

RF TEST REPORT



Report No.: 16070128-FCC-R5

Supersede Report No.: N/A

Applicant	SUPERSONIC INC	
Product Name	5.0" LTE smart phone	
Model No.	SV-150LTE	
Serial No.	SV-250LTE, SV-350LTE, SV-155LTE, SV-255LTE, SV-355LTE, SV-6LTE, SV-16LTE, SV-36LTE, SC-150LTE	
Test Standard	FCC Part 22(H), FCC Part 24(E), FCC Part 27: 2014; ANSI/TIA-603-D: 2010	
Test Date	Feb 04 to Feb 25 , 2016	
Issue Date	Feb 26, 2016	
Test Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	
Equipment complied with the specification	<input checked="" type="checkbox"/>	
Equipment did not comply with the specification	<input type="checkbox"/>	
<i>Winnie Zhang</i>	<i>David Huang</i>	
Winnie Zhang Test Engineer	David Huang Checked By	
<p>This test report may be reproduced in full only</p> <p>Test result presented in this test report is applicable to the tested sample only</p>		

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Issued by:

SIEMIC (SHENZHEN-CHINA) LABORATORIES

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Laboratories Introduction

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



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

Accreditations for Conformity Assessment

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

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1. Report Revision History

Report No.	Report Version	Description	Issue Date
16070128-FCC-R5	NONE	Original	Feb 26, 2016

2. Customer information

Applicant Name	SUPERSONIC INC
Applicant Add	6555 BANDINI BOULEVARD COMMERCE CA 90040-3119 USA
Manufacturer	NCBC OVERSEA CO., LIMITED
Manufacturer Add	FLAT/RM A5 9/F SILVERCORP INT' L TOWER 707-713 NATHAN ROAD MONGKOK KLN HONGKONG

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:	5.0" LTE smart phone
Main Model:	SV-150LTE
Serial Model:	SV-250LTE, SV-350LTE, SV-155LTE, SV-255LTE, SV-355LTE, SV-6LTE, SV-16LTE, SV-36LTE, SC-150LTE
Date EUT received:	Feb 03 , 2016
Test Date(s):	Feb 04 to Feb 25 , 2016
Equipment Category :	PCE
Antenna Gain:	GSM850: -1 dBi PCS1900: 0 dBi UMTS-FDD Band V: -1dBi UMTS-FDD Band II: 0 dBi Bluetooth/BLE: 0 dBi WIFI: 0 dBi LTE Band 2: 0 dBi LTE Band 4: 0 dBi LTE Band 7: 1 dBi LTE Band 17: -1 dBi GPS:0 dBi
Type of Modulation:	GSM / GPRS: GMSK EGPRS: GMSK,8PSK UMTS-FDD: QPSK, 16QAM 802.11b/g/n: DSSS, OFDM Bluetooth: GFSK, π /4DQPSK, 8DPSK BLE: GFSK LTE Band: QPSK, 16QAM GPS:BPSK

	GSM850 TX: 824.2 ~ 848.8 MHz; RX: 869.2 ~ 893.8 MHz
	PCS1900 TX: 1850.2 ~ 1909.8 MHz; RX: 1930.2 ~ 1989.8 MHz
	UMTS-FDD Band V TX: 826.4 ~ 846.6 MHz; RX: 871.4 ~ 891.6 MHz
	UMTS-FDD Band II TX:1852.4 ~ 1907.6 MHz;
	RX: 1932.4 ~ 1987.6 MHz
	WiFi:802.11b/g/n(20M): 2412-2472 MHz
RF Operating Frequency (ies):	WiFi:802.11n(40M): 2422-2462 MHz
	Bluetooth& BLE: 2402-2480 MHz
	LTE Band 2 TX: 1852.5 ~ 1907.5 MHz; RX : 1932.5 ~ 1987.5 MHz
	LTE Band 4 TX: 1712.5 ~ 1752.5 MHz; RX : 2112.5 ~ 2152.5 MHz
	LTE Band 7 TX: 2502.5 ~ 2567.5 MHz; RX : 2622.5 ~ 2687.5 MHz
	LTE Band 17 TX: 706.5 ~ 713.5 MHz; RX : 736.5 ~ 743.5 MHz
	GPS RX:1575.42 MHz
Maximum Conducted	LTE Band 2: 23.14 dBm
AV Power to Antenna:	LTE Band 4: 23.50 dBm
	LTE Band 7: 22.63 dBm
	LTE Band 17: 23.17 dBm
ERP/EIRP:	LTE Band 2: 22.95 dBm / EIRP
	LTE Band 4: 23.12 dBm / EIRP
	LTE Band 7: 23.36 dBm / EIRP
	LTE Band 17: 21.95 dBm / ERP
Port:	Power Port, Earphone Port, USB Port
Input Power:	Adapter:
	Model: HJ-0501000B2-US
	Input: AC 100-240V; 50/60Hz;0.15A
	Output: DC 5.0V,1000mA
	Battery:
	Model: SV-150LTE
	Capacity: 2200mAh
	Voltage: 4.35V
Trade Name :	SHARPER VIEW
GPRS/EGPRS Multi-slot class	8/10/12

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FCC ID:

2AC5R-SV-150LTE

5. Test Summary

The product was tested in accordance with the following specifications.

All testing has been performed according to below product classification:

FCC Rules	Description of Test	Result
§ 1.1307; § 2.1093	RF Exposure (SAR)	Compliance
§2.1046; § 22.913(a); § 24.232(c); § 27.50(c.10); § 27.50(d.4)	RF Output Power	Compliance
§ 24.232 (d); § 27.50(d)	Peak-Average Ratio	Compliance
§ 2.1047	Modulation Characteristics	N/A
§ 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;

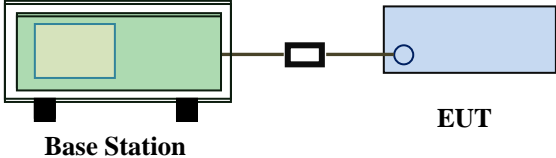
Please refer to RF Exposure Evaluation Report: 16070128-FCC-H.

6.2 RF Output Power

Temperature	24°C
Relative Humidity	56%
Atmospheric Pressure	1023mbar
Test date :	February 23, 2016
Tested By :	Winnie Zhang

Requirement(s):

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

Test Setup	 <p>The diagram illustrates the test setup. On the left is a green rectangular box labeled 'Base Station'. A line connects it to a small black square, which in turn connects to a blue rectangular box labeled 'EUT' (Equipment Under Test).</p>
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Test Procedure	<p>For Conducted Power:</p> <ul style="list-style-type: none"> - 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. <p>For ERP/EIRP:</p> <ul style="list-style-type: none"> - 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.
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	<ul style="list-style-type: none"> - 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	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail

Test Data Yes N/A
Test Plot Yes (See below) N/A

Conducted Power

LTE Band 2:

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant	
20MHz	18700	1860.0	QPSK	1	0	0	23.06	22.5 ± 1	
				1	49	0	23.04	22.5 ± 1	
				1	99	0	23.10	22.5 ± 1	
				50	0	1	21.90	22.5 ± 1	
				50	24	1	21.92	22.5 ± 1	
				50	49	1	21.93	22.5 ± 1	
			100	0	1	21.90	22.5 ± 1		
			16QAM	1	0	1	21.93	21.3 ± 1	
				1	49	1	21.90	21.3 ± 1	
				1	99	1	21.98	21.3 ± 1	
				50	0	2	21.26	21.3 ± 1	
				50	24	2	21.24	21.3 ± 1	
				50	49	2	21.22	21.3 ± 1	
				100	0	2	20.97	21.3 ± 1	
	QPSK	18900		1880.0	QPSK	1	0	0	22.97
			1			49	0	22.94	22.5 ± 1
			1			99	0	22.98	22.5 ± 1
			50			0	1	21.98	22.5 ± 1
			50			24	1	21.99	22.5 ± 1
			50			49	1	22.01	22.5 ± 1
			100		0	1	21.97	22.5 ± 1	
			16QAM		1	0	1	22.24	22 ± 1
					1	49	1	22.20	22 ± 1
					1	99	1	22.22	22 ± 1
	50	0		2	21.85	22 ± 1			
	50	24	2	21.84	22 ± 1				
	50	49	2	21.82	22 ± 1				
	100	0	2	21.05	22 ± 1				
	QPSK	19100	1900.0	QPSK	1	0	0	23.07	22.5 ± 1
					1	49	0	22.77	22.5 ± 1
1					99	0	22.65	22.5 ± 1	
50					0	1	21.97	22.5 ± 1	
50					24	1	21.91	22.5 ± 1	
50					49	1	21.84	22.5 ± 1	
100					0	1	21.94	22.5 ± 1	
16QAM				1	0	1	22.43	21.5 ± 1	
				1	49	1	22.21	21.5 ± 1	
				1	99	1	22.25	21.5 ± 1	
				50	0	2	21.35	21.5 ± 1	
				50	24	2	21.26	21.5 ± 1	
				50	49	2	21.24	21.5 ± 1	
				100	0	2	20.99	21.5 ± 1	

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
15MHz	18675	1857.5	QPSK	1	0	0	22.87	22.5 ± 1
				1	37	0	22.86	22.5 ± 1
				1	74	0	21.92	22.5 ± 1
				36	0	1	21.98	22.5 ± 1
				36	16	1	21.97	22.5 ± 1
				36	35	1	21.99	22.5 ± 1
				75	0	1	21.98	22.5 ± 1
			16QAM	1	0	1	22.43	22 ± 1
				1	37	1	22.46	22 ± 1
				1	74	1	22.51	22 ± 1
				36	0	2	21.65	22 ± 1
				36	16	2	21.63	22 ± 1
				36	35	2	21.61	22 ± 1
				75	0	2	21.05	22 ± 1
	18900	1880.0	QPSK	1	0	0	23.09	22.5 ± 1
				1	37	0	23.10	22.5 ± 1
				1	74	0	23.14	22.5 ± 1
				36	0	1	22.01	22.5 ± 1
				36	16	1	22.03	22.5 ± 1
				36	35	1	22.06	22.5 ± 1
				75	0	1	22.03	22.5 ± 1
			16QAM	1	0	1	21.86	22 ± 1
				1	37	1	21.87	22 ± 1
				1	74	1	21.91	22 ± 1
				36	0	2	21.45	22 ± 1
				36	16	2	21.42	22 ± 1
				36	35	2	21.43	22 ± 1
				75	0	2	21.08	22 ± 1
	19125	1902.5	QPSK	1	0	0	22.92	22.5 ± 1
				1	37	0	22.65	22.5 ± 1
1				74	0	22.53	22.5 ± 1	
36				0	1	21.95	22.5 ± 1	
36				16	1	21.91	22.5 ± 1	
36				35	1	21.82	22.5 ± 1	
75				0	1	21.88	22.5 ± 1	
16QAM			1	0	1	22.17	22 ± 1	
			1	37	1	21.99	22 ± 1	
			1	74	1	21.91	22 ± 1	
			36	0	2	21.54	22 ± 1	
			36	16	2	21.51	22 ± 1	
			36	35	2	21.46	22 ± 1	
			75	0	2	21.01	22 ± 1	

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
10MHz	18650	1855	QPSK	1	0	0	22.72	22.5±1
				1	24	0	22.88	22.5±1
				1	49	0	22.76	22.5±1
				25	0	1	21.90	22.5±1
				25	12	1	21.88	22.5±1
				25	24	1	21.89	22.5±1
				50	0	1	21.91	22.5±1
			16QAM	1	0	1	22.38	22±1
				1	24	1	22.41	22±1
				1	49	1	22.41	22±1
				25	0	2	21.85	22±1
				25	12	2	21.84	22±1
				25	24	2	21.82	22±1
				50	0	2	21.03	22±1
	18900	1880.0	QPSK	1	0	0	22.96	22.5±1
				1	24	0	23.06	22.5±1
				1	49	0	22.91	22.5±1
				25	0	1	21.98	22.5±1
				25	12	1	21.99	22.5±1
				25	24	1	22.00	22.5±1
				50	0	1	21.98	22.5±1
			16QAM	1	0	1	21.83	22±1
				1	24	1	21.90	22±1
				1	49	1	21.84	22±1
				25	0	2	21.42	22±1
				25	12	2	21.41	22±1
				25	24	2	21.38	22±1
				50	0	2	21.05	22±1
	19150	1905	QPSK	1	0	0	22.63	22.5±1
				1	24	0	22.57	22.5±1
1				49	0	22.30	22.5±1	
25				0	1	21.58	22.5±1	
25				12	1	21.57	22.5±1	
25				24	1	21.55	22.5±1	
50				0	1	21.63	22.5±1	
16QAM			1	0	1	21.58	21.5±1	
			1	24	1	21.54	21.5±1	
			1	49	1	21.36	21.5±1	
			25	0	2	21.25	21.5±1	
			25	12	2	21.21	21.5±1	
			25	24	2	21.19	21.5±1	
			50	0	2	20.81	21.5±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	22.95	22.5 ± 1
				1	12	0	22.95	22.5 ± 1
				1	24	0	22.91	22.5 ± 1
				12	0	1	21.92	22.5 ± 1
				12	6	1	21.90	22.5 ± 1
				12	11	1	21.91	22.5 ± 1
				25	0	1	21.84	22.5 ± 1
			16QAM	1	0	1	21.89	22 ± 1
				1	12	1	21.86	22 ± 1
				1	24	1	21.83	22 ± 1
				12	0	2	21.35	22 ± 1
				12	6	2	21.32	22 ± 1
				12	11	2	21.31	22 ± 1
				25	0	2	21.03	22 ± 1
	18900	1880.0	QPSK	1	0	0	23.12	22.5 ± 1
				1	12	0	23.11	22.5 ± 1
				1	24	0	23.08	22.5 ± 1
				12	0	1	21.99	22.5 ± 1
				12	6	1	21.98	22.5 ± 1
				12	11	1	22.00	22.5 ± 1
				25	0	1	21.94	22.5 ± 1
			16QAM	1	0	1	22.05	22 ± 1
				1	12	1	22.06	22 ± 1
				1	24	1	22.01	22 ± 1
				12	0	2	21.48	22 ± 1
				12	6	2	21.45	22 ± 1
				12	11	2	21.44	22 ± 1
				25	0	2	21.01	22 ± 1
	19175	1907.5	QPSK	1	0	0	22.98	22.5 ± 1
				1	12	0	22.81	22.5 ± 1
1				24	0	22.86	22.5 ± 1	
12				0	1	21.96	22.5 ± 1	
12				6	1	21.94	22.5 ± 1	
12				11	1	21.93	22.5 ± 1	
25				0	1	21.88	22.5 ± 1	
16QAM			1	0	1	22.20	21.5 ± 1	
			1	12	1	22.11	21.5 ± 1	
			1	24	1	22.10	21.5 ± 1	
			12	0	2	21.21	21.5 ± 1	
			12	6	2	21.18	21.5 ± 1	
			12	11	2	21.13	21.5 ± 1	
			25	0	2	20.94	21.5 ± 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	22.94	22.5 ± 1
				1	7	0	22.97	22.5 ± 1
				1	14	0	22.89	22.5 ± 1
				8	0	1	21.89	22.5 ± 1
				8	4	1	21.87	22.5 ± 1
				8	7	1	21.88	22.5 ± 1
				15	0	1	21.89	22.5 ± 1
			16QAM	1	0	1	21.72	21.5 ± 1
				1	7	1	21.74	21.5 ± 1
				1	14	1	21.68	21.5 ± 1
				8	0	2	21.32	21.5 ± 1
				8	4	2	21.29	21.5 ± 1
				8	7	2	21.28	21.5 ± 1
				15	0	2	20.90	21.5 ± 1
	18900	1880.0	QPSK	1	0	0	22.75	22.5 ± 1
				1	7	0	23.03	22.5 ± 1
				1	14	0	22.98	22.5 ± 1
				8	0	1	21.95	22.5 ± 1
				8	4	1	21.94	22.5 ± 1
				8	7	1	21.93	22.5 ± 1
				15	0	1	21.92	22.5 ± 1
			16QAM	1	0	1	22.31	22 ± 1
				1	7	1	21.93	22 ± 1
				1	14	1	21.91	22 ± 1
				8	0	2	21.35	22 ± 1
				8	4	2	21.34	22 ± 1
				8	7	2	21.37	22 ± 1
				15	0	2	21.01	22 ± 1
	19175	1907.5	QPSK	1	0	0	22.77	22.5 ± 1
				1	7	0	22.80	22.5 ± 1
1				14	0	22.72	22.5 ± 1	
8				0	1	21.88	22.5 ± 1	
8				4	1	21.85	22.5 ± 1	
8				7	1	21.87	22.5 ± 1	
15				0	1	21.89	22.5 ± 1	
16QAM			1	0	1	22.32	22 ± 1	
			1	7	1	22.32	22 ± 1	
			1	14	1	22.24	22 ± 1	
			8	0	2	21.84	22 ± 1	
			8	4	2	21.86	22 ± 1	
			8	7	2	21.85	22 ± 1	
			15	0	2	21.05	22 ± 1	

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
1.4MHz	18607	1850.7	QPSK	1	0	0	22.98	22.5±1
				1	2	0	22.99	22.5±1
				1	5	0	22.99	22.5±1
				3	0	0	23.03	22.5±1
				3	1	0	23.02	22.5±1
				3	2	0	23.00	22.5±1
				6	0	1	21.90	22.5±1
			16QAM	1	0	1	21.77	22±1
				1	2	1	21.78	22±1
				1	5	1	21.77	22±1
				3	0	1	21.26	22±1
				3	1	1	21.25	22±1
				3	2	1	21.24	22±1
				6	0	2	20.93	22±1
	18900	1880.0	QPSK	1	0	0	23.01	22.5±1
				1	2	0	23.10	22.5±1
				1	5	0	23.05	22.5±1
				3	0	0	23.02	22.5±1
				3	1	0	23.05	22.5±1
				3	2	0	23.08	22.5±1
				6	0	1	21.93	22.5±1
			16QAM	1	0	1	21.71	21.5±1
				1	2	1	22.04	21.5±1
				1	5	1	21.98	21.5±1
				3	0	1	21.42	21.5±1
				3	1	1	21.41	21.5±1
				3	2	1	21.39	21.5±1
				6	0	1	20.85	21.5±1
	19193	1909.3	QPSK	1	0	1	22.82	22.5±1
				1	2	2	22.69	22.5±1
1				5	0	22.74	22.5±1	
3				0	0	22.81	22.5±1	
3				1	0	22.79	22.5±1	
3				2	0	22.73	22.5±1	
6				0	1	21.84	22.5±1	
16QAM			1	0	1	21.50	22.5±1	
			1	2	1	21.42	22.5±1	
			1	5	1	21.49	22.5±1	
			3	0	1	21.25	22.5±1	
			3	1	1	21.22	22.5±1	
			3	2	1	21.21	22.5±1	
			6	0	2	20.81	22.5±1	

LTE Band 4:

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
20MHz	20050	1720.0	QPSK	1	0	0	23.15	22.5 ± 1
				1	49	0	23.04	22.5 ± 1
				1	99	0	22.92	22.5 ± 1
				50	0	1	22.06	22.5 ± 1
				50	24	1	22.01	22.5 ± 1
				50	49	1	21.95	22.5 ± 1
				100	0	1	22.00	22.5 ± 1
			16QAM	1	0	1	22.49	22 ± 1
				1	49	1	22.43	22 ± 1
				1	99	1	22.32	22 ± 1
				50	0	2	21.86	22 ± 1
				50	24	2	21.81	22 ± 1
				50	49	2	21.78	22 ± 1
				100	0	2	21.06	22 ± 1
	20175	1732.5	QPSK	1	0	0	23.08	22.5 ± 1
				1	49	0	22.93	22.5 ± 1
				1	99	0	23.06	22.5 ± 1
				50	0	1	21.86	22.5 ± 1
				50	24	1	21.85	22.5 ± 1
				50	49	1	21.83	22.5 ± 1
				100	0	1	21.84	22.5 ± 1
			16QAM	1	0	1	21.94	21.5 ± 1
				1	49	1	21.81	21.5 ± 1
				1	99	1	21.89	21.5 ± 1
				50	0	2	21.54	21.5 ± 1
				50	24	2	21.51	21.5 ± 1
				50	49	2	21.48	21.5 ± 1
100				0	2	20.91	21.5 ± 1	
20300	1745.0	QPSK	1	0	0	22.78	22.5 ± 1	
			1	49	0	22.99	22.5 ± 1	
			1	99	0	23.37	22.5 ± 1	
			50	0	1	21.85	22.5 ± 1	
			50	24	1	21.93	22.5 ± 1	
			50	49	1	22.17	22.5 ± 1	
			100	0	1	21.99	22.5 ± 1	
		16QAM	1	0	1	22.02	22 ± 1	
			1	49	1	22.17	22 ± 1	
			1	99	1	22.56	22 ± 1	
			50	0	2	21.96	22 ± 1	
			50	24	2	21.92	22 ± 1	
			50	49	2	21.89	22 ± 1	
			100	0	2	21.05	22 ± 1	

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
15MHz	20025	1717.5	QPSK	1	0	0	23.26	22.5 ± 1
				1	37	0	23.18	22.5 ± 1
				1	74	0	23.07	22.5 ± 1
				36	0	1	22.19	22.5 ± 1
				36	16	1	22.15	22.5 ± 1
				36	35	1	22.09	22.5 ± 1
				75	0	1	22.13	22.5 ± 1
			16QAM	1	0	1	21.99	21.5 ± 1
				1	37	1	21.95	21.5 ± 1
				1	74	1	21.87	21.5 ± 1
				36	0	2	21.56	21.5 ± 1
				36	16	2	21.52	21.5 ± 1
				36	35	2	21.49	21.5 ± 1
				75	0	2	21.15	21.5 ± 1
	20175	1732.5	QPSK	1	0	0	22.90	22 ± 1
				1	37	0	22.78	22 ± 1
				1	74	0	22.89	22 ± 1
				36	0	1	21.91	22 ± 1
				36	16	1	21.92	22 ± 1
				36	35	1	21.91	22 ± 1
				75	0	1	21.90	22 ± 1
			16QAM	1	0	1	22.13	21.5 ± 1
				1	37	1	22.01	21.5 ± 1
				1	74	1	22.07	21.5 ± 1
				36	0	2	21.64	21.5 ± 1
				36	16	2	21.45	21.5 ± 1
				36	35	2	21.28	21.5 ± 1
				75	0	2	20.90	21.5 ± 1
	20325	1747.5	QPSK	1	0	0	22.84	22.5 ± 1
				1	37	0	23.11	22.5 ± 1
1				74	0	23.38	22.5 ± 1	
36				0	1	22.05	22.5 ± 1	
36				16	1	22.19	22.5 ± 1	
36				35	1	22.33	22.5 ± 1	
75				0	1	22.20	22.5 ± 1	
16QAM			1	0	1	22.34	22 ± 1	
			1	37	1	22.58	22 ± 1	
			1	74	1	22.84	22 ± 1	
			36	0	2	21.68	22 ± 1	
			36	16	2	21.65	22 ± 1	
			36	35	2	21.64	22 ± 1	
			75	0	2	21.24	22 ± 1	

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
10MHz	20000	1715.0	QPSK	1	0	0	23.15	22.5 ± 1
				1	24	0	23.13	22.5 ± 1
				1	49	0	23.07	22.5 ± 1
				25	0	1	22.12	22.5 ± 1
				25	12	1	22.09	22.5 ± 1
				25	24	1	22.10	22.5 ± 1
				50	0	1	22.11	22.5 ± 1
			16QAM	1	0	1	22.64	22 ± 1
				1	24	1	22.62	22 ± 1
				1	49	1	22.56	22 ± 1
				25	0	2	21.75	22 ± 1
				25	12	2	21.71	22 ± 1
				25	24	2	21.69	22 ± 1
				50	0	2	21.18	22 ± 1
	20175	1732.5	QPSK	1	0	0	23.01	22.5 ± 1
				1	24	0	22.95	22.5 ± 1
				1	49	0	22.96	22.5 ± 1
				25	0	1	21.87	22.5 ± 1
				25	12	1	21.85	22.5 ± 1
				25	24	1	21.86	22.5 ± 1
				50	0	1	21.85	22.5 ± 1
			16QAM	1	0	1	21.80	21.5 ± 1
				1	24	1	21.73	21.5 ± 1
				1	49	1	21.75	21.5 ± 1
				25	0	2	21.15	21.5 ± 1
				25	12	2	21.14	21.5 ± 1
				25	24	2	21.16	21.5 ± 1
				50	0	2	20.91	21.5 ± 1
	20350	1750.0	QPSK	1	0	0	23.18	22.5 ± 1
				1	24	0	23.38	22.5 ± 1
				1	49	0	23.23	22.5 ± 1
				25	0	1	22.13	22.5 ± 1
				25	12	1	22.25	22.5 ± 1
				25	24	1	22.30	22.5 ± 1
				50	0	1	22.22	22.5 ± 1
			16QAM	1	0	1	22.05	22 ± 1
1				24	1	22.26	22 ± 1	
1				49	1	22.31	22 ± 1	
25				0	2	21.68	22 ± 1	
25				12	2	21.65	22 ± 1	
25				24	2	21.64	22 ± 1	
50				0	2	21.29	22 ± 1	

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
5MHz	20000	1715.0	QPSK	1	0	0	23.38	22.5 ± 1
				1	12	0	23.37	22.5 ± 1
				1	24	0	23.34	22.5 ± 1
				12	0	1	22.22	22.5 ± 1
				12	6	1	22.21	22.5 ± 1
				12	11	1	22.21	22.5 ± 1
				25	0	1	22.16	22.5 ± 1
			16QAM	1	0	1	22.25	21.5 ± 1
				1	12	1	22.23	21.5 ± 1
				1	24	1	22.21	21.5 ± 1
				12	0	2	21.95	21.5 ± 1
				12	6	2	21.96	21.5 ± 1
				12	11	2	21.94	21.5 ± 1
				25	0	2	21.19	21.5 ± 1
	20175	1732.5	QPSK	1	0	0	22.96	22 ± 1
				1	12	0	22.92	22 ± 1
				1	24	0	22.93	22 ± 1
				12	0	1	21.93	22 ± 1
				12	6	1	21.91	22 ± 1
				12	11	1	21.92	22 ± 1
				25	0	1	21.85	22 ± 1
			16QAM	1	0	1	22.20	21.5 ± 1
				1	12	1	22.19	21.5 ± 1
				1	24	1	22.19	21.5 ± 1
				12	0	2	21.85	21.5 ± 1
				12	6	2	21.83	21.5 ± 1
				12	11	2	21.81	21.5 ± 1
				25	0	2	20.90	21.5 ± 1
	20350	1750.0	QPSK	1	0	0	23.36	23 ± 1
				1	12	0	23.47	23 ± 1
1				24	0	23.50	23 ± 1	
12				0	1	22.34	23 ± 1	
12				6	1	22.41	23 ± 1	
12				11	1	22.44	23 ± 1	
25				0	1	22.34	23 ± 1	
16QAM			1	0	1	22.26	21.5 ± 1	
			1	12	1	22.35	21.5 ± 1	
			1	24	1	22.44	21.5 ± 1	
			12	0	2	22.06	21.5 ± 1	
			12	6	2	22.03	21.5 ± 1	
			12	11	2	22.02	21.5 ± 1	
			25	0	2	21.69	21.5 ± 1	

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
3MHz	19965	1711.5	QPSK	1	0	0	23.24	22.5 ± 1
				1	7	0	23.29	22.5 ± 1
				1	14	0	23.22	22.5 ± 1
				8	0	1	22.17	22.5 ± 1
				8	4	1	22.18	22.5 ± 1
				8	7	1	22.16	22.5 ± 1
				15	0	1	22.15	22.5 ± 1
			16QAM	1	0	1	21.98	22.5 ± 1
				1	7	1	22.04	22.5 ± 1
				1	14	1	21.96	22.5 ± 1
				8	0	2	21.45	22.5 ± 1
				8	4	2	21.43	22.5 ± 1
				8	7	2	21.42	22.5 ± 1
				15	0	2	21.13	22.5 ± 1
	20175	1732.5	QPSK	1	0	0	22.90	22 ± 1
				1	7	0	22.95	22 ± 1
				1	14	0	22.89	22 ± 1
				8	0	1	21.85	22 ± 1
				8	4	1	21.84	22 ± 1
				8	7	1	21.86	22 ± 1
				15	0	1	21.87	22 ± 1
			16QAM	1	0	1	21.82	21.5 ± 1
				1	7	1	21.85	21.5 ± 1
				1	14	1	21.81	21.5 ± 1
				8	0	2	21.65	21.5 ± 1
				8	4	2	21.62	21.5 ± 1
				8	7	2	21.63	21.5 ± 1
				15	0	2	20.93	21.5 ± 1
	20385	1753.5	QPSK	1	0	0	22.90	22 ± 1
				1	7	0	22.94	22 ± 1
1				14	0	22.90	22 ± 1	
8				0	1	21.85	22 ± 1	
8				4	1	21.86	22 ± 1	
8				7	1	21.87	22 ± 1	
15				0	1	21.86	22 ± 1	
16QAM			1	0	1	21.81	22.5 ± 1	
			1	7	1	21.84	22.5 ± 1	
			1	14	1	21.81	22.5 ± 1	
			8	0	2	21.16	22.5 ± 1	
			8	4	2	21.15	22.5 ± 1	
			8	7	2	21.18	22.5 ± 1	
			15	0	2	20.93	22.5 ± 1	

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
1.4MHz	19957	1710.7	QPSK	1	0	0	23.25	22.5±1
				1	2	0	23.39	22.5±1
				1	5	0	23.28	22.5±1
				3	0	0	23.27	22.5±1
				3	1	0	23.25	22.5±1
				3	2	0	23.26	22.5±1
			6	0	1	22.22	22.5±1	
			16QAM	1	0	1	22.01	21.5±1
				1	2	1	22.11	21.5±1
				1	5	1	22.02	21.5±1
				3	0	1	21.75	21.5±1
				3	1	1	21.76	21.5±1
	3	2		1	21.74	21.5±1		
	20175	1732.5	QPSK	1	0	0	22.92	22±1
				1	2	0	22.97	22±1
				1	5	0	22.92	22±1
				3	0	0	22.93	22±1
				3	1	0	22.92	22±1
				3	2	0	22.93	22±1
			6	0	1	21.86	22±1	
			16QAM	1	0	1	21.82	21.3±1
				1	2	1	21.91	21.5±1
				1	5	1	21.86	21.5±1
				3	0	1	21.23	21.5±1
				3	1	1	21.24	21.5±1
	3	2		1	21.21	21.5±1		
	20393	1754.3	QPSK	1	0	0	23.37	23±1
				1	2	0	23.48	23±1
				1	5	0	23.43	23±1
				3	0	0	23.45	23±1
3				1	0	23.46	23±1	
3				2	0	23.48	23±1	
6			0	1	22.43	23±1		
16QAM			1	0	1	21.99	21.5±1	
			1	2	1	22.09	21.5±1	
			1	5	1	22.07	21.5±1	
			3	0	1	21.84	21.5±1	
			3	1	1	21.83	21.5±1	
	3	2	1	21.85	21.5±1			
6	0	2	21.38	21.5±1				

LTE Band 7:

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
20MHz	20850	2510	QPSK	1	0	0	22.18	21.5 ± 1
				1	49	0	22.26	21.5 ± 1
				1	99	0	22.49	21.5 ± 1
				50	0	1	21.14	21.5 ± 1
				50	24	1	21.26	21.5 ± 1
				50	49	1	21.31	21.5 ± 1
				100	0	1	21.23	21.5 ± 1
			16QAM	1	0	1	21.56	21.3 ± 1
				1	49	1	21.58	21.3 ± 1
				1	99	1	21.83	21.3 ± 1
				50	0	2	21.52	21.3 ± 1
				50	24	2	21.48	21.3 ± 1
				50	49	2	21.46	21.3 ± 1
				100	0	2	20.35	21.3 ± 1
	21100	2535	QPSK	1	0	0	22.65	22 ± 1
				1	49	0	22.59	22 ± 1
				1	99	0	22.63	22 ± 1
				50	0	1	21.55	22 ± 1
				50	24	1	21.53	22 ± 1
				50	49	1	21.48	22 ± 1
				100	0	1	21.49	22 ± 1
			16QAM	1	0	1	21.58	21.3 ± 1
				1	49	1	21.49	21.3 ± 1
				1	99	1	21.50	21.3 ± 1
				50	0	2	21.14	21.3 ± 1
				50	24	2	21.06	21.3 ± 1
				50	49	2	21.05	21.3 ± 1
				100	0	2	20.43	21.3 ± 1
	21350	2560	QPSK	1	0	0	22.30	21.5 ± 1
				1	49	0	21.89	21.5 ± 1
1				99	0	20.78	21.5 ± 1	
50				0	1	21.25	21.5 ± 1	
50				24	1	20.95	21.5 ± 1	
50				49	1	20.58	21.5 ± 1	
100				0	1	20.99	21.5 ± 1	
16QAM			1	0	1	21.55	21.3 ± 1	
			1	49	1	21.20	21.3 ± 1	
			1	99	1	20.47	21.3 ± 1	
			50	0	2	20.84	21.3 ± 1	
			50	24	2	20.76	21.3 ± 1	
			50	49	2	20.68	21.3 ± 1	
			100	0	2	20.36	21.3 ± 1	

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
15MHz	20825	1717.5	QPSK	1	0	0	22.11	22±1
				1	37	0	22.27	22±1
				1	74	0	22.43	22±1
				36	0	1	21.25	22±1
				36	16	1	21.36	22±1
				36	35	1	21.43	22±1
				75	0	1	21.34	22±1
			16QAM	1	0	1	21.59	21.3±1
				1	37	1	21.66	21.3±1
				1	74	1	21.82	21.3±1
				36	0	2	21.26	21.3±1
				36	16	2	21.18	21.3±1
				36	35	2	21.11	21.3±1
				75	0	2	20.34	21.3±1
	21100	1732.5	QPSK	1	0	0	22.60	22.5±1
				1	37	0	22.55	22.5±1
				1	74	0	22.63	22.5±1
				36	0	1	21.60	22.5±1
				36	16	1	21.59	22.5±1
				36	35	1	21.57	22.5±1
				75	0	1	21.55	22.5±1
			16QAM	1	0	1	21.43	21.5±1
				1	37	1	21.35	21.3±1
				1	74	1	21.36	21.3±1
				36	0	2	21.10	21.3±1
				36	16	2	21.08	21.3±1
				36	35	2	21.05	21.3±1
				75	0	2	20.48	21.3±1
	21375	1747.5	QPSK	1	0	0	21.94	21.3±1
				1	37	0	21.58	21.3±1
1				74	0	20.41	21.3±1	
36				0	1	21.02	21.3±1	
36				16	1	20.68	21.3±1	
36				35	1	20.33	21.3±1	
75				0	1	20.70	21.3±1	
16QAM			1	0	1	21.38	21.3±1	
			1	37	1	21.06	21.3±1	
			1	74	1	20.35	21.3±1	
			36	0	2	20.34	21.3±1	
			36	16	2	20.33	21.3±1	
			36	35	2	20.36	21.3±1	
			75	0	2	20.31	21.3±1	

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
10MHz	20800	2502	QPSK	1	0	0	22.08	21.5±1
				1	24	0	22.10	21.5±1
				1	49	0	22.26	21.5±1
				25	0	1	21.15	21.5±1
				25	12	1	21.18	21.5±1
				25	24	1	21.22	21.5±1
				50	0	1	21.14	21.5±1
			16QAM	1	0	1	21.59	21.3±1
				1	24	1	21.62	21.3±1
				1	49	1	21.67	21.3±1
				25	0	2	20.68	21.3±1
				25	12	2	20.54	21.3±1
				25	24	2	20.59	21.3±1
				50	0	2	20.38	21.3±1
	21100	2535	QPSK	1	0	0	22.57	22±1
				1	24	0	22.56	22±1
				1	49	0	22.57	22±1
				25	0	1	21.49	22±1
				25	12	1	21.45	22±1
				25	24	1	21.47	22±1
				50	0	1	21.44	22±1
			16QAM	1	0	1	21.44	21.3±1
				1	24	1	21.36	21.3±1
				1	49	1	21.35	21.3±1
				25	0	2	20.95	21.3±1
				25	12	2	21.94	21.3±1
				25	24	2	21.86	21.3±1
				50	0	2	20.40	21.3±1
	21400	2565	QPSK	1	0	0	21.82	21.3±1
				1	24	0	21.26	21.3±1
1				49	0	20.35	21.3±1	
25				0	1	20.85	21.3±1	
25				12	1	20.68	21.3±1	
25				24	1	20.59	21.3±1	
50				0	1	20.46	21.3±1	
16QAM			1	0	1	20.87	21.3±1	
			1	24	1	20.43	21.3±1	
			1	49	1	20.37	21.3±1	
			25	0	2	20.35	21.3±1	
			25	12	2	20.36	21.3±1	
			25	24	2	20.37	21.3±1	
			50	0	2	20.34	21.3±1	

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
5MHz	19975	1712.5	QPSK	1	0	0	22.30	21.5±1
				1	12	0	22.33	21.5±1
				1	24	0	22.37	21.5±1
				12	0	1	21.20	21.5±1
				12	6	1	21.21	21.5±1
				12	11	1	21.23	21.5±1
				25	0	1	21.15	21.5±1
			16QAM	1	0	1	21.16	21.3±1
				1	12	1	21.22	21.3±1
				1	24	1	21.21	21.3±1
				12	0	2	20.84	21.3±1
				12	6	2	20.82	21.3±1
				12	11	2	20.81	21.3±1
				25	0	2	20.37	21.3±1
	20175	1732.5	QPSK	1	0	0	22.52	22±1
				1	12	0	22.51	22±1
				1	24	0	22.48	22±1
				12	0	1	21.57	22±1
				12	6	1	21.55	22±1
				12	11	1	21.54	22±1
				25	0	1	21.45	22±1
			16QAM	1	0	1	21.81	21.3±1
				1	12	1	21.75	21.3±1
				1	24	1	21.72	21.3±1
				12	0	2	20.45	21.3±1
				12	6	2	20.41	21.3±1
				12	11	2	20.42	21.3±1
				25	0	2	20.39	21.3±1
	20375	1752.5	QPSK	1	0	0	21.64	21.3±1
				1	12	0	20.60	21.3±1
1				24	0	20.61	21.3±1	
12				0	1	20.36	21.3±1	
12				6	1	20.34	21.3±1	
12				11	1	20.38	21.3±1	
25				0	1	20.37	21.3±1	
16QAM			1	0	1	20.74	21.3±1	
			1	12	1	20.56	21.3±1	
			1	24	1	20.52	21.3±1	
			12	0	2	20.42	21.3±1	
			12	6	2	20.41	21.3±1	
			12	11	2	20.39	21.3±1	
			25	0	2	20.31	21.3±1	

LTE Band 17:

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
10MHz	23780	709.0	QPSK	1	0	0	22.58	22.5±1
				1	24	0	23.04	22.5±1
				1	49	0	22.36	22.5±1
				25	0	1	21.99	22.5±1
				25	12	1	21.92	22.5±1
				25	24	1	21.84	22.5±1
				50	0	1	21.94	22.5±1
			16QAM	1	0	1	21.60	21.3±1
				1	24	1	21.86	21.3±1
				1	49	1	21.40	21.3±1
				25	0	2	21.11	21.3±1
				25	12	2	21.09	21.3±1
				25	24	2	21.08	21.3±1
				50	0	2	20.90	21.3±1
	23790	701.0	QPSK	1	0	0	22.99	22±1
				1	24	0	22.98	22±1
				1	49	0	22.32	22±1
				25	0	1	21.98	22±1
				25	12	1	21.84	22±1
				25	24	1	21.64	22±1
				50	0	1	21.87	22±1
			16QAM	1	0	1	22.02	21.5±1
				1	24	1	21.94	21.5±1
				1	49	1	21.41	21.5±1
				25	0	2	21.13	21.5±1
				25	12	2	21.11	21.5±1
				25	24	2	21.09	21.5±1
				50	0	2	20.87	21.5±1
	23800	711.0	QPSK	1	0	0	22.94	22.5±1
				1	24	0	22.70	22.5±1
1				49	0	22.14	22.5±1	
25				0	1	21.94	22.5±1	
25				12	1	21.76	22.5±1	
25				24	1	21.51	22.5±1	
50				0	1	21.88	22.5±1	
16QAM			1	0	1	22.59	21.8±1	
			1	24	1	22.44	21.8±1	
			1	49	1	21.93	21.8±1	
			25	0	2	21.25	21.8±1	
			25	12	2	21.23	21.8±1	
			25	24	2	21.22	21.8±1	
			50	0	2	20.94	21.8±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	22.5±1
				1	12	0	23.17	22.5±1
				1	24	0	23.12	22.5±1
				12	0	1	21.86	22.5±1
				12	6	1	21.95	22.5±1
				12	11	1	22.05	22.5±1
				25	0	1	22.02	22.5±1
			16QAM	1	0	1	22.01	21.5±1
				1	12	1	22.15	21.5±1
				1	24	1	22.08	21.5±1
				12	0	2	21.86	21.5±1
				12	6	2	21.84	21.5±1
				12	11	2	21.83	21.5±1
				25	0	2	21.01	21.5±1
	23790	710.0	QPSK	1	0	0	23.03	22.5±1
				1	12	0	22.99	22.5±1
				1	24	0	22.88	22.5±1
				12	0	1	21.98	22.5±1
				12	6	1	21.95	22.5±1
				12	11	1	21.90	22.5±1
				25	0	1	21.91	22.5±1
			16QAM	1	0	1	21.97	21.5±1
				1	12	1	21.93	21.5±1
				1	24	1	21.81	21.5±1
				12	0	2	21.64	21.5±1
				12	6	2	21.62	21.5±1
				12	11	2	21.58	21.5±1
				25	0	2	20.99	21.5±1
	23825	713.5	QPSK	1	0	0	22.86	22±1
				1	12	0	22.35	22±1
1				24	0	22.61	22±1	
12				0	1	21.84	22±1	
12				6	1	21.65	22±1	
12				11	1	21.45	22±1	
25				0	1	21.69	22±1	
16QAM			1	0	1	22.21	21.5±1	
			1	12	1	21.89	21.5±1	
			1	24	1	22.09	21.5±1	
			12	0	2	21.64	21.5±1	
			12	6	2	21.62	21.5±1	
			12	11	2	21.61	21.5±1	
			25	0	2	20.82	21.5±1	

ERP & EIRP

EIRP for LTE Band 2 (Part 24E)

Frequency (MHz)	BW (MHz)	Modulation	RB Size/Offset	Substituted level (dBm)	Antenna Polarization	Antenna Gain correction (dBi)	Cable Loss (dB)	Absolute Level (dBm)	Limit (dBm)
1850.7	1.4	QPSK	1/0	15.78	V	7.88	0.85	22.81	33.01
1880	1.4	QPSK	1/0	15.91	V	7.88	0.85	22.94	33.01
1909.3	1.4	QPSK	1/0	15.83	V	7.88	0.85	22.86	33.01
1850.7	1.4	QPSK	1/0	14.17	H	7.88	0.85	21.20	33.01
1880	1.4	QPSK	1/0	14.22	H	7.88	0.85	21.25	33.01
1909.3	1.4	QPSK	1/0	14.18	H	7.88	0.85	21.21	33.01
1850.7	1.4	16-QAM	1/0	14.69	V	7.88	0.85	21.72	33.01
1880	1.4	16-QAM	1/0	14.83	V	7.88	0.85	21.86	33.01
1909.3	1.4	16-QAM	1/0	14.72	V	7.88	0.85	21.75	33.01
1850.7	1.4	16-QAM	1/0	13.25	H	7.88	0.85	20.28	33.01
1880	1.4	16-QAM	1/0	13.31	H	7.88	0.85	20.34	33.01
1909.3	1.4	16-QAM	1/0	13.18	H	7.88	0.85	20.21	33.01
1851.5	3	QPSK	1/0	15.83	V	7.88	0.85	22.86	33.01
1880	3	QPSK	1/0	15.76	V	7.88	0.85	22.79	33.01
1908.5	3	QPSK	1/0	15.71	V	7.88	0.85	22.74	33.01
1851.5	3	QPSK	1/0	14.22	H	7.88	0.85	21.25	33.01
1880	3	QPSK	1/0	14.16	H	7.88	0.85	21.19	33.01
1908.5	3	QPSK	1/0	14.25	H	7.88	0.85	21.28	33.01
1851.5	3	16-QAM	1/0	14.77	V	7.88	0.85	21.80	33.01
1880	3	16-QAM	1/0	14.62	V	7.88	0.85	21.65	33.01
1908.5	3	16-QAM	1/0	14.73	V	7.88	0.85	21.76	33.01
1851.5	3	16-QAM	1/0	13.32	H	7.88	0.85	20.35	33.01
1880	3	16-QAM	1/0	13.29	H	7.88	0.85	20.32	33.01
1908.5	3	16-QAM	1/0	13.38	H	7.88	0.85	20.41	33.01
1852.5	5	QPSK	1/24	15.86	V	7.88	0.85	22.89	33.01
1880	5	QPSK	1/0	15.92	V	7.88	0.85	22.95	33.01
1907.5	5	QPSK	1/24	15.83	V	7.88	0.85	22.86	33.01
1852.5	5	QPSK	1/24	14.31	H	7.88	0.85	21.34	33.01
1880	5	QPSK	1/0	14.29	H	7.88	0.85	21.32	33.01
1907.5	5	QPSK	1/24	14.25	H	7.88	0.85	21.28	33.01
1852.5	5	16-QAM	1/24	14.81	V	7.88	0.85	21.84	33.01
1880	5	16-QAM	1/0	14.86	V	7.88	0.85	21.89	33.01

1907.5	5	16-QAM	1/24	14.77	V	7.88	0.85	21.80	33.01
1852.5	5	16-QAM	1/24	13.49	H	7.88	0.85	20.52	33.01
1880	5	16-QAM	1/0	13.38	H	7.88	0.85	20.41	33.01
1907.5	5	16-QAM	1/24	13.42	H	7.88	0.85	20.45	33.01
1855	10	QPSK	1/0	15.77	V	7.88	0.85	22.80	33.01
1880	10	QPSK	1/0	15.83	V	7.88	0.85	22.86	33.01
1905	10	QPSK	1/49	15.74	V	7.88	0.85	22.77	33.01
1855	10	QPSK	1/0	14.42	H	7.88	0.85	21.45	33.01
1880	10	QPSK	1/0	14.37	H	7.88	0.85	21.40	33.01
1905	10	QPSK	1/49	14.31	H	7.88	0.85	21.34	33.01
1855	10	16-QAM	1/0	14.67	V	7.88	0.85	21.7	33.01
1880	10	16-QAM	1/0	14.73	V	7.88	0.85	21.76	33.01
1905	10	16-QAM	1/49	14.69	V	7.88	0.85	21.72	33.01
1855	10	16-QAM	1/0	13.32	H	7.88	0.85	20.35	33.01
1880	10	16-QAM	1/0	13.41	H	7.88	0.85	20.44	33.01
1905	10	16-QAM	1/49	13.38	H	7.88	0.85	20.41	33.01
1857.5	15	QPSK	1/0	15.72	V	7.88	0.85	22.75	33.01
1880	15	QPSK	1/0	15.86	V	7.88	0.85	22.89	33.01
1902.5	15	QPSK	1/0	15.69	V	7.88	0.85	22.72	33.01
1857.5	15	QPSK	1/0	14.34	H	7.88	0.85	21.37	33.01
1880	15	QPSK	1/0	14.42	H	7.88	0.85	21.45	33.01
1902.5	15	QPSK	1/0	14.38	H	7.88	0.85	21.41	33.01
1857.5	15	16-QAM	1/0	14.56	V	7.88	0.85	21.59	33.01
1880	15	16-QAM	1/0	14.63	V	7.88	0.85	21.66	33.01
1902.5	15	16-QAM	1/0	14.51	V	7.88	0.85	21.54	33.01
1857.5	15	16-QAM	1/0	13.24	H	7.88	0.85	20.27	33.01
1880	15	16-QAM	1/0	13.38	H	7.88	0.85	20.41	33.01
1902.5	15	16-QAM	1/0	13.17	H	7.88	0.85	20.20	33.01
1860	20	QPSK	1/0	15.85	V	7.88	0.85	22.88	33.01
1880	20	QPSK	1/0	15.76	V	7.88	0.85	22.79	33.01
1900	20	QPSK	1/0	15.91	V	7.88	0.85	22.94	33.01
1860	20	QPSK	1/0	14.28	H	7.88	0.85	21.31	33.01
1880	20	QPSK	1/0	14.31	H	7.88	0.85	21.34	33.01
1900	20	QPSK	1/0	14.19	H	7.88	0.85	21.22	33.01
1860	20	16-QAM	1/0	14.67	V	7.88	0.85	21.70	33.01
1880	20	16-QAM	1/0	14.72	V	7.88	0.85	21.75	33.01
1900	20	16-QAM	1/0	14.63	V	7.88	0.85	21.66	33.01
1860	20	16-QAM	1/0	13.18	H	7.88	0.85	20.21	33.01

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1880	20	16-QAM	1/0	13.21	H	7.88	0.85	20.24	33.01
1900	20	16-QAM	1/0	13.15	H	7.88	0.85	20.18	33.01

EIRP for LTE Band 4 (Part 27)

Frequency (MHz)	BW (MHz)	Modulation	RB Size/Offset	Substituted level (dBm)	Antenna Polarization	Antenna Gain correction (dBi)	Cable Loss (dB)	Absolute Level (dBm)	Limit (dBm)
1710.7	1.4	QPSK	1/0	15.96	V	7.95	0.79	23.12	30
1732.5	1.4	QPSK	1/0	15.75	V	7.95	0.79	22.91	30
1754.3	1.4	QPSK	1/0	15.88	V	7.95	0.79	23.04	30
1710.7	1.4	QPSK	1/0	14.22	H	7.95	0.79	21.38	30
1732.5	1.4	QPSK	1/0	14.07	H	7.95	0.79	21.23	30
1754.3	1.4	QPSK	1/0	14.18	H	7.95	0.79	21.34	30
1710.7	1.4	16-QAM	1/5	14.83	V	7.95	0.79	21.99	30
1732.5	1.4	16-QAM	1/0	14.67	V	7.95	0.79	21.83	30
1754.3	1.4	16-QAM	1/0	14.81	V	7.95	0.79	21.97	30
1710.7	1.4	16-QAM	1/5	13.26	H	7.95	0.79	20.42	30
1732.5	1.4	16-QAM	1/0	13.08	H	7.95	0.79	20.24	30
1754.3	1.4	16-QAM	1/0	13.22	H	7.95	0.79	20.38	30
1711.5	3	QPSK	1/0	15.87	V	7.95	0.79	23.03	30
1732.5	3	QPSK	1/0	15.72	V	7.95	0.79	22.88	30
1753.5	3	QPSK	1/0	15.81	V	7.95	0.79	22.97	30
1711.5	3	QPSK	1/0	14.27	H	7.95	0.79	21.43	30
1732.5	3	QPSK	1/0	14.11	H	7.95	0.79	21.27	30
1753.5	3	QPSK	1/0	14.23	H	7.95	0.79	21.39	30
1711.5	3	16-QAM	1/0	14.77	V	7.95	0.79	21.93	30
1732.5	3	16-QAM	1/0	14.69	V	7.95	0.79	21.85	30
1753.5	3	16-QAM	1/0	14.81	V	7.95	0.79	21.97	30
1711.5	3	16-QAM	1/0	13.18	H	7.95	0.79	20.34	30
1732.5	3	16-QAM	1/0	13.23	H	7.95	0.79	20.39	30
1753.5	3	16-QAM	1/0	13.14	H	7.95	0.79	20.30	30
1712.5	5	QPSK	1/0	15.92	V	7.95	0.79	23.08	30
1732.5	5	QPSK	1/0	15.76	V	7.95	0.79	22.92	30
1752.5	5	QPSK	1/24	15.89	V	7.95	0.79	23.05	30
1712.5	5	QPSK	1/0	14.21	H	7.95	0.79	21.37	30
1732.5	5	QPSK	1/0	14.06	H	7.95	0.79	21.22	30
1752.5	5	QPSK	1/24	14.25	H	7.95	0.79	21.41	30
1712.5	5	16-QAM	1/0	14.83	V	7.95	0.79	21.99	30
1732.5	5	16-QAM	1/0	14.68	V	7.95	0.79	21.84	30
1752.5	5	16-QAM	1/24	14.81	V	7.95	0.79	21.97	30

1712.5	5	16-QAM	1/0	13.34	H	7.95	0.79	20.50	30
1732.5	5	16-QAM	1/0	13.19	H	7.95	0.79	20.35	30
1752.5	5	16-QAM	1/24	13.43	H	7.95	0.79	20.59	30
1715	10	QPSK	1/0	15.87	V	7.95	0.79	23.03	30
1732.5	10	QPSK	1/49	15.91	V	7.95	0.79	23.07	30
1750	10	QPSK	1/0	15.83	V	7.95	0.79	22.99	30
1715	10	QPSK	1/0	14.19	H	7.95	0.79	21.35	30
1732.5	10	QPSK	1/49	14.16	H	7.95	0.79	21.32	30
1750	10	QPSK	1/0	14.22	H	7.95	0.79	21.38	30
1715	10	16-QAM	1/0	14.79	V	7.95	0.79	21.95	30
1732.5	10	16-QAM	1/49	14.82	V	7.95	0.79	21.98	30
1750	10	16-QAM	1/0	14.76	V	7.95	0.79	21.92	30
1715	10	16-QAM	1/0	13.29	H	7.95	0.79	20.45	30
1732.5	10	16-QAM	1/49	13.31	H	7.95	0.79	20.47	30
1750	10	16-QAM	1/0	13.35	H	7.95	0.79	20.51	30
1717.5	15	QPSK	1/0	15.95	V	7.95	0.79	23.11	30
1732.5	15	QPSK	1/74	15.82	V	7.95	0.79	22.98	30
1747.5	15	QPSK	1/0	15.67	V	7.95	0.79	22.83	30
1717.5	15	QPSK	1/0	14.25	H	7.95	0.79	21.41	30
1732.5	15	QPSK	1/74	14.19	H	7.95	0.79	21.35	30
1747.5	15	QPSK	1/0	14.03	H	7.95	0.79	21.19	30
1717.5	15	16-QAM	1/0	14.86	V	7.95	0.79	22.02	30
1732.5	15	16-QAM	1/74	14.75	V	7.95	0.79	21.91	30
1747.5	15	16-QAM	1/0	14.58	V	7.95	0.79	21.74	30
1717.5	15	16-QAM	1/0	13.34	H	7.95	0.79	20.50	30
1732.5	15	16-QAM	1/74	13.28	H	7.95	0.79	20.44	30
1747.5	15	16-QAM	1/0	13.19	H	7.95	0.79	20.35	30
1720	20	QPSK	1/99	15.93	V	7.95	0.79	23.09	30
1732.5	20	QPSK	1/99	15.89	V	7.95	0.79	23.05	30
1745	20	QPSK	1/0	15.52	V	7.95	0.79	22.68	30
1720	20	QPSK	1/99	14.27	H	7.95	0.79	21.43	30
1732.5	20	QPSK	1/99	14.23	H	7.95	0.79	21.39	30
1745	20	QPSK	1/0	13.95	H	7.95	0.79	21.11	30
1720	20	16-QAM	1/99	14.83	V	7.95	0.79	21.99	30
1732.5	20	16-QAM	1/99	14.88	V	7.95	0.79	22.04	30
1745	20	16-QAM	1/0	14.62	V	7.95	0.79	21.78	30
1720	20	16-QAM	1/99	13.47	H	7.95	0.79	20.63	30
1732.5	20	16-QAM	1/99	13.43	H	7.95	0.79	20.59	30

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1745	20	16-QAM	1/0	13.08	H	7.95	0.79	20.24	30
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ERP for LTE Band 7 (Part 27)

Frequency (MHz)	BW (MHz)	Modulation	RB Size/Offset	Substituted level (dBm)	Antenna Polarization	Antenna Gain correction (dBi)	Cable Loss (dB)	Absolute Level (dBm)	Limit (dBm)
2502.5	5	QPSK	1/0	15.12	V	8.93	0.83	23.22	30
2535	5	QPSK	1/0	15.26	V	8.93	0.83	23.36	30
2567.5	5	QPSK	1/24	14.67	V	8.93	0.83	22.77	30
2502.5	5	QPSK	1/0	13.49	H	8.93	0.83	21.59	30
2535	5	QPSK	1/0	13.44	H	8.93	0.83	21.54	30
2567.5	5	QPSK	1/24	13.18	H	8.93	0.83	21.28	30
2502.5	5	16-QAM	1/0	14.23	V	8.93	0.83	22.33	30
2535	5	16-QAM	1/0	14.17	V	8.93	0.83	22.27	30
2567.5	5	16-QAM	1/24	13.72	V	8.93	0.83	21.82	30
2502.5	5	16-QAM	1/0	12.76	H	8.93	0.83	20.86	30
2535	5	16-QAM	1/0	12.73	H	8.93	0.83	20.83	30
2567.5	5	16-QAM	1/24	12.48	H	8.93	0.83	20.58	30
2505	10	QPSK	1/0	15.07	V	8.93	0.83	23.17	30
2535	10	QPSK	1/49	15.21	V	8.93	0.83	23.31	30
2565	10	QPSK	1/0	14.56	V	8.93	0.83	22.66	30
2505	10	QPSK	1/0	13.44	H	8.93	0.83	21.54	30
2535	10	QPSK	1/49	13.41	H	8.93	0.83	21.51	30
2565	10	QPSK	1/0	13.06	H	8.93	0.83	21.16	30
2505	10	16-QAM	1/0	14.12	V	8.93	0.83	22.22	30
2535	10	16-QAM	1/49	14.09	V	8.93	0.83	22.19	30
2565	10	16-QAM	1/0	13.68	V	8.93	0.83	21.78	30
2505	10	16-QAM	1/0	12.63	H	8.93	0.83	20.73	30
2535	10	16-QAM	1/49	12.59	H	8.93	0.83	20.69	30
2565	10	16-QAM	1/0	12.37	H	8.93	0.83	20.47	30
2507.5	15	QPSK	1/0	15.09	V	8.93	0.83	23.19	30
2535	15	QPSK	1/74	15.16	V	8.93	0.83	23.26	30
2562.5	15	QPSK	1/0	14.62	V	8.93	0.83	22.72	30
2507.5	15	QPSK	1/0	13.38	H	8.93	0.83	21.48	30
2535	15	QPSK	1/74	13.44	H	8.93	0.83	21.54	30
2562.5	15	QPSK	1/0	13.02	H	8.93	0.83	21.12	30
2507.5	15	16-QAM	1/0	14.17	V	8.93	0.83	22.27	30
2535	15	16-QAM	1/74	14.23	V	8.93	0.83	22.33	30
2562.5	15	16-QAM	1/0	13.59	V	8.93	0.83	21.69	30

2507.5	15	16-QAM	1/0	12.54	H	8.93	0.83	20.64	30
2535	15	16-QAM	1/74	12.51	H	8.93	0.83	20.61	30
2562.5	15	16-QAM	1/0	12.29	H	8.93	0.83	20.39	30
2510	20	QPSK	1/99	15.02	V	8.93	0.83	23.12	30
2535	20	QPSK	1/99	14.87	V	8.93	0.83	22.97	30
2560	20	QPSK	1/0	14.73	V	8.93	0.83	22.83	30
2510	20	QPSK	1/99	13.31	H	8.93	0.83	21.41	30
2535	20	QPSK	1/99	13.27	H	8.93	0.83	21.37	30
2560	20	QPSK	1/0	13.05	H	8.93	0.83	21.15	30
2510	20	16-QAM	1/99	14.14	V	8.93	0.83	22.24	30
2535	20	16-QAM	1/99	14.19	V	8.93	0.83	22.29	30
2560	20	16-QAM	1/0	13.52	V	8.93	0.83	21.62	30
2510	20	16-QAM	1/99	12.59	H	8.93	0.83	20.69	30
2535	20	16-QAM	1/99	12.61	H	8.93	0.83	20.71	30
2560	20	16-QAM	1/0	12.18	H	8.93	0.83	20.28	30

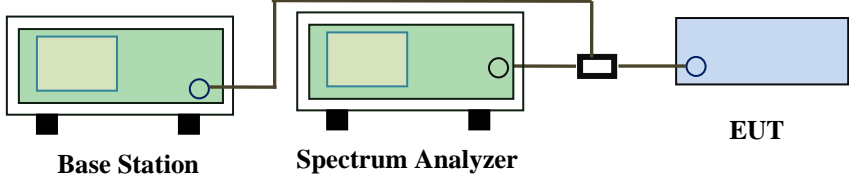
ERP for LTE Band 17 (Part 27)

Frequency (MHz)	BW (MHz)	Modulation	RB Size/Offset	Substituted level (dBm)	Antenna Polarization	Antenna Gain correction (dBi)	Cable Loss (dB)	Absolute Level (dBm)	Limit (dBm)
706.5	5	QPSK	1/0	15.43	V	6.8	0.42	21.81	34.77
710	5	QPSK	1/0	15.57	V	6.8	0.42	21.95	34.77
713.5	5	QPSK	1/0	15.34	V	6.8	0.42	21.72	34.77
706.5	5	QPSK	1/0	13.68	H	6.8	0.42	20.06	34.77
710	5	QPSK	1/0	13.61	H	6.8	0.42	19.99	34.77
713.5	5	QPSK	1/0	13.29	H	6.8	0.42	19.67	34.77
706.5	5	16-QAM	1/0	14.31	V	6.8	0.42	20.69	34.77
710	5	16-QAM	1/0	14.38	V	6.8	0.42	20.76	34.77
713.5	5	16-QAM	1/0	14.15	V	6.8	0.42	20.53	34.77
706.5	5	16-QAM	1/0	12.42	H	6.8	0.42	18.80	34.77
710	5	16-QAM	1/0	12.37	H	6.8	0.42	18.75	34.77
713.5	5	16-QAM	1/0	12.24	H	6.8	0.42	18.62	34.77
709	10	QPSK	1/0	15.49	V	6.8	0.42	21.87	34.77
710	10	QPSK	1/0	15.53	V	6.8	0.42	21.91	34.77
711	10	QPSK	1/0	15.27	V	6.8	0.42	21.65	34.77
709	10	QPSK	1/0	13.71	H	6.8	0.42	20.09	34.77
710	10	QPSK	1/0	13.75	H	6.8	0.42	20.13	34.77
711	10	QPSK	1/0	13.33	H	6.8	0.42	19.71	34.77
709	10	16-QAM	1/0	14.46	V	6.8	0.42	20.84	34.77
710	10	16-QAM	1/0	14.52	V	6.8	0.42	20.90	34.77
711	10	16-QAM	1/0	14.09	V	6.8	0.42	20.47	34.77
709	10	16-QAM	1/0	12.68	H	6.8	0.42	19.06	34.77
710	10	16-QAM	1/0	12.71	H	6.8	0.42	19.09	34.77
711	10	16-QAM	1/0	12.35	H	6.8	0.42	18.73	34.77

6.3 Peak-Average Ratio

Temperature	25°C
Relative Humidity	57%
Atmospheric Pressure	1024mbar
Test date :	February 24, 2016
Tested By :	Winnie Zhang

Requirement(s):

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

Test Data Yes N/A
 Test Plot Yes (See below) N/A

LTE Band 2 (part 24E)

BW(MHz)	Frequency (MHz)	Mode	Modulation	Conducted Power (dBm)		Peak-Average Ratio (PAR)
				Peak	Average	
1.4	1880	RB 1/0	QPSK	23.08	23.01	0.07
			16QAM	21.90	21.71	0.19
3	1880	RB 1/0	QPSK	22.88	22.75	0.13
			16QAM	22.42	22.31	0.11
5	1880	RB 1/0	QPSK	23.26	23.12	0.14
			16QAM	22.22	22.05	0.17
10	1880	RB 1/0	QPSK	23.11	22.96	0.15
			16QAM	21.97	21.83	0.14
15	1880	RB 1/0	QPSK	23.22	23.09	0.13
			16QAM	22.02	21.86	0.16
20	1880	RB 1/0	QPSK	23.15	22.97	0.18
			16QAM	22.39	22.24	0.15

LTE Band 4 (part 27)

BW(MHz)	Frequency (MHz)	Mode	Modulation	Conducted Power (dBm)		Peak-Average Ratio (PAR)
				Peak	Average	
1.4	1732.5	RB 1/0	QPSK	23.02	22.92	0.10
			16QAM	22.09	21.82	0.27
3	1732.5	RB 1/0	QPSK	23.02	22.90	0.12
			16QAM	21.93	21.82	0.11
5	1732.5	RB 1/0	QPSK	23.03	22.96	0.07
			16QAM	22.56	22.20	0.36
10	1732.5	RB 1/0	QPSK	23.14	23.01	0.13
			16QAM	21.89	21.80	0.09
15	1732.5	RB 1/0	QPSK	23.04	22.90	0.14
			16QAM	22.22	22.13	0.09
20	1732.5	RB 1/0	QPSK	23.21	23.08	0.13
			16QAM	21.98	21.94	0.04

LTE Band 7 (part 27)

BW(MHz)	Frequency (MHz)	Mode	Modulation	Conducted Power (dBm)		Peak-Average Ratio (PAR)
				Peak	Average	
5	2535	RB 1/0	QPSK	22.58	22.52	0.06
			16QAM	22.15	21.81	0.34
10	2535	RB 1/0	QPSK	22.7	22.57	0.13
			16QAM	21.51	21.44	0.07
15	2535	RB 1/0	QPSK	22.74	22.60	0.14
			16QAM	21.51	21.43	0.08
20	2535	RB 1/0	QPSK	22.79	22.65	0.14
			16QAM	21.62	21.58	0.04

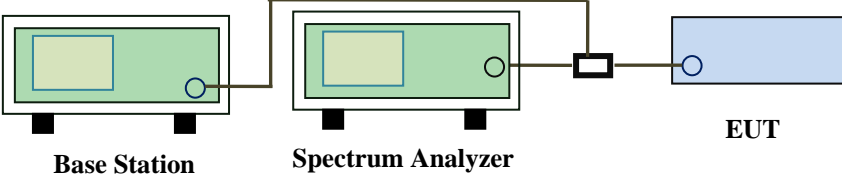
LTE Band 17 (part 27)

BW(MHz)	Frequency (MHz)	Mode	Modulation	Conducted Power (dBm)		Peak-Average Ratio (PAR)
				Peak	Average	
5	710	RB 1/0	QPSK	23.10	23.03	0.07
			16QAM	22.03	21.97	0.06
10	710	RB 1/0	QPSK	23.10	22.99	0.11
			16QAM	22.13	22.02	0.11

6.4 Occupied Bandwidth

Temperature	22°C
Relative Humidity	58%
Atmospheric Pressure	1025mbar
Test date :	February 25, 2016
Tested By :	Winnie Zhang

Requirement(s):

Spec	Item	Requirement	Applicable
§2.1049, §22.917, §22.905 §24.238 §27.53(a)	a)	99% Occupied Bandwidth(kHz)	<input checked="" type="checkbox"/>
	b)	26 dB Bandwidth(kHz)	<input checked="" type="checkbox"/>
Test Setup	 <p style="text-align: center;"> Base Station Spectrum Analyzer EUT </p>		
Test Procedure	<ul style="list-style-type: none"> - 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	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail		

Test Data Yes N/A

Test Plot Yes (See below) N/A

LTE Band 2 (Part 24E)

BW(MHz)	Channel	Frequency (MHz)	Modulation	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
1.4	18607	1850.7	16QAM	1.0941	1.269
			QPSK	1.0964	1.279
1.4	18900	1880	16QAM	1.0942	1.271
			QPSK	1.1023	1.271
1.4	19193	1909.3	16QAM	1.1065	1.276
			QPSK	1.0995	1.277
3	18615	1851.5	16QAM	2.7433	3.077
			QPSK	2.7441	3.066
3	18900	1880	16QAM	2.7475	3.099
			QPSK	2.7406	3.105
3	19185	1908.5	16QAM	2.7348	3.049
			QPSK	2.7501	3.096
5	18625	1852.5	16QAM	4.5267	5.063
			QPSK	4.5291	5.084
5	18900	1880	16QAM	4.5077	5.117
			QPSK	4.5154	5.049
5	19175	1907.5	16QAM	4.5127	5.071
			QPSK	4.5283	5.047
10	18650	1855	16QAM	9.0646	10.109
			QPSK	9.0611	10.168
10	18900	1880	16QAM	9.0483	10.207
			QPSK	9.0629	10.139
10	19150	1905	16QAM	9.0609	10.011
			QPSK	9.0463	10.081
15	18675	1857.5	16QAM	13.4762	14.851
			QPSK	13.4774	14.748
15	18900	1880	16QAM	13.4659	14.718
			QPSK	13.4484	14.887
15	19125	1902.5	16QAM	13.4900	14.775
			QPSK	13.4543	14.768

20	18700	1860	16QAM	17.8979	19.469
			QPSK	17.8702	19.268
20	18900	1880	16QAM	17.9063	19.409
			QPSK	17.9076	19.570
20	19100	1900	16QAM	17.8799	19.543
			QPSK	17.8939	19.310

LTE Band 4 (Part 27)

BW(MHz)	Channel	Frequency (MHz)	Modulation	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
1.4	19957	1710.7	16QAM	1.1017	1.291
			QPSK	1.1041	1.278
1.4	20175	1732.5	16QAM	1.0922	1.263
			QPSK	1.0974	1.270
1.4	20393	1754.3	16QAM	1.0998	1.287
			QPSK	1.0927	1.260
3	19965	1711.5	16QAM	2.7448	3.081
			QPSK	2.7478	3.061
3	20175	1732.5	16QAM	2.7331	3.046
			QPSK	2.7553	3.098
3	20385	1753.5	16QAM	2.7350	3.085
			QPSK	2.7388	3.087
5	19975	1712.5	16QAM	4.5238	5.086
			QPSK	4.5263	5.104
5	20175	1732.5	16QAM	4.5209	5.016
			QPSK	4.5176	5.019
5	20375	1752.5	16QAM	4.5286	5.066
			QPSK	4.5108	5.054
10	20000	1715	16QAM	9.0791	10.159
			QPSK	9.0926	10.086
10	20175	1732.5	16QAM	9.0491	10.176
			QPSK	9.0659	10.246
10	20350	1750	16QAM	9.0570	10.202
			QPSK	9.0886	10.122

15	20025	1717.5	16QAM	13.4673	14.842
			QPSK	13.4690	14.697
15	20175	1732.5	16QAM	13.4718	14.848
			QPSK	13.4932	14.948
15	20325	1747.5	16QAM	13.4957	14.842
			QPSK	13.4767	14.932
20	20050	1720	16QAM	17.9159	19.288
			QPSK	17.8922	19.413
20	20175	1732.5	16QAM	17.8934	19.247
			QPSK	17.8629	19.208
20	20300	1745	16QAM	17.8892	19.169
			QPSK	17.8823	19.318

LTE Band 7 (Part 27) result

BW(MHz)	Channel	Frequency (MHz)	Modulation	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
5	20775	2502.5	16QAM	4.5231	5.040
			QPSK	4.5356	5.236
5	21100	2535	16QAM	4.5122	5.020
			QPSK	4.5064	5.061
5	21425	2567.5	16QAM	4.5124	5.103
			QPSK	4.5156	5.037
10	20800	2505	16QAM	9.0555	10.251
			QPSK	9.0463	10.572
10	21100	2535	16QAM	9.0381	10.071
			QPSK	9.0699	10.077
10	21400	2562.5	16QAM	9.0602	9.981
			QPSK	9.0603	9.980
15	20825	2507.5	16QAM	13.4796	14.985
			QPSK	13.4684	14.959
15	21100	2535	16QAM	13.4318	14.706
			QPSK	13.4769	14.799
15	21400	2562.5	16QAM	13.4659	14.780

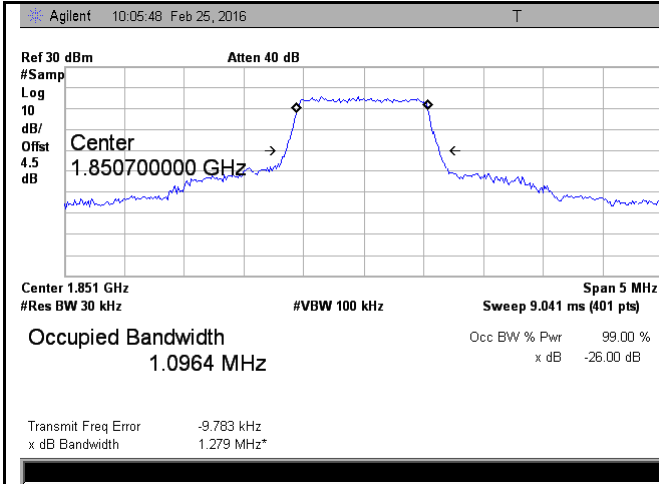
			QPSK	13.4595	14.861
20	20850	2510	16QAM	17.8962	19.328
			QPSK	17.8892	19.667
20	21100	2535	16QAM	17.8770	19.217
			QPSK	17.8793	19.327
20	21350	2560	16QAM	17.9044	19.103
			QPSK	17.9075	19.545

LTE Band 17 (Part 27)

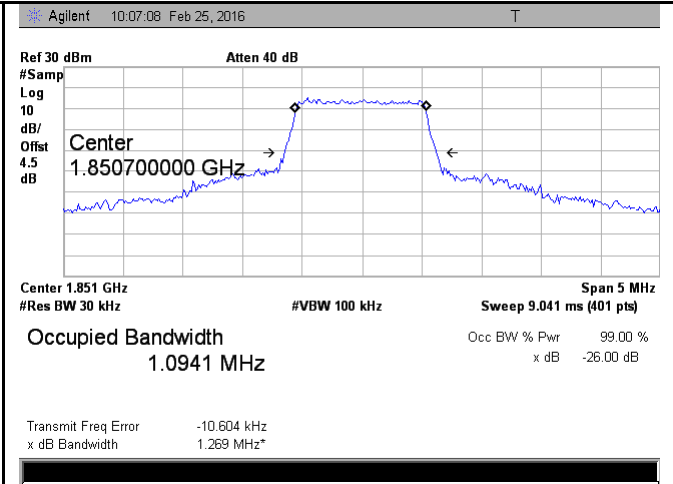
BW(MHz)	Channel	Frequency (MHz)	Modulation	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
5	23755	706.5	16QAM	4.5186	5.049
			QPSK	4.5174	5.050
5	23790	710	16QAM	4.5185	5.051
			QPSK	4.5260	5.096
5	23825	713.5	16QAM	4.5230	5.068
			QPSK	4.5300	5.050
10	23780	709	16QAM	9.0694	10.017
			QPSK	9.0561	10.087
10	23790	710	16QAM	9.0455	10.135
			QPSK	9.0740	10.144
10	23800	711	16QAM	9.0671	10.158
			QPSK	9.0986	10.216

Test Plots

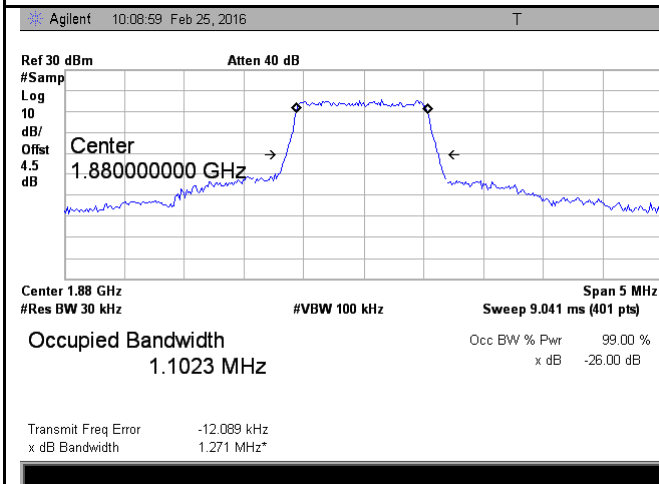
LTE Band 2 (Part 24E)



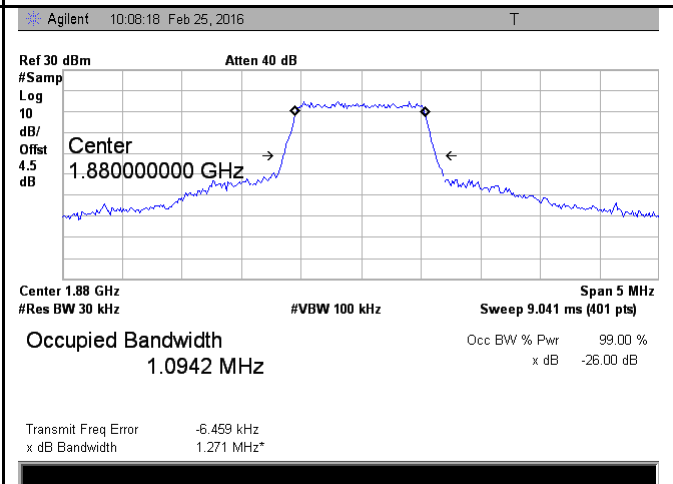
LTE band 2 - Low CH QPSK-1.4



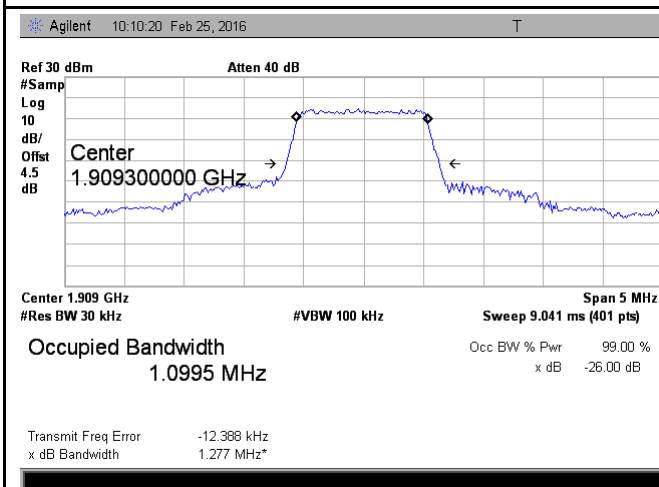
LTE band 2 - Low CH 16QAM-1.4



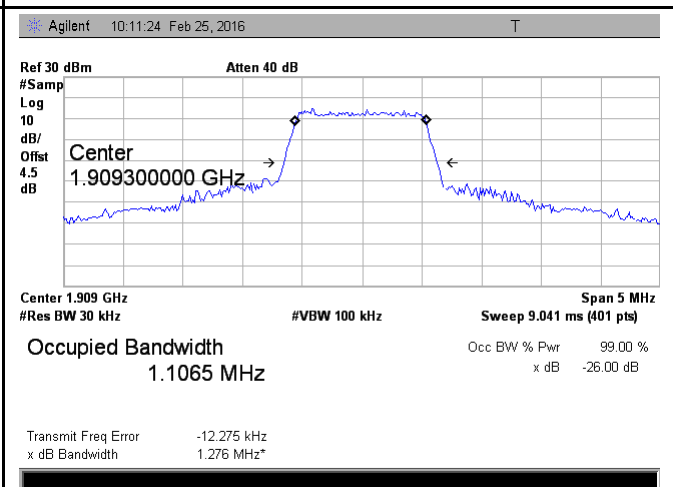
LTE band 2 - Middle CH QPSK-1.4



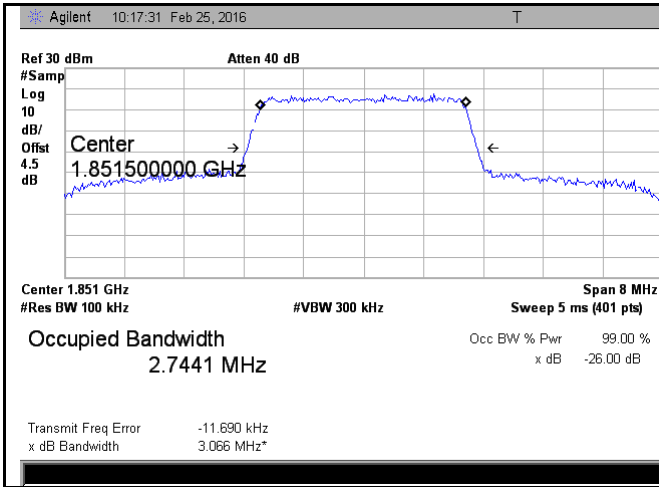
LTE band 2 - Middle CH 16QAM-1.4



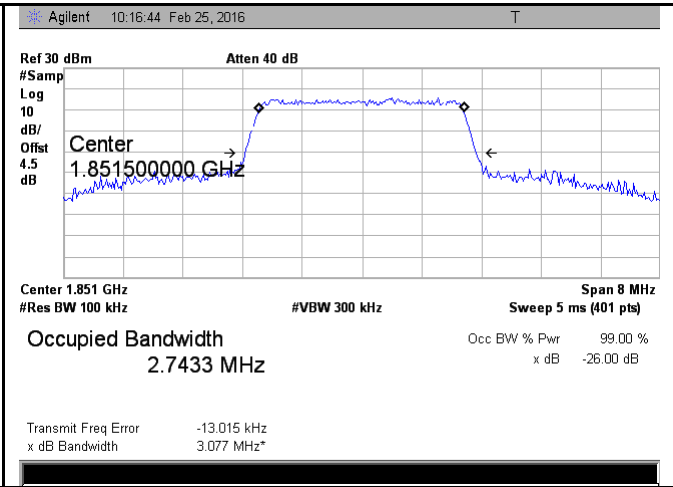
LTE band 2 - High CH QPSK-1.4



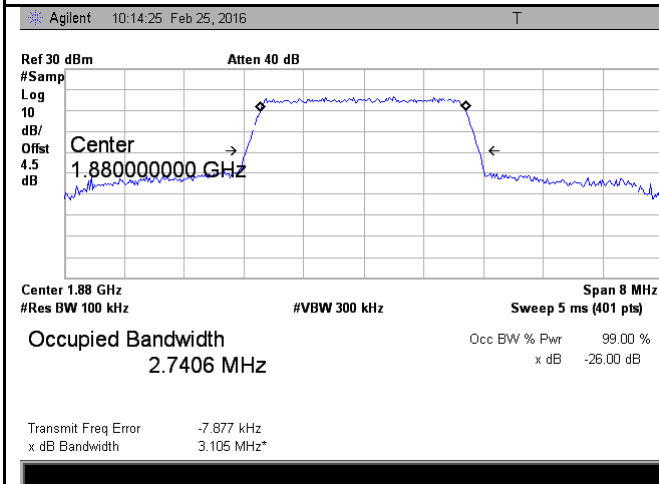
LTE band 2 - High CH 16QAM-1.4



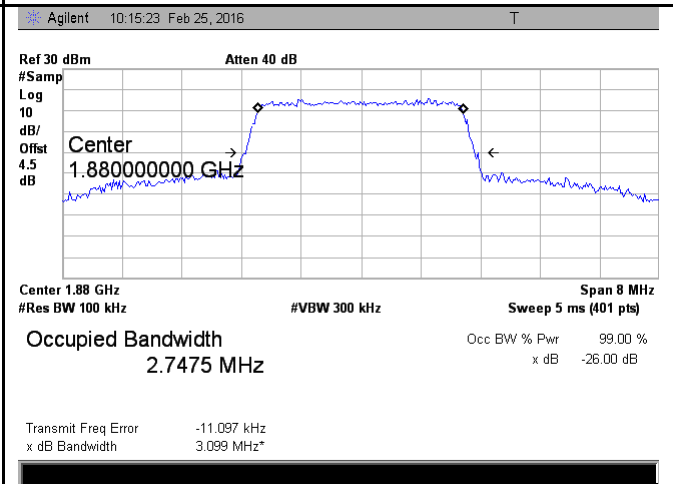
LTE band 2 - Low CH QPSK-3



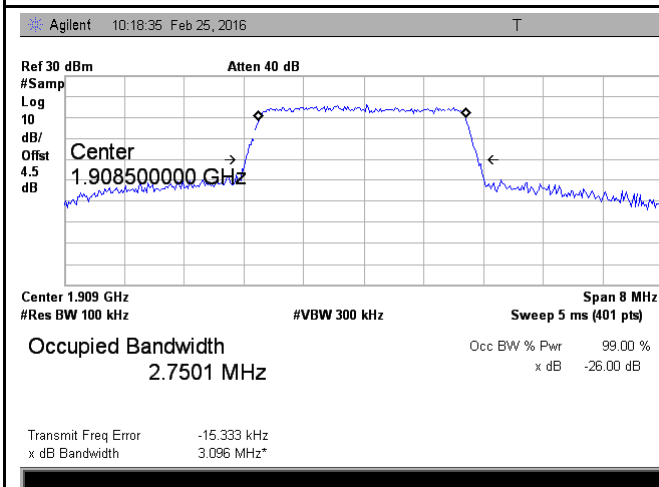
LTE band 2 - Low CH 16QAM-3



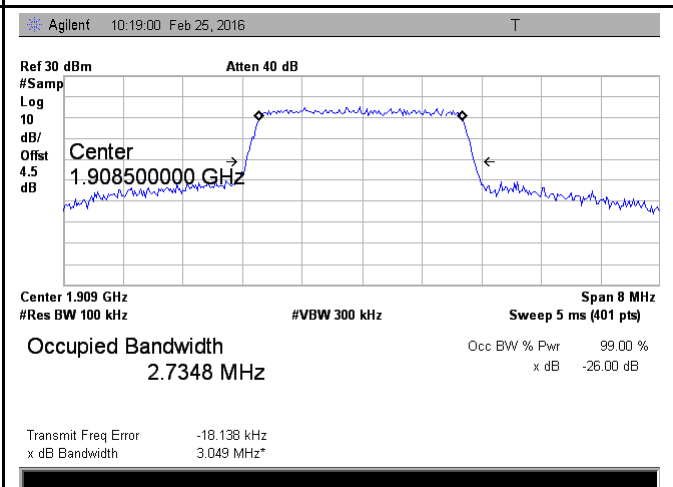
LTE band 2 - Middle CH QPSK-3



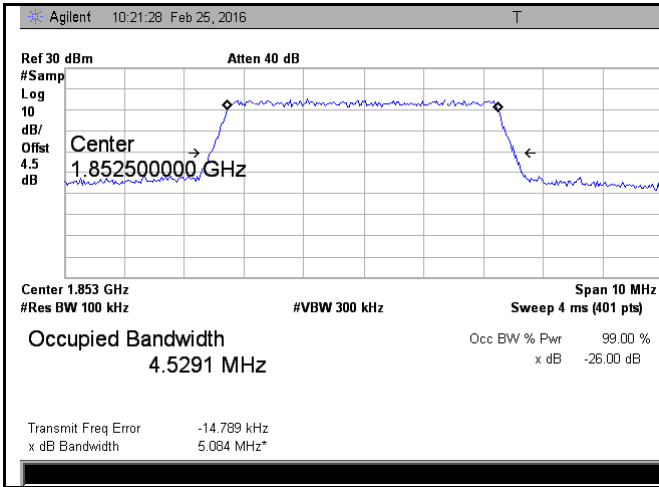
LTE band 2 - Middle CH 16QAM-3



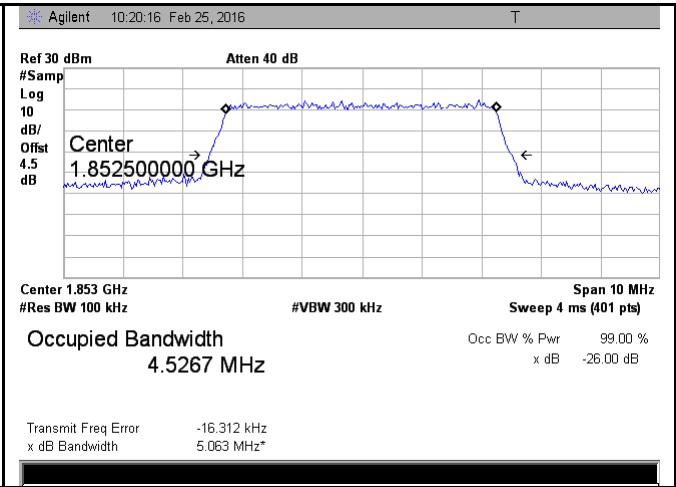
LTE band 2 - High CH QPSK-3



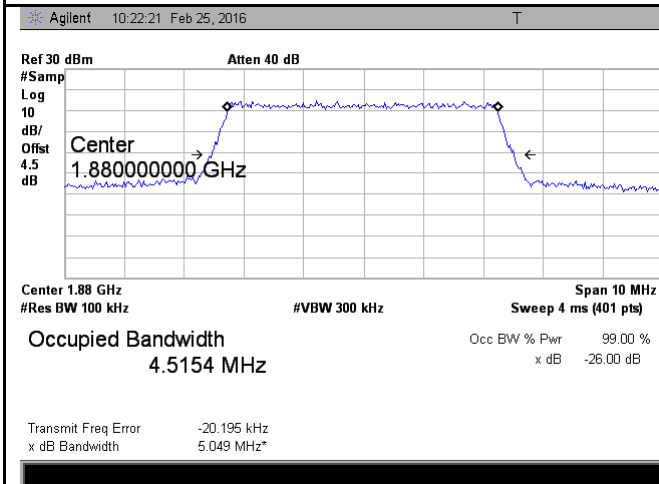
LTE band 2 - High CH 16QAM-3



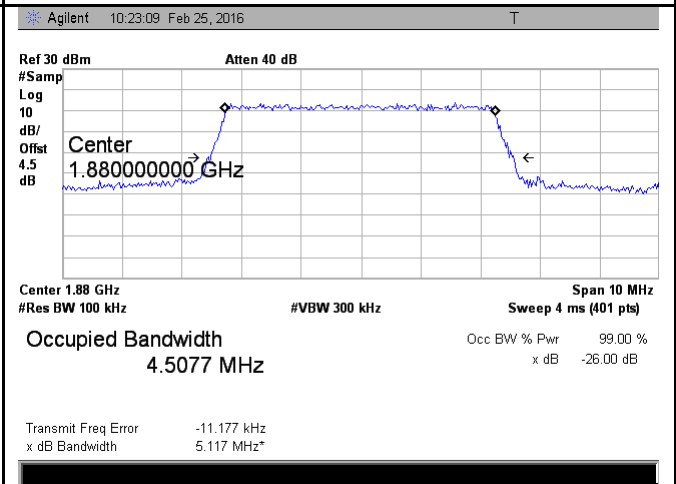
LTE band 2 - Low CH QPSK-5



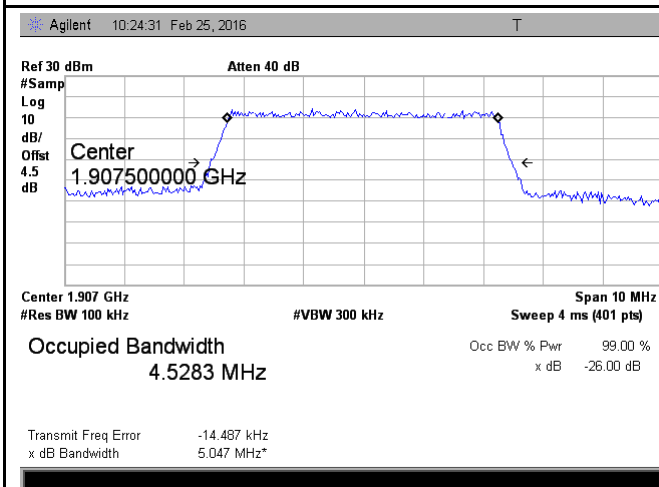
LTE band 2 - Low CH 16QAM-5



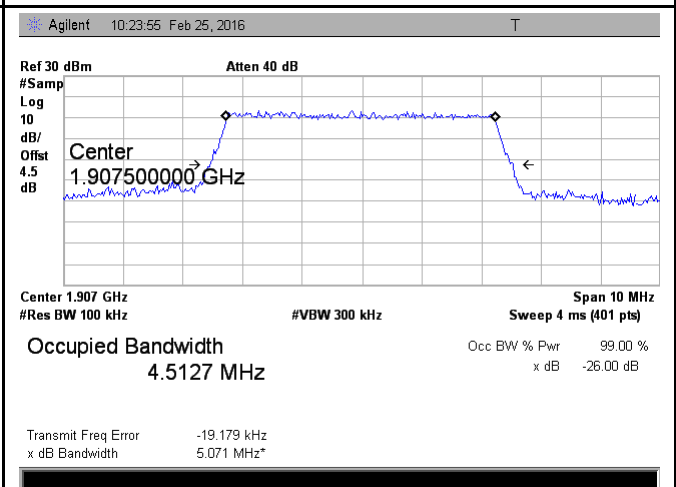
LTE band 2 - Middle CH QPSK-5



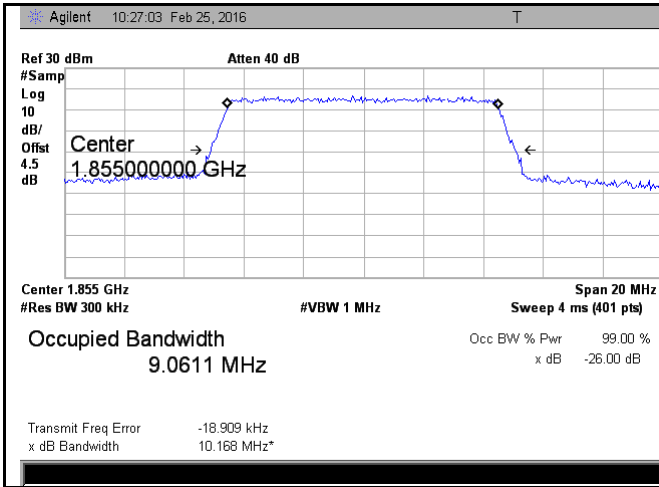
LTE band 2 - Middle CH 16QAM-5



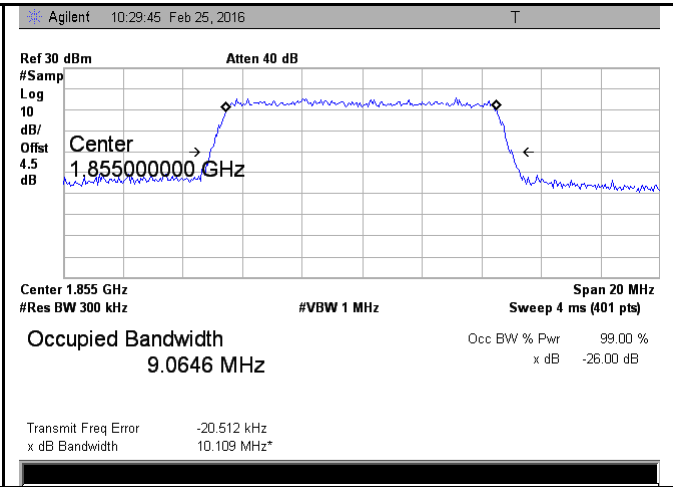
LTE band 2 - High CH QPSK-5



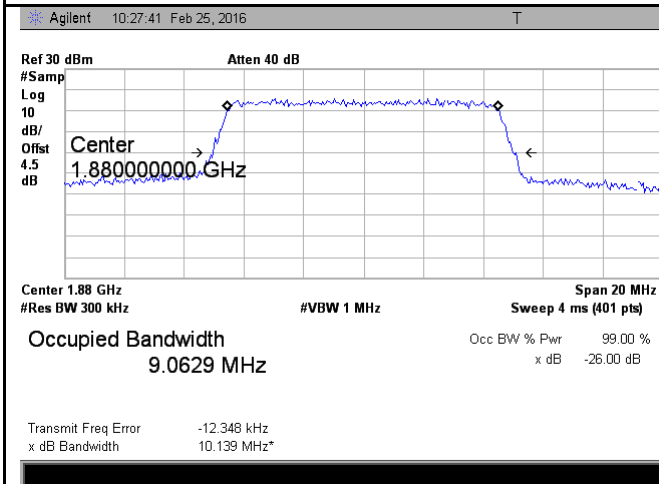
LTE band 2 - High CH 16QAM-5



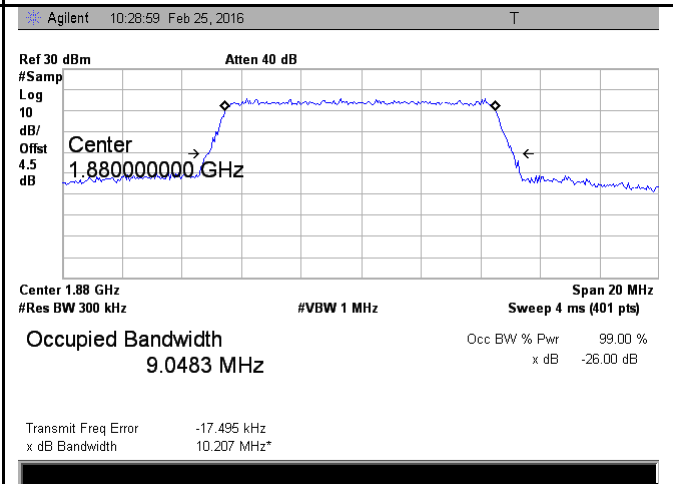
LTE band 2 - Low CH QPSK-10



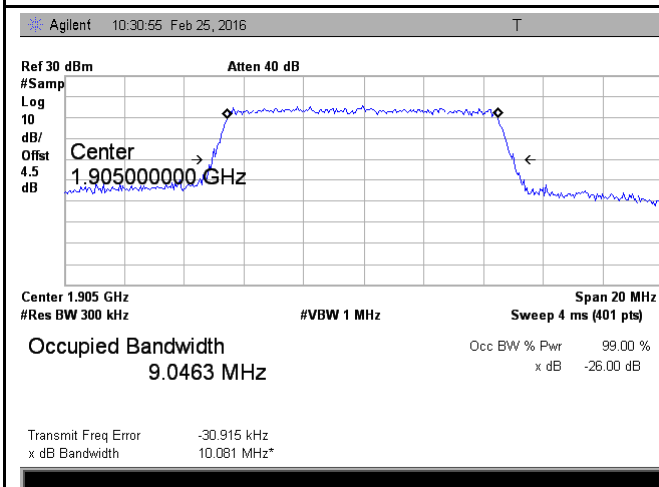
LTE band 2 - Low CH 16QAM-10



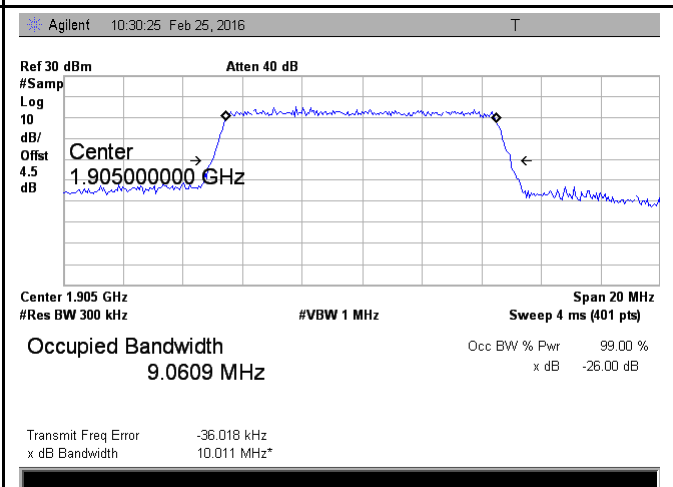
LTE band 2 - Middle CH QPSK-10



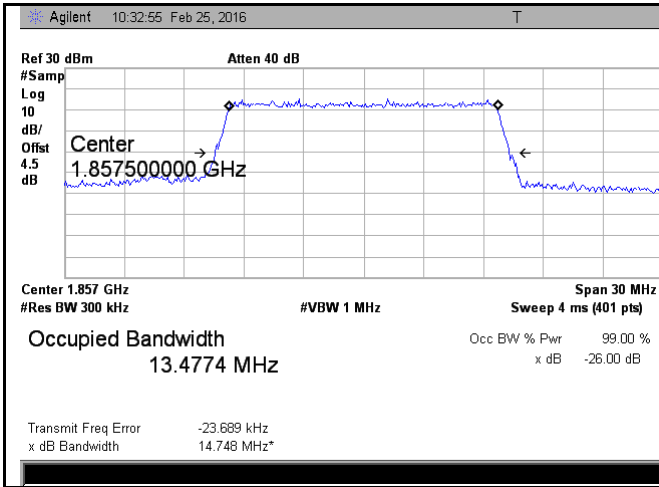
LTE band 2 - Middle CH 16QAM-10



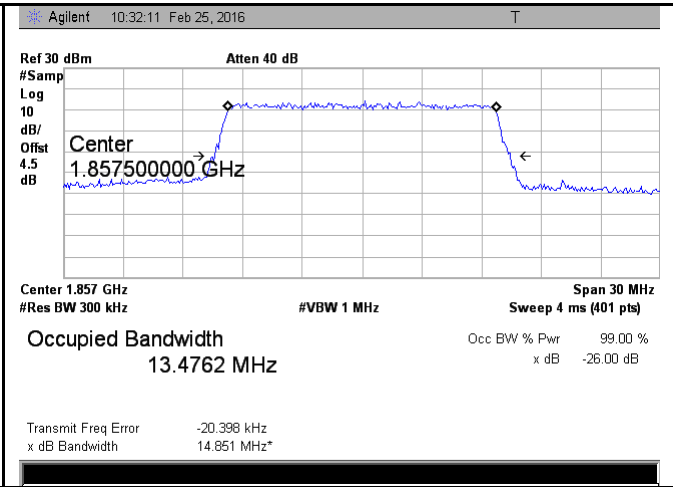
LTE band 2 - High CH QPSK-10



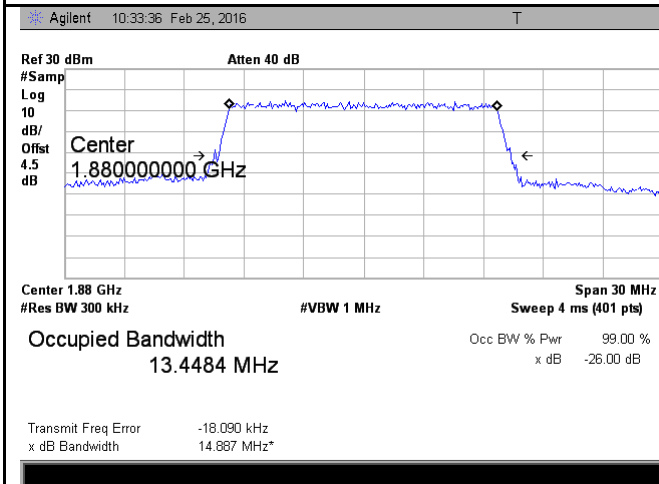
LTE band 2 - High CH 16QAM-10



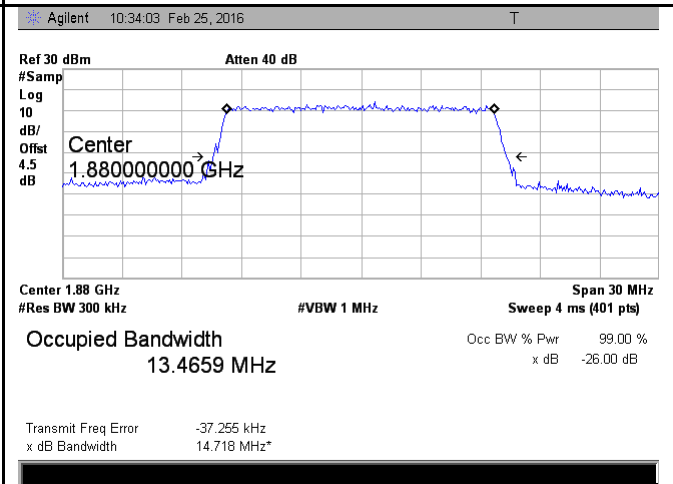
LTE band 2 - Low CH QPSK-15



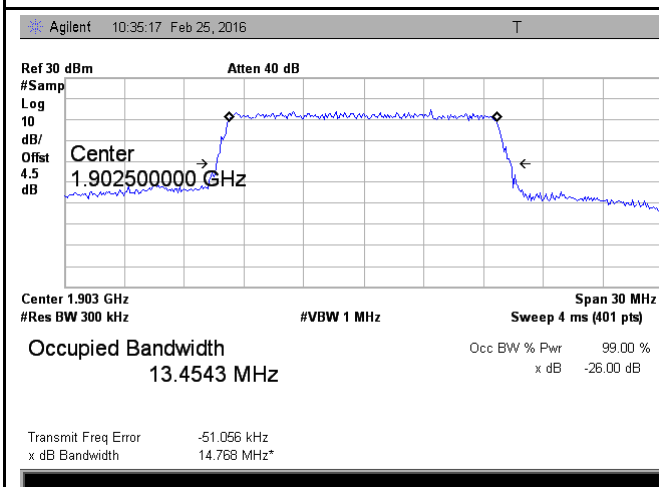
LTE band 2 - Low CH 16QAM-15



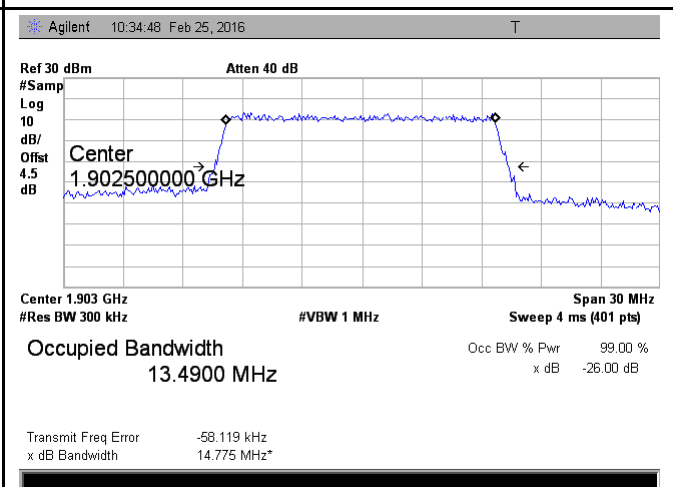
LTE band 2 - Middle CH QPSK-15



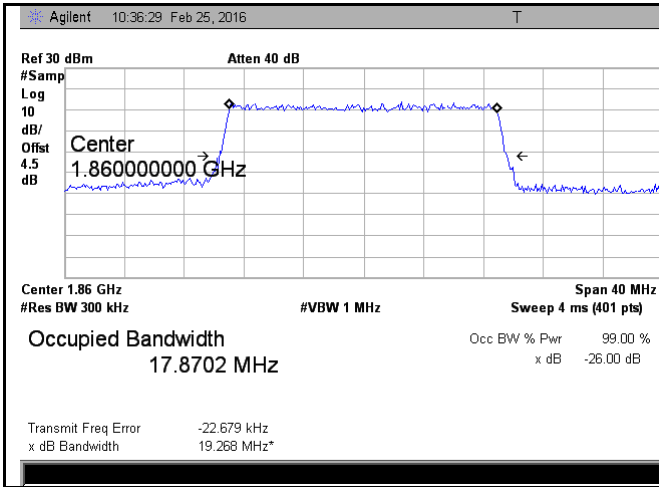
LTE band 2 - Middle CH 16QAM-15



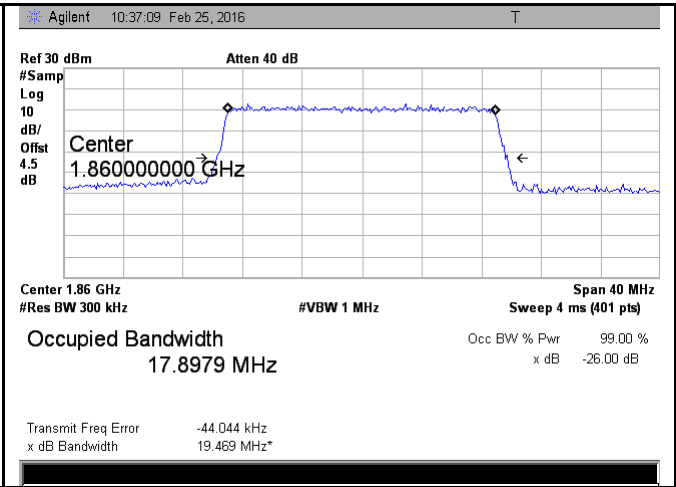
LTE band 2 - High CH QPSK-15



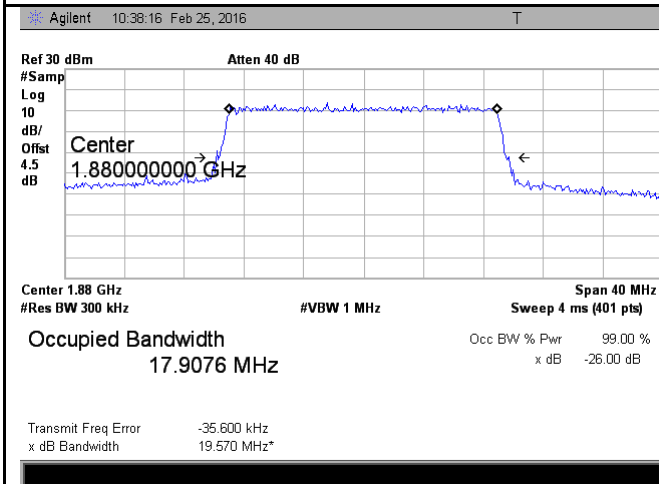
LTE band 2 - High CH 16QAM-15



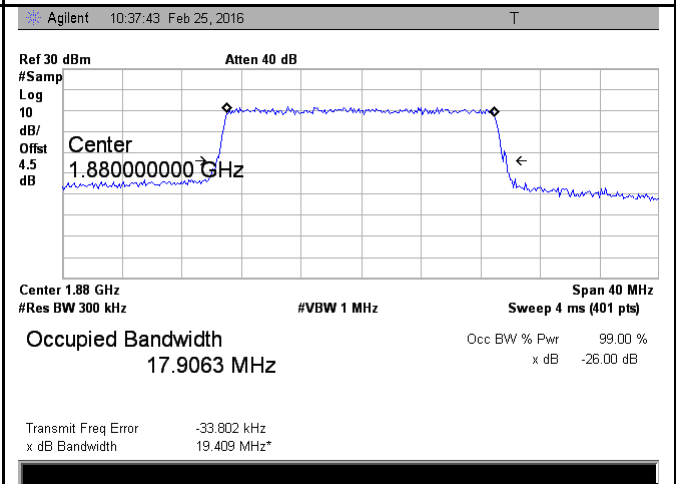
LTE band 2 - Low CH QPSK-20



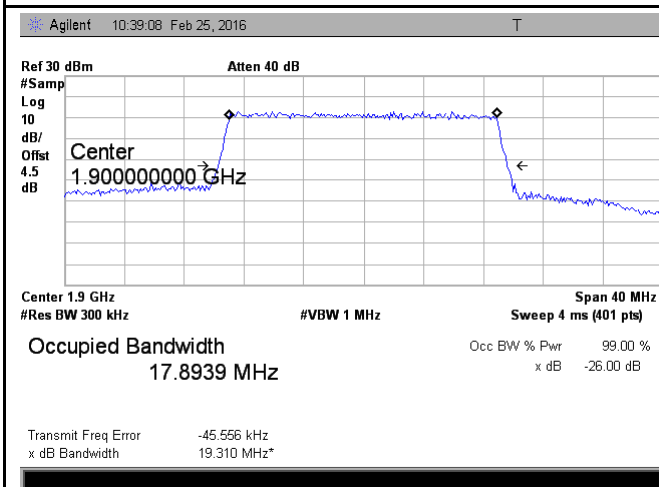
LTE band 2 - Low CH 16QAM-20



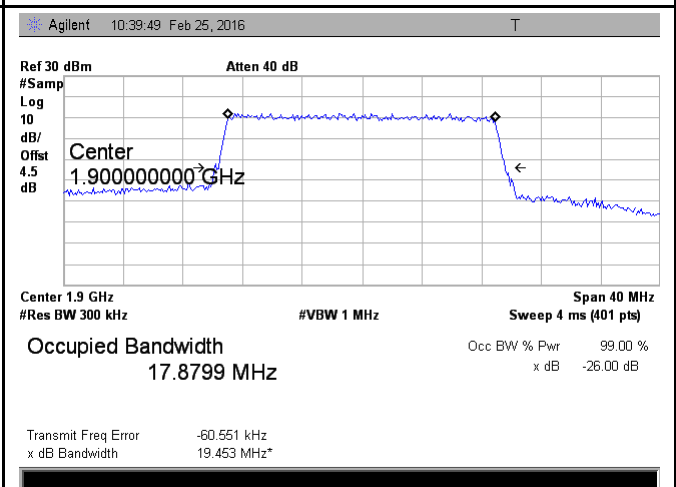
LTE band 2 - Middle CH QPSK-20



LTE band 2 - Middle CH 16QAM-20

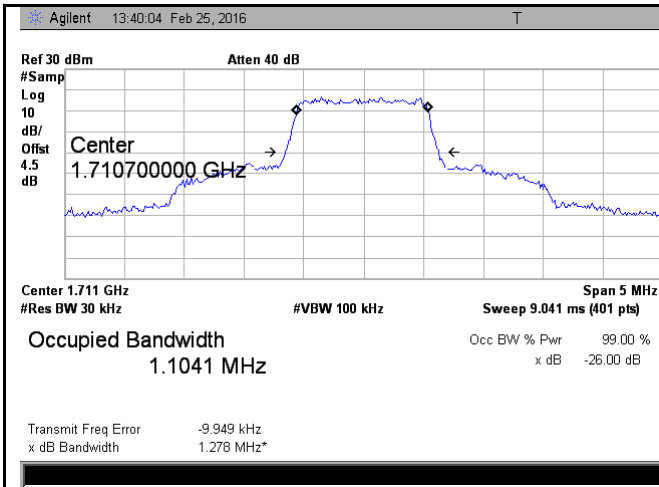


LTE band 2 - High CH QPSK-20

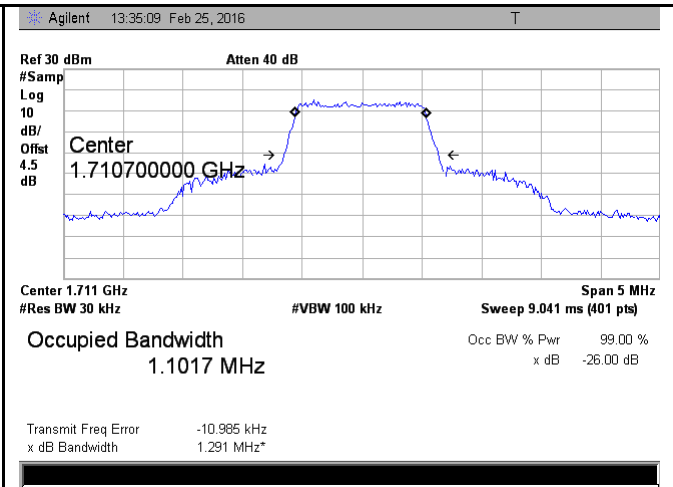


LTE band 2 - High CH 16QAM-20

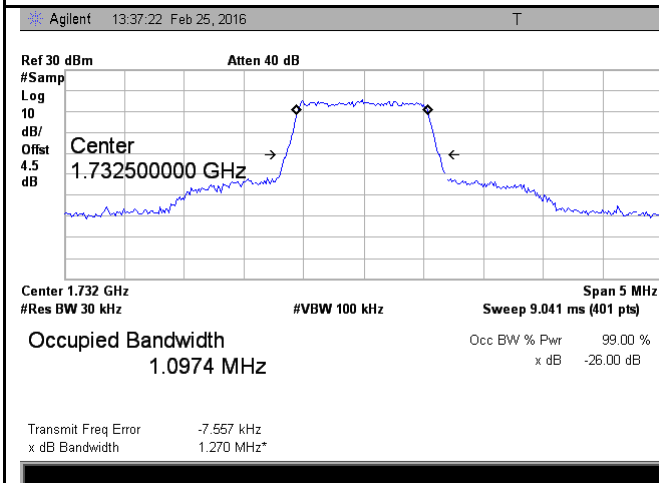
LTE Band 4 (Part 27)



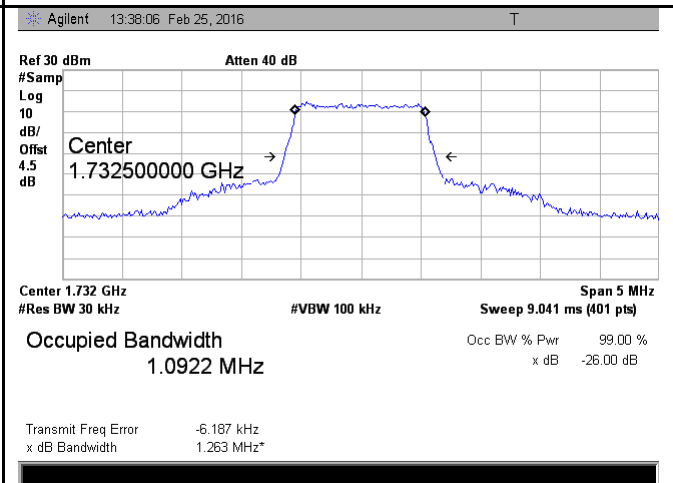
LTE band 4 - Low CH QPSK-1.4



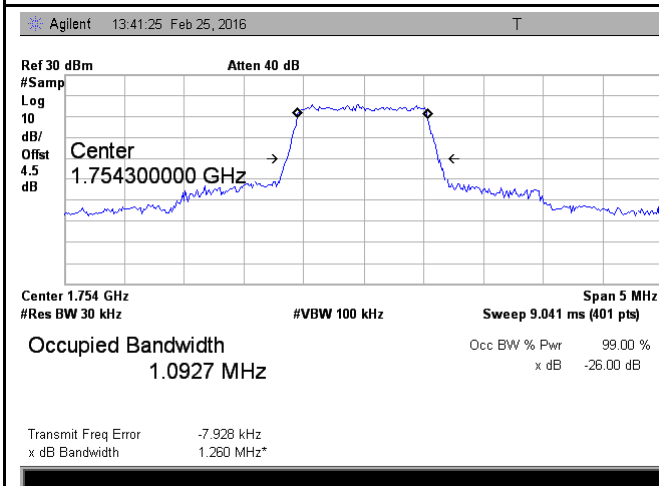
LTE band 4 - Low CH 16QAM-1.4



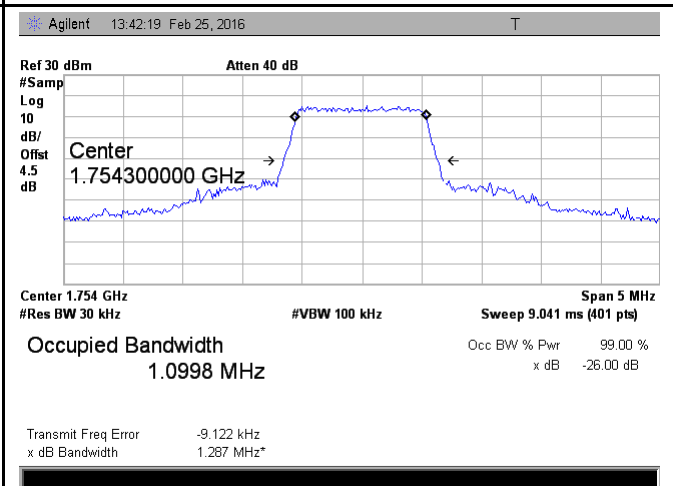
LTE band 4 - Middle CH QPSK-1.4



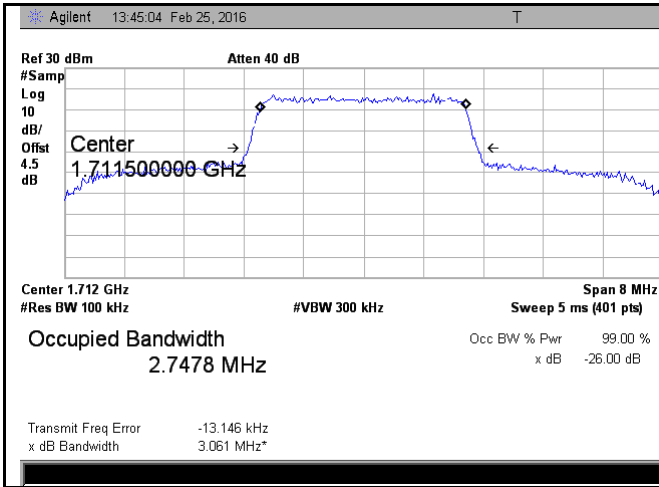
LTE band 4 - Middle CH 16QAM-1.4



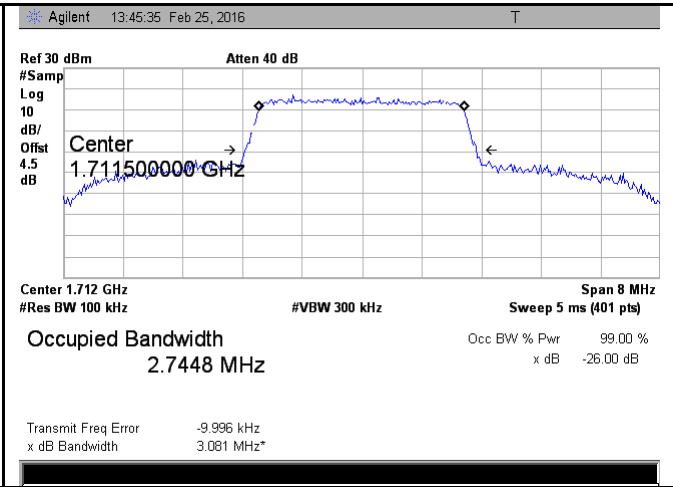
LTE band 4 - High CH QPSK-1.4



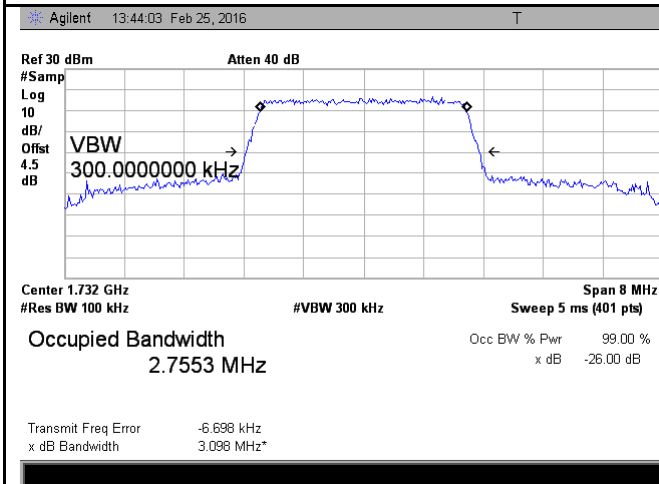
LTE band 4 - High CH 16QAM-1.4



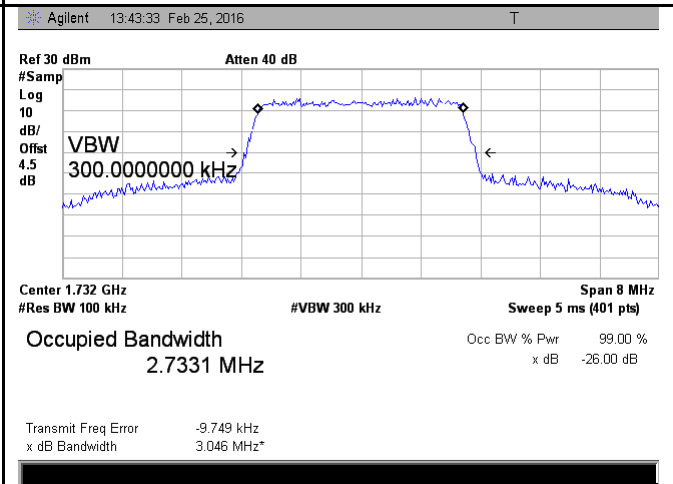
LTE band 4 - Low CH QPSK-3



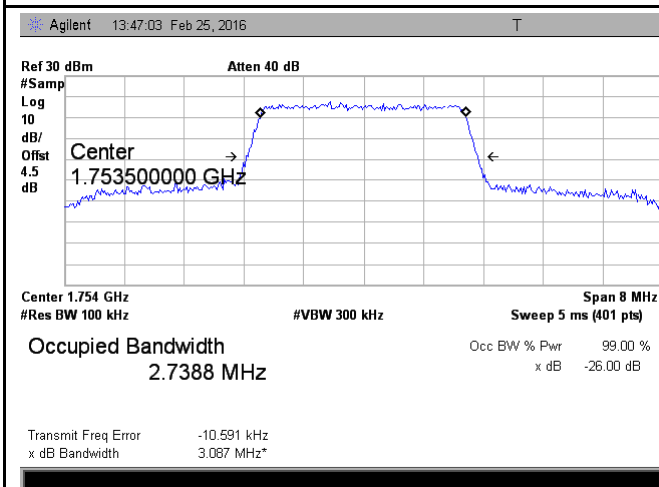
LTE band 4 - Low CH 16QAM-3



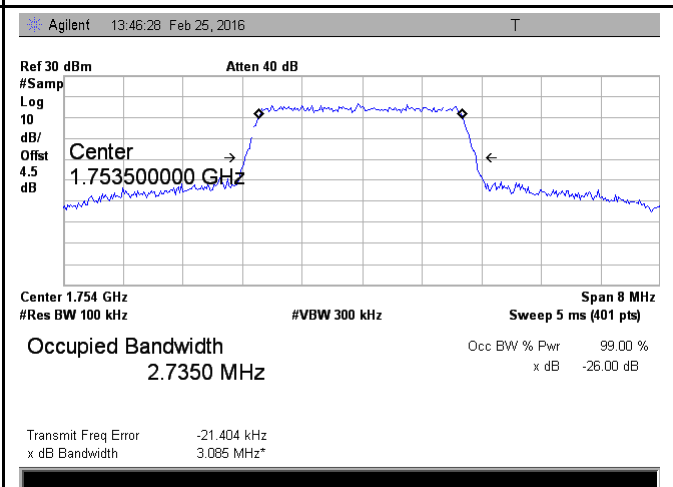
LTE band 4 - Middle CH QPSK-3



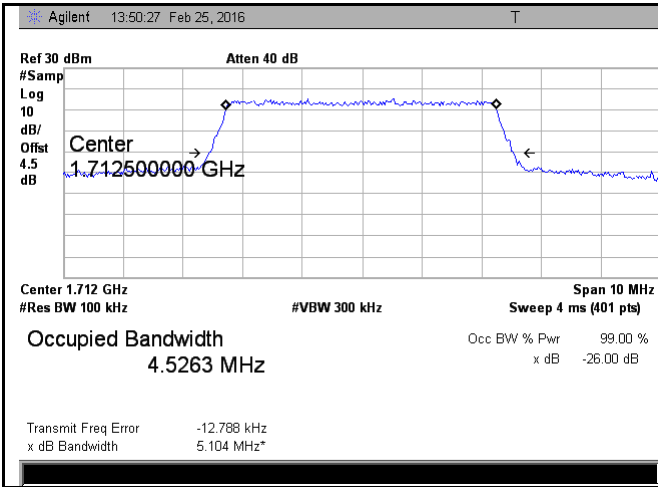
LTE band 4 - Middle CH 16QAM-3



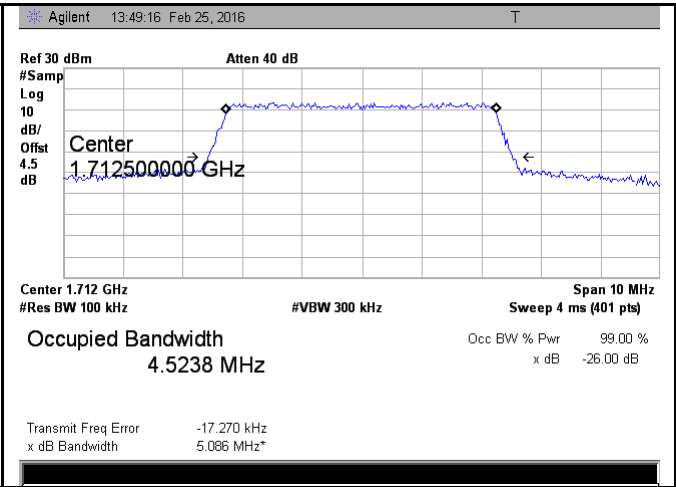
LTE band 4 - High CH QPSK-3



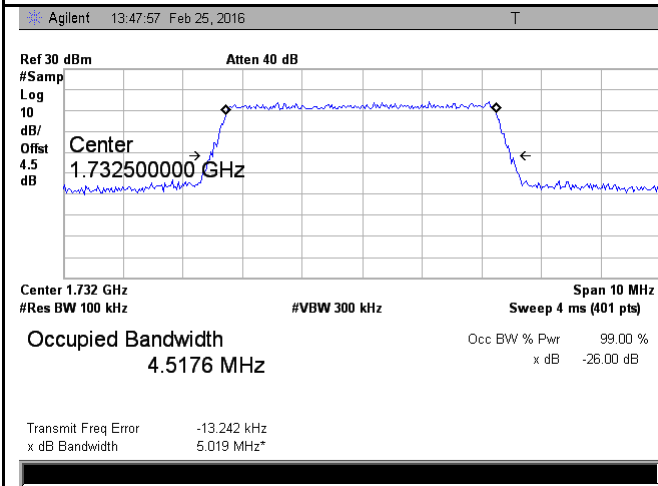
LTE band 4 - High CH 16QAM-3



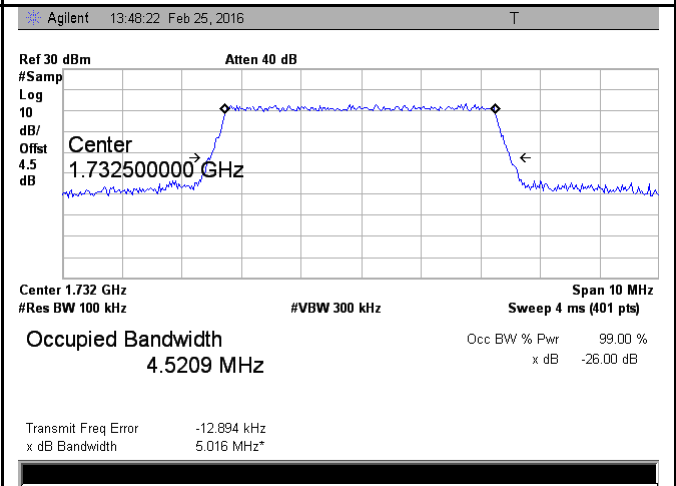
LTE band 4 - Low CH QPSK-5



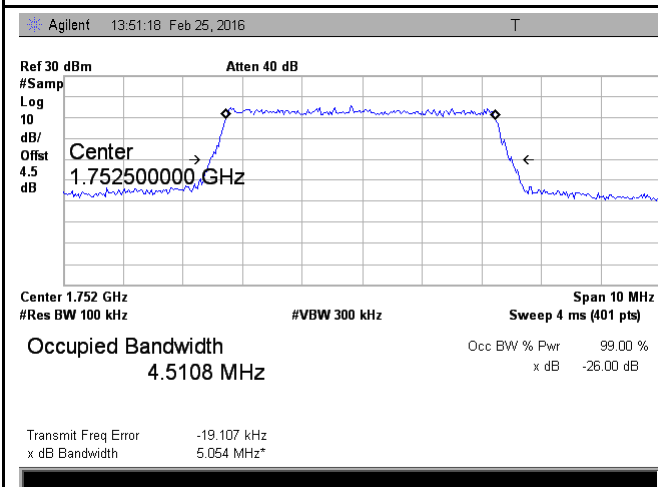
LTE band 4 - Low CH 16QAM-5



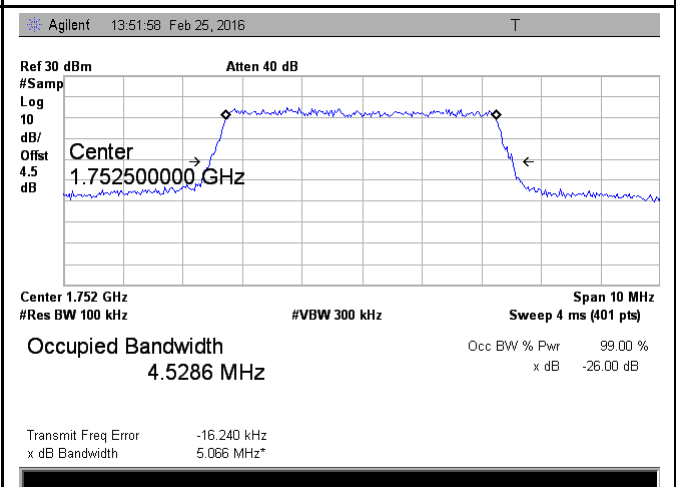
LTE band 4 - Middle CH QPSK-5



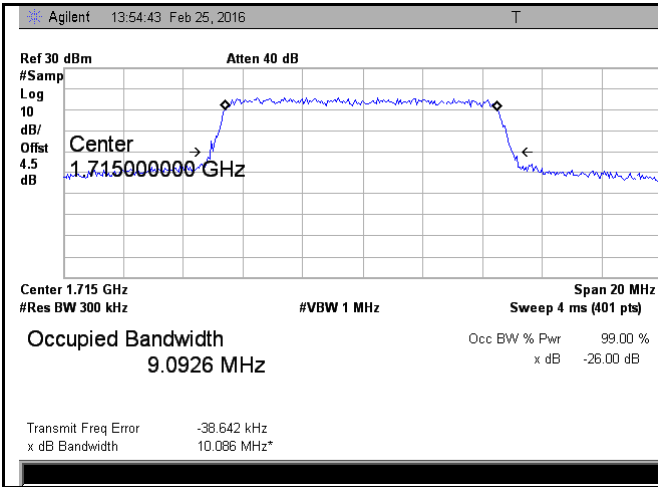
LTE band 4 - Middle CH 16QAM-5



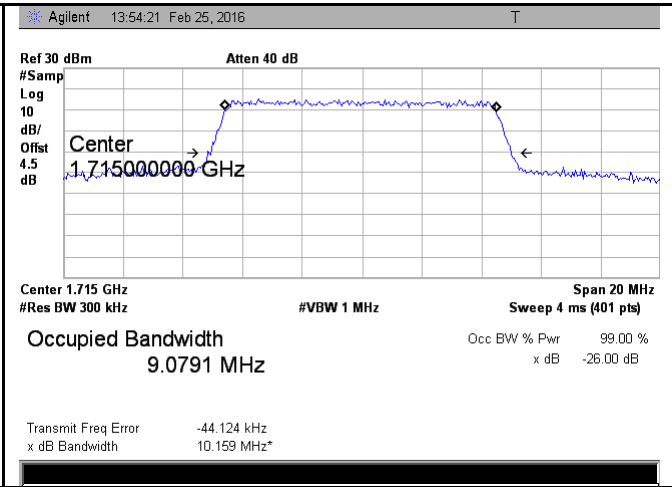
LTE band 4 - High CH QPSK-5



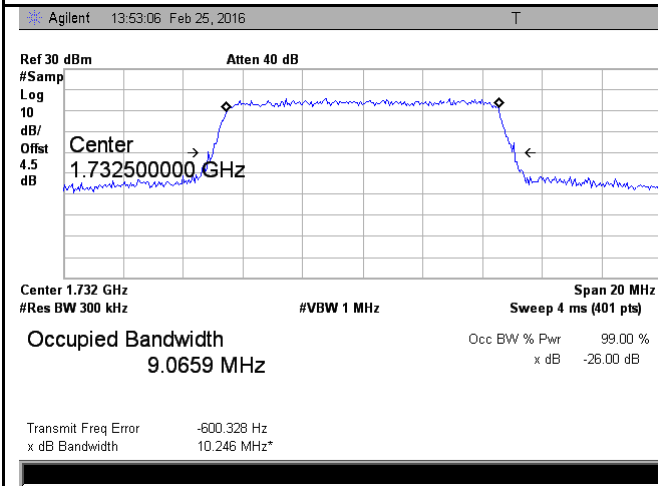
LTE band 4 - High CH 16QAM-5



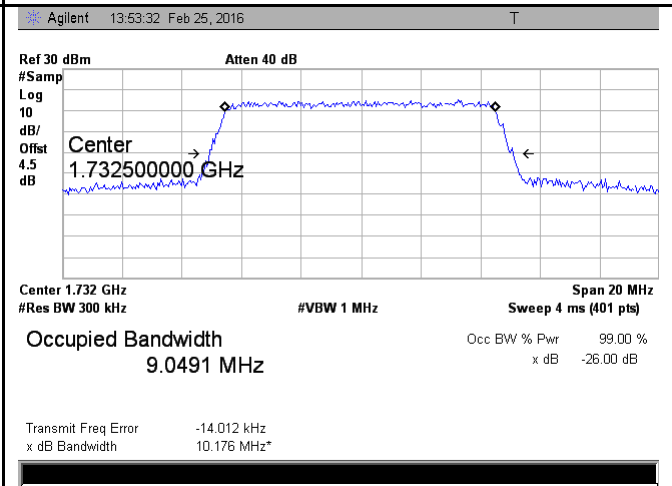
LTE band 4 - Low CH QPSK-10



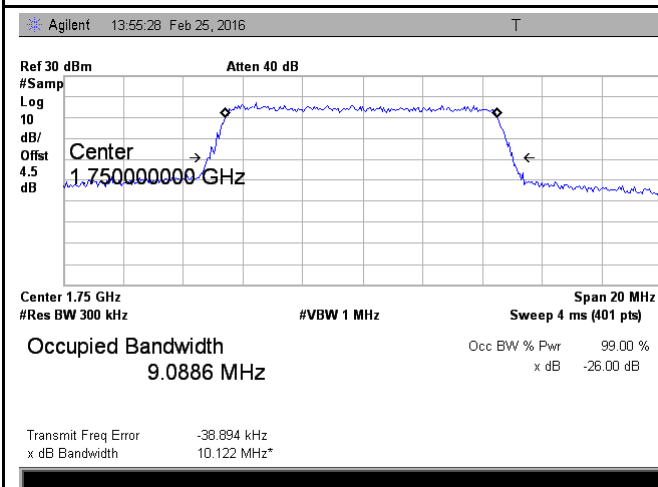
LTE band 4 - Low CH 16QAM-10



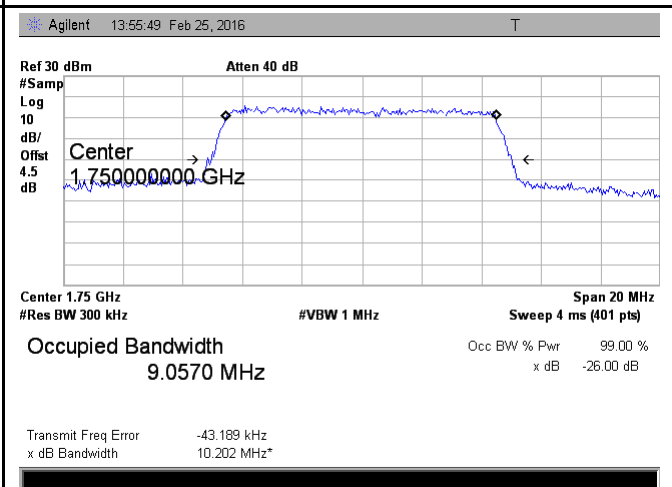
LTE band 4 - Middle CH QPSK-10



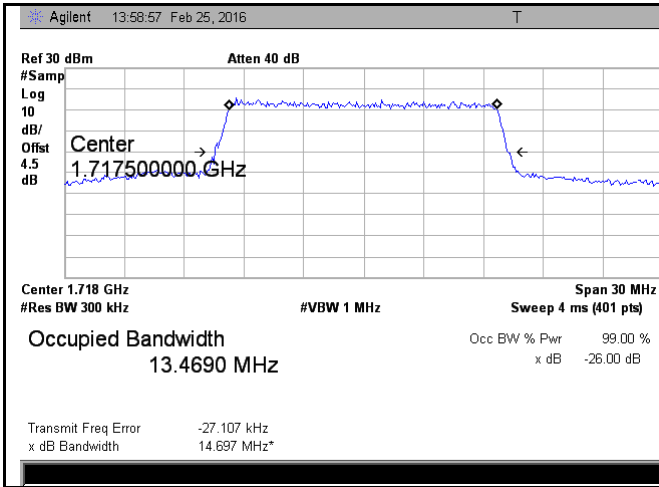
LTE band 4 - Middle CH 16QAM-10



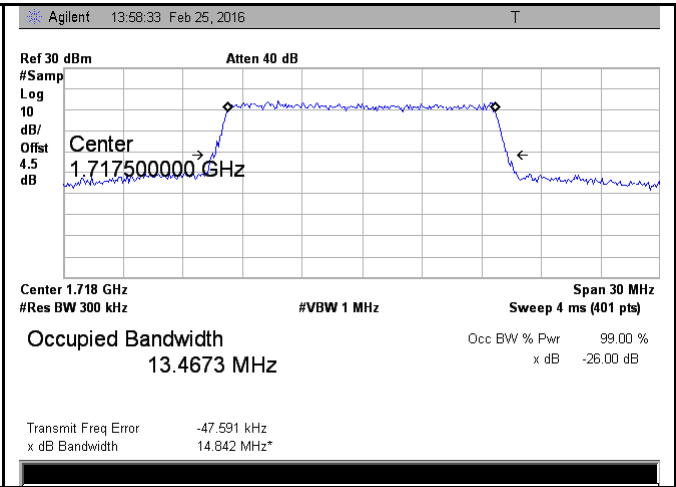
LTE band 4 - High CH QPSK-10



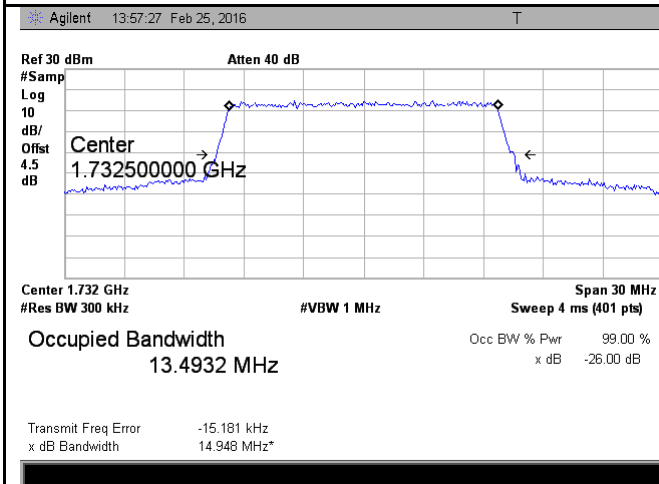
LTE band 4 - High CH 16QAM-10



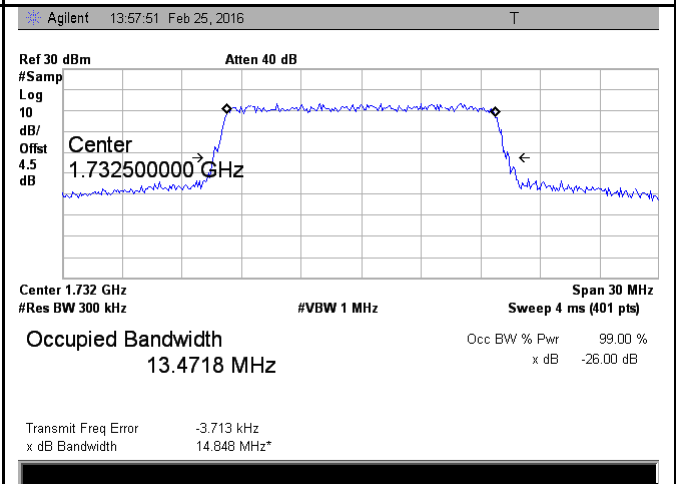
LTE band 4 - Low CH QPSK-15



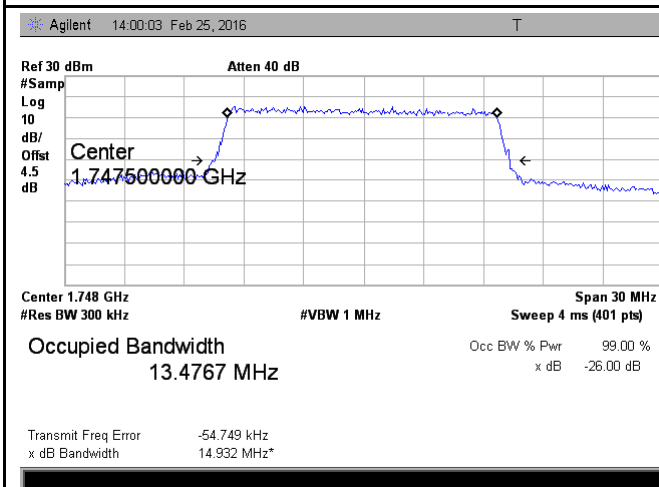
LTE band 4 - Low CH 16QAM-15



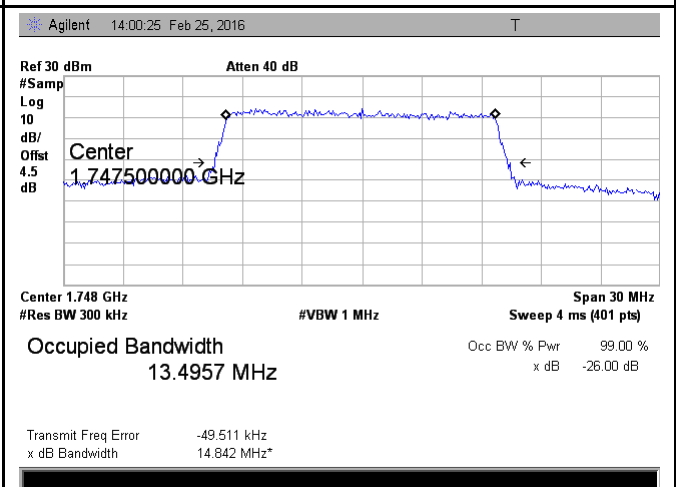
LTE band 4 - Middle CH QPSK-15



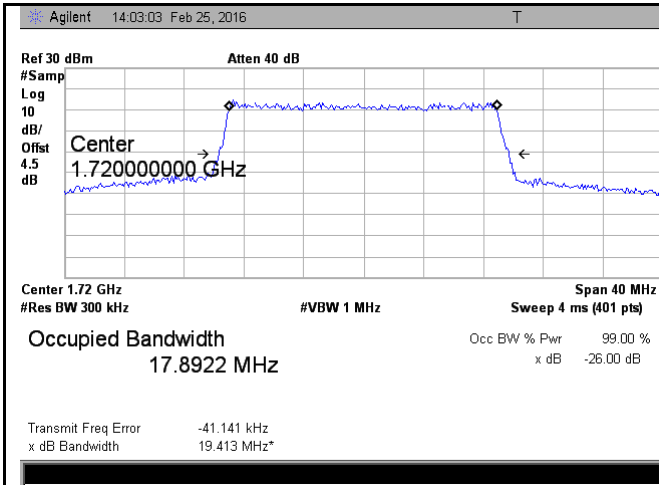
LTE band 4 - Middle CH 16QAM-15



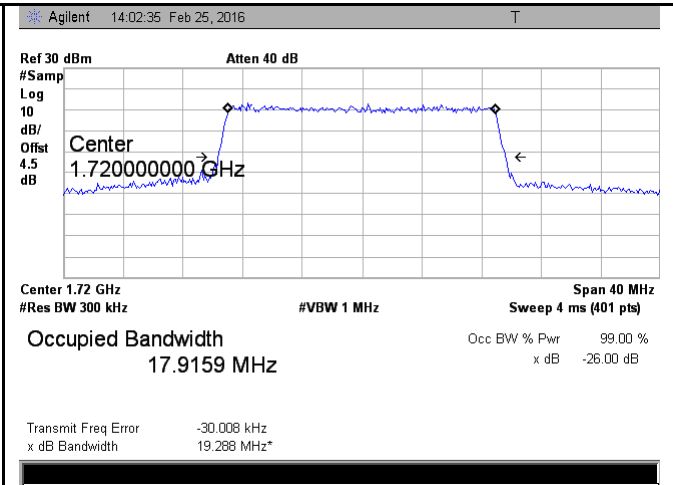
LTE band 4 - High CH QPSK-15



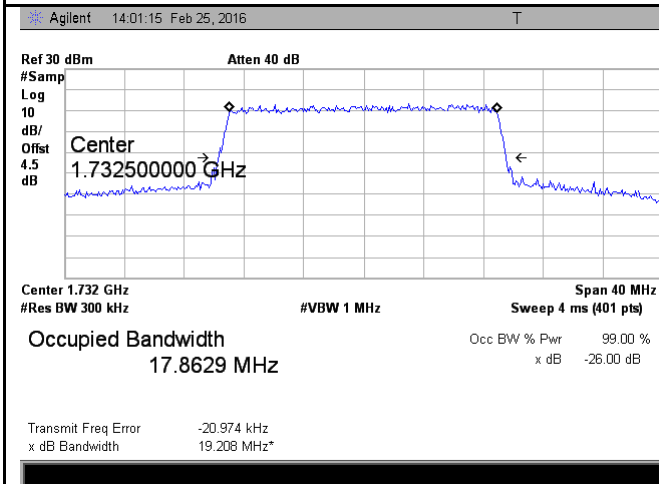
LTE band 4 - High CH 16QAM-15



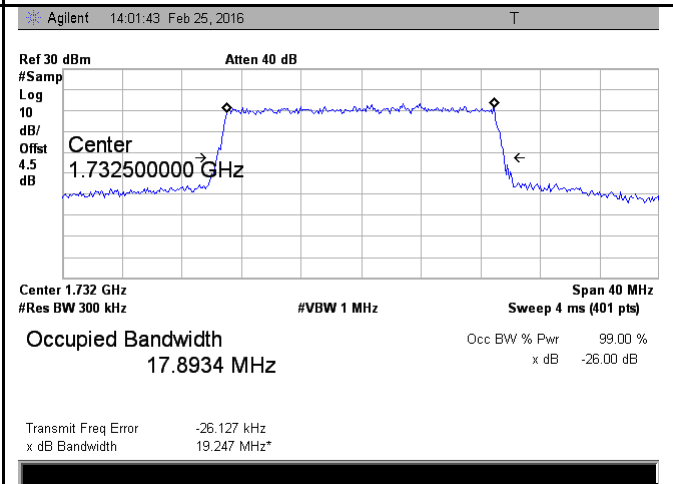
LTE band 4 - Low CH QPSK-20



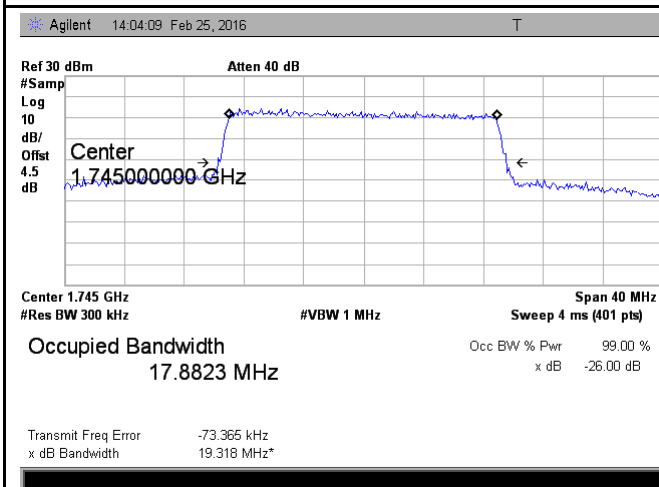
LTE band 4 - Low CH 16QAM-20



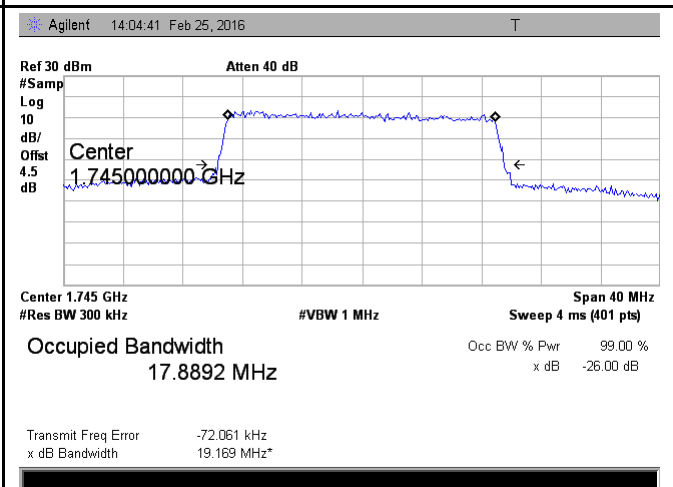
LTE band 4 - Middle CH QPSK-20



LTE band 4 - Middle CH 16QAM-20

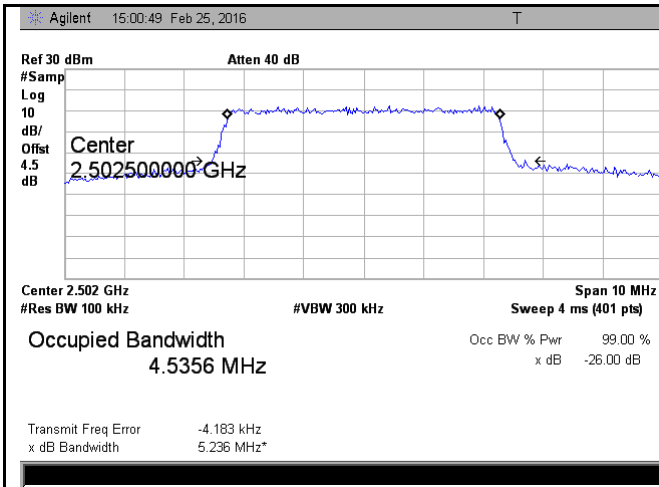


LTE band 4 - High CH QPSK-20

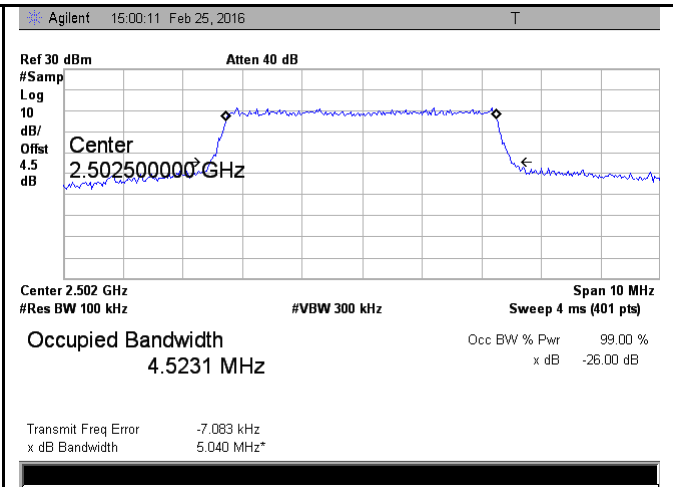


LTE band 4 - High CH 16QAM-20

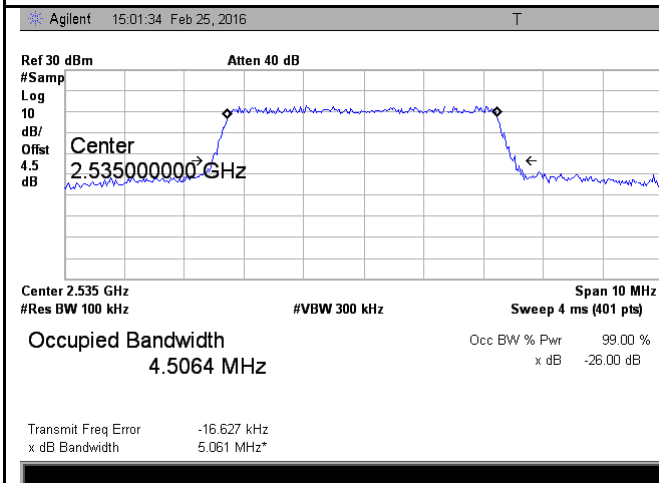
LTE Band 7 (Part 27)



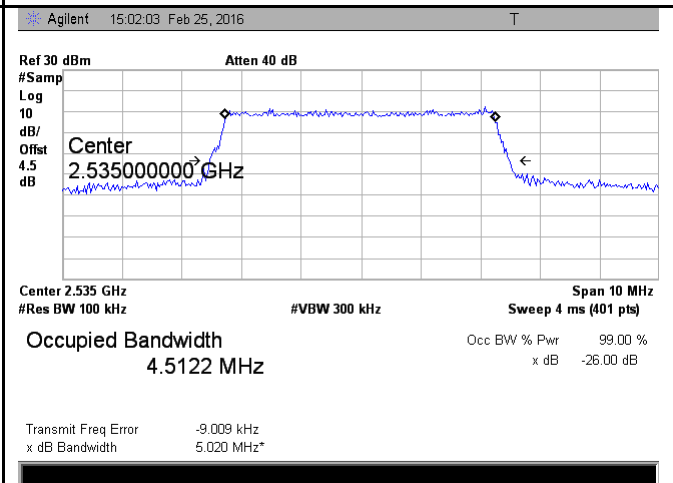
LTE band 7 - Low CH QPSK-5



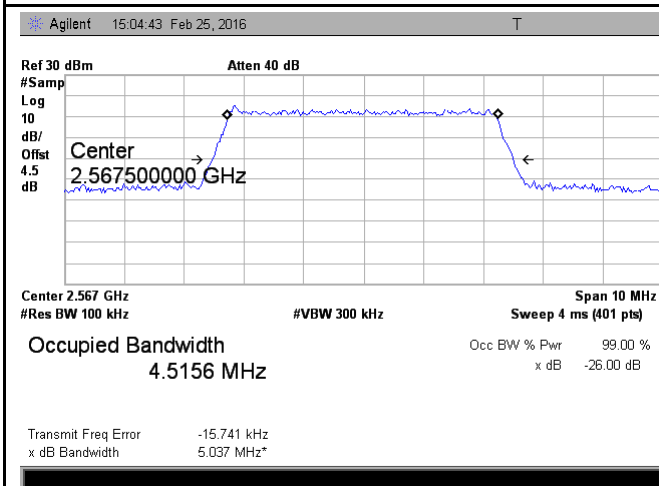
LTE band 7 - Low CH 16QAM-5



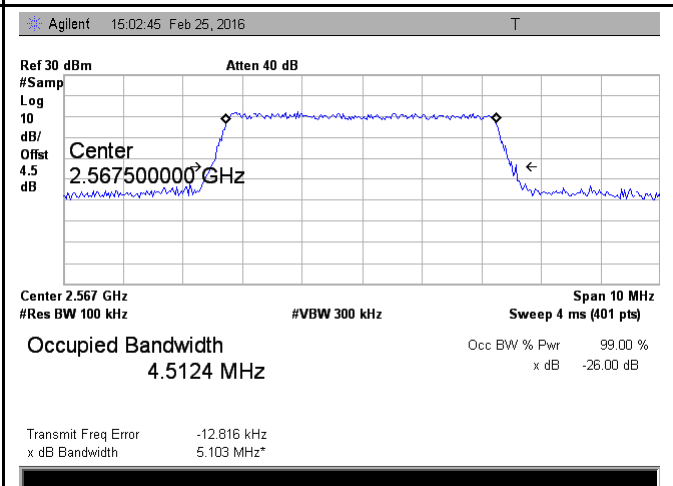
LTE band 7 - Middle CH QPSK-5



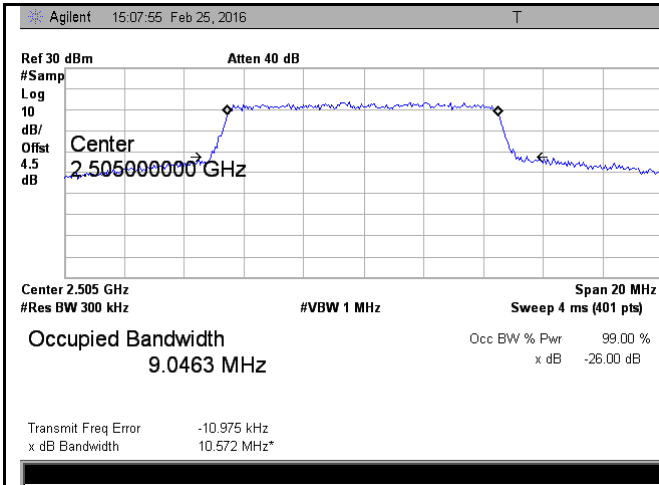
LTE band 7 - Middle CH 16QAM-5



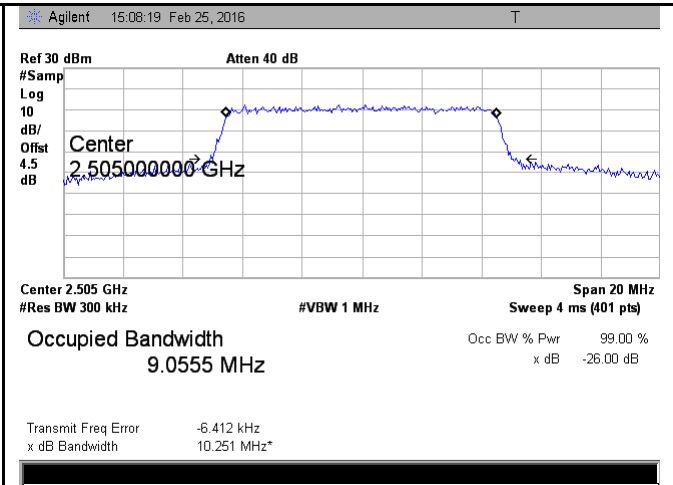
LTE band 7 - High CH QPSK-5



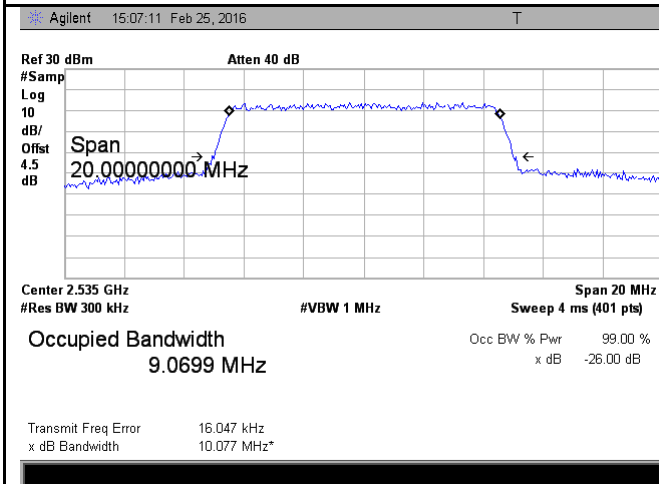
LTE band 7 - High CH 16QAM-5



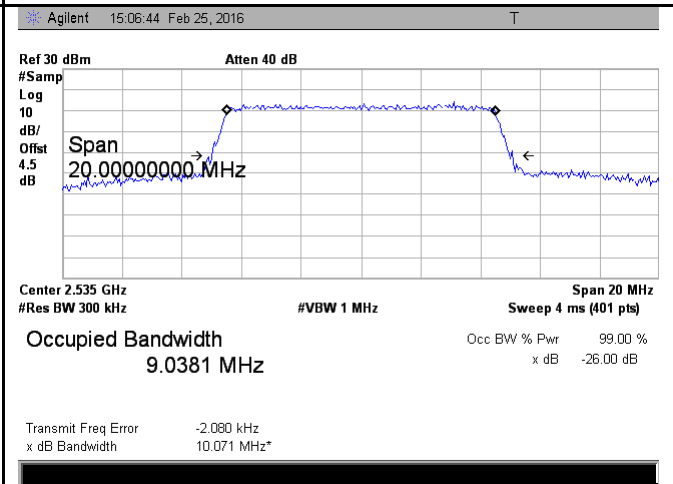
LTE band 7 - Low CH QPSK-10



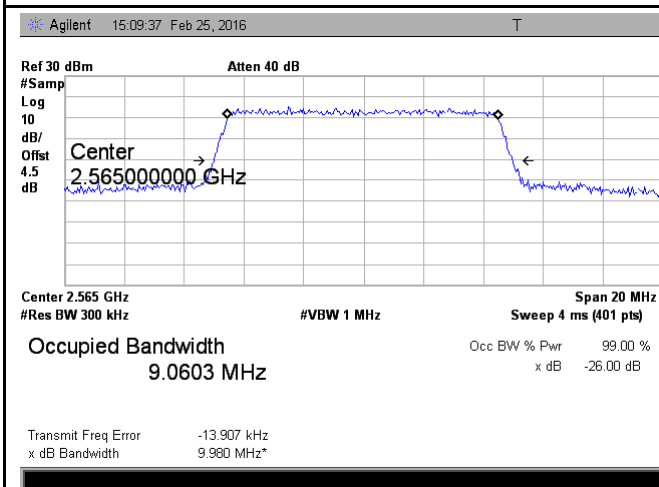
LTE band 7 - Low CH 16QAM-10



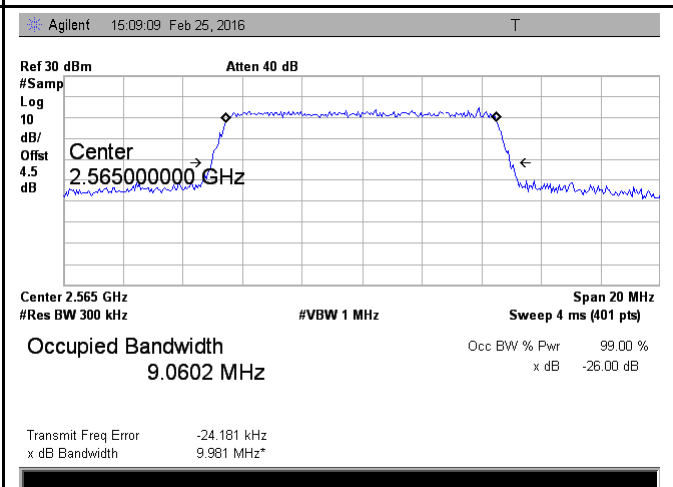
LTE band 7 - Middle CH QPSK-10



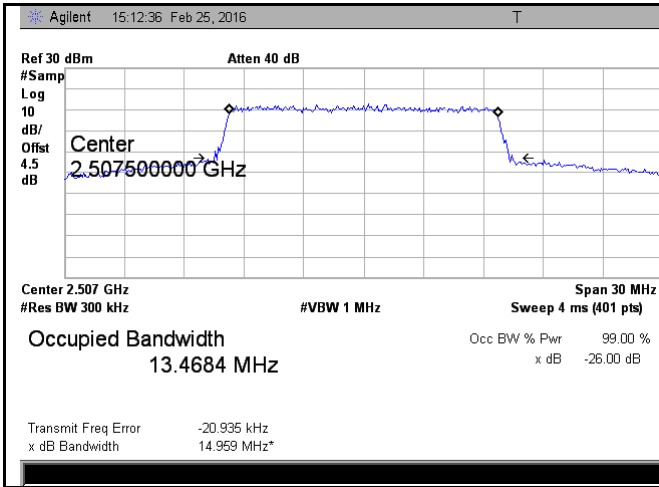
LTE band 7 - Middle CH 16QAM-10



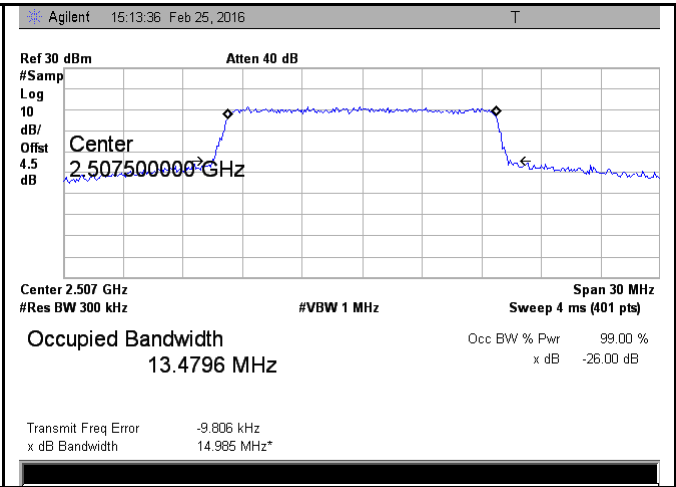
LTE band 7 - High CH QPSK-10



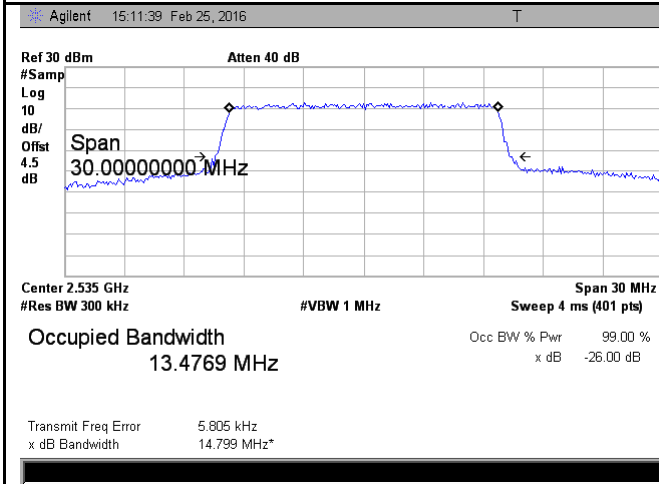
LTE band 7 - High CH 16QAM-10



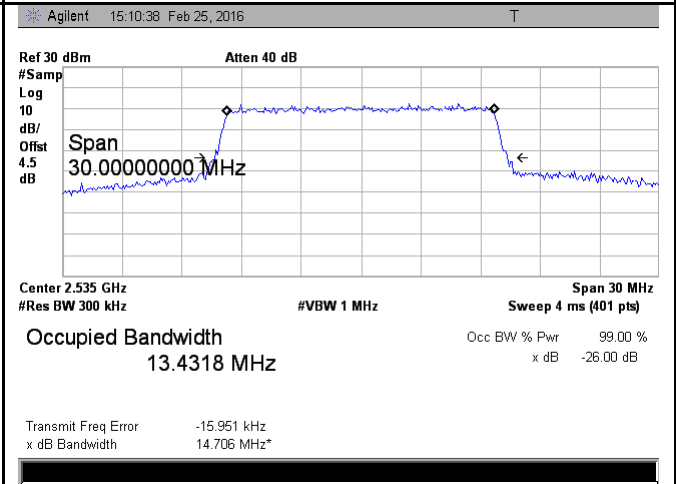
LTE band 7 - Low CH QPSK-15



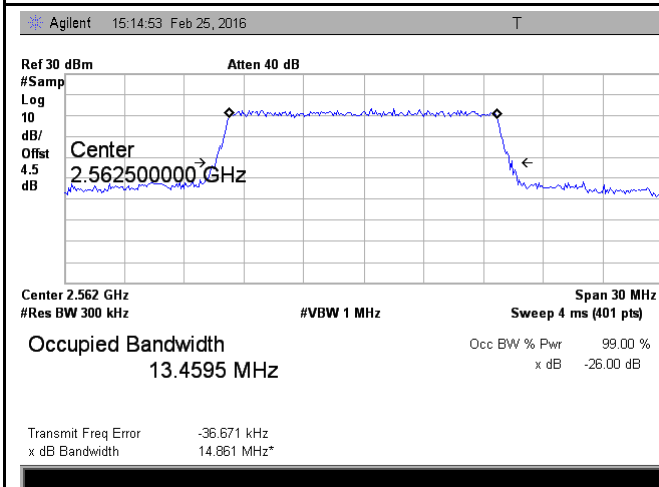
LTE band 7 - Low CH 16QAM-15



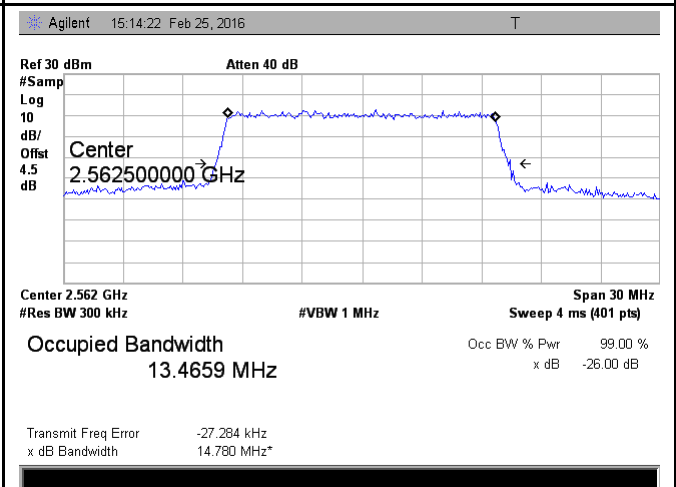
LTE band 7 - Middle CH QPSK-15



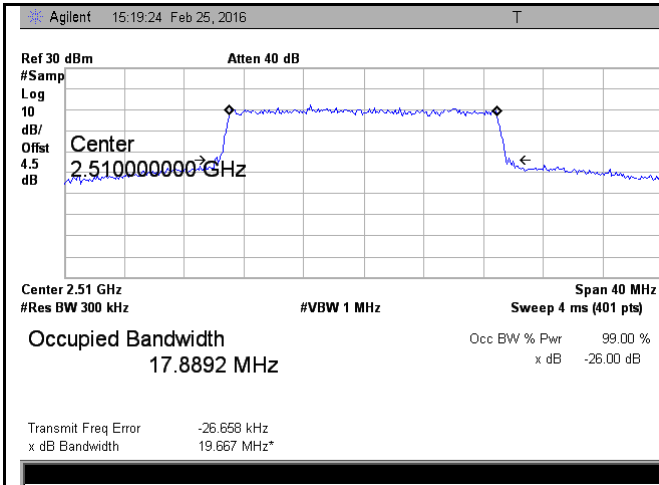
LTE band 7 - Middle CH 16QAM-15



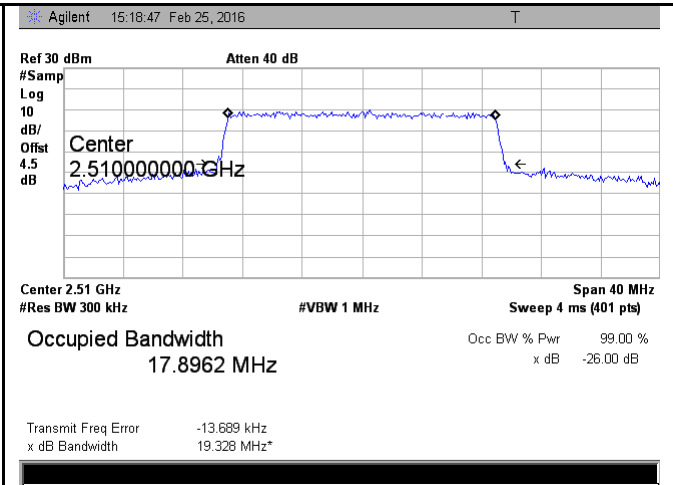
LTE band 7 - High CH QPSK-15



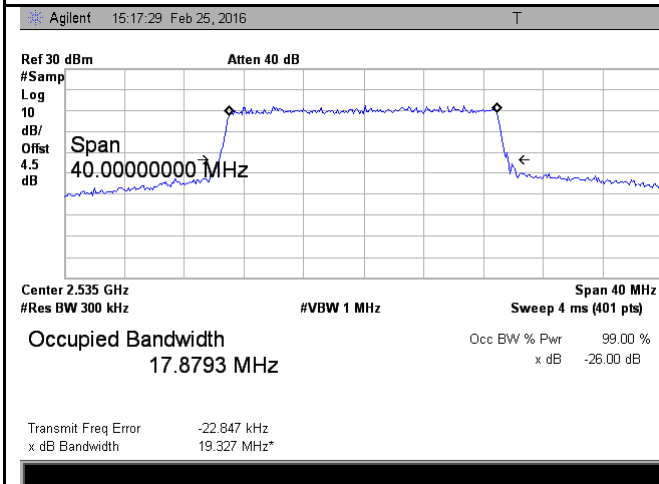
LTE band 7 - High CH 16QAM-15



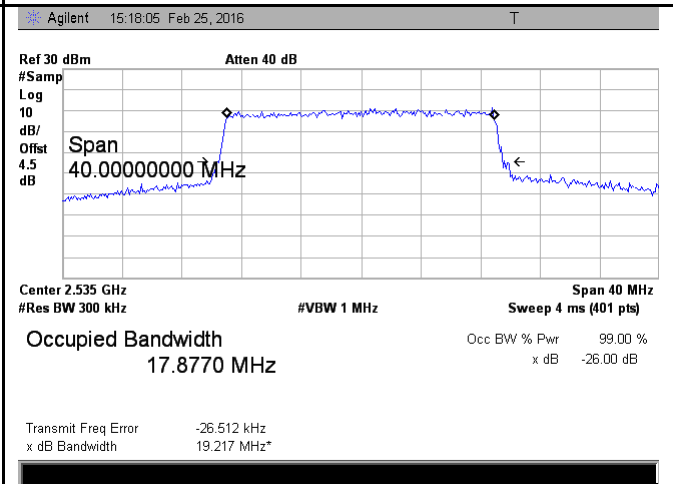
LTE band 7 - Low CH QPSK-20



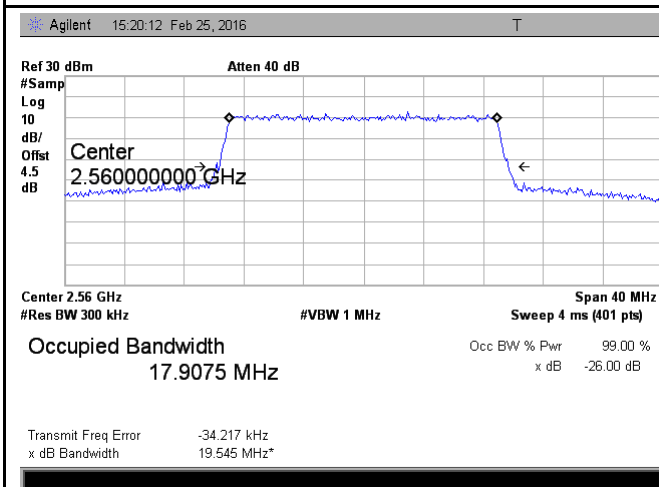
LTE band 7 - Low CH 16QAM-20



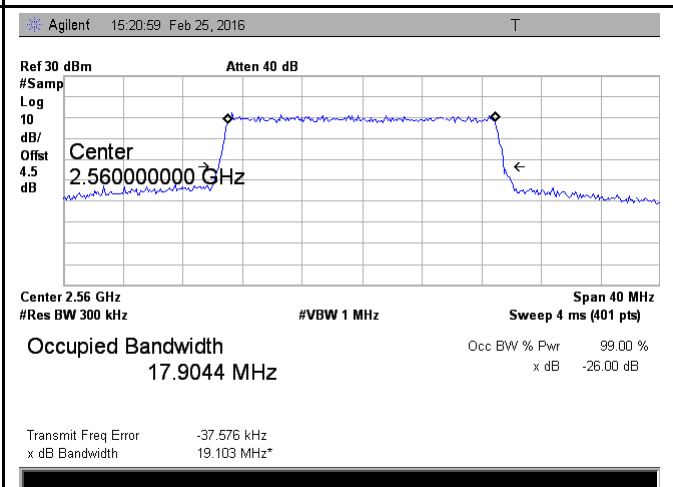
LTE band 7 - Middle CH QPSK-20



LTE band 7 - Middle CH 16QAM-20

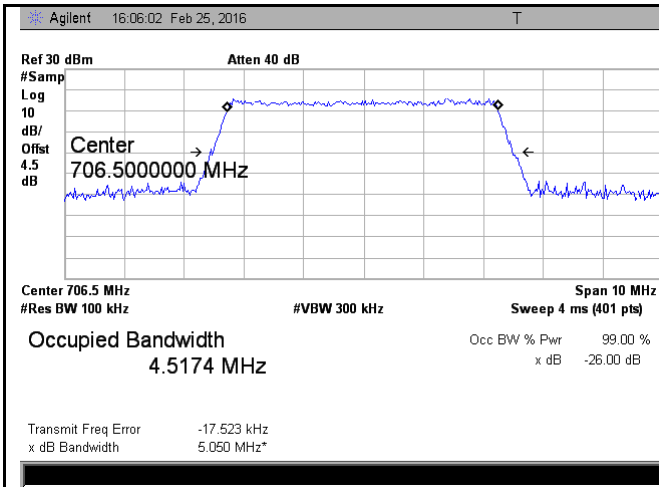


LTE band 7 - High CH QPSK-20

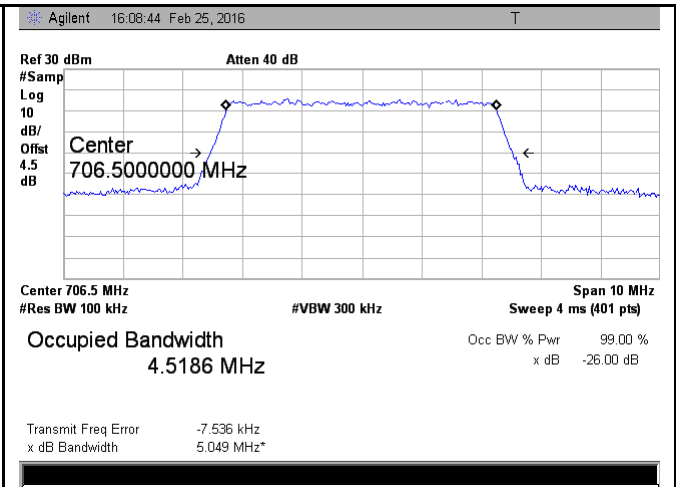


LTE band 7 - High CH 16QAM-20

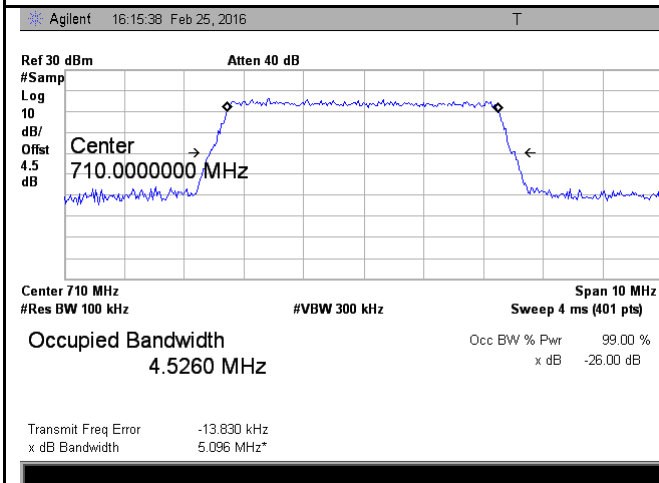
LTE Band 17 (Part 27)



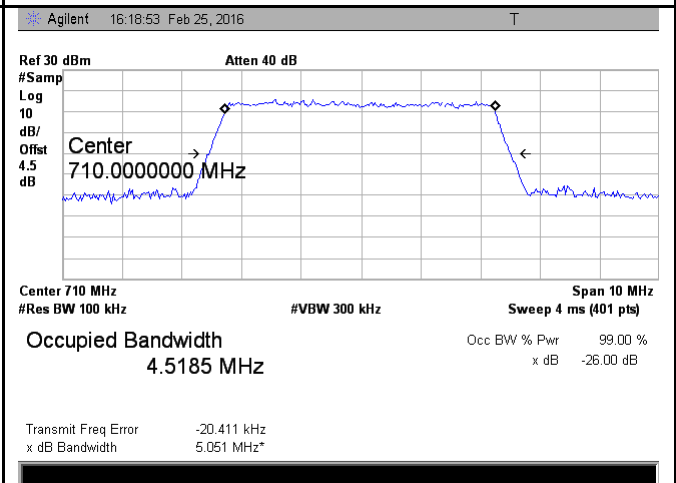
LTE band 17 - Low CH QPSK-5



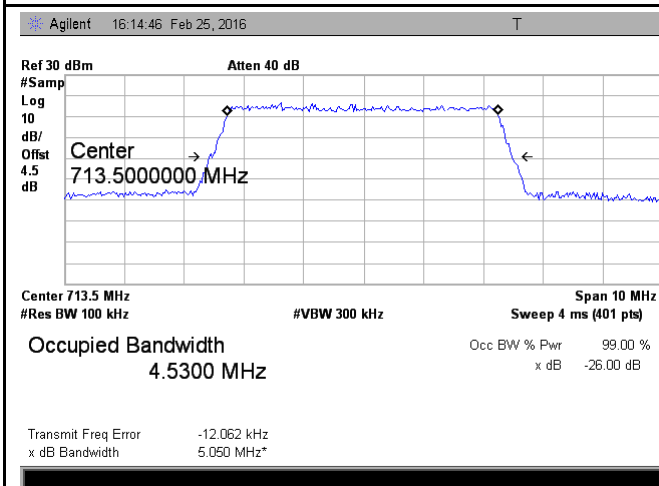
LTE band 17 - Low CH 16QAM-5



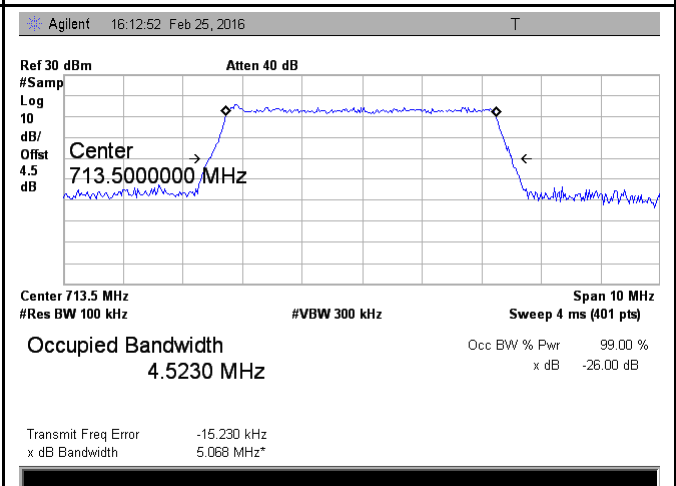
LTE band 17 - Middle CH QPSK-5



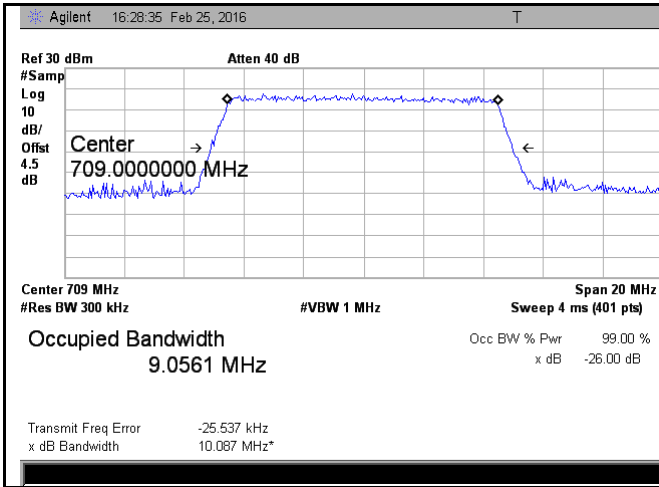
LTE band 17 - Middle CH 16QAM-5



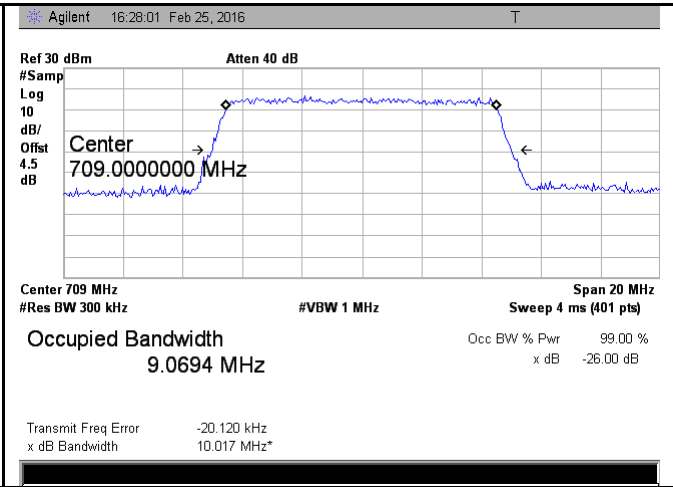
LTE band 17 - High CH QPSK-5



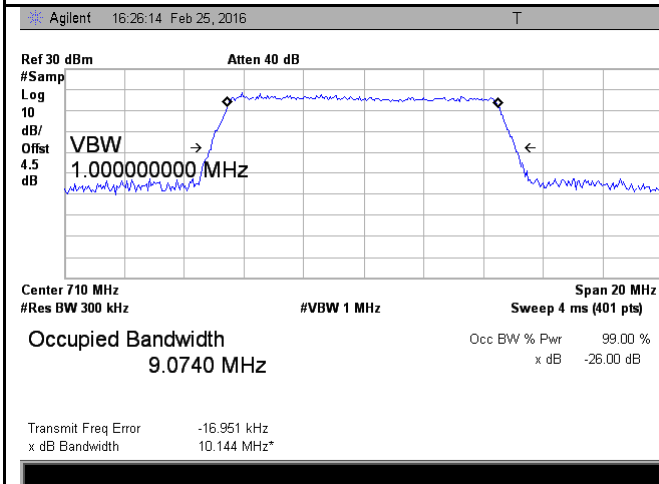
LTE band 17 - High CH 16QAM-5



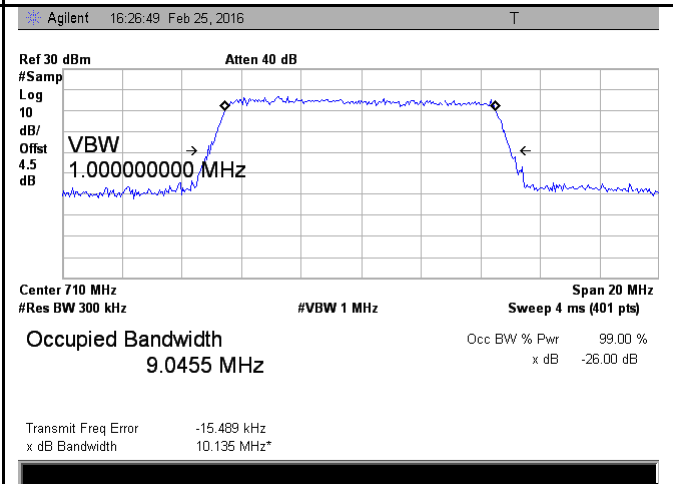
LTE band 17 - Low CH QPSK-10



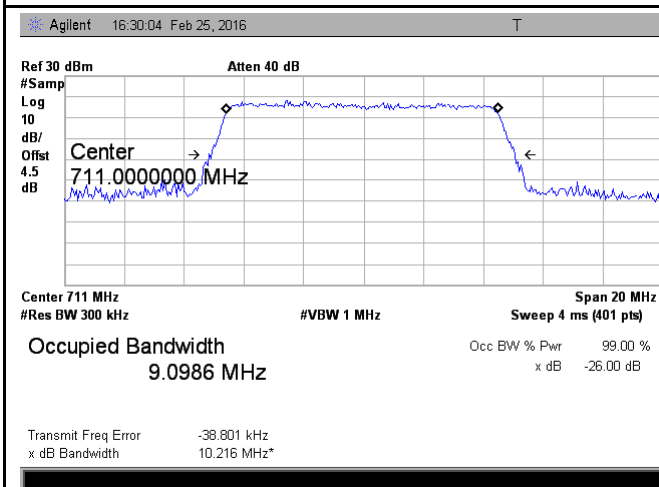
LTE band 17 - Low CH 16QAM-10



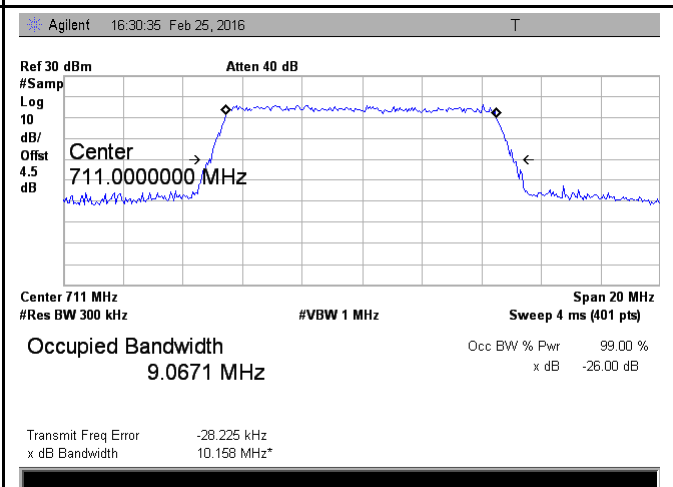
LTE band 17 - Middle CH QPSK-10



LTE band 17 - Middle CH 16QAM-10



LTE band 17 - High CH QPSK-10

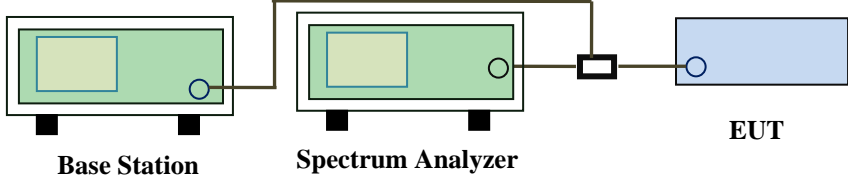


LTE band 17 - High CH 16QAM-10

6.5 Spurious Emissions at Antenna Terminals

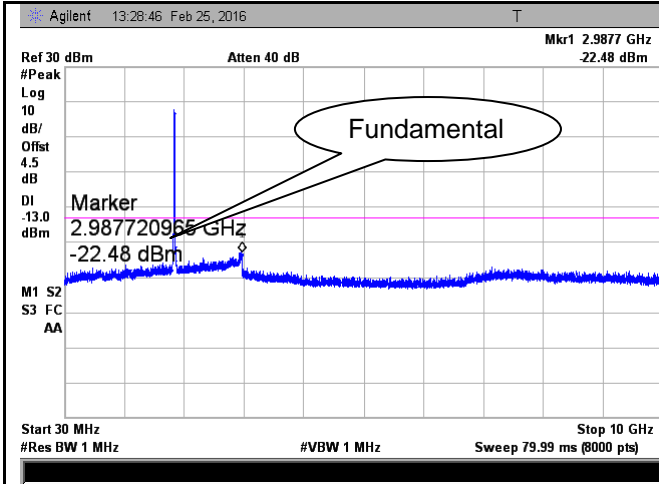
Temperature	22°C
Relative Humidity	58%
Atmospheric Pressure	1025mbar
Test date :	February 25, 2016
Tested By :	Winnie Zhang

Requirement(s):

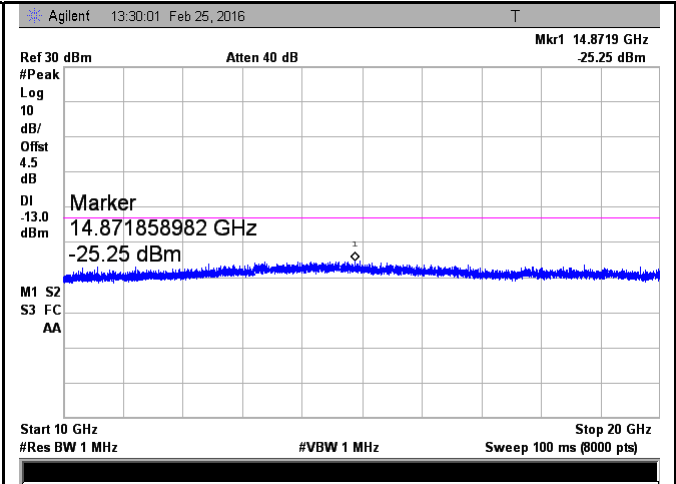
Spec	Item	Requirement	Applicable
§2.1051, §22.917(a)& §24.238(a) § 27.53(h)	a)	The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $43 + 10 \log(P)$ dB	<input checked="" type="checkbox"/>
Test Setup	 <p style="text-align: center;">Base Station Spectrum Analyzer EUT</p>		
Test Procedure	<ul style="list-style-type: none"> - 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	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail		

Test Data Yes N/A
 Test Plot Yes (See below) N/A

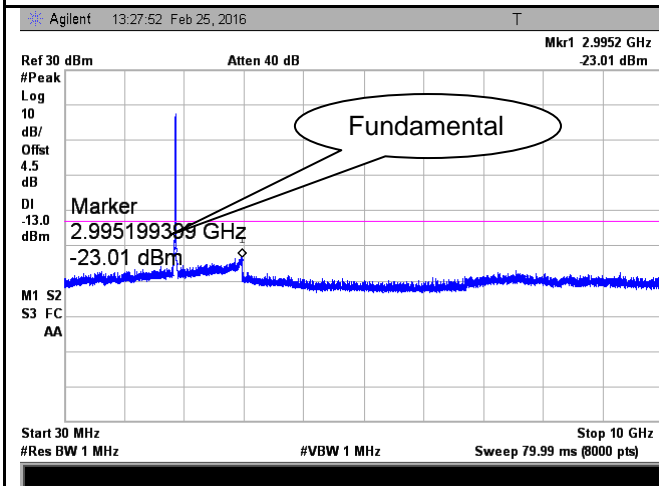
Test Plots 30MHz-5GHz
LTE Band 2 (Part 24E)



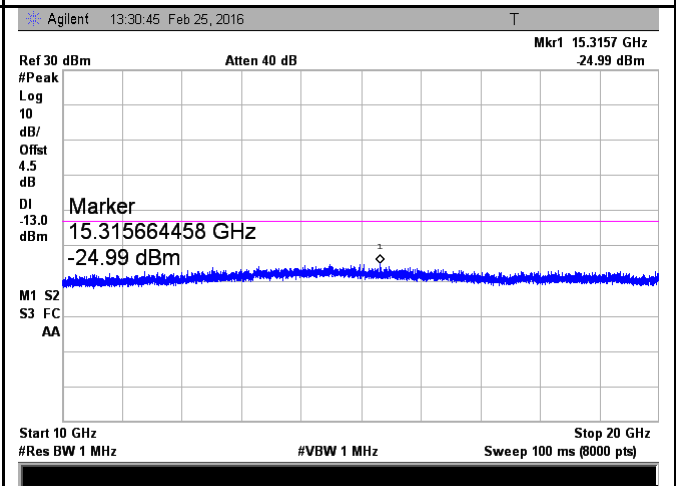
LTE Band 2 - Low Channel-1



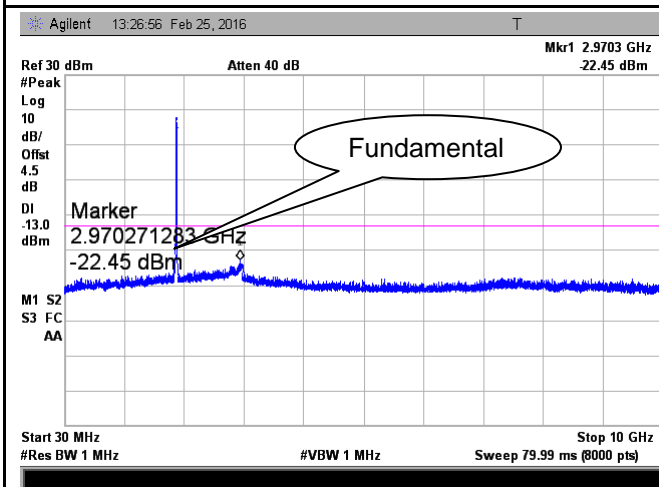
LTE Band 2 - Low Channel-2



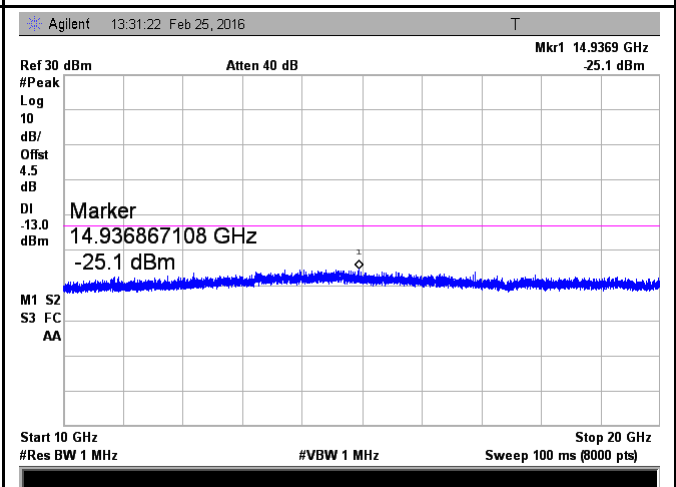
LTE Band 2 Middle Channel-1



LTE Band 2 Middle Channel-2

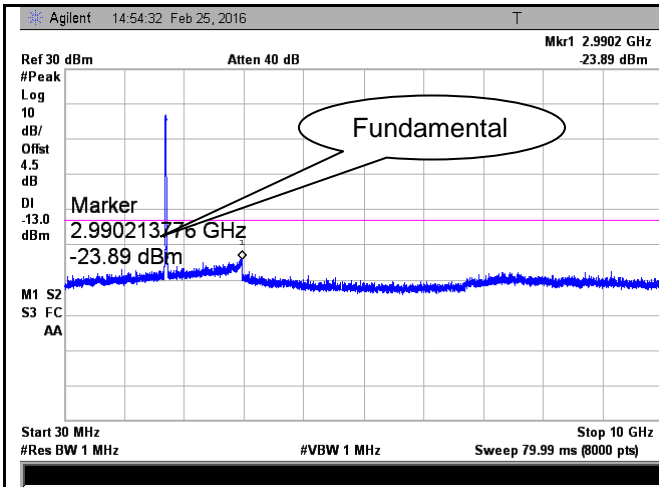


LTE Band 2 - High Channel-1

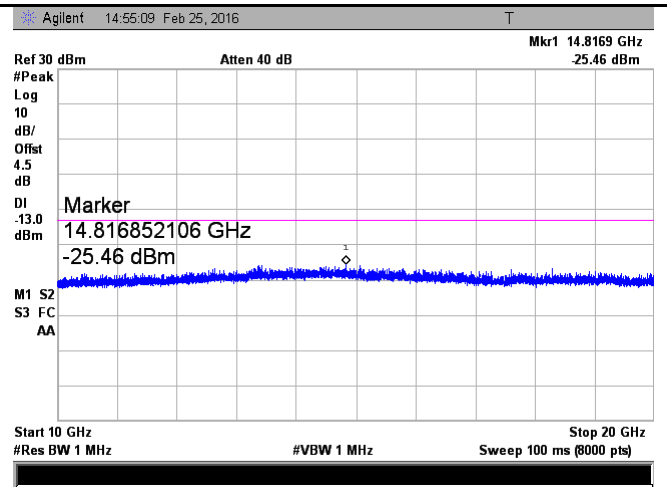


LTE Band 2 - High Channel-2

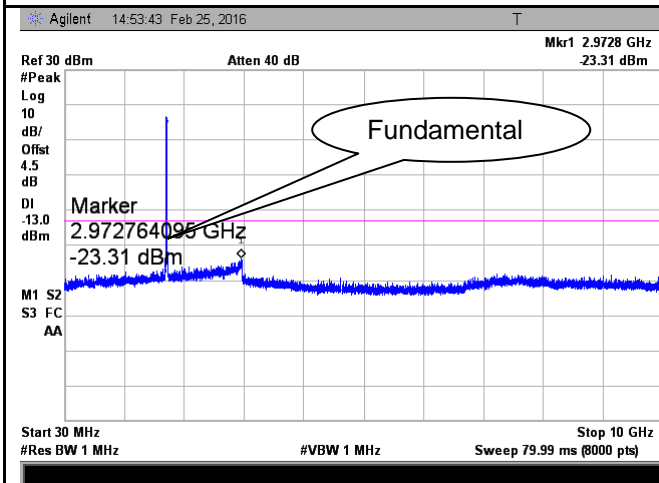
LTE Band 4 (Part27) result



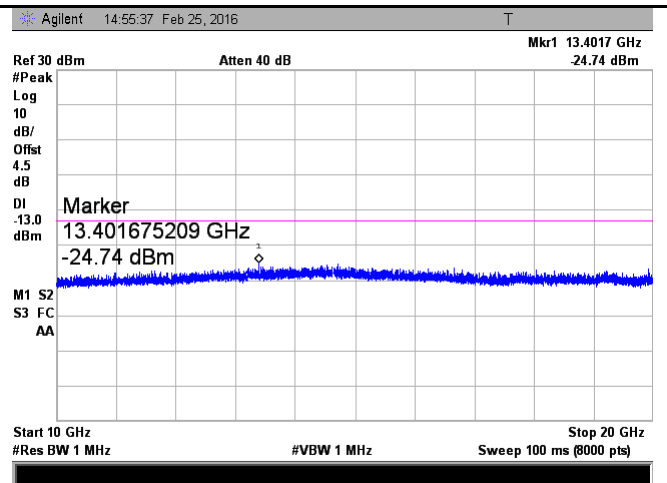
LTE Band 4 - Low Channel-1



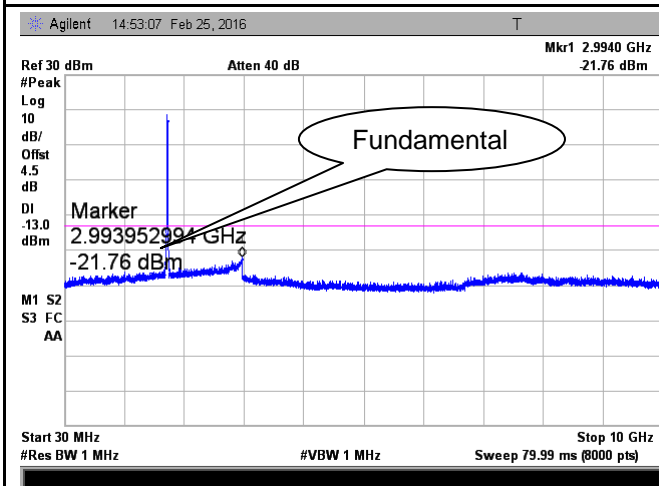
LTE Band 4 - Low Channel-2



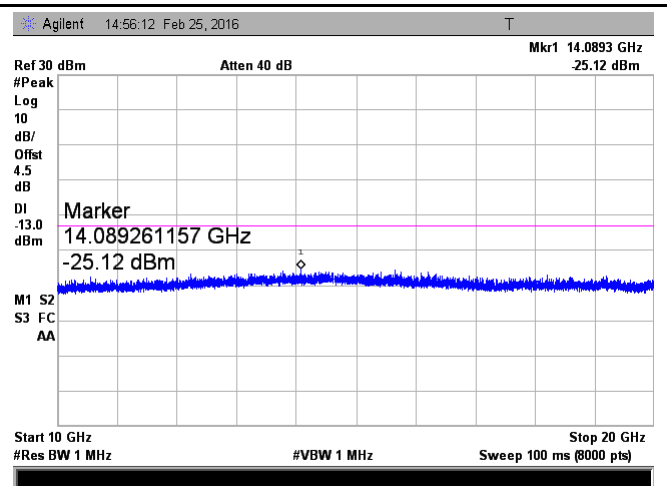
LTE Band 4 - Middle Channel-1



LTE Band 4 - Middle Channel-2

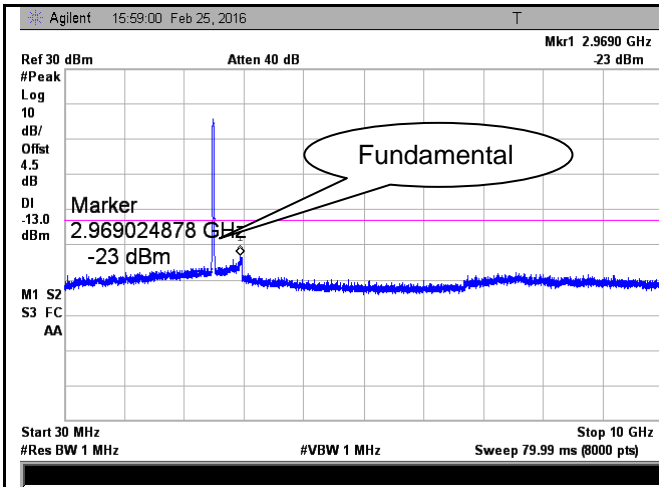


LTE Band 4 - High Channel-1

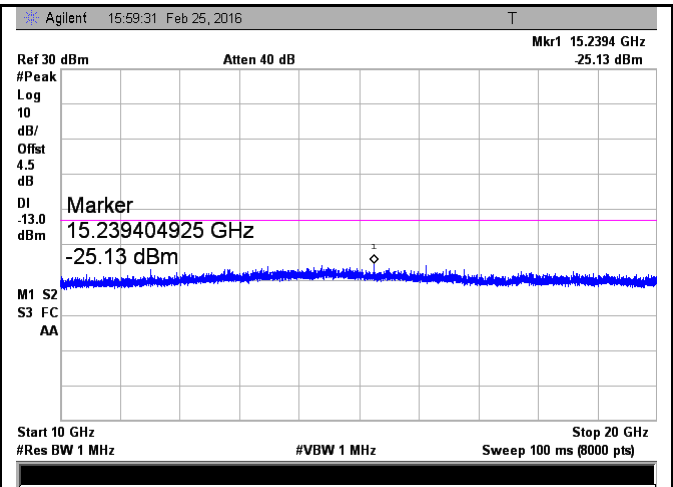


LTE Band 4 - High Channel-2

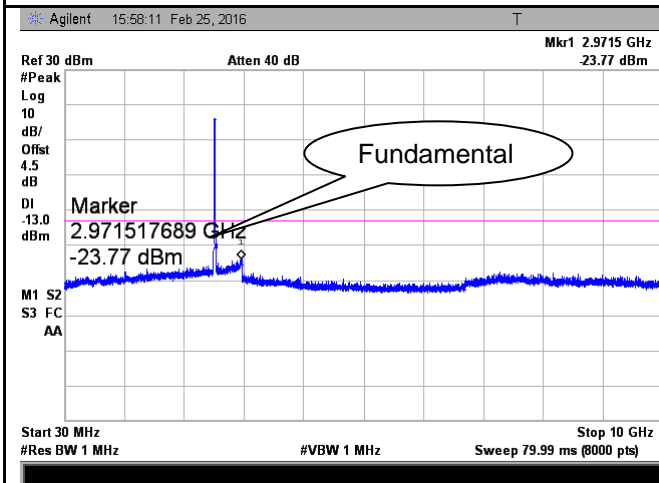
LTE Band 7 (Part 27)



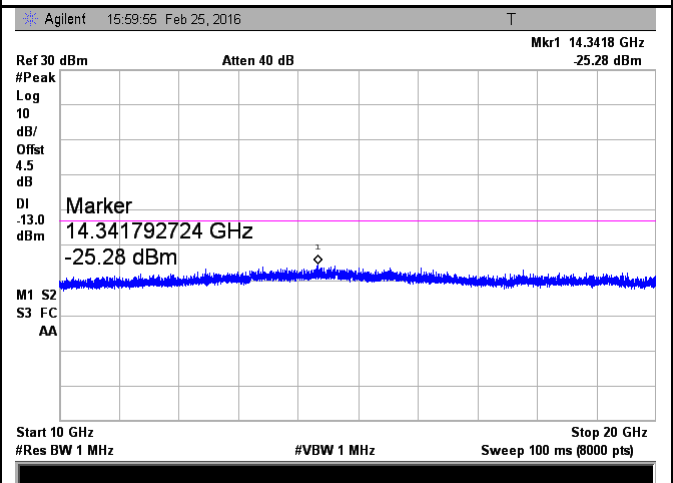
LTE Band 7 - Low Channel-1



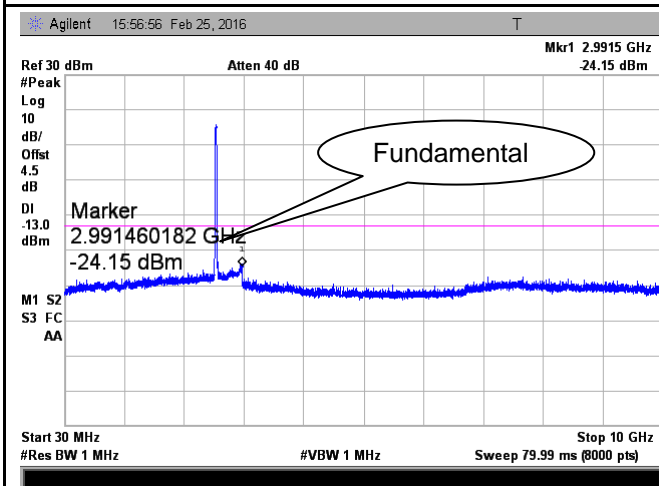
LTE Band 7 - Low Channel-2



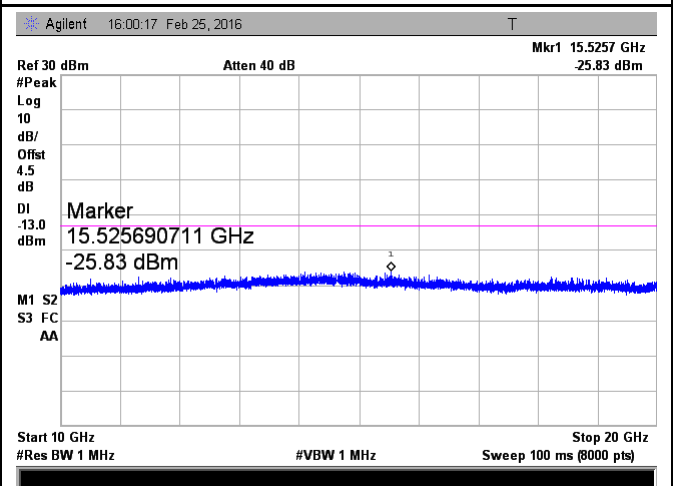
LTE Band 7 - Middle Channel-1



LTE Band 7 - Middle Channel-2

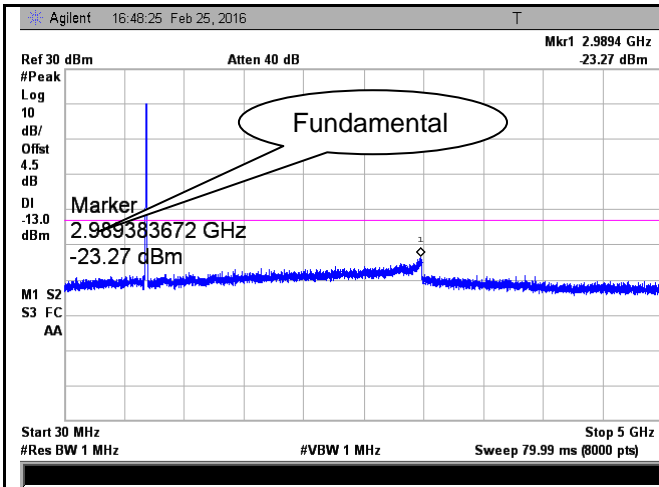


LTE Band 7 - High Channel-1

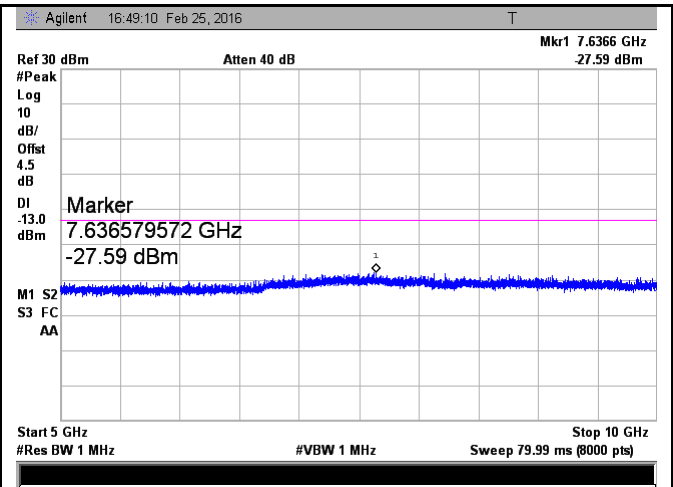


LTE Band 7 - High Channel-2

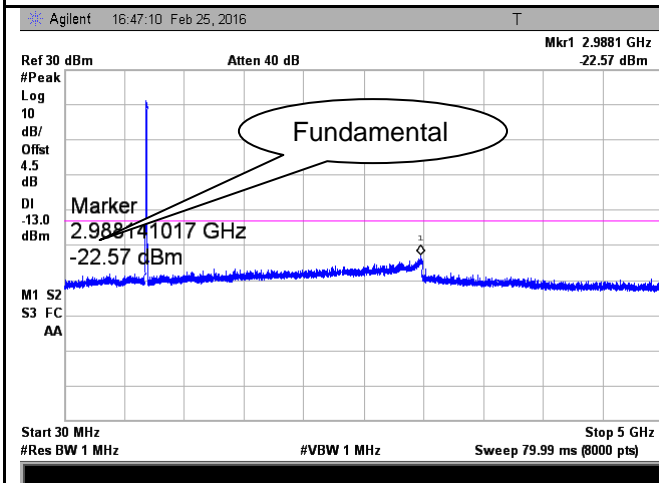
LTE Band 17 (Part 27)



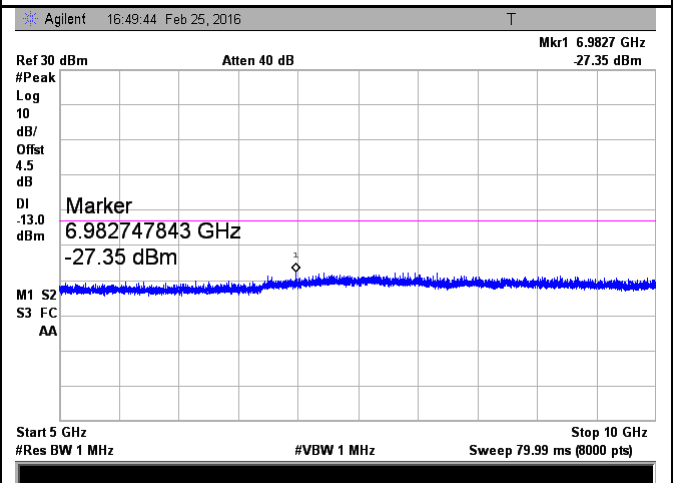
LTE Band 17 - Low Channel-1



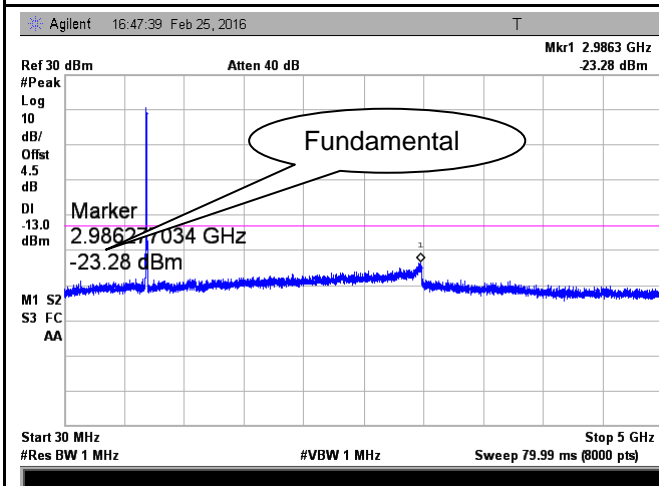
LTE Band 17 - Low Channel-2



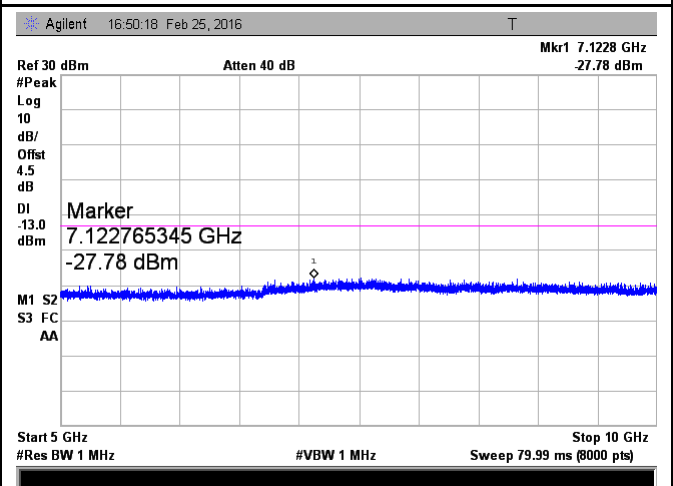
LTE Band 17 - Middle Channel-1



LTE Band 17 - Middle Channel-2



LTE Band 17 - High Channel-1



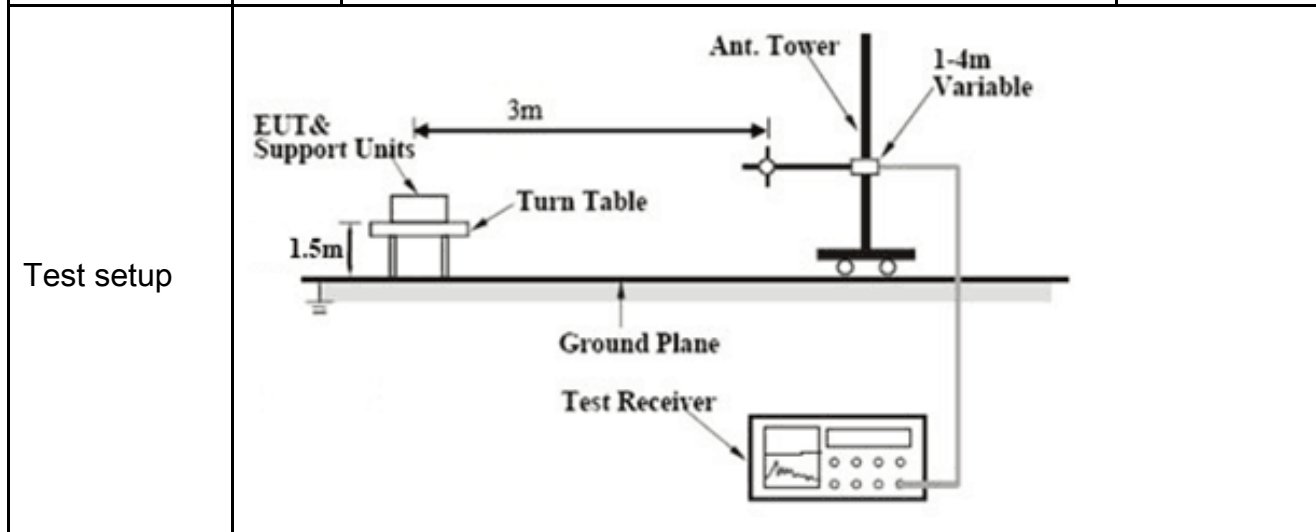
LTE Band 17 - High Channel-2

6.6 Spurious Radiated Emissions

Temperature	22°C
Relative Humidity	58%
Atmospheric Pressure	1025mbar
Test date :	February 25, 2016
Tested By :	Winnie Zhang

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.	<input checked="" type="checkbox"/>



Test Procedure	<ol style="list-style-type: none"> 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. 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. <p>Sample Calculation:</p> $\text{EUT Field Strength} = \text{Raw Amplitude (dB}\mu\text{V/m)} - \text{Amplifier Gain (dB)} + \text{Antenna Factor (dB)} + \text{Cable Loss (dB)} + \text{Filter Attenuation (dB, if used)}$
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Remark	
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail

Test Data Yes N/A

Test Plot Yes (See below) N/A

LTE Band 2 (Part 24E) 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	-45.23	V	10.25	2.73	-37.71	-13	-24.71
3720	-45.61	H	10.25	2.73	-38.09	-13	-25.09
65.9	-40.77	V	-4.2	0.11	-45.08	-13	-32.08
138.3	-49.92	H	4.6	0.18	-45.5	-13	-32.50

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	-45.18	V	10.25	2.73	-37.66	-13	-24.66
3760	-45.53	H	10.25	2.73	-38.01	-13	-25.01
65.5	-40.61	V	-4.2	0.11	-44.92	-13	-31.92
138.4	-49.86	H	4.6	0.18	-45.44	-13	-32.44

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	-45.12	V	10.36	2.73	-37.86	-13	-24.86
3800	-45.49	H	10.36	2.73	-32.88	-13	-19.88
65.8	-40.51	V	-4.2	0.11	-44.82	-13	-31.82
138.3	-49.93	H	4.6	0.18	-45.51	-13	-32.51

LTE Band 4(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	-45.61	V	10.06	2.52	-38.07	-13	-25.07
3440	-45.95	H	10.06	2.52	-38.41	-13	-25.41
66.2	-40.48	V	-4.2	0.11	-44.79	-13	-31.79
139.7	-49.52	H	4.6	0.18	-45.1	-13	-32.10

Middle channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
3465	-45.57	V	10.09	2.52	-38	-13	-25.00
3465	-45.83	H	10.09	2.52	-38.26	-13	-25.26
66.6	-40.51	V	-4.2	0.11	-44.82	-13	-31.82
139.4	-49.48	H	4.6	0.18	-45.06	-13	-32.06

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	-45.51	V	10.09	2.52	-37.94	-13	-24.94
3490	-45.76	H	10.09	2.52	-38.19	-13	-25.19
66.3	-40.48	V	-4.2	0.11	-44.79	-13	-31.79
139.7	-49.53	H	4.6	0.18	-45.11	-13	-32.11

LTE Band 7(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	-45.42	V	10.29	0.98	-36.11	-13	-23.11
5020	-45.68	H	10.29	0.98	-36.37	-13	-23.37
64.8	-40.57	V	-4.2	0.11	-44.88	-13	-31.88
137.6	-48.43	H	4.6	0.18	-44.01	-13	-31.01

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	-45.63	V	10.3	0.99	-36.32	-13	-23.32
5070	-45.58	H	10.3	0.99	-36.27	-13	-23.27
64.5	-40.49	V	-4.2	0.11	-44.8	-13	-31.80
137.2	-48.56	H	4.6	0.18	-44.14	-13	-31.14

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	-45.57	V	10.32	1	-36.25	-13	-23.25
5120	-45.63	H	10.32	1	-36.31	-13	-23.31
64.8	-40.55	V	-4.2	0.11	-44.86	-13	-31.86
137.5	-48.69	H	4.6	0.18	-44.27	-13	-31.27

LTE Band 17(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	-44.38	V	7.65	0.75	-37.48	-13	-24.48
1418	-45.14	H	7.65	0.75	-38.24	-13	-25.24
65.2	-40.71	V	-4.2	0.11	-45.02	-13	-32.02
138.5	-49.85	H	4.6	0.18	-45.43	-13	-32.43

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	-44.35	V	7.65	0.75	-37.45	-13	-24.45
1420	-45.09	H	7.65	0.75	-38.19	-13	-25.19
65.9	-40.66	V	-4.2	0.11	-44.97	-13	-31.97
138.4	-48.72	H	4.6	0.18	-44.3	-13	-31.30

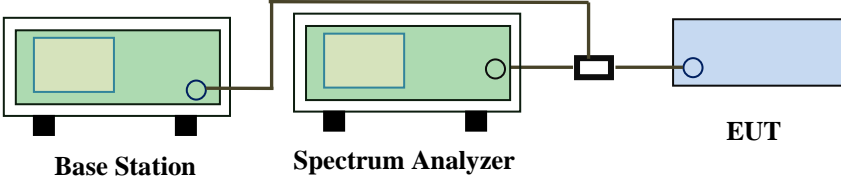
High channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
1422	-44.51	V	7.65	0.75	-37.61	-13	-24.61
1422	-45.12	H	7.65	0.75	-38.22	-13	-25.22
65.6	-40.57	V	-4.2	0.11	-44.88	-13	-31.88
138.3	-48.68	H	4.6	0.18	-44.26	-13	-31.26

6.7 Band Edge

Temperature	22°C
Relative Humidity	58%
Atmospheric Pressure	1025mbar
Test date :	February 25, 2016
Tested By :	Winnie Zhang

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.	<input checked="" type="checkbox"/>
Test setup	 <p>The diagram illustrates the test setup. On the left is a green box labeled 'Base Station'. A line connects it to a green box labeled 'Spectrum Analyzer'. From the Spectrum Analyzer, a line goes to a small black box representing a power divider. From the power divider, two lines branch out: one goes to a blue box labeled 'EUT' (Under Test Equipment), and the other goes back to the Spectrum Analyzer. Labels 'Base Station', 'Spectrum Analyzer', and 'EUT' are placed below their respective boxes.</p>		
Procedure	<ul style="list-style-type: none"> - 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	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail		

Test Data Yes N/A

Test Plot Yes (See below) N/A

LTE Band 2 (Part 24E) result

BW(MHz)	Channel	Frequency (MHz)	Mode	Emission (dBm)	Limit (dBm)
1.4	18607	1850.7	QPSK	-23.61	-13
			16QAM	-23.87	-13
1.4	18900	1909.3	QPSK	-27.84	-13
			16QAM	-28.59	-13
3	18615	1851.5	QPSK	-17.05	-13
			16QAM	-18.26	-13
3	19185	1908.5	QPSK	-22.11	-13
			16QAM	-20.67	-13
5	18625	1852.5	QPSK	-17.12	-13
			16QAM	-16.75	-13
5	19175	1907.5	QPSK	-17.83	-13
			16QAM	-18.63	-13
10	18650	1855	QPSK	-18.03	-13
			16QAM	-17.63	-13
10	19150	1905	QPSK	-20.82	-13
			16QAM	-19.65	-13
15	18675	1857.5	QPSK	-19.57	-13
			16QAM	-20.23	-13
15	19125	1902.5	QPSK	-21.87	-13
			16QAM	-23.74	-13
20	18700	1860	QPSK	-22.37	-13
			16QAM	-24.51	-13
20	19100	1900	QPSK	-24.03	-13
			16QAM	-26.55	-13

LTE Band 4 (Part 27) result

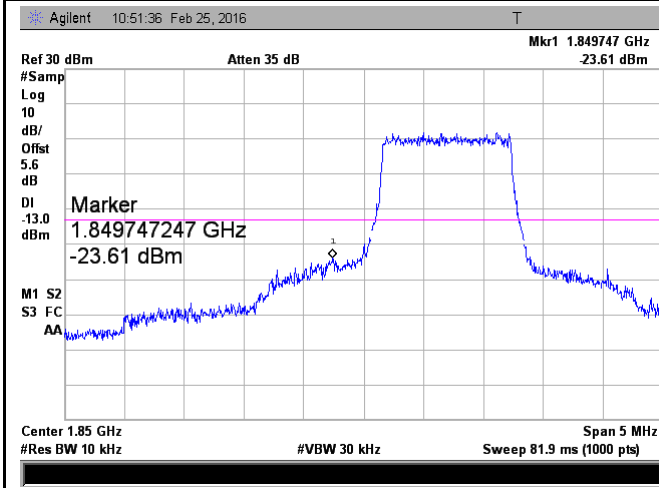
BW(MHz)	Channel	Frequency (MHz)	Mode	Emission (dBm)	Limit (dBm)
1.4	19957	1710.7	QPSK	-18.94	-13
			16QAM	-26.61	-13
1.4	20393	1754.3	QPSK	-26.13	-13
			16QAM	-26.61	-13
3	19965	1711.5	QPSK	-17.39	-13
			16QAM	-19.61	-13
3	20385	1753.5	QPSK	-20.07	-13
			16QAM	-21.44	-13
5	19975	1712.5	QPSK	-15.20	-13
			16QAM	-16.92	-13
5	20375	1752.5	QPSK	-16.66	-13
			16QAM	-19.29	-13
10	20000	1715	QPSK	-16.27	-13
			16QAM	-16.64	-13
10	20350	1750	QPSK	-19.27	-13
			16QAM	-19.35	-13
15	20025	1717.5	QPSK	-18.55	-13
			16QAM	-20.79	-13
15	20325	1747.5	QPSK	-19.20	-13
			16QAM	-21.01	-13
20	20050	1720	QPSK	-21.27	-13
			16QAM	-22.64	-13
20	20300	1745	QPSK	-21.87	-13
			16QAM	-22.66	-13

LTE Band 17 (Part 27) result

BW(MHz)	Channel	Frequency (MHz)	Mode	Emission (dBm)	Limit (dBm)
5	23755	706.5	QPSK	-16.53	-13
			16QAM	-17.24	-13
5	23825	713.5	QPSK	-17.37	-13
			16QAM	-17.28	-13
10	23780	709	QPSK	-16.55	-13
			16QAM	-18.44	-13
10	23800	711	QPSK	-17.52	-13
			16QAM	-19.21	-13

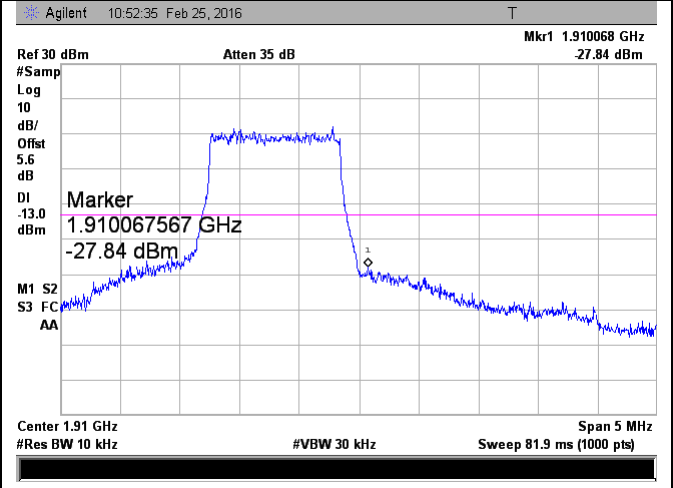
Test Plots

LTE Band 2 (Part 24E)



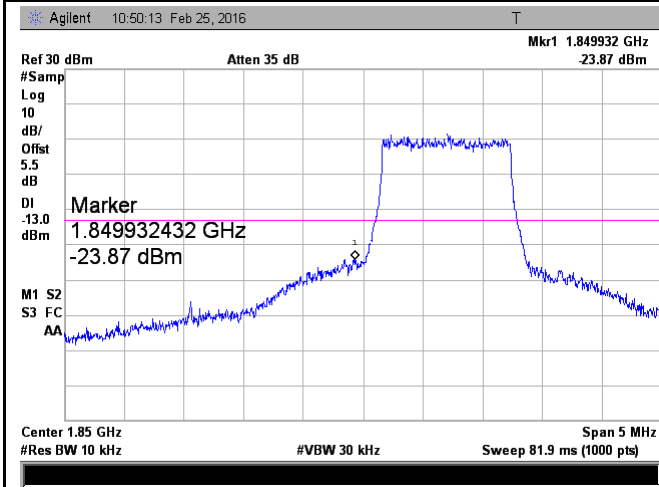
LTE Band 2 - Low Channel QPSK-1.4

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



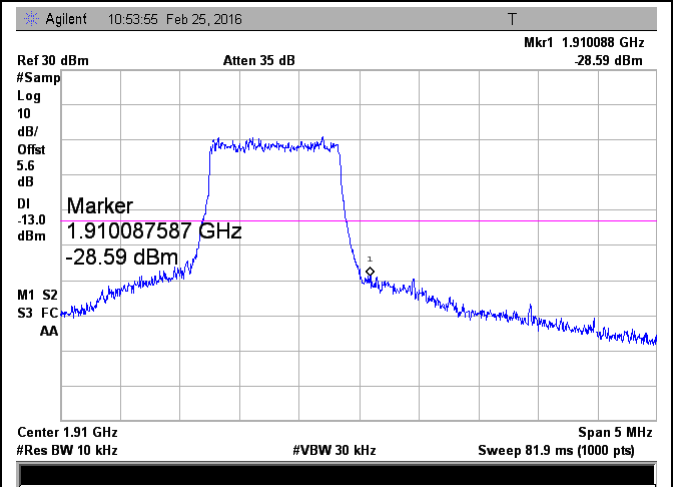
LTE Band 2 - High Channel QPSK-1.4

Note: Offset=Cable loss (4.5) + 10log
(12.77/10)=4.5+1.1=5.6dB



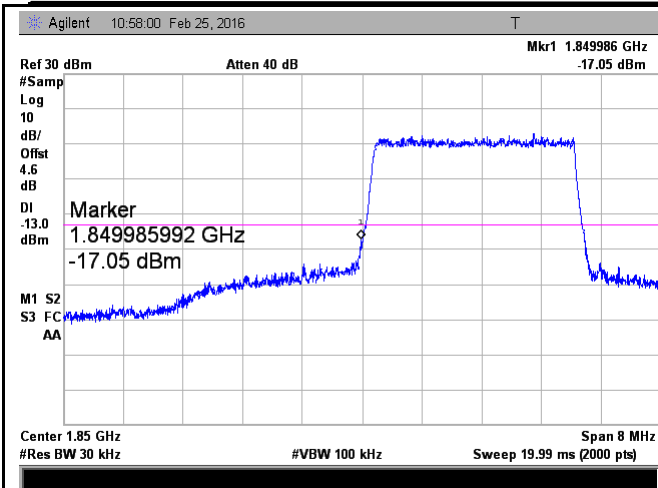
LTE Band 2 - Low Channel 16QAM-1.4

Note: Offset=Cable loss (4.5) + 10log
(12.69/10)=4.5+1.0=5.5 dB



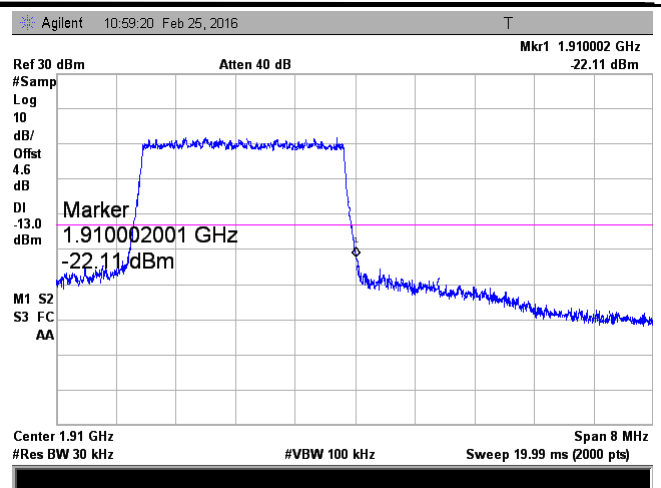
LTE Band 2 - High Channel 16QAM-1.4

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



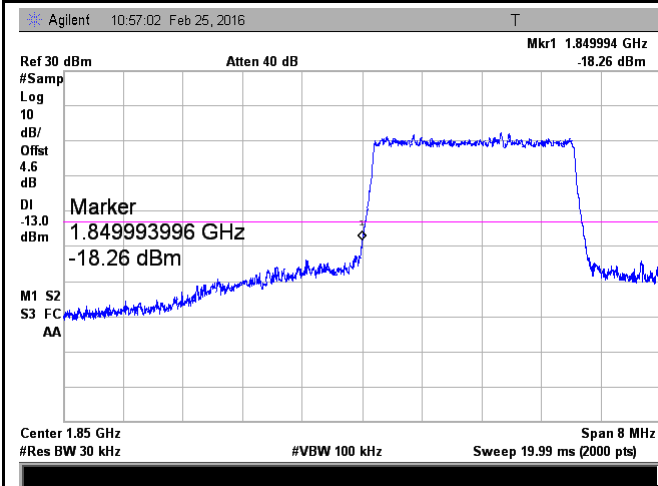
LTE Band 2 - Low Channel QPSK-3

Note: Offset=Cable loss (4.5) + 10log
(30.66/30)=4.5+0.1=4.6 dB



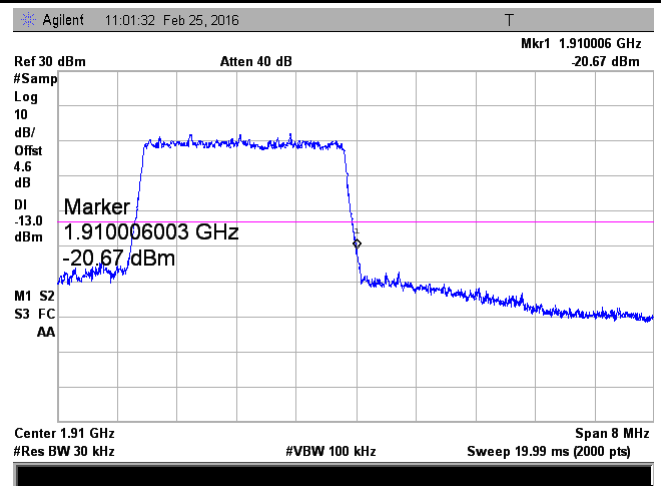
LTE Band 2 - High Channel QPSK-3

Note: Offset=Cable loss (4.5) + 10log
(30.96/30)=4.5+0.1=4.6 dB



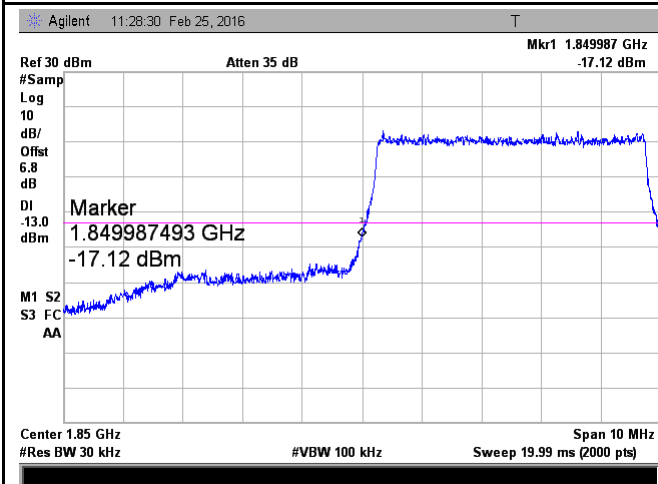
LTE Band 2 - Low Channel 16QAM-3

Note: Offset=Cable loss (4.5) + 10log
(30.77/30)=4.5+0.1=4.6 dB

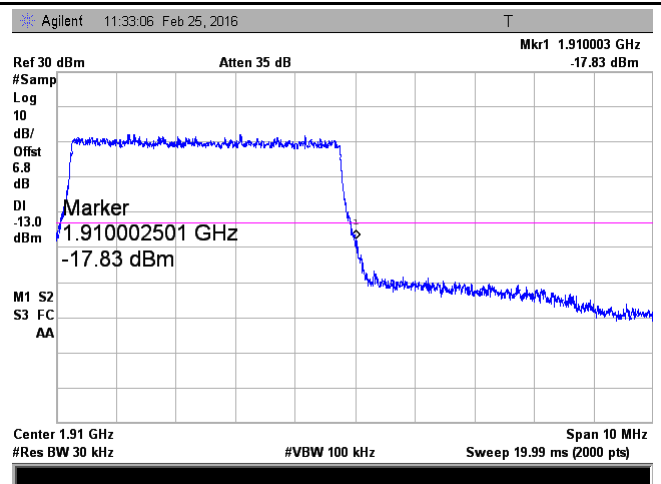


LTE Band 2 - High Channel 16QAM-3

Note: Offset=Cable loss (4.5) + 10log
(30.49/30)=4.5+0.1=4.6 dB

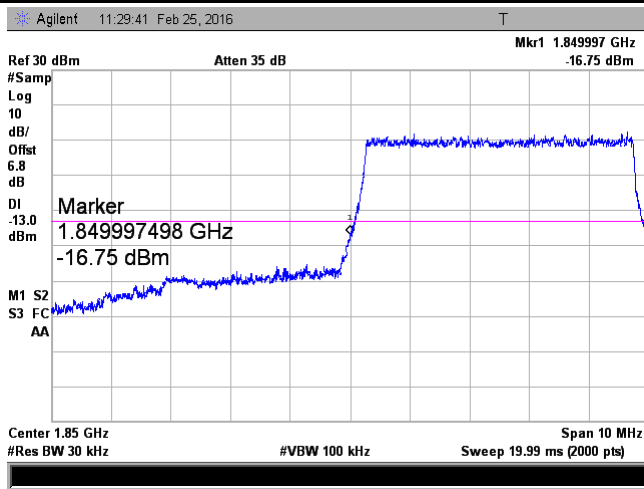


LTE Band 2 - Low Channel QPSK-5



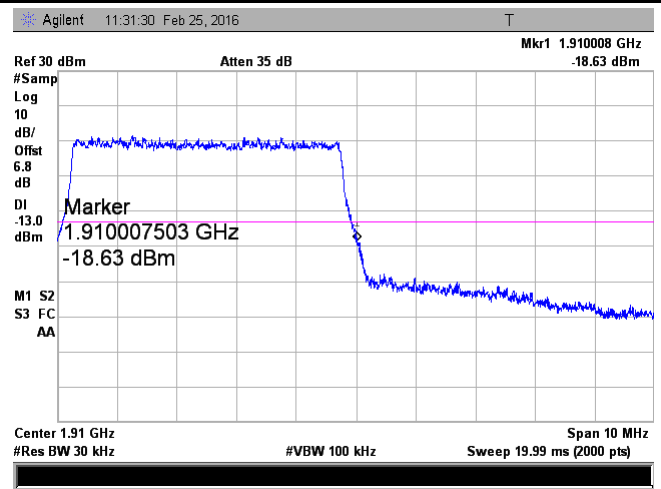
LTE Band 2 - High Channel QPSK-5

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



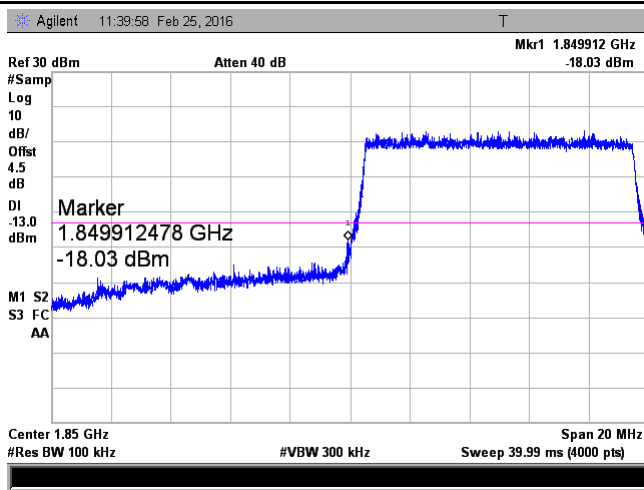
LTE Band 2 - Low Channel 16QAM-5

Note: Offset=Cable loss (4.5) + 10log
(50.47/30)=4.5+2.3=6.8 dB



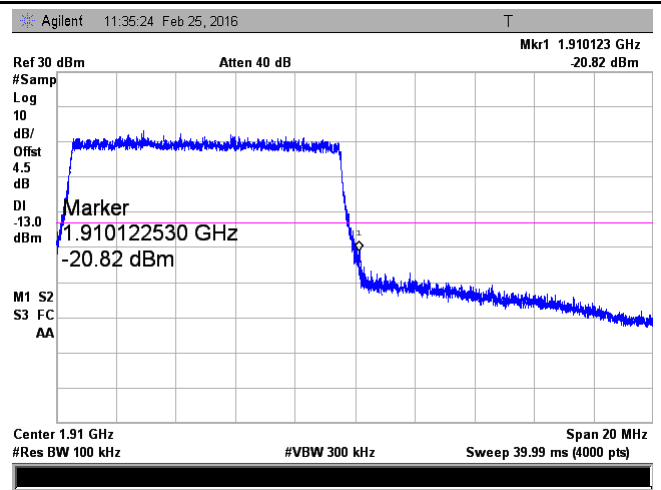
LTE Band 2 - High Channel 16QAM-5

Note: Offset=Cable loss (4.5) + 10log
(50.63/30)=4.5+2.3=6.8 dB

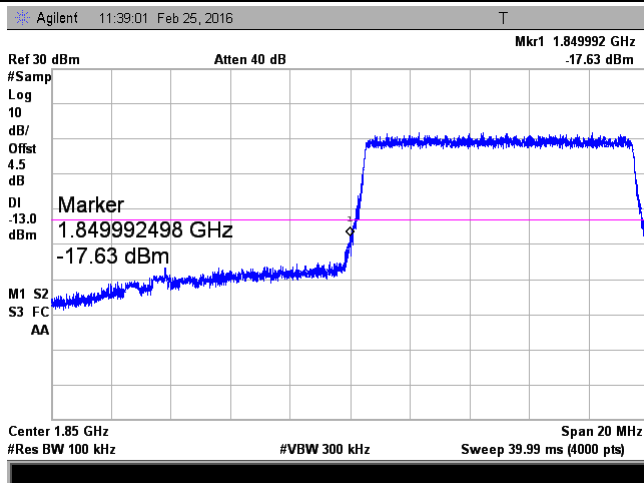


LTE Band 2 - Low Channel QPSK-10

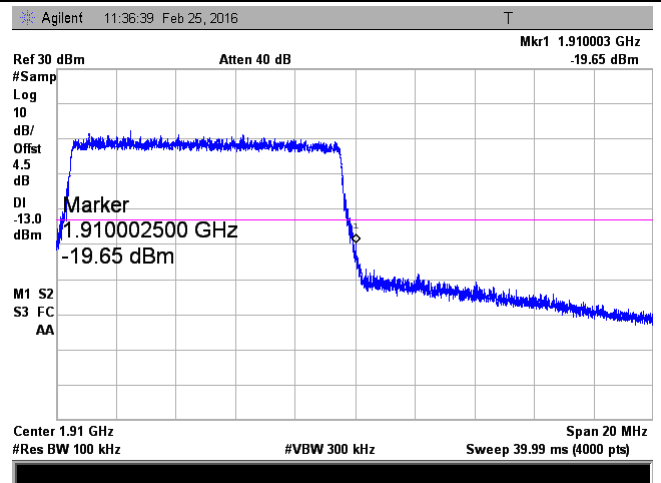
Note: Offset=Cable loss (4.5) + 10log
(50.71/30)=4.5+2.3=6.8 dB



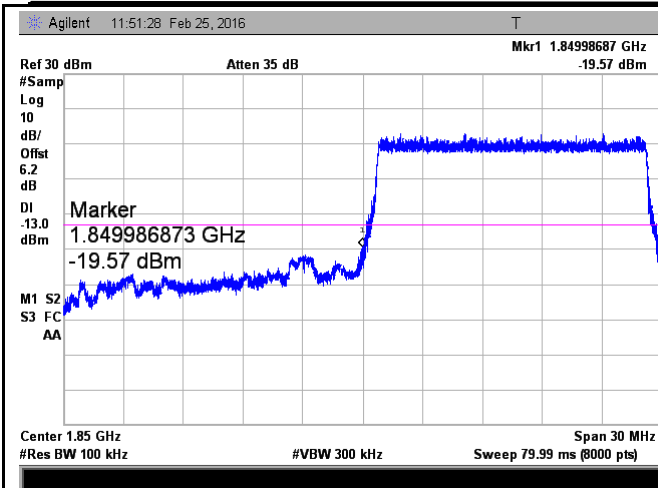
LTE Band 2 - High Channel QPSK-10



LTE Band 2 - Low Channel 16QAM-10

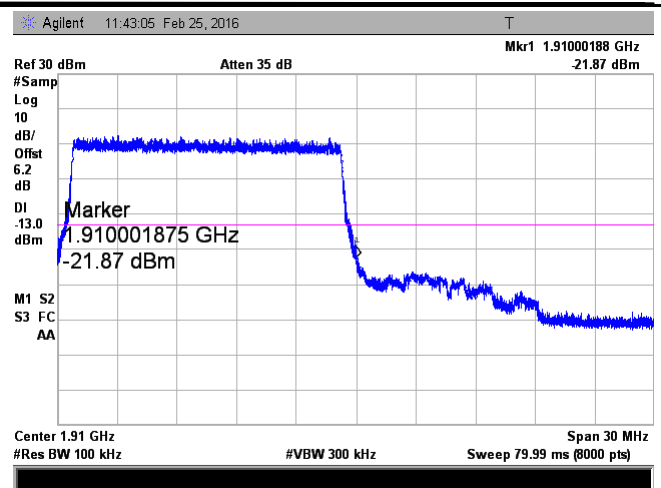


LTE Band 2 - High Channel 16QAM-10



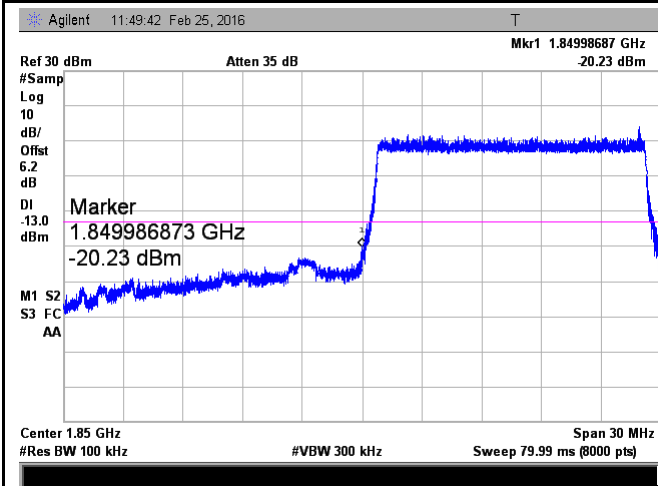
LTE Band 2 - Low Channel QPSK-15

Note: Offset=Cable loss (4.5) + 10log
(147.48/100)=4.5+1.7=6.2 dB



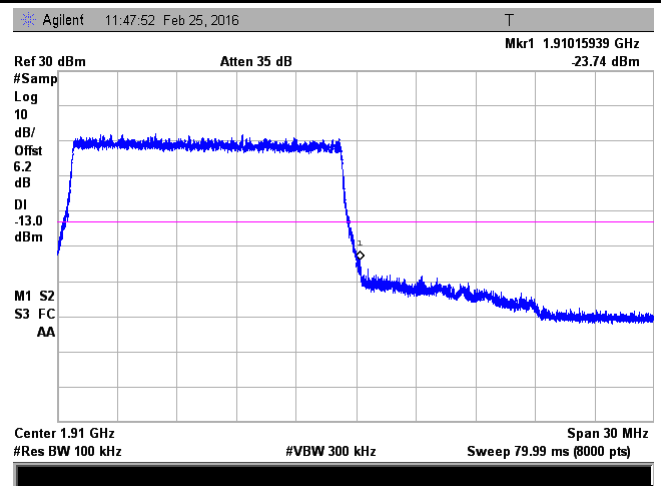
LTE Band 2 - High Channel QPSK-15

Note: Offset=Cable loss (4.5) + 10log
(147.68/100)=4.5+1.7=6.2 dB



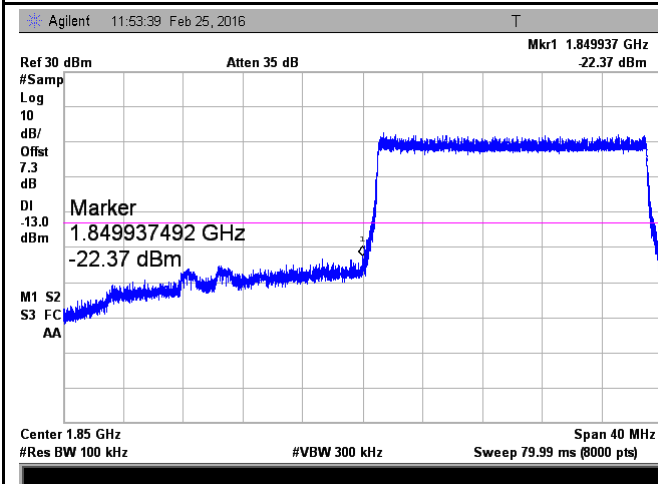
LTE Band 2 - Low Channel 16QAM-15

Note: Offset=Cable loss (4.5) + 10log
(148.51/100)=4.5+1.7=6.2 dB

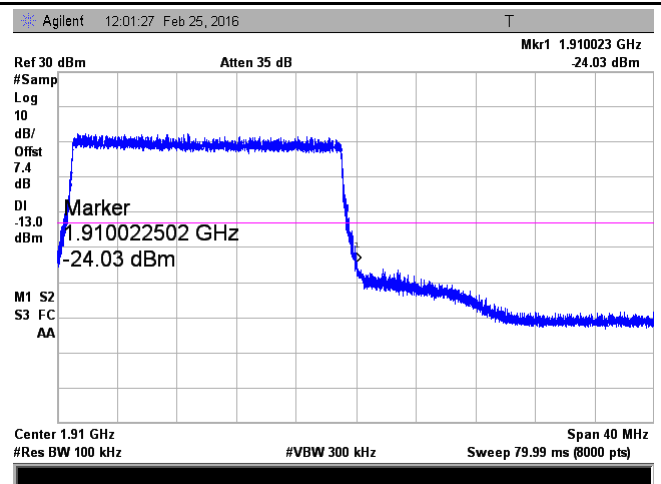


LTE Band 2 - High Channel 16QAM-15

Note: Offset=Cable loss (4.5) + 10log
(147.75/100)=4.5+1.7=6.2 dB

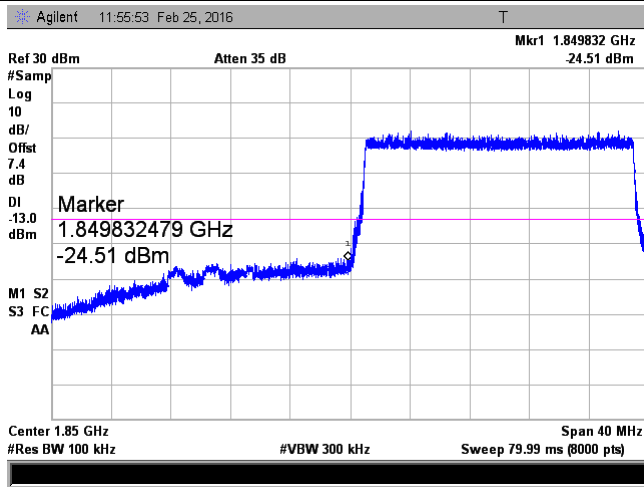


LTE Band 2 - Low Channel QPSK-20



LTE Band 2 - High Channel QPSK-20

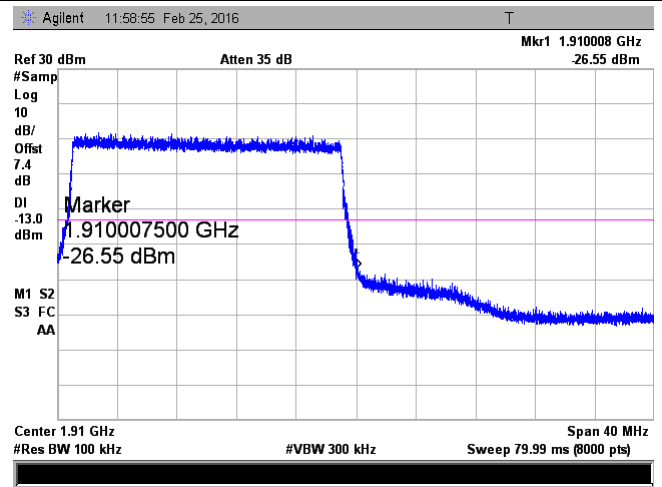
Note: Offset=Cable loss (4.5) + 10log
 (192.68/100)=4.5+2.8=7.3 dB



LTE Band 2 - Low Channel 16QAM-20

Note: Offset=Cable loss (4.5) + 10log
 (194.69/100)=4.5+2.9=7.4 dB

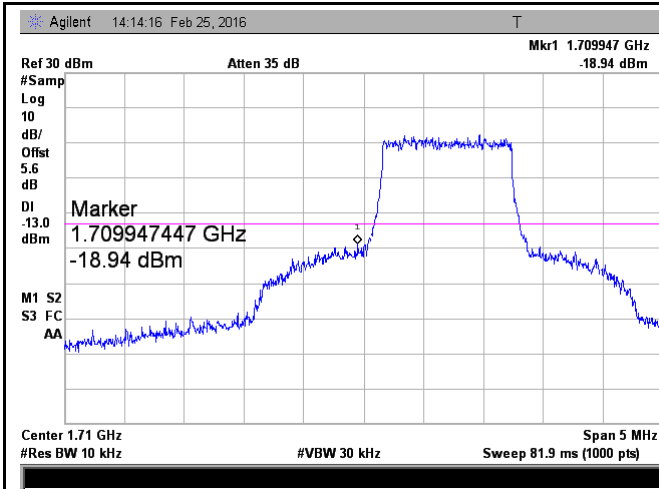
Note: Offset=Cable loss (4.5) + 10log
 (193.10/100)=4.5+2.9=7.4 dB



LTE Band 2 - High Channel 16QAM-20

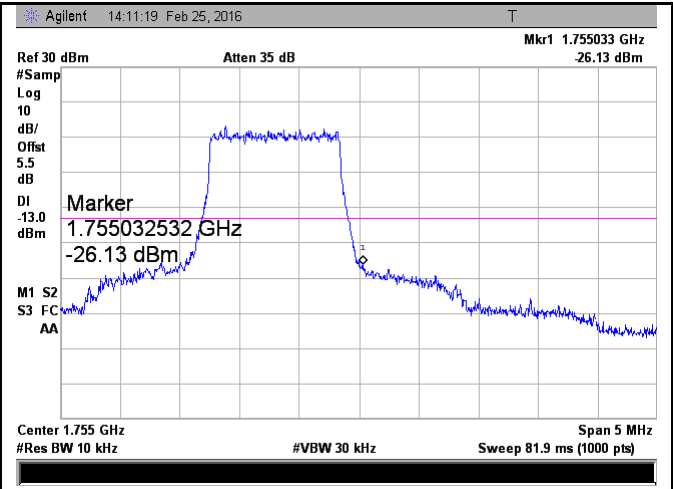
Note: Offset=Cable loss (4.5) + 10log
 (195.43/100)=4.5+2.9=7.4 dB

LTE Band 4 (Part 27)



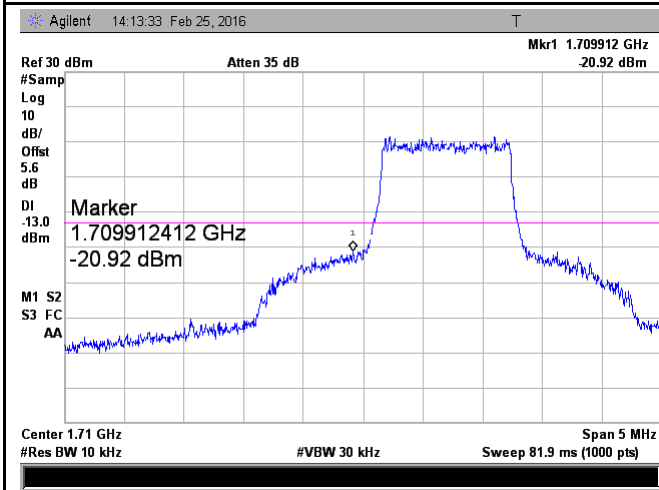
LTE Band 4 - Low Channel QPSK-1.4

Note: Offset=Cable loss (4.5) + 10log
(12.78/10)=4.5+1.1=5.6dB



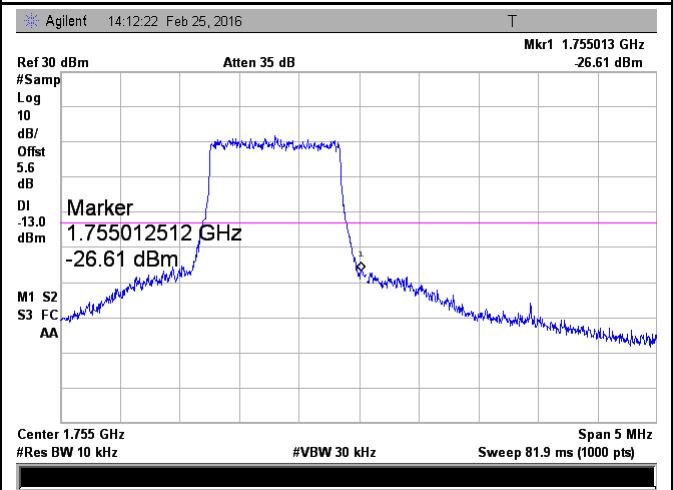
LTE Band 4 - High Channel QPSK-1.4

Note: Offset=Cable loss (4.5) + 10log
(12.60/10)=4.5+1.0=5.5dB



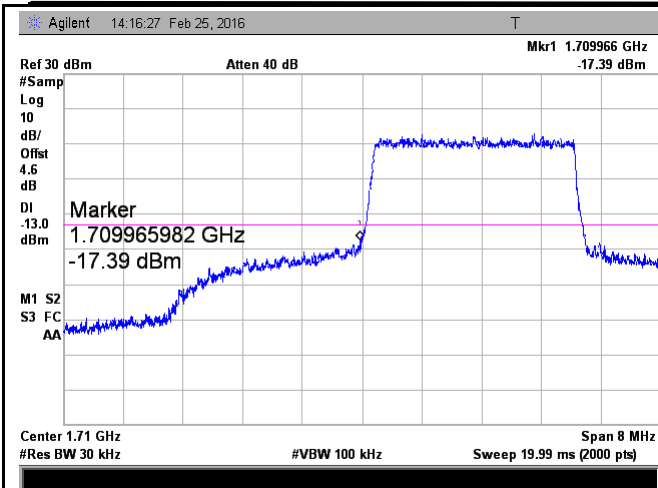
LTE Band 4 - Low Channel 16QAM-1.4

Note: Offset=Cable loss (4.5) + 10log
(12.91/10)=4.5+1.1=5.6 dB



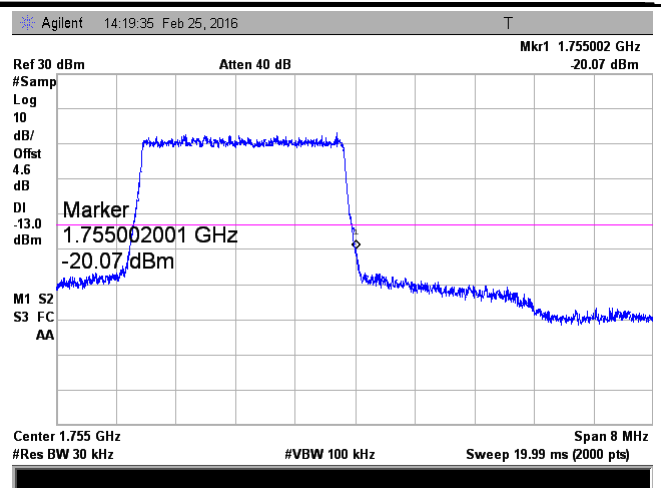
LTE Band 4 - High Channel 16QAM-1.4

Note: Offset=Cable loss (4.5) + 10log
(12.87/10)=4.5+1.1=5.6 dB



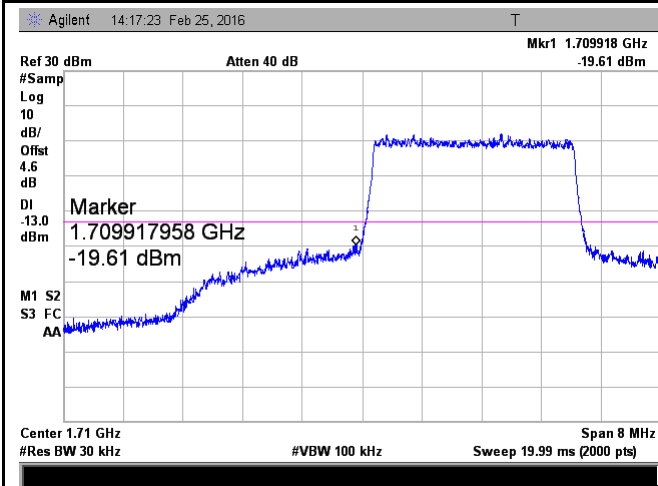
LTE Band 4 - Low Channel QPSK-3

Note: Offset=Cable loss (4.5) + 10log
(30.61/30)=4.5+0.1=4.6 dB



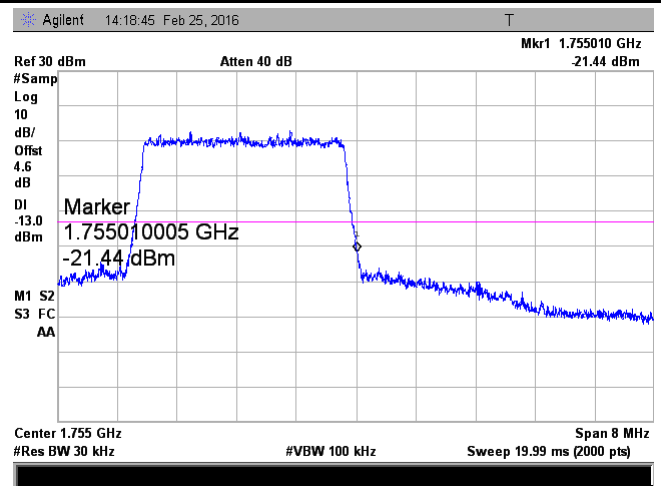
LTE Band 4 - High Channel QPSK-3

Note: Offset=Cable loss (4.5) + 10log
(30.87/30)=4.5+0.1=4.6 dB



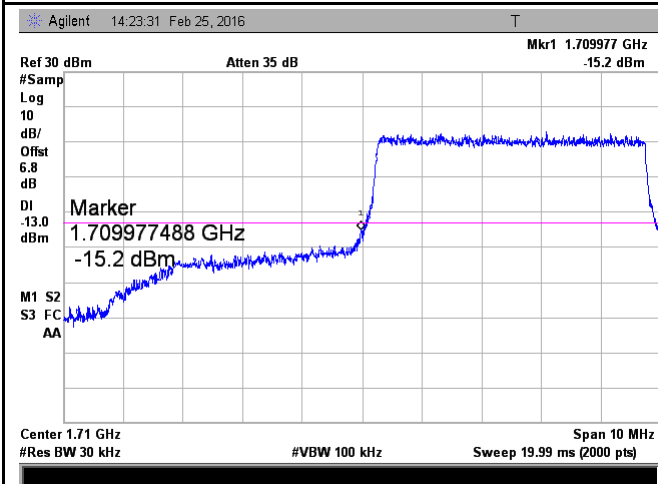
LTE Band 4 - Low Channel 16QAM-3

Note: Offset=Cable loss (4.5) + 10log
(30.81/30)=4.5+0.1=4.6dB

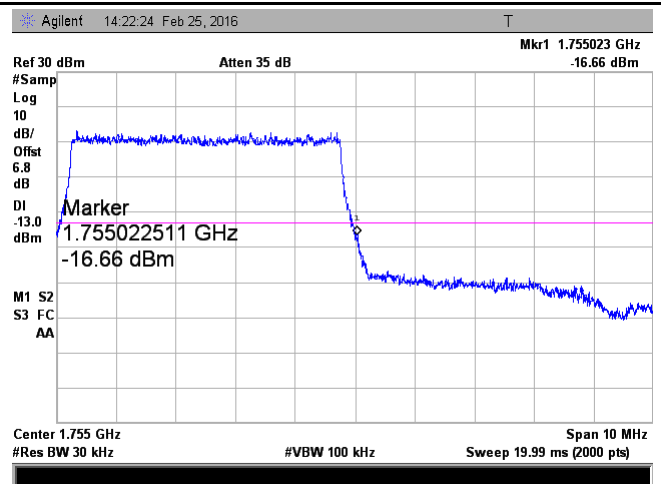


LTE Band 4 - High Channel 16QAM-3

Note: Offset=Cable loss (4.5) + 10log
(30.85/30)=4.5+0.1=4.6dB

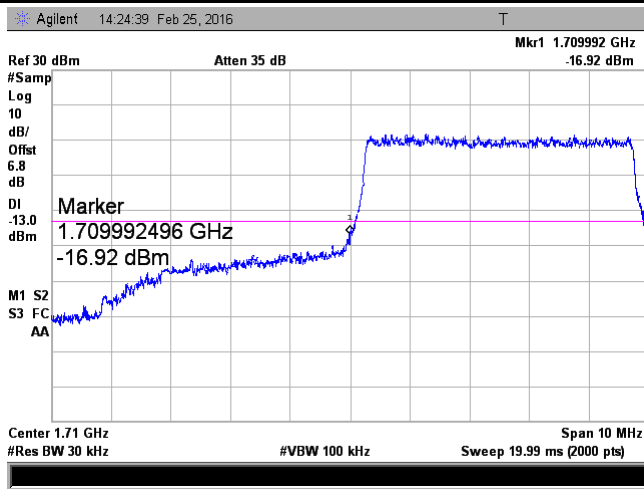


LTE Band 4 - Low Channel QPSK-5



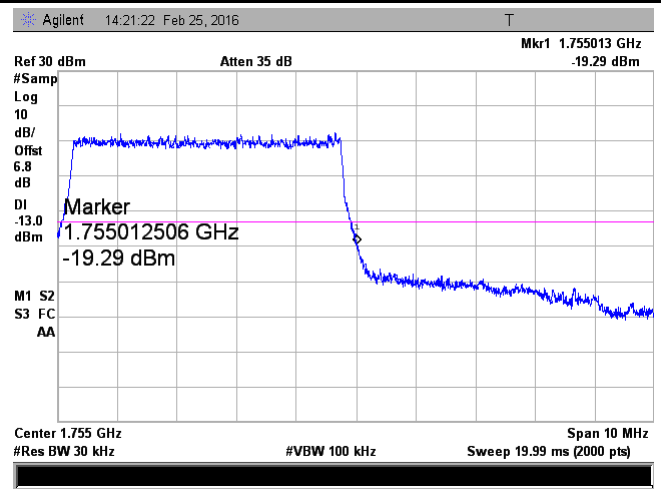
LTE Band 4 - High Channel QPSK-5

Note: Offset=Cable loss (4.5) + 10log
(51.04/30)=4.5+2.3=6.8 dB



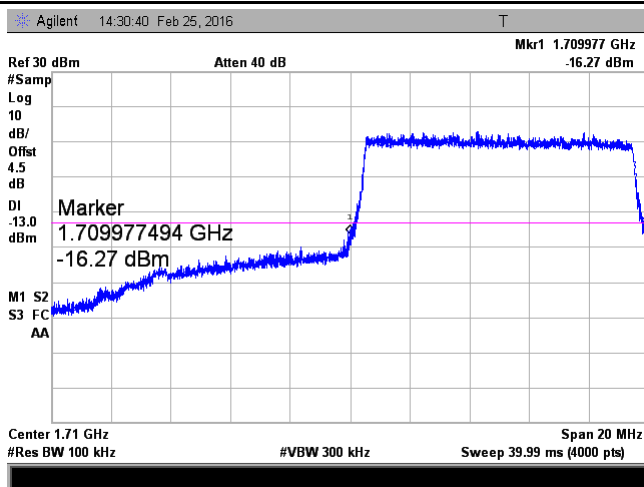
LTE Band 4 - Low Channel 16QAM-5

Note: Offset=Cable loss (4.5) + 10log
(50.54/30)=4.5+2.3=6.8 dB



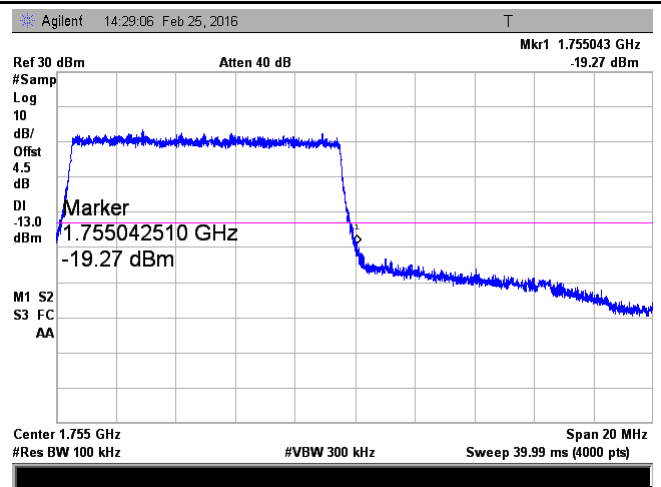
LTE Band 4 - High Channel 16QAM-5

Note: Offset=Cable loss (4.5) + 10log
(50.86/30)=4.5+2.3=6.8 dB

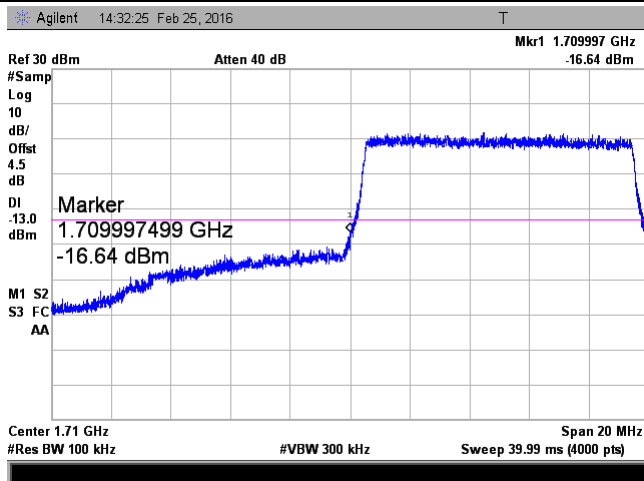


LTE Band 4 - Low Channel QPSK-10

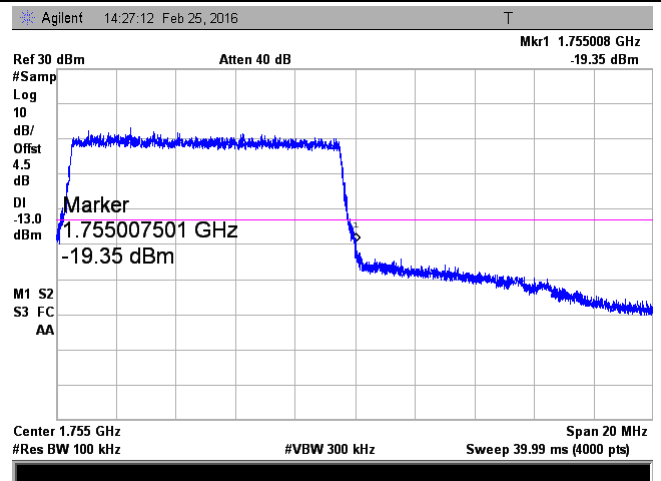
Note: Offset=Cable loss (4.5) + 10log
(50.66/30)=4.5+2.3=6.8 dB



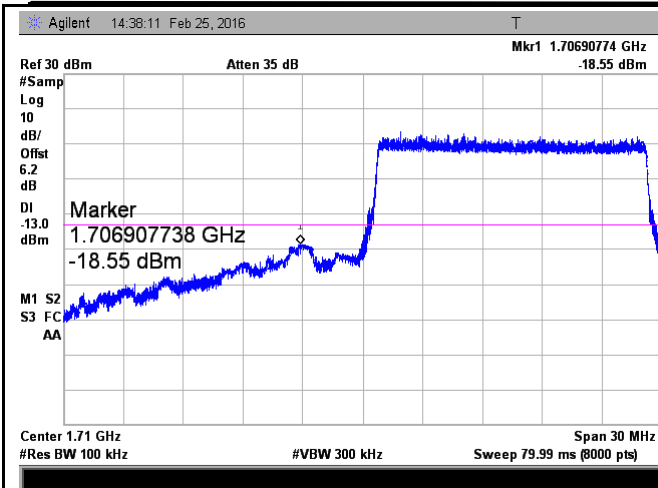
LTE Band 4 - High Channel QPSK-10



LTE Band 4 - Low Channel 16QAM-10

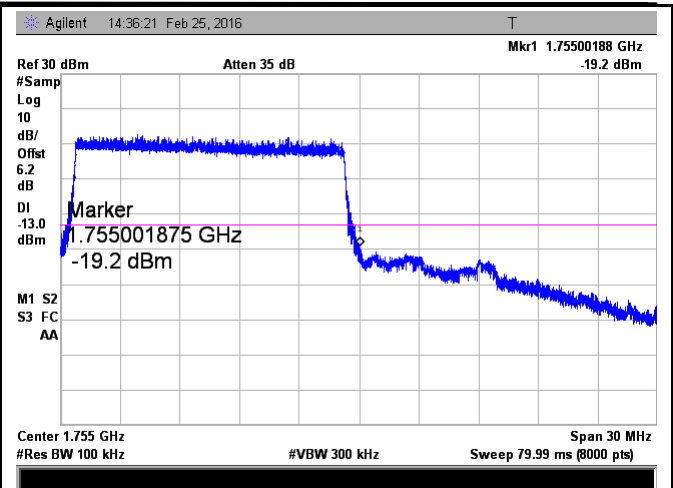


LTE Band 4 - High Channel 16QAM-10



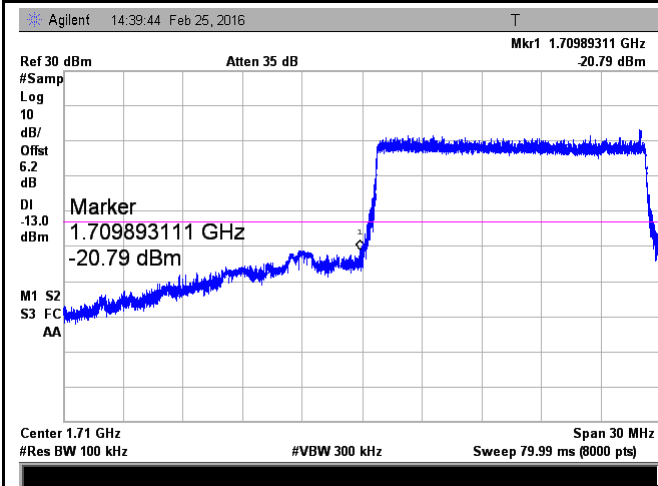
LTE Band 4 - Low Channel QPSK-15

Note: Offset=Cable loss (4.5) + 10log
(146.97/100)=4.5+17=6.2dB



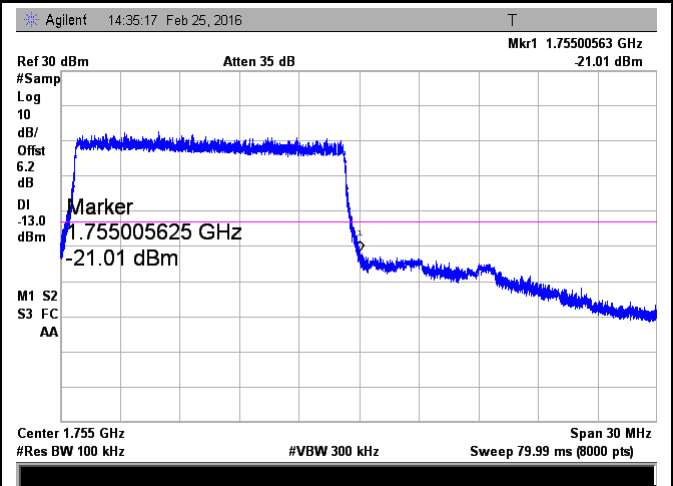
LTE Band 4 - High Channel QPSK-15

Note: Offset=Cable loss (4.5) + 10log
(149.32/100)=4.5+1.7=6.2 dB



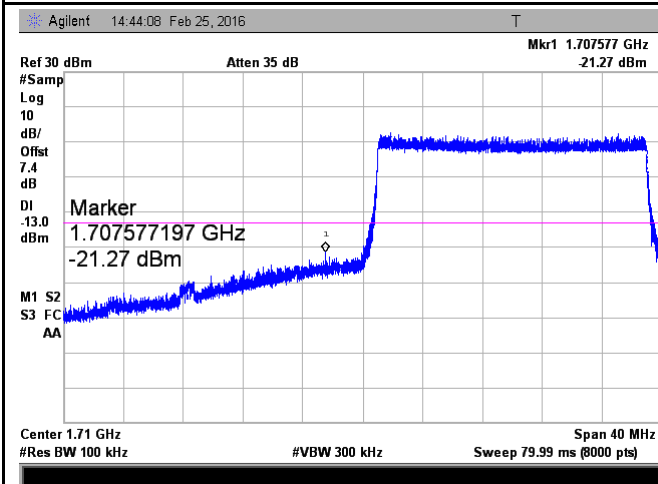
LTE Band 4 - Low Channel 16QAM-15

Note: Offset=Cable loss (4.5) + 10log
(148.42/100)=4.5+1.7=6.2 dB

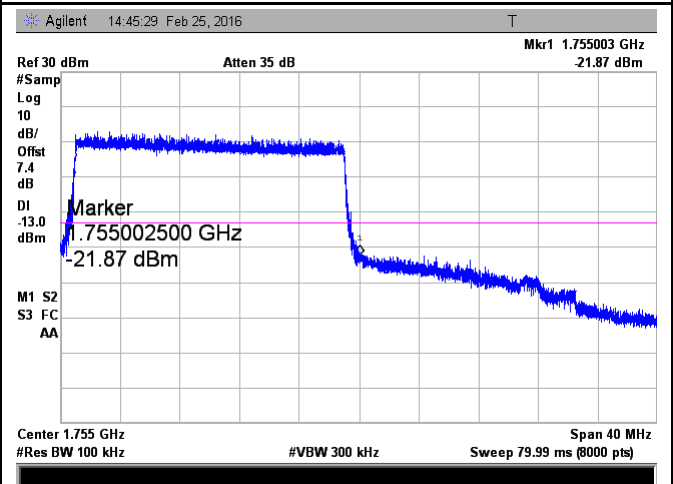


LTE Band 4 - High Channel 16QAM-15

Note: Offset=Cable loss (4.5) + 10log
(148.42/100)=4.5+1.7=6.2 dB

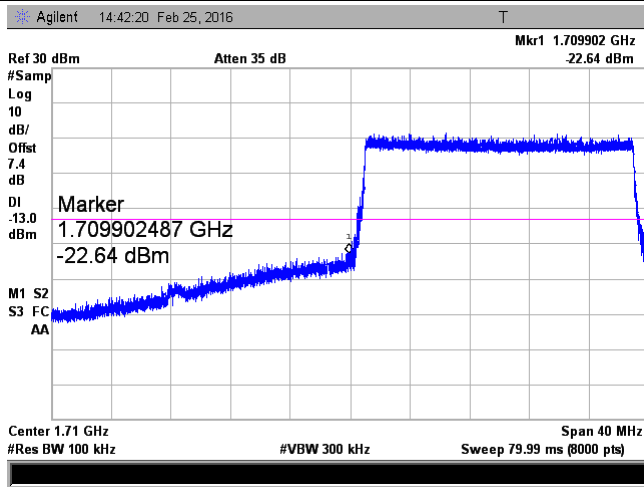


LTE Band 4 - Low Channel QPSK-20



LTE Band 4 - High Channel QPSK-20

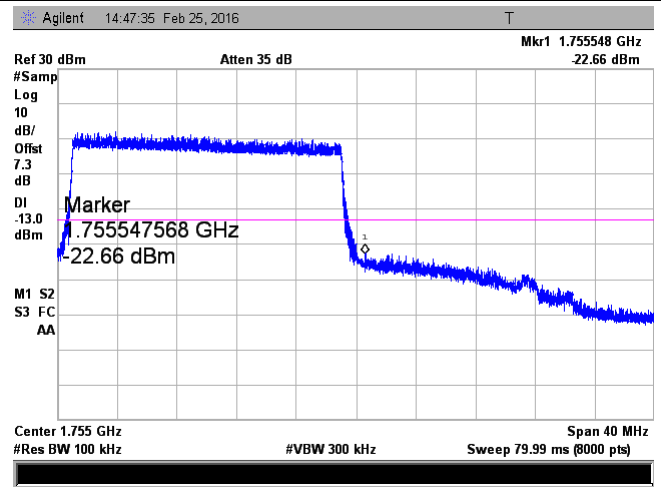
Note: Offset=Cable loss (4.5) + 10log
 (194.13/100)=4.5+2.9=7.4 dB



LTE Band 4 - Low Channel 16QAM-20

Note: Offset=Cable loss (4.5) + 10log
 (192.88/100)=4.5+2.9=7.4dB

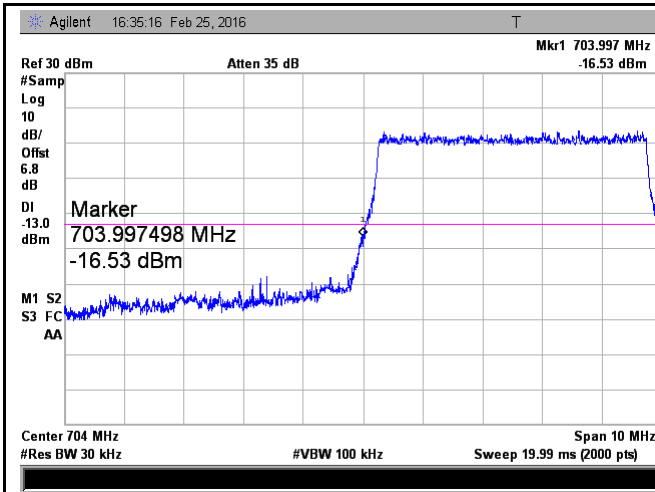
Note: Offset=Cable loss (4.5) + 10log
 (193.18/100)=4.5+2.9=7.4 dB



LTE Band 4 - High Channel 16QAM-20

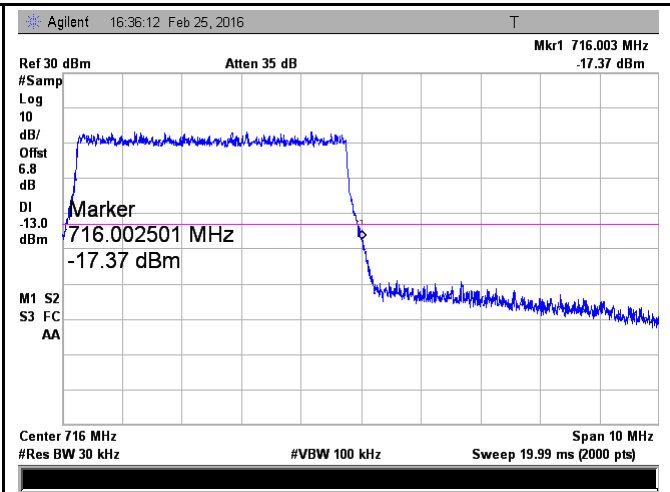
Note: Offset=Cable loss (4.5) + 10log
 (191.69/100)=4.5+2.8=7.3 dB

LTE Band 17 (Part 27)



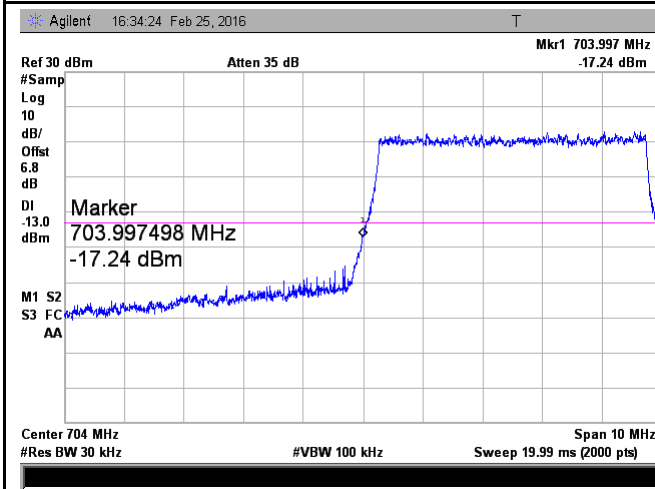
LTE Band 17 - Low Channel QPSK-5

Note: Offset=Cable loss (4.0) + 10log
(50.50/30)=4.5+2.3=6.8 dB



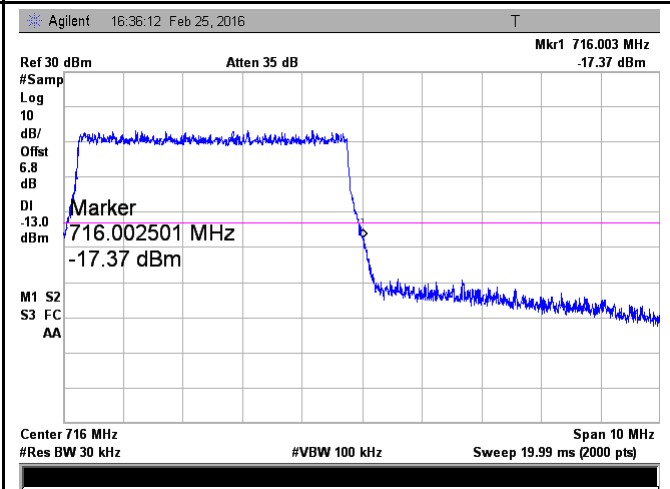
LTE Band 17 - High Channel QPSK-5

Note: Offset=Cable loss (4.0) + 10log
(50.50/30)=4.5+2.3=6.8 dB



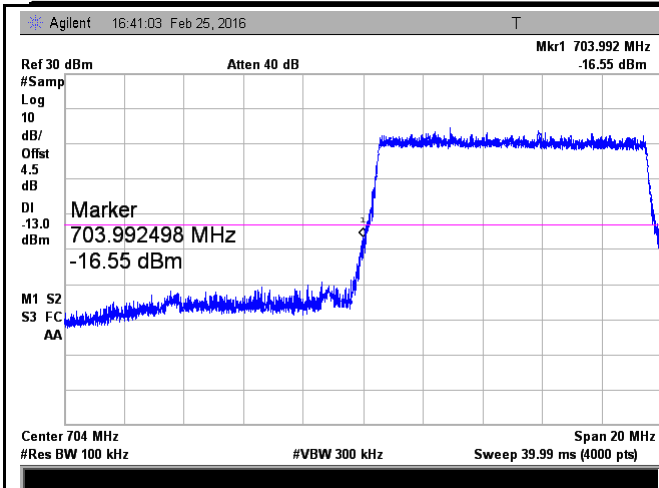
LTE Band 17 - Low Channel 16QAM-5

Note: Offset=Cable loss (4.0) + 10log
(50.49/30)=4.5+2.3=6.8 dB

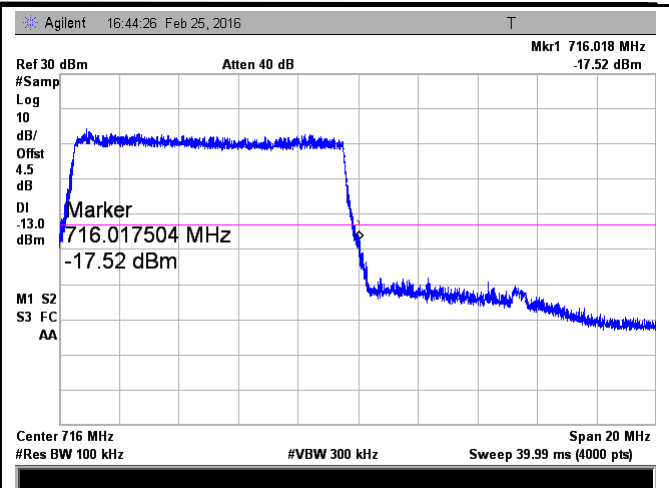


LTE Band 17 - High Channel 16QAM-5

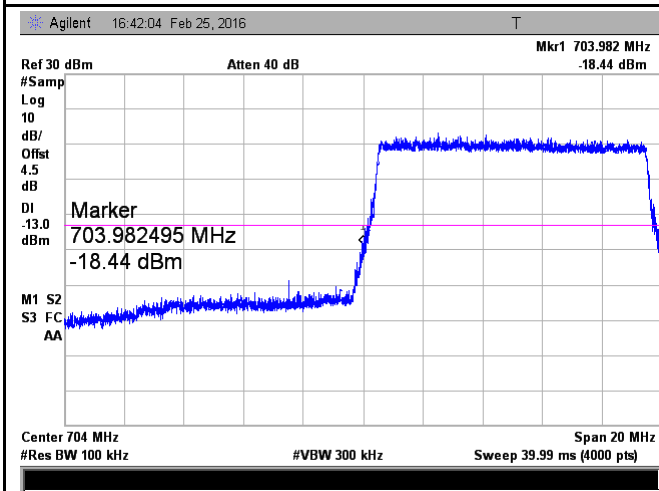
Note: Offset=Cable loss (4.0) + 10log
(50.68/30)=4.5+2.3=6.8 dB



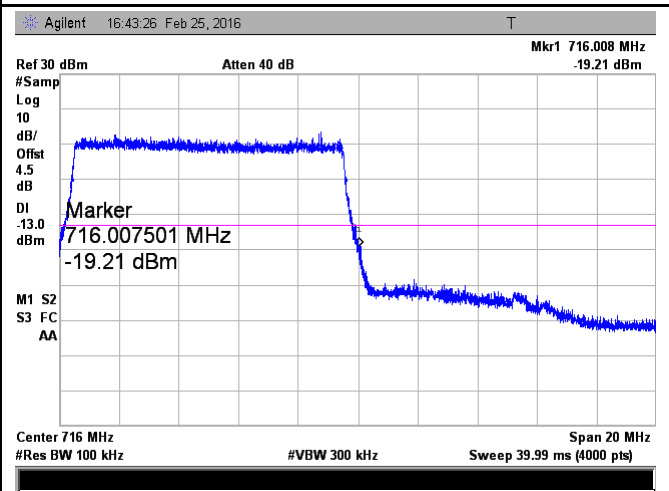
LTE Band 17 - Low Channel QPSK-10



LTE Band 17 - High Channel QPSK-10



LTE Band 17 - Low Channel 16QAM-10

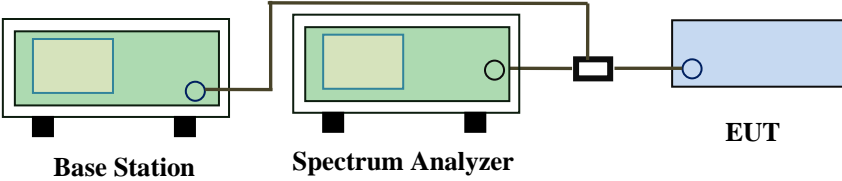


LTE Band 17 - High Channel 16QAM-10

6.8 Band Edge 27.53(m)

Temperature	22°C
Relative Humidity	58%
Atmospheric Pressure	1025mbar
Test date :	February 25, 2016
Tested By :	Winnie Zhang

Requirement(s):

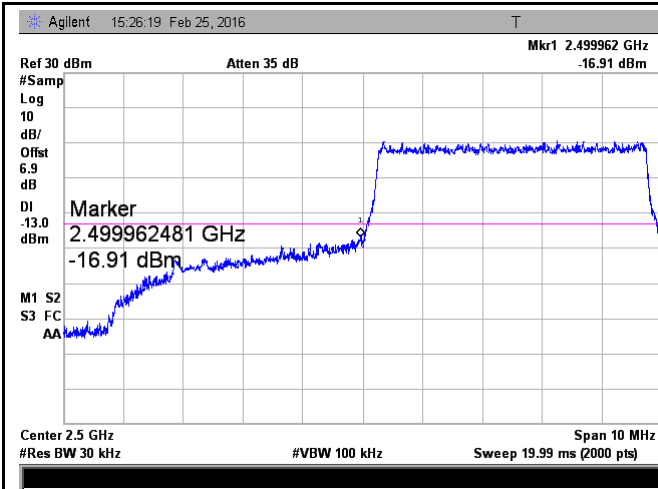
Spec	Requirement	Applicable
§27.53(m)	According to FCC 27.53(m)(4) specified that power of any emission outside of the channel edge must be attenuated below the transmitting power(P) by a factor shall be not less than $43+10\log(P)$ dB at the channel edge, the limit of emission equal to -13dBm. And $55+10\log(P)$ 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 frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.	<input checked="" type="checkbox"/>
Test Setup	 <p style="text-align: center;">Base Station Spectrum Analyzer EUT</p>	
Test Procedure	<ul style="list-style-type: none"> - 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	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	

Test Data Yes N/A
 Test Plot Yes (See below) N/A

LTE Band 7 (Part 27) result

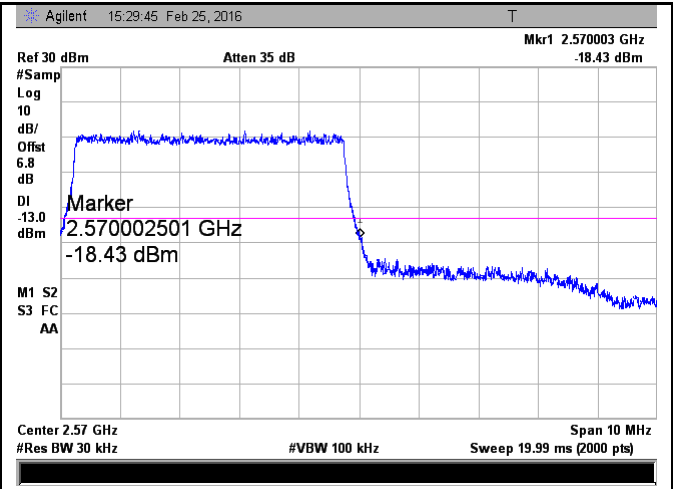
BW(MHz)	Channel	Frequency (MHz)	Mode	Emission (dBm)	Limit (dBm)
5	20775	2502.5	QPSK	-16.91	-13
			16QAM	-18.68	-13
5	21425	2567.5	QPSK	-18.43	-13
			16QAM	-18.48	-13
10	20800	2505	QPSK	-16.14	-13
			16QAM	-19.21	-13
10	21400	2562.5	QPSK	-18.71	-13
			16QAM	-21.51	-13
15	20825	2507.5	QPSK	-16.36	-13
			16QAM	-18.77	-13
15	21400	2562.5	QPSK	-21.23	-13
			16QAM	-20.01	-13
20	20850	2510	QPSK	-15.76	-13
			16QAM	-16.74	-13
20	21350	2560	QPSK	-23.19	-13
			16QAM	-24.80	-13

LTE Band 7 (Part 27)



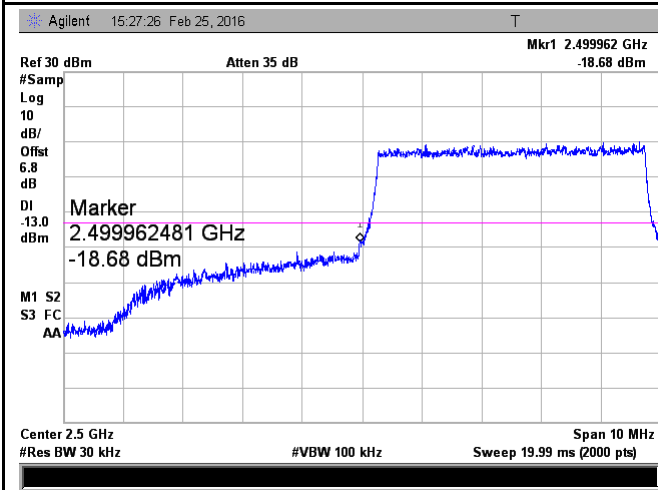
LTE Band 7 - Low Channel QPSK-5

Note: Offset=Cable loss (4.5) + 10log
(52.36/30)=4.5+2.4=6.9 dB



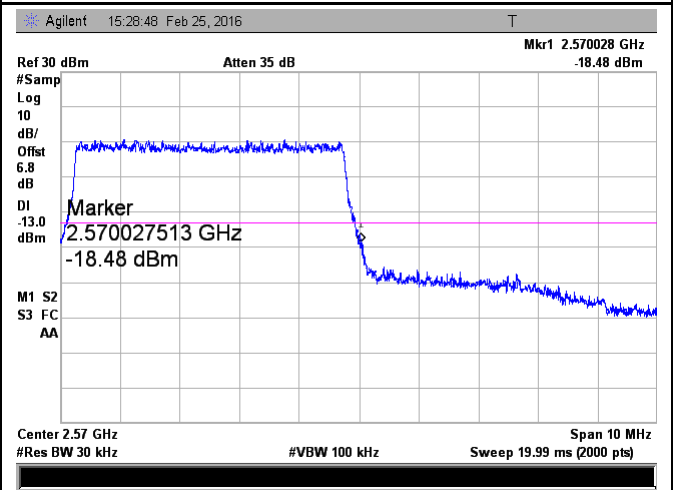
LTE Band 7 - High Channel QPSK-5

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



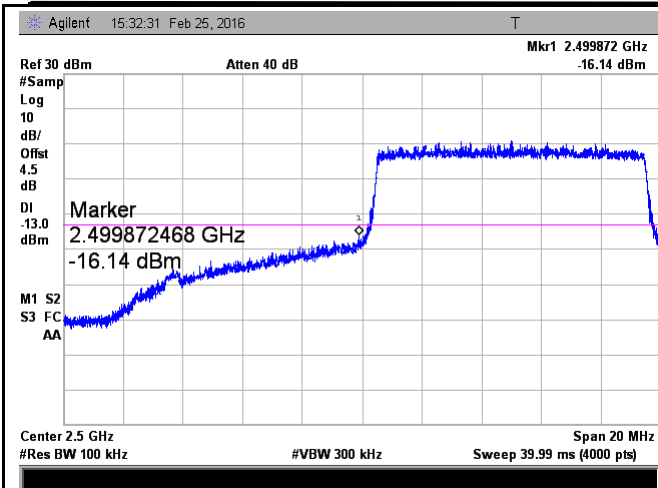
LTE Band 7 - Low Channel 16QAM-5

Note: Offset=Cable loss (4.5) + 10log
(50.40/30)=4.5+2.3=6.8 dB

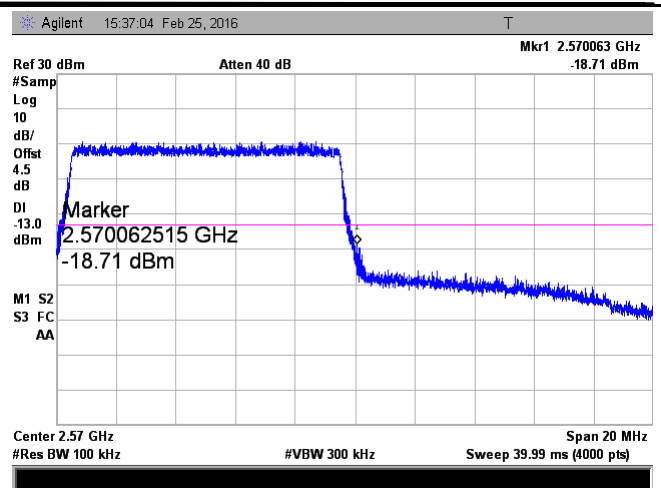


LTE Band 7 - High Channel 16QAM-5

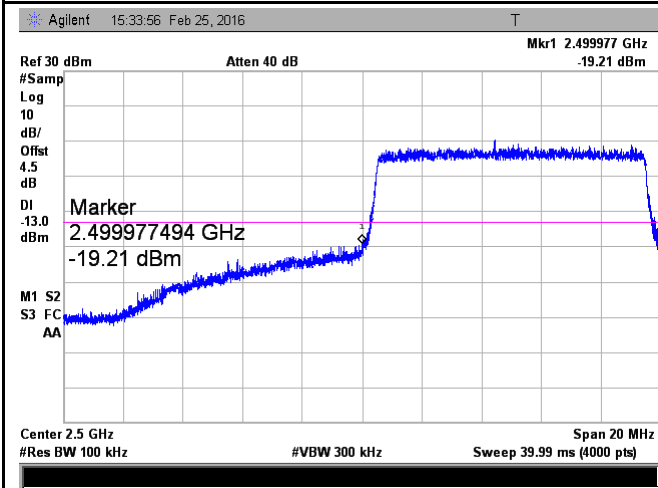
Note: Offset=Cable loss (4.5) + 10log
(51.03/30)=4.5+2.3=6.8 dB



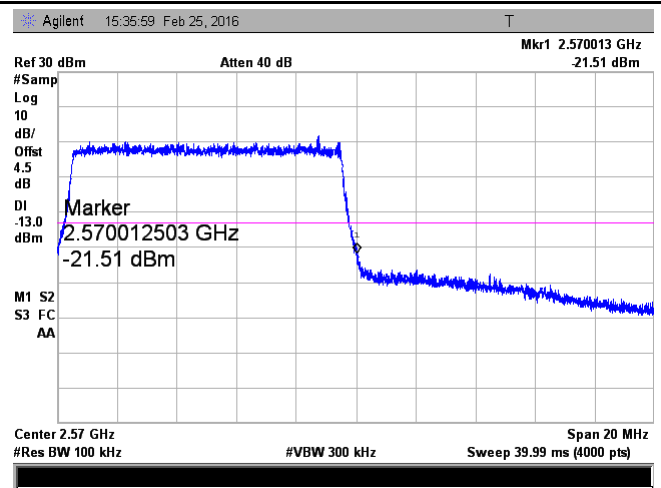
LTE Band 7 - Low Channel QPSK-10



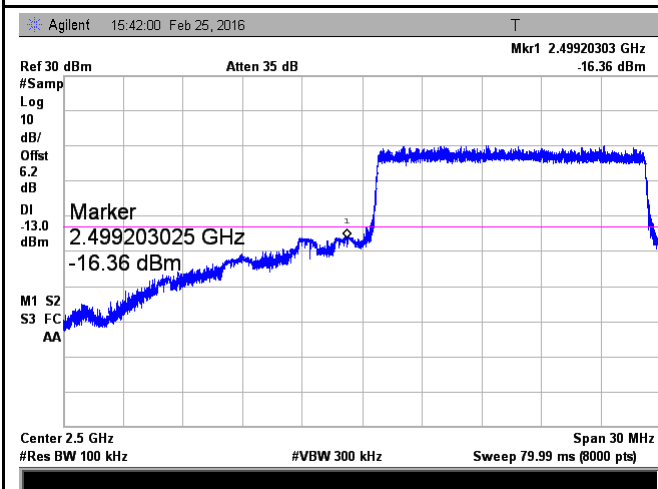
LTE Band 7 - High Channel QPSK-10



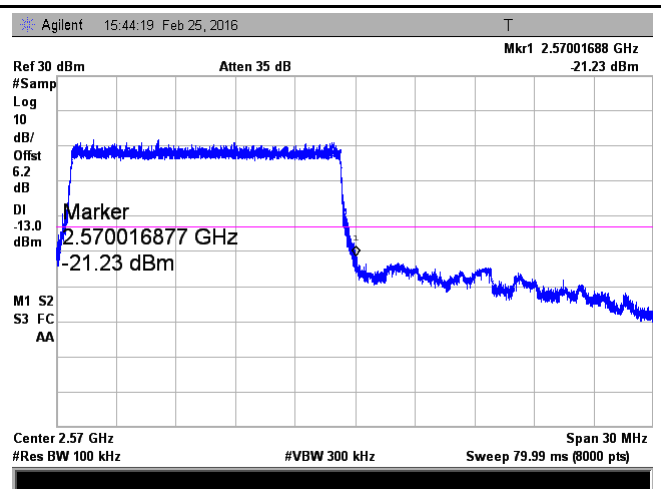
LTE Band 7 - Low Channel 16QAM-10



LTE Band 7 - High Channel 16QAM-10



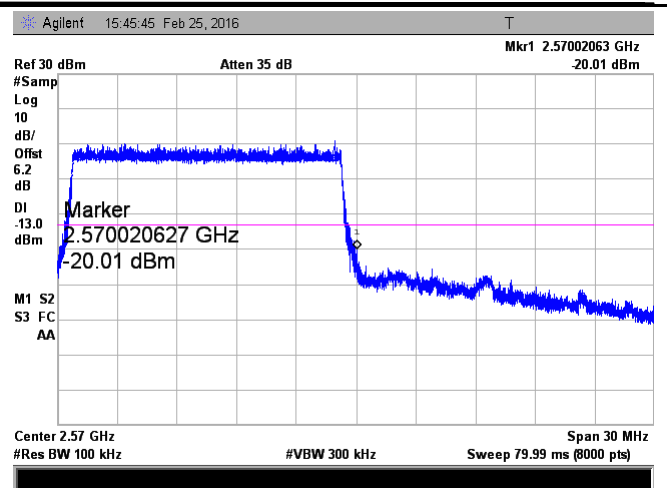
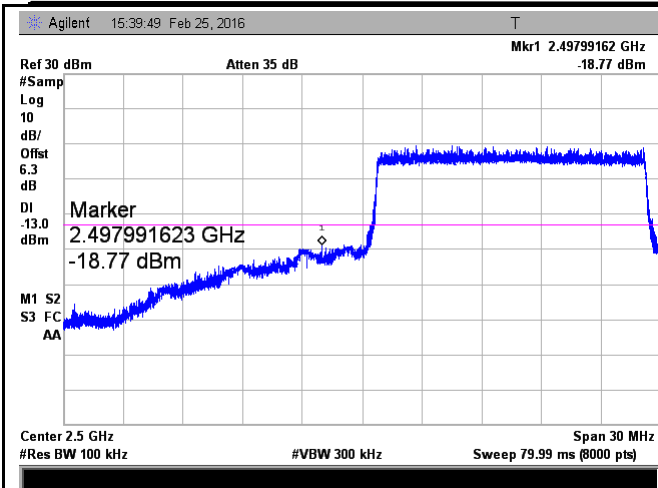
LTE Band 7 - Low Channel QPSK-15



LTE Band 7 - High Channel QPSK-15

Note: Offset=Cable loss (4.5) + 10log
(149.59/100)=4.5+1.7=6.2 dB

Note: Offset=Cable loss (4.5) + 10log
(148.61/100)=4.5+1.7=6.2 dB

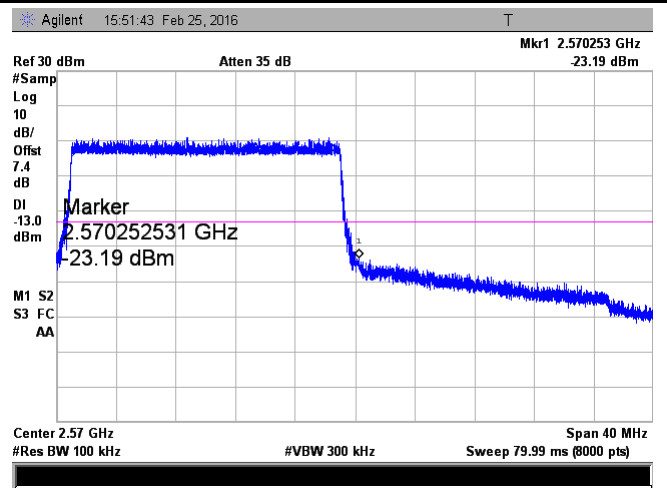
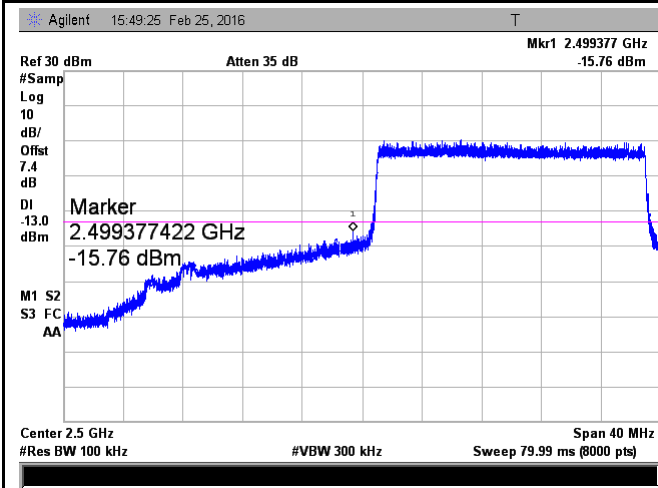


LTE Band 7 - Low Channel 16QAM-15

LTE Band 7 - High Channel 16QAM-15

Note: Offset=Cable loss (4.5) + 10log
(149.85/100)=4.5+1.8=6.3 dB

Note: Offset=Cable loss (4.5) + 10log
(147.80/100)=4.5+1.7=6.2 dB

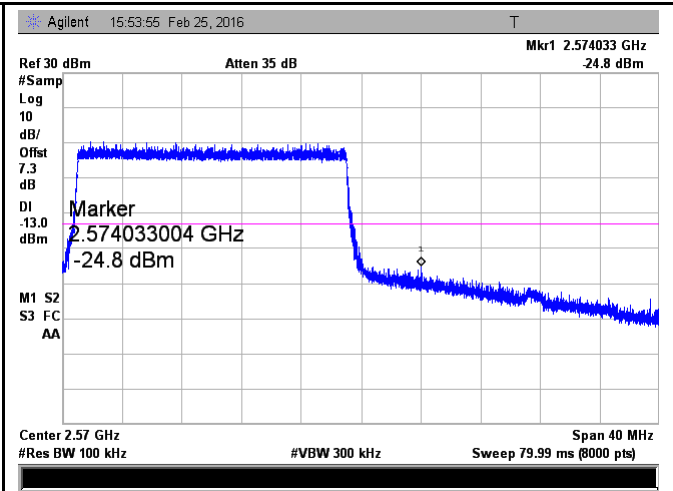
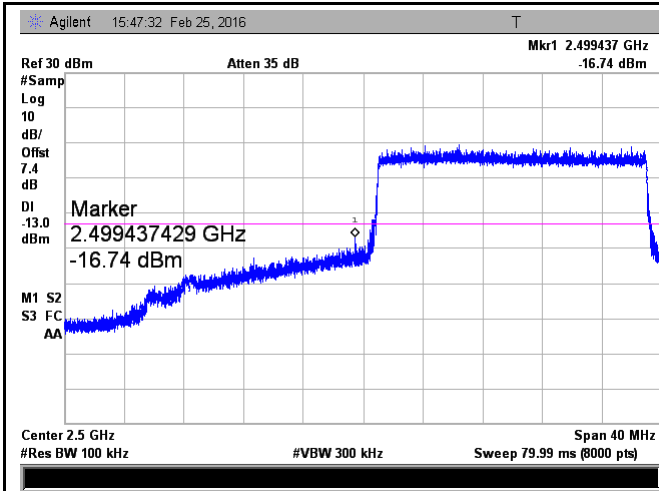


LTE Band 7 - Low Channel QPSK-20

LTE Band 7 - High Channel QPSK-20

Note: Offset=Cable loss (4.5) + 10log
(196.67/100)=4.5+2.9=7.4 dB

Note: Offset=Cable loss (4.5) + 10log
(195.45/100)=4.5+2.9=7.4 dB



LTE Band 7 - Low Channel 16QAM-20

LTE Band 7 - High Channel 16QAM-20

Note: Offset=Cable loss (4.5) + 10log
 (193.28/100)=4.5+2.9=7.4 dB

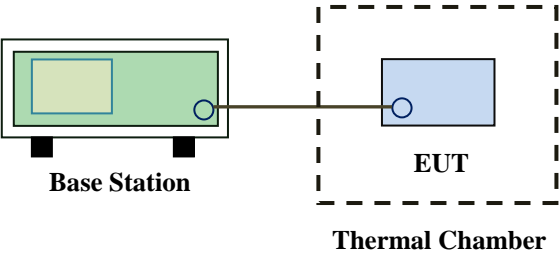
Note: Offset=Cable loss (4.5) + 10log
 (191.03/100)=4.5+2.8=7.3 dB

6.9 Frequency Stability

Temperature	25°C
Relative Humidity	57%
Atmospheric Pressure	1024mbar
Test date :	February 24, 2016
Tested By :	Winnie Zhang

Requirement(s):

Spec	Item	Requirement	Applicable																																
§2.1055, §22.355 & §24.235 § 27.5(h); § 27.54	a)	<p>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:</p> <p>Frequency Tolerance for Transmitters in the Public Mobile Services</p> <table border="1"> <thead> <tr> <th>Frequency Range (MHz)</th> <th>Base, fixed (ppm)</th> <th>Mobile ≤ 3 watts (ppm)</th> <th>Mobile ≤ 3 watts (ppm)</th> </tr> </thead> <tbody> <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> </tbody> </table>	Frequency Range (MHz)	Base, fixed (ppm)	Mobile ≤ 3 watts (ppm)	Mobile ≤ 3 watts (ppm)	25 to 50	20.0	20.0	50.0	to 450	5.0	5.0	50.0	450 to 512	2.5	5.0	5 0	821 to 896	1.5	2.5	2.5	928 to 929.	5.0	N/A	N/A	929 to 960.	1.5	N/A	N/A	2110 to 2220	10.0	N/A	N/A	<input checked="" type="checkbox"/>
		Frequency Range (MHz)	Base, fixed (ppm)	Mobile ≤ 3 watts (ppm)	Mobile ≤ 3 watts (ppm)																														
		25 to 50	20.0	20.0	50.0																														
		to 450	5.0	5.0	50.0																														
		450 to 512	2.5	5.0	5 0																														
		821 to 896	1.5	2.5	2.5																														
		928 to 929.	5.0	N/A	N/A																														
		929 to 960.	1.5	N/A	N/A																														
		2110 to 2220	10.0	N/A	N/A																														
<p>According to §24.235, the frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized frequency block.</p>																																			
<p>According to §27.54, The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.</p>																																			

Test setup	 <p>The diagram illustrates the test setup. On the left, a green rectangular box labeled 'Base Station' is shown with a smaller green box inside it. A horizontal line connects the right side of the Base Station to the left side of a blue rectangular box labeled 'EUT'. The EUT is enclosed within a dashed-line rectangular box labeled 'Thermal Chamber'.</p>
Procedure	<p>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.</p> <p>Limit: The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ ($\pm 2.5\text{ppm}$) of the center frequency.</p>
Remark	<p>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 -10°C to $+55^{\circ}\text{C}$ at normal supply voltage.</p>
Result	<p><input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail</p>

Test Data Yes N/A

Test Plot Yes (See below) N/A

LTE Band 2 (Part 24E) result

Middle Channel, f ₀ = 1880 MHz				
Temperature (°C)	Power Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-10	3.7	-4	0.0021	2.5
0		-5	0.0027	2.5
10		-3	0.0016	2.5
20		-7	0.0037	2.5
30		-6	0.0032	2.5
40		-10	0.0053	2.5
50		-12	0.0064	2.5
55		-9	0.0048	2.5
25		4.2	-8	0.0043
	3.5	-11	0.0059	2.5

LTE Band 4 (Part 27) result

Middle Channel, f ₀ = 1732.5 MHz				
Temperature (°C)	Power Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-10	3.7	-13	0.0075	2.5
0		-11	0.0063	2.5
10		-12	0.0069	2.5
20		-10	0.0058	2.5
30		-15	0.0087	2.5
40		-16	0.0092	2.5
50		-12	0.0069	2.5
55		-13	0.0075	2.5
25		4.2	-11	0.0063
	3.5	-15	0.0087	2.5

LTE Band 7 (Part 27) result

Middle Channel, $f_0 = 2535$ MHz				
Temperature (°C)	Power Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-10	3.7	-8	0.0032	2.5
0		-6	0.0024	2.5
10		-9	0.0036	2.5
20		-10	0.0039	2.5
30		-11	0.0043	2.5
40		-15	0.0059	2.5
50		-7	0.0028	2.5
55		-12	0.0047	2.5
25		4.2	-19	0.0075
	3.5	-10	0.0039	2.5

LTE Band 17 (Part 27) result

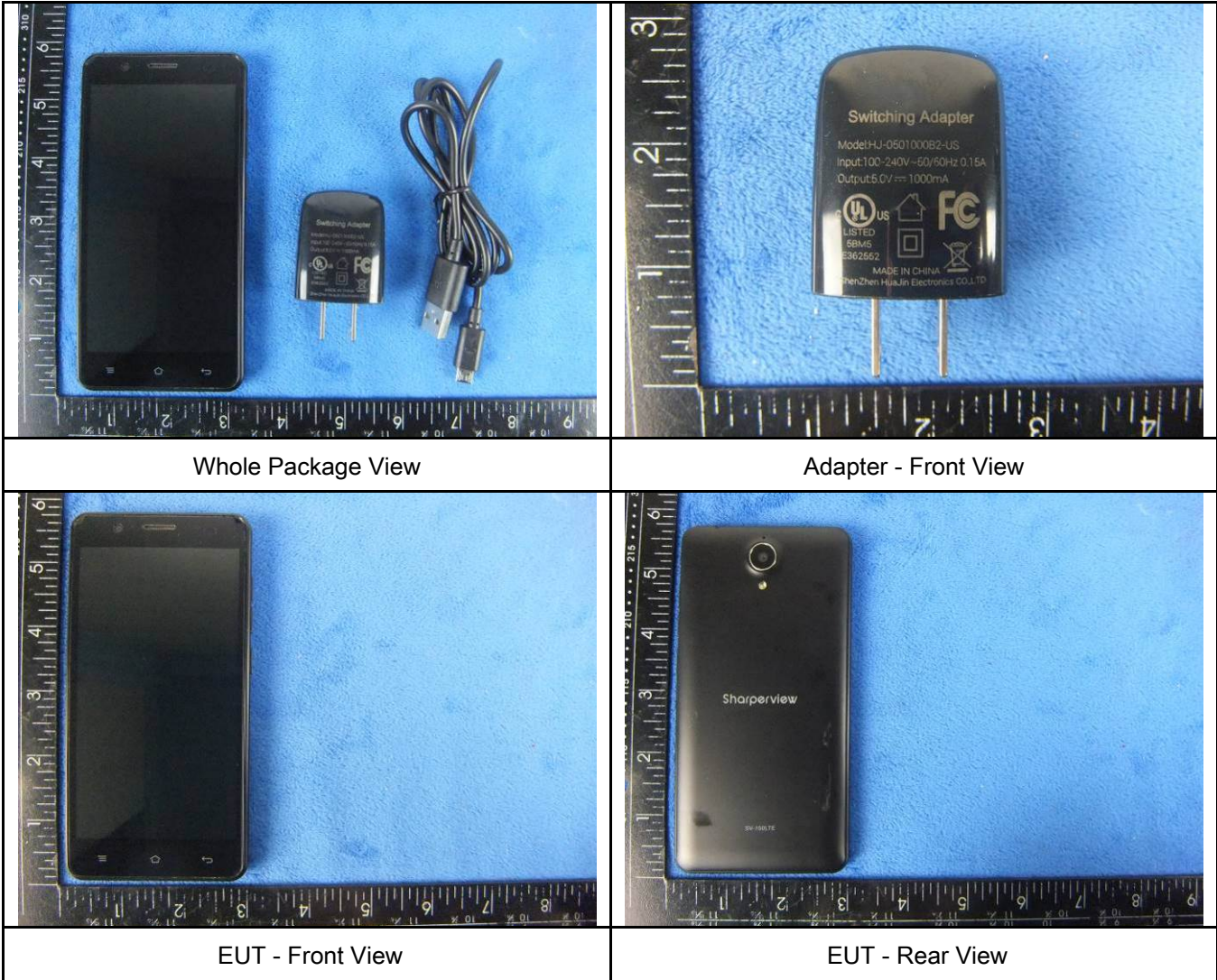
Middle Channel, $f_0 = 710$ MHz				
Temperature (°C)	Power Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-10	3.7	5	0.0070	2.5
0		8	0.0113	2.5
10		10	0.0141	2.5
20		11	0.0155	2.5
30		4	0.0056	2.5
40		7	0.0099	2.5
50		9	0.0127	2.5
55		12	0.0169	2.5
25		4.2	11	0.0155
	3.5	13	0.0183	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	09/16/2015	09/15/2016	<input checked="" type="checkbox"/>
Power Splitter	1#	1#	09/01/2015	08/31/2016	<input checked="" type="checkbox"/>
Universal Radio Communication Tester	CMU200	121393	09/25/2015	09/24/2016	<input checked="" type="checkbox"/>
Wideband Radio Communication Tester	CMW500	120906	03/28/2015	03/27/2016	<input checked="" type="checkbox"/>
Temperature/Humidity Chamber	UHL-270	001	10/09/2015	10/08/2016	<input checked="" type="checkbox"/>
DC Power Supply	E3640A	MY40004013	09/17/2015	09/16/2016	<input checked="" type="checkbox"/>
Radiated Emissions					
EMI test receiver	ESL6	100262	09/17/2015	09/16/2016	<input checked="" type="checkbox"/>
OPT 010 AMPLIFIER (0.1-1300MHz)	8447E	2727A02430	09/01/2015	08/31/2016	<input checked="" type="checkbox"/>
Microwave Preamplifier (0.5 ~ 18GHz)	PAM-118	443008	09/01/2015	08/31/2016	<input checked="" type="checkbox"/>
Bilog Antenna (30MHz~6GHz)	JB6	A110712	09/21/2015	09/20/2016	<input checked="" type="checkbox"/>
Bilog Antenna (30MHz~2GHz)	JB1	A112017	09/21/2015	09/20/2016	<input checked="" type="checkbox"/>
Double Ridge Horn Antenna (1 ~18GHz)	AH-118	71259	09/24/2015	09/23/2016	<input checked="" type="checkbox"/>
Double Ridge Horn Antenna (1 ~18GHz)	AH-118	71283	09/24/2015	09/23/2016	<input checked="" type="checkbox"/>
SYNTHESIZED SIGNAL GENERATOR	8665B	3744A01293	09/17/2015	09/16/2016	<input checked="" type="checkbox"/>
Tunable Notch Filter	3NF-800/1000-S	AA4	09/01/2015	08/31/2016	<input checked="" type="checkbox"/>
Tunable Notch Filter	3NF-1000/2000-S	AM 4	09/01/2015	08/31/2016	<input checked="" type="checkbox"/>

Annex B. EUT And Test Setup Photographs

Annex B.i. Photograph: EUT External Photo

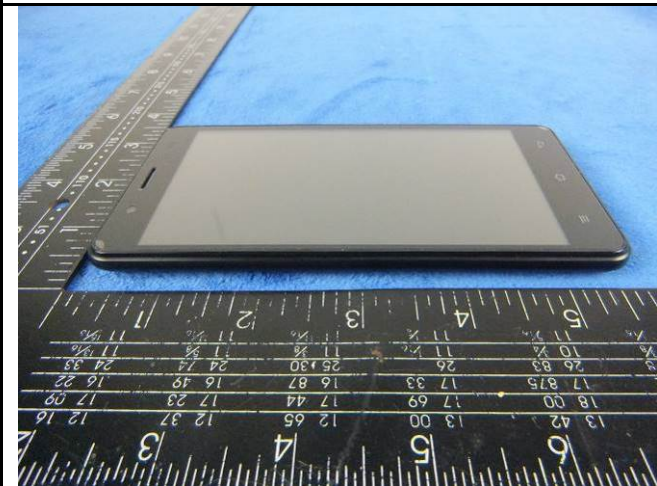




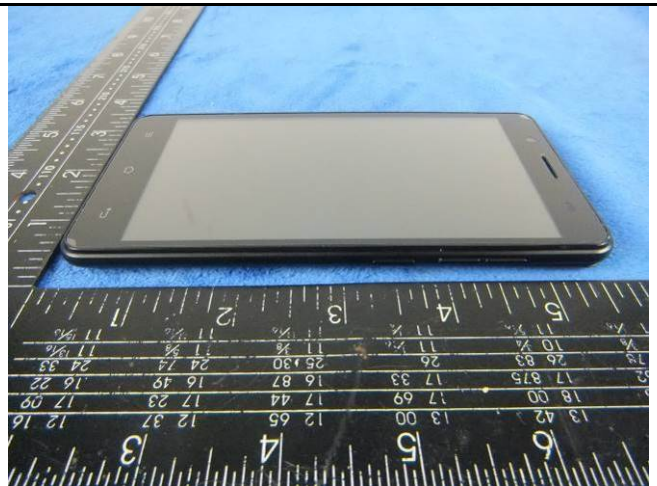
EUT - Top View



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



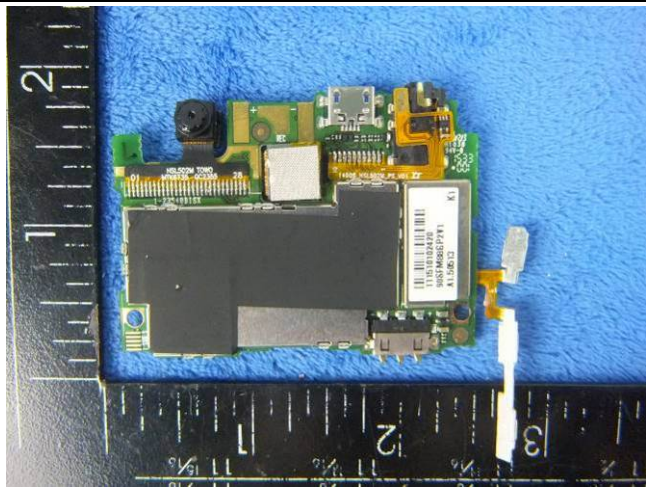
Battery - Rear View



Mainboard with Shielding - Front View



Mainboard without Shielding - Front View



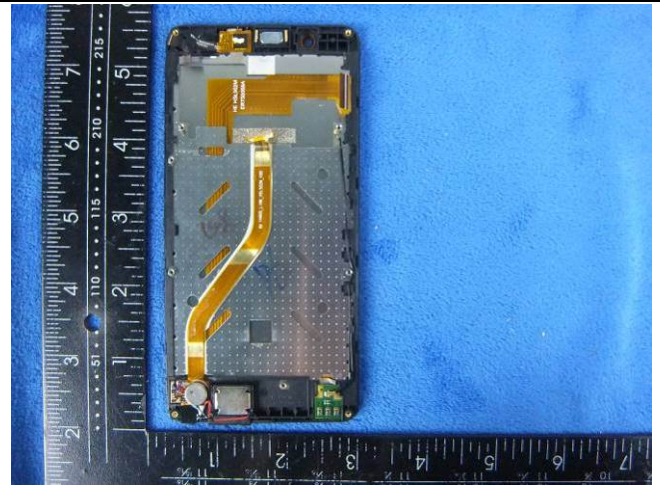
Mainboard with Shielding - Rear View



Mainboard without Shielding - Rear View



LCD - Front View



LCD - Rear View



GSM/PCS/UMTS-FDD Antenna View

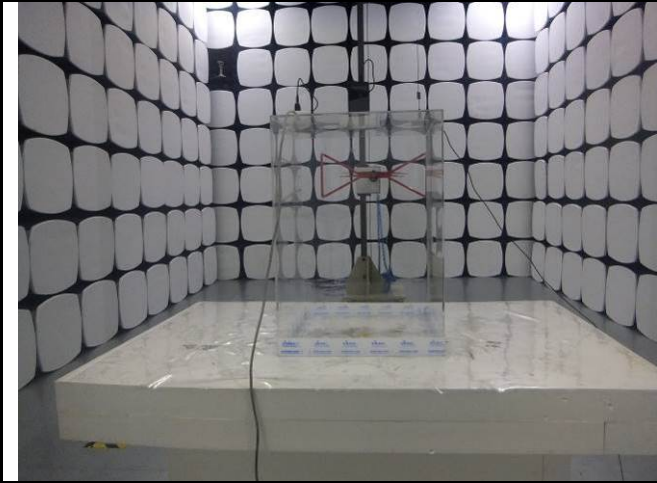


LTE - Antenna View

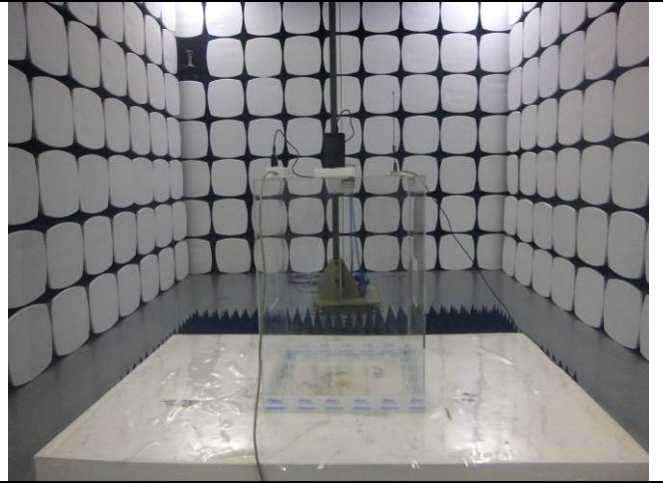


WIFI/BT/BLE/GPS - Antenna View

Annex B.iii. Photograph: Test Setup Photo



Radiated Spurious Emissions Test Setup Below 1GHz

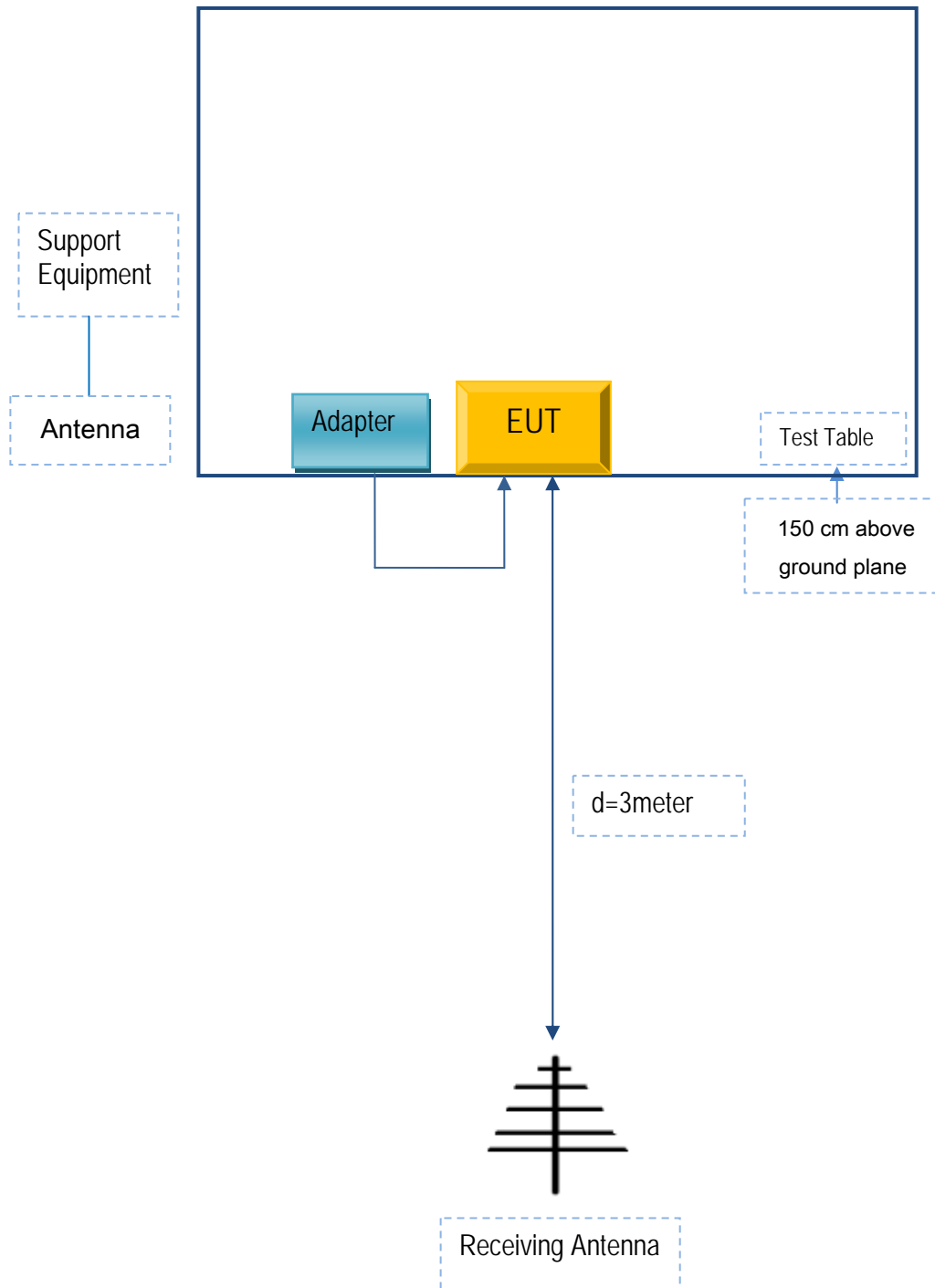


Radiated Spurious Emissions Test Setup Above
1GHz

Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

Annex C.ii. TEST SET UP BLOCK

Block Configuration Diagram for Radiated Emissions



Annex C. ii. 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
SUPERSONIC INC	Adapter	HJ-0501000B2-US	ST22100

Supporting Cable:

Cable type	Shield Type	Ferrite Core	Length	Serial No
USB Cable	Un-shielding	No	0.8m	ST22100

Test Report	16070128-FCC-R5
Page	112 of 114

Annex C.ii. EUT OPERATING CONKITIONS

N/A

Test Report	16070128-FCC-R5
Page	113 of 114

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

N/A

Annex E. DECLARATION OF SIMILARITY

SUPERSONIC INC

To: SIEMIC ,775 Montague Expressway, Milpitas, CA 95035,USA

Declaration Letter

Dear Sir,

For our business issue and marketing requirement, we would like to list 10 model numbers on the FCC certificates and reports, as following:

Model No.: SV-150LTE, SV-250LTE, SV-350LTE, SV-155LTE,SV-255LTE AND SV-355LTE, SV-6LTE,SV-16LTE, SV-36LTE, SC-150LTE

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
SV-150LTE	SV-250LTE, SV-350LTE, SV-155LTE, SV-255LTE, SV-355LTE, SV-6LTE, SV-16LTE, SV-36LTE, SC-150LTE	Different model name

Thank you!

Signature:



Printed name/title: David Gholiani

Address: 6555 BANDINI BOULEVARD COMMERCE CA 90040-3119 USA