RF TEST REPORT

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Report No.: 15071081-FCC-R5

Supersede Report No.: N/A

Applicant	MACATE GROUP CORPORATION
Product Name	4G LTE SMARTPHONE
Model No.	GATCA ELITE
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	November 24 to December 16, 2015
Issue Date	December 18, 2015
Test Result	☑ Pass ☐ Fail
Equipment complied with the specification	☑
Equipment did not comply with the specification	☐

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

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.

In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

Accreditations for Conformity Assessment

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
15071081-FCC-R5	NONE	Original	December 18, 2015

2. Customer information

Applicant Name	MACATE GROUP CORPORATION
Applicant Add	3401 SW 160th AVENUE, SUITE 430, MIRAMAR/FLORIDA, USA
Manufacturer	MOBIWIRE MOBILES (NINGBO) CO.,LTD
Manufacturer Add	No.999,Dacheng East Road,Fenghua City,Zhejiang Province,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:	4G LTE SMARTPHONE
Main Model:	GATCA ELITE
Serial Model:	N/A
Date EUT received:	November 23,2015
Test Date(s):	November 24 to December 16, 2015
Equipment Category :	PCE
Antenna Gain:	GSM850: -3dBi PCS1900: 0dBi UMTS-FDD Band V: -3dBi UMTS-FDD Band II: 0dBi UMTS-FDD Band IV: 0dBi Bluetooth/BLE/WIFI/GPS:-1dBi LTE Band 2: 0dBi LTE Band 4: 0dBi LTE Band 5: -3dBi LTE Band 12: -3dBi LTE Band 17: -3dBi
Type of Modulation:	GSM / GPRS: GMSK EGPRS: GMSK, 8PSK UMTS-FDD: QPSK, 16QAM 802.11b/g/n: DSSS, OFDM Bluetooth: GFSK, π /4DQPSK, 8DPSK BLE: GFSK LTE Band: QPSK, 16QAM GPS:BPSK
RF Operating Frequency (ies):	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 II TX:1852.4 ~ 1907.6 MHz;

	RX: 1932.4 ~ 1987.6 MHz UMTS-FDD Band IV TX:1712.4 ~ 1752.6 MHz; WIFI:802.11b/g/n(20M): 2412-2462 MHz WIFI:802.11n(40M): 2422-2452 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 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
Maximum Conducted AV Power to Antenna:	LTE Band 2: 23.63 dBm LTE Band 4: 23.53 dBm LTE Band 5: 23.16 dBm LTE Band 12: 23.68 dBm LTE Band 17: 23.46 dBm
ERP/EIRP:	LTE Band 2: 23.54 dBm / EIRP LTE Band 4: 23.39 dBm / EIRP LTE Band 5: 19.58 dBm / EIRP LTE Band 12: 19.87 dBm / EIRP LTE Band 17: 20.19 dBm / ERP
Port:	Power Port, Earphone Port, USB Port
Input Power:	Battery: Model:N/A Standard Voltage:DC3.8V Rated Capacity:3000mAh,11.4Wh Adapter: Model:A88-502000 Input: AC100-240V; 50/60Hz; 0.35A Output: DC 5.0V,2.0A
Trade Name :	GATCA ELITE
GPRS/EGPRS Multi-slot class	8/10/12
FCC ID:	2AGMA-SGE1G

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
§ 2.1049; § 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)

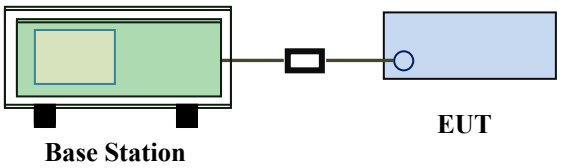
Test Result: Pass

The EUT is a portable device, thus requires SAR evaluation;
Please refer to RF Exposure Evaluation Report: 15071081-FCC-H.

6.2 RF Output Power

Temperature	23℃
Relative Humidity	56%
Atmospheric Pressure	1014mbar
Test date :	December 14, 2015
Tested By :	Winnie Zhang

Requirement(s):

Spec	Item	Requirement	Applicable
§22.913 (a)	a)	ERP:38.45dBm	☑
§24.232 (c)	b)	EIRP:33dBm	☑
§27.50 (c)	c)	EIRP: 30dBm	☑
Test Setup			
Test Procedure	For Conducted Power: - The transmitter output port was connected to base station. - Set EUT at maximum power through base station. - Select lowest, middle, and highest channels for each band and different test mode. For ERP/EIRP: - According with KDB 971168 v02r02 - The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable. - 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. - The frequency range up to tenth harmonic of the fundamental		

	frequency was investigated. - 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. - Spurious emissions in dB = 10 log (TX power in Watts/0.001) – the absolute level - Spurious attenuation limit in dB = 43 + 10 Log10 (power out in Watts.
Remark	
Result	☑ Pass ☐ 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
20MHz	18700	1860.0	QPSK	1	0	0	**23.59**	23±1
				1	49	0	23.56	23±1
				1	99	0	23.53	23±1
				50	0	1	22.76	23±1
				50	24	1	22.75	23±1
				50	49	1	22.73	23±1
				100	0	1	22.71	23±1
			16QAM	1	0	1	22.98	22±1
				1	49	1	22.96	22±1
				1	99	1	22.93	22±1
				50	0	2	21.86	22±1
				50	24	2	21.85	22±1
				50	49	2	21.89	22±1
				100	0	2	21.62	22±1
	18900	1880.0	QPSK	1	0	0	23.34	23±1
				1	49	0	23.36	23±1
				1	99	0	23.34	23±1
				50	0	1	22.32	23±1
				50	24	1	22.35	23±1
				50	49	1	22.36	23±1
				100	0	1	22.44	23±1
			16QAM	1	0	1	22.20	22±1
				1	49	1	22.23	22±1
				1	99	1	22.25	22±1
				50	0	2	21.70	22±1
				50	24	2	21.76	22±1
				50	49	2	21.73	22±1
				100	0	2	21.57	22±1
	19100	1900.0	QPSK	1	0	0	23.09	23±1
				1	49	0	23.03	23±1
				1	99	0	23.04	23±1
				50	0	1	22.22	23±1
				50	24	1	22.23	23±1
				50	49	1	22.26	23±1
				100	0	1	22.19	23±1
			16QAM	1	0	1	22.23	22±1
				1	49	1	22.25	22±1
				1	99	1	22.26	22±1
				50	0	2	21.56	22±1
				50	24	2	21.59	22±1
				50	49	2	21.58	22±1
				100	0	2	21.29	22±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
15MHz	18675	1857.5	QPSK	1	0	0	**23.59**	23±1
				1	37	0	23.56	23±1
				1	74	0	23.54	23±1
				36	0	1	22.71	23±1
				36	16	1	22.75	23±1
				36	35	1	22.73	23±1
				75	0	1	22.65	23±1
			16QAM	1	0	1	23.25	22±1
				1	37	1	23.26	22±1
				1	74	1	23.24	22±1
				36	0	2	22.23	22±1
				36	16	2	22.26	22±1
				36	35	2	22.24	22±1
				75	0	2	21.70	22±1
	18900	1880.0	QPSK	1	0	0	23.33	23±1
				1	37	0	23.36	23±1
				1	74	0	23.35	23±1
				36	0	1	22.31	23±1
				36	16	1	22.35	23±1
				36	35	1	22.36	23±1
				75	0	1	22.46	23±1
			16QAM	1	0	1	22.09	22±1
				1	37	1	22.05	22±1
				1	74	1	22.03	22±1
				36	0	2	21.86	22±1
				36	16	2	21.89	22±1
				36	35	2	21.89	22±1
				75	0	2	21.73	22±1
	19125	1902.5	QPSK	1	0	0	23.17	23±1
				1	37	0	23.16	23±1
				1	74	0	23.15	23±1
				36	0	1	22.24	23±1
				36	16	1	22.26	23±1
				36	35	1	22.23	23±1
				75	0	1	22.19	23±1
			16QAM	1	0	1	22.32	22±1
				1	37	1	22.35	22±1
				1	74	1	22.36	22±1
				36	0	2	21.56	22±1
				36	16	2	21.58	22±1
				36	35	2	21.57	22±1
				75	0	2	21.23	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	23.53	23±1
				1	24	0	23.56	23±1
				1	49	0	23.54	23±1
				25	0	1	22.69	23±1
				25	12	1	22.68	23±1
				25	24	1	22.63	23±1
				50	0	1	22.70	23±1
			16QAM	1	0	1	23.19	22.5±1
				1	24	1	23.15	22.5±1
				1	49	1	23.14	22.5±1
				25	0	2	22.53	22.5±1
				25	12	2	22.56	22.5±1
				25	24	2	22.51	22.5±1
				50	0	2	21.81	22.5±1
	18900	1880.0	QPSK	1	0	0	23.25	23±1
				1	24	0	23.26	23±1
				1	49	0	23.23	23±1
				25	0	1	22.32	23±1
				25	12	1	22.35	23±1
				25	24	1	22.31	23±1
				50	0	1	22.39	23±1
			16QAM	1	0	1	22.78	22±1
				1	24	1	22.79	22±1
				1	49	1	22.73	22±1
				25	0	2	21.68	22±1
				25	12	2	21.69	22±1
				25	24	2	21.63	22±1
				50	0	2	21.53	22±1
	19150	1905	QPSK	1	0	0	23.05	23±1
				1	24	0	23.06	23±1
				1	49	0	23.01	23±1
				25	0	1	22.17	23±1
				25	12	1	22.16	23±1
				25	24	1	22.13	23±1
				50	0	1	22.2	23±1
			16QAM	1	0	1	21.95	22±1
				1	24	1	21.96	22±1
				1	49	1	21.93	22±1
				25	0	2	21.52	22±1
				25	12	2	21.56	22±1
				25	24	2	21.53	22±1
				50	0	2	21.31	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	23.51	23±1
				1	12	0	23.52	23±1
				1	24	0	23.56	23±1
				12	0	1	22.67	23±1
				12	6	1	22.62	23±1
				12	11	1	22.63	23±1
				25	0	1	22.62	23±1
			16QAM	1	0	1	22.55	22±1
				1	12	1	22.53	22±1
				1	24	1	22.54	22±1
				12	0	2	22.13	22±1
				12	6	2	22.16	22±1
				12	11	2	22.18	22±1
				25	0	2	21.71	22±1
	18900	1880.0	QPSK	1	0	0	23.27	23±1
				1	12	0	23.25	23±1
				1	24	0	23.23	23±1
				12	0	1	22.36	23±1
				12	6	1	22.35	23±1
				12	11	1	22.39	23±1
				25	0	1	22.34	23±1
			16QAM	1	0	1	22.63	22±1
				1	12	1	22.65	22±1
				1	24	1	22.68	22±1
				12	0	2	21.56	22±1
				12	6	2	21.59	22±1
				12	11	2	21.58	22±1
				25	0	2	21.41	22±1
	19175	1907.5	QPSK	1	0	0	23.08	23±1
				1	12	0	23.05	23±1
				1	24	0	23.04	23±1
				12	0	1	22.20	23±1
				12	6	1	22.23	23±1
				12	11	1	22.25	23±1
				25	0	1	22.12	23±1
			16QAM	1	0	1	22.04	22±1
				1	12	1	22.23	22±1
				1	24	1	22.26	22±1
				12	0	2	21.56	22±1
				12	6	2	21.59	22±1
				12	11	2	21.58	22±1
				25	0	2	21.24	22±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	23.35	23±1
				1	7	0	23.36	23±1
				1	14	0	23.34	23±1
				8	0	1	22.46	23±1
				8	4	1	22.43	23±1
				8	7	1	22.42	23±1
				15	0	1	22.59	23±1
			16QAM	1	0	1	22.95	22±1
				1	7	1	22.96	22±1
				1	14	1	22.93	22±1
				8	0	2	21.46	22±1
				8	4	2	21.42	22±1
				8	7	2	21.43	22±1
				15	0	2	21.72	22±1
	18900	1880.0	QPSK	1	0	0	23.34	23±1
				1	7	0	23.36	23±1
				1	14	0	23.31	23±1
				8	0	1	22.19	23±1
				8	4	1	22.15	23±1
				8	7	1	22.13	23±1
				15	0	1	22.32	23±1
			16QAM	1	0	1	22.09	22±1
				1	7	1	22.03	22±1
				1	14	1	22.04	22±1
				8	0	2	21.22	22±1
				8	4	2	21.26	22±1
				8	7	2	22.23	22±1
				15	0	2	21.36	22±1
	19175	1907.5	QPSK	1	0	0	23.17	23±1
				1	7	0	23.16	23±1
				1	14	0	23.15	23±1
				8	0	1	22.01	23±1
				8	4	1	22.03	23±1
				8	7	1	22.05	23±1
				15	0	1	22.09	23±1
			16QAM	1	0	1	21.98	21.3±1
				1	7	1	21.93	21.3±1
				1	14	1	21.92	21.3±1
				8	0	2	20.89	21.3±1
				8	4	2	20.86	21.3±1
				8	7	2	20.86	21.3±1
				15	0	2	21.17	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	23.45	23±1
				1	2	0	23.46	23±1
				1	5	0	23.42	23±1
				3	0	0	23.62	23±1
				3	1	0	23.61	23±1
				3	2	0	**23.63**	23±1
				6	0	1	22.45	23±1
			16QAM	1	0	1	22.12	22±1
				1	2	1	22.15	22±1
				1	5	1	22.13	22±1
				3	0	1	21.56	22±1
				3	1	1	21.59	22±1
				3	2	1	21.53	22±1
				6	0	2	21.39	22±1
	18900	1880.0	QPSK	1	0	0	23.36	23±1
				1	2	0	23.31	23±1
				1	5	0	23.35	23±1
				3	0	0	23.43	23±1
				3	1	0	23.45	23±1
				3	2	0	23.42	23±1
				6	0	1	22.20	23±1
			16QAM	1	0	1	22.12	22±1
				1	2	1	22.16	22±1
				1	5	1	22.14	22±1
				3	0	1	21.69	22±1
				3	1	1	21.68	22±1
				3	2	1	21.62	22±1
				6	0	2	21.21	22±1
	19193	1909.3	QPSK	1	0	0	23.16	22.5±1
				1	2	0	23.15	22.5±1
				1	5	0	23.14	22.5±1
				3	0	0	23.19	22.5±1
				3	1	0	23.15	22.5±1
				3	2	0	23.13	22.5±1
				6	0	1	21.97	22.5±1
			16QAM	1	0	1	22.02	21.3±1
				1	2	1	22.03	21.3±1
				1	5	1	22.05	21.3±1
				3	0	1	21.35	21.3±1
				3	1	1	21.36	21.3±1
				3	2	1	21.32	21.3±1
				6	0	2	20.86	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	**23.38**	23±1
				1	49	0	23.36	23±1
				1	99	0	23.35	23±1
				50	0	1	22.35	23±1
				50	24	1	22.36	23±1
				50	49	1	22.31	23±1
				100	0	1	22.29	23±1
			16QAM	1	0	1	22.75	22±1
				1	49	1	22.76	22±1
				1	99	1	22.78	22±1
				50	0	2	21.86	22±1
				50	24	2	21.82	22±1
				50	49	2	21.83	22±1
				100	0	2	21.38	22±1
	20175	1732.5	QPSK	1	0	0	23.45	23±1
				1	49	0	**23.46**	23±1
				1	99	0	23.43	23±1
				50	0	1	22.44	23±1
				50	24	1	22.45	23±1
				50	49	1	22.43	23±1
				100	0	1	22.41	23±1
			16QAM	1	0	1	22.23	22±1
				1	49	1	22.26	22±1
				1	99	1	22.35	22±1
				50	0	2	21.86	22±1
				50	24	2	21.89	22±1
				50	49	2	21.83	22±1
				100	0	2	21.6	22±1
	20300	1745.0	QPSK	1	0	0	23.36	23±1
				1	49	0	23.34	23±1
				1	99	0	23.31	23±1
				50	0	1	22.25	23±1
				50	24	1	22.23	23±1
				50	49	1	22.21	23±1
				100	0	1	22.32	23±1
			16QAM	1	0	1	22.66	22±1
				1	49	1	22.63	22±1
				1	99	1	22.61	22±1
				50	0	2	21.59	22±1
				50	24	2	21.56	22±1
				50	49	2	21.58	22±1
				100	0	2	21.43	22±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
15MHz	20025	1717.5	QPSK	1	0	0	23.26	23±1
				1	37	0	23.25	23±1
				1	74	0	23.23	23±1
				36	0	1	22.42	23±1
				36	16	1	22.46	23±1
				36	35	1	22.48	23±1
				75	0	1	22.41	23±1
			16QAM	1	0	1	22.84	22±1
				1	37	1	22.83	22±1
				1	74	1	22.85	22±1
				36	0	2	21.85	22±1
				36	16	2	21.86	22±1
				36	35	2	21.84	22±1
				75	0	2	21.51	22±1
	20175	1732.5	QPSK	1	0	0	**23.47**	23±1
				1	37	0	23.45	23±1
				1	74	0	23.46	23±1
				36	0	1	22.48	23±1
				36	16	1	22.43	23±1
				36	35	1	22.45	23±1
				75	0	1	22.41	23±1
			16QAM	1	0	1	22.20	22±1
				1	37	1	22.24	22±1
				1	74	1	22.21	22±1
				36	0	2	21.63	22±1
				36	16	2	21.64	22±1
				36	35	2	21.69	22±1
				75	0	2	21.41	22±1
	20325	1747.5	QPSK	1	0	0	23.19	23±1
				1	37	0	23.13	23±1
				1	74	0	23.14	23±1
				36	0	1	22.31	23±1
				36	16	1	22.35	23±1
				36	35	1	22.36	23±1
				75	0	1	22.35	23±1
			16QAM	1	0	1	22.51	22±1
				1	37	1	22.56	22±1
				1	74	1	22.53	22±1
				36	0	2	21.65	22±1
				36	16	2	21.69	22±1
				36	35	2	21.64	22±1
				75	0	2	21.35	22±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
10MHz	20000	1715.0	QPSK	1	0	0	23.31	23±1
				1	24	0	23.35	23±1
				1	49	0	23.32	23±1
				25	0	1	22.38	23±1
				25	12	1	22.36	23±1
				25	24	1	22.35	23±1
				50	0	1	22.35	23±1
			16QAM	1	0	1	22.90	22±1
				1	24	1	22.93	22±1
				1	49	1	22.96	22±1
				25	0	2	21.56	22±1
				25	12	2	21.59	22±1
				25	24	2	21.62	22±1
				50	0	2	21.42	22±1
	20175	1732.5	QPSK	1	0	0	23.46	23±1
				1	24	0	23.45	23±1
				1	49	0	23.43	23±1
				25	0	1	22.44	23±1
				25	12	1	22.45	23±1
				25	24	1	22.43	23±1
				50	0	1	22.41	23±1
			16QAM	1	0	1	22.27	22±1
				1	24	1	22.26	22±1
				1	49	1	22.23	22±1
				25	0	2	21.86	22±1
				25	12	2	21.89	22±1
				25	24	2	21.87	22±1
				50	0	2	21.53	22±1
	20350	1750.0	QPSK	1	0	0	23.20	23±1
				1	24	0	23.26	23±1
				1	49	0	23.25	23±1
				25	0	1	22.28	23±1
				25	12	1	22.25	23±1
				25	24	1	22.23	23±1
				50	0	1	22.27	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	21.56	22±1
				25	12	2	21.58	22±1
				25	24	2	21.59	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
5MHz	20000	1715.0	QPSK	1	0	0	23.34	23±1
				1	12	0	23.36	23±1
				1	24	0	23.31	23±1
				12	0	1	22.37	23±1
				12	6	1	22.38	23±1
				12	11	1	22.35	23±1
				25	0	1	22.31	23±1
			16QAM	1	0	1	21.36	22±1
				1	12	1	21.31	22±1
				1	24	1	21.35	22±1
				12	0	2	21.30	22±1
				12	6	2	21.29	22±1
				12	11	2	21.28	22±1
				25	0	2	21.36	22±1
	20175	1732.5	QPSK	1	0	0	23.39	23±1
				1	12	0	23.36	23±1
				1	24	0	23.35	23±1
				12	0	1	22.41	23±1
				12	6	1	22.43	23±1
				12	11	1	22.45	23±1
				25	0	1	22.37	23±1
			16QAM	1	0	1	22.72	22±1
				1	12	1	22.75	22±1
				1	24	1	22.73	22±1
				12	0	2	21.69	22±1
				12	6	2	21.68	22±1
				12	11	2	21.69	22±1
				25	0	2	21.40	22±1
	20350	1750.0	QPSK	1	0	0	23.32	23±1
				1	12	0	23.36	23±1
				1	24	0	23.38	23±1
				12	0	1	22.36	23±1
				12	6	1	22.39	23±1
				12	11	1	22.35	23±1
				25	0	1	22.23	23±1
			16QAM	1	0	1	22.27	22±1
				1	12	1	22.26	22±1
				1	24	1	22.23	22±1
				12	0	2	21.56	22±1
				12	6	2	21.58	22±1
				12	11	2	21.56	22±1
				25	0	2	21.36	22±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
3MHz	19965	1711.5	QPSK	1	0	0	23.16	23±1
				1	7	0	23.15	23±1
				1	14	0	23.14	23±1
				8	0	1	22.29	23±1
				8	4	1	22.25	23±1
				8	7	1	22.23	23±1
				15	0	1	22.32	23±1
			16QAM	1	0	1	22.69	22±1
				1	7	1	22.68	22±1
				1	14	1	22.64	22±1
				8	0	2	21.28	22±1
				8	4	2	21.26	22±1
				8	7	2	21.23	22±1
				15	0	2	21.43	22±1
	20175	1732.5	QPSK	1	0	0	23.39	23±1
				1	7	0	23.36	23±1
				1	14	0	23.34	23±1
				8	0	1	22.27	23±1
				8	4	1	22.26	23±1
				8	7	1	22.23	23±1
				15	0	1	22.32	23±1
			16QAM	1	0	1	22.17	22±1
				1	7	1	22.13	22±1
				1	14	1	22.14	22±1
				8	0	2	21.29	22±1
				8	4	2	21.23	22±1
				8	7	2	21.24	22±1
				15	0	2	21.31	22±1
	20385	1753.5	QPSK	1	0	0	23.34	23±1
				1	7	0	23.36	23±1
				1	14	0	23.35	23±1
				8	0	1	22.25	23±1
				8	4	1	22.23	23±1
				8	7	1	22.29	23±1
				15	0	1	22.31	23±1
			16QAM	1	0	1	22.24	22±1
				1	7	1	22.23	22±1
				1	14	1	22.28	22±1
				8	0	2	21.17	22±1
				8	4	2	21.19	22±1
				8	7	2	21.15	22±1
				15	0	2	21.37	22±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
1.4MHz	19957	1710.7	QPSK	1	0	0	23.28	23±1
				1	2	0	23.26	23±1
				1	5	0	23.25	23±1
				3	0	0	23.39	23±1
				3	1	0	23.35	23±1
				3	2	0	23.36	23±1
				6	0	1	22.28	23±1
			16QAM	1	0	1	21.91	22±1
				1	2	1	21.93	22±1
				1	5	1	21.93	22±1
				3	0	1	21.45	22±1
				3	1	1	21.46	22±1
				3	2	1	21.48	22±1
				6	0	2	21.21	22±1
	20175	1732.5	QPSK	1	0	0	23.45	23±1
				1	2	0	23.46	23±1
				1	5	0	23.42	23±1
				3	0	0	23.51	23±1
				3	1	0	23.52	23±1
				3	2	0	**23.53**	23±1
				6	0	1	22.33	23±1
			16QAM	1	0	1	22.21	22±1
				1	2	1	22.23	22±1
				1	5	1	22.26	22±1
				3	0	1	21.86	22±1
				3	1	1	21.85	22±1
				3	2	1	21.83	22±1
				6	0	2	21.32	22±1
	20393	1754.3	QPSK	1	0	0	23.35	23±1
				1	2	0	23.36	23±1
				1	5	0	23.32	23±1
				3	0	0	23.42	23±1
				3	1	0	23.45	23±1
				3	2	0	23.46	23±1
				6	0	1	22.24	23±1
			16QAM	1	0	1	22.30	22±1
				1	2	1	22.36	22±1
				1	5	1	22.31	22±1
				3	0	1	21.56	22±1
				3	1	1	21.53	22±1
				3	2	1	21.54	22±1
				6	0	2	21.14	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
10MHz	20450	829	QPSK	1	0	0	22.95	22±1
				1	24	0	**22.96**	22±1
				1	49	0	22.93	22±1
				25	0	1	22.00	22±1
				25	12	1	22.03	22±1
				25	24	1	22.01	22±1
				50	0	1	21.71	22±1
			16QAM	1	0	1	22.67	22±1
				1	24	1	22.69	22±1
				1	49	1	22.63	22±1
				25	0	2	22.43	22±1
				25	12	2	22.45	22±1
				25	24	2	22.46	22±1
				50	0	2	21.20	22±1
	20525	836.5	QPSK	1	0	0	**22.97**	22±1
				1	24	0	22.92	22±1
				1	49	0	22.93	22±1
				25	0	1	22.17	22±1
				25	12	1	22.16	22±1
				25	24	1	22.13	22±1
				50	0	1	22.14	22±1
			16QAM	1	0	1	22.60	22±1
				1	24	1	22.65	22±1
				1	49	1	22.69	22±1
				25	0	2	21.56	22±1
				25	12	2	21.58	22±1
				25	24	2	21.59	22±1
				50	0	2	21.20	22±1
	20600	844	QPSK	1	0	0	22.07	22±1
				1	24	0	22.05	22±1
				1	49	0	22.06	22±1
				25	0	1	21.11	22±1
				25	12	1	21.16	22±1
				25	24	1	21.23	22±1
				50	0	1	21.23	22±1
			16QAM	1	0	1	21.00	21.3±1
				1	24	1	21.15	21.3±1
				1	49	1	21.09	21.3±1
				25	0	2	20.56	21.3±1
				25	12	2	20.58	21.3±1
				25	24	2	20.59	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	20425	826.5	QPSK	1	0	0	22.63	22±1
				1	12	0	22.65	22±1
				1	24	0	22.62	22±1
				12	0	1	21.61	22±1
				12	6	1	21.63	22±1
				12	11	1	21.65	22±1
				25	0	1	21.41	22±1
			16QAM	1	0	1	21.64	21.3±1
				1	12	1	21.63	21.3±1
				1	24	1	21.61	21.3±1
				12	0	2	21.34	21.3±1
				12	6	2	21.38	21.3±1
				12	11	2	21.36	21.3±1
				25	0	2	20.46	21.3±1
	20525	836.5	QPSK	1	0	0	23.13	23±1
				1	12	0	**23.16**	23±1
				1	24	0	23.15	23±1
				12	0	1	22.18	23±1
				12	6	1	22.16	23±1
				12	11	1	22.13	23±1
				25	0	1	22.13	23±1
			16QAM	1	0	1	22.57	22±1
				1	12	1	22.56	22±1
				1	24	1	22.52	22±1
				12	0	2	22.03	22±1
				12	6	2	22.09	22±1
				12	11	2	22.05	22±1
				25	0	2	21.13	22±1
	20625	846.5	QPSK	1	0	0	21.90	21.3±1
				1	12	0	21.96	21.3±1
				1	24	0	21.93	21.3±1
				12	0	1	21.56	21.3±1
				12	6	1	21.53	21.3±1
				12	11	1	21.58	21.3±1
				25	0	1	21.43	21.3±1
			16QAM	1	0	1	21.06	21.3±1
				1	12	1	21.03	21.3±1
				1	24	1	21.05	21.3±1
				12	0	2	20.86	21.3±1
				12	6	2	20.85	21.3±1
				12	11	2	20.83	21.3±1
				25	0	2	20.40	21.3±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
3MHz	20415	825.5	QPSK	1	0	0	22.33	22±1
				1	7	0	22.36	22±1
				1	14	0	22.35	22±1
				8	0	1	21.30	22±1
				8	4	1	21.36	22±1
				8	7	1	21.36	22±1
				15	0	1	21.26	22±1
			16QAM	1	0	1	21.23	21.3±1
				1	7	1	21.36	21.3±1
				1	14	1	21.25	21.3±1
				8	0	2	20.42	21.3±1
				8	4	2	20.45	21.3±1
				8	7	2	20.46	21.3±1
				15	0	2	20.33	21.3±1
	20525	836.5	QPSK	1	0	0	23.07	23±1
				1	7	0	23.05	23±1
				1	14	0	23.01	23±1
				8	0	1	22.07	23±1
				8	4	1	22.03	23±1
				8	7	1	22.05	23±1
				15	0	1	22.11	23±1
			16QAM	1	0	1	22.05	21.3±1
				1	7	1	22.03	21.3±1
				1	14	1	22.09	21.3±1
				8	0	2	20.98	21.3±1
				8	4	2	20.96	21.3±1
				8	7	2	20.93	21.3±1
				15	0	2	21.14	21.3±1
	20635	847.5	QPSK	1	0	0	21.78	21.3±1
				1	7	0	21.79	21.3±1
				1	14	0	21.76	21.3±1
				8	0	1	21.05	21.3±1
				8	4	1	21.06	21.3±1
				8	7	1	21.09	21.3±1
				15	0	1	21.23	21.3±1
			16QAM	1	0	1	21.51	21.3±1
				1	7	1	21.53	21.3±1
				1	14	1	21.52	21.3±1
				8	0	2	20.35	21.3±1
				8	4	2	20.36	21.3±1
				8	7	2	20.34	21.3±1
				15	0	2	20.33	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	20407	824.7	QPSK	1	0	0	22.29	22±1
				1	2	0	22.26	22±1
				1	5	0	22.25	22±1
				3	0	0	22.27	22±1
				3	1	0	22.24	22±1
				3	2	0	22.23	22±1
				6	0	1	21.24	22±1
			16QAM	1	0	1	21.12	21.3±1
				1	2	1	21.23	21.3±1
				1	5	1	21.26	21.3±1
				3	0	1	20.86	21.3±1
				3	1	1	20.89	21.3±1
				3	2	1	20.89	21.3±1
				6	0	2	20.34	21.3±1
	20525	836.5	QPSK	1	0	0	23.07	23±1
				1	2	0	23.06	23±1
				1	5	0	23.06	23±1
				3	0	0	23.11	23±1
				3	1	0	23.15	23±1
				3	2	0	23.16	23±1
				6	0	1	22.05	23±1
			16QAM	1	0	1	22.09	21.3±1
				1	2	1	22.06	21.3±1
				1	5	1	22.03	21.3±1
				3	0	1	21.35	21.3±1
				3	1	1	21.36	21.3±1
				3	2	1	21.34	21.3±1
				6	0	2	20.94	21.3±1
	20643	848.3	QPSK	1	0	0	21.95	22±1
				1	2	0	21.93	22±1
				1	5	0	21.96	22±1
				3	0	0	22.80	22±1
				3	1	0	22.06	22±1
				3	2	0	22.03	22±1
				6	0	1	21.06	22±1
			16QAM	1	0	1	20.66	21.3±1
				1	2	1	20.69	21.3±1
				1	5	1	20.65	21.3±1
				3	0	1	20.53	21.3±1
				3	1	1	20.56	21.3±1
				3	2	1	20.59	21.3±1
				6	0	2	20.32	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
10MHz	23060	704	QPSK	1	0	0	21.58	21.3±1
				1	24	0	21.56	21.3±1
				1	49	0	21.53	21.3±1
				25	0	1	21.11	21.3±1
				25	12	1	21.13	21.3±1
				25	24	1	21.16	21.3±1
				50	0	1	21.24	21.3±1
			16QAM	1	0	1	21.23	21.3±1
				1	24	1	21.25	21.3±1
				1	49	1	21.26	21.3±1
				25	0	2	20.75	21.3±1
				25	12	2	20.73	21.3±1
				25	24	2	20.75	21.3±1
				50	0	2	20.36	21.3±1
	23095	707.5	QPSK	1	0	0	22.15	21.3±1
				1	24	0	22.13	21.3±1
				1	49	0	**22.16**	21.3±1
				25	0	1	20.88	21.3±1
				25	12	1	20.86	21.3±1
				25	24	1	20.83	21.3±1
				50	0	1	20.94	21.3±1
			16QAM	1	0	1	20.83	21.3±1
				1	24	1	20.86	21.3±1
				1	49	1	20.82	21.3±1
				25	0	2	20.62	21.3±1
				25	12	2	20.63	21.3±1
				25	24	2	20.65	21.3±1
				50	0	2	20.36	21.3±1
	23130	711	QPSK	1	0	0	21.44	21.3±1
				1	24	0	21.45	21.3±1
				1	49	0	21.43	21.3±1
				25	0	1	20.66	21.3±1
				25	12	1	20.68	21.3±1
				25	24	1	20.63	21.3±1
				50	0	1	20.63	21.3±1
			16QAM	1	0	1	20.75	21.3±1
				1	24	1	20.72	21.3±1
				1	49	1	20.73	21.3±1
				25	0	2	20.56	21.3±1
				25	12	2	20.59	21.3±1
				25	24	2	20.58	21.3±1
				50	0	2	20.34	21.3±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
5MHz	23035	701.5	QPSK	1	0	0	21.81	21.3±1
				1	12	0	21.86	21.3±1
				1	24	0	21.83	21.3±1
				12	0	1	21.35	21.3±1
				12	6	1	21.36	21.3±1
				12	11	1	21.39	21.3±1
				25	0	1	21.35	21.3±1
			16QAM	1	0	1	21.45	21.3±1
				1	12	1	21.43	21.3±1
				1	24	1	21.43	21.3±1
				12	0	2	20.68	21.3±1
				12	6	2	20.69	21.3±1
				12	11	2	20.63	21.3±1
				25	0	2	20.36	21.3±1
	23095	707.5	QPSK	1	0	0	22.14	21.3±1
				1	12	0	22.16	21.3±1
				1	24	0	22.15	21.3±1
				12	0	1	21.12	21.3±1
				12	6	1	21.15	21.3±1
				12	11	1	21.16	21.3±1
				25	0	1	21.14	21.3±1
			16QAM	1	0	1	20.75	21.3±1
				1	12	1	20.76	21.3±1
				1	24	1	20.73	21.3±1
				12	0	2	20.53	21.3±1
				12	6	2	20.56	21.3±1
				12	11	2	20.58	21.3±1
				25	0	2	20.35	21.3±1
	23155	713.5	QPSK	1	0	0	21.63	21.3±1
				1	12	0	21.65	21.3±1
				1	24	0	21.68	21.3±1
				12	0	1	20.74	21.3±1
				12	6	1	20.75	21.3±1
				12	11	1	20.76	21.3±1
				25	0	1	20.72	21.3±1
			16QAM	1	0	1	20.96	21.3±1
				1	12	1	20.98	21.3±1
				1	24	1	20.93	21.3±1
				12	0	2	20.61	21.3±1
				12	6	2	20.65	21.3±1
				12	11	2	20.63	21.3±1
				25	0	2	20.33	21.3±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
3MHz	23025	700.5	QPSK	1	0	0	23.40	23±1
				1	7	0	**23.46**	23±1
				1	14	0	23.42	23±1
				8	0	1	22.58	23±1
				8	4	1	22.56	23±1
				8	7	1	22.53	23±1
				15	0	1	22.65	23±1
			16QAM	1	0	1	23.07	22.5±1
				1	7	1	23.06	22.5±1
				1	14	1	23.01	22.5±1
				8	0	2	21.54	22.5±1
				8	4	2	21.53	22.5±1
				8	7	2	21.56	22.5±1
				15	0	2	21.71	22.5±1
	23095	707.5	QPSK	1	0	0	23.40	23±1
				1	7	0	23.46	23±1
				1	14	0	23.42	23±1
				8	0	1	22.35	23±1
				8	4	1	22.36	23±1
				8	7	1	22.38	23±1
				15	0	1	22.45	23±1
			16QAM	1	0	1	22.32	22±1
				1	7	1	22.35	22±1
				1	14	1	22.36	22±1
				8	0	2	21.36	22±1
				8	4	2	21.35	22±1
				8	7	2	21.33	22±1
				15	0	2	21.38	22±1
	23025	714.5	QPSK	1	0	0	**23.48**	23±1
				1	7	0	23.45	23±1
				1	14	0	23.43	23±1
				8	0	1	22.50	23±1
				8	4	1	22.56	23±1
				8	7	1	22.53	23±1
				15	0	1	22.54	23±1
			16QAM	1	0	1	22.50	22±1
				1	7	1	22.53	22±1
				1	14	1	22.56	22±1
				8	0	2	22.57	22±1
				8	4	2	21.34	22±1
				8	7	2	21.35	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
1.4MHz	23017	699.7	QPSK	1	0	0	23.47	23±1
				1	2	0	23.45	23±1
				1	5	0	23.43	23±1
				3	0	0	23.63	23±1
				3	1	0	23.61	23±1
				3	2	0	**23.68**	23±1
				6	0	1	22.48	23±1
			16QAM	1	0	1	22.23	22±1
				1	2	1	22.26	22±1
				1	5	1	22.28	22±1
				3	0	1	21.56	22±1
				3	1	1	21.53	22±1
				3	2	1	21.59	22±1
				6	0	2	21.46	22±1
	23095	707.5	QPSK	1	0	0	23.46	23±1
				1	2	0	23.45	23±1
				1	5	0	23.43	23±1
				3	0	0	23.55	23±1
				3	1	0	23.56	23±1
				3	2	0	23.53	23±1
				6	0	1	22.37	23±1
			16QAM	1	0	1	22.36	22±1
				1	2	1	22.35	22±1
				1	5	1	22.31	22±1
				3	0	1	21.65	22±1
				3	1	1	21.69	22±1
				3	2	1	21.68	22±1
				6	0	2	21.34	22±1
	23173	715.3	QPSK	1	0	0	23.50	23±1
				1	2	0	23.51	23±1
				1	5	0	23.52	23±1
				3	0	0	23.57	23±1
				3	1	0	23.56	23±1
				3	2	0	23.53	23±1
				6	0	1	22.48	23±1
			16QAM	1	0	1	22.54	22±1
				1	2	1	22.56	22±1
				1	5	1	22.53	22±1
				3	0	1	21.83	22±1
				3	1	1	21.85	22±1
				3	2	1	21.89	22±1
				6	0	2	21.31	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
10MHz	23780	709.0	QPSK	1	0	0	23.43	23±1
				1	24	0	**23.45**	23±1
				1	49	0	23.42	23±1
				25	0	1	22.46	23±1
				25	12	1	22.49	23±1
				25	24	1	22.43	23±1
				50	0	1	22.48	23±1
			16QAM	1	0	1	22.32	22±1
				1	24	1	22.35	22±1
				1	49	1	22.36	22±1
				25	0	2	22.35	22±1
				25	12	2	22.36	22±1
				25	24	2	22.31	22±1
				50	0	2	21.48	22±1
	23790	701.0	QPSK	1	0	0	23.32	23±1
				1	24	0	23.35	23±1
				1	49	0	23.36	23±1
				25	0	1	22.52	23±1
				25	12	1	22.56	23±1
				25	24	1	22.53	23±1
				50	0	1	22.46	23±1
			16QAM	1	0	1	22.94	22±1
				1	24	1	22.95	22±1
				1	49	1	22.93	22±1
				25	0	2	21.86	22±1
				25	12	2	21.85	22±1
				25	24	2	21.85	22±1
				50	0	2	21.45	22±1
	23800	711.0	QPSK	1	0	0	23.37	23±1
				1	24	0	23.35	23±1
				1	49	0	23.31	23±1
				25	0	1	22.49	23±1
				25	12	1	22.43	23±1
				25	24	1	22.45	23±1
				50	0	1	22.45	23±1
			16QAM	1	0	1	22.30	22±1
				1	24	1	22.35	22±1
				1	49	1	22.31	22±1
				25	0	2	21.63	22±1
				25	12	2	21.69	22±1
				25	24	2	21.68	22±1
				50	0	2	21.32	22±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
5MHz	23755	706.5	QPSK	1	0	0	23.35	23±1
				1	12	0	23.36	23±1
				1	24	0	23.31	23±1
				12	0	1	22.47	23±1
				12	6	1	22.46	23±1
				12	11	1	22.43	23±1
				25	0	1	22.45	23±1
			16QAM	1	0	1	22.54	22±1
				1	12	1	22.53	22±1
				1	24	1	22.56	22±1
				12	0	2	21.86	22±1
				12	6	2	21.89	22±1
				12	11	2	21.87	22±1
				25	0	2	21.45	22±1
	23790	710.0	QPSK	1	0	0	23.45	23±1
				1	12	0	**23.46**	23±1
				1	24	0	23.41	23±1
				12	0	1	22.55	23±1
				12	6	1	22.56	23±1
				12	11	1	22.53	23±1
				25	0	1	22.48	23±1
			16QAM	1	0	1	22.47	22±1
				1	12	1	22.46	22±1
				1	24	1	22.43	22±1
				12	0	2	22.03	22±1
				12	6	2	22.05	22±1
				12	11	2	22.06	22±1
				25	0	2	21.49	22±1
	23825	713.5	QPSK	1	0	0	23.29	23±1
				1	12	0	23.26	23±1
				1	24	0	23.25	23±1
				12	0	1	22.47	23±1
				12	6	1	22.45	23±1
				12	11	1	22.46	23±1
				25	0	1	22.42	23±1
			16QAM	1	0	1	22.75	22±1
				1	12	1	22.73	22±1
				1	24	1	22.74	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	21.36	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	16.28	V	7.88	0.85	23.31	33.01
1880	1.4	QPSK	1/0	16.32	V	7.88	0.85	23.35	33.01
1909.3	1.4	QPSK	1/0	16.25	V	7.88	0.85	23.28	33.01
1850.7	1.4	QPSK	1/0	14.71	H	7.88	0.85	21.74	33.01
1880	1.4	QPSK	1/0	14.68	H	7.88	0.85	21.71	33.01
1909.3	1.4	QPSK	1/0	14.69	H	7.88	0.85	21.72	33.01
1850.7	1.4	16-QAM	1/0	15.13	V	7.88	0.85	22.16	33.01
1880	1.4	16-QAM	1/0	15.16	V	7.88	0.85	22.19	33.01
1909.3	1.4	16-QAM	1/0	15.09	V	7.88	0.85	22.12	33.01
1850.7	1.4	16-QAM	1/0	13.94	H	7.88	0.85	20.97	33.01
1880	1.4	16-QAM	1/0	13.88	H	7.88	0.85	20.91	33.01
1909.3	1.4	16-QAM	1/0	13.95	H	7.88	0.85	20.98	33.01
1851.5	3	QPSK	1/0	16.35	V	7.88	0.85	23.38	33.01
1880	3	QPSK	1/0	16.32	V	7.88	0.85	23.35	33.01
1908.5	3	QPSK	1/0	16.24	V	7.88	0.85	23.27	33.01
1851.5	3	QPSK	1/0	14.85	H	7.88	0.85	21.88	33.01
1880	3	QPSK	1/0	14.92	H	7.88	0.85	21.95	33.01
1908.5	3	QPSK	1/0	14.77	H	7.88	0.85	21.80	33.01
1851.5	3	16-QAM	1/0	15.23	V	7.88	0.85	22.26	33.01
1880	3	16-QAM	1/0	15.18	V	7.88	0.85	22.21	33.01
1908.5	3	16-QAM	1/0	15.04	V	7.88	0.85	22.07	33.01
1851.5	3	16-QAM	1/0	13.59	H	7.88	0.85	20.62	33.01
1880	3	16-QAM	1/0	13.62	H	7.88	0.85	20.65	33.01
1908.5	3	16-QAM	1/0	13.44	H	7.88	0.85	20.47	33.01
1852.5	5	QPSK	1/24	16.28	V	7.88	0.85	23.31	33.01
1880	5	QPSK	1/0	16.15	V	7.88	0.85	23.18	33.01
1907.5	5	QPSK	1/24	16.07	V	7.88	0.85	23.10	33.01
1852.5	5	QPSK	1/24	14.81	H	7.88	0.85	21.84	33.01
1880	5	QPSK	1/0	14.76	H	7.88	0.85	21.79	33.01
1907.5	5	QPSK	1/24	14.69	H	7.88	0.85	21.72	33.01
1852.5	5	16-QAM	1/24	15.24	V	7.88	0.85	22.27	33.01
1880	5	16-QAM	1/0	15.08	V	7.88	0.85	22.11	33.01

1907.5	5	16-QAM	1/24	15.01	V	7.88	0.85	22.04	33.01
1852.5	5	16-QAM	1/24	13.57	H	7.88	0.85	20.60	33.01
1880	5	16-QAM	1/0	13.52	H	7.88	0.85	20.55	33.01
1907.5	5	16-QAM	1/24	13.48	H	7.88	0.85	20.51	33.01
1855	10	QPSK	1/0	16.25	V	7.88	0.85	23.28	33.01
1880	10	QPSK	1/0	16.13	V	7.88	0.85	23.16	33.01
1905	10	QPSK	1/49	16.08	V	7.88	0.85	23.11	33.01
1855	10	QPSK	1/0	14.68	H	7.88	0.85	21.71	33.01
1880	10	QPSK	1/0	14.61	H	7.88	0.85	21.64	33.01
1905	10	QPSK	1/49	14.57	H	7.88	0.85	21.60	33.01
1855	10	16-QAM	1/0	15.13	V	7.88	0.85	22.16	33.01
1880	10	16-QAM	1/0	15.08	V	7.88	0.85	22.11	33.01
1905	10	16-QAM	1/49	15.02	V	7.88	0.85	22.05	33.01
1855	10	16-QAM	1/0	13.51	H	7.88	0.85	20.54	33.01
1880	10	16-QAM	1/0	13.56	H	7.88	0.85	20.59	33.01
1905	10	16-QAM	1/49	13.48	H	7.88	0.85	20.51	33.01
1857.5	15	QPSK	1/0	16.35	V	7.88	0.85	23.38	33.01
1880	15	QPSK	1/0	16.24	V	7.88	0.85	23.27	33.01
1902.5	15	QPSK	1/0	16.18	V	7.88	0.85	23.21	33.01
1857.5	15	QPSK	1/0	14.85	H	7.88	0.85	21.88	33.01
1880	15	QPSK	1/0	14.79	H	7.88	0.85	21.82	33.01
1902.5	15	QPSK	1/0	14.81	H	7.88	0.85	21.84	33.01
1857.5	15	16-QAM	1/0	15.27	V	7.88	0.85	22.30	33.01
1880	15	16-QAM	1/0	15.19	V	7.88	0.85	22.22	33.01
1902.5	15	16-QAM	1/0	15.23	V	7.88	0.85	22.26	33.01
1857.5	15	16-QAM	1/0	13.48	H	7.88	0.85	20.51	33.01
1880	15	16-QAM	1/0	13.45	H	7.88	0.85	20.48	33.01
1902.5	15	16-QAM	1/0	13.51	H	7.88	0.85	20.54	33.01
1860	20	QPSK	1/0	16.51	V	7.88	0.85	**23.54**	33.01
1880	20	QPSK	1/0	16.34	V	7.88	0.85	23.37	33.01
1900	20	QPSK	1/0	16.18	V	7.88	0.85	23.21	33.01
1860	20	QPSK	1/0	14.86	H	7.88	0.85	21.89	33.01
1880	20	QPSK	1/0	14.95	H	7.88	0.85	21.98	33.01
1900	20	QPSK	1/0	14.82	H	7.88	0.85	21.85	33.01
1860	20	16-QAM	1/0	15.49	V	7.88	0.85	22.52	33.01
1880	20	16-QAM	1/0	15.52	V	7.88	0.85	22.55	33.01
1900	20	16-QAM	1/0	15.46	V	7.88	0.85	22.49	33.01
1860	20	16-QAM	1/0	13.87	H	7.88	0.85	20.90	33.01

1880	20	16-QAM	1/0	13.92	H	7.88	0.85	20.95	33.01
1900	20	16-QAM	1/0	13.86	H	7.88	0.85	20.89	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	16.11	V	7.95	0.79	23.27	30
1732.5	1.4	QPSK	1/0	16.18	V	7.95	0.79	23.34	30
1754.3	1.4	QPSK	1/0	16.23	V	7.95	0.79	**23.39**	30
1710.7	1.4	QPSK	1/0	14.92	H	7.95	0.79	22.08	30
1732.5	1.4	QPSK	1/0	14.96	H	7.95	0.79	22.12	30
1754.3	1.4	QPSK	1/0	14.89	H	7.95	0.79	22.05	30
1710.7	1.4	16-QAM	1/5	15.03	V	7.95	0.79	22.19	30
1732.5	1.4	16-QAM	1/0	15.08	V	7.95	0.79	22.24	30
1754.3	1.4	16-QAM	1/0	15.11	V	7.95	0.79	22.27	30
1710.7	1.4	16-QAM	1/5	13.64	H	7.95	0.79	20.80	30
1732.5	1.4	16-QAM	1/0	13.58	H	7.95	0.79	20.74	30
1754.3	1.4	16-QAM	1/0	13.65	H	7.95	0.79	20.81	30
1711.5	3	QPSK	1/0	15.86	V	7.95	0.79	23.02	30
1732.5	3	QPSK	1/0	15.93	V	7.95	0.79	23.09	30
1753.5	3	QPSK	1/0	15.97	V	7.95	0.79	23.13	30
1711.5	3	QPSK	1/0	14.29	H	7.95	0.79	21.45	30
1732.5	3	QPSK	1/0	14.32	H	7.95	0.79	21.48	30
1753.5	3	QPSK	1/0	14.36	H	7.95	0.79	21.52	30
1711.5	3	16-QAM	1/0	14.73	V	7.95	0.79	21.89	30
1732.5	3	16-QAM	1/0	14.82	V	7.95	0.79	21.98	30
1753.5	3	16-QAM	1/0	14.76	V	7.95	0.79	21.92	30
1711.5	3	16-QAM	1/0	13.24	H	7.95	0.79	20.40	30
1732.5	3	16-QAM	1/0	13.28	H	7.95	0.79	20.44	30
1753.5	3	16-QAM	1/0	13.31	H	7.95	0.79	20.47	30
1712.5	5	QPSK	1/0	16.13	V	7.95	0.79	23.29	30
1732.5	5	QPSK	1/0	16.11	V	7.95	0.79	23.27	30
1752.5	5	QPSK	1/24	16.08	V	7.95	0.79	23.24	30
1712.5	5	QPSK	1/0	14.75	H	7.95	0.79	21.91	30
1732.5	5	QPSK	1/0	14.71	H	7.95	0.79	21.87	30
1752.5	5	QPSK	1/24	14.68	H	7.95	0.79	21.84	30
1712.5	5	16-QAM	1/0	14.86	V	7.95	0.79	22.02	30
1732.5	5	16-QAM	1/0	14.79	V	7.95	0.79	21.95	30
1752.5	5	16-QAM	1/24	14.82	V	7.95	0.79	21.98	30
1712.5	5	16-QAM	1/0	13.24	H	7.95	0.79	20.40	30
1732.5	5	16-QAM	1/0	13.28	H	7.95	0.79	20.44	30

1752.5	5	16-QAM	1/24	13.25	H	7.95	0.79	20.41	30
1715	10	QPSK	1/0	16.19	V	7.95	0.79	23.35	30
1732.5	10	QPSK	1/49	16.13	V	7.95	0.79	23.29	30
1750	10	QPSK	1/0	16.14	V	7.95	0.79	23.30	30
1715	10	QPSK	1/0	14.82	H	7.95	0.79	21.98	30
1732.5	10	QPSK	1/49	14.76	H	7.95	0.79	21.92	30
1750	10	QPSK	1/0	14.83	H	7.95	0.79	21.99	30
1715	10	16-QAM	1/0	15.03	V	7.95	0.79	22.19	30
1732.5	10	16-QAM	1/49	15.07	V	7.95	0.79	22.23	30
1750	10	16-QAM	1/0	14.98	V	7.95	0.79	22.14	30
1715	10	16-QAM	1/0	13.73	H	7.95	0.79	20.89	30
1732.5	10	16-QAM	1/49	13.69	H	7.95	0.79	20.85	30
1750	10	16-QAM	1/0	13.61	H	7.95	0.79	20.77	30
1717.5	15	QPSK	1/0	16.11	V	7.95	0.79	23.27	30
1732.5	15	QPSK	1/74	16.23	V	7.95	0.79	23.39	30
1747.5	15	QPSK	1/0	16.08	V	7.95	0.79	23.24	30
1717.5	15	QPSK	1/0	14.68	H	7.95	0.79	21.84	30
1732.5	15	QPSK	1/74	14.52	H	7.95	0.79	21.68	30
1747.5	15	QPSK	1/0	14.63	H	7.95	0.79	21.79	30
1717.5	15	16-QAM	1/0	15.34	V	7.95	0.79	22.50	30
1732.5	15	16-QAM	1/74	15.26	V	7.95	0.79	22.42	30
1747.5	15	16-QAM	1/0	15.25	V	7.95	0.79	22.41	30
1717.5	15	16-QAM	1/0	13.82	H	7.95	0.79	20.98	30
1732.5	15	16-QAM	1/74	13.79	H	7.95	0.79	20.95	30
1747.5	15	16-QAM	1/0	13.74	H	7.95	0.79	20.90	30
1720	20	QPSK	1/99	16.15	V	7.95	0.79	23.31	30
1732.5	20	QPSK	1/99	16.12	V	7.95	0.79	23.28	30
1745	20	QPSK	1/0	16.08	V	7.95	0.79	23.24	30
1720	20	QPSK	1/99	14.61	H	7.95	0.79	21.77	30
1732.5	20	QPSK	1/99	14.57	H	7.95	0.79	21.73	30
1745	20	QPSK	1/0	14.63	H	7.95	0.79	21.79	30
1720	20	16-QAM	1/99	15.23	V	7.95	0.79	22.39	30
1732.5	20	16-QAM	1/99	15.18	V	7.95	0.79	22.34	30
1745	20	16-QAM	1/0	15.16	V	7.95	0.79	22.32	30
1720	20	16-QAM	1/99	13.54	H	7.95	0.79	20.70	30
1732.5	20	16-QAM	1/99	13.48	H	7.95	0.79	20.64	30
1745	20	16-QAM	1/0	13.51	H	7.95	0.79	20.67	30

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	12.88	V	6.8	0.44	19.24	34.77
836.5	1.4	QPSK	1/5	12.83	V	6.8	0.44	19.19	34.77
848.3	1.4	QPSK	1/5	12.84	V	6.9	0.44	**19.30**	34.77
824.7	1.4	QPSK	1/5	11.39	H	6.8	0.44	17.75	34.77
836.5	1.4	QPSK	1/5	11.42	H	6.8	0.44	17.78	34.77
848.3	1.4	QPSK	1/5	11.35	H	6.9	0.44	17.81	34.77
824.7	1.4	16-QAM	1/5	11.61	V	6.8	0.44	17.97	34.77
836.5	1.4	16-QAM	1/5	11.57	V	6.8	0.44	17.93	34.77
848.3	1.4	16-QAM	1/5	11.53	V	6.9	0.44	17.99	34.77
824.7	1.4	16-QAM	1/5	10.19	H	6.8	0.44	16.55	34.77
836.5	1.4	16-QAM	1/5	10.21	H	6.8	0.44	16.57	34.77
848.3	1.4	16-QAM	1/5	10.15	H	6.9	0.44	16.61	34.77
825.5	3	QPSK	1/14	12.73	V	6.8	0.44	19.09	34.77
836.5	3	QPSK	1/0	12.81	V	6.8	0.44	19.17	34.77
847.5	3	QPSK	1/14	12.75	V	6.9	0.44	19.21	34.77
825.5	3	QPSK	1/14	11.29	H	6.8	0.44	17.65	34.77
836.5	3	QPSK	1/0	11.31	H	6.8	0.44	17.67	34.77
847.5	3	QPSK	1/14	11.24	H	6.9	0.44	17.70	34.77
825.5	3	16-QAM	1/14	12.14	V	6.8	0.44	18.50	34.77
836.5	3	16-QAM	1/0	12.31	V	6.8	0.44	18.67	34.77
847.5	3	16-QAM	1/14	12.06	V	6.9	0.44	18.52	34.77
825.5	3	16-QAM	1/14	10.64	H	6.8	0.44	17.00	34.77
836.5	3	16-QAM	1/0	10.58	H	6.8	0.44	16.94	34.77
847.5	3	16-QAM	1/14	10.55	H	6.9	0.44	17.01	34.77
826.5	5	QPSK	1/24	12.93	V	6.8	0.44	19.29	34.77
836.5	5	QPSK	1/24	12.88	V	6.8	0.44	19.24	34.77
846.5	5	QPSK	1/24	12.76	V	6.8	0.44	19.12	34.77
826.5	5	QPSK	1/24	11.45	H	6.8	0.44	17.81	34.77
836.5	5	QPSK	1/24	11.38	H	6.8	0.44	17.74	34.77
846.5	5	QPSK	1/24	11.26	H	6.8	0.44	17.62	34.77
826.5	5	16-QAM	1/24	12.21	V	6.8	0.44	18.57	34.77
836.5	5	16-QAM	1/24	12.16	V	6.8	0.44	18.52	34.77
846.5	5	16-QAM	1/24	12.08	V	6.8	0.44	18.44	34.77

826.5	5	16-QAM	1/24	10.51	H	6.8	0.44	16.87	34.77
836.5	5	16-QAM	1/24	10.48	H	6.8	0.44	16.84	34.77
846.5	5	16-QAM	1/24	10.33	H	6.8	0.44	16.69	34.77
829	10	QPSK	1/49	13.15	V	6.8	0.44	19.51	34.77
836.5	10	QPSK	1/49	13.22	V	6.8	0.44	**19.58**	34.77
844	10	QPSK	1/49	12.89	V	6.8	0.44	19.25	34.77
829	10	QPSK	1/49	11.54	H	6.8	0.44	17.90	34.77
836.5	10	QPSK	1/49	11.48	H	6.8	0.44	17.84	34.77
844	10	QPSK	1/49	11.31	H	6.8	0.44	17.67	34.77
829	10	16-QAM	1/49	12.37	V	6.8	0.44	18.73	34.77
836.5	10	16-QAM	1/49	12.42	V	6.8	0.44	18.78	34.77
844	10	16-QAM	1/49	12.38	V	6.8	0.44	18.74	34.77
829	10	16-QAM	1/49	10.81	H	6.8	0.44	17.17	34.77
836.5	10	16-QAM	1/49	10.76	H	6.8	0.44	17.12	34.77
844	10	16-QAM	1/49	10.83	H	6.8	0.44	17.19	34.77

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	13.35	V	6.9	0.42	19.83	34.77
707.5	1.4	QPSK	1/5	13.41	V	6.8	0.42	19.79	34.77
715.3	1.4	QPSK	1/5	13.49	V	6.8	0.42	**19.87**	34.77
699.7	1.4	QPSK	1/5	11.72	H	6.9	0.42	18.20	34.77
707.5	1.4	QPSK	1/5	11.68	H	6.8	0.42	18.06	34.77
715.3	1.4	QPSK	1/5	11.63	H	6.8	0.42	18.01	34.77
699.7	1.4	16-QAM	1/5	12.18	V	6.9	0.42	18.66	34.77
707.5	1.4	16-QAM	1/5	12.23	V	6.8	0.42	18.61	34.77
715.3	1.4	16-QAM	1/5	11.16	V	6.8	0.42	17.54	34.77
699.7	1.4	16-QAM	1/5	10.71	H	6.9	0.42	17.19	34.77
707.5	1.4	16-QAM	1/5	10.65	H	6.8	0.42	17.03	34.77
715.3	1.4	16-QAM	1/5	10.73	H	6.8	0.42	17.11	34.77
700.5	3	QPSK	1/14	13.25	V	6.9	0.42	19.73	34.77
707.5	3	QPSK	1/0	13.29	V	6.8	0.42	19.67	34.77
714.5	3	QPSK	1/14	13.33	V	6.8	0.42	19.71	34.77
700.5	3	QPSK	1/14	11.81	H	6.9	0.42	18.29	34.77
707.5	3	QPSK	1/0	11.76	H	6.8	0.42	18.14	34.77
714.5	3	QPSK	1/14	11.72	H	6.8	0.42	18.10	34.77
700.5	3	16-QAM	1/14	12.19	V	6.9	0.42	18.67	34.77
707.5	3	16-QAM	1/0	12.21	V	6.8	0.42	18.59	34.77
714.5	3	16-QAM	1/14	12.13	V	6.8	0.42	18.51	34.77
700.5	3	16-QAM	1/14	10.57	H	6.9	0.42	17.05	34.77
707.5	3	16-QAM	1/0	10.49	H	6.8	0.42	16.87	34.77
714.5	3	16-QAM	1/14	10.53	H	6.8	0.42	16.91	34.77
701.5	5	QPSK	1/24	11.86	V	6.9	0.42	18.34	34.77
707.5	5	QPSK	1/24	11.92	V	6.8	0.42	18.30	34.77
713.5	5	QPSK	1/24	11.85	V	6.8	0.42	18.23	34.77
701.5	5	QPSK	1/24	10.38	H	6.9	0.42	16.86	34.77
707.5	5	QPSK	1/24	10.42	H	6.8	0.42	16.80	34.77
713.5	5	QPSK	1/24	10.31	H	6.8	0.42	16.69	34.77
701.5	5	16-QAM	1/24	11.23	V	6.9	0.42	17.71	34.77
707.5	5	16-QAM	1/24	11.18	V	6.8	0.42	17.56	34.77
713.5	5	16-QAM	1/24	11.26	V	6.8	0.42	17.64	34.77

701.5	5	16-QAM	1/24	9.81	H	6.9	0.42	16.29	34.77
707.5	5	16-QAM	1/24	9.76	H	6.8	0.42	16.14	34.77
713.5	5	16-QAM	1/24	9.73	H	6.8	0.42	16.11	34.77
704	10	QPSK	1/49	11.95	V	6.8	0.42	18.33	34.77
707.5	10	QPSK	1/49	12.19	V	6.8	0.42	18.57	34.77
711	10	QPSK	1/49	11.92	V	6.8	0.42	18.30	34.77
704	10	QPSK	1/49	10.24	H	6.8	0.42	16.62	34.77
707.5	10	QPSK	1/49	10.37	H	6.8	0.42	16.75	34.77
711	10	QPSK	1/49	10.26	H	6.8	0.42	16.64	34.77
704	10	16-QAM	1/49	11.37	V	6.8	0.42	17.75	34.77
707.5	10	16-QAM	1/49	11.32	V	6.8	0.42	17.70	34.77
711	10	16-QAM	1/49	11.28	V	6.8	0.42	17.66	34.77
704	10	16-QAM	1/49	9.81	H	6.8	0.42	16.19	34.77
707.5	10	16-QAM	1/49	9.76	H	6.8	0.42	16.14	34.77
711	10	16-QAM	1/49	9.83	H	6.8	0.42	16.21	34.77

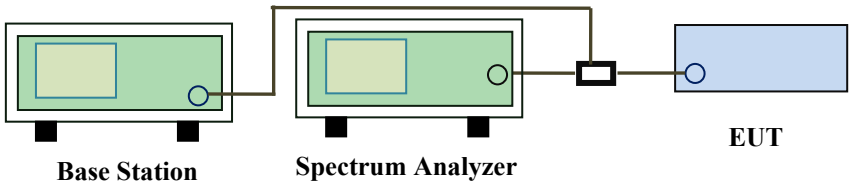
ERP for LTE Band 17 (Part 27)

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	13.81	V	6.8	0.42	**20.19**	34.77
710	5	QPSK	1/0	13.75	V	6.8	0.42	20.13	34.77
713.5	5	QPSK	1/0	13.68	V	6.8	0.42	20.06	34.77
706.5	5	QPSK	1/0	12.41	H	6.8	0.42	18.79	34.77
710	5	QPSK	1/0	12.37	H	6.8	0.42	18.75	34.77
713.5	5	QPSK	1/0	12.32	H	6.8	0.42	18.70	34.77
706.5	5	16-QAM	1/0	13.15	V	6.8	0.42	19.53	34.77
710	5	16-QAM	1/0	13.07	V	6.8	0.42	19.45	34.77
713.5	5	16-QAM	1/0	13.11	V	6.8	0.42	19.49	34.77
706.5	5	16-QAM	1/0	11.76	H	6.8	0.42	18.14	34.77
710	5	16-QAM	1/0	11.71	H	6.8	0.42	18.09	34.77
713.5	5	16-QAM	1/0	11.69	H	6.8	0.42	18.07	34.77
709	10	QPSK	1/0	13.72	V	6.8	0.42	20.10	34.77
710	10	QPSK	1/0	13.68	V	6.8	0.42	20.06	34.77
711	10	QPSK	1/0	13.75	V	6.8	0.42	20.13	34.77
709	10	QPSK	1/0	12.13	H	6.8	0.42	18.51	34.77
710	10	QPSK	1/0	12.08	H	6.8	0.42	18.46	34.77
711	10	QPSK	1/0	12.04	H	6.8	0.42	18.42	34.77
709	10	16-QAM	1/0	12.51	V	6.8	0.42	18.89	34.77
710	10	16-QAM	1/0	12.49	V	6.8	0.42	18.87	34.77
711	10	16-QAM	1/0	12.56	V	6.8	0.42	18.94	34.77
709	10	16-QAM	1/0	11.27	H	6.8	0.42	17.65	34.77
710	10	16-QAM	1/0	11.23	H	6.8	0.42	17.61	34.77
711	10	16-QAM	1/0	11.18	H	6.8	0.42	17.56	34.77

6.3 Peak-Average Ratio

Temperature	23℃
Relative Humidity	56%
Atmospheric Pressure	1014mbar
Test date :	December 14, 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.	☑
Test Setup			
Test Procedure	According with KDB 971168 v02r02 1. The signal analyzer' s CCDF measurement profile is enabled 2. Frequency = carrier center frequency 3. Measurement BW > Emission bandwidth of signal 4. The signal analyzer was set to collect one million samples to generate the CCDF curve 5. The measurement interval was set depending on the type of signal analyzed. For continuous signals (>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		
Remark			
Result	☑ Pass ☐ 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	25.68	23.36	2.32
			16QAM	25.63	22.12	3.51
3	1880	RB 1/0	QPSK	25.62	23.34	2.28
			16QAM	25.67	22.09	3.58
5	1880	RB 1/0	QPSK	25.63	23.27	2.36
			16QAM	25.64	22.63	3.01
10	1880	RB 1/0	QPSK	25.83	23.25	2.58
			16QAM	25.56	22.78	2.78
15	1880	RB 1/0	QPSK	25.51	23.33	2.18
			16QAM	25.45	22.09	3.36
20	1880	RB 1/0	QPSK	25.53	23.34	2.19
			16QAM	25.51	22.2	3.31

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	25.53	23.45	2.08
			16QAM	25.48	22.21	3.27
3	1732.5	RB 1/0	QPSK	25.44	23.39	2.05
			16QAM	25.53	22.17	3.36
5	1732.5	RB 1/0	QPSK	25.54	23.39	2.15
			16QAM	25.61	22.72	2.89
10	1732.5	RB 1/0	QPSK	25.34	23.46	1.88
			16QAM	25.34	22.27	3.07
15	1732.5	RB 1/0	QPSK	25.25	23.47	1.78
			16QAM	25.32	22.24	3.08
20	1732.5	RB 1/0	QPSK	25.33	23.45	1.88
			16QAM	25.29	22.3	2.99

LTE Band 5 (part 27)

BW(MHz)	Frequency (MHz)	Mode	Modulation	Conducted Power (dBm)		Peak-Average Ratio (PAR)
				Peak	Average	
1.4	836.5	RB 1/0	QPSK	25.36	23.07	2.29
			16QAM	25.34	22.09	3.25
3	836.5	RB 1/0	QPSK	25.38	23.07	2.31
			16QAM	25.42	22.05	3.37
5	836.5	RB 1/0	QPSK	25.24	23.13	2.11
			16QAM	25.19	22.57	2.62
10	836.5	RB 1/0	QPSK	25.29	22.97	2.32
			16QAM	25.38	22.6	2.78

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	25.33	23.46	1.87
			16QAM	25.47	22.36	3.11
3	1732.5	RB 1/0	QPSK	25.34	23.4	1.94
			16QAM	25.43	22.32	3.11
5	1732.5	RB 1/0	QPSK	25.46	23.4	2.06
			16QAM	25.48	22.92	2.56
10	1732.5	RB 1/0	QPSK	25.44	23.53	1.91
			16QAM	25.43	22.46	2.97

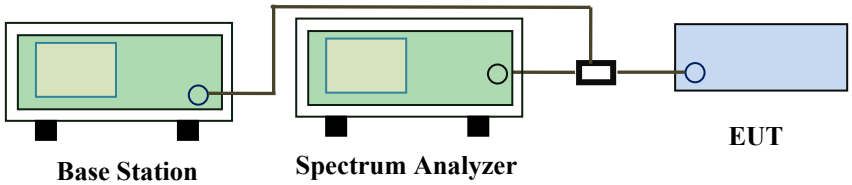
LTE Band 17 (part 27)

BW(MHz)	Frequency (MHz)	Mode	Modulation	Conducted Power (dBm)		Peak-Average Ratio (PAR)
				Peak	Average	
5	710	RB 1/0	QPSK	25.33	23.45	1.88
			16QAM	25.39	22.47	2.92
10	710	RB 1/0	QPSK	25.31	23.32	1.99
			16QAM	25.34	22.94	2.40

6.4 Occupied Bandwidth

Temperature	24℃
Relative Humidity	53%
Atmospheric Pressure	1011mbar
Test date :	December 11, 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)	☑
	b)	26 dB Bandwidth(kHz)	☑
Test Setup			
Test Procedure	- The EUT was connected to Spectrum Analyzer and Base Station via power divider. - The 99% and 26 dB occupied bandwidth (BW) of the middle channel for the highest RF powers.		
Remark			
Result	☑ Pass ☐ 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	1.1946	2.494
			QPSK	1.1754	2.509
1.4	18900	1880	16QAM	1.1367	1.963
			QPSK	1.1358	1.565
1.4	19193	1909.3	16QAM	1.1371	1.413
			QPSK	1.1393	1.655
3.0463	18615	1851.5	16QAM	2.8316	5.686
			QPSK	2.8379	5.995
3	18900	1880	16QAM	2.8040	4.536
			QPSK	2.8015	4.417
3	19185	1908.5	16QAM	2.7961	4.173
			QPSK	2.7995	4.791
5	18625	1852.5	16QAM	4.6163	7.455
			QPSK	4.6122	7.472
5	18900	1880	16QAM	4.5812	6.977
			QPSK	4.5877	6.638
5	19175	1907.5	16QAM	4.5822	7.198
			QPSK	4.5845	7.216
10	18650	1855	16QAM	9.2228	10.52
			QPSK	9.2351	10.50
10	18900	1880	16QAM	9.2201	10.32
			QPSK	9.2105	10.39
10	19150	1905	16QAM	9.1888	10.28
			QPSK	9.1987	10.42
15	18675	1857.5	16QAM	13.658	15.17
			QPSK	13.622	15.20
15	18900	1880	16QAM	13.685	15.18
			QPSK	13.674	15.24
15	19125	1902.5	16QAM	13.595	15.13
			QPSK	13.624	15.05

20	18700	1860	16QAM	18.030	19.63
			QPSK	18.031	19.55
20	18900	1880	16QAM	18.114	19.85
			QPSK	18.108	19.89
20	19100	1900	16QAM	18.038	19.70
			QPSK	18.017	19.54

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	1.1854	2.455
			QPSK	1.1841	2.486
1.4	20175	1732.5	16QAM	1.1766	2.331
			QPSK	1.1646	2.368
1.4	20393	1754.3	16QAM	1.1472	1.544
			QPSK	1.1509	1.727
3	19965	1711.5	16QAM	2.9298	5.398
			QPSK	2.8545	5.318
3	20175	1732.5	16QAM	2.8331	5.793
			QPSK	2.8586	5.857
3	20385	1753.5	16QAM	2.8092	4.785
			QPSK	2.8115	4.769
5	19975	1712.5	16QAM	4.6058	7.473
			QPSK	4.6138	7.472
5	20175	1732.5	16QAM	4.6116	7.137
			QPSK	4.6148	7.086
5	20375	1752.5	16QAM	4.5963	7.265
			QPSK	4.6059	7.289
10	20000	1715	16QAM	9.2486	11.05
			QPSK	9.2204	11.18
10	20175	1732.5	16QAM	9.2717	14.22
			QPSK	9.2017	14.07
10	20350	1750	16QAM	9.2187	10.45
			QPSK	9.2159	10.43

15	20025	1717.5	16QAM	13.664	15.18
			QPSK	13.661	15.17
15	20175	1732.5	16QAM	13.647	15.52
			QPSK	13.620	15.73
15	20325	1747.5	16QAM	13.651	15.10
			QPSK	13.668	15.23
20	20050	1720	16QAM	18.053	19.69
			QPSK	18.043	19.69
20	20175	1732.5	16QAM	18.027	19.75
			QPSK	18.024	19.66
20	20300	1745	16QAM	18.060	19.77
			QPSK	18.089	19.61

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	1.1761	2.497
			QPSK	1.1692	2.265
1.4	20525	936.5	16QAM	1.3746	2.739
			QPSK	1.3517	2.749
1.4	20643	949.3	16QAM	1.1414	2.103
			QPSK	1.1427	2.089
3	20415	825.5	16QAM	2.8718	5.302
			QPSK	2.8960	5.363
3	20525	936.5	16QAM	2.8331	4.350
			QPSK	2.8286	4.340
3	20635	847.5	16QAM	2.8238	4.842
			QPSK	2.8256	4.818
5	20425	826.5	16QAM	4.6222	7.485
			QPSK	4.5990	7.472
5	20525	936.5	16QAM	4.7531	8.303
			QPSK	4.6972	8.071
5	20625	846.5	16QAM	4.6302	7.193
			QPSK	4.6360	7.407

10	20450	829	16QAM	9.2739	11.19
			QPSK	9.2561	11.10
10	20525	936.5	16QAM	9.2907	12.39
			QPSK	9.2836	12.48
10	20800	844	16QAM	9.3054	14.79
			QPSK	9.2966	14.94

LTE Band 12 (Part 27)

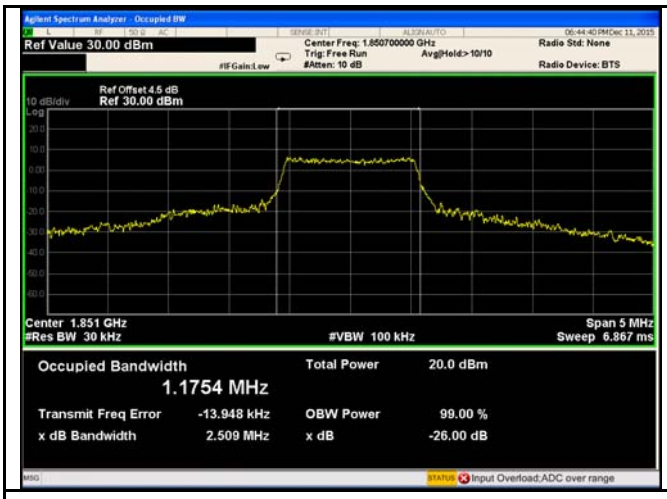
BW(MHz)	Channel	Frequency (MHz)	Modulation	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
1.4	23017	699.7	16QAM	1.5518	2.860
			QPSK	1.5184	2.866
1.4	23095	707.5	16QAM	1.5000	2.789
			QPSK	1.5169	2.834
1.4	23173	715.3	16QAM	1.6570	2.75
			QPSK	1.6376	2.723
3	23025	700.5	16QAM	3.6946	6.804
			QPSK	3.6898	6.785
3	23095	707.5	16QAM	3.7522	6.916
			QPSK	3.7438	6.837
3	23165	714.5	16QAM	3.9579	6.958
			QPSK	3.9126	6.974
5	23035	701.5	16QAM	5.0214	8.209
			QPSK	5.0554	8.290
5	23095	707.5	16QAM	5.0188	7.892
			QPSK	5.1162	8.322
5	23055	713.5	16QAM	5.3662	8.321
			QPSK	5.3587	8.318
10	23060	704	16QAM	9.0277	10.05
			QPSK	9.0267	10.04
10	23095	707.5	16QAM	9.1136	10.08
			QPSK	9.1320	10.07
10	23130	711	16QAM	9.0512	9.985
			QPSK	9.0477	9.909

LTE Band 17 (Part 27)

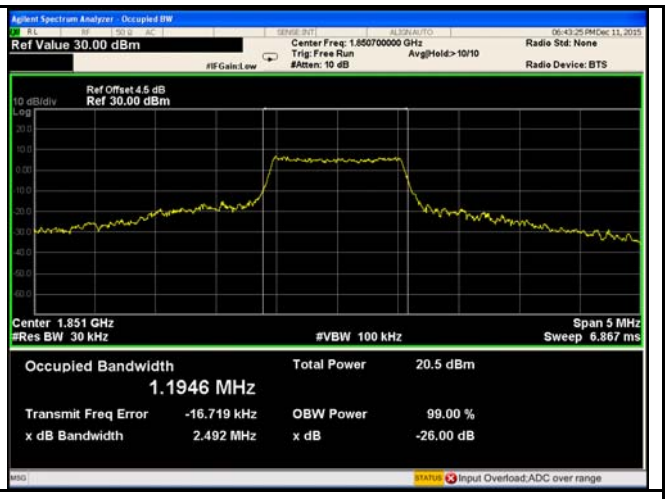
BW(MHz)	Channel	Frequency (MHz)	Modulation	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
5	23755	706.5	16QAM	5.1023	8.311
			QPSK	5.1648	8.282
5	23790	710	16QAM	4.9137	8.208
			QPSK	4.9695	8.853
5	23825	713.5	16QAM	5.0355	8.297
			QPSK	5.1007	8.286
10	23780	709	16QAM	9.3671	14.83
			QPSK	9.4016	14.92
10	23790	710	16QAM	9.2871	14.10
			QPSK	9.3002	13.74
10	23800	711	16QAM	9.2713	11.12
			QPSK	9.2677	13.97

Test Plots

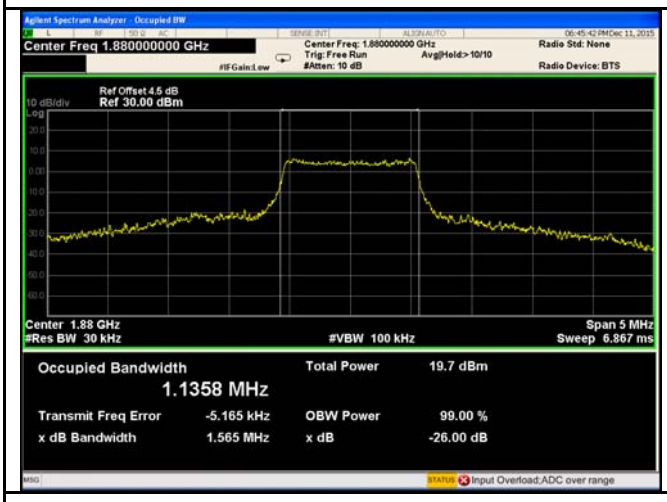
LTE Band 2 (Part 24E)



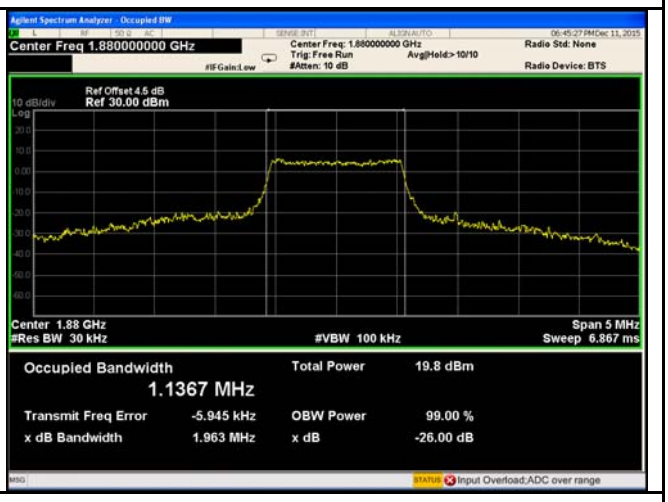
LTE band 2 - Low CH QPSK-1.4



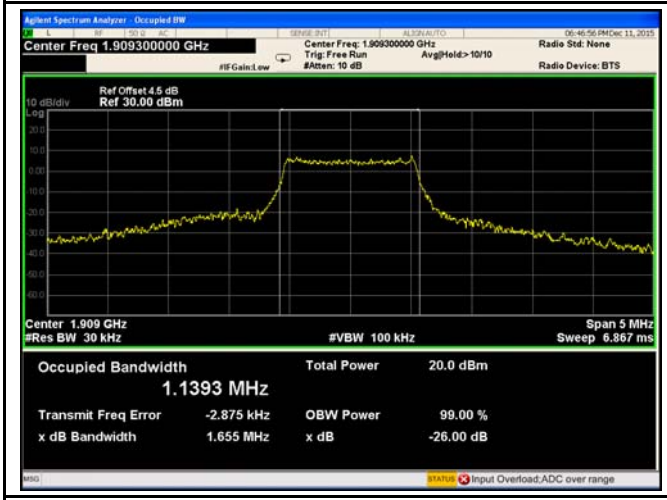
LTE band 2 - Low CH 16QAM-1.4



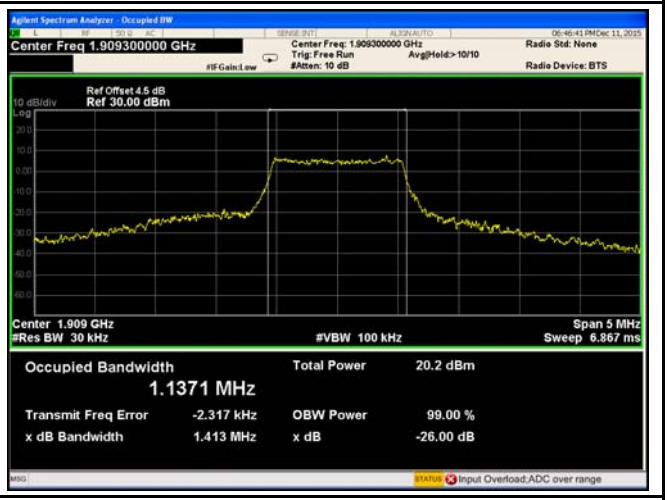
LTE band 2 - Middle CH QPSK-1.4



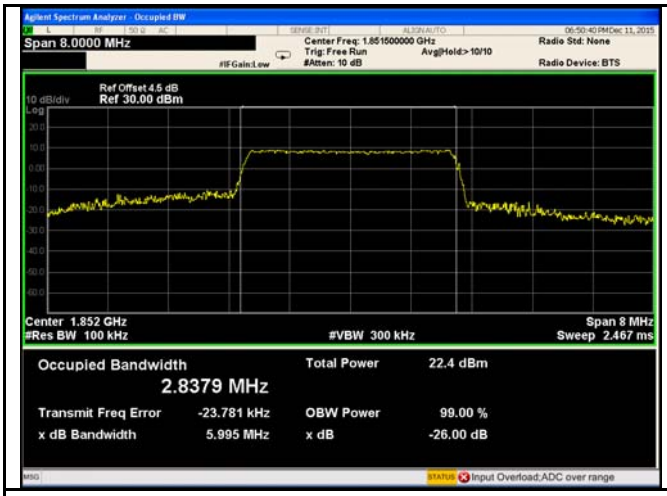
LTE band 2 - Middle CH 16QAM-1.4



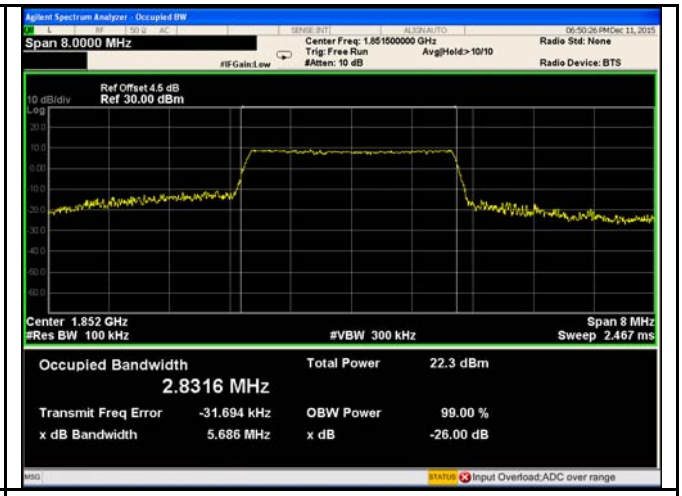
LTE band 2 - High CH QPSK-1.4



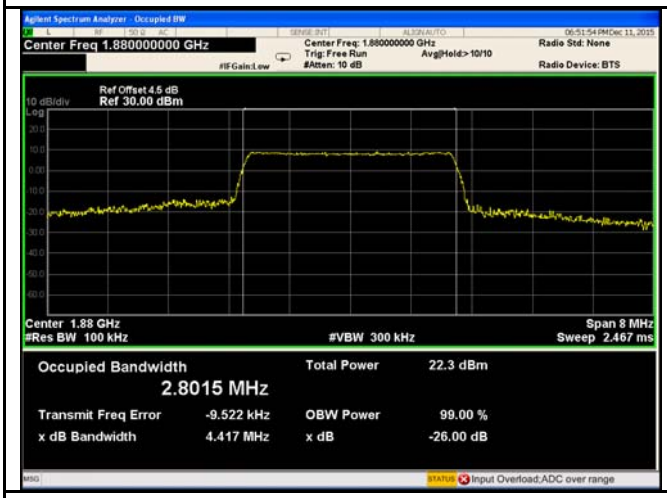
LTE band 2 - High CH 16QAM-1.4



LTE band 2 - Low CH QPSK-3



LTE band 2 - Low CH 16QAM-3

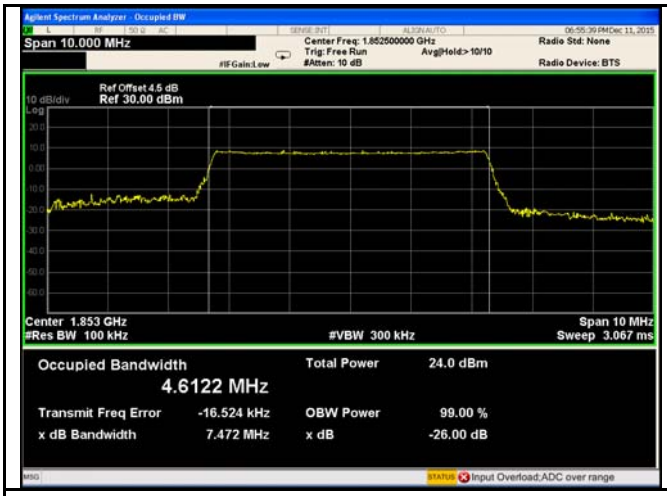


LTE band 2 - Middle CH QPSK-3

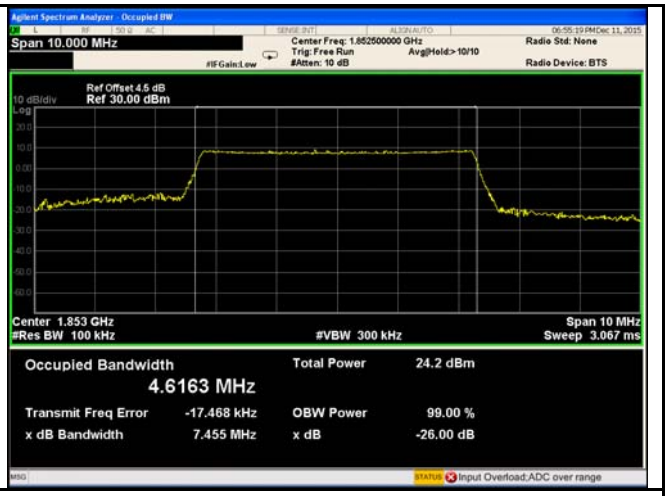
LTE band 2 - Middle CH 16QAM-3

LTE band 2 - High CH QPSK-3

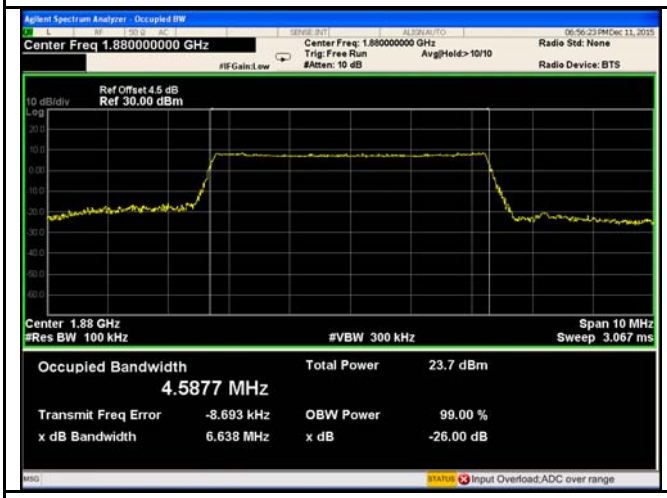
LTE band 2 - High CH 16QAM-3



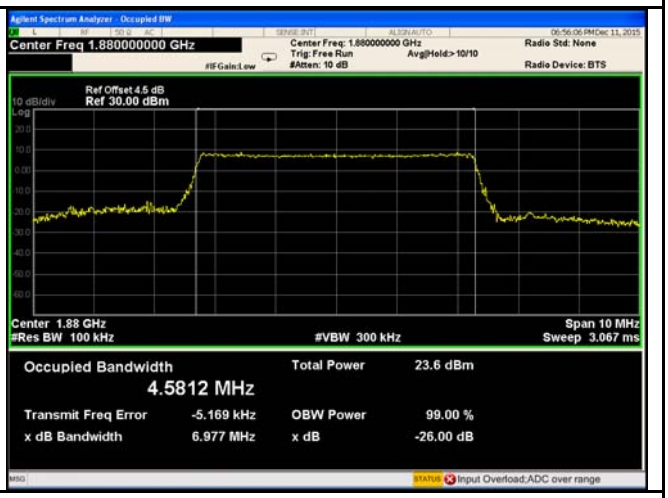
LTE band 2 - Low CH QPSK-5



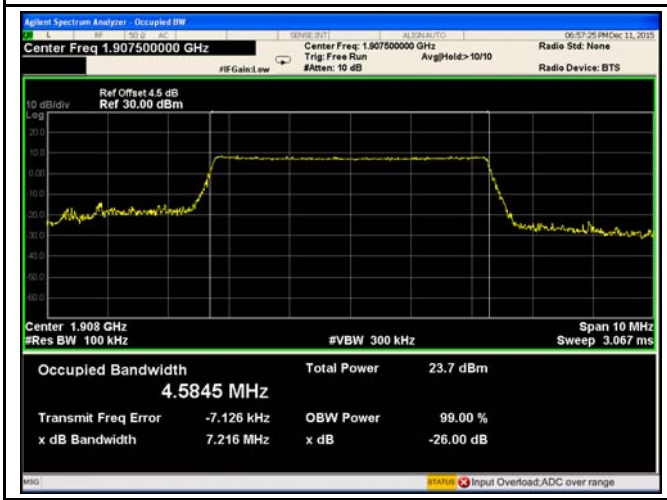
LTE band 2 - Low CH 16QAM-5



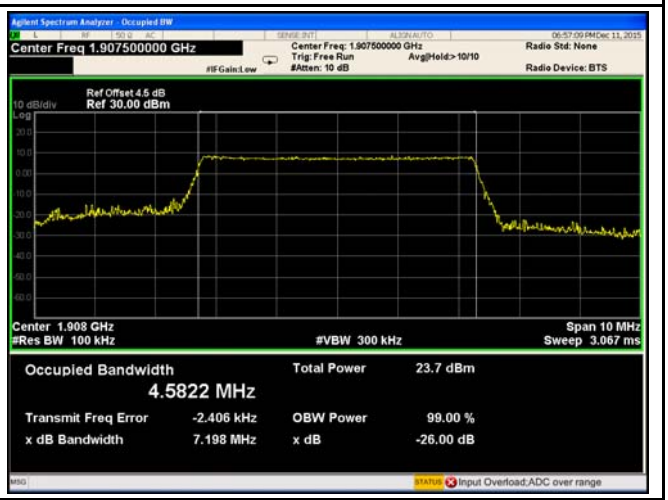
LTE band 2 - Middle CH QPSK-5



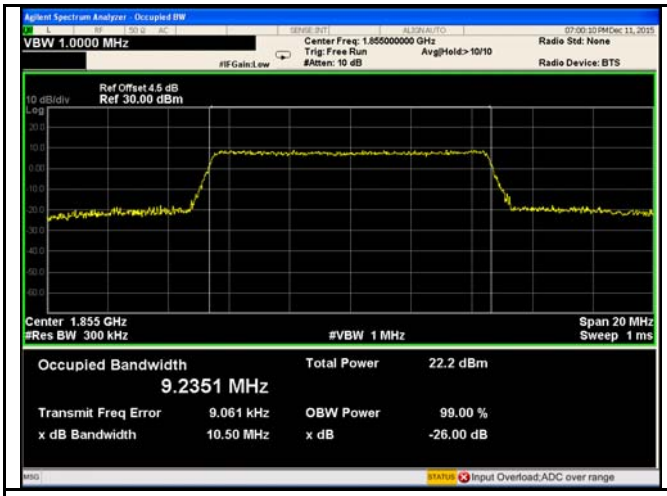
LTE band 2 - Middle CH 16QAM-5



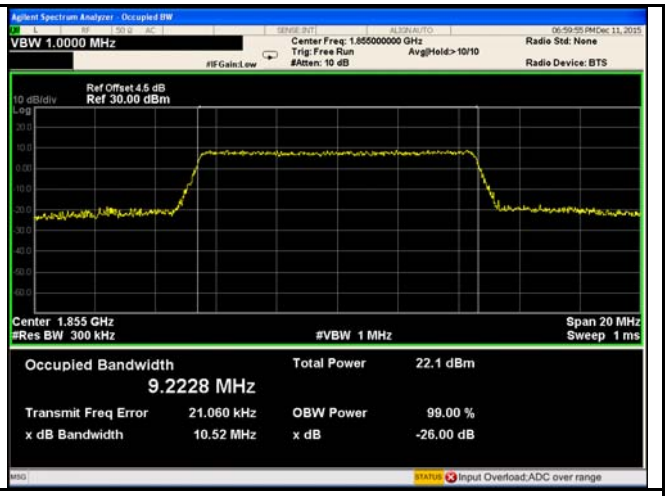
LTE band 2 - High CH QPSK-5



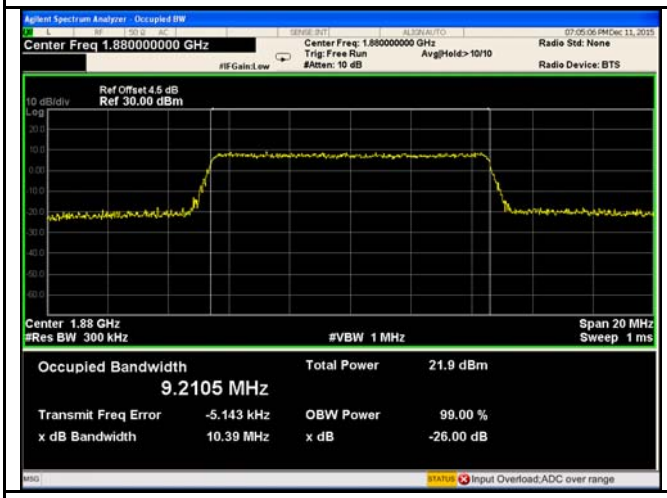
LTE band 2 - High CH 16QAM-5



LTE band 2 - Low CH QPSK-10

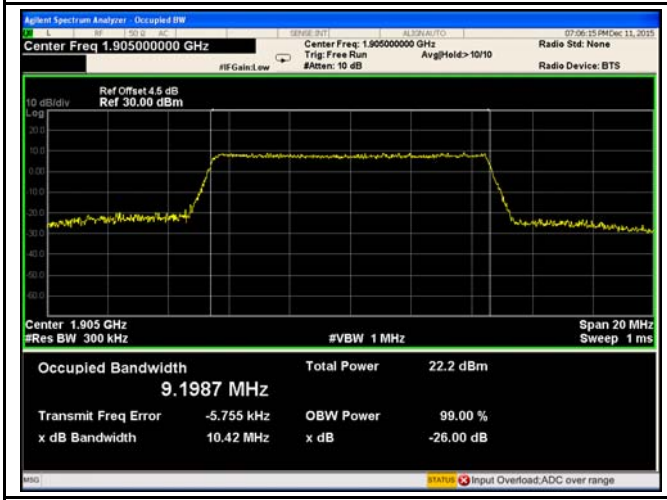


LTE band 2 - Low CH 16QAM-10

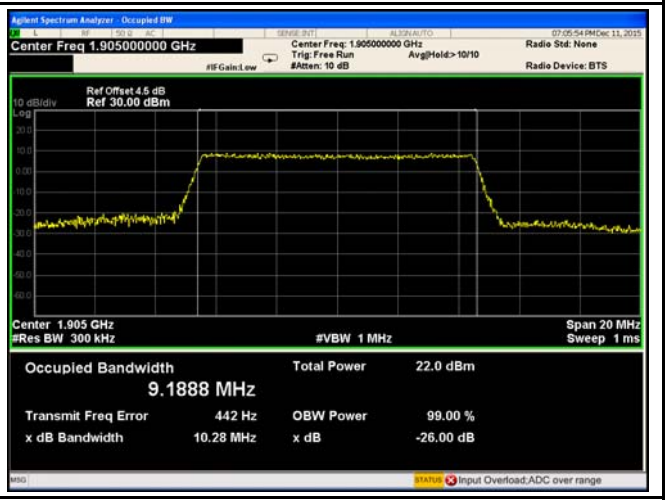


LTE band 2 - Middle CH QPSK-10

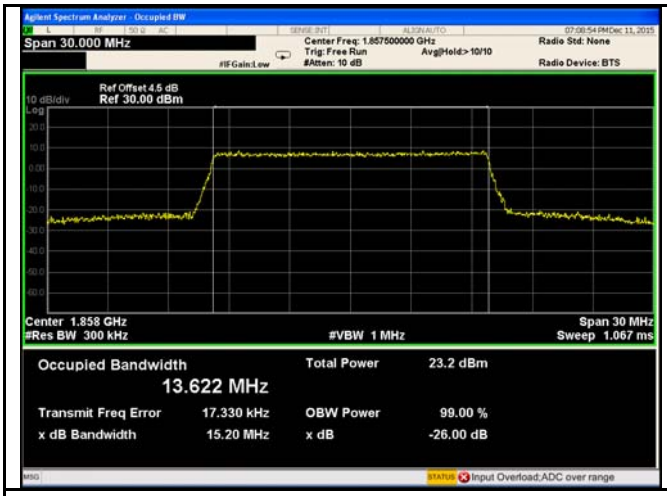
LTE band 2 - Middle CH 16QAM-10



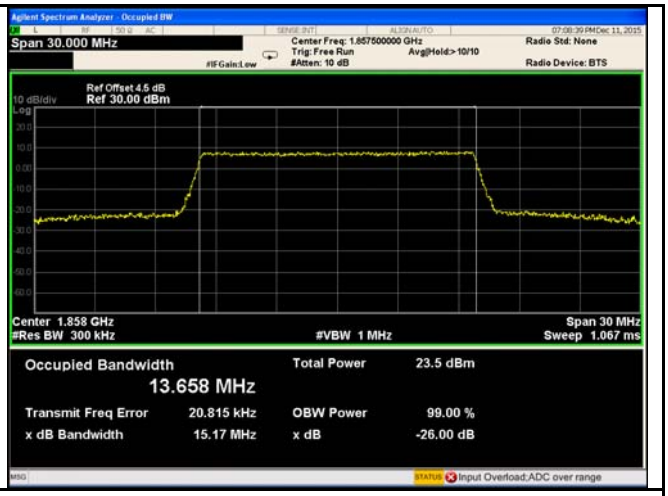
LTE band 2 - High CH QPSK-10



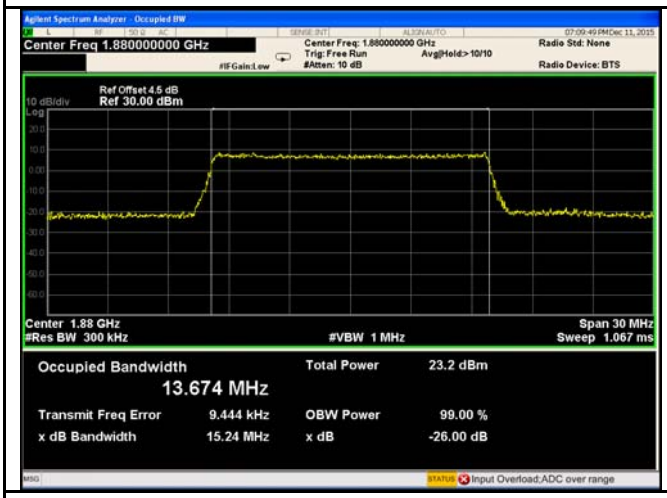
LTE band 2 - High CH 16QAM-10



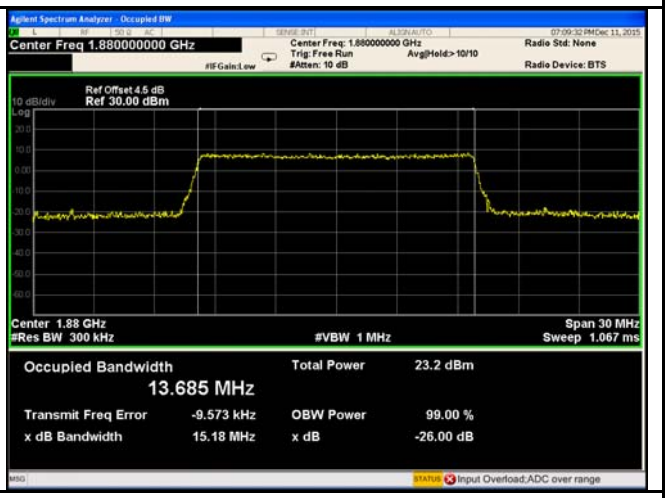
LTE band 2 - Low CH QPSK-15



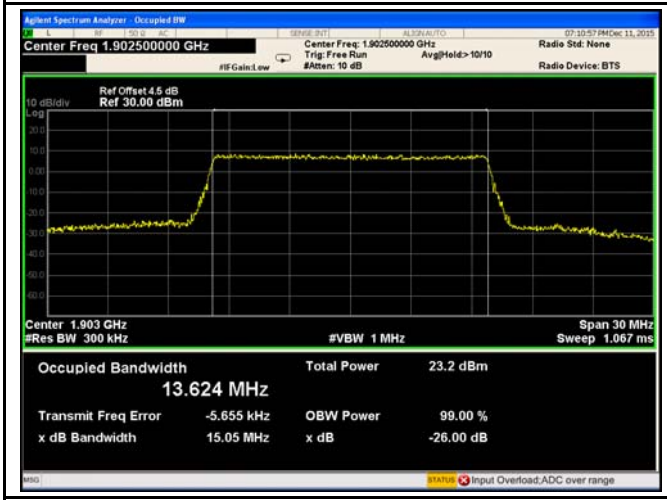
LTE band 2 - Low CH 16QAM-15



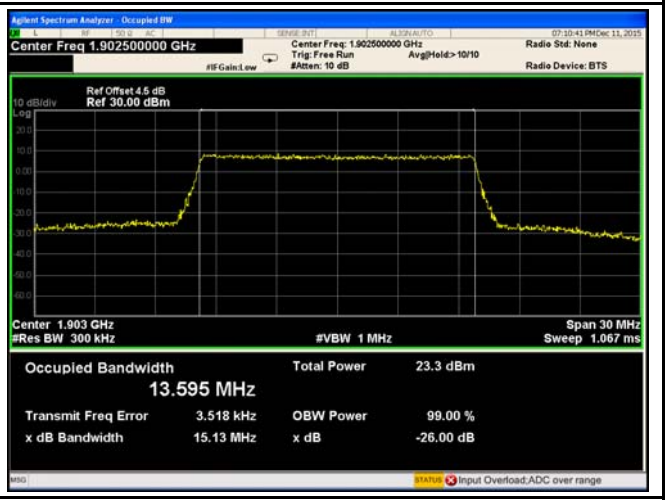
LTE band 2 - Middle CH QPSK-15



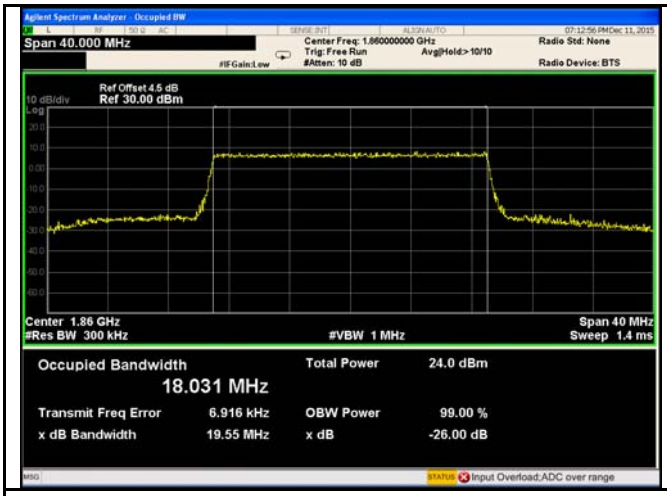
LTE band 2 - Middle CH 16QAM-15



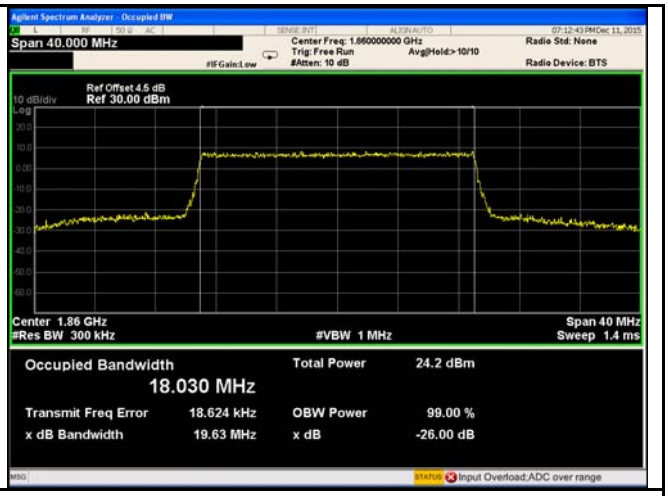
LTE band 2 - High CH QPSK-15



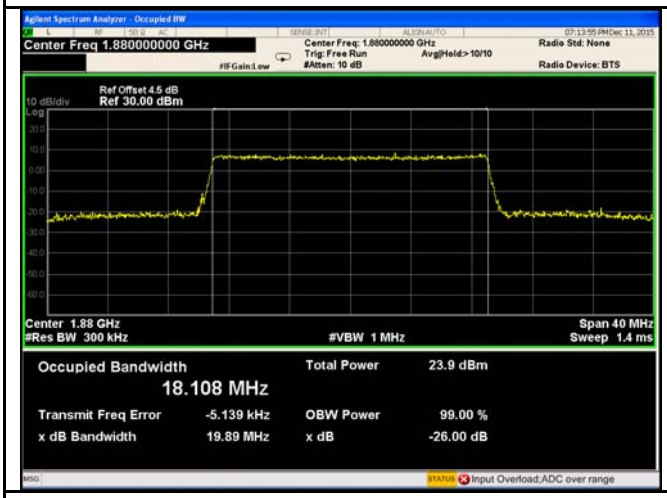
LTE band 2 - High CH 16QAM-15



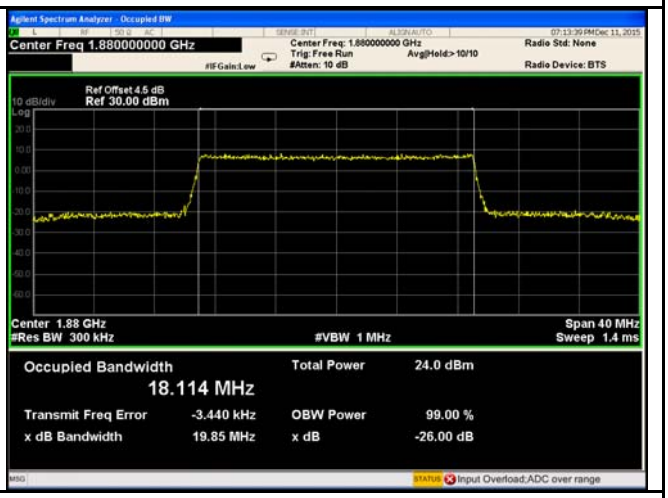
LTE band 2 - Low CH QPSK-20



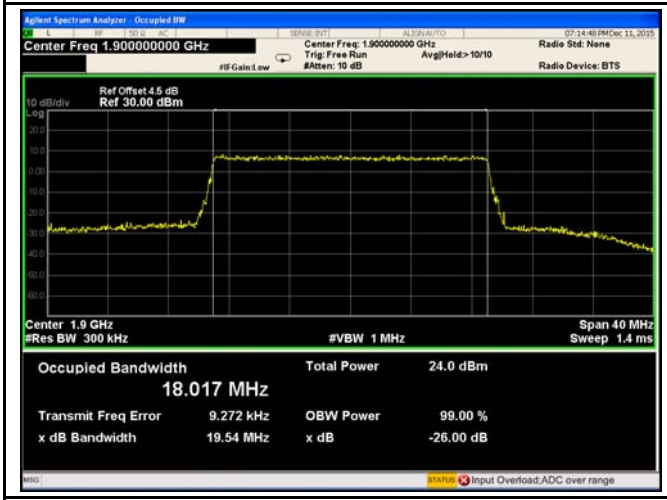
LTE band 2 - Low CH 16QAM-20



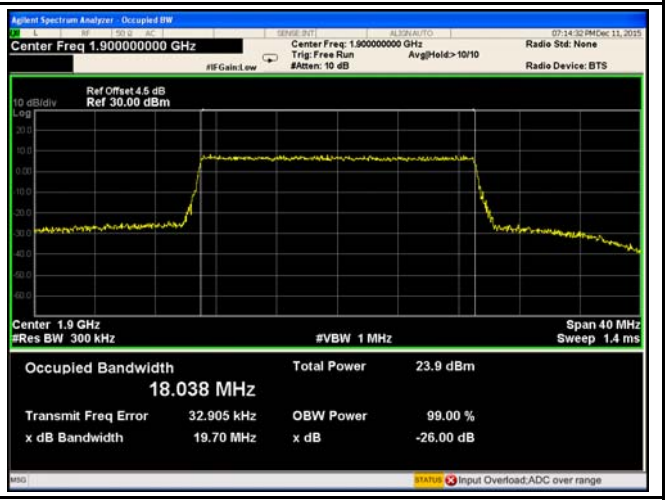
LTE band 2 - Middle CH QPSK-20



LTE band 2 - Middle CH 16QAM-20

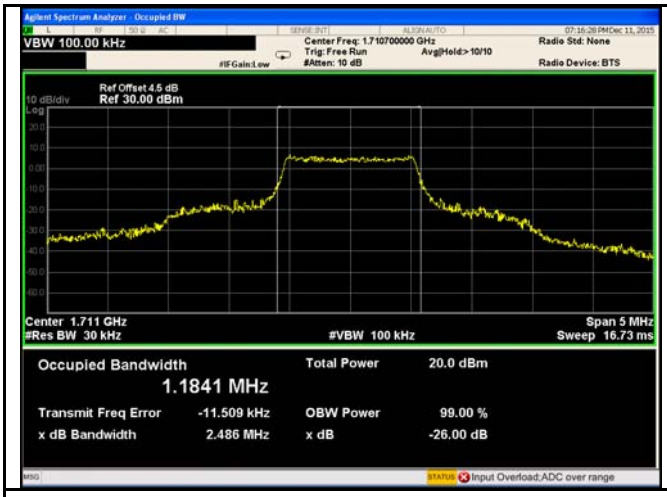


LTE band 2 - High CH QPSK-20



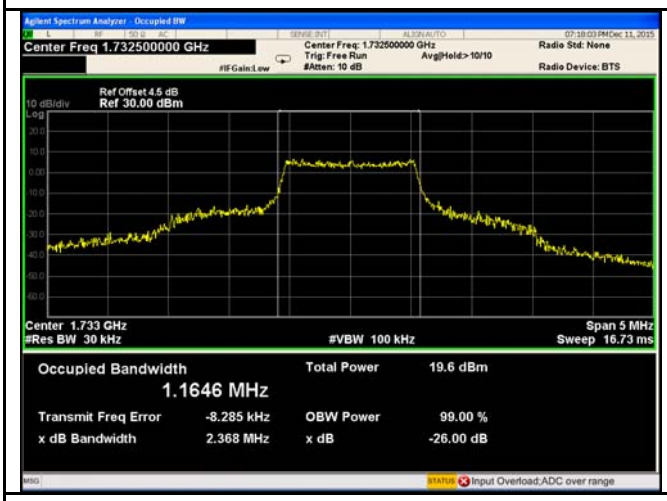
LTE band 2 - High CH 16QAM-20

LTE Band 4 (Part 27)



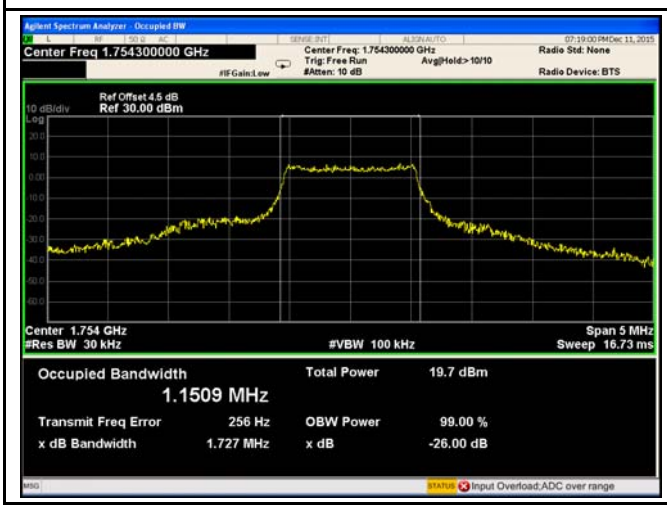
LTE band 4 - Low CH QPSK-1.4

LTE band 4 - Low CH 16QAM-1.4

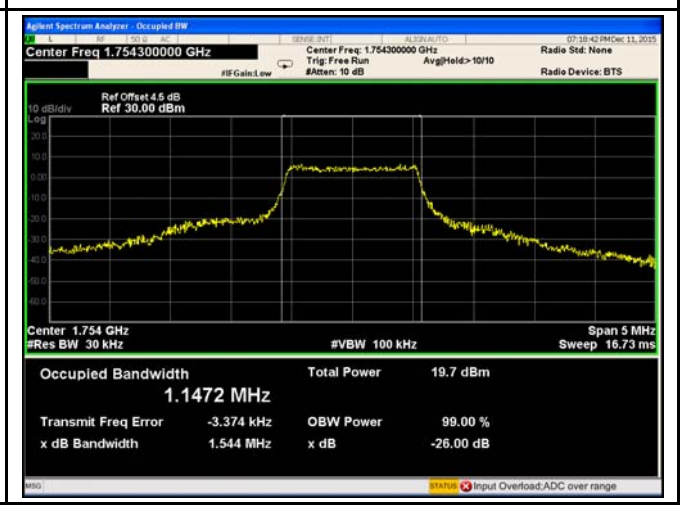


LTE band 4 - Middle CH QPSK-1.4

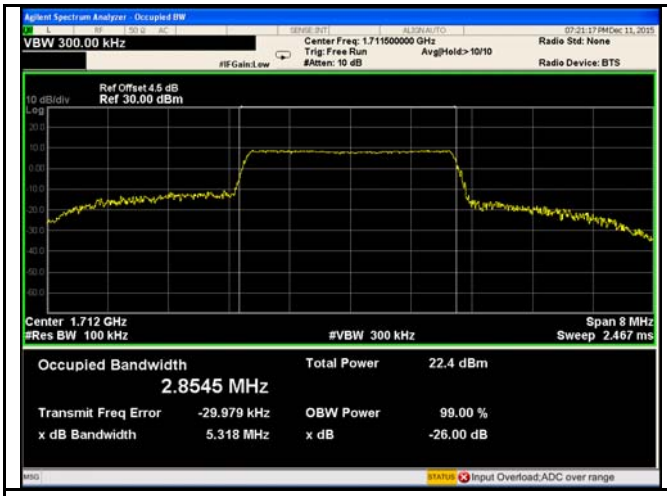
LTE band 4 - Middle CH 16QAM-1.4



LTE band 4 - High CH QPSK-1.4

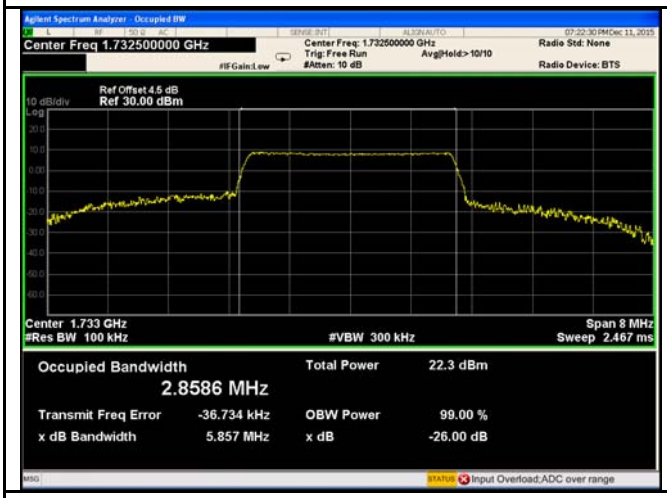


LTE band 4 - High CH 16QAM-1.4



LTE band 4 - Low CH QPSK-3

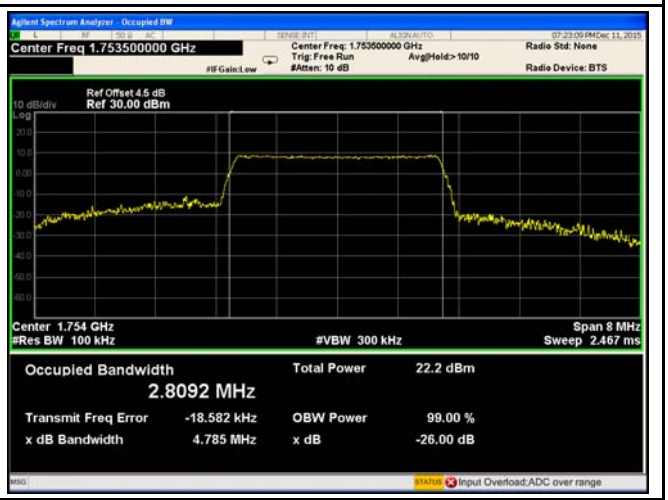
LTE band 4 - Low CH 16QAM-3



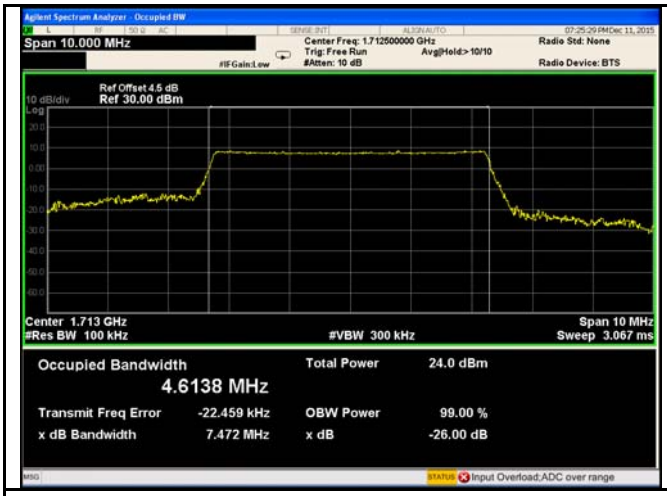
LTE band 4 - Middle CH QPSK-3

LTE band 4 - Middle CH 16QAM-3

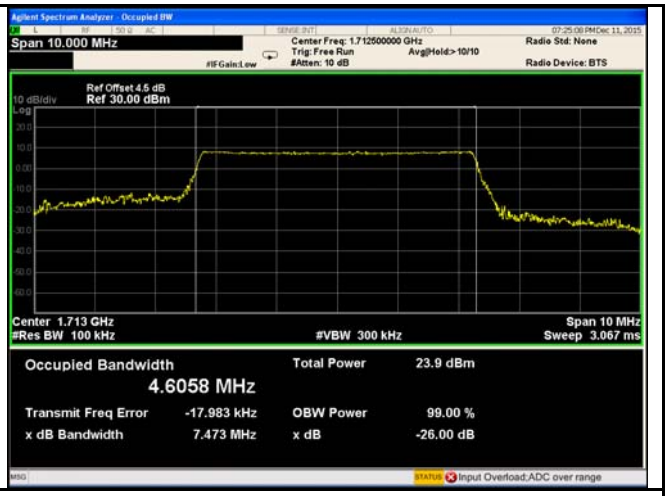
LTE band 4 - High CH QPSK-3



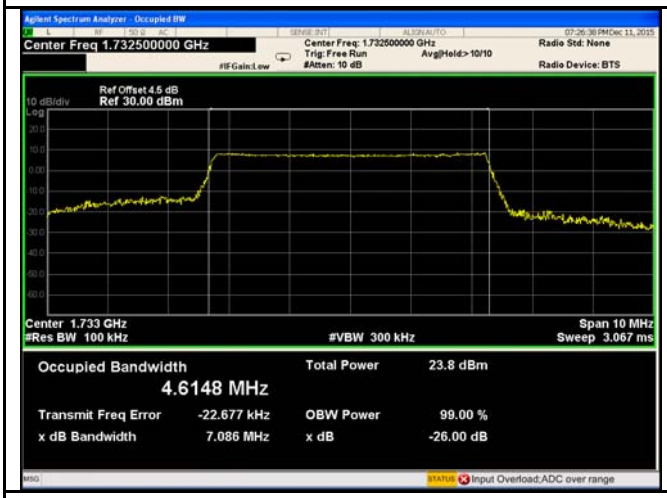
LTE band 4 - High CH 16QAM-3



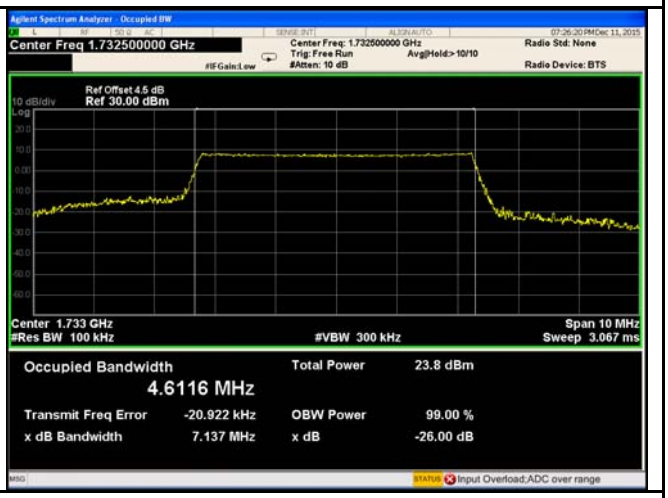
LTE band 4 - Low CH QPSK-5



LTE band 4 - Low CH 16QAM-5

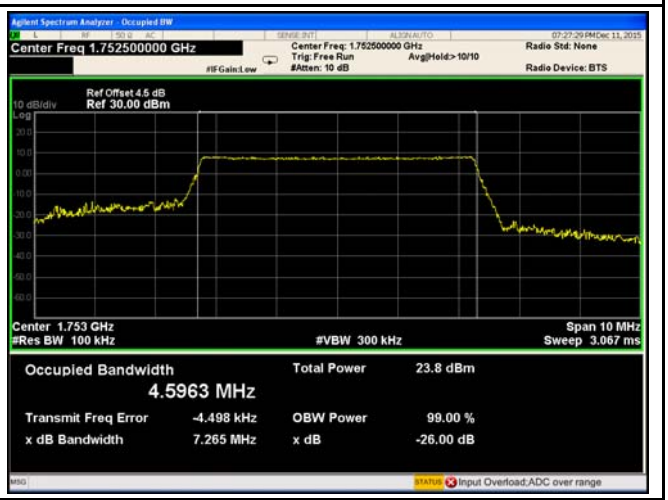


LTE band 4 - Middle CH QPSK-5

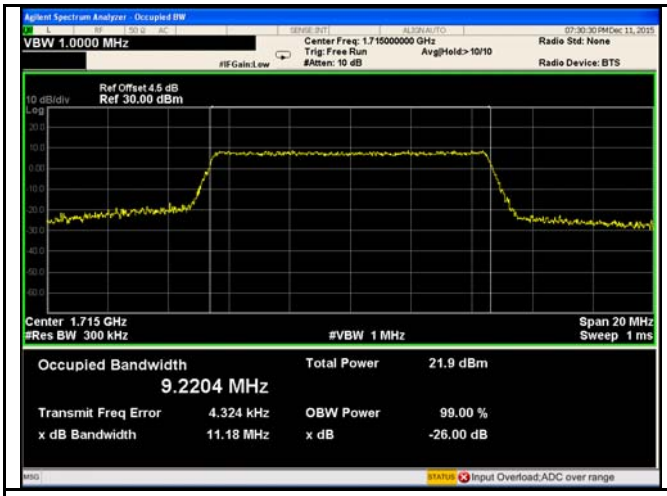


LTE band 4 - Middle CH 16QAM-5

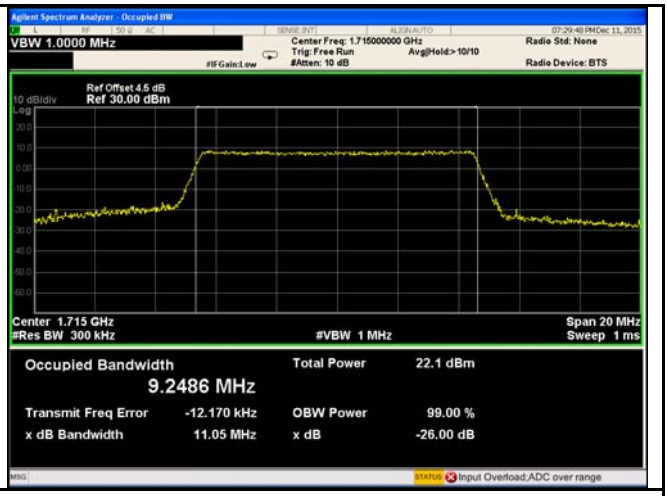
LTE band 4 - High CH QPSK-5



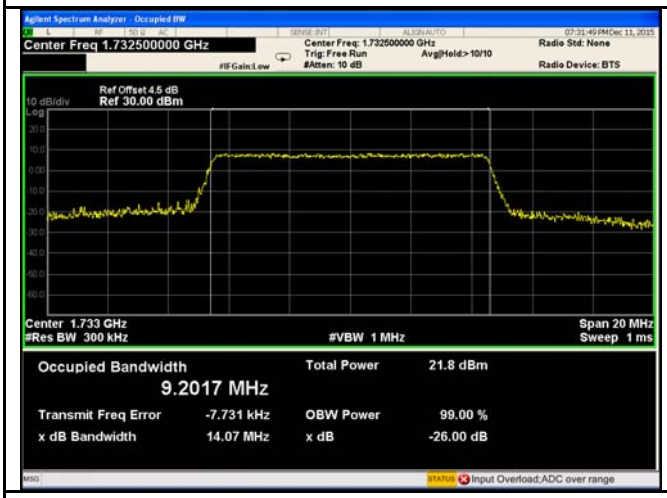
LTE band 4 - High CH 16QAM-5



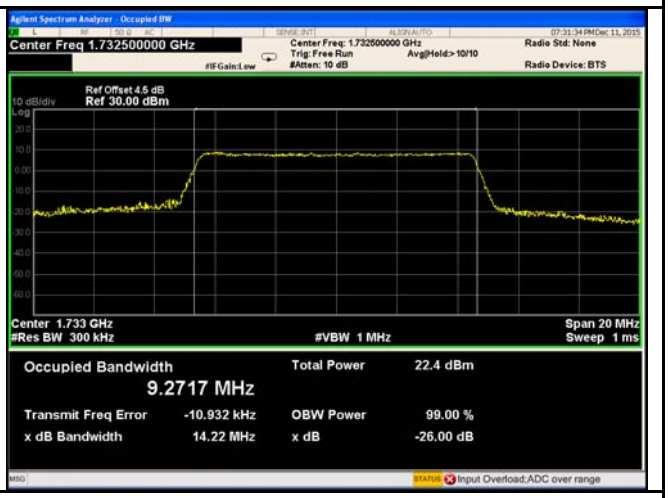
LTE band 4 - Low CH QPSK-10



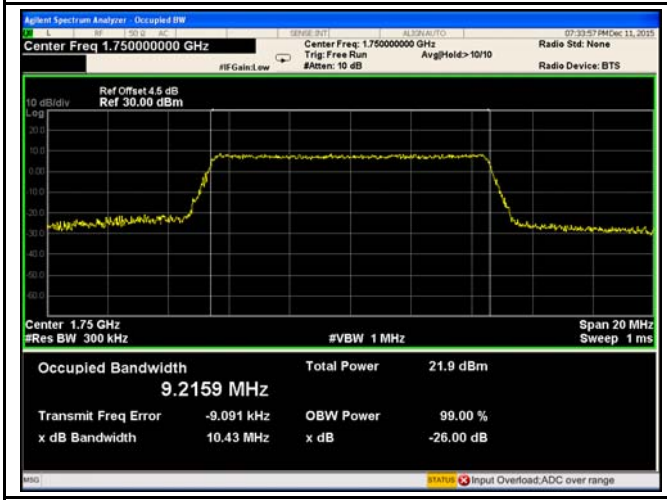
LTE band 4 - Low CH 16QAM-10



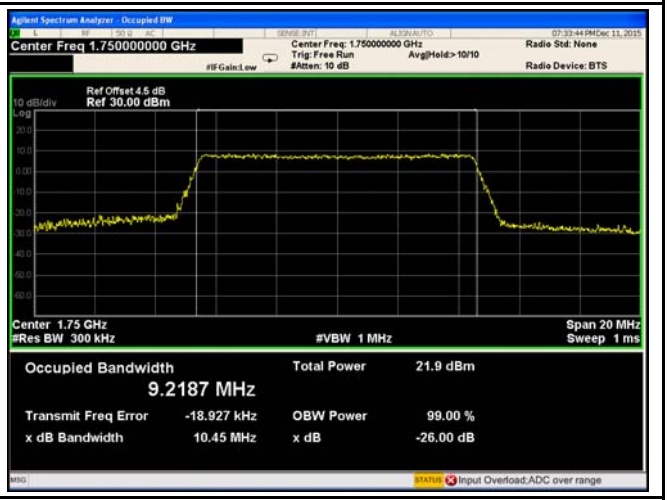
LTE band 4 - Middle CH QPSK-10



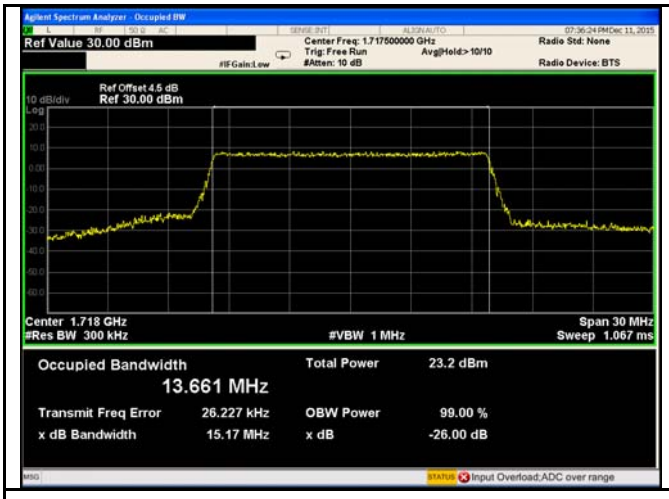
LTE band 4 - Middle CH 16QAM-10



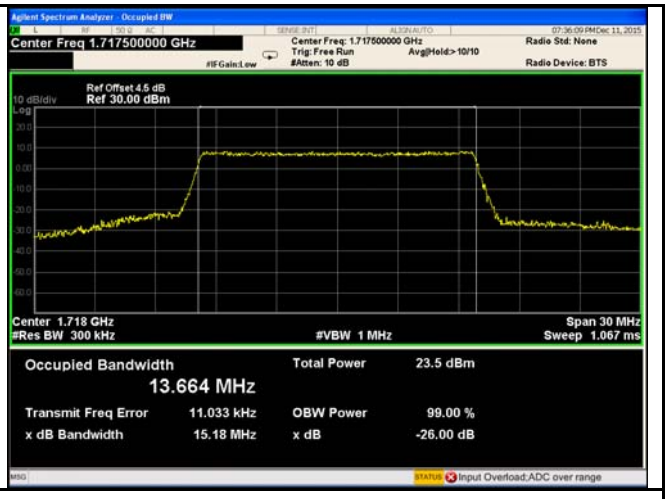
LTE band 4 - High CH QPSK-10



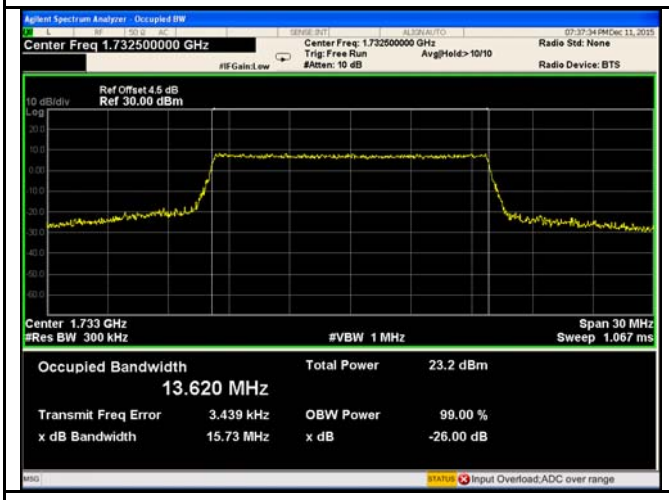
LTE band 4 - High CH 16QAM-10



LTE band 4 - Low CH QPSK-15

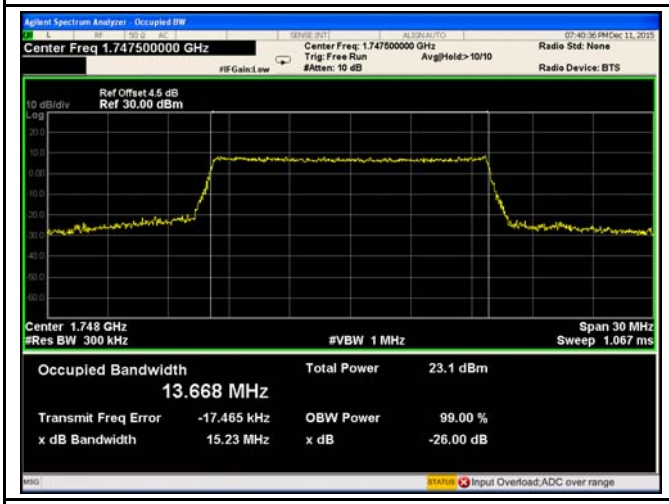


LTE band 4 - Low CH 16QAM-15

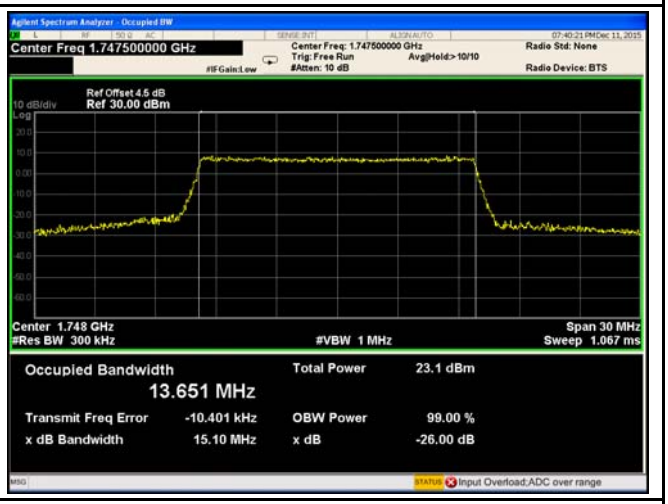


LTE band 4 - Middle CH QPSK-15

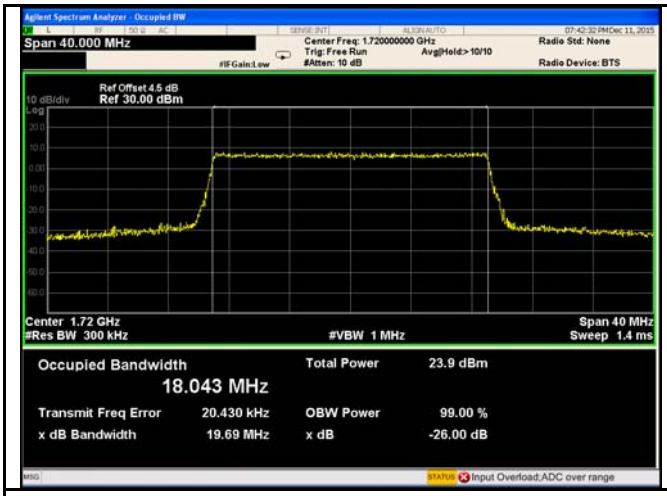
LTE band 4 - Middle CH 16QAM-15



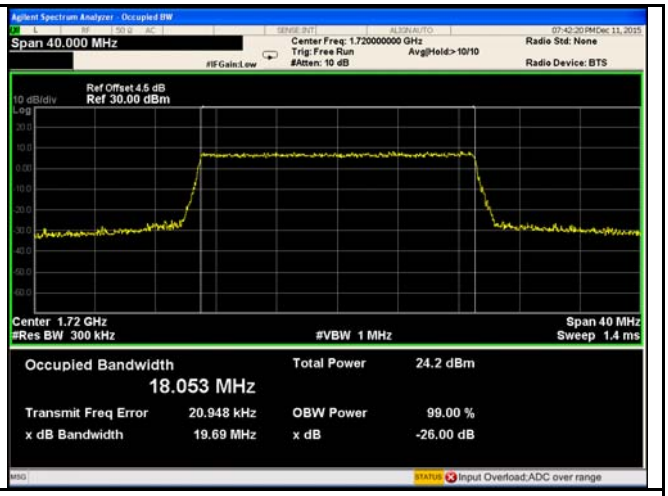
LTE band 4 - High CH QPSK-15



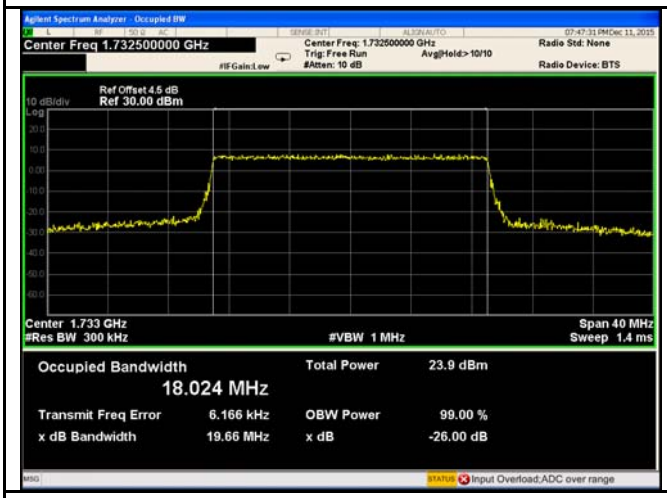
LTE band 4 - High CH 16QAM-15



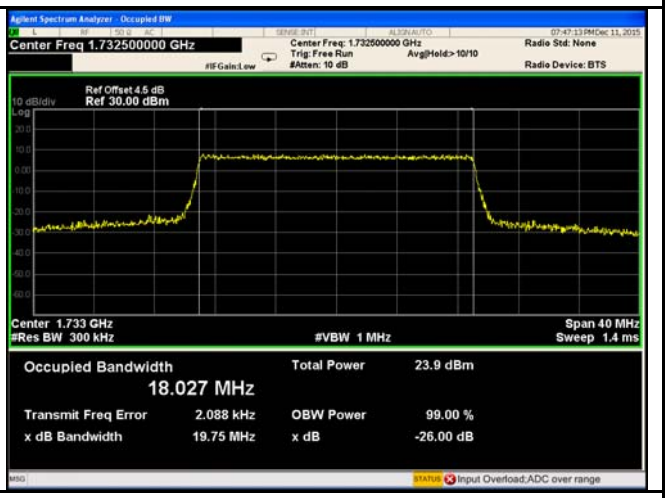
LTE band 4 - Low CH QPSK-20



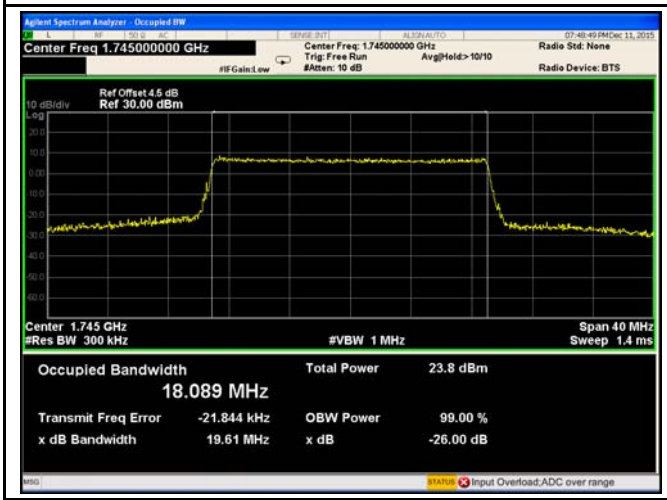
LTE band 4 - Low CH 16QAM-20



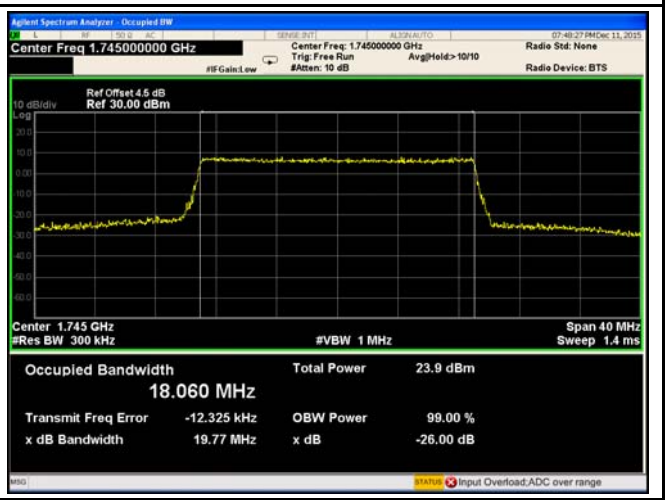
LTE band 4 - Middle CH QPSK-20



LTE band 4 - Middle CH 16QAM-20

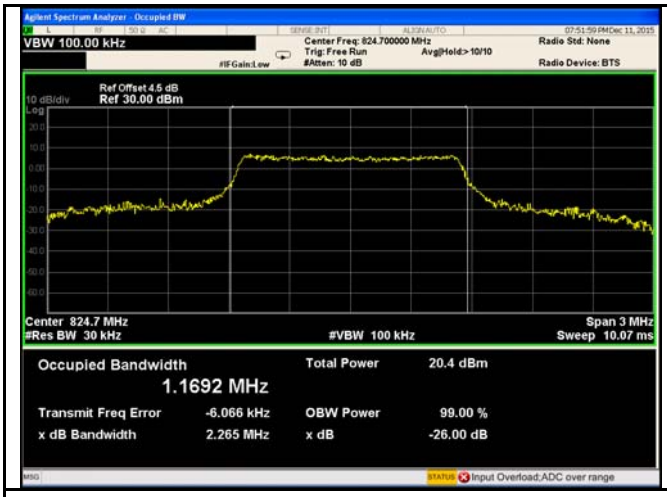


LTE band 4 - High CH QPSK-20



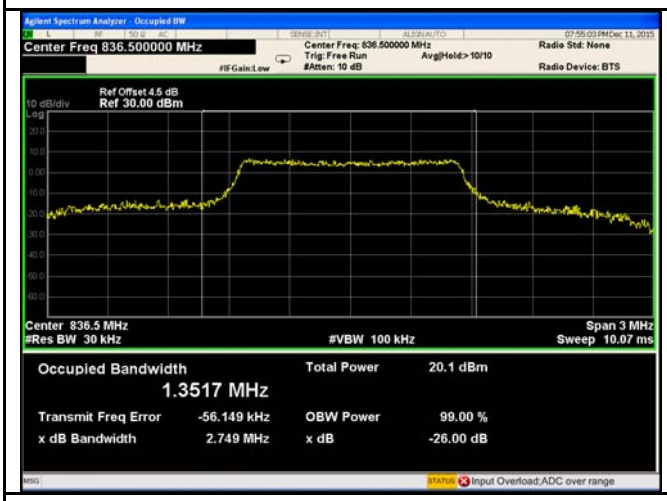
LTE band 4 - High CH 16QAM-20

LTE Band 5 (Part 22H)



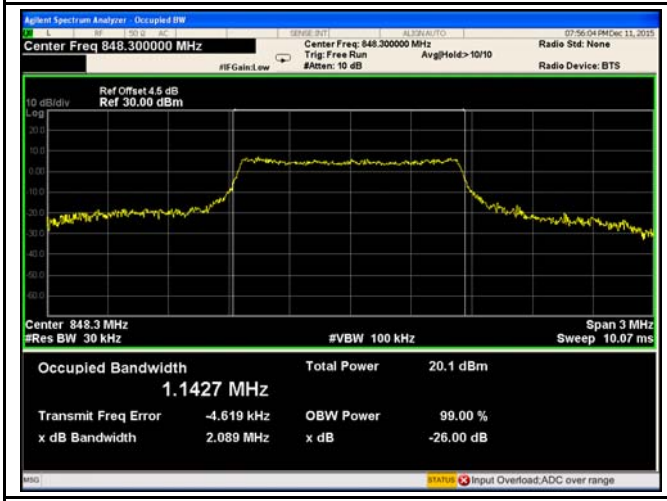
LTE band 5 - Low CH QPSK-1.4

LTE band 5 - Low CH 16QAM-1.4



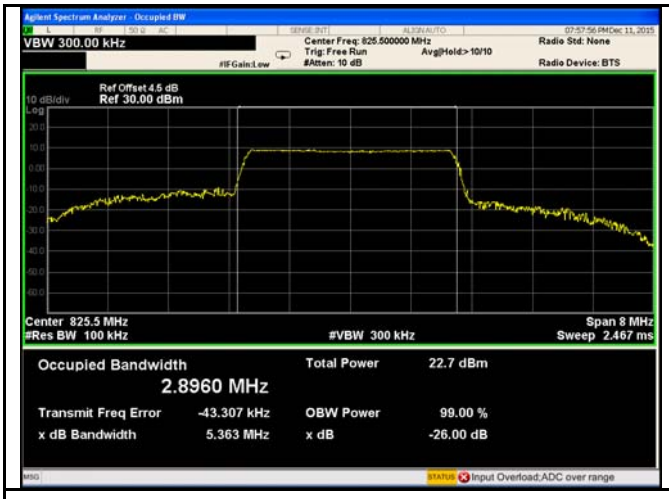
LTE band 5 - Middle CH QPSK-1.4

LTE band 5 - Middle CH 16QAM-1.4

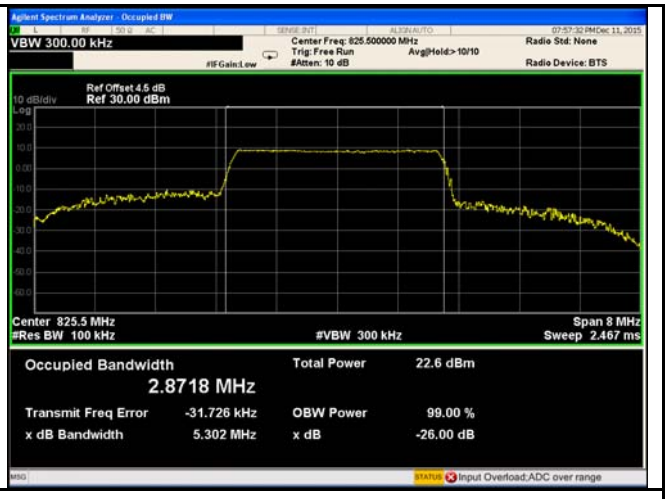


LTE band 5 - High CH QPSK-1.4

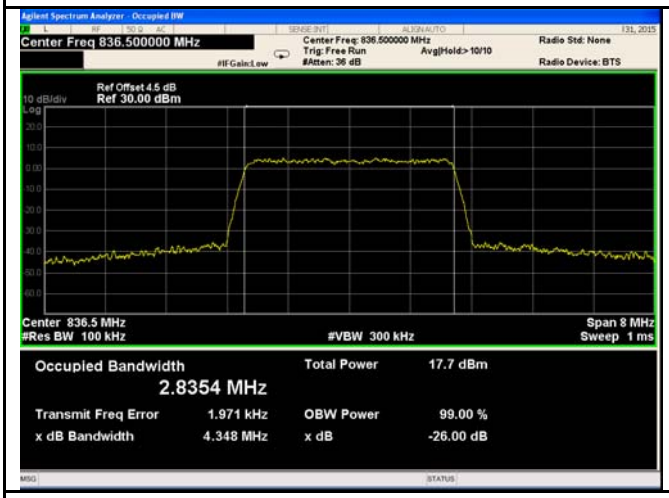
LTE band 5 - High CH 16QAM-1.4



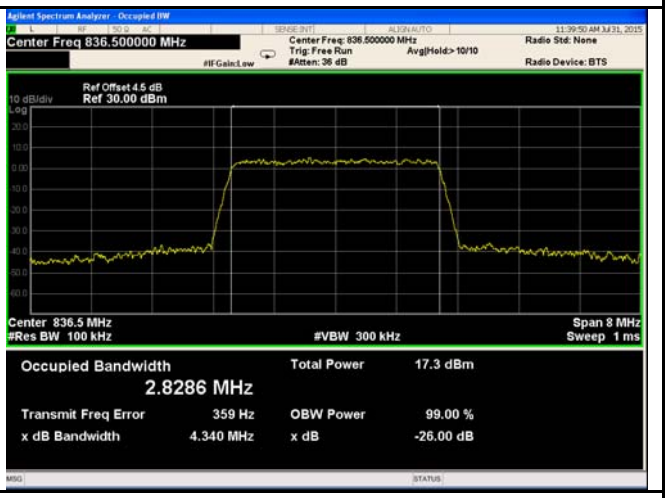
LTE band 5 - Low CH QPSK-3



LTE band 5 - Low CH 16QAM-3

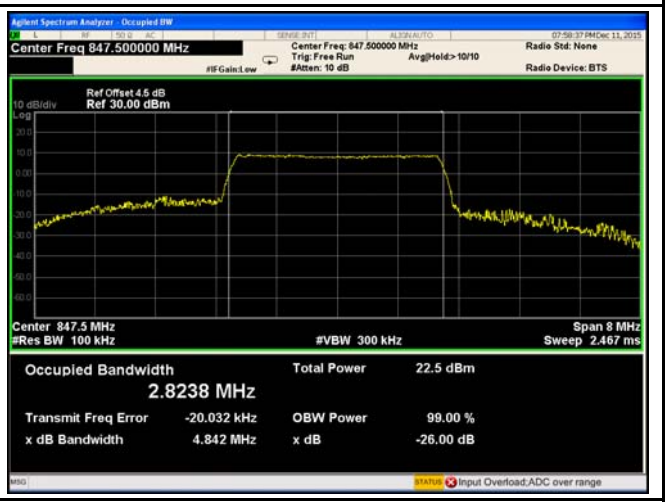


LTE band 5 - Middle CH QPSK-3

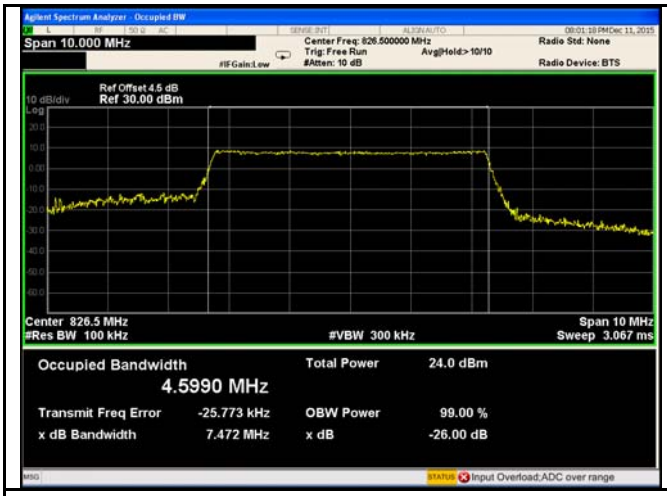


LTE band 5 - Middle CH 16QAM-3

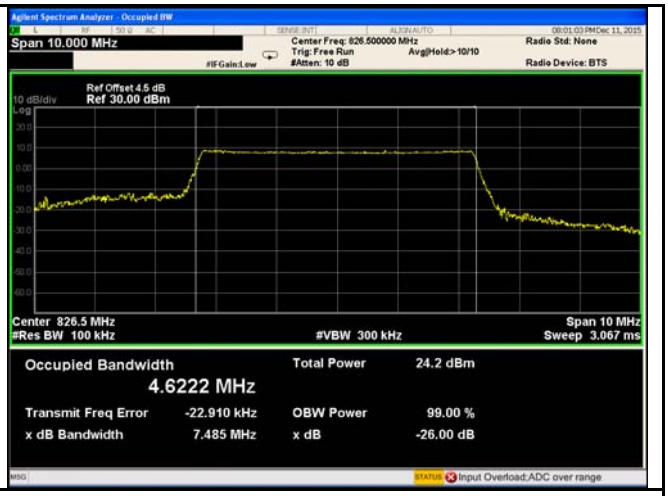
LTE band 5 - High CH QPSK-3



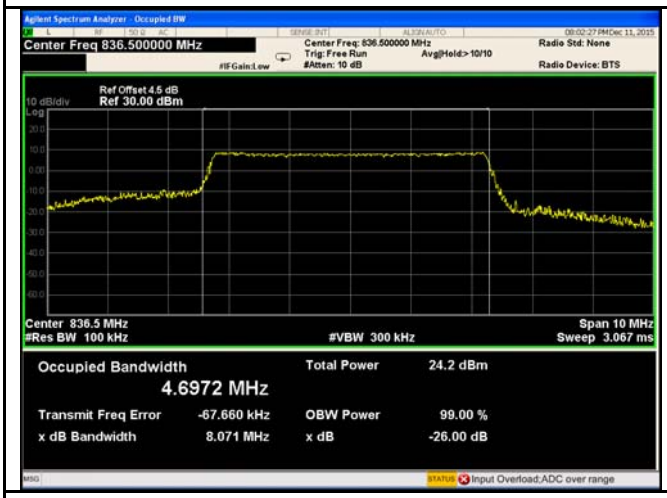
LTE band 5 - High CH 16QAM-3



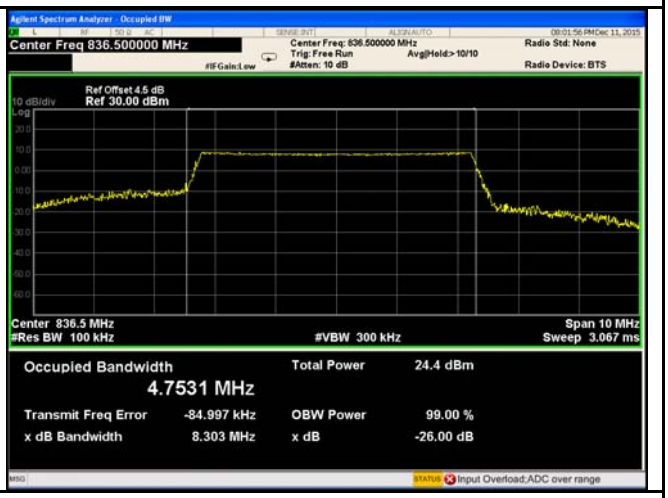
LTE band 5 - Low CH QPSK-5



LTE band 5 - Low CH 16QAM-5

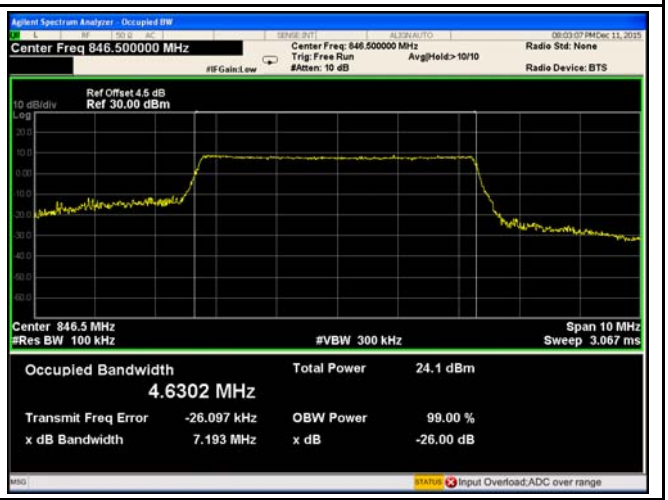


LTE band 5 - Middle CH QPSK-5

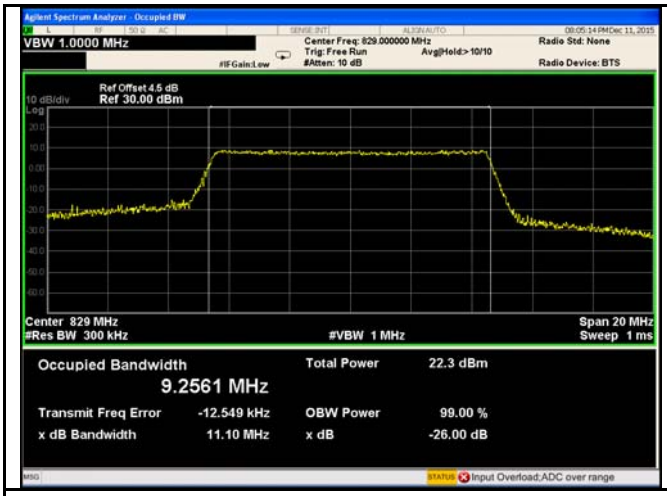


LTE band 5 - Middle CH 16QAM-5

LTE band 5 - High CH QPSK-5

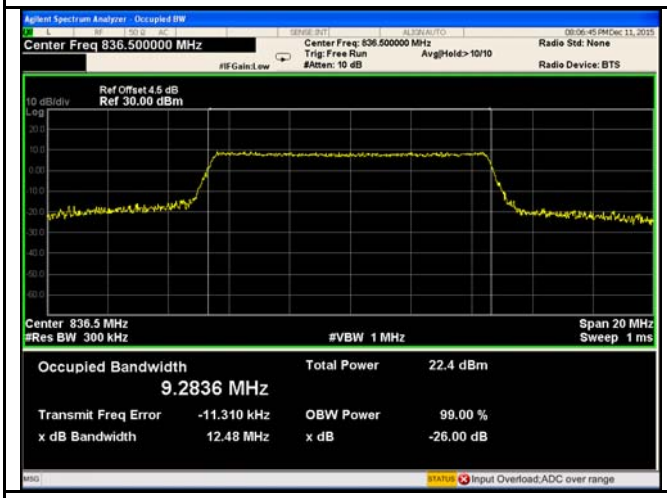


LTE band 5 - High CH 16QAM-5



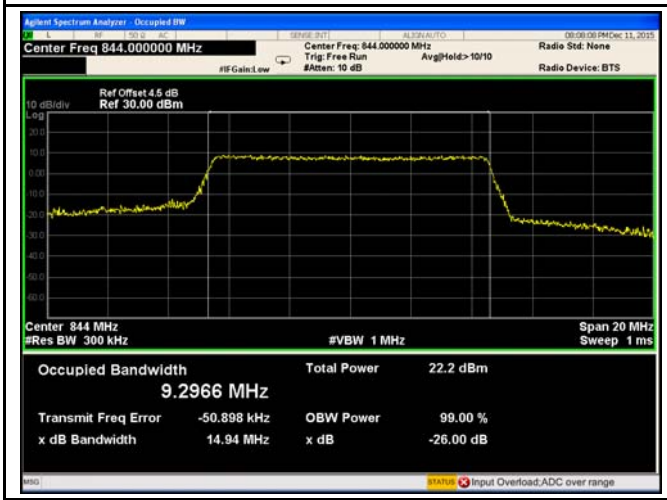
LTE band 5 - Low CH QPSK-10

LTE band 5 - Low CH 16QAM-10

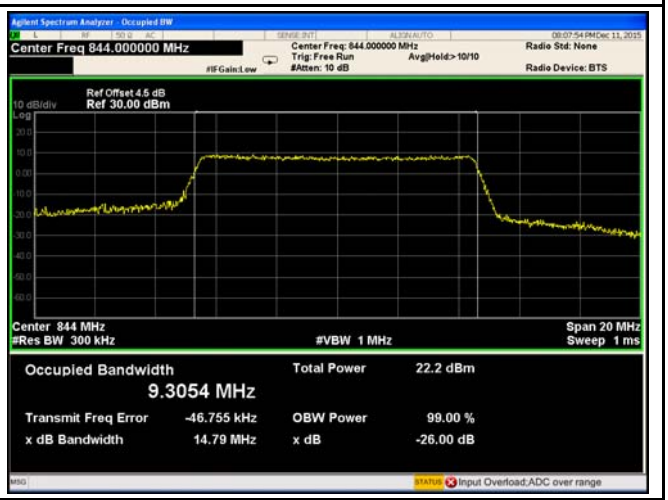


LTE band 5 - Middle CH QPSK-10

LTE band 5 - Middle CH 16QAM-10

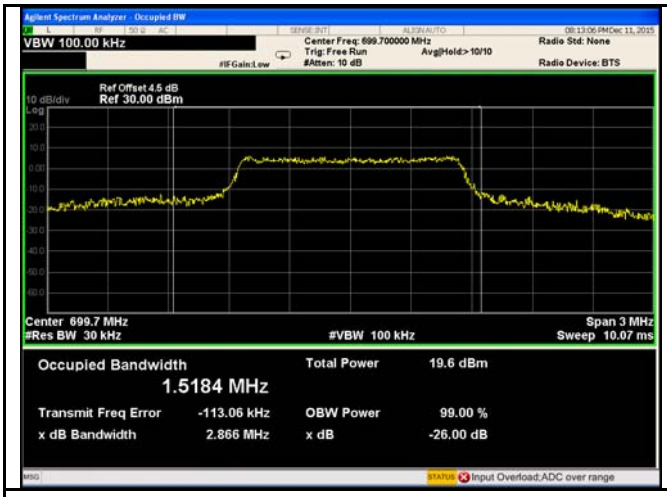


LTE band 5 - High CH QPSK-10

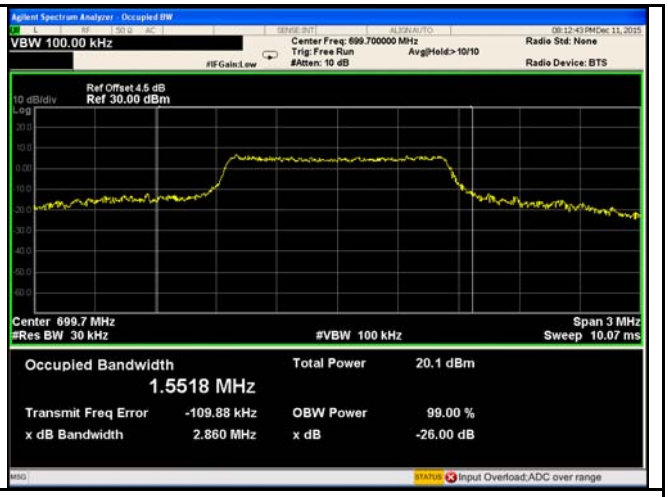


LTE band 5 - High CH 16QAM-10

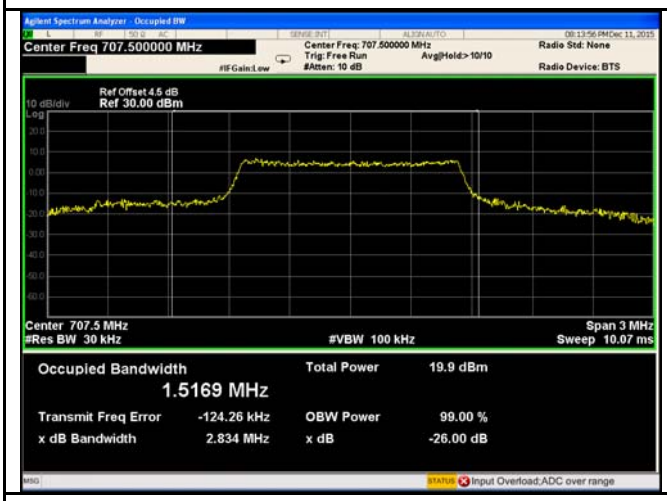
LTE Band 12 (Part 27)



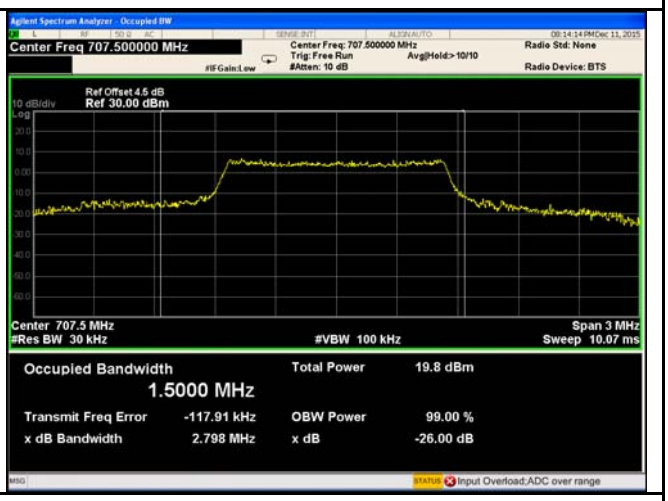
LTE band 12 - Low CH QPSK-1.4



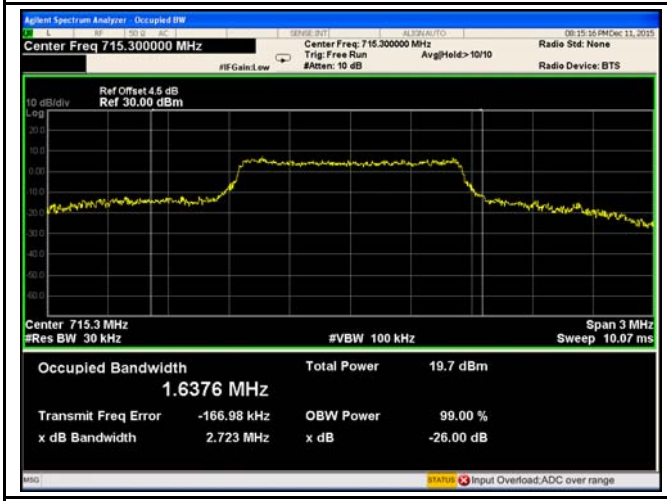
LTE band 12 - Low CH 16QAM-1.4



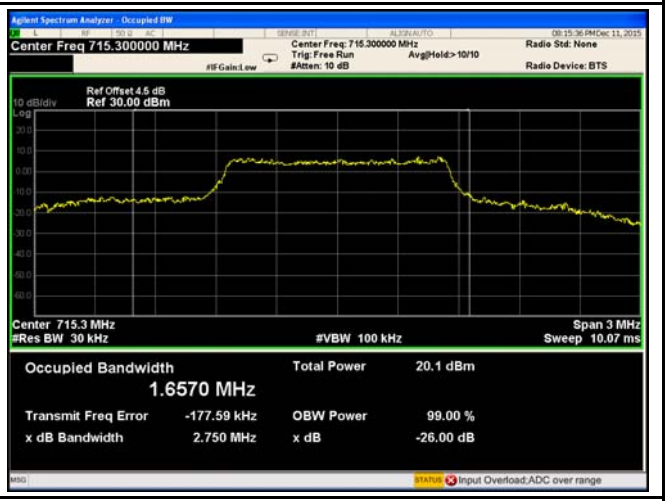
LTE band 12 - Middle CH QPSK-1.4



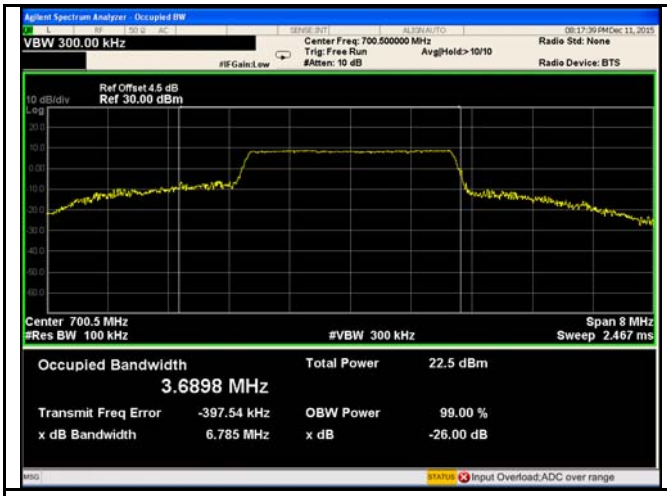
LTE band 12 - Middle CH 16QAM-1.4



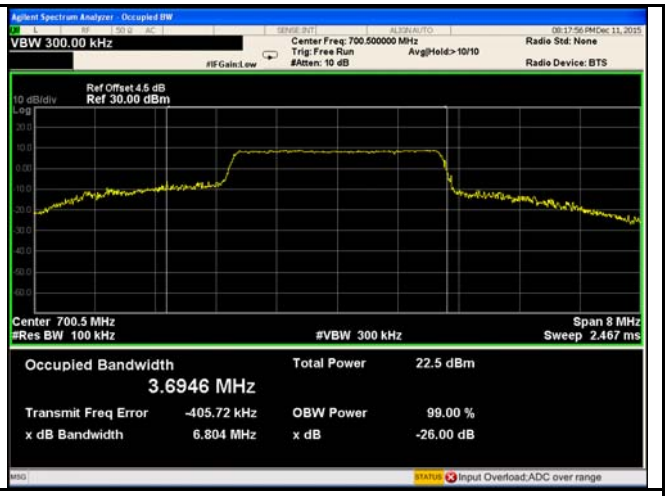
LTE band 12 - High CH QPSK-1.4



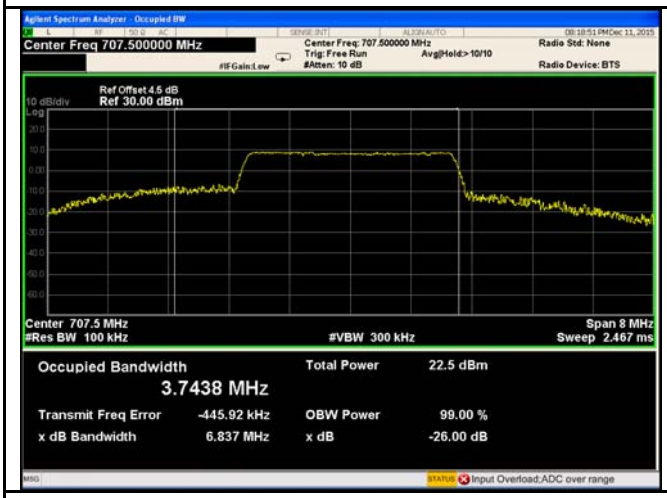
LTE band 12 - High CH 16QAM-1.4



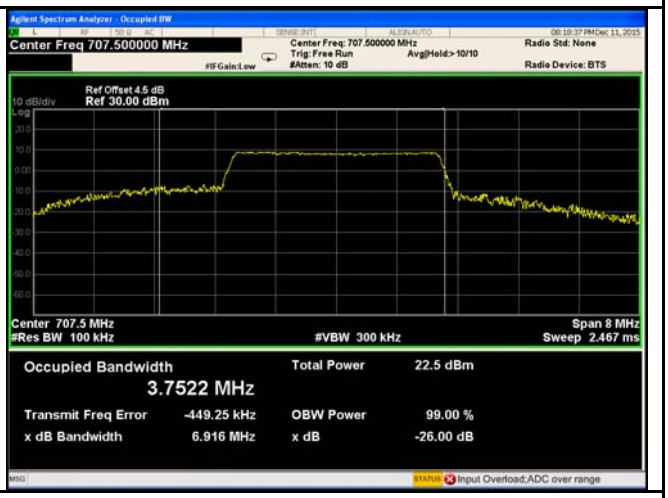
LTE band 12 - Low CH QPSK-3



LTE band 12 - Low CH 16QAM-3



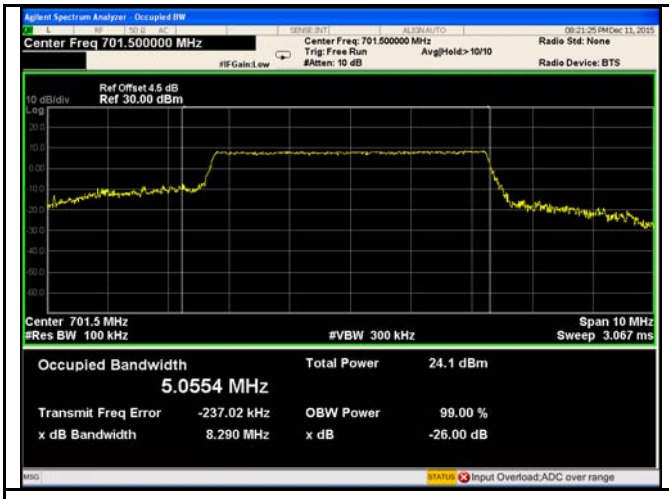
LTE band 12 - Middle CH QPSK-3



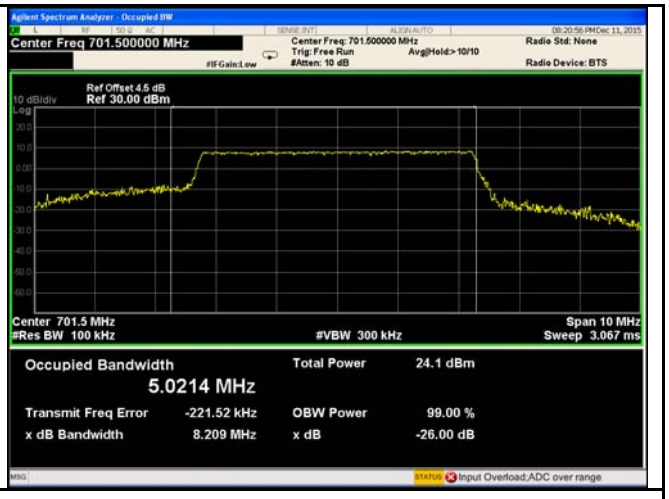
LTE band 12 - Middle CH 16QAM-3

LTE band 12 - High CH QPSK-3

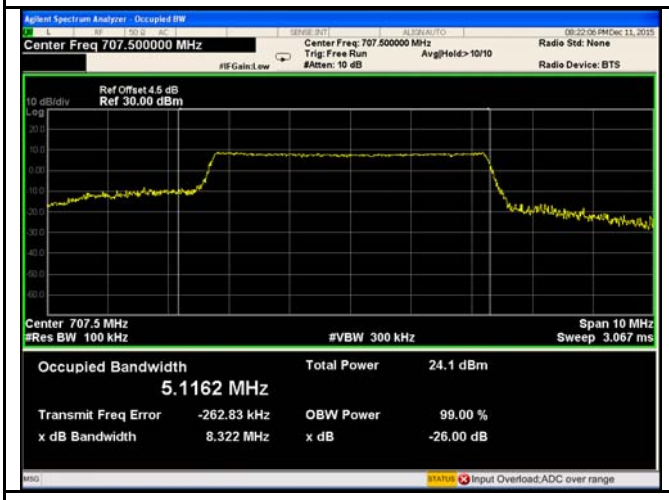
LTE band 12 - High CH 16QAM-3



LTE band 12 - Low CH QPSK-5

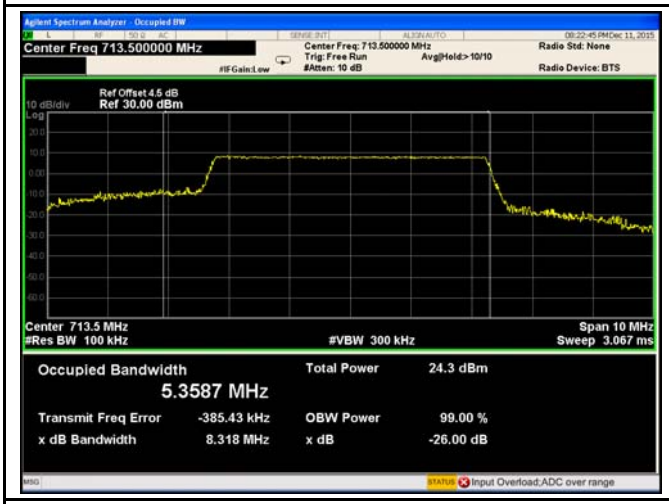


LTE band 12 - Low CH 16QAM-5

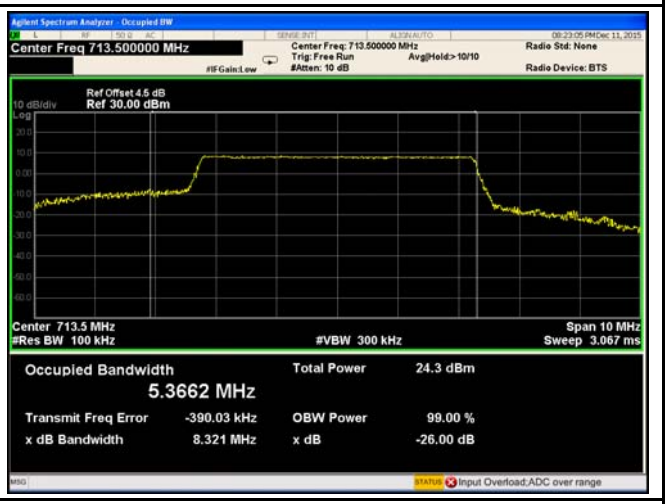


LTE band 12 - Middle CH QPSK-5

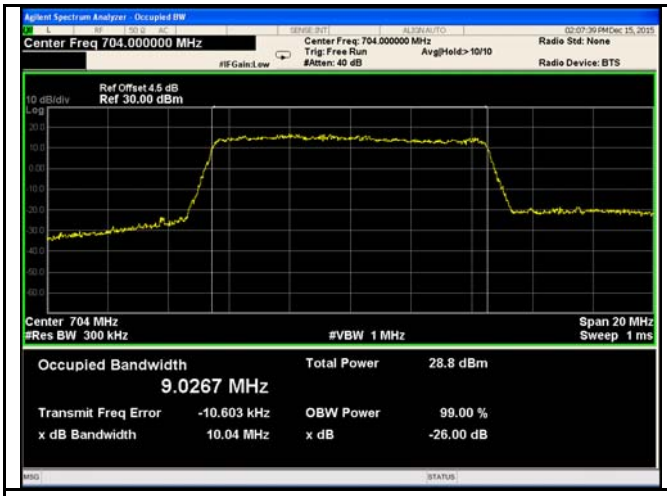
LTE band 12 - Middle CH 16QAM-5



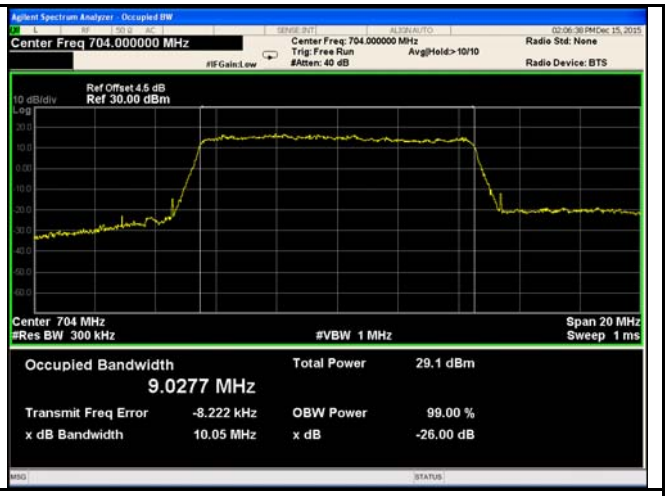
LTE band 12 - High CH QPSK-5



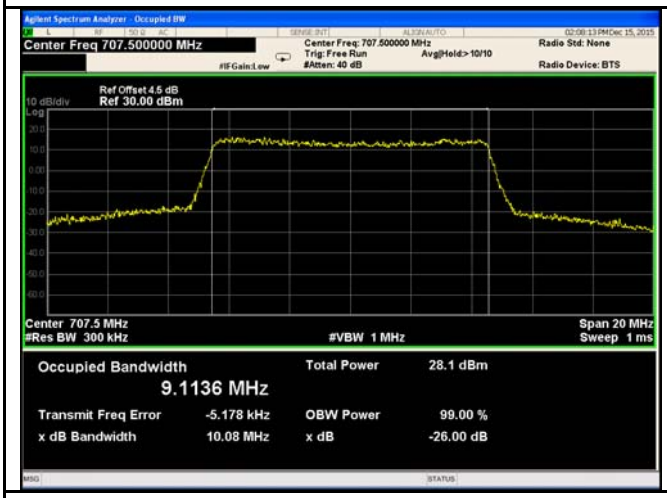
LTE band 12 - High CH 16QAM-5



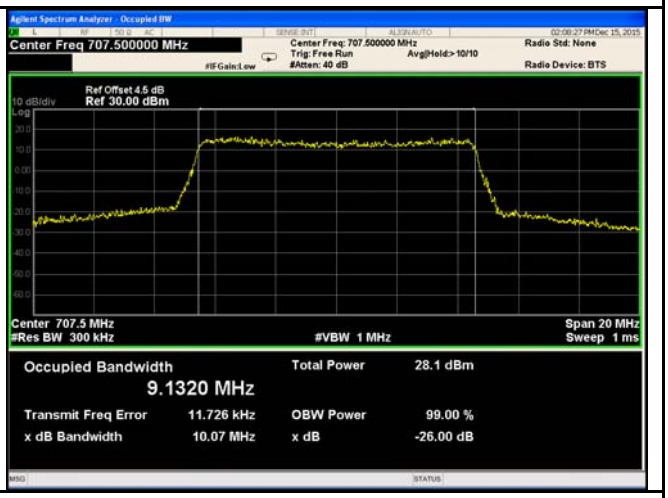
LTE band 12 - Low CH QPSK-10



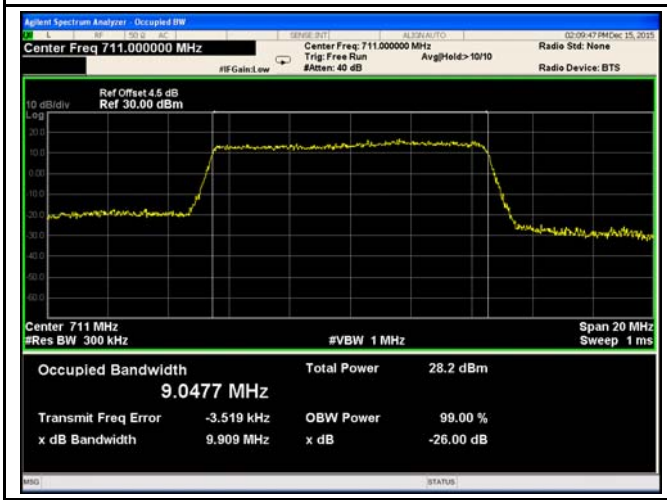
LTE band 12 - Low CH 16QAM-10



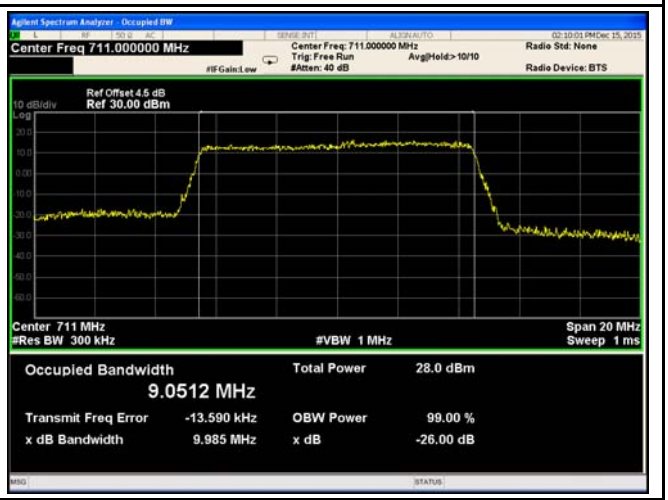
LTE band 12 - Middle CH QPSK-10



LTE band 12 - Middle CH 16QAM-10

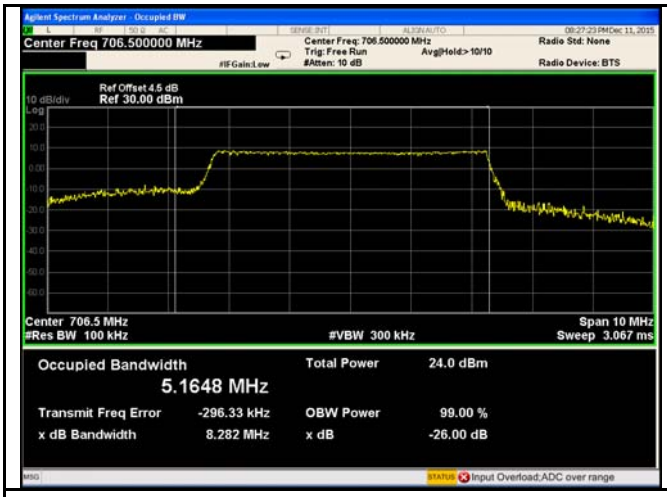


LTE band 12 - High CH QPSK-10

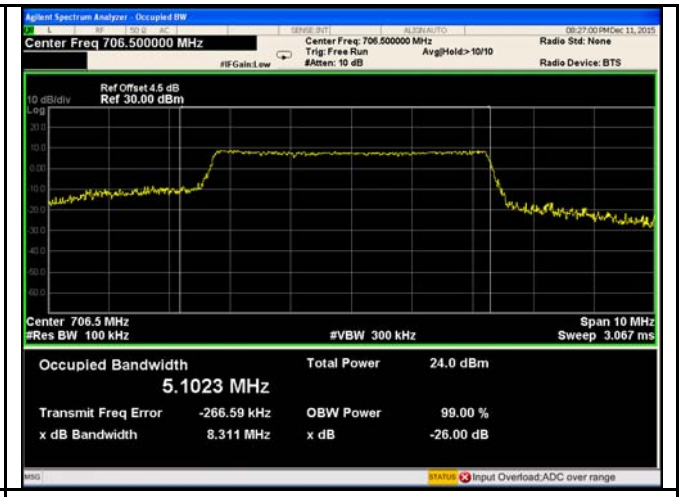


LTE band 12 - High CH 16QAM-10

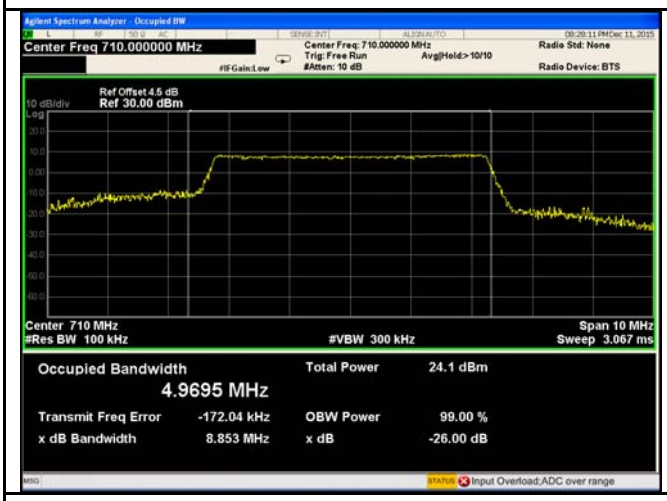
LTE Band 17 (Part 27)



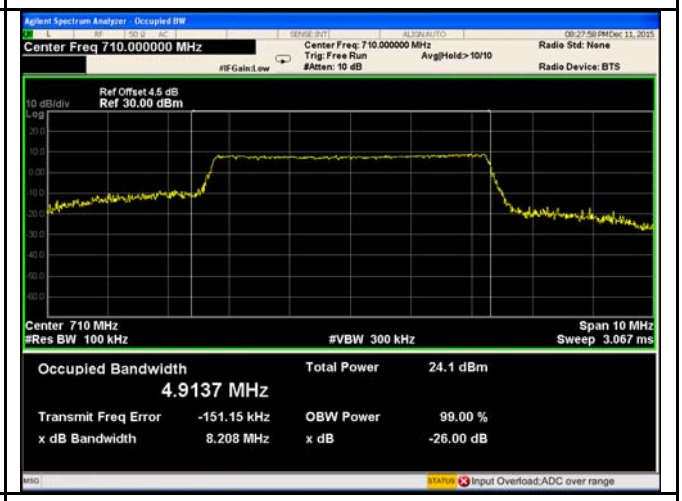
LTE band 17 - Low CH QPSK-5



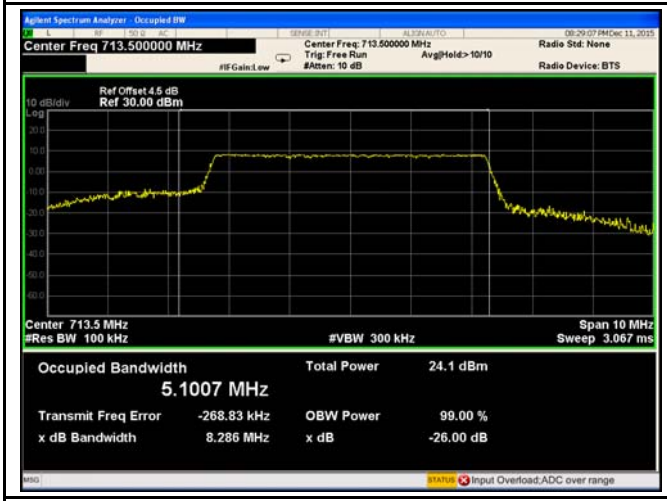
LTE band 17 - Low CH 16QAM-5



LTE band 17 - Middle CH QPSK-5

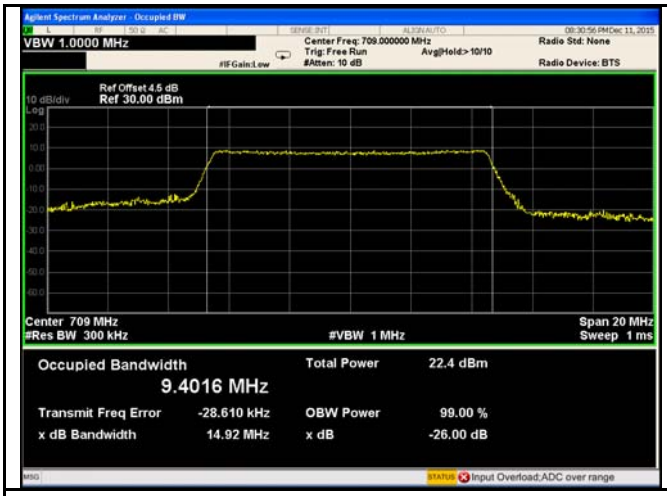


LTE band 17 - Middle CH 16QAM-5



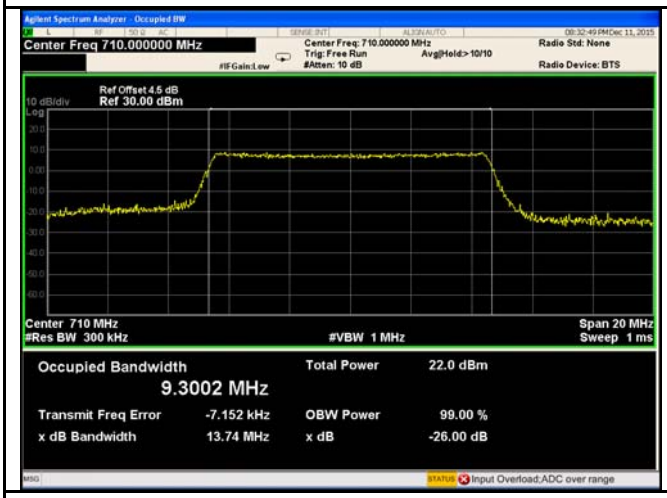
LTE band 17 - High CH QPSK-5

LTE band 17 - High CH 16QAM-5



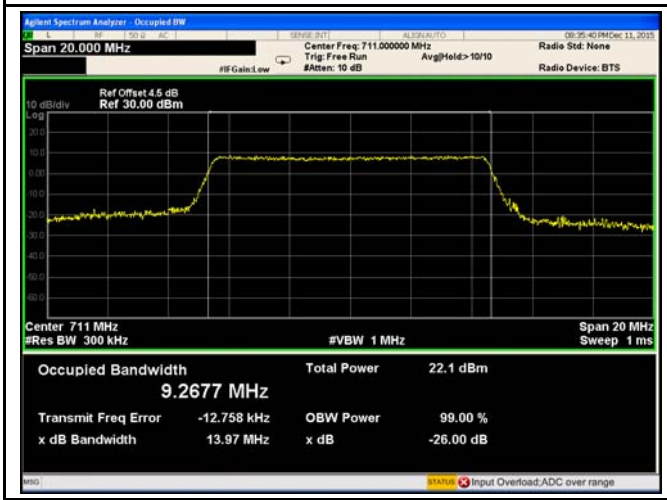
LTE band 17 - Low CH QPSK-10

LTE band 17 - Low CH 16QAM-10

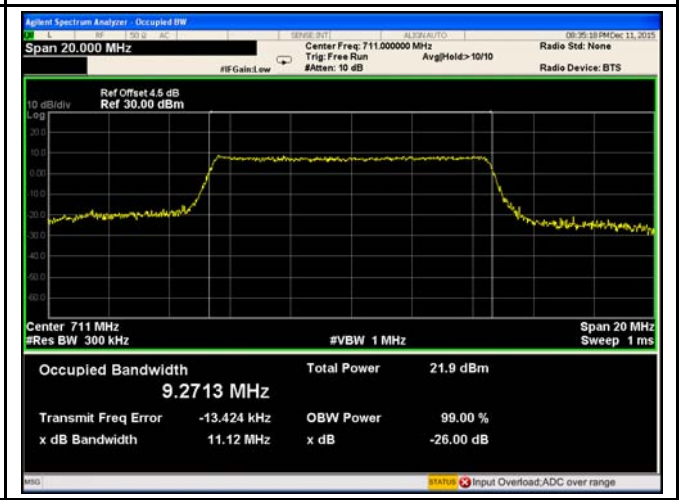


LTE band 17 - Middle CH QPSK-10

LTE band 17 - Middle CH 16QAM-10



LTE band 17 - High CH QPSK-10



LTE band 17 - High CH 16QAM-10