FCC Test Report

(PART 24)

Report No.:	RF171013C04B-1
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

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Release Control Record

Issue No.	Description	Date Issued
RF171013C04B-1	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 24, Subpart E

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's 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 24 & Part 2			
FCC Clause	**Test Item**	**Result**	**Remarks**
2.1046 24.232	Effective Isotropic Radiated Power	Pass	Meet the requirement of limit.
2.1046 24.232(d)	Peak to Average Ratio	Pass	Meet the requirement of limit.
2.1055 24.235	Frequency Stability	Pass	Meet the requirement of limit.
2.1049 24.238(b)	Occupied Bandwidth	Pass	Meet the requirement of limit.
24.238(b)	Band Edge Measurements	Pass	Meet the requirement of limit.
2.1051 24.238	Conducted Spurious Emissions	Pass	Meet the requirement of limit.
2.1053 24.238	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -7.73 dB at 3765 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	1852.4 ~ 1907.6 MHz
	LTE Band 2 (Channel Bandwidth: 1.4 MHz)	1850.7 ~ 1909.3 MHz
	LTE Band 2 (Channel Bandwidth: 3 MHz)	1851.5 ~ 1908.5 MHz
	LTE Band 2 (Channel Bandwidth: 5 MHz)	1852.5 ~ 1907.5 MHz
	LTE Band 2 (Channel Bandwidth: 10 MHz)	1855.0 ~ 1905.0 MHz
	LTE Band 2 (Channel Bandwidth: 15 MHz)	1857.5 ~ 1902.5 MHz
	LTE Band 2 (Channel Bandwidth: 20 MHz)	1860.0 ~ 1900.0 MHz
	LTE Band 25 (Channel Bandwidth: 1.4 MHz)	1850.7 ~ 1914.3 MHz
	LTE Band 25 (Channel Bandwidth: 3 MHz)	1851.5 ~ 1913.5 MHz
	LTE Band 25 (Channel Bandwidth: 5 MHz)	1852.5 ~ 1912.5 MHz
	LTE Band 25 (Channel Bandwidth: 10 MHz)	1855.0 ~ 1910.0 MHz
	LTE Band 25 (Channel Bandwidth: 15 MHz)	1857.5 ~ 1907.5 MHz
	LTE Band 25 (Channel Bandwidth: 20 MHz)	1860.0 ~ 1905.0 MHz
Max. EIRP Power	WCDMA	226.05 mW
	LTE Band 2 (Channel Bandwidth: 1.4 MHz)	405.51 mW
	LTE Band 2 (Channel Bandwidth: 3 MHz)	407.38 mW
	LTE Band 2 (Channel Bandwidth: 5 MHz)	404.58 mW
	LTE Band 2 (Channel Bandwidth: 10 MHz)	404.86 mW
	LTE Band 2 (Channel Bandwidth: 15 MHz)	407.38 mW
	LTE Band 2 (Channel Bandwidth: 20 MHz)	411.15 mW
	LTE Band 25 (Channel Bandwidth: 1.4 MHz)	227.51 mW
	LTE Band 25 (Channel Bandwidth: 3 MHz)	226.62 mW
	LTE Band 25 (Channel Bandwidth: 5 MHz)	226.62 mW
	LTE Band 25 (Channel Bandwidth: 10 MHz)	228.56 mW
	LTE Band 25 (Channel Bandwidth: 15 MHz)	229.09 mW
	LTE Band 25 (Channel Bandwidth: 20 MHz)	231.74 mW

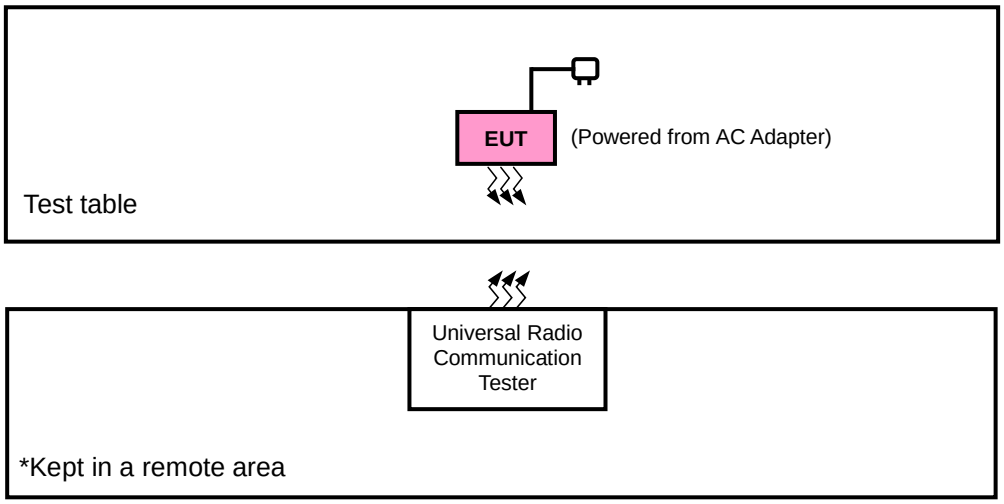
Emission Designator	WCDMA	4M13F9W
	LTE Band 2 (Channel Bandwidth: 1.4 MHz)	1M08W7D
	LTE Band 2 (Channel Bandwidth: 3 MHz)	2M70G7D
	LTE Band 2 (Channel Bandwidth: 5 MHz)	4M49W7D
	LTE Band 2 (Channel Bandwidth: 10 MHz)	8M97W7D
	LTE Band 2 (Channel Bandwidth: 15 MHz)	13M5G7D
	LTE Band 2 (Channel Bandwidth: 20 MHz)	18M0W7D
	LTE Band 25 (Channel Bandwidth: 1.4 MHz)	1M09W7D
	LTE Band 25 (Channel Bandwidth: 3 MHz)	2M70G7D
	LTE Band 25 (Channel Bandwidth: 5 MHz)	4M49W7D
	LTE Band 25 (Channel Bandwidth: 10 MHz)	8M99W7D
	LTE Band 25 (Channel Bandwidth: 15 MHz)	13M5G7D
	LTE Band 25 (Channel Bandwidth: 20 MHz)	17M9W7D
Antenna Type	Fixed Internal Antenna	
Accessory Device	Refer to Note as below	
Data Cable Supplied	Refer to Note as below	

Note:

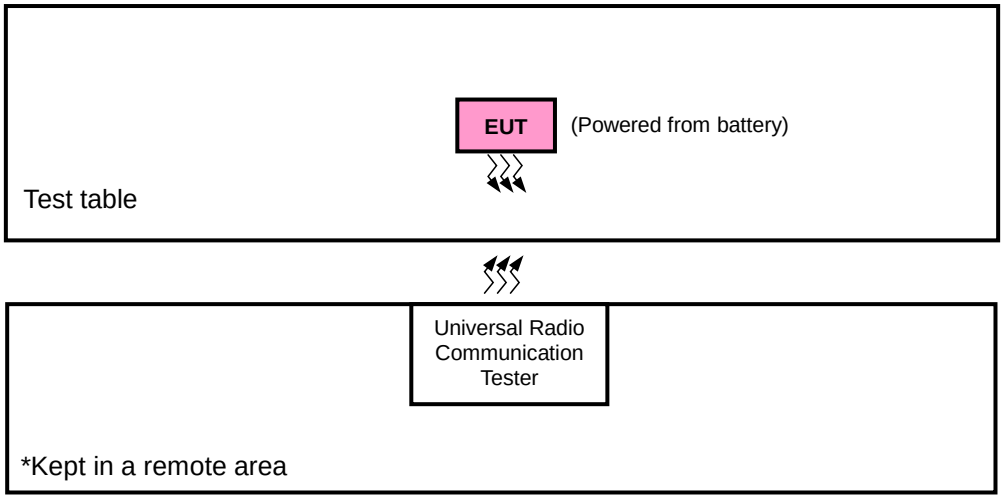
1. The EUT's accessories list refers to Ext. Pho.
2. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 Configuration of System under Test

<Radiated Emission Test>



<E.I.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	EIRP	Radiated Emission
WCDMA	X-plane	Z-axis
LTE Band 2	X-plane	Z-axis
LTE Band 25	X-plane	X-axis

WCDMA

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Mode
-	EIRP	9262 to 9538	9262, 9400, 9538	WCDMA
-	Frequency Stability	9262 to 9538	9262, 9538	WCDMA
-	Occupied Bandwidth	9262 to 9538	9262, 9400, 9538	WCDMA
-	Band Edge	9262 to 9538	9262, 9538	WCDMA
-	Peak to Average Ratio	9262 to 9538	9262, 9400, 9538	WCDMA
-	Conducted Emission	9262 to 9538	9262, 9400, 9538	WCDMA
-	Radiated Emission	9262 to 9538	9262, 9400, 9538	WCDMA

LTE Band 2

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	EIRP	18607 to 19193	18607, 18900, 19193	1.4 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		18615 to 19185	18615, 18900, 19185	3 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		18625 to 19175	18625, 18900, 19175	5 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		18650 to 19150	18650, 18900, 19150	10 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		18675 to 19125	18675, 18900, 19125	15 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		18700 to 19100	18700, 18900, 19100	20 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
-	Frequency Stability	18607 to 19193	18607, 19193	1.4 MHz	QPSK	1 RB / 0 RB Offset
		18615 to 19185	18615, 19185	3 MHz	QPSK	1 RB / 0 RB Offset
		18625 to 19175	18625, 19175	5 MHz	QPSK	1 RB / 0 RB Offset
		18650 to 19150	18650, 19150	10 MHz	QPSK	1 RB / 0 RB Offset
		18675 to 19125	18675, 19125	15 MHz	QPSK	1 RB / 0 RB Offset
		18700 to 19100	18700, 19100	20 MHz	QPSK	1 RB / 0 RB Offset
-	Occupied Bandwidth	18607 to 19193	18607, 18900, 19193	1.4 MHz	QPSK, 16QAM, 64QAM	6 RB / 0 RB Offset
		18615 to 19185	18615, 18900, 19185	3 MHz	QPSK, 16QAM, 64QAM	15 RB / 0 RB Offset
		18625 to 19175	18625, 18900, 19175	5 MHz	QPSK, 16QAM, 64QAM	25 RB / 0 RB Offset
		18650 to 19150	18650, 18900, 19150	10 MHz	QPSK, 16QAM, 64QAM	50 RB / 0 RB Offset
		18675 to 19125	18675, 18900, 19125	15 MHz	QPSK, 16QAM, 64QAM	75 RB / 0 RB Offset
		18700 to 19100	18700, 18900, 19100	20 MHz	QPSK, 16QAM, 64QAM	100 RB / 0 RB Offset
-	Peak to Average Ratio	18607 to 19193	18607, 18900, 19193	1.4 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		18615 to 19185	18615, 18900, 19185	3 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		18625 to 19175	18625, 18900, 19175	5 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		18650 to 19150	18650, 18900, 19150	10 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		18675 to 19125	18675, 18900, 19125	15 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		18700 to 19100	18700, 18900, 19100	20 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
-	Band Edge	18607 to 19193	18607	1.4 MHz	QPSK	1 RB / 0 RB Offset
						6 RB / 0 RB Offset
			19193	1.4 MHz	QPSK	1 RB / 5 RB Offset
						6 RB / 0 RB Offset
		18615 to 19185	18615	3 MHz	QPSK	1 RB / 0 RB Offset
						15 RB / 0 RB Offset
			19185	3 MHz	QPSK	1 RB / 14 RB Offset
						15 RB / 0 RB Offset
		18625 to 19175	18625	5 MHz	QPSK	1 RB / 0 RB Offset
						25 RB / 0 RB Offset
			19175	5 MHz	QPSK	1 RB / 24 RB Offset
						25 RB / 0 RB Offset

		18650 to 19150	18650	10 MHz	QPSK	1 RB / 0 RB Offset
						50 RB / 0 RB Offset
			19150	10 MHz	QPSK	1 RB / 49 RB Offset
						50 RB / 0 RB Offset
		18675 to 19125	18675	15 MHz	QPSK	1 RB / 0 RB Offset
						75 RB / 0 RB Offset
			19125	15 MHz	QPSK	1 RB / 74 RB Offset
						75 RB / 0 RB Offset
		18700 to 19100	18700	20 MHz	QPSK	1 RB / 0 RB Offset
						100 RB / 0 RB Offset
			19100	20 MHz	QPSK	1 RB / 99 RB Offset
						100 RB / 0 RB Offset
-	Conducted Emission	18607 to 19193	18607, 18900, 19193	1.4 MHz	QPSK	1 RB / 0 RB Offset
		18615 to 19185	18615, 18900, 19185	3 MHz	QPSK	1 RB / 0 RB Offset
		18625 to 19175	18625, 18900, 19175	5 MHz	QPSK	1 RB / 0 RB Offset
		18650 to 19150	18650, 18900, 19150	10 MHz	QPSK	1 RB / 0 RB Offset
		18675 to 19125	18675, 18900, 19125	15 MHz	QPSK	1 RB / 0 RB Offset
		18700 to 19100	18700, 18900, 19100	20 MHz	QPSK	1 RB / 0 RB Offset
-	Radiated Emission	18700 to 19100	18700, 18900, 19100	20 MHz	QPSK	1 RB / 0 RB Offset

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

LTE Band 25

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	EIRP	26047 to 26683	26047, 26365, 26683	1.4 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		26055 to 26675	26055, 26365, 26675	3 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		26065 to 26665	26065, 26365, 26665	5 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		26090 to 26640	26090, 26365, 26640	10 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		26115 to 26615	26115, 26365, 26615	15 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		26140 to 26590	26140, 26365, 26590	20 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
-	Frequency Stability	26047 to 26683	26047, 26683	1.4 MHz	QPSK	1 RB / 0 RB Offset
		26055 to 26675	26055, 26675	3 MHz	QPSK	1 RB / 0 RB Offset
		26065 to 26665	26065, 26665	5 MHz	QPSK	1 RB / 0 RB Offset
		26090 to 26640	26090, 26640	10 MHz	QPSK	1 RB / 0 RB Offset
		26115 to 26615	26115, 26615	15 MHz	QPSK	1 RB / 0 RB Offset
		26140 to 26590	26140, 26590	20 MHz	QPSK	1 RB / 0 RB Offset
-	Occupied Bandwidth	26047 to 26683	26047, 26365, 26683	1.4 MHz	QPSK, 16QAM, 64QAM	6 RB / 0 RB Offset
		26055 to 26675	26055, 26365, 26675	3 MHz	QPSK, 16QAM, 64QAM	15 RB / 0 RB Offset
		26065 to 26665	26065, 26365, 26665	5 MHz	QPSK, 16QAM, 64QAM	25 RB / 0 RB Offset
		26090 to 26640	26090, 26365, 26640	10 MHz	QPSK, 16QAM, 64QAM	50 RB / 0 RB Offset
		26115 to 26615	26115, 26365, 26615	15 MHz	QPSK, 16QAM, 64QAM	75 RB / 0 RB Offset
		26140 to 26590	26140, 26365, 26590	20 MHz	QPSK, 16QAM, 64QAM	100 RB / 0 RB Offset
-	Peak to Average Ratio	26047 to 26683	26047, 26365, 26683	1.4 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		26055 to 26675	26055, 26365, 26675	3 MHz	QPSK, 16QAM, 64QAM	1 RB / 7 RB Offset
		26065 to 26665	26065, 26365, 26665	5 MHz	QPSK, 16QAM, 64QAM	1 RB / 12 RB Offset
		26090 to 26640	26090, 26365, 26640	10 MHz	QPSK, 16QAM, 64QAM	1 RB / 24 RB Offset
		26115 to 26615	26115, 26365, 26615	15 MHz	QPSK, 16QAM, 64QAM	75 RB / 0 RB Offset
		26140 to 26590	26140, 26365, 26590	20 MHz	QPSK, 16QAM, 64QAM	100 RB / 0 RB Offset
-	Band Edge	26047 to 26683	26047	1.4 MHz	QPSK	1 RB / 0 RB Offset
						6 RB / 0 RB Offset
			26683	1.4 MHz	QPSK	1 RB / 5 RB Offset
						6 RB / 0 RB Offset
		26055 to 26675	26055	3 MHz	QPSK	1 RB / 0 RB Offset
						1 RB / 0 RB Offset
			26675	3 MHz	QPSK	1 RB / 14 RB Offset
						15 RB / 0 RB Offset
		26065 to 26665	26065	5 MHz	QPSK	1 RB / 0 RB Offset
						25 RB / 0 RB Offset
			26665	5 MHz	QPSK	1 RB / 24 RB Offset
						25 RB / 0 RB Offset
		26090 to 26640	26090	10 MHz	QPSK	1 RB / 0 RB Offset

						50 RB / 0 RB Offset
			26640	10 MHz	QPSK	1 RB / 49 RB Offset
						50 RB / 0 RB Offset
		26115 to 26615	26115	15 MHz	QPSK	1 RB / 0 RB Offset
						75 RB / 0 RB Offset
			26615	15 MHz	QPSK	1 RB / 74 RB Offset
						75 RB / 0 RB Offset
		26140 to 26590	26140	20 MHz	QPSK	1 RB / 0 RB Offset
						100 RB / 0 RB Offset
			26590	20 MHz	QPSK	1 RB / 99 RB Offset
						100 RB / 0 RB Offset

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	Conducted Emission	26047 to 26683	26047, 26365, 26683	1.4 MHz	QPSK	1 RB / 5 RB Offset
		26055 to 26675	26055, 26365, 26675	3 MHz	QPSK	1 RB / 7 RB Offset
		26065 to 26665	26065, 26365, 26665	5 MHz	QPSK	1 RB / 12 RB Offset
		26090 to 26640	26090, 26365, 26640	10 MHz	QPSK	1 RB / 24 RB Offset
		26115 to 26615	26115, 26365, 26615	15 MHz	QPSK	1 RB / 0 RB Offset
		26140 to 26590	26140, 26365, 26590	20 MHz	QPSK	1 RB / 0 RB Offset
-	Radiated Emission	26140 to 26590	26140, 26365, 26590	20 MHz	QPSK	1 RB / 0 RB Offset

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

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
EIRP	26 deg. C, 58 % RH	15.4 Vdc	Anson Lin
Frequency Stability	26 deg. C, 58 % RH	15.4 Vdc	Taylor Liu
Occupied Bandwidth	26 deg. C, 58 % RH	15.4 Vdc	Taylor Liu
Band Edge	26 deg. C, 58 % RH	15.4 Vdc	Taylor Liu
Peak to Average Ratio	26 deg. C, 58 % RH	15.4 Vdc	Taylor Liu
Conducted Emission	26 deg. C, 58 % RH	15.4 Vdc	Taylor Liu
Radiated Emission	25 deg. C, 65 % RH	120 Vac, 60 Hz	Getaz Yang, Karl Lee

3.4 EUT Operating Conditions

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

3.5 General Description of Applied Standards

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

FCC 47 CFR Part 2
FCC 47 CFR Part 24
KDB 971168 D01 Power Meas License Digital Systems 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 2 watts e.i.r.p.

4.1.2 Test Procedures

EIRP / ERP Measurement:

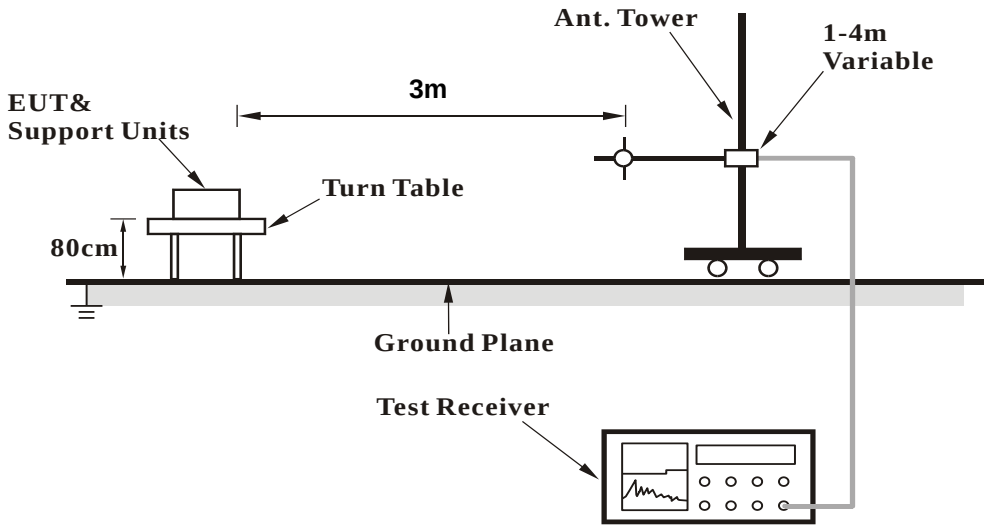
a. All measurements were done at low, middle and high operational frequency range. RBW and VBW is 1 MHz for GSM, GPRS & EDGE, 5 MHz for WCDMA and CDMA, and 10 MHz for LTE mode.
b. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8 m (below or equal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

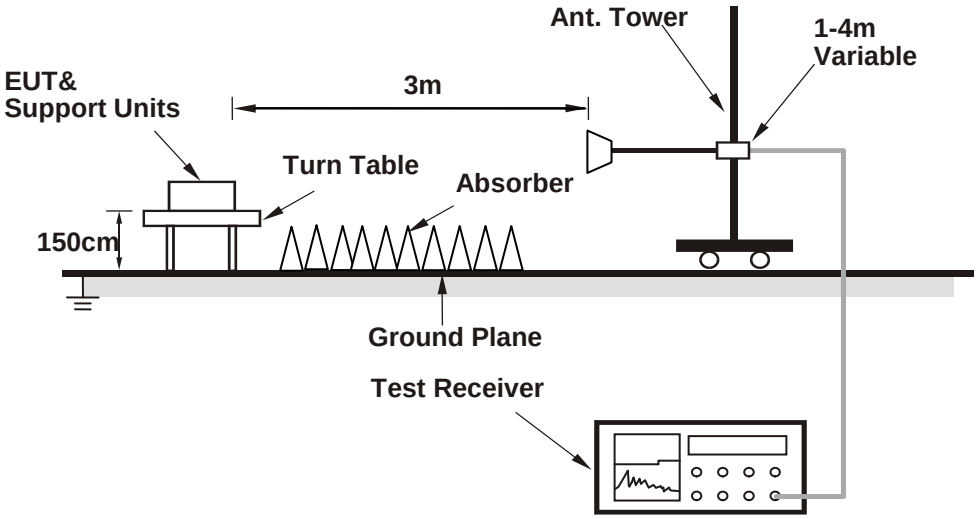
The EUT was set up for the maximum power with GSM, GPRS, EDGE, WCDMA, CDMA, and LTE link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

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 II			3GPP MPR (dB)
Channel	9262	9400	9538	
Frequency (MHz)	1852.4	1880.0	1907.6	
EUT without Power Reduction (P-Sensor NOT Triggered)				
RMC 12.2K	22.68	23.23	**23.77**	-
HSDPA Subtest-1	21.70	22.12	22.61	0
HSDPA Subtest-2	21.69	22.14	22.45	0
HSDPA Subtest-3	21.19	21.68	22.17	0.5
HSDPA Subtest-4	21.15	21.49	21.63	0.5
HSUPA Subtest-1	21.80	21.82	22.00	0
HSUPA Subtest-2	19.58	19.73	19.83	2
HSUPA Subtest-3	20.44	21.13	20.97	1
HSUPA Subtest-4	19.84	19.03	19.78	2
HSUPA Subtest-5	21.60	21.60	22.10	0
EUT with Power Reduction (P-Sensor Triggered)				
RMC 12.2K	13.75	14.17	**14.43**	-
HSDPA Subtest-1	12.70	13.12	13.38	0
HSDPA Subtest-2	12.69	13.11	13.37	0
HSDPA Subtest-3	12.14	12.56	12.82	0.5
HSDPA Subtest-4	12.19	12.61	12.87	0.5
HSUPA Subtest-1	12.34	12.76	13.02	0
HSUPA Subtest-2	10.25	10.67	10.93	2
HSUPA Subtest-3	11.65	12.07	12.33	1
HSUPA Subtest-4	9.55	9.97	10.23	2
HSUPA Subtest-5	12.12	12.54	12.80	0

LTE Band 2

EUT without Power Reduction (P-Sensor NOT Triggered)

BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 18700 1860.0 MHz	Mid CH 18900 1880.0 MHz	High CH 19100 1900.0 MHz	3GPP MPR (dB)	Low CH 18607 1850.7 MHz	Mid CH 18900 1880.0 MHz	High CH 19193 1909.3 MHz	3GPP MPR (dB)	Low CH 18607 1850.7 MHz	Mid CH 18900 1880.0 MHz	High CH 19193 1909.3 MHz	3GPP MPR (dB)
20	1	0	22.96	23.18	23.80	0	21.89	22.11	22.73	1	21.05	21.33	21.92	2
	1	50	22.97	23.19	23.79	0	21.90	22.12	22.72	1	21.07	21.31	21.84	2
	1	99	22.94	23.16	23.77	0	21.87	22.09	22.70	1	21.02	21.26	21.73	2
	50	0	22.04	22.26	22.87	1	20.97	21.19	21.80	2	20.03	20.17	20.87	3
	50	25	21.99	22.21	22.82	1	20.92	21.14	21.75	2	20.11	20.33	20.80	3
	50	50	21.96	22.18	22.79	1	20.89	21.11	21.72	2	20.03	20.20	20.76	3
	100	0	21.95	22.17	22.78	1	20.88	21.10	21.71	2	20.09	20.29	20.83	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 18675 1857.5 MHz	Mid CH 18900 1880.0 MHz	High CH 19125 1902.5 MHz	3GPP MPR (dB)	Low CH 18675 1857.5 MHz	Mid CH 18900 1880.0 MHz	High CH 19125 1902.5 MHz	3GPP MPR (dB)	Low CH 18675 1857.5 MHz	Mid CH 18900 1880.0 MHz	High CH 19125 1902.5 MHz	3GPP MPR (dB)
15	1	0	22.89	23.11	23.73	0	21.86	22.08	22.70	1	21.12	21.26	21.90	2
	1	37	22.90	23.12	23.72	0	21.87	22.09	22.69	1	21.08	21.29	21.74	2
	1	74	22.87	23.09	23.70	0	21.84	22.06	22.67	1	21.08	21.30	21.87	2
	36	0	21.97	22.19	22.80	1	20.94	21.16	21.77	2	20.50	20.25	20.76	3
	36	19	21.92	22.14	22.75	1	20.89	21.11	21.72	2	20.03	20.34	20.92	3
	36	39	21.89	22.11	22.72	1	20.86	21.08	21.69	2	20.09	20.24	20.79	3
	75	0	21.88	22.10	22.71	1	20.85	21.07	21.68	2	20.07	20.30	20.74	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 18650 1855.0 MHz	Mid CH 18900 1880.0 MHz	High CH 19150 1905.0 MHz	3GPP MPR (dB)	Low CH 18650 1855.0 MHz	Mid CH 18900 1880.0 MHz	High CH 19150 1905.0 MHz	3GPP MPR (dB)	Low CH 18650 1855.0 MHz	Mid CH 18900 1880.0 MHz	High CH 19150 1905.0 MHz	3GPP MPR (dB)
10	1	0	22.86	23.08	23.70	0	21.79	22.01	22.63	1	21.11	21.15	21.91	2
	1	24	22.87	23.09	23.69	0	21.80	22.02	22.62	1	21.04	21.22	21.77	2
	1	49	22.84	23.06	23.67	0	21.77	21.99	22.60	1	21.03	21.30	21.77	2
	25	0	21.94	22.16	22.77	1	20.87	21.09	21.70	2	20.08	20.24	20.87	3
	25	12	21.89	22.11	22.72	1	20.82	21.04	21.65	2	20.02	20.19	20.78	3
	25	25	21.86	22.08	22.69	1	20.79	21.01	21.62	2	20.04	20.20	20.84	3
	50	0	21.85	22.07	22.68	1	20.78	21.00	21.61	2	20.08	20.14	20.83	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 18625 1852.5 MHz	Mid CH 18900 1880.0 MHz	High CH 19175 1907.5 MHz	3GPP MPR (dB)	Low CH 18625 1852.5 MHz	Mid CH 18900 1880.0 MHz	High CH 19175 1907.5 MHz	3GPP MPR (dB)	Low CH 18625 1852.5 MHz	Mid CH 18900 1880.0 MHz	High CH 19175 1907.5 MHz	3GPP MPR (dB)
5	1	0	22.80	23.02	23.64	0	21.74	21.96	22.58	1	21.11	21.23	21.75	2
	1	12	22.81	23.03	23.63	0	21.75	21.97	22.57	1	21.08	21.18	21.74	2
	1	24	22.78	23.00	23.61	0	21.72	21.94	22.55	1	21.09	21.20	21.75	2
	12	0	21.88	22.10	22.71	1	20.82	21.04	21.65	2	20.05	20.26	20.86	3
	12	6	21.83	22.05	22.66	1	20.77	20.99	21.60	2	20.02	20.29	20.85	3
	12	13	21.80	22.02	22.63	1	20.74	20.96	21.57	2	20.08	20.23	20.84	3
	25	0	21.79	22.01	22.62	1	20.73	20.95	21.56	2	20.05	20.18	20.84	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 18615 1851.5 MHz	Mid CH 18900 1880.0 MHz	High CH 19185 1908.5 MHz	3GPP MPR (dB)	Low CH 18615 1851.5 MHz	Mid CH 18900 1880.0 MHz	High CH 19185 1908.5 MHz	3GPP MPR (dB)	Low CH 18615 1851.5 MHz	Mid CH 18900 1880.0 MHz	High CH 19185 1908.5 MHz	3GPP MPR (dB)
3	1	0	22.75	22.97	23.59	0	21.68	21.90	22.52	1	21.11	21.33	21.81	2
	1	7	22.76	22.98	23.58	0	21.69	21.91	22.51	1	21.11	21.23	21.92	2
	1	14	22.73	22.95	23.56	0	21.66	21.88	22.49	1	21.03	21.14	21.75	2
	8	0	21.83	22.05	22.66	1	20.76	20.98	21.59	2	20.06	20.20	20.93	3
	8	3	21.78	22.00	22.61	1	20.71	20.93	21.54	2	20.10	20.14	20.87	3
	8	7	21.75	21.97	22.58	1	20.68	20.90	21.51	2	20.10	20.30	20.91	3
	15	0	21.74	21.96	22.57	1	20.67	20.89	21.50	2	20.05	20.11	20.89	3
BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 18607 1850.7 MHz	Mid CH 18900 1880.0 MHz	High CH 19193 1909.3 MHz	3GPP MPR (dB)	Low CH 18607 1850.7 MHz	Mid CH 18900 1880.0 MHz	High CH 19193 1909.3 MHz	3GPP MPR (dB)	Low CH 18607 1850.7 MHz	Mid CH 18900 1880.0 MHz	High CH 19193 1909.3 MHz	3GPP MPR (dB)
1.4	1	0	22.73	22.95	23.64	0	21.61	21.83	22.52	1	21.10	21.15	21.87	2
	1	2	22.74	22.96	23.56	0	21.62	21.84	22.44	1	21.09	21.22	21.92	2
	1	5	22.71	22.93	23.54	0	21.59	21.81	22.42	1	21.01	21.24	21.89	2
	3	0	22.81	23.03	23.57	0	21.69	21.91	22.45	1	21.10	21.23	21.84	2
	3	1	22.76	22.98	23.59	0	21.64	21.86	22.47	1	21.09	21.19	21.89	2
	3	3	22.73	22.95	23.56	0	21.61	21.83	22.44	1	21.05	21.22	21.85	2
	6	0	21.72	21.94	22.55	1	20.60	20.82	21.43	2	20.05	20.20	20.81	3

LTE Band 2

EUT with Power Reduction (P-Sensor Triggered)

BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 18700	Mid CH 18900	High CH 19100	3GPP MPR (dB)	Low CH 18607	Mid CH 18900	High CH 19193	3GPP MPR (dB)	Low CH 18607	Mid CH 18900	High CH 19193	3GPP MPR (dB)
			1860.0 MHz	1880.0 MHz	1900.0 MHz		1850.7 MHz	1880.0 MHz	1909.3 MHz		1850.7 MHz	1880.0 MHz	1909.3 MHz	
20	1	0	13.62	13.78	14.21	0	12.53	12.69	13.12	1	12.49	12.65	13.08	2
	1	50	13.52	13.68	14.11	0	12.43	12.59	13.02	1	12.39	12.55	12.98	2
	1	99	13.49	13.65	14.08	0	12.40	12.56	12.99	1	12.36	12.52	12.95	2
	50	0	12.79	12.95	13.38	1	11.70	11.86	12.29	2	11.66	11.82	12.25	3
	50	25	12.68	12.84	13.27	1	11.59	11.75	12.18	2	11.55	11.71	12.14	3
	50	50	12.64	12.80	13.23	1	11.55	11.71	12.14	2	11.51	11.67	12.10	3
	100	0	12.82	12.98	13.41	1	11.73	11.89	12.32	2	11.69	11.85	12.28	3

BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 18675	Mid CH 18900	High CH 19125	3GPP MPR (dB)	Low CH 18675	Mid CH 18900	High CH 19125	3GPP MPR (dB)	Low CH 18675	Mid CH 18900	High CH 19125	3GPP MPR (dB)
			1857.5 MHz	1880.0 MHz	1902.5 MHz		1857.5 MHz	1880.0 MHz	1902.5 MHz		1857.5 MHz	1880.0 MHz	1902.5 MHz	
15	1	0	13.59	13.75	14.18	0	12.50	12.66	13.09	1	12.46	12.62	13.05	2
	1	37	13.49	13.65	14.08	0	12.40	12.56	12.99	1	12.36	12.52	12.95	2
	1	74	13.46	13.62	14.05	0	12.37	12.53	12.96	1	12.33	12.49	12.92	2
	36	0	12.76	12.92	13.35	1	11.67	11.83	12.26	2	11.63	11.79	12.22	3
	36	19	12.65	12.81	13.24	1	11.56	11.72	12.15	2	11.52	11.68	12.11	3
	36	39	12.61	12.77	13.20	1	11.52	11.68	12.11	2	11.48	11.64	12.07	3
	75	0	12.79	12.95	13.38	1	11.70	11.86	12.29	2	11.66	11.82	12.25	3

BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 18650	Mid CH 18900	High CH 19150	3GPP MPR (dB)	Low CH 18650	Mid CH 18900	High CH 19150	3GPP MPR (dB)	Low CH 18650	Mid CH 18900	High CH 19150	3GPP MPR (dB)
			1855.0 MHz	1880.0 MHz	1905.0 MHz		1855.0 MHz	1880.0 MHz	1905.0 MHz		1855.0 MHz	1880.0 MHz	1905.0 MHz	
10	1	0	13.49	13.65	14.08	0	12.40	12.56	12.99	1	12.36	12.52	12.95	2
	1	24	13.39	13.55	13.98	0	12.30	12.46	12.89	1	12.26	12.42	12.85	2
	1	49	13.36	13.52	13.95	0	12.27	12.43	12.86	1	12.23	12.39	12.82	2
	25	0	12.66	12.82	13.25	1	11.57	11.73	12.16	2	11.53	11.69	12.12	3
	25	12	12.55	12.71	13.14	1	11.46	11.62	12.05	2	11.42	11.58	12.01	3
	25	25	12.51	12.67	13.10	1	11.42	11.58	12.01	2	11.38	11.54	11.97	3
	50	0	12.69	12.85	13.28	1	11.60	11.76	12.19	2	11.56	11.72	12.15	3

BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 18625	Mid CH 18900	High CH 19175	3GPP MPR (dB)	Low CH 18625	Mid CH 18900	High CH 19175	3GPP MPR (dB)	Low CH 18625	Mid CH 18900	High CH 19175	3GPP MPR (dB)
			1852.5 MHz	1880.0 MHz	1907.5 MHz		1852.5 MHz	1880.0 MHz	1907.5 MHz		1852.5 MHz	1880.0 MHz	1907.5 MHz	
5	1	0	13.43	13.59	14.02	0	12.34	12.50	12.93	1	12.30	12.46	12.89	2
	1	12	13.33	13.49	13.92	0	12.24	12.40	12.83	1	12.20	12.36	12.79	2
	1	24	13.30	13.46	13.89	0	12.21	12.37	12.80	1	12.17	12.33	12.76	2
	12	0	12.60	12.76	13.19	1	11.51	11.67	12.10	2	11.47	11.63	12.06	3
	12	6	12.49	12.65	13.08	1	11.40	11.56	11.99	2	11.36	11.52	11.95	3
	12	13	12.45	12.61	13.04	1	11.36	11.52	11.95	2	11.32	11.48	11.91	3
	25	0	12.63	12.79	13.22	1	11.54	11.70	12.13	2	11.50	11.66	12.09	3

BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 18615	Mid CH 18900	High CH 19185	3GPP MPR (dB)	Low CH 18615	Mid CH 18900	High CH 19185	3GPP MPR (dB)	Low CH 18615	Mid CH 18900	High CH 19185	3GPP MPR (dB)
			1851.5 MHz	1880.0 MHz	1908.5 MHz		1851.5 MHz	1880.0 MHz	1908.5 MHz		1851.5 MHz	1880.0 MHz	1908.5 MHz	
3	1	0	13.40	13.56	13.99	0	12.31	12.47	12.90	1	12.27	12.43	12.86	2
	1	7	13.30	13.46	13.89	0	12.21	12.37	12.80	1	12.17	12.33	12.76	2
	1	14	13.27	13.43	13.86	0	12.18	12.34	12.77	1	12.14	12.30	12.73	2
	8	0	12.57	12.73	13.16	1	11.48	11.64	12.07	2	11.44	11.60	12.03	3
	8	3	12.46	12.62	13.05	1	11.37	11.53	11.96	2	11.33	11.49	11.92	3
	8	7	12.42	12.58	13.01	1	11.33	11.49	11.92	2	11.29	11.45	11.88	3
	15	0	12.60	12.76	13.19	1	11.51	11.67	12.10	2	11.47	11.63	12.06	3

BW (MHz)	RB Size	RB Offset	QPSK				16QAM				64QAM			
			Low CH 18607	Mid CH 18900	High CH 19193	3GPP MPR (dB)	Low CH 18607	Mid CH 18900	High CH 19193	3GPP MPR (dB)	Low CH 18607	Mid CH 18900	High CH 19193	3GPP MPR (dB)
			1850.7 MHz	1880.0 MHz	1909.3 MHz		1850.7 MHz	1880.0 MHz	1909.3 MHz		1850.7 MHz	1880.0 MHz	1909.3 MHz	
1.4	1	0	13.38	13.54	13.97	0	12.29	12.45	12.88	1	12.25	12.41	12.44	2
	1	2	13.28	13.44	13.87	0	12.19	12.35	12.78	1	12.15	12.31	12.43	2
	1	5	13.25	13.41	13.84	0	12.16	12.32	12.75	1	12.12	12.28	12.41	2
	3	0	13.07	13.23	13.66	0	11.98	12.14	12.57	1	11.94	12.10	12.33	2
	3	1	12.96	13.12	13.55	0	11.87	12.03	12.46	1	11.83	11.99	12.42	2
	3	3	12.92	13.08	13.51	0	11.83	11.99	12.42	1	11.79	11.95	12.38	2
	6	0	12.58	12.74	13.17	1	11.49	11.65	12.08	2	11.45	11.46	11.50	3

LTE Band 25

EUT without Power Reduction (P-Sensor NOT Triggered)

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		26140	26365	26590				Channel		26115	26365	26615	
		Frequency (MHz)		1860.0	1882.5	1905.0				Frequency (MHz)		1857.5	1882.5	1907.5	
20M	QPSK	1	0	22.35	22.88	23.15	0	15M	QPSK	1	0	22.29	22.82	23.09	0
		1	50	22.52	23.05	23.32	0			1	37	22.46	22.99	23.26	0
		1	99	22.28	22.81	23.08	0			1	74	22.22	22.75	23.02	0
		50	0	21.54	22.07	22.34	1			36	0	21.48	22.01	22.28	1
		50	25	21.56	22.09	22.36	1			36	19	21.50	22.03	22.30	1
		50	50	21.49	22.02	22.29	1			36	39	21.43	21.96	22.23	1
		100	0	21.61	22.14	22.41	1			75	0	21.55	22.08	22.35	1
	16QAM	1	0	21.66	22.19	22.48	1		16QAM	1	0	21.58	22.11	22.40	1
		1	50	21.79	22.32	22.61	1			1	37	21.71	22.24	22.53	1
		1	99	21.61	22.14	22.43	1			1	74	21.53	22.06	22.35	1
		50	0	20.56	21.09	21.38	2			36	0	20.48	21.01	21.30	2
		50	25	20.56	21.09	21.38	2			36	19	20.48	21.01	21.30	2
		50	50	20.50	21.03	21.32	2			36	39	20.42	20.95	21.24	2
		100	0	20.59	21.12	21.41	2			75	0	20.51	21.04	21.33	2
	64QAM	1	0	21.31	21.33	21.36	2		64QAM	1	0	21.28	21.30	21.33	2
		1	50	21.42	21.44	21.47	2			1	37	21.39	21.41	21.44	2
		1	99	21.32	21.34	21.37	2			1	74	21.29	21.31	21.34	2
		50	0	20.35	20.37	20.40	3			36	0	20.32	20.34	20.37	3
		50	25	20.37	20.39	20.42	3			36	19	20.34	20.36	20.39	3
		50	50	20.33	20.32	20.35	3			36	39	20.30	20.29	20.32	3
		100	0	20.37	20.39	20.42	3			75	0	20.34	20.36	20.39	3

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		26090	26365	26640				Channel		26065	26365	26665	
		Frequency (MHz)		2855.0	1882.5	1910.0				Frequency (MHz)		1852.5	1882.5	1912.5	
10M	QPSK	1	0	22.24	22.77	23.04	0	5M	QPSK	1	0	22.22	22.75	23.02	0
		1	24	22.41	22.94	23.21	0			1	12	22.39	22.92	23.19	0
		1	49	22.17	22.70	22.97	0			1	24	22.15	22.68	22.95	0
		25	0	21.43	21.96	22.23	1			12	0	21.41	21.94	22.21	1
		25	12	21.45	21.98	22.25	1			12	6	21.43	21.96	22.23	1
		25	25	21.38	21.91	22.18	1			12	13	21.36	21.89	22.16	1
		50	0	21.50	22.03	22.30	1			25	0	21.48	22.01	22.28	1
	16QAM	1	0	21.55	22.08	22.37	1		16QAM	1	0	21.48	22.01	22.30	1
		1	24	21.68	22.21	22.50	1			1	12	21.61	22.14	22.43	1
		1	49	21.50	22.03	22.32	1			1	24	21.43	21.96	22.25	1
		25	0	20.45	20.98	21.27	2			12	0	20.38	20.91	21.20	2
		25	12	20.45	20.98	21.27	2			12	6	20.38	20.91	21.20	2
		25	25	20.39	20.92	21.21	2			12	13	20.32	20.85	21.14	2
		50	0	20.48	21.01	21.30	2			25	0	20.41	20.94	21.23	2
	64QAM	1	0	21.22	21.22	21.25	2		64QAM	1	0	21.15	21.18	21.21	2
		1	24	21.33	21.33	21.36	2			1	12	21.26	21.29	21.32	2
		1	49	21.23	21.23	21.26	2			1	24	21.16	21.19	21.22	2
		25	0	20.26	20.26	20.29	3			12	0	20.19	20.22	20.25	3
		25	12	20.28	20.28	20.31	3			12	6	20.21	20.24	20.27	3
		25	25	20.24	20.21	20.24	3			12	13	20.17	20.17	20.20	3
		50	0	20.28	20.28	20.31	3			25	0	20.21	20.24	20.27	3

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		26055	26365	26675				Channel		26047	26365	26683	
		Frequency (MHz)		1851.5	1882.5	1913.5				Frequency (MHz)		1850.7	1882.5	1914.3	
3M	QPSK	1	0	22.17	22.70	22.97	0	1.4M	QPSK	1	0	22.15	22.68	22.95	0
		1	7	22.34	22.87	23.14	0			1	2	22.32	22.85	23.12	0
		1	14	22.10	22.63	22.90	0			1	5	22.08	22.61	22.88	0
		8	0	21.36	21.89	22.16	1			3	0	22.34	22.87	23.14	0
		8	3	21.38	21.91	22.18	1			3	1	22.36	22.89	23.16	0
		8	7	21.31	21.84	22.11	1			3	3	22.29	22.82	23.09	0
		15	0	21.43	21.96	22.23	1			6	0	21.41	21.94	22.21	1
	16QAM	1	0	21.45	21.98	22.27	1		16QAM	1	0	21.37	21.90	22.19	1
		1	7	21.58	22.11	22.40	1			1	2	21.50	22.03	22.32	1
		1	14	21.40	21.93	22.22	1			1	5	21.32	21.85	22.14	1
		8	0	20.35	20.88	21.17	2			3	0	21.27	21.80	22.09	1
		8	3	20.35	20.88	21.17	2			3	1	21.27	21.80	22.09	1
		8	7	20.29	20.82	21.11	2			3	3	21.21	21.74	22.03	1
		15	0	20.38	20.91	21.20	2			6	0	20.30	20.83	21.12	2
	64QAM	1	0	21.12	21.11	21.14	2		64QAM	1	0	21.05	21.08	21.11	2
		1	7	21.23	21.22	21.25	2			1	2	21.16	21.19	21.22	2
		1	14	21.13	21.12	21.15	2			1	5	21.06	21.09	21.12	2
		8	0	20.16	20.15	20.18	3			3	0	21.09	21.12	21.15	2
		8	3	20.18	20.17	20.20	3			3	1	21.11	21.14	21.17	2
		8	7	20.14	20.10	20.13	3			3	3	21.07	21.07	21.10	2
		15	0	20.18	20.17	20.20	3			6	0	20.11	20.14	20.17	3

LTE Band 25

EUT with Power Reduction (P-Sensor Triggered)

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		26140	26365	26590	
		Frequency (MHz)		1860.0	1882.5	1905.0	
20M	QPSK	1	0	14.03	14.63	14.65	0
		1	50	14.30	14.90	14.92	0
		1	99	13.85	14.45	14.47	0
		50	0	13.15	13.75	13.77	1
		50	25	13.21	13.81	13.83	1
		50	50	13.01	13.61	13.63	1
		100	0	13.13	13.73	13.75	1
	16QAM	1	0	13.01	13.61	13.63	1
		1	50	13.28	13.88	13.90	1
		1	99	12.83	13.43	13.45	1
		50	0	12.19	12.79	12.81	2
		50	25	12.13	12.73	12.75	2
		50	50	11.99	12.59	12.61	2
		100	0	12.11	12.71	12.73	2
	64QAM	1	0	12.02	12.62	12.64	2
		1	50	12.29	12.89	12.91	2
		1	99	11.84	12.44	12.46	2
		50	0	11.20	11.80	11.82	3
		50	25	11.14	11.74	11.76	3
		50	50	11.00	11.60	11.62	3
		100	0	11.12	11.72	11.74	3

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		26115	26365	26615	
		Frequency (MHz)		1857.5	1882.5	1907.5	
15M	QPSK	1	0	13.96	14.56	14.58	0
		1	37	14.23	14.83	14.85	0
		1	74	13.78	14.38	14.40	0
		36	0	13.14	13.74	13.76	1
		36	19	13.08	13.68	13.70	1
		36	39	12.94	13.54	13.56	1
		75	0	13.06	13.66	13.68	1
	16QAM	1	0	12.94	13.54	13.56	1
		1	37	13.21	13.81	13.83	1
		1	74	12.76	13.36	13.38	1
		36	0	12.12	12.72	12.74	2
		36	19	12.06	12.66	12.68	2
		36	39	11.92	12.52	12.54	2
		75	0	12.04	12.64	12.66	2
	64QAM	1	0	11.95	12.55	12.57	2
		1	37	12.22	12.82	12.84	2
		1	74	11.77	12.37	12.39	2
		36	0	11.13	11.73	11.75	3
		36	19	11.07	11.67	11.69	3
		36	39	10.93	11.53	11.55	3
		75	0	11.05	11.65	11.67	3

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		26090	26365	26640	
		Frequency (MHz)		2855.0	1882.5	1910.0	
10M	QPSK	1	0	13.88	14.48	14.50	0
		1	24	14.15	14.75	14.77	0
		1	49	13.70	14.30	14.32	0
		25	0	13.06	13.66	13.68	1
		25	12	13.00	13.60	13.62	1
		25	25	12.86	13.46	13.48	1
		50	0	12.98	13.58	13.60	1
	16QAM	1	0	12.86	13.46	13.48	1
		1	24	13.13	13.73	13.75	1
		1	49	12.68	13.28	13.30	1
		25	0	12.04	12.64	12.66	2
		25	12	11.98	12.58	12.60	2
		25	25	11.84	12.44	12.46	2
		50	0	11.96	12.56	12.58	2
	64QAM	1	0	11.87	12.47	12.49	2
		1	24	12.14	12.74	12.76	2
		1	49	11.69	12.29	12.31	2
		25	0	11.05	11.65	11.67	3
		25	12	10.99	11.59	11.61	3
		25	25	10.85	11.45	11.47	3
		50	0	10.97	11.57	11.59	3

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		26065	26365	26665	
		Frequency (MHz)		1852.5	1882.5	1912.5	
5M	QPSK	1	0	13.81	14.41	14.43	0
		1	12	14.08	14.68	14.70	0
		1	24	13.63	14.23	14.25	0
		12	0	12.99	13.59	13.61	1
		12	6	12.93	13.53	13.55	1
		12	13	12.79	13.39	13.41	1
		25	0	12.91	13.51	13.53	1
	16QAM	1	0	12.79	13.39	13.41	1
		1	12	13.06	13.66	13.68	1
		1	24	12.61	13.21	13.23	1
		12	0	11.97	12.57	12.59	2
		12	6	11.91	12.51	12.53	2
		12	13	11.77	12.37	12.39	2
		25	0	11.89	12.49	12.51	2
	64QAM	1	0	11.80	12.40	12.42	2
		1	12	12.07	12.67	12.69	2
		1	24	11.62	12.22	12.24	2
		12	0	10.98	11.58	11.60	3
		12	6	10.92	11.52	11.54	3
		12	13	10.78	11.38	11.40	3
		25	0	10.90	11.50	11.52	3

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		26055	26365	26675	
		Frequency (MHz)		1851.5	1882.5	1913.5	
3M	QPSK	1	0	13.76	14.36	14.38	0
		1	7	14.03	14.63	14.65	0
		1	14	13.58	14.18	14.20	0
		8	0	12.94	13.54	13.56	1
		8	3	12.88	13.48	13.50	1
		8	7	12.74	13.34	13.36	1
		15	0	12.86	13.46	13.48	1
	16QAM	1	0	12.74	13.34	13.36	1
		1	7	13.01	13.61	13.63	1
		1	14	12.56	13.16	13.18	1
		8	0	11.92	12.52	12.54	2
		8	3	11.86	12.46	12.48	2
		8	7	11.72	12.32	12.34	2
		15	0	11.84	12.44	12.46	2
	64QAM	1	0	11.75	12.35	12.37	2
		1	7	12.02	12.62	12.64	2
		1	14	11.57	12.17	12.19	2
		8	0	10.93	11.53	11.55	3
		8	3	10.87	11.47	11.49	3
		8	7	10.73	11.33	11.35	3
		15	0	10.85	11.45	11.47	3

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		26047	26365	26683	
		Frequency (MHz)		1850.7	1882.5	1914.3	
1.4M	QPSK	1	0	13.69	14.29	14.31	0
		1	2	13.96	14.56	14.58	0
		1	5	13.51	14.11	14.13	0
		3	0	12.87	13.47	13.49	0
		3	1	12.81	13.41	13.43	0
		3	3	12.67	13.27	13.29	0
		6	0	12.79	13.39	13.41	1
	16QAM	1	0	12.67	13.27	13.29	1
		1	2	12.94	13.54	13.56	1
		1	5	12.49	13.09	13.11	1
		3	0	12.35	12.95	12.97	1
		3	1	12.29	12.89	12.91	1
		3	3	12.15	12.75	12.77	1
		6	0	11.77	12.37	12.39	2
	64QAM	1	0	11.68	12.28	12.30	2
		1	2	11.95	12.55	12.57	2
		1	5	11.50	12.10	12.12	2
		3	0	11.36	11.96	11.98	2
		3	1	11.30	11.90	11.92	2
		3	3	11.16	11.76	11.78	2
		6	0	10.78	11.38	11.40	3

EIRP Power (dBm)

WCDMA							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (mW)**	**Polarization (H/V)**
X	9262	1852.4	-13.54	36.57	23.03	201.00	H
	9400	1880.0	-13.76	37.22	23.46	222.02	
	9538	1907.6	-13.64	37.18	23.54	226.05	
	9262	1852.4	-19.81	37.65	17.84	60.83	V
	9400	1880.0	-19.22	37.58	18.36	68.60	
	9538	1907.6	-19.10	37.48	18.38	68.87	

LTE Band 2							
Channel Bandwidth: 1.4 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (mW)**	**Polarization (H/V)**
X	18607	1850.7	-18.68	44.70	26.02	399.94	H
	18900	1880.0	-18.62	44.70	26.08	405.51	
	19193	1909.3	-18.54	44.57	26.03	401.14	
	18607	1850.7	-22.27	44.27	22.00	158.49	V
	18900	1880.0	-22.84	44.87	22.03	159.59	
	19193	1909.3	-22.54	44.61	22.07	161.18	
Channel Bandwidth: 1.4 MHz / 16QAM							
X	18607	1850.7	-19.64	44.70	25.06	320.63	H
	18900	1880.0	-19.70	44.70	25.00	316.23	
	19193	1909.3	-19.56	44.57	25.01	317.18	
	18607	1850.7	-23.24	44.27	21.03	126.77	V
	18900	1880.0	-23.80	44.87	21.07	127.94	
	19193	1909.3	-23.56	44.61	21.05	127.44	
Channel Bandwidth: 1.4 MHz / 64QAM							
X	18607	1850.7	-20.64	44.70	24.06	254.68	H
	18900	1880.0	-20.64	44.70	24.06	254.68	
	19193	1909.3	-20.53	44.57	24.04	253.69	
	18607	1850.7	-24.21	44.27	20.06	101.39	V
	18900	1880.0	-24.86	44.87	20.01	100.23	
	19193	1909.3	-24.57	44.61	20.04	101.00	

LTE Band 2							
Channel Bandwidth: 3 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (mW)**	**Polarization (H/V)**
X	18615	1851.5	-18.64	44.70	26.06	403.65	H
	18900	1880.0	-18.60	44.70	26.10	407.38	
	19185	1908.5	-18.53	44.57	26.04	402.07	
	18615	1851.5	-22.20	44.27	22.07	161.06	V
	18900	1880.0	-22.84	44.87	22.03	159.59	
	19185	1908.5	-22.59	44.61	22.02	159.33	
Channel Bandwidth: 3 MHz / 16QAM							
X	18615	1851.5	-19.64	44.70	25.06	320.63	H
	18900	1880.0	-19.62	44.70	25.08	322.11	
	19185	1908.5	-19.54	44.57	25.03	318.64	
	18615	1851.5	-23.23	44.27	21.04	127.06	V
	18900	1880.0	-23.86	44.87	21.01	126.18	
	19185	1908.5	-23.58	44.61	21.03	126.85	
Channel Bandwidth: 3 MHz / 64QAM							
X	18615	1851.5	-20.67	44.70	24.03	252.93	H
	18900	1880.0	-20.64	44.70	24.06	254.68	
	19185	1908.5	-20.51	44.57	24.06	254.86	
	18615	1851.5	-24.27	44.27	20.00	100.00	V
	18900	1880.0	-24.80	44.87	20.07	101.62	
	19185	1908.5	-24.59	44.61	20.02	100.53	

LTE Band 2							
Channel Bandwidth: 5 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (mW)**	**Polarization (H/V)**
X	18625	1852.5	-18.65	44.70	26.05	402.72	H
	18900	1880.0	-18.63	44.70	26.07	404.58	
	19175	1907.5	-18.52	44.57	26.05	403.00	
	18625	1852.5	-22.22	44.27	22.05	160.32	V
	18900	1880.0	-22.83	44.87	22.04	159.96	
	19175	1907.5	-22.60	44.61	22.01	158.96	
Channel Bandwidth: 5 MHz / 16QAM							
X	18625	1852.5	-19.61	44.70	25.09	322.85	H
	18900	1880.0	-19.60	44.70	25.10	323.59	
	19175	1907.5	-19.53	44.57	25.04	319.37	
	18625	1852.5	-23.24	44.27	21.03	126.77	V
	18900	1880.0	-23.83	44.87	21.04	127.06	
	19175	1907.5	-23.51	44.61	21.10	128.91	
Channel Bandwidth: 5 MHz / 64QAM							
X	18625	1852.5	-20.61	44.70	24.09	256.45	H
	18900	1880.0	-20.65	44.70	24.05	254.10	
	19175	1907.5	-20.56	44.57	24.01	251.94	
	18625	1852.5	-24.21	44.27	20.06	101.39	V
	18900	1880.0	-24.84	44.87	20.03	100.69	
	19175	1907.5	-24.53	44.61	20.08	101.93	

LTE Band 2							
Channel Bandwidth: 10 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (mW)**	**Polarization (H/V)**
X	18650	1855.0	-18.67	44.70	26.03	400.87	H
	18900	1880.0	-18.63	44.70	26.07	404.58	
	19150	1905.0	-18.50	44.57	26.07	404.86	
	18650	1855.0	-22.21	44.27	22.06	160.69	V
	18900	1880.0	-22.82	44.87	22.05	160.32	
	19150	1905.0	-22.57	44.61	22.04	160.07	
Channel Bandwidth: 10 MHz / 16QAM							
X	18650	1855.0	-19.64	44.70	25.06	320.63	H
	18900	1880.0	-19.65	44.70	25.05	319.89	
	19150	1905.0	-19.52	44.57	25.05	320.11	
	18650	1855.0	-23.20	44.27	21.07	127.94	V
	18900	1880.0	-23.76	44.87	21.11	129.12	
	19150	1905.0	-23.57	44.61	21.04	127.15	
Channel Bandwidth: 10 MHz / 64QAM							
X	18650	1855.0	-20.61	44.70	24.09	256.45	H
	18900	1880.0	-20.67	44.70	24.03	252.93	
	19150	1905.0	-20.52	44.57	24.05	254.27	
	18650	1855.0	-24.21	44.27	20.06	101.39	V
	18900	1880.0	-24.80	44.87	20.07	101.62	
	19150	1905.0	-24.52	44.61	20.09	102.16	

LTE Band 2							
Channel Bandwidth: 15 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (mW)**	**Polarization (H/V)**
X	18675	1857.5	-18.60	44.70	26.10	407.38	H
	18900	1880.0	-18.64	44.70	26.06	403.65	
	19125	1902.5	-18.55	44.57	26.02	400.22	
	18675	1857.5	-22.23	44.27	22.04	159.96	V
	18900	1880.0	-22.84	44.87	22.03	159.59	
	19125	1902.5	-22.57	44.61	22.04	160.07	
Channel Bandwidth: 15 MHz / 16QAM							
X	18675	1857.5	-19.60	44.70	25.10	323.59	H
	18900	1880.0	-19.70	44.70	25.00	316.23	
	19125	1902.5	-19.53	44.57	25.04	319.37	
	18675	1857.5	-23.22	44.27	21.05	127.35	V
	18900	1880.0	-23.85	44.87	21.02	126.47	
	19125	1902.5	-23.56	44.61	21.05	127.44	
Channel Bandwidth: 15 MHz / 64QAM							
X	18675	1857.5	-20.62	44.70	24.08	255.86	H
	18900	1880.0	-20.68	44.70	24.02	252.35	
	19125	1902.5	-20.55	44.57	24.02	252.52	
	18675	1857.5	-24.21	44.27	20.06	101.39	V
	18900	1880.0	-24.83	44.87	20.04	100.93	
	19125	1902.5	-24.58	44.61	20.03	100.76	

LTE Band 2							
Channel Bandwidth: 20 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (mW)**	**Polarization (H/V)**
X	18700	1860.0	-18.56	44.70	26.14	411.15	H
	18900	1880.0	-18.62	44.70	26.08	405.51	
	19100	1900.0	-18.53	44.57	26.04	402.07	
	18700	1860.0	-22.11	44.27	22.16	164.44	V
	18900	1880.0	-22.80	44.87	22.07	161.06	
	19100	1900.0	-22.50	44.61	22.11	162.67	
Channel Bandwidth: 20 MHz / 16QAM							
X	18700	1860.0	-19.49	44.70	25.21	331.89	H
	18900	1880.0	-19.57	44.70	25.13	325.84	
	19100	1900.0	-19.43	44.57	25.14	326.81	
	18700	1860.0	-23.12	44.27	21.15	130.32	V
	18900	1880.0	-23.76	44.87	21.11	129.12	
	19100	1900.0	-23.50	44.61	21.11	129.21	
Channel Bandwidth: 20 MHz / 64QAM							
X	18700	1860.0	-20.57	44.70	24.13	258.82	H
	18900	1880.0	-20.54	44.70	24.16	260.62	
	19100	1900.0	-20.49	44.57	24.08	256.04	
	18700	1860.0	-24.16	44.27	20.11	102.57	V
	18900	1880.0	-24.70	44.87	20.17	103.99	
	19100	1900.0	-24.49	44.61	20.12	102.87	

LTE Band 25							
Channel Bandwidth: 1.4 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (mW)**	**Polarization (H/V)**
X	26047	1850.7	-21.13	44.70	23.57	227.51	H
	26365	1882.5	-21.20	44.70	23.50	223.87	
	26683	1914.3	-21.06	44.57	23.51	224.54	
	26047	1850.7	-24.71	44.27	19.56	90.36	V
	26365	1882.5	-25.36	44.87	19.51	89.33	
	26683	1914.3	-25.11	44.61	19.50	89.19	
Channel Bandwidth: 1.4 MHz / 16QAM							
X	26047	1850.7	-22.15	44.70	22.55	179.89	H
	26365	1882.5	-22.21	44.70	22.49	177.42	
	26683	1914.3	-22.05	44.57	22.52	178.77	
	26047	1850.7	-25.76	44.27	18.51	70.96	V
	26365	1882.5	-26.37	44.87	18.50	70.79	
	26683	1914.3	-26.10	44.61	18.51	71.01	
Channel Bandwidth: 1.4 MHz / 64QAM							
X	26047	1850.7	-23.16	44.70	21.54	142.56	H
	26365	1882.5	-23.25	44.70	21.45	139.64	
	26683	1914.3	-23.07	44.57	21.50	141.35	
	26047	1850.7	-26.75	44.27	17.52	56.49	V
	26365	1882.5	-27.36	44.87	17.51	56.36	
	26683	1914.3	-27.15	44.61	17.46	55.76	

LTE Band 25							
Channel Bandwidth: 3 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (mW)**	**Polarization (H/V)**
X	26055	1851.5	-21.16	44.70	23.54	225.94	H
	26365	1882.5	-21.25	44.70	23.45	221.31	
	26675	1913.5	-21.02	44.57	23.55	226.62	
	26055	1851.5	-24.74	44.27	19.53	89.74	V
	26365	1882.5	-25.36	44.87	19.51	89.33	
	26675	1913.5	-25.15	44.61	19.46	88.37	
Channel Bandwidth: 3 MHz / 16QAM							
X	26055	1851.5	-22.19	44.70	22.51	178.24	H
	26365	1882.5	-22.30	44.70	22.40	173.78	
	26675	1913.5	-22.05	44.57	22.52	178.77	
	26055	1851.5	-25.74	44.27	18.53	71.29	V
	26365	1882.5	-26.38	44.87	18.49	70.63	
	26675	1913.5	-26.12	44.61	18.49	70.68	
Channel Bandwidth: 3 MHz / 64QAM							
X	26055	1851.5	-23.18	44.70	21.52	141.91	H
	26365	1882.5	-23.25	44.70	21.45	139.64	
	26675	1913.5	-23.04	44.57	21.53	142.33	
	26055	1851.5	-26.76	44.27	17.51	56.36	V
	26365	1882.5	-27.35	44.87	17.52	56.49	
	26675	1913.5	-27.15	44.61	17.46	55.76	

LTE Band 25							
Channel Bandwidth: 5 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (mW)**	**Polarization (H/V)**
X	26065	1852.5	-21.16	44.70	23.54	225.94	H
	26365	1882.5	-21.22	44.70	23.48	222.84	
	26665	1912.5	-21.02	44.57	23.55	226.62	
	26065	1852.5	-24.73	44.27	19.54	89.95	V
	26365	1882.5	-25.33	44.87	19.54	89.95	
	26665	1912.5	-25.19	44.61	19.42	87.56	
Channel Bandwidth: 5 MHz / 16QAM							
X	26065	1852.5	-22.15	44.70	22.55	179.89	H
	26365	1882.5	-22.27	44.70	22.43	174.82	
	26665	1912.5	-22.06	44.57	22.51	178.36	
	26065	1852.5	-25.76	44.27	18.51	70.96	V
	26365	1882.5	-26.30	44.87	18.57	71.94	
	26665	1912.5	-26.17	44.61	18.44	69.87	
Channel Bandwidth: 5 MHz / 64QAM							
X	26065	1852.5	-23.16	44.70	21.54	142.56	H
	26365	1882.5	-23.20	44.70	21.50	141.25	
	26665	1912.5	-23.06	44.57	21.51	141.68	
	26065	1852.5	-26.77	44.27	17.50	56.23	V
	26365	1882.5	-27.32	44.87	17.55	56.89	
	26665	1912.5	-27.12	44.61	17.49	56.14	

LTE Band 25							
Channel Bandwidth: 10 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (mW)**	**Polarization (H/V)**
X	26090	1855.0	-21.11	44.70	23.59	228.56	H
	26365	1882.5	-21.22	44.70	23.48	222.84	
	26640	1910.0	-21.05	44.57	23.52	225.06	
	26090	1855.0	-24.73	44.27	19.54	89.95	V
	26365	1882.5	-25.36	44.87	19.51	89.33	
	26640	1910.0	-25.08	44.61	19.53	89.80	
Channel Bandwidth: 10 MHz / 16QAM							
X	26090	1855.0	-22.16	44.70	22.54	179.47	H
	26365	1882.5	-22.23	44.70	22.47	176.60	
	26640	1910.0	-22.08	44.57	22.49	177.54	
	26090	1855.0	-25.71	44.27	18.56	71.78	V
	26365	1882.5	-26.34	44.87	18.53	71.29	
	26640	1910.0	-26.02	44.61	18.59	72.33	
Channel Bandwidth: 10 MHz / 64QAM							
X	26090	1855.0	-23.20	44.70	21.50	141.25	H
	26365	1882.5	-23.21	44.70	21.49	140.93	
	26640	1910.0	-23.05	44.57	21.52	142.00	
	26090	1855.0	-26.73	44.27	17.54	56.75	V
	26365	1882.5	-27.34	44.87	17.53	56.62	
	26640	1910.0	-27.05	44.61	17.56	57.06	

LTE Band 25							
Channel Bandwidth: 15 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (mW)**	**Polarization (H/V)**
X	26115	1857.5	-21.14	44.70	23.56	226.99	H
	26365	1882.5	-21.10	44.70	23.60	229.09	
	26615	1907.5	-20.98	44.57	23.59	228.72	
	26115	1857.5	-24.77	44.27	19.50	89.13	V
	26365	1882.5	-25.26	44.87	19.61	91.41	
	26615	1907.5	-25.07	44.61	19.54	90.01	
Channel Bandwidth: 15 MHz / 16QAM							
X	26115	1857.5	-22.16	44.70	22.54	179.47	H
	26365	1882.5	-22.11	44.70	22.59	181.55	
	26615	1907.5	-22.02	44.57	22.55	180.01	
	26115	1857.5	-25.76	44.27	18.51	70.96	V
	26365	1882.5	-26.30	44.87	18.57	71.94	
	26615	1907.5	-26.08	44.61	18.53	71.33	
Channel Bandwidth: 15 MHz / 64QAM							
X	26115	1857.5	-23.18	44.70	21.52	141.91	H
	26365	1882.5	-23.16	44.70	21.54	142.56	
	26615	1907.5	-23.04	44.57	21.53	142.33	
	26115	1857.5	-26.78	44.27	17.49	56.10	V
	26365	1882.5	-27.32	44.87	17.55	56.89	
	26615	1907.5	-27.09	44.61	17.52	56.53	

LTE Band 25							
Channel Bandwidth: 20 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (mW)**	**Polarization (H/V)**
X	26140	1860.0	-21.10	44.70	23.60	229.09	H
	26365	1882.5	-21.05	44.70	23.65	231.74	
	26590	1905.0	-21.03	44.57	23.54	226.10	
	26140	1860.0	-24.70	44.27	19.57	90.57	V
	26365	1882.5	-25.23	44.87	19.64	92.04	
	26590	1905.0	-25.01	44.61	19.60	91.26	
Channel Bandwidth: 20 MHz / 16QAM							
X	26140	1860.0	-22.11	44.70	22.59	181.55	H
	26365	1882.5	-22.04	44.70	22.66	184.50	
	26590	1905.0	-22.05	44.57	22.52	178.77	
	26140	1860.0	-25.71	44.27	18.56	71.78	V
	26365	1882.5	-26.19	44.87	18.68	73.79	
	26590	1905.0	-26.04	44.61	18.57	71.99	
Channel Bandwidth: 20 MHz / 64QAM							
X	26140	1860.0	-23.10	44.70	21.60	144.54	H
	26365	1882.5	-23.02	44.70	21.68	147.23	
	26590	1905.0	-23.09	44.57	21.48	140.70	
	26140	1860.0	-26.70	44.27	17.57	57.15	V
	26365	1882.5	-27.21	44.87	17.66	58.34	
	26590	1905.0	-27.06	44.61	17.55	56.92	

4.2 Frequency Stability Measurement

4.2.1 Limits of Frequency Stabiliity Measurement

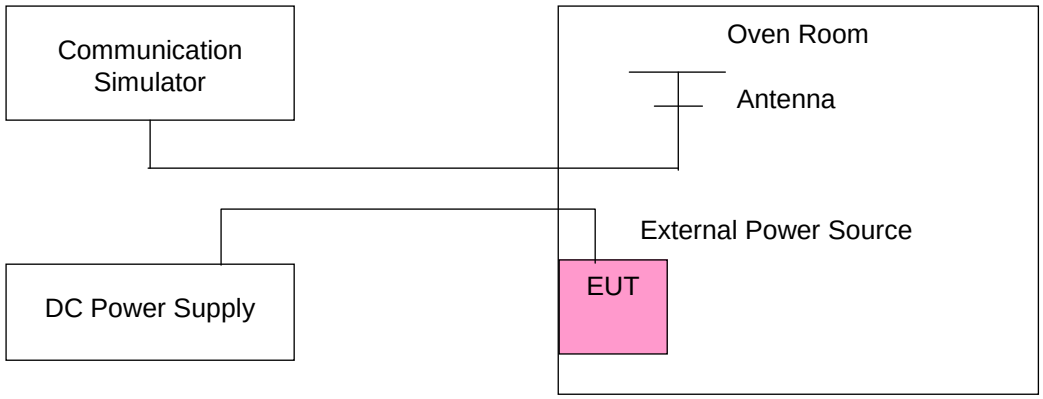
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

4.2.2 Test Procedure

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

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

4.2.3 Test Setup



4.2.4 Test Results

Frequency Error vs. Voltage

Voltage (Volts)	WCDMA				Limit (ppm)
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	1852.400002	0.001	1907.600001	0.001	2.5
14.0	1852.400002	0.001	1907.600002	0.001	2.5
17.0	1852.400002	0.001	1907.600002	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. (℃)	WCDMA				Limit (ppm)
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1852.400002	0.001	1907.600004	0.002	2.5
-20	1852.400004	0.002	1907.600003	0.002	2.5
-10	1852.400001	0.001	1907.600003	0.002	2.5
0	1852.400004	0.002	1907.600003	0.002	2.5
10	1852.399997	-0.002	1907.599996	-0.002	2.5
20	1852.399998	-0.001	1907.599997	-0.002	2.5
30	1852.399996	-0.002	1907.599997	-0.002	2.5
40	1852.399998	-0.001	1907.599999	-0.001	2.5
50	1852.399996	-0.002	1907.599999	-0.001	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 2				Limit (ppm)
	Channel Bandwidth: 1.4 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	1850.700002	0.001	1909.300004	0.002	2.5
14.0	1850.700003	0.001	1909.300004	0.002	2.5
17.0	1850.700003	0.002	1909.300002	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 2				Limit (ppm)
	Channel Bandwidth: 1.4 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1850.700004	0.002	1909.300002	0.001	2.5
-20	1850.700003	0.002	1909.300004	0.002	2.5
-10	1850.700003	0.002	1909.300003	0.002	2.5
0	1850.700002	0.001	1909.300003	0.001	2.5
10	1850.699997	-0.002	1909.299997	-0.001	2.5
20	1850.699998	-0.001	1909.299999	-0.001	2.5
30	1850.699998	-0.001	1909.299999	-0.001	2.5
40	1850.699996	-0.002	1909.299998	-0.001	2.5
50	1850.699998	-0.001	1909.299998	-0.001	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 2				Limit (ppm)
	Channel Bandwidth: 3 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	1851.500003	0.002	1907.500001	0.001	2.5
14.0	1851.500002	0.001	1907.500002	0.001	2.5
17.0	1851.500004	0.002	1907.500001	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 2				Limit (ppm)
	Channel Bandwidth: 3 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1851.500004	0.002	1907.500002	0.001	2.5
-20	1851.500004	0.002	1907.500002	0.001	2.5
-10	1851.500004	0.002	1907.500003	0.001	2.5
0	1851.500002	0.001	1907.500003	0.001	2.5
10	1851.499998	-0.001	1907.499999	-0.001	2.5
20	1851.499996	-0.002	1907.499998	-0.001	2.5
30	1851.499997	-0.002	1907.499999	-0.001	2.5
40	1851.499996	-0.002	1907.499999	-0.001	2.5
50	1851.499998	-0.001	1907.499999	-0.001	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 2				Limit (ppm)
	Channel Bandwidth: 5 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	1852.500003	0.002	1907.500002	0.001	2.5
14.0	1852.500004	0.002	1907.500004	0.002	2.5
17.0	1852.500002	0.001	1907.500001	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 2				Limit (ppm)
	Channel Bandwidth: 5 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1852.500003	0.002	1907.500004	0.002	2.5
-20	1852.500003	0.002	1907.500002	0.001	2.5
-10	1852.500003	0.002	1907.500002	0.001	2.5
0	1852.500003	0.001	1907.500004	0.002	2.5
10	1852.499999	-0.001	1907.499997	-0.002	2.5
20	1852.499999	-0.001	1907.499999	-0.001	2.5
30	1852.499996	-0.002	1907.499999	-0.001	2.5
40	1852.499996	-0.002	1907.499998	-0.001	2.5
50	1852.499998	-0.001	1907.499997	-0.002	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 2				Limit (ppm)
	Channel Bandwidth: 10 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	1855.000002	0.001	1905.000003	0.002	2.5
14.0	1855.000002	0.001	1905.000002	0.001	2.5
17.0	1855.000003	0.002	1905.000003	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 2				Limit (ppm)
	Channel Bandwidth: 10 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1855.000004	0.002	1905.000003	0.002	2.5
-20	1855.000003	0.002	1905.000004	0.002	2.5
-10	1855.000002	0.001	1905.000002	0.001	2.5
0	1855.000003	0.002	1905.000003	0.001	2.5
10	1854.999996	-0.002	1904.999998	-0.001	2.5
20	1854.999997	-0.001	1904.999996	-0.002	2.5
30	1854.999996	-0.002	1904.999999	-0.001	2.5
40	1854.999998	-0.001	1904.999999	-0.001	2.5
50	1854.999996	-0.002	1904.999998	-0.001	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 2				Limit (ppm)
	Channel Bandwidth: 15 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	1857.500002	0.001	1902.500002	0.001	2.5
14.0	1857.500004	0.002	1902.500001	0.001	2.5
17.0	1857.500001	0.001	1902.500002	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 2				Limit (ppm)
	Channel Bandwidth: 15 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1857.500003	0.001	1902.500001	0.001	2.5
-20	1857.500002	0.001	1902.500003	0.001	2.5
-10	1857.500003	0.002	1902.500003	0.002	2.5
0	1857.500004	0.002	1902.500002	0.001	2.5
10	1857.499997	-0.002	1902.499998	-0.001	2.5
20	1857.499998	-0.001	1902.499996	-0.002	2.5
30	1857.499997	-0.002	1902.499998	-0.001	2.5
40	1857.499998	-0.001	1902.499997	-0.002	2.5
50	1857.499997	-0.001	1902.499998	-0.001	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 2				Limit (ppm)
	Channel Bandwidth: 20 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	1860.000003	0.002	1900.000004	0.002	2.5
14.0	1860.000003	0.002	1900.000002	0.001	2.5
17.0	1860.000003	0.002	1900.000004	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 2				Limit (ppm)
	Channel Bandwidth: 20 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1860.000003	0.001	1900.000001	0.001	2.5
-20	1860.000002	0.001	1900.000002	0.001	2.5
-10	1860.000003	0.002	1900.000001	0.001	2.5
0	1860.000004	0.002	1900.000002	0.001	2.5
10	1859.999999	-0.001	1899.999998	-0.001	2.5
20	1859.999998	-0.001	1899.999998	-0.001	2.5
30	1859.999998	-0.001	1899.999997	-0.002	2.5
40	1859.999997	-0.002	1899.999997	-0.002	2.5
50	1859.999998	-0.001	1899.999999	-0.001	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 25				Limit (ppm)
	Channel Bandwidth: 1.4 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	1850.700003	0.002	1914.300003	0.002	2.5
14.0	1850.700003	0.002	1914.300002	0.001	2.5
17.0	1850.700003	0.002	1914.300002	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 25				Limit (ppm)
	Channel Bandwidth: 1.4 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1850.700003	0.002	1914.300002	0.001	2.5
-20	1850.700001	0.001	1914.300003	0.001	2.5
-10	1850.700001	0.001	1914.300003	0.002	2.5
0	1850.700003	0.002	1914.300002	0.001	2.5
10	1850.700002	0.001	1914.300004	0.002	2.5
20	1850.699998	-0.001	1914.299997	-0.002	2.5
30	1850.699997	-0.002	1914.299997	-0.002	2.5
40	1850.699997	-0.002	1914.299997	-0.002	2.5
50	1850.699996	-0.002	1914.299998	-0.001	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 25				Limit (ppm)
	Channel Bandwidth: 3 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	1851.500004	0.002	1913.500003	0.002	2.5
14.0	1851.500003	0.002	1913.500003	0.001	2.5
17.0	1851.500004	0.002	1913.500003	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 25				Limit (ppm)
	Channel Bandwidth: 3 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1851.500003	0.001	1913.500003	0.001	2.5
-20	1851.500001	0.001	1913.500002	0.001	2.5
-10	1851.500004	0.002	1913.500002	0.001	2.5
0	1851.500001	0.001	1913.500003	0.001	2.5
10	1851.500001	0.001	1913.500001	0.001	2.5
20	1851.499997	-0.002	1913.499998	-0.001	2.5
30	1851.499999	-0.001	1913.499998	-0.001	2.5
40	1851.499999	-0.001	1913.499997	-0.002	2.5
50	1851.499999	-0.001	1913.499997	-0.002	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 25				Limit (ppm)
	Channel Bandwidth: 5 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	1852.500002	0.001	1912.500002	0.001	2.5
14.0	1852.500003	0.002	1912.500002	0.001	2.5
17.0	1852.500002	0.001	1912.500003	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 25				Limit (ppm)
	Channel Bandwidth: 5 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1852.500002	0.001	1912.500002	0.001	2.5
-20	1852.500003	0.001	1912.500003	0.002	2.5
-10	1852.500002	0.001	1912.500001	0.001	2.5
0	1852.500003	0.001	1912.500003	0.002	2.5
10	1852.500003	0.001	1912.500004	0.002	2.5
20	1852.499996	-0.002	1912.499999	-0.001	2.5
30	1852.499997	-0.002	1912.499999	-0.001	2.5
40	1852.499997	-0.002	1912.499998	-0.001	2.5
50	1852.499997	-0.001	1912.499998	-0.001	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 25				Limit (ppm)
	Channel Bandwidth: 10 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	1855.000002	0.001	1910.000004	0.002	2.5
14.0	1855.000001	0.001	1910.000001	0.001	2.5
17.0	1855.000004	0.002	1910.000003	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 25				Limit (ppm)
	Channel Bandwidth: 10 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1855.000003	0.002	1910.000003	0.002	2.5
-20	1855.000001	0.001	1910.000003	0.001	2.5
-10	1855.000003	0.002	1910.000001	0.001	2.5
0	1855.000004	0.002	1910.000003	0.002	2.5
10	1855.000002	0.001	1910.000002	0.001	2.5
20	1854.999996	-0.002	1909.999997	-0.001	2.5
30	1854.999997	-0.002	1909.999998	-0.001	2.5
40	1854.999999	-0.001	1909.999998	-0.001	2.5
50	1854.999998	-0.001	1909.999997	-0.002	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 25				Limit (ppm)
	Channel Bandwidth: 15 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	1857.500003	0.002	1907.500001	0.001	2.5
14.0	1857.500001	0.001	1907.500001	0.001	2.5
17.0	1857.500002	0.001	1907.500003	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 25				Limit (ppm)
	Channel Bandwidth: 15 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1857.500002	0.001	1907.500003	0.002	2.5
-20	1857.500002	0.001	1907.500004	0.002	2.5
-10	1857.500003	0.002	1907.500003	0.002	2.5
0	1857.500001	0.001	1907.500002	0.001	2.5
10	1857.500003	0.001	1907.500002	0.001	2.5
20	1857.499998	-0.001	1907.499997	-0.002	2.5
30	1857.499998	-0.001	1907.499997	-0.002	2.5
40	1857.499997	-0.001	1907.499999	-0.001	2.5
50	1857.499996	-0.002	1907.499999	-0.001	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 25				Limit (ppm)
	Channel Bandwidth: 20 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
15.5	1860.000001	0.001	1905.000003	0.002	2.5
14.0	1860.000001	0.001	1905.000002	0.001	2.5
17.0	1860.000002	0.001	1905.000003	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

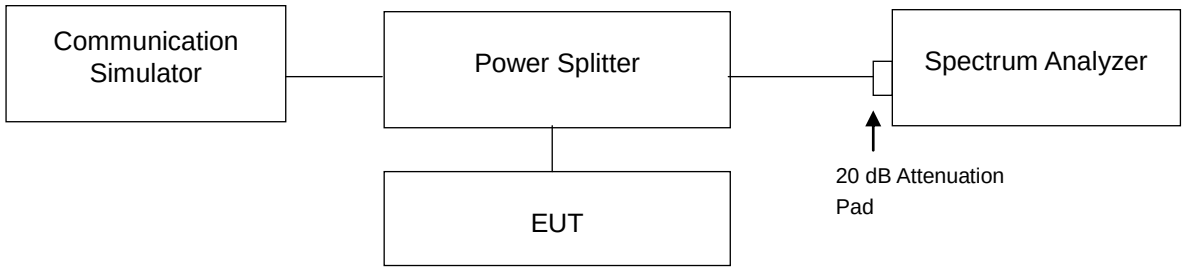
Temp. (℃)	LTE Band 25				Limit (ppm)
	Channel Bandwidth: 20 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	1860.000001	0.001	1905.000003	0.001	2.5
-20	1860.000002	0.001	1905.000002	0.001	2.5
-10	1860.000002	0.001	1905.000004	0.002	2.5
0	1860.000001	0.001	1905.000004	0.002	2.5
10	1860.000003	0.002	1905.000002	0.001	2.5
20	1859.999998	-0.001	1904.999998	-0.001	2.5
30	1859.999998	-0.001	1904.999997	-0.001	2.5
40	1859.999999	-0.001	1904.999999	-0.001	2.5
50	1859.999998	-0.001	1904.999999	-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.

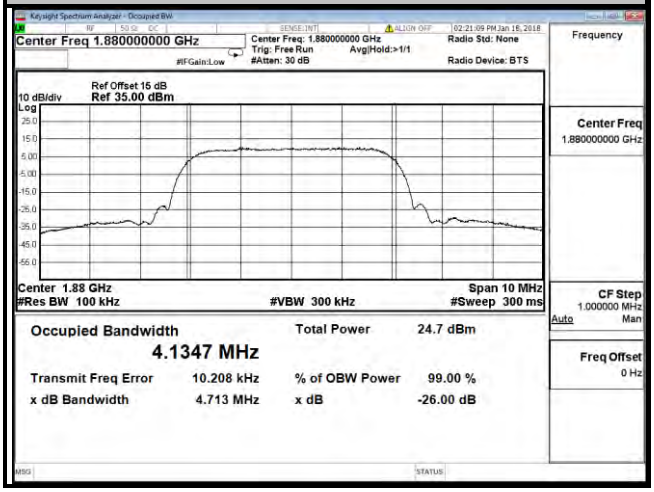
4.3.2 Test Setup



4.3.3 Test Result

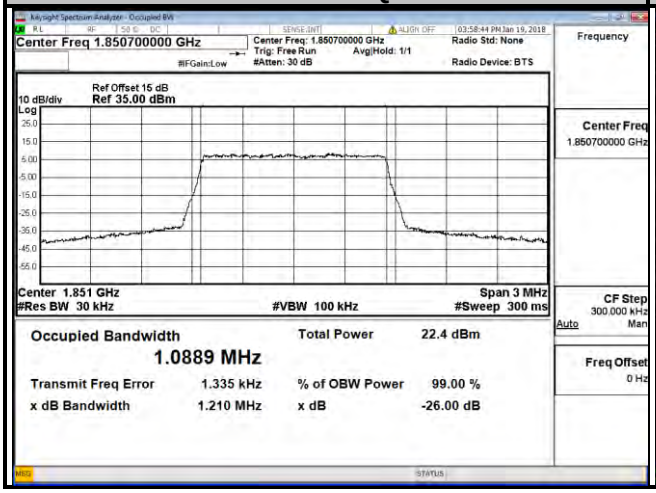
Channel	Frequency (MHz)	99 % Occupied Bandwidth (kHz)
		WCDMA
9262	1852.4	4.1293
9400	1880.0	4.1347
9538	1907.6	4.1333

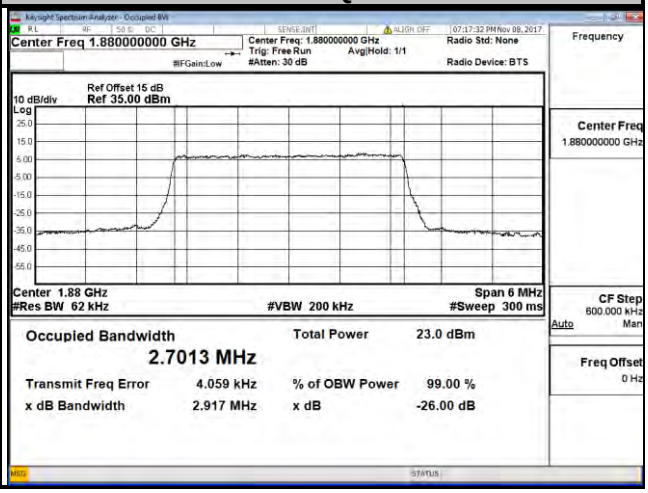
Spectrum Plot of Worst Value
WCDMA



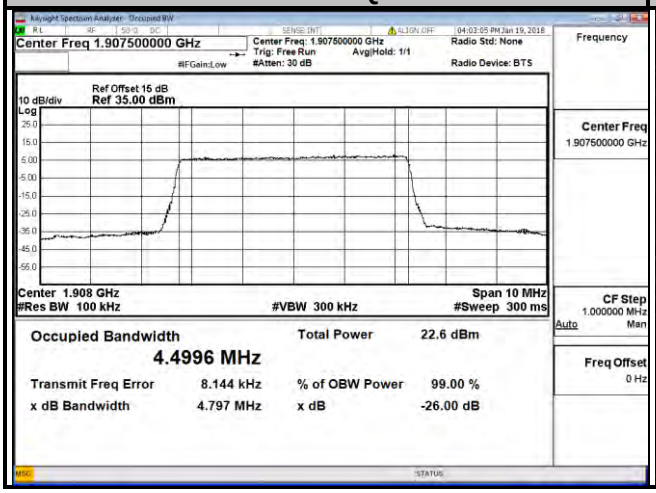
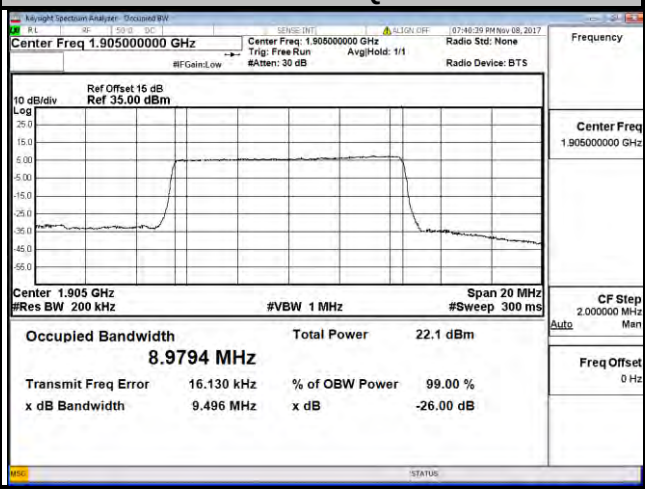
LTE Band 2									
Channel Bandwidth: 1.4 MHz					Channel Bandwidth: 3 MHz				
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)			Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
18607	1850.7	1.0872	1.0888	1.0889	18615	1851.5	2.6994	2.6955	2.6974
18900	1880.0	1.0863	1.0873	1.0875	18900	1880.0	2.7013	2.6956	2.6973
19193	1909.3	1.0862	1.0887	1.0876	19185	1908.5	2.6987	2.6918	2.6975

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

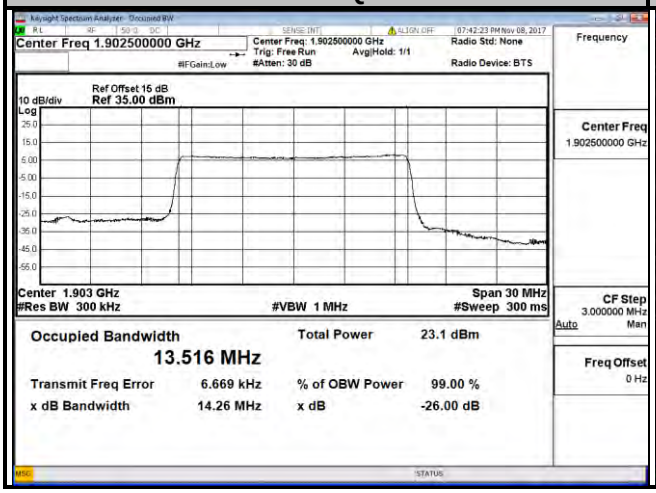
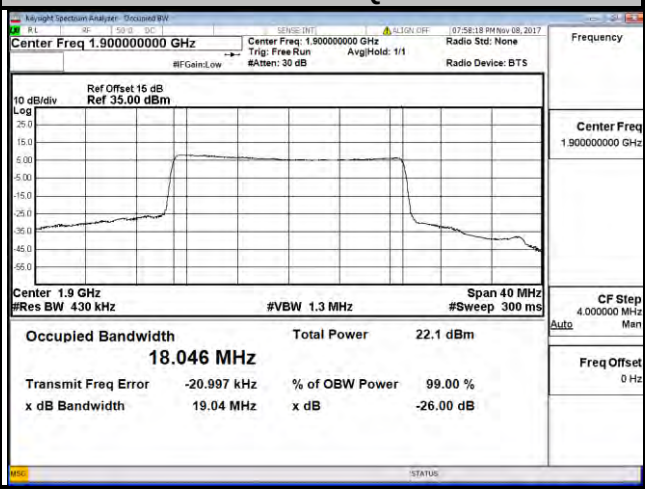




LTE Band 2									
Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)			Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
18625	1852.5	4.4843	4.4872	4.4970	18650	1855.0	8.9495	8.9488	8.9554
18900	1880.0	4.4880	4.4887	4.4973	18900	1880.0	8.9661	8.9694	8.9773
19175	1907.5	4.4835	4.4826	4.4996	19150	1905.0	8.9690	8.9794	8.9957

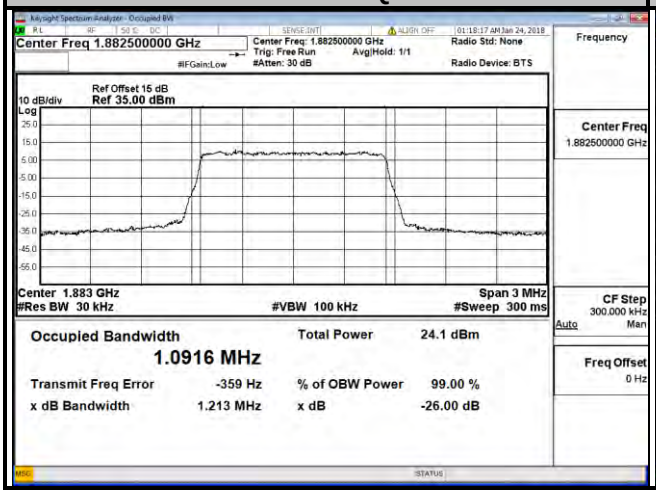
Spectrum Plot of Worst Value	
5 MHz / 64QAM	10 MHz / 16QAM
	

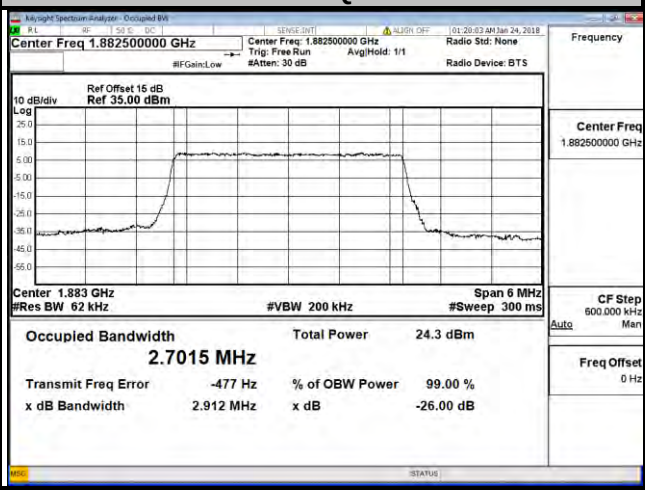
LTE Band 2									
Channel Bandwidth: 15 MHz					Channel Bandwidth: 20 MHz				
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)			Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
18675	1857.5	13.420	13.406	13.399	18700	1860.0	17.865	17.880	17.867
18900	1880.0	13.451	13.445	13.452	18900	1880.0	17.914	17.935	17.959
19125	1902.5	13.516	13.502	13.500	19100	1900.0	18.024	18.046	18.008

Spectrum Plot of Worst Value	
15 MHz / QPSK	20 MHz / 16QAM
	

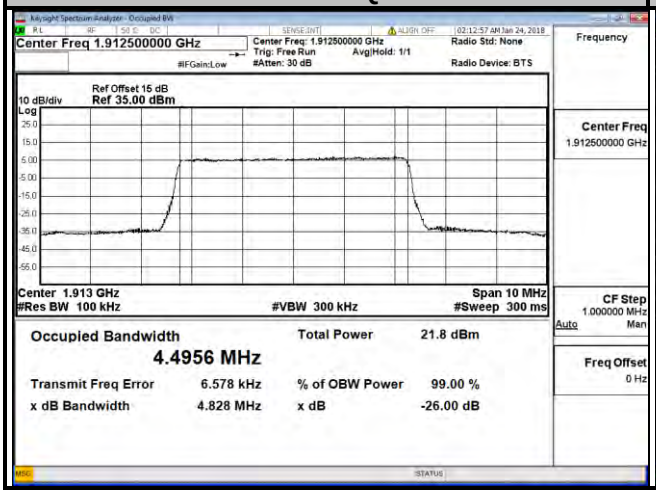
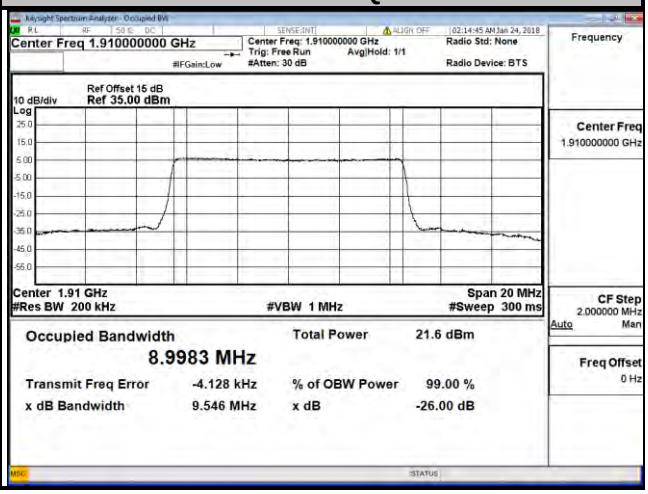
LTE Band 25									
Channel Bandwidth: 1.4 MHz					Channel Bandwidth: 3 MHz				
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)			Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
26047	1850.7	1.0874	1.0877	1.0874	26055	1851.5	2.6988	2.6944	2.6950
26365	1882.5	1.0873	1.0916	1.0870	26365	1882.5	2.7015	2.6952	2.6965
26683	1914.3	1.0855	1.0867	1.0862	26675	1913.5	2.6981	2.6958	2.6967

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



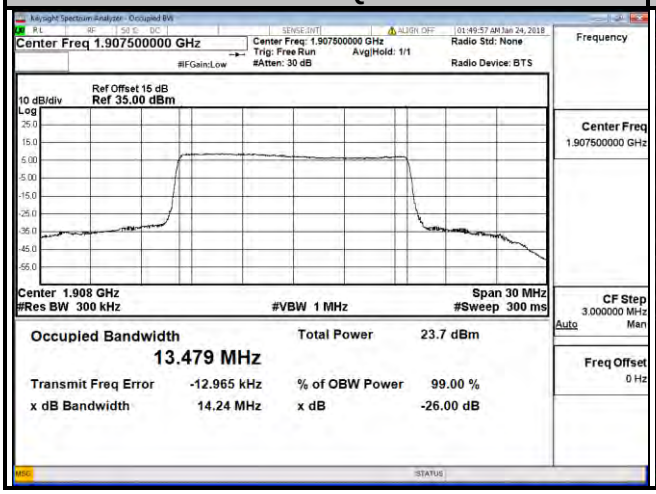


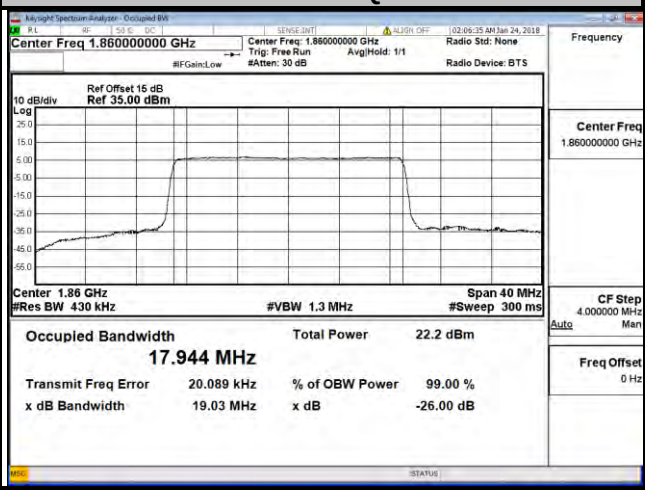
LTE Band 25									
Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)			Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
26065	1852.5	4.4806	4.4829	4.4935	26090	1855.0	8.9498	8.9563	8.9528
26365	1882.5	4.4871	4.8650	4.4928	26365	1882.5	8.9571	8.9551	8.9653
26665	1912.5	4.4914	4.4920	4.4956	26640	1910.0	8.9942	8.9977	8.9983

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

LTE BAND 25									
Channel Bandwidth: 15 MHz					Channel Bandwidth: 20 MHz				
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)			Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
26115	1857.5	13.444	13.427	13.418	26140	1860.0	17.928	17.944	17.935
26365	1882.5	13.439	13.419	13.422	26365	1882.5	17.883	17.896	17.894
26615	1907.5	13.479	13.463	13.452	26590	1905.0	17.887	17.898	17.888

Spectrum Plot of Worst Value	
15 MHz / QPSK	20 MHz / 16QAM



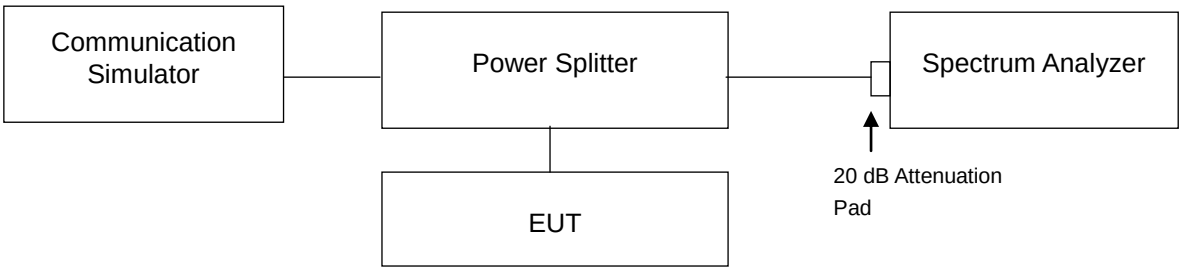


4.4 Band Edge Measurement

4.4.1 Limits of Band Edge Measurement

Power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

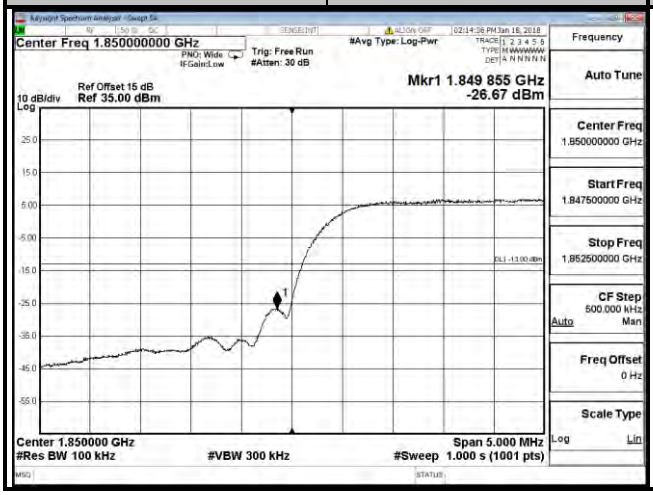
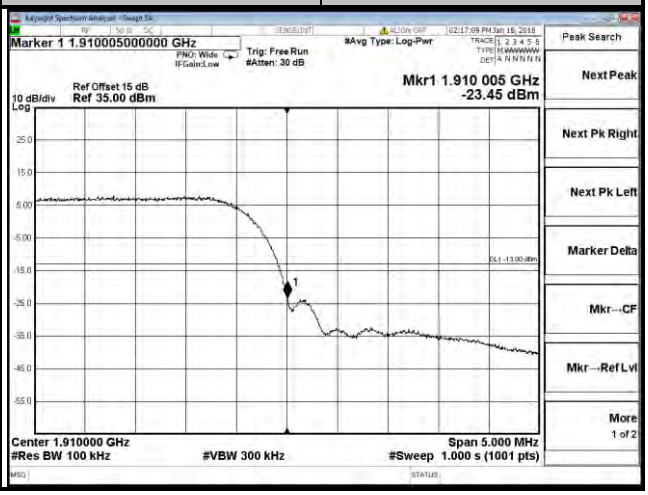
4.4.2 Test Setup

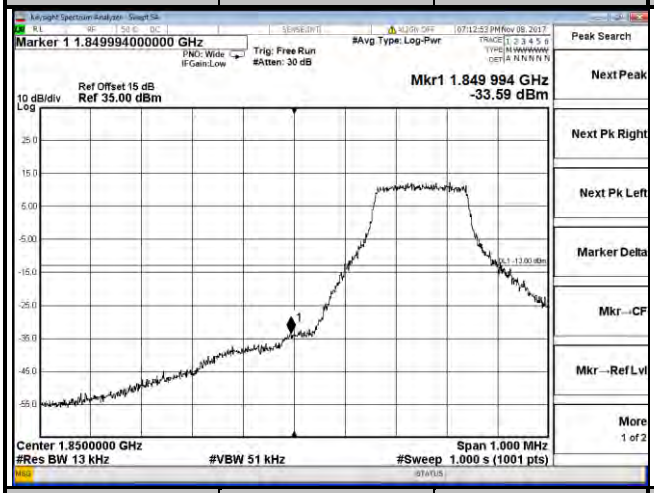
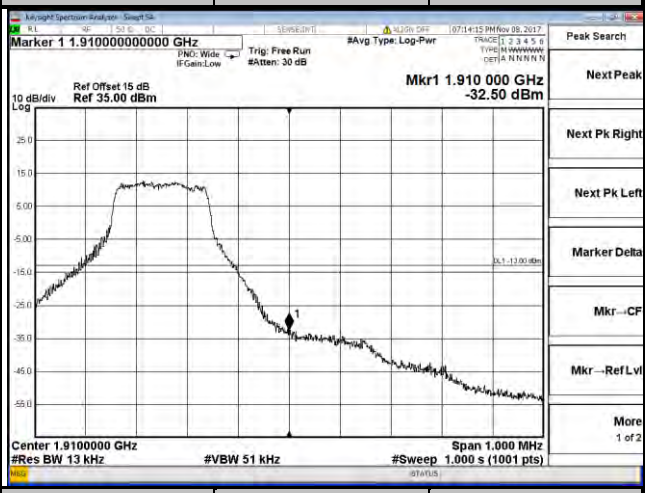
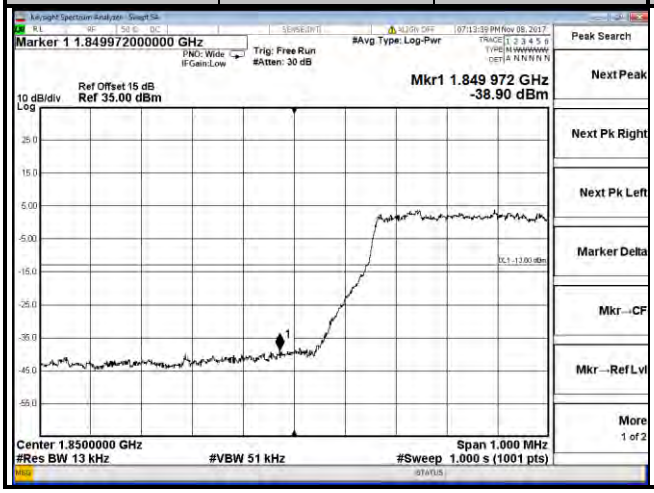
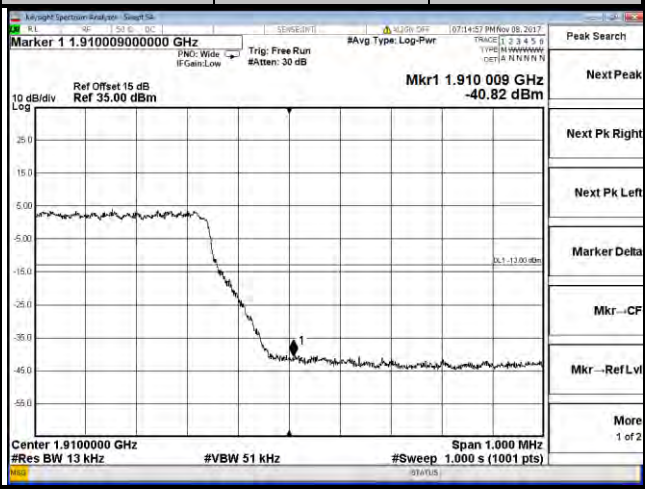


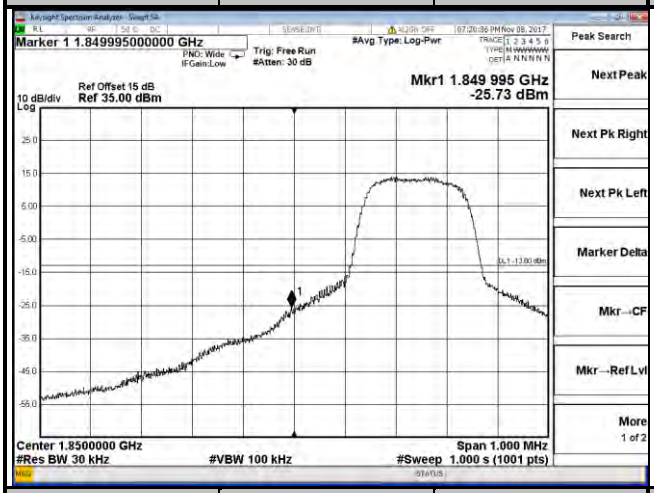
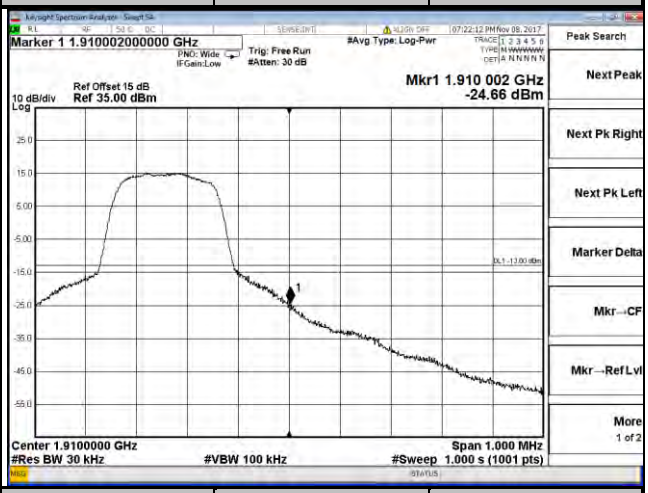
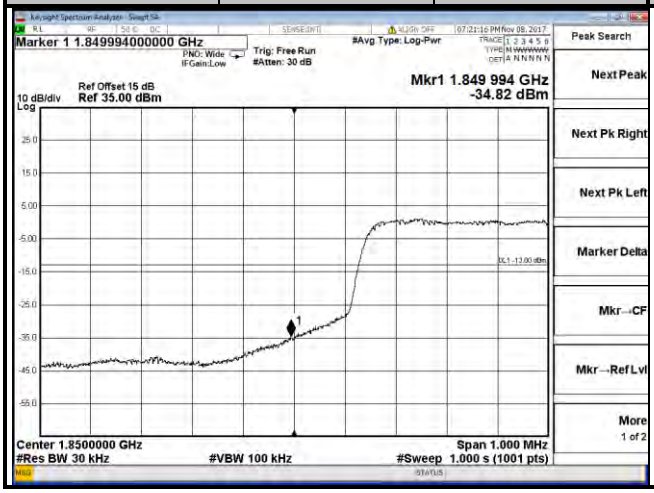
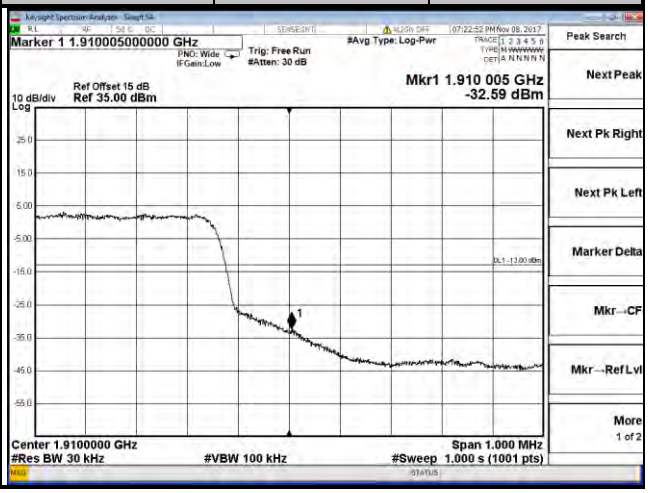
4.4.3 Test Procedures

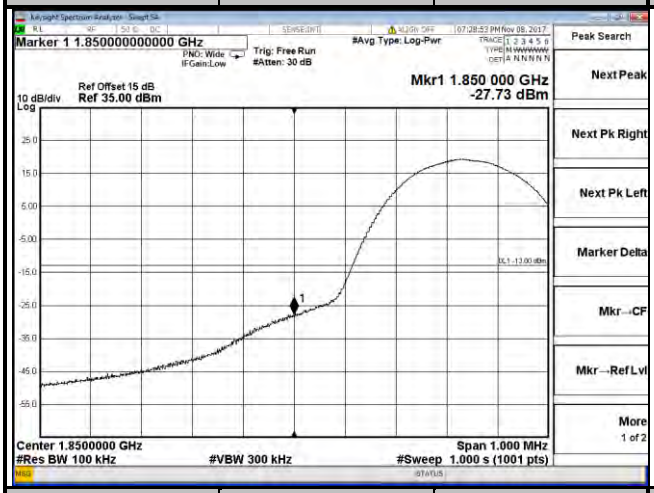
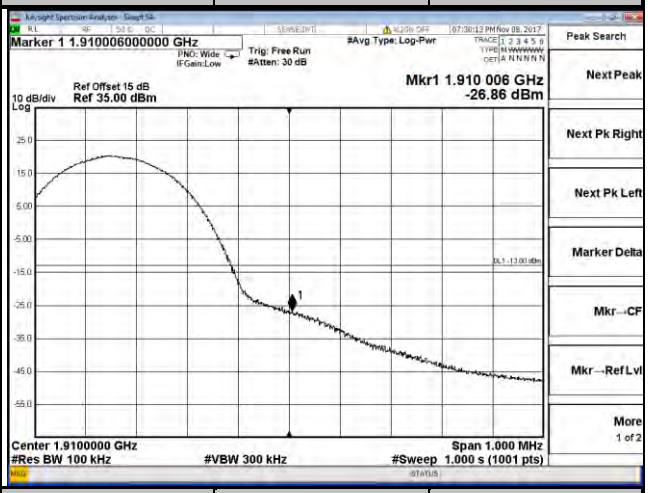
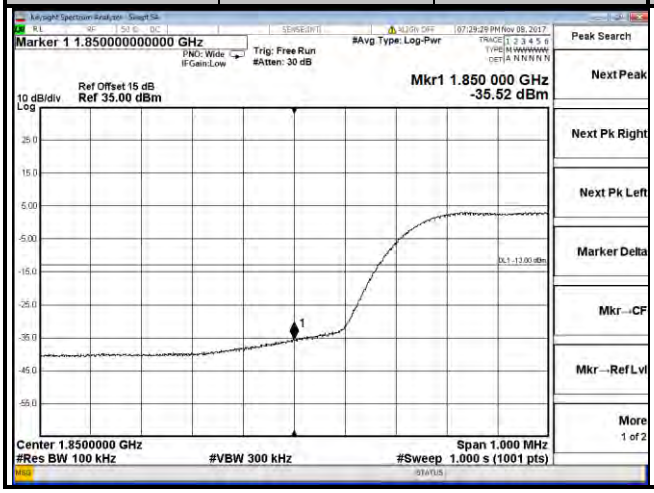
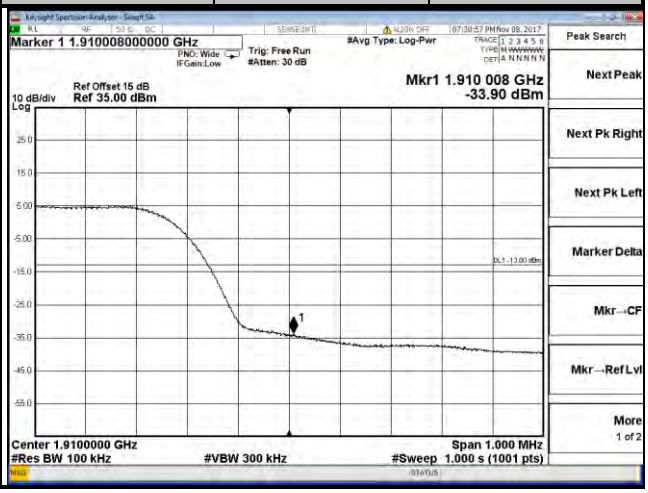
a. All measurements were done at low and high operational frequency range.
b. The center frequency of spectrum is the band edge frequency and span is 5 MHz. RB of the spectrum is 100 kHz and VB of the spectrum is 300 kHz (WCDMA).
c. The center frequency of spectrum is the band edge frequency and span 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 1 MHz. RB of the spectrum is 150 kHz and VB of the spectrum is 470 kHz (LTE Bandwidth 15 MHz).
g. The center frequency of spectrum is the band edge frequency and span is 1 MHz. RB of the spectrum is 180 kHz and VB of the spectrum is 560 kHz (LTE Bandwidth 20 MHz).
h. Record the max trace plot into the test report.

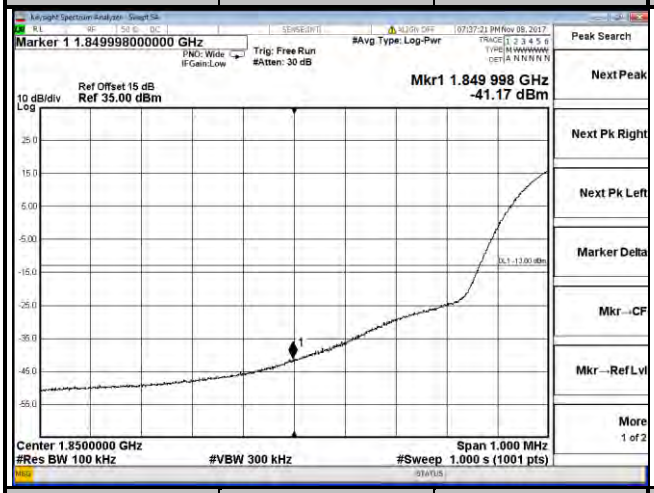
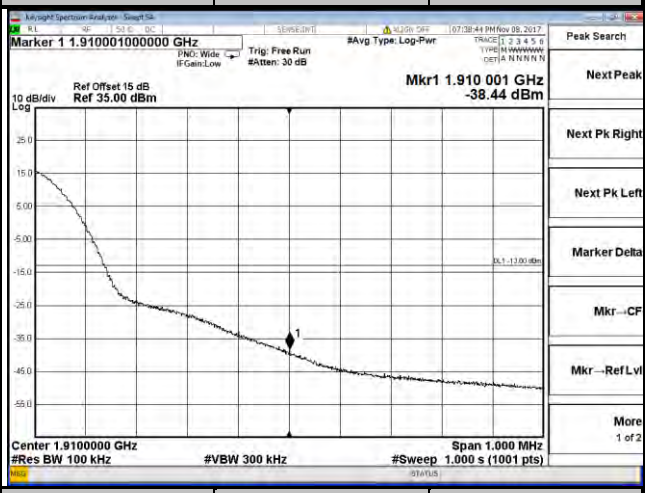
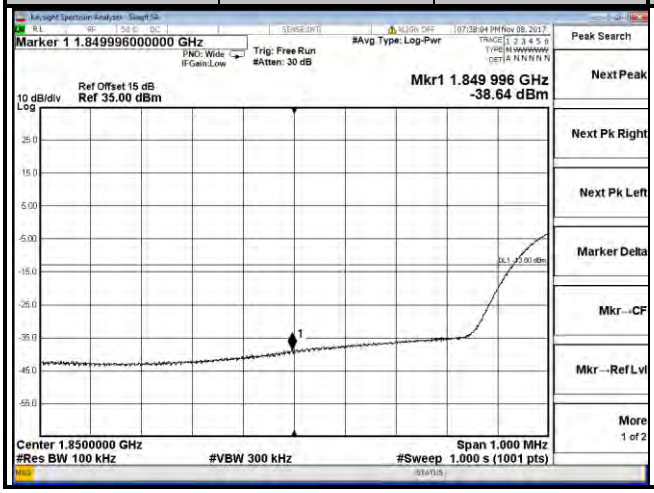
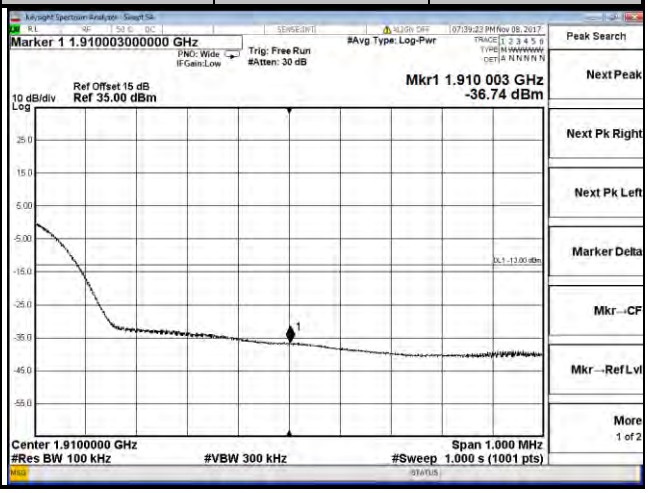
4.4.4 Test Results

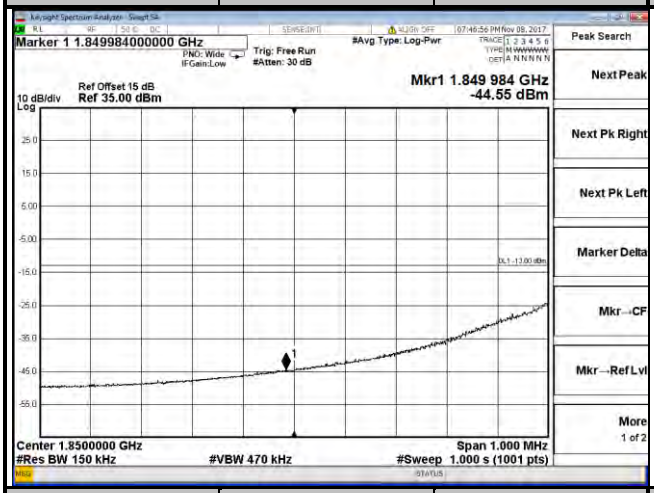
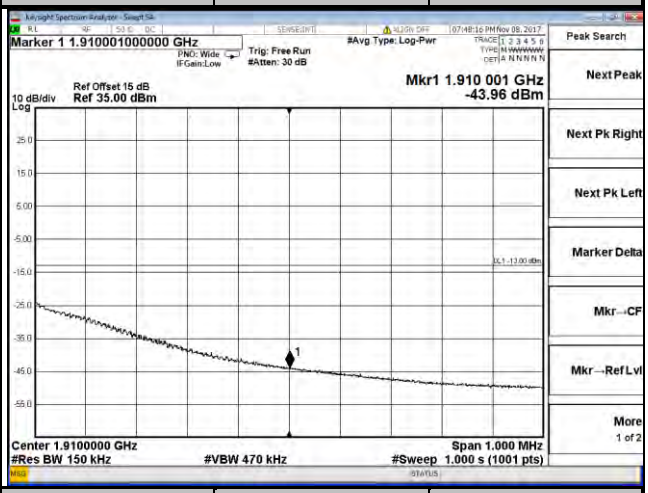
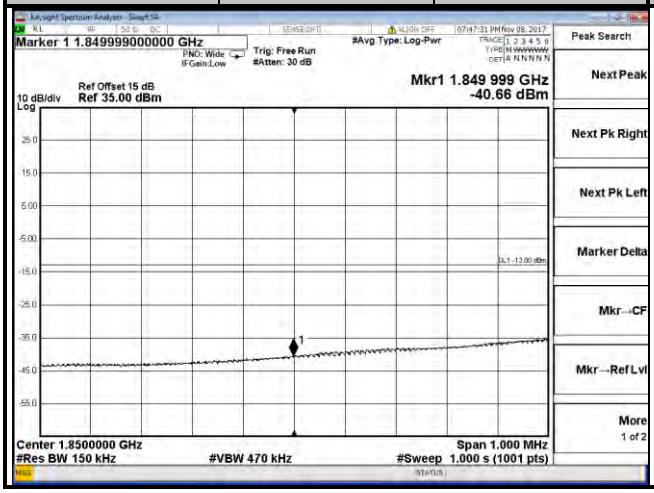
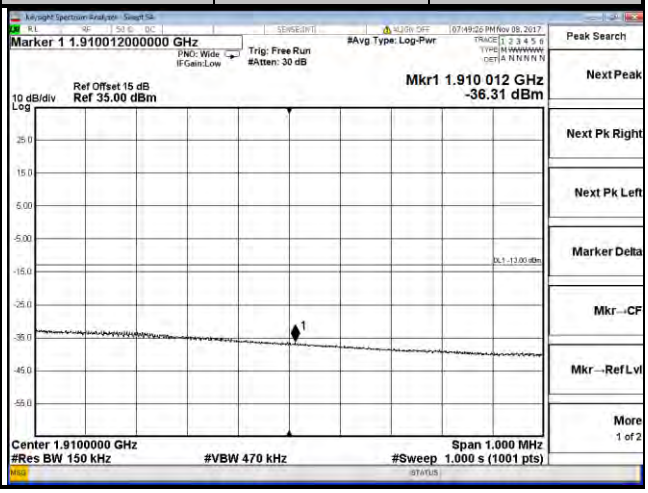
WCDMA			
Channel	9262	Channel	9538
			

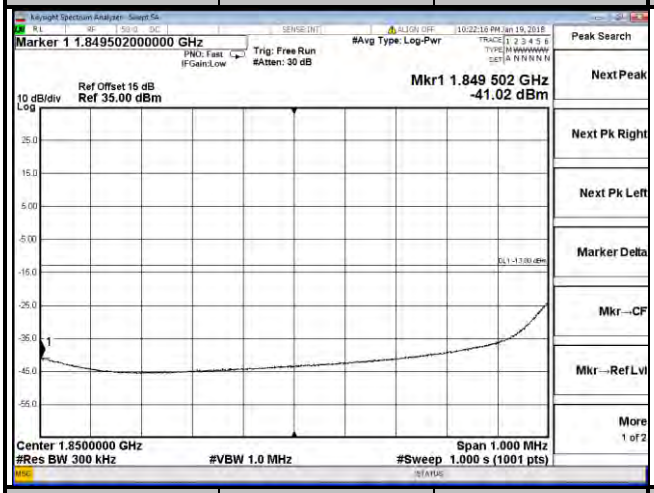
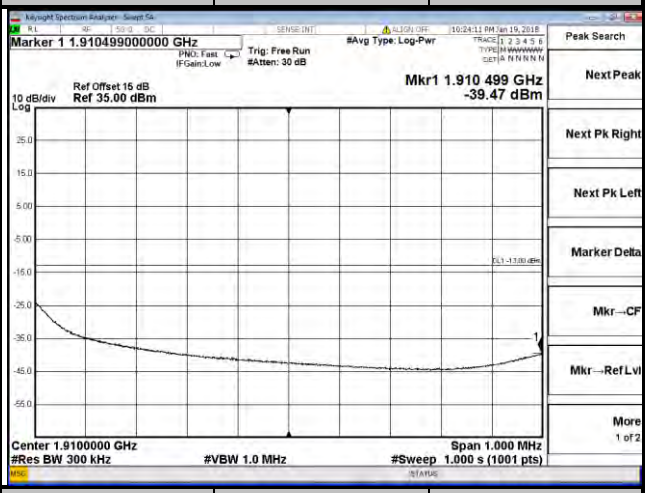
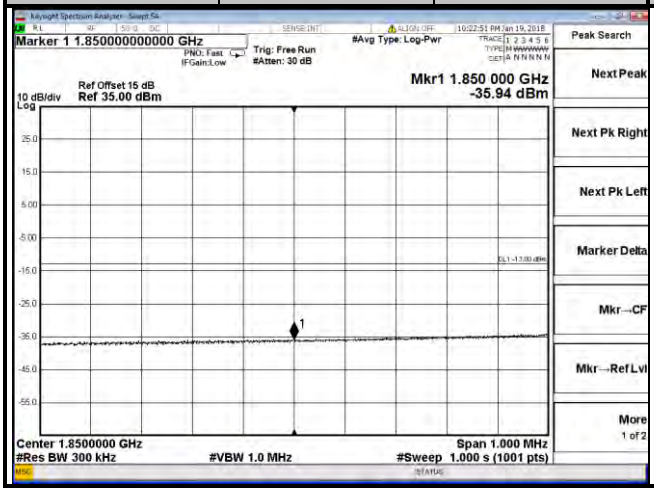
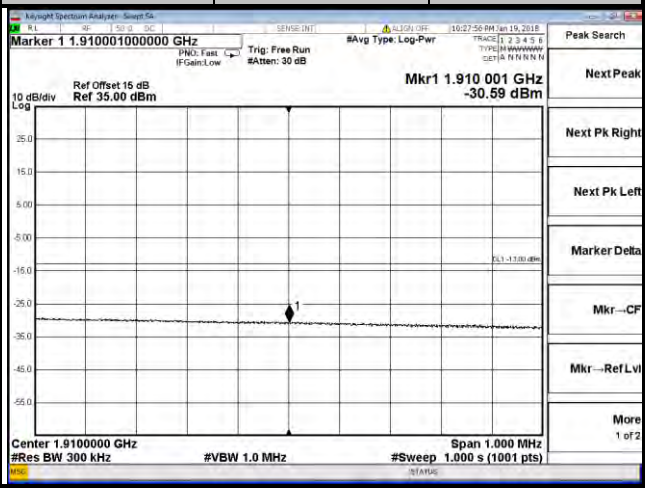
LTE Band 2					
Channel Bandwidth: 1.4 MHz					
Channel	18607	1 RB	Channel	19193	1 RB
					
Channel	18607	6 RB	Channel	19193	6 RB
					

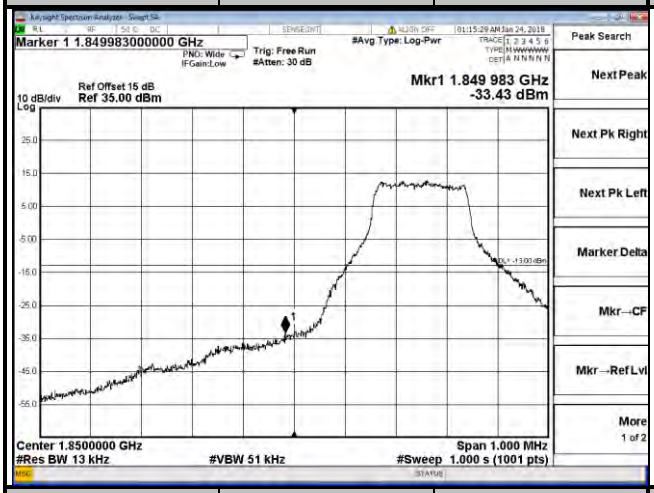
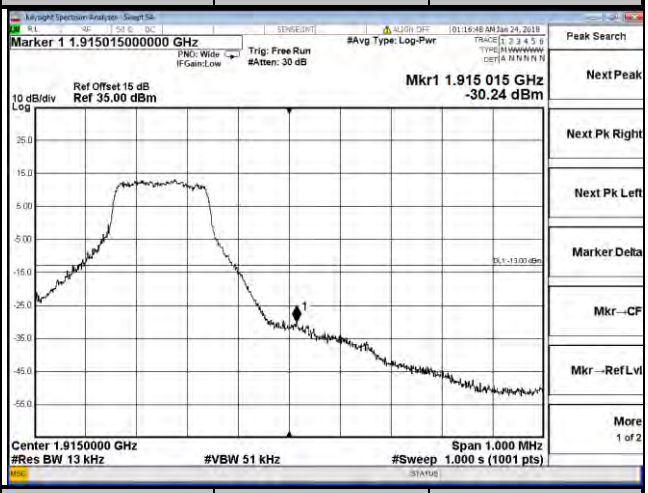
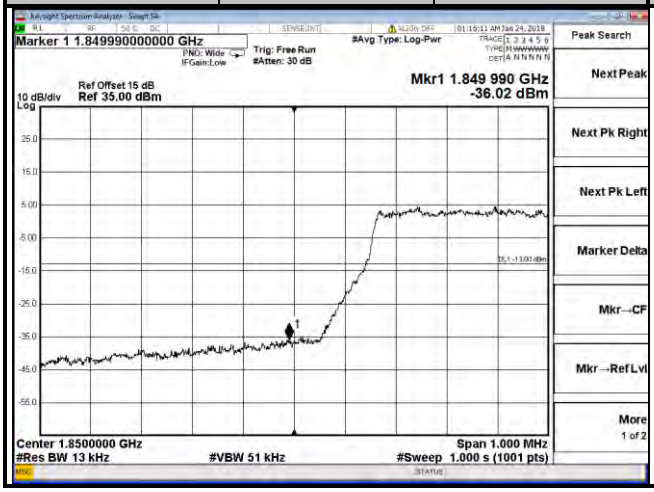
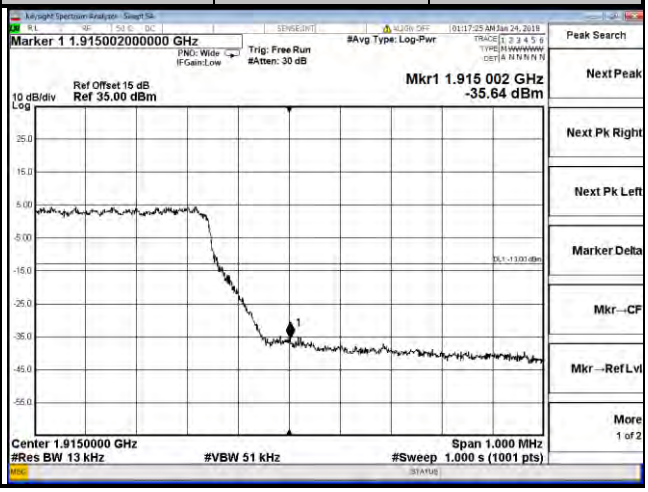
LTE Band 2					
Channel Bandwidth: 3 MHz					
Channel	18615	1 RB	Channel	19185	1 RB
					
Channel	18615	15 RB	Channel	19185	15 RB
					

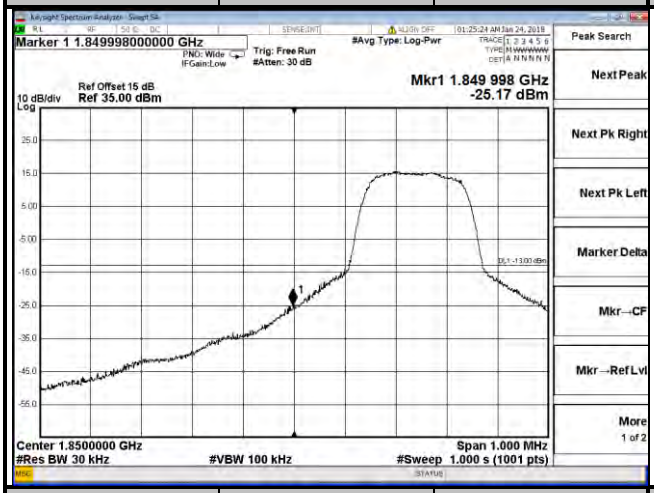
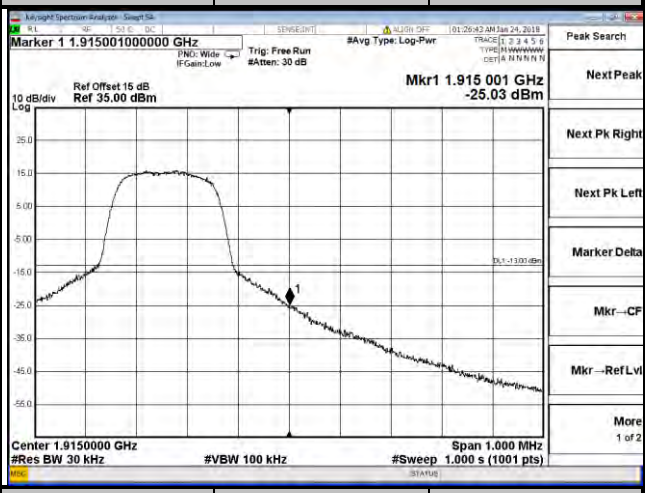
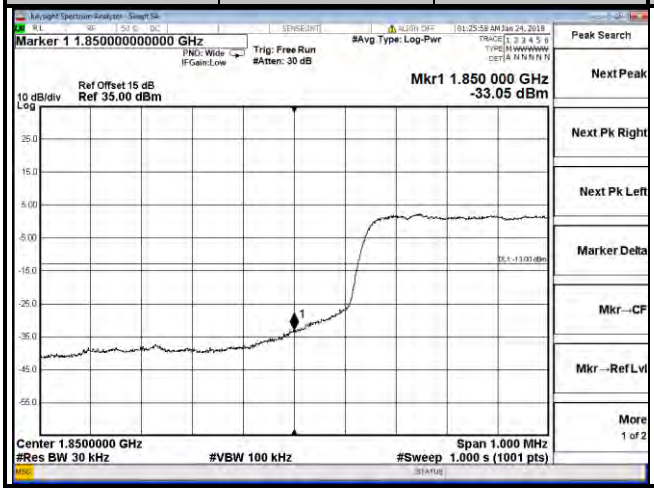
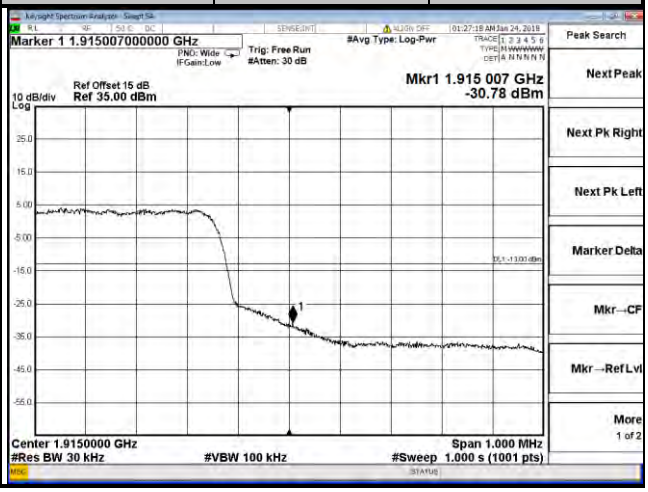
LTE Band 2					
Channel Bandwidth: 5 MHz					
Channel	18625	1 RB	Channel	19175	1 RB
					
Channel	18625	25 RB	Channel	19175	25 RB
					

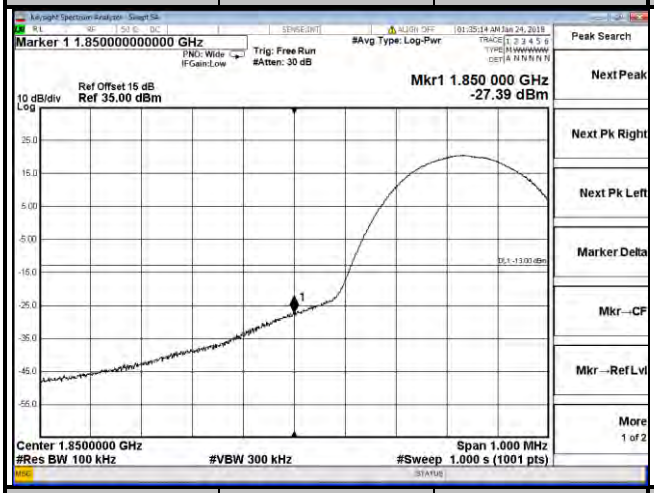
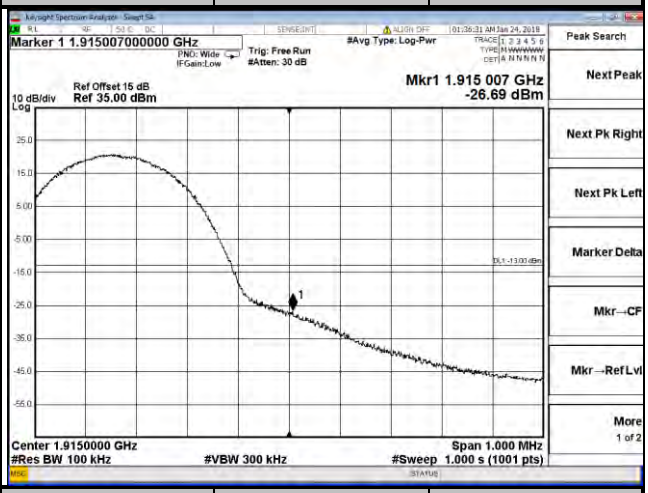
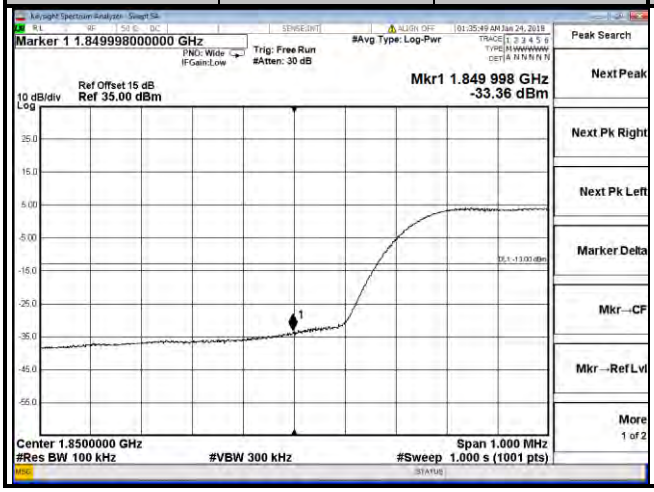
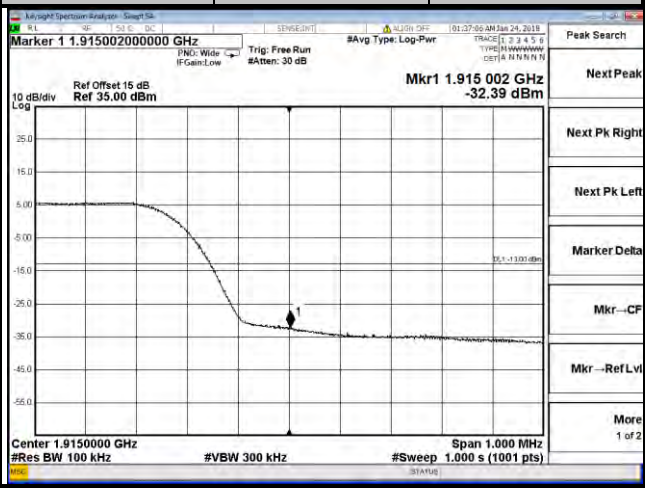
LTE Band 2					
Channel Bandwidth: 10 MHz					
Channel	18650	1 RB	Channel	19150	1 RB
					
Channel	18650	50 RB	Channel	19150	50 RB
					

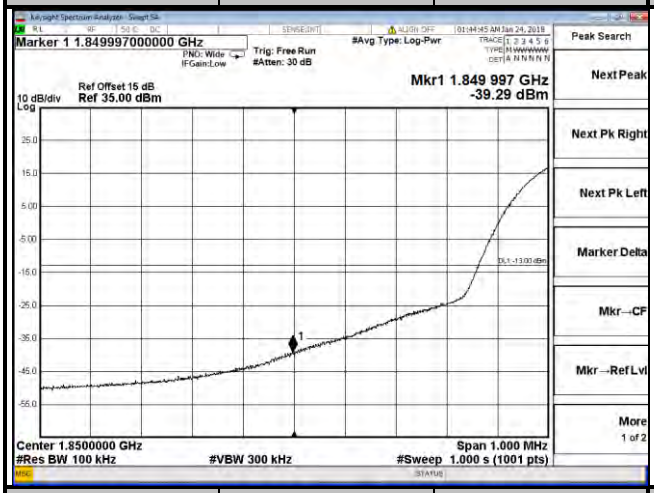
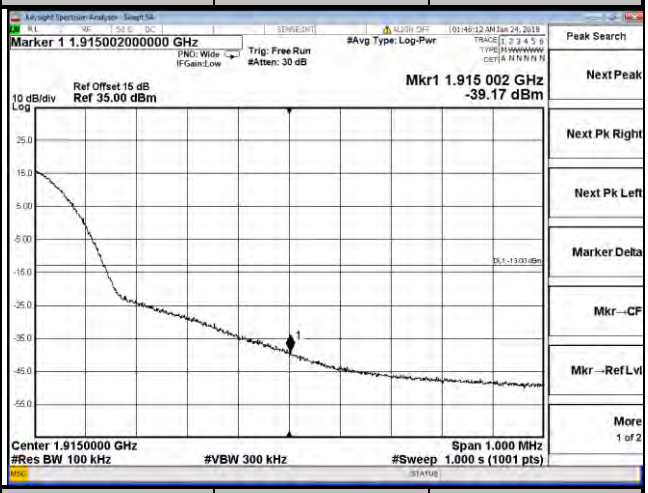
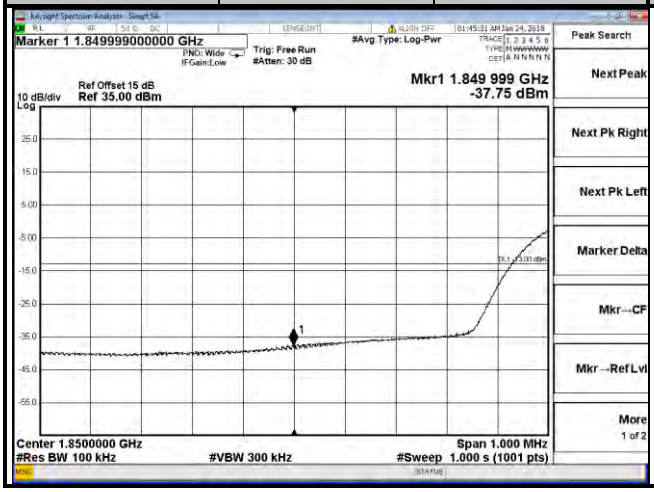
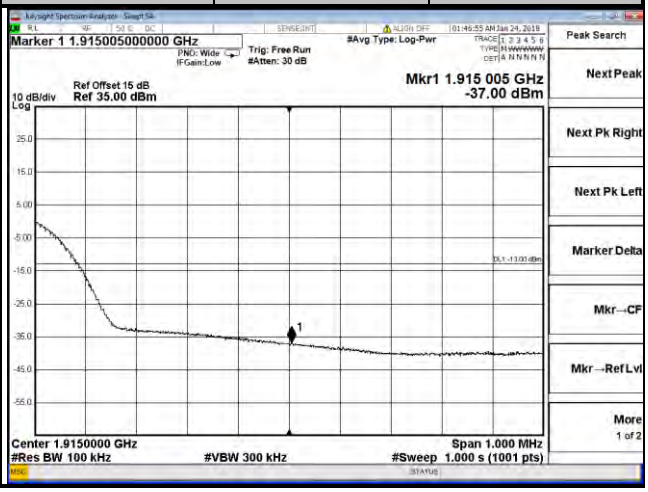
LTE Band 2					
Channel Bandwidth: 15 MHz					
Channel	18675	1 RB	Channel	19125	1 RB
					
Channel	18675	75 RB	Channel	19125	75 RB
					

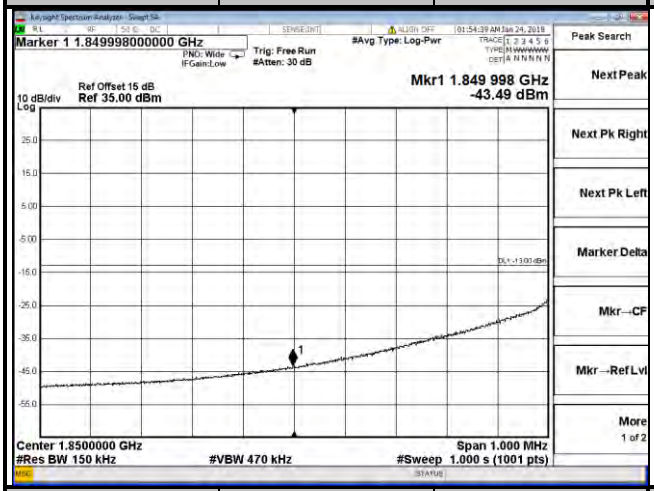
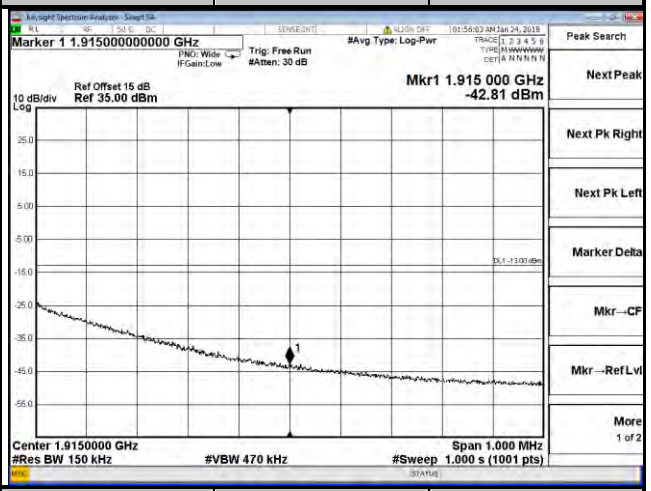
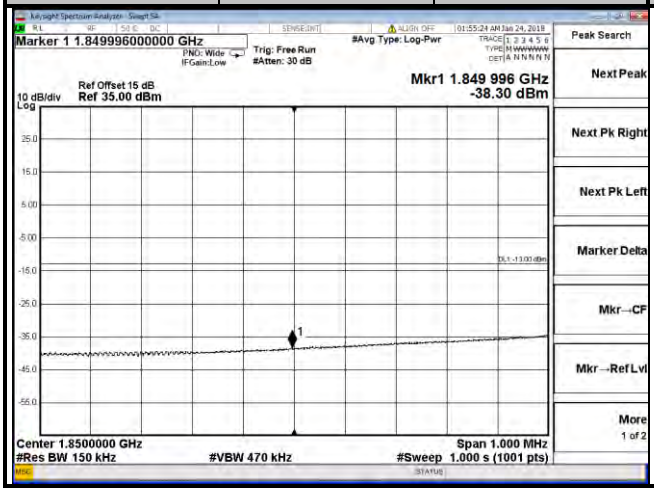
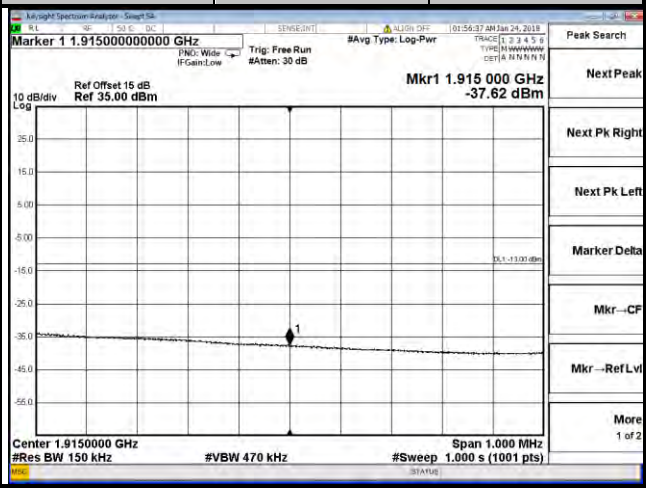
LTE Band 2					
Channel Bandwidth: 20 MHz					
Channel	18700	1 RB	Channel	19100	1 RB
					
Channel	18700	100 RB	Channel	19100	100 RB
					

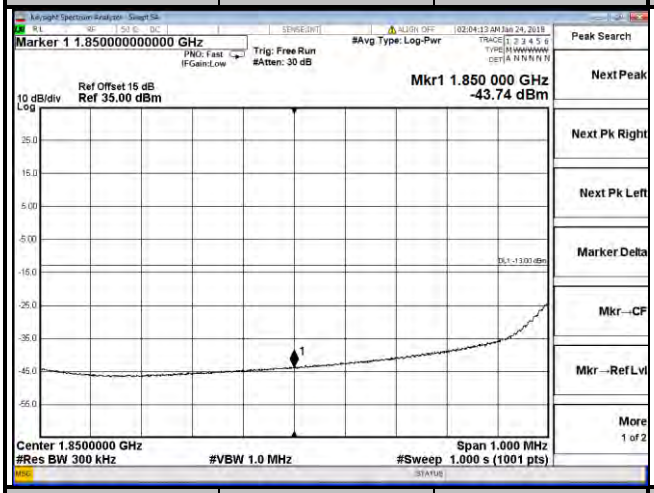
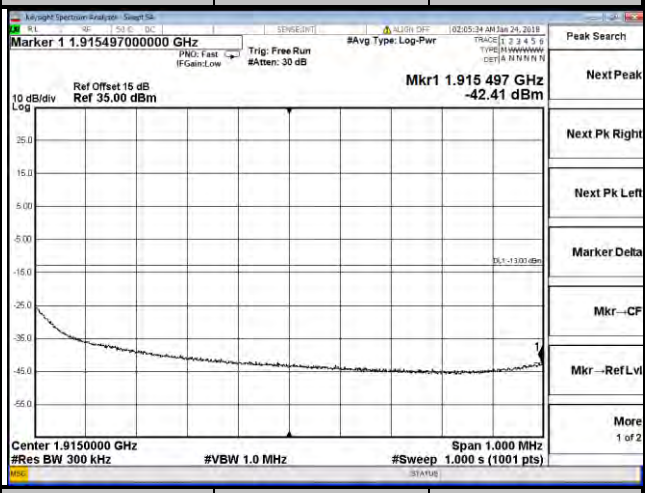
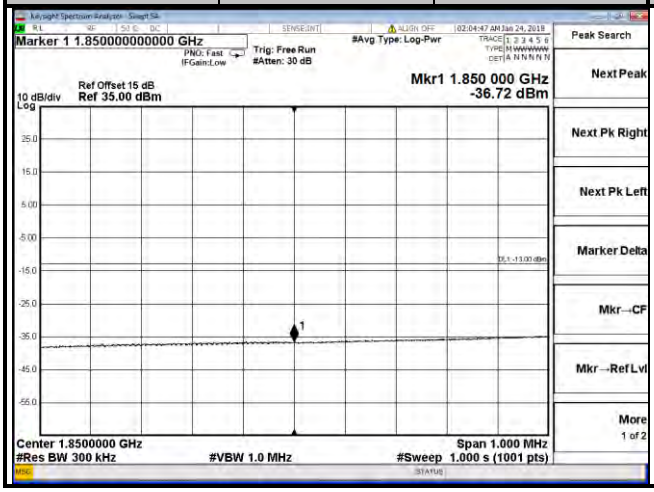
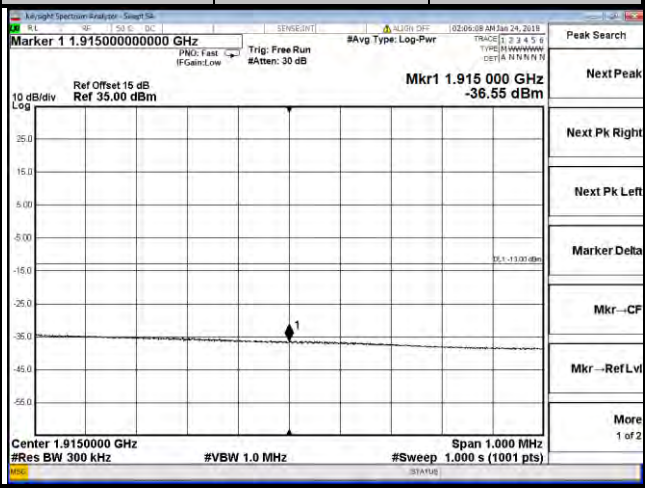
LTE Band 25					
Channel Bandwidth: 1.4 MHz					
Channel	26047	1 RB	Channel	26683	1 RB
					
Channel	26047	6 RB	Channel	26683	6 RB
					

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

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

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

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

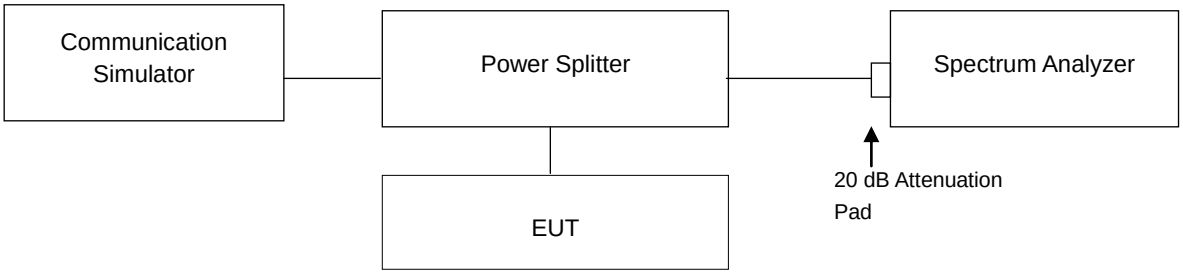
LTE Band 25					
Channel Bandwidth: 20 MHz					
Channel	26140	1 RB	Channel	26590	1 RB
					
Channel	26140	100 RB	Channel	26590	100 RB
					

4.5 Peak to Average Ratio

4.5.1 Limits of Peak to Average Ratio Measurement

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

4.5.2 Test Setup



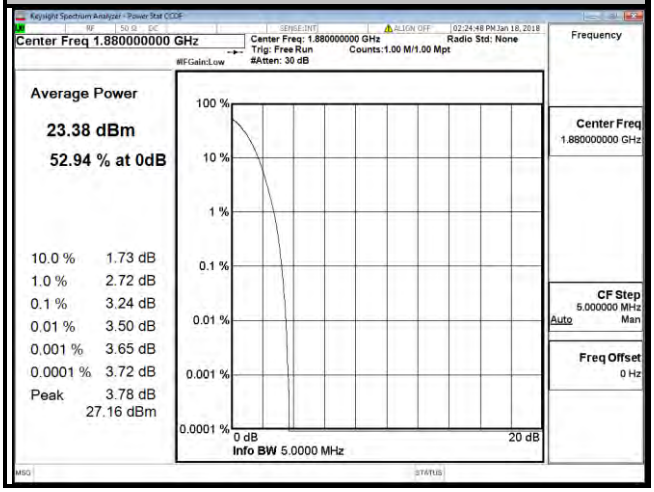
4.5.3 Test Procedures

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

4.5.4 Test Results

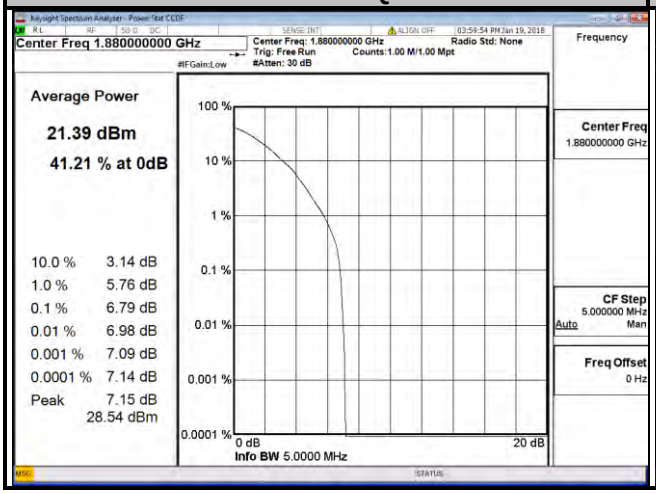
Channel	Frequency (MHz)	Peak to Average Ratio (dB)
		WCDMA
9262	1852.4	3.21
9400	1880.0	3.24
9538	1907.6	3.23

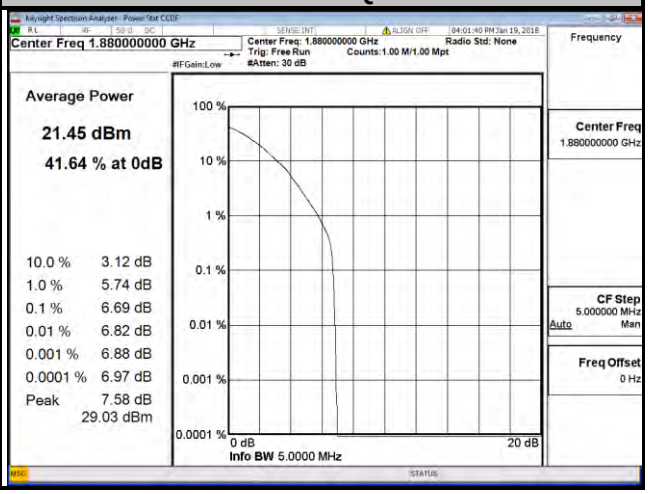
Spectrum Plot of Worst Value
WCDMA



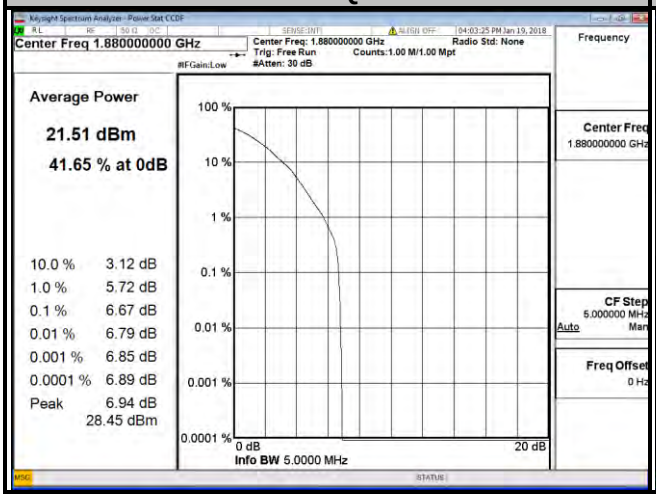
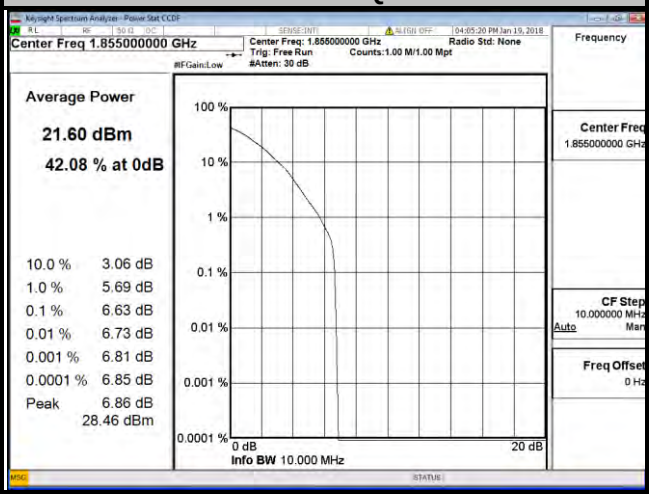
LTE Band 2									
Channel Bandwidth: 1.4 MHz					Channel Bandwidth: 3 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)			Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
18607	1850.7	4.93	5.71	6.75	18615	1851.5	4.77	5.52	6.67
18900	1880.0	4.94	5.73	6.79	18900	1880.0	4.78	5.54	6.69
19193	1909.3	4.57	5.32	6.41	19185	1908.5	4.59	5.29	6.35

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



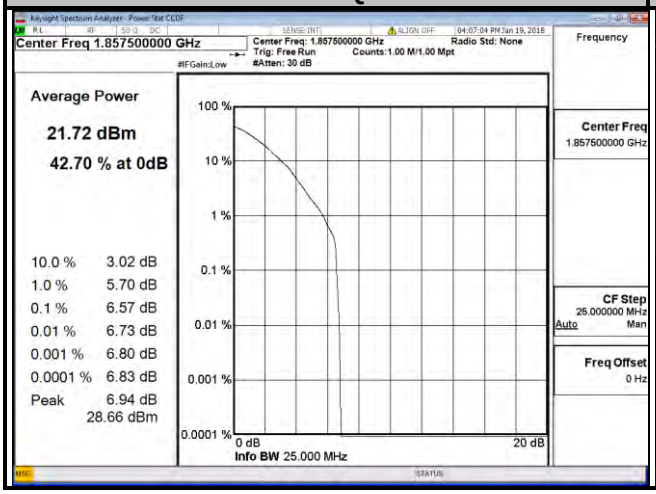


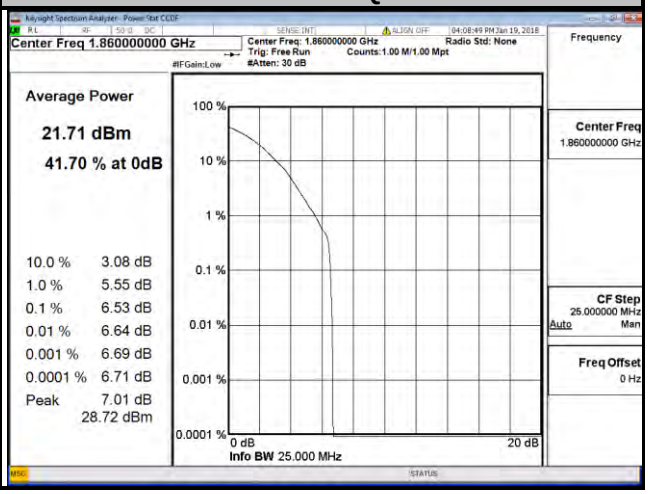
LTE Band 2									
Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)			Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
18625	1852.5	4.77	5.49	6.66	18650	1855.0	4.68	5.44	6.63
18900	1880.0	4.77	5.53	6.67	18900	1880.0	4.68	5.49	6.62
19175	1907.5	4.57	5.31	6.29	19150	1905.0	4.50	5.22	6.25

Spectrum Plot of Worst Value	
5 MHz / QPSK	10 MHz / 16QAM
	

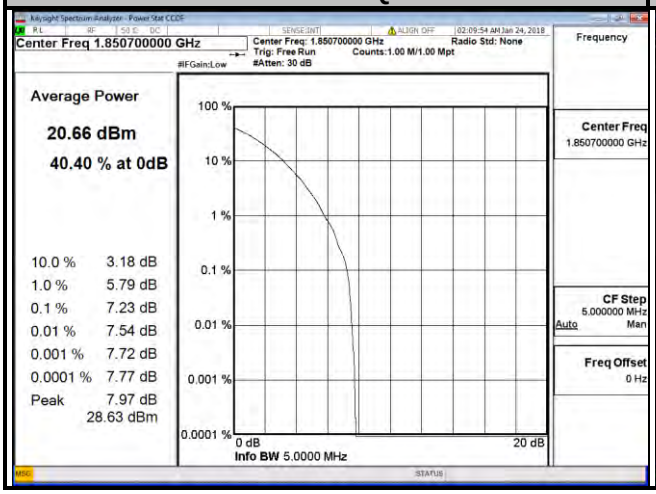
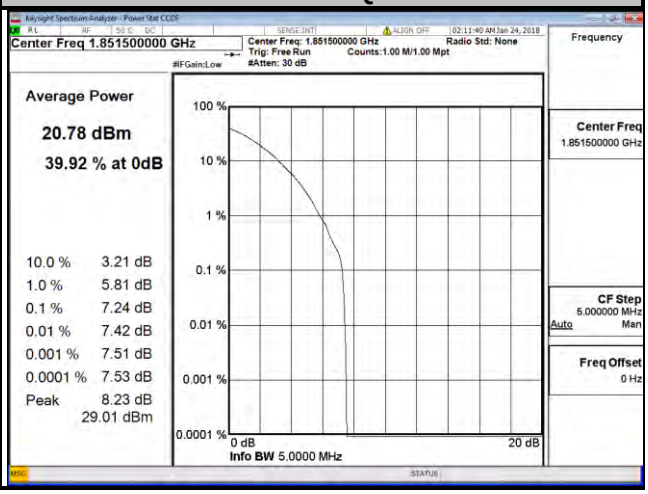
LTE Band 2									
Channel Bandwidth: 15 MHz					Channel Bandwidth: 20 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)			Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
18675	1857.5	4.67	5.38	6.57	18700	1860.0	4.61	5.33	6.53
18900	1880.0	4.63	5.41	6.43	18900	1880.0	4.64	5.34	6.47
19125	1902.5	4.53	5.27	6.39	19100	1900.0	4.53	5.26	6.41

Spectrum Plot of Worst Value	
15 MHz / QPSK	20 MHz / 16QAM

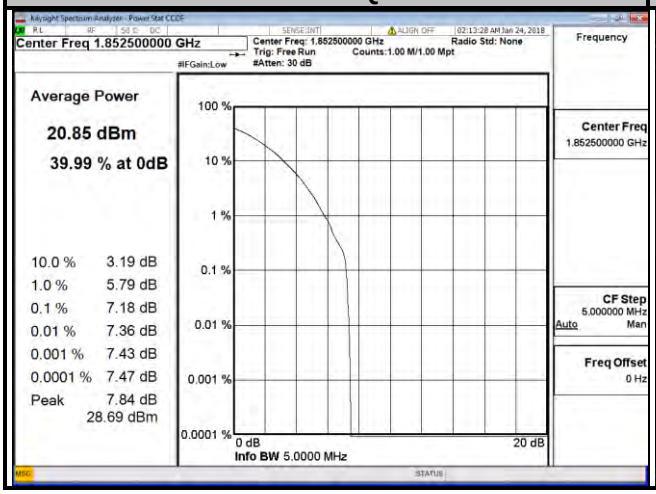
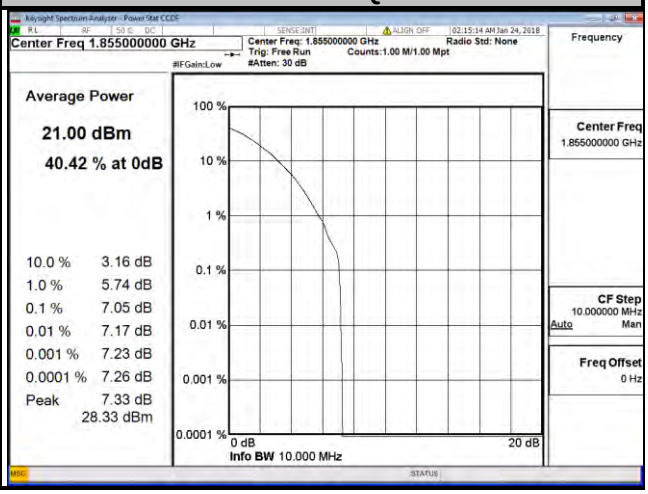




LTE Band 25									
Channel Bandwidth: 1.4 MHz					Channel Bandwidth: 3 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)			Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
26047	1850.7	4.94	6.06	7.23	26055	1851.5	4.77	6.08	7.24
26365	1882.5	4.98	5.98	7.13	26365	1882.5	4.81	5.80	7.15
26683	1914.3	5.01	6.30	7.16	26675	1913.5	5.23	6.18	7.10

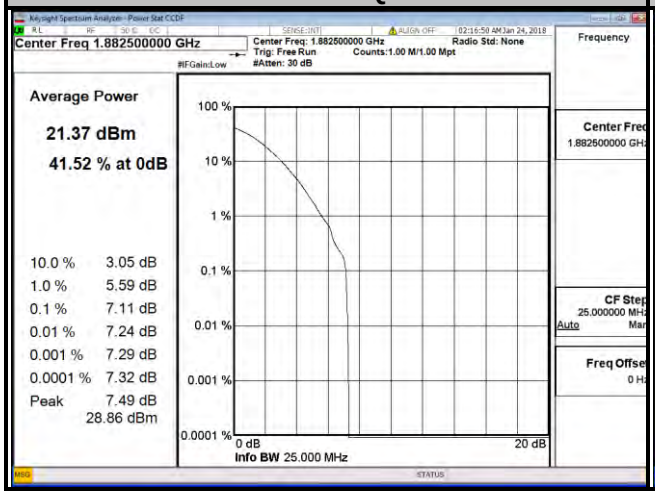
Spectrum Plot of Worst Value	
1.4 MHz / 64QAM	3 MHz / 64QAM
	

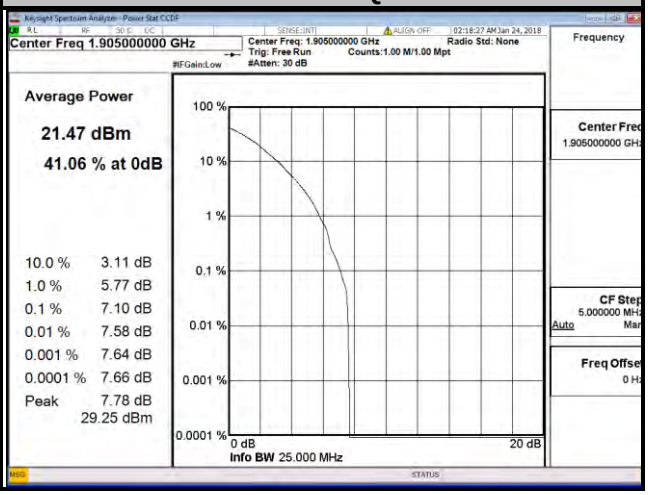
LTE Band 25									
Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)			Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
26065	1852.5	4.77	6.10	7.18	26090	1855.0	4.71	6.04	7.05
26365	1882.5	4.79	6.06	7.11	26365	1882.5	4.72	6.16	7.04
26665	1912.5	5.24	6.09	7.02	26640	1910.0	4.72	5.89	6.97

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

LTE Band 25									
Channel Bandwidth: 15 MHz					Channel Bandwidth: 20 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)			Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
26115	1857.5	4.72	5.93	6.81	26140	1860.0	4.65	5.97	6.82
26365	1882.5	4.70	5.76	7.11	26365	1882.5	5.56	6.17	7.06
26615	1907.5	4.71	5.88	6.68	26590	1905.0	4.64	6.06	7.10

Spectrum Plot of Worst Value	
15 MHz / 64QAM	20 MHz / 64QAM



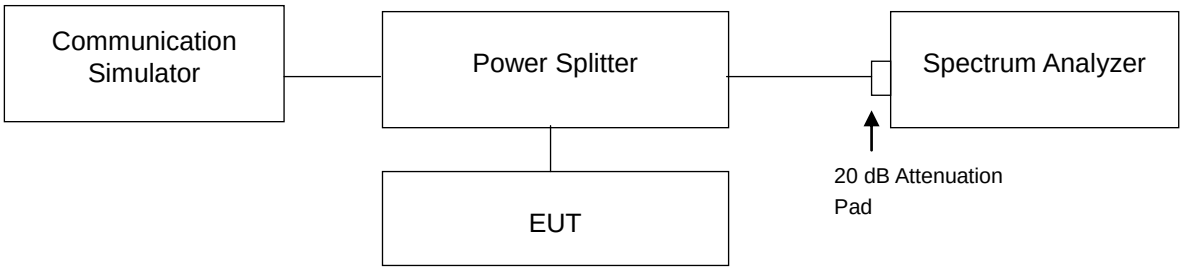


4.6 Conducted Spurious Emissions

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



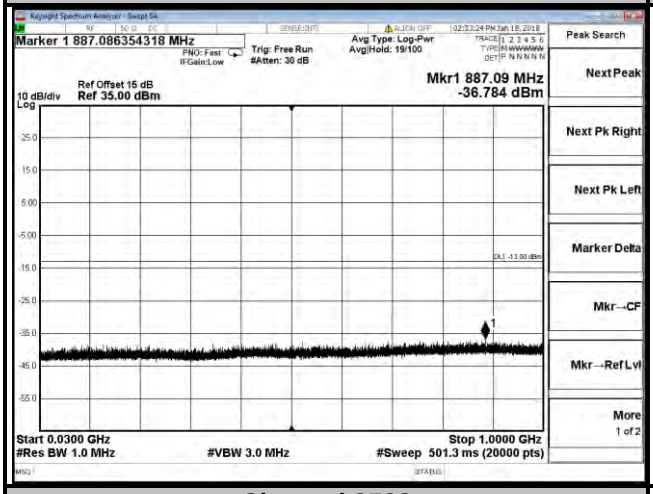
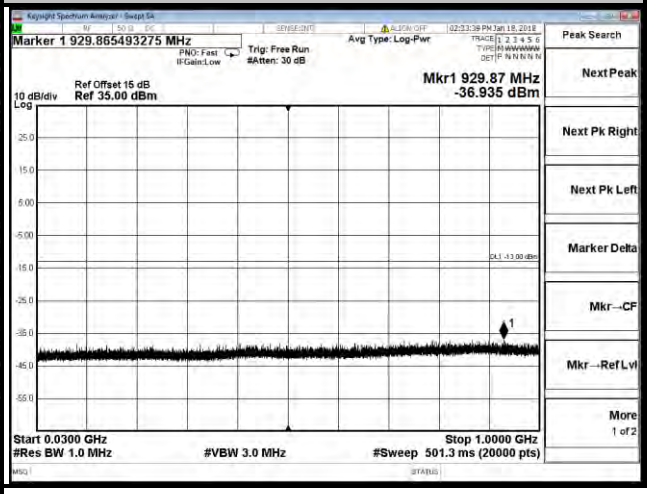
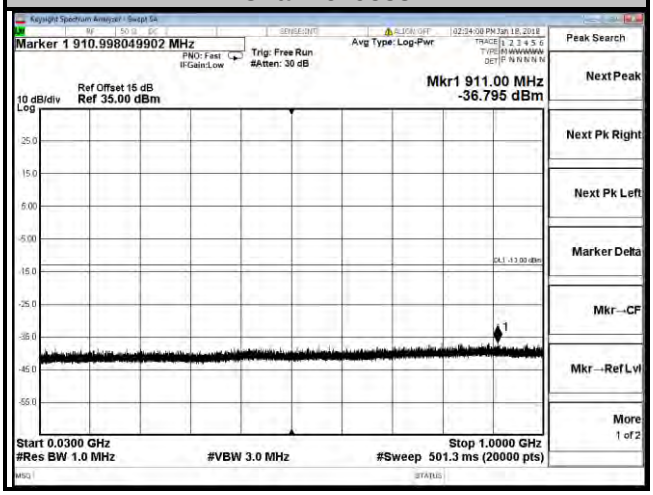
4.6.3 Test Procedure

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

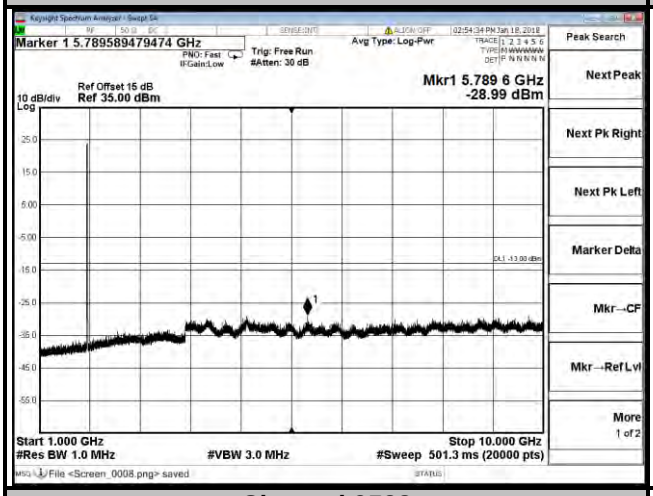
30MHz ~ 1GHz

WCDMA	
Channel 9262	Channel 9400
	
Channel 9538	
	

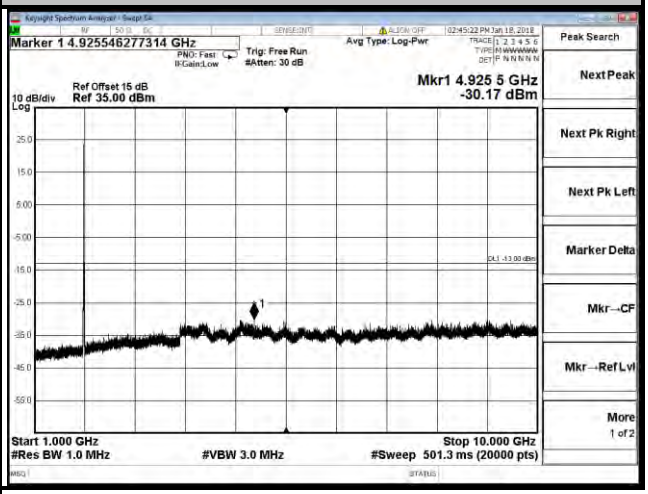
1GHz ~ 10GHz

WCDMA

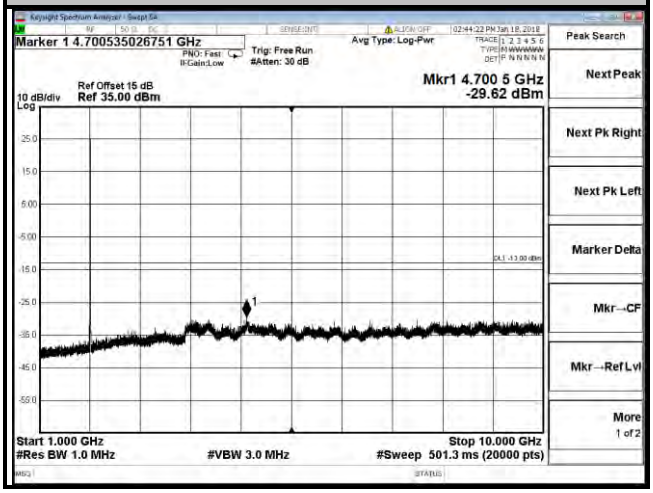
Channel 9262



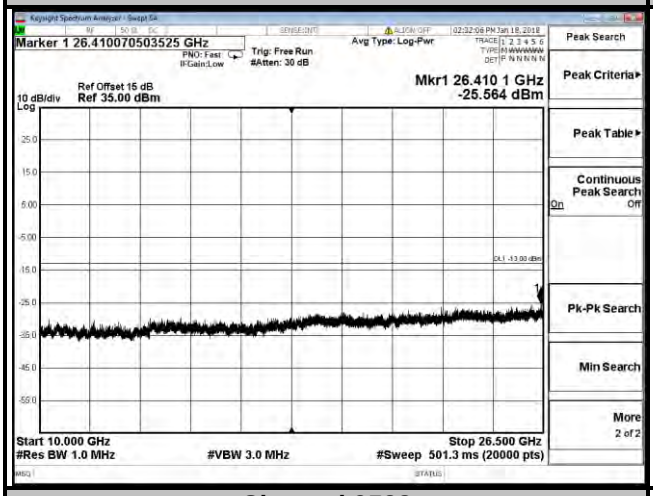
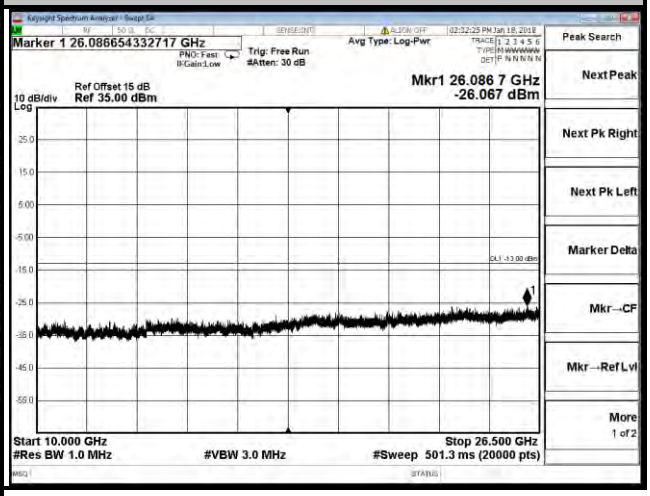
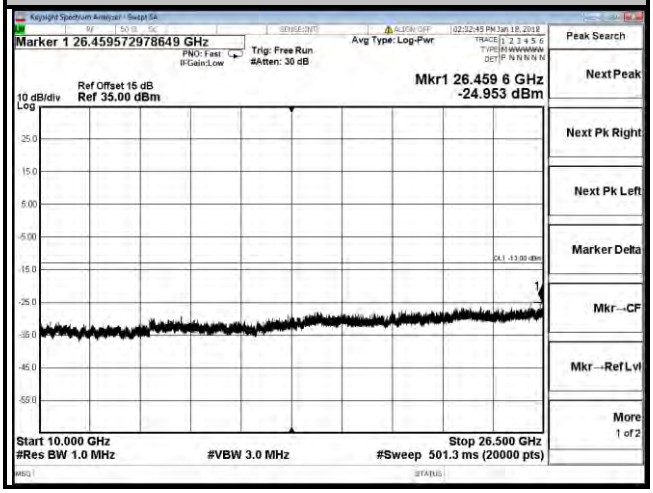
Channel 9400



Channel 9538

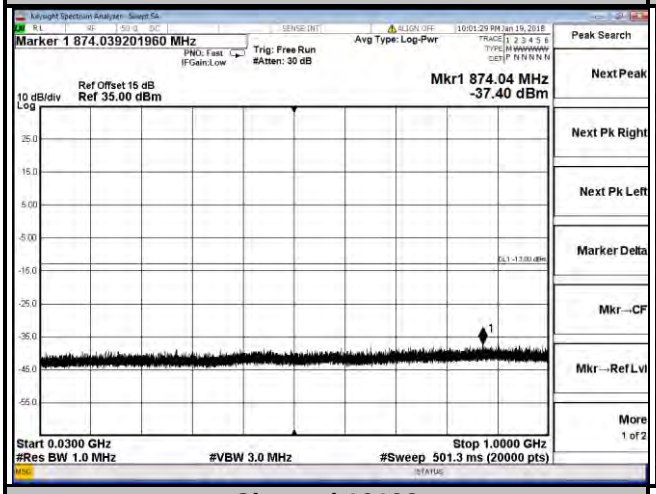
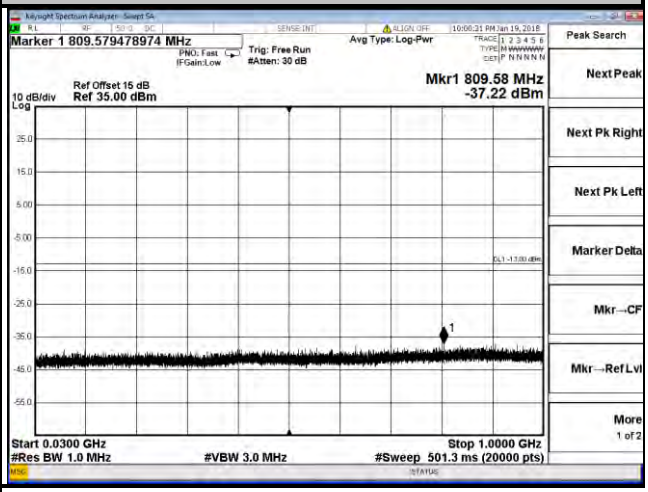
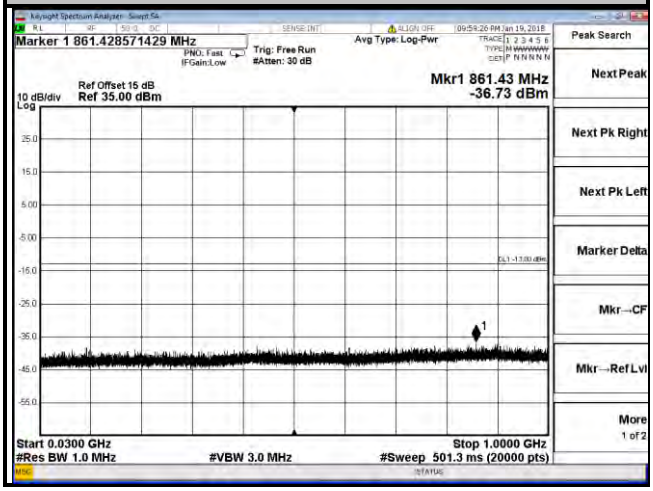


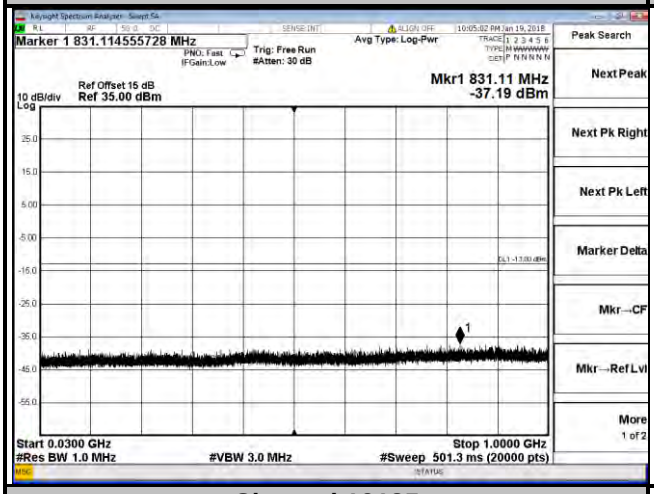
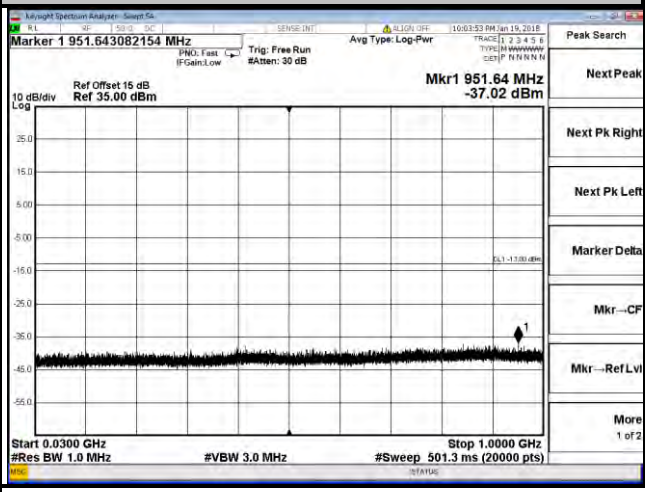
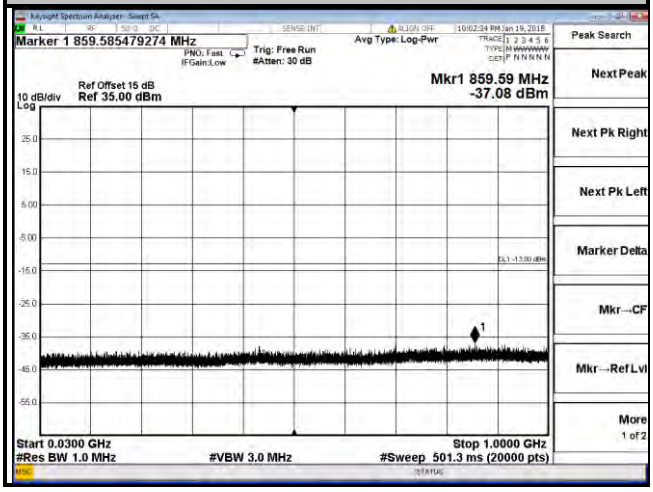
10GHz ~ 26.5GHz

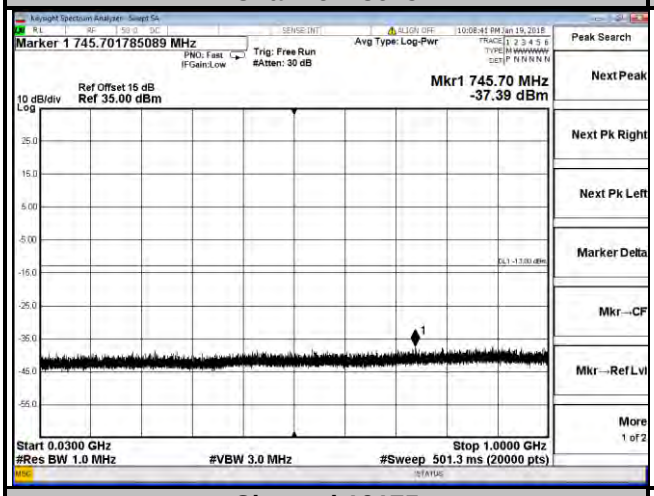
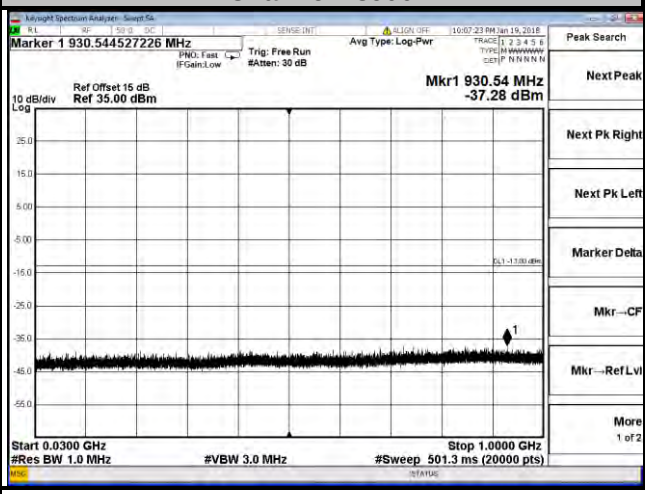
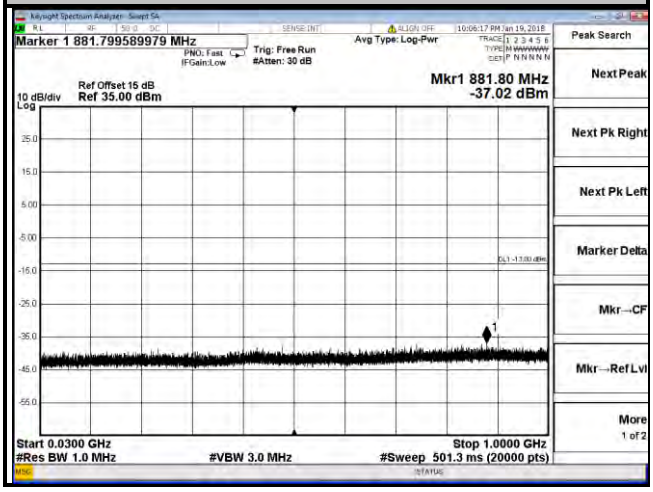
WCDMA	
Channel 9262	**Channel 9400**
	
Channel 9538	
	

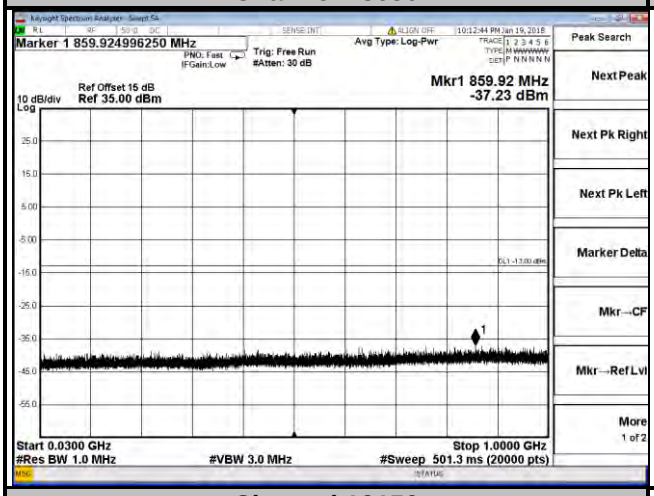
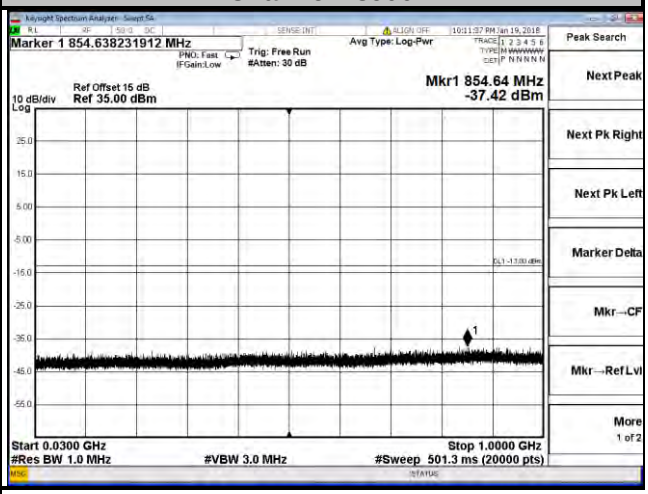
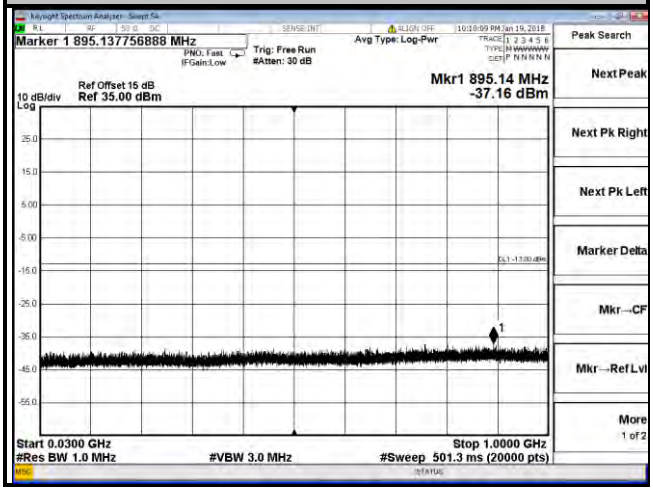
LTE Band 2

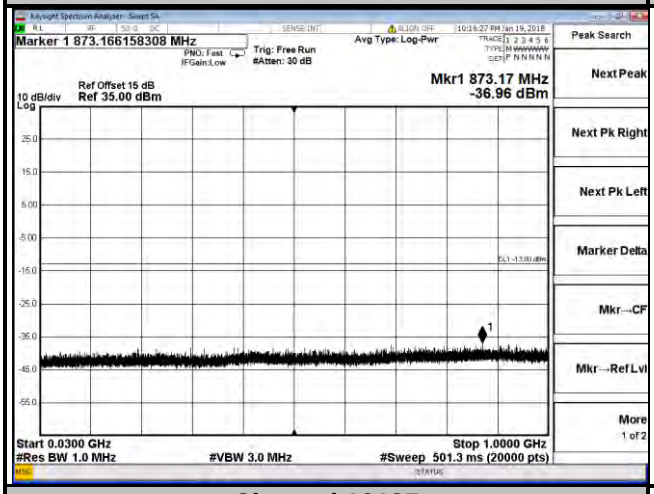
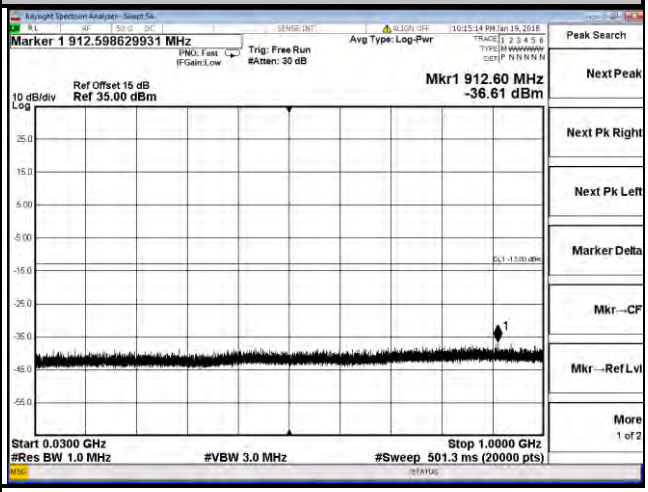
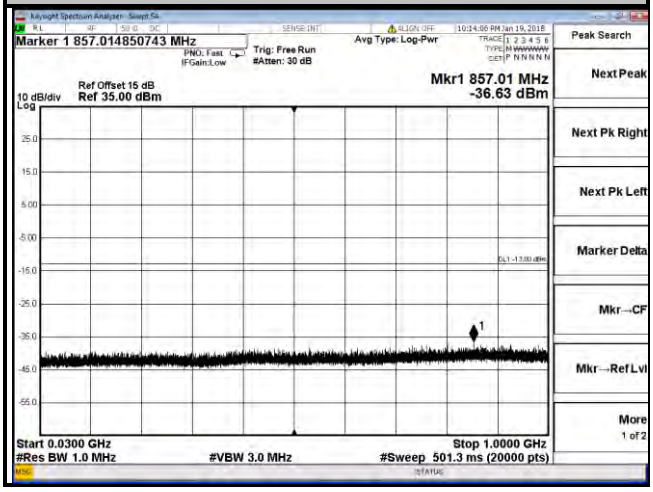
30MHz ~ 1GHz

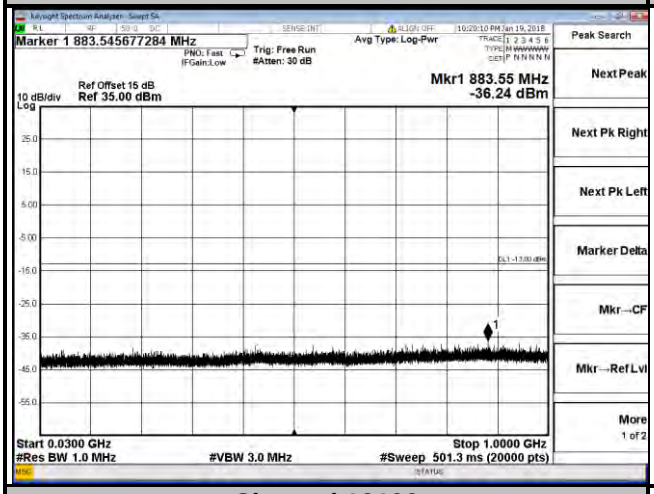
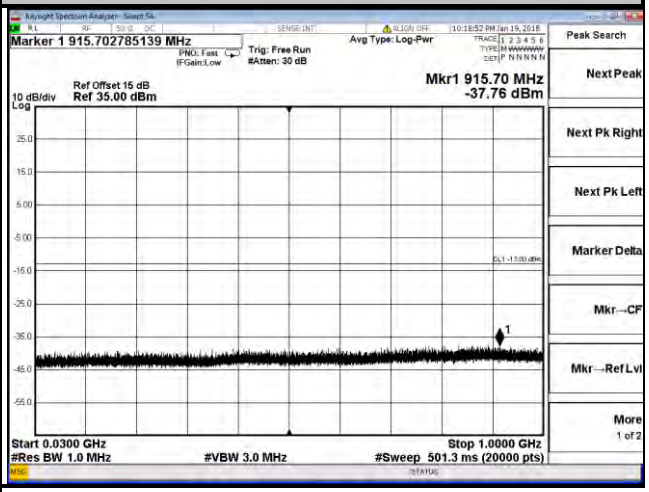
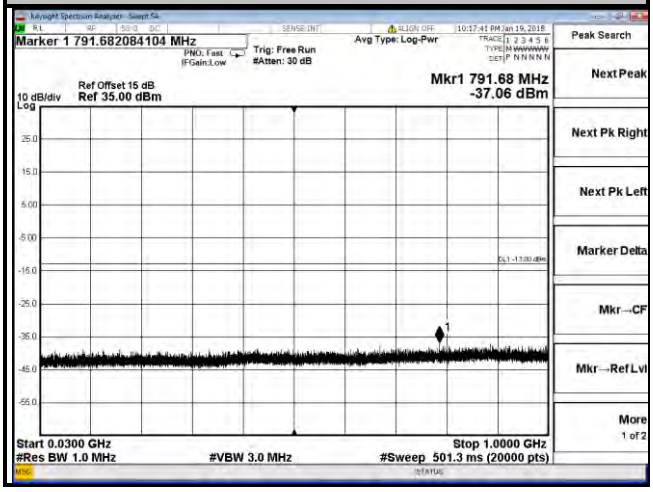
LTE Band 2	
Channel Bandwidth: 1.4 MHz	
Channel 18607	Channel 18900
	
Channel 19193	
	

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

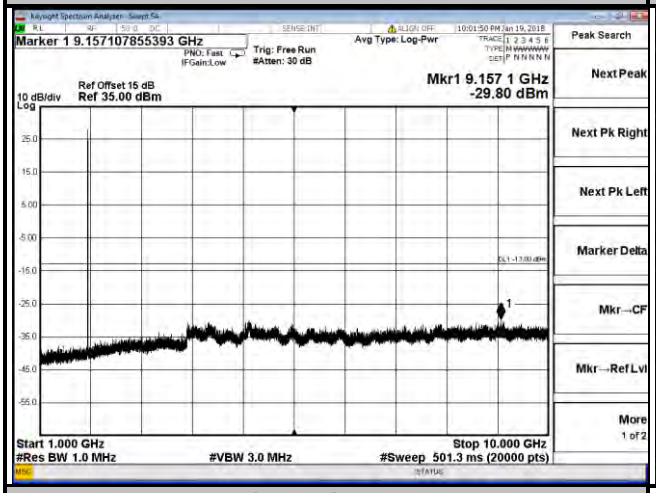
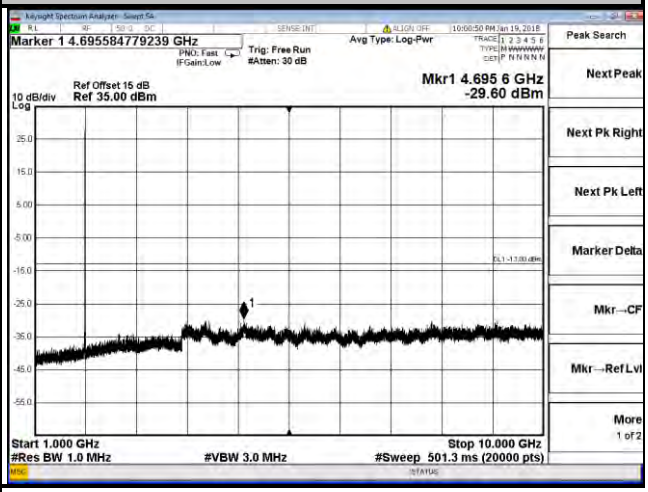
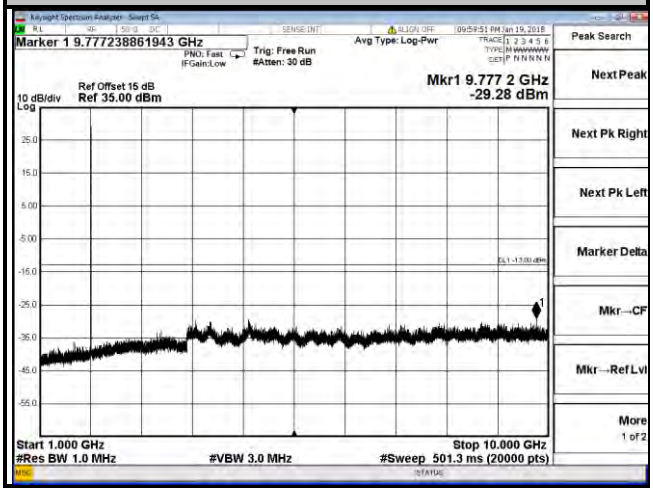
LTE Band 2	
Channel Bandwidth: 5 MHz	
Channel 18625	Channel 18900
	
Channel 19175	
	

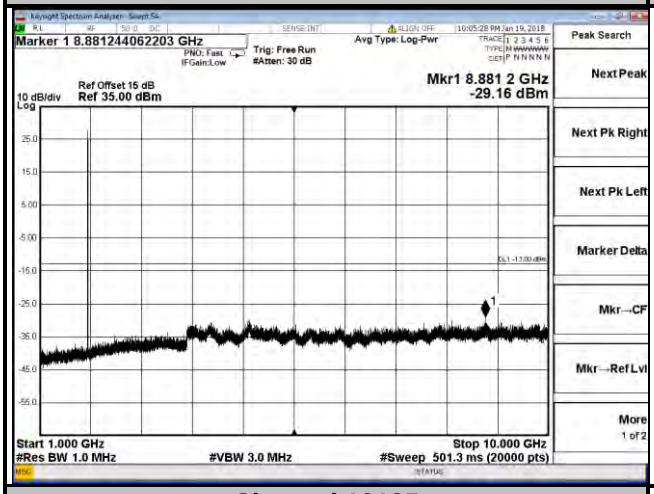
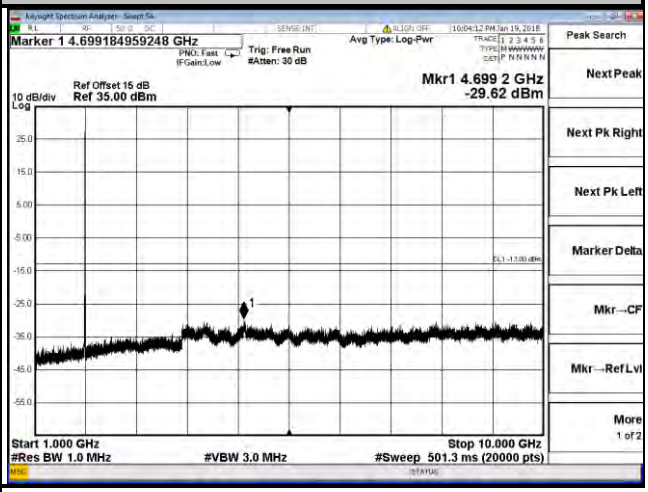
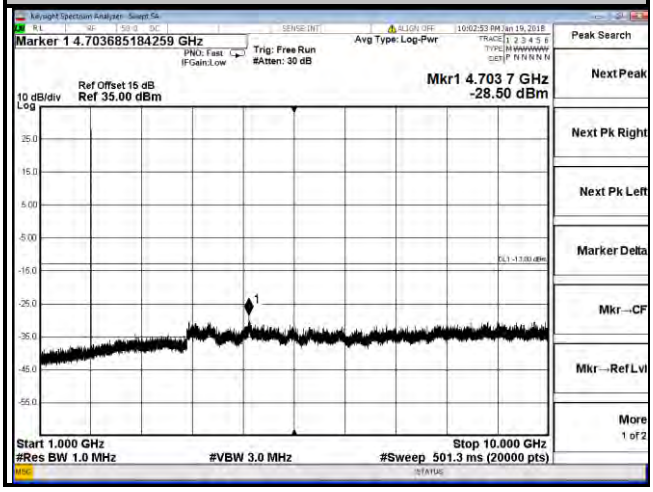
LTE Band 2	
Channel Bandwidth: 10 MHz	
Channel 18650	Channel 18900
	
Channel 19150	
	

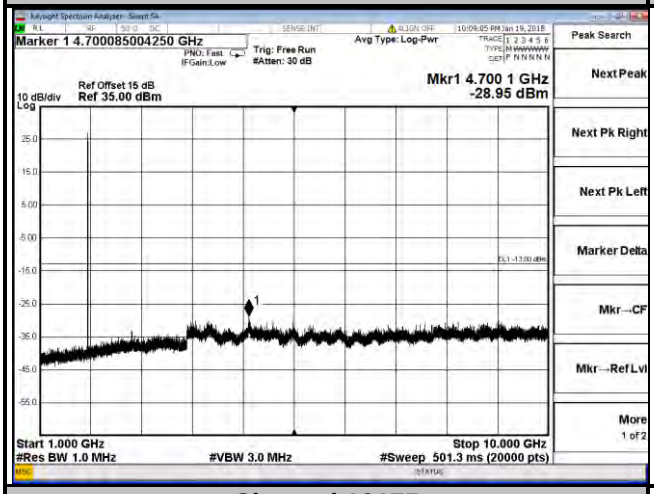
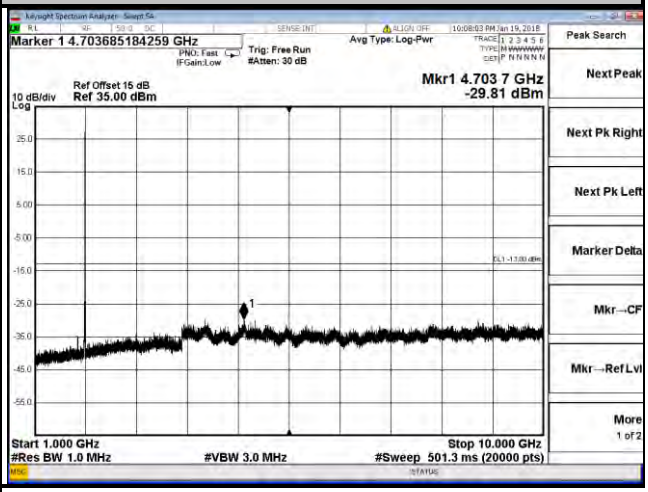
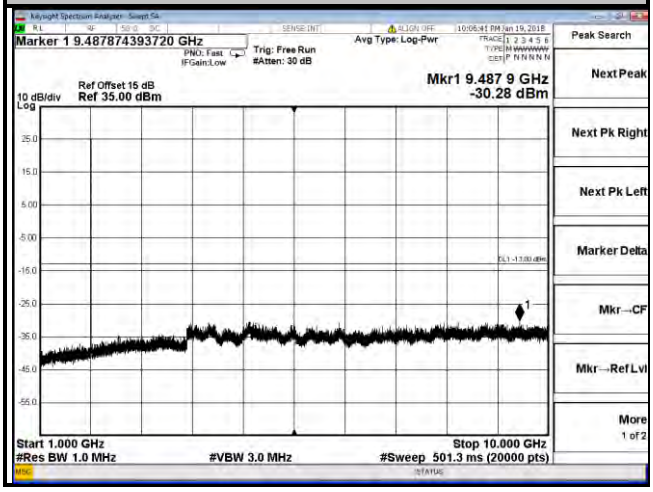
LTE Band 2	
Channel Bandwidth: 15 MHz	
Channel 18675	Channel 18900
	
Channel 19125	
	

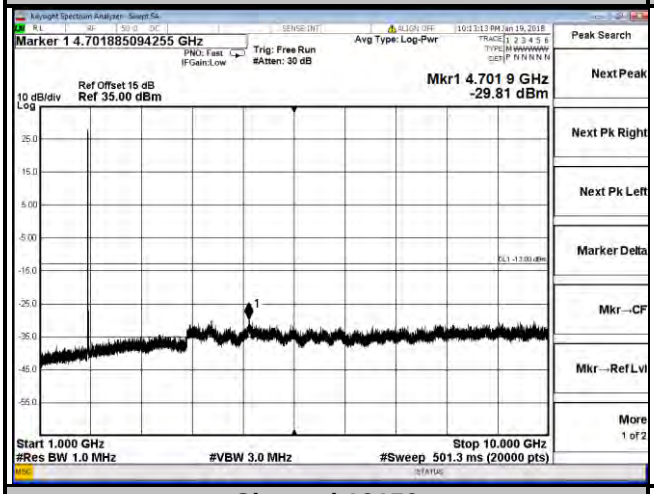
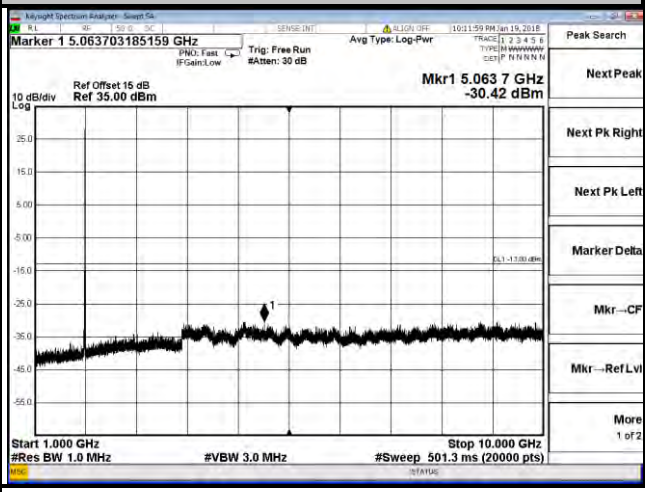
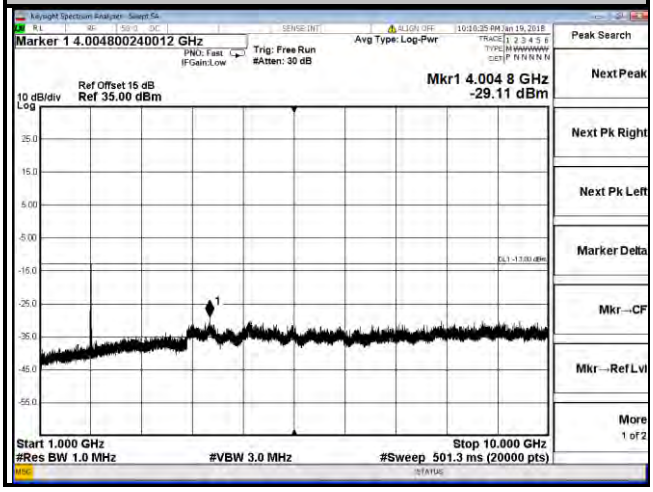
LTE Band 2	
Channel Bandwidth: 20 MHz	
Channel 18700	Channel 18900
	
Channel 19100	
	

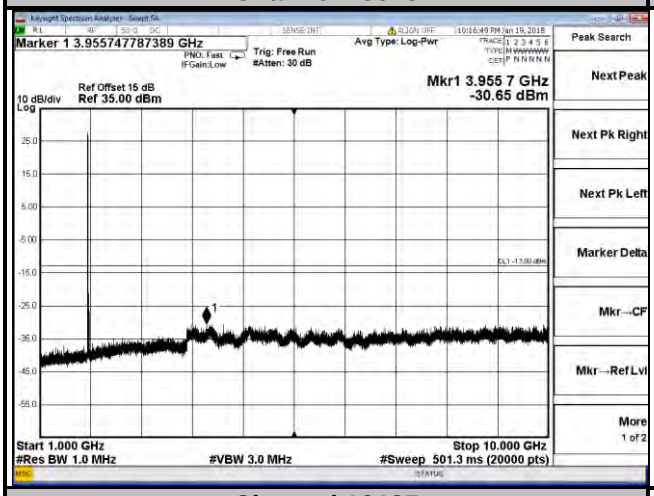
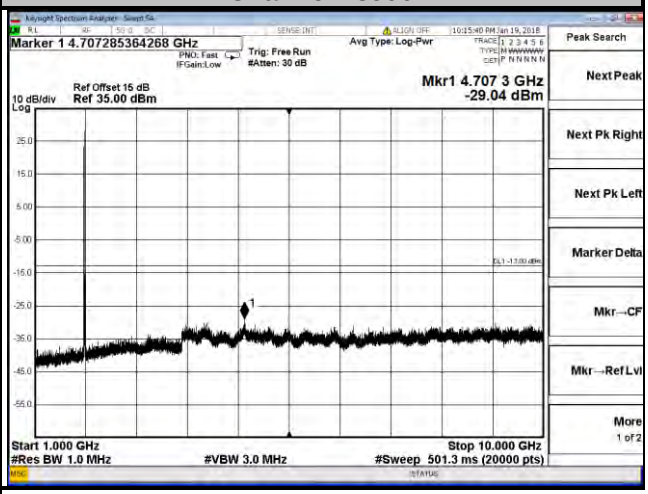
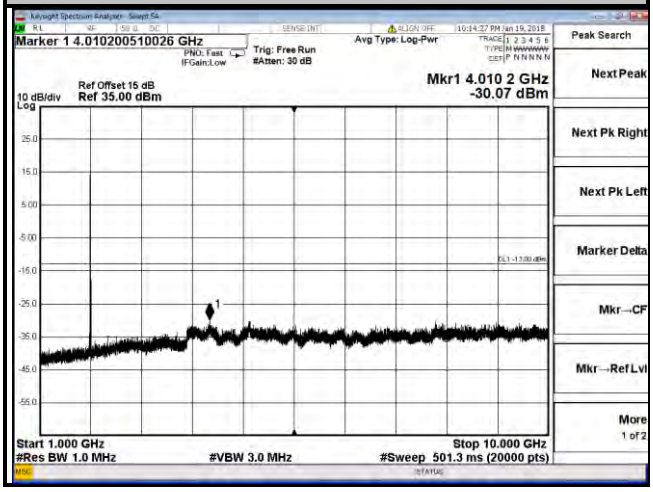
1GHz ~ 10GHz

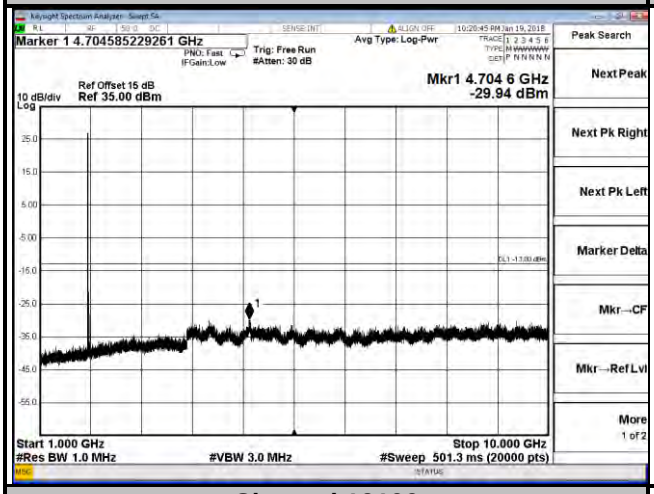
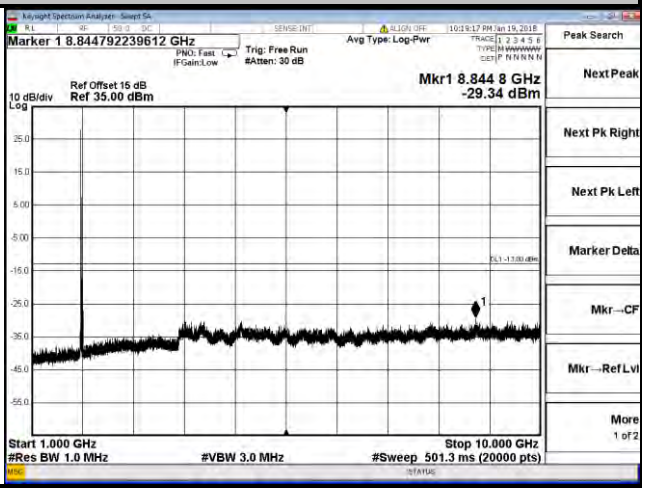
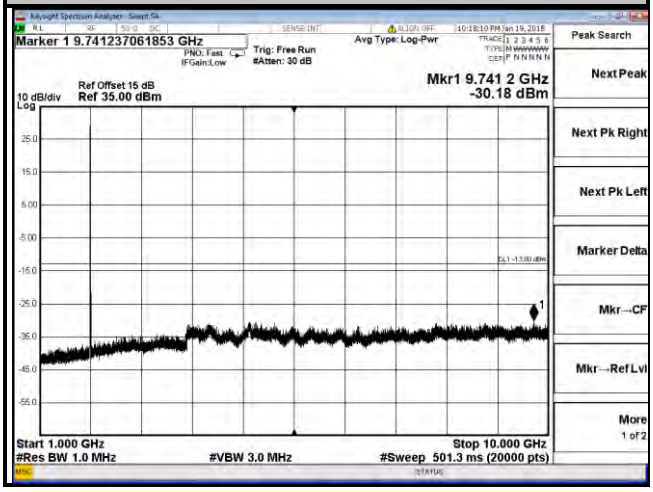
LTE Band 2	
Channel Bandwidth: 1.4 MHz	
Channel 18607	Channel 18900
	
Channel 19193	
	

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

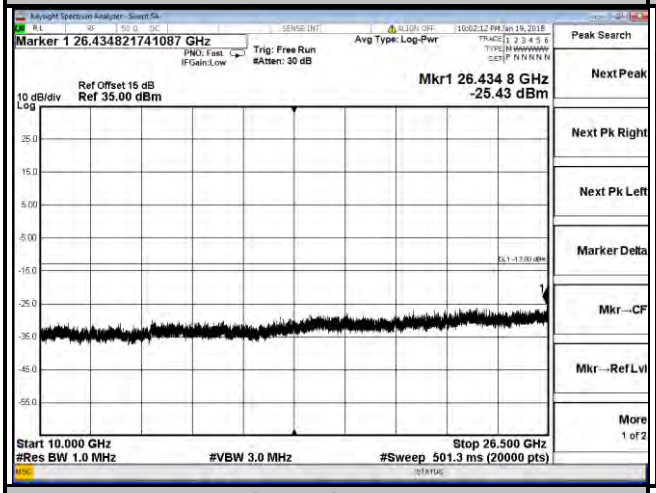
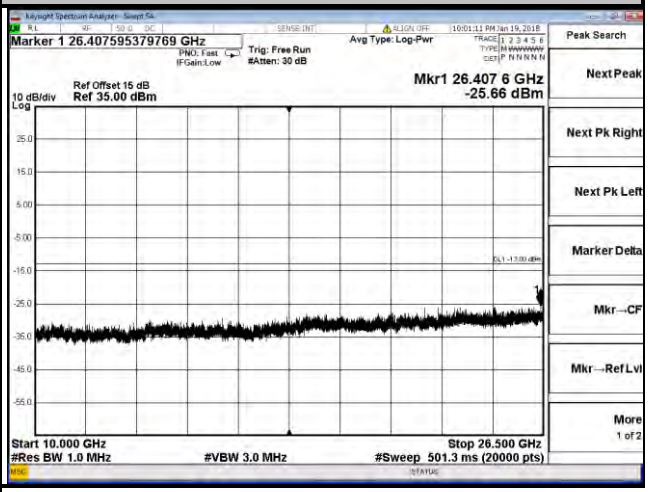
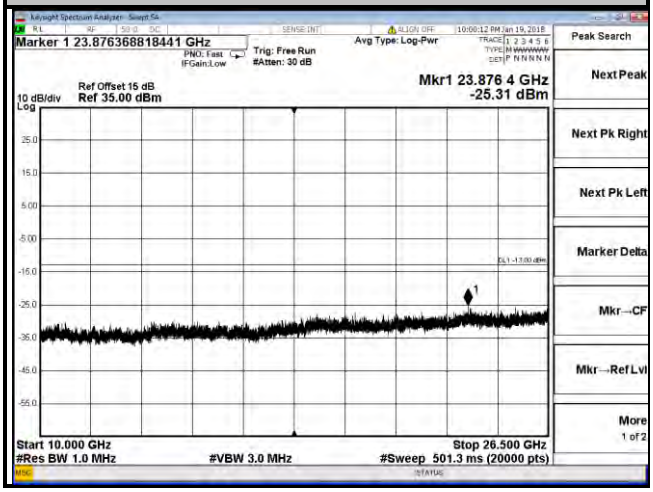
LTE Band 2	
Channel Bandwidth: 5 MHz	
Channel 18625	Channel 18900
	
Channel 19175	
	

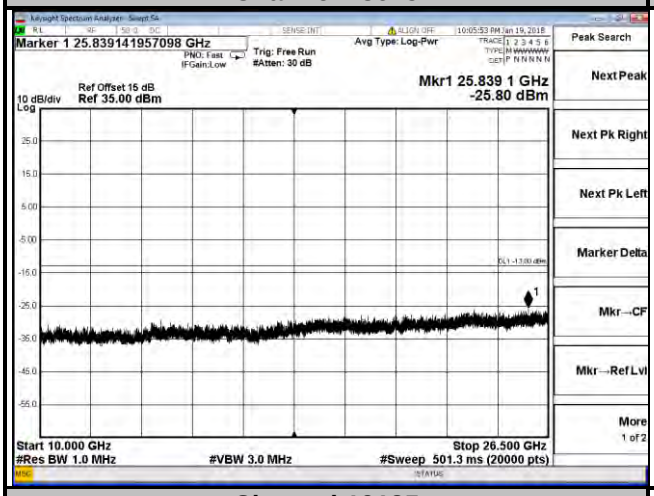
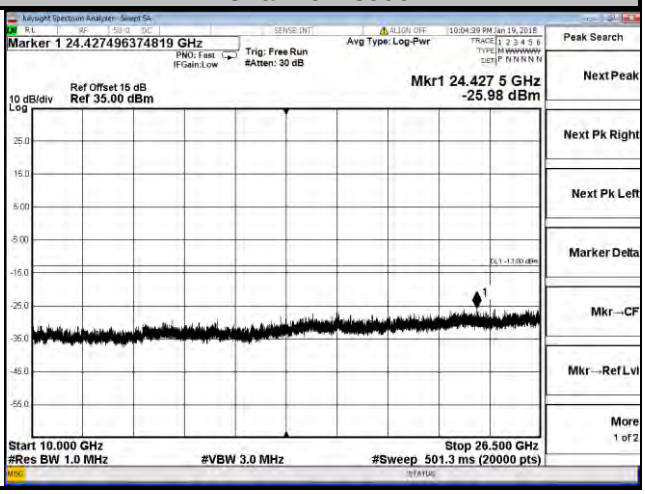
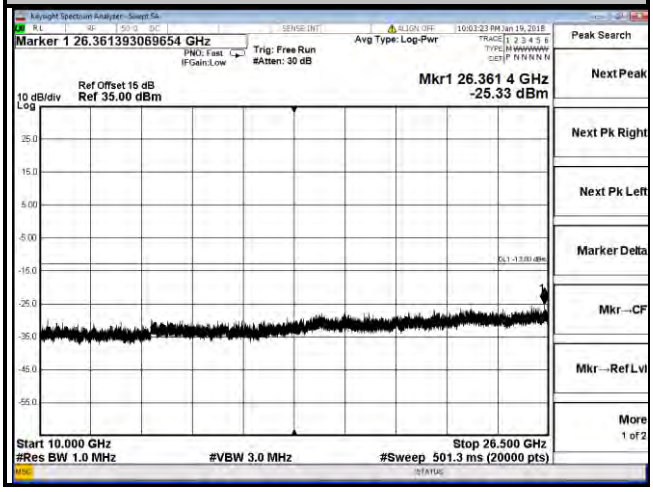
LTE Band 2	
Channel Bandwidth: 10 MHz	
Channel 18650	Channel 18900
	
Channel 19150	
	

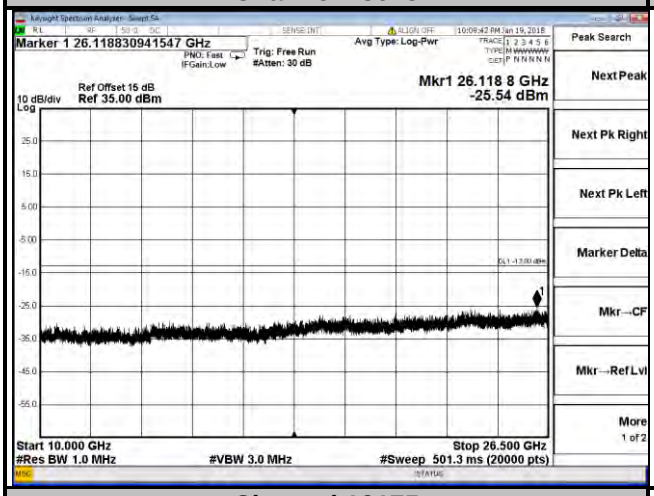
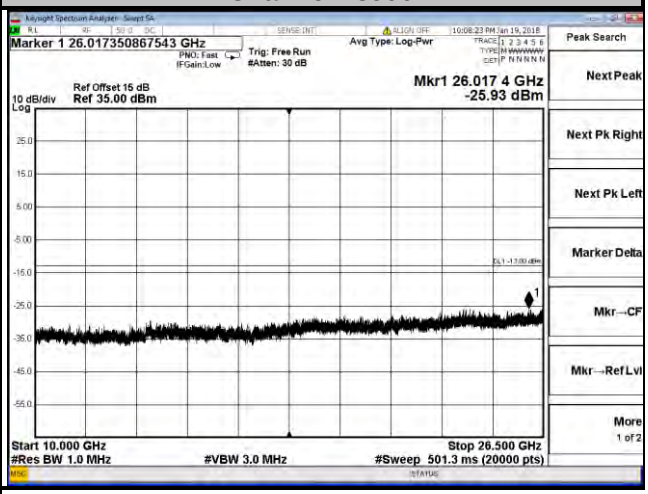
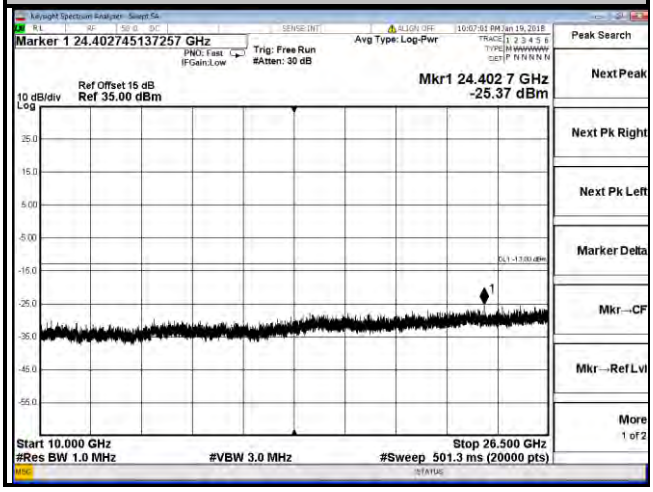
LTE Band 2	
Channel Bandwidth: 15 MHz	
Channel 18675	Channel 18900
	
Channel 19125	
	

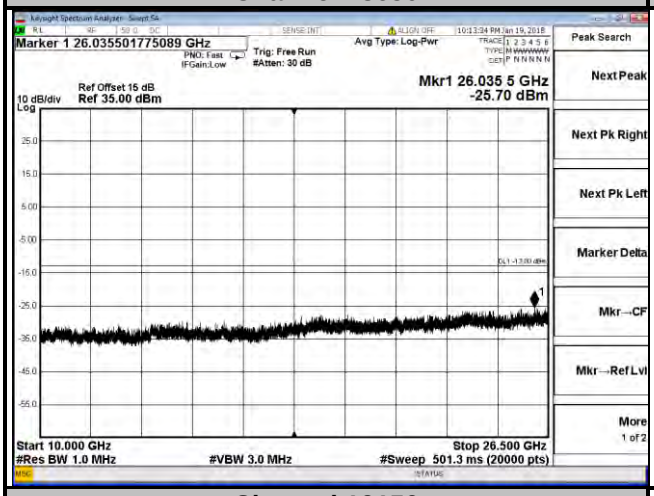
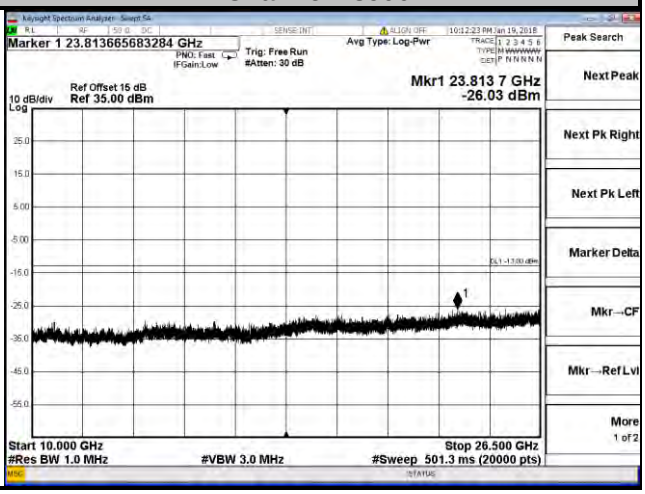
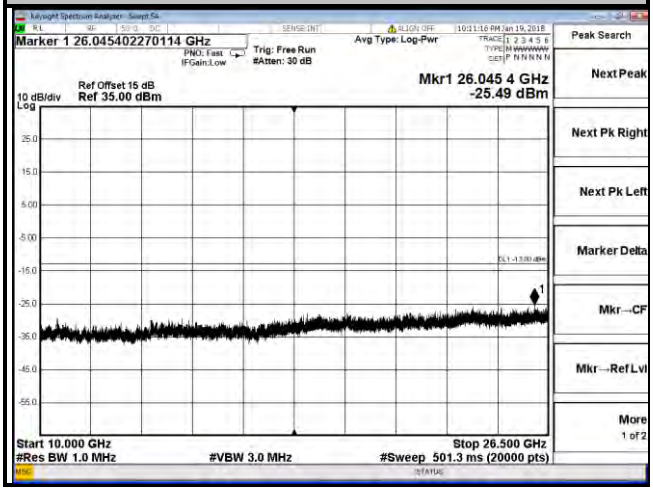
LTE Band 2	
Channel Bandwidth: 20 MHz	
Channel 18700	Channel 18900
	
Channel 19100	
	

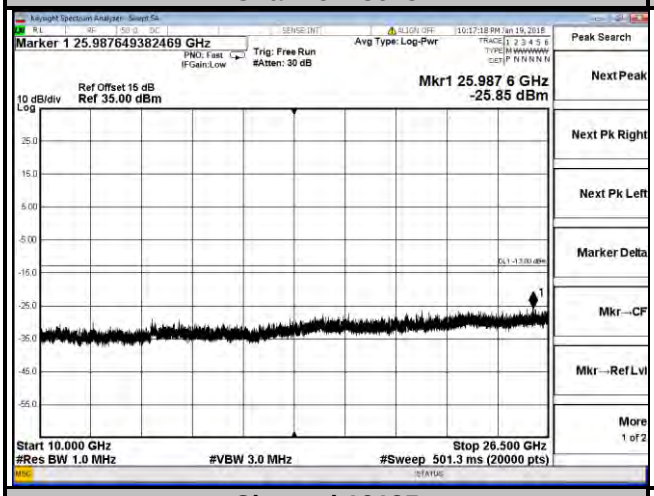
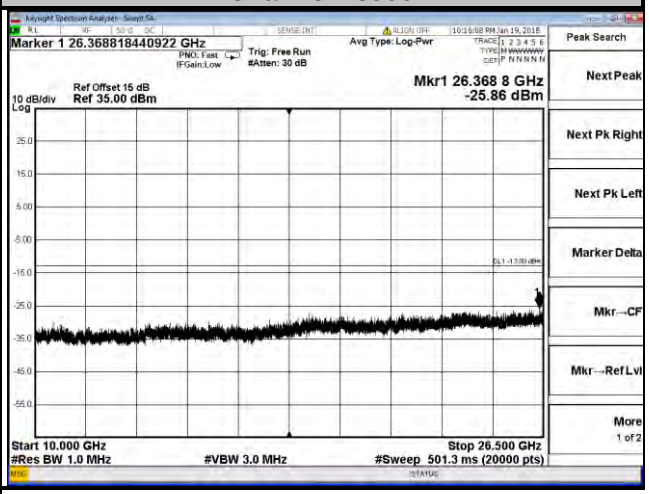
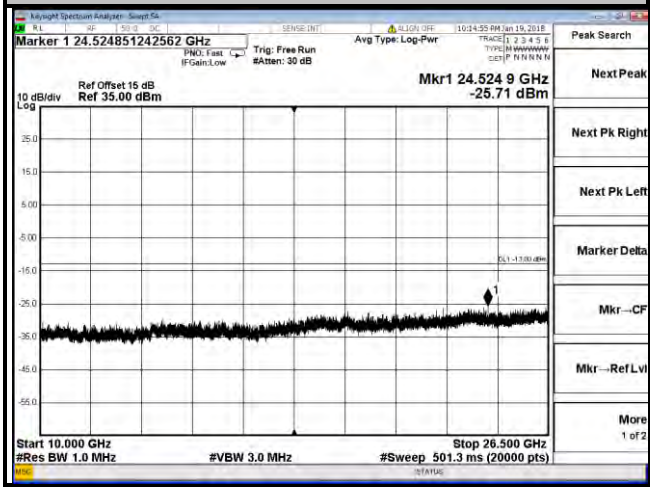
10GHz ~ 26.5GHz

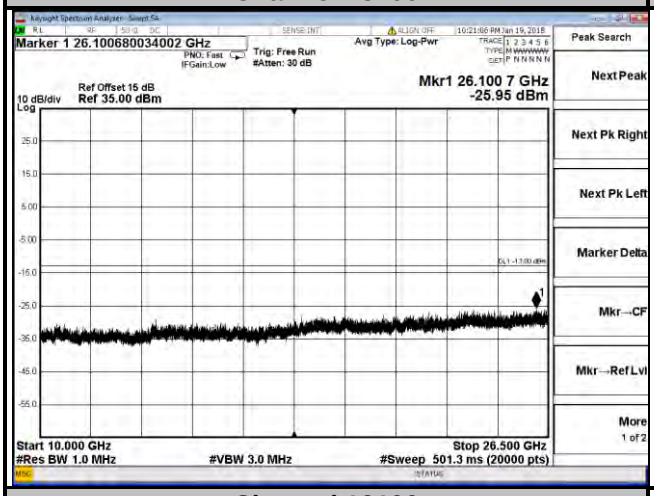
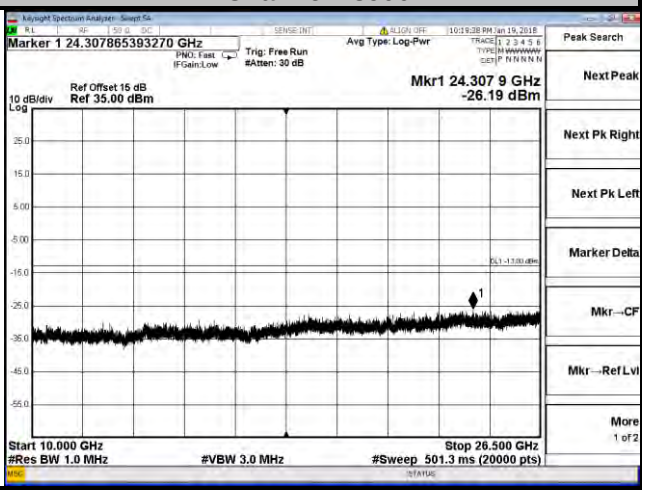
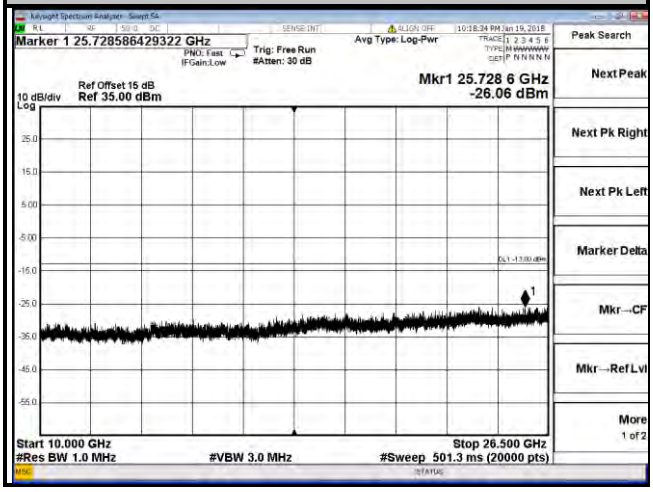
LTE Band 2	
Channel Bandwidth: 1.4 MHz	
Channel 18607	Channel 18900
	
Channel 19193	
	

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

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

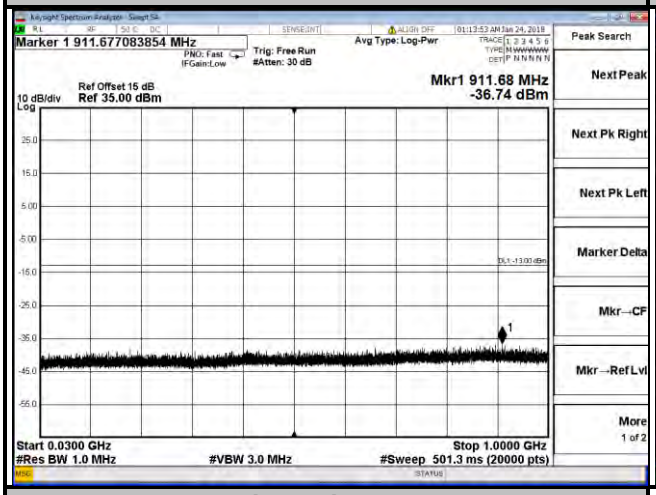
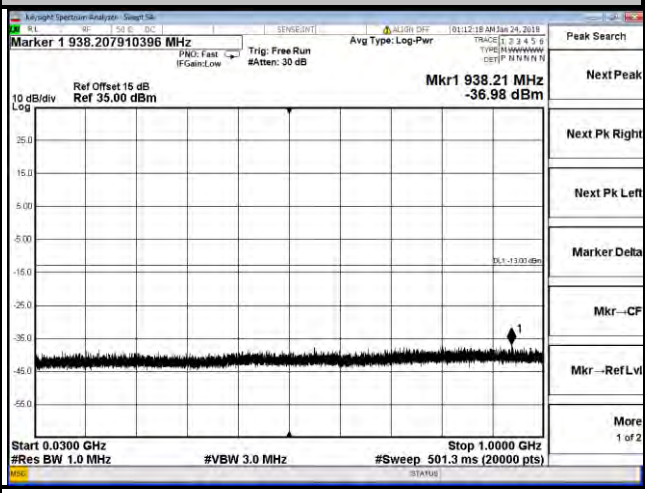
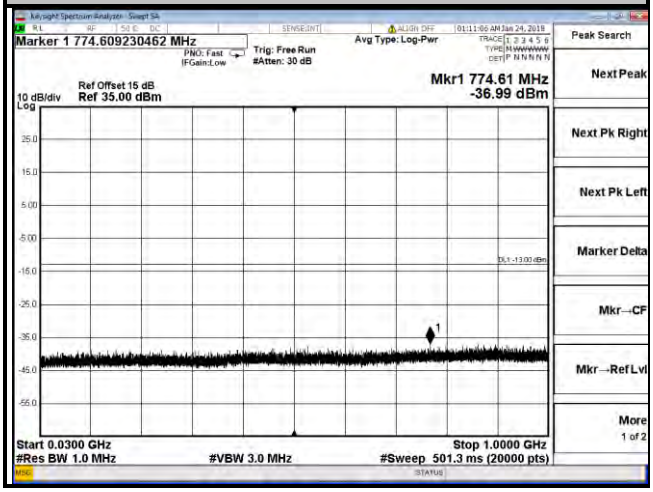
LTE Band 2	
Channel Bandwidth: 10 MHz	
Channel 18650	Channel 18900
	
Channel 19150	
	

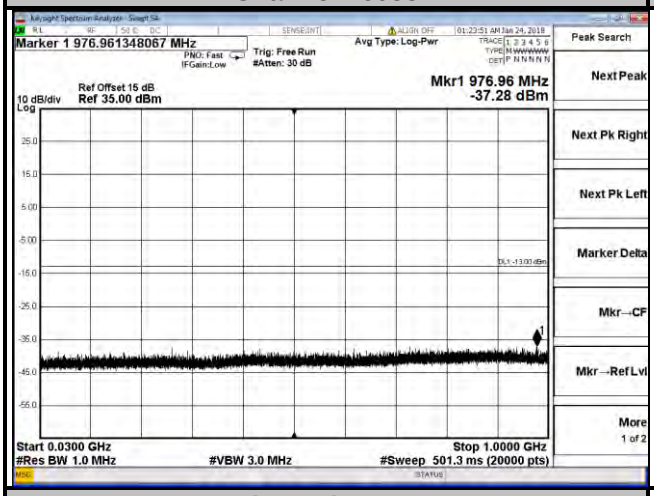
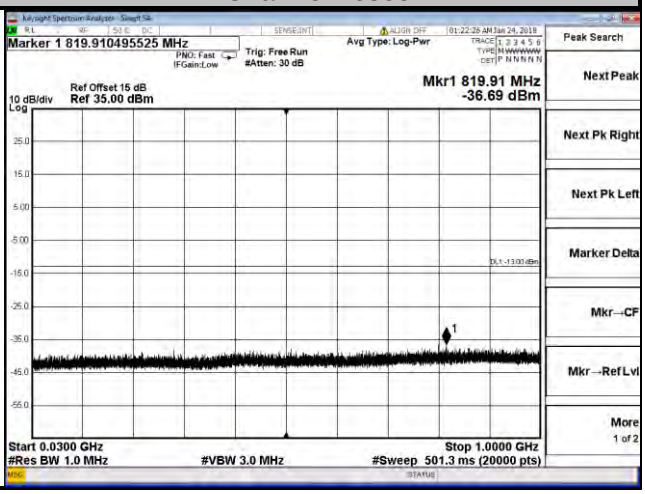
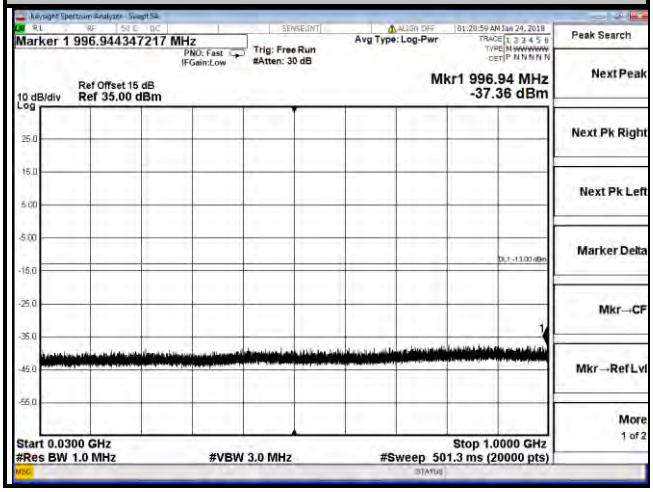
LTE Band 2	
Channel Bandwidth: 15 MHz	
Channel 18675	Channel 18900
	
Channel 19125	
	

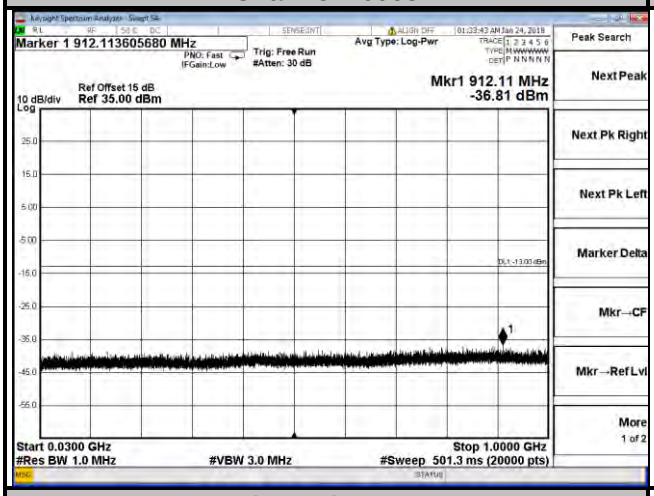
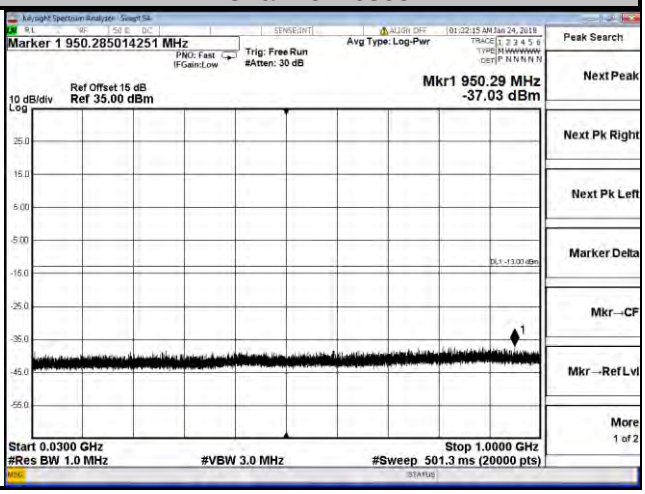
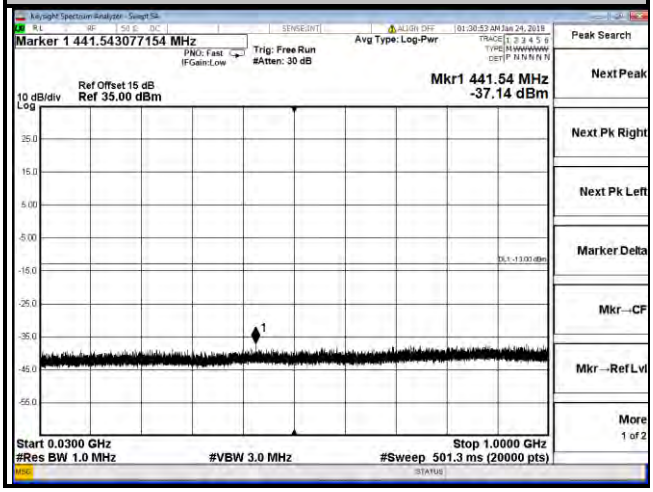
LTE Band 2	
Channel Bandwidth: 20 MHz	
Channel 18700	Channel 18900
	
Channel 19100	
	

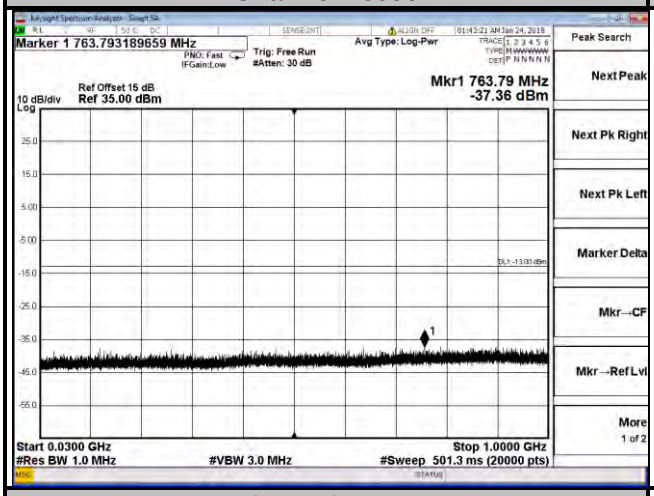
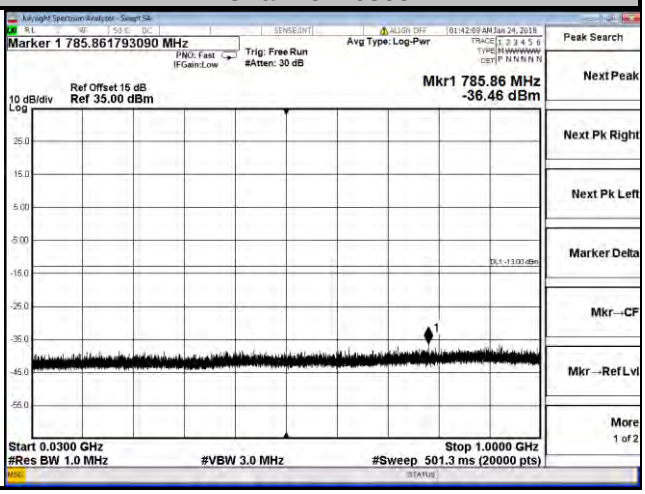
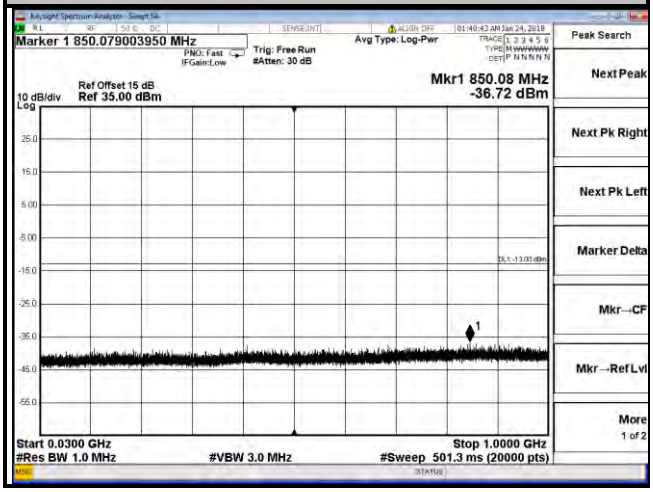
LTE Band 25

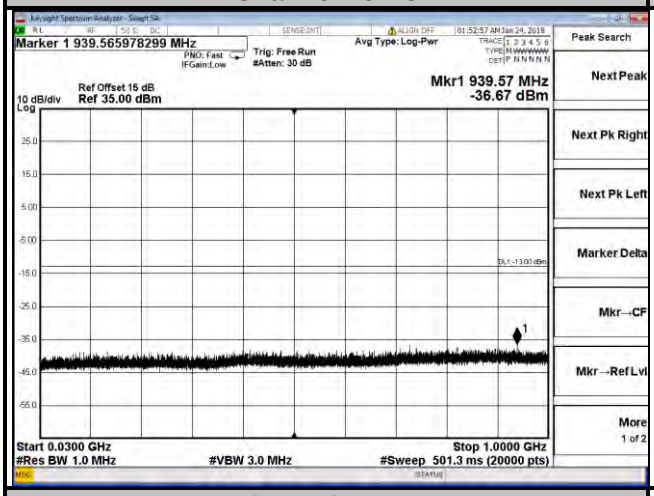
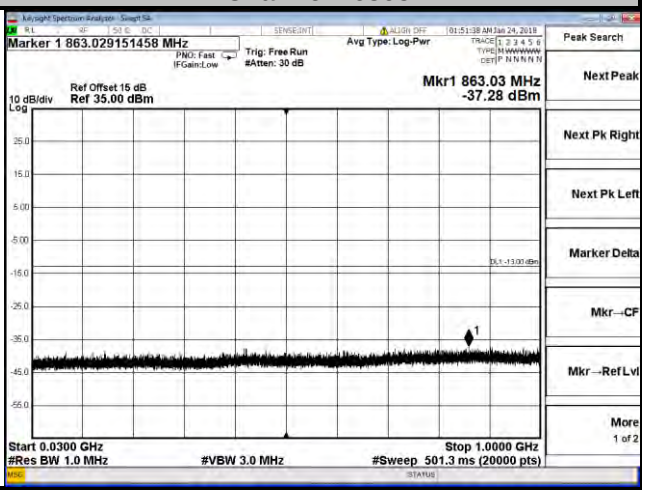
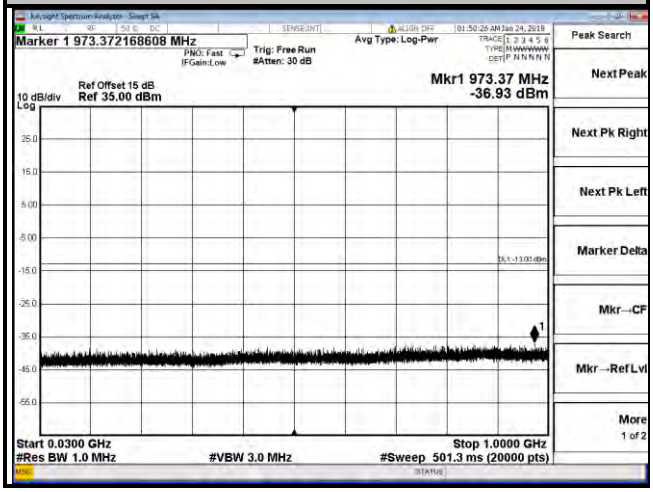
30MHz ~ 1GHz

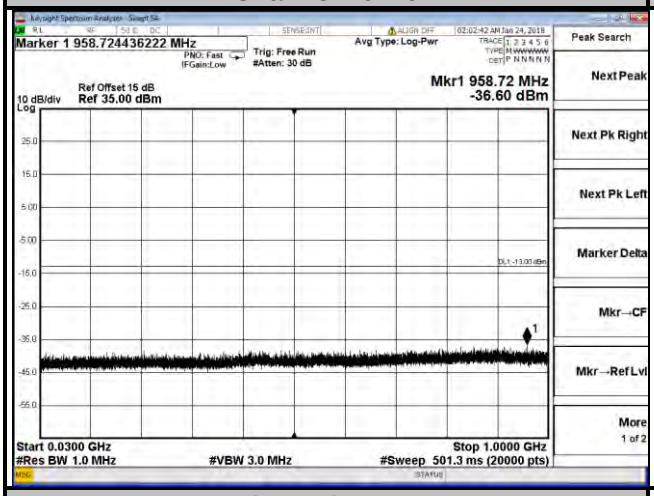
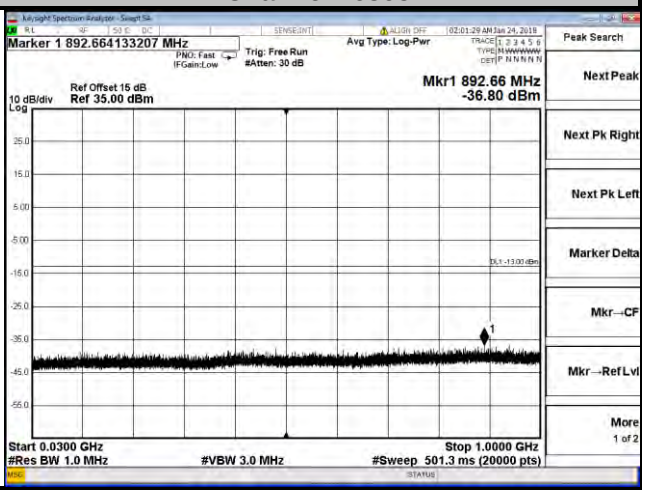
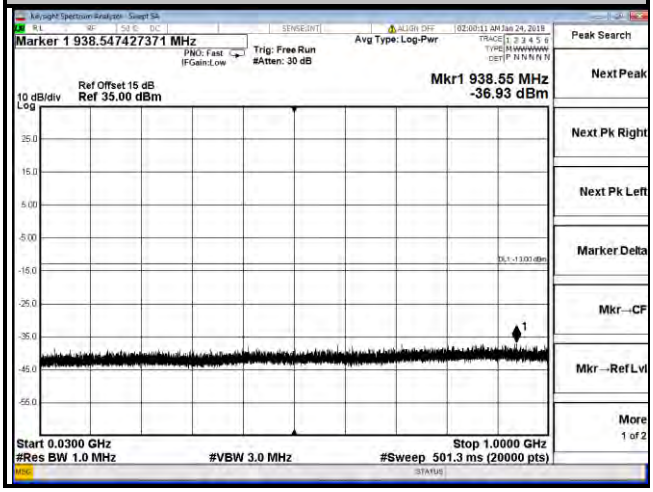
LTE Band 25	
Channel Bandwidth: 1.4 MHz	
Channel 26047	Channel 26365
	
Channel 26683	
	

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

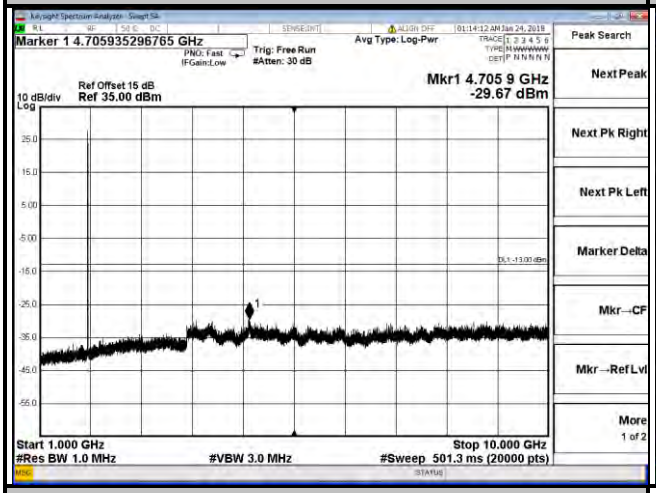
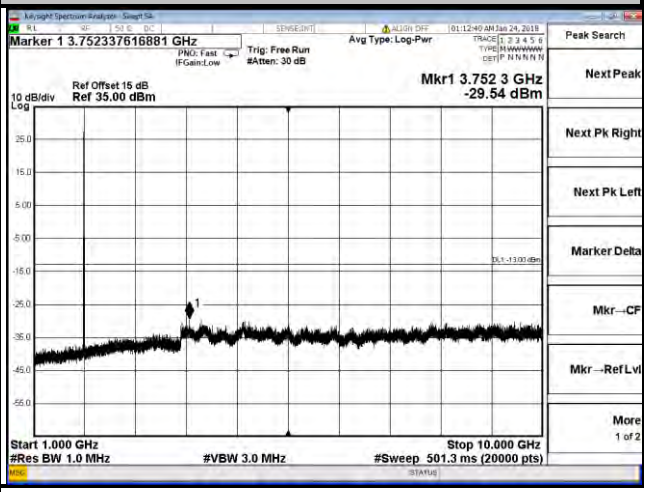
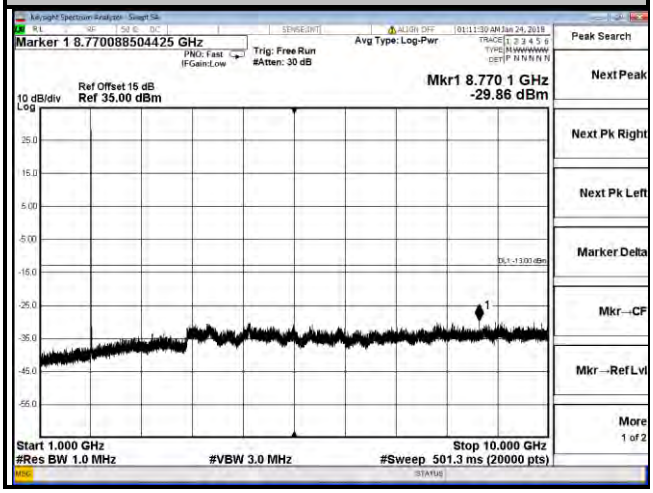
LTE Band 25	
Channel Bandwidth: 5 MHz	
Channel 26065	Channel 26365
	
Channel 26665	
	

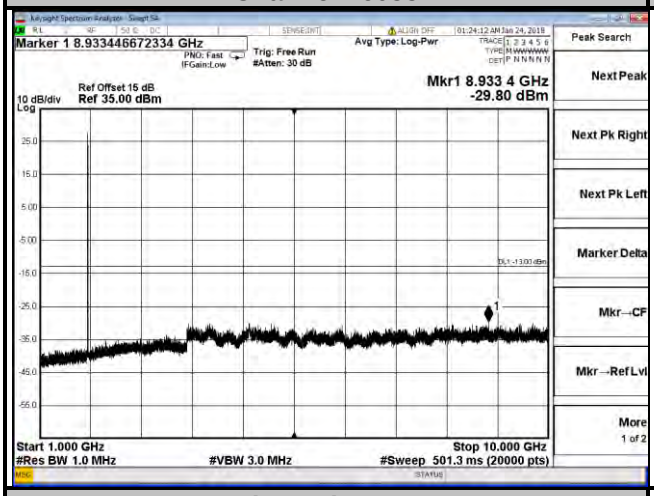
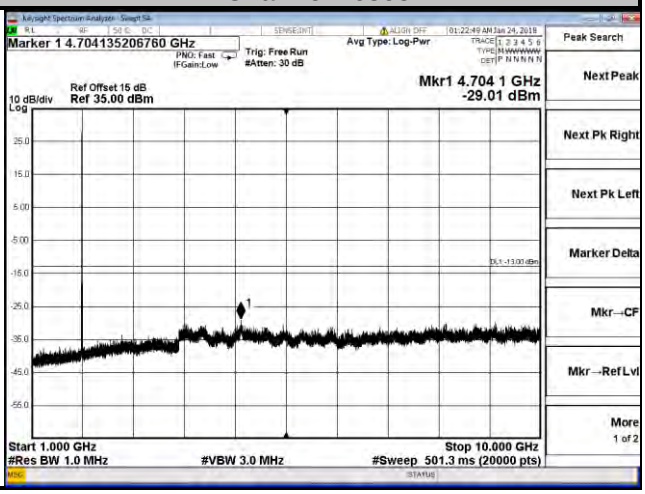
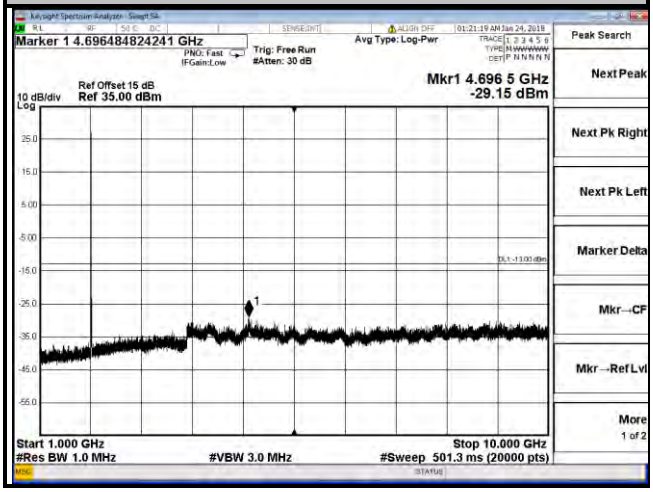
LTE Band 25	
Channel Bandwidth: 10 MHz	
Channel 26090	Channel 26365
	
Channel 26640	
	

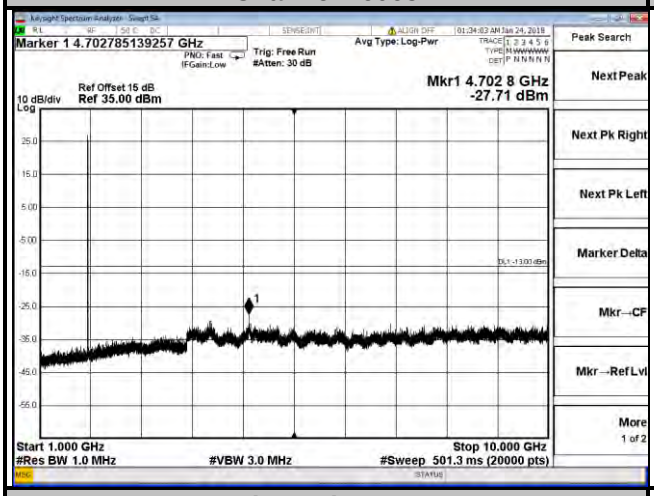
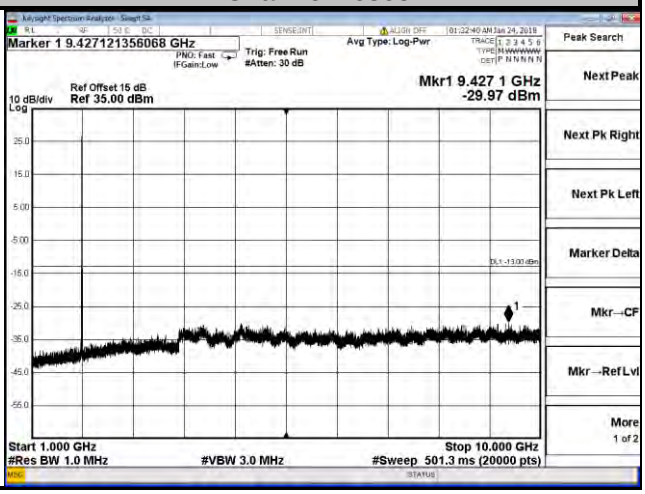
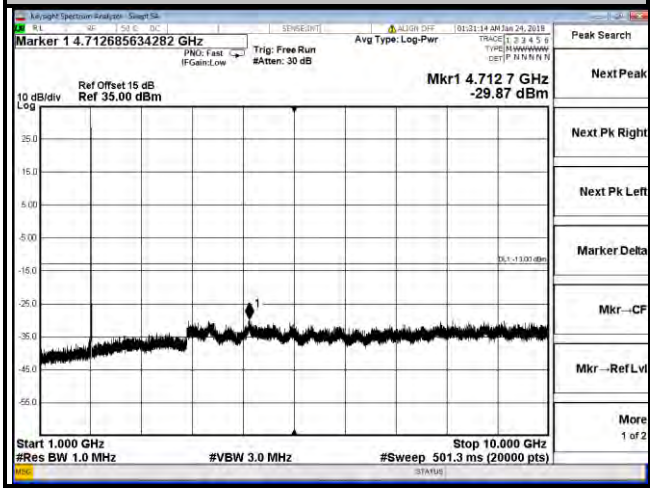
LTE Band 25	
Channel Bandwidth: 15 MHz	
Channel 26115	Channel 26365
	
Channel 26615	
	

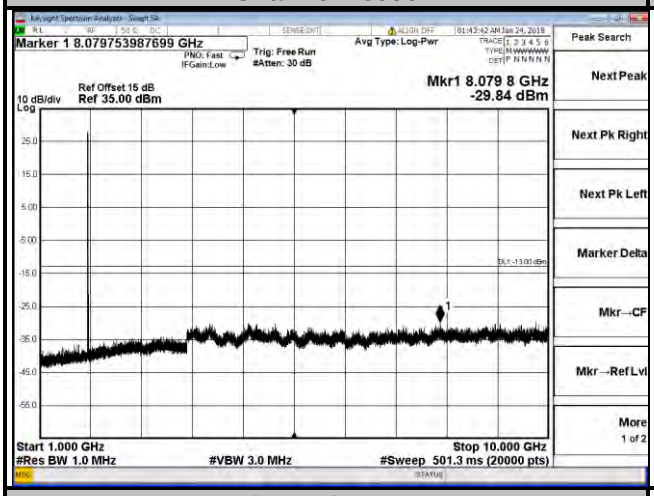
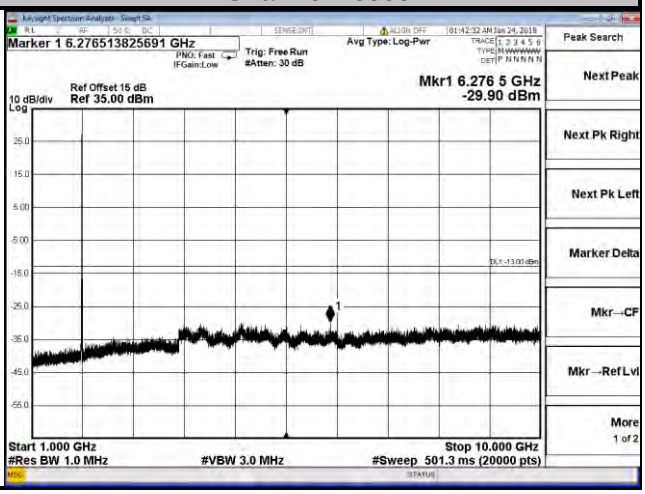
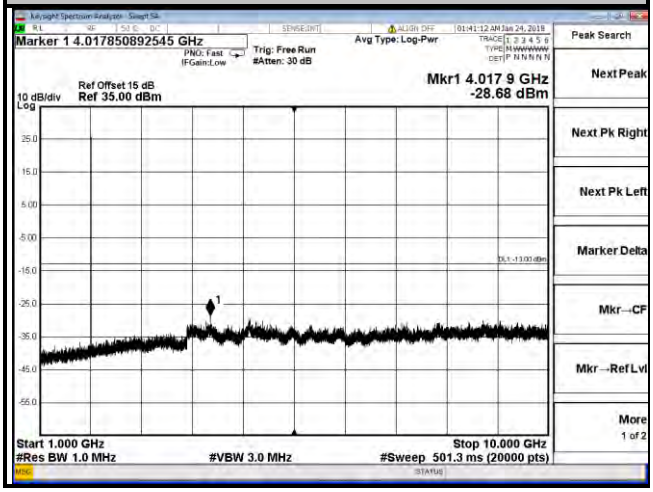
LTE Band 25	
Channel Bandwidth: 20 MHz	
Channel 26140	Channel 26365
	
Channel 26590	
	

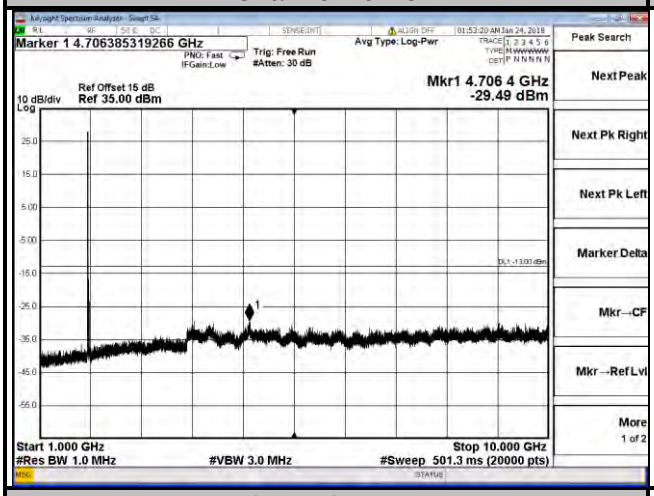
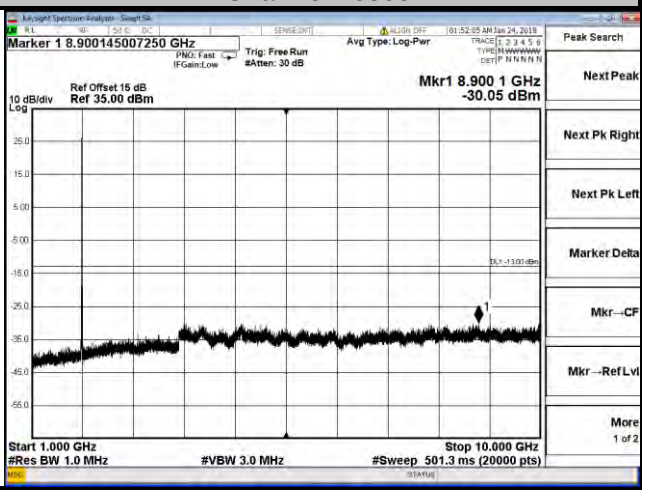
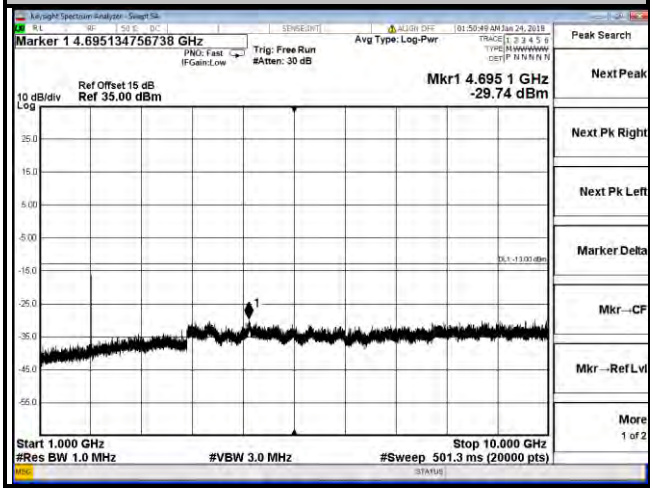
1GHz ~ 10GHz

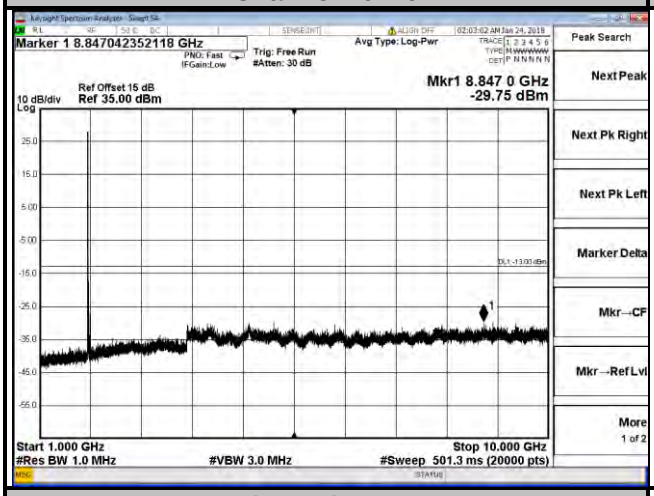
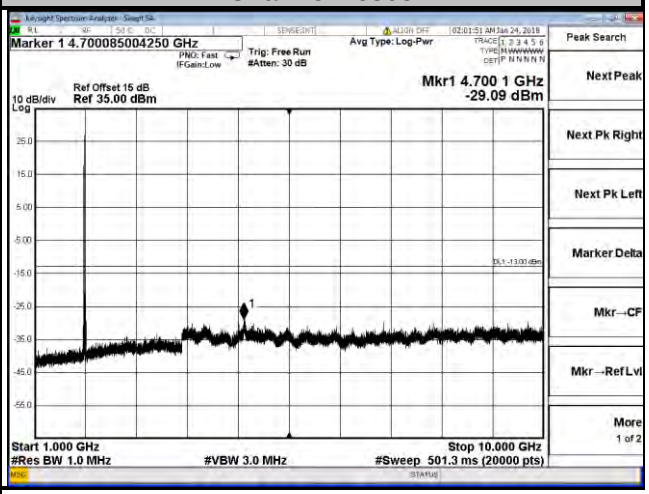
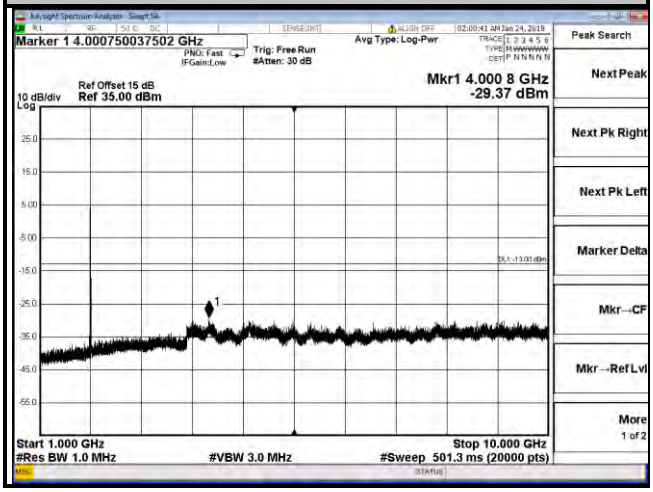
LTE Band 25	
Channel Bandwidth: 1.4 MHz	
Channel 26047	Channel 26365
	
Channel 26683	
	

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

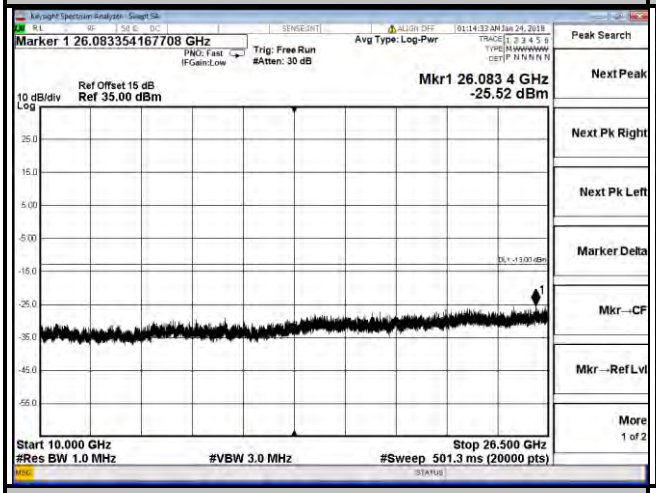
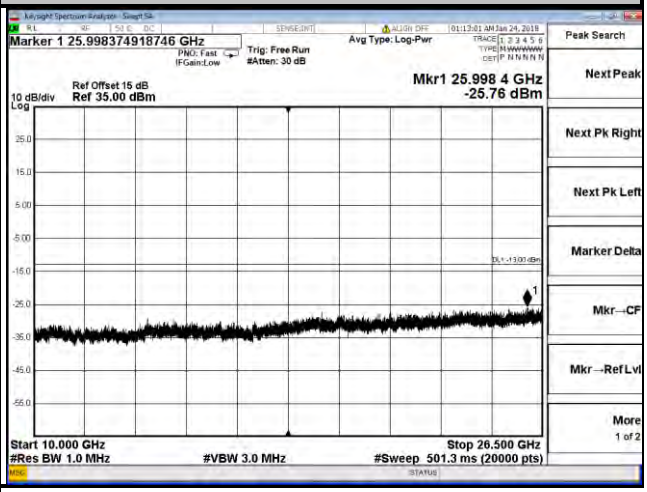
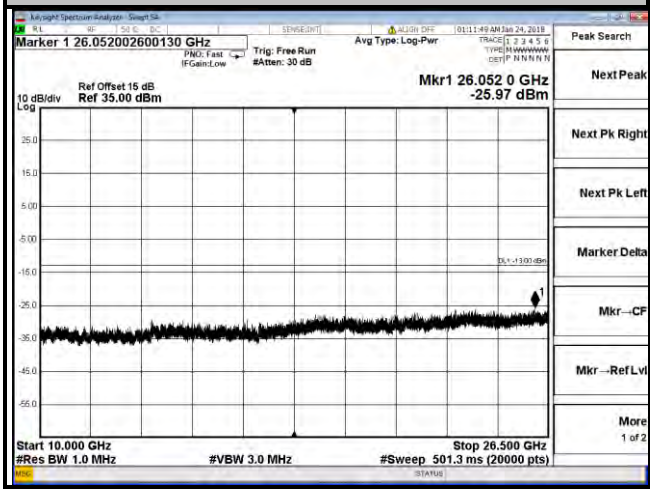
LTE Band 25	
Channel Bandwidth: 5 MHz	
Channel 26065	Channel 26365
	
Channel 26665	
	

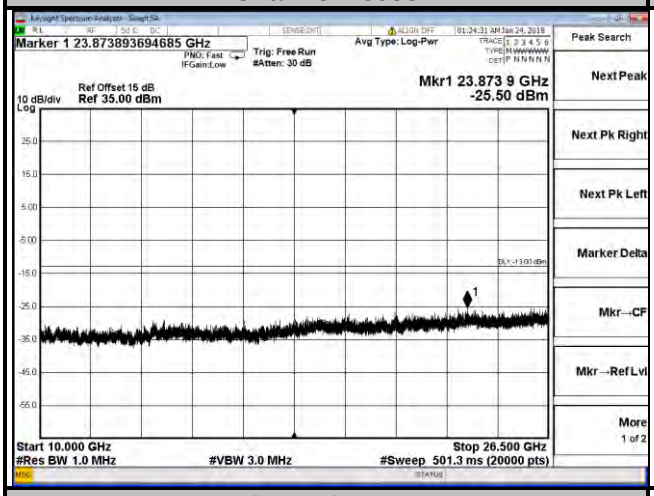
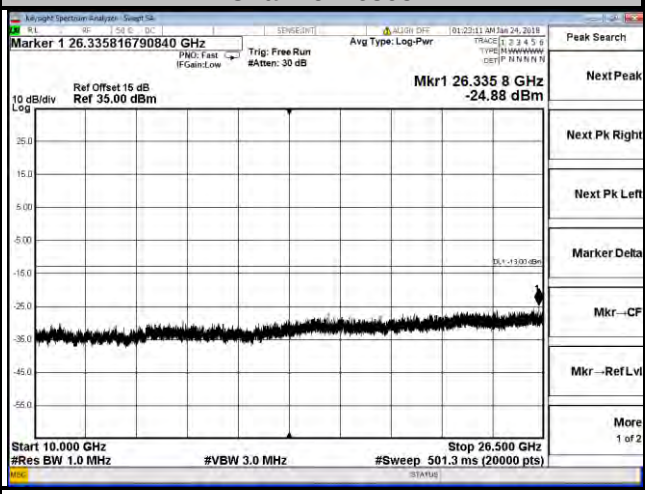
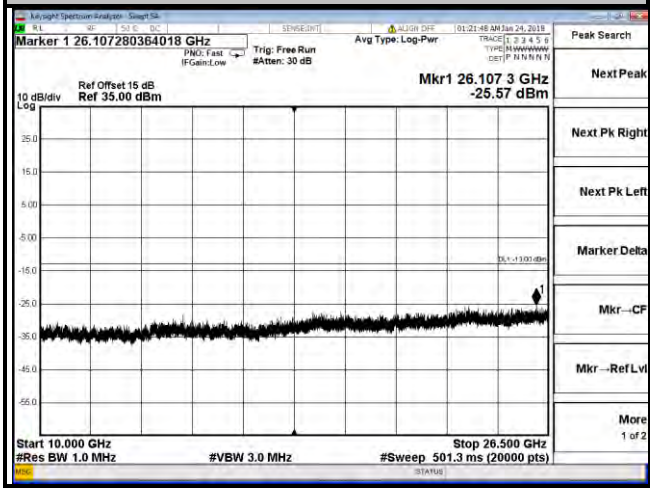
LTE Band 25	
Channel Bandwidth: 10 MHz	
Channel 26090	Channel 26365
	
Channel 26640	
	

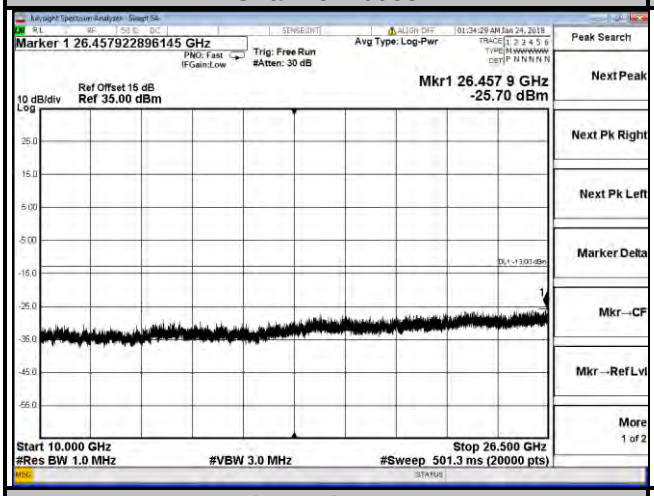
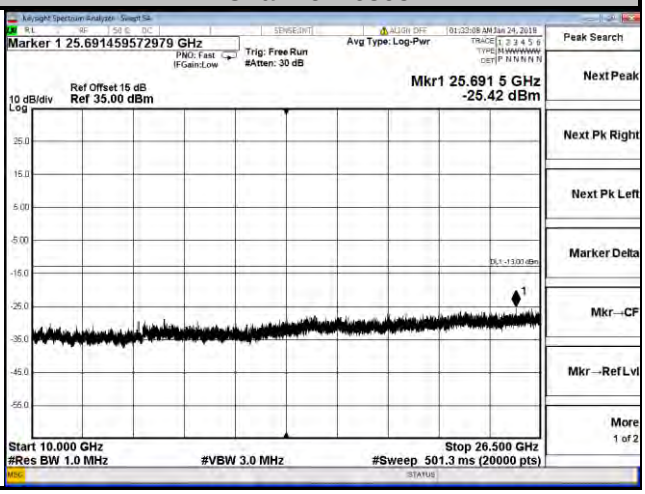
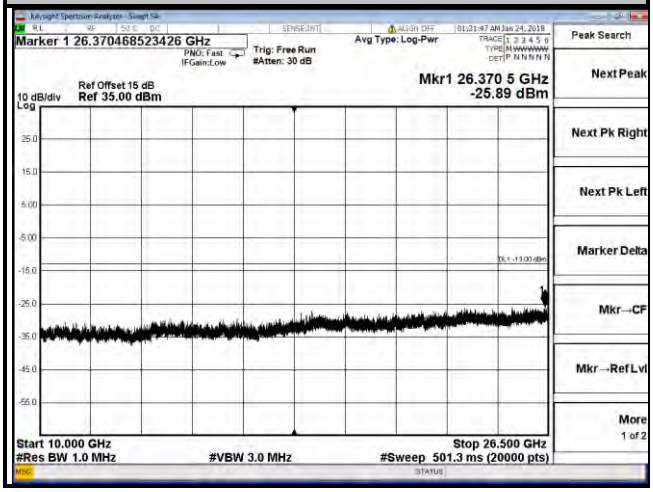
LTE Band 25	
Channel Bandwidth: 15 MHz	
Channel 26115	Channel 26365
	
Channel 26615	
	

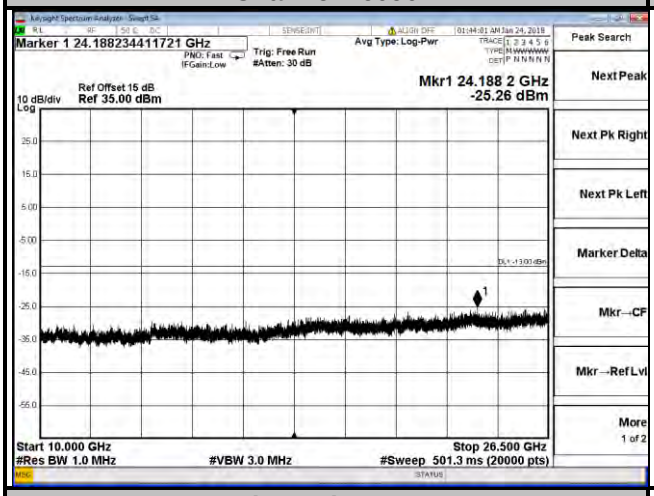
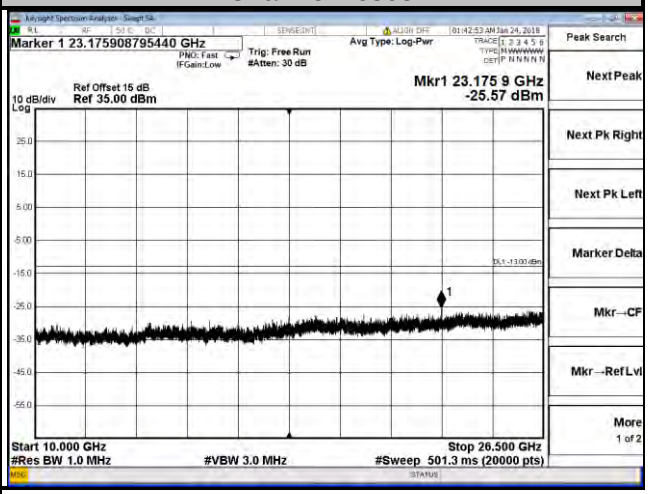
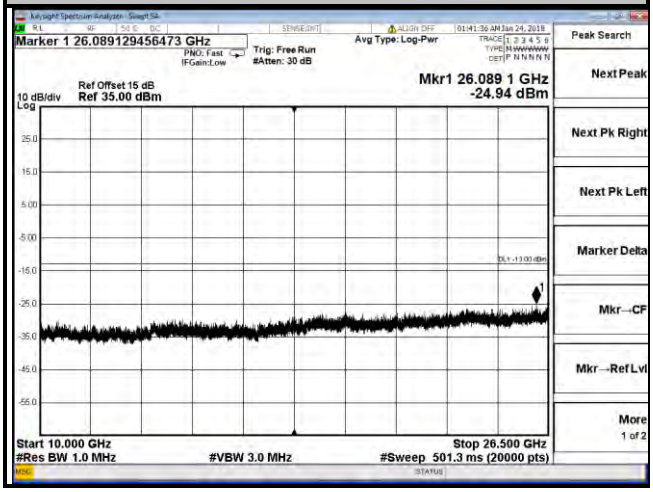
LTE Band 25	
Channel Bandwidth: 20 MHz	
Channel 26140	Channel 26365
	
Channel 26590	
	

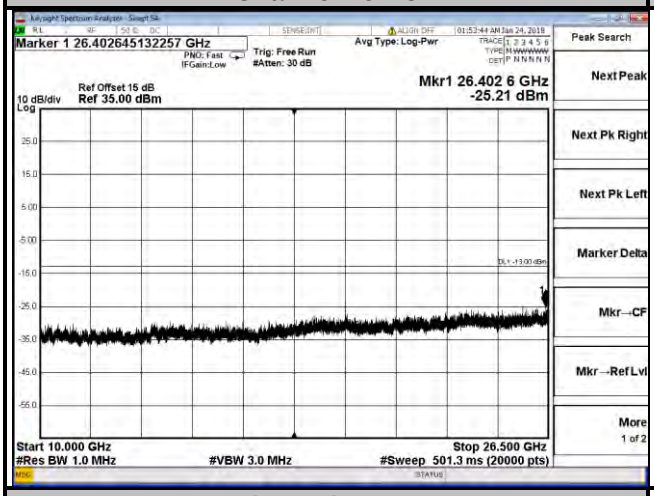
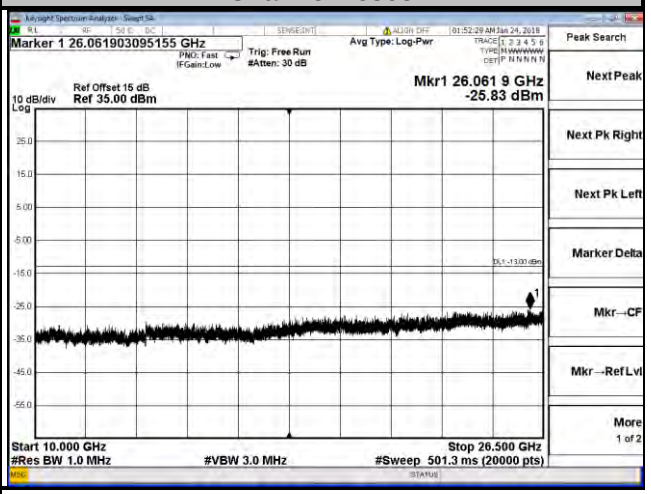
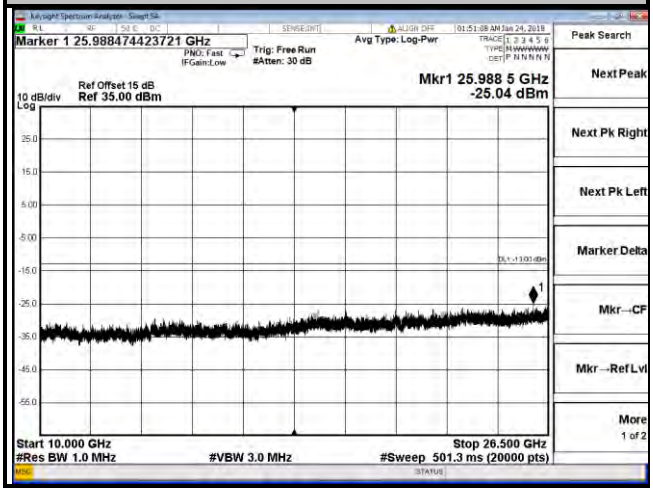
10GHz ~ 26.5GHz

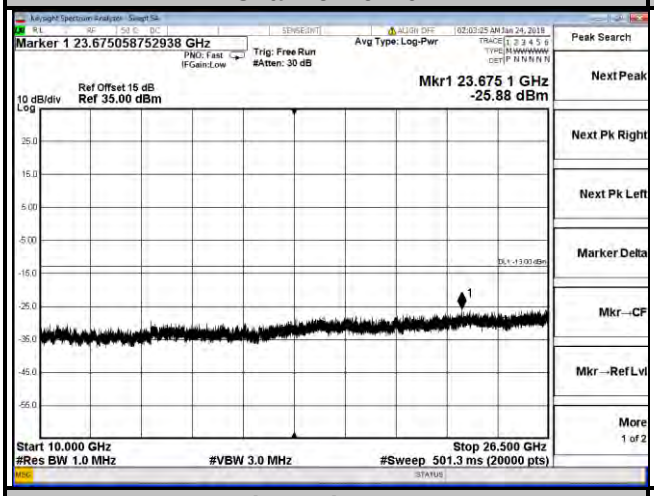
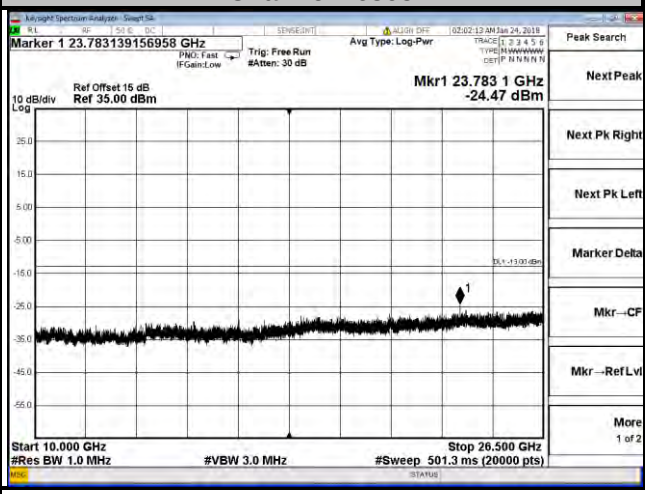
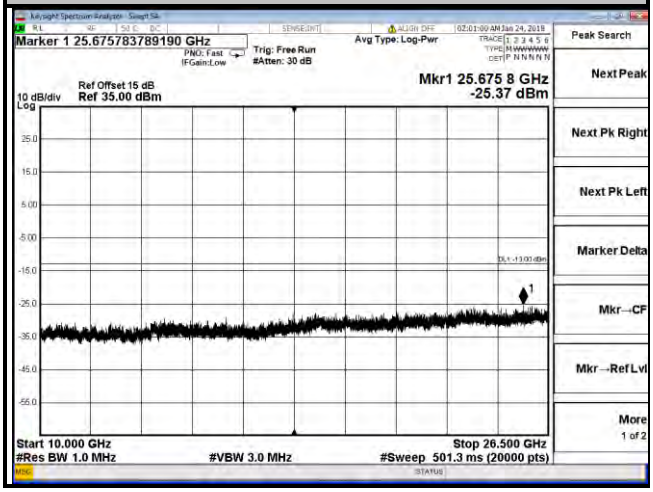
LTE Band 25	
Channel Bandwidth: 1.4 MHz	
Channel 26047	Channel 26365
	
Channel 26683	
	

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

LTE Band 25	
Channel Bandwidth: 5 MHz	
Channel 26065	Channel 26365
	
Channel 26665	
	

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

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

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

4.7 Radiated Emission Measurement

4.7.1 Limits of Radiated Emission Measurement

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

4.7.2 Test Procedure

a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8 m (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.

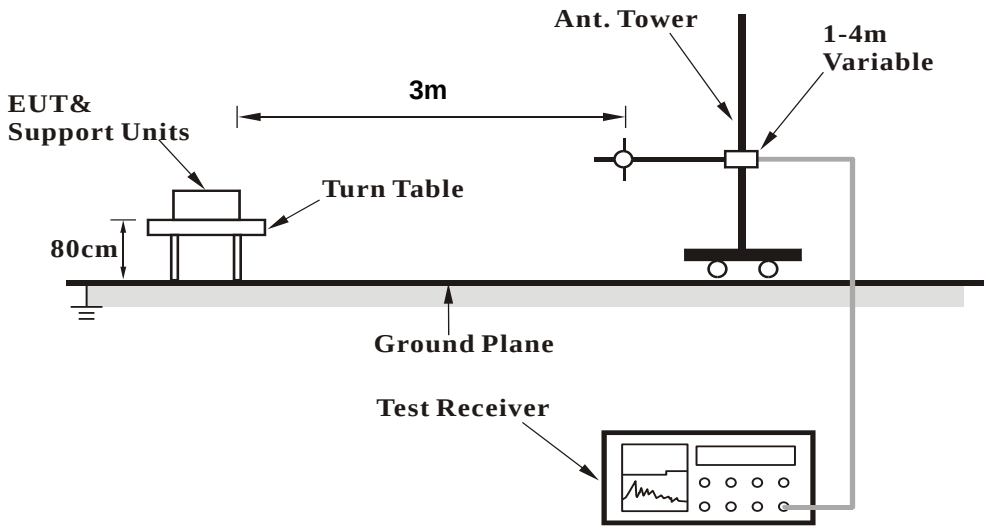
NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz/3 MHz.

4.7.3 Deviation from Test Standard

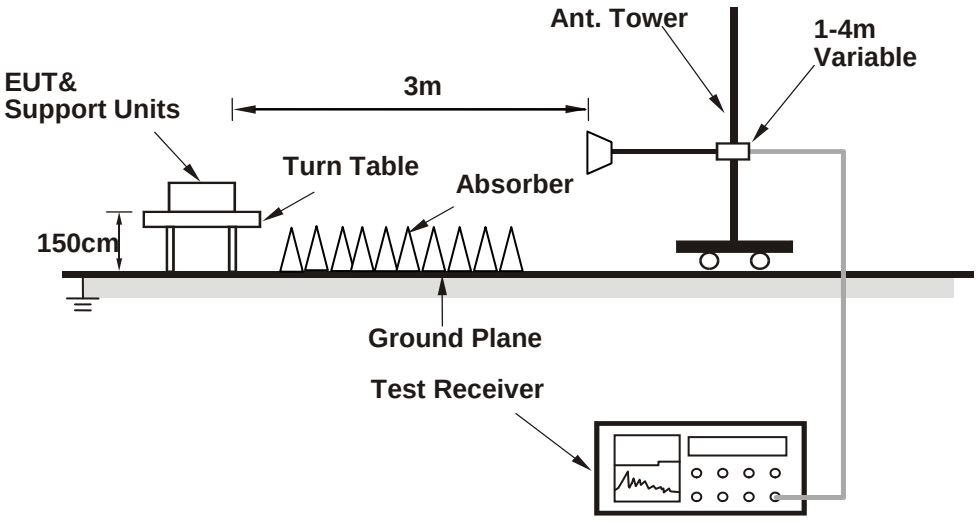
No deviation.

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

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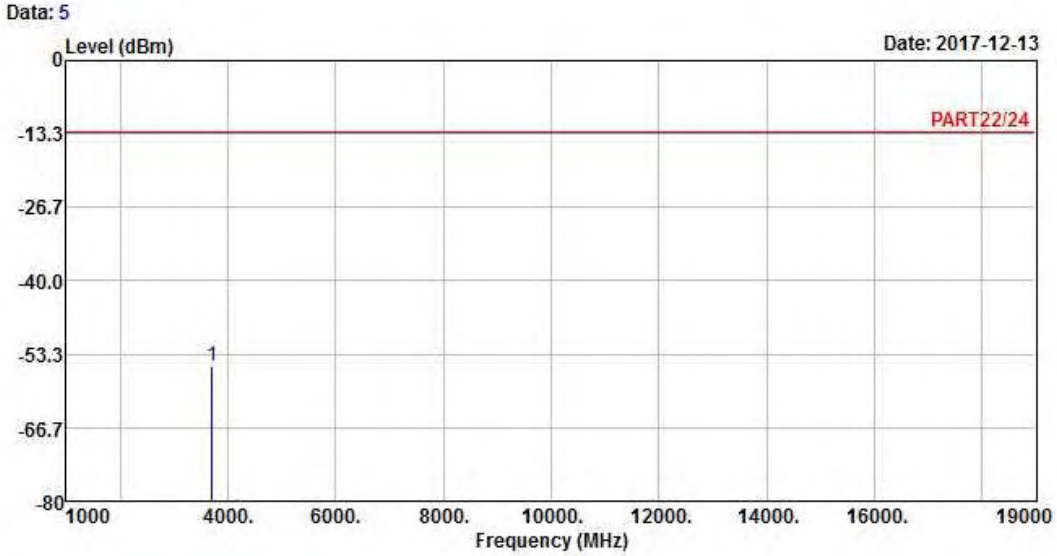
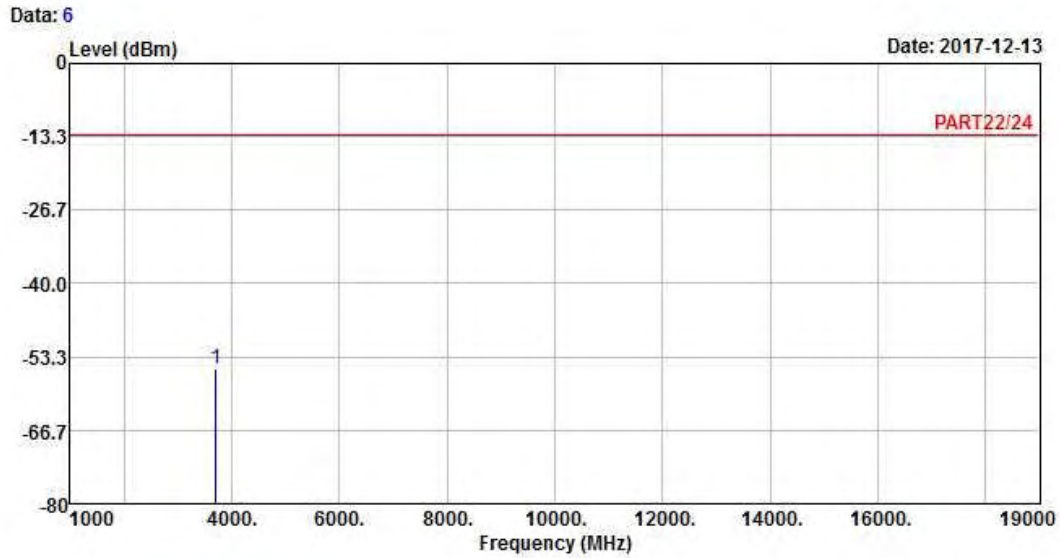
A D T



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remark : WCDMA Band II 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	3704.80	-55.51	-47.34	-13.00	-42.51	-8.17	Peak



Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remark : WCDMA Band II 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	3704.80	-55.52	-47.35	-13.00	-42.52	-8.17	Peak

Middle Channel

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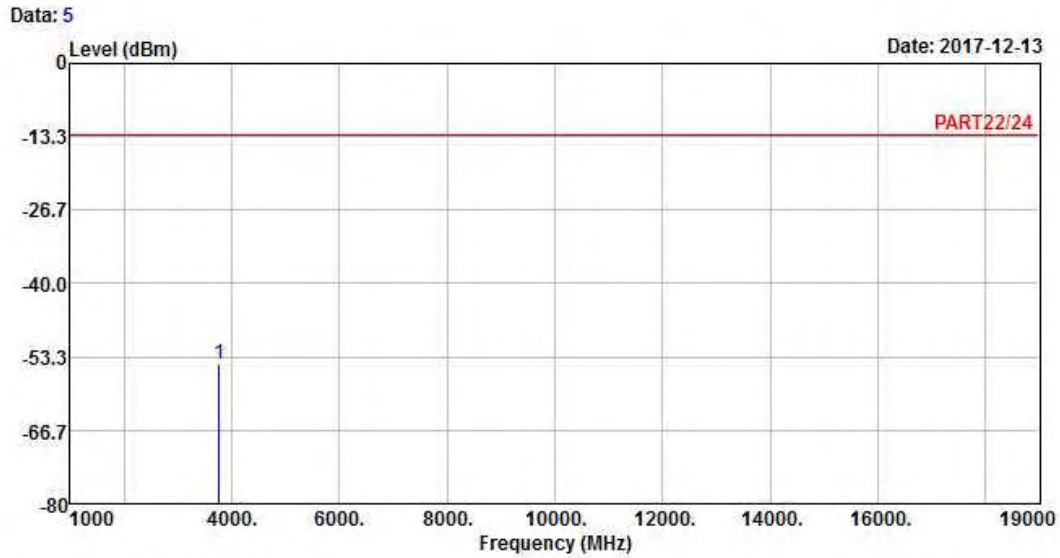
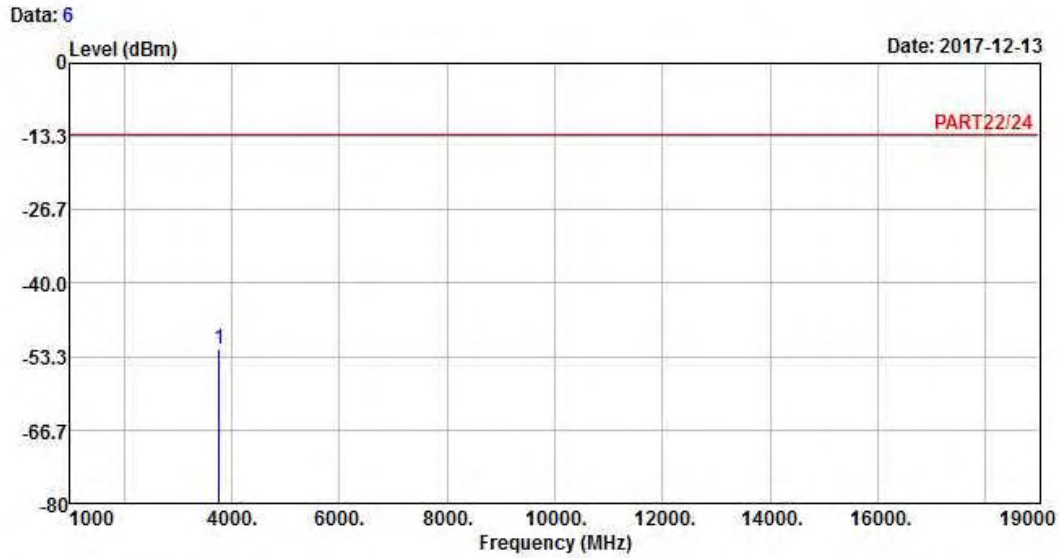


Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remark : WCDMA Band II Link_M-CH
Tested by: Getaz Yang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3760.00	-54.58	-46.52	-13.00	-41.58	-8.06	Peak



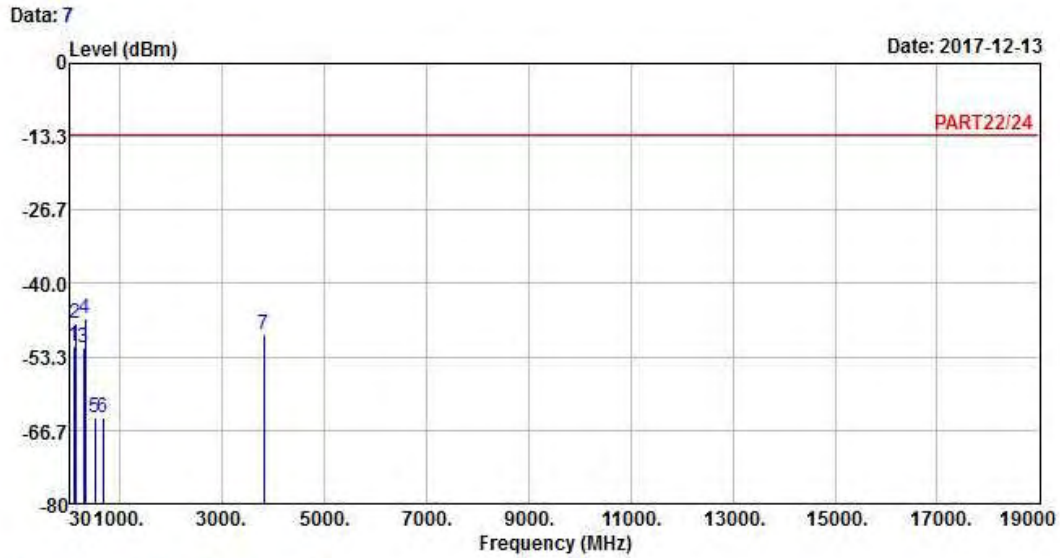
Site : 966 Chamber 5
Condition: PART22/24 VERTICAL
Remark : WCDMA Band II Link_M-CH
Tested by: Getaz Yang

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3760.00	-51.85	-43.79	-13.00	-38.85	-8.06	Peak

High Channel

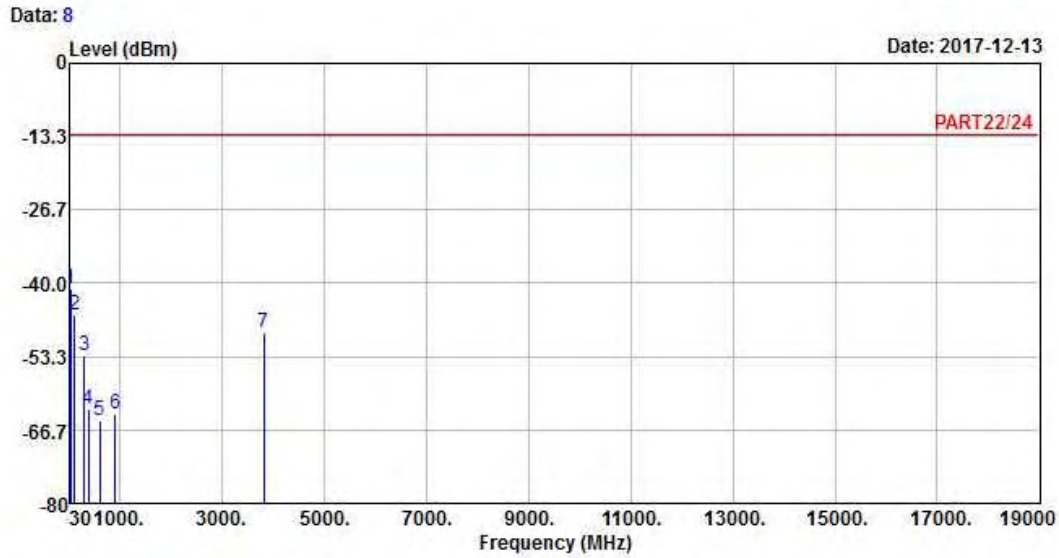
Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch

A D T



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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	92.08	-51.28	-40.28	-13.00	-38.28	-11.00	Peak
2	125.06	-47.21	-37.94	-13.00	-34.21	-9.27	Peak
3	290.93	-51.74	-44.91	-13.00	-38.74	-6.83	Peak
4 pp	324.88	-46.35	-39.72	-13.00	-33.35	-6.63	Peak
5	506.27	-64.38	-59.98	-13.00	-51.38	-4.40	Peak
6	668.26	-64.44	-63.84	-13.00	-51.44	-0.60	Peak
7	3815.20	-49.17	-41.39	-13.00	-36.17	-7.78	Peak



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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	41.64	-41.17	-40.76	-13.00	-28.17	-0.41	Peak
2	111.48	-45.89	-35.65	-13.00	-32.89	-10.24	Peak
3	300.63	-53.09	-46.09	-13.00	-40.09	-7.00	Peak
4	379.20	-62.96	-56.89	-13.00	-49.96	-6.07	Peak
5	604.24	-65.03	-64.27	-13.00	-52.03	-0.76	Peak
6	914.64	-63.70	-64.63	-13.00	-50.70	0.93	Peak
7	3815.20	-49.08	-41.30	-13.00	-36.08	-7.78	Peak

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

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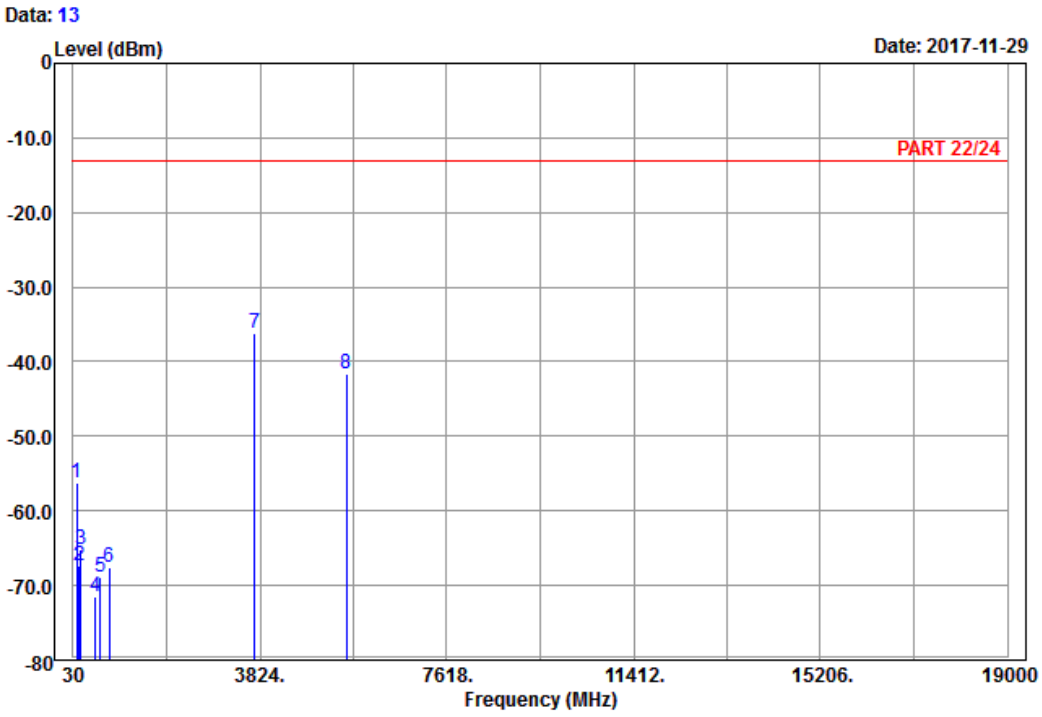
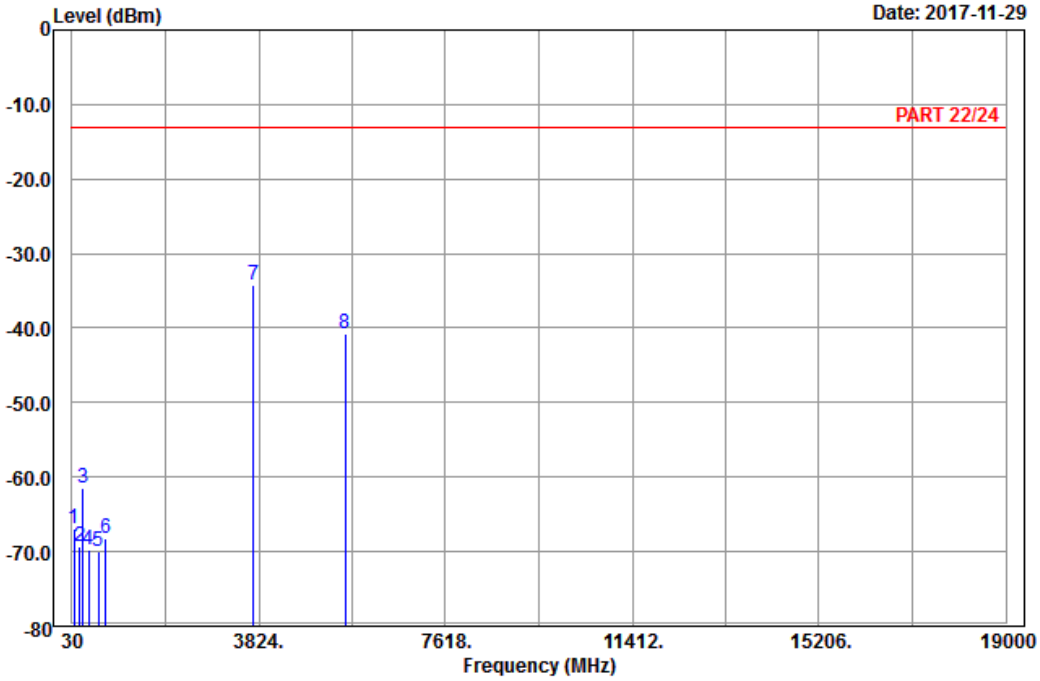


Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 2_Link_CH18700
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	106.68	-56.25	-46.95	-13.00	-43.25	-9.30	Peak
2	148.53	-67.43	-59.53	-13.00	-54.43	-7.90	Peak
3	192.27	-65.13	-59.31	-13.00	-52.13	-5.82	Peak
4	477.10	-71.40	-66.78	-13.00	-58.40	-4.62	Peak
5	589.10	-68.97	-68.92	-13.00	-55.97	-0.05	Peak
6	768.30	-67.52	-67.42	-13.00	-54.52	-0.10	Peak
7 pp	3720.00	-36.19	-52.16	-13.00	-23.19	15.97	Peak
8	5580.00	-41.53	-61.90	-13.00	-28.53	20.37	Peak

Data: 14



Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 2_Link_CH18700
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	71.58	-66.85	-54.33	-13.00	-53.85	-12.52	Peak
2	178.50	-69.40	-63.62	-13.00	-56.40	-5.78	Peak
3	253.29	-61.50	-55.97	-13.00	-48.50	-5.53	Peak
4	370.70	-69.76	-65.47	-13.00	-56.76	-4.29	Peak
5	560.40	-70.02	-68.80	-13.00	-57.02	-1.22	Peak
6	715.80	-68.25	-67.58	-13.00	-55.25	-0.67	Peak
7 pp	3720.00	-34.14	-50.11	-13.00	-21.14	15.97	Peak
8	5580.00	-40.70	-61.07	-13.00	-27.70	20.37	Peak

Middle Channel

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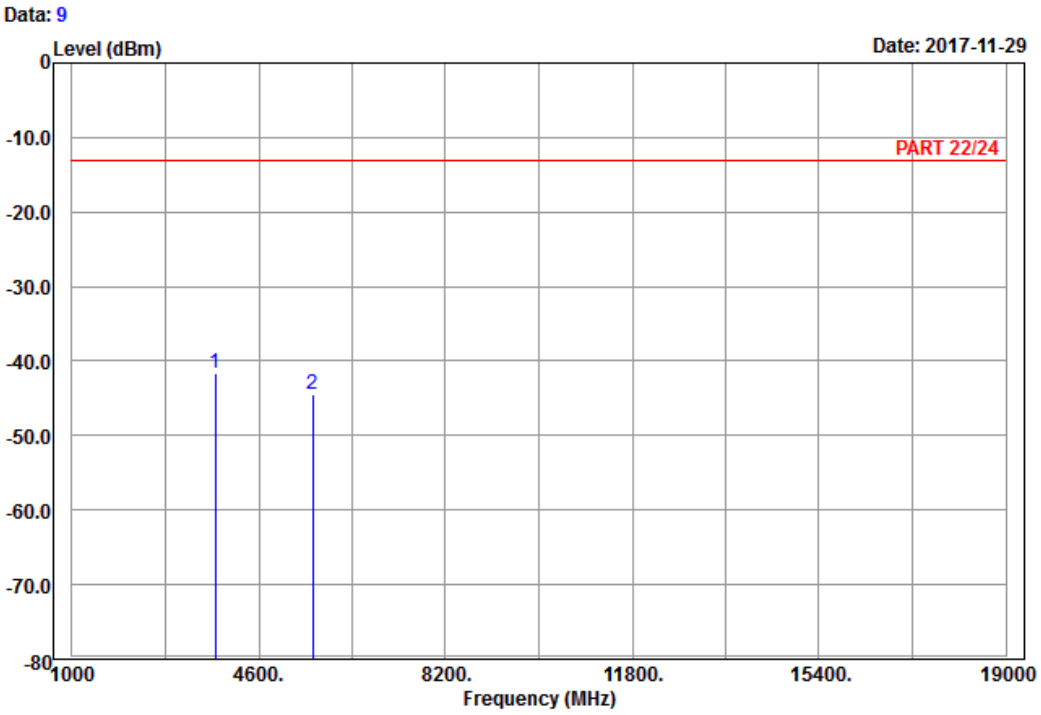
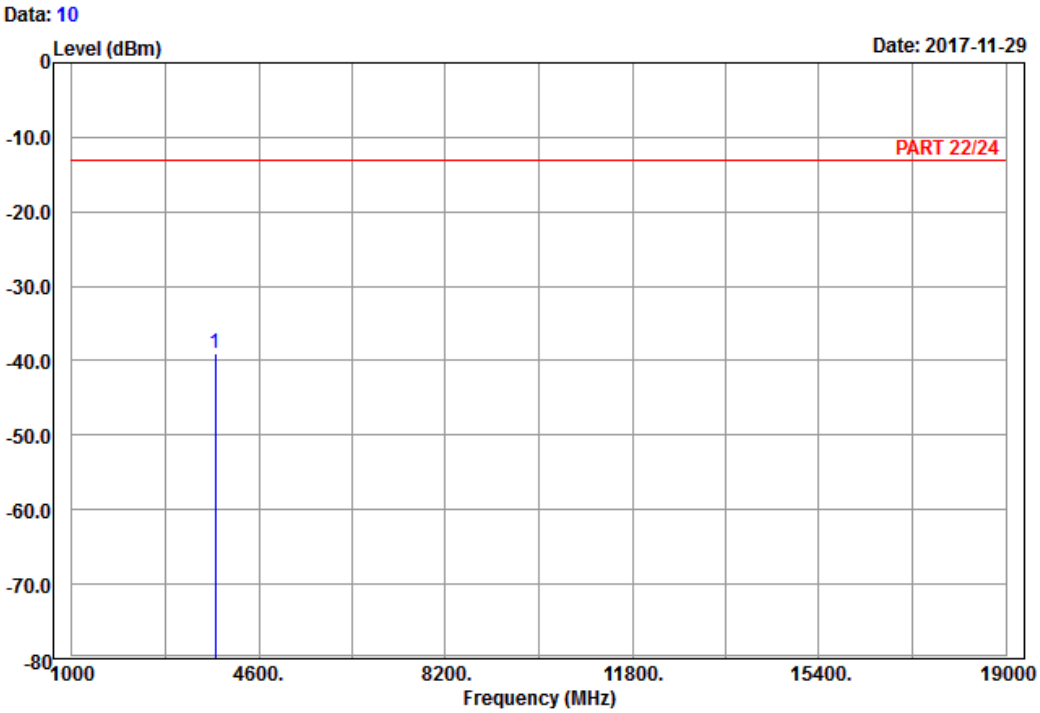


Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 2_Link_CH18900
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3760.00	-41.57	-57.71	-13.00	-28.57	16.14	Peak
2	5640.00	-44.46	-64.93	-13.00	-31.46	20.47	Peak

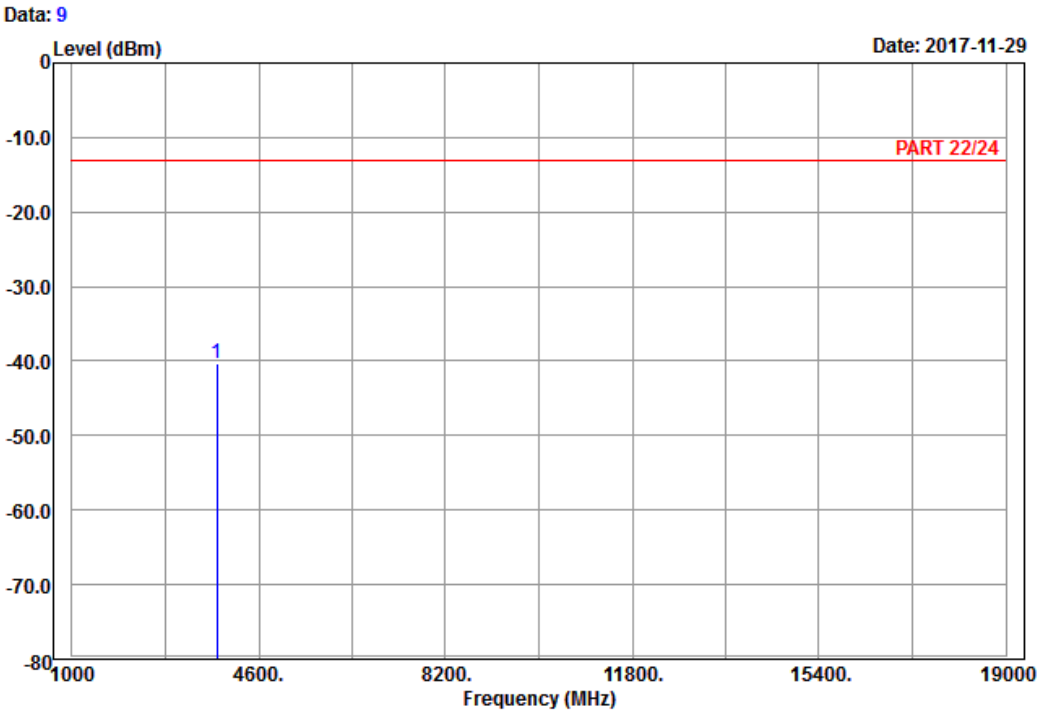


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 2_Link_CH18900
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3760.00	-39.02	-55.16	-13.00	-26.02	16.14	Peak

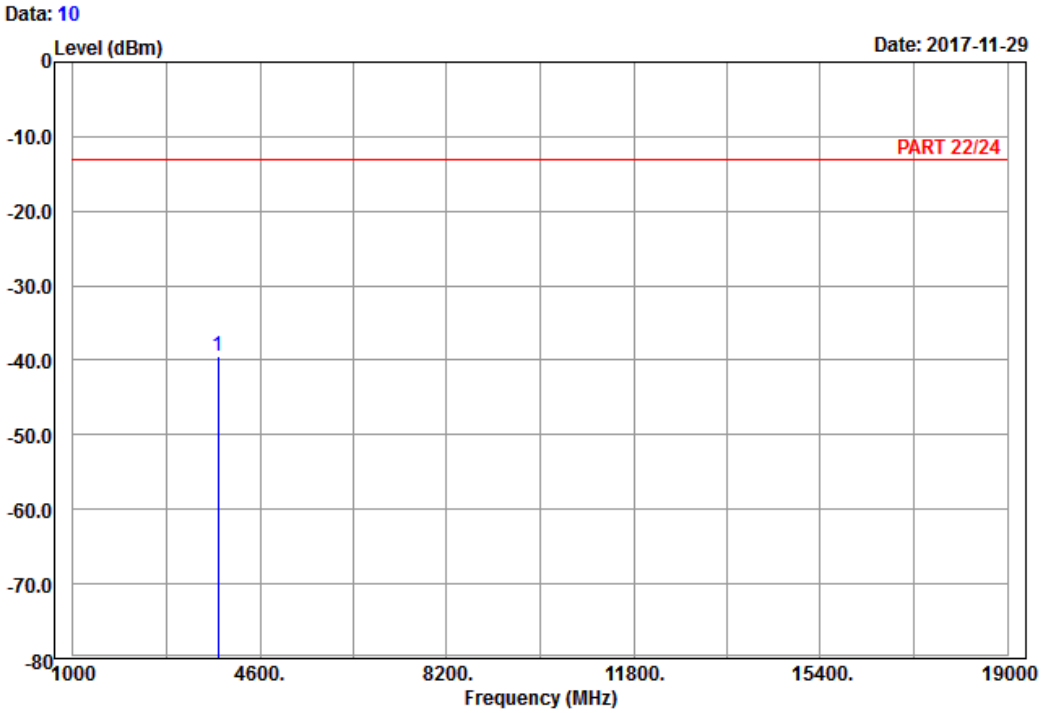
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 2_Link_CH19100
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3800.00	-40.25	-56.66	-13.00	-27.25	16.41	Peak

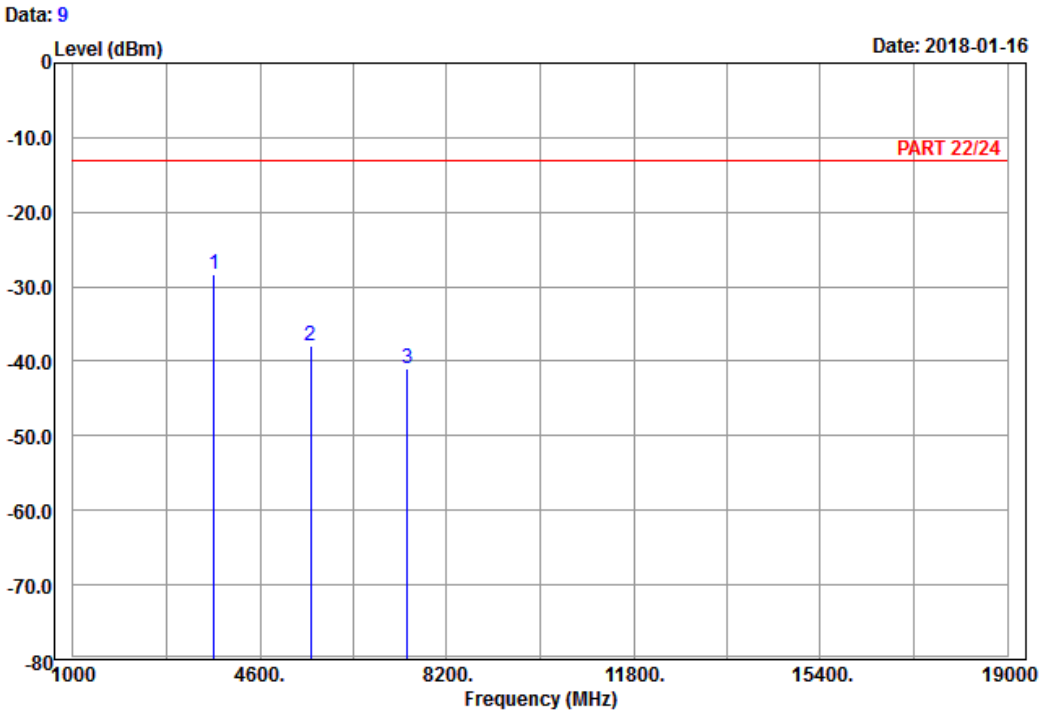


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 2_Link_CH19100
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3800.00	-39.45	-55.86	-13.00	-26.45	16.41	Peak

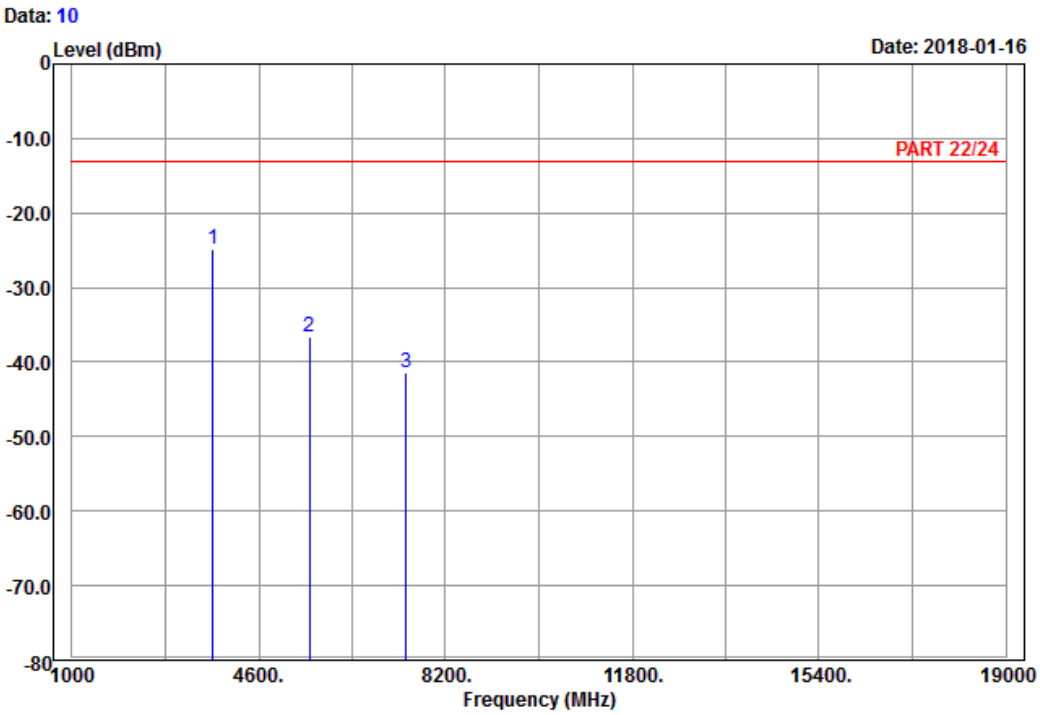
LTE Band 25
Channel Bandwidth: 20 MHz / QPSK
Low Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 25_Link_CH26140
Tested by: Charles Hsiao

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3720.00	-28.35	-44.32	-13.00	-15.35	15.97	Peak
2	5580.00	-38.02	-58.39	-13.00	-25.02	20.37	Peak
3	7440.00	-40.97	-63.22	-13.00	-27.97	22.25	Peak



Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 25_Link_CH26140
Tested by: Charles Hsiao

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3720.00	-24.89	-40.86	-13.00	-11.89	15.97	Peak
2	5580.00	-36.61	-56.98	-13.00	-23.61	20.37	Peak
3	7440.00	-41.34	-63.59	-13.00	-28.34	22.25	Peak

Middle Channel

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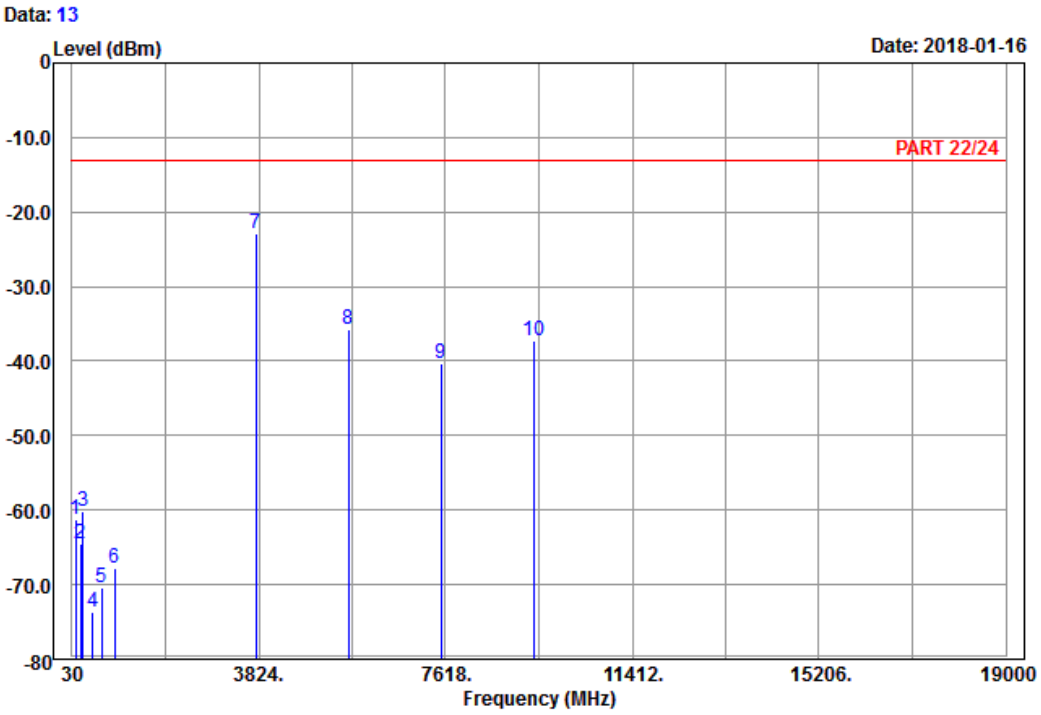
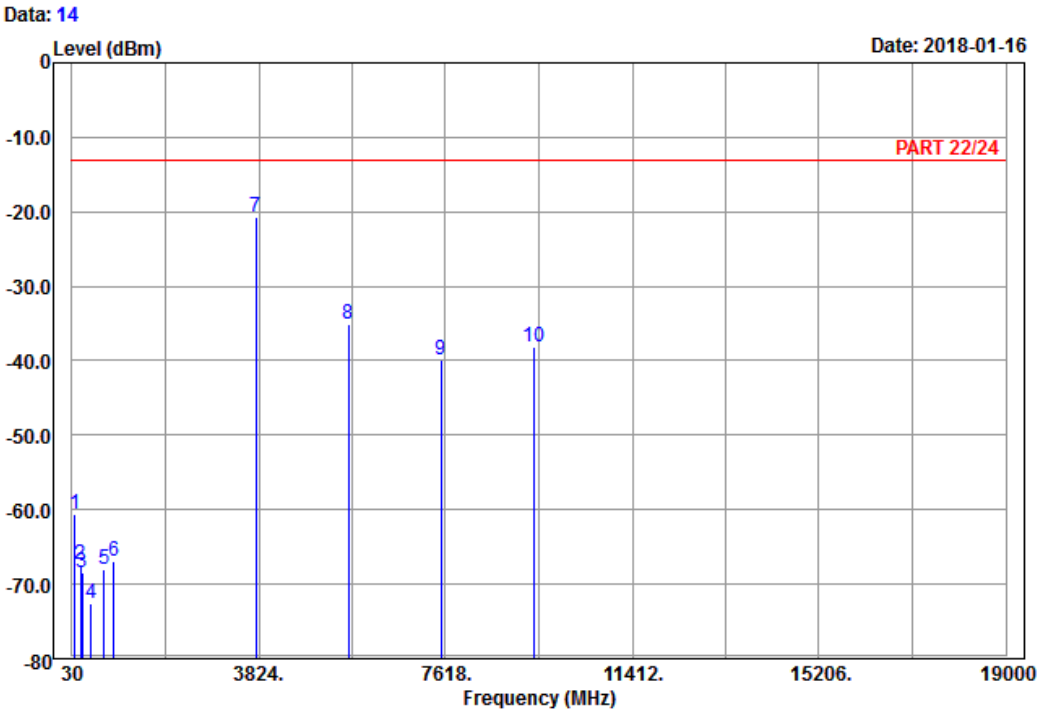


Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 25_Link_CH26365
Tested by: Charles Hsiao

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
		MHz	dBm	dBm	dBm	dB	dB	
1		96.42	-61.30	-50.96	-13.00	-48.30	-10.34	Peak
2		202.26	-64.44	-58.30	-13.00	-51.44	-6.14	Peak
3		246.81	-60.16	-54.61	-13.00	-47.16	-5.55	Peak
4		452.60	-73.63	-69.70	-13.00	-60.63	-3.93	Peak
5		636.70	-70.38	-70.40	-13.00	-57.38	0.02	Peak
6		891.50	-67.84	-70.48	-13.00	-54.84	2.64	Peak
7	pp	3765.00	-22.96	-39.19	-13.00	-9.96	16.23	Peak
8		5647.50	-35.76	-56.23	-13.00	-22.76	20.47	Peak
9		7530.00	-40.37	-63.22	-13.00	-27.37	22.85	Peak
10		9412.50	-37.34	-63.11	-13.00	-24.34	25.77	Peak

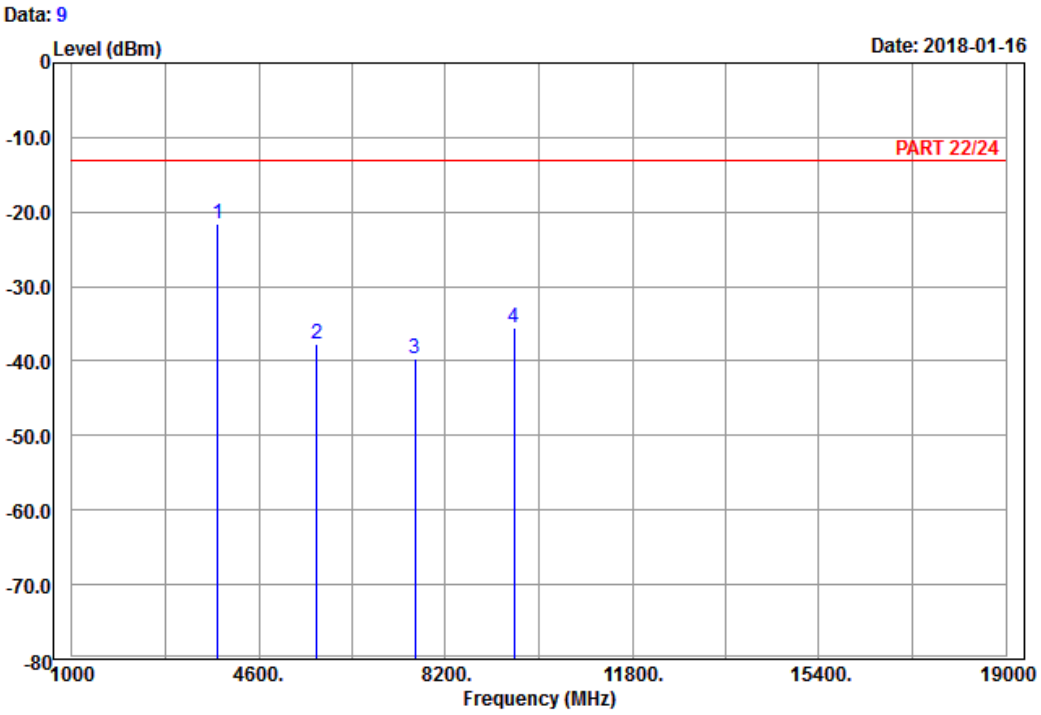


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 25_Link_CH26365
Tested by: Charles Hsiao

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	84.54	-60.60	-49.27	-13.00	-47.60	-11.33	Peak
2	202.26	-67.33	-61.19	-13.00	-54.33	-6.14	Peak
3	231.15	-68.38	-62.61	-13.00	-55.38	-5.77	Peak
4	425.30	-72.51	-69.20	-13.00	-59.51	-3.31	Peak
5	686.40	-68.11	-67.80	-13.00	-55.11	-0.31	Peak
6	887.30	-67.01	-69.54	-13.00	-54.01	2.53	Peak
7 pp	3765.00	-20.73	-36.96	-13.00	-7.73	16.23	Peak
8	5647.50	-35.03	-55.50	-13.00	-22.03	20.47	Peak
9	7530.00	-39.87	-62.72	-13.00	-26.87	22.85	Peak
10	9412.50	-38.23	-64.00	-13.00	-25.23	25.77	Peak

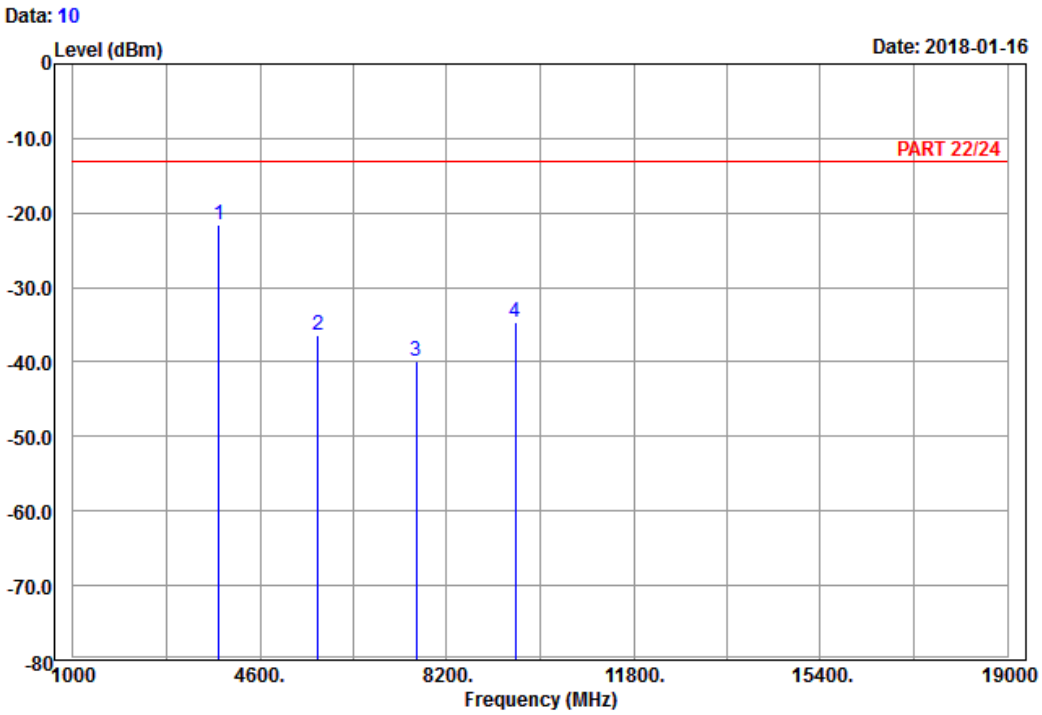
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 25_Link_CH26590
Tested by: Charles Hsiao

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3810.00	-21.62	-38.03	-13.00	-8.62	16.41	Peak
2	5715.00	-37.72	-57.99	-13.00	-24.72	20.27	Peak
3	7620.00	-39.72	-62.74	-13.00	-26.72	23.02	Peak
4	9525.00	-35.60	-61.64	-13.00	-22.60	26.04	Peak



Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 25_Link_CH26590
Tested by: Charles Hsiao

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3810.00	-21.59	-38.00	-13.00	-8.59	16.41	Peak
2	5715.00	-36.42	-56.69	-13.00	-23.42	20.27	Peak
3	7620.00	-39.90	-62.92	-13.00	-26.90	23.02	Peak
4	9525.00	-34.74	-60.78	-13.00	-21.74	26.04	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:

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Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab
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Email: service.adt@tw.bureauveritas.com
Web Site: www.bureauveritas-adt.com

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

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