RF TEST REPORT



Report No.: 16071296-FCC-R5-V1

Supersede Report No.: N/A

Applicant	Posh Mobile Limited
Product Name	Revel Max LTE
Model No.	L551
Serial No.	L551A,L551B,L551C
Test Standard	FCC Part 22(H):2015, FCC Part 24(E):2015, FCC Part 27: 2015; ANSI/TIA-603-D: 2010
Test Date	November 18 to December 04, 2016
Issue Date	December 22, 2016
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

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Laboratories Introduction

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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
16071296-FCC-R5	NONE	Original	December 05, 2016
16071296-FCC-R5-V1	V1	Updated the frequency(P26/28)	December 22, 2016

2. Customer information

Applicant Name	Posh Mobile Limited
Applicant Add	1011A, 10/F., Harbour Centre Tower 1, No.1 Hok Cheung Street, Hung Hom, Kowloon, Hong Kong
Manufacturer	Shenzhen Posh Mobile Limited
Manufacturer Add	Room 6H, Block C, NEO Building, Chegongmiao, Futian District, Shenzhen, P.R. China

3. Test site information

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

4. Equipment under Test (EUT) Information

Description of EUT:	Revel Max LTE
Main Model:	L551
Serial Model:	L551A,L551B,L551C
Date EUT received:	November 17, 2016
Test Date(s):	November 18 to December 04, 2016
Equipment Category：	PCE
Antenna Gain:	GSM850: -1.27dBi PCS1900: 0.84dBi UMTS-FDD Band V: -1.27dBi UMTS-FDD Band IV: 0.84dBi UMTS-FDD Band II: 0.84dBi LTE Band II: 0.54dBi LTE Band IV: 0.84dBi LTE Band VII: 0.9dBi LTE Band XII: -2.02dBi LTE Band XVII: -2.06dBi WIFI: 0.87dBi Bluetooth/BLE: 0.87dBi GPS: 0.89dBi
Antenna Type:	PIFA antenna
Type of Modulation:	GSM / GPRS: GMSK EGPRS: GMSK,8PSK UMTS-FDD: QPSK LTE Band: QPSK, 16QAM 802.11b/g/n: DSSS, OFDM Bluetooth: GFSK, π /4DQPSK, 8DPSK BLE: GFSK GPS:BPSK

RF Operating Frequency (ies):	GSM850 TX: 824.2 ~ 848.8 MHz; RX: 869.2 ~ 893.8 MHz PCS1900 TX: 1850.2 ~ 1909.8 MHz; RX: 1930.2 ~ 1989.8 MHz UMTS-FDD Band V TX: 826.4 ~ 846.6 MHz; RX: 871.4 ~ 891.6 MHz UMTS-FDD Band IV TX:1712.4 ~ 1752.6 MHz; RX : 2112.4 ~ 2152.6 MHz UMTS-FDD Band II TX:1852.4 ~ 1907.6 MHz; RX: 1932.4 ~ 1987.6 MHz LTE Band II TX: 1850.7 ~ 1909.3MHz; RX : 1930.7 ~ 1989.3 MHz LTE Band IV TX: 1710.7 ~ 1754.3 MHz; RX : 2110.7~ 2154.3 MHz LTE Band VII TX: 2502.5 ~ 2567.5 MHz; RX : 2622.5 ~ 2687.5 MHz LTE Band XII TX:699.7 ~ 715.3 MHz; RX : 729.7~ 745.3MHz LTE Band XVII TX: 706.5 ~ 713.5 MHz; RX : 736.5 ~ 743.5 MHz WIFI: 802.11b/g/n(20M): 2412-2462 MHz WIFI: 802.11n(40M): 2422-2452 MHz Bluetooth& BLE: 2402-2480 MHz GPS: 1575.42 MHz
Maximum Conducted AV Power to Antenna:	LTE Band II: 22.58 dBm LTE Band IV: 22.57dBm LTE Band VII: 22.49 dBm LTE Band XII: 22.87 dBm LTE Band XVII: 22.96 dBm
ERP/EIRP:	LTE Band II: 23.05 dBm / EIRP LTE Band IV: 23.40 dBm / EIRP LTE Band VII: 23.37dBm / EIRP LTE Band XII: 18.61dBm / EIRP LTE Band XVII: 18.79 dBm / ERP
Port:	USB Port, Earphone Port

Input Power:	Adapter: Model: A88-501500 Input: AC100-240V~50/60Hz,0.35A Output: DC 5.0V,1.5A Battery: Spec: 3.85V,2820mAh
Trade Name :	Posh
FCC ID:	2AG8KL551

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

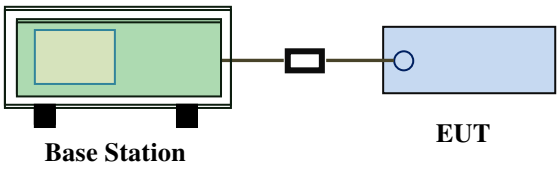
The EUT is a portable device, thus requires SAR evaluation;

Please refer to RF Exposure Evaluation Report: 16071296-FCC-H.

6.2 RF Output Power

Temperature	23℃
Relative Humidity	51%
Atmospheric Pressure	1018mbar
Test date :	November 18, 2016
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	22.57	22±1
				1	49	0	22.56	22±1
				1	99	0	22.51	22±1
				50	0	1	21.45	22±1
				50	24	1	21.46	22±1
				50	49	1	21.49	22±1
				100	0	1	21.42	22±1
			16QAM	1	0	1	21.45	21.3±1
				1	49	1	21.46	21.3±1
				1	99	1	21.49	21.3±1
				50	0	2	21.45	21.3±1
				50	24	2	21.46	21.3±1
				50	49	2	21.47	21.3±1
				100	0	2	20.45	21.3±1
	18900	1880.0	QPSK	1	0	0	22.33	22±1
				1	49	0	22.35	22±1
				1	99	0	22.36	22±1
				50	0	1	21.39	22±1
				50	24	1	21.38	22±1
				50	49	1	21.40	22±1
				100	0	1	21.38	22±1
			16QAM	1	0	1	21.63	21.3±1
				1	49	1	21.65	21.3±1
				1	99	1	21.64	21.3±1
				50	0	2	21.39	21.3±1
				50	24	2	21.38	21.3±1
				50	49	2	21.36	21.3±1
				100	0	2	20.41	21.3±1
	19100	1900.0	QPSK	1	0	0	22.41	22±1
				1	49	0	22.43	22±1
				1	99	0	22.44	22±1
				50	0	1	21.37	22±1
				50	24	1	21.38	22±1
				50	49	1	21.36	22±1
				100	0	1	21.36	22±1
			16QAM	1	0	1	21.76	21.3±1
				1	49	1	21.75	21.3±1
				1	99	1	21.73	21.3±1
				50	0	2	21.37	21.3±1
				50	24	2	21.36	21.3±1
				50	49	2	21.35	21.3±1
				100	0	2	20.38	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	22.53	22±1
				1	37	0	22.55	22±1
				1	74	0	22.54	22±1
				36	0	1	21.41	22±1
				36	16	1	21.46	22±1
				36	35	1	21.43	22±1
				75	0	1	21.42	22±1
			16QAM	1	0	1	21.31	21.3±1
				1	37	1	21.36	21.3±1
				1	74	1	21.35	21.3±1
				36	0	2	21.41	21.3±1
				36	16	2	21.42	21.3±1
				36	35	2	21.44	21.3±1
				75	0	2	20.44	21.3±1
	18900	1880.0	QPSK	1	0	0	22.36	22±1
				1	37	0	22.39	22±1
				1	74	0	22.34	22±1
				36	0	1	21.38	22±1
				36	16	1	21.39	22±1
				36	35	1	21.37	22±1
				75	0	1	21.39	22±1
			16QAM	1	0	1	21.66	21.3±1
				1	37	1	21.62	21.3±1
				1	74	1	21.64	21.3±1
				36	0	2	21.38	21.3±1
				36	16	2	21.39	21.3±1
				36	35	2	21.37	21.3±1
				75	0	2	20.38	21.3±1
	19125	1902.5	QPSK	1	0	0	22.36	22±1
				1	37	0	22.38	22±1
				1	74	0	22.37	22±1
				36	0	1	21.43	22±1
				36	16	1	21.45	22±1
				36	35	1	21.46	22±1
				75	0	1	21.43	22±1
			16QAM	1	0	1	21.83	21.3±1
				1	37	1	21.87	21.3±1
				1	74	1	21.85	21.3±1
				36	0	2	21.43	21.3±1
				36	16	2	21.45	21.3±1
				36	35	2	21.46	21.3±1
				75	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
10MHz	18650	1855	QPSK	1	0	0	22.48	22±1
				1	24	0	22.46	22±1
				1	49	0	22.49	22±1
				25	0	1	21.42	22±1
				25	12	1	21.45	22±1
				25	24	1	21.46	22±1
				50	0	1	21.40	22±1
			16QAM	1	0	1	21.28	21.3±1
				1	24	1	21.30	21.3±1
				1	49	1	21.26	21.3±1
				25	0	2	21.42	21.3±1
				25	12	2	21.43	21.3±1
				25	24	2	21.46	21.3±1
				50	0	2	21.40	21.3±1
	18900	1880.0	QPSK	1	0	0	22.43	22±1
				1	24	0	22.45	22±1
				1	49	0	22.41	22±1
				25	0	1	21.38	22±1
				25	12	1	21.39	22±1
				25	24	1	21.37	22±1
				50	0	1	21.40	22±1
			16QAM	1	0	1	21.39	21.3±1
				1	24	1	21.36	21.3±1
				1	49	1	21.37	21.3±1
				25	0	2	21.38	21.3±1
				25	12	2	21.39	21.3±1
				25	24	2	21.36	21.3±1
				50	0	2	20.43	21.3±1
	19150	1905	QPSK	1	0	0	22.35	22±1
				1	24	0	22.36	22±1
				1	49	0	22.34	22±1
				25	0	1	21.38	22±1
				25	12	1	21.36	22±1
				25	24	1	21.39	22±1
				50	0	1	21.38	22±1
			16QAM	1	0	1	21.82	21.3±1
				1	24	1	21.84	21.3±1
				1	49	1	21.83	21.3±1
				25	0	2	21.38	21.3±1
				25	12	2	21.39	21.3±1
				25	24	2	21.36	21.3±1
				50	0	2	20.43	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	22.57	22±1
				1	12	0	22.56	22±1
				1	24	0	**22.58**	22±1
				12	0	1	21.48	22±1
				12	6	1	21.47	22±1
				12	11	1	21.49	22±1
				25	0	1	21.40	22±1
			16QAM	1	0	1	21.52	21.3±1
				1	12	1	21.53	21.3±1
				1	24	1	21.54	21.3±1
				12	0	2	21.48	21.3±1
				12	6	2	21.49	21.3±1
				12	11	2	21.47	21.3±1
				25	0	2	20.46	21.3±1
	18900	1880.0	QPSK	1	0	0	22.37	22±1
				1	12	0	22.39	22±1
				1	24	0	22.38	22±1
				12	0	1	21.44	22±1
				12	6	1	21.46	22±1
				12	11	1	21.48	22±1
				25	0	1	21.39	22±1
			16QAM	1	0	1	21.74	21.3±1
				1	12	1	21.76	21.3±1
				1	24	1	21.74	21.3±1
				12	0	2	21.44	21.3±1
				12	6	2	21.46	21.3±1
				12	11	2	21.43	21.3±1
				25	0	2	20.41	21.3±1
	19175	1907.5	QPSK	1	0	0	22.43	22±1
				1	12	0	22.45	22±1
				1	24	0	22.41	22±1
				12	0	1	21.44	22±1
				12	6	1	21.46	22±1
				12	11	1	21.45	22±1
				25	0	1	21.39	22±1
			16QAM	1	0	1	21.38	21.3±1
				1	12	1	21.38	21.3±1
				1	24	1	21.34	21.3±1
				12	0	2	21.44	21.3±1
				12	6	2	21.46	21.3±1
				12	11	2	21.47	21.3±1
				25	0	2	20.57	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	22.41	22±1
				1	7	0	22.46	22±1
				1	14	0	22.43	22±1
				8	0	1	21.37	22±1
				8	4	1	21.36	22±1
				8	7	1	21.39	22±1
				15	0	1	21.38	22±1
			16QAM	1	0	1	21.25	21.2±1
				1	7	1	21.26	21.2±1
				1	14	1	21.23	21.2±1
				8	0	2	20.37	21.2±1
				8	4	2	20.39	21.2±1
				8	7	2	20.35	21.2±1
				15	0	2	20.37	21.2±1
	18900	1880.0	QPSK	1	0	0	22.36	22±1
				1	7	0	22.35	22±1
				1	14	0	22.39	22±1
				8	0	1	21.28	22±1
				8	4	1	21.26	22±1
				8	7	1	21.27	22±1
				15	0	1	21.35	22±1
			16QAM	1	0	1	21.34	21.2±1
				1	7	1	21.35	21.2±1
				1	14	1	21.38	21.2±1
				8	0	2	20.21	21.2±1
				8	4	2	20.26	21.2±1
				8	7	2	20.23	21.2±1
				15	0	2	20.41	21.2±1
	19175	1907.5	QPSK	1	0	0	22.18	22±1
				1	7	0	22.19	22±1
				1	14	0	22.16	22±1
				8	0	1	21.31	22±1
				8	4	1	21.33	22±1
				8	7	1	21.36	22±1
				15	0	1	21.36	22±1
			16QAM	1	0	1	21.81	21.3±1
				1	7	1	21.84	21.3±1
				1	14	1	21.83	21.3±1
				8	0	2	20.36	21.3±1
				8	4	2	20.34	21.3±1
				8	7	2	20.33	21.3±1
				15	0	2	20.51	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	22.42	22±1
				1	2	0	22.39	22±1
				1	5	0	22.45	22±1
				3	0	0	22.52	22±1
				3	1	0	22.53	22±1
				3	2	0	22.51	22±1
				6	0	1	21.38	22±1
			16QAM	1	0	1	21.25	21.3±1
				1	2	1	21.26	21.3±1
				1	5	1	21.28	21.3±1
				3	0	1	22.54	21.3±1
				3	1	1	22.53	21.3±1
				3	2	1	22.51	21.3±1
				6	0	2	20.39	21.3±1
	18900	1880.0	QPSK	1	0	0	22.35	22±1
				1	2	0	22.39	22±1
				1	5	0	22.31	22±1
				3	0	0	22.40	22±1
				3	1	0	22.42	22±1
				3	2	0	22.44	22±1
				6	0	1	21.31	22±1
			16QAM	1	0	1	21.32	21±1
				1	2	1	21.36	21±1
				1	5	1	21.35	21±1
				3	0	1	22.42	21±1
				3	1	1	22.41	21±1
				3	2	1	22.43	21±1
				6	0	2	20.24	21±1
	19193	1909.3	QPSK	1	0	0	22.25	22±1
				1	2	0	22.26	22±1
				1	5	0	22.28	22±1
				3	0	0	22.46	22±1
				3	1	0	22.48	22±1
				3	2	0	22.43	22±1
				6	0	1	21.32	22±1
			16QAM	1	0	1	20.96	21.3±1
				1	2	1	20.95	21.3±1
				1	5	1	21.10	21.3±1
				3	0	1	22.46	21.3±1
				3	1	1	22.45	21.3±1
				3	2	1	22.49	21.3±1
				6	0	2	20.30	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	22.53	22±1
				1	49	0	22.55	22±1
				1	99	0	**22.57**	22±1
				50	0	1	21.40	22±1
				50	24	1	21.44	22±1
				50	49	1	21.43	22±1
				100	0	1	21.41	22±1
			16QAM	1	0	1	21.37	21.3±1
				1	49	1	21.33	21.3±1
				1	99	1	21.36	21.3±1
				50	0	2	21.40	21.3±1
				50	24	2	21.44	21.3±1
				50	49	2	21.43	21.3±1
				100	0	2	20.44	21.3±1
	20175	1732.5	QPSK	1	0	0	22.44	22±1
				1	49	0	22.43	22±1
				1	99	0	22.46	22±1
				50	0	1	21.42	22±1
				50	24	1	21.44	22±1
				50	49	1	21.45	22±1
				100	0	1	21.42	22±1
			16QAM	1	0	1	21.83	21.3±1
				1	49	1	21.85	21.3±1
				1	99	1	21.86	21.3±1
				50	0	2	21.42	21.3±1
				50	24	2	21.43	21.3±1
				50	49	2	21.44	21.3±1
				100	0	2	20.47	21.3±1
	20300	1745.0	QPSK	1	0	0	22.37	22±1
				1	49	0	22.36	22±1
				1	99	0	22.35	22±1
				50	0	1	21.45	22±1
				50	24	1	21.46	22±1
				50	49	1	21.44	22±1
				100	0	1	21.40	22±1
			16QAM	1	0	1	21.63	21.3±1
				1	49	1	21.66	21.3±1
				1	99	1	21.65	21.3±1
				50	0	2	21.45	21.3±1
				50	24	2	21.43	21.3±1
				50	49	2	21.42	21.3±1
				100	0	2	20.43	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	22.49	22±1
				1	37	0	22.48	22±1
				1	74	0	22.46	22±1
				36	0	1	21.40	22±1
				36	16	1	21.44	22±1
				36	35	1	21.45	22±1
				75	0	1	21.42	22±1
			16QAM	1	0	1	21.26	21.3±1
				1	37	1	21.25	21.3±1
				1	74	1	21.28	21.3±1
				36	0	2	21.40	21.3±1
				36	16	2	21.42	21.3±1
				36	35	2	21.43	21.3±1
				75	0	2	20.45	21.3±1
	20175	1732.5	QPSK	1	0	0	22.38	22±1
				1	37	0	22.36	22±1
				1	74	0	22.34	22±1
				36	0	1	21.43	22±1
				36	16	1	21.44	22±1
				36	35	1	21.45	22±1
				75	0	1	21.42	22±1
			16QAM	1	0	1	21.63	21.3±1
				1	37	1	21.66	21.3±1
				1	74	1	21.45	21.3±1
				36	0	2	21.43	21.3±1
				36	16	2	21.45	21.3±1
				36	35	2	21.43	21.3±1
				75	0	2	20.41	21.3±1
	20325	1747.5	QPSK	1	0	0	22.39	22±1
				1	37	0	22.44	22±1
				1	74	0	22.36	22±1
				36	0	1	21.47	22±1
				36	16	1	21.46	22±1
				36	35	1	21.45	22±1
				75	0	1	21.44	22±1
			16QAM	1	0	1	21.96	21.3±1
				1	37	1	21.95	21.3±1
				1	74	1	21.97	21.3±1
				36	0	2	21.47	21.3±1
				36	16	2	21.46	21.3±1
				36	35	2	21.44	21.3±1
				75	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
10MHz	20000	1715.0	QPSK	1	0	0	22.46	22±1
				1	24	0	22.44	22±1
				1	49	0	22.41	22±1
				25	0	1	21.37	22±1
				25	12	1	21.36	22±1
				25	24	1	21.33	22±1
				50	0	1	21.38	22±1
			16QAM	1	0	1	21.25	21.3±1
				1	24	1	21.26	21.3±1
				1	49	1	21.22	21.3±1
				25	0	2	21.37	21.3±1
				25	12	2	21.33	21.3±1
				25	24	2	21.35	21.3±1
				50	0	2	20.41	21.3±1
	20175	1732.5	QPSK	1	0	0	22.41	22±1
				1	24	0	22.42	22±1
				1	49	0	22.43	22±1
				25	0	1	21.36	22±1
				25	12	1	21.35	22±1
				25	24	1	21.33	22±1
				50	0	1	21.37	22±1
			16QAM	1	0	1	21.38	21.3±1
				1	24	1	21.36	21.3±1
				1	49	1	21.33	21.3±1
				25	0	2	21.36	21.3±1
				25	12	2	21.35	21.3±1
				25	24	2	21.36	21.3±1
				50	0	2	20.44	21.3±1
	20350	1750.0	QPSK	1	0	0	22.32	22±1
				1	24	0	22.35	22±1
				1	49	0	22.34	22±1
				25	0	1	21.36	22±1
				25	12	1	21.35	22±1
				25	24	1	21.34	22±1
				50	0	1	21.36	22±1
			16QAM	1	0	1	21.91	21.3±1
				1	24	1	21.92	21.3±1
				1	49	1	21.94	21.3±1
				25	0	2	21.36	21.3±1
				25	12	2	21.33	21.3±1
				25	24	2	21.34	21.3±1
				50	0	2	20.41	21.3±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	22.53	22±1
				1	12	0	22.54	22±1
				1	24	0	22.51	22±1
				12	0	1	21.41	22±1
				12	6	1	21.46	22±1
				12	11	1	21.42	22±1
				25	0	1	21.36	22±1
			16QAM	1	0	1	21.47	21.3±1
				1	12	1	21.45	21.3±1
				1	24	1	21.46	21.3±1
				12	0	2	21.41	21.3±1
				12	6	2	21.43	21.3±1
				12	11	2	21.44	21.3±1
				25	0	2	20.38	21.3±1
	20175	1732.5	QPSK	1	0	0	22.40	22±1
				1	12	0	22.41	22±1
				1	24	0	22.39	22±1
				12	0	1	21.43	22±1
				12	6	1	21.44	22±1
				12	11	1	21.44	22±1
				25	0	1	21.36	22±1
			16QAM	1	0	1	21.72	21.3±1
				1	12	1	21.74	21.3±1
				1	24	1	21.75	21.3±1
				12	0	2	21.43	21.3±1
				12	6	2	21.43	21.3±1
				12	11	2	21.45	21.3±1
				25	0	2	20.38	21.3±1
	20350	1750.0	QPSK	1	0	0	22.44	22±1
				1	12	0	22.45	22±1
				1	24	0	22.43	22±1
				12	0	1	21.41	22±1
				12	6	1	21.43	22±1
				12	11	1	21.42	22±1
				25	0	1	21.34	22±1
			16QAM	1	0	1	21.32	21.3±1
				1	12	1	21.33	21.3±1
				1	24	1	21.34	21.3±1
				12	0	2	21.41	21.3±1
				12	6	2	21.42	21.3±1
				12	11	2	21.44	21.3±1
				25	0	2	20.48	21.3±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	22.38	22±1
				1	7	0	22.36	22±1
				1	14	0	22.34	22±1
				8	0	1	21.29	22±1
				8	4	1	21.26	22±1
				8	7	1	21.27	22±1
				15	0	1	21.33	22±1
			16QAM	1	0	1	21.18	21±1
				1	7	1	21.19	21±1
				1	14	1	21.15	21±1
				8	0	2	20.29	21±1
				8	4	2	20.28	21±1
				8	7	2	20.27	21±1
				15	0	2	20.30	21±1
	20175	1732.5	QPSK	1	0	0	22.36	22±1
				1	7	0	22.35	22±1
				1	14	0	22.33	22±1
				8	0	1	21.28	22±1
				8	4	1	21.29	22±1
				8	7	1	21.25	22±1
				15	0	1	21.36	22±1
			16QAM	1	0	1	21.31	21±1
				1	7	1	21.33	21±1
				1	14	1	21.34	21±1
				8	0	2	20.18	21±1
				8	4	2	20.19	21±1
				8	7	2	20.16	21±1
				15	0	2	20.40	21±1
	20385	1753.5	QPSK	1	0	0	22.18	22±1
				1	7	0	22.19	22±1
				1	14	0	22.16	22±1
				8	0	1	21.29	22±1
				8	4	1	21.26	22±1
				8	7	1	21.26	22±1
				15	0	1	21.32	22±1
			16QAM	1	0	1	21.79	21.3±1
				1	7	1	21.78	21.3±1
				1	14	1	21.80	21.3±1
				8	0	2	20.30	21.3±1
				8	4	2	20.31	21.3±1
				8	7	2	20.36	21.3±1
				15	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
1.4MHz	19957	1710.7	QPSK	1	0	0	22.39	22±1
				1	2	0	22.38	22±1
				1	5	0	22.37	22±1
				3	0	0	22.47	22±1
				3	1	0	22.46	22±1
				3	2	0	22.48	22±1
				6	0	1	21.31	22±1
			16QAM	1	0	1	21.19	22±1
				1	2	1	21.21	22±1
				1	5	1	21.18	22±1
				3	0	1	22.47	22±1
				3	1	1	22.46	22±1
				3	2	1	22.45	22±1
				6	0	2	21.31	22±1
	20175	1732.5	QPSK	1	0	0	22.37	22±1
				1	2	0	22.36	22±1
				1	5	0	22.34	22±1
				3	0	0	22.45	22±1
				3	1	0	22.46	22±1
				3	2	0	22.44	22±1
				6	0	1	21.28	22±1
			16QAM	1	0	1	21.31	21.3±1
				1	2	1	21.36	21.3±1
				1	5	1	21.35	21.3±1
				3	0	1	22.45	21.3±1
				3	1	1	22.44	21.3±1
				3	2	1	22.46	21.3±1
				6	0	2	20.19	21.3±1
	20393	1754.3	QPSK	1	0	0	22.26	22±1
				1	2	0	22.29	22±1
				1	5	0	22.27	22±1
				3	0	0	22.41	22±1
				3	1	0	22.43	22±1
				3	2	0	22.42	22±1
				6	0	1	21.31	22±1
			16QAM	1	0	1	20.93	21.3±1
				1	2	1	20.95	21.3±1
				1	5	1	20.94	21.3±1
				3	0	1	22.41	21.3±1
				3	1	1	22.43	21.3±1
				3	2	1	22.41	21.3±1
				6	0	2	20.24	21.3±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	22.48	22±1
				1	49	0	**22.49**	22±1
				1	99	0	22.47	22±1
				50	0	1	21.28	22±1
				50	24	1	21.26	22±1
				50	49	1	21.27	22±1
				100	0	1	21.34	22±1
			16QAM	1	0	1	21.36	21±1
				1	49	1	21.35	21±1
				1	99	1	21.39	21±1
				50	0	2	21.28	21±1
				50	24	2	21.28	21±1
				50	49	2	21.29	21±1
				100	0	2	20.27	21±1
	21100	2535	QPSK	1	0	0	22.26	22±1
				1	49	0	22.28	22±1
				1	99	0	22.25	22±1
				50	0	1	21.30	22±1
				50	24	1	21.31	22±1
				50	49	1	21.33	22±1
				100	0	1	21.28	22±1
			16QAM	1	0	1	21.36	21.3±1
				1	49	1	21.35	21.3±1
				1	99	1	21.34	21.3±1
				50	0	2	21.30	21.3±1
				50	24	2	21.31	21.3±1
				50	49	2	21.33	21.3±1
				100	0	2	21.28	21.3±1
	21350	2560	QPSK	1	0	0	22.15	22±1
				1	49	0	22.16	22±1
				1	99	0	22.14	22±1
				50	0	1	21.09	22±1
				50	24	1	21.08	22±1
				50	49	1	21.10	22±1
				100	0	1	21.07	22±1
			16QAM	1	0	1	21.52	21±1
				1	49	1	21.53	21±1
				1	99	1	21.51	21±1
				50	0	2	21.09	21±1
				50	24	2	21.08	21±1
				50	49	2	21.09	21±1
				100	0	2	20.11	21±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
15MHz	20825	2507.5	QPSK	1	0	0	22.43	22±1
				1	37	0	22.42	22±1
				1	74	0	22.41	22±1
				36	0	1	21.30	22±1
				36	16	1	21.31	22±1
				36	35	1	21.33	22±1
				75	0	1	21.36	22±1
			16QAM	1	0	1	21.20	21±1
				1	37	1	21.21	21±1
				1	74	1	21.22	21±1
				36	0	2	21.30	21±1
				36	16	2	21.33	21±1
				36	35	2	21.32	21±1
				75	0	2	20.30	21±1
	21100	2535	QPSK	1	0	0	21.53	22±1
				1	37	0	21.52	22±1
				1	74	0	21.55	22±1
				36	0	1	21.28	22±1
				36	16	1	21.27	22±1
				36	35	1	21.26	22±1
				75	0	1	21.31	22±1
			16QAM	1	0	1	22.04	21.3±1
				1	37	1	22.06	21.3±1
				1	74	1	22.05	21.3±1
				36	0	2	21.09	21.3±1
				36	16	2	21.08	21.3±1
				36	35	2	21.12	21.3±1
				75	0	2	21.07	21.3±1
	21375	2562.5	QPSK	1	0	0	21.62	21.3±1
				1	37	0	21.63	21.3±1
				1	74	0	21.63	21.3±1
				36	0	1	21.09	21.3±1
				36	16	1	21.10	21.3±1
				36	35	1	21.08	21.3±1
				75	0	1	21.07	21.3±1
			16QAM	1	0	1	21.63	21±1
				1	37	1	21.60	21±1
				1	74	1	22.52	21±1
				36	0	2	21.09	21±1
				36	16	2	21.10	21±1
				36	35	2	21.11	21±1
				75	0	2	20.11	21±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
10MHz	20800	2505	QPSK	1	0	0	22.36	22±1
				1	24	0	22.35	22±1
				1	49	0	22.34	22±1
				25	0	1	21.30	22±1
				25	12	1	21.33	22±1
				25	24	1	21.32	22±1
				50	0	1	21.27	22±1
			16QAM	1	0	1	21.15	21±1
				1	24	1	21.16	21±1
				1	49	1	21.14	21±1
				25	0	2	21.30	21±1
				25	12	2	21.33	21±1
				25	24	2	21.31	21±1
				50	0	2	20.21	21±1
	21100	2535	QPSK	1	0	0	22.30	22±1
				1	24	0	22.31	22±1
				1	49	0	22.32	22±1
				25	0	1	21.19	22±1
				25	12	1	21.18	22±1
				25	24	1	21.17	22±1
				50	0	1	21.25	22±1
			16QAM	1	0	1	21.26	21±1
				1	24	1	21.22	21±1
				1	49	1	21.24	21±1
				25	0	2	21.19	21±1
				25	12	2	21.18	21±1
				25	24	2	21.17	21±1
				50	0	2	20.20	21±1
	21400	2565	QPSK	1	0	0	21.99	22±1
				1	24	0	21.95	22±1
				1	49	0	21.96	22±1
				25	0	1	21.01	22±1
				25	12	1	21.03	22±1
				25	24	1	21.04	22±1
				50	0	1	21.03	22±1
			16QAM	1	0	1	21.54	21±1
				1	24	1	21.53	21±1
				1	49	1	21.55	21±1
				25	0	2	21.01	21±1
				25	12	2	21.02	21±1
				25	24	2	21.01	21±1
				50	0	2	20.07	21±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
5MHz	20775	2502.5	QPSK	1	0	0	22.45	22±1
				1	12	0	22.46	22±1
				1	24	0	22.41	22±1
				12	0	1	21.35	22±1
				12	6	1	21.36	22±1
				12	11	1	21.34	22±1
				25	0	1	21.28	22±1
			16QAM	1	0	1	21.36	21.3±1
				1	12	1	21.35	21.3±1
				1	24	1	21.34	21.3±1
				12	0	2	21.35	21.3±1
				12	6	2	21.36	21.3±1
				12	11	2	21.33	21.3±1
				25	0	2	20.31	21.3±1
	21100	2535	QPSK	1	0	0	22.26	22±1
				1	12	0	22.25	22±1
				1	24	0	22.24	22±1
				12	0	1	21.27	22±1
				12	6	1	21.26	22±1
				12	11	1	21.29	22±1
				25	0	1	21.24	22±1
			16QAM	1	0	1	21.49	21.3±1
				1	12	1	21.45	21.3±1
				1	24	1	21.46	21.3±1
				12	0	2	21.27	21.3±1
				12	6	2	21.26	21.3±1
				12	11	2	21.22	21.3±1
				25	0	2	20.35	21.3±1
	21425	2567.5	QPSK	1	0	0	22.07	22±1
				1	12	0	22.05	22±1
				1	24	0	22.06	22±1
				12	0	1	21.06	22±1
				12	6	1	21.05	22±1
				12	11	1	21.03	22±1
				25	0	1	21.04	22±1
			16QAM	1	0	1	21.01	21.3±1
				1	12	1	21.02	21.3±1
				1	24	1	21.03	21.3±1
				12	0	2	21.06	21.3±1
				12	6	2	21.05	21.3±1
				12	11	2	21.04	21.3±1
				25	0	2	20.37	21.3±1

LTE Band XII:

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
10MHz	23060	704	QPSK	1	0	0	22.81	22±1
				1	24	0	22.83	22±1
				1	49	0	22.81	22±1
				25	0	1	21.79	22±1
				25	12	1	21.80	22±1
				25	24	1	21.79	22±1
				50	0	1	21.77	22±1
			16QAM	1	0	1	21.64	21.3±1
				1	24	1	21.66	21.3±1
				1	49	1	21.65	21.3±1
				25	0	2	21.79	21.3±1
				25	12	2	21.77	21.3±1
				25	24	2	21.76	21.3±1
				50	0	2	20.70	21.3±1
	23095	707.5	QPSK	1	0	0	22.77	22±1
				1	24	0	22.76	22±1
				1	49	0	22.74	22±1
				25	0	1	21.73	22±1
				25	12	1	21.75	22±1
				25	24	1	21.74	22±1
				50	0	1	21.74	22±1
			16QAM	1	0	1	21.71	22±1
				1	24	1	21.74	22±1
				1	49	1	21.73	22±1
				25	0	2	21.73	22±1
				25	12	2	21.72	22±1
				25	24	2	21.74	22±1
				50	0	2	21.74	22±1
	23130	711	QPSK	1	0	0	22.61	22±1
				1	24	0	22.62	22±1
				1	49	0	22.61	22±1
				25	0	1	21.75	22±1
				25	12	1	21.74	22±1
				25	24	1	21.76	22±1
				50	0	1	21.72	22±1
			16QAM	1	0	1	22.22	21.5±1
				1	24	1	22.23	21.5±1
				1	49	1	22.21	21.5±1
				25	0	2	21.75	21.5±1
				25	12	2	21.73	21.5±1
				25	24	2	21.74	21.5±1
				50	0	2	20.71	21.5±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
5MHz	23035	701.5	QPSK	1	0	0	22.86	22.5±1
				1	12	0	**22.87**	22.5±1
				1	24	0	22.85	22.5±1
				12	0	1	21.81	22.5±1
				12	6	1	21.83	22.5±1
				12	11	1	21.82	22.5±1
				25	0	1	21.75	22.5±1
			16QAM	1	0	1	21.84	21.3±1
				1	12	1	21.86	21.3±1
				1	24	1	21.85	21.3±1
				12	0	2	21.81	21.3±1
				12	6	2	21.82	21.3±1
				12	11	2	21.83	21.3±1
				25	0	2	20.71	21.3±1
	23095	707.5	QPSK	1	0	0	22.68	22±1
				1	12	0	22.69	22±1
				1	24	0	22.67	22±1
				12	0	1	21.76	22±1
				12	6	1	21.75	22±1
				12	11	1	21.74	22±1
				25	0	1	21.72	22±1
			16QAM	1	0	1	21.96	21.3±1
				1	12	1	21.94	21.3±1
				1	24	1	21.92	21.3±1
				12	0	2	21.76	21.3±1
				12	6	2	21.75	21.3±1
				12	11	2	21.74	21.3±1
				25	0	2	20.68	21.3±1
	23155	713.5	QPSK	1	0	0	22.81	22±1
				1	12	0	22.83	22±1
				1	24	0	22.84	22±1
				12	0	1	21.79	22±1
				12	6	1	21.80	22±1
				12	11	1	21.81	22±1
				25	0	1	21.74	22±1
			16QAM	1	0	1	21.81	21.3±1
				1	12	1	21.82	21.3±1
				1	24	1	21.83	21.3±1
				12	0	2	21.79	21.3±1
				12	6	2	21.78	21.3±1
				12	11	2	21.74	21.3±1
				25	0	2	20.80	21.3±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
3MHz	23025	700.5	QPSK	1	0	0	22.70	22±1
				1	7	0	22.71	22±1
				1	14	0	22.73	22±1
				8	0	1	21.67	22±1
				8	4	1	21.66	22±1
				8	7	1	21.65	22±1
				15	0	1	21.73	22±1
			16QAM	1	0	1	21.57	21.3±1
				1	7	1	21.56	21.3±1
				1	14	1	21.55	21.3±1
				8	0	2	20.62	21.3±1
				8	4	2	20.63	21.3±1
				8	7	2	20.61	21.3±1
				15	0	2	20.64	21.3±1
	23095	707.5	QPSK	1	0	0	22.65	22±1
				1	7	0	22.67	22±1
				1	14	0	22.63	22±1
				8	0	1	21.60	22±1
				8	4	1	21.62	22±1
				8	7	1	21.61	22±1
				15	0	1	21.70	22±1
			16QAM	1	0	1	21.63	21.3±1
				1	7	1	21.62	21.3±1
				1	14	1	21.64	21.3±1
				8	0	2	20.46	21.3±1
				8	4	2	20.45	21.3±1
				8	7	2	20.43	21.3±1
				15	0	2	20.69	21.3±1
	23025	714.5	QPSK	1	0	0	22.49	22±1
				1	7	0	22.45	22±1
				1	14	0	22.47	22±1
				8	0	1	21.61	22±1
				8	4	1	21.62	22±1
				8	7	1	21.61	22±1
				15	0	1	21.62	22±1
			16QAM	1	0	1	22.05	22±1
				1	7	1	22.06	22±1
				1	14	1	22.04	22±1
				8	0	2	21.53	22±1
				8	4	2	21.54	22±1
				8	7	2	21.55	22±1
				15	0	2	21.66	22±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
1.4MHz	23017	699.7	QPSK	1	0	0	22.72	22±1
				1	2	0	22.73	22±1
				1	5	0	22.74	22±1
				3	0	0	22.83	22±1
				3	1	0	22.81	22±1
				3	2	0	22.85	22±1
				6	0	1	21.66	22±1
			16QAM	1	0	1	21.58	21.3±1
				1	2	1	21.56	21.3±1
				1	5	1	21.57	21.3±1
				3	0	1	22.83	21.3±1
				3	1	1	22.85	21.3±1
				3	2	1	22.84	21.3±1
				6	0	2	20.60	21.3±1
	23095	707.5	QPSK	1	0	0	22.66	22±1
				1	2	0	22.67	22±1
				1	5	0	22.68	22±1
				3	0	0	22.73	22±1
				3	1	0	22.74	22±1
				3	2	0	22.73	22±1
				6	0	1	21.62	22±1
			16QAM	1	0	1	21.64	21.3±1
				1	2	1	21.66	21.3±1
				1	5	1	21.65	21.3±1
				3	0	1	22.73	21.3±1
				3	1	1	22.74	21.3±1
				3	2	1	22.73	21.3±1
				6	0	2	20.47	21.3±1
	23173	715.3	QPSK	1	0	0	22.52	22±1
				1	2	0	22.54	22±1
				1	5	0	22.53	22±1
				3	0	0	22.64	22±1
				3	1	0	22.65	22±1
				3	2	0	22.61	22±1
				6	0	1	21.59	22±1
			16QAM	1	0	1	21.19	22±1
				1	2	1	21.20	22±1
				1	5	1	21.18	22±1
				3	0	1	22.64	22±1
				3	1	1	22.63	22±1
				3	2	1	22.65	22±1
				6	0	2	21.59	22±1

LTE Band XVII:

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
10MHz	23780	709.0	QPSK	1	0	0	**22.96**	22±1
				1	24	0	22.95	22±1
				1	49	0	22.93	22±1
				25	0	1	21.91	22±1
				25	12	1	21.92	22±1
				25	24	1	21.93	22±1
				50	0	1	21.84	22±1
			16QAM	1	0	1	22.01	21.3±1
				1	24	1	22.03	21.3±1
				1	49	1	22.01	21.3±1
				25	0	2	21.91	21.3±1
				25	12	2	21.92	21.3±1
				25	24	2	21.93	21.3±1
				50	0	2	20.84	21.3±1
	23790	701.0	QPSK	1	0	0	22.73	22±1
				1	24	0	22.75	22±1
				1	49	0	22.74	22±1
				25	0	1	21.85	22±1
				25	12	1	21.86	22±1
				25	24	1	21.84	22±1
				50	0	1	21.79	22±1
			16QAM	1	0	1	22.23	22±1
				1	24	1	22.24	22±1
				1	49	1	22.22	22±1
				25	0	2	21.80	22±1
				25	12	2	21.81	22±1
				25	24	2	21.82	22±1
				50	0	2	21.75	22±1
	23800	711.0	QPSK	1	0	0	22.80	22±1
				1	24	0	22.79	22±1
				1	49	0	22.81	22±1
				25	0	1	21.80	22±1
				25	12	1	21.81	22±1
				25	24	1	21.80	22±1
				50	0	1	21.77	22±1
			16QAM	1	0	1	21.81	21.3±1
				1	24	1	21.82	21.3±1
				1	49	1	21.80	21.3±1
				25	0	2	21.80	21.3±1
				25	12	2	21.80	21.3±1
				25	24	2	21.81	21.3±1
				50	0	2	20.86	21.3±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
5MHz	23755	706.5	QPSK	1	0	0	22.86	22±1
				1	12	0	22.85	22±1
				1	24	0	22.86	22±1
				12	0	1	21.82	22±1
				12	6	1	21.83	22±1
				12	11	1	21.84	22±1
				25	0	1	21.82	22±1
			16QAM	1	0	1	21.75	21.3±1
				1	12	1	21.76	21.3±1
				1	24	1	21.74	21.3±1
				12	0	2	21.82	21.3±1
				12	6	2	21.83	21.3±1
				12	11	2	21.81	21.3±1
				25	0	2	20.81	21.3±1
	23790	710.0	QPSK	1	0	0	22.82	22±1
				1	12	0	22.83	22±1
				1	24	0	22.81	22±1
				12	0	1	21.81	22±1
				12	6	1	21.82	22±1
				12	11	1	21.81	22±1
				25	0	1	21.82	22±1
			16QAM	1	0	1	21.83	21.3±1
				1	12	1	21.80	21.3±1
				1	24	1	21.81	21.3±1
				12	0	2	21.81	21.3±1
				12	6	2	21.82	21.3±1
				12	11	2	21.81	21.3±1
				25	0	2	20.80	21.3±1
	23825	713.5	QPSK	1	0	0	22.64	22±1
				1	12	0	22.65	22±1
				1	24	0	22.63	22±1
				12	0	1	21.82	22±1
				12	6	1	21.83	22±1
				12	11	1	21.84	22±1
				25	0	1	21.80	22±1
			16QAM	1	0	1	22.42	22±1
				1	12	1	22.43	22±1
				1	24	1	22.41	22±1
				12	0	2	21.82	22±1
				12	6	2	21.83	22±1
				12	11	2	21.84	22±1
				25	0	2	21.81	22±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	15.90	V	7.88	0.85	22.93	33.01
1880	1.4	QPSK	1/0	15.85	V	7.88	0.85	22.88	33.01
1909.3	1.4	QPSK	1/0	15.75	V	7.88	0.85	22.78	33.01
1850.7	1.4	QPSK	1/0	15.04	H	7.88	0.85	22.07	33.01
1880	1.4	QPSK	1/0	14.99	H	7.88	0.85	22.02	33.01
1909.3	1.4	QPSK	1/0	14.89	H	7.88	0.85	21.92	33.01
1850.7	1.4	16-QAM	1/0	14.83	V	7.88	0.85	21.86	33.01
1880	1.4	16-QAM	1/0	14.9	V	7.88	0.85	21.93	33.01
1909.3	1.4	16-QAM	1/0	14.47	V	7.88	0.85	21.50	33.01
1850.7	1.4	16-QAM	1/0	13.95	H	7.88	0.85	20.98	33.01
1880	1.4	16-QAM	1/0	14.02	H	7.88	0.85	21.05	33.01
1909.3	1.4	16-QAM	1/0	13.58	H	7.88	0.85	20.61	33.01
1851.5	3	QPSK	1/0	15.87	V	7.88	0.85	22.90	33.01
1880	3	QPSK	1/0	15.82	V	7.88	0.85	22.85	33.01
1908.5	3	QPSK	1/0	15.59	V	7.88	0.85	22.62	33.01
1851.5	3	QPSK	1/0	14.96	H	7.88	0.85	21.99	33.01
1880	3	QPSK	1/0	14.89	H	7.88	0.85	21.92	33.01
1908.5	3	QPSK	1/0	14.68	H	7.88	0.85	21.71	33.01
1851.5	3	16-QAM	1/0	14.76	V	7.88	0.85	21.79	33.01
1880	3	16-QAM	1/0	14.86	V	7.88	0.85	21.89	33.01
1908.5	3	16-QAM	1/0	15.28	V	7.88	0.85	22.31	33.01
1851.5	3	16-QAM	1/0	13.89	H	7.88	0.85	20.92	33.01
1880	3	16-QAM	1/0	13.94	H	7.88	0.85	20.97	33.01
1908.5	3	16-QAM	1/0	14.38	H	7.88	0.85	21.41	33.01
1852.5	5	QPSK	1/24	15.97	V	7.88	0.85	23.00	33.01
1880	5	QPSK	1/0	15.87	V	7.88	0.85	22.90	33.01
1907.5	5	QPSK	1/24	15.94	V	7.88	0.85	22.97	33.01
1852.5	5	QPSK	1/24	15.05	H	7.88	0.85	22.08	33.01
1880	5	QPSK	1/0	14.97	H	7.88	0.85	22.00	33.01
1907.5	5	QPSK	1/24	15.02	H	7.88	0.85	22.05	33.01
1852.5	5	16-QAM	1/24	15.03	V	7.88	0.85	22.06	33.01
1880	5	16-QAM	1/0	15.24	V	7.88	0.85	22.27	33.01

1907.5	5	16-QAM	1/24	14.86	V	7.88	0.85	21.89	33.01
1852.5	5	16-QAM	1/24	14.13	H	7.88	0.85	21.16	33.01
1880	5	16-QAM	1/0	14.35	H	7.88	0.85	21.38	33.01
1907.5	5	16-QAM	1/24	13.92	H	7.88	0.85	20.95	33.01
1855	10	QPSK	1/0	15.9	V	7.88	0.85	22.93	33.01
1880	10	QPSK	1/0	15.81	V	7.88	0.85	22.84	33.01
1905	10	QPSK	1/49	15.73	V	7.88	0.85	22.76	33.01
1855	10	QPSK	1/0	15.03	H	7.88	0.85	22.06	33.01
1880	10	QPSK	1/0	14.95	H	7.88	0.85	21.98	33.01
1905	10	QPSK	1/49	14.84	H	7.88	0.85	21.87	33.01
1855	10	16-QAM	1/0	14.75	V	7.88	0.85	21.78	33.01
1880	10	16-QAM	1/0	14.86	V	7.88	0.85	21.89	33.01
1905	10	16-QAM	1/49	15.42	V	7.88	0.85	22.45	33.01
1855	10	16-QAM	1/0	13.84	H	7.88	0.85	20.87	33.01
1880	10	16-QAM	1/0	13.96	H	7.88	0.85	20.99	33.01
1905	10	16-QAM	1/49	14.56	H	7.88	0.85	21.59	33.01
1857.5	15	QPSK	1/0	15.98	V	7.88	0.85	23.01	33.01
1880	15	QPSK	1/0	15.84	V	7.88	0.85	22.87	33.01
1902.5	15	QPSK	1/0	15.83	V	7.88	0.85	22.86	33.01
1857.5	15	QPSK	1/0	15.03	H	7.88	0.85	22.06	33.01
1880	15	QPSK	1/0	14.96	H	7.88	0.85	21.99	33.01
1902.5	15	QPSK	1/0	14.95	H	7.88	0.85	21.98	33.01
1857.5	15	16-QAM	1/0	14.84	V	7.88	0.85	21.87	33.01
1880	15	16-QAM	1/0	15.2	V	7.88	0.85	22.23	33.01
1902.5	15	16-QAM	1/0	15.31	V	7.88	0.85	22.34	33.01
1857.5	15	16-QAM	1/0	13.92	H	7.88	0.85	20.95	33.01
1880	15	16-QAM	1/0	14.35	H	7.88	0.85	21.38	33.01
1902.5	15	16-QAM	1/0	14.43	H	7.88	0.85	21.46	33.01
1860	20	QPSK	1/0	16.02	V	7.88	0.85	**23.05**	33.01
1880	20	QPSK	1/0	15.83	V	7.88	0.85	22.86	33.01
1900	20	QPSK	1/0	15.89	V	7.88	0.85	22.92	33.01
1860	20	QPSK	1/0	15.13	H	7.88	0.85	22.16	33.01
1880	20	QPSK	1/0	14.92	H	7.88	0.85	21.95	33.01
1900	20	QPSK	1/0	14.98	H	7.88	0.85	22.01	33.01
1860	20	16-QAM	1/0	15.01	V	7.88	0.85	22.04	33.01
1880	20	16-QAM	1/0	15.17	V	7.88	0.85	22.20	33.01
1900	20	16-QAM	1/0	15.29	V	7.88	0.85	22.32	33.01
1860	20	16-QAM	1/0	14.16	H	7.88	0.85	21.19	33.01

1880	20	16-QAM	1/0	14.28	H	7.88	0.85	21.31	33.01
1900	20	16-QAM	1/0	14.37	H	7.88	0.85	21.40	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	16.08	V	7.95	0.79	23.24	30
1732.5	1.4	QPSK	1/0	16.06	V	7.95	0.79	23.22	30
1754.3	1.4	QPSK	1/0	15.95	V	7.95	0.79	23.11	30
1710.7	1.4	QPSK	1/0	15.13	H	7.95	0.79	22.29	30
1732.5	1.4	QPSK	1/0	15.11	H	7.95	0.79	22.27	30
1754.3	1.4	QPSK	1/0	15.04	H	7.95	0.79	22.20	30
1710.7	1.4	16-QAM	1/5	14.88	V	7.95	0.79	22.04	30
1732.5	1.4	16-QAM	1/0	15.02	V	7.95	0.79	22.18	30
1754.3	1.4	16-QAM	1/0	14.65	V	7.95	0.79	21.81	30
1710.7	1.4	16-QAM	1/5	13.97	H	7.95	0.79	21.13	30
1732.5	1.4	16-QAM	1/0	14.16	H	7.95	0.79	21.32	30
1754.3	1.4	16-QAM	1/0	13.75	H	7.95	0.79	20.91	30
1711.5	3	QPSK	1/0	16.07	V	7.95	0.79	23.23	30
1732.5	3	QPSK	1/0	16.05	V	7.95	0.79	23.21	30
1753.5	3	QPSK	1/0	15.87	V	7.95	0.79	23.03	30
1711.5	3	QPSK	1/0	15.13	H	7.95	0.79	22.29	30
1732.5	3	QPSK	1/0	15.11	H	7.95	0.79	22.27	30
1753.5	3	QPSK	1/0	14.93	H	7.95	0.79	22.09	30
1711.5	3	16-QAM	1/0	14.87	V	7.95	0.79	22.03	30
1732.5	3	16-QAM	1/0	14.98	V	7.95	0.79	22.14	30
1753.5	3	16-QAM	1/0	15.46	V	7.95	0.79	22.62	30
1711.5	3	16-QAM	1/0	13.95	H	7.95	0.79	21.11	30
1732.5	3	16-QAM	1/0	14.07	H	7.95	0.79	21.23	30
1753.5	3	16-QAM	1/0	14.59	H	7.95	0.79	21.75	30
1712.5	5	QPSK	1/0	16.16	V	7.95	0.79	23.32	30
1732.5	5	QPSK	1/0	16.03	V	7.95	0.79	23.19	30
1752.5	5	QPSK	1/24	16.06	V	7.95	0.79	23.22	30
1712.5	5	QPSK	1/0	15.28	H	7.95	0.79	22.44	30
1732.5	5	QPSK	1/0	15.17	H	7.95	0.79	22.33	30
1752.5	5	QPSK	1/24	15.2	H	7.95	0.79	22.36	30
1712.5	5	16-QAM	1/0	15.1	V	7.95	0.79	22.26	30
1732.5	5	16-QAM	1/0	15.33	V	7.95	0.79	22.49	30
1752.5	5	16-QAM	1/24	14.97	V	7.95	0.79	22.13	30
1712.5	5	16-QAM	1/0	14.23	H	7.95	0.79	21.39	30
1732.5	5	16-QAM	1/0	14.47	H	7.95	0.79	21.63	30

1752.5	5	16-QAM	1/24	14.06	H	7.95	0.79	21.22	30
1715	10	QPSK	1/0	16.15	V	7.95	0.79	23.31	30
1732.5	10	QPSK	1/49	16.13	V	7.95	0.79	23.29	30
1750	10	QPSK	1/0	16.02	V	7.95	0.79	23.18	30
1715	10	QPSK	1/0	15.24	H	7.95	0.79	22.40	30
1732.5	10	QPSK	1/49	15.22	H	7.95	0.79	22.38	30
1750	10	QPSK	1/0	15.13	H	7.95	0.79	22.29	30
1715	10	16-QAM	1/0	14.94	V	7.95	0.79	22.10	30
1732.5	10	16-QAM	1/49	15.03	V	7.95	0.79	22.19	30
1750	10	16-QAM	1/0	15.62	V	7.95	0.79	22.78	30
1715	10	16-QAM	1/0	14.09	H	7.95	0.79	21.25	30
1732.5	10	16-QAM	1/49	14.18	H	7.95	0.79	21.34	30
1750	10	16-QAM	1/0	14.75	H	7.95	0.79	21.91	30
1717.5	15	QPSK	1/0	16.18	V	7.95	0.79	23.34	30
1732.5	15	QPSK	1/74	16.07	V	7.95	0.79	23.23	30
1747.5	15	QPSK	1/0	16.08	V	7.95	0.79	23.24	30
1717.5	15	QPSK	1/0	15.27	H	7.95	0.79	22.43	30
1732.5	15	QPSK	1/74	15.16	H	7.95	0.79	22.32	30
1747.5	15	QPSK	1/0	15.17	H	7.95	0.79	22.33	30
1717.5	15	16-QAM	1/0	14.98	V	7.95	0.79	22.14	30
1732.5	15	16-QAM	1/74	15.17	V	7.95	0.79	22.33	30
1747.5	15	16-QAM	1/0	15.68	V	7.95	0.79	22.84	30
1717.5	15	16-QAM	1/0	14.06	H	7.95	0.79	21.22	30
1732.5	15	16-QAM	1/74	14.27	H	7.95	0.79	21.43	30
1747.5	15	16-QAM	1/0	14.78	H	7.95	0.79	21.94	30
1720	20	QPSK	1/99	16.24	V	7.95	0.79	**23.40**	30
1732.5	20	QPSK	1/99	16.13	V	7.95	0.79	23.29	30
1745	20	QPSK	1/0	16.04	V	7.95	0.79	23.20	30
1720	20	QPSK	1/99	15.37	H	7.95	0.79	22.53	30
1732.5	20	QPSK	1/99	15.28	H	7.95	0.79	22.44	30
1745	20	QPSK	1/0	15.11	H	7.95	0.79	22.27	30
1720	20	16-QAM	1/99	15.14	V	7.95	0.79	22.30	30
1732.5	20	16-QAM	1/99	15.53	V	7.95	0.79	22.69	30
1745	20	16-QAM	1/0	15.34	V	7.95	0.79	22.50	30
1720	20	16-QAM	1/99	14.28	H	7.95	0.79	21.44	30
1732.5	20	16-QAM	1/99	14.67	H	7.95	0.79	21.83	30
1745	20	16-QAM	1/0	14.46	H	7.95	0.79	21.62	30

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	15.25	V	8.93	0.83	23.35	30
2535	5	QPSK	1/0	15.06	V	8.93	0.83	23.16	30
2567.5	5	QPSK	1/24	14.86	V	8.93	0.83	22.96	30
2502.5	5	QPSK	1/0	14.33	H	8.93	0.83	22.43	30
2535	5	QPSK	1/0	14.17	H	8.93	0.83	22.27	30
2567.5	5	QPSK	1/24	13.95	H	8.93	0.83	22.05	30
2502.5	5	16-QAM	1/0	14.15	V	8.93	0.83	22.25	30
2535	5	16-QAM	1/0	14.26	V	8.93	0.83	22.36	30
2567.5	5	16-QAM	1/24	13.83	V	8.93	0.83	21.93	30
2502.5	5	16-QAM	1/0	13.27	H	8.93	0.83	21.37	30
2535	5	16-QAM	1/0	13.38	H	8.93	0.83	21.48	30
2567.5	5	16-QAM	1/24	12.97	H	8.93	0.83	21.07	30
2505	10	QPSK	1/0	15.16	V	8.93	0.83	23.26	30
2535	10	QPSK	1/49	15.12	V	8.93	0.83	23.22	30
2565	10	QPSK	1/0	14.81	V	8.93	0.83	22.91	30
2505	10	QPSK	1/0	14.25	H	8.93	0.83	22.35	30
2535	10	QPSK	1/49	14.23	H	8.93	0.83	22.33	30
2565	10	QPSK	1/0	13.96	H	8.93	0.83	22.06	30
2505	10	16-QAM	1/0	13.94	V	8.93	0.83	22.04	30
2535	10	16-QAM	1/49	14.03	V	8.93	0.83	22.13	30
2565	10	16-QAM	1/0	14.41	V	8.93	0.83	22.51	30
2505	10	16-QAM	1/0	13.07	H	8.93	0.83	21.17	30
2535	10	16-QAM	1/49	13.14	H	8.93	0.83	21.24	30
2565	10	16-QAM	1/0	13.56	H	8.93	0.83	21.66	30
2507.5	15	QPSK	1/0	15.23	V	8.93	0.83	23.33	30
2535	15	QPSK	1/74	14.35	V	8.93	0.83	22.45	30
2562.5	15	QPSK	1/0	14.43	V	8.93	0.83	22.53	30
2507.5	15	QPSK	1/0	14.37	H	8.93	0.83	22.47	30
2535	15	QPSK	1/74	13.48	H	8.93	0.83	21.58	30
2562.5	15	QPSK	1/0	13.54	H	8.93	0.83	21.64	30
2507.5	15	16-QAM	1/0	14.02	V	8.93	0.83	22.12	30
2535	15	16-QAM	1/74	14.85	V	8.93	0.83	22.95	30
2562.5	15	16-QAM	1/0	14.44	V	8.93	0.83	22.54	30

2507.5	15	16-QAM	1/0	13.15	H	8.93	0.83	21.25	30
2535	15	16-QAM	1/74	13.96	H	8.93	0.83	22.06	30
2562.5	15	16-QAM	1/0	13.52	H	8.93	0.83	21.62	30
2510	20	QPSK	1/99	15.27	V	8.93	0.83	**23.37**	30
2535	20	QPSK	1/99	15.02	V	8.93	0.83	23.12	30
2560	20	QPSK	1/0	14.93	V	8.93	0.83	23.03	30
2510	20	QPSK	1/99	14.36	H	8.93	0.83	22.46	30
2535	20	QPSK	1/99	14.17	H	8.93	0.83	22.27	30
2560	20	QPSK	1/0	14.05	H	8.93	0.83	22.15	30
2510	20	16-QAM	1/99	14.23	V	8.93	0.83	22.33	30
2535	20	16-QAM	1/99	14.13	V	8.93	0.83	22.23	30
2560	20	16-QAM	1/0	14.31	V	8.93	0.83	22.41	30
2510	20	16-QAM	1/99	13.35	H	8.93	0.83	21.45	30
2535	20	16-QAM	1/99	13.26	H	8.93	0.83	21.36	30
2560	20	16-QAM	1/0	13.42	H	8.93	0.83	21.52	30

ERP for LTE Band XII (Part 27)

Frequency (MHz)	BW (MHz)	Modulation	RB Size/Offset	Substituted level (dBm)	Antenna Polarization	Antenna Gain correction (dBi)	Cable Loss (dB)	Absolute Level (dBm)	Limit (dBm)
699.7	1.4	QPSK	1/5	12.06	V	6.9	0.42	18.54	34.77
707.5	1.4	QPSK	1/5	11.99	V	6.8	0.42	18.37	34.77
715.3	1.4	QPSK	1/5	11.85	V	6.8	0.42	18.23	34.77
699.7	1.4	QPSK	1/5	11.18	H	6.9	0.42	17.66	34.77
707.5	1.4	QPSK	1/5	11.07	H	6.8	0.42	17.45	34.77
715.3	1.4	QPSK	1/5	10.96	H	6.8	0.42	17.34	34.77
699.7	1.4	16-QAM	1/5	10.84	V	6.9	0.42	17.32	34.77
707.5	1.4	16-QAM	1/5	10.98	V	6.8	0.42	17.36	34.77
715.3	1.4	16-QAM	1/5	10.55	V	6.8	0.42	16.93	34.77
699.7	1.4	16-QAM	1/5	9.95	H	6.9	0.42	16.43	34.77
707.5	1.4	16-QAM	1/5	10.07	H	6.8	0.42	16.45	34.77
715.3	1.4	16-QAM	1/5	9.64	H	6.8	0.42	16.02	34.77
700.5	3	QPSK	1/14	12.05	V	6.9	0.42	18.53	34.77
707.5	3	QPSK	1/0	11.97	V	6.8	0.42	18.35	34.77
714.5	3	QPSK	1/14	11.65	V	6.8	0.42	18.03	34.77
700.5	3	QPSK	1/14	11.17	H	6.9	0.42	17.65	34.77
707.5	3	QPSK	1/0	11.08	H	6.8	0.42	17.46	34.77
714.5	3	QPSK	1/14	10.76	H	6.8	0.42	17.14	34.77
700.5	3	16-QAM	1/14	10.76	V	6.9	0.42	17.24	34.77
707.5	3	16-QAM	1/0	10.95	V	6.8	0.42	17.33	34.77
714.5	3	16-QAM	1/14	11.24	V	6.8	0.42	17.62	34.77
700.5	3	16-QAM	1/14	9.86	H	6.9	0.42	16.34	34.77
707.5	3	16-QAM	1/0	10.03	H	6.8	0.42	16.41	34.77
714.5	3	16-QAM	1/14	10.32	H	6.8	0.42	16.70	34.77
701.5	5	QPSK	1/24	12.13	V	6.9	0.42	**18.61**	34.77
707.5	5	QPSK	1/24	11.96	V	6.8	0.42	18.34	34.77
713.5	5	QPSK	1/24	12.12	V	6.8	0.42	18.50	34.77
701.5	5	QPSK	1/24	11.25	H	6.9	0.42	17.73	34.77
707.5	5	QPSK	1/24	11.07	H	6.8	0.42	17.45	34.77
713.5	5	QPSK	1/24	11.24	H	6.8	0.42	17.62	34.77
701.5	5	16-QAM	1/24	11.13	V	6.9	0.42	17.61	34.77
707.5	5	16-QAM	1/24	11.26	V	6.8	0.42	17.64	34.77
713.5	5	16-QAM	1/24	11.12	V	6.8	0.42	17.50	34.77
701.5	5	16-QAM	1/24	10.23	H	6.9	0.42	16.71	34.77

707.5	5	16-QAM	1/24	10.34	H	6.8	0.42	16.72	34.77
713.5	5	16-QAM	1/24	10.22	H	6.8	0.42	16.60	34.77
704	10	QPSK	1/49	12.09	V	6.8	0.42	18.47	34.77
707.5	10	QPSK	1/49	12.03	V	6.8	0.42	18.41	34.77
711	10	QPSK	1/49	11.92	V	6.8	0.42	18.30	34.77
704	10	QPSK	1/49	11.18	H	6.8	0.42	17.56	34.77
707.5	10	QPSK	1/49	11.12	H	6.8	0.42	17.50	34.77
711	10	QPSK	1/49	11.04	H	6.8	0.42	17.42	34.77
704	10	16-QAM	1/49	10.83	V	6.8	0.42	17.21	34.77
707.5	10	16-QAM	1/49	11.01	V	6.8	0.42	17.39	34.77
711	10	16-QAM	1/49	11.52	V	6.8	0.42	17.90	34.77
704	10	16-QAM	1/49	9.94	H	6.8	0.42	16.32	34.77
707.5	10	16-QAM	1/49	10.12	H	6.8	0.42	16.50	34.77
711	10	16-QAM	1/49	10.67	H	6.8	0.42	17.05	34.77

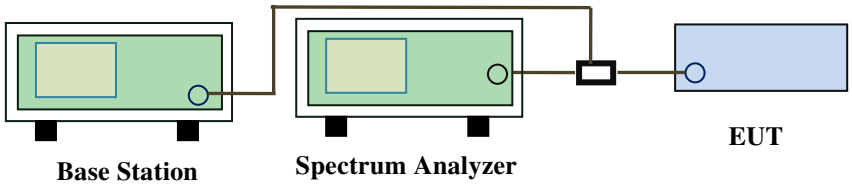
ERP for LTE Band XVII (Part 27)

Frequency (MHz)	BW (MHz)	Modulation	RB Size/Offset	Substituted level (dBm)	Antenna Polarization	Antenna Gain correction (dBi)	Cable Loss (dB)	Absolute Level (dBm)	Limit (dBm)
706.5	5	QPSK	1/0	12.34	V	6.8	0.42	18.72	34.77
710	5	QPSK	1/0	12.30	V	6.8	0.42	18.68	34.77
713.5	5	QPSK	1/0	12.08	V	6.8	0.42	18.46	34.77
706.5	5	QPSK	1/0	11.43	H	6.8	0.42	17.81	34.77
710	5	QPSK	1/0	11.41	H	6.8	0.42	17.79	34.77
713.5	5	QPSK	1/0	11.17	H	6.8	0.42	17.55	34.77
706.5	5	16-QAM	1/0	11.23	V	6.8	0.42	17.61	34.77
710	5	16-QAM	1/0	11.29	V	6.8	0.42	17.67	34.77
713.5	5	16-QAM	1/0	11.81	V	6.8	0.42	18.19	34.77
706.5	5	16-QAM	1/0	10.34	H	6.8	0.42	16.72	34.77
710	5	16-QAM	1/0	10.38	H	6.8	0.42	16.76	34.77
713.5	5	16-QAM	1/0	10.93	H	6.8	0.42	17.31	34.77
709	10	QPSK	1/0	12.41	V	6.8	0.42	**18.79**	34.77
710	10	QPSK	1/0	12.19	V	6.8	0.42	18.57	34.77
711	10	QPSK	1/0	12.17	V	6.8	0.42	18.55	34.77
709	10	QPSK	1/0	11.54	H	6.8	0.42	17.92	34.77
710	10	QPSK	1/0	11.28	H	6.8	0.42	17.66	34.77
711	10	QPSK	1/0	11.26	H	6.8	0.42	17.64	34.77
709	10	16-QAM	1/0	11.52	V	6.8	0.42	17.90	34.77
710	10	16-QAM	1/0	11.68	V	6.8	0.42	18.06	34.77
711	10	16-QAM	1/0	11.18	V	6.8	0.42	17.56	34.77
709	10	16-QAM	1/0	10.67	H	6.8	0.42	17.05	34.77
710	10	16-QAM	1/0	10.75	H	6.8	0.42	17.13	34.77
711	10	16-QAM	1/0	10.24	H	6.8	0.42	16.62	34.77

6.3 Peak-Average Ratio

Temperature	23℃
Relative Humidity	51%
Atmospheric Pressure	1018mbar
Test date :	November 18, 2016
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	25.19	22.35	2.84
			16QAM	25.16	21.32	3.84
3	1880	RB 1/0	QPSK	25.16	22.36	2.80
			16QAM	25.19	21.34	3.85
5	1880	RB 1/0	QPSK	25.46	22.37	3.09
			16QAM	25.46	21.74	3.72
10	1880	RB 1/0	QPSK	25.43	22.43	3.00
			16QAM	25.16	21.39	3.77
15	1880	RB 1/0	QPSK	25.15	22.36	2.79
			16QAM	25.49	21.66	3.83
20	1880	RB 1/0	QPSK	25.34	22.33	3.01
			16QAM	25.2	21.63	3.57

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	25.5	22.37	3.13
			16QAM	25.51	21.31	4.2
3	1732.5	RB 1/0	QPSK	25.23	22.36	2.87
			16QAM	25.21	21.31	3.9
5	1732.5	RB 1/0	QPSK	25.21	22.4	2.81
			16QAM	25.16	21.72	3.44
10	1732.5	RB 1/0	QPSK	25.16	22.41	2.75
			16QAM	25.35	21.32	4.03
15	1732.5	RB 1/0	QPSK	25.33	22.38	2.95
			16QAM	25.31	21.63	3.68
20	1732.5	RB 1/0	QPSK	25.31	22.44	2.87
			16QAM	25.12	21.83	3.29

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	25.36	22.26	3.10
			16QAM	25.44	21.49	3.95
10	2535	RB 1/0	QPSK	24.74	22.3	2.44
			16QAM	24.26	21.24	3.02
15	2535	RB 1/0	QPSK	25.36	22.28	3.08
			16QAM	24.33	21.53	2.80
20	2535	RB 1/0	QPSK	24.91	22.26	2.65
			16QAM	24.26	21.55	2.71

LTE Band XII (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	24.65	22.66	1.99
			16QAM	24.39	21.64	2.75
3	1732.5	RB 1/0	QPSK	24.36	22.65	1.71
			16QAM	24.35	21.63	2.72
5	1732.5	RB 1/0	QPSK	24.62	22.68	1.94
			16QAM	25.61	21.96	3.65
10	1732.5	RB 1/0	QPSK	25.12	22.77	2.35
			16QAM	25.16	21.71	3.45

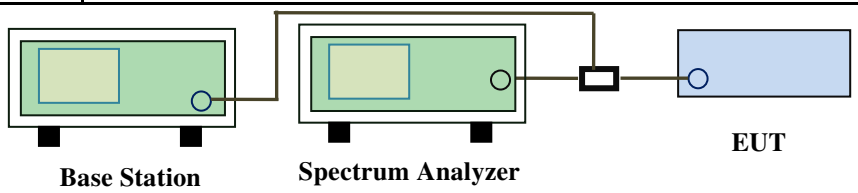
LTE Band XVII (part 27)

BW(MHz)	Frequency (MHz)	Mode	Modulation	Conducted Power (dBm)		Peak-Average Ratio (PAR)
				Peak	Average	
5	710	RB 1/0	QPSK	25.32	22.73	2.59
			16QAM	25.32	22.23	3.09
10	710	RB 1/0	QPSK	25.14	22.82	2.32
			16QAM	25.34	21.83	3.51

6.4 Occupied Bandwidth

Temperature	22℃
Relative Humidity	58%
Atmospheric Pressure	1025mbar
Test date :	November 25&26, 2016
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	1.1002	1.275
			QPSK	1.0920	1.273
1.4	18900	1880	16QAM	1.1026	1.287
			QPSK	1.1040	1.262
1.4	19193	1909	16QAM	1.1091	1.274
			QPSK	1.0966	1.256
3	18615	1851	16QAM	2.7389	3.084
			QPSK	2.7511	3.094
3	18900	1880	16QAM	2.7536	3.089
			QPSK	2.7514	3.071
3	19185	1909	16QAM	2.7464	3.089
			QPSK	2.7345	3.095
5	18625	1853	16QAM	4.5369	5.109
			QPSK	4.5300	5.122
5	18900	1880	16QAM	4.5315	5.096
			QPSK	4.5243	5.055
5	19175	1908	16QAM	4.5346	5.077
			QPSK	4.5327	5.053
10	18650	1855	16QAM	9.0411	10.272
			QPSK	9.0439	10.202
10	18900	1880	16QAM	9.0875	10.266
			QPSK	9.0696	10.185
10	19150	1905	16QAM	9.0832	10.433
			QPSK	9.0737	10.360
15	18675	1858	16QAM	13.4878	14.989
			QPSK	13.4749	14.978
15	18900	1880	16QAM	13.5060	15.138
			QPSK	13.4971	15.002
15	19125	1903	16QAM	13.5137	15.009
			QPSK	13.5345	14.970

20	18700	1860	16QAM	17.9337	19.522
			QPSK	17.9079	19.644
20	18900	1880	16QAM	17.8788	19.606
			QPSK	17.8521	19.640
20	19100	1900	16QAM	17.9243	19.557
			QPSK	17.9799	19.418

LTE Band IV (Part 27)

BW(MHz)	Channel	Frequency (MHz)	Modulation	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
1.4	19957	1711	16QAM	1.1018	1.270
			QPSK	1.1050	1.296
1.4	20175	1732	16QAM	1.1042	1.287
			QPSK	1.1031	1.276
1.4	20393	1754	16QAM	1.1003	1.276
			QPSK	1.0973	1.270
3	19965	1712	16QAM	2.7467	3.090
			QPSK	2.7366	3.107
3	20175	1732	16QAM	2.7538	3.089
			QPSK	2.7484	3.081
3	20385	1754	16QAM	2.7432	3.121
			QPSK	2.7457	3.114
5	19975	1712	16QAM	4.5338	5.107
			QPSK	4.5234	5.096
5	20175	1732	16QAM	4.5318	5.061
			QPSK	4.5276	5.084
5	20375	1752	16QAM	4.5246	5.078
			QPSK	4.5385	5.049
10	20000	1715	16QAM	9.0472	10.277
			QPSK	9.0741	10.270
10	20175	1732	16QAM	9.0793	10.279
			QPSK	9.0663	10.300
10	20350	1750	16QAM	9.0830	10.372
			QPSK	9.0793	10.306
15	20025	1718	16QAM	13.4772	14.999
			QPSK	13.5046	15.011
15	20175	1732	16QAM	13.4997	14.930
			QPSK	13.5103	15.044
15	20325	1748	16QAM	13.4777	15.013
			QPSK	13.4579	14.974

20	20050	1720	16QAM	17.9031	19.601
			QPSK	17.9633	19.572
20	20175	1732	16QAM	17.9735	19.904
			QPSK	17.9515	19.568
20	20300	1745	16QAM	17.9442	19.389
			QPSK	17.8983	19.369

LTE Band VII (Part 27) result

BW(MHz)	Channel	Frequency (MHz)	Modulation	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
5	20775	2502	16QAM	4.5363	5.101
			QPSK	4.5427	5.112
5	21100	2535	16QAM	4.5265	5.067
			QPSK	4.5233	5.101
5	21425	2567	16QAM	4.5354	5.100
			QPSK	4.5280	5.087
10	20800	2505	16QAM	9.0557	10.268
			QPSK	9.0564	10.286
10	21100	2535	16QAM	9.0979	10.408
			QPSK	9.0923	10.332
10	21400	2565	16QAM	9.1032	10.316
			QPSK	9.0829	10.363
15	20825	2507	16QAM	13.5033	14.976
			QPSK	13.5092	14.965
15	21100	2535	16QAM	13.4968	14.966
			QPSK	13.5047	15.015
15	21400	2562	16QAM	13.5147	15.076
			QPSK	13.5236	15.016
20	20850	2510	16QAM	17.8671	19.619
			QPSK	17.8780	19.592
20	21100	2535	16QAM	17.9237	19.620
			QPSK	17.9260	19.531
20	21350	2560	16QAM	17.9380	19.554
			QPSK	17.9430	19.460

LTE Band XII (Part 27)

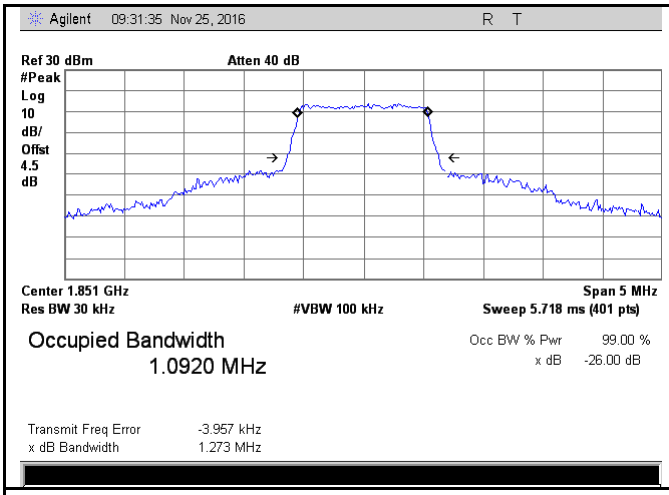
BW(MHz)	Channel	Frequency (MHz)	Modulation	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
1.4	23017	699.7	16QAM	1.1018	1.288
			QPSK	1.1031	1.271
1.4	23095	707.5	16QAM	1.1078	1.285
			QPSK	1.1048	1.285
1.4	23173	715.3	16QAM	1.0971	1.275
			QPSK	1.1000	1.259
3	23025	700.5	16QAM	2.7297	3.080
			QPSK	2.7335	3.072
3	23095	707.5	16QAM	2.7452	3.129
			QPSK	2.7521	3.095
3	23165	714.5	16QAM	2.7628	3.120
			QPSK	2.7517	3.109
5	23035	701.5	16QAM	4.5078	5.082
			QPSK	4.5234	5.087
5	23095	707.5	16QAM	4.5267	5.090
			QPSK	4.5388	5.059
5	23055	713.5	16QAM	4.5309	5.011
			QPSK	4.5247	5.001
10	23060	704	16QAM	9.0656	10.241
			QPSK	9.0747	10.178
10	23095	707.5	16QAM	9.1029	10.360
			QPSK	9.1149	10.370
10	23130	711	16QAM	9.0788	10.277
			QPSK	9.0888	10.330

LTE Band XVII (Part 27)

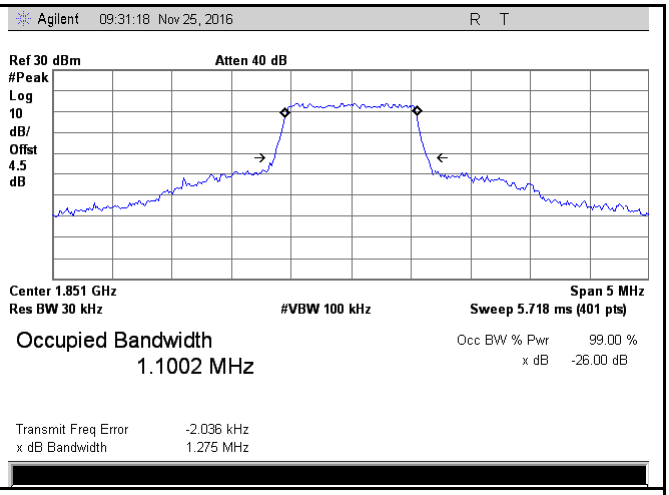
BW(MHz)	Channel	Frequency (MHz)	Modulation	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
5	23755	706.5	16QAM	4.5446	5.111
			QPSK	4.5359	5.103
5	23790	710	16QAM	4.5227	5.060
			QPSK	4.5209	5.063
5	23825	713.5	16QAM	4.5340	5.043
			QPSK	4.5321	5.061
10	23780	709	16QAM	9.0653	10.259
			QPSK	9.0575	10.151
10	23790	710	16QAM	9.0765	10.294
			QPSK	9.0705	10.292
10	23800	711	16QAM	9.0822	10.346
			QPSK	9.0709	10.161

Test Plots

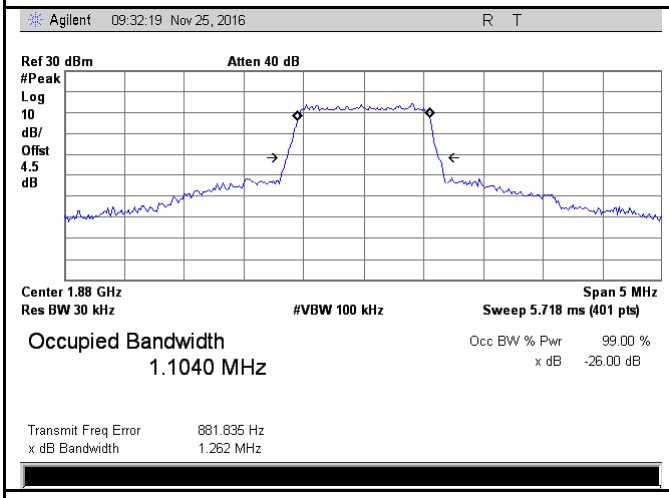
LTE Band II (Part 24E)



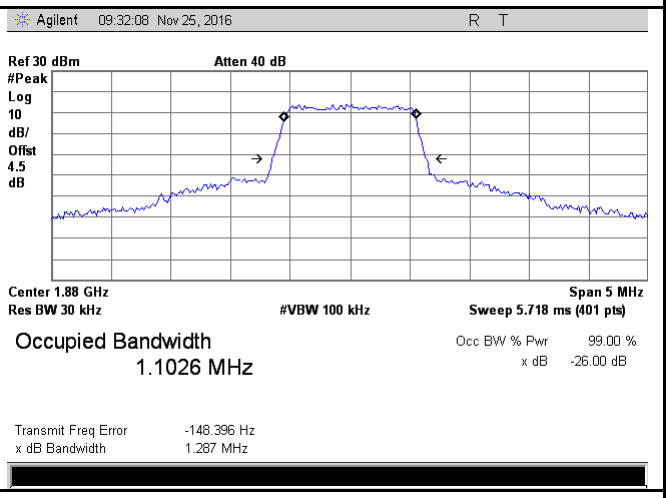
LTE Band II - Low CH QPSK-1.4



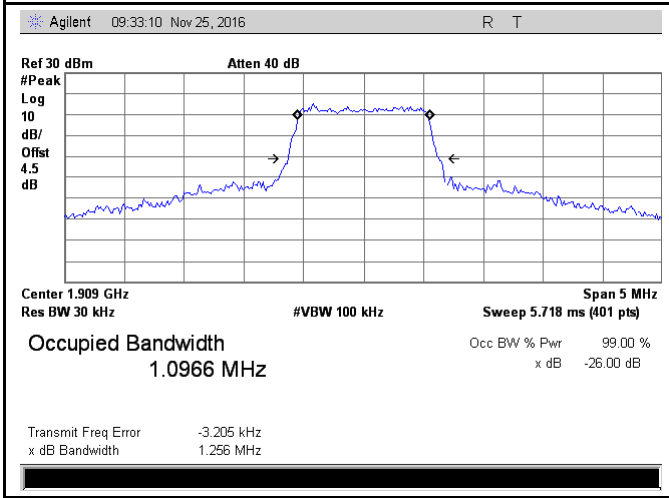
LTE Band II - Low CH 16QAM-1.4



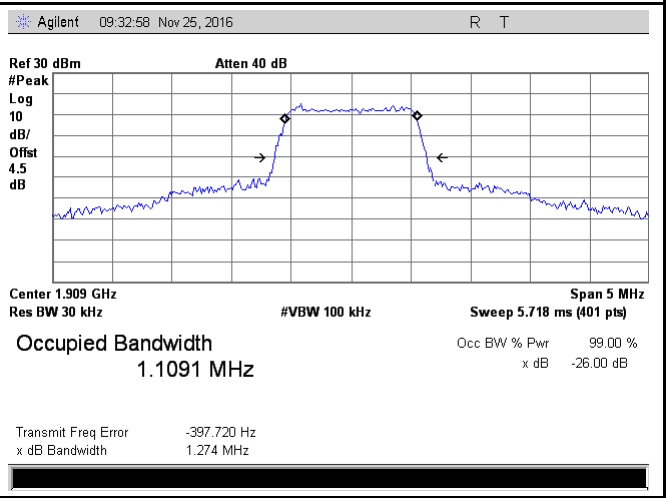
LTE Band II - Middle CH QPSK-1.4



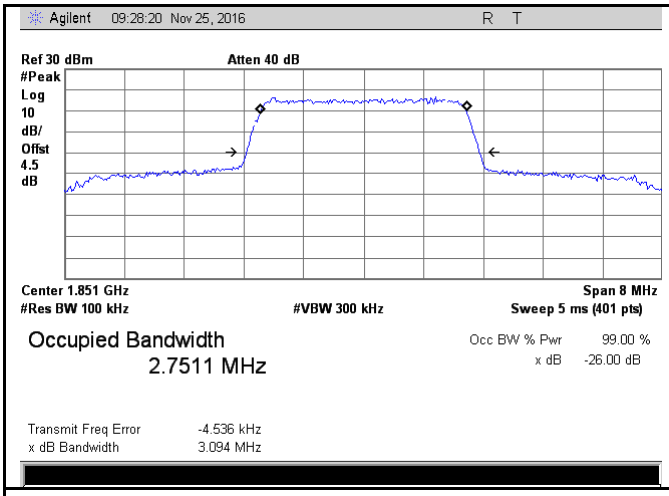
LTE Band II - Middle CH 16QAM-1.4



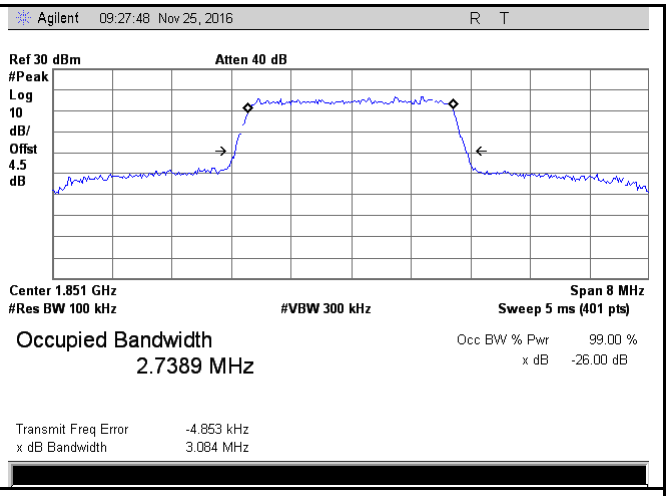
LTE Band II - High CH QPSK-1.4



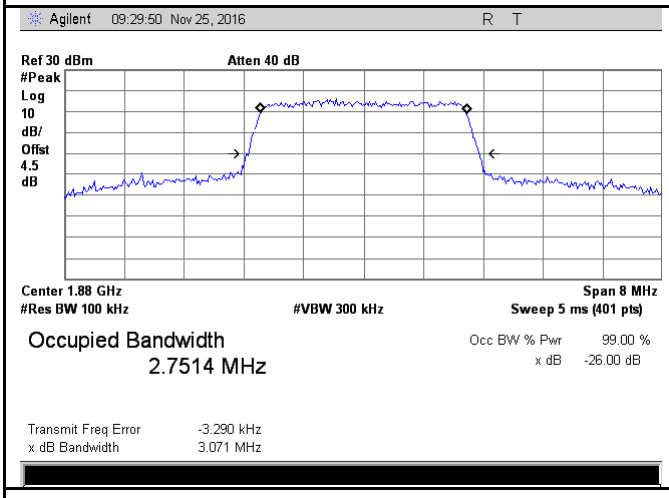
LTE Band II - High CH 16QAM-1.4



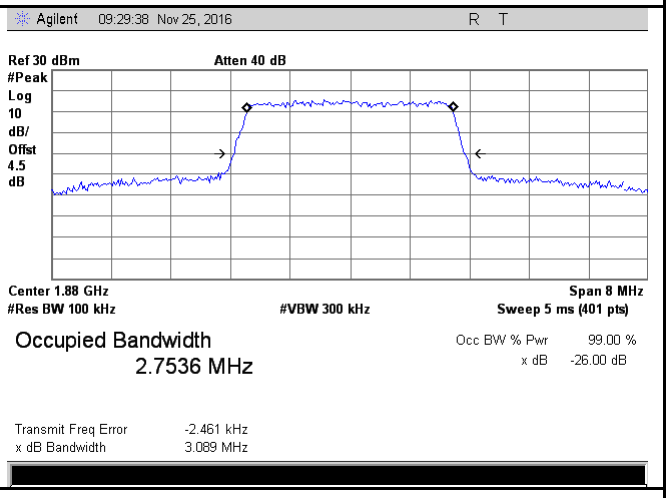
LTE Band II - Low CH QPSK-3



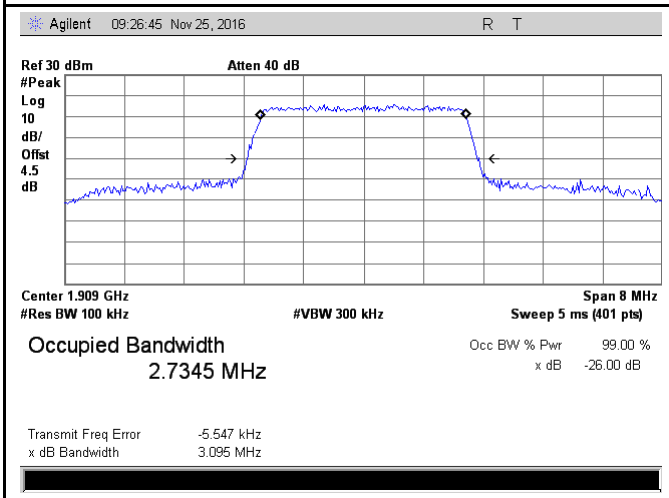
LTE Band II - Low CH 16QAM-3



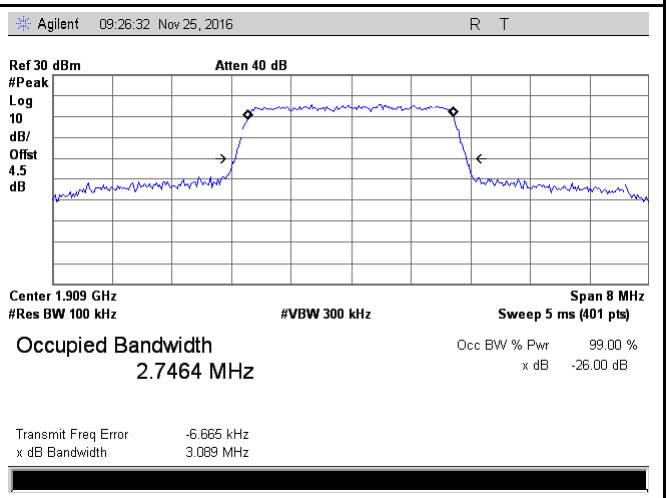
LTE Band II - Middle CH QPSK-3



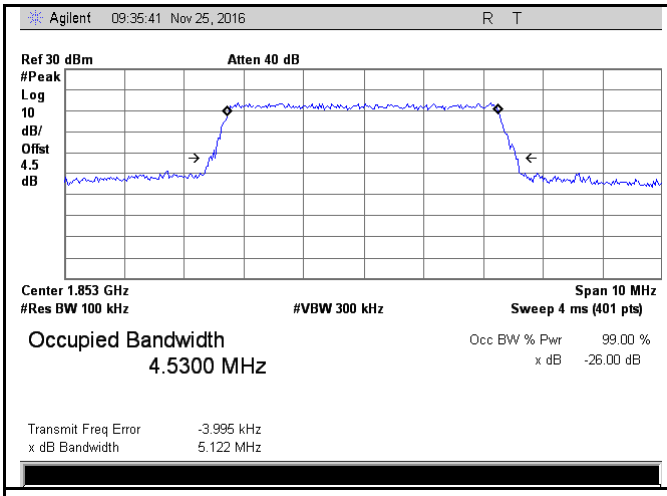
LTE Band II - Middle CH 16QAM-3



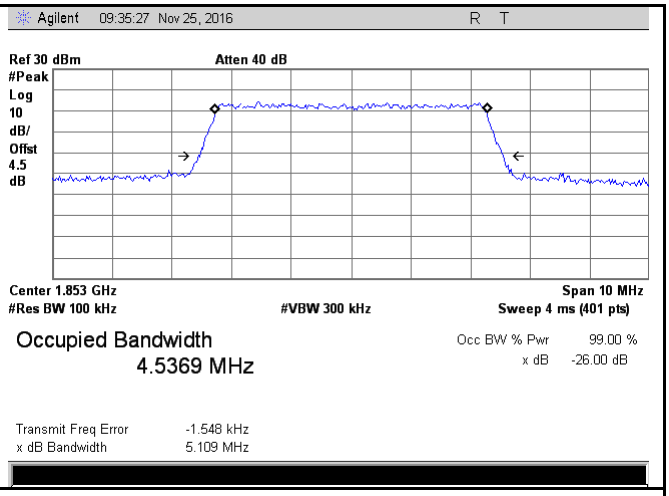
LTE Band II - High CH QPSK-3



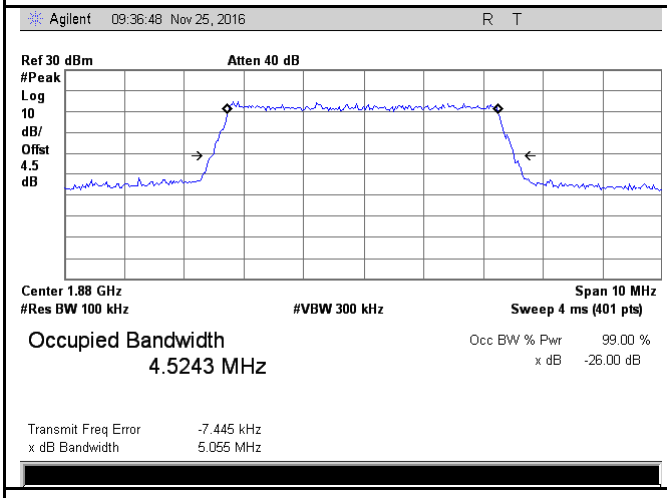
LTE Band II - High CH 16QAM-3



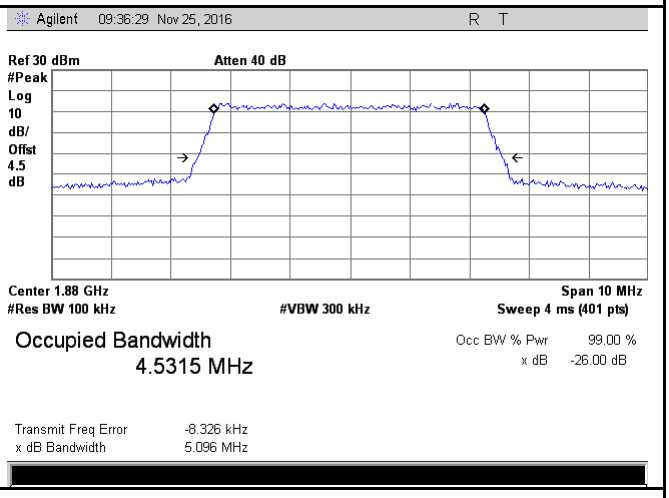
LTE Band II - Low CH QPSK-5



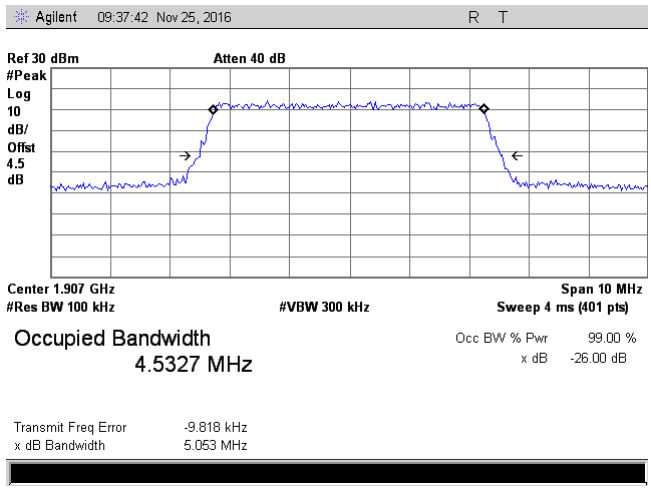
LTE Band II - Low CH 16QAM-5



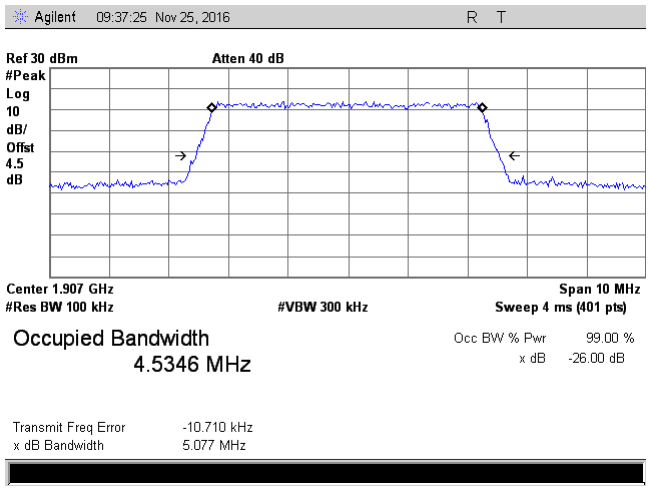
LTE Band II - Middle CH QPSK-5



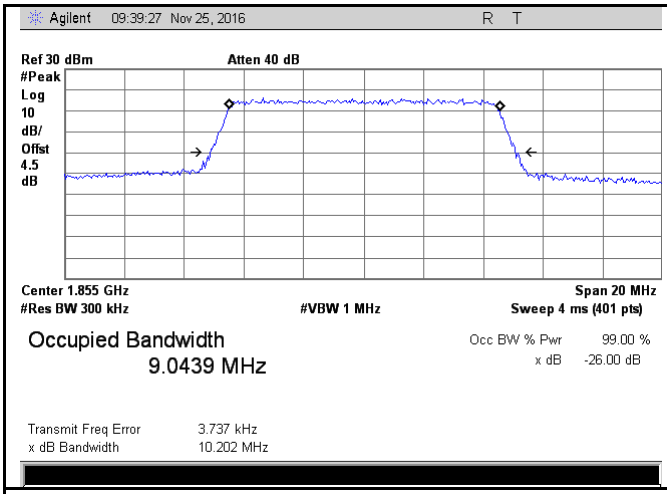
LTE Band II - Middle CH 16QAM-5



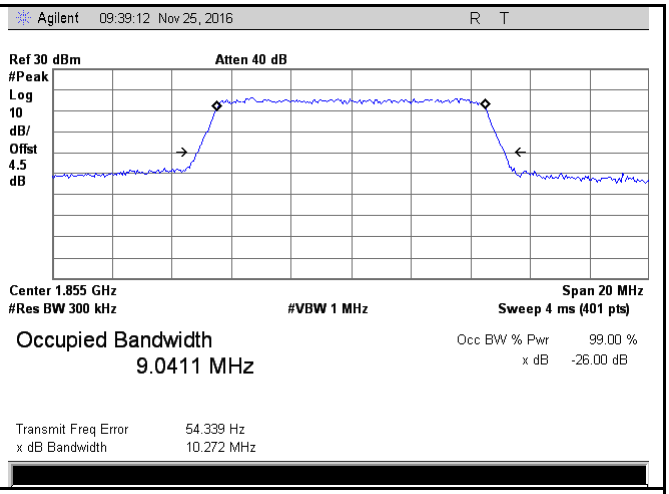
LTE Band II - High CH QPSK-5



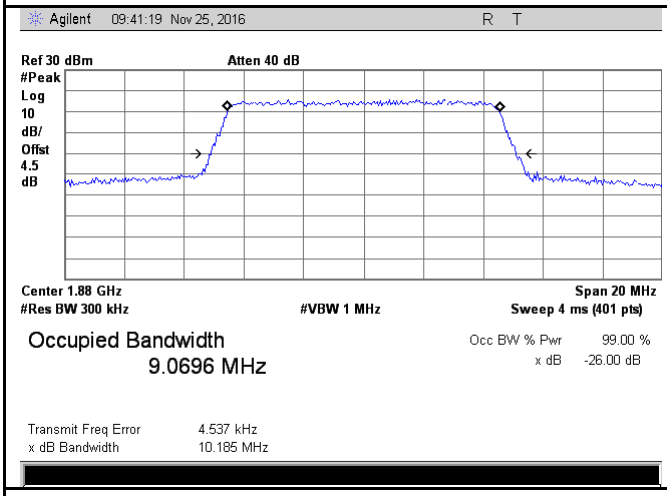
LTE Band II - High CH 16QAM-5



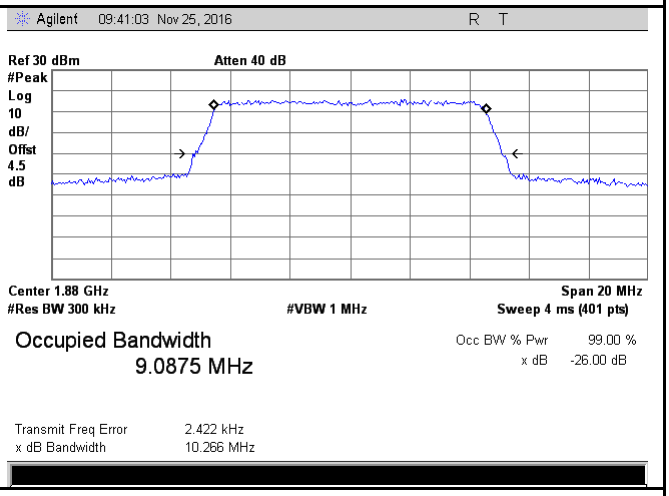
LTE Band II - Low CH QPSK-10



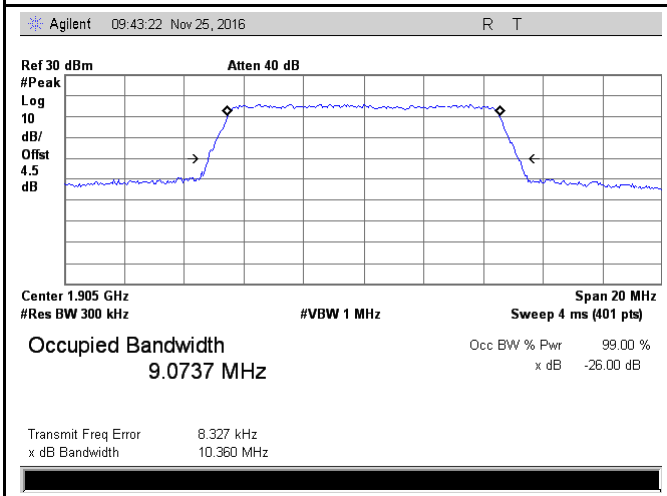
LTE Band II - Low CH 16QAM-10



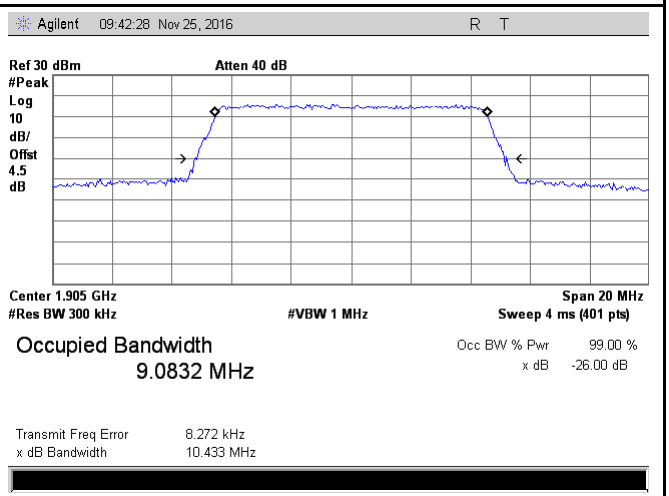
LTE Band II - Middle CH QPSK-10



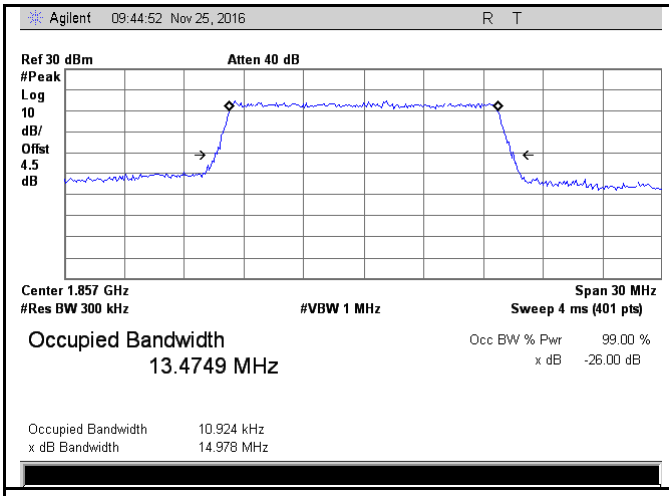
LTE Band II - Middle CH 16QAM-10



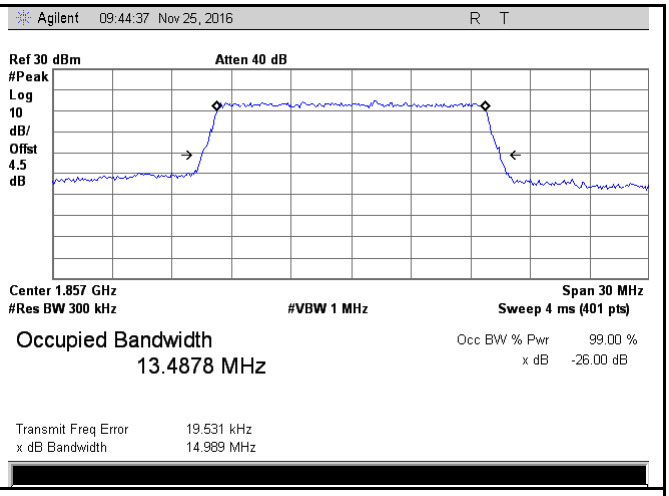
LTE Band II - High CH QPSK-10



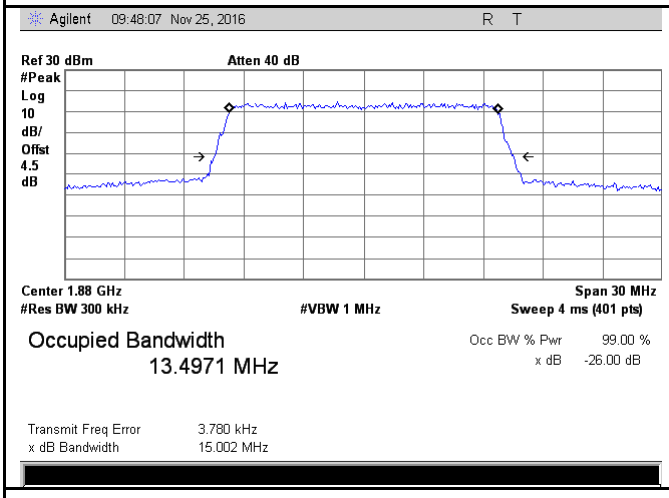
LTE Band II - High CH 16QAM-10



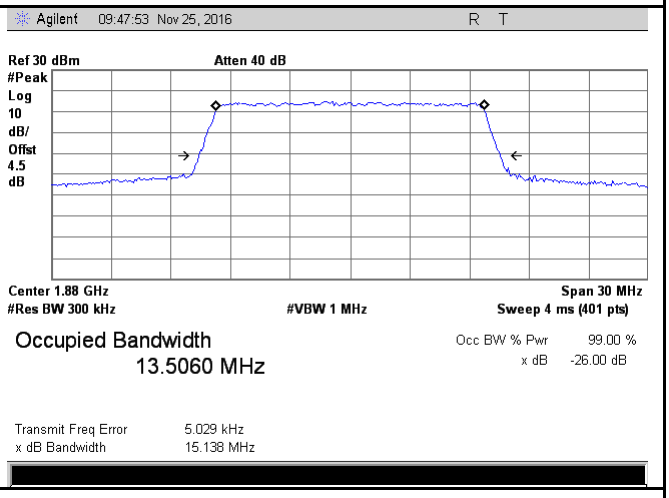
LTE Band II - Low CH QPSK-15



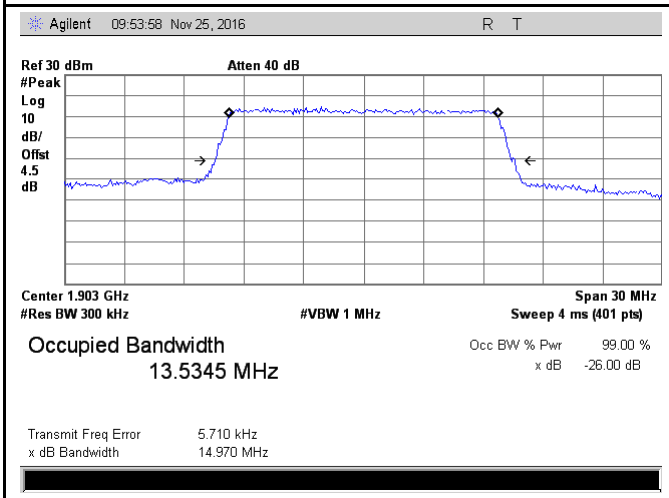
LTE Band II - Low CH 16QAM-15



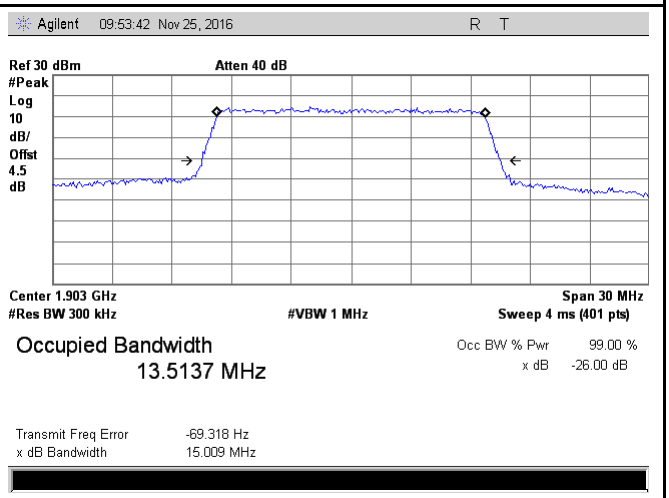
LTE Band II - Middle CH QPSK-15



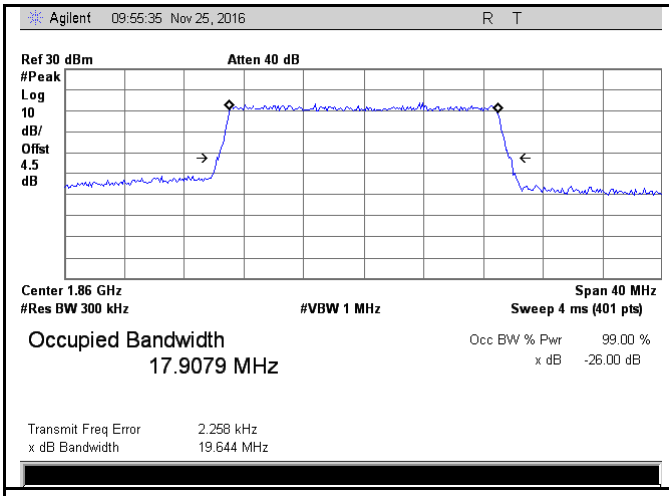
LTE Band II - Middle CH 16QAM-15



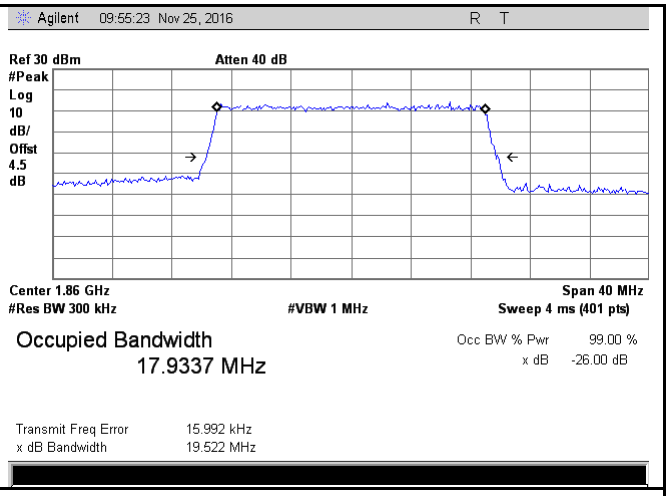
LTE Band II - High CH QPSK-15



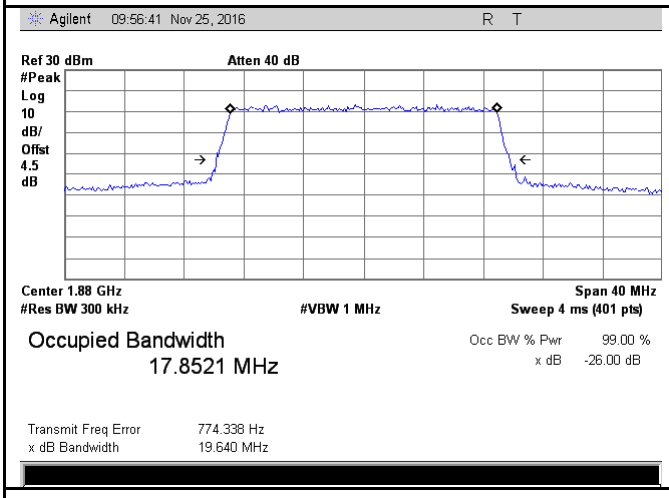
LTE Band II - High CH 16QAM-15



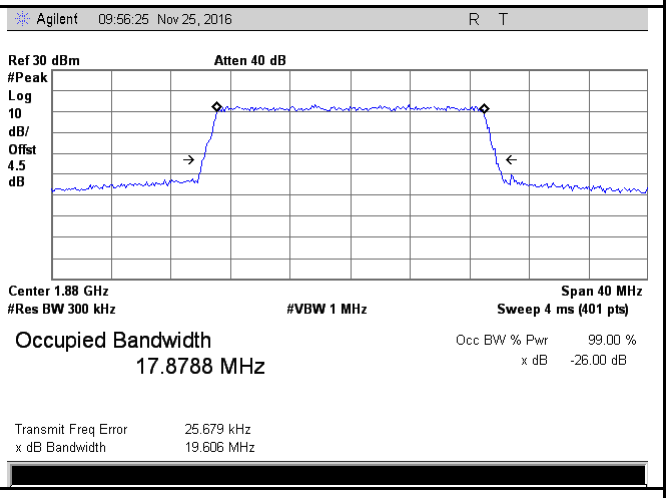
LTE Band II - Low CH QPSK-20



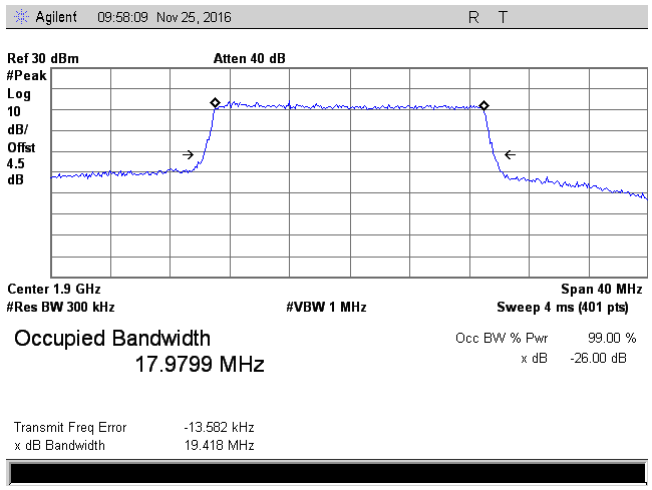
LTE Band II - Low CH 16QAM-20



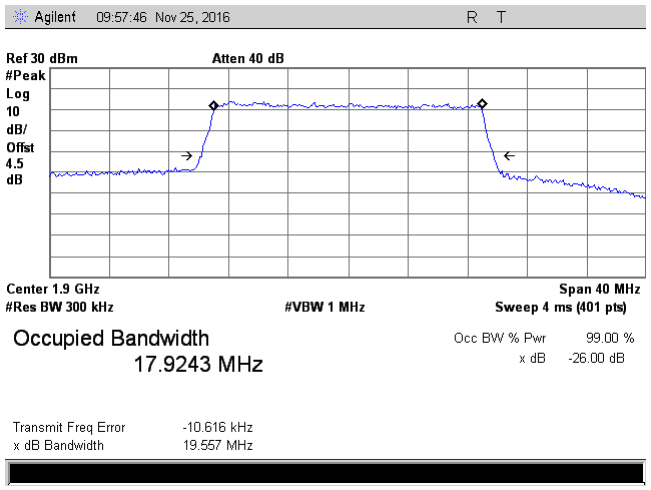
LTE Band II - Middle CH QPSK-20



LTE Band II - Middle CH 16QAM-20

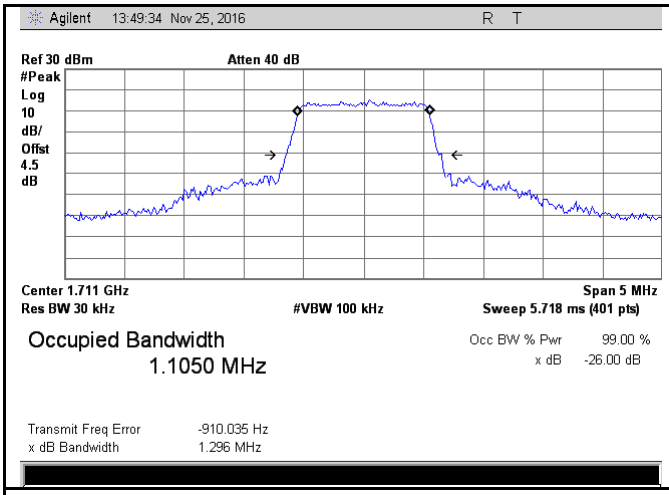


LTE Band II - High CH QPSK-20

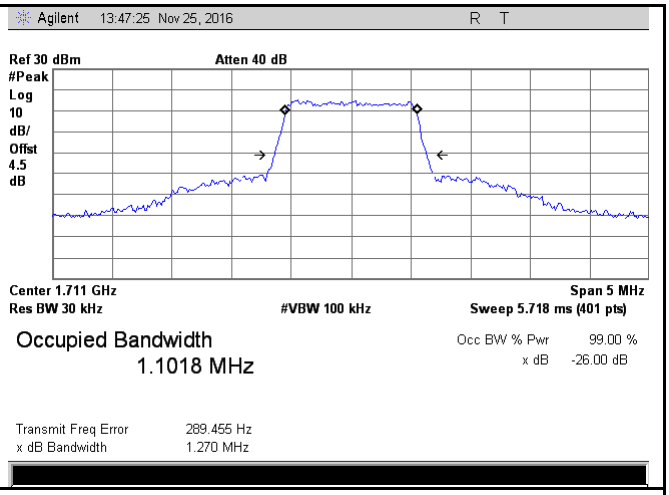


LTE Band II - High CH 16QAM-20

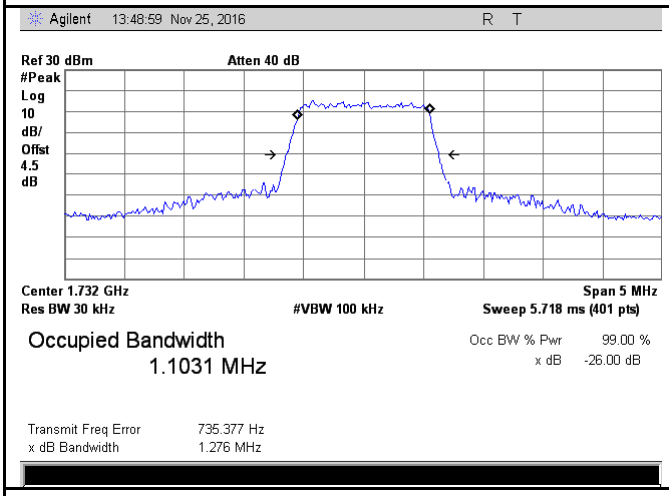
LTE Band IV (Part 27)



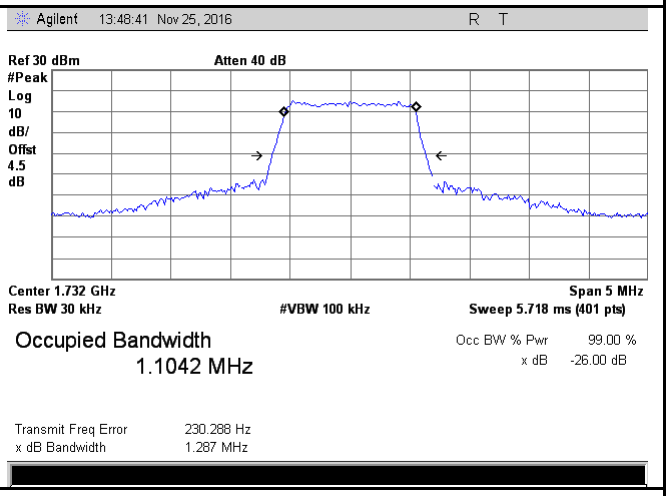
LTE Band IV - Low CH QPSK-1.4



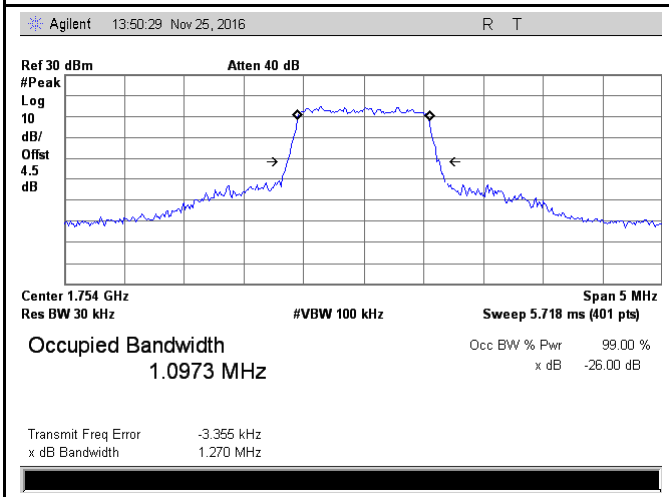
LTE Band IV - Low CH 16QAM-1.4



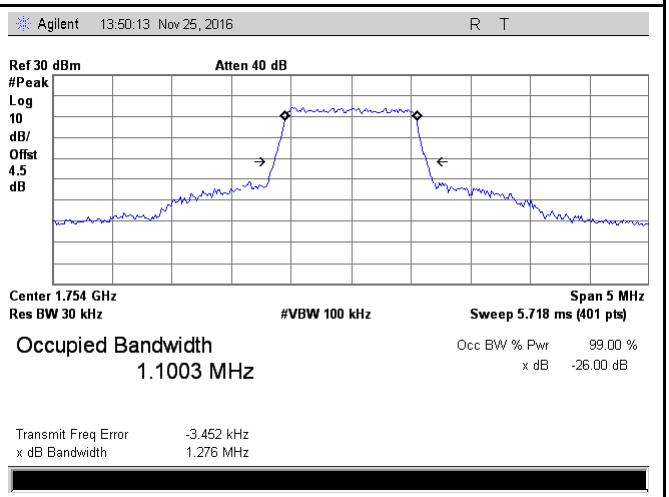
LTE Band IV - Middle CH QPSK-1.4



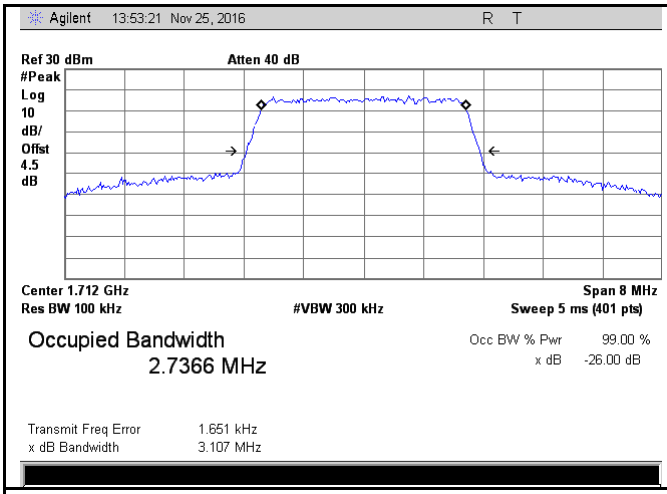
LTE Band IV - Middle CH 16QAM-1.4



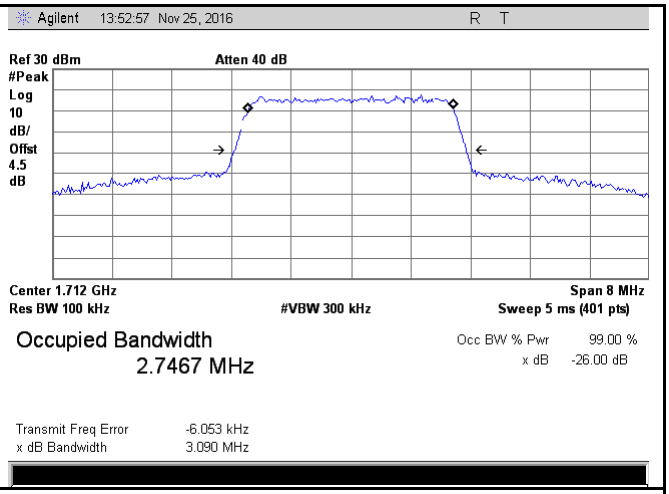
LTE Band IV - High CH QPSK-1.4



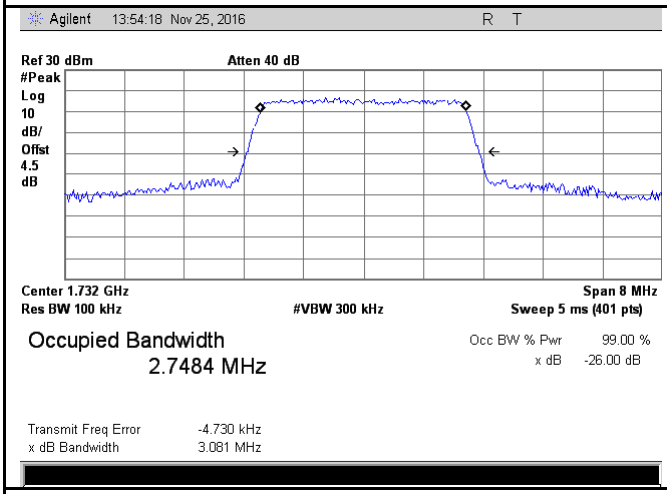
LTE Band IV - High CH 16QAM-1.4



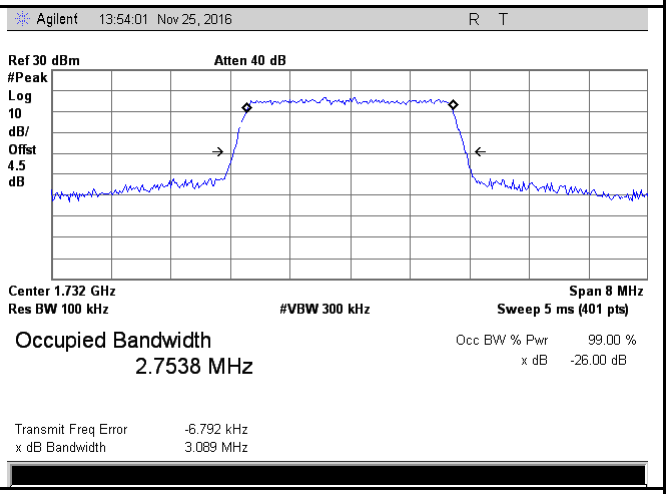
LTE Band IV - Low CH QPSK-3



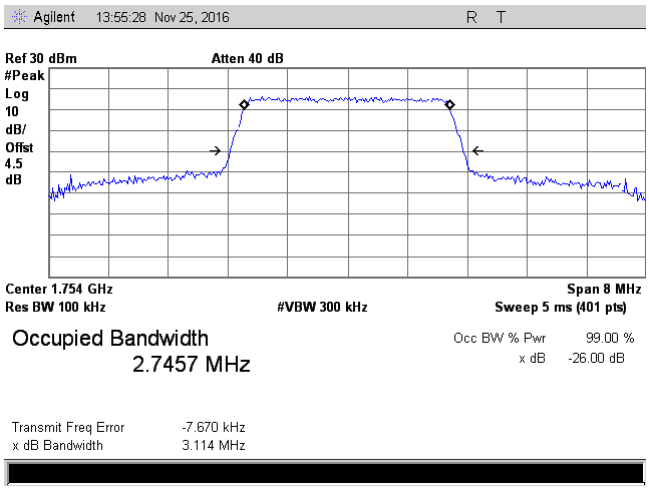
LTE Band IV - Low CH 16QAM-3



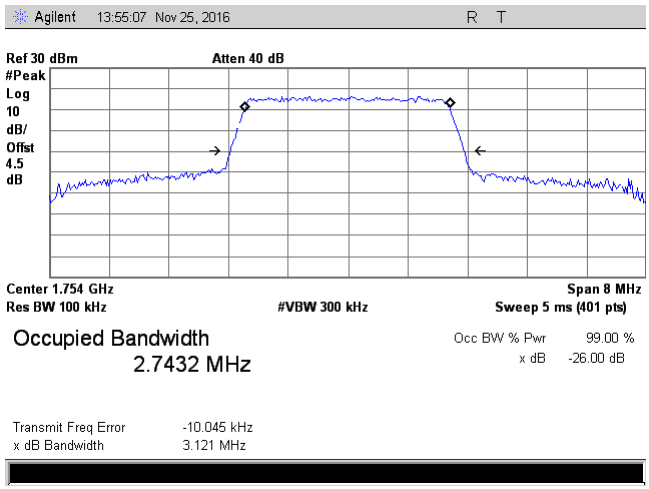
LTE Band IV - Middle CH QPSK-3



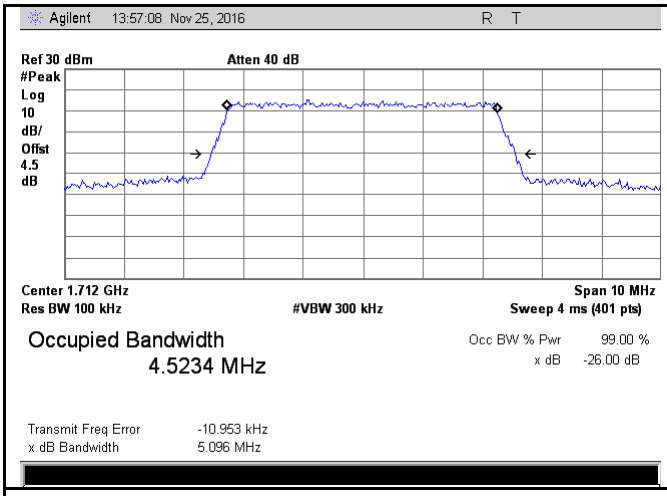
LTE Band IV - Middle CH 16QAM-3



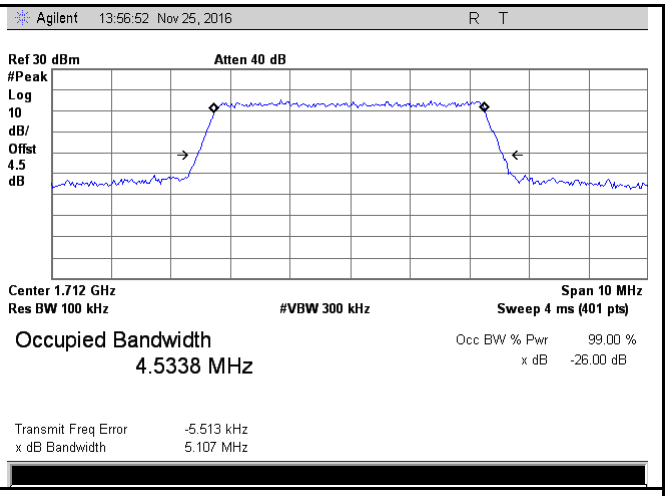
LTE Band IV - High CH QPSK-3



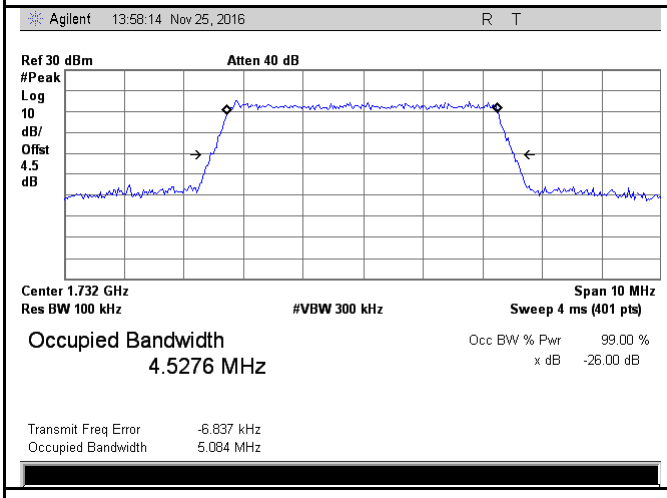
LTE Band IV - High CH 16QAM-3



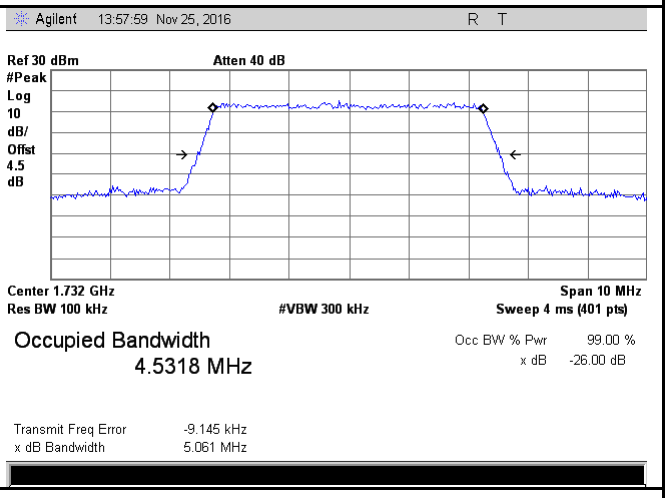
LTE Band IV - Low CH QPSK-5



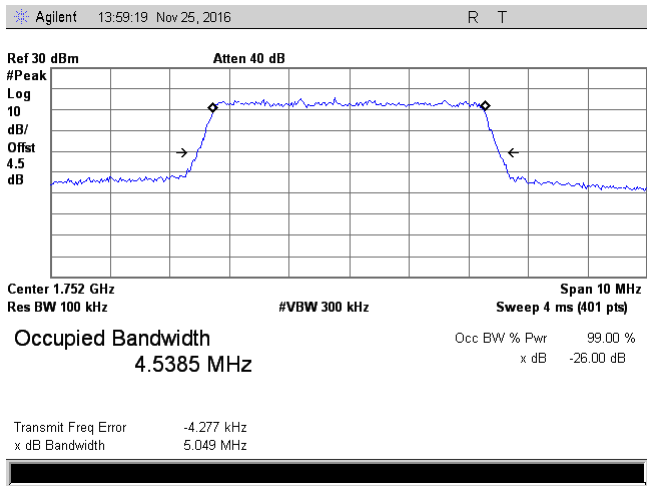
LTE Band IV - Low CH 16QAM-5



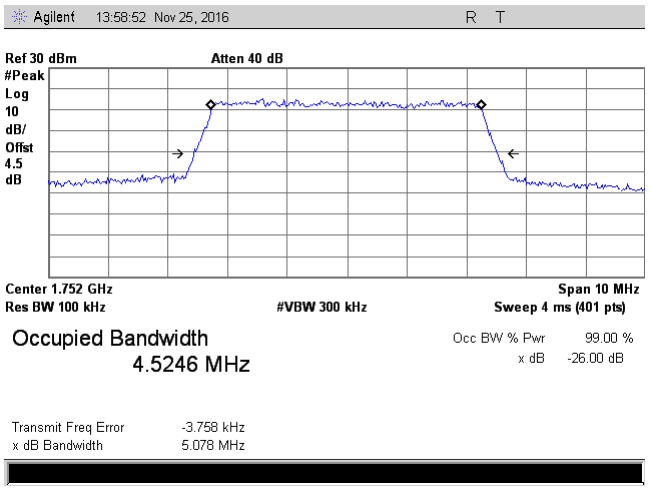
LTE Band IV - Middle CH QPSK-5



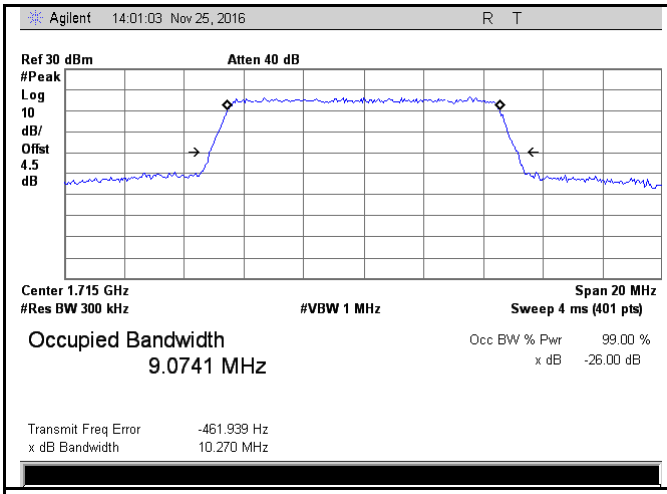
LTE Band IV - Middle CH 16QAM-5



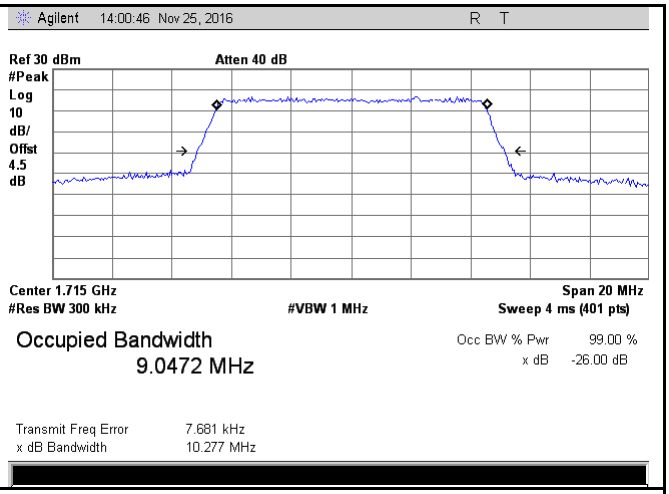
LTE Band IV - High CH QPSK-5



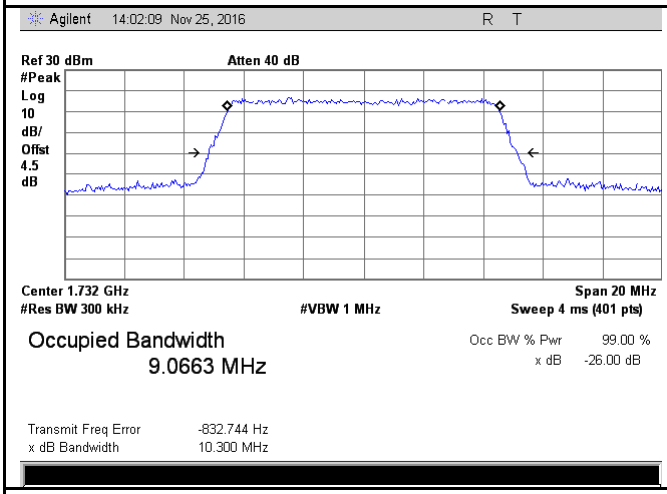
LTE Band IV - High CH 16QAM-5



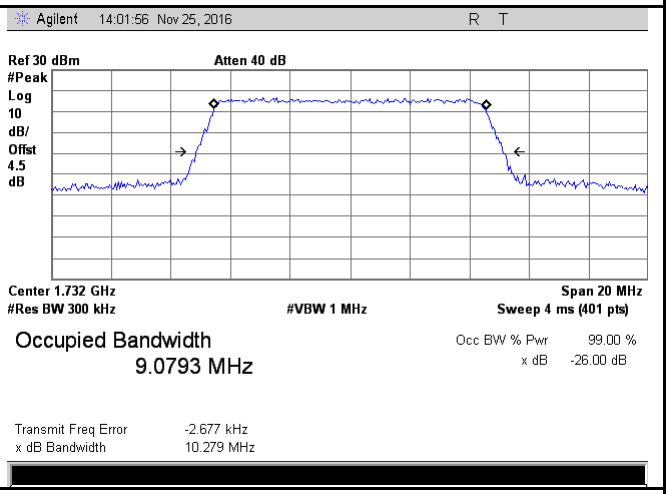
LTE Band IV - Low CH QPSK-10



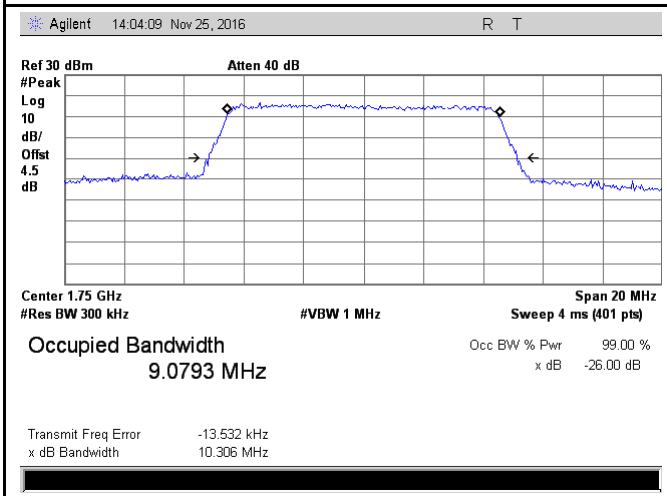
LTE Band IV - Low CH 16QAM-10



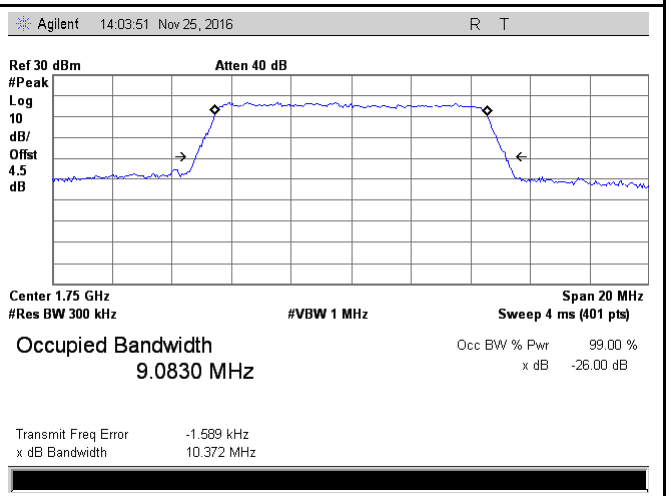
LTE Band IV - Middle CH QPSK-10



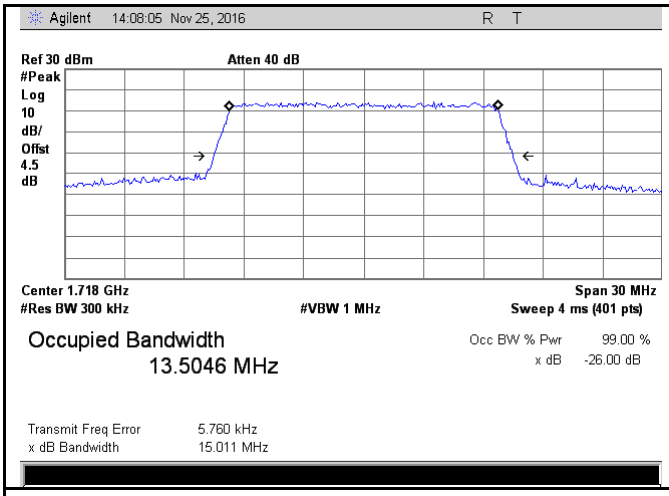
LTE Band IV - Middle CH 16QAM-10



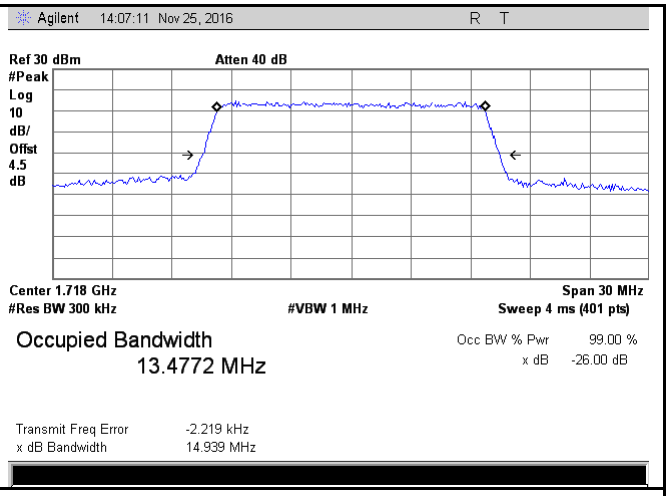
LTE Band IV - High CH QPSK-10



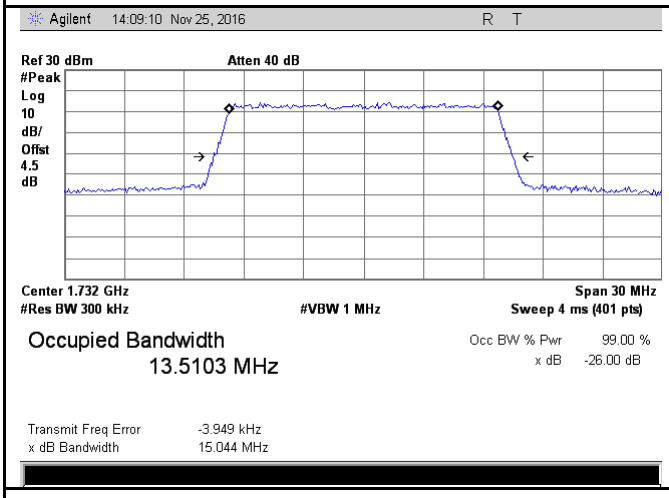
LTE Band IV - High CH 16QAM-10



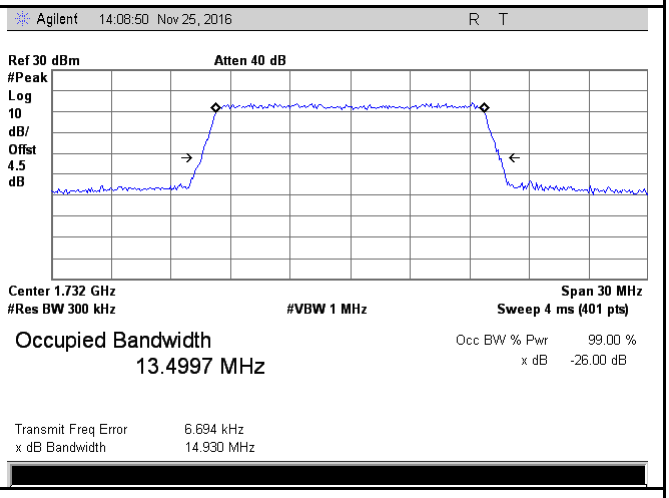
LTE Band IV - Low CH QPSK-15



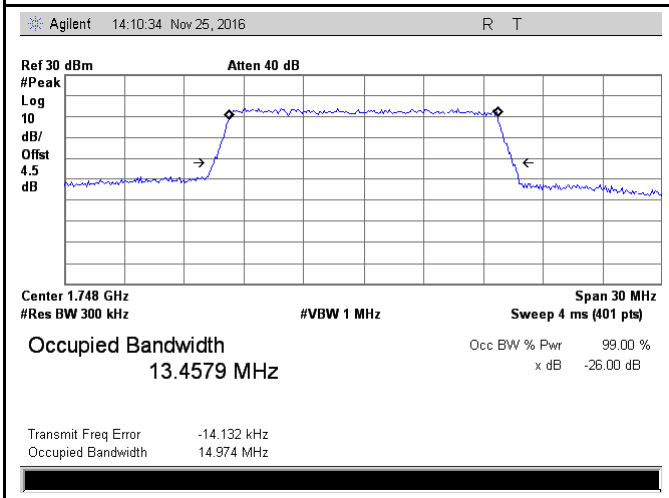
LTE Band IV - Low CH 16QAM-15



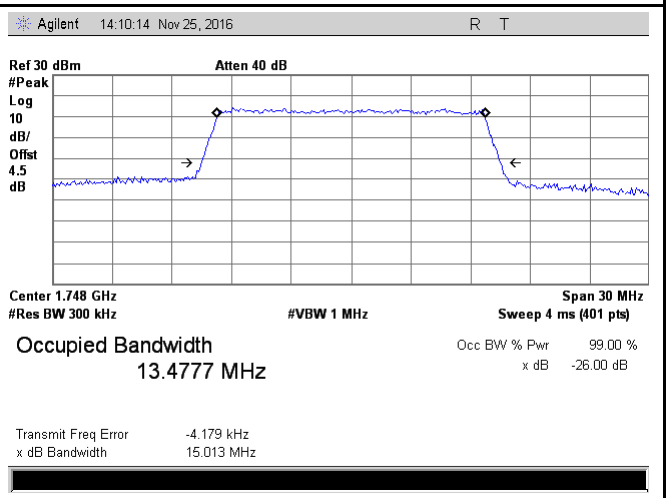
LTE Band IV - Middle CH QPSK-15



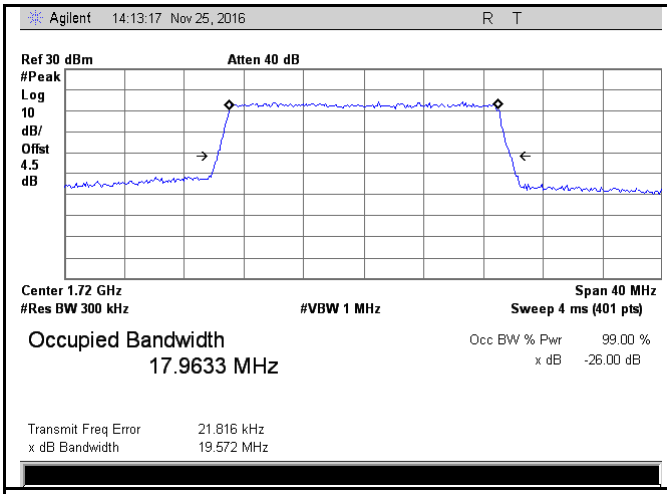
LTE Band IV - Middle CH 16QAM-15



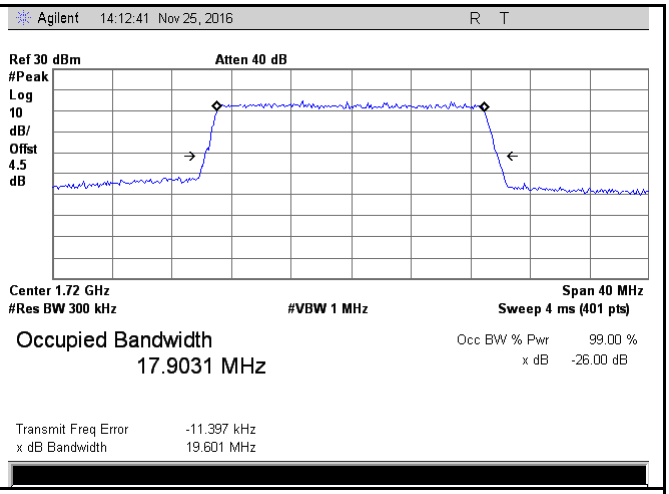
LTE Band IV - High CH QPSK-15



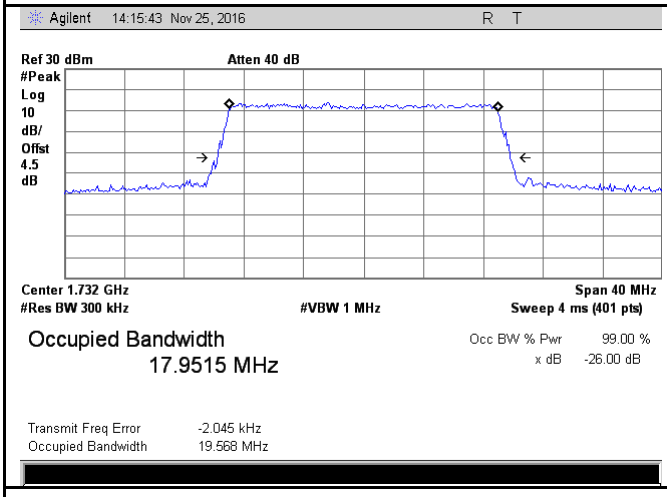
LTE Band IV - High CH 16QAM-15



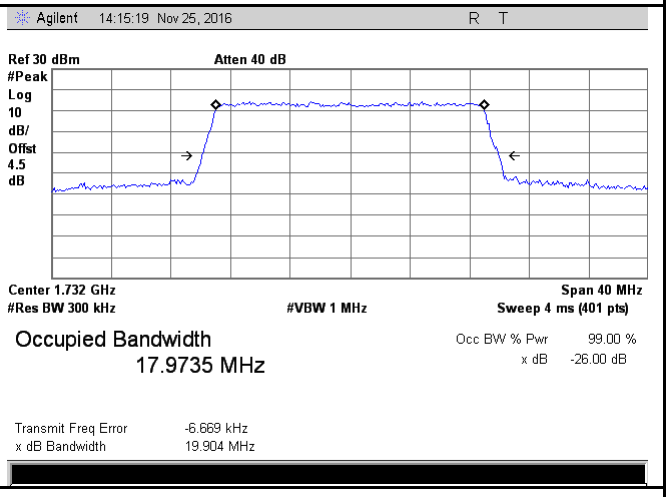
LTE Band IV - Low CH QPSK-20



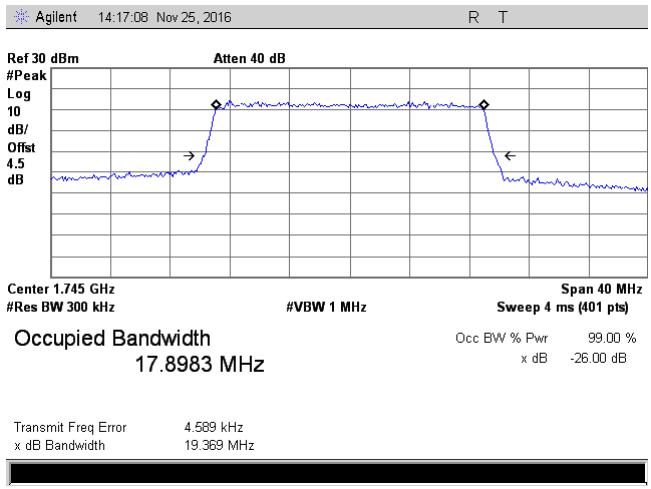
LTE Band IV - Low CH 16QAM-20



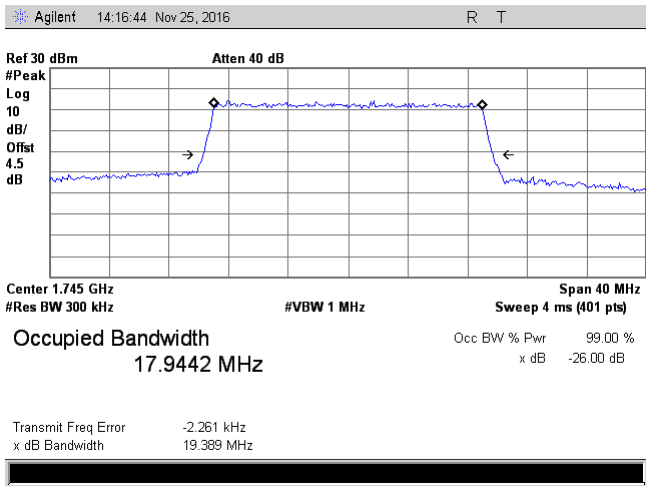
LTE Band IV - Middle CH QPSK-20



LTE Band IV - Middle CH 16QAM-20

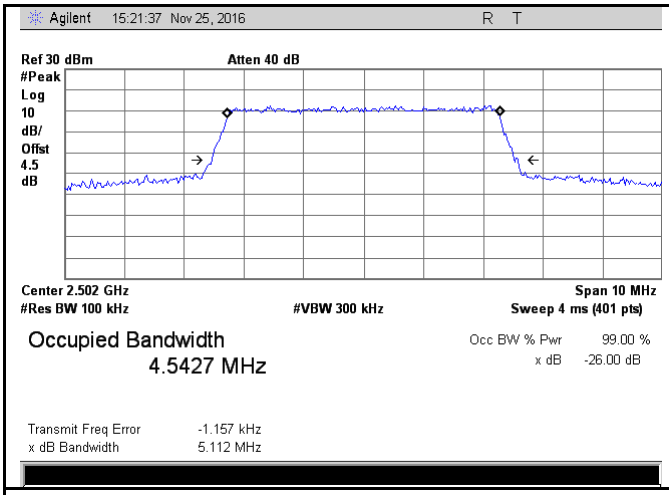


LTE Band IV - High CH QPSK-20

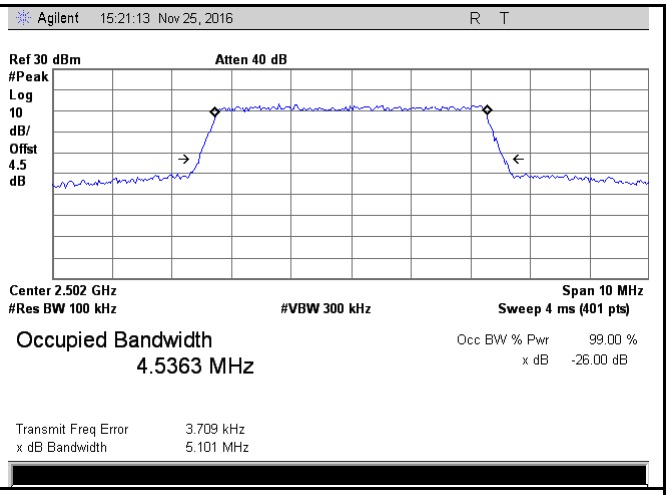


LTE Band IV - High CH 16QAM-20

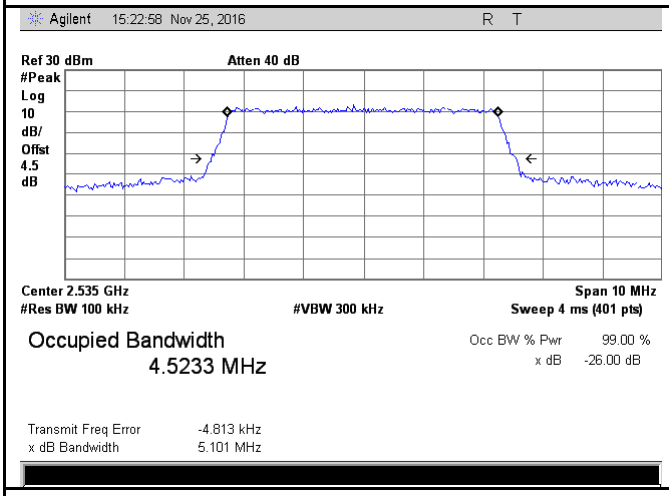
LTE Band VII (Part 27)



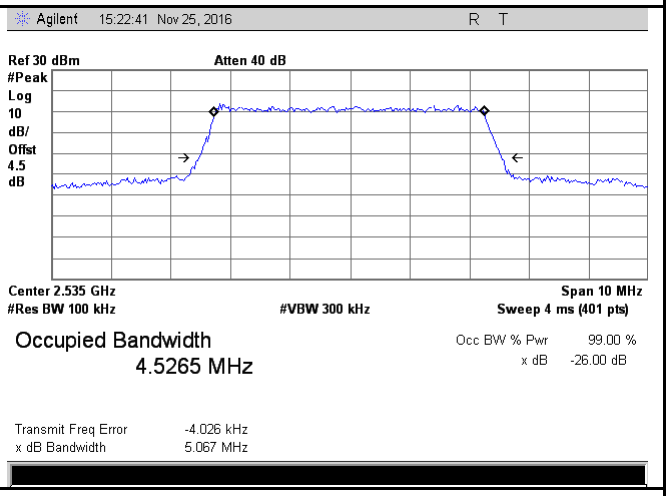
LTE Band VII - Low CH QPSK-5



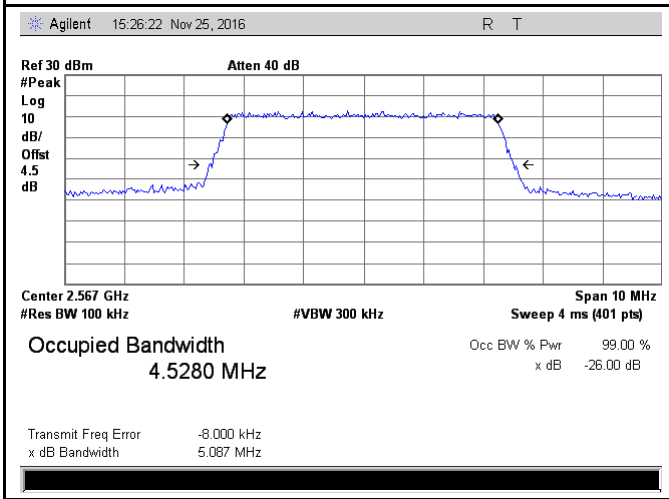
LTE Band VII - Low CH 16QAM-5



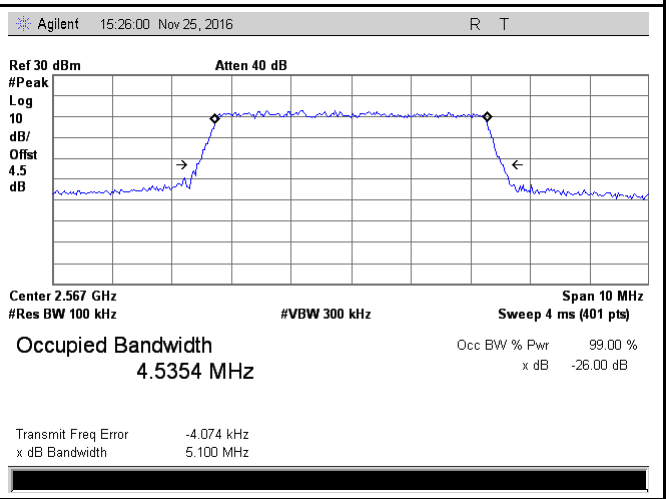
LTE Band VII - Middle CH QPSK-5



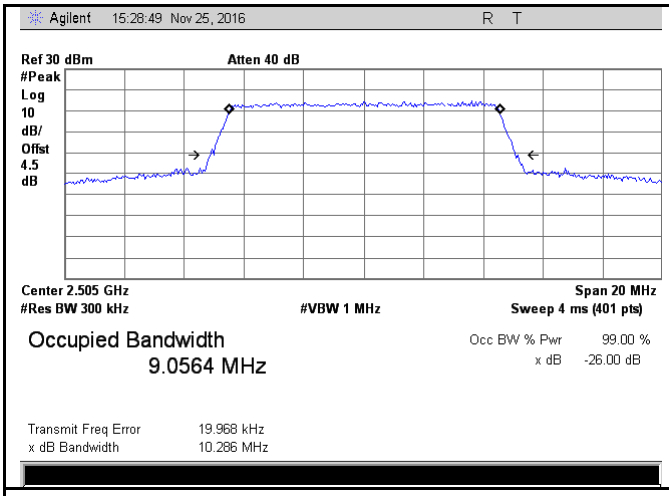
LTE Band VII - Middle CH 16QAM-5



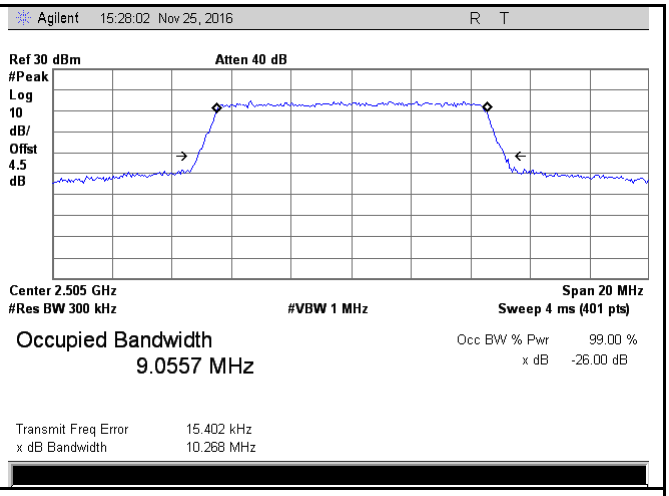
LTE Band VII - High CH QPSK-5



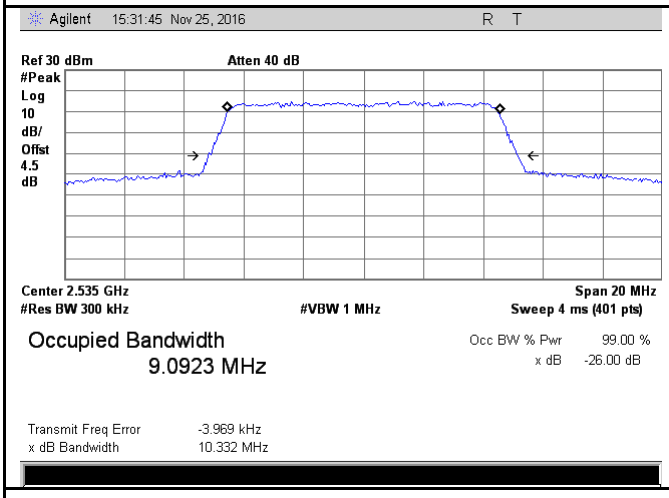
LTE Band VII - High CH 16QAM-5



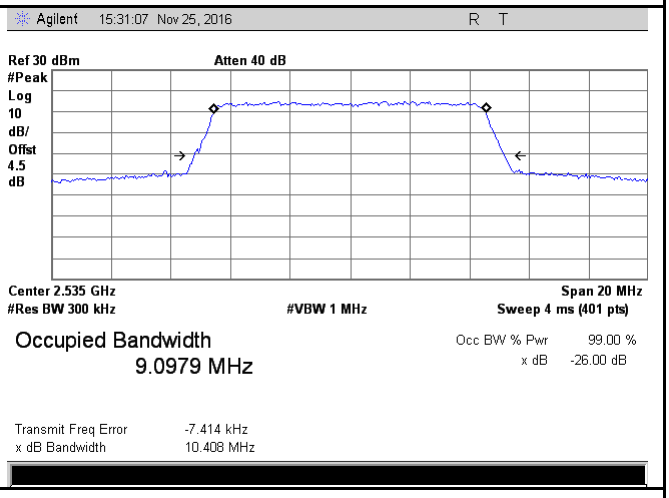
LTE Band VII - Low CH QPSK-10



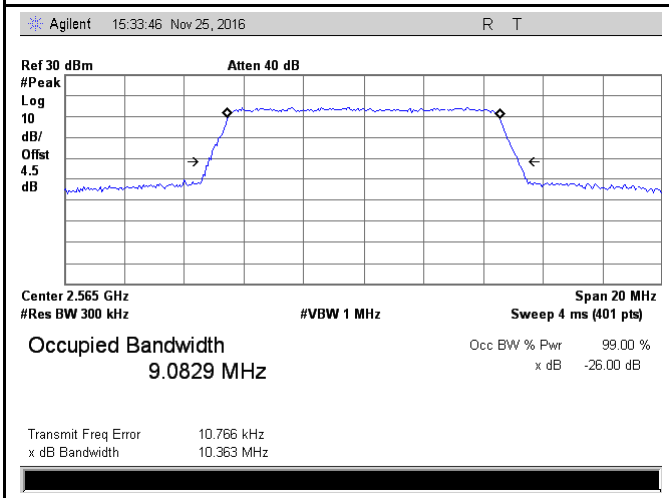
LTE Band VII - Low CH 16QAM-10



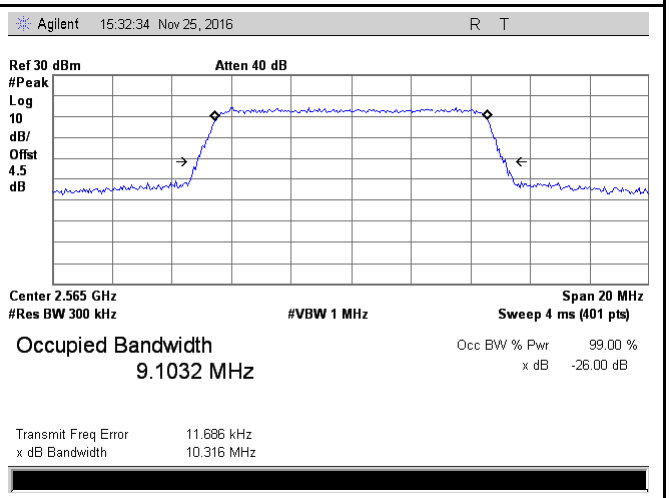
LTE Band VII - Middle CH QPSK-10



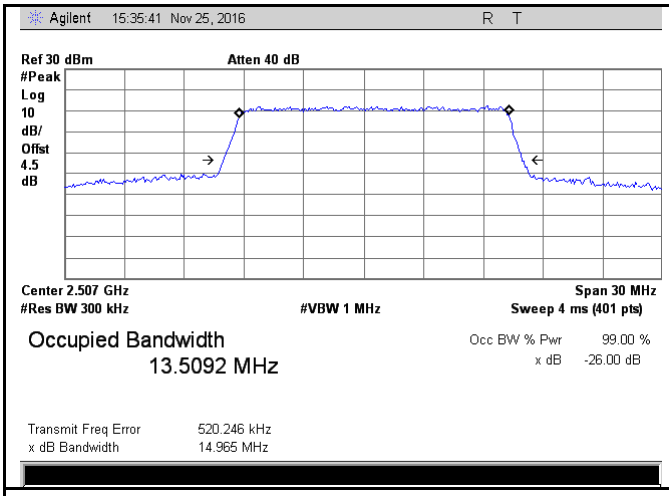
LTE Band VII - Middle CH 16QAM-10



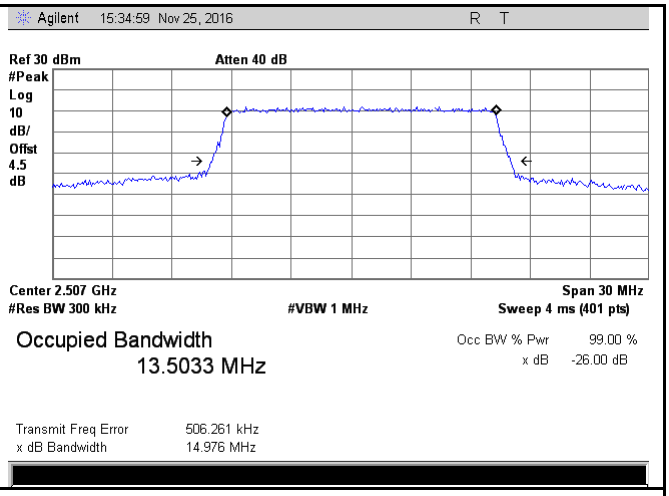
LTE Band VII - High CH QPSK-10



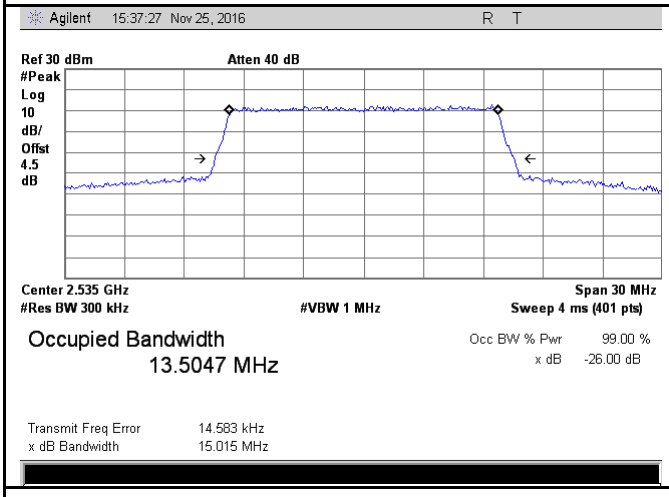
LTE Band VII - High CH 16QAM-10



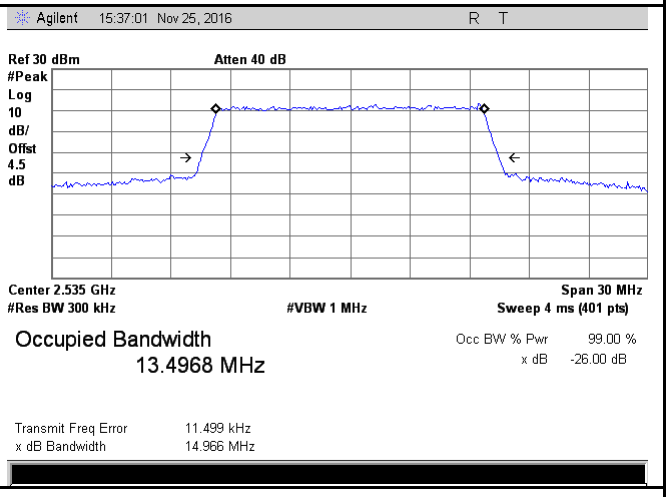
LTE Band VII - Low CH QPSK-15



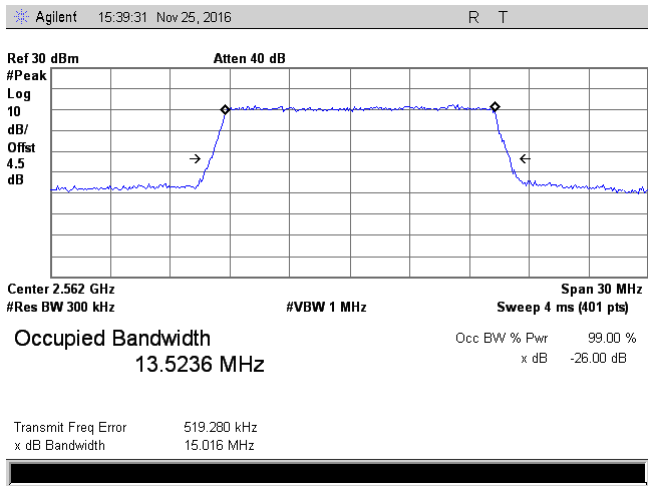
LTE Band VII - Low CH 16QAM-15



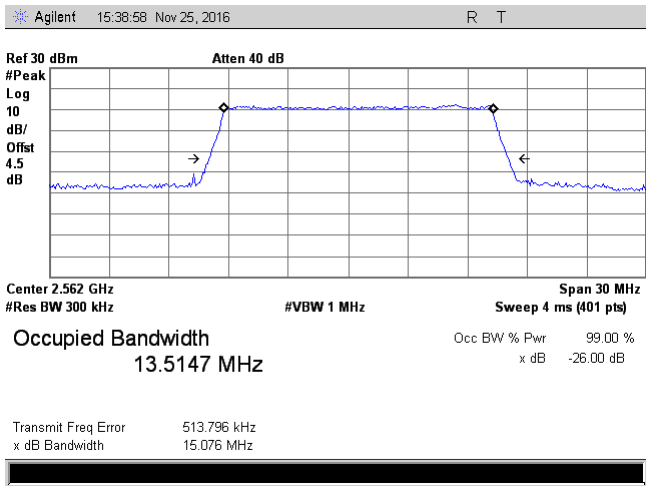
LTE Band VII - Middle CH QPSK-15



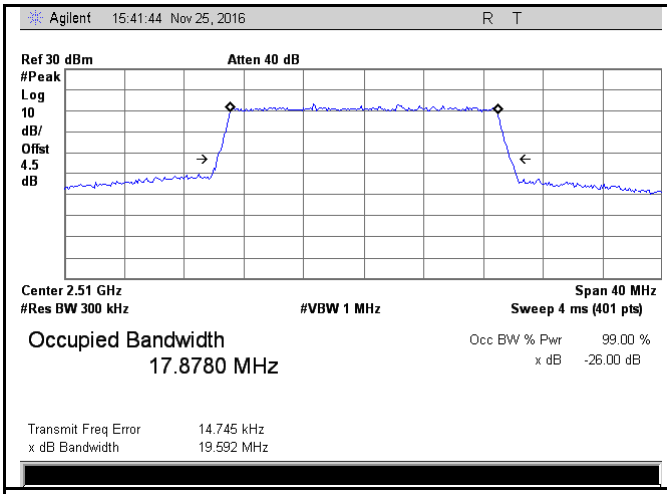
LTE Band VII - Middle CH 16QAM-15



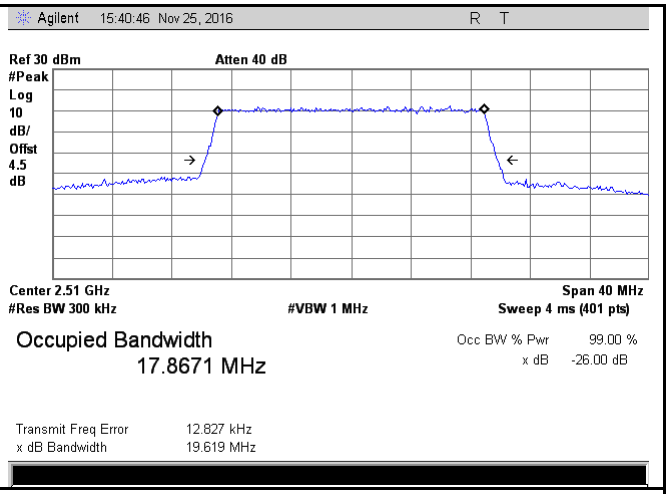
LTE Band VII - High CH QPSK-15



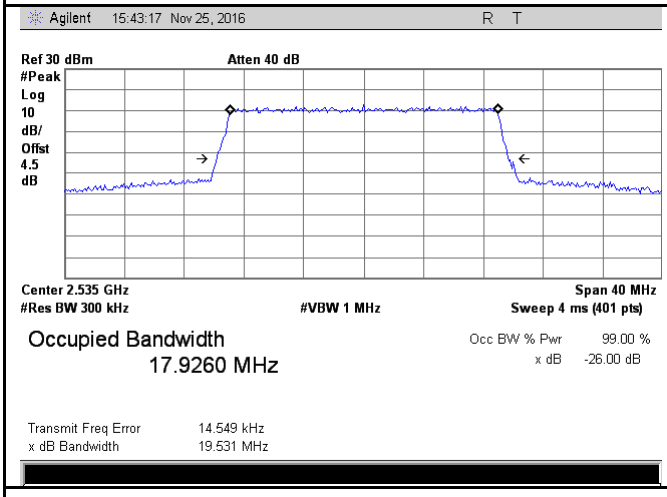
LTE Band VII - High CH 16QAM-15



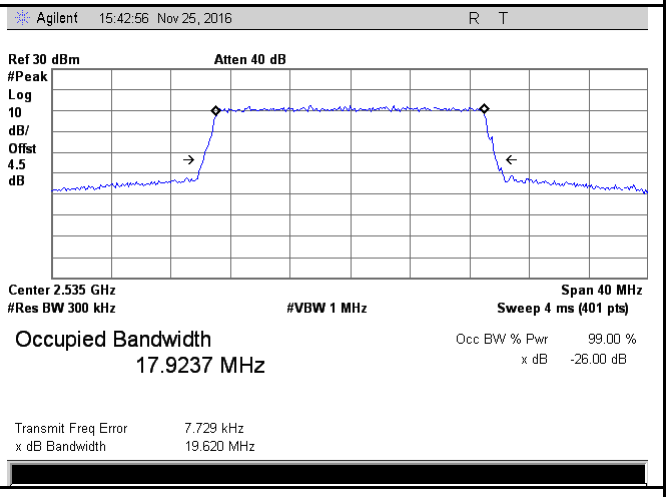
LTE Band VII - Low CH QPSK-20



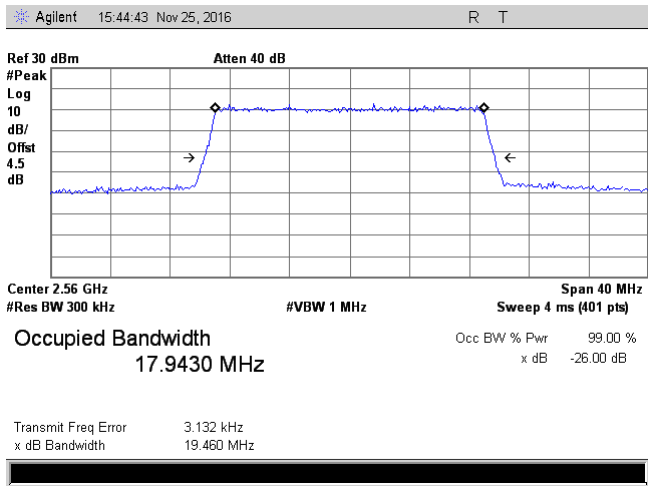
LTE Band VII - Low CH 16QAM-20



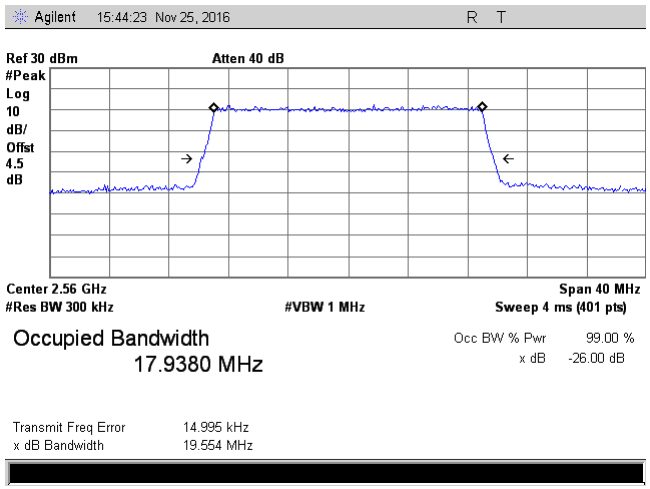
LTE Band VII - Middle CH QPSK-20



LTE Band VII - Middle CH 16QAM-20

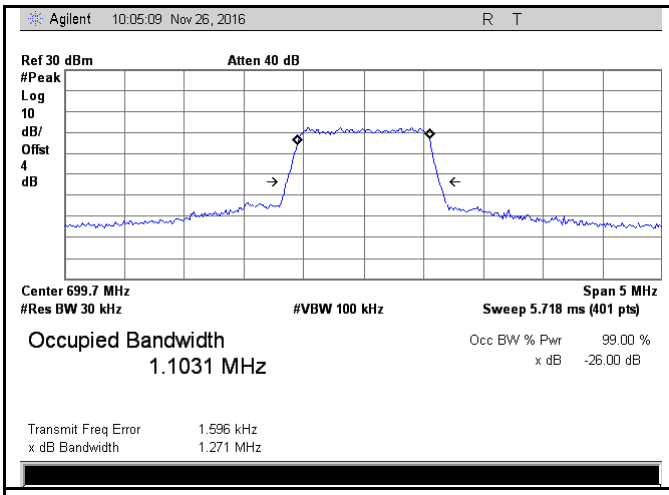


LTE Band VII - High CH QPSK-20

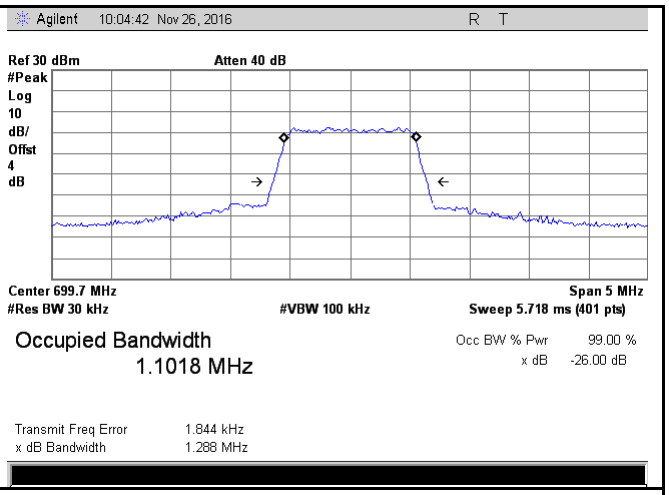


LTE Band VII - High CH 16QAM-20

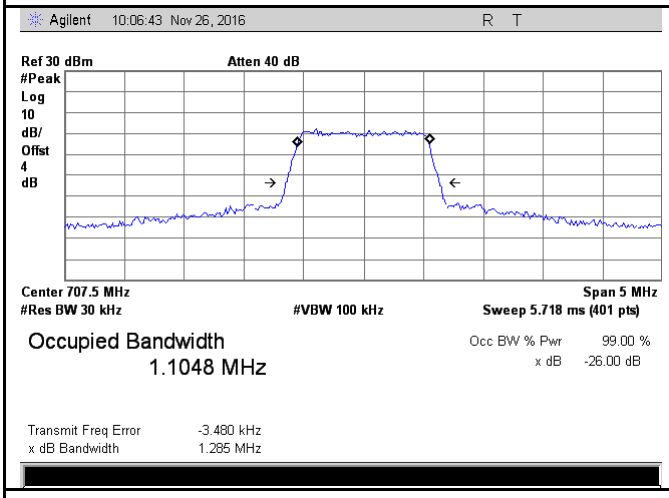
LTE Band XII (Part 27)



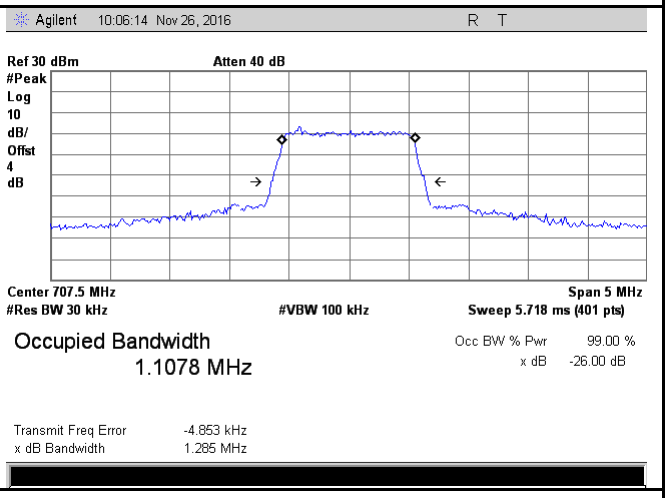
LTE Band XII - Low CH QPSK-1.4



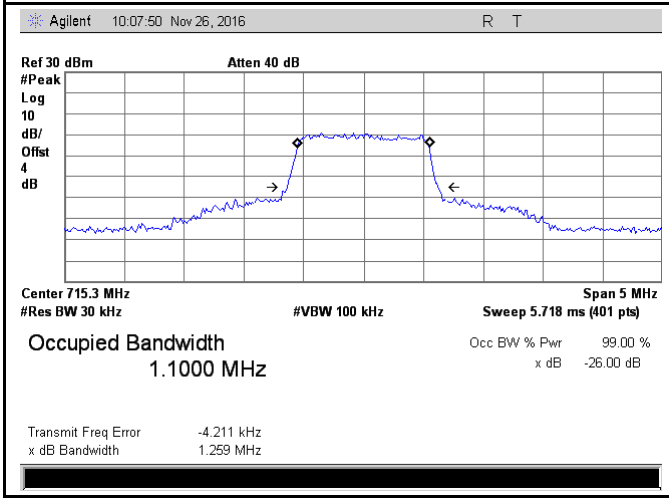
LTE Band XII - Low CH 16QAM-1.4



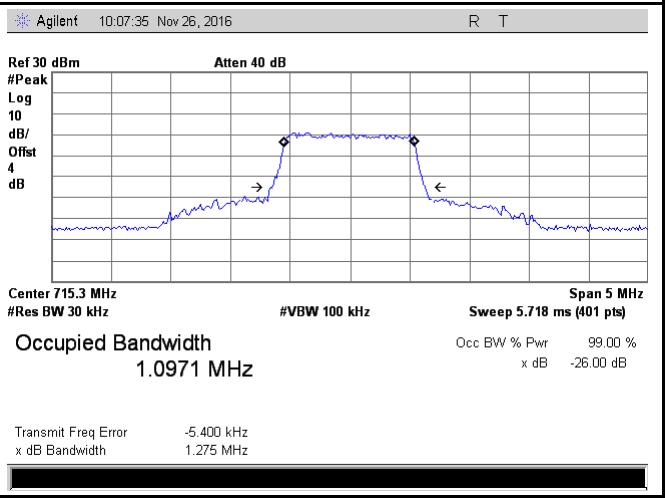
LTE Band XII - Middle CH QPSK-1.4



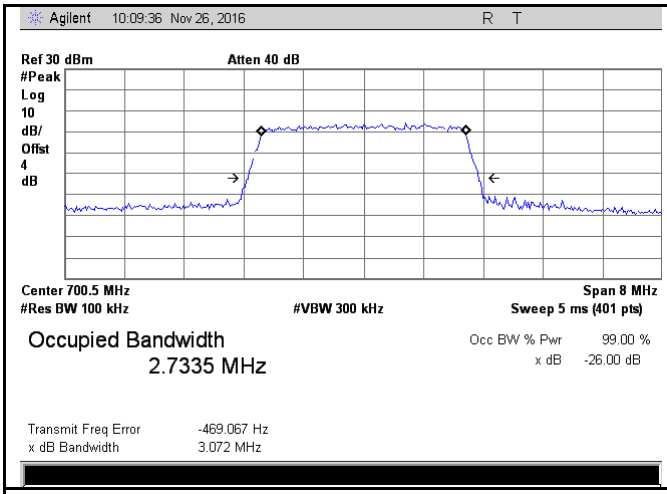
LTE Band XII - Middle CH 16QAM-1.4



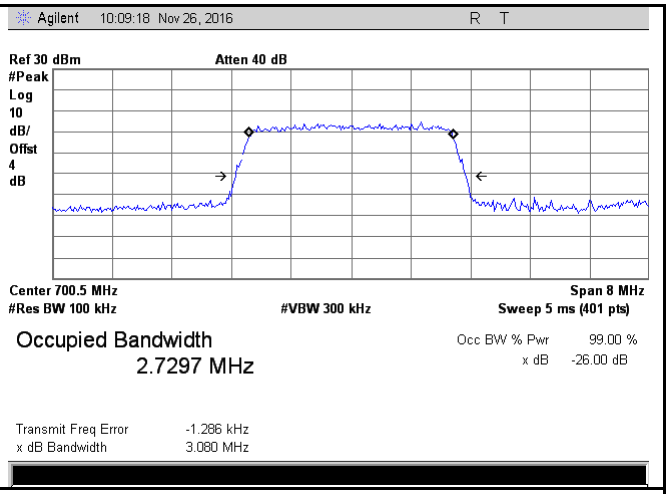
LTE Band XII - High CH QPSK-1.4



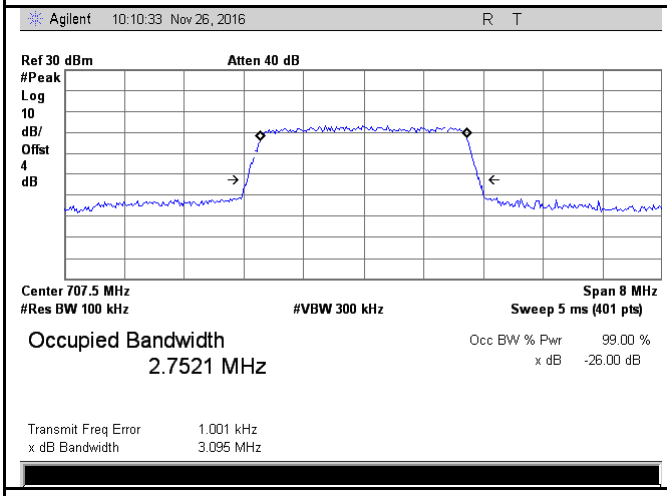
LTE Band XII - High CH 16QAM-1.4



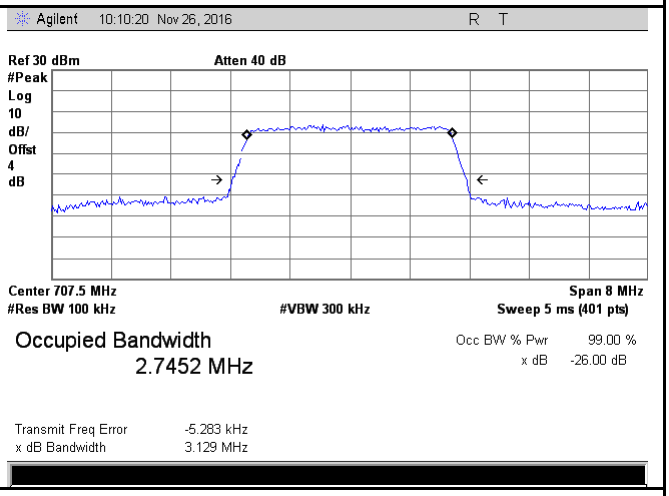
LTE Band XII - Low CH QPSK-3



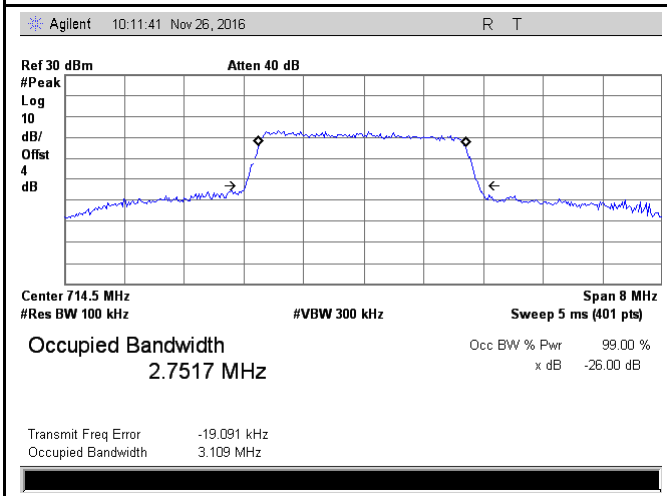
LTE Band XII - Low CH 16QAM-3



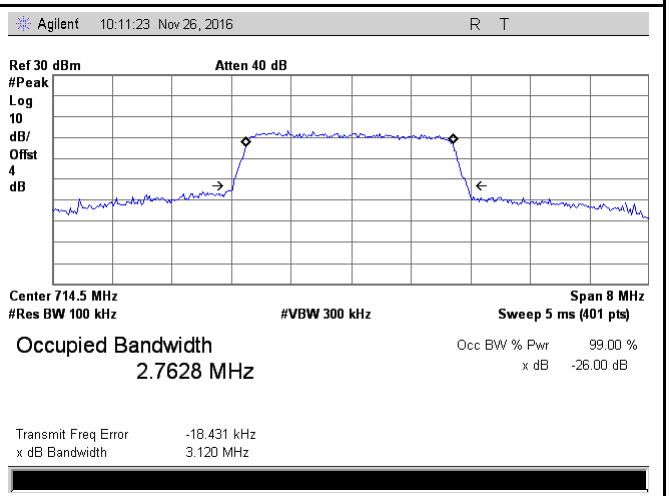
LTE Band XII - Middle CH QPSK-3



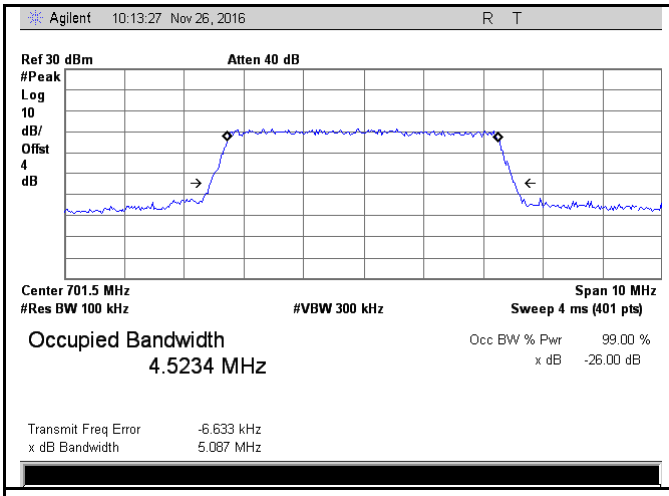
LTE Band XII - Middle CH 16QAM-3



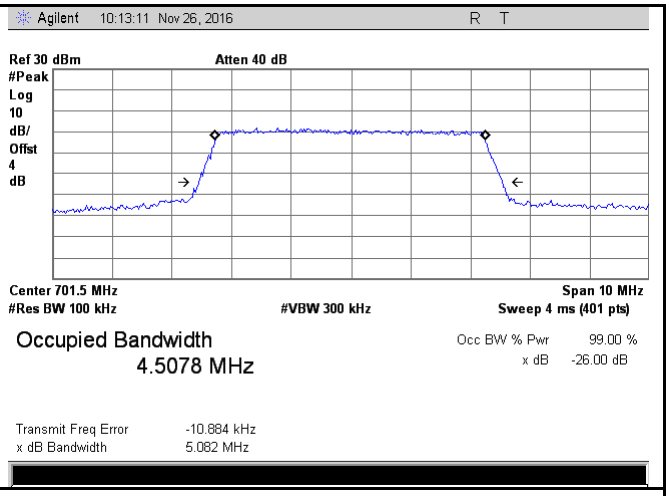
LTE Band XII - High CH QPSK-3



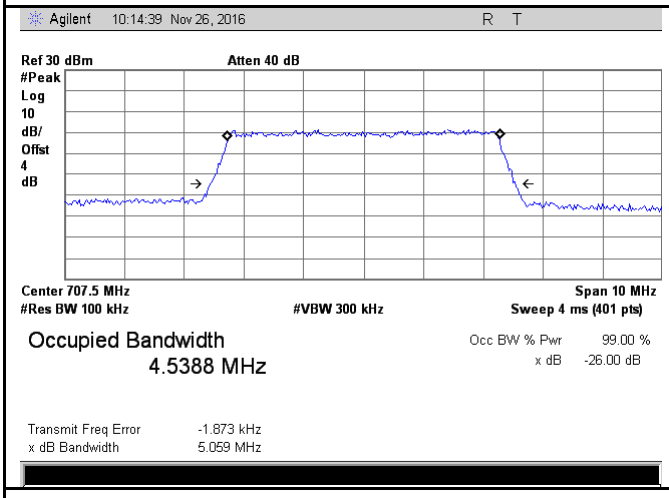
LTE Band XII - High CH 16QAM-3



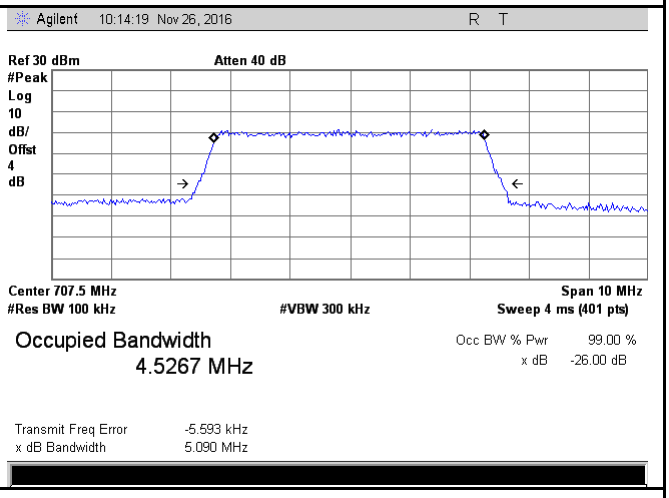
LTE Band XII - Low CH QPSK-5



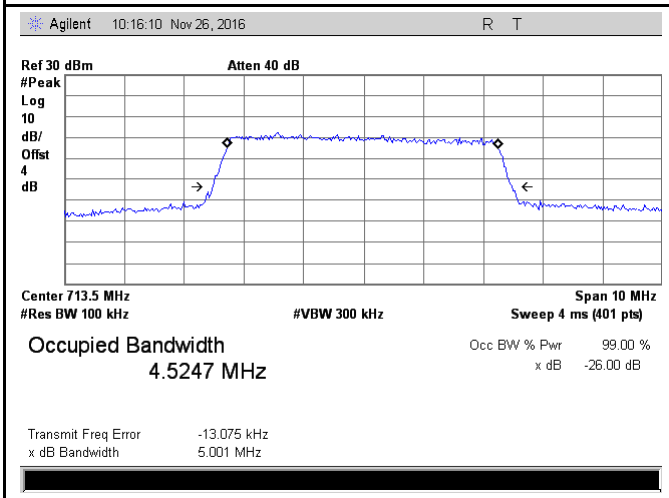
LTE Band XII - Low CH 16QAM-5



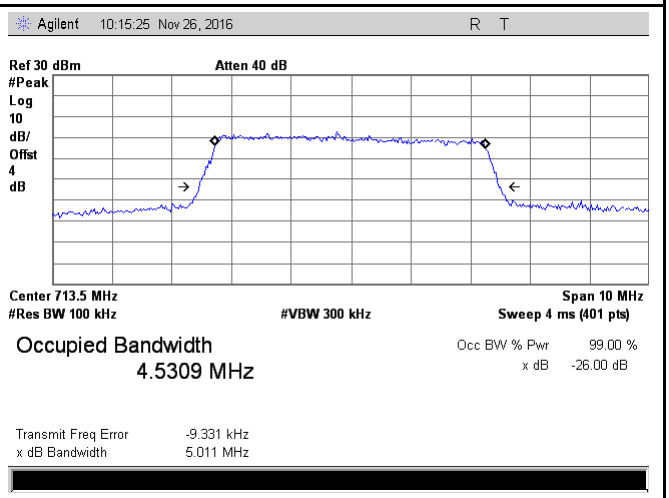
LTE Band XII - Middle CH QPSK-5



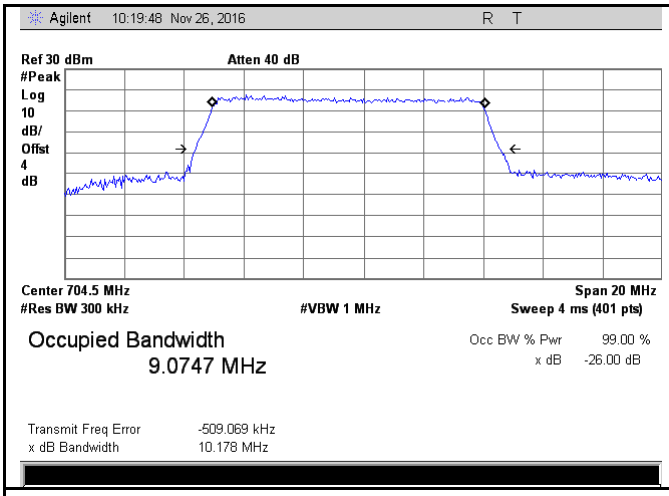
LTE Band XII - Middle CH 16QAM-5



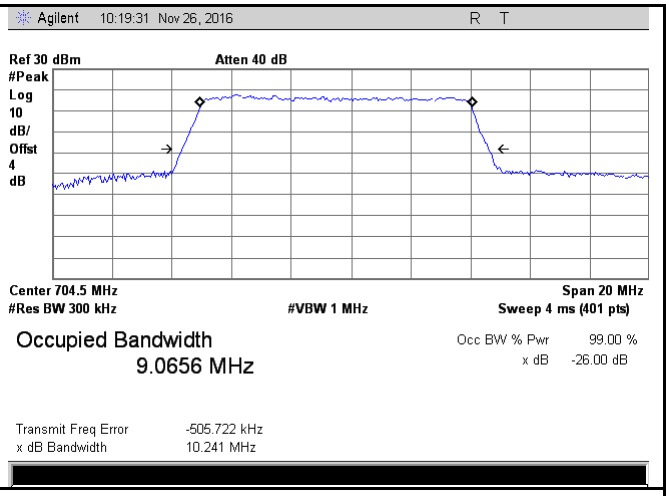
LTE Band XII - High CH QPSK-5



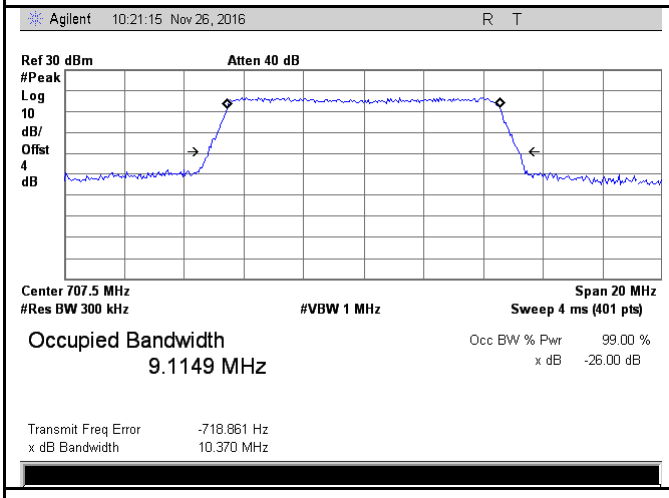
LTE Band XII - High CH 16QAM-5



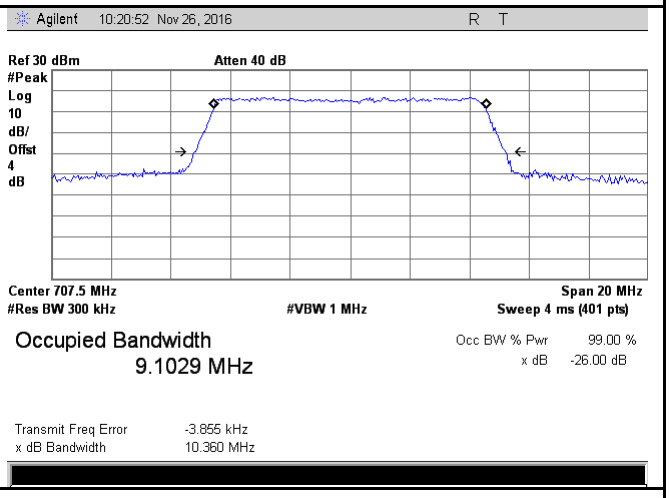
LTE Band XII - Low CH QPSK-10



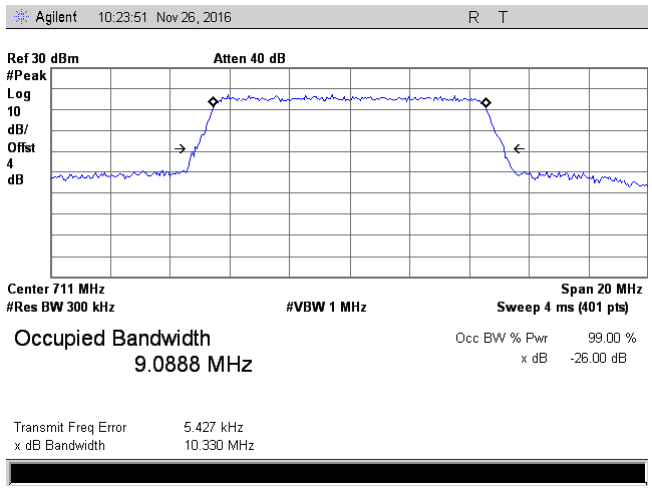
LTE Band XII - Low CH 16QAM-10



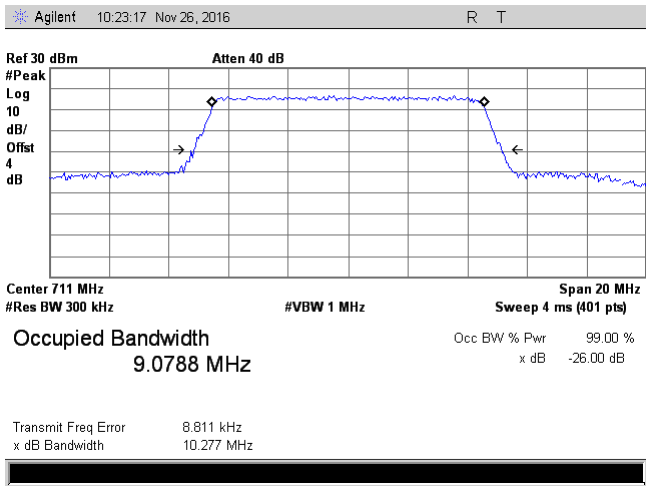
LTE Band XII - Middle CH QPSK-10



LTE Band XII - Middle CH 16QAM-10

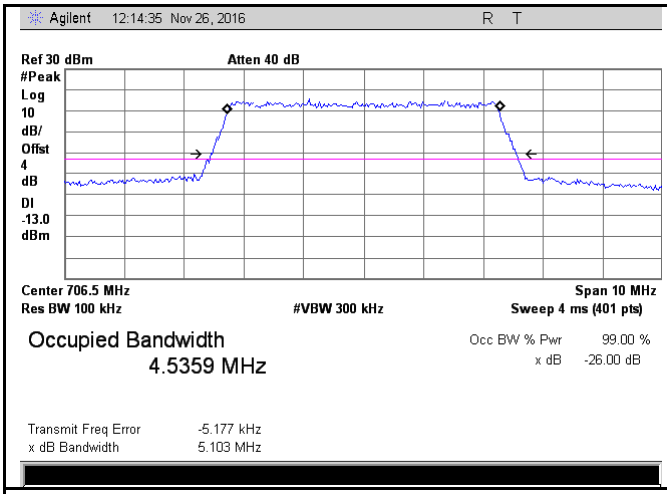


LTE Band XII - High CH QPSK-10

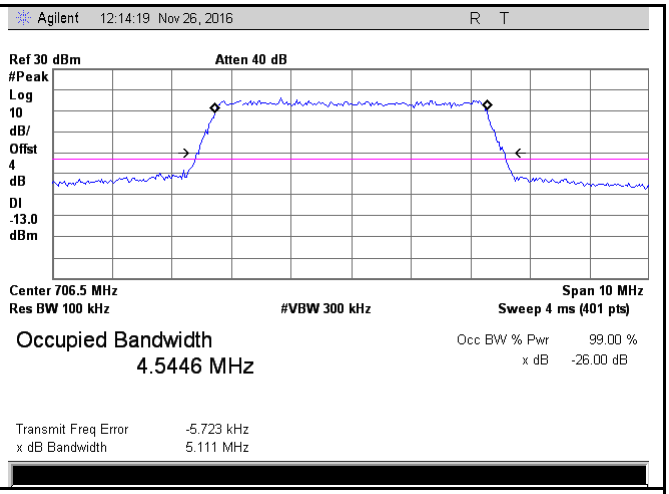


LTE Band XII - High CH 16QAM-10

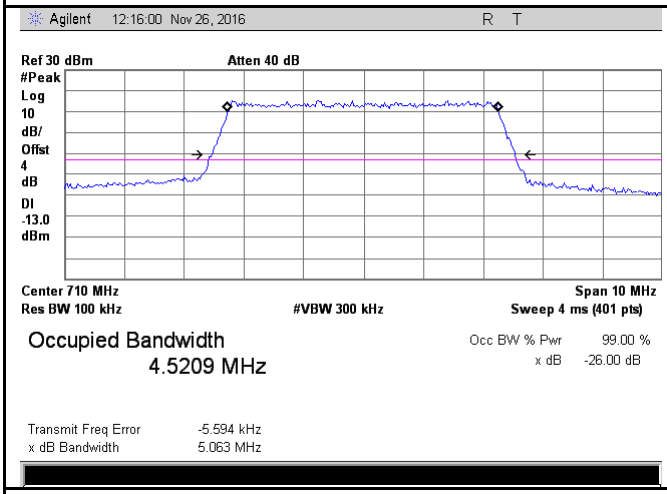
LTE Band XVII (Part 27)



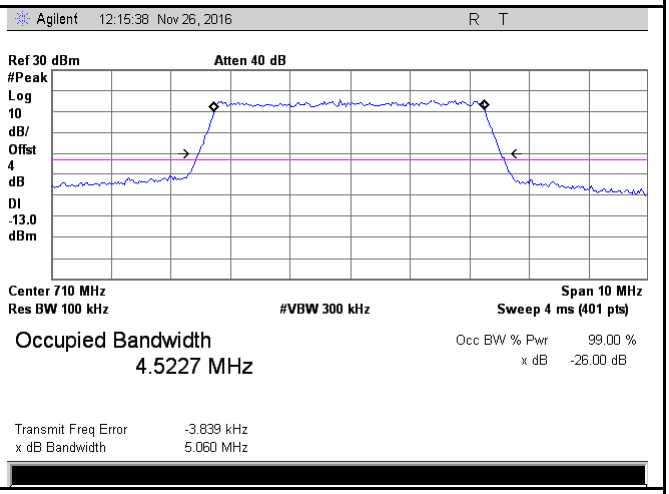
LTE Band XVII - Low CH QPSK-5



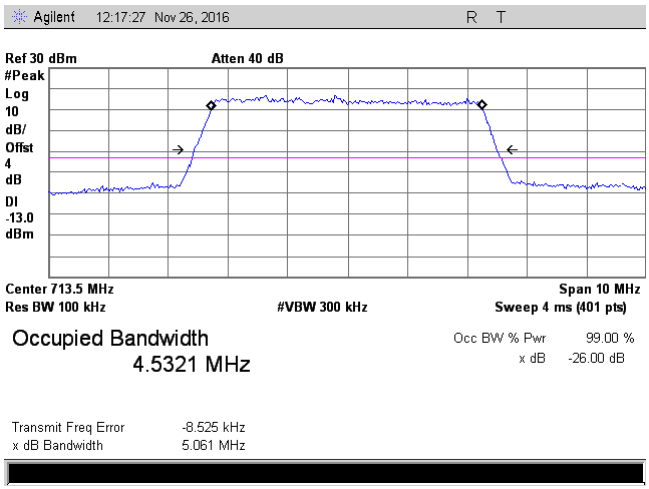
LTE Band XVII - Low CH 16QAM-5



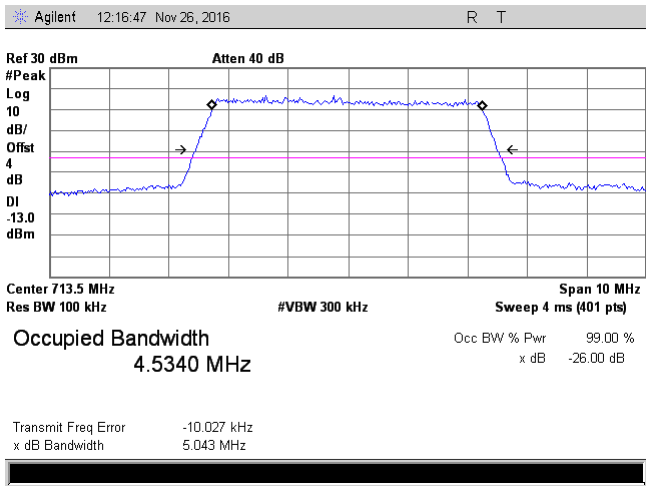
LTE Band XVII - Middle CH QPSK-5



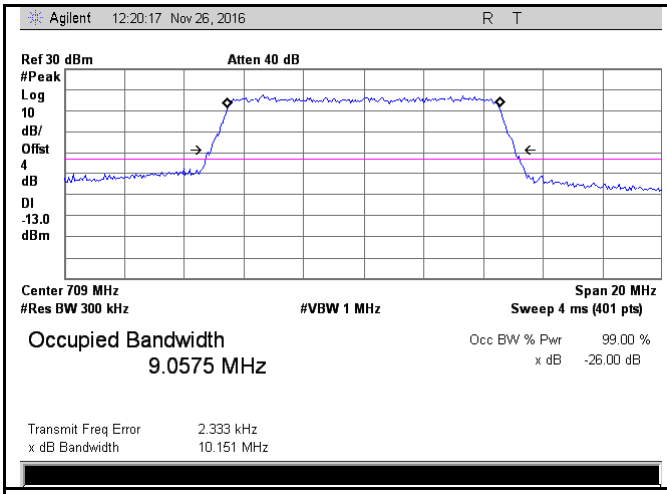
LTE Band XVII - Middle CH 16QAM-5



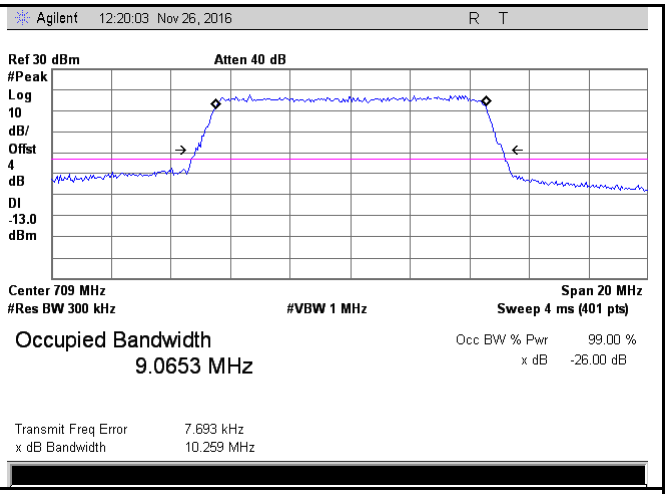
LTE Band XVII - High CH QPSK-5



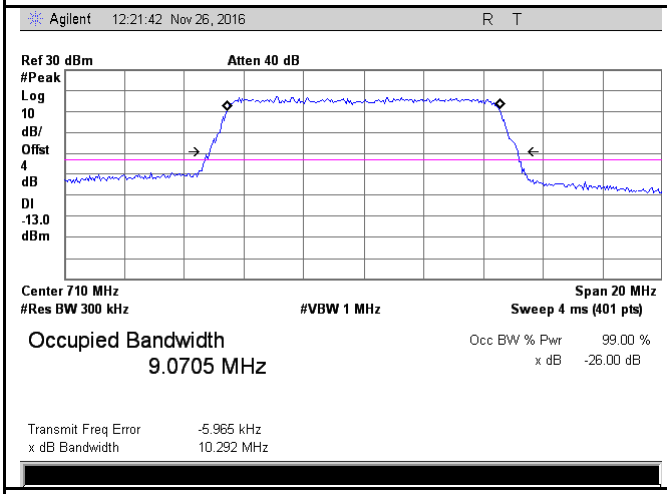
LTE Band XVII - High CH 16QAM-5



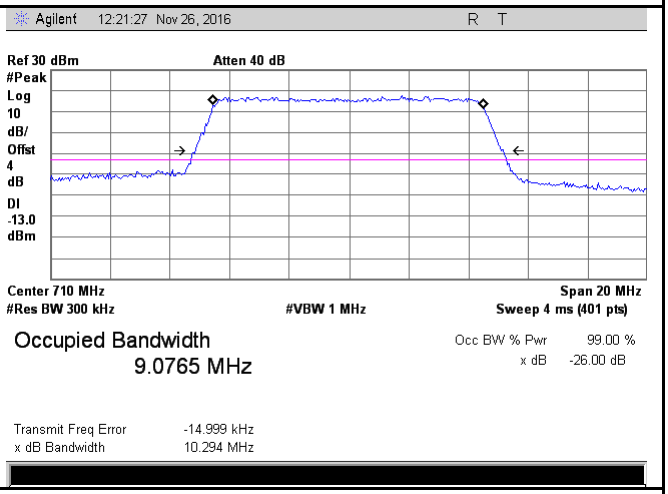
LTE Band XVII - Low CH QPSK-10



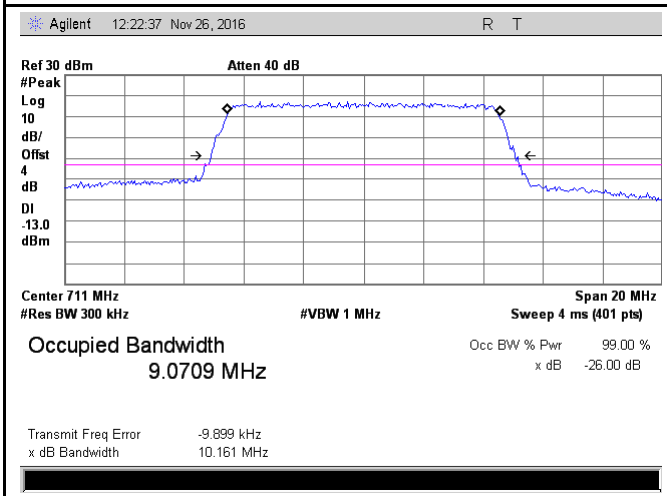
LTE Band XVII - Low CH 16QAM-10



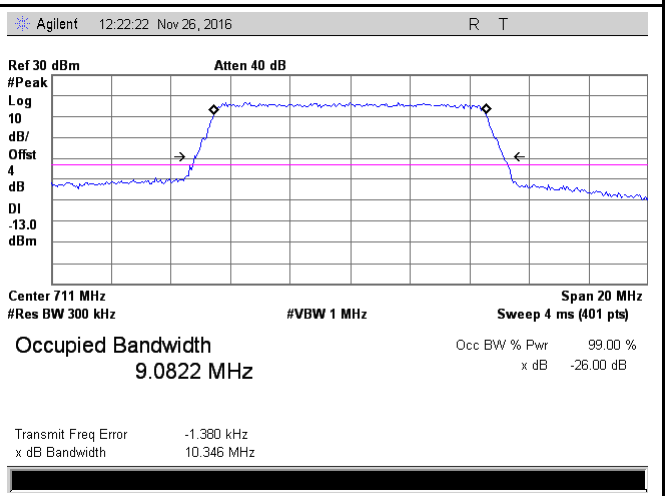
LTE Band XVII - Middle CH QPSK-10



LTE Band XVII - Middle CH 16QAM-10



LTE Band XVII - High CH QPSK-10

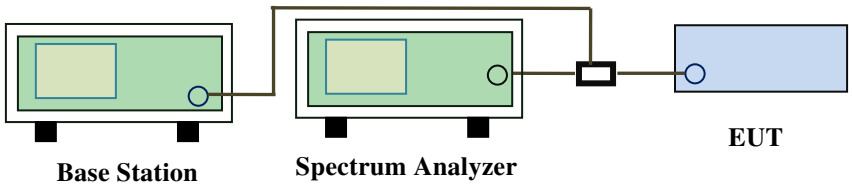


LTE Band XVII - High CH 16QAM-10

6.5 Spurious Emissions at Antenna Terminals

Temperature	22℃
Relative Humidity	58%
Atmospheric Pressure	1025mbar
Test date :	November 25&26, 2016
Tested By :	Loren Luo

Requirement(s):

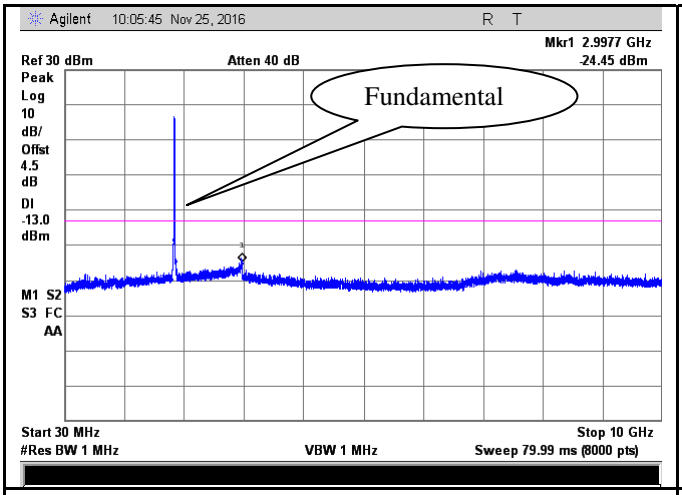
Spec	Item	Requirement	Applicable
§2.1051, §22.917(a)& §24.238(a) § 27.53(h)	a)	The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 43 + 10 log (P) dB	☑
Test Setup			
Test Procedure	- The EUT was connected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

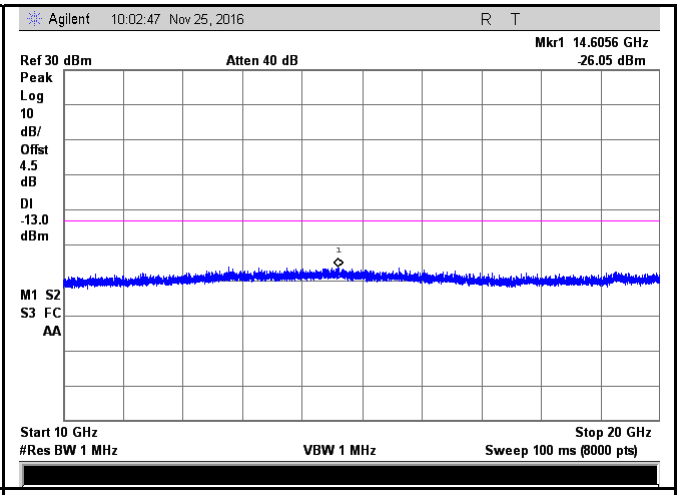
Test Plot ☑ Yes (See below) ☐ N/A

Test Plots 30MHz-5GHz

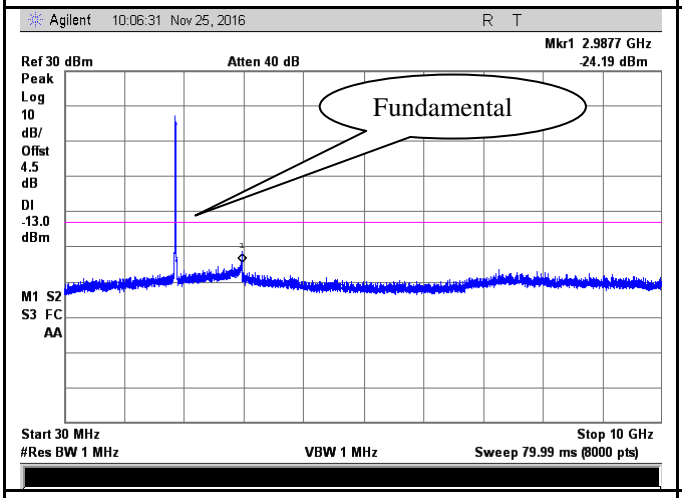
LTE Band II (Part 24E)



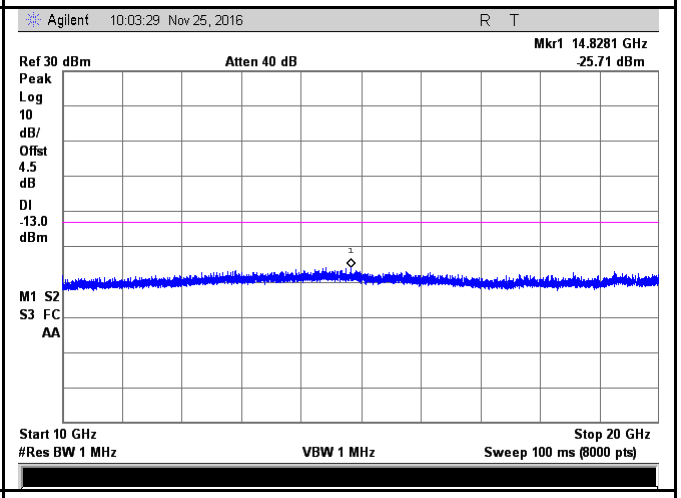
LTE Band II - Low Channel-1



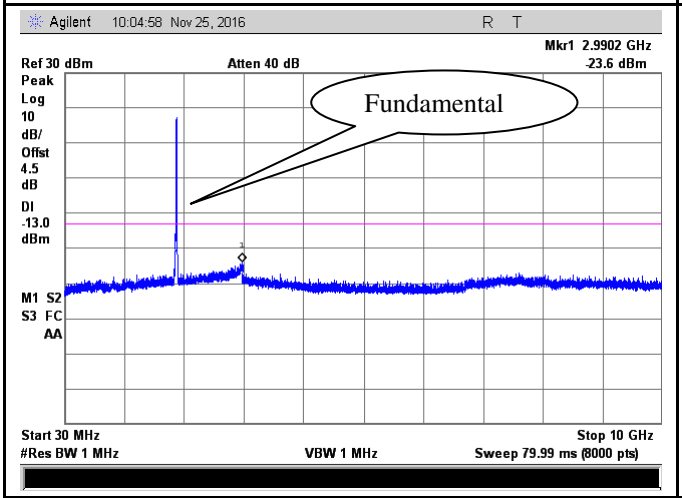
LTE Band II - Low Channel-2



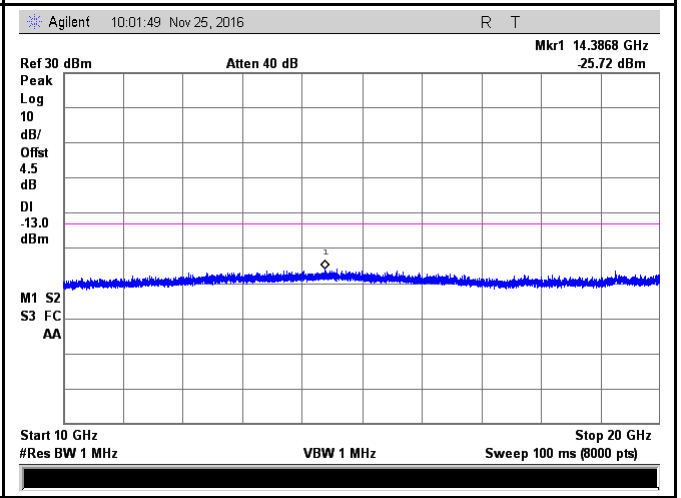
LTE Band II Middle Channel-1



LTE Band II Middle Channel-2

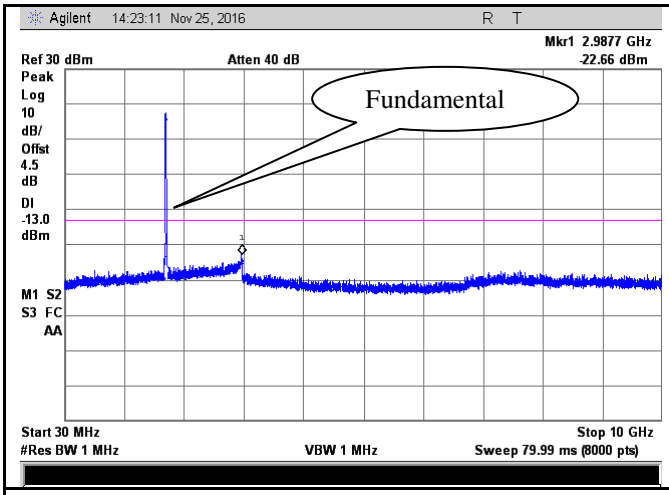


LTE Band II - High Channel-1

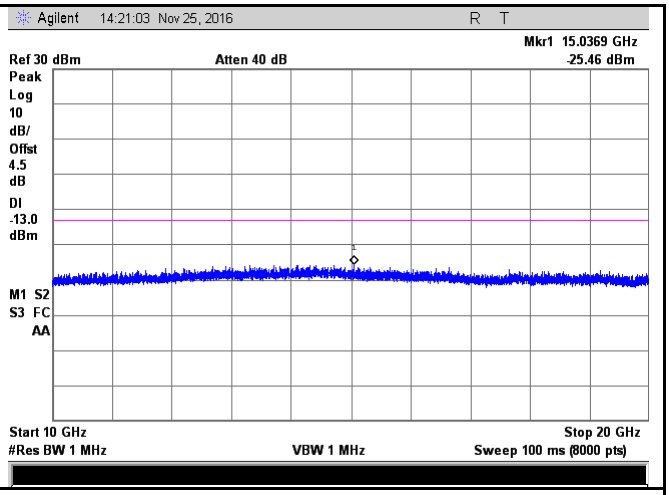


LTE Band II - High Channel-2

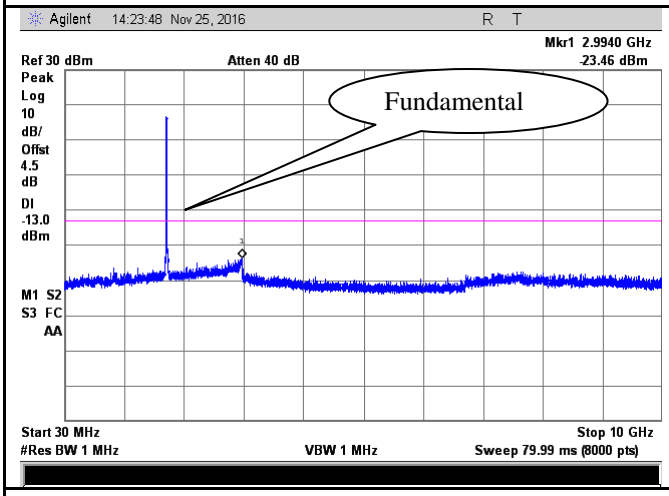
LTE Band IV (Part27) result



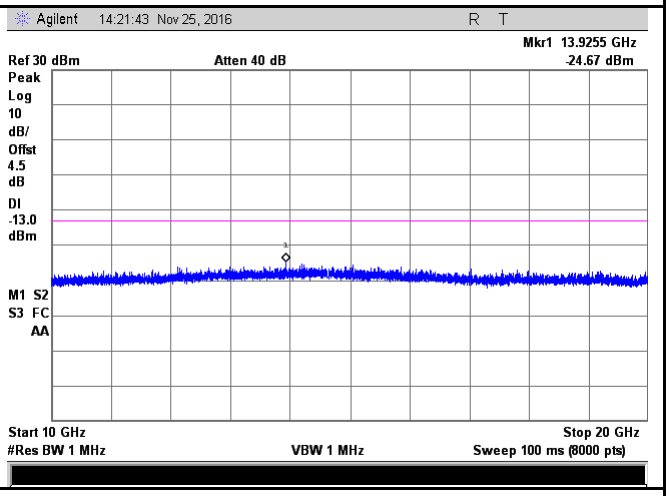
LTE Band IV - Low Channel-1



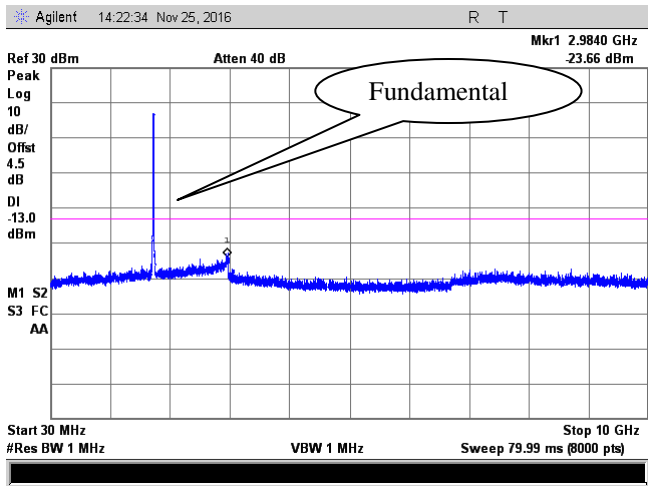
LTE Band IV - Low Channel-2



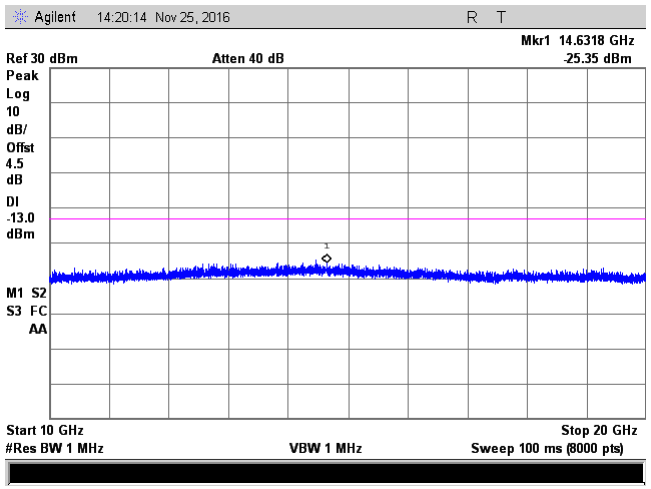
LTE Band IV - Middle Channel-1



LTE Band IV - Middle Channel-2

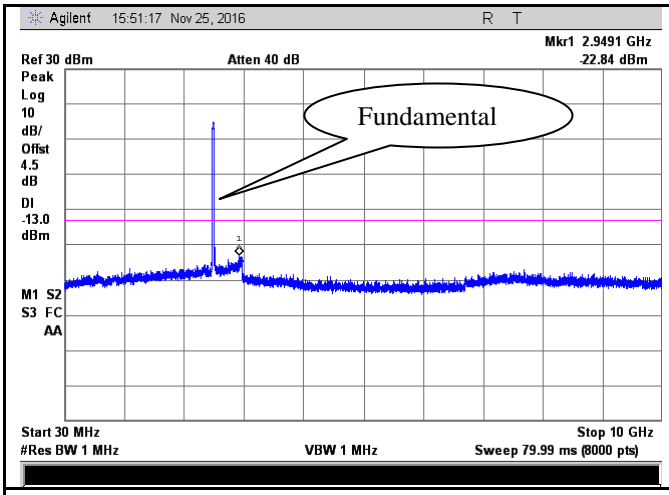


LTE Band IV - High Channel-1

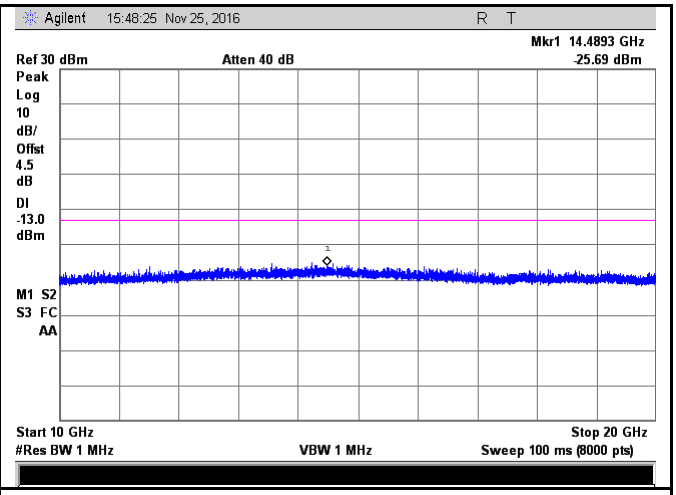


LTE Band IV - High Channel-2

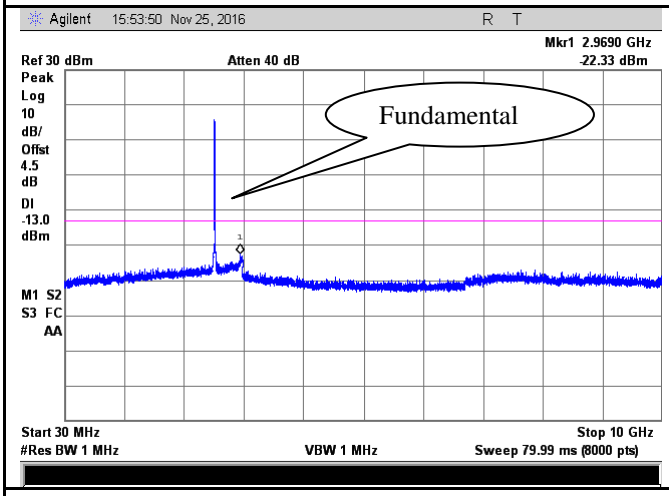
LTE Band VII (Part 27)



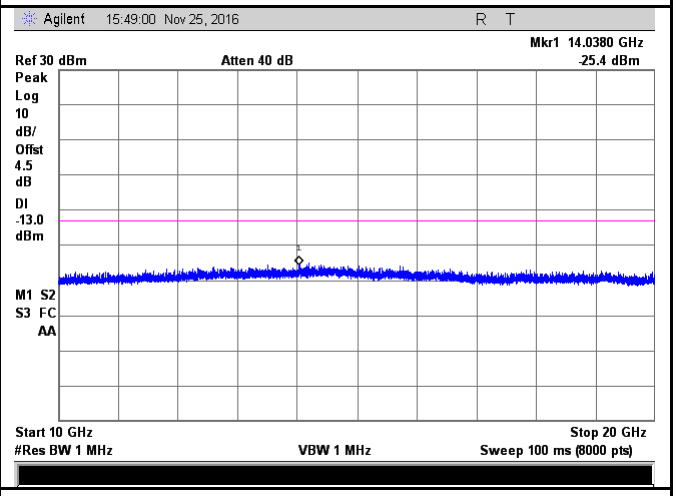
LTE Band VII - Low Channel-1



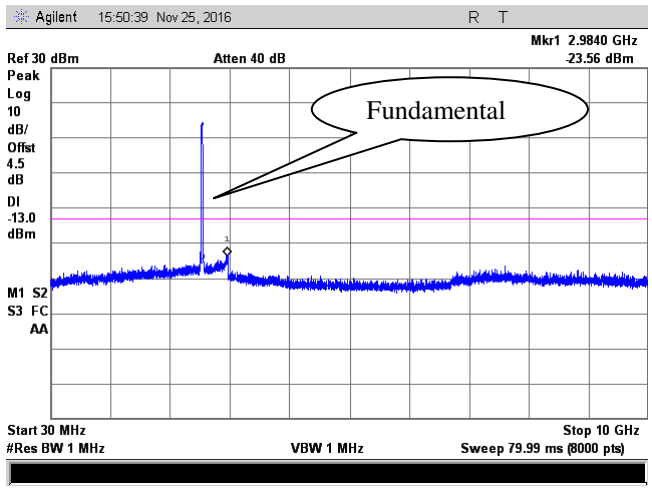
LTE Band VII - Low Channel-2



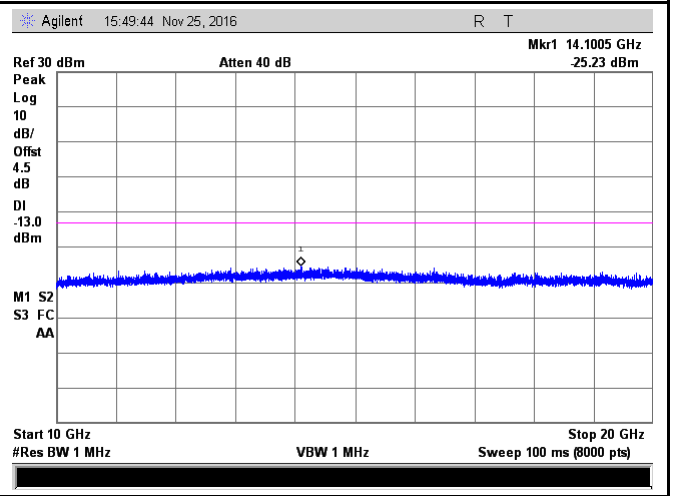
LTE Band VII- Middle Channel-1



LTE Band VII - Middle Channel-2

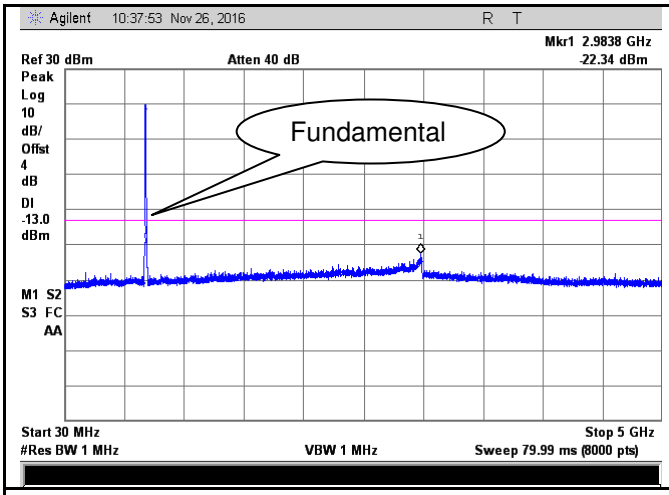


LTE Band VII - High Channel-1

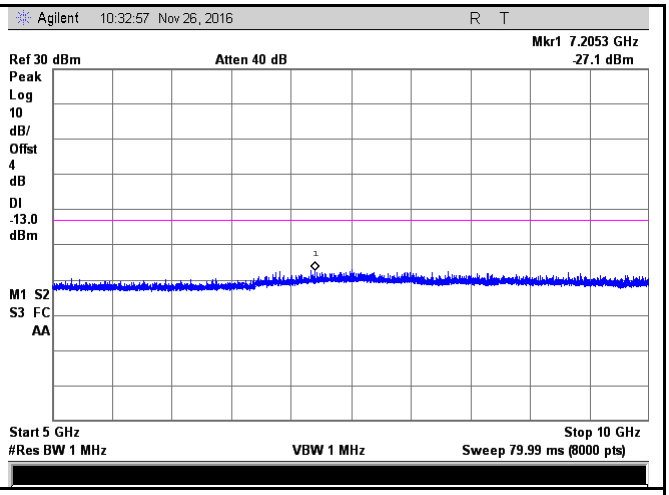


LTE Band VII - High Channel-2

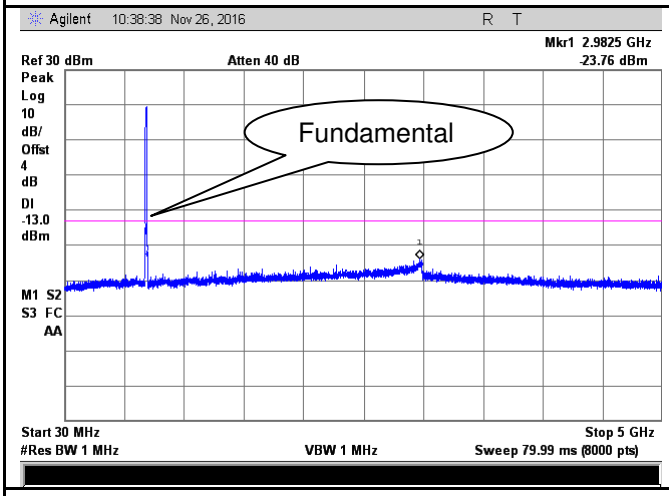
LTE Band XII (Part 27)



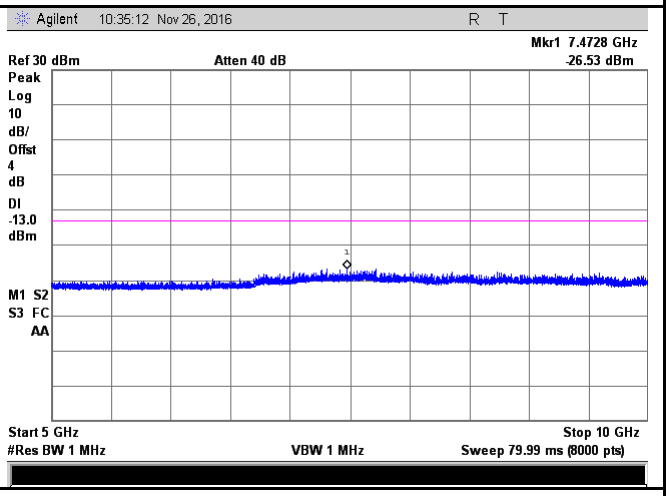
LTE Band XII - Low Channel-1



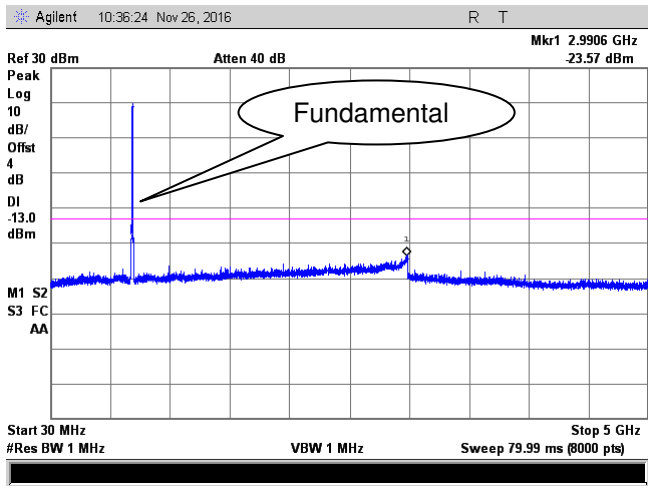
LTE Band XII - Low Channel-2



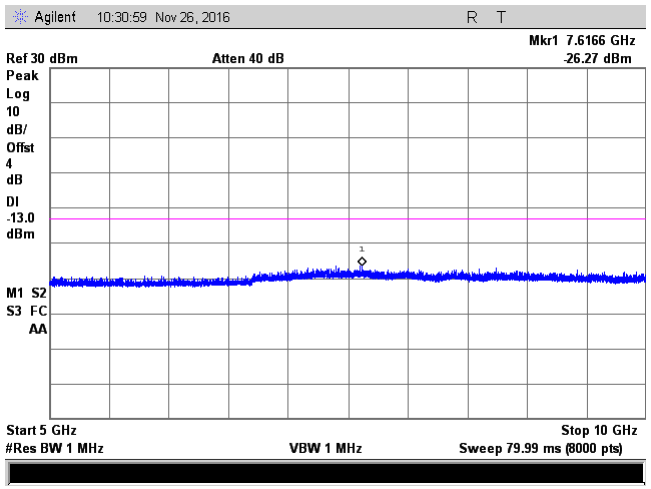
LTE Band XII- Middle Channel-1



LTE Band XII - Middle Channel-2

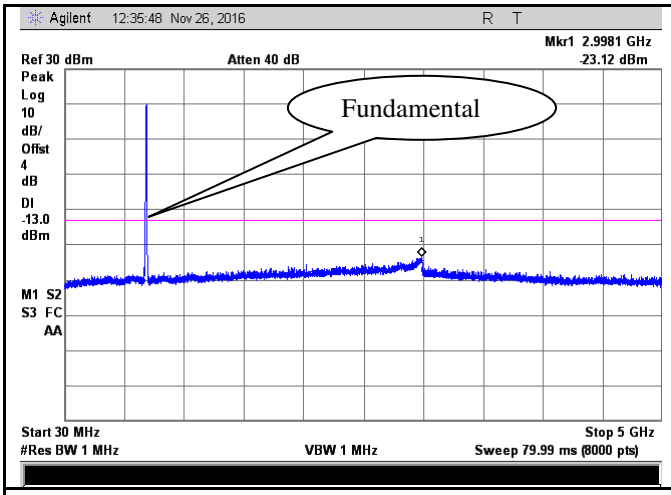


LTE Band XII - High Channel-1

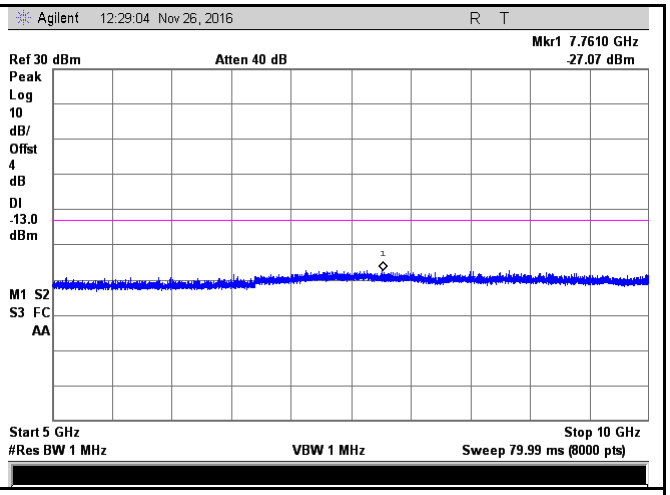


LTE Band XII - High Channel-2

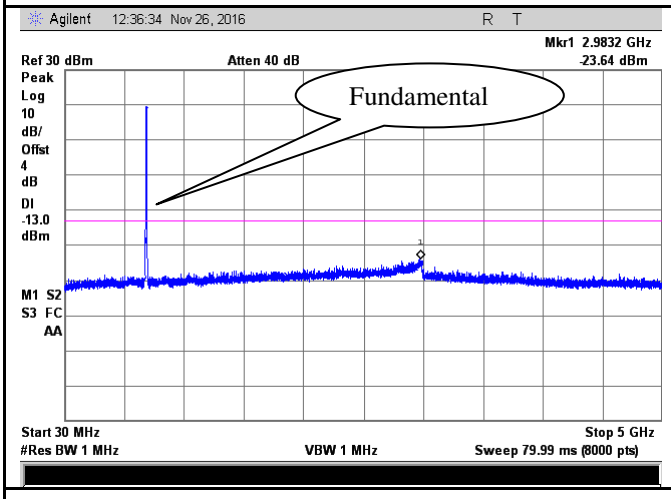
LTE Band XVII (Part 27)



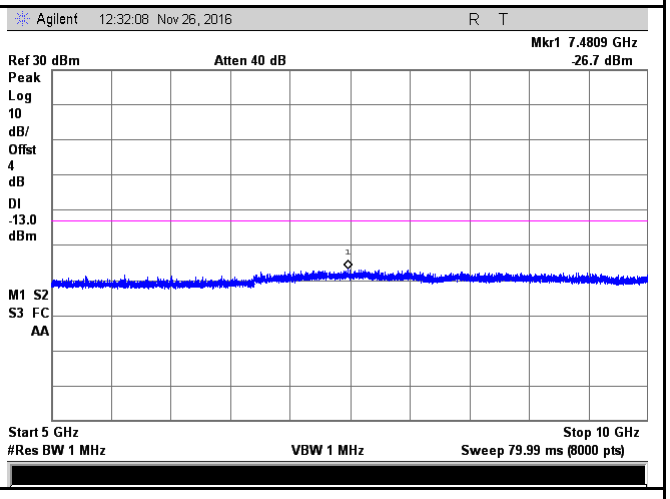
LTE Band XVII - Low Channel-1



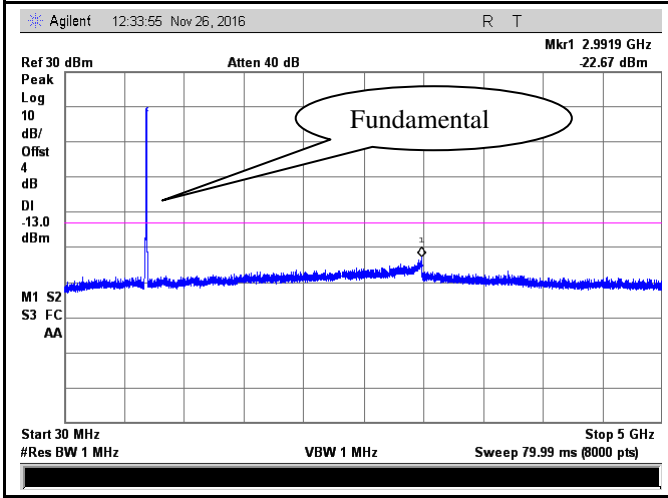
LTE Band XVII - Low Channel-2



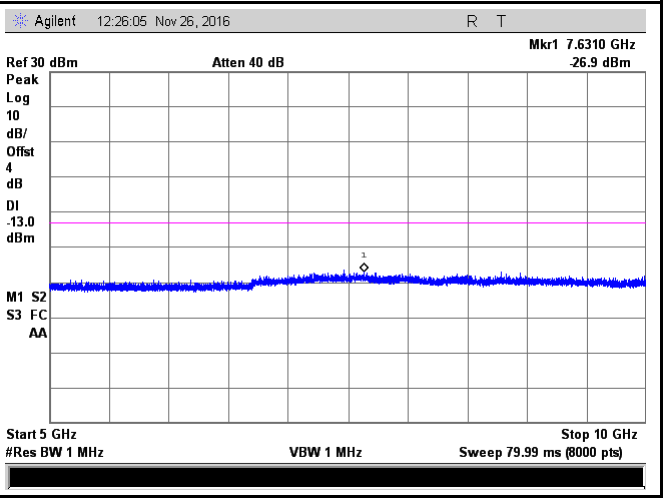
LTE Band XVII- Middle Channel-1



LTE Band XVII - Middle Channel-2



LTE Band XVII - High Channel-1

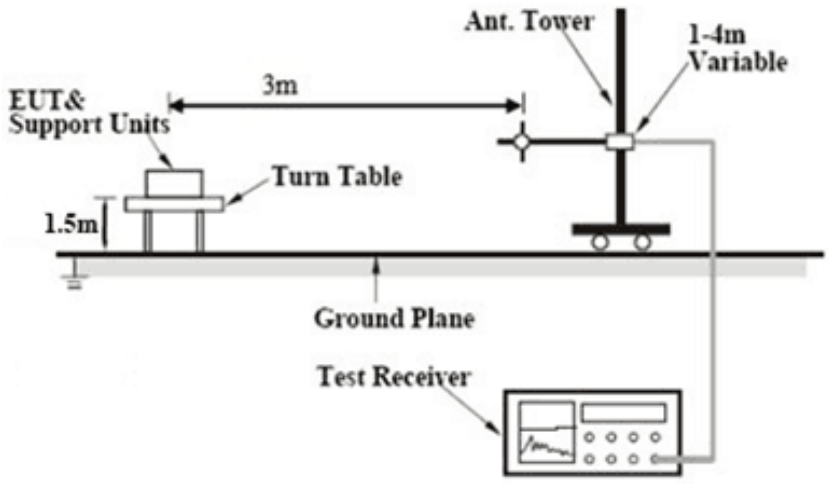


LTE Band XVII - High Channel-2

6.6 Spurious Radiated Emissions

Temperature	22℃
Relative Humidity	58%
Atmospheric Pressure	1025mbar
Test date :	November 25, 2016
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	-46.45	V	10.25	2.73	-38.93	-13	-25.93
3720	-47.23	H	10.25	2.73	-39.71	-13	-26.71
50.7	-45.34	V	-4.2	0.11	-49.65	-13	-36.65
204.6	-48.67	H	4.6	0.18	-44.25	-13	-31.25

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	-46.59	V	10.25	2.73	-39.07	-13	-26.07
3760	-47.25	H	10.25	2.73	-39.73	-13	-26.73
51.3	-45.31	V	-4.2	0.11	-49.62	-13	-36.62
205.6	-48.51	H	4.6	0.18	-44.09	-13	-31.09

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	-46.21	V	10.36	2.73	-38.58	-13	-25.58
3800	-47.13	H	10.36	2.73	-39.5	-13	-26.50
50.7	-45.24	V	-4.2	0.11	-49.55	-13	-36.55
202.3	-47.16	H	4.6	0.18	-42.74	-13	-29.74

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.

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	-46.15	V	10.06	2.52	-38.61	-13	-25.61
3440	-47.35	H	10.06	2.52	-39.81	-13	-26.81
50.5	-45.67	V	-4.2	0.11	-49.98	-13	-36.98
204.3	-48.49	H	4.6	0.18	-44.07	-13	-31.07

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	-46.28	V	10.09	2.52	-38.71	-13	-25.71
3465	-47.52	H	10.09	2.52	-39.95	-13	-26.95
51.2	-46.49	V	-4.2	0.11	-50.8	-13	-37.80
204.7	-49.28	H	4.6	0.18	-44.86	-13	-31.86

High channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
3490	-46.27	V	10.09	2.52	-38.7	-13	-25.70
3490	-47.35	H	10.09	2.52	-39.78	-13	-26.78
49.8	-46.49	V	-4.2	0.11	-50.8	-13	-37.80
202.5	-49.27	H	4.6	0.18	-44.85	-13	-31.85

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 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	-48.16	V	10.29	0.98	-38.85	-13	-25.85
5020	-48.27	H	10.29	0.98	-38.96	-13	-25.96
50.4	-46.38	V	-4.2	0.11	-50.69	-13	-37.69
205.7	-48.17	H	4.6	0.18	-43.75	-13	-30.75

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	-48.22	V	10.3	0.99	-38.91	-13	-25.91
5070	-48.15	H	10.3	0.99	-38.84	-13	-25.84
50.8	-46.34	V	-4.2	0.11	-50.65	-13	-37.65
201.6	-48.39	H	4.6	0.18	-43.97	-13	-30.97

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	-48.25	V	10.32	1	-38.93	-13	-25.93
5120	-48.26	H	10.32	1	-38.94	-13	-25.94
49.6	-46.27	V	-4.2	0.11	-50.58	-13	-37.58
202.5	-47.31	H	4.6	0.18	-42.89	-13	-29.89

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.

LTE Band XII (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)
1408	-48.11	V	7.65	0.75	-41.21	-13	-28.21
1408	-47.28	H	7.65	0.75	-40.38	-13	-27.38
578.2	-56.49	V	6.5	0.36	-50.35	-13	-37.35
846.7	-50.82	H	6.8	0.44	-44.46	-13	-31.46

Middle channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
1415	-47.73	V	7.65	0.75	-40.83	-13	-27.83
1415	-47.39	H	7.65	0.75	-40.49	-13	-27.49
563.5	-56.24	V	6.5	0.36	-50.1	-13	-37.10
847.9	-50.28	H	6.8	0.44	-43.92	-13	-30.92

High channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
1422	-47.22	V	7.65	0.75	-40.32	-13	-27.32
1422	-48.31	H	7.65	0.75	-41.41	-13	-28.41
571.4	-57.62	V	6.5	0.36	-51.48	-13	-38.48
852.9	-50.23	H	6.8	0.44	-43.87	-13	-30.87

Note:

*1, The testing has been conformed to 10*715.3MHz=7,153MHz*
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 XVII (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)
1418	-43.57	V	7.65	0.75	-36.67	-13	-23.67
1418	-44.68	H	7.65	0.75	-37.78	-13	-24.78
51.4	-50.24	V	-4.2	0.11	-54.55	-13	-41.55
206.8	-49.23	H	4.6	0.18	-44.81	-13	-31.81

Middle channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
1420	-43.57	V	7.65	0.75	-36.67	-13	-23.67
1420	-44.92	H	7.65	0.75	-38.02	-13	-25.02
50.3	-45.86	V	-4.2	0.11	-50.17	-13	-37.17
204.7	-49.5	H	4.6	0.18	-45.08	-13	-32.08

High channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
1422	-44.23	V	7.65	0.75	-37.33	-13	-24.33
1422	-45.13	H	7.65	0.75	-38.23	-13	-25.23
49.9	-45.27	V	-4.2	0.11	-49.58	-13	-36.58
204.5	-49.23	H	4.6	0.18	-44.81	-13	-31.81

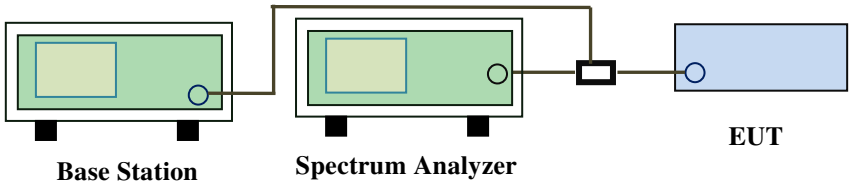
Note:

*1, The testing has been conformed to 10*713.5MHz=7,135MHz*
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.

6.7 Band Edge

Temperature	22℃
Relative Humidity	58%
Atmospheric Pressure	1025mbar
Test date :	November 25&26, 2016
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	-21.99	-13
			16QAM	-21.75	-13
1.4	18900	1910	QPSK	-25.53	-13
			16QAM	-25.98	-13
3	18615	1850	QPSK	-18.63	-13
			16QAM	-16.99	-13
3	19185	1910	QPSK	-20.72	-13
			16QAM	-20.46	-13
5	18625	1850	QPSK	-17.19	-13
			16QAM	-17.27	-13
5	19175	1910	QPSK	-17.94	-13
			16QAM	-17.70	-13
10	18650	1850	QPSK	-16.26	-13
			16QAM	-18.19	-13
10	19150	1910	QPSK	-19.11	-13
			16QAM	-18.61	-13
15	18675	1850	QPSK	-20.10	-13
			16QAM	-18.07	-13
15	19125	1910	QPSK	-19.49	-13
			16QAM	-19.64	-13
20	18700	1850	QPSK	-21.74	-13
			16QAM	-21.86	-13
20	19100	1910	QPSK	-21.90	-13
			16QAM	-22.05	-13

LTE Band IV (Part 27) result

BW(MHz)	Channel	Frequency (MHz)	Mode	Emission (dBm)	Limit (dBm)
1.4	19957	1709.9	QPSK	-24.41	-13
			16QAM	-24.26	-13
1.4	20393	1755	QPSK	-27.46	-13
			16QAM	-27.07	-13
3	19965	1709.9	QPSK	-18.65	-13
			16QAM	-21.75	-13
3	20385	1755	QPSK	-22.59	-13
			16QAM	-21.34	-13
5	19975	1709.9	QPSK	-17.40	-13
			16QAM	-17.16	-13
5	20375	1755	QPSK	-17.28	-13
			16QAM	-18.11	-13
10	20000	1709.9	QPSK	-18.64	-13
			16QAM	-18.64	-13
10	20350	1755	QPSK	-19.70	-13
			16QAM	-20.62	-13
15	20025	1710	QPSK	-20.77	-13
			16QAM	-21.32	-13
15	20325	1755	QPSK	-23.47	-13
			16QAM	-20.60	-13
20	20050	1710	QPSK	-21.42	-13
			16QAM	-23.02	-13
20	20300	1755	QPSK	-23.74	-13
			16QAM	-22.30	-13

LTE Band XII (Part 27) result

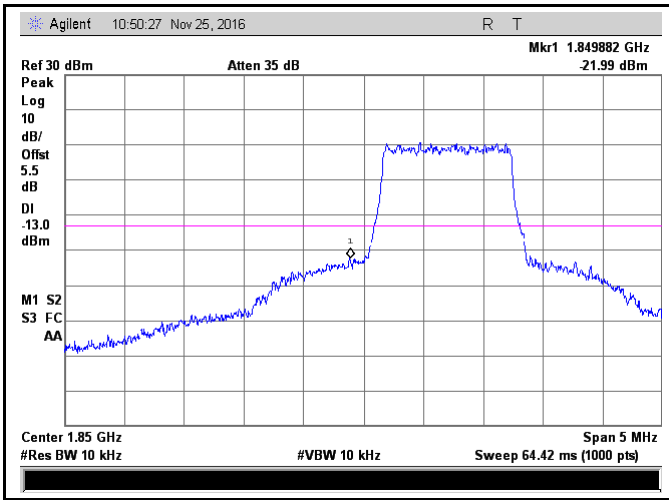
BW(MHz)	Channel	Frequency (MHz)	Mode	Emission (dBm)	Limit (dBm)
1.4	23017	699	QPSK	-27.94	-13
			16QAM	-27.21	-13
1.4	23173	716	QPSK	-23.68	-13
			16QAM	-22.67	-13
3	23025	699	QPSK	-19.01	-13
			16QAM	-18.71	-13
3	23165	716	QPSK	-20.01	-13
			16QAM	-19.72	-13
5	23035	699	QPSK	-14.90	-13
			16QAM	-15.66	-13
5	23155	716	QPSK	-19.28	-13
			16QAM	-18.19	-13
10	23060	698	QPSK	-17.10	-13
			16QAM	-18.75	-13
10	23130	716	QPSK	-20.35	-13
			16QAM	-18.12	-13

LTE Band XVII (Part 27) result

BW(MHz)	Channel	Frequency (MHz)	Mode	Emission (dBm)	Limit (dBm)
5	23755	704	QPSK	-13.72	-13
			16QAM	-14.52	-13
5	23825	716	QPSK	-18.04	-13
			16QAM	-18.42	-13
10	23780	704	QPSK	-16.17	-13
			16QAM	-14.57	-13
10	23800	716	QPSK	-18.38	-13
			16QAM	-16.74	-13

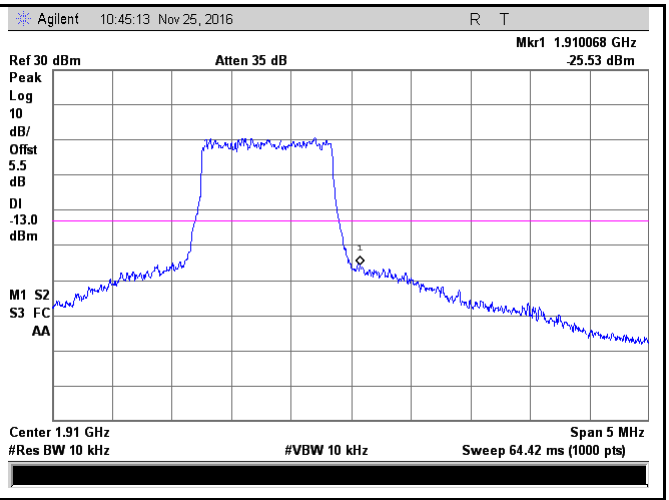
Test Plots

LTE Band II (Part 24E)



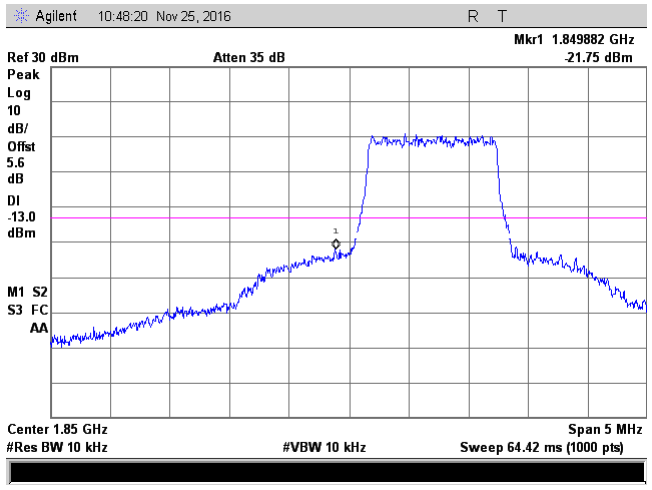
LTE Band II - Low Channel QPSK-1.4

Note: Offset=Cable loss (4.5) + 10log (12.73/10)=4.5+1.0=5.5dB



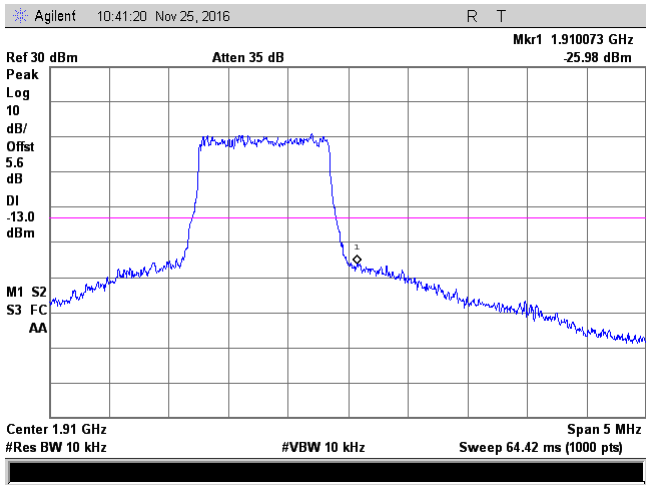
LTE Band II - High Channel QPSK-1.4

Note: Offset=Cable loss (4.5) + 10log (12.56/10)=4.5+1.0=5.5dB



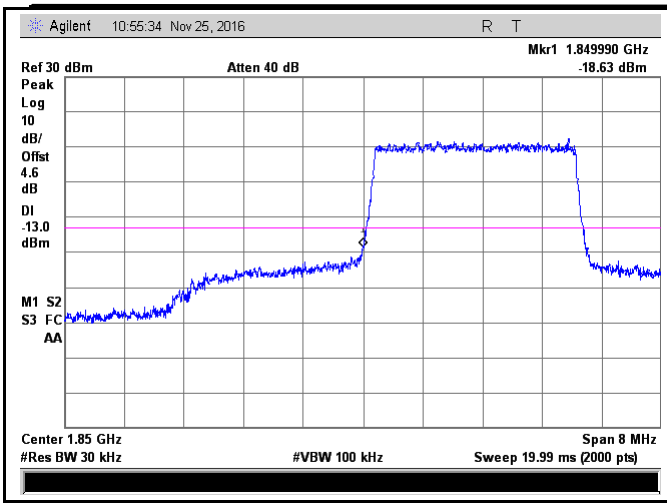
LTE Band II - Low Channel 16QAM-1.4

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



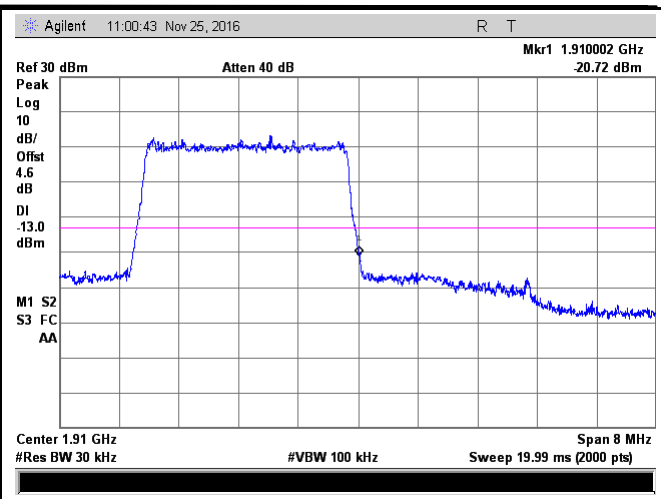
LTE Band II - High Channel 16QAM-1.4

Note: Offset=Cable loss (4.5) + 10log (12.74/10)=4.5+1.1=5.6 dB



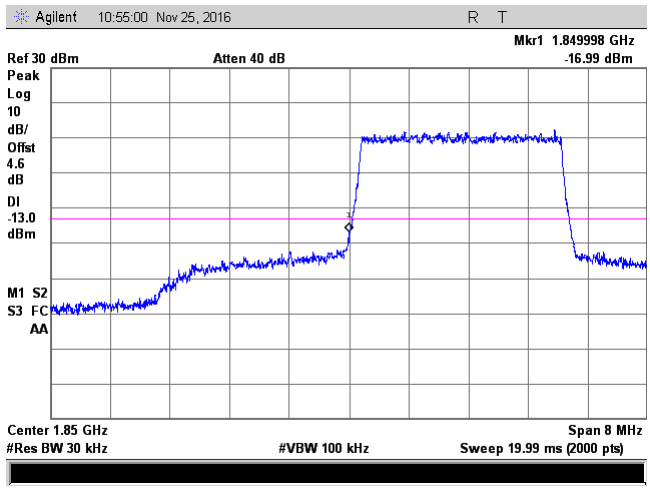
LTE Band II - Low Channel QPSK-3

Note: Offset=Cable loss (4.5) + 10log (30.94/30)=4.5+0.1=4.6 dB



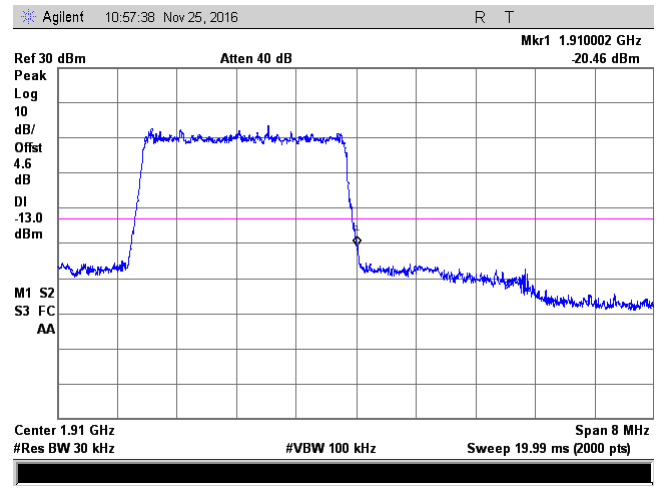
LTE Band II - High Channel QPSK-3

Note: Offset=Cable loss (4.5) + 10log (30.95/30)=4.5+0.1=4.6 dB



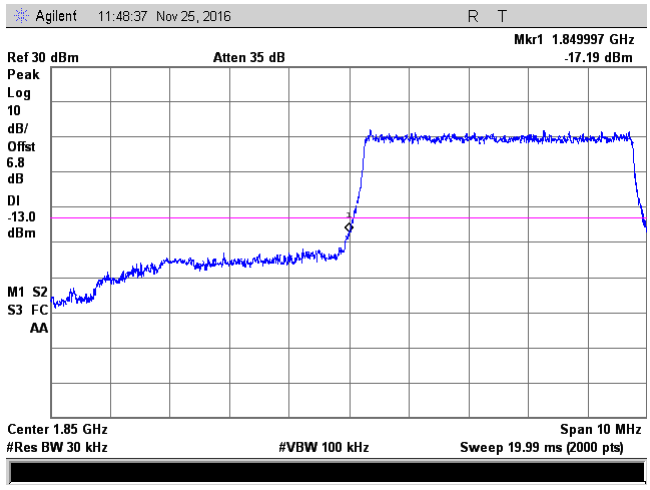
LTE Band II - Low Channel 16QAM-3

Note: Offset=Cable loss (4.5) + 10log (30.84/30)=4.5+0.1=4.6 dB

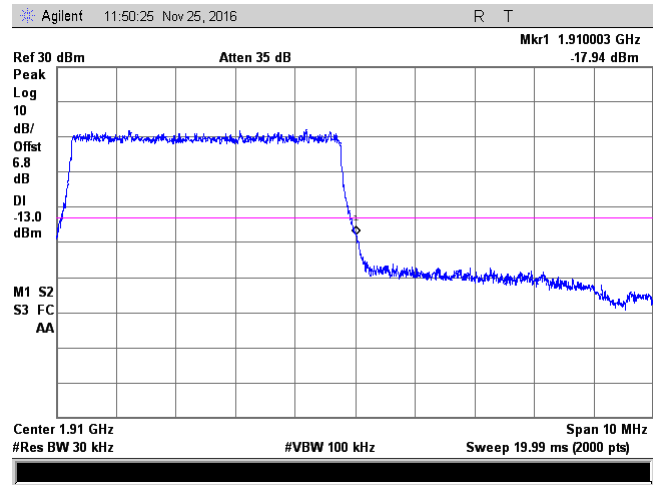


LTE Band II - High Channel 16QAM-3

Note: Offset=Cable loss (4.5) + 10log (30.89/30)=4.5+0.1=4.6 dB

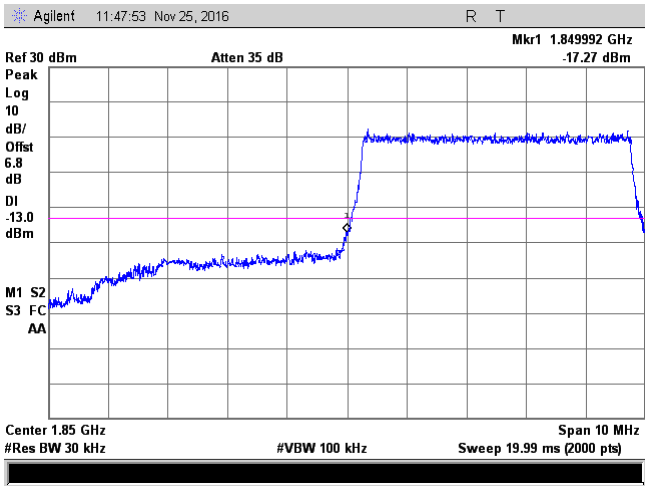


LTE Band II - Low Channel QPSK-5



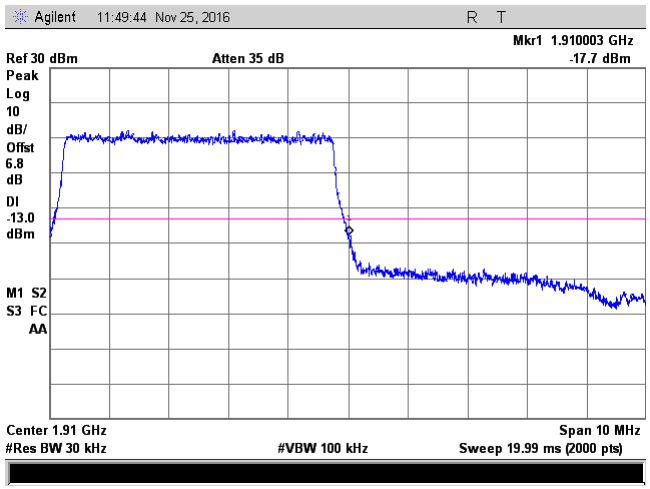
LTE Band II - High Channel QPSK-5

Note: Offset=Cable loss (4.5) + 10log (51.22/30)=4.5+2.3=6.8 dB



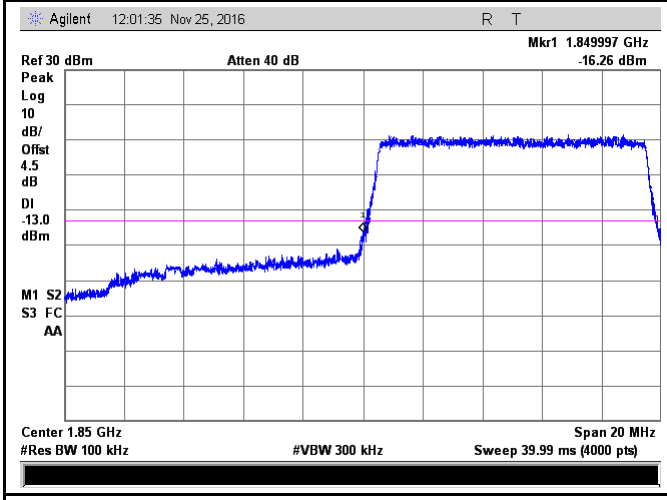
LTE Band II - Low Channel 16QAM-5

Note: Offset=Cable loss (4.5) + 10log (50.53/30)=4.5+2.3=6.8 dB



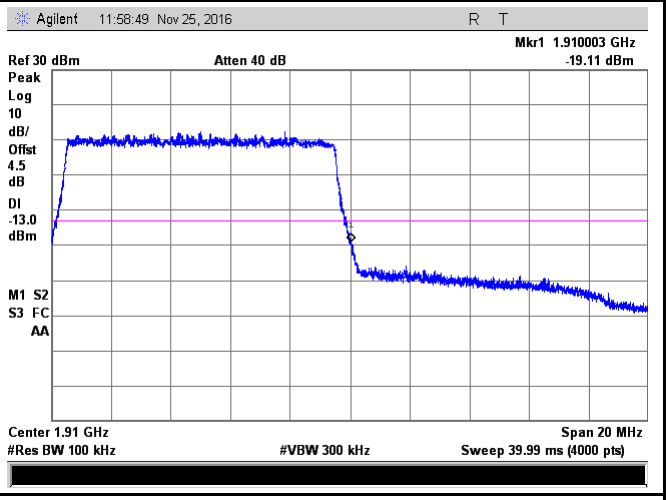
LTE Band II - High Channel 16QAM-5

Note: Offset=Cable loss (4.5) + 10log (51.09/30)=4.5+2.3=6.8 dB

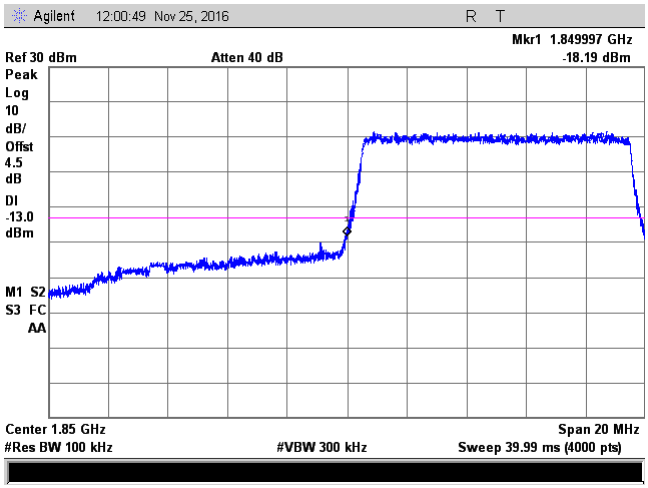


LTE Band II - Low Channel QPSK-10

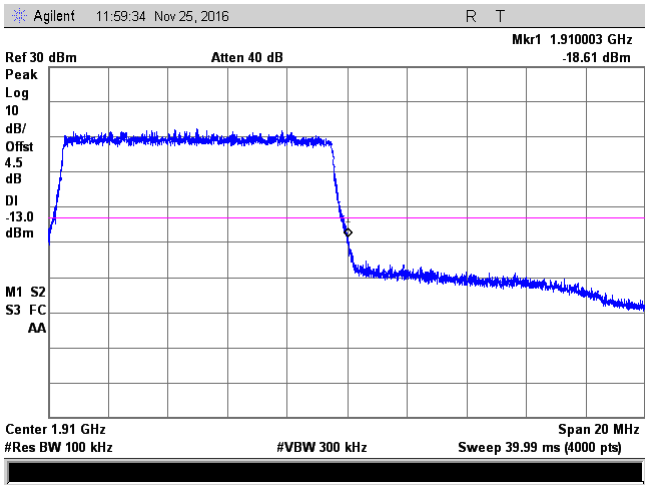
Note: Offset=Cable loss (4.5) + 10log (50.77/30)=4.5+2.3=6.8 dB



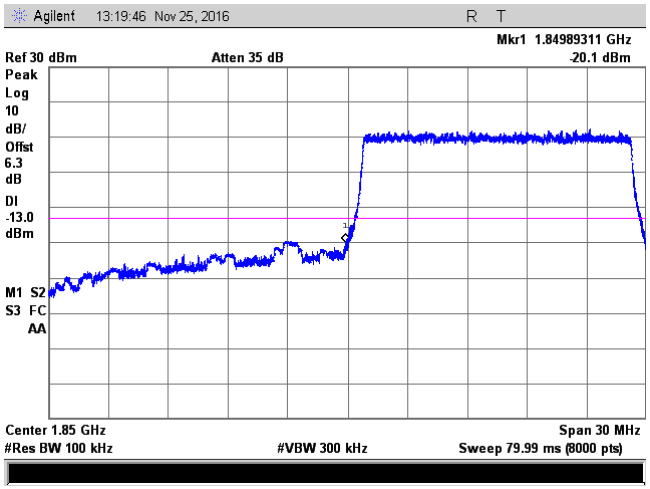
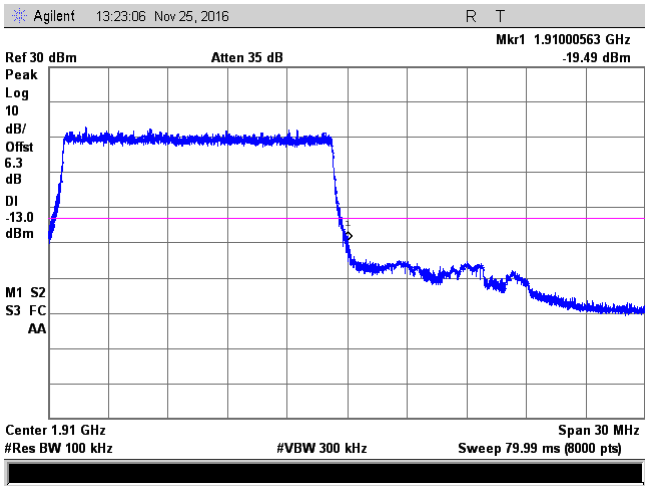
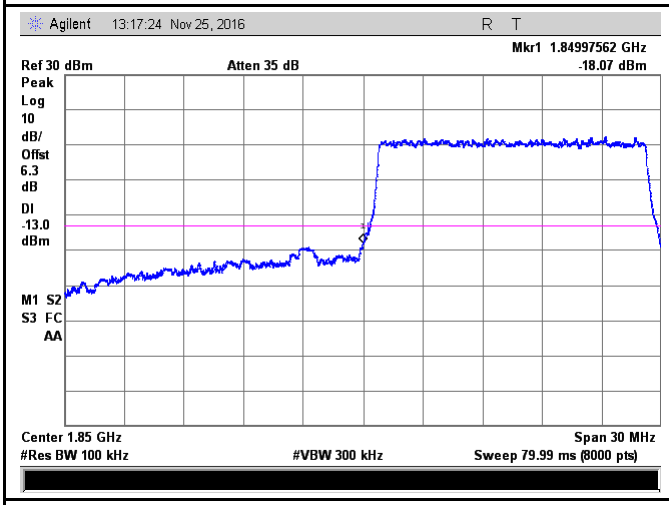
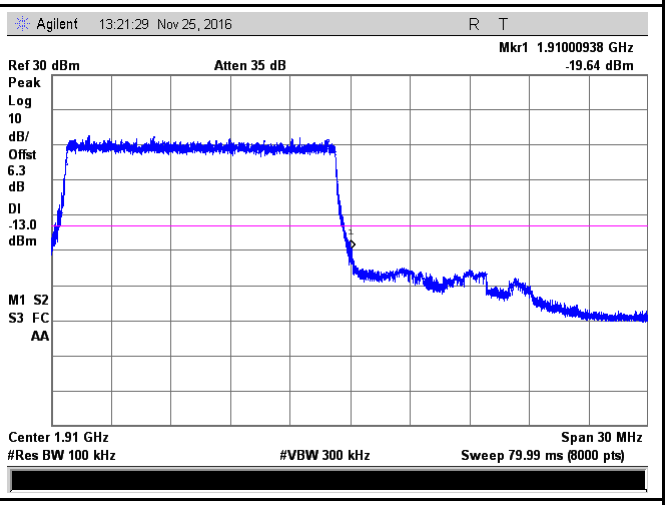
LTE Band II - High Channel QPSK-10

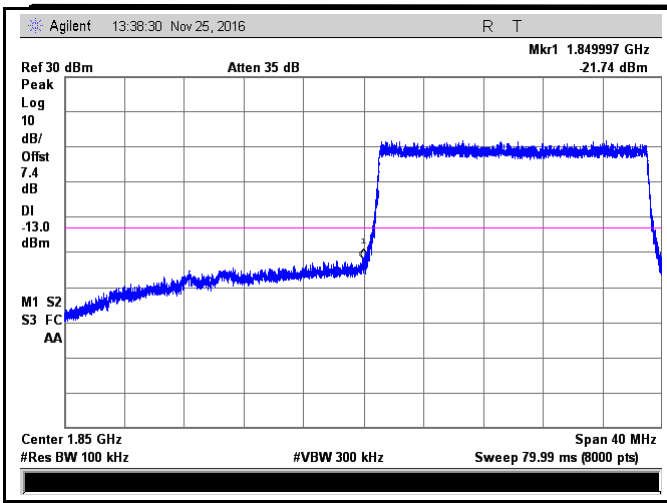


LTE Band II - Low Channel 16QAM-10



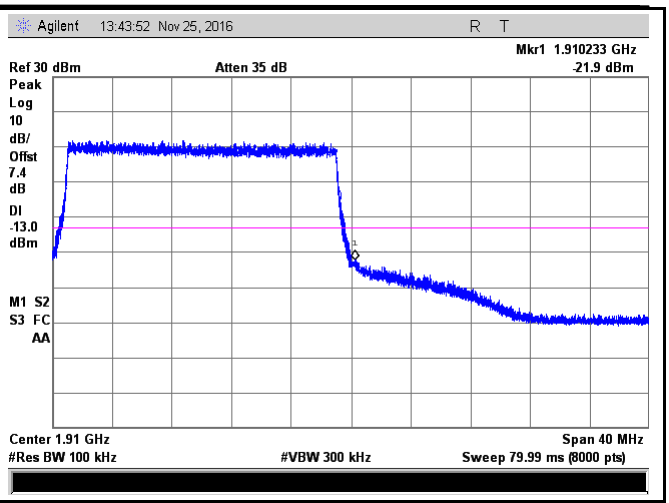
LTE Band II - High Channel 16QAM-10

Note: Offset=Cable loss (4.5) + 10log (102.7/100)=4.5+0.0=4.5 dB	Note: Offset=Cable loss (4.5) + 10log (104.3/100)=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 (149.8/100)=4.5+1.8=6.3 dB	Note: Offset=Cable loss (4.5) + 10log (149.7/100)=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 (149.9/100)=4.5+1.8=6.3 dB	Note: Offset=Cable loss (4.5) + 10log (150.1/100)=4.5+1.8=6.3 dB



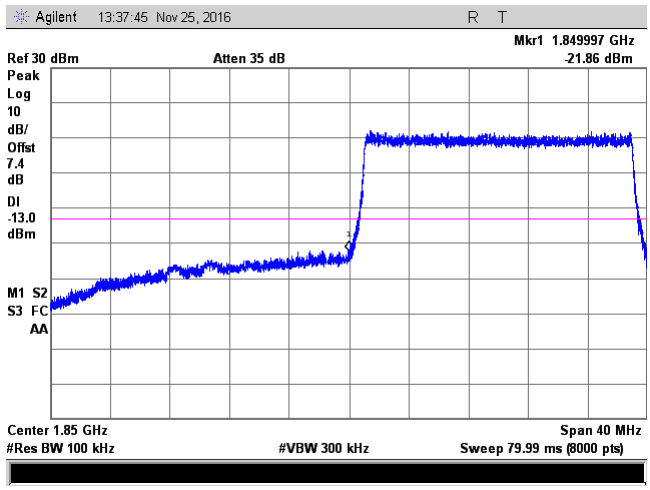
LTE Band II - Low Channel QPSK-20

Note: Offset=Cable loss (4.5) + 10log (196.4/100)=4.5+2.9=7.4 dB



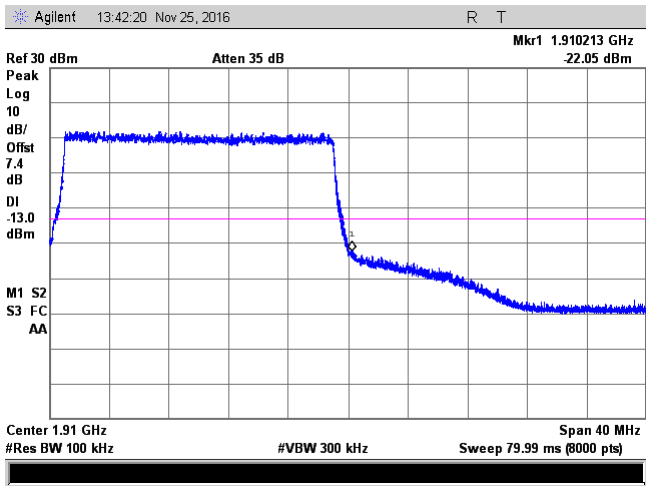
LTE Band II - High Channel QPSK-20

Note: Offset=Cable loss (4.5) + 10log (194.2/100)=4.5+2.9=7.4 dB



LTE Band II - Low Channel 16QAM-20

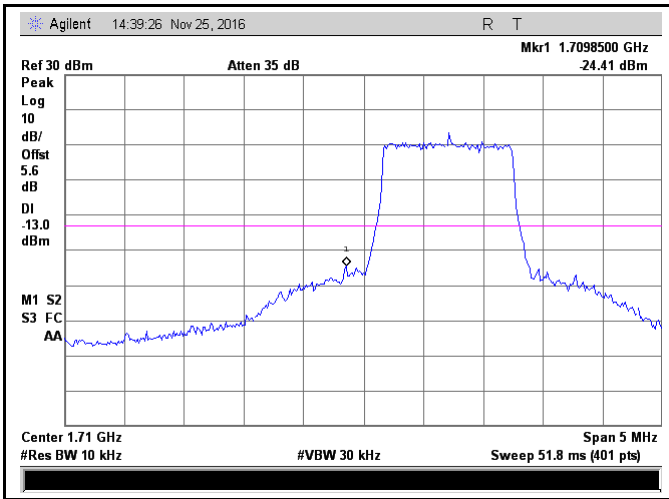
Note: Offset=Cable loss (4.5) + 10log (195.2/100)=4.5+2.9=7.4 dB



LTE Band II - High Channel 16QAM-20

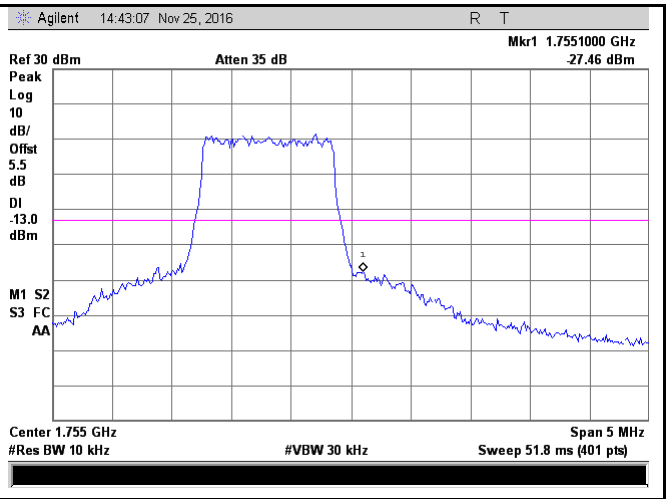
Note: Offset=Cable loss (4.5) + 10log (195.6/100)=4.5+2.9=7.4 dB

LTE Band IV (Part 27)



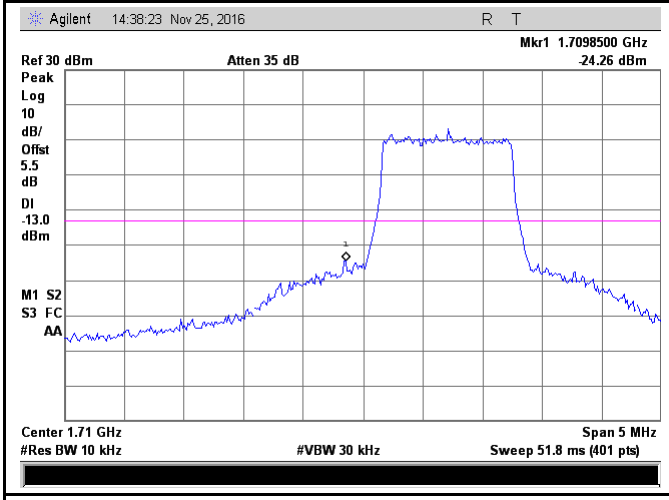
LTE Band IV - Low Channel QPSK-1.4

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



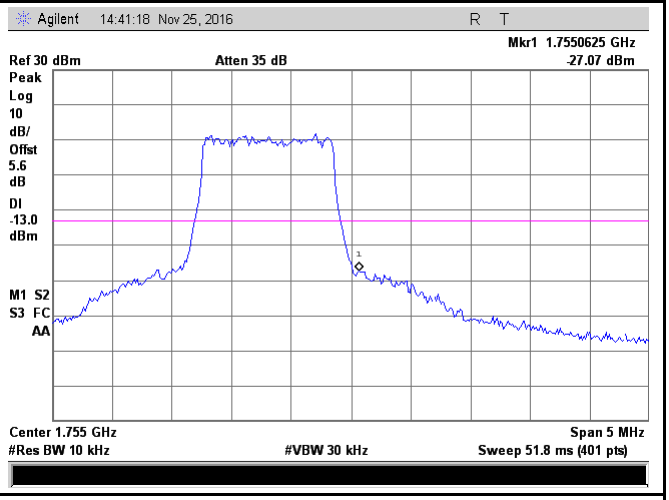
LTE Band IV - High Channel QPSK-1.4

Note: Offset=Cable loss (4.5) + 10log (12.70/10)=4.5+1.0=5.5 dB



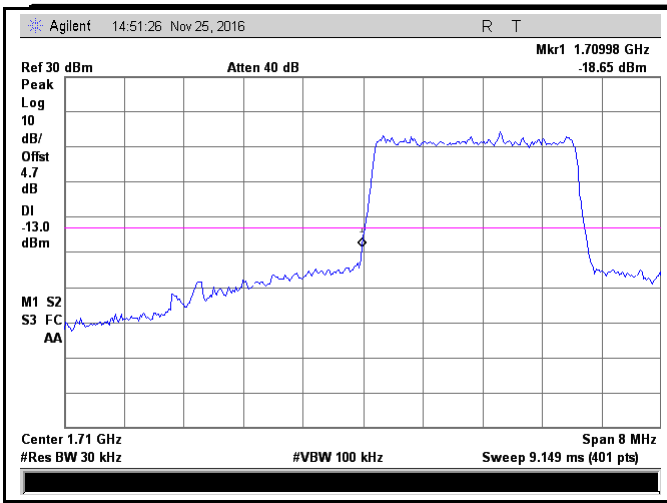
LTE Band IV - Low Channel 16QAM-1.4

Note: Offset=Cable loss (4.5) + 10log (12.70/10)=4.5+1.0=5.5 dB



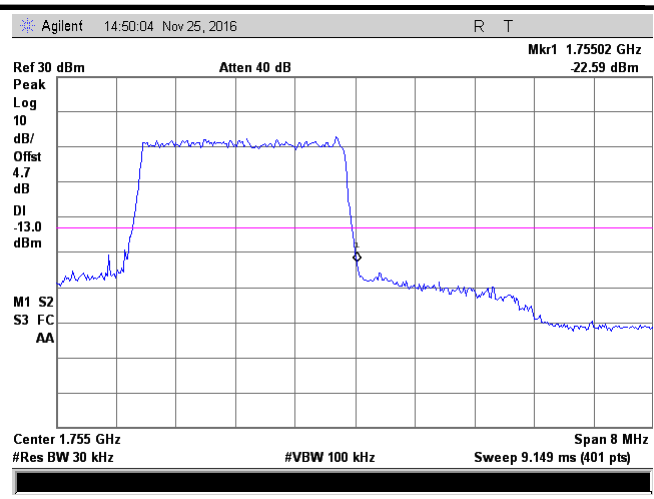
LTE Band IV - High Channel 16QAM-1.4

Note: Offset=Cable loss (4.5) + 10log ((12.76/10)=4.5+1.1=5.6 dB



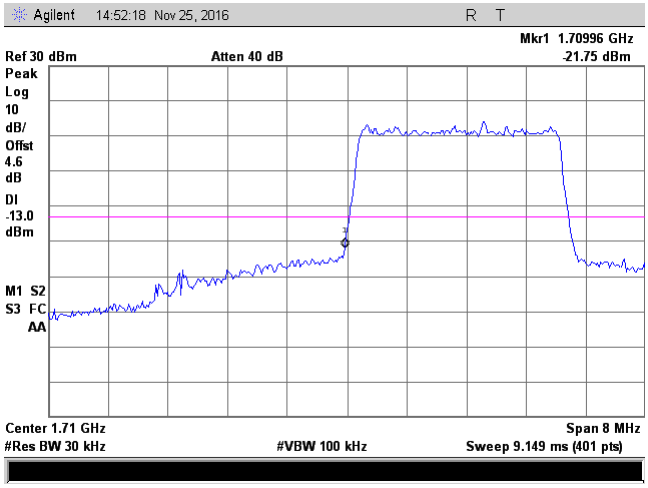
LTE Band IV - Low Channel QPSK-3

Note: Offset=Cable loss (4.5) + 10log (31.07/30)=4.5+0.2=4.7 dB



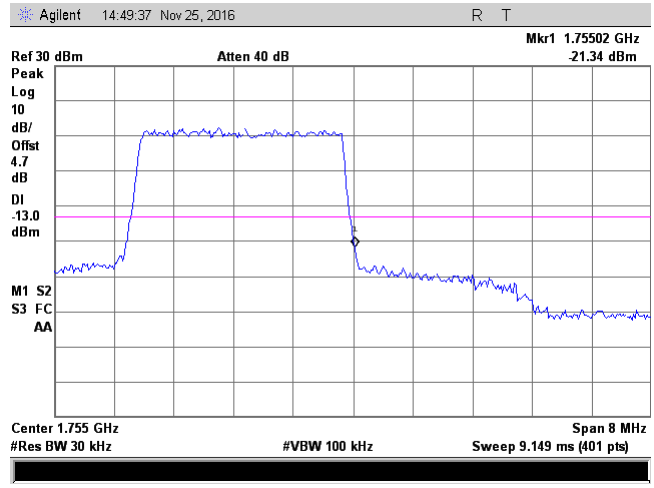
LTE Band IV - High Channel QPSK-3

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



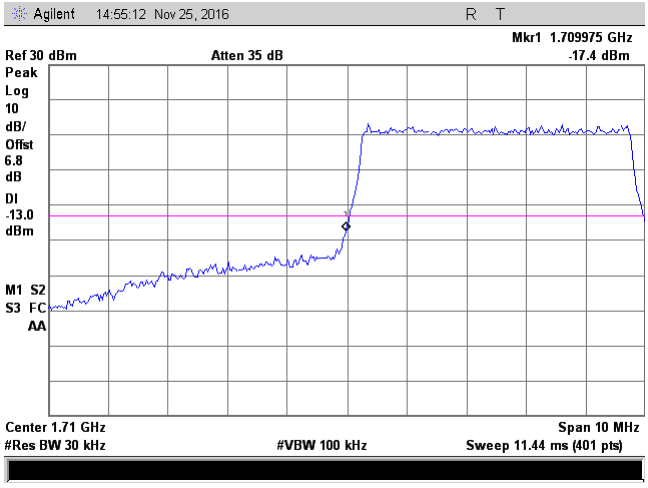
LTE Band IV - Low Channel 16QAM-3

Note: Offset=Cable loss (4.5) + 10log (30.9/30)=4.5+0.1=4.6 dB

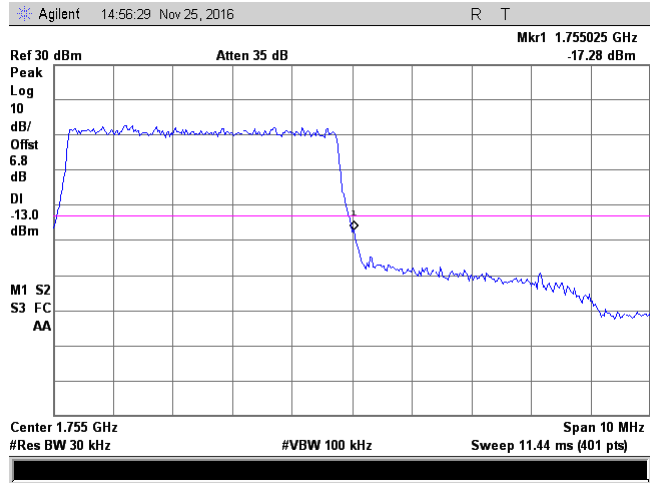


LTE Band IV - High Channel 16QAM-3

Note: Offset=Cable loss (4.5) + 10log (31.21/30)=4.5+0.2=4.7 dB

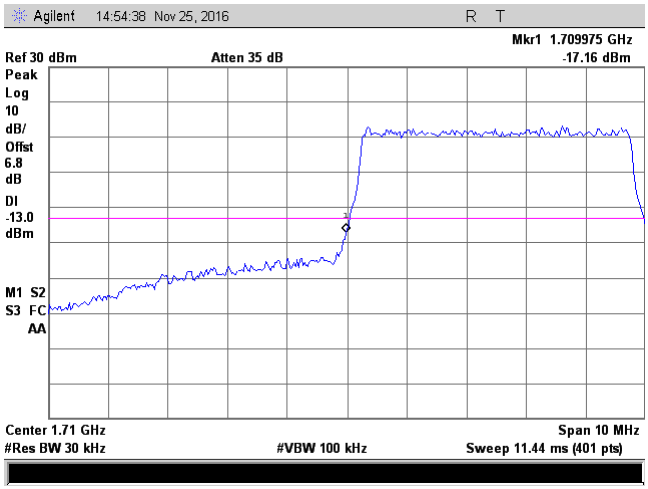


LTE Band IV - Low Channel QPSK-5



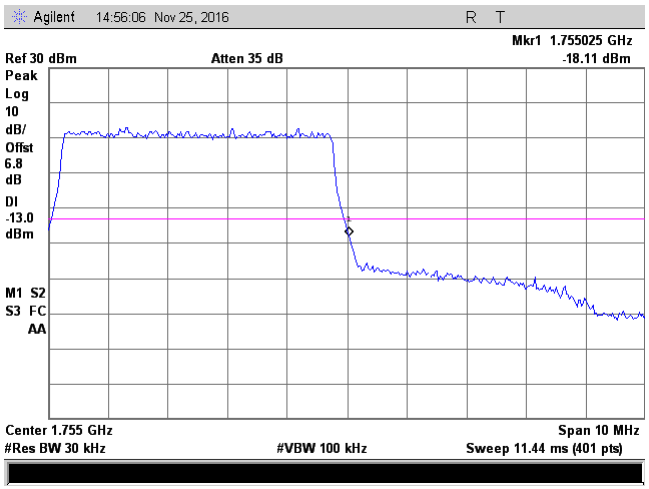
LTE Band IV - High Channel QPSK-5

Note: Offset=Cable loss (4.5) + 10log (50.96/30)=4.5+2.3=6.8 dB



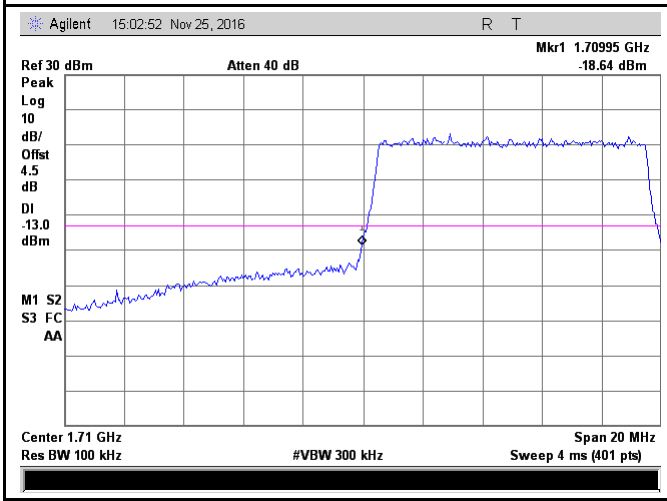
LTE Band IV - Low Channel 16QAM-5

Note: Offset=Cable loss (4.5) + 10log (50.49/30)=4.5+2.3=6.8 dB



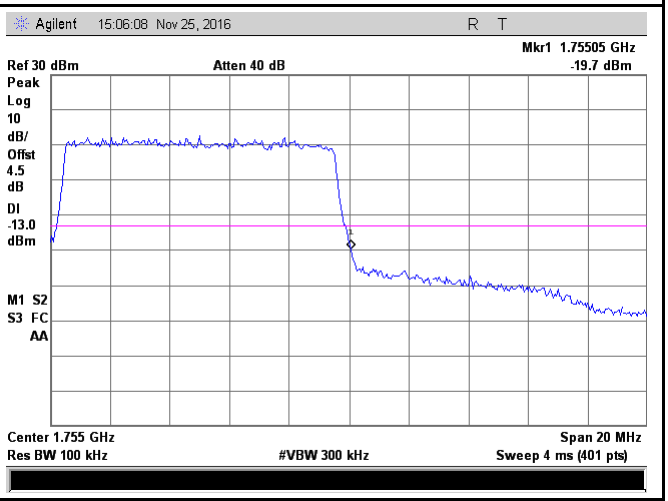
LTE Band IV - High Channel 16QAM-5

Note: Offset=Cable loss (4.5) + 10log (51.07/30)=4.5+2.3=6.8 dB

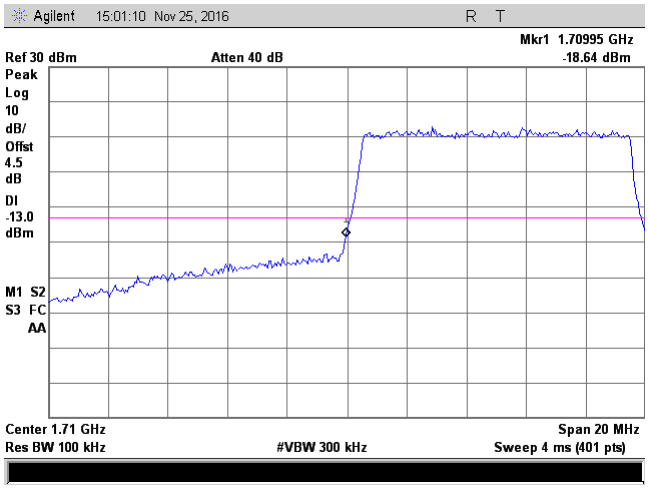


LTE Band IV - Low Channel QPSK-10

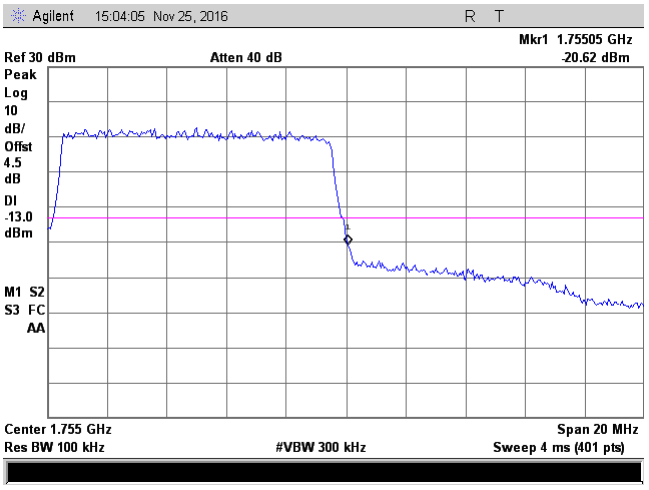
Note: Offset=Cable loss (4.5) + 10log (50.78/30)=4.5+2.3=6.8 dB



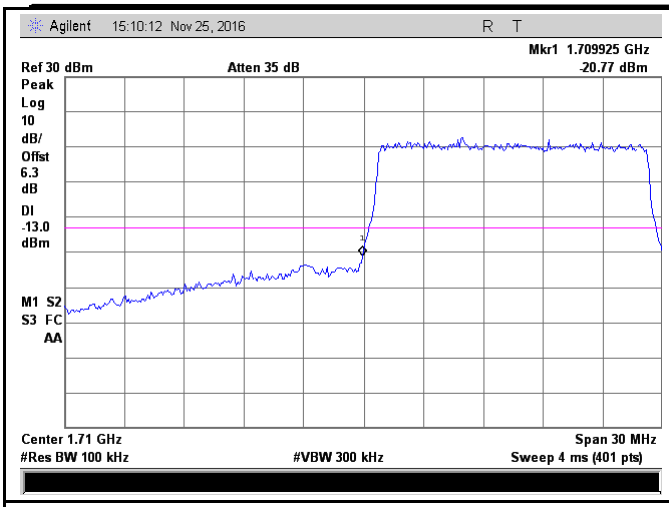
LTE Band IV - High Channel QPSK-10



LTE Band IV - Low Channel 16QAM-10

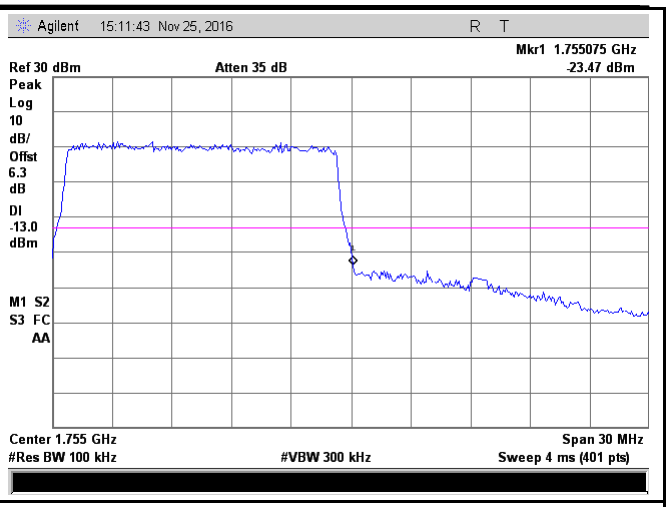


LTE Band IV - High Channel 16QAM-10



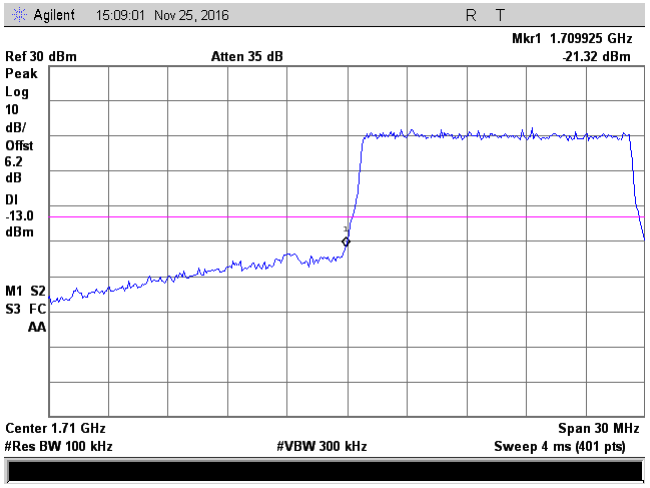
LTE Band IV - Low Channel QPSK-15

Note: Offset=Cable loss (4.5) + 10log (150.1/100)=4.5+1.8=6.3 dB



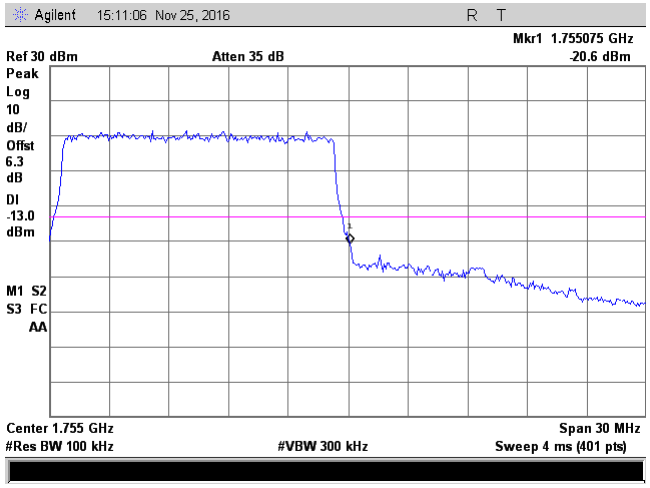
LTE Band IV - High Channel QPSK-15

Note: Offset=Cable loss (4.5) + 10log (149.7/100)=4.5+1.8=6.3 dB



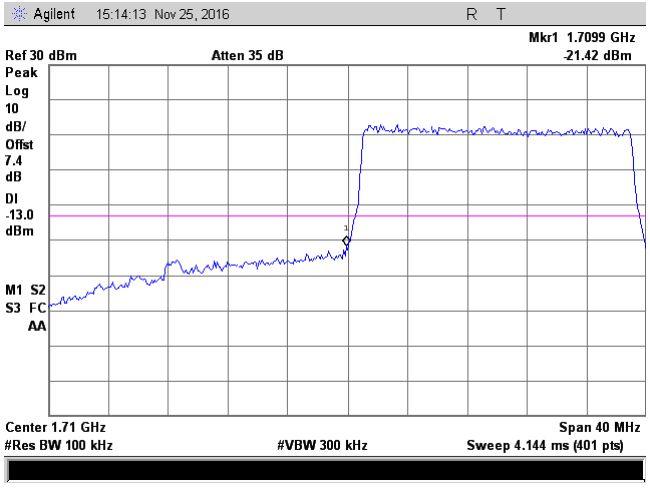
LTE Band IV - Low Channel 16QAM-15

Note: Offset=Cable loss (4.5) + 10log (150/100)=4.5+1.8=6.3 dB

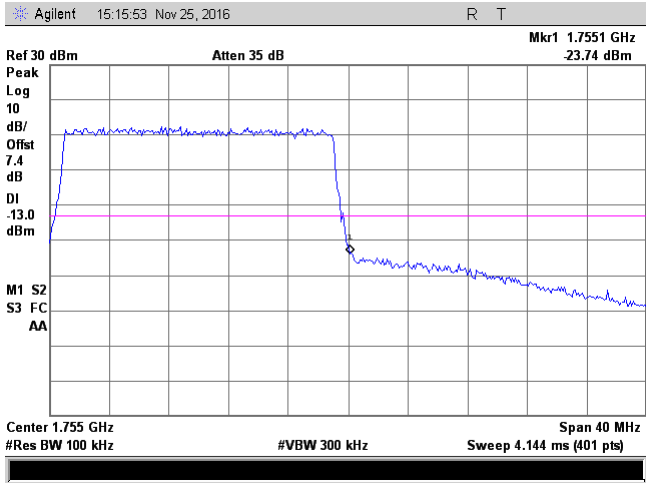


LTE Band IV - High Channel 16QAM-15

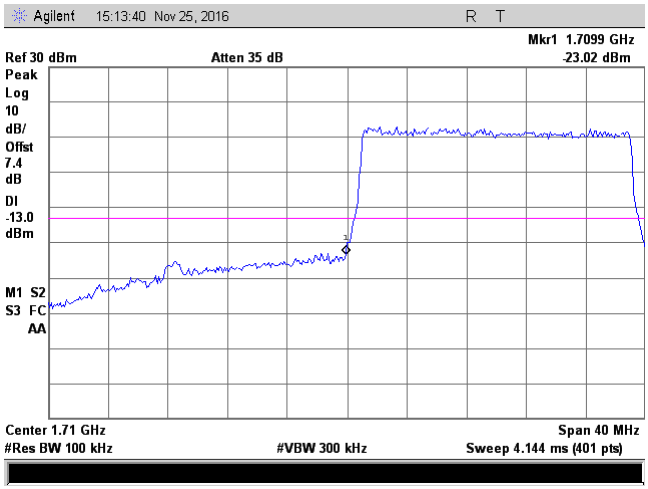
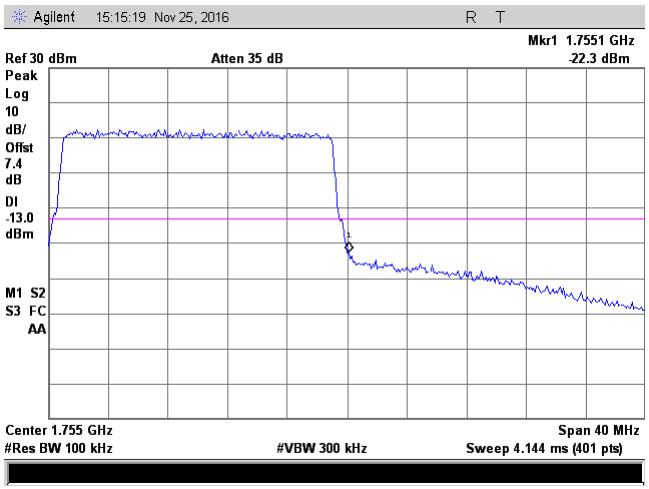
Note: Offset=Cable loss (4.5) + 10log (150/100)=4.5+1.8=6.3 dB



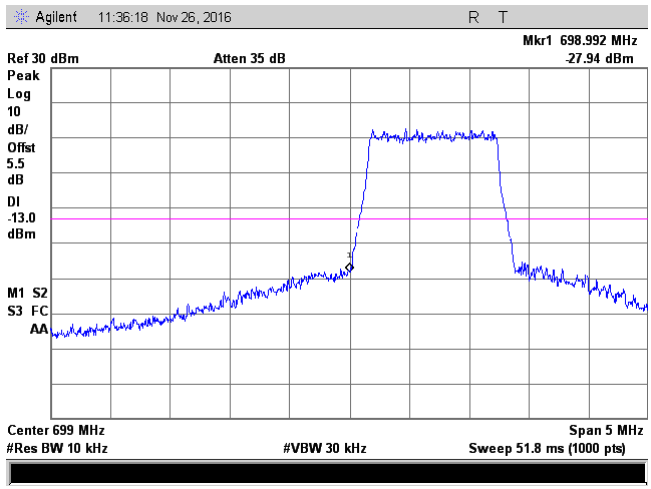
LTE Band IV - Low Channel QPSK-20



LTE Band IV - High Channel QPSK-20

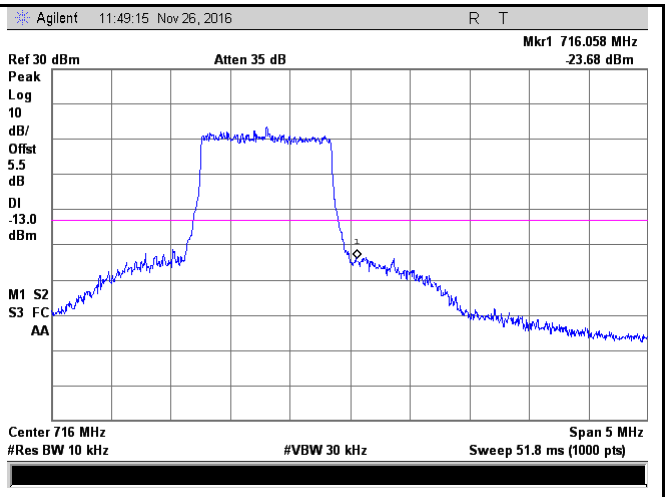
Note: Offset=Cable loss (4.5) + 10log (195.7/100)=4.5+2.9=7.4 dB	Note: Offset=Cable loss (4.5) + 10log (193.7/100)=4.5+2.9=7.4 dB
	
LTE Band IV - Low Channel 16QAM-20	LTE Band IV - High Channel 16QAM-20
Note: Offset=Cable loss (4.5) + 10log (196.0/100)=4.5+2.9=7.4dB	Note: Offset=Cable loss (4.5) + 10log (193.9/100)=4.5+2.9=7.4 dB

LTE Band XII (Part 27)



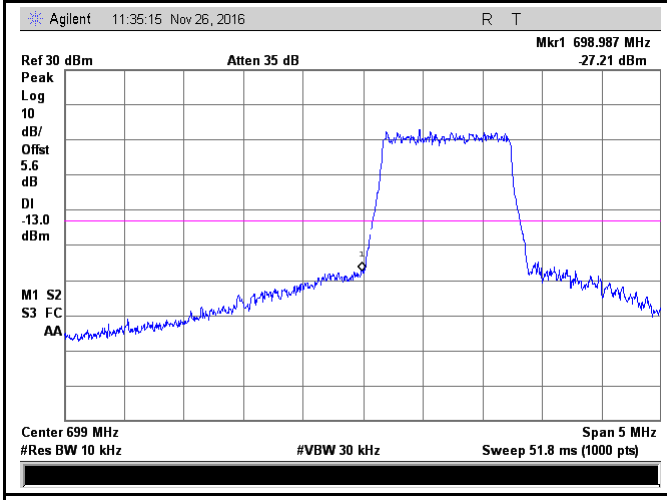
LTE Band XII - Low Channel QPSK-1.4

Note: Offset=Cable loss (4.5) + 10log (12.71/10)=4.5+1.0=5.5 dB



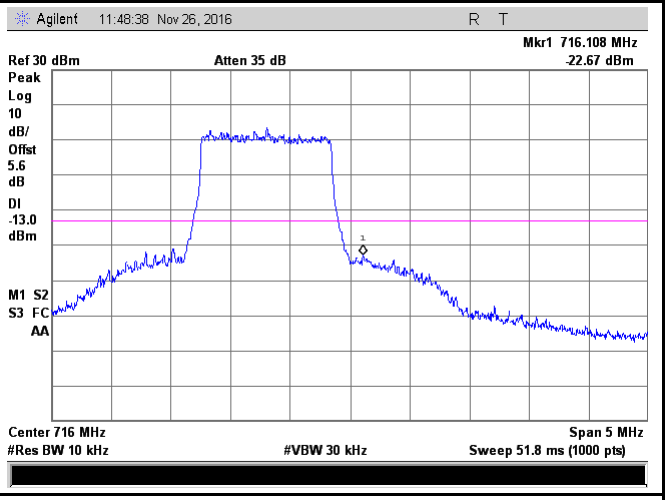
LTE Band XII - High Channel QPSK-1.4

Note: Offset=Cable loss (4.5) + 10log (12.59/10)=4.5+1.0=5.5 dB



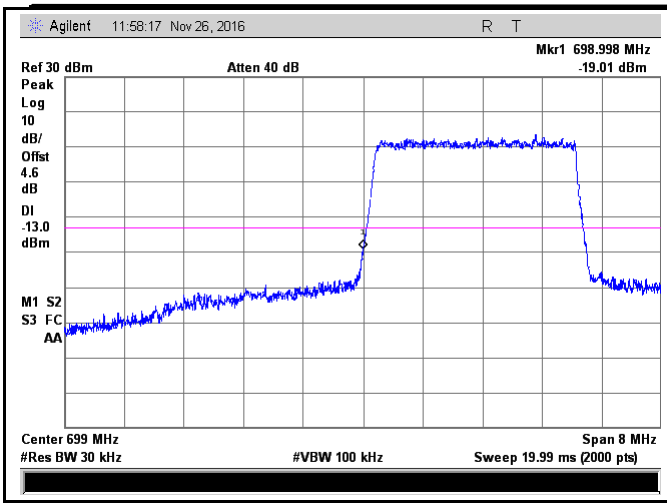
LTE Band XII - Low Channel 16QAM-1.4

Note: Offset=Cable loss (4.5) + 10log (12.88/10)=4.5+1.1=5.6 dB



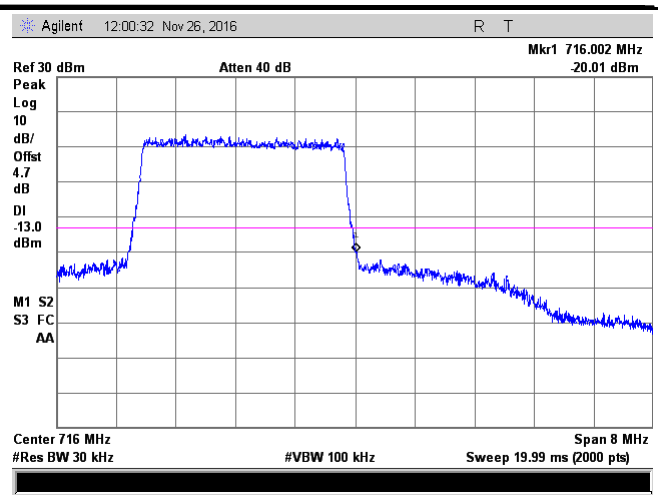
LTE Band XII - High Channel 16QAM-1.4

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



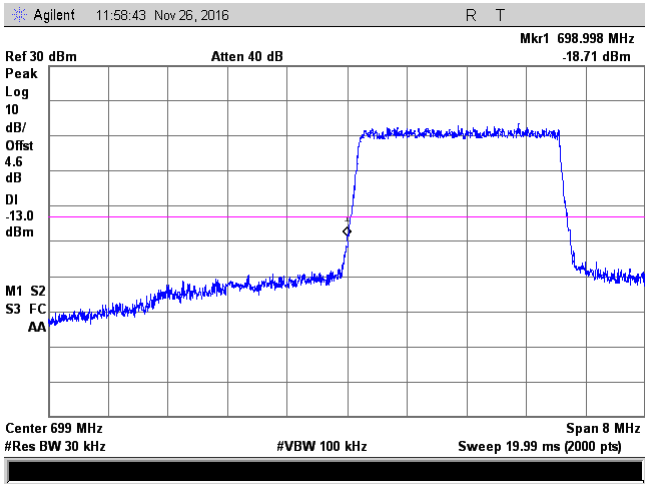
LTE Band XII - Low Channel QPSK-3

Note: Offset=Cable loss (4.5) + 10log (30.72/30)=4.5+0.1=4.6 dB



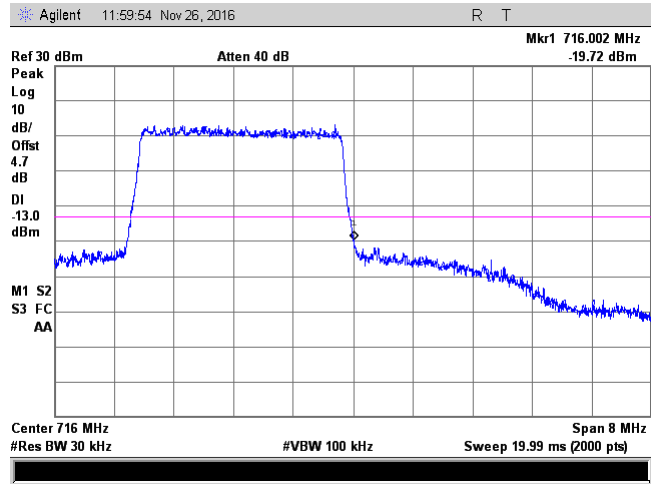
LTE Band XII - High Channel QPSK-3

Note: Offset=Cable loss (4.5) + 10log (31.09/30)=4.5+0.2=4.7 dB



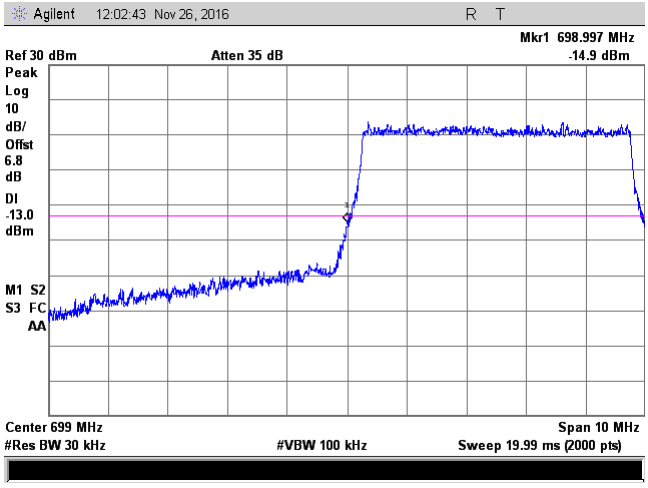
LTE Band XII - Low Channel 16QAM-3

Note: Offset=Cable loss (4.5) + 10log (30.8/30)=4.5+0.1=4.6 dB

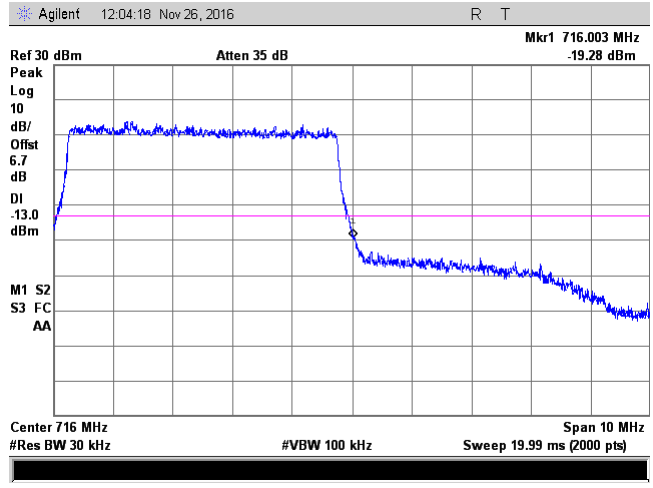


LTE Band XII - High Channel 16QAM-3

Note: Offset=Cable loss (4.5) + 10log (31.2/30)=4.5+0.2=4.7 dB

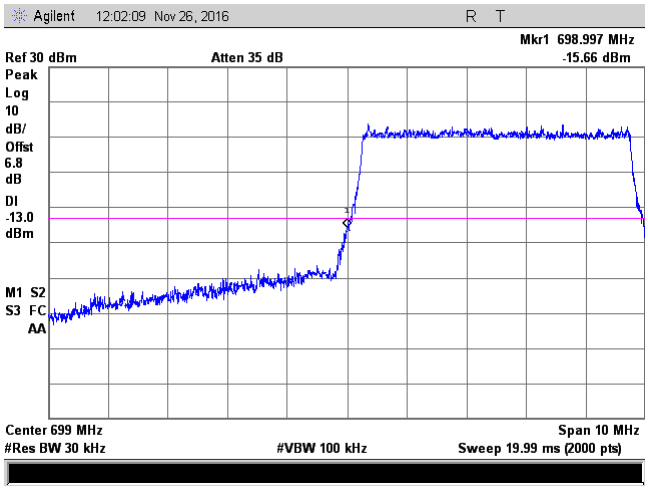


LTE Band XII - Low Channel QPSK-5



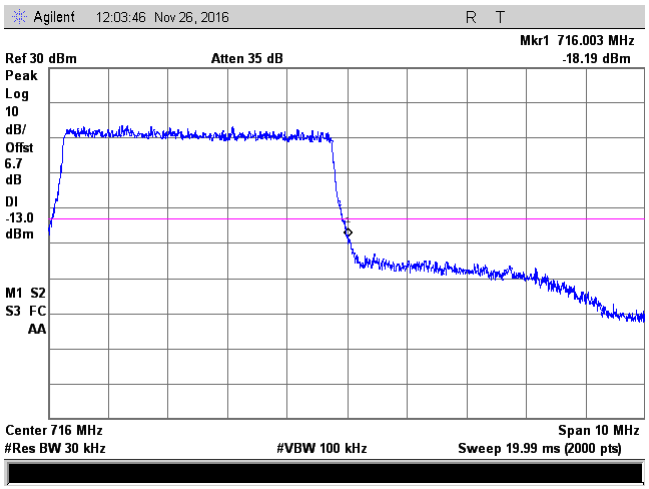
LTE Band XII - High Channel QPSK-5

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



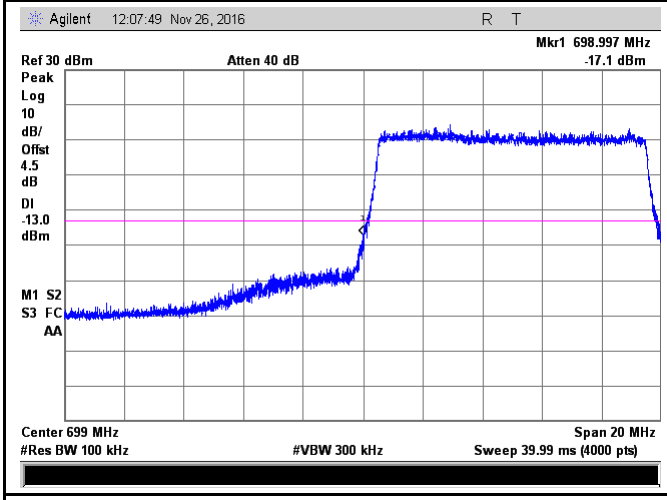
LTE Band XII - Low Channel 16QAM-5

Note: Offset=Cable loss (4.5) + 10log (50.01/30)=4.5+2.2=6.7 dB



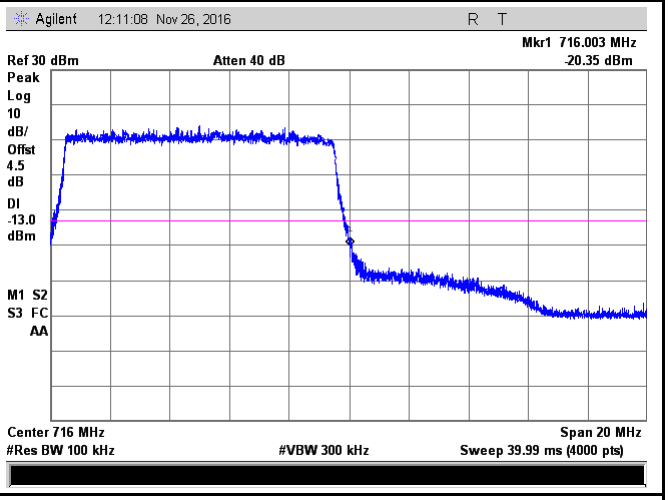
LTE Band XII - High Channel 16QAM-5

Note: Offset=Cable loss (4.5) + 10log (50.82/30)=4.5+2.3=6.8 dB

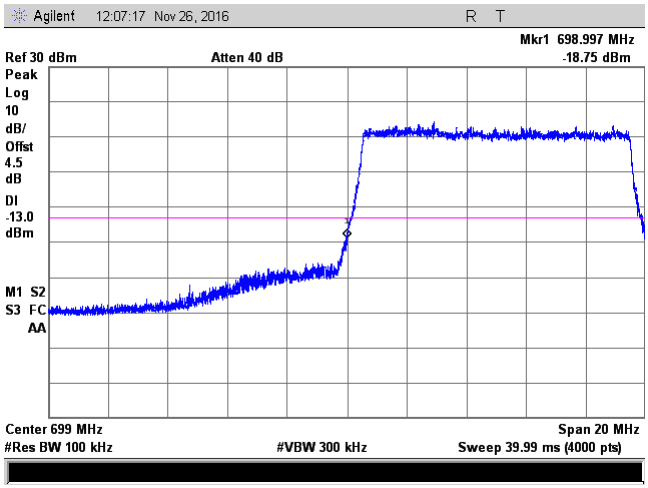


LTE Band XII - Low Channel QPSK-10

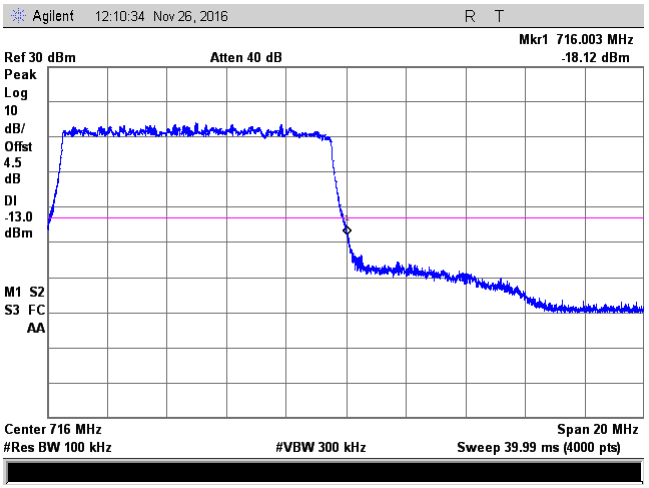
Note: Offset=Cable loss (4.5) + 10log (50.11/30)=4.5+2.2=6.7 dB



LTE Band XII - High Channel QPSK-10

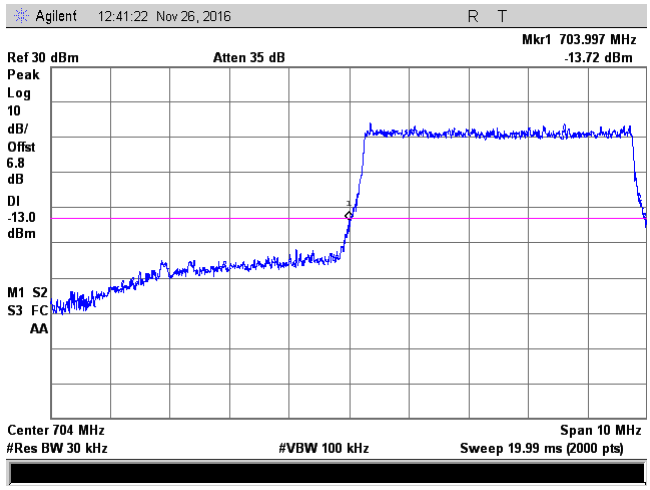


LTE Band XII - Low Channel 16QAM-10



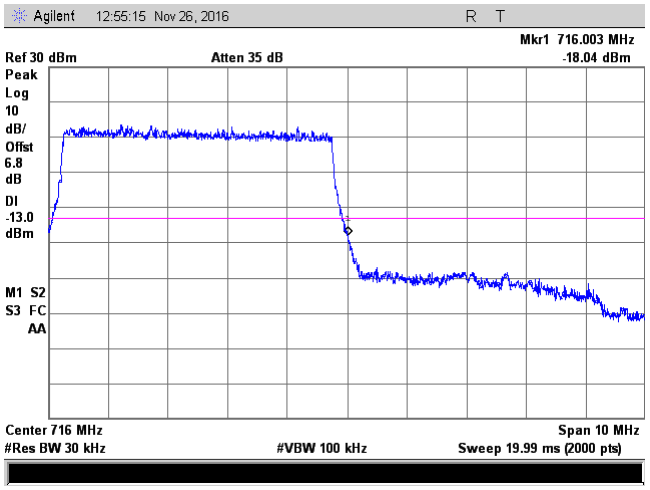
LTE Band XII - High Channel 16QAM-10

LTE Band XVII (Part 27)



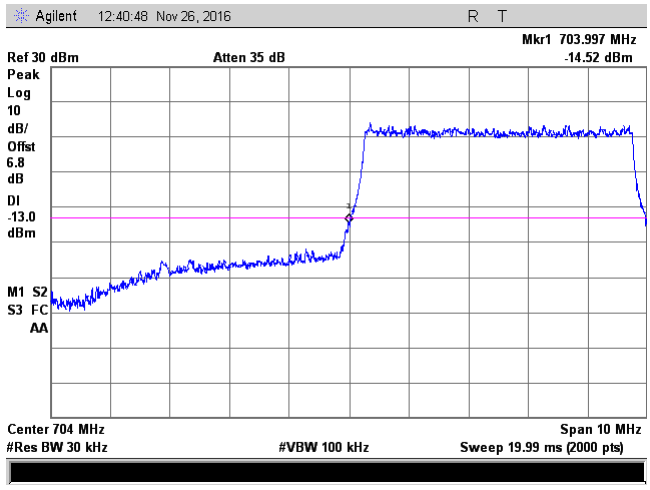
LTE Band XVII - Low Channel QPSK-5

Note: Offset=Cable loss (4.0) + 10log (51.03/30)=4.5+2.3=6.8 dB



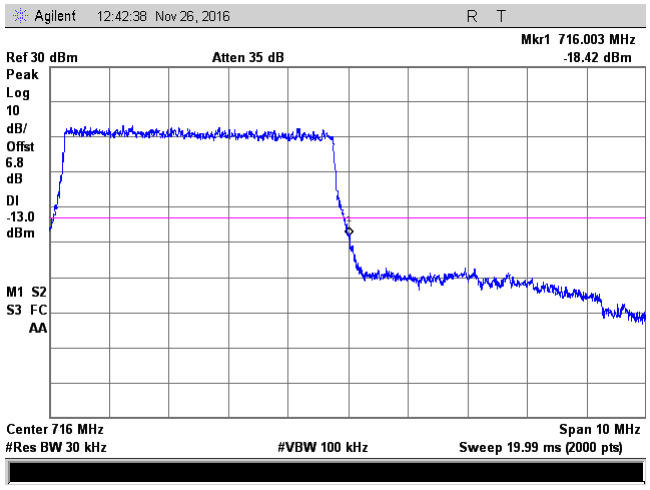
LTE Band XVII - High Channel QPSK-5

Note: Offset=Cable loss (4.0) + 10log (50.61/30)=4.5+2.2=6.8 dB



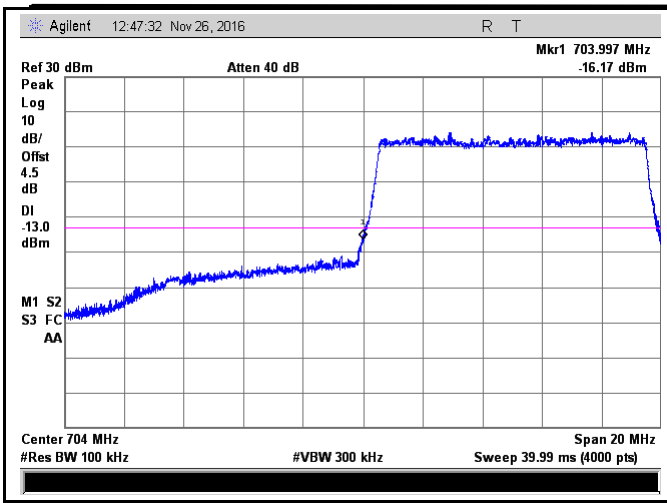
LTE Band XVII - Low Channel 16QAM-5

Note: Offset=Cable loss (4.0) + 10log (50.11/30)=4.5+2.3=6.8 dB

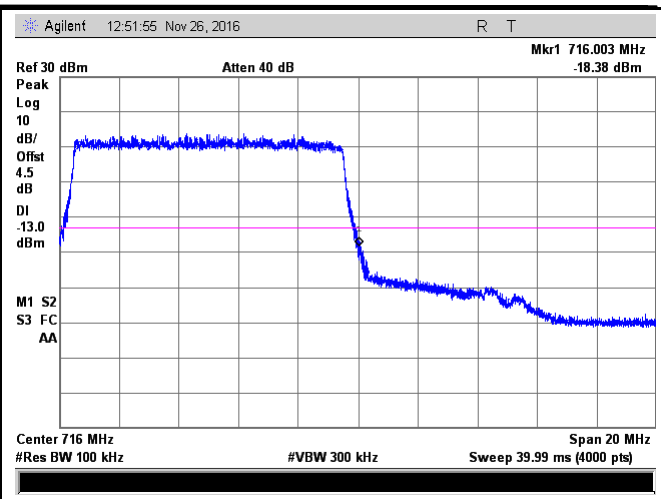


LTE Band XVII - High Channel 16QAM-5

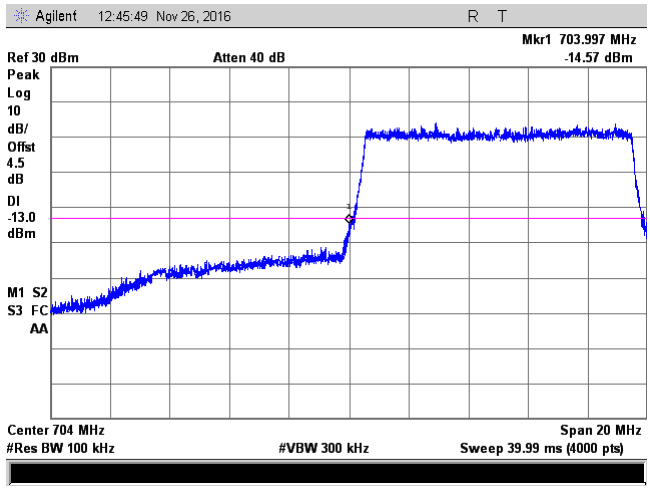
Note: Offset=Cable loss (4.0) + 10log (50.43/30)=4.5+2.3=6.8 dB



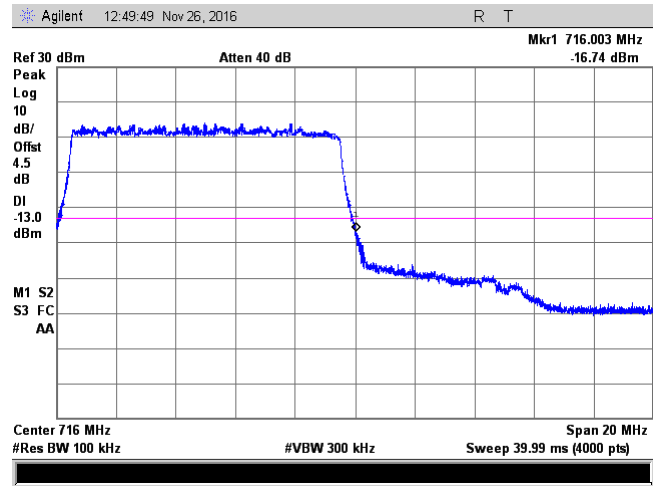
LTE Band XVII - Low Channel QPSK-10



LTE Band XVII - High Channel QPSK-10



LTE Band XVII - Low Channel 16QAM-10

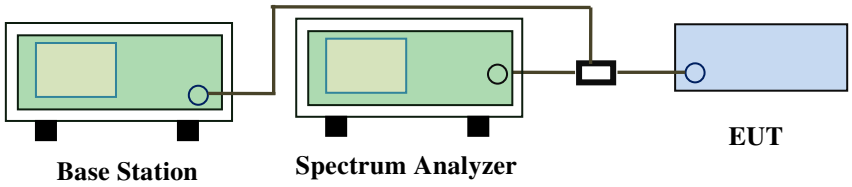


LTE Band XVII - High Channel 16QAM-10

6.8 Band Edge 27.53(m)

Temperature	23℃
Relative Humidity	59%
Atmospheric Pressure	1026mbar
Test date :	November 26, 2016
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	

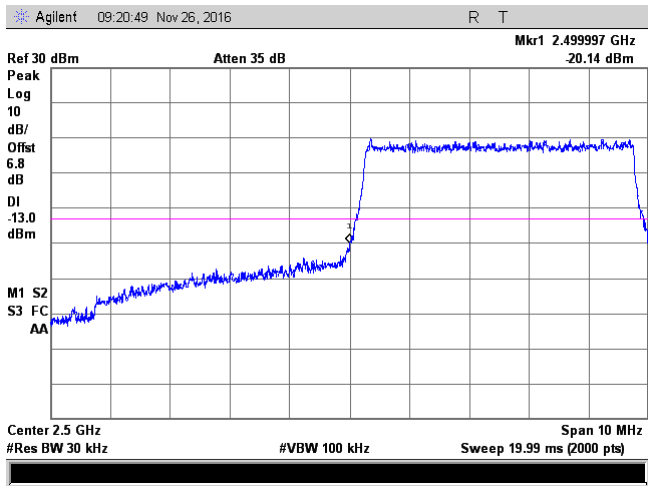
Test Data ☑ Yes ☐ N/A

Test Plot ☑ Yes (See below) ☐ N/A

LTE Band VII (Part 27) result

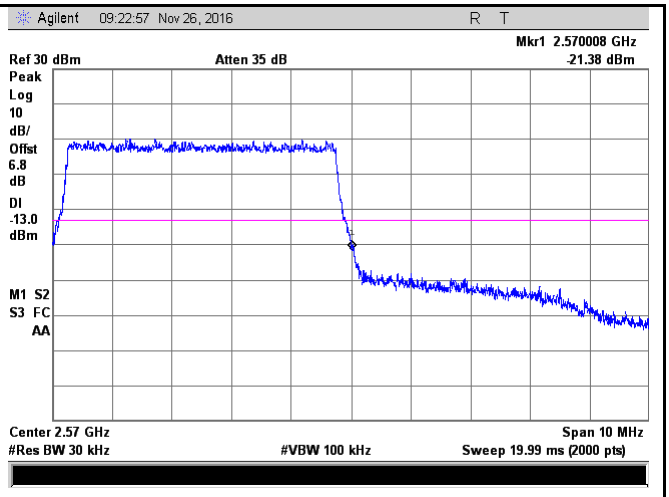
BW(MHz)	Channel	Frequency (MHz)	Mode	Emission (dBm)	Limit (dBm)
5	20775	2500	QPSK	-20.14	-13
			16QAM	-20.30	-13
5	21425	2570	QPSK	-21.38	-13
			16QAM	-19.12	-13
10	20800	2500	QPSK	-19.74	-13
			16QAM	-19.32	-13
10	21400	2570	QPSK	-21.47	-13
			16QAM	-23.13	-13
15	20825	2500	QPSK	-22.52	-13
			16QAM	-22.73	-13
15	21400	2570	QPSK	-26.37	-13
			16QAM	-22.87	-13
20	20850	2500	QPSK	-21.68	-13
			16QAM	-22.29	-13
20	21350	2571	QPSK	-30.90	-13
			16QAM	-30.87	-13

LTE Band VII (Part 27)



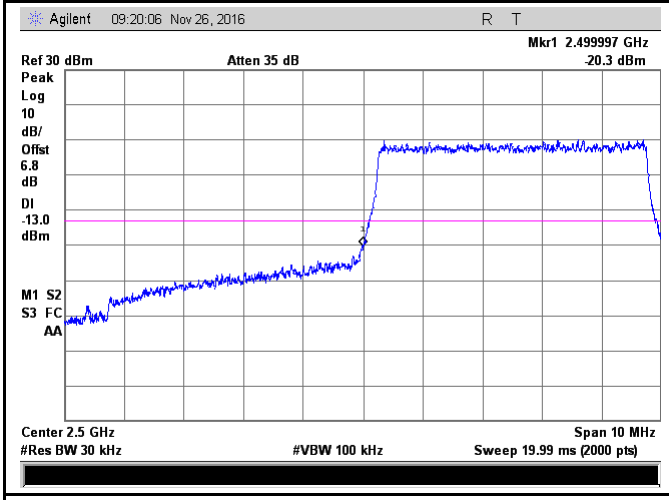
LTE Band VII - Low Channel QPSK-5

Note: Offset=Cable loss (4.5) + 10log (51.12/30)=4.5+2.3=6.8 dB



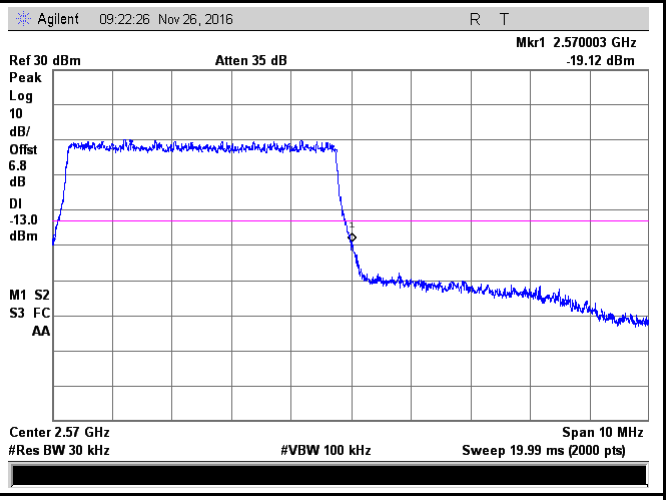
LTE Band VII - High Channel QPSK-5

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



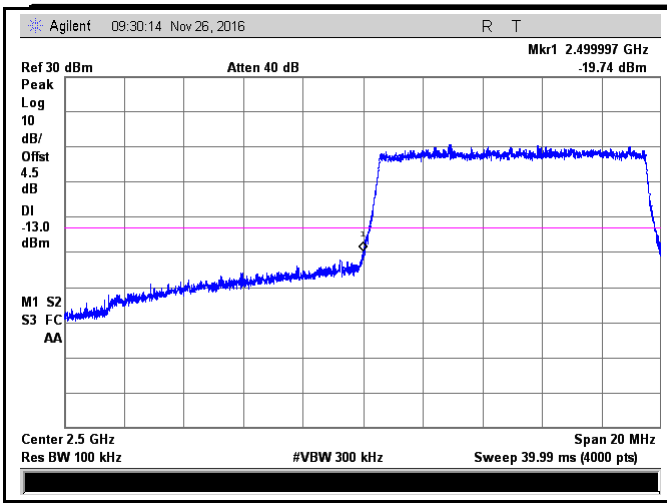
LTE Band VII - Low Channel 16QAM-5

Note: Offset=Cable loss (4.5) + 10log (51.01/30)=4.5+2.3=6.8 dB

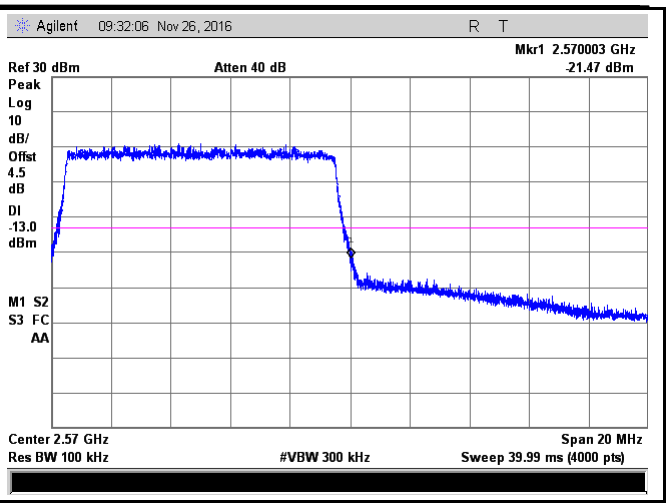


LTE Band VII - High Channel 16QAM-5

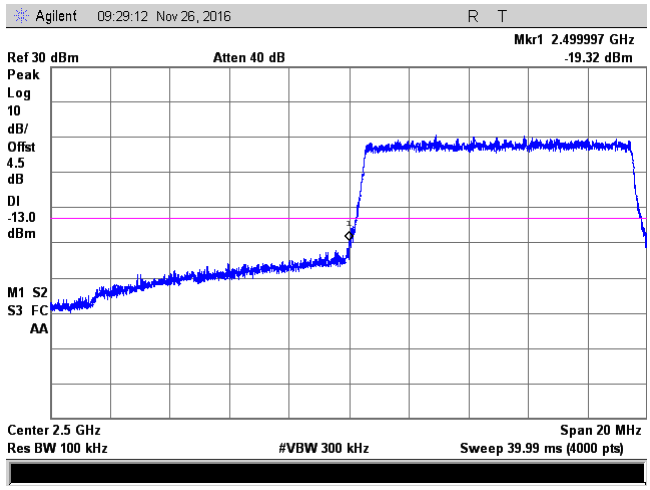
Note: Offset=Cable loss (4.5) + 10log (51/30)=4.5+2.3=6.8 dB



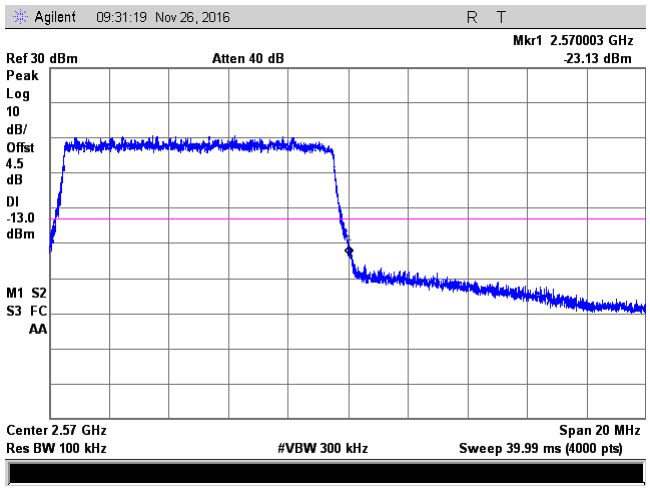
LTE Band VII - Low Channel QPSK-10



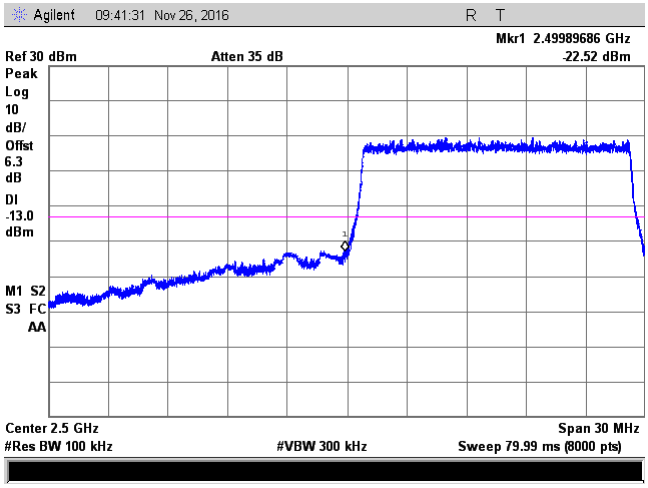
LTE Band VII - High Channel QPSK-10



LTE Band VII - Low Channel 16QAM-10

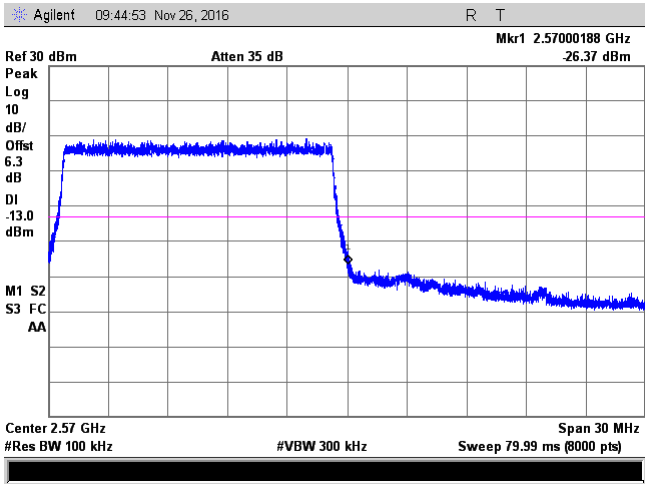


LTE Band VII - High Channel 16QAM-10



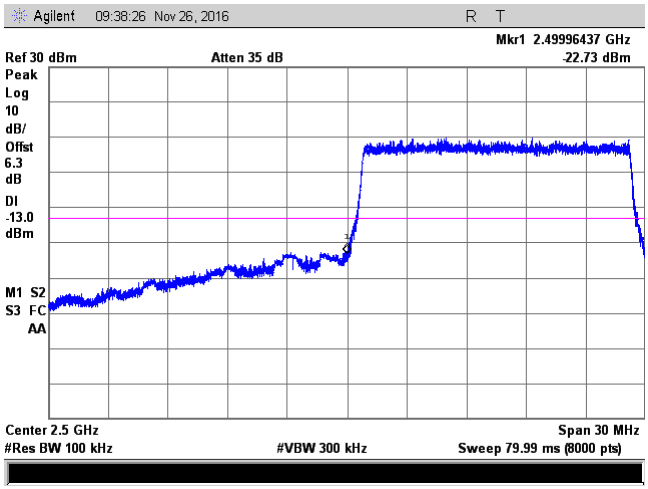
LTE Band VII - Low Channel QPSK-15

Note: Offset=Cable loss (4.5) + 10log (149.7/100)=4.5+1.8=6.3 dB



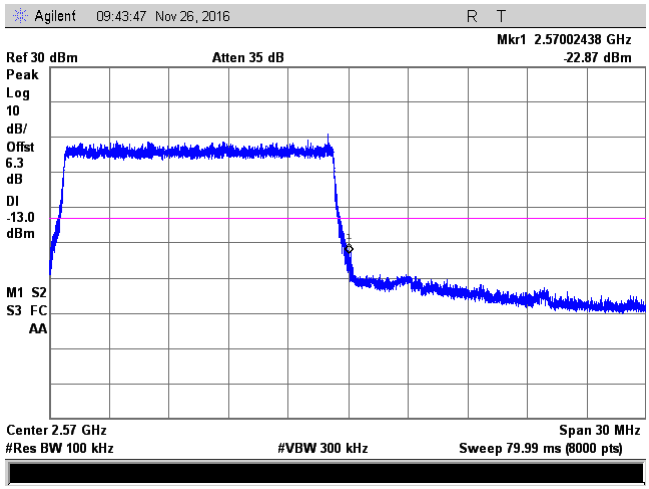
LTE Band VII - High Channel QPSK-15

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



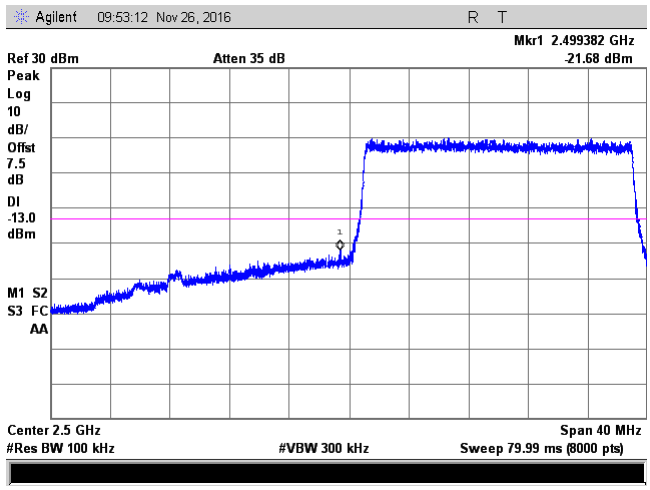
LTE Band VII - Low Channel 16QAM-15

Note: Offset=Cable loss (4.5) + 10log (149.8/100)=4.5+1.8=6.3dB



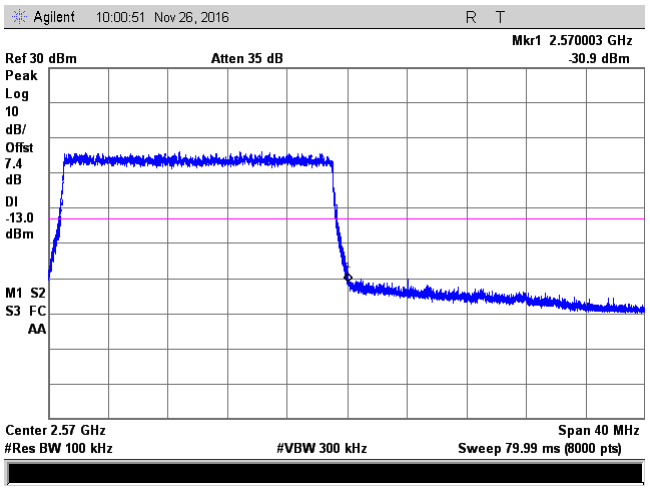
LTE Band VII - High Channel 16QAM-15

Note: Offset=Cable loss (4.5) + 10log (150.8/100)=4.5+1.8=6.3 dB



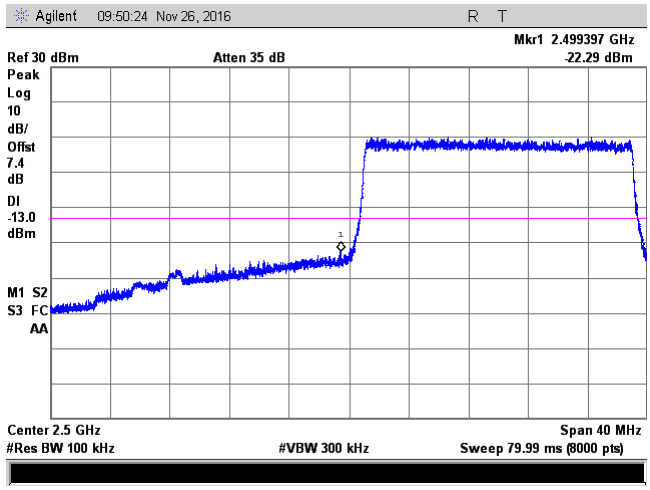
LTE Band VII - Low Channel QPSK-20

Note: Offset=Cable loss (4.5) + 10log (195.9/100)=4.5+3.0=7.5 dB



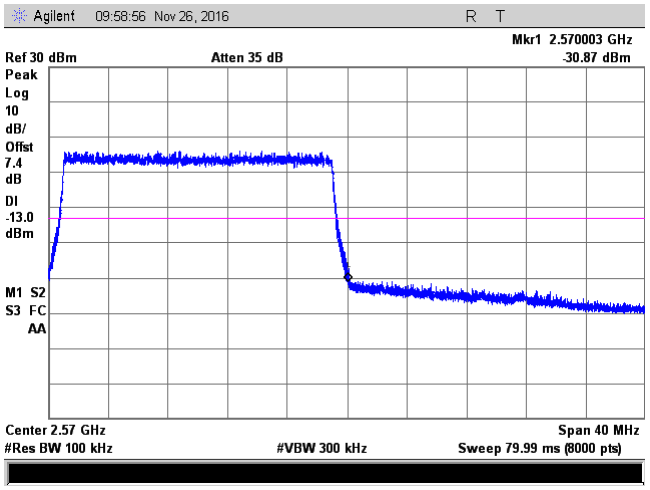
LTE Band VII - High Channel QPSK-20

Note: Offset=Cable loss (4.5) + 10log (195 /100)=4.5+2.9=7.4dB



LTE Band VII - Low Channel 16QAM-20

Note: Offset=Cable loss (4.5) + 10log (196.2/100)=4.5+2.9=7.4 dB



LTE Band VII - High Channel 16QAM-20

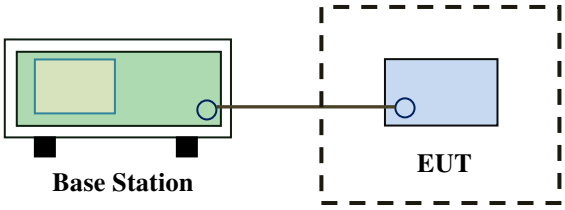
Note: Offset=Cable loss (4.5) + 10log (195.5/100)=4.5+2.9=7.4 dB

6.9 Frequency Stability

Temperature	22℃
Relative Humidity	58%
Atmospheric Pressure	1025mbar
Test date :	November 25, 2016
Tested By :	Loren Luo

Requirement(s):

<table>
<tr><th>Spec</th><th>Item</th><th>Requirement</th><th>Applicable</th></tr>
<tr><td>§2.1055, §22.355 & §24.235 § 27.5(h); § 27.54</td><td>a)</td><td>According to §22.355, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table below:
Frequency Tolerance for Transmitters in the Public Mobile Services
<table>
<tr><th>Frequency Range (MHz)</th><th>Base, fixed (ppm)</th><th>Mobile ≤ 3 watts (ppm)</th><th>Mobile ≤ 3 watts (ppm)</th></tr>
<tr><td>25 to 50</td><td>20.0</td><td>20.0</td><td>50.0</td></tr>
<tr><td>to 450</td><td>5.0</td><td>5.0</td><td>50.0</td></tr>
<tr><td>450 to 512</td><td>2.5</td><td>5.0</td><td>5 0</td></tr>
<tr><td>821 to 896</td><td>1.5</td><td>2.5</td><td>2.5</td></tr>
<tr><td>928 to 929.</td><td>5.0</td><td>N/A</td><td>N/A</td></tr>
<tr><td>929 to 960.</td><td>1.5</td><td>N/A</td><td>N/A</td></tr>
<tr><td>2110 to 2220</td><td>10.0</td><td>N/A</td><td>N/A</td></tr>
</table>
According to §24.235, the frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized frequency block.
According to §27.54, The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.</td><td>☑</td></tr>
</table>

Test setup	
Procedure	A communication link was established between EUT and base station. The frequency error was monitored and measured by base station under variation of ambient temperature and variation of primary supply voltage. Limit: The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center frequency.
Remark	Frequency Stability versus Temperature: The Frequency tolerance of the carrier signal shall be maintained within 2.5ppm of the operating frequency over a temperature variation of -10ºC to +55ºC at normal supply voltage.
Result	☑ Pass ☐ Fail

Test Data ☑ Yes ☐ N/A

Test Plot ☐ Yes (See below) ☑ N/A

LTE Band II (Part 24E) result

Middle Channel, f_o = 1880 MHz				
Temperature (℃)	Power Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-10	3.7	-8	0.0043	2.5
0		-9	0.0048	2.5
10		-9	0.0048	2.5
20		-14	0.0074	2.5
30		-6	0.0032	2.5
40		-5	0.0027	2.5
50		-14	0.0074	2.5
55		-15	0.0080	2.5
25	4.2	-9	0.0048	2.5
	3.5	-11	0.0059	2.5

LTE Band IV (Part 27) result

Middle Channel, f_o = 1732.5 MHz				
Temperature (℃)	Power Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-10	3.7	-11	0.0063	2.5
0		-14	0.0081	2.5
10		-12	0.0069	2.5
20		-9	0.0052	2.5
30		-8	0.0046	2.5
40		-10	0.0058	2.5
50		-11	0.0063	2.5
55		-15	0.0087	2.5
25	4.2	-7	0.0040	2.5
	3.5	-12	0.0069	2.5

LTE Band VII (Part 27) result

Middle Channel, f_o = 2535 MHz				
Temperature (℃)	Power Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-10	3.7	-12	0.0047	2.5
0		-13	0.0051	2.5
10		-14	0.0055	2.5
20		-9	0.0036	2.5
30		-9	0.0036	2.5
40		-10	0.0039	2.5
50		-6	0.0024	2.5
55		-15	0.0059	2.5
25	4.2	-2	0.0008	2.5
	3.5	-6	0.0024	2.5

LTE Band XII (Part 27) result

Middle Channel, f_o = 707.5MHz				
Temperature (℃)	Power Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-10	3.7	-9	0.0027	2.5
0		-8	0.0059	2.5
10		-8	0.0037	2.5
20		-4	0.0053	2.5
30		-5	0.0064	2.5
40		-8	0.0048	2.5
50		-8	0.0064	2.5
55		-10	0.0032	2.5
25	4.2	-6	0.0059	2.5
	3.5	-9	0.0053	2.5

LTE Band XVII (Part 27) result

Middle Channel, f_o = 710 MHz				
Temperature (℃)	Power Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-10	3.7	-8	0.0113	2.5
0		-6	0.0085	2.5
10		-6	0.0085	2.5
20		-4	0.0056	2.5
30		-9	0.0127	2.5
40		-10	0.0141	2.5
50		-5	0.0070	2.5
55		-6	0.0085	2.5
25	4.2	-10	0.0141	2.5
	3.5	-8	0.0113	2.5

Annex A. TEST INSTRUMENT

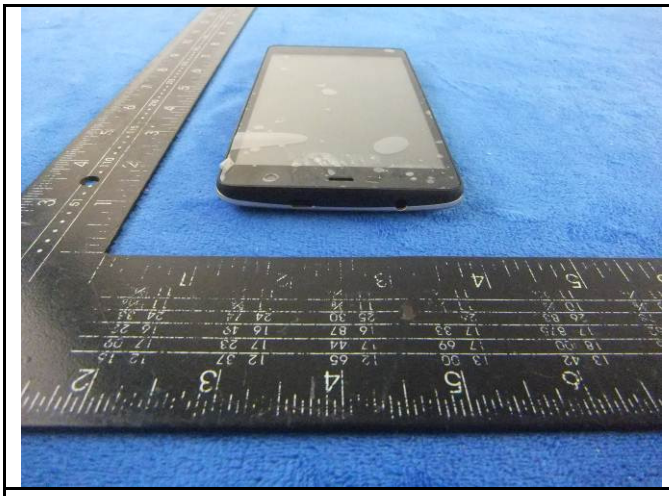
Instrument	Model	Serial #	Cal Date	Cal Due	In use
RF Conducted Test					
Agilent ESA-E SERIES SPECTRUM ANALYZER	E4407B	MY45108319	09/15/2016	09/14/2017	☑
Power Splitter	1#	1#	08/31/2016	08/30/2017	☑
Universal Radio Communication Tester	CMU200	121393	09/24/2016	09/23/2017	☑
Wideband Radio Communication Tester	CMW500	120906	03/27/2016	03/26/2017	☑
Temperature/Humidity Chamber	UHL-270	001	10/08/2016	10/07/2017	☑
DC Power Supply	E3640A	MY40004013	09/16/2016	09/15/2017	☑
RF Power Sensor	Dare RPR3006C/P/W	AY554013	09/16/2016	09/15/2017	☑
Radiated Emissions					
EMI test receiver	ESL6	100262	09/16/2016	09/15/2017	☑
OPT 010 AMPLIFIER (0.1-1300MHz)	8447E	2727A02430	08/31/2016	08/30/2017	☑
Microwave Preamplifier (0.5 ~ 18GHz)	PAM-118	443008	08/31/2016	08/30/2017	☑
Bilog Antenna (30MHz~6GHz)	JB6	A110712	09/20/2016	09/19/2017	☑
Bilog Antenna (30MHz~2GHz)	JB1	A112017	09/20/2016	09/19/2017	☑
Double Ridge Horn Antenna (1 ~18GHz)	AH-118	71259	09/23/2016	09/22/2017	☑
Double Ridge Horn Antenna (1 ~18GHz)	AH-118	71283	09/23/2016	09/22/2017	☑
SYNTHESIZED SIGNAL GENERATOR	8665B	3744A01293	09/16/2016	09/15/2017	☑
Tunable Notch Filter	3NF-800/1000-S	AA4	08/31/2016	08/30/2017	☑

Tunable Notch Filter	3NF-1000/2000-S	AM 4	08/31/2016	08/30/2017	☑

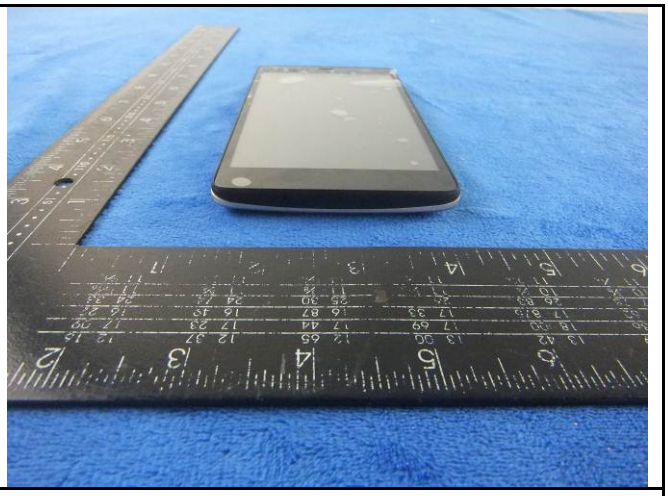
Annex B. EUT And Test Setup Photographs

Annex B.i. Photograph: EUT External Photo

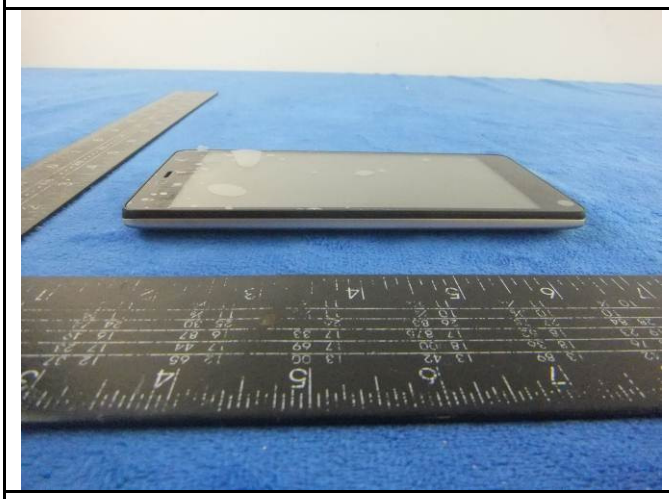
	
Whole Package View	Adapter - Front View
	
EUT - Front View	EUT - Rear View



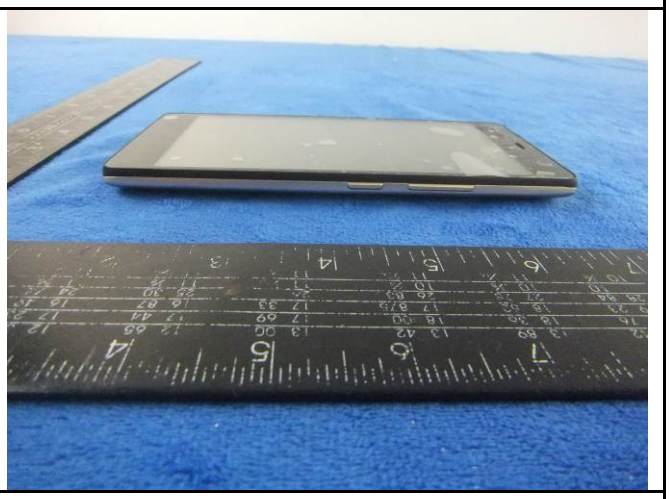
EUT - Top View



EUT - Bottom View



EUT - Left View



EUT - Right View

Annex B.ii. Photograph: EUT Internal Photo



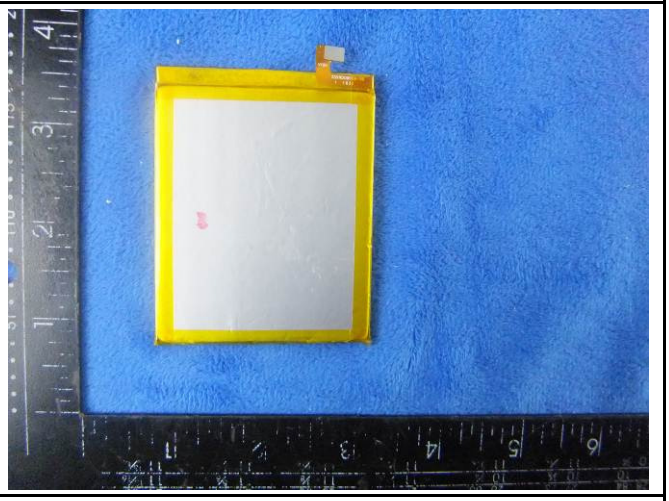
Cover Off - Top View 1



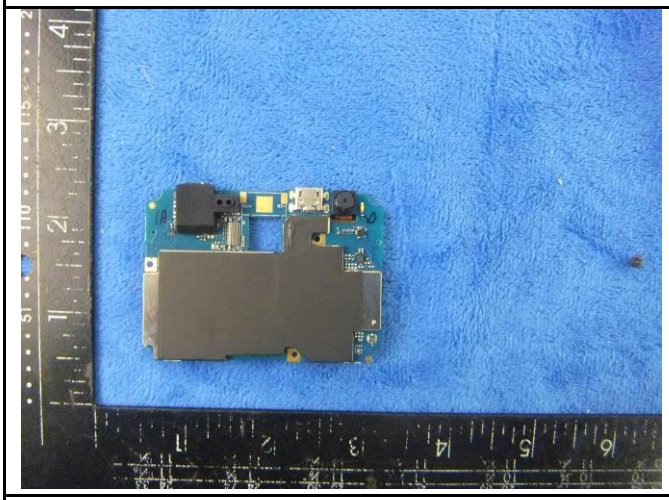
Cover Off - Top View 2



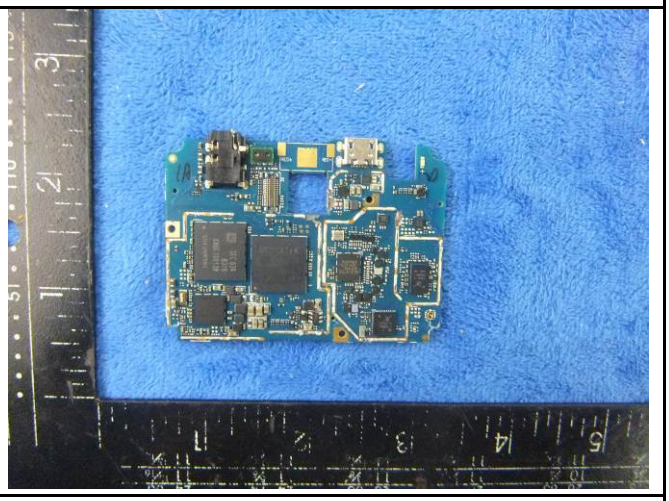
Battery - Front View



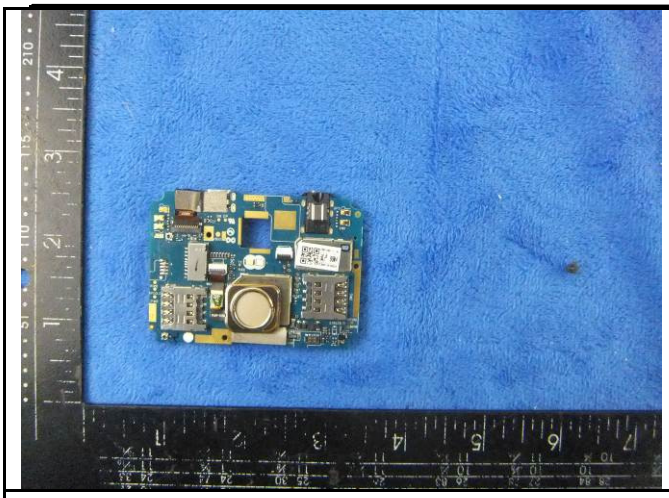
Battery - Rear View



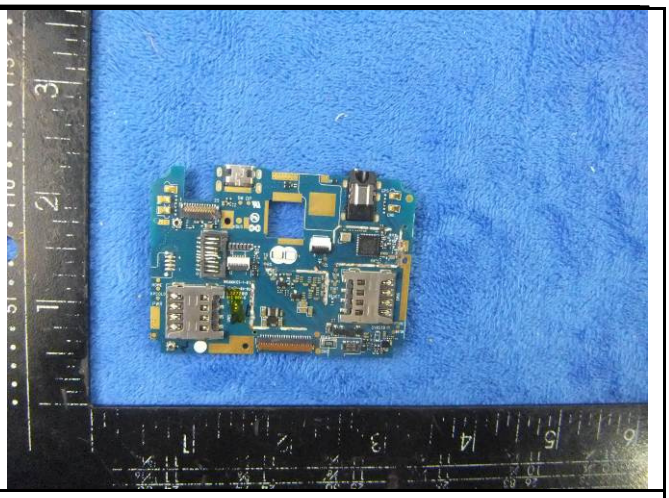
Mainboard with Shielding - Front View



Mainboard without Shielding - Front View



Mainboard with Shielding – Rear View



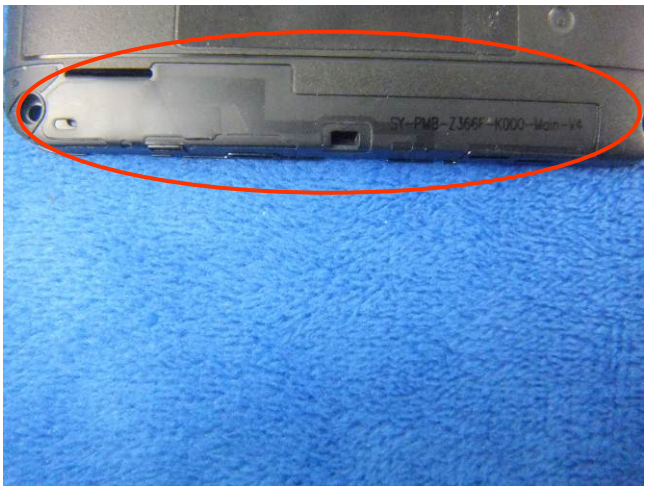
Mainboard without Shielding - Rear View



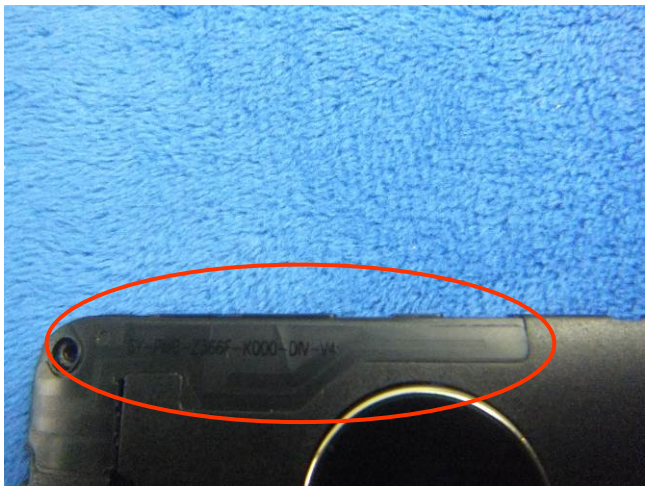
LCD – Front View



LCD – Rear View



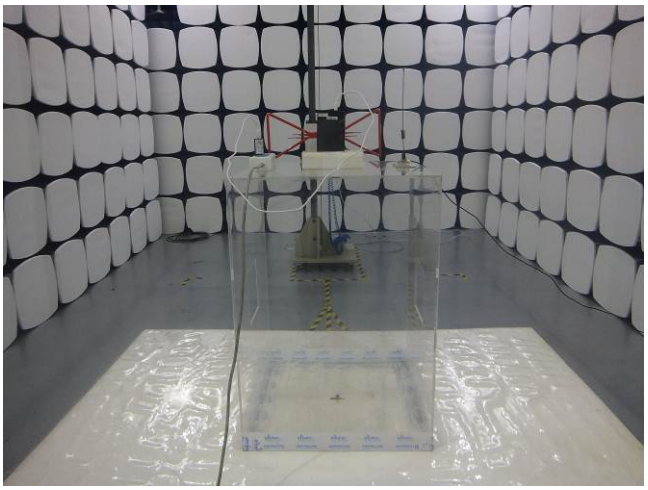
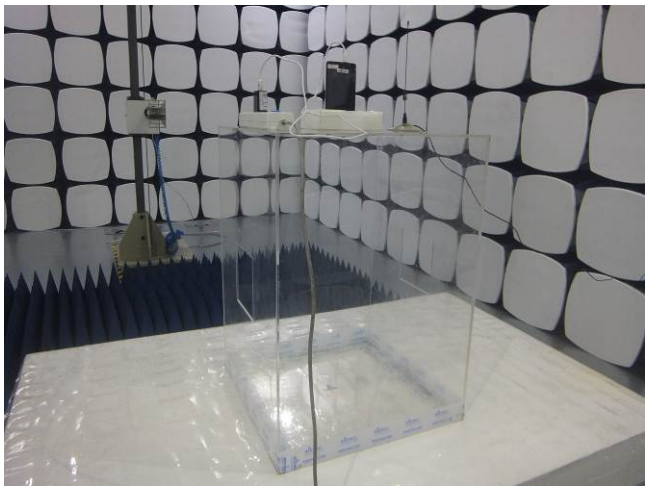
GSM/PCS/UMTS-FDD Antenna View



LTE - Antenna View

	
WIFI/BT/BLE/GPS - Antenna View	

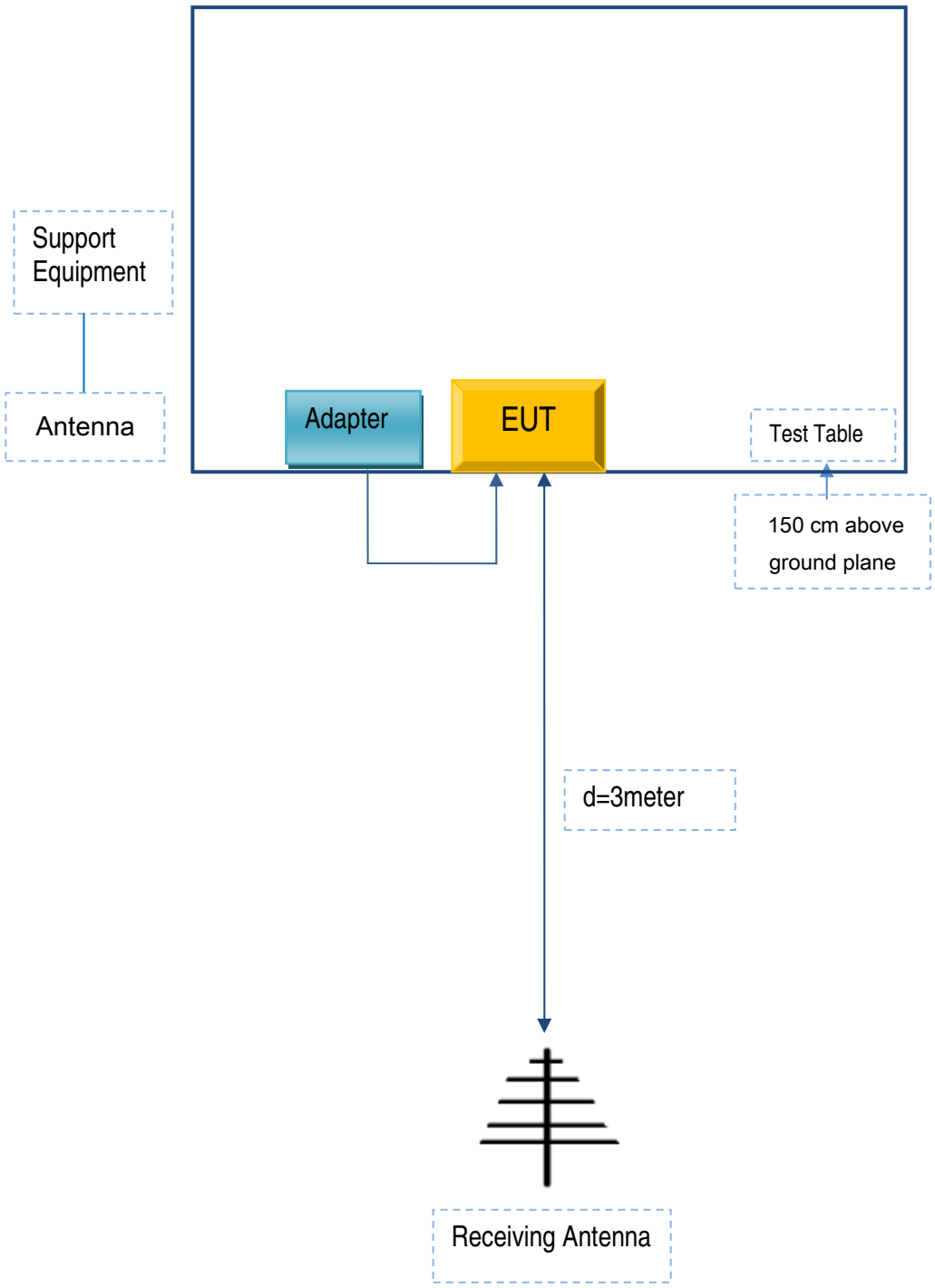
Annex B.iii. Photograph: Test Setup Photo

	
Radiated Spurious Emissions Test Setup Below 1GHz	Radiated Spurious Emissions Test Setup Above 1GHz

Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

Annex C.ii. TEST SET UP BLOCK

Block Configuration Diagram for Radiated Emissions



Annex C. il. SUPPORTING EQUIPMENT DESCRIPTION

The following is a description of supporting equipment and details of cables used with the EUT.

Supporting Equipment:

Manufacturer	Equipment Description	Model	Serial No
Posh Mobile Limited	Adapter	A88-501500	S0523DF2

Supporting Cable:

Cable type	Shield Type	Ferrite Core	Length	Serial No
USB Cable	Un-shielding	No	0.8m	S0523DF2

Annex C.ii. EUT OPERATING CONKITIONS

N/A

Annex D. User Manual / Block Diagram / Schematics / Partlist

Please see the attachment

Annex E. DECLARATION OF SIMILARITY

Posh Mobile Limited

To: SIEMIC,775 Montague Expressway,Milpitas,CA95035,USA

Declaration Letter

Dear Sir,

For our business issue and marketing requirement, we would like to list 4 model numbers on the FCC certificates and reports, as following:

Model No.: L551 L551A L551B L551C
We declare that, all the model PCB, Antenna and Appearance shape, accessories are the same.
The difference of these is listed as below:

Main Model No.	Serial Model No.	Difference
L551	L551A L551B L551C	Different model name and color

Thank you!

Signature: 

Printed name/title: Warren Chan

Address: 1011A, 10/F., Harbour Centre Tower 1 No.1 Hok Cheung St., Hung Hom, Kowloon, Hong Kong