FCC Test Report

(PART 24)

Report No.:	RF171027C05-2
FCC ID:	XHG-R871A
Test Model:	R871
Received Date:	Nov. 17, 2016
Test Date:	Dec. 17, 2016 ~ Dec. 27, 2016
Issued Date:	Nov. 13, 2017
Applicant:	Franklin Technology Inc.
Address:	906 JEI Platz, 186, Gasan digital 1-ro, Geumcheon-gu, Seoul, Korea, (08502)
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C)
Test Location:	No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

Table of Contents

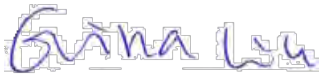
Release Control Record

Issue No.	Description	Date Issued
RF171027C05-2	Original Release	Nov. 13, 2017

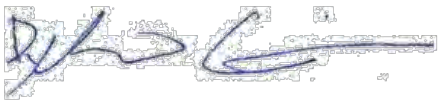
1 Certificate of Conformity

Product:	Mobile Hotspot
Brand:	Franklin
Test Model:	R871
Sample Status:	Production Unit
Applicant:	Franklin Technology Inc.
Test Date:	Dec. 17, 2016 ~ Dec. 27, 2016
Standards:	FCC Part 24, Subpart E

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by :  , **Date:** Nov. 13, 2017

Gina Liu / Specialist

Approved by :  , **Date:** Nov. 13, 2017

Dylan Chiou / Project Engineer

2 Summary of Test Results

Applied Standard: FCC Part 24 & Part 2			
FCC Clause	**Test Item**	**Result**	**Remarks**
2.1046 24.232	Effective Isotropic Radiated Power	Pass	Meet the requirement of limit.
2.1046 24.232(d)	Peak to Average Ratio	Pass	Meet the requirement of limit.
2.1055 24.235	Frequency Stability	Pass	Meet the requirement of limit.
2.1049 24.238(b)	Occupied Bandwidth	Pass	Meet the requirement of limit.
24.238(b)	Band Edge Measurements	Pass	Meet the requirement of limit.
2.1051 24.238	Conducted Spurious Emissions	Pass	Meet the requirement of limit.
2.1053 24.238	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -12.32 dB at 5715.00 MHz.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	**Frequency**	**Expended Uncertainty (k=2) (±)**
Conducted Emissions at mains ports	150 kHz ~ 30 MHz	2.44 dB
Radiated Emissions up to 1 GHz	30 MHz ~ 200 MHz	2.93 dB
	200 MHz ~1000 MHz	2.95 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	2.26 dB
	18 GHz ~ 40 GHz	1.94 dB

2.2 Test Site And Instruments

Description & Manaufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver Agilent	N9038A	MY51210203	Jan. 21, 2016	Jan. 20, 2017
Spectrum Analyzer Agilent	N9010A	MY52220314	Dec. 16, 2016	Dec. 15, 2017
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Dec. 13, 2016	Dec. 12, 2017
BILOG Antenna SCHWARZBECK	VULB9168	9168-472	Jan. 07, 2016	Jan. 06, 2017
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-969	Jan. 04, 2016	Jan. 03, 2017
Double Ridge Guide Horn Antenna EMCO	3115	5619	Jan. 04, 2016	Jan. 03, 2017
BILOG Antenna SCHWARZBECK	VULB 9168	9168-153	Jan. 07, 2016	Jan. 06, 2017
Fixed Attenuator Mini-Circuits	BW-N10W5+	NA	Jul. 08, 2016	Jul. 07, 2017
MXG Vector signal generator Agilent	N5182B	MY53050430	Oct. 19, 2016	Oct. 18, 2017
Preamplifier EMCI	EMC 012645	980115	Oct. 21, 2016	Oct. 20, 2017
Preamplifier EMCI	EMC 184045	980116	Oct. 21, 2016	Oct. 20, 2017
Preamplifier EMCI	EMC 330H	980112	Oct. 21, 2016	Oct. 20, 2017
Power Meter Anritsu	ML2495A	1232002	Sep. 08, 2016	Sep. 07, 2017
Power Sensor Anritsu	MA2411B	1207325	Sep. 08, 2016	Sep. 07, 2017
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	309219/4 2950114	Oct. 21, 2016	Oct. 20, 2017
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	250130/4	Oct. 21, 2016	Oct. 20, 2017
RF Coaxial Cable Worken	8D-FB	Cable-Ch10-01	Oct. 21, 2016	Oct. 20, 2017
Software BV ADT	E3 6.120103	NA	NA	NA
Antenna Tower MF	MFA-440H	NA	NA	NA
Turn Table MF	MFT-201SS	NA	NA	NA
Antenna Tower &Turn Table Controller MF	MF-7802	NA	NA	NA
Fixed Attenuator Mini-Circuits	BW-N10W5+	NA	Jul. 08, 2016	Jul. 07, 2017
Radio Communication Analyzer	MT8820C	6201300640	Aug. 10, 2015	Aug. 09, 2017
Communications Tester-Wireless	8960 Series 10	MY53201073	Jul. 03, 2015	Jul. 02, 2017

Note:
1. The calibration interval of the above test instruments is 12 / 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 10.
3. The horn antenna and preamplifier (model: EMC 184045) are used only for the measurement of emission frequency above 1 GHz if tested.
4. The FCC Designation Number is TW0003. The number will be varied with the Lab location and scope as attached.
5. The IC Site Registration No. is IC7450F-10.

3 General Information

3.1 General Description of EUT

Product	Mobile Hotspot	
Brand	Franklin	
Test Model	R871	
Status of EUT	Production Unit	
Power Supply Rating	5.0 Vdc (adapter or host equipment) 3.8 Vdc (Li-ion battery)	
Modulation Type	CDMA	QPSK, OQPSK, HPSK
	LTE	QPSK, 16QAM
Frequency Range	CDMA	1851.3 ~ 1908.8 MHz
	LTE Band 2 (Channel Bandwidth: 1.4 MHz)	1850.7 ~ 1909.3 MHz
	LTE Band 2 (Channel Bandwidth: 3 MHz)	1851.5 ~ 1908.5 MHz
	LTE Band 2 (Channel Bandwidth: 5 MHz)	1852.5 ~ 1907.5 MHz
	LTE Band 2 (Channel Bandwidth: 10 MHz)	1855.0 ~ 1905.0 MHz
	LTE Band 2 (Channel Bandwidth: 15 MHz)	1857.5 ~ 1902.5 MHz
	LTE Band 2 (Channel Bandwidth: 20 MHz)	1860.0 ~ 1900.0 MHz
	LTE Band 25 (Channel Bandwidth: 1.4 MHz)	1850.7 ~ 1914.3 MHz
	LTE Band 25 (Channel Bandwidth: 3 MHz)	1851.5 ~ 1913.5 MHz
	LTE Band 25 (Channel Bandwidth: 5 MHz)	1852.5 ~ 1912.5 MHz
	LTE Band 25 (Channel Bandwidth: 10 MHz)	1855.0 ~ 1910.0 MHz
	LTE Band 25 (Channel Bandwidth: 15 MHz)	1857.5 ~ 1907.5 MHz
	LTE Band 25 (Channel Bandwidth: 20 MHz)	1860.0 ~ 1905.0 MHz
Max. EIRP Power	CDMA	69.07 mW
	LTE Band 2 (Channel Bandwidth: 1.4 MHz)	122.24 mW
	LTE Band 2 (Channel Bandwidth: 3 MHz)	123.94 mW
	LTE Band 2 (Channel Bandwidth: 5 MHz)	134.65 mW
	LTE Band 2 (Channel Bandwidth: 10 MHz)	138.42 mW
	LTE Band 2 (Channel Bandwidth: 15 MHz)	142.96 mW
	LTE Band 2 (Channel Bandwidth: 20 MHz)	153.18 mW
	LTE Band 25 (Channel Bandwidth: 1.4 MHz)	139.00 mW
	LTE Band 25 (Channel Bandwidth: 3 MHz)	147.23 mW
	LTE Band 25 (Channel Bandwidth: 5 MHz)	181.97 mW
	LTE Band 25 (Channel Bandwidth: 10 MHz)	208.93 mW
	LTE Band 25 (Channel Bandwidth: 15 MHz)	210.86 mW
	LTE Band 25 (Channel Bandwidth: 20 MHz)	212.32 mW

Emission Designator	CDMA	1M28F9W
	LTE Band 2 (Channel Bandwidth: 1.4 MHz)	1M09W7D
	LTE Band 2 (Channel Bandwidth: 3 MHz)	2M70G7D
	LTE Band 2 (Channel Bandwidth: 5 MHz)	4M50W7D
	LTE Band 2 (Channel Bandwidth: 10 MHz)	8M98G7D
	LTE Band 2 (Channel Bandwidth: 15 MHz)	13M5G7D
	LTE Band 2 (Channel Bandwidth: 20 MHz)	17M9W7D
	LTE Band 25 (Channel Bandwidth: 1.4 MHz)	1M09W7D
	LTE Band 25 (Channel Bandwidth: 3 MHz)	2M70G7D
	LTE Band 25 (Channel Bandwidth: 5 MHz)	4M49W7D
	LTE Band 25 (Channel Bandwidth: 10 MHz)	8M96W7D
	LTE Band 25 (Channel Bandwidth: 15 MHz)	13M5G7D
	LTE Band 25 (Channel Bandwidth: 20 MHz)	18M0W7D
Antenna Type	Fixed Internal Antenna	
Accessory Device	Refer to Note as below	
Data Cable Supplied	Refer to Note as below	

Note:

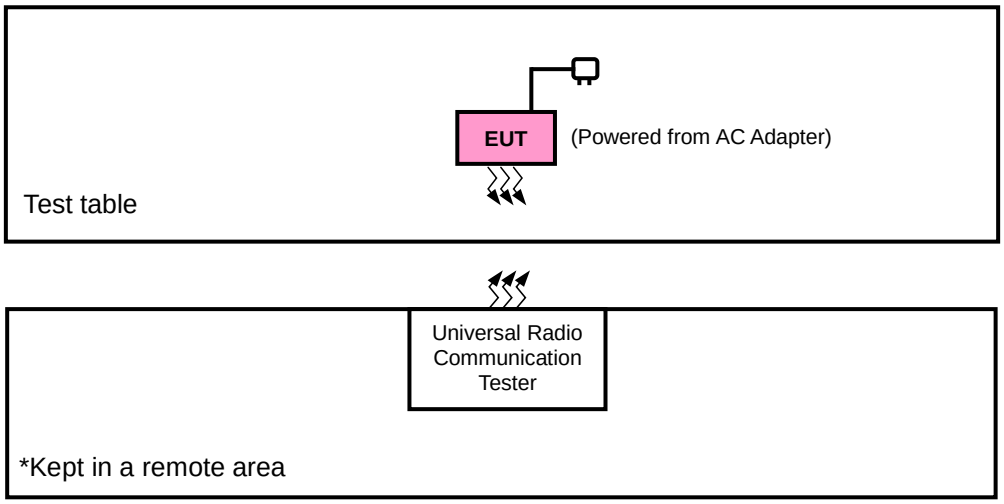
1. The EUT contains following accessory devices.

Product	Brand	Model	Description
Adapter	Franklin Wireless	FWCR900TVL	I/P: 100-240 Vac, 0.3 A O/P: 5 Vdc, 1.0 A 1.5 m cable non-shielded cable w/o core
Battery	Franklin Wireless	R850	3.8 Vdc, 2450 mAh

2. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 Configuration of System under Test

<Radiated Emission Test>



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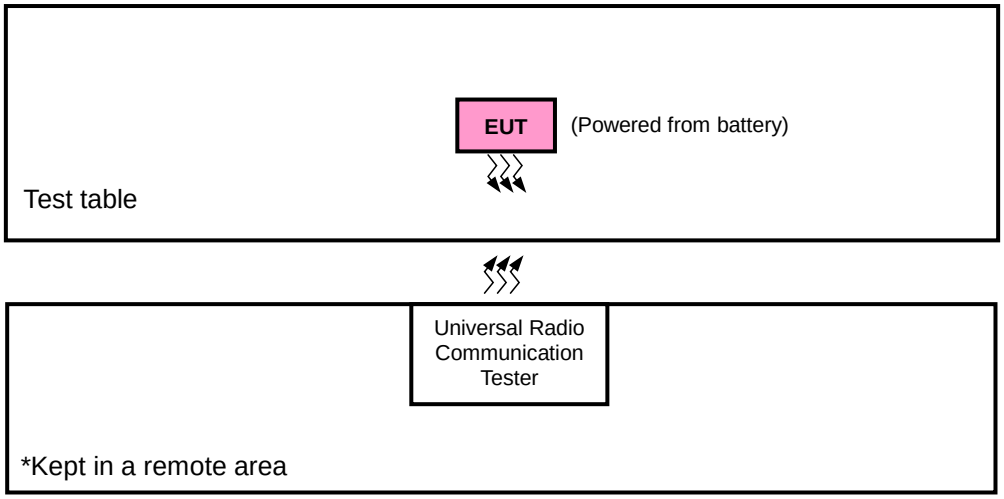


3.2.1 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units.

3.3 Test Mode Applicability and Tested Channel Detail

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis, and antenna ports.
The worst case was found when positioned as the table below. Following channel(s) was (were) selected for the final test as listed below:

Band	EIRP	Radiated Emission
CDMA	Y-plane	Y-axis
LTE Band 2	X-plane	Y-axis
LTE Band 25	X-plane	Y-axis

CDMA

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Mode
-	ERP	25 to 1175	25, 600, 1175	1xEVDO
-	Frequency Stability	25 to 1175	600	1xEVDO
-	Occupied Bandwidth	25 to 1175	25, 600, 1175	1xEVDO
-	Band Edge	25 to 1175	25, 600, 1175	1xEVDO
-	Peak to Average Ratio	25 to 1175	25, 1175	1xEVDO
-	Condcudeted Emission	25 to 1175	25, 600, 1175	1xEVDO
-	Radiated Emission	25 to 1175	25, 600, 1175	1xEVDO

LTE Band 2

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	EIRP	18607 to 19193	18607, 18900, 19193	1.4 MHz	QPSK	1 RB / 0 RB Offset
					16QAM	3 RB / 1 RB Offset
		18615 to 19185	18615, 18900, 19185	3 MHz	QPSK	1 RB / 0 RB Offset
					16QAM	1 RB / 7 RB Offset
		18625 to 19175	18625, 18900, 19175	5 MHz	QPSK	1 RB / 0 RB Offset
					16QAM	1 RB / 12 RB Offset
		18650 to 19150	18650, 18900, 19150	10 MHz	QPSK	1 RB / 0 RB Offset
					16QAM	1 RB / 0 RB Offset
		18675 to 19125	18675, 18900, 19125	15 MHz	QPSK	1 RB / 0 RB Offset
					16QAM	1 RB / 37 RB Offset
		18700 to 19100	18700, 18900, 19100	20 MHz	QPSK	1 RB / 0 RB Offset
					16QAM	1 RB / 50 RB Offset
-	Frequency Stability	18607 to 19193	18900	1.4 MHz	QPSK	1 RB / 0 RB Offset
		18615 to 19185	18900	3 MHz	QPSK	1 RB / 0 RB Offset
		18625 to 19175	18900	5 MHz	QPSK	1 RB / 0 RB Offset
		18650 to 19150	18900	10 MHz	QPSK	1 RB / 0 RB Offset
		18675 to 19125	18900	15 MHz	QPSK	1 RB / 0 RB Offset
		18700 to 19100	18900	20 MHz	QPSK	1 RB / 0 RB Offset
-	Occupied Bandwidth	18607 to 19193	18607, 18900, 19193	1.4 MHz	QPSK, 16QAM	6 RB / 0 RB Offset
		18615 to 19185	18615, 18900, 19185	3 MHz	QPSK, 16QAM	15 RB / 0 RB Offset
		18625 to 19175	18625, 18900, 19175	5 MHz	QPSK, 16QAM	25 RB / 0 RB Offset
		18650 to 19150	18650, 18900, 19150	10 MHz	QPSK, 16QAM	50 RB / 0 RB Offset
		18675 to 19125	18675, 18900, 19125	15 MHz	QPSK, 16QAM	75 RB / 0 RB Offset
		18700 to 19100	18700, 18900, 19100	20 MHz	QPSK, 16QAM	100 RB / 0 RB Offset
-	Peak to Average Ratio	18607 to 19193	18607, 18900, 19193	1.4 MHz	QPSK	1 RB / 0 RB Offset
					16QAM	3 RB / 1 RB Offset
		18615 to 19185	18615, 18900, 19185	3 MHz	QPSK	1 RB / 0 RB Offset
					16QAM	1 RB / 7 RB Offset
		18625 to 19175	18625, 18900, 19175	5 MHz	QPSK	1 RB / 0 RB Offset
					16QAM	1 RB / 12 RB Offset
		18650 to 19150	18650, 18900, 19150	10 MHz	QPSK	1 RB / 0 RB Offset
					16QAM	1 RB / 0 RB Offset
		18675 to 19125	18675, 18900, 19125	15 MHz	QPSK	1 RB / 0 RB Offset
					16QAM	1 RB / 37 RB Offset
		18700 to 19100	18700, 18900, 19100	20 MHz	QPSK	1 RB / 0 RB Offset
					16QAM	1 RB / 50 RB Offset

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	Band Edge	18607 to 19193	18607	1.4 MHz	QPSK	1 RB / 0 RB Offset
						6 RB / 0 RB Offset
			19193	1.4 MHz	QPSK	1 RB / 5 RB Offset
						6 RB / 0 RB Offset
		18615 to 19185	18615	3 MHz	QPSK	1 RB / 0 RB Offset
						15 RB / 0 RB Offset
			19185	3 MHz	QPSK	1 RB / 14 RB Offset
						15 RB / 0 RB Offset
		18625 to 19175	18625	5 MHz	QPSK	1 RB / 0 RB Offset
						25 RB / 0 RB Offset
			19175	5 MHz	QPSK	1 RB / 24 RB Offset
						25 RB / 0 RB Offset
		18650 to 19150	18650	10 MHz	QPSK	1 RB / 0 RB Offset
						50 RB / 0 RB Offset
			19150	10 MHz	QPSK	1 RB / 49 RB Offset
						50 RB / 0 RB Offset
		18675 to 19125	18675	15 MHz	QPSK	1 RB / 0 RB Offset
						75 RB / 0 RB Offset
			19125	15 MHz	QPSK	1 RB / 74 RB Offset
						75 RB / 0 RB Offset
		18700 to 19100	18700	20 MHz	QPSK	1 RB / 0 RB Offset
						100 RB / 0 RB Offset
			19100	20 MHz	QPSK	1 RB / 99 RB Offset
						100 RB / 0 RB Offset
-	Conducted Emission	18607 to 19193	18607, 18900, 19193	1.4 MHz	QPSK	1 RB / 0 RB Offset
		18615 to 19185	18615, 18900, 19185	3 MHz	QPSK	1 RB / 0 RB Offset
		18625 to 19175	18625, 18900, 19175	5 MHz	QPSK	1 RB / 0 RB Offset
		18650 to 19150	18650, 18900, 19150	10 MHz	QPSK	1 RB / 0 RB Offset
		18675 to 19125	18675, 18900, 19125	15 MHz	QPSK	1 RB / 0 RB Offset
		18700 to 19100	18700, 18900, 19100	20 MHz	QPSK	1 RB / 0 RB Offset
-	Radiated Emission	18700 to 19100	18700, 18900, 19100	20 MHz	QPSK	1 RB / 0 RB Offset

Note: This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

LTE Band 25

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	EIRP	26047 to 26683	26047, 26365, 26683	1.4 MHz	QPSK	1 RB / 0 RB Offset
					16QAM	3 RB / 3 RB Offset
		26055 to 26675	26055, 26365, 26675	3 MHz	QPSK	1 RB / 0 RB Offset
					16QAM	1 RB / 7 RB Offset
		26065 to 26665	26065, 26365, 26665	5 MHz	QPSK	1 RB / 0 RB Offset
					16QAM	1 RB / 0 RB Offset
		26090 to 26640	26090, 26365, 26640	10 MHz	QPSK	1 RB / 0 RB Offset
					16QAM	1 RB / 24 RB Offset
		26115 to 26615	26115, 26365, 26615	15 MHz	QPSK	1 RB / 0 RB Offset
					16QAM	1 RB / 0 RB Offset
		26140 to 26590	26140, 26365, 26590	20 MHz	QPSK	1 RB / 0 RB Offset
					16QAM	1 RB / 50 RB Offset
-	Frequency Stability	26047 to 26683	26365	1.4 MHz	QPSK	1 RB / 0 RB Offset
		26055 to 26675	26365	3 MHz	QPSK	1 RB / 0 RB Offset
		26065 to 26665	26365	5 MHz	QPSK	1 RB / 0 RB Offset
		26090 to 26640	26365	10 MHz	QPSK	1 RB / 0 RB Offset
		26115 to 26615	26365	15 MHz	QPSK	1 RB / 0 RB Offset
		26140 to 26590	26365	20 MHz	QPSK	1 RB / 0 RB Offset
-	Occupied Bandwidth	26047 to 26683	26047, 26365, 26683	1.4 MHz	QPSK / 16QAM	6 RB / 0 RB Offset
		26055 to 26675	26055, 26365, 26675	3 MHz	QPSK / 16QAM	15 RB / 0 RB Offset
		26065 to 26665	26065, 26365, 26665	5 MHz	QPSK / 16QAM	25 RB / 0 RB Offset
		26090 to 26640	26090, 26365, 26640	10 MHz	QPSK / 16QAM	50 RB / 0 RB Offset
		26115 to 26615	26115, 26365, 26615	15 MHz	QPSK / 16QAM	75 RB / 0 RB Offset
		26140 to 26590	26140, 26365, 26590	20 MHz	QPSK / 16QAM	100 RB / 0 RB Offset
-	Peak to Average Ratio	26047 to 26683	26047, 26365, 26683	1.4 MHz	QPSK	1 RB / 0 RB Offset
					16QAM	3 RB / 3 RB Offset
		26055 to 26675	26055, 26365, 26675	3 MHz	QPSK	1 RB / 0 RB Offset
					16QAM	1 RB / 7 RB Offset
		26065 to 26665	26065, 26365, 26665	5 MHz	QPSK	1 RB / 0 RB Offset
					16QAM	1 RB / 0 RB Offset
		26090 to 26640	26090, 26365, 26640	10 MHz	QPSK	1 RB / 0 RB Offset
					16QAM	1 RB / 24 RB Offset
		26115 to 26615	26115, 26365, 26615	15 MHz	QPSK	1 RB / 0 RB Offset
					16QAM	1 RB / 0 RB Offset
		26140 to 26590	26140, 26365, 26590	20 MHz	QPSK	1 RB / 0 RB Offset
					16QAM	1 RB / 50 RB Offset

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	Band Edge	26047 to 26683	26047	1.4 MHz	QPSK	1 RB / 0 RB Offset
						6 RB / 0 RB Offset
			26683	1.4 MHz	QPSK	1 RB / 5 RB Offset
						6 RB / 0 RB Offset
		26055 to 26675	26055	3 MHz	QPSK	1 RB / 0 RB Offset
						1 RB / 0 RB Offset
			26675	3 MHz	QPSK	1 RB / 14 RB Offset
						15 RB / 0 RB Offset
		26065 to 26665	26065	5 MHz	QPSK	1 RB / 0 RB Offset
						25 RB / 0 RB Offset
			26665	5 MHz	QPSK	1 RB / 24 RB Offset
						25 RB / 0 RB Offset
		26090 to 26640	26090	10 MHz	QPSK	1 RB / 0 RB Offset
						50 RB / 0 RB Offset
			26640	10 MHz	QPSK	1 RB / 49 RB Offset
						50 RB / 0 RB Offset
		26115 to 26615	26115	15 MHz	QPSK	1 RB / 0 RB Offset
						75 RB / 0 RB Offset
			26615	15 MHz	QPSK	1 RB / 74 RB Offset
						75 RB / 0 RB Offset
		26140 to 26590	26140	20 MHz	QPSK	1 RB / 0 RB Offset
						100 RB / 0 RB Offset
			26590	20 MHz	QPSK	1 RB / 99 RB Offset
						100 RB / 0 RB Offset
-	Conducted Emission	26047 to 26683	26047, 26365, 26683	1.4 MHz	QPSK	1 RB / 0 RB Offset
		26055 to 26675	26055, 26365, 26675	3 MHz	QPSK	1 RB / 0 RB Offset
		26065 to 26665	26065, 26365, 26665	5 MHz	QPSK	1 RB / 0 RB Offset
		26090 to 26640	26090, 26365, 26640	10 MHz	QPSK	1 RB / 0 RB Offset
		26115 to 26615	26115, 26365, 26615	15 MHz	QPSK	1 RB / 0 RB Offset
		26140 to 26590	26140, 26365, 26590	20 MHz	QPSK	1 RB / 0 RB Offset
-	Radiated Emission	26140 to 26590	26140, 26365, 26590	20 MHz	QPSK	1 RB / 0 RB Offset

Note: This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
EIRP	26 deg. C, 58 % RH	3.8 Vdc	Gavin Wu
Frequency Stability	26 deg. C, 58 % RH	3.8 Vdc	Carlos Chen
Occupied Bandwidth	26 deg. C, 58 % RH	3.8 Vdc	Carlos Chen
Band Edge	26 deg. C, 58 % RH	3.8 Vdc	Carlos Chen
Peak to Average Ratio	26 deg. C, 58 % RH	3.8 Vdc	Carlos Chen
Condcudeted Emission	26 deg. C, 58 % RH	3.8 Vdc	Carlos Chen
Radiated Emission	25 deg. C, 65 % RH	120 Vac, 60 Hz	Gavin Wu

3.4 EUT Operating Conditions

The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency

3.5 General Description of Applied Standards

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC 47 CFR Part 2
FCC 47 CFR Part 24
KDB 971168 D01 Power Meas License Digital Systems v02r02
ANSI/TIA/EIA-603-D 2010

NOTE: All test items have been performed and recorded as per the above standards.

4 Test Types and Results

4.1 Output Power Measurement

4.1.1 Limits of Output Power Measurement

Mobile / Portable station are limited to 2 watts e.i.r.p.

4.1.2 Test Procedures

EIRP / ERP Measurement:

a. All measurements were done at low, middle and high operational frequency range. RBW and VBW is 5 MHz for CDMA and 10 MHz for LTE mode.

b. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8 m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.

c. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a tx cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value” of step b. Record the power level of S.G.

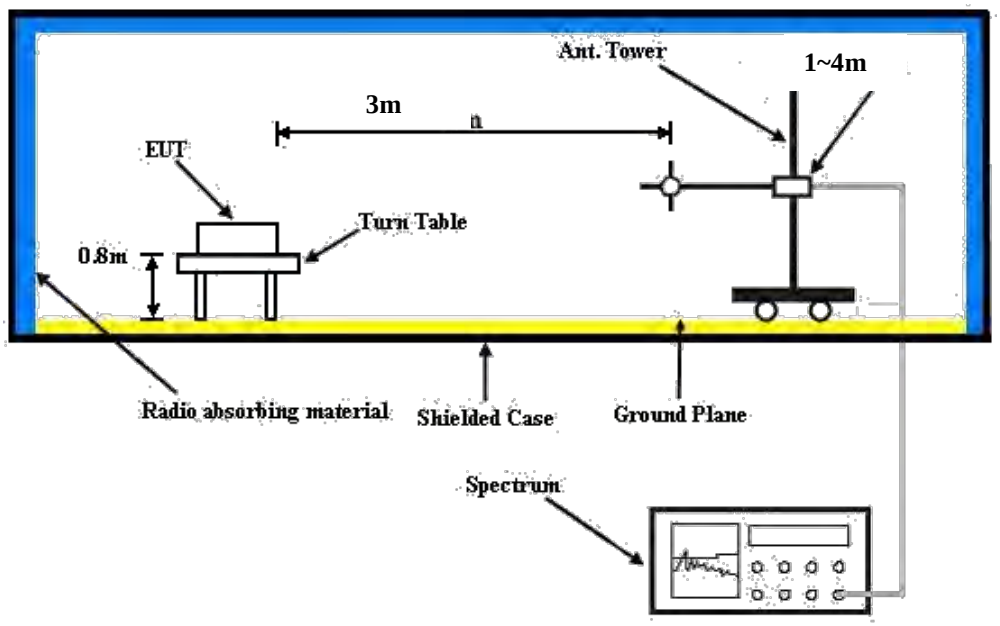
d. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn.E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.P.R power - 2.15 dBi.

Conducted Power Measurement:

The EUT was set up for the maximum power with CDMA and LTE link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

4.1.3 Test Setup

EIRP / ERP Measurement:



For the actual test configuration, please refer to the attached file (Test Setup Photo).

Conducted Power Measurement:

4.1.4 Test Results

Conducted Output Power (dBm)

Band	CDMA		
Channel	25	600	1175
Frequency (MHz)	1851.25	1880	1908.75
RC1+SO55	20.71	20.97	20.38
RC3+SO55	20.55	20.82	20.38
RC3+SO32 (+F-SCH)	20.58	20.83	20.35
RC3+SO32 (+SCH)	20.51	20.87	20.43
RTAP 153.6	20.75	20.83	20.61
RETAP 4096	20.74	20.99	20.65

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low Ch 18607	Mid Ch 18900	High Ch 19193		Low Ch 18607	Mid Ch 18900	High Ch 19193	
			1850.7 MHz	1880.0 MHz	1909.3 MHz		1850.7 MHz	1880.0 MHz	1909.3 MHz	
2 / 1.4M	1	0	20.86	20.75	20.64	0	19.58	19.57	19.63	1
	1	2	20.81	20.81	20.61	0	19.62	19.53	19.30	1
	1	5	20.85	20.40	20.54	0	19.57	19.35	19.17	1
	3	0	20.84	20.84	20.53	0	19.75	19.63	19.50	1
	3	1	20.83	20.81	20.48	0	19.81	19.68	19.48	1
	3	3	20.84	20.83	20.50	0	19.79	19.69	19.49	1
	6	0	19.80	19.83	19.53	1	18.89	18.67	18.48	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low Ch 18615	Mid Ch 18900	High Ch 19185		Low Ch 18615	Mid Ch 18900	High Ch 19185	
			1851.5 MHz	1880.0 MHz	1908.5 MHz		1851.5 MHz	1880.0 MHz	1908.5 MHz	
2 / 3M	1	0	20.94	20.82	20.68	0	19.53	19.48	19.33	1
	1	7	20.80	20.79	20.62	0	19.28	19.73	19.28	1
	1	14	20.91	20.71	20.61	0	19.36	19.48	19.32	1
	8	0	19.86	19.72	19.52	1	18.98	18.84	18.58	2
	8	3	19.81	19.71	19.58	1	18.88	19.03	18.65	2
	8	7	19.78	19.68	19.56	1	18.97	19.01	18.61	2
	15	0	19.78	19.69	19.59	1	18.72	18.82	18.65	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low Ch 18625	Mid Ch 18900	High Ch 19175		Low Ch 18625	Mid Ch 18900	High Ch 19175	
			1852.5 MHz	1880.0 MHz	1907.5 MHz		1852.5 MHz	1880.0 MHz	1907.5 MHz	
2 / 5M	1	0	20.91	20.89	20.81	0	19.50	19.32	19.39	1
	1	12	20.81	20.80	20.82	0	19.42	19.64	19.22	1
	1	24	20.80	20.61	20.59	0	19.38	19.23	19.23	1
	12	0	19.78	19.67	19.53	1	18.54	18.58	18.27	2
	12	6	19.77	19.75	19.55	1	18.65	18.64	18.39	2
	12	13	19.80	19.68	19.52	1	18.63	18.59	18.46	2
	25	0	19.72	19.73	19.47	1	18.82	18.74	18.42	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low Ch 18650	Mid Ch 18900	High Ch 19150		Low Ch 18650	Mid Ch 18900	High Ch 19150	
			1855.0 MHz	1880.0 MHz	1905.0 MHz		1855.0 MHz	1880.0 MHz	1905.0 MHz	
2 / 10M	1	0	20.96	20.88	20.91	0	19.56	19.43	19.37	1
	1	24	20.91	20.88	20.84	0	19.52	19.48	19.34	1
	1	49	20.90	20.73	20.53	0	19.47	19.28	19.16	1
	25	0	19.90	19.76	19.62	1	19.02	18.65	18.76	2
	25	12	19.98	19.73	19.65	1	19.07	18.85	18.69	2
	25	25	19.80	19.70	19.46	1	18.78	18.60	18.56	2
	50	0	19.84	19.74	19.54	1	18.87	18.86	18.68	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low Ch 18675	Mid Ch 18900	High Ch 19125		Low Ch 18675	Mid Ch 18900	High Ch 19125	
			1857.5 MHz	1880.0 MHz	1902.5 MHz		1857.5 MHz	1880.0 MHz	1902.5 MHz	
2 / 15M	1	0	20.96	20.89	20.86	0	19.52	19.40	19.50	1
	1	37	20.86	20.87	20.65	0	19.59	19.72	19.48	1
	1	74	20.68	20.58	20.52	0	19.26	19.29	19.21	1
	36	0	19.83	19.73	19.68	1	18.83	18.70	18.75	2
	36	19	19.95	19.76	19.63	1	18.88	18.82	18.70	2
	36	39	19.64	19.59	19.49	1	18.65	18.62	18.45	2
	75	0	19.77	19.65	19.68	1	18.87	18.80	18.75	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low Ch 18700	Mid Ch 18900	High Ch 19100		Low Ch 18700	Mid Ch 18900	High Ch 19100	
			1860.0 MHz	1880.0 MHz	1900.0 MHz		1860.0 MHz	1880.0 MHz	1900.0 MHz	
2 / 20M	1	0	20.86	20.97	20.74	0	19.47	19.46	19.37	1
	1	50	20.84	20.71	20.76	0	19.88	19.74	19.73	1
	1	99	20.49	20.62	20.40	0	19.22	19.30	19.12	1
	50	0	19.87	19.91	19.69	1	18.99	18.89	18.79	2
	50	25	19.87	19.78	19.62	1	18.89	18.82	18.67	2
	50	50	19.57	19.64	19.48	1	18.61	18.67	18.53	2
	100	0	19.81	19.85	19.71	1	18.80	18.76	18.64	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low Ch 26047	Mid Ch 26365	High Ch 26683		Low Ch 26047	Mid Ch 26365	High Ch 26683	
			1850.7 MHz	1882.5 MHz	1914.3 MHz		1850.7 MHz	1882.5 MHz	1914.3 MHz	
25 / 1.4M	1	0	20.86	20.77	20.69	0	19.60	19.40	19.71	1
	1	2	20.72	20.63	20.51	0	19.50	19.33	19.34	1
	1	5	20.78	20.57	20.38	0	19.51	19.40	19.41	1
	3	0	20.71	20.66	20.55	0	20.03	19.64	19.65	1
	3	1	20.79	20.67	20.50	0	19.97	19.53	19.67	1
	3	3	20.81	20.69	20.57	0	20.03	19.48	19.38	1
	6	0	19.83	19.50	19.49	1	18.52	18.44	18.54	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low Ch 26055	Mid Ch 26365	High Ch 26675		Low Ch 26055	Mid Ch 26365	High Ch 26675	
			1851.5 MHz	1882.5 MHz	1913.5 MHz		1851.5 MHz	1882.5 MHz	1913.5 MHz	
25 / 3M	1	0	20.93	20.81	20.84	0	19.63	19.38	19.51	1
	1	7	20.87	20.66	20.64	0	19.34	19.12	19.69	1
	1	14	20.81	20.73	20.68	0	19.54	19.37	19.48	1
	8	0	19.85	19.48	19.77	1	18.87	18.56	18.75	2
	8	3	19.81	19.65	19.6	1	18.86	18.54	18.68	2
	8	7	19.82	19.56	19.65	1	18.85	18.74	18.79	2
	15	0	19.85	19.54	19.52	1	18.83	18.68	18.7	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low Ch 26065	Mid Ch 26365	High Ch 26665		Low Ch 26065	Mid Ch 26365	High Ch 26665	
			1852.5 MHz	1882.5 MHz	1912.5 MHz		1852.5 MHz	1882.5 MHz	1912.5 MHz	
25 / 5M	1	0	20.95	20.76	20.86	0	19.47	19.21	19.24	1
	1	12	20.90	20.47	20.57	0	19.40	19.11	19.28	1
	1	24	20.77	20.56	20.55	0	19.38	19.05	19.35	1
	12	0	19.86	19.52	19.50	1	18.72	18.36	18.41	2
	12	6	19.80	19.55	19.50	1	18.92	18.37	18.77	2
	12	13	19.81	19.59	19.64	1	18.77	18.43	18.71	2
	25	0	19.80	19.59	19.60	1	18.84	18.62	18.63	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low Ch 26090	Mid Ch 26365	High Ch 26640		Low Ch 26090	Mid Ch 26365	High Ch 26640	
			1855.0 MHz	1882.5 MHz	1910.0 MHz		1855.0 MHz	1882.5 MHz	1910.0 MHz	
25 / 10M	1	0	20.94	20.95	20.97	0	19.41	19.35	19.33	1
	1	24	20.9	20.7	20.76	0	19.43	19.03	19.01	1
	1	49	20.81	20.55	20.67	0	19.23	19.18	19.36	1
	25	0	19.68	19.6	19.58	1	18.82	18.63	18.72	2
	25	12	19.84	19.61	19.57	1	18.74	18.82	18.65	2
	25	25	19.57	19.547	19.54	1	18.74	18.71	18.65	2
	50	0	19.75	19.59	19.51	1	18.85	18.7	18.62	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low Ch 26115	Mid Ch 26365	High Ch 26615		Low Ch 26115	Mid Ch 26365	High Ch 26615	
			1857.5 MHz	1882.5 MHz	1907.5 MHz		1857.5 MHz	1882.5 MHz	1907.5 MHz	
25 / 15M	1	0	20.84	20.73	20.69	0	19.49	19.39	19.49	1
	1	37	20.73	20.64	20.1	0	19.48	19.37	19.18	1
	1	74	20.63	20.61	20.56	0	19.28	19.11	19.3	1
	36	0	19.77	19.55	19.66	1	18.82	18.51	18.69	2
	36	19	19.78	19.53	19.57	1	18.79	18.54	18.45	2
	36	39	19.58	19.46	19.55	1	18.67	18.59	18.63	2
	75	0	19.72	19.58	19.59	1	18.71	18.72	18.57	2

Band / BW	RB Size	RB Offset	QPSK			3GPP MPR (dB)	16QAM			3GPP MPR (dB)
			Low Ch 26140	Mid Ch 26365	High Ch 26590		Low Ch 26140	Mid Ch 26365	High Ch 26590	
			1860.0 MHz	1882.5 MHz	1905.0 MHz		1860.0 MHz	1882.5 MHz	1905.0 MHz	
25 / 20M	1	0	20.98	20.86	20.84	0	19.56	19.43	19.53	1
	1	50	20.93	20.87	20.82	0	19.67	19.6	19.53	1
	1	99	20.79	20.66	20.74	0	19.42	19.3	19.31	1
	50	0	19.76	19.65	19.75	1	18.67	18.56	18.87	2
	50	25	18.73	19.67	19.65	1	18.64	18.48	18.86	2
	50	50	19.62	19.51	19.58	1	18.59	18.72	18.64	2
	100	0	19.9	19.66	19.65	1	18.85	18.7	18.61	2

EIRP Power (dBm)

CDMA							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (mW)**	**Polarization (H/V)**
Y	25	1851.25	-28.02	36.57	8.55	7.16	H
	600	1880.00	-28.53	37.22	8.69	7.40	
	1175	1908.75	-28.71	37.18	8.47	7.03	
	25	1851.25	-19.32	37.65	18.33	68.09	V
	600	1880.00	-19.19	37.58	18.39	69.07	
	1175	1908.75	-19.13	37.48	18.35	68.39	

LTE Band 2							
Channel Bandwidth: 1.4 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (mW)**	**Polarization (H/V)**
X	18607	1850.7	-16.65	36.57	19.92	98.22	H
	18900	1880.0	-16.45	37.22	20.77	119.51	
	19193	1909.3	-16.31	37.18	20.87	122.24	
	18607	1850.7	-22.45	37.65	15.20	33.12	V
	18900	1880.0	-22.29	37.58	15.29	33.83	
	19193	1909.3	-22.21	37.48	15.27	33.65	
Channel Bandwidth: 1.4 MHz / 16QAM							
X	18607	1850.7	-17.05	36.57	19.52	89.58	H
	18900	1880.0	-17.75	37.22	19.47	88.59	
	19193	1909.3	-17.71	37.18	19.47	88.55	
	18607	1850.7	-22.78	37.65	14.87	30.70	V
	18900	1880.0	-22.69	37.58	14.89	30.85	
	19193	1909.3	-22.65	37.48	14.83	30.41	

LTE Band 2							
Channel Bandwidth: 3 MHz / QPSK							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
X	18615	1851.5	-16.61	36.57	19.96	99.13	H
	18900	1880.0	-16.42	37.22	20.80	120.34	
	19185	1908.5	-16.25	37.18	20.93	123.94	
	18615	1851.5	-22.41	37.65	15.24	33.43	V
	18900	1880.0	-22.25	37.58	15.33	34.14	
	19185	1908.5	-22.19	37.48	15.29	33.81	
Channel Bandwidth: 3 MHz / 16QAM							
X	18615	1851.5	-17.45	36.57	19.12	81.70	H
	18900	1880.0	-17.36	37.22	19.86	96.92	
	19185	1908.5	-17.32	37.18	19.86	96.87	
	18615	1851.5	-22.75	37.65	14.90	30.91	V
	18900	1880.0	-22.65	37.58	14.93	31.14	
	19185	1908.5	-22.61	37.48	14.87	30.69	

LTE Band 2							
Channel Bandwidth: 5 MHz / QPSK							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
X	18625	1852.5	-15.78	36.57	20.79	120.01	H
	18900	1880.0	-15.94	37.22	21.28	134.40	
	19175	1907.5	-15.89	37.18	21.29	134.65	
	18625	1852.5	-22.34	37.65	15.31	33.97	V
	18900	1880.0	-20.50	37.58	17.08	51.09	
	19175	1907.5	-22.15	37.48	15.33	34.12	
Channel Bandwidth: 5 MHz / 16QAM							
X	18625	1852.5	-17.17	36.57	19.40	87.14	H
	18900	1880.0	-17.21	37.22	20.01	100.32	
	19175	1907.5	-17.33	37.18	19.85	96.65	
	18625	1852.5	-22.35	37.65	15.30	33.89	V
	18900	1880.0	-22.28	37.58	15.30	33.91	
	19175	1907.5	-22.19	37.48	15.29	33.81	

LTE Band 2							
Channel Bandwidth: 10 MHz / QPSK							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
X	18650	1855.0	-15.89	36.57	20.68	117.00	H
	18900	1880.0	-15.88	37.22	21.34	136.27	
	19150	1905.0	-15.77	37.18	21.41	138.42	
	18650	1855.0	-22.22	37.65	15.43	34.92	V
	18900	1880.0	-22.10	37.58	15.48	35.34	
	19150	1905.0	-22.01	37.48	15.47	35.24	
Channel Bandwidth: 10 MHz / 16QAM							
X	18650	1855.0	-16.61	36.57	19.96	99.13	H
	18900	1880.0	-16.53	37.22	20.69	117.33	
	19150	1905.0	-17.01	37.18	20.17	104.04	
	18650	1855.0	-22.31	37.65	15.34	34.21	V
	18900	1880.0	-22.20	37.58	15.38	34.54	
	19150	1905.0	-22.15	37.48	15.33	34.12	

LTE Band 2							
Channel Bandwidth: 15 MHz / QPSK							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
X	18675	1857.5	-15.82	36.57	20.75	118.90	H
	18900	1880.0	-15.86	37.22	21.36	136.90	
	19125	1902.5	-15.63	37.18	21.55	142.96	
	18675	1857.5	-22.14	37.65	15.51	35.57	V
	18900	1880.0	-21.96	37.58	15.62	36.50	
	19125	1902.5	-21.87	37.48	15.61	36.39	
Channel Bandwidth: 15 MHz / 16QAM							
X	18675	1857.5	-16.44	36.57	20.13	103.09	H
	18900	1880.0	-16.57	37.22	20.65	116.25	
	19125	1902.5	-16.68	37.18	20.50	112.25	
	18675	1857.5	-22.02	37.65	15.63	36.57	V
	18900	1880.0	-21.91	37.58	15.67	36.92	
	19125	1902.5	-21.85	37.48	15.63	36.56	

LTE Band 2							
Channel Bandwidth: 20 MHz / QPSK							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
X	18700	1860.0	-15.15	36.57	21.42	138.74	H
	18900	1880.0	-15.45	37.22	21.77	150.45	
	19100	1900.0	-15.33	37.18	21.85	153.18	
	18700	1860.0	-21.98	37.65	15.67	36.91	V
	18900	1880.0	-21.88	37.58	15.70	37.18	
	19100	1900.0	-21.79	37.48	15.69	37.07	
Channel Bandwidth: 20 MHz / 16QAM							
X	18700	1860.0	-16.13	36.57	20.44	110.71	H
	18900	1880.0	-16.22	37.22	21.00	126.01	
	19100	1900.0	-16.35	37.18	20.83	121.12	
	18700	1860.0	-21.95	37.65	15.70	37.16	V
	18900	1880.0	-21.84	37.58	15.74	37.52	
	19100	1900.0	-21.79	37.48	15.69	37.07	

LTE Band 25							
Channel Bandwidth: 1.4 MHz / QPSK							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
X	26047	1850.7	-16.48	36.57	20.09	102.14	H
	26365	1882.5	-16.35	37.22	20.87	122.29	
	26683	1914.3	-17.66	39.09	21.43	139.00	
	26047	1850.7	-23.15	37.65	14.50	28.19	V
	26365	1882.5	-23.02	37.58	14.56	28.60	
	26683	1914.3	-23.35	37.92	14.57	28.64	
Channel Bandwidth: 1.4 MHz / 16QAM							
X	26047	1850.7	-17.56	36.57	19.01	79.65	H
	26365	1882.5	-17.74	37.22	19.48	88.80	
	26683	1914.3	-18.65	39.09	20.44	110.66	
	26047	1850.7	-22.85	37.65	14.80	30.21	V
	26365	1882.5	-22.78	37.58	14.80	30.22	
	26683	1914.3	-23.05	37.92	14.87	30.69	

LTE Band 25							
Channel Bandwidth: 3 MHz / QPSK							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
X	26055	1851.5	-16.35	36.57	20.22	105.24	H
	26365	1882.5	-16.21	37.22	21.01	126.30	
	26675	1913.5	-17.43	39.11	21.68	147.23	
	26055	1851.5	-23.07	37.65	14.58	28.71	V
	26365	1882.5	-22.95	37.58	14.63	29.06	
	26675	1913.5	-23.16	37.93	14.77	29.99	
Channel Bandwidth: 3 MHz / 16QAM							
X	26055	1851.5	-17.06	36.57	19.51	89.37	H
	26365	1882.5	-17.12	37.22	20.10	102.42	
	26675	1913.5	-18.45	39.11	20.66	116.41	
	26055	1851.5	-22.71	37.65	14.94	31.20	V
	26365	1882.5	-22.61	37.58	14.97	31.43	
	26675	1913.5	-22.89	37.93	15.04	31.92	

LTE Band 25							
Channel Bandwidth: 5 MHz / QPSK							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
X	26065	1852.5	-15.95	36.57	20.62	115.40	H
	26365	1882.5	-15.90	37.22	21.32	135.64	
	26665	1912.5	-16.51	39.11	22.60	181.97	
	26065	1852.5	-22.91	37.65	14.74	29.79	V
	26365	1882.5	-22.80	37.58	14.78	30.08	
	26665	1912.5	-23.11	37.96	14.85	30.55	
Channel Bandwidth: 5 MHz / 16QAM							
X	26065	1852.5	-16.98	36.57	19.59	91.03	H
	26365	1882.5	-17.05	37.22	20.17	104.09	
	26665	1912.5	-18.22	39.11	20.89	122.74	
	26065	1852.5	-22.63	37.65	15.02	31.78	V
	26365	1882.5	-22.52	37.58	15.06	32.08	
	26665	1912.5	-22.85	37.96	15.11	32.43	

LTE Band 25							
Channel Bandwidth: 10 MHz / QPSK							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
X	26090	1855.0	-15.81	36.57	20.76	119.18	H
	26365	1882.5	-15.85	37.22	21.37	137.21	
	26640	1910.0	-15.99	39.19	23.20	208.93	
	26090	1855.0	-22.78	37.65	14.87	30.70	V
	26365	1882.5	-22.65	37.58	14.93	31.14	
	26640	1910.0	-22.99	38.15	15.16	32.81	
Channel Bandwidth: 10 MHz / 16QAM							
X	26090	1855.0	-16.56	36.57	20.01	100.28	H
	26365	1882.5	-16.98	37.22	20.24	105.78	
	26640	1910.0	-18.11	39.19	21.08	128.23	
	26090	1855.0	-22.61	37.65	15.04	31.92	V
	26365	1882.5	-22.40	37.58	15.18	32.98	
	26640	1910.0	-22.89	38.15	15.26	33.57	

LTE Band 25							
Channel Bandwidth: 15 MHz / QPSK							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
X	26115	1857.5	-15.78	36.57	20.79	120.01	H
	26365	1882.5	-15.74	37.22	21.48	140.73	
	26615	1907.5	-15.99	39.23	23.24	210.86	
	26115	1857.5	-22.09	37.65	15.56	35.98	V
	26365	1882.5	-22.01	37.58	15.57	36.08	
	26615	1907.5	-22.35	38.22	15.87	38.64	
Channel Bandwidth: 15 MHz / 16QAM							
X	26115	1857.5	-16.45	36.57	20.12	102.85	H
	26365	1882.5	-16.77	37.22	20.45	111.02	
	26615	1907.5	-17.93	39.23	21.30	134.90	
	26115	1857.5	-22.12	37.65	15.53	35.74	V
	26365	1882.5	-21.99	37.58	15.59	36.25	
	26615	1907.5	-22.56	38.22	15.66	36.81	

LTE Band 25							
Channel Bandwidth: 20 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (mW)**	**Polarization (H/V)**
X	26140	1860.0	-15.56	36.57	21.01	126.24	H
	26365	1882.5	-15.15	37.22	22.07	161.21	
	26590	1905.0	-15.45	38.72	23.27	212.32	
	26140	1860.0	-21.94	37.65	15.71	37.25	V
	26365	1882.5	-21.86	37.58	15.72	37.35	
	26590	1905.0	-21.78	37.56	15.78	37.84	
Channel Bandwidth: 20 MHz / 16QAM							
X	26140	1860.0	-16.05	36.57	20.52	112.77	H
	26365	1882.5	-16.33	37.22	20.89	122.86	
	26590	1905.0	-17.10	38.72	21.62	145.21	
	26140	1860.0	-21.79	37.65	15.86	38.56	V
	26365	1882.5	-21.68	37.58	15.90	38.93	
	26590	1905.0	-21.56	37.56	16.00	39.81	

4.2 Frequency Stability Measurement

4.2.1 Limits of Frequency Stabiliity Measurement

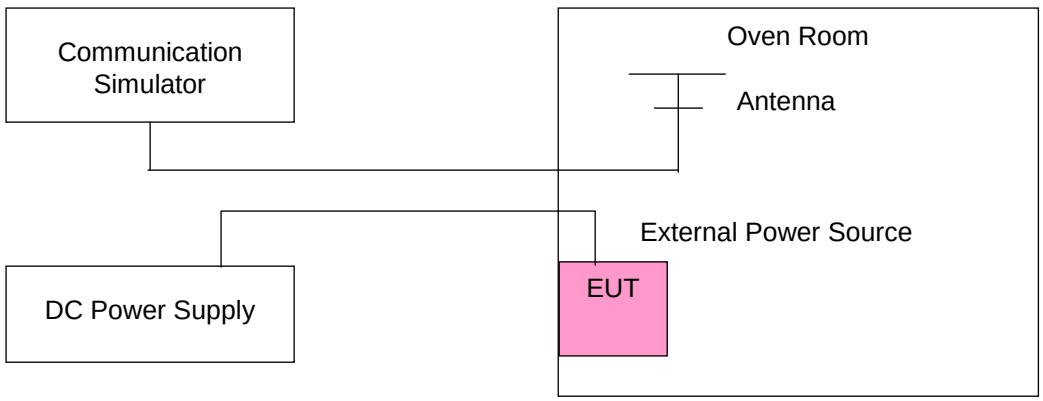
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

4.2.2 Test Procedure

a. Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
b. EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
c. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the ±0.5 ℃ during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

NOTE: The frequency error was recorded frequency error from the communication simulator.

4.2.3 Test Setup



4.2.4 Test Results

Frequency Error vs. Voltage

Voltage (Volts)	CDMA		Limit (ppm)
	Frequency (MHz)	Frequency Error (ppm)	
3.8	1880.000001	0.001	2.5
3.5	1880.000003	0.002	2.5
4.35	1880.000002	0.001	2.5

Note: The applicant defined the normal working voltage of the battery is from 3.5 Vdc to 4.35 Vdc.

Frequency Error vs. Temperature

Temp. (℃)	CDMA		Limit (ppm)
	Frequency (MHz)	Frequency Error (ppm)	
-30	1880.000001	0.001	2.5
-20	1880.000003	0.001	2.5
-10	1880.000002	0.001	2.5
0	1880.000004	0.002	2.5
10	1880.000003	0.001	2.5
20	1879.999997	-0.001	2.5
30	1879.999999	-0.001	2.5
40	1879.999997	-0.002	2.5
50	1879.999997	-0.002	2.5
55	1879.999998	-0.001	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 2				Limit (ppm)
	1.4 MHz		3 MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
3.8	1880.000003	0.002	1880.000001	0.001	2.5
3.5	1880.000002	0.001	1880.000002	0.001	2.5
4.35	1880.000002	0.001	1880.000003	0.002	2.5

Note: The applicant defined the normal working voltage of the battery is from 3.5 Vdc to 4.35 Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 2				Limit (ppm)
	1.4 MHz		3 MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1880.000002	0.001	1880.000001	0.001	2.5
-20	1880.000001	0.001	1880.000004	0.002	2.5
-10	1880.000001	0.001	1880.000004	0.002	2.5
0	1880.000004	0.002	1880.000002	0.001	2.5
10	1880.000004	0.002	1880.000002	0.001	2.5
20	1879.999997	-0.001	1879.999996	-0.002	2.5
30	1879.999999	-0.001	1879.999996	-0.002	2.5
40	1879.999998	-0.001	1879.999997	-0.002	2.5
50	1879.999998	-0.001	1879.999997	-0.002	2.5
55	1879.999997	-0.002	1879.999998	-0.001	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 2				Limit (ppm)
	5 MHz		10 MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
3.8	1880.000003	0.002	1880.000002	0.001	2.5
3.5	1880.000001	0.001	1880.000001	0.001	2.5
4.35	1880.000001	0.001	1880.000002	0.001	2.5

Note: The applicant defined the normal working voltage of the battery is from 3.5 Vdc to 4.35 Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 2				Limit (ppm)
	5 MHz		10 MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1880.000002	0.001	1880.000003	0.002	2.5
-20	1880.000003	0.002	1880.000004	0.002	2.5
-10	1880.000001	0.001	1880.000002	0.001	2.5
0	1880.000003	0.002	1880.000004	0.002	2.5
10	1880.000001	0.001	1880.000004	0.002	2.5
20	1879.999998	-0.001	1879.999998	-0.001	2.5
30	1879.999999	-0.001	1879.999997	-0.001	2.5
40	1879.999997	-0.002	1879.999996	-0.002	2.5
50	1879.999997	-0.002	1879.999999	-0.001	2.5
55	1879.999998	-0.001	1879.999999	-0.001	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 2				Limit (ppm)
	15 MHz		20 MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
3.8	1880.000004	0.002	1880.000001	0.001	2.5
3.5	1880.000002	0.001	1880.000003	0.002	2.5
4.35	1880.000004	0.002	1880.000003	0.002	2.5

Note: The applicant defined the normal working voltage of the battery is from 3.5 Vdc to 4.35 Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 2				Limit (ppm)
	15 MHz		20 MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1880.000003	0.002	1880.000002	0.001	2.5
-20	1880.000001	0.001	1880.000001	0.001	2.5
-10	1880.000004	0.002	1880.000004	0.002	2.5
0	1880.000002	0.001	1880.000004	0.002	2.5
10	1880.000002	0.001	1880.000003	0.002	2.5
20	1879.999997	-0.002	1879.999998	-0.001	2.5
30	1879.999997	-0.002	1879.999998	-0.001	2.5
40	1879.999999	-0.001	1879.999997	-0.002	2.5
50	1879.999998	-0.001	1879.999996	-0.002	2.5
55	1879.999998	-0.001	1879.999999	-0.001	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 25				Limit (ppm)
	1.4 MHz		3 MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
3.8	1882.500001	0.001	1882.500003	0.001	2.5
3.5	1882.500001	0.001	1882.500004	0.002	2.5
4.35	1882.500003	0.001	1882.500003	0.001	2.5

Note: The applicant defined the normal working voltage of the battery is from 3.5 Vdc to 4.35 Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 25				Limit (ppm)
	1.4 MHz		3 MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1882.500001	0.001	1882.500003	0.001	2.5
-20	1882.500003	0.001	1882.500004	0.002	2.5
-10	1882.500002	0.001	1882.500003	0.001	2.5
0	1882.500004	0.002	1882.500004	0.002	2.5
10	1882.500001	0.001	1882.500003	0.002	2.5
20	1882.499998	-0.001	1882.499998	-0.001	2.5
30	1882.499998	-0.001	1882.499997	-0.002	2.5
40	1882.499997	-0.002	1882.499997	-0.002	2.5
50	1882.499998	-0.001	1882.499998	-0.001	2.5
55	1882.499999	-0.001	1882.499998	-0.001	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 25				Limit (ppm)
	5 MHz		10 MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
3.8	1882.500003	0.002	1882.500004	0.002	2.5
3.5	1882.500004	0.002	1882.500002	0.001	2.5
4.35	1882.500002	0.001	1882.500003	0.002	2.5

Note: The applicant defined the normal working voltage of the battery is from 3.5 Vdc to 4.35 Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 25				Limit (ppm)
	5 MHz		10 MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1882.500002	0.001	1882.500004	0.002	2.5
-20	1882.500002	0.001	1882.500002	0.001	2.5
-10	1882.500002	0.001	1882.500001	0.001	2.5
0	1882.500002	0.001	1882.500001	0.001	2.5
10	1882.500003	0.002	1882.500004	0.002	2.5
20	1882.499998	-0.001	1882.499997	-0.002	2.5
30	1882.499996	-0.002	1882.499997	-0.002	2.5
40	1882.499997	-0.002	1882.499997	-0.002	2.5
50	1882.499999	-0.001	1882.499998	-0.001	2.5
55	1882.499998	-0.001	1882.499997	-0.002	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 25				Limit (ppm)
	15 MHz		20 MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
3.8	1882.500003	0.002	1882.500003	0.002	2.5
3.5	1882.500002	0.001	1882.500001	0.001	2.5
4.35	1882.500004	0.002	1882.500002	0.001	2.5

Note: The applicant defined the normal working voltage of the battery is from 3.5 Vdc to 4.35 Vdc.

Frequency Error vs. Temperature

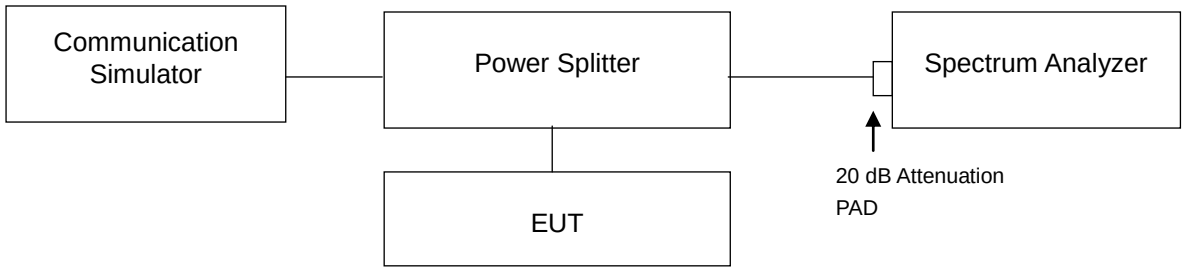
Temp. (℃)	LTE Band 25				Limit (ppm)
	15 MHz		20 MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1882.500002	0.001	1882.500003	0.001	2.5
-20	1882.500003	0.001	1882.500003	0.001	2.5
-10	1882.500002	0.001	1882.500004	0.002	2.5
0	1882.500003	0.001	1882.500001	0.001	2.5
10	1882.500001	0.001	1882.500003	0.002	2.5
20	1882.499998	-0.001	1882.499999	-0.001	2.5
30	1882.499997	-0.002	1882.499996	-0.002	2.5
40	1882.499999	-0.001	1882.499997	-0.002	2.5
50	1882.499996	-0.002	1882.499998	-0.001	2.5
55	1882.499996	-0.002	1882.499998	-0.001	2.5

4.3 Occupied Bandwidth Measurement

4.3.1 Test Procedure

The EUT makes a call to the communication simulator. All measurements were done at low, middle and high operational frequency range. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

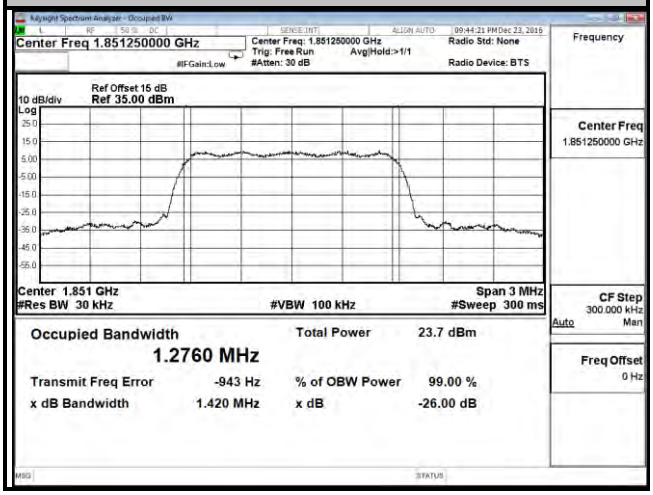
4.3.2 Test Setup



4.3.3 Test Result

Channel	Frequency (MHz)	99 % Occupied Bandwidth (kHz)
		CDMA
25	1851.25	1.2760
600	1880.00	1.2719
1175	1908.75	1.2737

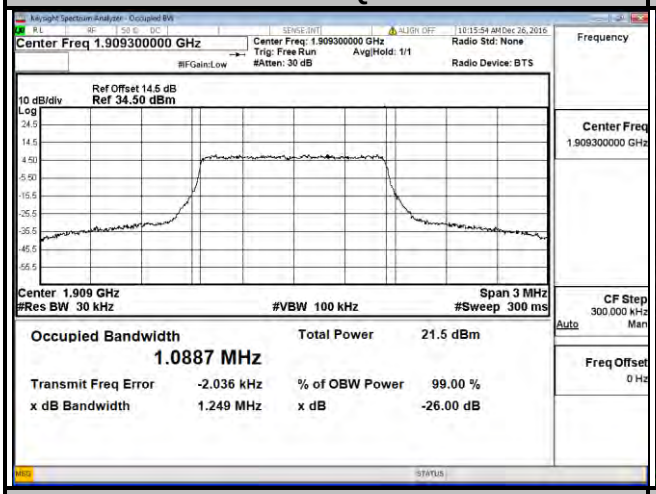
Spectrum Plot of Worst Value
CDMA



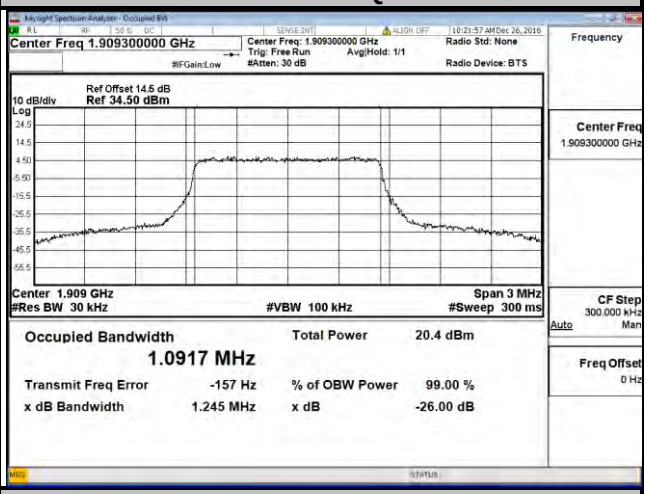
LTE Band 2							
Channel Bandwidth: 1.4 MHz				Channel Bandwidth: 3 MHz			
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)	
		QPSK	16QAM			QPSK	16QAM
18607	1850.7	1.0874	1.0894	18615	1851.5	2.6998	2.6979
18900	1880.0	1.0879	1.0884	18900	1880.0	2.7022	2.6987
19193	1909.3	1.0887	1.0917	19185	1908.5	2.7021	2.6970

Spectrum Plot of Worst Value

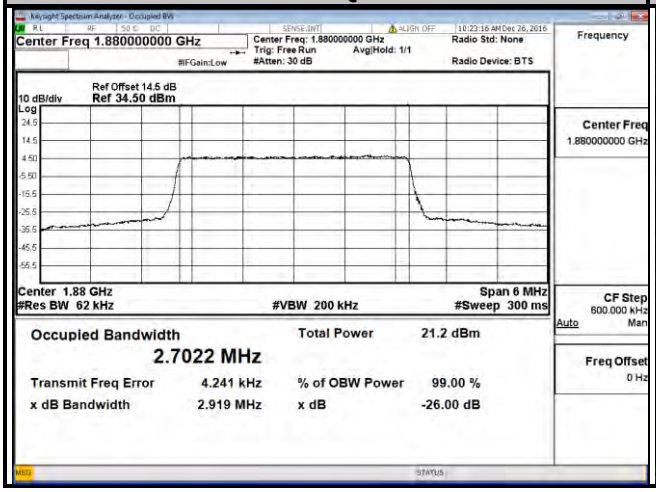
1.4 MHz / QPSK



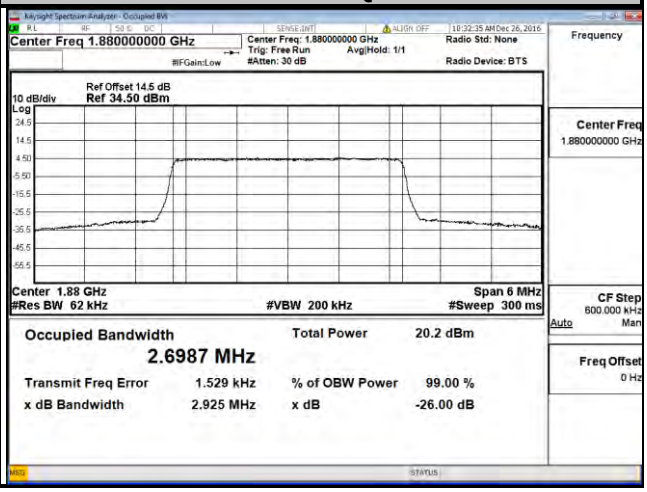
1.4 MHz / 16QAM



3 MHz / QPSK



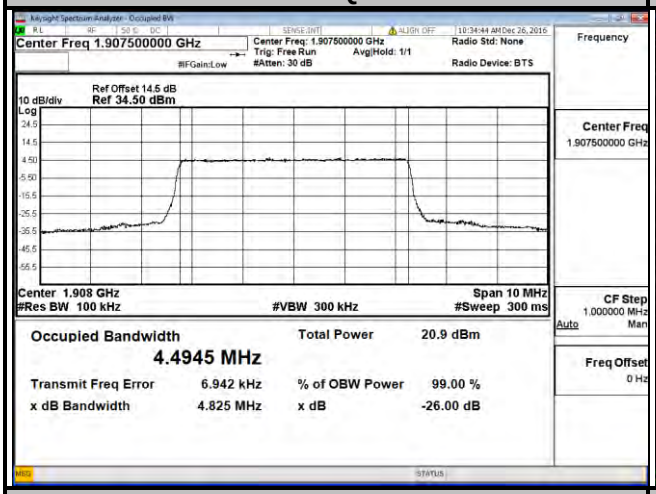
3 MHz / 16QAM



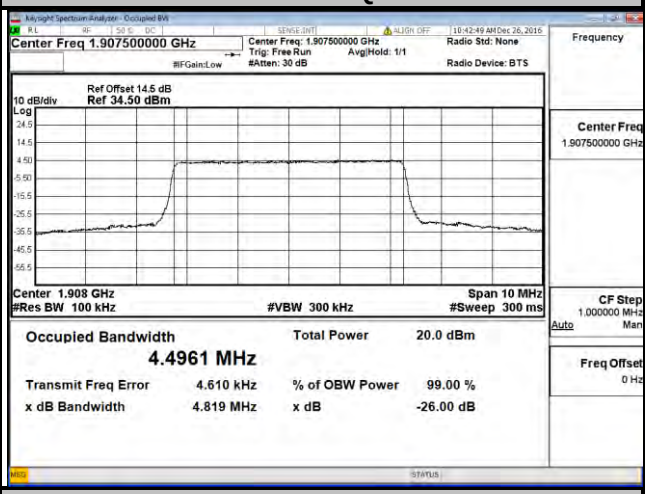
LTE Band 2							
Channel Bandwidth: 5 MHz				Channel Bandwidth: 10 MHz			
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)	
		QPSK	16QAM			QPSK	16QAM
18625	1852.5	4.4906	4.4898	18650	1855.0	8.9456	8.9483
18900	1880.0	4.4928	4.4954	18900	1880.0	8.9625	8.9642
19175	1907.5	4.4945	4.4961	19150	1905.0	8.9777	8.9763

Spectrum Plot of Worst Value

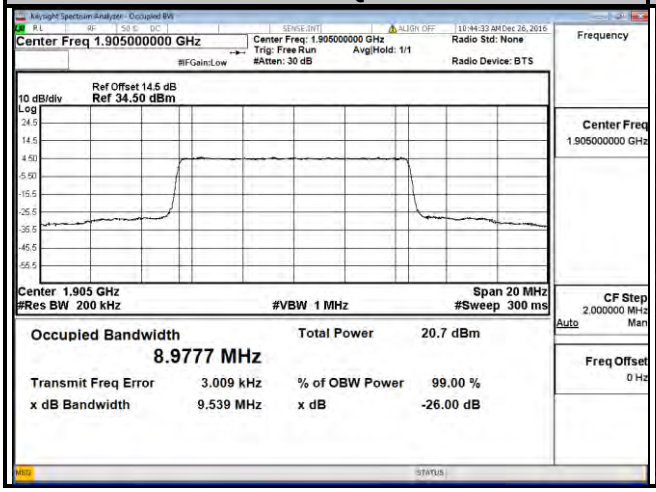
5 MHz / QPSK



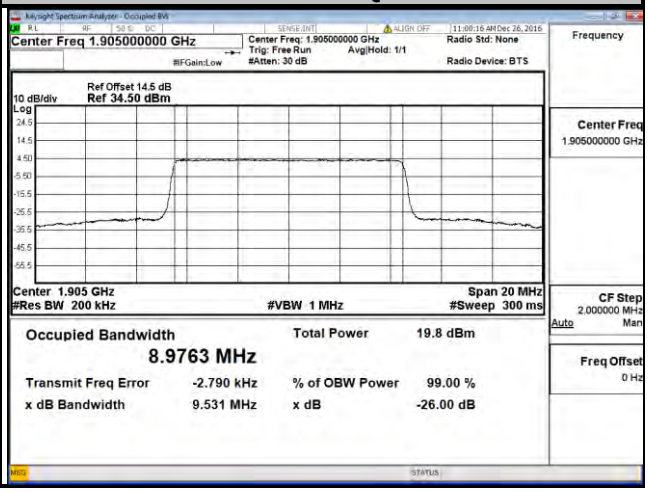
5 MHz / 16QAM



10 MHz / QPSK



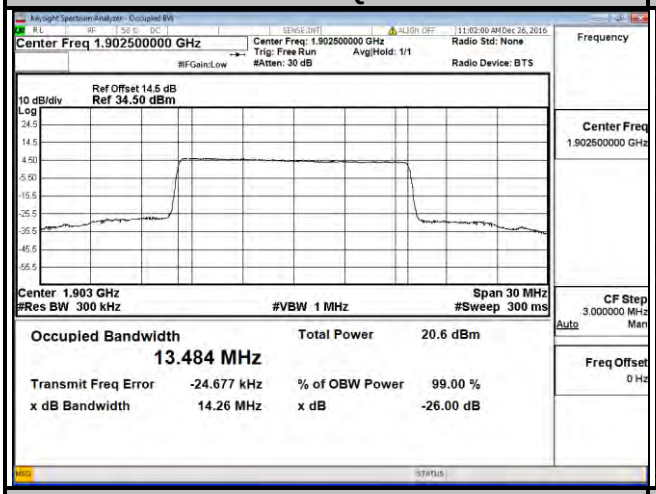
10 MHz / 16QAM



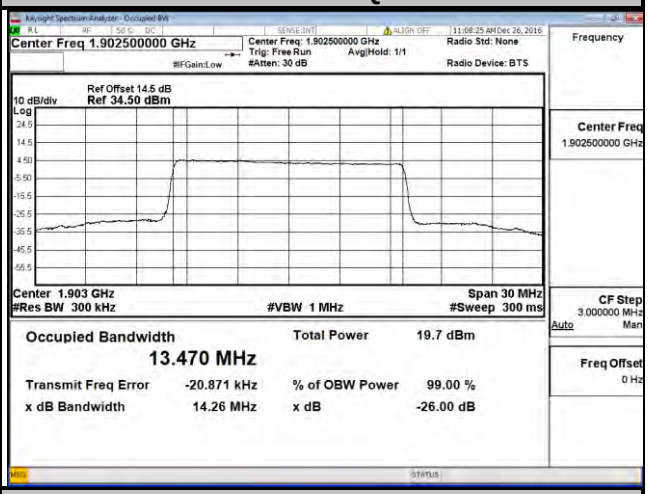
LTE Band 2							
Channel Bandwidth: 15 MHz				Channel Bandwidth: 20 MHz			
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)	
		QPSK	16QAM			QPSK	16QAM
18675	1857.5	13.422	13.413	18700	1860.0	17.881	17.906
18900	1880.0	13.455	13.441	18900	1880.0	17.923	17.942
19125	1902.5	13.484	13.470	19100	1900.0	17.921	17.940

Spectrum Plot of Worst Value

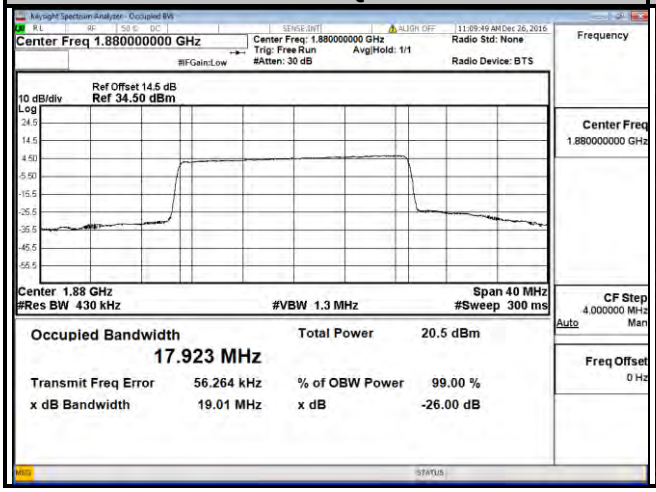
15 MHz / QPSK



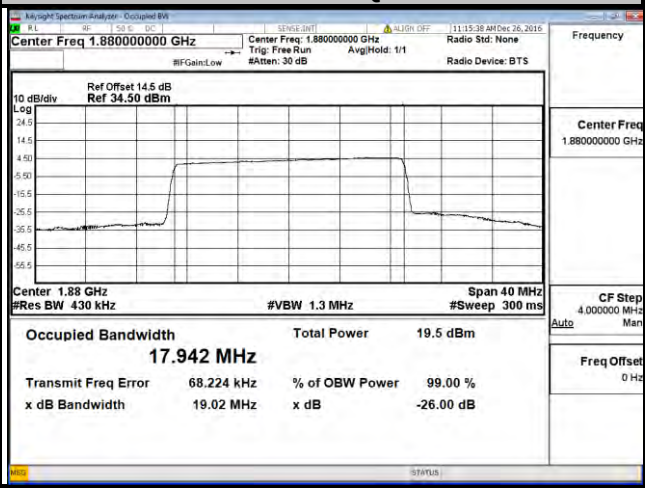
15 MHz / 16QAM



20 MHz / QPSK



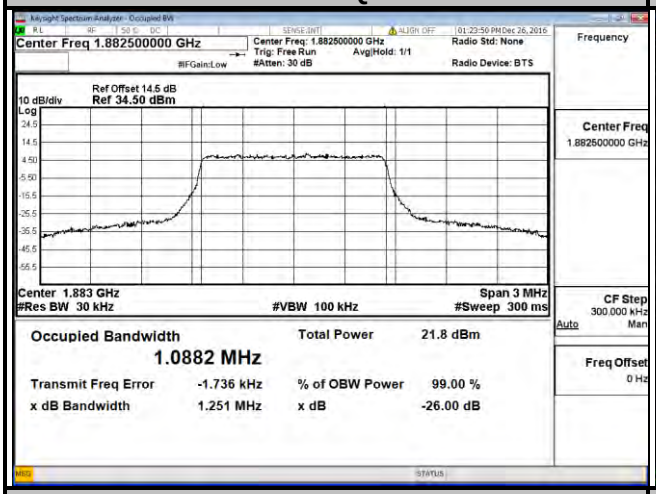
20 MHz / 16QAM



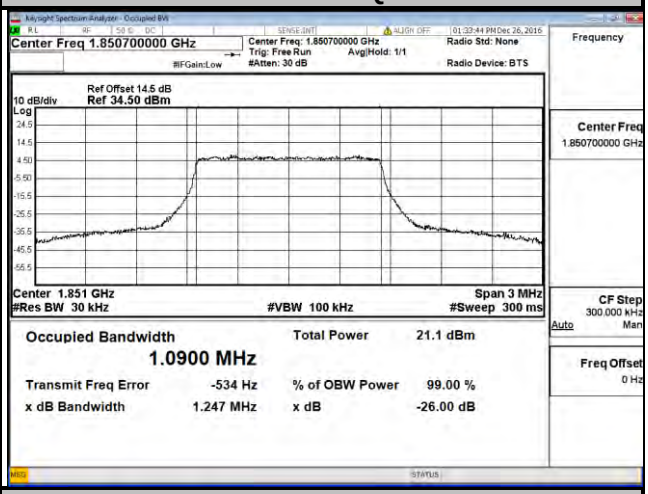
LTE Band 25							
Channel Bandwidth: 1.4 MHz				Channel Bandwidth: 3 MHz			
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)	
		QPSK	16QAM			QPSK	16QAM
26047	1850.7	1.0875	1.0900	26055	1851.5	2.6999	2.6987
26365	1882.5	1.0882	1.0879	26365	1882.5	2.7022	2.6984
26683	1914.3	1.0881	1.0888	26675	1913.5	2.6978	2.6946

Spectrum Plot of Worst Value

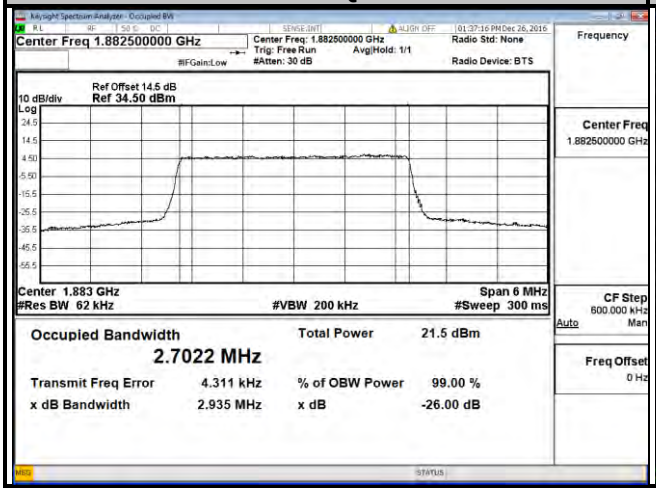
1.4 MHz / QPSK



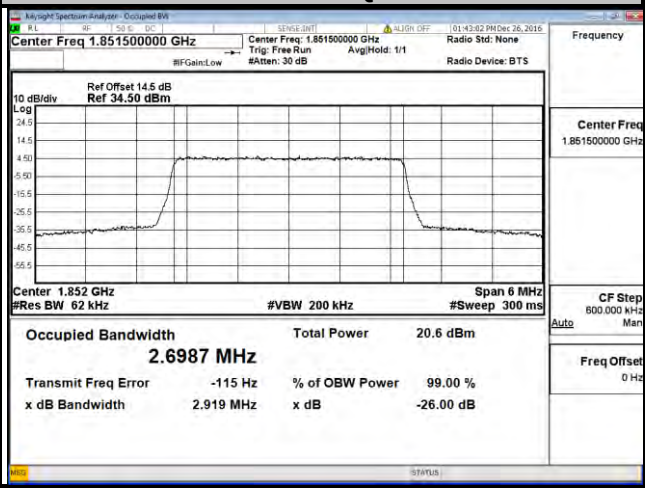
1.4 MHz / 16QAM



3 MHz / QPSK



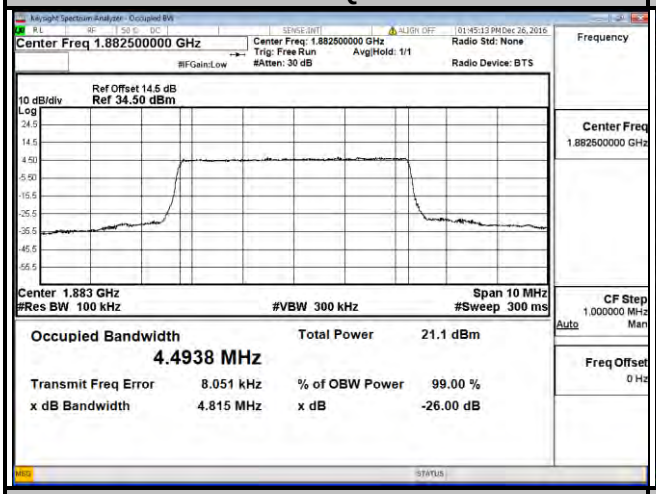
3 MHz / 16QAM



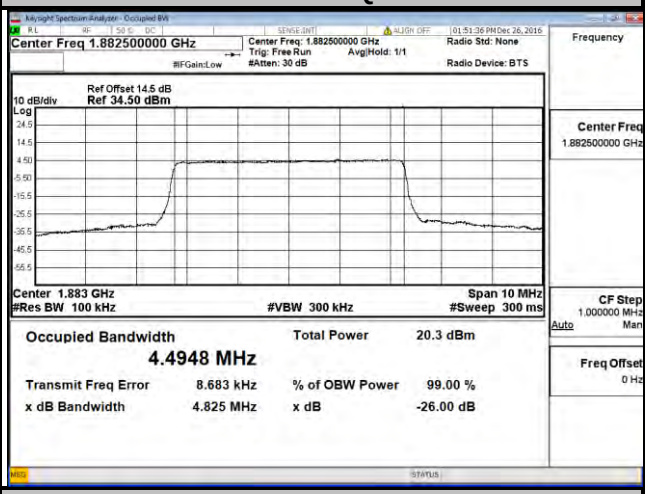
LTE Band 25							
Channel Bandwidth: 5 MHz				Channel Bandwidth: 10 MHz			
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)	
		QPSK	16QAM			QPSK	16QAM
26065	1852.5	4.4899	4.4929	26090	1855.0	8.9463	8.9438
26365	1882.5	4.4938	4.4948	26365	1882.5	8.9581	8.9593
26665	1912.5	4.4824	4.4830	26640	1910.0	8.9393	8.9467

Spectrum Plot of Worst Value

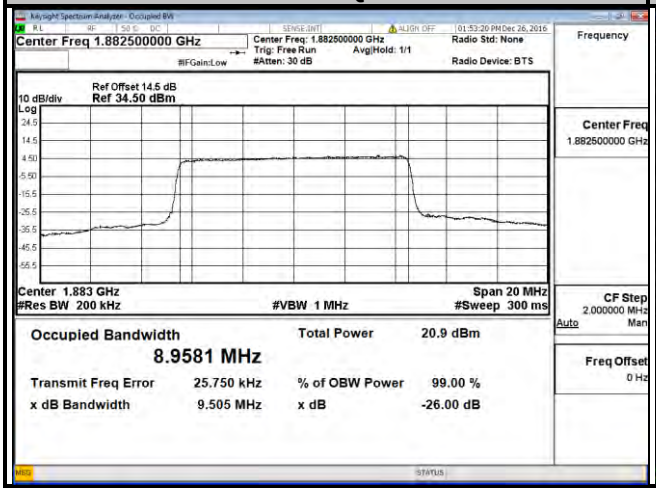
5 MHz / QPSK



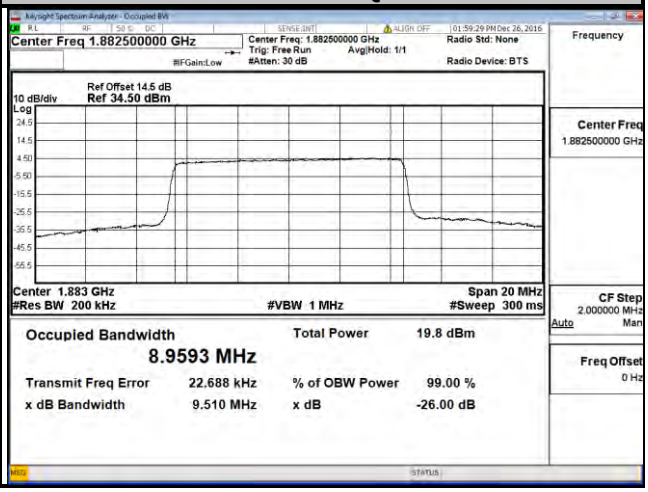
5 MHz / 16QAM



10 MHz / QPSK



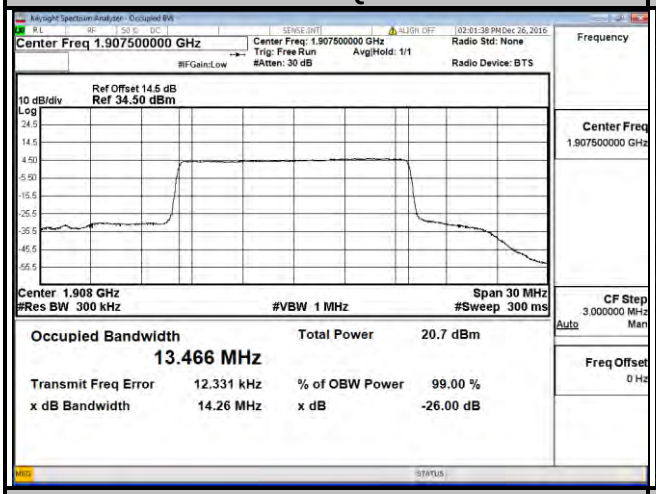
10 MHz / 16QAM



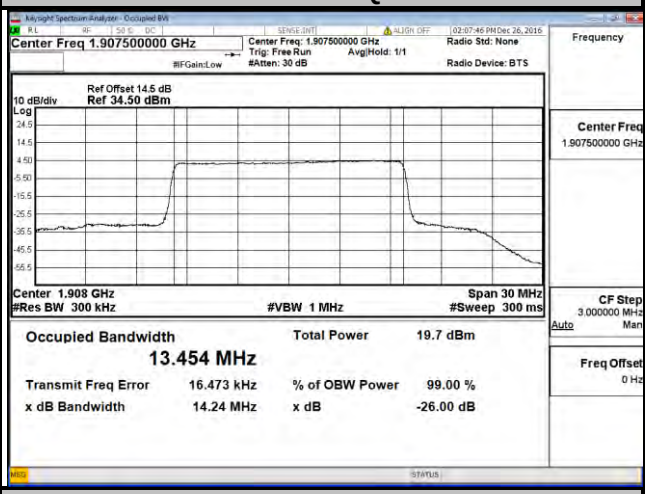
LTE BAND 25							
Channel Bandwidth: 15 MHz				Channel Bandwidth: 20 MHz			
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)	
		QPSK	16QAM			QPSK	16QAM
26115	1857.5	13.420	13.409	26140	1860.0	17.882	17.899
26365	1882.5	13.437	13.422	26365	1882.5	17.889	17.914
26615	1907.5	13.466	13.454	26590	1905.0	17.985	18.006

Spectrum Plot of Worst Value

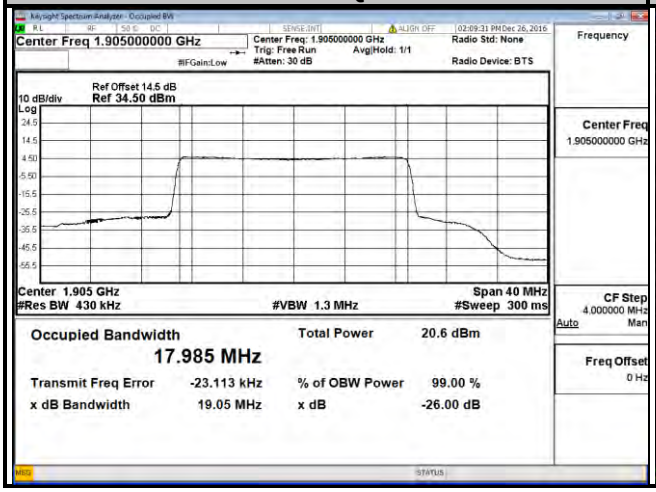
15 MHz / QPSK



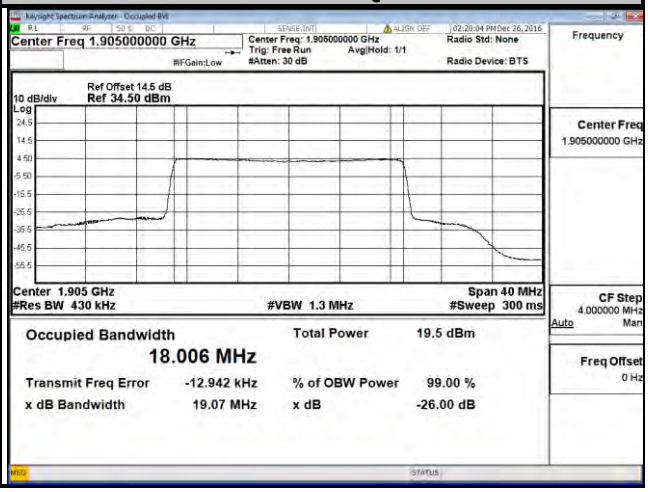
15 MHz / 16QAM



20 MHz / QPSK



20 MHz / 16QAM

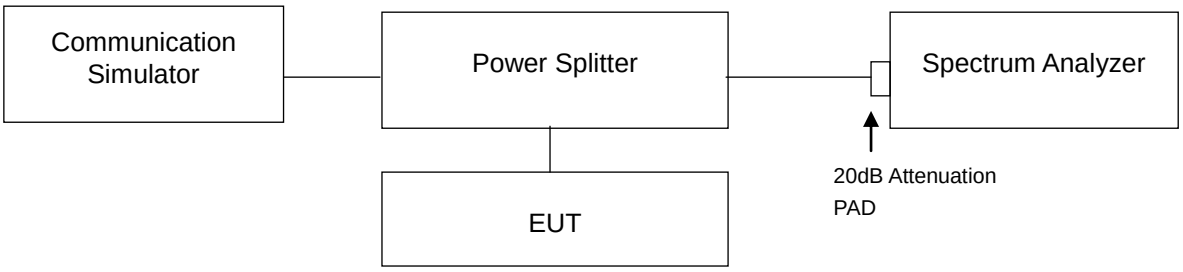


4.4 Band Edge Measurement

4.4.1 Limits of Band Edge Measurement

Power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. In the 1 MHz 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.

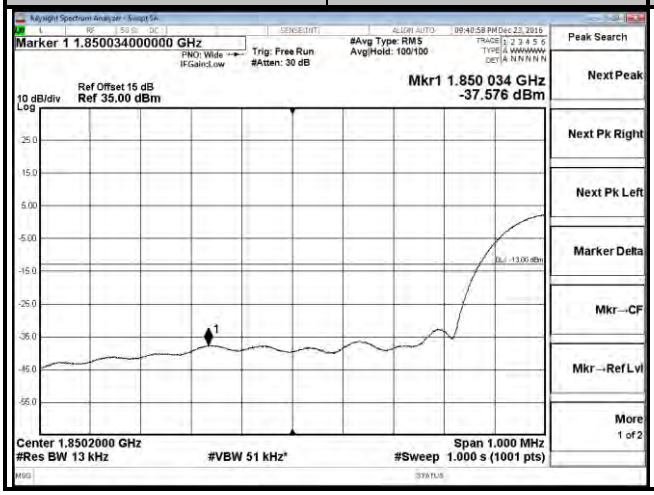
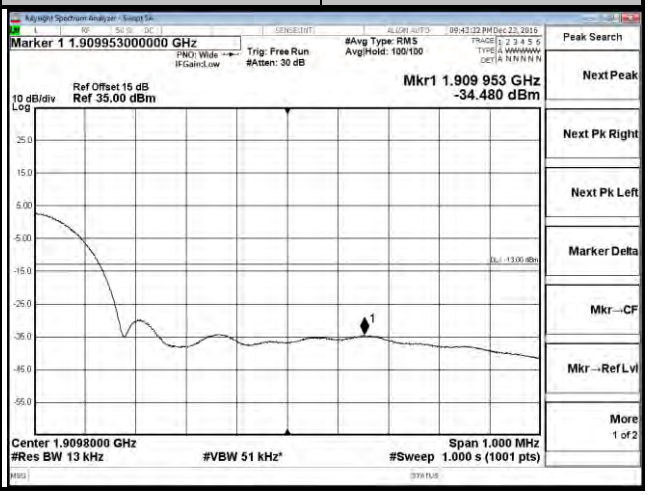
4.4.2 Test Setup

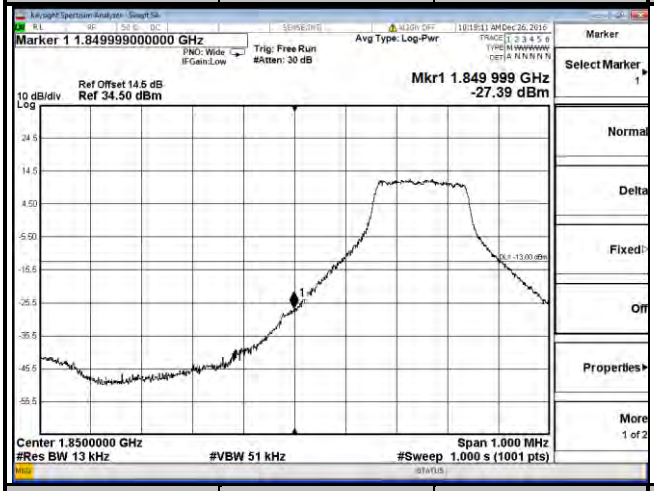
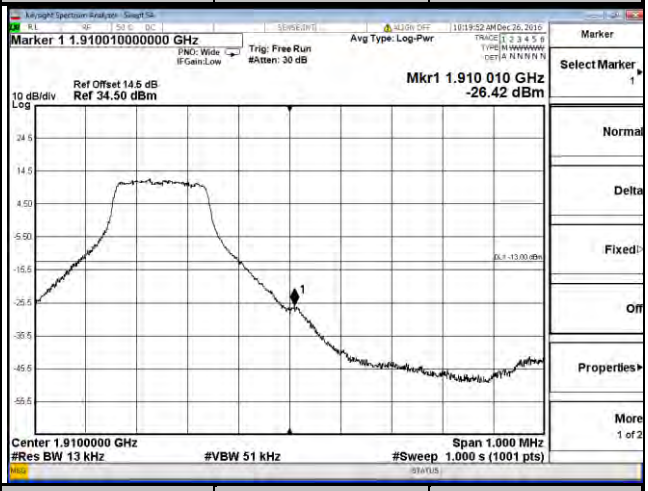
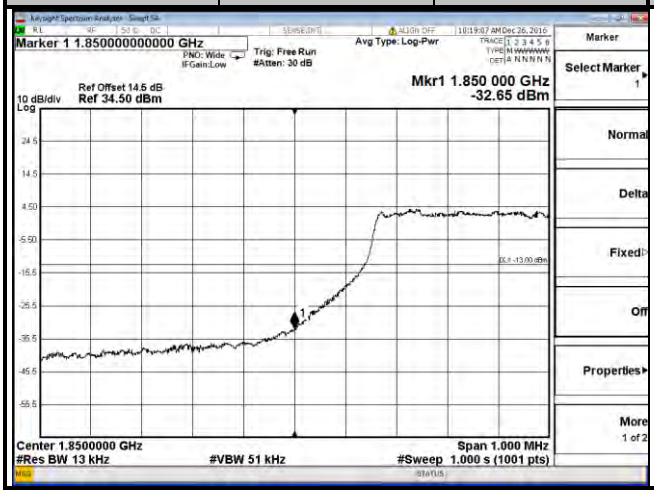
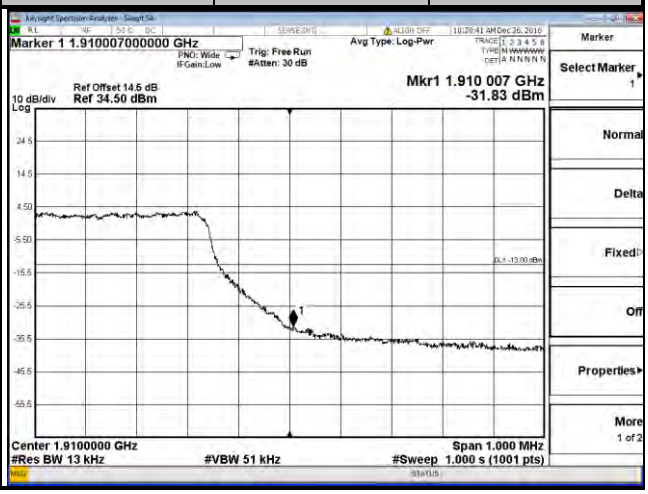


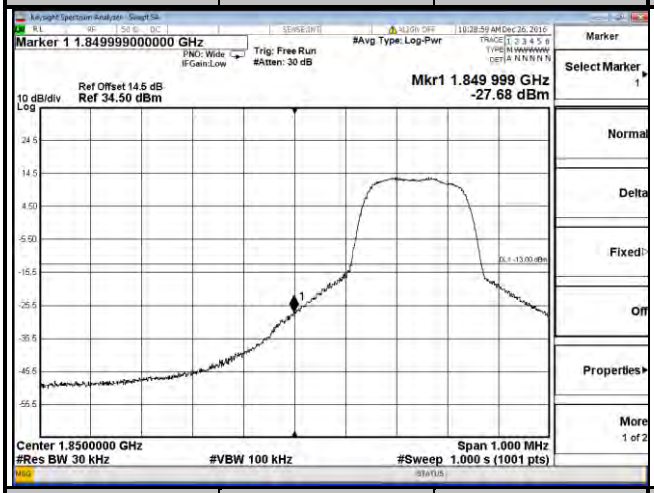
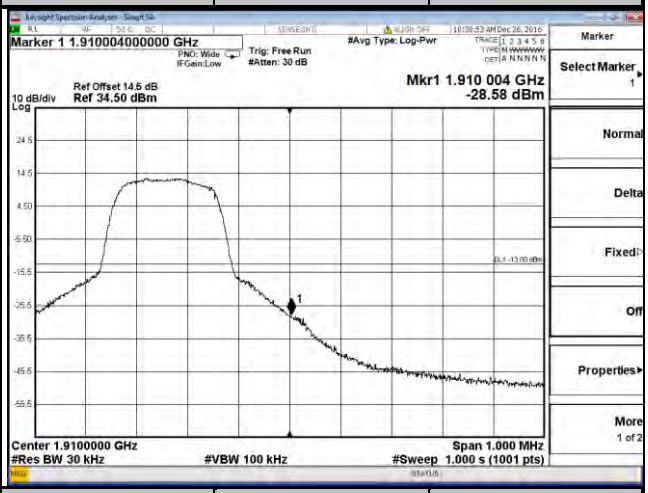
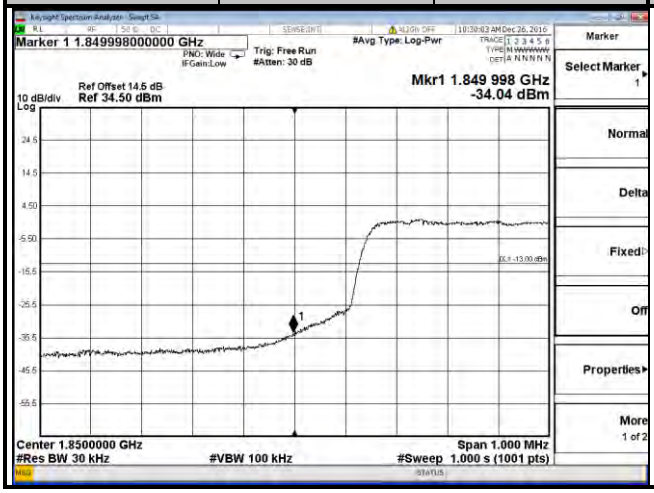
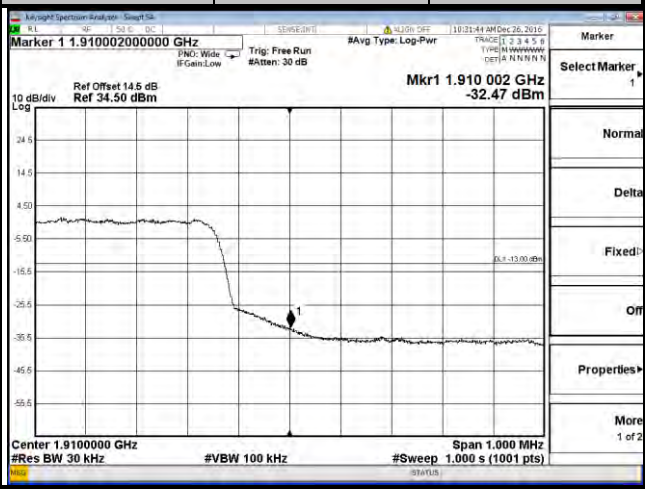
4.4.3 Test Procedures

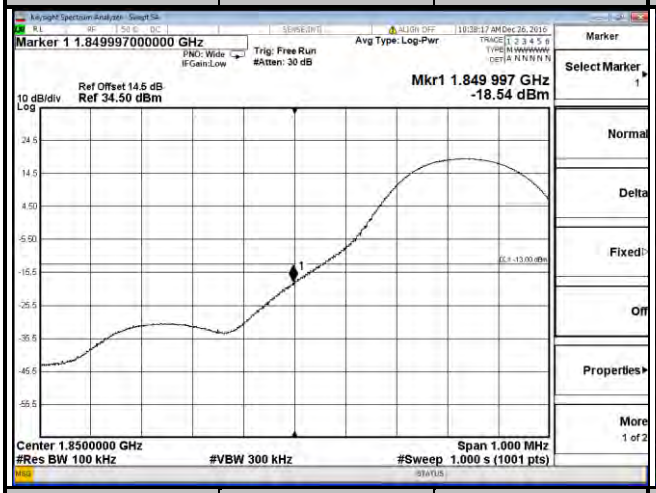
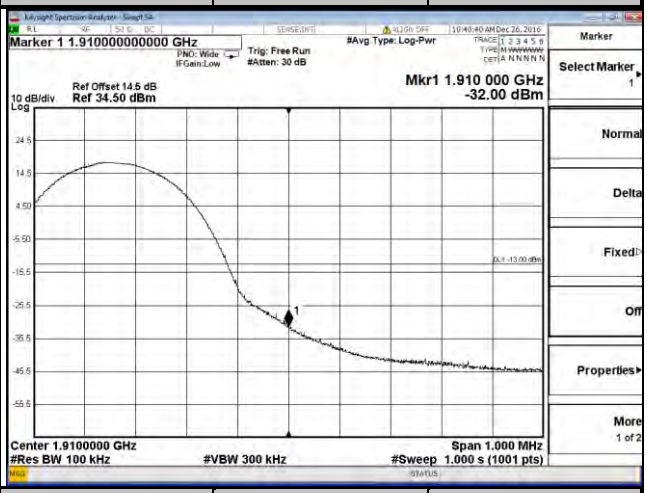
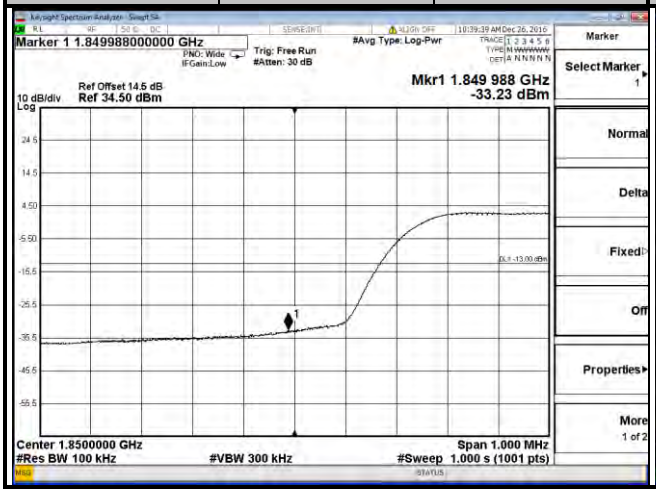
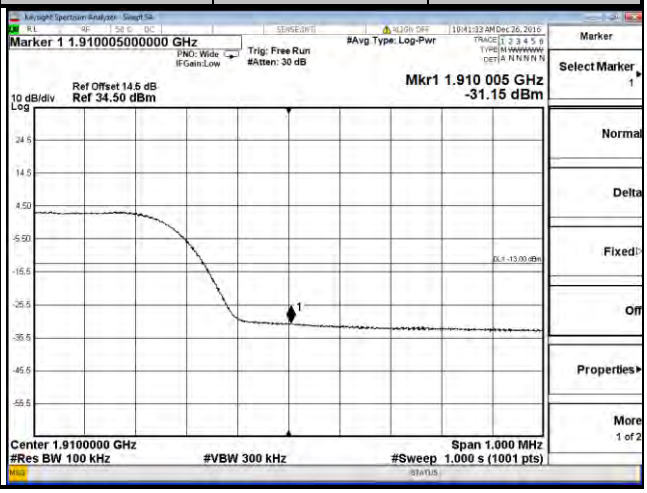
a. All measurements were done at low and high operational frequency range.
b. The center frequency of spectrum is the band edge frequency and span is 1 MHz. RB of the spectrum is 13 kHz and VB of the spectrum is 51 kHz (CDMA / LTE Bandwidth 1.4 MHz).
c. The center frequency of spectrum is the band edge frequency and span is 1 MHz. RB of the spectrum is 30 kHz and VB of the spectrum is 100 kHz (LTE Bandwidth 3 MHz).
d. The center frequency of spectrum is the band edge frequency and span is 1 MHz. RB of the spectrum is 100 kHz and VB of the spectrum is 300 kHz (LTE Bandwidth 5 MHz/10 MHz).
e. The center frequency of spectrum is the band edge frequency and span is 1 MHz. RB of the spectrum is 150 kHz and VB of the spectrum is 470 kHz (LTE Bandwidth 15 MHz).
f. The center frequency of spectrum is the band edge frequency and span is 1 MHz. RB of the spectrum is 180 kHz and VB of the spectrum is 560 kHz (LTE Bandwidth 20 MHz).
g. Record the max trace plot into the test report.

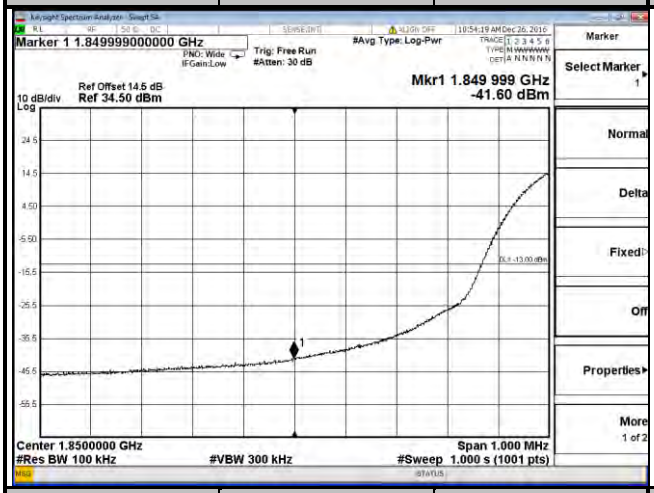
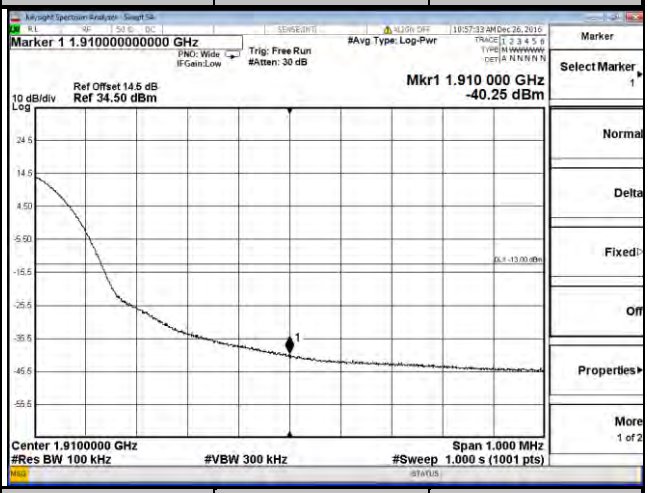
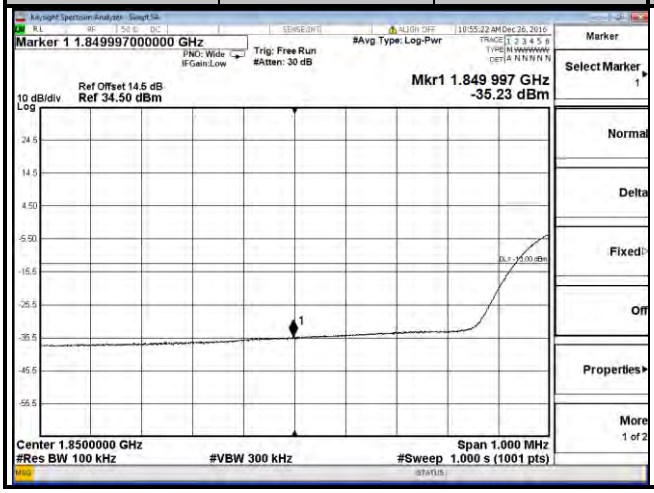
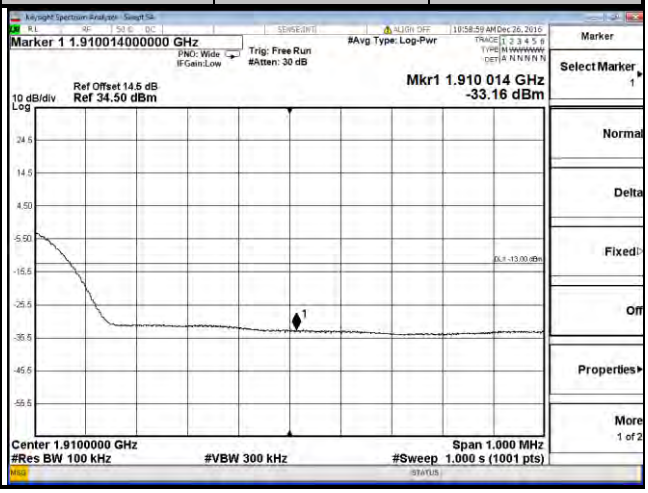
4.4.4 Test Results

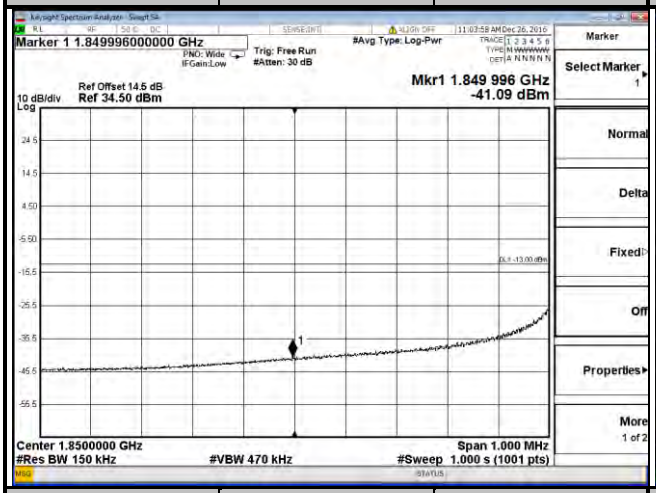
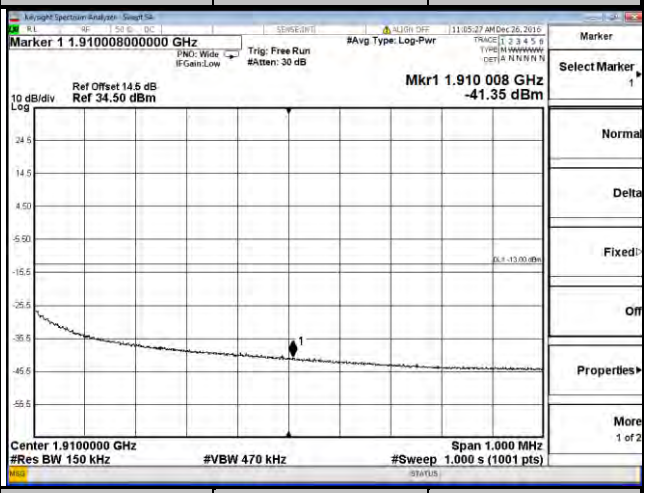
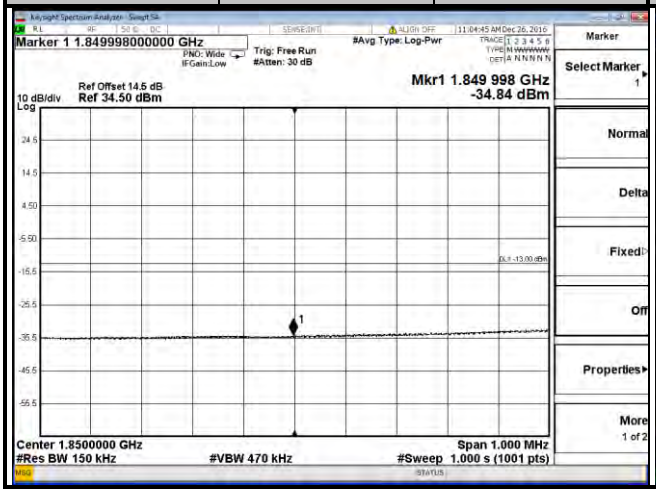
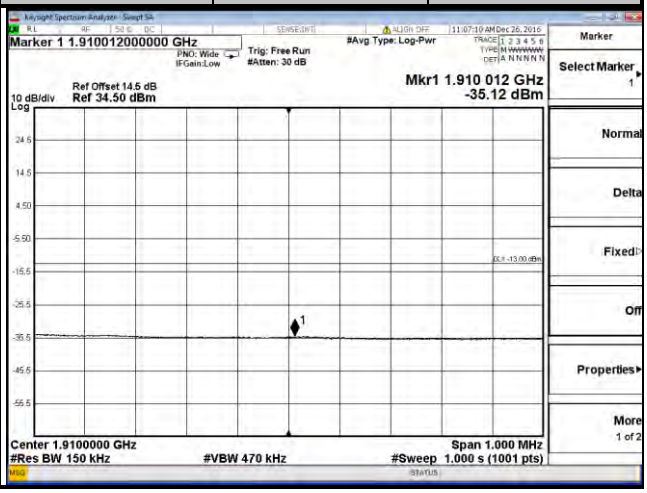
CDMA			
Channel	25	Channel	1175
			

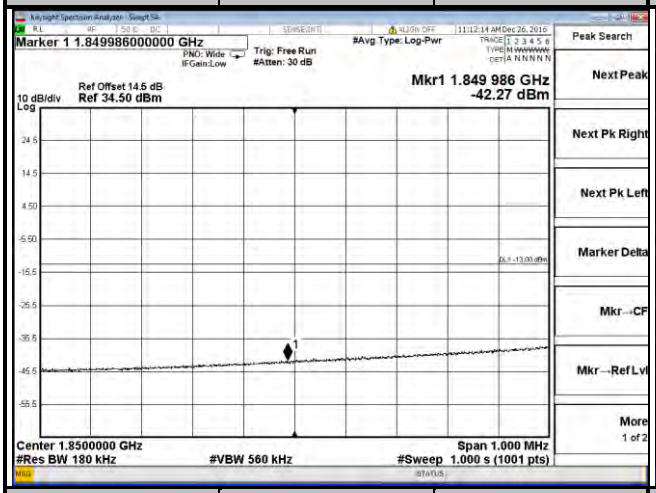
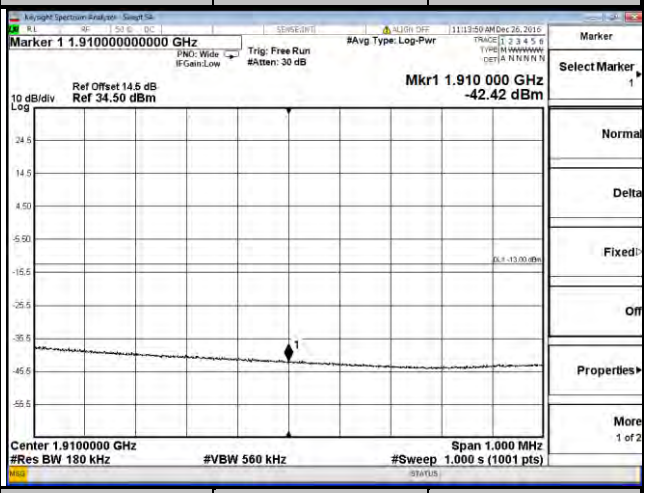
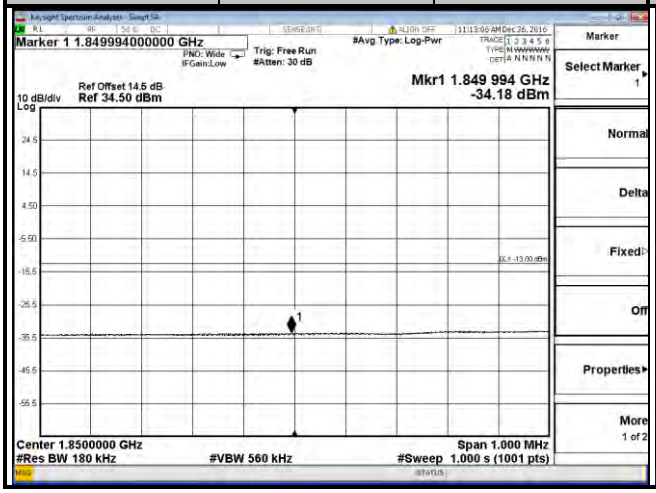
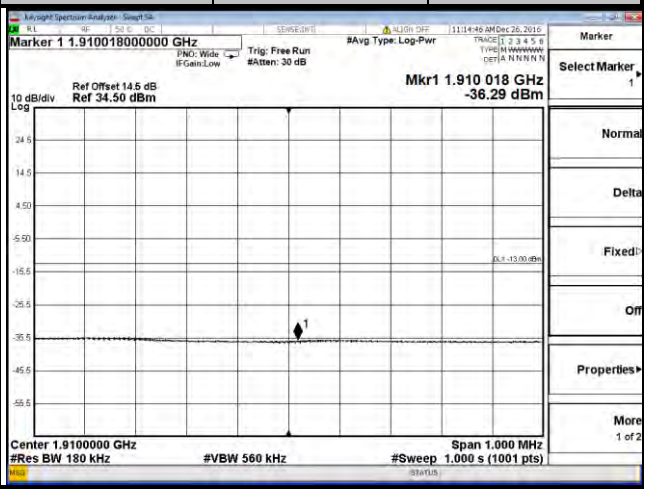
LTE Band 2					
Channel Bandwidth: 1.4 MHz					
Channel	18607	1 RB	Channel	19193	1 RB
					
Channel	18607	6 RB	Channel	19193	6 RB
					

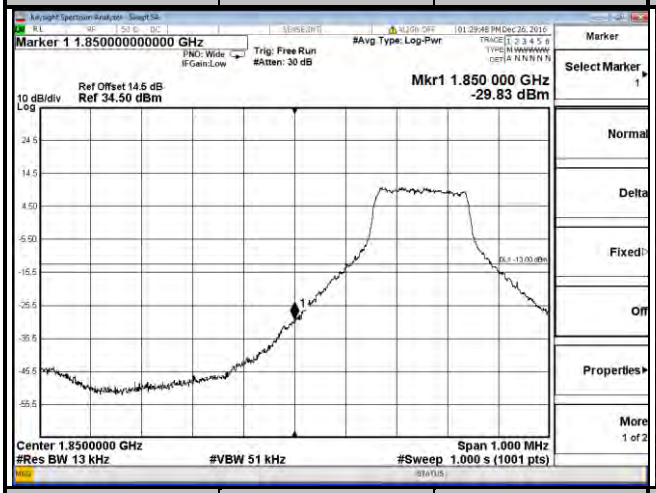
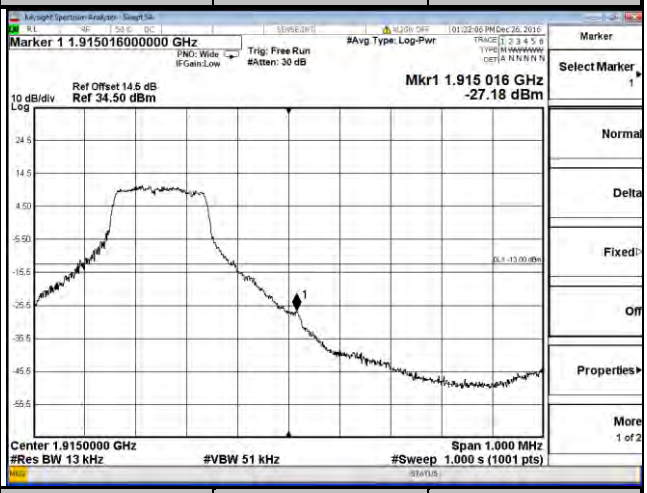
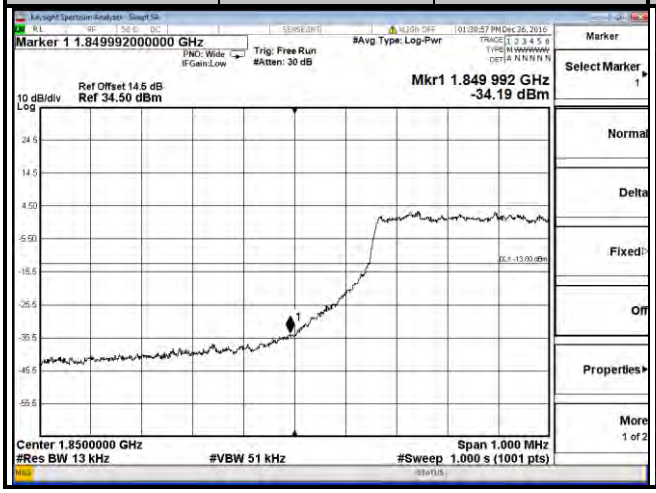
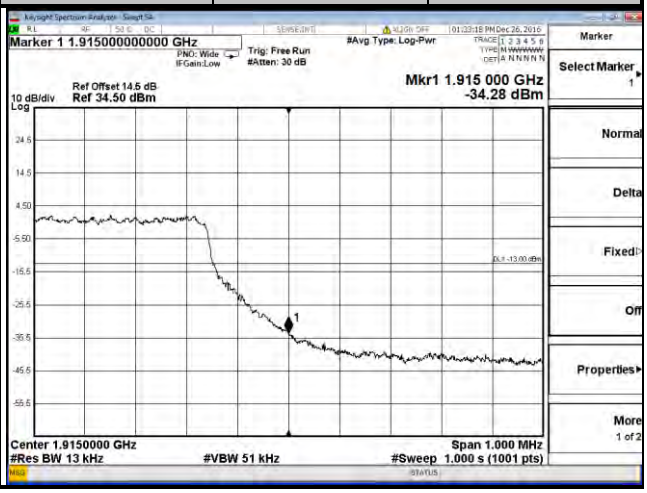
LTE Band 2					
Channel Bandwidth: 3 MHz					
Channel	18615	1 RB	Channel	19185	1 RB
					
Channel	18615	15 RB	Channel	19185	15 RB
					

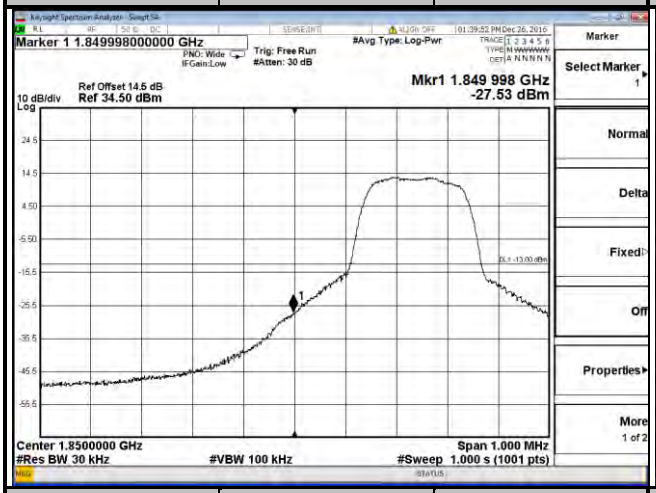
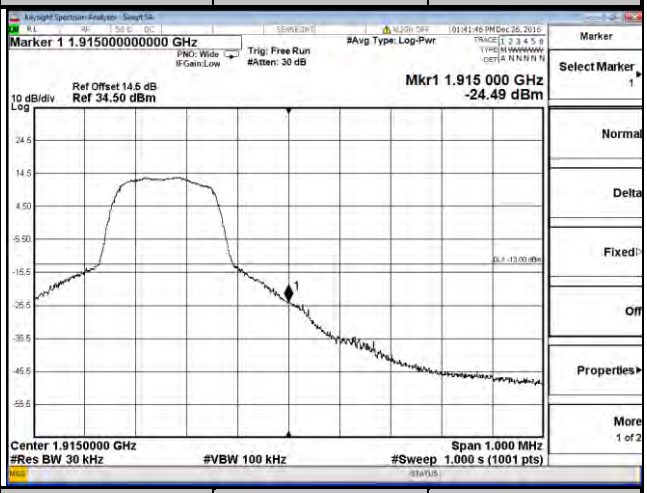
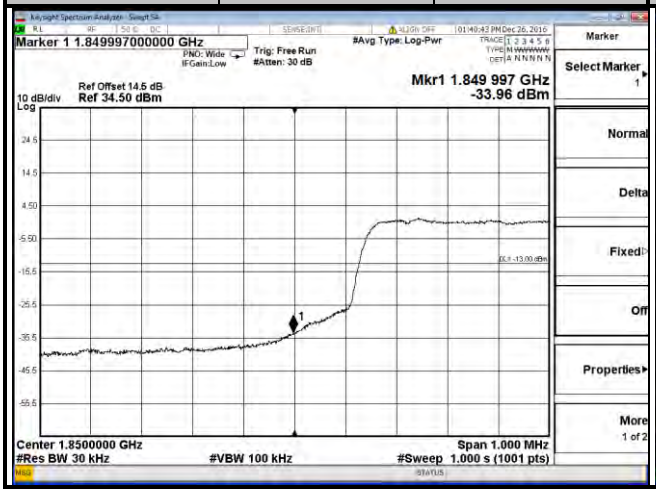
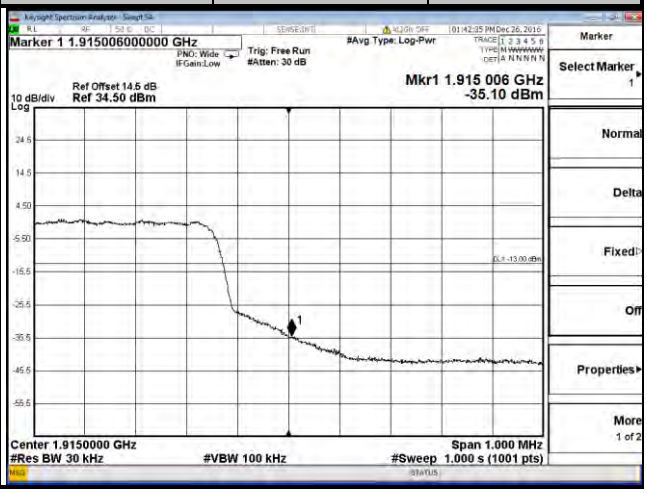
LTE Band 2					
Channel Bandwidth: 5 MHz					
Channel	18625	1 RB	Channel	19175	1 RB
					
Channel	18625	25 RB	Channel	19175	25 RB
					

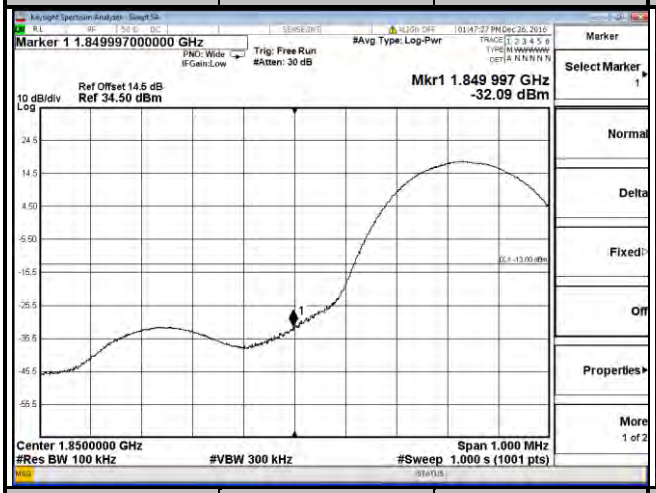
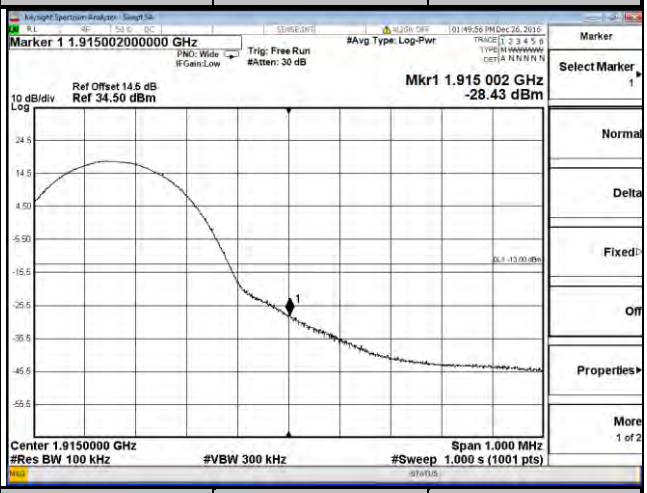
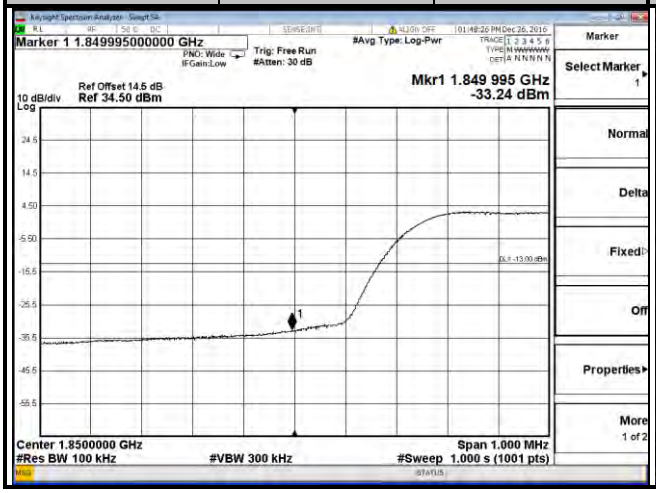
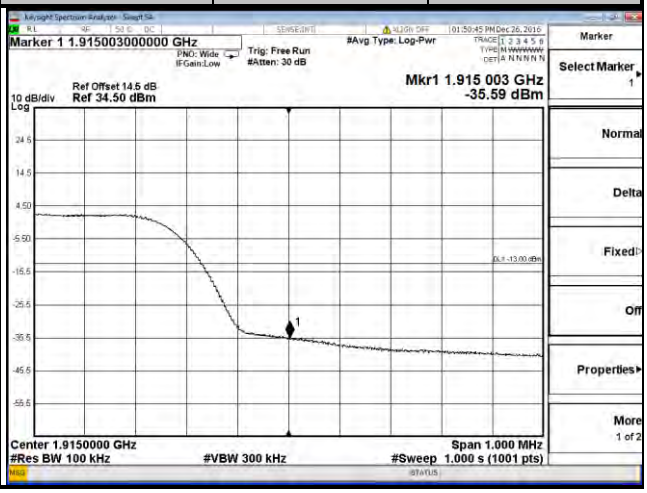
LTE Band 2					
Channel Bandwidth: 10 MHz					
Channel	18650	1 RB	Channel	19150	1 RB
					
Channel	18650	50 RB	Channel	19150	50 RB
					

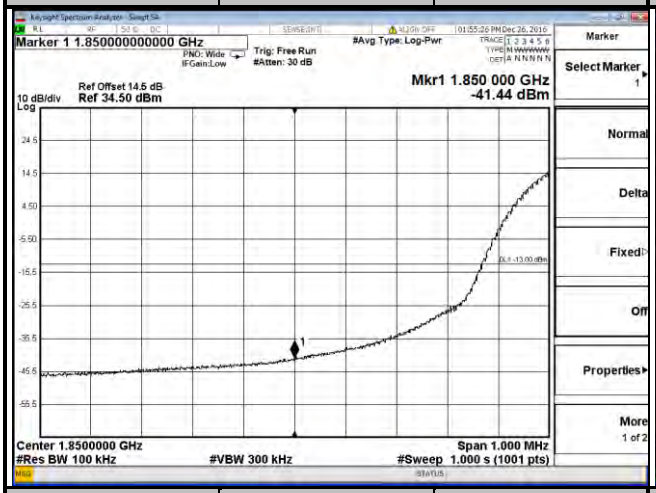
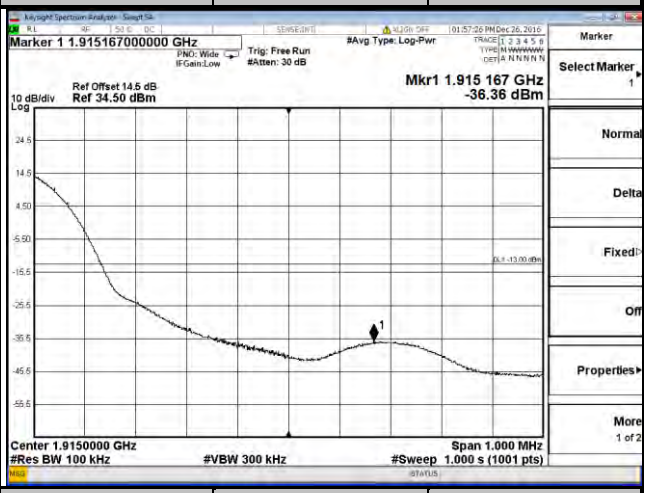
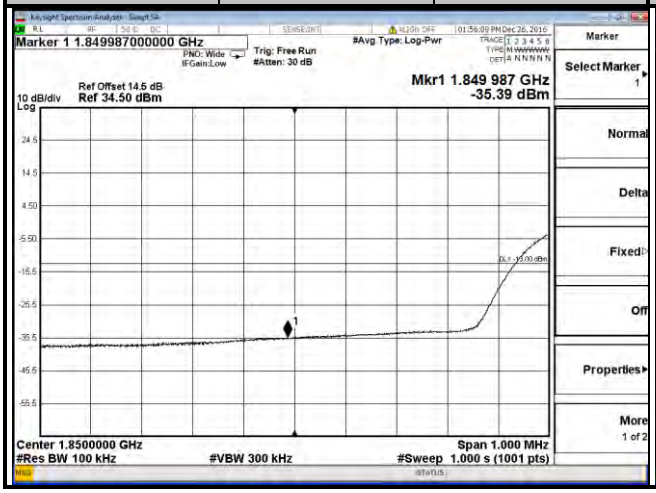
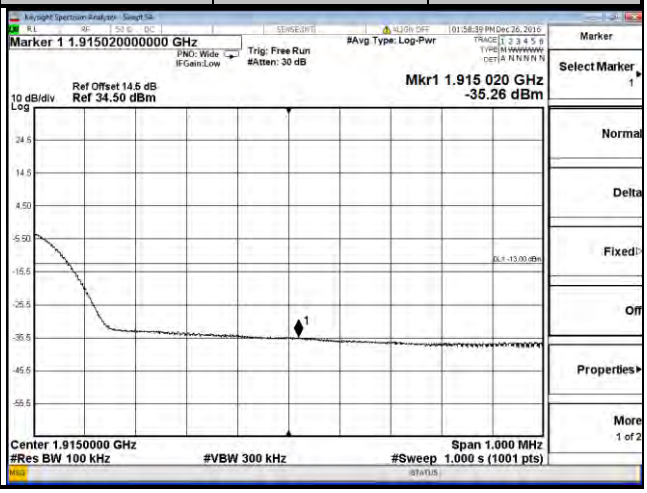
LTE Band 2					
Channel Bandwidth: 15 MHz					
Channel	18675	1 RB	Channel	19125	1 RB
					
Channel	18675	75 RB	Channel L	19125	75 RB
					

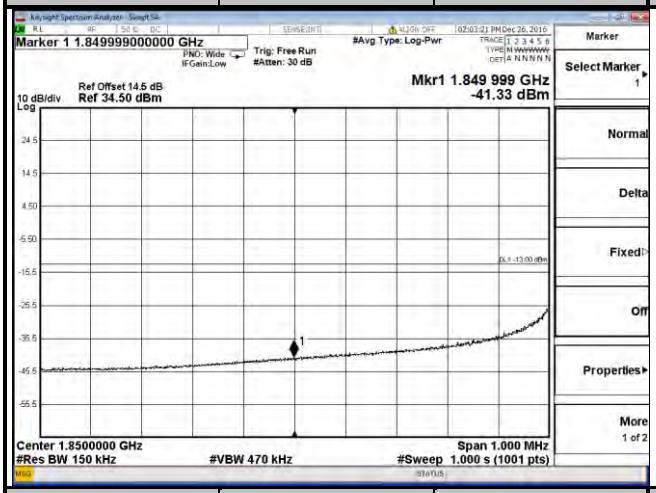
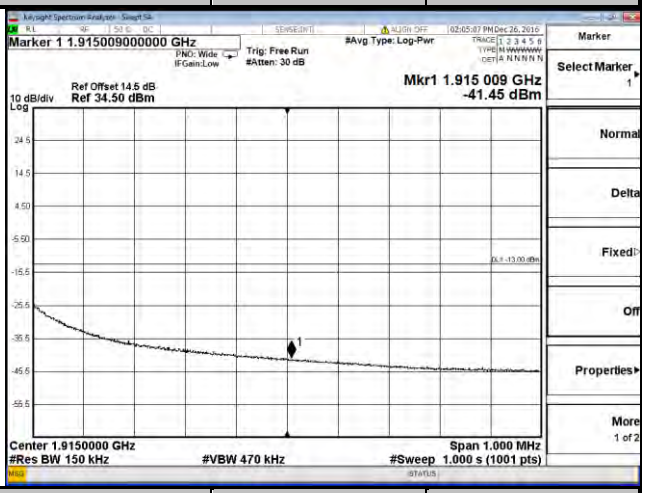
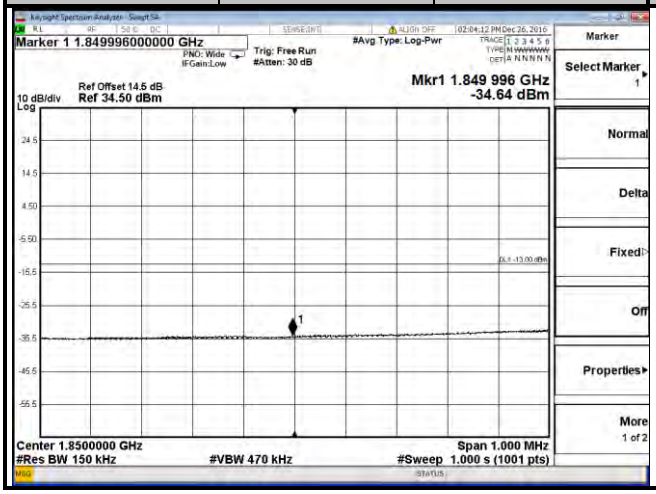
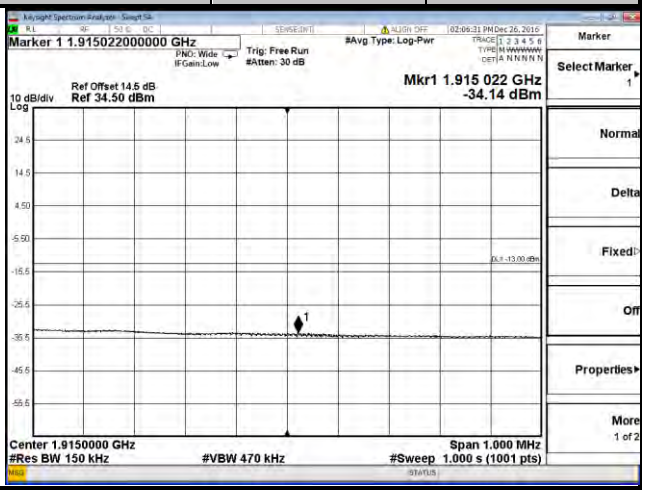
LTE Band 2					
Channel Bandwidth: 20 MHz					
Channel	18700	1 RB	Channel	19100	1 RB
					
Channel	18700	100 RB	Channel	19100	100 RB
					

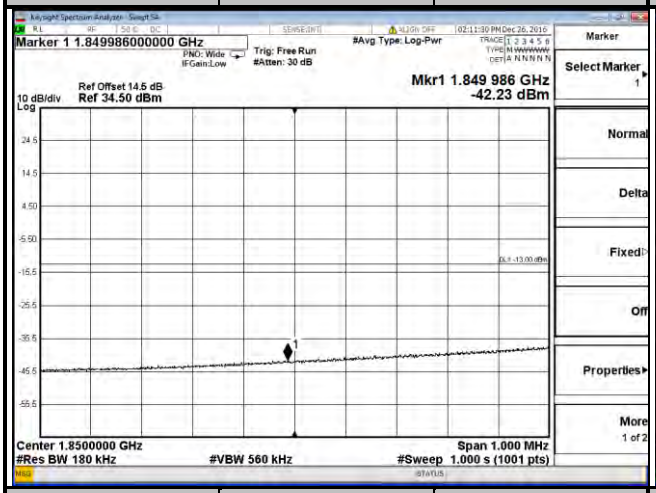
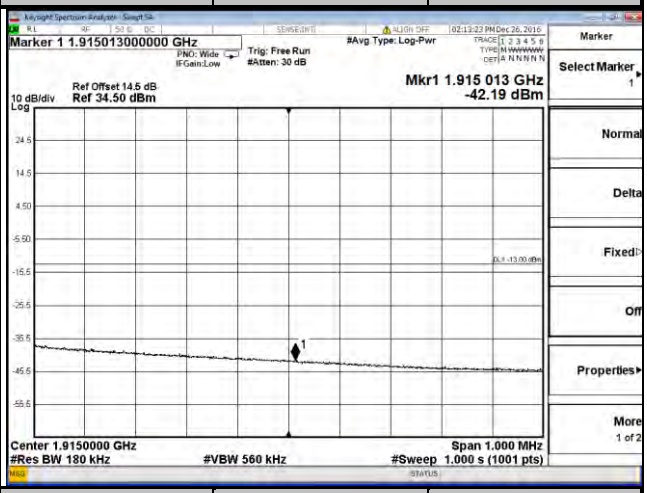
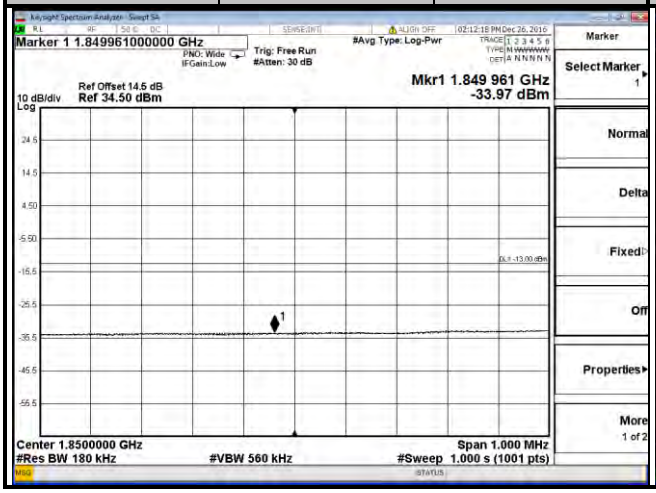
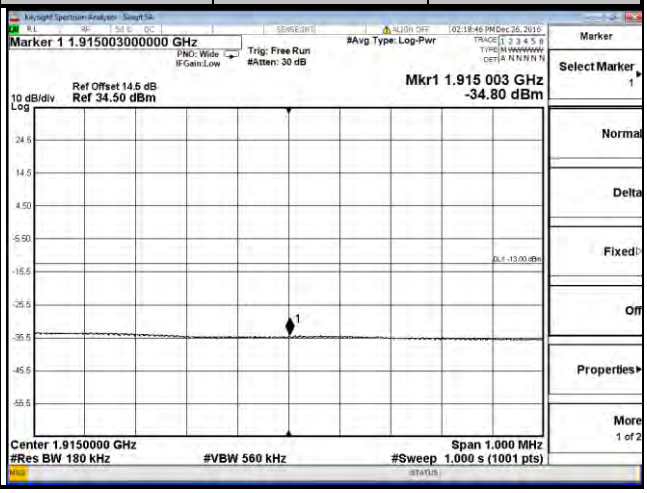
LTE Band 25					
Channel Bandwidth: 1.4 MHz					
Channel	26047	1 RB	Channel	26683	1 RB
					
Channel	26047	6 RB	Channel	26683	6 RB
					

LTE Band 25					
Channel Bandwidth: 3 MHz					
Channel	26055	1 RB	Channel	26675	1 RB
					
Channel	26055	15 RB	Channel	26675	15 RB
					

LTE Band 25					
Channel Bandwidth: 5 MHz					
Channel	26065	1 RB	Channel	26665	1 RB
					
Channel	26065	25 RB	Channel	26665	25 RB
					

LTE Band 25					
Channel Bandwidth: 10 MHz					
Channel	26090	1 RB	Channel	26640	1 RB
					
Channel	26090	50 RB	Channel	26640	50 RB
					

LTE Band 25					
Channel Bandwidth: 15 MHz					
Channel	26115	1 RB	Channel	26615	1 RB
					
Channel	26115	75 RB	Channel	26615	75 RB
					

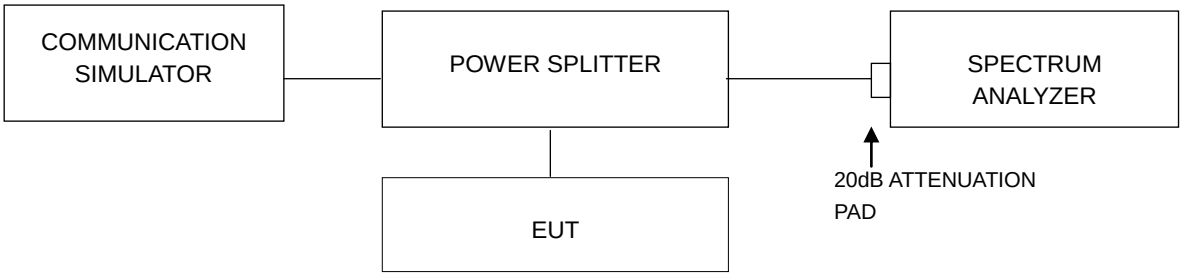
LTE Band 25					
Channel Bandwidth: 20 MHz					
Channel	26140	1 RB	Channel	26590	1 RB
					
Channel	26140	100 RB	Channel	26590	100 RB
					

4.5 Peak to Average Ratio

4.5.1 Limits of Peak to Average Ratio Measurement

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB.

4.5.2 Test Setup



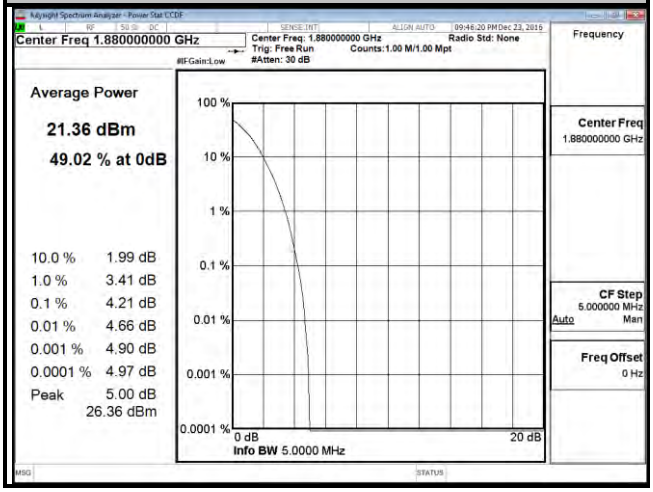
4.5.3 Test Procedures

1. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Record the maximum PAPR level associated with a probability of 0.1 %.

4.5.4 Test Results

Channel	Frequency (MHz)	Peak to Average Ratio (dB)
		CDMA
25	1851.25	4.02
600	1880.00	4.21
1175	1908.75	4.14

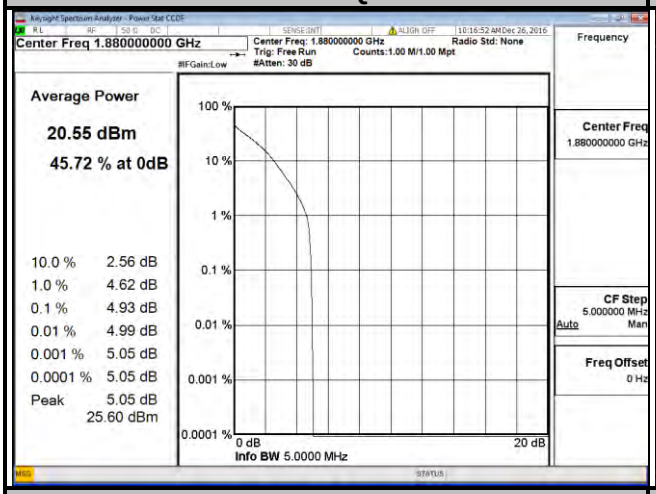
Spectrum Plot of Worst Value
CDMA



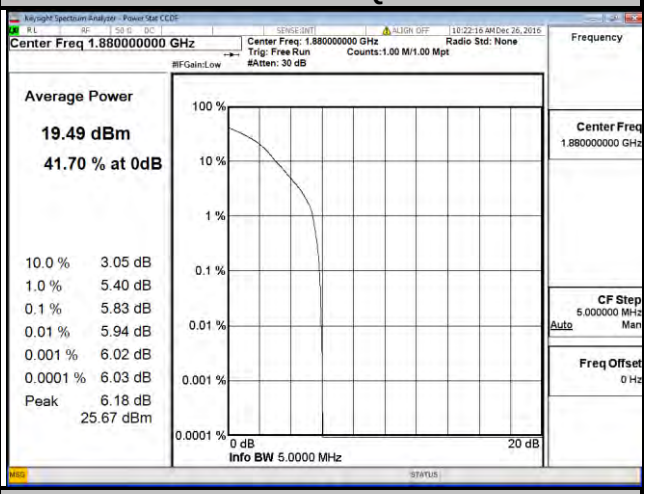
LTE Band 2							
Channel Bandwidth: 1.4 MHz				Channel Bandwidth: 3 MHz			
Channel	Frequency (MHz)	Peak to Average Ratio (dB)		Channel	Frequency (MHz)	Peak to Average Ratio (dB)	
		QPSK	16QAM			QPSK	16QAM
18607	1850.7	4.69	5.53	18615	1851.5	4.69	5.58
18900	1880.0	4.93	5.83	18900	1880.0	4.95	5.77
19193	1909.3	4.86	5.66	19185	1908.5	4.88	5.72

Spectrum Plot of Worst Value

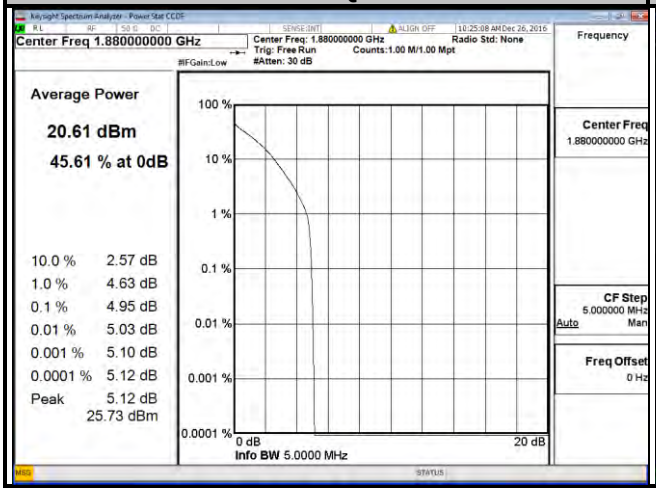
1.4 MHz / QPSK



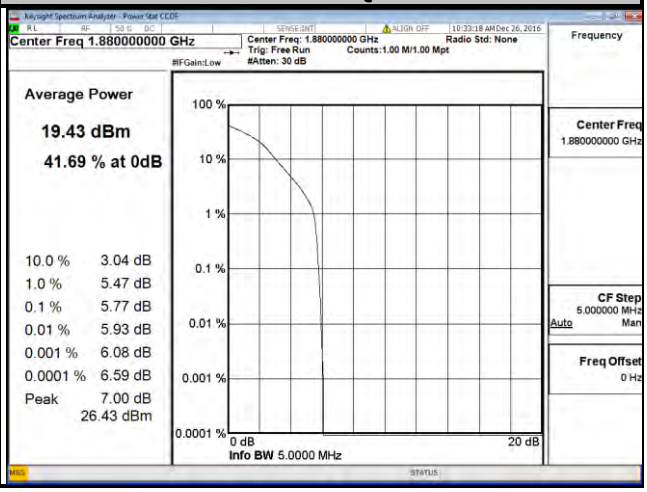
1.4 MHz / 16QAM



3 MHz / QPSK



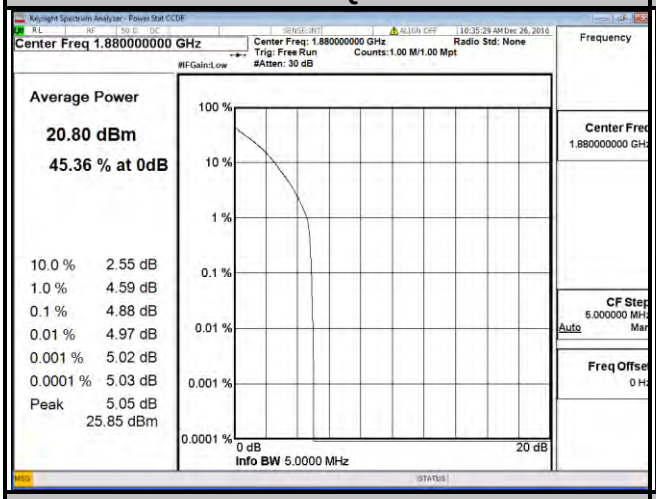
3 MHz / 16QAM



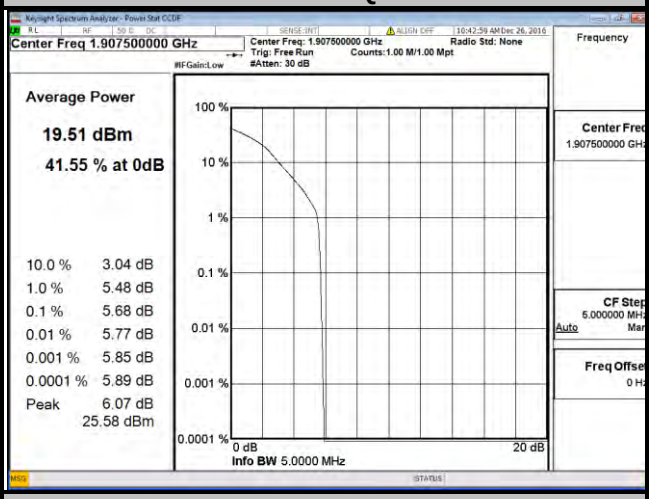
LTE Band 2							
Channel Bandwidth: 5 MHz				Channel Bandwidth: 10 MHz			
Channel	Frequency (MHz)	Peak to Average Ratio (dB)		Channel	Frequency (MHz)	Peak to Average Ratio (dB)	
		QPSK	16QAM			QPSK	16QAM
18625	1852.5	4.64	5.45	18650	1855.0	4.62	5.47
18900	1880.0	4.88	5.66	18900	1880.0	4.93	5.67
19175	1907.5	4.87	5.68	19150	1905.0	4.80	5.63

Spectrum Plot of Worst Value

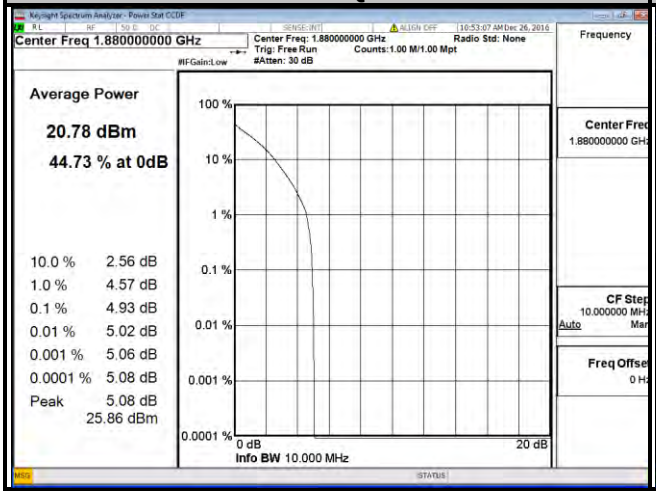
5 MHz / QPSK



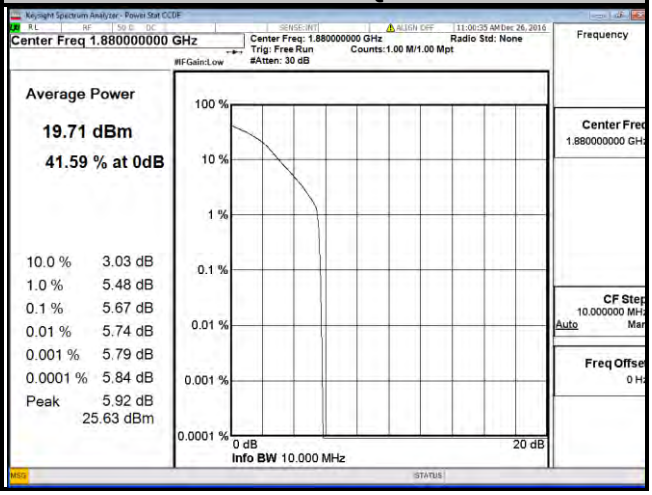
5 MHz / 16QAM



10 MHz / QPSK



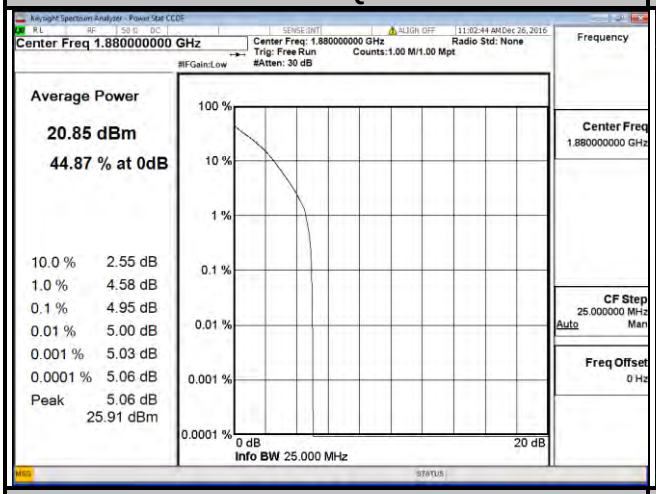
10 MHz / 16QAM



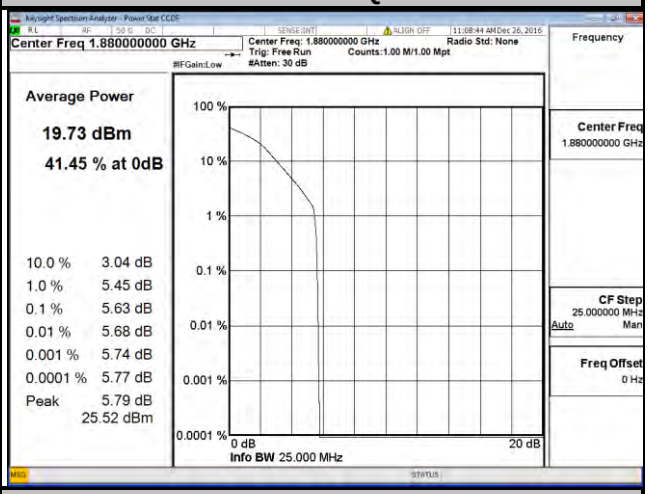
LTE Band 2							
Channel Bandwidth: 15 MHz				Channel Bandwidth: 20 MHz			
Channel	Frequency (MHz)	Peak to Average Ratio (dB)		Channel	Frequency (MHz)	Peak to Average Ratio (dB)	
		QPSK	16QAM			QPSK	16QAM
18675	1857.5	4.63	5.48	18700	1860.0	4.58	5.45
18900	1880.0	4.95	5.63	18900	1880.0	4.93	5.71
19125	1902.5	4.73	5.55	19100	1900.0	4.71	5.50

Spectrum Plot of Worst Value

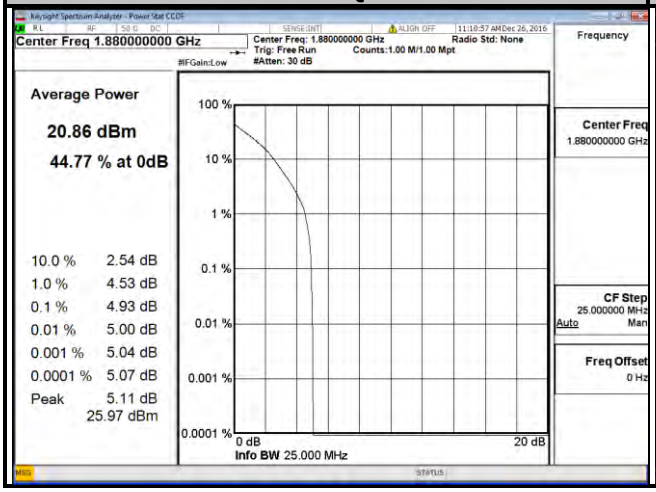
15 MHz / QPSK



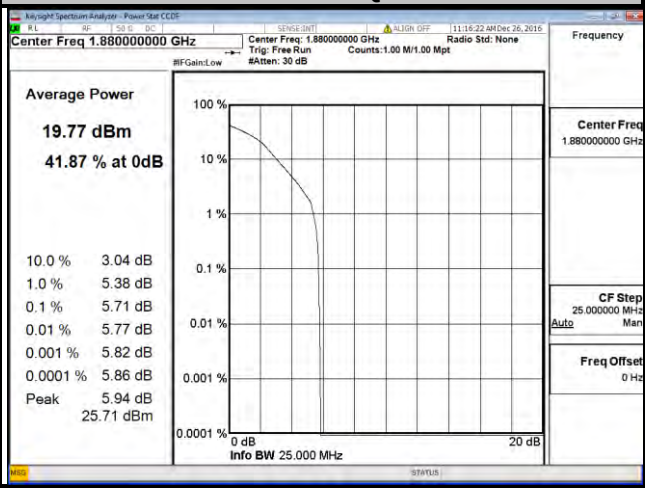
15 MHz / 16QAM



20 MHz / QPSK



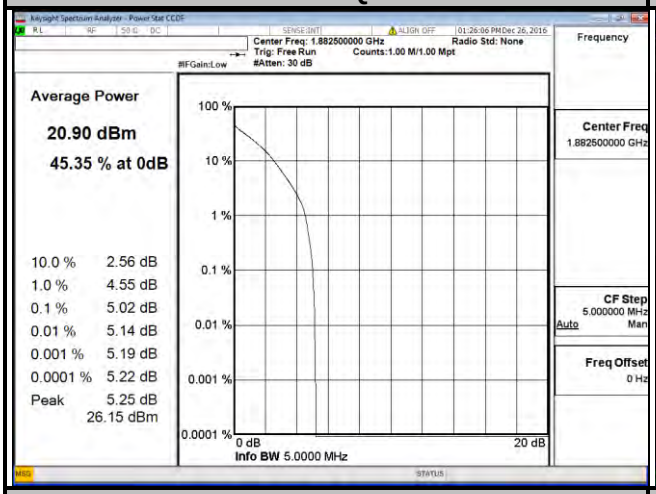
20 MHz / 16QAM



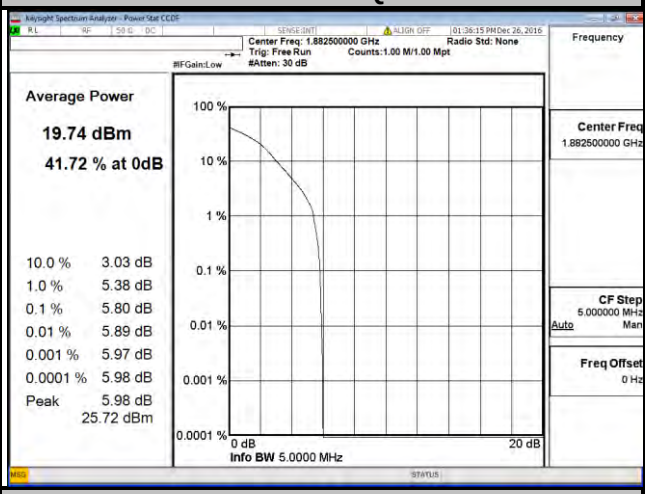
LTE Band 25							
Channel Bandwidth: 1.4 MHz				Channel Bandwidth: 3 MHz			
Channel	Frequency (MHz)	Peak to Average Ratio (dB)		Channel	Frequency (MHz)	Peak to Average Ratio (dB)	
		QPSK	16QAM			QPSK	16QAM
26047	1850.7	4.70	5.44	26055	1851.5	4.67	5.44
26365	1882.5	5.02	5.80	26365	1882.5	5.02	5.80
26683	1914.3	3.76	4.75	26675	1913.5	4.21	5.25

Spectrum Plot of Worst Value

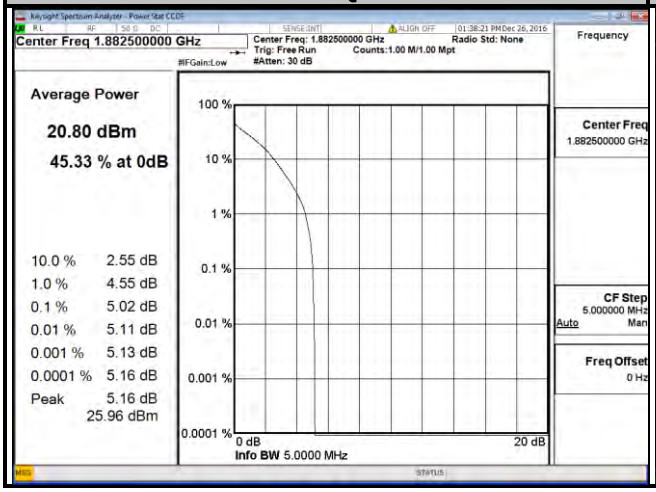
1.4 MHz / QPSK



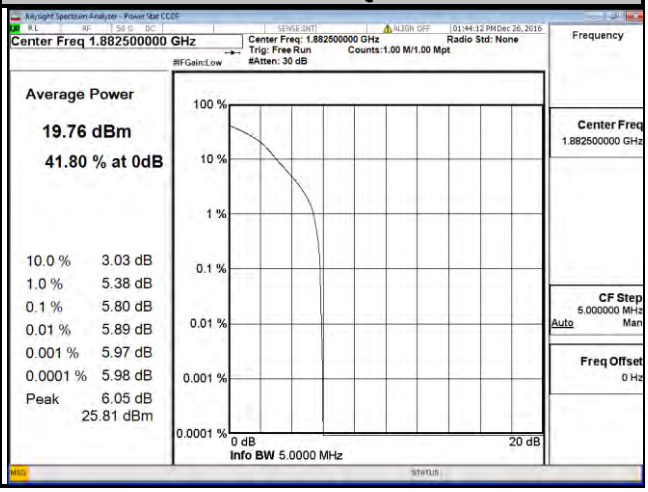
1.4 MHz / 16QAM



3 MHz / QPSK



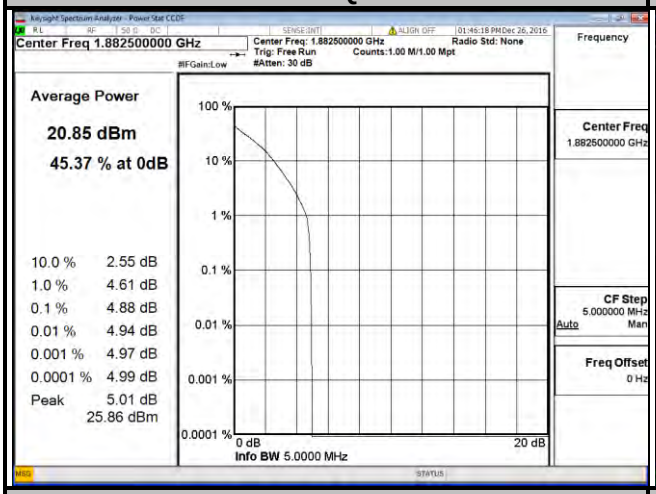
3 MHz / 16QAM



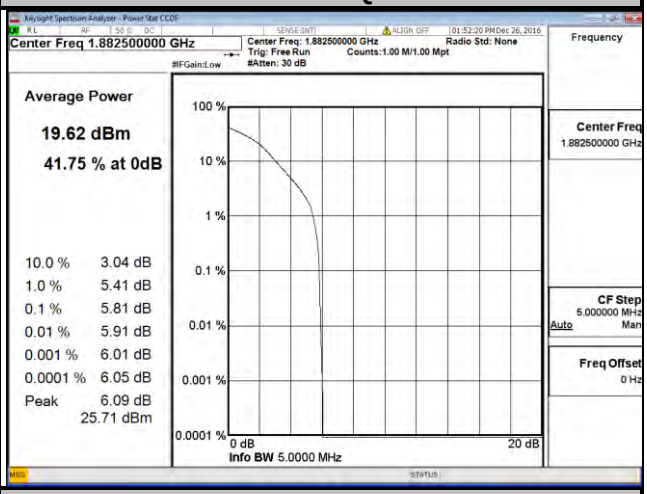
LTE Band 25							
Channel Bandwidth: 5 MHz				Channel Bandwidth: 10 MHz			
Channel	Frequency (MHz)	Peak to Average Ratio (dB)		Channel	Frequency (MHz)	Peak to Average Ratio (dB)	
		QPSK	16QAM			QPSK	16QAM
26065	1852.5	4.66	5.49	26090	1855.0	4.61	5.52
26365	1882.5	4.88	5.81	26365	1882.5	4.88	5.63
26665	1912.5	4.77	5.57	26640	1910.0	4.89	5.67

Spectrum Plot of Worst Value

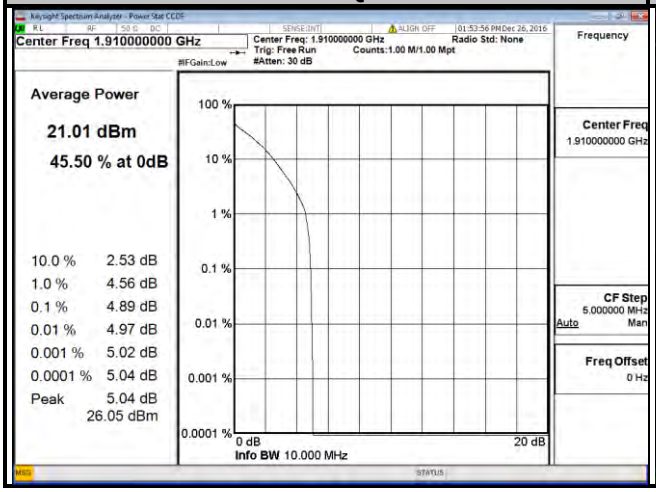
5 MHz / QPSK



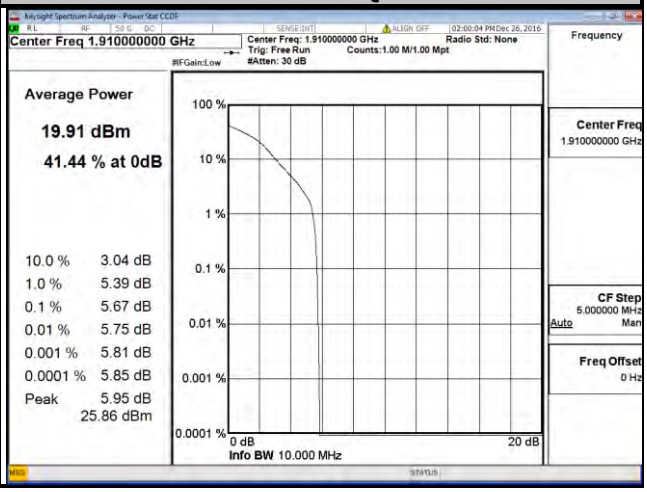
5 MHz / 16QAM



10 MHz / QPSK



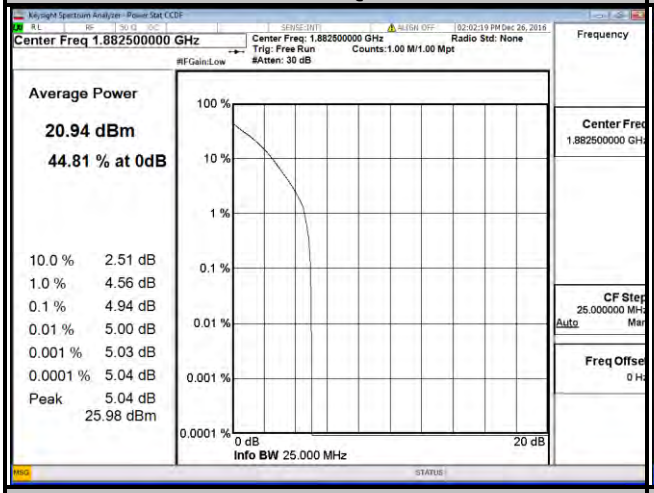
10 MHz / 16QAM



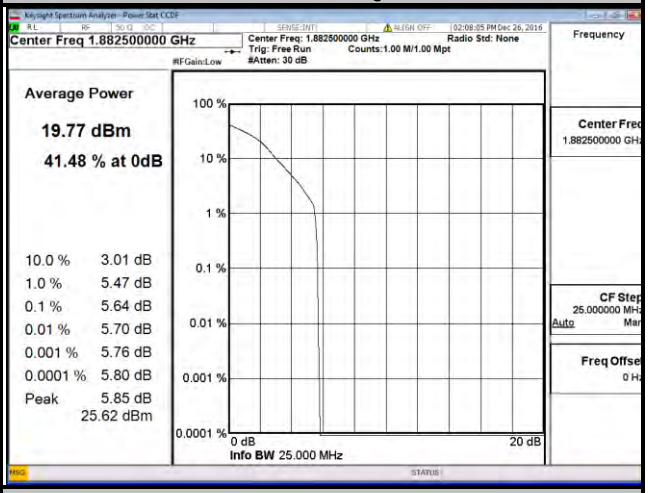
LTE Band 25							
Channel Bandwidth: 15 MHz				Channel Bandwidth: 20 MHz			
Channel	Frequency (MHz)	Peak to Average Ratio (dB)		Channel	Frequency (MHz)	Peak to Average Ratio (dB)	
		QPSK	16QAM			QPSK	16QAM
26115	1857.5	4.61	5.49	26140	1860	4.54	5.44
26365	1882.5	4.94	5.64	26365	1882.5	4.96	5.61
26615	1907.5	4.78	5.59	26590	1905	4.68	5.56

Spectrum Plot of Worst Value

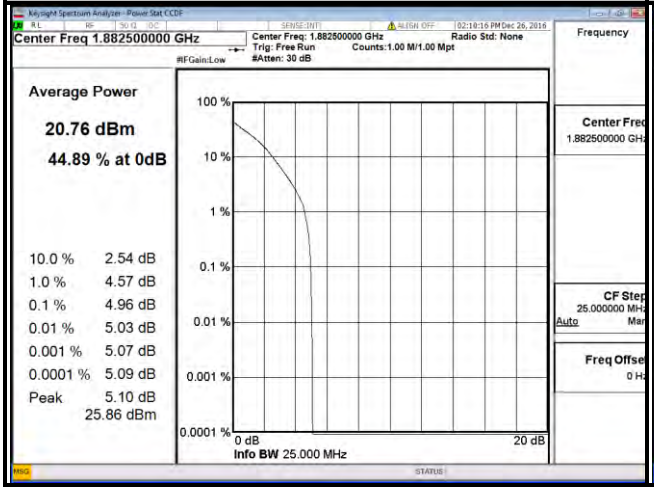
15 MHz / QPSK



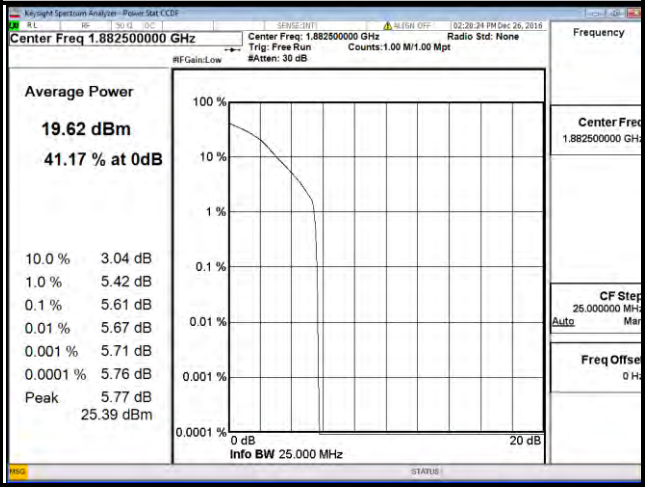
15 MHz / 16QAM



20 MHz / QPSK



20 MHz / 16QAM

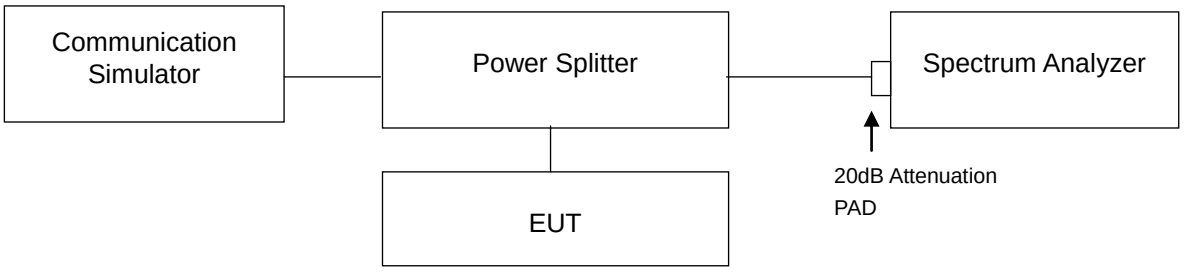


4.6 Conducted Spurious Emissions

4.6.1 Limits of Conducted Spurious Emissions Measurement

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to –13 dBm.

4.6.2 Test Setup

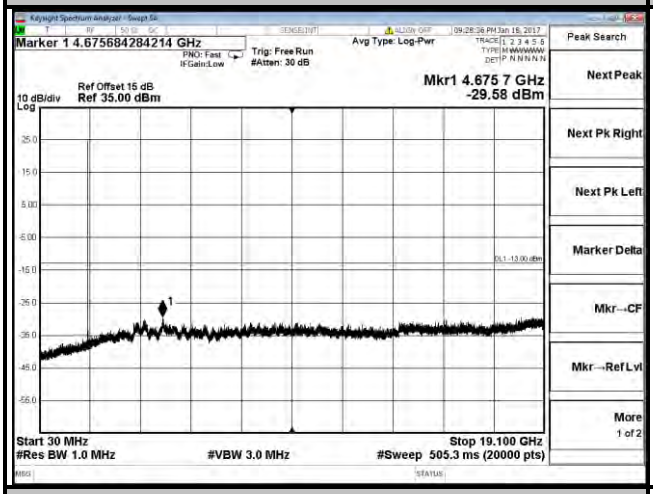
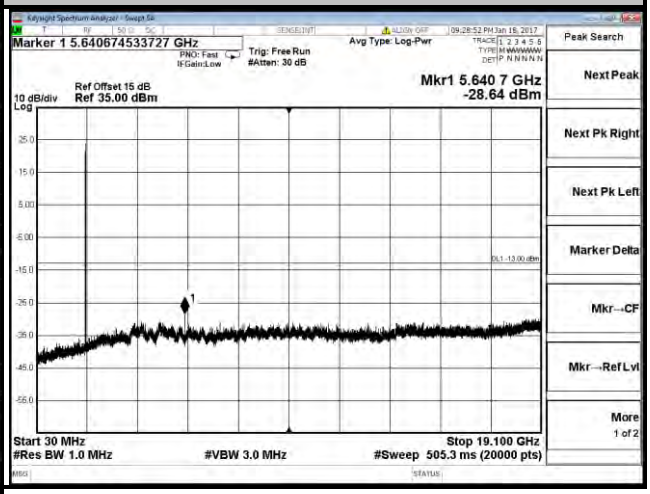
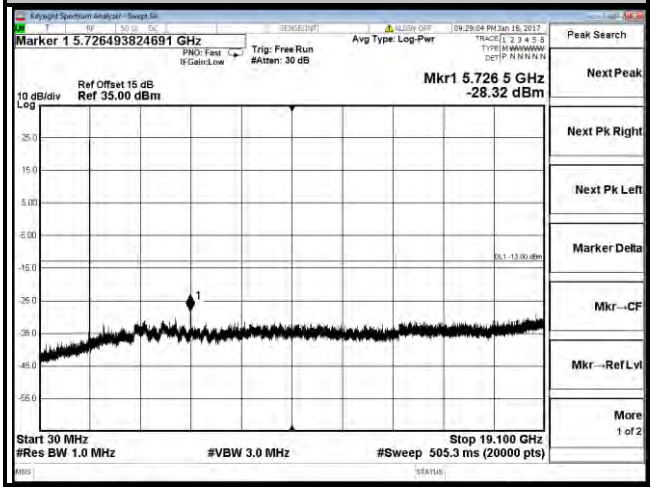


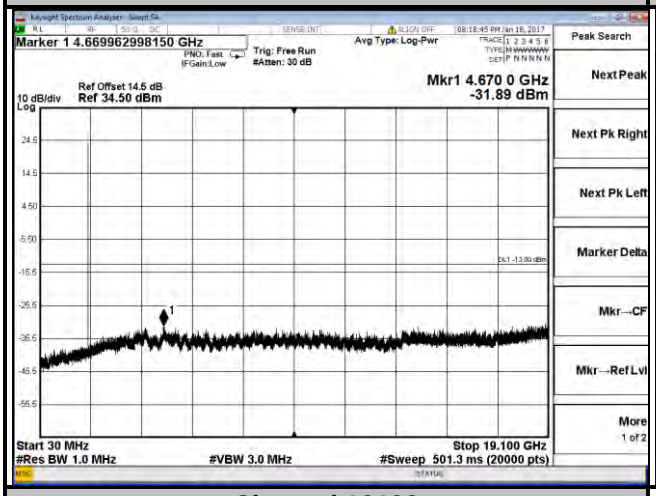
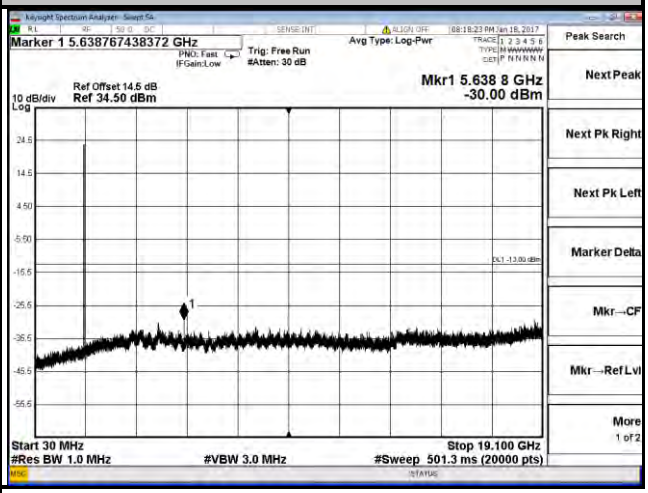
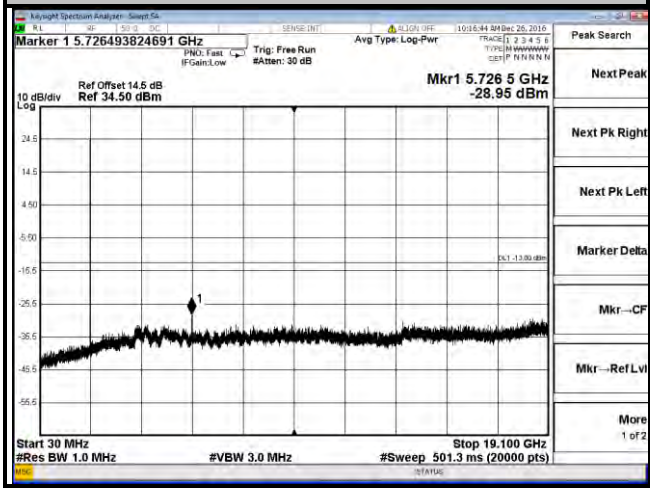
4.6.3 Test Procedure

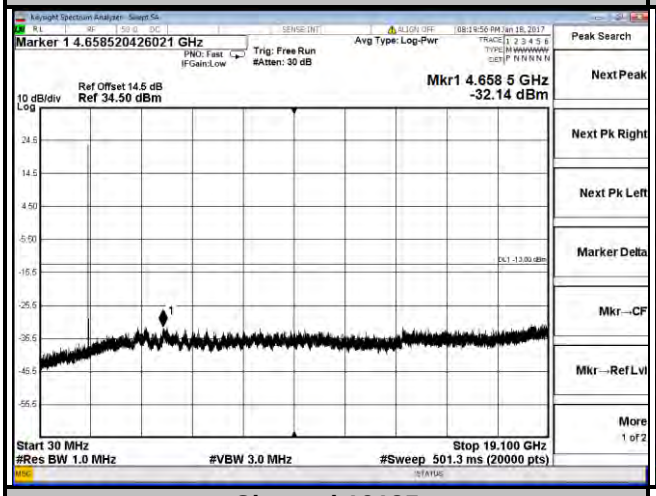
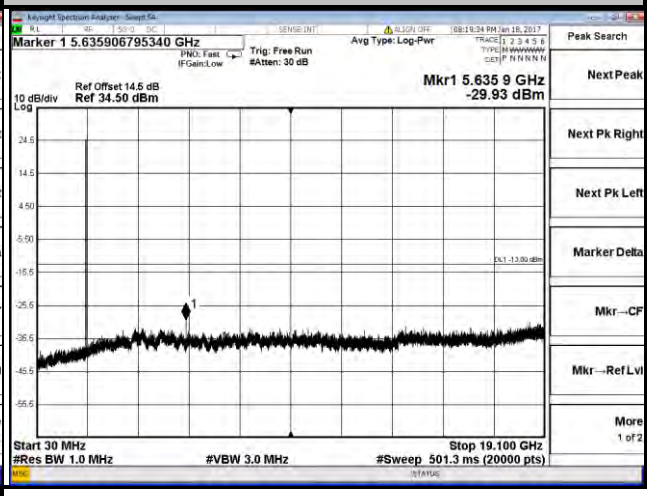
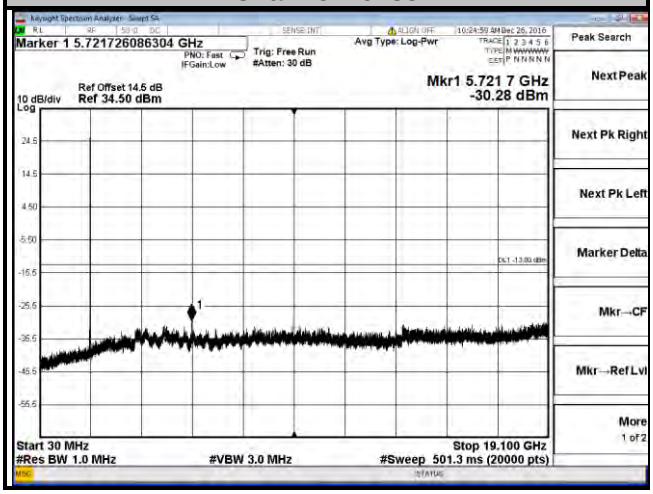
a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.

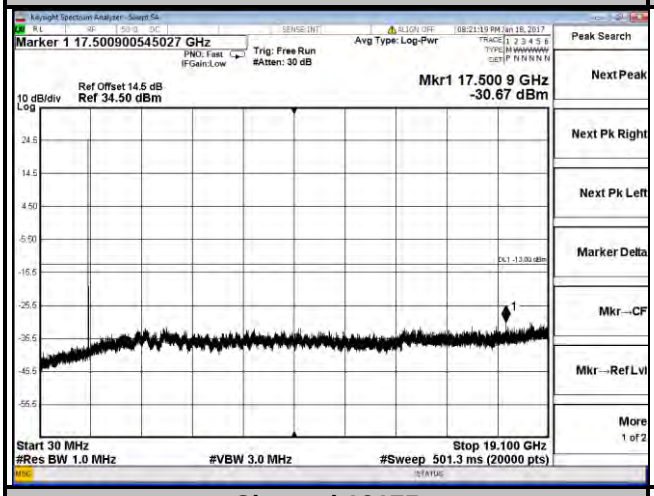
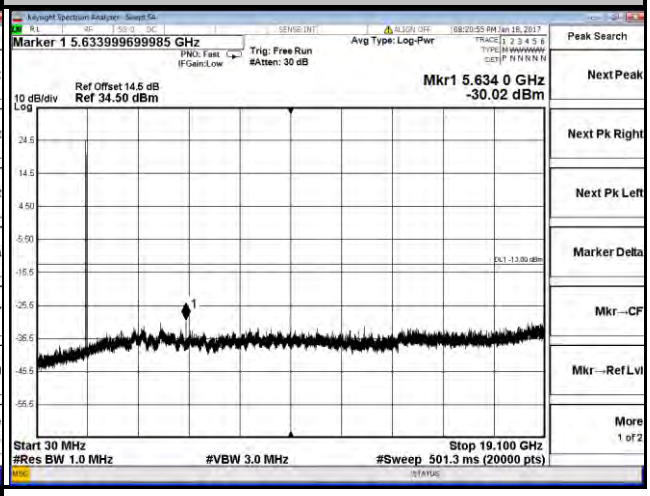
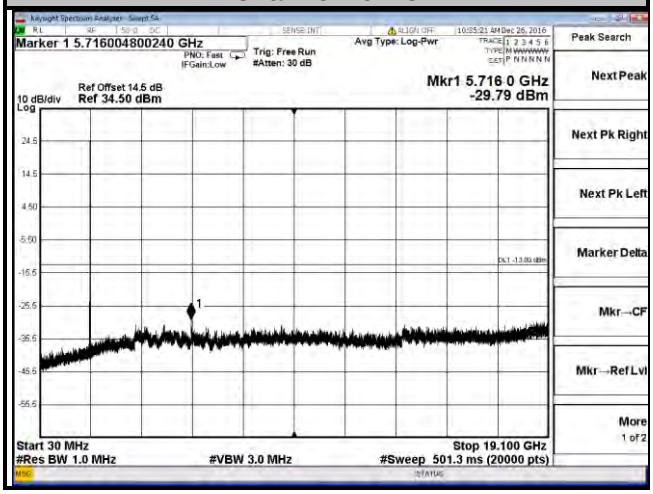
b. Measuring frequency range is from 9 kHz to 9 GHz. 20 dB attenuation pad is connected with spectrum. RBW=1 MHz and VBW=3 MHz is used for conducted emission measurement.

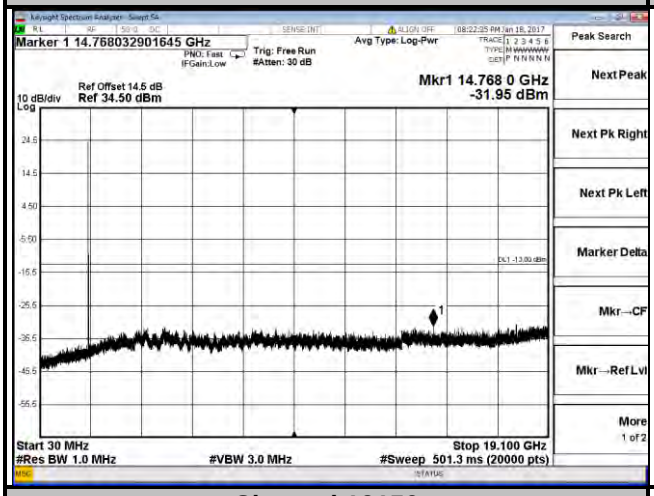
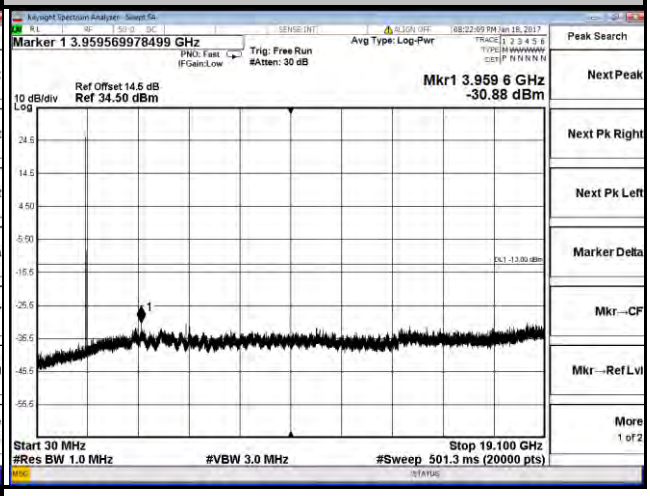
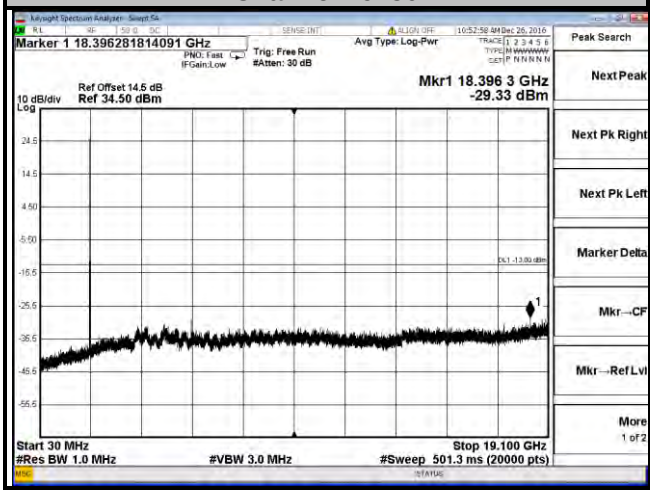
4.6.4 Test Results

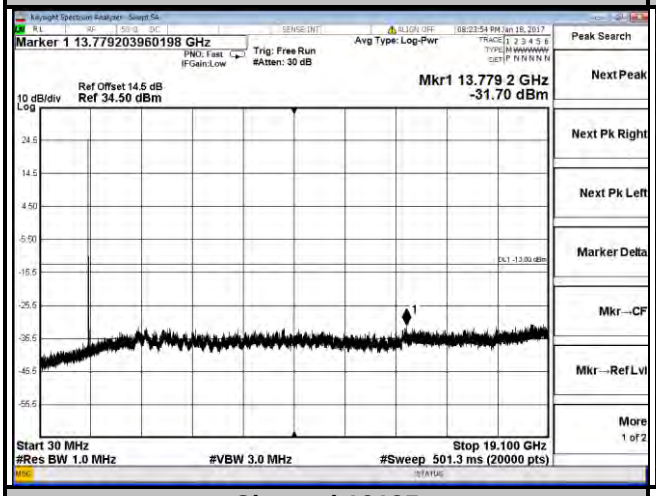
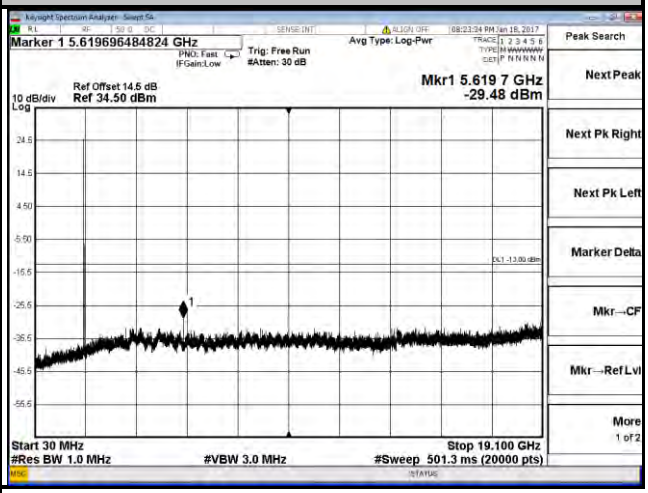
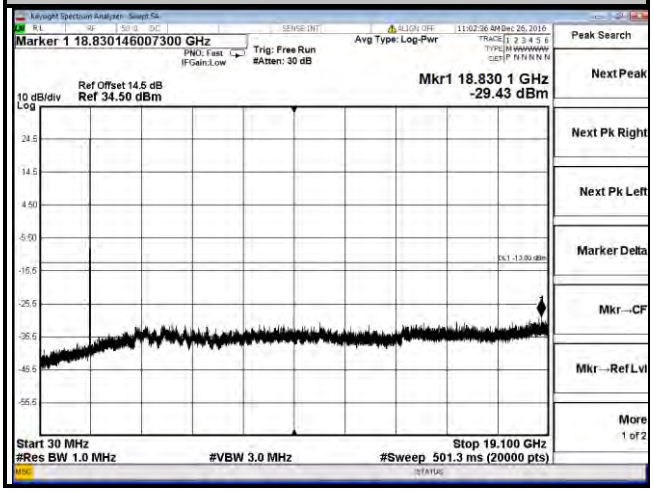
CDMA	
Channel 25	Channel 600
	
Channel 1175	
	

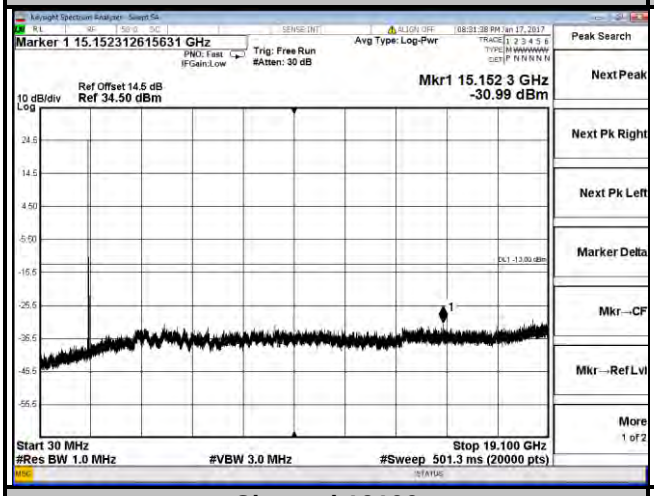
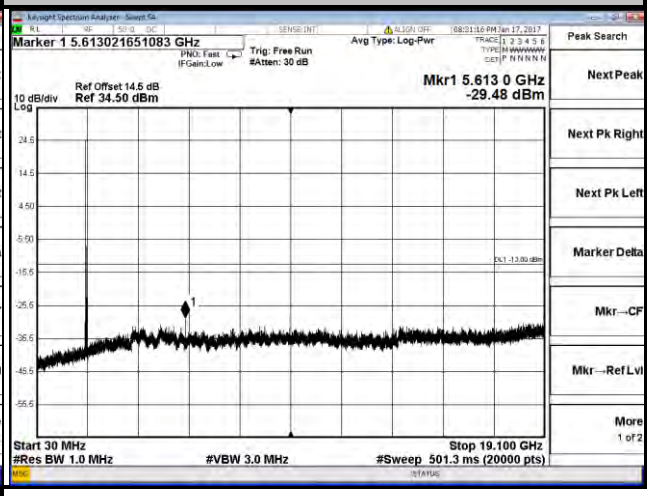
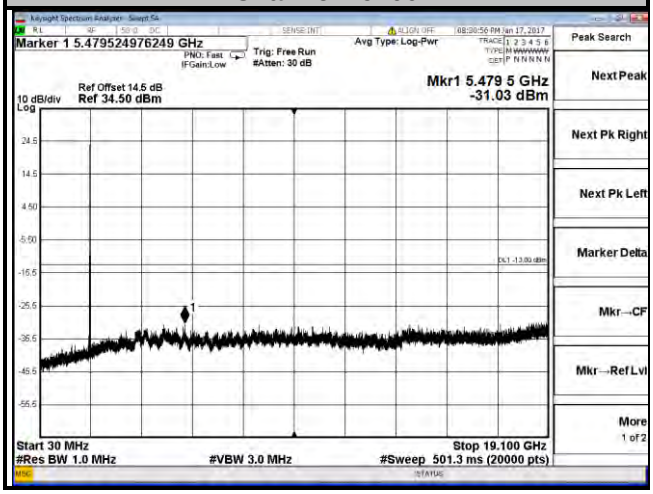
LTE Band 2	
Channel Bandwidth: 1.4 MHz	
Channel 18607	Channel 18900
	
Channel 19193	
	

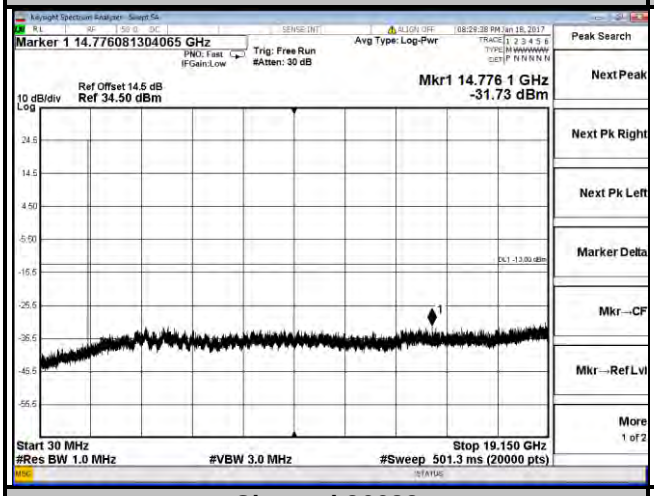
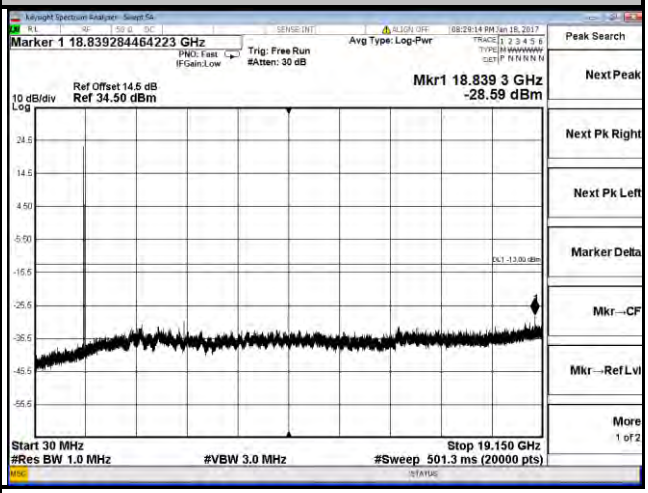
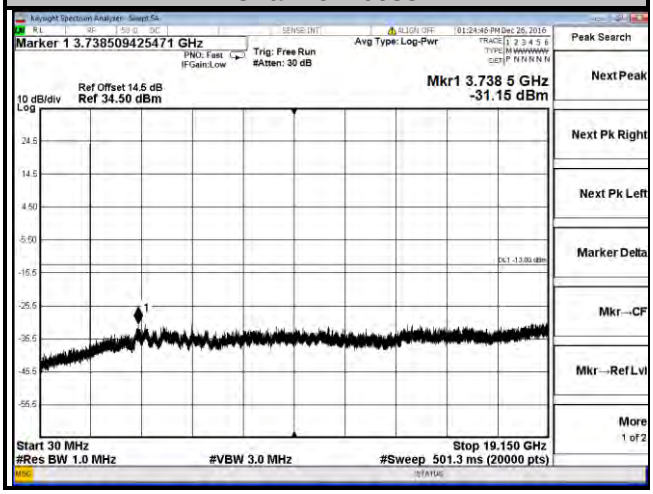
LTE Band 2	
Channel Bandwidth: 3 MHz	
Channel 18615	Channel 18900
	
Channel 19185	
	

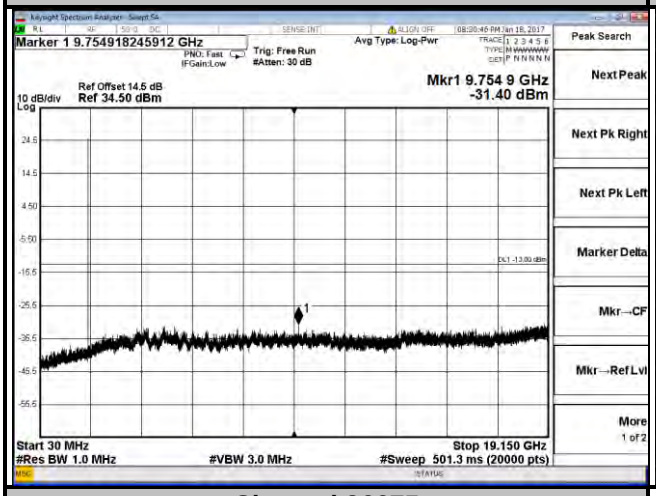
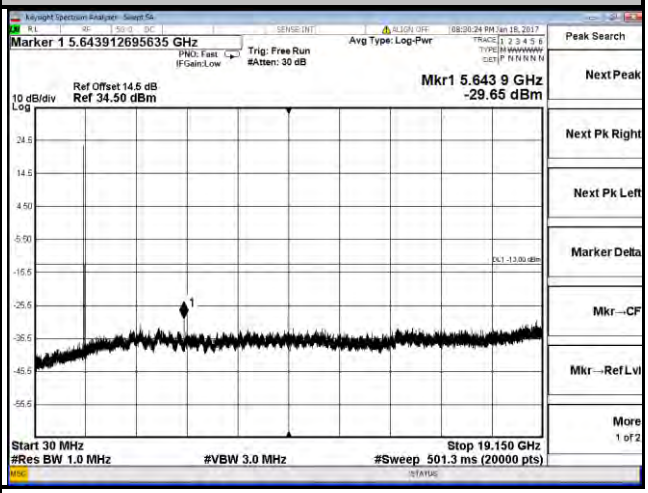
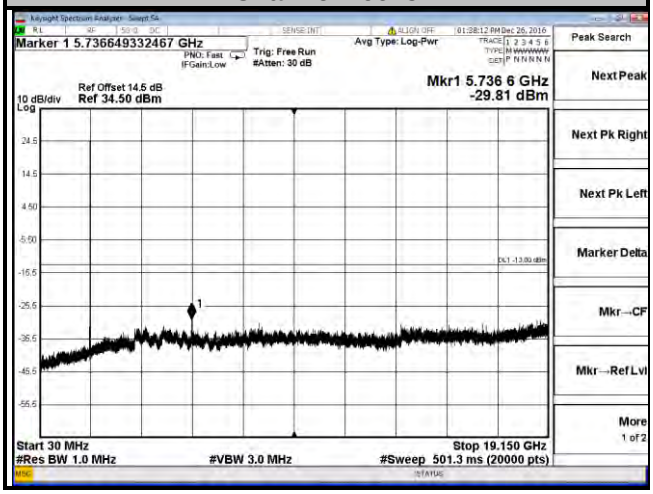
LTE Band 2	
Channel Bandwidth: 5 MHz	
Channel 18625	Channel 18900
	
Channel 19175	
	

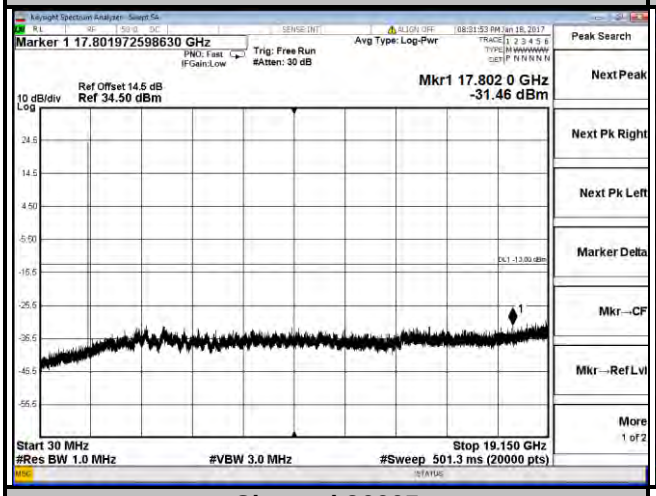
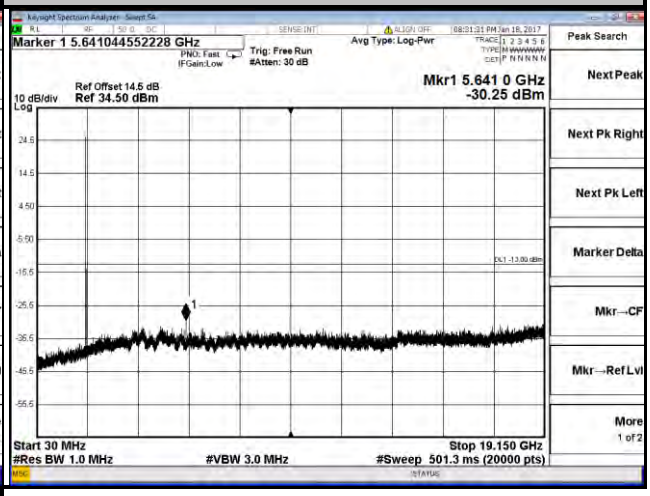
LTE Band 2	
Channel Bandwidth: 10 MHz	
Channel 18650	Channel 18900
	
Channel 19150	
	

LTE Band 2	
Channel Bandwidth: 15 MHz	
Channel 18675	Channel 18900
	
Channel 19125	
	

LTE Band 2	
Channel Bandwidth: 20 MHz	
Channel 18700	Channel 18900
	
Channel 19100	
	

LTE Band 25	
Channel Bandwidth: 1.4 MHz	
Channel 26047	Channel 26365
	
Channel 26683	
	

LTE Band 25	
Channel Bandwidth: 3 MHz	
Channel 26055	Channel 26365
	
Channel 26675	
	

LTE Band 25	
Channel Bandwidth: 5 MHz	
Channel 26065	Channel 26365
	
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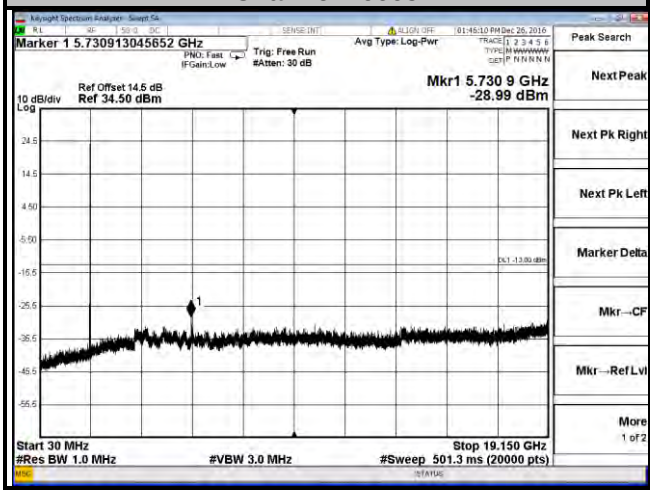
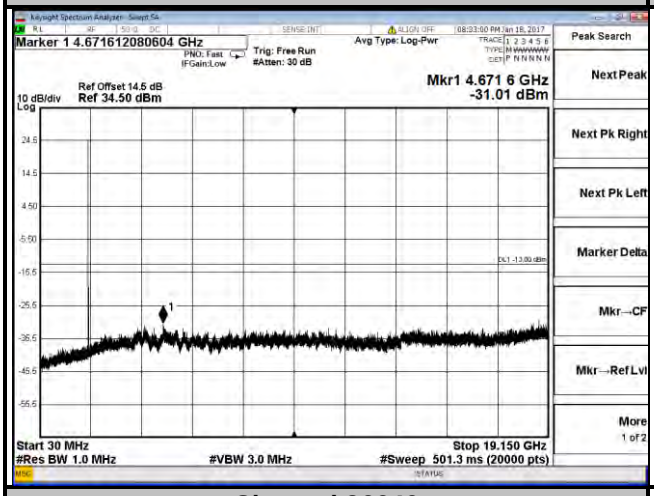
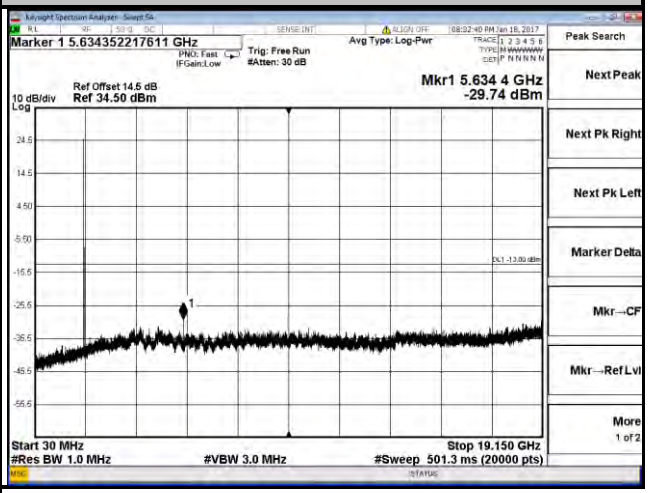
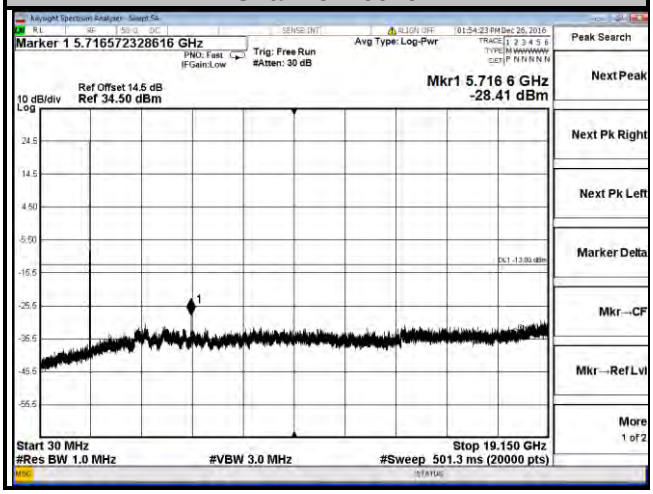
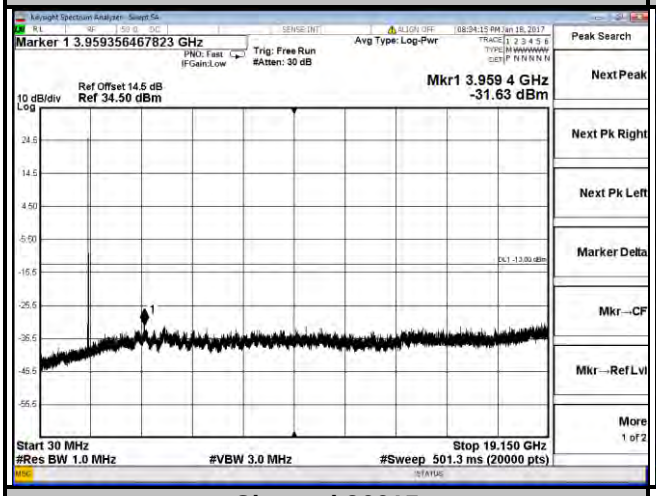
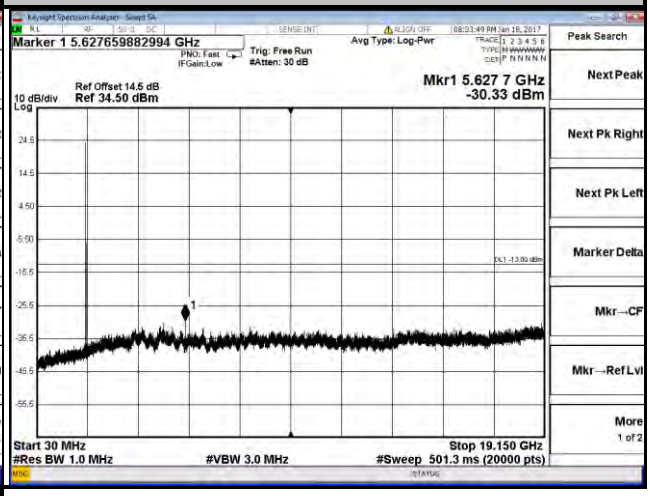
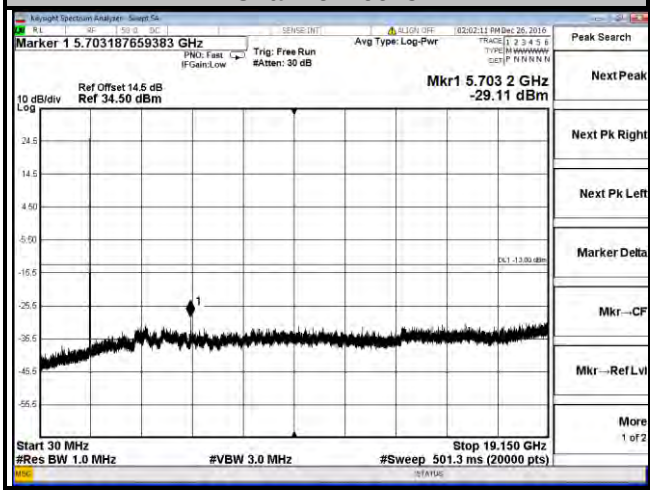
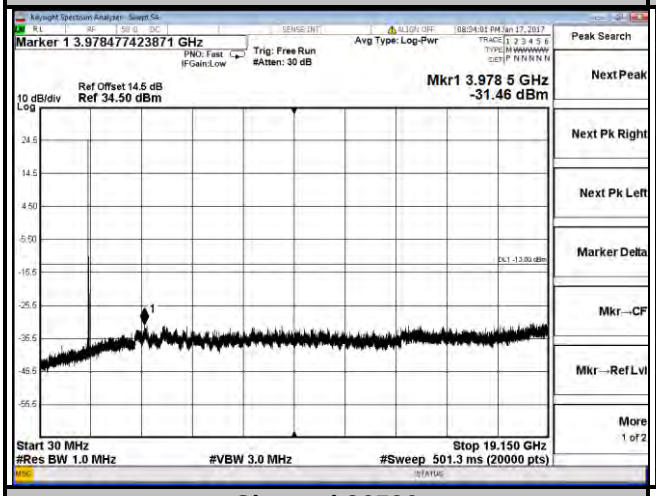
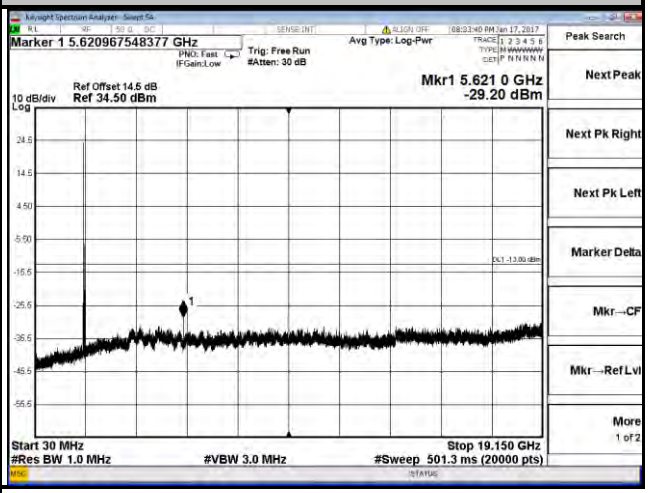
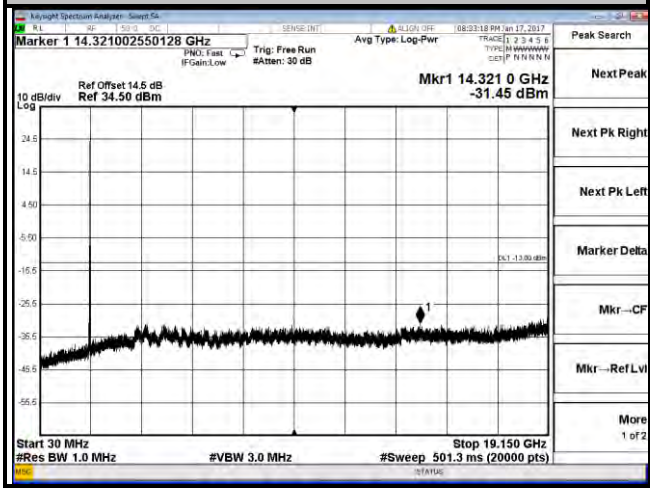
	

LTE Band 25	
Channel Bandwidth: 10 MHz	
Channel 26090	Channel 26365
	
Channel 26640	
	

LTE Band 25	
Channel Bandwidth: 15 MHz	
Channel 26115	Channel 26365
	
Channel 26615	
	

LTE Band 25	
Channel Bandwidth: 20 MHz	
Channel 26140	Channel 26365
	
Channel 26590	
	

4.7 Radiated Emission Measurement

4.7.1 Limits of Radiated Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit is equal to –13 dBm.

4.7.2 Test Procedure

a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8 m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1 m to 4 m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.

b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value” of step a. Record the power level of S.G.

c. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn.

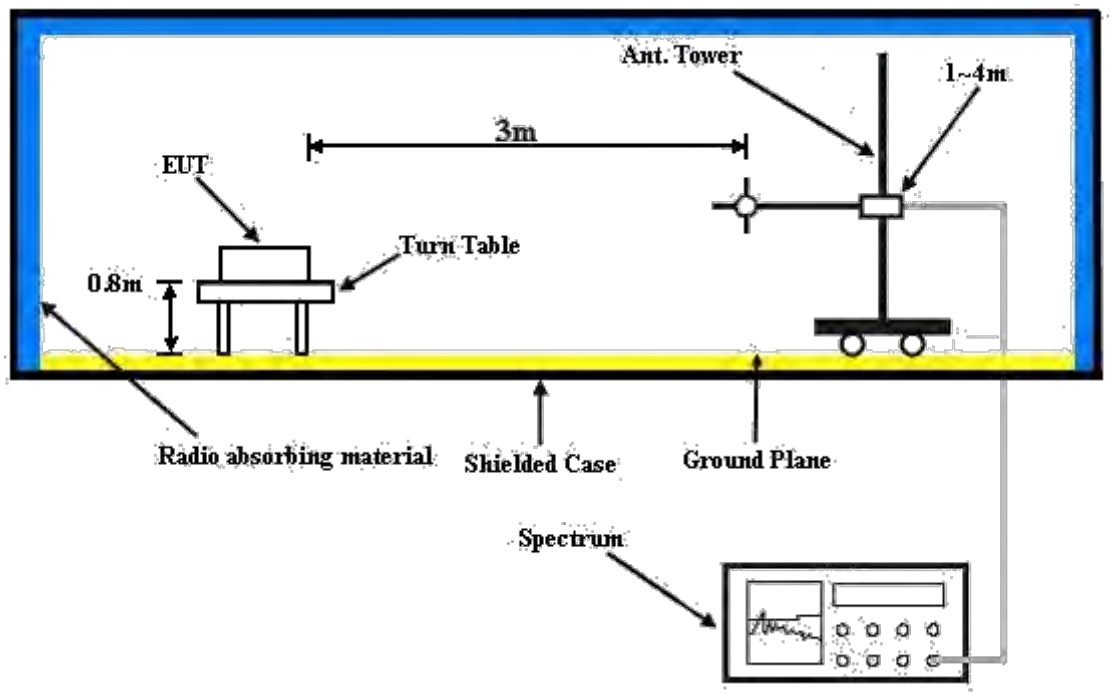
d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.P.R power - 2.15 dBi.

NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz/3 MHz.

4.7.3 Deviation from Test Standard

No deviation.

4.7.4 Test Setup

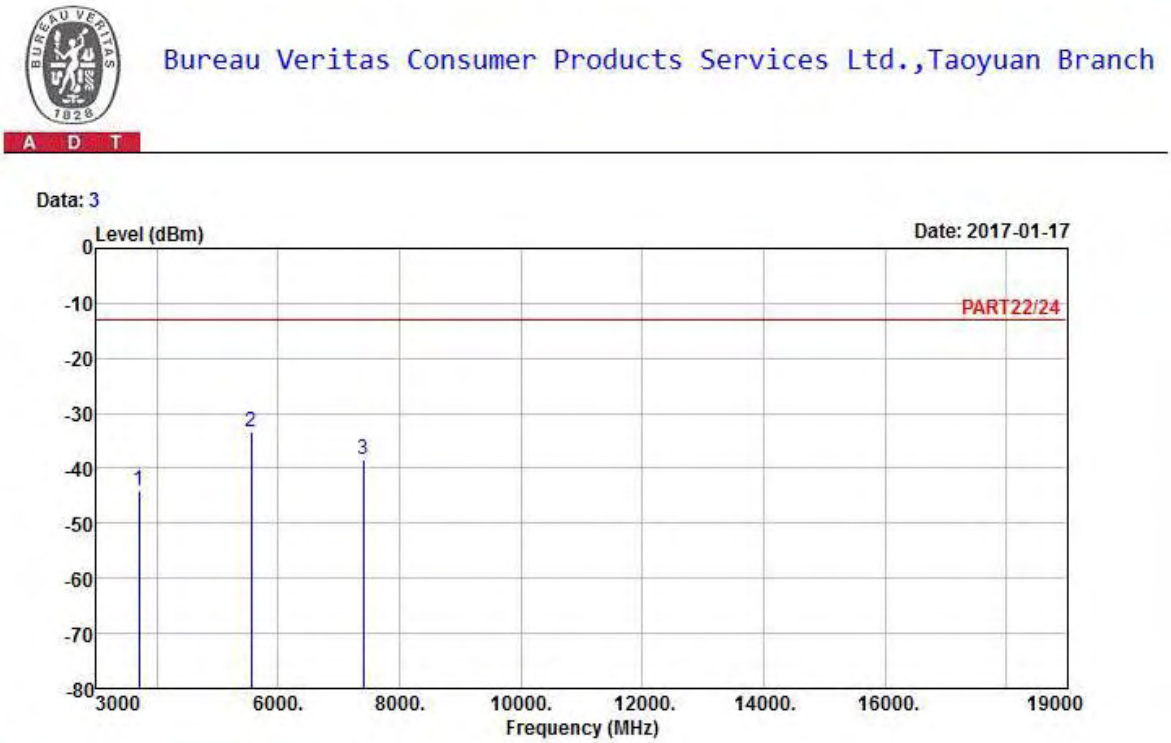


For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.7.5 Test Results

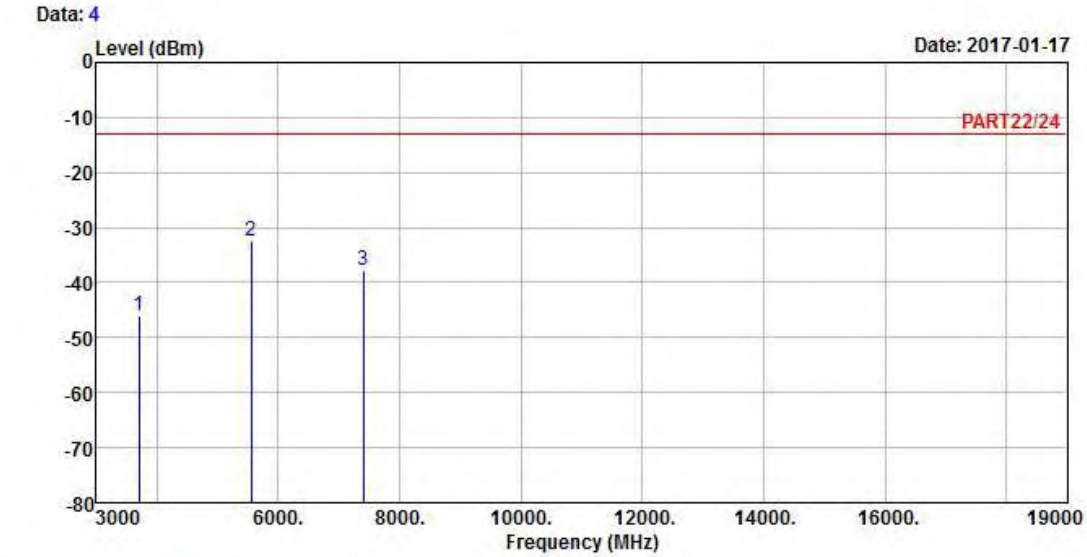
CDMA:

Low Channel



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : CDMA BC1_L-CH
Tested by: Gavin Wu

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3702.50	-44.06	-35.89	-13.00	-31.06	-8.17	Peak
2 pp	5553.75	-33.44	-31.99	-13.00	-20.44	-1.45	Peak
3	7405.00	-38.26	-43.76	-13.00	-25.26	5.50	Peak



Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : CDMA BC1_L-CH
Tested by: Gavin Wu

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3702.50	-45.97	-37.80	-13.00	-32.97	-8.17	Peak
2 pp	5553.75	-32.36	-30.91	-13.00	-19.36	-1.45	Peak
3	7405.00	-37.71	-43.21	-13.00	-24.71	5.50	Peak

Middle Channel

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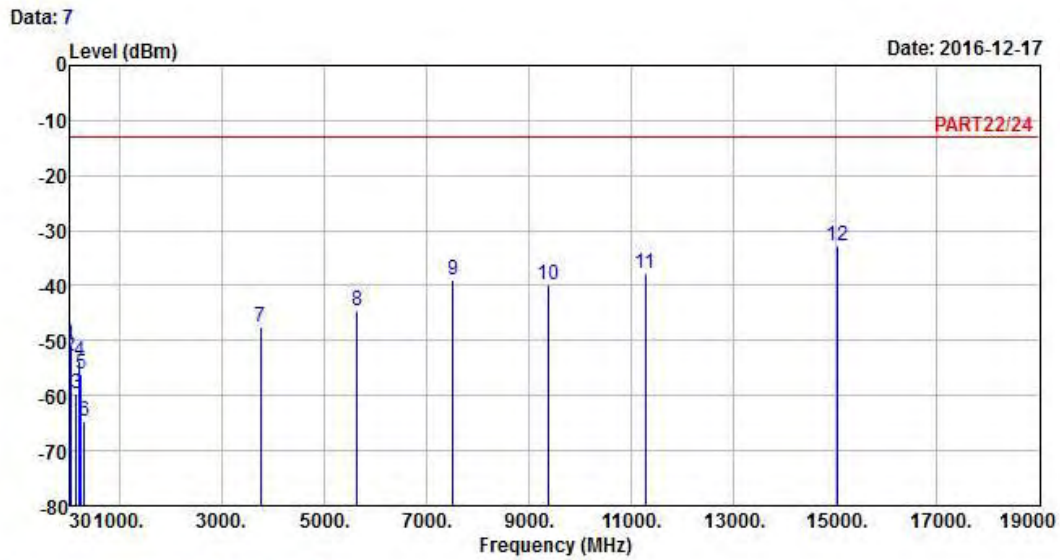
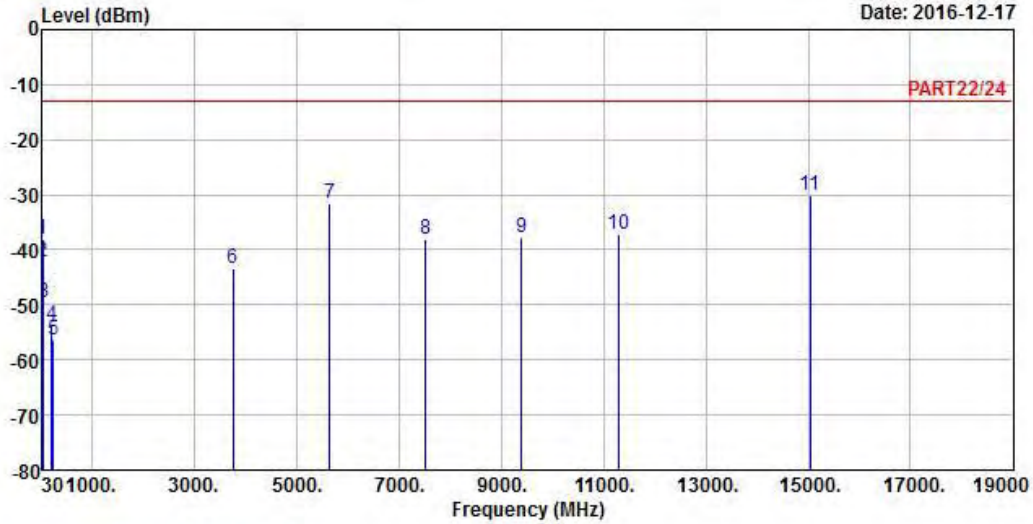


Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : CDMA BC1_M-CH
Tested by: Gavin Wu

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
		MHz	dBm	dBm	dBm	dB	dB	
1		30.00	-50.90	-51.28	-13.00	-37.90	0.38	Peak
2		41.64	-52.93	-52.52	-13.00	-39.93	-0.41	Peak
3		142.52	-59.77	-51.41	-13.00	-46.77	-8.36	Peak
4		208.48	-53.85	-46.18	-13.00	-40.85	-7.67	Peak
5		237.58	-56.05	-49.55	-13.00	-43.05	-6.50	Peak
6		300.63	-64.50	-57.50	-13.00	-51.50	-7.00	Peak
7		3760.00	-47.39	-39.33	-13.00	-34.39	-8.06	Peak
8		5640.00	-44.71	-42.77	-13.00	-31.71	-1.94	Peak
9		7520.00	-38.94	-44.53	-13.00	-25.94	5.59	Peak
10		9400.00	-39.90	-47.95	-13.00	-26.90	8.05	Peak
11		11280.00	-37.84	-46.22	-13.00	-24.84	8.38	Peak
12	pp	15040.00	-32.90	-46.97	-13.00	-19.90	14.07	Peak

Data: 8



Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : CDMA BC1_M-CH
Tested by: Gavin Wu

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	30.00	-37.96	-38.34	-13.00	-24.96	0.38	Peak
2	39.70	-42.07	-42.71	-13.00	-29.07	0.64	Peak
3	53.28	-49.69	-43.88	-13.00	-36.69	-5.81	Peak
4	207.51	-53.79	-46.08	-13.00	-40.79	-7.71	Peak
5	235.64	-56.46	-49.88	-13.00	-43.46	-6.58	Peak
6	3760.00	-43.33	-35.27	-13.00	-30.33	-8.06	Peak
7	5640.00	-31.60	-29.66	-13.00	-18.60	-1.94	Peak
8	7520.00	-37.96	-43.55	-13.00	-24.96	5.59	Peak
9	9400.00	-37.87	-45.92	-13.00	-24.87	8.05	Peak
10	11280.00	-37.07	-45.45	-13.00	-24.07	8.38	Peak
11 pp	15040.00	-30.25	-44.32	-13.00	-17.25	14.07	Peak

High Channel

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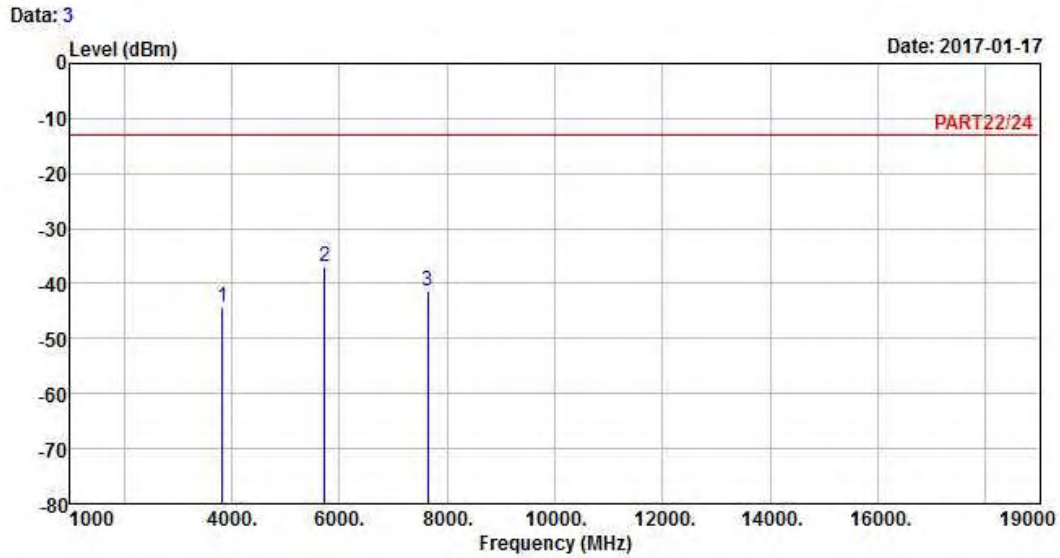
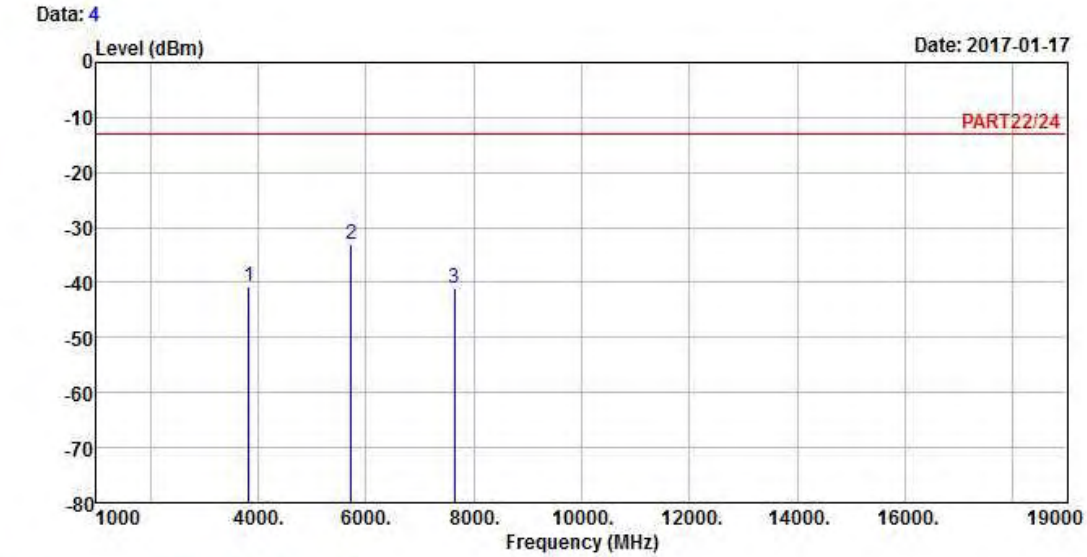


Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : CDMA BC1_H-CH
Tested by: Gavin Wu

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3817.50	-44.25	-36.57	-13.00	-31.25	-7.68	Peak
2 pp	5726.25	-36.98	-35.40	-13.00	-23.98	-1.58	Peak
3	7635.00	-41.33	-46.39	-13.00	-28.33	5.06	Peak

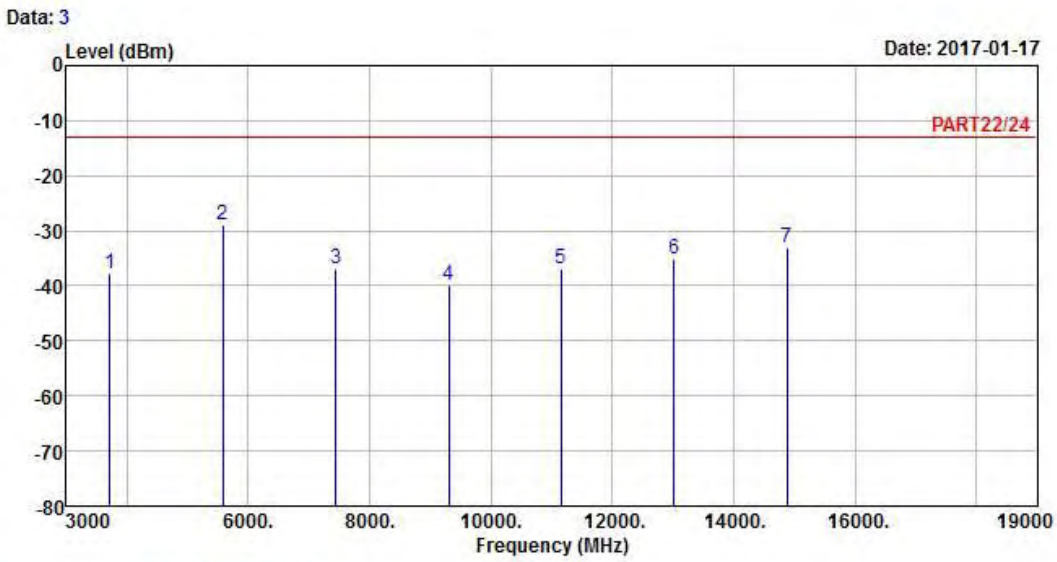


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : CDMA BC1_H-CH
Tested by: Gavin Wu

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3817.50	-40.68	-33.00	-13.00	-27.68	-7.68	Peak
2 pp	5726.25	-33.14	-31.56	-13.00	-20.14	-1.58	Peak
3	7635.00	-41.02	-46.08	-13.00	-28.02	5.06	Peak

LTE Band 2
Channel Bandwidth: 20 MHz / QPSK
Low Channel

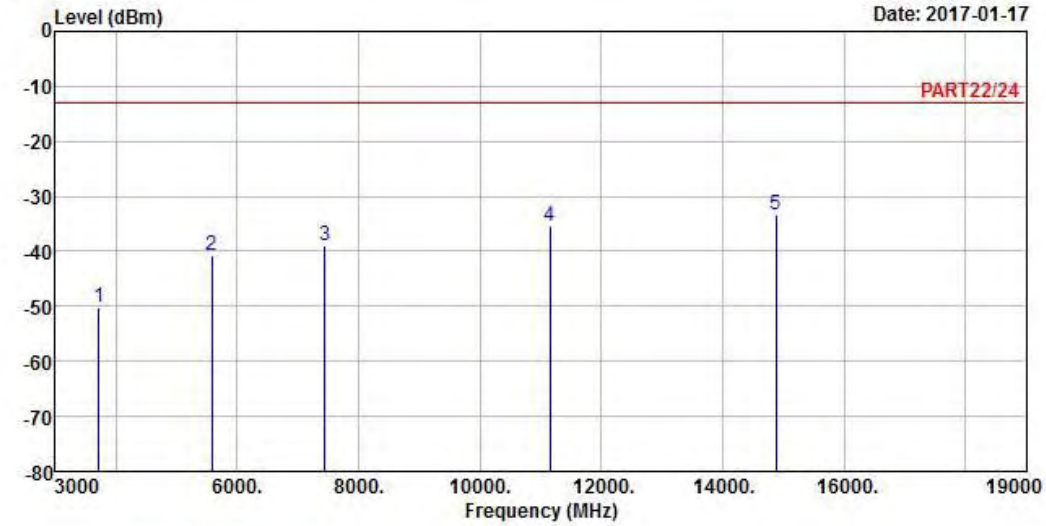
Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band II_QPSK_20M_L-CH
Tested by: Getaz Yang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3720.00	-37.65	-29.52	-13.00	-24.65	-8.13	Peak
2 pp	5580.00	-28.82	-27.27	-13.00	-15.82	-1.55	Peak
3	7440.00	-36.83	-42.39	-13.00	-23.83	5.56	Peak
4	9300.00	-39.80	-47.59	-13.00	-26.80	7.79	Peak
5	11160.00	-36.93	-45.05	-13.00	-23.93	8.12	Peak
6	13020.00	-35.11	-46.61	-13.00	-22.11	11.50	Peak
7	14880.00	-33.19	-45.29	-13.00	-20.19	12.10	Peak

Data: 4



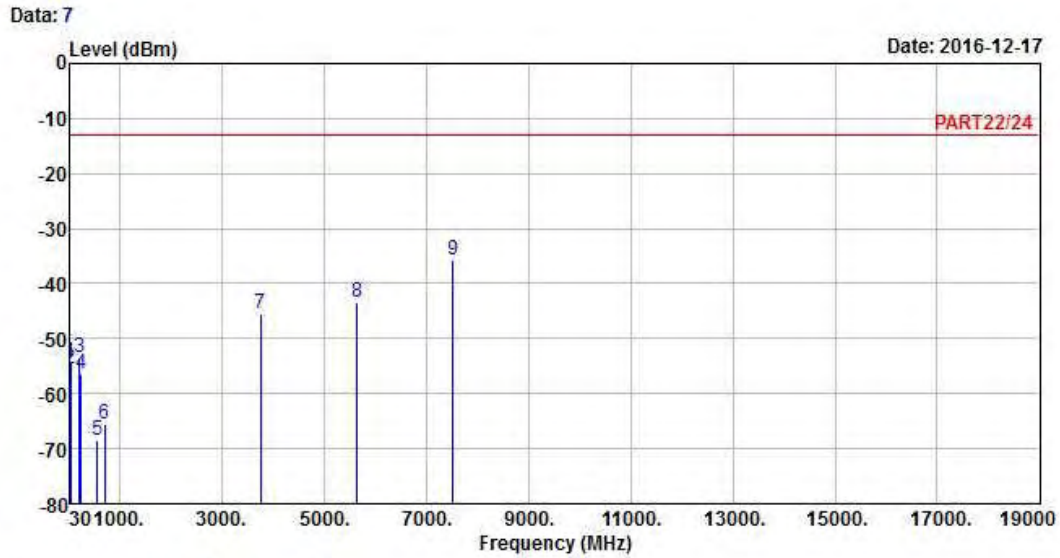
Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band II_QPSK_20M_L-CH
Tested by: Getaz Yang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3720.00	-50.32	-42.19	-13.00	-37.32	-8.13	Peak
2	5580.00	-40.74	-39.19	-13.00	-27.74	-1.55	Peak
3	7440.00	-39.02	-44.58	-13.00	-26.02	5.56	Peak
4	11160.00	-35.33	-43.45	-13.00	-22.33	8.12	Peak
5 pp	14880.00	-33.30	-45.40	-13.00	-20.30	12.10	Peak

Middle Channel

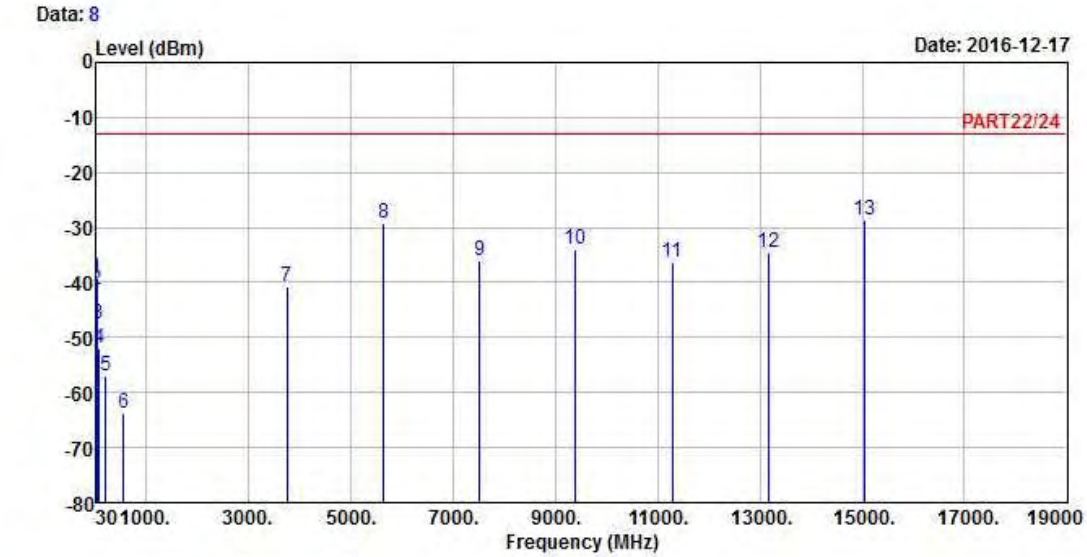
Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch

A D T



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : LTE Band II_QPSK_20M_M-CH
Tested by: Getaz Yang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	32.91	-54.34	-53.25	-13.00	-41.34	-1.09	Peak
2	42.61	-55.41	-54.47	-13.00	-42.41	-0.94	Peak
3	209.45	-53.44	-45.81	-13.00	-40.44	-7.63	Peak
4	236.61	-56.46	-49.92	-13.00	-43.46	-6.54	Peak
5	551.86	-68.54	-65.77	-13.00	-55.54	-2.77	Peak
6	701.24	-65.56	-65.48	-13.00	-52.56	-0.08	Peak
7	3760.00	-45.50	-37.44	-13.00	-32.50	-8.06	Peak
8	5640.00	-43.44	-41.50	-13.00	-30.44	-1.94	Peak
9 pp	7520.00	-35.60	-41.19	-13.00	-22.60	5.59	Peak

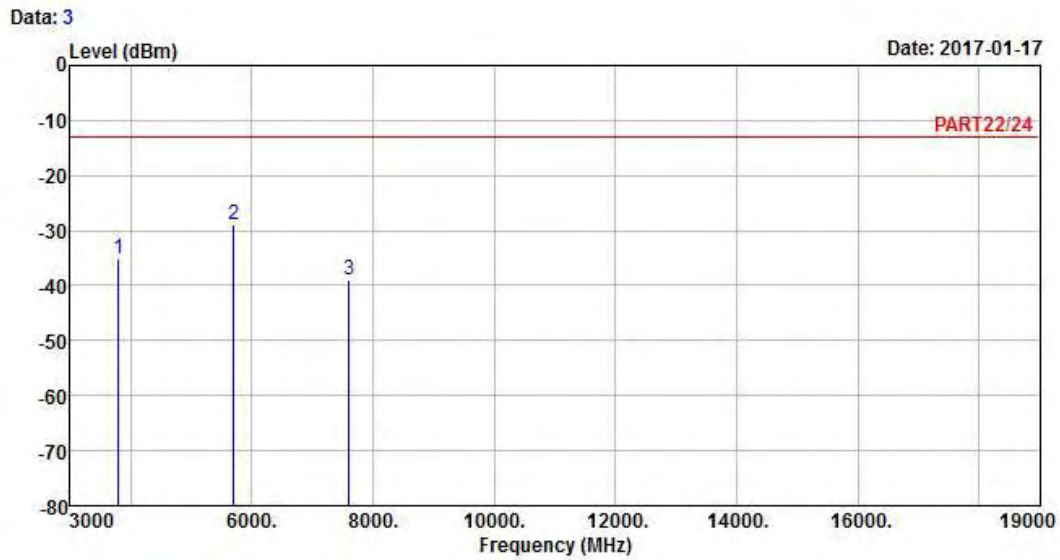


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band II_QPSK_20M_M-CH
Tested by: Getaz Yang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	30.00	-39.36	-39.74	-13.00	-26.36	0.38	Peak
2	39.70	-41.21	-41.85	-13.00	-28.21	0.64	Peak
3	53.28	-47.45	-41.64	-13.00	-34.45	-5.81	Peak
4	77.53	-51.94	-41.74	-13.00	-38.94	-10.20	Peak
5	212.36	-56.83	-49.32	-13.00	-43.83	-7.51	Peak
6	565.44	-63.86	-61.66	-13.00	-50.86	-2.20	Peak
7	3760.00	-40.86	-32.80	-13.00	-27.86	-8.06	Peak
8	5640.00	-29.26	-27.32	-13.00	-16.26	-1.94	Peak
9	7520.00	-36.01	-41.60	-13.00	-23.01	5.59	Peak
10	9400.00	-33.92	-41.97	-13.00	-20.92	8.05	Peak
11	11280.00	-36.18	-44.56	-13.00	-23.18	8.38	Peak
12	13160.00	-34.65	-45.56	-13.00	-21.65	10.91	Peak
13 pp	15040.00	-28.61	-42.68	-13.00	-15.61	14.07	Peak

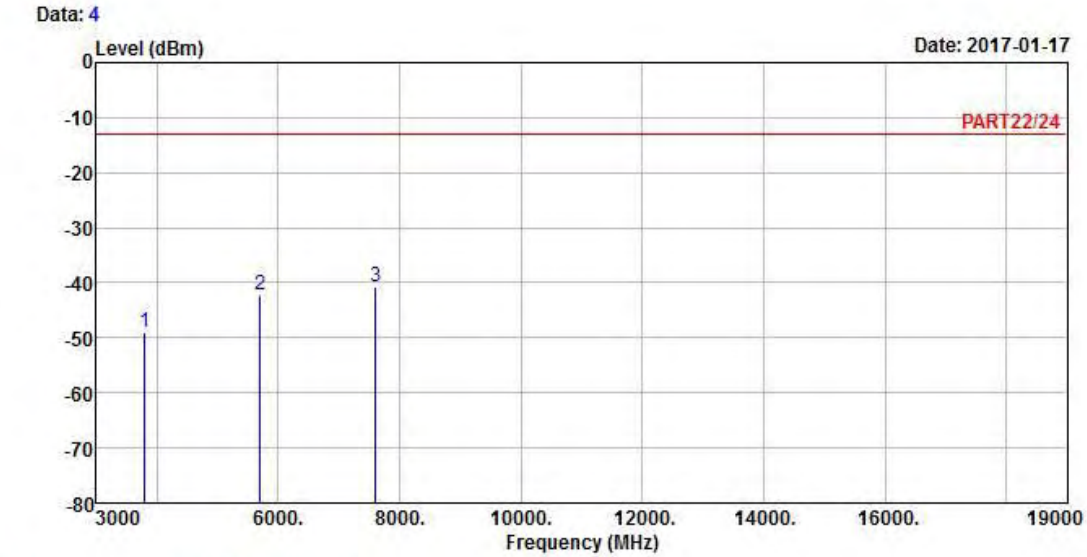
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : LTE Band II_QPSK_20M_H-CH
Tested by: Getaz Yang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3800.00	-35.07	-27.29	-13.00	-22.07	-7.78	Peak
2 pp	5700.00	-29.02	-27.07	-13.00	-16.02	-1.95	Peak
3	7600.00	-38.96	-44.00	-13.00	-25.96	5.04	Peak

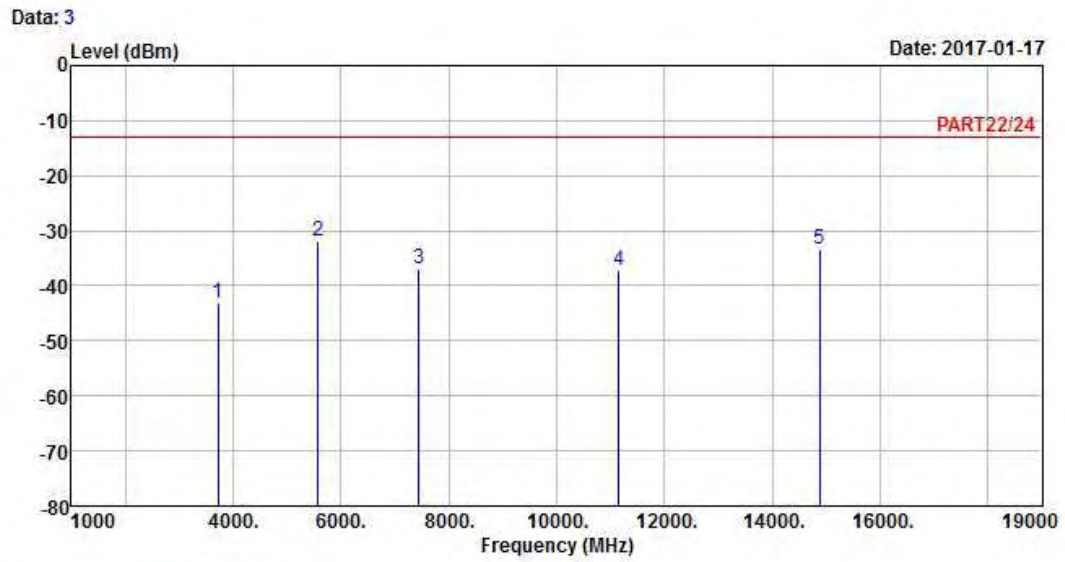


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band II_QPSK_20M_H-CH
Tested by: Getaz Yang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3800.00	-48.98	-41.20	-13.00	-35.98	-7.78	Peak
2	5700.00	-42.14	-40.19	-13.00	-29.14	-1.95	Peak
3 pp	7600.00	-40.66	-45.70	-13.00	-27.66	5.04	Peak

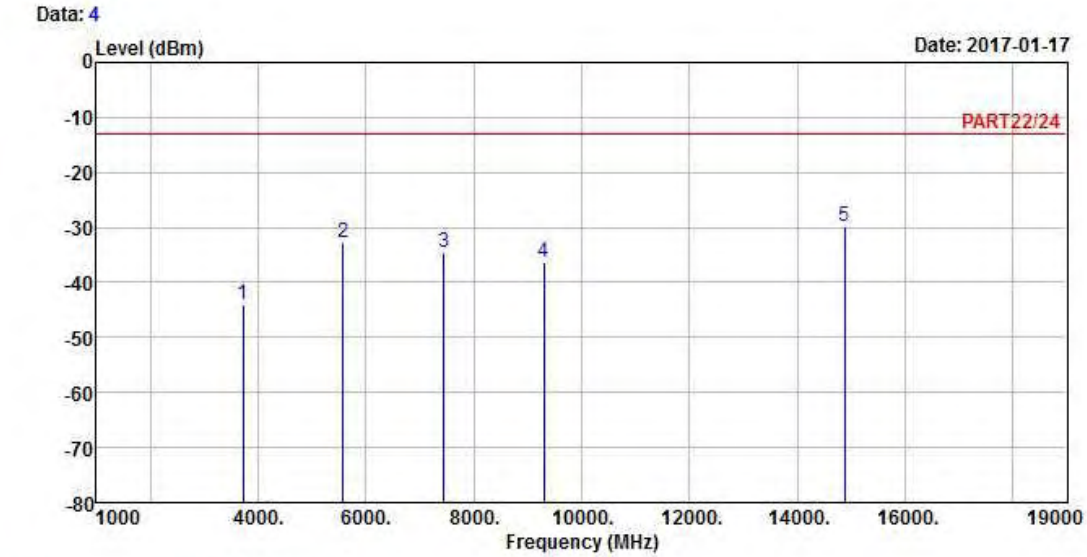
LTE Band 25
Channel Bandwidth: 20 MHz / QPSK
Low Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : LTE Band 25_QPSK_20M_L-CH
Tested by: Getaz Yang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3720.00	-43.18	-35.05	-13.00	-30.18	-8.13	Peak
2 pp	5580.00	-31.91	-30.36	-13.00	-18.91	-1.55	Peak
3	7440.00	-36.87	-42.43	-13.00	-23.87	5.56	Peak
4	11160.00	-37.11	-45.23	-13.00	-24.11	8.12	Peak
5	14880.00	-33.46	-45.56	-13.00	-20.46	12.10	Peak



Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band 25_QPSK_20M_L-CH
Tested by: Getaz Yang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3720.00	-44.06	-35.93	-13.00	-31.06	-8.13	Peak
2	5580.00	-32.77	-31.22	-13.00	-19.77	-1.55	Peak
3	7440.00	-34.63	-40.19	-13.00	-21.63	5.56	Peak
4	9300.00	-36.21	-44.00	-13.00	-23.21	7.79	Peak
5 pp	14880.00	-29.94	-42.04	-13.00	-16.94	12.10	Peak

Middle Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch

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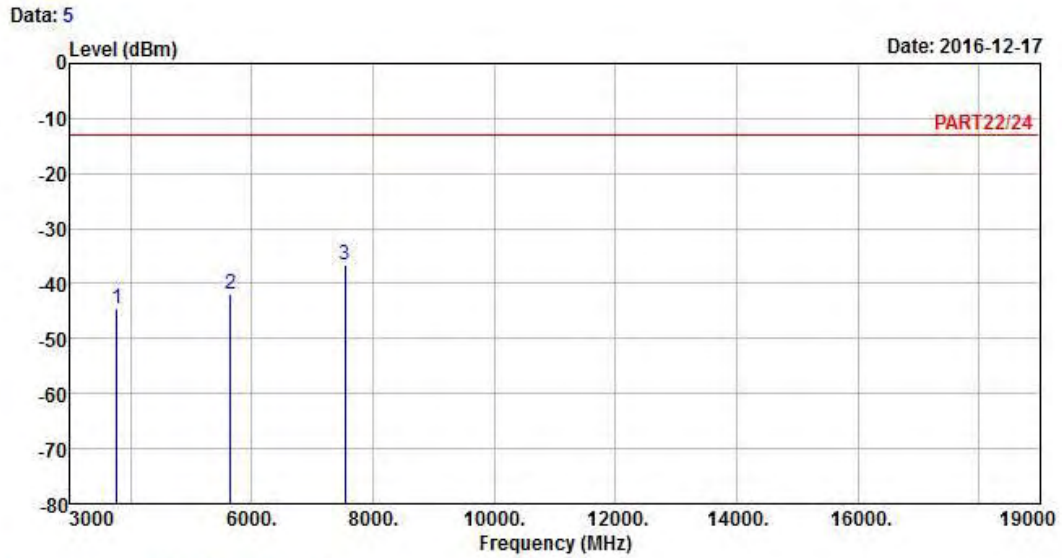
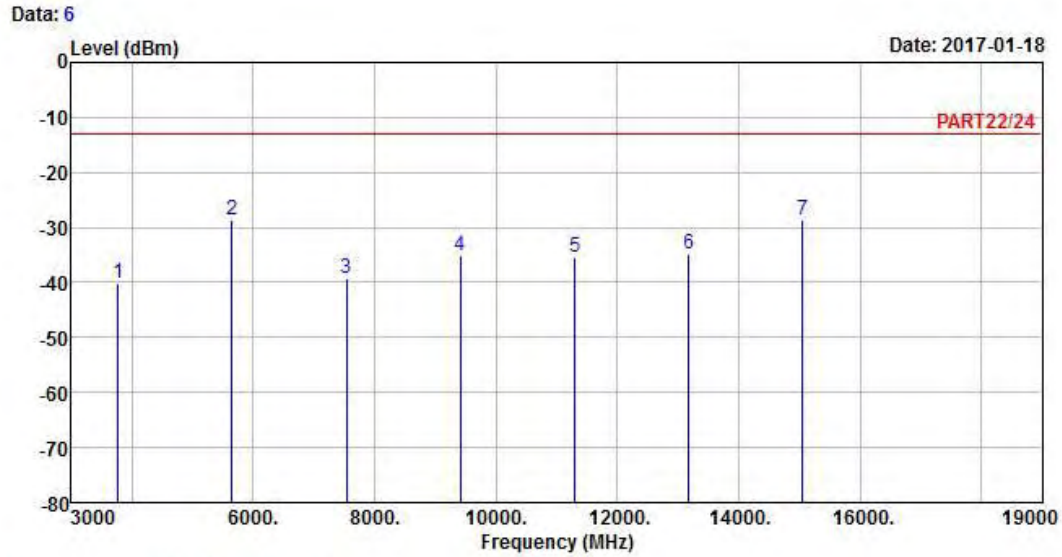


Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : LTE Band 25_QPSK_20M_M-CH
Tested by: Getaz Yang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3765.00	-44.44	-36.47	-13.00	-31.44	-7.97	Peak
2	5647.50	-41.98	-40.04	-13.00	-28.98	-1.94	Peak
3 pp	7530.00	-36.51	-41.52	-13.00	-23.51	5.01	Peak



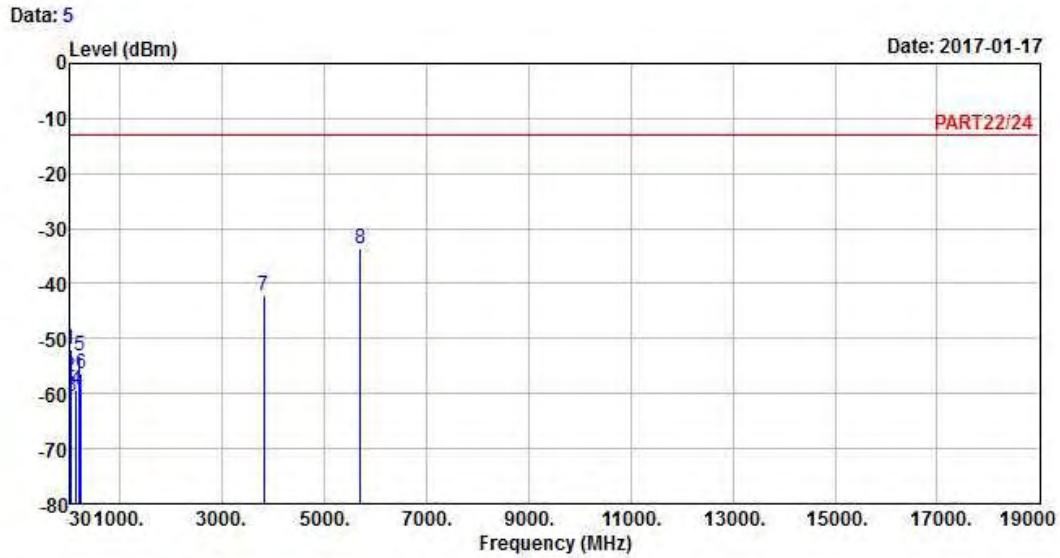
Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band 25_QPSK_20M_M-CH
Tested by: Getaz Yang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3765.00	-40.12	-32.15	-13.00	-27.12	-7.97	Peak
2 pp	5647.50	-28.71	-26.77	-13.00	-15.71	-1.94	Peak
3	7530.00	-39.31	-44.32	-13.00	-26.31	5.01	Peak
4	9412.50	-35.03	-43.08	-13.00	-22.03	8.05	Peak
5	11295.00	-35.32	-43.68	-13.00	-22.32	8.36	Peak
6	13177.50	-34.77	-45.74	-13.00	-21.77	10.97	Peak
7	15060.00	-28.78	-42.76	-13.00	-15.78	13.98	Peak

High Channel

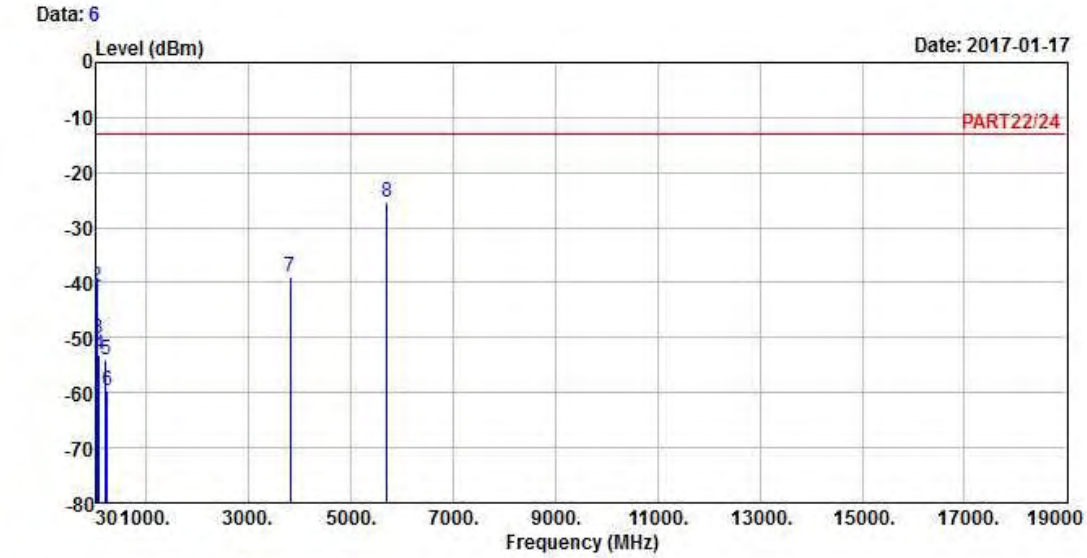
Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch

A D T



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : LTE Band 25_QPSK_20M_H-CH
Tested by: Getaz Yang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	30.00	-51.95	-52.33	-13.00	-38.95	0.38	Peak
2	38.73	-56.91	-57.01	-13.00	-43.91	0.10	Peak
3	53.28	-60.46	-54.65	-13.00	-47.46	-5.81	Peak
4	145.43	-59.42	-51.35	-13.00	-46.42	-8.07	Peak
5	211.39	-53.08	-45.53	-13.00	-40.08	-7.55	Peak
6	234.67	-56.52	-49.90	-13.00	-43.52	-6.62	Peak
7	3810.00	-42.28	-34.50	-13.00	-29.28	-7.78	Peak
8 pp	5715.00	-33.62	-31.86	-13.00	-20.62	-1.76	Peak



Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remak : LTE Band 25_QPSK_20M_H-CH
Tested by: Getaz Yang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	32.91	-42.73	-41.64	-13.00	-29.73	-1.09	Peak
2	40.67	-40.81	-40.93	-13.00	-27.81	0.12	Peak
3	56.19	-50.07	-43.47	-13.00	-37.07	-6.60	Peak
4	77.53	-53.23	-43.03	-13.00	-40.23	-10.20	Peak
5	204.60	-53.95	-46.12	-13.00	-40.95	-7.83	Peak
6	244.37	-59.58	-53.35	-13.00	-46.58	-6.23	Peak
7	3810.00	-38.96	-31.18	-13.00	-25.96	-7.78	Peak
8 pp	5715.00	-25.32	-23.56	-13.00	-12.32	-1.76	Peak

5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

Appendix – Information on the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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Fax: 886-2-26051924

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Tel: 886-3-3183232
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Email: service.adt@tw.bureauveritas.com
Web Site: www.bureauveritas-adt.com

The address and road map of all our labs can be found in our web site also.

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