RF TEST REPORT

Report No.: 17070659-FCC-R5

Supersede Report No.: N/A

Applicant	TECNO MOBILE LIMITED
Product Name	Mobile phone
Model No.	AX8
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	July 29 to September 14, 2017
Issue Date	September 15, 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

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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
17070659-FCC-R5	NONE	Original	September 15, 2017

2. Customer information

Applicant Name	TECNO MOBILE LIMITED
Applicant Add	ROOMS 05-15, 13A/F., SOUTH TOWER, WORLD FINANCE CENTRE, HARBOUR CITY, 17 CANTON ROAD, TSIM SHA TSUI, KOWLOON, HONG KONG
Manufacturer	SHENZHEN TECNO TECHNOLOGY CO.,LTD.
Manufacturer Add	1-4th Floor,3rd Building,Pacific Industrial Park,No.2088,Shenyan Road,Yantian District,Shenzhen,Guangdong,China

3. Test site information

Test Lab A:

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.	535293
IC Test Site No.	4842E-1
Test Software	Radiated Emission Program-To Shenzhen v2.0

Test Lab B:

Lab performing tests	SIEMIC (Nanjing-China) Laboratories
Lab Address	2-1 Longcang Avenue Yuhua Economic and Technology Development Park, Nanjing, China
FCC Test Site No.	694825
IC Test Site No.	4842B-1
Test Software	EZ_EMC(ver.Icp-03A1)

Note: We just perform Radiated Spurious Emission above 18GHz in the test Lab. B.

4. Equipment under Test (EUT) Information

Description of EUT:	Mobile phone
Main Model:	AX8
Serial Model:	N/A
Date EUT received:	July 28, 2017
Test Date(s):	July 29 to September 14, 2017
Equipment Category：	PCE
Antenna Gain:	GSM850: -2.53dBi PCS1900: -1.31dBi UMTS-FDD Band V: -2dBi UMTS-FDD Band II: -1.74dBi LTE Band II: -1.31dBi LTE Band IV: -2.64dBi LTE Band V: -2.14dBi LTE Band VII: -0.27dBi WIFI(2.4G): -0.87 dBi WIFI(5150-5250MHz): -5.3 dBi WIFI(5250-5350MHz): -5.3 dBi WIFI(5725-5850MHz): -5.3 dBi Bluetooth/BLE: -0.87dBi GPS: -1.47dBi
Antenna Type:	IFA 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 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 LTE Band V TX: 824.7~ 848.3 MHz; RX : 869.7 ~ 893.3MHz LTE Band VII TX: 2502.5 ~ 2567.5 MHz; RX : 2622.5 ~ 2687.5 MHz 802.11b/g: 2412-2462 MHz (TX/RX) 802.11n20: 2412-2462MHz ; 5180-5240 MHz; 5260-5320 MHz; 5745-5825 MHz； (TX/RX) 802.11n40: 2422-2452 MHz (TX/RX); 5190-5230 MHz; 5270-5310 MHz; 5755-5795 MHz；(TX/RX) 802.11 a: 5180-5240 MHz; 5260-5320 MHz; 5745-5825 MHz (TX/RX) Bluetooth& BLE: 2402-2480 MHz GPS: 1575.42 MHz
Maximum Conducted AV Power to Antenna:	LTE Band I: 22.75 dBm LTE Band IV: 23.06 dBm LTE Band V: 23.59 dBm LTE Band VII: 22.75 dBm
ERP/EIRP:	LTE Band II: 21.44 dBm / EIRP LTE Band IV: 20.42 dBm / EIRP LTE Band V: 21.34 dBm / EIRP LTE Band VII: 22.43 dBm / EIRP
Port:	USB Port, Earphone Port
Input Power:	Adapter: Model: CQ-18KX Input: AC100-240V~50/60Hz,400mA Output: DC 5V-9V,2A DC9V-12V,1.5A Battery: Model: BL-35AT Rating: 3.85V, 3500mAh/3600mAh(min/typ) 13.47Wh/13.86Wh(min/typ) Limited charge voltage: 4.4V

Trade Name : TECNO

FCC ID: 2ADYY-AX8

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

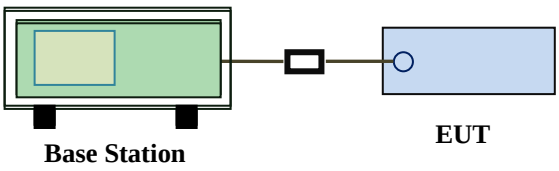
The EUT is a portable device, thus requires SAR evaluation;

Please refer to RF Exposure Evaluation Report: 17070659-FCC-H.

6.2 RF Output Power

Temperature	23℃
Relative Humidity	54%
Atmospheric Pressure	1014mbar
Test date :	September 11, 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 II:

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	22.75	22±1
				1	49	0	22.70	22±1
				1	99	0	22.67	22±1
				50	0	1	21.58	22±1
				50	24	1	21.52	22±1
				50	49	1	21.65	22±1
				100	0	1	21.57	22±1
			16QAM	1	0	1	21.54	21.3±1
				1	49	1	21.56	21.3±1
				1	99	1	21.58	21.3±1
				50	0	2	20.55	21.3±1
				50	24	2	20.59	21.3±1
				50	49	2	20.56	21.3±1
				100	0	2	20.78	21.3±1
	18900	1880.0	QPSK	1	0	0	22.63	22±1
				1	49	0	22.55	22±1
				1	99	0	22.65	22±1
				50	0	1	21.56	22±1
				50	24	1	21.63	22±1
				50	49	1	21.46	22±1
				100	0	1	21.54	22±1
			16QAM	1	0	1	21.98	21.3±1
				1	49	1	21.98	21.3±1
				1	99	1	21.95	21.3±1
				50	0	2	20.61	21.3±1
				50	24	2	20.63	21.3±1
				50	49	2	20.58	21.3±1
				100	0	2	20.64	21.3±1
	19100	1900.0	QPSK	1	0	0	22.26	22±1
				1	49	0	22.34	22±1
				1	99	0	22.16	22±1
				50	0	1	21.58	22±1
				50	24	1	21.65	22±1
				50	49	1	21.55	22±1
				100	0	1	21.37	22±1
			16QAM	1	0	1	21.58	21.3±1
				1	49	1	21.58	21.3±1
				1	99	1	21.66	21.3±1
				50	0	2	20.62	21.3±1
				50	24	2	20.65	21.3±1
				50	49	2	20.58	21.3±1

				100	0	2	20.69	21.3±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	22.58	22±1
				1	37	0	22.55	22±1
				1	74	0	22.68	22±1
				36	0	1	21.61	22±1
				36	16	1	21.63	22±1
				36	35	1	21.71	22±1
				75	0	1	21.53	22±1
			16QAM	1	0	1	21.58	21.3±1
				1	37	1	21.49	21.3±1
				1	74	1	21.60	21.3±1
				36	0	2	20.58	21.3±1
				36	16	2	20.61	21.3±1
				36	35	2	20.69	21.3±1
				75	0	2	21.11	21.3±1
	18900	1880.0	QPSK	1	0	0	22.61	22±1
				1	37	0	22.52	22±1
				1	74	0	22.71	22±1
				36	0	1	21.58	22±1
				36	16	1	21.65	22±1
				36	35	1	21.65	22±1
				75	0	1	21.49	22±1
			16QAM	1	0	1	21.49	21.3±1
				1	37	1	21.44	21.3±1
				1	74	1	21.43	21.3±1
				36	0	2	20.62	21.3±1
				36	16	2	20.63	21.3±1
				36	35	2	20.64	21.3±1
				75	0	2	20.61	21.3±1
	19125	1902.5	QPSK	1	0	0	22.42	22±1
				1	37	0	22.43	22±1
				1	74	0	22.33	22±1
				36	0	1	21.40	22±1
				36	16	1	21.41	22±1
				36	35	1	21.36	22±1
				75	0	1	21.37	22±1
			16QAM	1	0	1	21.59	21.3±1
				1	37	1	21.56	21.3±1
				1	74	1	21.52	21.3±1
				36	0	2	20.49	21.3±1
				36	16	2	20.48	21.3±1
				36	35	2	20.61	21.3±1
				75	0	2	20.47	21.3±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
10MHz	18650	1855	QPSK	1	0	0	22.43	22±1
				1	24	0	22.40	22±1
				1	49	0	22.35	22±1
				25	0	1	21.48	22±1
				25	12	1	21.58	22±1
				25	24	1	21.50	22±1
				50	0	1	21.49	22±1
			16QAM	1	0	1	21.45	21.3±1
				1	24	1	21.45	21.3±1
				1	49	1	21.36	21.3±1
				25	0	2	20.51	21.3±1
				25	12	2	20.53	21.3±1
				25	24	2	20.54	21.3±1
				50	0	2	21.01	21.3±1
	18900	1880.0	QPSK	1	0	0	22.45	22±1
				1	24	0	22.41	22±1
				1	49	0	22.51	22±1
				25	0	1	21.42	22±1
				25	12	1	21.50	22±1
				25	24	1	21.43	22±1
				50	0	1	21.43	22±1
			16QAM	1	0	1	21.32	21.3±1
				1	24	1	21.31	21.3±1
				1	49	1	21.29	21.3±1
				25	0	2	20.49	21.3±1
				25	12	2	20.46	21.3±1
				25	24	2	20.48	21.3±1
				50	0	2	20.58	21.3±1
	19150	1905	QPSK	1	0	0	22.31	22±1
				1	24	0	22.30	22±1
				1	49	0	22.41	22±1
				25	0	1	21.31	22±1
				25	12	1	21.25	22±1
				25	24	1	21.21	22±1
				50	0	1	21.31	22±1
			16QAM	1	0	1	21.34	21.3±1
				1	24	1	21.40	21.3±1
				1	49	1	21.29	21.3±1
				25	0	2	20.39	21.3±1
				25	12	2	20.51	21.3±1
				25	24	2	20.47	21.3±1
				50	0	2	20.45	21.3±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	22.45	22±1
				1	12	0	22.43	22±1
				1	24	0	22.54	22±1
				12	0	1	21.43	22±1
				12	6	1	21.53	22±1
				12	11	1	21.49	22±1
				25	0	1	21.43	22±1
			16QAM	1	0	1	21.37	21.3±1
				1	12	1	21.32	21.3±1
				1	24	1	21.47	21.3±1
				12	0	2	20.58	21.3±1
				12	6	2	20.56	21.3±1
				12	11	2	20.57	21.3±1
				25	0	2	20.54	21.3±1
	18900	1880.0	QPSK	1	0	0	22.40	22±1
				1	12	0	22.32	22±1
				1	24	0	22.49	22±1
				12	0	1	21.39	22±1
				12	6	1	21.45	22±1
				12	11	1	21.47	22±1
				25	0	1	21.39	22±1
			16QAM	1	0	1	21.51	21.3±1
				1	12	1	21.58	21.3±1
				1	24	1	21.47	21.3±1
				12	0	2	20.51	21.3±1
				12	6	2	20.53	21.3±1
				12	11	2	20.49	21.3±1
				25	0	2	20.49	21.3±1
	19175	1907.5	QPSK	1	0	0	22.13	22±1
				1	12	0	22.19	22±1
				1	24	0	22.18	22±1
				12	0	1	21.25	22±1
				12	6	1	21.16	22±1
				12	11	1	21.24	22±1
				25	0	1	21.20	22±1
			16QAM	1	0	1	20.97	21.3±1
				1	12	1	20.99	21.3±1
				1	24	1	21.36	21.3±1
				12	0	2	20.39	21.3±1
				12	6	2	20.36	21.3±1
				12	11	2	20.38	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	18625	1852.5	QPSK	1	0	0	22.38	22±1
				1	7	0	22.43	22±1
				1	14	0	22.46	22±1
				8	0	1	21.47	22±1
				8	4	1	21.41	22±1
				8	7	1	21.51	22±1
				15	0	1	21.44	22±1
			16QAM	1	0	1	21.38	21.3±1
				1	7	1	21.46	21.3±1
				1	14	1	21.43	21.3±1
				8	0	2	20.52	21.3±1
				8	4	2	20.58	21.3±1
				8	7	2	20.47	21.3±1
				15	0	2	20.51	21.3±1
	18900	1880.0	QPSK	1	0	0	22.29	21.3±1
				1	7	0	20.58	21.3±1
				1	14	0	22.29	21.3±1
				8	0	1	21.36	21.3±1
				8	4	1	21.43	21.3±1
				8	7	1	21.36	21.3±1
				15	0	1	21.40	21.3±1
			16QAM	1	0	1	21.21	21.3±1
				1	7	1	21.29	21.3±1
				1	14	1	21.28	21.3±1
				8	0	2	20.46	21.3±1
				8	4	2	20.48	21.3±1
				8	7	2	20.51	21.3±1
				15	0	2	20.56	21.3±1
	19175	1907.5	QPSK	1	0	0	22.09	22±1
				1	7	0	22.14	22±1
				1	14	0	22.05	22±1
				8	0	1	21.21	22±1
				8	4	1	21.30	22±1
				8	7	1	21.28	22±1
				15	0	1	21.23	22±1
			16QAM	1	0	1	21.15	21.3±1
				1	7	1	21.15	21.3±1
				1	14	1	21.05	21.3±1
				8	0	2	20.22	21.3±1
				8	4	2	20.28	21.3±1
				8	7	2	20.32	21.3±1
				15	0	2	20.31	21.3±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
1.4MHz	18607	1850.7	QPSK	1	0	0	22.28	22±1
				1	2	0	22.26	22±1
				1	5	0	22.32	22±1
				3	0	0	22.43	22±1
				3	1	0	22.39	22±1
				3	2	0	22.34	22±1
				6	0	1	21.33	22±1
			16QAM	1	0	1	21.34	21.3±1
				1	2	1	21.34	21.3±1
				1	5	1	21.28	21.3±1
				3	0	1	21.33	21.3±1
				3	1	1	21.42	21.3±1
				3	2	1	21.46	21.3±1
				6	0	2	20.39	21.3±1
	18900	1880.0	QPSK	1	0	0	22.28	22±1
				1	2	0	22.36	22±1
				1	5	0	22.33	22±1
				3	0	0	22.50	22±1
				3	1	0	22.43	22±1
				3	2	0	22.51	22±1
				6	0	1	21.21	22±1
			16QAM	1	0	1	21.14	21.3±1
				1	2	1	21.18	21.3±1
				1	5	1	21.24	21.3±1
				3	0	1	21.49	21.3±1
				3	1	1	21.48	21.3±1
				3	2	1	21.51	21.3±1
				6	0	2	20.31	21.3±1
	19193	1909.3	QPSK	1	0	0	22.19	22±1
				1	2	0	22.15	22±1
				1	5	0	22.25	22±1
				3	0	0	22.31	22±1
				3	1	0	22.38	22±1
				3	2	0	22.26	22±1
				6	0	1	21.10	22±1
			16QAM	1	0	1	21.18	21.3±1
				1	2	1	21.09	21.3±1
				1	5	1	21.22	21.3±1
				3	0	1	21.51	21.3±1
				3	1	1	21.49	21.3±1
				3	2	1	21.48	21.3±1
				6	0	2	20.31	21.3±1

LTE Band IV:

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
20MHz	20050	1720.0	QPSK	1	0	0	22.75	22.5±1
				1	49	0	22.71	22.5±1
				1	99	0	22.72	22.5±1
				50	0	1	21.58	22.5±1
				50	24	1	21.55	22.5±1
				50	49	1	21.54	22.5±1
				100	0	1	21.57	22.5±1
			16QAM	1	0	1	21.54	21.3±1
				1	49	1	21.49	21.3±1
				1	99	1	21.52	21.3±1
				50	0	2	20.59	21.3±1
				50	24	2	20.56	21.3±1
				50	49	2	20.53	21.3±1
				100	0	2	20.78	21.3±1
	20175	1732.5	QPSK	1	0	0	22.63	22±1
				1	49	0	22.70	22±1
				1	99	0	22.73	22±1
				50	0	1	21.56	22±1
				50	24	1	21.48	22±1
				50	49	1	21.48	22±1
				100	0	1	21.54	22±1
			16QAM	1	0	1	21.98	21.5±1
				1	49	1	21.89	21.5±1
				1	99	1	21.88	21.5±1
				50	0	2	20.58	21.5±1
				50	24	2	20.47	21.5±1
				50	49	2	20.61	21.5±1
				100	0	2	20.64	21.5±1
	20300	1745.0	QPSK	1	0	0	22.26	22±1
				1	49	0	22.19	22±1
				1	99	0	22.33	22±1
				50	0	1	21.58	22±1
				50	24	1	21.53	22±1
				50	49	1	21.63	22±1
				100	0	1	21.37	22±1
			16QAM	1	0	1	21.58	21.3±1
				1	49	1	21.56	21.3±1
				1	99	1	21.63	21.3±1
				50	0	2	20.56	21.3±1
				50	24	2	20.49	21.3±1
				50	49	2	20.51	21.3±1
				100	0	2	20.69	21.3±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	22.58	22±1
				1	37	0	22.63	22±1
				1	74	0	22.56	22±1
				36	0	1	21.61	22±1
				36	16	1	21.64	22±1
				36	35	1	21.56	22±1
				75	0	1	21.53	22±1
			16QAM	1	0	1	21.58	21.5±1
				1	37	1	21.55	21.5±1
				1	74	1	21.59	21.5±1
				36	0	2	20.56	21.5±1
				36	16	2	20.58	21.5±1
				36	35	2	20.52	21.5±1
				75	0	2	21.11	21.5±1
	20175	1732.5	QPSK	1	0	0	22.61	22±1
				1	37	0	22.66	22±1
				1	74	0	22.70	22±1
				36	0	1	21.58	22±1
				36	16	1	21.67	22±1
				36	35	1	21.66	22±1
				75	0	1	21.49	22±1
			16QAM	1	0	1	21.49	21.3±1
				1	37	1	21.44	21.3±1
				1	74	1	21.53	21.3±1
				36	0	2	20.62	21.3±1
				36	16	2	20.65	21.3±1
				36	35	2	20.63	21.3±1
				75	0	2	20.61	21.3±1
	20325	1747.5	QPSK	1	0	0	22.42	22±1
				1	37	0	22.47	22±1
				1	74	0	22.52	22±1
				36	0	1	21.40	22±1
				36	16	1	21.46	22±1
				36	35	1	21.49	22±1
				75	0	1	21.37	22±1
			16QAM	1	0	1	21.59	21.3±1
				1	37	1	21.50	21.3±1
				1	74	1	21.52	21.3±1
				36	0	2	20.51	21.3±1
				36	16	2	20.53	21.3±1
				36	35	2	20.59	21.3±1
				75	0	2	20.47	21.3±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	22.84	22.5±1
				1	24	0	22.82	22.5±1
				1	49	0	22.80	22.5±1
				25	0	1	21.85	22.5±1
				25	12	1	21.90	22.5±1
				25	24	1	21.78	22.5±1
				50	0	1	21.88	22.5±1
			16QAM	1	0	1	21.89	21.5±1
				1	24	1	21.89	21.5±1
				1	49	1	21.94	21.5±1
				25	0	2	20.86	21.5±1
				25	12	2	20.89	21.5±1
				25	24	2	20.78	21.5±1
				50	0	2	20.94	21.5±1
	20175	1732.5	QPSK	1	0	0	22.97	22.5±1
				1	24	0	22.99	22.5±1
				1	49	0	23.06	22.5±1
				25	0	1	21.90	22.5±1
				25	12	1	21.98	22.5±1
				25	24	1	21.85	22.5±1
				50	0	1	21.90	22.5±1
			16QAM	1	0	1	21.80	21.3±1
				1	24	1	21.89	21.3±1
				1	49	1	21.86	21.3±1
				25	0	2	20.88	21.3±1
				25	12	2	20.89	21.3±1
				25	24	2	20.91	21.3±1
				50	0	2	20.98	21.3±1
	20350	1750.0	QPSK	1	0	0	22.95	22.5±1
				1	24	0	22.92	22.5±1
				1	49	0	23.01	22.5±1
				25	0	1	21.94	22.5±1
				25	12	1	21.98	22.5±1
				25	24	1	22.03	22.5±1
				50	0	1	21.99	22.5±1
			16QAM	1	0	1	22.07	22±1
				1	24	1	21.98	22±1
				1	49	1	22.15	22±1
				25	0	2	20.88	22±1
				25	12	2	20.92	22±1
				25	24	2	20.93	22±1
				50	0	2	21.09	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	22.84	22±1
				1	12	0	22.80	22±1
				1	24	0	22.86	22±1
				12	0	1	21.81	22±1
				12	6	1	21.73	22±1
				12	11	1	21.71	22±1
				25	0	1	21.83	22±1
			16QAM	1	0	1	21.81	22±1
				1	12	1	21.73	22±1
				1	24	1	21.89	22±1
				12	0	2	21.78	22±1
				12	6	2	21.75	22±1
				12	11	2	21.69	22±1
				25	0	2	21.94	22±1
	20175	1732.5	QPSK	1	0	0	22.92	22.5±1
				1	12	0	23.01	22.5±1
				1	24	0	23.01	22.5±1
				12	0	1	21.91	22.5±1
				12	6	1	21.93	22.5±1
				12	11	1	21.86	22.5±1
				25	0	1	21.92	22.5±1
			16QAM	1	0	1	22.01	21.5±1
				1	12	1	21.99	21.5±1
				1	24	1	22.01	21.5±1
				12	0	2	20.89	21.5±1
				12	6	2	20.85	21.5±1
				12	11	2	20.76	21.5±1
				25	0	2	20.96	21.5±1
	20350	1750.0	QPSK	1	0	0	22.92	23±1
				1	12	0	22.97	23±1
				1	24	0	22.92	23±1
				12	0	1	22.03	23±1
				12	6	1	22.03	23±1
				12	11	1	22.01	23±1
				25	0	1	22.00	23±1
			16QAM	1	0	1	21.77	22±1
				1	12	1	21.81	22±1
				1	24	1	21.79	22±1
				12	0	2	21.95	22±1
				12	6	2	21.95	22±1
				12	11	2	21.79	22±1
				25	0	2	21.12	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	21.76	22±1
				1	7	0	21.78	22±1
				1	14	0	21.71	22±1
				8	0	1	21.87	22±1
				8	4	1	21.81	22±1
				8	7	1	21.81	22±1
				15	0	1	21.86	22±1
			16QAM	1	0	1	20.59	21.3±1
				1	7	1	20.63	21.3±1
				1	14	1	20.52	21.3±1
				8	0	2	20.92	21.3±1
				8	4	2	20.99	21.3±1
				8	7	2	20.82	21.3±1
				15	0	2	20.90	21.3±1
	20175	1732.5	QPSK	1	0	0	22.89	22±1
				1	7	0	22.00	22±1
				1	14	0	22.81	22±1
				8	0	1	21.94	22±1
				8	4	1	22.03	22±1
				8	7	1	21.87	22±1
				15	0	1	21.97	22±1
			16QAM	1	0	1	21.75	22±1
				1	7	1	21.70	22±1
				1	14	1	21.69	22±1
				8	0	2	21.00	22±1
				8	4	2	21.08	22±1
				8	7	2	21.10	22±1
				15	0	2	21.09	22±1
	20385	1753.5	QPSK	1	0	0	22.94	22±1
				1	7	0	22.88	22±1
				1	14	0	22.96	22±1
				8	0	1	22.06	22±1
				8	4	1	22.06	22±1
				8	7	1	22.05	22±1
				15	0	1	22.07	22±1
			16QAM	1	0	1	22.03	22±1
				1	7	1	22.07	22±1
				1	14	1	22.08	22±1
				8	0	2	21.07	22±1
				8	4	2	21.09	22±1
				8	7	2	21.06	22±1
				15	0	2	21.07	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	21.67	22±1
				1	2	0	21.74	22±1
				1	5	0	21.65	22±1
				3	0	0	21.86	22±1
				3	1	0	21.92	22±1
				3	2	0	21.80	22±1
				6	0	1	21.74	22±1
			16QAM	1	0	1	20.73	21±1
				1	2	1	20.79	21±1
				1	5	1	20.66	21±1
				3	0	1	20.86	21±1
				3	1	1	20.82	21±1
				3	2	1	20.81	21±1
				6	0	2	20.80	21±1
	20175	1732.5	QPSK	1	0	0	21.87	22±1
				1	2	0	21.82	22±1
				1	5	0	21.94	22±1
				3	0	0	22.03	22±1
				3	1	0	21.95	22±1
				3	2	0	22.01	22±1
				6	0	1	21.78	22±1
			16QAM	1	0	1	20.70	21.3±1
				1	2	1	20.75	21.3±1
				1	5	1	20.62	21.3±1
				3	0	1	21.88	21.3±1
				3	1	1	21.86	21.3±1
				3	2	1	21.92	21.3±1
				6	0	2	20.83	21.3±1
	20393	1754.3	QPSK	1	0	0	22.04	22±1
				1	2	0	22.14	22±1
				1	5	0	21.96	22±1
				3	0	0	22.11	22±1
				3	1	0	22.02	22±1
				3	2	0	22.15	22±1
				6	0	1	20.98	22±1
			16QAM	1	0	1	21.04	21.3±1
				1	2	1	21.11	21.3±1
				1	5	1	21.05	21.3±1
				3	0	1	21.85	21.3±1
				3	1	1	21.82	21.3±1
				3	2	1	21.83	21.3±1
				6	0	2	20.33	21.3±1

LTE Band V:

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	23.31	23±1
				1	24	0	23.34	23±1
				1	49	0	23.21	23±1
				25	0	1	22.46	23±1
				25	12	1	22.41	23±1
				25	24	1	22.39	23±1
				50	0	1	22.42	23±1
			16QAM	1	0	1	22.56	22±1
				1	24	1	22.47	22±1
				1	49	1	22.48	22±1
				25	0	2	21.46	22±1
				25	12	2	21.49	22±1
				25	24	2	21.51	22±1
				50	0	2	21.47	22±1
	20525	836.5	QPSK	1	0	0	23.50	23±1
				1	24	0	23.41	23±1
				1	49	0	23.59	23±1
				25	0	1	22.37	23±1
				25	12	1	22.40	23±1
				25	24	1	22.46	23±1
				50	0	1	22.39	23±1
			16QAM	1	0	1	22.54	22±1
				1	24	1	22.56	22±1
				1	49	1	22.55	22±1
				25	0	2	21.42	22±1
				25	12	2	21.46	22±1
				25	24	2	21.49	22±1
				50	0	2	21.49	22±1
	20600	844	QPSK	1	0	0	23.34	23±1
				1	24	0	23.37	23±1
				1	49	0	23.41	23±1
				25	0	1	22.45	23±1
				25	12	1	22.48	23±1
				25	24	1	22.38	23±1
				50	0	1	22.48	23±1
			16QAM	1	0	1	22.43	22.5±1
				1	24	1	22.50	22.5±1
				1	49	1	22.52	22.5±1
				25	0	2	21.52	22.5±1
				25	12	2	21.49	22.5±1
				25	24	2	21.62	22.5±1
				50	0	2	21.51	22.5±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
5MHz	20425	826.5	QPSK	1	0	0	23.49	23±1
				1	12	0	23.41	23±1
				1	24	0	23.48	23±1
				12	0	1	22.60	23±1
				12	6	1	22.57	23±1
				12	11	1	22.64	23±1
				25	0	1	22.59	23±1
			16QAM	1	0	1	22.32	22±1
				1	12	1	22.38	22±1
				1	24	1	22.34	22±1
				12	0	2	21.62	22±1
				12	6	2	21.49	22±1
				12	11	2	21.58	22±1
				25	0	2	21.67	22±1
	20525	836.5	QPSK	1	0	0	23.44	23±1
				1	12	0	23.42	23±1
				1	24	0	23.40	23±1
				12	0	1	22.37	23±1
				12	6	1	22.37	23±1
				12	11	1	22.38	23±1
				25	0	1	22.39	23±1
			16QAM	1	0	1	22.59	22±1
				1	12	1	22.49	22±1
				1	24	1	22.58	22±1
				12	0	2	21.41	22±1
				12	6	2	21.43	22±1
				12	11	2	21.29	22±1
				25	0	2	21.43	22±1
	20625	846.5	QPSK	1	0	0	23.41	23±1
				1	12	0	23.34	23±1
				1	24	0	23.42	23±1
				12	0	1	22.54	23±1
				12	6	1	22.51	23±1
				12	11	1	22.45	23±1
				25	0	1	22.52	23±1
			16QAM	1	0	1	22.40	22±1
				1	12	1	22.50	22±1
				1	24	1	22.31	22±1
				12	0	2	21.46	22±1
				12	6	2	21.48	22±1
				12	11	2	21.43	22±1
				25	0	2	21.55	22±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	23.33	23±1
				1	7	0	23.27	23±1
				1	14	0	23.37	23±1
				8	0	1	22.48	23±1
				8	4	1	22.39	23±1
				8	7	1	22.41	23±1
				15	0	1	22.41	23±1
			16QAM	1	0	1	22.32	22±1
				1	7	1	22.25	22±1
				1	14	1	22.31	22±1
				8	0	2	21.51	22±1
				8	4	2	21.43	22±1
				8	7	2	21.56	22±1
				15	0	2	21.43	22±1
	20525	836.5	QPSK	1	0	0	23.34	22.4±1
				1	7	0	21.43	22.4±1
				1	14	0	23.29	22.4±1
				8	0	1	22.38	22.4±1
				8	4	1	22.45	22.4±1
				8	7	1	22.42	22.4±1
				15	0	1	22.44	22.4±1
			16QAM	1	0	1	22.25	22±1
				1	7	1	22.28	22±1
				1	14	1	22.34	22±1
				8	0	2	21.49	22±1
				8	4	2	21.57	22±1
				8	7	2	21.42	22±1
				15	0	2	21.59	22±1
	20635	847.5	QPSK	1	0	0	23.21	23±1
				1	7	0	23.30	23±1
				1	14	0	23.18	23±1
				8	0	1	22.38	23±1
				8	4	1	22.35	23±1
				8	7	1	22.41	23±1
				15	0	1	22.42	23±1
			16QAM	1	0	1	22.34	22±1
				1	7	1	22.36	22±1
				1	14	1	22.39	22±1
				8	0	2	21.43	22±1
				8	4	2	21.46	22±1
				8	7	2	21.41	22±1
				15	0	2	21.44	22±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	23.29	23±1
				1	2	0	23.35	23±1
				1	5	0	23.23	23±1
				3	0	0	23.40	23±1
				3	1	0	23.49	23±1
				3	2	0	23.30	23±1
				6	0	1	22.38	23±1
			16QAM	1	0	1	22.34	22±1
				1	2	1	22.29	22±1
				1	5	1	22.25	22±1
				3	0	1	22.33	22±1
				3	1	1	22.41	22±1
				3	2	1	22.16	22±1
				6	0	2	21.4	22±1
	20525	836.5	QPSK	1	0	0	23.21	23±1
				1	2	0	23.11	23±1
				1	5	0	23.23	23±1
				3	0	0	23.47	23±1
				3	1	0	23.50	23±1
				3	2	0	23.39	23±1
				6	0	1	22.30	23±1
			16QAM	1	0	1	22.35	22±1
				1	2	1	22.45	22±1
				1	5	1	22.41	22±1
				3	0	1	22.16	22±1
				3	1	1	22.45	22±1
				3	2	1	22.35	22±1
				6	0	2	21.39	22±1
	20643	848.3	QPSK	1	0	0	23.25	23±1
				1	2	0	23.32	23±1
				1	5	0	23.23	23±1
				3	0	0	23.48	23±1
				3	1	0	23.54	23±1
				3	2	0	23.58	23±1
				6	0	1	22.18	23±1
			16QAM	1	0	1	22.15	22±1
				1	2	1	22.05	22±1
				1	5	1	22.17	22±1
				3	0	1	22.36	22±1
				3	1	1	22.15	22±1
				3	2	1	22.20	22±1
				6	0	2	21.33	22±1

LTE Band VII:

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
20MHz	20850	2510	QPSK	1	0	0	22.75	22±1
				1	49	0	22.74	22±1
				1	99	0	22.70	22±1
				50	0	1	21.44	22±1
				50	24	1	21.44	22±1
				50	49	1	21.34	22±1
				100	0	1	21.43	22±1
			16QAM	1	0	1	21.49	21.3±1
				1	49	1	21.43	21.3±1
				1	99	1	21.58	21.3±1
				50	0	2	20.49	21.3±1
				50	24	2	20.51	21.3±1
				50	49	2	20.62	21.3±1
				100	0	2	20.54	21.3±1
	21100	2535	QPSK	1	0	0	22.58	22±1
				1	49	0	22.58	22±1
				1	99	0	22.49	22±1
				50	0	1	21.53	22±1
				50	24	1	21.47	22±1
				50	49	1	21.43	22±1
				100	0	1	21.53	22±1
			16QAM	1	0	1	21.85	21.3±1
				1	49	1	21.75	21.3±1
				1	99	1	21.87	21.3±1
				50	0	2	20.62	21.3±1
				50	24	2	20.65	21.3±1
				50	49	2	20.63	21.3±1
				100	0	2	20.63	21.3±1
	21350	2560	QPSK	1	0	0	22.68	22.5±1
				1	49	0	22.70	22.5±1
				1	99	0	22.62	22.5±1
				50	0	1	21.67	22.5±1
				50	24	1	21.60	22.5±1
				50	49	1	21.62	22.5±1
				100	0	1	21.62	22.5±1
			16QAM	1	0	1	21.98	21.5±1
				1	49	1	21.97	21.5±1
				1	99	1	21.98	21.5±1
				50	0	2	20.71	21.5±1
				50	24	2	20.59	21.5±1
				50	49	2	20.68	21.5±1
				100	0	2	20.68	21.5±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
15MHz	20825	1717.5	QPSK	1	0	0	22.50	22±1
				1	37	0	22.43	22±1
				1	74	0	22.59	22±1
				36	0	1	21.45	22±1
				36	16	1	21.41	22±1
				36	35	1	21.50	22±1
				75	0	1	21.44	22±1
			16QAM	1	0	1	21.56	21.3±1
				1	37	1	21.58	21.3±1
				1	74	1	21.47	21.3±1
				36	0	2	20.48	21.3±1
				36	16	2	20.51	21.3±1
				36	35	2	20.56	21.3±1
				75	0	2	20.55	21.3±1
	21100	1732.5	QPSK	1	0	0	22.55	22±1
				1	37	0	22.51	22±1
				1	74	0	22.63	22±1
				36	0	1	21.42	22±1
				36	16	1	21.37	22±1
				36	35	1	21.46	22±1
				75	0	1	21.44	22±1
			16QAM	1	0	1	21.40	21.3±1
				1	37	1	21.48	21.3±1
				1	74	1	21.39	21.3±1
				36	0	2	20.41	21.3±1
				36	16	2	20.52	21.3±1
				36	35	2	20.39	21.3±1
				75	0	2	20.52	21.3±1
	21375	1747.5	QPSK	1	0	0	22.54	22±1
				1	37	0	22.48	22±1
				1	74	0	22.46	22±1
				36	0	1	21.54	22±1
				36	16	1	21.61	22±1
				36	35	1	21.49	22±1
				75	0	1	21.52	22±1
			16QAM	1	0	1	21.59	21.3±1
				1	37	1	21.54	21.3±1
				1	74	1	21.64	21.3±1
				36	0	2	20.65	21.3±1
				36	16	2	20.71	21.3±1
				36	35	2	20.58	21.3±1
				75	0	2	20.63	21.3±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
10MHz	20800	2502	QPSK	1	0	0	22.34	22±1
				1	24	0	22.36	22±1
				1	49	0	22.35	22±1
				25	0	1	21.34	22±1
				25	12	1	21.32	22±1
				25	24	1	21.42	22±1
				50	0	1	21.39	22±1
			16QAM	1	0	1	21.41	21.3±1
				1	24	1	21.40	21.3±1
				1	49	1	21.49	21.3±1
				25	0	2	20.56	21.3±1
				25	12	2	20.49	21.3±1
				25	24	2	20.62	21.3±1
				50	0	2	20.44	21.3±1
	21100	2535	QPSK	1	0	0	22.36	22±1
				1	24	0	22.26	22±1
				1	49	0	22.43	22±1
				25	0	1	21.35	22±1
				25	12	1	21.29	22±1
				25	24	1	21.41	22±1
				50	0	1	21.39	22±1
			16QAM	1	0	1	21.22	21.3±1
				1	24	1	21.16	21.3±1
				1	49	1	21.25	21.3±1
				25	0	2	20.46	21.3±1
				25	12	2	20.48	21.3±1
				25	24	2	20.39	21.3±1
				50	0	2	20.48	21.3±1
	21400	2565	QPSK	1	0	0	22.39	22±1
				1	24	0	22.32	22±1
				1	49	0	22.32	22±1
				25	0	1	21.46	22±1
				25	12	1	21.49	22±1
				25	24	1	21.38	22±1
				50	0	1	21.48	22±1
			16QAM	1	0	1	21.43	21.3±1
				1	24	1	21.48	21.3±1
				1	49	1	21.44	21.3±1
				25	0	2	20.56	21.3±1
				25	12	2	20.69	21.3±1
				25	24	2	20.48	21.3±1
				50	0	2	20.60	21.3±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
5MHz	19975	1712.5	QPSK	1	0	0	22.23	22±1
				1	12	0	22.14	22±1
				1	24	0	22.26	22±1
				12	0	1	21.32	22±1
				12	6	1	21.27	22±1
				12	11	1	21.36	22±1
				25	0	1	21.33	22±1
			16QAM	1	0	1	21.51	21.3±1
				1	12	1	21.61	21.3±1
				1	24	1	21.55	21.3±1
				12	0	2	20.46	21.3±1
				12	6	2	20.48	21.3±1
				12	11	2	20.49	21.3±1
				25	0	2	20.41	21.3±1
	20175	1732.5	QPSK	1	0	0	22.32	22±1
				1	12	0	22.32	22±1
				1	24	0	22.24	22±1
				12	0	1	21.31	22±1
				12	6	1	21.27	22±1
				12	11	1	21.22	22±1
				25	0	1	21.34	22±1
			16QAM	1	0	1	21.37	21.3±1
				1	12	1	21.33	21.3±1
				1	24	1	21.32	21.3±1
				12	0	2	20.39	21.3±1
				12	6	2	20.38	21.3±1
				12	11	2	20.41	21.3±1
				25	0	2	20.45	21.3±1
	20375	1752.5	QPSK	1	0	0	22.34	22±1
				1	12	0	22.44	22±1
				1	24	0	22.37	22±1
				12	0	1	21.42	22±1
				12	6	1	21.33	22±1
				12	11	1	21.38	22±1
				25	0	1	21.41	22±1
			16QAM	1	0	1	21.45	21.3±1
				1	12	1	21.48	21.3±1
				1	24	1	21.45	21.3±1
				12	0	2	20.51	21.3±1
				12	6	2	20.46	21.3±1
				12	11	2	20.43	21.3±1
				25	0	2	20.54	21.3±1

ERP & EIRP

EIRP for LTE Band II (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	13	V	7.88	0.85	20.03	33.01
1880	1.4	QPSK	1/0	13.94	V	7.88	0.85	20.97	33.01
1909.3	1.4	QPSK	1/0	13.85	V	7.88	0.85	20.88	33.01
1850.7	1.4	QPSK	1/0	11.13	H	7.88	0.85	18.16	33.01
1880	1.4	QPSK	1/0	12.09	H	7.88	0.85	19.12	33.01
1909.3	1.4	QPSK	1/0	12.03	H	7.88	0.85	19.06	33.01
1850.7	1.4	16-QAM	1/0	13	V	7.88	0.85	20.03	33.01
1880	1.4	16-QAM	1/0	12.8	V	7.88	0.85	19.83	33.01
1909.3	1.4	16-QAM	1/0	13.85	V	7.88	0.85	20.88	33.01
1850.7	1.4	16-QAM	1/0	11.07	H	7.88	0.85	18.10	33.01
1880	1.4	16-QAM	1/0	11.45	H	7.88	0.85	18.48	33.01
1909.3	1.4	16-QAM	1/0	11.93	H	7.88	0.85	18.96	33.01
1851.5	3	QPSK	1/0	14.04	V	7.88	0.85	21.07	33.01
1880	3	QPSK	1/0	13.95	V	7.88	0.85	20.98	33.01
1908.5	3	QPSK	1/0	13.75	V	7.88	0.85	20.78	33.01
1851.5	3	QPSK	1/0	12.96	H	7.88	0.85	19.99	33.01
1880	3	QPSK	1/0	12.96	H	7.88	0.85	19.99	33.01
1908.5	3	QPSK	1/0	12.34	H	7.88	0.85	19.37	33.01
1851.5	3	16-QAM	1/0	13.04	V	7.88	0.85	20.07	33.01
1880	3	16-QAM	1/0	12.87	V	7.88	0.85	19.90	33.01
1908.5	3	16-QAM	1/0	12.81	V	7.88	0.85	19.84	33.01
1851.5	3	16-QAM	1/0	12.09	H	7.88	0.85	19.12	33.01
1880	3	16-QAM	1/0	11.25	H	7.88	0.85	18.28	33.01
1908.5	3	16-QAM	1/0	11.34	H	7.88	0.85	18.37	33.01
1852.5	5	QPSK	1/24	14.2	V	7.88	0.85	21.23	33.01
1880	5	QPSK	1/0	14.06	V	7.88	0.85	21.09	33.01
1907.5	5	QPSK	1/24	13.84	V	7.88	0.85	20.87	33.01
1852.5	5	QPSK	1/24	12.73	H	7.88	0.85	19.76	33.01
1880	5	QPSK	1/0	12.51	H	7.88	0.85	19.54	33.01
1907.5	5	QPSK	1/24	12.77	H	7.88	0.85	19.80	33.01
1852.5	5	16-QAM	1/24	13.13	V	7.88	0.85	20.16	33.01
1880	5	16-QAM	1/0	13.17	V	7.88	0.85	20.20	33.01
1907.5	5	16-QAM	1/24	13.02	V	7.88	0.85	20.05	33.01
1852.5	5	16-QAM	1/24	12.11	H	7.88	0.85	19.14	33.01
1880	5	16-QAM	1/0	12.05	H	7.88	0.85	19.08	33.01

1907.5	5	16-QAM	1/24	11.16	H	7.88	0.85	18.19	33.01
1855	10	QPSK	1/0	14.09	V	7.88	0.85	21.12	33.01
1880	10	QPSK	1/0	14.11	V	7.88	0.85	21.14	33.01
1905	10	QPSK	1/49	14.07	V	7.88	0.85	21.10	33.01
1855	10	QPSK	1/0	12.5	H	7.88	0.85	19.53	33.01
1880	10	QPSK	1/0	12.79	H	7.88	0.85	19.82	33.01
1905	10	QPSK	1/49	12.09	H	7.88	0.85	19.12	33.01
1855	10	16-QAM	1/0	13.11	V	7.88	0.85	20.14	33.01
1880	10	16-QAM	1/0	12.98	V	7.88	0.85	20.01	33.01
1905	10	16-QAM	1/49	14.07	V	7.88	0.85	21.10	33.01
1855	10	16-QAM	1/0	11.88	H	7.88	0.85	18.91	33.01
1880	10	16-QAM	1/0	12.06	H	7.88	0.85	19.09	33.01
1905	10	16-QAM	1/49	12.18	H	7.88	0.85	19.21	33.01
1857.5	15	QPSK	1/0	14.24	V	7.88	0.85	21.27	33.01
1880	15	QPSK	1/0	14.27	V	7.88	0.85	21.30	33.01
1902.5	15	QPSK	1/0	14.08	V	7.88	0.85	21.11	33.01
1857.5	15	QPSK	1/0	13.07	H	7.88	0.85	20.10	33.01
1880	15	QPSK	1/0	13.24	H	7.88	0.85	20.27	33.01
1902.5	15	QPSK	1/0	12.23	H	7.88	0.85	19.26	33.01
1857.5	15	16-QAM	1/0	13.24	V	7.88	0.85	20.27	33.01
1880	15	16-QAM	1/0	13.15	V	7.88	0.85	20.18	33.01
1902.5	15	16-QAM	1/0	13.25	V	7.88	0.85	20.28	33.01
1857.5	15	16-QAM	1/0	12.01	H	7.88	0.85	19.04	33.01
1880	15	16-QAM	1/0	11.87	H	7.88	0.85	18.90	33.01
1902.5	15	16-QAM	1/0	11.44	H	7.88	0.85	18.47	33.01
1860	20	QPSK	1/0	14.41	V	7.88	0.85	21.44	33.01
1880	20	QPSK	1/0	14.29	V	7.88	0.85	21.32	33.01
1900	20	QPSK	1/0	13.92	V	7.88	0.85	20.95	33.01
1860	20	QPSK	1/0	12.59	H	7.88	0.85	19.62	33.01
1880	20	QPSK	1/0	13.35	H	7.88	0.85	20.38	33.01
1900	20	QPSK	1/0	12.8	H	7.88	0.85	19.83	33.01
1860	20	16-QAM	1/0	13.2	V	7.88	0.85	20.23	33.01
1880	20	16-QAM	1/0	13.64	V	7.88	0.85	20.67	33.01
1900	20	16-QAM	1/0	13.24	V	7.88	0.85	20.27	33.01
1860	20	16-QAM	1/0	11.24	H	7.88	0.85	18.27	33.01
1880	20	16-QAM	1/0	12.18	H	7.88	0.85	19.21	33.01
1900	20	16-QAM	1/0	11.7	H	7.88	0.85	18.73	33.01

EIRP for LTE Band IV (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	11.87	V	7.95	0.79	19.03	30
1732.5	1.4	QPSK	1/0	12.07	V	7.95	0.79	19.23	30
1754.3	1.4	QPSK	1/0	12.24	V	7.95	0.79	19.40	30
1710.7	1.4	QPSK	1/0	10.52	H	7.95	0.79	17.68	30
1732.5	1.4	QPSK	1/0	10.53	H	7.95	0.79	17.69	30
1754.3	1.4	QPSK	1/0	11	H	7.95	0.79	18.16	30
1710.7	1.4	16-QAM	1/5	10.86	V	7.95	0.79	18.02	30
1732.5	1.4	16-QAM	1/0	10.9	V	7.95	0.79	18.06	30
1754.3	1.4	16-QAM	1/0	11.24	V	7.95	0.79	18.40	30
1710.7	1.4	16-QAM	1/5	9.64	H	7.95	0.79	16.80	30
1732.5	1.4	16-QAM	1/0	9.87	H	7.95	0.79	17.03	30
1754.3	1.4	16-QAM	1/0	9.29	H	7.95	0.79	16.45	30
1711.5	3	QPSK	1/0	11.96	V	7.95	0.79	19.12	30
1732.5	3	QPSK	1/0	13.09	V	7.95	0.79	20.25	30
1753.5	3	QPSK	1/0	13.14	V	7.95	0.79	20.30	30
1711.5	3	QPSK	1/0	10.66	H	7.95	0.79	17.82	30
1732.5	3	QPSK	1/0	11.37	H	7.95	0.79	18.53	30
1753.5	3	QPSK	1/0	12.13	H	7.95	0.79	19.29	30
1711.5	3	16-QAM	1/0	10.79	V	7.95	0.79	17.95	30
1732.5	3	16-QAM	1/0	11.95	V	7.95	0.79	19.11	30
1753.5	3	16-QAM	1/0	12.23	V	7.95	0.79	19.39	30
1711.5	3	16-QAM	1/0	8.97	H	7.95	0.79	16.13	30
1732.5	3	16-QAM	1/0	10.41	H	7.95	0.79	17.57	30
1753.5	3	16-QAM	1/0	10.49	H	7.95	0.79	17.65	30
1712.5	5	QPSK	1/0	13.04	V	7.95	0.79	20.20	30
1732.5	5	QPSK	1/0	13.12	V	7.95	0.79	20.28	30
1752.5	5	QPSK	1/24	13.12	V	7.95	0.79	20.28	30
1712.5	5	QPSK	1/0	11.17	H	7.95	0.79	18.33	30
1732.5	5	QPSK	1/0	11.53	H	7.95	0.79	18.69	30
1752.5	5	QPSK	1/24	11.29	H	7.95	0.79	18.45	30
1712.5	5	16-QAM	1/0	12.01	V	7.95	0.79	19.17	30
1732.5	5	16-QAM	1/0	12.21	V	7.95	0.79	19.37	30
1752.5	5	16-QAM	1/24	11.99	V	7.95	0.79	19.15	30
1712.5	5	16-QAM	1/0	10.53	H	7.95	0.79	17.69	30
1732.5	5	16-QAM	1/0	10.51	H	7.95	0.79	17.67	30

1752.5	5	16-QAM	1/24	10.25	H	7.95	0.79	17.41	30
1715	10	QPSK	1/0	13.04	V	7.95	0.79	20.20	30
1732.5	10	QPSK	1/49	13.26	V	7.95	0.79	20.42	30
1750	10	QPSK	1/0	13.15	V	7.95	0.79	20.31	30
1715	10	QPSK	1/0	11.77	H	7.95	0.79	18.93	30
1732.5	10	QPSK	1/49	11.38	H	7.95	0.79	18.54	30
1750	10	QPSK	1/0	11.95	H	7.95	0.79	19.11	30
1715	10	16-QAM	1/0	12.09	V	7.95	0.79	19.25	30
1732.5	10	16-QAM	1/49	12.06	V	7.95	0.79	19.22	30
1750	10	16-QAM	1/0	12.27	V	7.95	0.79	19.43	30
1715	10	16-QAM	1/0	10.66	H	7.95	0.79	17.82	30
1732.5	10	16-QAM	1/49	10.17	H	7.95	0.79	17.33	30
1750	10	16-QAM	1/0	10.49	H	7.95	0.79	17.65	30
1717.5	15	QPSK	1/0	12.78	V	7.95	0.79	19.94	30
1732.5	15	QPSK	1/74	12.9	V	7.95	0.79	20.06	30
1747.5	15	QPSK	1/0	12.62	V	7.95	0.79	19.78	30
1717.5	15	QPSK	1/0	11.37	H	7.95	0.79	18.53	30
1732.5	15	QPSK	1/74	11.41	H	7.95	0.79	18.57	30
1747.5	15	QPSK	1/0	10.75	H	7.95	0.79	17.91	30
1717.5	15	16-QAM	1/0	11.78	V	7.95	0.79	18.94	30
1732.5	15	16-QAM	1/74	11.73	V	7.95	0.79	18.89	30
1747.5	15	16-QAM	1/0	11.79	V	7.95	0.79	18.95	30
1717.5	15	16-QAM	1/0	9.91	H	7.95	0.79	17.07	30
1732.5	15	16-QAM	1/74	10.1	H	7.95	0.79	17.26	30
1747.5	15	16-QAM	1/0	9.79	H	7.95	0.79	16.95	30
1720	20	QPSK	1/99	12.92	V	7.95	0.79	20.08	30
1732.5	20	QPSK	1/99	12.93	V	7.95	0.79	20.09	30
1745	20	QPSK	1/0	12.46	V	7.95	0.79	19.62	30
1720	20	QPSK	1/99	11.67	H	7.95	0.79	18.83	30
1732.5	20	QPSK	1/99	11.85	H	7.95	0.79	19.01	30
1745	20	QPSK	1/0	10.78	H	7.95	0.79	17.94	30
1720	20	16-QAM	1/99	11.72	V	7.95	0.79	18.88	30
1732.5	20	16-QAM	1/99	12.08	V	7.95	0.79	19.24	30
1745	20	16-QAM	1/0	11.78	V	7.95	0.79	18.94	30
1720	20	16-QAM	1/99	10.09	H	7.95	0.79	17.25	30
1732.5	20	16-QAM	1/99	10.92	H	7.95	0.79	18.08	30
1745	20	16-QAM	1/0	10.69	H	7.95	0.79	17.85	30

EIRP for LTE Band V (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	14.73	V	6.8	0.44	21.09	34.77
836.5	1.4	QPSK	1/5	14.73	V	6.8	0.44	21.09	34.77
848.3	1.4	QPSK	1/5	14.63	V	6.9	0.44	21.09	34.77
824.7	1.4	QPSK	1/5	13.29	H	6.8	0.44	19.65	34.77
836.5	1.4	QPSK	1/5	13.43	H	6.8	0.44	19.79	34.77
848.3	1.4	QPSK	1/5	12.81	H	6.9	0.44	19.27	34.77
824.7	1.4	16-QAM	1/5	13.75	V	6.8	0.44	20.11	34.77
836.5	1.4	16-QAM	1/5	13.91	V	6.8	0.44	20.27	34.77
848.3	1.4	16-QAM	1/5	13.57	V	6.9	0.44	20.03	34.77
824.7	1.4	16-QAM	1/5	12.63	H	6.8	0.44	18.99	34.77
836.5	1.4	16-QAM	1/5	12.38	H	6.8	0.44	18.74	34.77
848.3	1.4	16-QAM	1/5	12.65	H	6.9	0.44	19.11	34.77
825.5	3	QPSK	1/14	14.87	V	6.8	0.44	21.23	34.77
836.5	3	QPSK	1/0	14.84	V	6.8	0.44	21.2	34.77
847.5	3	QPSK	1/14	14.58	V	6.9	0.44	21.04	34.77
825.5	3	QPSK	1/14	13.15	H	6.8	0.44	19.51	34.77
836.5	3	QPSK	1/0	13.93	H	6.8	0.44	20.29	34.77
847.5	3	QPSK	1/14	13.01	H	6.9	0.44	19.47	34.77
825.5	3	16-QAM	1/14	13.81	V	6.8	0.44	20.17	34.77
836.5	3	16-QAM	1/0	13.75	V	6.8	0.44	20.11	34.77
847.5	3	16-QAM	1/14	13.79	V	6.9	0.44	20.25	34.77
825.5	3	16-QAM	1/14	11.95	H	6.8	0.44	18.31	34.77
836.5	3	16-QAM	1/0	11.91	H	6.8	0.44	18.27	34.77
847.5	3	16-QAM	1/14	12.64	H	6.9	0.44	19.1	34.77
826.5	5	QPSK	1/24	14.84	V	6.8	0.44	21.2	34.77
836.5	5	QPSK	1/24	14.91	V	6.8	0.44	21.27	34.77
846.5	5	QPSK	1/24	14.87	V	6.8	0.44	21.23	34.77
826.5	5	QPSK	1/24	13.69	H	6.8	0.44	20.05	34.77
836.5	5	QPSK	1/24	13.99	H	6.8	0.44	20.35	34.77
846.5	5	QPSK	1/24	13.3	H	6.8	0.44	19.66	34.77
826.5	5	16-QAM	1/24	13.97	V	6.8	0.44	20.33	34.77
836.5	5	16-QAM	1/24	14.06	V	6.8	0.44	20.42	34.77

846.5	5	16-QAM	1/24	14	V	6.8	0.44	20.36	34.77
826.5	5	16-QAM	1/24	12.54	H	6.8	0.44	18.9	34.77
836.5	5	16-QAM	1/24	12.78	H	6.8	0.44	19.14	34.77
846.5	5	16-QAM	1/24	12.13	H	6.8	0.44	18.49	34.77
829	10	QPSK	1/49	14.98	V	6.8	0.44	21.34	34.77
836.5	10	QPSK	1/49	14.9	V	6.8	0.44	21.26	34.77
844	10	QPSK	1/49	14.92	V	6.8	0.44	21.28	34.77
829	10	QPSK	1/49	13.26	H	6.8	0.44	19.62	34.77
836.5	10	QPSK	1/49	13.19	H	6.8	0.44	19.55	34.77
844	10	QPSK	1/49	13.96	H	6.8	0.44	20.32	34.77
829	10	16-QAM	1/49	13.84	V	6.8	0.44	20.2	34.77
836.5	10	16-QAM	1/49	14.08	V	6.8	0.44	20.44	34.77
844	10	16-QAM	1/49	13.81	V	6.8	0.44	20.17	34.77
829	10	16-QAM	1/49	12.09	H	6.8	0.44	18.45	34.77
836.5	10	16-QAM	1/49	12.57	H	6.8	0.44	18.93	34.77
844	10	16-QAM	1/49	12.61	H	6.8	0.44	18.97	34.77

ERP for LTE Band VII (Part 27)

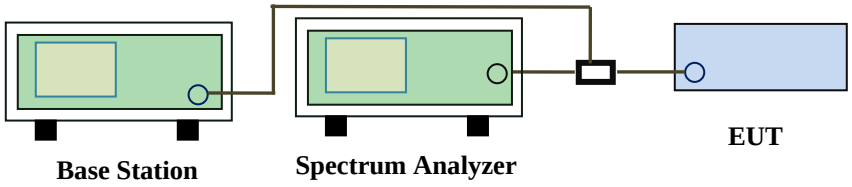
Frequency (MHz)	BW (MHz)	Modulation	RB Size/Offset	Substituted level (dBm)	Antenna Polarization	Antenna Gain correction (dBi)	Cable Loss (dB)	Absolute Level (dBm)	Limit (dBm)
2502.5	5	QPSK	1/0	13.86	V	8.93	0.83	21.96	30
2535	5	QPSK	1/0	13.95	V	8.93	0.83	22.05	30
2567.5	5	QPSK	1/24	14	V	8.93	0.83	22.10	30
2502.5	5	QPSK	1/0	11.95	H	8.93	0.83	20.05	30
2535	5	QPSK	1/0	12.9	H	8.93	0.83	21.00	30
2567.5	5	QPSK	1/24	12.85	H	8.93	0.83	20.95	30
2502.5	5	16-QAM	1/0	13.14	V	8.93	0.83	21.24	30
2535	5	16-QAM	1/0	13	V	8.93	0.83	21.10	30
2567.5	5	16-QAM	1/24	13.08	V	8.93	0.83	21.18	30
2502.5	5	16-QAM	1/0	11.18	H	8.93	0.83	19.28	30
2535	5	16-QAM	1/0	11.35	H	8.93	0.83	19.45	30
2567.5	5	16-QAM	1/24	11.44	H	8.93	0.83	19.54	30
2505	10	QPSK	1/0	13.97	V	8.93	0.83	22.07	30
2535	10	QPSK	1/49	14.06	V	8.93	0.83	22.16	30
2565	10	QPSK	1/0	14.02	V	8.93	0.83	22.12	30
2505	10	QPSK	1/0	12.65	H	8.93	0.83	20.75	30
2535	10	QPSK	1/49	12.88	H	8.93	0.83	20.98	30
2565	10	QPSK	1/0	12.24	H	8.93	0.83	20.34	30
2505	10	16-QAM	1/0	13.04	V	8.93	0.83	21.14	30
2535	10	16-QAM	1/49	12.88	V	8.93	0.83	20.98	30
2565	10	16-QAM	1/0	13.06	V	8.93	0.83	21.16	30
2505	10	16-QAM	1/0	11.72	H	8.93	0.83	19.82	30
2535	10	16-QAM	1/49	11.4	H	8.93	0.83	19.50	30
2565	10	16-QAM	1/0	11.6	H	8.93	0.83	19.70	30
2507.5	15	QPSK	1/0	14.13	V	8.93	0.83	22.23	30
2535	15	QPSK	1/74	14.26	V	8.93	0.83	22.36	30
2562.5	15	QPSK	1/0	14.17	V	8.93	0.83	22.27	30
2507.5	15	QPSK	1/0	12.36	H	8.93	0.83	20.46	30
2535	15	QPSK	1/74	12.38	H	8.93	0.83	20.48	30
2562.5	15	QPSK	1/0	13.27	H	8.93	0.83	21.37	30
2507.5	15	16-QAM	1/0	13.19	V	8.93	0.83	21.29	30
2535	15	16-QAM	1/74	13.02	V	8.93	0.83	21.12	30

2562.5	15	16-QAM	1/0	13.22	V	8.93	0.83	21.32	30
2507.5	15	16-QAM	1/0	11.19	H	8.93	0.83	19.29	30
2535	15	16-QAM	1/74	11.71	H	8.93	0.83	19.81	30
2562.5	15	16-QAM	1/0	11.88	H	8.93	0.83	19.98	30
2510	20	QPSK	1/99	14.33	V	8.93	0.83	22.43	30
2535	20	QPSK	1/99	14.12	V	8.93	0.83	22.22	30
2560	20	QPSK	1/0	14.31	V	8.93	0.83	22.41	30
2510	20	QPSK	1/99	12.73	H	8.93	0.83	20.83	30
2535	20	QPSK	1/99	12.95	H	8.93	0.83	21.05	30
2560	20	QPSK	1/0	12.8	H	8.93	0.83	20.90	30
2510	20	16-QAM	1/99	13.21	V	8.93	0.83	21.31	30
2535	20	16-QAM	1/99	13.5	V	8.93	0.83	21.60	30
2560	20	16-QAM	1/0	13.61	V	8.93	0.83	21.71	30
2510	20	16-QAM	1/99	11.6	H	8.93	0.83	19.70	30
2535	20	16-QAM	1/99	11.57	H	8.93	0.83	19.67	30
2560	20	16-QAM	1/0	12.1	H	8.93	0.83	20.20	30

6.3 Peak-Average Ratio

Temperature	23℃
Relative Humidity	54%
Atmospheric Pressure	1014mbar
Test date :	September 11, 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 II (part 24E)

BW(MHz)	Frequency (MHz)	Mode	Modulation	Conducted Power (dBm)		Peak-Average Ratio (PAR)
				Peak	Average	
1.4	1880	RB 1/0	QPSK	22.66	22.28	0.38
			16QAM	22.89	22.5	0.39
3	1880	RB 1/0	QPSK	22.63	22.32	0.31
			16QAM	21.81	21.36	0.45
5	1880	RB 1/0	QPSK	22.7	22.4	0.3
			16QAM	21.71	21.39	0.32
10	1880	RB 1/0	QPSK	22.86	22.45	0.41
			16QAM	21.82	21.42	0.40
15	1880	RB 1/0	QPSK	23	22.61	0.39
			16QAM	21.9	21.58	0.32
20	1880	RB 1/0	QPSK	22.99	22.63	0.36
			16QAM	22.01	21.56	0.45

LTE Band IV (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	22.22	21.87	0.35
			16QAM	22.41	22.03	0.38
3	1732.5	RB 1/0	QPSK	23.28	22.89	0.39
			16QAM	22.27	21.94	0.33
5	1732.5	RB 1/0	QPSK	23.24	22.92	0.32
			16QAM	22.31	21.91	0.4
10	1732.5	RB 1/0	QPSK	23.41	22.97	0.44
			16QAM	22.2	21.9	0.3
15	1732.5	RB 1/0	QPSK	23.38	23.08	0.3
			16QAM	22.53	22.06	0.47
20	1732.5	RB 1/0	QPSK	23.81	23.35	0.46
			16QAM	22.51	22.2	0.31

LTE Band V (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	23.54	23.21	0.33
			16QAM	23.79	23.47	0.32
3	836.5	RB 1/0	QPSK	23.76	23.34	0.42
			16QAM	22.77	22.38	0.39
5	836.5	RB 1/0	QPSK	23.87	23.5	0.37
			16QAM	22.85	22.37	0.48
10	836.5	RB 1/0	QPSK	23.75	23.44	0.31
			16QAM	22.85	22.37	0.48

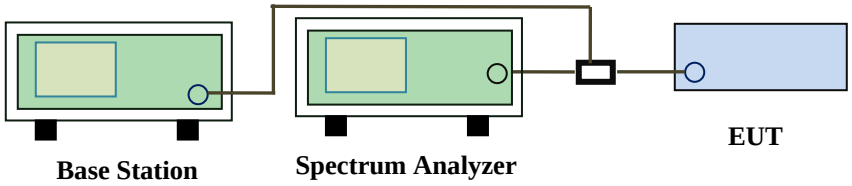
LTE Band VII (part 27)

BW(MHz)	Frequency (MHz)	Mode	Modulation	Conducted Power (dBm)		Peak-Average Ratio (PAR)
				Peak	Average	
5	2535	RB 1/0	QPSK	22.64	22.32	0.32
			16QAM	21.67	21.31	0.36
10	2535	RB 1/0	QPSK	22.73	22.36	0.37
			16QAM	21.84	21.35	0.49
15	2535	RB 1/0	QPSK	22.96	22.55	0.41
			16QAM	21.84	21.42	0.42
20	2535	RB 1/0	QPSK	22.9	22.58	0.32
			16QAM	22	21.53	0.47

6.4 Occupied Bandwidth

Temperature	23℃
Relative Humidity	54%
Atmospheric Pressure	1014mbar
Test date :	September 11, 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 II (Part 24E)

BW(MHz)	Channel	Frequency (MHz)	Modulation	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
1.4	18607	1851	16QAM	1.1158	1.306
			QPSK	1.1113	1.303
1.4	18900	1880	16QAM	1.0971	1.272
			QPSK	1.0956	1.271
1.4	19193	1909	16QAM	1.1125	1.295
			QPSK	1.1211	1.305
3	18615	1852	16QAM	2.7660	3.190
			QPSK	2.7615	3.175
3	18900	1880	16QAM	2.7541	3.118
			QPSK	2.7577	3.117
3	19185	1909	16QAM	2.7486	3.117
			QPSK	2.7505	3.114
5	18625	1853	16QAM	4.5161	5.125
			QPSK	4.5146	5.123
5	18900	1880	16QAM	4.5389	5.109
			QPSK	4.5307	5.127
5	19175	1908	16QAM	4.5343	5.079
			QPSK	4.5294	5.073
10	18650	1855	16QAM	9.0796	10.344
			QPSK	9.0711	10.327
10	18900	1880	16QAM	9.0892	10.335
			QPSK	9.0999	10.247
10	19150	1905	16QAM	9.0923	10.375
			QPSK	9.0955	10.293
15	18675	1858	16QAM	13.5632	15.092
			QPSK	13.5351	15.103
15	18900	1880	16QAM	13.4934	15.069
			QPSK	13.4930	15.025
15	19125	1903	16QAM	13.5245	15.070
			QPSK	13.5422	15.028

20	18700	1860	16QAM	17.9341	19.869
			QPSK	17.9637	19.829
20	18900	1880	16QAM	17.9763	19.781
			QPSK	17.9587	19.397
20	19100	1900	16QAM	18.0038	19.684
			QPSK	17.9712	19.797

LTE Band IV (Part 27)

BW(MHz)	Channel	Frequency (MHz)	Modulation	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
1.4	19957	1711	16QAM	1.1216	1.301
			QPSK	1.1085	1.298
1.4	20175	1733	16QAM	1.1018	1.283
			QPSK	1.1030	1.290
1.4	20393	1754	16QAM	1.1008	1.283
			QPSK	1.0982	1.279
3	19965	1712	16QAM	2.7672	3.136
			QPSK	2.7547	3.128
3	20175	1733	16QAM	2.7528	3.107
			QPSK	2.7438	3.123
3	20385	1754	16QAM	2.7447	3.116
			QPSK	2.7456	3.115
5	19975	1713	16QAM	4.5115	5.068
			QPSK	4.5066	5.084
5	20175	1733	16QAM	4.5119	5.064
			QPSK	4.5175	5.073
5	20375	1753	16QAM	4.5129	5.073
			QPSK	4.5198	5.088
10	20000	1715	16QAM	9.0575	10.258
			QPSK	9.0731	10.226
10	20175	1733	16QAM	9.0899	10.322
			QPSK	9.0865	10.280
10	20350	1750	16QAM	9.0687	10.292
			QPSK	9.0645	10.256
15	20025	1718	16QAM	13.5129	15.148
			QPSK	13.5293	15.070
15	20175	1733	16QAM	13.4970	14.956
			QPSK	13.4461	14.946
15	20325	1748	16QAM	13.4666	15.003
			QPSK	13.4868	15.021

20	20050	1720	16QAM	17.9271	19.642
			QPSK	17.9094	19.609
20	20175	1733	16QAM	17.9646	19.487
			QPSK	17.9499	19.557
20	20300	1745	16QAM	17.9022	19.521
			QPSK	17.9237	19.517

LTE Band V (Part 22H)

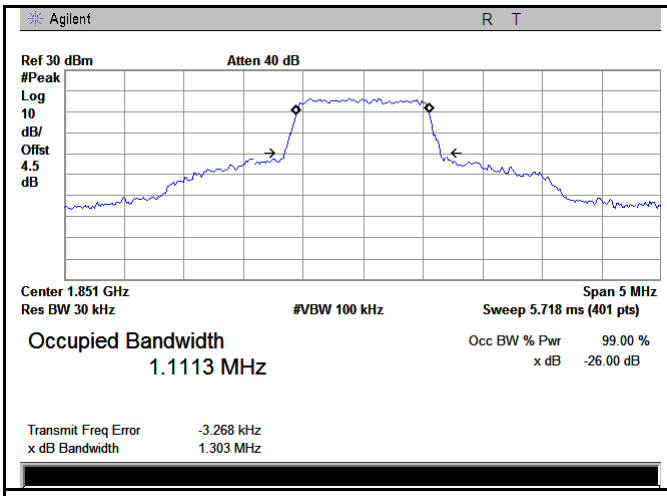
BW(MHz)	Channel	Frequency (MHz)	Modulation	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
1.4	20407	824.7	16QAM	1.1103	1.298
			QPSK	1.1166	1.296
1.4	20525	836.5	16QAM	1.1034	1.271
			QPSK	1.1001	1.276
1.4	20643	848.3	16QAM	1.1015	1.280
			QPSK	1.1031	1.275
3	20415	825.5	16QAM	2.7644	3.152
			QPSK	2.7574	3.139
3	20525	836.5	16QAM	2.7516	3.117
			QPSK	2.7550	3.115
3	20635	847.5	16QAM	2.7601	3.126
			QPSK	2.7572	3.120
5	20425	826.5	16QAM	4.5151	5.034
			QPSK	4.5154	5.037
5	20525	836.5	16QAM	4.5147	5.135
			QPSK	4.5173	5.072
5	20625	846.5	16QAM	4.5325	5.065
			QPSK	4.5290	5.042
10	20450	829	16QAM	9.1224	10.358
			QPSK	9.1144	10.273
10	20525	836.5	16QAM	9.0673	10.274
			QPSK	9.0766	10.454
10	20800	844	16QAM	9.1092	10.281
			QPSK	9.1026	10.413

LTE Band VII (Part 27) result

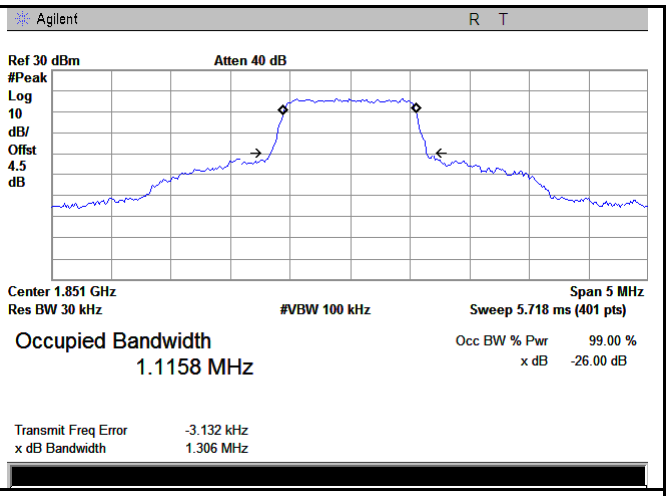
BW(MHz)	Channel	Frequency (MHz)	Modulation	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
5	20775	2503	16QAM	4.5097	5.079
			QPSK	4.5099	5.087
5	21100	2535	16QAM	4.5271	5.078
			QPSK	4.5263	5.060
5	21425	2568	16QAM	4.5231	5.092
			QPSK	4.5272	5.094
10	20800	2505	16QAM	9.0949	10.296
			QPSK	9.1218	10.359
10	21100	2535	16QAM	9.0883	10.275
			QPSK	9.0901	10.263
10	21400	2565	16QAM	9.1064	10.326
			QPSK	9.1029	10.319
15	20825	2508	16QAM	13.5206	15.128
			QPSK	13.5444	15.123
15	21100	2535	16QAM	13.4953	15.124
			QPSK	13.5098	15.069
15	21400	2563	16QAM	13.5009	15.044
			QPSK	13.4808	15.048
20	20850	2510	16QAM	17.9705	19.651
			QPSK	17.9516	19.560
20	21100	2535	16QAM	17.9962	19.813
			QPSK	17.9685	19.711
20	21350	2560	16QAM	17.9162	19.466
			QPSK	17.8787	19.494

Test Plots

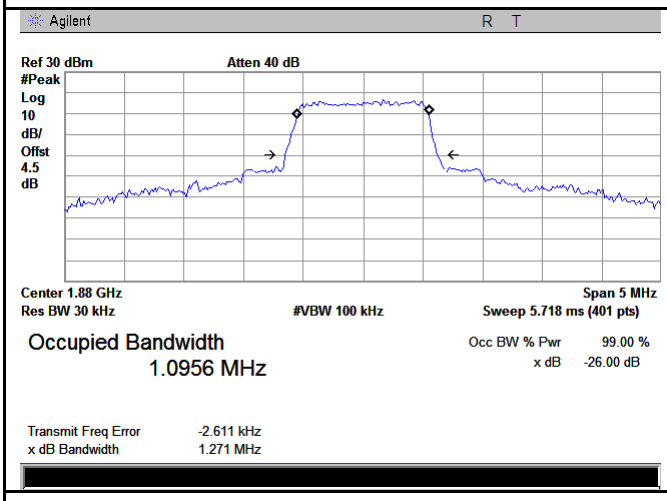
LTE Band II (Part 24E)



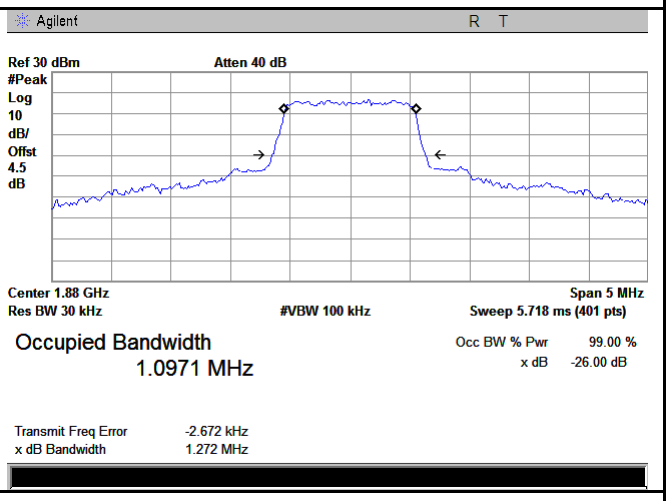
LTE Band II - Low CH QPSK-1.4



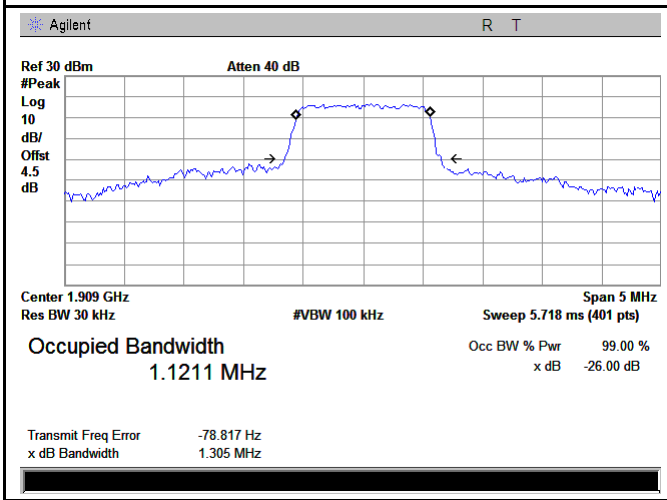
LTE Band II - Low CH 16QAM-1.4



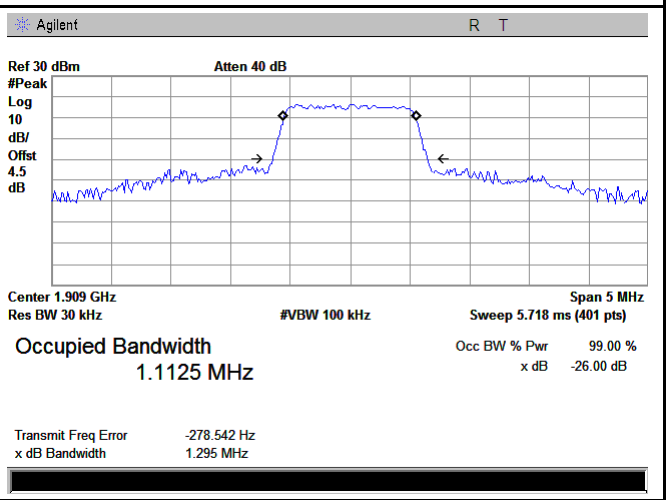
LTE Band II - Middle CH QPSK-1.4



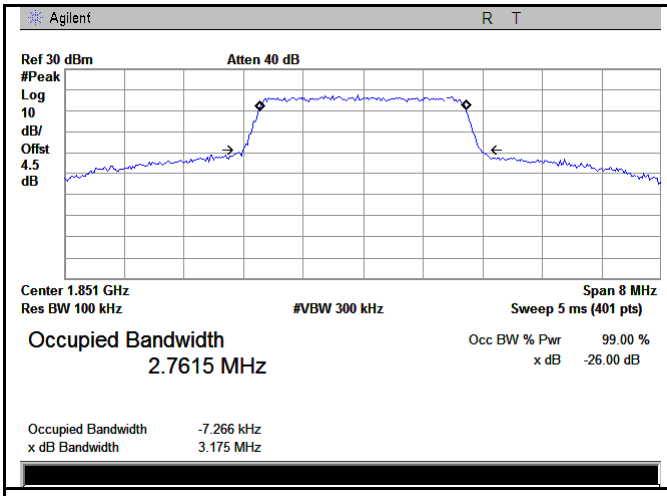
LTE Band II - Middle CH 16QAM-1.4



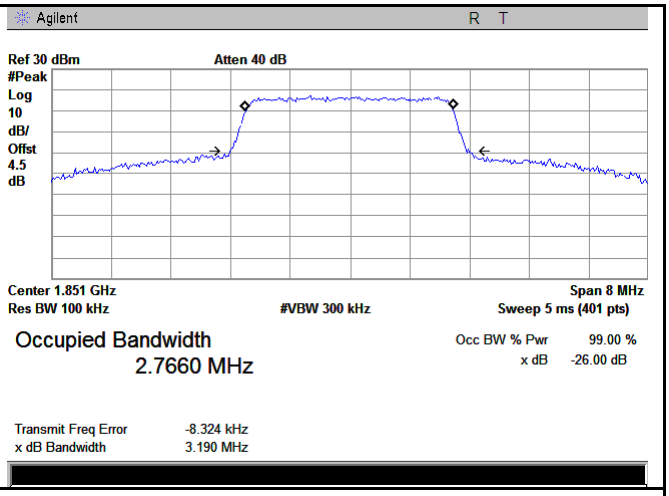
LTE Band II - High CH QPSK-1.4



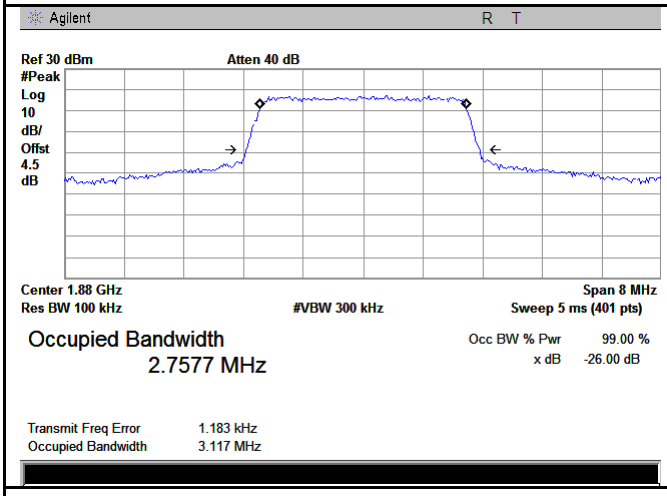
LTE Band II - High CH 16QAM-1.4



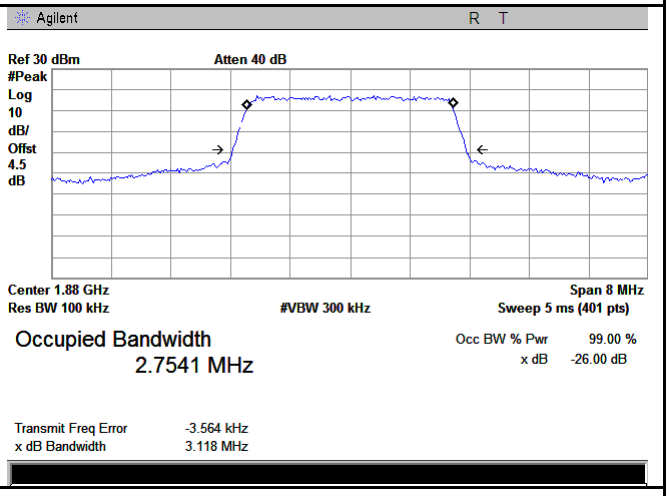
LTE Band II - Low CH QPSK-3



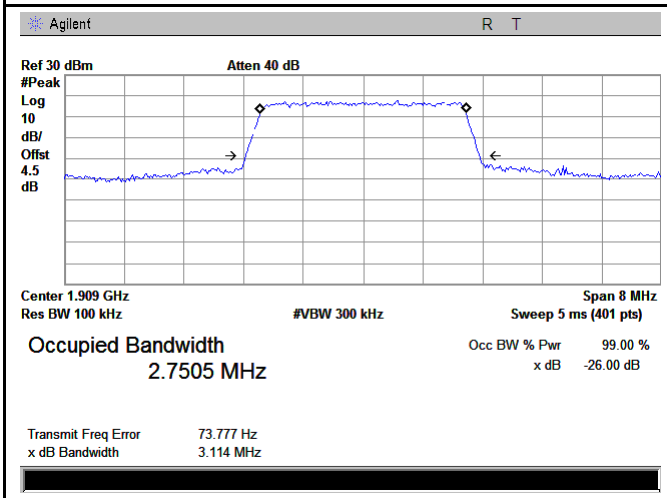
LTE Band II - Low CH 16QAM-3



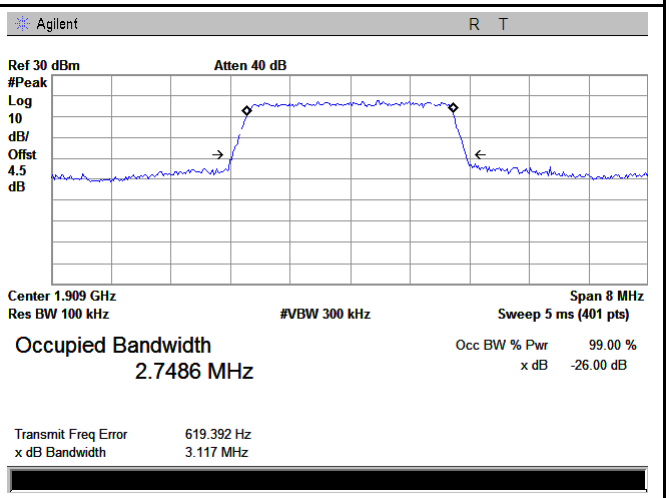
LTE Band II - Middle CH QPSK-3



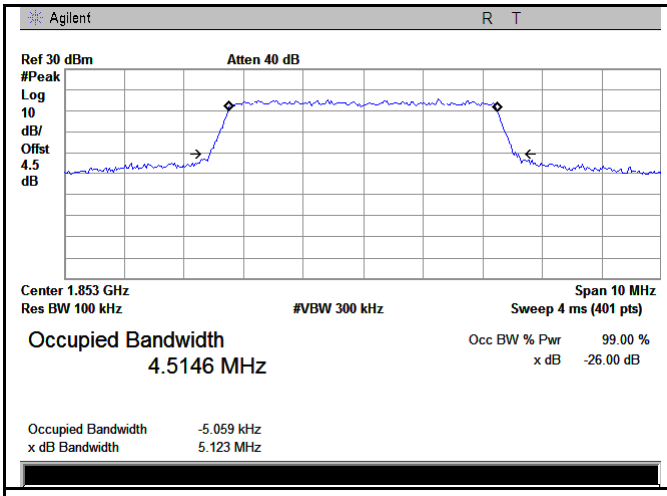
LTE Band II - Middle CH 16QAM-3



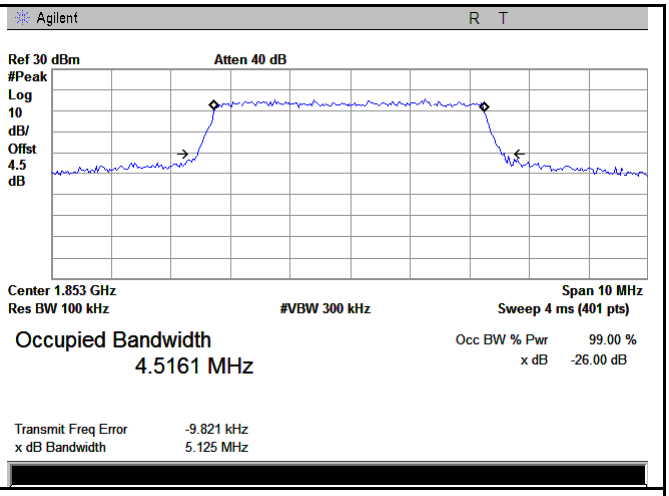
LTE Band II - High CH QPSK-3



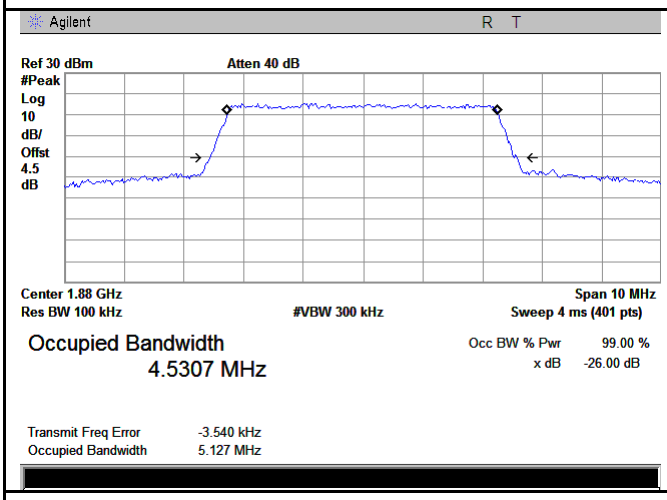
LTE Band II - High CH 16QAM-3



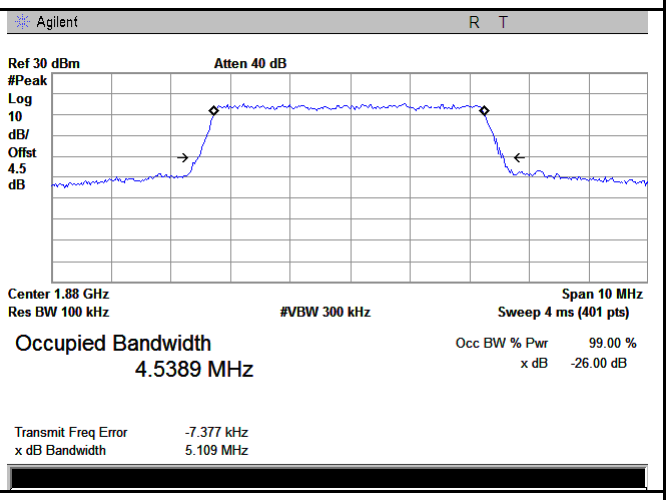
LTE Band II - Low CH QPSK-5



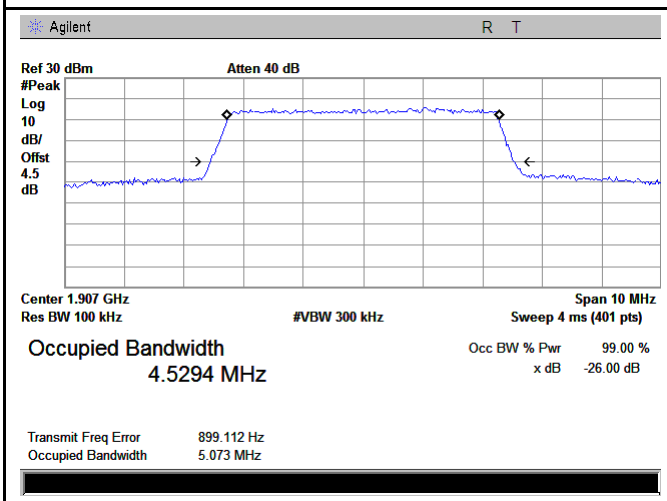
LTE Band II - Low CH 16QAM-5



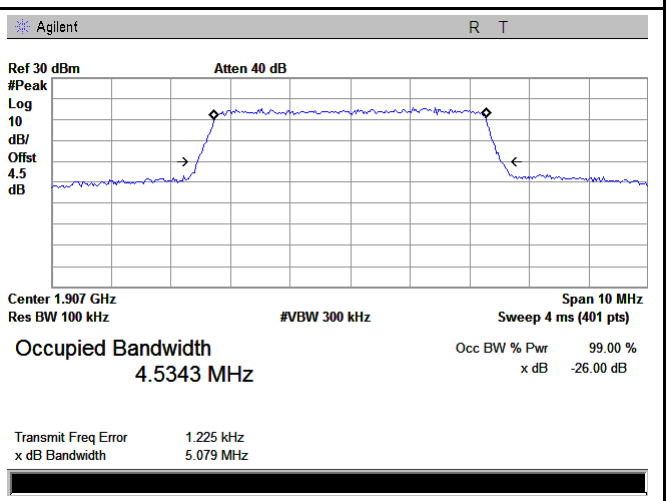
LTE Band II - Middle CH QPSK-5



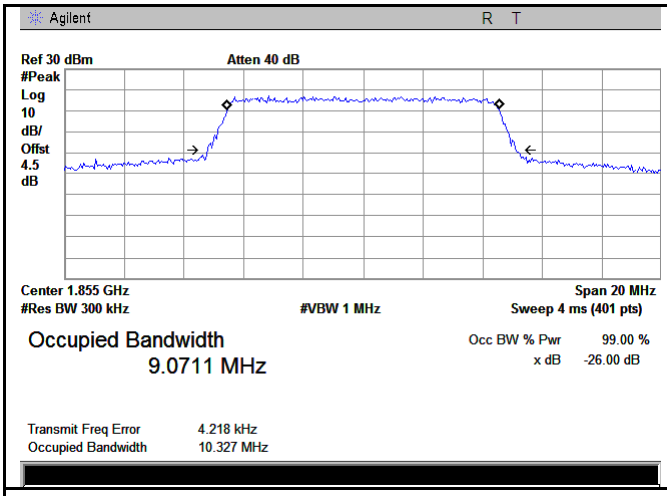
LTE Band II - Middle CH 16QAM-5



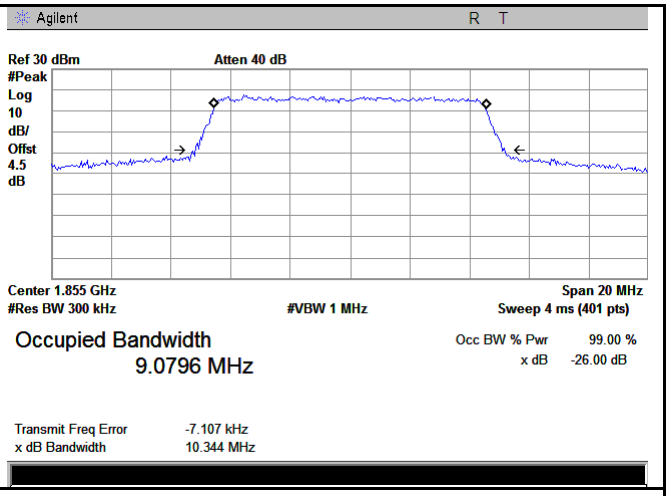
LTE Band II - High CH QPSK-5



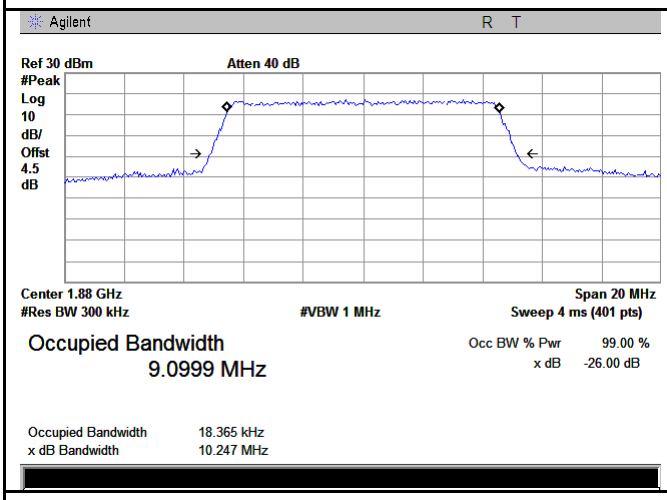
LTE Band II - High CH 16QAM-5



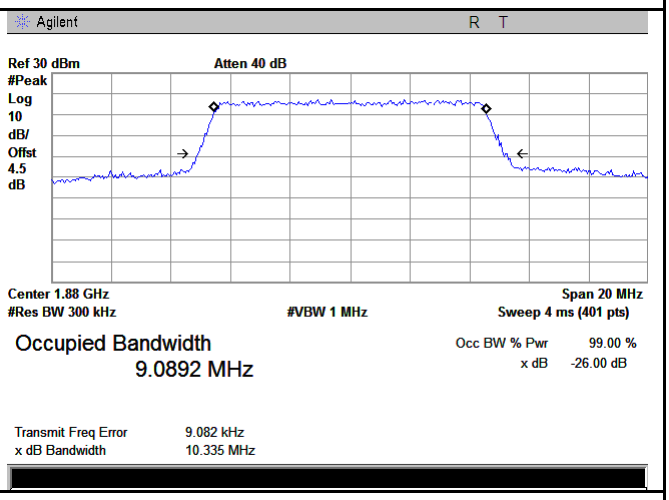
LTE Band II - Low CH QPSK-10



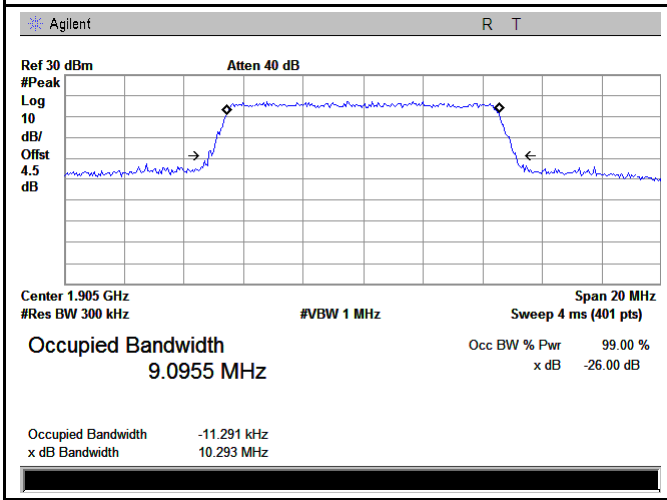
LTE Band II - Low CH 16QAM-10



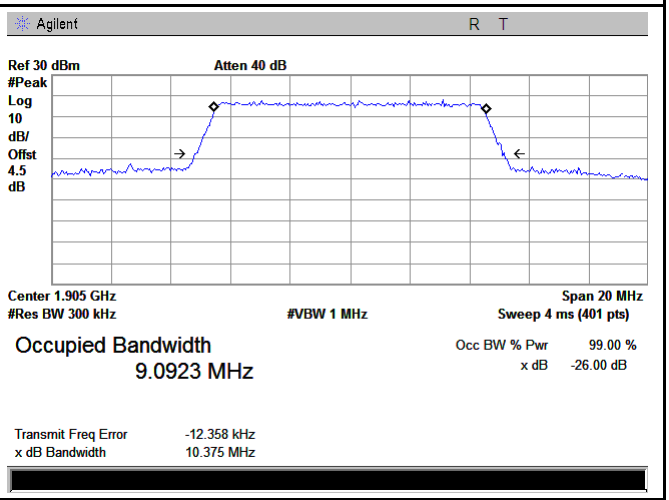
LTE Band II - Middle CH QPSK-10



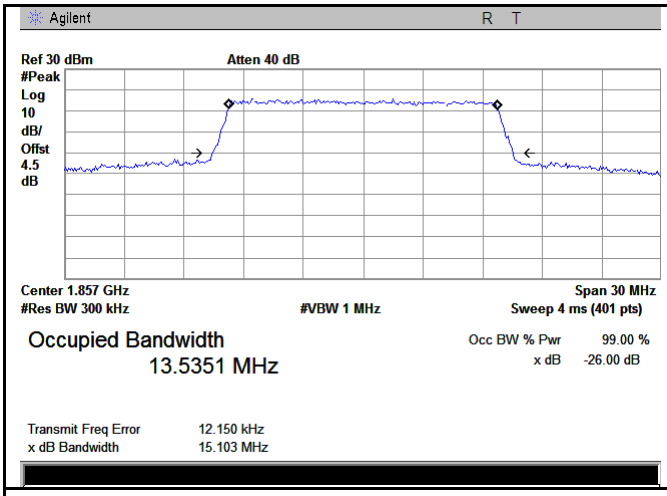
LTE Band II - Middle CH 16QAM-10



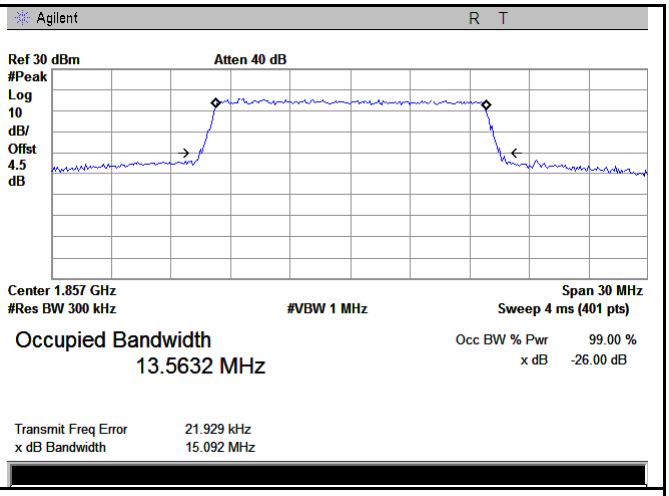
LTE Band II - High CH QPSK-10



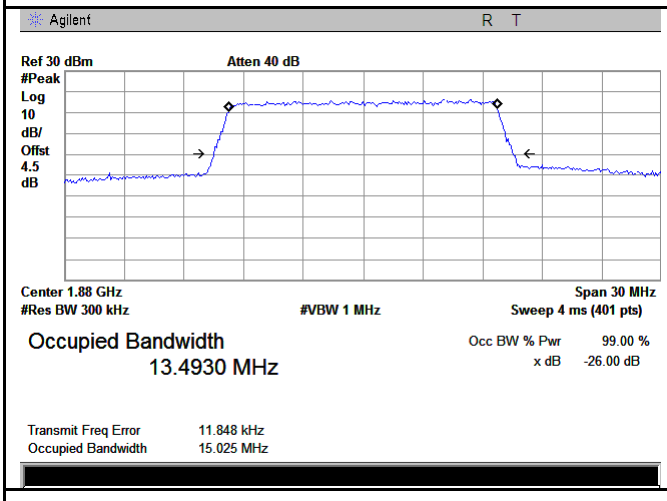
LTE Band II - High CH 16QAM-10



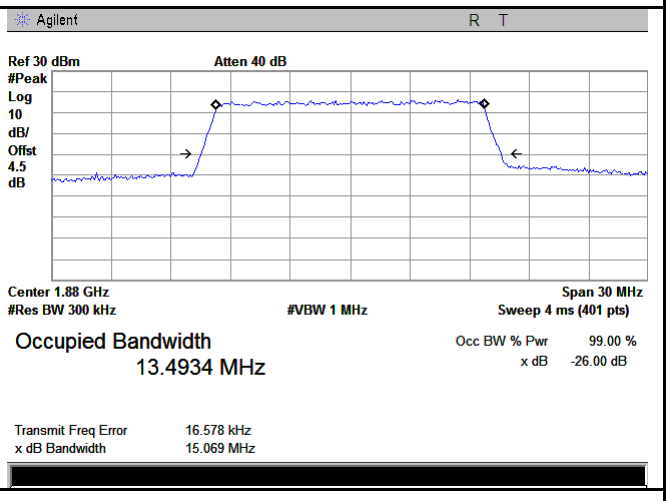
LTE Band II - Low CH QPSK-15



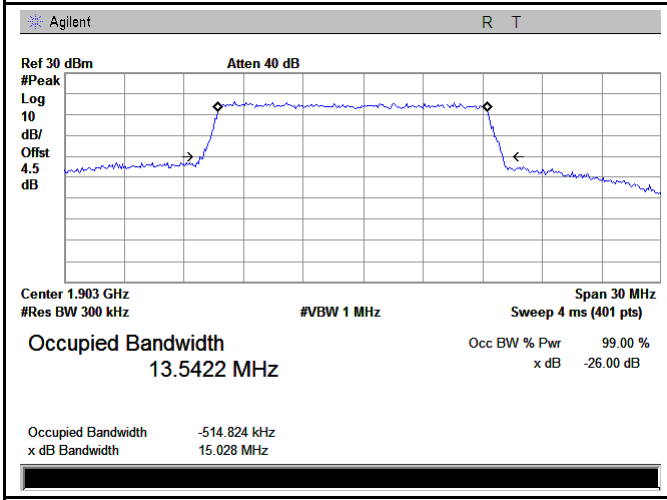
LTE Band II - Low CH 16QAM-15



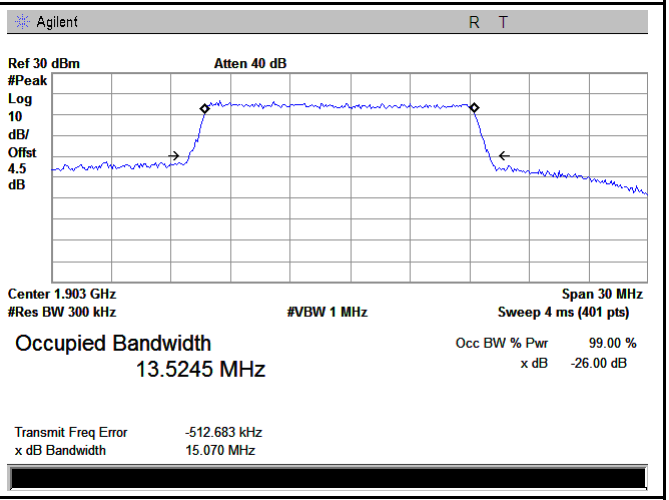
LTE Band II - Middle CH QPSK-15



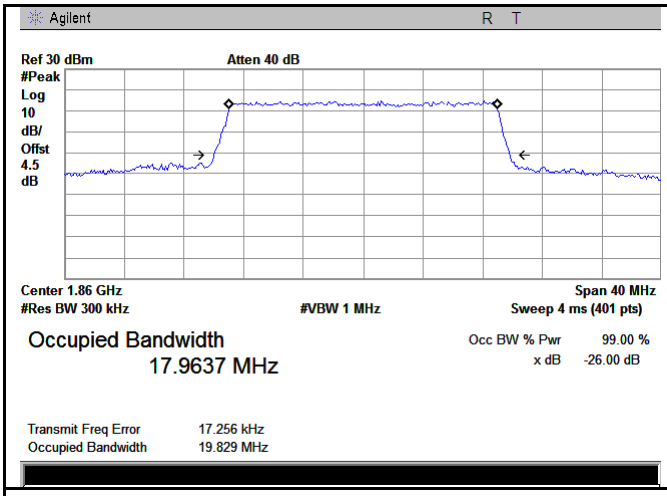
LTE Band II - Middle CH 16QAM-15



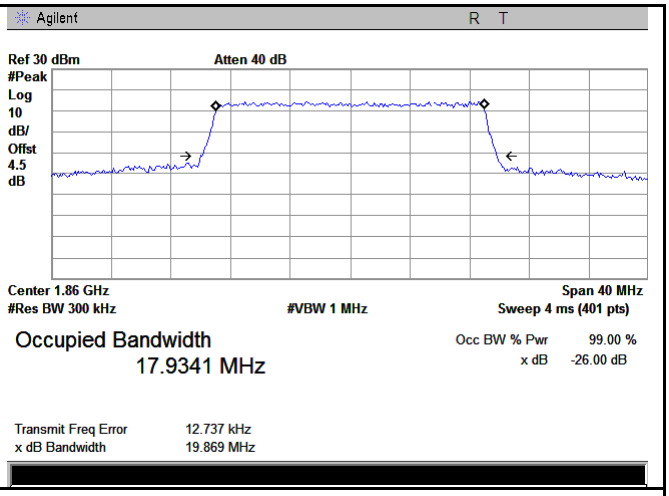
LTE Band II - High CH QPSK-15



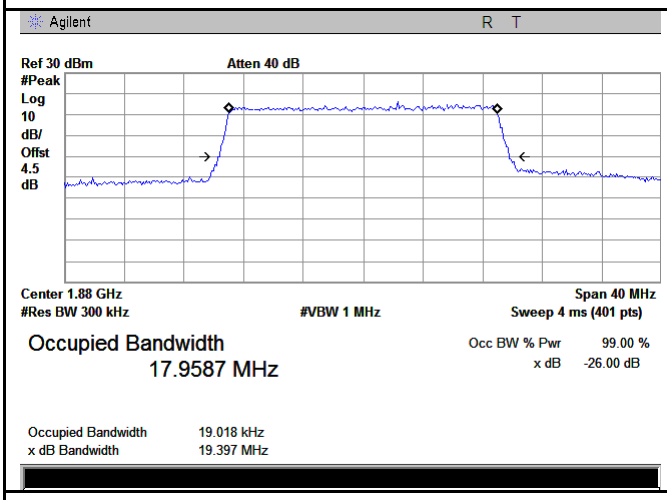
LTE Band II - High CH 16QAM-15



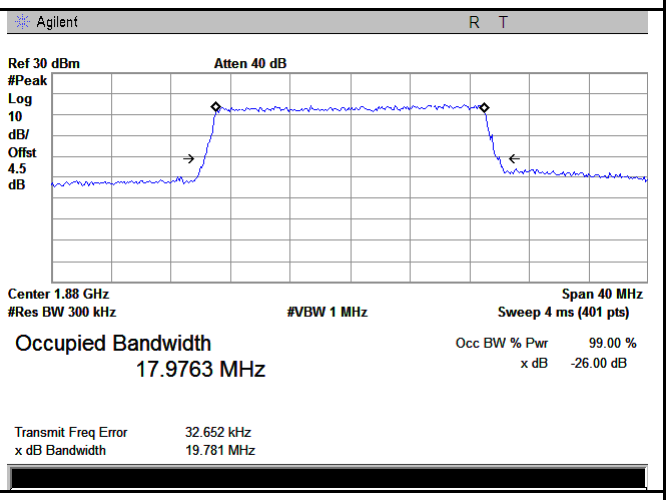
LTE Band II - Low CH QPSK-20



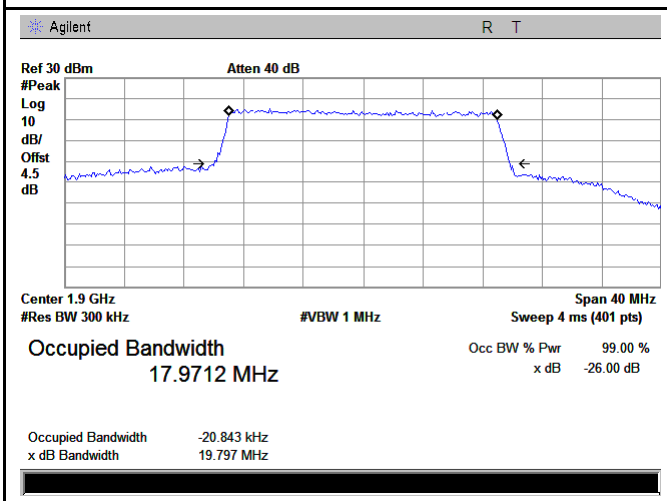
LTE Band II - Low CH 16QAM-20



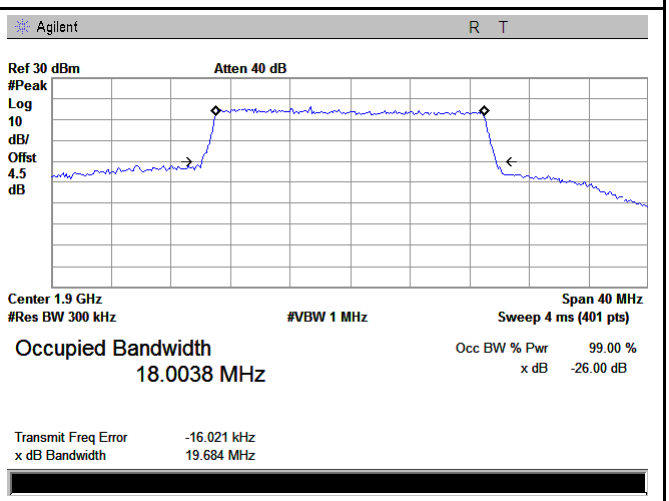
LTE Band II - Middle CH QPSK-20



LTE Band II - Middle CH 16QAM-20

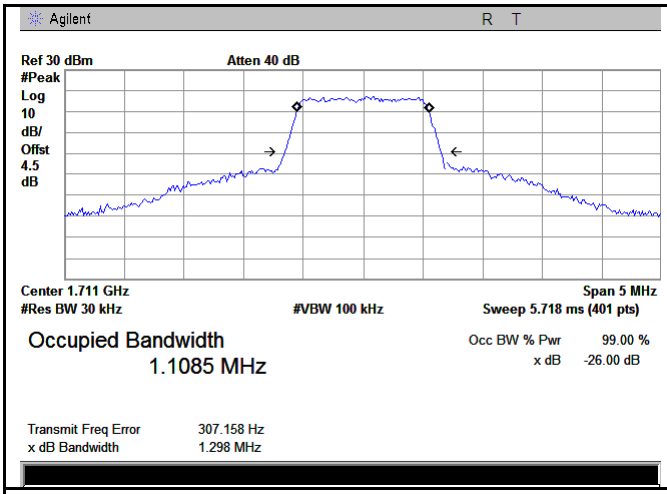


LTE Band II - High CH QPSK-20

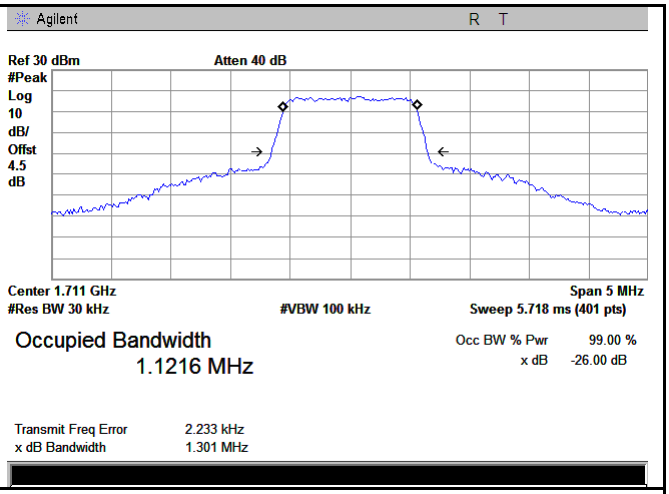


LTE Band II - High CH 16QAM-20

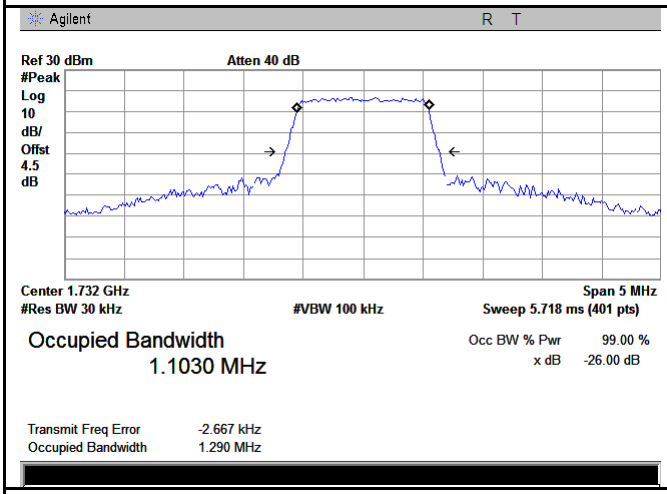
LTE Band IV (Part 27)



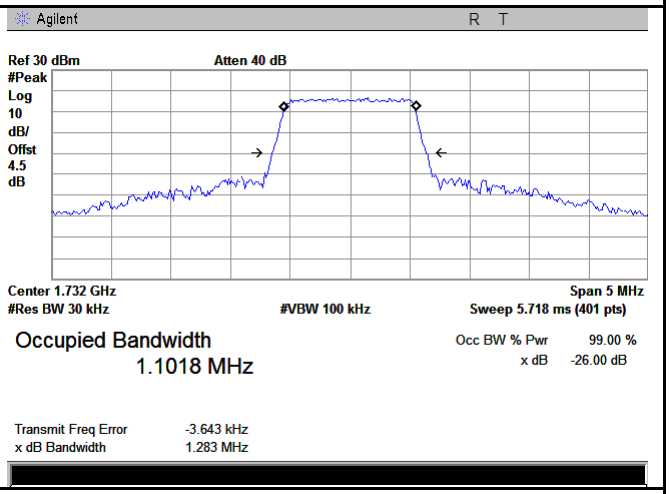
LTE Band IV - Low CH QPSK-1.4



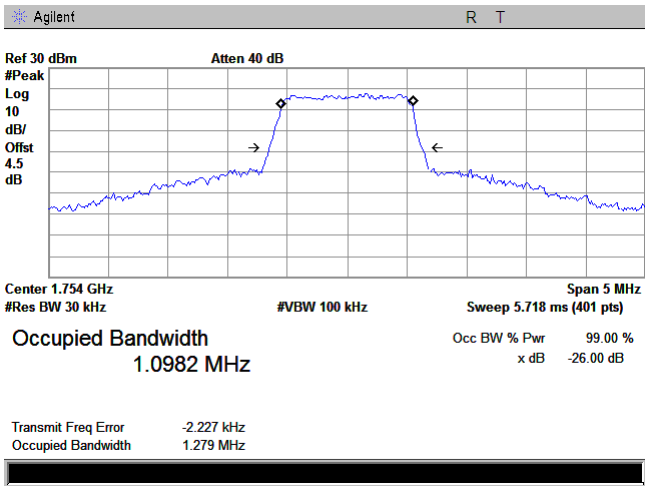
LTE Band IV - Low CH 16QAM-1.4



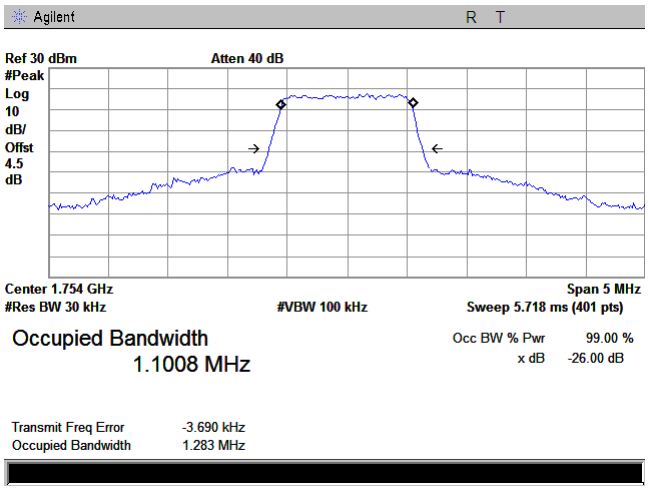
LTE Band IV - Middle CH QPSK-1.4



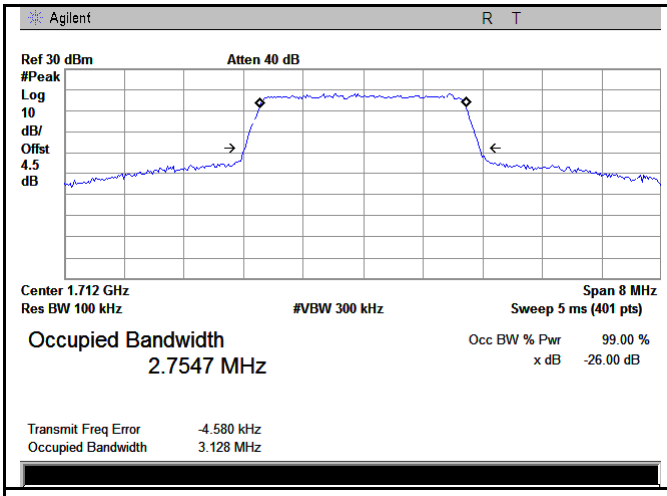
LTE Band IV - Middle CH 16QAM-1.4



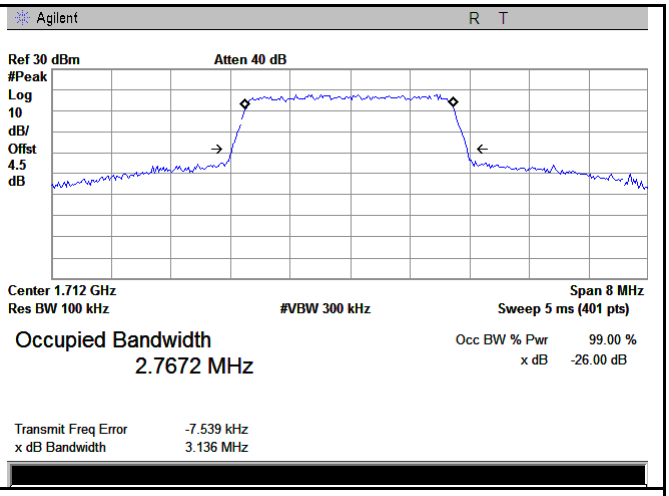
LTE Band IV - High CH QPSK-1.4



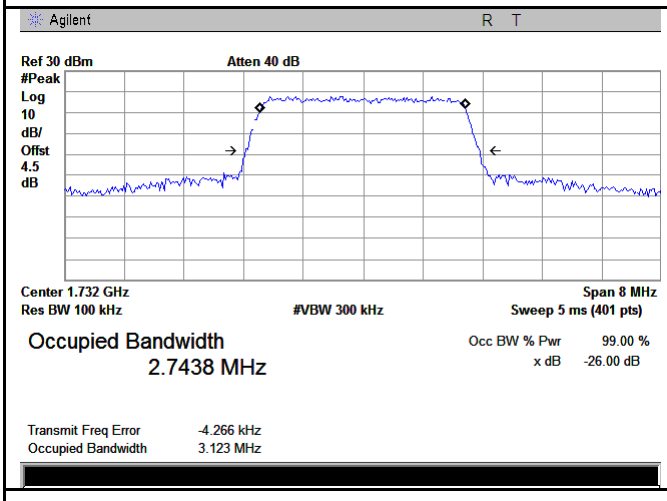
LTE Band IV - High CH 16QAM-1.4



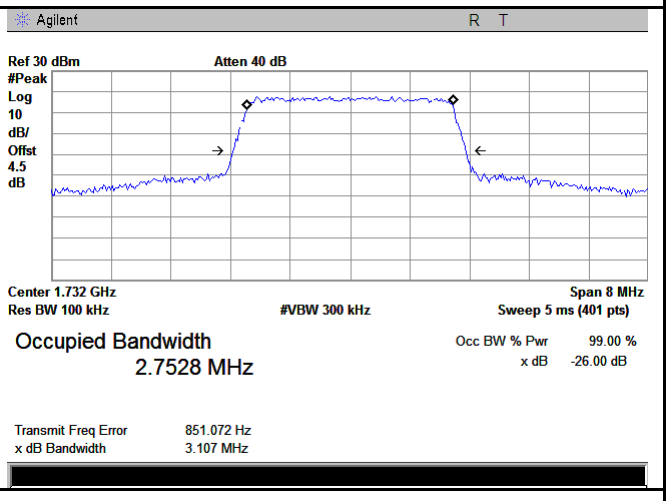
LTE Band IV - Low CH QPSK-3



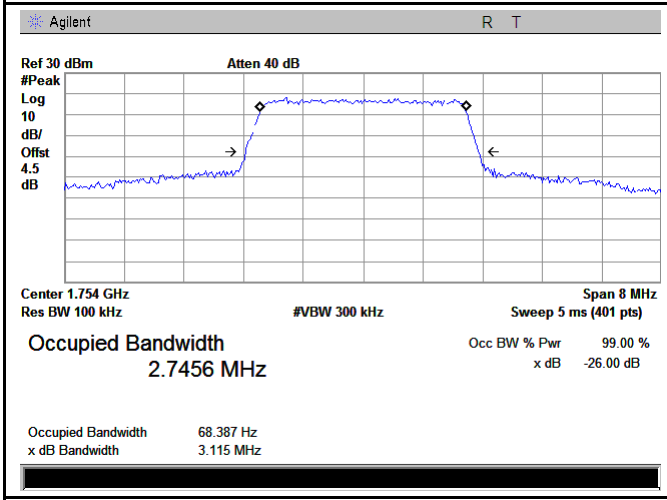
LTE Band IV - Low CH 16QAM-3



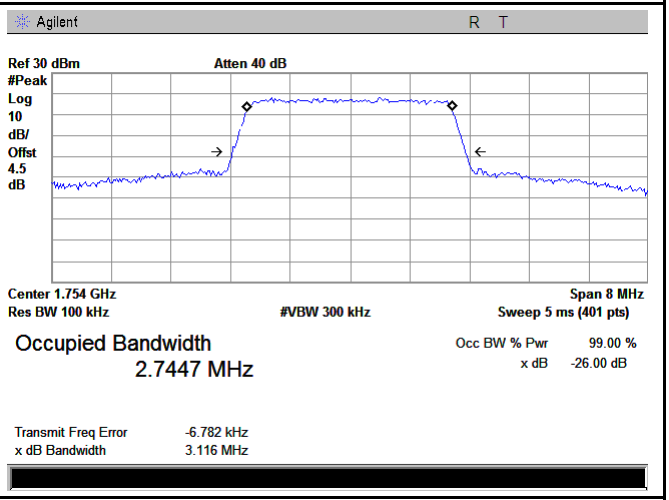
LTE Band IV - Middle CH QPSK-3



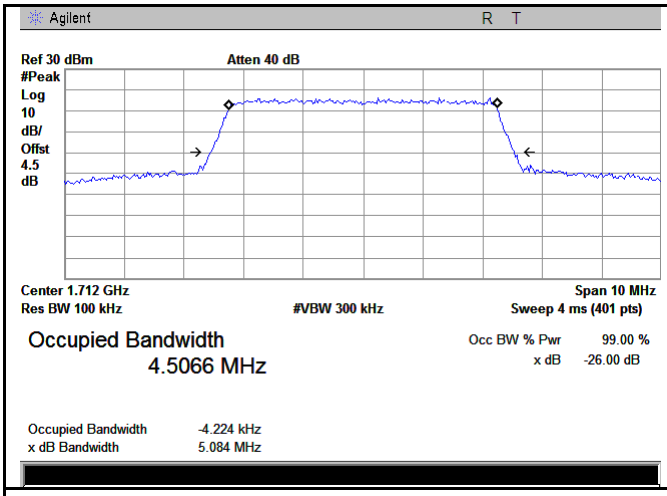
LTE Band IV - Middle CH 16QAM-3



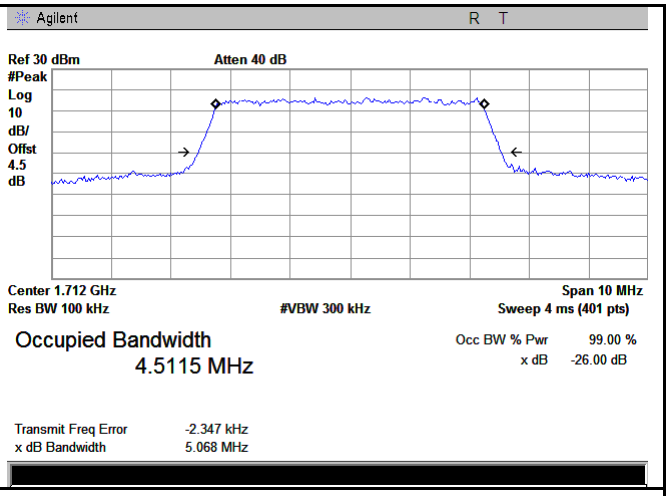
LTE Band IV - High CH QPSK-3



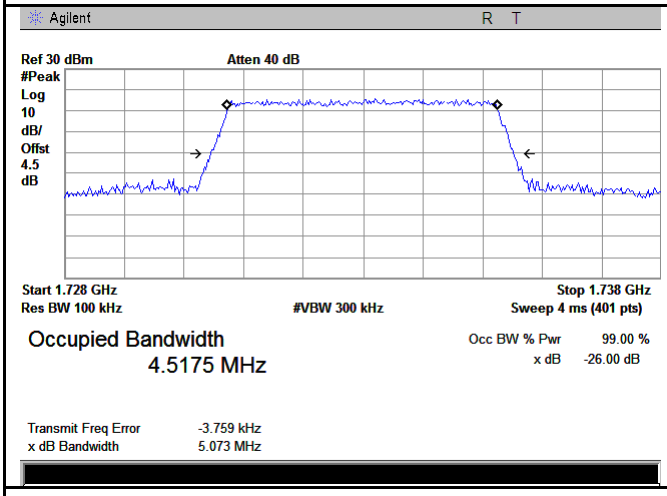
LTE Band IV - High CH 16QAM-3



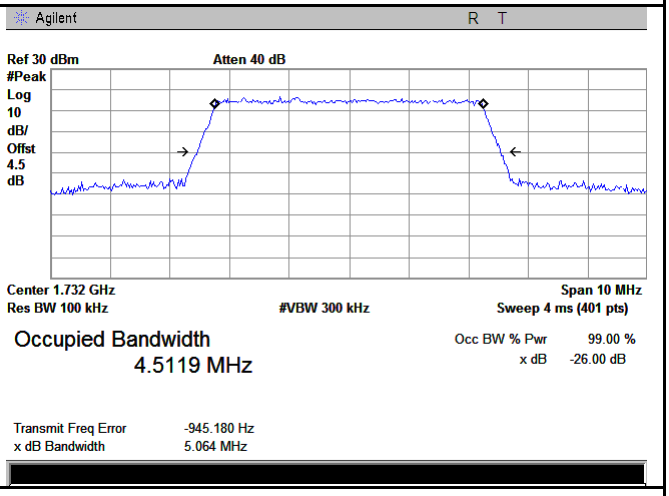
LTE Band IV - Low CH QPSK-5



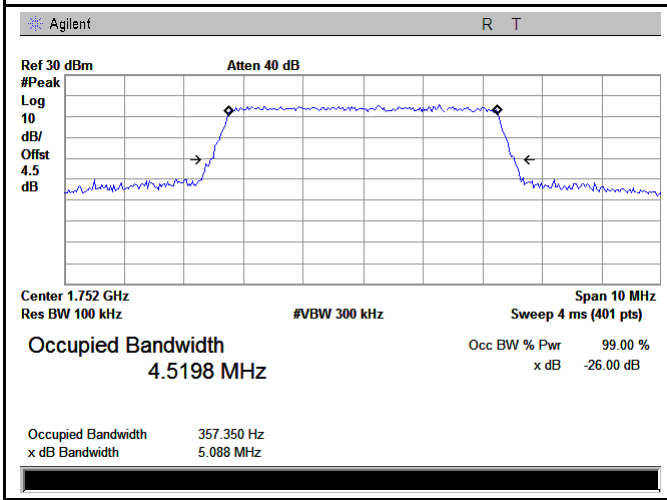
LTE Band IV - Low CH 16QAM-5



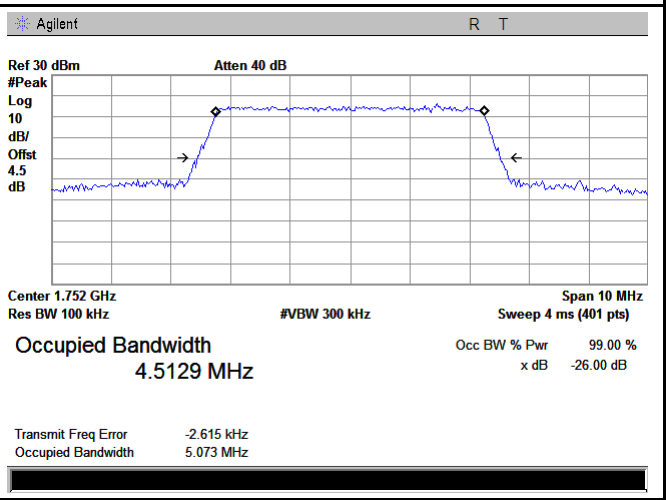
LTE Band IV - Middle CH QPSK-5



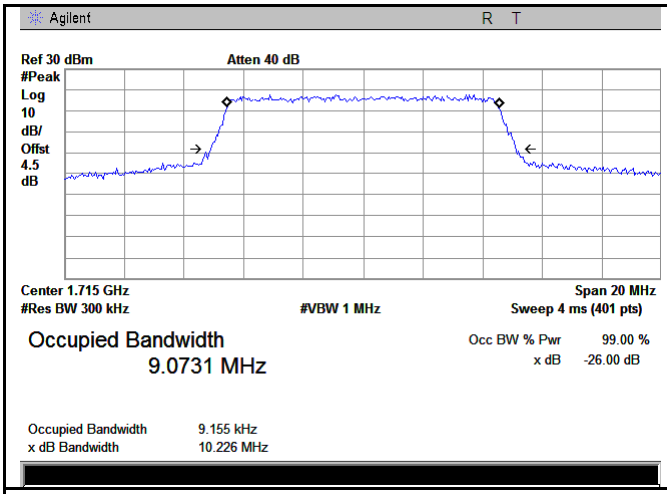
LTE Band IV - Middle CH 16QAM-5



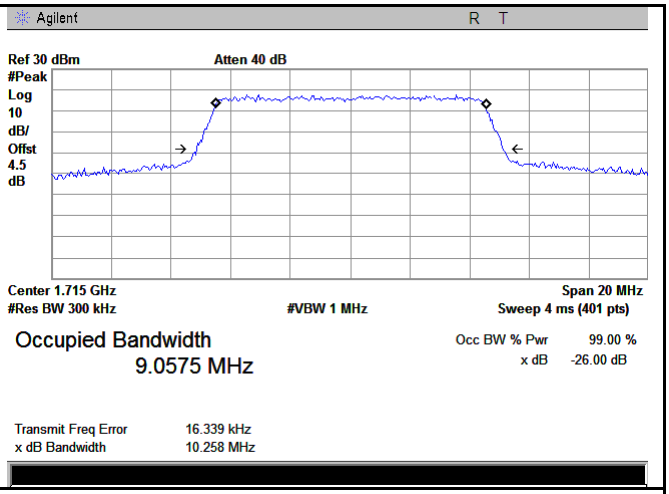
LTE Band IV - High CH QPSK-5



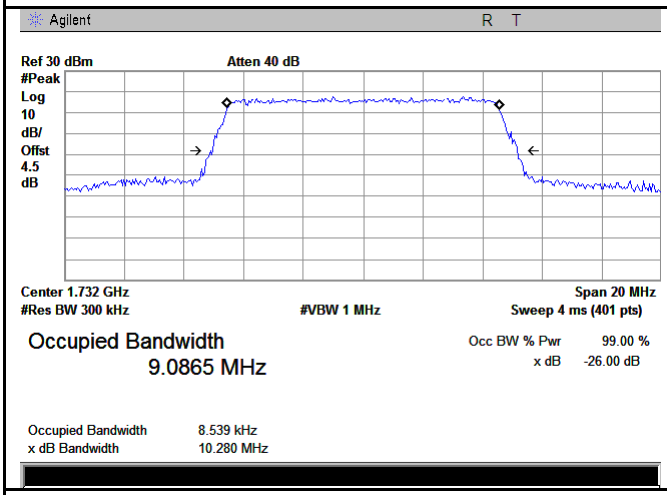
LTE Band IV - High CH 16QAM-5



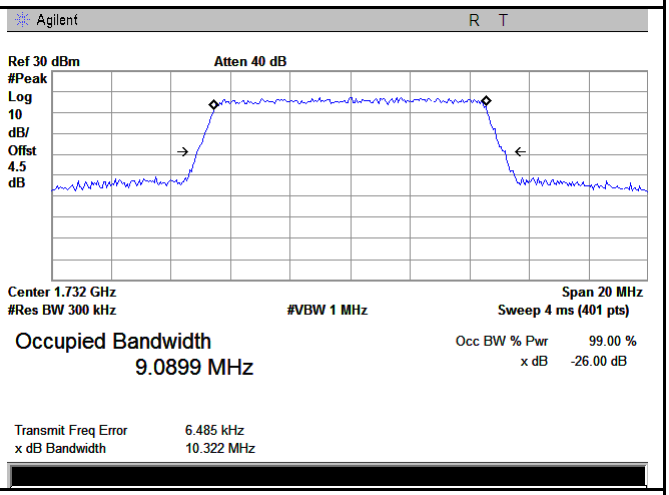
LTE Band IV - Low CH QPSK-10



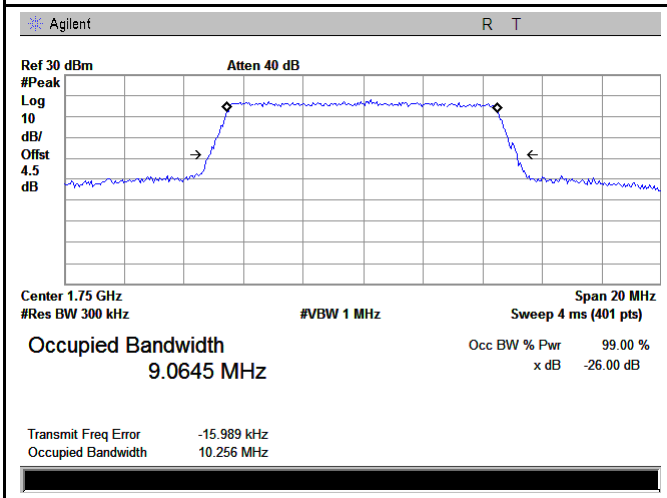
LTE Band IV - Low CH 16QAM-10



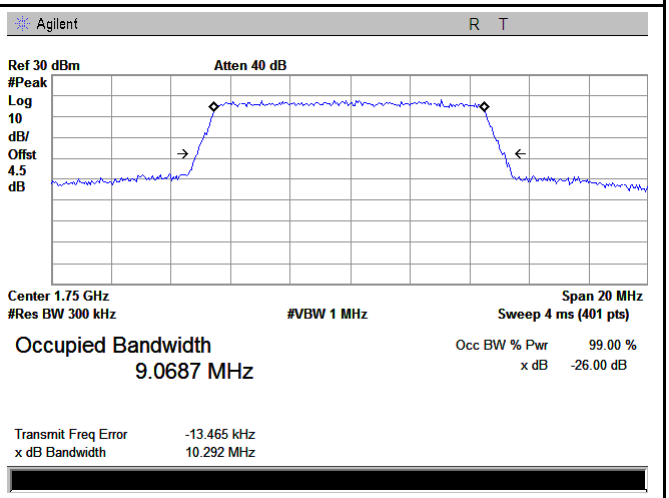
LTE Band IV - Middle CH QPSK-10



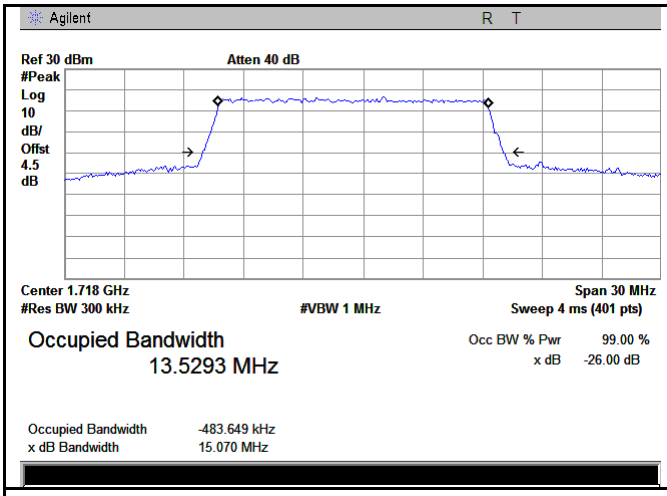
LTE Band IV - Middle CH 16QAM-10



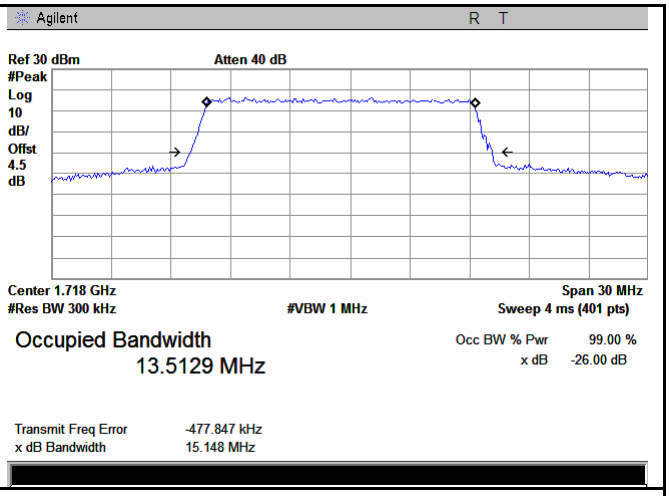
LTE Band IV - High CH QPSK-10



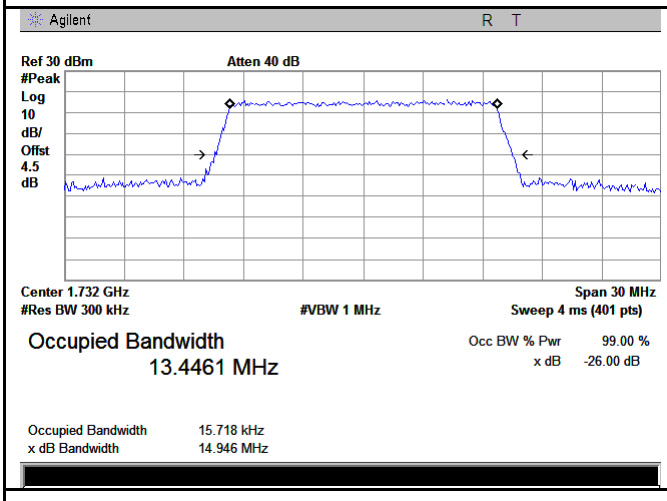
LTE Band IV - High CH 16QAM-10



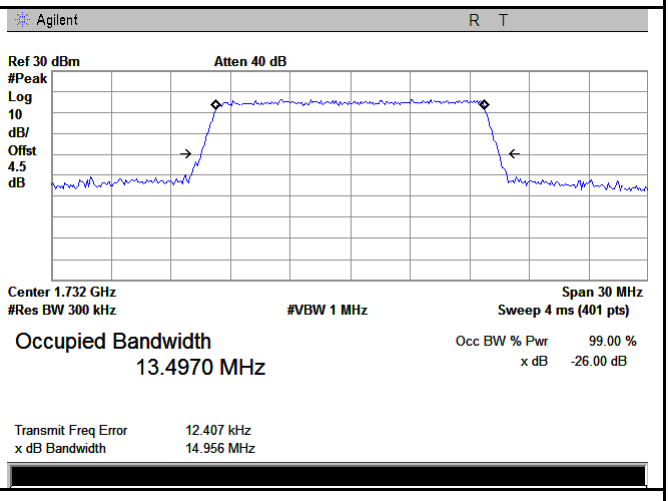
LTE Band IV - Low CH QPSK-15



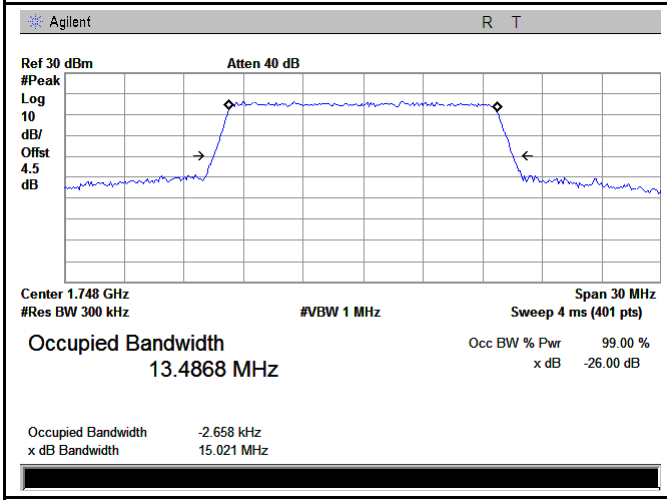
LTE Band IV - Low CH 16QAM-15



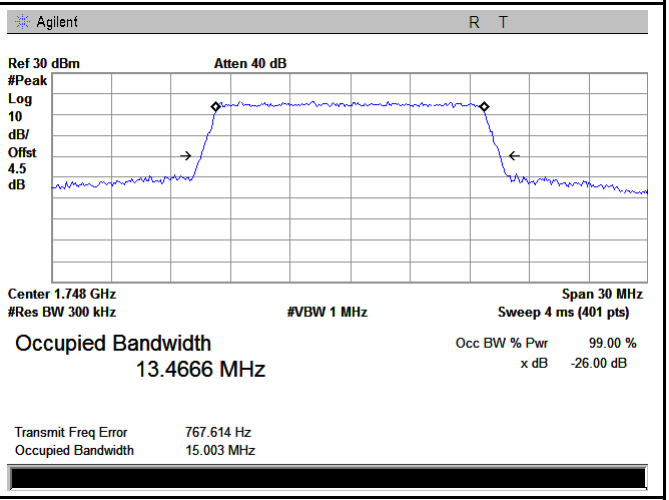
LTE Band IV - Middle CH QPSK-15



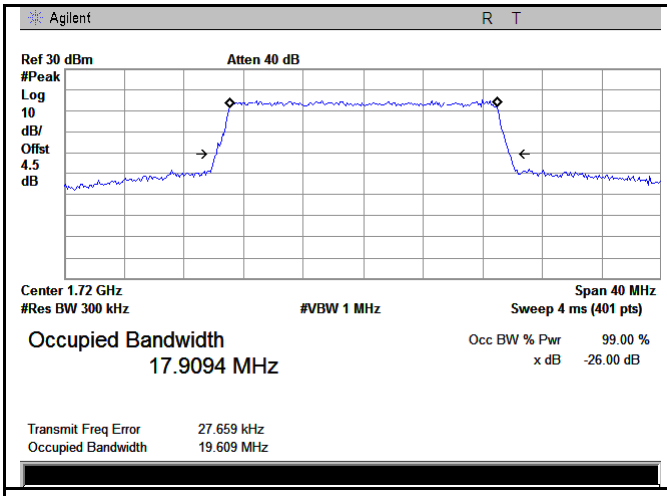
LTE Band IV - Middle CH 16QAM-15



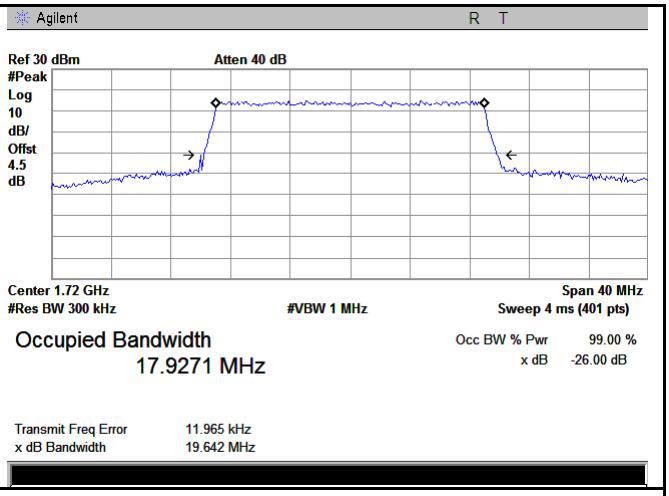
LTE Band IV - High CH QPSK-15



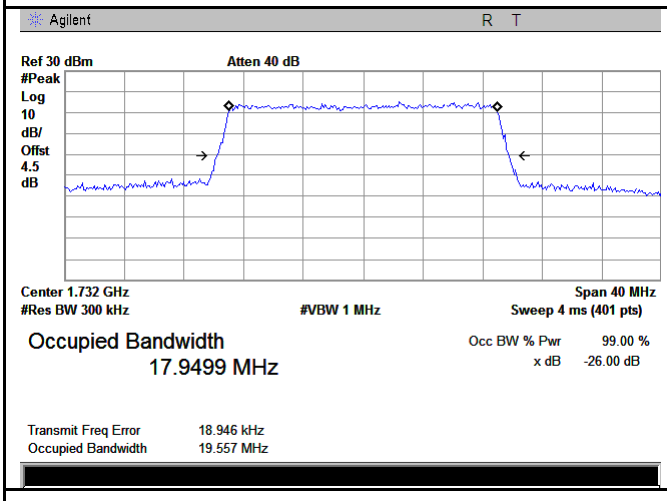
LTE Band IV - High CH 16QAM-15



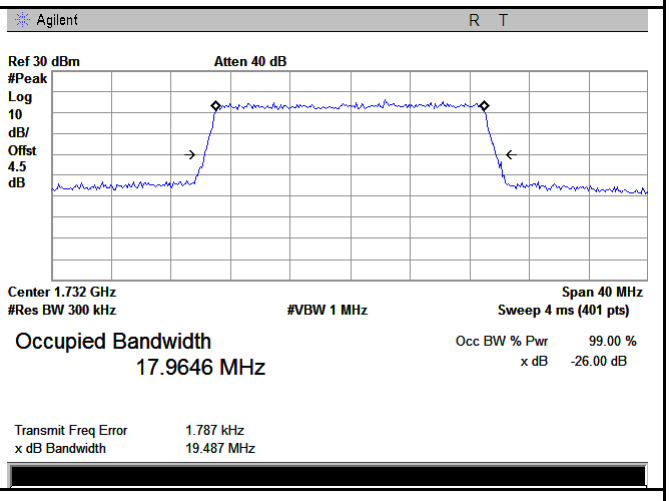
LTE Band IV - Low CH QPSK-20



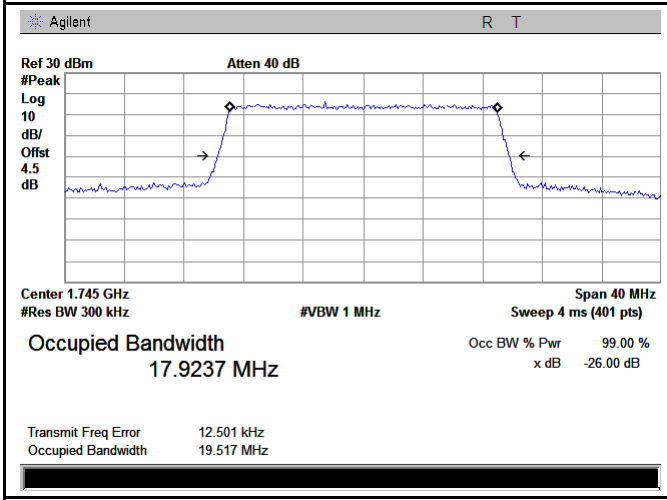
LTE Band IV - Low CH 16QAM-20



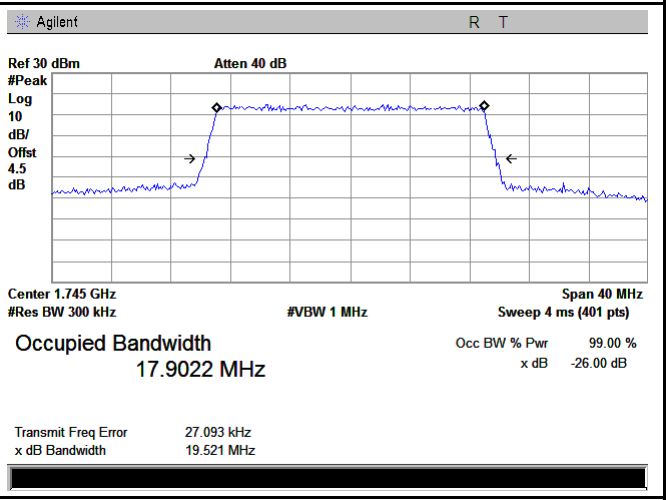
LTE Band IV - Middle CH QPSK-20



LTE Band IV - Middle CH 16QAM-20

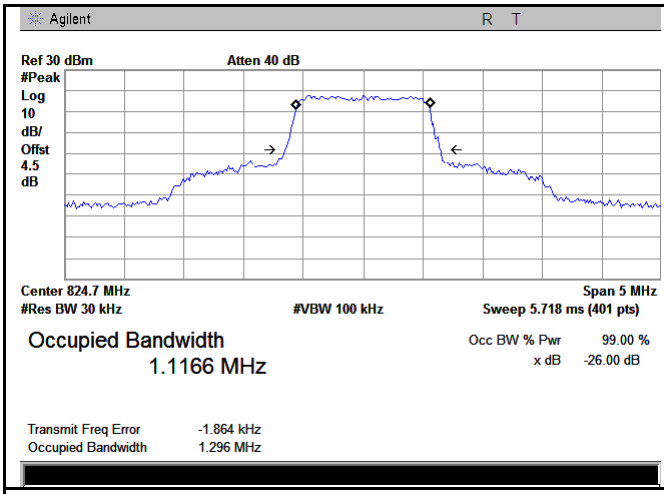


LTE Band IV - High CH QPSK-20

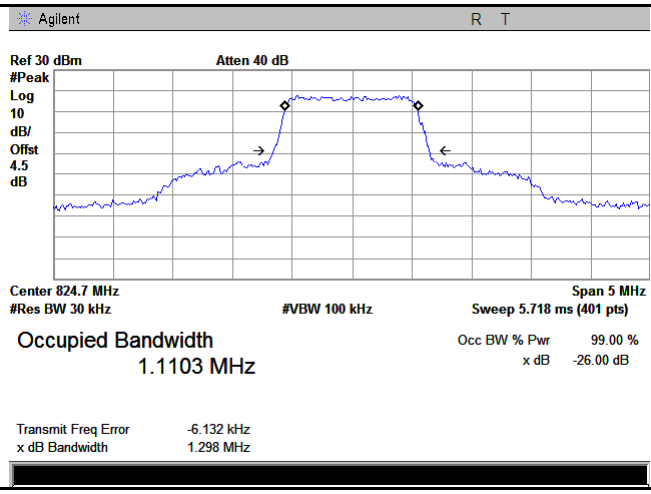


LTE Band IV - High CH 16QAM-20

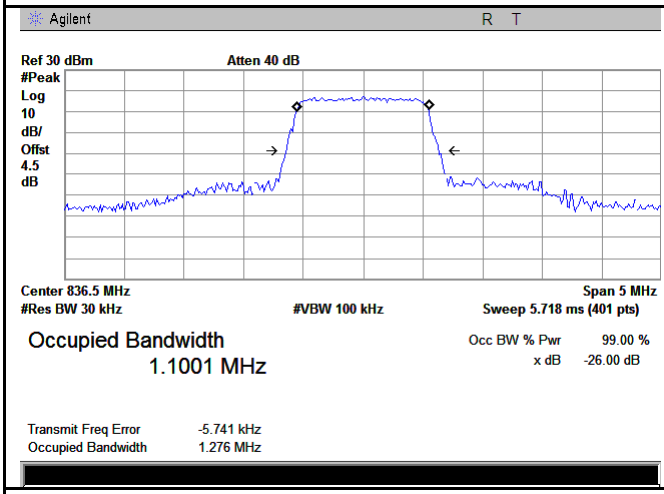
LTE Band V (Part 22H)



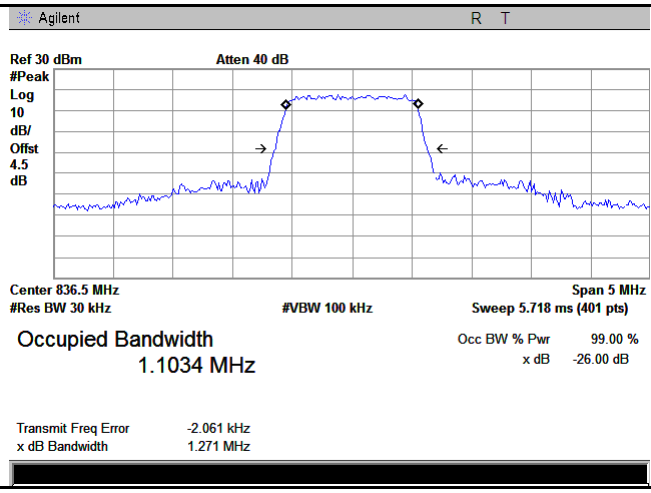
LTE Band V - Low CH QPSK-1.4



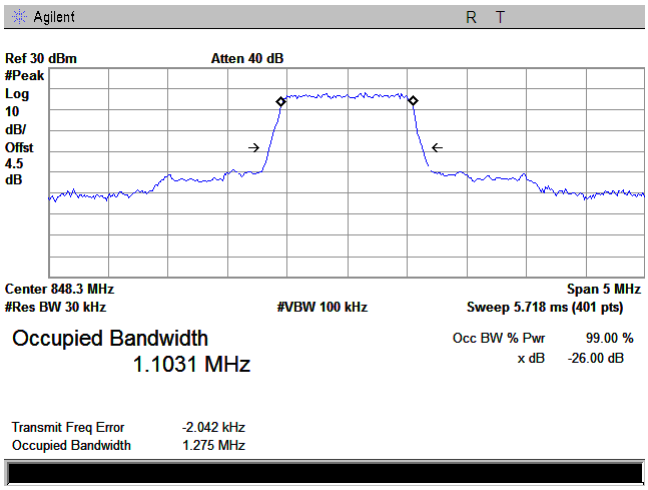
LTE Band V - Low CH 16QAM-1.4



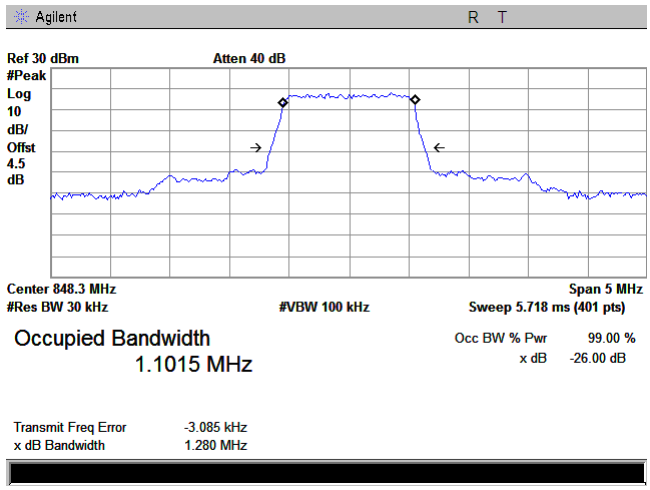
LTE Band V - Middle CH QPSK-1.4



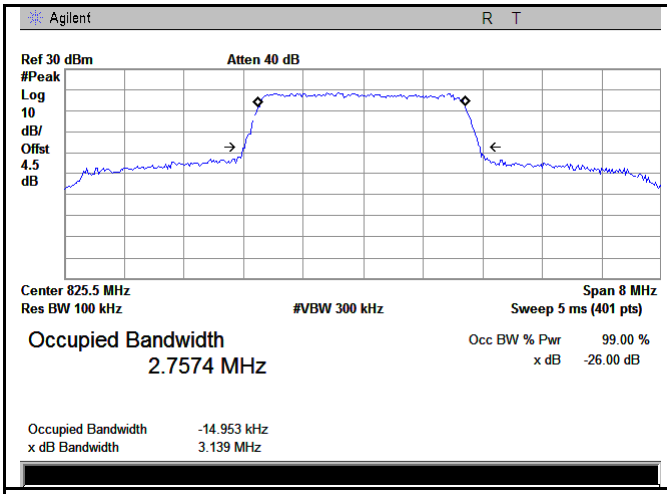
LTE Band V - Middle CH 16QAM-1.4



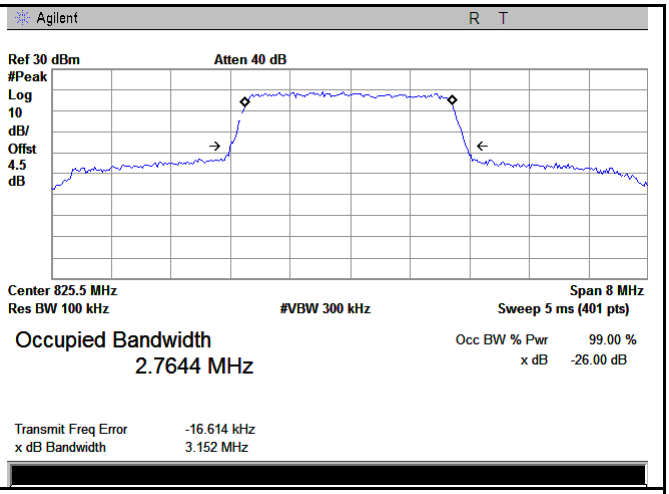
LTE Band V - High CH QPSK-1.4



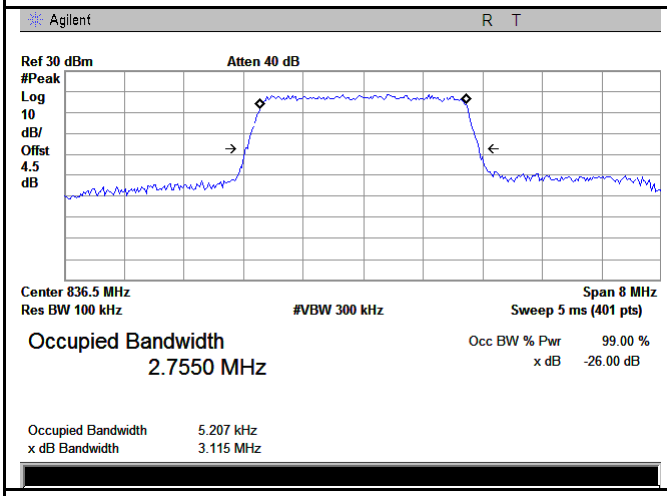
LTE Band V - High CH 16QAM-1.4



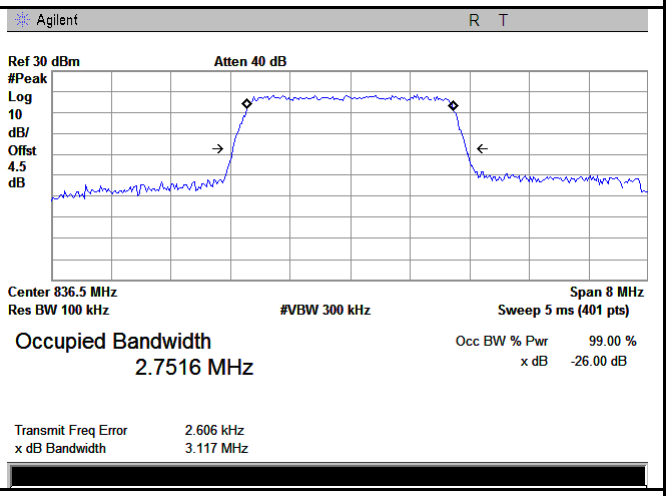
LTE Band V - Low CH QPSK-3



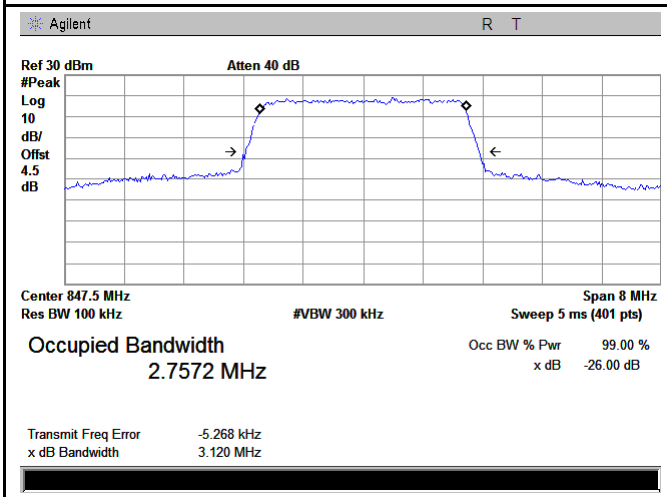
LTE Band V - Low CH 16QAM-3



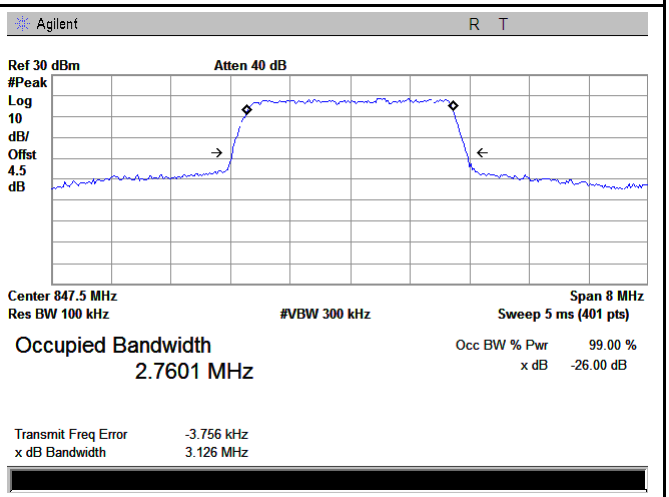
LTE Band V - Middle CH QPSK-3



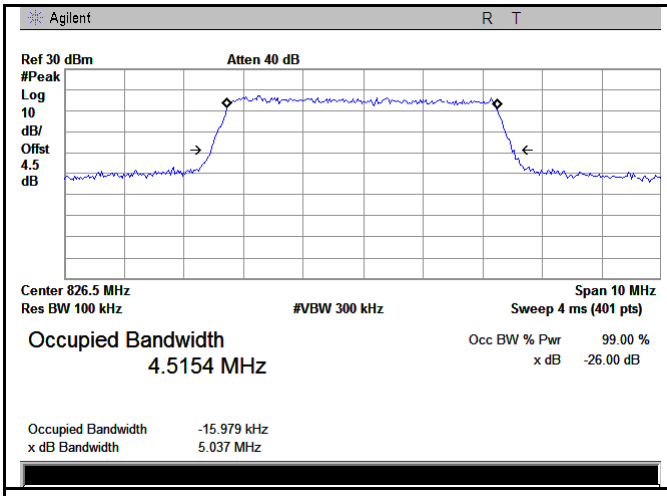
LTE Band V - Middle CH 16QAM-3



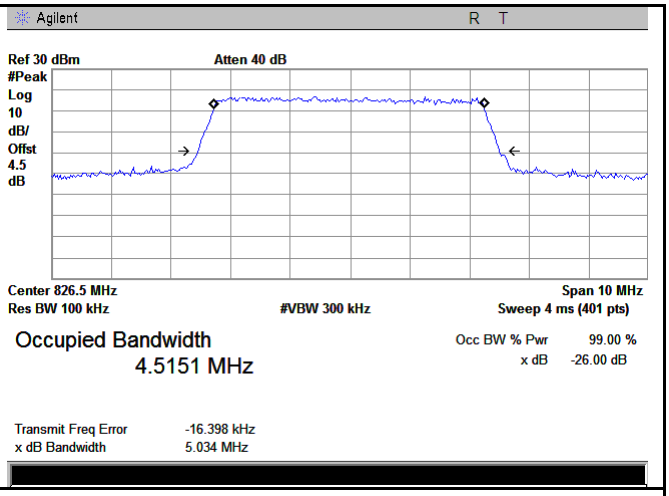
LTE Band V - High CH QPSK-3



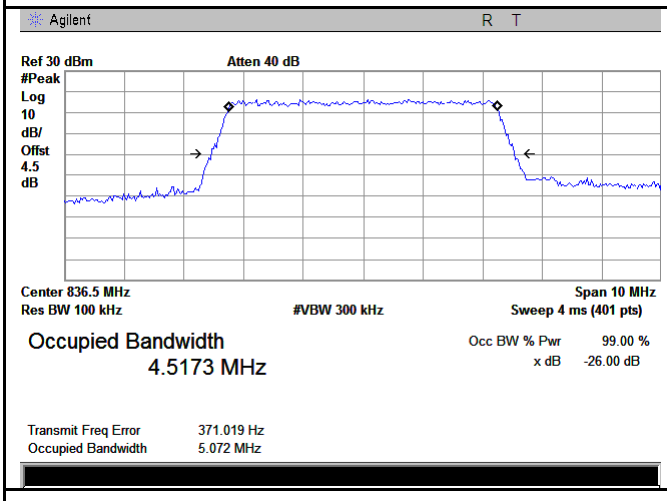
LTE Band V - High CH 16QAM-3



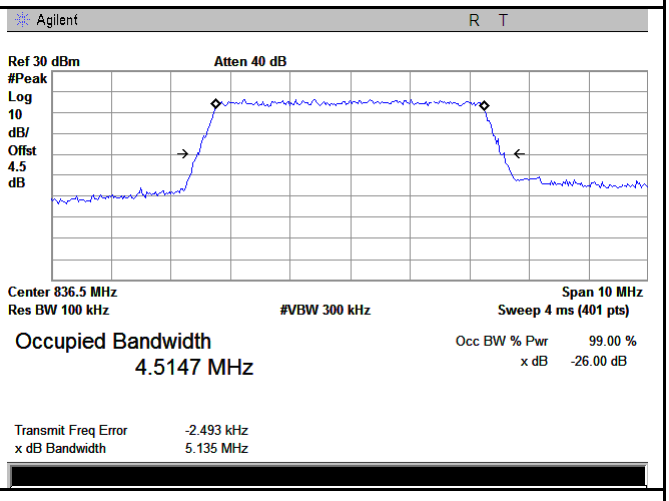
LTE Band V - Low CH QPSK-5



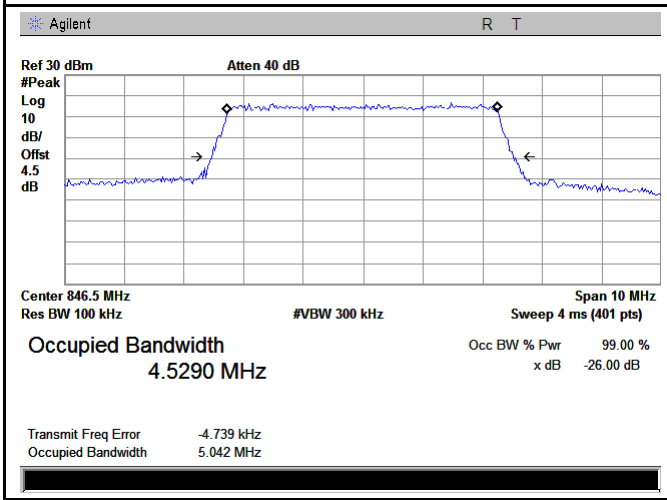
LTE Band V - Low CH 16QAM-5



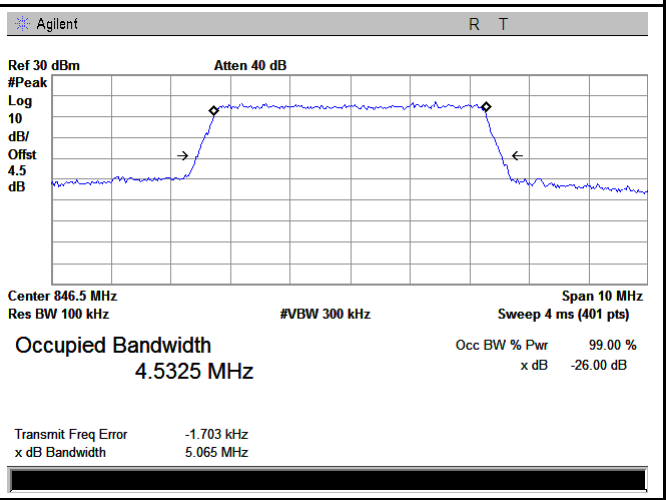
LTE Band V - Middle CH QPSK-5



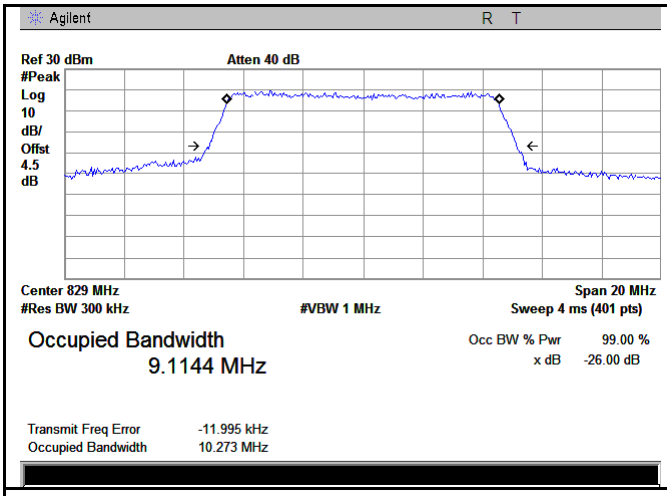
LTE Band V - Middle CH 16QAM-5



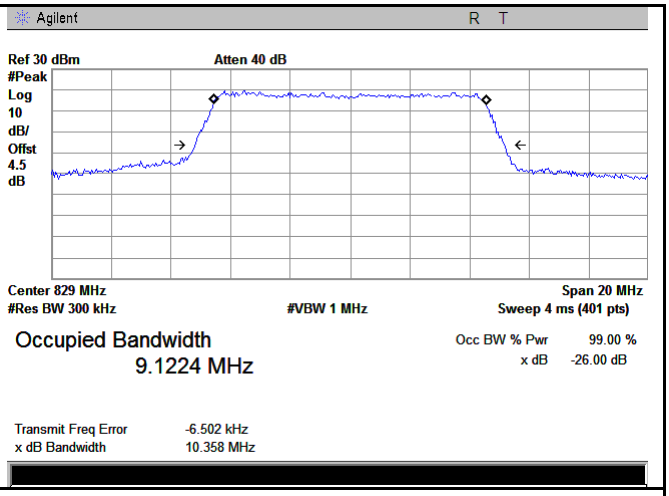
LTE Band V - High CH QPSK-5



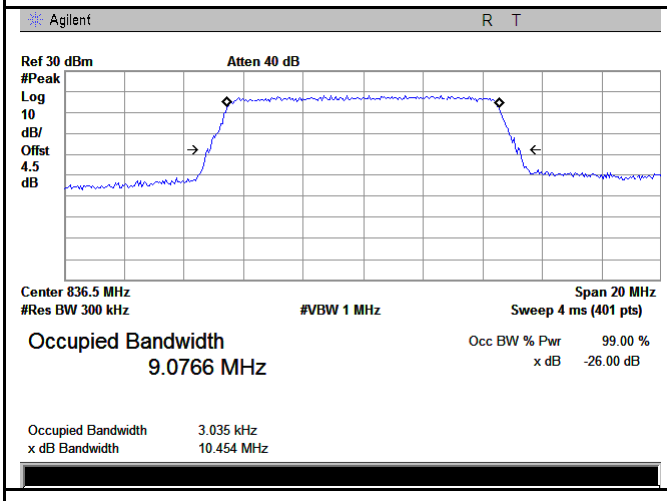
LTE Band V - High CH 16QAM-5



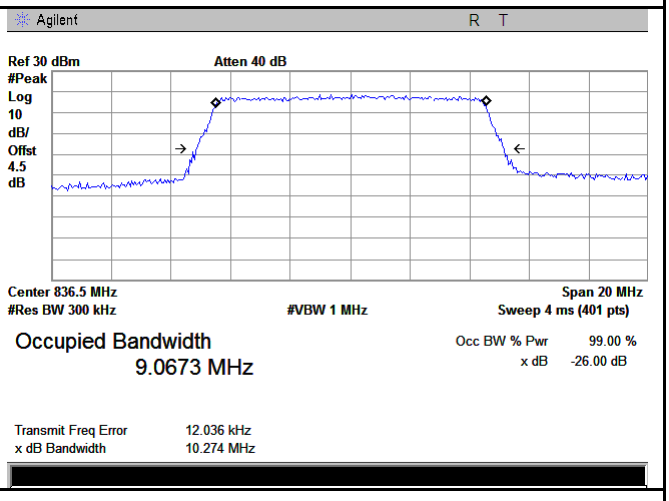
LTE Band V - Low CH QPSK-10



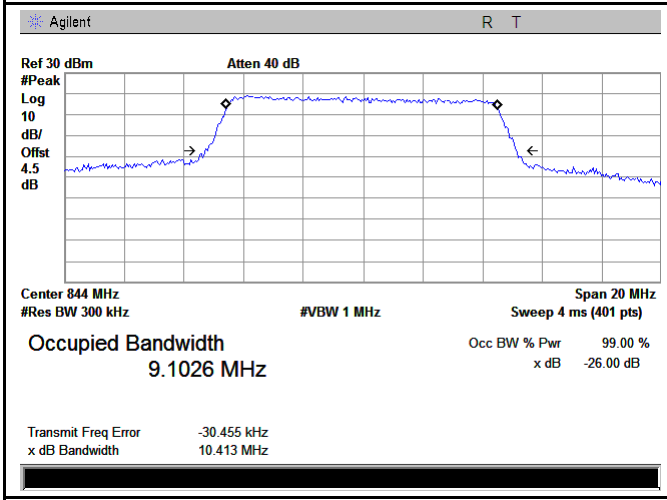
LTE Band V - Low CH 16QAM-10



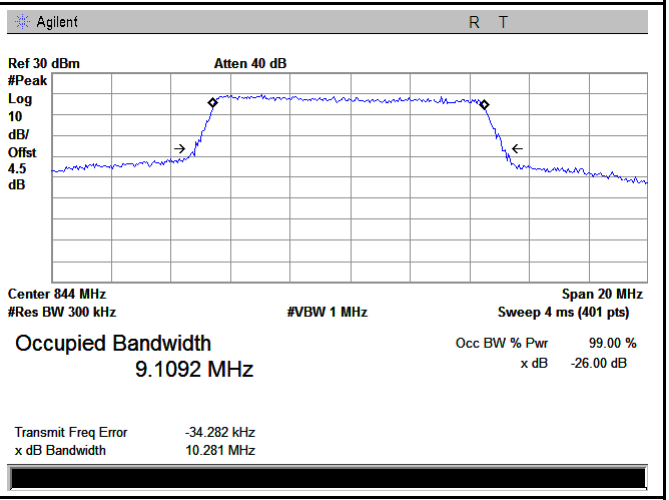
LTE Band V - Middle CH QPSK-10



LTE Band V - Middle CH 16QAM-10

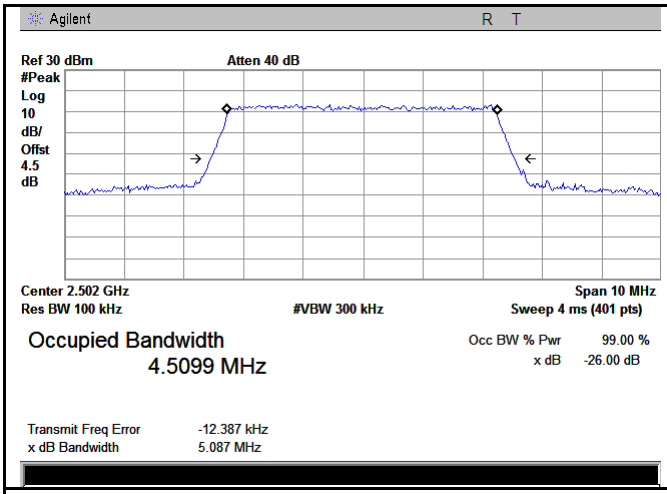


LTE Band V - High CH QPSK-10

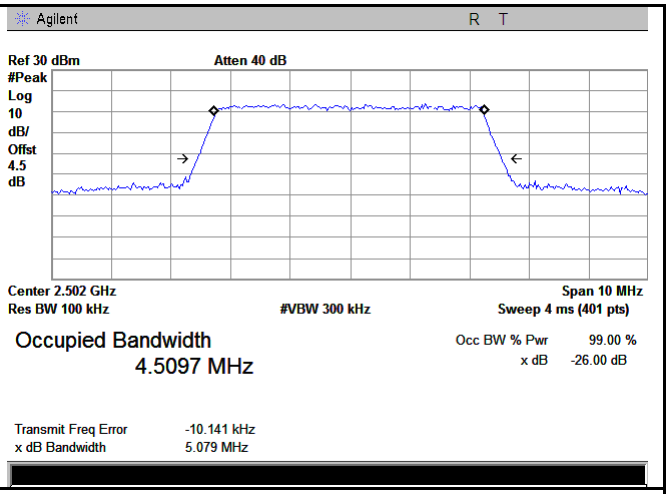


LTE Band V - High CH 16QAM-10

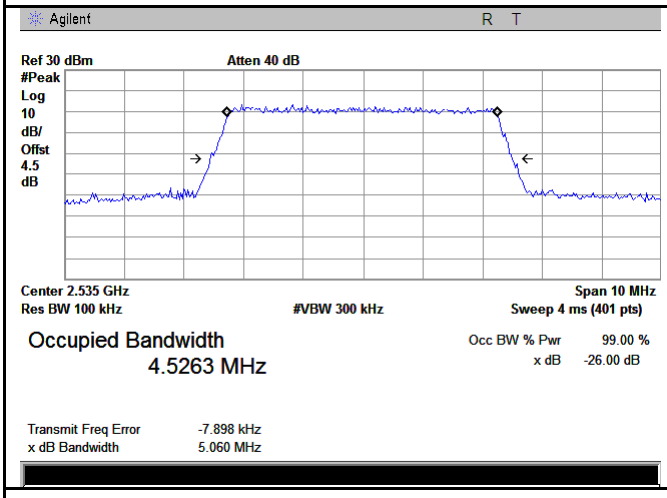
LTE Band VII (Part 27)



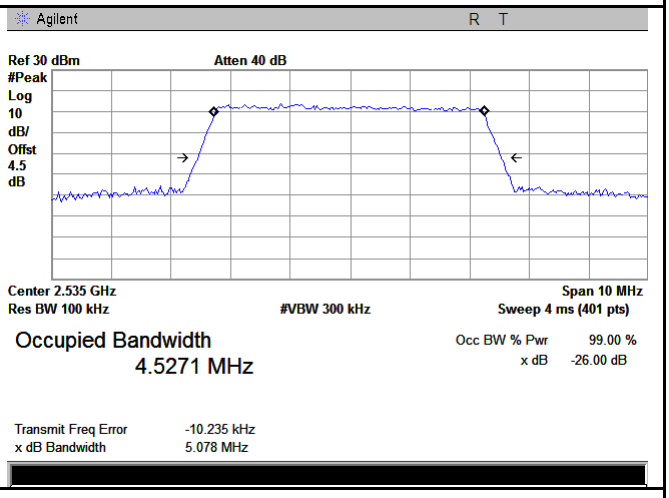
LTE Band VII - Low CH QPSK-5



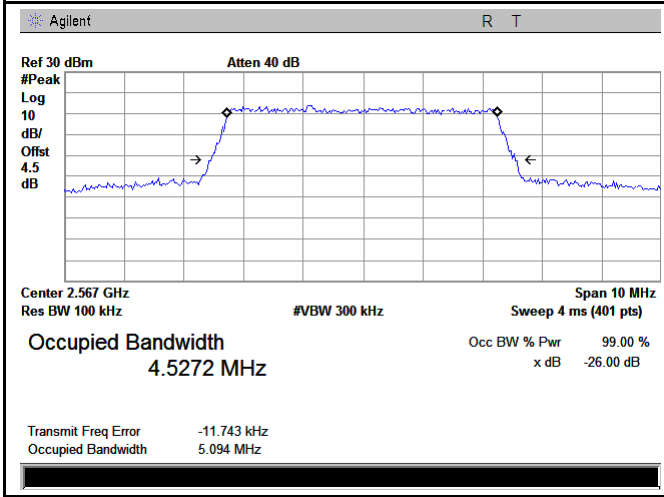
LTE Band VII - Low CH 16QAM-5



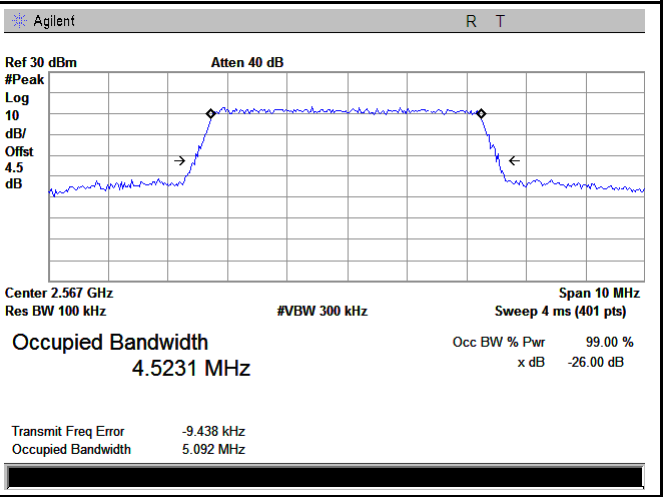
LTE Band VII - Middle CH QPSK-5



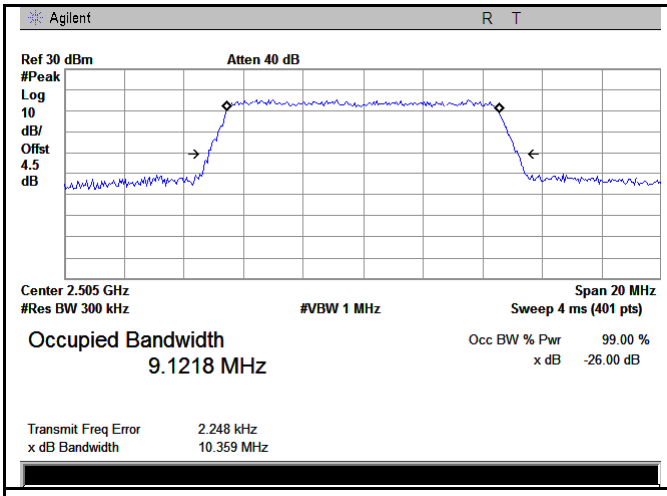
LTE Band VII - Middle CH 16QAM-5



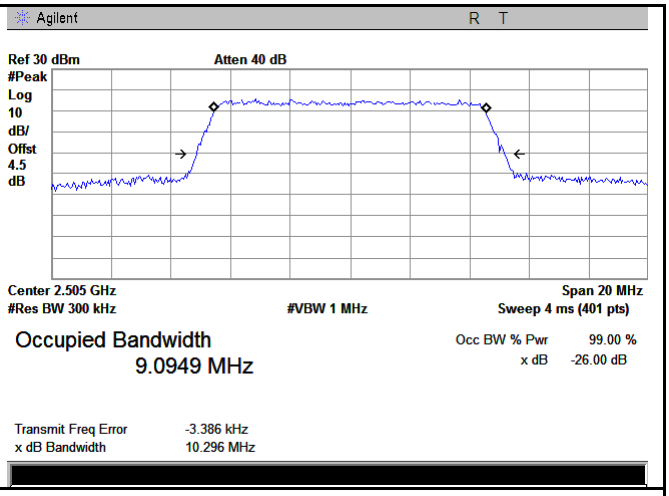
LTE Band VII - High CH QPSK-5



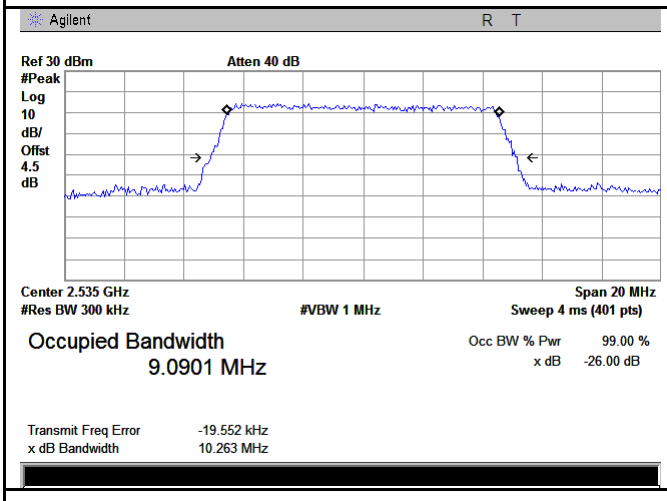
LTE Band VII - High CH 16QAM-5



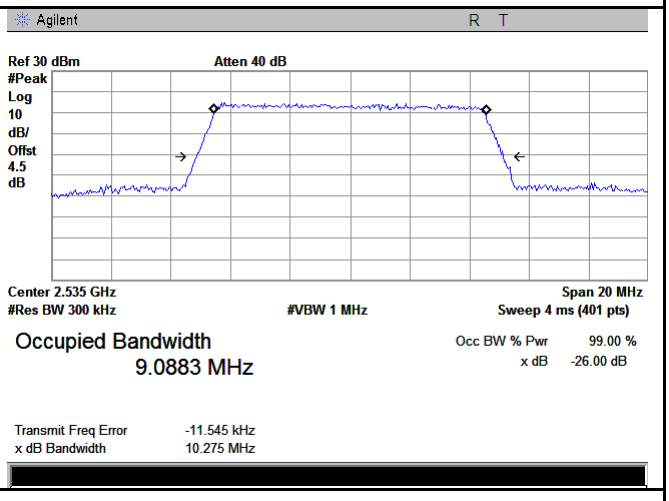
LTE Band VII - Low CH QPSK-10



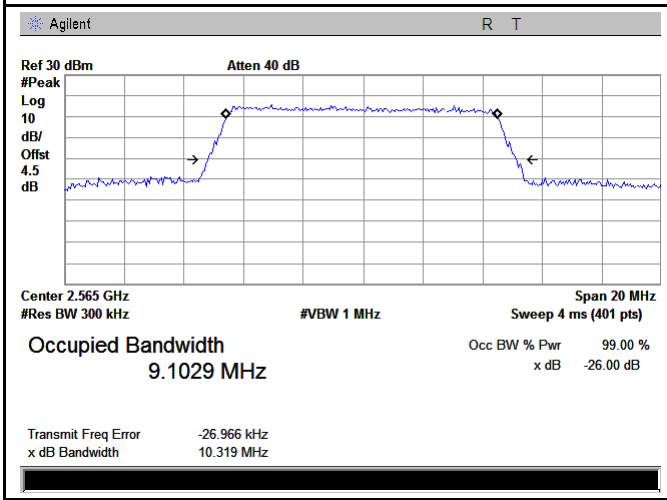
LTE Band VII - Low CH 16QAM-10



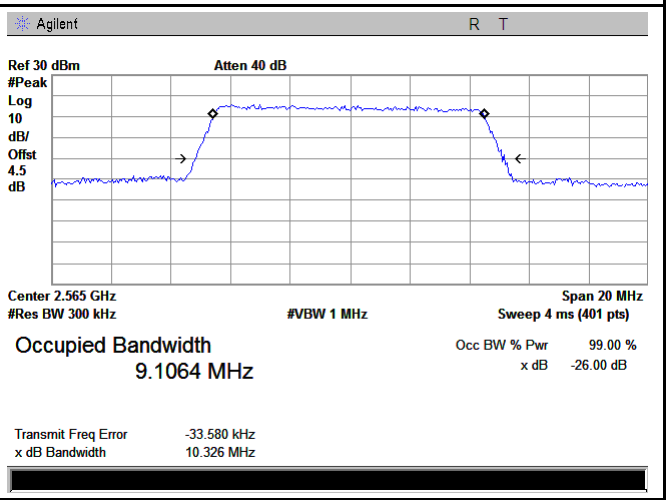
LTE Band VII - Middle CH QPSK-10



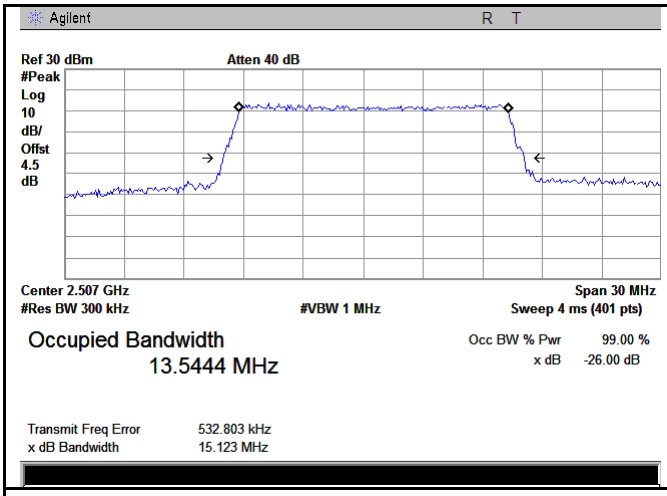
LTE Band VII - Middle CH 16QAM-10



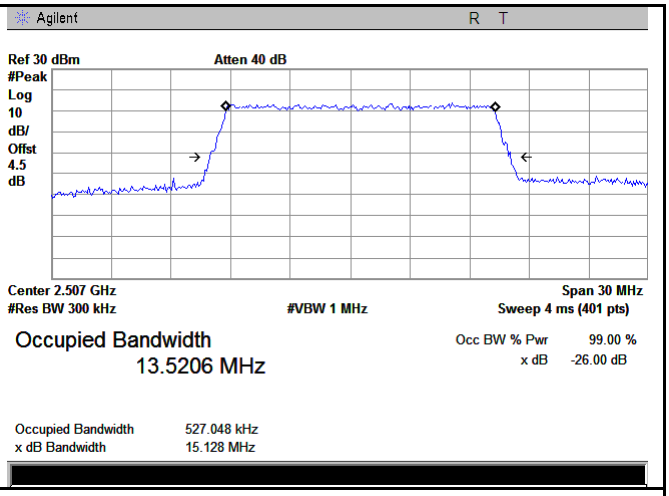
LTE Band VII - High CH QPSK-10



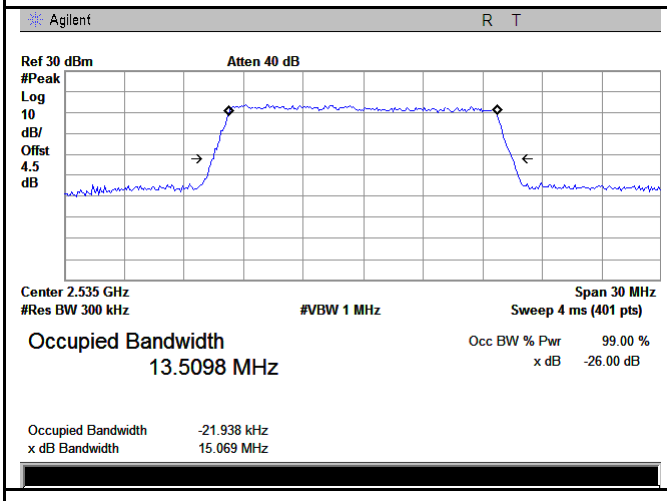
LTE Band VII - High CH 16QAM-10



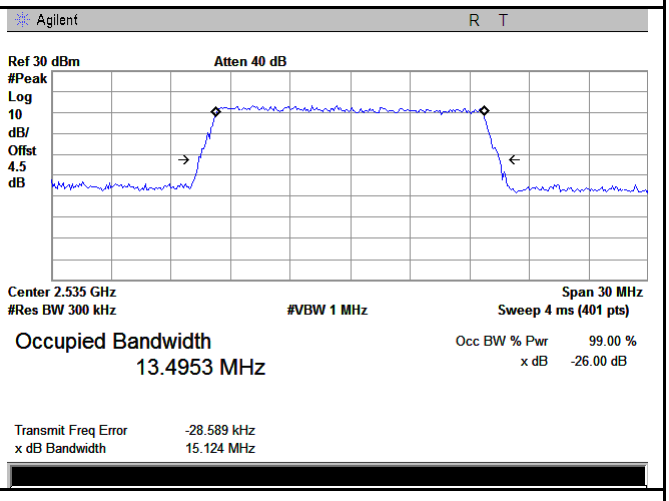
LTE Band VII - Low CH QPSK-15



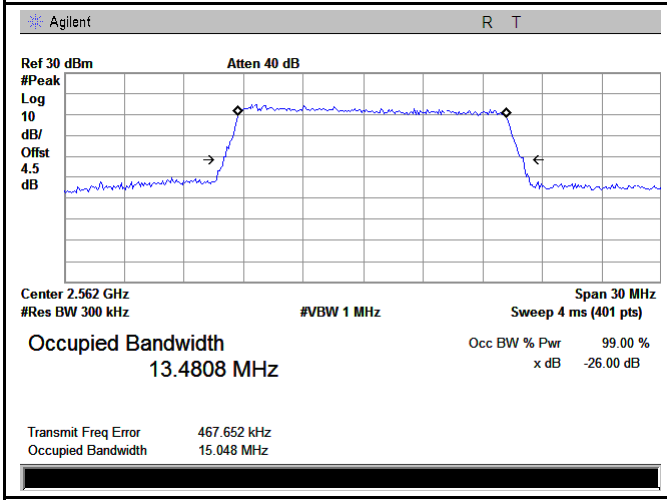
LTE Band VII - Low CH 16QAM-15



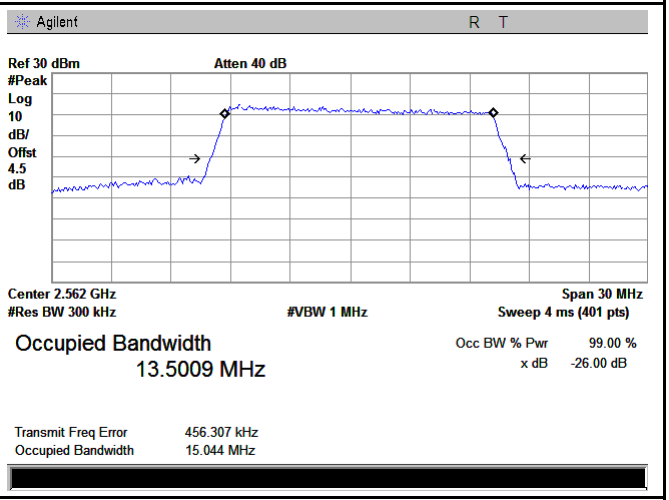
LTE Band VII - Middle CH QPSK-15



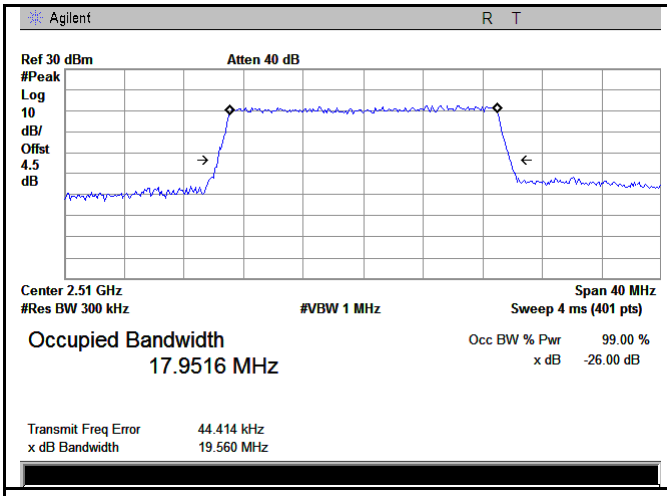
LTE Band VII - Middle CH 16QAM-15



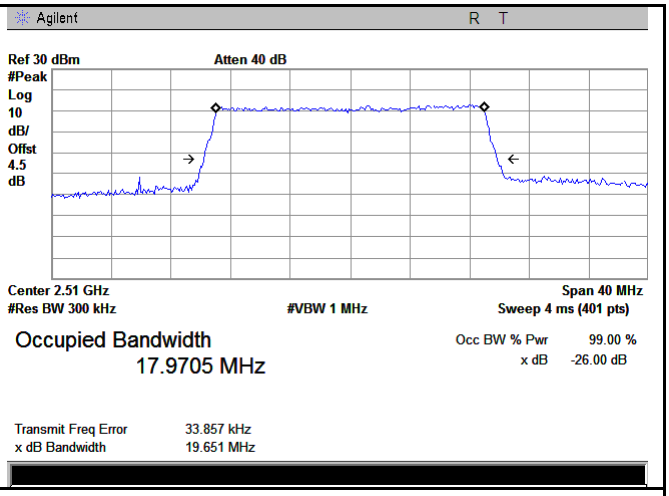
LTE Band VII - High CH QPSK-15



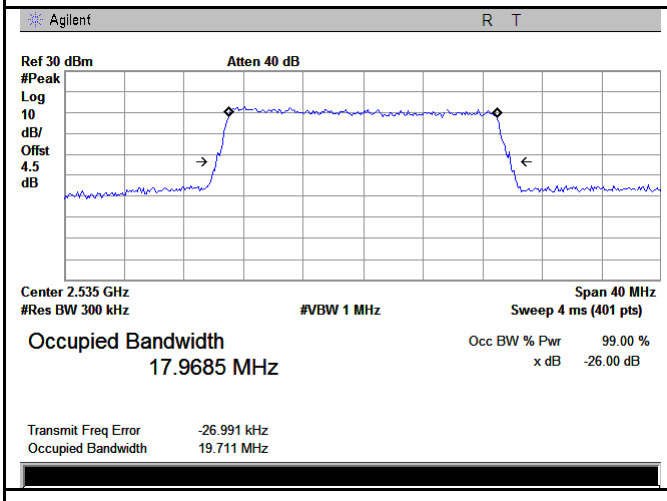
LTE Band VII - High CH 16QAM-15



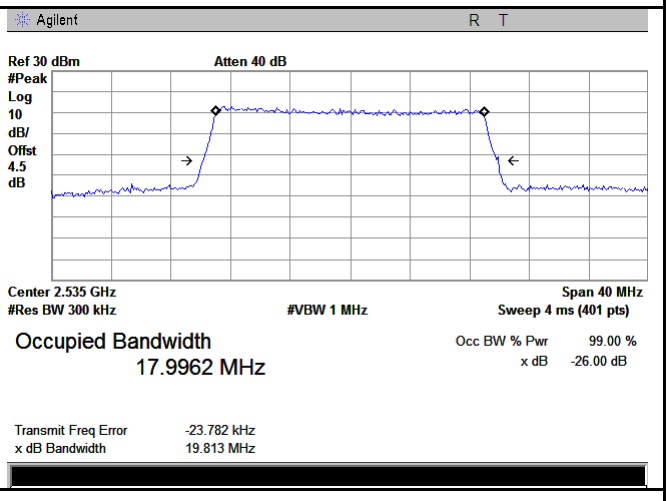
LTE Band VII - Low CH QPSK-20



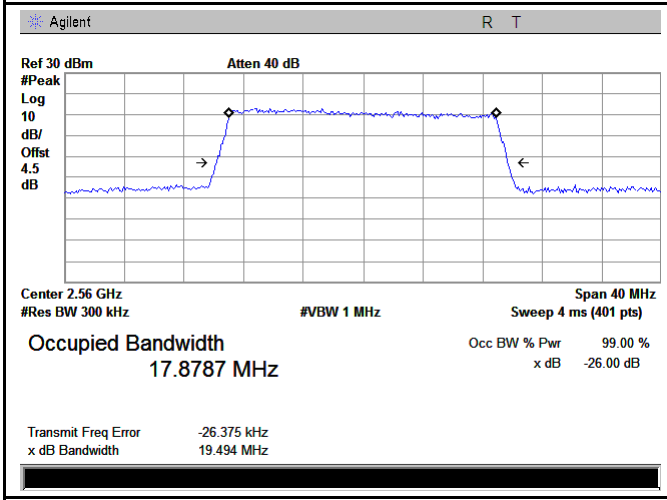
LTE Band VII - Low CH 16QAM-20



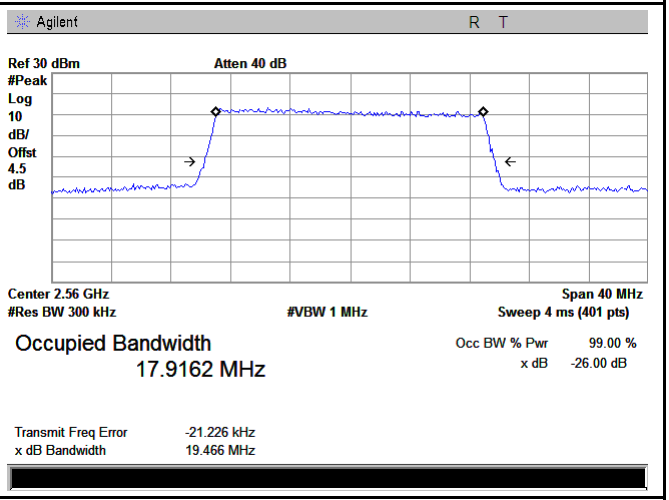
LTE Band VII - Middle CH QPSK-20



LTE Band VII - Middle CH 16QAM-20



LTE Band VII - High CH QPSK-20

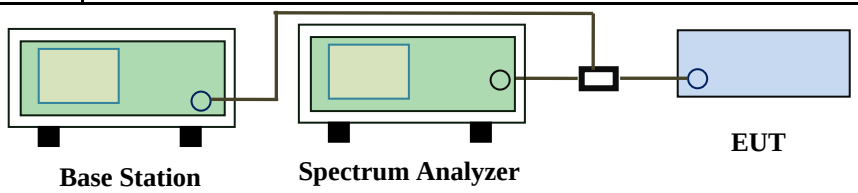


LTE Band VII - High CH 16QAM-20

6.5 Spurious Emissions at Antenna Terminals

Temperature	23℃
Relative Humidity	54%
Atmospheric Pressure	1014mbar
Test date :	September 11, 2017
Tested By :	Loren Luo

Requirement(s):

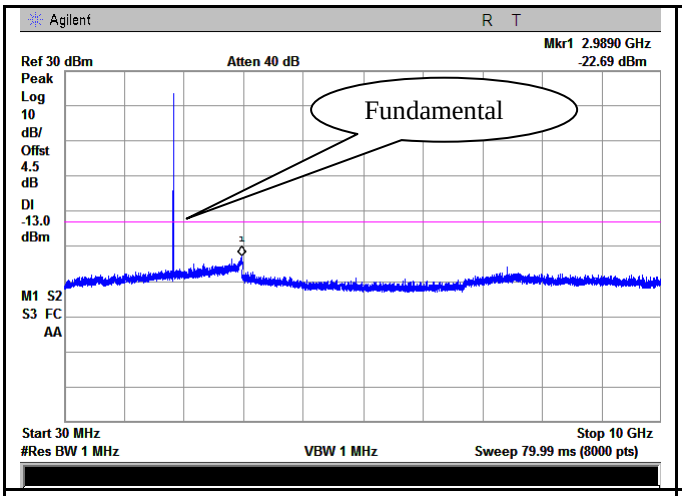
Spec	Item	Requirement	Applicable
§2.1051, §22.917(a)& §24.238(a) § 27.53(h)	a)	The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 43 + 10 log (P) dB	☑
Test Setup			
Test Procedure	- The EUT was connected 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

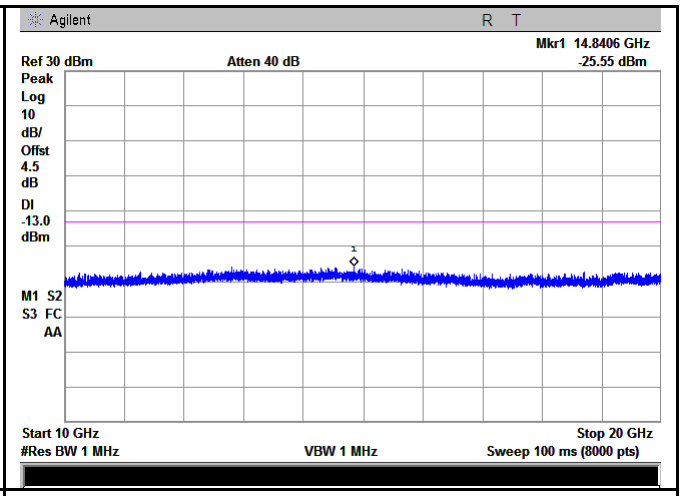
Test Plot ☑ Yes (See below) ☐ N/A

Test Plots 30MHz-5GHz

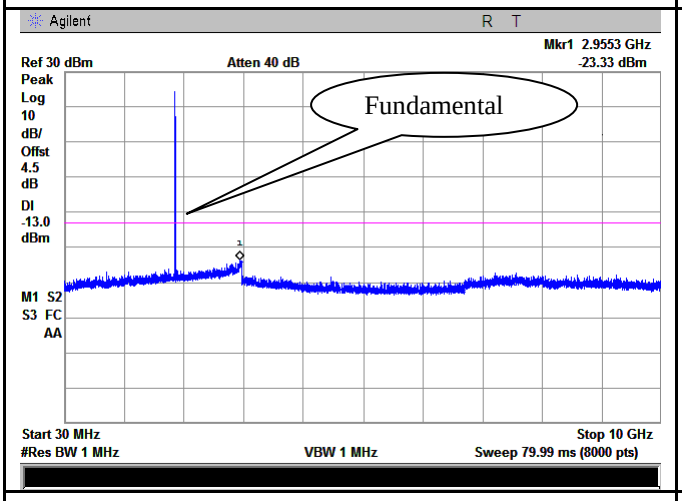
LTE Band II (Part 24E)



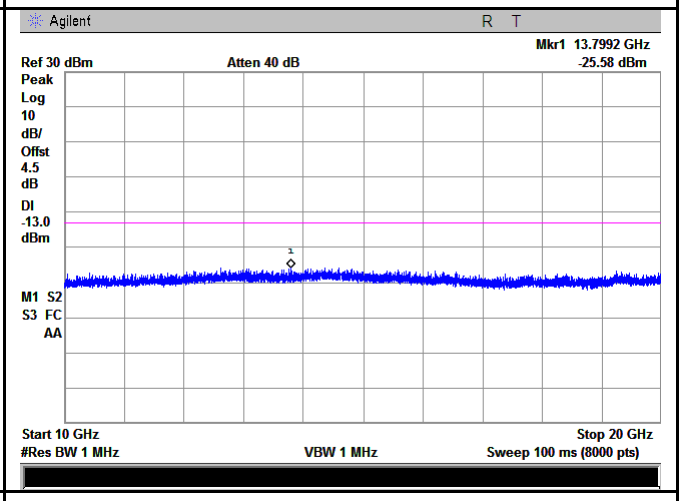
LTE Band II - Low Channel-1



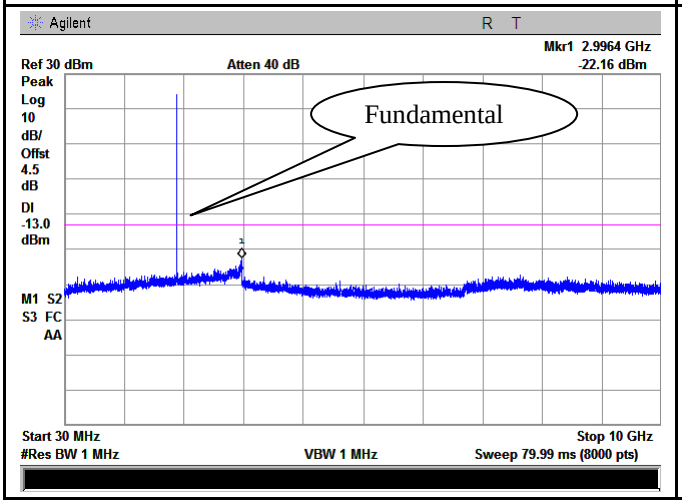
LTE Band II - Low Channel-2



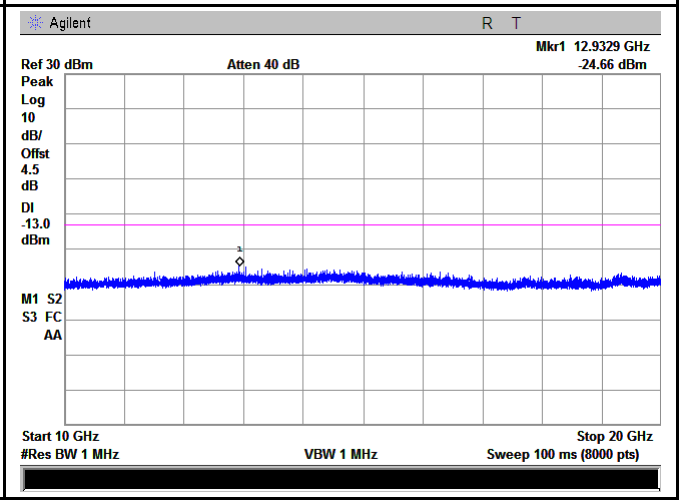
LTE Band II Middle Channel-1



LTE Band II Middle Channel-2

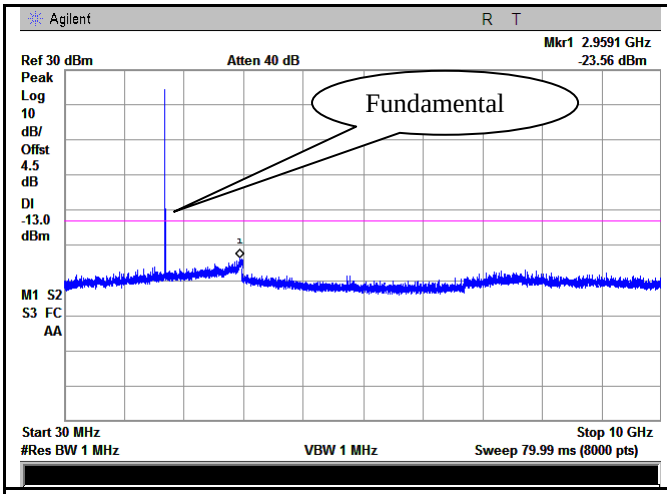


LTE Band II - High Channel-1

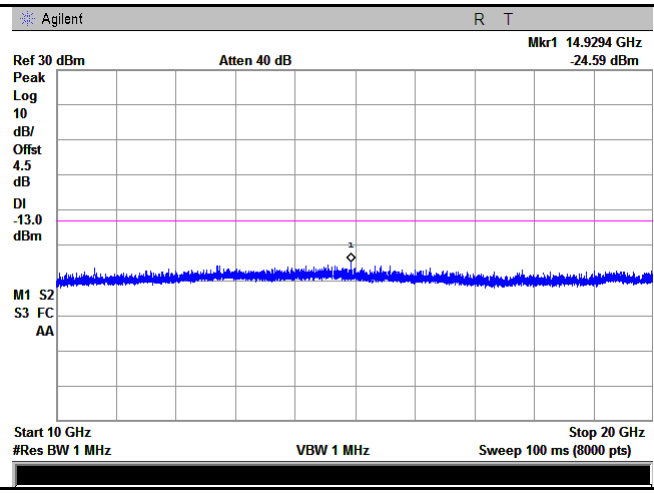


LTE Band II - High Channel-2

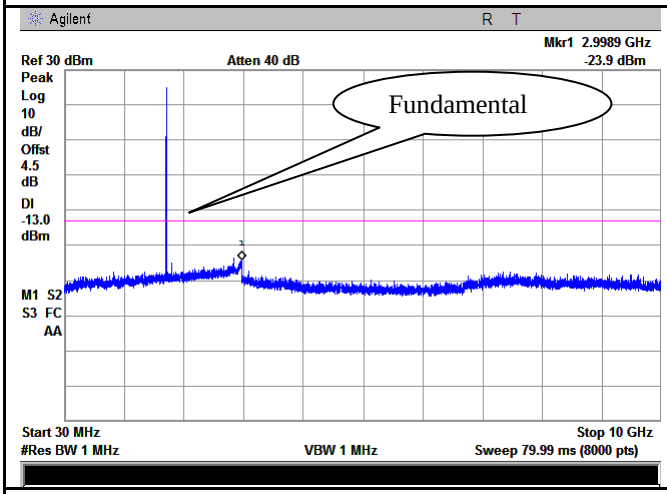
LTE Band IV (Part27) result



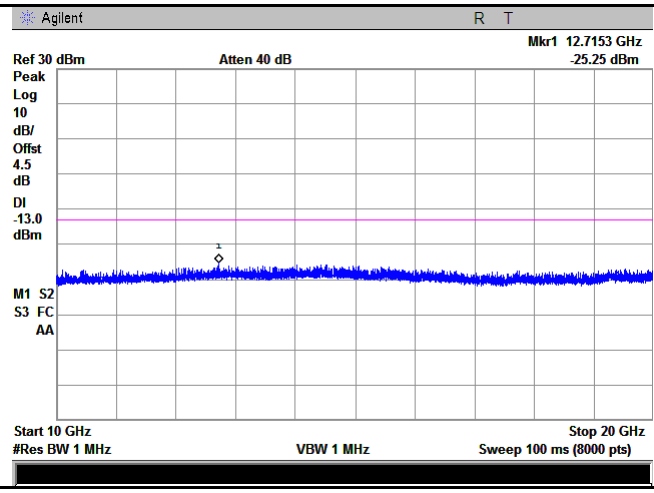
LTE Band IV - Low Channel-1



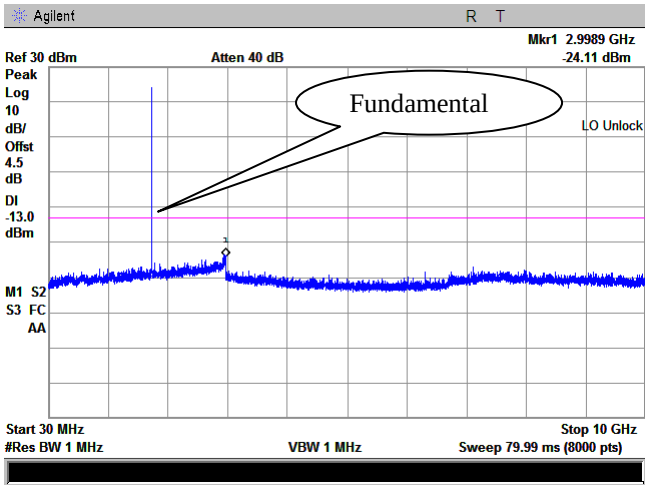
LTE Band IV - Low Channel-2



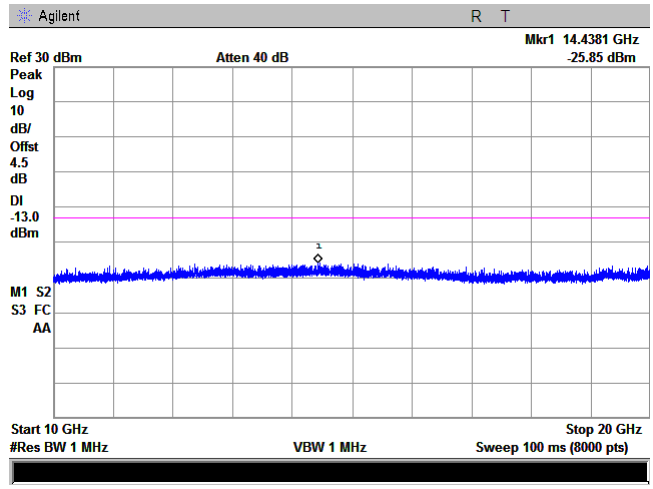
LTE Band IV - Middle Channel-1



LTE Band IV - Middle Channel-2

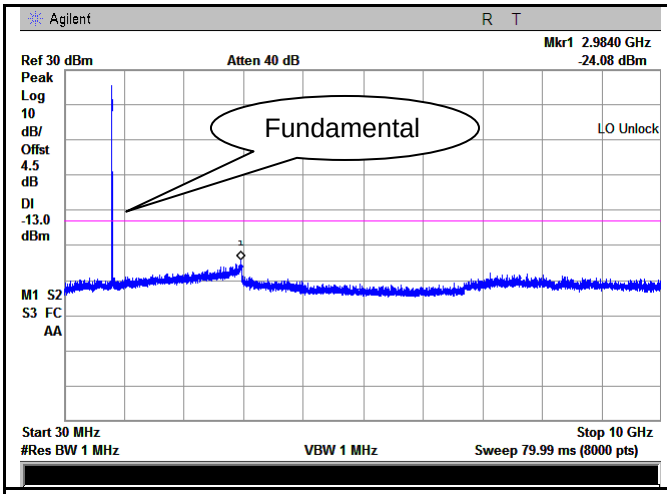


LTE Band IV - High Channel-1

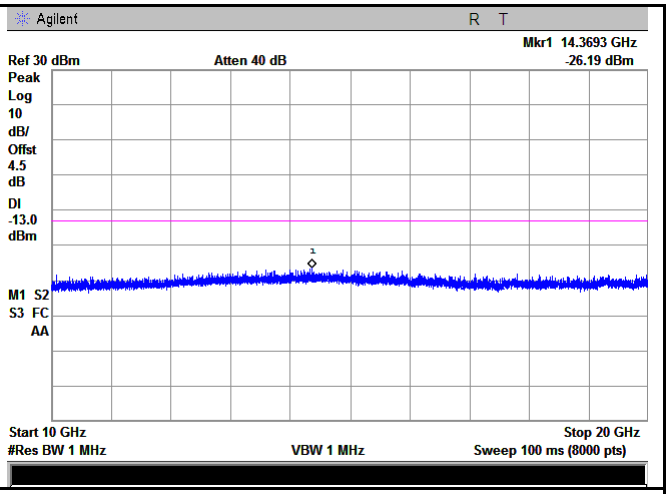


LTE Band IV - High Channel-2

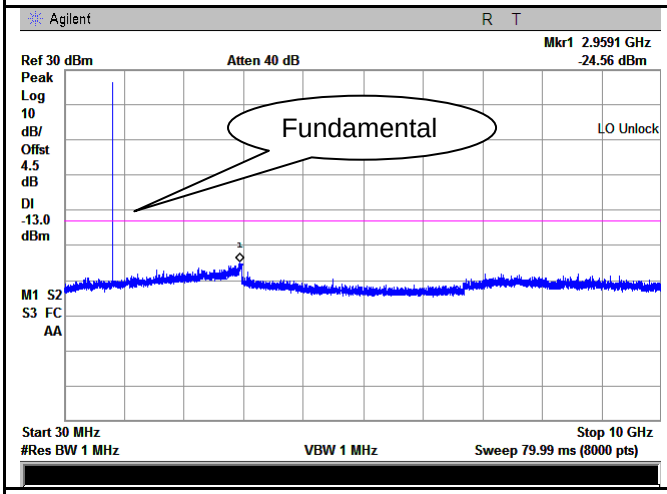
LTE Band V (Part 22H)



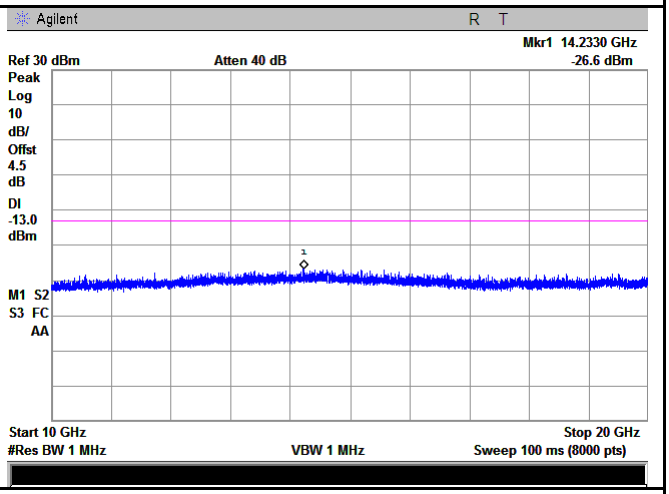
LTE Band V - Low Channel-1



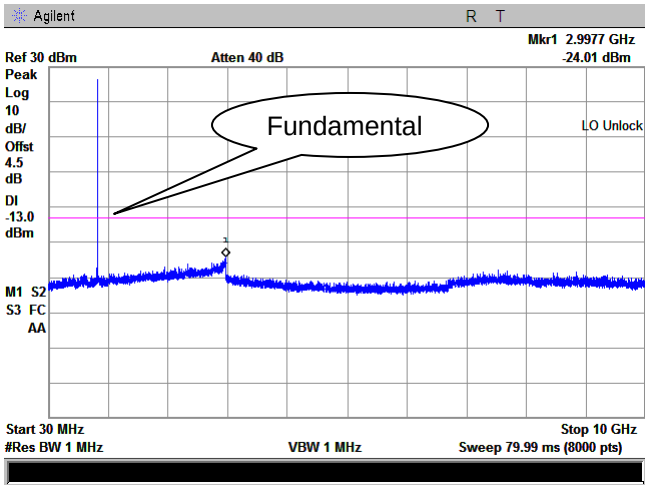
LTE Band V - Low Channel-2



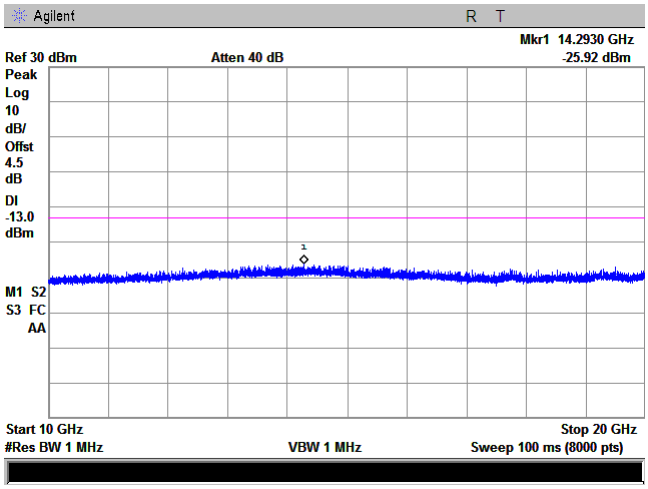
LTE Band V- Middle Channel-1



LTE Band V - Middle Channel-2

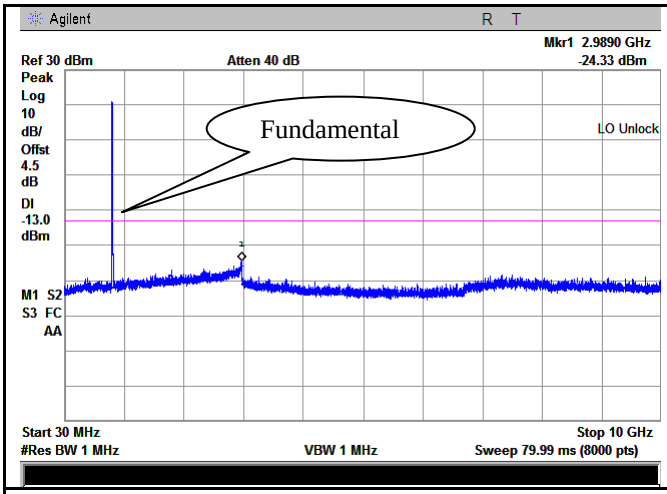


LTE Band V - High Channel-1

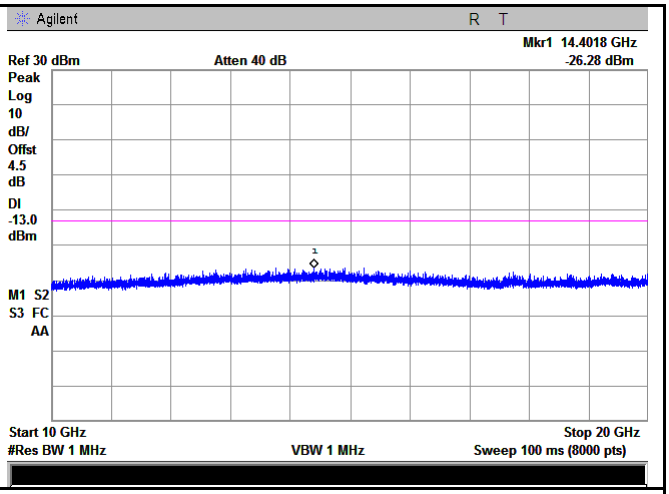


LTE Band V - High Channel-2

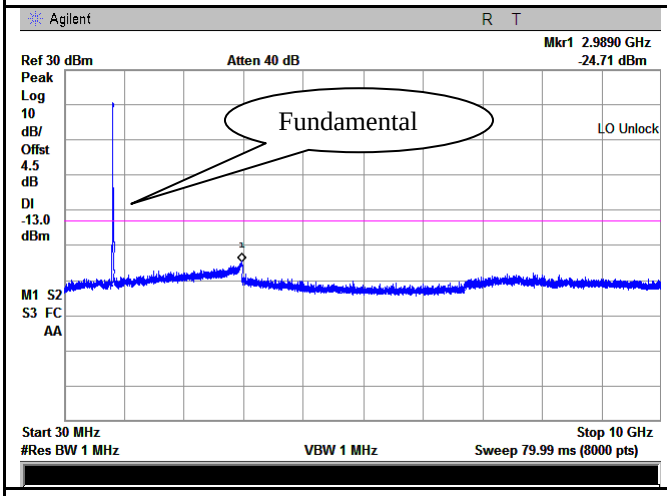
LTE Band VII (Part 27)



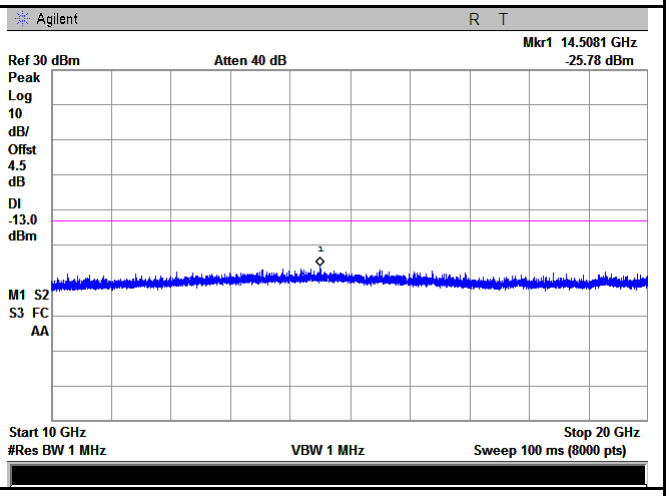
LTE Band VII - Low Channel-1



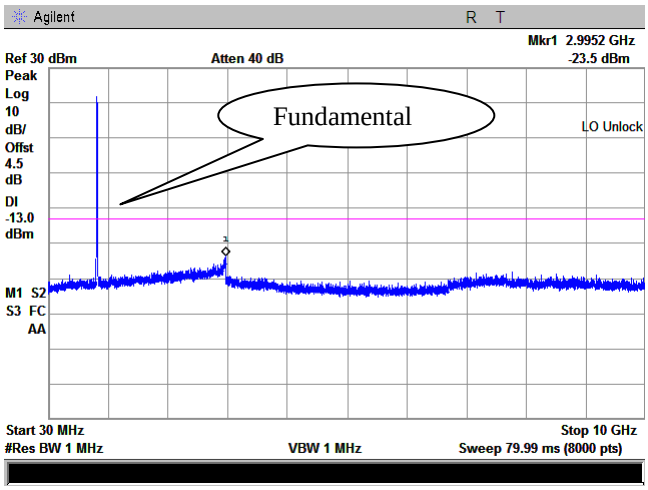
LTE Band VII - Low Channel-2



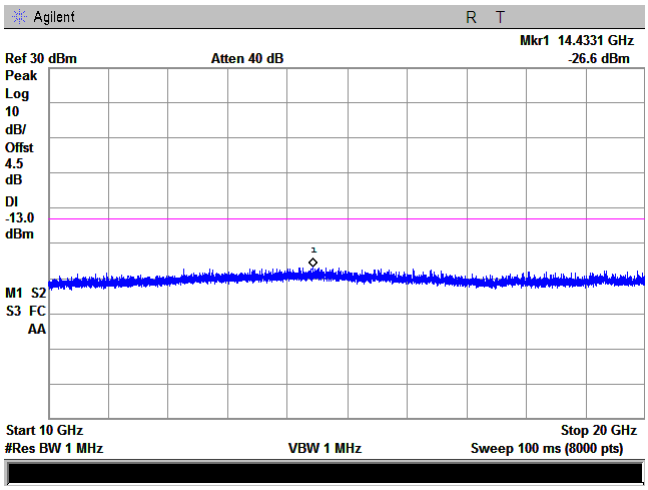
LTE Band VII- Middle Channel-1



LTE Band VII - Middle Channel-2



LTE Band VII - High Channel-1

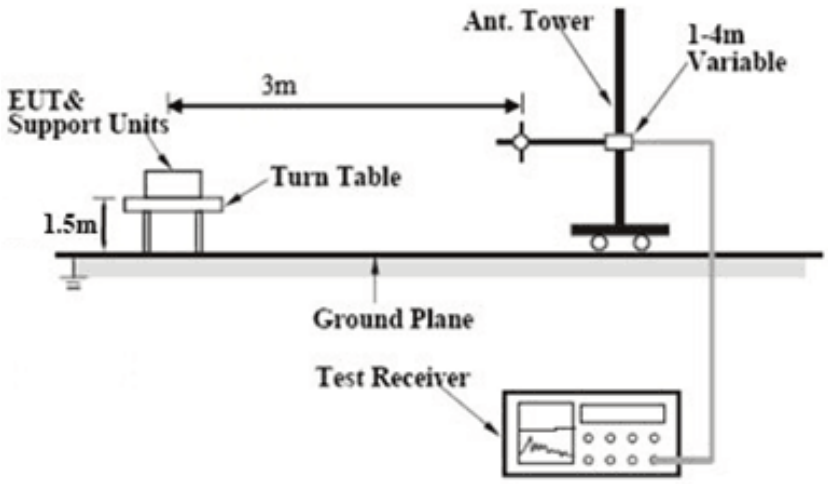


LTE Band VII - High Channel-2

6.6 Spurious Radiated Emissions

Temperature	23℃
Relative Humidity	54%
Atmospheric Pressure	1014mbar
Test date :	September 11, 2017
Tested By :	Loren Luo

Requirement(s):

Spec	Item	Requirement	Applicable
§2.1053, §22.917 & §24.238 § 27.53(h)	a)	The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.	☑
Test setup			
Test Procedure	1. The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable. 2. 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. 3. 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. Sample Calculation: EUT Field Strength = Raw Amplitude (dBμV/m) – Amplifier Gain (dB) + Antenna		

	Factor (dB) + Cable Loss (dB) + Filter Attenuation (dB, if used)
Remark	
Result	☑ Pass ☐ Fail

Test Data ☑ Yes ☐ N/A

Test Plot ☐ Yes (See below) ☑ N/A

LTE Band II (Part 24E) result

Low channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
3720	-44.47	V	10.25	2.73	-36.95	-13	-23.95
3720	-43.49	H	10.25	2.73	-35.97	-13	-22.97
631.6	-52.55	V	6.1	0.37	-46.82	-13	-33.82
931.6	-53.21	H	6.2	0.44	-47.45	-13	-34.45

Middle channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
3760	-43.34	V	10.25	2.73	-35.82	-13	-22.82
3760	-43.87	H	10.25	2.73	-36.35	-13	-23.35
261.3	-51.76	V	6	0.24	-46	-13	-33
949	-52.85	H	6.3	0.47	-47.02	-13	-34.02

High channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
3800	-44.33	V	10.36	2.73	-36.7	-13	-23.7
3800	-44.34	H	10.36	2.73	-36.71	-13	-23.71
637.8	-52.08	V	6.1	0.37	-46.35	-13	-33.35
917.4	-52.79	H	6.2	0.44	-47.03	-13	-34.03

Note:

*1, The testing has been conformed to 10*1907.5MHz=19,075MHz*
2, All other emissions more than 30 dB below the limit
3, X-Axis, Y-Axis and Z–Axis were investigated. The results above show only the worst case.
4, The radiated spurious test above 18GHz is subcontracted to SIEMIC (Nanjing-China) Laboratories. and found 30dB below the limit at least.

LTE Band IV (Part27) result

Low channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
3440	-48.38	V	10.06	2.52	-40.84	-13	-27.84
3440	-48.28	H	10.06	2.52	-40.74	-13	-27.74
702.7	-54.11	V	6.3	0.4	-48.21	-13	-35.21
287.1	-52.75	H	5.4	0.24	-47.59	-13	-34.59

Middle channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
3465	-48	V	10.09	2.52	-40.43	-13	-27.43
3465	-48.61	H	10.09	2.52	-41.04	-13	-28.04
325.1	-52.37	V	5.6	0.25	-47.02	-13	-34.02
602.5	-53.08	H	6.1	0.37	-47.35	-13	-34.35

High channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
3490	-49.33	V	10.09	2.52	-41.76	-13	-28.76
3490	-49.71	H	10.09	2.52	-42.14	-13	-29.14
680	-53.49	V	6.3	0.4	-47.59	-13	-34.59
582.7	-52.63	H	6.1	0.37	-46.9	-13	-33.90

Note:

*1, The testing has been conformed to 10*1752.5MHz=17,525MHz*
2, All other emissions more than 30 dB below the limit
3, X-Axis, Y-Axis and Z–Axis were investigated. The results above show only the worst case.

LTE Band V (Part22H) result

Low channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
1658	-45.92	V	7.95	0.78	-38.75	-13	-25.75
1658	-44.85	H	7.95	0.78	-37.68	-13	-24.68
506.6	-52.66	V	6.1	0.34	-46.9	-13	-33.90
903	-53.84	H	6.2	0.44	-48.08	-13	-35.08

Middle channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
1673	-49.06	V	7.95	0.78	-41.89	-13	-28.89
1673	-48.72	H	7.95	0.78	-41.55	-13	-28.55
489.3	-52.97	V	6.1	0.34	-47.21	-13	-34.21
160.6	-51.63	H	1	0.19	-50.82	-13	-37.82

High channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
1688	-47.67	V	7.95	0.78	-40.5	-13	-27.50
1688	-49.72	H	7.95	0.78	-42.55	-13	-29.55
648.4	-52.51	V	6.1	0.39	-46.8	-13	-33.80
872	-51.54	H	6.2	0.44	-45.78	-13	-32.78

Note:

*1, The testing has been conformed to 10*846.5MHz=8,465MHz*
2, All other emissions more than 30 dB below the limit
3, X-Axis, Y-Axis and Z–Axis were investigated. The results above show only the worst case.

LTE Band VII (Part27) result

Low channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
5020	-47.56	V	10.29	0.98	-38.25	-13	-25.25
5020	-48.82	H	10.29	0.98	-39.51	-13	-26.51
742.2	-53	V	6.4	0.43	-47.03	-13	-34.03
560.3	-51.15	H	6.4	0.35	-45.1	-13	-32.10

Middle channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
5070	-48.7	V	10.3	0.99	-39.39	-13	-26.39
5070	-49.39	H	10.3	0.99	-40.08	-13	-27.08
866.6	-52.77	V	6.1	0.44	-47.11	-13	-34.11
128.7	-51.89	H	0.2	0.17	-51.86	-13	-38.86

High channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
5120	-49.07	V	10.32	1	-39.75	-13	-26.75
5120	-49.22	H	10.32	1	-39.9	-13	-26.90
156.8	-52.83	V	1	0.19	-52.02	-13	-39.02
547.7	-52.36	H	6.4	0.35	-46.31	-13	-33.31

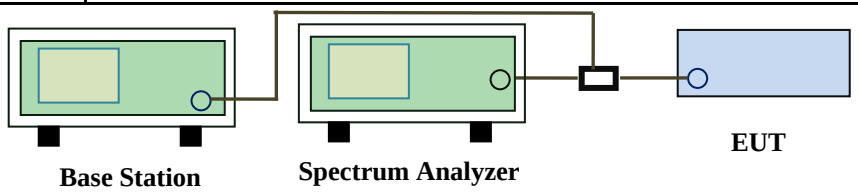
Note:

*1, The testing has been conformed to 10*2567.5MHz=25,675MHz*
2, All other emissions more than 30 dB below the limit
3, X-Axis, Y-Axis and Z –Axis were investigated. The results above show only the worst case.
4, The radiated spurious test above 18GHz is subcontracted to SIEMIC (Nanjing-China) Laboratories. and found 30dB below the limit at least.

6.7 Band Edge

Temperature	23℃
Relative Humidity	54%
Atmospheric Pressure	1014mbar
Test date :	September 11, 2017
Tested By :	Loren Luo

Requirement(s):

Spec	Item	Requirement	Applicable
§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			
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

LTE Band II (Part 24E) result

BW(MHz)	Channel	Frequency (MHz)	Mode	Emission (dBm)	Limit (dBm)
1.4	18607	1850	QPSK	-17.23	-13
			16QAM	-17.04	-13
1.4	18900	1910	QPSK	-19.55	-13
			16QAM	-19.59	-13
3	18615	1850	QPSK	-15.75	-13
			16QAM	-14.15	-13
3	19185	1910	QPSK	-18.03	-13
			16QAM	-15.97	-13
5	18625	1850	QPSK	-15.23	-13
			16QAM	-15.24	-13
5	19175	1910	QPSK	-13.70	-13
			16QAM	-14.55	-13
10	18650	1850	QPSK	-15.20	-13
			16QAM	-13.84	-13
10	19150	1910	QPSK	-17.55	-13
			16QAM	-18.15	-13
15	18675	1850	QPSK	-14.97	-13
			16QAM	-15.03	-13
15	19125	1910	QPSK	-17.22	-13
			16QAM	-17.31	-13
20	18700	1850	QPSK	-18.06	-13
			16QAM	-17.93	-13
20	19100	1910	QPSK	-17.47	-13
			16QAM	-17.21	-13

LTE Band IV (Part 27) result

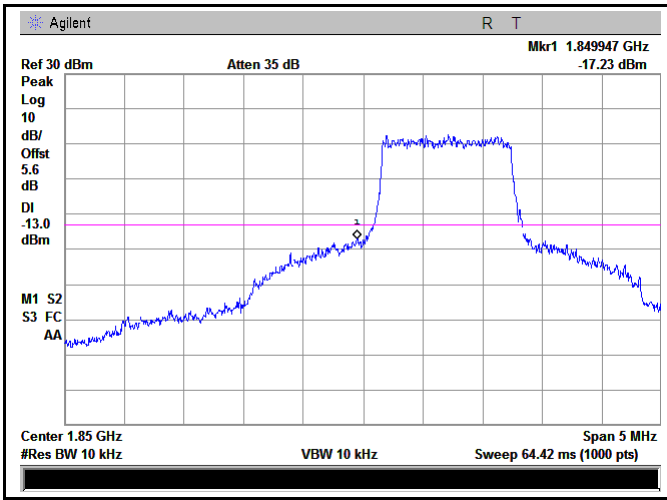
BW(MHz)	Channel	Frequency (MHz)	Mode	Emission (dBm)	Limit (dBm)
1.4	19957	1709.9	QPSK	-21.24	-13
			16QAM	-21.91	-13
1.4	20393	1755	QPSK	-24.50	-13
			16QAM	-25.18	-13
3	19965	1709.9	QPSK	-15.22	-13
			16QAM	-17.63	-13
3	20385	1755	QPSK	-18.18	-13
			16QAM	-19.32	-13
5	19975	1709.9	QPSK	-16.21	-13
			16QAM	-15.75	-13
5	20375	1755	QPSK	-17.85	-13
			16QAM	-18.30	-13
10	20000	1709.9	QPSK	-16.86	-13
			16QAM	-15.81	-13
10	20350	1755	QPSK	-16.76	-13
			16QAM	-18.30	-13
15	20025	1709.9	QPSK	-16.35	-13
			16QAM	-17.15	-13
15	20325	1755	QPSK	-21.10	-13
			16QAM	-21.04	-13
20	20050	1709.9	QPSK	-21.39	-13
			16QAM	-21.20	-13
20	20300	1755	QPSK	-23.21	-13
			16QAM	-22.66	-13

LTE Band V (Part 22H) result

BW(MHz)	Channel	Frequency (MHz)	Mode	Emission (dBm)	Limit (dBm)
1.4	20407	823.9	QPSK	-19.39	-13
			16QAM	-19.18	-13
1.4	20643	849	QPSK	-23.02	-13
			16QAM	-22.50	-13
3	20415	824	QPSK	-15.13	-13
			16QAM	-13.62	-13
3	20635	849	QPSK	-17.68	-13
			16QAM	-14.83	-13
5	20425	824	QPSK	-13.69	-13
			16QAM	-13.78	-13
5	20625	849	QPSK	-16.65	-13
			16QAM	-17.09	-13
10	20450	824	QPSK	-14.80	-13
			16QAM	-15.32	-13
10	20800	849	QPSK	-18.46	-13
			16QAM	-18.30	-13

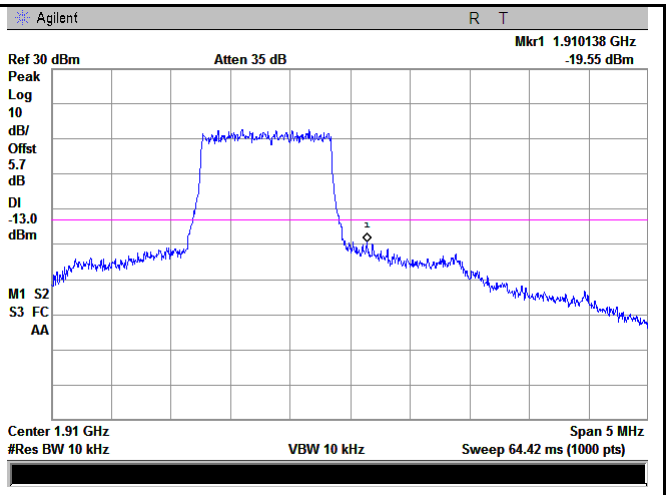
Test Plots

LTE Band II (Part 24E)



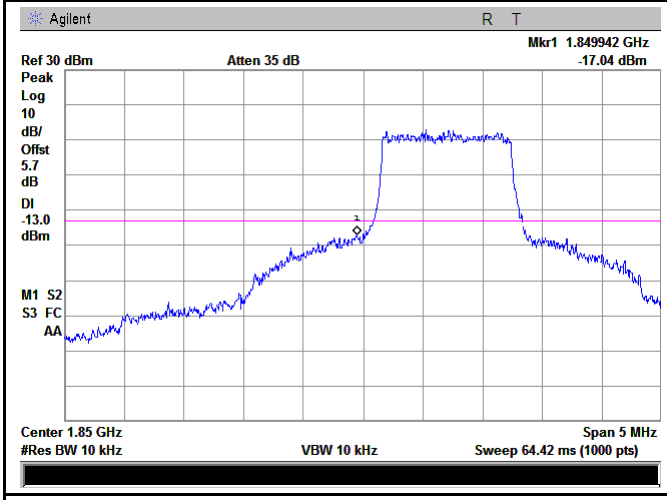
LTE Band II - Low Channel QPSK-1.4

Note: Offset=Cable loss (4.5) + 10log (13.03/10)=4.5+1.1=5.6dB



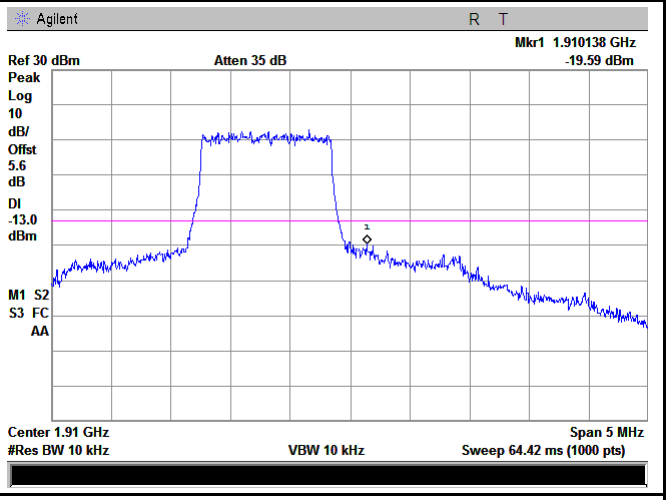
LTE Band II - High Channel QPSK-1.4

Note: Offset=Cable loss (4.5) + 10log (13.05/10)=4.5+1.2=5.7dB



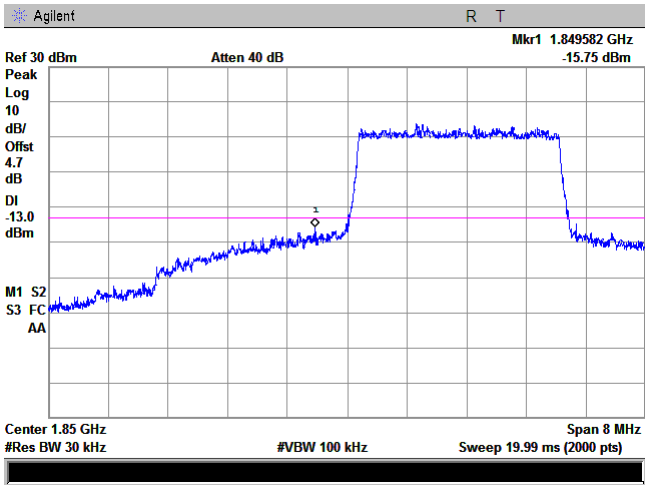
LTE Band II - Low Channel 16QAM-1.4

Note: Offset=Cable loss (4.5) + 10log (13.06/10)=4.5+1.2=5.7 dB



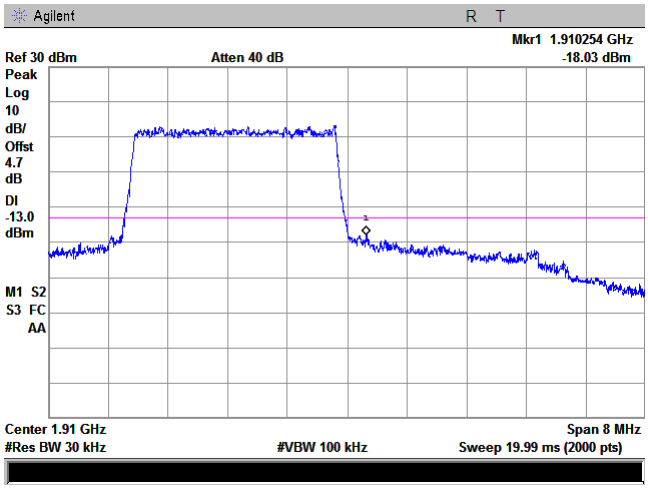
LTE Band II - High Channel 16QAM-1.4

Note: Offset=Cable loss (4.5) + 10log (12.95/10)=4.5+1.1=5.6 dB



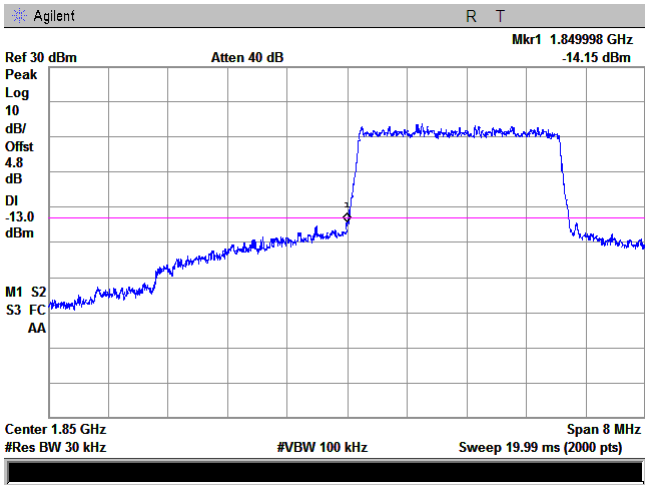
LTE Band II - Low Channel QPSK-3

Note: Offset=Cable loss (4.5) + 10log (31.75/30)=4.5+0.2=4.7 dB



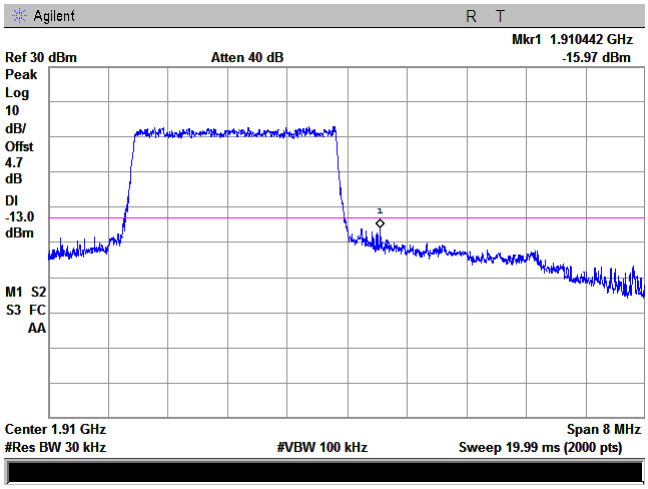
LTE Band II - High Channel QPSK-3

Note: Offset=Cable loss (4.5) + 10log (31.14/30)=4.5+0.2=4.7 dB



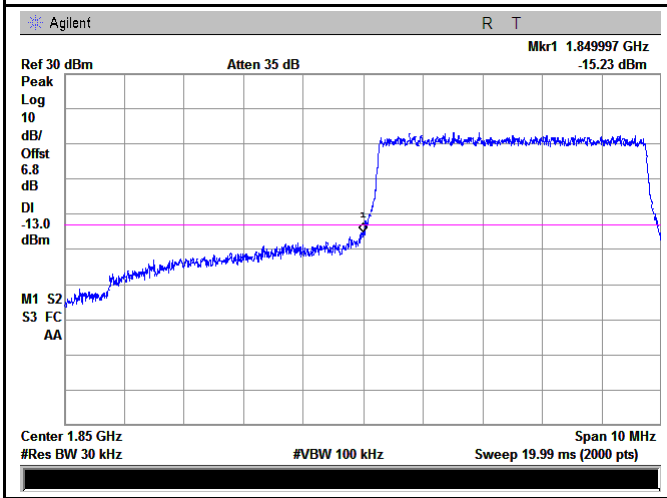
LTE Band II - Low Channel 16QAM-3

Note: Offset=Cable loss (4.5) + 10log (31.90/30)=4.5+0.3=4.8 dB

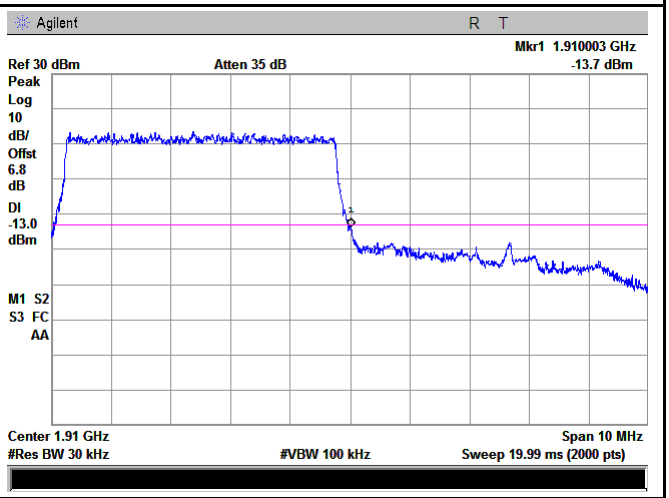


LTE Band II - High Channel 16QAM-3

Note: Offset=Cable loss (4.5) + 10log (31.17/30)=4.5+0.2=4.7 dB

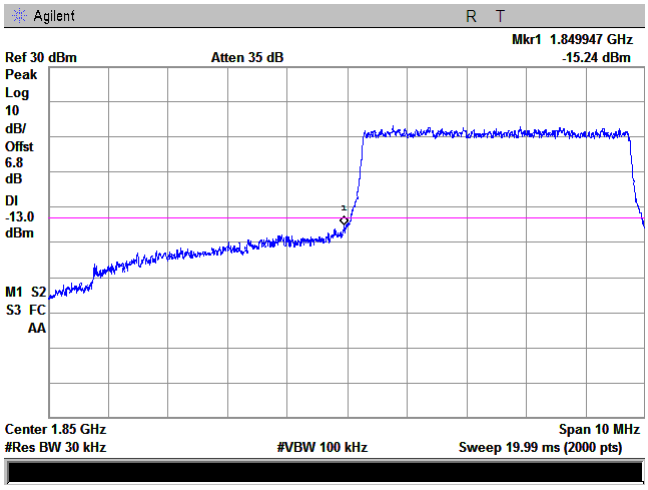


LTE Band II - Low Channel QPSK-5



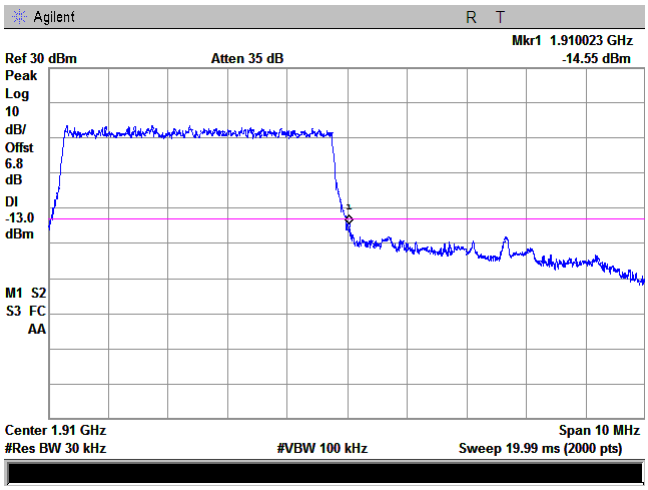
LTE Band II - High Channel QPSK-5

Note: Offset=Cable loss (4.5) + 10log (51.23/30)=4.5+2.3=6.8 dB



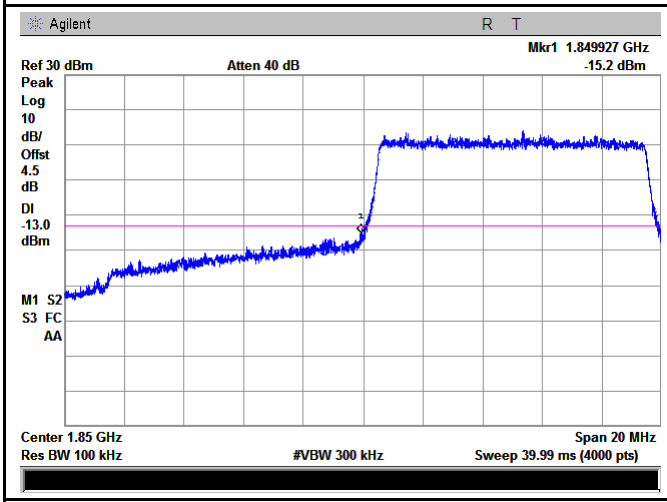
LTE Band II - Low Channel 16QAM-5

Note: Offset=Cable loss (4.5) + 10log (50.73/30)=4.5+2.3=6.8 dB



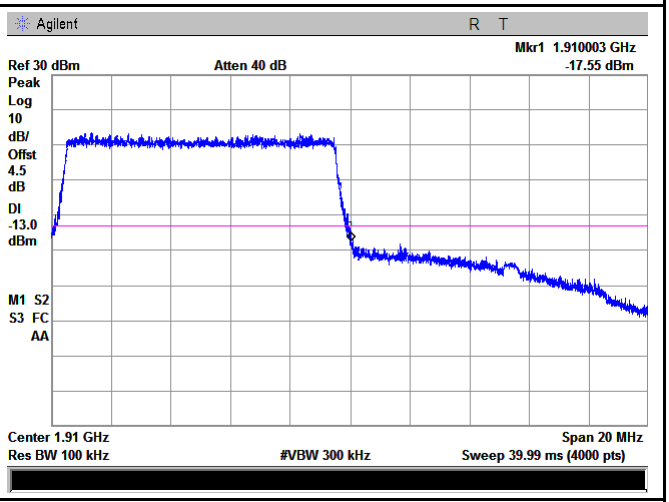
LTE Band II - High Channel 16QAM-5

Note: Offset=Cable loss (4.5) + 10log (51.25/30)=4.5+2.3=6.8 dB

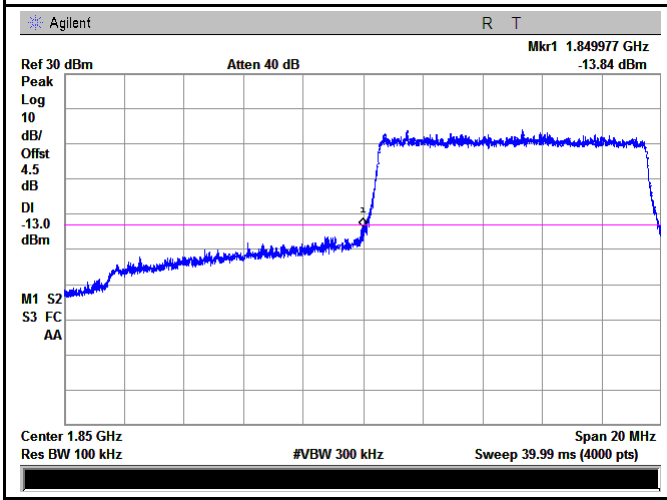


LTE Band II - Low Channel QPSK-10

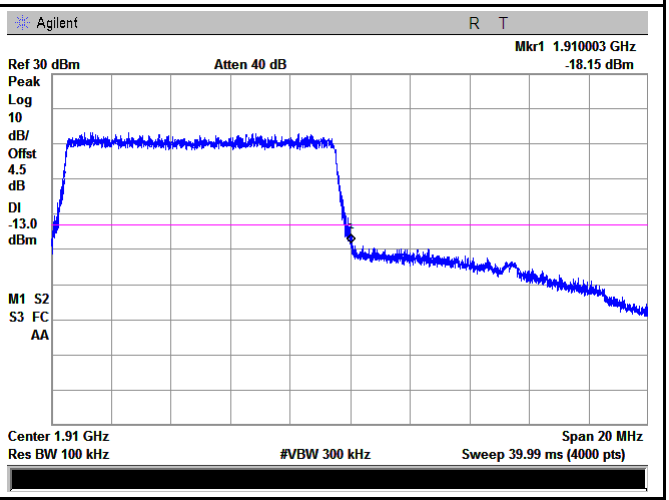
Note: Offset=Cable loss (4.5) + 10log (50.79/30)=4.5+2.3=6.8 dB



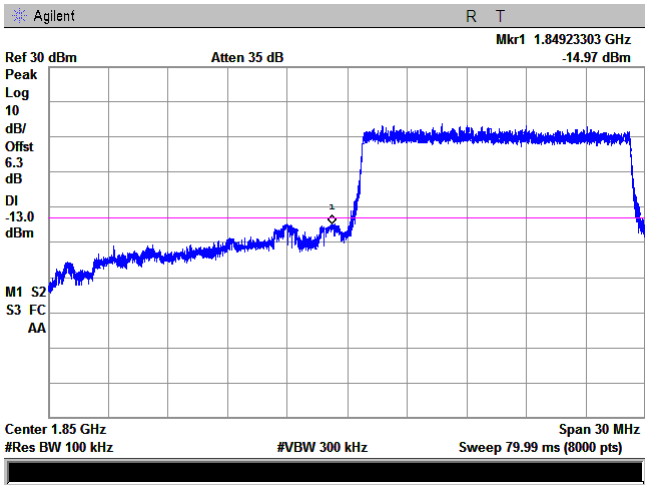
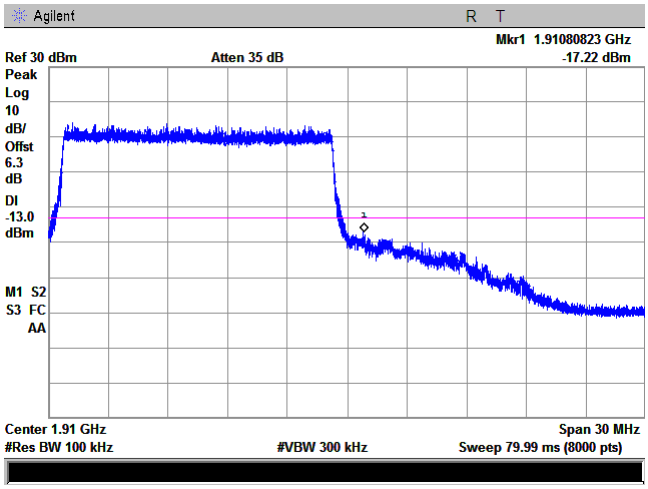
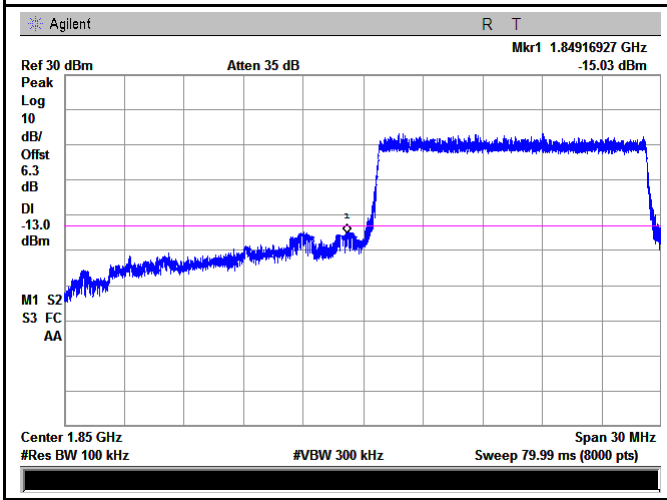
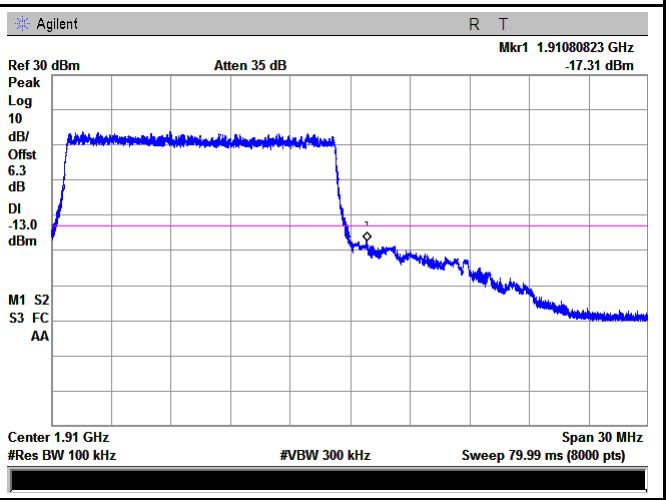
LTE Band II - High Channel QPSK-10

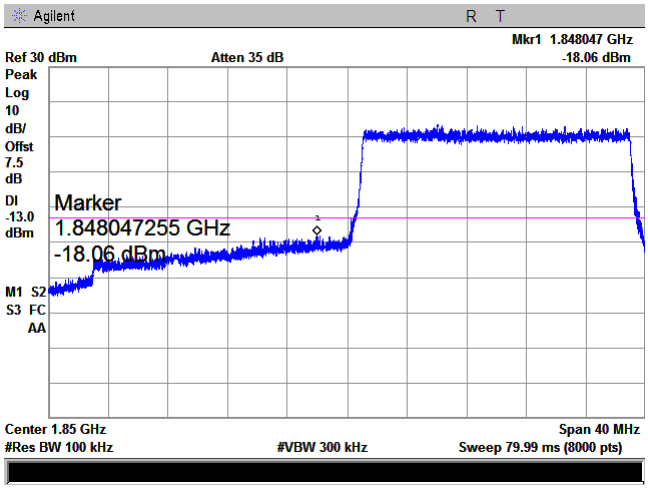


LTE Band II - Low Channel 16QAM-10



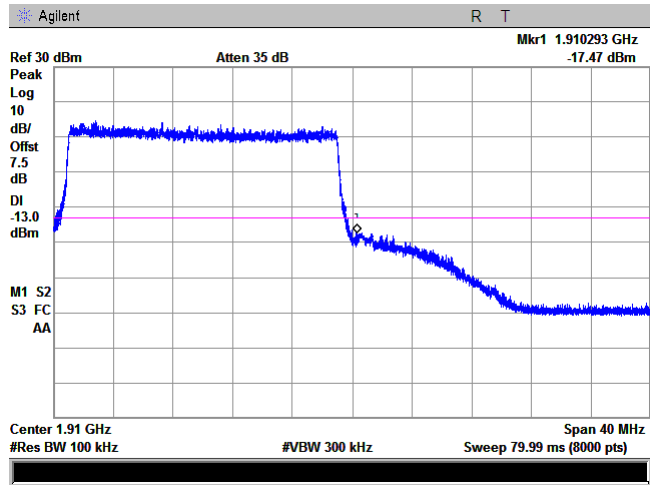
LTE Band II - High Channel 16QAM-10

Note: Offset=Cable loss (4.5) + 10log (103.4/100)=4.5+0.0=4.5 dB	Note: Offset=Cable loss (4.5) + 10log (103.8/100)=4.5+0.0=4.5 dB
	
LTE Band II - Low Channel QPSK-15	LTE Band II - High Channel QPSK-15
Note: Offset=Cable loss (4.5) + 10log (151.0/100)=4.5+1.8=6.3 dB	Note: Offset=Cable loss (4.5) + 10log (150.3/100)=4.5+1.8=6.3 dB
	
LTE Band II - Low Channel 16QAM-15	LTE Band II - High Channel 16QAM-15
Note: Offset=Cable loss (4.5) + 10log (150.9/100)=4.5+1.8=6.3 dB	Note: Offset=Cable loss (4.5) + 10log (150.7/100)=4.5+1.8=6.3 dB



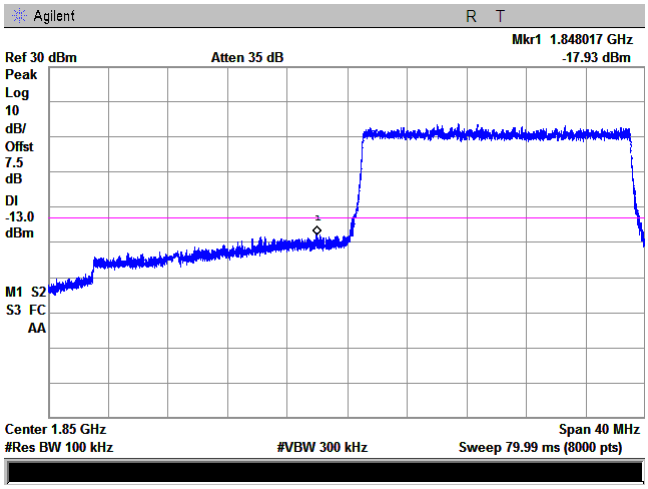
LTE Band II - Low Channel QPSK-20

Note: Offset=Cable loss (4.5) + 10log (198.3/100)=4.5+3.0=7.5 dB



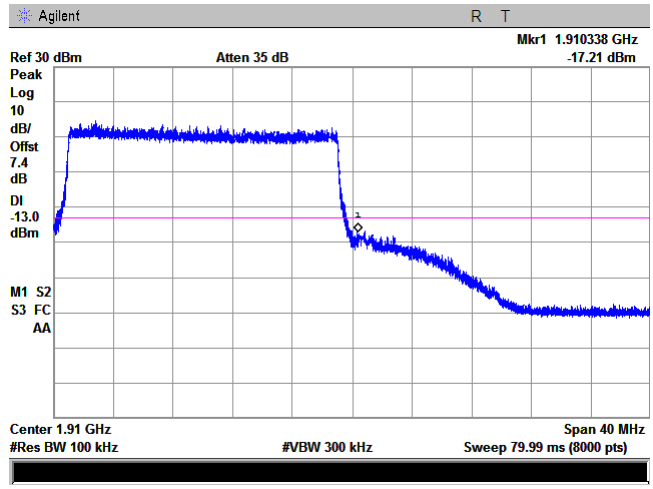
LTE Band II - High Channel QPSK-20

Note: Offset=Cable loss (4.5) + 10log (197.8/100)=4.5+3.0=7.5 dB



LTE Band II - Low Channel 16QAM-20

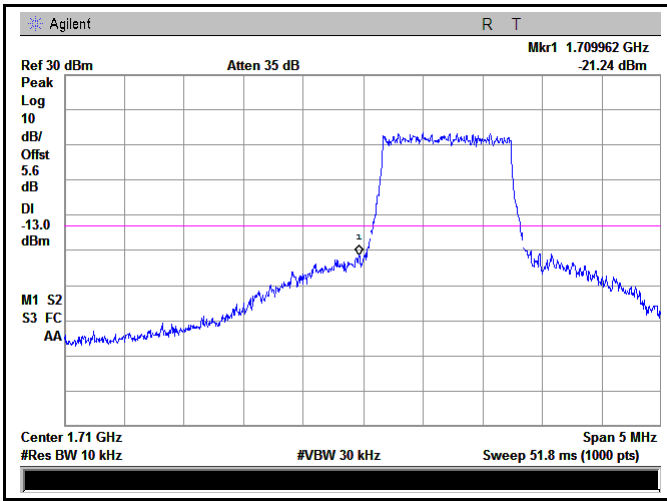
Note: Offset=Cable loss (4.5) + 10log (198.7/100)=4.5+3.0=7.5 dB



LTE Band II - High Channel 16QAM-20

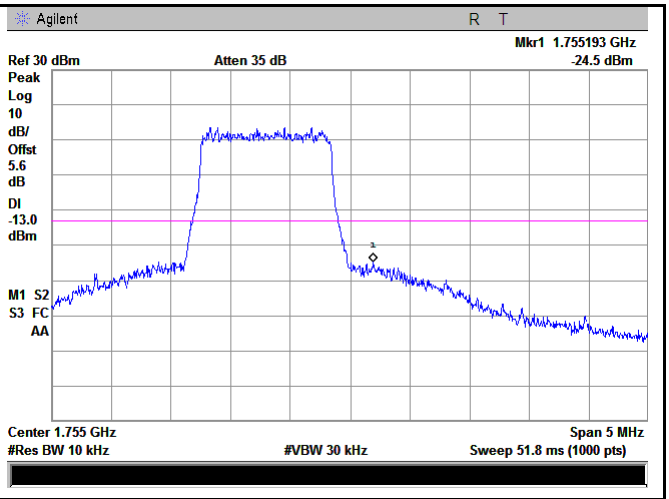
Note: Offset=Cable loss (4.5) + 10log (196.8/100)=4.5+2.9=7.4 dB

LTE Band IV (Part 27)



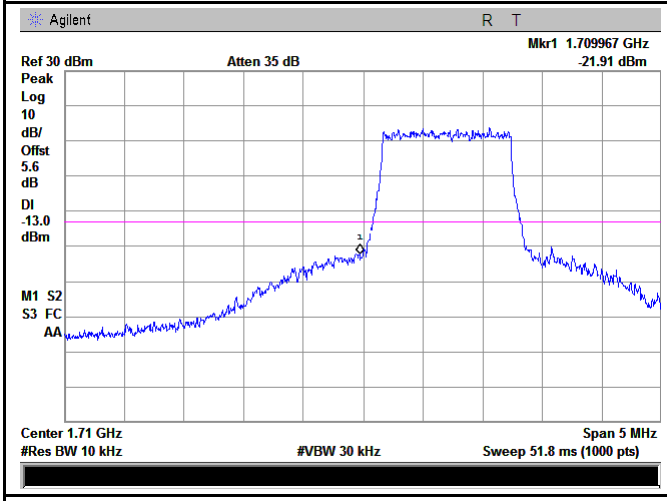
LTE Band IV - Low Channel QPSK-1.4

Note: Offset=Cable loss (4.5) + 10log (12.98/10)=4.5+1.1=5.6 dB



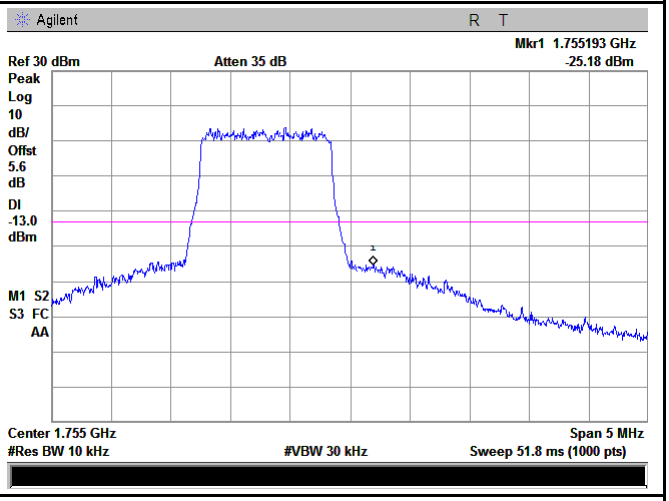
LTE Band IV - High Channel QPSK-1.4

Note: Offset=Cable loss (4.5) + 10log (12.79/10)=4.5+1.1=5.6 dB



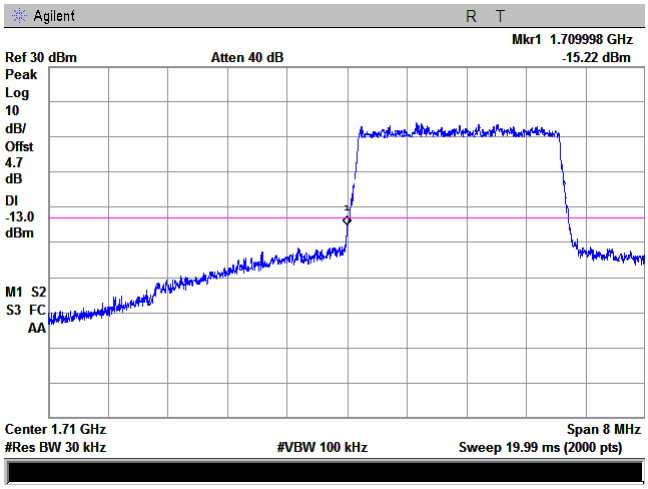
LTE Band IV - Low Channel 16QAM-1.4

Note: Offset=Cable loss (4.5) + 10log (13.01/10)=4.5+1.1=5.6 dB



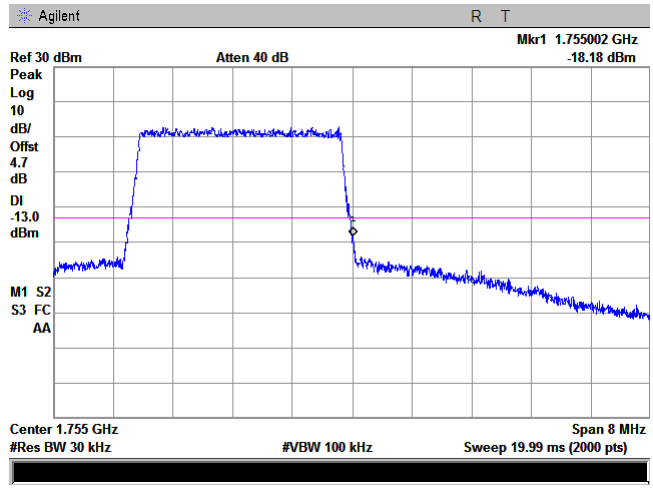
LTE Band IV - High Channel 16QAM-1.4

Note: Offset=Cable loss (4.5) + 10log ((12.83/10)=4.5+1.1=5.6 dB



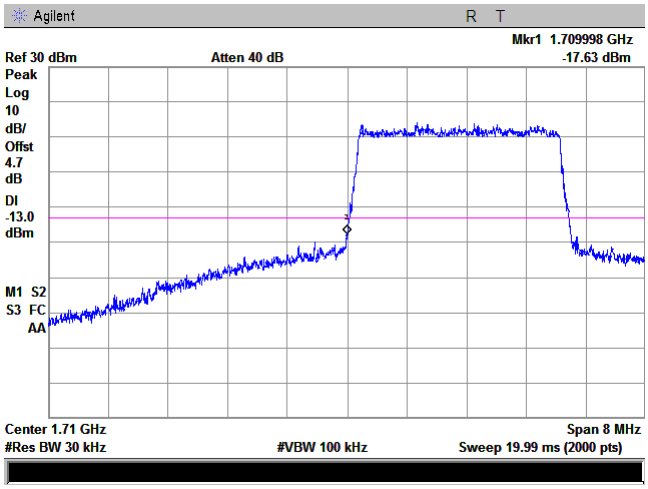
LTE Band IV - Low Channel QPSK-3

Note: Offset=Cable loss (4.5) + 10log (31.28/30)=4.5+0.2=4.7 dB



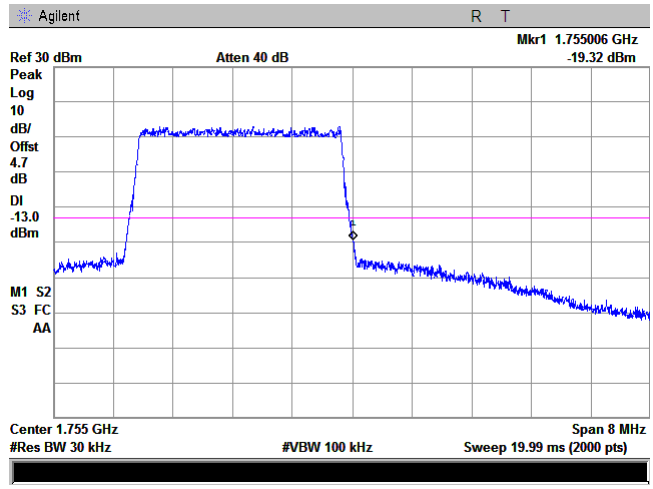
LTE Band IV - High Channel QPSK-3

Note: Offset=Cable loss (4.5) + 10log (31.15/30)=4.5+0.2=4.7 dB



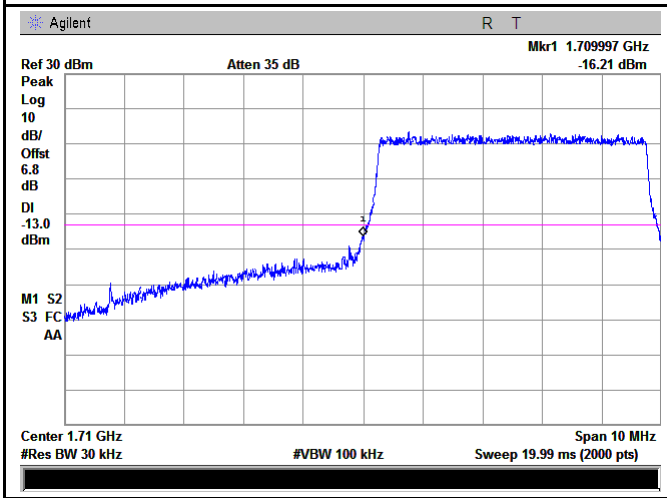
LTE Band IV - Low Channel 16QAM-3

Note: Offset=Cable loss (4.5) + 10log (31.36/30)=4.5+0.2=4.7 dB

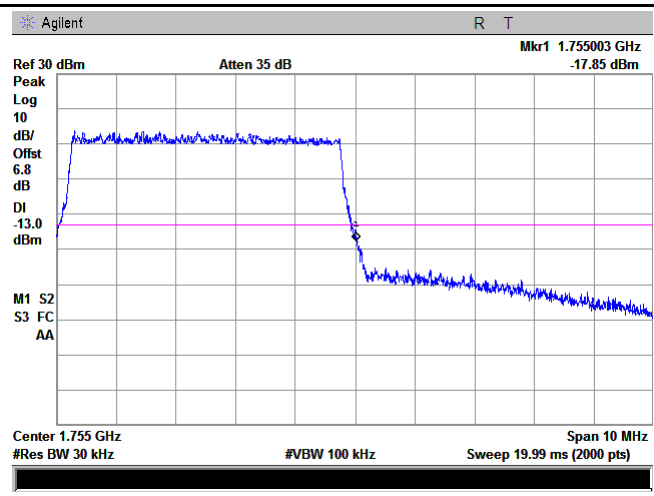


LTE Band IV - High Channel 16QAM-3

Note: Offset=Cable loss (4.5) + 10log (31.16/30)=4.5+0.2=4.7dB

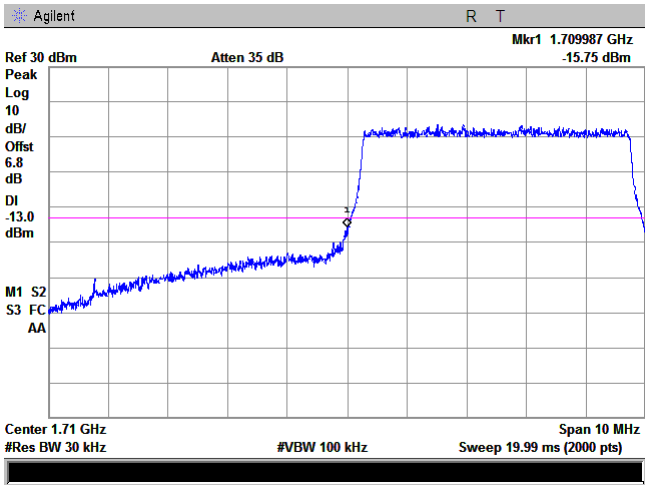


LTE Band IV - Low Channel QPSK-5



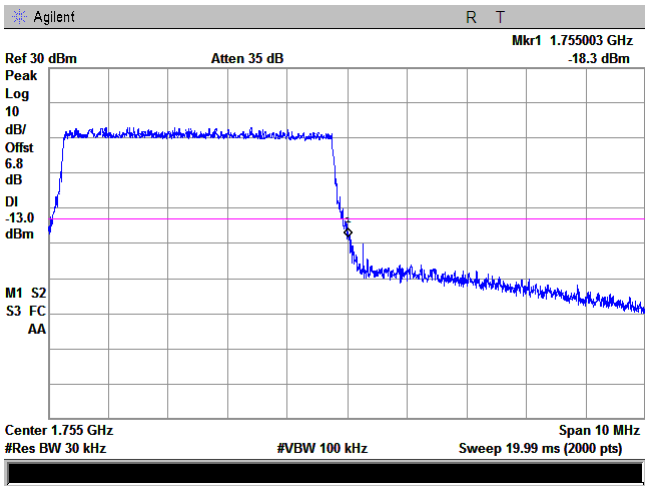
LTE Band IV - High Channel QPSK-5

Note: Offset=Cable loss (4.5) + 10log (50.84/30)=4.5+2.3=6.8 dB



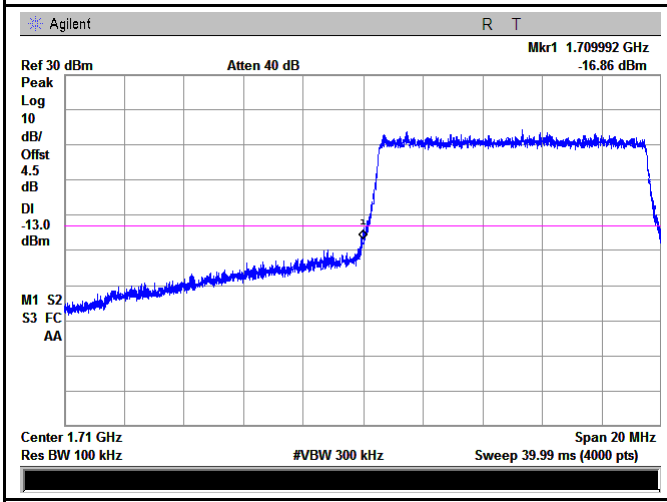
LTE Band IV - Low Channel 16QAM-5

Note: Offset=Cable loss (4.5) + 10log (50.88/30)=4.5+2.3=6.8 dB



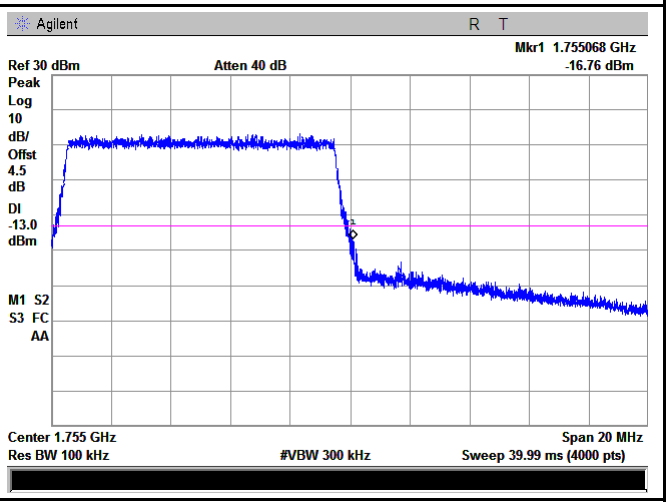
LTE Band IV - High Channel 16QAM-5

Note: Offset=Cable loss (4.5) + 10log (50.68/30)=4.5+2.3=6.8 dB

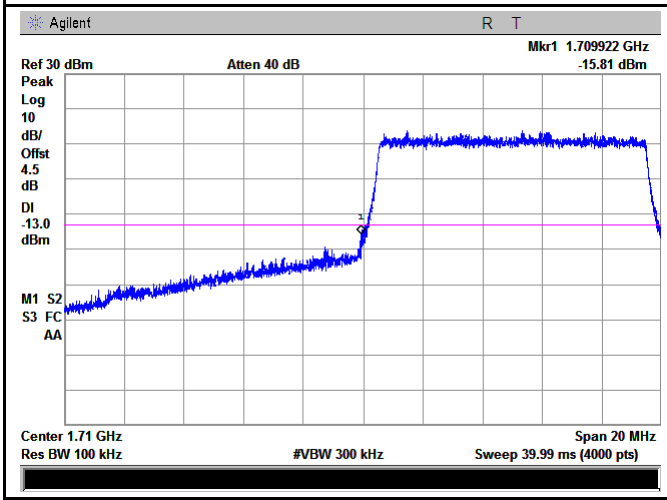


LTE Band IV - Low Channel QPSK-10

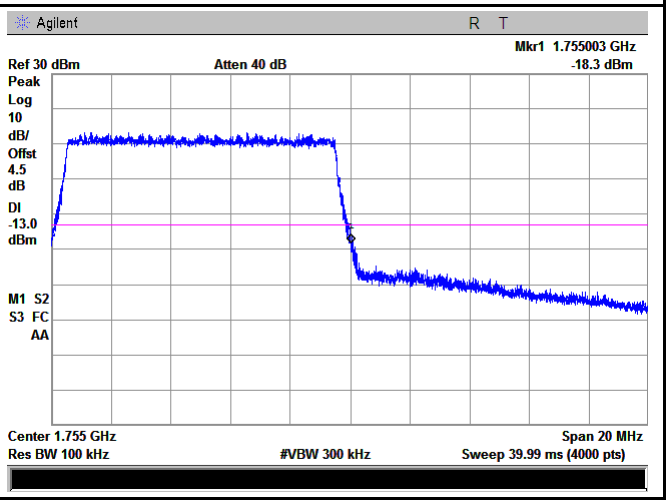
Note: Offset=Cable loss (4.5) + 10log (50.73/30)=4.5+2.3=6.8 dB



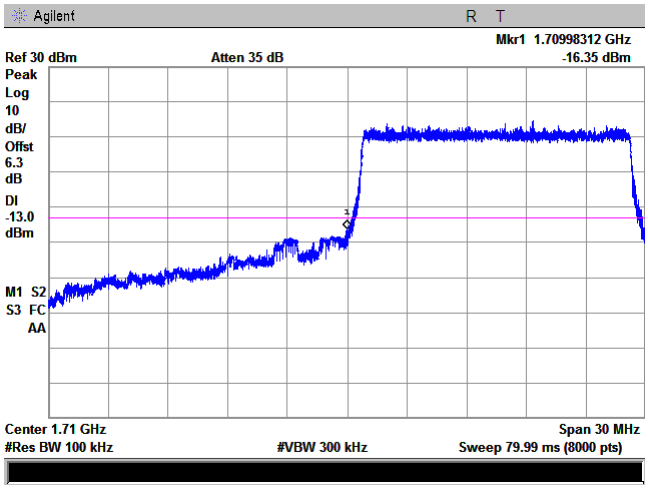
LTE Band IV - High Channel QPSK-10



LTE Band IV - Low Channel 16QAM-10

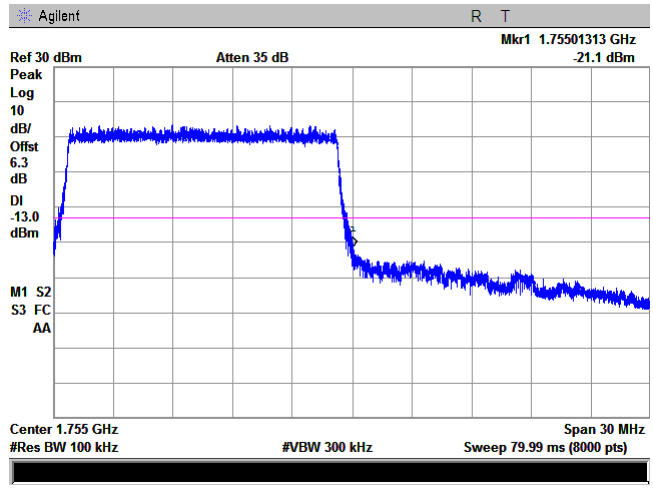


LTE Band IV - High Channel 16QAM-10



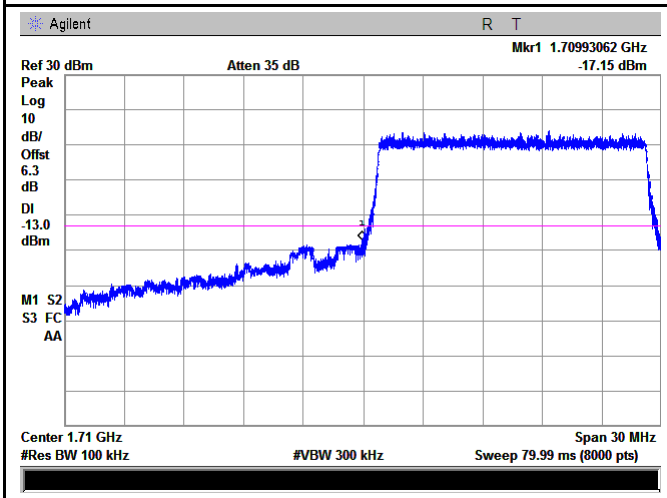
LTE Band IV - Low Channel QPSK-15

Note: Offset=Cable loss (4.5) + 10log (150.7/100)=4.5+1.8=6.3 dB



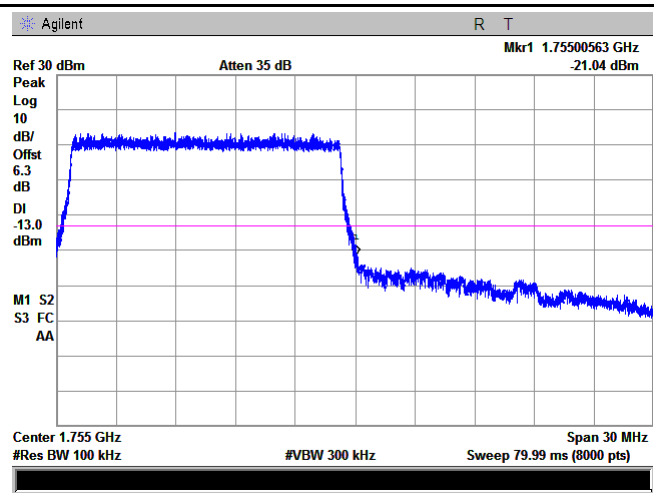
LTE Band IV - High Channel QPSK-15

Note: Offset=Cable loss (4.5) + 10log (150.2/100)=4.5+1.8=6.3 dB



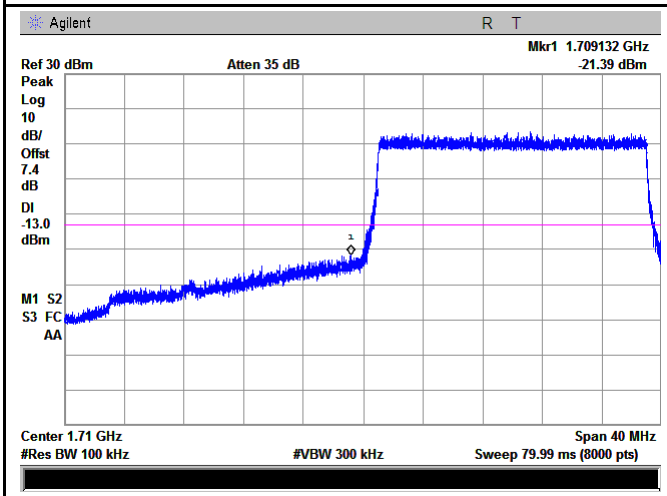
LTE Band IV - Low Channel 16QAM-15

Note: Offset=Cable loss (4.5) + 10log (151.5/100)=4.5+1.8=6.3 dB

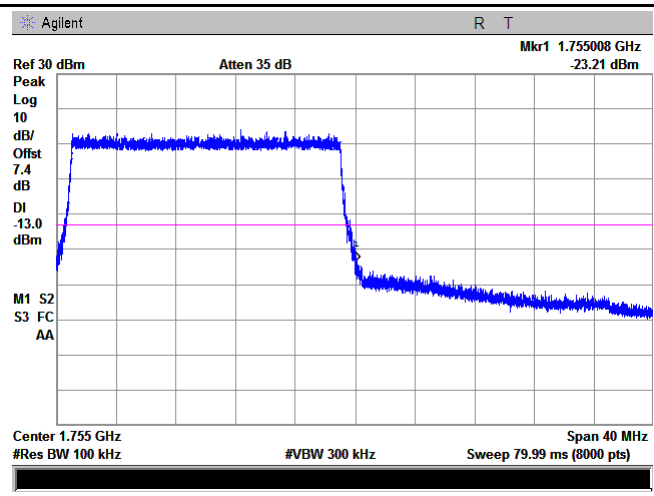


LTE Band IV - High Channel 16QAM-15

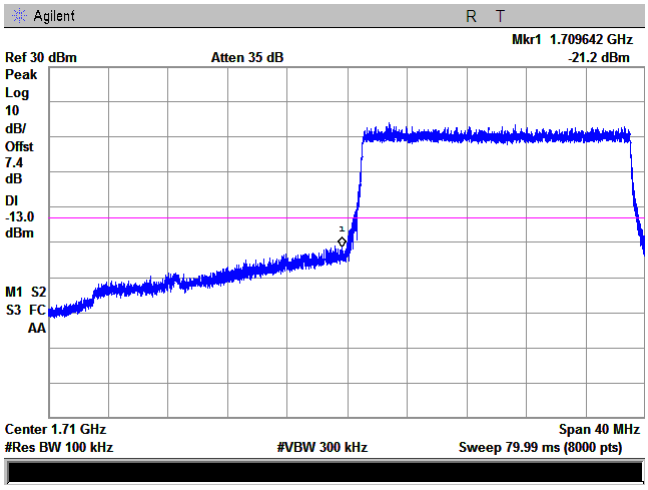
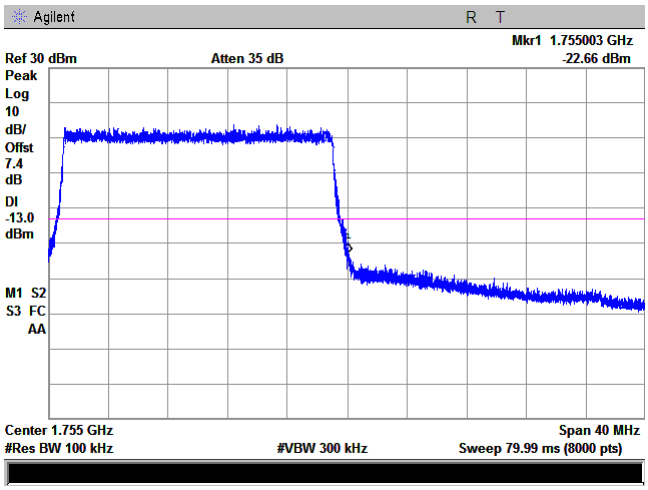
Note: Offset=Cable loss (4.5) + 10log (150.0/100)=4.5+1.8=6.3 dB



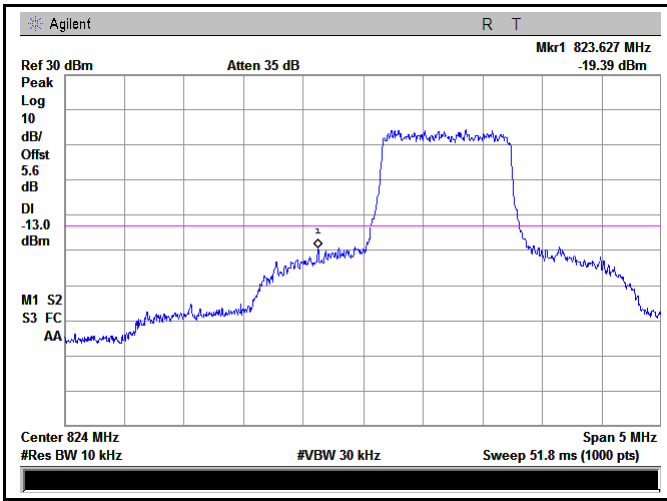
LTE Band IV - Low Channel QPSK-20



LTE Band IV - High Channel QPSK-20

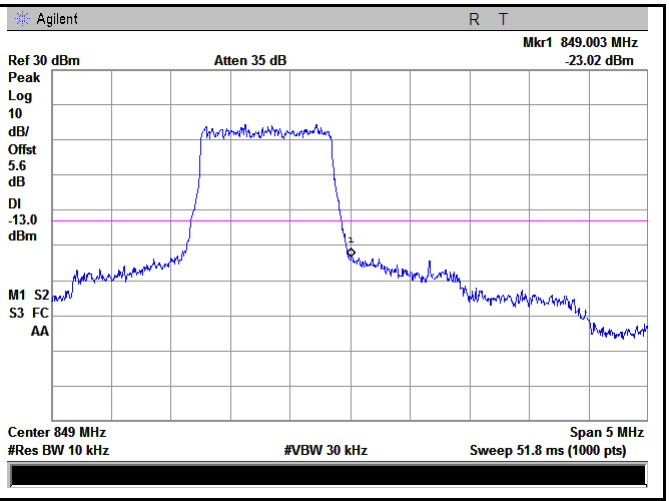
Note: Offset=Cable loss (4.5) + 10log (196.1/100)=4.5+2.9=7.4 dB	Note: Offset=Cable loss (4.5) + 10log (195.2/100)=4.5+2.9=7.4 dB
	
LTE Band IV - Low Channel 16QAM-20	LTE Band IV - High Channel 16QAM-20
Note: Offset=Cable loss (4.5) + 10log (196.4/100)=4.5+2.9=7.4dB	Note: Offset=Cable loss (4.5) + 10log (195.2/100)=4.5+2.9=7.4 dB

LTE Band V (Part 22H)



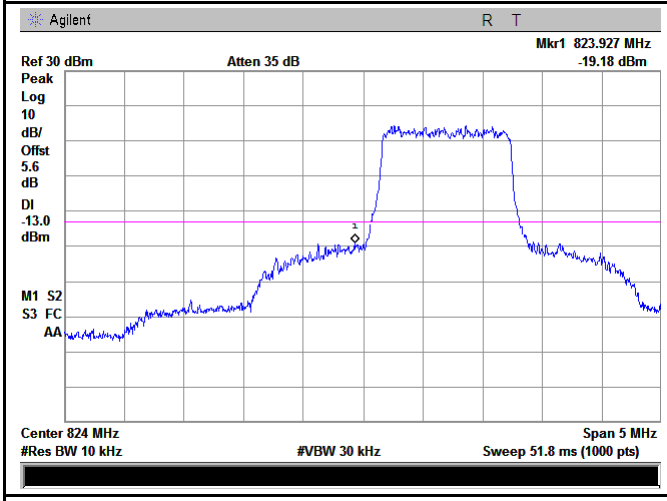
LTE Band V - Low Channel QPSK-1.4

Note: Offset=Cable loss (4.5) + 10log (12.96/10)=4.5+1.1=5.6 dB



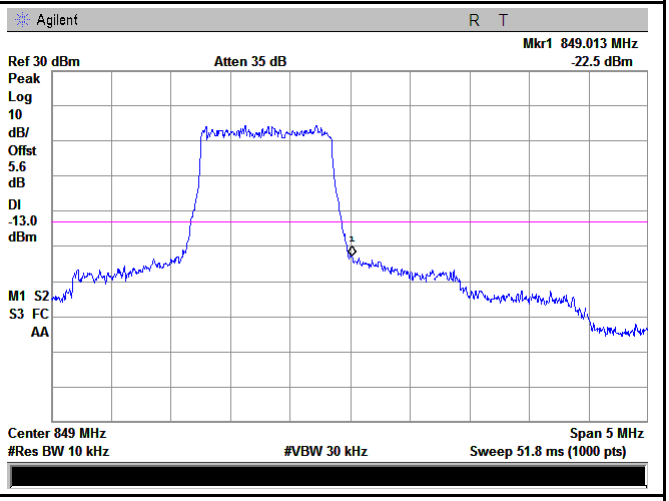
LTE Band V - High Channel QPSK-1.4

Note: Offset=Cable loss (4.5) + 10log (12.75/10)=4.5+1.1=5.6 dB



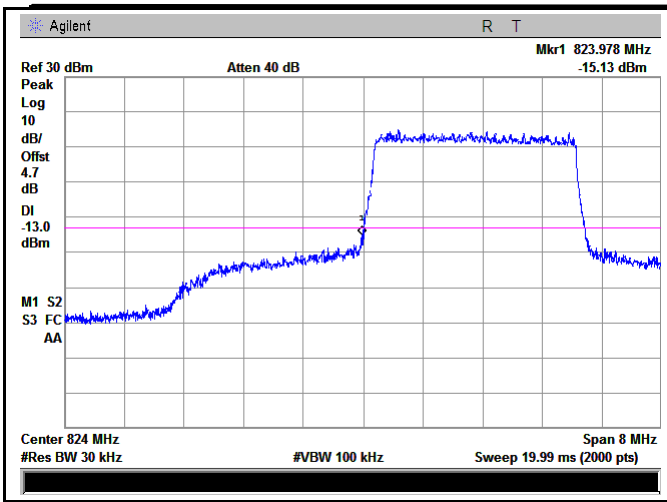
LTE Band V - Low Channel 16QAM-1.4

Note: Offset=Cable loss (4.5) + 10log (12.98/10)=4.5+1.1=5.6dB



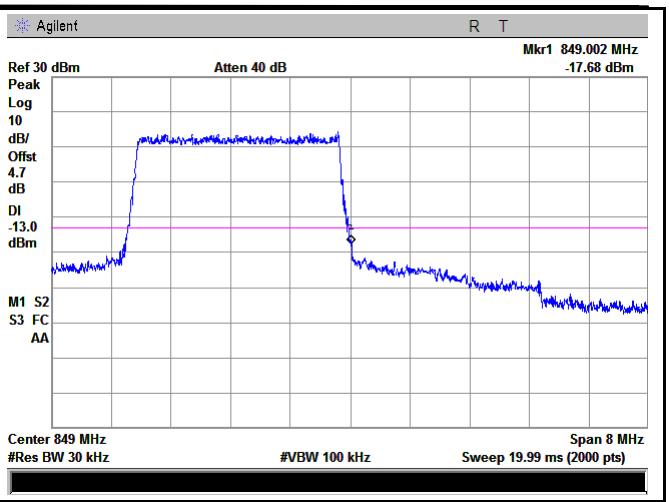
LTE Band V - High Channel 16QAM-1.4

Note: Offset=Cable loss (4.5) + 10log (12.80/10)=4.5+1.1=5.6 dB



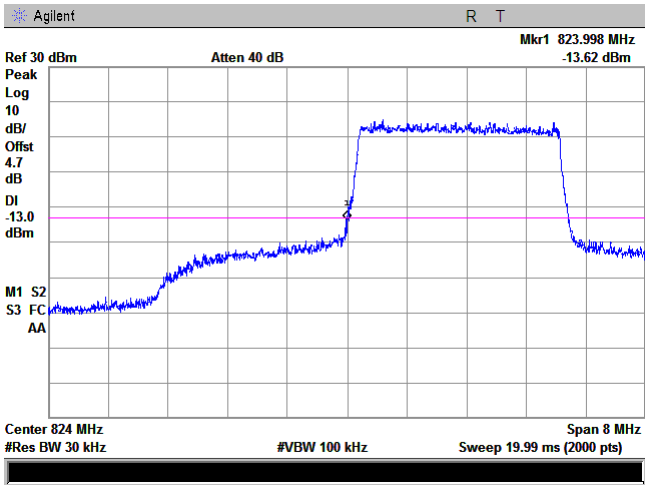
LTE Band V - Low Channel QPSK-3

Note: Offset=Cable loss (4.5) + 10log (31.39/30)=4.5+0.2=4.7 dB



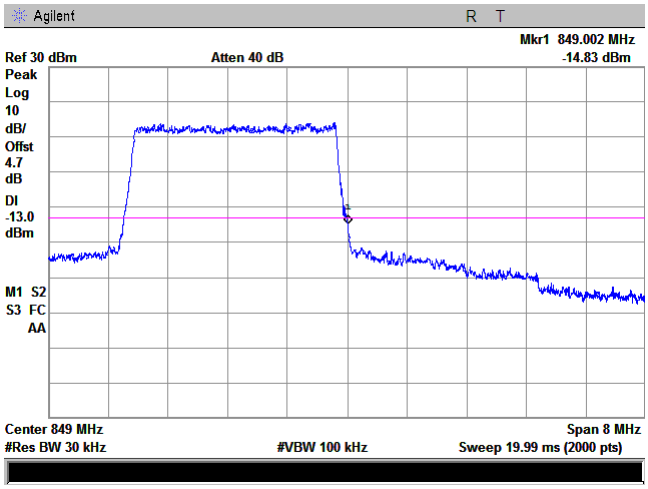
LTE Band V - High Channel QPSK-3

Note: Offset=Cable loss (4.5) + 10log (31.20/30)=4.5+0.2=4.7 dB



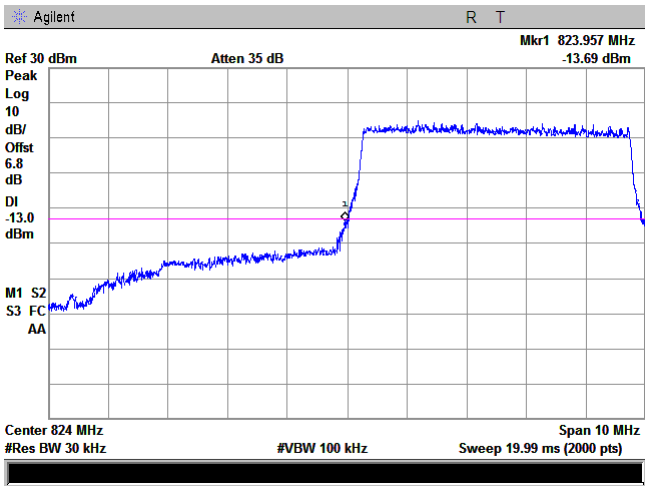
LTE Band V - Low Channel 16QAM-3

Note: Offset=Cable loss (4.5) + 10log (31.52/30)=4.5+0.2=4.7 dB



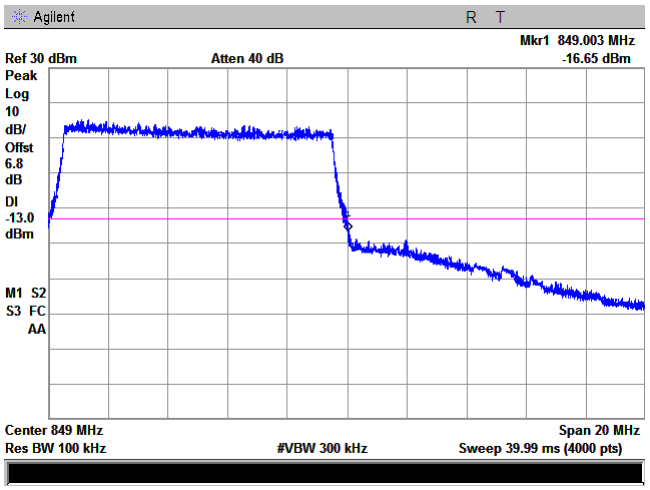
LTE Band V - High Channel 16QAM-3

Note: Offset=Cable loss (4.5) + 10log (31.26/30)=4.5+0.2=4.7 dB



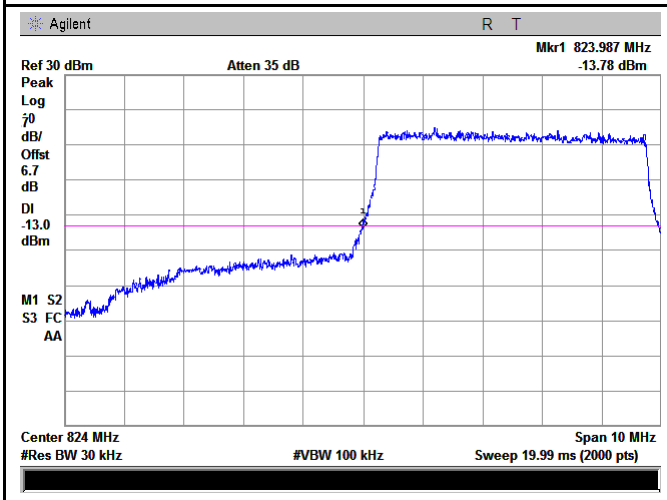
LTE Band V - Low Channel QPSK-5

Note: Offset=Cable loss (4.5) + 10log (50.37/30)=4.5+2.3=6.8 dB



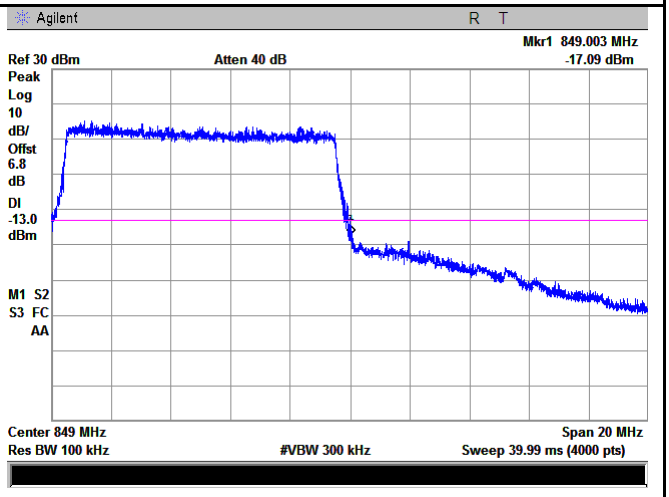
LTE Band V - High Channel QPSK-5

Note: Offset=Cable loss (4.5) + 10log (50.42/30)=4.5+2.3=6.8 dB



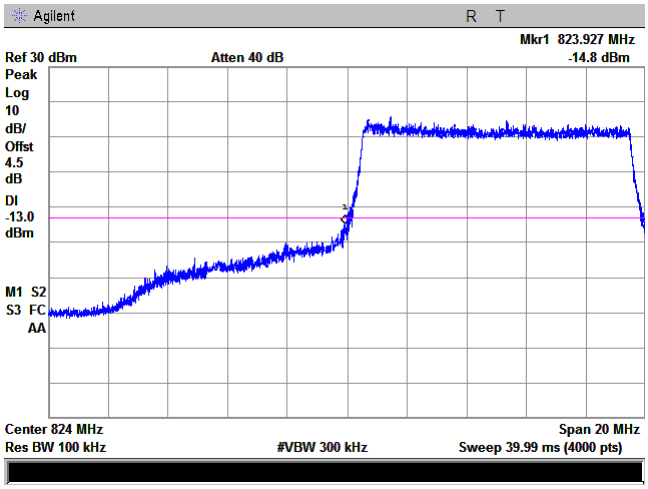
LTE Band V - Low Channel 16QAM-5

Note: Offset=Cable loss (4.5) + 10log (50.34/30)=4.5+2.2=6.7 dB

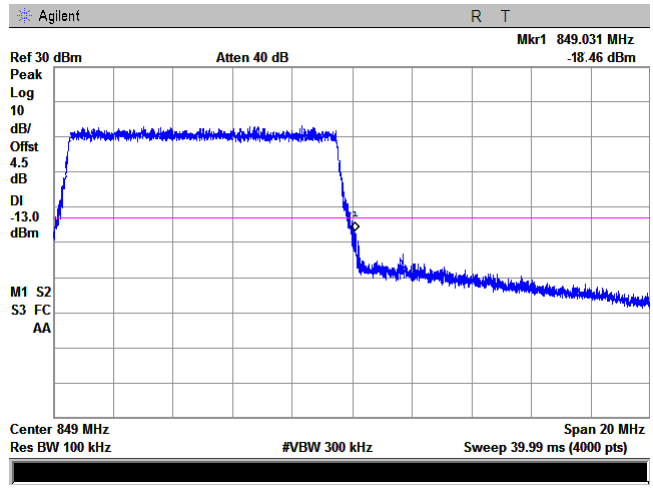


LTE Band V - High Channel 16QAM-5

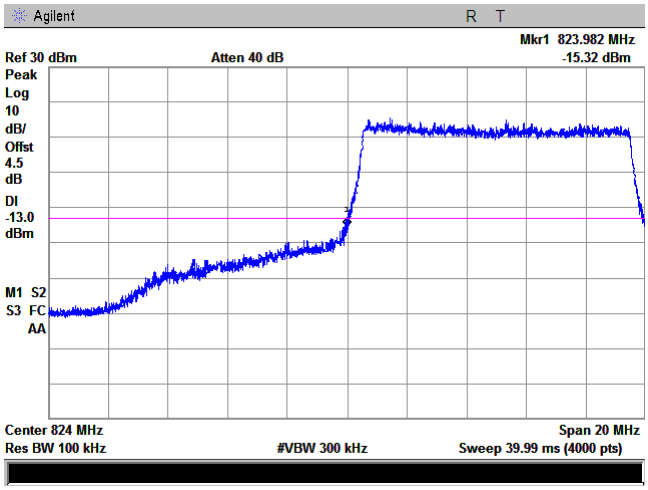
Note: Offset=Cable loss (4.5) + 10log (50.65/30)=4.5+2.3=6.8dB



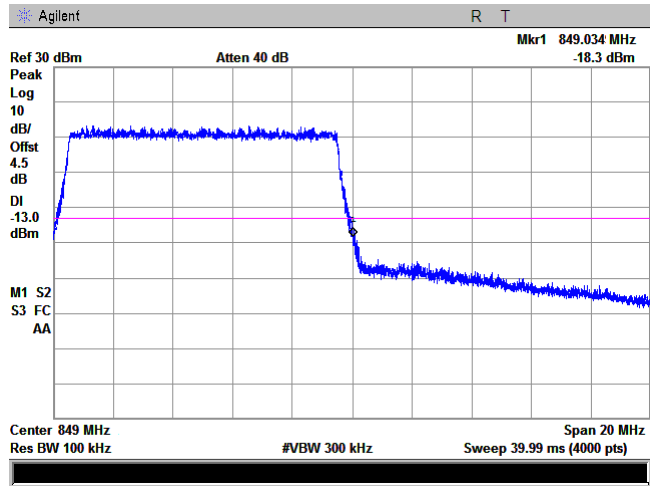
LTE Band V - Low Channel QPSK-10



LTE Band V - High Channel QPSK-10



LTE Band V - Low Channel 16QAM-10

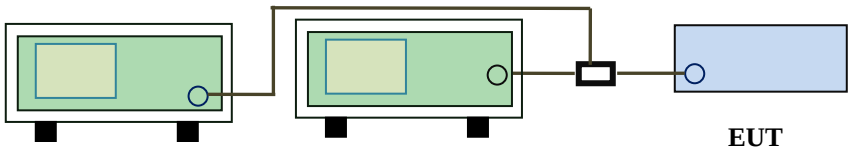


LTE Band V - High Channel 16QAM-10

6.8 Band Edge 27.53(m)

Temperature	23℃
Relative Humidity	54%
Atmospheric Pressure	1014mbar
Test date :	September 11, 2017
Tested By :	Loren Luo

Requirement(s):

Spec	Requirement	Applicable
§27.53(m)	According to FCC 27.53(m)(4) specified that power of any emmission ouutside of the channel edge must be attenuated below the transmitting power(P) by a factor shall be not less than 43+10log (P)dB at the channel edge, the limit of emission equal to -13dBm. And 55+10log (P)dB at 5.5MHz from the channel edges, the limit of emission equal to -25dBm. In the 1MHz bands immediately outside and adjacent to the frenqency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.	☑
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	

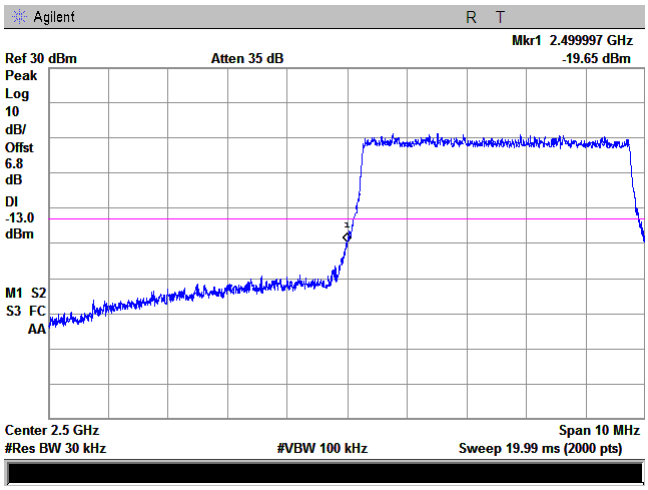
Test Data ☑ Yes ☐ N/A

Test Plot ☑ Yes (See below) ☐ N/A

LTE Band VII (Part 27) result

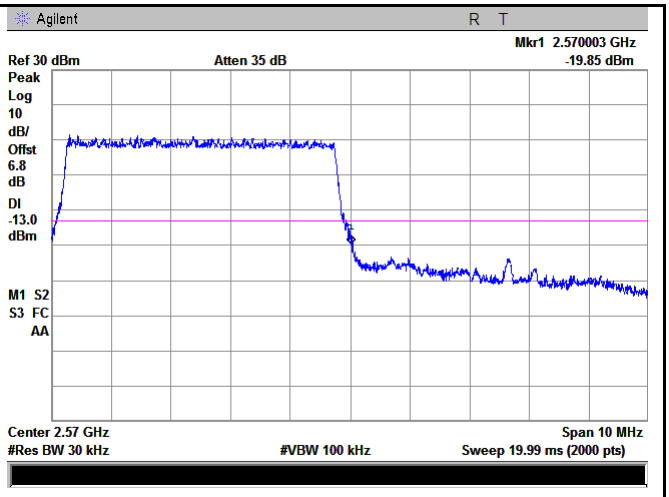
BW(MHz)	Channel	Frequency (MHz)	Mode	Emission (dBm)	Limit (dBm)
5	20775	2500	QPSK	-19.65	-13
			16QAM	-20.06	-13
5	21425	2570	QPSK	-19.85	-13
			16QAM	-18.40	-13
10	20800	2500	QPSK	-18.54	-13
			16QAM	-19.93	-13
10	21400	2570	QPSK	-19.80	-13
			16QAM	-18.07	-13
15	20825	2500	QPSK	-25.34	-13
			16QAM	-21.95	-13
15	21400	2570	QPSK	-21.81	-13
			16QAM	-21.50	-13
20	20850	2500	QPSK	-22.51	-13
			16QAM	-23.15	-13
20	21350	2571	QPSK	-27.10	-13
			16QAM	-23.36	-13

LTE Band VII (Part 27)



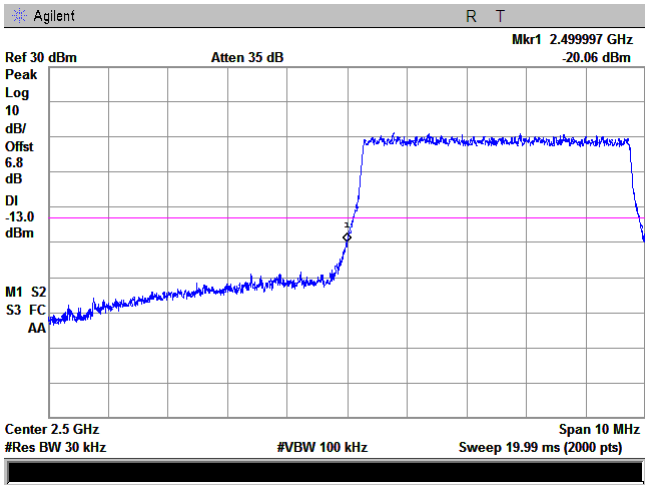
LTE Band VII - Low Channel QPSK-5

Note: Offset=Cable loss (4.5) + 10log (50.87/30)=4.5+2.3=6.8 dB



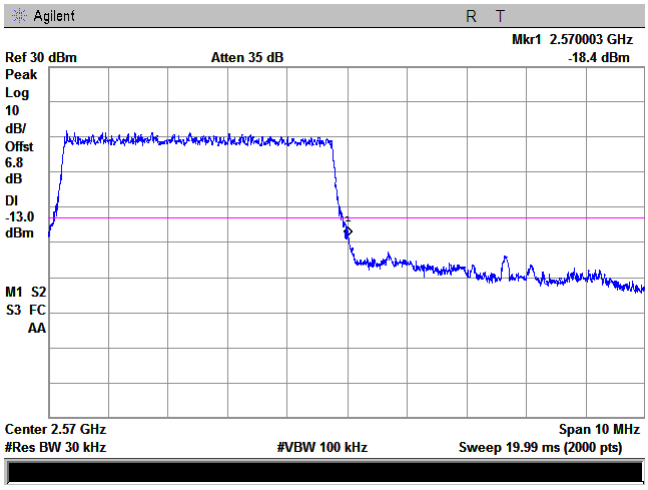
LTE Band VII - High Channel QPSK-5

Note: Offset=Cable loss (4.5) + 10log (50.94/30)=4.5+2.3=6.8 dB



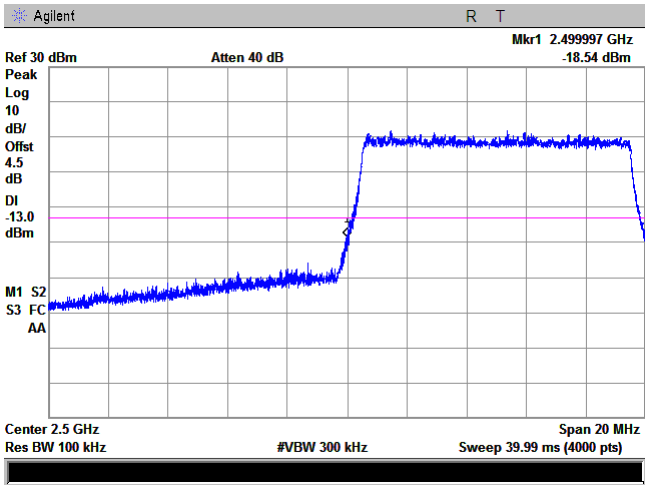
LTE Band VII - Low Channel 16QAM-5

Note: Offset=Cable loss (4.5) + 10log (50.79/30)=4.5+2.3=6.8 dB

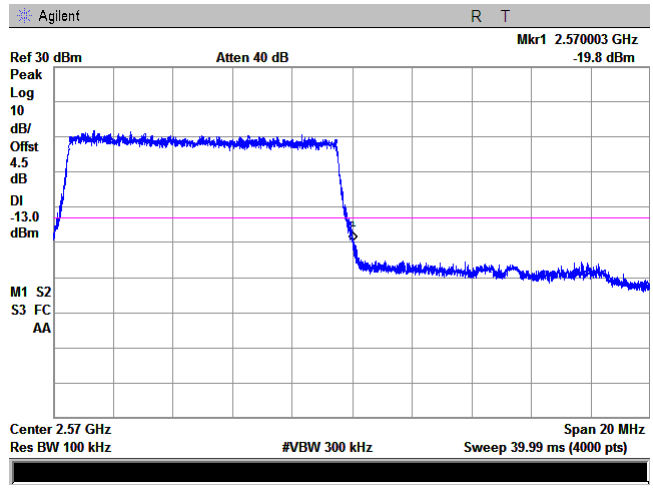


LTE Band VII - High Channel 16QAM-5

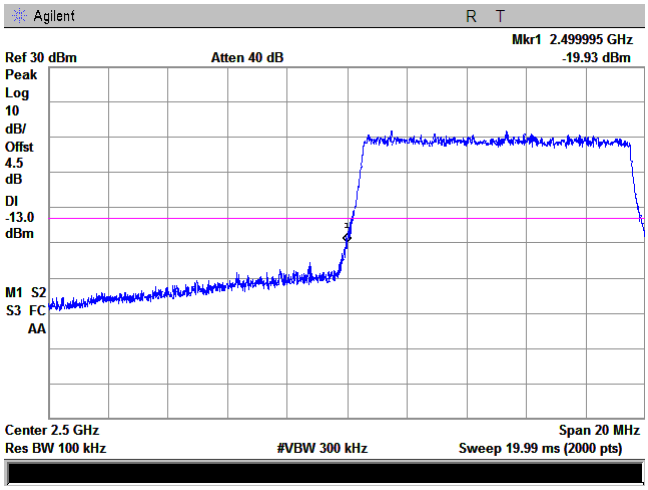
Note: Offset=Cable loss (4.5) + 10log (50.92/30)=4.5+2.3=6.8 dB



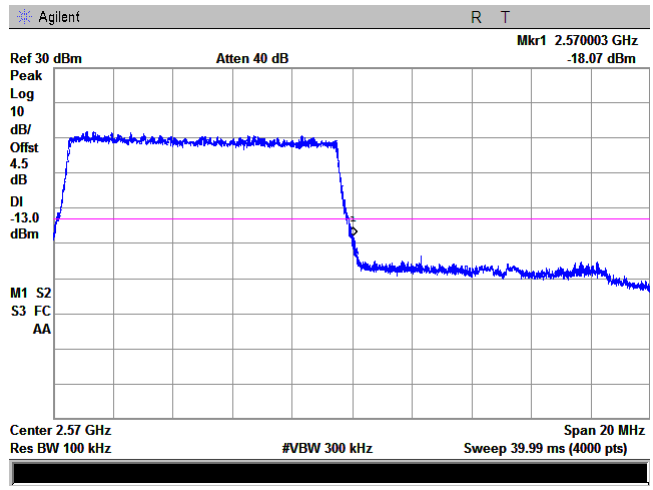
LTE Band VII - Low Channel QPSK-10



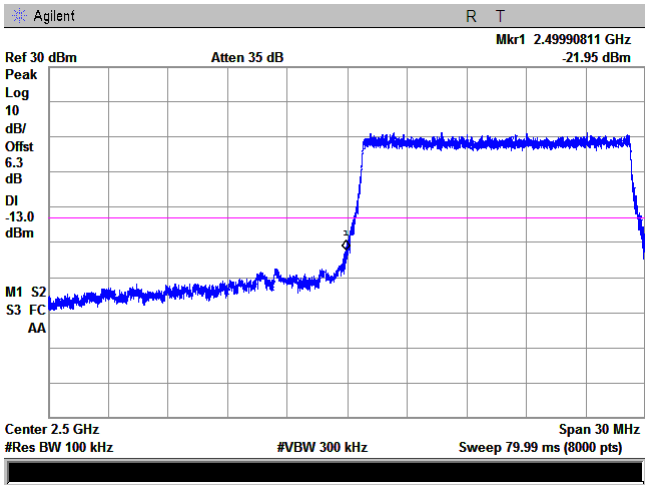
LTE Band VII - High Channel QPSK-10



LTE Band VII - Low Channel 16QAM-10

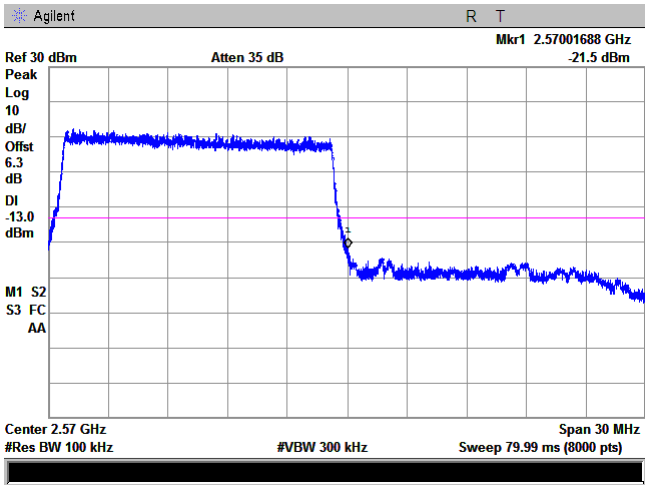


LTE Band VII - High Channel 16QAM-10



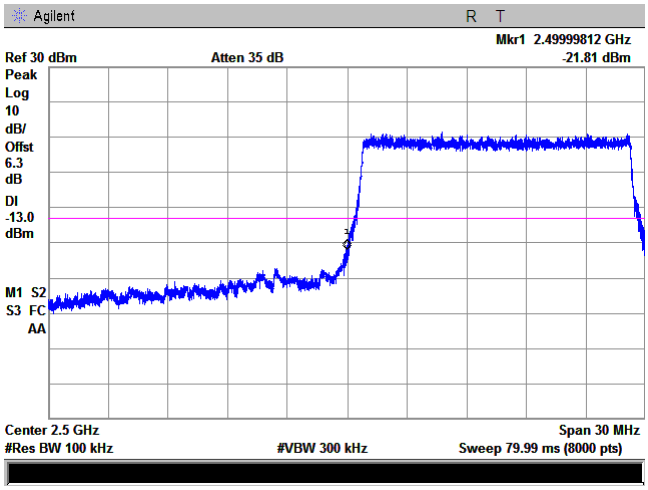
LTE Band VII - Low Channel QPSK-15

Note: Offset=Cable loss (4.5) + 10log (151.2/100)=4.5+1.8=6.3 dB



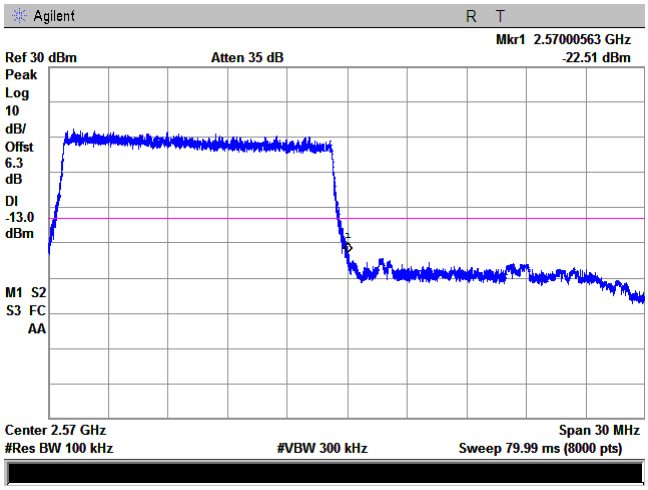
LTE Band VII - High Channel QPSK-15

Note: Offset=Cable loss (4.5) + 10log (150.5/100)=4.5+1.8=6.3 dB



LTE Band VII - Low Channel 16QAM-15

Note: Offset=Cable loss (4.5) + 10log (151.3/100)=4.5+1.8=6.3dB



LTE Band VII - High Channel 16QAM-15

Note: Offset=Cable loss (4.5) + 10log (150.4/100)=4.5+1.8=6.3 dB