RF TEST REPORT

Report No.: 17070023-FCC-R5

Supersede Report No.: N/A

Applicant	Anda Technologies S.A.C
Product Name	Anda Watch
Model No.	W010R1
Serial No.	N/A
Test Standard	FCC Part 22(H):2016, FCC Part 24(E):2016, FCC Part 27: 2016; ANSI/TIA-603-D: 2010
Test Date	January 13 to February 05, 2017
Issue Date	February 06, 2017
Test Result	☑ Pass ☐ Fail
Equipment complied with the specification	☑
Equipment did not comply with the specification	☐

Loren Luo	David Huang	
Loren Luo 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

Zone A, Floor 1, Building 2 Wan Ye Long Technology Park

South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China 518108

Phone: +86 0755 2601 4629801 Email: China@siemic.com.cn

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
17070023-FCC-R5	NONE	Original	February 06, 2017

2. Customer information

Applicant Name	Anda Technologies S.A.C
Applicant Add	Avenida Santa Cruz No. 888, Piso 4, Miraflores, Lima, Peru
Manufacturer	Borqs Beijing Ltd.
Manufacturer Add	Tower A, Building B23, Universal Business Park, No. 10 Jiuxianqiao Road, Chaoyang District Beijing, 100015 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 of Radiated Emission	Radiated Emission Program-To Shenzhen v2.0
Test Software of Conducted Emission	EZ-EMC(ver.Icp-03A1)

4. Equipment under Test (EUT) Information

Description of EUT:	Anda Watch
Main Model:	W010R1
Serial Model:	N/A
Date EUT received:	January 12, 2017
Test Date(s):	January 13 to February 05, 2017
Equipment Category：	PCE
Antenna Gain:	GSM850: -5.00dBi PCS1900: 1.4dBi UMTS-FDD Band V: -5.00dBi UMTS-FDD Band IV: 0.84dBi UMTS-FDD Band II: 1.4dBi LTE Band II:1.41dBi LTE Band IV: 0.84dBi WIFI: -1.5dBi Bluetooth/BLE: -1.5dBi GPS: 0.48dBi
Antenna Type:	PIFA antenna
Type of Modulation:	GSM / GPRS: GMSK EGPRS: GMSK,8PSK UMTS-FDD: QPSK LTE Band: QPSK, 16QAM 802.11b/g/n: DSSS, OFDM Bluetooth: GFSK, π /4DQPSK, 8DPSK BLE: GFSK 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 IV TX:1712.4 ~ 1752.6 MHz; RX : 2112.4 ~ 2152.6 MHz UMTS-FDD Band II TX:1852.4 ~ 1907.6 MHz; RX: 1932.4 ~ 1987.6 MHz LTE Band II TX: 1850.7 ~ 1909.3MHz; RX : 1930.7 ~ 1989.3 MHz LTE Band IV TX: 1710.7 ~ 1754.3 MHz; RX : 2110.7~ 2154.3 MHz WIFI: 802.11b/g/n(20M): 2412-2462 MHz Bluetooth& BLE: 2402-2480 MHz GPS: 1575.42 MHz
Maximum Conducted AV Power to Antenna:	LTE Band 2: 24.06 dBm LTE Band 4: 24.14 dBm
ERP/EIRP:	LTE Band 2: 19.77 dBm / EIRP LTE Band 4: 19.43 dBm / EIRP
Port:	Data and charging Port
Input Power:	Adapter: Model: ASUC37a-050100 Input: AC100-240V~50/60Hz,0.3A Output: DC 5.0V,1.0A Battery: Spec: 4.35V,400mAh
Trade Name :	Anda Watch
GPRS/EGPRS Multi-slot class	8/10/12
FCC ID:	2ALJB-W010R1

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

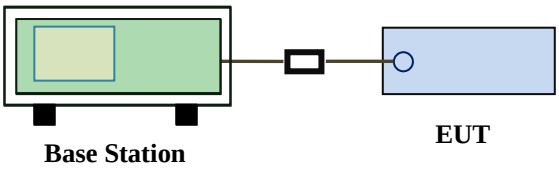
The EUT is a portable device, thus requires SAR evaluation;

Please refer to RF Exposure Evaluation Report: 17070023-FCC-H.

6.2 RF Output Power

Temperature	25 °C
Relative Humidity	53%
Atmospheric Pressure	1020mbar
Test date :	January 20, 2017
Tested By :	Loren Luo

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: - 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	23.96	23.5±1
				1	49	0	23.95	23.5±1
				1	99	0	23.91	23.5±1
				50	0	1	22.77	23.5±1
				50	24	1	22.72	23.5±1
				50	49	1	22.75	23.5±1
				100	0	1	22.76	23.5±1
			16QAM	1	0	1	22.41	22±1
				1	49	1	22.40	22±1
				1	99	1	22.42	22±1
				50	0	2	21.77	22±1
				50	24	2	21.75	22±1
				50	49	2	21.71	22±1
				100	0	2	21.78	22±1
	18900	1880.0	QPSK	1	0	0	23.21	23±1
				1	49	0	23.22	23±1
				1	99	0	23.20	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	23.33	23±1
			16QAM	1	0	1	23.12	22.3±1
				1	49	1	23.11	22.3±1
				1	99	1	23.11	22.3±1
				50	0	2	21.66	22.3±1
				50	24	2	21.63	22.3±1
				50	49	2	21.60	22.3±1
				100	0	2	21.64	22.3±1
	19100	1900.0	QPSK	1	0	0	23.44	23±1
				1	49	0	23.42	23±1
				1	99	0	23.18	23±1
				50	0	1	22.73	23±1
				50	24	1	22.77	23±1
				50	49	1	22.78	23±1
				100	0	1	22.63	23±1
			16QAM	1	0	1	22.94	22.5±1
				1	49	1	22.95	22.5±1
				1	99	1	22.93	22.5±1
				50	0	2	21.8	22.5±1
				50	24	2	21.79	22.5±1
				50	49	2	21.80	22.5±1
				100	0	2	21.81	22.5±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	23.86	23.5±1
				1	37	0	23.82	23.5±1
				1	74	0	23.81	23.5±1
				36	0	1	23.17	23.5±1
				36	16	1	23.11	23.5±1
				36	35	1	23.16	23.5±1
				75	0	1	23	23.5±1
			16QAM	1	0	1	23.32	22.8±1
				1	37	1	23.33	22.8±1
				1	74	1	23.39	22.8±1
				36	0	2	22.3	22.8±1
				36	16	2	22.24	22.8±1
				36	35	2	22.26	22.8±1
				75	0	2	22.23	22.8±1
	18900	1880.0	QPSK	1	0	0	24.03	23.5±1
				1	37	0	24.01	23.5±1
				1	74	0	24.02	23.5±1
				36	0	1	22.98	23.5±1
				36	16	1	22.92	23.5±1
				36	35	1	22.94	23.5±1
				75	0	1	23.14	23.5±1
			16QAM	1	0	1	23.29	22.5±1
				1	37	1	23.27	22.5±1
				1	74	1	23.22	22.5±1
				36	0	2	22.22	22.5±1
				36	16	2	22.18	22.5±1
				36	35	2	22.21	22.5±1
				75	0	2	22.24	22.5±1
	19125	1902.5	QPSK	1	0	0	23.71	23±1
				1	37	0	23.69	23±1
				1	74	0	23.70	23±1
				36	0	1	23.12	23±1
				36	16	1	23.11	23±1
				36	35	1	23.13	23±1
				75	0	1	22.73	23±1
			16QAM	1	0	1	23.03	22.5±1
				1	37	1	23.02	22.5±1
				1	74	1	23.06	22.5±1
				36	0	2	21.85	22.5±1
				36	16	2	21.90	22.5±1
				36	35	2	21.82	22.5±1
				75	0	2	21.91	22.5±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	23.73	23.3±1
				1	24	0	23.72	23.3±1
				1	49	0	23.71	23.3±1
				25	0	1	23.02	23.3±1
				25	12	1	23.00	23.3±1
				25	24	1	22.99	23.3±1
				50	0	1	23.04	23.3±1
			16QAM	1	0	1	23.2	22.5±1
				1	24	1	23.19	22.5±1
				1	49	1	23.15	22.5±1
				25	0	2	22.06	22.5±1
				25	12	2	22.05	22.5±1
				25	24	2	22.12	22.5±1
				50	0	2	21.83	22.5±1
	18900	1880.0	QPSK	1	0	0	23.50	23±1
				1	24	0	23.49	23±1
				1	49	0	23.45	23±1
				25	0	1	22.71	23±1
				25	12	1	22.63	23±1
				25	24	1	22.70	23±1
				50	0	1	22.62	23±1
			16QAM	1	0	1	22.98	22.3±1
				1	24	1	22.89	22.3±1
				1	49	1	22.91	22.3±1
				25	0	2	21.71	22.3±1
				25	12	2	21.73	22.3±1
				25	24	2	21.75	22.3±1
				50	0	2	21.69	22.3±1
	19150	1905	QPSK	1	0	0	24.06	23.5±1
				1	24	0	24.03	23.5±1
				1	49	0	23.96	23.5±1
				25	0	1	23.09	23.5±1
				25	12	1	23.01	23.5±1
				25	24	1	23.04	23.5±1
				50	0	1	23.10	23.5±1
			16QAM	1	0	1	22.58	22.3±1
				1	24	1	22.51	22.3±1
				1	49	1	22.53	22.3±1
				25	0	2	22.03	22.3±1
				25	12	2	22.05	22.3±1
				25	24	2	22.02	22.3±1
				50	0	2	22.12	22.3±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	23.82	23.3±1
				1	12	0	23.80	23.3±1
				1	24	0	23.81	23.3±1
				12	0	1	22.91	23.3±1
				12	6	1	22.90	23.3±1
				12	11	1	22.93	23.3±1
				25	0	1	22.75	23.3±1
			16QAM	1	0	1	22.45	22±1
				1	12	1	22.46	22±1
				1	24	1	22.37	22±1
				12	0	2	21.80	22±1
				12	6	2	21.83	22±1
				12	11	2	21.85	22±1
				25	0	2	21.95	22±1
	18900	1880.0	QPSK	1	0	0	22.74	22.5±1
				1	12	0	22.72	22.5±1
				1	24	0	22.69	22.5±1
				12	0	1	22.65	22.5±1
				12	6	1	22.61	22.5±1
				12	11	1	22.63	22.5±1
				25	0	1	22.58	22.5±1
			16QAM	1	0	1	22.96	22.3±1
				1	12	1	22.91	22.3±1
				1	24	1	22.92	22.3±1
				12	0	2	21.52	22.3±1
				12	6	2	21.56	22.3±1
				12	11	2	21.58	22.3±1
				25	0	2	21.59	22.3±1
	19175	1907.5	QPSK	1	0	0	23.60	23±1
				1	12	0	23.54	23±1
				1	24	0	23.52	23±1
				12	0	1	22.63	23±1
				12	6	1	22.66	23±1
				12	11	1	22.61	23±1
				25	0	1	22.75	23±1
			16QAM	1	0	1	22.82	22±1
				1	12	1	22.83	22±1
				1	24	1	22.88	22±1
				12	0	2	21.60	22±1
				12	6	2	21.62	22±1
				12	11	2	21.59	22±1
				25	0	2	21.58	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	23.38	23±1
				1	7	0	23.33	23±1
				1	14	0	23.34	23±1
				8	0	1	22.62	23±1
				8	4	1	22.58	23±1
				8	7	1	22.59	23±1
				15	0	1	22.73	23±1
			16QAM	1	0	1	22.95	22.3±1
				1	7	1	22.91	22.3±1
				1	14	1	22.93	22.3±1
				8	0	2	21.67	22.3±1
				8	4	2	21.65	22.3±1
				8	7	2	21.66	22.3±1
				15	0	2	21.85	22.3±1
	18900	1880.0	QPSK	1	0	0	23.45	23±1
				1	7	0	23.38	23±1
				1	14	0	23.34	23±1
				8	0	1	22.32	23±1
				8	4	1	22.28	23±1
				8	7	1	22.28	23±1
				15	0	1	22.49	23±1
			16QAM	1	0	1	22.62	22±1
				1	7	1	22.56	22±1
				1	14	1	22.61	22±1
				8	0	2	21.35	22±1
				8	4	2	21.28	22±1
				8	7	2	21.35	22±1
				15	0	2	21.49	22±1
	19175	1907.5	QPSK	1	0	0	23.43	23±1
				1	7	0	23.33	23±1
				1	14	0	23.39	23±1
				8	0	1	22.44	23±1
				8	4	1	22.38	23±1
				8	7	1	22.41	23±1
				15	0	1	22.56	23±1
			16QAM	1	0	1	22.22	22±1
				1	7	1	22.23	22±1
				1	14	1	22.16	22±1
				8	0	2	21.58	22±1
				8	4	2	21.57	22±1
				8	7	2	21.55	22±1
				15	0	2	21.73	22±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	23.77	23±1
				1	2	0	23.69	23±1
				1	5	0	23.66	23±1
				3	0	0	23.82	23±1
				3	1	0	23.78	23±1
				3	2	0	23.80	23±1
				6	0	1	22.67	23±1
			16QAM	1	0	1	22.53	22±1
				1	2	1	22.58	22±1
				1	5	1	22.54	22±1
				3	0	1	21.63	22±1
				3	1	1	21.65	22±1
				3	2	1	21.62	22±1
				6	0	2	21.81	22±1
	18900	1880.0	QPSK	1	0	0	23.45	23±1
				1	2	0	23.44	23±1
				1	5	0	23.43	23±1
				3	0	0	22.58	23±1
				3	1	0	22.57	23±1
				3	2	0	22.49	23±1
				6	0	1	22.53	23±1
			16QAM	1	0	1	22.49	22±1
				1	2	1	22.48	22±1
				1	5	1	22.43	22±1
				3	0	1	21.55	22±1
				3	1	1	21.58	22±1
				3	2	1	21.52	22±1
				6	0	2	21.45	22±1
	19193	1909.3	QPSK	1	0	0	23.39	23±1
				1	2	0	23.3	23±1
				1	5	0	23.33	23±1
				3	0	0	23.61	23±1
				3	1	0	23.54	23±1
				3	2	0	23.59	23±1
				6	0	1	22.65	23±1
			16QAM	1	0	1	22.57	22±1
				1	2	1	22.56	22±1
				1	5	1	22.52	22±1
				3	0	1	21.52	22±1
				3	1	1	21.59	22±1
				3	2	1	21.53	22±1
				6	0	2	21.61	22±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	23.76	23±1
				1	49	0	23.69	23±1
				1	99	0	23.68	23±1
				50	0	1	22.64	23±1
				50	24	1	22.63	23±1
				50	49	1	22.66	23±1
				100	0	1	22.73	23±1
			16QAM	1	0	1	22.25	22±1
				1	49	1	22.21	22±1
				1	99	1	22.19	22±1
				50	0	2	21.95	22±1
				50	24	2	21.92	22±1
				50	49	2	21.93	22±1
				100	0	2	21.52	22±1
	20175	1732.5	QPSK	1	0	0	23.42	23±1
				1	49	0	23.4	23±1
				1	99	0	23.37	23±1
				50	0	1	22.48	23±1
				50	24	1	22.42	23±1
				50	49	1	22.46	23±1
				100	0	1	22.54	23±1
			16QAM	1	0	1	23.18	22.3±1
				1	49	1	23.13	22.3±1
				1	99	1	23.11	22.3±1
				50	0	2	21.35	22.3±1
				50	24	2	21.33	22.3±1
				50	49	2	21.31	22.3±1
				100	0	2	21.43	22.3±1
	20300	1745.0	QPSK	1	0	0	24.14	23.3±1
				1	49	0	24.13	23.3±1
				1	99	0	24.11	23.3±1
				50	0	1	22.91	23.3±1
				50	24	1	22.85	23.3±1
				50	49	1	22.9	23.3±1
				100	0	1	22.79	23.3±1
			16QAM	1	0	1	23.33	22.5±1
				1	49	1	23.3	22.5±1
				1	99	1	23.31	22.5±1
				50	0	2	21.7	22.5±1
				50	24	2	21.73	22.5±1
				50	49	2	21.71	22.5±1
				100	0	2	21.68	22.5±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	23.22	23±1
				1	74	0	23.25	23±1
				36	0	1	22.47	23±1
				36	16	1	22.44	23±1
				36	35	1	22.45	23±1
				75	0	1	22.56	23±1
			16QAM	1	0	1	22.74	22±1
				1	37	1	22.77	22±1
				1	74	1	22.71	22±1
				36	0	2	21.63	22±1
				36	16	2	21.66	22±1
				36	35	2	21.61	22±1
				75	0	2	21.53	22±1
	20175	1732.5	QPSK	1	0	0	22.87	22.5±1
				1	37	0	22.81	22.5±1
				1	74	0	22.82	22.5±1
				36	0	1	22.09	22.5±1
				36	16	1	22.07	22.5±1
				36	35	1	22.1	22.5±1
				75	0	1	22.08	22.5±1
			16QAM	1	0	1	22.17	21.5±1
				1	37	1	22.14	21.5±1
				1	74	1	22.11	21.5±1
				36	0	2	20.99	21.5±1
				36	16	2	21.01	21.5±1
				36	35	2	21.03	21.5±1
				75	0	2	20.89	21.5±1
	20325	1747.5	QPSK	1	0	0	23.59	23±1
				1	37	0	23.55	23±1
				1	74	0	23.52	23±1
				36	0	1	22.79	23±1
				36	16	1	22.75	23±1
				36	35	1	22.73	23±1
				75	0	1	22.77	23±1
			16QAM	1	0	1	22.78	22±1
				1	37	1	22.7	22±1
				1	74	1	22.72	22±1
				36	0	2	21.48	22±1
				36	16	2	21.44	22±1
				36	35	2	21.43	22±1
				75	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
10MHz	20000	1715.0	QPSK	1	0	0	23.71	23±1
				1	24	0	23.67	23±1
				1	49	0	23.69	23±1
				25	0	1	22.72	23±1
				25	12	1	22.7	23±1
				25	24	1	22.71	23±1
				50	0	1	22.57	23±1
			16QAM	1	0	1	22.77	22±1
				1	24	1	22.73	22±1
				1	49	1	22.74	22±1
				25	0	2	21.63	22±1
				25	12	2	21.66	22±1
				25	24	2	21.65	22±1
				50	0	2	21.54	22±1
	20175	1732.5	QPSK	1	0	0	23.57	23±1
				1	24	0	23.52	23±1
				1	49	0	23.5	23±1
				25	0	1	22.58	23±1
				25	12	1	22.51	23±1
				25	24	1	22.59	23±1
				50	0	1	22.68	23±1
			16QAM	1	0	1	22.73	22±1
				1	24	1	22.66	22±1
				1	49	1	22.69	22±1
				25	0	2	21.55	22±1
				25	12	2	21.58	22±1
				25	24	2	21.59	22±1
				50	0	2	21.44	22±1
	20350	1750.0	QPSK	1	0	0	23.58	23±1
				1	24	0	23.58	23±1
				1	49	0	23.57	23±1
				25	0	1	22.75	23±1
				25	12	1	22.73	23±1
				25	24	1	22.67	23±1
				50	0	1	22.81	23±1
			16QAM	1	0	1	22.38	22±1
				1	24	1	22.26	22±1
				1	49	1	22.28	22±1
				25	0	2	21.95	22±1
				25	12	2	21.92	22±1
				25	24	2	21.93	22±1
				50	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
5MHz	20000	1715.0	QPSK	1	0	0	23.56	23±1
				1	12	0	23.54	23±1
				1	24	0	23.51	23±1
				12	0	1	22.66	23±1
				12	6	1	22.59	23±1
				12	11	1	22.57	23±1
				25	0	1	22.57	23±1
			16QAM	1	0	1	22.17	22±1
				1	12	1	22.14	22±1
				1	24	1	22.16	22±1
				12	0	2	21.6	22±1
				12	6	2	21.66	22±1
				12	11	2	21.65	22±1
				25	0	2	21.62	22±1
	20175	1732.5	QPSK	1	0	0	23.61	23±1
				1	12	0	23.59	23±1
				1	24	0	23.56	23±1
				12	0	1	22.46	23±1
				12	6	1	22.4	23±1
				12	11	1	22.41	23±1
				25	0	1	22.56	23±1
			16QAM	1	0	1	23.15	22.3±1
				1	12	1	23.13	22.3±1
				1	24	1	23.07	22.3±1
				12	0	2	21.46	22.3±1
				12	6	2	21.49	22.3±1
				12	11	2	21.43	22.3±1
				25	0	2	21.51	22.3±1
	20350	1750.0	QPSK	1	0	0	23.7	23±1
				1	12	0	23.66	23±1
				1	24	0	23.67	23±1
				12	0	1	22.8	23±1
				12	6	1	22.74	23±1
				12	11	1	22.75	23±1
				25	0	1	22.77	23±1
			16QAM	1	0	1	22.64	22±1
				1	12	1	22.61	22±1
				1	24	1	22.66	22±1
				12	0	2	21.93	22±1
				12	6	2	21.99	22±1
				12	11	2	21.95	22±1
				25	0	2	21.86	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	23.61	23±1
				1	7	0	23.52	23±1
				1	14	0	23.6	23±1
				8	0	1	22.52	23±1
				8	4	1	22.48	23±1
				8	7	1	22.46	23±1
				15	0	1	22.57	23±1
			16QAM	1	0	1	22.87	22±1
				1	7	1	22.75	22±1
				1	14	1	22.83	22±1
				8	0	2	21.4	22±1
				8	4	2	21.35	22±1
				8	7	2	21.34	22±1
				15	0	2	21.57	22±1
	20175	1732.5	QPSK	1	0	0	23.51	23±1
				1	7	0	23.41	23±1
				1	14	0	23.49	23±1
				8	0	1	22.38	23±1
				8	4	1	22.29	23±1
				8	7	1	22.3	23±1
				15	0	1	22.45	23±1
			16QAM	1	0	1	22.79	22±1
				1	7	1	22.76	22±1
				1	14	1	22.78	22±1
				8	0	2	21.37	22±1
				8	4	2	21.32	22±1
				8	7	2	21.28	22±1
				15	0	2	21.35	22±1
	20385	1753.5	QPSK	1	0	0	23.66	23±1
				1	7	0	23.66	23±1
				1	14	0	23.62	23±1
				8	0	1	22.64	23±1
				8	4	1	22.64	23±1
				8	7	1	22.62	23±1
				15	0	1	22.63	23±1
			16QAM	1	0	1	22.42	22±1
				1	7	1	22.41	22±1
				1	14	1	22.4	22±1
				8	0	2	21.71	22±1
				8	4	2	21.73	22±1
				8	7	2	21.72	22±1
				15	0	2	21.67	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	23.68	23±1
				1	2	0	23.65	23±1
				1	5	0	23.64	23±1
				3	0	0	23.61	23±1
				3	1	0	23.6	23±1
				3	2	0	23.58	23±1
				6	0	1	22.44	23±1
			16QAM	1	0	1	22.41	22±1
				1	2	1	22.44	22±1
				1	5	1	22.42	22±1
				3	0	1	21.55	22±1
				3	1	1	21.58	22±1
				3	2	1	21.53	22±1
				6	0	2	21.52	22±1
	20175	1732.5	QPSK	1	0	0	23.47	23±1
				1	2	0	23.32	23±1
				1	5	0	23.4	23±1
				3	0	0	23.66	23±1
				3	1	0	23.63	23±1
				3	2	0	23.6	23±1
				6	0	1	22.52	23±1
			16QAM	1	0	1	22.52	22±1
				1	2	1	22.5	22±1
				1	5	1	22.49	22±1
				3	0	1	21.32	22±1
				3	1	1	21.33	22±1
				3	2	1	21.32	22±1
				6	0	2	21.34	22±1
	20393	1754.3	QPSK	1	0	0	23.81	23±1
				1	2	0	23.77	23±1
				1	5	0	23.81	23±1
				3	0	0	23.87	23±1
				3	1	0	23.83	23±1
				3	2	0	23.85	23±1
				6	0	1	22.63	23±1
			16QAM	1	0	1	22.42	22±1
				1	2	1	22.4	22±1
				1	5	1	22.39	22±1
				3	0	1	21.81	22±1
				3	1	1	21.8	22±1
				3	2	1	21.79	22±1
				6	0	2	21.78	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	15.34	V	7.88	0.85	22.37	33.01
1880	1.4	QPSK	1/0	15.02	V	7.88	0.85	22.05	33.01
1909.3	1.4	QPSK	1/0	14.95	V	7.88	0.85	21.98	33.01
1850.7	1.4	QPSK	1/0	14.2	H	7.88	0.85	21.23	33.01
1880	1.4	QPSK	1/0	13.93	H	7.88	0.85	20.96	33.01
1909.3	1.4	QPSK	1/0	13.81	H	7.88	0.85	20.84	33.01
1850.7	1.4	16-QAM	1/0	14.1	V	7.88	0.85	21.13	33.01
1880	1.4	16-QAM	1/0	14.05	V	7.88	0.85	21.08	33.01
1909.3	1.4	16-QAM	1/0	14.13	V	7.88	0.85	21.16	33.01
1850.7	1.4	16-QAM	1/0	13	H	7.88	0.85	20.03	33.01
1880	1.4	16-QAM	1/0	12.94	H	7.88	0.85	19.97	33.01
1909.3	1.4	16-QAM	1/0	13.03	H	7.88	0.85	20.06	33.01
1851.5	3	QPSK	1/0	14.94	V	7.88	0.85	21.97	33.01
1880	3	QPSK	1/0	15.01	V	7.88	0.85	22.04	33.01
1908.5	3	QPSK	1/0	14.99	V	7.88	0.85	22.02	33.01
1851.5	3	QPSK	1/0	13.83	H	7.88	0.85	20.86	33.01
1880	3	QPSK	1/0	14.11	H	7.88	0.85	21.14	33.01
1908.5	3	QPSK	1/0	14.09	H	7.88	0.85	21.12	33.01
1851.5	3	16-QAM	1/0	14.52	V	7.88	0.85	21.55	33.01
1880	3	16-QAM	1/0	14.2	V	7.88	0.85	21.23	33.01
1908.5	3	16-QAM	1/0	13.72	V	7.88	0.85	20.75	33.01
1851.5	3	16-QAM	1/0	13.6	H	7.88	0.85	20.63	33.01
1880	3	16-QAM	1/0	13.31	H	7.88	0.85	20.34	33.01
1908.5	3	16-QAM	1/0	12.84	H	7.88	0.85	19.87	33.01
1852.5	5	QPSK	1/24	15.37	V	7.88	0.85	22.4	33.01
1880	5	QPSK	1/0	14.31	V	7.88	0.85	21.34	33.01
1907.5	5	QPSK	1/24	15.08	V	7.88	0.85	22.11	33.01
1852.5	5	QPSK	1/24	14.51	H	7.88	0.85	21.54	33.01
1880	5	QPSK	1/0	13.43	H	7.88	0.85	20.46	33.01
1907.5	5	QPSK	1/24	14.2	H	7.88	0.85	21.23	33.01
1852.5	5	16-QAM	1/24	13.93	V	7.88	0.85	20.96	33.01
1880	5	16-QAM	1/0	14.52	V	7.88	0.85	21.55	33.01
1907.5	5	16-QAM	1/24	14.44	V	7.88	0.85	21.47	33.01
1852.5	5	16-QAM	1/24	12.92	H	7.88	0.85	19.95	33.01
1880	5	16-QAM	1/0	13.58	H	7.88	0.85	20.61	33.01
1907.5	5	16-QAM	1/24	13.52	H	7.88	0.85	20.55	33.01
1855	10	QPSK	1/0	15.29	V	7.88	0.85	22.32	33.01
1880	10	QPSK	1/0	15.06	V	7.88	0.85	22.09	33.01
1905	10	QPSK	1/49	15.52	V	7.88	0.85	22.55	33.01
1855	10	QPSK	1/0	14.38	H	7.88	0.85	21.41	33.01
1880	10	QPSK	1/0	14.13	H	7.88	0.85	21.16	33.01

1905	10	QPSK	1/49	14.64	H	7.88	0.85	21.67	33.01
1855	10	16-QAM	1/0	14.76	V	7.88	0.85	21.79	33.01
1880	10	16-QAM	1/0	14.54	V	7.88	0.85	21.57	33.01
1905	10	16-QAM	1/49	14.09	V	7.88	0.85	21.12	33.01
1855	10	16-QAM	1/0	13.81	H	7.88	0.85	20.84	33.01
1880	10	16-QAM	1/0	13.61	H	7.88	0.85	20.64	33.01
1905	10	16-QAM	1/49	13.2	H	7.88	0.85	20.23	33.01
1857.5	15	QPSK	1/0	15.42	V	7.88	0.85	22.45	33.01
1880	15	QPSK	1/0	15.59	V	7.88	0.85	22.62	33.01
1902.5	15	QPSK	1/0	15.27	V	7.88	0.85	22.3	33.01
1857.5	15	QPSK	1/0	14.55	H	7.88	0.85	21.58	33.01
1880	15	QPSK	1/0	14.7	H	7.88	0.85	21.73	33.01
1902.5	15	QPSK	1/0	14.43	H	7.88	0.85	21.46	33.01
1857.5	15	16-QAM	1/0	14.88	V	7.88	0.85	21.91	33.01
1880	15	16-QAM	1/0	14.83	V	7.88	0.85	21.86	33.01
1902.5	15	16-QAM	1/0	14.6	V	7.88	0.85	21.63	33.01
1857.5	15	16-QAM	1/0	13.95	H	7.88	0.85	20.98	33.01
1880	15	16-QAM	1/0	13.88	H	7.88	0.85	20.91	33.01
1902.5	15	16-QAM	1/0	13.71	H	7.88	0.85	20.74	33.01
1860	20	QPSK	1/0	15.52	V	7.88	0.85	22.55	33.01
1880	20	QPSK	1/0	14.8	V	7.88	0.85	21.83	33.01
1900	20	QPSK	1/0	15	V	7.88	0.85	22.03	33.01
1860	20	QPSK	1/0	14.66	H	7.88	0.85	21.69	33.01
1880	20	QPSK	1/0	13.92	H	7.88	0.85	20.95	33.01
1900	20	QPSK	1/0	14.11	H	7.88	0.85	21.14	33.01
1860	20	16-QAM	1/0	13.98	V	7.88	0.85	21.01	33.01
1880	20	16-QAM	1/0	14.7	V	7.88	0.85	21.73	33.01
1900	20	16-QAM	1/0	14.51	V	7.88	0.85	21.54	33.01
1860	20	16-QAM	1/0	13.14	H	7.88	0.85	20.17	33.01
1880	20	16-QAM	1/0	13.82	H	7.88	0.85	20.85	33.01
1900	20	16-QAM	1/0	13.63	H	7.88	0.85	20.66	33.01

EIRP for LTE Band 4 (Part 27)

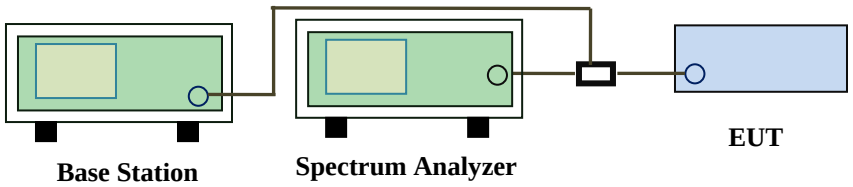
Frequency (MHz)	BW (MHz)	Modulation	RB Size/Offset	Substituted level (dBm)	Antenna Polarization	Antenna Gain correction (dBi)	Cable Loss (dB)	Absolute Level (dBm)	Limit (dBm)
1710.7	1.4	QPSK	1/0	15.77	V	7.95	0.79	22.93	30
1732.5	1.4	QPSK	1/0	15.51	V	7.95	0.79	22.67	30
1754.3	1.4	QPSK	1/0	15.85	V	7.95	0.79	23.01	30
1710.7	1.4	QPSK	1/0	14.88	H	7.95	0.79	22.04	30
1732.5	1.4	QPSK	1/0	14.59	H	7.95	0.79	21.75	30
1754.3	1.4	QPSK	1/0	14.98	H	7.95	0.79	22.14	30
1710.7	1.4	16-QAM	1/5	14.46	V	7.95	0.79	21.62	30
1732.5	1.4	16-QAM	1/0	14.52	V	7.95	0.79	21.68	30
1754.3	1.4	16-QAM	1/0	14.5	V	7.95	0.79	21.66	30
1710.7	1.4	16-QAM	1/5	13.58	H	7.95	0.79	20.74	30
1732.5	1.4	16-QAM	1/0	13.63	H	7.95	0.79	20.79	30
1754.3	1.4	16-QAM	1/0	13.6	H	7.95	0.79	20.76	30
1711.5	3	QPSK	1/0	15.64	V	7.95	0.79	22.8	30
1732.5	3	QPSK	1/0	15.57	V	7.95	0.79	22.73	30
1753.5	3	QPSK	1/0	15.7	V	7.95	0.79	22.86	30
1711.5	3	QPSK	1/0	14.78	H	7.95	0.79	21.94	30
1732.5	3	QPSK	1/0	14.69	H	7.95	0.79	21.85	30
1753.5	3	QPSK	1/0	14.81	H	7.95	0.79	21.97	30
1711.5	3	16-QAM	1/0	14.91	V	7.95	0.79	22.07	30
1732.5	3	16-QAM	1/0	14.83	V	7.95	0.79	21.99	30
1753.5	3	16-QAM	1/0	14.46	V	7.95	0.79	21.62	30
1711.5	3	16-QAM	1/0	13.98	H	7.95	0.79	21.14	30
1732.5	3	16-QAM	1/0	13.87	H	7.95	0.79	21.03	30
1753.5	3	16-QAM	1/0	13.59	H	7.95	0.79	20.75	30
1712.5	5	QPSK	1/0	15.6	V	7.95	0.79	22.76	30
1732.5	5	QPSK	1/0	15.65	V	7.95	0.79	22.81	30
1752.5	5	QPSK	1/24	15.71	V	7.95	0.79	22.87	30
1712.5	5	QPSK	1/0	14.67	H	7.95	0.79	21.83	30
1732.5	5	QPSK	1/0	14.74	H	7.95	0.79	21.9	30
1752.5	5	QPSK	1/24	14.79	H	7.95	0.79	21.95	30
1712.5	5	16-QAM	1/0	14.21	V	7.95	0.79	21.37	30
1732.5	5	16-QAM	1/0	15.19	V	7.95	0.79	22.35	30
1752.5	5	16-QAM	1/24	14.7	V	7.95	0.79	21.86	30
1712.5	5	16-QAM	1/0	13.31	H	7.95	0.79	20.47	30
1732.5	5	16-QAM	1/0	14.27	H	7.95	0.79	21.43	30
1752.5	5	16-QAM	1/24	13.8	H	7.95	0.79	20.96	30
1715	10	QPSK	1/0	15.75	V	7.95	0.79	22.91	30
1732.5	10	QPSK	1/49	15.54	V	7.95	0.79	22.7	30
1750	10	QPSK	1/0	15.62	V	7.95	0.79	22.78	30
1715	10	QPSK	1/0	14.8	H	7.95	0.79	21.96	30
1732.5	10	QPSK	1/49	14.69	H	7.95	0.79	21.85	30
1750	10	QPSK	1/0	14.66	H	7.95	0.79	21.82	30
1715	10	16-QAM	1/0	14.81	V	7.95	0.79	21.97	30
1732.5	10	16-QAM	1/49	14.73	V	7.95	0.79	21.89	30

1750	10	16-QAM	1/0	14.42	V	7.95	0.79	21.58	30
1715	10	16-QAM	1/0	13.91	H	7.95	0.79	21.07	30
1732.5	10	16-QAM	1/49	13.77	H	7.95	0.79	20.93	30
1750	10	16-QAM	1/0	13.51	H	7.95	0.79	20.67	30
1717.5	15	QPSK	1/0	15.3	V	7.95	0.79	22.46	30
1732.5	15	QPSK	1/74	14.86	V	7.95	0.79	22.02	30
1747.5	15	QPSK	1/0	15.63	V	7.95	0.79	22.79	30
1717.5	15	QPSK	1/0	14.37	H	7.95	0.79	21.53	30
1732.5	15	QPSK	1/74	13.93	H	7.95	0.79	21.09	30
1747.5	15	QPSK	1/0	14.68	H	7.95	0.79	21.84	30
1717.5	15	16-QAM	1/0	14.78	V	7.95	0.79	21.94	30
1732.5	15	16-QAM	1/74	14.16	V	7.95	0.79	21.32	30
1747.5	15	16-QAM	1/0	14.82	V	7.95	0.79	21.98	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	13.28	H	7.95	0.79	20.44	30
1747.5	15	16-QAM	1/0	13.9	H	7.95	0.79	21.06	30
1720	20	QPSK	1/99	15.72	V	7.95	0.79	22.88	30
1732.5	20	QPSK	1/99	15.41	V	7.95	0.79	22.57	30
1745	20	QPSK	1/0	16.18	V	7.95	0.79	23.34	30
1720	20	QPSK	1/99	14.79	H	7.95	0.79	21.95	30
1732.5	20	QPSK	1/99	14.51	H	7.95	0.79	21.67	30
1745	20	QPSK	1/0	15.3	H	7.95	0.79	22.46	30
1720	20	16-QAM	1/99	14.23	V	7.95	0.79	21.39	30
1732.5	20	16-QAM	1/99	15.15	V	7.95	0.79	22.31	30
1745	20	16-QAM	1/0	15.37	V	7.95	0.79	22.53	30
1720	20	16-QAM	1/99	13.27	H	7.95	0.79	20.43	30
1732.5	20	16-QAM	1/99	14.31	H	7.95	0.79	21.47	30
1745	20	16-QAM	1/0	14.53	H	7.95	0.79	21.69	30

6.3 Peak-Average Ratio

Temperature	23 °C
Relative Humidity	55%
Atmospheric Pressure	1022mbar
Test date :	January 22, 2017
Tested By :	Loren Luo

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 5.7.2 Alternate procedure for PAPR 5.1.2 Peak power measurements with a peak power meter The total peak output power may be measured using a broadband peak RF power meter. The power meter must have a video bandwidth that is greater than or equal to the emission bandwidth and utilize a fast-responding diode detector. 5.2.3 Average power measurement with average power meter As an alternative to the use of a spectrum/signal analyzer or EMI receiver to perform a measurement of the total in-band average output power, a wideband RF average power meter with a thermocouple detector or equivalent can be used under certain conditions		

	If the EUT can be configured to transmit continuously (i.e., the burst duty cycle ≥ 98%) and at all times the EUT is transmitting at is maximum output power level, then a conventional wide-band RF power meter can be used. If the EUT cannot be configured to transmit continuously (i.e., the burst duty cycle < 98%), then there are two options for the use of an average power meter. First, a gated average power meter can be used to perform the measurement if the gating parameters can be adjusted such that the power is measured only over active transmission bursts at maximum output power levels. A conventional average power meter can also be used if the measured burst duty cycle is constant (i.e., duty cycle variations are less than ± 2 percent) by performing the measurement over the on/off burst cycles and then correcting (increasing) the measured level by a factor equal to 10log(1/duty cycle)
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	25.31	23.45	1.86
			16QAM	24.41	22.49	1.92
3	1880	RB 1/0	QPSK	25.32	23.45	1.87
			16QAM	24.42	22.62	1.80
5	1880	RB 1/0	QPSK	25.32	22.74	2.58
			16QAM	24.43	22.96	1.47
10	1880	RB 1/0	QPSK	25.34	23.50	1.84
			16QAM	24.53	22.98	1.55
15	1880	RB 1/0	QPSK	25.43	24.03	1.40
			16QAM	24.26	23.29	0.97
20	1880	RB 1/0	QPSK	25.38	23.21	2.17
			16QAM	24.42	23.12	1.30

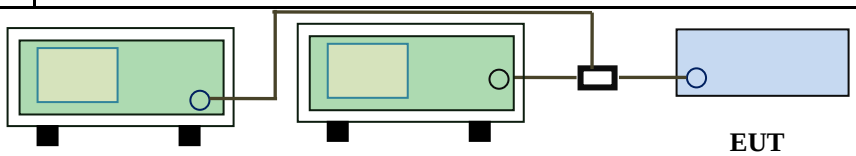
LTE Band 4 (part 27)

BW(MHz)	Frequency (MHz)	Mode	Modulation	Conducted Power (dBm)		Peak-Average Ratio (PAR)
				Peak	Average	
1.4	1732.5	RB 1/0	QPSK	25.26	23.47	1.79
			16QAM	24.54	22.52	2.02
3	1732.5	RB 1/0	QPSK	25.34	23.51	1.83
			16QAM	24.62	22.79	1.83
5	1732.5	RB 1/0	QPSK	25.31	23.61	1.70
			16QAM	24.57	23.15	1.42
10	1732.5	RB 1/0	QPSK	25.3	23.57	1.73
			16QAM	24.46	22.73	1.73
15	1732.5	RB 1/0	QPSK	25.28	22.87	2.41
			16QAM	24.32	22.17	2.15
20	1732.5	RB 1/0	QPSK	25.33	23.42	1.91
			16QAM	24.38	23.18	1.20

6.4 Occupied Bandwidth

Temperature	23 °C
Relative Humidity	55%
Atmospheric Pressure	1022mbar
Test date :	January 22, 2017
Tested By :	Loren Luo

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	1.1110	1.444
			QPSK	1.1072	1.440
1.4	18900	1880	16QAM	1.1083	1.326
			QPSK	1.1071	1.323
1.4	19193	1909.3	16QAM	1.111	1.434
			QPSK	1.1131	1.472
3	18615	1851.5	16QAM	2.7612	3.133
			QPSK	2.7694	3.081
3	18900	1880	16QAM	2.7534	3.075
			QPSK	2.7575	3.065
3	19185	1908.5	16QAM	2.7539	3.128
			QPSK	2.7639	3.174
5	18625	1852.5	16QAM	4.5321	5.023
			QPSK	4.5400	5.053
5	18900	1880	16QAM	4.5290	5.029
			QPSK	4.5292	5.054
5	19175	1907.5	16QAM	4.5266	5.021
			QPSK	4.5205	5.032
10	18650	1855	16QAM	9.0893	10.22
			QPSK	9.0735	10.20
10	18900	1880	16QAM	9.0348	10.08
			QPSK	9.0326	10.14
10	19150	1905	16QAM	9.0440	10.16
			QPSK	9.0411	9.886
15	18675	1857.5	16QAM	13.481	14.85
			QPSK	13.494	14.95
15	18900	1880	16QAM	13.445	14.72
			QPSK	13.405	14.67
15	19125	1902.5	16QAM	13.385	14.59
			QPSK	13.424	14.60

20	18700	1860	16QAM	17.902	19.09
			QPSK	17.891	19.12
20	18900	1880	16QAM	17.840	19.11
			QPSK	17.816	19.06
20	19100	1900	16QAM	17.836	19.24
			QPSK	17.844	19.27

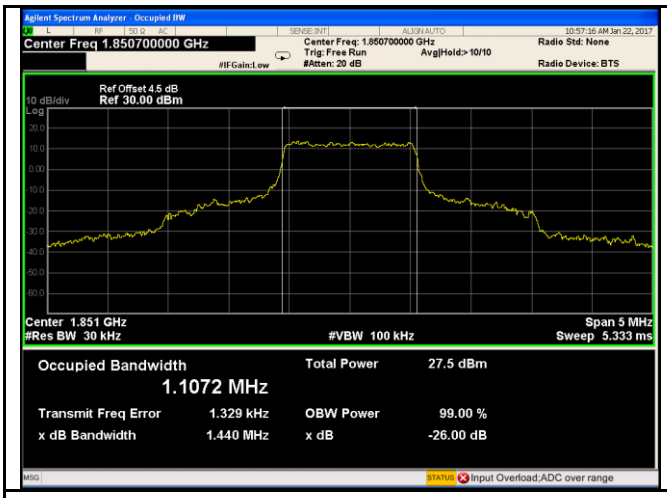
LTE Band 4 (Part 27)

BW(MHz)	Channel	Frequency (MHz)	Modulation	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
1.4	19957	1710.7	16QAM	1.0960	1.322
			QPSK	1.1081	1.344
1.4	20175	1732.5	16QAM	1.1058	1.342
			QPSK	1.1081	1.348
1.4	20393	1754.3	16QAM	1.1062	1.338
			QPSK	1.1089	1.337
3	19965	1711.5	16QAM	2.7491	3.045
			QPSK	2.7590	3.049
3	20175	1732.5	16QAM	2.7520	3.056
			QPSK	2.7486	3.068
3	20385	1753.5	16QAM	2.7444	3.067
			QPSK	2.7411	3.074
5	19975	1712.5	16QAM	4.5241	5.018
			QPSK	4.5323	5.028
5	20175	1732.5	16QAM	4.5169	5.033
			QPSK	4.5221	5.014
5	20375	1752.5	16QAM	4.5395	5.007
			QPSK	4.5272	5.005
10	20000	1715	16QAM	9.0677	10.01
			QPSK	9.0488	10.18
10	20175	1732.5	16QAM	9.0398	10.00
			QPSK	9.0304	10.04
10	20350	1750	16QAM	9.0423	10.13
			QPSK	9.0729	10.08
15	20025	1717.5	16QAM	13.479	14.71
			QPSK	13.743	14.81
15	20175	1732.5	16QAM	13.430	14.71
			QPSK	13.414	14.65
15	20325	1747.5	16QAM	13.465	14.70
			QPSK	13.469	14.72

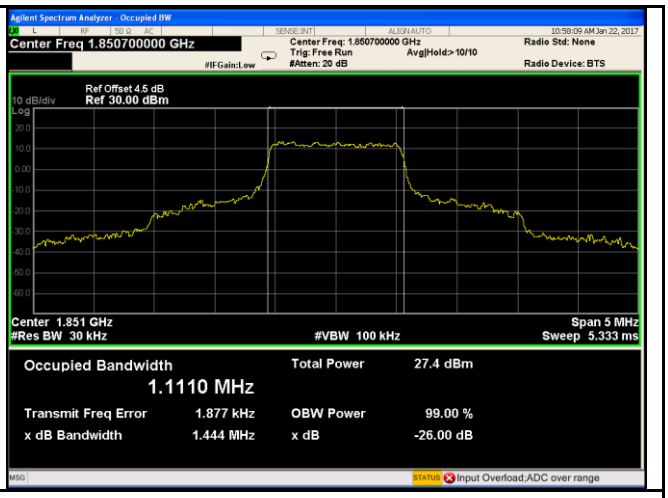
20	20050	1720	16QAM	17.857	19.15
			QPSK	17.853	18.97
20	20175	1732.5	16QAM	17.874	19.27
			QPSK	17.834	19.29
20	20300	1745	16QAM	17.916	19.17
			QPSK	17.871	19.20

Test Plots

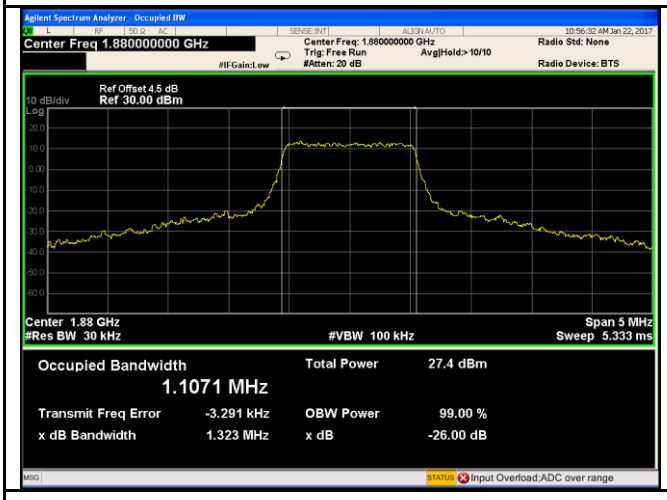
LTE Band 2 (Part 24E)



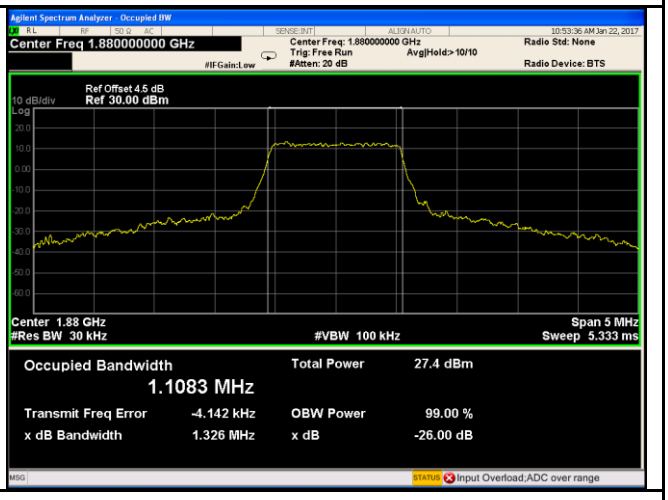
LTE band 2 - Low CH QPSK-1.4



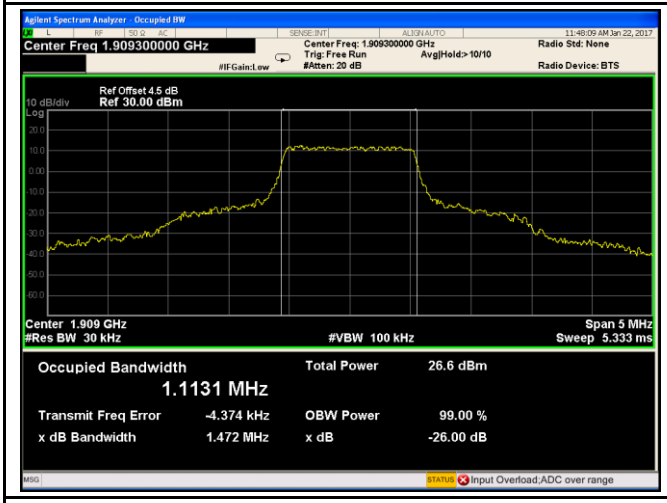
LTE band 2 - Low CH 16QAM-1.4



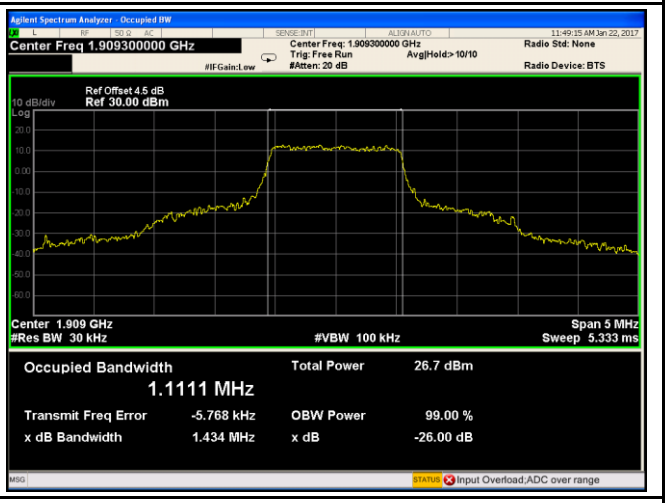
LTE band 2 - Middle CH QPSK-1.4



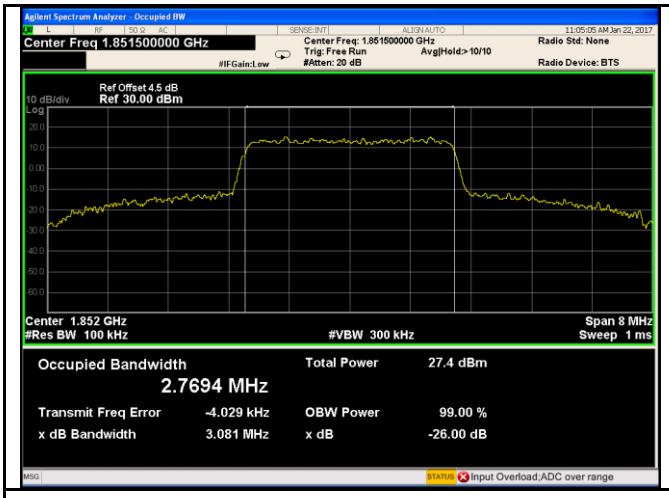
LTE band 2 - Middle CH 16QAM-1.4



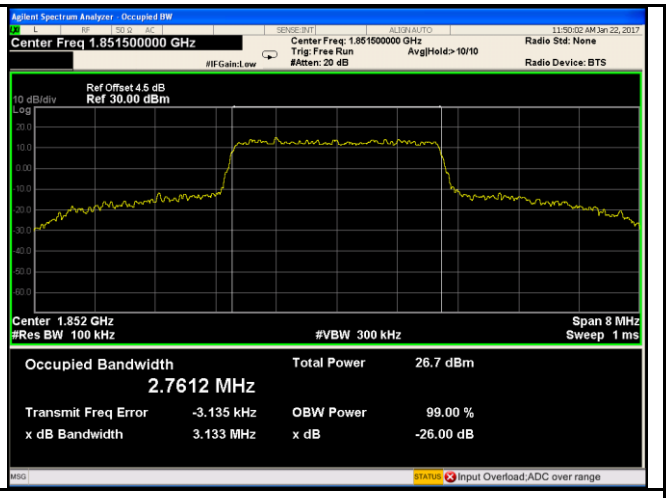
LTE band 2 - High CH QPSK-1.4



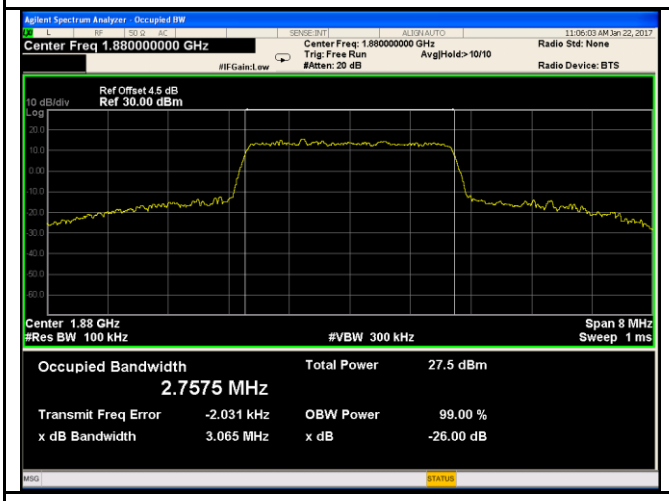
LTE band 2 - High CH 16QAM-1.4



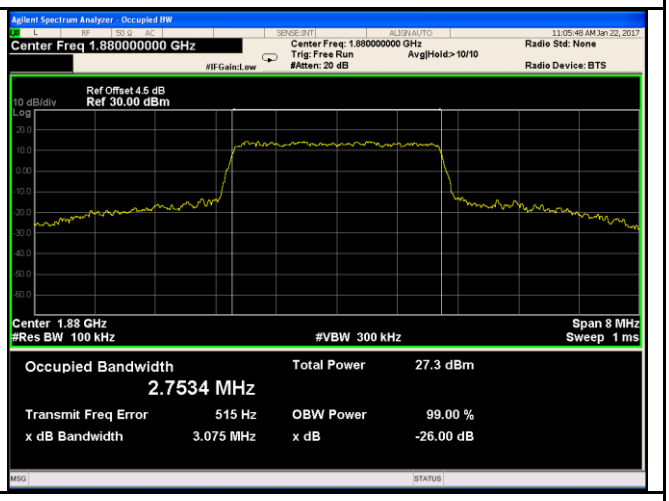
LTE band 2 - Low CH QPSK-3



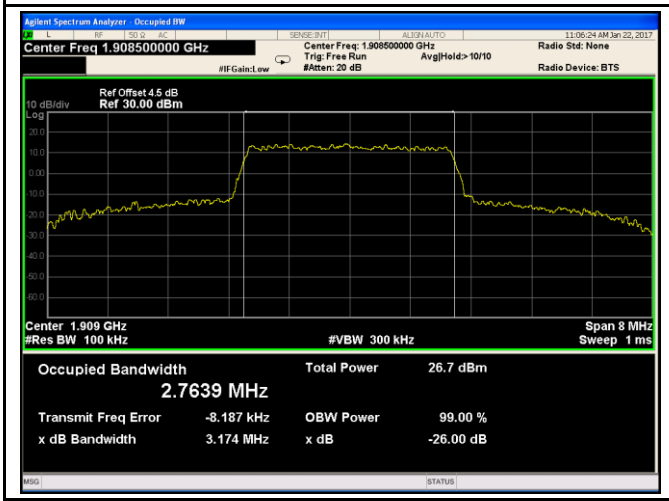
LTE band 2 - Low CH 16QAM-3



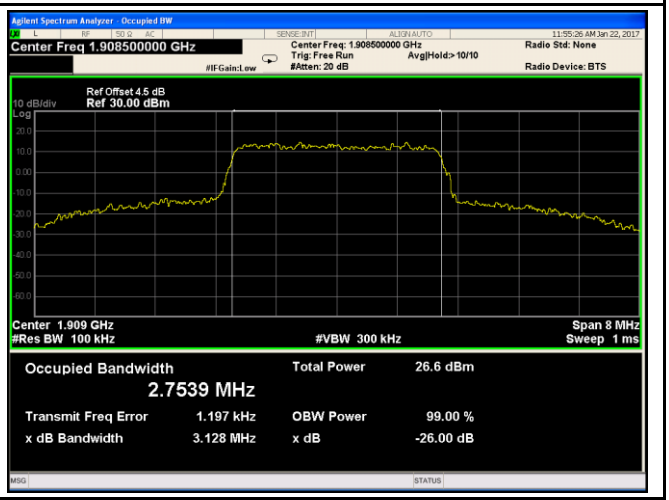
LTE band 2 - Middle CH QPSK-3



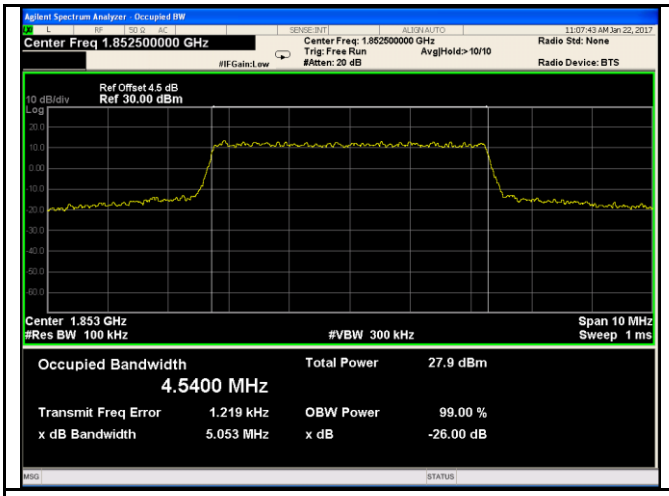
LTE band 2 - Middle CH 16QAM-3



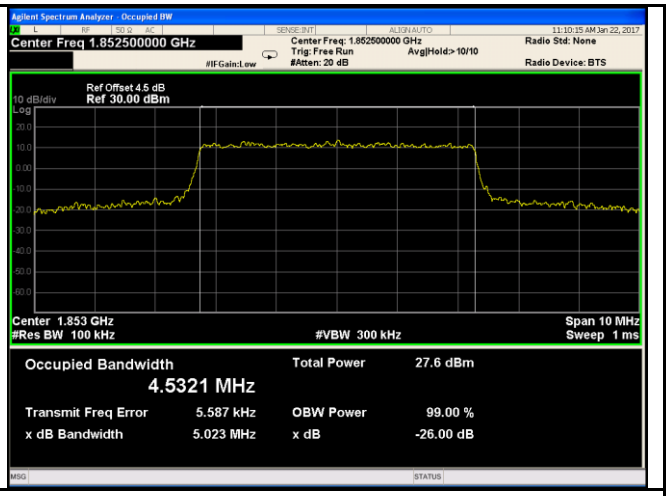
LTE band 2 - High CH QPSK-3



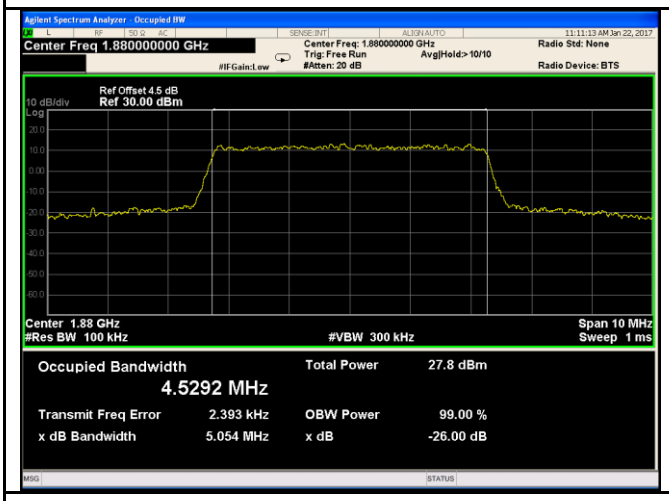
LTE band 2 - High CH 16QAM-3



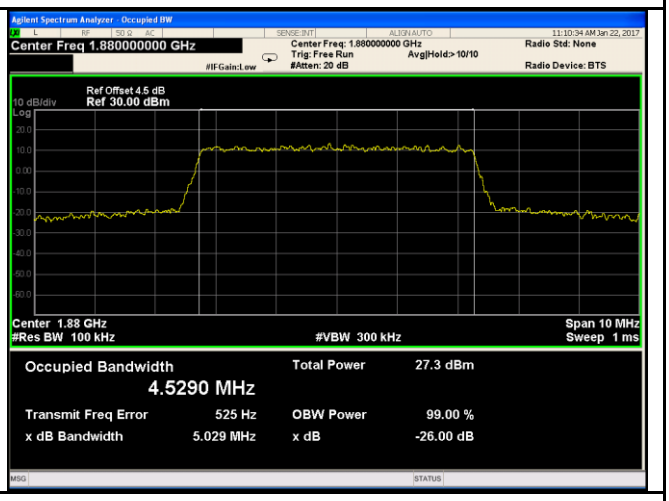
LTE band 2 - Low CH QPSK-5



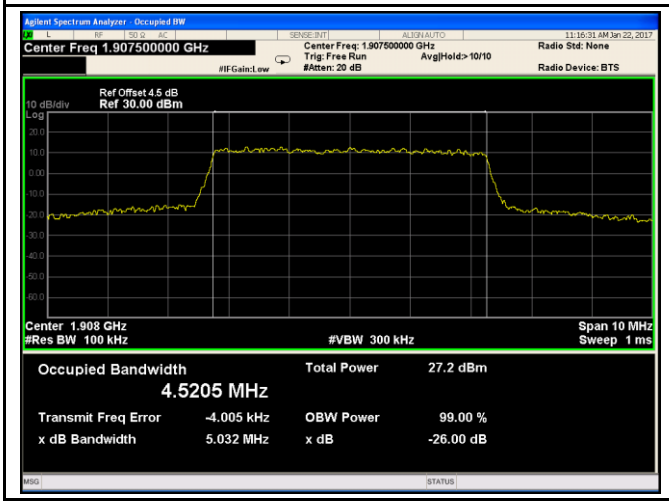
LTE band 2 - Low CH 16QAM-5



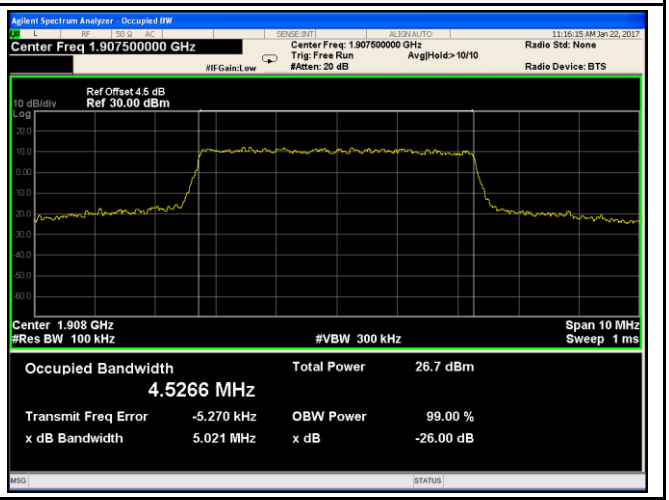
LTE band 2 - Middle CH QPSK-5



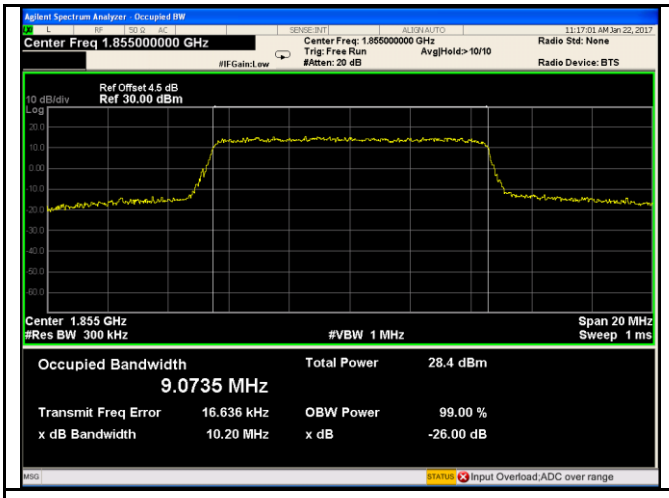
LTE band 2 - Middle CH 16QAM-5



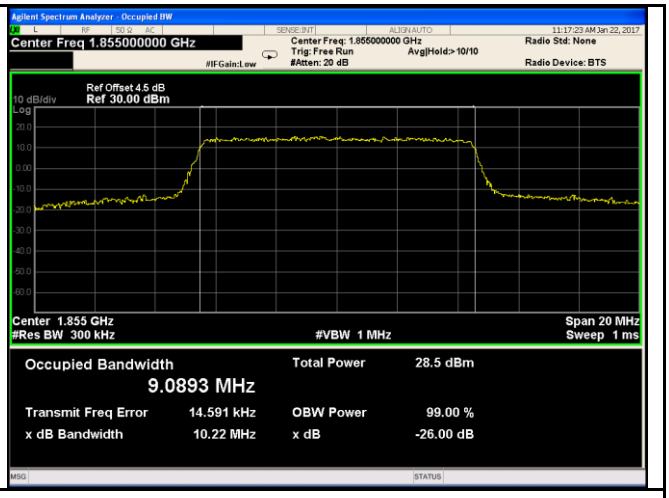
LTE band 2 - High CH QPSK-5



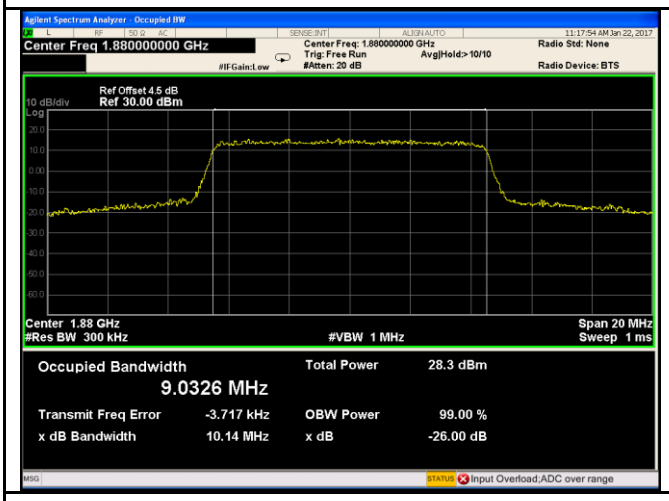
LTE band 2 - High CH 16QAM-5



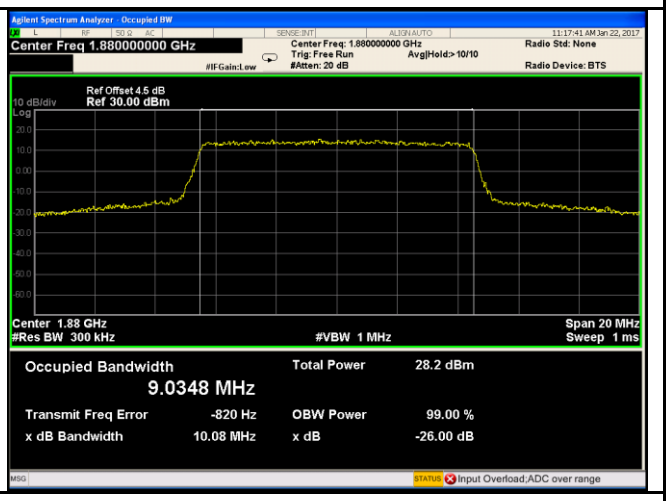
LTE band 2 - Low CH QPSK-10



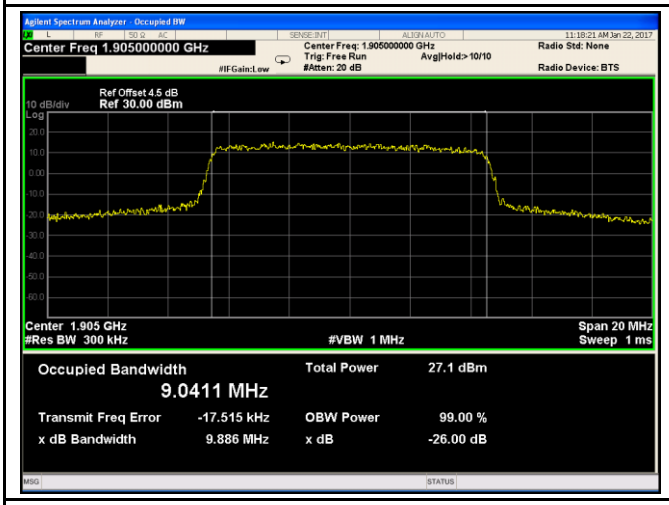
LTE band 2 - Low CH 16QAM-10



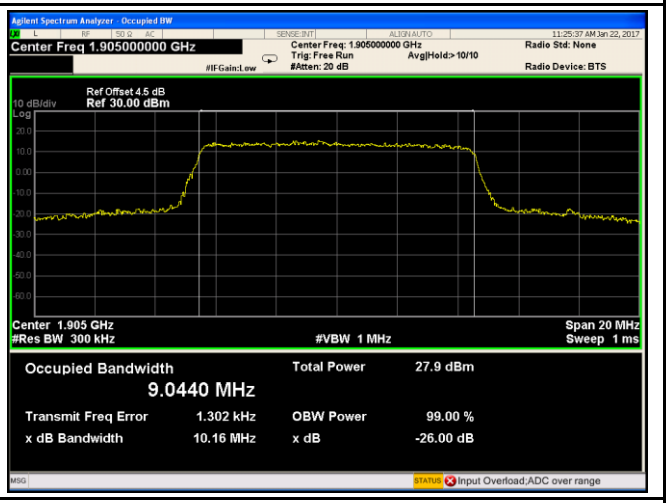
LTE band 2 - Middle CH QPSK-10



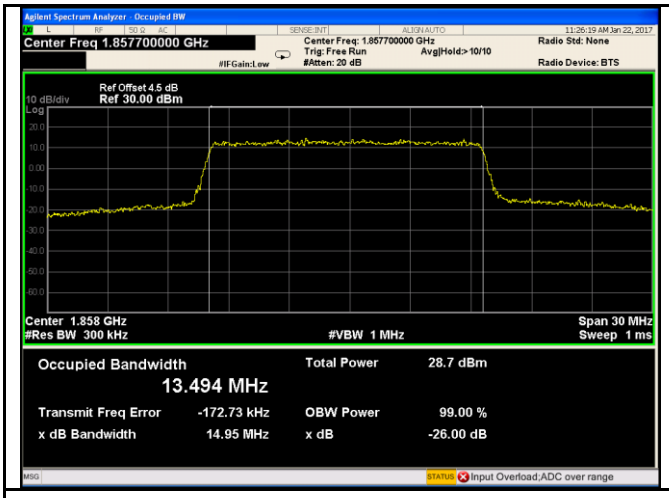
LTE band 2 - Middle CH 16QAM-10



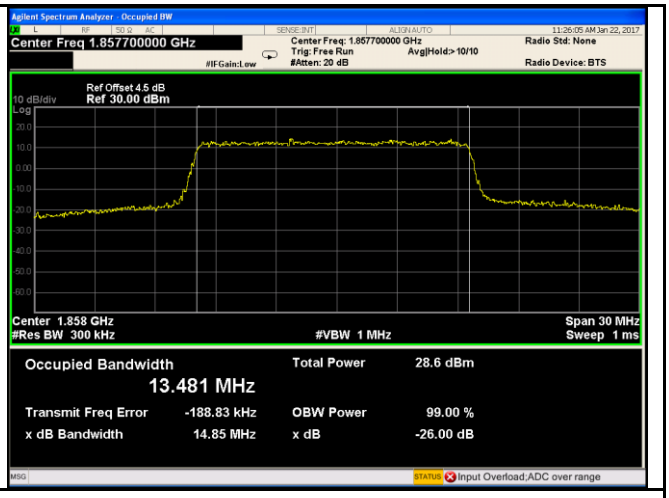
LTE band 2 - High CH QPSK-10



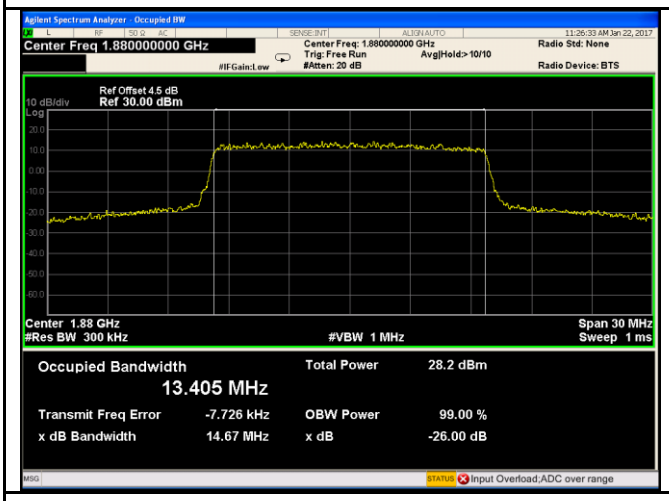
LTE band 2 - High CH 16QAM-10



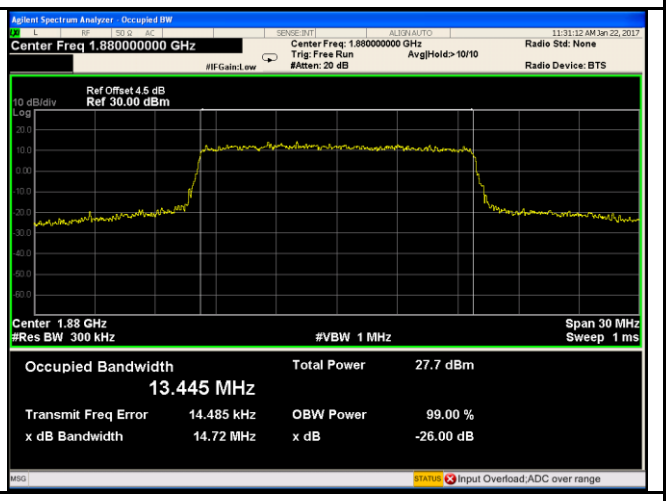
LTE band 2 - Low CH QPSK-15



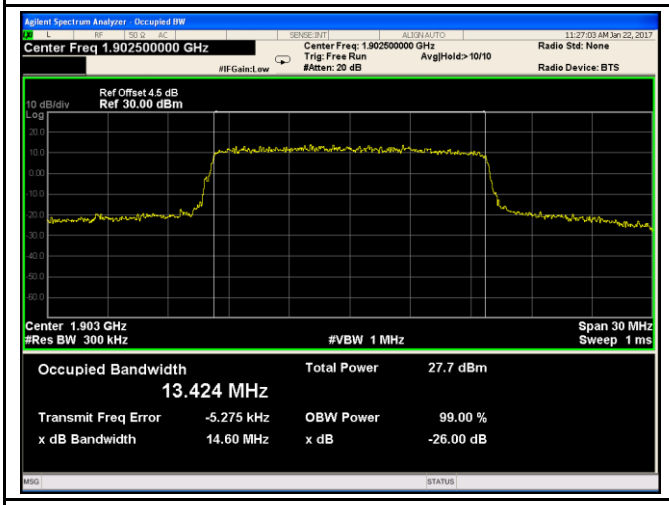
LTE band 2 - Low CH 16QAM-15



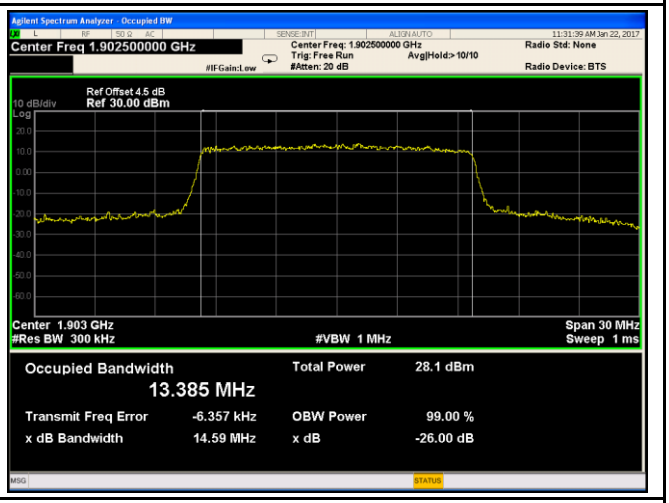
LTE band 2 - Middle CH QPSK-15



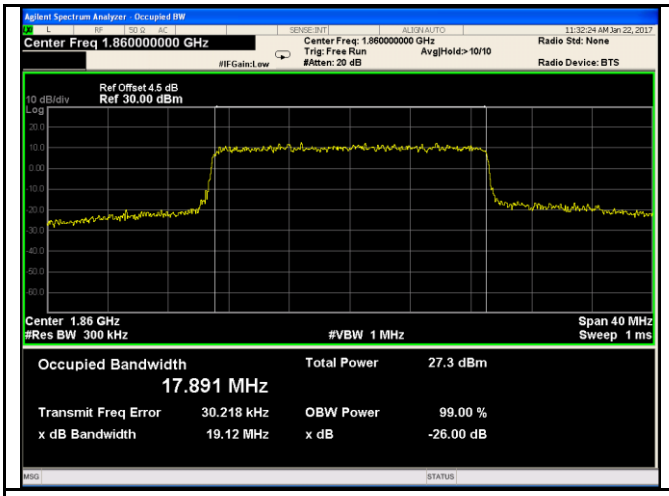
LTE band 2 - Middle CH 16QAM-15



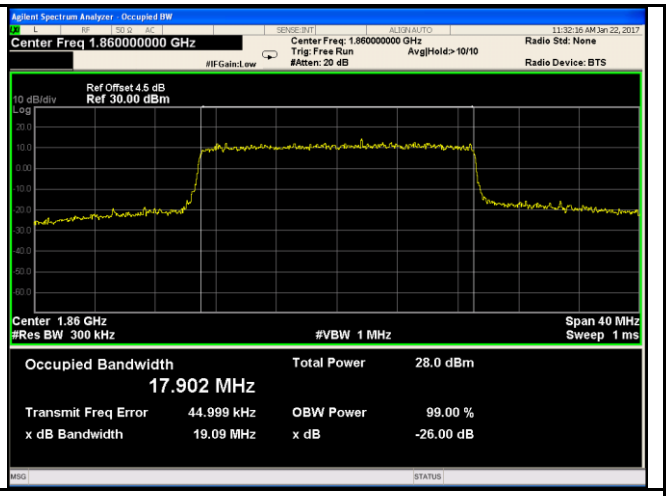
LTE band 2 - High CH QPSK-15



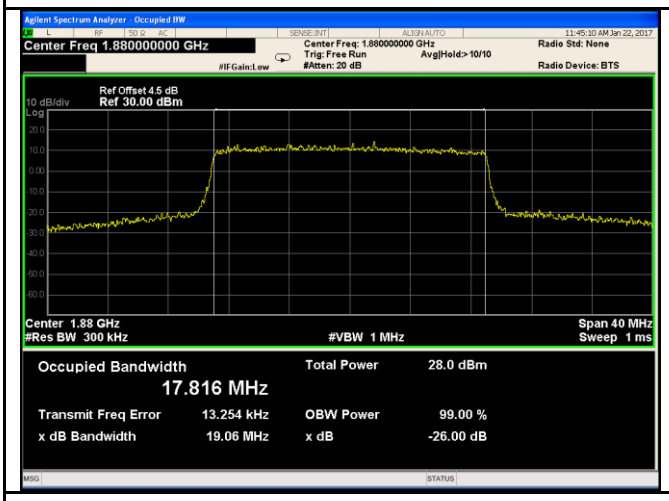
LTE band 2 - High CH 16QAM-15



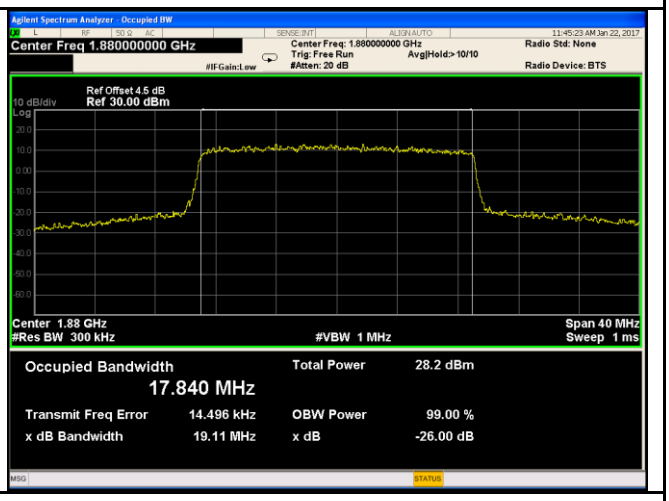
LTE band 2 - Low CH QPSK-20



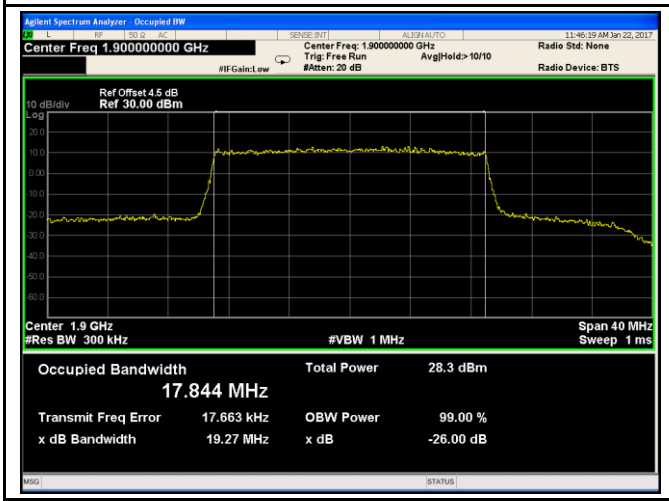
LTE band 2 - Low CH 16QAM-20



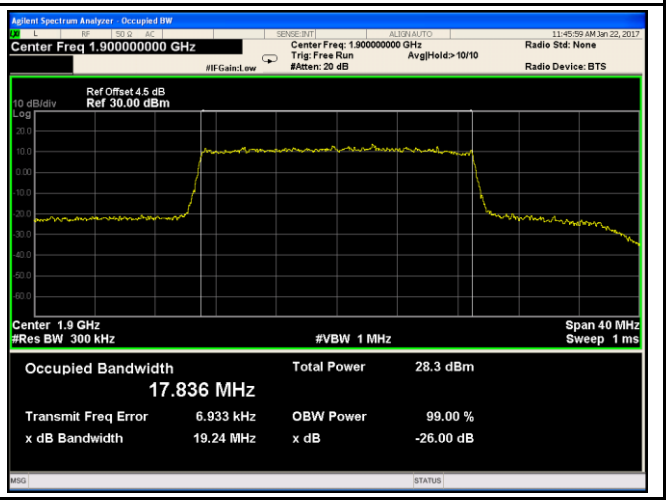
LTE band 2 - Middle CH QPSK-20



LTE band 2 - Middle CH 16QAM-20

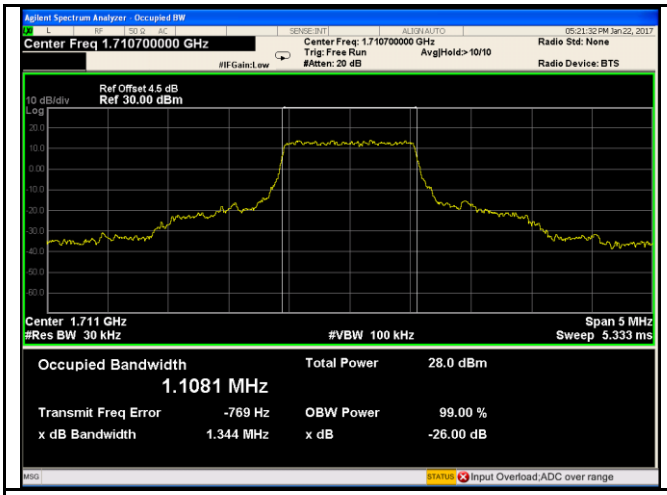


LTE band 2 - High CH QPSK-20

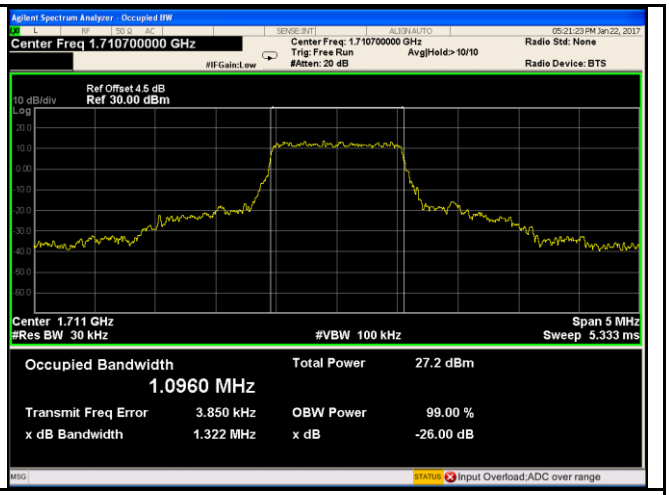


LTE band 2 - High CH 16QAM-20

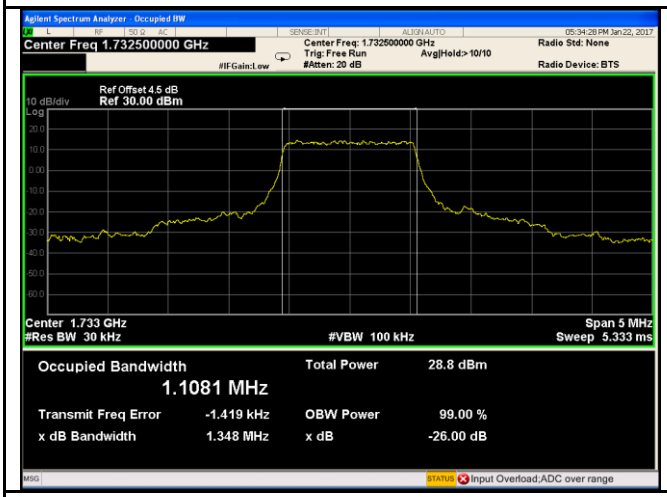
LTE Band 4 (Part 27)



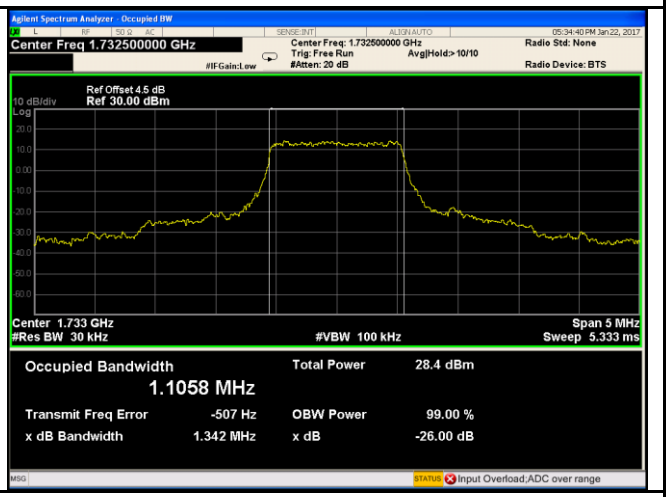
LTE band 4 - Low CH QPSK-1.4



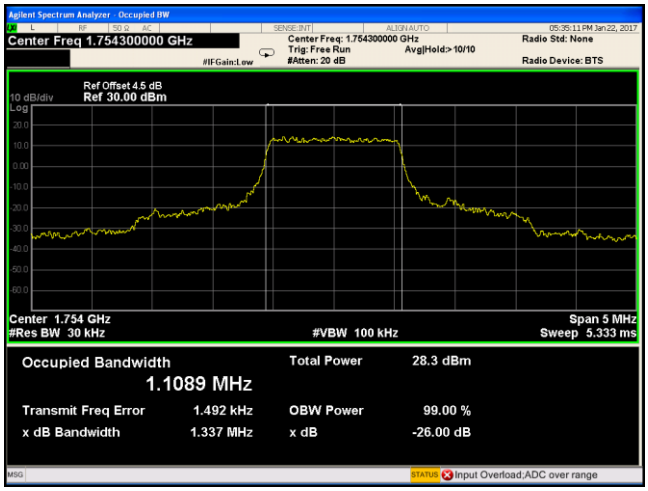
LTE band 4 - Low CH 16QAM-1.4



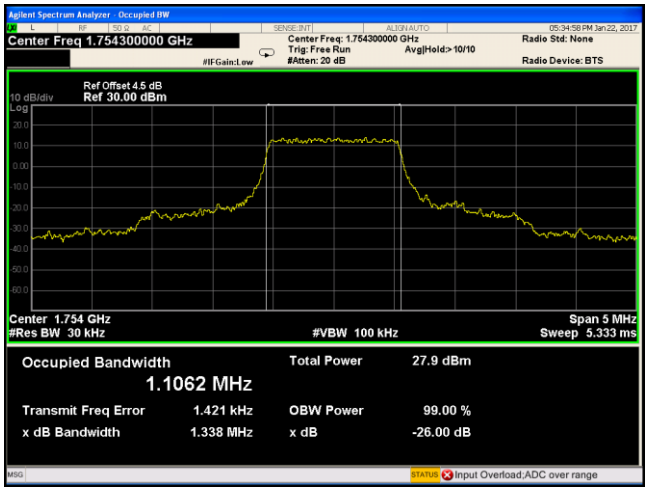
LTE band 4 - Middle CH QPSK-1.4



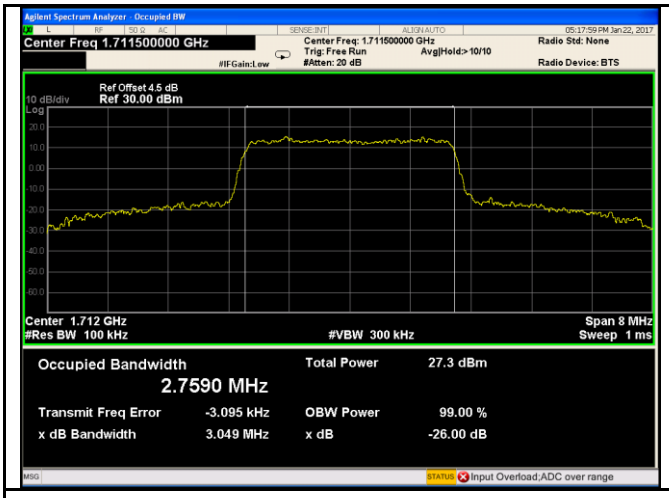
LTE band 4 - Middle CH 16QAM-1.4



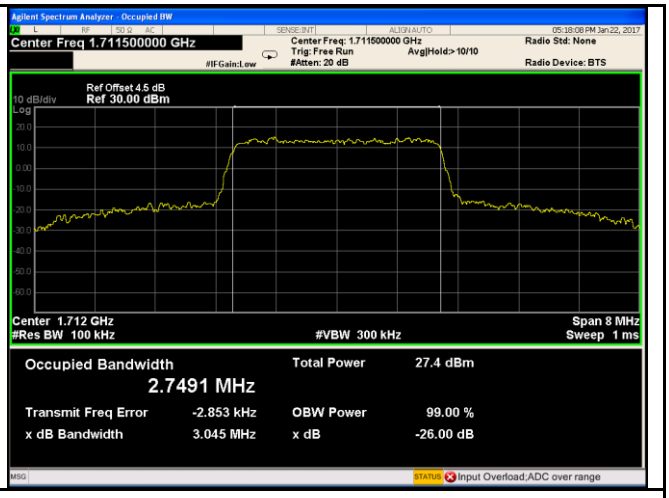
LTE band 4 - High CH QPSK-1.4



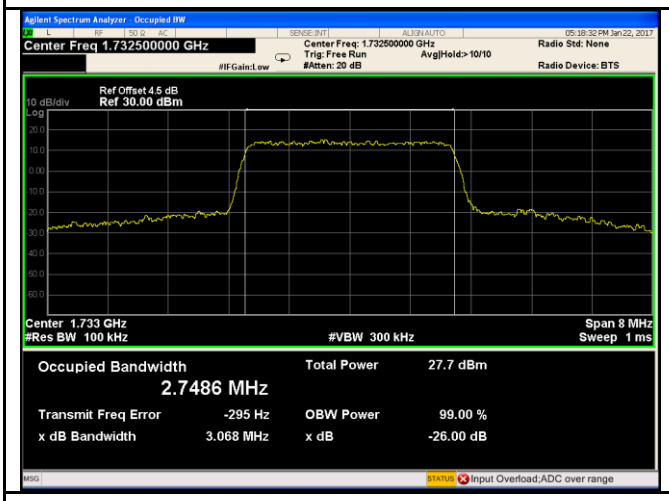
LTE band 4 - High CH 16QAM-1.4



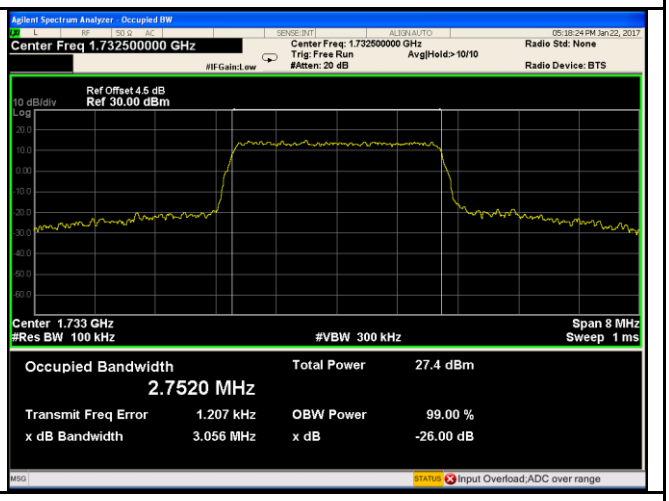
LTE band 4 - Low CH QPSK-3



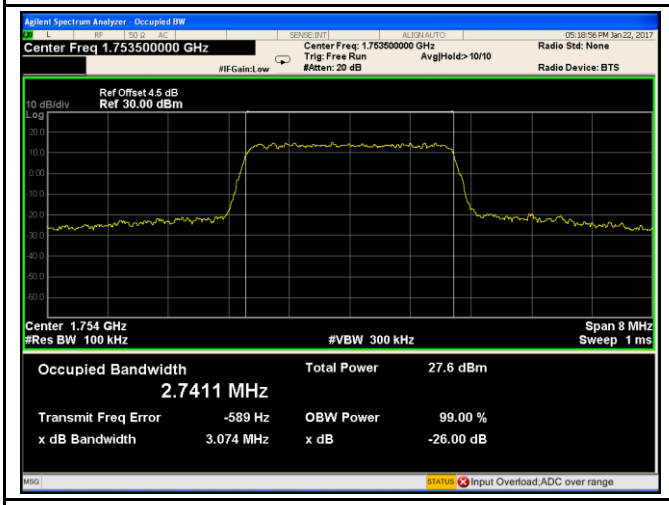
LTE band 4 - Low CH 16QAM-3



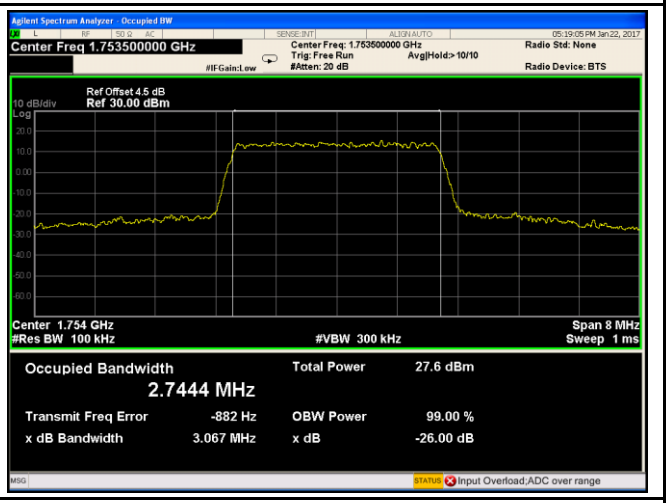
LTE band 4 - Middle CH QPSK-3



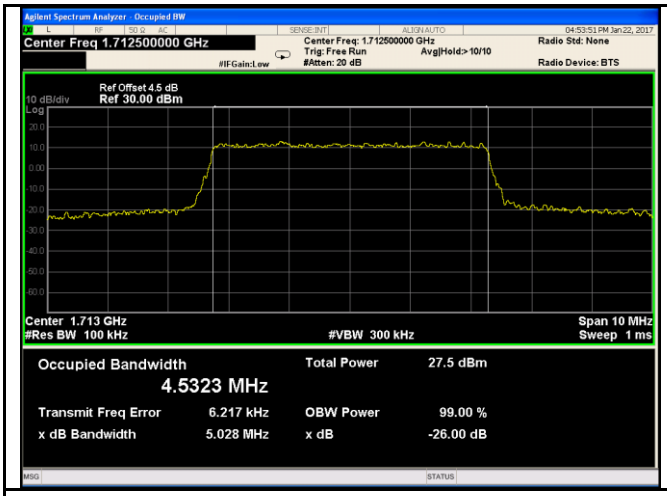
LTE band 4 - Middle CH 16QAM-3



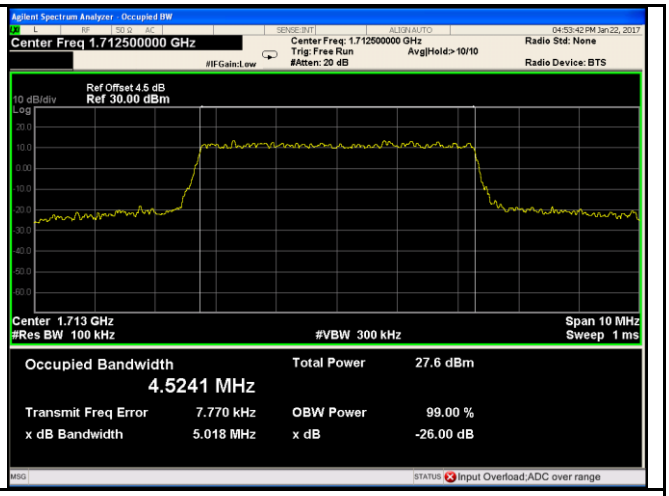
LTE band 4 - High CH QPSK-3



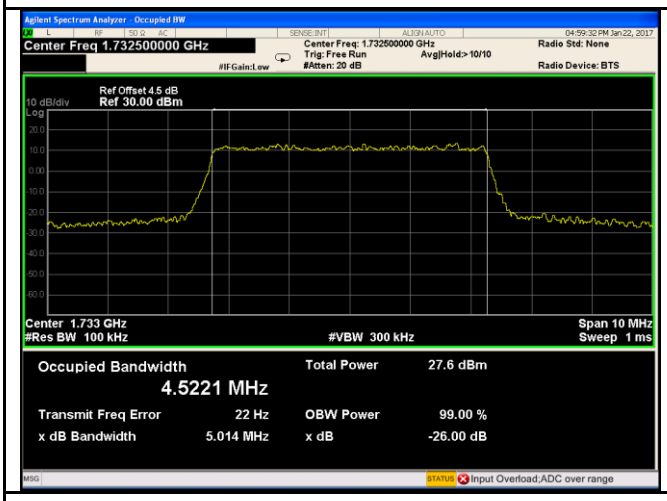
LTE band 4 - High CH 16QAM-3



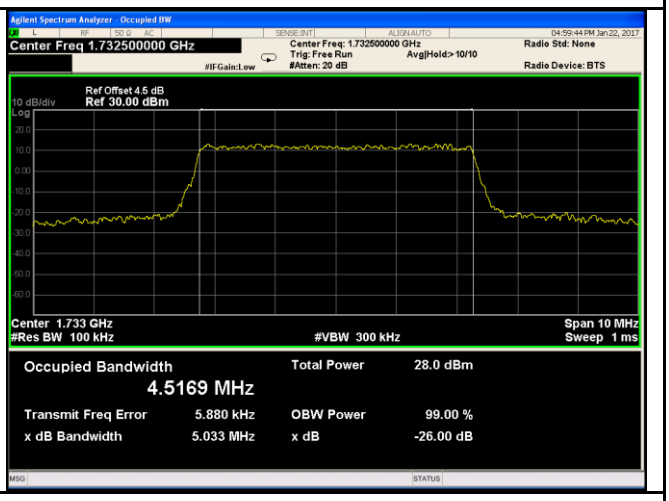
LTE band 4 - Low CH QPSK-5



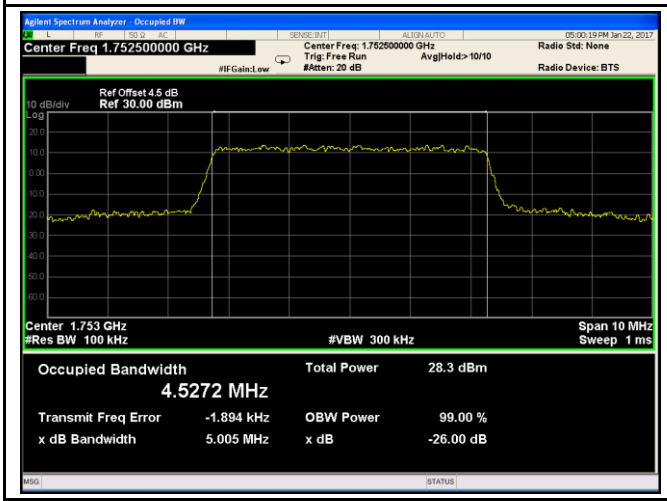
LTE band 4 - Low CH 16QAM-5



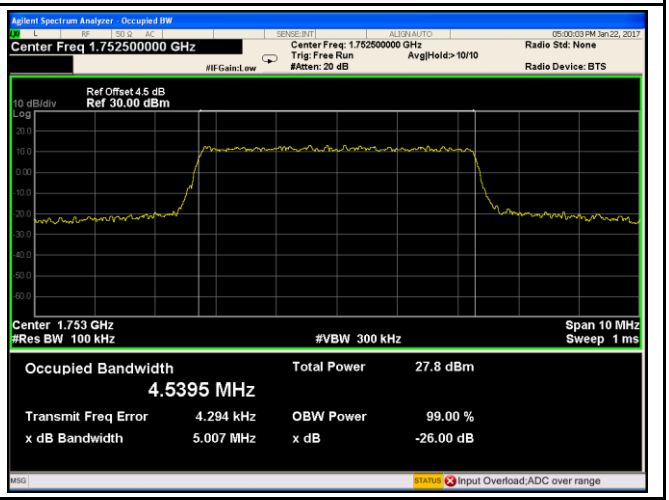
LTE band 4 - Middle CH QPSK-5



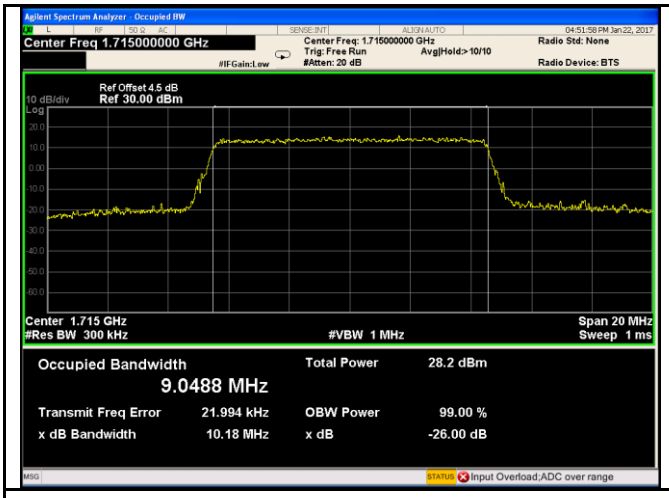
LTE band 4 - Middle CH 16QAM-5



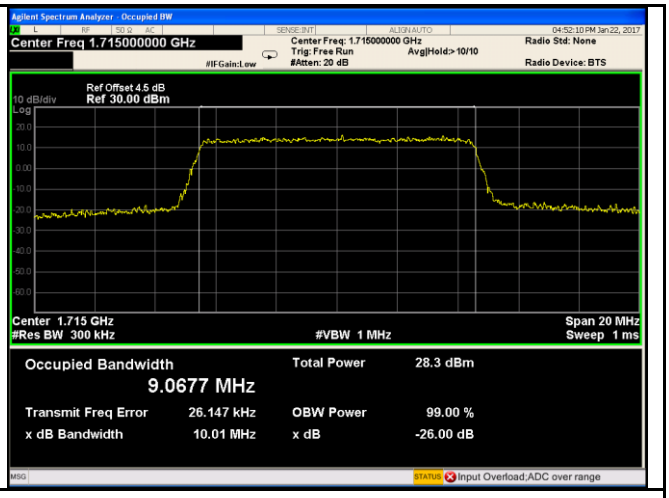
LTE band 4 - High CH QPSK-5



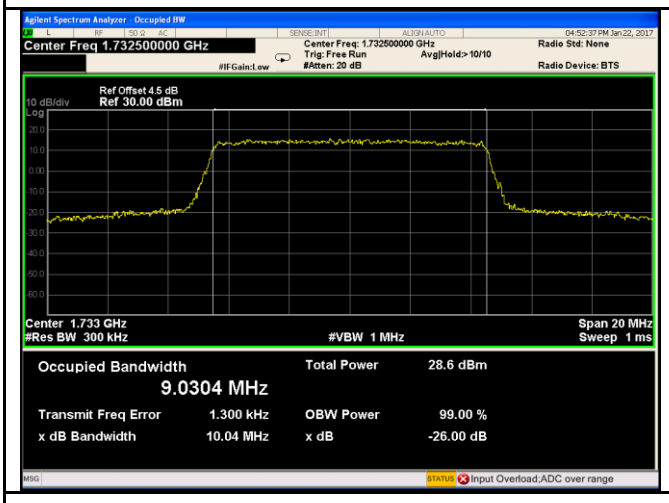
LTE band 4 - High CH 16QAM-5



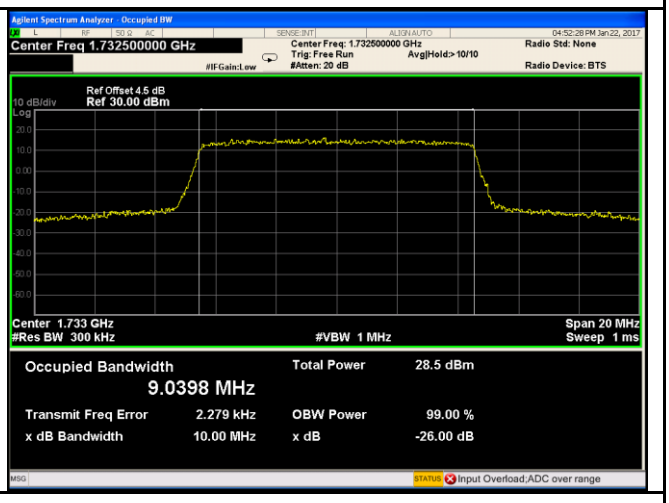
LTE band 4 - Low CH QPSK-10



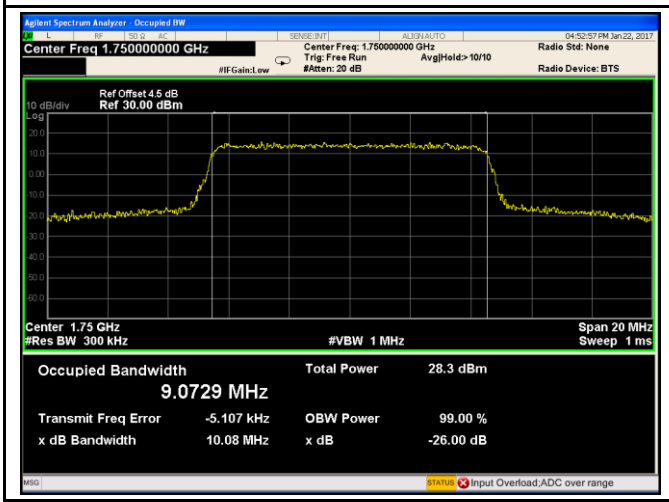
LTE band 4 - Low CH 16QAM-10



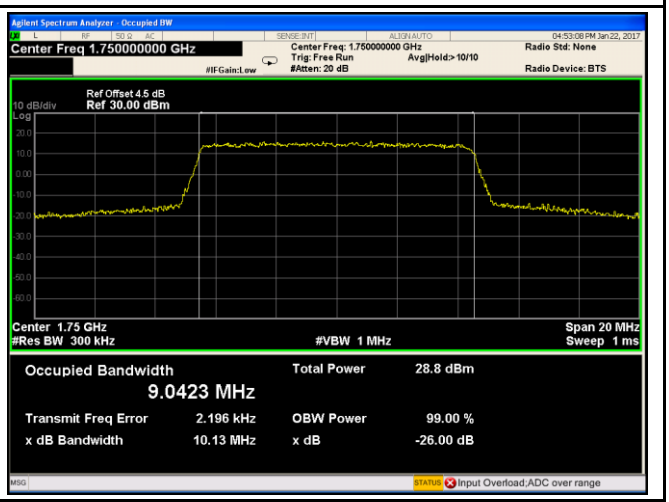
LTE band 4 - Middle CH QPSK-10



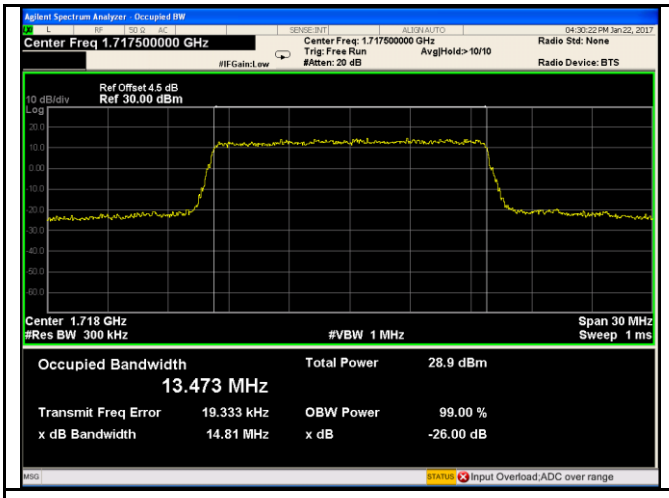
LTE band 4 - Middle CH 16QAM-10



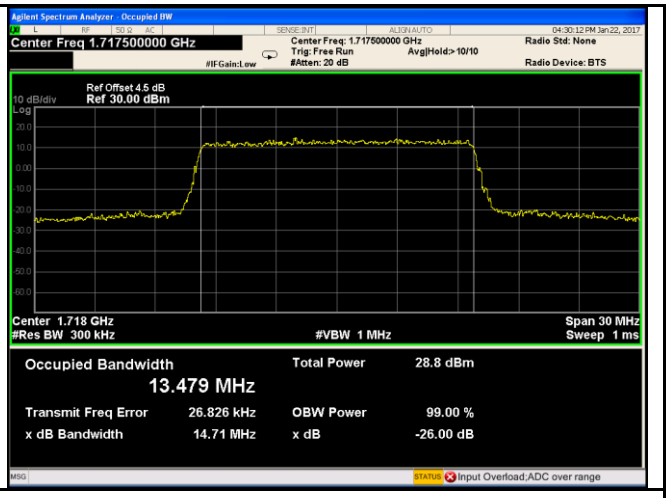
LTE band 4 - High CH QPSK-10



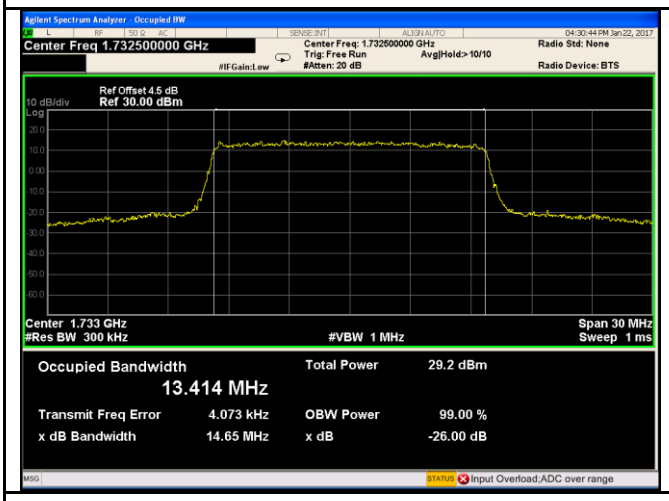
LTE band 4 - High CH 16QAM-10



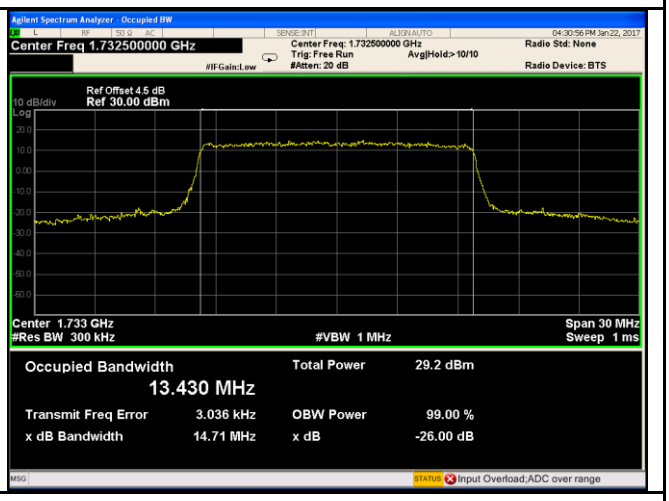
LTE band 4 - Low CH QPSK-15



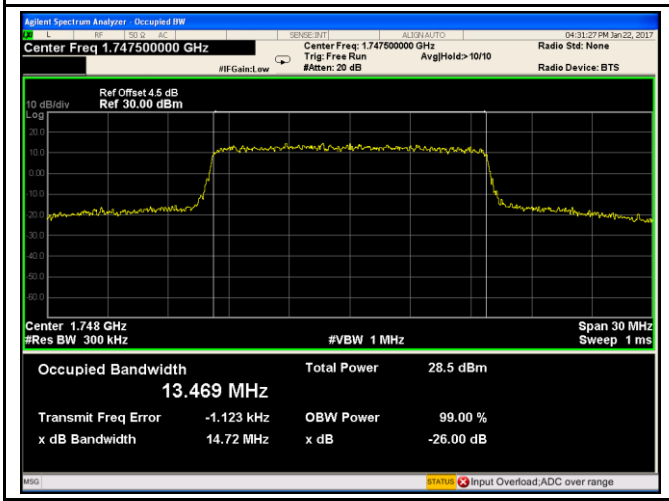
LTE band 4 - Low CH 16QAM-15



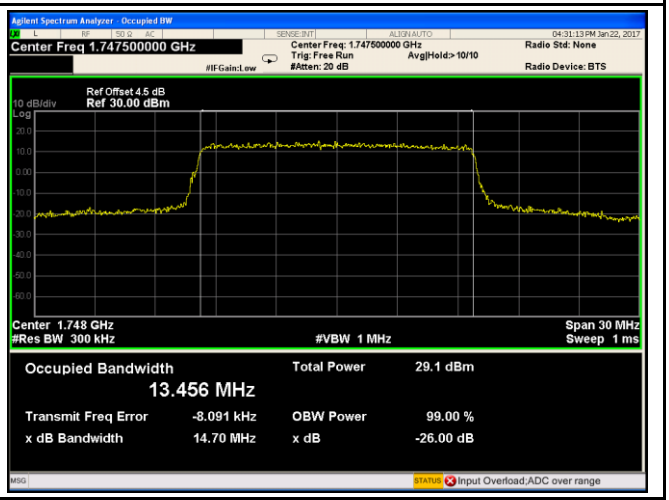
LTE band 4 - Middle CH QPSK-15



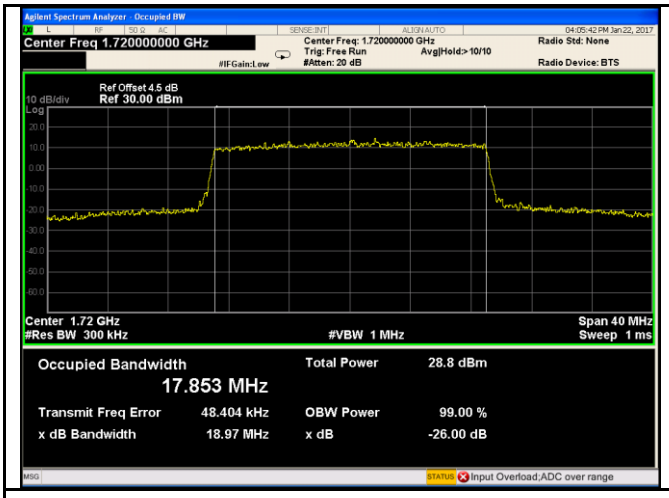
LTE band 4 - Middle CH 16QAM-15



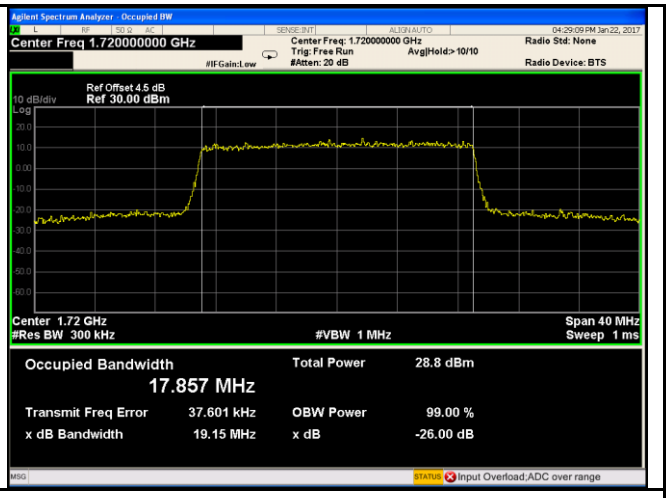
LTE band 4 - High CH QPSK-15



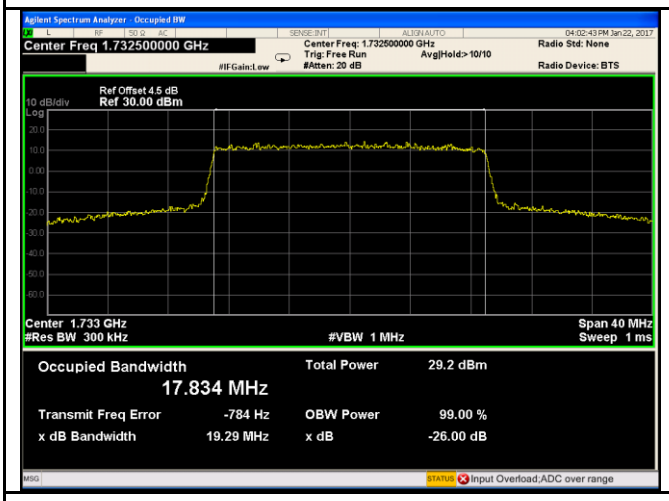
LTE band 4 - High CH 16QAM-15



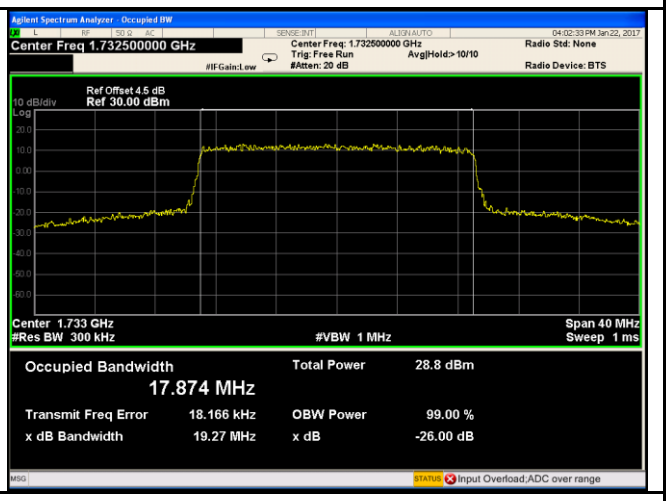
LTE band 4 - Low CH QPSK-20



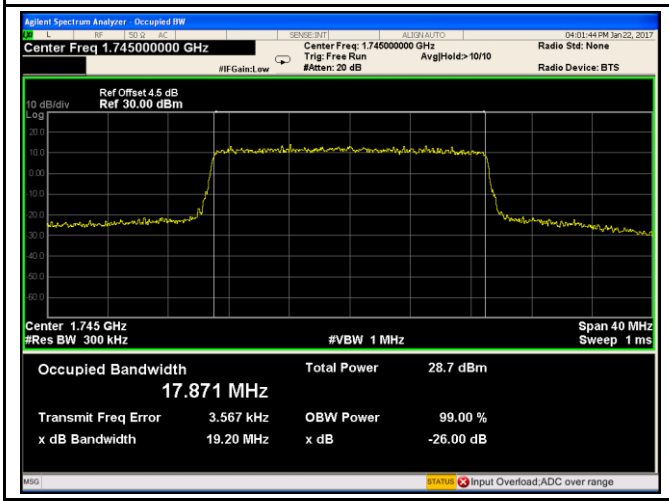
LTE band 4 - Low CH 16QAM-20



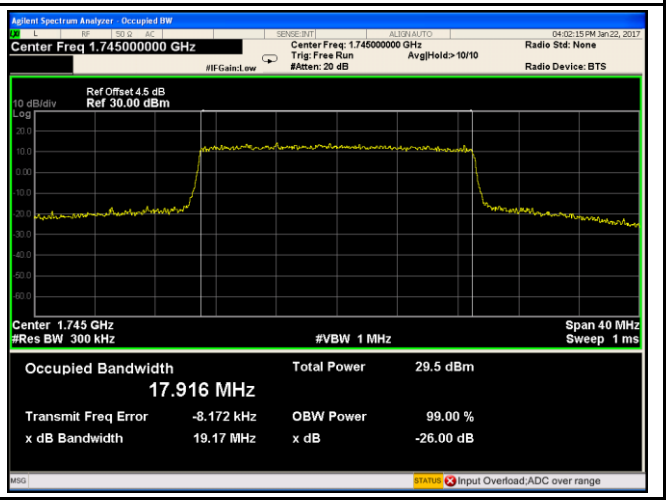
LTE band 4 - Middle CH QPSK-20



LTE band 4 - Middle CH 16QAM-20



LTE band 4 - High CH QPSK-20

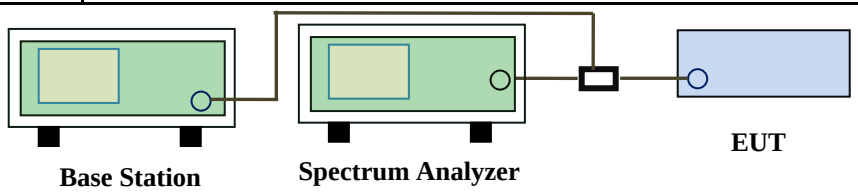


LTE band 4 - High CH 16QAM-20

6.5 Spurious Emissions at Antenna Terminals

Temperature	23 °C
Relative Humidity	55%
Atmospheric Pressure	1022mbar
Test date :	January 22, 2017
Tested By :	Loren Luo

Requirement(s):

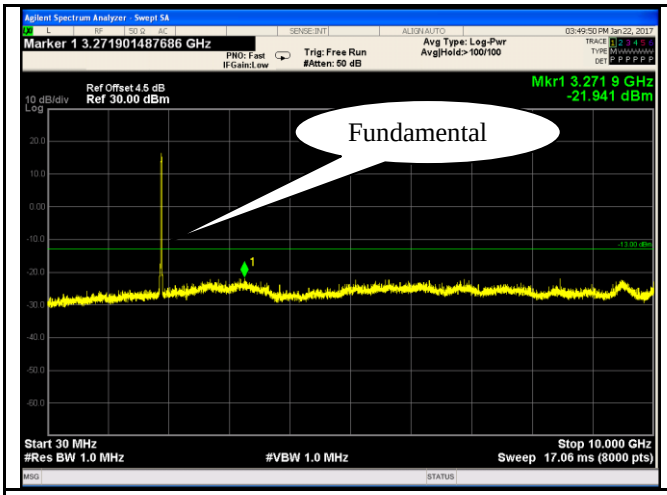
Spec	Item	Requirement	Applicable
§2.1051, §22.917(a)& §24.238(a) § 27.53(h)	a)	The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 43 + 10 log (P) dB	☑
Test Setup			
Test Procedure	- The EUT was connected to Spectrum Analyzer and Base Station via power divider. - The Band Edges of low and high channels for the highest RF powers were measured. - Setting RBW as roughly BW/100.		
Remark			
Result	☑ Pass ☐ Fail		

Test Data ☑ Yes ☐ N/A

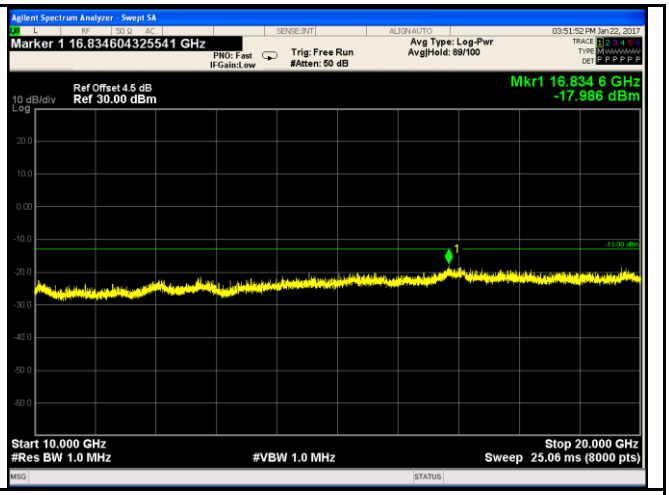
Test Plot ☑ Yes (See below) ☐ N/A

Test Plots 30MHz-5GHz

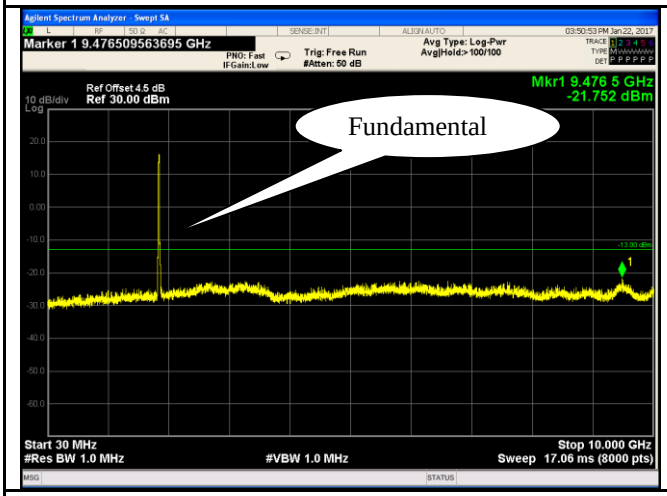
LTE Band 2 (Part 24E)



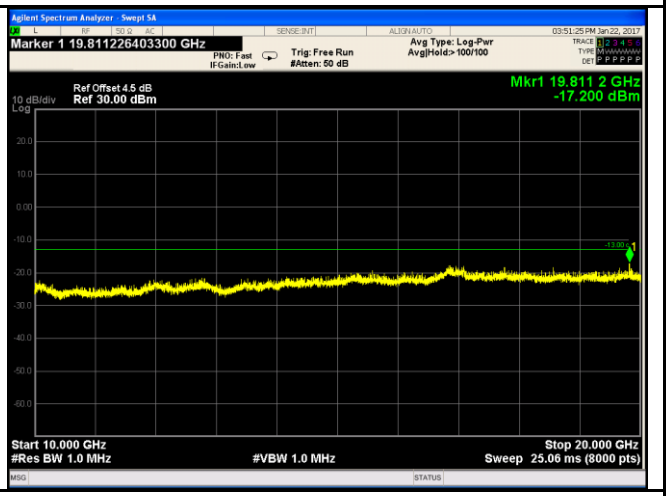
LTE Band 2 - Low Channel-1



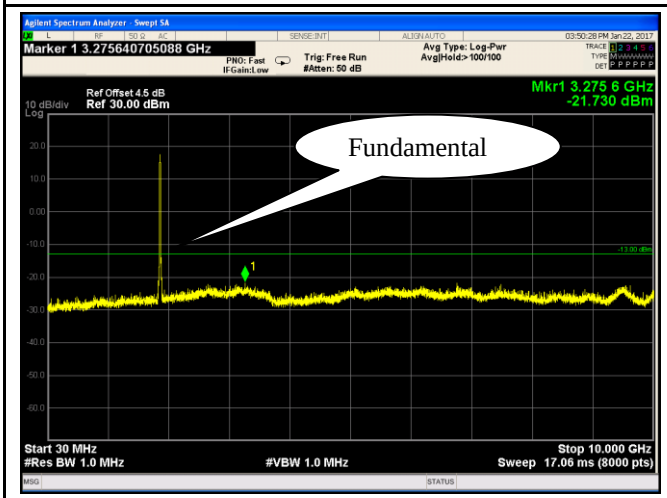
LTE Band 2 - Low Channel-2



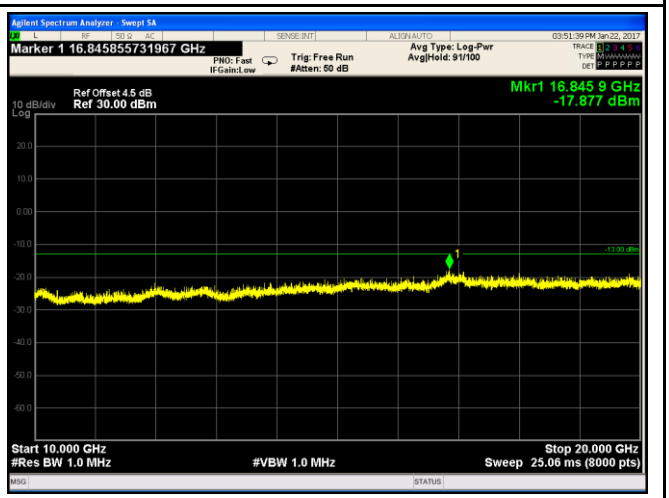
LTE Band 2 Middle Channel-1



LTE Band 2 Middle Channel-2



LTE Band 2 - High Channel-1



LTE Band 2 - High Channel-2