

# RF TEST REPORT



Report No.: 15070897-FCC-R5

Supersede Report No.: N/A

Applicant	Verykool USA Inc	
Product Name	Mobile phone	
Model No.	SL5550	
Serial No.	N/A	
Test Standard	FCC Part 22(H), FCC Part 24(E), FCC Part 27: 2014; ANSI/TIA C603 D: 2010	
Test Date	September 26 to October 15, 2015	
Issue Date	October 15, 2015	
Test Result	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail
Equipment complied with the specification		<input checked="" type="checkbox"/>
Equipment did not comply with the specification		<input type="checkbox"/>
Winnie Zhang	David Huang	
Winnie Zhang Test Engineer	David Huang Checked By	
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Test result presented in this test report is applicable to the tested sample only		

Issued by:

SIEMIC (SHENZHEN-CHINA) LABORATORIES

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## Laboratories Introduction

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Country/Region	Scope
USA	EMC, RF/Wireless, SAR, Telecom
Canada	EMC, RF/Wireless, SAR, Telecom
Taiwan	EMC, RF, Telecom, SAR, Safety
Hong Kong	RF/Wireless, SAR, Telecom
Australia	EMC, RF, Telecom, SAR, Safety
Korea	EMI, EMS, RF, SAR, Telecom, Safety
Japan	EMI, RF/Wireless, SAR, Telecom
Singapore	EMC, RF, SAR, Telecom
Europe	EMC, RF, SAR, Telecom, Safety

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## 1. Report Revision History

Report No.	Report Version	Description	Issue Date
15070897-FCC-R5	NONE	Original	October 15, 2015

## 2. Customer information

Applicant Name	Verykool USA Inc
Applicant Add	3636 Nobel Drive, Suite 325, San Diego, CA 92122 USA
Manufacturer	Zechin Communications Co.,Ltd.
Manufacturer Add	Unit804,8th Floor Desay Tech Building Gaoxin, Road South, Nanshan District Shenzhen,China

## 3. Test site information

Lab performing tests	SIEMIC (Shenzhen-China) LABORATORIES
Lab Address	Zone A, Floor 1, Building 2 Wan Ye Long Technology Park South Side of Zhoushi Road, Bao'an District, Shenzhen, Guangdong China 518108
FCC Test Site No.	718246
IC Test Site No.	4842E-1
Test Software	Radiated Emission Program-To Shenzhen v2.0

#### **4. Equipment under Test (EUT) Information**

Description of EUT: Mobile phone

Main Model: SL5550

Serial Model: N/A

Date EUT received: September 25, 2015

Test Date(s): September 26 to October 15, 2015

Equipment Category : PCE

Antenna Gain:

- GSM850: 1.6 dBi
- PCS1900: 3.8 dBi
- UMTS-FDD Band V: 1.7 dBi
- UMTS-FDD Band IV: 3.7 dBi
- UMTS-FDD Band II: 3.8 dBi
- Bluetooth/BLE: 3 dBi
- WIFI: 2.9 dBi
- LTE Band 2: 3.8 dBi
- LTE Band 4: 3.8 dBi
- LTE Band 5: 3.8 dBi
- LTE Band 7: 3.8 dBi
- LTE Band 12: 3.8 dBi
- LTE Band 17: 3.8 dBi
- GPS:1.6 dBi

Type of Modulation:

- GSM / GPRS: GMSK
- EGPRS: GMSK
- UMTS-FDD: QPSK, 16QAM
- 802.11b/g/n: DSSS, OFDM
- Bluetooth: GFSK, π /4DQPSK, 8DPSK
- BLE: GFSK
- LTE Band: QPSK, 16QAM
- GPS:BPSK

GSM850 TX: 824.2 ~ 848.8 MHz; RX: 869.2 ~ 893.8 MHz  
PCS1900 TX: 1850.2 ~ 1909.8 MHz; RX: 1930.2 ~ 1989.8 MHz  
UMTS-FDD Band V TX: 826.4 ~ 846.6 MHz; RX: 871.4 ~ 891.6 MHz  
UMTS-FDD Band IV TX: 1712.4 ~ 1752.6 MHz;  
UMTS-FDD Band II TX: 1852.4 ~ 1907.6 MHz;  
RX: 1932.4 ~ 1987.6 MHz  
WIFI: 802.11b/g/n(20M): 2412-2462 MHz  
WIFI: 802.11n(40M): 2422-2472 MHz  
Bluetooth& BLE: 2402-2480 MHz  
LTE Band 2 TX: 1852.5 ~ 1907.5 MHz; RX : 1932.5 ~ 1987.5 MHz  
LTE Band 4 TX: 1712.5 ~ 1752.5 MHz; RX : 2112.5 ~ 2152.5 MHz  
LTE Band 5 TX: 826.5 ~ 846.5 MHz; RX : 871.5 ~ 891.5 MHz  
LTE Band 7 TX: 2502.5 ~ 2567.5 MHz; RX : 2622.5 ~ 2687.5 MHz  
LTE Band 12 TX: 699.7 ~ 715.3 MHz; RX : 729.7~ 745.3MHz  
LTE Band 17 TX: 706.5 ~ 713.5 MHz; RX : 736.5 ~ 743.5 MHz  
GPS RX: 1575.42 MHz

RF Operating Frequency (ies):

LTE Band 2: 23.58 dBm  
LTE Band 4: 22.78 dBm  
LTE Band 5: 23.88 dBm  
LTE Band 7: 22.49 dBm  
LTE Band 12: 23.47 dBm  
LTE Band 17: 23.59 dBm

## Maximum Conducted AV Power to Antenna

LTE Band 2: 27.84 dBm / EIRP  
LTE Band 4: 27.31 dBm / EIRP  
LTE Band 5: 28.64 dBm / EIRP  
LTE Band 7: 26.99 dBm / EIRP  
LTE Band 12: 25.88 dBm / EIRP  
LTE Band 17: 26.75 dBm / EIRP

ERP/EIRP:

Port: Power Port, Earphone Port, USB Port

Battery:  
Model:355093PV  
Spec:3.8V,2500mAh,9.5Wh  
Limited Charging Voltage: 4.35V  
Adapter:  
Model:SC050100-US

### Input Power:

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Input: 100-240V; 50/60Hz; 0.4A

Output: DC 5.0V,1A

Trade Name : verykool

GPRS/EGPRS Multi-slot class 8/10/12

FCC ID: WA6SL5550

## 5. Test Summary

The product was tested in accordance with the following specifications.

All testing has been performed according to below product classification:

FCC Rules	Description of Test	Result
§ 1.1307; § 2.1093	RF Exposure (SAR)	Compliance
§2.1046; § 22.913(a); § 24.232(c); § 27.50(c.10); § 27.50(d.4)	RF Output Power	Compliance
§ 24.232 (d); § 27.50(d)	Peak-Average Ratio	Compliance
§ 2.1047	Modulation Characteristics	Compliance
§ 2.1049; § 22.905; § 22.917; § 24.238; § 27.53(a.5)	99% & -26 dB Occupied Bandwidth	Compliance
§ 2.1051; § 22.917(a); § 24.238(a); § 27.53(h)	Spurious Emissions at Antenna Terminal	Compliance
§ 2.1053; § 22.917(a); § 24.238(a); § 27.53(h)	Field Strength of Spurious Radiation	Compliance
§ 22.917(a); § 24.238(a);	Out of band emission, Band Edge	Compliance
§ 27.53(m)	Band Edge 27.53(m)	Compliance
§ 2.1055; § 22.355; § 24.235; § 27.5(h); § 27.54	Frequency stability vs. temperature Frequency stability vs. voltage	Compliance

Note: Testing was performed by configuring EUT to maximum output power status, the declared output power class for different

### Measurement Uncertainty

Emissions		
Test Item	Description	Uncertainty
Band Edge and Radiated Spurious Emissions	Confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2 (for EUTs < 0.5m X 0.5m X 0.5m)	+5.6dB/-4.5dB
-	-	-

## **6. MEASUREMENTS, EXAMINATION AND DERIVED RESULTS**

### **6.1 RF Exposure (SAR)**

Test Result: Pass

The EUT is a portable device, thus requires SAR evaluation;

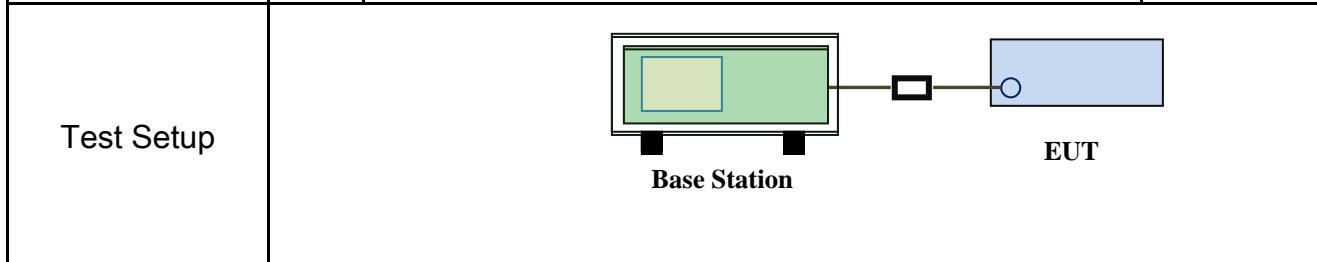
Please refer to RF Exposure Evaluation Report: 15070897-FCC-H.

## 6.2 RF Output Power

Temperature	25°C
Relative Humidity	50%
Atmospheric Pressure	1008mbar
Test date :	October 08, 2015
Tested By :	Winnie Zhang

### Requirement(s):

Spec	Item	Requirement	Applicable
§22.913 (a)	a)	ERP:38.45dBm	<input checked="" type="checkbox"/>
§24.232 (c)	b)	EIRP:33dBm	<input checked="" type="checkbox"/>
§27.50 (c)	c)	EIRP: 30dBm	<input checked="" type="checkbox"/>



<b>Test Procedure</b>	<p>For Conducted Power:</p> <ul style="list-style-type: none"> <li>- The transmitter output port was connected to base station.</li> <li>- Set EUT at maximum power through base station.</li> <li>- Select lowest, middle, and highest channels for each band and different test mode.</li> </ul> <p>For ERP/EIRP:</p> <ul style="list-style-type: none"> <li>- The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable.</li> <li>- The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.</li> <li>- The frequency range up to tenth harmonic of the fundamental frequency was investigated.</li> </ul>

	<ul style="list-style-type: none"> <li>- Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.</li> <li>- Spurious emissions in dB = <math>10 \log (\text{TX power in Watts}/0.001)</math> – the absolute level</li> <li>- Spurious attenuation limit in dB = <math>43 + 10 \log_{10} (\text{power out in Watts})</math>.</li> </ul>
Remark	
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail

Test Data     Yes       N/A

Test Plot     Yes (See below)       N/A

## Conducted Power

LTE Band 2:

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
18700	1860.0	1860.0	QPSK	1	0	0	22.72	22±1
				1	49	0	22.76	22±1
				1	99	0	22.73	22±1
				50	0	1	22.83	22±1
				50	24	1	22.81	22±1
				50	49	1	22.86	22±1
				100	0	1	22.74	22±1
		1880.0	16QAM	1	0	1	21.85	21.3±1
				1	49	1	21.83	21.3±1
				1	99	1	21.86	21.3±1
				50	0	2	21.34	21.3±1
				50	24	2	21.32	21.3±1
				50	49	2	21.31	21.3±1
				100	0	2	20.75	21.3±1
20MHz	18900	1880.0	QPSK	1	0	0	22.43	22±1
				1	49	0	22.46	22±1
				1	99	0	22.42	22±1
				50	0	1	21.55	22±1
				50	24	1	21.58	22±1
				50	49	1	21.53	22±1
				100	0	1	21.51	22±1
		1900.0	16QAM	1	0	1	21.96	21.3±1
				1	49	1	21.96	21.3±1
				1	99	1	21.98	21.3±1
				50	0	2	21.62	21.3±1
				50	24	2	21.63	21.3±1
				50	49	2	21.61	21.3±1
				100	0	2	20.73	21.3±1
19100	1900.0	1900.0	QPSK	1	0	0	22.63	22±1
				1	49	0	22.65	22±1
				1	99	0	22.68	22±1
				50	0	1	21.59	22±1
				50	24	1	21.58	22±1
				50	49	1	21.59	22±1
				100	0	1	21.62	22±1
		1900.0	16QAM	1	0	1	21.63	21.3±1
				1	49	1	21.65	21.3±1
				1	99	1	21.61	21.3±1
				50	0	2	21.38	21.3±1
				50	24	2	21.36	21.3±1
				50	49	2	21.33	21.3±1
				100	0	2	20.65	21.3±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
18675	1857.5	18675	QPSK	1	0	0	22.35	22±1
				1	37	0	22.36	22±1
				1	74	0	22.41	22±1
				36	0	1	21.43	22±1
				36	16	1	21.41	22±1
				36	35	1	21.44	22±1
				75	0	1	21.29	22±1
		1857.5	16QAM	1	0	1	21.88	22±1
				1	37	1	21.91	22±1
				1	74	1	21.93	22±1
				36	0	2	21.23	22±1
				36	16	2	21.25	22±1
				36	35	2	21.22	22±1
				75	0	2	21.16	22±1
15MHz	18900	18900	QPSK	1	0	0	22.23	22±1
				1	37	0	22.26	22±1
				1	74	0	22.29	22±1
				36	0	1	21.56	22±1
				36	16	1	21.59	22±1
				36	35	1	21.58	22±1
				75	0	1	21.53	22±1
		1880.0	16QAM	1	0	1	22.13	21.3±1
				1	37	1	22.15	21.3±1
				1	74	1	22.16	21.3±1
				36	0	2	21.12	21.3±1
				36	16	2	21.20	21.3±1
				36	35	2	21.22	21.3±1
				75	0	2	20.92	21.3±1
19125	1902.5	19125	QPSK	1	0	0	22.56	22±1
				1	37	0	22.59	22±1
				1	74	0	22.54	22±1
				36	0	1	21.53	22±1
				36	16	1	21.56	22±1
				36	35	1	21.58	22±1
				75	0	1	21.49	22±1
		1902.5	16QAM	1	0	1	21.43	22±1
				1	37	1	21.45	22±1
				1	74	1	21.46	22±1
				36	0	2	21.25	22±1
				36	16	2	21.23	22±1
				36	35	2	21.22	22±1
				75	0	2	21.77	22±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
10MHz	18650	1855	QPSK	1	0	0	22.84	22±1
				1	24	0	22.81	22±1
				1	49	0	22.86	22±1
				25	0	1	21.95	22±1
				25	12	1	21.89	22±1
				25	24	1	21.93	22±1
				50	0	1	21.93	22±1
	18900	1880.0	16QAM	1	0	1	22.41	22±1
				1	24	1	22.45	22±1
				1	49	1	22.43	22±1
				25	0	2	21.06	22±1
				25	12	2	21.09	22±1
				25	24	2	21.10	22±1
				50	0	2	21.03	22±1
	19150	1905	QPSK	1	0	0	<b>23.58</b>	23±1
				1	24	0	23.52	23±1
				1	49	0	23.53	23±1
				25	0	1	22.61	23±1
				25	12	1	22.64	23±1
				25	24	1	22.66	23±1
				50	0	1	22.59	23±1
			16QAM	1	0	1	23.25	22.3±1
				1	24	1	23.22	22.3±1
				1	49	1	23.24	22.3±1
				25	0	2	21.31	22.3±1
				25	12	2	21.43	22.3±1
				25	24	2	21.36	22.3±1
				50	0	2	21.61	22.3±1
			QPSK	1	0	0	22.86	22±1
				1	24	0	22.89	22±1
				1	49	0	22.81	22±1
				25	0	1	22.03	22±1
				25	12	1	22.06	22±1
				25	24	1	21.98	22±1
				50	0	1	21.91	22±1
			16QAM	1	0	1	22.25	22±1
				1	24	1	22.24	22±1
				1	49	1	22.29	22±1
				25	0	2	21.13	22±1
				25	12	2	21.15	22±1
				25	24	2	21.13	22±1
				50	0	2	21.06	22±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
5MHz	18625	1852.5	QPSK	1	0	0	22.88	22±1
				1	12	0	22.86	22±1
				1	24	0	22.83	22±1
				12	0	1	21.96	22±1
				12	6	1	21.93	22±1
				12	11	1	21.94	22±1
				25	0	1	21.87	22±1
			16QAM	1	0	1	21.86	22±1
				1	12	1	21.85	22±1
				1	24	1	21.83	22±1
				12	0	2	21.12	22±1
				12	6	2	21.16	22±1
				12	11	2	21.11	22±1
				25	0	2	21.01	22±1
5MHz	18900	1880.0	QPSK	1	0	0	22.88	22±1
				1	12	0	22.83	22±1
				1	24	0	22.86	22±1
				12	0	1	21.96	22±1
				12	6	1	21.92	22±1
				12	11	1	21.94	22±1
				25	0	1	21.90	22±1
			16QAM	1	0	1	21.86	22±1
				1	12	1	21.83	22±1
				1	24	1	21.88	22±1
				12	0	2	21.16	22±1
				12	6	2	21.13	22±1
				12	11	2	21.18	22±1
				25	0	2	21.03	22±1
5MHz	19175	1907.5	QPSK	1	0	0	22.72	22±1
				1	12	0	22.76	22±1
				1	24	0	22.71	22±1
				12	0	1	21.81	22±1
				12	6	1	21.86	22±1
				12	11	1	21.85	22±1
				25	0	1	21.80	22±1
			16QAM	1	0	1	22.04	21.3±1
				1	12	1	22.06	21.3±1
				1	24	1	22.03	21.3±1
				12	0	2	21.16	21.3±1
				12	6	2	21.19	21.3±1
				12	11	2	21.19	21.3±1
				25	0	2	20.83	21.3±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
3MHz	18625	1852.5	QPSK	1	0	0	22.53	21.7±1
				1	7	0	22.56	21.7±1
				1	14	0	22.54	21.7±1
				8	0	1	22.64	21.7±1
				8	4	1	22.67	21.7±1
				8	7	1	22.63	21.7±1
				15	0	1	20.75	21.7±1
			16QAM	1	0	1	22.20	21.3±1
				1	7	1	22.21	21.3±1
				1	14	1	22.14	21.3±1
				8	0	2	20.85	21.3±1
				8	4	2	20.86	21.3±1
				8	7	2	20.84	21.3±1
				15	0	2	21.01	21.3±1
3MHz	18900	1880.0	QPSK	1	0	0	22.47	22±1
				1	7	0	22.49	22±1
				1	14	0	22.44	22±1
				8	0	1	21.52	22±1
				8	4	1	21.54	22±1
				8	7	1	21.47	22±1
				15	0	1	21.62	22±1
			16QAM	1	0	1	21.38	21.3±1
				1	7	1	21.37	21.3±1
				1	14	1	21.34	21.3±1
				8	0	2	20.59	21.3±1
				8	4	2	20.55	21.3±1
				8	7	2	20.61	21.3±1
				15	0	2	20.65	21.3±1
3MHz	19175	1907.5	QPSK	1	0	0	22.78	22±1
				1	7	0	22.82	22±1
				1	14	0	22.78	22±1
				8	0	1	21.66	22±1
				8	4	1	21.67	22±1
				8	7	1	21.65	22±1
				15	0	1	22.78	22±1
			16QAM	1	0	1	21.73	21.3±1
				1	7	1	21.71	21.3±1
				1	14	1	21.69	21.3±1
				8	0	2	20.56	21.3±1
				8	4	2	20.55	21.3±1
				8	7	2	20.54	21.3±1
				15	0	2	20.86	21.3±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
1.4MHz	18607	1850.7	QPSK	1	0	0	22.72	22±1
				1	2	0	22.75	22±1
				1	5	0	22.71	22±1
				3	0	0	22.81	22±1
				3	1	0	22.83	22±1
				3	2	0	22.86	22±1
				6	0	1	21.66	22±1
			16QAM	1	0	1	21.35	21.3±1
				1	2	1	21.38	21.3±1
				1	5	1	21.32	21.3±1
				3	0	1	21.43	21.3±1
				3	1	1	21.45	21.3±1
				3	2	1	21.44	21.3±1
				6	0	2	20.58	21.3±1
	18900	1880.0	QPSK	1	0	0	22.43	22±1
				1	2	0	22.41	22±1
				1	5	0	22.46	22±1
				3	0	0	22.51	22±1
				3	1	0	22.50	22±1
				3	2	0	21.98	22±1
				6	0	1	21.46	22±1
			16QAM	1	0	1	21.23	22±1
				1	2	1	21.25	22±1
				1	5	1	21.22	22±1
				3	0	1	21.32	22±1
				3	1	1	21.31	22±1
				3	2	1	21.35	22±1
				6	0	2	21.00	22±1
	19193	1909.3	QPSK	1	0	0	22.69	22±1
				1	2	0	22.78	22±1
				1	5	0	22.72	22±1
				3	0	0	22.73	22±1
				3	1	0	22.75	22±1
				3	2	0	22.77	22±1
				6	0	1	21.66	22±1
			16QAM	1	0	1	21.69	21.3±1
				1	2	1	21.78	21.3±1
				1	5	1	21.74	21.3±1
				3	0	1	21.62	21.3±1
				3	1	1	21.64	21.3±1
				3	2	1	21.61	21.3±1
				6	0	2	20.67	21.3±1

**LTE Band 4:**

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
20MHz	20050	1720.0	QPSK	1	0	0	22.36	22±1
				1	49	0	22.35	22±1
				1	99	0	22.41	22±1
				50	0	1	22.23	22±1
				50	24	1	22.26	22±1
				50	49	1	22.29	22±1
				100	0	1	22.06	22±1
			16QAM	1	0	1	22.50	22±1
				1	49	1	22.53	22±1
				1	99	1	22.54	22±1
				50	0	2	22.61	22±1
				50	24	2	22.60	22±1
				50	49	2	22.59	22±1
				100	0	2	22.06	22±1
20MHz	20175	1732.5	QPSK	1	0	0	22.30	22±1
				1	49	0	22.31	22±1
				1	99	0	22.36	22±1
				50	0	1	22.16	22±1
				50	24	1	22.13	22±1
				50	49	1	22.19	22±1
				100	0	1	22.12	22±1
			16QAM	1	0	1	22.56	22±1
				1	49	1	22.53	22±1
				1	99	1	22.59	22±1
				50	0	2	22.51	22±1
				50	24	2	22.52	22±1
				50	49	2	22.58	22±1
				100	0	2	22.10	22±1
20MHz	20300	1745.0	QPSK	1	0	0	21.63	22±1
				1	49	0	21.60	22±1
				1	99	0	21.61	22±1
				50	0	1	21.61	22±1
				50	24	1	21.62	22±1
				50	49	1	21.65	22±1
				100	0	1	21.28	22±1
			16QAM	1	0	1	21.70	22±1
				1	49	1	21.73	22±1
				1	99	1	21.69	22±1
				50	0	2	21.82	22±1
				50	24	2	21.81	22±1
				50	49	2	21.83	22±1
				100	0	2	21.51	22±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
20025	1717.5	QPSK	1	0	0	21.88	$22 \pm 1$	
			1	37	0	21.86	$22 \pm 1$	
			1	74	0	21.81	$22 \pm 1$	
			36	0	1	22.03	$22 \pm 1$	
			36	16	1	22.06	$22 \pm 1$	
			36	35	1	22.10	$22 \pm 1$	
			75	0	1	22.13	$22 \pm 1$	
		16QAM	1	0	1	22.35	$22 \pm 1$	
			1	37	1	22.36	$22 \pm 1$	
			1	74	1	22.38	$22 \pm 1$	
			36	0	2	22.56	$22 \pm 1$	
			36	16	2	22.59	$22 \pm 1$	
			36	35	2	22.58	$22 \pm 1$	
			75	0	2	22.15	$22 \pm 1$	
15MHz	2017.5	QPSK	1	0	0	21.65	$22 \pm 1$	
			1	37	0	21.68	$22 \pm 1$	
			1	74	0	21.67	$22 \pm 1$	
			36	0	1	21.69	$22 \pm 1$	
			36	16	1	21.63	$22 \pm 1$	
			36	35	1	21.65	$22 \pm 1$	
			75	0	1	21.77	$22 \pm 1$	
		16QAM	1	0	1	21.78	$22 \pm 1$	
			1	37	1	21.74	$22 \pm 1$	
			1	74	1	21.75	$22 \pm 1$	
			36	0	2	21.86	$22 \pm 1$	
			36	16	2	21.82	$22 \pm 1$	
			36	35	2	21.85	$22 \pm 1$	
			75	0	2	21.80	$22 \pm 1$	
20325	1747.5	QPSK	1	0	0	21.57	$22 \pm 1$	
			1	37	0	21.56	$22 \pm 1$	
			1	74	0	21.54	$22 \pm 1$	
			36	0	1	21.66	$22 \pm 1$	
			36	16	1	21.63	$22 \pm 1$	
			36	35	1	21.69	$22 \pm 1$	
			75	0	1	21.72	$22 \pm 1$	
		16QAM	1	0	1	21.87	$22 \pm 1$	
			1	37	1	21.85	$22 \pm 1$	
			1	74	1	21.83	$22 \pm 1$	
			36	0	2	21.69	$22 \pm 1$	
			36	16	2	21.68	$22 \pm 1$	
			36	35	2	21.68	$22 \pm 1$	
			75	0	2	21.71	$22 \pm 1$	

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
20000	1715.0	QPSK	1	0	0	22.19	22±1	
			1	24	0	22.13	22±1	
			1	49	0	22.18	22±1	
			25	0	1	22.23	22±1	
			25	12	1	22.25	22±1	
			25	24	1	22.24	22±1	
			50	0	1	22.20	22±1	
		16QAM	1	0	1	22.74	22±1	
			1	24	1	22.73	22±1	
			1	49	1	<b>22.78</b>	22±1	
			25	0	2	22.43	22±1	
			25	12	2	22.46	22±1	
			25	24	2	22.45	22±1	
			50	0	2	22.21	22±1	
10MHz	20175	QPSK	1	0	0	21.78	22±1	
			1	24	0	21.76	22±1	
			1	49	0	21.79	22±1	
			25	0	1	21.73	22±1	
			25	12	1	21.75	22±1	
			25	24	1	21.81	22±1	
			50	0	1	21.71	22±1	
		16QAM	1	0	1	21.73	22±1	
			1	24	1	21.76	22±1	
			1	49	1	21.74	22±1	
			25	0	2	21.72	22±1	
			25	12	2	21.75	22±1	
			25	24	2	21.76	22±1	
			50	0	2	21.74	22±1	
20350	1750.0	QPSK	1	0	0	21.54	22±1	
			1	24	0	21.56	22±1	
			1	49	0	21.59	22±1	
			25	0	1	21.65	22±1	
			25	12	1	21.62	22±1	
			25	24	1	21.68	22±1	
			50	0	1	21.64	22±1	
		16QAM	1	0	1	22.06	22±1	
			1	24	1	22.08	22±1	
			1	49	1	22.01	22±1	
			25	0	2	21.76	22±1	
			25	12	2	21.79	22±1	
			25	24	2	21.72	22±1	
			50	0	2	21.66	22±1	

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
20000	1715.0	1715.0	QPSK	1	0	0	22.14	22±1
				1	12	0	22.13	22±1
				1	24	0	22.16	22±1
				12	0	1	22.25	22±1
				12	6	1	22.15	22±1
				12	11	1	22.23	22±1
				25	0	1	22.20	22±1
		1732.5	16QAM	1	0	1	22.10	22±1
				1	12	1	22.12	22±1
				1	24	1	22.15	22±1
				12	0	2	22.16	22±1
				12	6	2	22.19	22±1
				12	11	2	22.19	22±1
				25	0	2	22.23	22±1
5MHz	20175	1732.5	QPSK	1	0	0	21.66	22±1
				1	12	0	21.64	22±1
				1	24	0	21.68	22±1
				12	0	1	21.75	22±1
				12	6	1	21.74	22±1
				12	11	1	21.78	22±1
				25	0	1	21.74	22±1
		1750.0	16QAM	1	0	1	22.03	22±1
				1	12	1	22.10	22±1
				1	24	1	21.98	22±1
				12	0	2	22.02	22±1
				12	6	2	22.06	22±1
				12	11	2	22.01	22±1
				25	0	2	21.71	22±1
20350	20350	1750.0	QPSK	1	0	0	21.51	22±1
				1	12	0	21.53	22±1
				1	24	0	21.62	22±1
				12	0	1	21.63	22±1
				12	6	1	21.67	22±1
				12	11	1	21.66	22±1
				25	0	1	21.68	22±1
		1750.0	16QAM	1	0	1	21.56	22±1
				1	12	1	21.53	22±1
				1	24	1	21.54	22±1
				12	0	2	21.75	22±1
				12	6	2	21.71	22±1
				12	11	2	21.69	22±1
				25	0	2	21.70	22±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
19965	1711.5	1711.5	QPSK	1	0	0	22.05	22±1
				1	7	0	22.03	22±1
				1	14	0	22.12	22±1
				8	0	1	22.18	22±1
				8	4	1	22.16	22±1
				8	7	1	22.09	22±1
				15	0	1	22.24	22±1
		1732.5	16QAM	1	0	1	22.63	22±1
				1	7	1	22.65	22±1
				1	14	1	22.69	22±1
				8	0	2	22.17	22±1
				8	4	2	22.10	22±1
				8	7	2	22.19	22±1
				15	0	2	22.31	22±1
3MHz	20175	1732.5	QPSK	1	0	0	21.69	22±1
				1	7	0	21.66	22±1
				1	14	0	21.59	22±1
				8	0	1	21.61	22±1
				8	4	1	21.66	22±1
				8	7	1	21.71	22±1
				15	0	1	21.69	22±1
		1753.5	16QAM	1	0	1	21.52	22±1
				1	7	1	21.56	22±1
				1	14	1	21.54	22±1
				8	0	2	21.61	22±1
				8	4	2	21.59	22±1
				8	7	2	21.58	22±1
				15	0	2	21.64	22±1
20385	1753.5	1753.5	QPSK	1	0	0	21.57	22±1
				1	7	0	21.54	22±1
				1	14	0	21.56	22±1
				8	0	1	21.55	22±1
				8	4	1	21.56	22±1
				8	7	1	21.52	22±1
				15	0	1	21.63	22±1
		1753.5	16QAM	1	0	1	21.52	22±1
				1	7	1	21.56	22±1
				1	14	1	21.53	22±1
				8	0	2	21.40	22±1
				8	4	2	21.45	22±1
				8	7	2	21.41	22±1
				15	0	2	21.62	22±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
19957	1710.7		QPSK	1	0	0	22.01	22±1
				1	2	0	22.03	22±1
				1	5	0	22.06	22±1
				3	0	0	22.26	22±1
				3	1	0	22.31	22±1
				3	2	0	22.27	22±1
				6	0	1	22.12	22±1
		16QAM	16QAM	1	0	1	21.79	22±1
				1	2	1	21.77	22±1
				1	5	1	21.76	22±1
				3	0	1	21.35	22±1
				3	1	1	21.36	22±1
				3	2	1	21.38	22±1
				6	0	2	22.09	22±1
1.4MHz	20175		QPSK	1	0	0	21.55	22±1
				1	2	0	21.53	22±1
				1	5	0	21.56	22±1
				3	0	0	21.96	22±1
				3	1	0	21.91	22±1
				3	2	0	21.98	22±1
				6	0	1	21.67	22±1
		16QAM	16QAM	1	0	1	21.47	22±1
				1	2	1	21.45	22±1
				1	5	1	21.51	22±1
				3	0	1	21.53	22±1
				3	1	1	21.69	22±1
				3	2	1	21.65	22±1
				6	0	2	21.54	22±1
20393	1754.3		QPSK	1	0	0	21.47	22±1
				1	2	0	21.53	22±1
				1	5	0	21.49	22±1
				3	0	0	21.62	22±1
				3	1	0	21.65	22±1
				3	2	0	21.63	22±1
				6	0	1	21.56	22±1
		16QAM	16QAM	1	0	1	21.15	22±1
				1	2	1	21.13	22±1
				1	5	1	21.09	22±1
				3	0	1	21.56	22±1
				3	1	1	21.54	22±1
				3	2	1	21.55	22±1
				6	0	2	21.46	22±1

**LTE Band 5:**

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
20450	829	20450	QPSK	1	0	0	23.66	23±1
				1	24	0	23.61	23±1
				1	49	0	23.65	23±1
				25	0	1	22.74	23±1
				25	12	1	22.76	23±1
				25	24	1	22.73	23±1
				50	0	1	22.71	23±1
		836.5	16QAM	1	0	1	23.26	22.3±1
				1	24	1	23.28	22.3±1
				1	49	1	23.22	22.3±1
				25	0	2	21.85	22.3±1
				25	12	2	21.86	22.3±1
				25	24	2	21.83	22.3±1
				50	0	2	21.80	22.3±1
10MHz	20525	20525	QPSK	1	0	0	23.56	23±1
				1	24	0	23.52	23±1
				1	49	0	23.59	23±1
				25	0	1	22.63	23±1
				25	12	1	22.65	23±1
				25	24	1	22.68	23±1
				50	0	1	22.59	23±1
		844	16QAM	1	0	1	23.21	22.3±1
				1	24	1	23.24	22.3±1
				1	49	1	23.16	22.3±1
				25	0	2	21.68	22.3±1
				25	12	2	21.68	22.3±1
				25	24	2	21.63	22.3±1
				50	0	2	21.61	22.3±1
20600	20600	20600	QPSK	1	0	0	23.43	23±1
				1	24	0	23.45	23±1
				1	49	0	23.44	23±1
				25	0	1	22.53	23±1
				25	12	1	22.54	23±1
				25	24	1	22.58	23±1
				50	0	1	22.53	23±1
		844	16QAM	1	0	1	23.00	22.3±1
				1	24	1	23.15	22.3±1
				1	49	1	23.06	22.3±1
				25	0	2	21.62	22.3±1
				25	12	2	21.60	22.3±1
				25	24	2	21.63	22.3±1
				50	0	2	21.60	22.3±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
5MHz	20425	826.5	QPSK	1	0	0	23.63	23±1
				1	12	0	23.62	23±1
				1	24	0	23.65	23±1
				12	0	1	22.77	23±1
				12	6	1	22.75	23±1
				12	11	1	22.76	23±1
				25	0	1	22.79	23±1
			16QAM	1	0	1	23.05	22.3±1
				1	12	1	23.06	22.3±1
				1	24	1	23.08	22.3±1
				12	0	2	21.69	22.3±1
				12	6	2	21.68	22.3±1
				12	11	2	21.63	22.3±1
				25	0	2	21.65	22.3±1
5MHz	20525	836.5	QPSK	1	0	0	23.39	23±1
				1	12	0	23.36	23±1
				1	24	0	23.38	23±1
				12	0	1	22.65	23±1
				12	6	1	22.63	23±1
				12	11	1	22.61	23±1
				25	0	1	22.58	23±1
			16QAM	1	0	1	22.49	22±1
				1	12	1	22.43	22±1
				1	24	1	22.46	22±1
				12	0	2	21.65	22±1
				12	6	2	21.63	22±1
				12	11	2	21.68	22±1
				25	0	2	21.64	22±1
5MHz	20625	846.5	QPSK	1	0	0	23.50	23±1
				1	12	0	23.53	23±1
				1	24	0	23.51	23±1
				12	0	1	22.62	23±1
				12	6	1	22.60	23±1
				12	11	1	22.65	23±1
				25	0	1	22.54	23±1
			16QAM	1	0	1	22.51	22±1
				1	12	1	22.56	22±1
				1	24	1	22.56	22±1
				12	0	2	21.74	22±1
				12	6	2	21.73	22±1
				12	11	2	21.77	22±1
				25	0	2	21.64	22±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
20415	825.5	20415	QPSK	1	0	0	23.52	23±1
				1	7	0	23.54	23±1
				1	14	0	23.56	23±1
				8	0	1	22.69	23±1
				8	4	1	22.68	23±1
				8	7	1	22.63	23±1
				15	0	1	22.75	23±1
		20525	16QAM	1	0	1	23.09	22.3±1
				1	7	1	23.01	22.3±1
				1	14	1	23.10	22.3±1
				8	0	2	21.71	22.3±1
				8	4	2	21.73	22.3±1
				8	7	2	21.75	22.3±1
				15	0	2	21.88	22.3±1
3MHz	20635	20635	QPSK	1	0	0	23.46	23±1
				1	7	0	23.45	23±1
				1	14	0	23.43	23±1
				8	0	1	22.48	23±1
				8	4	1	22.42	23±1
				8	7	1	22.46	23±1
				15	0	1	22.52	23±1
		847.5	16QAM	1	0	1	22.30	22±1
				1	7	1	22.36	22±1
				1	14	1	22.39	22±1
				8	0	2	21.50	22±1
				8	4	2	21.52	22±1
				8	7	2	21.56	22±1
				15	0	2	21.53	22±1
3MHz	20635	20635	QPSK	1	0	0	23.46	23±1
				1	7	0	23.42	23±1
				1	14	0	23.48	23±1
				8	0	1	22.47	23±1
				8	4	1	22.46	23±1
				8	7	1	22.43	23±1
				15	0	1	22.54	23±1
		847.5	16QAM	1	0	1	22.35	22±1
				1	7	1	22.39	22±1
				1	14	1	22.36	22±1
				8	0	2	21.53	22±1
				8	4	2	21.50	22±1
				8	7	2	21.54	22±1
				15	0	2	21.54	22±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
20407	824.7	QPSK	1	0	0	23.76	23±1	
			1	2	0	23.71	23±1	
			1	5	0	23.75	23±1	
			3	0	0	23.86	23±1	
			3	1	0	<b>23.88</b>	23±1	
			3	2	0	23.81	23±1	
			6	0	1	22.72	23±1	
		16QAM	1	0	1	22.62	22±1	
			1	2	1	22.69	22±1	
			1	5	1	22.65	22±1	
			3	0	1	22.61	22±1	
			3	1	1	22.65	22±1	
			3	2	1	22.62	22±1	
			6	0	2	21.70	22±1	
1.4MHz	20525	QPSK	1	0	0	23.76	23±1	
			1	2	0	23.75	23±1	
			1	5	0	23.78	23±1	
			3	0	0	23.86	23±1	
			3	1	0	23.85	23±1	
			3	2	0	23.88	23±1	
			6	0	1	22.73	23±1	
		16QAM	1	0	1	22.61	22±1	
			1	2	1	22.68	22±1	
			1	5	1	22.63	22±1	
			3	0	1	22.75	22±1	
			3	1	1	22.76	22±1	
			3	2	1	22.73	22±1	
			6	0	2	21.73	22±1	
20643	848.3	QPSK	1	0	0	23.52	23±1	
			1	2	0	23.56	23±1	
			1	5	0	23.54	23±1	
			3	0	0	23.66	23±1	
			3	1	0	23.63	23±1	
			3	2	0	23.68	23±1	
			6	0	1	22.50	23±1	
		16QAM	1	0	1	22.38	22±1	
			1	2	1	22.36	22±1	
			1	5	1	22.39	22±1	
			3	0	1	22.42	22±1	
			3	1	1	22.43	22±1	
			3	2	1	22.46	22±1	
			6	0	2	21.54	22±1	

## LTE Band 7:

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
20MHz	20850	2510	QPSK	1	0	0	21.98	21.3±1
				1	49	0	21.96	21.3±1
				1	99	0	21.99	21.3±1
				50	0	1	20.80	21.3±1
				50	24	1	20.83	21.3±1
				50	49	1	20.86	21.3±1
				100	0	1	20.82	21.3±1
			16QAM	1	0	1	21.08	21.3±1
				1	49	1	21.12	21.3±1
				1	99	1	21.13	21.3±1
				50	0	2	20.35	21.3±1
				50	24	2	20.39	21.3±1
				50	49	2	20.41	21.3±1
				100	0	2	20.33	21.3±1
20MHz	21100	2535	QPSK	1	0	0	21.75	21.3±1
				1	49	0	21.74	21.3±1
				1	99	0	21.73	21.3±1
				50	0	1	20.63	21.3±1
				50	24	1	20.65	21.3±1
				50	49	1	20.68	21.3±1
				100	0	1	20.75	21.3±1
			16QAM	1	0	1	20.69	21.3±1
				1	49	1	20.68	21.3±1
				1	99	1	20.66	21.3±1
				50	0	2	20.42	21.3±1
				50	24	2	20.41	21.3±1
				50	49	2	20.43	21.3±1
				100	0	2	20.34	21.3±1
20MHz	21350	2560	QPSK	1	0	0	22.28	21.3±1
				1	49	0	22.26	21.3±1
				1	99	0	22.31	21.3±1
				50	0	1	21.01	21.3±1
				50	24	1	21.03	21.3±1
				50	49	1	21.05	21.3±1
				100	0	1	20.66	21.3±1
			16QAM	1	0	1	21.55	21.3±1
				1	49	1	21.56	21.3±1
				1	99	1	21.59	21.3±1
				50	0	2	20.56	21.3±1
				50	24	2	20.53	21.3±1
				50	49	2	20.55	21.3±1
				100	0	2	20.35	21.3±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
20825	1717.5	1717.5	QPSK	1	0	0	22.10	21.3±1
				1	37	0	22.13	21.3±1
				1	74	0	22.16	21.3±1
				36	0	1	20.93	21.3±1
				36	16	1	20.91	21.3±1
				36	35	1	20.95	21.3±1
				75	0	1	20.88	21.3±1
		1732.5	16QAM	1	0	1	21.43	21.3±1
				1	37	1	21.45	21.3±1
				1	74	1	21.42	21.3±1
				36	0	2	20.45	21.3±1
				36	16	2	20.43	21.3±1
				36	35	2	20.42	21.3±1
				75	0	2	20.33	21.3±1
15MHz	21100	1732.5	QPSK	1	0	0	22.09	21.3±1
				1	37	0	22.08	21.3±1
				1	74	0	22.03	21.3±1
				36	0	1	20.91	21.3±1
				36	16	1	20.96	21.3±1
				36	35	1	20.95	21.3±1
				75	0	1	20.81	21.3±1
		1747.5	16QAM	1	0	1	21.07	21.3±1
				1	37	1	21.03	21.3±1
				1	74	1	21.06	21.3±1
				36	0	2	20.43	21.3±1
				36	16	2	20.45	21.3±1
				36	35	2	20.44	21.3±1
				75	0	2	20.32	21.3±1
21375	21375	1747.5	QPSK	1	0	0	21.56	21.3±1
				1	37	0	21.53	21.3±1
				1	74	0	21.59	21.3±1
				36	0	1	21.56	21.3±1
				36	16	1	20.63	21.3±1
				36	35	1	20.65	21.3±1
				75	0	1	20.67	21.3±1
		1747.5	16QAM	1	0	1	20.72	21.3±1
				1	37	1	20.75	21.3±1
				1	74	1	20.73	21.3±1
				36	0	2	20.41	21.3±1
				36	16	2	20.43	21.3±1
				36	35	2	20.43	21.3±1
				75	0	2	20.31	21.3±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
20800	2502	2502	QPSK	1	0	0	22.35	22±1
				1	24	0	22.36	22±1
				1	49	0	22.39	22±1
				25	0	1	21.26	22±1
				25	12	1	21.23	22±1
				25	24	1	21.23	22±1
				50	0	1	21.24	22±1
		16QAM	16QAM	1	0	1	21.69	21.3±1
				1	24	1	21.68	21.3±1
				1	49	1	21.66	21.3±1
				25	0	2	20.45	21.3±1
				25	12	2	20.46	21.3±1
				25	24	2	20.43	21.3±1
				50	0	2	20.33	21.3±1
10MHz	21100	2535	QPSK	1	0	0	21.68	21.3±1
				1	24	0	21.69	21.3±1
				1	49	0	21.66	21.3±1
				25	0	1	20.59	21.3±1
				25	12	1	20.56	21.3±1
				25	24	1	20.58	21.3±1
				50	0	1	20.65	21.3±1
		16QAM	16QAM	1	0	1	20.93	21.3±1
				1	24	1	20.95	21.3±1
				1	49	1	20.93	21.3±1
				25	0	2	20.41	21.3±1
				25	12	2	20.42	21.3±1
				25	24	2	20.44	21.3±1
				50	0	2	20.34	21.3±1
21400	2565	2565	QPSK	1	0	0	21.94	21.3±1
				1	24	0	21.93	21.3±1
				1	49	0	21.96	21.3±1
				25	0	1	20.90	21.3±1
				25	12	1	20.93	21.3±1
				25	24	1	20.91	21.3±1
				50	0	1	20.87	21.3±1
		16QAM	16QAM	1	0	1	20.70	21.3±1
				1	24	1	20.73	21.3±1
				1	49	1	20.75	21.3±1
				25	0	2	20.51	21.3±1
				25	12	2	20.53	21.3±1
				25	24	2	20.56	21.3±1
				50	0	2	20.32	21.3±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
5MHz	19975	1712.5	QPSK	1	0	0	22.31	22±1
				1	12	0	22.35	22±1
				1	24	0	22.32	22±1
				12	0	1	21.35	22±1
				12	6	1	21.34	22±1
				12	11	1	21.36	22±1
				25	0	1	21.24	22±1
			16QAM	1	0	1	21.58	21.3±1
				1	12	1	21.55	21.3±1
				1	24	1	21.56	21.3±1
				12	0	2	20.53	21.3±1
				12	6	2	20.51	21.3±1
				12	11	2	20.54	21.3±1
				25	0	2	20.36	21.3±1
5MHz	20175	1732.5	QPSK	1	0	0	22.39	22±1
				1	12	0	22.36	22±1
				1	24	0	22.34	22±1
				12	0	1	21.46	22±1
				12	6	1	21.49	22±1
				12	11	1	21.48	22±1
				25	0	1	21.42	22±1
			16QAM	1	0	1	21.35	21.3±1
				1	12	1	21.33	21.3±1
				1	24	1	21.39	21.3±1
				12	0	2	20.63	21.3±1
				12	6	2	20.52	21.3±1
				12	11	2	20.51	21.3±1
				25	0	2	20.43	21.3±1
5MHz	20375	1752.5	QPSK	1	0	0	<b>22.49</b>	22±1
				1	12	0	22.46	22±1
				1	24	0	22.43	22±1
				12	0	1	21.48	22±1
				12	6	1	21.45	22±1
				12	11	1	21.43	22±1
				25	0	1	21.39	22±1
			16QAM	1	0	1	21.38	21.3±1
				1	12	1	21.40	21.3±1
				1	24	1	21.35	21.3±1
				12	0	2	20.53	21.3±1
				12	6	2	20.56	21.3±1
				12	11	2	20.54	21.3±1
				25	0	2	20.40	21.3±1

## LTE Band 12:

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
23060	704	QPSK	1	0	0	23.35	23±1	
			1	24	0	23.36	23±1	
			1	49	0	23.33	23±1	
			25	0	1	22.34	23±1	
			25	12	1	22.36	23±1	
			25	24	1	22.33	23±1	
			50	0	1	22.29	23±1	
		16QAM	1	0	1	22.73	22±1	
			1	24	1	22.76	22±1	
			1	49	1	22.75	22±1	
			25	0	2	21.23	22±1	
			25	12	2	21.28	22±1	
			25	24	2	21.29	22±1	
			50	0	2	21.26	22±1	
10MHz	23095	QPSK	1	0	0	<b>23.47</b>	23±1	
			1	24	0	23.45	23±1	
			1	49	0	23.43	23±1	
			25	0	1	22.43	23±1	
			25	12	1	22.45	23±1	
			25	24	1	22.43	23±1	
			50	0	1	22.39	23±1	
		16QAM	1	0	1	22.59	22±1	
			1	24	1	22.56	22±1	
			1	49	1	22.53	22±1	
			25	0	2	21.34	22±1	
			25	12	2	21.32	22±1	
			25	24	2	21.36	22±1	
			50	0	2	21.38	22±1	
23130	711	QPSK	1	0	0	23.24	23±1	
			1	24	0	23.25	23±1	
			1	49	0	23.21	23±1	
			25	0	1	22.42	23±1	
			25	12	1	22.45	23±1	
			25	24	1	22.46	23±1	
			50	0	1	22.39	23±1	
		16QAM	1	0	1	22.66	22±1	
			1	24	1	22.63	22±1	
			1	49	1	22.65	22±1	
			25	0	2	21.35	22±1	
			25	12	2	21.36	22±1	
			25	24	2	21.39	22±1	
			50	0	2	21.34	22±1	

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
23035	701.5	QPSK	1	0	0	23.30	23±1	
			1	12	0	23.31	23±1	
			1	24	0	23.35	23±1	
			12	0	1	22.34	23±1	
			12	6	1	22.36	23±1	
			12	11	1	22.31	23±1	
			25	0	1	22.26	23±1	
		16QAM	1	0	1	22.19	22±1	
			1	12	1	22.13	22±1	
			1	24	1	22.15	22±1	
			12	0	2	21.23	22±1	
			12	6	2	21.26	22±1	
			12	11	2	21.29	22±1	
			25	0	2	21.23	22±1	
5MHz	23095	QPSK	1	0	0	23.42	23±1	
			1	12	0	23.45	23±1	
			1	24	0	23.45	23±1	
			12	0	1	22.34	23±1	
			12	6	1	22.36	23±1	
			12	11	1	22.33	23±1	
			25	0	1	22.30	23±1	
		16QAM	1	0	1	22.57	22±1	
			1	12	1	22.56	22±1	
			1	24	1	22.53	22±1	
			12	0	2	21.34	22±1	
			12	6	2	21.33	22±1	
			12	11	2	21.31	22±1	
			25	0	2	21.23	22±1	
23155	713.5	QPSK	1	0	0	23.36	23±1	
			1	12	0	23.31	23±1	
			1	24	0	23.34	23±1	
			12	0	1	22.36	23±1	
			12	6	1	22.35	23±1	
			12	11	1	22.38	23±1	
			25	0	1	22.23	23±1	
		16QAM	1	0	1	22.24	22±1	
			1	12	1	22.23	22±1	
			1	24	1	22.25	22±1	
			12	0	2	21.25	22±1	
			12	6	2	21.23	22±1	
			12	11	2	21.28	22±1	
			25	0	2	21.15	22±1	

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
23025	700.5	700.5	QPSK	1	0	0	23.33	23±1
				1	7	0	23.35	23±1
				1	14	0	23.34	23±1
				8	0	1	22.42	23±1
				8	4	1	22.43	23±1
				8	7	1	22.46	23±1
				15	0	1	22.29	23±1
			16QAM	1	0	1	22.51	22±1
				1	7	1	22.53	22±1
				1	14	1	22.52	22±1
				8	0	2	21.24	22±1
				8	4	2	21.26	22±1
				8	7	2	21.23	22±1
				15	0	2	21.28	22±1
3MHz	23095	707.5	QPSK	1	0	0	23.35	23±1
				1	7	0	23.36	23±1
				1	14	0	23.34	23±1
				8	0	1	22.37	23±1
				8	4	1	22.35	23±1
				8	7	1	22.31	23±1
				15	0	1	22.31	23±1
			16QAM	1	0	1	22.11	22±1
				1	7	1	22.13	22±1
				1	14	1	22.16	22±1
				8	0	2	21.29	22±1
				8	4	2	21.28	22±1
				8	7	2	21.26	22±1
				15	0	2	21.21	22±1
23025	23025	714.5	QPSK	1	0	0	23.31	23±1
				1	7	0	23.35	23±1
				1	14	0	23.36	23±1
				8	0	1	22.39	23±1
				8	4	1	22.32	23±1
				8	7	1	22.36	23±1
				15	0	1	22.22	23±1
			16QAM	1	0	1	22.09	22±1
				1	7	1	22.06	22±1
				1	14	1	22.01	22±1
				8	0	2	21.05	22±1
				8	4	2	21.08	22±1
				8	7	2	21.03	22±1
				15	0	2	21.10	22±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
23017	699.7	699.7	QPSK	1	0	0	23.24	23±1
				1	2	0	23.25	23±1
				1	5	0	23.26	23±1
				3	0	0	23.25	23±1
				3	1	0	23.22	23±1
				3	2	0	23.29	23±1
				6	0	1	22.33	23±1
			16QAM	1	0	1	21.83	22±1
				1	2	1	21.86	22±1
				1	5	1	21.85	22±1
				3	0	1	21.75	22±1
				3	1	1	21.77	22±1
				3	2	1	21.74	22±1
				6	0	2	21.13	22±1
1.4MHz	23095	707.5	QPSK	1	0	0	23.40	23±1
				1	2	0	23.42	23±1
				1	5	0	23.45	23±1
				3	0	0	23.33	23±1
				3	1	0	23.36	23±1
				3	2	0	23.31	23±1
				6	0	1	22.38	23±1
			16QAM	1	0	1	22.12	22±1
				1	2	1	22.13	22±1
				1	5	1	22.16	22±1
				3	0	1	21.22	22±1
				3	1	1	21.23	22±1
				3	2	1	21.24	22±1
				6	0	2	21.27	22±1
23173	23173	715.3	QPSK	1	0	0	23.21	23±1
				1	2	0	23.24	23±1
				1	5	0	23.26	23±1
				3	0	0	23.13	23±1
				3	1	0	23.16	23±1
				3	2	0	23.16	23±1
				6	0	1	22.42	23±1
			16QAM	1	0	1	22.17	22±1
				1	2	1	22.15	22±1
				1	5	1	22.13	22±1
				3	0	1	21.43	22±1
				3	1	1	21.44	22±1
				3	2	1	21.41	22±1
				6	0	2	21.09	22±1

**LTE Band 17:**

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
23780	709.0	709.0	QPSK	1	0	0	22.95	22±1
				1	24	0	22.93	22±1
				1	49	0	22.96	22±1
				25	0	1	22.50	22±1
				25	12	1	22.53	22±1
				25	24	1	22.56	22±1
				50	0	1	22.48	22±1
			16QAM	1	0	1	22.69	22±1
				1	24	1	22.63	22±1
				1	49	1	22.68	22±1
				25	0	2	21.63	22±1
				25	12	2	21.62	22±1
				25	24	2	21.66	22±1
				50	0	2	21.58	22±1
10MHz	23790	701.0	QPSK	1	0	0	23.21	23±1
				1	24	0	23.22	23±1
				1	49	0	23.25	23±1
				25	0	1	22.51	23±1
				25	12	1	22.53	23±1
				25	24	1	22.56	23±1
				50	0	1	22.46	23±1
			16QAM	1	0	1	22.27	22±1
				1	24	1	22.23	22±1
				1	49	1	22.25	22±1
				25	0	2	21.45	22±1
				25	12	2	21.46	22±1
				25	24	2	21.48	22±1
				50	0	2	21.46	22±1
23800	711.0	QPSK	1	0	0	23.39	23±1	
			1	24	0	23.35	23±1	
			1	49	0	23.36	23±1	
			25	0	1	22.47	23±1	
			25	12	1	22.45	23±1	
			25	24	1	22.53	23±1	
			50	0	1	22.47	23±1	
			16QAM	1	0	1	22.31	22±1
				1	24	1	22.35	22±1
				1	49	1	22.36	22±1
				25	0	2	21.45	22±1
				25	12	2	21.48	22±1
				25	24	2	21.46	22±1
				50	0	2	21.48	22±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
23755	706.5	706.5	QPSK	1	0	0	23.58	23±1
				1	12	0	23.56	23±1
				1	24	0	23.54	23±1
				12	0	1	22.51	23±1
				12	6	1	22.56	23±1
				12	11	1	22.54	23±1
				25	0	1	22.49	23±1
			16QAM	1	0	1	22.75	22±1
				1	12	1	22.73	22±1
				1	24	1	22.71	22±1
				12	0	2	21.46	22±1
				12	6	2	21.43	22±1
				12	11	2	21.47	22±1
				25	0	2	21.45	22±1
5MHz	23790	710.0	QPSK	1	0	0	23.55	23±1
				1	12	0	23.56	23±1
				1	24	0	23.54	23±1
				12	0	1	22.57	23±1
				12	6	1	22.53	23±1
				12	11	1	22.59	23±1
				25	0	1	22.50	23±1
			16QAM	1	0	1	22.49	22±1
				1	12	1	22.46	22±1
				1	24	1	22.43	22±1
				12	0	2	21.56	22±1
				12	6	2	21.54	22±1
				12	11	2	21.57	22±1
				25	0	2	21.51	22±1
23825	23825	713.5	QPSK	1	0	0	<b>23.59</b>	23±1
				1	12	0	23.54	23±1
				1	24	0	23.53	23±1
				12	0	1	22.58	23±1
				12	6	1	22.53	23±1
				12	11	1	22.56	23±1
				25	0	1	22.44	23±1
			16QAM	1	0	1	22.39	22±1
				1	12	1	22.36	22±1
				1	24	1	22.37	22±1
				12	0	2	21.53	22±1
				12	6	2	21.52	22±1
				12	11	2	21.53	22±1
				25	0	2	21.41	22±1

## ERP & EIRP

### EIRP for LTE Band 2 (Part 24E)

Frequency (MHz)	BW (MHz)	Modulation	RB Size/Offset	Substituted level (dBm)	Antenna Polarization	Antenna Gain correction (dBi)	Cable Loss (dB)	Absolute Level (dBm)	Limit (dBm)
1850.7	1.4	QPSK	1/0	19.08	V	7.88	0.85	26.11	33.01
1880	1.4	QPSK	1/0	19.52	V	7.88	0.85	26.55	33.01
1909.3	1.4	QPSK	1/0	19.42	V	7.88	0.85	26.45	33.01
1850.7	1.4	QPSK	1/0	19.09	H	7.88	0.85	26.12	33.01
1880	1.4	QPSK	1/0	18.96	H	7.88	0.85	25.99	33.01
1909.3	1.4	QPSK	1/0	19.42	H	7.88	0.85	26.45	33.01
1850.7	1.4	16-QAM	1/0	18.20	V	7.88	0.85	25.23	33.01
1880	1.4	16-QAM	1/0	18.19	V	7.88	0.85	25.22	33.01
1909.3	1.4	16-QAM	1/0	18.42	V	7.88	0.85	25.45	33.01
1850.7	1.4	16-QAM	1/0	17.95	H	7.88	0.85	24.98	33.01
1880	1.4	16-QAM	1/0	17.75	H	7.88	0.85	24.78	33.01
1909.3	1.4	16-QAM	1/0	17.63	H	7.88	0.85	24.66	33.01
1851.5	3	QPSK	1/0	19.11	V	7.88	0.85	26.14	33.01
1880	3	QPSK	1/0	19.18	V	7.88	0.85	26.21	33.01
1908.5	3	QPSK	1/0	19.39	V	7.88	0.85	26.42	33.01
1851.5	3	QPSK	1/0	19.75	H	7.88	0.85	26.78	33.01
1880	3	QPSK	1/0	19.96	H	7.88	0.85	26.99	33.01
1908.5	3	QPSK	1/0	19.84	H	7.88	0.85	26.87	33.01
1851.5	3	16-QAM	1/0	18.09	V	7.88	0.85	25.12	33.01
1880	3	16-QAM	1/0	18.19	V	7.88	0.85	25.22	33.01
1908.5	3	16-QAM	1/0	18.21	V	7.88	0.85	25.24	33.01
1851.5	3	16-QAM	1/0	18.30	H	7.88	0.85	25.33	33.01
1880	3	16-QAM	1/0	18.18	H	7.88	0.85	25.21	33.01
1908.5	3	16-QAM	1/0	18.16	H	7.88	0.85	25.19	33.01
1852.5	5	QPSK	1/24	20.44	V	7.88	0.85	27.47	33.01
1880	5	QPSK	1/0	20.11	V	7.88	0.85	27.14	33.01
1907.5	5	QPSK	1/24	20.63	V	7.88	0.85	27.66	33.01
1852.5	5	QPSK	1/24	20.42	H	7.88	0.85	27.45	33.01
1880	5	QPSK	1/0	20.30	H	7.88	0.85	27.33	33.01
1907.5	5	QPSK	1/24	20.25	H	7.88	0.85	27.28	33.01
1852.5	5	16-QAM	1/24	19.11	V	7.88	0.85	26.14	33.01
1880	5	16-QAM	1/0	19.42	V	7.88	0.85	26.45	33.01

1907.5	5	16-QAM	1/24	19.11	V	7.88	0.85	26.14	33.01
1852.5	5	16-QAM	1/24	18.96	H	7.88	0.85	25.99	33.01
1880	5	16-QAM	1/0	18.88	H	7.88	0.85	25.91	33.01
1907.5	5	16-QAM	1/24	18.69	H	7.88	0.85	25.72	33.01
1855	10	QPSK	1/0	21.44	V	7.88	0.85	28.47	33.01
1880	10	QPSK	1/0	21.07	V	7.88	0.85	28.10	33.01
1905	10	QPSK	1/49	21.19	V	7.88	0.85	28.22	33.01
1855	10	QPSK	1/0	20.81	H	7.88	0.85	27.84	33.01
1880	10	QPSK	1/0	20.63	H	7.88	0.85	27.66	33.01
1905	10	QPSK	1/49	20.71	H	7.88	0.85	27.74	33.01
1855	10	16-QAM	1/0	18.11	V	7.88	0.85	25.14	33.01
1880	10	16-QAM	1/0	19.85	V	7.88	0.85	26.88	33.01
1905	10	16-QAM	1/49	18.29	V	7.88	0.85	25.32	33.01
1855	10	16-QAM	1/0	17.96	H	7.88	0.85	24.99	33.01
1880	10	16-QAM	1/0	17.75	H	7.88	0.85	24.78	33.01
1905	10	16-QAM	1/49	18.07	H	7.88	0.85	25.10	33.01
1857.5	15	QPSK	1/0	18.85	V	7.88	0.85	25.88	33.01
1880	15	QPSK	1/0	18.95	V	7.88	0.85	25.98	33.01
1902.5	15	QPSK	1/0	18.86	V	7.88	0.85	25.89	33.01
1857.5	15	QPSK	1/0	18.52	H	7.88	0.85	25.55	33.01
1880	15	QPSK	1/0	18.42	H	7.88	0.85	25.45	33.01
1902.5	15	QPSK	1/0	18.36	H	7.88	0.85	25.39	33.01
1857.5	15	16-QAM	1/0	18.07	V	7.88	0.85	25.10	33.01
1880	15	16-QAM	1/0	18.4	V	7.88	0.85	25.43	33.01
1902.5	15	16-QAM	1/0	18.08	V	7.88	0.85	25.11	33.01
1857.5	15	16-QAM	1/0	17.96	H	7.88	0.85	24.99	33.01
1880	15	16-QAM	1/0	17.53	H	7.88	0.85	24.56	33.01
1902.5	15	16-QAM	1/0	17.75	H	7.88	0.85	24.78	33.01
1860	20	QPSK	1/0	20.11	V	7.88	0.85	27.14	33.01
1880	20	QPSK	1/0	20.09	V	7.88	0.85	27.12	33.01
1900	20	QPSK	1/0	20.21	V	7.88	0.85	27.24	33.01
1860	20	QPSK	1/0	19.85	H	7.88	0.85	26.88	33.01
1880	20	QPSK	1/0	19.96	H	7.88	0.85	26.99	33.01
1900	20	QPSK	1/0	19.75	H	7.88	0.85	26.78	33.01
1860	20	16-QAM	1/0	19.07	V	7.88	0.85	26.10	33.01
1880	20	16-QAM	1/0	19.19	V	7.88	0.85	26.22	33.01
1900	20	16-QAM	1/0	19.06	V	7.88	0.85	26.09	33.01
1860	20	16-QAM	1/0	19.31	H	7.88	0.85	26.34	33.01

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1880	20	16-QAM	1/0	19.44	H	7.88	0.85	26.47	33.01
1900	20	16-QAM	1/0	19.41	H	7.88	0.85	26.44	33.01

### EIRP for LTE Band 4 (Part 27)

Frequency (MHz)	BW (MHz)	Modulation	RB Size/Offset	Substituted level (dBm)	Antenna Polarization	Antenna Gain correction (dBi)	Cable Loss (dB)	Absolute Level (dBm)	Limit (dBm)
1710.7	1.4	QPSK	1/0	18.94	V	7.95	0.79	26.10	30
1732.5	1.4	QPSK	1/0	18.96	V	7.95	0.79	26.12	30
1754.3	1.4	QPSK	1/0	19.18	V	7.95	0.79	26.34	30
1710.7	1.4	QPSK	1/0	18.82	H	7.95	0.79	25.98	30
1732.5	1.4	QPSK	1/0	18.71	H	7.95	0.79	25.87	30
1754.3	1.4	QPSK	1/0	18.73	H	7.95	0.79	25.89	30
1710.7	1.4	16-QAM	1/5	17.94	V	7.95	0.79	25.10	30
1732.5	1.4	16-QAM	1/0	18.07	V	7.95	0.79	25.23	30
1754.3	1.4	16-QAM	1/0	18.01	V	7.95	0.79	25.17	30
1710.7	1.4	16-QAM	1/5	17.83	H	7.95	0.79	24.99	30
1732.5	1.4	16-QAM	1/0	17.71	H	7.95	0.79	24.87	30
1754.3	1.4	16-QAM	1/0	17.65	H	7.95	0.79	24.81	30
1711.5	3	QPSK	1/0	19.01	V	7.95	0.79	26.17	30
1732.5	3	QPSK	1/0	19.32	V	7.95	0.79	26.48	30
1753.5	3	QPSK	1/0	19.53	V	7.95	0.79	26.69	30
1711.5	3	QPSK	1/0	18.98	H	7.95	0.79	26.14	30
1732.5	3	QPSK	1/0	19.06	H	7.95	0.79	26.22	30
1753.5	3	QPSK	1/0	19.26	H	7.95	0.79	26.42	30
1711.5	3	16-QAM	1/0	19.97	V	7.95	0.79	27.13	30
1732.5	3	16-QAM	1/0	20.06	V	7.95	0.79	27.22	30
1753.5	3	16-QAM	1/0	20.15	V	7.95	0.79	<b>27.31</b>	30
1711.5	3	16-QAM	1/0	19.72	H	7.95	0.79	26.88	30
1732.5	3	16-QAM	1/0	19.58	H	7.95	0.79	26.74	30
1753.5	3	16-QAM	1/0	19.79	H	7.95	0.79	26.95	30
1712.5	5	QPSK	1/0	17.96	V	7.95	0.79	25.12	30
1732.5	5	QPSK	1/0	18.48	V	7.95	0.79	25.64	30
1752.5	5	QPSK	1/24	17.97	V	7.95	0.79	25.13	30
1712.5	5	QPSK	1/0	17.98	H	7.95	0.79	25.14	30
1732.5	5	QPSK	1/0	18.27	H	7.95	0.79	25.43	30
1752.5	5	QPSK	1/24	18.5	H	7.95	0.79	25.66	30
1712.5	5	16-QAM	1/0	17.72	V	7.95	0.79	24.88	30
1732.5	5	16-QAM	1/0	17.82	V	7.95	0.79	24.98	30
1752.5	5	16-QAM	1/24	17.49	V	7.95	0.79	24.65	30

1712.5	5	16-QAM	1/0	17.39	H	7.95	0.79	24.55	30
1732.5	5	16-QAM	1/0	17.46	H	7.95	0.79	24.62	30
1752.5	5	16-QAM	1/24	17.56	H	7.95	0.79	24.72	30
1715	10	QPSK	1/0	18.55	V	7.95	0.79	25.71	30
1732.5	10	QPSK	1/49	18.72	V	7.95	0.79	25.88	30
1750	10	QPSK	1/0	18.53	V	7.95	0.79	25.69	30
1715	10	QPSK	1/0	17.95	H	7.95	0.79	25.11	30
1732.5	10	QPSK	1/49	18.08	H	7.95	0.79	25.24	30
1750	10	QPSK	1/0	18.15	H	7.95	0.79	25.31	30
1715	10	16-QAM	1/0	17.83	V	7.95	0.79	24.99	30
1732.5	10	16-QAM	1/49	17.72	V	7.95	0.79	24.88	30
1750	10	16-QAM	1/0	17.65	V	7.95	0.79	24.81	30
1715	10	16-QAM	1/0	17.39	H	7.95	0.79	24.55	30
1732.5	10	16-QAM	1/49	17.4	H	7.95	0.79	24.56	30
1750	10	16-QAM	1/0	17.62	H	7.95	0.79	24.78	30
1717.5	15	QPSK	1/0	18.94	V	7.95	0.79	26.10	30
1732.5	15	QPSK	1/74	19.06	V	7.95	0.79	26.22	30
1747.5	15	QPSK	1/0	19.06	V	7.95	0.79	26.22	30
1717.5	15	QPSK	1/0	19.16	H	7.95	0.79	26.32	30
1732.5	15	QPSK	1/74	19.26	H	7.95	0.79	26.42	30
1747.5	15	QPSK	1/0	18.62	H	7.95	0.79	25.78	30
1717.5	15	16-QAM	1/0	18.58	V	7.95	0.79	25.74	30
1732.5	15	16-QAM	1/74	18.55	V	7.95	0.79	25.71	30
1747.5	15	16-QAM	1/0	18.26	V	7.95	0.79	25.42	30
1717.5	15	16-QAM	1/0	18.16	H	7.95	0.79	25.32	30
1732.5	15	16-QAM	1/74	18.25	H	7.95	0.79	25.41	30
1747.5	15	16-QAM	1/0	18.3	H	7.95	0.79	25.46	30
1720	20	QPSK	1/99	19.29	V	7.95	0.79	26.45	30
1732.5	20	QPSK	1/99	19.83	V	7.95	0.79	26.99	30
1745	20	QPSK	1/0	19.94	V	7.95	0.79	27.10	30
1720	20	QPSK	1/99	18.73	H	7.95	0.79	25.89	30
1732.5	20	QPSK	1/99	18.74	H	7.95	0.79	25.90	30
1745	20	QPSK	1/0	18.58	H	7.95	0.79	25.74	30
1720	20	16-QAM	1/99	19.54	V	7.95	0.79	26.70	30
1732.5	20	16-QAM	1/99	19.71	V	7.95	0.79	26.87	30
1745	20	16-QAM	1/0	19.82	V	7.95	0.79	26.98	30
1720	20	16-QAM	1/99	18.96	H	7.95	0.79	26.12	30
1732.5	20	16-QAM	1/99	19.18	H	7.95	0.79	26.34	30

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1745	20	16-QAM	1/0	19.12	H	7.95	0.79	26.28	30
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### EIRP for LTE Band 5 (Part 22)

Frequency (MHz)	BW (MHz)	Modulation	RB Size/Offset	Substituted level (dBm)	Antenna Polarization	Antenna Gain correction (dBi)	Cable Loss (dB)	Absolute Level (dBm)	Limit (dBm)
824.7	1.4	QPSK	1/5	21.76	V	6.8	0.44	28.12	34.77
836.5	1.4	QPSK	1/5	21.96	V	6.8	0.44	28.32	34.77
848.3	1.4	QPSK	1/5	21.98	V	6.9	0.44	28.44	34.77
824.7	1.4	QPSK	1/5	21.76	H	6.8	0.44	28.12	34.77
836.5	1.4	QPSK	1/5	22.09	H	6.8	0.44	28.45	34.77
848.3	1.4	QPSK	1/5	22.15	H	6.9	0.44	28.61	34.77
824.7	1.4	16-QAM	1/5	20.78	V	6.8	0.44	27.14	34.77
836.5	1.4	16-QAM	1/5	20.87	V	6.8	0.44	27.23	34.77
848.3	1.4	16-QAM	1/5	20.88	V	6.9	0.44	27.34	34.77
824.7	1.4	16-QAM	1/5	20.78	H	6.8	0.44	27.14	34.77
836.5	1.4	16-QAM	1/5	21.18	H	6.8	0.44	27.54	34.77
848.3	1.4	16-QAM	1/5	20.85	H	6.9	0.44	27.31	34.77
825.5	3	QPSK	1/14	22.09	V	6.8	0.44	28.45	34.77
836.5	3	QPSK	1/0	22.09	V	6.8	0.44	28.45	34.77
847.5	3	QPSK	1/14	21.68	V	6.9	0.44	28.14	34.77
825.5	3	QPSK	1/14	21.86	H	6.8	0.44	28.22	34.77
836.5	3	QPSK	1/0	21.98	H	6.8	0.44	28.34	34.77
847.5	3	QPSK	1/14	22.18	H	6.9	0.44	<b>28.64</b>	34.77
825.5	3	16-QAM	1/14	20.74	V	6.8	0.44	27.10	34.77
836.5	3	16-QAM	1/0	20.86	V	6.8	0.44	27.22	34.77
847.5	3	16-QAM	1/14	20.89	V	6.9	0.44	27.35	34.77
825.5	3	16-QAM	1/14	21.09	H	6.8	0.44	27.45	34.77
836.5	3	16-QAM	1/0	21.20	H	6.8	0.44	27.56	34.77
847.5	3	16-QAM	1/14	21.18	H	6.9	0.44	27.64	34.77
826.5	5	QPSK	1/24	21.63	V	6.8	0.44	27.99	34.77
836.5	5	QPSK	1/24	21.47	V	6.8	0.44	27.83	34.77
846.5	5	QPSK	1/24	21.39	V	6.8	0.44	27.75	34.77
826.5	5	QPSK	1/24	21.09	H	6.8	0.44	27.45	34.77
836.5	5	QPSK	1/24	21.05	H	6.8	0.44	27.41	34.77
846.5	5	QPSK	1/24	21.20	H	6.8	0.44	27.56	34.77
826.5	5	16-QAM	1/24	19.76	V	6.8	0.44	26.12	34.77
836.5	5	16-QAM	1/24	19.86	V	6.8	0.44	26.22	34.77
846.5	5	16-QAM	1/24	19.95	V	6.8	0.44	26.31	34.77

826.5	5	16-QAM	1/24	19.63	H	6.8	0.44	25.99	34.77
836.5	5	16-QAM	1/24	19.53	H	6.8	0.44	25.89	34.77
846.5	5	16-QAM	1/24	19.11	H	6.8	0.44	25.47	34.77
829	10	QPSK	1/49	20.77	V	6.8	0.44	27.13	34.77
836.5	10	QPSK	1/49	20.86	V	6.8	0.44	27.22	34.77
844	10	QPSK	1/49	21.09	V	6.8	0.44	27.45	34.77
829	10	QPSK	1/49	21.09	H	6.8	0.44	27.45	34.77
836.5	10	QPSK	1/49	20.99	H	6.8	0.44	27.35	34.77
844	10	QPSK	1/49	20.79	H	6.8	0.44	27.15	34.77
829	10	16-QAM	1/49	20.62	V	6.8	0.44	26.98	34.77
836.5	10	16-QAM	1/49	20.42	V	6.8	0.44	26.78	34.77
844	10	16-QAM	1/49	20.49	V	6.8	0.44	26.85	34.77
829	10	16-QAM	1/49	19.53	H	6.8	0.44	25.89	34.77
836.5	10	16-QAM	1/49	19.42	H	6.8	0.44	25.78	34.77
844	10	16-QAM	1/49	19.28	H	6.8	0.44	25.64	34.77

### ERP for LTE Band 7 (Part 27)

Frequency (MHz)	BW (MHz)	Modulation	RB Size/Offset	Substituted level (dBm)	Antenna Polarization	Antenna Gain correction (dBi)	Cable Loss (dB)	Absolute Level (dBm)	Limit (dBm)
2502.5	5	QPSK	1/0	17.78	V	8.93	0.83	25.88	30
2535	5	QPSK	1/0	17.64	V	8.93	0.83	25.74	30
2567.5	5	QPSK	1/24	17.55	V	8.93	0.83	25.65	30
2502.5	5	QPSK	1/0	17.35	H	8.93	0.83	25.45	30
2535	5	QPSK	1/0	17.38	H	8.93	0.83	25.48	30
2567.5	5	QPSK	1/24	17.57	H	8.93	0.83	25.67	30
2502.5	5	16-QAM	1/0	16.05	V	8.93	0.83	24.15	30
2535	5	16-QAM	1/0	16.25	V	8.93	0.83	24.35	30
2567.5	5	16-QAM	1/24	16.75	V	8.93	0.83	24.85	30
2502.5	5	16-QAM	1/0	16.22	H	8.93	0.83	24.32	30
2535	5	16-QAM	1/0	16.05	H	8.93	0.83	24.15	30
2567.5	5	16-QAM	1/24	16.21	H	8.93	0.83	24.31	30
2505	10	QPSK	1/0	18.12	V	8.93	0.83	26.22	30
2535	10	QPSK	1/49	18.35	V	8.93	0.83	26.45	30
2565	10	QPSK	1/0	18.77	V	8.93	0.83	26.87	30
2505	10	QPSK	1/0	18.89	H	8.93	0.83	<b>26.99</b>	30
2535	10	QPSK	1/49	18.37	H	8.93	0.83	26.47	30
2565	10	QPSK	1/0	18.78	H	8.93	0.83	26.88	30
2505	10	16-QAM	1/0	17.89	V	8.93	0.83	25.99	30
2535	10	16-QAM	1/49	17.68	V	8.93	0.83	25.78	30
2565	10	16-QAM	1/0	17.77	V	8.93	0.83	25.87	30
2505	10	16-QAM	1/0	17.32	H	8.93	0.83	25.42	30
2535	10	16-QAM	1/49	17.23	H	8.93	0.83	25.33	30
2565	10	16-QAM	1/0	17.02	H	8.93	0.83	25.12	30
2507.5	15	QPSK	1/0	18.00	V	8.93	0.83	26.10	30
2535	15	QPSK	1/74	18.35	V	8.93	0.83	26.45	30
2562.5	15	QPSK	1/0	18.68	V	8.93	0.83	26.78	30
2507.5	15	QPSK	1/0	18.11	H	8.93	0.83	26.21	30
2535	15	QPSK	1/74	18.22	H	8.93	0.83	26.32	30
2562.5	15	QPSK	1/0	18.35	H	8.93	0.83	26.45	30
2507.5	15	16-QAM	1/0	17.02	V	8.93	0.83	25.12	30
2535	15	16-QAM	1/74	17.23	V	8.93	0.83	25.33	30
2562.5	15	16-QAM	1/0	17.02	V	8.93	0.83	25.12	30

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2507.5	15	16-QAM	1/0	17.38	H	8.93	0.83	25.48	30
2535	15	16-QAM	1/74	17.54	H	8.93	0.83	25.64	30
2562.5	15	16-QAM	1/0	17.77	H	8.93	0.83	25.87	30
2510	20	QPSK	1/99	18.02	V	8.93	0.83	26.12	30
2535	20	QPSK	1/99	18.12	V	8.93	0.83	26.22	30
2560	20	QPSK	1/0	18.35	V	8.93	0.83	26.45	30
2510	20	QPSK	1/99	18.68	H	8.93	0.83	26.78	30
2535	20	QPSK	1/99	18.35	H	8.93	0.83	26.45	30
2560	20	QPSK	1/0	18.77	H	8.93	0.83	26.87	30
2510	20	16-QAM	1/99	17.02	V	8.93	0.83	25.12	30
2535	20	16-QAM	1/99	17.22	V	8.93	0.83	25.32	30
2560	20	16-QAM	1/0	17.24	V	8.93	0.83	25.34	30
2510	20	16-QAM	1/99	17.34	H	8.93	0.83	25.44	30
2535	20	16-QAM	1/99	17.05	H	8.93	0.83	25.15	30
2560	20	16-QAM	1/0	17.68	H	8.93	0.83	25.78	30

### ERP for LTE Band 12 (Part 27)

Frequency (MHz)	BW (MHz)	Modulation	RB Size/Offset	Substituted level (dBm)	Antenna Polarization	Antenna Gain correction (dBi)	Cable Loss (dB)	Absolute Level (dBm)	Limit (dBm)
699.7	1.4	QPSK	1/5	19.03	V	6.9	0.42	25.51	34.77
707.5	1.4	QPSK	1/5	18.74	V	6.8	0.42	25.12	34.77
715.3	1.4	QPSK	1/5	18.51	V	6.8	0.42	24.89	34.77
699.7	1.4	QPSK	1/5	18.42	H	6.9	0.42	24.90	34.77
707.5	1.4	QPSK	1/5	18.19	H	6.8	0.42	24.57	34.77
715.3	1.4	QPSK	1/5	18.49	H	6.8	0.42	24.87	34.77
699.7	1.4	16-QAM	1/5	17.64	V	6.9	0.42	24.12	34.77
707.5	1.4	16-QAM	1/5	17.84	V	6.8	0.42	24.22	34.77
715.3	1.4	16-QAM	1/5	18.01	V	6.8	0.42	24.39	34.77
699.7	1.4	16-QAM	1/5	17.51	H	6.9	0.42	23.99	34.77
707.5	1.4	16-QAM	1/5	17.51	H	6.8	0.42	23.89	34.77
715.3	1.4	16-QAM	1/5	17.18	H	6.8	0.42	23.56	34.77
700.5	3	QPSK	1/14	18.64	V	6.9	0.42	25.12	34.77
707.5	3	QPSK	1/0	18.84	V	6.8	0.42	25.22	34.77
714.5	3	QPSK	1/14	18.96	V	6.8	0.42	25.34	34.77
700.5	3	QPSK	1/14	18.97	H	6.9	0.42	25.45	34.77
707.5	3	QPSK	1/0	19.23	H	6.8	0.42	25.61	34.77
714.5	3	QPSK	1/14	18.94	H	6.8	0.42	25.32	34.77
700.5	3	16-QAM	1/14	17.97	V	6.9	0.42	24.45	34.77
707.5	3	16-QAM	1/0	17.94	V	6.8	0.42	24.32	34.77
714.5	3	16-QAM	1/14	17.94	V	6.8	0.42	24.32	34.77
700.5	3	16-QAM	1/14	17.64	H	6.9	0.42	24.12	34.77
707.5	3	16-QAM	1/0	17.79	H	6.8	0.42	24.17	34.77
714.5	3	16-QAM	1/14	18.27	H	6.8	0.42	24.65	34.77
701.5	5	QPSK	1/24	19.4	V	6.9	0.42	<b>25.88</b>	34.77
707.5	5	QPSK	1/24	19.37	V	6.8	0.42	25.75	34.77
713.5	5	QPSK	1/24	19.26	V	6.8	0.42	25.64	34.77
701.5	5	QPSK	1/24	18.64	H	6.9	0.42	25.12	34.77
707.5	5	QPSK	1/24	19.26	H	6.8	0.42	25.64	34.77
713.5	5	QPSK	1/24	19.07	H	6.8	0.42	25.45	34.77
701.5	5	16-QAM	1/24	17.64	V	6.9	0.42	24.12	34.77
707.5	5	16-QAM	1/24	17.84	V	6.8	0.42	24.22	34.77
713.5	5	16-QAM	1/24	17.94	V	6.8	0.42	24.32	34.77
701.5	5	16-QAM	1/24	17.92	H	6.9	0.42	24.40	34.77
707.5	5	16-QAM	1/24	17.74	H	6.8	0.42	24.12	34.77

713.5	5	16-QAM	1/24	17.94	H	6.8	0.42	24.32	34.77
704	10	QPSK	1/49	19.48	V	6.8	0.42	25.86	34.77
707.5	10	QPSK	1/49	19.40	V	6.8	0.42	25.78	34.77
711	10	QPSK	1/49	19.26	V	6.8	0.42	25.64	34.77
704	10	QPSK	1/49	19.07	H	6.8	0.42	25.45	34.77
707.5	10	QPSK	1/49	19.04	H	6.8	0.42	25.42	34.77
711	10	QPSK	1/49	18.84	H	6.8	0.42	25.22	34.77
704	10	16-QAM	1/49	17.74	V	6.8	0.42	24.12	34.77
707.5	10	16-QAM	1/49	17.75	V	6.8	0.42	24.13	34.77
711	10	16-QAM	1/49	17.77	V	6.8	0.42	24.15	34.77
704	10	16-QAM	1/49	18.50	H	6.8	0.42	24.88	34.77
707.5	10	16-QAM	1/49	18.21	H	6.8	0.42	24.59	34.77
711	10	16-QAM	1/49	18.40	H	6.8	0.42	24.78	34.77

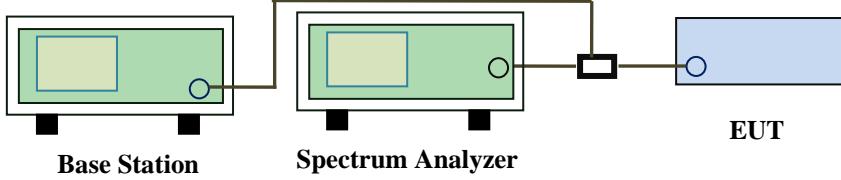
### ERP for LTE Band 17 (Part 27)

Frequency (MHz)	BW (MHz)	Modulation	RB Size/Offset	Substituted level (dBm)	Antenna Polarization	Antenna Gain correction (dBi)	Cable Loss (dB)	Absolute Level (dBm)	Limit (dBm)
706.5	5	QPSK	1/0	19.74	V	6.8	0.42	26.12	34.77
710	5	QPSK	1/0	19.84	V	6.8	0.42	26.22	34.77
713.5	5	QPSK	1/0	19.85	V	6.8	0.42	26.23	34.77
706.5	5	QPSK	1/0	19.74	H	6.8	0.42	26.12	34.77
710	5	QPSK	1/0	20.07	H	6.8	0.42	26.45	34.77
713.5	5	QPSK	1/0	20.37	H	6.8	0.42	<b>26.75</b>	34.77
706.5	5	16-QAM	1/0	19.19	V	6.8	0.42	25.57	34.77
710	5	16-QAM	1/0	18.76	V	6.8	0.42	25.14	34.77
713.5	5	16-QAM	1/0	19.28	V	6.8	0.42	25.66	34.77
706.5	5	16-QAM	1/0	18.74	H	6.8	0.42	25.12	34.77
710	5	16-QAM	1/0	18.94	H	6.8	0.42	25.32	34.77
713.5	5	16-QAM	1/0	18.89	H	6.8	0.42	25.27	34.77
709	10	QPSK	1/0	18.5	V	6.8	0.42	24.88	34.77
710	10	QPSK	1/0	18.51	V	6.8	0.42	24.89	34.77
711	10	QPSK	1/0	18.60	V	6.8	0.42	24.98	34.77
709	10	QPSK	1/0	17.77	H	6.8	0.42	24.15	34.77
710	10	QPSK	1/0	18.18	H	6.8	0.42	24.56	34.77
711	10	QPSK	1/0	17.97	H	6.8	0.42	24.35	34.77
709	10	16-QAM	1/0	16.74	V	6.8	0.42	23.12	34.77
710	10	16-QAM	1/0	16.74	V	6.8	0.42	23.12	34.77
711	10	16-QAM	1/0	16.87	V	6.8	0.42	23.25	34.77
709	10	16-QAM	1/0	17.57	H	6.8	0.42	23.95	34.77
710	10	16-QAM	1/0	17.07	H	6.8	0.42	23.45	34.77
711	10	16-QAM	1/0	16.86	H	6.8	0.42	23.24	34.77

### 6.3 Peak-Average Ratio

Temperature	25°C
Relative Humidity	50%
Atmospheric Pressure	1008mbar
Test date :	October 08, 2015
Tested By :	Winnie Zhang

Requirement(s):

Spec	Item	Requirement	Applicable
§24.232(d) § 27.50(d)	a)	The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.	<input checked="" type="checkbox"/>
Test Setup		 <p style="text-align: center;"><b>Base Station</b>      <b>Spectrum Analyzer</b>      <b>EUT</b></p>	
Test Procedure	<p><b>According with KDB 971168</b></p> <ol style="list-style-type: none"> <li>1. The signal analyzer's CCDF measurement profile is enabled</li> <li>2. Frequency = carrier center frequency</li> <li>3. Measurement BW &gt; Emission bandwidth of signal</li> <li>4. The signal analyzer was set to collect one million samples to generate the CCDF curve</li> <li>5. The measurement interval was set depending on the type of signal analyzed. For continuous signals (&gt;98% duty cycle), the measurement interval was set to 1ms. For burst transmissions, the spectrum analyzer is set to use an internal "RF Burst" trigger that is synced with an incoming pulse and the measurement interval is set to less than the duration of the "on time" of one burst to ensure that energy is only captured during a time in which the transmitter is operating at maximum power</li> </ol>		
Remark			
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail		

Test Data     Yes       N/A

Test Plot     Yes (See below)       N/A

### LTE Band 2 (part 24E)

BW(MHz)	Frequency (MHz)	Mode	Modulation	Conducted Power (dBm)		Peak-Average Ratio (PAR)
				Peak	Average	
1.4	1880	RB 1/0	QPSK	25.63	22.43	3.20
			16QAM	25.32	21.23	4.09
3	1880	RB 1/0	QPSK	25.13	22.47	2.66
			16QAM	24.86	21.38	3.48
5	1880	RB 1/0	QPSK	25.33	22.88	2.45
			16QAM	25.16	21.86	3.30
10	1880	RB 1/0	QPSK	24.63	23.58	1.05
			16QAM	24.53	23.25	1.28
15	1880	RB 1/0	QPSK	25.23	22.23	3.00
			16QAM	25.23	22.13	3.10
20	1880	RB 1/0	QPSK	25.34	22.43	2.91
			16QAM	24.86	21.96	2.90

### LTE Band 4 (part 27)

BW(MHz)	Frequency (MHz)	Mode	Modulation	Conducted Power (dBm)		Peak-Average Ratio (PAR)
				Peak	Average	
1.4	1732.5	RB 1/0	QPSK	25.23	21.55	3.68
			16QAM	25.26	21.47	3.79
3	1732.5	RB 1/0	QPSK	25.15	21.69	3.46
			16QAM	24.96	21.52	3.44
5	1732.5	RB 1/0	QPSK	24.86	21.66	3.20
			16QAM	25.23	22.03	3.20
10	1732.5	RB 1/0	QPSK	25.15	21.78	3.37
			16QAM	25.14	21.72	3.42
15	1732.5	RB 1/0	QPSK	25.06	21.65	3.41
			16QAM	25.11	21.78	3.33
20	1732.5	RB 1/0	QPSK	24.62	22.30	2.32
			16QAM	24.86	22.56	2.30

**LTE Band 7 (part 27)**

BW(MHz)	Frequency (MHz)	Mode	Modulation	Conducted Power (dBm)		Peak-Average Ratio (PAR)
				Peak	Average	
5	1880	RB 1/0	QPSK	25.23	22.39	2.84
			16QAM	25.24	21.35	3.89
10	1880	RB 1/0	QPSK	25.36	21.68	3.68
			16QAM	25.21	20.93	4.28
15	1880	RB 1/0	QPSK	25.45	22.09	3.36
			16QAM	25.21	21.07	4.14
20	1880	RB 1/0	QPSK	25.29	21.75	3.54
			16QAM	24.68	20.69	3.99

**LTE Band 12 (part 27)**

BW(MHz)	Frequency (MHz)	Mode	Modulation	Conducted Power (dBm)		Peak-Average Ratio (PAR)
				Peak	Average	
1.4	1732.5	RB 1/0	QPSK	25.23	23.40	1.83
			16QAM	25.22	22.12	3.1
3	1732.5	RB 1/0	QPSK	25.36	23.35	2.01
			16QAM	24.89	22.11	2.78
5	1732.5	RB 1/0	QPSK	24.99	23.42	1.57
			16QAM	25.21	22.57	2.64
10	1732.5	RB 1/0	QPSK	25.01	23.47	1.54
			16QAM	25.12	22.59	2.53

**LTE Band 17 (part 27)**

BW(MHz)	Frequency (MHz)	Mode	Modulation	Conducted Power (dBm)		Peak-Average Ratio (PAR)
				Peak	Average	
5	710	RB 1/0	QPSK	25.23	23.55	1.68
			16QAM	25.25	22.49	2.76
10	710	RB 1/0	QPSK	25.34	23.21	2.13
			16QAM	25.33	22.27	3.06

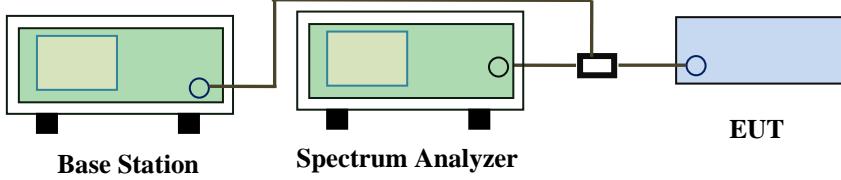
## 6.4 Modulation Characteristic

According to FCC § 2.1047(d), Part 22H&24E& Part 27 there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

## 6.5 Occupied Bandwidth

Temperature	22°C
Relative Humidity	51%
Atmospheric Pressure	1009mbar
Test date :	October 09, 2015
Tested By :	Winnie Zhang

### Requirement(s):

Spec	Item	Requirement	Applicable
§2.1049, §22.917, §22.905 §24.238 §27.53(a)	a)	99% Occupied Bandwidth(kHz)	<input checked="" type="checkbox"/>
	b)	26 dB Bandwidth(kHz)	<input checked="" type="checkbox"/>
Test Setup		 <p style="text-align: center;">Base Station      Spectrum Analyzer      EUT</p>	
Test Procedure		<ul style="list-style-type: none"> <li>- The EUT was connected to Spectrum Analyzer and Base Station via power divider.</li> <li>- The 99% and 26 dB occupied bandwidth (BW) of the middle channel for the highest RF powers.</li> </ul>	
Remark			
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail		

Test Data  Yes  N/A

Test Plot  Yes (See below)  N/A

**LTE Band 2 (Part 24E)**

BW(MHz)	Channel	Frequency (MHz)	Modulation	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
1.4	18607	1850.7	16QAM	1.1827	2.472
			QPSK	1.1691	2.184
1.4	18900	1880	16QAM	1.1438	1.735
			QPSK	1.1401	1.890
1.4	19193	1909.3	16QAM	1.1470	2.267
			QPSK	1.1533	2.197
3	18615	1851.5	16QAM	3.3164	5.738
			QPSK	3.2185	5.678
3	18900	1880	16QAM	2.8271	5.274
			QPSK	2.8315	5.266
3	19185	1908.5	16QAM	2.8549	5.183
			QPSK	2.8342	5.160
5	18625	1852.5	16QAM	4.6336	7.435
			QPSK	4.6039	7.435
5	18900	1880	16QAM	4.5862	6.926
			QPSK	4.5934	6.908
5	19175	1907.5	16QAM	4.6401	7.407
			QPSK	4.6136	7.256
10	18650	1855	16QAM	9.2408	12.48
			QPSK	9.2358	10.45
10	18900	1880	16QAM	9.2028	10.34
			QPSK	9.2159	10.33
10	19150	1905	16QAM	9.2149	12.90
			QPSK	9.2402	12.97
15	18675	1857.5	16QAM	13.646	14.19
			QPSK	13.645	15.31
15	18900	1880	16QAM	13.624	15.10
			QPSK	13.606	15.05
15	19125	1902.5	16QAM	13.656	15.21
			QPSK	13.681	15.20

20	18700	1860	16QAM	18.070	19.70
			QPSK	18.074	19.68
20	18900	1880	16QAM	18.042	19.70
			QPSK	18.067	19.93
20	19100	1900	16QAM	18.114	20.45
			QPSK	18.116	21.13

### LTE Band 4 (Part 27)

BW(MHz)	Channel	Frequency (MHz)	Modulation	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
1.4	19957	1710.7	16QAM	1.0943	1.261
			QPSK	1.0939	1.266
1.4	20175	1732.5	16QAM	1.0974	1.278
			QPSK	1.0932	1.277
1.4	20393	1754.3	16QAM	1.1030	1.260
			QPSK	1.0933	1.258
3	19965	1711.5	16QAM	3.2187	5.976
			QPSK	3.3185	6.172
3	20175	1732.5	16QAM	2.8263	5.098
			QPSK	2.8281	5.314
3	20385	1753.5	16QAM	2.8819	5.758
			QPSK	2.8223	5.490
5	19975	1712.5	16QAM	4.5996	6.969
			QPSK	4.6001	6.399
5	20175	1732.5	16QAM	4.5984	7.568
			QPSK	4.5822	7.462
5	20375	1752.5	16QAM	4.7730	7.586
			QPSK	4.6345	7.668
10	20000	1715	16QAM	9.2505	10.55
			QPSK	9.2158	10.32
10	20175	1732.5	16QAM	9.2201	10.30
			QPSK	9.2356	10.33
10	20350	1750	16QAM	9.1711	10.33
			QPSK	9.1892	10.33

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15	20025	1717.5	16QAM	13.685	15.21
			QPSK	13.639	15.14
15	20175	1732.5	16QAM	13.608	15.04
			QPSK	13.615	15.21
15	20325	1747.5	16QAM	13.613	15.11
			QPSK	13.627	15.05
20	20050	1720	16QAM	18.068	19.81
			QPSK	18.067	19.69
20	20175	1732.5	16QAM	18.003	19.56
			QPSK	18.049	19.82
20	20300	1745	16QAM	18.077	19.47
			QPSK	18.082	19.82

### LTE Band 5 (Part 22H)

BW(MHz)	Channel	Frequency (MHz)	Modulation	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
1.4	20407	824.7	16QAM	1.0938	1.274
			QPSK	1.0936	1.271
1.4	20525	936.5	16QAM	1.1041	1.251
			QPSK	1.1037	1.253
1.4	20643	949.3	16QAM	1.0903	1.273
			QPSK	1.0932	1.261
3	20415	825.5	16QAM	2.7405	3.049
			QPSK	2.7577	3.023
3	20525	936.5	16QAM	2.7348	3.039
			QPSK	2.7365	3.035
3	20635	847.5	16QAM	2.7281	3.035
			QPSK	2.7318	3.044
5	20425	826.5	16QAM	4.5318	5.031
			QPSK	4.5292	5.044
5	20525	936.5	16QAM	4.5113	5.015
			QPSK	4.5197	5.018
5	20625	846.5	16QAM	4.5246	5.065
			QPSK	4.5343	5.083

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10	20450	829	16QAM	9.0733	10.07
			QPSK	9.0511	10.12
10	20525	936.5	16QAM	9.3475	20.00
			QPSK	9.3649	20.00
10	20800	844	16QAM	9.0823	10.10
			QPSK	9.0914	10.07

### LTE Band 7 (Part 27) result

BW(MHz)	Channel	Frequency (MHz)	Modulation	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
5	20775	2502.5	16QAM	4.5252	5.028
			QPSK	4.5232	5.073
5	21100	2535	16QAM	4.5142	5.076
			QPSK	4.5236	5.046
5	21425	2567.5	16QAM	4.5249	5.043
			QPSK	4.5157	5.042
10	20800	2505	16QAM	9.0648	10.18
			QPSK	9.0700	10.09
10	21100	2535	16QAM	9.0649	10.19
			QPSK	9.0694	10.26
10	21400	2562.5	16QAM	9.0471	10.14
			QPSK	9.0705	10.03
15	20825	2507.5	16QAM	13.535	14.75
			QPSK	13.498	14.90
15	21100	2535	16QAM	13.497	14.81
			QPSK	13.492	14.88
15	21400	2562.5	16QAM	13.503	14.88
			QPSK	13.489	14.83
20	20850	2510	16QAM	17.977	19.38
			QPSK	17.965	19.25
20	21100	2535	16QAM	17.948	19.23
			QPSK	17.988	19.23
20	21350	2560	16QAM	17.906	19.29
			QPSK	17.922	19.26

### LTE Band 12 (Part 27)

BW(MHz)	Channel	Frequency (MHz)	Modulation	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
1.4	23017	699.7	16QAM	1.1110	1.941
			QPSK	1.1109	1.933
1.4	23095	707.5	16QAM	1.0973	1.300
			QPSK	1.0963	1.296
1.4	23173	715.3	16QAM	1.1350	2.023
			QPSK	1.1363	2.021
3	23025	700.5	16QAM	2.7622	3.636
			QPSK	2.7594	3.830
3	23095	707.5	16QAM	2.7383	3.038
			QPSK	2.7409	3.028
3	23165	714.5	16QAM	2.8045	5.401
			QPSK	2.8005	5.660
5	23035	701.5	16QAM	4.5532	6.605
			QPSK	4.5568	6.749
5	23095	707.5	16QAM	4.5238	5.086
			QPSK	4.5348	5.107
5	23055	713.5	16QAM	4.5876	8.487
			QPSK	4.5990	7.969
10	23060	704	16QAM	9.1379	12.54
			QPSK	9.1410	12.57
10	23095	707.5	16QAM	9.0962	11.35
			QPSK	9.0835	10.35
10	23130	711	16QAM	9.0986	10.18
			QPSK	9.0825	11.62

### LTE Band 17 (Part 27)

BW(MHz)	Channel	Frequency (MHz)	Modulation	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
5	23755	706.5	16QAM	4.5254	5.039
			QPSK	4.5396	5.055
5	23790	710	16QAM	4.5159	5.025
			QPSK	4.5202	5.056
5	23825	713.5	16QAM	4.5204	5.093
			QPSK	4.5200	5.054
10	23780	709	16QAM	9.0651	10.21
			QPSK	9.0742	10.11
10	23790	710	16QAM	9.0300	10.05
			QPSK	9.0297	10.04
10	23800	711	16QAM	9.0477	10.05
			QPSK	9.0532	10.01

## Test Plots

### LTE Band 2 (Part 24E)



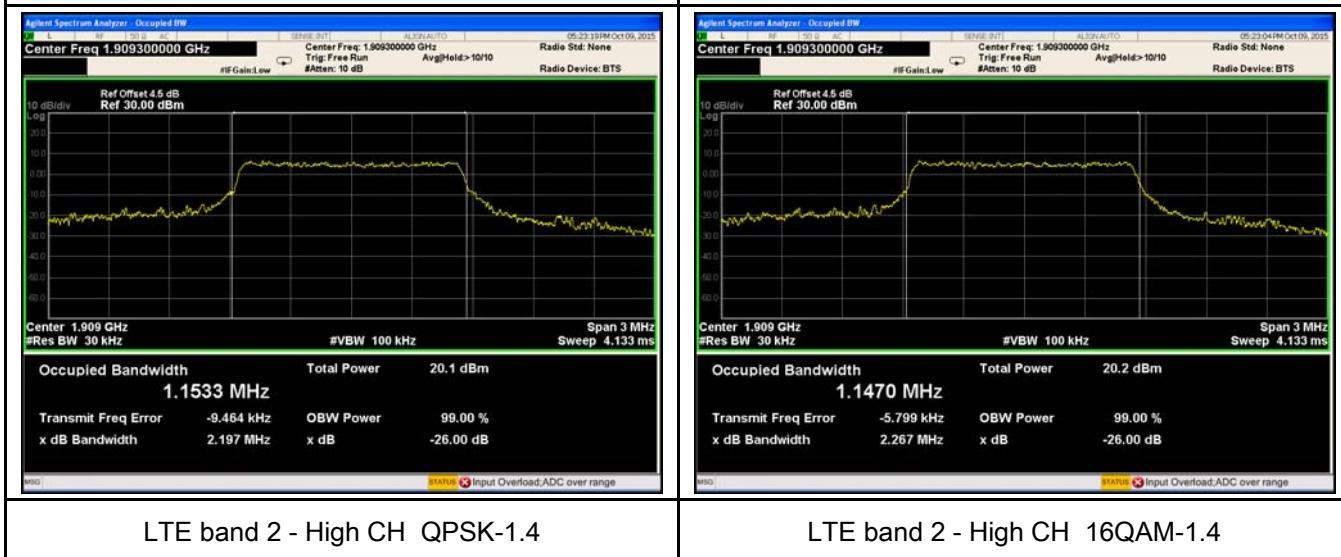
LTE band 2 - Low CH QPSK-1.4

LTE band 2 - Low CH 16QAM-1.4



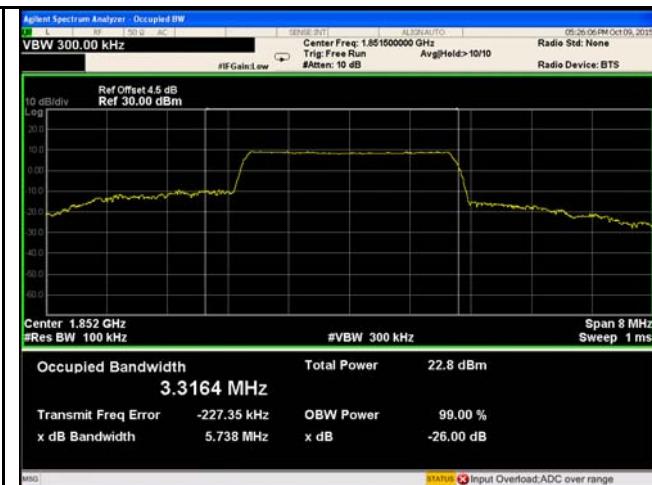
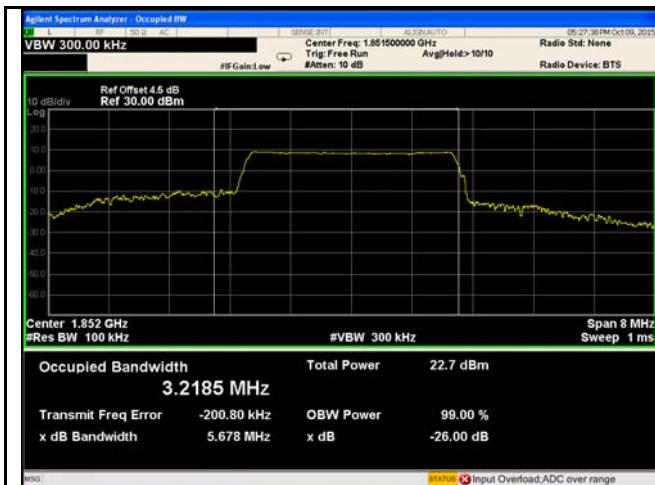
LTE band 2 - Middle CH QPSK-1.4

LTE band 2 - Middle CH 16QAM-1.4



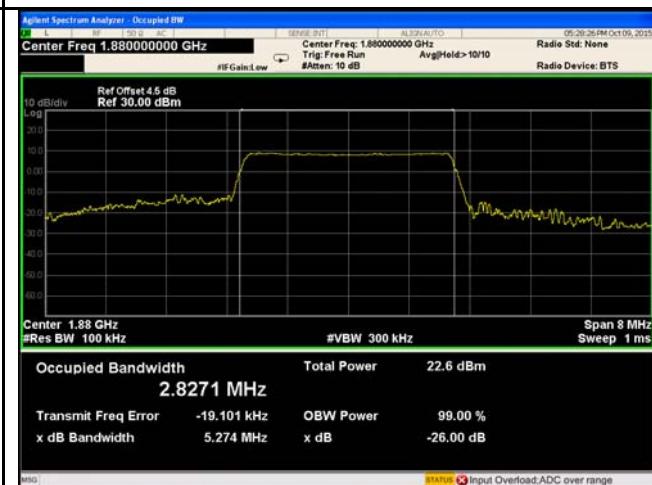
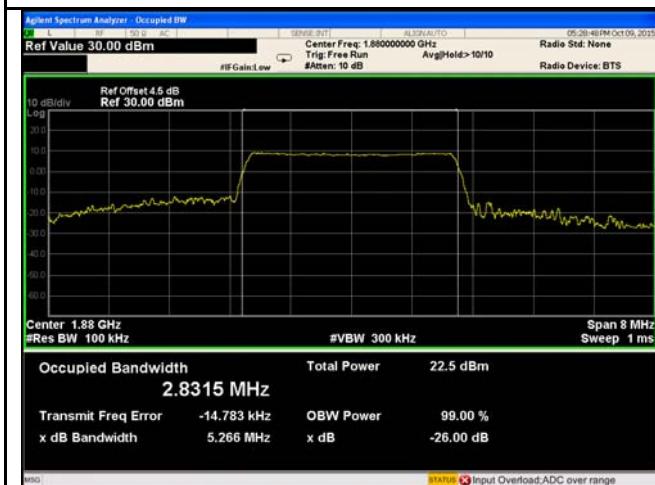
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LTE band 2 - High CH 16QAM-1.4



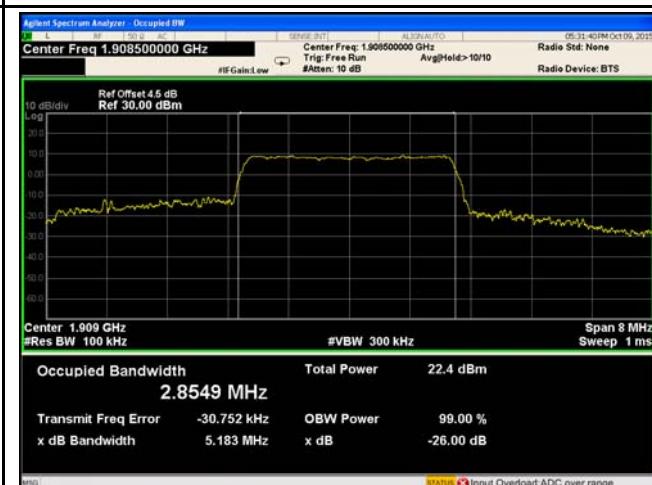
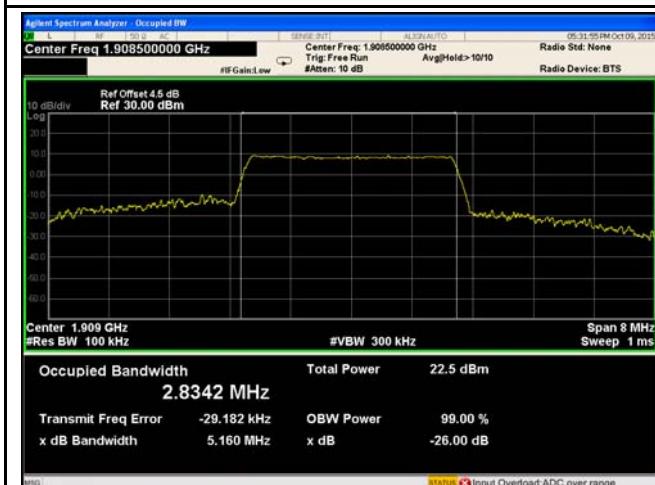
LTE band 2 - Low CH QPSK-3

LTE band 2 - Low CH 16QAM-3



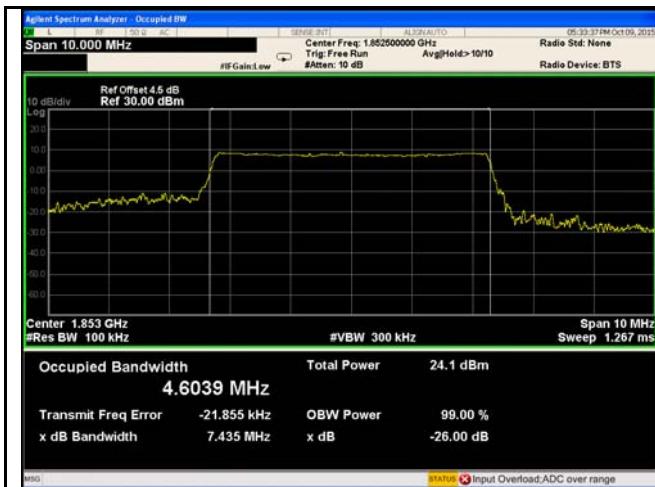
LTE band 2 - Middle CH QPSK-3

LTE band 2 - Middle CH 16QAM-3



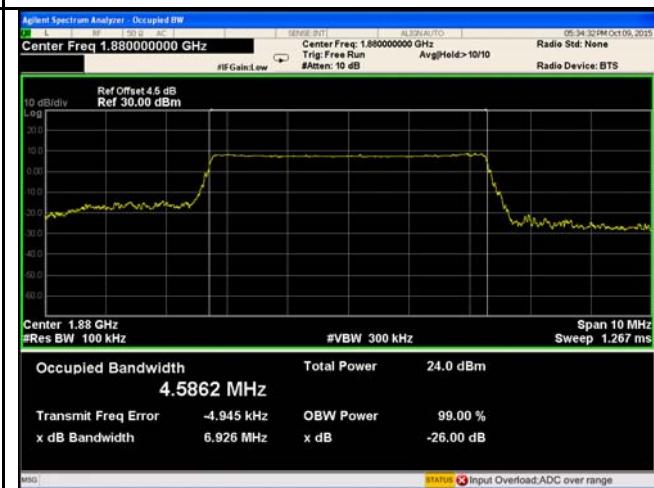
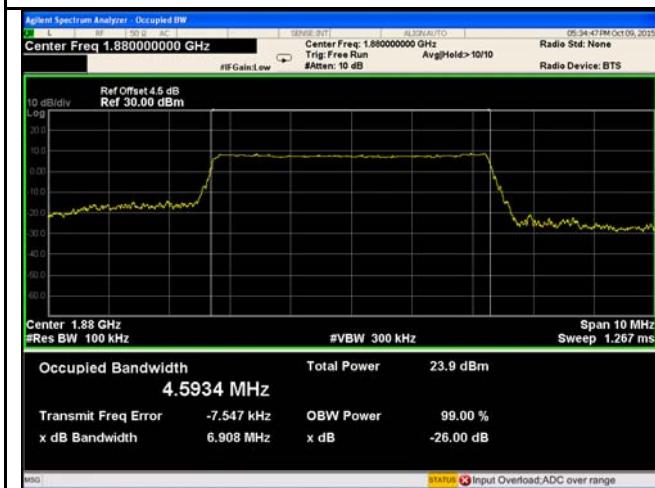
LTE band 2 - High CH QPSK-3

LTE band 2 - High CH 16QAM-3



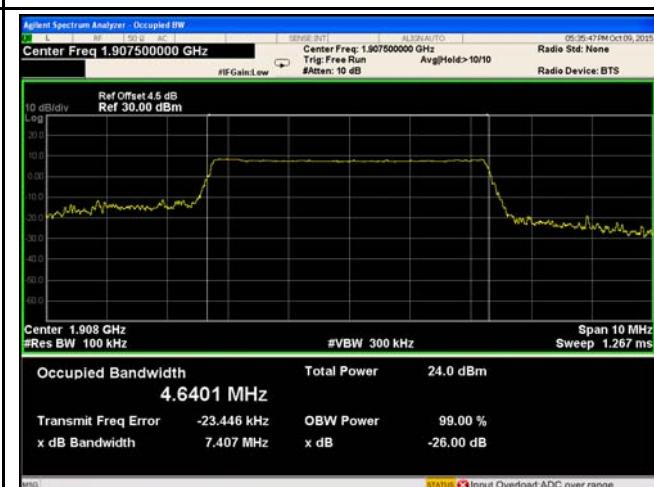
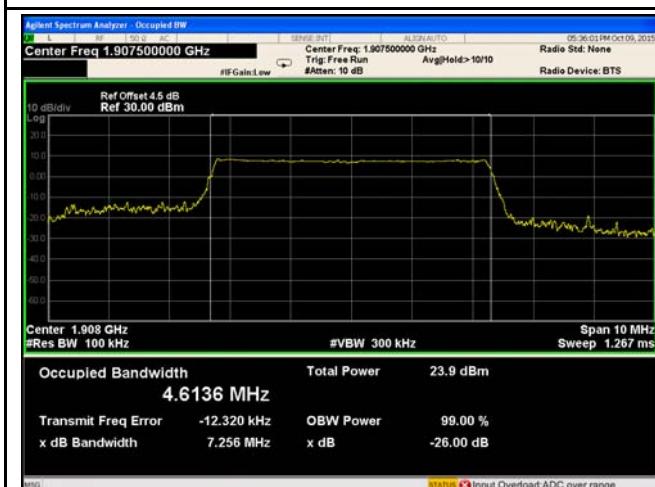
LTE band 2 - Low CH QPSK-5

LTE band 2 - Low CH 16QAM-5



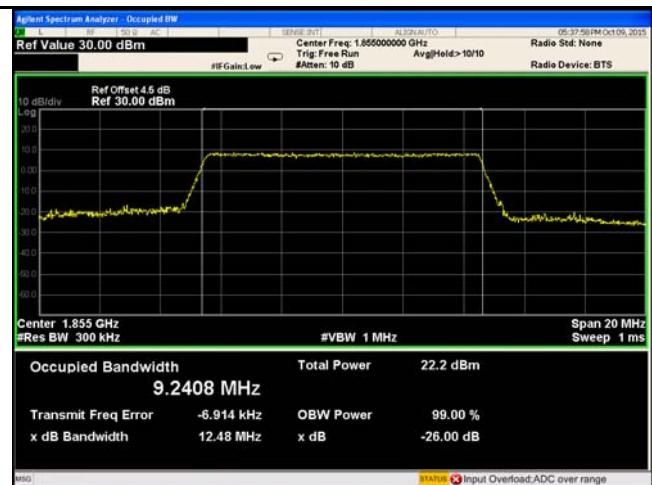
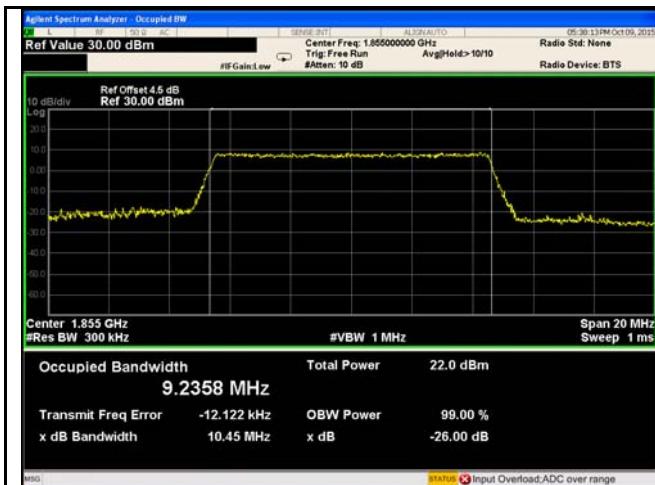
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LTE band 2 - Middle CH 16QAM-5



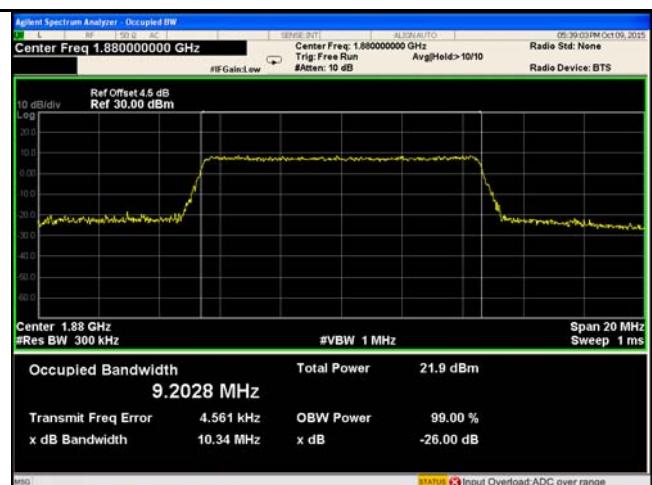
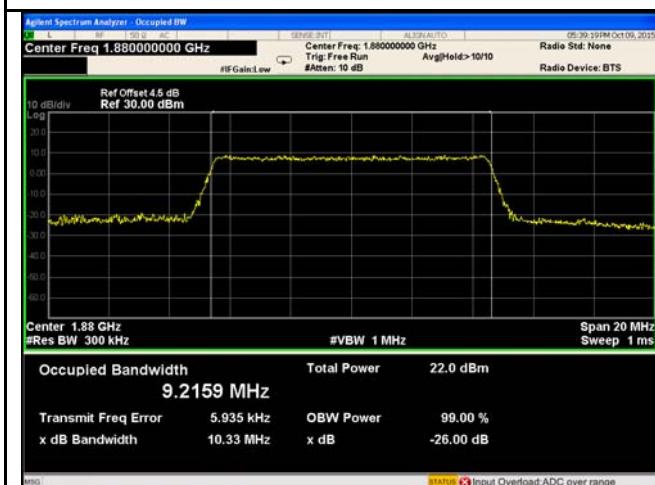
LTE band 2 - High CH QPSK-5

LTE band 2 - High CH 16QAM-5



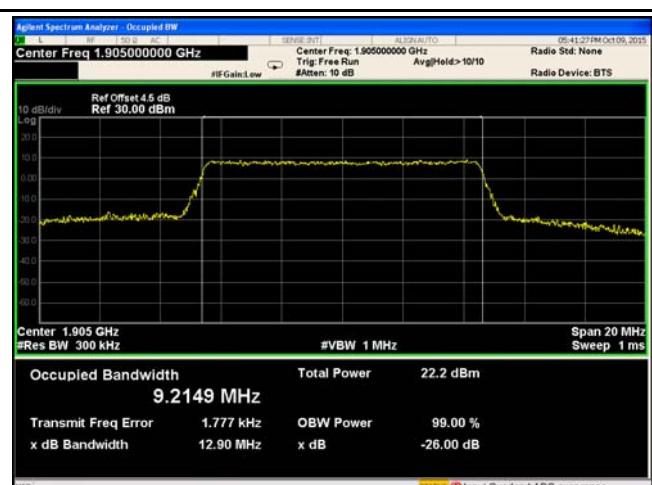
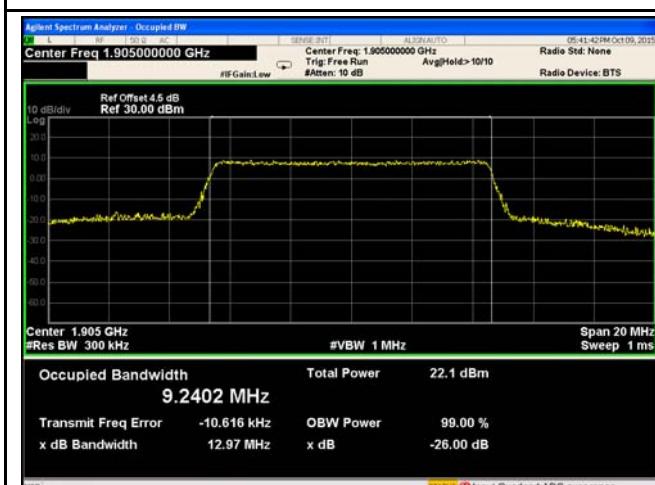
LTE band 2 - Low CH QPSK-10

LTE band 2 - Low CH 16QAM-10



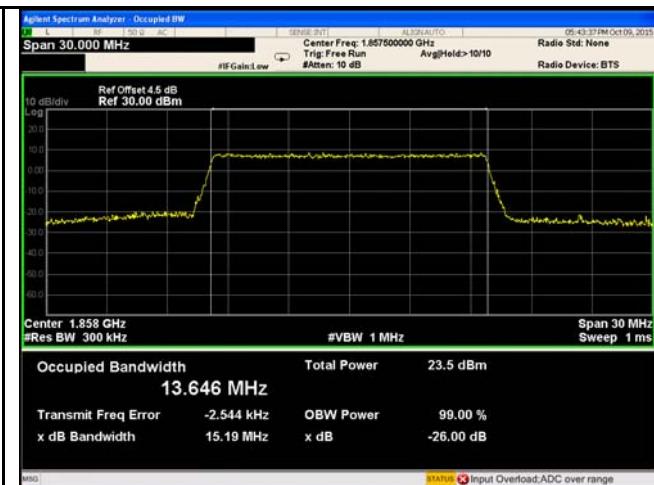
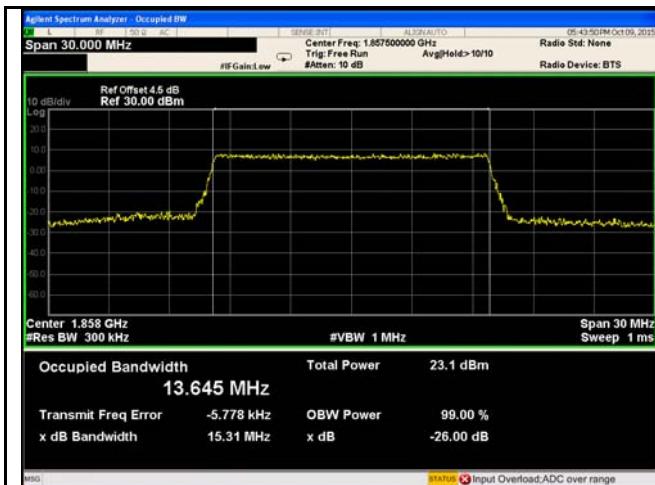
LTE band 2 - Middle CH QPSK-10

LTE band 2 - Middle CH 16QAM-10



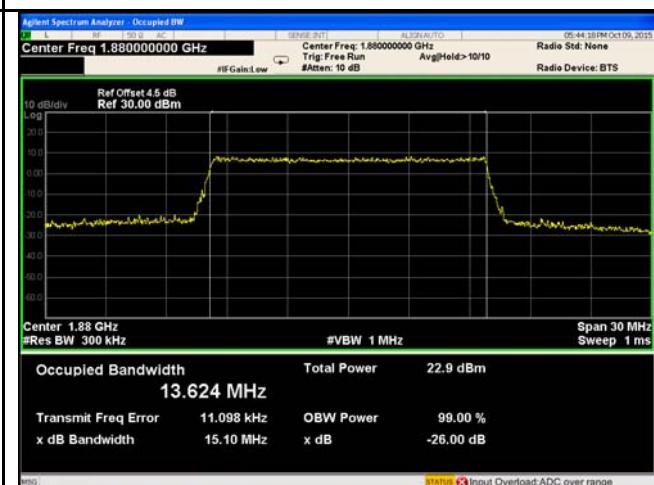
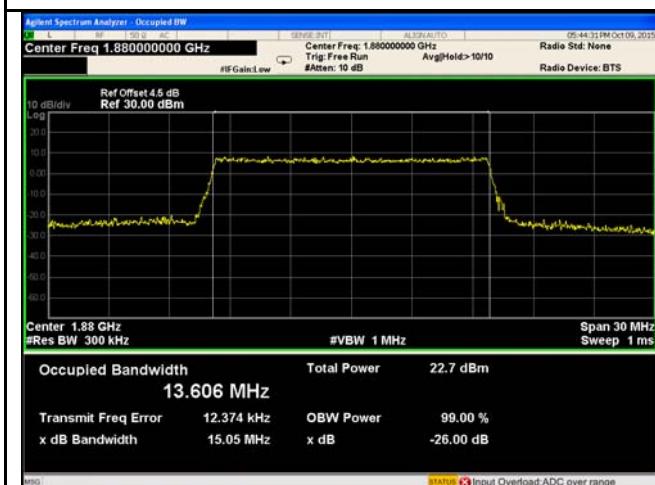
LTE band 2 - High CH QPSK-10

LTE band 2 - High CH 16QAM-10



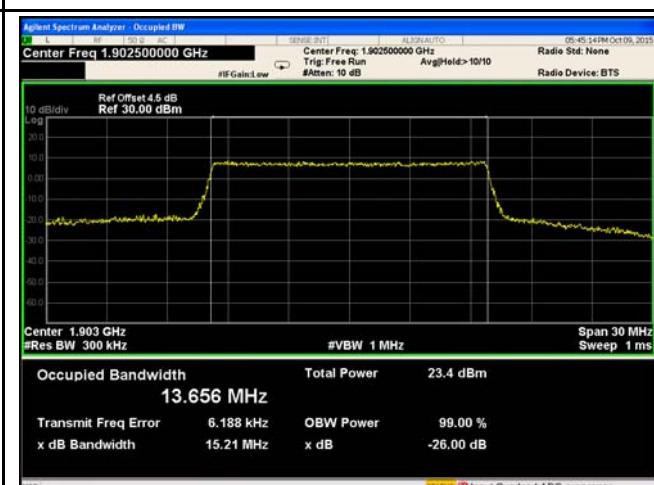
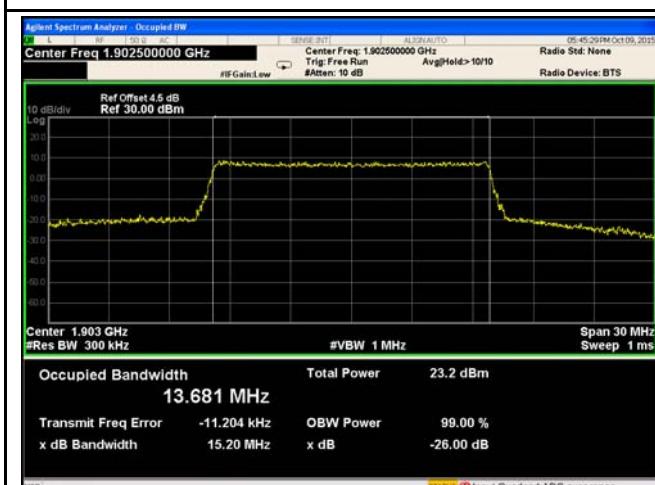
LTE band 2 - Low CH QPSK-15

LTE band 2 - Low CH 16QAM-15



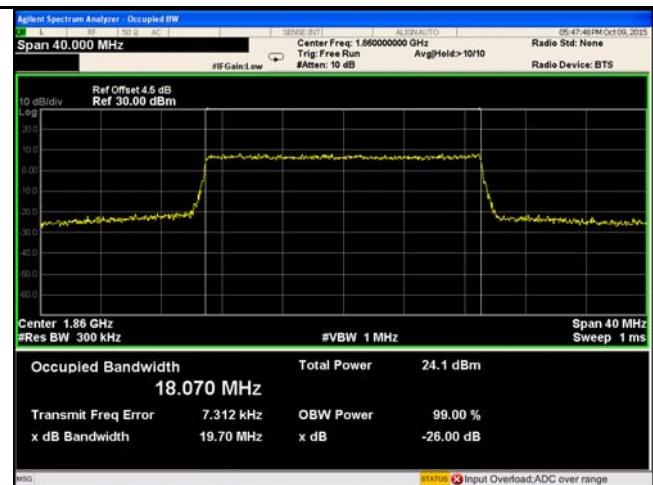
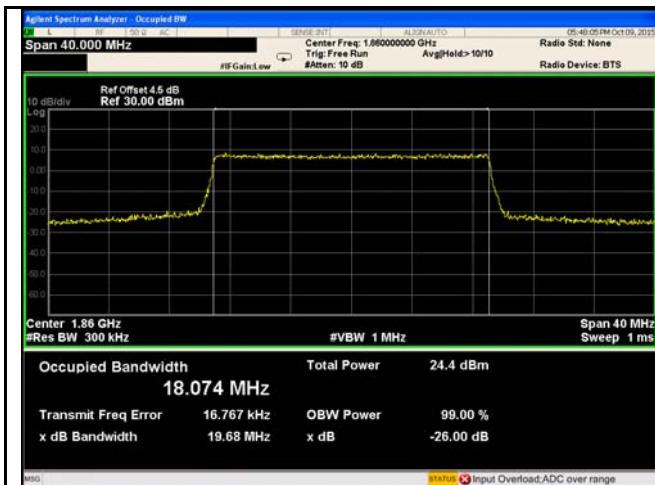
LTE band 2 - Middle CH QPSK-15

LTE band 2 - Middle CH 16QAM-15



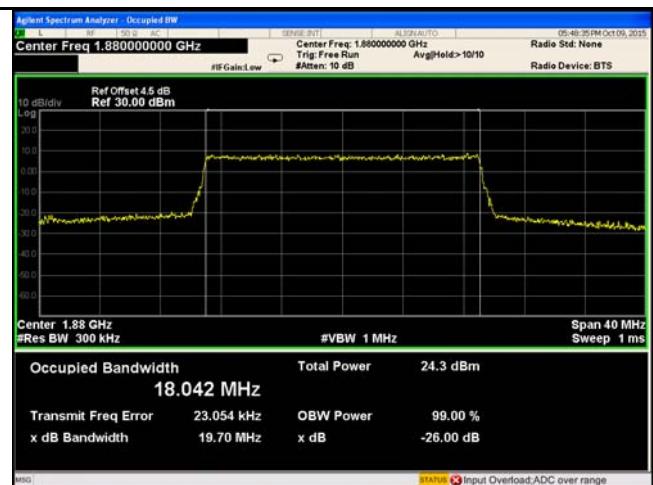
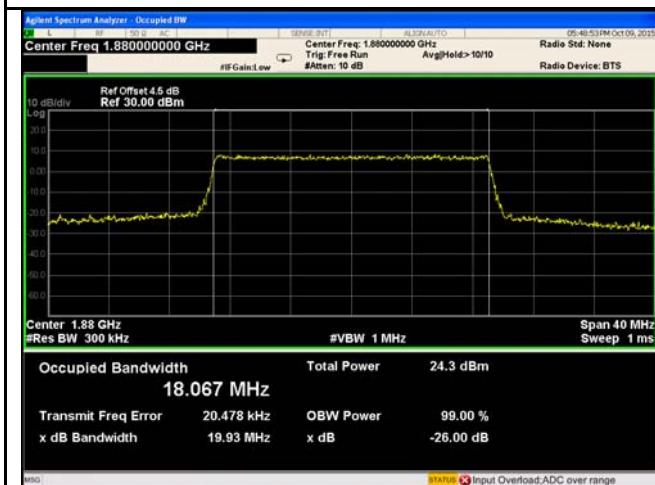
LTE band 2 - High CH QPSK-15

LTE band 2 - High CH 16QAM-15



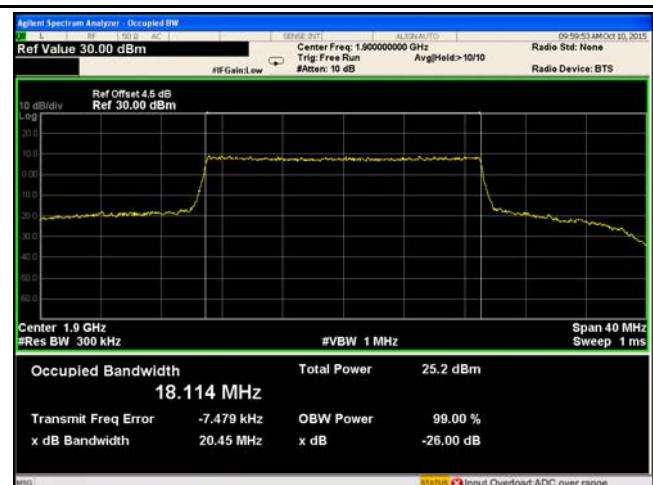
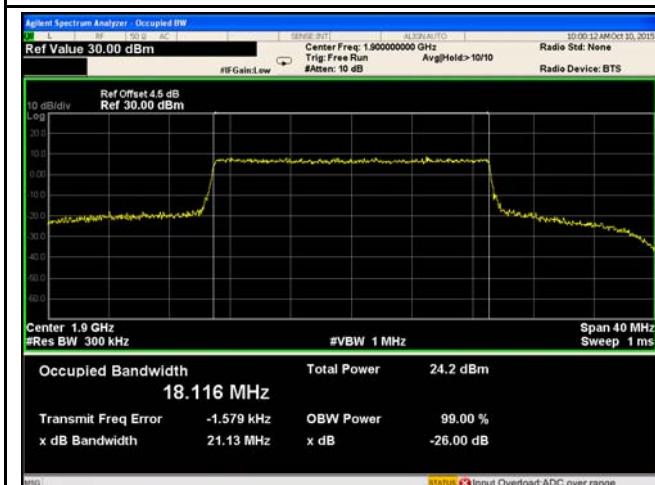
LTE band 2 - Low CH QPSK-20

LTE band 2 - Low CH 16QAM-20



LTE band 2 - Middle CH QPSK-20

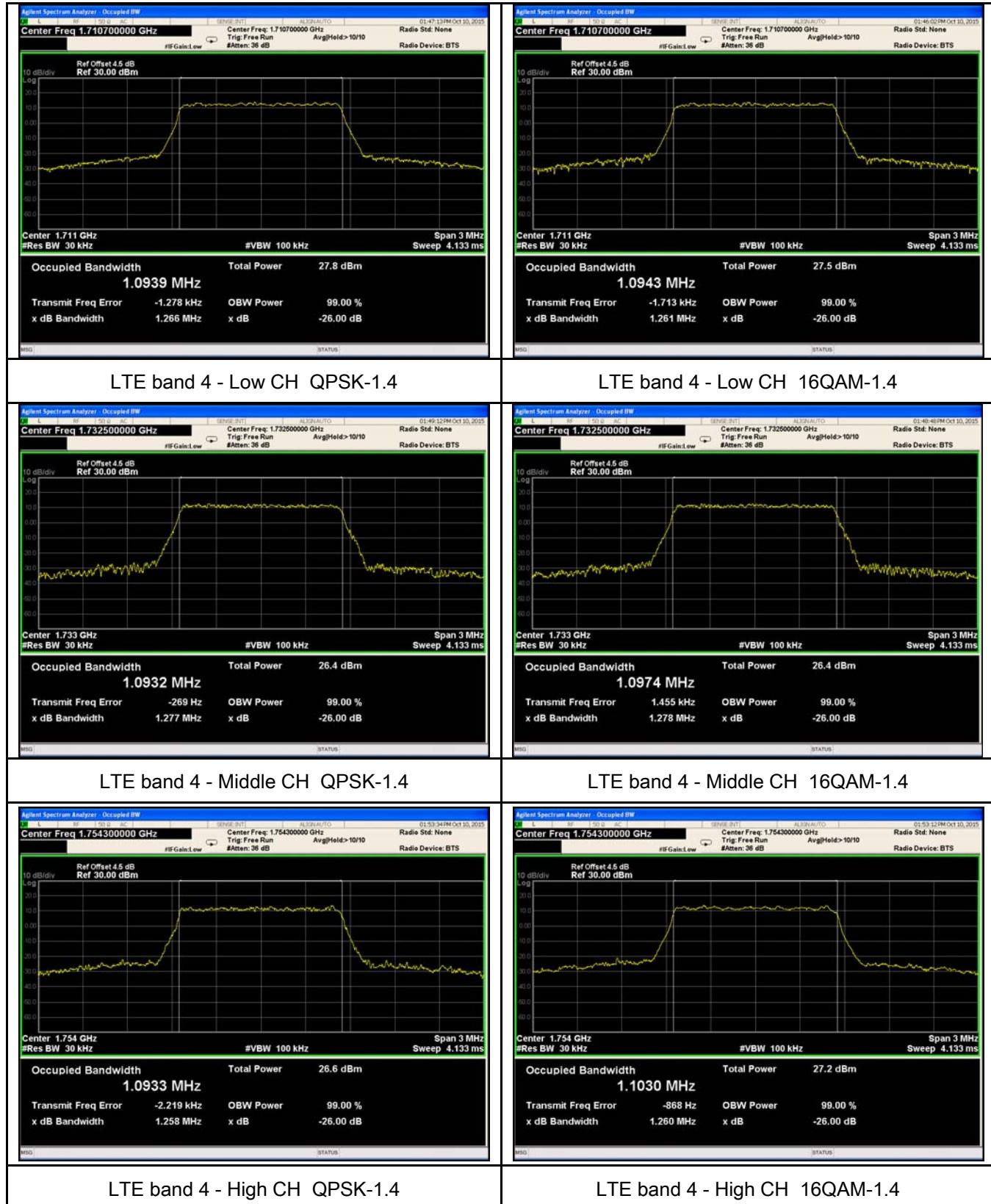
LTE band 2 - Middle CH 16QAM-20

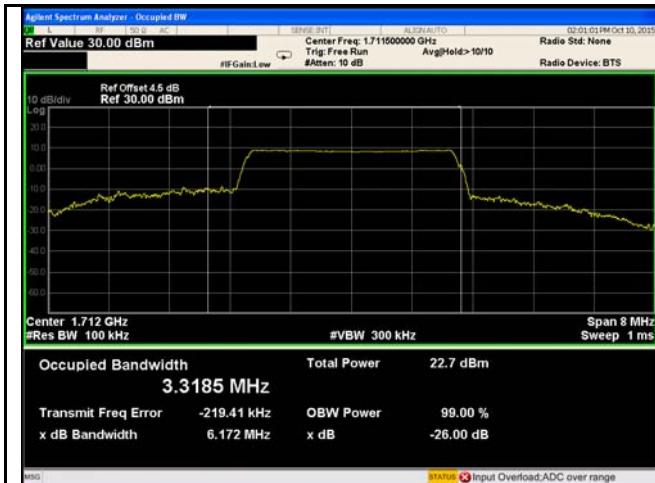


LTE band 2 - High CH QPSK-20

LTE band 2 - High CH 16QAM-20

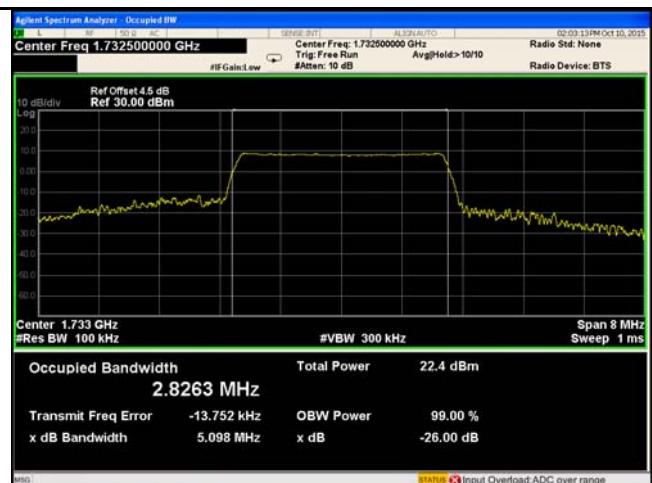
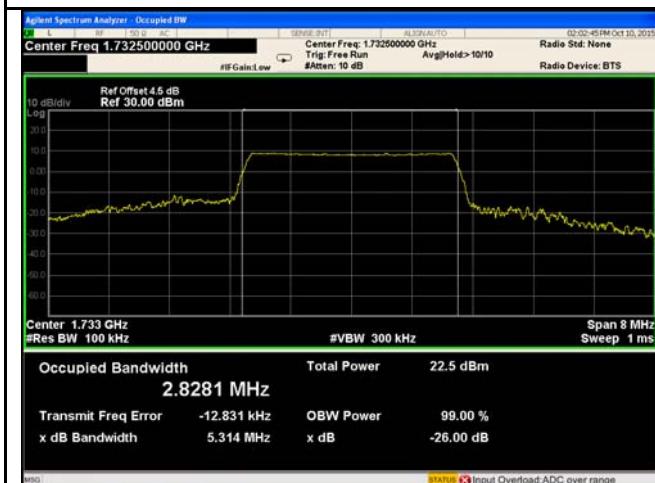
## LTE Band 4 (Part 27)





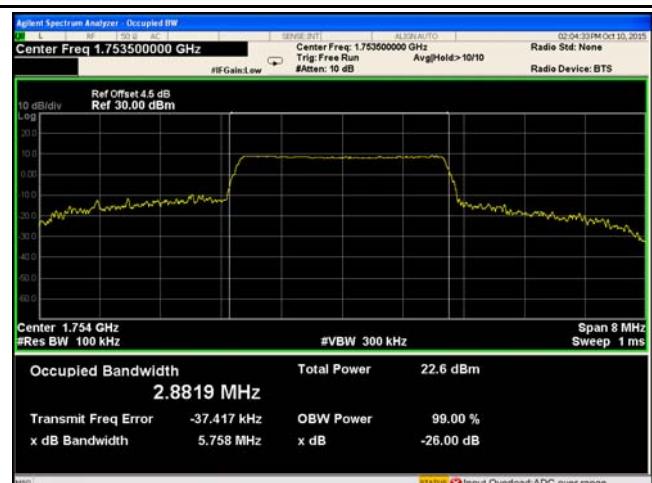
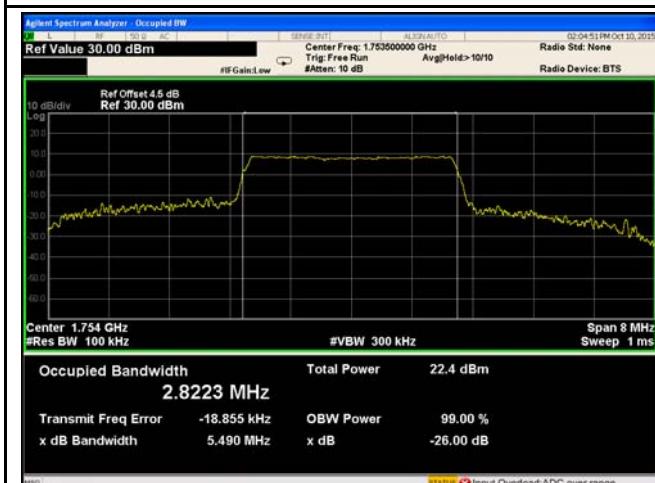
LTE band 4 - Low CH QPSK-3

LTE band 4 - Low CH 16QAM-3



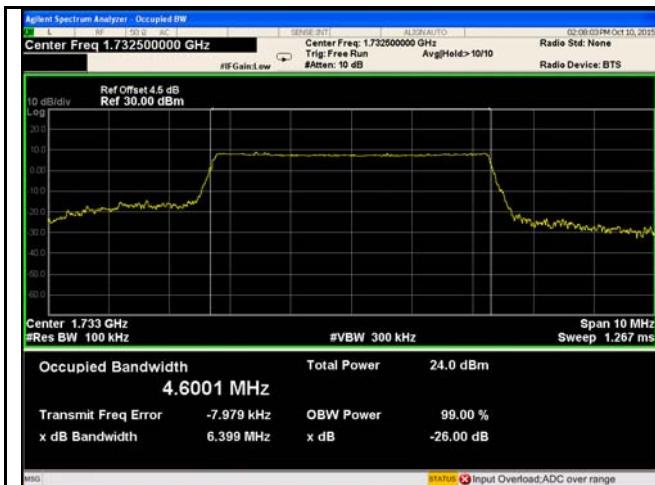
LTE band 4 - Middle CH QPSK-3

LTE band 4 - Middle CH 16QAM-3



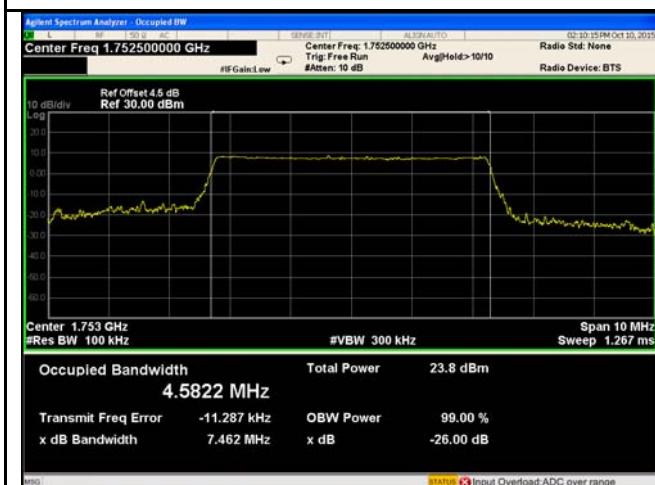
LTE band 4 - High CH QPSK-3

LTE band 4 - High CH 16QAM-3



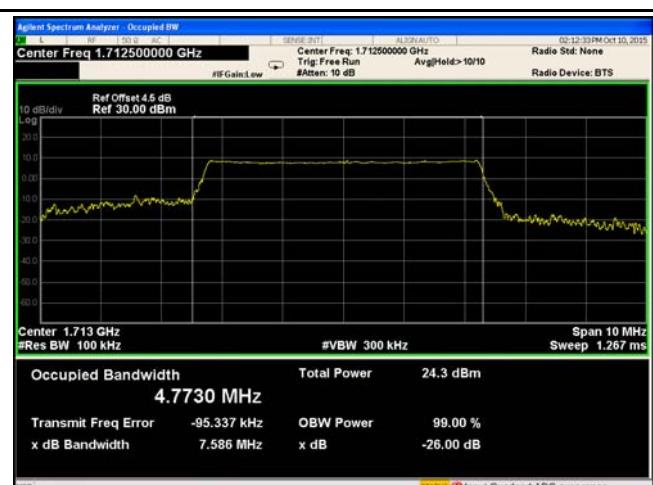
LTE band 4 - Low CH QPSK-5

LTE band 4 - Low CH 16QAM-5



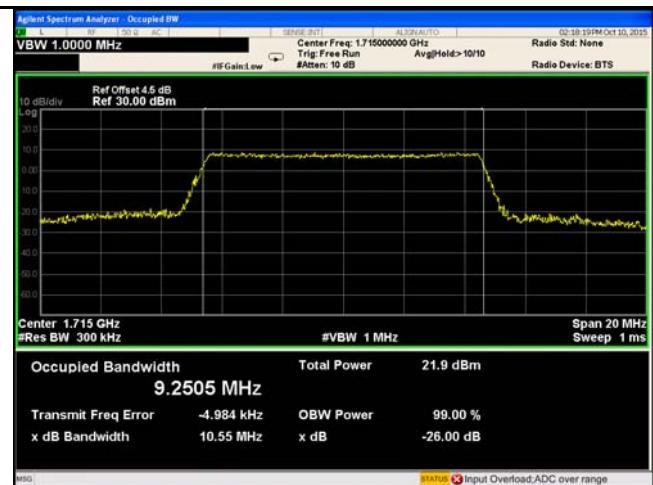
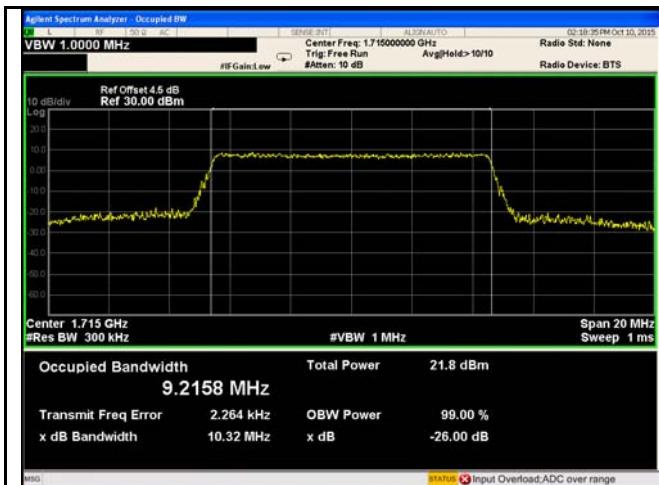
LTE band 4 - Middle CH QPSK-5

LTE band 4 - Middle CH 16QAM-5



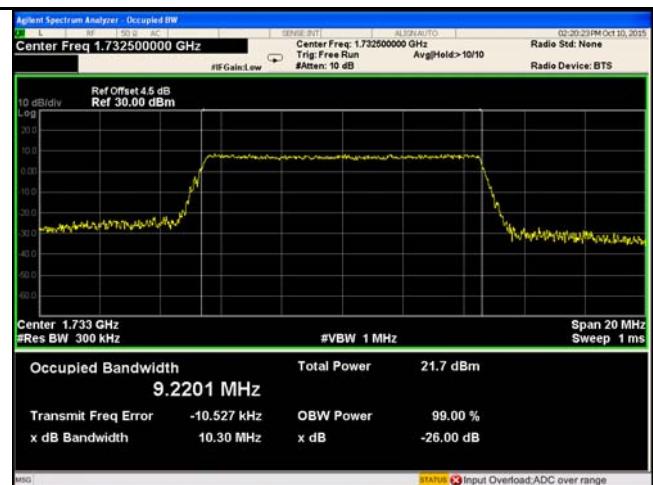
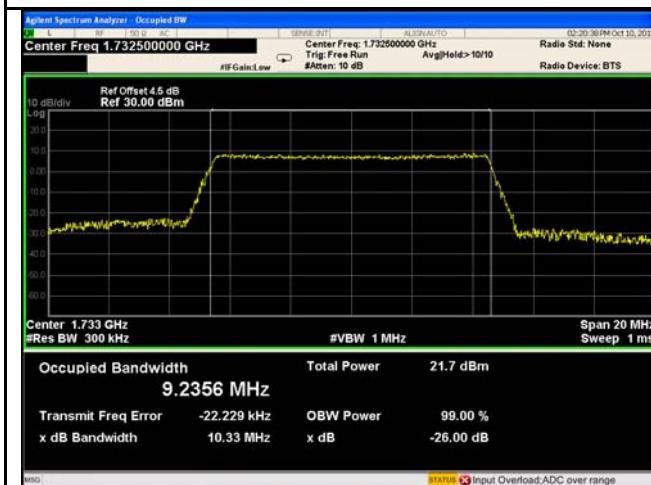
LTE band 4 - High CH QPSK-5

LTE band 4 - High CH 16QAM-5



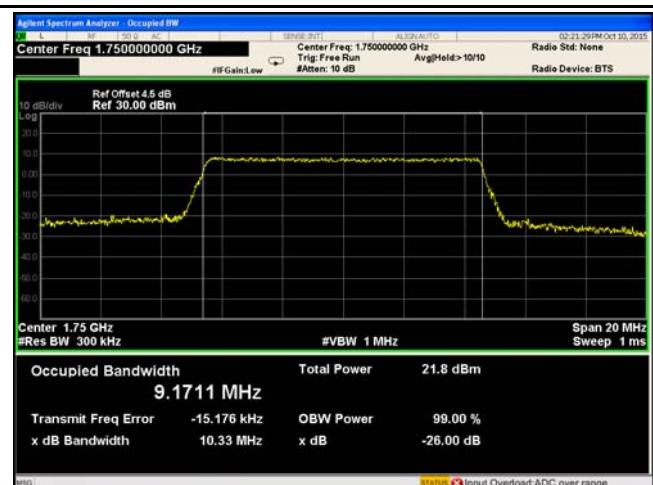
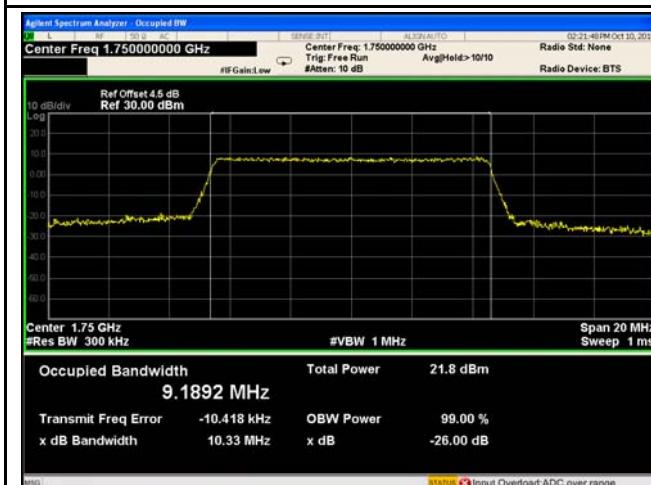
## LTE band 4 - Low CH QPSK-10

## LTE band 4 - Low CH 16QAM-10



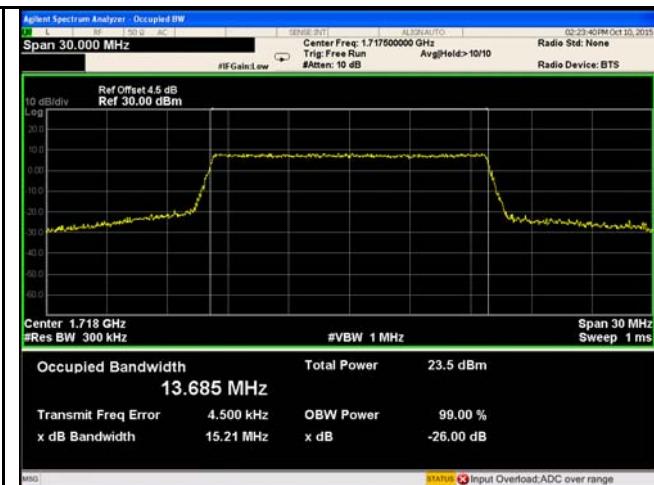
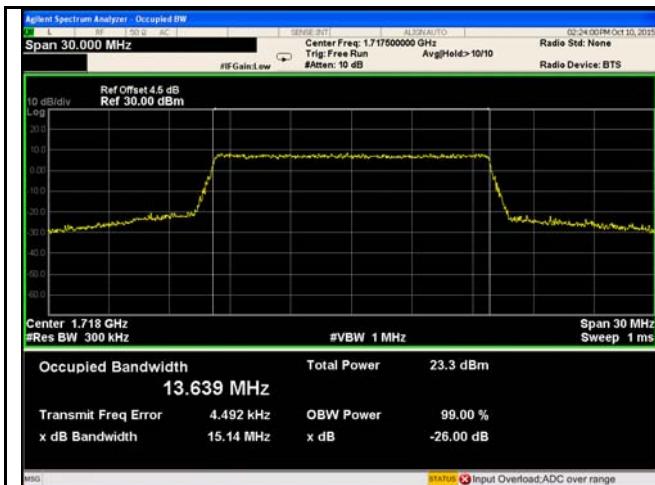
## LTE band 4 - Middle CH QPSK-10

## LTE band 4 - Middle CH 16QAM-10



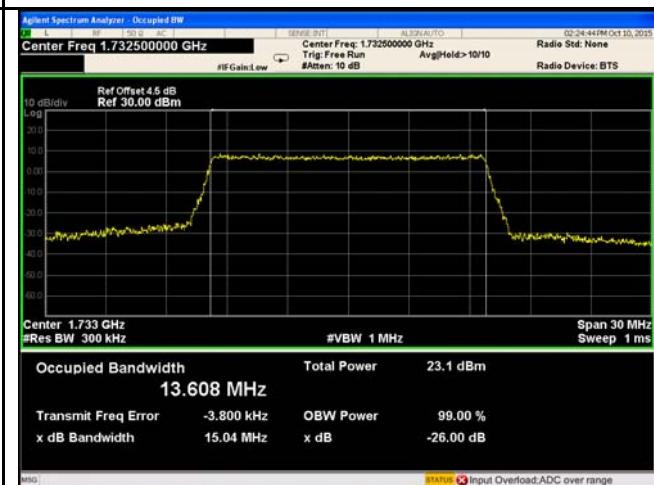
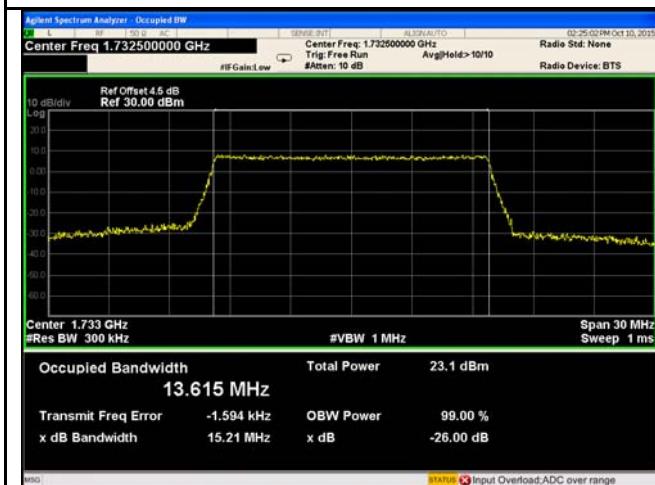
## LTE band 4 - High CH QPSK-10

## LTE band 4 - High CH 16QAM-10



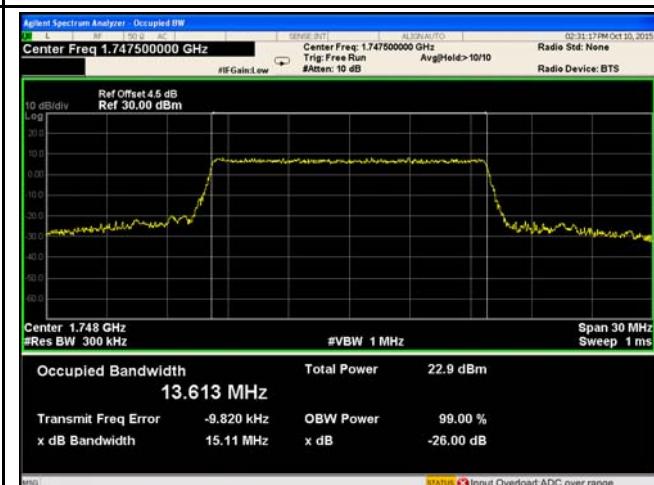
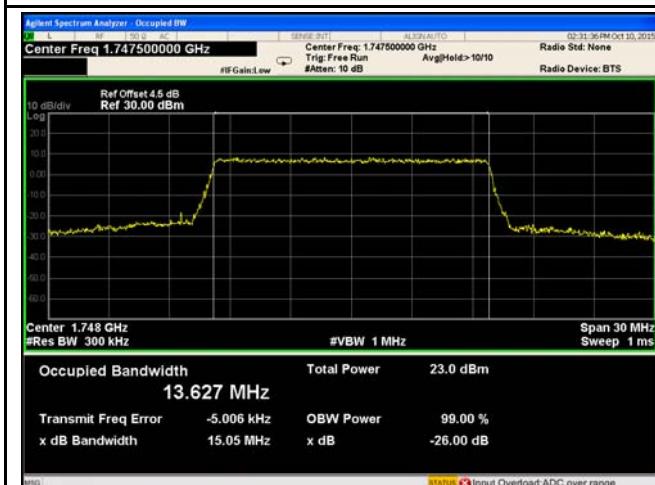
LTE band 4 - Low CH QPSK-15

LTE band 4 - Low CH 16QAM-15



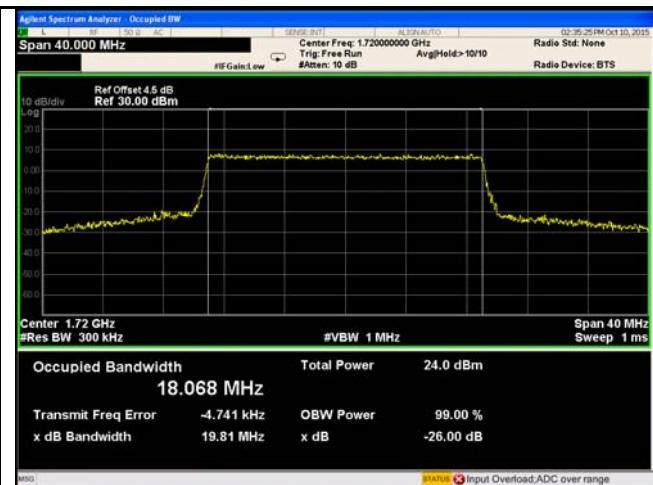
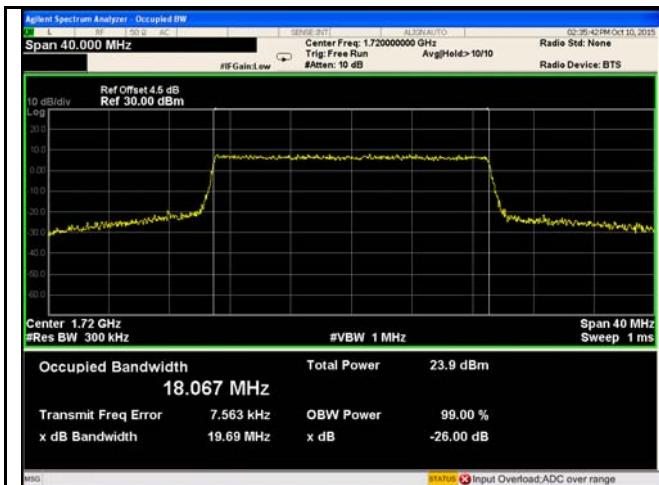
LTE band 4 - Middle CH QPSK-15

LTE band 4 - Middle CH 16QAM-15



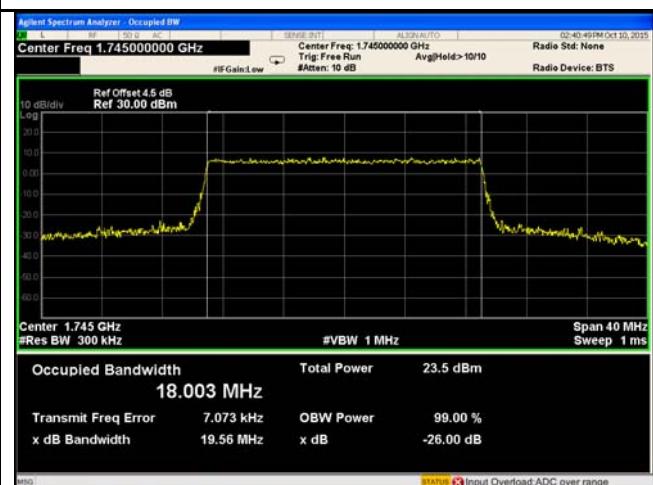
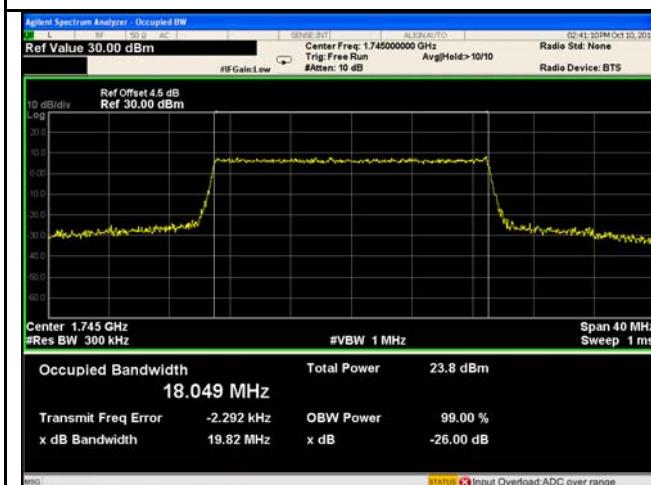
LTE band 4 - High CH QPSK-15

LTE band 4 - High CH 16QAM-15



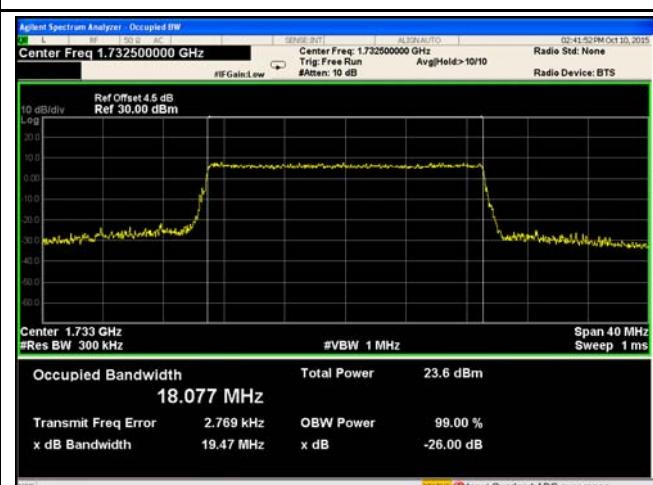
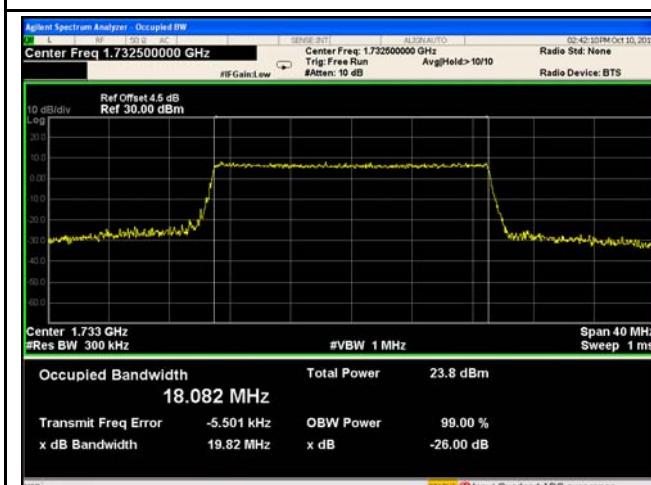
LTE band 4 - Low CH QPSK-20

LTE band 4 - Low CH 16QAM-20



LTE band 4 - Middle CH QPSK-20

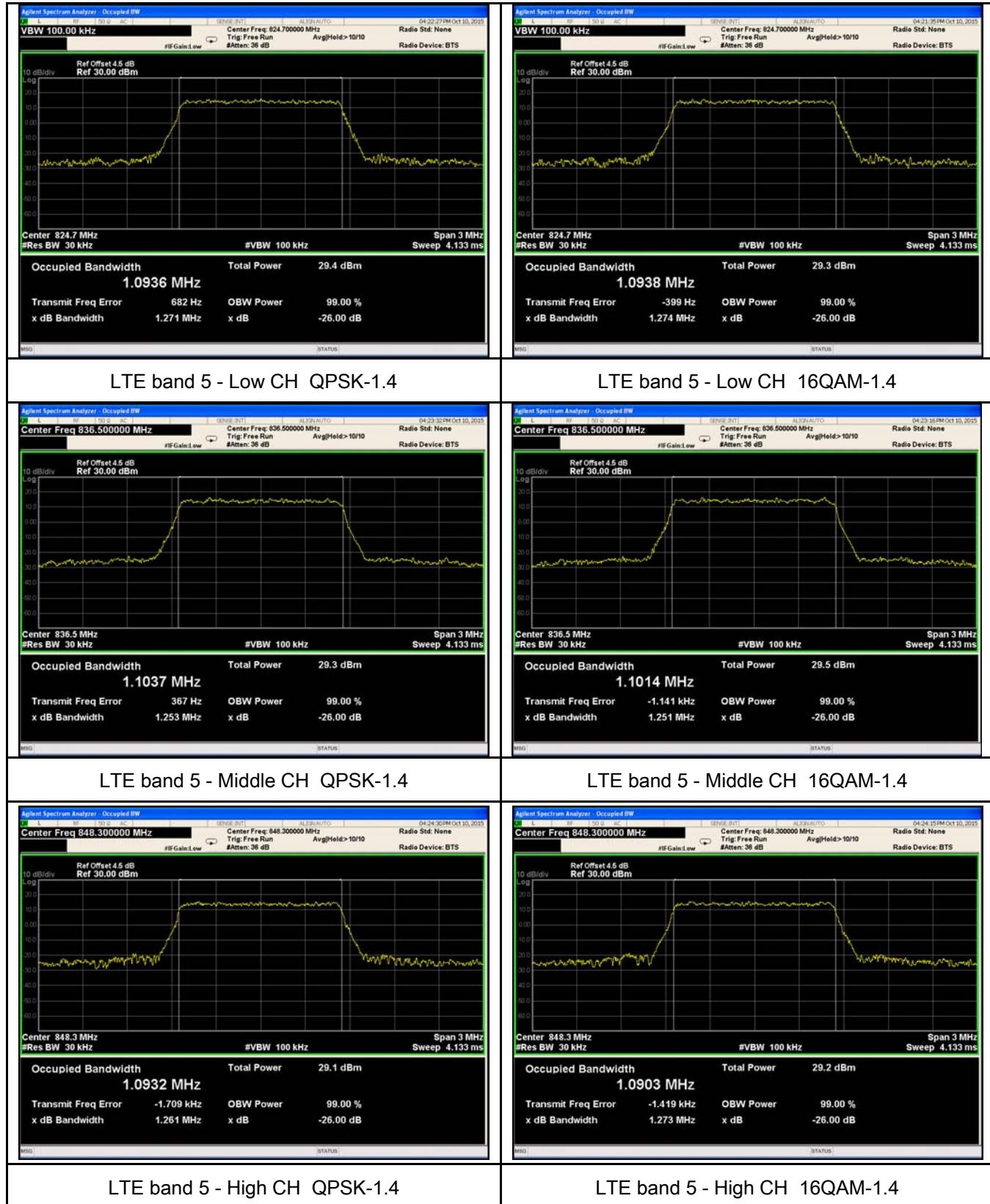
LTE band 4 - Middle CH 16QAM-20

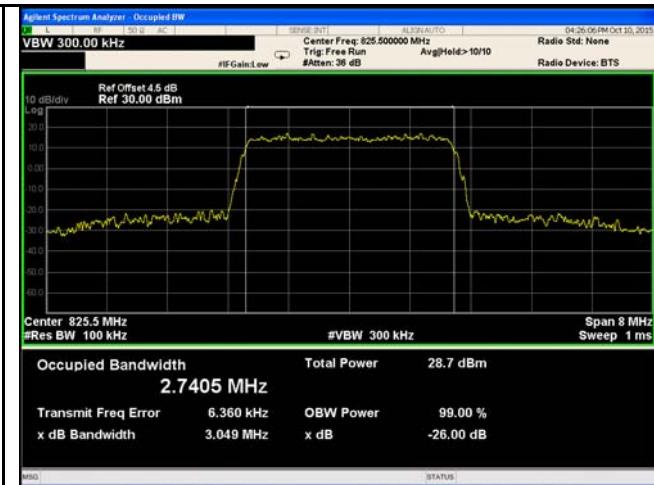
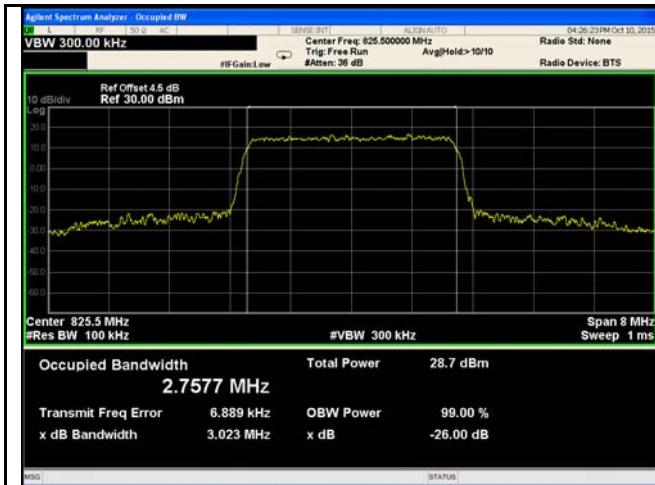


LTE band 4 - High CH QPSK-20

LTE band 4 - High CH 16QAM-20

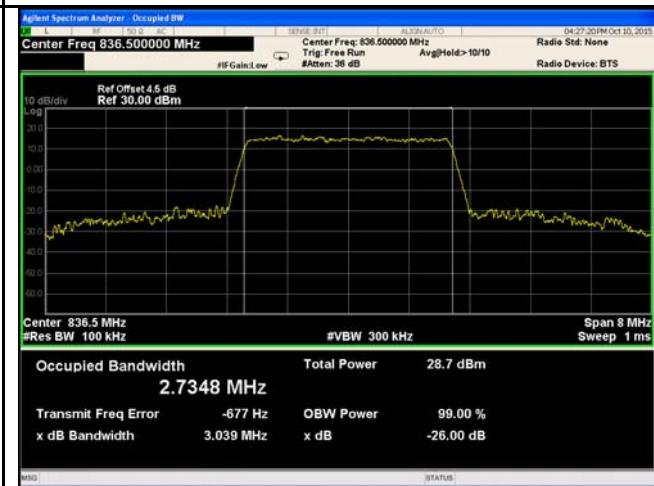
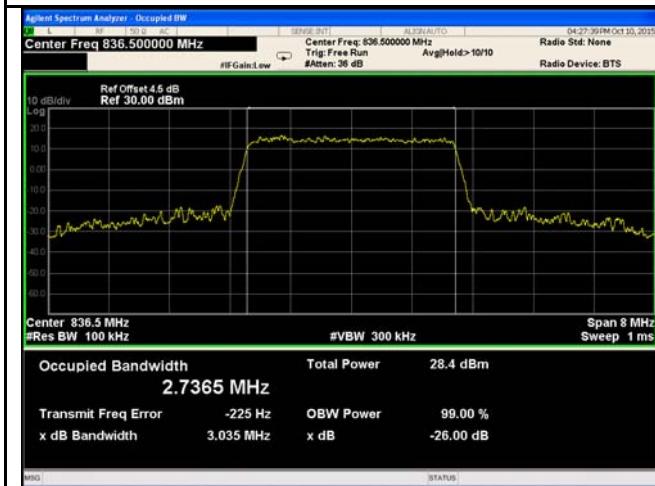
## LTE Band 5 (Part 22H)





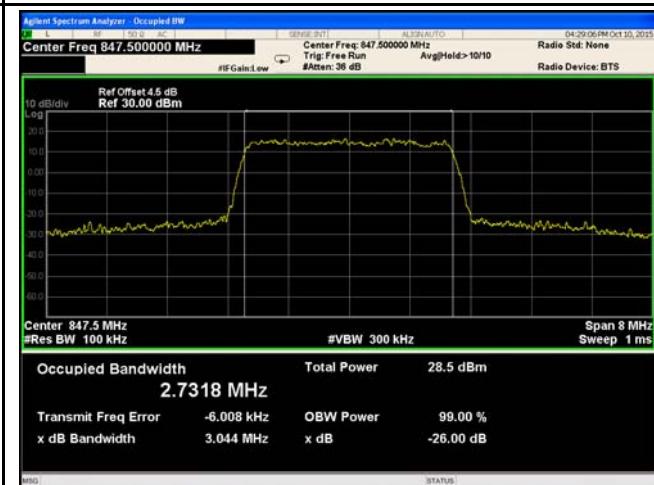
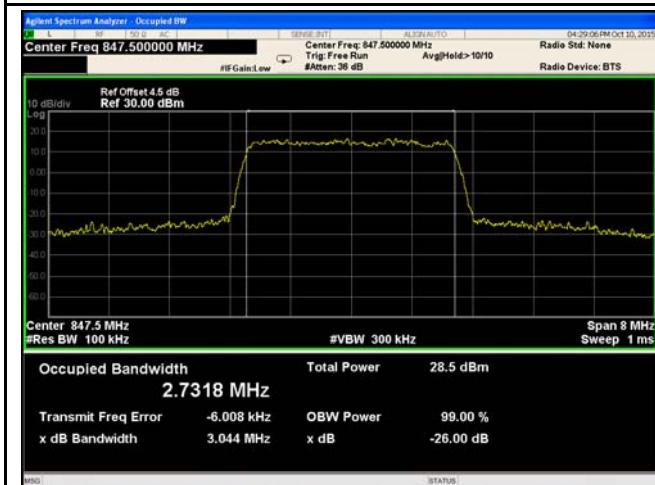
LTE band 5 - Low CH QPSK-3

LTE band 5 - Low CH 16QAM-3



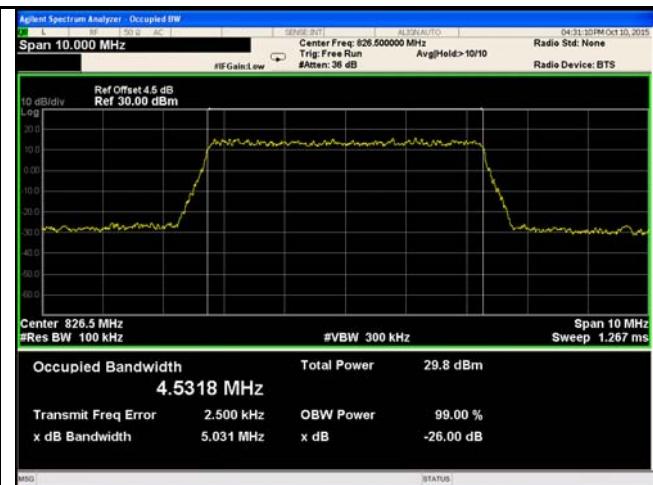
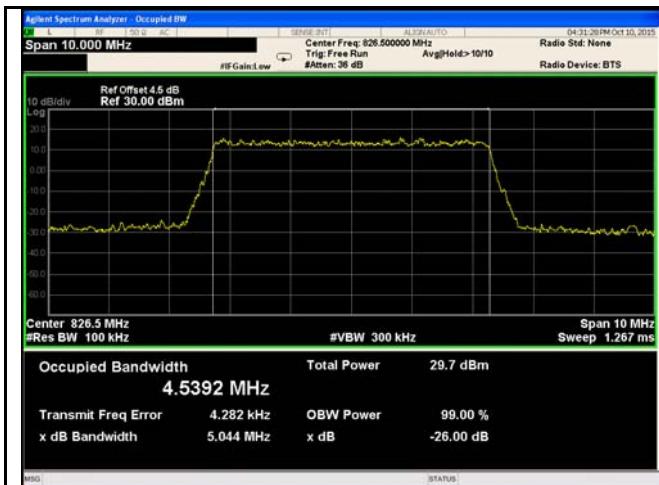
LTE band 5 - Middle CH QPSK-3

LTE band 5 - Middle CH 16QAM-3



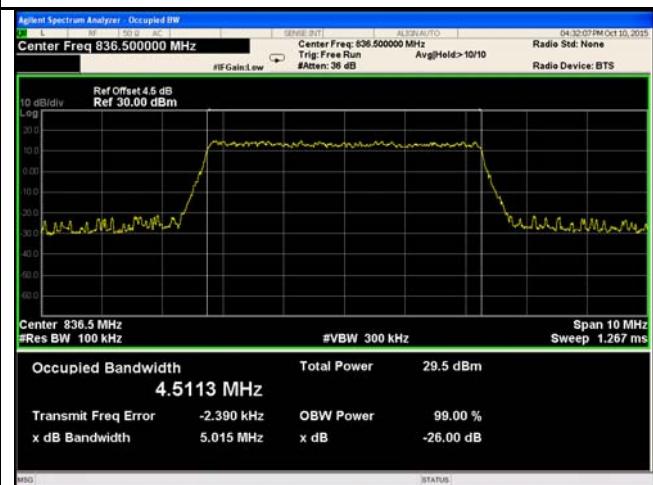
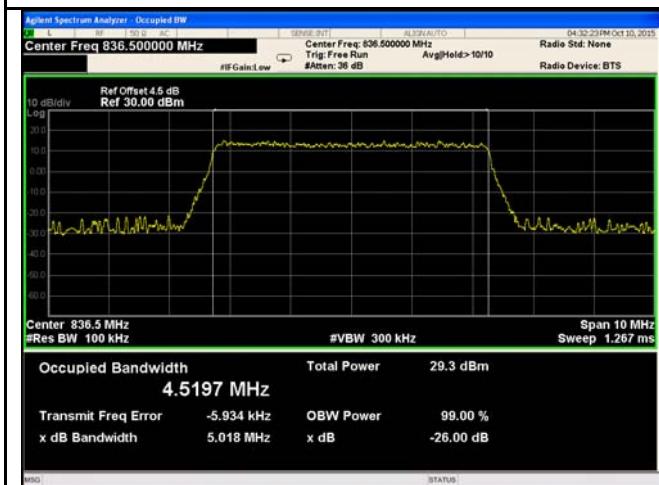
LTE band 5 - High CH QPSK-3

LTE band 5 - High CH 16QAM-3



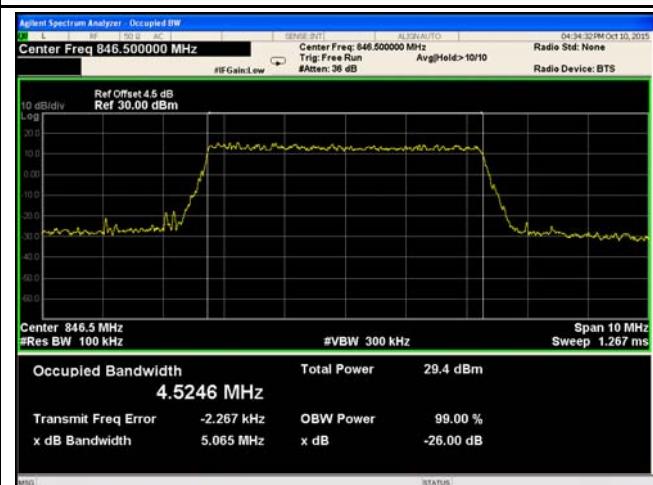
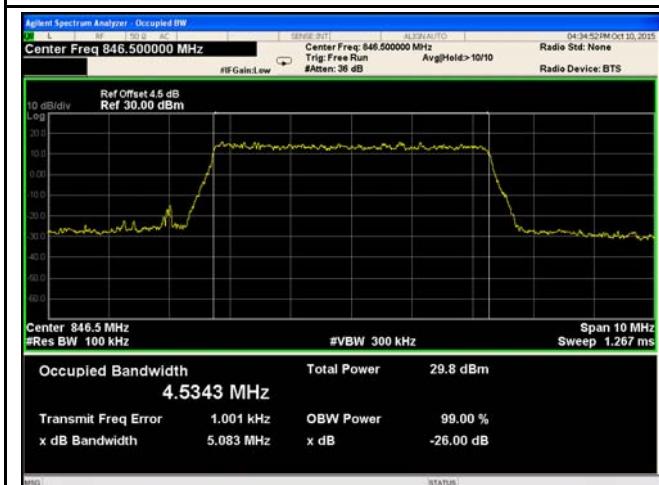
LTE band 5 - Low CH QPSK-5

LTE band 5 - Low CH 16QAM-5



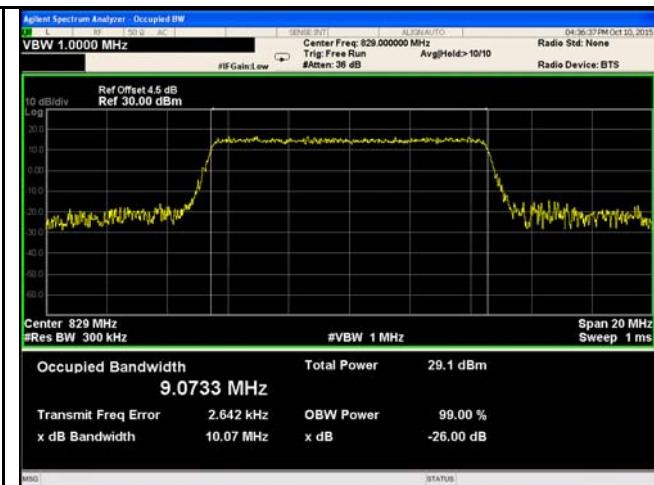
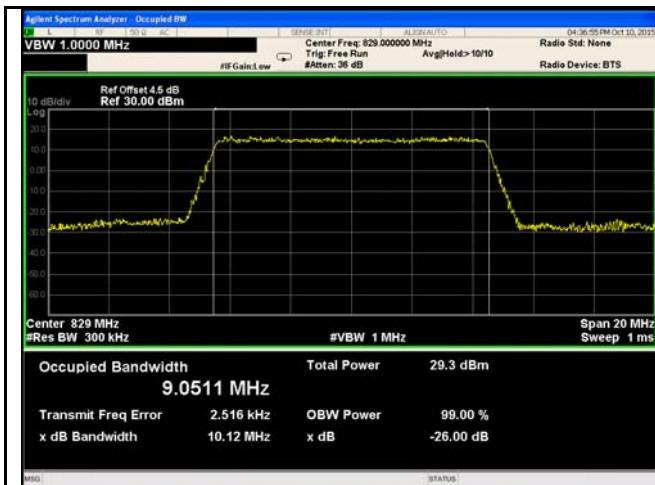
LTE band 5 - Middle CH QPSK-5

LTE band 5 - Middle CH 16QAM-5



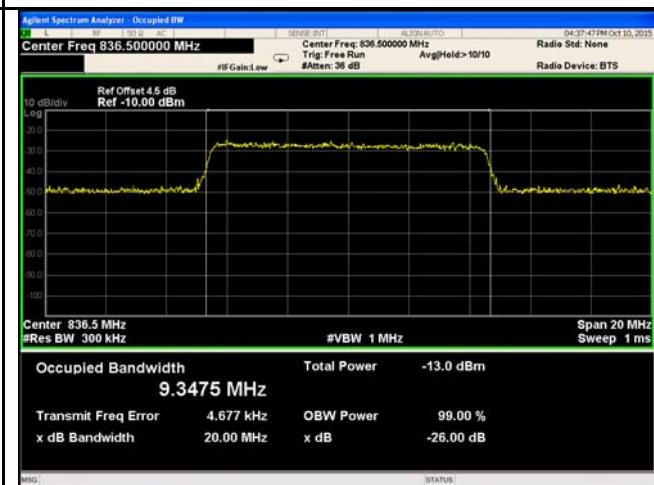
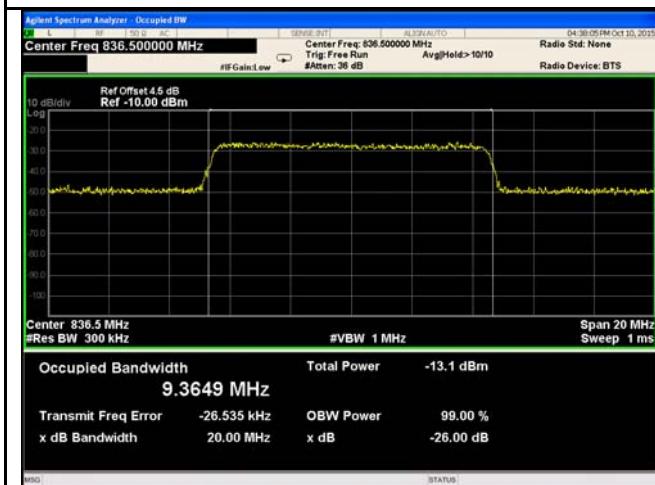
LTE band 5 - High CH QPSK-5

LTE band 5 - High CH 16QAM-5



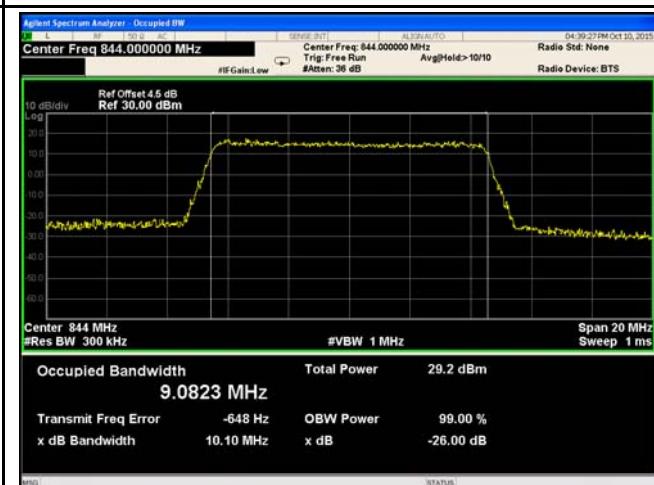
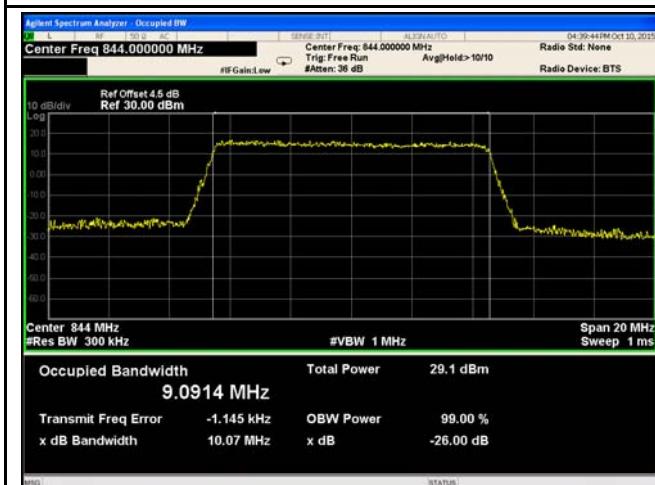
## LTE band 5 - Low CH QPSK-10

## LTE band 5 - Low CH 16QAM-10



## LTE band 5 - Middle CH QPSK-10

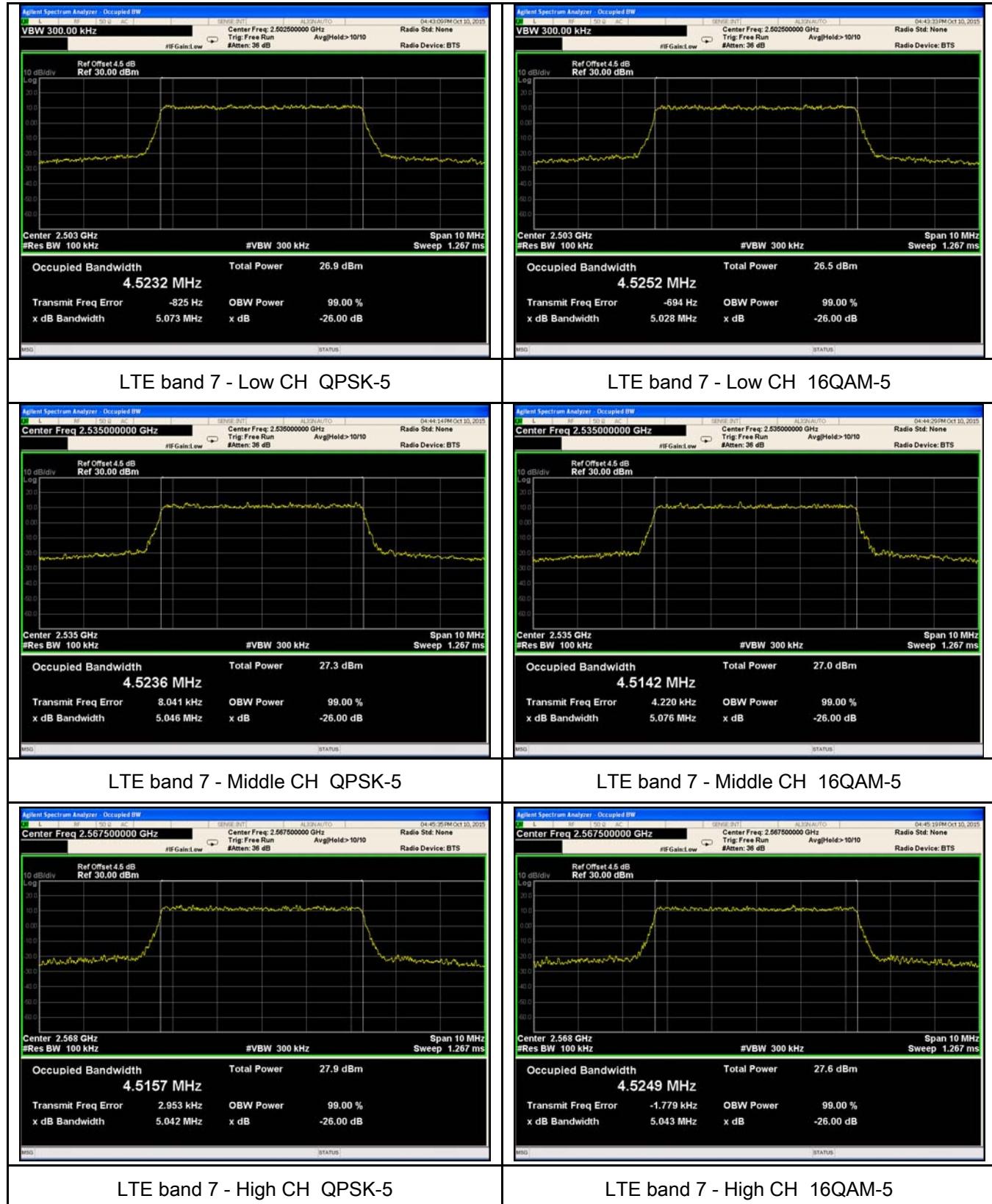
## LTE band 5 - Middle CH 16QAM-10

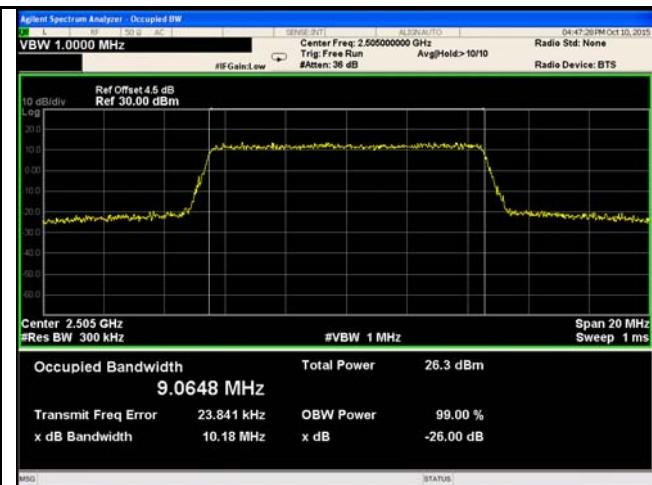
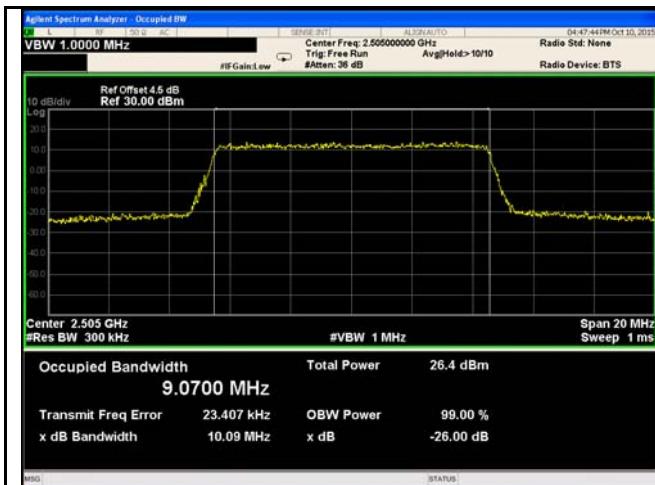


## LTE band 5 - High CH QPSK-10

## LTE band 5 - High CH 16QAM-10

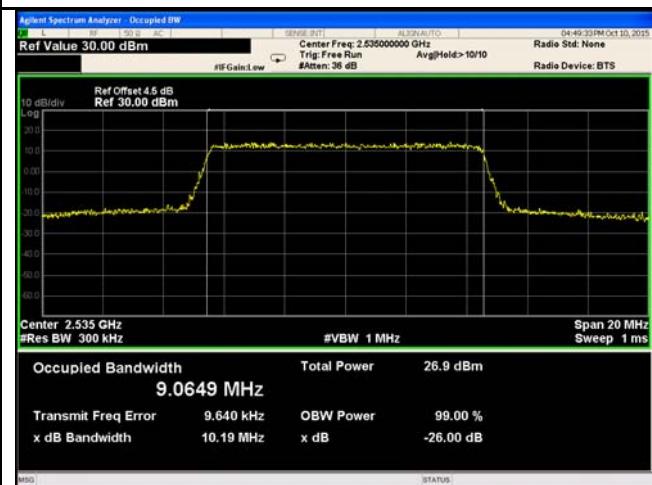
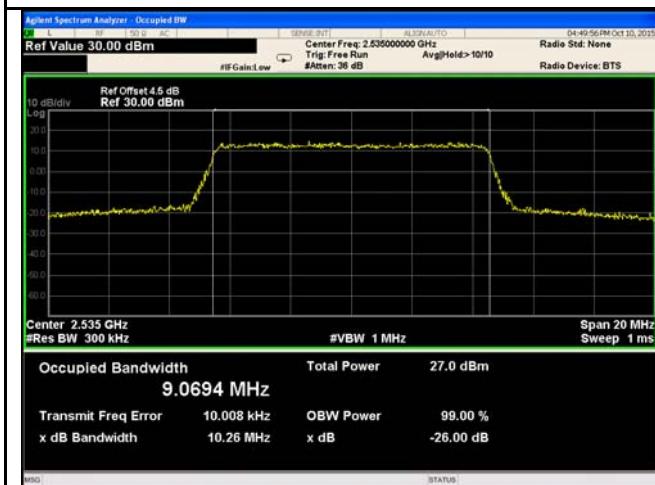
## LTE Band 7 (Part 27)





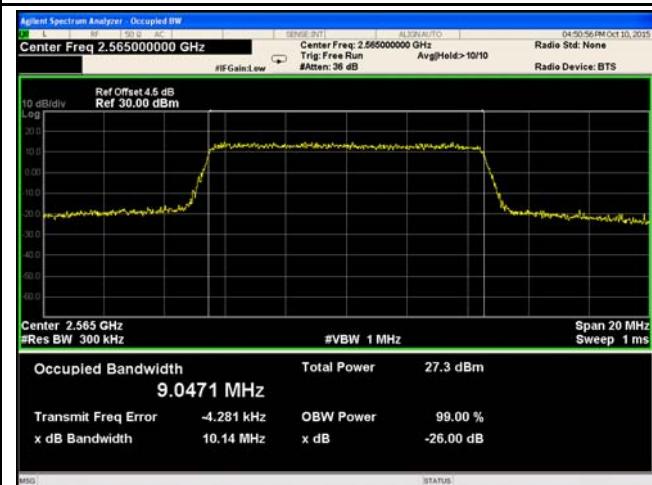
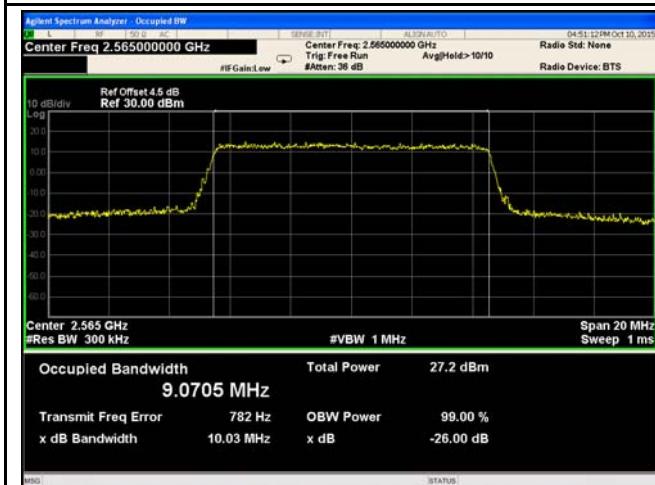
LTE band 7 - Low CH QPSK-10

LTE band 7 - Low CH 16QAM-10



LTE band 7 - Middle CH QPSK-10

LTE band 7 - Middle CH 16QAM-10



LTE band 7 - High CH QPSK-10

LTE band 7 - High CH 16QAM-10