FCC Test Report

(PART 22)

Report No.:	RF171013C04B
FCC ID:	MSQTP370QL
Test Model:	TP370QL
Received Date:	Oct. 13, 2017
Test Date:	Oct. 28, 2017 ~ Jan. 24, 2018
Issued Date:	Mar. 06, 2018
Applicant:	ASUSTek COMPUTER INC.
Address:	4F, No. 150, LI-TE Rd., PEITOU, TAIPEI 112, TAIWAN
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 (1):	No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.
Test Location (2):	No.215, Sec. 3, Beixin Rd., Xindian Dist., New Taipei City 231, Taiwan, R.O.C
FCC Registration / Designation Number:	427177 / TW0011

Table of Contents

Release Control Record

Issue No.	Description	Date Issued
RF171013C04B	Original Release	Mar. 06, 2018

1 Certificate of Conformity

Product:	Notebook PC
Brand:	ASUS
Test Model:	TP370QL
Sample Status:	Production Unit
Applicant:	ASUSTek COMPUTER INC.
Test Date:	Oct. 28, 2017 ~ Jan. 24, 2018
Standards:	FCC Part 22, Subpart H

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 RF characteristics under the conditions specified in this report.

Prepared by : Evonne Liu , **Date:** Mar. 06, 2018

Evonne Liu / Specialist

Approved by : , **Date:** Mar. 06, 2018

Dylan Chiou / Project Engineer

2 Summary of Test Results

Applied Standard: FCC Part 22 & Part 2			
FCC Clause	**Test Item**	**Result**	**Remarks**
2.1046 22.913 (a)	Effective Radiated Power	Pass	Meet the requirement of limit.
---	Peak to Average Ratio	Pass	Meet the requirement of limit.
2.1055 22.355	Frequency Stability	Pass	Meet the requirement of limit.
2.1049	Occupied Bandwidth	Pass	Meet the requirement of limit.
22.917	Band Edge Measurements	Pass	Meet the requirement of limit.
2.1051 22.917	Conducted Spurious Emissions	Pass	Meet the requirement of limit.
2.1053 22.917	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -3.02 dB at 2524.50 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	2.0153 dB
	200 MHz ~ 1000 MHz	2.0224 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	1.0121 dB
	18 GHz ~ 40 GHz	1.1508 dB

2.2 Test Site and Instruments

Description & Manaufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver Agilent Technologies	N9038A	MY52260177	Jul. 05, 2017	Jul. 04, 2018
Spectrum Analyzer Keysight	N9020A	MY57130210	Oct. 30, 2017	Oct. 29, 2018
BILOG Antenna SCHWARZBECK	VULB9168	9168-472	Dec. 13, 2016	Dec. 12, 2017
			Dec. 06, 2017	Dec. 05, 2018
HORN Antenna ETS-Lindgren	3117	00143293	Jun. 26, 2017	Jun. 25, 2018
HORN Antenna SCHWARZBECK	BBHA 9170	9170-480	Dec. 14, 2016	Dec. 13, 2017
			Dec. 01, 2017	Nov. 30, 2018
Fixed Attenuator Mini-Circuits	BW-N10W5+	NA	Jul. 07, 2017	Jul. 06, 2018
Preamplifier Agilent	310N	187226	Jun. 23, 2017	Jun. 22, 2018
Preamplifier Agilent	83017A	MY39501357	Jun. 23, 2017	Jun. 22, 2018
Power Meter Anritsu	ML2495A	1012010	Aug. 15, 2017	Aug. 14, 2018
Power Sensor Anritsu	MA2411B	1315050	Aug. 15, 2017	Aug. 14, 2018
RF signal cable ETS-LINDGREN	5D-FB	Cable-CH1-01(RFC-SMS-100-SMS-120+RFC-SMS-100-SMS-400)	Jun. 23, 2017	Jun. 22, 2018
RF signal cable ETS-LINDGREN	8D-FB	Cable-CH1-02(RFC-SMS-100-SMS-24)	Jun. 23, 2017	Jun. 22, 2018
Software BV ADT	E3 8.130425b	NA	NA	NA
Antenna Tower MF	NA	NA	NA	NA
Turn Table MF	NA	NA	NA	NA
Antenna Tower &Turn Table Controller MF	MF-7802	NA	NA	NA
Communications Tester-Wireless Agilent	8960 Series 10	MY53201073	Jun. 28, 2017	Jun. 27, 2019
Radio Communication Analyzer Anritsu	MT8820C	6201300638	Jul. 11, 2017	Jul. 10, 2018
Temperature & Humidity Chamber	GTH-120-40-CP-AR	MAA1306-019	Sep. 08, 2017	Sep. 07, 2018
DC Power Supply Topward	33010D	807748	Oct. 25, 2016	Oct. 24, 2018
Digital Multimeter Fluke	87-III	70360742	Jun. 30, 2017	Jun. 29, 2018

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 HsinTien Chamber 1.
3. The horn antenna and preamplifier (model: 83017A) are used only for the measurement of emission frequency above 1 GHz if tested.
4. The IC Site Registration No. is IC7450I-1.

3 General Information

3.1 General Description of EUT

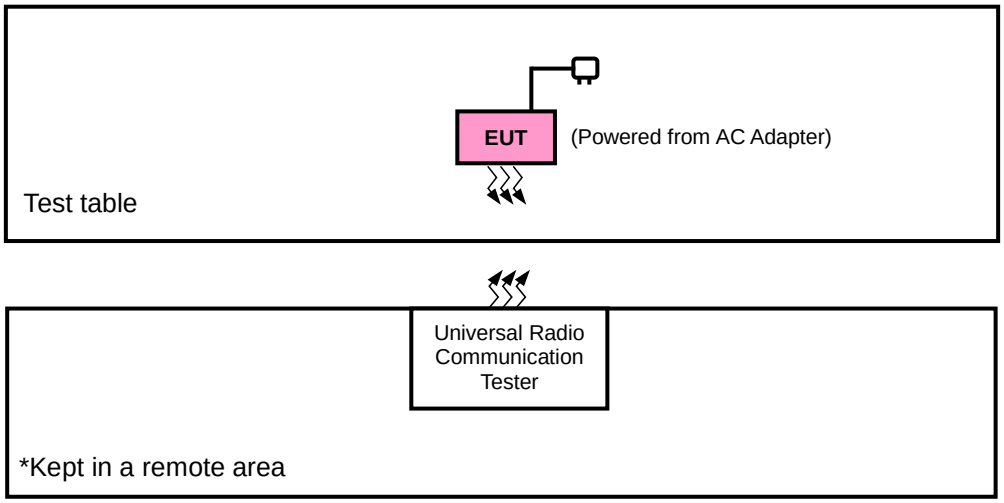
Product	Notebook PC	
Brand	ASUS	
Test Model	TP370QL	
Status of EUT	Production Unit	
Power Supply Rating	15.4 Vdc (Battery) 19.0 Vdc (Adapter)	
Modulation Type	WCDMA	QPSK
	LTE	QPSK, 16QAM, 64QAM
Frequency Range	WCDMA	826.4 ~ 846.6 MHz
	LTE 5 (Channel Bandwidth: 1.4 MHz)	824.7 ~ 848.3 MHz
	LTE 5 (Channel Bandwidth: 3 MHz)	825.5 ~ 847.5 MHz
	LTE 5 (Channel Bandwidth: 5 MHz)	826.5 ~ 846.5 MHz
	LTE 5 (Channel Bandwidth: 10 MHz)	829 ~ 844 MHz
	LTE 26 (Channel Bandwidth: 1.4 MHz)	824.7 ~ 848.3 MHz
	LTE 26 (Channel Bandwidth: 3 MHz)	825.5 ~ 847.5 MHz
	LTE 26 (Channel Bandwidth: 5 MHz)	826.5 ~ 846.5 MHz
	LTE 26 (Channel Bandwidth: 10 MHz)	829 ~ 844 MHz
	LTE 26 (Channel Bandwidth: 15 MHz)	831.5 ~ 841.5 MHz
Max. ERP Power	WCDMA	207.49 mW
	LTE 5 (Channel Bandwidth: 1.4 MHz)	162.48 mW
	LTE 5 (Channel Bandwidth: 3 MHz)	161.81 mW
	LTE 5 (Channel Bandwidth: 5 MHz)	161.36 mW
	LTE 5 (Channel Bandwidth: 10 MHz)	164.74 mW
	LTE 26 (Channel Bandwidth: 1.4 MHz)	203.24 mW
	LTE 26 (Channel Bandwidth: 3 MHz)	203.14 mW
	LTE 26 (Channel Bandwidth: 5 MHz)	204.55 mW
	LTE 26 (Channel Bandwidth: 10 MHz)	205.49 mW
	LTE 26 (Channel Bandwidth: 15 MHz)	206.92 mW
Emission Designator	WCDMA	4M13F9W
	LTE 5 (Channel Bandwidth: 1.4 MHz)	1M09W7D
	LTE 5 (Channel Bandwidth: 3 MHz)	2M70G7D
	LTE 5 (Channel Bandwidth: 5 MHz)	4M50W7D
	LTE 5 (Channel Bandwidth: 10 MHz)	8M98W7D
	LTE 26 (Channel Bandwidth: 1.4 MHz)	1M09W7D
	LTE 26 (Channel Bandwidth: 3 MHz)	2M70G7D
	LTE 26 (Channel Bandwidth: 5 MHz)	4M49W7D
	LTE 26 (Channel Bandwidth: 10 MHz)	8M99W7D
	LTE 26 (Channel Bandwidth: 15 MHz)	13M5G7D
Antenna Type	Fixed Internal Antenna	
Accessory Device	Refer to Note as below	
Data Cable Supplied	Refer to Note as below	

Note:

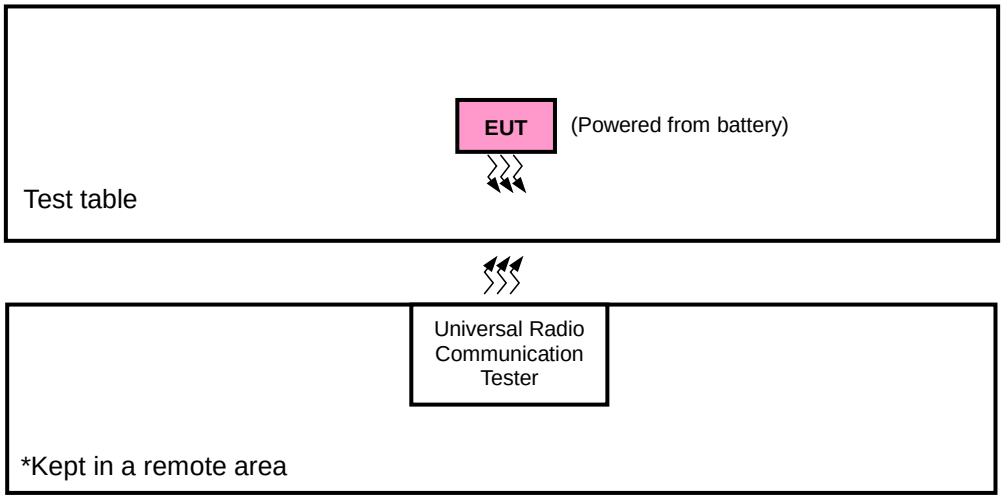
1. The EUT's accessories list refers to Ext. Pho.
2. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 Configuration of System under Test

<Radiated Emission Test>



<E.R.P. Test>



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	ERP	Radiated Emission
WCDMA	X-plane	Z-axis
LTE Band 5	Y-plane	Z-axis
LTE Band 26	X-plane	Z-axis

WCDMA

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Mode
-	ERP	4132 to 4233	4132, 4182, 4233	WCDMA
-	Frequency Stability	4132 to 4233	4132, 4233	WCDMA
-	Occupied Bandwidth	4132 to 4233	4132, 4182, 4233	WCDMA
-	Band Edge	4132 to 4233	4132, 4233	WCDMA
-	Peak to Average Ratio	4132 to 4233	4132, 4182, 4233	WCDMA
-	Conducted Emission	4132 to 4233	4132, 4182, 4233	WCDMA
-	Radiated Emission	4132 to 4233	4132, 4182, 4233	WCDMA

LTE Band 5

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	ERP	20407 to 20643	20407, 20525, 20643	1.4 MHz	QPSK, 16QAM, 64QAM	1 RB / 2 RB Offset
		20415 to 20635	20415, 20525, 20635	3 MHz	QPSK, 16QAM, 64QAM	1 RB / 7 RB Offset
		20425 to 20625	20425, 20525, 20625	5 MHz	QPSK, 16QAM, 64QAM	1 RB / 12 RB Offset
		20450 to 20600	20450, 20525, 20600	10 MHz	QPSK, 16QAM, 64QAM	1 RB / 24 RB Offset
-	Frequency Stability	20407 to 20643	20407, 20643	1.4 MHz	QPSK	1 RB / 2 RB Offset
		20415 to 20635	20415, 20635	3 MHz	QPSK	1 RB / 7 RB Offset
		20425 to 20625	20425, 20625	5 MHz	QPSK	1 RB / 12 RB Offset
		20450 to 20600	20450, 20600	10 MHz	QPSK	1 RB / 24 RB Offset
-	Occupied Bandwidth	20407 to 20643	20407, 20525, 20643	1.4 MHz	QPSK, 16QAM, 64QAM	6 RB / 0 RB Offset
		20415 to 20635	20415, 20525, 20635	3 MHz	QPSK, 16QAM, 64QAM	15 RB / 0 RB Offset
		20425 to 20625	20425, 20525, 20625	5 MHz	QPSK, 16QAM, 64QAM	25 RB / 0 RB Offset
		20450 to 20600	20450, 20525, 20600	10 MHz	QPSK, 16QAM, 64QAM	50 RB / 0 RB Offset

-	Band Edge	20407 to 20643	20407	1.4MHz	QPSK	1 RB / 0 RB Offset
						6 RB / 0 RB Offset
			20643	1.4MHz	QPSK	1 RB / 5 RB Offset
						6 RB / 0 RB Offset
		20415 to 20635	20415	3 MHz	QPSK	1 RB / 0 RB Offset
						15 RB / 0 RB Offset
			20635	3 MHz	QPSK	1 RB / 14 RB Offset
						15 RB / 0 RB Offset
		20425 to 20625	20425	5 MHz	QPSK	1 RB / 0 RB Offset
						25 RB / 0 RB Offset
			20625	5 MHz	QPSK	1 RB / 24 RB Offset
						25 RB / 0 RB Offset
		20450 to 20600	20450	10 MHz	QPSK	1 RB / 0 RB Offset
						50 RB / 0 RB Offset
			20600	10 MHz	QPSK	1 RB / 49 RB Offset
						50 RB / 0 RB Offset
-	Peak to Average Ratio	20407 to 20643	20407, 20525, 20643	1.4 MHz	QPSK, 16QAM, 64QAM	6 RB / 0 RB Offset
		20415 to 20635	20415, 20525, 20635	3 MHz	QPSK, 16QAM, 64QAM	15 RB / 0 RB Offset
		20425 to 20625	20425, 20525, 20625	5 MHz	QPSK, 16QAM, 64QAM	25 RB / 0 RB Offset
		20450 to 20600	20450, 20525, 20600	10 MHz	QPSK, 16QAM, 64QAM	50 RB / 0 RB Offset
-	Conducted Emission	20407 to 20643	20407, 20525, 20643	1.4 MHz	QPSK	1 RB / 2 RB Offset
		20415 to 20635	20415, 20525, 20635	3 MHz	QPSK	1 RB / 7 RB Offset
		20425 to 20625	20425, 20525, 20625	5 MHz	QPSK	1 RB / 12 RB Offset
		20450 to 20600	20450, 20525, 20600	10 MHz	QPSK	1 RB / 24 RB Offset
-	Radiated Emission	20450 to 20600	20450, 20525, 20600	10 MHz	QPSK	1 RB / 24 RB Offset

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

LTE Band 26

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	ERP	26797 to 27033	26797, 26915, 27033	1.4 MHz	QPSK, 16QAM, 64QAM	1 RB / 5 RB Offset
		26805 to 27025	26805, 26915, 27025	3 MHz	QPSK, 16QAM, 64QAM	1 RB / 14 RB Offset
		26815 to 27015	26815, 26915, 27015	5 MHz	QPSK, 16QAM, 64QAM	1 RB / 24 RB Offset
		26840 to 26990	26840, 26915, 26990	10 MHz	QPSK, 16QAM, 64QAM	1 RB / 49 RB Offset
		26865 to 26965	26865, 26915, 26965	15 MHz	QPSK, 16QAM, 64QAM	1 RB / 49 RB Offset
-	Frequency Stability	26797 to 27033	26797, 27033	1.4 MHz	QPSK	1 RB / 5 RB Offset
		26805 to 27025	26805, 27025	3 MHz	QPSK	1 RB / 14 RB Offset
		26815 to 27015	26815, 27015	5 MHz	QPSK	1 RB / 24 RB Offset
		26840 to 26990	26840, 26990	10 MHz	QPSK	1 RB / 49 RB Offset
		26865 to 26965	26865, 26965	15 MHz	QPSK	1 RB / 49 RB Offset
-	Occupied Bandwidth	26797 to 27033	26797, 26915, 27033	1.4 MHz	QPSK, 16QAM, 64QAM	6 RB / 0 RB Offset
		26805 to 27025	26805, 26915, 27025	3 MHz	QPSK, 16QAM, 64QAM	15 RB / 0 RB Offset
		26815 to 27015	26815, 26915, 27015	5 MHz	QPSK, 16QAM, 64QAM	25 RB / 0 RB Offset
		26840 to 26990	26840, 26915, 26990	10 MHz	QPSK, 16QAM, 64QAM	50 RB / 0 RB Offset
		26865 to 26965	26865, 26915, 26965	15 MHz	QPSK, 16QAM, 64QAM	75 RB / 0 RB Offset
-	Band Edge	26797 to 27033	26797	1.4 MHz	QPSK	1 RB / 0 RB Offset
						6 RB / 0 RB Offset
			27033	1.4 MHz	QPSK	1 RB / 5 RB Offset
						6 RB / 0 RB Offset
		26805 to 27025	26805	3 MHz	QPSK	1 RB / 0 RB Offset
						15 RB / 0 RB Offset
			27025	3 MHz	QPSK	1 RB / 14 RB Offset
						15 RB / 0 RB Offset
		26815 to 27015	26815	5 MHz	QPSK	1 RB / 0 RB Offset
						25 RB / 0 RB Offset
			27015	5 MHz	QPSK	1 RB / 24 RB Offset
						25 RB / 0 RB Offset
		26840 to 26990	26840	10 MHz	QPSK	1 RB / 0 RB Offset
						50 RB / 0 RB Offset
			26990	10 MHz	QPSK	1 RB / 49 RB Offset
						50 RB / 0 RB Offset
		26865 to 26965	26865	15 MHz	QPSK	1 RB / 0 RB Offset
						75 RB / 0 RB Offset
			26965	15 MHz	QPSK	1 RB / 74 RB Offset
						75 RB / 0 RB Offset
-	Peak to Average Ratio	26797 to 27033	26797, 26915, 27033	1.4 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		26805 to 27025	26805, 26915, 27025	3 MHz	QPSK, 16QAM, 64QAM	15 RB / 0 RB Offset

		26815 to 27015	26815, 26915, 27015	5 MHz	QPSK, 16QAM, 64QAM	25 RB / 0 RB Offset
		26840 to 26990	26840, 26915, 26990	10 MHz	QPSK, 16QAM, 64QAM	50 RB / 0 RB Offset
		26865 to 26965	26865, 26915, 26965	15 MHz	QPSK, 16QAM, 64QAM	75 RB / 0 RB Offset
-	Conducted Emission	26797 to 27033	26797, 26915, 27033	1.4 MHz	QPSK	1 RB / 0 RB Offset
		26805 to 27025	26805, 26915, 27025	3 MHz	QPSK	15 RB / 0 RB Offset
		26815 to 27015	26815, 26915, 27015	5 MHz	QPSK	25 RB / 0 RB Offset
		26840 to 26990	26840, 26915, 26990	10 MHz	QPSK	1 RB / 0 RB Offset
		26865 to 26965	26865, 26915, 26965	15 MHz	QPSK	25 RB / 0 RB Offset
-	Radiated Emission	26865 to 26965	26865, 26915, 26965	15 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
ERP	25 deg. C, 65 % RH	15.4 Vdc	Anson Lin
Frequency Stability	25 deg. C, 65 % RH	15.4 Vdc	Taylor Liu
Occupied Bandwidth	25 deg. C, 65 % RH	15.4 Vdc	Taylor Liu
Band Edge	25 deg. C, 65 % RH	15.4 Vdc	Taylor Liu
Peak to Average Ratio	25 deg. C, 65 % RH	15.4 Vdc	Taylor Liu
Conducted Emission	25 deg. C, 65 % RH	15.4 Vdc	Taylor Liu
Radiated Emission	25 deg. C, 65 % RH	120 Vac, 60 Hz	Getaz Yang, Karl Lee, Charles Hsiao

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 22
KDB 971168 D01 Power Meas License Digital Systems v03
ANSI/TIA/EIA-603-E 2016
ANSI 63.26-2015

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 7 watts e.r.p.

4.1.2 Test Procedures

EIRP / ERP Measurement:

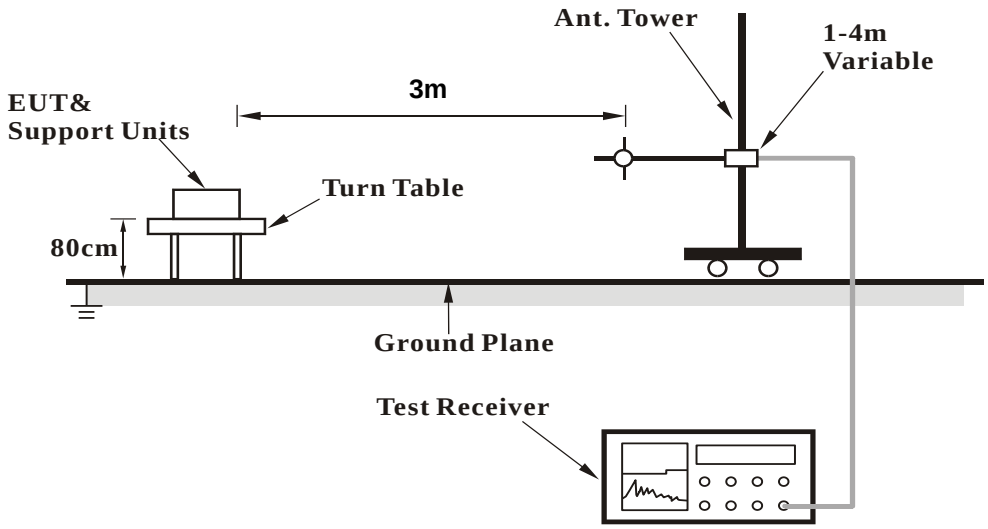
a. All measurements were done at low, middle and high operational frequency range. RBW and VBW is 1 MHz for GSM, GPRS & EDGE, and 5 MHz for WCDMA and CDMA, and 10 MHz for LTE mode.
b. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8 m (below or equal 1 GHz) and/or 1.5 m (above 1 GHz) 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.
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:

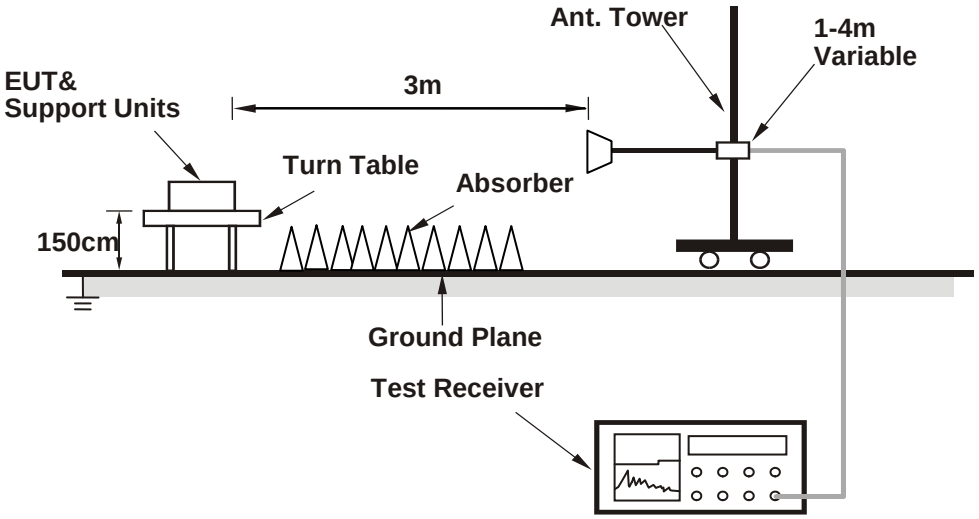
The EUT was set up for the maximum power with GSM, GPRS, EDGE, WCDMA, CDMA, and LTE link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

4.1.3 Test Setup

EIRP / ERP Measurement:
<Radiated Emission below or equal 1 GHz>



<Radiated Emission above 1 GHz>



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	WCDMA Band V			3GPP MPR (dB)
Channel	4132	4182	4233	
Frequency (MHz)	826.4	836.4	846.6	
EUT without Power Reduction (P-Sensor NOT Triggered)				
RMC 12.2K	23.07	23.31	**23.69**	-
HSDPA Subtest-1	21.99	22.32	22.70	0
HSDPA Subtest-2	22.02	22.37	22.68	0
HSDPA Subtest-3	21.40	21.86	22.21	0.5
HSDPA Subtest-4	21.48	21.94	22.17	0.5
HSUPA Subtest-1	22.07	22.37	22.67	0
HSUPA Subtest-2	19.99	20.40	20.80	2
HSUPA Subtest-3	21.03	21.43	21.63	1
HSUPA Subtest-4	20.04	20.41	20.65	2
HSUPA Subtest-5	21.90	22.30	22.50	0
EUT with Power Reduction (P-Sensor Triggered)				
RMC 12.2K	19.18	19.33	**19.39**	-
HSDPA Subtest-1	18.31	18.46	18.50	0
HSDPA Subtest-2	17.98	18.13	18.19	0
HSDPA Subtest-3	17.73	17.88	17.94	0.5
HSDPA Subtest-4	17.77	17.92	17.98	0.5
HSUPA Subtest-1	18.26	18.41	18.47	0
HSUPA Subtest-2	16.37	16.44	16.50	2
HSUPA Subtest-3	17.23	17.38	17.44	1
HSUPA Subtest-4	16.32	16.47	16.49	2
HSUPA Subtest-5	18.24	18.39	18.45	0

LTE Band 5

EUT without Power Reduction (P-Sensor NOT Triggered)

BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 20450 829.0 MHz	Mid CH 20525 836.5 MHz	High CH 20600 844.0 MHz	3GPP MPR (dB)	Low CH 20450 829.0 MHz	Mid CH 20525 836.5 MHz	High CH 20600 844.0 MHz	3GPP MPR (dB)	Low CH 20450 829.0 MHz	Mid CH 20525 836.5 MHz	High CH 20600 844.0 MHz	3GPP MPR (dB)
10	1	0	22.94	22.98	22.93	0	21.86	21.90	21.85	1	21.22	21.27	21.15	2
	1	24	22.93	22.97	22.92	0	21.85	21.89	21.84	1	21.20	21.25	21.13	2
	1	49	22.90	22.94	22.89	0	21.82	21.86	21.81	1	21.18	21.23	21.11	2
	25	0	21.92	21.96	21.91	1	20.84	20.88	20.83	2	20.05	20.10	20.08	3
	25	12	21.90	21.94	21.89	1	20.82	20.86	20.81	2	20.01	20.06	20.04	3
	25	25	21.87	21.91	21.86	1	20.79	20.83	20.78	2	20.08	20.13	20.01	3
	50	0	21.91	21.95	21.90	1	20.83	20.87	20.82	2	20.02	20.07	20.05	3

BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 20425 826.5 MHz	Mid CH 20525 836.5 MHz	High CH 20625 846.5 MHz	3GPP MPR (dB)	Low CH 20425 826.5 MHz	Mid CH 20525 836.5 MHz	High CH 20625 846.5 MHz	3GPP MPR (dB)	Low CH 20425 826.5 MHz	Mid CH 20525 836.5 MHz	High CH 20625 846.5 MHz	3GPP MPR (dB)
5	1	0	22.86	22.90	22.85	0	21.78	21.82	21.77	1	21.19	21.24	21.12	2
	1	12	22.85	22.89	22.84	0	21.77	21.81	21.76	1	21.17	21.22	21.10	2
	1	24	22.82	22.86	22.81	0	21.74	21.78	21.73	1	21.15	21.20	21.08	2
	12	0	21.84	21.88	21.83	1	20.76	20.80	20.75	2	20.12	20.17	20.05	3
	12	6	21.82	21.86	21.81	1	20.74	20.78	20.73	2	20.08	20.13	20.01	3
	12	13	21.79	21.83	21.78	1	20.71	20.75	20.70	2	20.05	20.10	20.05	3
	25	0	21.83	21.87	21.82	1	20.75	20.79	20.74	2	20.09	20.14	20.02	3

BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 20415 825.5 MHz	Mid CH 20525 836.5 MHz	High CH 20635 847.5 MHz	3GPP MPR (dB)	Low CH 20415 825.5 MHz	Mid CH 20525 836.5 MHz	High CH 20635 847.5 MHz	3GPP MPR (dB)	Low CH 20415 825.5 MHz	Mid CH 20525 836.5 MHz	High CH 20635 847.5 MHz	3GPP MPR (dB)
3	1	0	22.75	22.79	22.74	0	21.67	21.71	21.66	1	21.13	21.18	21.06	2
	1	7	22.74	22.78	22.73	0	21.66	21.70	21.65	1	21.11	21.16	21.04	2
	1	14	22.71	22.75	22.70	0	21.63	21.67	21.62	1	21.09	21.14	21.02	2
	8	0	21.73	21.77	21.72	1	20.65	20.69	20.64	2	20.06	20.11	20.07	3
	8	3	21.71	21.75	21.70	1	20.63	20.67	20.62	2	20.02	20.07	20.03	3
	8	7	21.68	21.72	21.67	1	20.60	20.64	20.59	2	20.05	20.04	20.02	3
	15	0	21.72	21.76	21.71	1	20.64	20.68	20.63	2	20.03	20.08	20.04	3

BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 20407 824.7 MHz	Mid CH 20525 836.5 MHz	High CH 20643 848.3 MHz	3GPP MPR (dB)	Low CH 20407 824.7 MHz	Mid CH 20525 836.5 MHz	High CH 20643 848.3 MHz	3GPP MPR (dB)	Low CH 20407 824.7 MHz	Mid CH 20525 836.5 MHz	High CH 20643 848.3 MHz	3GPP MPR (dB)
1.4	1	0	22.69	22.73	22.68	0	21.92	21.99	21.95	1	21.09	21.14	21.02	2
	1	2	22.68	22.72	22.67	0	21.82	21.91	21.89	1	21.07	21.12	21.08	2
	1	5	22.65	22.69	22.64	0	21.97	21.90	21.80	1	21.05	21.10	21.03	2
	3	0	22.67	22.71	22.66	0	21.96	21.92	21.87	1	21.02	21.07	21.03	2
	3	1	22.65	22.69	22.64	0	21.92	21.95	21.84	1	21.05	21.03	21.03	2
	3	3	22.62	22.66	22.61	0	21.90	21.92	21.84	1	21.01	21.05	21.06	2
	6	0	21.66	21.70	21.65	1	20.79	20.83	20.97	2	20.02	20.04	20.01	3

LTE Band 5

EUT with Power Reduction (P-Sensor Triggered)

BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 20450	Mid CH 20525	High CH 20600	3GPP MPR (dB)	Low CH 20450	Mid CH 20525	High CH 20600	3GPP MPR (dB)	Low CH 20450	Mid CH 20525	High CH 20600	3GPP MPR (dB)
			829.0 MHz	836.5 MHz	844.0 MHz		829.0 MHz	836.5 MHz	844.0 MHz		829.0 MHz	836.5 MHz	844.0 MHz	
10	1	0	19.18	19.22	19.23	0	18.16	18.20	18.21	1	17.13	17.17	17.18	2
	1	24	19.16	19.20	19.21	0	18.14	18.18	18.19	1	17.11	17.15	17.16	2
	1	49	19.14	19.18	19.19	0	18.12	18.16	18.17	1	17.09	17.13	17.14	2
	25	0	18.31	18.35	18.36	1	17.29	17.33	17.34	2	16.26	16.30	16.31	3
	25	12	18.27	18.31	18.32	1	17.25	17.29	17.30	2	16.22	16.26	16.27	3
	25	25	18.26	18.30	18.31	1	17.24	17.28	17.29	2	16.21	16.25	16.26	3
	50	0	18.18	18.22	18.23	1	17.16	17.20	17.21	2	16.13	16.17	16.18	3

BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 20425	Mid CH 20525	High CH 20625	3GPP MPR (dB)	Low CH 20425	Mid CH 20525	High CH 20625	3GPP MPR (dB)	Low CH 20425	Mid CH 20525	High CH 20625	3GPP MPR (dB)
			826.5 MHz	836.5 MHz	846.5 MHz		826.5 MHz	836.5 MHz	846.5 MHz		826.5 MHz	836.5 MHz	846.5 MHz	
5	1	0	19.12	19.16	19.17	0	18.10	18.14	18.15	1	17.07	17.11	17.12	2
	1	12	19.10	19.14	19.15	0	18.08	18.12	18.13	1	17.05	17.09	17.10	2
	1	24	19.08	19.12	19.13	0	18.06	18.10	18.11	1	17.03	17.07	17.08	2
	12	0	18.25	18.29	18.30	1	17.23	17.27	17.28	2	16.20	16.24	16.25	3
	12	6	18.21	18.25	18.26	1	17.19	17.23	17.24	2	16.16	16.20	16.21	3
	12	13	18.20	18.24	18.25	1	17.18	17.22	17.23	2	16.15	16.19	16.20	3
	25	0	18.12	18.16	18.17	1	17.10	17.14	17.15	2	16.07	16.11	16.12	3

BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 20415	Mid CH 20525	High CH 20635	3GPP MPR (dB)	Low CH 20415	Mid CH 20525	High CH 20635	3GPP MPR (dB)	Low CH 20415	Mid CH 20525	High CH 20635	3GPP MPR (dB)
			825.5 MHz	836.5 MHz	847.5 MHz		825.5 MHz	836.5 MHz	847.5 MHz		825.5 MHz	836.5 MHz	847.5 MHz	
3	1	0	19.06	19.10	19.11	0	18.04	18.08	18.09	1	17.01	17.05	17.06	2
	1	7	19.04	19.08	19.09	0	18.02	18.06	18.07	1	16.99	17.03	17.04	2
	1	14	19.02	19.06	19.07	0	18.00	18.04	18.05	1	16.97	17.01	17.02	2
	8	0	18.19	18.23	18.24	1	17.17	17.21	17.22	2	16.14	16.18	16.19	3
	8	3	18.15	18.19	18.20	1	17.13	17.17	17.18	2	16.10	16.14	16.15	3
	8	7	18.14	18.18	18.19	1	17.12	17.16	17.17	2	16.09	16.13	16.14	3
	15	0	18.06	18.10	18.11	1	17.04	17.08	17.09	2	16.01	16.05	16.06	3

BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 20407	Mid CH 20525	High CH 20643	3GPP MPR (dB)	Low CH 20407	Mid CH 20525	High CH 20643	3GPP MPR (dB)	Low CH 20407	Mid CH 20525	High CH 20643	3GPP MPR (dB)
			824.7 MHz	836.5 MHz	848.3 MHz		824.7 MHz	836.5 MHz	848.3 MHz		824.7 MHz	836.5 MHz	848.3 MHz	
1.4	1	0	19.02	19.06	19.07	0	18.00	18.04	18.05	1	16.97	17.01	17.02	2
	1	2	19.00	19.04	19.05	0	17.98	18.02	18.03	1	16.95	16.99	17.00	2
	1	5	18.98	19.02	19.03	0	17.96	18.00	18.01	1	16.93	16.97	16.98	2
	3	0	18.99	19.03	19.04	0	17.97	18.01	18.02	1	16.94	16.98	16.99	2
	3	1	18.95	18.99	19.00	0	17.93	17.97	17.98	1	16.90	16.94	16.95	2
	3	3	18.94	18.98	18.99	0	17.92	17.96	17.97	1	16.89	16.93	16.94	2
	6	0	18.02	18.06	18.07	1	17.00	17.04	17.05	2	15.97	16.01	16.02	3

LTE Band 26

EUT without Power Reduction (P-Sensor NOT Triggered)

BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 26765 821.5 MHz	Mid CH 26865 831.5 MHz	High CH 26965 841.5 MHz	3GPP MPR (dB)	Low CH 26765 821.5 MHz	Mid CH 26865 831.5 MHz	High CH 26965 841.5 MHz	3GPP MPR (dB)	Low CH 26765 821.5 MHz	Mid CH 26865 831.5 MHz	High CH 26965 841.5 MHz	3GPP MPR (dB)
15	1	0	23.59	23.55	23.79	0	22.54	22.50	22.74	1	21.67	21.45	21.76	2
	1	37	23.13	23.09	23.26	0	22.08	22.04	22.21	1	21.22	21.03	21.21	2
	1	74	23.66	23.62	23.72	0	22.61	22.57	22.67	1	21.76	21.54	21.80	2
	36	0	22.35	22.31	22.52	1	21.30	21.26	21.47	2	20.55	20.50	20.86	3
	36	19	22.27	22.23	22.40	1	21.22	21.18	21.35	2	20.21	20.01	20.33	3
	36	39	22.39	22.35	22.48	1	21.34	21.30	21.43	2	20.56	20.61	20.79	3
	75	0	22.36	22.32	22.49	1	21.31	21.27	21.44	2	20.57	20.71	20.74	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 26740 819.0 MHz	Mid CH 26865 831.5 MHz	High CH 26990 844.0 MHz	3GPP MPR (dB)	Low CH 26740 819.0 MHz	Mid CH 26865 831.5 MHz	High CH 26990 844.0 MHz	3GPP MPR (dB)	Low CH 26740 819.0 MHz	Mid CH 26865 831.5 MHz	High CH 26990 844.0 MHz	3GPP MPR (dB)
10	1	0	23.54	23.50	23.74	0	22.50	22.46	22.70	1	21.58	21.61	21.86	2
	1	24	23.08	23.04	23.21	0	22.04	22.00	22.17	1	21.23	21.02	21.21	2
	1	49	23.61	23.57	23.67	0	22.57	22.53	22.63	1	21.73	21.56	21.70	2
	25	0	22.30	22.26	22.47	1	21.26	21.22	21.43	2	20.53	20.45	20.83	3
	25	12	22.22	22.18	22.35	1	21.18	21.14	21.31	2	20.20	20.05	20.18	3
	25	25	22.34	22.30	22.43	1	21.30	21.26	21.39	2	20.60	20.58	20.81	3
	50	0	22.31	22.27	22.44	1	21.27	21.23	21.40	2	20.62	20.56	20.72	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 26715 816.5 MHz	Mid CH 26865 831.5 MHz	High CH 27015 846.5 MHz	3GPP MPR (dB)	Low CH 26715 816.5 MHz	Mid CH 26865 831.5 MHz	High CH 27015 846.5 MHz	3GPP MPR (dB)	Low CH 26715 816.5 MHz	Mid CH 26865 831.5 MHz	High CH 27015 846.5 MHz	3GPP MPR (dB)
5	1	0	23.46	23.42	23.66	0	22.47	22.43	22.67	1	21.58	21.63	21.85	2
	1	12	23.00	22.96	23.13	0	22.01	21.97	22.14	1	21.06	21.04	21.27	2
	1	24	23.53	23.49	23.59	0	22.54	22.50	22.60	1	21.64	21.71	21.68	2
	12	0	22.22	22.18	22.39	1	21.23	21.19	21.40	2	20.55	20.51	20.76	3
	12	6	22.14	22.10	22.27	1	21.15	21.11	21.28	2	20.22	20.09	20.25	3
	12	13	22.26	22.22	22.35	1	21.27	21.23	21.36	2	20.71	20.65	20.70	3
	25	0	22.23	22.19	22.36	1	21.24	21.20	21.37	2	20.63	20.72	20.80	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 26705 815.5 MHz	Mid CH 26865 831.5 MHz	High CH 27025 847.5 MHz	3GPP MPR (dB)	Low CH 26705 815.5 MHz	Mid CH 26865 831.5 MHz	High CH 27025 847.5 MHz	3GPP MPR (dB)	Low CH 26705 815.5 MHz	Mid CH 26865 831.5 MHz	High CH 27025 847.5 MHz	3GPP MPR (dB)
3	1	0	23.43	23.39	23.63	0	22.39	22.35	22.59	1	21.66	21.50	21.89	2
	1	7	22.97	22.93	23.10	0	21.93	21.89	22.06	1	21.08	21.03	21.24	2
	1	14	23.50	23.46	23.56	0	22.46	22.42	22.52	1	21.65	21.72	21.80	2
	8	0	22.19	22.15	22.36	1	21.15	21.11	21.32	2	20.64	20.51	20.88	3
	8	3	22.11	22.07	22.24	1	21.07	21.03	21.20	2	20.13	20.12	20.27	3
	8	7	22.23	22.19	22.32	1	21.19	21.15	21.28	2	20.71	20.63	20.72	3
	15	0	22.20	22.16	22.33	1	21.16	21.12	21.29	2	20.72	20.71	20.66	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 26697 814.7 MHz	Mid CH 26865 831.5 MHz	High CH 27033 848.3 MHz	3GPP MPR (dB)	Low CH 26697 814.7 MHz	Mid CH 26865 831.5 MHz	High CH 27033 848.3 MHz	3GPP MPR (dB)	Low CH 26697 814.7 MHz	Mid CH 26865 831.5 MHz	High CH 27033 848.3 MHz	3GPP MPR (dB)
1.4	1	0	23.41	23.37	23.61	0	22.32	22.28	22.52	1	21.65	21.50	21.78	2
	1	2	22.95	22.91	23.08	0	21.86	21.82	21.99	1	21.14	21.15	21.30	2
	1	5	23.48	23.44	23.54	0	22.39	22.35	22.45	1	21.67	21.59	21.67	2
	3	0	23.17	23.13	23.34	0	22.08	22.04	22.25	1	21.53	21.53	21.69	2
	3	1	23.09	23.05	23.22	0	22.00	21.96	22.13	1	21.22	21.16	21.23	2
	3	3	23.21	23.17	23.30	0	22.12	22.08	22.21	1	21.72	21.71	21.78	2
	6	0	22.18	22.14	22.31	1	21.09	21.05	21.22	2	20.69	20.55	20.82	3

LTE Band 26

EUT with Power Reduction (P-Sensor Triggered)

BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 26765	Mid CH 26865	High CH 26965	3GPP MPR (dB)	Low CH 26765	Mid CH 26865	High CH 26965	3GPP MPR (dB)	Low CH 26765	Mid CH 26865	High CH 26965	3GPP MPR (dB)
			821.5 MHz	831.5 MHz	841.5 MHz		821.5 MHz	831.5 MHz	841.5 MHz		821.5 MHz	831.5 MHz	841.5 MHz	
15	1	0	18.71	18.63	18.73	0	17.69	17.61	17.71	1	16.67	16.59	16.69	2
	1	37	18.23	18.15	18.25	0	17.21	17.13	17.23	1	16.19	16.11	16.21	2
	1	74	18.61	18.53	18.63	0	17.59	17.51	17.61	1	16.57	16.49	16.59	2
	36	0	17.41	17.33	17.43	1	16.39	16.31	16.41	2	15.37	15.29	15.39	3
	36	19	17.35	17.27	17.37	1	16.33	16.25	16.35	2	15.31	15.23	15.33	3
	36	39	17.30	17.22	17.32	1	16.28	16.20	16.30	2	15.26	15.18	15.28	3
	75	0	17.39	17.31	17.41	1	16.37	16.29	16.39	2	15.35	15.27	15.37	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 26740	Mid CH 26865	High CH 26990	3GPP MPR (dB)	Low CH 26740	Mid CH 26865	High CH 26990	3GPP MPR (dB)	Low CH 26740	Mid CH 26865	High CH 26990	3GPP MPR (dB)
			819.0 MHz	831.5 MHz	844.0 MHz		819.0 MHz	831.5 MHz	844.0 MHz		819.0 MHz	831.5 MHz	844.0 MHz	
10	1	0	18.65	18.57	18.67	0	17.63	17.55	17.65	1	16.61	16.53	16.63	2
	1	24	18.17	18.09	18.19	0	17.15	17.07	17.17	1	16.13	16.05	16.15	2
	1	49	18.55	18.47	18.57	0	17.53	17.45	17.55	1	16.51	16.43	16.53	2
	25	0	17.35	17.27	17.37	1	16.33	16.25	16.35	2	15.31	15.23	15.33	3
	25	12	17.29	17.21	17.31	1	16.27	16.19	16.29	2	15.25	15.17	15.27	3
	25	25	17.24	17.16	17.26	1	16.22	16.14	16.24	2	15.20	15.12	15.22	3
	50	0	17.33	17.25	17.35	1	16.31	16.23	16.33	2	15.29	15.21	15.31	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 26715	Mid CH 26865	High CH 27015	3GPP MPR (dB)	Low CH 26715	Mid CH 26865	High CH 27015	3GPP MPR (dB)	Low CH 26715	Mid CH 26865	High CH 27015	3GPP MPR (dB)
			816.5 MHz	831.5 MHz	846.5 MHz		816.5 MHz	831.5 MHz	846.5 MHz		816.5 MHz	831.5 MHz	846.5 MHz	
5	1	0	18.60	18.52	18.62	0	17.58	17.50	17.60	1	16.56	16.48	16.58	2
	1	12	18.12	18.04	18.14	0	17.10	17.02	17.12	1	16.08	16.05	16.10	2
	1	24	18.50	18.42	18.52	0	17.48	17.40	17.50	1	16.46	16.38	16.48	2
	12	0	17.30	17.22	17.32	1	16.28	16.20	16.30	2	15.26	15.18	15.28	3
	12	6	17.24	17.16	17.26	1	16.22	16.14	16.24	2	15.20	15.12	15.22	3
	12	13	17.19	17.11	17.21	1	16.17	16.09	16.19	2	15.15	15.07	15.17	3
	25	0	17.28	17.20	17.30	1	16.26	16.18	16.28	2	15.24	15.16	15.26	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 26705	Mid CH 26865	High CH 27025	3GPP MPR (dB)	Low CH 26705	Mid CH 26865	High CH 27025	3GPP MPR (dB)	Low CH 26705	Mid CH 26865	High CH 27025	3GPP MPR (dB)
			815.5 MHz	831.5 MHz	847.5 MHz		815.5 MHz	831.5 MHz	847.5 MHz		815.5 MHz	831.5 MHz	847.5 MHz	
3	1	0	18.57	18.49	18.59	0	17.55	17.47	17.57	1	16.53	16.45	16.55	2
	1	7	18.09	18.01	18.11	0	17.07	16.99	17.09	1	16.05	16.03	16.07	2
	1	14	18.47	18.39	18.49	0	17.45	17.37	17.47	1	16.43	16.35	16.45	2
	8	0	17.27	17.19	17.29	1	16.25	16.17	16.27	2	15.23	15.15	15.25	3
	8	3	17.21	17.13	17.23	1	16.19	16.11	16.21	2	15.17	15.09	15.19	3
	8	7	17.16	17.08	17.18	1	16.14	16.06	16.16	2	15.12	15.04	15.14	3
	15	0	17.25	17.17	17.27	1	16.23	16.15	16.25	2	15.21	15.13	15.23	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 26697	Mid CH 26865	High CH 27033	3GPP MPR (dB)	Low CH 26697	Mid CH 26865	High CH 27033	3GPP MPR (dB)	Low CH 26697	Mid CH 26865	High CH 27033	3GPP MPR (dB)
			814.7 MHz	831.5 MHz	848.3 MHz		814.7 MHz	831.5 MHz	848.3 MHz		814.7 MHz	831.5 MHz	848.3 MHz	
1.4	1	0	18.55	18.47	18.57	0	17.53	17.45	17.55	1	16.51	16.43	16.53	2
	1	2	18.07	17.99	18.09	0	17.05	16.97	17.07	1	16.03	16.01	16.05	2
	1	5	18.45	18.37	18.47	0	17.43	17.35	17.45	1	16.41	16.33	16.43	2
	3	0	18.17	18.09	18.19	0	17.15	17.07	17.17	1	16.13	16.05	16.15	2
	3	1	18.11	18.03	18.13	0	17.09	17.01	17.11	1	16.07	15.99	16.09	2
	3	3	18.06	17.98	18.08	0	17.04	16.96	17.06	1	16.02	15.94	16.04	2
	6	0	17.23	17.15	17.25	1	16.21	16.13	16.23	2	15.19	15.11	15.21	3

ERP Power (dBm)

WCDMA							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (mW)**	**Polarization (H/V)**
X	4132	826.4	-7.61	32.62	22.86	193.20	H
	4182	836.4	-7.85	32.52	22.52	178.65	
	4233	846.6	-7.33	32.65	23.17	207.49	
	4132	826.4	-17.68	32.76	12.93	19.63	V
	4182	836.4	-17.28	32.39	12.96	19.77	
	4233	846.6	-17.14	32.54	13.25	21.13	

LTE Band 5							
Channel Bandwidth: 1.4 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (mW)**	**Polarization (H/V)**
Y	20407	824.7	-6.95	31.208	22.11	162.48	H
	20525	836.5	-7.15	31.3	22.00	158.49	
	20643	848.3	-7.01	31.222	22.06	160.77	
	20407	824.7	-12.35	31.504	17.00	50.16	V
	20525	836.5	-11.92	31.117	17.05	50.66	
	20643	848.3	-12.69	31.922	17.08	51.07	
Channel Bandwidth: 1.4 MHz / 16QAM							
Y	20407	824.7	-8.05	31.208	21.01	126.12	H
	20525	836.5	-8.12	31.3	21.03	126.77	
	20643	848.3	-7.99	31.222	21.08	128.29	
	20407	824.7	-13.25	31.504	16.10	40.78	V
	20525	836.5	-12.94	31.117	16.03	40.06	
	20643	848.3	-13.72	31.922	16.05	40.29	
Channel Bandwidth: 1.4 MHz / 64QAM							
Y	20407	824.7	-9.04	31.208	20.02	100.42	H
	20525	836.5	-9.10	31.3	20.05	101.16	
	20643	848.3	-9.01	31.222	20.06	101.44	
	20407	824.7	-14.26	31.504	15.09	32.31	V
	20525	836.5	-13.92	31.117	15.05	31.97	
	20643	848.3	-14.77	31.922	15.00	31.64	

LTE Band 5							
Channel Bandwidth: 3 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (mW)**	**Polarization (H/V)**
Y	20415	825.5	-6.98	31.208	22.08	161.36	H
	20525	836.5	-7.06	31.3	22.09	161.81	
	20635	847.5	-7.04	31.222	22.03	159.66	
	20415	825.5	-12.30	31.504	17.05	50.75	V
	20525	836.5	-11.95	31.117	17.02	50.32	
	20635	847.5	-12.74	31.922	17.03	50.49	
Channel Bandwidth: 3 MHz / 16QAM							
Y	20415	825.5	-8.03	31.208	21.03	126.71	H
	20525	836.5	-8.12	31.3	21.03	126.77	
	20635	847.5	-8.03	31.222	21.04	127.12	
	20415	825.5	-13.30	31.504	16.05	40.31	V
	20525	836.5	-12.90	31.117	16.07	40.43	
	20635	847.5	-13.71	31.922	16.06	40.38	
Channel Bandwidth: 3 MHz / 64QAM							
Y	20415	825.5	-9.01	31.208	20.05	101.11	H
	20525	836.5	-9.15	31.3	20.00	100.00	
	20635	847.5	-9.00	31.222	20.07	101.67	
	20415	825.5	-14.33	31.504	15.02	31.80	V
	20525	836.5	-13.92	31.117	15.05	31.97	
	20635	847.5	-14.74	31.922	15.03	31.86	

LTE Band 5							
Channel Bandwidth: 5 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (mW)**	**Polarization (H/V)**
Y	20425	826.5	-6.98	31.208	22.08	161.36	H
	20525	836.5	-7.10	31.3	22.05	160.32	
	20625	846.5	-6.98	31.222	22.09	161.88	
	20425	826.5	-12.35	31.504	17.00	50.16	V
	20525	836.5	-11.90	31.117	17.07	50.90	
	20625	846.5	-12.74	31.922	17.03	50.49	
Channel Bandwidth: 5 MHz / 16QAM							
Y	20425	826.5	-8.02	31.208	21.04	127.00	H
	20525	836.5	-8.14	31.3	21.01	126.18	
	20625	846.5	-8.02	31.222	21.05	127.41	
	20425	826.5	-13.32	31.504	16.03	40.12	V
	20525	836.5	-12.96	31.117	16.01	39.87	
	20625	846.5	-13.75	31.922	16.02	40.01	
Channel Bandwidth: 5 MHz / 64QAM							
Y	20425	826.5	-9.00	31.208	20.06	101.34	H
	20525	836.5	-9.11	31.3	20.04	100.93	
	20625	846.5	-9.01	31.222	20.06	101.44	
	20425	826.5	-14.30	31.504	15.05	32.02	V
	20525	836.5	-13.92	31.117	15.05	31.97	
	20625	846.5	-14.70	31.922	15.07	32.15	

LTE Band 5							
Channel Bandwidth: 10 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (mW)**	**Polarization (H/V)**
Y	20450	829.0	-6.89	31.208	22.17	164.74	H
	20525	836.5	-7.04	31.3	22.11	162.55	
	20600	844.0	-7.02	31.222	22.05	160.40	
	20450	829.0	-12.19	31.504	17.16	52.05	V
	20525	836.5	-11.82	31.117	17.15	51.84	
	20600	844.0	-12.67	31.922	17.10	51.31	
Channel Bandwidth: 10 MHz / 16QAM							
Y	20425	826.5	-7.96	31.208	21.10	128.77	H
	20525	836.5	-8.12	31.3	21.03	126.77	
	20625	846.5	-7.95	31.222	21.12	129.48	
	20425	826.5	-13.20	31.504	16.15	41.25	V
	20525	836.5	-12.96	31.117	16.01	39.87	
	20625	846.5	-13.74	31.922	16.03	40.11	
Channel Bandwidth: 10 MHz / 64QAM							
Y	20450	829.0	-8.92	31.208	20.14	103.23	H
	20525	836.5	-9.01	31.3	20.14	103.28	
	20600	844.0	-8.90	31.222	20.17	104.04	
	20450	829.0	-14.22	31.504	15.13	32.61	V
	20525	836.5	-13.94	31.117	15.03	31.82	
	20600	844.0	-14.67	31.922	15.10	32.37	

LTE Band 26							
Channel Bandwidth: 1.4 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (mW)**	**Polarization (H/V)**
X	26797	824.7	-6.01	31.208	23.05	201.74	H
	26915	836.5	-6.07	31.3	23.08	203.24	
	27033	848.3	-6.02	31.222	23.05	201.93	
	26797	824.7	-11.26	31.504	18.09	64.48	V
	26915	836.5	-10.93	31.117	18.04	63.64	
	27033	848.3	-11.74	31.922	18.03	63.56	
Channel Bandwidth: 1.4 MHz / 16QAM							
X	26797	824.7	-7.04	31.208	22.02	159.15	H
	26915	836.5	-7.11	31.3	22.04	159.96	
	27033	848.3	-7.03	31.222	22.04	160.03	
	26797	824.7	-12.30	31.504	17.05	50.75	V
	26915	836.5	-11.95	31.117	17.02	50.32	
	27033	848.3	-12.74	31.922	17.03	50.49	
Channel Bandwidth: 1.4 MHz / 64QAM							
X	26797	824.7	-8.00	31.208	21.06	127.59	H
	26915	836.5	-8.10	31.3	21.05	127.35	
	27033	848.3	-8.05	31.222	21.02	126.53	
	26797	824.7	-13.32	31.504	16.03	40.12	V
	26915	836.5	-12.97	31.117	16.00	39.78	
	27033	848.3	-13.70	31.922	16.07	40.48	

LTE Band 26							
Channel Bandwidth: 3 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (mW)**	**Polarization (H/V)**
X	26805	825.5	-5.98	31.208	23.08	203.14	H
	26915	836.5	-6.11	31.3	23.04	201.28	
	27025	847.5	-6.05	31.222	23.02	200.54	
	26805	825.5	-11.27	31.504	18.08	64.33	V
	26915	836.5	-10.93	31.117	18.04	63.64	
	27025	847.5	-11.70	31.922	18.07	64.15	
Channel Bandwidth: 3 MHz / 16QAM							
X	26805	825.5	-6.99	31.208	22.07	160.99	H
	26915	836.5	-7.12	31.3	22.03	159.59	
	27025	847.5	-7.03	31.222	22.04	160.03	
	26805	825.5	-12.26	31.504	17.09	51.22	V
	26915	836.5	-11.90	31.117	17.07	50.90	
	27025	847.5	-12.72	31.922	17.05	50.72	
Channel Bandwidth: 3 MHz / 64QAM							
X	26805	825.5	-8.00	31.208	21.06	127.59	H
	26915	836.5	-8.13	31.3	21.02	126.47	
	27025	847.5	-8.00	31.222	21.07	128.00	
	26805	825.5	-13.25	31.504	16.10	40.78	V
	26915	836.5	-12.94	31.117	16.03	40.06	
	27025	847.5	-13.74	31.922	16.03	40.11	

LTE Band 26							
Channel Bandwidth: 5 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (mW)**	**Polarization (H/V)**
X	26815	826.5	-5.95	31.208	23.11	204.55	H
	26915	836.5	-6.07	31.3	23.08	203.24	
	27015	846.5	-6.05	31.222	23.02	200.54	
	26815	826.5	-11.28	31.504	18.07	64.18	V
	26919	836.5	-10.95	31.117	18.02	63.34	
	27015	846.5	-11.70	31.922	18.07	64.15	
Channel Bandwidth: 5 MHz / 16QAM							
X	26815	826.5	-6.98	31.208	22.08	161.36	H
	26915	836.5	-7.10	31.3	22.05	160.32	
	27015	846.5	-6.97	31.222	22.10	162.26	
	26815	826.5	-12.30	31.504	17.05	50.75	V
	26919	836.5	-11.86	31.117	17.11	51.37	
	27015	846.5	-12.74	31.922	17.03	50.49	
Channel Bandwidth: 5 MHz / 64QAM							
X	26815	826.5	-7.99	31.208	21.07	127.88	H
	26915	836.5	-8.11	31.3	21.04	127.06	
	27015	846.5	-7.99	31.222	21.08	128.29	
	26815	826.5	-13.32	31.504	16.03	40.12	V
	26919	836.5	-12.89	31.117	16.08	40.52	
	27015	846.5	-13.71	31.922	16.06	40.38	

LTE Band 26							
Channel Bandwidth: 10 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (mW)**	**Polarization (H/V)**
X	26840	829.0	-5.93	31.208	23.13	205.49	H
	26915	836.5	-6.09	31.3	23.06	202.30	
	26990	844.0	-6.00	31.222	23.07	202.86	
	26840	829.0	-11.26	31.504	18.09	64.48	V
	26919	836.5	-10.97	31.117	18.00	63.05	
	26990	844.0	-11.76	31.922	18.01	63.23	
Channel Bandwidth: 10 MHz / 16QAM							
X	26840	829.0	-7.02	31.208	22.04	159.88	H
	26915	836.5	-7.08	31.3	22.07	161.06	
	26990	844.0	-6.98	31.222	22.09	161.88	
	26840	829.0	-12.26	31.504	17.09	51.22	V
	26919	836.5	-11.93	31.117	17.04	50.55	
	26990	844.0	-12.74	31.922	17.03	50.49	
Channel Bandwidth: 10 MHz / 64QAM							
X	26840	829.0	-8.05	31.208	21.01	126.12	H
	26915	836.5	-8.11	31.3	21.04	127.06	
	26990	844.0	-7.96	31.222	21.11	129.18	
	26840	829.0	-13.24	31.504	16.11	40.87	V
	26919	836.5	-12.97	31.117	16.00	39.78	
	26990	844.0	-13.71	31.922	16.06	40.38	

LTE Band 26							
Channel Bandwidth: 15 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (mW)**	**Polarization (H/V)**
X	26865	831.5	-5.90	31.208	23.16	206.92	H
	26915	836.5	-6.02	31.3	23.13	205.59	
	26965	841.5	-6.00	31.222	23.07	202.86	
	26865	831.5	-11.16	31.504	18.19	65.98	V
	26915	836.5	-10.86	31.117	18.11	64.67	
	26965	841.5	-11.73	31.922	18.04	63.71	
Channel Bandwidth: 15 MHz / 16QAM							
X	26865	831.5	-6.88	31.208	22.18	165.12	H
	26915	836.5	-7.00	31.3	22.15	164.06	
	26965	841.5	-6.98	31.222	22.09	161.88	
	26865	831.5	-12.20	31.504	17.15	51.93	V
	26915	836.5	-11.86	31.117	17.11	51.37	
	26965	841.5	-12.69	31.922	17.08	51.07	
Channel Bandwidth: 15 MHz / 64QAM							
X	26865	831.5	-7.90	31.208	21.16	130.56	H
	26915	836.5	-8.04	31.3	21.11	129.12	
	26965	841.5	-8.00	31.222	21.07	128.00	
	26865	831.5	-13.16	31.504	16.19	41.63	V
	26915	836.5	-12.84	31.117	16.13	40.99	
	26965	841.5	-13.70	31.922	16.07	40.48	

4.2 Frequency Stability Measurement

4.2.1 Limits of Frequency Stabiliity Measurement

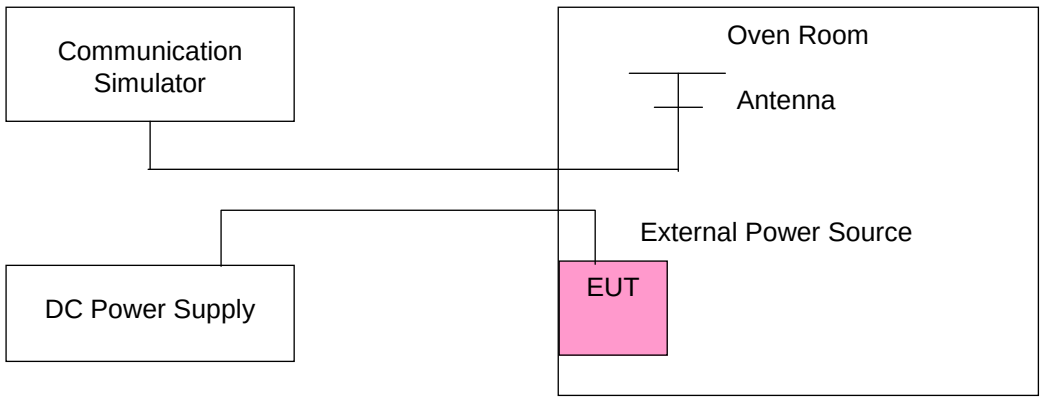
1.5 ppm is for base and fixed station. 2.5 ppm is for mobile station.

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)	WCDMA				Limit (ppm)
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	826.400003	0.004	846.600003	0.003	2.5
14.0	826.400002	0.002	846.600004	0.005	2.5
17.0	826.400002	0.002	846.600004	0.004	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (℃)	WCDMA				Limit (ppm)
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	826.400002	0.003	846.600003	0.003	2.5
-20	826.400003	0.004	846.600002	0.002	2.5
-10	826.400003	0.004	846.600004	0.004	2.5
0	826.400003	0.004	846.600004	0.005	2.5
10	826.399999	-0.001	846.599998	-0.002	2.5
20	826.399999	-0.001	846.599998	-0.003	2.5
30	826.399999	-0.001	846.599999	-0.002	2.5
40	826.399997	-0.003	846.599998	-0.002	2.5
50	826.399996	-0.004	846.599996	-0.004	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 5				Limit (ppm)
	Channel Bandwidth: 1.4 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	824.700004	0.005	848.300002	0.003	2.5
14.0	824.700003	0.004	848.300001	0.001	2.5
17.0	824.700003	0.003	848.300001	0.002	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 5				Limit (ppm)
	Channel Bandwidth: 1.4 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	824.700003	0.004	848.300003	0.003	2.5
-20	824.700004	0.004	848.300004	0.004	2.5
-10	824.700003	0.003	848.300002	0.002	2.5
0	824.700003	0.004	848.300002	0.002	2.5
10	824.700003	0.004	848.300003	0.004	2.5
20	824.699996	-0.005	848.299997	-0.004	2.5
30	824.699998	-0.003	848.299998	-0.002	2.5
40	824.699997	-0.003	848.299999	-0.002	2.5
50	824.699997	-0.004	848.299997	-0.004	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 5				Limit (ppm)
	Channel Bandwidth: 3 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	825.500002	0.002	847.500002	0.003	2.5
14.0	825.500002	0.002	847.500002	0.003	2.5
17.0	825.500004	0.004	847.500004	0.004	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 5				Limit (ppm)
	Channel Bandwidth: 3 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	825.500004	0.004	847.500002	0.002	2.5
-20	825.500001	0.001	847.500002	0.002	2.5
-10	825.500002	0.002	847.500001	0.002	2.5
0	825.500004	0.005	847.500003	0.004	2.5
10	825.500003	0.004	847.500003	0.004	2.5
20	825.499998	-0.003	847.499997	-0.004	2.5
30	825.499999	-0.002	847.499998	-0.002	2.5
40	825.499997	-0.004	847.499998	-0.003	2.5
50	825.499997	-0.004	847.499998	-0.002	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 5				Limit (ppm)
	Channel Bandwidth: 5 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	826.500003	0.004	846.500004	0.005	2.5
14.0	826.500002	0.002	846.500002	0.002	2.5
17.0	826.500002	0.002	846.500003	0.004	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 5				Limit (ppm)
	Channel Bandwidth: 5 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	826.500004	0.005	846.500003	0.004	2.5
-20	826.500001	0.001	846.500003	0.003	2.5
-10	826.500004	0.005	846.500002	0.002	2.5
0	826.500001	0.001	846.500002	0.002	2.5
10	826.500003	0.004	846.500001	0.002	2.5
20	826.499996	-0.004	846.499997	-0.003	2.5
30	826.499998	-0.002	846.499999	-0.001	2.5
40	826.499996	-0.005	846.499996	-0.005	2.5
50	826.499999	-0.001	846.499997	-0.003	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 5				Limit (ppm)
	Channel Bandwidth: 10 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	829.000003	0.003	844.000003	0.004	2.5
14.0	829.000002	0.002	844.000002	0.003	2.5
17.0	829.000001	0.002	844.000001	0.001	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 5				Limit (ppm)
	Channel Bandwidth: 10 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	829.000002	0.002	844.000002	0.003	2.5
-20	829.000001	0.002	844.000003	0.003	2.5
-10	829.000001	0.001	844.000004	0.004	2.5
0	829.000002	0.003	844.000002	0.002	2.5
10	829.000001	0.001	844.000004	0.005	2.5
20	828.999998	-0.002	843.999996	-0.004	2.5
30	828.999998	-0.003	843.999999	-0.002	2.5
40	828.999997	-0.004	843.999997	-0.003	2.5
50	828.999999	-0.002	843.999998	-0.002	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 26				Limit (ppm)
	Channel Bandwidth: 1.4 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	824.700003	0.004	848.300003	0.004	2.5
14.0	824.700003	0.004	848.300002	0.003	2.5
17.0	824.700001	0.001	848.300004	0.004	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 26				Limit (ppm)
	Channel Bandwidth: 1.4 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	824.700004	0.004	848.300004	0.004	2.5
-20	824.700002	0.003	848.300003	0.004	2.5
-10	824.700004	0.005	848.300003	0.003	2.5
0	824.700002	0.002	848.300004	0.004	2.5
10	824.699998	-0.003	848.299997	-0.004	2.5
20	824.699999	-0.002	848.299998	-0.002	2.5
30	824.699996	-0.005	848.299996	-0.005	2.5
40	824.699997	-0.003	848.299998	-0.002	2.5
50	824.699999	-0.002	848.299996	-0.004	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 26				Limit (ppm)
	Channel Bandwidth: 3 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	825.500003	0.004	847.500002	0.002	2.5
14.0	825.500002	0.003	847.500003	0.003	2.5
17.0	825.500001	0.002	847.500002	0.002	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 26				Limit (ppm)
	Channel Bandwidth: 3 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	825.500002	0.003	847.500003	0.004	2.5
-20	825.500001	0.001	847.500001	0.002	2.5
-10	825.500004	0.004	847.500004	0.004	2.5
0	825.500001	0.002	847.500002	0.002	2.5
10	825.499998	-0.002	847.499998	-0.002	2.5
20	825.499997	-0.004	847.499997	-0.004	2.5
30	825.499997	-0.004	847.499997	-0.004	2.5
40	825.499998	-0.002	847.499998	-0.003	2.5
50	825.499998	-0.002	847.499998	-0.002	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 26				Limit (ppm)
	Channel Bandwidth: 5 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	826.500003	0.004	846.500002	0.002	2.5
14.0	826.500004	0.004	846.500003	0.004	2.5
17.0	826.500002	0.003	846.500003	0.003	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 26				Limit (ppm)
	Channel Bandwidth: 5 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	826.500003	0.004	846.500001	0.001	2.5
-20	826.500003	0.004	846.500003	0.003	2.5
-10	826.500002	0.003	846.500002	0.002	2.5
0	826.500002	0.002	846.500004	0.005	2.5
10	826.499997	-0.004	846.499999	-0.001	2.5
20	826.499997	-0.003	846.499996	-0.005	2.5
30	826.499996	-0.005	846.499998	-0.002	2.5
40	826.499998	-0.002	846.499998	-0.002	2.5
50	826.499997	-0.004	846.499997	-0.004	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 26				Limit (ppm)
	Channel Bandwidth: 10 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	829.000003	0.004	844.000002	0.002	2.5
14.0	829.000001	0.001	844.000001	0.002	2.5
17.0	829.000002	0.002	844.000001	0.002	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 26				Limit (ppm)
	Channel Bandwidth: 10 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	829.000002	0.002	844.000002	0.002	2.5
-20	829.000003	0.004	844.000002	0.002	2.5
-10	829.000004	0.005	844.000002	0.003	2.5
0	829.000003	0.003	844.000003	0.003	2.5
10	828.999998	-0.002	843.999997	-0.003	2.5
20	828.999999	-0.001	843.999999	-0.001	2.5
30	828.999997	-0.004	843.999999	-0.002	2.5
40	828.999996	-0.005	843.999999	-0.002	2.5
50	828.999998	-0.003	843.999997	-0.004	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 26				Limit (ppm)
	Channel Bandwidth: 15 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	831.500003	0.004	841.500003	0.004	2.5
14.0	831.500003	0.003	841.500001	0.001	2.5
17.0	831.500001	0.002	841.500003	0.004	2.5

Note: The applicant defined the normal working voltage of the battery is from 14.0 Vdc to 17.0 Vdc.

Frequency Error vs. Temperature

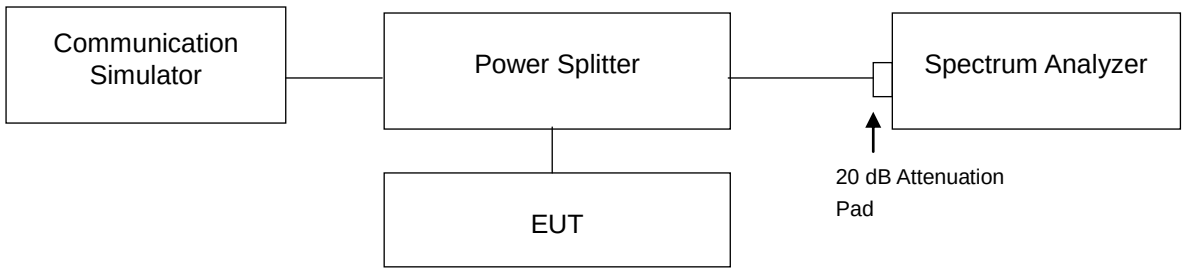
Temp. (℃)	LTE Band 26				Limit (ppm)
	Channel Bandwidth: 15 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	831.500002	0.002	841.500003	0.004	2.5
-20	831.500002	0.003	841.500001	0.001	2.5
-10	831.500002	0.002	841.500004	0.005	2.5
0	831.500004	0.004	841.500003	0.004	2.5
10	831.499997	-0.003	841.499997	-0.004	2.5
20	831.499997	-0.003	841.499997	-0.003	2.5
30	831.499998	-0.002	841.499997	-0.004	2.5
40	831.499997	-0.004	841.499997	-0.004	2.5
50	831.499998	-0.003	841.499999	-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.

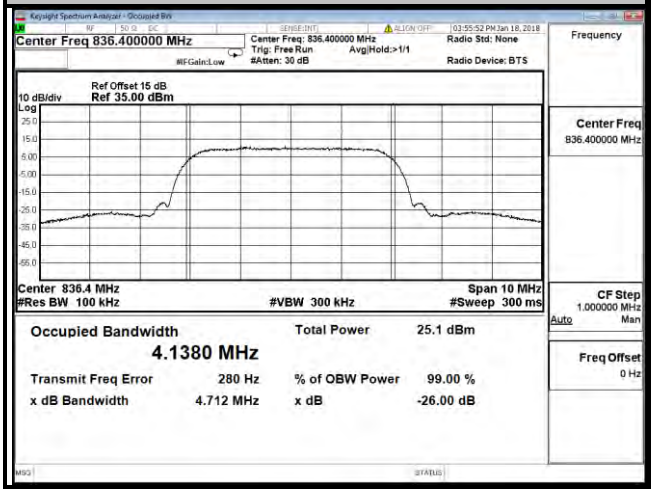
4.3.2 Test Setup



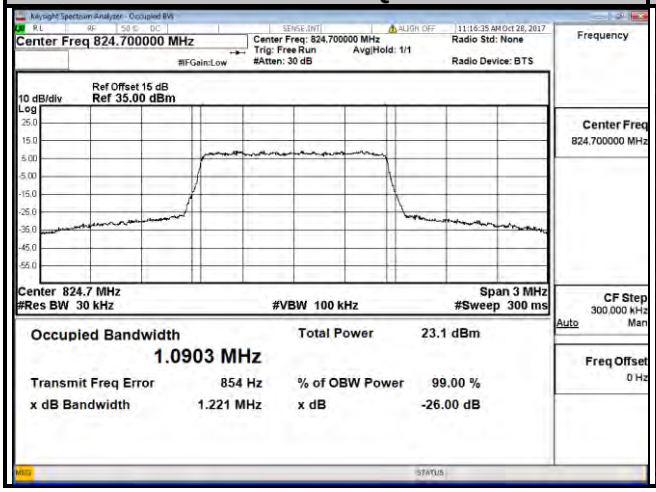
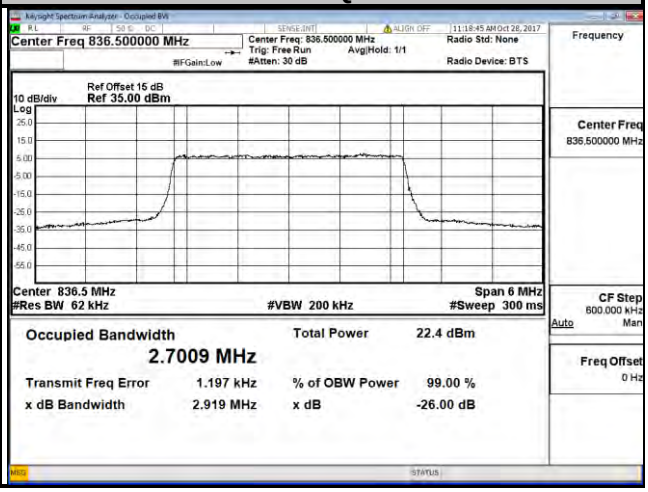
4.3.3 Test Result

Channel	Frequency (MHz)	99 % Occupied Bandwidth (kHz)
		WCDMA
4132	826.4	4.1225
4182	836.4	4.1380
4233	846.6	4.1236

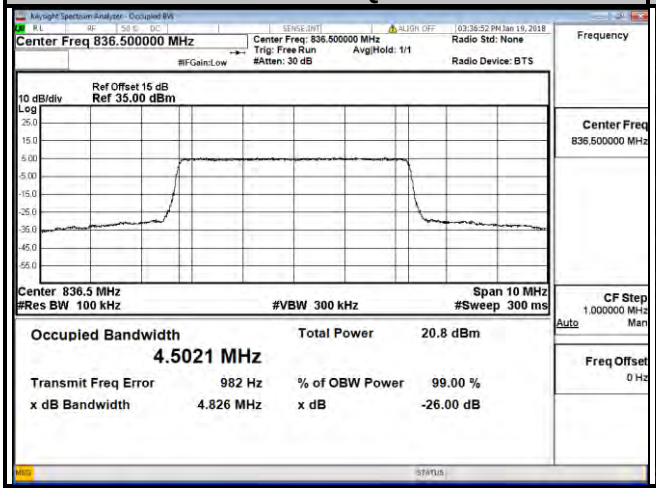
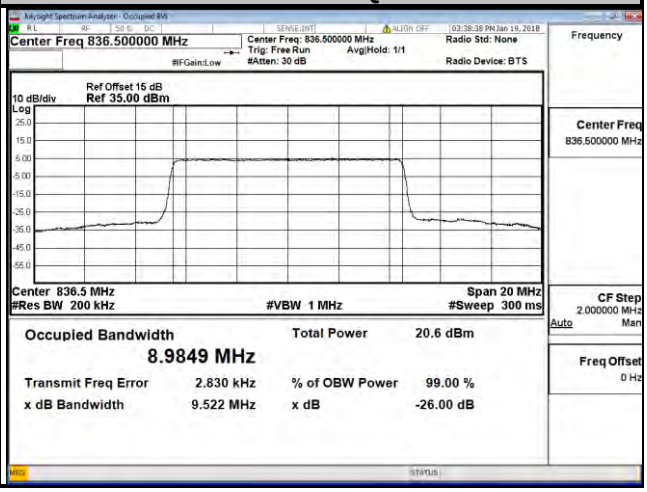
Spectrum Plot of Worst Value
WCDMA



LTE Band 5									
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	64QAM			QPSK	16QAM	64QAM
20407	824.7	1.0861	1.0903	1.0883	20415	825.5	2.6994	2.6969	2.6947
20525	836.5	1.0858	1.0880	1.0895	20525	836.5	2.7009	2.6979	2.6986
20643	848.3	1.0870	1.0884	1.0889	20635	847.5	2.6998	2.6954	2.6963

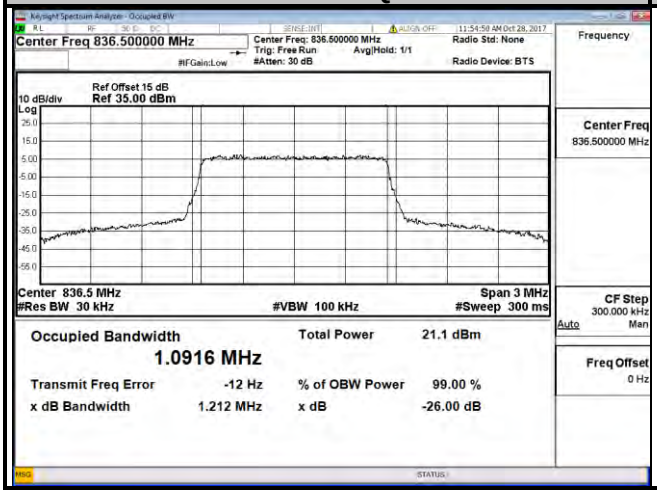
Spectrum Plot of Worst Value	
1.4 MHz / 16QAM	3 MHz / QPSK
	

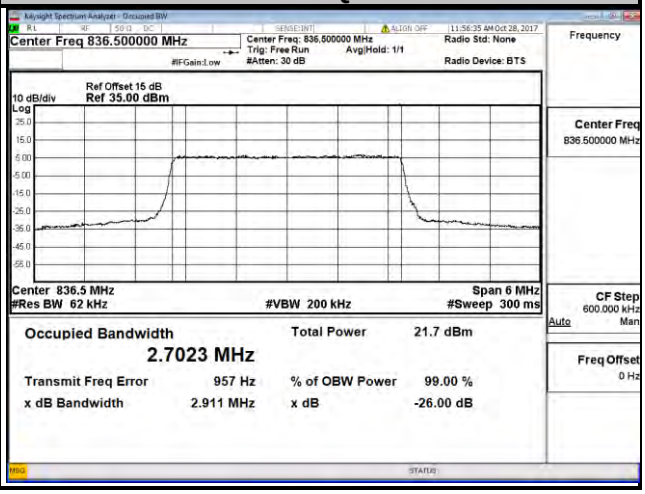
LTE Band 5									
Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)			Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
20425	826.5	4.4861	4.4887	4.4957	20450	829.0	8.9591	8.9594	8.9598
20525	836.5	4.4907	4.4919	4.5021	20525	836.5	8.9803	8.9804	8.9849
20625	846.5	4.4845	4.4874	4.4938	20600	844.0	8.9328	8.9368	8.9355

Spectrum Plot of Worst Value	
5 MHz / 64QAM	10 MHz / 64QAM
	

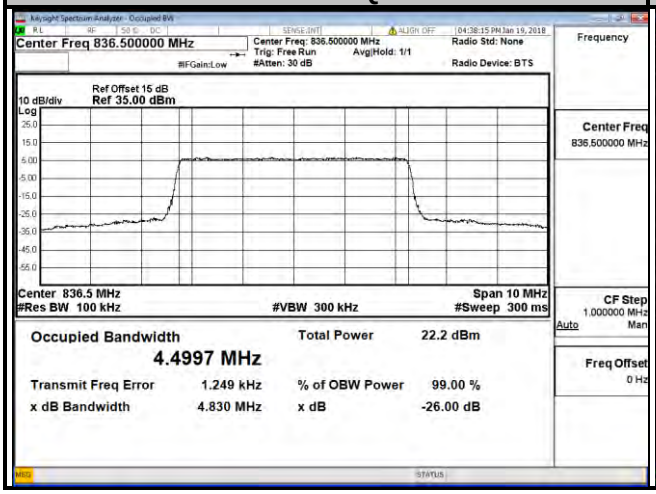
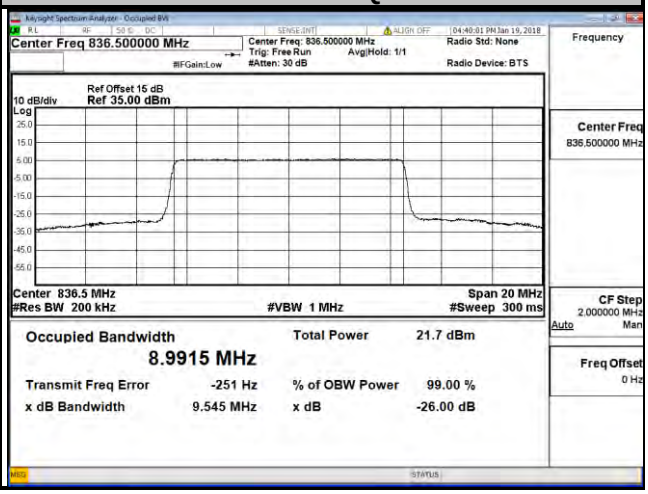
LTE Band 26									
Channel Bandwidth: 1.4 MHz					Channel Bandwidth: 3 MHz				
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)			Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
26797	824.7	1.0859	1.0901	1.0886	26805	825.5	2.6994	2.6975	2.6961
26915	836.5	1.0875	1.0916	1.0889	26915	836.5	2.7023	2.6983	2.6993
27033	848.3	1.0875	1.0911	1.0882	27025	847.5	2.6995	2.6960	2.6967

Spectrum Plot of Worst Value	
1.4 MHz / 16QAM	3 MHz / QPSK



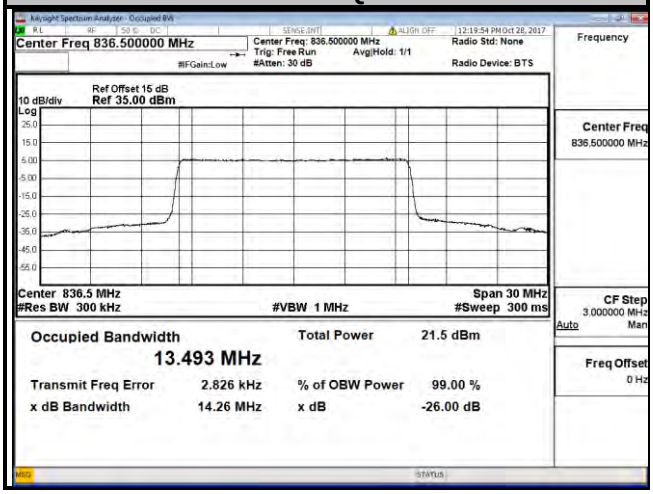


LTE Band 26									
Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)			Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
26815	826.5	4.4854	4.4884	4.4949	26840	829.0	8.9534	8.9579	8.9587
26915	836.5	4.4910	4.4915	4.4997	26915	836.5	8.9815	8.9810	8.9915
27015	846.5	4.4858	4.4857	4.4928	26990	844.0	8.9328	8.9362	8.9325

Spectrum Plot of Worst Value	
5 MHz / 64QAM	10 MHz / 64QAM
	

LTE Band 26				
Channel Bandwidth: 15 MHz				
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
26865	831.5	13.467	13.451	13.451
26915	836.5	13.493	13.486	13.483
26965	841.5	13.416	13.402	13.395

Spectrum Plot of Worst Value
15 MHz / QPSK

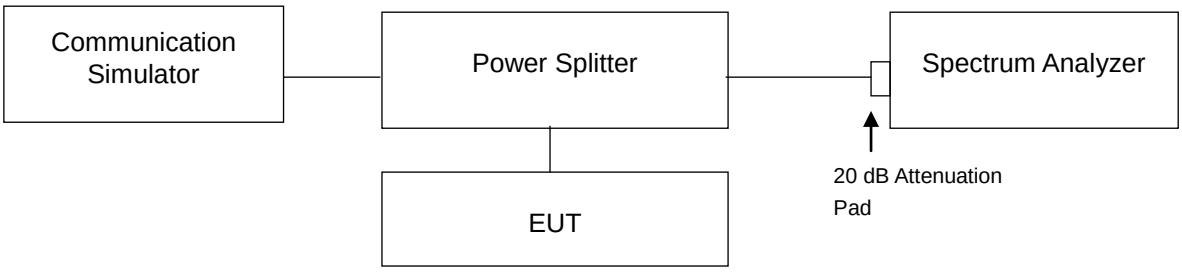


4.4 Band Edge Measurement

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.

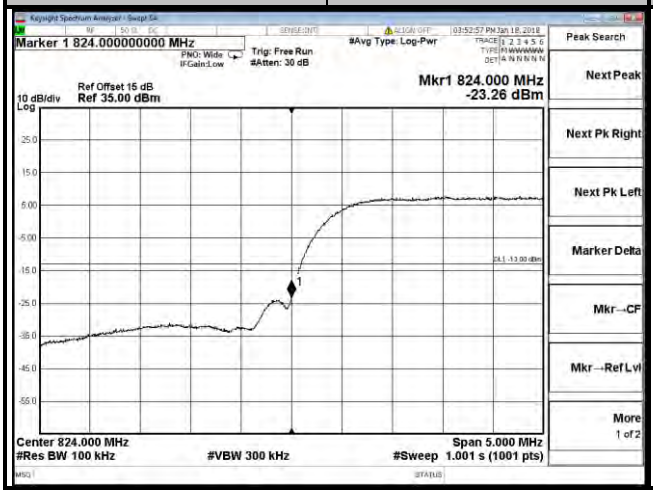
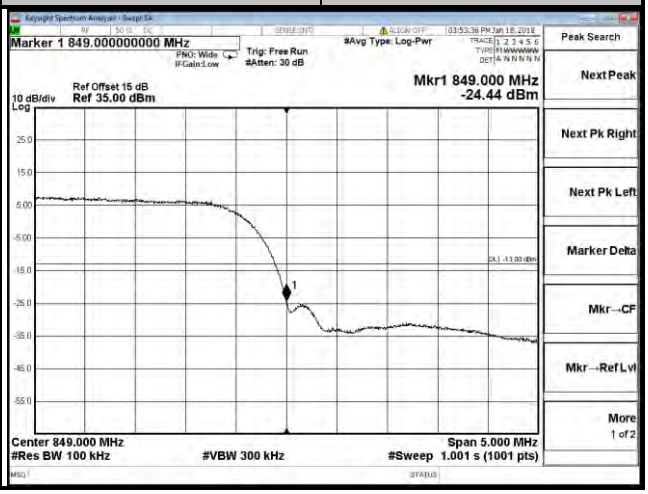
4.4.2 Test Setup

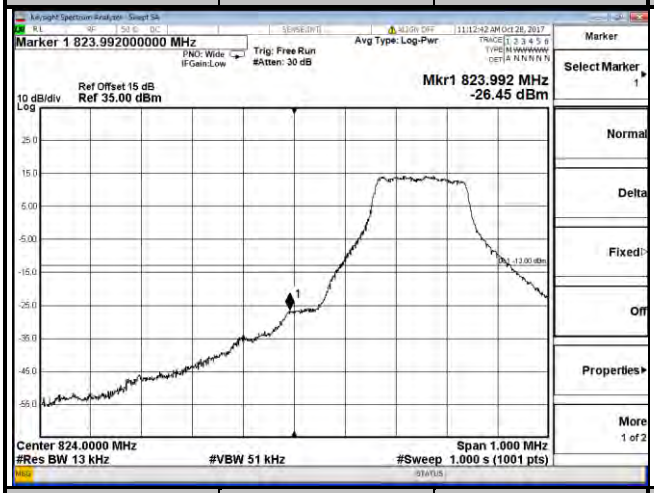
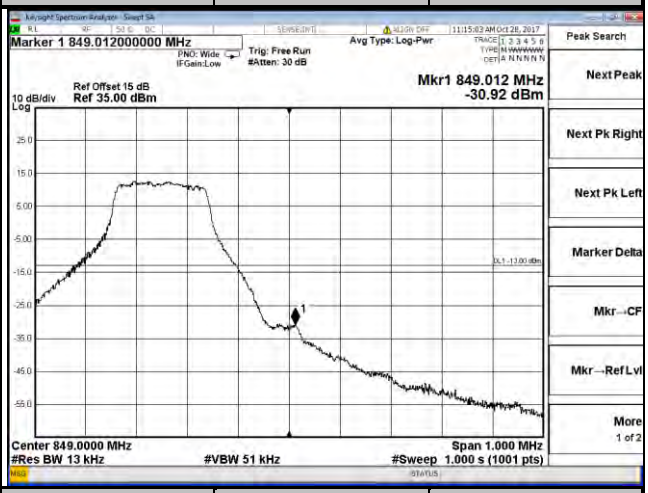
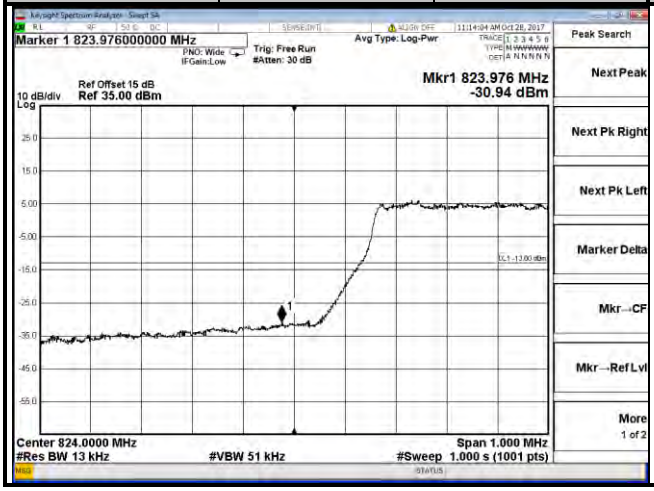
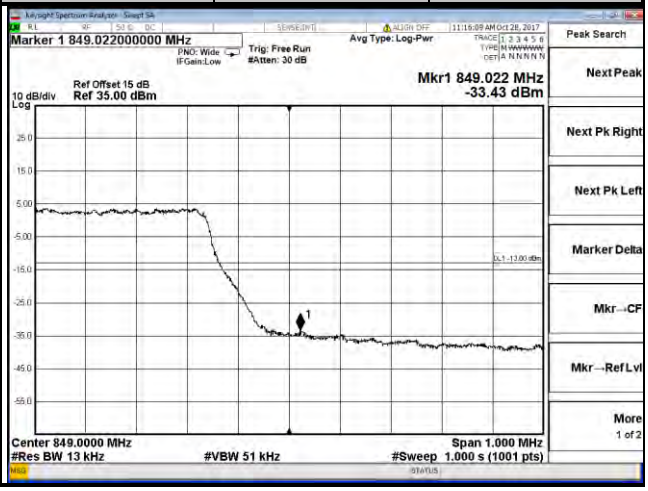


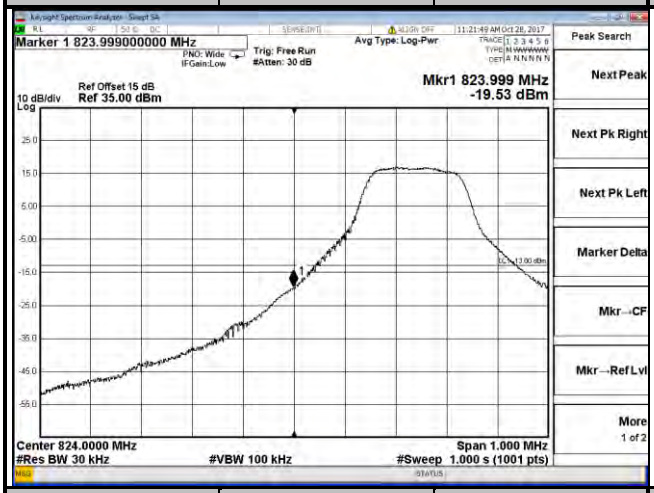
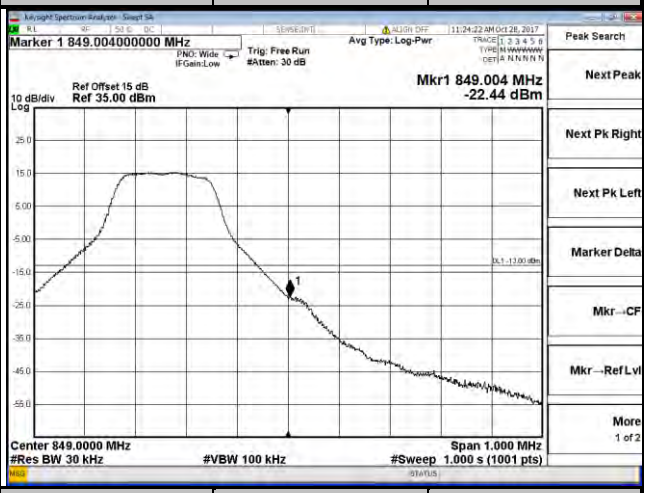
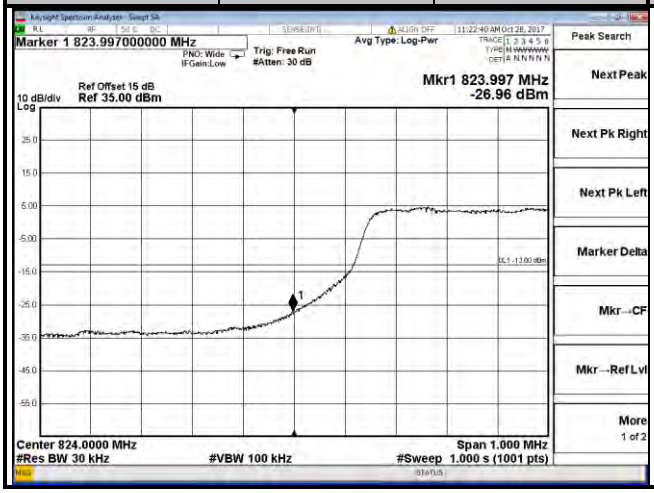
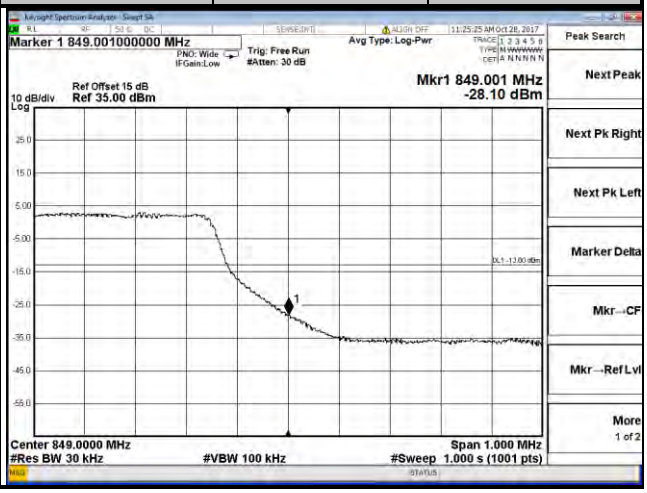
4.4.3 Test Procedures

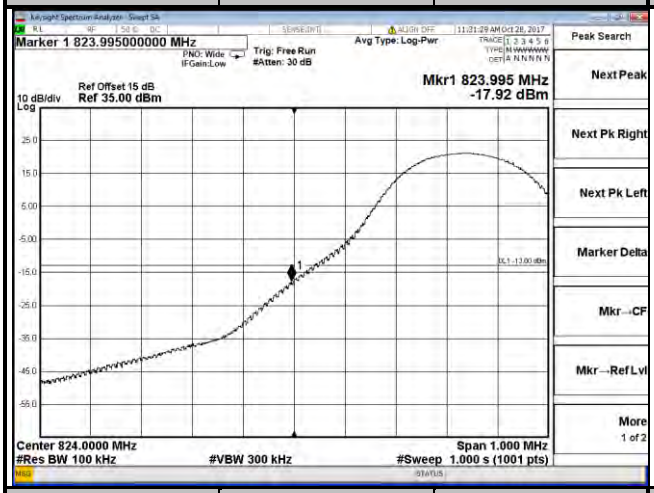
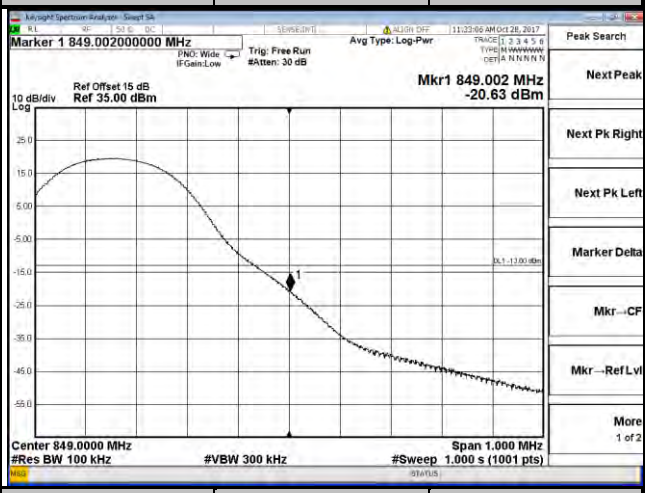
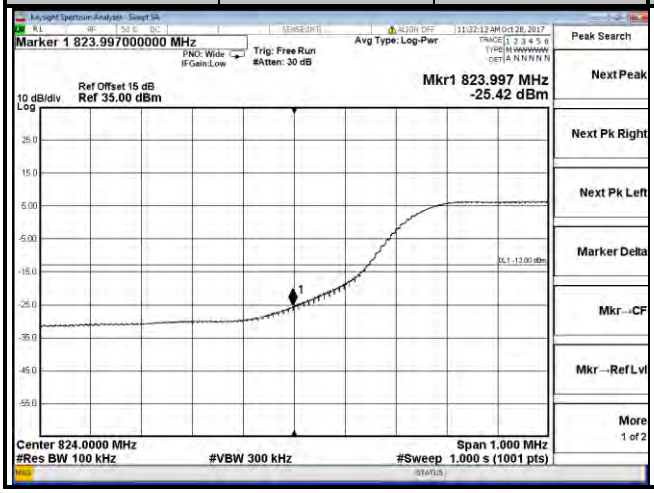
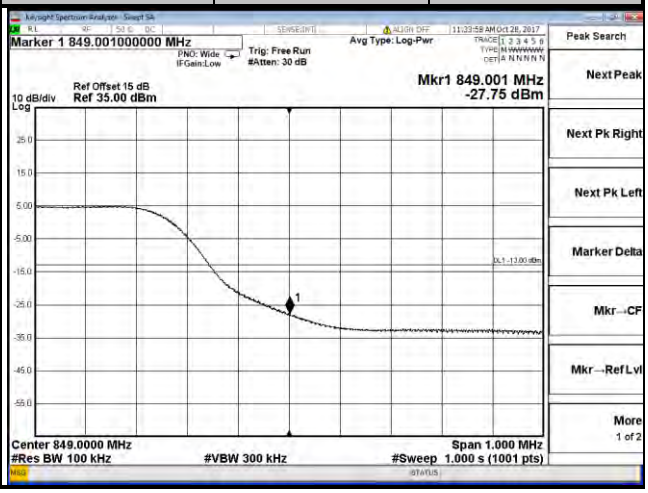
a. All measurements were done at low and high operational frequency range.
b. The center frequency of spectrum is the band edge frequency and span is 5 MHz. RB of the spectrum is 100 kHz and VB of the spectrum is 300 kHz (WCDMA).
c. The center frequency of spectrum is the band edge frequency and span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

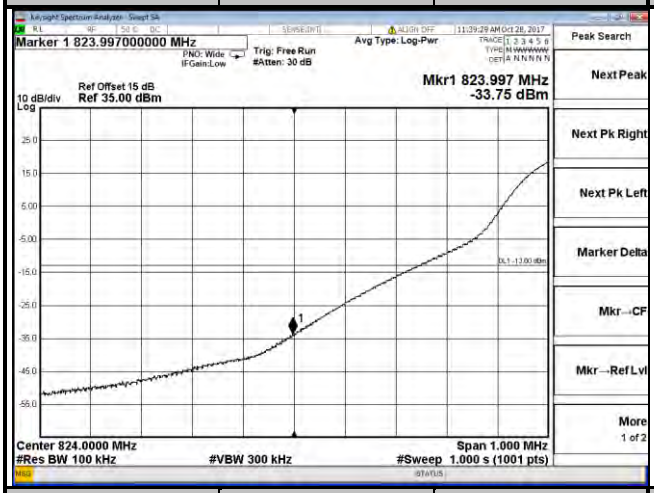
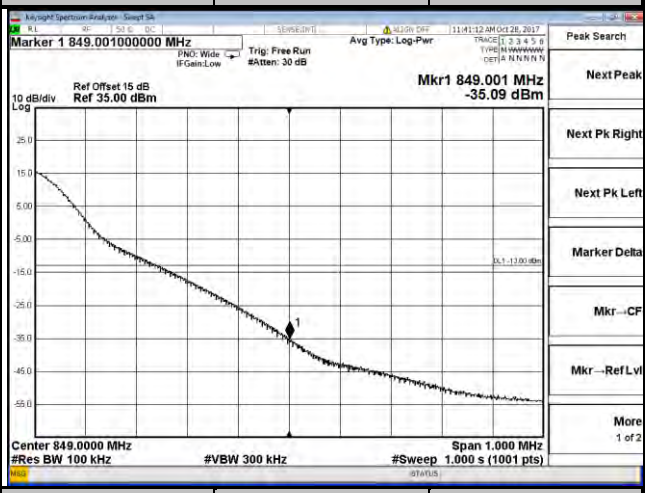
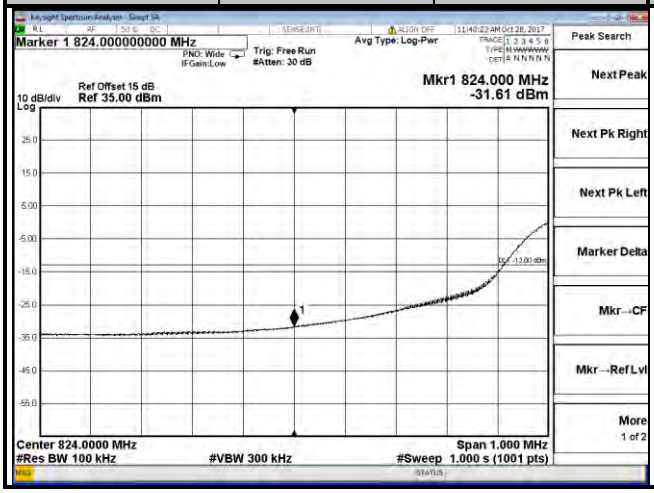
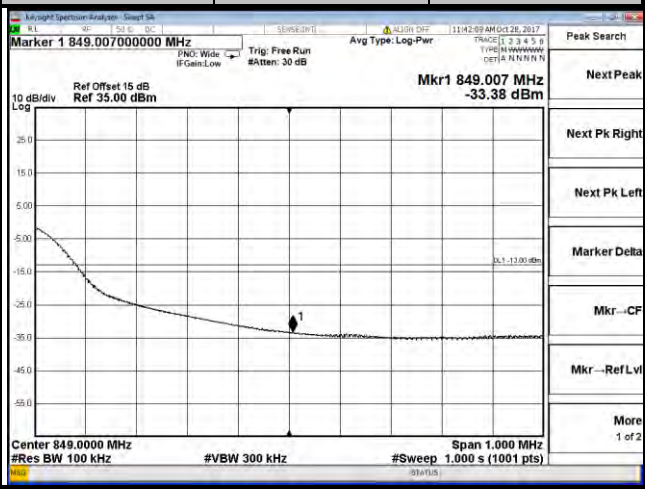
4.4.4 Test Results

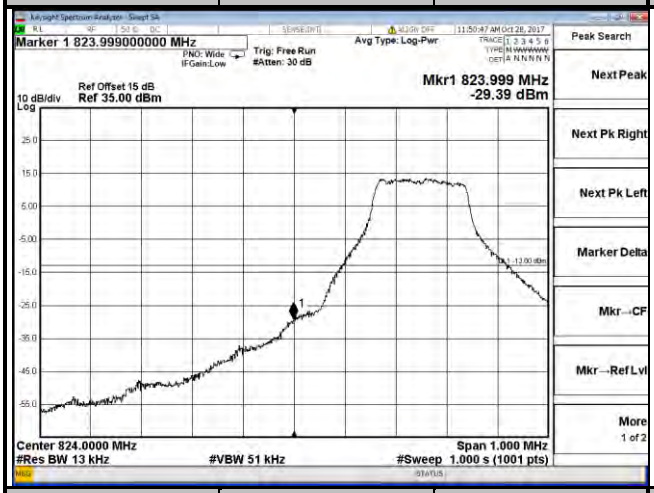
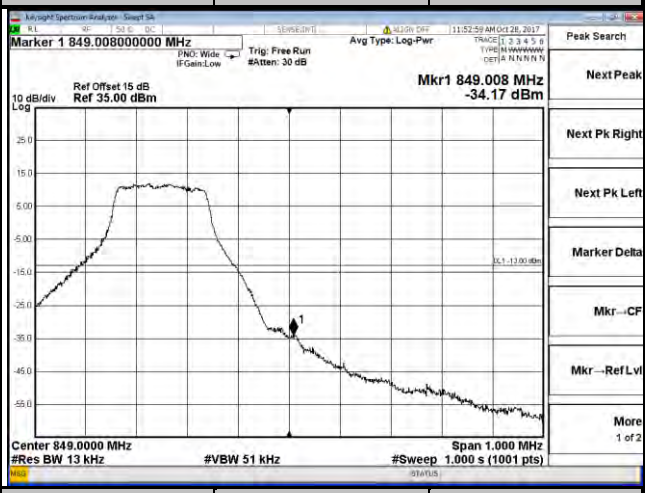
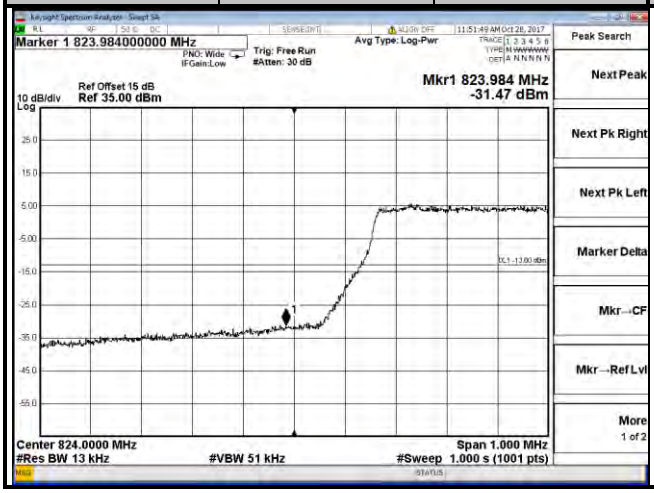
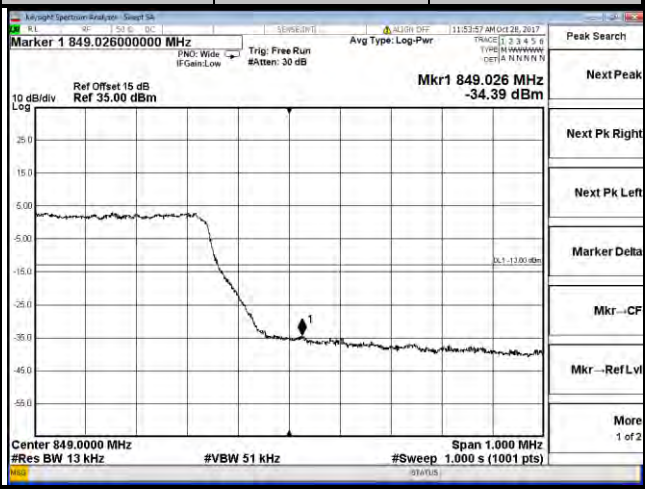
WCDMA			
Channel	4132	Channel	4233
			

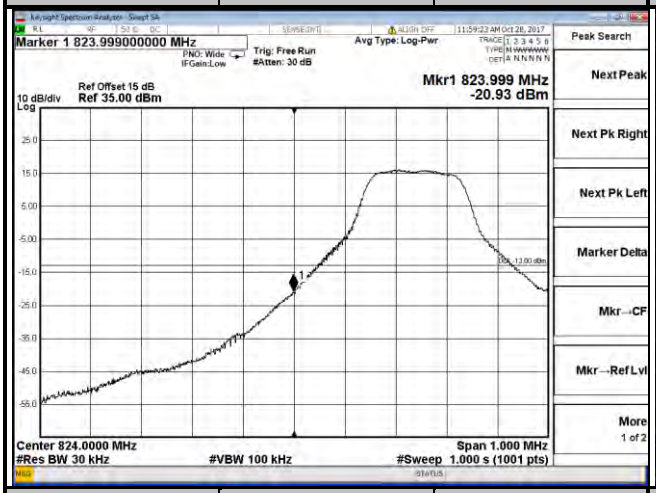
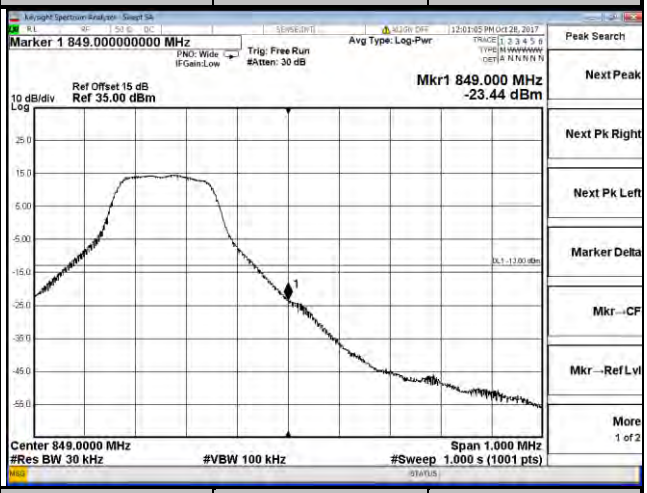
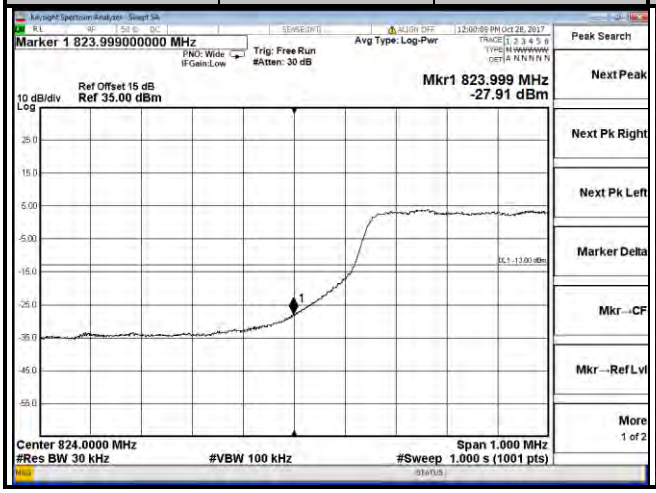
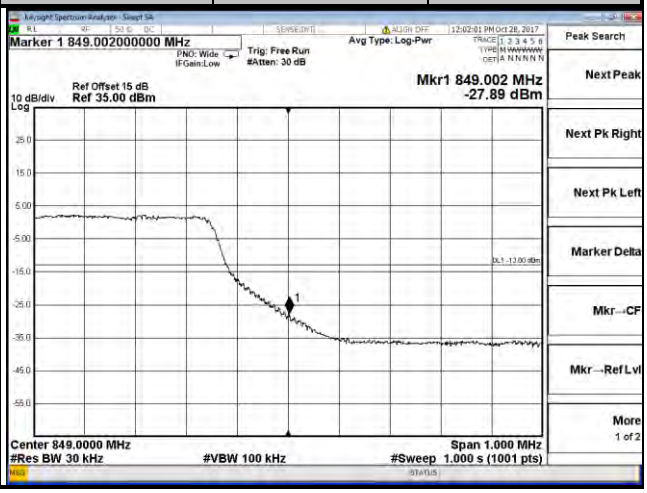
LTE Band 5					
Channel Bandwidth: 1.4 MHz					
Channel	20407	1 RB	Channel	20643	1 RB
					
Channel	20407	6 RB	Channel	20643	6 RB
					

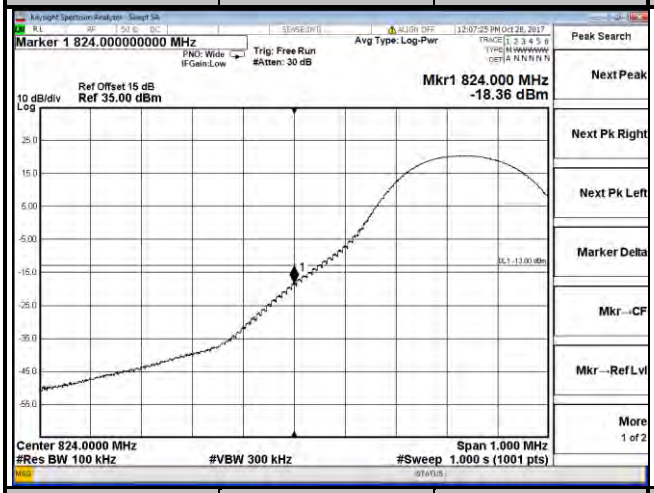
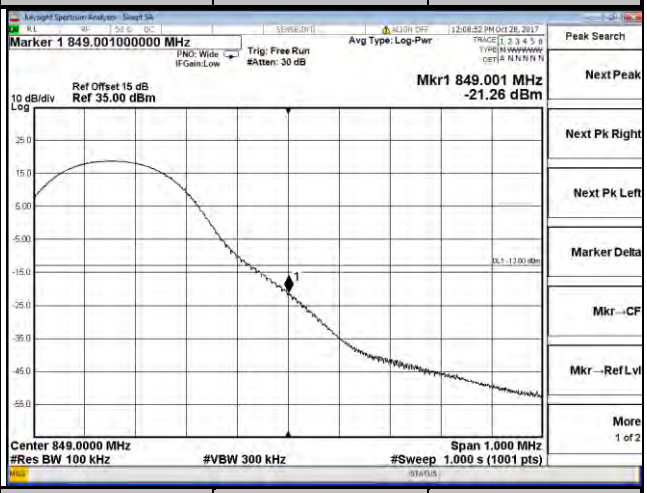
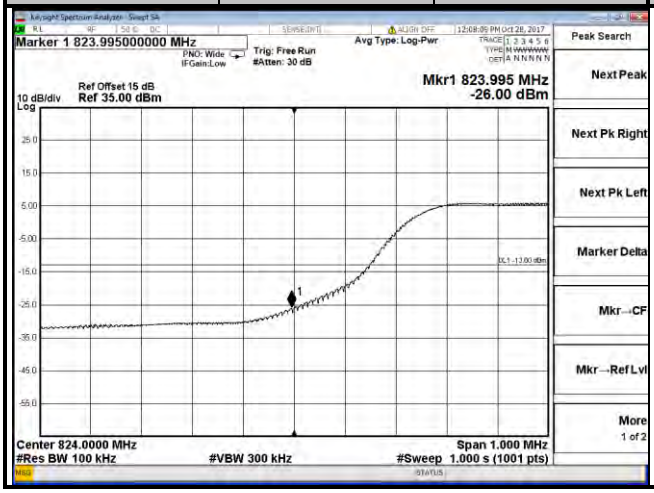
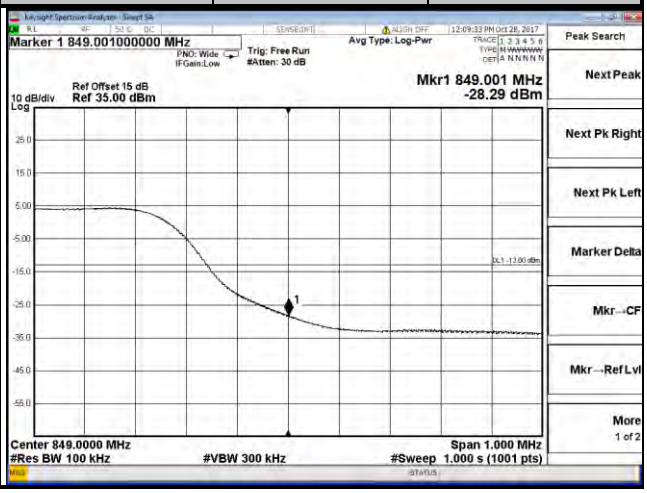
LTE Band 5					
Channel Bandwidth: 3 MHz					
Channel	20415	1 RB	Channel	20635	1 RB
					
Channel	20415	15 RB	Channel	20635	15 RB
					

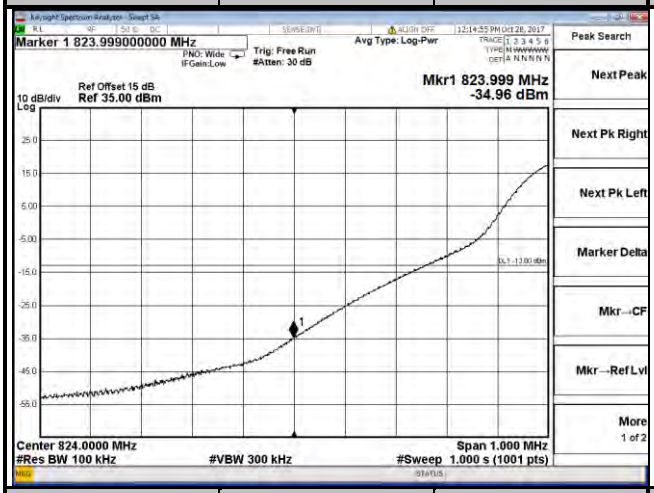
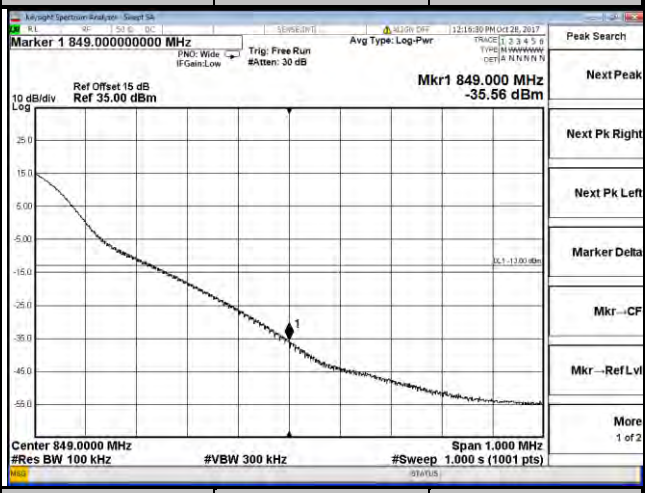
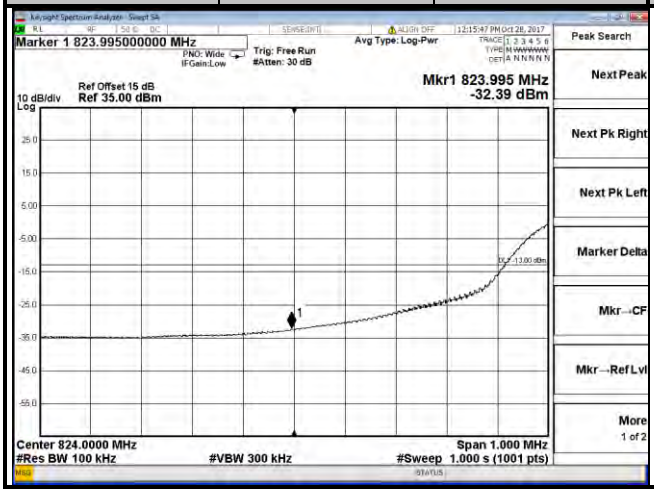
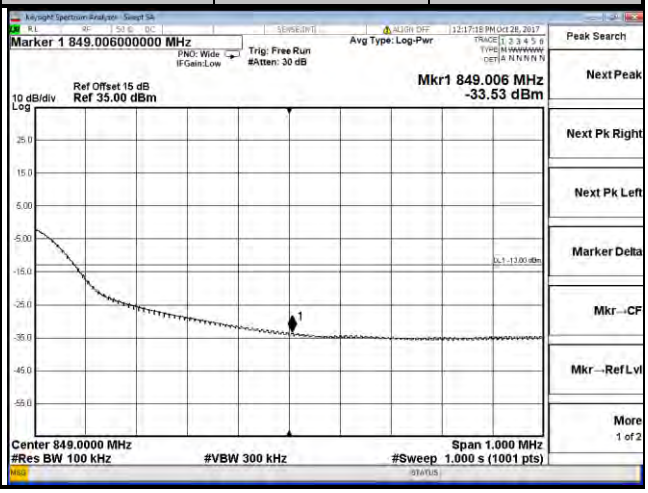
LTE Band 5					
Channel Bandwidth: 5 MHz					
Channel	20425	1 RB	Channel	20625	1 RB
					
Channel	20425	25 RB	Channel	20625	25 RB
					

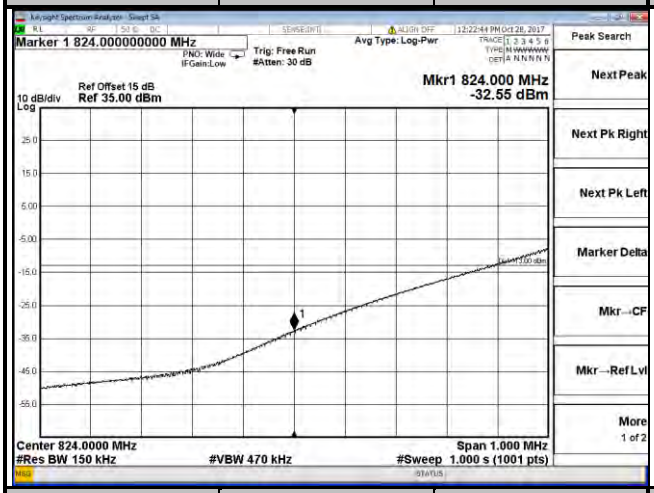
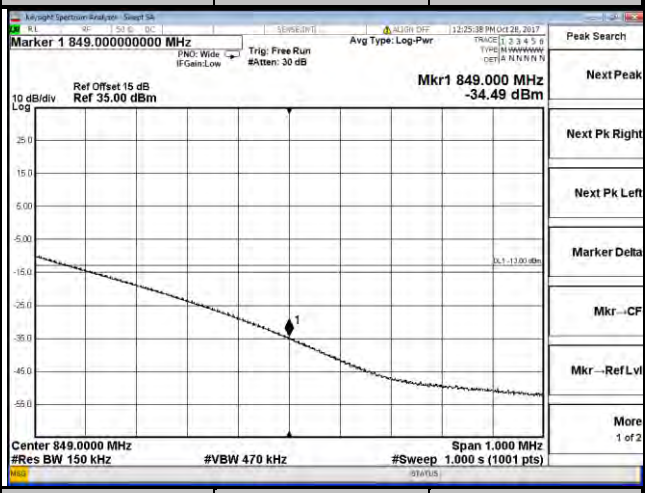
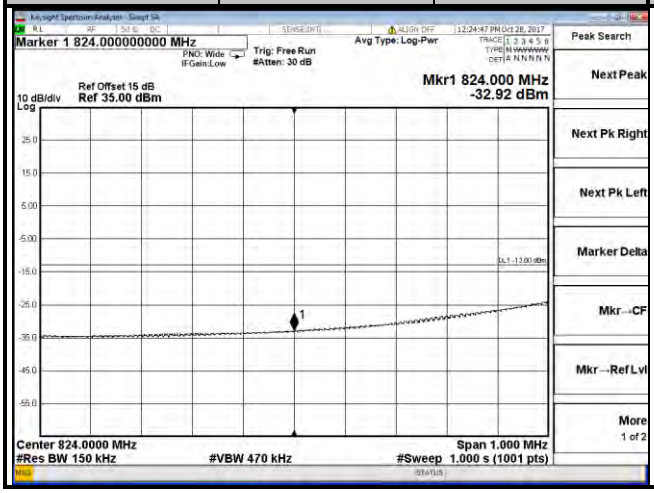
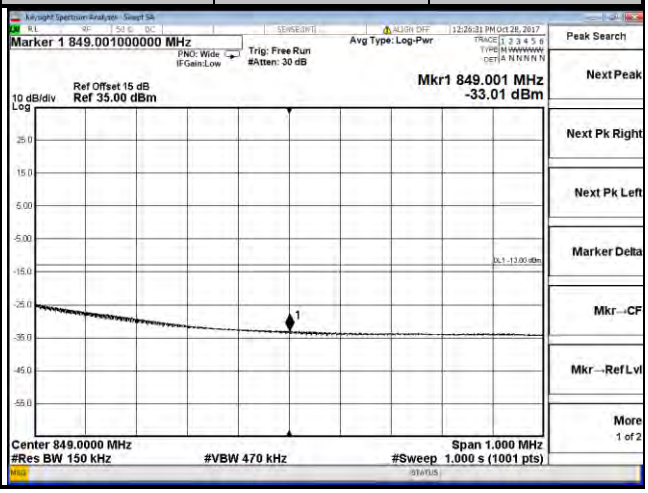
LTE Band 5					
Channel Bandwidth: 10 MHz					
Channel	20450	1 RB	Channel	20600	1 RB
					
Channel	20450	50 RB	Channel	20600	50 RB
					

LTE Band 26					
Channel Bandwidth: 1.4 MHz					
Channel	26797	1 RB	Channel	27033	1 RB
					
Channel	26797	6 RB	Channel	27033	6 RB
					

LTE Band 26					
Channel Bandwidth: 3 MHz					
Channel	26805	1 RB	Channel	27025	1 RB
					
Channel	26805	15 RB	Channel	27025	6 RB
					

LTE Band 26					
Channel Bandwidth: 5 MHz					
Channel	26815	1 RB	Channel	27015	1 RB
					
Channel	26815	25 RB	Channel	27015	25 RB
					

LTE Band 26					
Channel Bandwidth: 10 MHz					
Channel	26840	1 RB	Channel	26990	1 RB
					
Channel	26840	50 RB	Channel	26990	50 RB
					

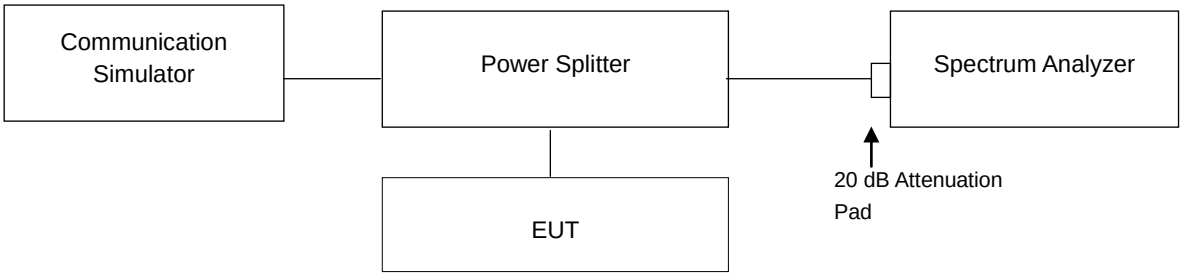
LTE Band 26					
Channel Bandwidth: 15 MHz					
Channel	26865	1 RB	Channel	26965	1 RB
					
Channel	26865	75 RB	Channel	26965	75 RB
					

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



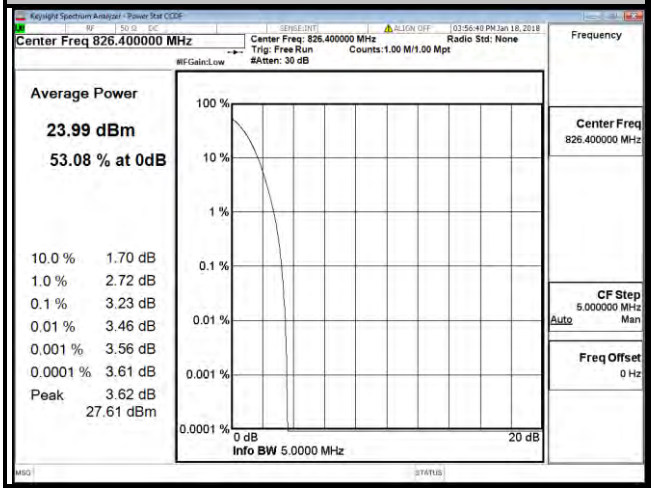
4.5.3 Test Procedures

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

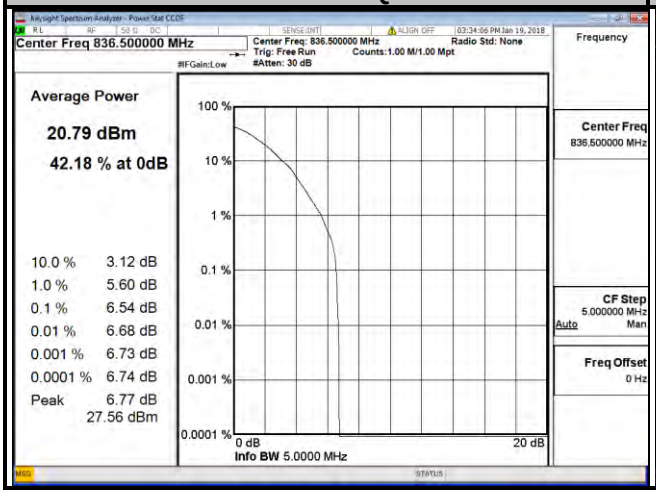
Channel	Frequency (MHz)	Peak to Average Ratio (dB)
		WCDMA
4132	826.4	3.23
4182	836.4	3.20
4233	846.6	3.22

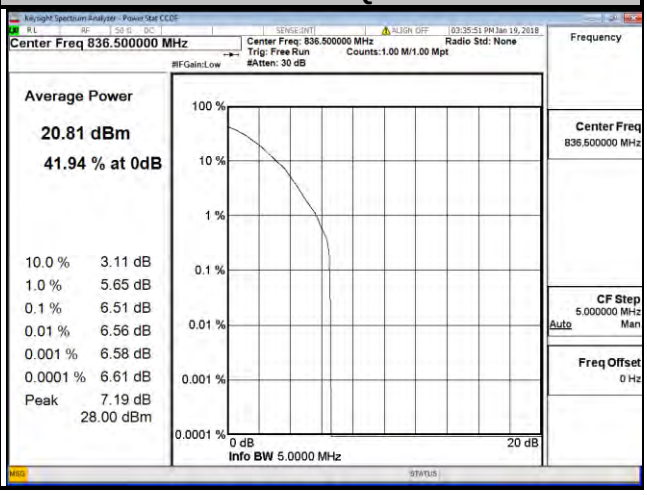
Spectrum Plot of Worst Value
WCDMA



LTE Band 5									
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	64QAM			QPSK	16QAM	64QAM
20407	824.7	4.60	5.39	6.31	20415	825.5	4.50	5.25	6.30
20525	836.5	4.72	5.54	6.54	20525	836.5	4.61	5.38	6.51
20643	848.3	4.65	5.47	6.47	20635	847.5	4.41	5.21	6.27

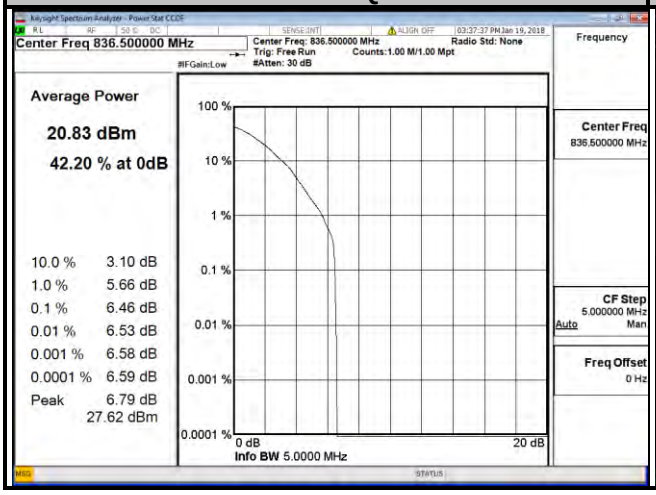
Spectrum Plot of Worst Value	
1.4 MHz / 64QAM	3 MHz / 64QAM

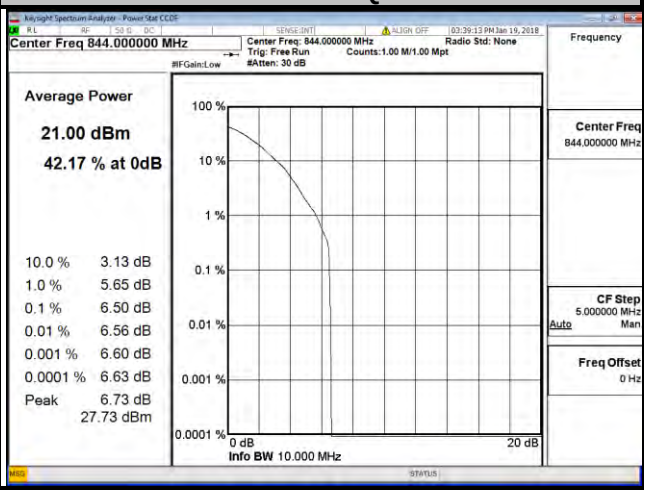




LTE Band 5									
Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)			Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
20425	826.5	4.52	5.27	6.30	20450	829.0	4.50	5.26	6.34
20525	836.5	4.61	5.37	6.46	20525	836.5	4.56	5.30	6.43
20625	846.5	4.17	4.90	5.86	20600	844.0	4.57	5.35	6.50

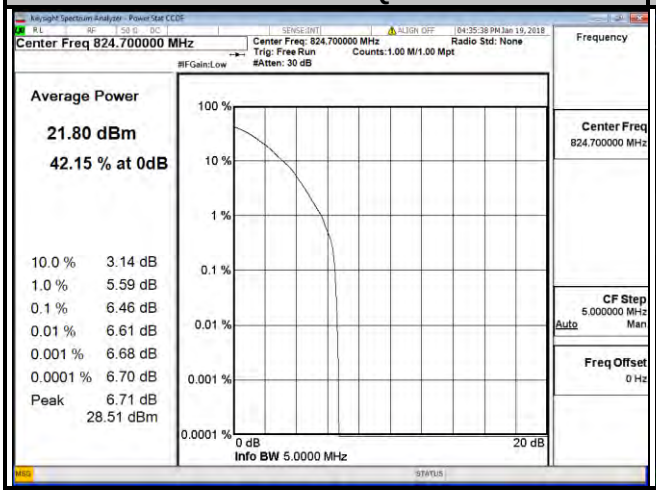
Spectrum Plot of Worst Value	
5 MHz / 64QAM	10 MHz / 64QAM

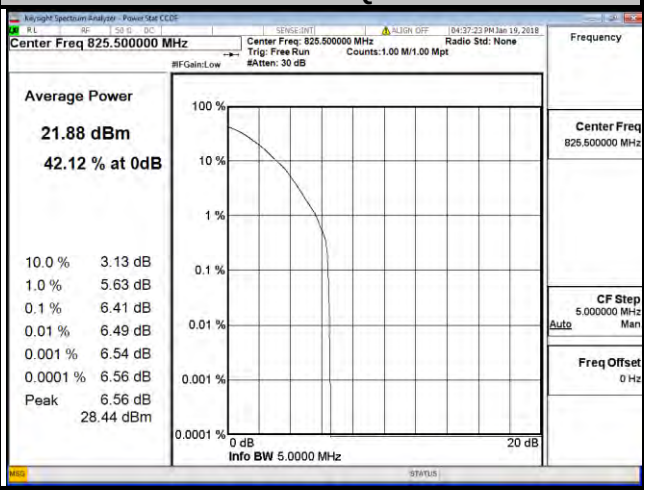




LTE Band 26									
Channel Bandwidth: 1.4 MHz					Channel Bandwidth: 3 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)			Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
26797	824.7	4.82	5.64	6.46	26805	825.5	4.70	5.42	6.41
26915	836.5	4.88	5.69	6.21	26915	836.5	4.73	5.51	6.11
27033	848.3	4.83	5.63	6.05	27025	847.5	4.63	5.35	6.09

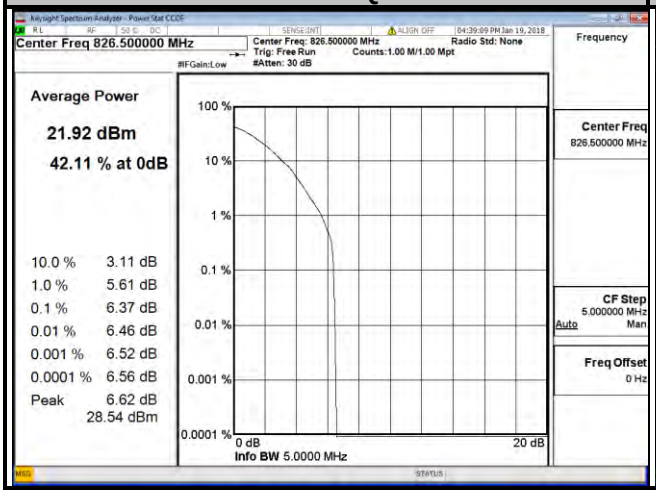
Spectrum Plot of Worst Value	
1.4 MHz / 64QAM	3 MHz / 64QAM

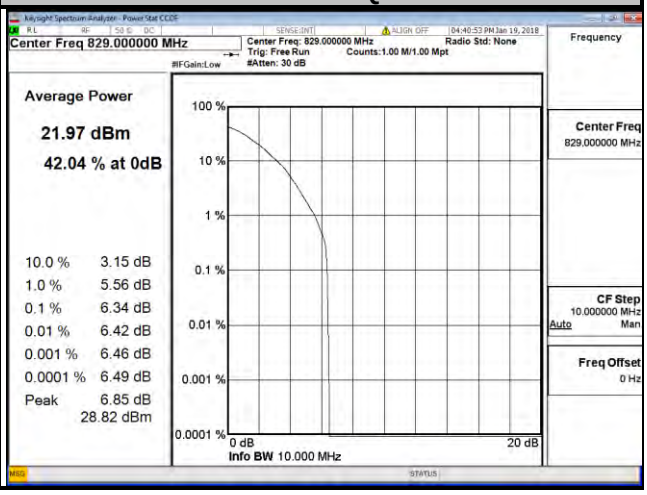




LTE Band 26									
Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)			Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
26815	826.5	4.68	5.45	6.37	26840	829.0	4.64	5.39	6.34
26915	836.5	4.71	5.51	6.14	26915	836.5	4.65	5.43	6.09
27015	846.5	4.54	5.29	5.94	26990	844.0	4.67	5.45	6.14

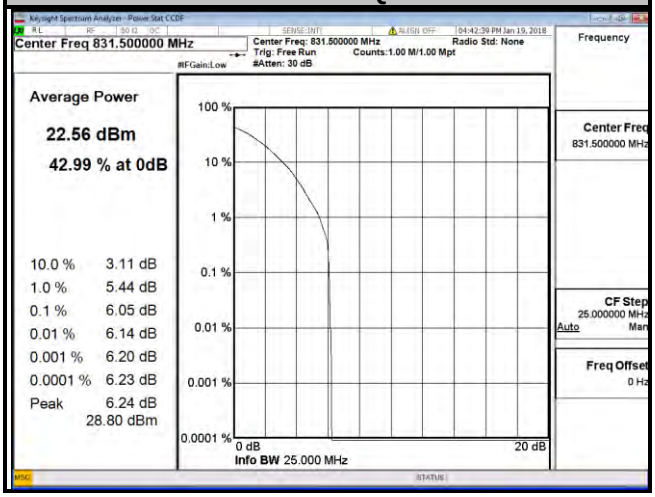
Spectrum Plot of Worst Value	
5 MHz / 64QAM	10 MHz / 64QAM





LTE Band 26				
Channel Bandwidth: 15 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM
26865	831.5	4.62	5.38	6.05
26915	836.5	4.61	5.37	6.04
26965	841.5	4.66	5.45	5.94

Spectrum Plot of Worst Value
15 MHz / 64QAM

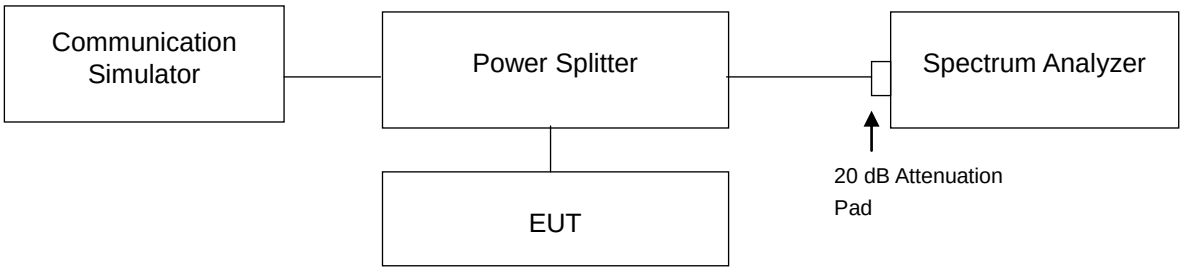


4.6 Conducted Spurious Emissions

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



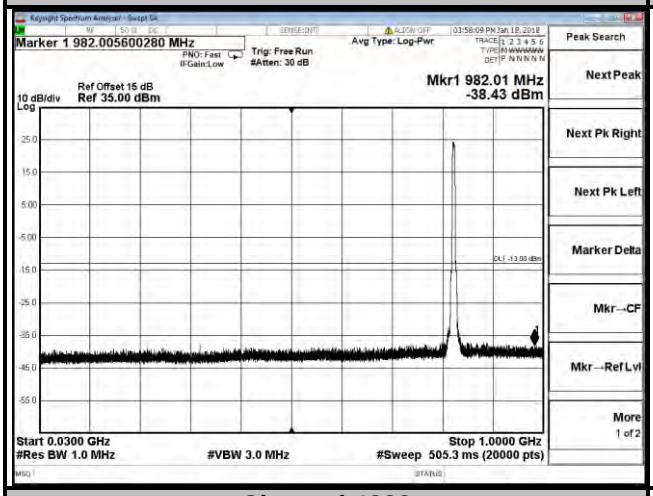
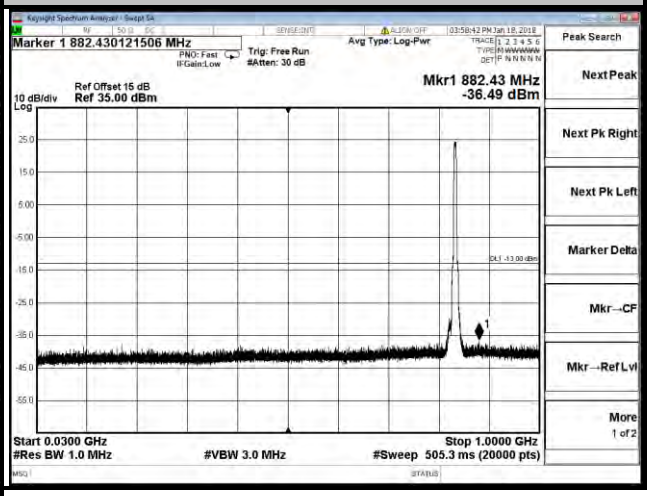
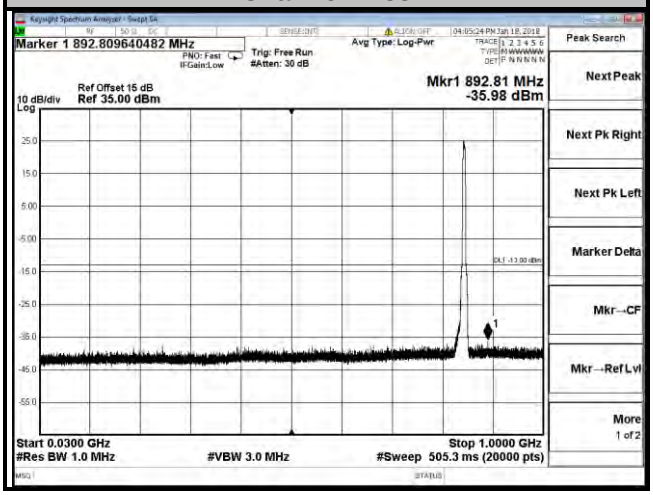
4.6.3 Test Procedure

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 = 100 kHz and VBW = 300 kHz is used for conducted emission measurement.

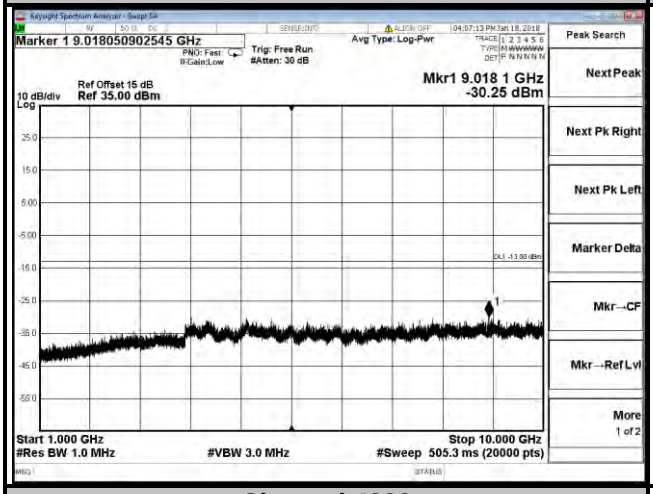
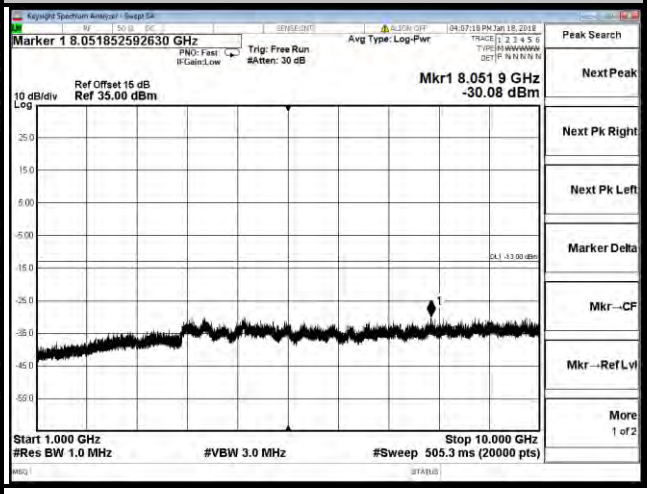
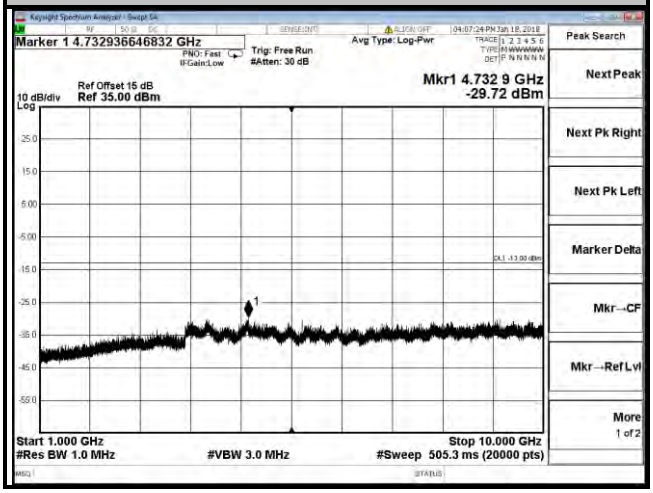
4.6.4 Test Results

WCDMA

30MHz ~ 1GHz

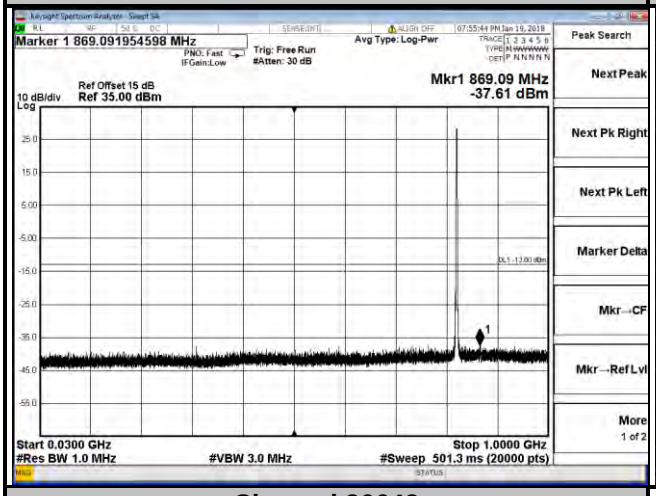
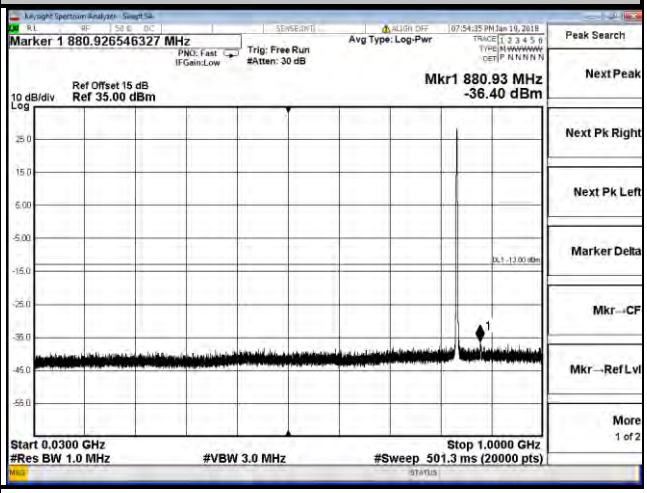
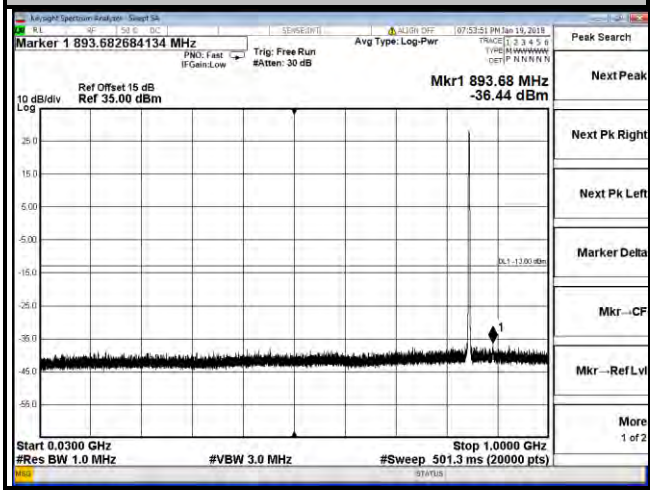
WCDMA	
Channel 4132	Channel 4182
	
Channel 4233	
	

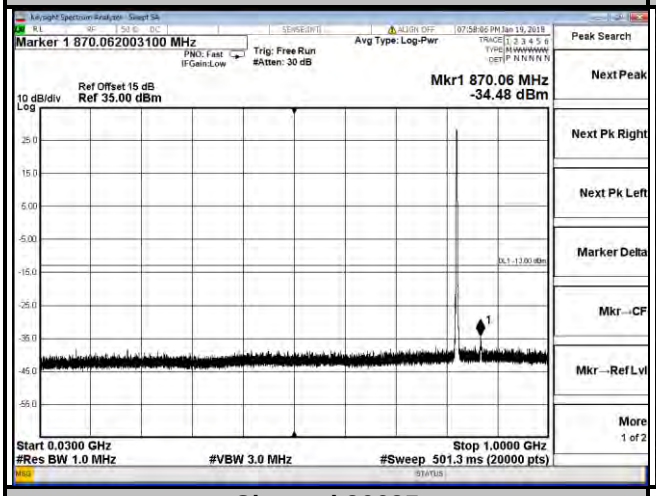
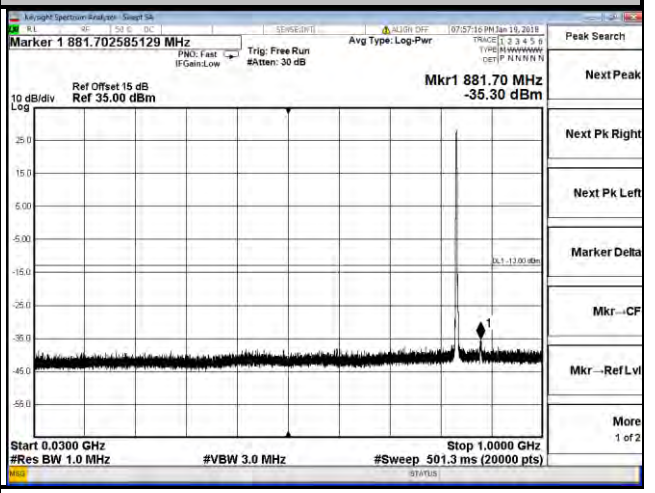
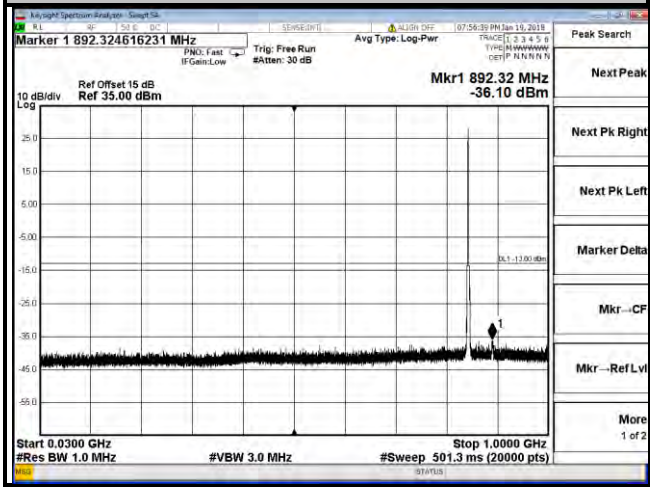
1GHz ~ 10GHz

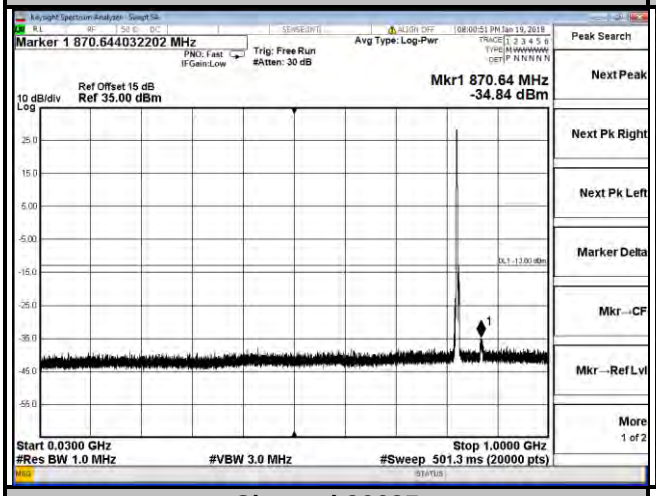
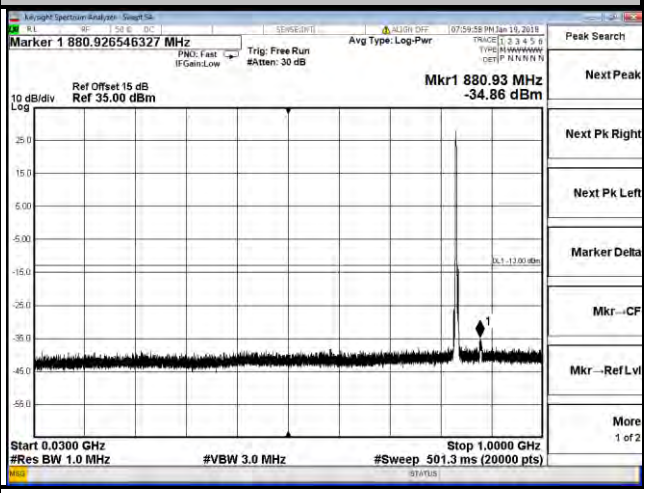
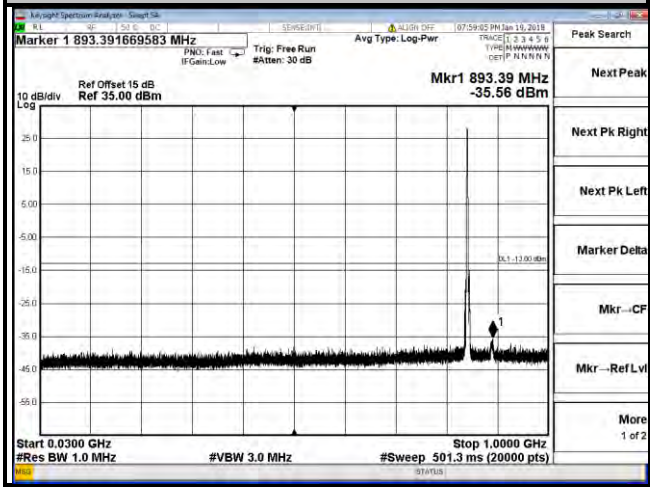
WCDMA	
Channel 4132	Channel 4182
	
Channel 4233	
	

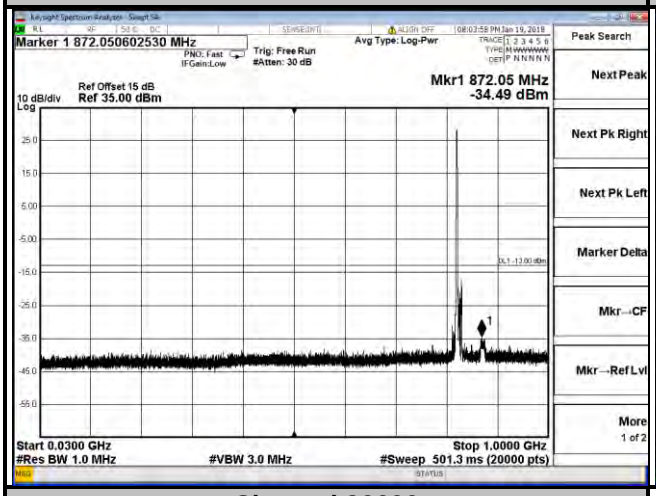
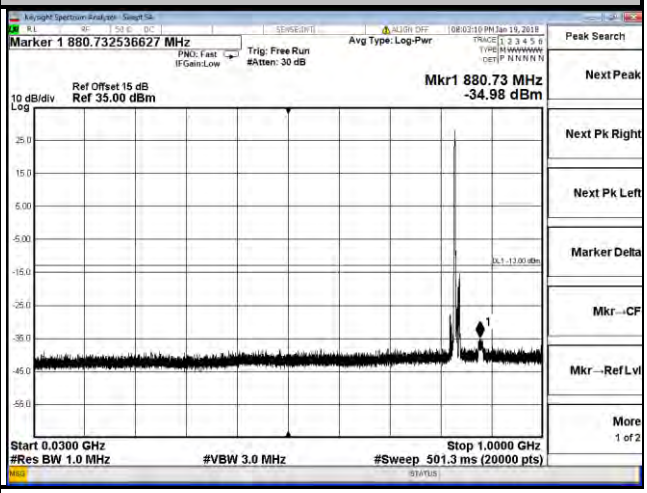
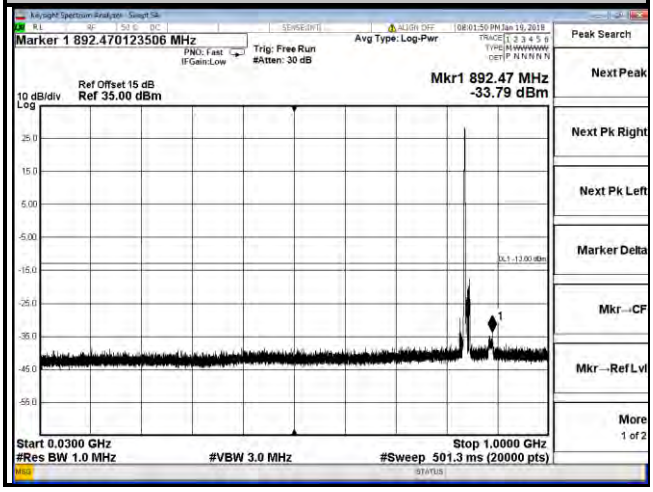
LTE Band 5

30MHz ~ 1GHz

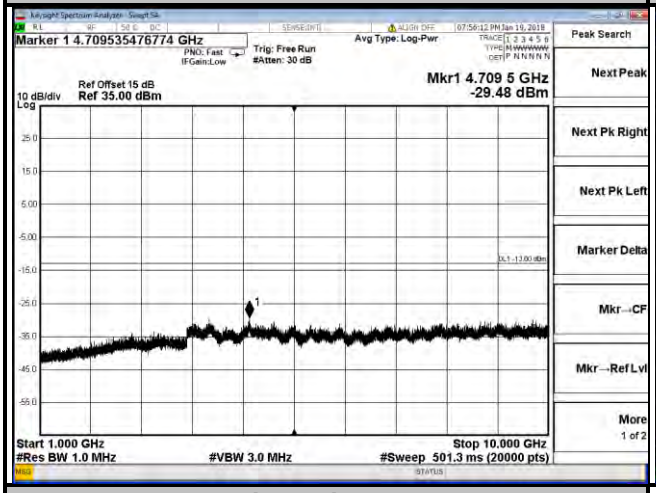
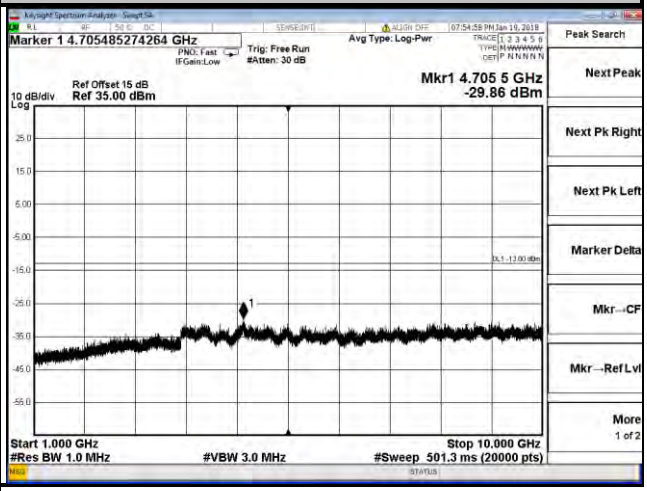
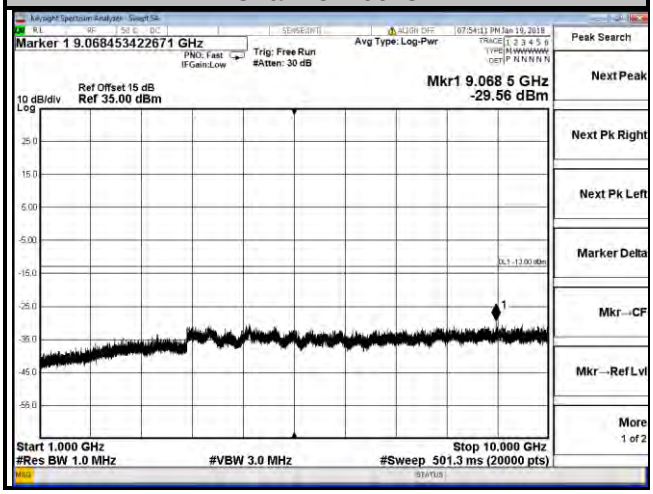
LTE Band 5	
Channel Bandwidth: 1.4 MHz	
Channel 20407	Channel 20525
	
Channel 20643	
	

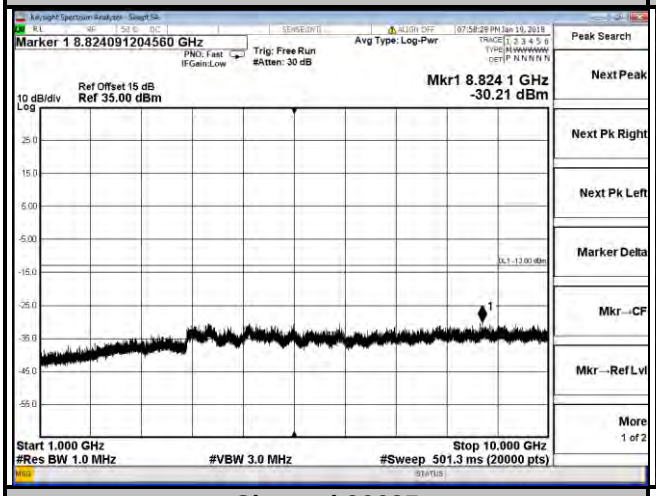
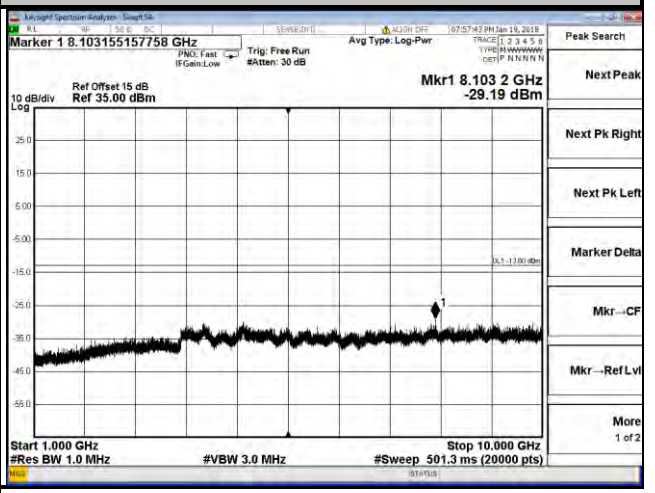
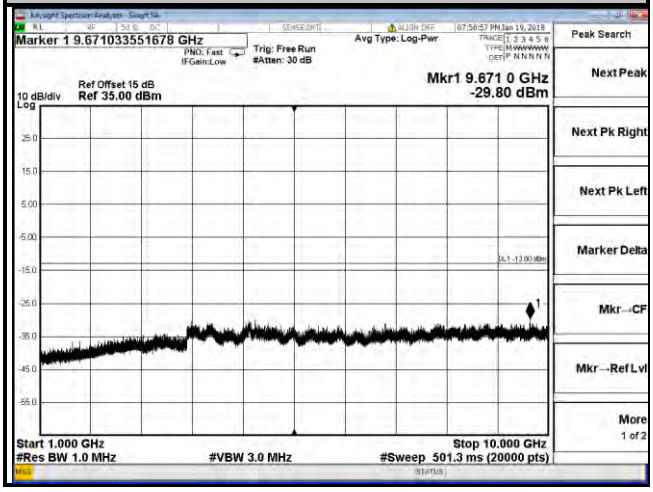
LTE Band 5	
Channel Bandwidth: 3 MHz	
Channel 20415	Channel 20525
	
Channel 20635	
	

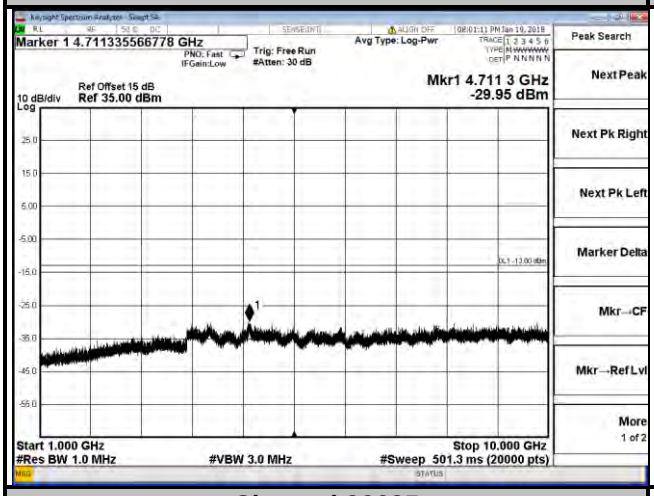
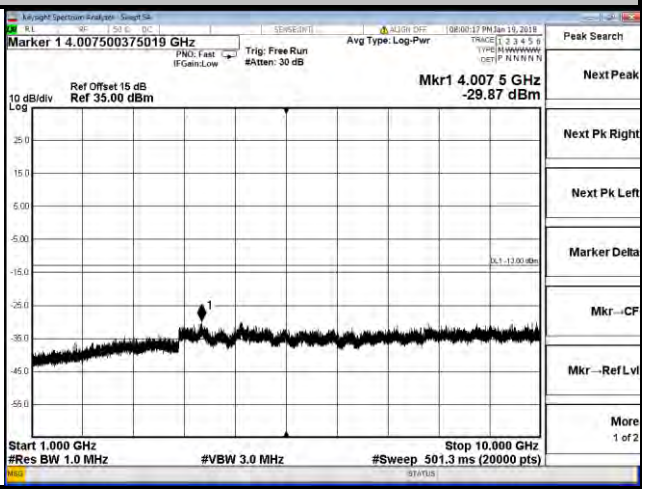
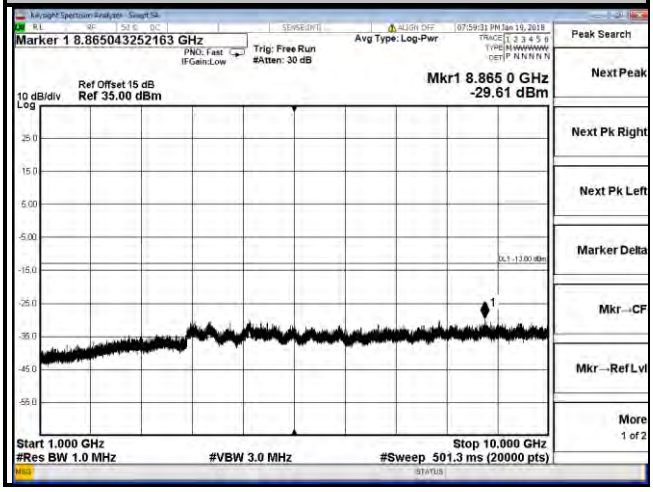
LTE Band 5	
Channel Bandwidth: 5 MHz	
Channel 20425	Channel 20525
	
Channel 20625	
	

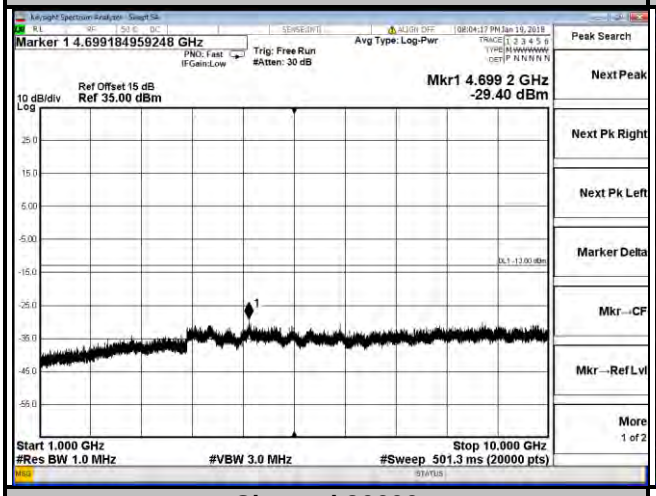
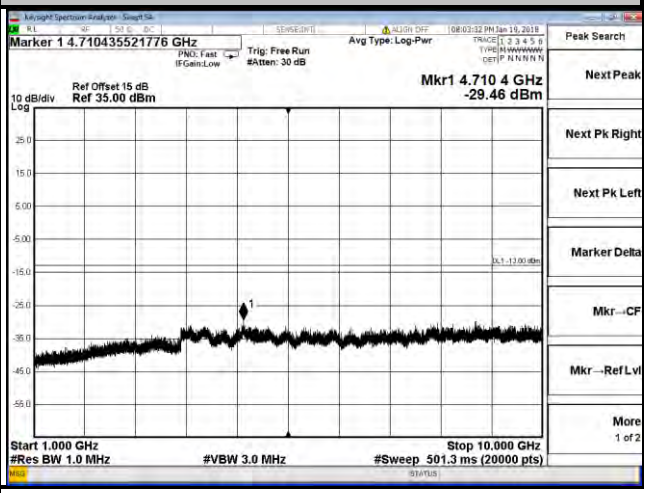
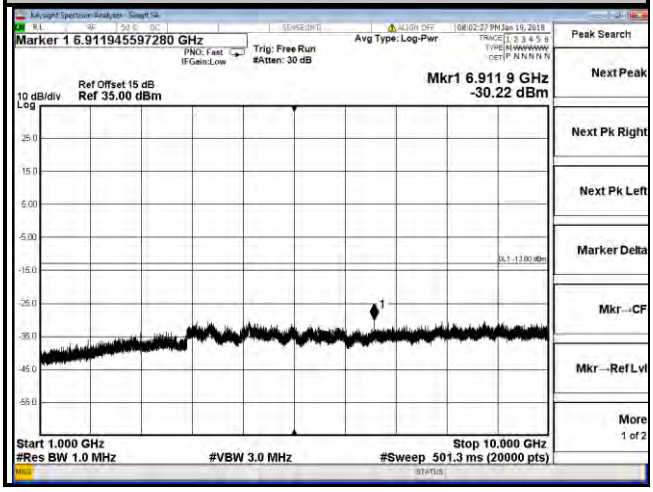
LTE Band 5	
Channel Bandwidth: 10 MHz	
Channel 20450	Channel 20525
	
Channel 20600	
	

1GHz ~ 10GHz

LTE Band 5	
Channel Bandwidth: 1.4 MHz	
Channel 20407	Channel 20525
	
Channel 20643	
	

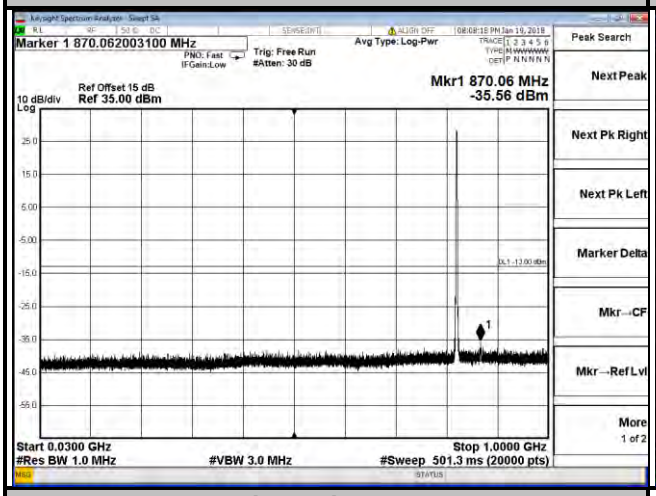
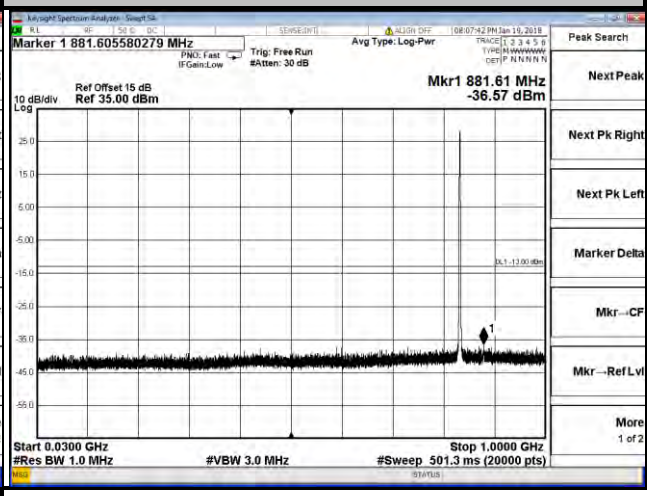
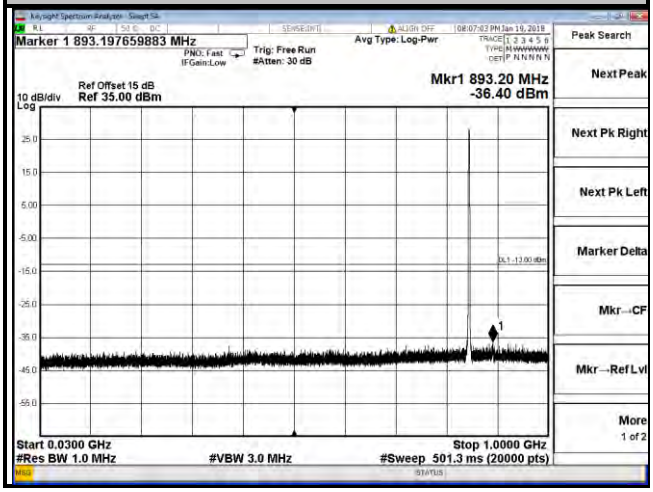
LTE Band 5	
Channel Bandwidth: 3 MHz	
Channel 20415	Channel 20525
	
Channel 20635	
	

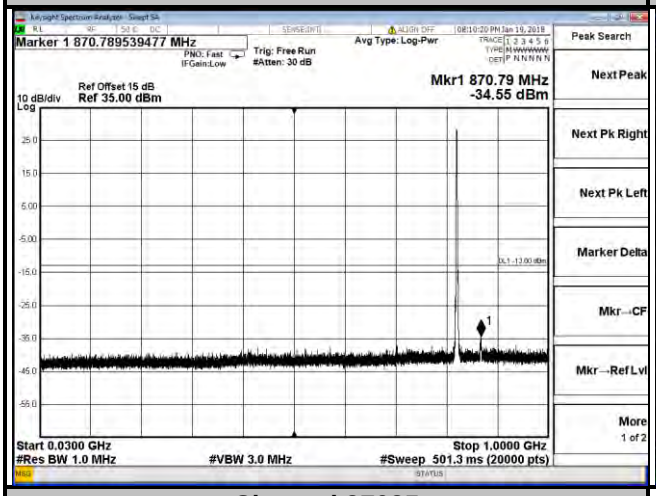
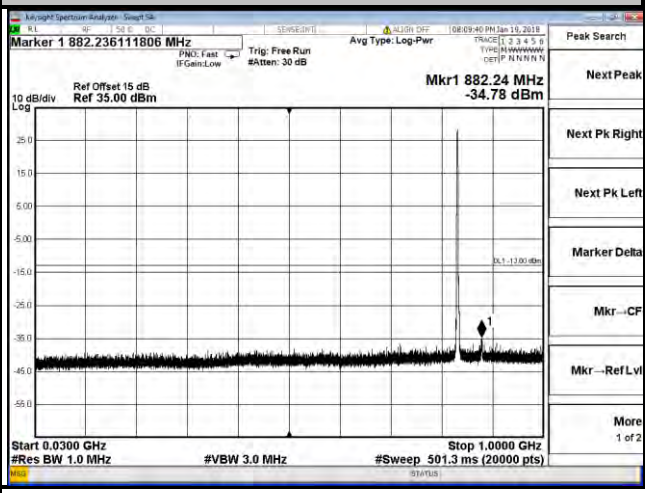
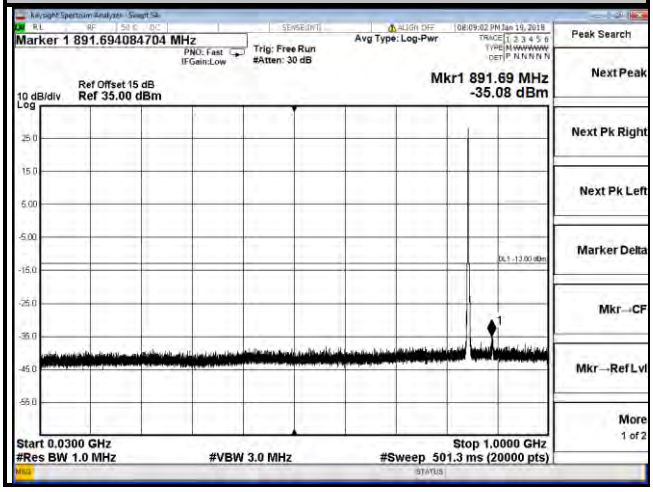
LTE Band 5	
Channel Bandwidth: 5 MHz	
Channel 20425	Channel 20525
	
Channel 20625	
	

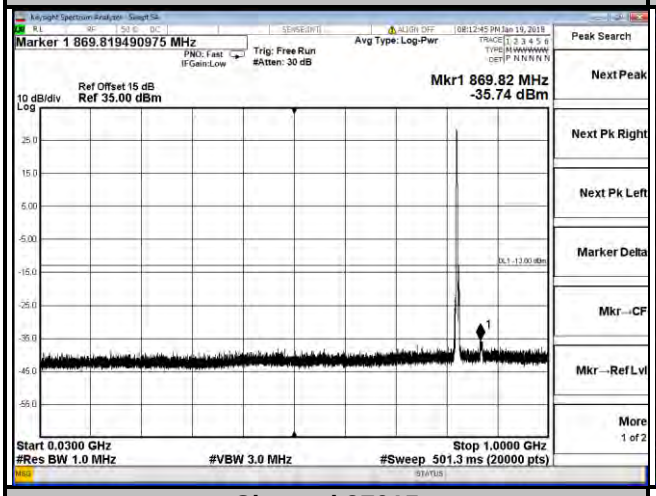
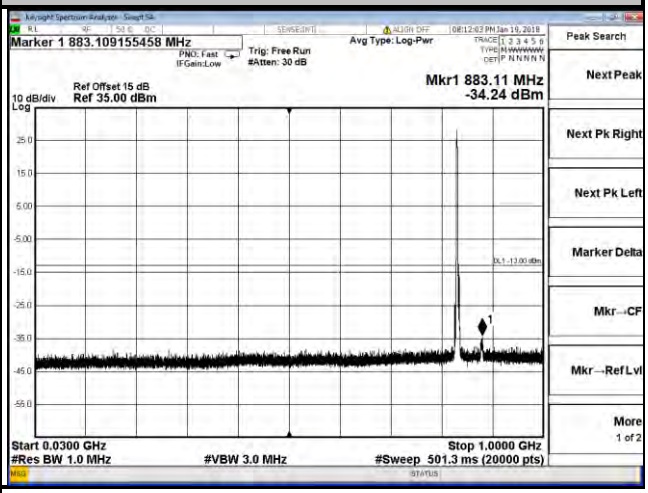
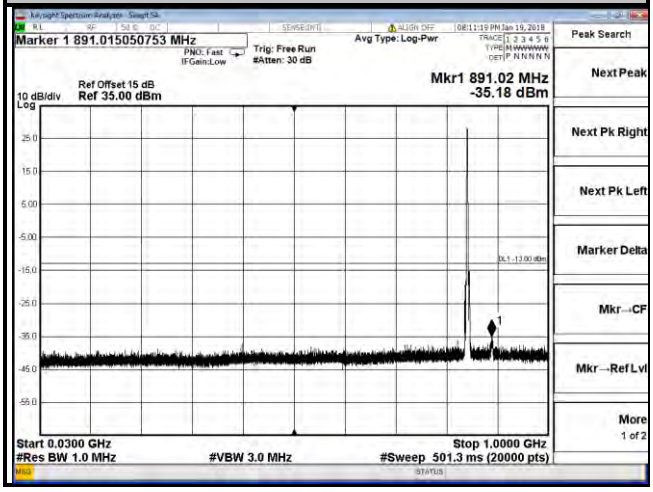
LTE Band 5	
Channel Bandwidth: 10 MHz	
Channel 20450	Channel 20525
	
Channel 20600	
	

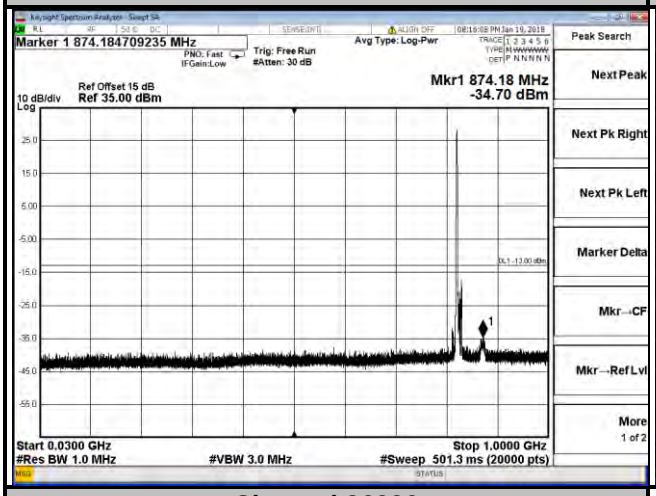
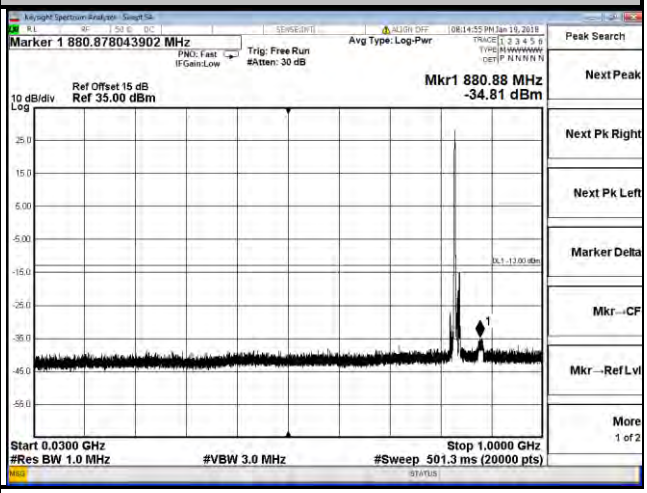
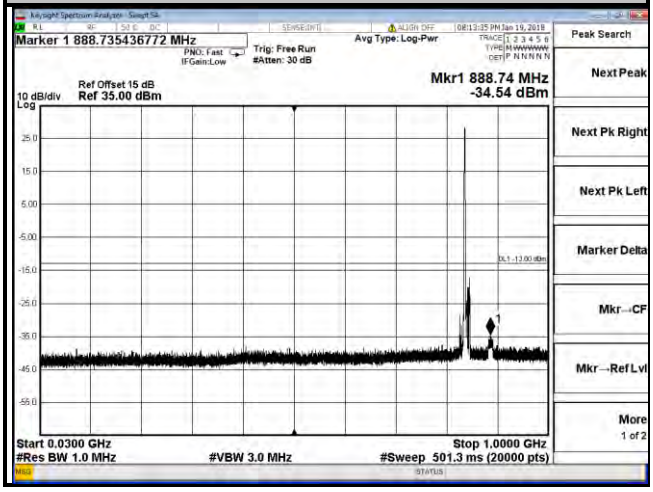
LTE Band 26

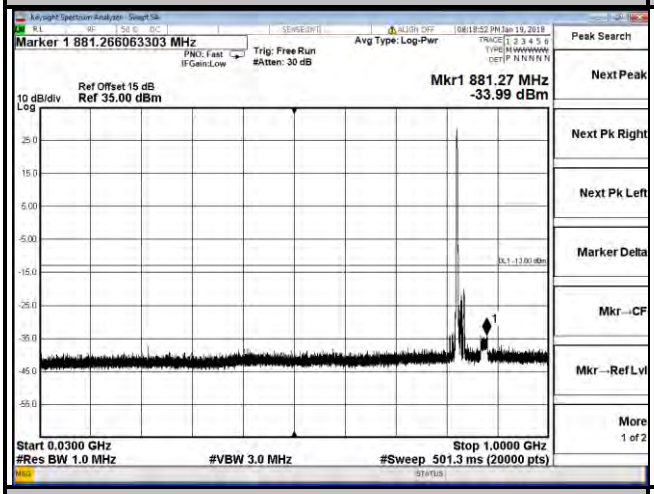
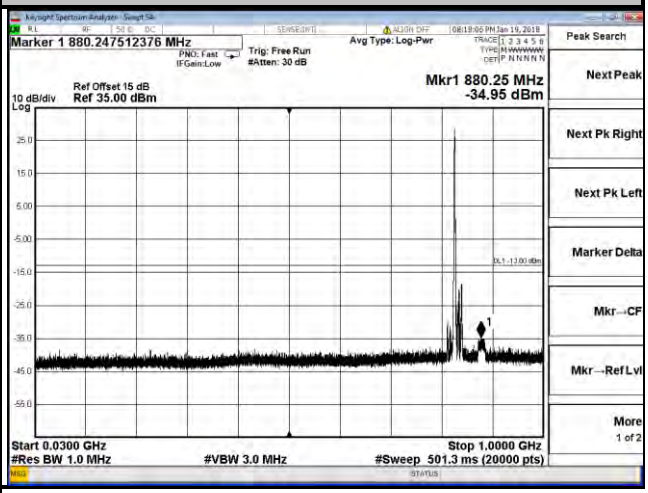
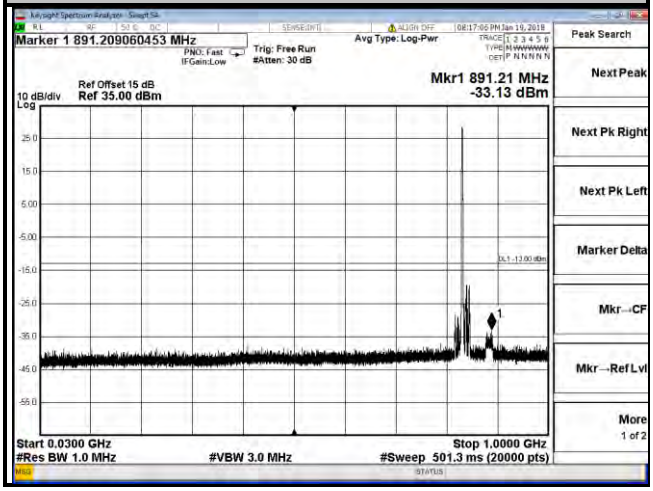
30MHz ~ 1GHz

LTE Band 26	
Channel Bandwidth: 1.4 MHz	
Channel 26797	Channel 26915
	
Channel 27033	
	

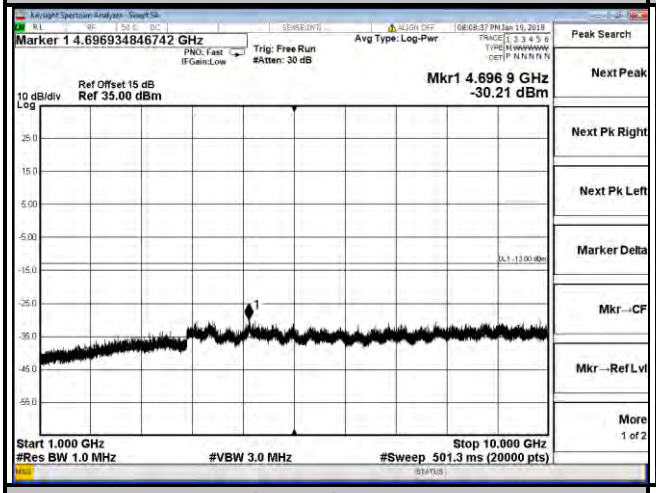
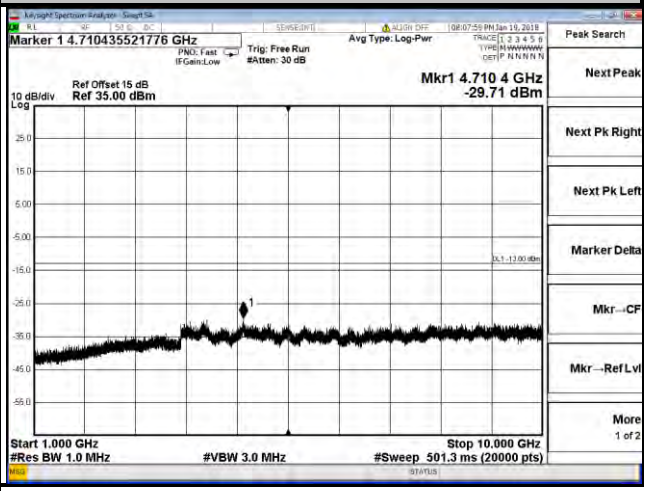
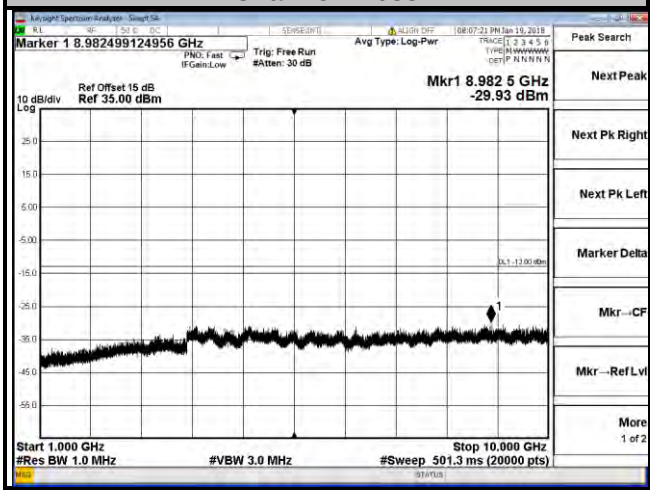
LTE Band 26	
Channel Bandwidth: 3 MHz	
Channel 26805	Channel 26915
	
Channel 27025	
	

LTE Band 26	
Channel Bandwidth: 5 MHz	
Channel 26815	Channel 26915
	
Channel 27015	
	

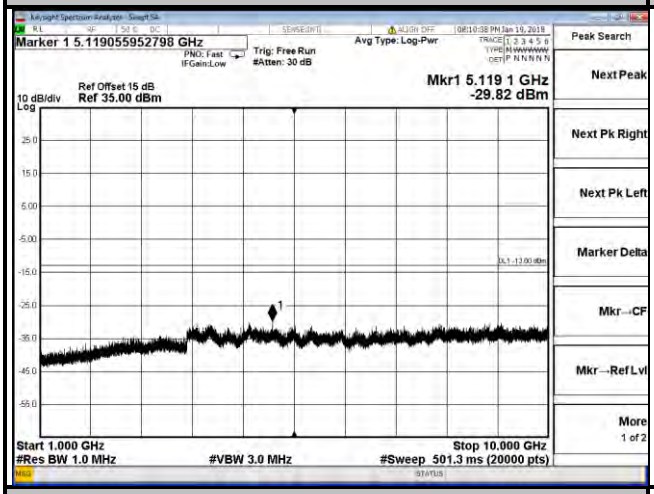
LTE Band 26	
Channel Bandwidth: 10 MHz	
Channel 26840	Channel 26915
	
Channel 26990	
	

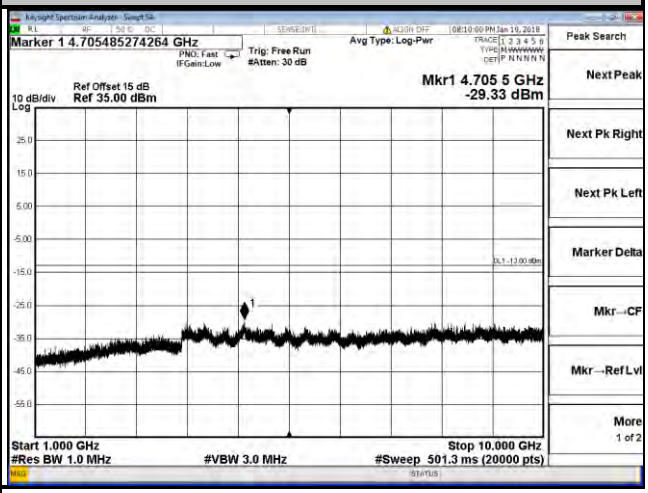
LTE Band 26	
Channel Bandwidth: 15 MHz	
Channel 26865	Channel 26915
	
Channel 26965	
	

1GHz ~ 10GHz

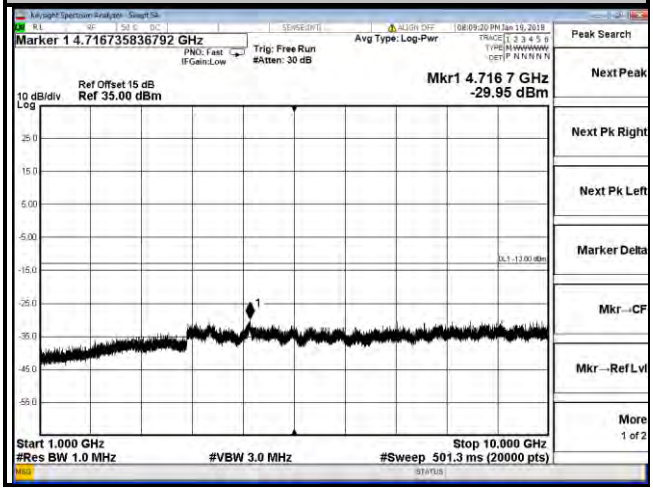
LTE Band 26	
Channel Bandwidth: 1.4 MHz	
Channel 26797	Channel 26915
	
Channel 27033	
	

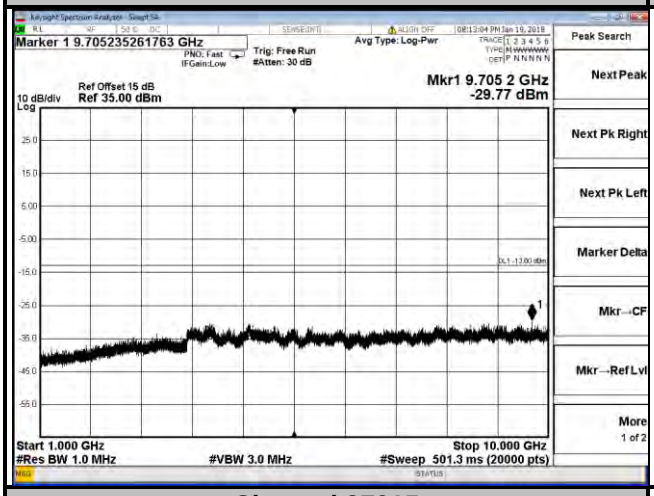
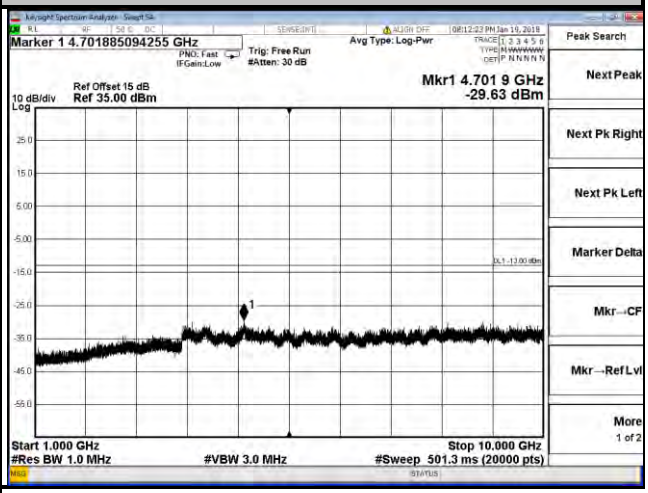
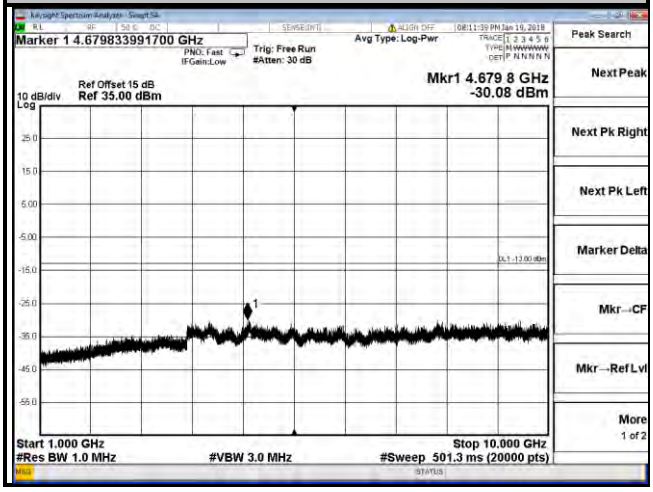
LTE Band 26	
Channel Bandwidth: 3 MHz	
Channel 26805	Channel 26915

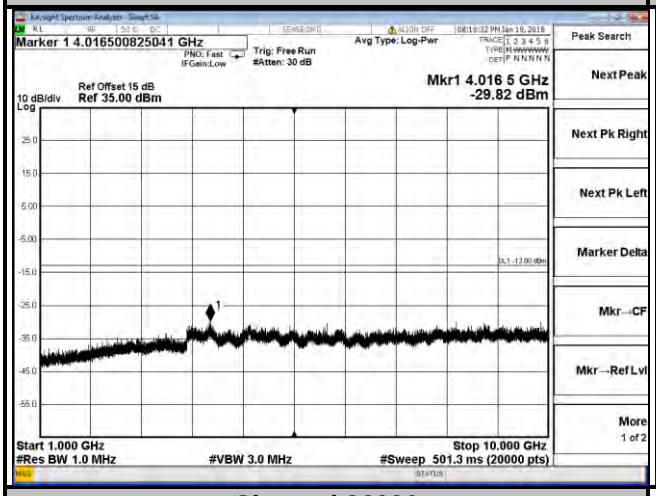
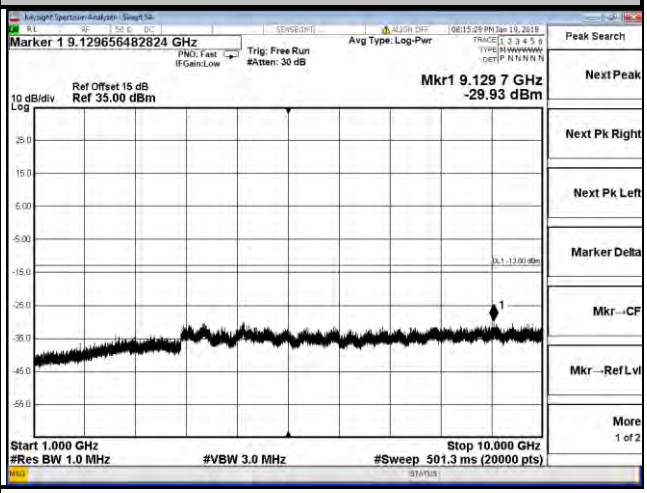
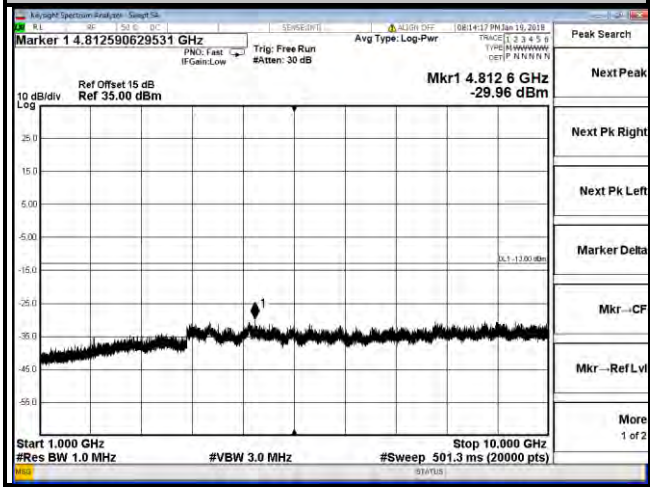


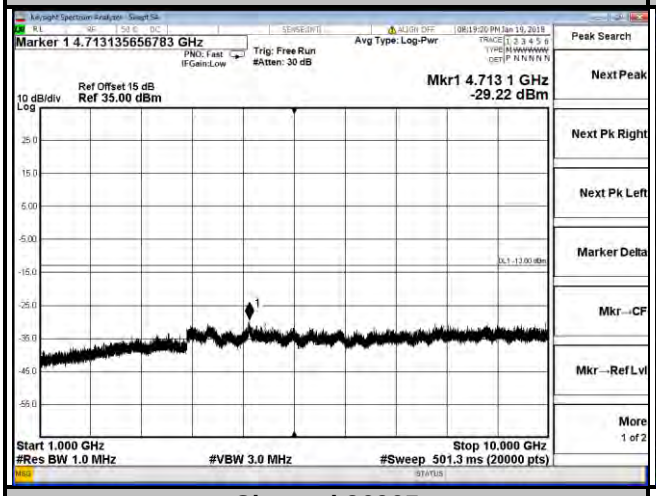
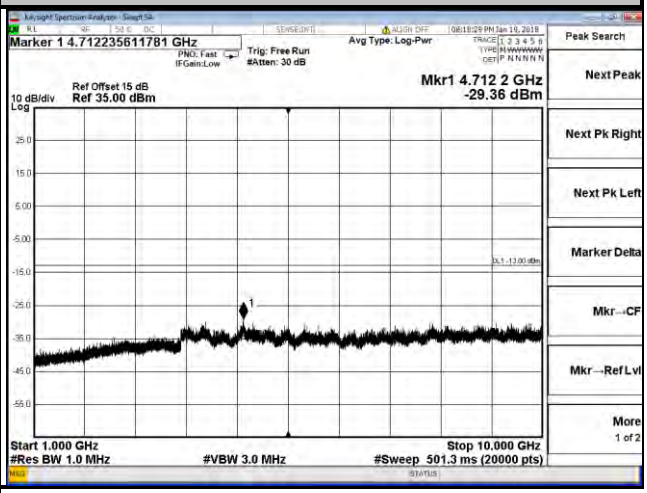
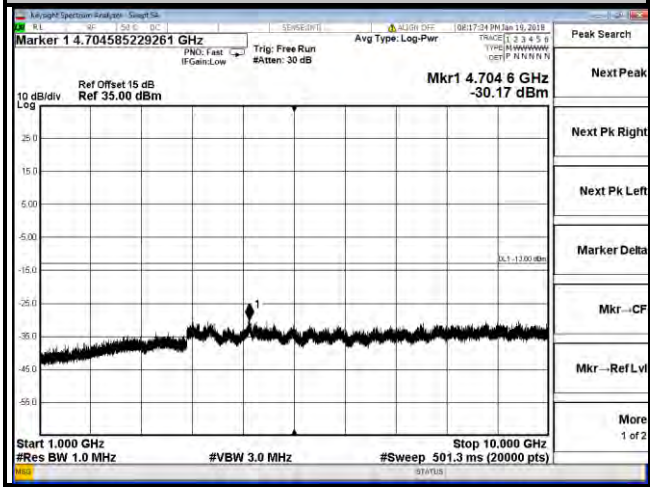


Channel 27025



LTE Band 26	
Channel Bandwidth: 5 MHz	
Channel 26815	Channel 26915
	
Channel 27015	
	

LTE Band 26	
Channel Bandwidth: 10 MHz	
Channel 26840	Channel 26915
	
Channel 26990	
	

LTE Band 26	
Channel Bandwidth: 15 MHz	
Channel 26865	Channel 26915
	
Channel 26965	
	

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 (below or equal 1 GHz) and/or 1.5 m (above 1 GHz) 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.

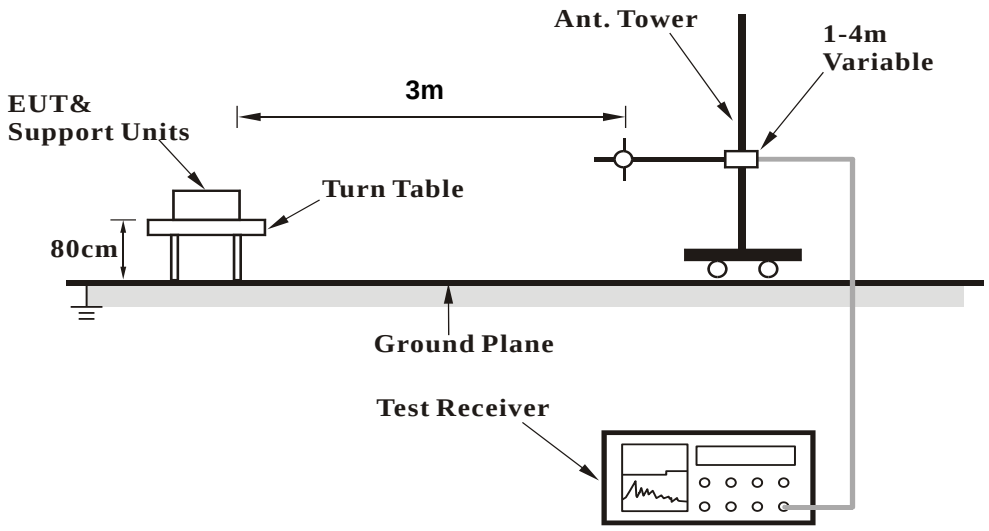
NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz/3 MHz.

4.7.3 Deviation from Test Standard

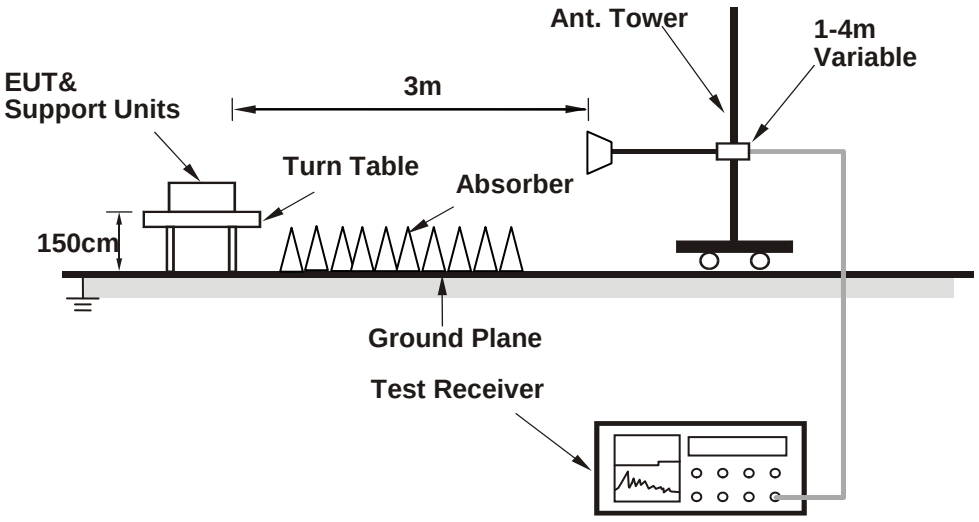
No deviation.

4.7.4 Test Setup

<Radiated Emission below or equal 1 GHz>



<Radiated Emission above 1 GHz>



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

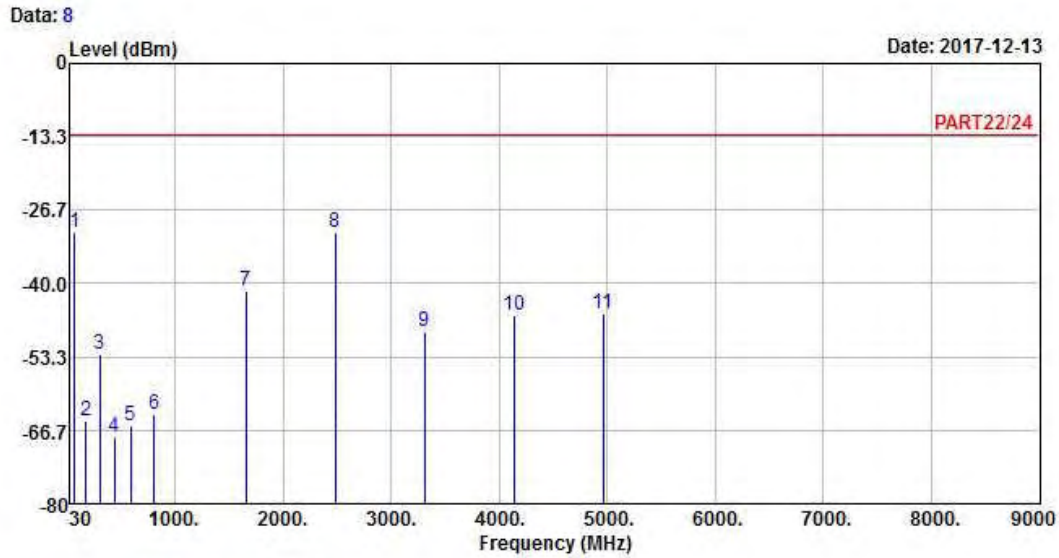
4.7.5 Test Results

WCDMA:

Low Channel

Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remark : WCDMA Band V Link_L-CH
Tested by: Getaz Yang

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
		MHz	dBm	dBm	dBm	dB	dB	
1		43.58	-37.83	-36.36	-13.00	-24.83	-1.47	Peak
2		138.64	-44.07	-35.41	-13.00	-31.07	-8.66	Peak
3		286.08	-51.71	-44.98	-13.00	-38.71	-6.73	Peak
4		430.61	-69.58	-63.88	-13.00	-56.58	-5.70	Peak
5		624.61	-65.36	-64.54	-13.00	-52.36	-0.82	Peak
6		838.98	-64.28	-64.67	-13.00	-51.28	0.39	Peak
7		1652.80	-33.74	-19.01	-13.00	-20.74	-14.73	Peak
8	pp	2479.20	-24.28	-13.84	-13.00	-11.28	-10.44	Peak
9		3305.60	-47.88	-38.42	-13.00	-34.88	-9.46	Peak
10		4132.00	-44.25	-37.42	-13.00	-31.25	-6.83	Peak
11		4958.40	-45.35	-42.82	-13.00	-32.35	-2.53	Peak

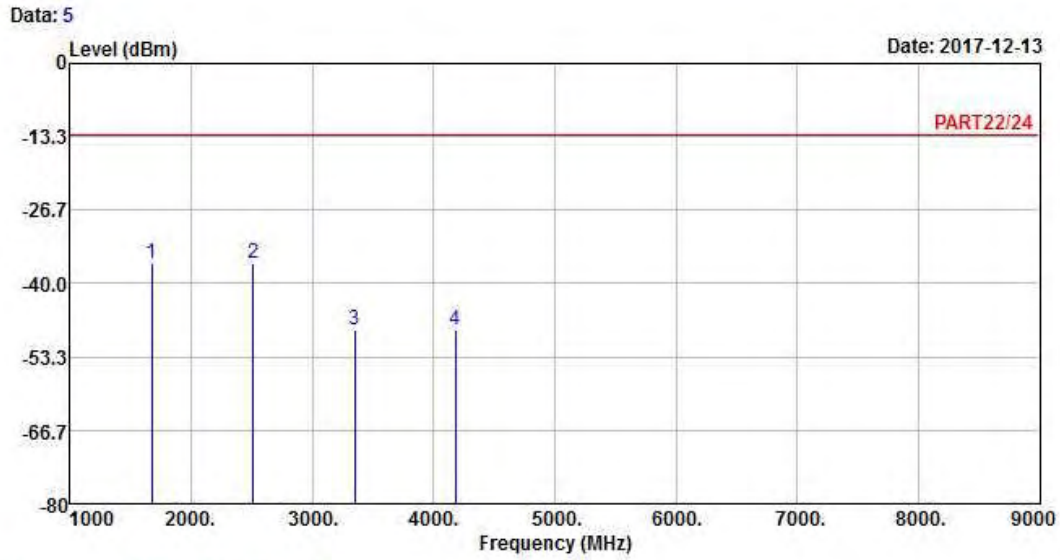


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remark : WCDMA Band V Link_L-CH
Tested by: Getaz Yang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	70.74	-30.68	-22.06	-13.00	-17.68	-8.62	Peak
2	176.47	-65.08	-58.36	-13.00	-52.08	-6.72	Peak
3	299.66	-52.82	-45.81	-13.00	-39.82	-7.01	Peak
4	440.31	-67.96	-62.33	-13.00	-54.96	-5.63	Peak
5	587.75	-65.91	-64.63	-13.00	-52.91	-1.28	Peak
6	806.00	-63.74	-64.42	-13.00	-50.74	0.68	Peak
7	1652.80	-41.36	-26.63	-13.00	-28.36	-14.73	Peak
8	2479.20	-30.71	-20.27	-13.00	-17.71	-10.44	Peak
9	3305.60	-48.86	-39.40	-13.00	-35.86	-9.46	Peak
10	4132.00	-45.76	-38.93	-13.00	-32.76	-6.83	Peak
11	4958.40	-45.45	-42.92	-13.00	-32.45	-2.53	Peak

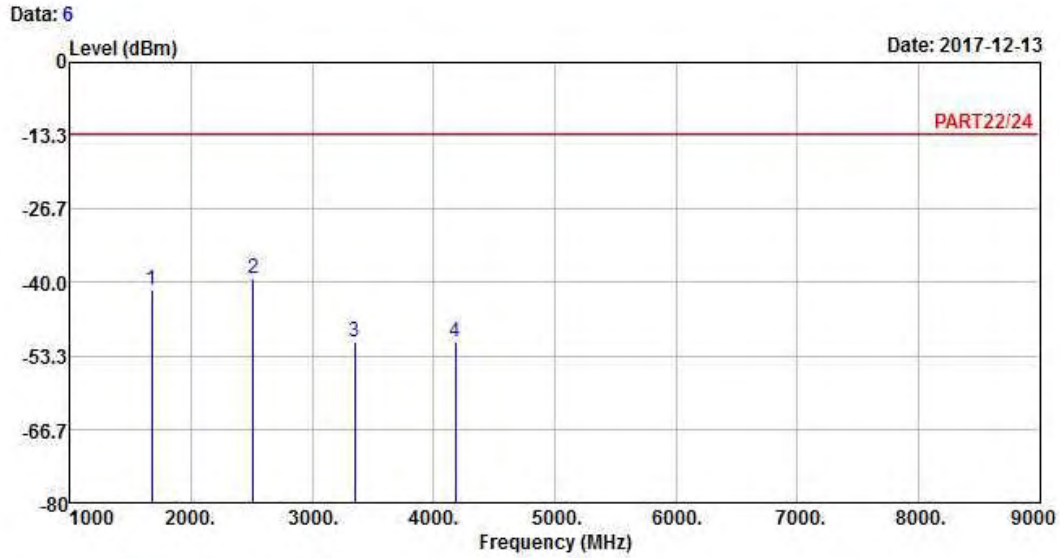
Middle Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remark : WCDMA Band V Link_M-CH
Tested by: Getaz Yang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1672.80	-36.23	-21.55	-13.00	-23.23	-14.68	Peak
2	2509.20	-36.44	-25.53	-13.00	-23.44	-10.91	Peak
3	3345.60	-48.30	-38.76	-13.00	-35.30	-9.54	Peak
4	4182.00	-48.43	-41.81	-13.00	-35.43	-6.62	Peak

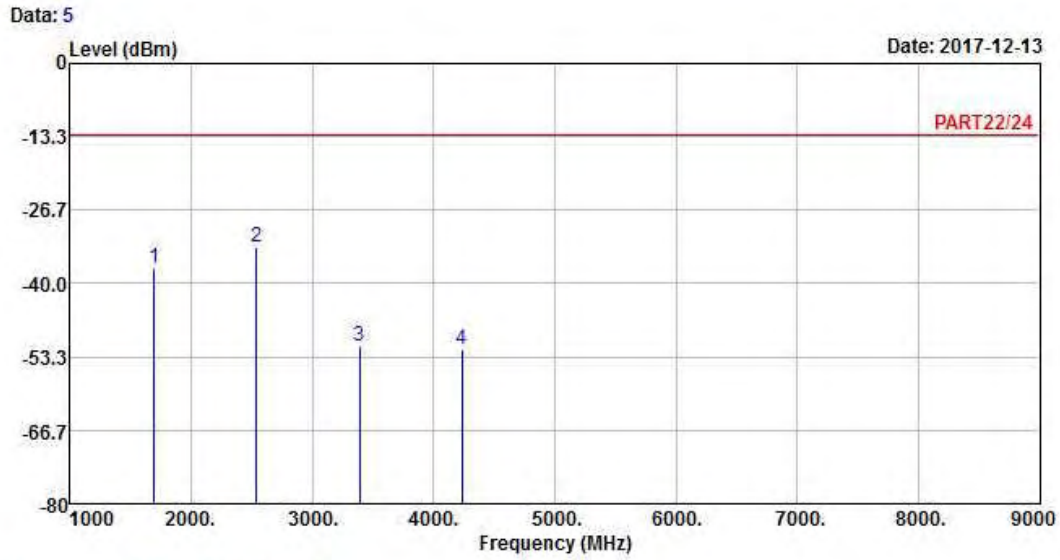


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remark : WCDMA Band V Link_M-CH
Tested by: Getaz Yang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1672.80	-41.41	-26.73	-13.00	-28.41	-14.68	Peak
2 pp	2509.20	-39.23	-28.32	-13.00	-26.23	-10.91	Peak
3	3345.60	-50.88	-41.34	-13.00	-37.88	-9.54	Peak
4	4182.00	-50.68	-44.06	-13.00	-37.68	-6.62	Peak

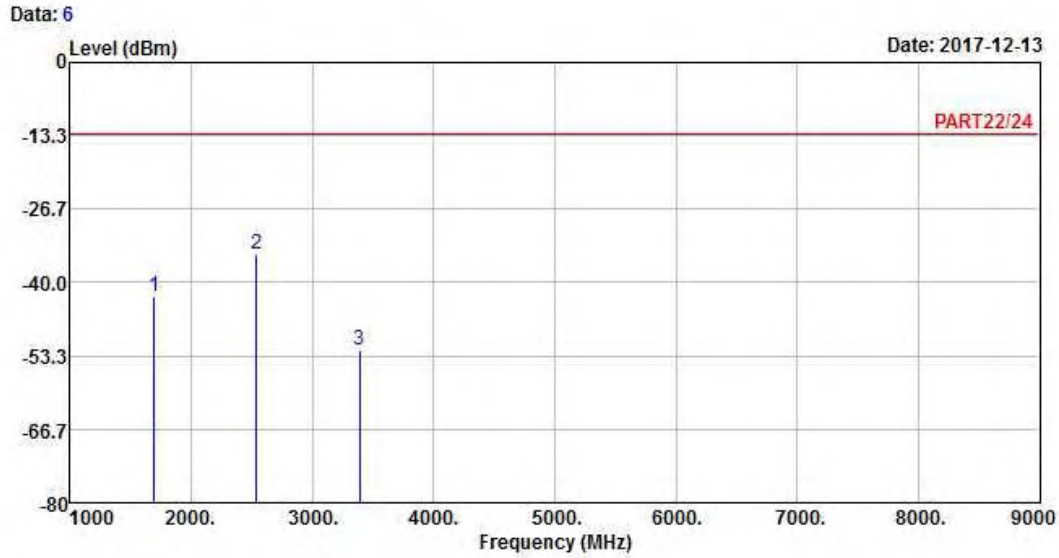
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remark : WCDMA Band V Link_H-CH
Tested by: Getaz Yang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1693.20	-37.06	-22.53	-13.00	-24.06	-14.53	Peak
2 pp	2539.80	-33.28	-22.51	-13.00	-20.28	-10.77	Peak
3	3386.40	-51.49	-42.22	-13.00	-38.49	-9.27	Peak
4	4233.00	-52.06	-45.24	-13.00	-39.06	-6.82	Peak

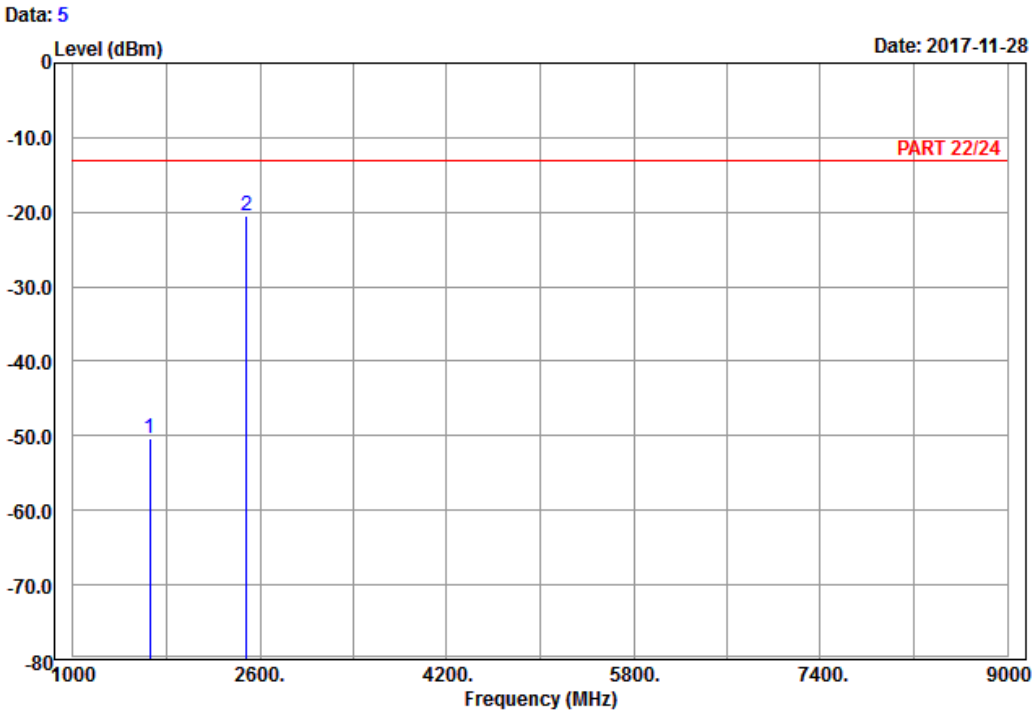


Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remark : WCDMA Band V Link_H-CH
Tested by: Getaz Yang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1693.20	-42.59	-28.06	-13.00	-29.59	-14.53	Peak
2 pp	2539.80	-34.86	-24.09	-13.00	-21.86	-10.77	Peak
3	3386.40	-52.12	-42.85	-13.00	-39.12	-9.27	Peak

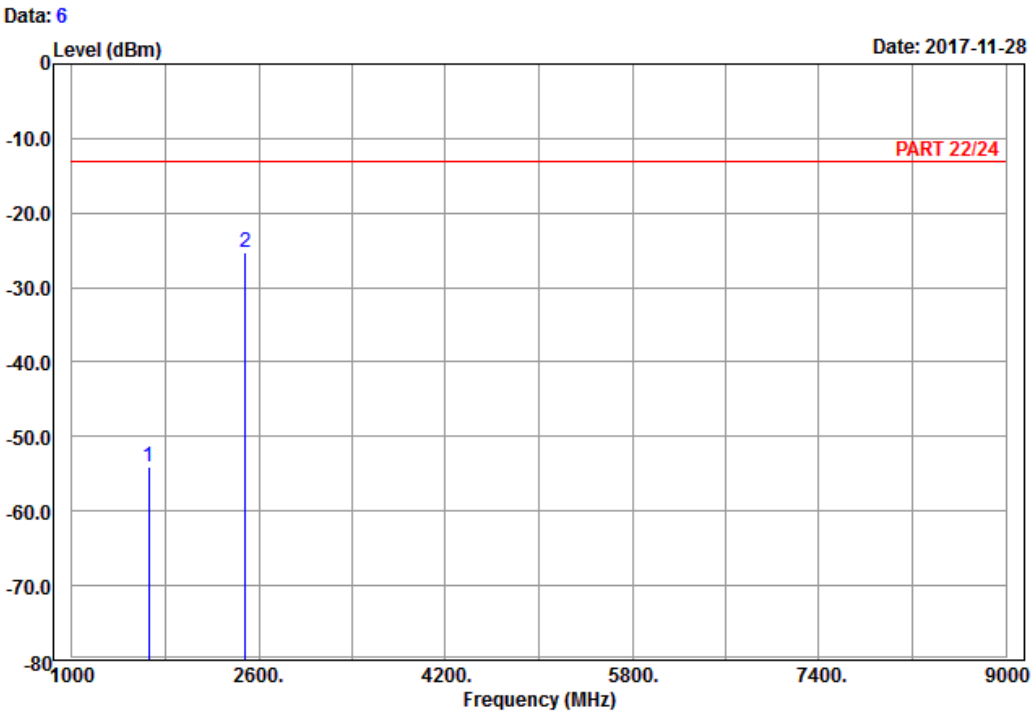
LTE Band 5
Channel Bandwidth: 10 MHz / QPSK
Low Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 5_Link_CH20450
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1658.00	-50.34	-58.25	-13.00	-37.34	7.91	Peak
2 pp	2487.00	-20.49	-31.53	-13.00	-7.49	11.04	Peak

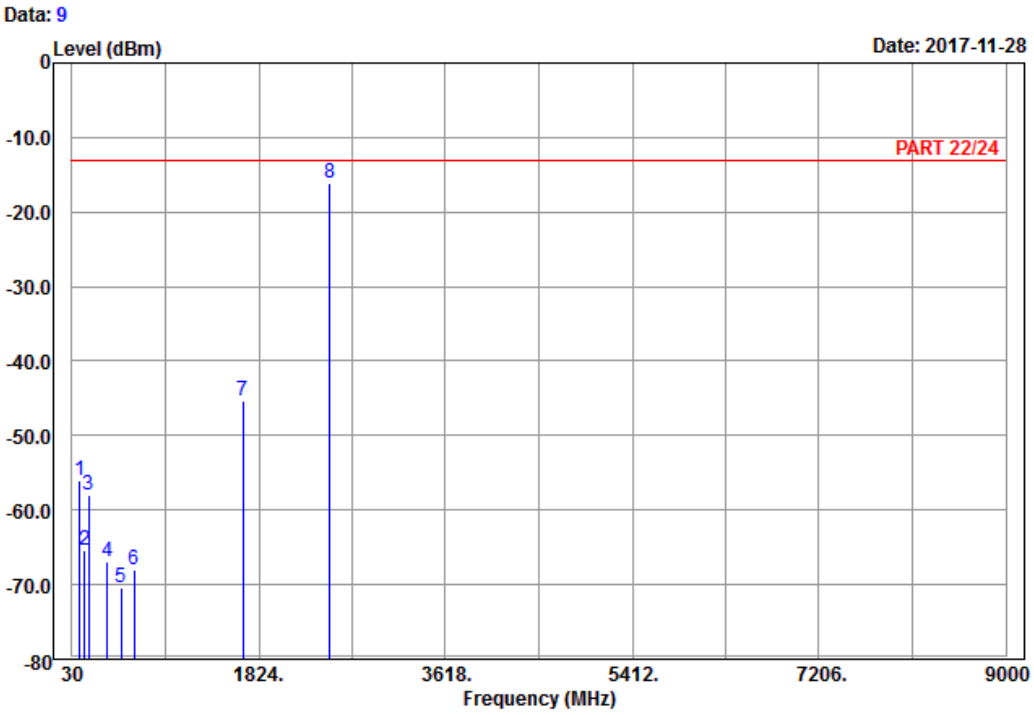


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5_Link_CH20450
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1658.00	-54.04	-61.95	-13.00	-41.04	7.91	Peak
2 pp	2487.00	-25.28	-36.32	-13.00	-12.28	11.04	Peak

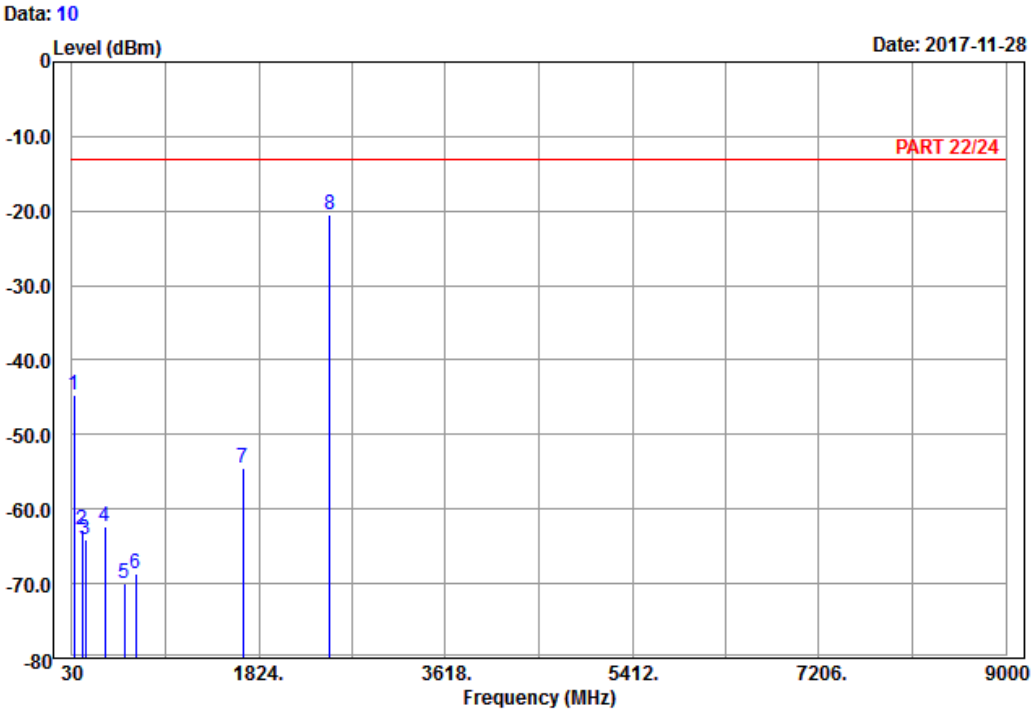
Middle Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 5_Link_CH20525
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	103.98	-56.01	-46.36	-13.00	-43.01	-9.65	Peak
2	150.69	-65.40	-57.45	-13.00	-52.40	-7.95	Peak
3	187.95	-58.02	-52.32	-13.00	-45.02	-5.70	Peak
4	365.80	-66.85	-62.30	-13.00	-53.85	-4.55	Peak
5	504.40	-70.44	-65.44	-13.00	-57.44	-5.00	Peak
6	626.20	-68.08	-68.21	-13.00	-55.08	0.13	Peak
7	1673.00	-45.43	-53.34	-13.00	-32.43	7.91	Peak
8 pp	2509.50	-16.12	-27.40	-13.00	-3.12	11.28	Peak

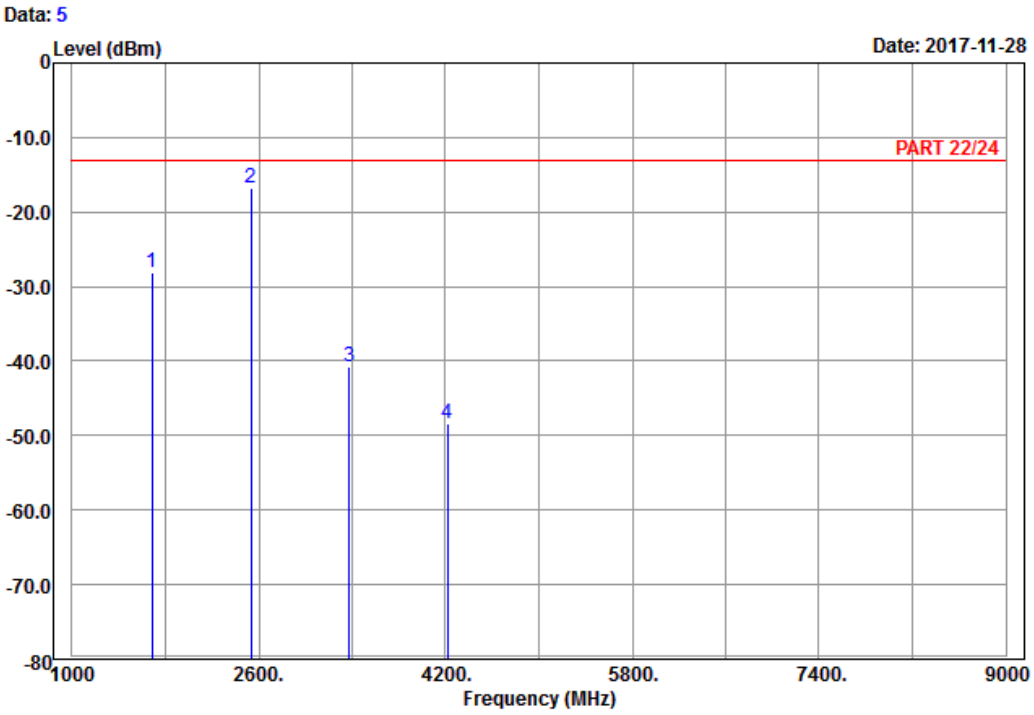


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5_Link_CH20525
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	50.25	-44.73	-30.68	-13.00	-31.73	-14.05	Peak
2	123.96	-62.88	-54.87	-13.00	-49.88	-8.01	Peak
3	161.76	-63.99	-56.52	-13.00	-50.99	-7.47	Peak
4	344.10	-62.35	-56.90	-13.00	-49.35	-5.45	Peak
5	535.90	-69.88	-67.22	-13.00	-56.88	-2.66	Peak
6	642.30	-68.71	-68.66	-13.00	-55.71	-0.05	Peak
7	1673.00	-54.46	-62.37	-13.00	-41.46	7.91	Peak
8 pp	2509.50	-20.57	-31.85	-13.00	-7.57	11.28	Peak

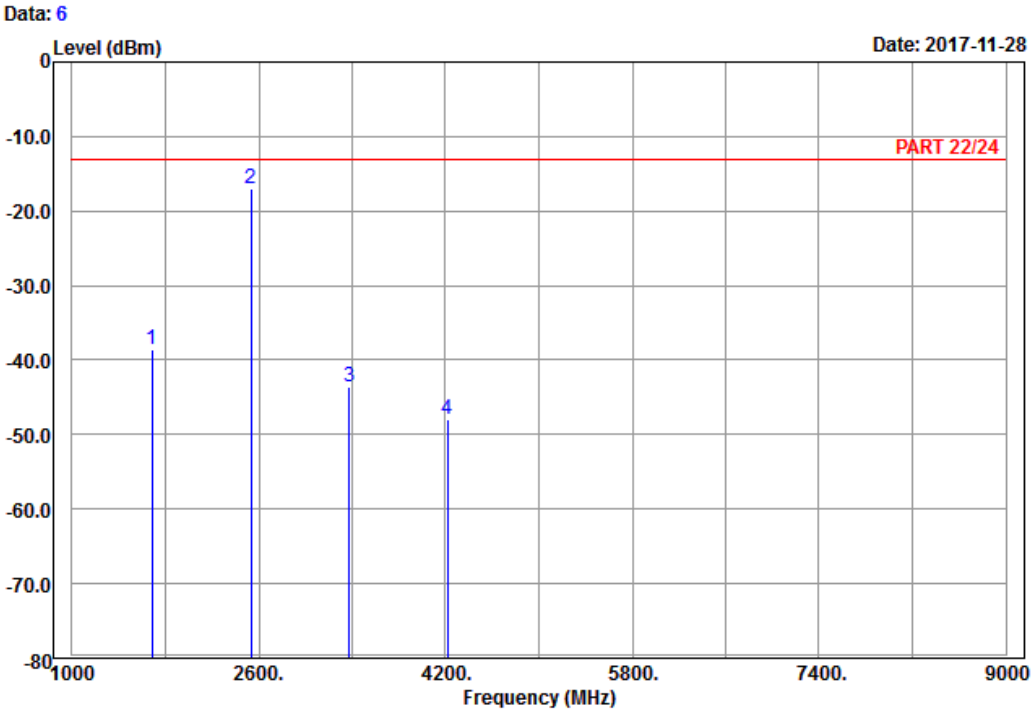
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 5_Link_CH20600
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1688.00	-28.14	-36.16	-13.00	-15.14	8.02	Peak
2 pp	2532.00	-16.77	-28.15	-13.00	-3.77	11.38	Peak
3	3376.00	-40.72	-55.14	-13.00	-27.72	14.42	Peak
4	4220.00	-48.30	-65.58	-13.00	-35.30	17.28	Peak

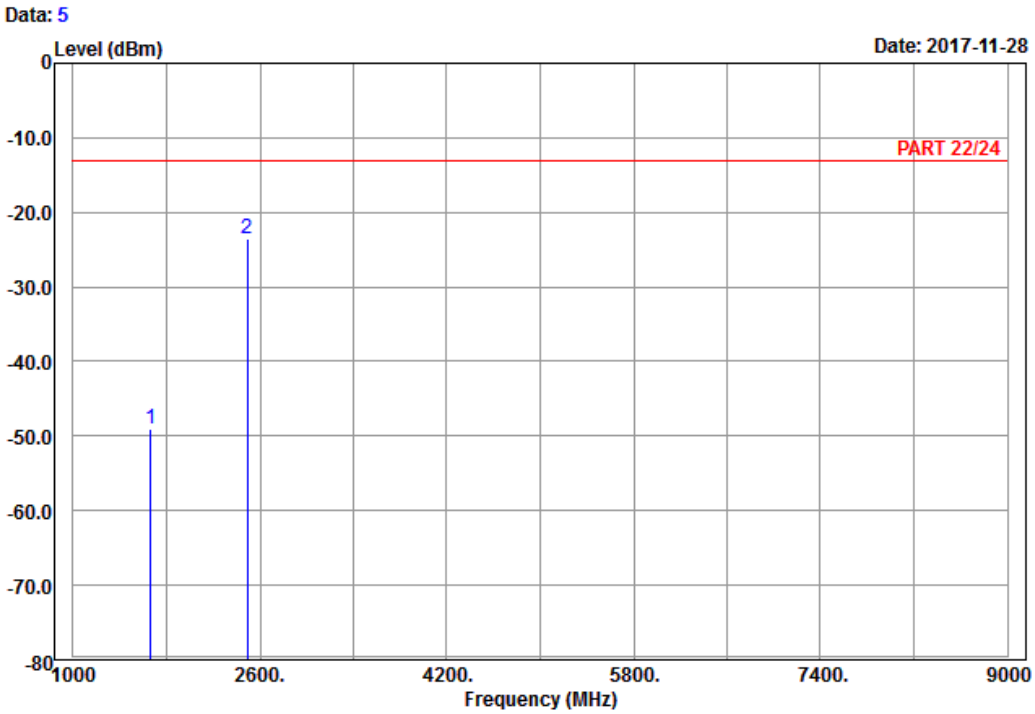


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5_Link_CH20600
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1688.00	-38.58	-46.60	-13.00	-25.58	8.02	Peak
2 pp	2532.00	-17.07	-28.45	-13.00	-4.07	11.38	Peak
3	3376.00	-43.61	-58.03	-13.00	-30.61	14.42	Peak
4	4220.00	-47.93	-65.21	-13.00	-34.93	17.28	Peak

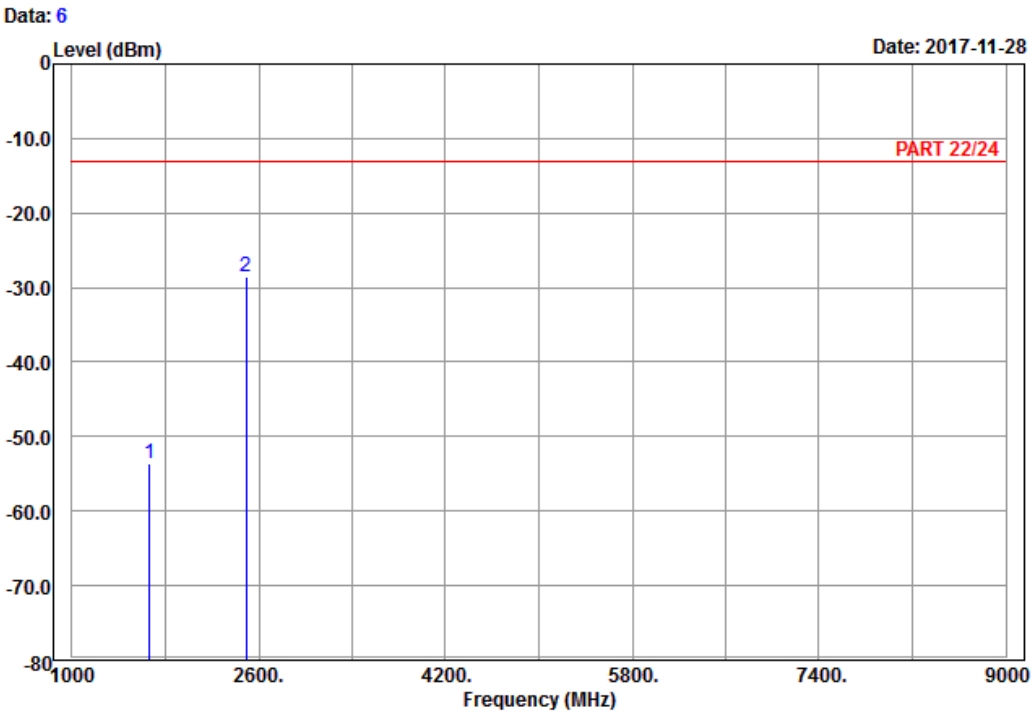
LTE Band 26
Channel Bandwidth: 15 MHz / QPSK
Low Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 26_Link_CH26865
Tested by: Charles Hsiao

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1663.00	-49.04	-56.95	-13.00	-36.04	7.91	Peak
2 pp	2494.50	-23.47	-34.51	-13.00	-10.47	11.04	Peak

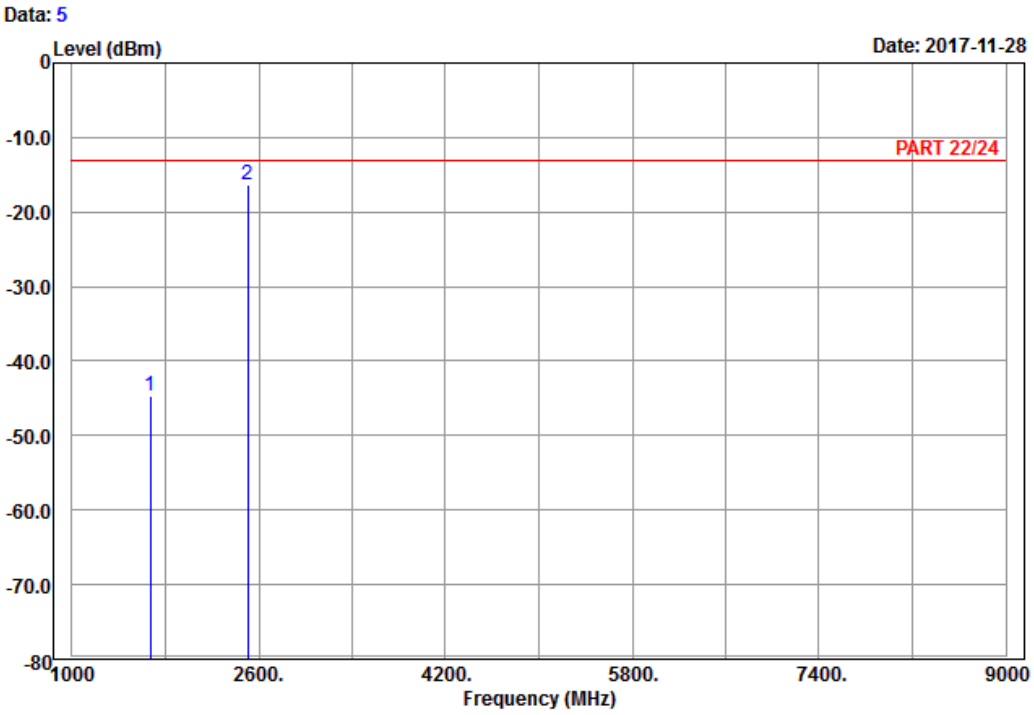


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 26_Link_CH26865
Tested by: Charles Hsiao

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1663.00	-53.52	-61.43	-13.00	-40.52	7.91	Peak
2 pp	2494.50	-28.48	-39.52	-13.00	-15.48	11.04	Peak

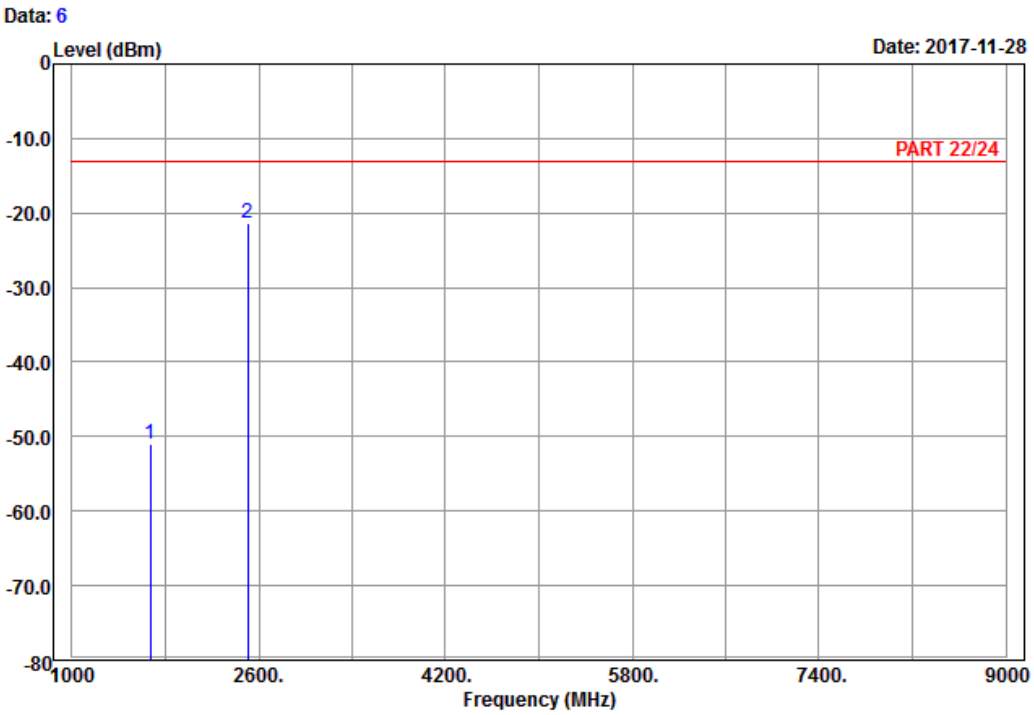
Middle Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 26_Link_CH26915
Tested by: Charles Hsiao

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1673.00	-44.63	-52.54	-13.00	-31.63	7.91	Peak
2 pp	2509.50	-16.27	-27.55	-13.00	-3.27	11.28	Peak

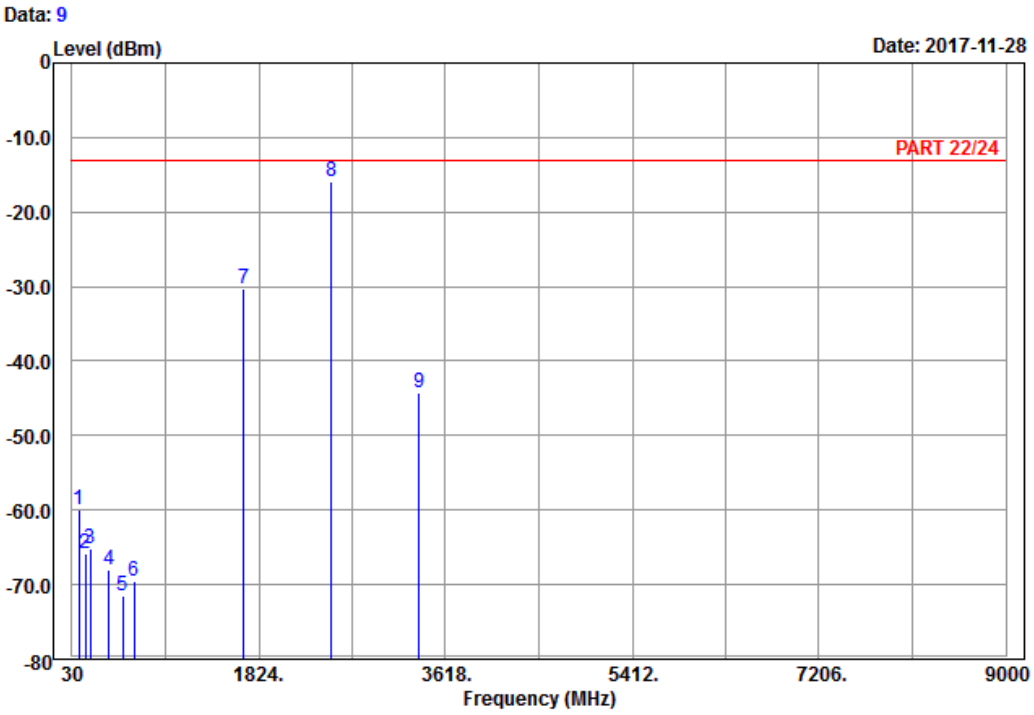


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 26_Link_CH26915
Tested by: Charles Hsiao

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1673.00	-51.04	-58.95	-13.00	-38.04	7.91	Peak
2 pp	2509.50	-21.31	-32.59	-13.00	-8.31	11.28	Peak

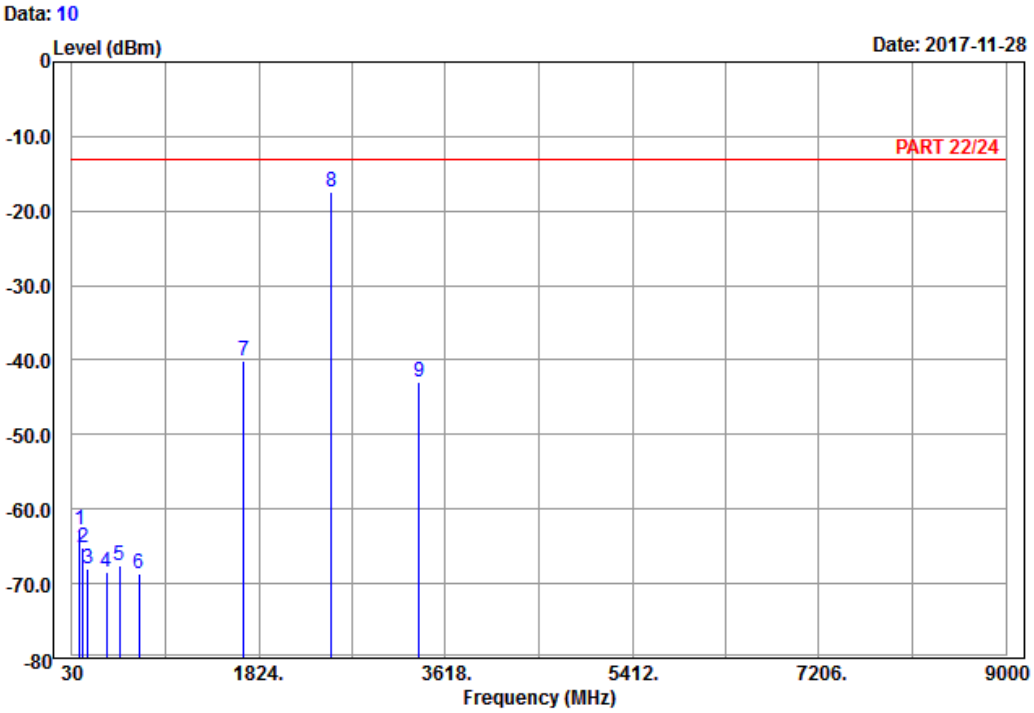
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 26_Link_CH26965
Tested by: Charles Hsiao

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	97.50	-60.02	-49.79	-13.00	-47.02	-10.23	Peak
2	159.87	-65.73	-58.06	-13.00	-52.73	-7.67	Peak
3	201.99	-65.27	-59.11	-13.00	-52.27	-6.16	Peak
4	386.80	-67.92	-64.51	-13.00	-54.92	-3.41	Peak
5	514.90	-71.55	-67.33	-13.00	-58.55	-4.22	Peak
6	625.50	-69.51	-69.65	-13.00	-56.51	0.14	Peak
7	1683.00	-30.22	-38.24	-13.00	-17.22	8.02	Peak
8 pp	2524.50	-16.02	-27.40	-13.00	-3.02	11.38	Peak
9	3366.00	-44.31	-58.75	-13.00	-31.31	14.44	Peak



Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 26_Link_CH26965
Tested by: Charles Hsiao

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	105.60	-62.81	-53.39	-13.00	-49.81	-9.42	Peak
2	138.00	-65.25	-57.57	-13.00	-52.25	-7.68	Peak
3	178.50	-68.10	-62.32	-13.00	-55.10	-5.78	Peak
4	358.10	-68.50	-63.54	-13.00	-55.50	-4.96	Peak
5	486.90	-67.48	-62.58	-13.00	-54.48	-4.90	Peak
6	671.70	-68.74	-68.50	-13.00	-55.74	-0.24	Peak
7	1683.00	-40.07	-48.09	-13.00	-27.07	8.02	Peak
8 pp	2524.50	-17.47	-28.85	-13.00	-4.47	11.38	Peak
9	3366.00	-42.96	-57.40	-13.00	-29.96	14.44	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 FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

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

Linko EMC/RF Lab
Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab
Tel: 886-3-6668565
Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety
Tel: 886-3-3183232
Fax: 886-3-3270892

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.

--- END ---