

RF TEST REPORT



Report No.: 16070480-FCC-R5

Supersede Report No.: N/A

Applicant	MOBIWIRE MOBILES (NINGBO) CO.,LTD	
Product Name	Mobile phone	
Model No.	öwn SMART VALUE	
Serial No.	N/A	
Test Standard	FCC Part 27: 2015; ANSI/TIA-603-D: 2010	
Test Date	April 28 to May 10, 2016	
Issue Date	May 20, 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	
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Issued by:

SIEMIC (SHENZHEN-CHINA) LABORATORIES

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Laboratories Introduction

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Accreditations for Conformity Assessment

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

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1. Report Revision History

Report No.	Report Version	Description	Issue Date
16070480-FCC-R5	NONE	Original	May 11, 2016
16070480-FCC-R5	V1	Update trademark	May 20, 2016

2. Customer information

Applicant Name	MOBIWIRE MOBILES (NINGBO) CO.,LTD
Applicant Add	No.999,Dacheng East Road,Fenghua City,Zhejiang
Manufacturer	MOBIWIRE MOBILES (NINGBO) CO.,LTD
Manufacturer Add	No.999,Dacheng East Road,Fenghua City,Zhejiang

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: Mobile phone

Main Model: 

Serial Model: N/A

Date EUT received: April 27 , 2016

Test Date(s): April 28 to May 10, 2016

Equipment Category : PCE

Antenna Gain:

- GSM850: -3dBi
- PCS1900: -1dBi
- UMTS-FDD Band V: -3dBi
- UMTS-FDD Band II: -1dBi
- Bluetooth/BLE/WIFI: -2dBi
- LTE Band IV: -3dBi
- LTE Band VII: -2dBi
- GPS:-2dBi

Type of Modulation:

- GSM / GPRS: GMSK
- EGPRS: GMSK,8PSK
- UMTS-FDD: QPSK, 16QAM
- 802.11b/g/n: DSSS, OFDM
- Bluetooth: GFSK, $\pi/4$ DQPSK, 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
RF Operating Frequency (ies):	WIFI:802.11b/g/n(20M): 2412-2462 MHz
	WIFI:802.11n(40M): 2422-2452 MHz
	Bluetooth& BLE: 2402-2480 MHz
	LTE Band IV TX: 1712.5 ~ 1752.5 MHz; RX : 2112.5 ~ 2152.5 MHz
	LTE Band VII TX: 2502.5 ~ 2567.5 MHz; RX : 2622.5 ~ 2687.5 MHz
	GPS RX:1575.42 MHz
	GSM 850: 124CH
	PCS1900: 299CH
	UMTS-FDD Band V : 102CH
	UMTS-FDD Band II : 277CH
Number of Channels:	WIFI :802.11b/g/n(20M): 11CH
	WIFI :802.11n(40M): 7CH
	Bluetooth: 79CH
	BLE: 40CH
	GPS:1CH
Maximum Conducted	LTE Band 4: 23.61 dBm
AV Power to Antenna:	LTE Band 7: 22.48 dBm
ERP/EIRP:	LTE Band 4: 20.54 dBm / EIRP
	LTE Band 7: 20.35 dBm / EIRP
Port:	Power Port, Earphone Port, USB Port
	Adapter:
	Model: OWN SMART VALUE
	Input: AC 100-240V; 50/60Hz;0.2A
	Output: DC 5.0V,1A
Input Power:	Battery:
	Model: OWN SMART VALUE
	Spec:3.8V,2100mAh,7.98Wh
	Limited charger voltage :4.35V

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Trade Name :

öwn

GPRS/EGPRS Multi-slot class

8/10/12

FCC ID:

2ADA4VALUE

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; § 27.50(c.10); §27.50(d.4)	RF Output Power	Compliance
§ 27.50(d)	Peak-Average Ratio	Compliance
§ 2.1047	Modulation Characteristics	N/A
§ 2.1049; § 27.53(a.5)	99% & -26 dB Occupied Bandwidth	Compliance
§ 2.1051; § 27.53(h)	Spurious Emissions at Antenna Terminal	Compliance
§ 2.1053; § 27.53(h)	Field Strength of Spurious Radiation	Compliance
§ 27.53(h)	Out of band emission, Band Edge	Compliance
§ 27.53(m)	Band Edge 27.53(m)	Compliance
§ 2.1055; § 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)

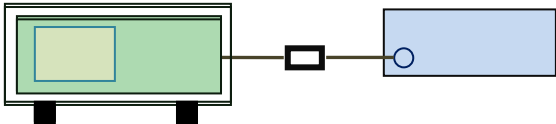
Test Result: Pass

The EUT is a portable device, thus requires SAR evaluation;
Please refer to RF Exposure Evaluation Report: 16070480-FCC-H.

6.2 RF Output Power

Temperature	23°C
Relative Humidity	55%
Atmospheric Pressure	1003mbar
Test date :	May 03, 2016
Tested By :	Winnie Zhang

Requirement(s):

Spec	Item	Requirement	Applicable
§27.50 (c)	c)	EIRP: 30dBm	<input checked="" type="checkbox"/>
Test Setup			
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. - Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non- 		

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	<p>radiating cable. The absolute levels of the spurious emissions were measured by the substitution.</p> <ul style="list-style-type: none"> - 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 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	23.55	23±1
				1	49	0	23.55	23±1
				1	99	0	23.54	23±1
				50	0	1	22.41	23±1
				50	24	1	22.44	23±1
				50	49	1	22.43	23±1
			16QAM	100	0	1	22.41	23±1
				1	0	1	22.39	22±1
				1	49	1	22.38	22±1
				1	99	1	22.37	22±1
				50	0	2	21.16	22±1
				50	24	2	21.21	22±1
				50	49	2	21.18	22±1
				100	0	2	21.55	22±1
	20175	1732.5	QPSK	1	0	0	23.41	23±1
				1	49	0	23.25	23±1
				1	99	0	23.39	23±1
				50	0	1	22.36	23±1
				50	24	1	22.38	23±1
				50	49	1	22.34	23±1
			16QAM	100	0	1	22.33	23±1
				1	0	1	22.76	22±1
				1	49	1	22.66	22±1
				1	99	1	22.73	22±1
				50	0	2	21.35	22±1
				50	24	2	21.33	22±1
				50	49	2	21.34	22±1
				100	0	2	21.63	22±1
	20300	1745.0	QPSK	1	0	0	23.26	23±1
				1	49	0	23.25	23±1
				1	99	0	23.26	23±1
				50	0	1	22.38	23±1
				50	24	1	22.36	23±1
				50	49	1	22.38	23±1
			16QAM	100	0	1	22.31	23±1
				1	0	1	22.47	22±1
				1	49	1	22.49	22±1
				1	99	1	22.46	22±1
				50	0	2	21.17	22±1
				50	24	2	21.24	22±1
				50	49	2	21.18	22±1
				100	0	2	21.63	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	23.51	23 ± 1
				1	37	0	23.50	23 ± 1
				1	74	0	23.52	23 ± 1
				36	0	1	22.41	23 ± 1
				36	16	1	22.40	23 ± 1
				36	35	1	22.41	23 ± 1
				75	0	1	22.43	23 ± 1
			16QAM	1	0	1	22.23	22 ± 1
				1	37	1	22.24	22 ± 1
				1	74	1	22.22	22 ± 1
				36	0	2	21.21	22 ± 1
				36	16	2	21.18	22 ± 1
				36	35	2	21.09	22 ± 1
				75	0	2	21.50	22 ± 1
	20175	1732.5	QPSK	1	0	0	23.35	23 ± 1
				1	37	0	23.34	23 ± 1
				1	74	0	23.36	23 ± 1
				36	0	1	22.35	23 ± 1
				36	16	1	22.33	23 ± 1
				36	35	1	22.36	23 ± 1
				75	0	1	22.33	23 ± 1
			16QAM	1	0	1	22.56	22 ± 1
				1	37	1	22.57	22 ± 1
				1	74	1	22.54	22 ± 1
				36	0	2	21.36	22 ± 1
				36	16	2	21.34	22 ± 1
				36	35	2	21.37	22 ± 1
				75	0	2	21.35	22 ± 1
	20325	1747.5	QPSK	1	0	0	23.29	23 ± 1
				1	37	0	23.30	23 ± 1
				1	74	0	23.28	23 ± 1
				36	0	1	22.39	23 ± 1
				36	16	1	22.37	23 ± 1
				36	35	1	22.38	23 ± 1
				75	0	1	22.37	23 ± 1
			16QAM	1	0	1	22.77	22 ± 1
				1	37	1	22.79	22 ± 1
				1	74	1	22.78	22 ± 1
				36	0	2	21.46	22 ± 1
				36	16	2	21.44	22 ± 1
				36	35	2	21.47	22 ± 1
				75	0	2	21.47	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	23.51	23±1
				1	24	0	23.49	23±1
				1	49	0	23.50	23±1
				25	0	1	22.39	23±1
				25	12	1	22.41	23±1
				25	24	1	22.37	23±1
				50	0	1	22.39	23±1
			16QAM	1	0	1	22.23	22±1
				1	24	1	22.24	22±1
				1	49	1	22.21	22±1
				25	0	2	21.16	22±1
				25	12	2	21.31	22±1
				25	24	2	21.25	22±1
				50	0	2	21.11	22±1
	20175	1732.5	QPSK	1	0	0	23.49	23±1
				1	24	0	23.47	23±1
				1	49	0	23.51	23±1
				25	0	1	22.28	23±1
				25	12	1	22.27	23±1
				25	24	1	22.26	23±1
				50	0	1	22.28	23±1
			16QAM	1	0	1	22.30	22±1
				1	24	1	22.31	22±1
				1	49	1	22.29	22±1
				25	0	2	21.47	22±1
				25	12	2	21.56	22±1
				25	24	2	21.43	22±1
				50	0	2	21.33	22±1
	20350	1750.0	QPSK	1	0	0	23.29	23±1
				1	24	0	23.30	23±1
				1	49	0	23.28	23±1
				25	0	1	22.31	23±1
				25	12	1	22.34	23±1
				25	24	1	22.37	23±1
				50	0	1	22.31	23±1
			16QAM	1	0	1	22.80	22±1
				1	24	1	22.78	22±1
				1	49	1	22.81	22±1
				25	0	2	21.56	22±1
				25	12	2	21.53	22±1
				25	24	2	21.49	22±1
				50	0	2	21.36	22±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
5MHz	20000	1715.0	QPSK	1	0	0	23.60	23±1
				1	12	0	23.61	23±1
				1	24	0	23.59	23±1
				12	0	1	22.45	23±1
				12	6	1	22.44	23±1
				12	11	1	22.43	23±1
				25	0	1	22.37	23±1
			16QAM	1	0	1	22.45	22±1
				1	12	1	22.43	22±1
				1	24	1	22.41	22±1
				12	0	2	21.56	22±1
				12	6	2	21.53	22±1
				12	11	2	21.54	22±1
				25	0	2	21.39	22±1
	20175	1732.5	QPSK	1	0	0	23.31	23±1
				1	12	0	23.33	23±1
				1	24	0	23.29	23±1
				12	0	1	22.30	23±1
				12	6	1	22.31	23±1
				12	11	1	22.32	23±1
				25	0	1	22.24	23±1
			16QAM	1	0	1	22.56	22±1
				1	12	1	22.54	22±1
				1	24	1	22.57	22±1
				12	0	2	21.36	22±1
				12	6	2	21.34	22±1
				12	11	2	21.37	22±1
				25	0	2	21.25	22±1
	20350	1750.0	QPSK	1	0	0	23.40	23±1
				1	12	0	23.41	23±1
				1	24	0	23.39	23±1
				12	0	1	22.41	23±1
				12	6	1	22.37	23±1
				12	11	1	22.36	23±1
				25	0	1	22.33	23±1
			16QAM	1	0	1	22.30	22±1
				1	12	1	22.31	22±1
				1	24	1	22.33	22±1
				12	0	2	21.77	22±1
				12	6	2	21.76	22±1
				12	11	2	21.69	22±1
				25	0	2	21.47	22±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
3MHz	19965	1711.5	QPSK	1	0	0	23.43	23±1
				1	7	0	23.44	23±1
				1	14	0	23.43	23±1
				8	0	1	22.37	23±1
				8	4	1	22.38	23±1
				8	7	1	22.41	23±1
				15	0	1	22.40	23±1
			16QAM	1	0	1	22.20	22±1
				1	7	1	22.24	22±1
				1	14	1	22.21	22±1
				8	0	2	21.64	22±1
				8	4	2	21.63	22±1
				8	7	2	21.67	22±1
				15	0	2	21.36	22±1
	20175	1732.5	QPSK	1	0	0	23.27	23±1
				1	7	0	23.26	23±1
				1	14	0	23.24	23±1
				8	0	1	22.24	23±1
				8	4	1	22.25	23±1
				8	7	1	22.23	23±1
				15	0	1	22.22	23±1
			16QAM	1	0	1	22.17	22±1
				1	7	1	22.14	22±1
				1	14	1	22.13	22±1
				8	0	2	21.36	22±1
				8	4	2	21.33	22±1
				8	7	2	21.37	22±1
				15	0	2	21.25	22±1
	20385	1753.5	QPSK	1	0	0	23.19	23±1
				1	7	0	23.20	23±1
				1	14	0	23.18	23±1
				8	0	1	22.27	23±1
				8	4	1	22.26	23±1
				8	7	1	22.24	23±1
				15	0	1	22.32	23±1
			16QAM	1	0	1	22.71	22±1
				1	7	1	22.70	22±1
				1	14	1	22.71	22±1
				8	0	2	21.54	22±1
				8	4	2	21.56	22±1
				8	7	2	21.57	22±1
				15	0	2	21.44	22±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
1.4MHz	19957	1710.7	QPSK	1	0	0	23.47	23±1
				1	2	0	23.46	23±1
				1	5	0	23.48	23±1
				3	0	0	23.53	23±1
				3	1	0	23.51	23±1
				3	2	0	23.49	23±1
				6	0	1	22.38	23±1
			16QAM	1	0	1	22.23	22±1
				1	2	1	22.24	22±1
				1	5	1	22.22	22±1
				3	0	1	21.43	22±1
				3	1	1	21.45	22±1
				3	2	1	21.44	22±1
				6	0	2	21.35	22±1
	20175	1732.5	QPSK	1	0	0	23.25	23±1
				1	2	0	23.26	23±1
				1	5	0	23.24	23±1
				3	0	0	23.28	23±1
				3	1	0	23.26	23±1
				3	2	0	23.27	23±1
				6	0	1	22.18	23±1
			16QAM	1	0	1	22.15	22±1
				1	2	1	22.16	22±1
				1	5	1	22.17	22±1
				3	0	1	21.64	22±1
				3	1	1	21.65	22±1
				3	2	1	21.63	22±1
				6	0	2	21.09	22±1
	20393	1754.3	QPSK	1	0	0	23.28	23±1
				1	2	0	23.26	23±1
				1	5	0	23.28	23±1
				3	0	0	23.40	23±1
				3	1	0	23.41	23±1
				3	2	0	23.39	23±1
				6	0	1	22.28	23±1
			16QAM	1	0	1	21.90	22±1
				1	2	1	21.91	22±1
				1	5	1	21.93	22±1
				3	0	1	21.44	22±1
				3	1	1	21.46	22±1
				3	2	1	21.45	22±1
				6	0	2	21.21	22±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	21.91	21.5 ± 1
				1	49	0	21.89	21.5 ± 1
				1	99	0	21.93	21.5 ± 1
				50	0	1	21.01	21.5 ± 1
				50	24	1	21.03	21.5 ± 1
				50	49	1	21.02	21.5 ± 1
				100	0	1	20.91	21.5 ± 1
			16QAM	1	0	1	21.07	21.3 ± 1
				1	49	1	21.06	21.3 ± 1
				1	99	1	21.08	21.3 ± 1
				50	0	2	20.64	21.3 ± 1
				50	24	2	20.66	21.3 ± 1
				50	49	2	20.63	21.3 ± 1
				100	0	2	20.43	21.3 ± 1
	21100	2535	QPSK	1	0	0	22.15	21.3 ± 1
				1	49	0	22.14	21.3 ± 1
				1	99	0	22.13	21.3 ± 1
				50	0	1	21.09	21.3 ± 1
				50	24	1	21.03	21.3 ± 1
				50	49	1	21.06	21.3 ± 1
				100	0	1	20.95	21.3 ± 1
			16QAM	1	0	1	20.95	21.3 ± 1
				1	49	1	20.97	21.3 ± 1
				1	99	1	20.94	21.3 ± 1
				50	0	2	20.54	21.3 ± 1
				50	24	2	20.56	21.3 ± 1
				50	49	2	20.49	21.3 ± 1
				100	0	2	20.33	21.3 ± 1
	21350	2560	QPSK	1	0	0	22.02	21.3 ± 1
				1	49	0	22.03	21.3 ± 1
				1	99	0	22.01	21.3 ± 1
				50	0	1	21.03	21.3 ± 1
				50	24	1	21.02	21.3 ± 1
				50	49	1	21.02	21.3 ± 1
				100	0	1	21.00	21.3 ± 1
			16QAM	1	0	1	21.39	21.3 ± 1
				1	49	1	21.37	21.3 ± 1
				1	99	1	21.38	21.3 ± 1
				50	0	2	20.84	21.3 ± 1
				50	24	2	20.83	21.3 ± 1
				50	49	2	20.86	21.3 ± 1
				100	0	2	20.38	21.3 ± 1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
15MHz	20825	1717.5	QPSK	1	0	0	22.03	21.3±1
				1	37	0	22.01	21.3±1
				1	74	0	22.04	21.3±1
				36	0	1	21.07	21.3±1
				36	16	1	21.03	21.3±1
				36	35	1	21.06	21.3±1
				75	0	1	20.94	21.3±1
			16QAM	1	0	1	20.73	21.3±1
				1	37	1	20.74	21.3±1
				1	74	1	20.75	21.3±1
				36	0	2	20.54	21.3±1
				36	16	2	20.51	21.3±1
				36	35	2	20.53	21.3±1
				75	0	2	20.41	21.3±1
	21100	1732.5	QPSK	1	0	0	21.99	21.3±1
				1	37	0	22.00	21.3±1
				1	74	0	21.97	21.3±1
				36	0	1	21.03	21.3±1
				36	16	1	21.01	21.3±1
				36	35	1	21.04	21.3±1
				75	0	1	20.96	21.3±1
			16QAM	1	0	1	21.17	21.3±1
				1	37	1	21.16	21.3±1
				1	74	1	21.14	21.3±1
				36	0	2	20.47	21.3±1
				36	16	2	20.44	21.3±1
				36	35	2	20.41	21.3±1
				75	0	2	20.35	21.3±1
	21375	1747.5	QPSK	1	0	0	21.94	21.3±1
				1	37	0	21.93	21.3±1
				1	74	0	21.95	21.3±1
				36	0	1	21.13	21.3±1
				36	16	1	21.14	21.3±1
				36	35	1	21.16	21.3±1
				75	0	1	21.01	21.3±1
			16QAM	1	0	1	21.49	21.3±1
				1	37	1	21.47	21.3±1
				1	74	1	21.48	21.3±1
				36	0	2	20.54	21.3±1
				36	16	2	20.61	21.3±1
				36	35	2	20.59	21.3±1
				75	0	2	20.49	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	22.03	21.5±1
				1	24	0	22.04	21.5±1
				1	49	0	22.02	21.5±1
				25	0	1	21.04	21.5±1
				25	12	1	21.03	21.5±1
				25	24	1	21.04	21.5±1
				50	0	1	20.91	21.5±1
			16QAM	1	0	1	20.73	21.3±1
				1	24	1	20.76	21.3±1
				1	49	1	20.77	21.3±1
				25	0	2	20.41	21.3±1
				25	12	2	20.44	21.3±1
				25	24	2	20.43	21.3±1
				50	0	2	20.33	21.3±1
	21100	2535	QPSK	1	0	0	22.05	21.3±1
				1	24	0	22.07	21.3±1
				1	49	0	22.03	21.3±1
				25	0	1	21.07	21.3±1
				25	12	1	21.04	21.3±1
				25	24	1	21.03	21.3±1
				50	0	1	20.89	21.3±1
			16QAM	1	0	1	20.88	21.3±1
				1	24	1	20.87	21.3±1
				1	49	1	20.86	21.3±1
				25	0	2	20.53	21.3±1
				25	12	2	20.47	21.3±1
				25	24	2	20.51	21.3±1
				50	0	2	20.31	21.3±1
	21400	2565	QPSK	1	0	0	21.99	21.3±1
				1	24	0	22.00	21.3±1
				1	49	0	21.97	21.3±1
				25	0	1	21.01	21.3±1
				25	12	1	21.00	21.3±1
				25	24	1	21.03	21.3±1
				50	0	1	20.98	21.3±1
			16QAM	1	0	1	21.46	21.3±1
				1	24	1	21.47	21.3±1
				1	49	1	21.44	21.3±1
				25	0	2	20.87	21.3±1
				25	12	2	20.83	21.3±1
				25	24	2	20.84	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	22.48	21.7±1
				1	12	0	22.46	21.7±1
				1	24	0	22.47	21.7±1
				12	0	1	21.34	21.7±1
				12	6	1	21.33	21.7±1
				12	11	1	21.32	21.7±1
				25	0	1	20.98	21.7±1
			16QAM	1	0	1	21.16	21.3±1
				1	12	1	21.17	21.3±1
				1	24	1	21.13	21.3±1
				12	0	2	20.86	21.3±1
				12	6	2	20.84	21.3±1
				12	11	2	20.88	21.3±1
				25	0	2	20.34	21.3±1
	20175	1732.5	QPSK	1	0	0	22.36	21.7±1
				1	12	0	22.34	21.7±1
				1	24	0	22.37	21.7±1
				12	0	1	21.16	21.7±1
				12	6	1	21.13	21.7±1
				12	11	1	21.12	21.7±1
				25	0	1	20.91	21.7±1
			16QAM	1	0	1	21.04	21.3±1
				1	12	1	21.06	21.3±1
				1	24	1	21.03	21.3±1
				12	0	2	20.64	21.3±1
				12	6	2	20.66	21.3±1
				12	11	2	20.68	21.3±1
				25	0	2	20.43	21.3±1
	20375	1752.5	QPSK	1	0	0	22.19	21.3±1
				1	12	0	22.20	21.3±1
				1	24	0	22.18	21.3±1
				12	0	1	21.01	21.3±1
				12	6	1	21.03	21.3±1
				12	11	1	21.00	21.3±1
				25	0	1	20.95	21.3±1
			16QAM	1	0	1	20.98	21.3±1
				1	12	1	20.96	21.3±1
				1	24	1	20.97	21.3±1
				12	0	2	20.46	21.3±1
				12	6	2	20.43	21.3±1
				12	11	2	20.44	21.3±1
				25	0	2	20.31	21.3±1

ERP & EIRP

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	13.23	V	7.95	0.79	20.39	30
1732.5	1.4	QPSK	1/0	13.29	V	7.95	0.79	20.45	30
1754.3	1.4	QPSK	1/0	13.25	V	7.95	0.79	20.41	30
1710.7	1.4	QPSK	1/0	11.71	H	7.95	0.79	18.87	30
1732.5	1.4	QPSK	1/0	11.68	H	7.95	0.79	18.84	30
1754.3	1.4	QPSK	1/0	11.73	H	7.95	0.79	18.89	30
1710.7	1.4	16-QAM	1/5	12.57	V	7.95	0.79	19.73	30
1732.5	1.4	16-QAM	1/0	12.54	V	7.95	0.79	19.70	30
1754.3	1.4	16-QAM	1/0	12.58	V	7.95	0.79	19.74	30
1710.7	1.4	16-QAM	1/5	11.85	H	7.95	0.79	19.01	30
1732.5	1.4	16-QAM	1/0	11.82	H	7.95	0.79	18.98	30
1754.3	1.4	16-QAM	1/0	11.83	H	7.95	0.79	18.99	30
1711.5	3	QPSK	1/0	13.18	V	7.95	0.79	20.34	30
1732.5	3	QPSK	1/0	13.21	V	7.95	0.79	20.37	30
1753.5	3	QPSK	1/0	13.17	V	7.95	0.79	20.33	30
1711.5	3	QPSK	1/0	12.43	H	7.95	0.79	19.59	30
1732.5	3	QPSK	1/0	12.44	H	7.95	0.79	19.60	30
1753.5	3	QPSK	1/0	12.38	H	7.95	0.79	19.54	30
1711.5	3	16-QAM	1/0	12.34	V	7.95	0.79	19.50	30
1732.5	3	16-QAM	1/0	12.29	V	7.95	0.79	19.45	30
1753.5	3	16-QAM	1/0	12.37	V	7.95	0.79	19.53	30
1711.5	3	16-QAM	1/0	11.58	H	7.95	0.79	18.74	30
1732.5	3	16-QAM	1/0	11.62	H	7.95	0.79	18.78	30
1753.5	3	16-QAM	1/0	11.54	H	7.95	0.79	18.70	30
1712.5	5	QPSK	1/0	13.32	V	7.95	0.79	20.48	30
1732.5	5	QPSK	1/0	13.27	V	7.95	0.79	20.43	30
1752.5	5	QPSK	1/24	13.36	V	7.95	0.79	20.52	30
1712.5	5	QPSK	1/0	11.55	H	7.95	0.79	18.71	30
1732.5	5	QPSK	1/0	11.63	H	7.95	0.79	18.79	30
1752.5	5	QPSK	1/24	11.58	H	7.95	0.79	18.74	30
1712.5	5	16-QAM	1/0	12.47	V	7.95	0.79	19.63	30
1732.5	5	16-QAM	1/0	12.44	V	7.95	0.79	19.60	30

1752.5	5	16-QAM	1/24	12.51	V	7.95	0.79	19.67	30
1712.5	5	16-QAM	1/0	11.23	H	7.95	0.79	18.39	30
1732.5	5	16-QAM	1/0	11.18	H	7.95	0.79	18.34	30
1752.5	5	16-QAM	1/24	11.22	H	7.95	0.79	18.38	30
1715	10	QPSK	1/0	13.38	V	7.95	0.79	20.54	30
1732.5	10	QPSK	1/49	13.35	V	7.95	0.79	20.51	30
1750	10	QPSK	1/0	13.32	V	7.95	0.79	20.48	30
1715	10	QPSK	1/0	12.51	H	7.95	0.79	19.67	30
1732.5	10	QPSK	1/49	12.49	H	7.95	0.79	19.65	30
1750	10	QPSK	1/0	12.55	H	7.95	0.79	19.71	30
1715	10	16-QAM	1/0	12.64	V	7.95	0.79	19.80	30
1732.5	10	16-QAM	1/49	12.58	V	7.95	0.79	19.74	30
1750	10	16-QAM	1/0	12.57	V	7.95	0.79	19.73	30
1715	10	16-QAM	1/0	11.73	H	7.95	0.79	18.89	30
1732.5	10	16-QAM	1/49	11.69	H	7.95	0.79	18.85	30
1750	10	16-QAM	1/0	11.72	H	7.95	0.79	18.88	30
1717.5	15	QPSK	1/0	13.29	V	7.95	0.79	20.45	30
1732.5	15	QPSK	1/74	13.31	V	7.95	0.79	20.47	30
1747.5	15	QPSK	1/0	13.26	V	7.95	0.79	20.42	30
1717.5	15	QPSK	1/0	12.37	H	7.95	0.79	19.53	30
1732.5	15	QPSK	1/74	12.33	H	7.95	0.79	19.49	30
1747.5	15	QPSK	1/0	12.36	H	7.95	0.79	19.52	30
1717.5	15	16-QAM	1/0	12.51	V	7.95	0.79	19.67	30
1732.5	15	16-QAM	1/74	12.48	V	7.95	0.79	19.64	30
1747.5	15	16-QAM	1/0	12.53	V	7.95	0.79	19.69	30
1717.5	15	16-QAM	1/0	11.68	H	7.95	0.79	18.84	30
1732.5	15	16-QAM	1/74	11.73	H	7.95	0.79	18.89	30
1747.5	15	16-QAM	1/0	11.69	H	7.95	0.79	18.85	30
1720	20	QPSK	1/99	13.35	V	7.95	0.79	20.51	30
1732.5	20	QPSK	1/99	13.31	V	7.95	0.79	20.47	30
1745	20	QPSK	1/0	13.34	V	7.95	0.79	20.50	30
1720	20	QPSK	1/99	12.67	H	7.95	0.79	19.83	30
1732.5	20	QPSK	1/99	12.68	H	7.95	0.79	19.84	30
1745	20	QPSK	1/0	12.63	H	7.95	0.79	19.79	30
1720	20	16-QAM	1/99	12.52	V	7.95	0.79	19.68	30
1732.5	20	16-QAM	1/99	12.47	V	7.95	0.79	19.63	30
1745	20	16-QAM	1/0	12.48	V	7.95	0.79	19.64	30
1720	20	16-QAM	1/99	11.63	H	7.95	0.79	18.79	30

1732.5	20	16-QAM	1/99	11.59	H	7.95	0.79	18.75	30
1745	20	16-QAM	1/0	11.64	H	7.95	0.79	18.80	30

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	12.25	V	8.93	0.83	20.35	30
2535	5	QPSK	1/0	12.21	V	8.93	0.83	20.31	30
2567.5	5	QPSK	1/24	12.19	V	8.93	0.83	20.29	30
2502.5	5	QPSK	1/0	11.38	H	8.93	0.83	19.48	30
2535	5	QPSK	1/0	11.42	H	8.93	0.83	19.52	30
2567.5	5	QPSK	1/24	11.36	H	8.93	0.83	19.46	30
2502.5	5	16-QAM	1/0	11.49	V	8.93	0.83	19.59	30
2535	5	16-QAM	1/0	11.52	V	8.93	0.83	19.62	30
2567.5	5	16-QAM	1/24	11.48	V	8.93	0.83	19.58	30
2502.5	5	16-QAM	1/0	10.73	H	8.93	0.83	18.83	30
2535	5	16-QAM	1/0	10.69	H	8.93	0.83	18.79	30
2567.5	5	16-QAM	1/24	10.68	H	8.93	0.83	18.78	30
2505	10	QPSK	1/0	11.91	V	8.93	0.83	20.01	30
2535	10	QPSK	1/49	11.86	V	8.93	0.83	19.96	30
2565	10	QPSK	1/0	11.87	V	8.93	0.83	19.97	30
2505	10	QPSK	1/0	10.59	H	8.93	0.83	18.69	30
2535	10	QPSK	1/49	10.63	H	8.93	0.83	18.73	30
2565	10	QPSK	1/0	10.58	H	8.93	0.83	18.68	30
2505	10	16-QAM	1/0	10.85	V	8.93	0.83	18.95	30
2535	10	16-QAM	1/49	10.79	V	8.93	0.83	18.89	30
2565	10	16-QAM	1/0	10.83	V	8.93	0.83	18.93	30
2505	10	16-QAM	1/0	10.13	H	8.93	0.83	18.23	30
2535	10	16-QAM	1/49	10.08	H	8.93	0.83	18.18	30
2565	10	16-QAM	1/0	10.15	H	8.93	0.83	18.25	30
2507.5	15	QPSK	1/0	11.83	V	8.93	0.83	19.93	30
2535	15	QPSK	1/74	11.86	V	8.93	0.83	19.96	30
2562.5	15	QPSK	1/0	11.79	V	8.93	0.83	19.89	30
2507.5	15	QPSK	1/0	10.64	H	8.93	0.83	18.74	30
2535	15	QPSK	1/74	10.58	H	8.93	0.83	18.68	30
2562.5	15	QPSK	1/0	10.62	H	8.93	0.83	18.72	30

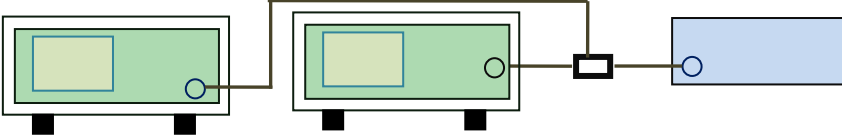
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2507.5	15	16-QAM	1/0	10.91	V	8.93	0.83	19.01	30
2535	15	16-QAM	1/74	10.88	V	8.93	0.83	18.98	30
2562.5	15	16-QAM	1/0	10.85	V	8.93	0.83	18.95	30
2507.5	15	16-QAM	1/0	10.03	H	8.93	0.83	18.13	30
2535	15	16-QAM	1/74	10.12	H	8.93	0.83	18.22	30
2562.5	15	16-QAM	1/0	10.07	H	8.93	0.83	18.17	30
2510	20	QPSK	1/99	11.63	V	8.93	0.83	19.73	30
2535	20	QPSK	1/99	11.59	V	8.93	0.83	19.69	30
2560	20	QPSK	1/0	11.58	V	8.93	0.83	19.68	30
2510	20	QPSK	1/99	10.81	H	8.93	0.83	18.91	30
2535	20	QPSK	1/99	10.86	H	8.93	0.83	18.96	30
2560	20	QPSK	1/0	10.83	H	8.93	0.83	18.93	30
2510	20	16-QAM	1/99	10.72	V	8.93	0.83	18.82	30
2535	20	16-QAM	1/99	10.69	V	8.93	0.83	18.79	30
2560	20	16-QAM	1/0	10.65	V	8.93	0.83	18.75	30
2510	20	16-QAM	1/99	9.85	H	8.93	0.83	17.95	30
2535	20	16-QAM	1/99	9.88	H	8.93	0.83	17.98	30
2560	20	16-QAM	1/0	9.86	H	8.93	0.83	17.96	30

6.3 Peak-Average Ratio

Temperature	23°C
Relative Humidity	55%
Atmospheric Pressure	1003mbar
Test date :	May 03, 2016
Tested By :	Winnie Zhang

Requirement(s):

Spec	Item	Requirement	Applicable
§ 27.50(d)	a)	The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.	<input checked="" type="checkbox"/>
Test Setup			
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 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	23.68	23.25	0.43
			16QAM	22.98	22.15	0.83
3	1732.5	RB 1/0	QPSK	23.47	23.27	0.2
			16QAM	22.59	22.17	0.42
5	1732.5	RB 1/0	QPSK	23.45	23.31	0.14
			16QAM	22.77	22.56	0.21
10	1732.5	RB 1/0	QPSK	23.64	23.49	0.15
			16QAM	22.38	22.3	0.08
15	1732.5	RB 1/0	QPSK	23.88	23.35	0.53
			16QAM	22.79	22.56	0.23
20	1732.5	RB 1/0	QPSK	23.68	23.41	0.27
			16QAM	23.15	22.76	0.39

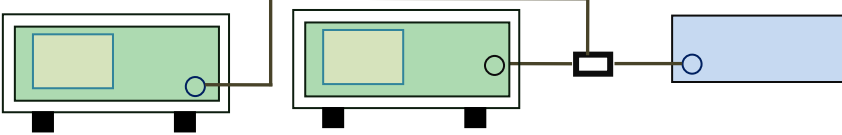
LTE Band 7 (part 27)

BW(MHz)	Frequency (MHz)	Mode	Modulation	Conducted Power (dBm)		Peak-Average Ratio (PAR)
				Peak	Average	
5	2535	RB 1/0	QPSK	22.66	22.36	0.3
			16QAM	21.98	21.04	0.94
10	2535	RB 1/0	QPSK	22.77	22.05	0.72
			16QAM	21.51	20.88	0.63
15	2535	RB 1/0	QPSK	22.89	21.99	0.9
			16QAM	21.85	21.17	0.68
20	2535	RB 1/0	QPSK	22.93	22.15	0.78
			16QAM	21.78	20.95	0.83

6.4 Occupied Bandwidth

Temperature	23°C
Relative Humidity	55%
Atmospheric Pressure	1003mbar
Test date :	May 03, 2016
Tested By :	Winnie Zhang

Requirement(s):

Spec	Item	Requirement	Applicable
§2.1049, §27.53(a)	a)	99% Occupied Bandwidth(kHz)	<input checked="" type="checkbox"/>
	b)	26 dB Bandwidth(kHz)	<input checked="" type="checkbox"/>
Test Setup			
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 4 (Part 27)

BW(MHz)	Channel	Frequency (MHz)	Modulation	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
1.4	19957	1710.7	16QAM	1.0927	1.270
			QPSK	1.0908	1.267
1.4	20175	1732.5	16QAM	1.0954	1.269
			QPSK	1.0935	1.268
1.4	20393	1754.3	16QAM	1.0972	1.270
			QPSK	1.1054	1.278
3	19965	1711.5	16QAM	2.7381	3.092
			QPSK	2.7287	3.042
3	20175	1732.5	16QAM	2.7311	3.049
			QPSK	2.7329	3.103
3	20385	1753.5	16QAM	2.7312	3.065
			QPSK	2.7286	3.100
5	19975	1712.5	16QAM	4.5146	5.038
			QPSK	4.5146	5.048
5	20175	1732.5	16QAM	4.5211	5.026
			QPSK	4.5136	4.995
5	20375	1752.5	16QAM	4.5122	5.027
			QPSK	4.5115	5.070
10	20000	1715	16QAM	9.0668	10.078
			QPSK	9.0640	10.034
10	20175	1732.5	16QAM	9.0645	10.083
			QPSK	9.0588	9.980
10	20350	1750	16QAM	9.0255	10.056
			QPSK	9.0501	10.040
15	20025	1717.5	16QAM	13.4985	14.755
			QPSK	13.4594	14.758
15	20175	1732.5	16QAM	13.5072	14.775
			QPSK	13.4964	14.771
15	20325	1747.5	16QAM	13.4508	14.758
			QPSK	13.4360	14.901

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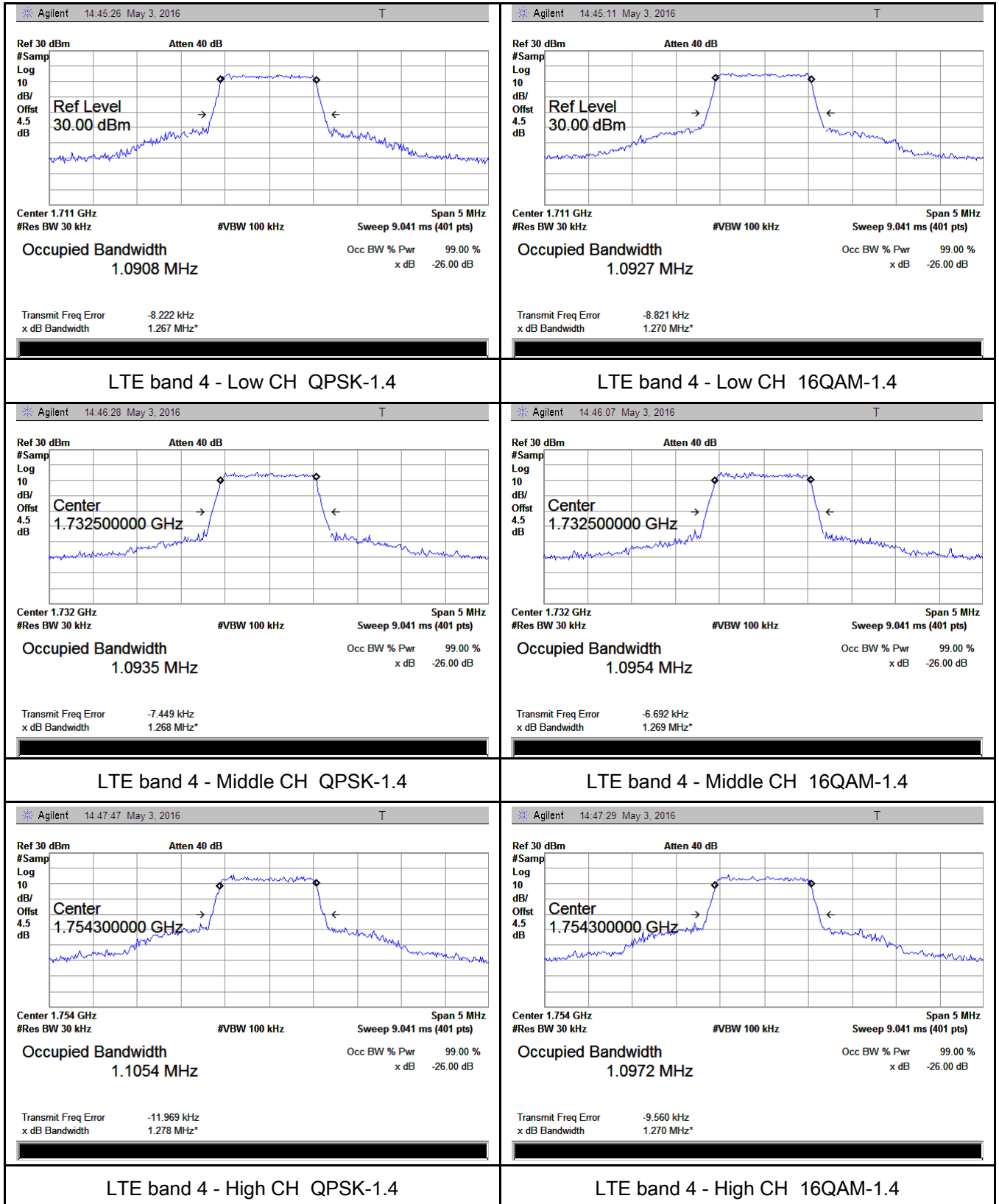
20	20050	1720	16QAM	17.8864	19.204
			QPSK	17.9693	19.159
20	20175	1732.5	16QAM	17.9534	19.599
			QPSK	17.9168	19.320
20	20300	1745	16QAM	17.8566	19.221
			QPSK	17.9067	18.982

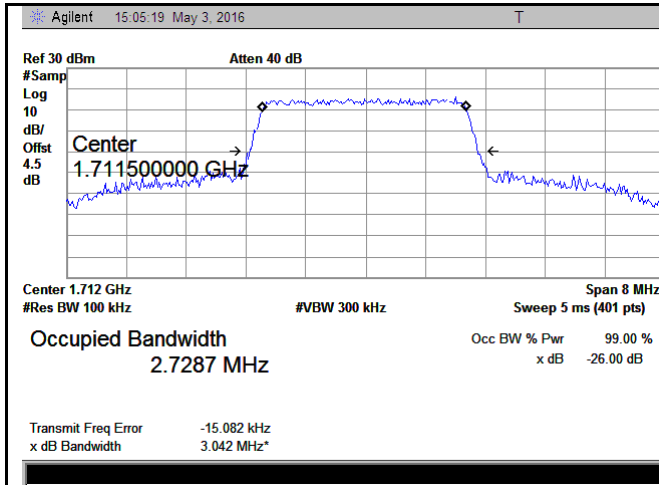
LTE Band 7 (Part 27) result

BW(MHz)	Channel	Frequency (MHz)	Modulation	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
5	20775	2502.5	16QAM	4.5228	5.088
			QPSK	4.5180	5.010
5	21100	2535	16QAM	4.5201	5.018
			QPSK	4.5163	5.076
5	21425	2567.5	16QAM	4.5289	5.028
			QPSK	4.5229	5.057
10	20800	2505	16QAM	9.0448	10.162
			QPSK	9.0087	10.137
10	21100	2535	16QAM	9.0460	10.022
			QPSK	9.0468	10.023
10	21400	2562.5	16QAM	9.0403	10.060
			QPSK	9.0461	10.132
15	20825	2507.5	16QAM	13.4520	14.755
			QPSK	13.4536	14.671
15	21100	2535	16QAM	13.4732	14.881
			QPSK	13.4681	14.672
15	21400	2562.5	16QAM	13.4518	14.753
			QPSK	13.4572	14.518
20	20850	2510	16QAM	17.8622	19.243
			QPSK	17.8624	19.060
20	21100	2535	16QAM	17.8835	19.258
			QPSK	17.8840	19.319
20	21350	2560	16QAM	17.8935	19.223
			QPSK	17.8666	19.086

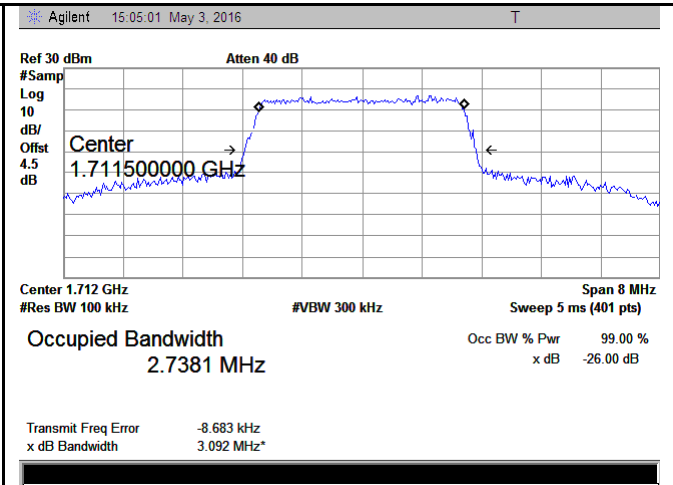
Test Plots

LTE Band 4 (Part 27)

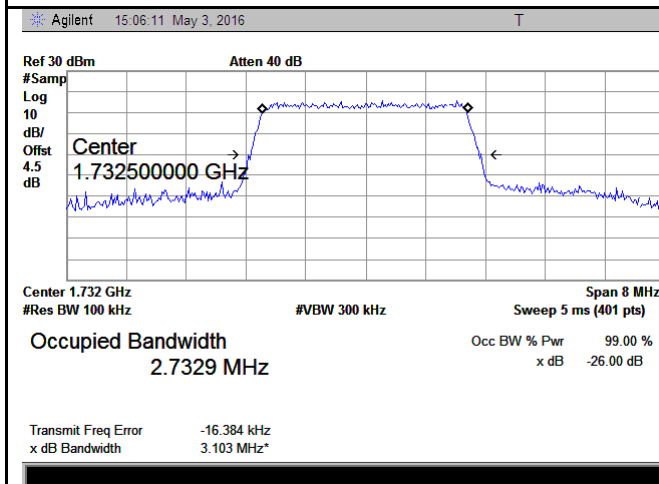




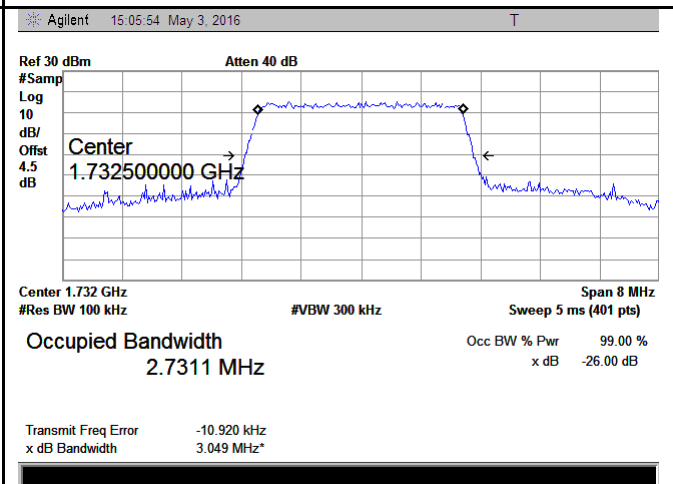
LTE band 4 - Low CH QPSK-3



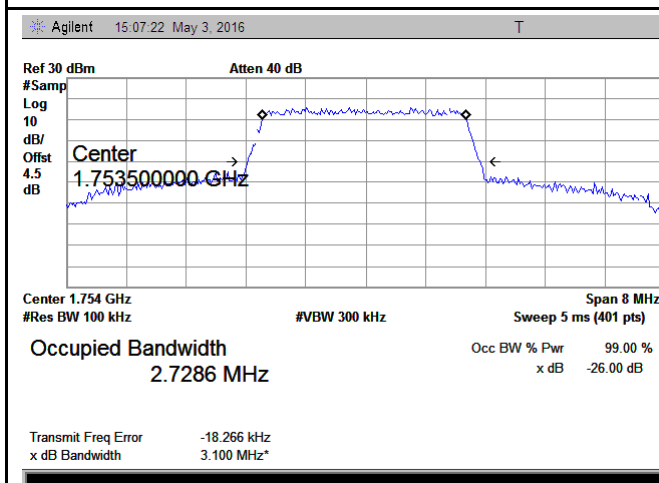
LTE band 4 - Low CH 16QAM-3



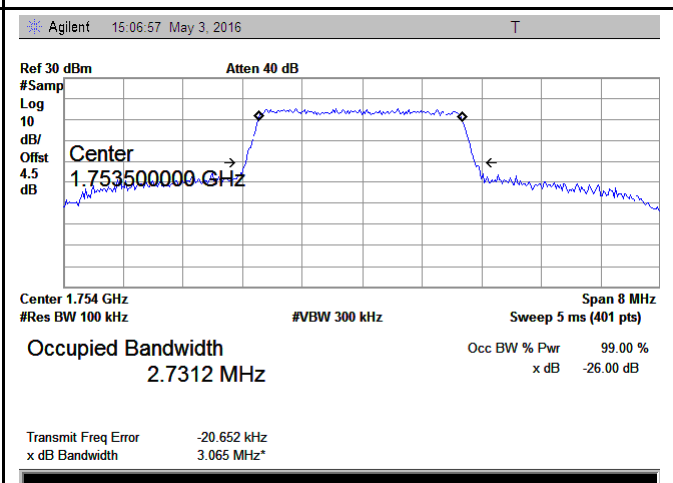
LTE band 4 - Middle CH QPSK-3



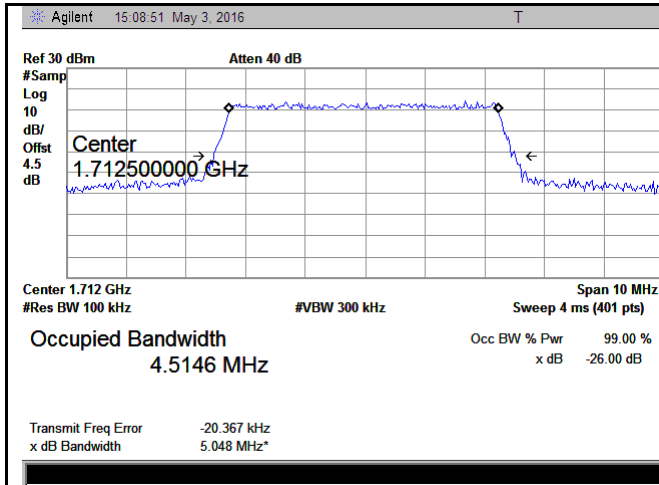
LTE band 4 - Middle CH 16QAM-3



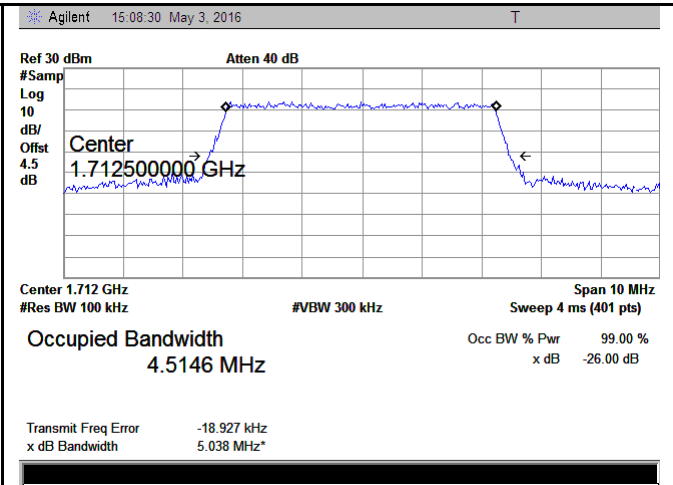
LTE band 4 - High CH QPSK-3



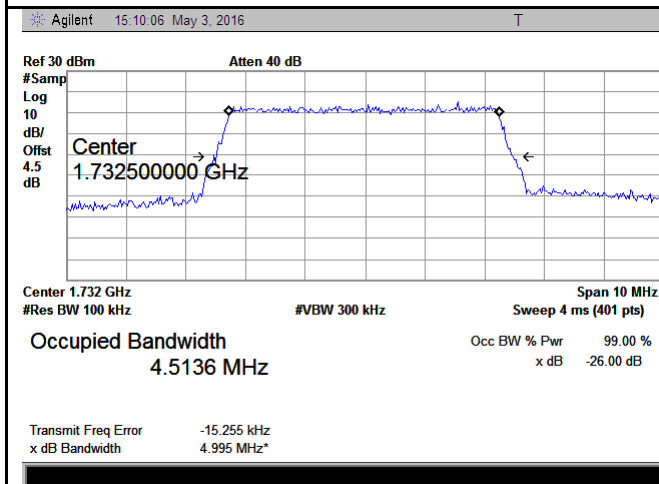
LTE band 4 - High CH 16QAM-3



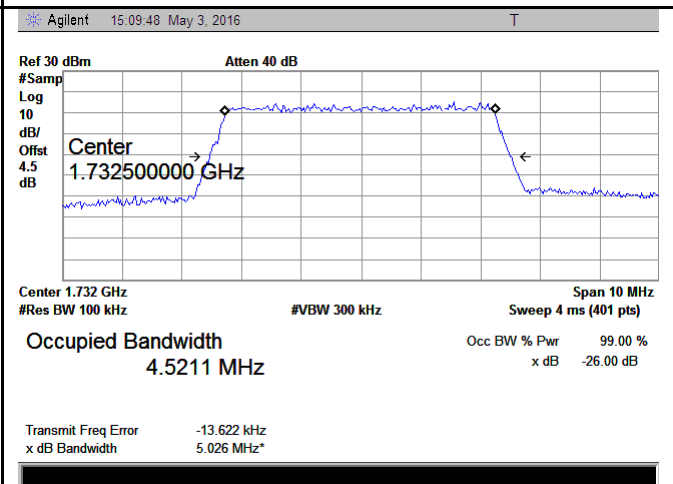
LTE band 4 - Low CH QPSK-5



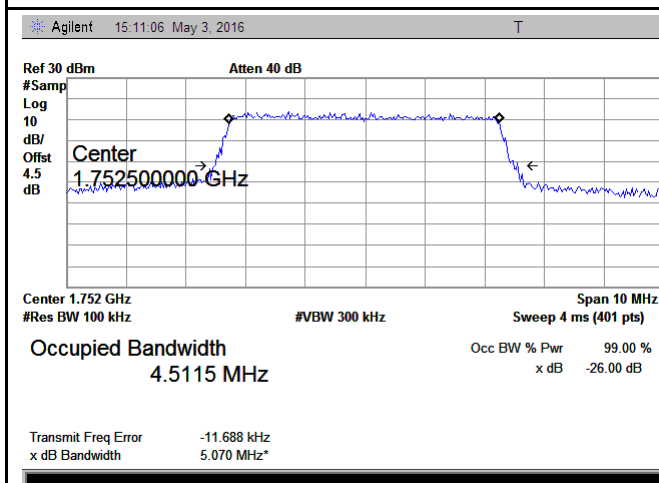
LTE band 4 - Low CH 16QAM-5



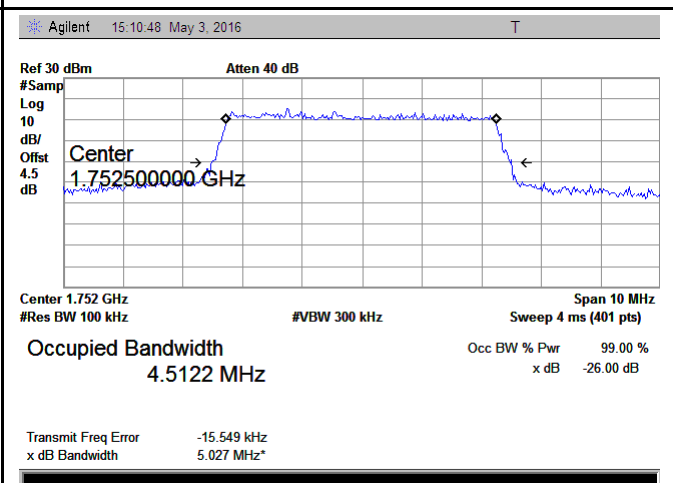
LTE band 4 - Middle CH QPSK-5



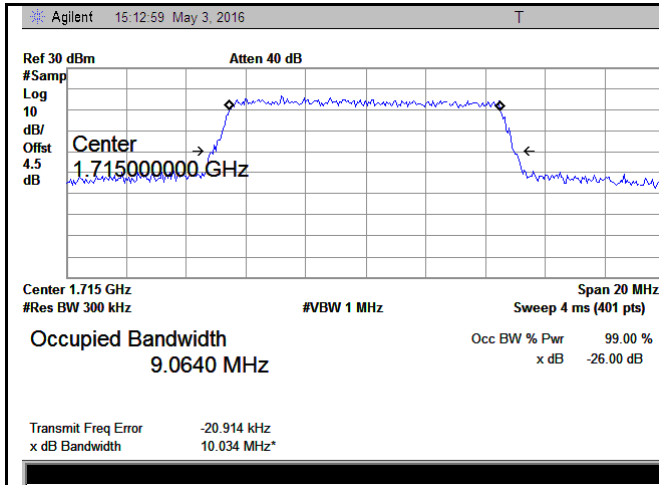
LTE band 4 - Middle CH 16QAM-5



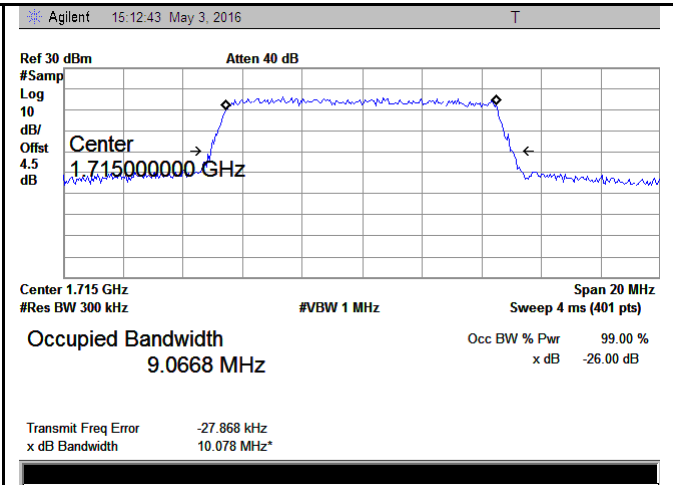
LTE band 4 - High CH QPSK-5



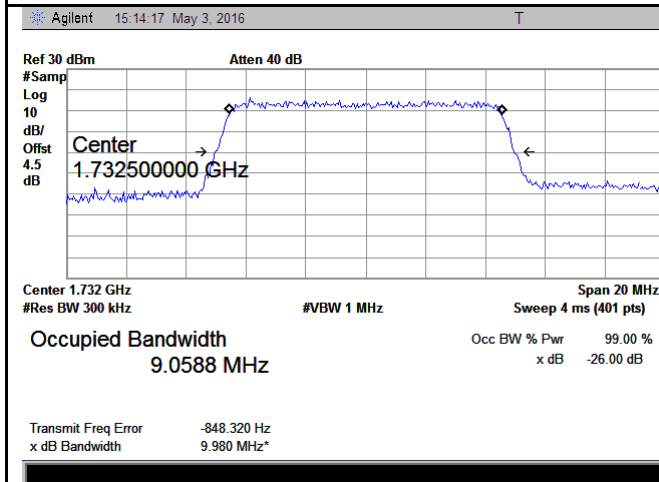
LTE band 4 - High CH 16QAM-5



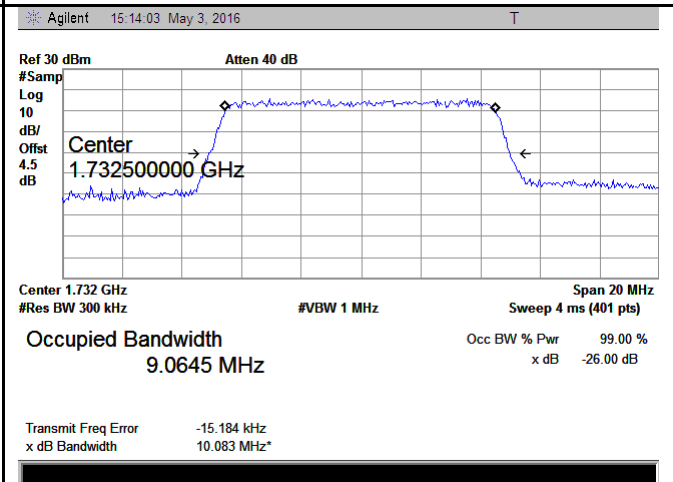
LTE band 4 - Low CH QPSK-10



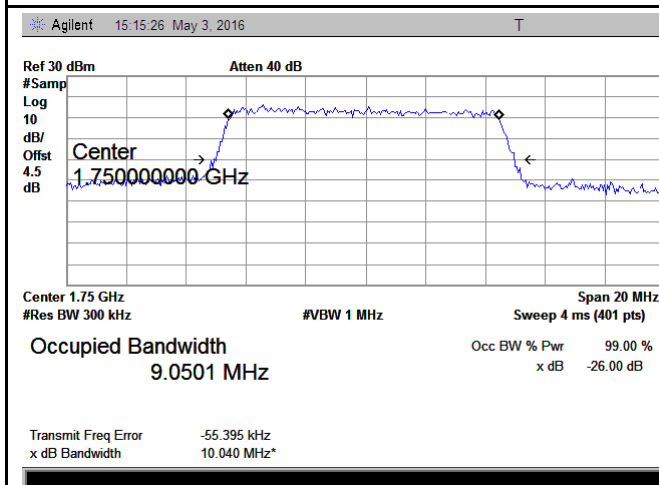
LTE band 4 - Low CH 16QAM-10



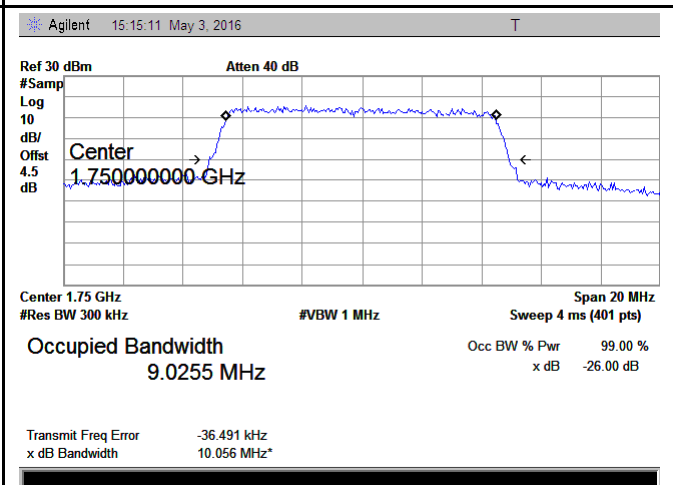
LTE band 4 - Middle CH QPSK-10



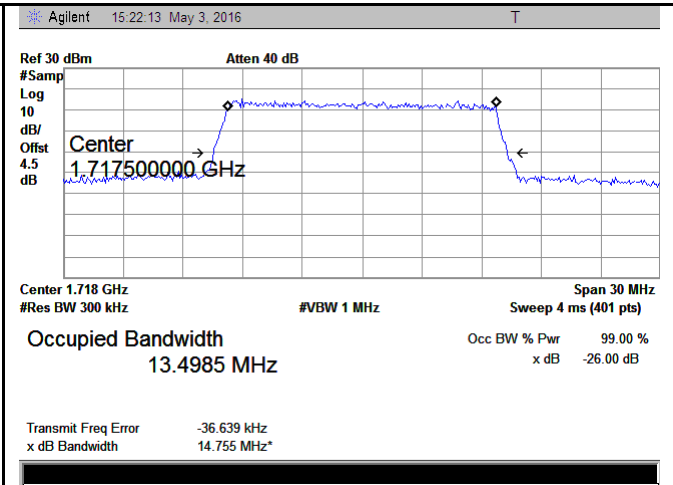
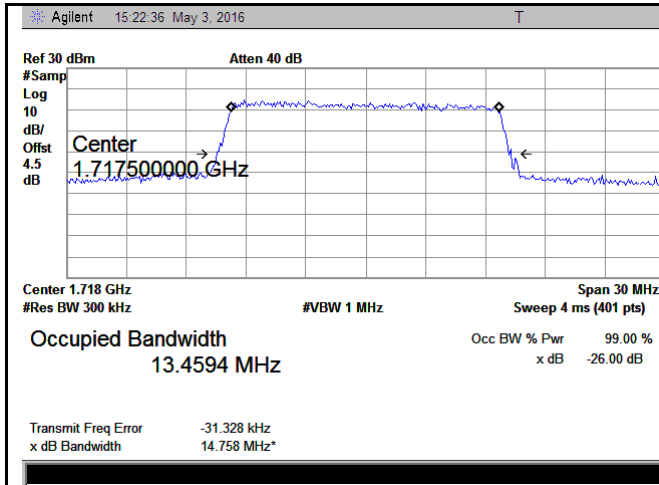
LTE band 4 - Middle CH 16QAM-10



LTE band 4 - High CH QPSK-10

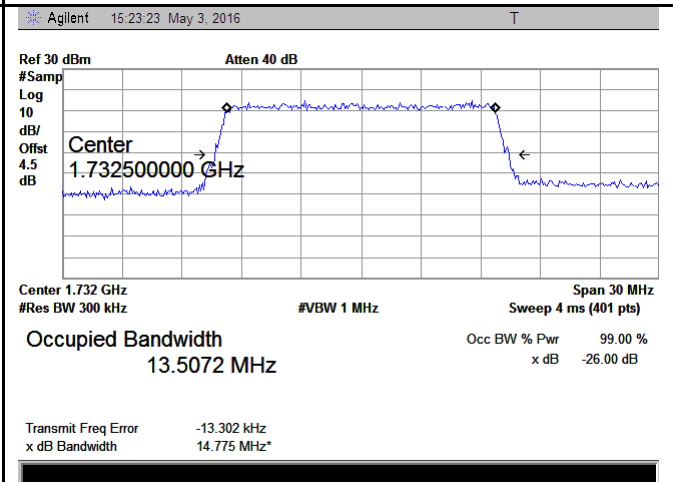
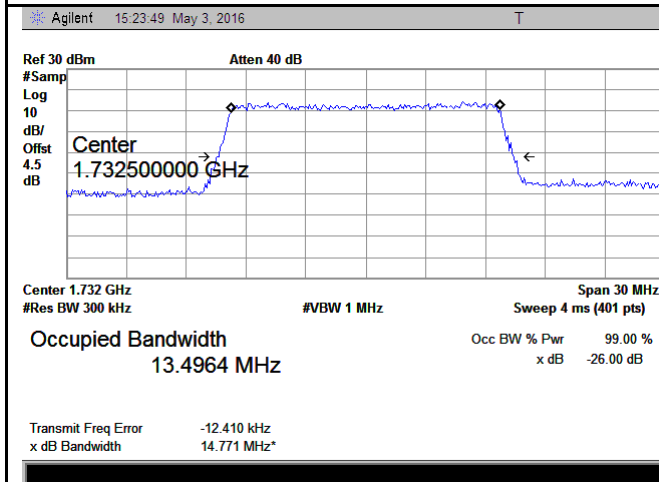


LTE band 4 - High CH 16QAM-10



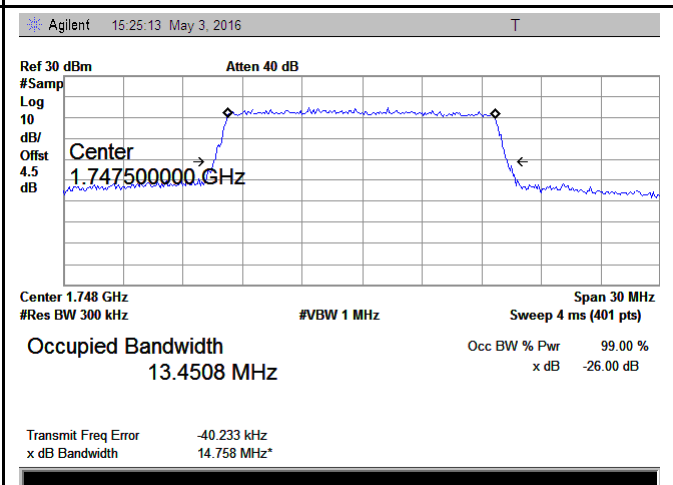
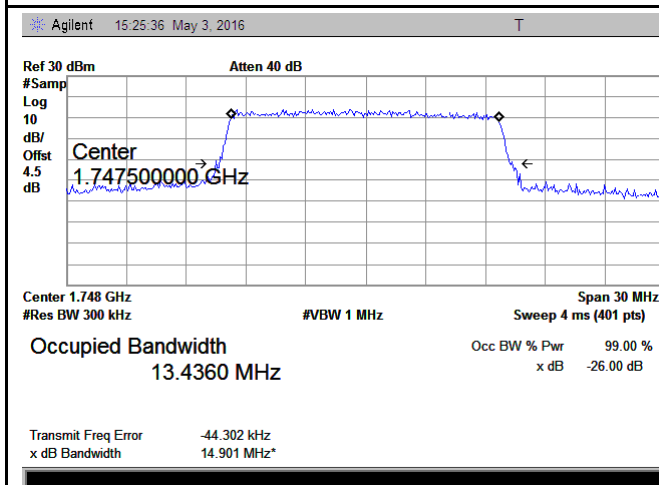
LTE band 4 - Low CH QPSK-15

LTE band 4 - Low CH 16QAM-15



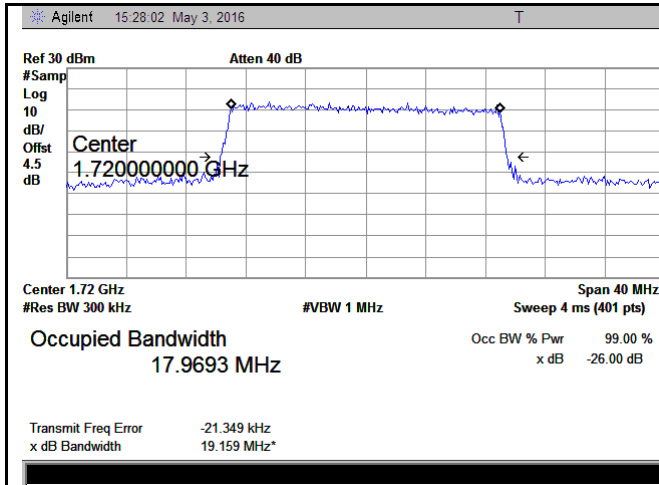
LTE band 4 - Middle CH QPSK-15

LTE band 4 - Middle CH 16QAM-15

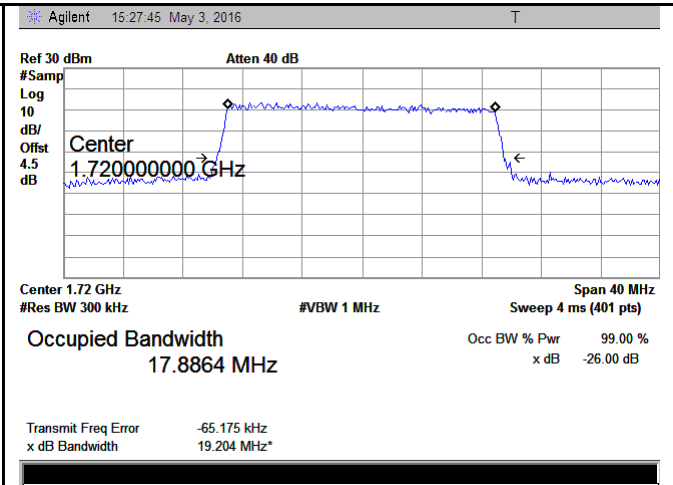


LTE band 4 - High CH QPSK-15

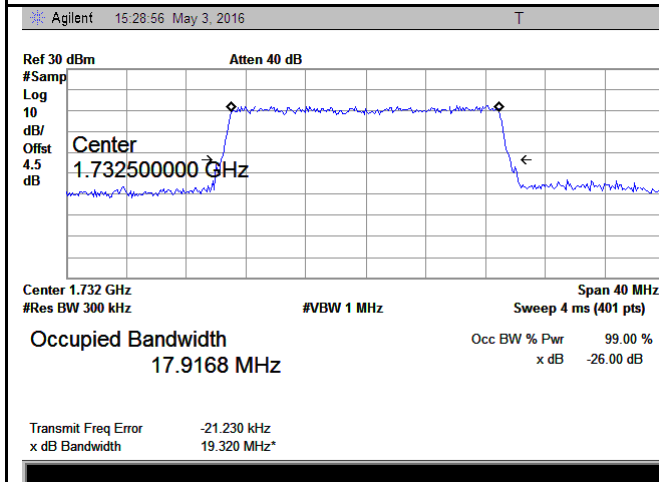
LTE band 4 - High CH 16QAM-15



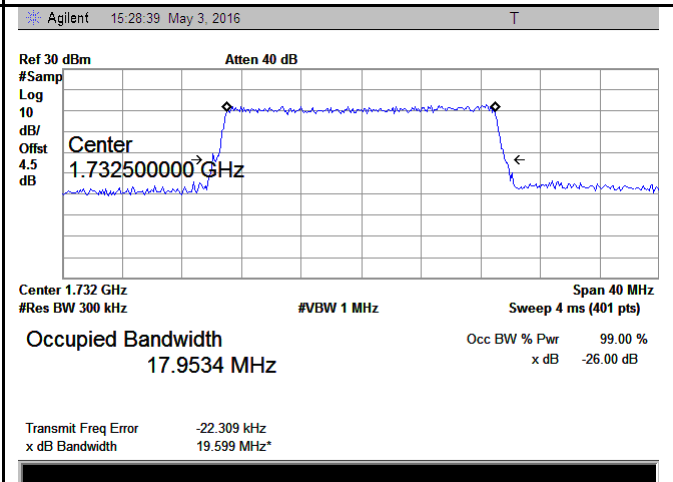
LTE band 4 - Low CH QPSK-20



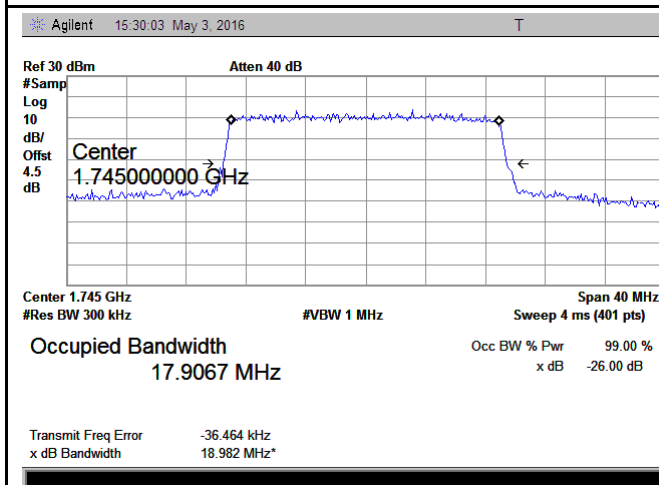
LTE band 4 - Low CH 16QAM-20



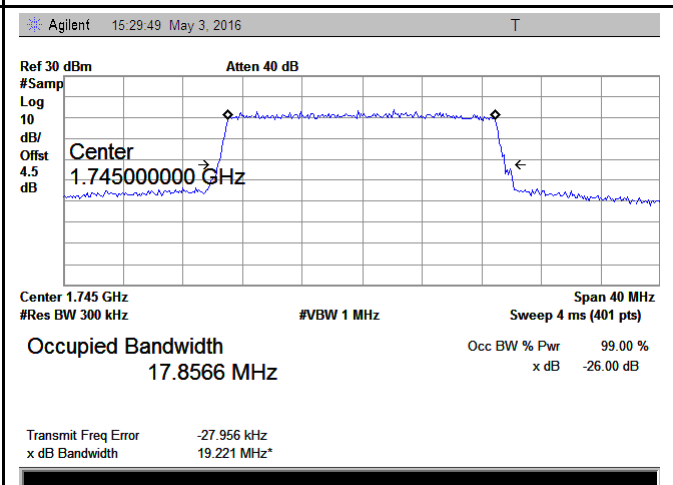
LTE band 4 - Middle CH QPSK-20



LTE band 4 - Middle CH 16QAM-20

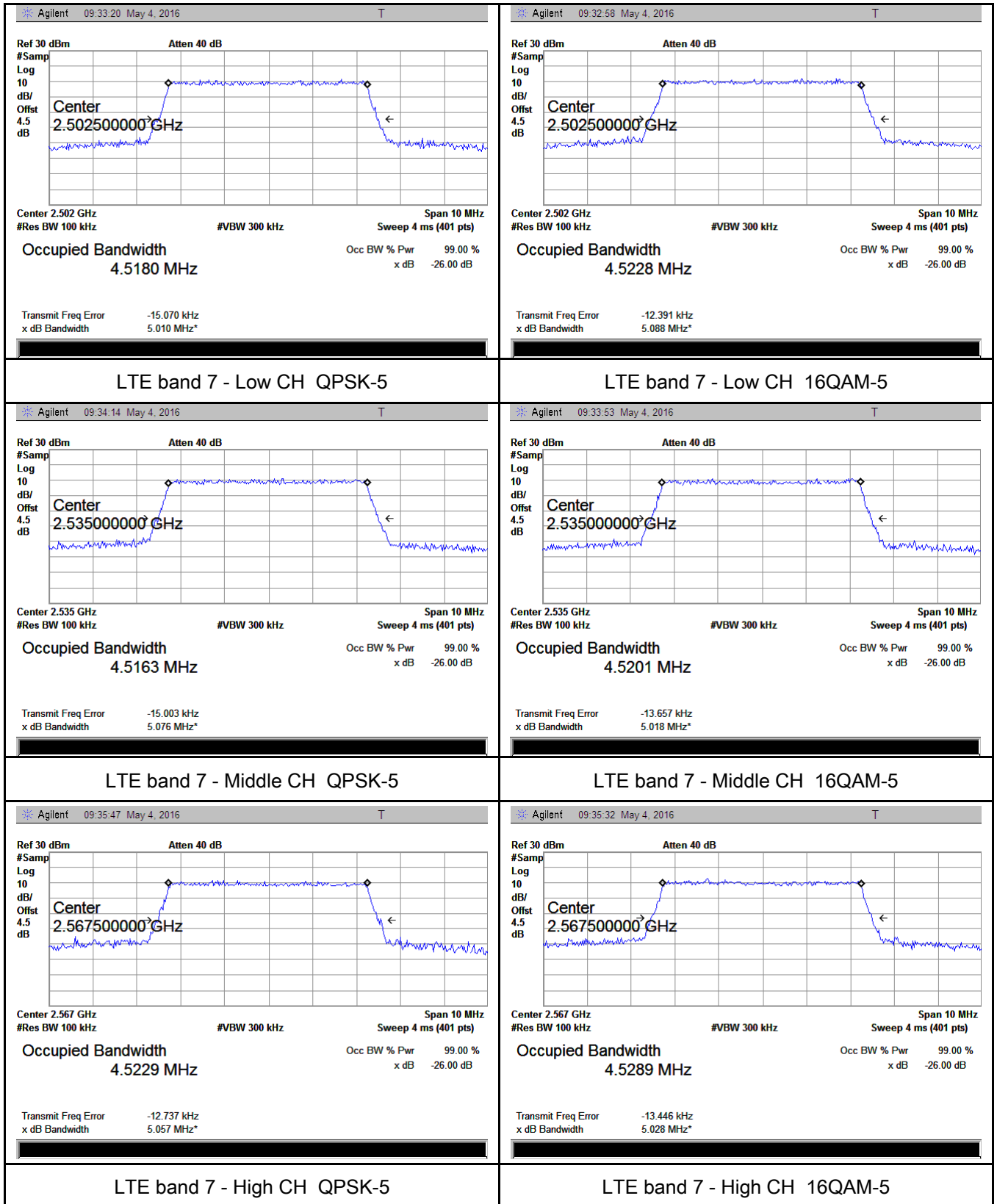


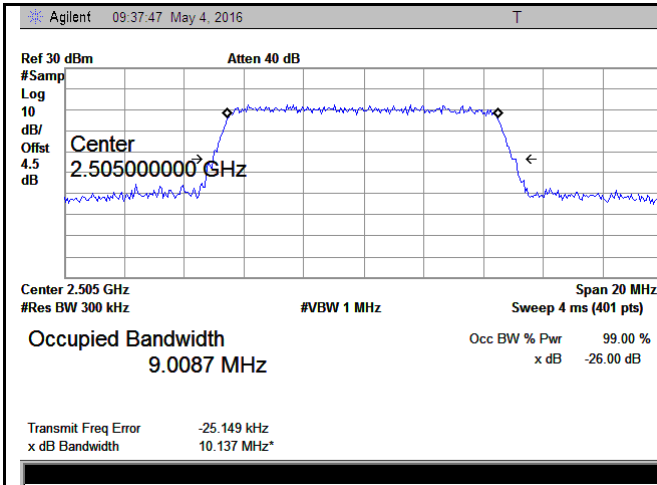
LTE band 4 - High CH QPSK-20



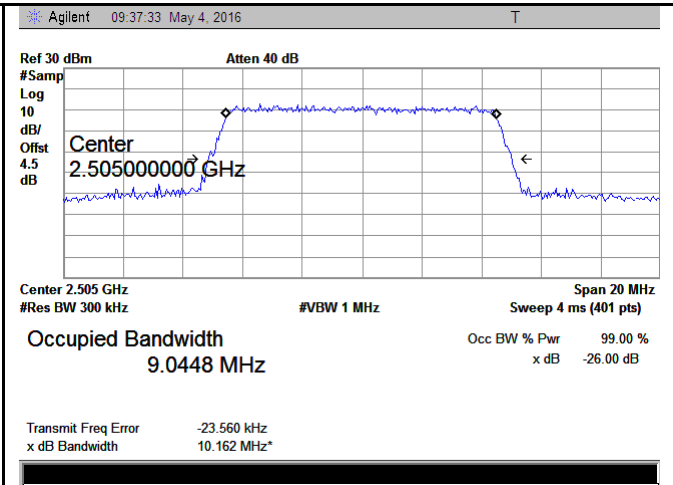
LTE band 4 - High CH 16QAM-20

LTE Band 7 (Part 27)

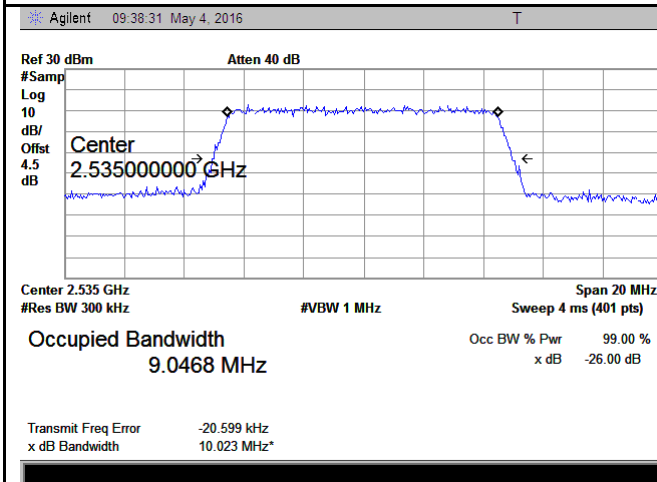




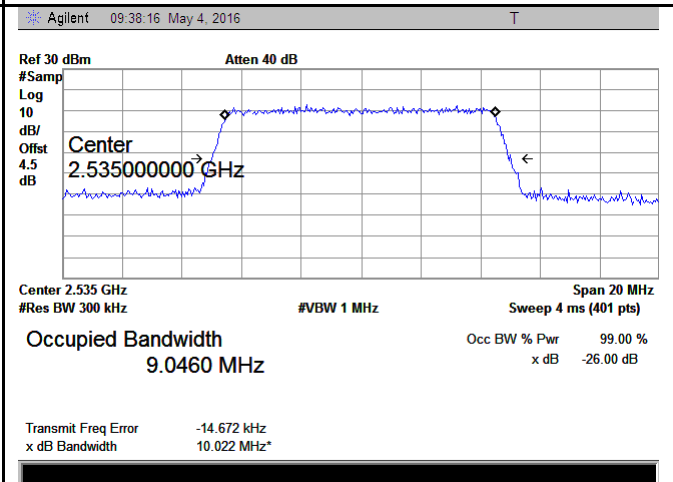
LTE band 7 - Low CH QPSK-10



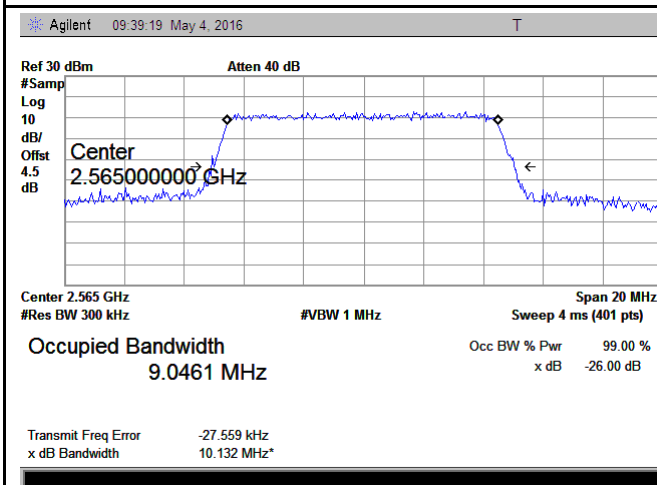
LTE band 7 - Low CH 16QAM-10



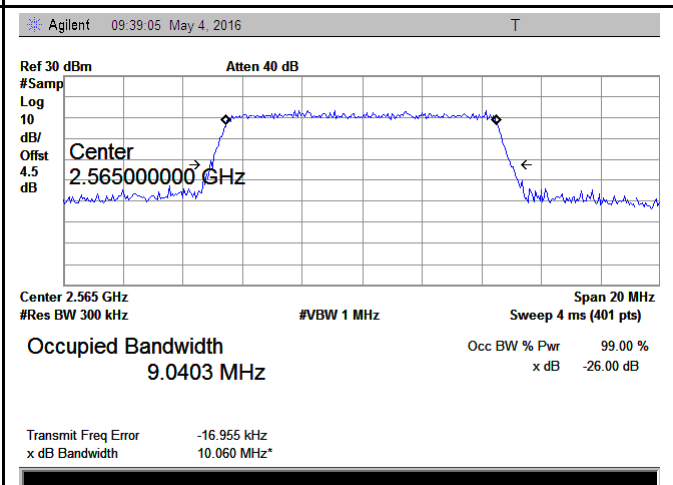
LTE band 7 - Middle CH QPSK-10



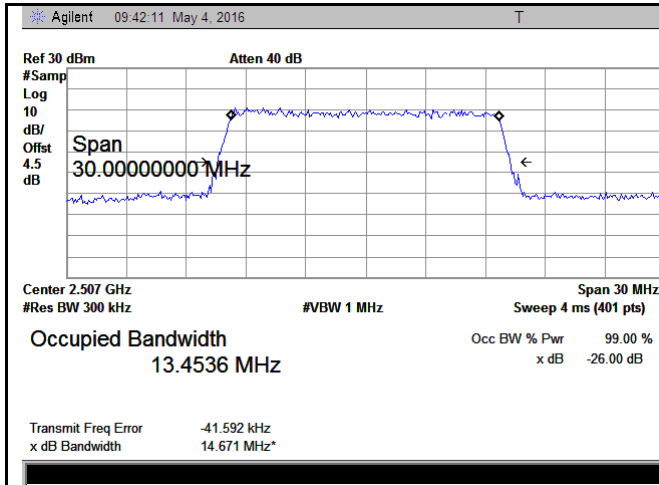
LTE band 7 - Middle CH 16QAM-10



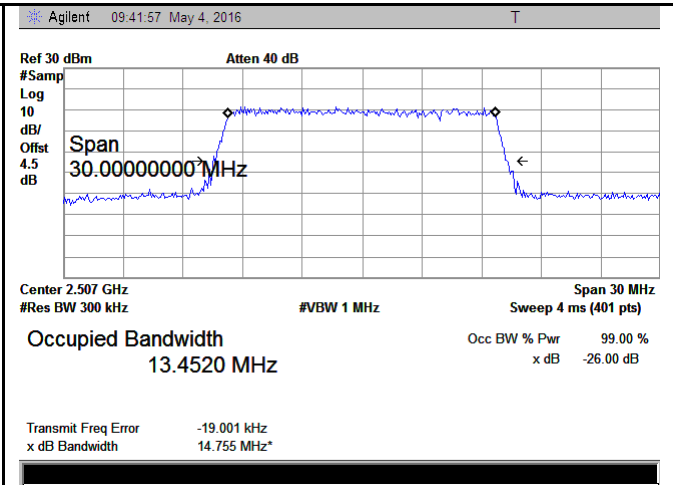
LTE band 7 - High CH QPSK-10



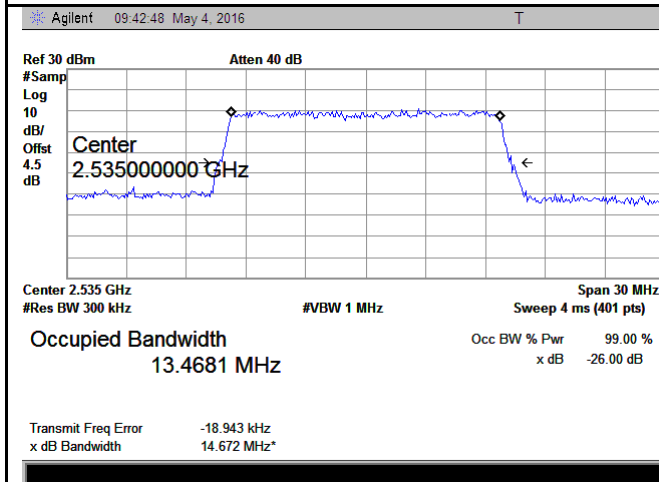
LTE band 7 - High CH 16QAM-10



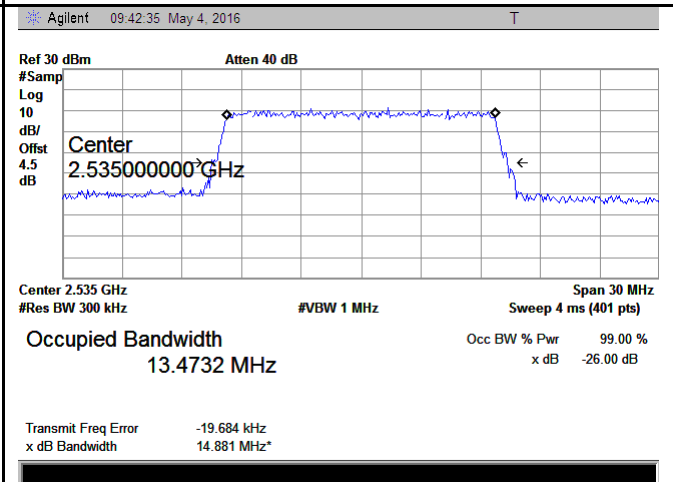
LTE band 7 - Low CH QPSK-15



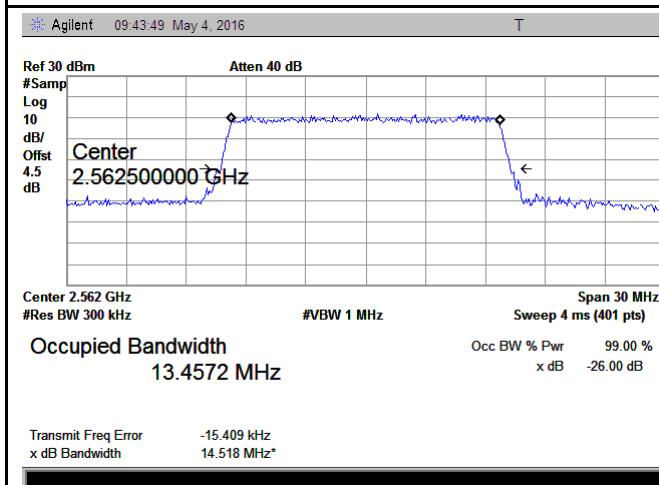
LTE band 7 - Low CH 16QAM-15



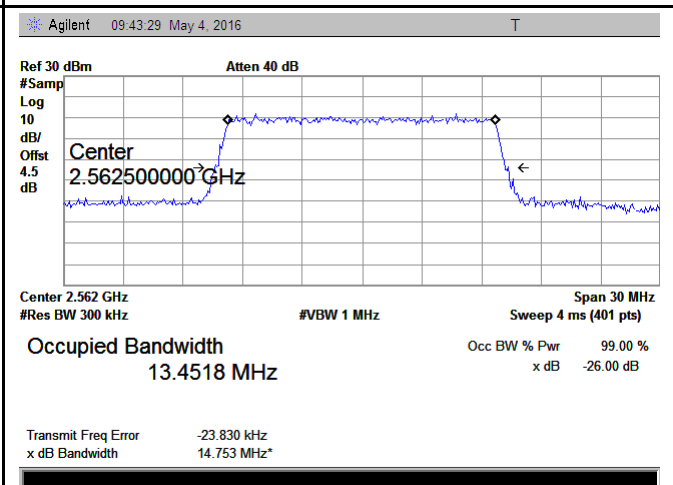
LTE band 7 - Middle CH QPSK-15



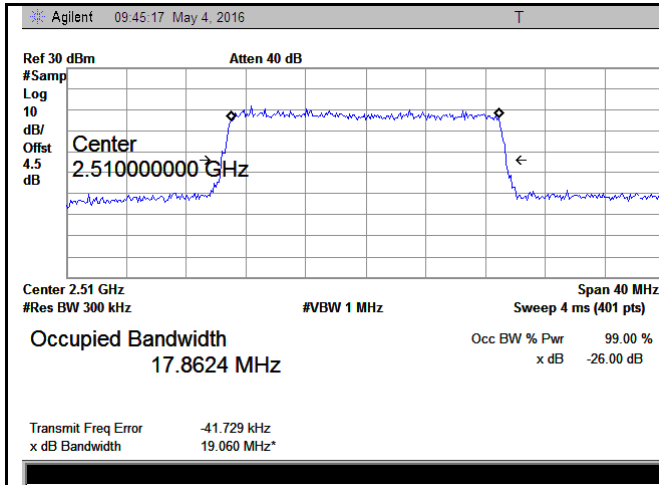
LTE band 7 - Middle CH 16QAM-15



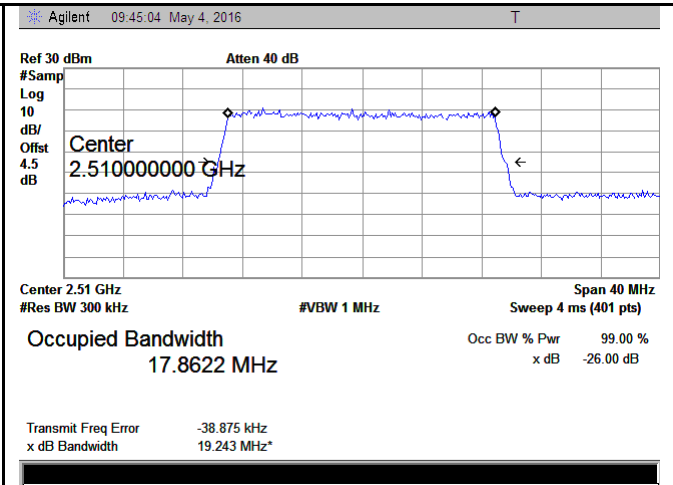
LTE band 7 - High CH QPSK-15



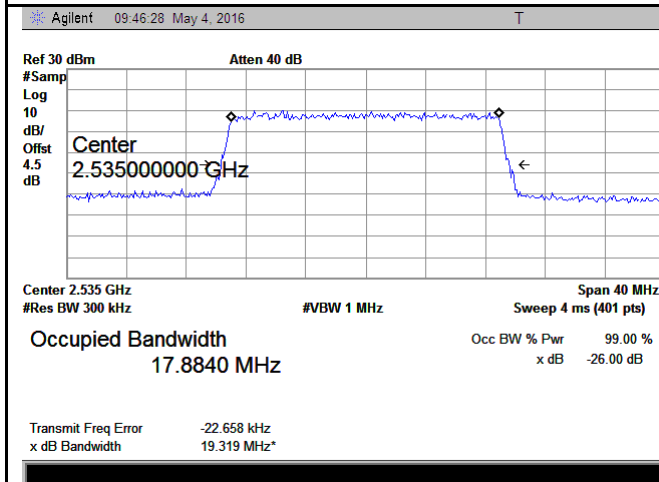
LTE band 7 - High CH 16QAM-15



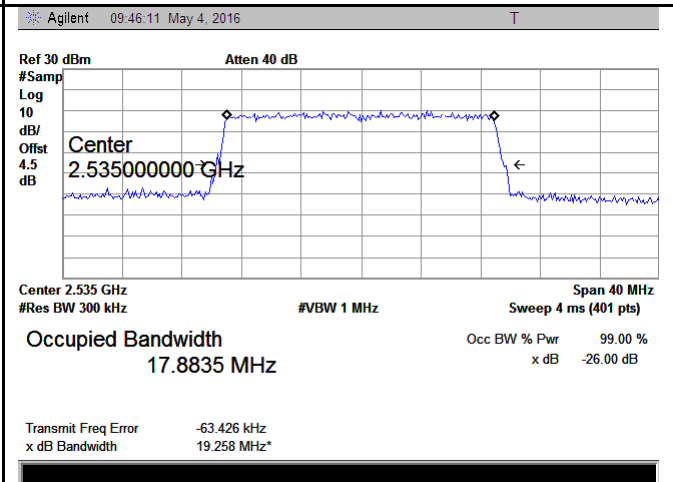
LTE band 7 - Low CH QPSK-20



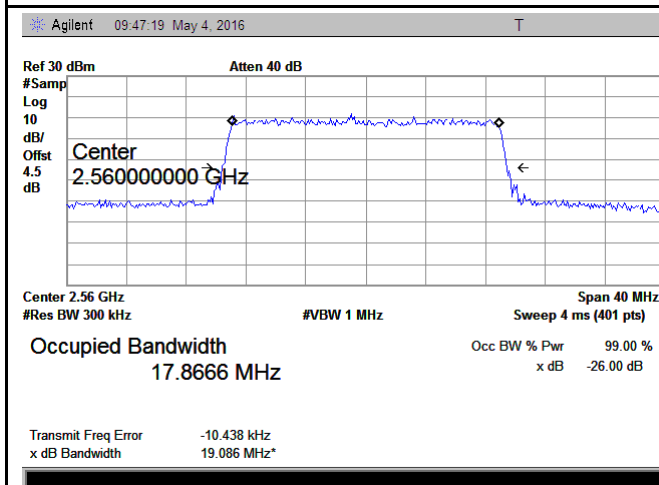
LTE band 7 - Low CH 16QAM-20



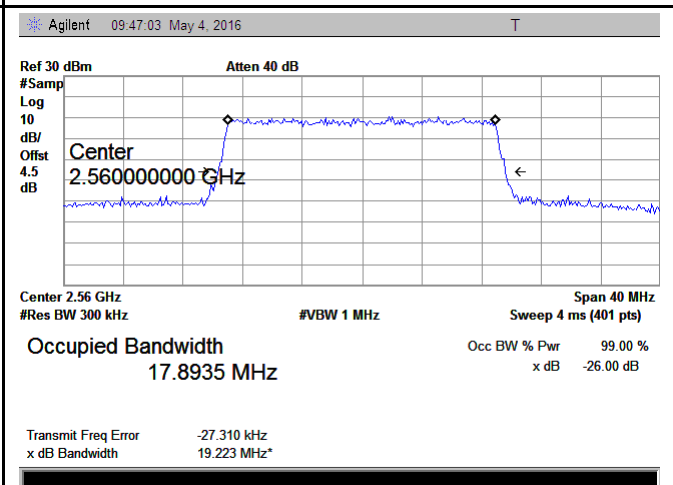
LTE band 7 - Middle CH QPSK-20



LTE band 7 - Middle CH 16QAM-20



LTE band 7 - High CH QPSK-20

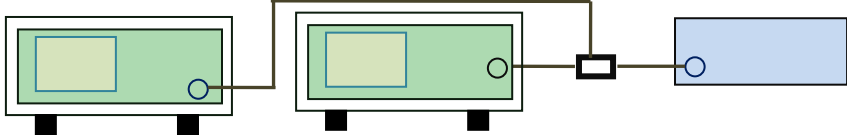


LTE band 7 - High CH 16QAM-20

6.5 Spurious Emissions at Antenna Terminals

Temperature	23°C
Relative Humidity	55%
Atmospheric Pressure	1003mbar
Test date :	May 03, 2016
Tested By :	Winnie Zhang

Requirement(s):

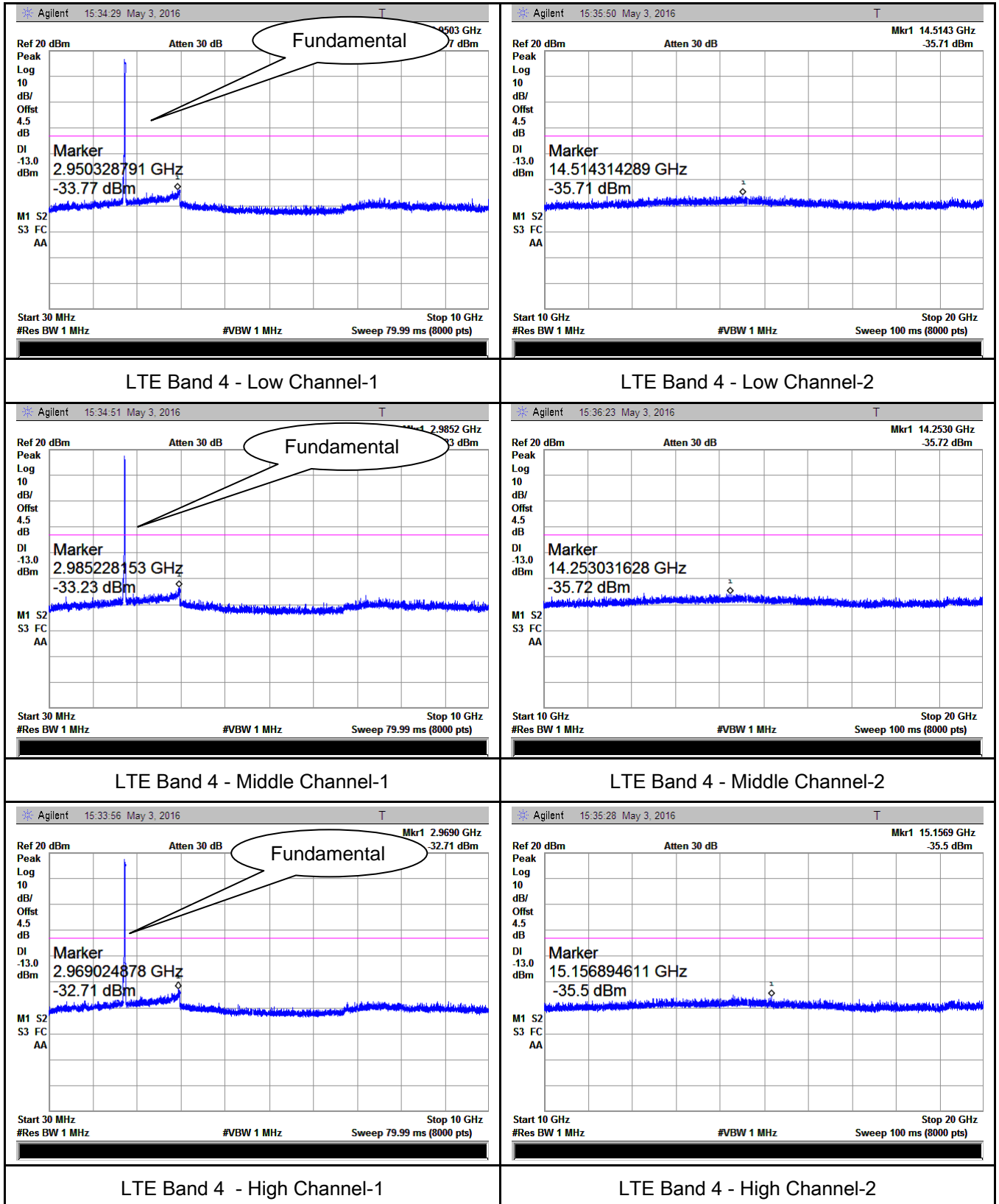
Spec	Item	Requirement	Applicable
§2.1051, § 27.53(h)	a)	The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB	<input checked="" type="checkbox"/>
Test Setup			
Test Procedure	<ul style="list-style-type: 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

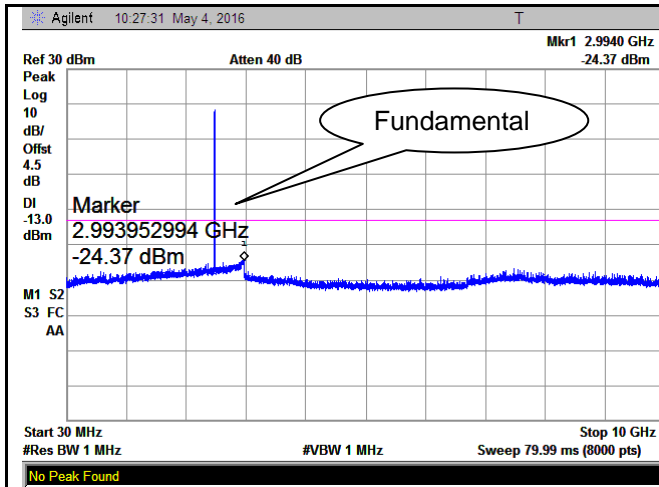
Test Plot ☒ Yes (See below) ☐ N/A

Test Plots 30MHz-5GHz

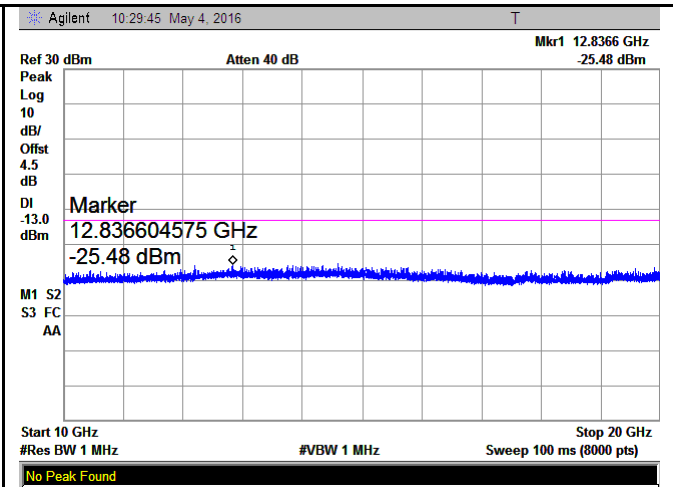
LTE Band 4 (Part27) result



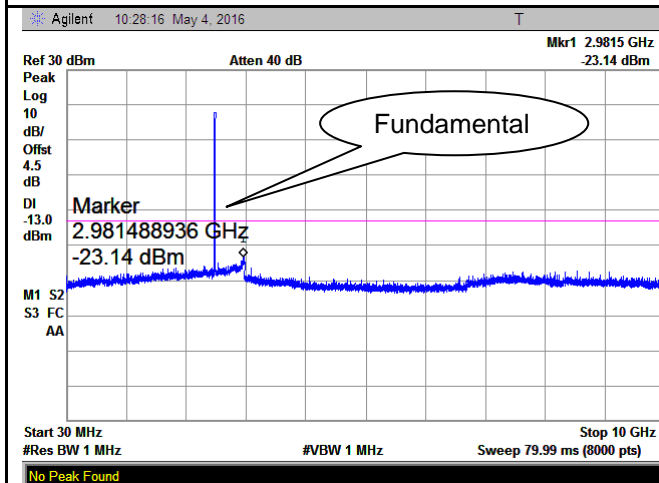
LTE Band 7 (Part 27)



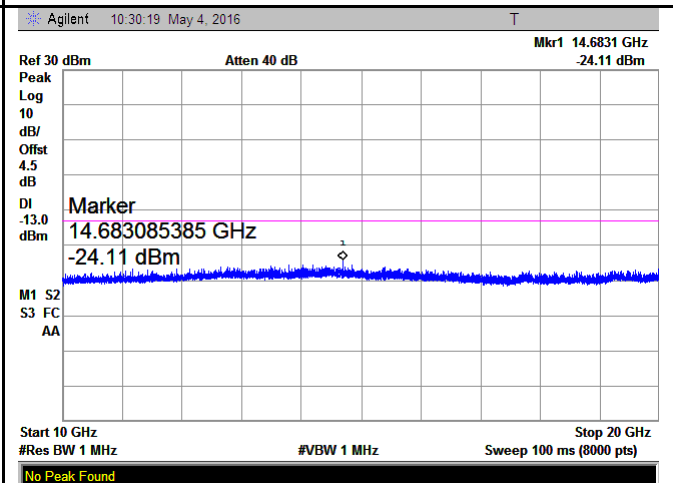
LTE Band 7 - Low Channel-1



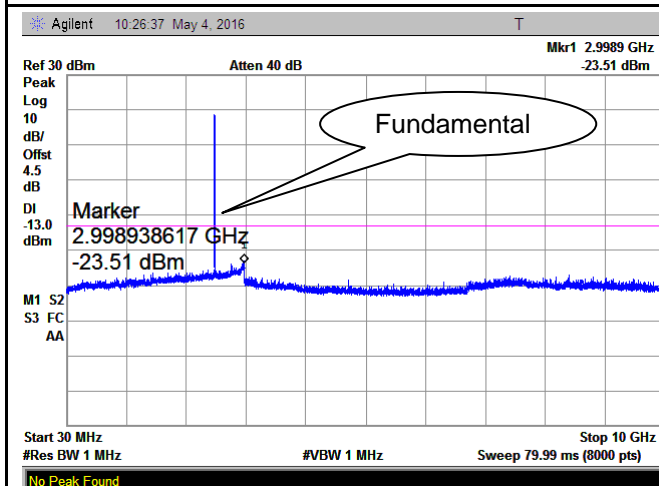
LTE Band 7 - Low Channel-2



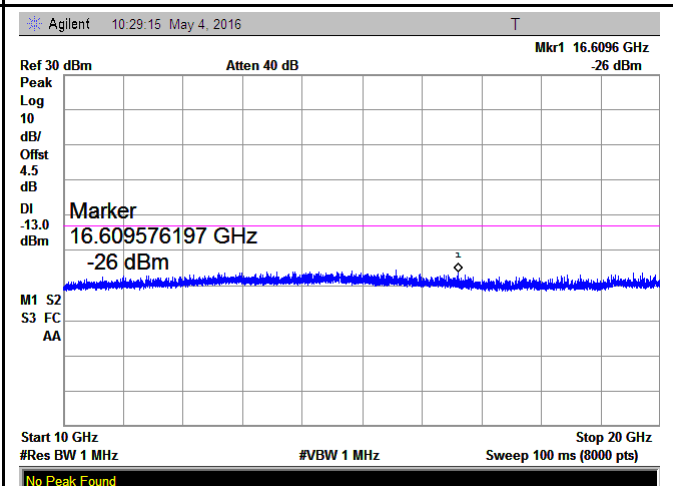
LTE Band 7 - Middle Channel-1



LTE Band 7 - Middle Channel-2



LTE Band 7 - High Channel-1



LTE Band 7 - High Channel-2

6.6 Spurious Radiated Emissions

Temperature	23°C
Relative Humidity	55%
Atmospheric Pressure	1003mbar
Test date :	May 03, 2016
Tested By :	Winnie Zhang

Requirement(s):

Spec	Item	Requirement	Applicable
§2.1053, § 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 setup	
------------	--

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> <p>EUT Field Strength = Raw Amplitude (dBμV/m) – Amplifier Gain (dB) + Antenna</p>
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	Factor (dB) + Cable Loss (dB) + Filter Attenuation (dB, if used)
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 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	-46.28	V	10.06	2.52	-38.74	-13	-25.74
3440	-46.51	H	10.06	2.52	-38.97	-13	-25.97
126.9	-44.67	V	-1.5	0.13	-46.3	-13	-33.30
214.5	-50.09	H	4.6	0.18	-45.67	-13	-32.67

Middle channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
3465	-46.33	V	10.09	2.52	-38.76	-13	-25.76
3465	-46.48	H	10.09	2.52	-38.91	-13	-25.91
126.3	-44.59	V	-1.5	0.13	-46.22	-13	-33.22
214.8	-49.92	H	4.6	0.18	-45.5	-13	-32.50

High channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
3490	-46.18	V	10.09	2.52	-38.61	-13	-25.61
3490	-46.35	H	10.09	2.52	-38.78	-13	-25.78
126.5	-44.43	V	-1.5	0.13	-46.06	-13	-33.06
214.2	-49.89	H	4.6	0.18	-45.47	-13	-32.47

Note:

1, The testing has been conformed to $10 \times 1752.5 \text{ MHz} = 17,525 \text{ MHz}$

2, All other emissions more than 30 dB below the limit

3, X-Axis, Y-Axis and -Axis were investigated. The results above show only the worst case.

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	-49.42	V	10.29	0.98	-40.11	-13	-27.11
5020	-49.35	H	10.29	0.98	-40.04	-13	-27.04
125.9	-43.61	V	-1.5	0.13	-45.24	-13	-32.24
213.5	-50.08	H	4.6	0.18	-45.66	-13	-32.66

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	-49.36	V	10.3	0.99	-40.05	-13	-27.05
5070	-49.22	H	10.3	0.99	-39.91	-13	-26.91
125.6	-43.78	V	-1.5	0.13	-45.41	-13	-32.41
213.8	-49.96	H	4.6	0.18	-45.54	-13	-32.54

High channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
5120	-49.51	V	10.32	1	-40.19	-13	-27.19
5120	-49.63	H	10.32	1	-40.31	-13	-27.31
125.4	-43.58	V	-1.5	0.13	-45.21	-13	-32.21
213.2	-50.17	H	4.6	0.18	-45.75	-13	-32.75

Note:

1, The testing has been conformed to $10 \times 2567.5 \text{ MHz} = 25,675 \text{ MHz}$

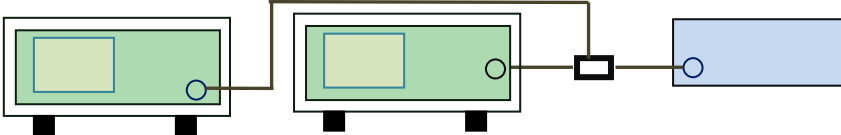
2, All other emissions more than 30 dB below the limit

3, X-Axis, Y-Axis and -Axis were investigated. The results above show only the worst case.

6.7 Band Edge

Temperature	23°C
Relative Humidity	55%
Atmospheric Pressure	1003mbar
Test date :	May 03, 2016
Tested By :	Winnie Zhang

Requirement(s):

Spec	Item	Requirement	Applicable
§ 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			
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

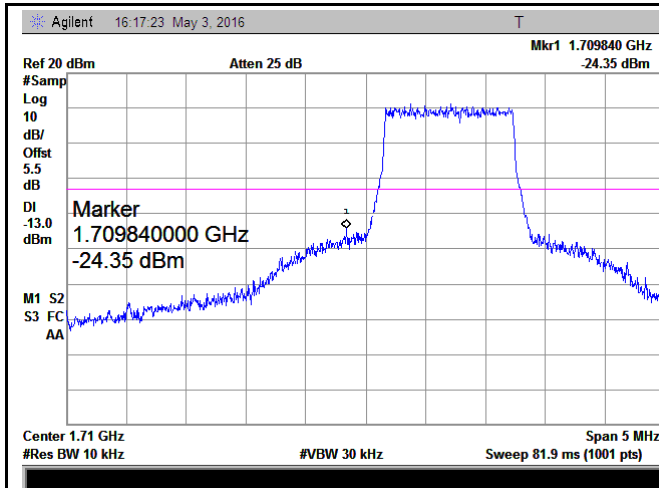
Test Plot ☒ Yes (See below) ☐ N/A

LTE Band 4 (Part 27) result

BW(MHz)	Channel	Frequency (MHz)	Mode	Emission (dBm)	Limit (dBm)
1.4	19957	1710.7	QPSK	-24.35	-13
			16QAM	-25.64	-13
1.4	20393	1754.3	QPSK	-23.33	-13
			16QAM	-22.90	-13
3	19965	1711.5	QPSK	-23.87	-13
			16QAM	-24.33	-13
3	20385	1753.5	QPSK	-22.55	-13
			16QAM	-21.46	-13
5	19975	1712.5	QPSK	-16.24	-13
			16QAM	-15.90	-13
5	20375	1752.5	QPSK	-19.12	-13
			16QAM	-18.50	-13
10	20000	1715	QPSK	-26.80	-13
			16QAM	-26.90	-13
10	20350	1750	QPSK	-27.16	-13
			16QAM	-27.91	-13
15	20025	1717.5	QPSK	-19.45	-13
			16QAM	-20.16	-13
15	20325	1747.5	QPSK	-23.67	-13
			16QAM	-23.23	-13
20	20050	1720	QPSK	-21.62	-13
			16QAM	-21.61	-13
20	20300	1745	QPSK	-24.46	-13
			16QAM	-24.17	-13

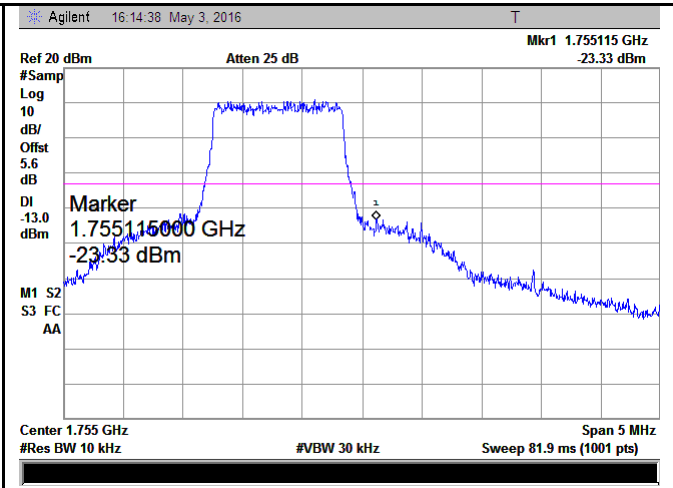
Test Plots

LTE Band 4 (Part 27)



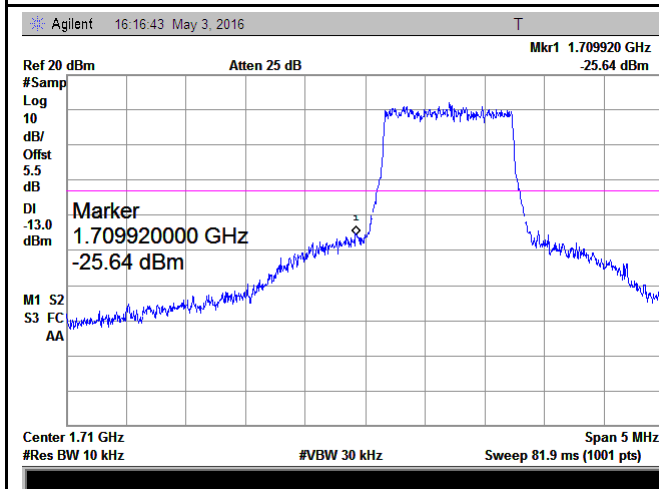
LTE Band 4 - Low Channel QPSK-1.4

Note: Offset=Cable loss (4.5) + 10log
(12.67/10)=4.5+1.0=5.5 dB



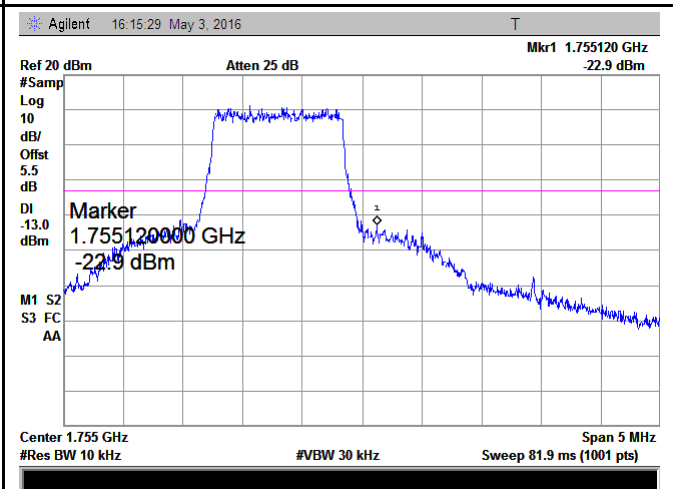
LTE Band 4 - High Channel QPSK-1.4

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



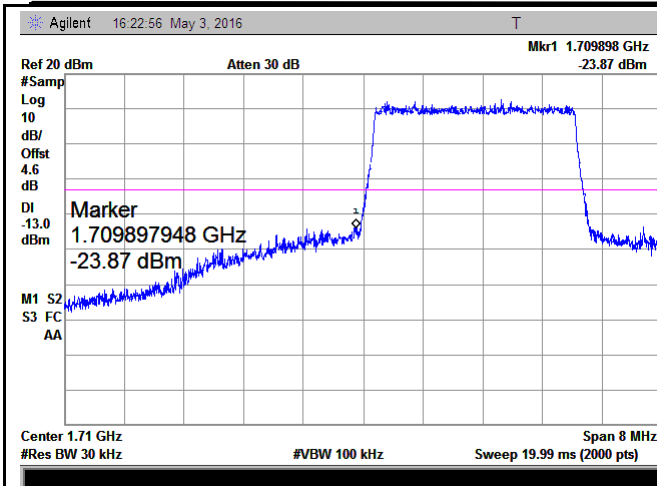
LTE Band 4 - Low Channel 16QAM-1.4

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



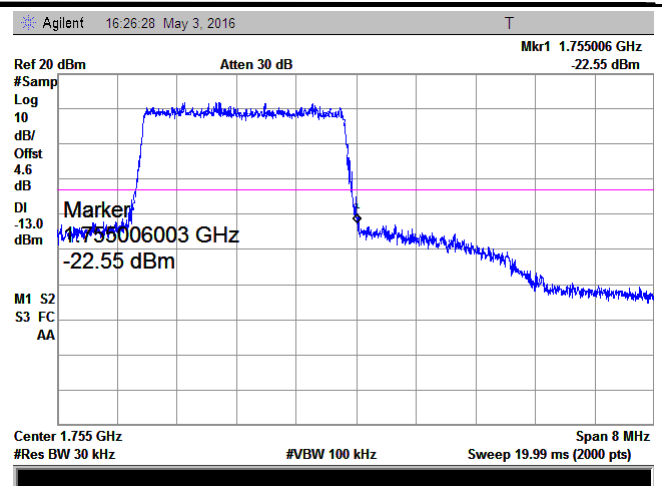
LTE Band 4 - High Channel 16QAM-1.4

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



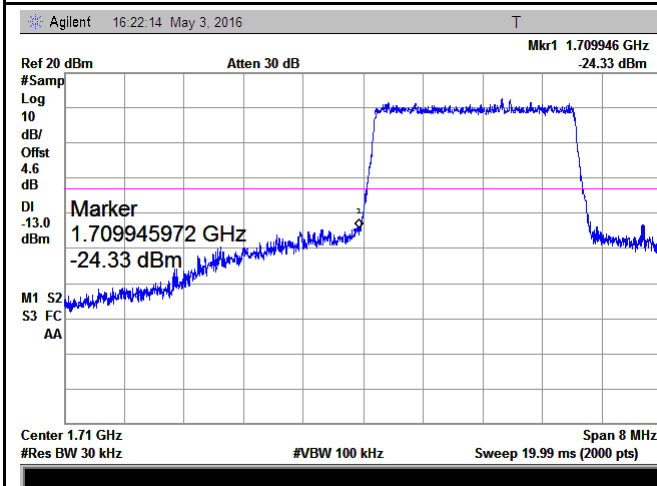
LTE Band 4 - Low Channel QPSK-3

Note: Offset=Cable loss (4.5) + 10log
(30.42/30)=4.5+0.1=4.6dB



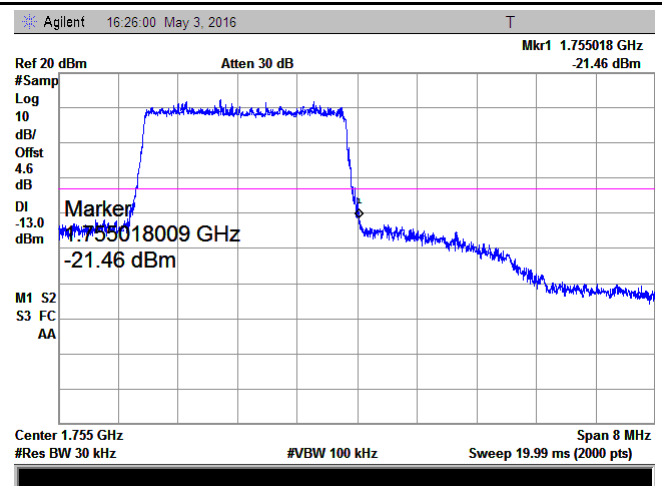
LTE Band 4 - High Channel QPSK-3

Note: Offset=Cable loss (4.5) + 10log
(31/30)=4.5+0.1=4.6 dB



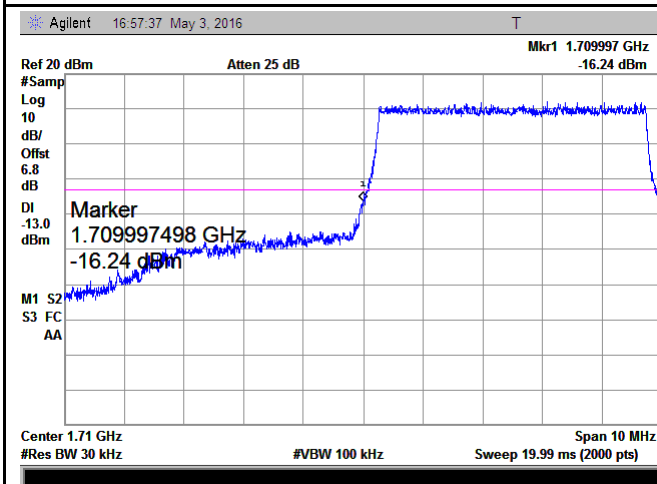
LTE Band 4 - Low Channel 16QAM-3

Note: Offset=Cable loss (4.5) + 10log
(30.92/30)=4.5+0.1=4.6 dB

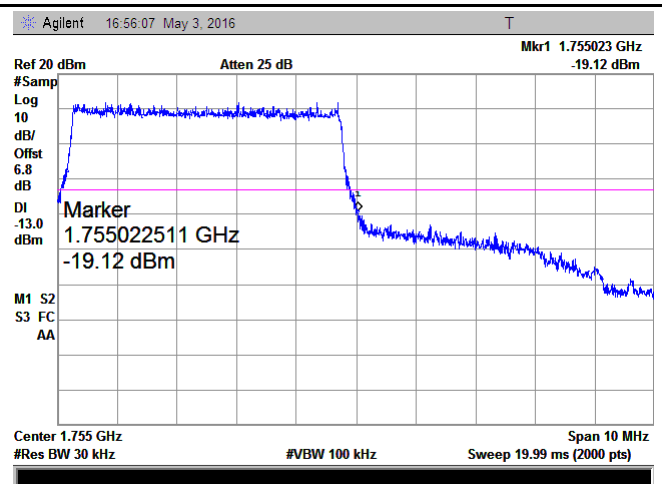


LTE Band 4 - High Channel 16QAM-3

Note: Offset=Cable loss (4.5) + 10log
(30.65/30)=4.5+0.1=4.6 dB

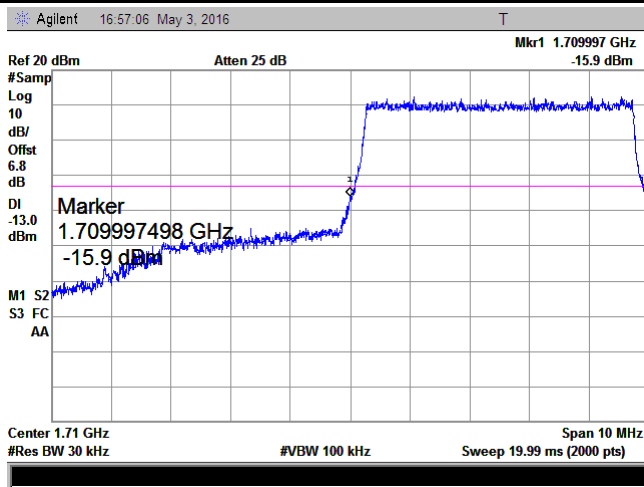


LTE Band 4 - Low Channel QPSK-5



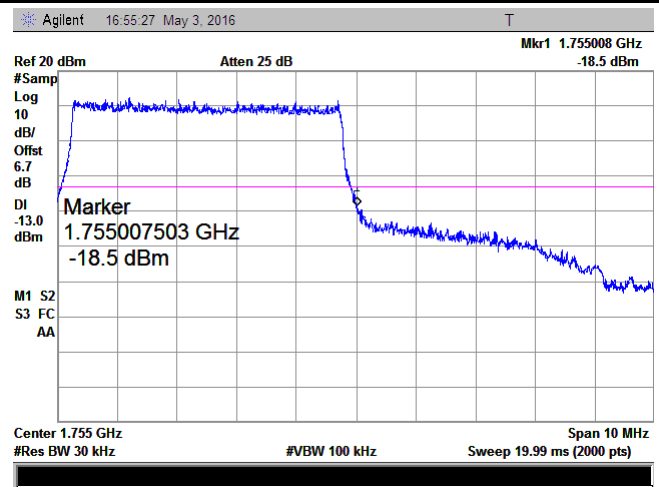
LTE Band 4 - High Channel QPSK-5

Note: Offset=Cable loss (4.5) + 10log
(50.48/30)=4.5+2.3=6.8 dB



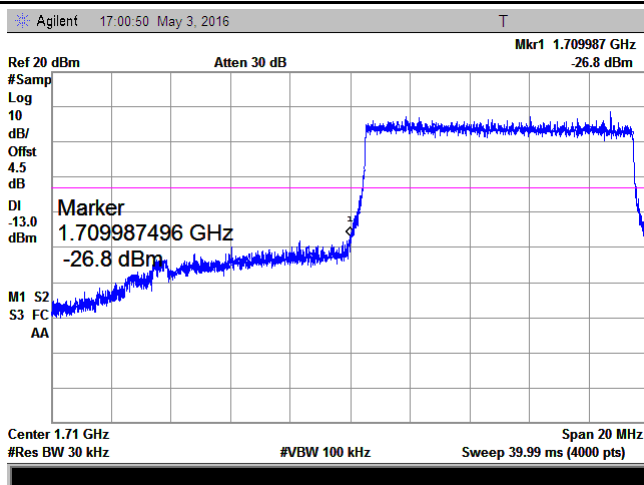
LTE Band 4 - Low Channel 16QAM-5

Note: Offset=Cable loss (4.5) + 10log
(50.70/30)=4.5+2.3=6.8dB



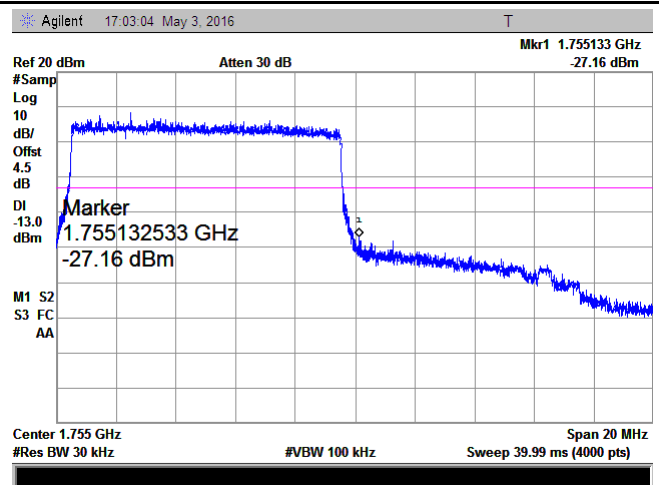
LTE Band 4 - High Channel 16QAM-5

Note: Offset=Cable loss (4.5) + 10log
(50.38/30)=4.5+2.3=6.8 dB

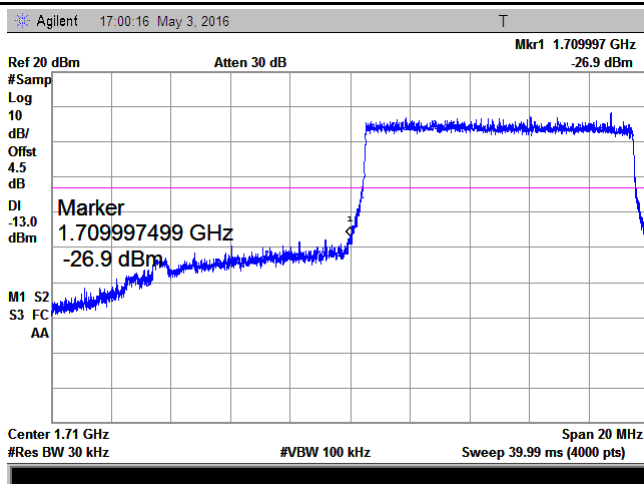


LTE Band 4 - Low Channel QPSK-10

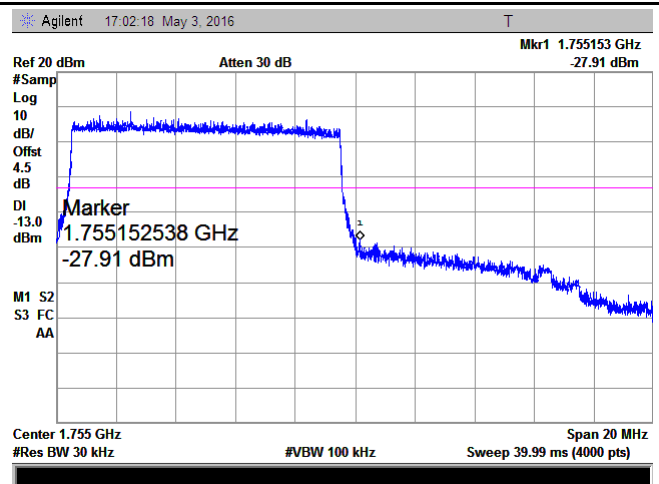
Note: Offset=Cable loss (4.5) + 10log
(50.27/30)=4.5+2.2=6.7 dB



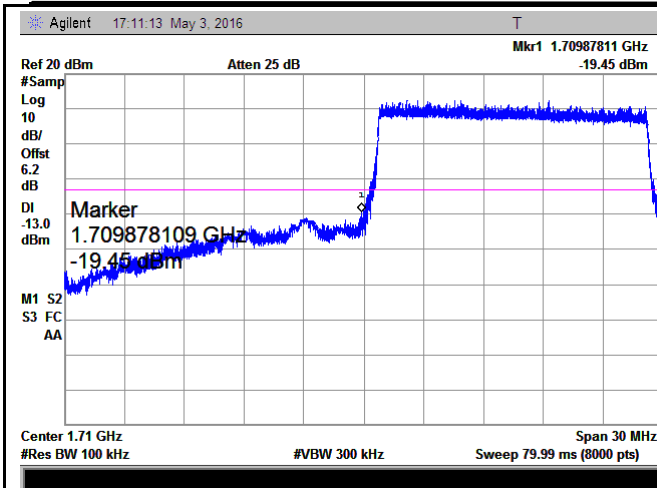
LTE Band 4 - High Channel QPSK-10



LTE Band 4 - Low Channel 16QAM-10

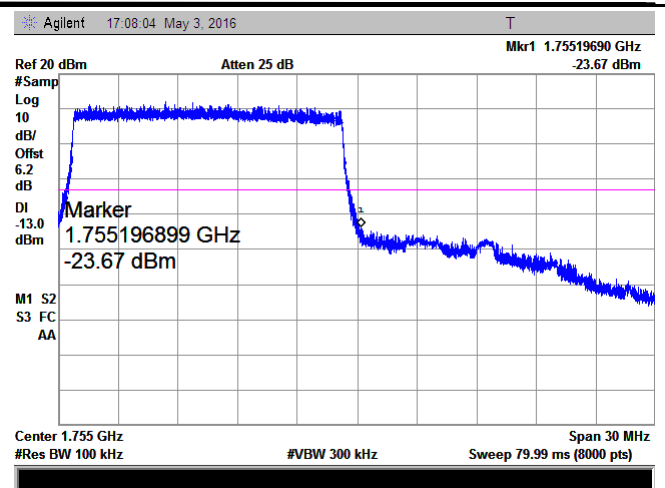


LTE Band 4 - High Channel 16QAM-10



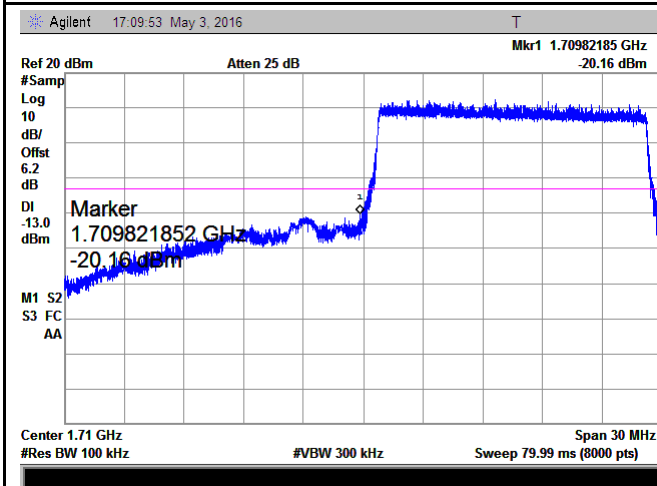
LTE Band 4 - Low Channel QPSK-15

Note: Offset=Cable loss (4.5) + 10log
(147.58/100)=4.5+1.7=6.2 dB



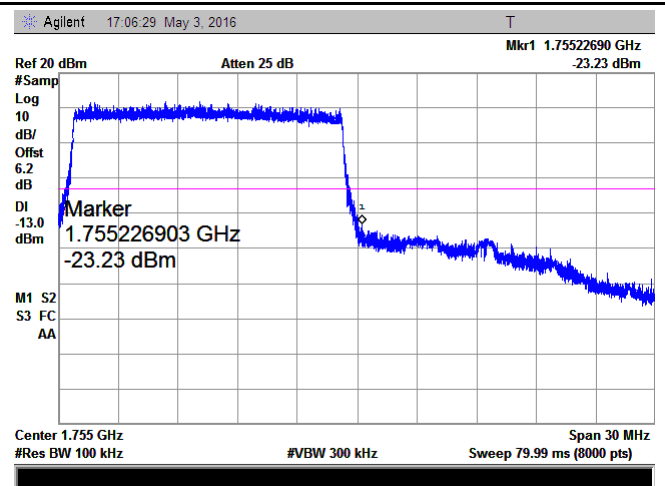
LTE Band 4 - High Channel QPSK-15

Note: Offset=Cable loss (4.5) + 10log
(149.01/100)=4.5+1.7=6.2 dB



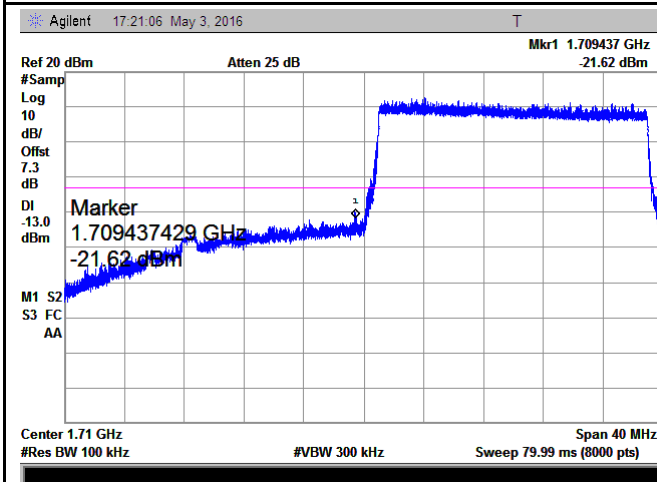
LTE Band 4 - Low Channel 16QAM-15

Note: Offset=Cable loss (4.5) + 10log
(147.55/100)=4.5+1.7=6.2 dB

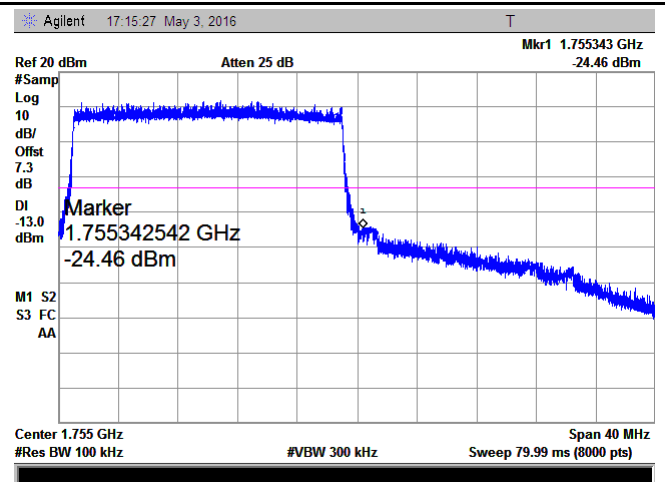


LTE Band 4 - High Channel 16QAM-15

Note: Offset=Cable loss (4.5) + 10log
(147.58/100)=4.5+1.7=6.2 dB

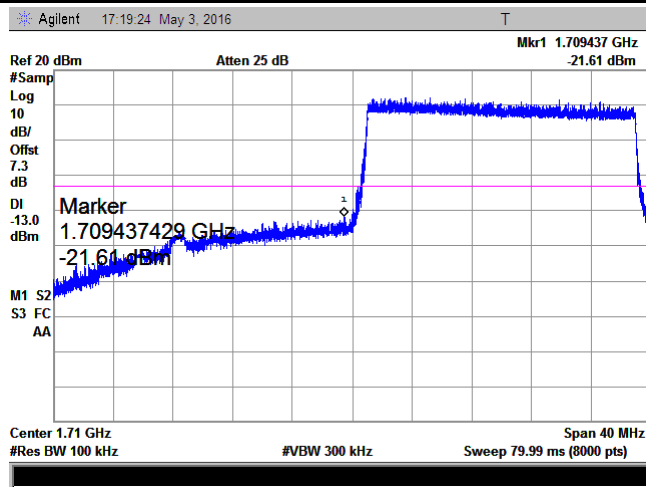


LTE Band 4 - Low Channel QPSK-20



LTE Band 4 - High Channel QPSK-20

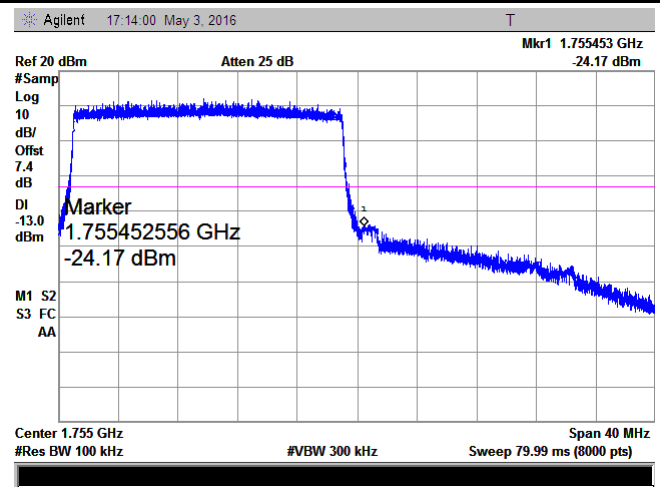
Note: Offset=Cable loss (4.5) + 10log
(191.59/100)=4.5+2.8=7.3 dB



LTE Band 4 - Low Channel 16QAM-20

Note: Offset=Cable loss (4.5) + 10log
(192.04/100)=4.5+2.8=7.3dB

Note: Offset=Cable loss (4.5) + 10log
(189.82/100)=4.5+2.8=7.3 dB



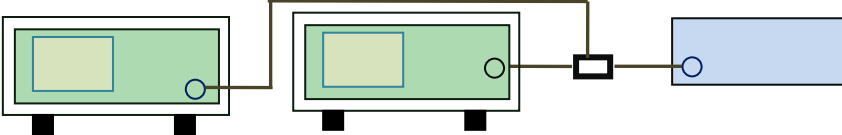
LTE Band 4 - High Channel 16QAM-20

Note: Offset=Cable loss (4.5) + 10log
(192.21/100)=4.5+2.9=7.4 dB

6.8 Band Edge 27.53(m)

Temperature	24°C
Relative Humidity	56%
Atmospheric Pressure	1004mbar
Test date :	May 04, 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		
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	

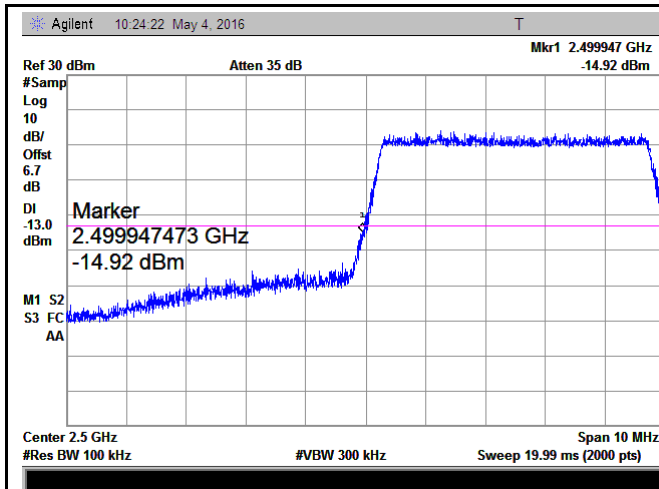
Test Data ☒ Yes ☐ N/A

Test Plot ☒ Yes (See below) ☐ N/A

LTE Band 7 (Part 27) result

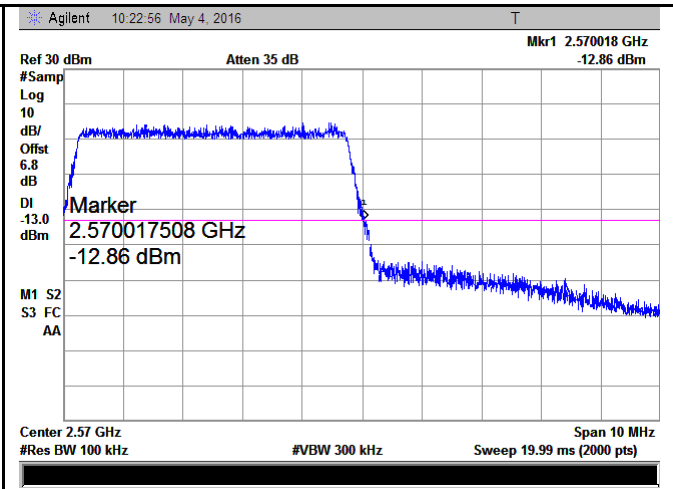
BW(MHz)	Channel	Frequency (MHz)	Mode	Emission (dBm)	Limit (dBm)
5	20775	2502.5	QPSK	-14.92	-13
			16QAM	-16.24	-13
5	21425	2567.5	QPSK	-12.86	-13
			16QAM	-14.88	-13
10	20800	2505	QPSK	-25.73	-13
			16QAM	-25.42	-13
10	21400	2562.5	QPSK	-22.57	-13
			16QAM	-23.04	-13
15	20825	2507.5	QPSK	-25.96	-13
			16QAM	-24.79	-13
15	21400	2562.5	QPSK	-25.68	-13
			16QAM	-26.29	-13
20	20850	2510	QPSK	-30.32	-13
			16QAM	-28.20	-13
20	21350	2560	QPSK	-29.57	-13
			16QAM	-28.05	-13

LTE Band 7 (Part 27)



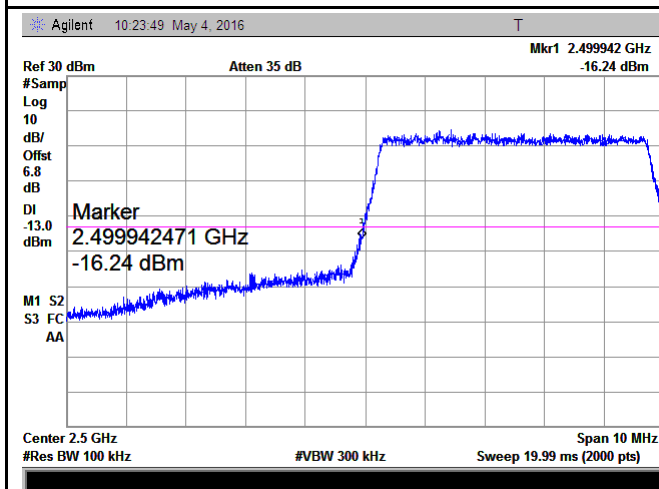
LTE Band 7 - Low Channel QPSK-5

Note: Offset=Cable loss (4.5) + 10log
(50.10/30)=4.5+2.2=6.7 dB



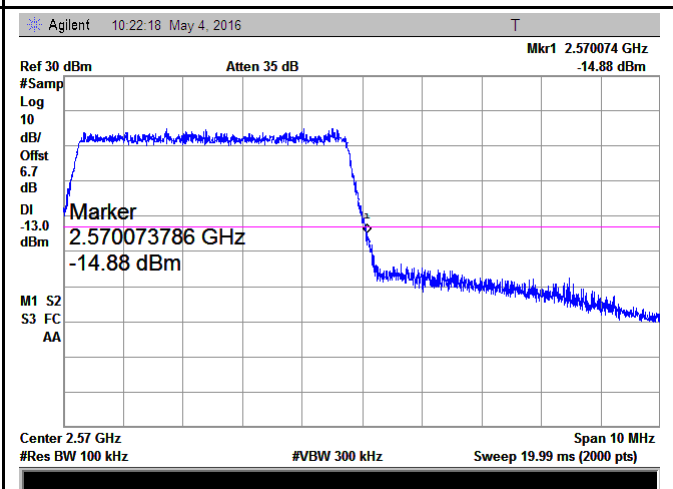
LTE Band 7 - High Channel QPSK-5

Note: Offset=Cable loss (4.5) + 10log
(50.57/30)=4.5+2.3=6.8 dB



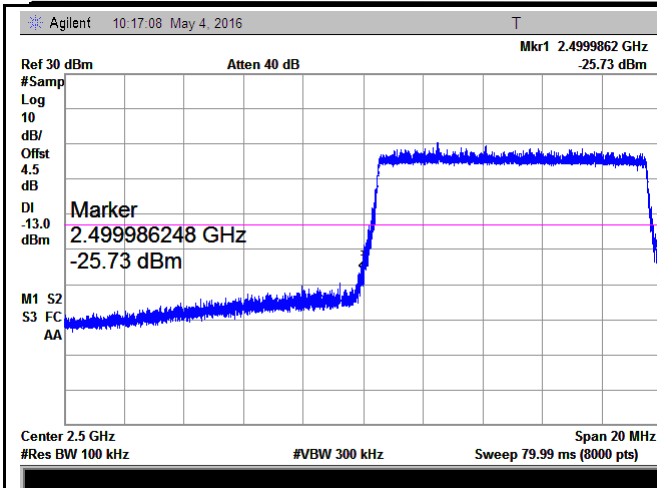
LTE Band 7 - Low Channel 16QAM-5

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

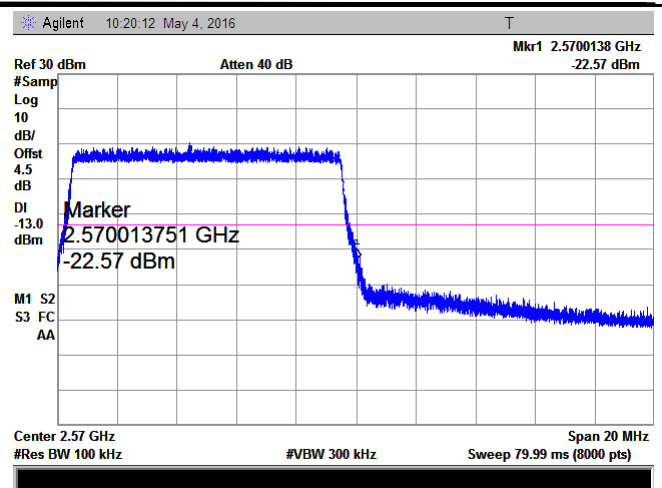


LTE Band 7 - High Channel 16QAM-5

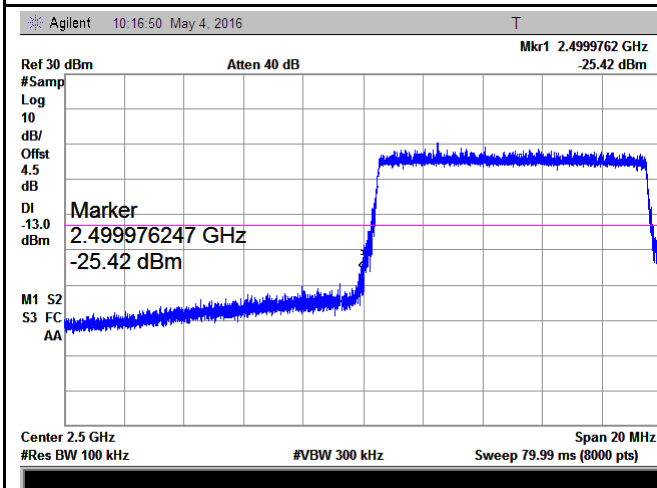
Note: Offset=Cable loss (4.5) + 10log
(50.28/30)=4.5+2.2=6.7 dB



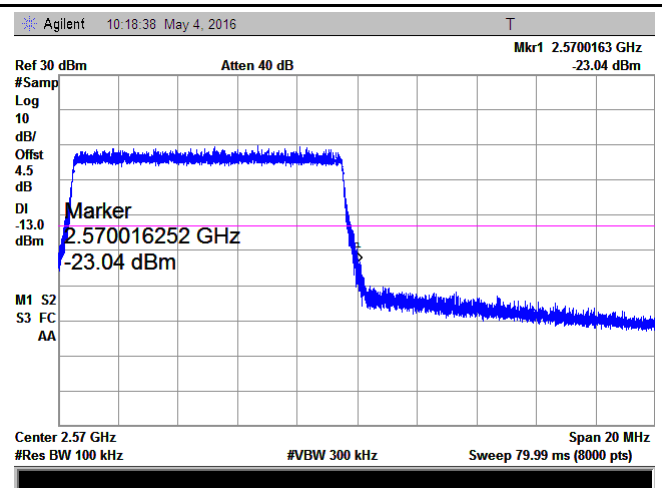
LTE Band 7 - Low Channel QPSK-10



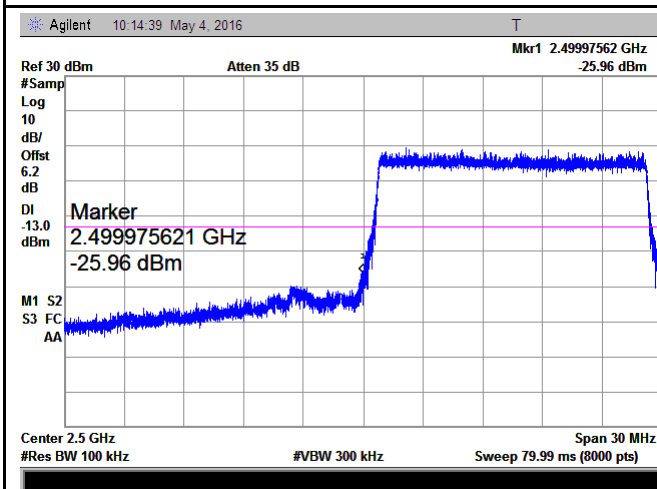
LTE Band 7 - High Channel QPSK-10



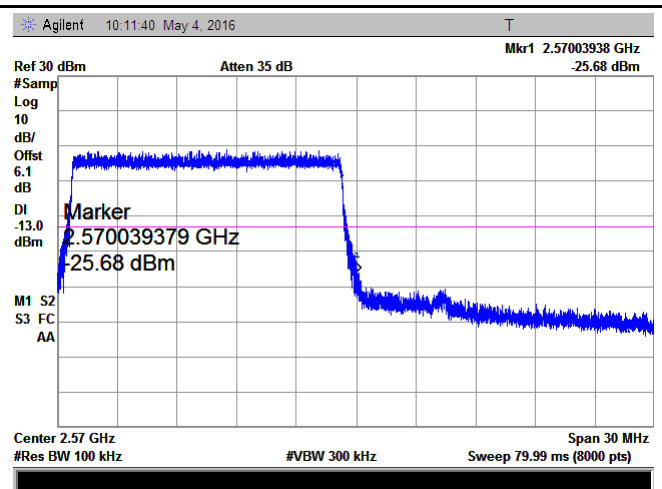
LTE Band 7 - Low Channel 16QAM-10



LTE Band 7 - High Channel 16QAM-10



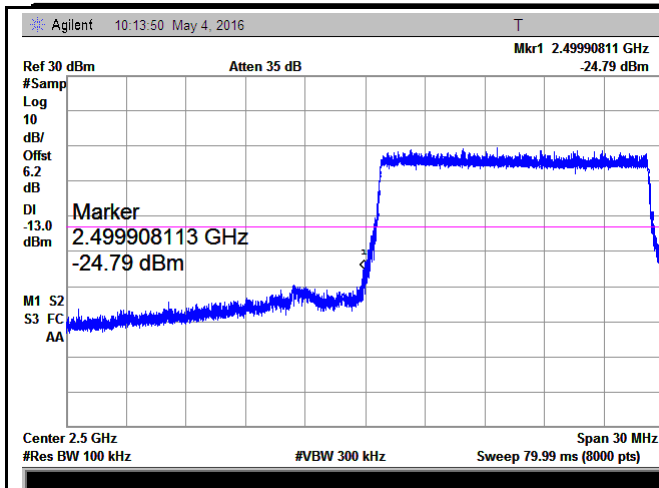
LTE Band 7 - Low Channel QPSK-15



LTE Band 7 - High Channel QPSK-15

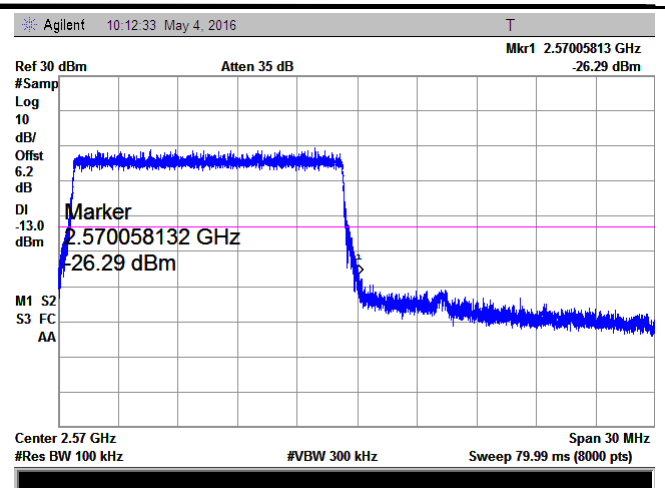
Note: Offset=Cable loss (4.5) + 10log
(146.71/100)=4.5+1.7=6.2 dB

Note: Offset=Cable loss (4.5) + 10log
(145.18/100)=4.5+1.6=6.1 dB



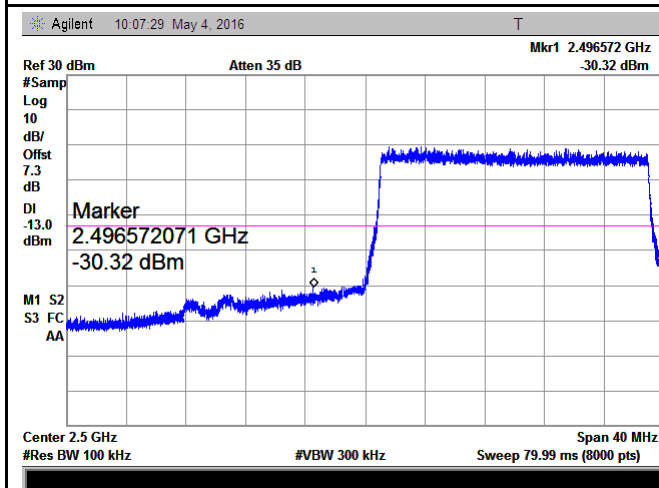
LTE Band 7 - Low Channel 16QAM-15

Note: Offset=Cable loss (4.5) + 10log
(147.55/100)=4.5+1.7=6.2 dB



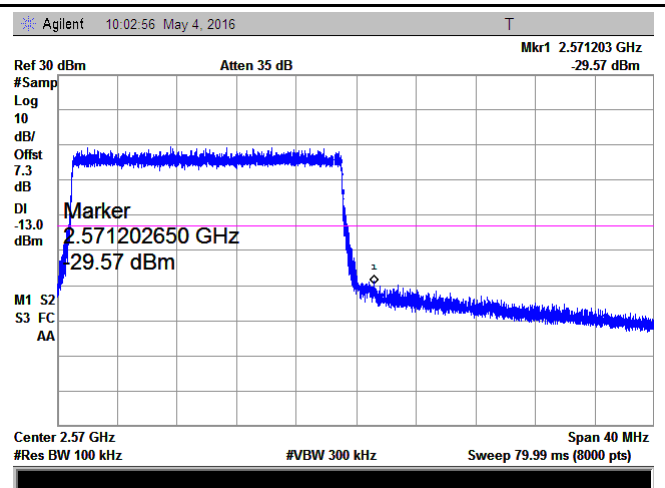
LTE Band 7 - High Channel 16QAM-15

Note: Offset=Cable loss (4.5) + 10log
(147.53/100)=4.5+1.7=6.2 dB



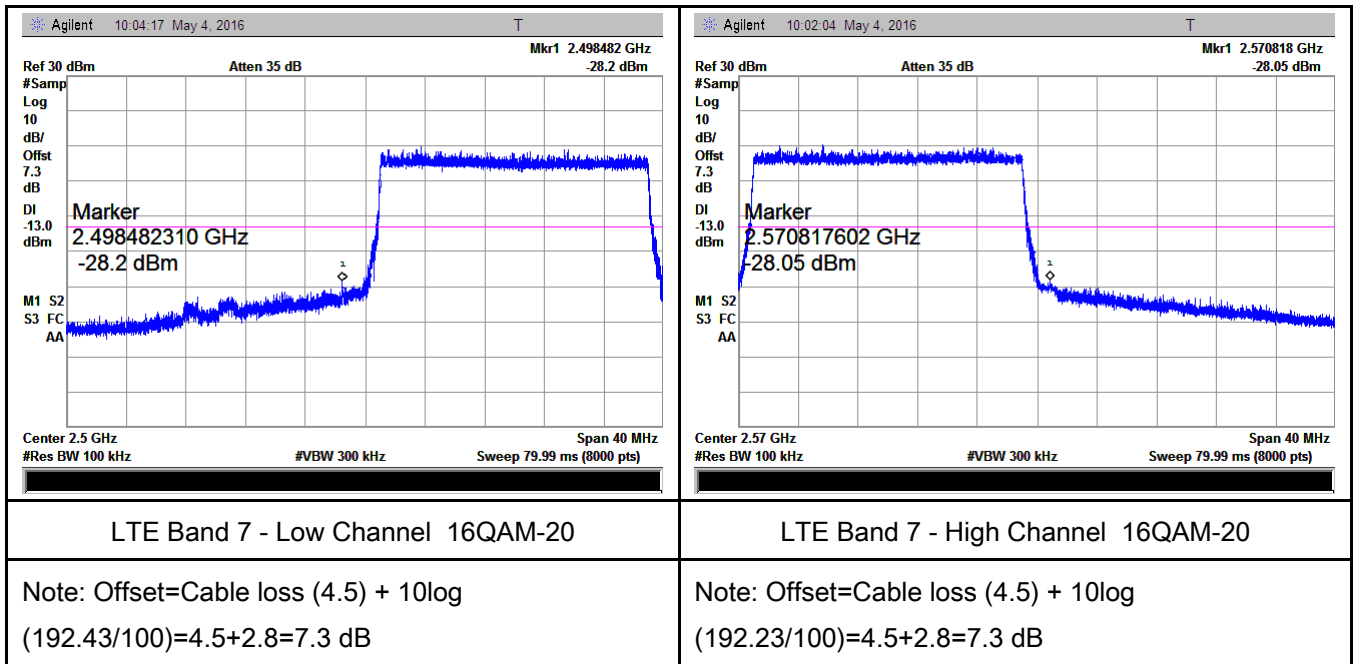
LTE Band 7 - Low Channel QPSK-20

Note: Offset=Cable loss (4.5) + 10log
(190.6/100)=4.5+2.8=7.3 dB



LTE Band 7 - High Channel QPSK-20

Note: Offset=Cable loss (4.5) + 10log
(190.86/100)=4.5+2.8=7.3 dB

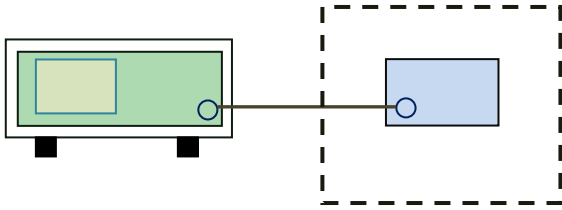


6.9 Frequency Stability

Temperature	23°C
Relative Humidity	55%
Atmospheric Pressure	1003mbar
Test date :	May 03, 2016
Tested By :	Winnie Zhang

Requirement(s):

Spec	Item	Requirement	Applicable																																
§2.1055 ; § 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 (pp)</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> <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>	Frequency Range (MHz)	Base, fixed (ppm)	Mobile ≤ 3 watts (pp)	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 (pp)	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																																

Test setup	
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	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°C at normal supply voltage.
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail

Test Data ☒ Yes ☐ N/A

Test Plot ☐ Yes (See below) ☒ N/A

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	17	0.0098	2.5
0		15	0.0087	2.5
10		10	0.0058	2.5
20		8	0.0046	2.5
30		11	0.0063	2.5
40		13	0.0075	2.5
50		17	0.0098	2.5
55		19	0.0110	2.5
25	4.2	11	0.0063	2.5
	3.5	13	0.0075	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	-17	0.0067	2.5
0		-13	0.0051	2.5
10		-10	0.0039	2.5
20		-8	0.0032	2.5
30		-11	0.0043	2.5
40		-15	0.0059	2.5
50		-17	0.0067	2.5
55		-21	0.0083	2.5
25	4.2	-13	0.0051	2.5
	3.5	-12	0.0047	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	03/27/2016	03/26/2017	<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

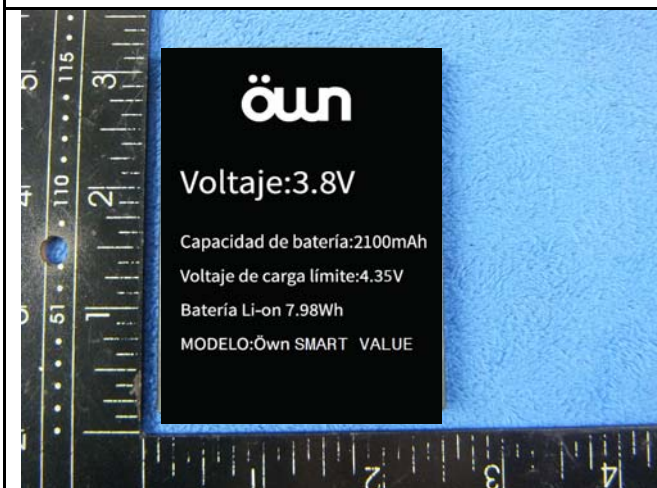
Annex B.ii. Photograph: EUT Internal Photo



Cover Off - Top View 1



Cover Off - Top View 2



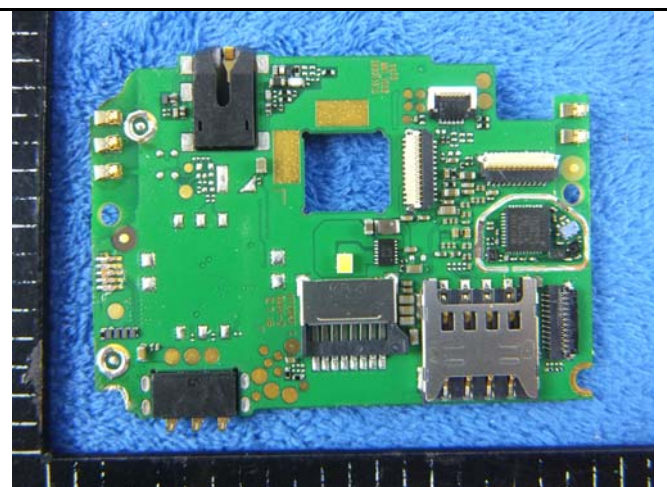
Battery - Front View



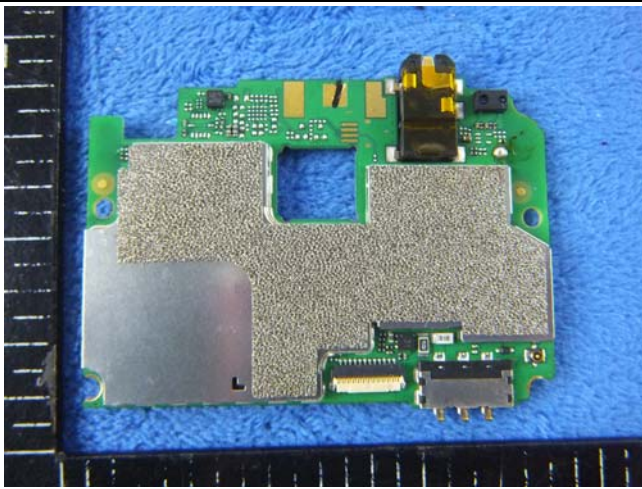
Battery - Rear View



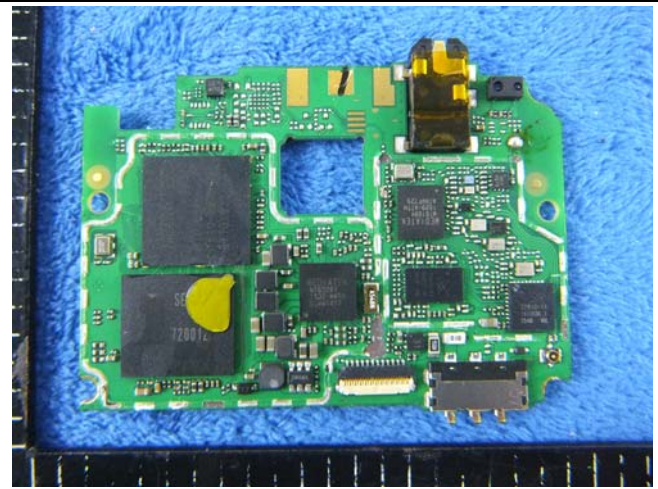
Mainboard with Shielding - Front View



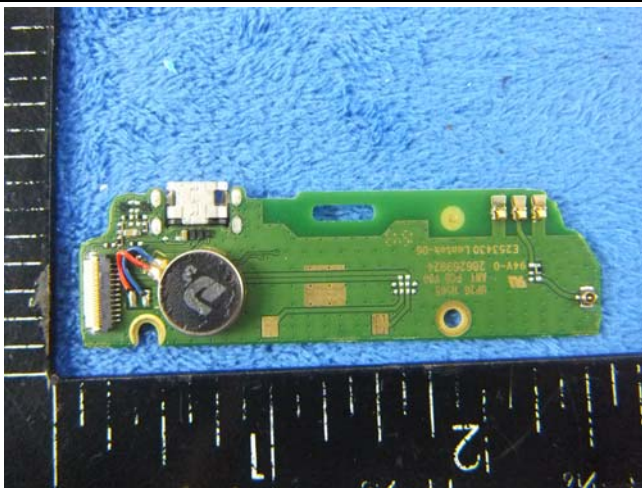
Mainboard without Shielding - Front View



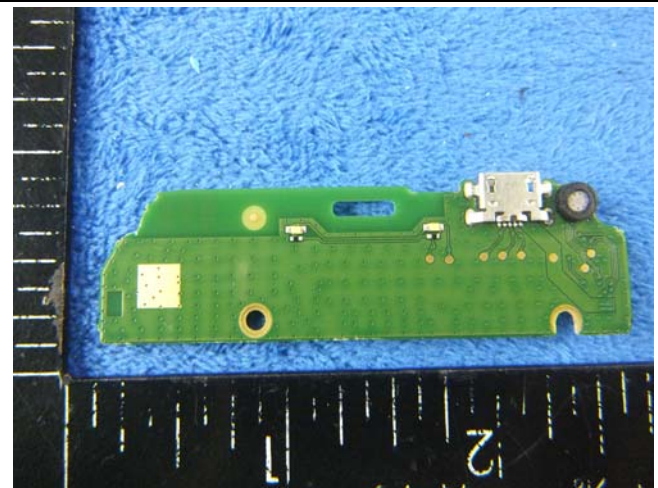
Mainboard with Shielding - Rear View



Mainboard without Shielding - Rear View



Small Mainboard - Front View



Small Mainboard - Rear View



LCD - Front View



LCD - Rear View

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GSM/PCS/UMTS-FDD Antenna View

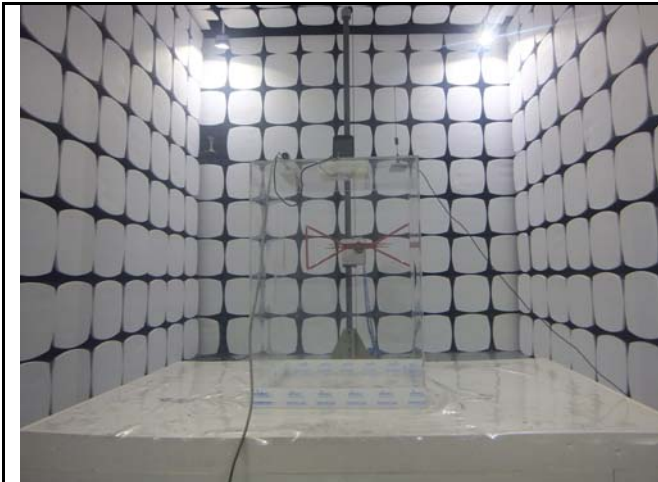


WIFI/BT/BLE/GPS - Antenna View

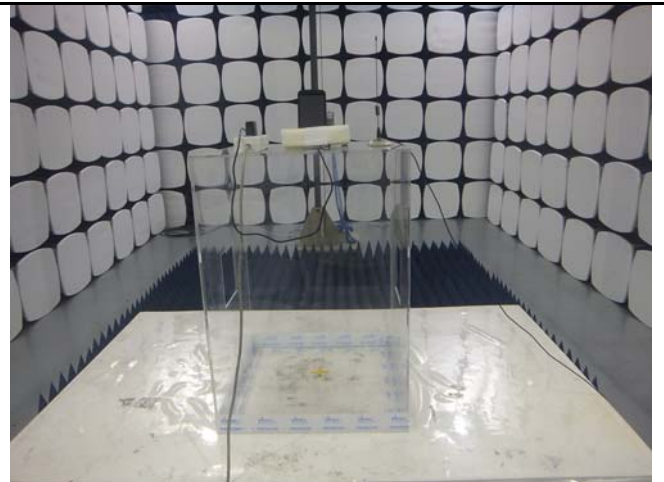


LTE - Antenna View

Annex B.iii. Photograph: Test Setup Photo



Radiated Spurious Emissions Test Setup Below 1GHz

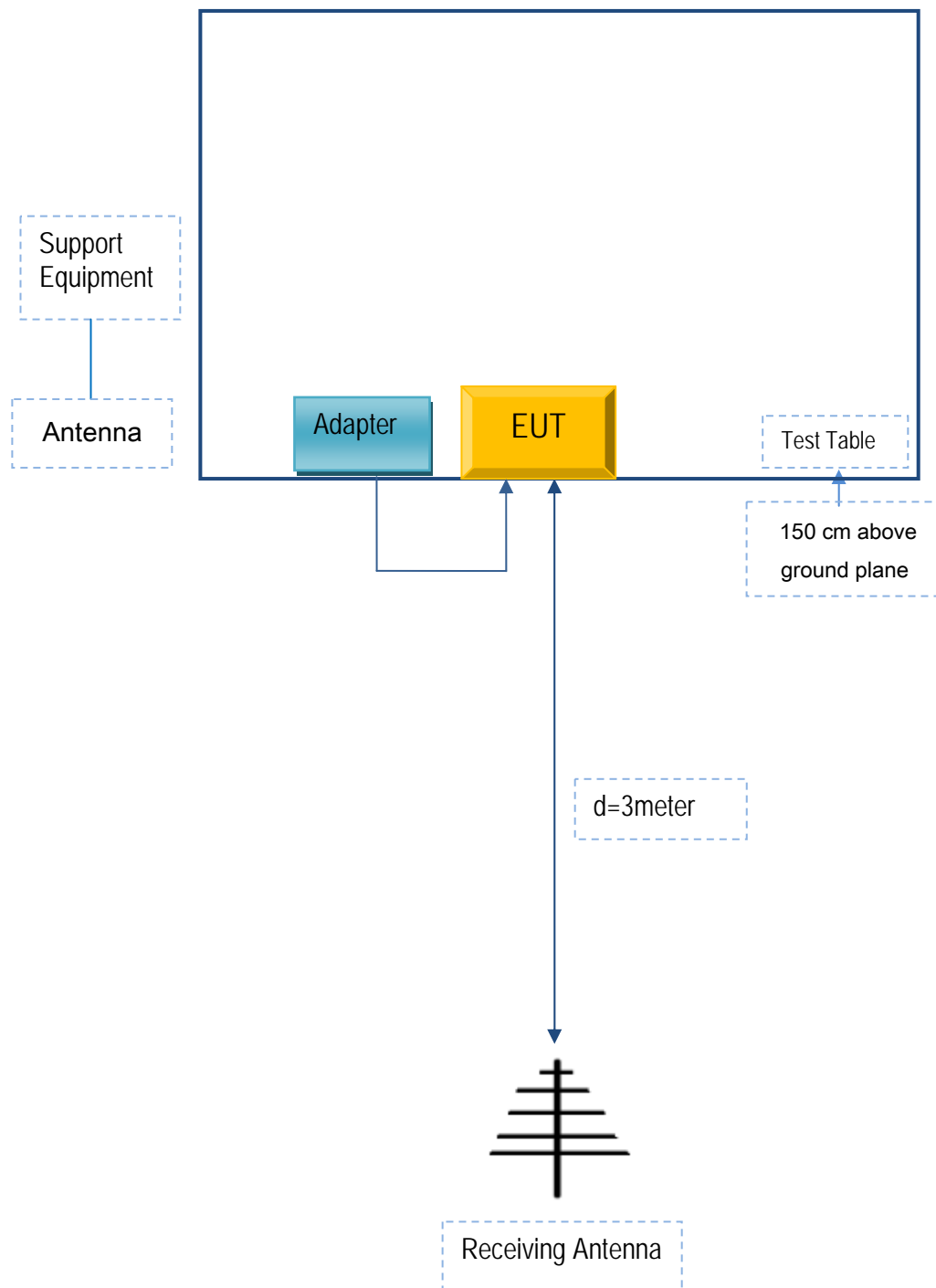


Radiated Spurious Emissions Test Setup Above
1GHz

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
MOBIWIRE MOBILES (NINGBO) CO.,LTD	Adapter	OWN SMART VALUE	C20160122

Supporting Cable:

Cable type	Shield Type	Ferrite Core	Length	Serial No
USB Cable	Un-shielding	No	0.8m	C20160122

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Annex C.ii. EUT OPERATING CONKITIONS

N/A

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

N/A

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Annex E. DECLARATION OF SIMILARITY

N/A