FCC Test Report

(PART 22)

Report No.:	RF180207C11-5
FCC ID:	MSQZ01RD
Test Model:	ASUS_Z01RD / ASUS_Z01RS
Received Date:	Feb. 07, 2018
Test Date:	Feb. 27, 2018 ~ Mar. 29, 2018
Issued Date:	May 02, 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
RF180207C11-5	Original Release	May 02, 2018

1 Certificate of Conformity

Product:	ASUS Phone
Brand:	ASUS
Test Model:	ASUS_Z01RD / ASUS_Z01RS
Sample Status:	Production Unit
Applicant:	ASUSTek COMPUTER INC.
Test Date:	Feb. 27, 2018 ~ Mar. 29, 2018
Standards:	FCC Part 22, Subpart H

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

Prepared by : _____ , **Date:** May 02, 2018

Ivonne Wu / Supervisor

Approved by : _____ , **Date:** May 02, 2018

Dylan Chiou / Project Engineer

2 Summary of Test Results

Applied Standard: FCC Part 22 & Part 2			
FCC Clause	**Test Item**	**Result**	**Remarks**
2.1046 22.913 (a)	Effective Radiated Power	Pass	Meet the requirement of limit.
---	Peak to Average Ratio	Pass	Meet the requirement of limit.
2.1055 22.355	Frequency Stability	Pass	Meet the requirement of limit.
2.1049	Occupied Bandwidth	Pass	Meet the requirement of limit.
22.917	Band Edge Measurements	Pass	Meet the requirement of limit.
2.1051 22.917	Conducted Spurious Emissions	Pass	Meet the requirement of limit.
2.1053 22.917	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -20.07 dB at 2546.40 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 ROHDE & SCHWARZ	FSU43	101261	Jan. 11, 2018	Jan. 10, 2019
Double Ridge Guide Horn Antenna EMCO	3115	5619	Nov. 30, 2017	Nov. 29, 2018
BILOG Antenna SCHWARZBECK	VULB 9168	9168-153	Dec. 06, 2017	Dec. 05, 2018
Fixed Attenuator Mini-Circuits	BW-N10W5+	NA	Jul. 07, 2017	Jul. 06, 2018
MXG Vector signal generator Agilent	N5182B	MY53050430	Oct. 24, 2017	Oct. 23, 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. 26, 2017	Jun. 25, 2018
RF signal cable ETS-LINDGREN	8D-FB	Cable-CH1-02(RFC-SMS-100-SMS-24)	Jun. 26, 2017	Jun. 25, 2018
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
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	6201010284	Dec. 28, 2017	Dec. 27, 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	ASUS Phone	
Brand	ASUS	
Test Model	ASUS_Z01RD / ASUS_Z01RS	
Status of EUT	Production Unit	
Power Supply Rating	5.0 Vdc or 9.0 Vdc (adapter) 5.0 Vdc (host equipment) 3.85 Vdc (battery)	
Modulation Type	GSM/GPRS	GMSK
	EDGE	GMSK, 8PSK
	WCDMA	QPSK
	LTE	QPSK, 16QAM, 64QAM
Frequency Range	GSM/GPRS/EDGE	824.2 ~ 848.8 MHz
	WCDMA	826.4 ~ 846.6 MHz
	LTE 5 (Channel Bandwidth: 1.4 MHz)	824.7 ~ 848.3 MHz
	LTE 5 (Channel Bandwidth: 3 MHz)	825.5 ~ 847.5 MHz
	LTE 5 (Channel Bandwidth: 5 MHz)	826.5 ~ 846.5 MHz
	LTE 5 (Channel Bandwidth: 10 MHz)	829 ~ 844 MHz
	LTE 26 (Channel Bandwidth: 1.4 MHz)	824.7 ~ 848.3 MHz
	LTE 26 (Channel Bandwidth: 3 MHz)	825.5 ~ 847.5 MHz
	LTE 26 (Channel Bandwidth: 5 MHz)	826.5 ~ 846.5 MHz
	LTE 26 (Channel Bandwidth: 10 MHz)	829 ~ 844 MHz
	LTE 26 (Channel Bandwidth: 15 MHz)	831.5 ~ 841.5 MHz
Max. ERP Power	GSM/GPRS	903.23 mW
	EDGE	319.01 mW
	WCDMA	143.48 mW
	LTE 5 (Channel Bandwidth: 1.4 MHz)	113.50 mW
	LTE 5 (Channel Bandwidth: 3 MHz)	113.76 mW
	LTE 5 (Channel Bandwidth: 5 MHz)	113.97 mW
	LTE 5 (Channel Bandwidth: 10 MHz)	115.61 mW
	LTE 26 (Channel Bandwidth: 1.4 MHz)	128.82 mW
	LTE 26 (Channel Bandwidth: 3 MHz)	127.88 mW
	LTE 26 (Channel Bandwidth: 5 MHz)	128.53 mW
	LTE 26 (Channel Bandwidth: 10 MHz)	128.53 mW
	LTE 26 (Channel Bandwidth: 15 MHz)	129.96 mW

Emission Designator	GSM/GPRS	248KGXW
	EDGE	252KG7W
	WCDMA	4M14F9W
	LTE 5 (Channel Bandwidth: 1.4 MHz)	1M09W7D
	LTE 5 (Channel Bandwidth: 3 MHz)	2M70W7D
	LTE 5 (Channel Bandwidth: 5 MHz)	4M50W7D
	LTE 5 (Channel Bandwidth: 10 MHz)	8M99W7D
	LTE 26 (Channel Bandwidth: 1.4 MHz)	1M09G7D
	LTE 26 (Channel Bandwidth: 3 MHz)	2M71W7D
	LTE 26 (Channel Bandwidth: 5 MHz)	4M50W7D
	LTE 26 (Channel Bandwidth: 10 MHz)	8M99W7D
	LTE 26 (Channel Bandwidth: 15 MHz)	13M5G7D
Antenna Type	PIFA Antenna with -0.3 dBi gain (Main) PIFA Antenna with -1.9 dBi gain (Aux.)	
Accessory Device	Refer to Note as below	
Data Cable Supplied	Refer to Note as below	

Note:

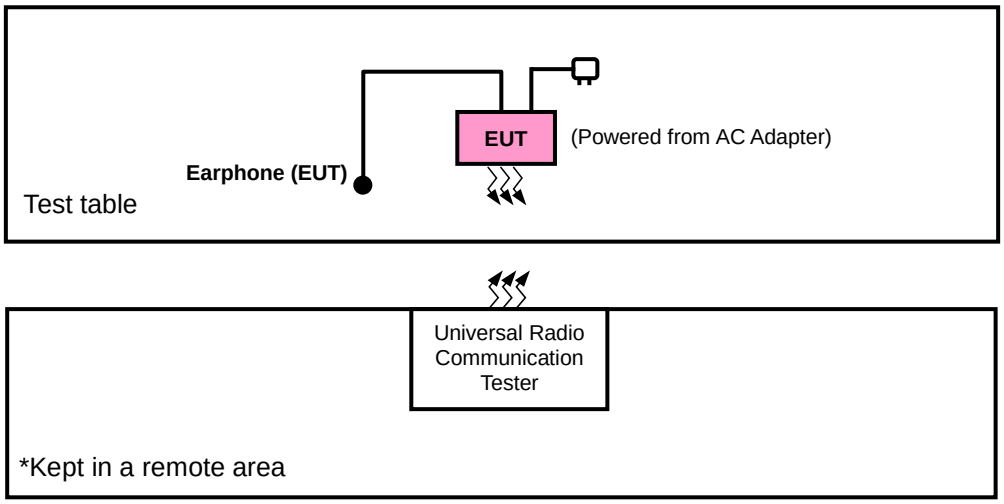
1. All models are listed as below.

Brand	SKU	Model	Difference
ASUS	WW-5CA	ASUS_Z01RD	Dual SIM
	WW Operator-5CA	ASUS_Z01RS	Single SIM
* The models have the same layout, circuit, and components, but different SIM card slot, therefore, only ASUS_Z01RD was chosen for the final test.			

2. There're 2 configurations for the EUT listed as below.
   Main Sample: EUT + CPU 1 + Rear Camera 1 + Front Camera 1 + UFS 3 + DDR 3
   2nd Sample: EUT + CPU 2 + Rear Camera 2 + Front Camera 2 + UFS 3 + DDR 3
   ✧ Only the worst test data was presented in the report.
3. The EUT's accessories list refers to Ext. Pho.
4. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 Configuration of System under Test

<Radiated Emission Test>



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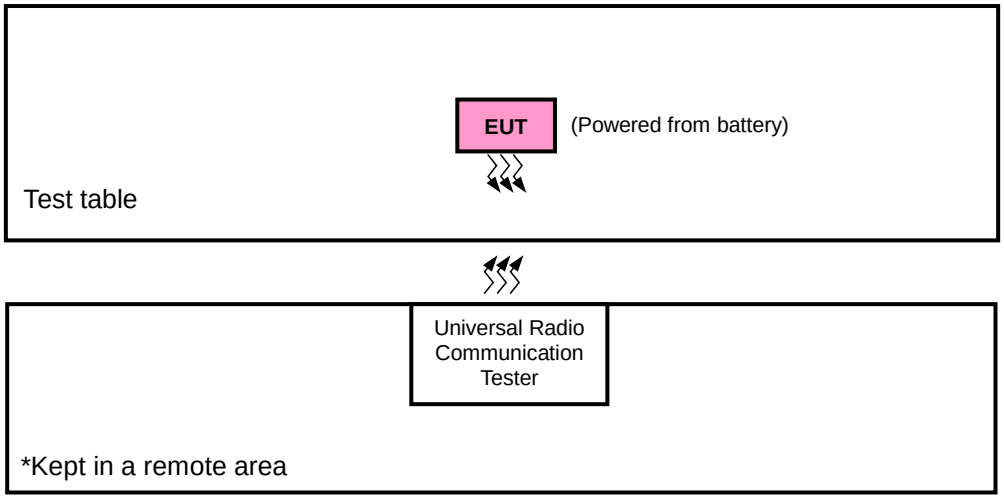


3.2.1 Description of Support Units

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

3.3 Test Mode Applicability and Tested Channel Detail

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

EUT Configure Mode	Description
A	Main Sample
B	2nd Sample

SIM	Band	ERP	Radiated Emission
1	**GSM**	X-plane	Y-axis
	EDGE	X-plane	Y-axis
	WCDMA	X-plane	Y-axis
	LTE Band 5	X-plane	X-axis
	LTE Band 26	X-plane	X-axis

GSM

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Mode
A	ERP	128 to 251	128, 189, 251	GSM, EDGE
A	Frequency Stability	128 to 251	128, 251	GSM, EDGE
A	Occupied Bandwidth	128 to 251	128, 189, 251	GSM, EDGE
A	Band Edge	128 to 251	128, 251	GSM, EDGE
A	Peak to Average Ratio	128 to 251	128, 189, 251	GSM, EDGE
A	Conducted Emission	128 to 251	128, 189, 251	GSM, EDGE
A	Radiated Emission	128 to 251	128, 189, 251	GSM, EDGE
B	Radiated Emission	128 to 251	251	GSM

WCDMA

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

LTE Band 5

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

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
A	Band Edge	20407 to 20643	20407	1.4MHz	QPSK	1 RB / 0 RB Offset
						6 RB / 0 RB Offset
			20643	1.4MHz	QPSK	1 RB / 5 RB Offset
						6 RB / 0 RB Offset
		20415 to 20635	20415	3 MHz	QPSK	1 RB / 0 RB Offset
						15 RB / 0 RB Offset
			20635	3 MHz	QPSK	1 RB / 14 RB Offset
						15 RB / 0 RB Offset
		20425 to 20625	20425	5 MHz	QPSK	1 RB / 0 RB Offset
						25 RB / 0 RB Offset
			20625	5 MHz	QPSK	1 RB / 24 RB Offset
						25 RB / 0 RB Offset
		20450 to 20600	20450	10 MHz	QPSK	1 RB / 0 RB Offset
						50 RB / 0 RB Offset
			20600	10 MHz	QPSK	1 RB / 49 RB Offset
						50 RB / 0 RB Offset
A	Peak to Average Ratio	20407 to 20643	20407, 20525, 20643	1.4 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		20415 to 20635	20415, 20525, 20635	3 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		20425 to 20625	20425, 20525, 20625	5 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		20450 to 20600	20450, 20525, 20600	10 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
A	Conducted Emission	20407 to 20643	20407, 20525, 20643	1.4 MHz	QPSK	1 RB / 0 RB Offset
		20415 to 20635	20415, 20525, 20635	3 MHz	QPSK	1 RB / 0 RB Offset
		20425 to 20625	20425, 20525, 20625	5 MHz	QPSK	1 RB / 0 RB Offset
		20450 to 20600	20450, 20525, 20600	10 MHz	QPSK	1 RB / 0 RB Offset
A	Radiated Emission	20407 to 20643	20407, 20525, 20643	1.4 MHz	QPSK	1 RB / 0 RB Offset
		20425 to 20625	20425, 20525, 20625	5 MHz	QPSK	1 RB / 0 RB Offset
		20450 to 20600	20450, 20525, 20600	10 MHz	QPSK	1 RB / 0 RB Offset
B		20450 to 20600	20525	10 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 26

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

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
A	Peak to Average Ratio	26797 to 27033	26797, 26915, 27033	1.4 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		26805 to 27025	26805, 26915, 27025	3 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		26815 to 27015	26815, 26915, 27015	5 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		26840 to 26990	26840, 26915, 26990	10 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		26865 to 26965	26865, 26915, 26965	15 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
A	Conducted Emission	26797 to 27033	26797, 26915, 27033	1.4 MHz	QPSK	1 RB / 0 RB Offset
		26805 to 27025	26805, 26915, 27025	3 MHz	QPSK	1 RB / 0 RB Offset
		26815 to 27015	26815, 26915, 27015	5 MHz	QPSK	1 RB / 0 RB Offset
		26840 to 26990	26840, 26915, 26990	10 MHz	QPSK	1 RB / 0 RB Offset
		26865 to 26965	26865, 26915, 26965	15 MHz	QPSK	1 RB / 0 RB Offset
A	Radiated Emission	26797 to 27033	26797, 26915, 27033	1.4 MHz	QPSK	1 RB / 0 RB Offset
		26815 to 27015	26815, 26915, 27015	5 MHz	QPSK	1 RB / 0 RB Offset
		26865 to 26965	26865, 26915, 26965	15 MHz	QPSK	1 RB / 0 RB Offset
B		26865 to 26965	26915	15 MHz	QPSK	1 RB / 0 RB Offset

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

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
ERP	25 deg. C, 65 % RH	3.85 Vdc	Karl Lee
Frequency Stability	25 deg. C, 65 % RH	3.85 Vdc	Vincent Huang
Occupied Bandwidth	25 deg. C, 65 % RH	3.85 Vdc	Vincent Huang
Band Edge	25 deg. C, 65 % RH	3.85 Vdc	Vincent Huang
Peak to Average Ratio	25 deg. C, 65 % RH	3.85 Vdc	Vincent Huang
Conducted Emission	25 deg. C, 65 % RH	3.85 Vdc	Vincent Huang
Radiated Emission	25 deg. C, 65 % RH	120 Vac, 60 Hz	Karl Lee / Charles Hsiao

3.4 EUT Operating Conditions

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

3.5 General Description of Applied Standards

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

FCC 47 CFR Part 2
FCC 47 CFR Part 22
KDB 971168 D01 Power Meas License Digital Systems v02r02
ANSI/TIA/EIA-603-E 2016
ANSI 63.26-2015

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

4 Test Types and Results

4.1 Output Power Measurement

4.1.1 Limits of Output Power Measurement

Mobile / Portable station are limited to 7 watts e.r.p.

4.1.2 Test Procedures

EIRP / ERP Measurement:

a. All measurements were done at low, middle and high operational frequency range. RBW and VBW is 1 MHz for GSM, GPRS & EDGE, 5 MHz for WCDMA, 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.

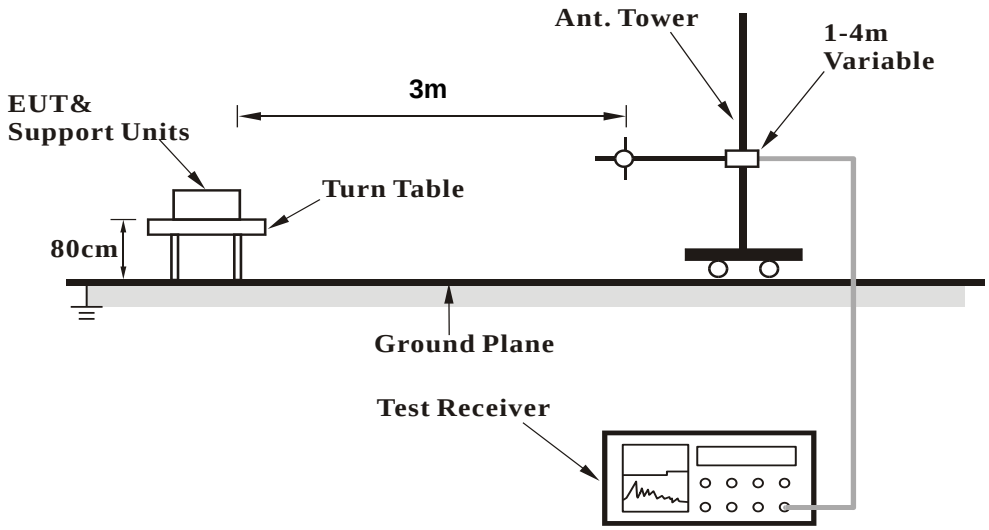
d. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn.E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.P.R power - 2.15 dBi.

Conducted Power Measurement:

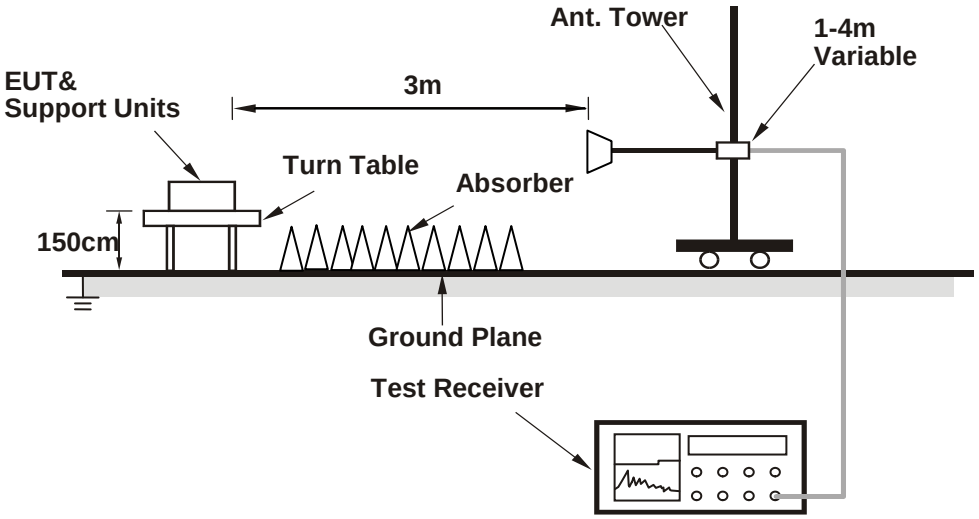
The EUT was set up for the maximum power with GSM, GPRS, EDGE, WCDMA, and LTE link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

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	GSM850		
Channel	128	189	251
Frequency (MHz)	824.2	836.4	848.8
GSM (GMSK, 1Tx-slot)	31.53	31.54	31.26
GPRS (GMSK, 1Tx-slot)	31.44	31.45	31.17
GPRS (GMSK, 2Tx-slot)	29.91	29.92	29.64
EDGE (8PSK, 1Tx-slot)	27.17	27.18	26.90
EDGE (8PSK, 2Tx-slot)	26.83	26.84	26.56

Band	WCDMA V		
Channel	4132	4182	4233
Frequency (MHz)	826.4	836.4	846.6
RMC 12.2K	23.99	23.93	23.91
HSDPA Subtest-1	22.93	22.87	22.85
HSDPA Subtest-2	22.87	22.81	22.79
HSDPA Subtest-3	22.38	22.32	22.30
HSDPA Subtest-4	22.37	22.31	22.29
DC-HSDPA Subtest-1	22.78	22.72	22.70
DC-HSDPA Subtest-2	22.72	22.66	22.64
DC-HSDPA Subtest-3	22.23	22.17	22.15
DC-HSDPA Subtest-4	22.22	22.16	22.14
HSUPA Subtest-1	22.97	22.91	22.89
HSUPA Subtest-2	20.98	20.92	20.90
HSUPA Subtest-3	21.93	21.87	21.85
HSUPA Subtest-4	20.98	20.95	20.93
HSUPA Subtest-5	22.98	22.92	22.90

LTE Band 5

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		20450	20525	20600				Channel		20425	20525	20625	
		Frequency (MHz)		829.0	836.5	844.0				Frequency (MHz)		826.5	836.5	846.5	
10M	QPSK	1	0	23.41.	23.35	23.17	0	5M	QPSK	1	0	23.32	23.26	23.08	0
		1	24	23.34	23.28	23.11	0			1	12	23.25	23.19	23.02	0
		1	49	23.21	23.18	23.03	0			1	24	23.12	23.09	22.94	0
		25	0	22.38	22.43	22.19	1			12	0	22.29	22.34	22.10	1
		25	12	22.31	22.31	22.17	1			12	6	22.22	22.22	22.08	1
		25	25	22.25	22.28	22.09	1			12	13	22.16	22.19	22.00	1
		50	0	22.26	22.27	22.18	1			25	0	22.17	22.18	22.09	1
	16QAM	1	0	22.32	22.38	22.14	1		16QAM	1	0	22.23	22.29	22.05	1
		1	24	22.31	22.25	22.08	1			1	12	22.22	22.16	21.99	1
		1	49	22.18	22.15	22.00	1			1	24	22.09	22.06	21.91	1
		25	0	21.35	21.40	21.16	2			12	0	21.26	21.31	21.07	2
		25	12	21.28	21.28	21.14	2			12	6	21.19	21.19	21.05	2
		25	25	21.22	21.25	21.06	2			12	13	21.13	21.16	20.97	2
		50	0	21.23	21.24	21.15	2			25	0	21.14	21.15	21.06	2
	64QAM	1	0	21.34	21.40	21.16	2		64QAM	1	0	21.25	21.31	21.07	2
		1	24	21.33	21.27	21.10	2			1	12	21.24	21.18	21.01	2
		1	49	21.20	21.17	21.02	2			1	24	21.11	21.08	20.93	2
		25	0	20.37	20.42	20.18	3			12	0	20.28	20.33	20.09	3
		25	12	20.30	20.30	20.16	3			12	6	20.21	20.21	20.07	3
		25	25	20.24	20.27	20.08	3			12	13	20.15	20.18	19.99	3
		50	0	20.25	20.26	20.17	3			25	0	20.16	20.17	20.08	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		20415	20525	20635				Channel		20407	20525	20643	
		Frequency (MHz)		825.5	836.5	847.5				Frequency (MHz)		824.7	836.5	848.3	
3M	QPSK	1	0	23.20	23.14	22.96	0	1.4M	QPSK	1	0	23.08	23.02	22.84	0
		1	7	23.13	23.07	22.90	0			1	2	23.01	22.95	22.78	0
		1	14	23.00	22.97	22.82	0			1	5	22.88	22.85	22.70	0
		8	0	22.17	22.22	21.98	1			3	0	22.84	22.89	22.65	0
		8	3	22.10	22.10	21.96	1			3	1	22.77	22.77	22.63	0
		8	7	22.04	22.07	21.88	1			3	3	22.71	22.74	22.55	0
		15	0	22.05	22.06	21.97	1			6	0	21.93	21.94	21.85	1
	16QAM	1	0	22.11	22.17	21.93	1		16QAM	1	0	21.99	22.05	21.81	1
		1	7	22.10	22.04	21.87	1			1	2	21.98	21.92	21.75	1
		1	14	21.97	21.94	21.79	1			1	5	21.85	21.82	21.67	1
		8	0	21.14	21.19	20.95	2			3	0	21.81	21.86	21.62	1
		8	3	21.07	21.07	20.93	2			3	1	21.74	21.74	21.60	1
		8	7	21.01	21.04	20.85	2			3	3	21.68	21.71	21.52	1
		15	0	21.02	21.03	20.94	2			6	0	20.90	20.91	20.82	2
	64QAM	1	0	21.13	21.19	20.95	2		64QAM	1	0	21.01	21.07	20.83	2
		1	7	21.12	21.06	20.89	2			1	2	21.00	20.94	20.77	2
		1	14	20.99	20.96	20.81	2			1	5	20.87	20.84	20.69	2
		8	0	20.16	20.21	19.97	3			3	0	20.83	20.88	20.64	2
		8	3	20.09	20.09	19.95	3			3	1	20.76	20.76	20.62	2
		8	7	20.03	20.06	19.87	3			3	3	20.70	20.73	20.54	2
		15	0	20.04	20.05	19.96	3			6	0	19.92	19.93	19.84	3

LTE Band 26

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		26865	26915	26965	
		Frequency (MHz)		831.5	836.5	841.5	
15M	QPSK	1	0	23.68	23.46	23.33	0
		1	37	23.58	23.42	23.25	0
		1	74	23.42	23.31	23.08	0
		36	0	22.72	22.48	22.36	1
		36	19	22.69	22.46	22.34	1
		36	39	22.54	22.34	22.26	1
		75	0	22.61	22.39	22.33	1
	16QAM	1	0	22.70	22.48	22.35	1
		1	37	22.60	22.44	22.27	1
		1	74	22.44	22.33	22.10	1
		36	0	21.74	21.50	21.38	2
		36	19	21.71	21.48	21.36	2
		36	39	21.56	21.36	21.28	2
		75	0	21.63	21.41	21.35	2
	64QAM	1	0	21.65	21.43	21.30	2
		1	37	21.55	21.39	21.22	2
		1	74	21.39	21.28	21.05	2
		36	0	20.69	20.45	20.33	3
		36	19	20.66	20.43	20.31	3
		36	39	20.51	20.31	20.23	3
		75	0	20.58	20.36	20.30	3

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		26840	26915	26990	
		Frequency (MHz)		829.0	836.5	844.0	
10M	QPSK	1	0	23.60	23.38	23.25	0
		1	24	23.50	23.34	23.17	0
		1	49	23.34	23.23	23.00	0
		25	0	22.64	22.40	22.28	1
		25	12	22.61	22.38	22.26	1
		25	25	22.46	22.26	22.18	1
		50	0	22.53	22.31	22.25	1
	16QAM	1	0	22.62	22.40	22.27	1
		1	24	22.52	22.36	22.19	1
		1	49	22.36	22.25	22.02	1
		25	0	21.66	21.42	21.30	2
		25	12	21.63	21.40	21.28	2
		25	25	21.48	21.28	21.20	2
		50	0	21.55	21.33	21.27	2
	64QAM	1	0	21.57	21.35	21.22	2
		1	24	21.47	21.31	21.14	2
		1	49	21.31	21.20	20.97	2
		25	0	20.61	20.37	20.25	3
		25	12	20.58	20.35	20.23	3
		25	25	20.43	20.23	20.15	3
		50	0	20.50	20.28	20.22	3

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		26815	26915	27015	
		Frequency (MHz)		826.5	836.5	846.5	
5M	QPSK	1	0	23.47	23.25	23.12	0
		1	12	23.37	23.21	23.04	0
		1	24	23.21	23.10	22.87	0
		12	0	22.51	22.27	22.15	1
		12	6	22.48	22.25	22.13	1
		12	13	22.33	22.13	22.05	1
		25	0	22.40	22.18	22.12	1
	16QAM	1	0	22.49	22.27	22.14	1
		1	12	22.39	22.23	22.06	1
		1	24	22.23	22.12	21.89	1
		12	0	21.53	21.29	21.17	2
		12	6	21.50	21.27	21.15	2
		12	13	21.35	21.15	21.07	2
		25	0	21.42	21.20	21.14	2
	64QAM	1	0	21.44	21.22	21.09	2
		1	12	21.34	21.18	21.01	2
		1	24	21.18	21.07	20.84	2
		12	0	20.48	20.24	20.12	3
		12	6	20.45	20.22	20.10	3
		12	13	20.30	20.10	20.02	3
		25	0	20.37	20.15	20.09	3

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		26805	26915	27025	
		Frequency (MHz)		825.5	836.5	847.5	
3M	QPSK	1	0	23.39	23.17	23.04	1
		1	7	23.29	23.13	22.96	1
		1	14	23.13	23.02	22.79	1
		8	0	22.43	22.19	22.07	3
		8	3	22.40	22.17	22.05	3
		8	7	22.25	22.05	21.97	3
		15	0	22.32	22.10	22.04	6
	16QAM	1	0	22.41	22.19	22.06	1
		1	7	22.31	22.15	21.98	1
		1	14	22.15	22.04	21.81	1
		8	0	21.45	21.21	21.09	2
		8	3	21.42	21.19	21.07	2
		8	7	21.27	21.07	20.99	2
		15	0	21.34	21.12	21.06	2
	64QAM	1	0	21.36	21.14	21.01	2
		1	7	21.26	21.10	20.93	2
		1	14	21.10	20.99	20.76	2
		8	0	20.40	20.16	20.04	3
		8	3	20.37	20.14	20.02	3
		8	7	20.22	20.02	19.94	3
		15	0	20.29	20.07	20.01	3

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		26797	26915	27033	
		Frequency (MHz)		824.7	836.5	848.3	
1.4M	QPSK	1	0	23.26	23.04	22.91	0
		1	2	23.16	23.00	22.83	0
		1	5	23.00	22.89	22.66	0
		3	0	22.92	22.68	22.56	0
		3	1	22.89	22.66	22.54	0
		3	3	22.74	22.54	22.46	0
		6	0	22.19	21.97	21.91	1
	16QAM	1	0	22.28	22.06	21.93	1
		1	2	22.18	22.02	21.85	1
		1	5	22.02	21.91	21.68	1
		3	0	21.94	21.70	21.58	1
		3	1	21.91	21.68	21.56	1
		3	3	21.76	21.56	21.48	1
		6	0	21.21	20.99	20.93	2
	64QAM	1	0	21.23	21.01	20.88	2
		1	2	21.13	20.97	20.80	2
		1	5	20.97	20.86	20.63	2
		3	0	20.89	20.65	20.53	2
		3	1	20.86	20.63	20.51	2
		3	3	20.71	20.51	20.43	2
		6	0	20.16	19.94	19.88	3

ERP Power (dBm)

GSM							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (mW)**	**Polarization (H/V)**
X	128	824.2	0.50	31.208	29.56	903.23	H
	189	836.4	0.38	31.3	29.53	897.43	
	251	848.8	0.45	31.222	29.52	895.78	
	128	824.2	-3.82	31.504	25.53	357.60	V
	189	836.4	-3.46	31.117	25.51	355.39	
	251	848.8	-4.29	31.922	25.48	353.35	

EDGE							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (mW)**	**Polarization (H/V)**
X	128	824.2	-4.02	31.208	25.04	319.01	H
	189	836.4	-4.12	31.3	25.03	318.42	
	251	848.8	-4.09	31.222	24.98	314.92	
	128	824.2	-8.26	31.504	21.09	128.65	V
	189	836.4	-7.92	31.117	21.05	127.26	
	251	848.8	-8.76	31.922	21.01	126.24	

WCDMA							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (mW)**	**Polarization (H/V)**
X	4132	826.4	-7.49	31.208	21.57	143.48	H
	4182	836.4	-7.62	31.3	21.53	142.23	
	4233	846.6	-7.55	31.222	21.52	141.97	
	4132	826.4	-11.76	31.504	17.59	57.46	V
	4182	836.4	-11.41	31.117	17.56	56.98	
	4233	846.6	-12.26	31.922	17.51	56.39	

LTE Band 5							
Channel Bandwidth: 1.4 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (mW)**	**Polarization (H/V)**
X	20407	824.7	-8.56	31.208	20.50	112.15	H
	20525	836.5	-8.60	31.3	20.55	113.50	
	20643	848.3	-8.56	31.222	20.51	112.51	
	20407	824.7	-12.81	31.504	16.54	45.12	V
	20525	836.5	-12.46	31.117	16.51	44.74	
	20643	848.3	-13.25	31.922	16.52	44.90	
Channel Bandwidth: 1.4 MHz / 16QAM							
X	20407	824.7	-9.55	31.208	19.51	89.29	H
	20525	836.5	-9.64	31.3	19.51	89.33	
	20643	848.3	-9.62	31.222	19.45	88.15	
	20407	824.7	-13.85	31.504	15.50	35.51	V
	20525	836.5	-13.52	31.117	15.45	35.05	
	20643	848.3	-14.32	31.922	15.45	35.09	
Channel Bandwidth: 1.4 MHz / 64QAM							
X	20407	824.7	-10.56	31.208	18.50	70.76	H
	20525	836.5	-10.68	31.3	18.47	70.31	
	20643	848.3	-10.66	31.222	18.41	69.37	
	20407	824.7	-14.84	31.504	14.51	28.27	V
	20525	836.5	-14.53	31.117	14.44	27.78	
	20643	848.3	-15.37	31.922	14.40	27.55	

LTE Band 5							
Channel Bandwidth: 3 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (mW)**	**Polarization (H/V)**
X	20415	825.5	-8.53	31.208	20.53	112.93	H
	20525	836.5	-8.59	31.3	20.56	113.76	
	20635	847.5	-8.52	31.222	20.55	113.55	
	20415	825.5	-12.80	31.504	16.55	45.23	V
	20525	836.5	-12.45	31.117	16.52	44.84	
	20635	847.5	-13.25	31.922	16.52	44.90	
Channel Bandwidth: 3 MHz / 16QAM							
X	20415	825.5	-9.56	31.208	19.50	89.08	H
	20525	836.5	-9.62	31.3	19.53	89.74	
	20635	847.5	-9.50	31.222	19.57	90.61	
	20415	825.5	-13.84	31.504	15.51	35.60	V
	20525	836.5	-13.43	31.117	15.54	35.78	
	20635	847.5	-14.27	31.922	15.50	35.50	
Channel Bandwidth: 3 MHz / 64QAM							
X	20415	825.5	-10.49	31.208	18.57	71.91	H
	20525	836.5	-10.63	31.3	18.52	71.12	
	20635	847.5	-10.57	31.222	18.50	70.83	
	20415	825.5	-14.83	31.504	14.52	28.34	V
	20525	836.5	-14.45	31.117	14.52	28.29	
	20635	847.5	-15.33	31.922	14.44	27.81	

LTE Band 5							
Channel Bandwidth: 5 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (mW)**	**Polarization (H/V)**
X	20425	826.5	-8.49	31.208	20.57	113.97	H
	20525	836.5	-8.63	31.3	20.52	112.72	
	20625	846.5	-8.57	31.222	20.50	112.25	
	20425	826.5	-12.83	31.504	16.52	44.92	V
	20525	836.5	-12.44	31.117	16.53	44.95	
	20625	846.5	-13.26	31.922	16.51	44.79	
Channel Bandwidth: 5 MHz / 16QAM							
X	20425	826.5	-9.53	31.208	19.53	89.70	H
	20525	836.5	-9.60	31.3	19.55	90.16	
	20625	846.5	-9.59	31.222	19.48	88.76	
	20425	826.5	-13.82	31.504	15.53	35.76	V
	20525	836.5	-13.45	31.117	15.52	35.62	
	20625	846.5	-14.24	31.922	15.53	35.74	
Channel Bandwidth: 5 MHz / 64QAM							
X	20425	826.5	-10.53	31.208	18.53	71.25	H
	20525	836.5	-10.64	31.3	18.51	70.96	
	20625	846.5	-10.57	31.222	18.50	70.83	
	20425	826.5	-14.80	31.504	14.55	28.54	V
	20525	836.5	-14.43	31.117	14.54	28.42	
	20625	846.5	-15.28	31.922	14.49	28.13	

LTE Band 5							
Channel Bandwidth: 10 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (mW)**	**Polarization (H/V)**
X	20450	829.0	-8.46	31.208	20.60	114.76	H
	20525	836.5	-8.52	31.3	20.63	115.61	
	20600	844.0	-8.55	31.222	20.52	112.77	
	20450	829.0	-12.73	31.504	16.62	45.96	V
	20525	836.5	-12.33	31.117	16.64	46.10	
	20600	844.0	-13.21	31.922	16.56	45.31	
Channel Bandwidth: 10 MHz / 16QAM							
X	20425	826.5	-9.47	31.208	19.59	90.95	H
	20525	836.5	-9.54	31.3	19.61	91.41	
	20625	846.5	-9.56	31.222	19.51	89.37	
	20425	826.5	-13.68	31.504	15.67	36.93	V
	20525	836.5	-13.28	31.117	15.69	37.04	
	20625	846.5	-14.20	31.922	15.57	36.07	
Channel Bandwidth: 10 MHz / 64QAM							
X	20450	829.0	-10.46	31.208	18.60	72.41	H
	20525	836.5	-10.51	31.3	18.64	73.11	
	20600	844.0	-10.55	31.222	18.52	71.15	
	20450	829.0	-14.69	31.504	14.66	29.27	V
	20525	836.5	-14.27	31.117	14.70	29.49	
	20600	844.0	-15.22	31.922	14.55	28.52	

LTE Band 26							
Channel Bandwidth: 1.4 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (mW)**	**Polarization (H/V)**
X	26797	824.7	-8.06	31.208	21.00	125.83	H
	26915	836.5	-8.05	31.3	21.10	128.82	
	27033	848.3	-8.06	31.222	21.01	126.24	
	26797	824.7	-12.28	31.504	17.08	51.00	V
	26915	836.5	-11.95	31.117	17.02	50.32	
	27033	848.3	-12.73	31.922	17.04	50.61	
Channel Bandwidth: 1.4 MHz / 16QAM							
X	26797	824.7	-9.07	31.208	19.99	99.72	H
	26915	836.5	-9.10	31.3	20.05	101.16	
	27033	848.3	-9.16	31.222	19.91	97.99	
	26797	824.7	-13.33	31.504	16.02	40.03	V
	26915	836.5	-13.01	31.117	15.96	39.42	
	27033	848.3	-13.86	31.922	15.91	39.01	
Channel Bandwidth: 1.4 MHz / 64QAM							
X	26797	824.7	-10.17	31.208	18.89	77.41	H
	26915	836.5	-10.18	31.3	18.97	78.89	
	27033	848.3	-10.21	31.222	18.86	76.95	
	26797	824.7	-14.32	31.504	15.03	31.87	V
	26915	836.5	-14.06	31.117	14.91	30.95	
	27033	848.3	-14.90	31.922	14.87	30.70	

LTE Band 26							
Channel Bandwidth: 3 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (mW)**	**Polarization (H/V)**
X	26805	825.5	-7.99	31.208	21.07	127.88	H
	26915	836.5	-8.10	31.3	21.05	127.35	
	27025	847.5	-8.05	31.222	21.02	126.53	
	26805	825.5	-12.26	31.504	17.09	51.22	V
	26915	836.5	-11.95	31.117	17.02	50.32	
	27025	847.5	-12.73	31.922	17.04	50.61	
Channel Bandwidth: 3 MHz / 16QAM							
X	26805	825.5	-9.02	31.208	20.04	100.88	H
	26915	836.5	-9.11	31.3	20.04	100.93	
	27025	847.5	-9.13	31.222	19.94	98.67	
	26805	825.5	-13.32	31.504	16.03	40.12	V
	26915	836.5	-12.98	31.117	15.99	39.69	
	27025	847.5	-13.85	31.922	15.92	39.10	
Channel Bandwidth: 3 MHz / 64QAM							
X	26805	825.5	-10.06	31.208	19.00	79.43	H
	26915	836.5	-10.11	31.3	19.04	80.17	
	27025	847.5	-10.09	31.222	18.98	79.10	
	26805	825.5	-14.32	31.504	15.03	31.87	V
	26915	836.5	-13.99	31.117	14.98	31.46	
	27025	847.5	-14.83	31.922	14.94	31.20	

LTE Band 26							
Channel Bandwidth: 5 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (mW)**	**Polarization (H/V)**
X	26815	826.5	-8.02	31.208	21.04	127.00	H
	26915	836.5	-8.06	31.3	21.09	128.53	
	27015	846.5	-8.06	31.222	21.01	126.24	
	26815	826.5	-12.29	31.504	17.06	50.86	V
	26919	836.5	-11.93	31.117	17.04	50.55	
	27015	846.5	-12.77	31.922	17.00	50.14	
Channel Bandwidth: 5 MHz / 16QAM							
X	26815	826.5	-9.01	31.208	20.05	101.11	H
	26915	836.5	-9.05	31.3	20.10	102.33	
	27015	846.5	-9.06	31.222	20.01	100.28	
	26815	826.5	-13.27	31.504	16.08	40.59	V
	26919	836.5	-12.95	31.117	16.02	39.97	
	27015	846.5	-13.82	31.922	15.95	39.37	
Channel Bandwidth: 5 MHz / 64QAM							
X	26815	826.5	-10.05	31.208	19.01	79.58	H
	26915	836.5	-10.07	31.3	19.08	80.91	
	27015	846.5	-10.10	31.222	18.97	78.92	
	26815	826.5	-14.26	31.504	15.09	32.31	V
	26919	836.5	-13.94	31.117	15.03	31.82	
	27015	846.5	-14.85	31.922	14.92	31.06	

LTE Band 26							
Channel Bandwidth: 10 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (mW)**	**Polarization (H/V)**
X	26840	829.0	-7.99	31.208	21.07	127.88	H
	26915	836.5	-8.06	31.3	21.09	128.53	
	26990	844.0	-8.00	31.222	21.07	128.00	
	26840	829.0	-12.28	31.504	17.07	50.98	V
	26919	836.5	-11.94	31.117	17.03	50.43	
	26990	844.0	-12.75	31.922	17.02	50.37	
Channel Bandwidth: 10 MHz / 16QAM							
X	26840	829.0	-8.94	31.208	20.12	102.75	H
	26915	836.5	-9.06	31.3	20.09	102.09	
	26990	844.0	-9.02	31.222	20.05	101.20	
	26840	829.0	-13.25	31.504	16.10	40.78	V
	26919	836.5	-12.96	31.117	16.01	39.87	
	26990	844.0	-13.74	31.922	16.03	40.11	
Channel Bandwidth: 10 MHz / 64QAM							
X	26840	829.0	-9.90	31.208	19.16	82.38	H
	26915	836.5	-10.02	31.3	19.13	81.85	
	26990	844.0	-10.06	31.222	19.01	79.65	
	26840	829.0	-14.27	31.504	15.08	32.24	V
	26919	836.5	-13.98	31.117	14.99	31.53	
	26990	844.0	-14.70	31.922	15.07	32.15	

LTE Band 26							
Channel Bandwidth: 15 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (mW)**	**Polarization (H/V)**
X	26865	831.5	-7.92	31.208	21.14	129.96	H
	26915	836.5	-8.06	31.3	21.09	128.53	
	26965	841.5	-7.99	31.222	21.08	128.29	
	26865	831.5	-12.18	31.504	17.17	52.17	V
	26915	836.5	-11.86	31.117	17.11	51.37	
	26965	841.5	-12.71	31.922	17.06	50.84	
Channel Bandwidth: 15 MHz / 16QAM							
X	26865	831.5	-8.88	31.208	20.18	104.18	H
	26915	836.5	-9.01	31.3	20.14	103.28	
	26965	841.5	-8.98	31.222	20.09	102.14	
	26865	831.5	-13.15	31.504	16.20	41.73	V
	26915	836.5	-12.85	31.117	16.12	40.90	
	26965	841.5	-13.68	31.922	16.09	40.66	
Channel Bandwidth: 15 MHz / 64QAM							
X	26865	831.5	-9.86	31.208	19.20	83.14	H
	26915	836.5	-10.05	31.3	19.10	81.28	
	26965	841.5	-9.99	31.222	19.08	80.95	
	26865	831.5	-14.12	31.504	15.23	33.37	V
	26915	836.5	-13.87	31.117	15.10	32.34	
	26965	841.5	-14.71	31.922	15.06	32.08	

4.2 Frequency Stability Measurement

4.2.1 Limits of Frequency Stabiliity Measurement

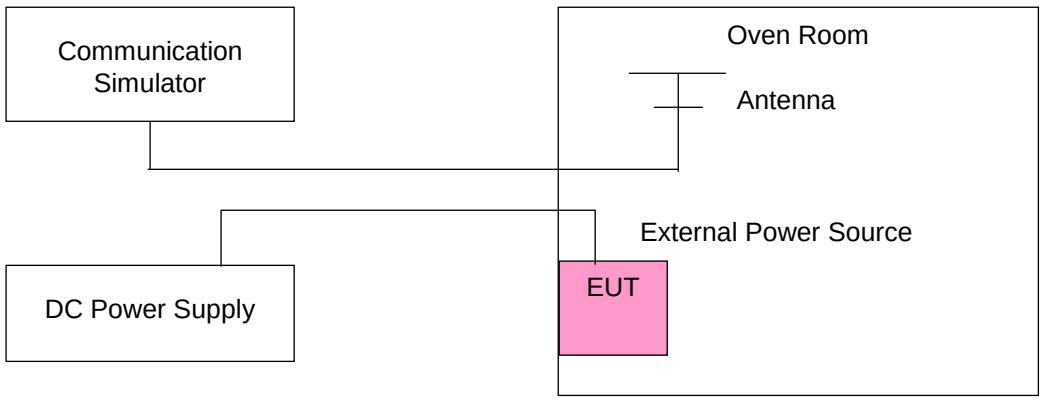
1.5 ppm is for base and fixed station. 2.5 ppm is for mobile station.

4.2.2 Test Procedure

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

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

4.2.3 Test Setup



4.2.4 Test Results

Frequency Error vs. Voltage

Voltage (Volts)	GSM				Limit (ppm)
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
3.85	824.200002	0.002	848.800002	0.002	2.5
3.6	824.200004	0.004	848.800004	0.005	2.5
4.38	824.200003	0.003	848.800003	0.004	2.5

Note: The applicant defined the normal working voltage of the battery is from 3.6 Vdc to 4.38 Vdc.

Frequency Error vs. Temperature

Temp. (℃)	GSM				Limit (ppm)
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	824.200004	0.004	848.800004	0.004	2.5
-20	824.200004	0.004	848.800002	0.002	2.5
-10	824.200002	0.003	848.800003	0.003	2.5
0	824.200001	0.002	848.800003	0.003	2.5
10	824.199996	-0.005	848.799997	-0.004	2.5
20	824.199997	-0.004	848.799997	-0.004	2.5
30	824.199999	-0.001	848.799997	-0.004	2.5
40	824.199998	-0.003	848.799997	-0.003	2.5
50	824.199998	-0.003	848.799998	-0.002	2.5
55	824.200002	0.003	848.800003	0.004	2.5

Frequency Error vs. Voltage

Voltage (Volts)	EDGE				Limit (ppm)
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
3.85	824.200002	0.002	848.800001	0.001	2.5
3.6	824.200002	0.003	848.800002	0.002	2.5
4.38	824.200002	0.002	848.800002	0.002	2.5

Note: The applicant defined the normal working voltage of the battery is from 3.6 Vdc to 4.38 Vdc.

Frequency Error vs. Temperature

Temp. (℃)	EDGE				Limit (ppm)
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	824.200002	0.003	848.800002	0.002	2.5
-20	824.200003	0.004	848.800004	0.004	2.5
-10	824.200003	0.004	848.800002	0.002	2.5
0	824.200002	0.002	848.800002	0.002	2.5
10	824.199997	-0.004	848.799999	-0.002	2.5
20	824.199997	-0.004	848.799997	-0.004	2.5
30	824.199997	-0.004	848.799996	-0.004	2.5
40	824.199998	-0.002	848.799997	-0.004	2.5
50	824.199999	-0.002	848.799997	-0.003	2.5
55	824.200003	0.004	848.800004	0.004	2.5

Frequency Error vs. Voltage

Voltage (Volts)	WCDMA				Limit (ppm)
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
3.85	826.400002	0.002	846.600002	0.003	2.5
3.6	826.400002	0.002	846.600003	0.003	2.5
4.38	826.400003	0.003	846.600004	0.004	2.5

Note: The applicant defined the normal working voltage of the battery is from 3.6 Vdc to 4.38 Vdc.

Frequency Error vs. Temperature

Temp. (℃)	WCDMA				Limit (ppm)
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	826.400002	0.003	846.600003	0.003	2.5
-20	826.400001	0.001	846.600002	0.002	2.5
-10	826.400001	0.001	846.600001	0.001	2.5
0	826.400004	0.005	846.600003	0.003	2.5
10	826.399998	-0.002	846.599999	-0.002	2.5
20	826.399998	-0.003	846.599998	-0.002	2.5
30	826.399997	-0.003	846.599996	-0.004	2.5
40	826.399998	-0.002	846.599997	-0.003	2.5
50	826.399997	-0.003	846.599997	-0.003	2.5
55	826.400002	0.003	846.600004	0.005	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 5				Limit (ppm)
	Channel Bandwidth: 1.4 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
3.85	824.700003	0.004	848.300002	0.002	2.5
3.6	824.700002	0.003	848.300001	0.001	2.5
4.38	824.700004	0.004	848.300003	0.004	2.5

Note: The applicant defined the normal working voltage of the battery is from 3.6 Vdc to 4.38 Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 5				Limit (ppm)
	Channel Bandwidth: 1.4 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	824.700003	0.004	848.300002	0.003	2.5
-20	824.700004	0.005	848.300003	0.003	2.5
-10	824.700002	0.002	848.300003	0.004	2.5
0	824.700004	0.005	848.300003	0.003	2.5
10	824.699996	-0.005	848.299999	-0.002	2.5
20	824.699997	-0.004	848.299999	-0.001	2.5
30	824.699998	-0.002	848.299998	-0.002	2.5
40	824.699996	-0.004	848.299997	-0.004	2.5
50	824.699998	-0.003	848.299997	-0.003	2.5
55	824.700001	0.002	848.300004	0.004	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 5				Limit (ppm)
	Channel Bandwidth: 3 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
3.85	825.500004	0.004	847.500003	0.004	2.5
3.6	825.500003	0.004	847.500001	0.001	2.5
4.38	825.500002	0.002	847.500001	0.001	2.5

Note: The applicant defined the normal working voltage of the battery is from 3.6 Vdc to 4.38 Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 5				Limit (ppm)
	Channel Bandwidth: 3 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	825.500002	0.003	847.500004	0.004	2.5
-20	825.500002	0.002	847.500002	0.003	2.5
-10	825.500003	0.004	847.500001	0.001	2.5
0	825.500002	0.002	847.500002	0.003	2.5
10	825.499998	-0.002	847.499999	-0.001	2.5
20	825.499997	-0.004	847.499998	-0.003	2.5
30	825.499996	-0.004	847.499999	-0.002	2.5
40	825.499998	-0.002	847.499997	-0.003	2.5
50	825.499996	-0.004	847.499997	-0.004	2.5
55	825.500003	0.004	847.500003	0.004	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 5				Limit (ppm)
	Channel Bandwidth: 5 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
3.85	826.500001	0.001	846.500003	0.004	2.5
3.6	826.500002	0.003	846.500002	0.002	2.5
4.38	826.500003	0.003	846.500003	0.003	2.5

Note: The applicant defined the normal working voltage of the battery is from 3.6 Vdc to 4.38 Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 5				Limit (ppm)
	Channel Bandwidth: 5 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	826.500003	0.004	846.500002	0.002	2.5
-20	826.500003	0.003	846.500004	0.004	2.5
-10	826.500004	0.004	846.500001	0.001	2.5
0	826.500004	0.004	846.500002	0.003	2.5
10	826.499996	-0.004	846.499998	-0.003	2.5
20	826.499998	-0.002	846.499998	-0.003	2.5
30	826.499998	-0.002	846.499997	-0.004	2.5
40	826.499996	-0.005	846.499997	-0.004	2.5
50	826.499996	-0.005	846.499997	-0.004	2.5
55	826.500004	0.005	846.500003	0.004	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 5				Limit (ppm)
	Channel Bandwidth: 10 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
3.85	829.000003	0.004	844.000004	0.004	2.5
3.6	829.000001	0.001	844.000001	0.001	2.5
4.38	829.000002	0.002	844.000002	0.002	2.5

Note: The applicant defined the normal working voltage of the battery is from 3.6 Vdc to 4.38 Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 5				Limit (ppm)
	Channel Bandwidth: 10 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	829.000001	0.001	844.000002	0.003	2.5
-20	829.000001	0.002	844.000002	0.002	2.5
-10	829.000003	0.003	844.000002	0.003	2.5
0	829.000003	0.004	844.000004	0.004	2.5
10	828.999999	-0.002	843.999996	-0.004	2.5
20	828.999997	-0.004	843.999996	-0.005	2.5
30	828.999997	-0.004	843.999998	-0.003	2.5
40	828.999998	-0.002	843.999998	-0.002	2.5
50	828.999996	-0.005	843.999997	-0.004	2.5
55	829.000002	0.002	844.000001	0.002	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 26				Limit (ppm)
	Channel Bandwidth: 1.4 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
3.85	824.700001	0.002	848.300001	0.001	2.5
3.6	824.700004	0.004	848.300004	0.005	2.5
4.38	824.700004	0.005	848.300002	0.002	2.5

Note: The applicant defined the normal working voltage of the battery is from 3.6 Vdc to 4.38 Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 26				Limit (ppm)
	Channel Bandwidth: 1.4 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	824.700002	0.003	848.300003	0.003	2.5
-20	824.700001	0.001	848.300002	0.002	2.5
-10	824.700002	0.003	848.300001	0.001	2.5
0	824.700002	0.002	848.300003	0.003	2.5
10	824.699997	-0.003	848.299997	-0.004	2.5
20	824.699996	-0.004	848.299997	-0.004	2.5
30	824.699999	-0.002	848.299996	-0.005	2.5
40	824.699999	-0.002	848.299999	-0.001	2.5
50	824.699998	-0.003	848.299996	-0.005	2.5
55	824.700004	0.004	848.300003	0.003	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 26				Limit (ppm)
	Channel Bandwidth: 3 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
3.85	825.500004	0.005	847.500002	0.003	2.5
3.6	825.500002	0.002	847.500001	0.002	2.5
4.38	825.500001	0.001	847.500004	0.004	2.5

Note: The applicant defined the normal working voltage of the battery is from 3.6 Vdc to 4.38 Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 26				Limit (ppm)
	Channel Bandwidth: 3 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	825.500002	0.003	847.500004	0.004	2.5
-20	825.500002	0.002	847.500001	0.002	2.5
-10	825.500002	0.002	847.500001	0.001	2.5
0	825.500002	0.002	847.500004	0.004	2.5
10	825.499996	-0.005	847.499997	-0.004	2.5
20	825.499997	-0.004	847.499996	-0.005	2.5
30	825.499998	-0.003	847.499998	-0.003	2.5
40	825.499998	-0.002	847.499998	-0.002	2.5
50	825.499999	-0.002	847.499998	-0.003	2.5
55	825.500002	0.003	847.500003	0.004	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 26				Limit (ppm)
	Channel Bandwidth: 5 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
3.85	826.500003	0.004	846.500002	0.002	2.5
3.6	826.500004	0.004	846.500001	0.001	2.5
4.38	826.500003	0.004	846.500003	0.003	2.5

Note: The applicant defined the normal working voltage of the battery is from 3.6 Vdc to 4.38 Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 26				Limit (ppm)
	Channel Bandwidth: 5 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	826.500003	0.003	846.500003	0.004	2.5
-20	826.500001	0.001	846.500003	0.004	2.5
-10	826.500004	0.004	846.500002	0.002	2.5
0	826.500002	0.003	846.500002	0.003	2.5
10	826.499996	-0.004	846.499998	-0.003	2.5
20	826.499996	-0.005	846.499997	-0.003	2.5
30	826.499997	-0.004	846.499997	-0.003	2.5
40	826.499998	-0.002	846.499998	-0.002	2.5
50	826.499998	-0.003	846.499999	-0.001	2.5
55	826.500002	0.003	846.500003	0.003	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 26				Limit (ppm)
	Channel Bandwidth: 10 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
3.85	829.000002	0.002	844.000003	0.003	2.5
3.6	829.000003	0.004	844.000002	0.002	2.5
4.38	829.000002	0.003	844.000003	0.003	2.5

Note: The applicant defined the normal working voltage of the battery is from 3.6 Vdc to 4.38 Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 26				Limit (ppm)
	Channel Bandwidth: 10 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	829.000002	0.003	844.000004	0.005	2.5
-20	829.000001	0.001	844.000002	0.002	2.5
-10	829.000004	0.004	844.000001	0.002	2.5
0	829.000003	0.004	844.000001	0.001	2.5
10	828.999997	-0.004	843.999997	-0.004	2.5
20	828.999998	-0.002	843.999996	-0.005	2.5
30	828.999996	-0.005	843.999999	-0.002	2.5
40	828.999999	-0.001	843.999999	-0.002	2.5
50	828.999997	-0.004	843.999998	-0.002	2.5
55	829.000003	0.003	844.000004	0.004	2.5

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 26				Limit (ppm)
	Channel Bandwidth: 15 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
3.85	831.500003	0.003	841.500004	0.005	2.5
3.6	831.500004	0.005	841.500001	0.002	2.5
4.38	831.500003	0.004	841.500002	0.002	2.5

Note: The applicant defined the normal working voltage of the battery is from 3.6 Vdc to 4.38 Vdc.

Frequency Error vs. Temperature

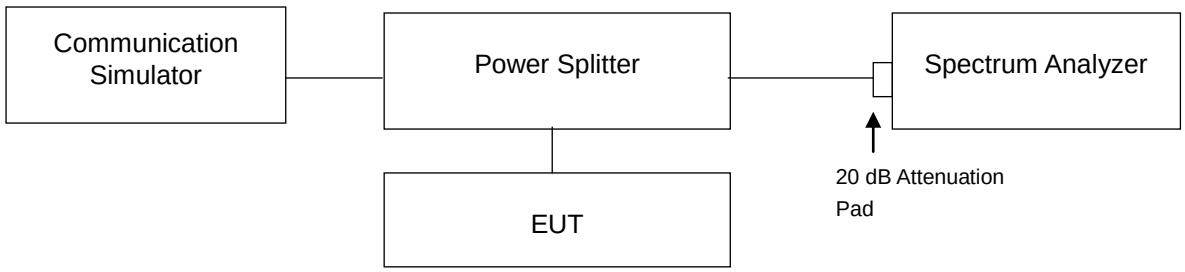
Temp. (℃)	LTE Band 26				Limit (ppm)
	Channel Bandwidth: 15 MHz				
	Low Channel		High Channel		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-30	831.500001	0.002	841.500003	0.003	2.5
-20	831.500002	0.003	841.500003	0.003	2.5
-10	831.500003	0.004	841.500002	0.003	2.5
0	831.500002	0.002	841.500002	0.002	2.5
10	831.499996	-0.005	841.499997	-0.003	2.5
20	831.499999	-0.002	841.499998	-0.002	2.5
30	831.499999	-0.001	841.499999	-0.001	2.5
40	831.499998	-0.003	841.499998	-0.003	2.5
50	831.499997	-0.003	841.499997	-0.004	2.5
55	831.500003	0.003	841.500001	0.002	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

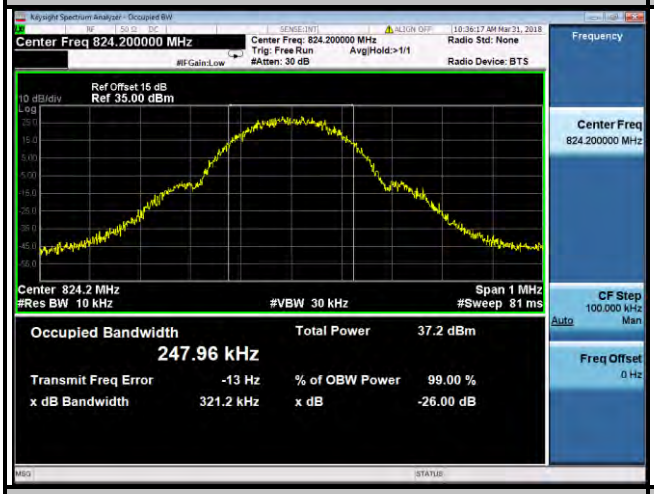


4.3.3 Test Result

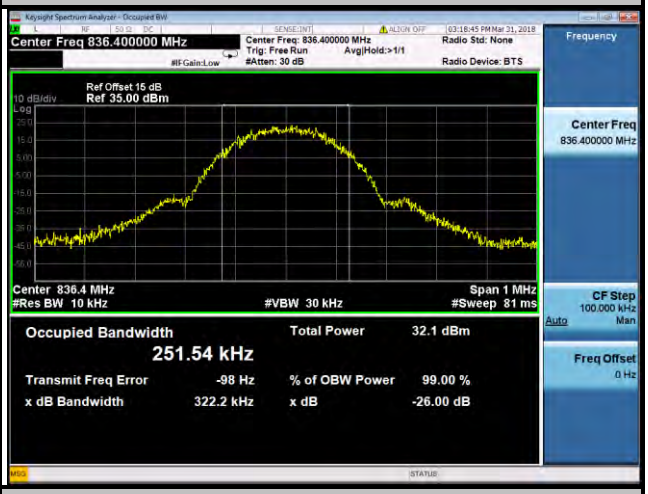
Channel	Frequency (MHz)	99 % Occupied Bandwidth (kHz)		Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)
		GSM	EDGE			WCDMA
128	824.2	247.96	247.69	4132	826.4	4.1443
189	836.4	245.97	251.54	4182	836.4	4.1323
251	848.8	246.46	250.35	4233	846.6	4.1437

Spectrum Plot of Worst Value

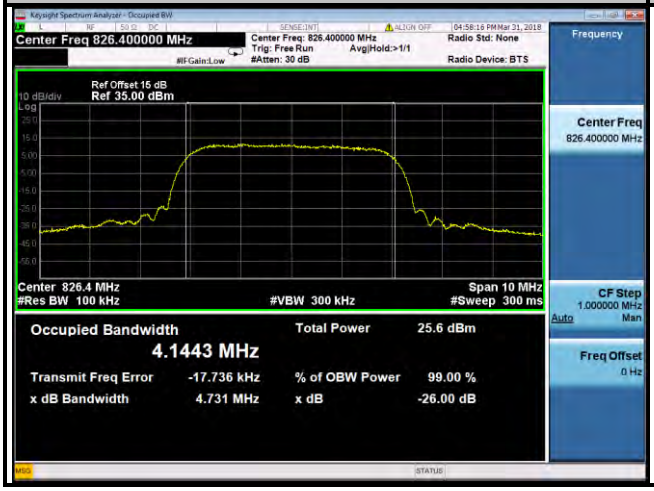
GSM



EDGE



WCDMA



LTE Band 5									
Channel Bandwidth: 1.4 MHz					Channel Bandwidth: 3 MHz				
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)			Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
20407	824.7	1.0866	1.0912	1.0862	20415	825.5	2.6972	2.6929	2.6989
20525	836.5	1.0876	1.0867	1.0872	20525	836.5	2.7009	2.6945	2.7029
20643	848.3	1.0864	1.0891	1.0861	20635	847.5	2.6978	2.6945	2.7026

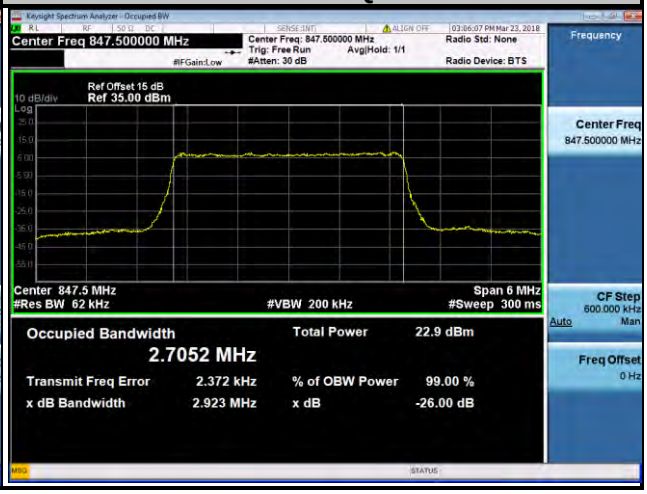
Spectrum Plot of Worst Value	
1.4 MHz / 16QAM	3 MHz / 64QAM
	

LTE Band 5									
Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)			Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
20425	826.5	4.4874	4.4903	4.4852	20450	829.0	8.9830	8.9813	8.9749
20525	836.5	4.4814	4.4850	4.4865	20525	836.5	8.9442	8.9482	8.9419
20625	846.5	4.4904	4.4924	4.4971	20600	844.0	8.9865	8.9800	8.9864

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

LTE Band 26									
Channel Bandwidth: 1.4 MHz					Channel Bandwidth: 3 MHz				
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)			Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
26797	824.7	1.0859	1.0872	1.0867	26805	825.5	2.6971	2.6906	2.7015
26915	836.5	1.0883	1.0875	1.0869	26915	836.5	2.7003	2.6961	2.7015
27033	848.3	1.0867	1.0868	1.0860	27025	847.5	2.6985	2.6967	2.7052

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



LTE Band 26									
Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)			Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
26815	826.5	4.4855	4.4863	4.4872	26840	829.0	8.9795	8.9767	8.9753
26915	836.5	4.4849	4.4852	4.4895	26915	836.5	8.9474	8.9503	8.9428
27015	846.5	4.4901	4.4915	4.4954	26990	844.0	8.9836	8.9862	8.9845

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

LTE Band 26				
Channel Bandwidth: 15 MHz				
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
26865	831.5	13.510	13.497	13.497
26915	836.5	13.408	13.399	13.393
26965	841.5	13.430	13.426	13.410

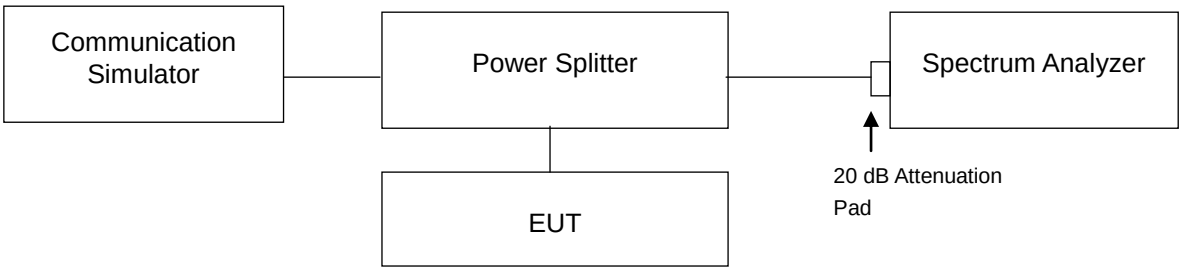
Spectrum Plot of Worst Value
15 MHz / QPSK

4.4 Band Edge Measurement

4.4.1 Limits of Band Edge Measurement

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

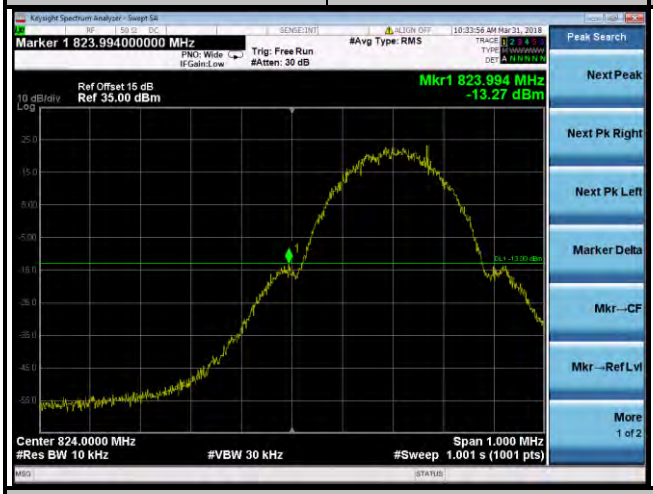
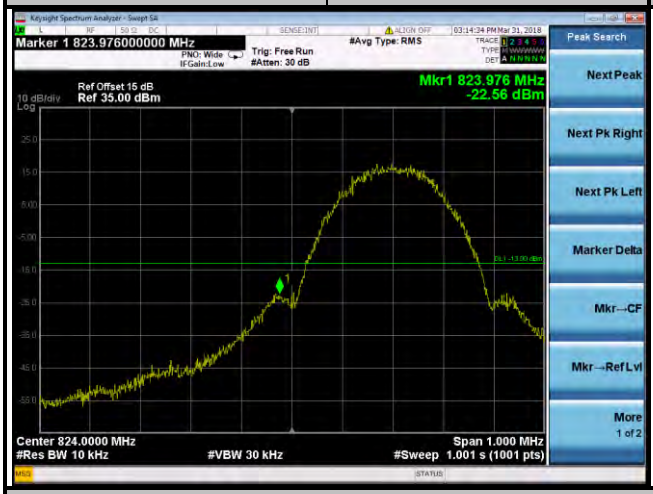
4.4.2 Test Setup

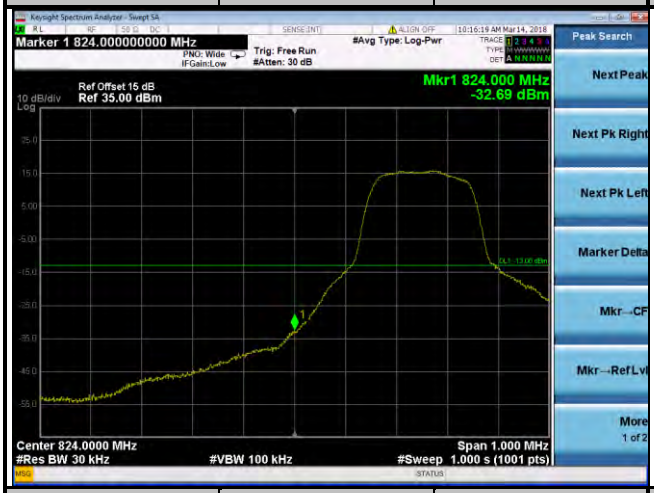
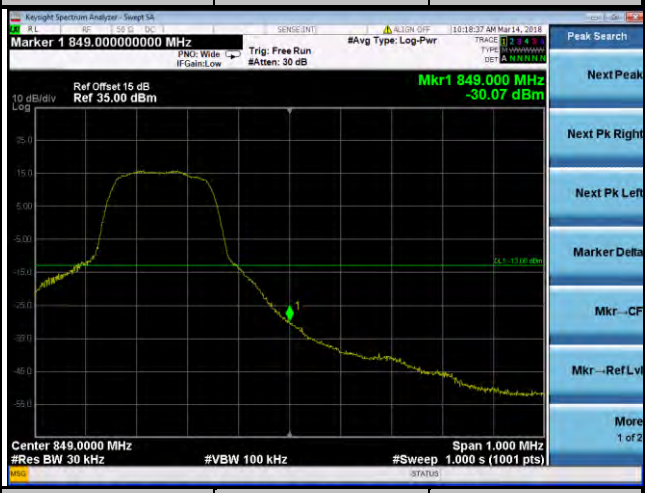
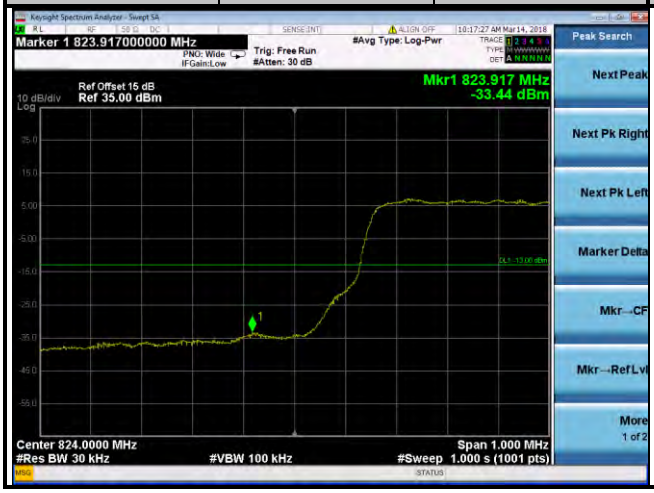
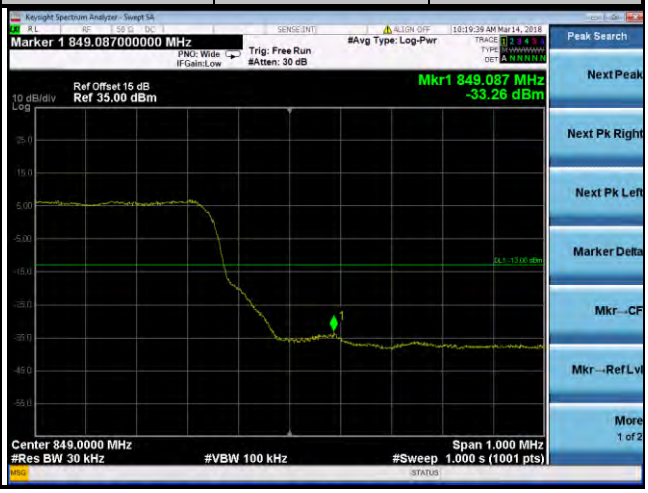


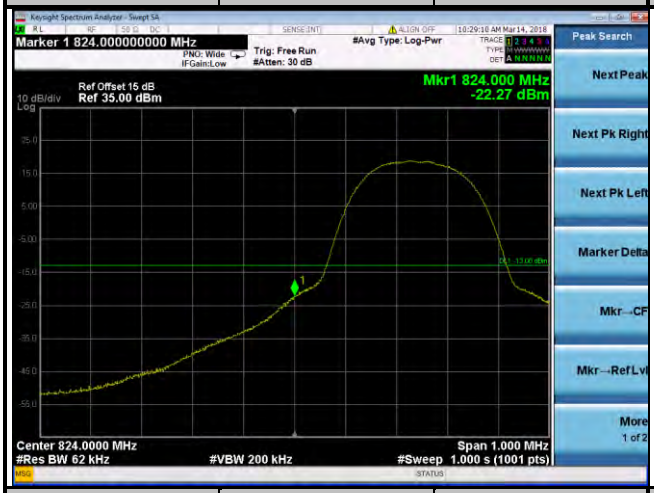
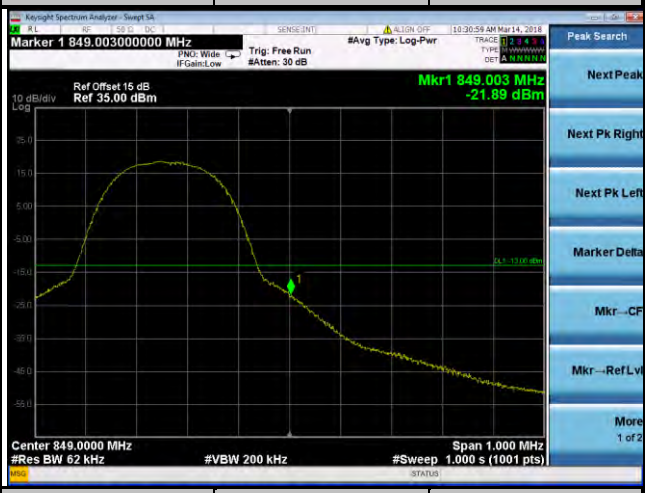
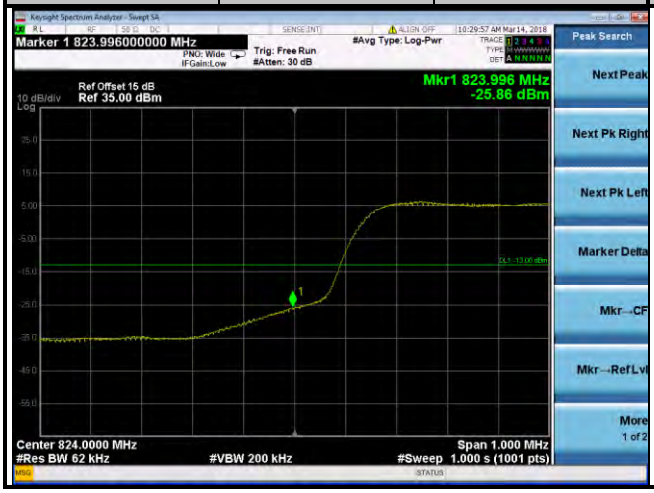
4.4.3 Test Procedures

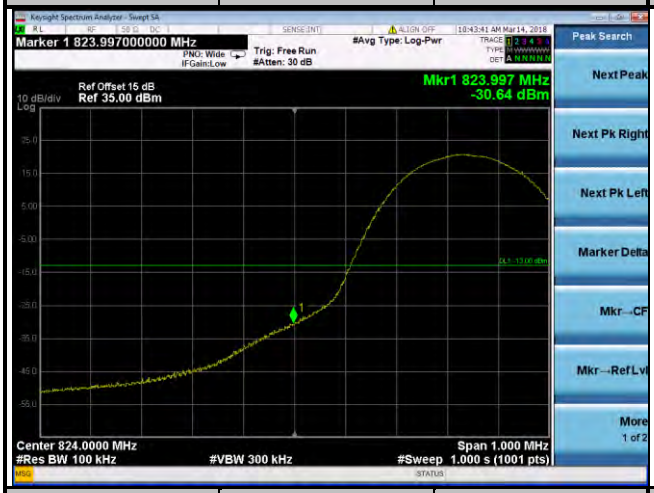
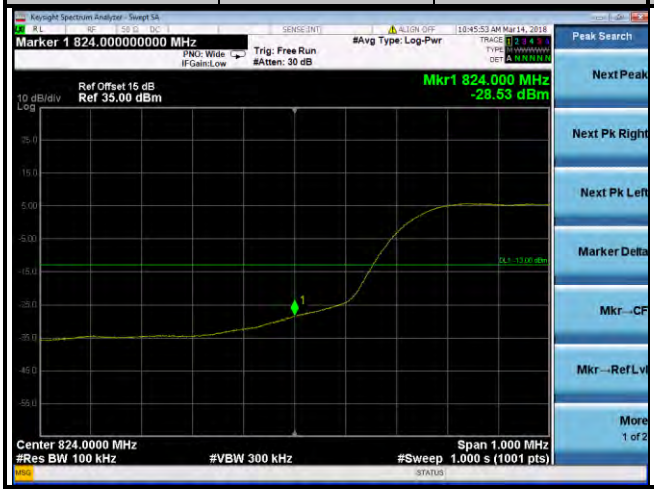
a. All measurements were done at low and high operational frequency range.
b. The center frequency of spectrum is the band edge frequency and span is 5 MHz. RB of the spectrum is 100 kHz and VB of the spectrum is 300 kHz (WCDMA).
c. The center frequency of spectrum is the band edge frequency and span is 1 MHz. RB of the spectrum is 30 kHz and VB of the spectrum is 100 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 62 kHz and VB of the spectrum is 200 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).
f. The center frequency of spectrum is the band edge frequency and span is 1 MHz. RB of the spectrum is 200 kHz and VB of the spectrum is 1 MHz (LTE Bandwidth 10 MHz).
g. The center frequency of spectrum is the band edge frequency and span is 1MHz. RB of the spectrum is 300 kHz and VB of the spectrum is 1 MHz (LTE Bandwidth 15 MHz).
h. Record the max trace plot into the test report.

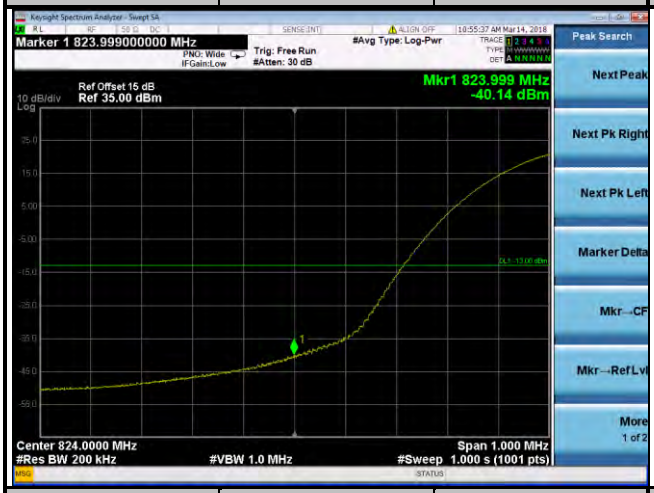
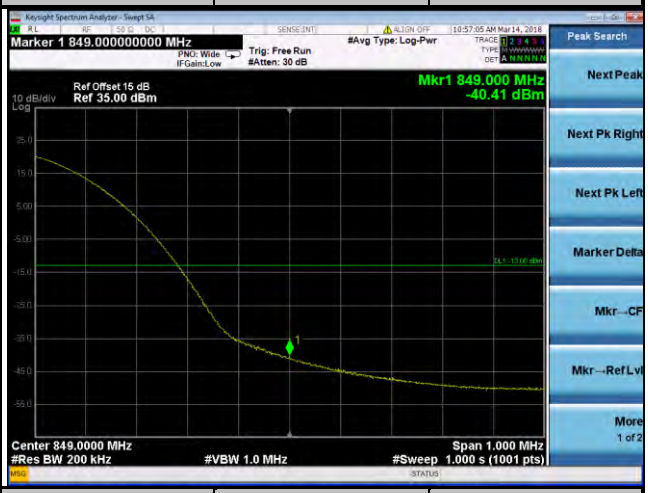
4.4.4 Test Results

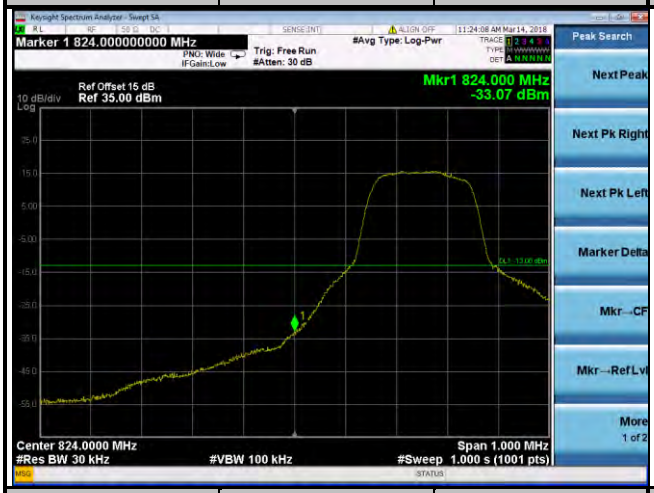
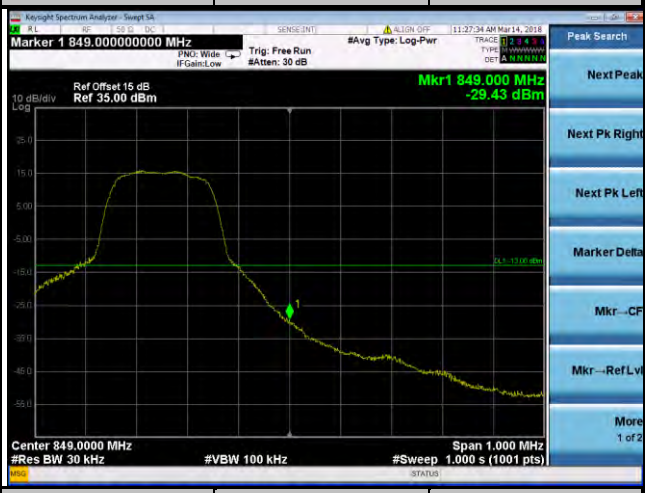
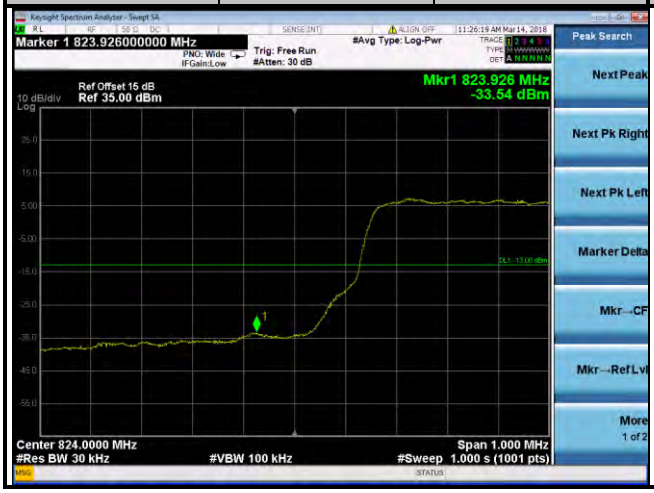
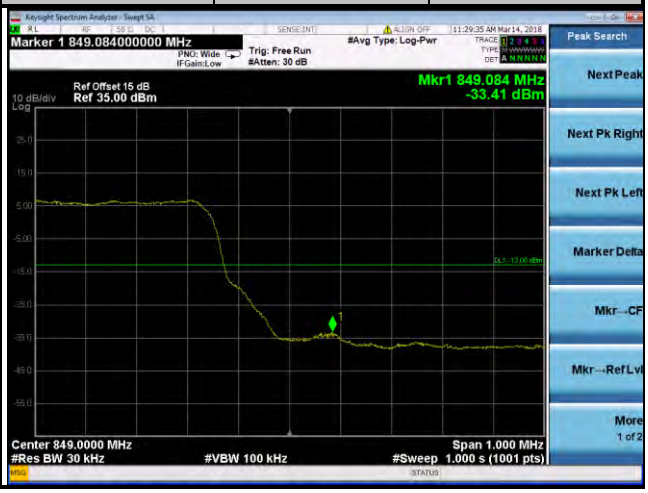
GSM			
Channel	128	Channel	251
			
EDGE			
Channel	128	Channel	251
			
WCDMA			
Channel	4132	Channel	4233
			

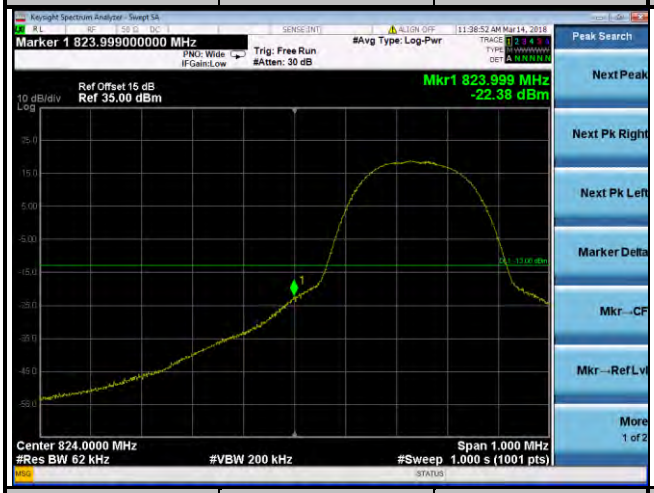
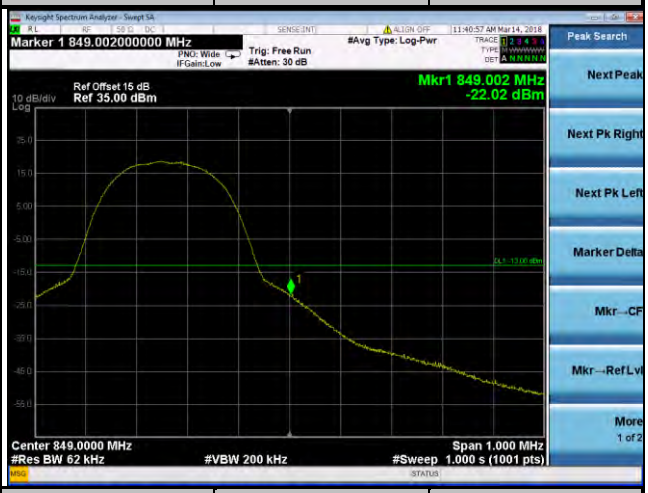
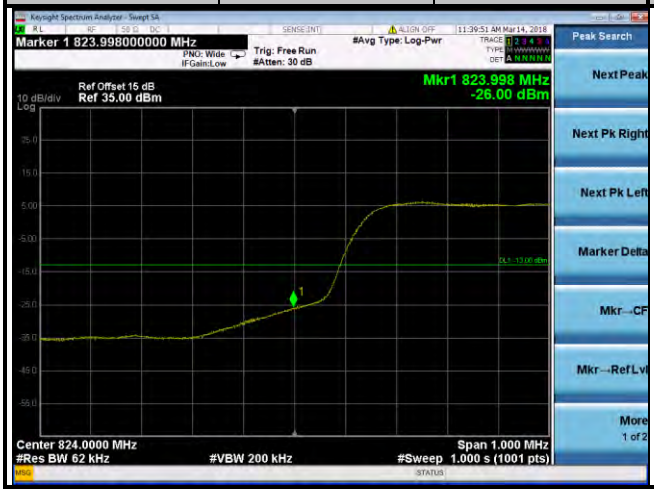
LTE Band 5					
Channel Bandwidth: 1.4 MHz					
Channel	20407	1 RB	Channel	20643	1 RB
					
Channel	20407	6 RB	Channel	20643	6 RB
					

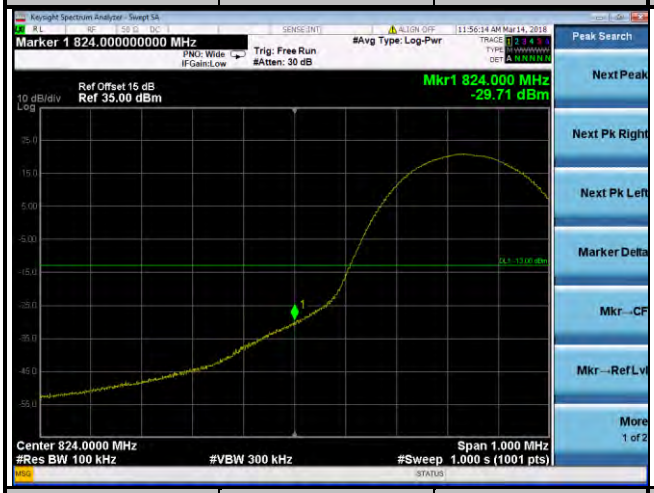
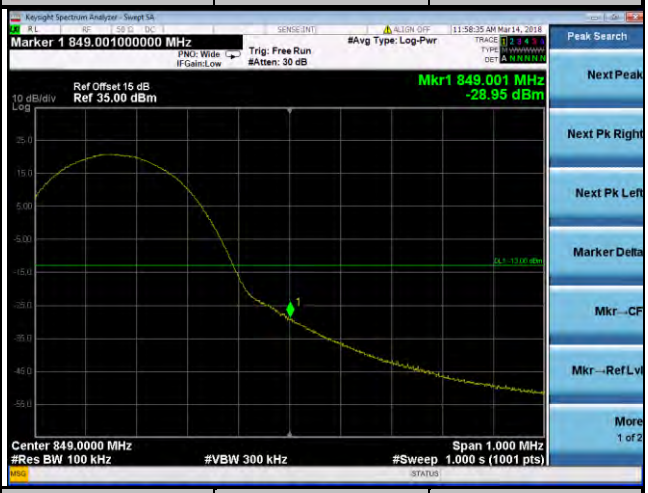
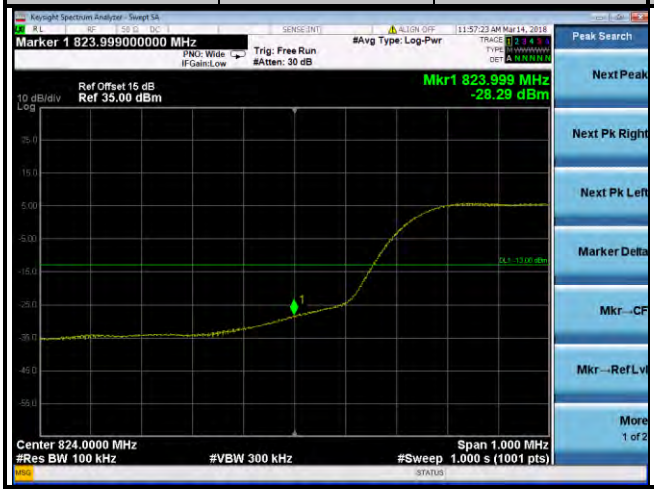
LTE Band 5					
Channel Bandwidth: 3 MHz					
Channel	20415	1 RB	Channel	20635	1 RB
					
Channel	20415	15 RB	Channel	20635	15 RB
					

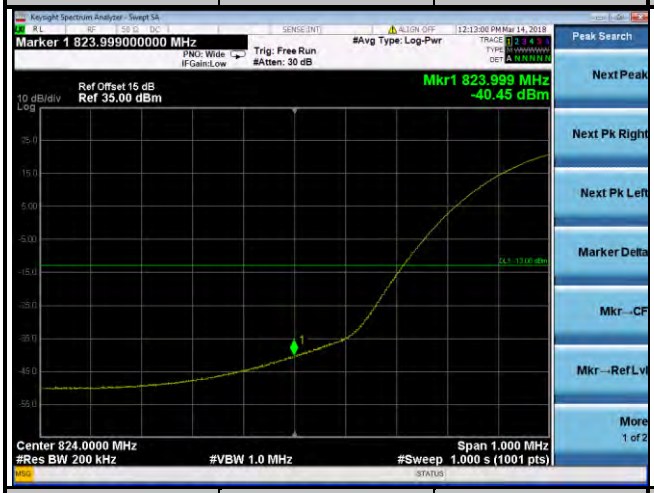
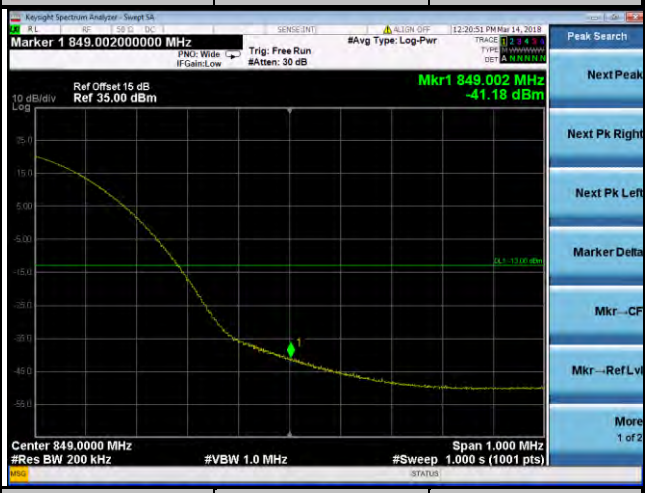
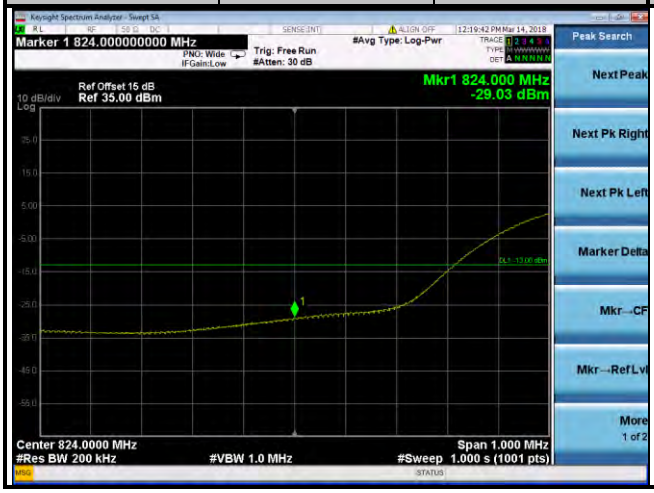
LTE Band 5					
Channel Bandwidth: 5 MHz					
Channel	20425	1 RB	Channel	20625	1 RB
					
Channel	20425	25 RB	Channel	20625	25 RB
					

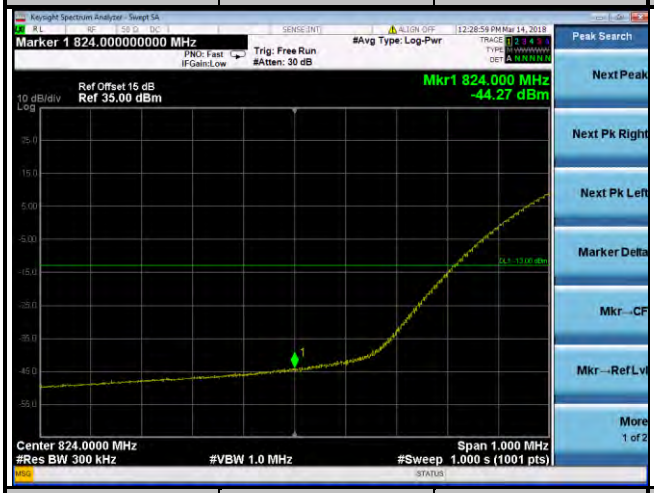
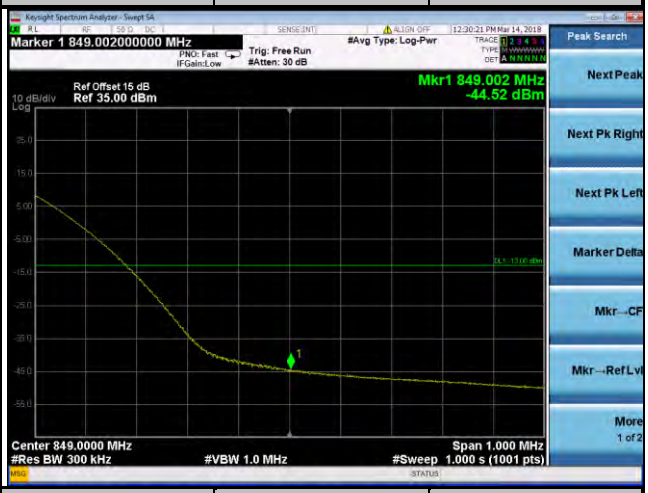
LTE Band 5					
Channel Bandwidth: 10 MHz					
Channel	20450	1 RB	Channel	20600	1 RB
					
Channel	20450	50 RB	Channel	20600	50 RB
					

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

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

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

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

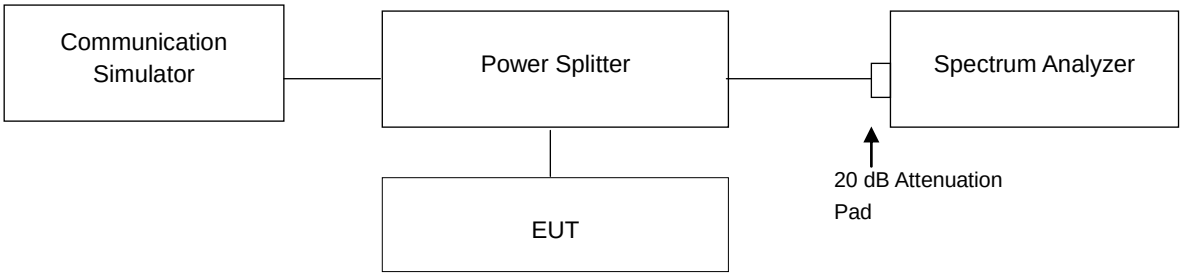
LTE Band 26					
Channel Bandwidth: 15 MHz					
Channel	26865	1 RB	Channel	26965	1 RB
					
Channel	26865	75 RB	Channel	26965	75 RB
					

4.5 Peak to Average Ratio

4.5.1 Limits of Peak to Average Ratio Measurement

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

4.5.2 Test Setup



4.5.3 Test Procedures

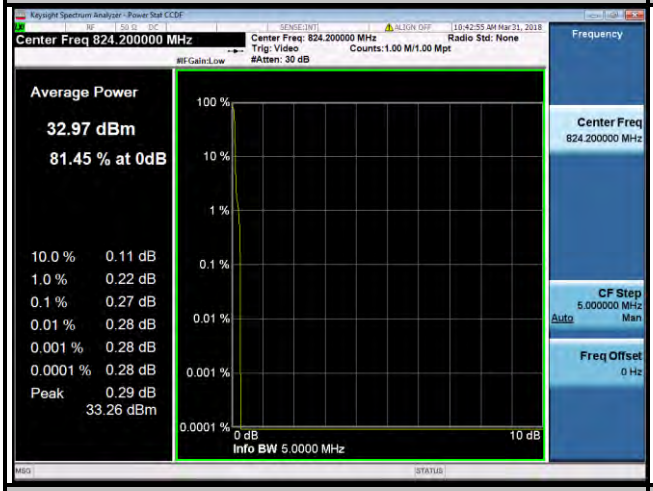
1. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Record the maximum PAPR level associated with a probability of 0.1 %.

4.5.4 Test Results

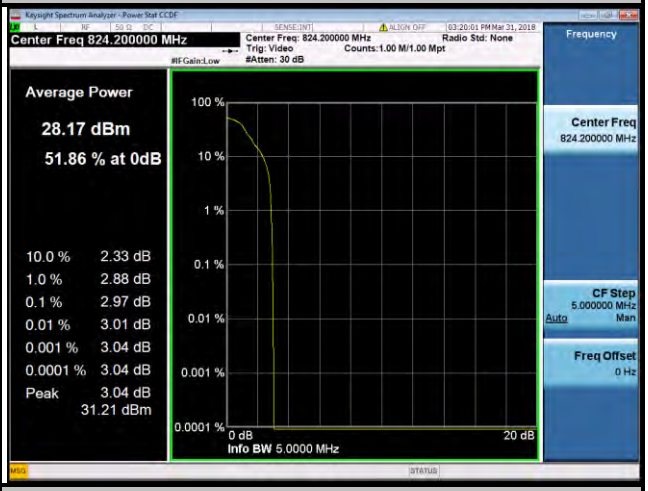
Channel	Frequency (MHz)	Peak to Average Ratio (dB)		Channel	Frequency (MHz)	Peak to Average Ratio (dB)
		GSM	EDGE			WCDMA
128	824.2	0.27	2.97	4132	826.4	2.95
189	836.4	0.21	2.95	4182	836.4	2.98
251	848.8	0.14	2.96	4233	846.6	2.92

Spectrum Plot of Worst Value

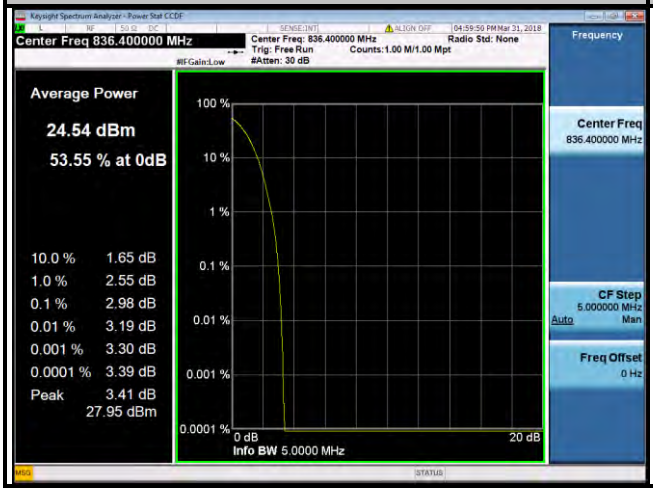
GSM



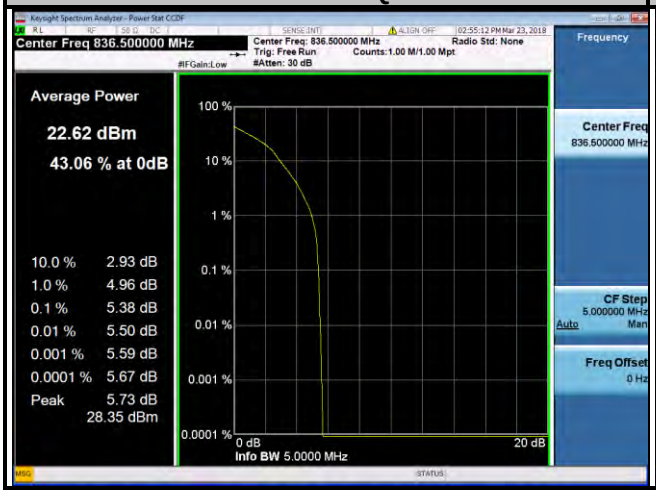
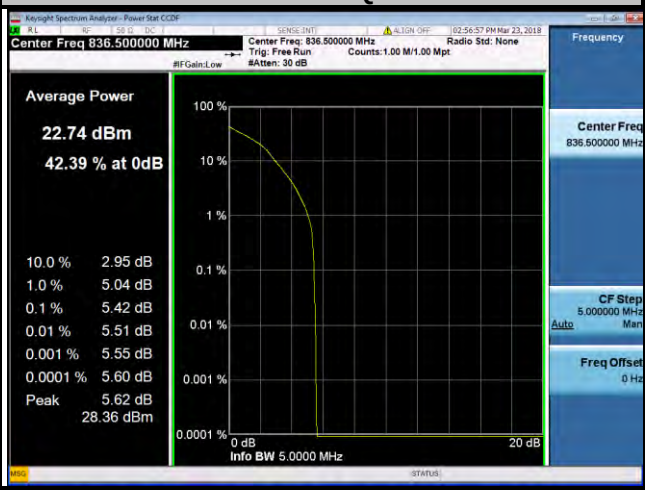
EDGE



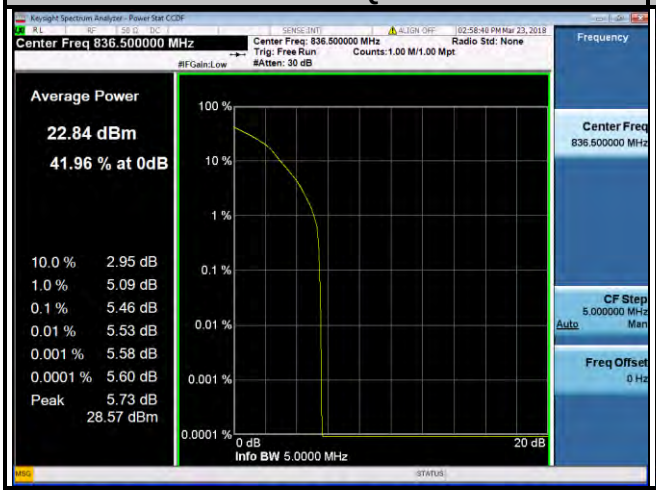
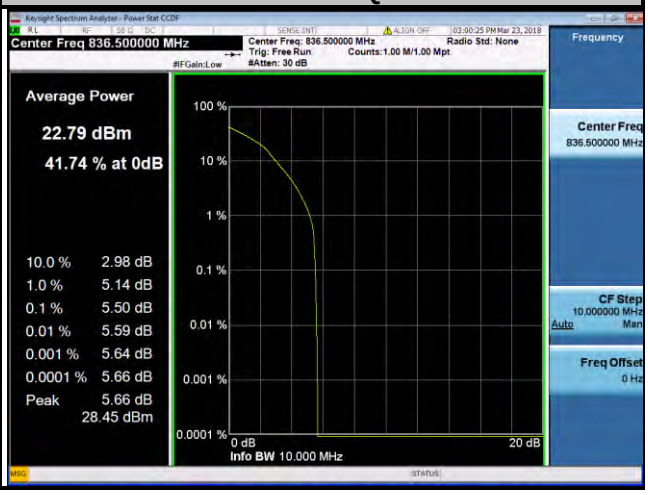
WCDMA



LTE Band 5									
Channel Bandwidth: 1.4 MHz					Channel Bandwidth: 3 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)			Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
20407	824.7	3.63	4.97	5.00	20415	825.5	3.43	4.83	4.91
20525	836.5	3.84	5.35	5.38	20525	836.5	3.69	5.28	5.42
20643	848.3	3.64	4.97	5.11	20635	847.5	3.63	5.11	5.21

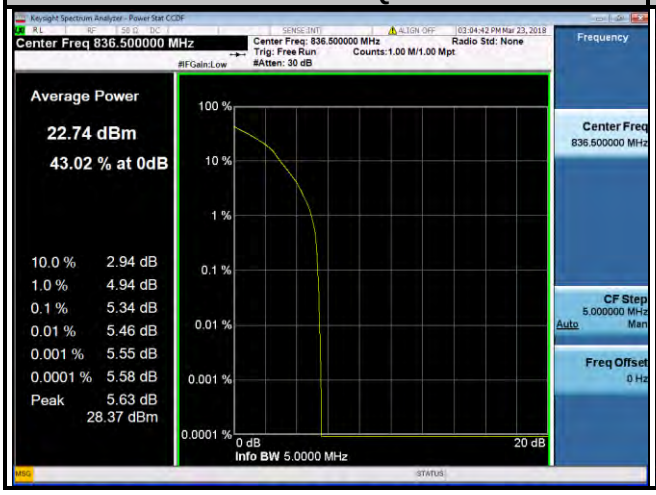
Spectrum Plot of Worst Value	
1.4 MHz / 64QAM	3 MHz / 64QAM
	

LTE Band 5									
Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)			Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
20425	826.5	3.44	4.82	4.86	20450	829.0	3.36	4.72	4.88
20525	836.5	3.74	5.36	5.46	20525	836.5	3.69	5.43	5.50
20625	846.5	3.47	4.86	4.93	20600	844.0	3.14	4.46	4.49

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

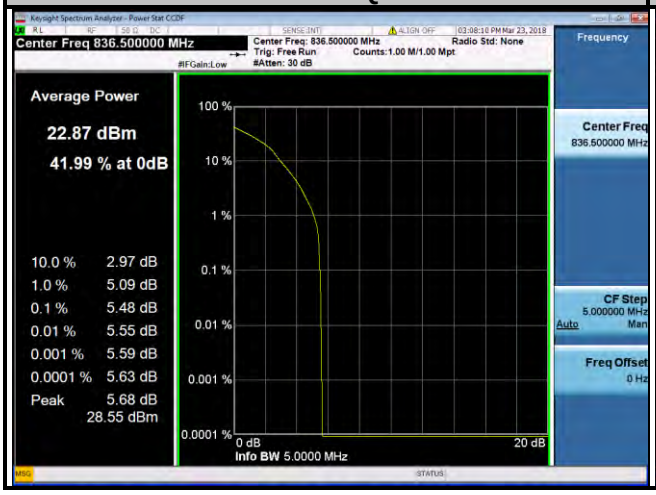
LTE Band 26									
Channel Bandwidth: 1.4 MHz					Channel Bandwidth: 3 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)			Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
26797	824.7	3.63	4.98	4.98	26805	825.5	3.44	4.84	4.90
26915	836.5	3.82	5.30	5.34	26915	836.5	3.72	5.36	5.36
27033	848.3	3.62	4.97	5.04	27025	847.5	3.62	5.10	5.27

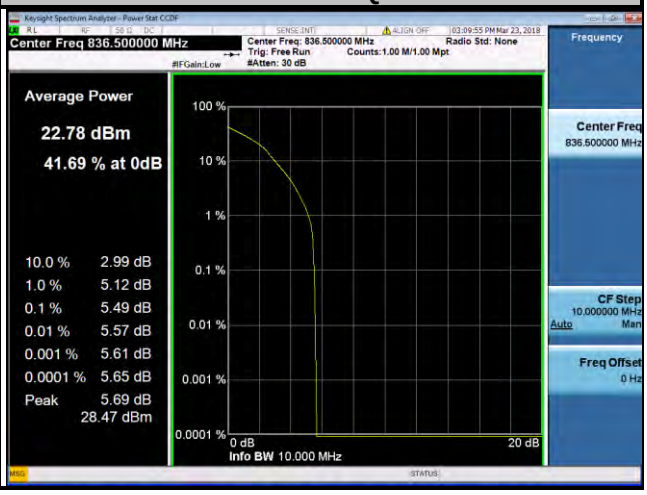
Spectrum Plot of Worst Value	
1.4 MHz / 64QAM	3 MHz / 64QAM



LTE Band 26									
Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)			Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM			QPSK	16QAM	64QAM
26815	826.5	3.44	4.85	4.87	26840	829.0	3.38	4.83	4.84
26915	836.5	3.76	5.38	5.48	26915	836.5	3.73	5.43	5.49
27015	846.5	3.48	4.87	4.90	26990	844.0	3.16	4.45	4.49

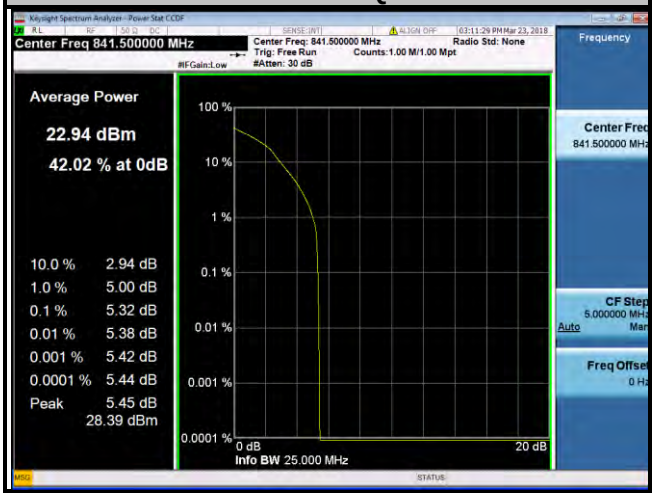
Spectrum Plot of Worst Value	
5 MHz / 64QAM	10 MHz / 64QAM





LTE Band 26				
Channel Bandwidth: 15 MHz				
Channel	Frequency (MHz)	Peak to Average Ratio (dB)		
		QPSK	16QAM	64QAM
26865	831.5	3.37	4.81	4.77
26915	836.5	3.65	5.26	5.31
26965	841.5	3.61	5.25	5.32

Spectrum Plot of Worst Value
15 MHz / 64QAM

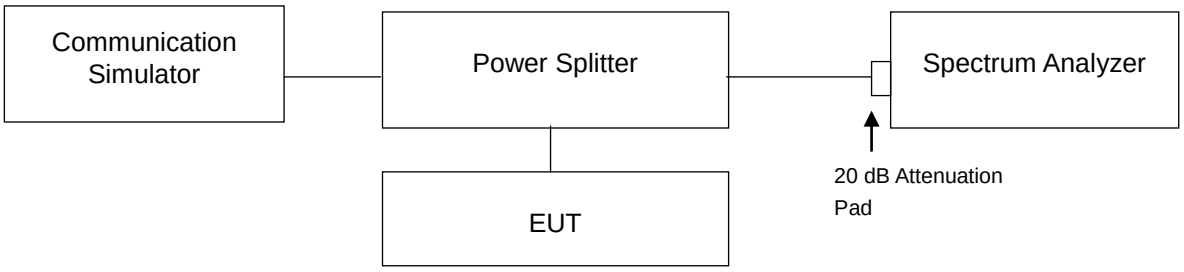


4.6 Conducted Spurious Emissions

4.6.1 Limits of Conducted Spurious Emissions Measurement

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

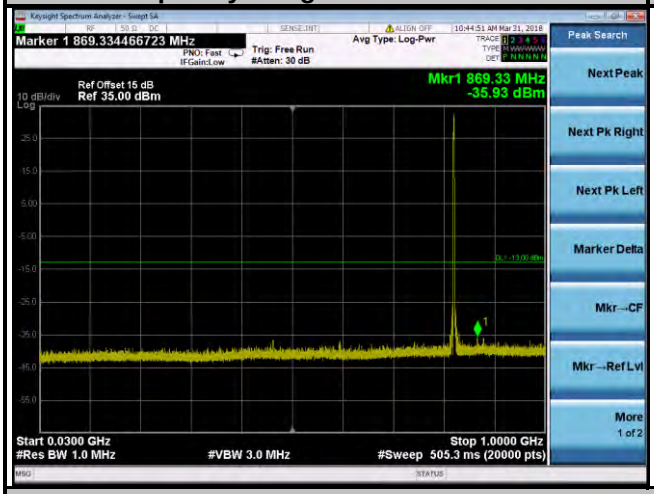
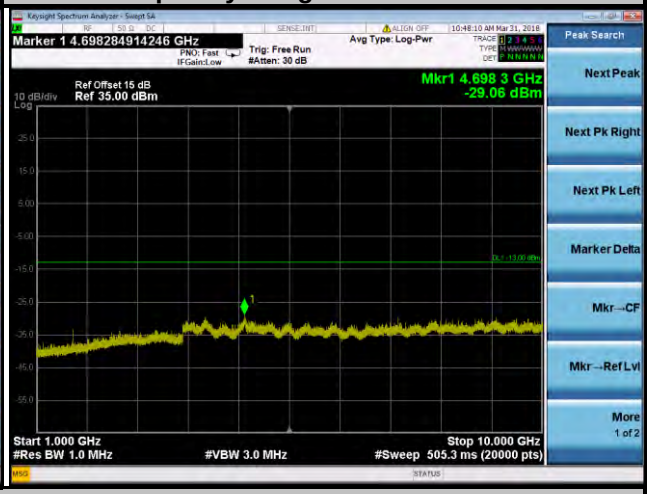
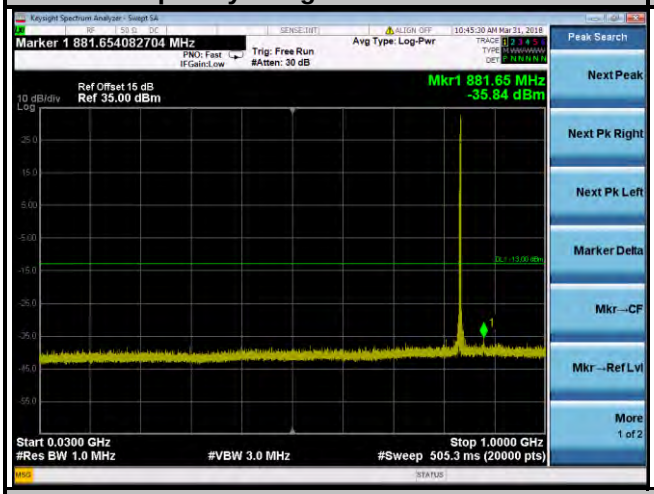
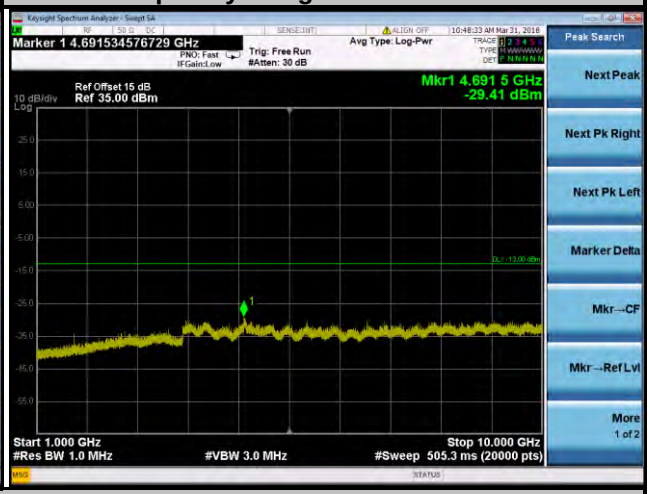
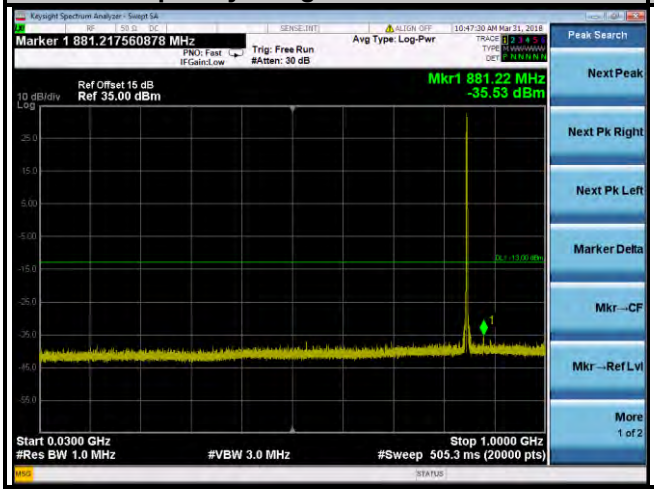
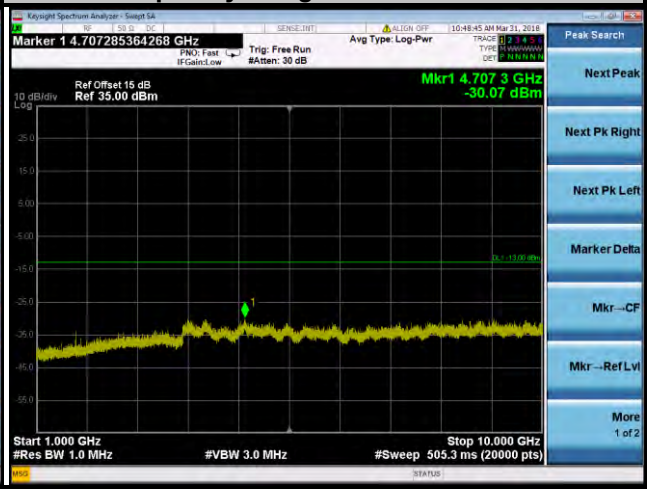
4.6.2 Test Setup

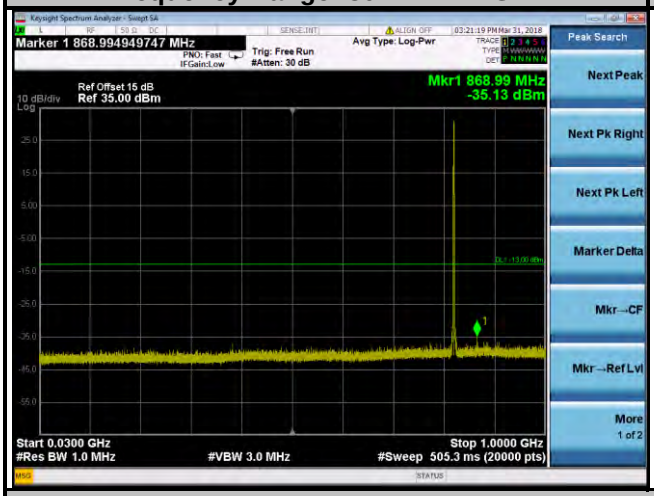
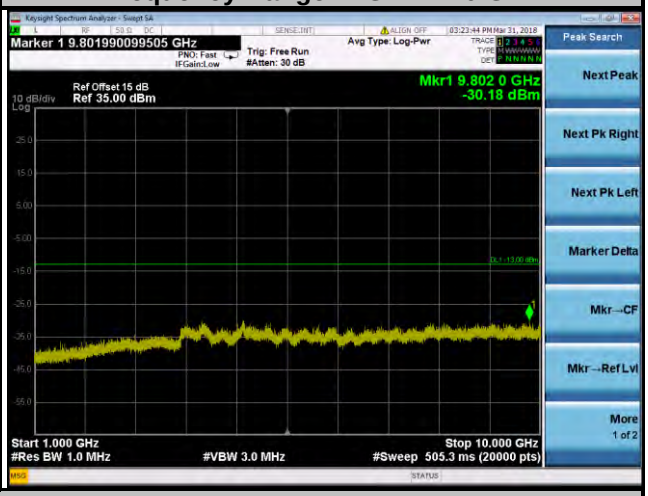
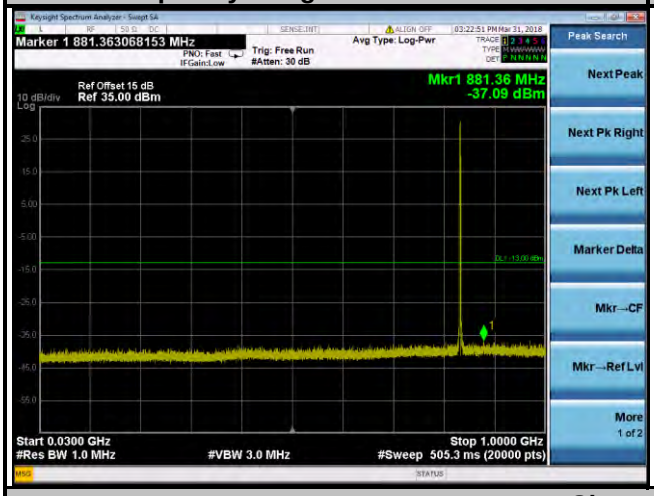
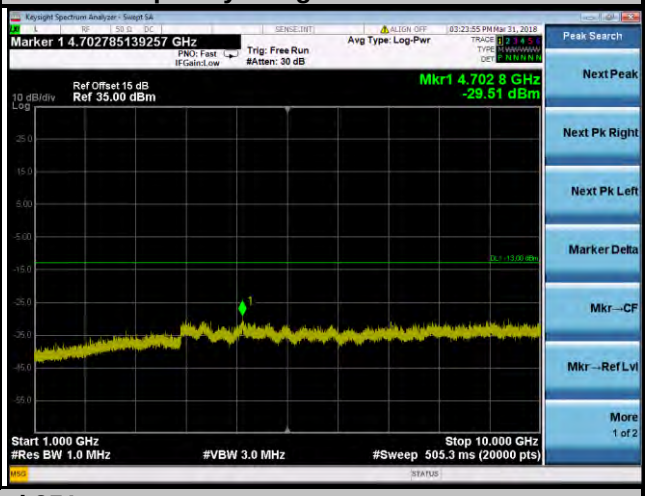
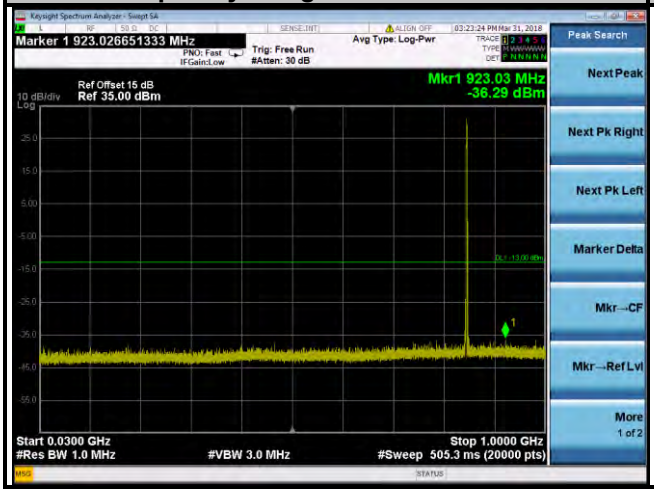
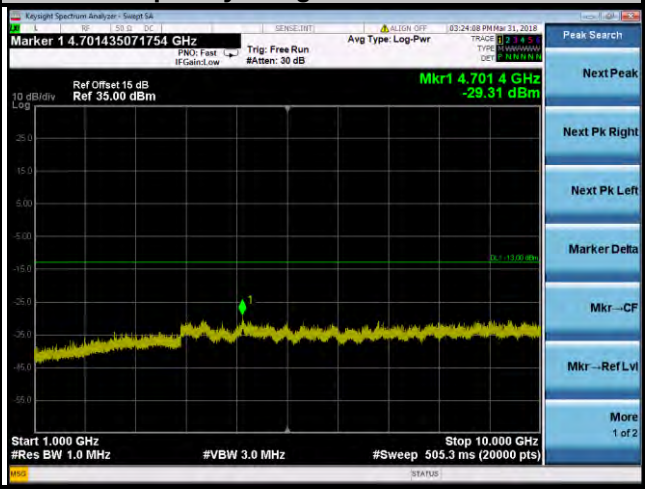


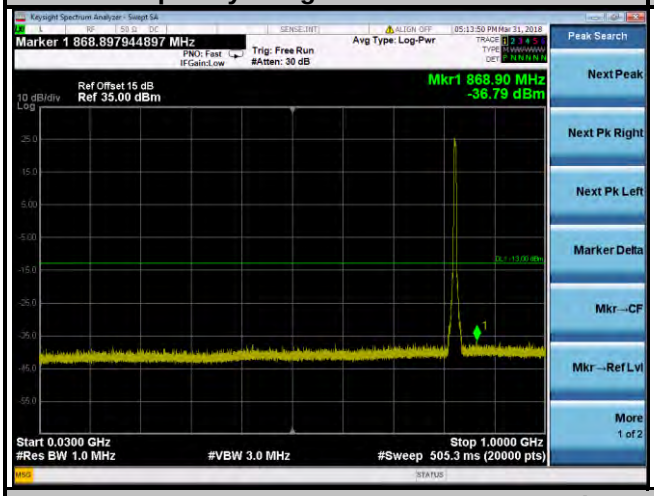
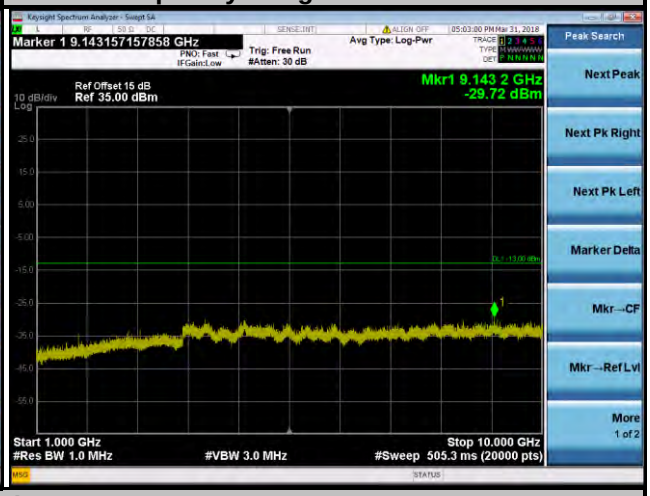
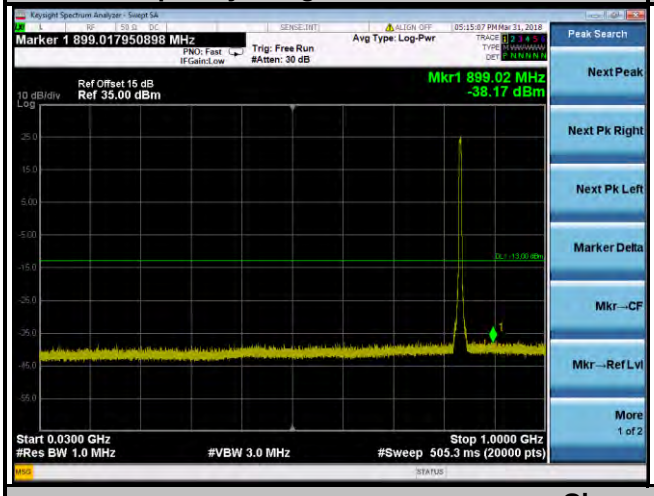
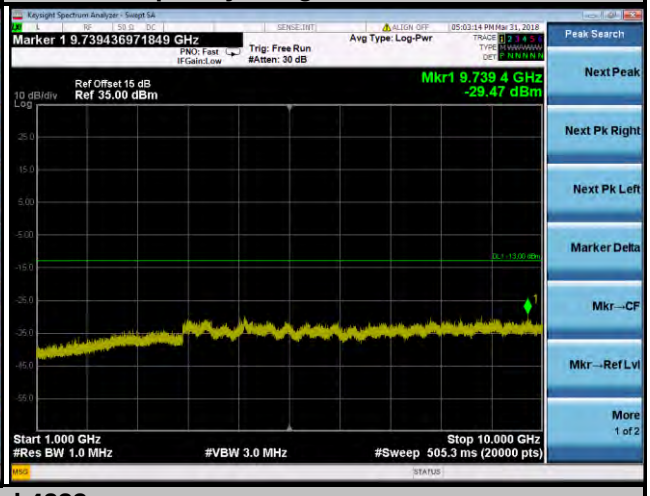
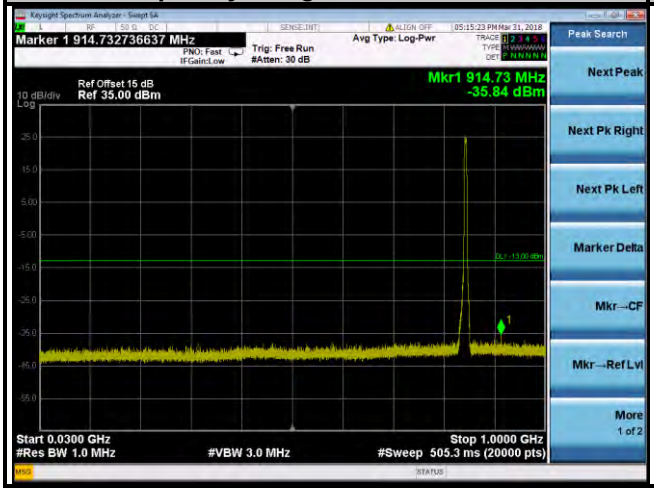
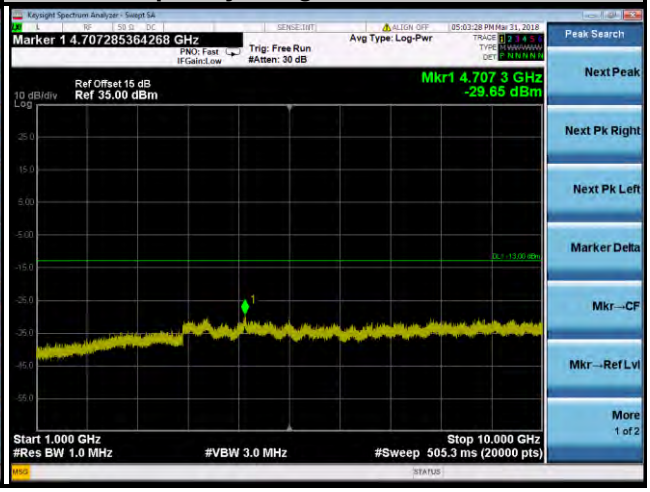
4.6.3 Test Procedure

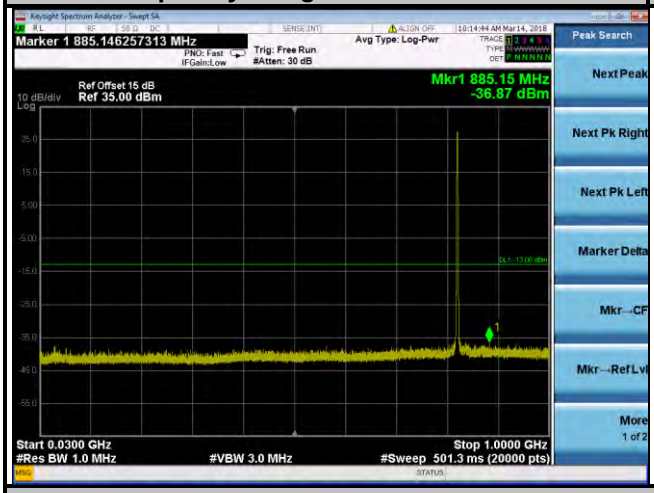
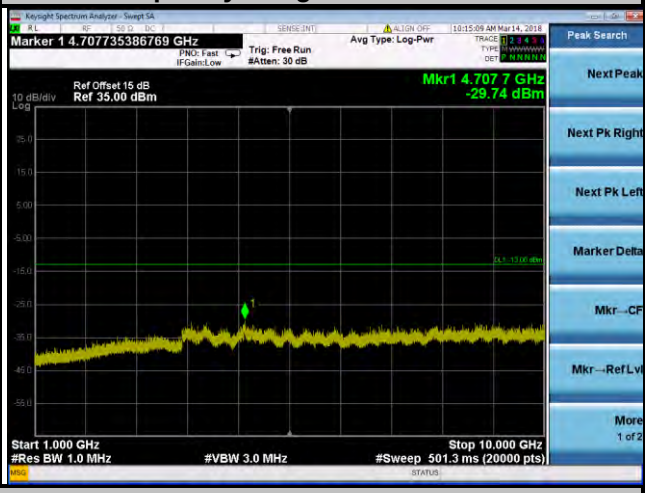
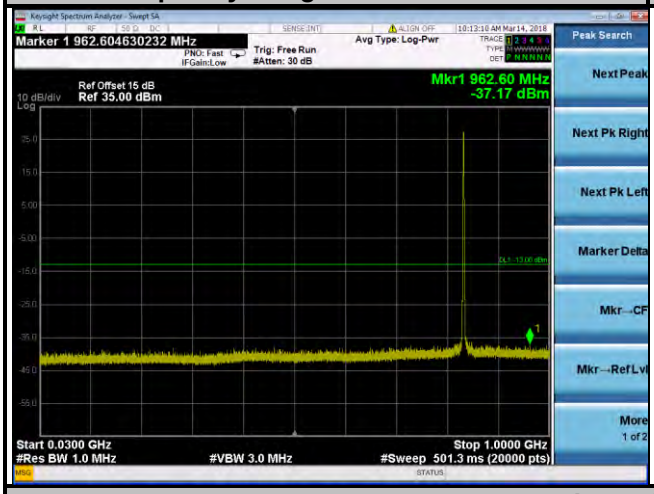
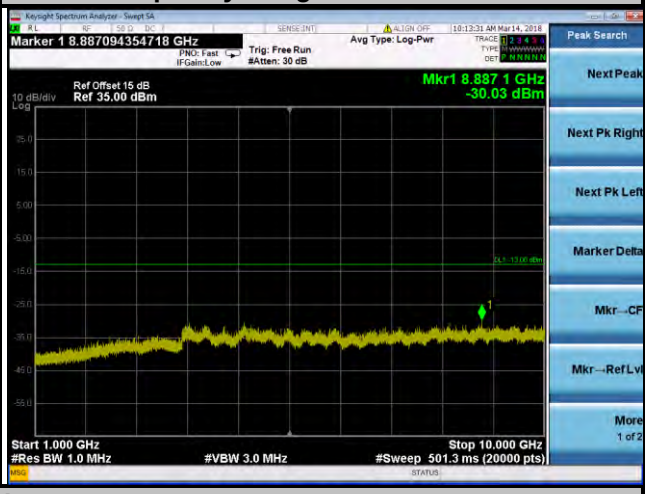
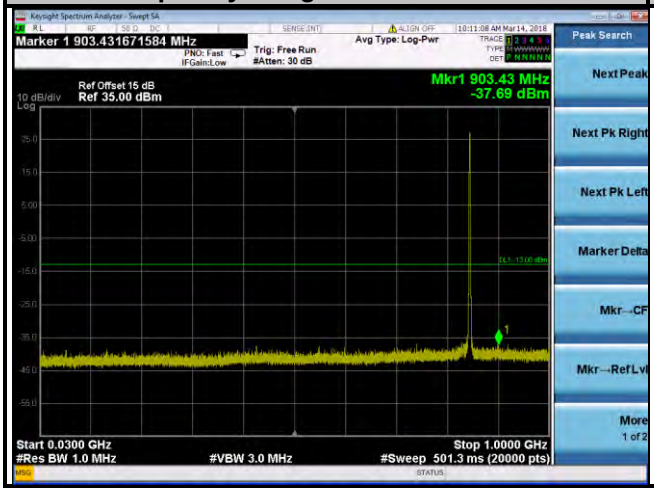
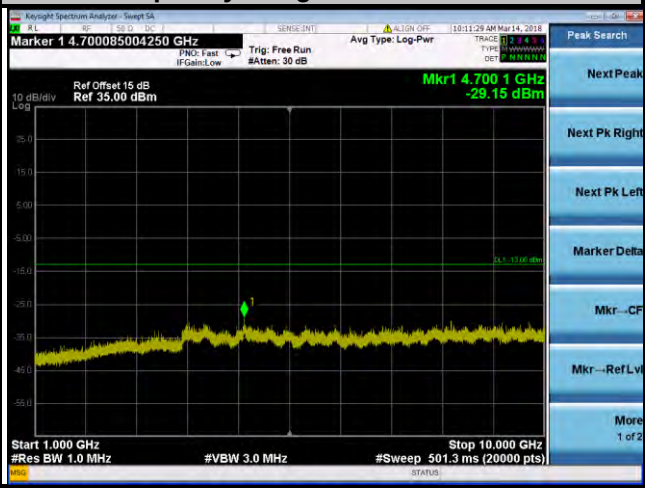
a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
b. Measuring frequency range is from 30 MHz to 10 GHz. 20 dB attenuation pad is connected with spectrum. RBW = 1 MHz and VBW = 3 MHz is used for conducted emission measurement.

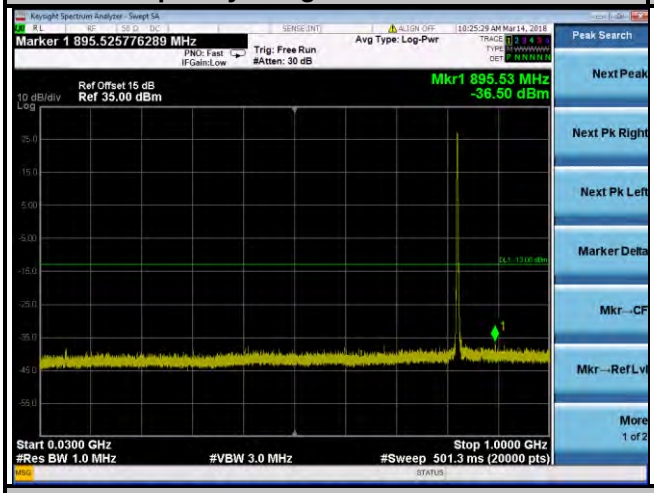
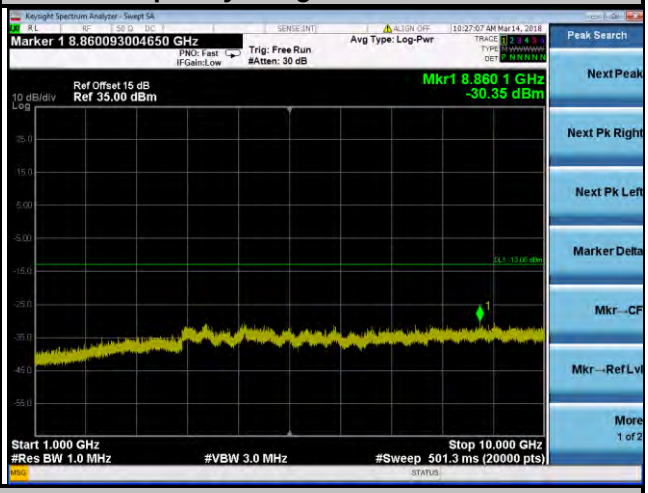
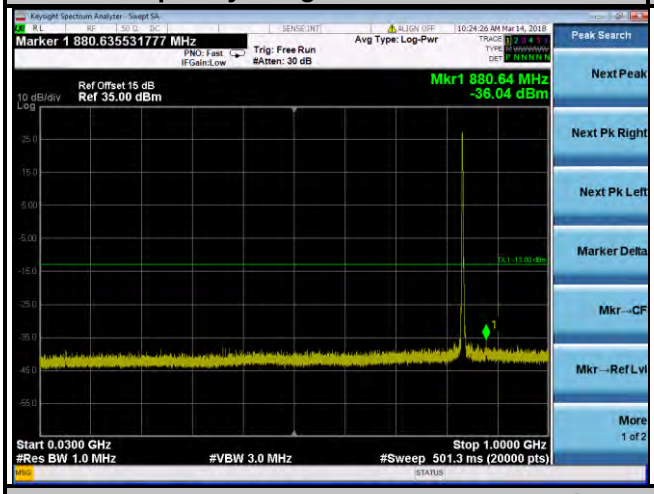
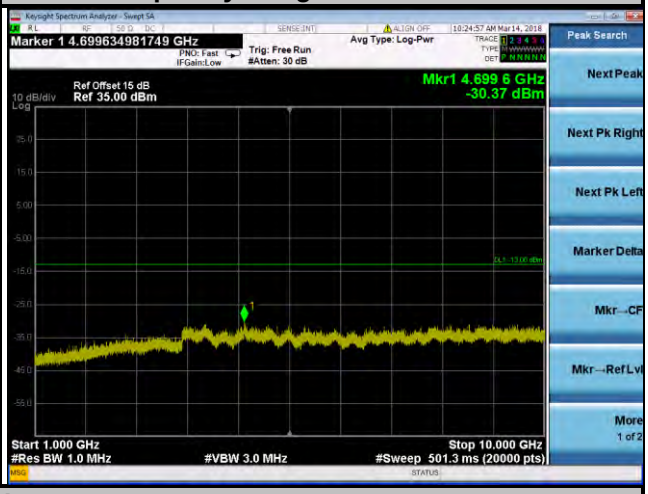
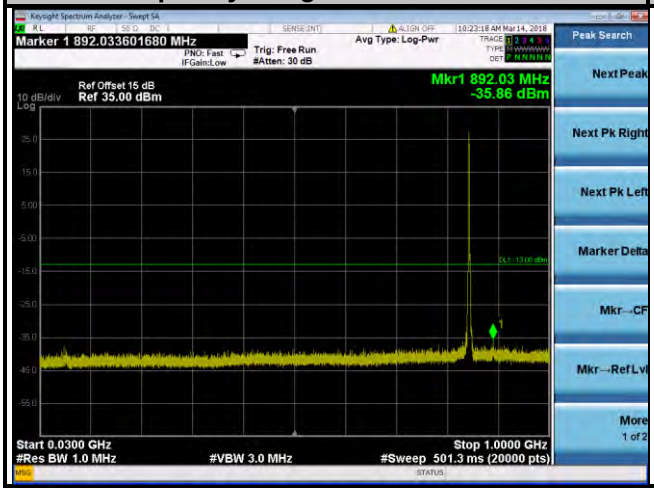
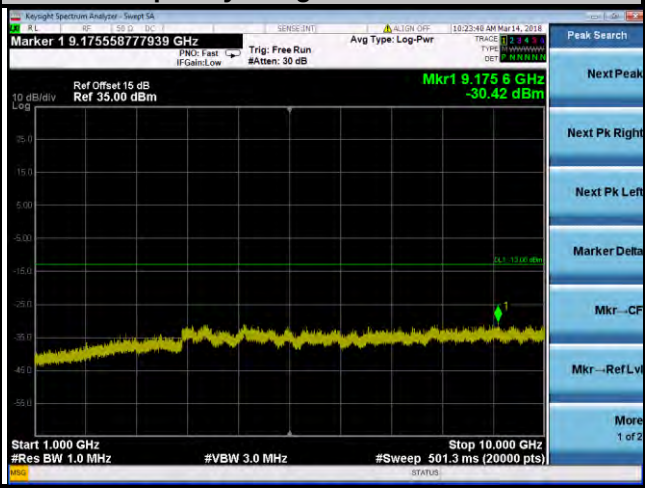
4.6.4 Test Results

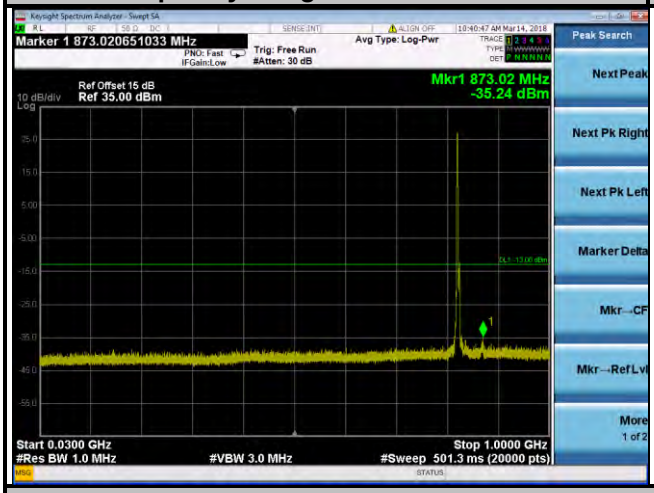
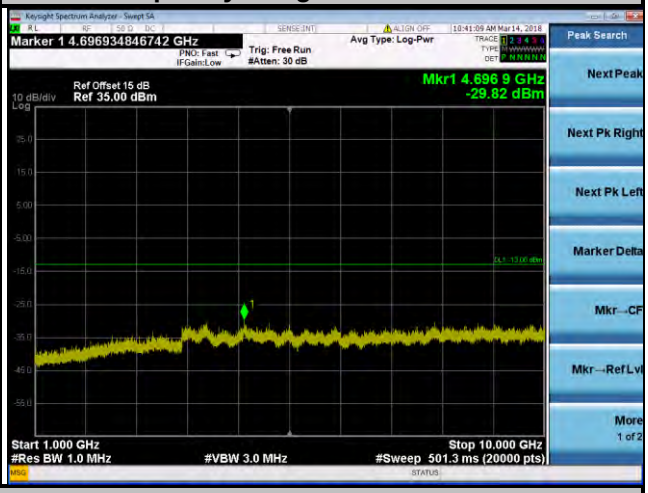
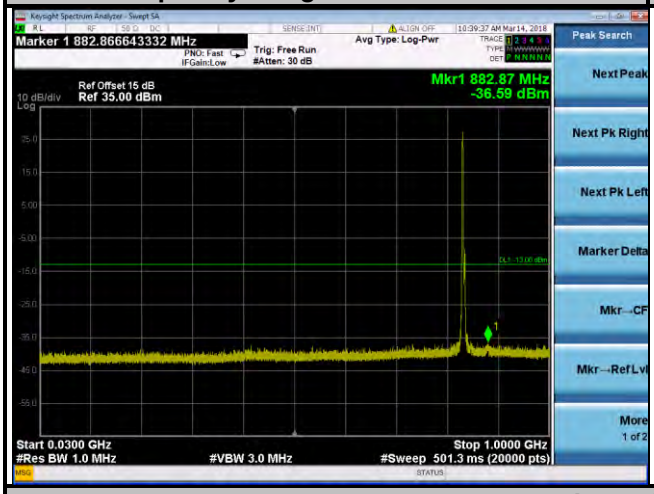
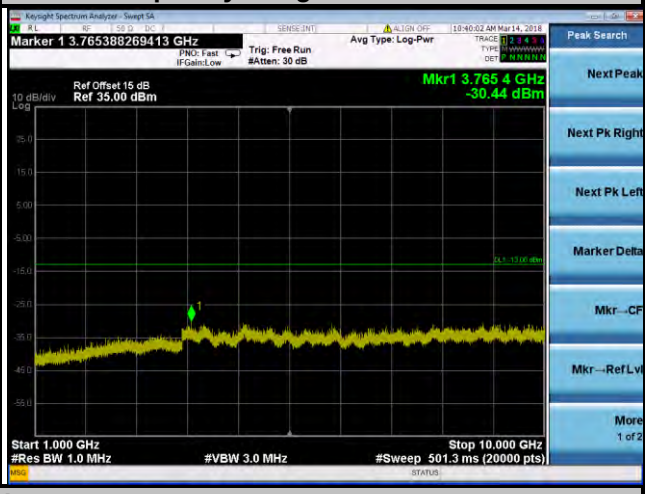
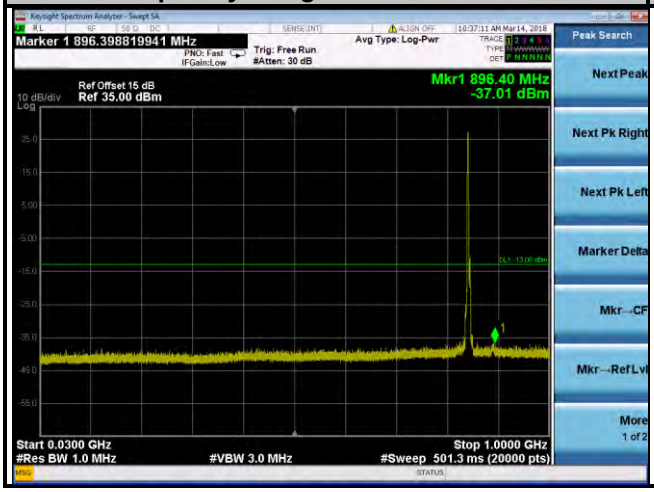
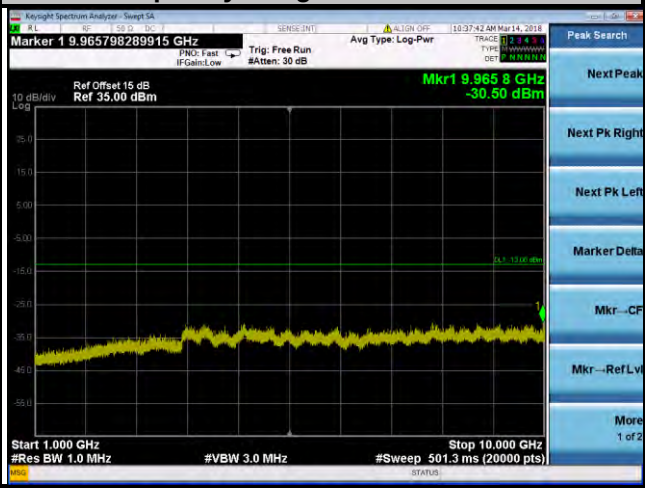
GSM	
Channel 128	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Channel 189	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Channel 251	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	

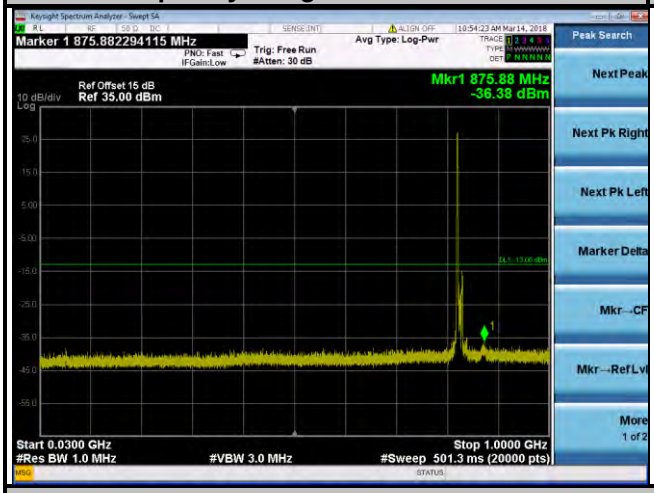
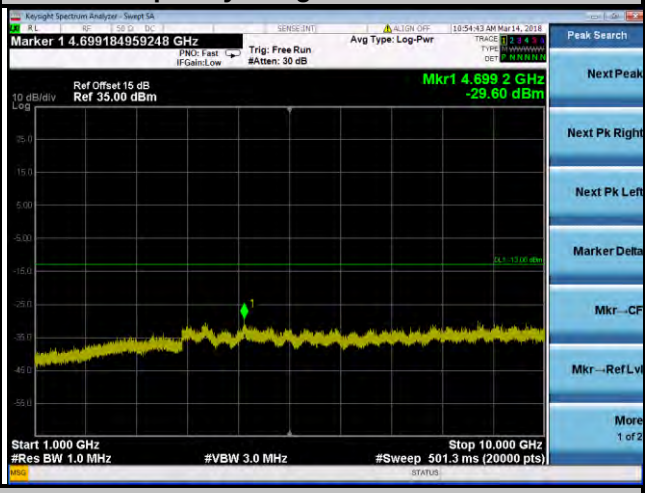
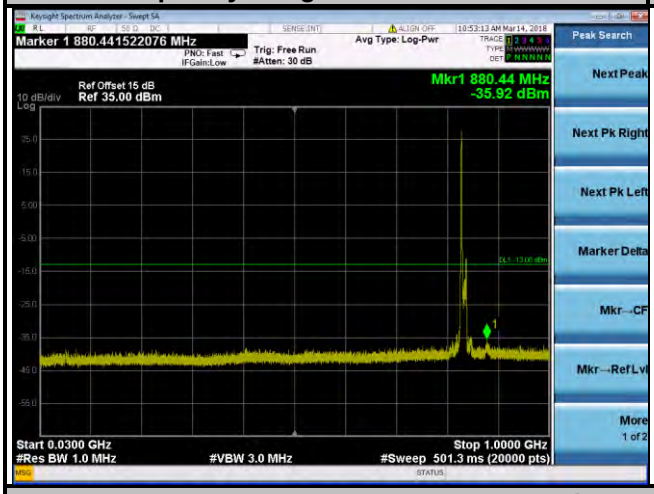
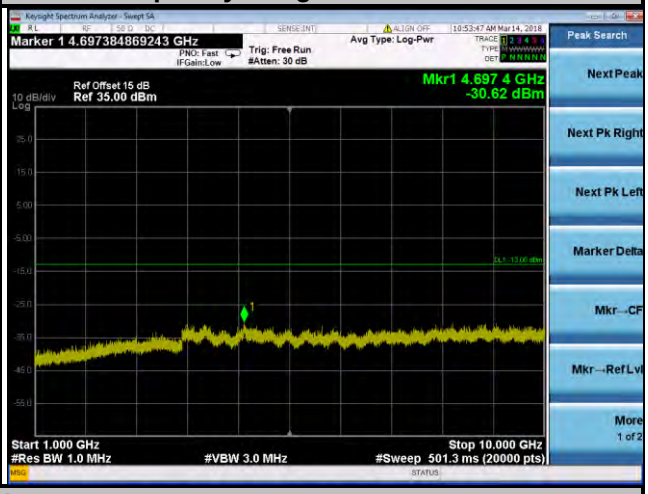
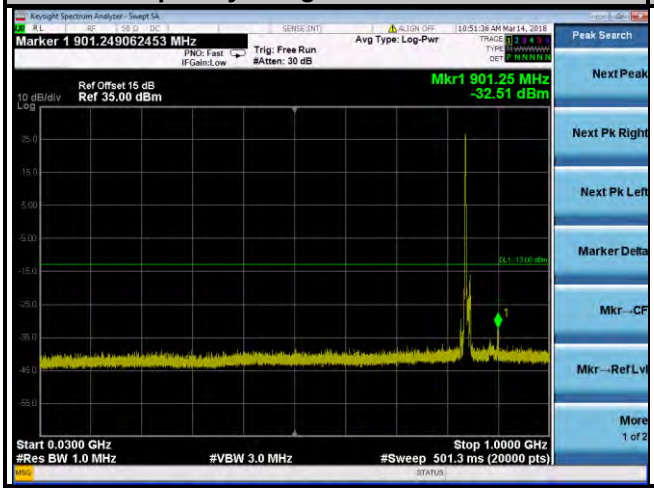
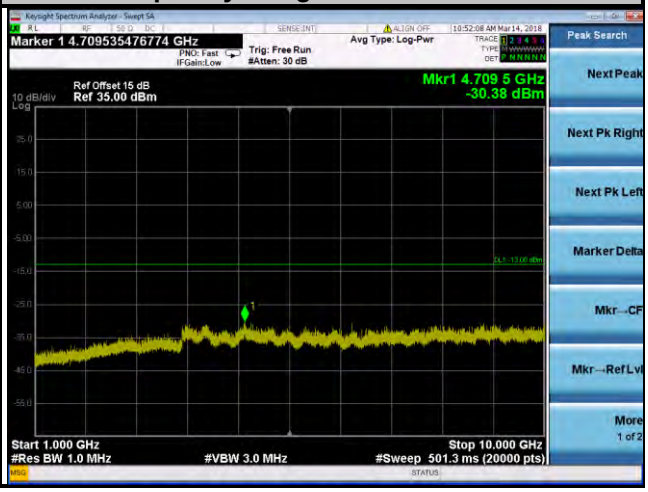
EDGE	
Channel 128	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Channel 189	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Channel 251	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	

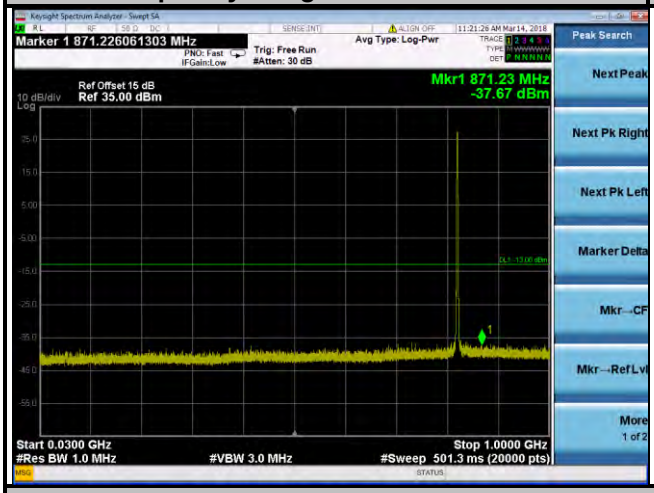
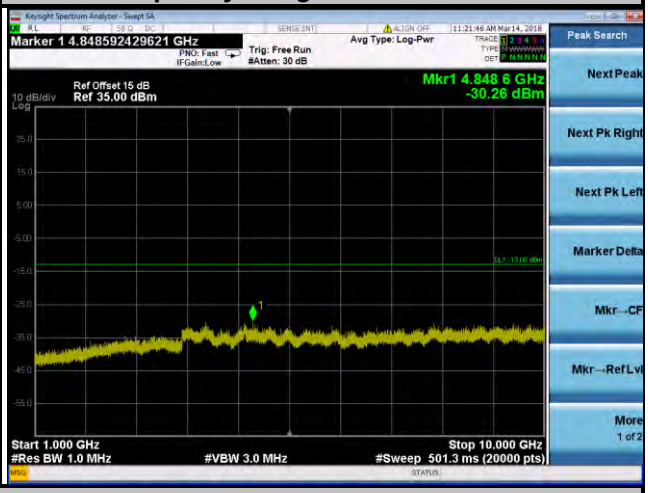
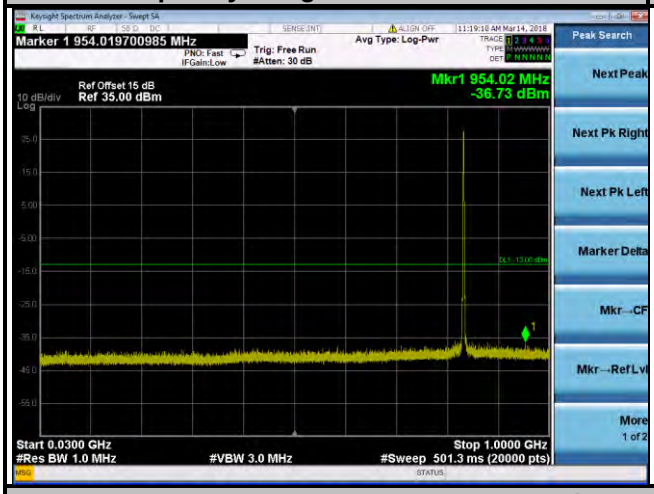
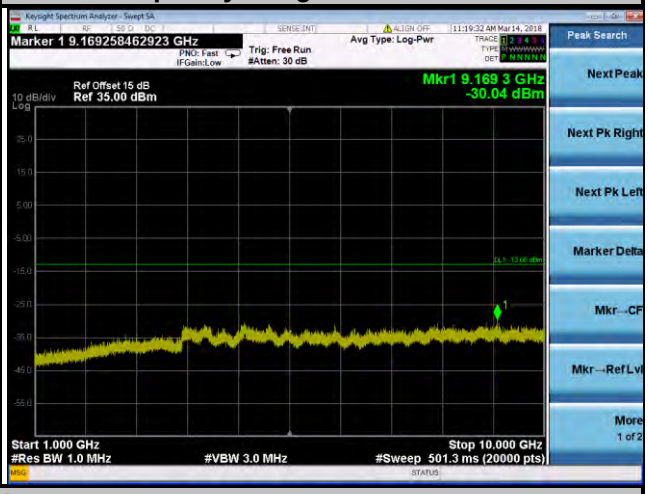
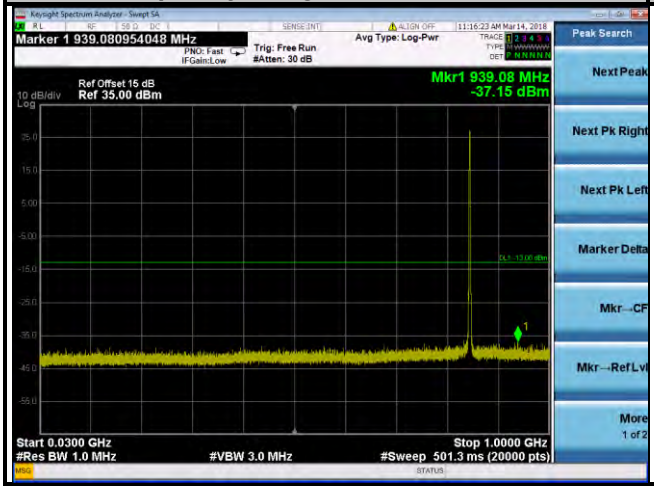
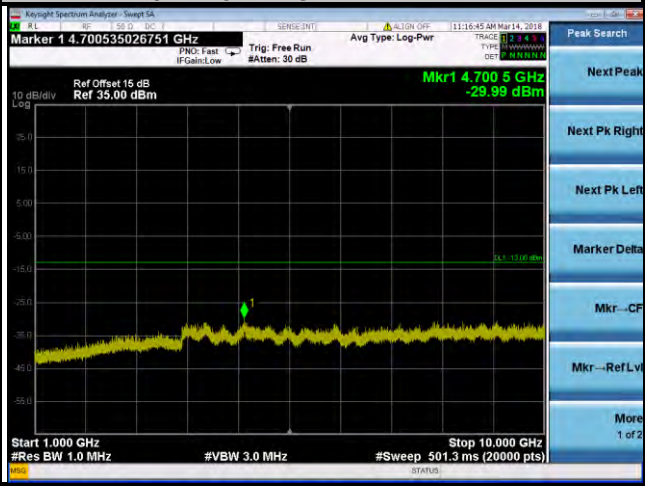
WCDMA	
Channel 4132	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Channel 4182	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Channel 4233	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	

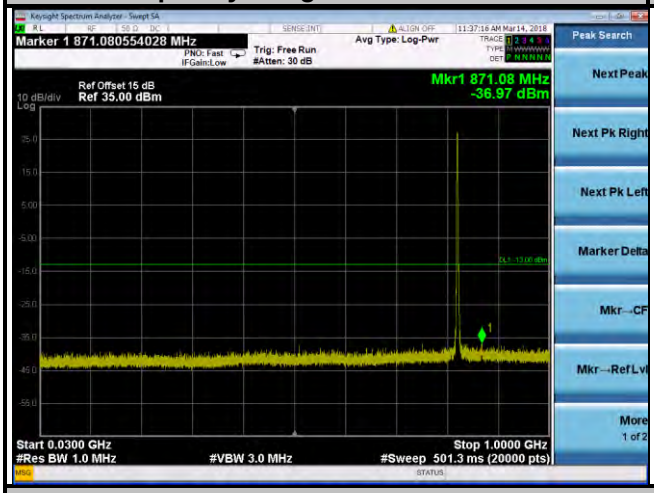
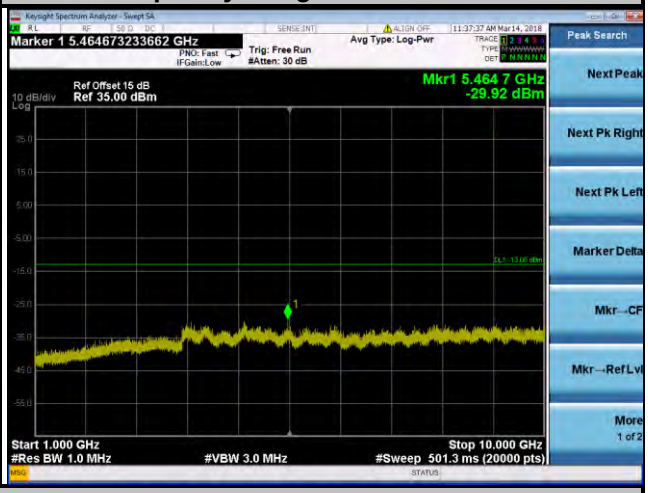
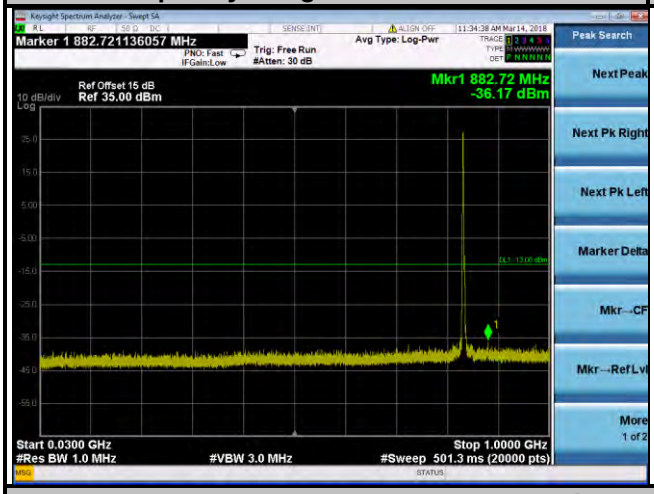
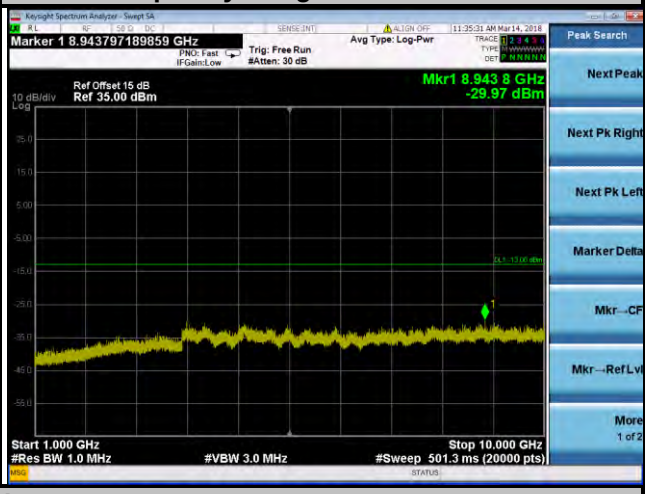
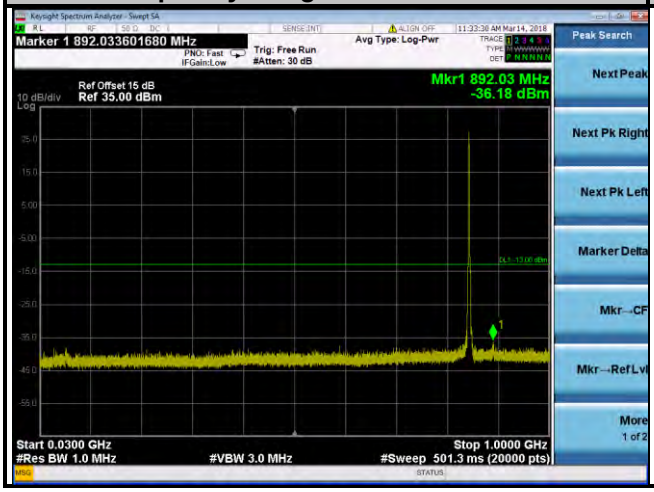
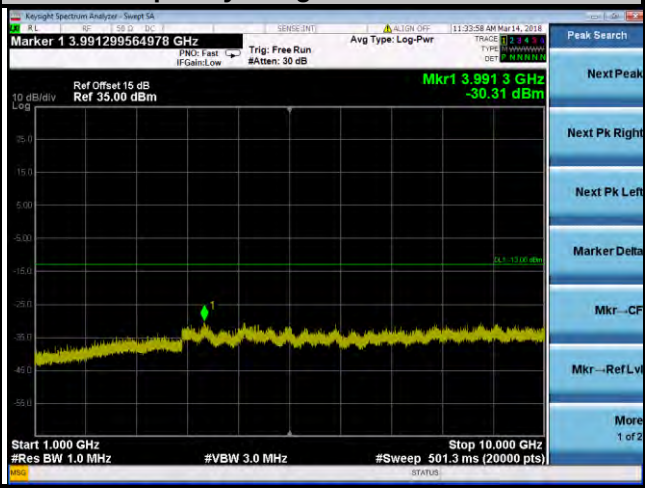
LTE Band 5	
Channel Bandwidth: 1.4 MHz	
Channel 20407	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Channel 20525	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Channel 20643	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	

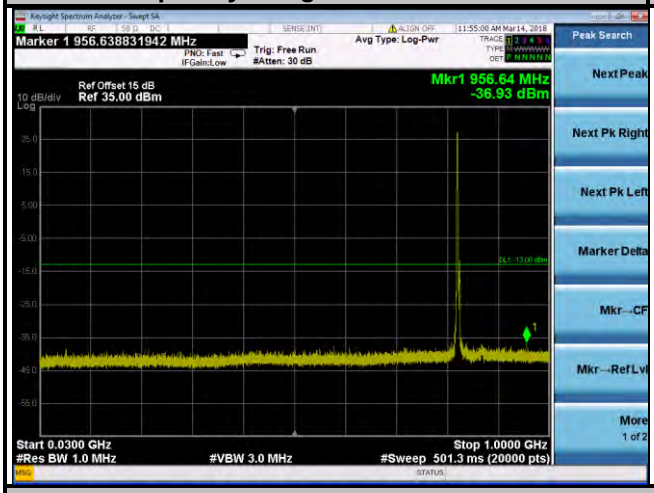
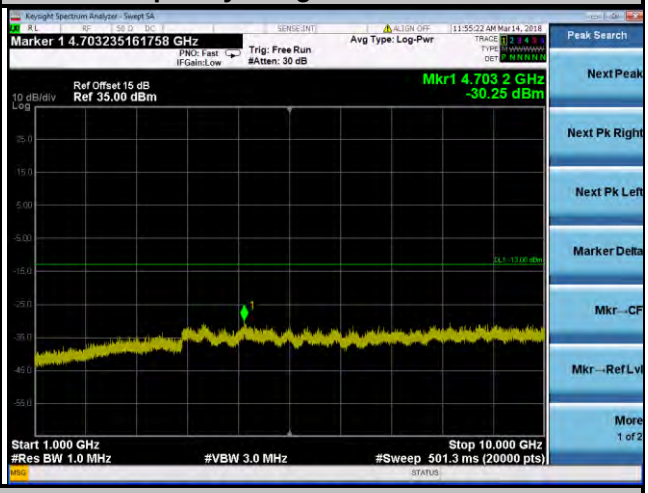
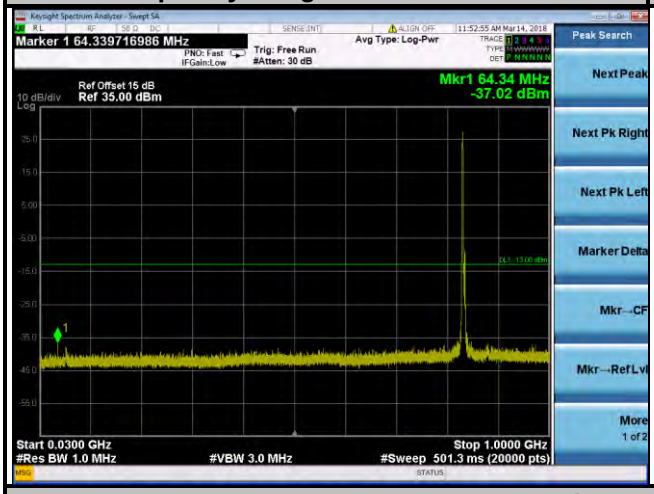
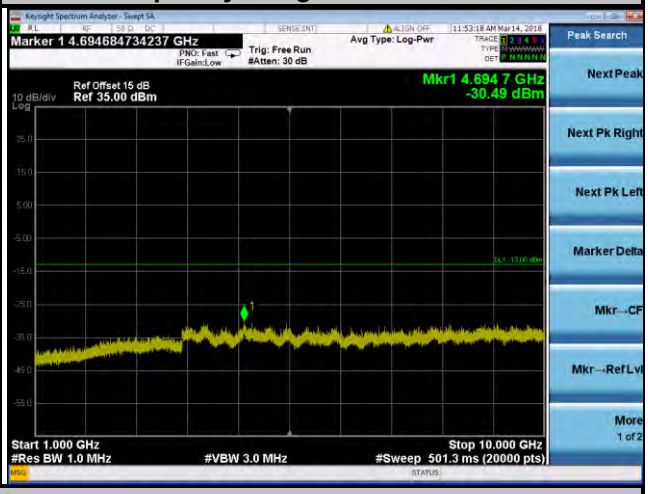
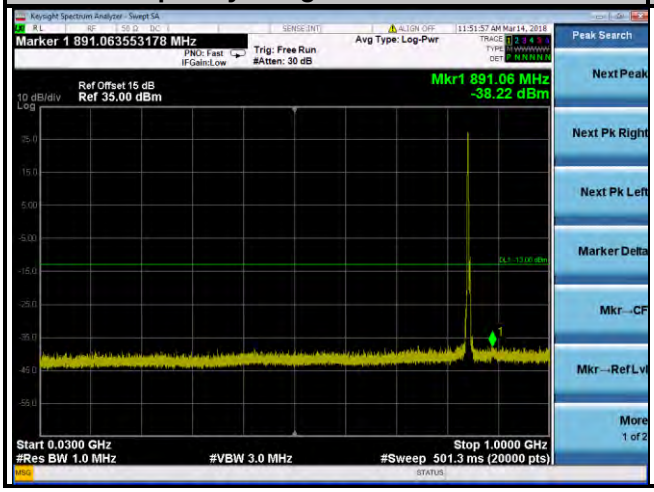
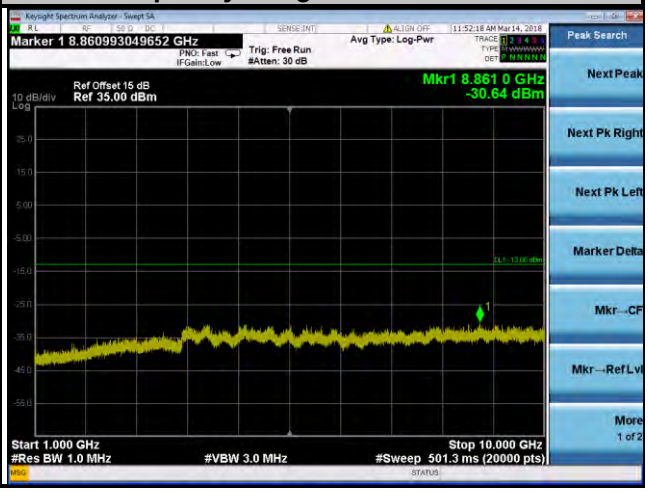
LTE Band 5	
Channel Bandwidth: 3 MHz	
Channel 20415	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Channel 20525	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Channel 20635	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	

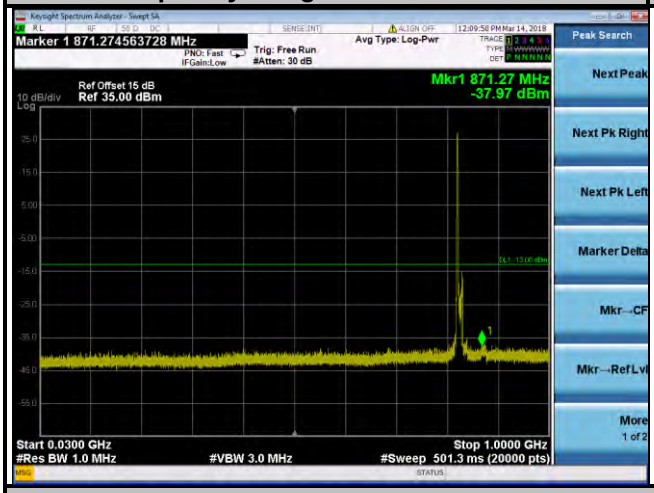
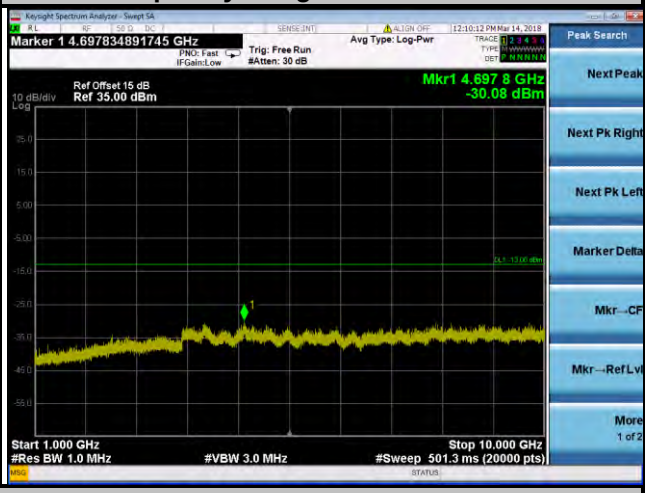
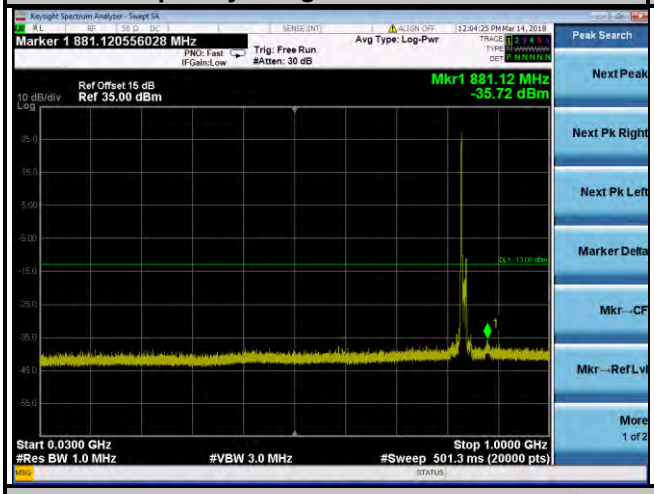
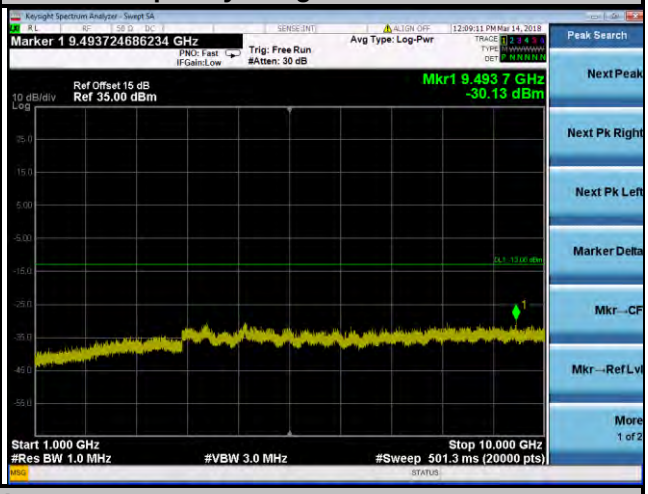
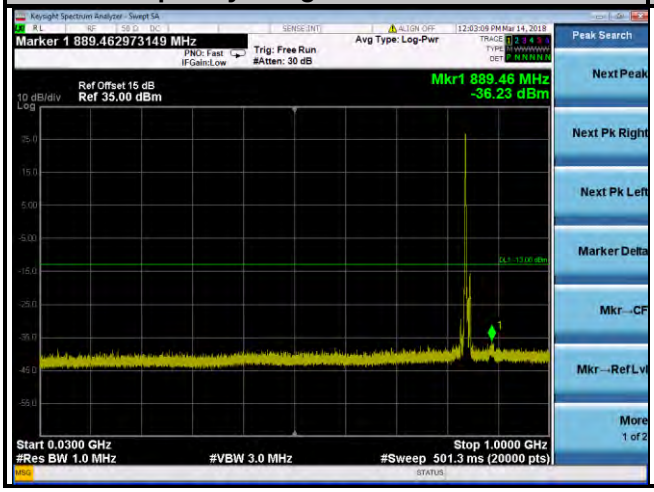
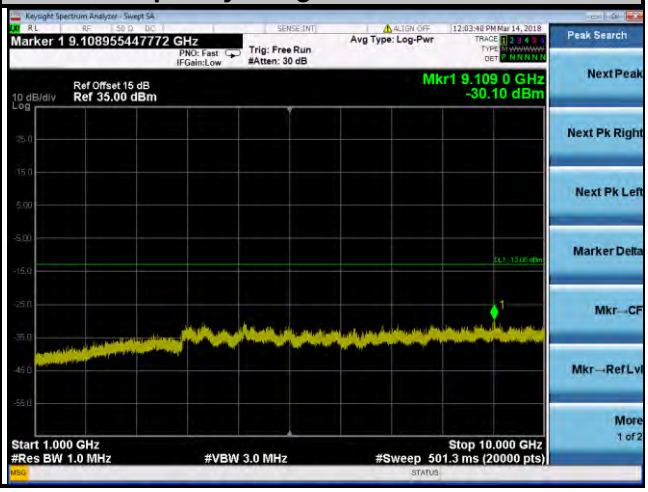
LTE Band 5	
Channel Bandwidth: 5 MHz	
Channel 20425	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Channel 20525	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Channel 20625	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	

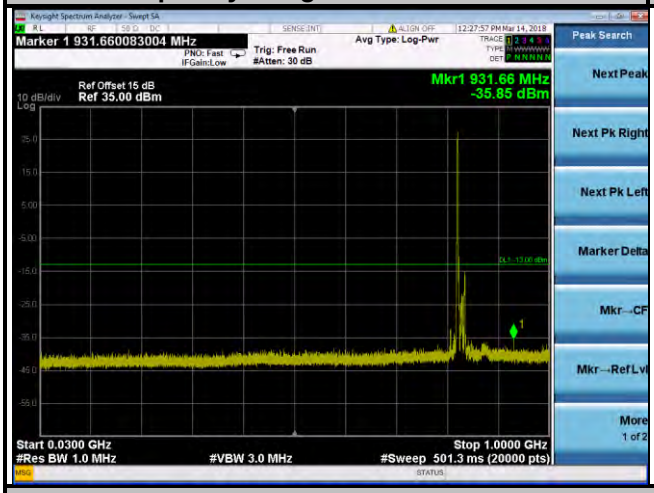
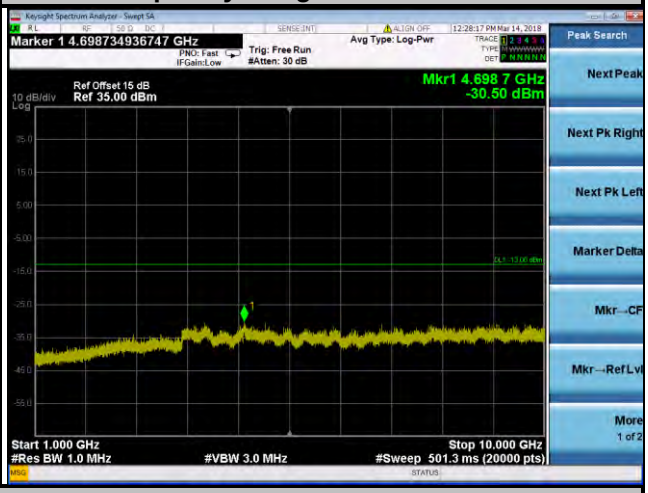
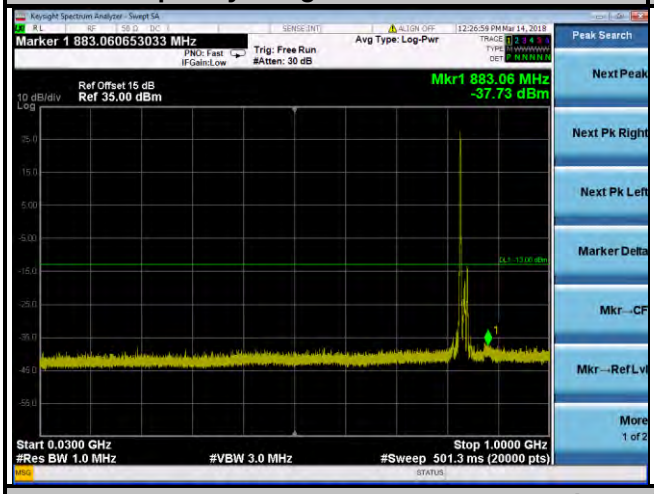
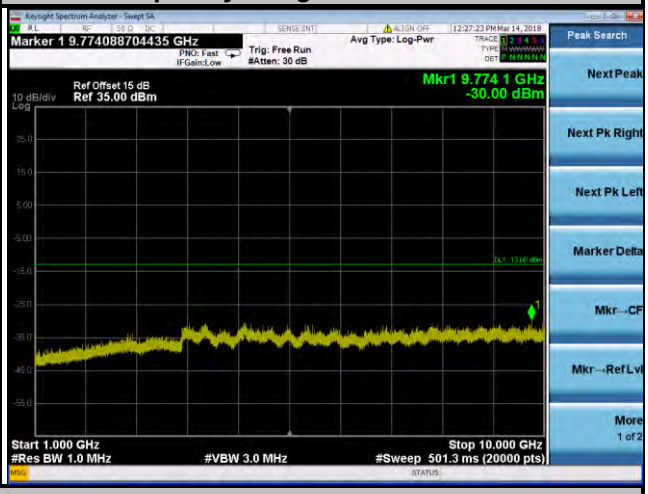
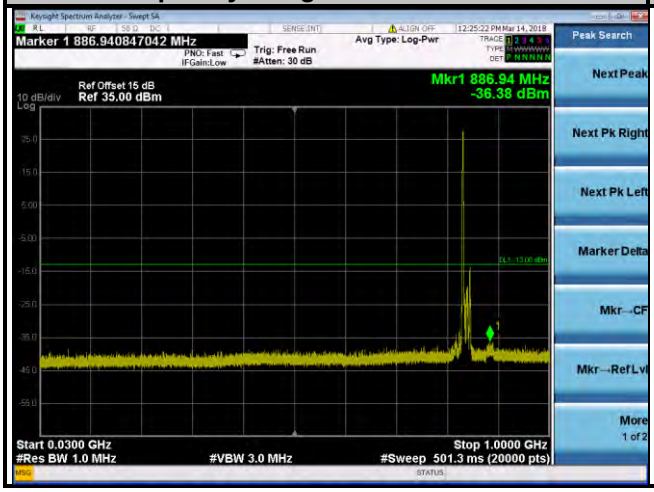
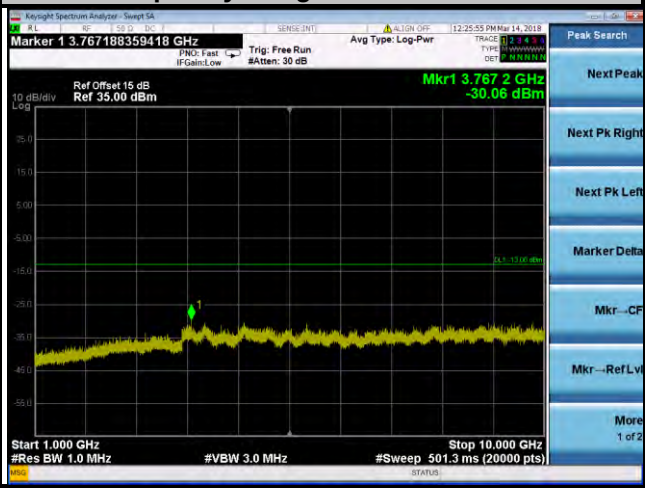
LTE Band 5	
Channel Bandwidth: 10 MHz	
Channel 20450	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Channel 20525	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Channel 20600	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	

LTE Band 26	
Channel Bandwidth: 1.4 MHz	
Channel 26797	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Channel 26915	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Channel 27033	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	

LTE Band 26	
Channel Bandwidth: 3 MHz	
Channel 26805	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Channel 26915	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Channel 27025	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	

LTE Band 26	
Channel Bandwidth: 5 MHz	
Channel 26815	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Channel 26915	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Channel 27015	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	

LTE Band 26	
Channel Bandwidth: 10 MHz	
Channel 26840	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Channel 26915	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Channel 26990	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	

LTE Band 26	
Channel Bandwidth: 15 MHz	
Channel 26865	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Channel 26915	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	
Channel 26965	
Frequency Range: 30 MHz ~ 1 GHz	Frequency Range: 1 GHz ~ 10 GHz
	

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.

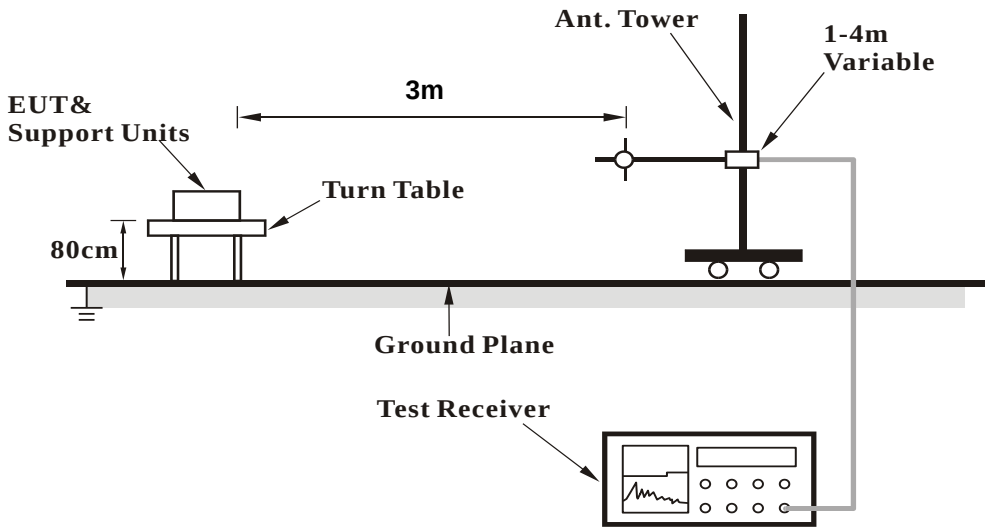
NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz/3 MHz.

4.7.3 Deviation from Test Standard

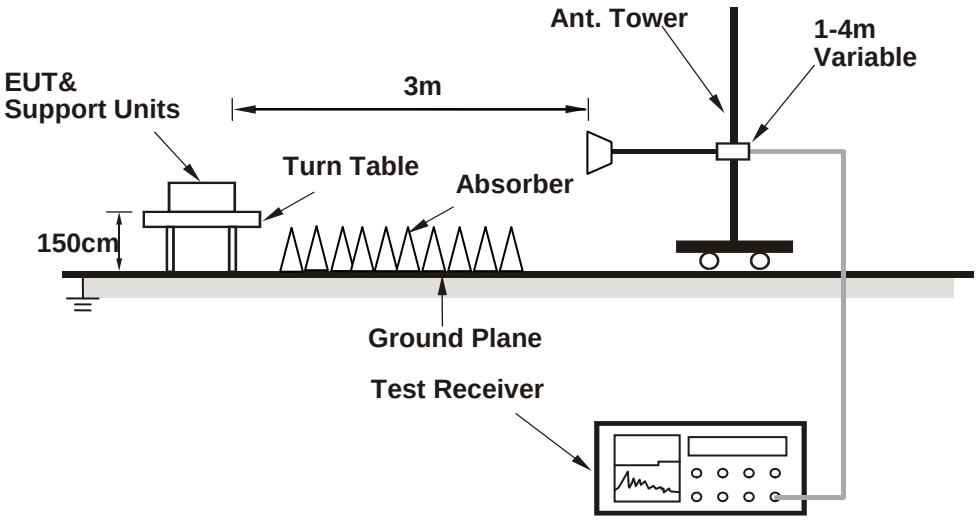
No deviation.

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

<Mode A>

GSM:

Low Channel

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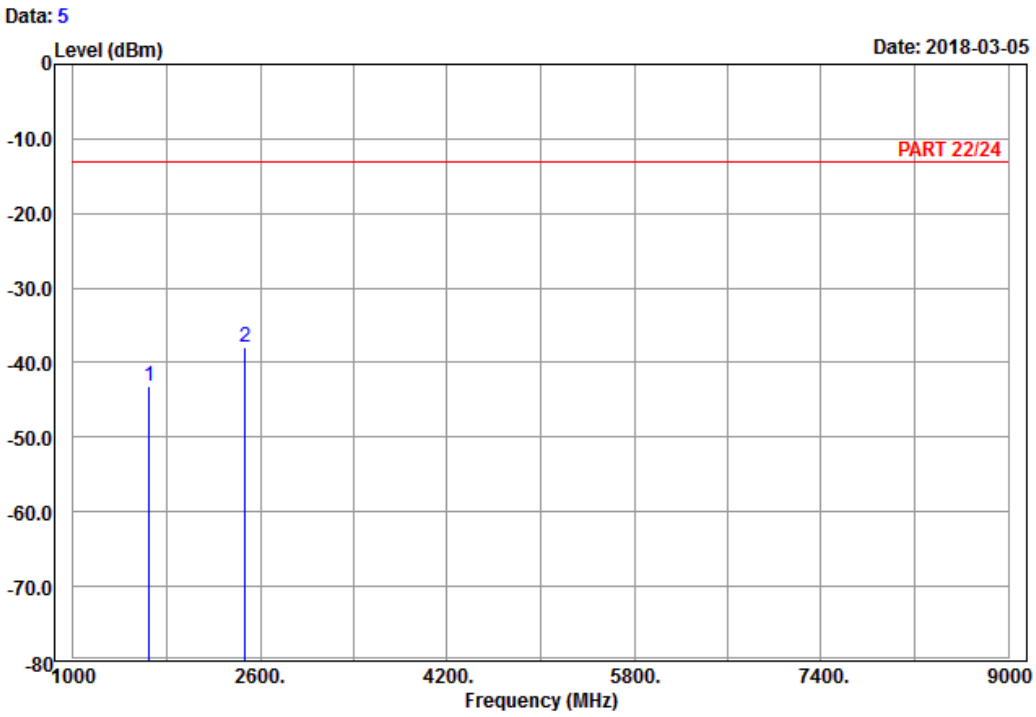
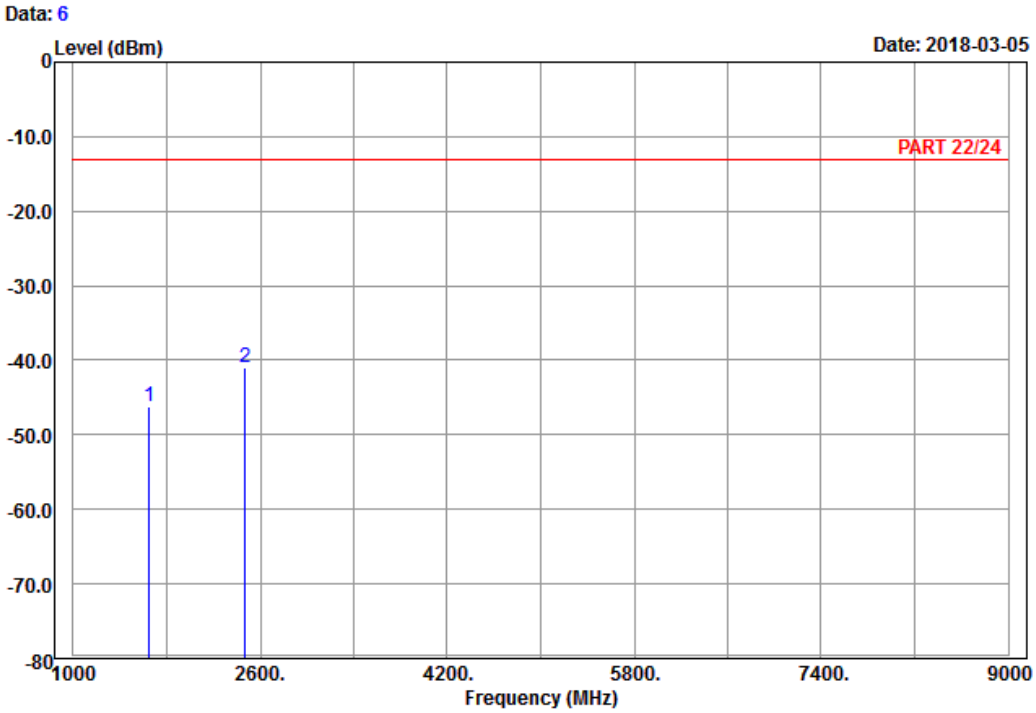



```
Site      : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark    : GSM 850_Link_CH128
Tested by: Karl Lee
                        Read  Limit   Over
           Freq  Level  Level   Line  Limit Factor Remark
          _____ _____ _____ _____ _____ _____ _________
                MHz    dBm    dBm    dBm     dB     dB

  1     1648.40 -43.22 -50.95 -13.00 -30.22   7.73 Peak
  2 pp  2472.60 -37.98 -49.01 -13.00 -24.98  11.03 Peak
```



Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : GSM 850_Link_CH128
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1648.40	-46.21	-53.94	-13.00	-33.21	7.73	Peak
2 pp	2472.60	-40.95	-51.98	-13.00	-27.95	11.03	Peak

Middle Channel

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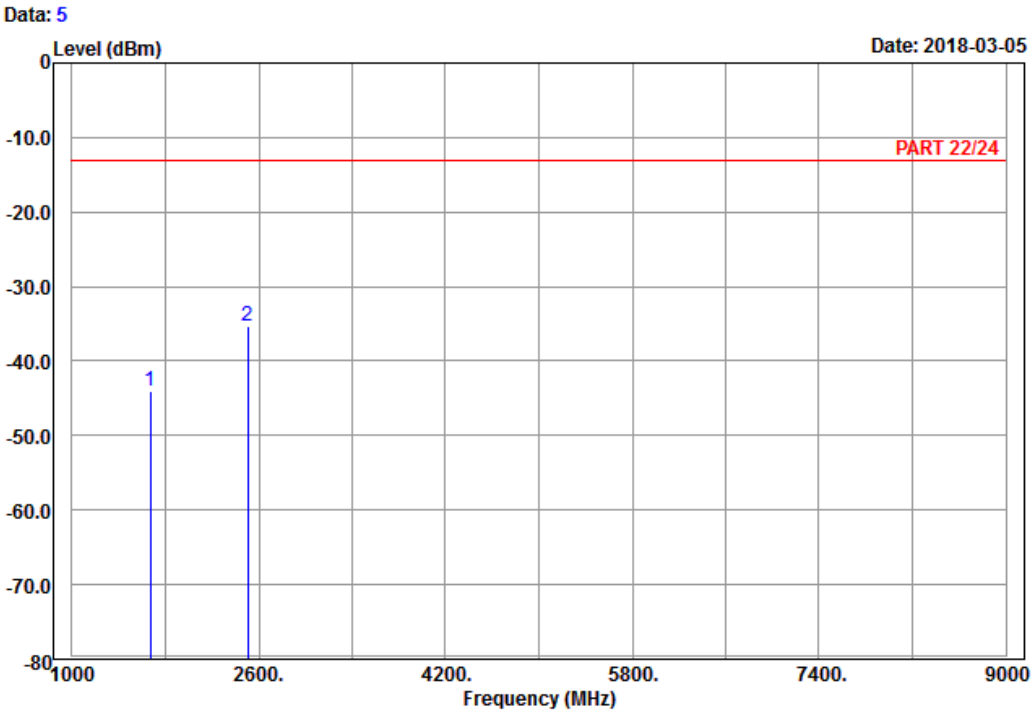
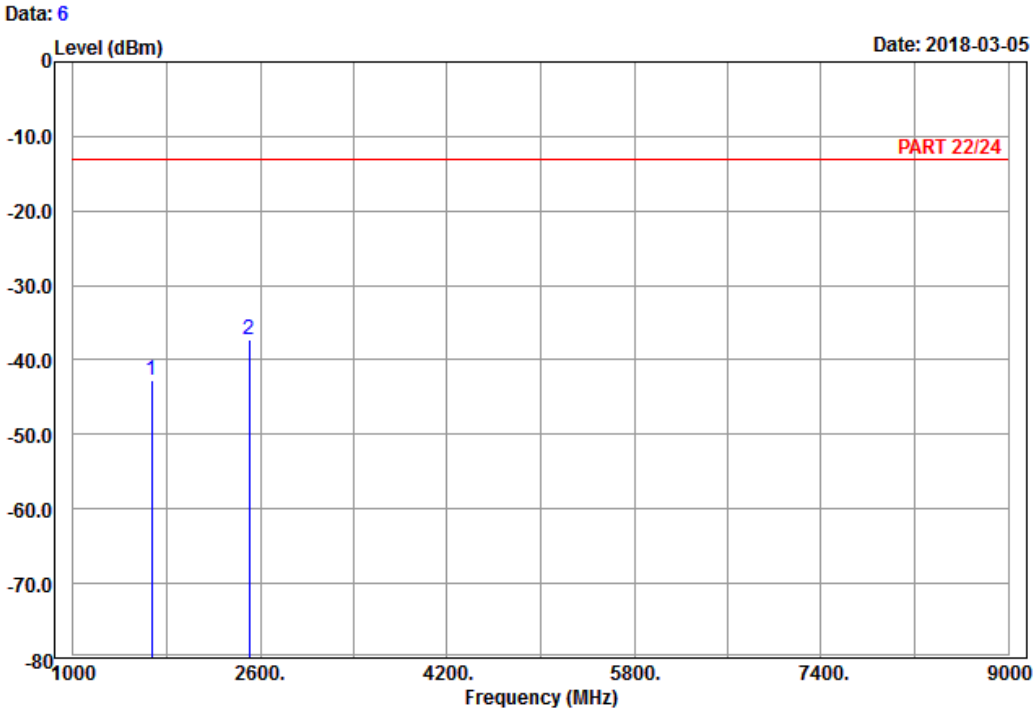


Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : GSM 850_Link_CH189
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1672.80	-44.04	-51.95	-13.00	-31.04	7.91	Peak
2 pp	2509.20	-35.36	-46.64	-13.00	-22.36	11.28	Peak

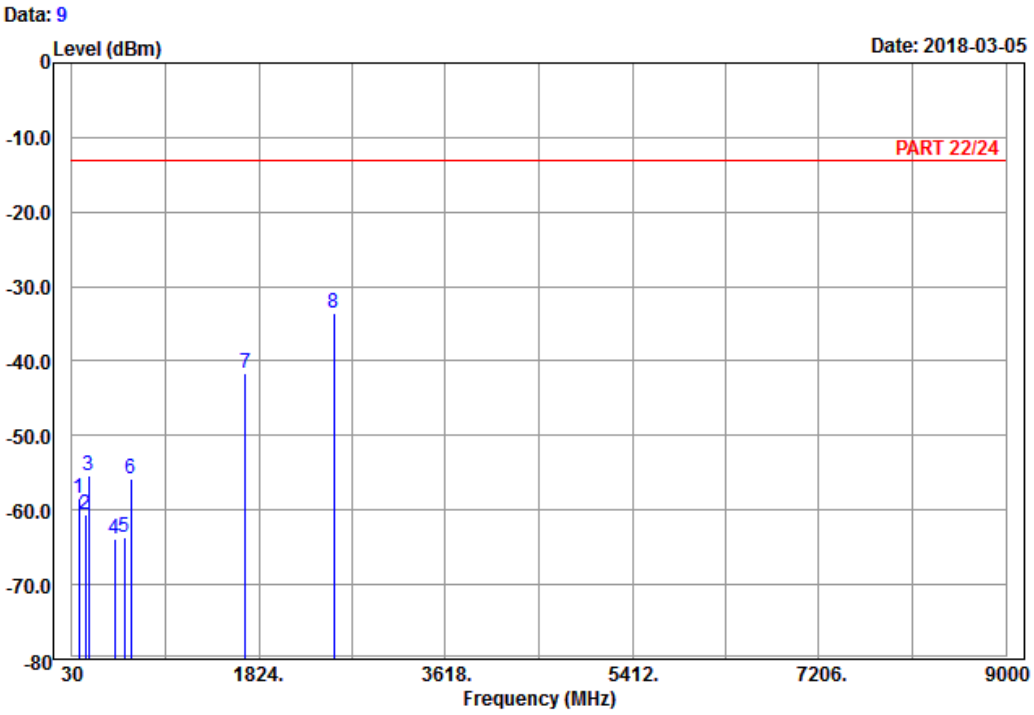


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : GSM 850_Link_CH189
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1672.80	-42.71	-50.62	-13.00	-29.71	7.91	Peak
2 pp	2509.20	-37.34	-48.62	-13.00	-24.34	11.28	Peak

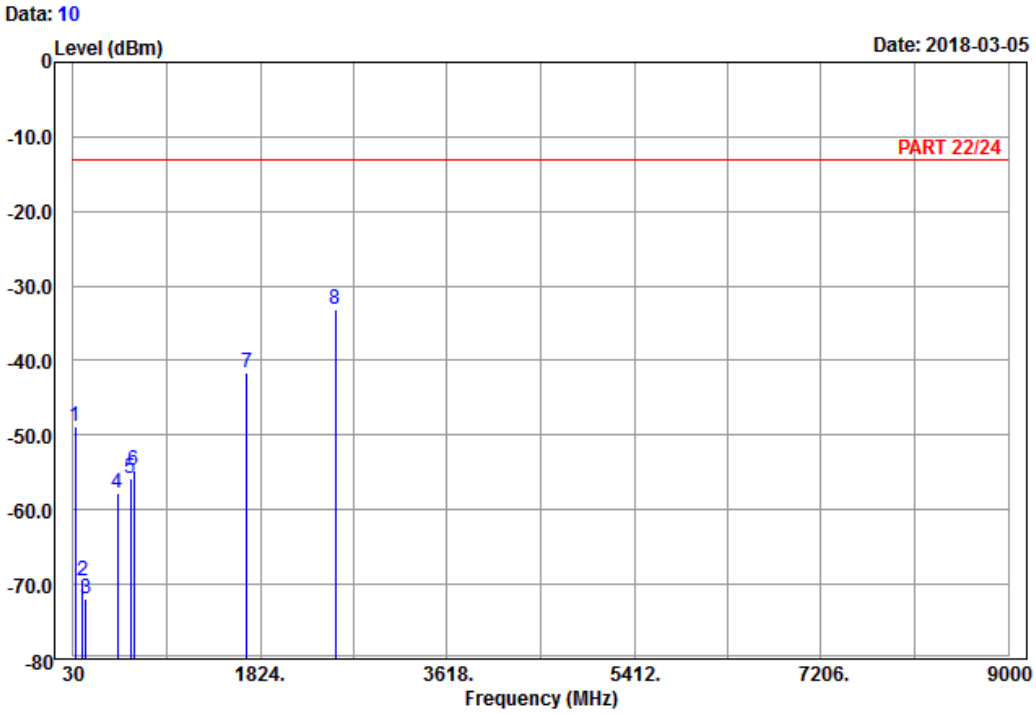
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : GSM 850_Link_CH251
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	98.04	-58.35	-48.12	-13.00	-45.35	-10.23	Peak
2	159.60	-60.56	-52.89	-13.00	-47.56	-7.67	Peak
3	186.87	-55.26	-49.57	-13.00	-42.26	-5.69	Peak
4	437.90	-63.80	-60.21	-13.00	-50.80	-3.59	Peak
5	535.90	-63.65	-60.99	-13.00	-50.65	-2.66	Peak
6	596.80	-55.87	-56.14	-13.00	-42.87	0.27	Peak
7	1697.60	-41.66	-49.80	-13.00	-28.66	8.14	Peak
8 pp	2546.40	-33.47	-44.94	-13.00	-20.47	11.47	Peak



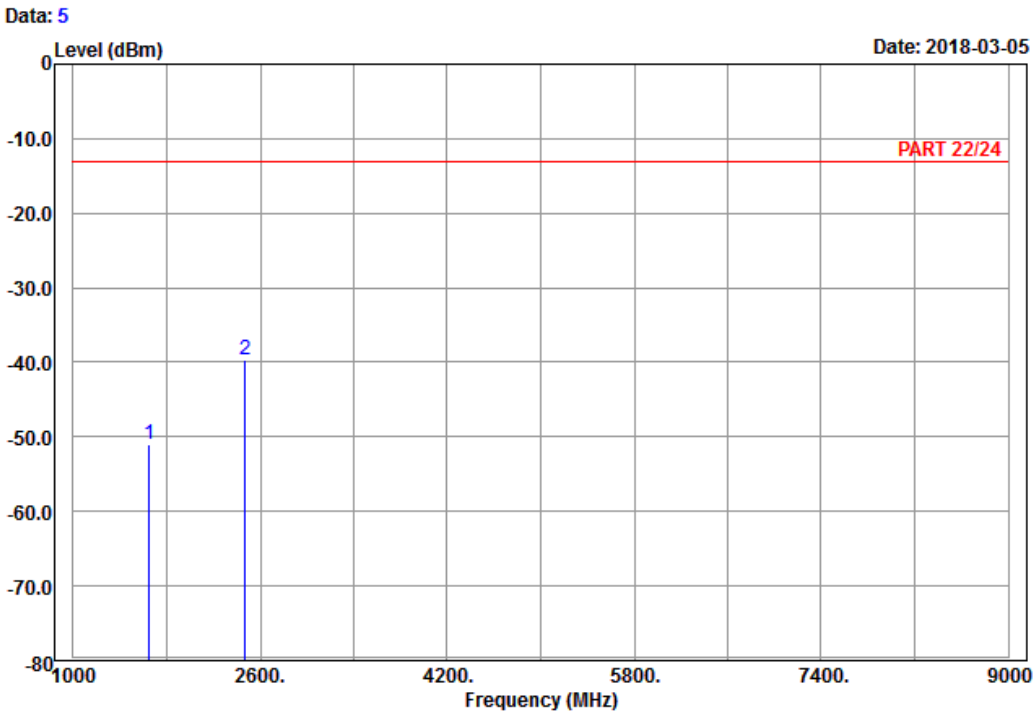
Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : GSM 850_Link_CH251
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	51.87	-48.74	-34.68	-13.00	-35.74	-14.06	Peak
2	115.86	-69.53	-61.02	-13.00	-56.53	-8.51	Peak
3	152.31	-71.89	-64.00	-13.00	-58.89	-7.89	Peak
4	458.20	-57.75	-53.68	-13.00	-44.75	-4.07	Peak
5	577.20	-55.83	-55.29	-13.00	-42.83	-0.54	Peak
6	608.70	-54.62	-54.95	-13.00	-41.62	0.33	Peak
7	1697.60	-41.74	-49.88	-13.00	-28.74	8.14	Peak
8 pp	2546.40	-33.07	-44.54	-13.00	-20.07	11.47	Peak

EDGE:

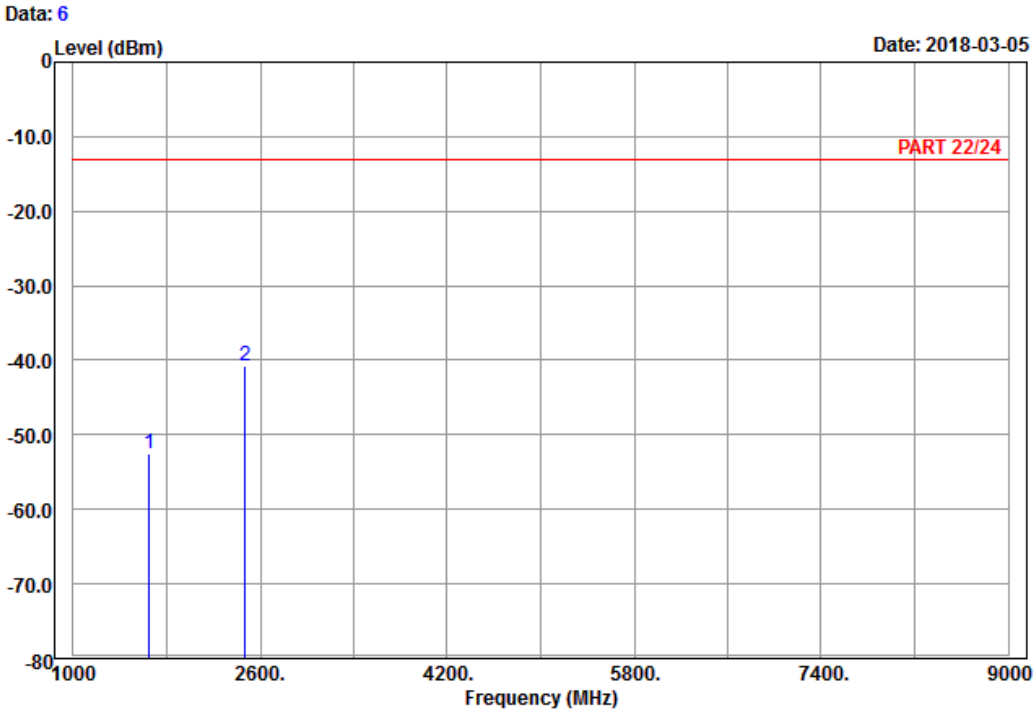
Low Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch




```
Site     : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark   : EGDE 850_Link_CH128
Tested by: Karl Lee
```

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1648.40	-51.07	-58.80	-13.00	-38.07	7.73	Peak
2 pp	2472.60	-39.68	-50.71	-13.00	-26.68	11.03	Peak

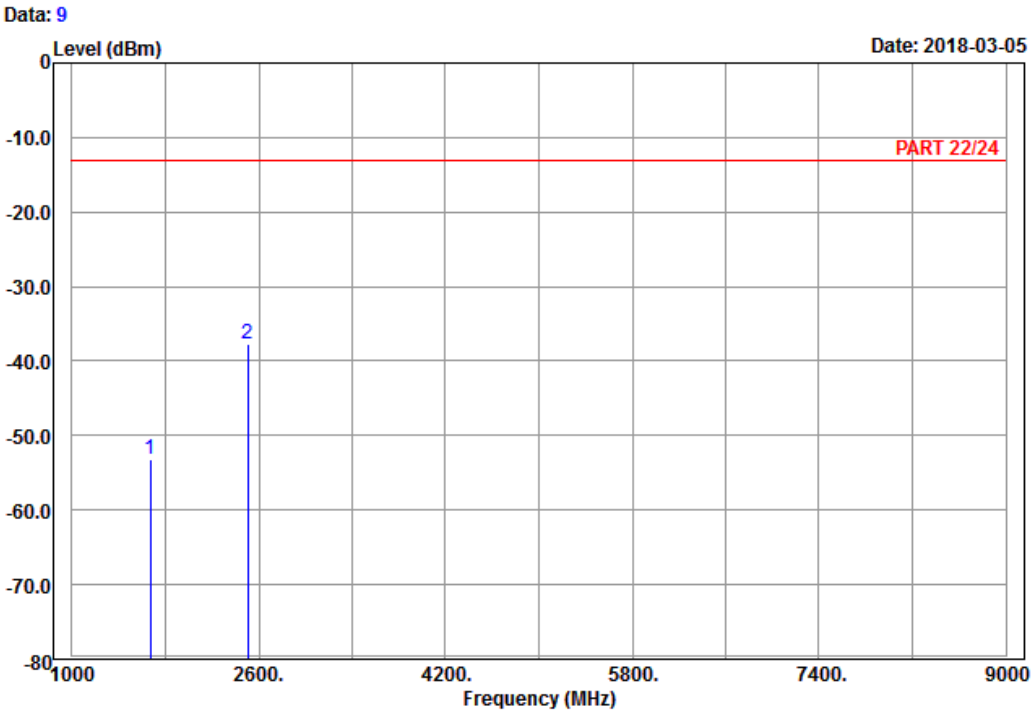


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : EGDE 850_Link_CH128
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1648.40	-52.57	-60.30	-13.00	-39.57	7.73	Peak
2 pp	2472.60	-40.68	-51.71	-13.00	-27.68	11.03	Peak

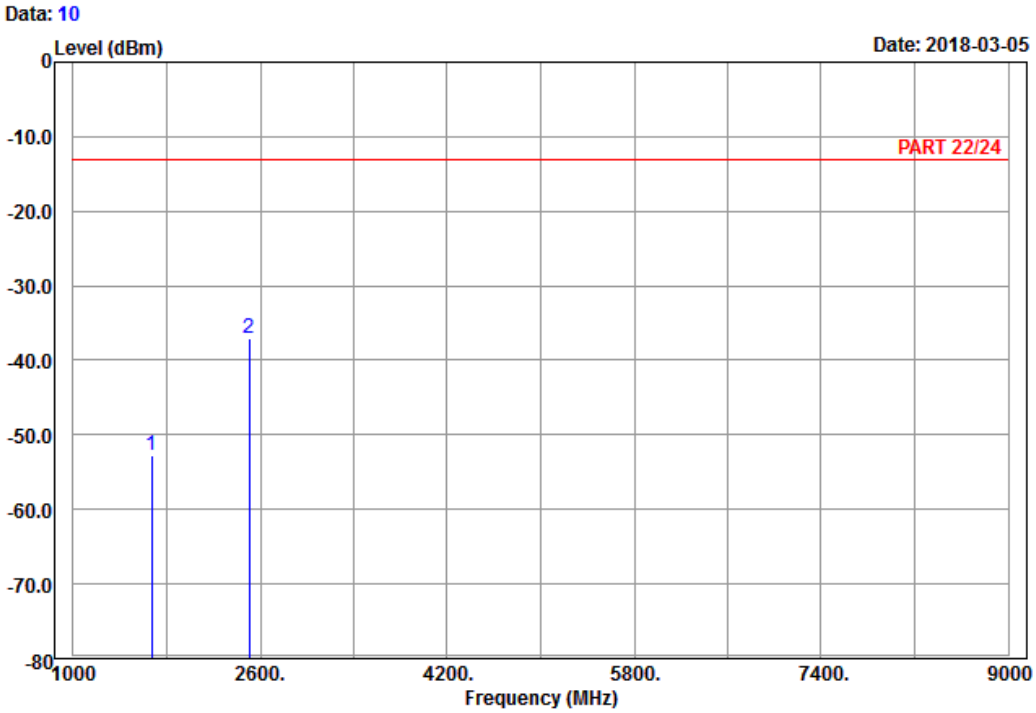
Middle Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : EGDE 850_Link_CH189
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1672.80	-53.22	-61.13	-13.00	-40.22	7.91	Peak
2 pp	2509.20	-37.81	-49.09	-13.00	-24.81	11.28	Peak

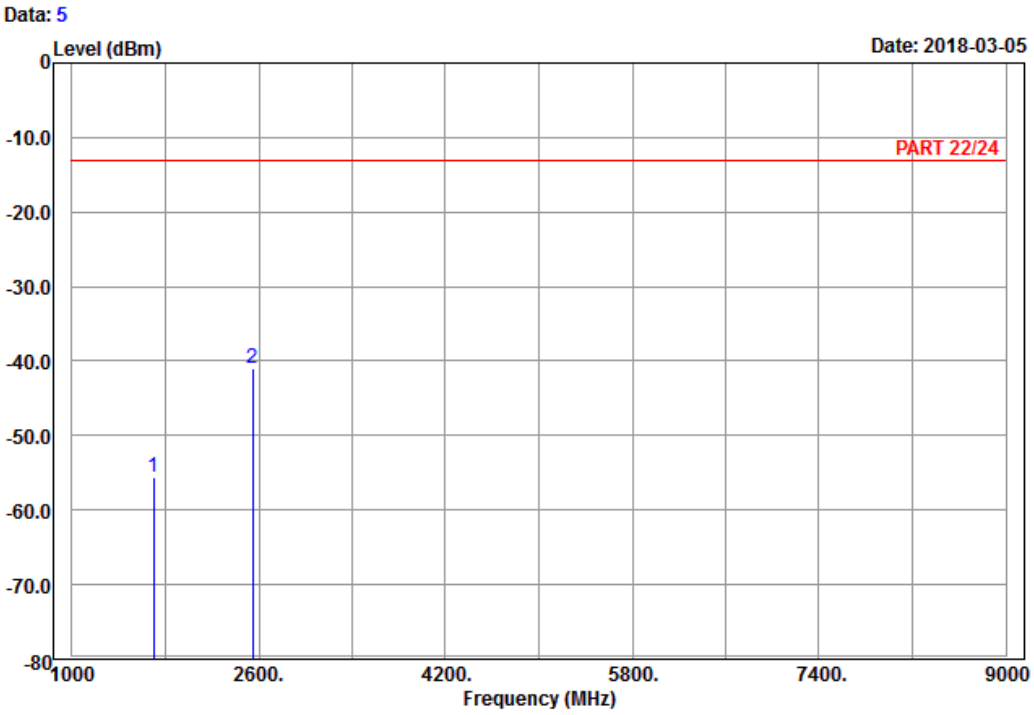


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : EGDE 850_Link_CH189
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1672.80	-52.73	-60.64	-13.00	-39.73	7.91	Peak
2 pp	2509.20	-37.09	-48.37	-13.00	-24.09	11.28	Peak

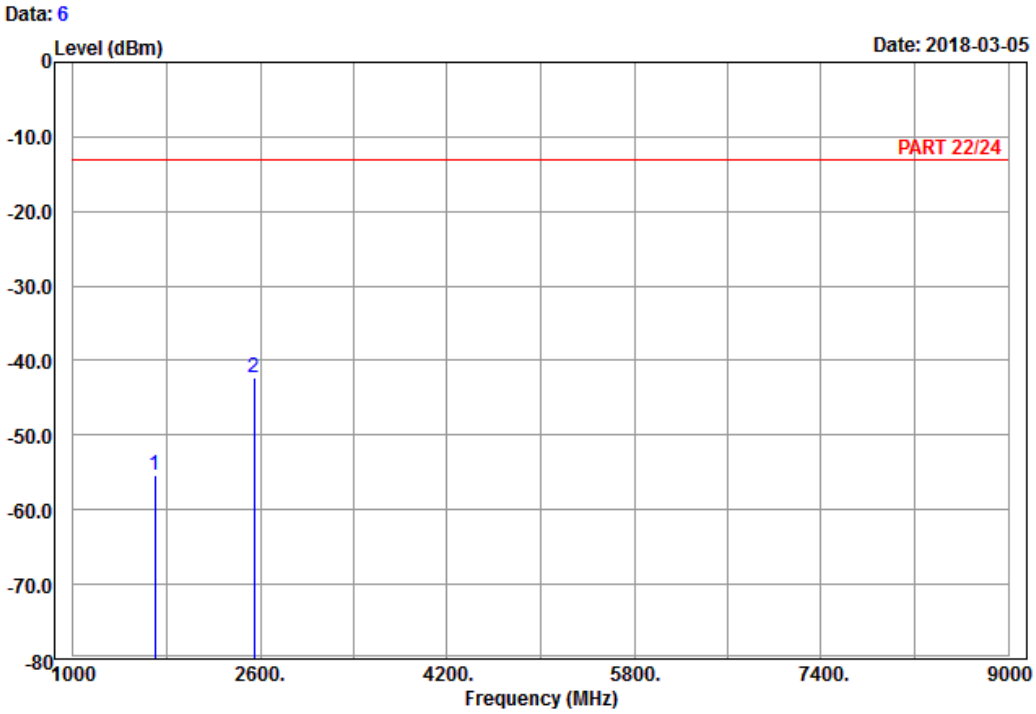
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : EGDE 850_Link_CH251
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1697.60	-55.54	-63.68	-13.00	-42.54	8.14	Peak
2 pp	2546.40	-40.99	-52.46	-13.00	-27.99	11.47	Peak



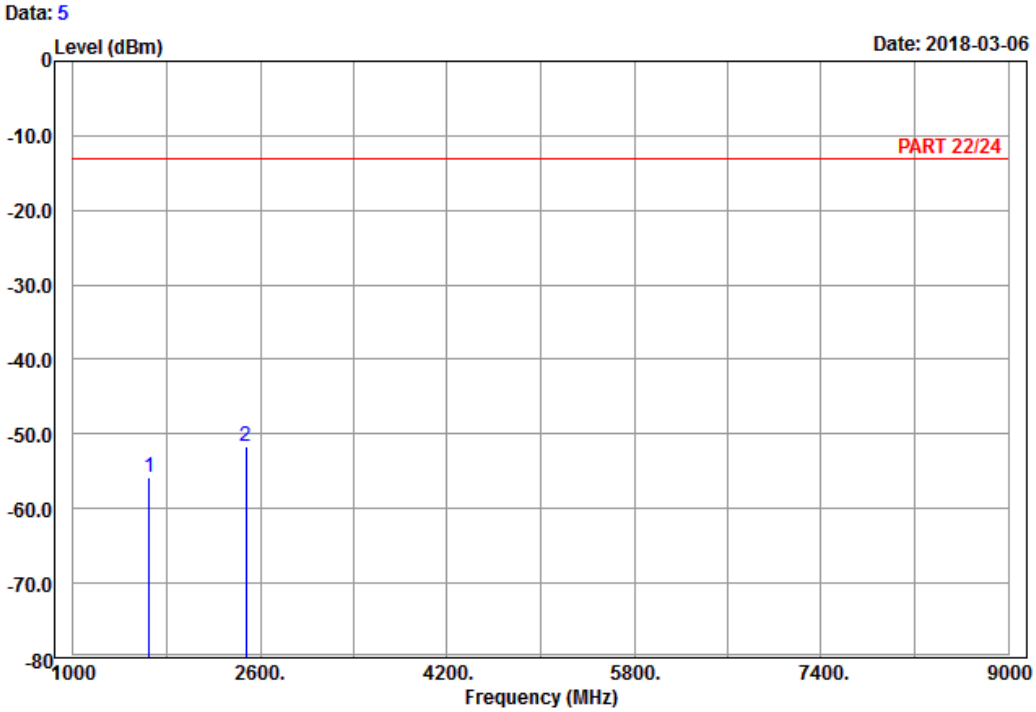
Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : EGDE 850_Link_CH251
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1697.60	-55.47	-63.61	-13.00	-42.47	8.14	Peak
2 pp	2546.40	-42.36	-53.83	-13.00	-29.36	11.47	Peak

WCDMA:

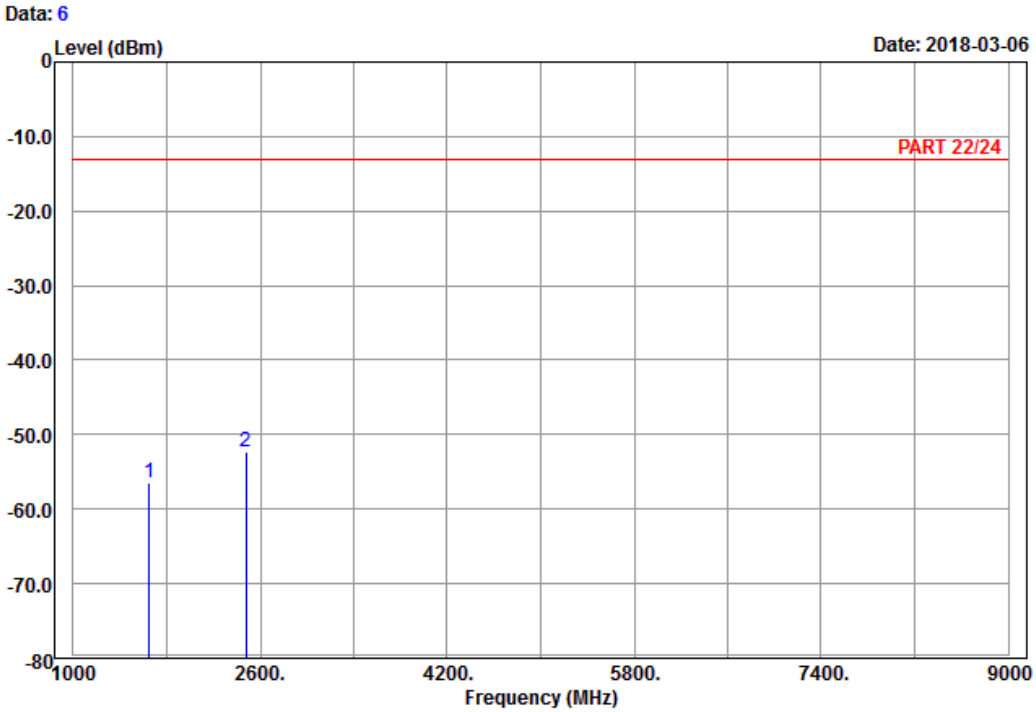
Low Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch




```
Site     : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark   : Band V_Link_CH4132
Tested by: Karl Lee
                        Read  Limit   Over
          Freq  Level  Level   Line  Limit Factor Remark
        _______ ______ ______ ______ ______ ______ ________
             MHz    dBm    dBm    dBm     dB     dB

  1     1652.80 -55.90 -63.63 -13.00 -42.90   7.73 Peak
  2 pp  2479.20 -51.60 -62.63 -13.00 -38.60  11.03 Peak
```

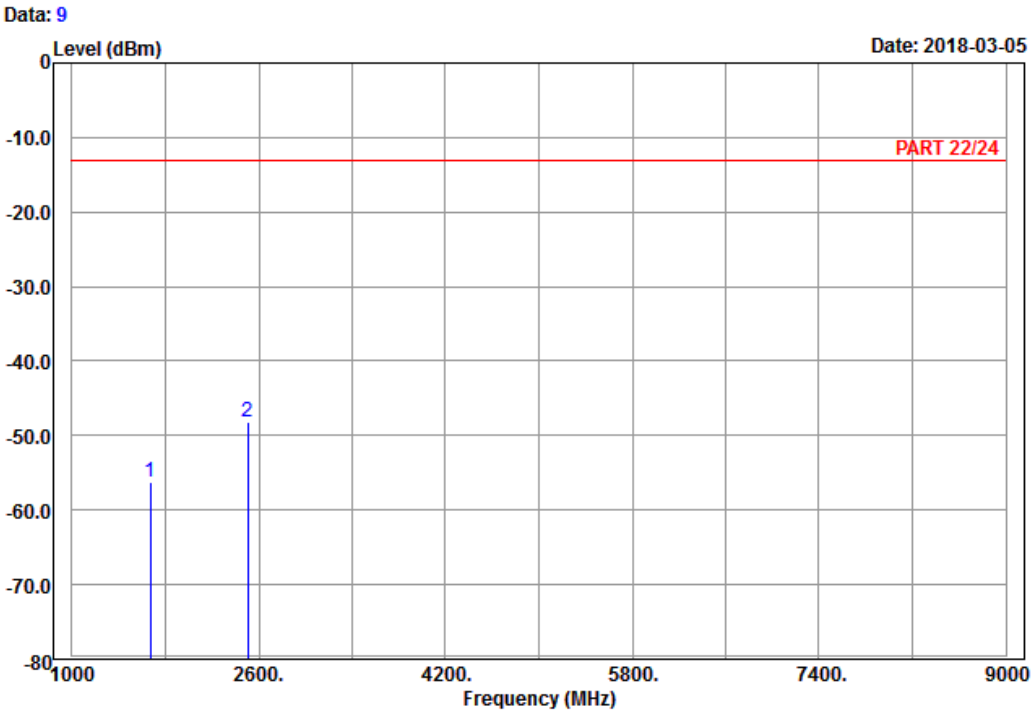


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : Band V_Link_CH4132
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1652.80	-56.54	-64.27	-13.00	-43.54	7.73	Peak
2 pp	2479.20	-52.34	-63.37	-13.00	-39.34	11.03	Peak

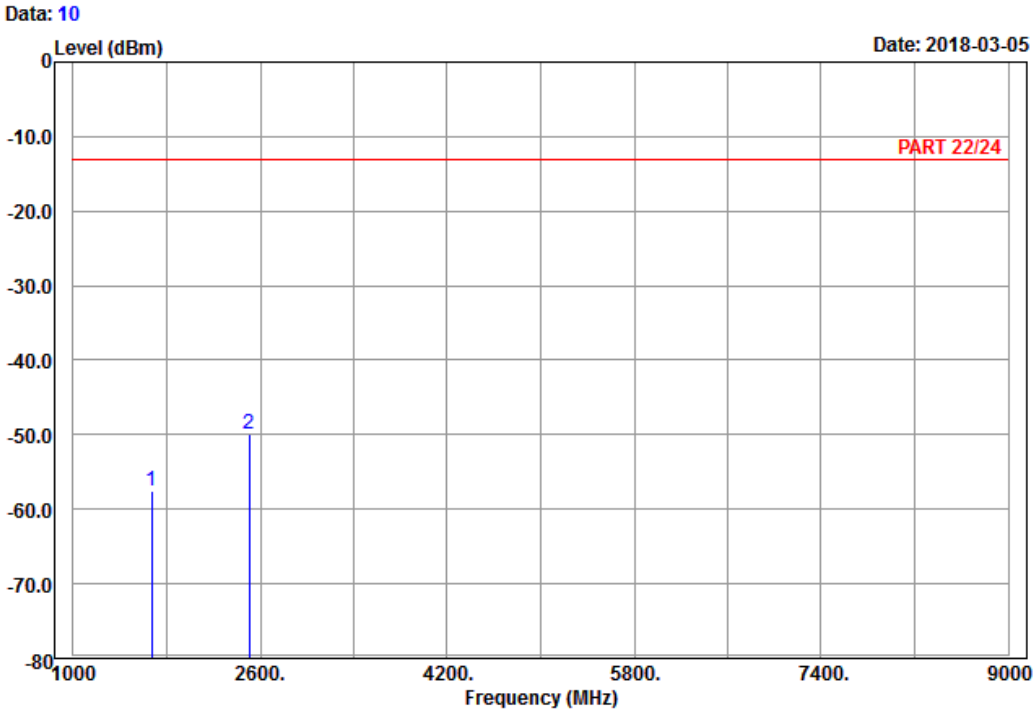
Middle Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : Band V_Link_CH4182
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1672.80	-56.33	-64.24	-13.00	-43.33	7.91	Peak
2 pp	2509.20	-48.10	-59.38	-13.00	-35.10	11.28	Peak

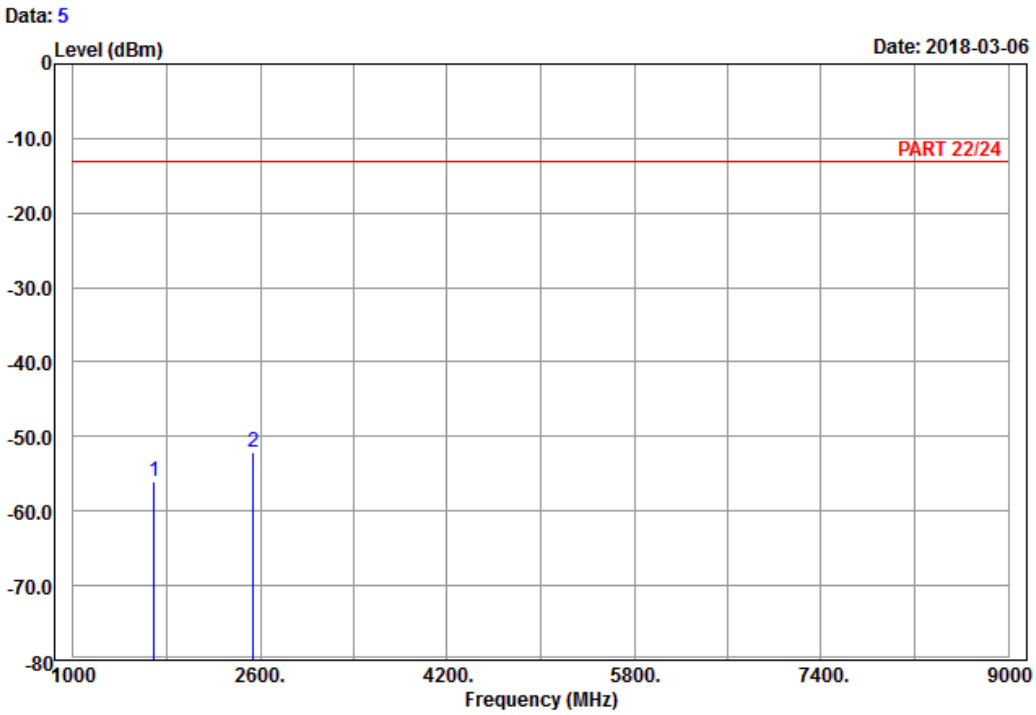


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : Band V_Link_CH4182
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1672.80	-57.46	-65.37	-13.00	-44.46	7.91	Peak
2 pp	2509.20	-49.82	-61.10	-13.00	-36.82	11.28	Peak

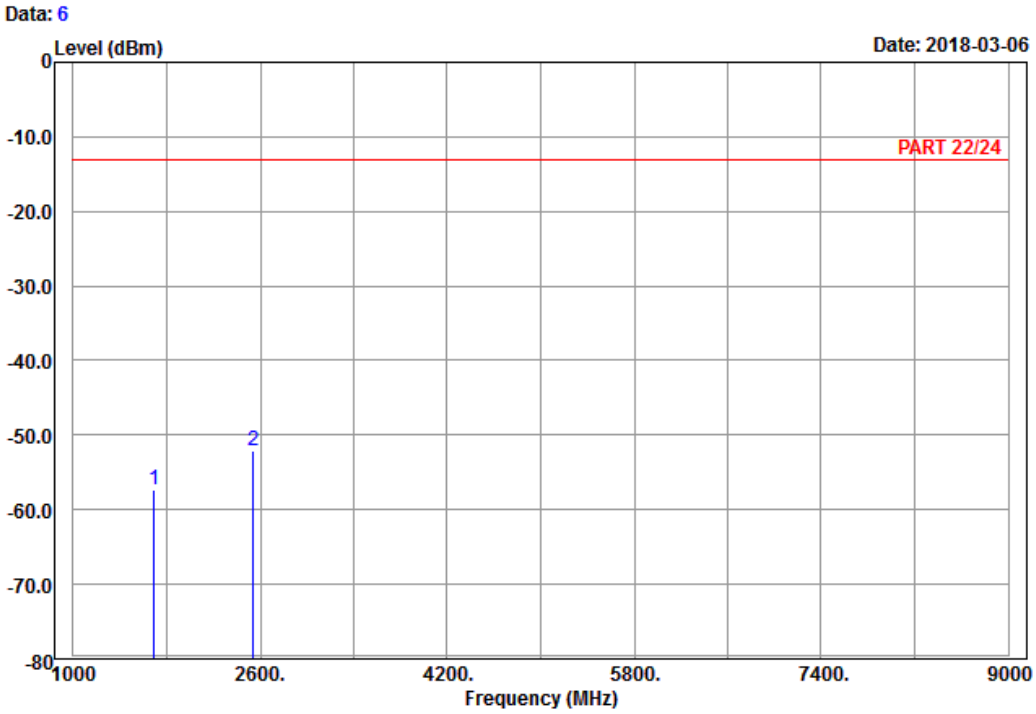
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : Band V_Link_CH4233
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1693.20	-55.93	-64.07	-13.00	-42.93	8.14	Peak
2 pp	2539.80	-52.13	-63.60	-13.00	-39.13	11.47	Peak

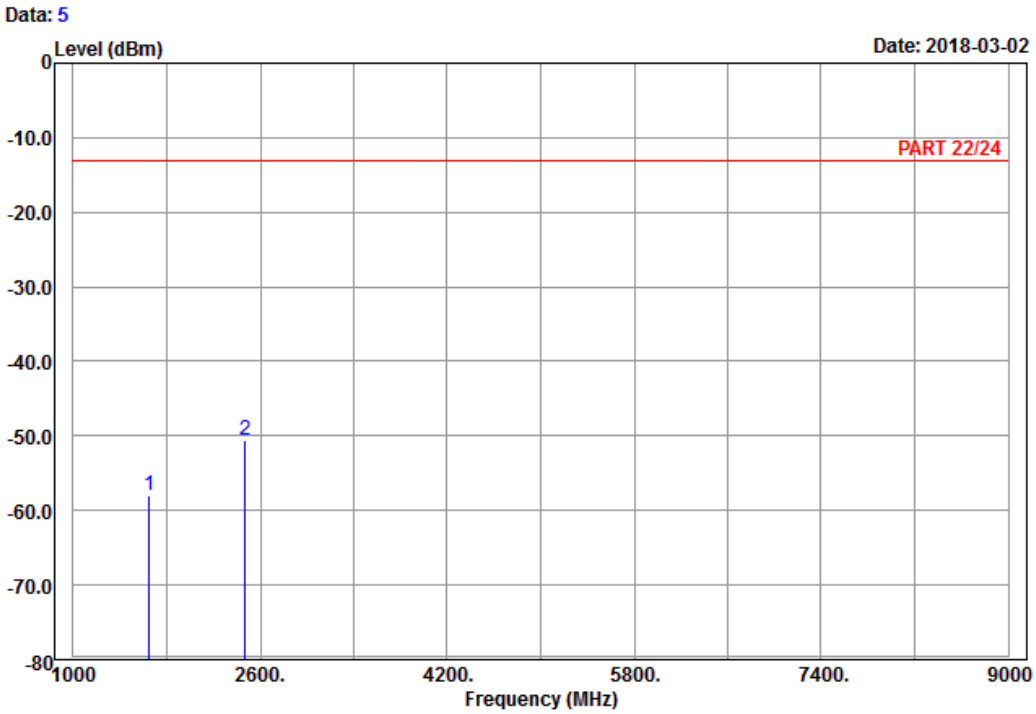


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : Band V_Link_CH4233
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1693.20	-57.26	-65.40	-13.00	-44.26	8.14	Peak
2 pp	2539.80	-52.12	-63.59	-13.00	-39.12	11.47	Peak

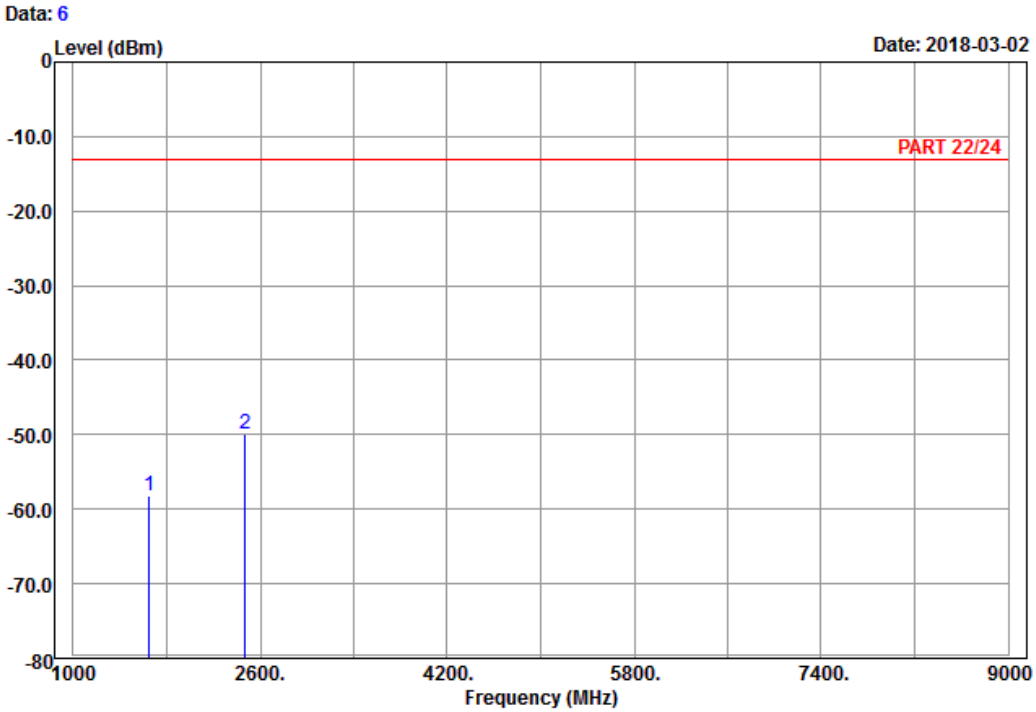
LTE Band 5
Channel Bandwidth: 1.4 MHz / QPSK
Low Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch




```
Site      : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark    : LTE_Band 5_Link_CH20407
Tested by: Karl Lee
```

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1649.40	-57.97	-65.70	-13.00	-44.97	7.73	Peak
2 pp	2474.10	-50.57	-61.60	-13.00	-37.57	11.03	Peak

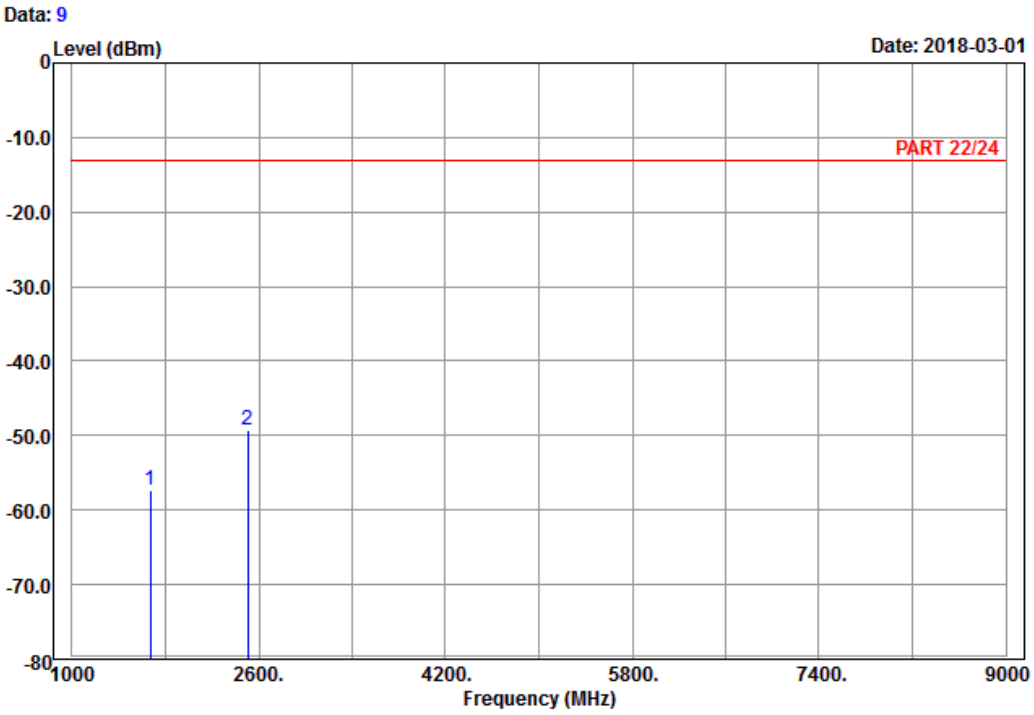


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5_Link_CH20407
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1649.40	-58.30	-66.03	-13.00	-45.30	7.73	Peak
2 pp	2474.10	-49.82	-60.85	-13.00	-36.82	11.03	Peak

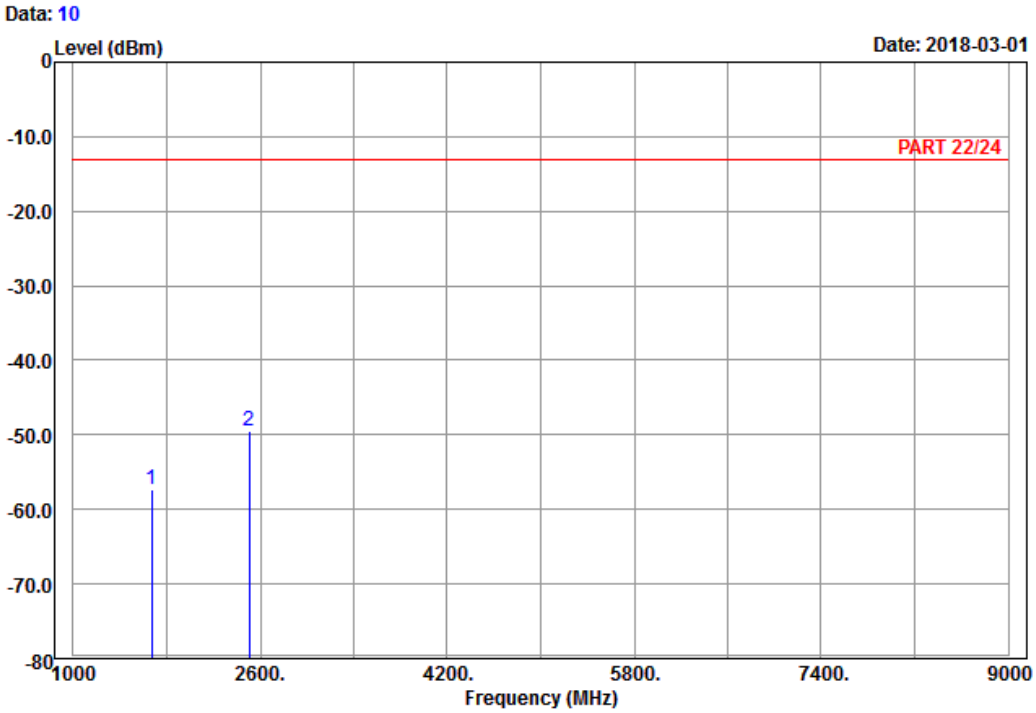
Middle Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1673.00	-57.24	-65.15	-13.00	-44.24	7.91	Peak
2 pp	2509.50	-49.33	-60.61	-13.00	-36.33	11.28	Peak

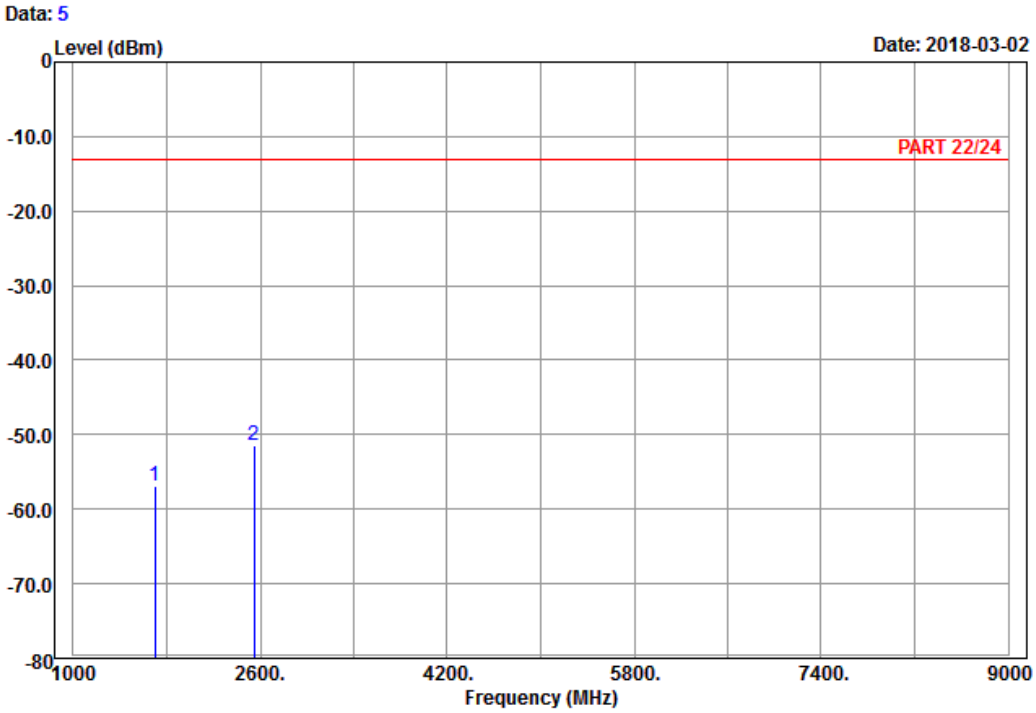


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5_Link_CH20525
Tested by: Charles Hsiao

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1673.00	-57.32	-65.23	-13.00	-44.32	7.91	Peak
2 pp	2509.50	-49.42	-60.70	-13.00	-36.42	11.28	Peak

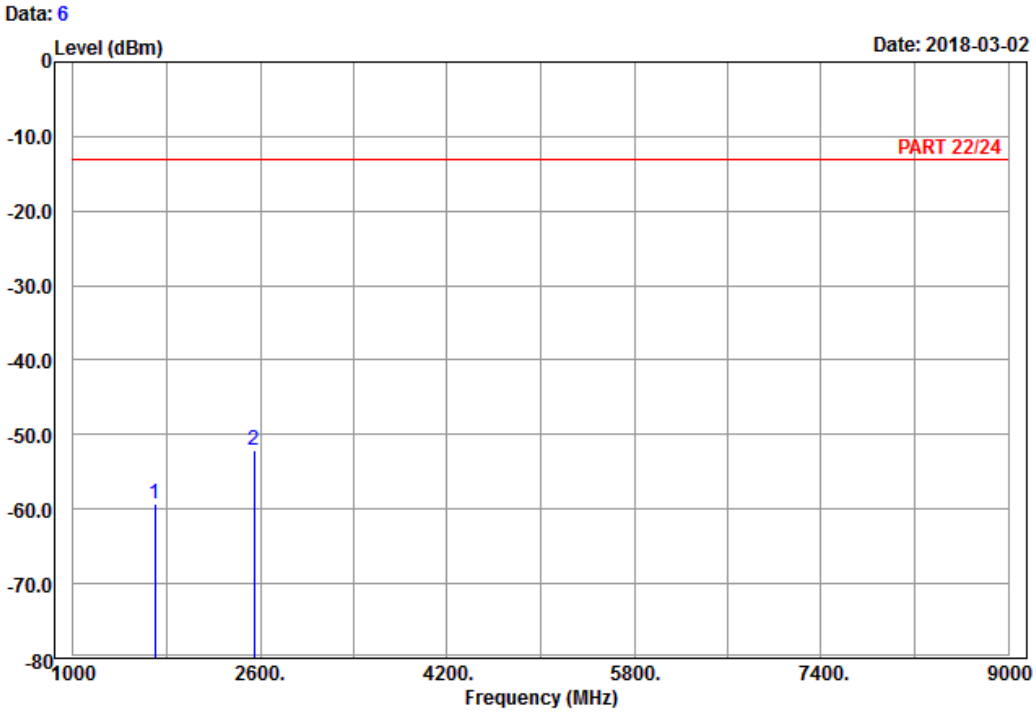
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 5_Link_CH20625
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1696.60	-56.84	-64.98	-13.00	-43.84	8.14	Peak
2 pp	2544.90	-51.42	-62.89	-13.00	-38.42	11.47	Peak

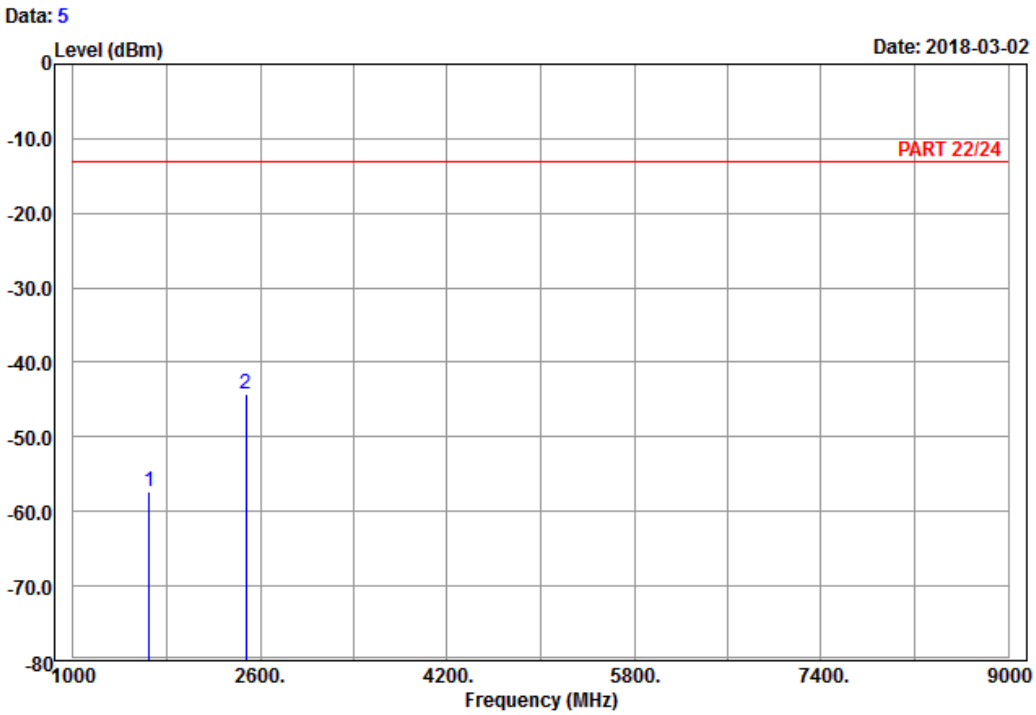


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5_Link_CH20625
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1696.60	-59.28	-67.42	-13.00	-46.28	8.14	Peak
2 pp	2544.90	-52.05	-63.52	-13.00	-39.05	11.47	Peak

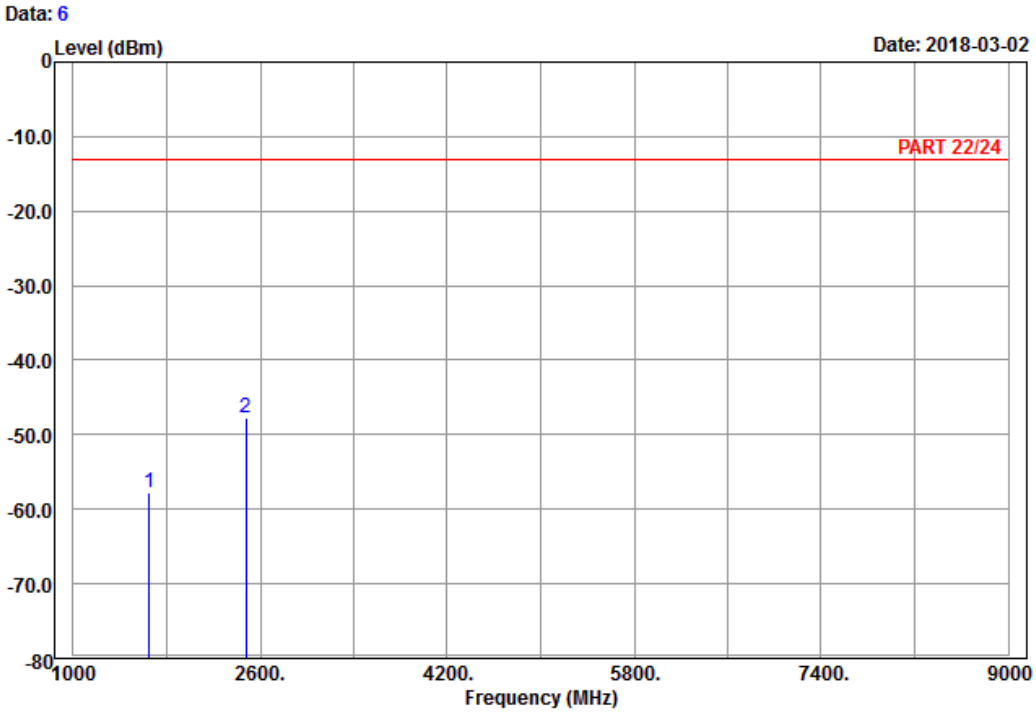
Channel Bandwidth: 5 MHz / QPSK
Low Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 5_Link_CH20425
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1653.00	-57.36	-65.09	-13.00	-44.36	7.73	Peak
2 pp	2479.50	-44.34	-55.37	-13.00	-31.34	11.03	Peak

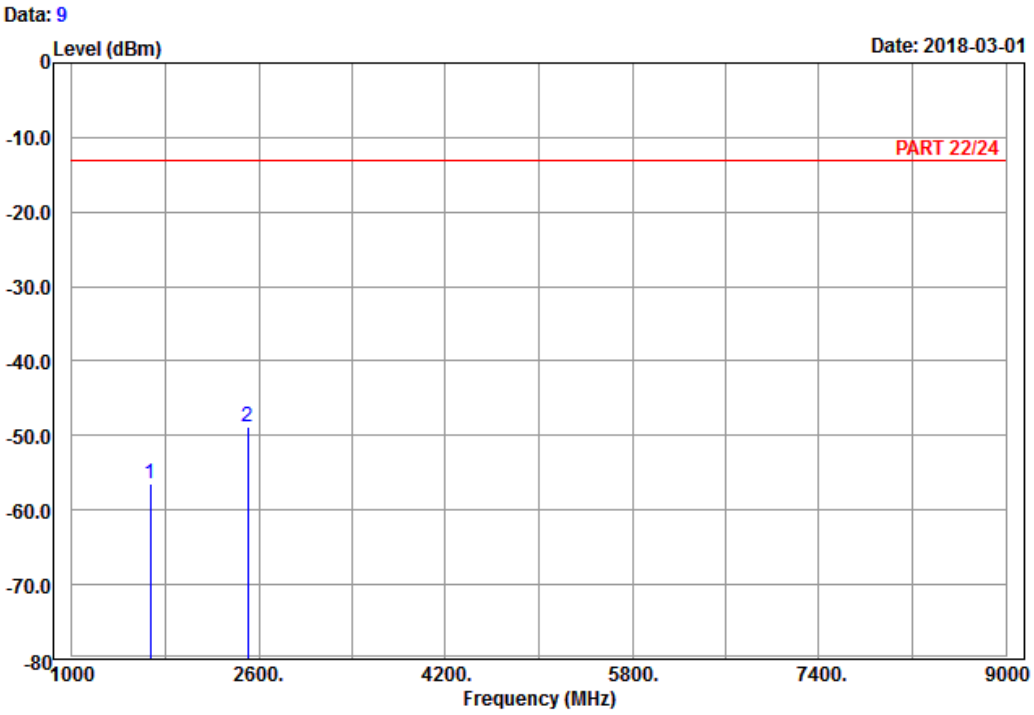


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5_Link_CH20425
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1653.00	-57.71	-65.44	-13.00	-44.71	7.73	Peak
2 pp	2479.50	-47.75	-58.78	-13.00	-34.75	11.03	Peak

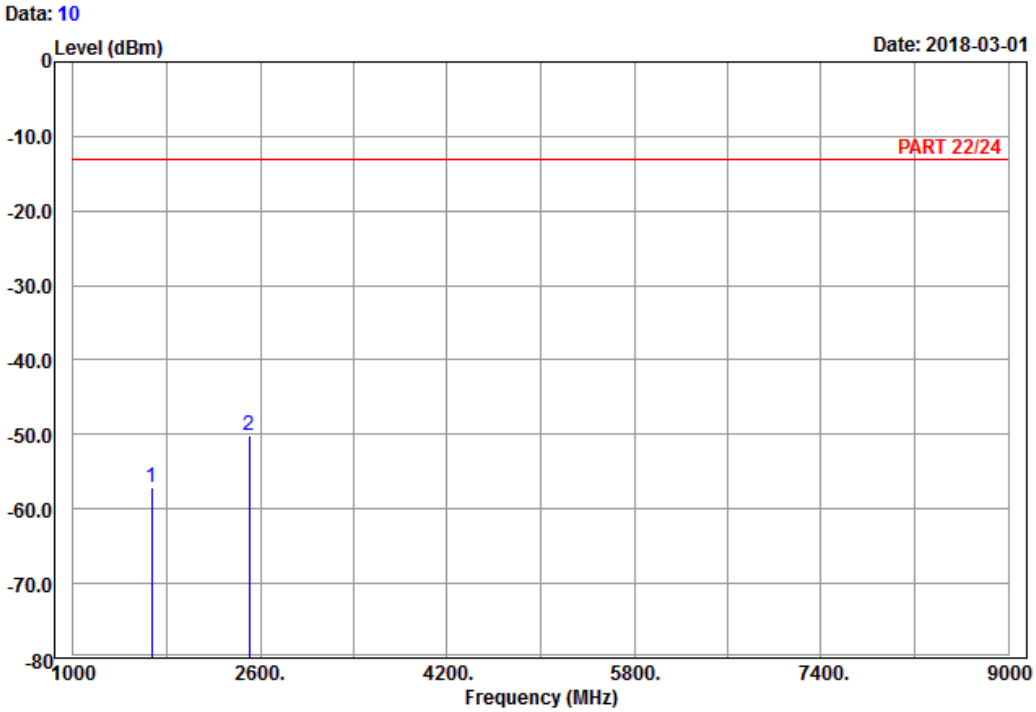
Middle Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1673.00	-56.38	-64.29	-13.00	-43.38	7.91	Peak
2 pp	2509.50	-48.76	-60.04	-13.00	-35.76	11.28	Peak

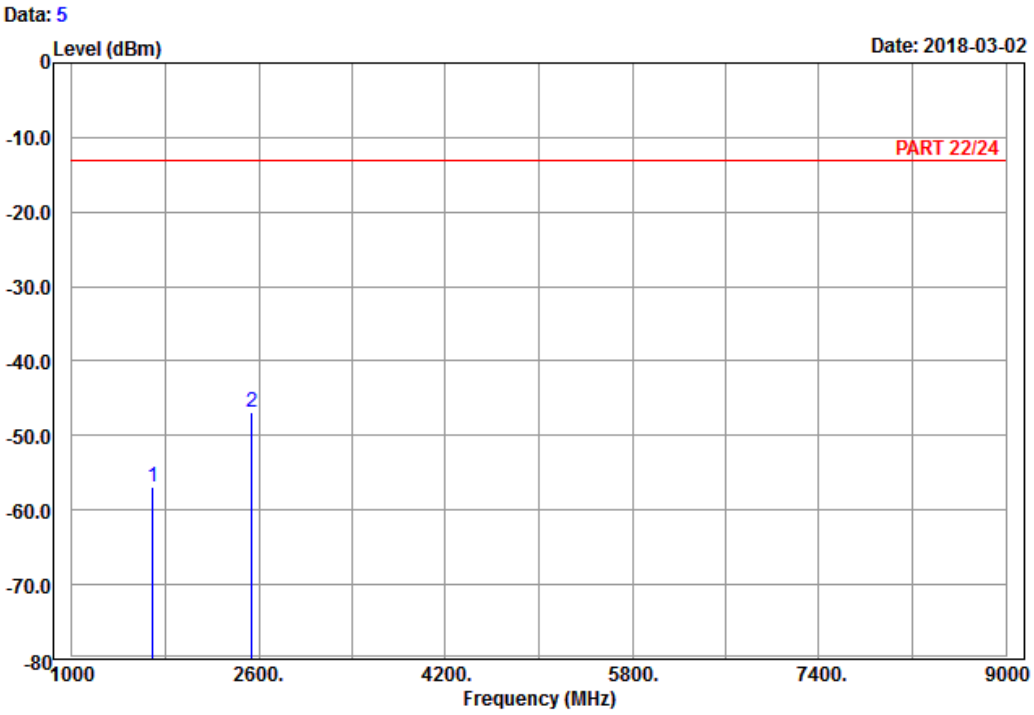


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5_Link_CH20525
Tested by: Charles Hsiao

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1673.00	-57.22	-65.13	-13.00	-44.22	7.91	Peak
2 pp	2509.50	-50.10	-61.38	-13.00	-37.10	11.28	Peak

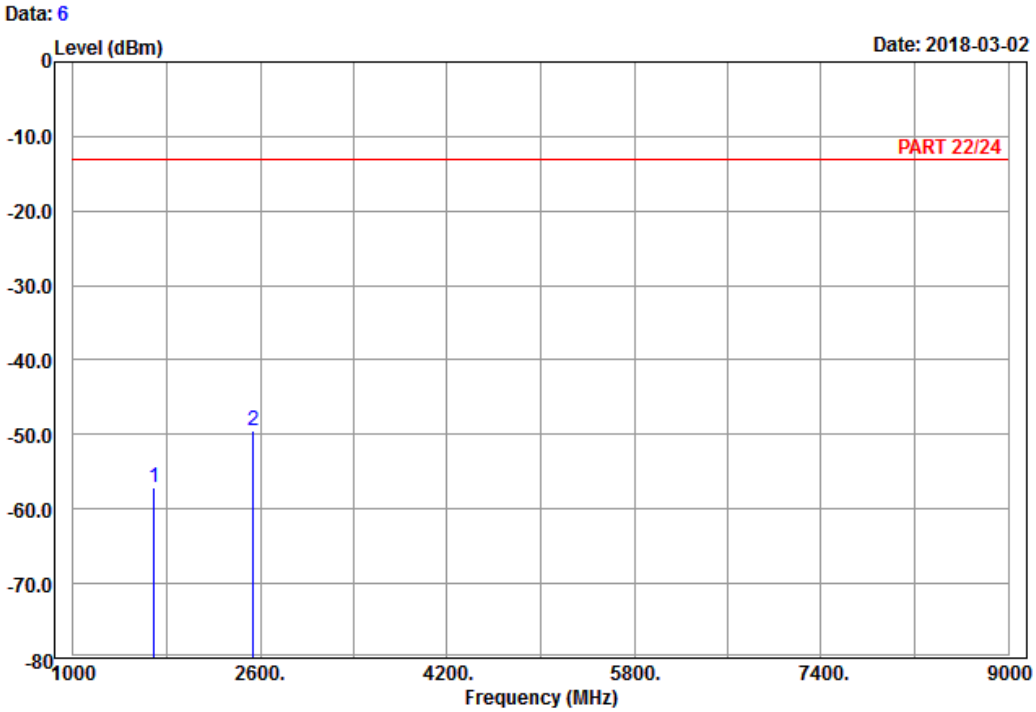
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 5_Link_CH20625
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1693.00	-56.84	-64.86	-13.00	-43.84	8.02	Peak
2 pp	2539.50	-46.87	-58.34	-13.00	-33.87	11.47	Peak

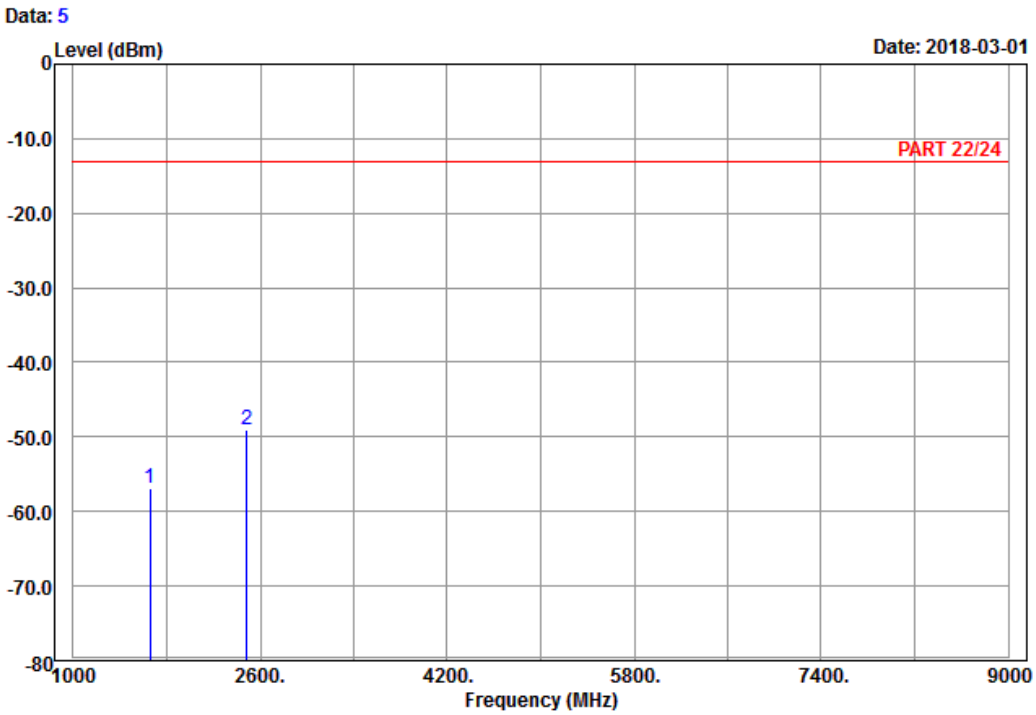


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5_Link_CH20625
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1693.00	-57.14	-65.16	-13.00	-44.14	8.02	Peak
2 pp	2539.50	-49.56	-61.03	-13.00	-36.56	11.47	Peak

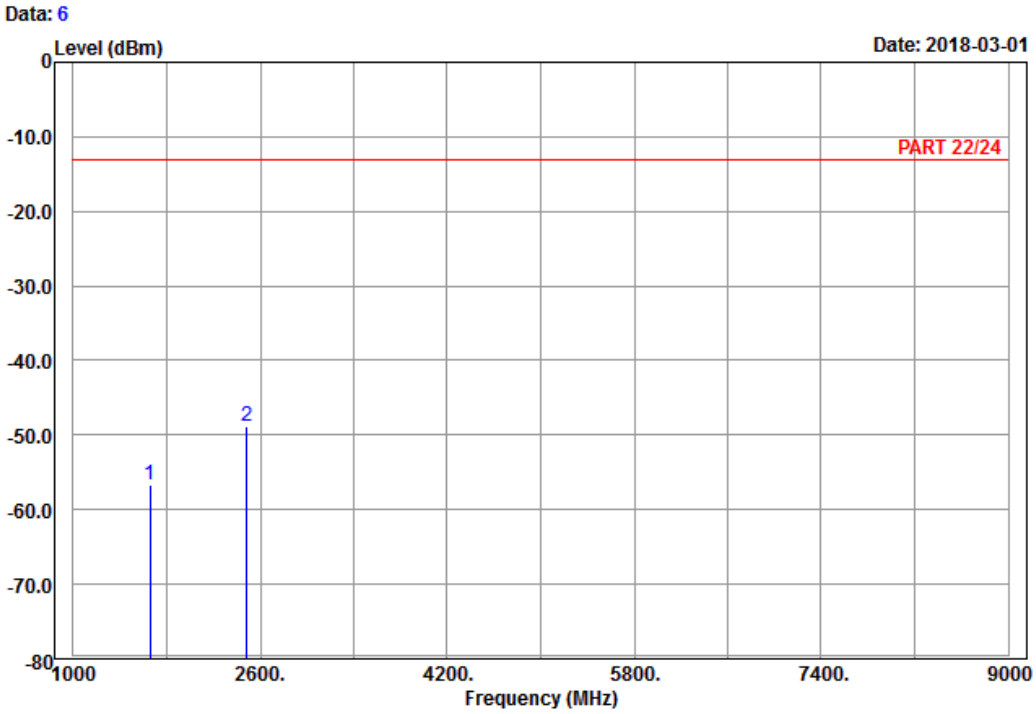
Channel Bandwidth: 10 MHz / QPSK
Low Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1658.00	-56.88	-64.79	-13.00	-43.88	7.91	Peak
2 pp	2487.00	-49.10	-60.14	-13.00	-36.10	11.04	Peak

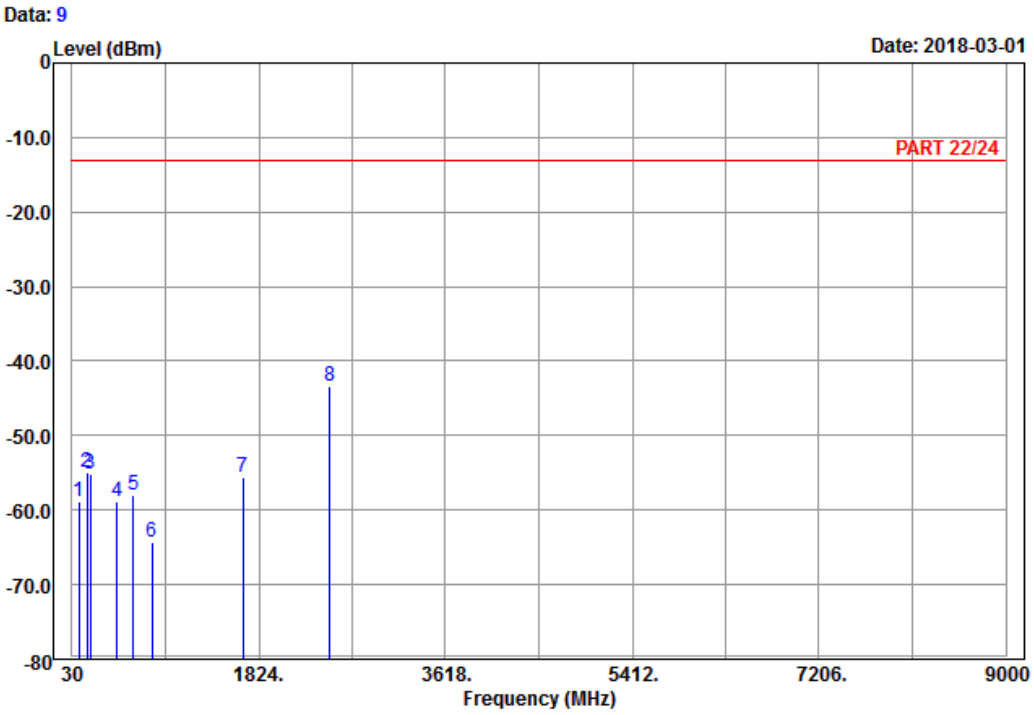


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5_Link_CH20450
Tested by: Charles Hsiao

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1658.00	-56.71	-64.62	-13.00	-43.71	7.91	Peak
2 pp	2487.00	-48.90	-59.94	-13.00	-35.90	11.04	Peak

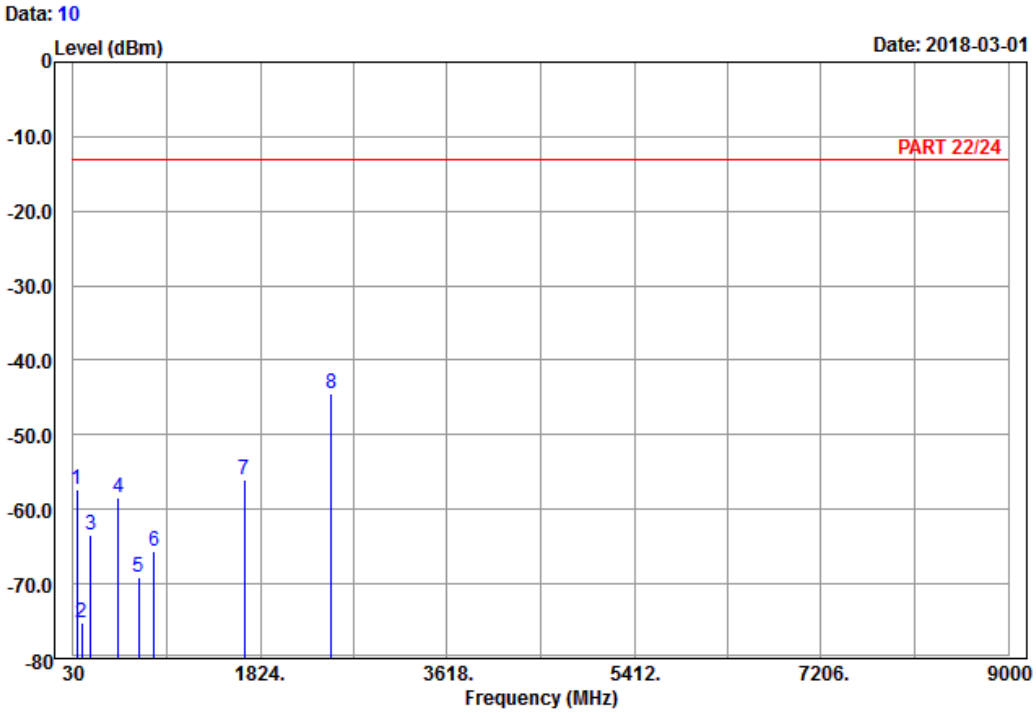
Middle Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	98.58	-58.81	-48.63	-13.00	-45.81	-10.18	Peak
2	173.91	-54.83	-48.53	-13.00	-41.83	-6.30	Peak
3	201.99	-55.21	-49.05	-13.00	-42.21	-6.16	Peak
4	465.20	-58.88	-54.59	-13.00	-45.88	-4.29	Peak
5	621.30	-57.94	-58.12	-13.00	-44.94	0.18	Peak
6	798.40	-64.37	-66.25	-13.00	-51.37	1.88	Peak
7	1673.00	-55.66	-63.57	-13.00	-42.66	7.91	Peak
8 pp	2509.50	-43.32	-54.60	-13.00	-30.32	11.28	Peak

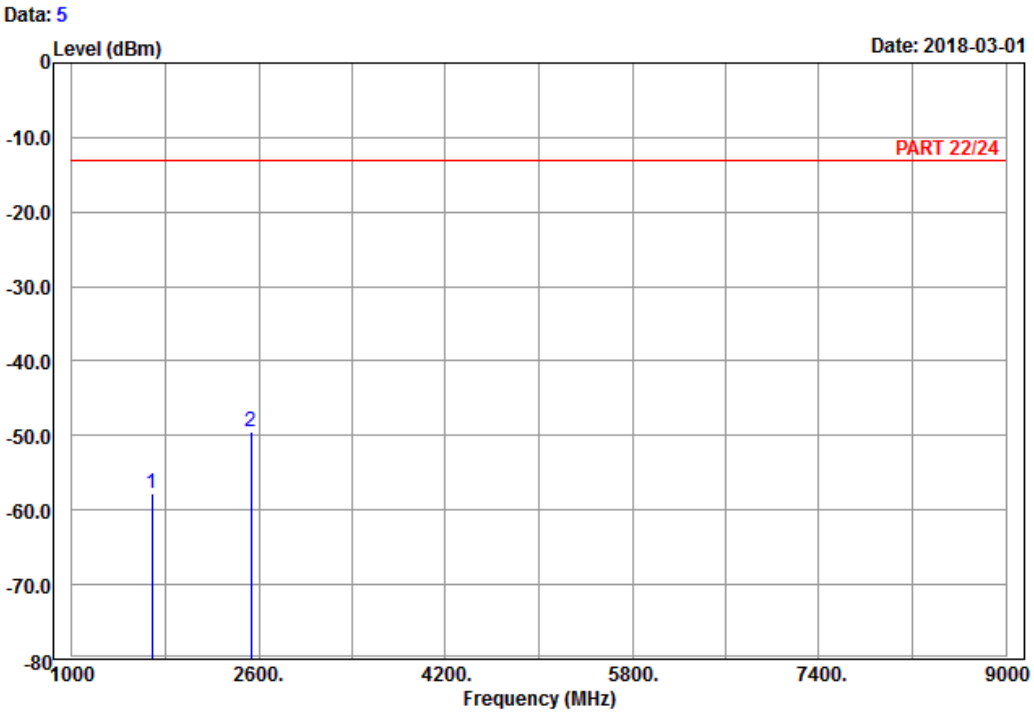


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5_Link_CH20525
Tested by: Charles Hsiao

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	63.48	-57.24	-43.73	-13.00	-44.24	-13.51	Peak
2	115.59	-75.13	-66.56	-13.00	-62.13	-8.57	Peak
3	195.78	-63.40	-57.40	-13.00	-50.40	-6.00	Peak
4	459.60	-58.47	-54.35	-13.00	-45.47	-4.12	Peak
5	661.20	-69.06	-68.87	-13.00	-56.06	-0.19	Peak
6	802.60	-65.60	-67.59	-13.00	-52.60	1.99	Peak
7	1673.00	-55.97	-63.88	-13.00	-42.97	7.91	Peak
8 pp	2509.50	-44.47	-55.75	-13.00	-31.47	11.28	Peak

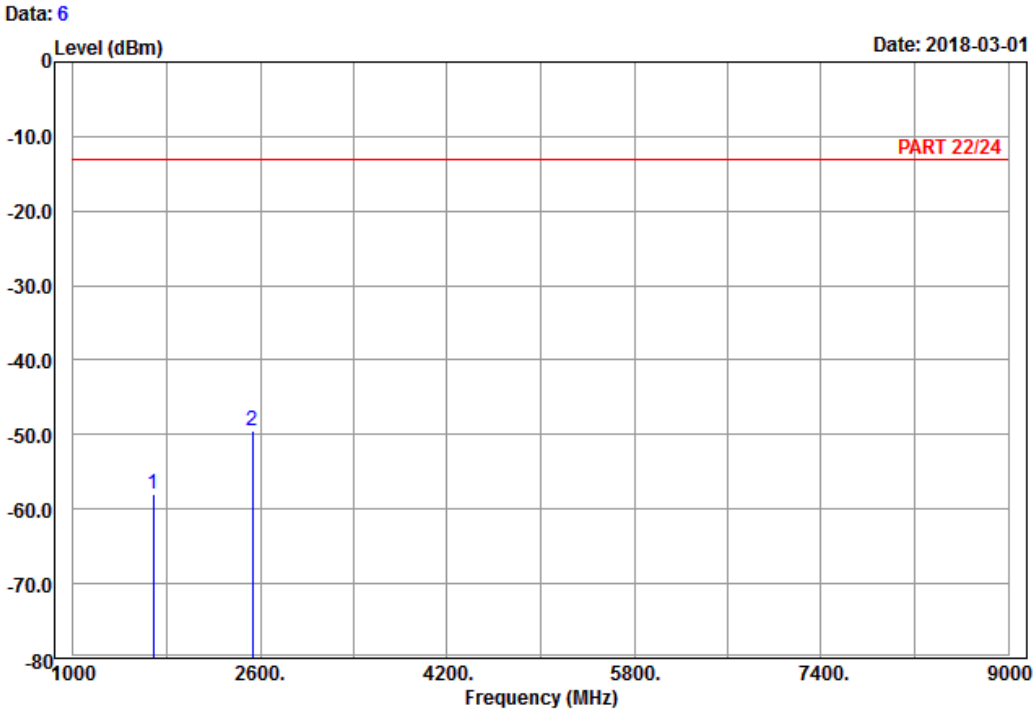
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1688.00	-57.87	-65.89	-13.00	-44.87	8.02	Peak
2 pp	2532.00	-49.45	-60.83	-13.00	-36.45	11.38	Peak

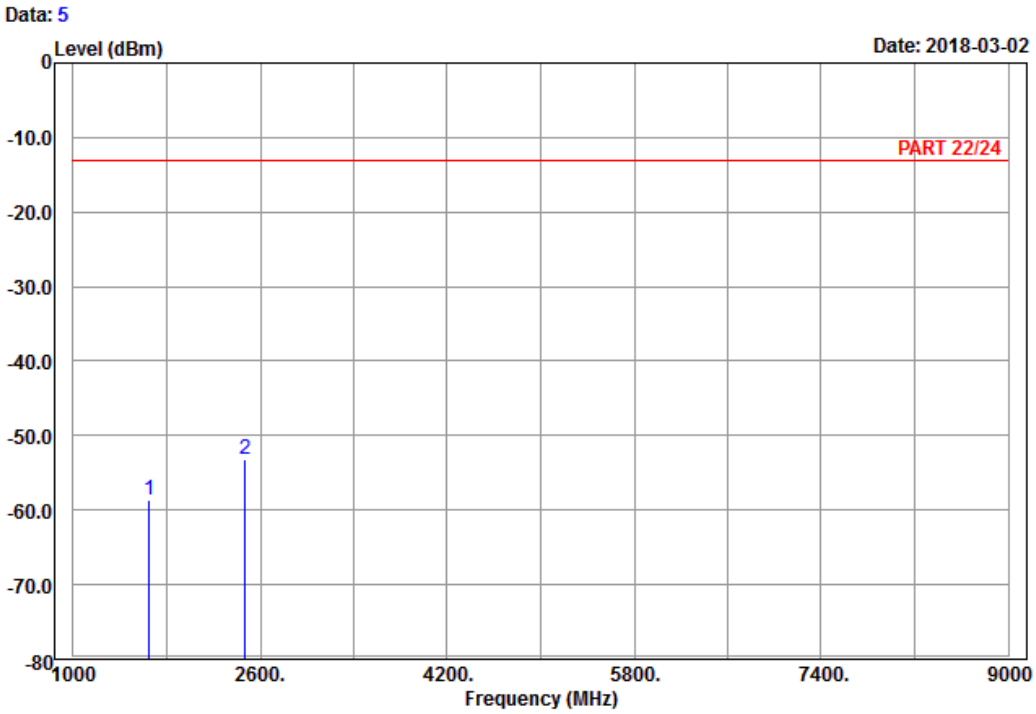


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5_Link_CH20600
Tested by: Charles Hsiao

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1688.00	-57.99	-66.01	-13.00	-44.99	8.02	Peak
2 pp	2532.00	-49.43	-60.81	-13.00	-36.43	11.38	Peak

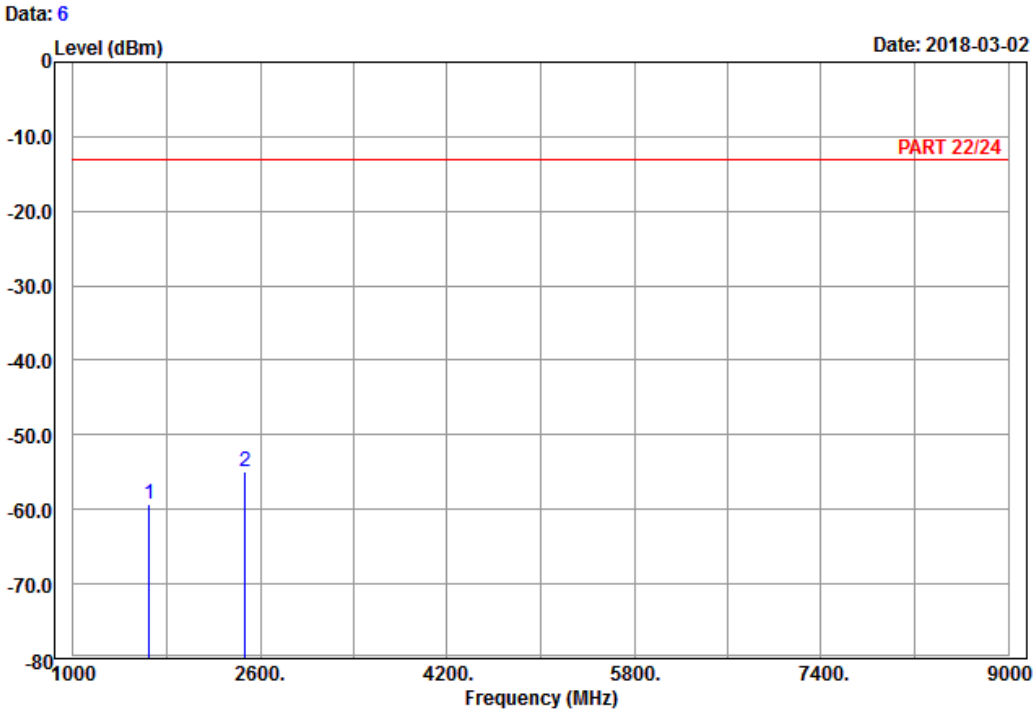
LTE Band 26
Channel Bandwidth: 1.4 MHz / QPSK
Low Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch




```
Site      : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark    : LTE_Band 26_Link_CH26797
Tested by: Karl Lee
                          Read  Limit   Over
           Freq  Level  Level   Line  Limit Factor Remark
          ______ _____ _______ _____ _____ ______ ________
             MHz   dBm    dBm   dBm    dB     dB

  1     1649.40 -58.74 -66.47 -13.00 -45.74   7.73 Peak
  2 pp  2474.10 -53.22 -64.25 -13.00 -40.22  11.03 Peak
```

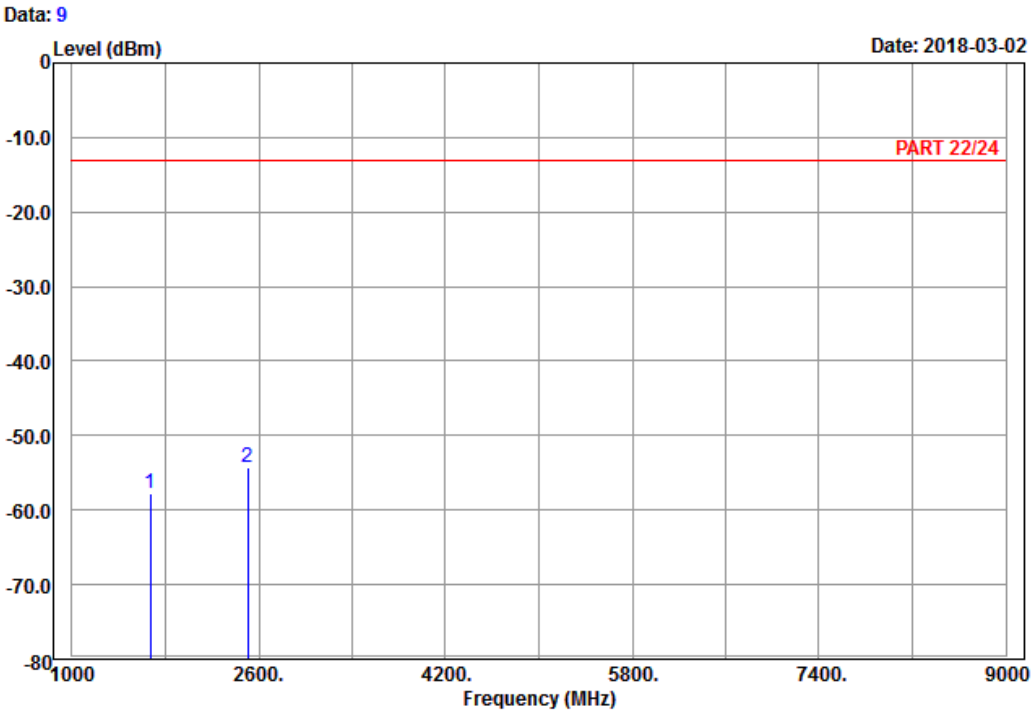


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 26_Link_CH26797
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1649.40	-59.19	-66.92	-13.00	-46.19	7.73	Peak
2 pp	2474.10	-54.87	-65.90	-13.00	-41.87	11.03	Peak

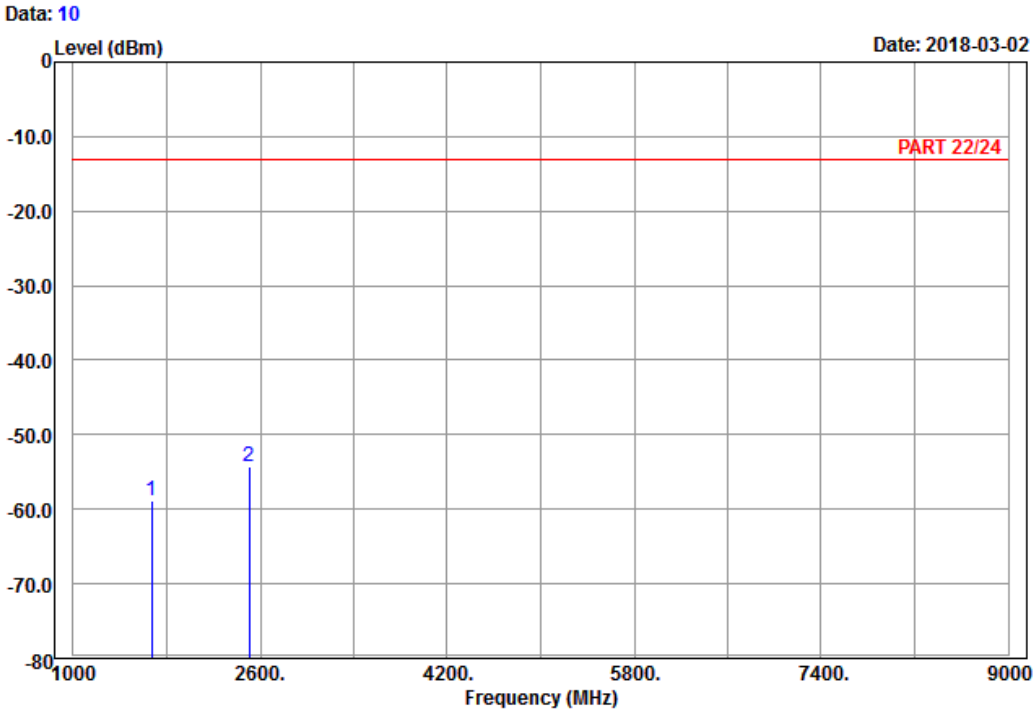
Middle Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1673.00	-57.84	-65.75	-13.00	-44.84	7.91	Peak
2 pp	2509.50	-54.35	-65.63	-13.00	-41.35	11.28	Peak

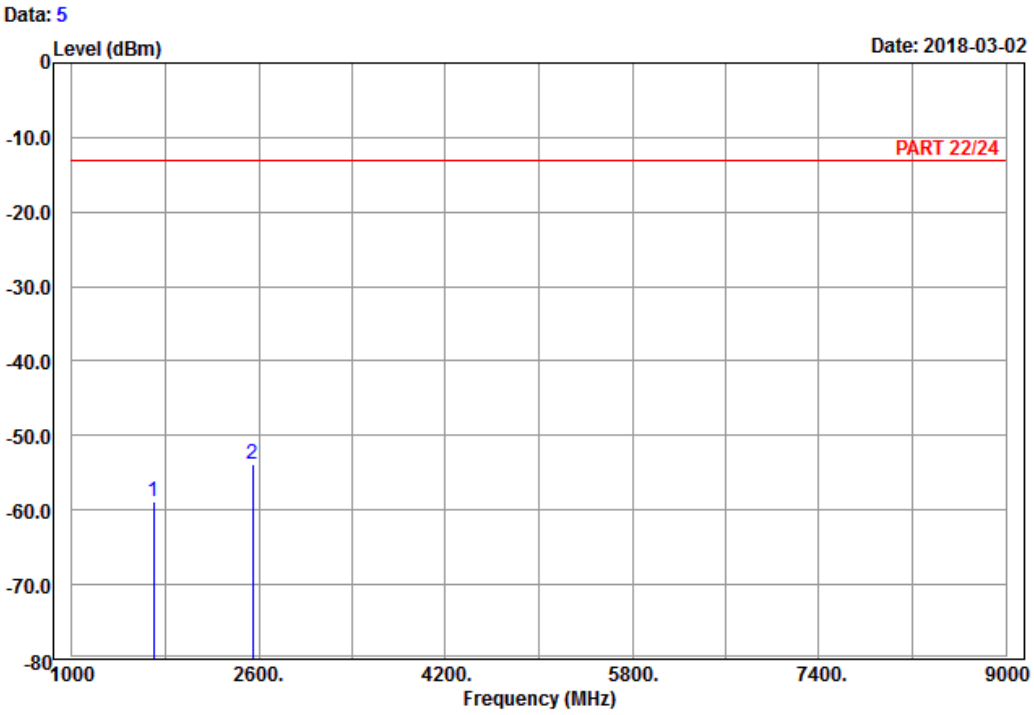


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 26_Link_CH26915
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1673.00	-58.80	-66.71	-13.00	-45.80	7.91	Peak
2 pp	2509.50	-54.28	-65.56	-13.00	-41.28	11.28	Peak

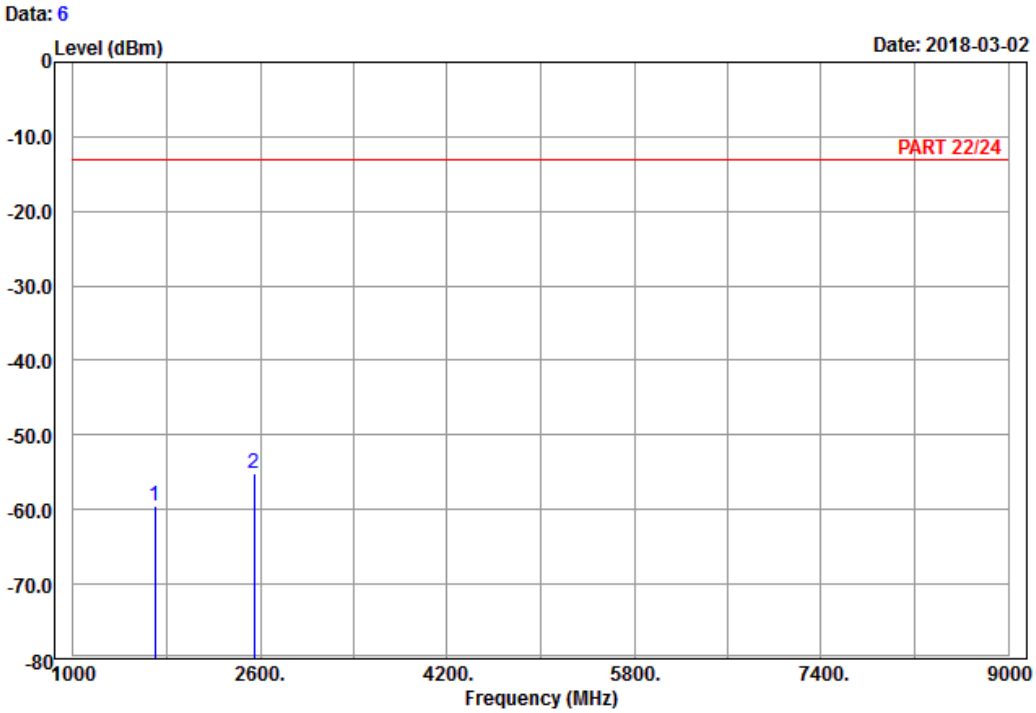
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 26_Link_CH27033
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1696.60	-58.94	-67.08	-13.00	-45.94	8.14	Peak
2 pp	2544.90	-53.89	-65.36	-13.00	-40.89	11.47	Peak

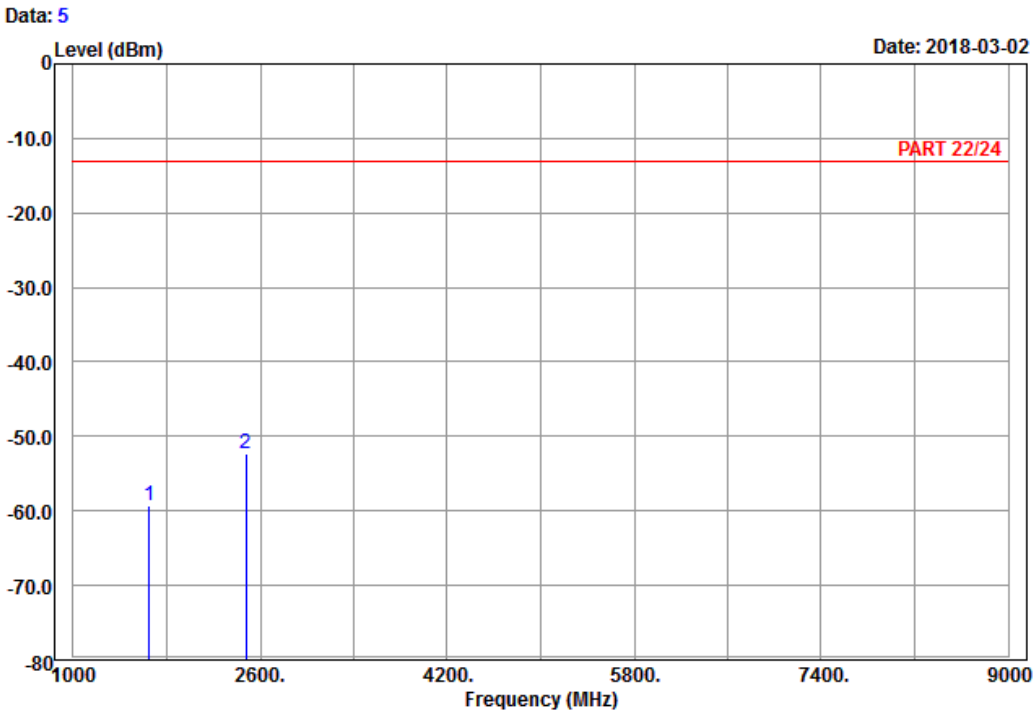


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 26_Link_CH27033
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1696.60	-59.46	-67.60	-13.00	-46.46	8.14	Peak
2 pp	2544.90	-55.07	-66.54	-13.00	-42.07	11.47	Peak

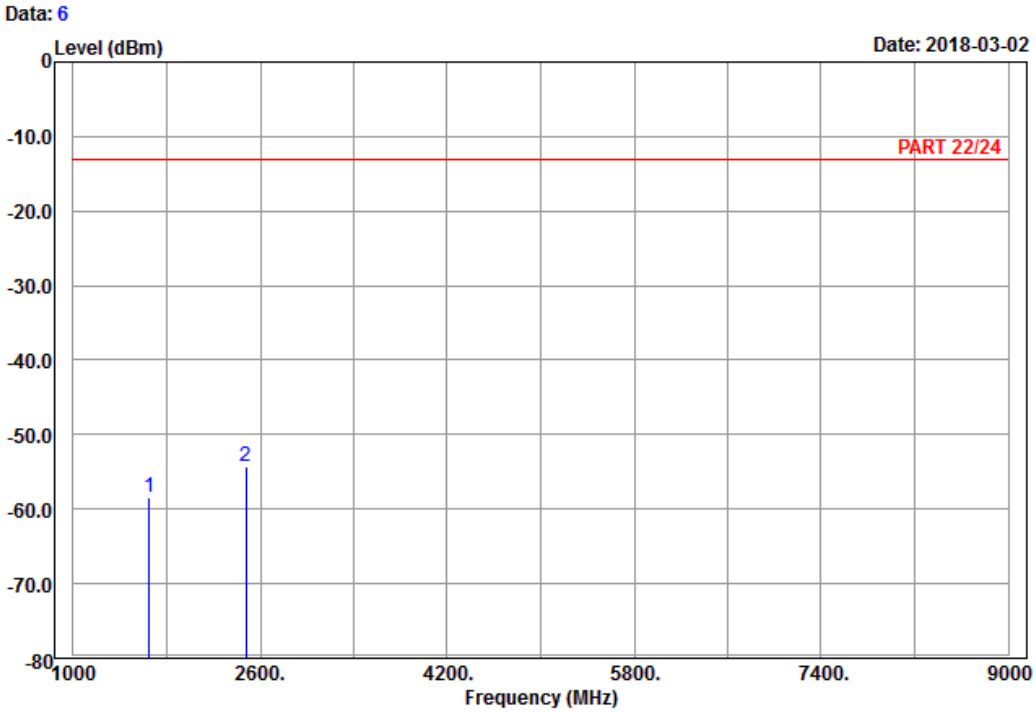
Channel Bandwidth: 5 MHz / QPSK
Low Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 26_Link_CH26815
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1653.00	-59.22	-66.95	-13.00	-46.22	7.73	Peak
2 pp	2479.50	-52.31	-63.34	-13.00	-39.31	11.03	Peak

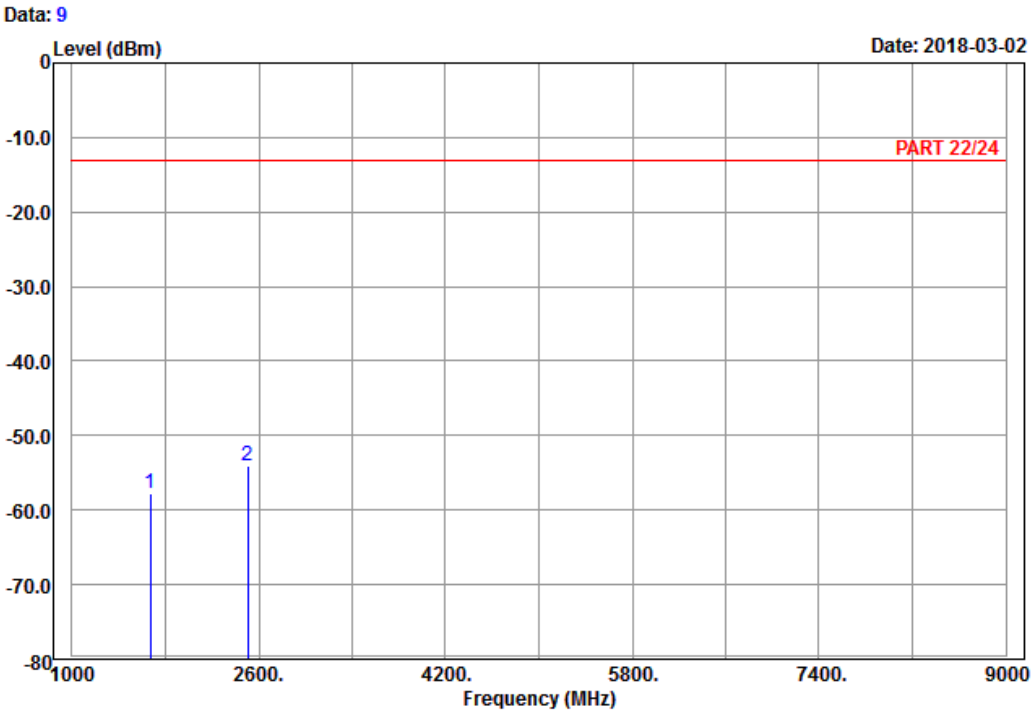


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 26_Link_CH26815
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1653.00	-58.47	-66.20	-13.00	-45.47	7.73	Peak
2 pp	2479.50	-54.28	-65.31	-13.00	-41.28	11.03	Peak

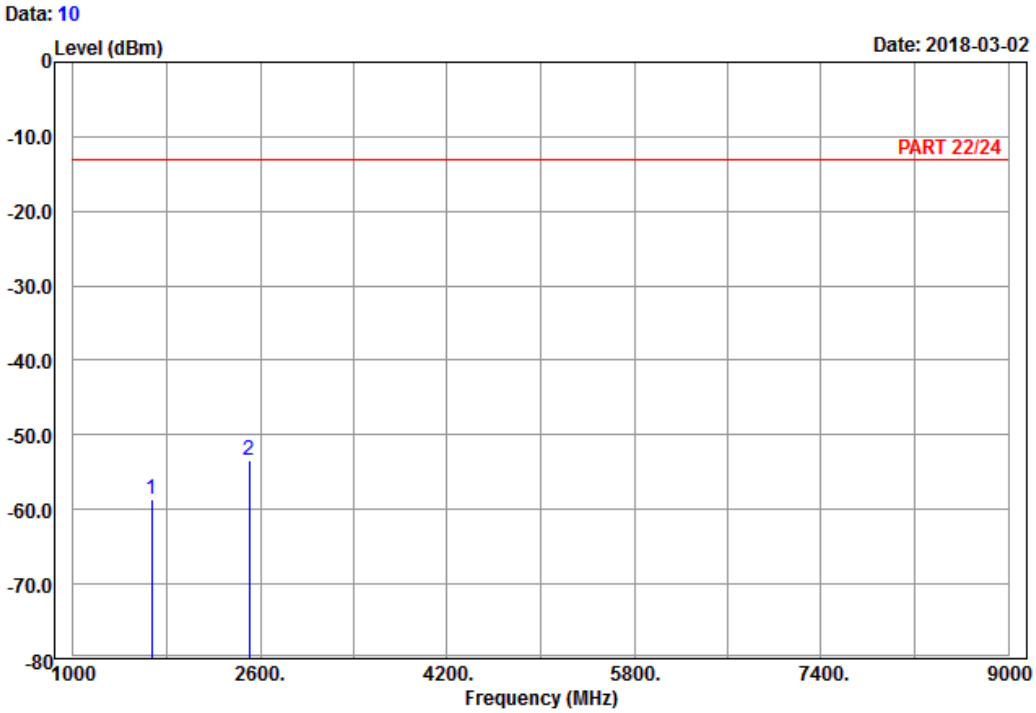
Middle Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1673.00	-57.71	-65.62	-13.00	-44.71	7.91	Peak
2 pp	2509.50	-54.09	-65.37	-13.00	-41.09	11.28	Peak

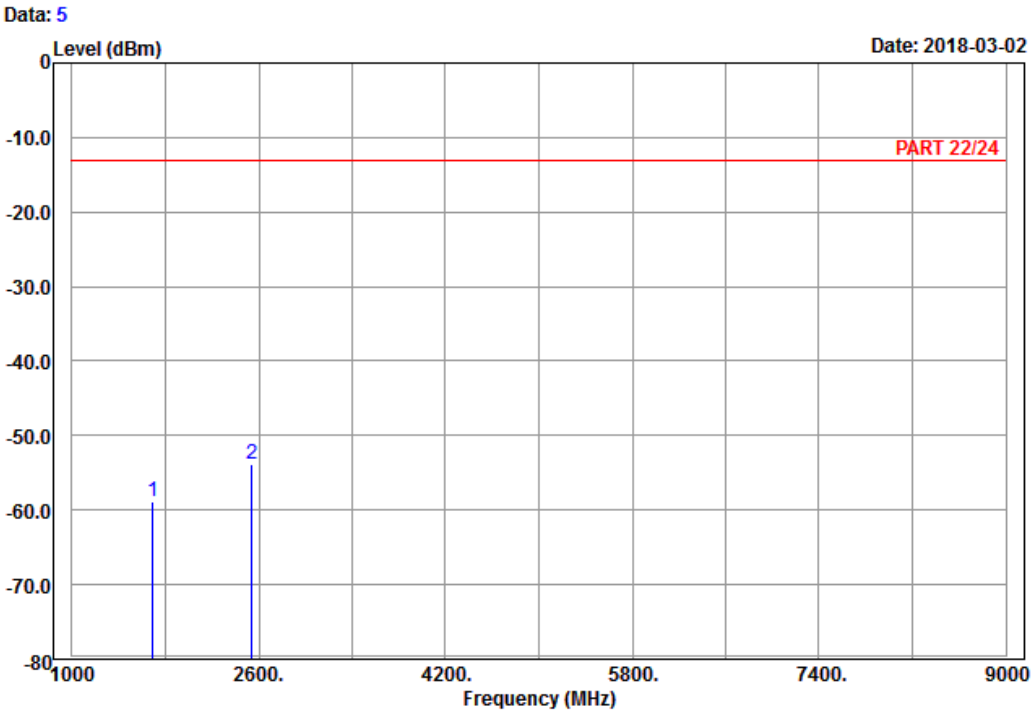


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 26_Link_CH26915
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1673.00	-58.72	-66.63	-13.00	-45.72	7.91	Peak
2 pp	2509.50	-53.37	-64.65	-13.00	-40.37	11.28	Peak

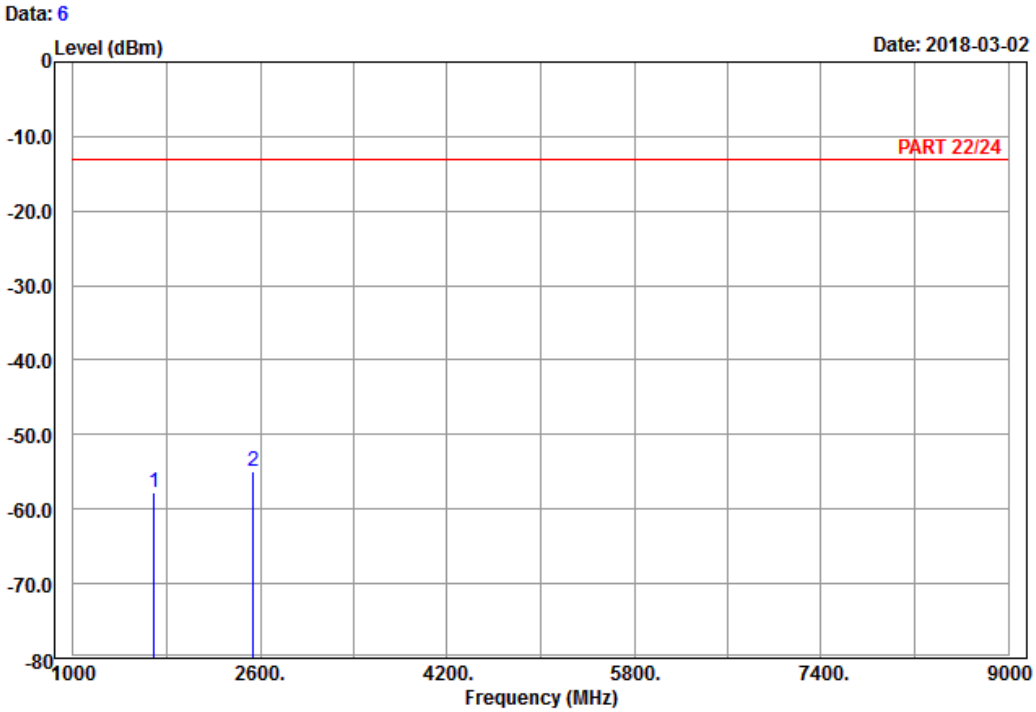
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 26_Link_CH27015
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1693.00	-58.80	-66.82	-13.00	-45.80	8.02	Peak
2 pp	2539.50	-53.82	-65.29	-13.00	-40.82	11.47	Peak

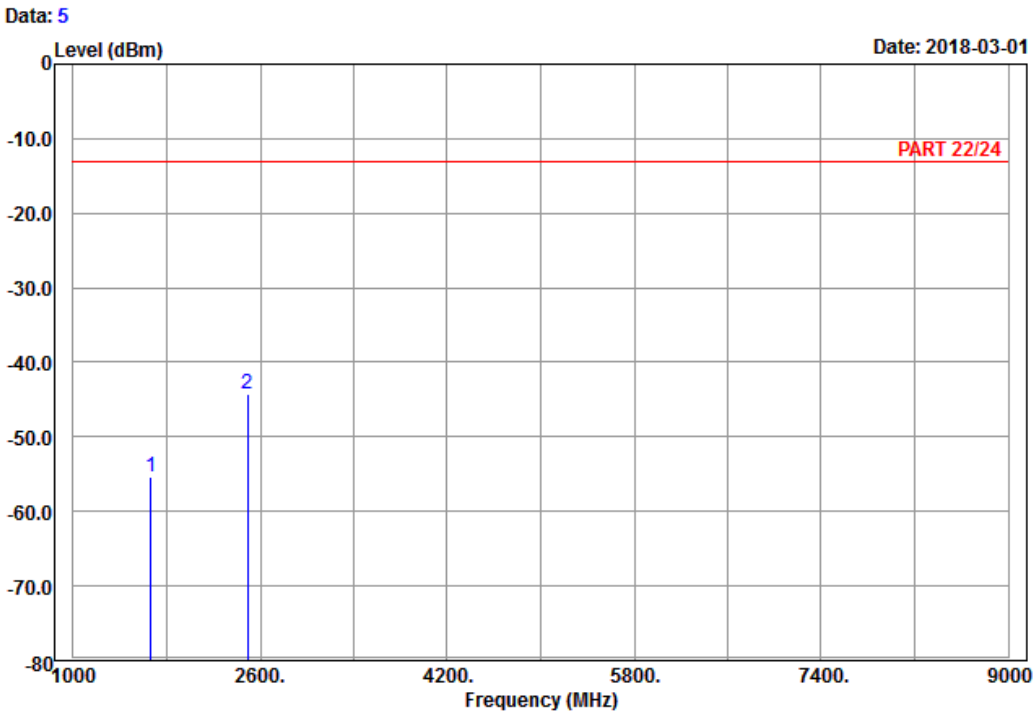


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 26_Link_CH27015
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1693.00	-57.87	-65.89	-13.00	-44.87	8.02	Peak
2 pp	2539.50	-54.86	-66.33	-13.00	-41.86	11.47	Peak

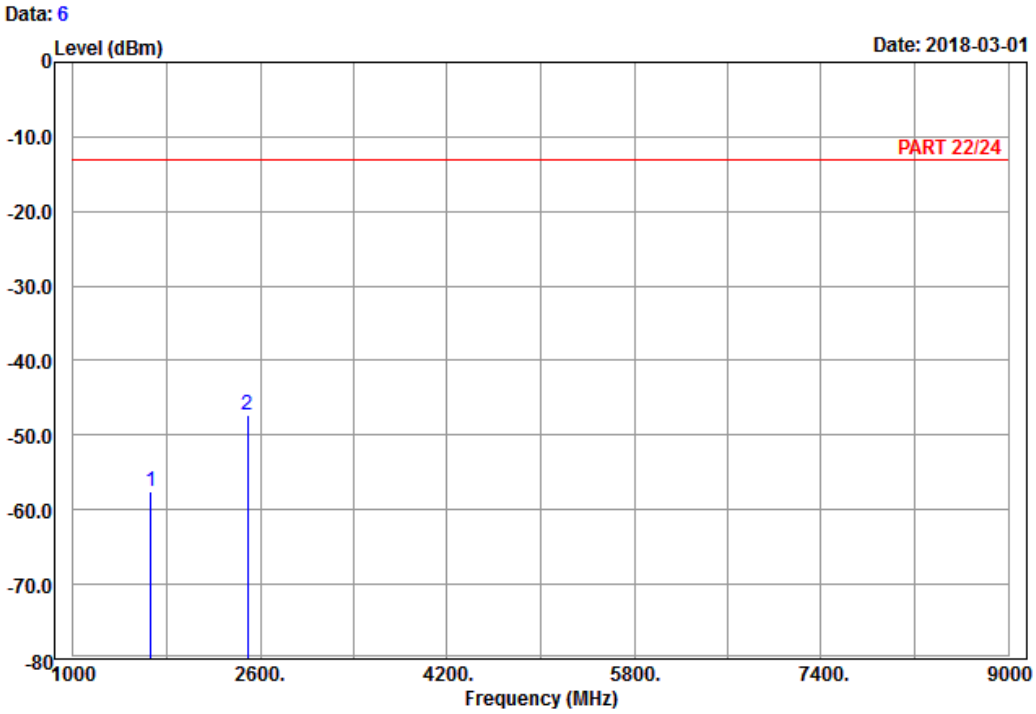
Channel Bandwidth: 15 MHz / QPSK
Low Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1663.00	-55.30	-63.21	-13.00	-42.30	7.91	Peak
2 pp	2494.50	-44.22	-55.26	-13.00	-31.22	11.04	Peak

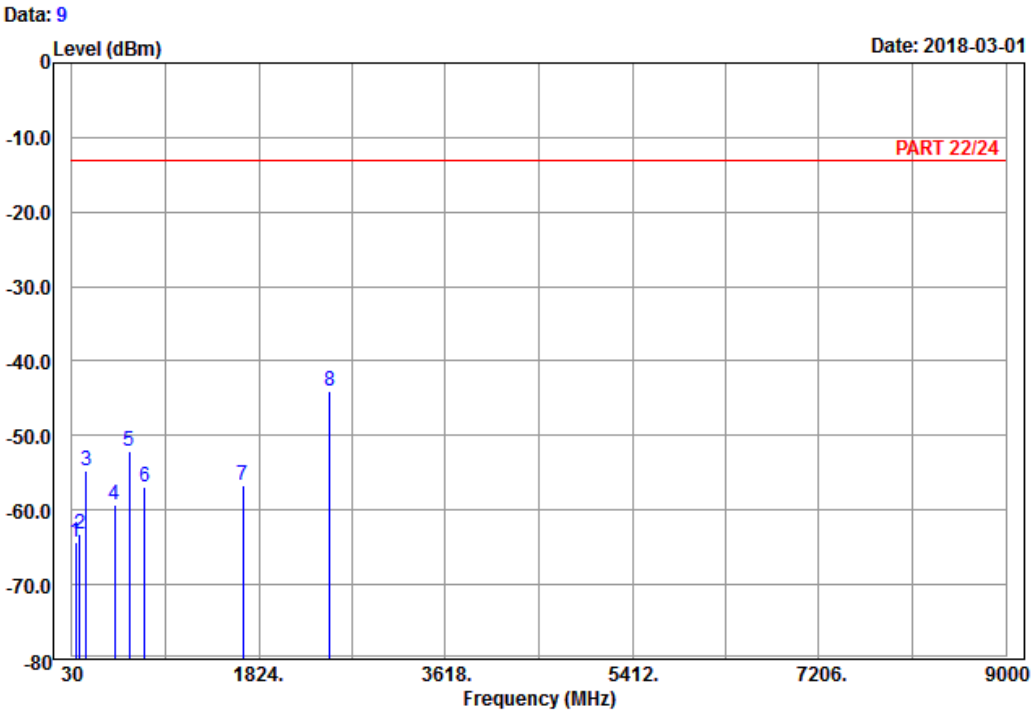


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 26_Link_CH26865
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1663.00	-57.54	-65.45	-13.00	-44.54	7.91	Peak
2 pp	2494.50	-47.22	-58.26	-13.00	-34.22	11.04	Peak

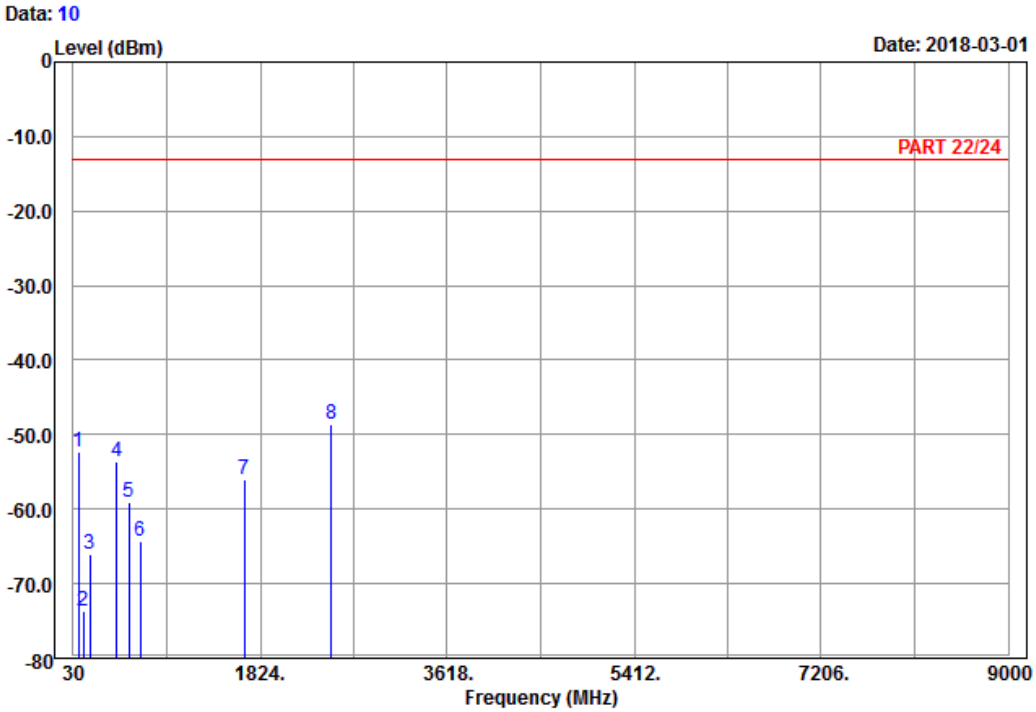
Middle Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	68.34	-64.25	-51.43	-13.00	-51.25	-12.82	Peak
2	101.28	-63.18	-53.18	-13.00	-50.18	-10.00	Peak
3	168.24	-54.69	-47.89	-13.00	-41.69	-6.80	Peak
4	441.40	-59.30	-55.65	-13.00	-46.30	-3.65	Peak
5	582.10	-52.13	-51.79	-13.00	-39.13	-0.34	Peak
6	729.80	-56.97	-56.04	-13.00	-43.97	-0.93	Peak
7	1673.00	-56.65	-64.56	-13.00	-43.65	7.91	Peak
8 pp	2509.50	-44.11	-55.39	-13.00	-31.11	11.28	Peak

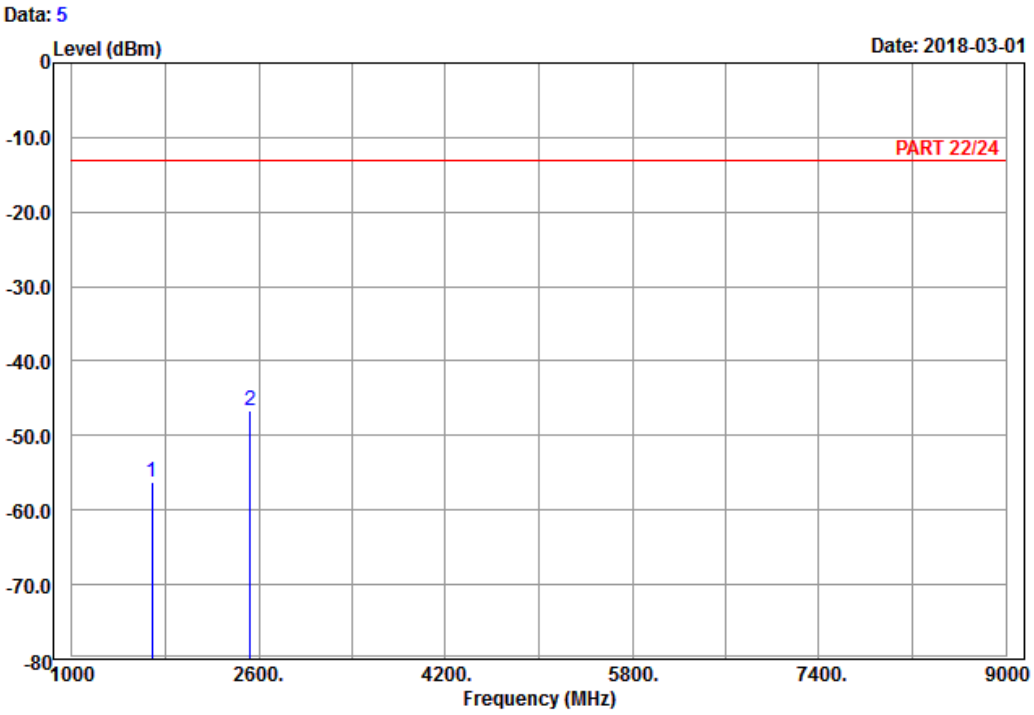


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 26_Link_CH26915
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	82.92	-52.27	-40.83	-13.00	-39.27	-11.44	Peak
2	130.71	-73.65	-66.00	-13.00	-60.65	-7.65	Peak
3	187.68	-66.04	-60.34	-13.00	-53.04	-5.70	Peak
4	447.00	-53.64	-49.86	-13.00	-40.64	-3.78	Peak
5	561.80	-59.05	-57.87	-13.00	-46.05	-1.18	Peak
6	670.30	-64.29	-64.06	-13.00	-51.29	-0.23	Peak
7	1673.00	-55.93	-63.84	-13.00	-42.93	7.91	Peak
8 pp	2509.50	-48.65	-59.93	-13.00	-35.65	11.28	Peak

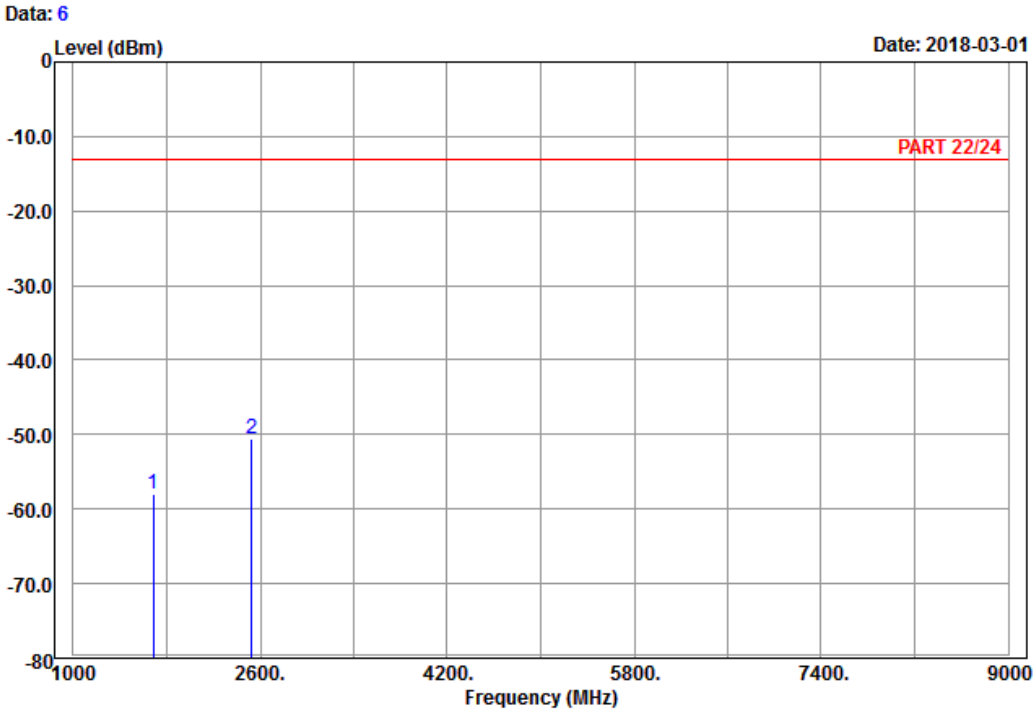
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1683.00	-56.19	-64.21	-13.00	-43.19	8.02	Peak
2 pp	2524.50	-46.57	-57.95	-13.00	-33.57	11.38	Peak

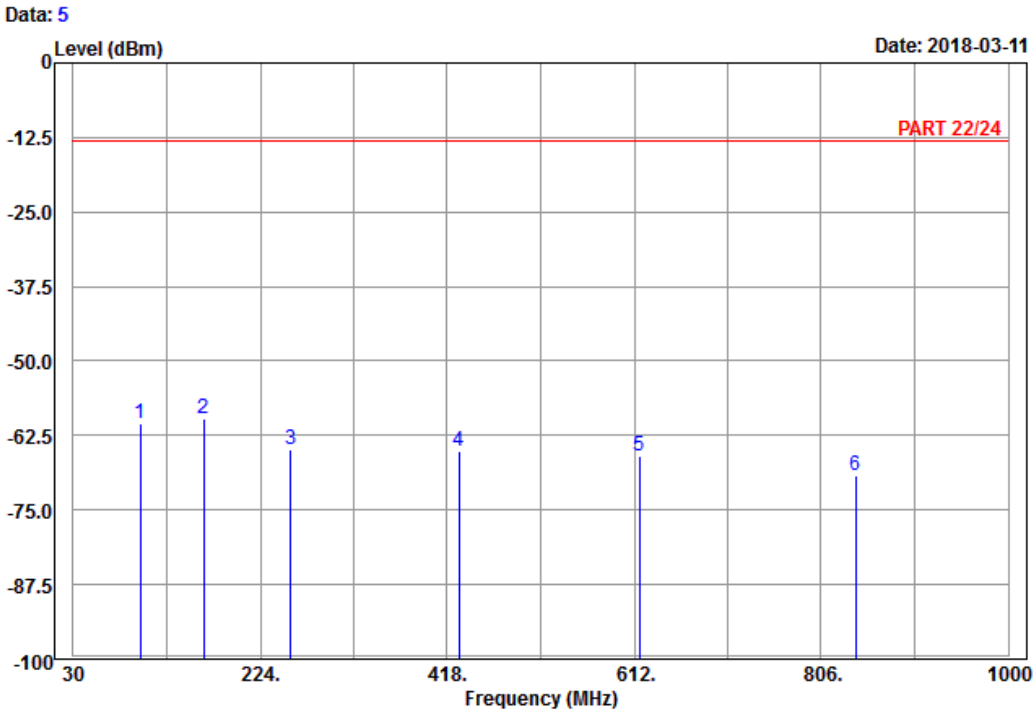


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 26_Link_CH26965
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	1683.00	-57.96	-65.98	-13.00	-44.96	8.02	Peak
2 pp	2524.50	-50.57	-61.95	-13.00	-37.57	11.38	Peak

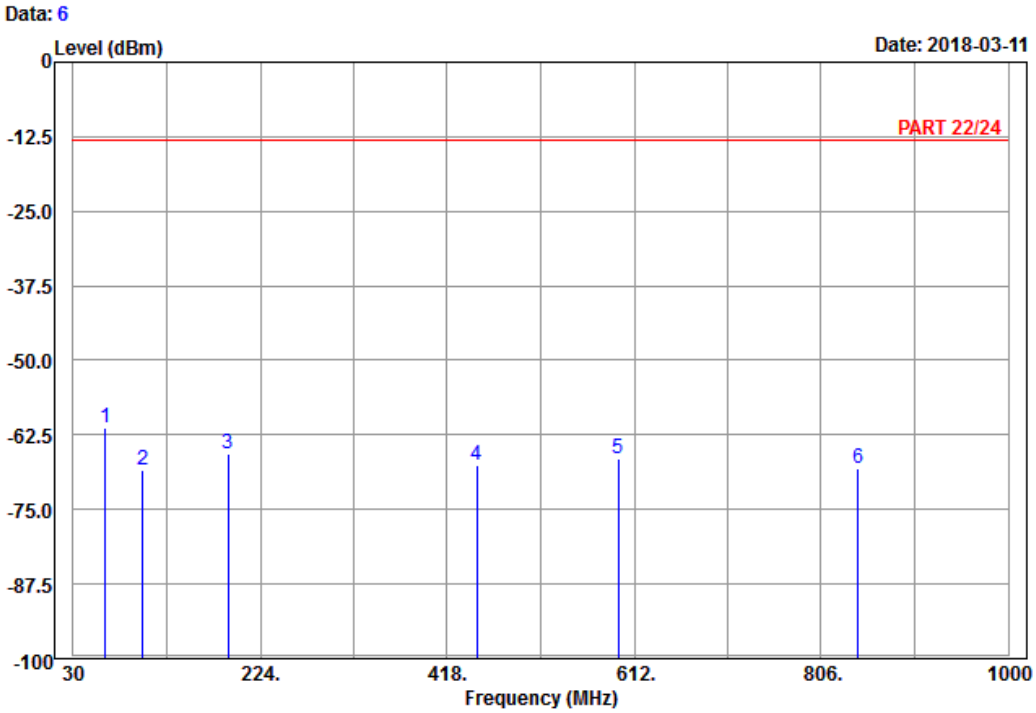
<Mode B>
GSM:
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : GSM 850_Link_CH189
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	99.66	-60.39	-50.27	-13.00	-47.39	-10.12	Peak
2 pp	165.00	-59.79	-52.60	-13.00	-46.79	-7.19	Peak
3	255.72	-64.87	-59.31	-13.00	-51.87	-5.56	Peak
4	430.20	-65.20	-61.78	-13.00	-52.20	-3.42	Peak
5	617.80	-65.81	-66.04	-13.00	-52.81	0.23	Peak
6	841.80	-69.20	-70.74	-13.00	-56.20	1.54	Peak

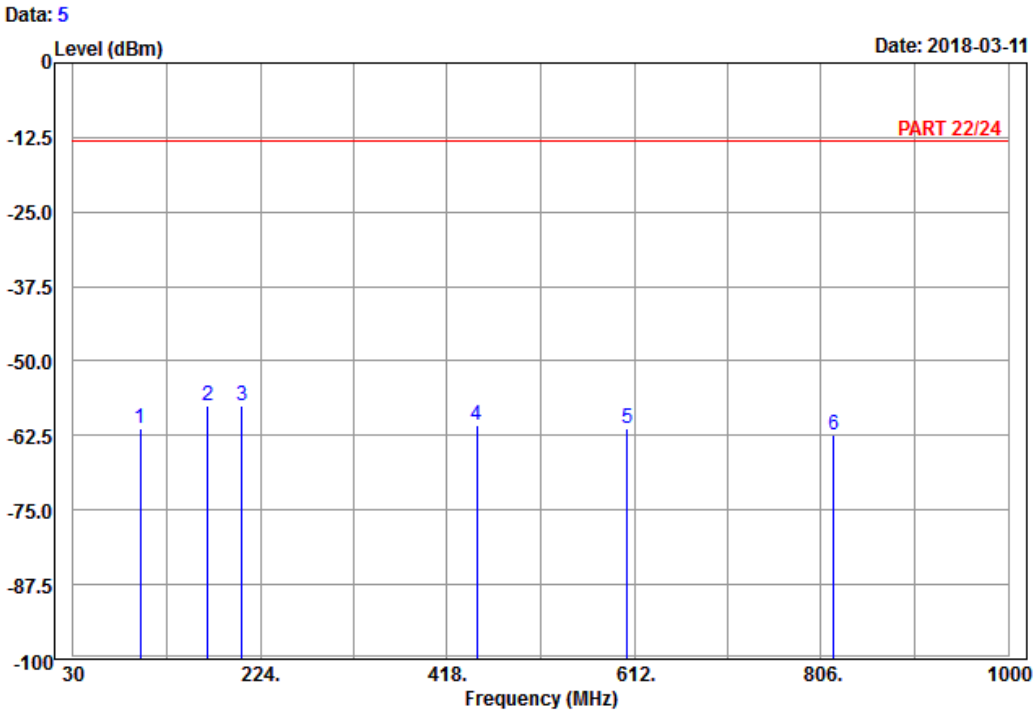


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : GSM 850_Link_CH189
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	62.94	-61.23	-47.58	-13.00	-48.23	-13.65	Peak
2	102.09	-68.41	-58.52	-13.00	-55.41	-9.89	Peak
3	190.65	-65.63	-59.85	-13.00	-52.63	-5.78	Peak
4	448.40	-67.53	-63.73	-13.00	-54.53	-3.80	Peak
5	595.40	-66.41	-66.64	-13.00	-53.41	0.23	Peak
6	844.60	-68.08	-69.58	-13.00	-55.08	1.50	Peak

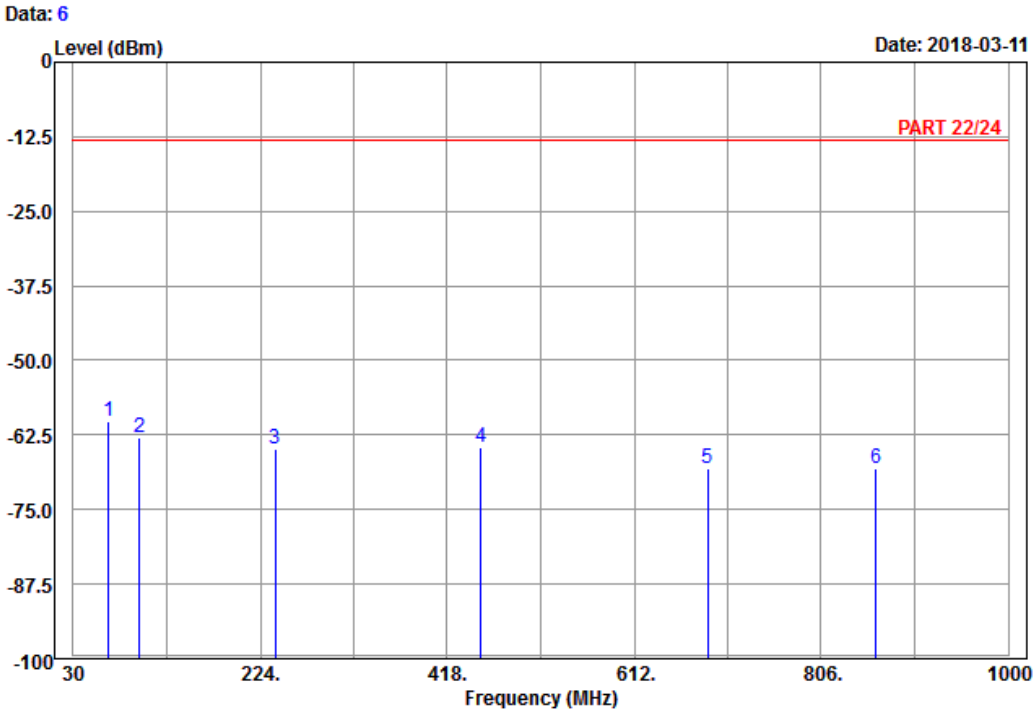
LTE Band 5
Channel Bandwidth: 10 MHz / QPSK
Middle Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	99.93	-61.31	-51.19	-13.00	-48.31	-10.12	Peak
2 pp	169.59	-57.39	-50.68	-13.00	-44.39	-6.71	Peak
3	204.69	-57.62	-51.50	-13.00	-44.62	-6.12	Peak
4	448.40	-60.90	-57.10	-13.00	-47.90	-3.80	Peak
5	604.50	-61.27	-61.65	-13.00	-48.27	0.38	Peak
6	818.70	-62.29	-64.09	-13.00	-49.29	1.80	Peak

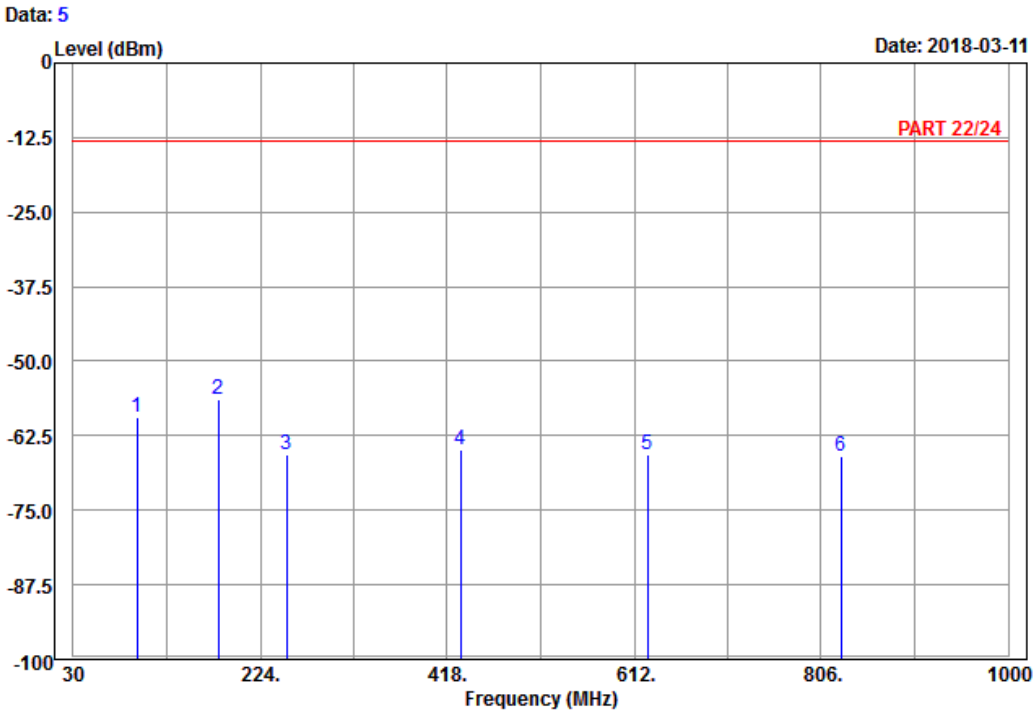


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5_Link_CH20525
Tested by: Charles Hsiao

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	66.99	-60.14	-47.04	-13.00	-47.14	-13.10	Peak
2	98.58	-62.98	-52.80	-13.00	-49.98	-10.18	Peak
3	239.79	-64.94	-59.29	-13.00	-51.94	-5.65	Peak
4	453.30	-64.46	-60.53	-13.00	-51.46	-3.93	Peak
5	688.50	-68.01	-67.69	-13.00	-55.01	-0.32	Peak
6	862.80	-68.05	-69.89	-13.00	-55.05	1.84	Peak

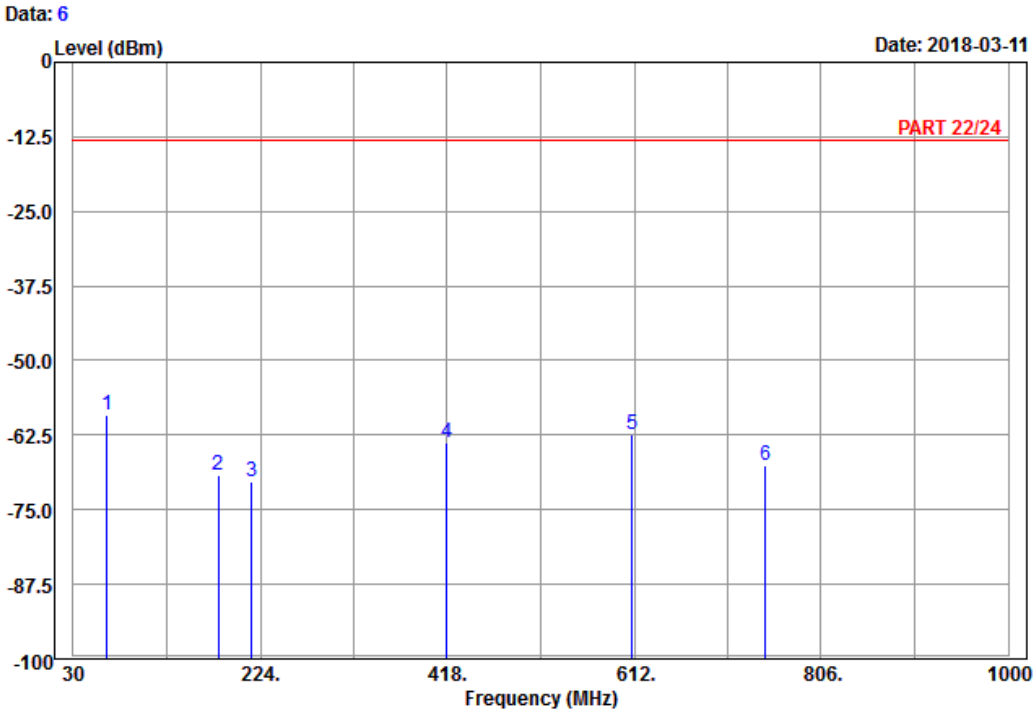
LTE Band 26
Channel Bandwidth: 15 MHz / QPSK
Middle Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	95.88	-59.31	-48.97	-13.00	-46.31	-10.34	Peak
2 pp	180.39	-56.35	-50.77	-13.00	-43.35	-5.58	Peak
3	251.40	-65.60	-60.08	-13.00	-52.60	-5.52	Peak
4	432.30	-64.82	-61.36	-13.00	-51.82	-3.46	Peak
5	625.50	-65.68	-65.82	-13.00	-52.68	0.14	Peak
6	826.40	-65.96	-67.67	-13.00	-52.96	1.71	Peak



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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	64.83	-59.04	-45.66	-13.00	-46.04	-13.38	Peak
2	180.66	-69.16	-63.58	-13.00	-56.16	-5.58	Peak
3	215.49	-70.34	-64.36	-13.00	-57.34	-5.98	Peak
4	417.60	-63.89	-60.75	-13.00	-50.89	-3.14	Peak
5	610.10	-62.27	-62.59	-13.00	-49.27	0.32	Peak
6	748.00	-67.56	-66.29	-13.00	-54.56	-1.27	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

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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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