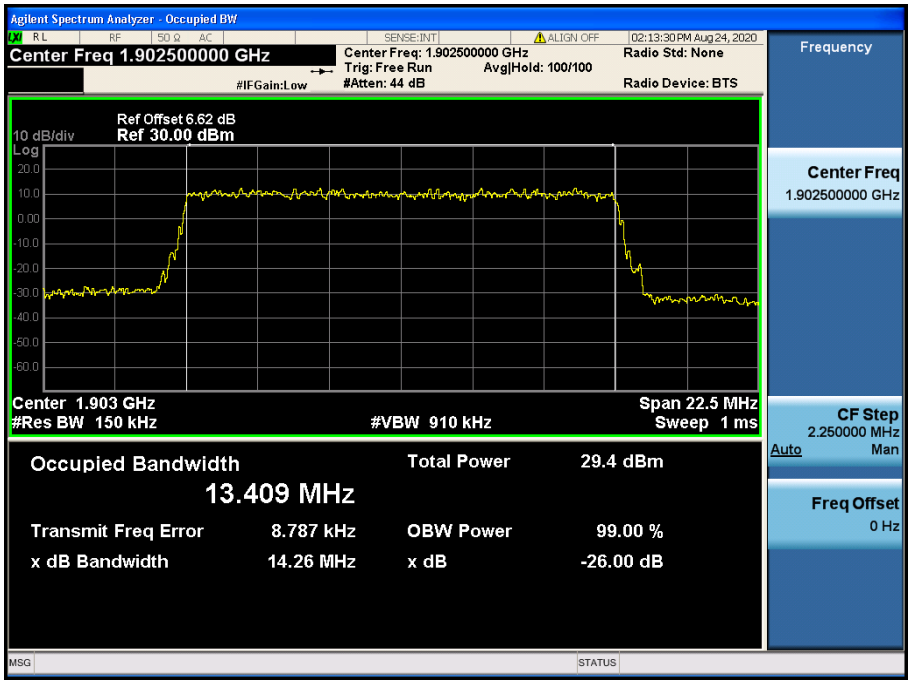
LTE Band 2 / 20 MHz / QPSK - RB Size 100



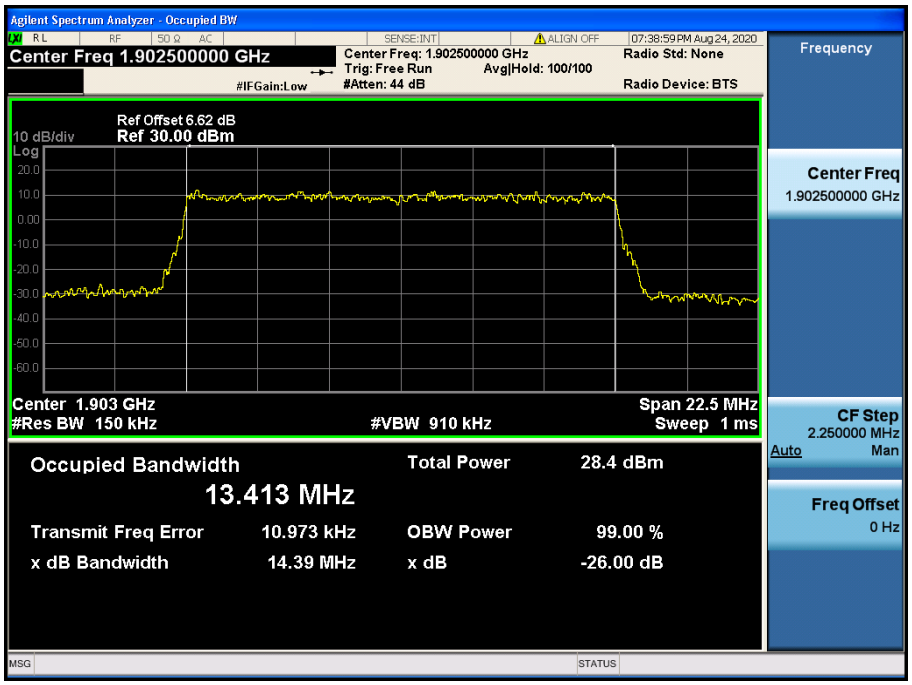
LTE Band 2 / 20 MHz / 16QAM - RB Size 100



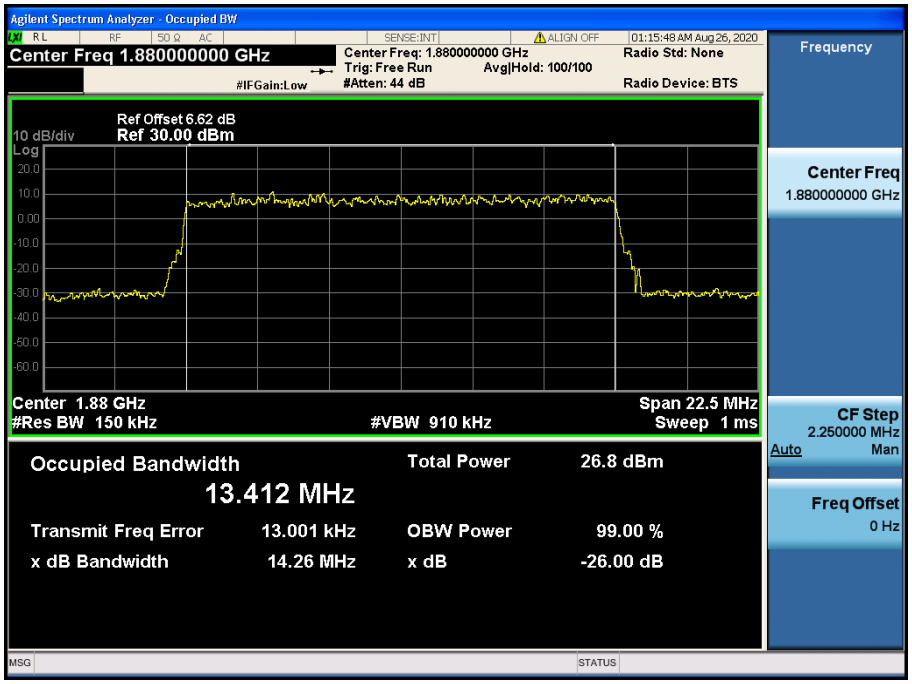
LTE Band 2 / 20 MHz / 64QAM - RB Size 100



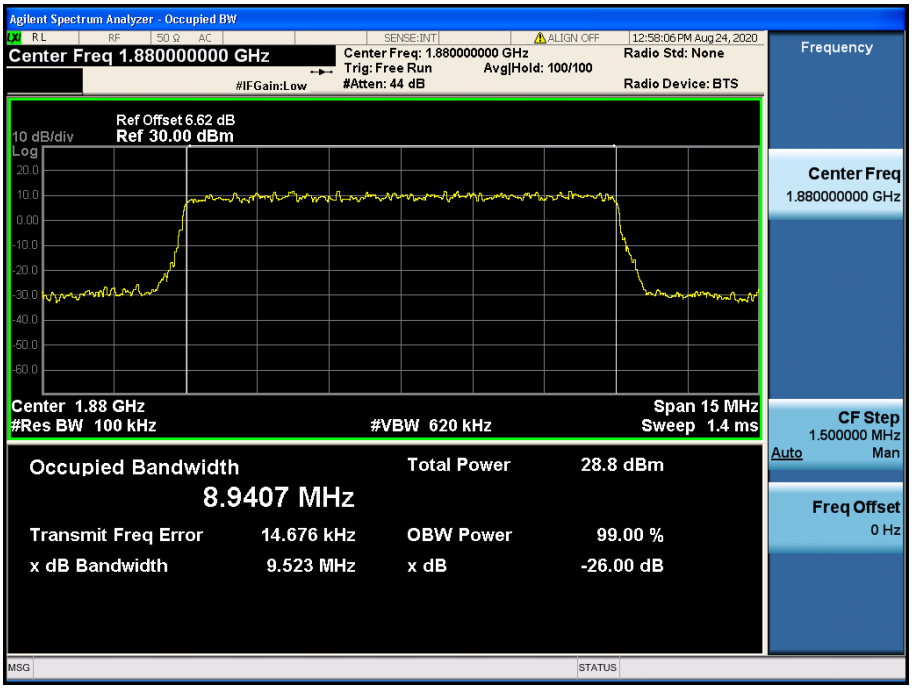
LTE Band 2 / 15 MHz / QPSK - RB Size 75



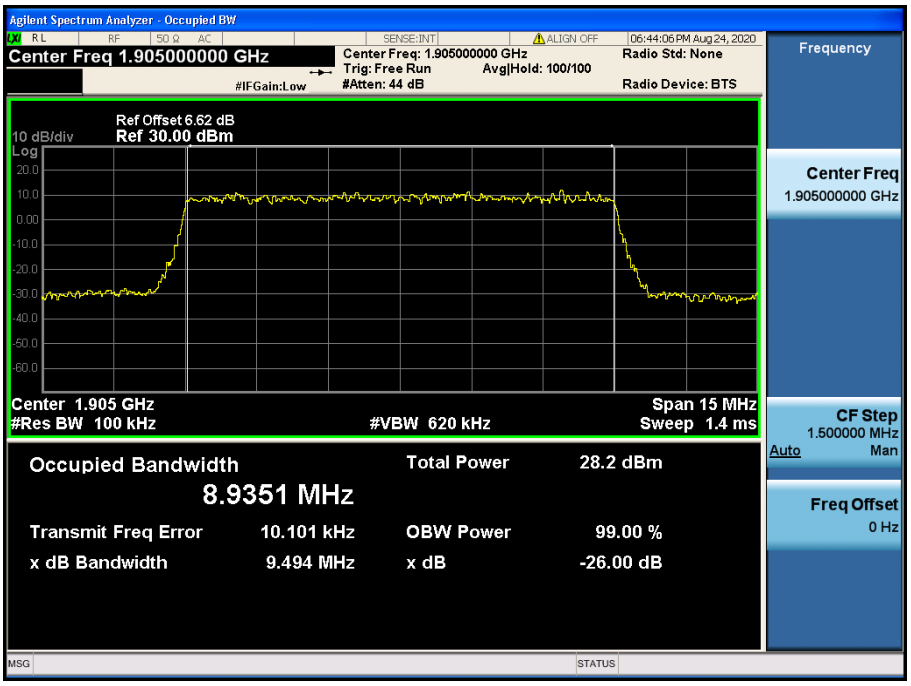
LTE Band 2 / 15 MHz / 16QAM - RB Size 75



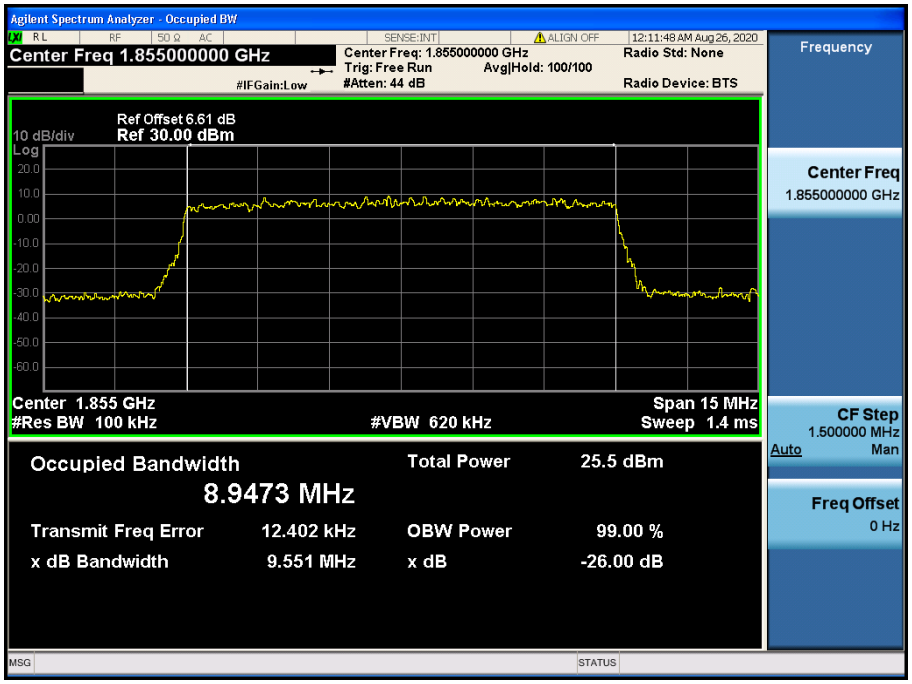
LTE Band 2 / 15 MHz / 64QAM - RB Size 75



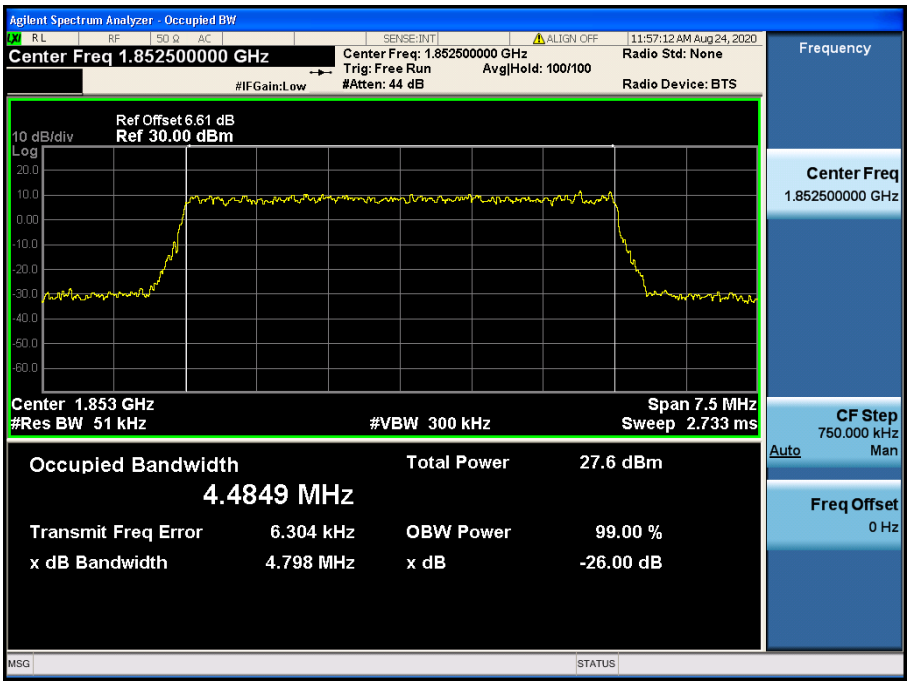
LTE Band 2 / 10 MHz / QPSK - RB Size 50



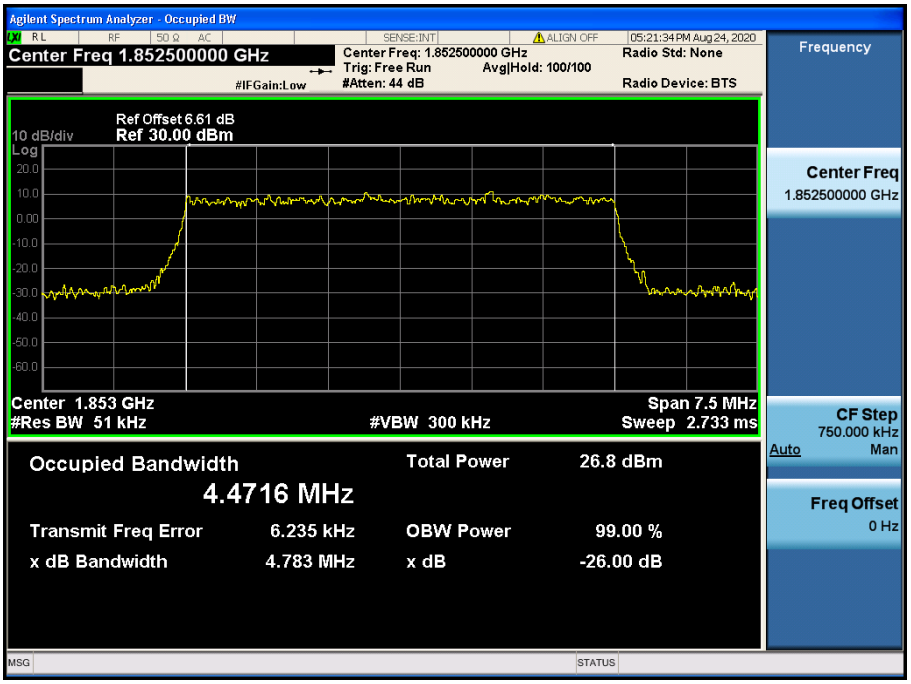
LTE Band 2 / 10 MHz / 16QAM - RB Size 50



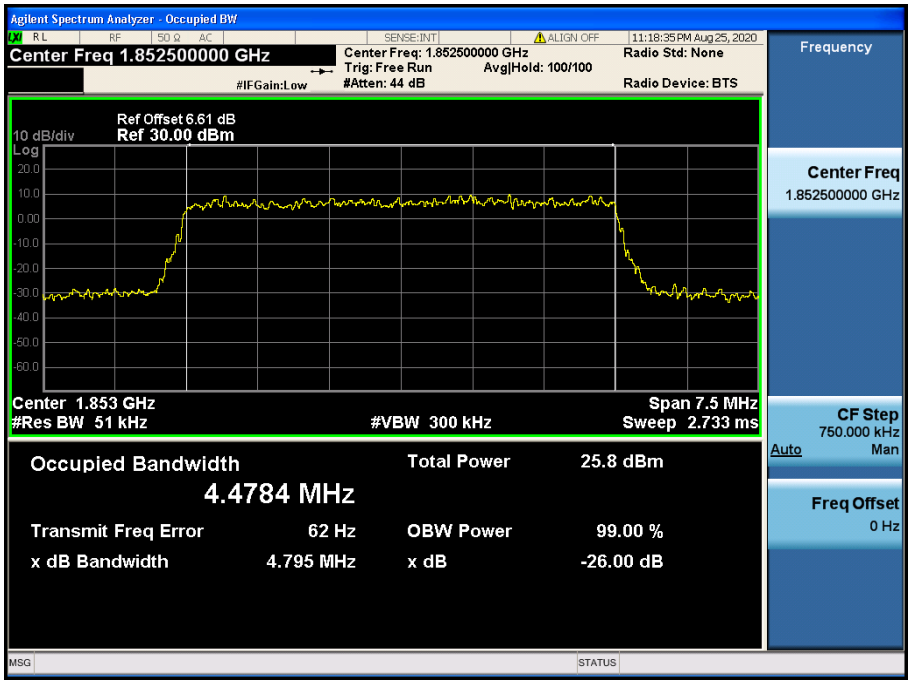
LTE Band 2 / 10 MHz / 64QAM - RB Size 50



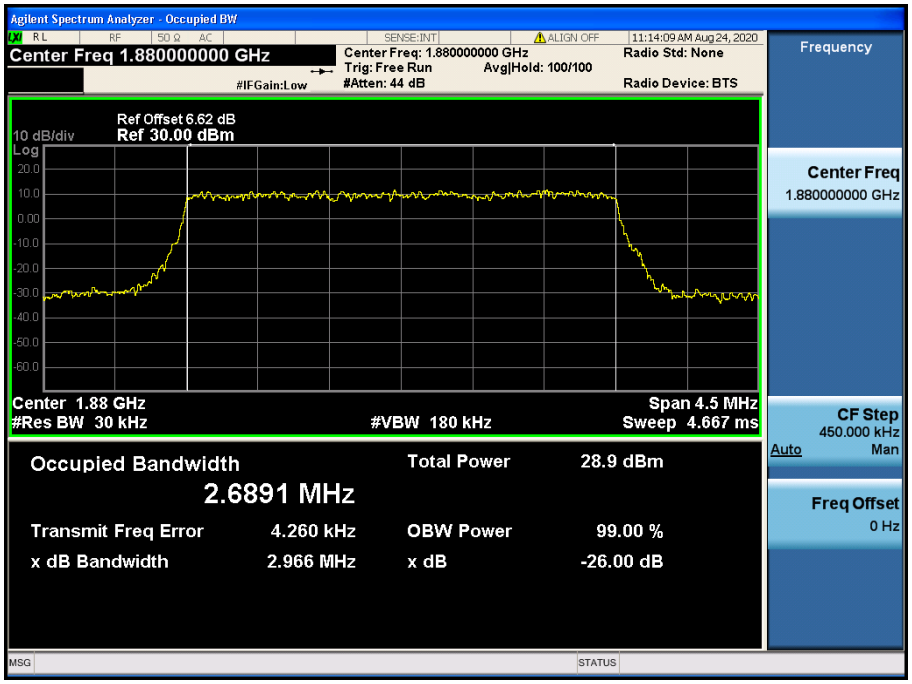
LTE Band 2 / 5 MHz / QPSK - RB Size 25



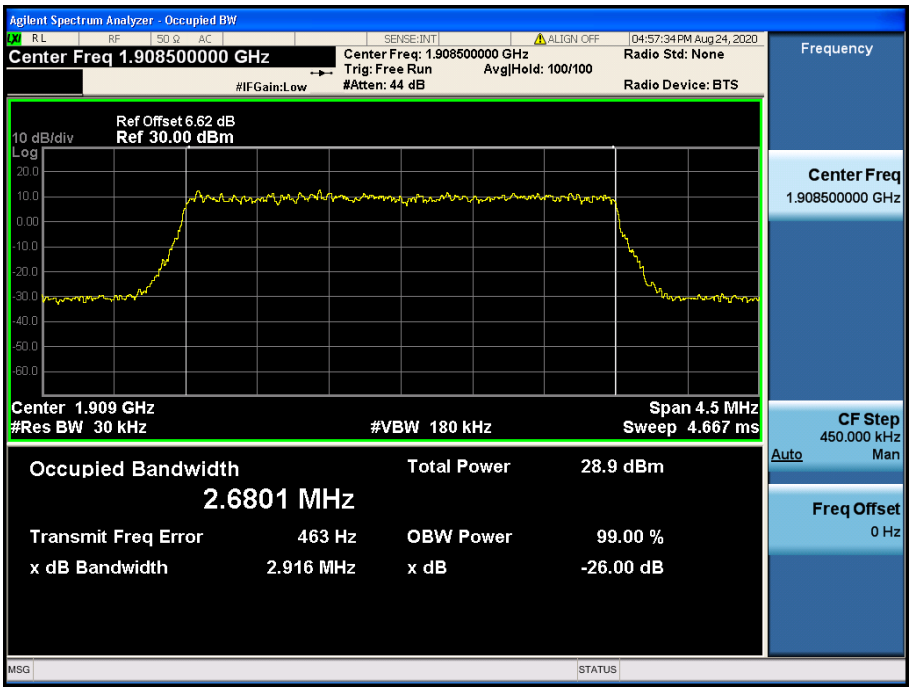
LTE Band 2 / 5 MHz / 16QAM - RB Size 25



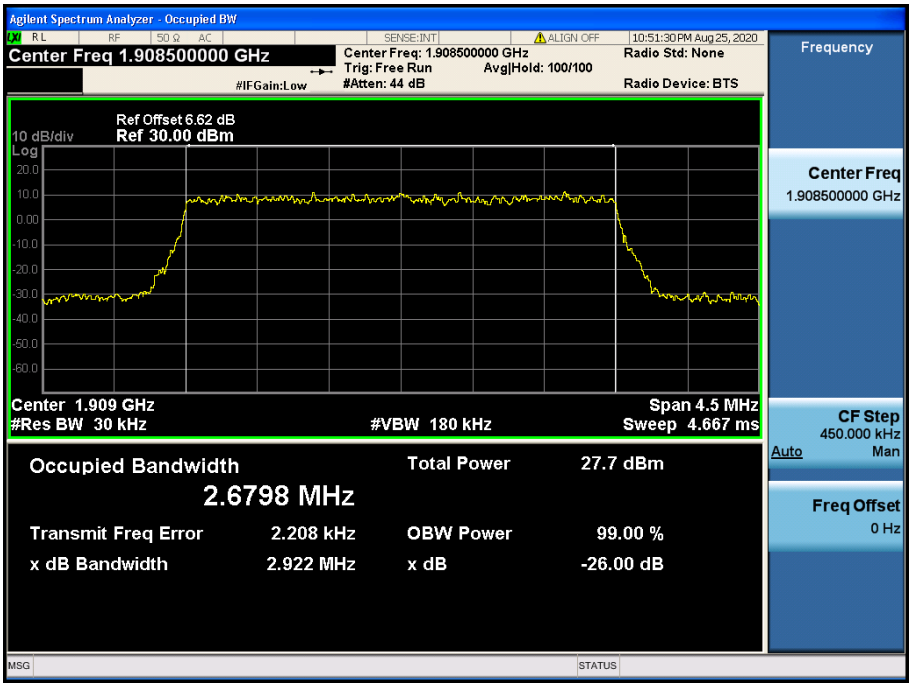
LTE Band 2 / 5 MHz / 64QAM - RB Size 25



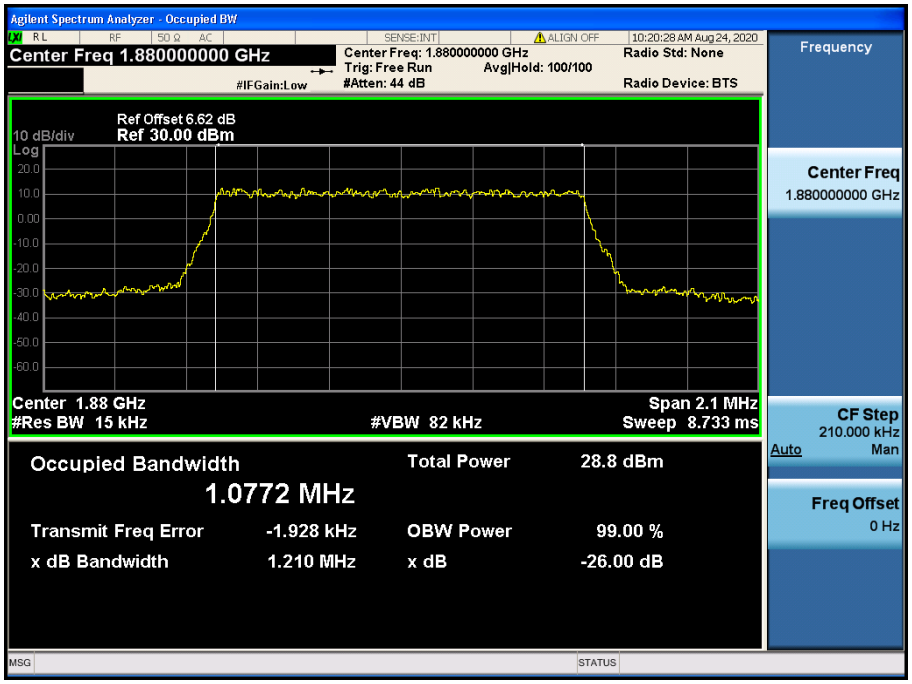
LTE Band 2 / 3 MHz / QPSK - RB Size 15



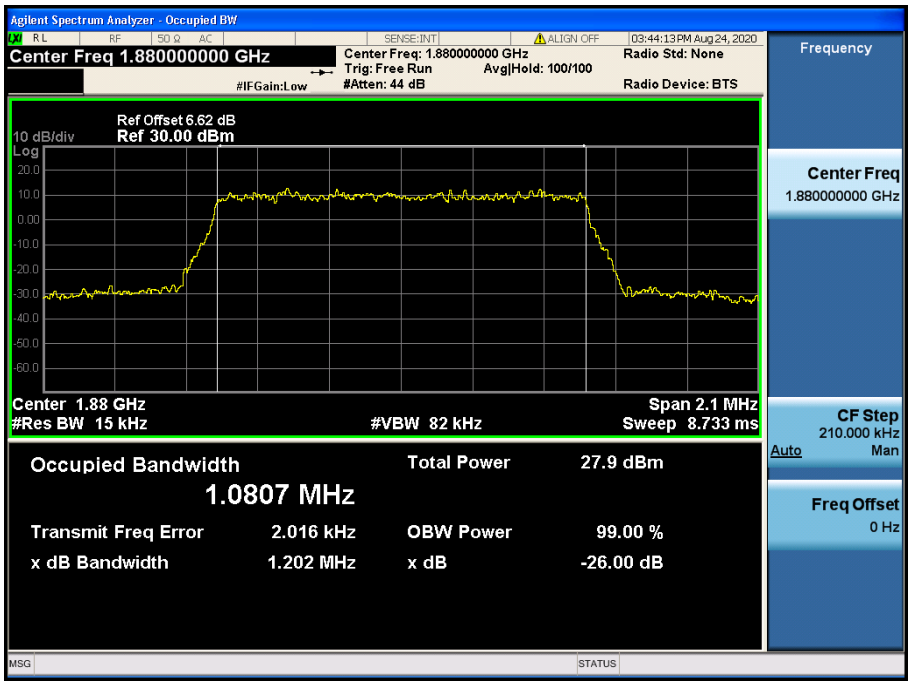
LTE Band 2 / 3 MHz / 16QAM - RB Size 15



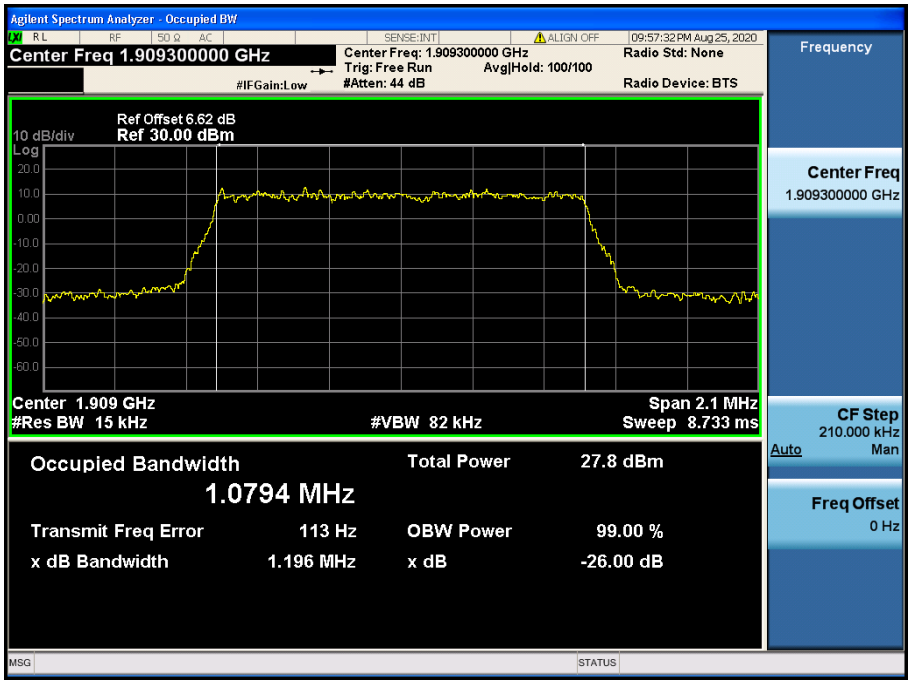
LTE Band 2 / 3 MHz / 64QAM - RB Size 15



LTE Band 2 / 1.4 MHz / QPSK - RB Size 6

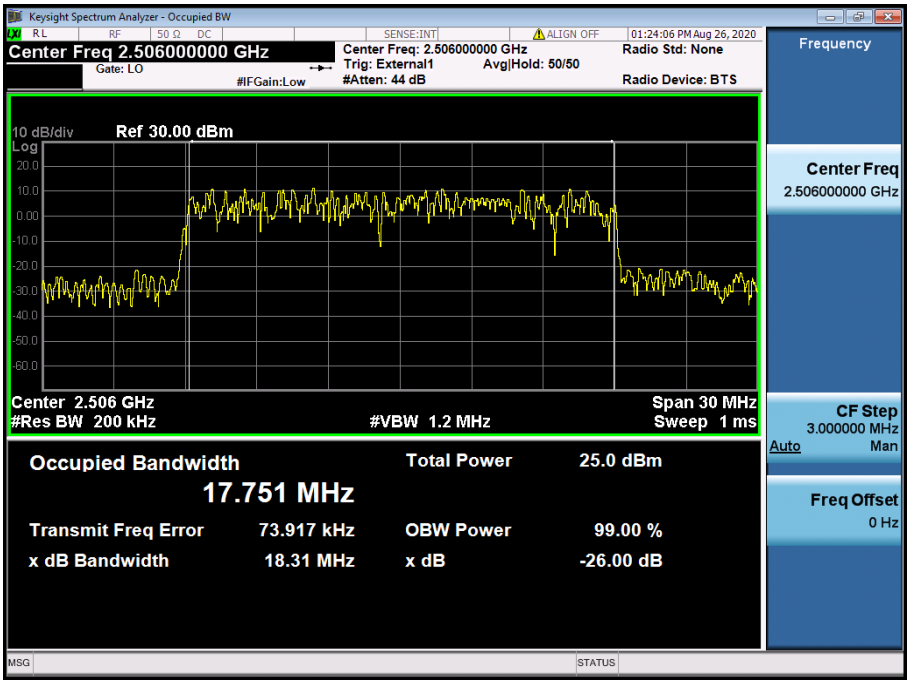


LTE Band 2 / 1.4 MHz / 16QAM - RB Size 6

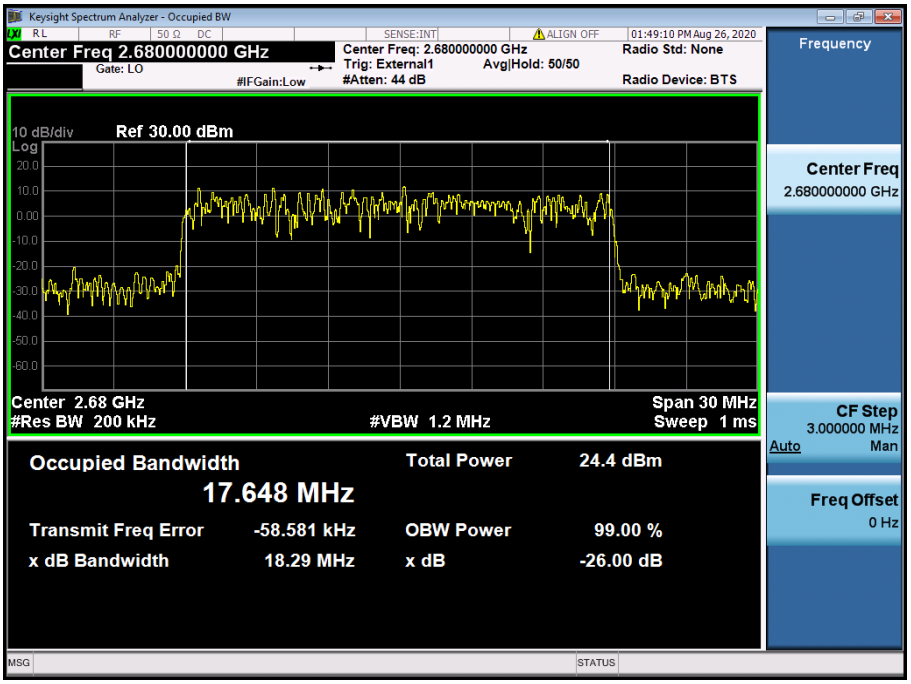


LTE Band 2 / 1.4 MHz / 64QAM - RB Size 6

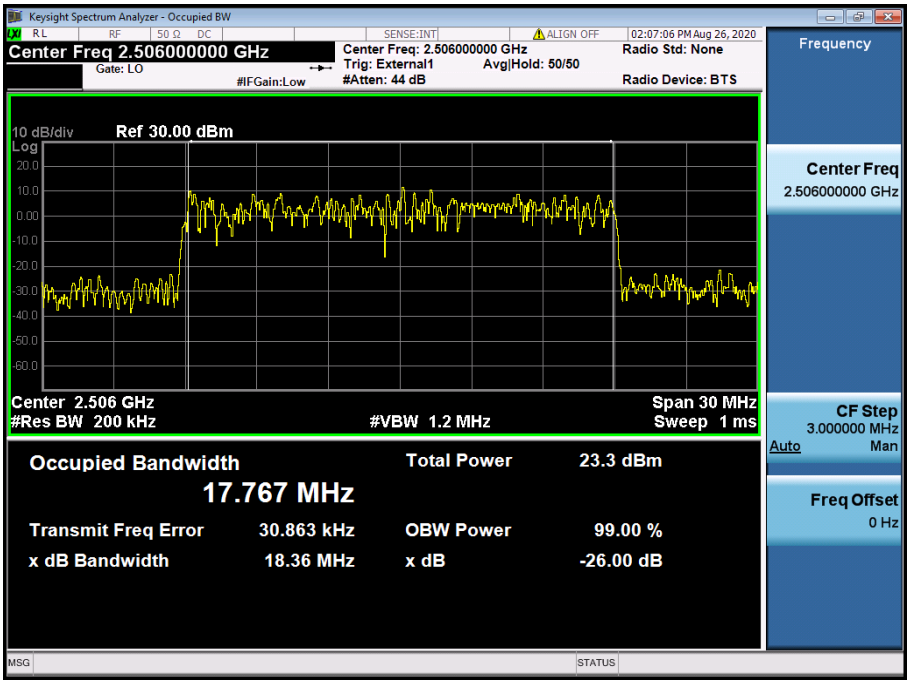
8.1.7 LTE Band 41



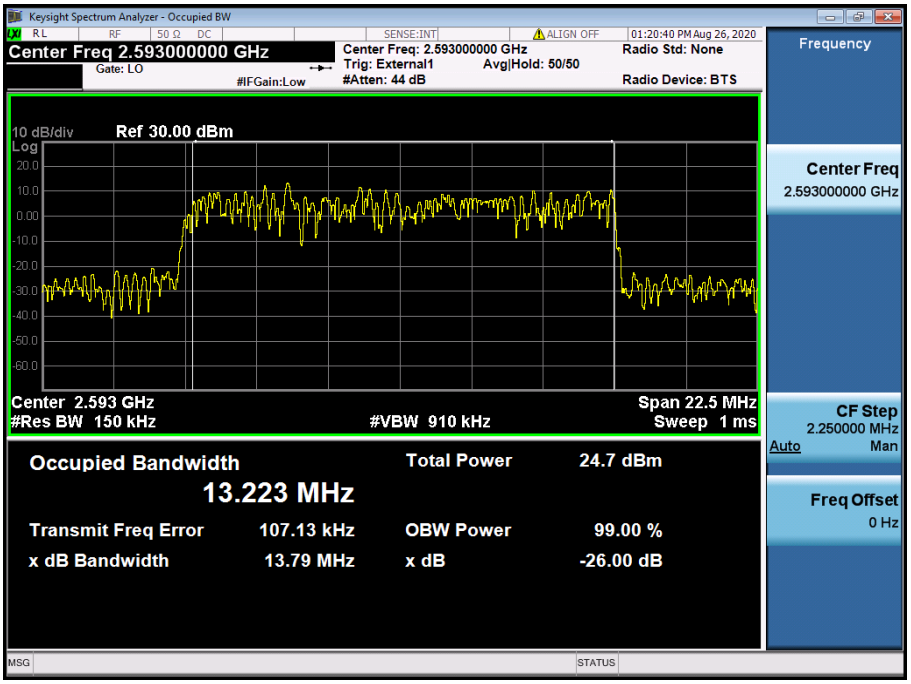
LTE Band 41 / 20 MHz / QPSK - RB Size 100



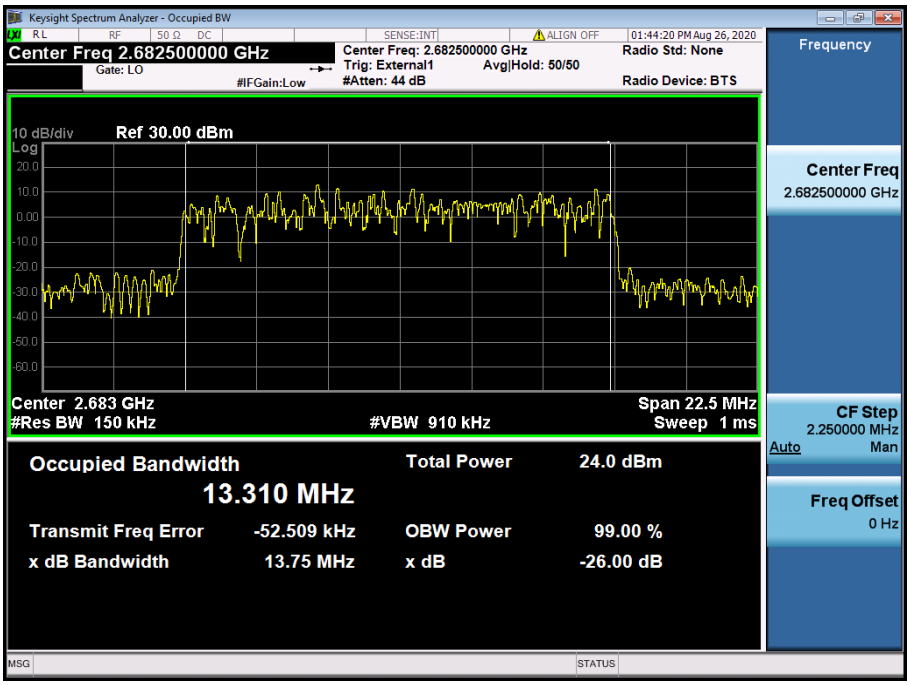
LTE Band 41 / 20 MHz / 16QAM - RB Size 100



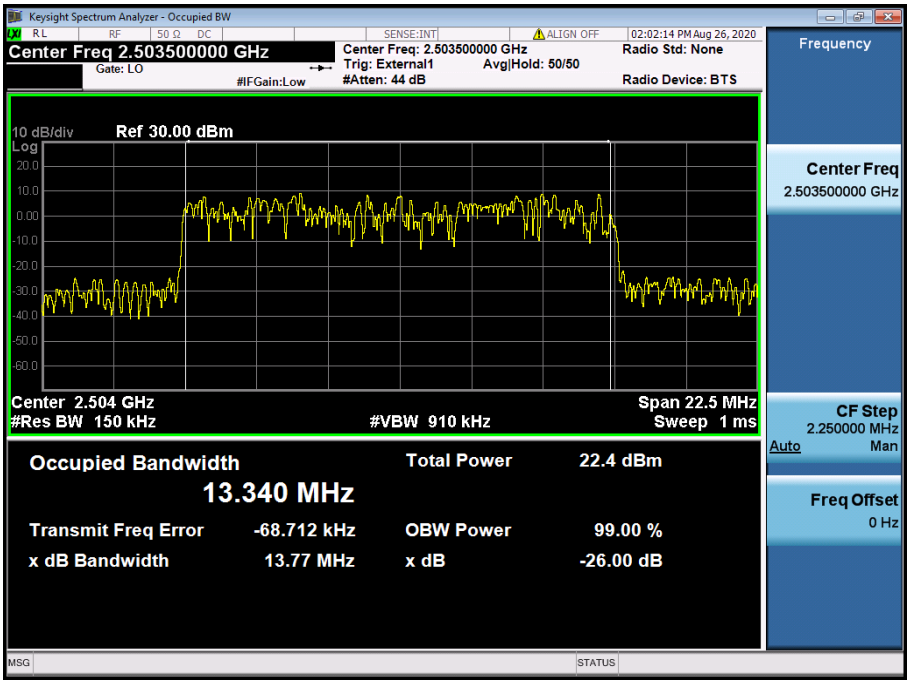
LTE Band 41 / 20 MHz / 64QAM - RB Size 100



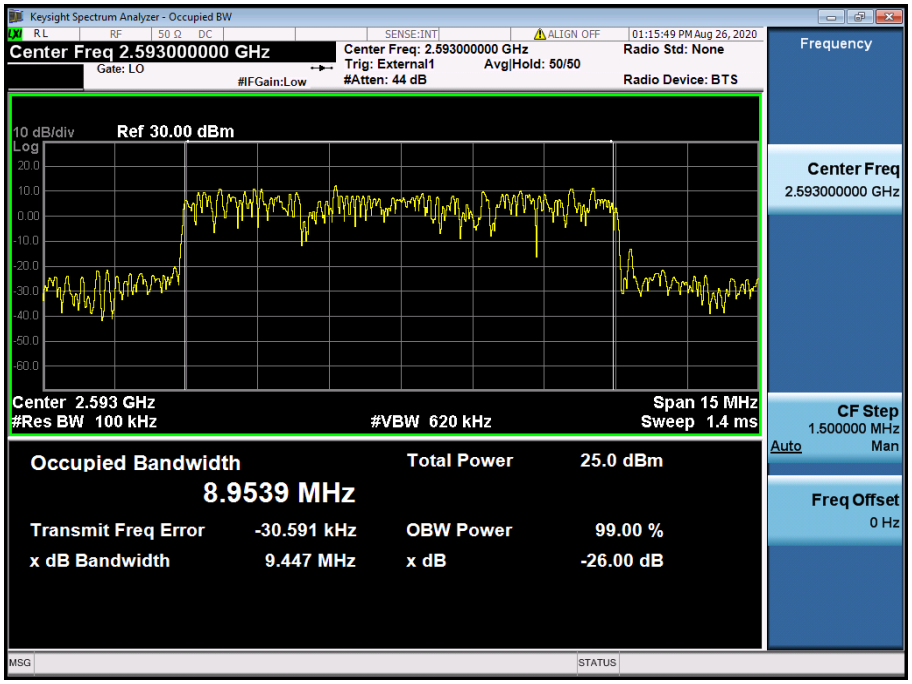
LTE Band 41 / 15 MHz / QPSK - RB Size 75



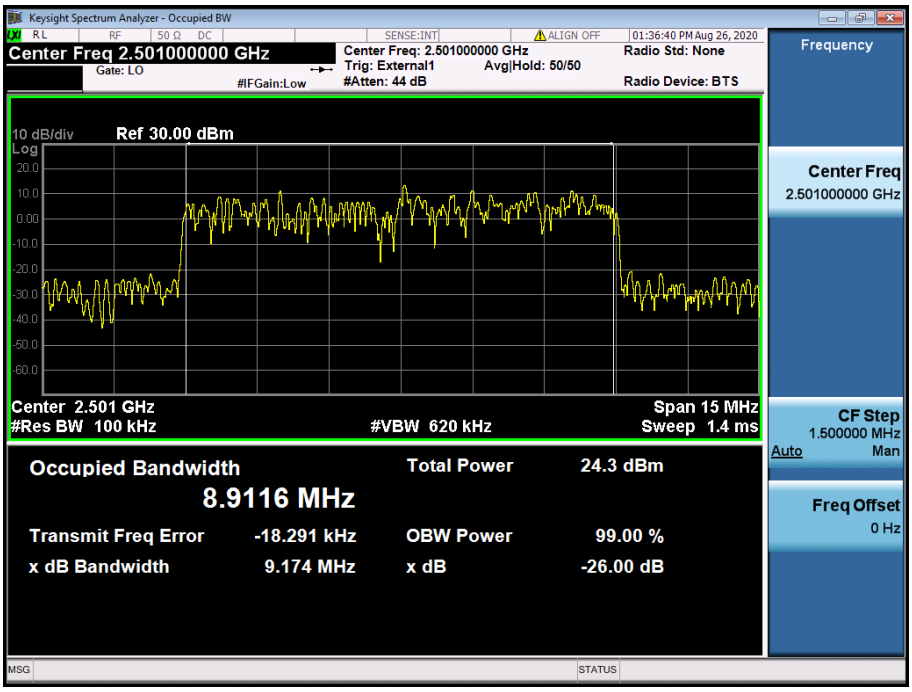
LTE Band 41 / 15 MHz / 16QAM - RB Size 75



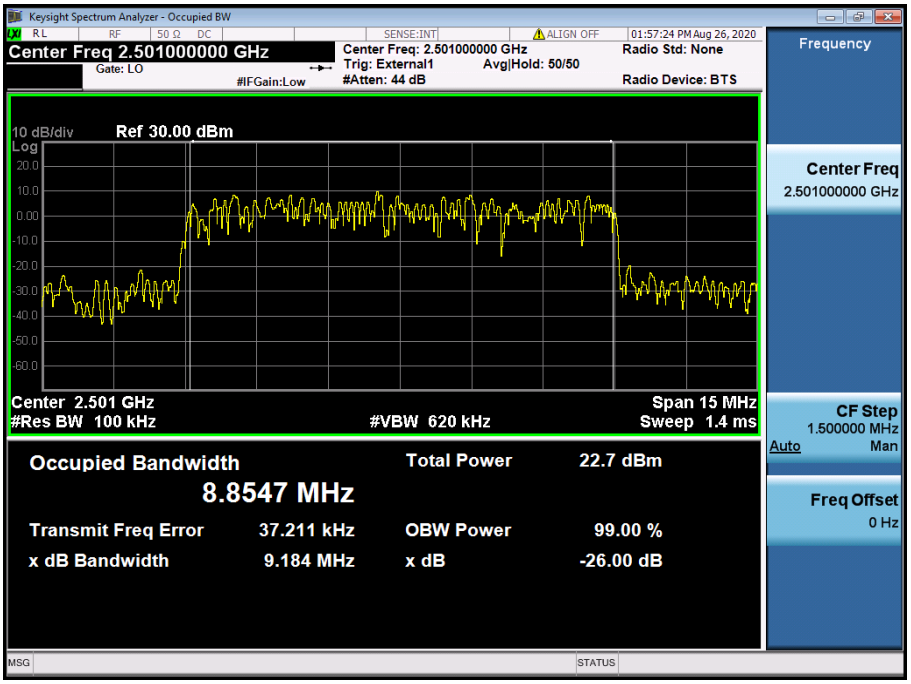
LTE Band 41 / 15 MHz / 64QAM - RB Size 75



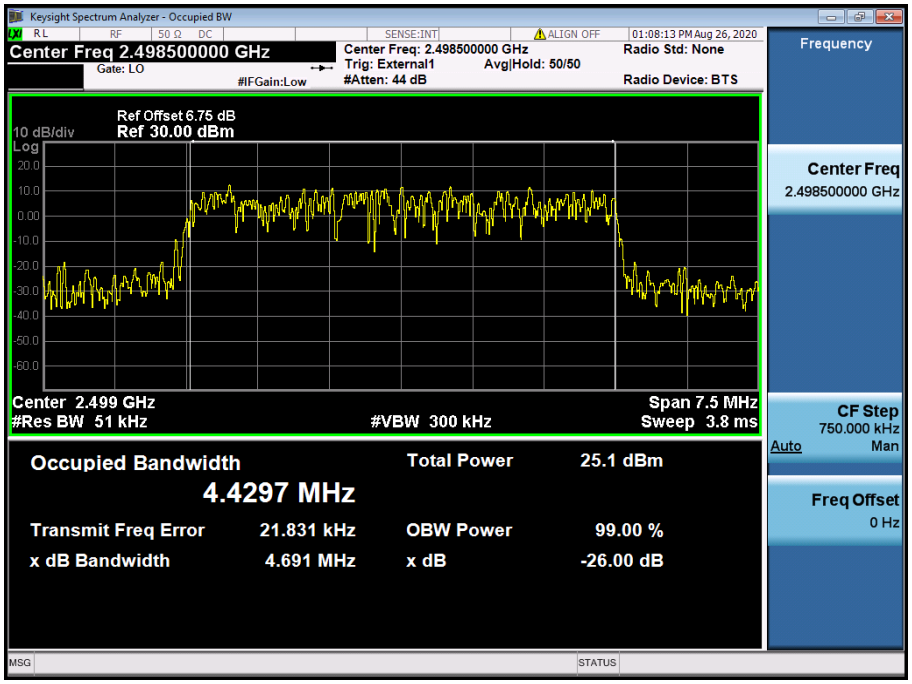
LTE Band 41 / 10 MHz / QPSK - RB Size 50



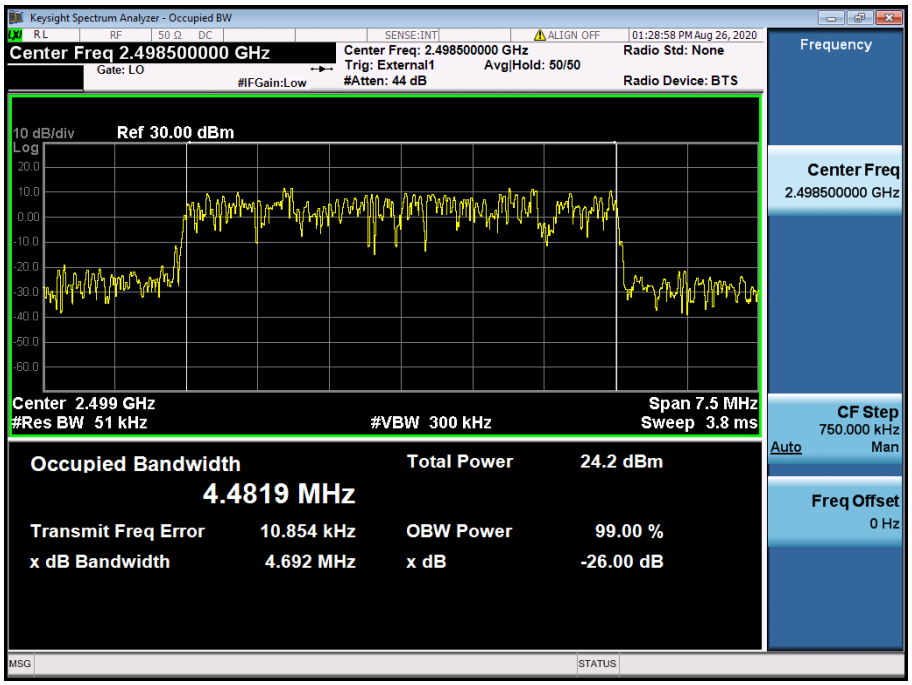
LTE Band 41 / 10 MHz / 16QAM - RB Size 50



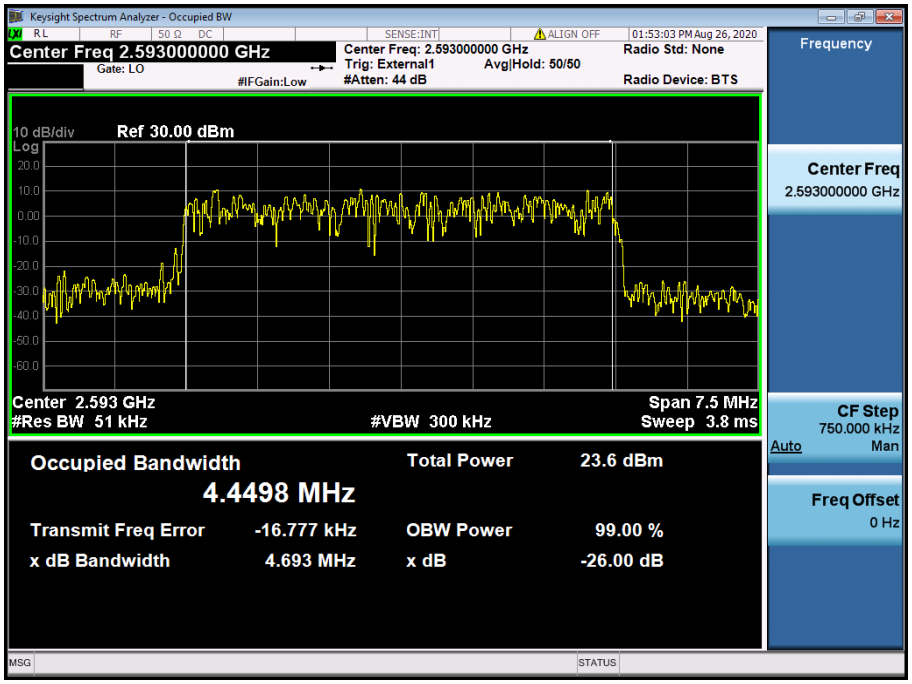
LTE Band 41 / 10 MHz / 64QAM - RB Size 50



LTE Band 41 / 5 MHz / QPSK - RB Size 25



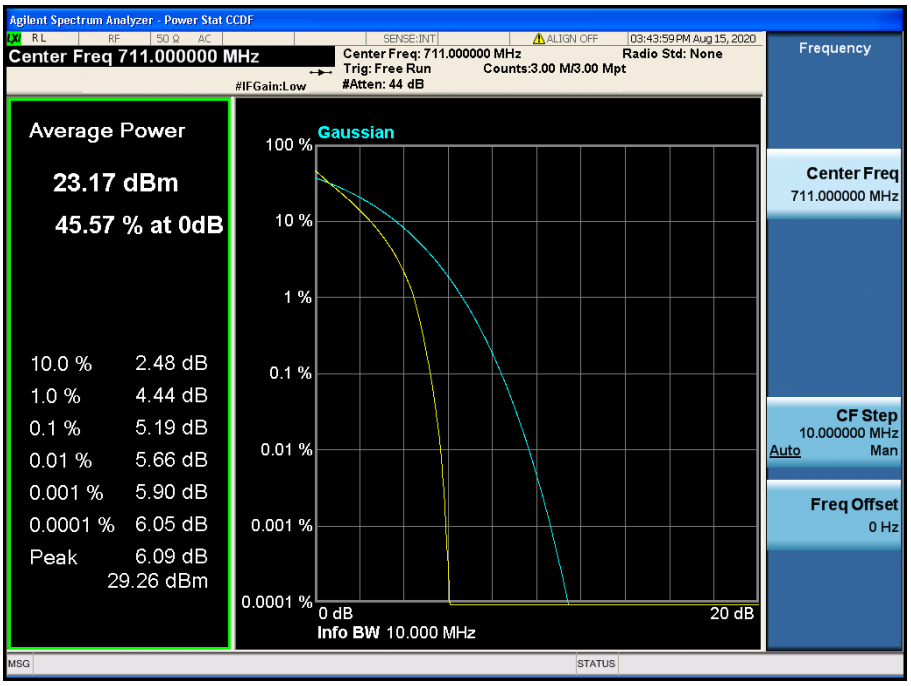
LTE Band 41 / 5 MHz / 16QAM - RB Size 25



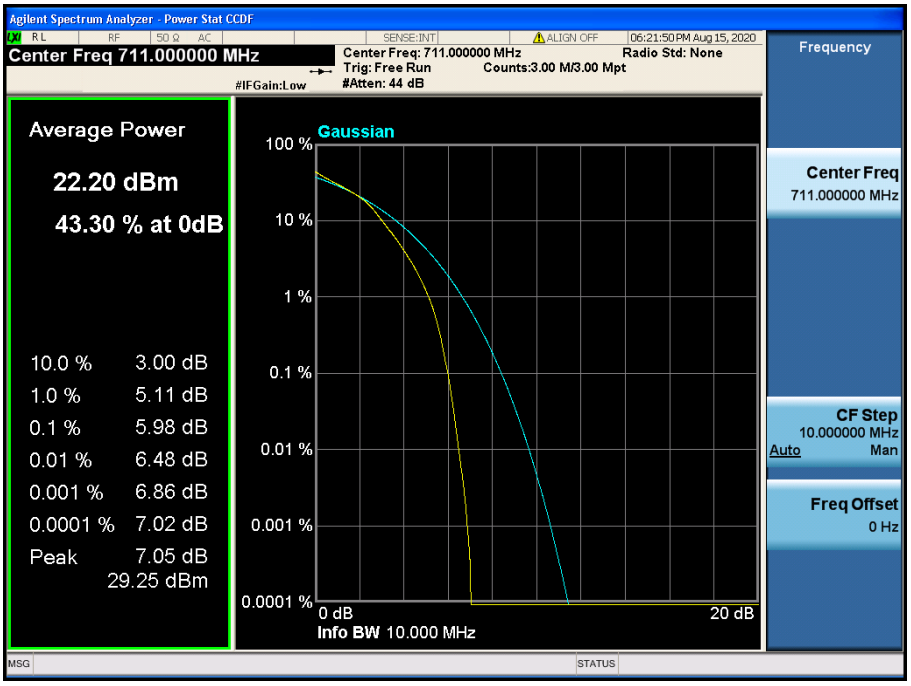
LTE Band 41 / 5 MHz / 64QAM - RB Size 25

8.2 PEAK TO AVERAGE RATIO

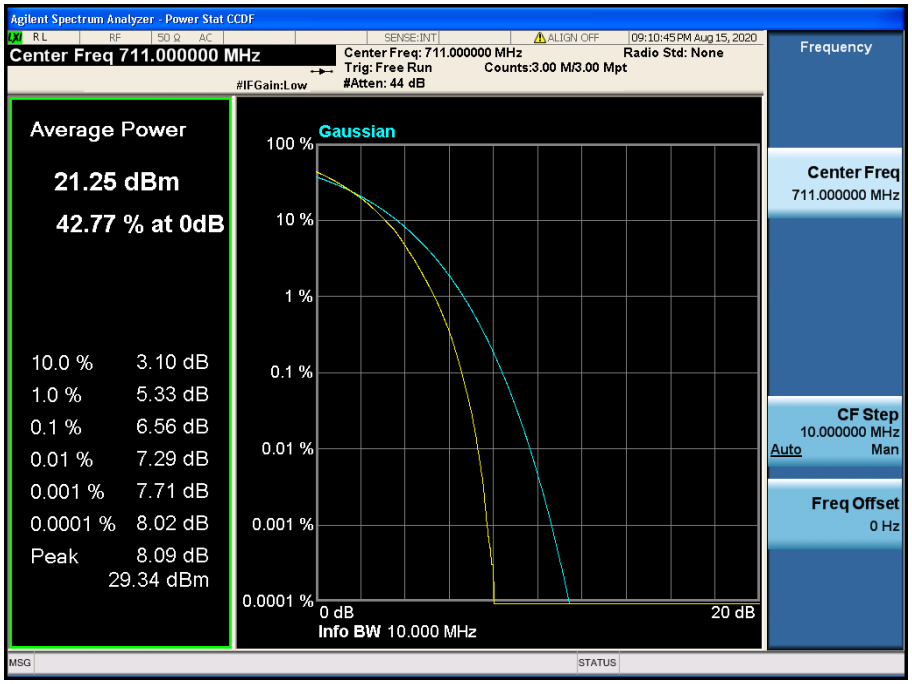
8.2.1 LTE Band 12, 17



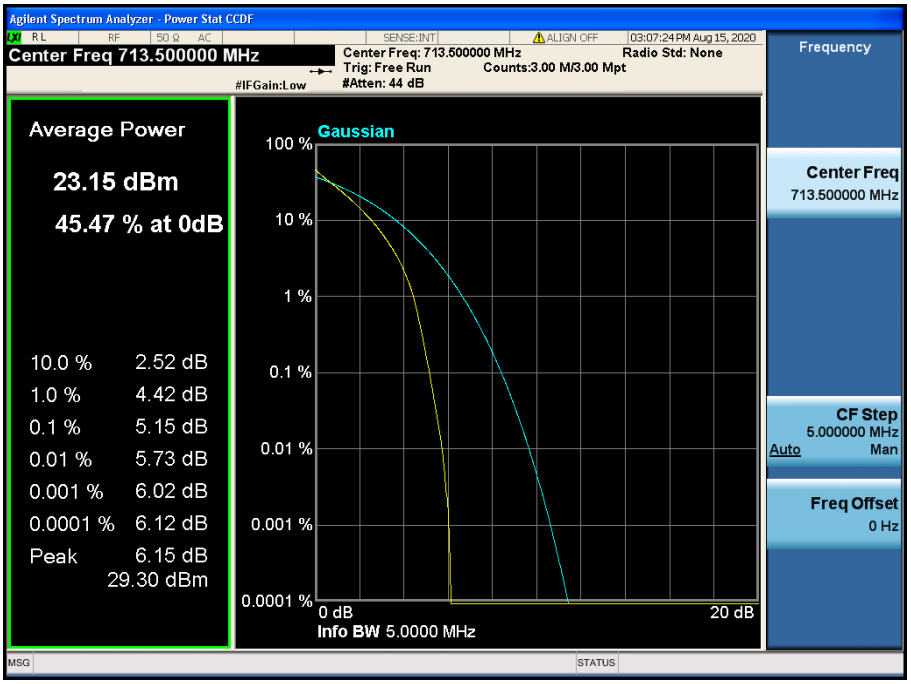
LTE Band 12, 17 / 10 MHz / QPSK - RB Size 50



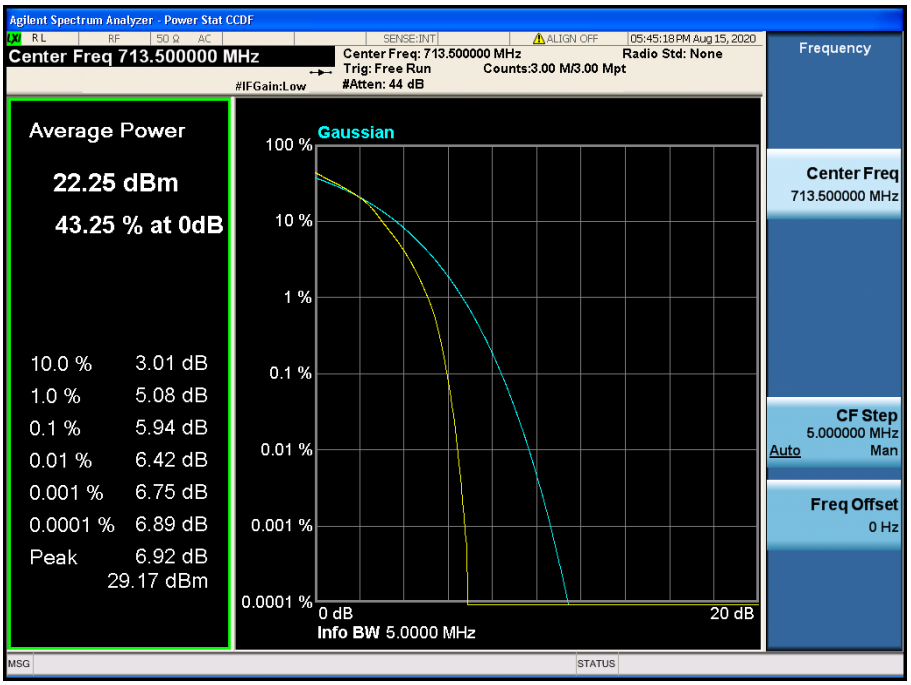
LTE Band 12, 17 / 10 MHz / 16QAM - RB Size 50



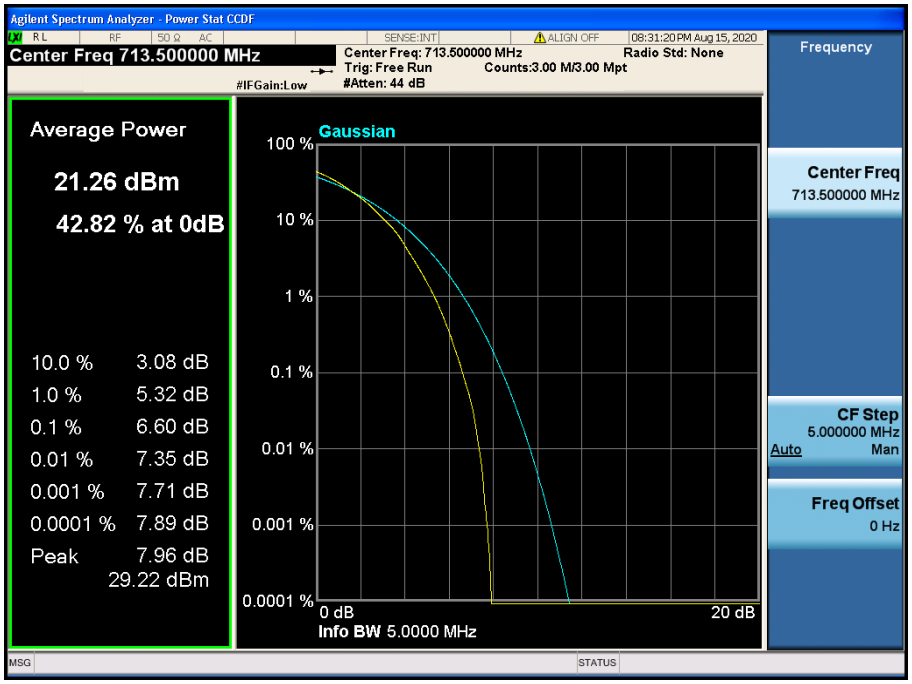
LTE Band 12, 17 / 10 MHz / 64QAM - RB Size 50



LTE Band 12, 17 / 5 MHz / QPSK - RB Size 25

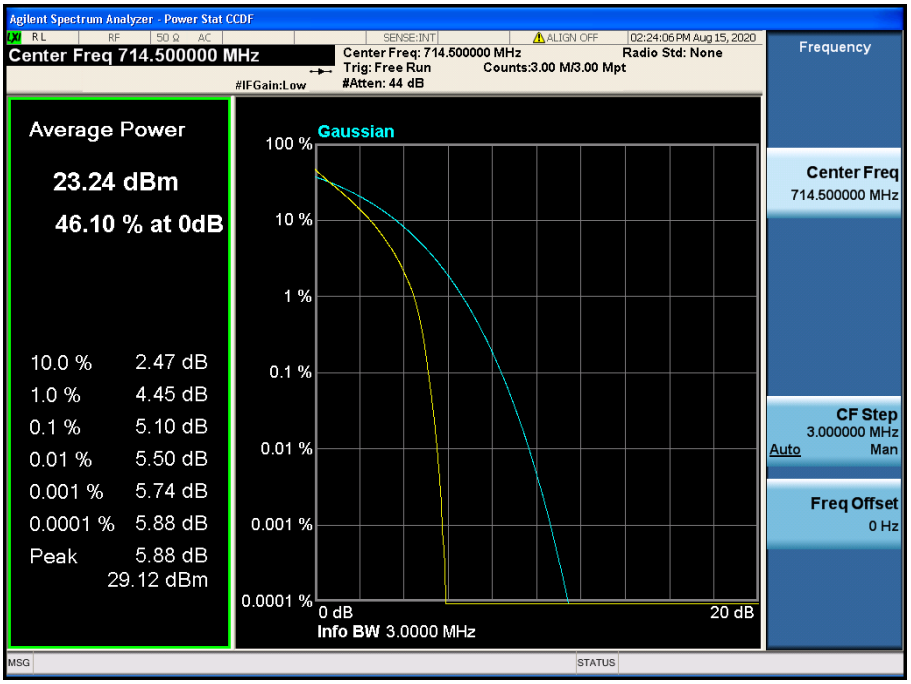


LTE Band 12, 17 / 5 MHz / 16QAM - RB Size 25

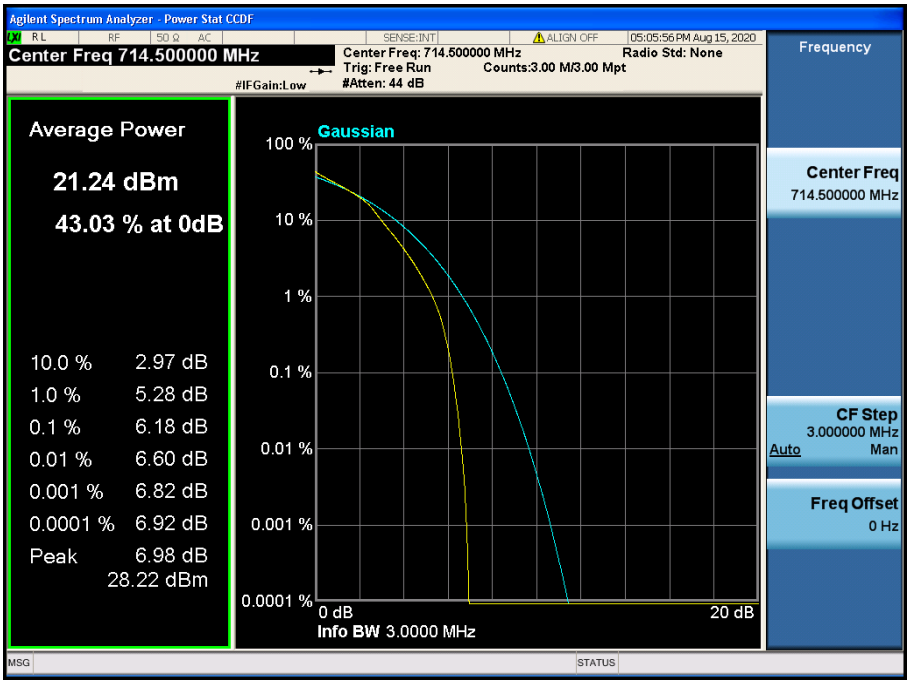


LTE Band 12, 17 / 5 MHz / 64QAM - RB Size 25

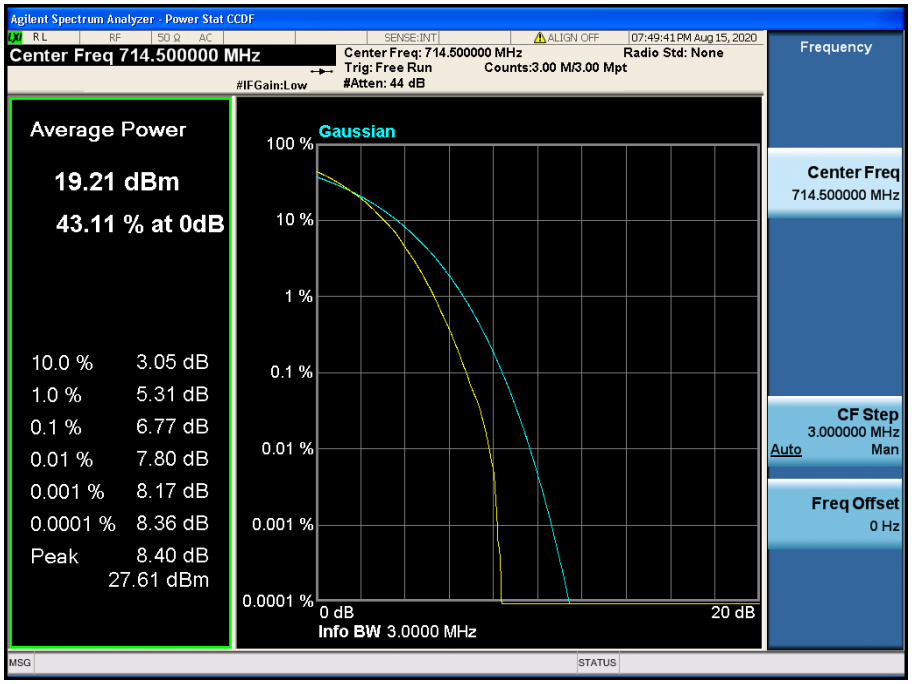
8.2.2 LTE Band 12



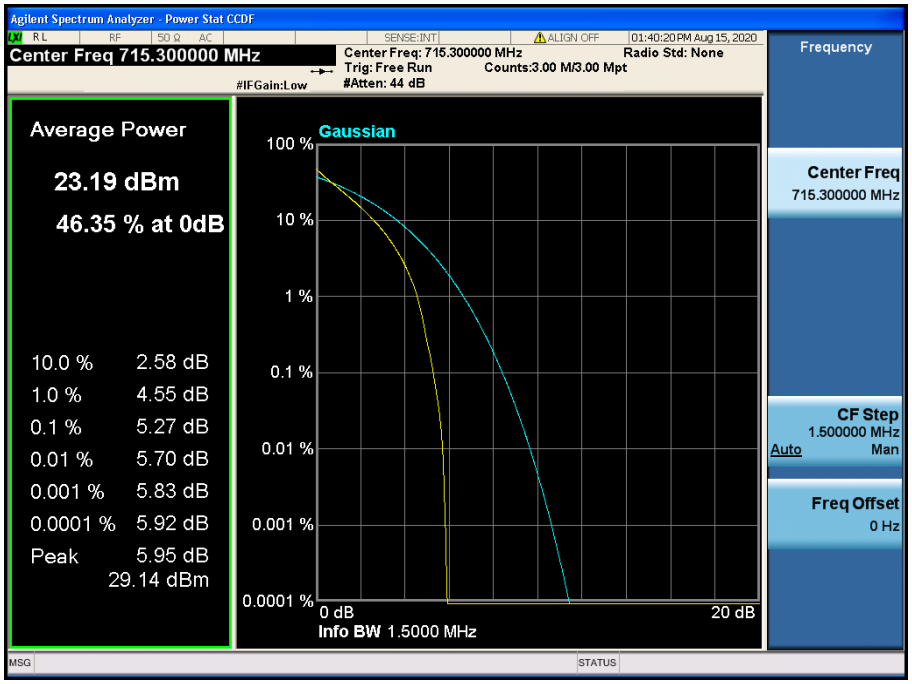
LTE Band 12 / 3 MHz / QPSK - RB Size 15



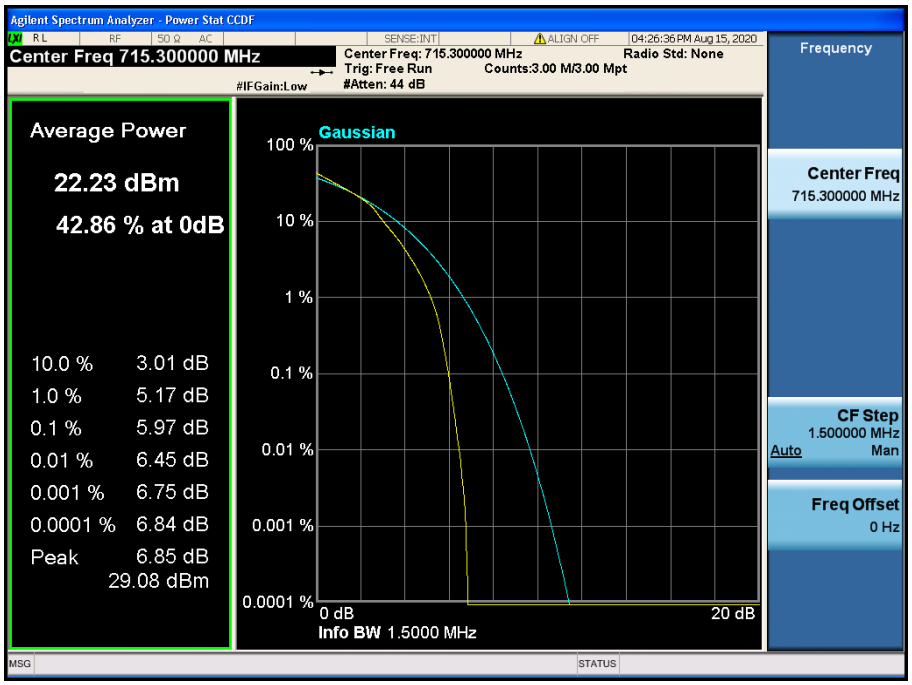
LTE Band 12 / 3 MHz / 16QAM - RB Size 15



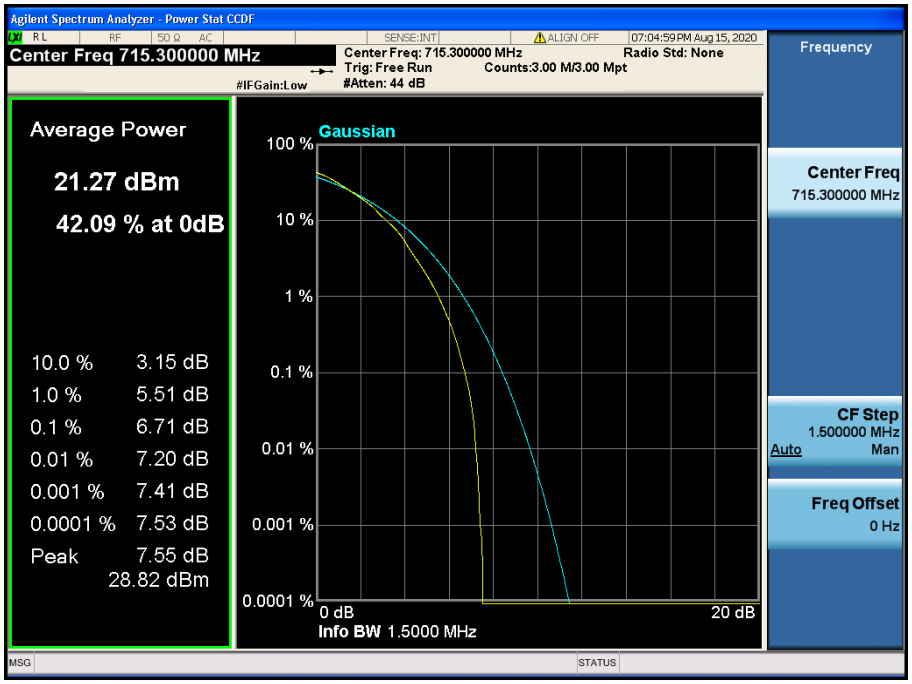
LTE Band 12 / 3 MHz / 64QAM - RB Size 15



LTE Band 12 / 1.4 MHz / QPSK - RB Size 6

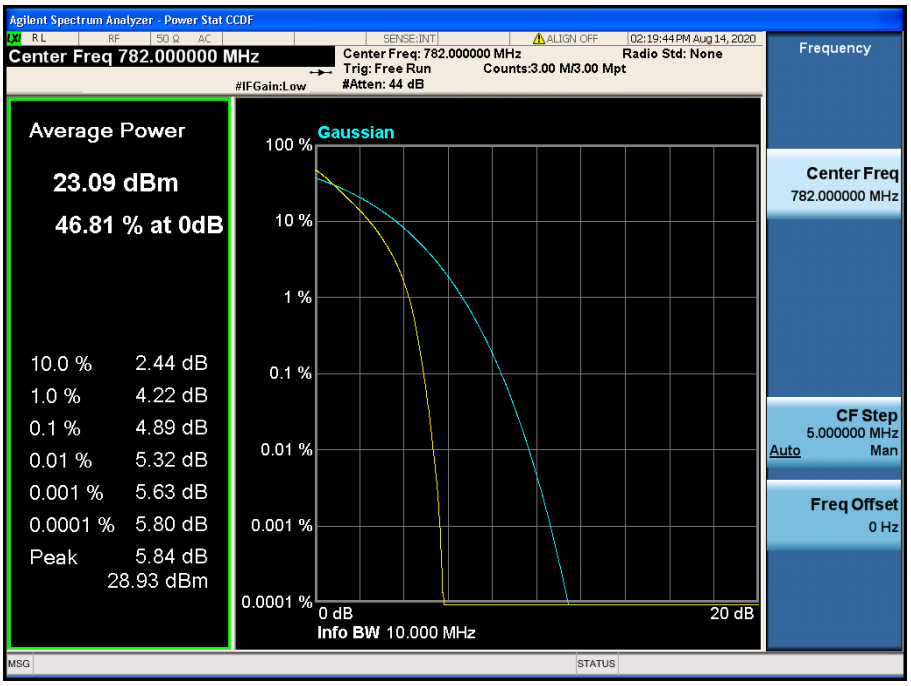


LTE Band 12 / 1.4 MHz / 16QAM - RB Size 6

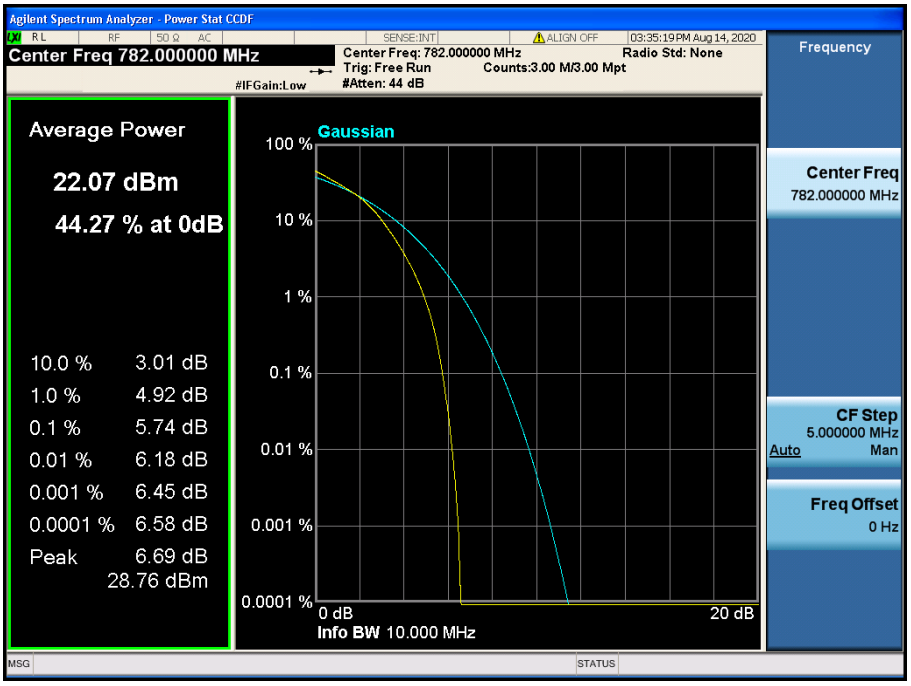


LTE Band 12 / 1.4 MHz / 64QAM - RB Size 6

8.2.3 LTE Band 13



LTE Band 13 / 10 MHz / QPSK - RB Size 50



LTE Band 13 / 10 MHz / 16QAM - RB Size 50