RF TEST REPORT

GLOBAL TESTING & CERTIFICATIONS
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Report No.: 16071303-FCC-R5

Supersede Report No.: N/A

Applicant	Shenzhen Konka Telecommunications Technology Co., Ltd.
Product Name	Smart Phone
Model No.	R5
Serial No.	N/A
Test Standard	FCC Part 27: 2015; ANSI/TIA-603-D: 2010
Test Date	November 05 to 21, 2016
Issue Date	November 22, 2016
Test Result	☑ Pass ☐ Fail
Equipment complied with the specification	☑
Equipment did not comply with the specification	☐

Loren Luo	David Huang	
Loren Luo Test Engineer	David Huang Checked By	

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Test result presented in this test report is applicable to the tested sample only

Issued by:

SIEMIC (SHENZHEN-CHINA) LABORATORIES

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Laboratories Introduction

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.

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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
16071303-FCC-R5	NONE	Original	November 22, 2016

2. Customer information

Applicant Name	Shenzhen Konka Telecommunications Technology Co., Ltd.
Applicant Add	No.9008 Shennan Road,Overseas Chinese Town, ShenZhen, Guangdong,China
Manufacturer	Shenzhen Konka Telecommunications Technology Co.,Ltd.
Manufacturer Add	No.9008 Shennan Road,Overseas Chinese Town, Shenzhen, Guangdong,China

3. Test site information

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

4. Equipment under Test (EUT) Information

Description of EUT:	Smart Phone
Main Model:	R5
Serial Model:	N/A
Date EUT received:	November 04, 2016
Test Date(s):	November 05 to 21, 2016
Equipment Category：	PCE
Antenna Type:	PIFA antenna
Antenna Gain:	GSM850: -0.09dBi GSM900: -0.01dBi(This is CE frequency) GSM1800: 0.93dBi(This is CE frequency) PCS1900: 0.99dBi UMTS-FDD Band II:0.93dBi UMTS-FDD Band VIII:-0.01dBi(This is CE frequency) LTE Band I:0.97dBi(This is CE frequency) LTE Band III: 0.93dBi(This is CE frequency) LTE Band IV: -0.41dBi Bluetooth/BLE/WIFI:2.01dBi GPS:2.01dBi
Port:	Power Port, Earphone Port, USB Port
Type of Modulation:	GSM / GPRS: GMSK EGPRS: GMSK,8PSK UMTS-FDD: QPSK LTE Band: QPSK, 16QAM 802.11b/g/n: DSSS, OFDM Bluetooth: GFSK, π /4DQPSK, 8DPSK BLE: GFSK GPS:BPSK

RF Operating Frequency (ies):	GSM850 TX: 824.2 ~ 848.8 MHz; RX: 869.2 ~ 893.8 MHz PCS1900 TX: 1850.2 ~ 1909.8 MHz; RX: 1930.2 ~ 1989.8 MHz EGSM900 TX:880-915 MHz; RX: 925-960MHz(This is CE frequency) DCS1800 TX:1710-1785MHz;RX:1805-1880MHz(This is CE frequency) UMTS-FDD Band II TX:1852.4 ~ 1907.6 MHz; RX: 1932.4 ~ 1987.6 MHz UMTS-FDD Band VIII: TX:880-915 MHz ; RX:925-960 MHz (This is CE frequency) LTE Band I TX:1920-1980MHz;RX:2110-2170MHz(This is CE frequency) LTE Band III TX:1710-1785MHz;RX:1805-1880MHz(This is CE frequency) LTE Band IV TX: 1710.7 ~ 1754.3 MHz; RX : 2110.7 ~ 2154.3 MHz WIFI: 802.11b/g/n(20M): 2412-2462 MHz WIFI: 802.11n(40M): 2422-2452 MHz Bluetooth& BLE: 2402-2480 MHz GPS: 1575.42 MHz
Number of Channels:	GSM 850: 124CH PCS1900: 299CH UMTS-FDD Band II: 277CH WIFI :802.11b/g/n(20M): 11CH WIFI :802.11n(40M): 7CH Bluetooth: 79CH BLE: 40CH GPS:1CH
Maximum Conducted AV Power to Antenna:	LTE Band IV: 21.85 dBm
ERP/EIRP:	LTE Band IV: 21.47 dBm / EIRP
Input Power:	Adapter: Model: U0B2E0A050100 Input: AC100-240V~50/60Hz,150mA Output: DC 5.0V,1A Battery: Model: KLB210N340 Capacity:3.8V,2000mAh,7.6Wh Limited charger voltage:4.35V

Trade Name : KONKA

GPRS/EGPRS Multi-slot class 8/10/12

FCC ID: UT3KKR5

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)	N/A
§ 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

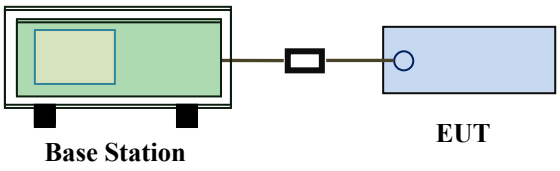
The EUT is a portable device, thus requires SAR evaluation;

Please refer to RF Exposure Evaluation Report: 16071303-FCC-H.

6.2 RF Output Power

Temperature	25℃
Relative Humidity	58%
Atmospheric Pressure	1016mbar
Test date :	November 16, 2016
Tested By :	Loren Luo

Requirement(s):

Spec	Item	Requirement	Applicable
§27.50 (c)	c)	EIRP: 30dBm	☑
Test Setup			
Test Procedure	For Conducted Power: - The transmitter output port was connected to base station. - Set EUT at maximum power through base station. - Select lowest, middle, and highest channels for each band and different test mode. For ERP/EIRP: - The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable. - The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis. - The frequency range up to tenth harmonic of the fundamental frequency was investigated. - Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-		

	radiating cable. The absolute levels of the spurious emissions were measured by the substitution. - Spurious emissions in dB = 10 log (TX power in Watts/0.001) – the absolute level - Spurious attenuation limit in dB = 43 + 10 Log10 (power out in Watts.
Remark	
Result	☑ Pass ☐ Fail

Test Data ☑ Yes ☐ N/A

Test Plot ☐ Yes (See below) ☑ N/A

Conducted Power

LTE Band IV:

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
20MHz	20050	1720.0	QPSK	1	0	0	21.8	21.3±1
				1	49	0	21.84	21.3±1
				1	99	0	21.82	21.3±1
				50	0	1	20.79	21.3±1
				50	24	1	20.77	21.3±1
				50	49	1	20.76	21.3±1
				100	0	1	20.78	21.3±1
			16QAM	1	0	1	20.72	20.3±1
				1	49	1	20.74	20.3±1
				1	99	1	20.75	20.3±1
				50	0	2	20.79	20.3±1
				50	24	2	20.74	20.3±1
				50	49	2	20.76	20.3±1
				100	0	2	19.77	20.3±1
	20175	1732.5	QPSK	1	0	0	21.69	21.3±1
				1	49	0	21.66	21.3±1
				1	99	0	21.67	21.3±1
				50	0	1	20.8	21.3±1
				50	24	1	20.86	21.3±1
				50	49	1	20.84	21.3±1
				100	0	1	20.78	21.3±1
			16QAM	1	0	1	20.99	20.3±1
				1	49	1	20.97	20.3±1
				1	99	1	21.02	20.3±1
				50	0	2	20.8	20.3±1
				50	24	2	20.82	20.3±1
				50	49	2	20.85	20.3±1
				100	0	2	19.8	20.3±1
	20300	1745.0	QPSK	1	0	0	21.74	21.3±1
				1	49	0	21.76	21.3±1

				1	99	0	21.71	21.3±1
				50	0	1	20.81	21.3±1
				50	24	1	20.83	21.3±1
				50	49	1	20.84	21.3±1
				100	0	1	20.79	21.3±1
			16QAM	1	0	1	21.15	20.5±1
				1	49	1	21.16	20.5±1
				1	99	1	21.17	20.5±1
				50	0	2	20.81	20.5±1
				50	24	2	20.83	20.5±1
				50	49	2	20.85	20.5±1
				100	0	2	19.8	20.5±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
15MHz	20025	1717.5	QPSK	1	0	0	21.75	21.3±1
				1	37	0	21.77	21.3±1
				1	74	0	21.76	21.3±1
				36	0	1	20.8	21.3±1
				36	16	1	20.81	21.3±1
				36	35	1	20.83	21.3±1
				75	0	1	20.82	21.3±1
			16QAM	1	0	1	20.57	20.3±1
				1	37	1	20.59	20.3±1
				1	74	1	20.55	20.3±1
				36	0	2	20.8	20.3±1
				36	16	2	20.83	20.3±1
				36	35	2	20.82	20.3±1
				75	0	2	19.82	20.3±1
	20175	1732.5	QPSK	1	0	0	21.76	21.3±1
				1	37	0	21.77	21.3±1
				1	74	0	21.74	21.3±1
				36	0	1	20.83	21.3±1
				36	16	1	20.84	21.3±1
				36	35	1	20.85	21.3±1

				75	0	1	20.83	21.3±1
			16QAM	1	0	1	21.08	20.3±1
				1	37	1	21.09	20.3±1
				1	74	1	21.05	20.3±1
				36	0	2	20.83	20.3±1
				36	16	2	20.84	20.3±1
				36	35	2	20.86	20.3±1
				75	0	2	19.77	20.3±1
	20325	1747.5	QPSK	1	0	0	21.73	21.3±1
				1	37	0	21.74	21.3±1
				1	74	0	21.76	21.3±1
				36	0	1	20.9	21.3±1
				36	16	1	20.91	21.3±1
				36	35	1	20.93	21.3±1
				75	0	1	20.86	21.3±1
			16QAM	1	0	1	21.32	21±1
				1	37	1	21.36	21±1
				1	74	1	21.32	21±1
				36	0	2	20.9	21±1
				36	16	2	20.93	21±1
				36	35	2	20.91	21±1
				75	0	2	19.9	20±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	21.73	21.3±1
				1	24	0	21.75	21.3±1
				1	49	0	21.71	21.3±1
				25	0	1	20.74	21.3±1
				25	12	1	20.75	21.3±1
				25	24	1	20.73	21.3±1
				50	0	1	20.73	21.3±1
			16QAM	1	0	1	20.57	20.3±1
				1	24	1	20.54	20.3±1
				1	49	1	20.55	20.3±1

				25	0	2	20.74	20.3±1
				25	12	2	20.76	20.3±1
				25	24	2	20.73	20.3±1
				50	0	2	19.73	20.3±1
	20175	1732.5	QPSK	1	0	0	21.83	21.3±1
				1	24	0	21.84	21.3±1
				1	49	0	**21.85**	21.3±1
				25	0	1	20.71	21.3±1
				25	12	1	20.74	21.3±1
				25	24	1	20.76	21.3±1
				50	0	1	20.7	21.3±1
			16QAM	1	0	1	20.77	20.3±1
				1	24	1	20.79	20.3±1
				1	49	1	20.74	20.3±1
				25	0	2	20.71	20.3±1
				25	12	2	20.74	20.3±1
				25	24	2	20.73	20.3±1
				50	0	2	19.73	20.3±1
	20350	1750.0	QPSK	1	0	0	21.68	21.3±1
				1	24	0	21.66	21.3±1
				1	49	0	21.65	21.3±1
				25	0	1	20.77	21.3±1
				25	12	1	20.74	21.3±1
				25	24	1	20.76	21.3±1
				50	0	1	20.78	21.3±1
			16QAM	1	0	1	21.3	20.5±1
				1	24	1	21.35	20.5±1
				1	49	1	21.33	20.5±1
				25	0	2	20.77	20.5±1
				25	12	2	20.75	20.5±1
				25	24	2	20.71	20.5±1
				50	0	2	19.81	20.5±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	21.76	21.3±1
				1	12	0	21.77	21.3±1
				1	24	0	21.7	21.3±1
				12	0	1	20.71	21.3±1
				12	6	1	20.73	21.3±1
				12	11	1	20.72	21.3±1
				25	0	1	20.68	21.3±1
			16QAM	1	0	1	20.73	20.3±1
				1	12	1	20.74	20.3±1
				1	24	1	20.71	20.3±1
				12	0	2	20.71	20.3±1
				12	6	2	20.75	20.3±1
				12	11	2	20.72	20.3±1
				25	0	2	19.7	20.3±1
	20175	1732.5	QPSK	1	0	0	21.75	21.3±1
				1	12	0	21.74	21.3±1
				1	24	0	21.76	21.3±1
				12	0	1	20.71	21.3±1
				12	6	1	20.73	21.3±1
				12	11	1	20.74	21.3±1
				25	0	1	20.64	21.3±1
			16QAM	1	0	1	20.68	20.3±1
				1	12	1	20.66	20.3±1
				1	24	1	20.69	20.3±1
				12	0	2	20.71	20.3±1
				12	6	2	20.72	20.3±1
				12	11	2	20.74	20.3±1
				25	0	2	19.76	20.3±1
	20350	1750.0	QPSK	1	0	0	21.81	21.3±1
				1	12	0	21.84	21.3±1
				1	24	0	21.82	21.3±1
				12	0	1	20.88	21.3±1

				12	6	1	20.86	21.3±1
				12	11	1	20.89	21.3±1
				25	0	1	20.81	21.3±1
			16QAM	1	0	1	21.16	20.5±1
				1	12	1	21.15	20.5±1
				1	24	1	21.18	20.5±1
				12	0	2	20.88	20.5±1
				12	6	2	20.87	20.5±1
				12	11	2	20.89	20.5±1
				25	0	2	19.79	20.5±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	21.6	21.3±1
				1	7	0	21.64	21.3±1
				1	14	0	21.62	21.3±1
				8	0	1	20.61	21.3±1
				8	4	1	20.63	21.3±1
				8	7	1	20.62	21.3±1
				15	0	1	20.63	21.3±1
			16QAM	1	0	1	20.46	20.±1
				1	7	1	20.44	20±1
				1	14	1	20.48	20±1
				8	0	2	19.59	20±1
				8	4	2	19.58	20±1
				8	7	2	19.55	20±1
				15	0	2	19.59	20±1
	20175	1732.5	QPSK	1	0	0	21.45	21.3±1
				1	7	0	21.44	21.3±1
				1	14	0	21.47	21.3±1
				8	0	1	20.6	21.3±1
				8	4	1	20.62	21.3±1
				8	7	1	20.61	21.3±1
				15	0	1	20.63	21.3±1

			16QAM	1	0	1	21.05	20.3±1
				1	7	1	21.03	20.3±1
				1	14	1	21.07	20.3±1
				8	0	2	19.56	20.3±1
				8	4	2	19.55	20.3±1
				8	7	2	19.53	20.3±1
				15	0	2	19.71	20.3±1
	20385	1753.5	QPSK	1	0	0	21.71	21.3±1
				1	7	0	21.73	21.3±1
				1	14	0	21.72	21.3±1
				8	0	1	20.77	21.3±1
				8	4	1	20.74	21.3±1
				8	7	1	20.73	21.3±1
				15	0	1	20.78	21.3±1
			16QAM	1	0	1	20.68	20±1
				1	7	1	20.66	20±1
				1	14	1	20.67	20±1
				8	0	2	19.62	20±1
				8	4	2	19.64	20±1
				8	7	2	19.62	20±1
				15	0	2	19.79	20±1

BW (MHz)	Ch	Freq. (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Tune up Power tolerant
1.4MHz	19957	1710.7	QPSK	1	0	0	21.63	21.3±1
				1	2	0	21.61	21.3±1
				1	5	0	21.64	21.3±1
				3	0	0	21.65	21.3±1
				3	1	0	21.62	21.3±1
				3	2	0	21.67	21.3±1
				6	0	1	20.61	21.3±1
			16QAM	1	0	1	20.46	21.3±1
				1	2	1	20.42	21.3±1

				1	5	1	20.48	21.3±1
				3	0	1	21.65	21.3±1
				3	1	1	21.62	21.3±1
				3	2	1	21.6	21.3±1
				6	0	2	19.58	20±1
	20175	1732.5	QPSK	1	0	0	21.58	21±1
				1	2	0	21.56	21±1
				1	5	0	21.54	21±1
				3	0	0	21.62	21±1
				3	1	0	21.63	21±1
				3	2	0	21.65	21±1
				6	0	1	20.56	21±1
			16QAM	1	0	1	20.58	21±1
				1	2	1	20.54	21±1
				1	5	1	20.51	21±1
				3	0	1	21.62	21±1
				3	1	1	21.63	21±1
				3	2	1	21.64	21±1
				6	0	2	20.56	21±1
	20393	1754.3	QPSK	1	0	0	21.67	21±1
				1	2	0	21.66	21±1
				1	5	0	21.62	21±1
				3	0	0	21.76	21±1
				3	1	0	21.74	21±1
				3	2	0	21.78	21±1
				6	0	1	20.76	21±1
			16QAM	1	0	1	20.37	21±1
				1	2	1	20.38	21±1
				1	5	1	20.35	21±1
				3	0	1	21.76	21±1
				3	1	1	21.74	21±1
				3	2	1	21.77	21±1
				6	0	2	19.69	20±1

ERP & EIRP

EIRP for LTE Band IV (Part 27)

Frequency (MHz)	BW (MHz)	Modulation	RB Size/Offset	Substituted level (dBm)	Antenna Polarization	Antenna Gain correction (dBi)	Cable Loss (dB)	Absolute Level (dBm)	Limit (dBm)
1710.7	1.4	QPSK	1/0	13.92	V	7.95	0.79	21.08	30
1732.5	1.4	QPSK	1/0	13.87	V	7.95	0.79	21.03	30
1754.3	1.4	QPSK	1/0	14.02	V	7.95	0.79	21.18	30
1710.7	1.4	QPSK	1/0	13.15	H	7.95	0.79	20.31	30
1732.5	1.4	QPSK	1/0	13.11	H	7.95	0.79	20.27	30
1754.3	1.4	QPSK	1/0	13.23	H	7.95	0.79	20.39	30
1710.7	1.4	16-QAM	1/5	12.85	V	7.95	0.79	20.01	30
1732.5	1.4	16-QAM	1/0	12.95	V	7.95	0.79	20.11	30
1754.3	1.4	16-QAM	1/0	12.76	V	7.95	0.79	19.92	30
1710.7	1.4	16-QAM	1/5	12.06	H	7.95	0.79	19.22	30
1732.5	1.4	16-QAM	1/0	12.14	H	7.95	0.79	19.3	30
1754.3	1.4	16-QAM	1/0	11.97	H	7.95	0.79	19.13	30
1711.5	3	QPSK	1/0	14.12	V	7.95	0.79	21.28	30
1732.5	3	QPSK	1/0	13.98	V	7.95	0.79	21.14	30
1753.5	3	QPSK	1/0	14.26	V	7.95	0.79	21.42	30
1711.5	3	QPSK	1/0	13.31	H	7.95	0.79	20.47	30
1732.5	3	QPSK	1/0	13.12	H	7.95	0.79	20.28	30
1753.5	3	QPSK	1/0	13.43	H	7.95	0.79	20.59	30
1711.5	3	16-QAM	1/0	12.87	V	7.95	0.79	20.03	30
1732.5	3	16-QAM	1/0	13.34	V	7.95	0.79	20.5	30
1753.5	3	16-QAM	1/0	12.96	V	7.95	0.79	20.12	30
1711.5	3	16-QAM	1/0	12.04	H	7.95	0.79	19.2	30
1732.5	3	16-QAM	1/0	12.56	H	7.95	0.79	19.72	30
1753.5	3	16-QAM	1/0	12.17	H	7.95	0.79	19.33	30
1712.5	5	QPSK	1/0	14.16	V	7.95	0.79	21.32	30
1732.5	5	QPSK	1/0	14.12	V	7.95	0.79	21.28	30
1752.5	5	QPSK	1/24	14.24	V	7.95	0.79	21.4	30
1712.5	5	QPSK	1/0	13.25	H	7.95	0.79	20.41	30
1732.5	5	QPSK	1/0	13.31	H	7.95	0.79	20.47	30

1752.5	5	QPSK	1/24	13.42	H	7.95	0.79	20.58	30
1712.5	5	16-QAM	1/0	13.19	V	7.95	0.79	20.35	30
1732.5	5	16-QAM	1/0	13.11	V	7.95	0.79	20.27	30
1752.5	5	16-QAM	1/24	13.59	V	7.95	0.79	20.75	30
1712.5	5	16-QAM	1/0	12.37	H	7.95	0.79	19.53	30
1732.5	5	16-QAM	1/0	12.33	H	7.95	0.79	19.49	30
1752.5	5	16-QAM	1/24	12.75	H	7.95	0.79	19.91	30
1715	10	QPSK	1/0	14.08	V	7.95	0.79	21.24	30
1732.5	10	QPSK	1/49	14.21	V	7.95	0.79	21.37	30
1750	10	QPSK	1/0	14.14	V	7.95	0.79	21.3	30
1715	10	QPSK	1/0	13.25	H	7.95	0.79	20.41	30
1732.5	10	QPSK	1/49	13.36	H	7.95	0.79	20.52	30
1750	10	QPSK	1/0	13.31	H	7.95	0.79	20.47	30
1715	10	16-QAM	1/0	12.87	V	7.95	0.79	20.03	30
1732.5	10	16-QAM	1/49	13.14	V	7.95	0.79	20.3	30
1750	10	16-QAM	1/0	13.62	V	7.95	0.79	20.78	30
1715	10	16-QAM	1/0	12.01	H	7.95	0.79	19.17	30
1732.5	10	16-QAM	1/49	12.28	H	7.95	0.79	19.44	30
1750	10	16-QAM	1/0	12.86	H	7.95	0.79	20.02	30
1717.5	15	QPSK	1/0	14.16	V	7.95	0.79	21.32	30
1732.5	15	QPSK	1/74	14.21	V	7.95	0.79	21.37	30
1747.5	15	QPSK	1/0	14.09	V	7.95	0.79	21.25	30
1717.5	15	QPSK	1/0	13.24	H	7.95	0.79	20.4	30
1732.5	15	QPSK	1/74	13.35	H	7.95	0.79	20.51	30
1747.5	15	QPSK	1/0	13.15	H	7.95	0.79	20.31	30
1717.5	15	16-QAM	1/0	13.11	V	7.95	0.79	20.27	30
1732.5	15	16-QAM	1/74	13.52	V	7.95	0.79	20.68	30
1747.5	15	16-QAM	1/0	13.84	V	7.95	0.79	21	30
1717.5	15	16-QAM	1/0	12.26	H	7.95	0.79	19.42	30
1732.5	15	16-QAM	1/74	12.65	H	7.95	0.79	19.81	30
1747.5	15	16-QAM	1/0	13.02	H	7.95	0.79	20.18	30
1720	20	QPSK	1/99	14.31	V	7.95	0.79	**21.47**	30
1732.5	20	QPSK	1/99	14.26	V	7.95	0.79	21.42	30
1745	20	QPSK	1/0	14.13	V	7.95	0.79	21.29	30
1720	20	QPSK	1/99	13.48	H	7.95	0.79	20.64	30

1732.5	20	QPSK	1/99	13.35	H	7.95	0.79	20.51	30
1745	20	QPSK	1/0	13.29	H	7.95	0.79	20.45	30
1720	20	16-QAM	1/99	13.14	V	7.95	0.79	20.3	30
1732.5	20	16-QAM	1/99	13.46	V	7.95	0.79	20.62	30
1745	20	16-QAM	1/0	13.49	V	7.95	0.79	20.65	30
1720	20	16-QAM	1/99	12.29	H	7.95	0.79	19.45	30
1732.5	20	16-QAM	1/99	12.58	H	7.95	0.79	19.74	30
1745	20	16-QAM	1/0	12.62	H	7.95	0.79	19.78	30

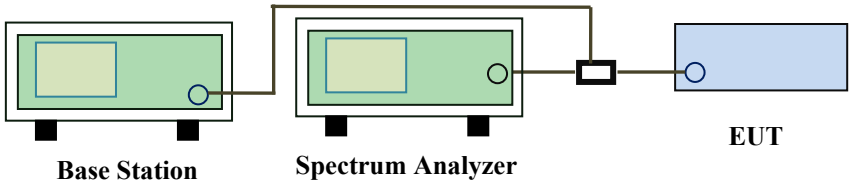
6.3 Peak-Average Ratio

Temperature	22℃
Relative Humidity	59%
Atmospheric Pressure	1017mbar
Test date :	November 17, 2016
Tested By :	Loren Luo

Requirement(s):

Spec	Item	Requirement	Applicable
§ 27.50(d)	a)	The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.	☑

Test Setup



Test Procedure

According with KDB 971168 v02r02

5.7.2 Alternate procedure for PAPR

5.1.2 Peak power measurements with a peak power meter

The total peak output power may be measured using a broadband peak RF power meter. The power meter must have a video bandwidth that is greater than or equal to the emission bandwidth and utilize a fast-responding diode detector.

5.2.3 Average power measurement with average power meter

As an alternative to the use of a spectrum/signal analyzer or EMI receiver to perform a measurement of the total in-band average output power, a wideband RF average power meter with a thermocouple detector or equivalent can be used under certain conditions

If the EUT can be configured to transmit continuously (i.e., the burst duty

	cycle ≥ 98%) and at all times the EUT is transmitting at is maximum output power level, then a conventional wide-band RF power meter can be used. If the EUT cannot be configured to transmit continuously (i.e., the burst duty cycle < 98%), then there are two options for the use of an average power meter. First, a gated average power meter can be used to perform the measurement if the gating parameters can be adjusted such that the power is measured only over active transmission bursts at maximum output power levels. A conventional average power meter can also be used if the measured burst duty cycle is constant (i.e., duty cycle variations are less than ± 2 percent) by performing the measurement over the on/off burst cycles and then correcting (increasing) the measured level by a factor equal to 10log(1/duty cycle)
Remark	
Result	☑ Pass ☐ Fail

Test Data ☑ Yes ☐ N/A

Test Plot ☐ Yes (See below) ☑ N/A

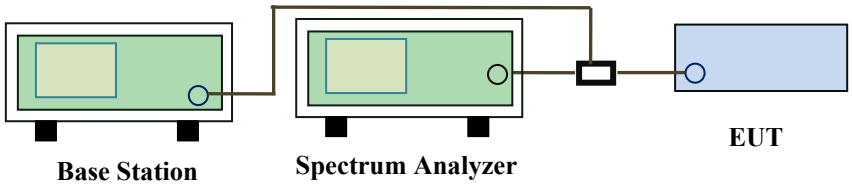
LTE Band IV (part 27)

BW(MHz)	Frequency (MHz)	Mode	Modulation	Conducted Power (dBm)		Peak-Average Ratio (PAR)
				Peak	Average	
1.4	1732.5	RB 1/0	QPSK	24.18	21.58	2.6
			16QAM	24.15	20.58	3.57
3	1732.5	RB 1/0	QPSK	24.69	21.45	3.24
			16QAM	23.18	21.05	2.13
5	1732.5	RB 1/0	QPSK	24.23	21.75	2.48
			16QAM	23.39	20.68	2.71
10	1732.5	RB 1/0	QPSK	24.66	21.83	2.83
			16QAM	24.07	20.77	3.3
15	1732.5	RB 1/0	QPSK	24.95	21.76	3.19
			16QAM	23.86	21.08	2.78
20	1732.5	RB 1/0	QPSK	24.19	21.69	2.5
			16QAM	23.93	20.99	2.94

6.4 Occupied Bandwidth

Temperature	25℃
Relative Humidity	58%
Atmospheric Pressure	1016mbar
Test date :	November 16, 2016
Tested By :	Loren Luo

Requirement(s):

Spec	Item	Requirement	Applicable
§2.1049, §27.53(a)	a)	99% Occupied Bandwidth(kHz)	☑
	b)	26 dB Bandwidth(kHz)	☑
Test Setup			
Test Procedure	- The EUT was connected to Spectrum Analyzer and Base Station via power divider. - The 99% and 26 dB occupied bandwidth (BW) of the middle channel for the highest RF powers.		
Remark			
Result	☑ Pass ☐ Fail		

Test Data ☑ Yes ☐ N/A

Test Plot ☑ Yes (See below) ☐ N/A

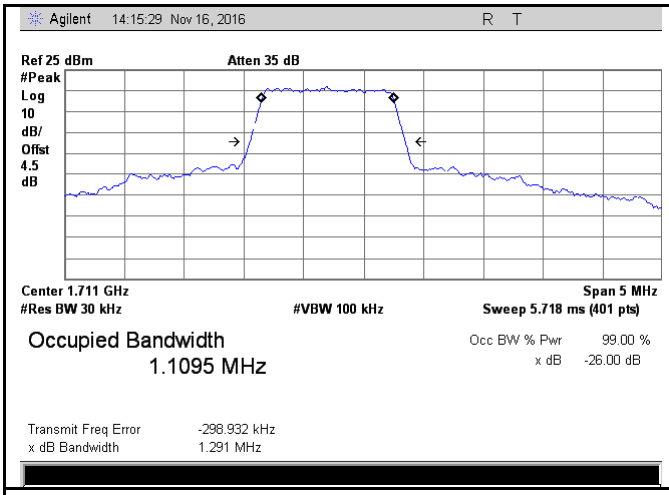
LTE Band IV (Part 27)

BW(MHz)	Channel	Frequency (MHz)	Modulation	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
1.4	19957	1710.7	16QAM	1.1062	1.282
			QPSK	1.1095	1.291
1.4	20175	1732.5	16QAM	1.1053	1.295
			QPSK	1.1060	1.297
1.4	20393	1754.3	16QAM	1.1019	1.278
			QPSK	1.1043	1.267
3	19965	1711.5	16QAM	2.7367	3.087
			QPSK	2.7666	3.096
3	20175	1732.5	16QAM	2.7360	3.075
			QPSK	2.7545	3.107
3	20385	1753.5	16QAM	2.7553	3.112
			QPSK	2.7426	3.121
5	19975	1712.5	16QAM	4.5303	5.040
			QPSK	4.5227	5.086
5	20175	1732.5	16QAM	4.5368	5.040
			QPSK	4.5267	5.097
5	20375	1752.5	16QAM	4.5326	5.062
			QPSK	4.5384	5.064
10	20000	1715	16QAM	9.0802	10.280
			QPSK	9.0751	10.219
10	20175	1732.5	16QAM	9.0830	10.182
			QPSK	9.0914	10.247
10	20350	1750	16QAM	9.0977	10.255
			QPSK	9.1097	10.316
15	20025	1717.5	16QAM	13.5005	14.907
			QPSK	13.5622	14.956
15	20175	1732.5	16QAM	13.4367	14.809
			QPSK	13.4347	14.941
15	20325	1747.5	16QAM	13.4963	14.790
			QPSK	13.4851	14.888

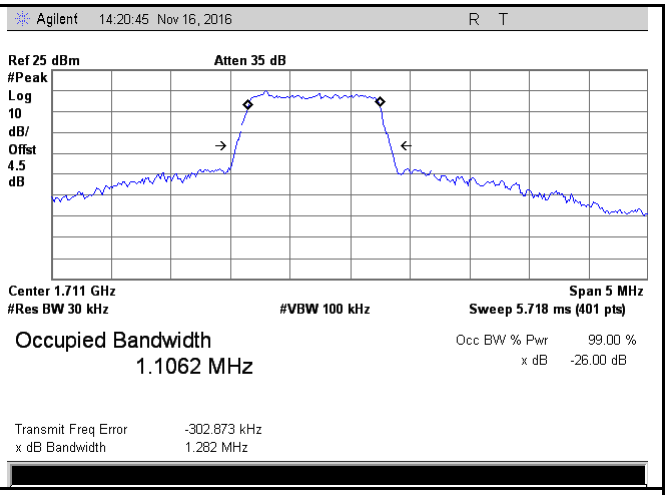
20	20050	1720	16QAM	18.0455	19.629
			QPSK	17.9574	19.548
20	20175	1732.5	16QAM	17.8182	19.400
			QPSK	17.8703	19.499
20	20300	1745	16QAM	17.8177	19.334
			QPSK	17.8340	19.280

Test Plots

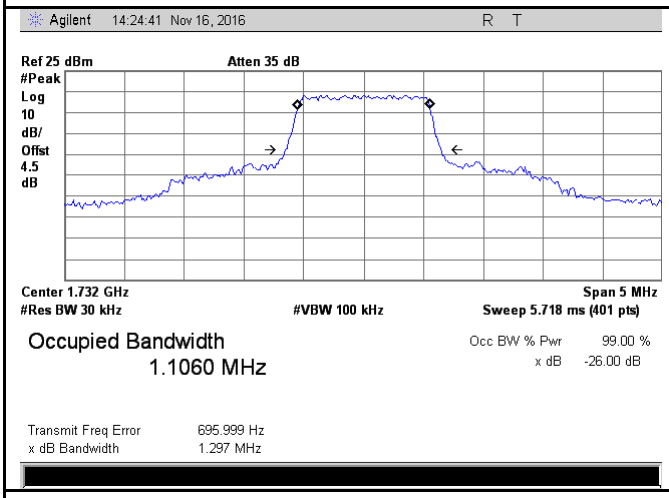
LTE Band IV (Part 27)



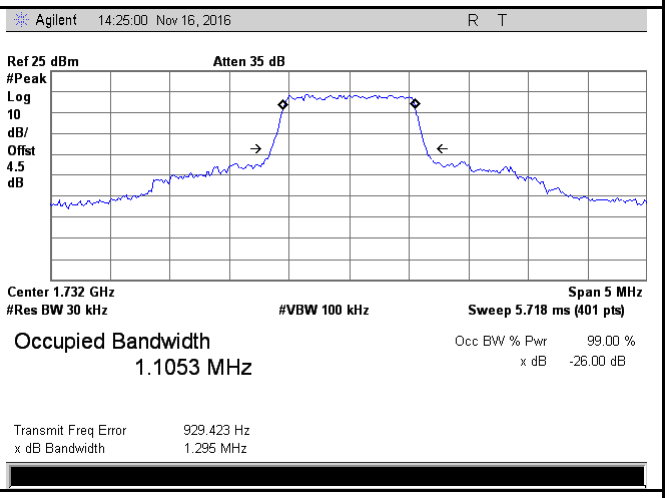
LTE band IV - Low CH QPSK-1.4



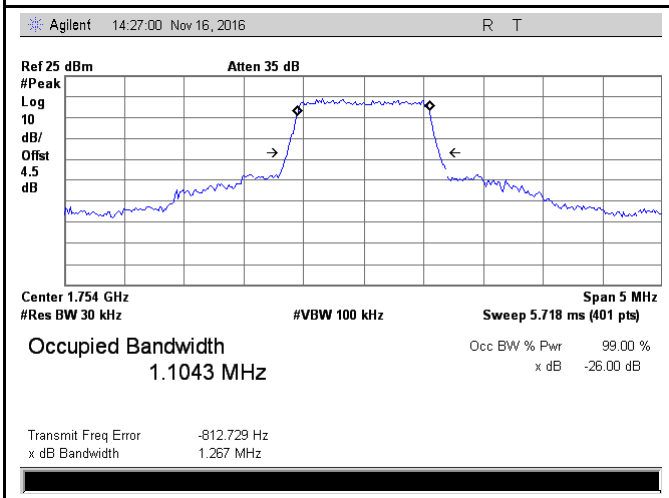
LTE band IV - Low CH 16QAM-1.4



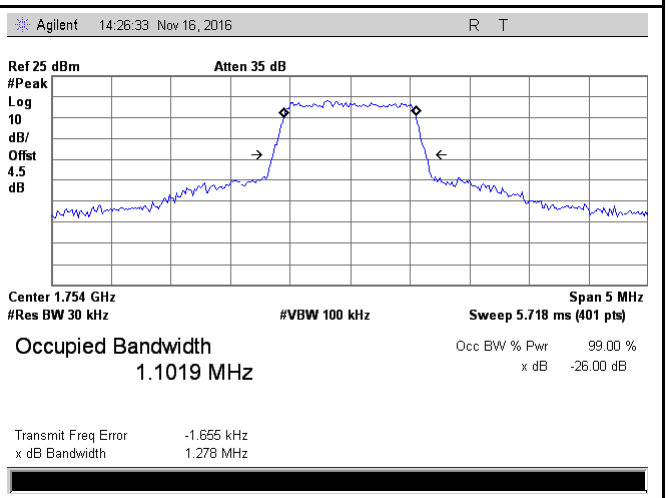
LTE band IV - Middle CH QPSK-1.4



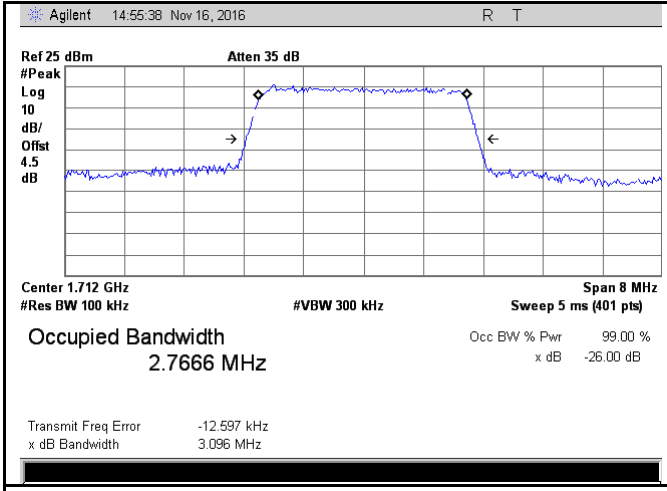
LTE band IV - Middle CH 16QAM-1.4



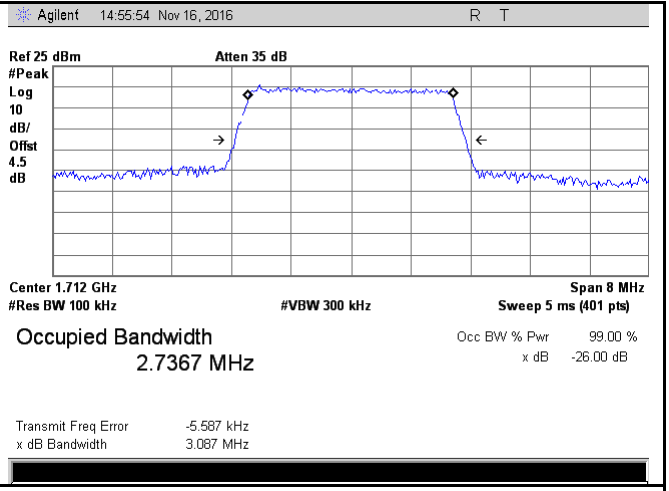
LTE band IV - High CH QPSK-1.4



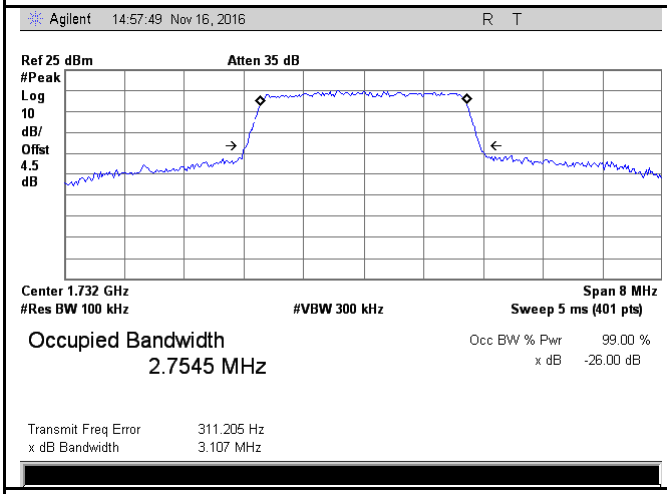
LTE band IV - High CH 16QAM-1.4



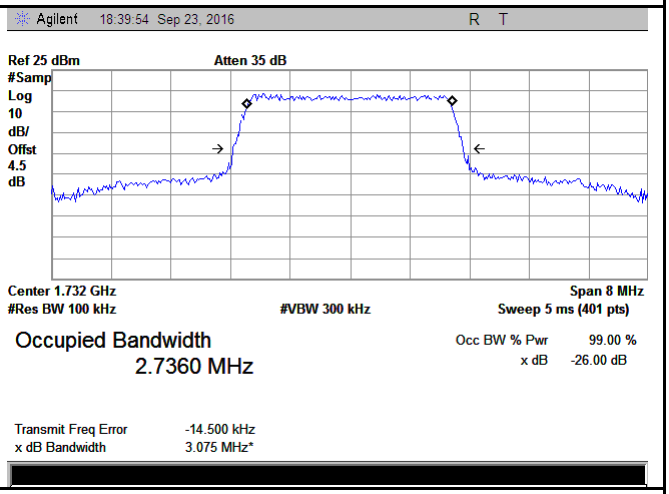
LTE band IV - Low CH QPSK-3



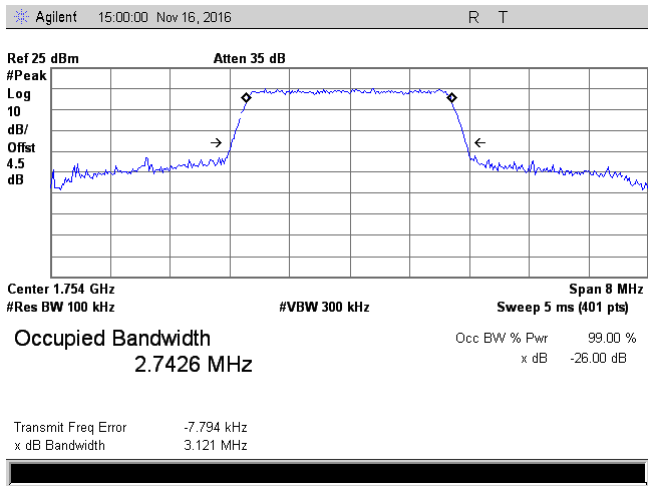
LTE band IV - Low CH 16QAM-3



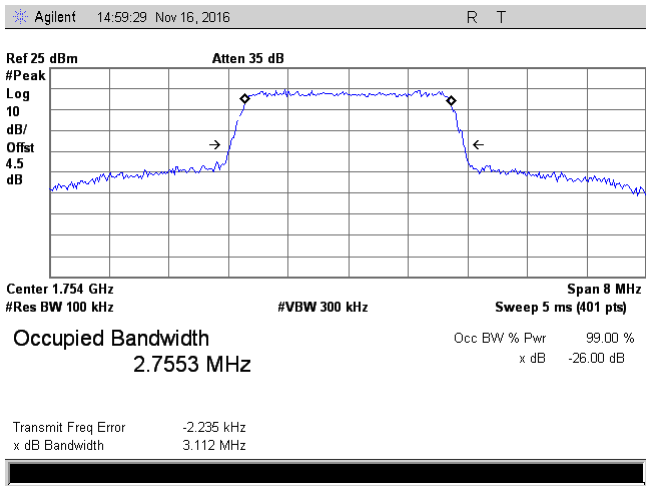
LTE band IV - Middle CH QPSK-3



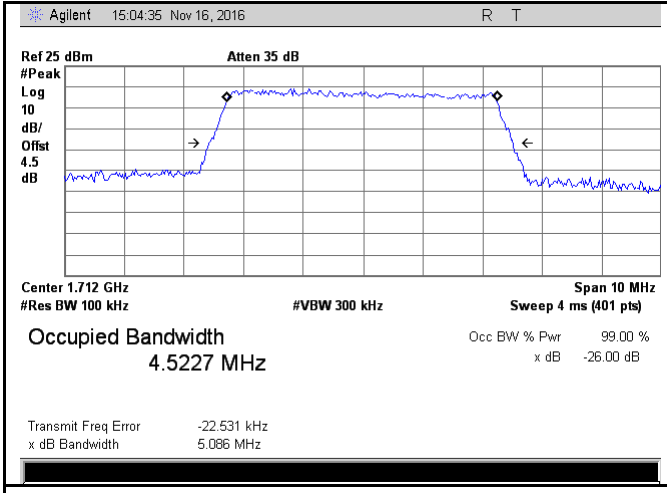
LTE band IV - Middle CH 16QAM-3



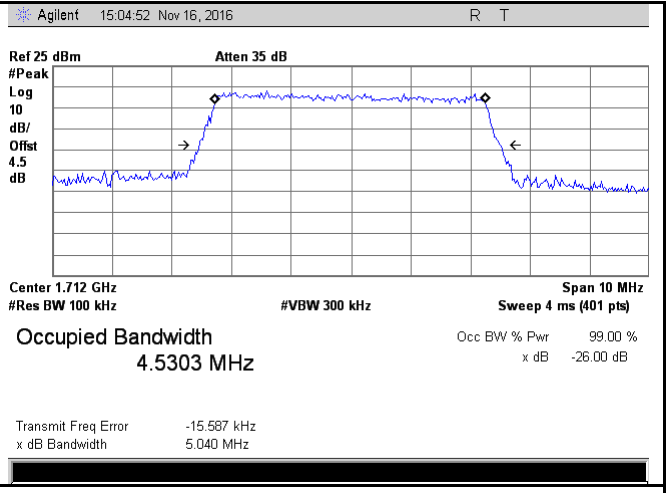
LTE band IV - High CH QPSK-3



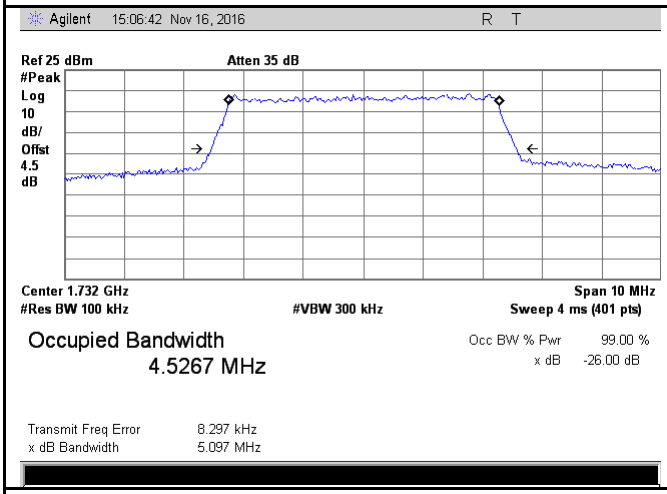
LTE band IV - High CH 16QAM-3



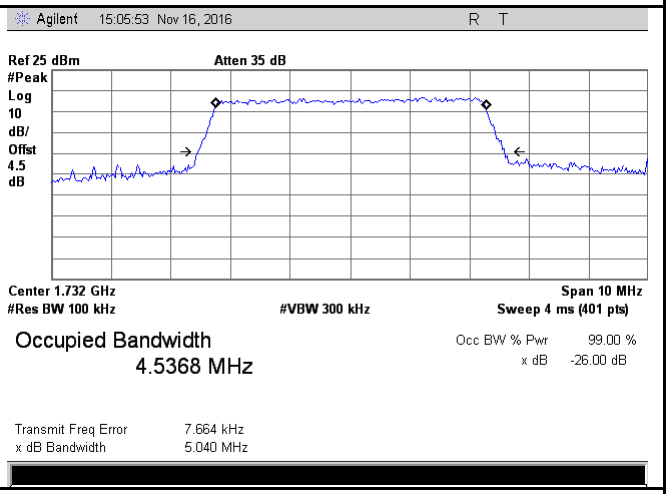
LTE band IV - Low CH QPSK-5



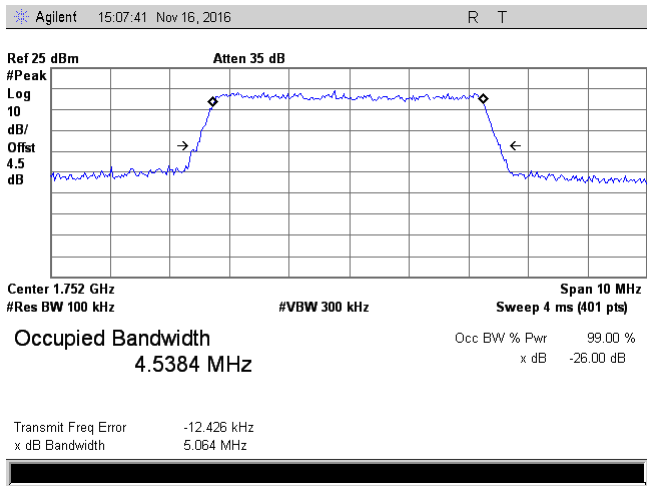
LTE band IV - Low CH 16QAM-5



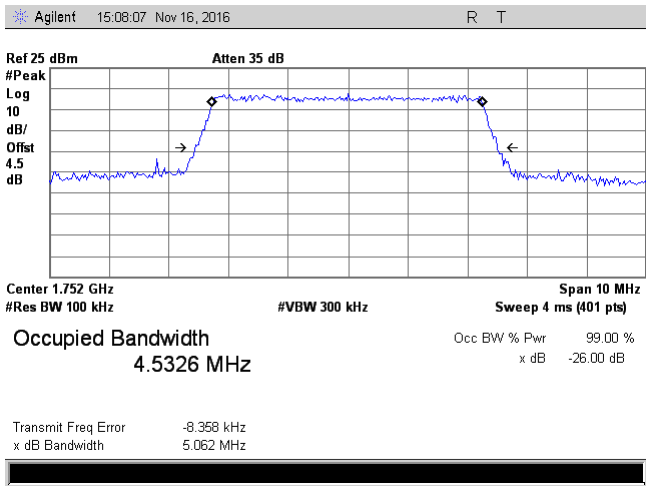
LTE band IV - Middle CH QPSK-5



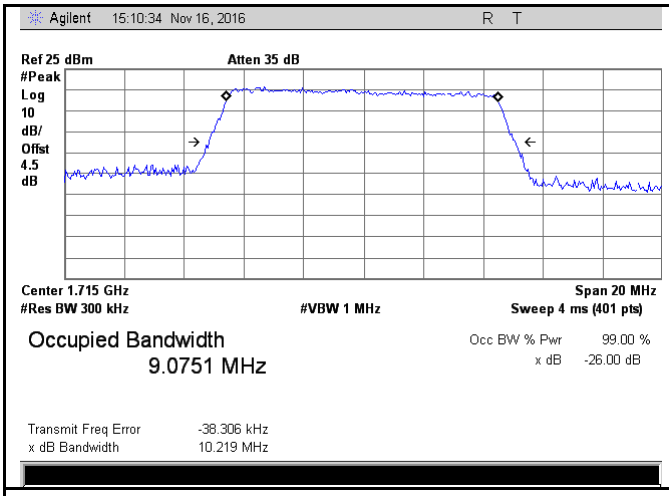
LTE band IV - Middle CH 16QAM-5



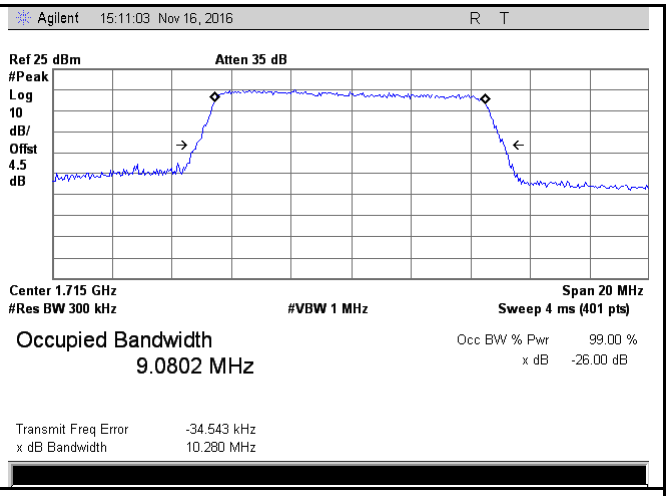
LTE band IV - High CH QPSK-5



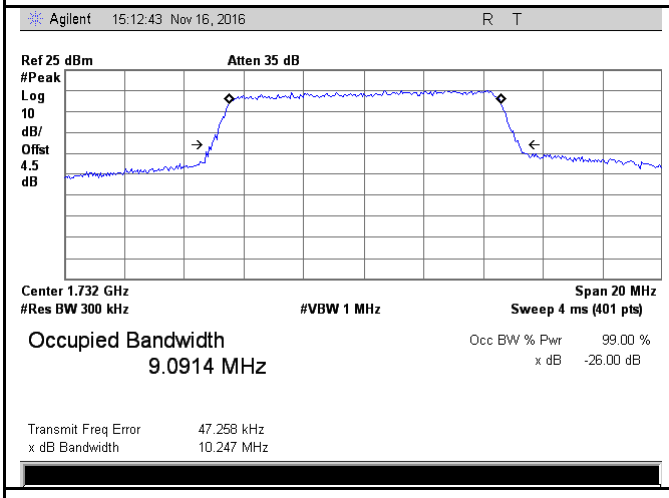
LTE band IV - High CH 16QAM-5



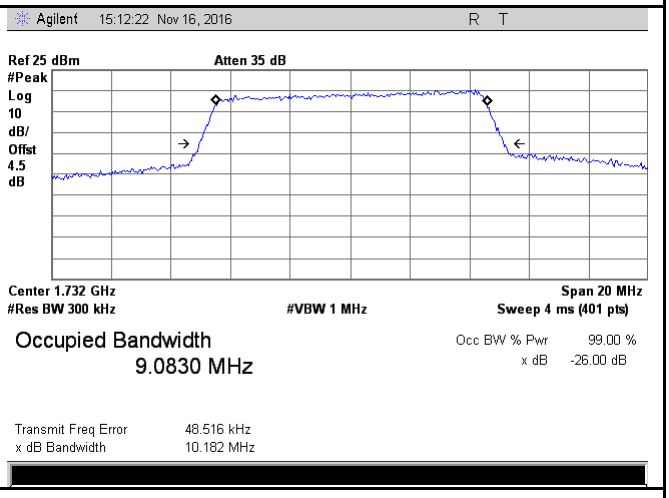
LTE band IV - Low CH QPSK-10



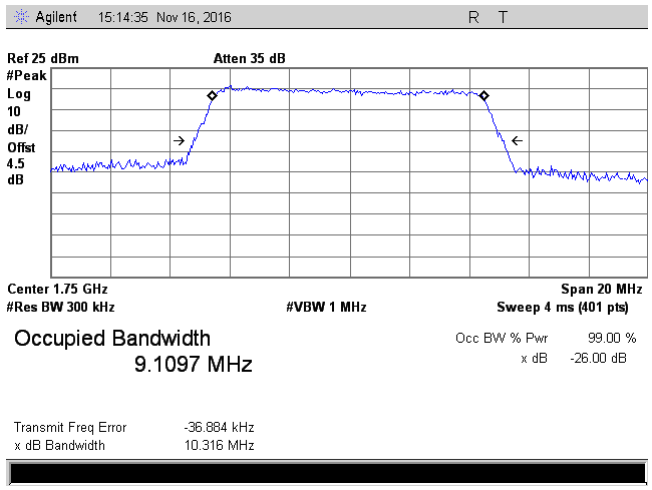
LTE band IV - Low CH 16QAM-10



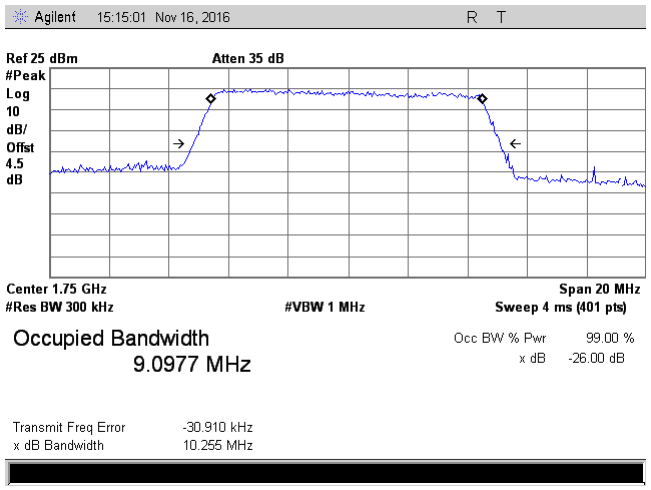
LTE band IV - Middle CH QPSK-10



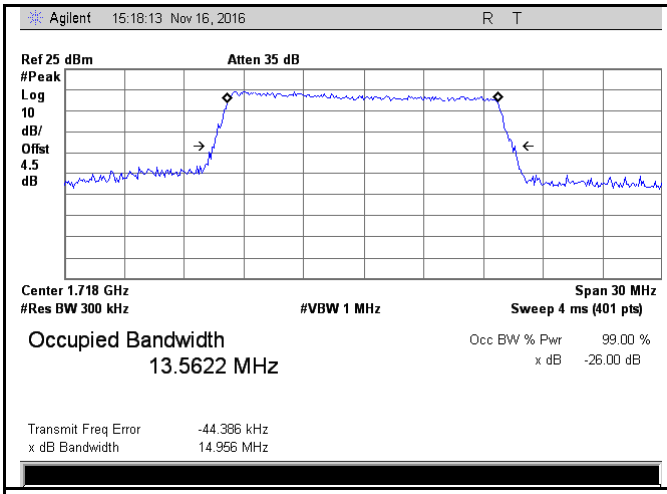
LTE band IV - Middle CH 16QAM-10



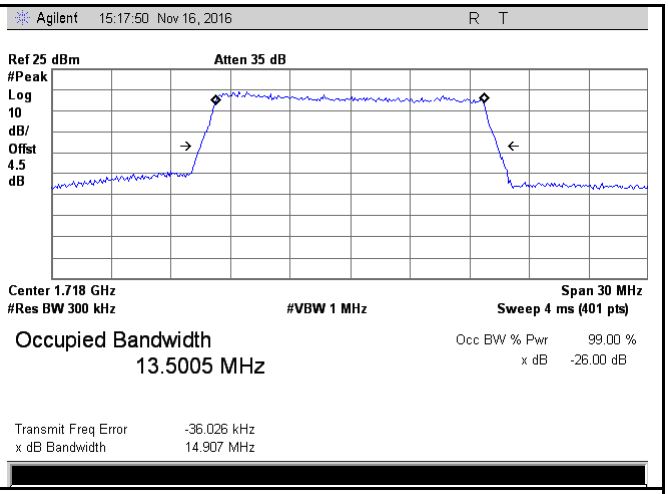
LTE band IV - High CH QPSK-10



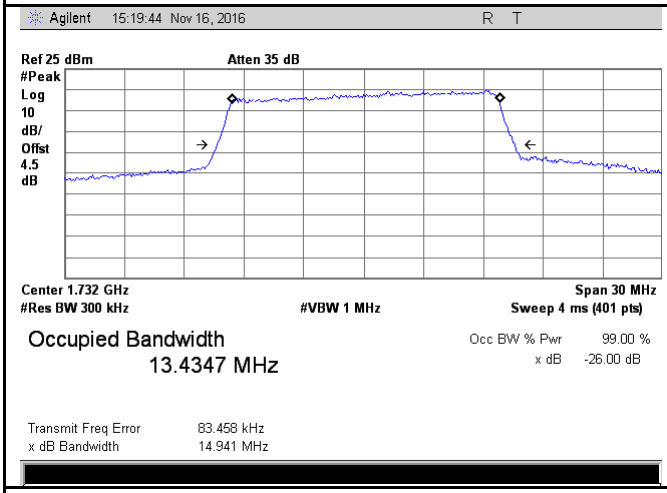
LTE band IV - High CH 16QAM-10



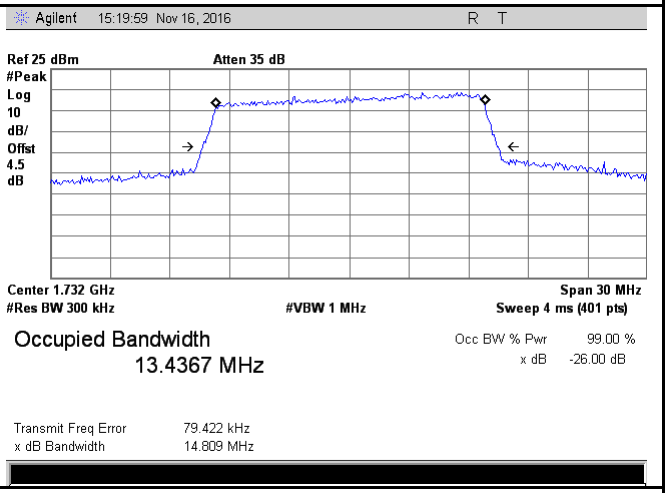
LTE band IV - Low CH QPSK-15



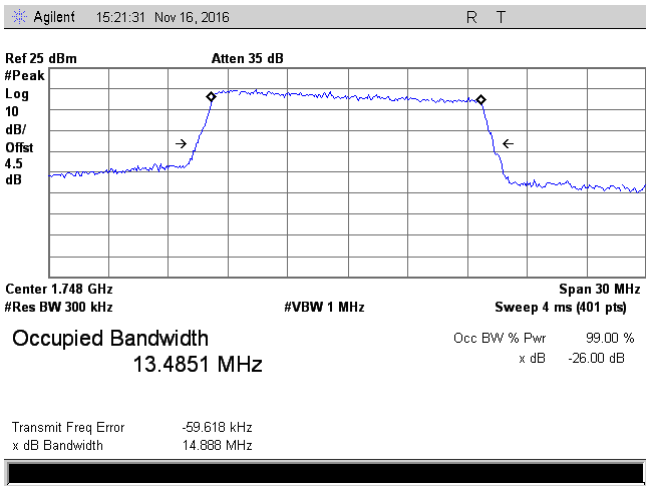
LTE band IV - Low CH 16QAM-15



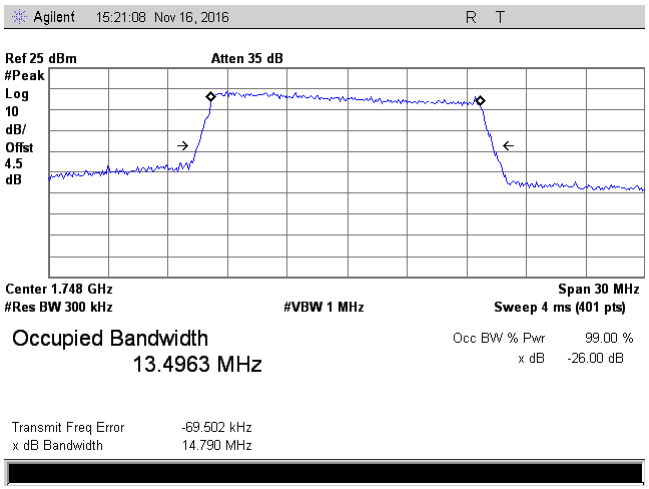
LTE band IV - Middle CH QPSK-15



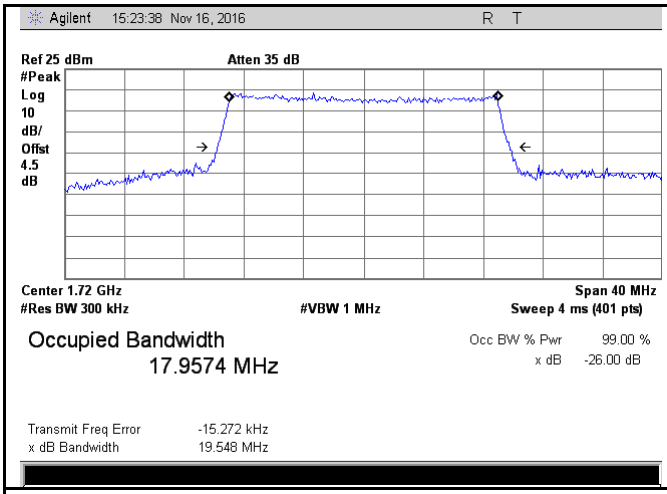
LTE band IV - Middle CH 16QAM-15



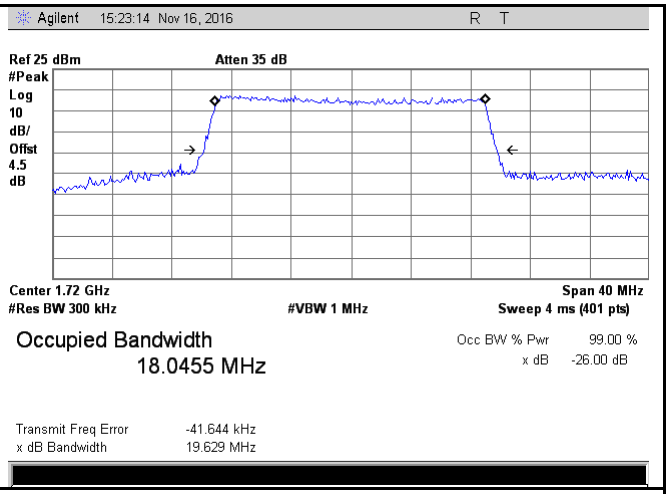
LTE band IV - High CH QPSK-15



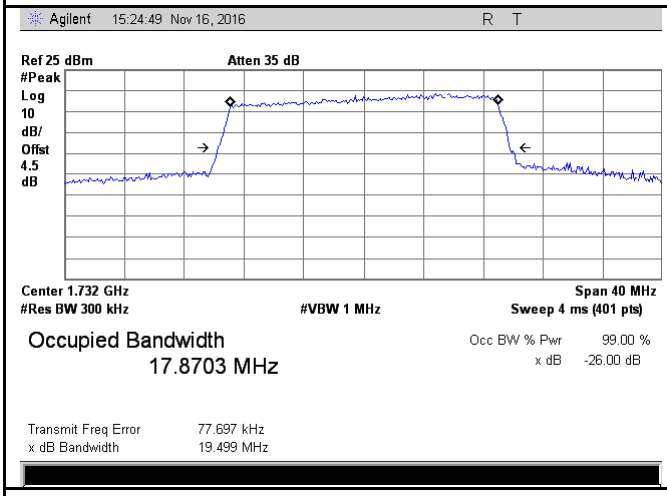
LTE band IV - High CH 16QAM-15



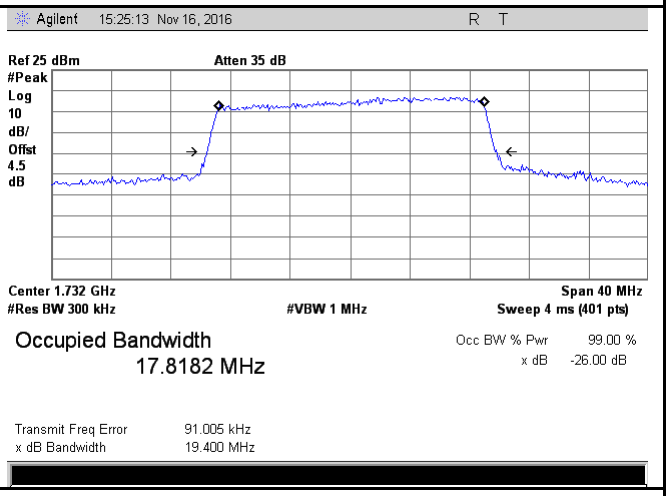
LTE band IV - Low CH QPSK-20



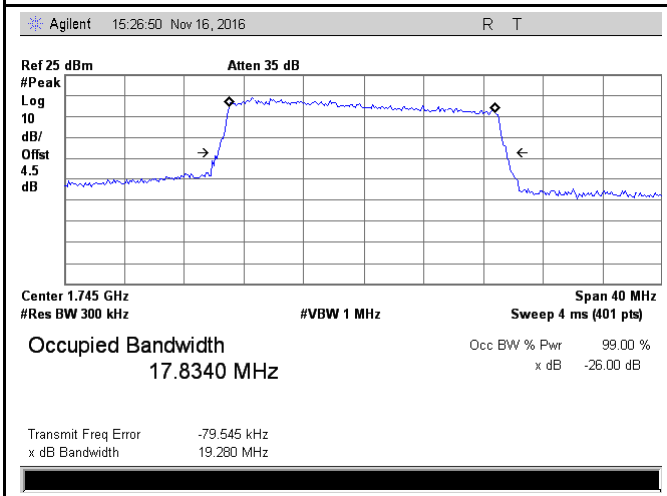
LTE band IV - Low CH 16QAM-20



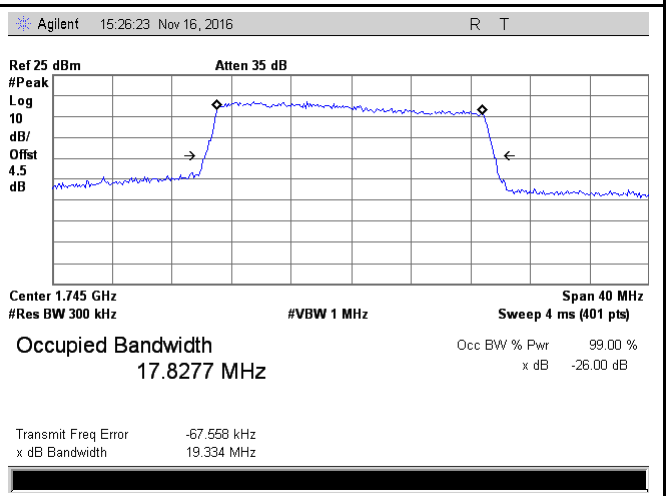
LTE band IV - Middle CH QPSK-20



LTE band IV - Middle CH 16QAM-20



LTE band IV - High CH QPSK-20

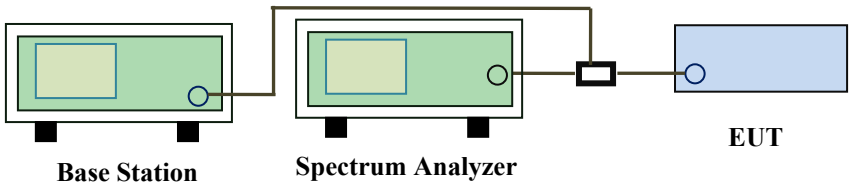


LTE band IV - High CH 16QAM-20

6.5 Spurious Emissions at Antenna Terminals

Temperature	25℃
Relative Humidity	58%
Atmospheric Pressure	1016mbar
Test date :	November 16, 2016
Tested By :	Loren Luo

Requirement(s):

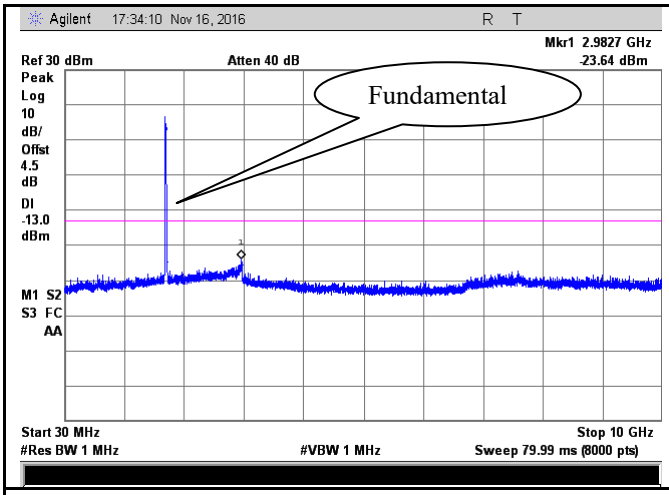
Spec	Item	Requirement	Applicable
§2.1051, § 27.53(h)	a)	The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 43 + 10 log (P) dB	☑
Test Setup			
Test Procedure	- The EUT was connected to Spectrum Analyzer and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

Test Data ☑ Yes ☐ N/A

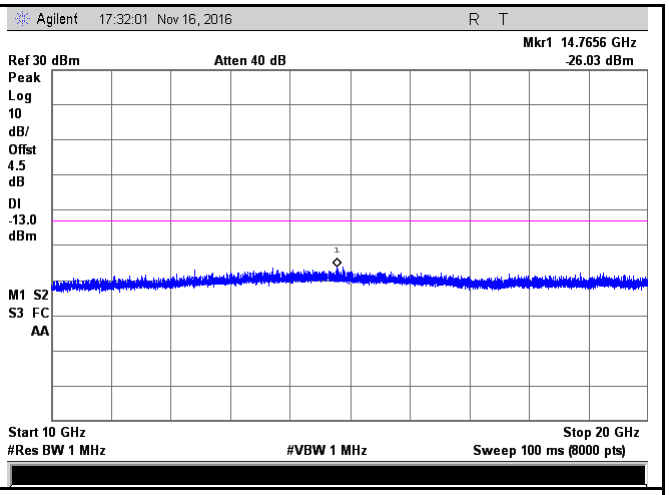
Test Plot ☑ Yes (See below) ☐ N/A

Test Plots 30MHz-20GHz

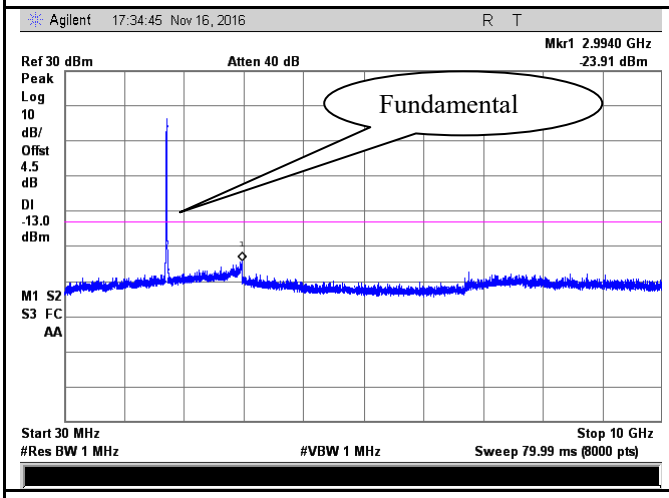
LTE Band IV (Part27) result



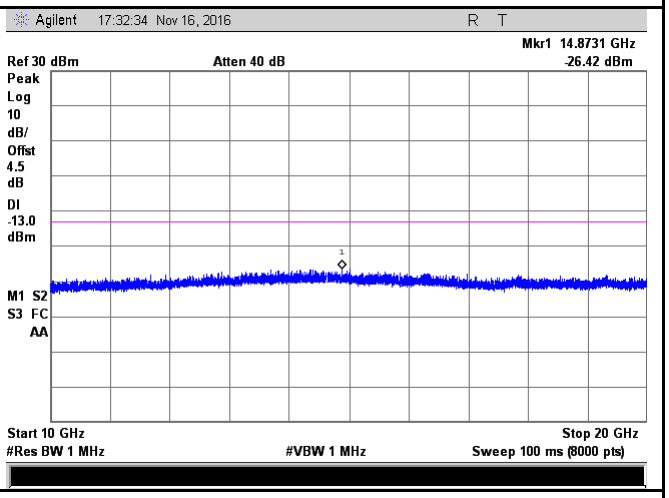
LTE Band IV - Low Channel-1



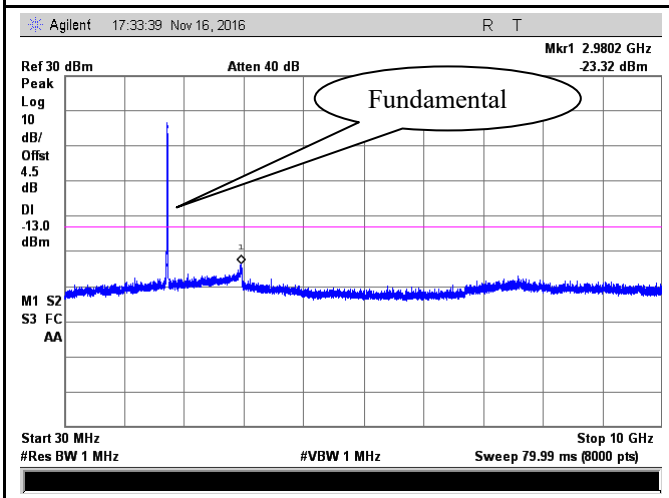
LTE Band IV - Low Channel-2



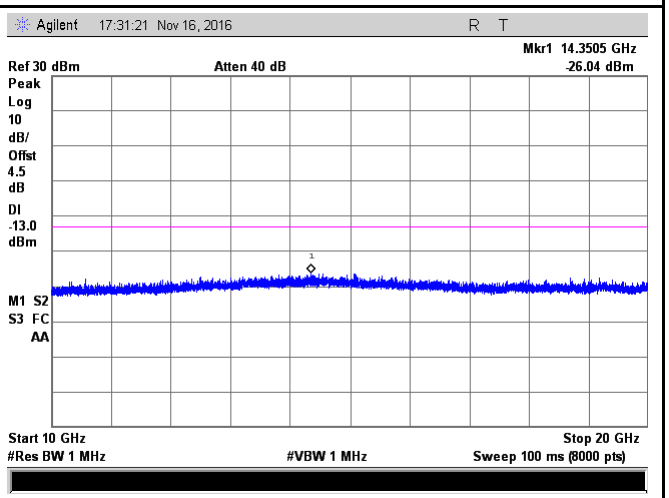
LTE Band IV - Middle Channel-1



LTE Band IV - Middle Channel-2



LTE Band IV - High Channel-1

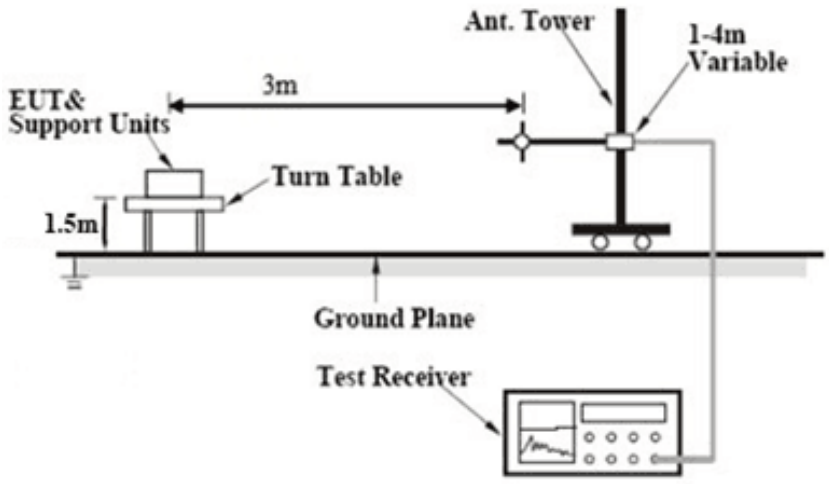


LTE Band IV - High Channel-2

6.6 Spurious Radiated Emissions

Temperature	23℃
Relative Humidity	51%
Atmospheric Pressure	1018mbar
Test date :	November 18, 2016
Tested By :	Loren Luo

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.	☑
Test setup			
Test Procedure	1. The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable. 2. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis. 3. Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution. Sample Calculation: EUT Field Strength = Raw Amplitude (dBμV/m) – Amplifier Gain (dB) + Antenna Factor (dB) + Cable Loss (dB) + Filter Attenuation (dB, if used)		

Remark	
Result	☑ Pass ☐ Fail

Test Data ☑ Yes ☐ N/A

Test Plot ☐ Yes (See below) ☑ N/A

LTE Band IV (Part27) result

Low channel

Frequency (MHz)	Substituted level (dBm)	Polarity (H/V)	Antenna Gain Correction (dB)	Cable Loss (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
3440	-46.23	V	10.06	2.52	-38.69	-13	-25.69
3440	-47.24	H	10.06	2.52	-39.7	-13	-26.7
50.8	-45.31	V	-4.2	0.11	-49.62	-13	-36.62
204.4	-48.51	H	4.6	0.18	-44.09	-13	-31.09

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	-46.17	V	10.09	2.52	-38.6	-13	-25.6
3465	-46.92	H	10.09	2.52	-39.35	-13	-26.35
50.6	-46.28	V	-4.2	0.11	-50.59	-13	-37.59
205.4	-49.05	H	4.6	0.18	-44.63	-13	-31.63

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	-45.76	V	10.09	2.52	-38.19	-13	-25.19
3490	-47.82	H	10.09	2.52	-40.25	-13	-27.25
50.7	-46.92	V	-4.2	0.11	-51.23	-13	-38.23
204.5	-48.73	H	4.6	0.18	-44.31	-13	-31.31

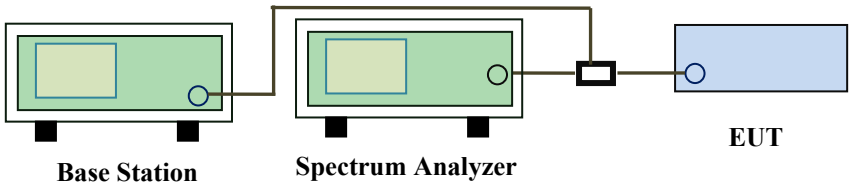
Note:

*1, The testing has been conformed to 10*1754.3MHz=17,543MHz*
2, All other emissions more than 30 dB below the limit
3, X-Axis, Y-Axis and Z–Axis were investigated. The results above show only the worst case.

6.7 Band Edge

Temperature	25℃
Relative Humidity	58%
Atmospheric Pressure	1016mbar
Test date :	November 16, 2016
Tested By :	Loren Luo

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.	☑
Test setup			
Procedure	- The EUT was connected to Spectrum Analyzer and Base Station via power divider. - The Band Edges of low and high channels for the highest RF powers were measured. Setting RBW as roughly BW/100.		
Remark			
Result	☑ Pass ☐ Fail		

Test Data ☑ Yes ☐ N/A

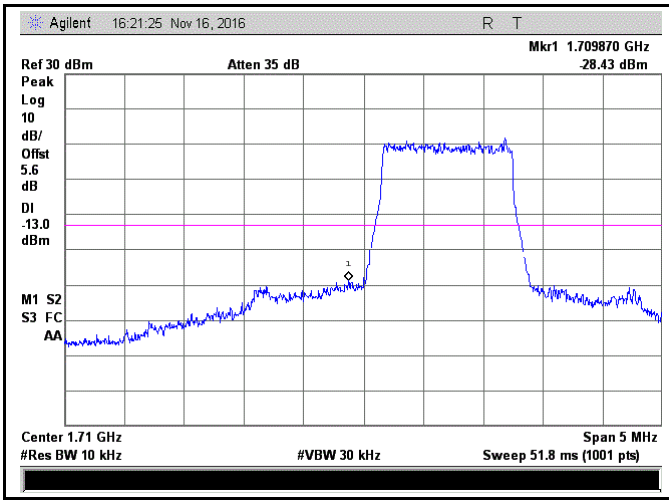
Test Plot ☑ Yes (See below) ☐ N/A

LTE Band IV (Part 27) result

BW(MHz)	Channel	Frequency (MHz)	Mode	Emission (dBm)	Limit (dBm)
1.4	19957	1709	QPSK	-28.43	-13
			16QAM	-26.33	-13
1.4	20393	1755	QPSK	-26.26	-13
			16QAM	-27.55	-13
3	19965	1709	QPSK	-19.42	-13
			16QAM	-21.99	-13
3	20385	1755	QPSK	-25.91	-13
			16QAM	-21.22	-13
5	19975	1709	QPSK	-16.6	-13
			16QAM	-18.53	-13
5	20375	1755	QPSK	-18.11	-13
			16QAM	-21.82	-13
10	20000	1709	QPSK	-15.35	-13
			16QAM	-18.47	-13
10	20350	1755	QPSK	-19.93	-13
			16QAM	-22.75	-13
15	20025	1709	QPSK	-18.54	-13
			16QAM	-22.8	-13
15	20325	1755	QPSK	-25.41	-13
			16QAM	-25.24	-13
20	20050	1709	QPSK	-21.07	-13
			16QAM	-25.69	-13
20	20300	1755	QPSK	-23.73	-13
			16QAM	-27.49	-13

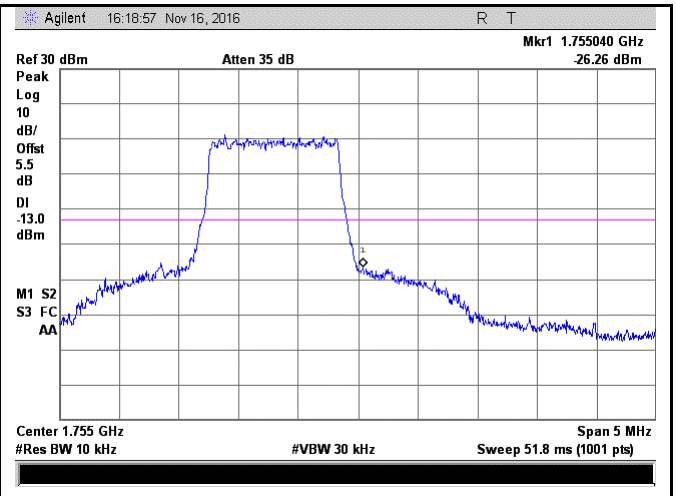
Test Plots

LTE Band IV (Part 27)



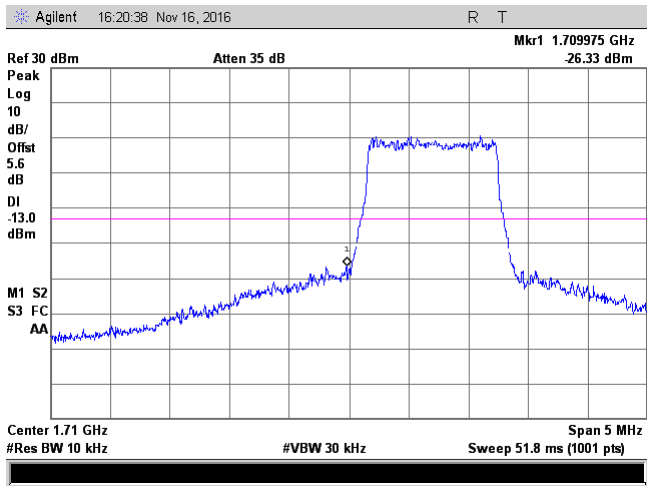
LTE Band IV - Low Channel QPSK-1.4

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



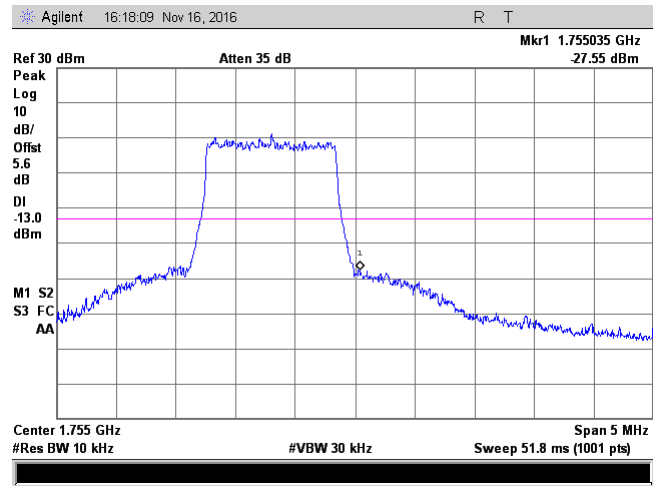
LTE Band IV - High Channel QPSK-1.4

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



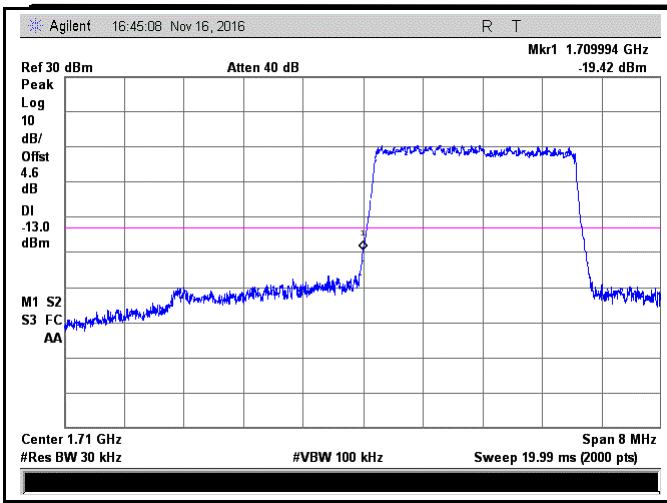
LTE Band IV - Low Channel 16QAM-1.4

Note: Offset=Cable loss (4.5) + 10log (12.82/10)=4.5+1.1=5.6 dB



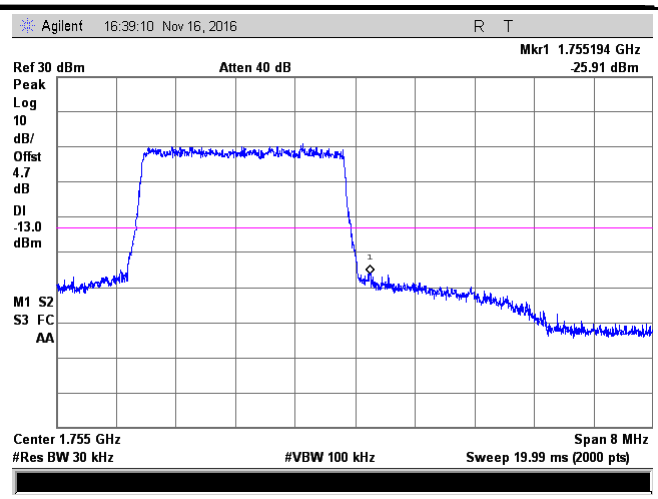
LTE Band IV - High Channel 16QAM-1.4

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



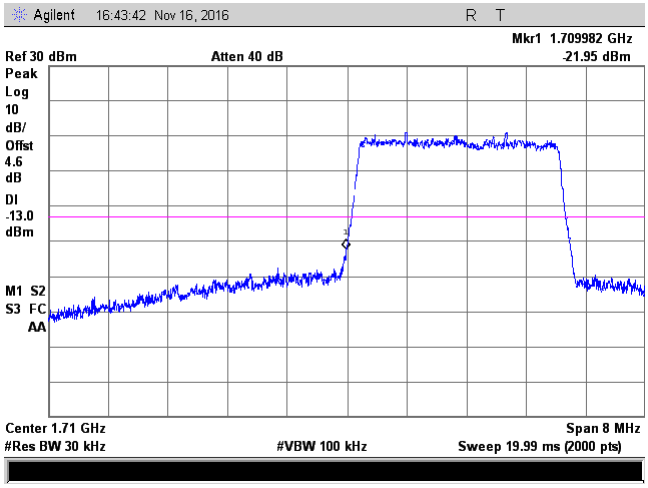
LTE Band IV - Low Channel QPSK-3

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



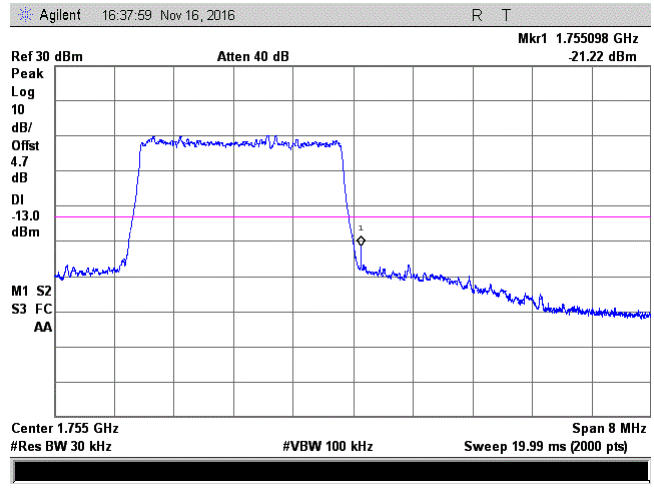
LTE Band IV - High Channel QPSK-3

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



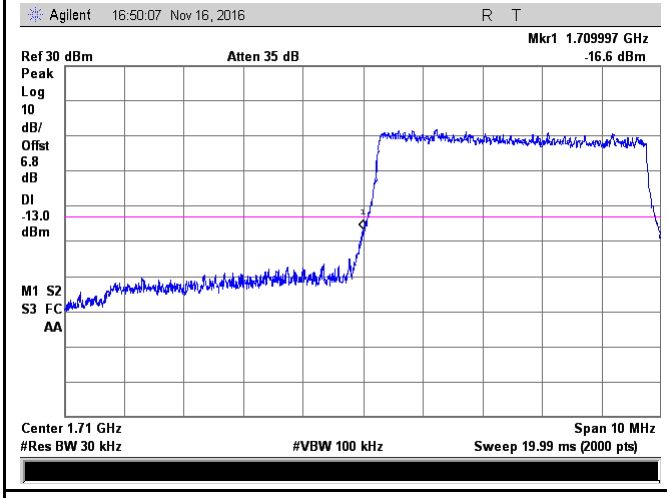
LTE Band IV - Low Channel 16QAM-3

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

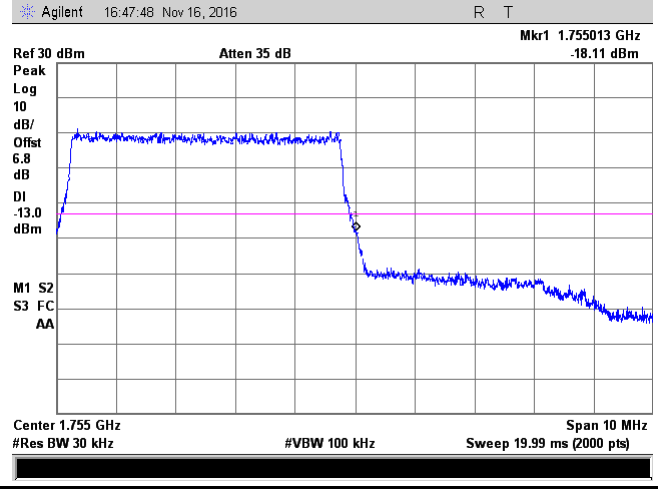


LTE Band IV - High Channel 16QAM-3

Note: Offset=Cable loss (4.5) + 10log (31.12/30)=4.5+0.2=4.7 dB

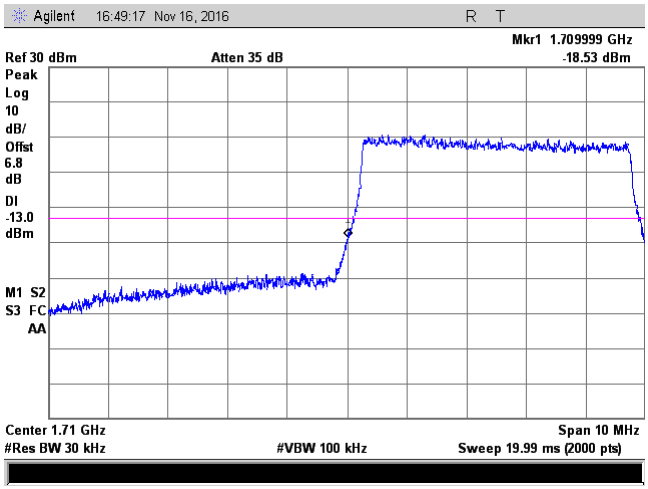


LTE Band IV - Low Channel QPSK-5



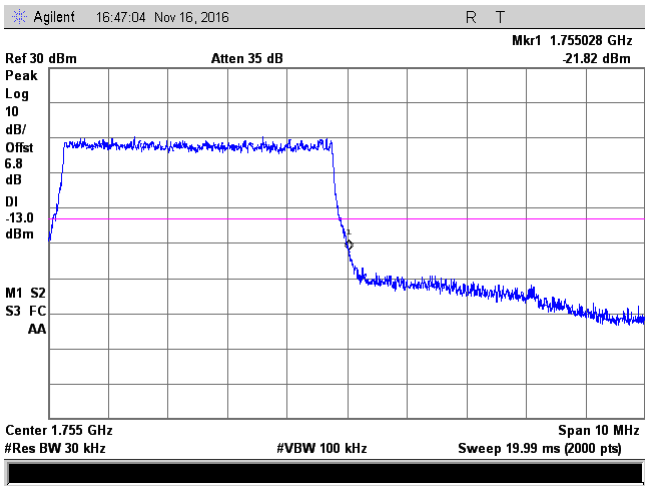
LTE Band IV - High Channel QPSK-5

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



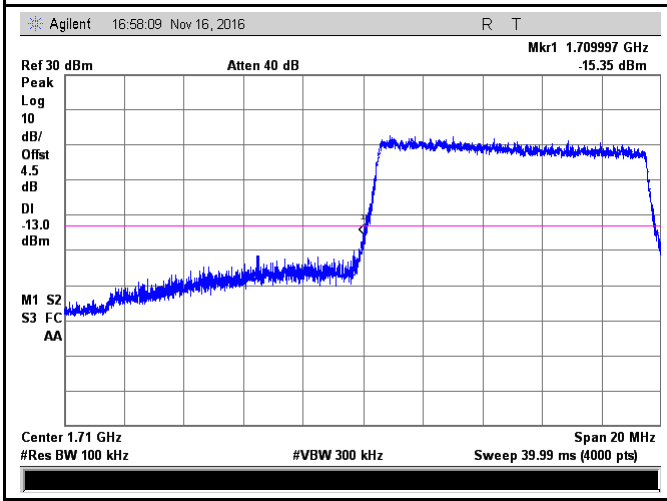
LTE Band IV - Low Channel 16QAM-5

Note: Offset=Cable loss (4.5) + 10log (50.64/30)=4.5+2.3=6.8 dB



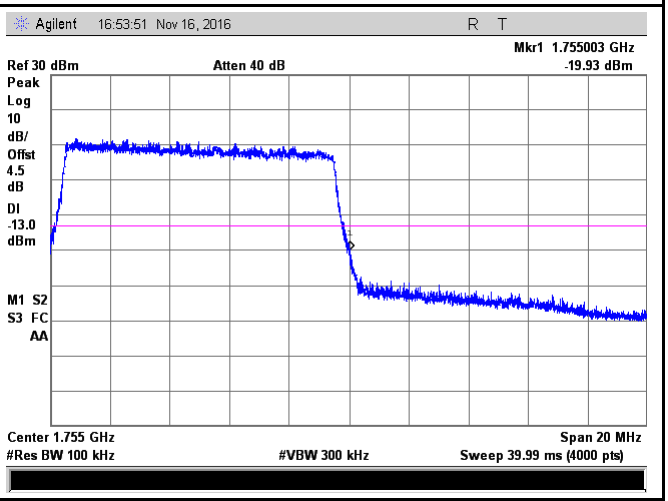
LTE Band IV - High Channel 16QAM-5

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

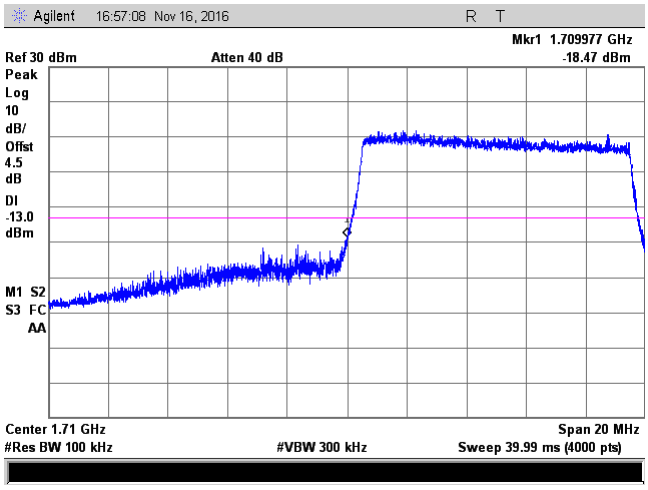


LTE Band IV - Low Channel QPSK-10

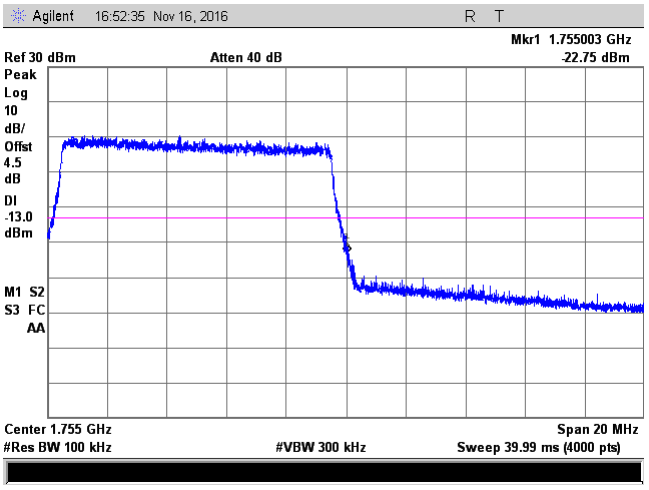
Note: Offset=Cable loss (4.5) + 10log (50.62/30)=4.5+2.3=6.8 dB



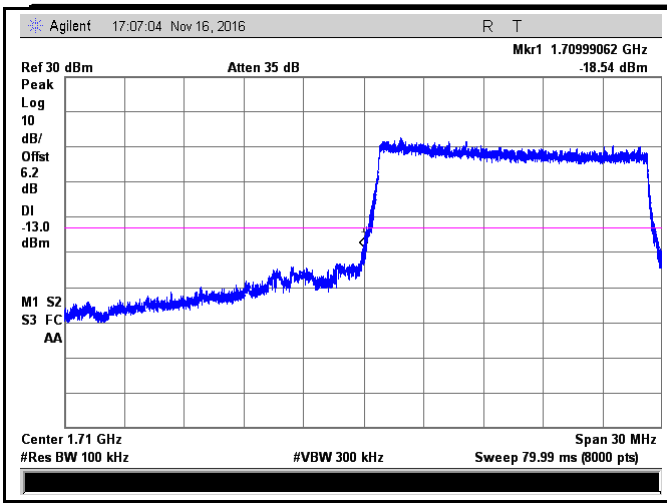
LTE Band IV - High Channel QPSK-10



LTE Band IV - Low Channel 16QAM-10

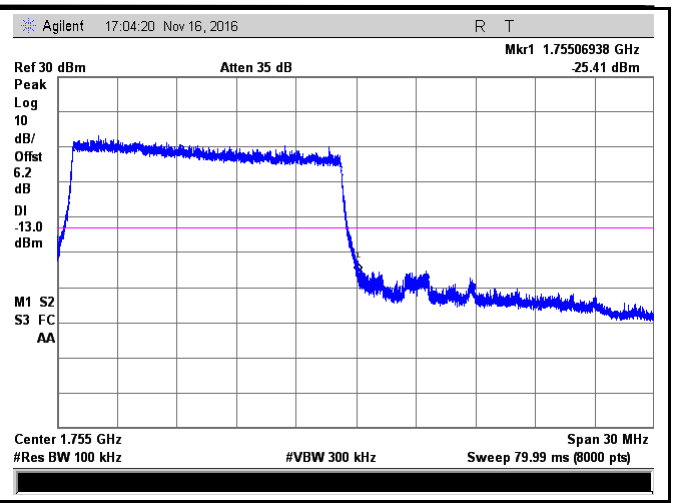


LTE Band IV - High Channel 16QAM-10



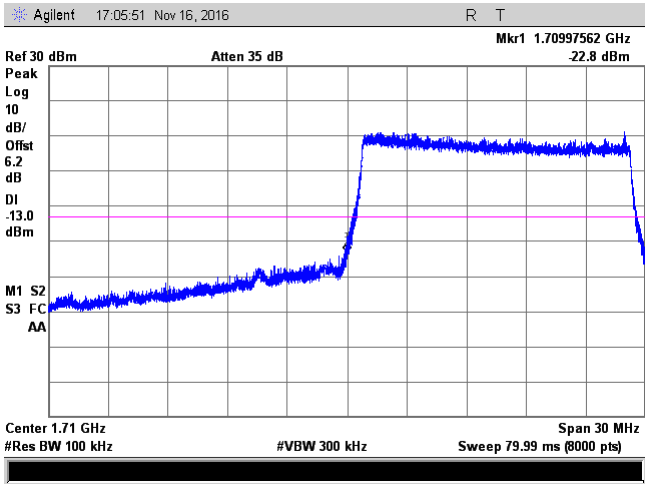
LTE Band IV - Low Channel QPSK-15

Note: Offset=Cable loss (4.5) + 10log (149.56/100)=4.5+1.7=6.2 dB



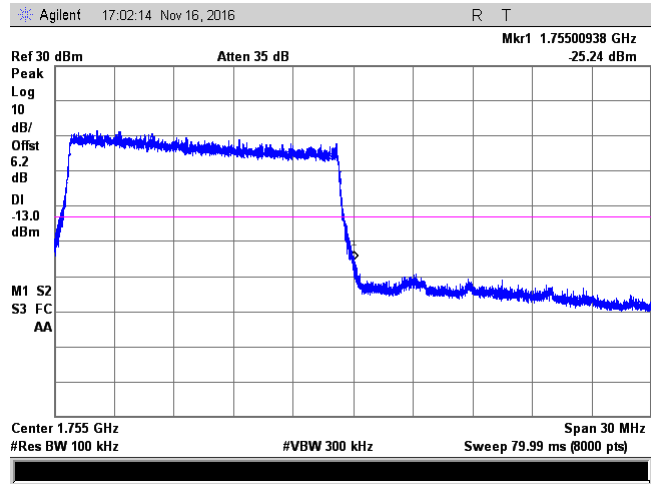
LTE Band IV - High Channel QPSK-15

Note: Offset=Cable loss (4.5) + 10log (148.88/100)=4.5+1.7=6.2 dB



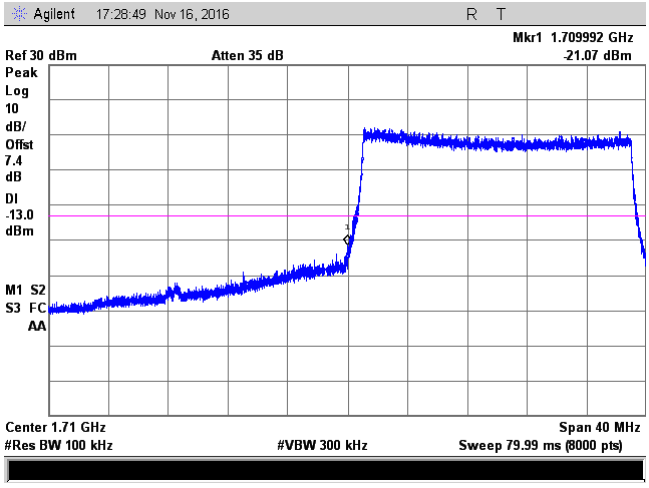
LTE Band IV - Low Channel 16QAM-15

Note: Offset=Cable loss (4.5) + 10log (149.07/100)=4.5+1.7=6.2 dB

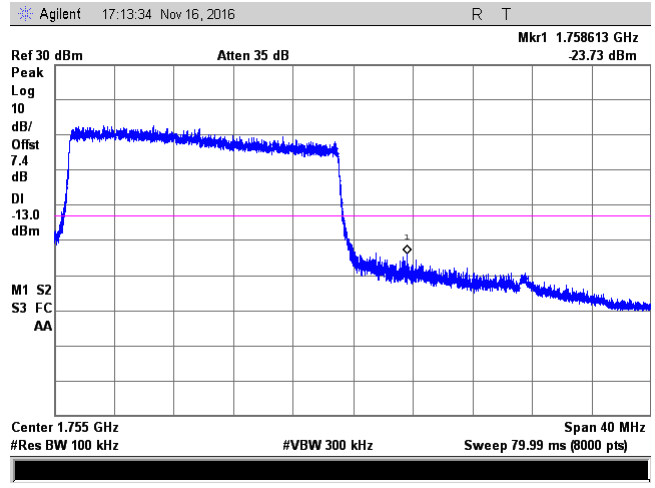


LTE Band IV - High Channel 16QAM-15

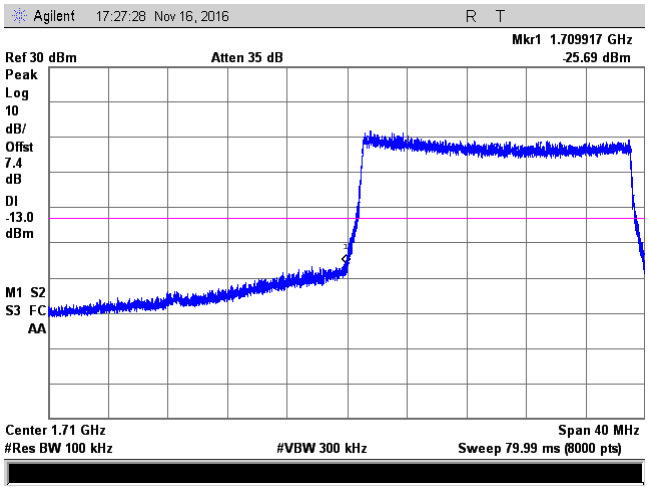
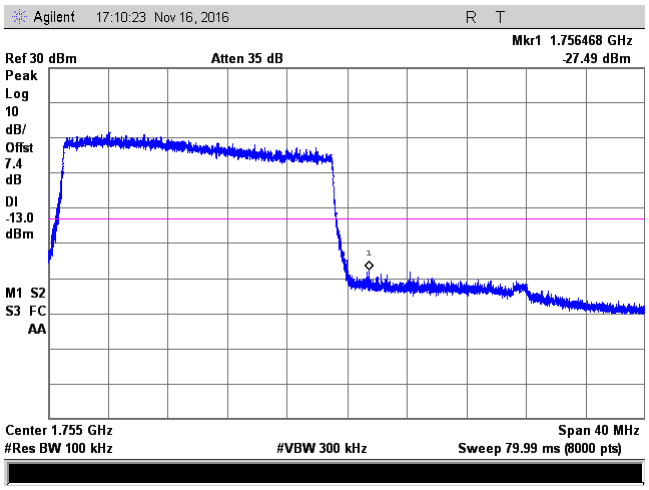
Note: Offset=Cable loss (4.5) + 10log (147.90/100)=4.5+1.7=6.2 dB



LTE Band IV - Low Channel QPSK-20



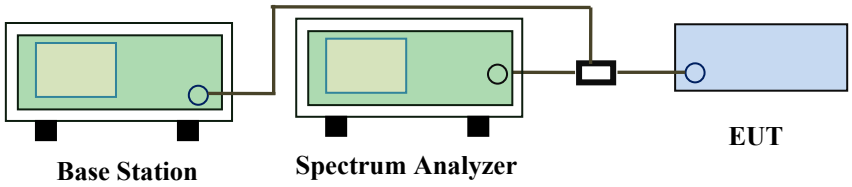
LTE Band IV - High Channel QPSK-20

Note: Offset=Cable loss (4.5) + 10log (195.48/100)=4.5+2.9=7.4 dB	Note: Offset=Cable loss (4.5) + 10log (192.80/100)=4.5+2.9=7.4 dB
	
LTE Band IV - Low Channel 16QAM-20	LTE Band IV - High Channel 16QAM-20
Note: Offset=Cable loss (4.5) + 10log (196.29/100)=4.5+2.9=7.4dB	Note: Offset=Cable loss (4.5) + 10log (193.34/100)=4.5+2.9=7.4 dB

6.8 Band Edge 27.53(m)

Temperature	23℃
Relative Humidity	58%
Atmospheric Pressure	1006mbar
Test date :	----------
Tested By :	Loren Luo

Requirement(s):

Spec	Requirement	Applicable
§27.53(m)	According to FCC 27.53(m)(4) specified that power of any emmission ouutside of the channel edge must be attenuated below the transmitting power(P) by a factor shall be not less than 43+10log (P)dB at the channel edge, the limit of emission equal to -13dBm. And 55+10log (P)dB at 5.5MHz from the channel edges, the limit of emission equal to -25dBm. In the 1MHz bands immediately outside and adjacent to the frenqency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.	☐
Test Setup		
Test Procedure	- The EUT was connected to Spectrum Analyzer and Base Station via power divider. - The 99% and 26 dB occupied bandwidth (BW) of the middle channel for the highest RF powers.	
Remark		
Result	☐ Pass ☐ Fail ☑ N/A	

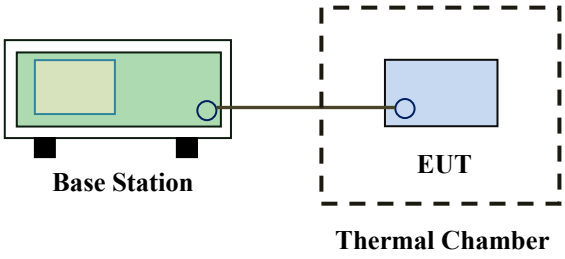
Test Data ☐ Yes ☑ N/A

Test Plot ☐ Yes (See below) ☑ N/A

6.9 Frequency Stability

Temperature	22℃
Relative Humidity	59%
Atmospheric Pressure	1017mbar
Test date :	November 17, 2016
Tested By :	Loren Luo

Requirement(s):

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

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

Test Data ☑ Yes ☐ N/A

Test Plot ☐ Yes (See below) ☑ N/A

LTE Band IV (Part 27) result

Middle Channel, f_o = 1732.5 MHz				
Temperature (℃)	Power Supplied (V_{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-10	3.7	-9	0.0052	2.5
0		-18	0.0104	2.5
10		-12	0.0069	2.5
20		-16	0.0092	2.5
30		-8	0.0046	2.5
40		-16	0.0092	2.5
50		-14	0.0081	2.5
55		-9	0.0052	2.5
25	4.2	-10	0.0058	2.5
	3.5	-13	0.0075	2.5

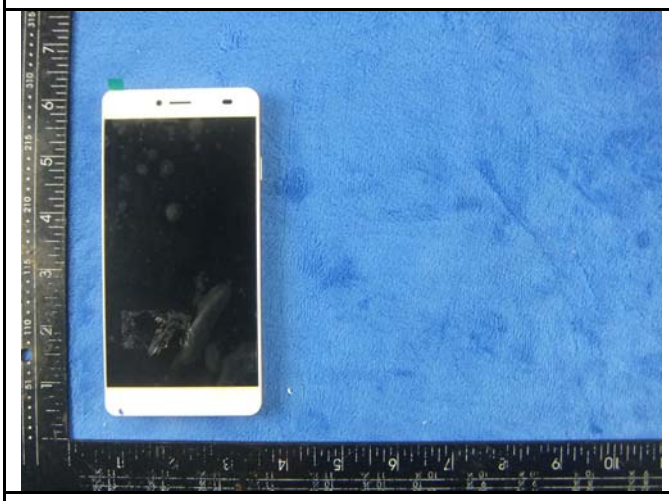
Annex A. TEST INSTRUMENT

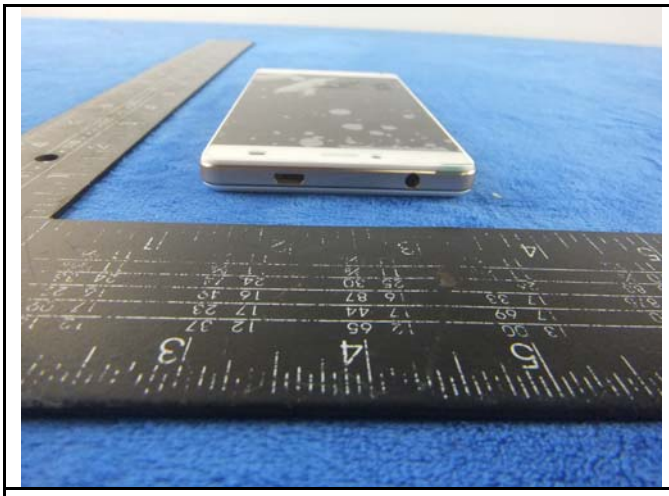
Instrument	Model	Serial #	Cal Date	Cal Due	In use
RF Conducted Test					
Agilent ESA-E SERIES SPECTRUM ANALYZER	E4407B	MY45108319	09/15/2016	09/14/2017	☑
Power Splitter	1#	1#	08/31/2016	08/30/2017	☑
Universal Radio Communication Tester	CMU200	121393	09/24/2016	09/23/2017	☑
Wideband Radio Communication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

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

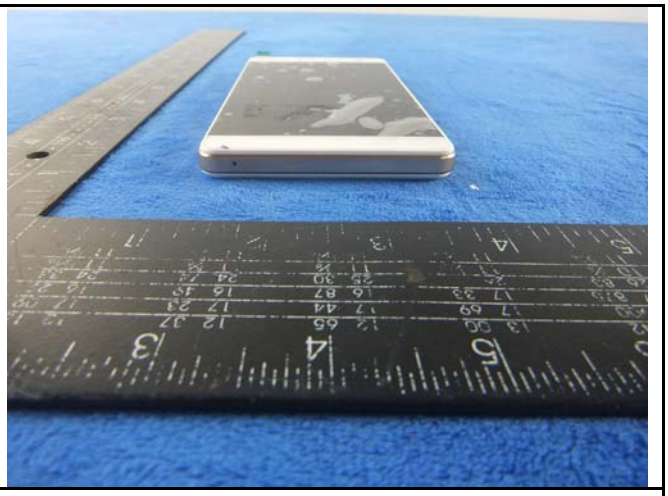
Annex B. EUT And Test Setup Photographs

Annex B.i. Photograph: EUT External Photo

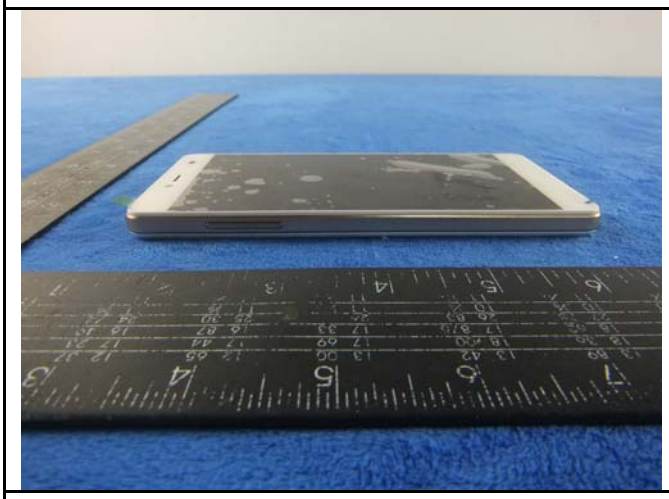
	
Whole Package View	Adapter - Front View
	
EUT - Front View	EUT - Rear View



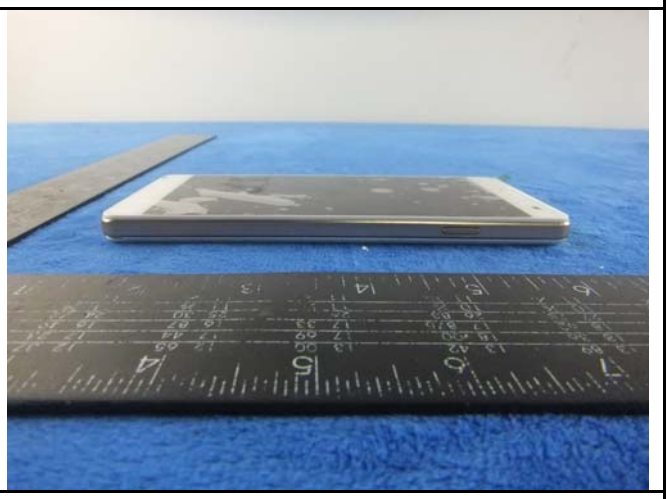
EUT - Top View



EUT - Bottom View



EUT - Left View



EUT - Right View

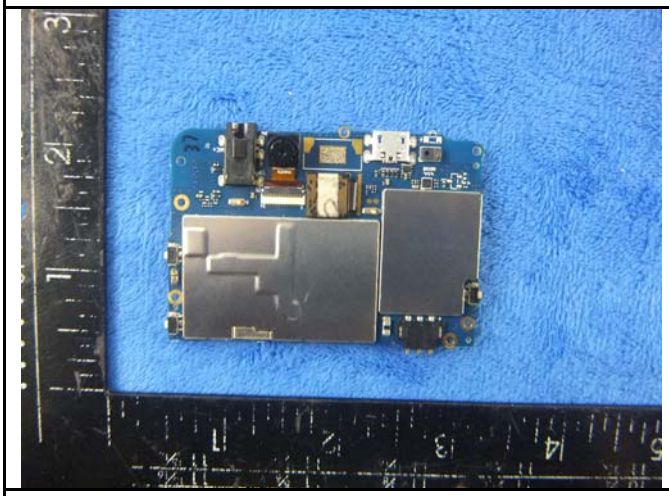
Annex B.ii. Photograph: EUT Internal Photo

Cover Off - Top View 1

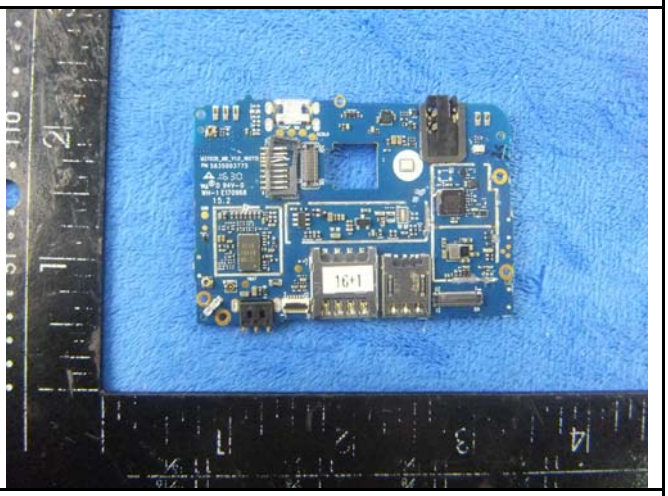
Cover Off - Top View 2

Battery - Front View

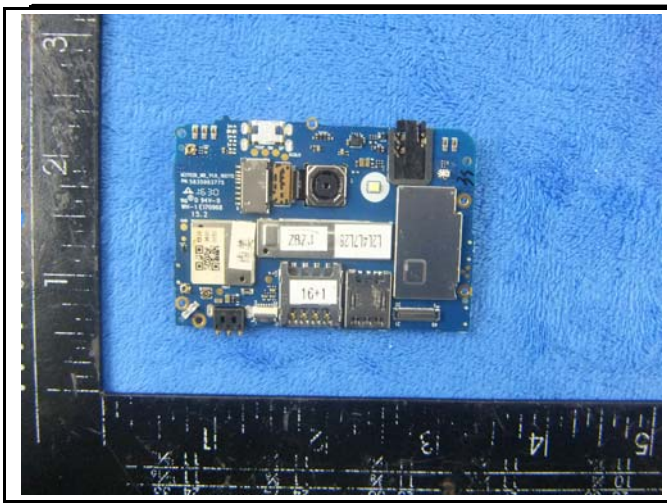
Battery - Rear View



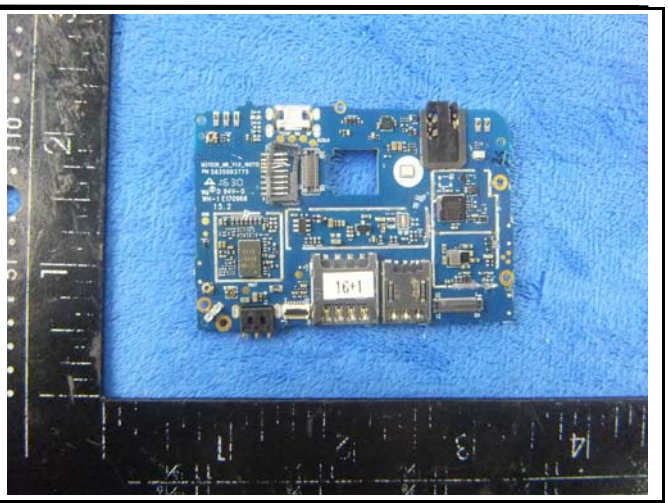
Mainboard with sheilding - Front View



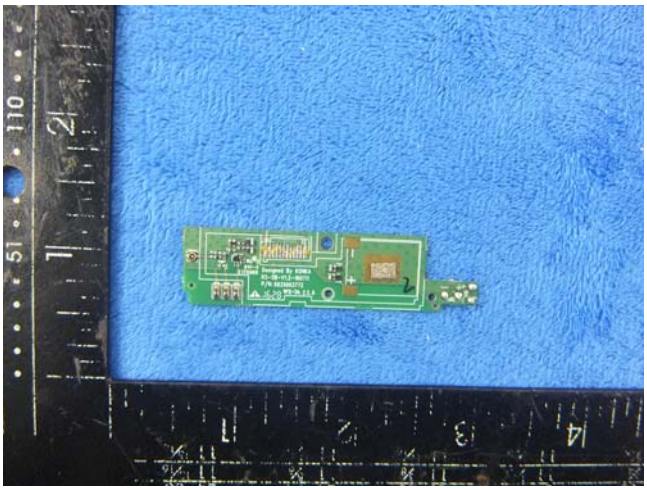
Mainboard witout sheilding - Front View



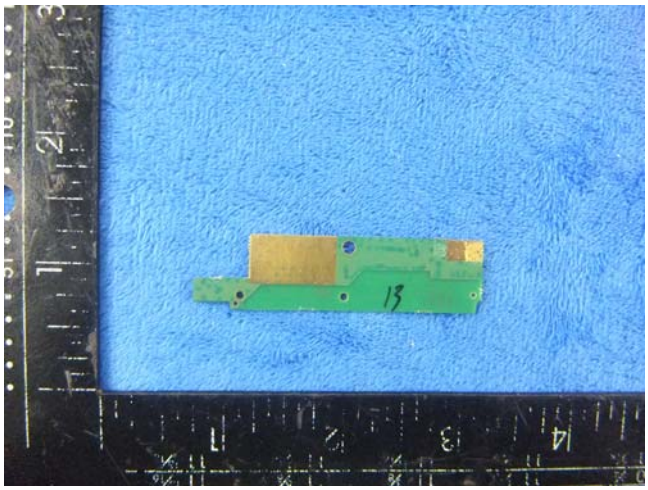
Mainboard with sheilding – Rear View



Mainboard witout sheilding – Rear View



Smllboard – Front View



Smallboard - Rear View

LCD – Feont View

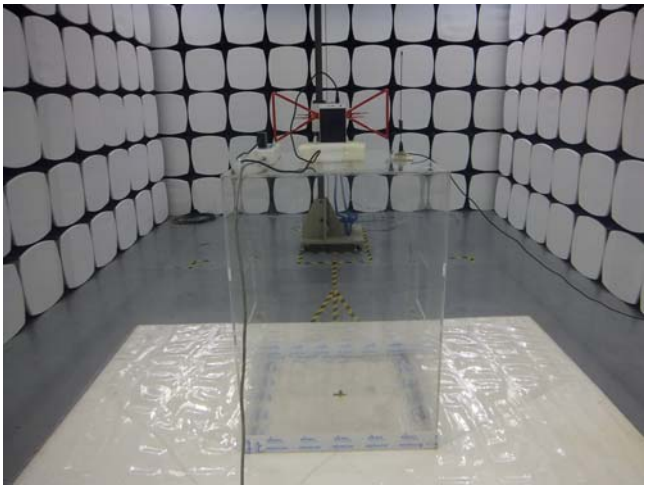
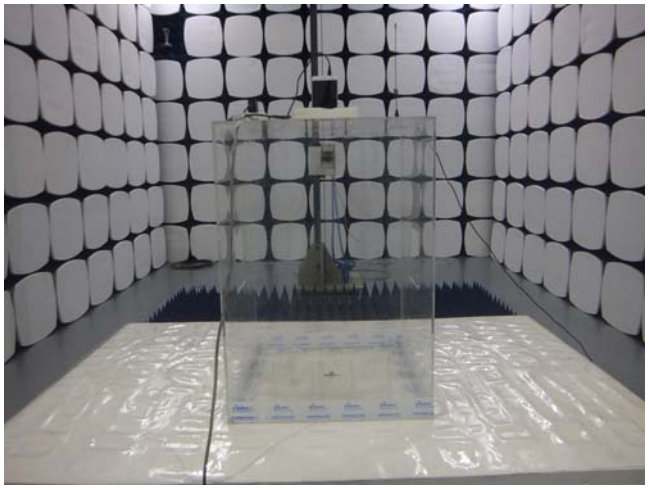
LCD – Rear View

GSM/PCS/UMTS-FDD Antenna View

WIFI/BT/BLE/GPS - Antenna View

LTE Antenna View

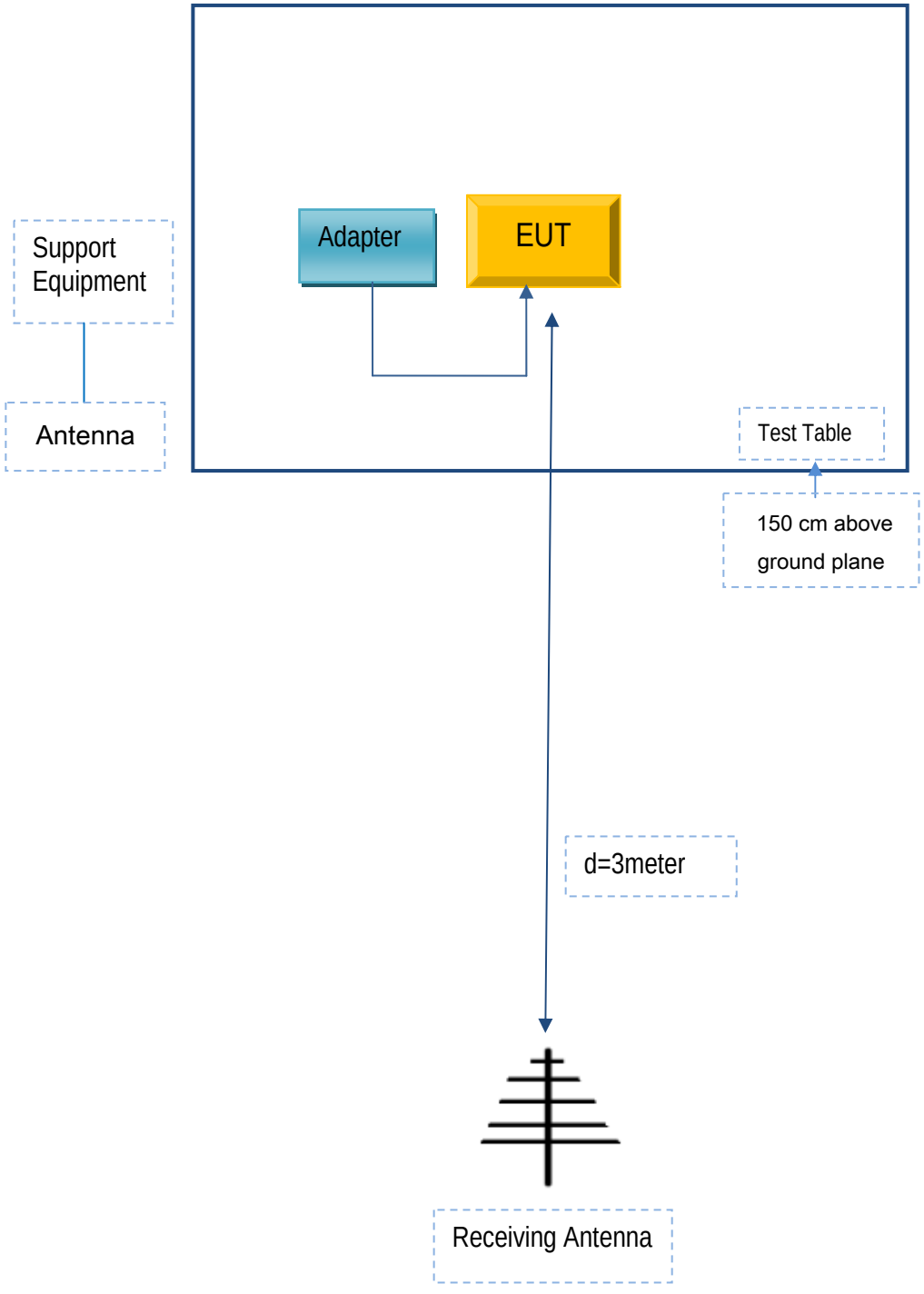
Annex B.iii. Photograph: Test Setup Photo

	
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. il. SUPPORTING EQUIPMENT DESCRIPTION

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

Supporting Equipment:

Manufacturer	Equipment Description	Model	Serial No
Shenzhen Konka Telecommunications Technology Co.,Ltd.	AC Adapter	U0B2E0A050100	5834005010

Supporting Cable:

Cable type	Shield Type	Ferrite Core	Length	Serial No
USB Cable	Un-shielding	No	0.8m	5834005010

Annex C.ii. EUT OPERATING CONKITIONS

N/A

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

Please see the attachment

Annex E. DECLARATION OF SIMILARITY

N/A