

Product Name: LTE Cat-M1 Tracker	Report No: FCC022022-05738RF12(a)
Product Model: ATD521	Security Classification: Open
Version: V1.0	Total Page: 82

Testing Report



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FCC Radio Test Report

FCC ID: 2AH4HATD521

This report concerns: Original Grant

Project No. : 2022-05738
Equipment : LTE Cat-M1 Tracker
Brand Name : Mobilogix
Test Model : ATD521
Series Model : NA
Applicant : Mobilogix, Inc.
Address : 5500 Trabuco Rd Suite 150 Irvine, CA, USA
Manufacturer : Mobilogix, Inc.
Address : 5500 Trabuco Rd Suite 150 Irvine, CA, USA
Factory : Suga Electronics (Dongguan) Co., Ltd.
Address : No.8 Fulong Road, Qingxi Town, Dongguan City
Date of Receipt : Aug. 05, 2022
Date of Test : Aug. 09, 2022 ~ Aug. 30, 2022
Issued Date : Nov. 04, 2022
Report Version : V1.0
Test Sample : Engineering Sample No.: 20221103019315
Standard(s) : 47 CFR FCC Part 22 Subpart H
47 CFR FCC Part 2
ANSI C63.26-2015
ANSI/TIA/EIA-603-E-2016
FCC KDB 971168 D01 Power Meas License Digital Systems v03r01

- The test result referred exclusively to the presented test model /sample.
- Without written approval of TIRT Inc. the test report shall not reproduced except in full.

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REPORT ISSUED HISTORY

Report No.	Version	Description	Issued Date	Note
FCC022022-05738RF12(a)	V1.0	Original Report.	2022.11.04	Valid

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

FCC Part 22 Subpart H & Part 2			
Standard(s) Section	Test Item	Judgment	Remark
2.1046 22.913(a)(5)	Output Power & Effective Radiated Power	PASS	-----
2.1049	Occupied Bandwidth	PASS	-----
2.1051 22.917(a)	Conducted Spurious Emissions	PASS	-----
2.1053 22.917(a)	Radiated Spurious Emissions	PASS	-----
22.917(a)	Band Edge Measurements	PASS	-----
22.913(d)	Peak To Average Ratio	PASS	-----
2.1055 22.355	Frequency Stability	PASS	-----

Note:

(1) "N/A" denotes test is not applicable in this test report.

1.1 TEST FACILITY

Company:	Beijing TIRT Technology Service Co.,Ltd Shenzhen
Address:	101, 3 # Factory Building, Gongjin Electronics Shatin Community, Kengzi Street, Pingshan District, Shenzhen, China
CNAS Registration Number:	CNAS L14158
A2LA Registration Number:	6049.01
FCC Accredited Lab. Designation Number:	CN1309
FCC Test Firm Registration Number:	825524
Telephone:	+86-0755-27087573

1.2 MEASUREMENT UNCERTAINTY

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

The TIRT measurement uncertainty as below table:

Parameter	Uncertainty
Occupied Channel Bandwidth	±142.12 KHz
RF power conducted	±0.74 dB
RF power radiated	±3.25dB
Spurious emissions, conducted	±1.78dB
Spurious emissions, radiated (30MHz~1GHz)	±4.6dB
Spurious emissions, radiated (1GHz ~ 18GHz)	±4.9dB
Conduction Emissions(150kHz~30MHz)	±3.1 dB
Humidity	±4.6%
Temperature	±0.7°C
Time	±1.25%

Note: Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

1.3 TEST ENVIRONMENT CONDITIONS

Test Item	Temperature	Humidity	Test Voltage	Tested By
Output Power & ERP	23°C	41%	DC 3.7V	Stone Tang
Occupied Bandwidth	23°C	41%	DC 3.7V	Stone Tang
Conducted Spurious Emissions	23°C	41%	DC 3.7V	Stone Tang
Radiated Spurious Emissions (9 kHz to 30 MHz)	25°C	55%	AC 120V/60Hz	Stone Tang
Radiated Spurious Emissions (30 MHz to 1000 MHz)	24°C	50~51%	AC 120V/60Hz	Stone Tang
Radiated Spurious Emissions (Above 1000 MHz)	24°C	51%	AC 120V/60Hz	Stone Tang
Band Edge	23°C	41%	DC 3.7V	Stone Tang
Peak to Average Ratio	23°C	41%	DC 3.7V	Stone Tang
Frequency Stability	Normal & Extreme	41%	Normal & Extreme	Stone Tang

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	LTE Cat-M1 Tracker				
Brand Name	Mobilogix				
Test Model	ATD521				
Series Model	NA				
Model Difference(s)	There are 3 types of this product: 1. Type L: MCU model: EFR32BG12P232F512GM68-CR. 2. Type S: MCU model: EFR32BG12P232F1024GM68-CR. Compared to the Type L, only the memory is different. 3. Type D: The same as Type L, but the labels are different, the customer are different. The difference does not affect RF characteristics, and type L is the main test model.				
Power Source	1# DC Voltage supplied from AC adapter. Model: ADS-10LA-06 05010EPCU 2# Supplied from battery.				
Power Rating	1# I/P: 100-240V ~ 50/60Hz MAX 0.3A O/P: 5V \equiv 2.0A 2# DC 3.7V / 3000mAh				
IMEI No.	Radiated	864351051515882			
	Conducted	864351051515635			
LTE Category	M1				
Modulation Type	GPRS/EDGE		GMSK, 8PSK		
	LTE		UL: QPSK, 16QAM DL: QPSK, 16QAM		
Max. ERP	GSM 850		GMSK	32.32	dBm
	LTE	Channel Bandwidth (MHz)	QPSK (dBm)	16QAM (dBm)	
	Band 5	1.4	21.27	19.90	
		3	21.04	19.89	
		5	21.31	20.93	
		10	21.13	20.64	
	Band 26	1.4	20.44	19.14	
		3	20.58	19.28	
		5	20.65	19.97	
		10	20.58	20.07	
	15	20.62	20.44		

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

2. Channel List:

GSM 850				
Test Frequency ID	UARFCN	Frequency of Uplink (MHz)	UARFCN	Frequency of Downlink (MHz)
Low Range	128	824.2	137	869.2
Mid Range	190	836.6	199	881.6
High Range	251	848.8	260	893.8

LTE Band 5					
Test Frequency ID	Bandwidth (MHz)	N _{UL}	Frequency of Uplink (MHz)	N _{DL}	Frequency of Downlink (MHz)
Low Range	1.4	20407	824.7	2407	869.7
	3	20415	825.5	2415	870.5
	5	20425	826.5	2425	871.5
	10	20450	829	2450	874
Mid Range	1.4/3/5/10	20525	836.5	2525	881.5
High Range	1.4	20643	848.3	2643	893.3
	3	20635	847.5	2635	892.5
	5	20625	846.5	2625	891.5
	10	20600	844	2600	889

LTE Band 26					
Test Frequency ID	Bandwidth (MHz)	N _{UL}	Frequency of Uplink (MHz)	N _{DL}	Frequency of Downlink (MHz)
Low Range	1.4	26797	824.7	8797	869.7
	3	26805	825.5	8805	870.5
	5	26815	826.5	8815	871.5
	10	26840	829	8840	874
	15	26865	831.5	8865	876.5
Mid Range	1.4/3/5/10/15	26915	836.5	8915	881.5
High Range	1.4	27033	848.3	9033	893.3
	3	27025	847.5	9025	892.5
	5	27015	846.5	9015	891.5
	10	26990	844	8990	889
	15	26965	841.5	8965	886.5

3. Table for Filed Antenna:

Brand	P/N	Antenna Type	Connector	Gain (dBi)	Note
ethertronics	1004795	Internal	N/A	1.6	GSM 850
				1.6	LTE Band 5
				1.6	LTE Band 26

Note: The antenna gain is provided by the manufacturer.

2.2 DESCRIPTION OF TEST MODES

Following mode(s) is (were) found to be the worst case(s) and selected for the final test.

GSM MODE			
Test Item	Available Channel	Tested Channel	Mode
Output Power & ERP	128 to 251	128, 190, 251	GPRS, EDGE
Occupied Bandwidth	128 to 251	128, 190, 251	GPRS, EDGE
Conducted Spurious Emissions	128 to 251	190	GPRS, EDGE
Radiated Spurious Emissions	128 to 251	190	GPRS
Band Edge	128 to 251	128, 251	GPRS, EDGE
Peak to Average Ratio	128 to 251	128, 190, 251	GPRS, EDGE
Frequency Stability	128 to 251	190	GPRS

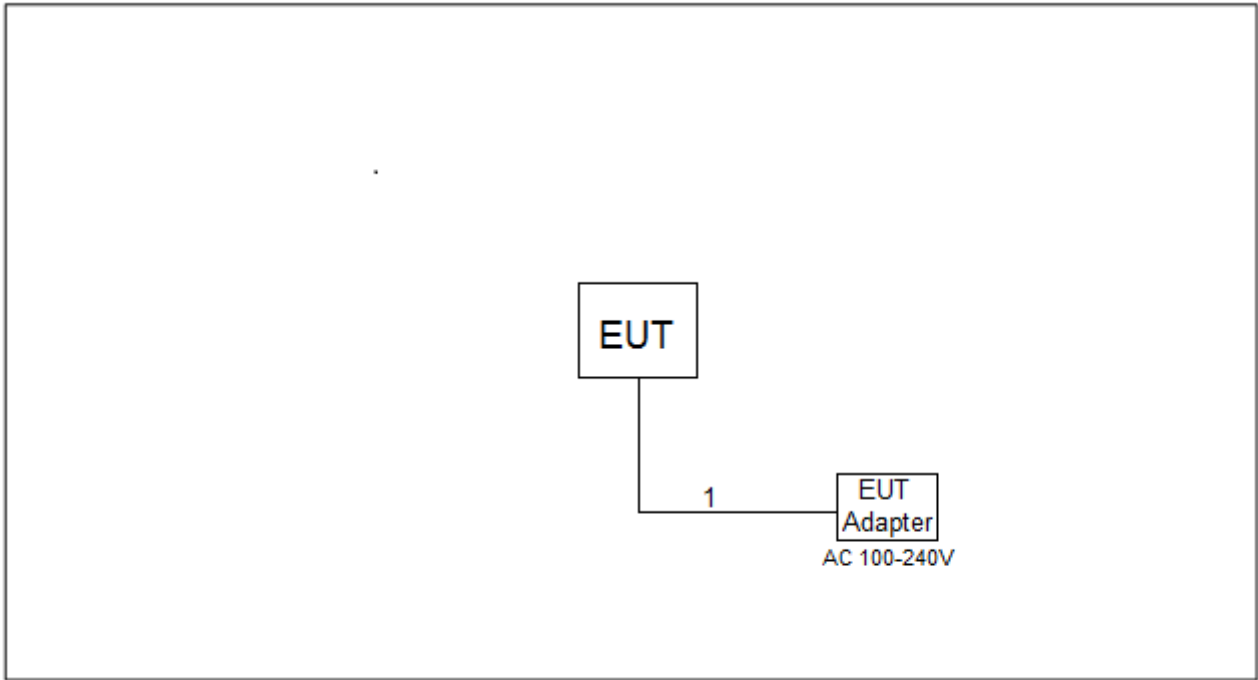
LTE BAND 5 MODE					
Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
Output Power & ERP	20407 to 20643	20407, 20525, 20643	1.4MHz	QPSK, 16QAM	1RB/5RB/6RB
	20415 to 20635	20415, 20525, 20635	3MHz	QPSK, 16QAM	1RB/5RB/6RB
	20425 to 20625	20425, 20525, 20625	5MHz	QPSK, 16QAM	1RB/5RB/6RB
	20450 to 20600	20450, 20525, 20600	10MHz	QPSK, 16QAM	1RB/5RB/6RB
Occupied Bandwidth	20407 to 20643	20407, 20525, 20643	1.4MHz	QPSK, 16QAM	5RB/6RB
	20415 to 20635	20415, 20525, 20635	3MHz	QPSK, 16QAM	5RB/6RB
	20425 to 20625	20425, 20525, 20625	5MHz	QPSK, 16QAM	5RB/6RB
	20450 to 20600	20450, 20525, 20600	10MHz	QPSK, 16QAM	5RB/6RB
Conducted Spurious Emissions	20407 to 20643	20525	1.4MHz	QPSK	1RB
	20425 to 20625	20525	5MHz	QPSK	1RB
	20450 to 20600	20525	10MHz	QPSK	1RB
Radiated Spurious Emissions	20407 to 20643	20525	1.4MHz	QPSK	1RB
	20425 to 20625	20525	5MHz	QPSK	1RB
	20450 to 20600	20525	10MHz	QPSK	1RB
Band Edge	20407 to 20643	20407, 20643	1.4MHz	QPSK	1RB/6RB
	20415 to 20635	20415, 20635	3MHz	QPSK	1RB/6RB
	20425 to 20625	20425, 20625	5MHz	QPSK	1RB/6RB
	20450 to 20600	20450, 20600	10MHz	QPSK	1RB/6RB
Peak To Average Ratio	20407 to 20643	20407, 20525, 20643	1.4MHz	QPSK, 16QAM	1RB
	20415 to 20635	20415, 20525, 20635	3MHz	QPSK, 16QAM	1RB
	20425 to 20625	20425, 20525, 20625	5MHz	QPSK, 16QAM	1RB
	20450 to 20600	20450, 20525, 20600	10MHz	QPSK, 16QAM	1RB
Frequency Stability	20450 to 20600	20525	10MHz	QPSK	6RB

LTE BAND 26 MODE					
Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
Output Power & ERP	26797 to 27033	26797, 26915, 27033	1.4MHz	QPSK, 16QAM	1RB/5RB/6RB
	26805 to 27025	26805, 26915, 27025	3MHz	QPSK, 16QAM	1RB/5RB/6RB
	26815 to 27015	26815, 26915, 27015	5MHz	QPSK, 16QAM	1RB/5RB/6RB
	26840 to 26990	26840, 26915, 26990	10MHz	QPSK, 16QAM	1RB/5RB/6RB
	26865 to 26965	26865, 26915, 26965	15MHz	QPSK, 16QAM	1RB/5RB/6RB
Occupied Bandwidth	26797 to 27033	26797, 26915, 27033	1.4MHz	QPSK, 16QAM	5RB/6RB
	26805 to 27025	26805, 26915, 27025	3MHz	QPSK, 16QAM	5RB/6RB
	26815 to 27015	26815, 26915, 27015	5MHz	QPSK, 16QAM	5RB/6RB
	26840 to 26990	26840, 26915, 26990	10MHz	QPSK, 16QAM	5RB/6RB
	26865 to 26965	26865, 26915, 26965	15MHz	QPSK, 16QAM	5RB/6RB
Conducted Spurious Emissions	26815 to 27015	226915	1.4MHz	QPSK	1RB
	26815 to 27015	226915	5MHz	QPSK	1RB
	26865 to 26965	226915	15MHz	QPSK	1RB
Radiated Spurious Emissions	26815 to 27015	226915	1.4MHz	QPSK	1RB
	26815 to 27015	226915	5MHz	QPSK	1RB
	26865 to 26965	226915	15MHz	QPSK	1RB
Band Edge	26797 to 27033	26797, 27033	1.4MHz	QPSK	1RB/6RB
	26805 to 27025	26805, 27025	3MHz	QPSK	1RB/6RB
	26815 to 27015	26815, 27015	5MHz	QPSK	1RB/6RB
	26840 to 26990	26840, 26990	10MHz	QPSK	1RB/6RB
	26865 to 26965	26865, 26965	15MHz	QPSK	1RB/6RB
Peak To Average Ratio	26797 to 27033	26797, 26915, 27033	1.4MHz	QPSK, 16QAM	1RB
	26805 to 27025	26805, 26915, 27025	3MHz	QPSK, 16QAM	1RB
	26815 to 27015	26815, 26915, 27015	5MHz	QPSK, 16QAM	1RB
	26840 to 26990	26840, 26915, 26990	10MHz	QPSK, 16QAM	1RB
	26865 to 26965	26865, 26915, 26965	15MHz	QPSK, 16QAM	1RB
Frequency Stability	26865 to 26965	226915	15MHz	QPSK	6RB

Note:

1. QPSK modulation mode supports the highest RB size up to 6RB and 16QAM modulation mode supports the highest RB size up to 5RB.

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



2.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Brand	Model No.	Series No.
-	-	-	-	-

Item	Cable Type	Shielded Type	Ferrite Core	Length
1	USB Cable	NO	NO	1m

3. TEST RESULT

3.1 OUTPUT POWER MEASUREMENT

3.1.1 LIMIT

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

3.1.2 TEST PROCEDURE

The testing follows FCC KDB 971168 v03r01 Section 5.

EIRP / ERP:

EIRP = Output Power + Antenan gain

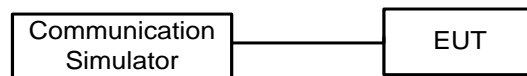
ERP = EIPR - 2.15dBi

Output Power:

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.

3.1.3 TEST SETUP LAYOUT

Output Power Measurement



3.1.4 TEST DEVIATION

No deviation.

3.1.5 TEST RESULTS

Please refer to the APPENDIX A.

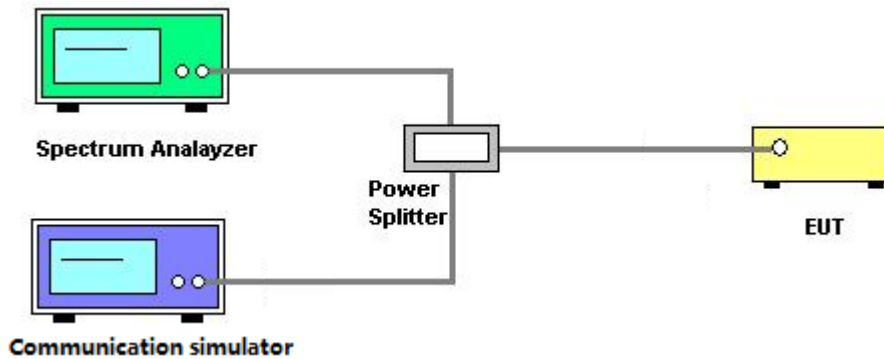
3.2 OCCUPIED BANDWIDTH MEASUREMENT

3.2.1 TEST PROCEDURE

The testing follows FCC KDB 971168 v03r01 Section 4.

1. 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 and 26dB bandwidth.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. $RBW=(1\% \sim 5\%)*EBW$
 $VBW \geq 3* RBW$
4. Set spectrum analyzer with Peak detector.

3.2.2 TEST SETUP LAYOUT



3.2.3 TEST DEVIATION

No deviation.

3.2.4 TEST RESULTS

Please refer to the APPENDIX B.

3.3 CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

3.3.1 LIMIT

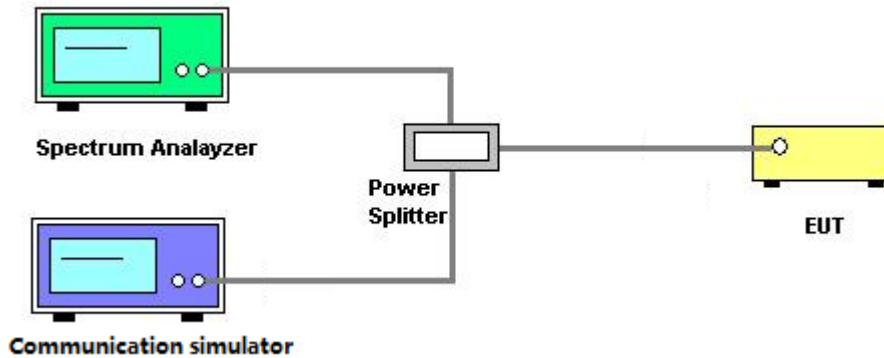
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. The emission limit equal to -13dBm.

3.3.2 TEST PROCEDURES

The testing follows FCC KDB 971168 v03r01 Section 6.

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The band edges of low and high channels for the highest RF powers were measured. Set RBW $\geq 1\%$ EBW in the 1MHz band immediately outside and adjacent to the band edge.
3. Set spectrum analyzer with Peak detector.
4. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

3.3.3 TEST SETUP LAYOUT



3.3.4 TEST DEVIATION

No deviation.

3.3.5 TEST RESULTS

Please refer to the APPENDIX C.

3.4 RADIATED SPURIOUS EMISSIONS MEASUREMENT

3.4.1 LIMIT

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 -13dBm.

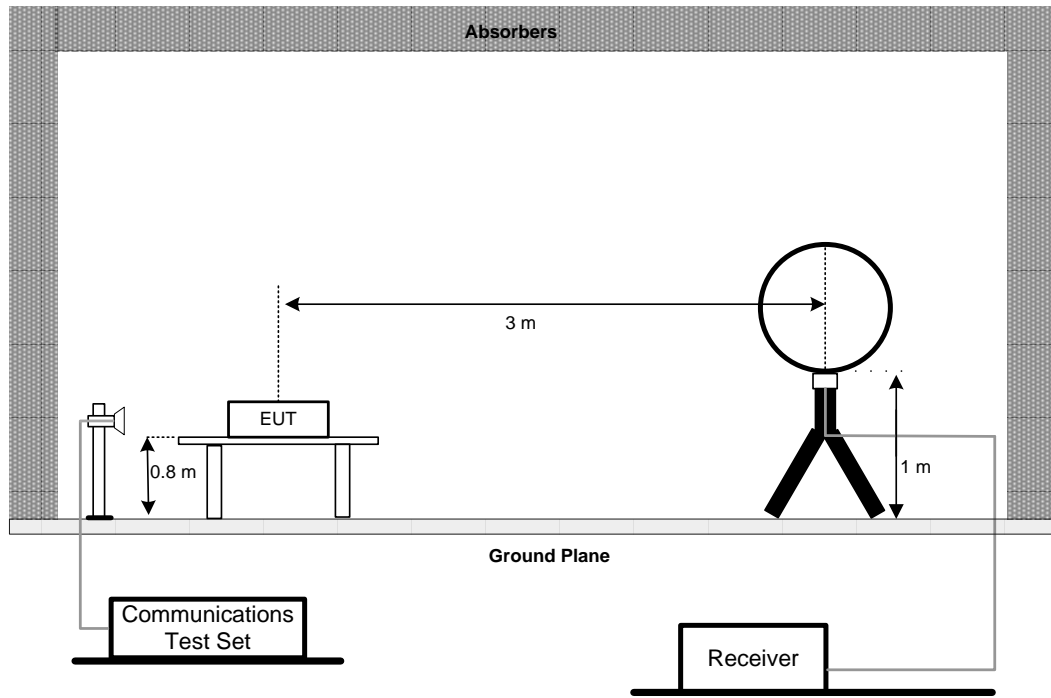
3.4.2 TEST PROCEDURES

The testing follows FCC KDB 971168 v03r01 Section 6.2.

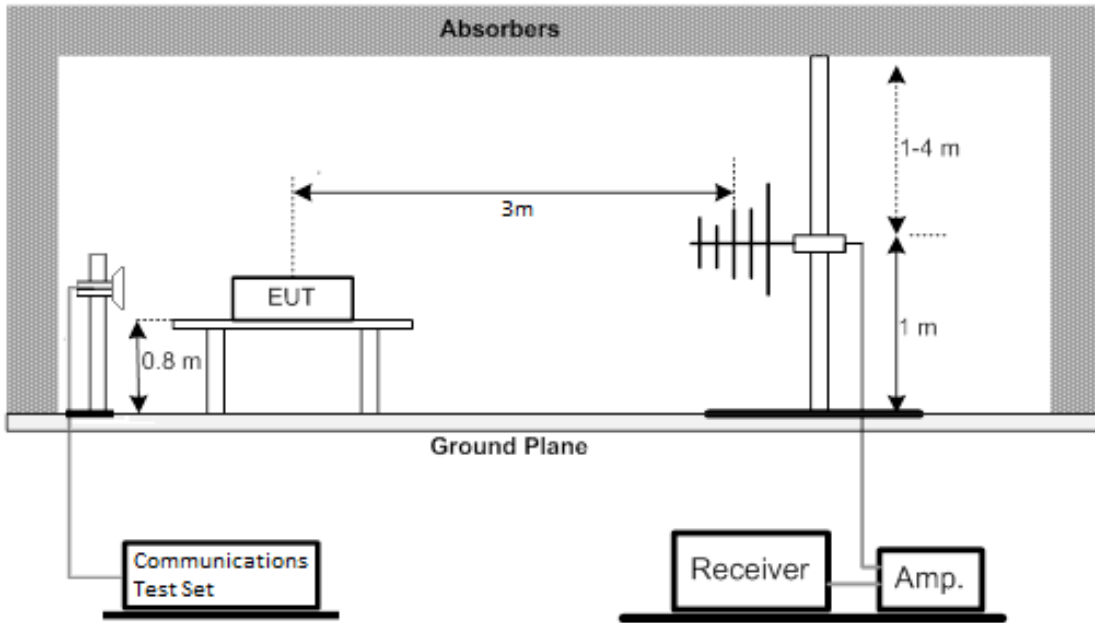
1. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
2. 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
3. $EIRP = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn.}$
4. ERP can be calculated form EIRP by subtracting the gain of dipole, $ERP = EIPR - 2.15dBi.$
5. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

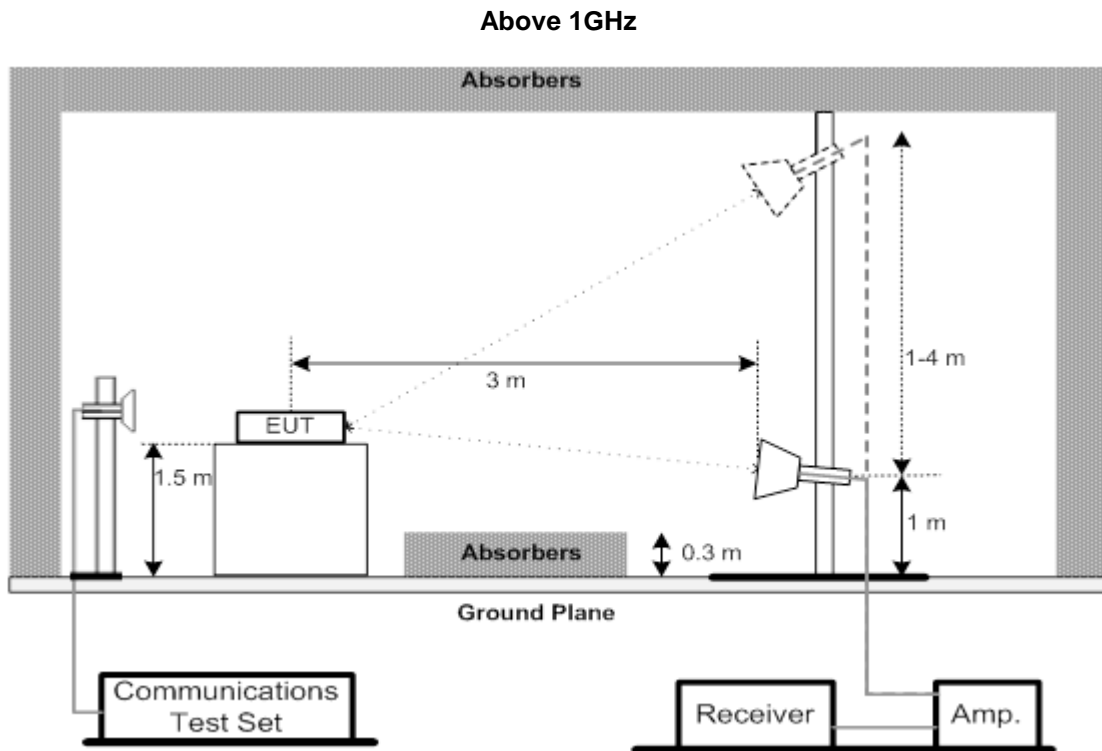
3.4.3 TEST SETUP LAYOUT

Below 30MHz



30MHz to 1000MHz





3.4.4 TEST DEVIATION

No deviation.

3.4.5 TEST RESULTS (9KHZ TO 30MHZ)

Please refer to the APPENDIX D.

3.4.6 TEST RESULTS (30MHZ TO 1000MHZ)

Please refer to the APPENDIX E.

3.4.7 TEST RESULTS (ABOVE 1000MHZ)

Please refer to the APPENDIX F.

3.5 BAND EDGE MEASUREMENT

3.5.1 LIMIT

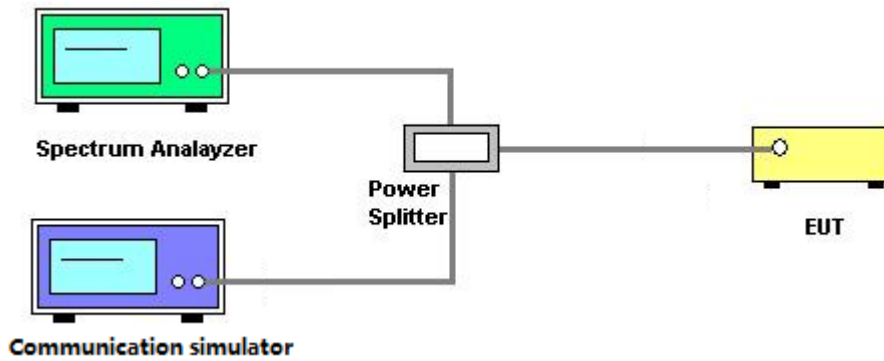
A Power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the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

3.5.2 TEST PROCEDURES

The testing follows FCC KDB 971168 v03r01 Section 6.

1. All measurements were done at low and high operational frequency range.
2. Record the max trace plot into the test report.

3.5.3 TEST SETUP LAYOUT



3.5.4 TEST DEVIATION

No deviation.

3.5.5 TEST RESULTS

Please refer to the APPENDIX G.

3.6 PEAK TO AVERAGE RATIO MEASUREMENT

3.6.1 LIMIT

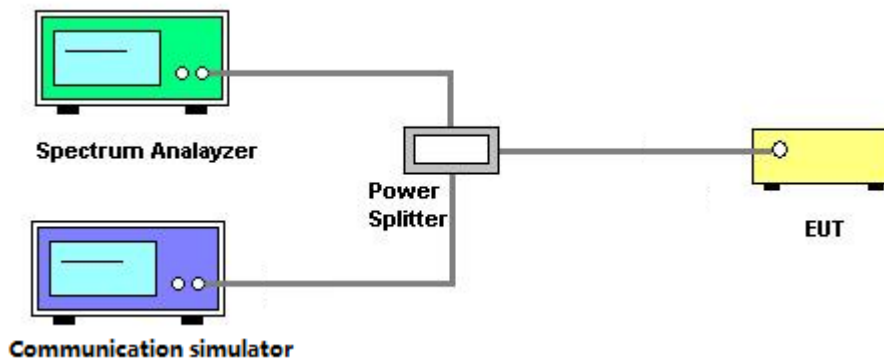
In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB.

3.6.2 TEST PROCEDURES

The testing follows FCC KDB 971168 v03r01 Section 5.7.

1. Set resolution/measurement bandwidth \geq 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%.

3.6.3 TEST SETUP LAYOUT



3.6.4 TEST DEVIATION

No deviation.

3.6.5 TEST RESULTS

Please refer to the APPENDIX H.

3.7 FREQUENCY STABILITY MEASUREMENT

3.7.1 LIMIT

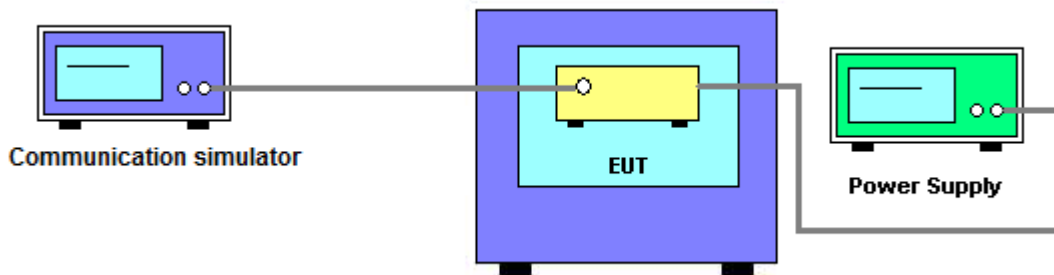
± 1.5 ppm is for base and fixed station. ± 2.5 ppm is for mobile station.

3.7.2 TEST PROCEDURES

The testing follows FCC KDB 971168 v03r01 Section 9.

1. 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.
2. 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.
3. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the $\pm 0.5^{\circ}\text{C}$ 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.
4. The frequency error was recorded frequency error from the communication simulator.

3.7.3 TEST SETUP LAYOUT



3.7.4 TEST DEVIATION

No deviation.

3.7.5 TEST RESULTS

Please refer to the APPENDIX I.

4. LIST OF MEASUREMENT EQUIPMENTS

Main Test Equipment					
No.	Equipment Name	Manufacturer	Model	Calibrated date	Calibrated until
1	DC Power Supply	Keysight	E3642A	2021/11/10	2022/11/09
2	Wideband Radio Communication Tester	R & S	CMW 500	2021/11/03	2022/11/02
3	MXA Signal Analyzer	Keysight	N9020B	2021/11/10	2022/11/09
4	Programmable Temperature & Humidity Chamber	ETMOA	NTH1100-30A	2021/11/10	2022/11/09
5	Temperature & Humidity Recorder	Anymetre	JR900	2021/11/10	2022/11/09
6	Integral Antenna	SCHWARZBECK	VULB9163	2021/11/10	2022/11/09
7	Loop Antenna	SCHWARZBECK	FMZB1519B	2021/11/10	2022/11/09
8	Horn Antenna	SCHWARZBECK	BBHA 9170	2021/11/10	2022/11/09
9	Double Ridged Broadband Horn Antenna	SCHWARZBECK	BBHA 9120D	2021/11/10	2022/11/09
10	Spectrum Analyzer	R & S	FSV30	2021/11/10	2022/11/09
11	EMI Receiver	R & S	ESR	2021/11/10	2022/11/09
12	Broadband amplifier	SCHWARZBECK	BBV9718	2021/11/10	2022/11/09
13	Broadband amplifier	SCHWARZBECK	BBV9721	2021/11/10	2022/11/09
14	Anechoic Chamber	ZHONGSHUO	FSAC318	2021/07/17	2024/07/16
15	RF Cable	Top Precision	BLU18A-Sm-2m	2021/11/10	2022/11/09
16	RF Cable	Top Precision	BLU18A-Sm-2m	2021/11/10	2022/11/09
17	RF Cable	ZDECL	ZT40-2.92J-6M	2021/11/10	2022/11/09
18	Band Reject Filter Group	Tonscend	JS0806-F	NA	NA

Software Information			
Test Item	Software Name	Manufacturer	Version
RSE	EZ-EMC	EZ-EMC	TW-03A2
Conducted RF	JS1120 RF Test System	Shenzhen JS tonskend co., Ltd	2.6.9.0826

Remark: "N/A" denotes no model name, serial no. or calibration specified.

Except * item, all calibration period of equipment list is one year.

*** calibration period of equipment list is three year.

APPENDIX A - OUTPUT POWER

Output Power (dBm)

GSM850		128CH	190CH	251CH
		824.2MHz	836.6MHz	848.8MHz
GPRS/EDGE (GMSK)	1 Tx Slot	32.81	32.87	32.82
	2 Tx Slot	32.14	31.63	31.98
	3 Tx Slot	30.82	30.85	29.96
	4 Tx Slot	29.28	29.75	29.50
EDGE (8PSK)	1 Tx Slot	26.01	26.17	25.52
	2 Tx Slot	25.5	25.24	24.96
	3 Tx Slot	23.06	23.58	23.57
	4 Tx Slot	21.96	21.89	21.33

LTE Band / BW	Channel / Frequency (MHz)	RB Size	RB Offset	Index	Conducted Power (dBm)	RB Size	RB Offset	Index	Conducted Power (dBm)
					QPSK				16QAM
5 / 1.4MHz	20407 / 824.7	1	0	0	21.82	1	0	0	20.45
		6	0	0	19.49	5	0	0	19.34
	20525 / 836.5	1	0	0	21.06	1	0	0	19.99
		6	0	0	19.04	5	0	0	18.81
	20643 / 848.3	1	5	0	21.49	1	5	0	20.17
		6	0	0	19.18	5	0	0	19.23
5 / 3MHz	20415 / 825.5	1	0	0	21.59	1	0	0	20.44
		6	0	0	19.38	5	0	0	19.35
	20525 / 836.5	1	0	0	21.21	1	0	0	20.01
		6	0	0	19.07	5	0	0	18.92
	20635 / 847.5	1	5	1	20.85	1	5	1	19.71
		6	0	1	18.65	5	0	1	18.63
5 / 5MHz	20425 / 826.5	1	0	0	21.86	1	0	0	21.48
		6	0	0	20.23	5	0	0	20.47
	20525 / 836.5	1	0	0	21.69	1	0	0	21.07
		6	0	0	19.99	5	0	0	20.13
	20625 / 846.5	1	5	3	21.15	1	5	3	20.60
		6	0	3	19.48	5	0	3	19.51
5 / 10MHz	20450 / 829	1	0	3	21.36	1	0	3	20.96
		4	0	0	21.35	5	0	0	21.16
	20525 / 836.5	1	0	0	21.68	1	0	0	21.19
		4	0	0	21.24	5	0	0	20.75
	20600 / 844	1	5	7	20.80	1	5	7	20.50
		4	2	7	20.67	4	2	7	20.35

LTE Band / BW	Channel / Frequency (MHz)	RB Size	RB Offset	Index	Conducted Power (dBm)	RB Size	RB Offset	Index	Conducted Power (dBm)
					QPSK				16QAM
26 / 1.4MHz	26797 / 824.7	1	0	0	20.94	1	0	0	19.47
		6	0	0	18.42	5	0	0	18.50
	26915 / 836.5	1	0	0	20.99	1	0	0	19.69
		6	0	0	18.61	5	0	0	18.42
	27033 / 848.3	1	5	0	20.31	1	5	0	19.04
		6	0	0	18.38	5	0	0	18.27
26 / 3MHz	26805 / 825.5	1	0	0	20.80	1	0	0	19.57
		6	0	0	18.53	5	0	0	18.39
	26915 / 836.5	1	0	0	21.13	1	0	0	19.83
		6	0	0	18.82	5	0	0	18.65
	27025 / 847.5	1	5	1	20.46	1	5	1	19.17
		6	0	1	18.36	5	0	1	18.27
26 / 5MHz	26815 / 826.5	1	0	3	20.66	1	0	3	20.01
		6	0	0	19.60	5	0	0	19.52
	26915 / 836.5	1	0	0	21.20	1	0	0	20.52
		6	0	0	19.78	5	0	0	19.95
	27015 / 846.5	1	5	0	20.77	1	5	0	20.27
		6	0	3	18.95	5	0	3	18.93
26 / 10MHz	26840 / 829	1	0	3	20.56	1	0	3	20.17
		4	0	0	20.46	5	0	0	19.93
	26915 / 836.5	1	0	0	21.13	1	0	0	20.62
		4	0	0	20.74	5	0	0	20.17
	26990 / 844	1	5	4	20.56	1	5	4	20.12
		4	2	7	20.18	4	2	7	19.88
26 / 15MHz	26865 / 831.5	1	0	3	20.65	1	0	3	20.02
		6	0	0	20.67	5	0	0	20.82
	26915 / 836.5	1	0	0	21.17	1	0	0	20.33
		6	0	0	20.74	5	0	0	20.99
	26965 / 841.5	1	5	8	20.84	1	5	8	20.17
		6	0	11	20.35	5	0	11	20.41

ERP (dBm)

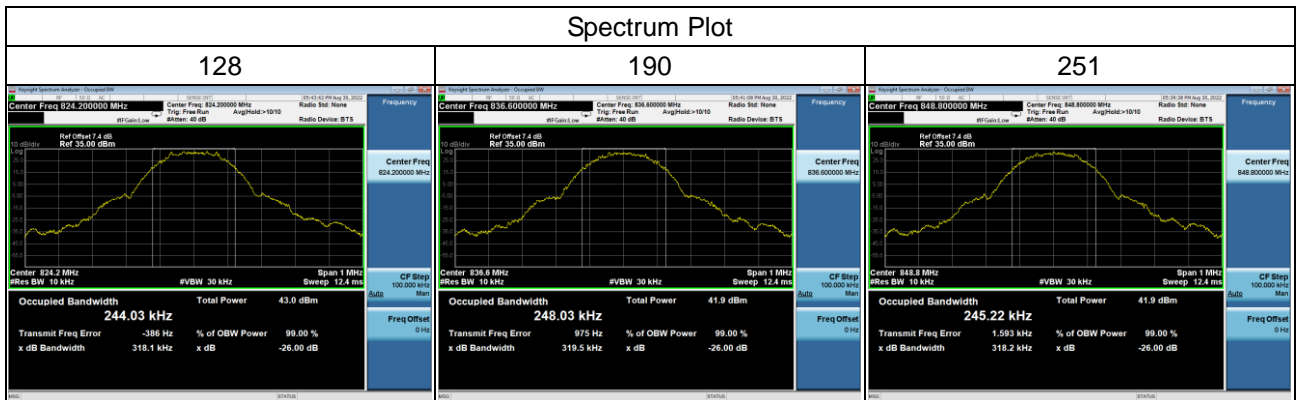
GSM850		128CH	190CH	251CH
		824.2MHz	836.6MHz	848.8MHz
GPRS/EDGE (GMSK)	1 Tx Slot	32.86	32.49	32.14
	2 Tx Slot	32.05	31.08	31.42
	3 Tx Slot	29.31	29.26	29.71
	4 Tx Slot	28.90	28.10	27.77
EDGE (8PSK)	1 Tx Slot	28.76	28.32	28.85
	2 Tx Slot	28.07	27.26	27.93
	3 Tx Slot	25.79	25.46	25.41
	4 Tx Slot	24.52	24.34	24.14

LTE Band / BW	Channel / Frequency (MHz)	RB Size	RB Offset	Index	ERP (dBm)	RB Size	RB Offset	Index	ERP (dBm)
					QPSK				16QAM
5 / 1.4MHz	20407 / 824.7	1	0	0	21.27	1	0	0	19.90
		6	0	0	18.94	5	0	0	18.79
	20525 / 836.5	1	0	0	20.51	1	0	0	19.44
		6	0	0	18.49	5	0	0	18.26
	20643 / 848.3	1	5	0	20.94	1	5	0	19.62
		6	0	0	18.63	5	0	0	18.68
5 / 3MHz	20415 / 825.5	1	0	0	21.04	1	0	0	19.89
		6	0	0	18.83	5	0	0	18.80
	20525 / 836.5	1	0	0	20.66	1	0	0	19.46
		6	0	0	18.52	5	0	0	18.37
	20635 / 847.5	1	5	1	20.30	1	5	1	19.16
		6	0	1	18.10	5	0	1	18.08
5 / 5MHz	20425 / 826.5	1	0	0	21.31	1	0	0	20.93
		6	0	0	19.68	5	0	0	19.92
	20525 / 836.5	1	0	0	21.14	1	0	0	20.52
		6	0	0	19.44	5	0	0	19.58
	20625 / 846.5	1	5	3	20.60	1	5	3	20.05
		6	0	3	18.93	5	0	3	18.96
5 / 10MHz	20450 / 829	1	0	3	20.81	1	0	3	20.41
		4	0	0	20.80	5	0	0	20.61
	20525 / 836.5	1	0	0	21.13	1	0	0	20.64
		4	0	0	20.69	5	0	0	20.20
	20600 / 844	1	5	7	20.25	1	5	7	19.95
		4	2	7	20.12	4	2	7	19.80

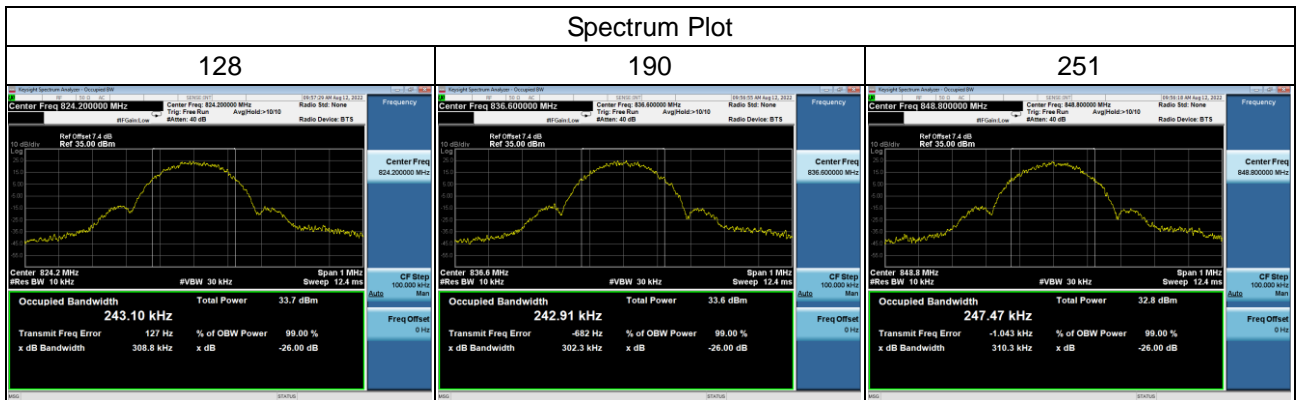
LTE Band / BW	Channel / Frequency (MHz)	RB Size	RB Offset	Index	ERP (dBm)	RB Size	RB Offset	Index	ERP (dBm)
					QPSK				16QAM
26 / 1.4MHz	26797 / 824.7	1	0	0	20.39	1	0	0	18.92
		6	0	0	17.87	5	0	0	17.95
	26915 / 836.5	1	0	0	20.44	1	0	0	19.14
		6	0	0	18.06	5	0	0	17.87
	27033 / 848.3	1	5	0	19.76	1	5	0	18.49
		6	0	0	17.83	5	0	0	17.72
26 / 3MHz	26805 / 825.5	1	0	0	20.25	1	0	0	19.02
		6	0	0	17.98	5	0	0	17.84
	26915 / 836.5	1	0	0	20.58	1	0	0	19.28
		6	0	0	18.27	5	0	0	18.10
	27025 / 847.5	1	5	1	19.91	1	5	1	18.62
		6	0	1	17.81	5	0	1	17.72
26 / 5MHz	26815 / 826.5	1	0	3	20.11	1	0	3	19.46
		6	0	0	19.05	5	0	0	18.97
	26915 / 836.5	1	0	0	20.65	1	0	0	19.97
		6	0	0	19.23	5	0	0	19.40
	27015 / 846.5	1	5	0	20.22	1	5	0	19.72
		6	0	3	18.40	5	0	3	18.38
26 / 10MHz	26840 / 829	1	0	3	20.01	1	0	3	19.62
		4	0	0	19.91	5	0	0	19.38
	26915 / 836.5	1	0	0	20.58	1	0	0	20.07
		4	0	0	20.19	5	0	0	19.62
	26990 / 844	1	5	4	20.01	1	5	4	19.57
		4	2	7	19.63	4	2	7	19.33
26 / 15MHz	26865 / 831.5	1	0	3	20.10	1	0	3	19.47
		6	0	0	20.12	5	0	0	20.27
	26915 / 836.5	1	0	0	20.62	1	0	0	19.78
		6	0	0	20.19	5	0	0	20.44
	26965 / 841.5	1	5	8	20.29	1	5	8	19.62
		6	0	11	19.80	5	0	11	19.86

APPENDIX B - OCCUPIED BANDWIDTH

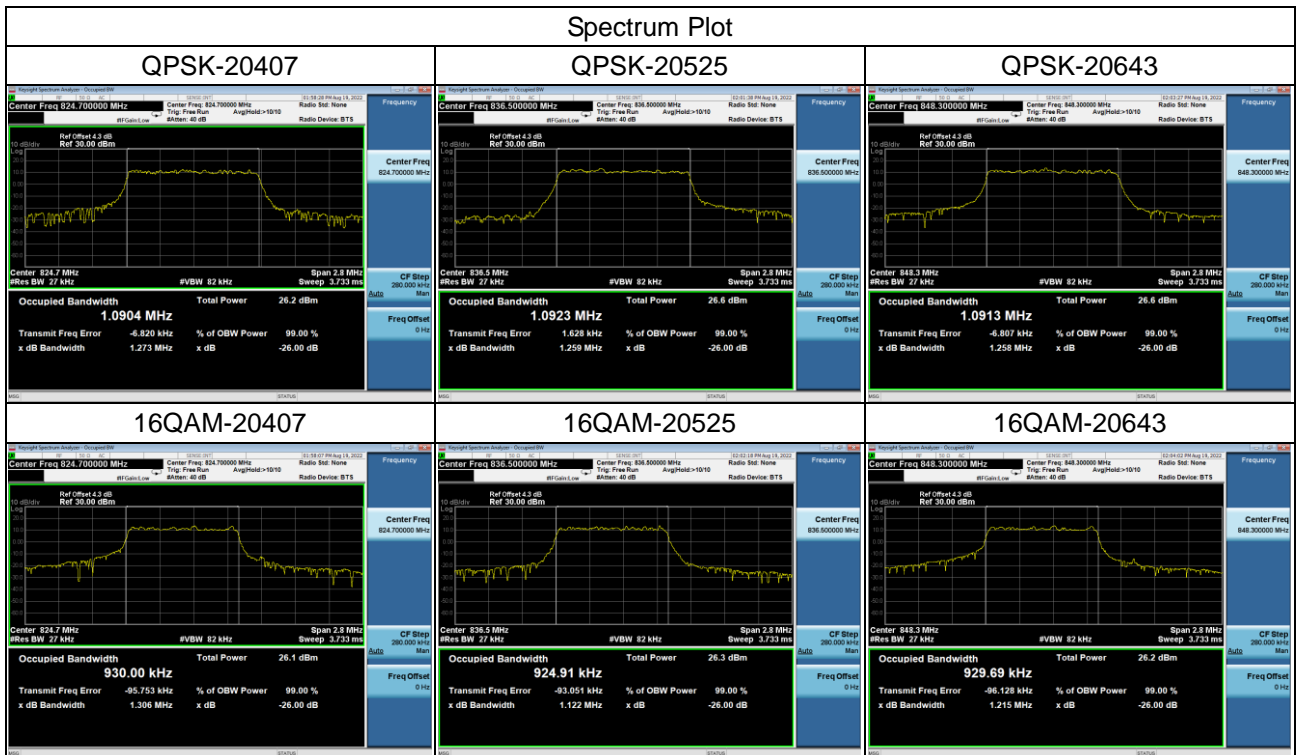
GSM850_GPRS			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
		QPSK	QPSK
128	824.2	0.2440	0.3181
190	836.6	0.2480	0.3195
251	848.8	0.2452	0.3182



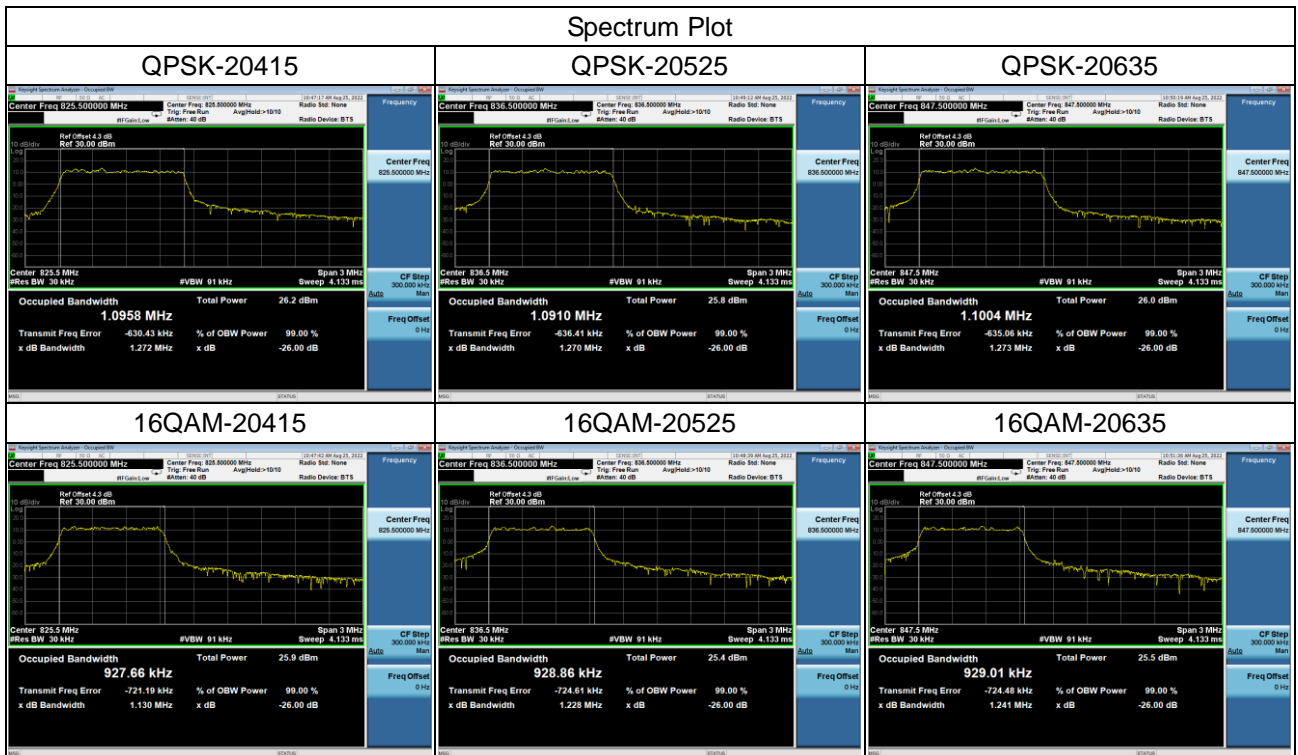
GSM850_EDGE			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
		QPSK	QPSK
128	824.2	0.2431	0.3088
190	836.6	0.2429	0.3023
251	848.8	0.2475	0.3103



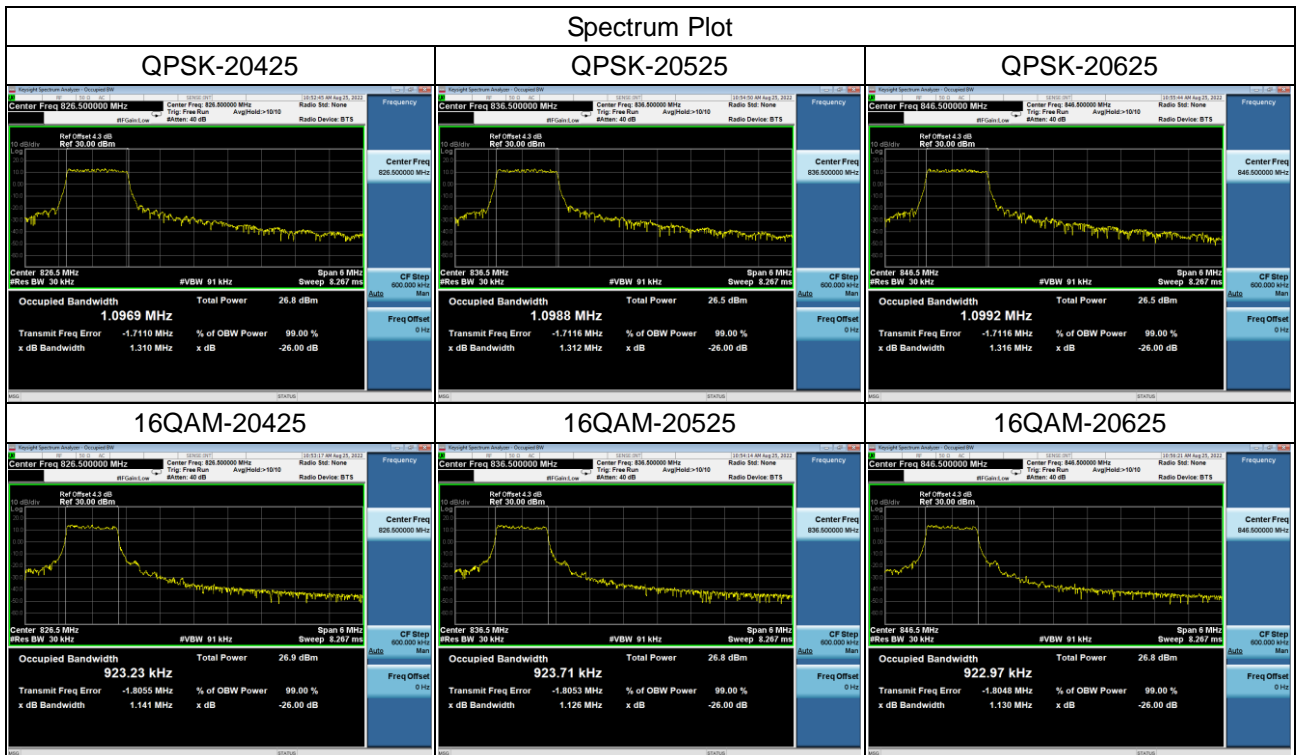
LTE Band 5_1.4MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		26dB Bandwidth (MHz)	
		QPSK	16QAM	QPSK	16QAM
20407	824.7	1.0904	0.9300	1.273	1.306
20525	836.5	1.0923	0.9249	1.259	1.122
20643	848.3	1.0913	0.9297	1.258	1.215



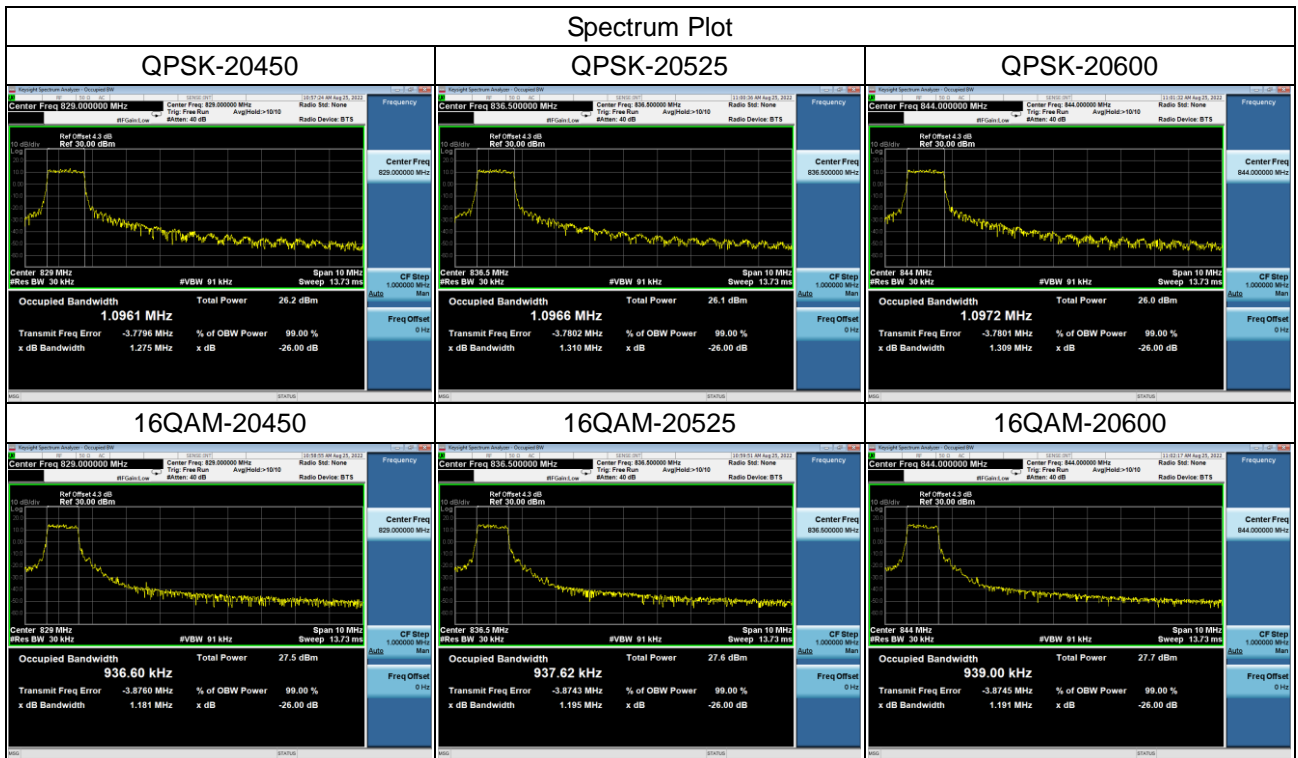
LTE Band 5_3MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		26dB Bandwidth (MHz)	
		QPSK	16QAM	QPSK	16QAM
20415	825.5	1.0958	0.9277	1.272	1.130
20525	836.5	1.0910	0.9289	1.270	1.228
20635	847.5	1.1004	0.9290	1.273	1.241



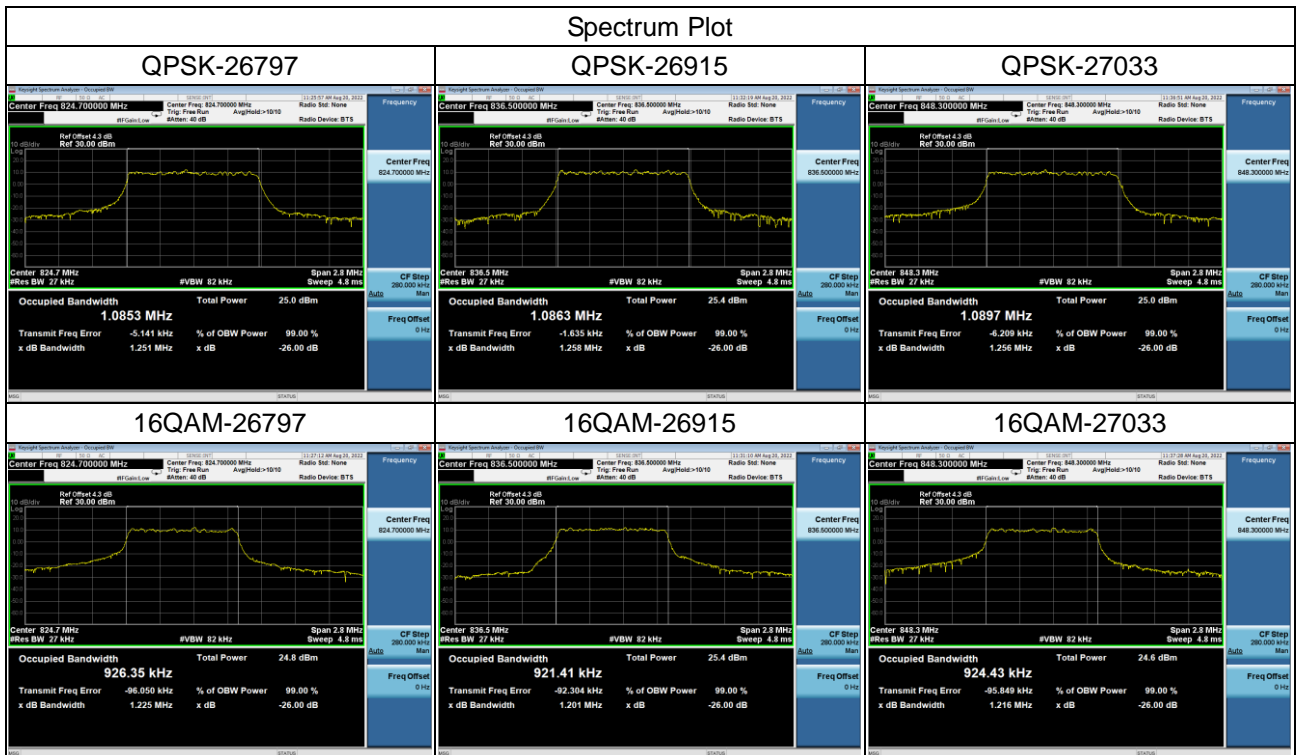
LTE Band 5_5MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		26dB Bandwidth (MHz)	
		QPSK	16QAM	QPSK	16QAM
20425	826.5	1.0969	0.9232	1.310	1.141
20525	836.5	1.0988	0.9237	1.312	1.126
20625	846.5	1.0992	0.9230	1.316	1.130



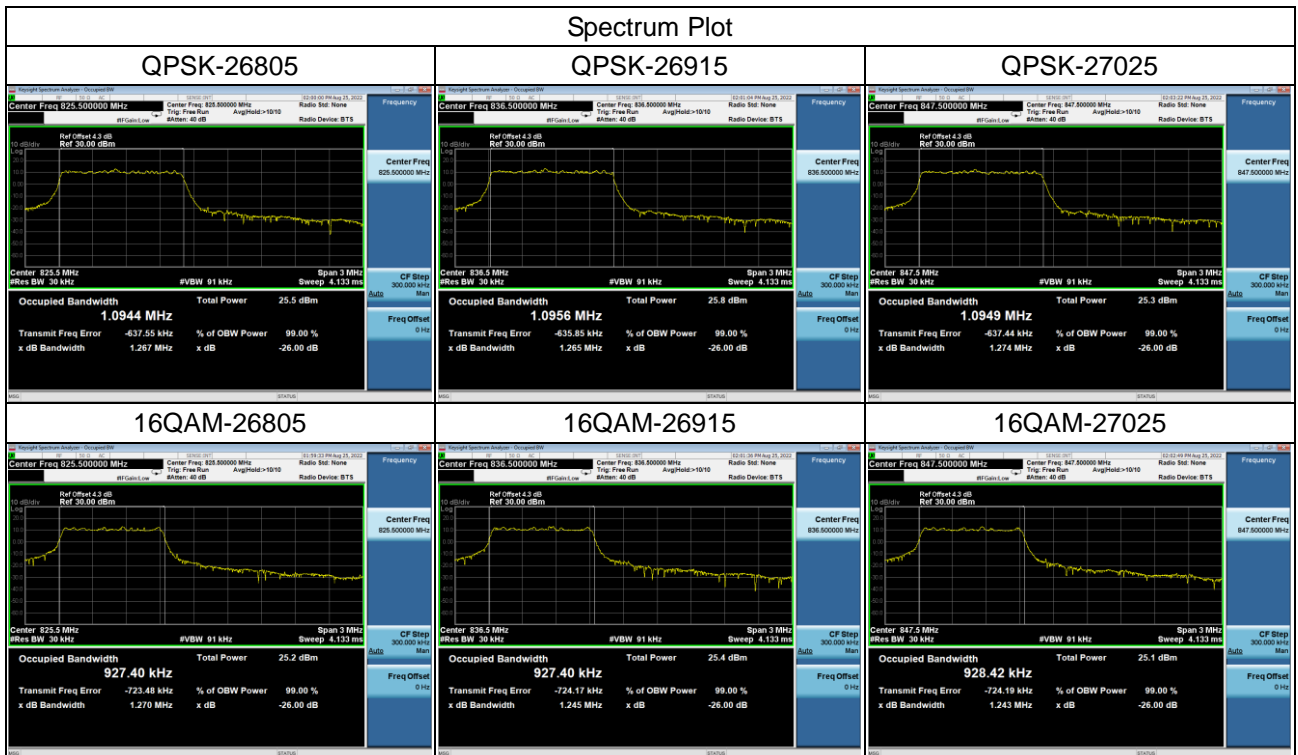
LTE Band 5_10MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		26dB Bandwidth (MHz)	
		QPSK	16QAM	QPSK	16QAM
20450	829.0	1.0961	0.9366	1.275	1.181
20525	836.5	1.0966	0.9376	1.310	1.195
20600	844.0	1.0972	0.9390	1.309	1.191



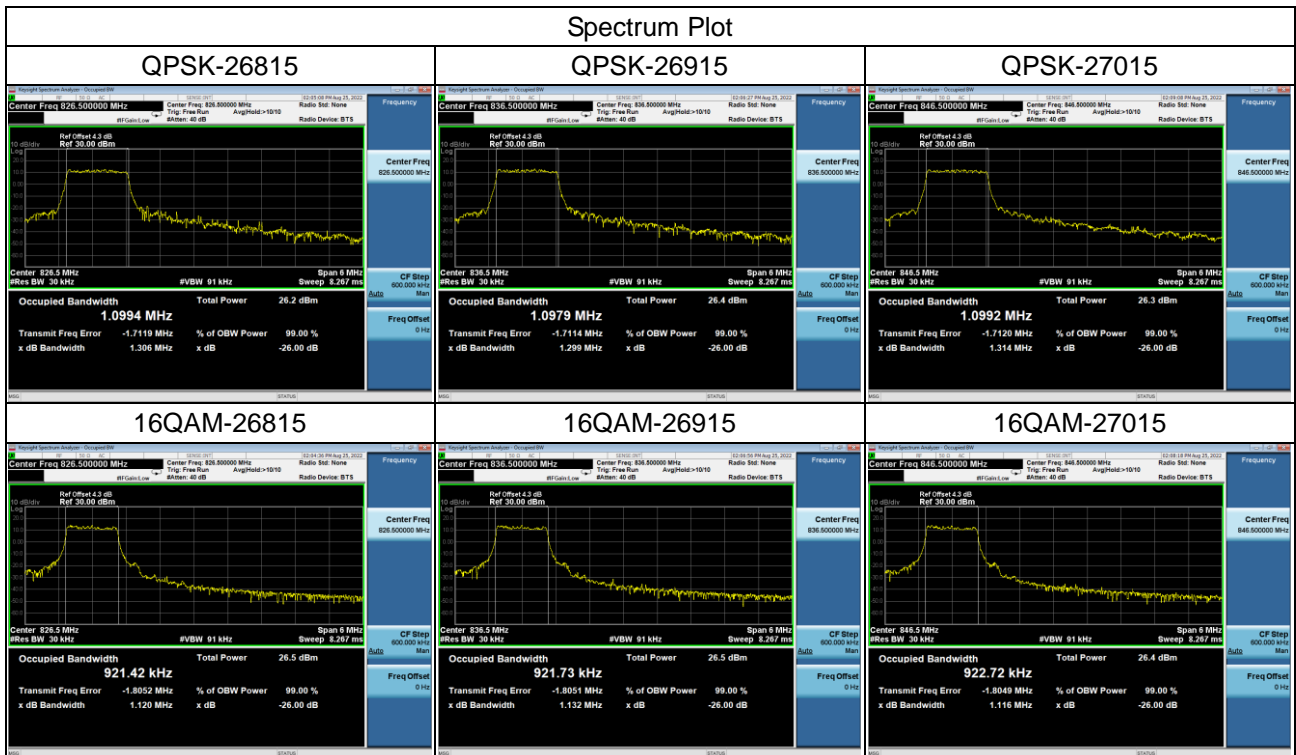
LTE Band 26_1.4MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		26dB Bandwidth (MHz)	
		QPSK	16QAM	QPSK	16QAM
26797	824.7	1.0853	0.9264	1.251	1.225
26915	836.5	1.0863	0.9214	1.258	1.201
27033	848.3	1.0897	0.9244	1.256	1.216



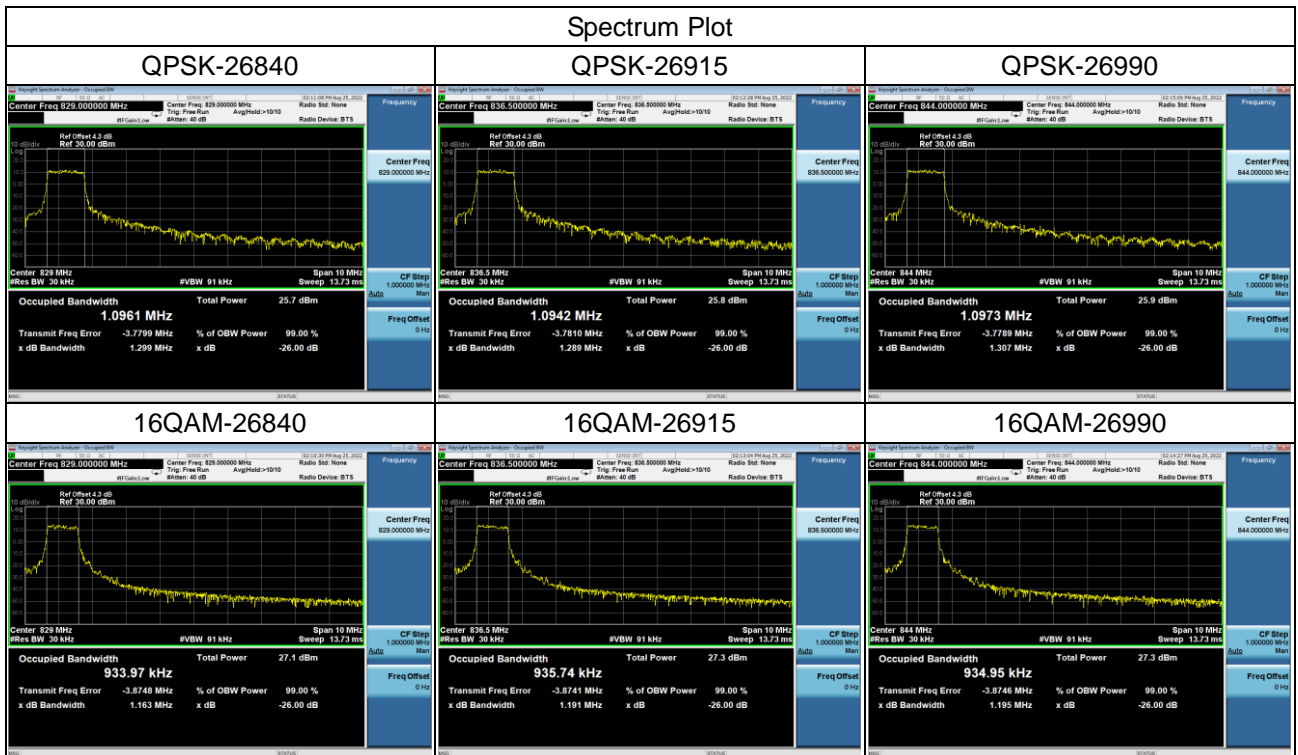
LTE Band 26_3MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		26dB Bandwidth (MHz)	
		QPSK	16QAM	QPSK	16QAM
26805	825.5	1.0944	0.9274	1.267	1.270
26915	836.5	1.0956	0.9274	1.265	1.245
27025	847.5	1.0949	0.9284	1.274	1.243



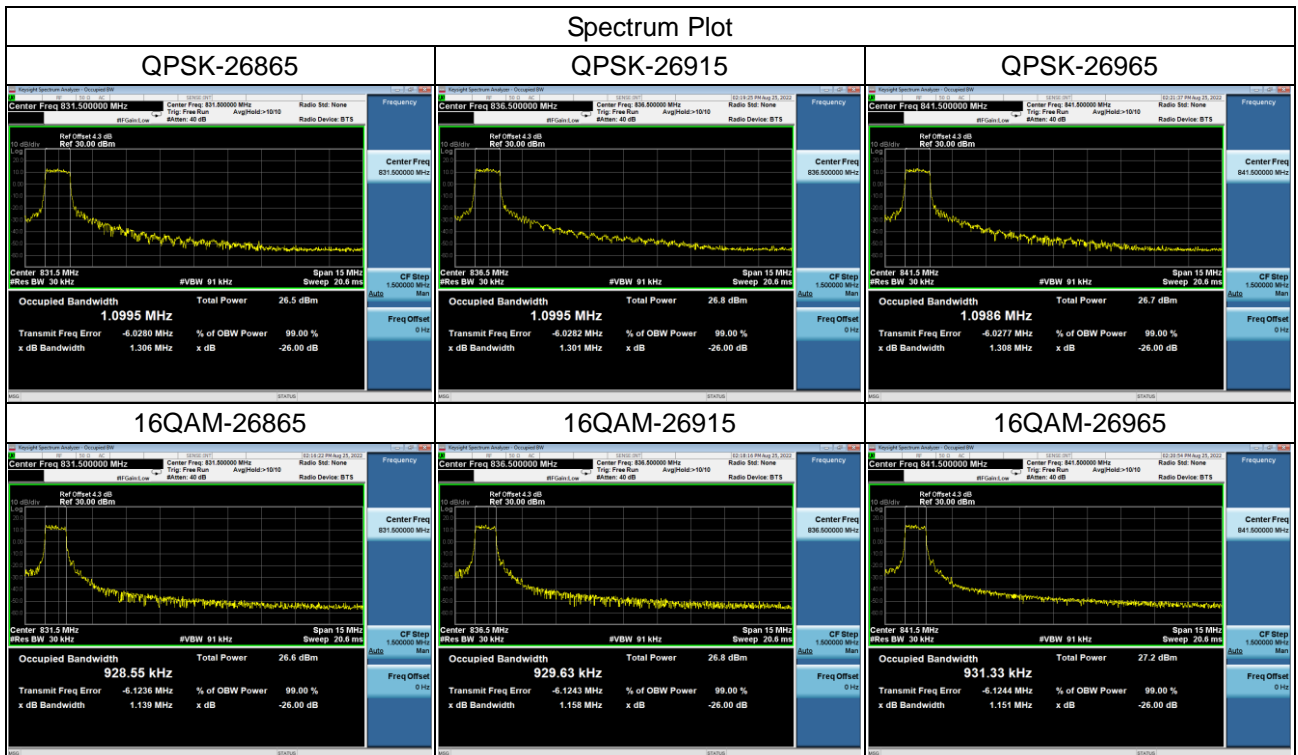
LTE Band 26_5MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		26dB Bandwidth (MHz)	
		QPSK	16QAM	QPSK	16QAM
26815	826.5	1.0994	0.9214	1.306	1.120
26915	836.5	1.0979	0.9217	1.299	1.132
27015	846.5	1.0992	0.9227	1.314	1.116



LTE Band 26_10MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		26dB Bandwidth (MHz)	
		QPSK	16QAM	QPSK	16QAM
26840	829	1.0961	0.9340	1.299	1.163
26915	836.5	1.0942	0.9357	1.289	1.191
26990	844	1.0973	0.9350	1.307	1.195

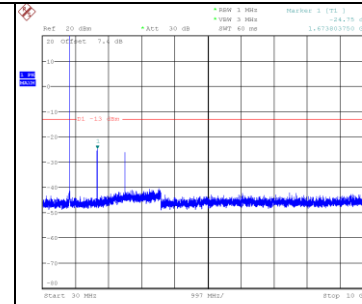
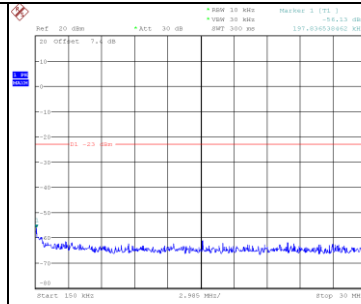
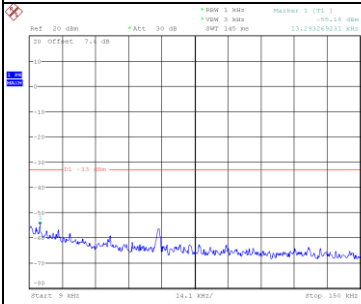


LTE Band 26_15MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		26dB Bandwidth (MHz)	
		QPSK	16QAM	QPSK	16QAM
26865	831.5	1.0995	0.9286	1.306	1.139
26915	836.5	1.0995	0.9296	1.301	1.158
26965	841.5	1.0986	0.9313	1.308	1.151



APPENDIX C - CONDUCTED SPURIOUS EMISSIONS

GSM850_GPRS_CH190 Spectrum Plot

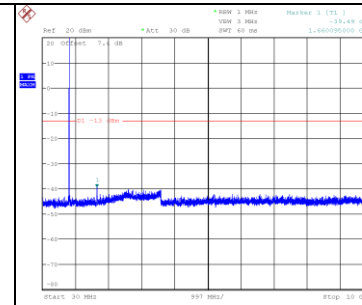
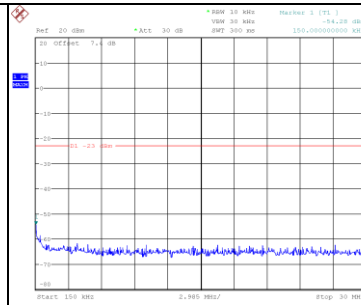
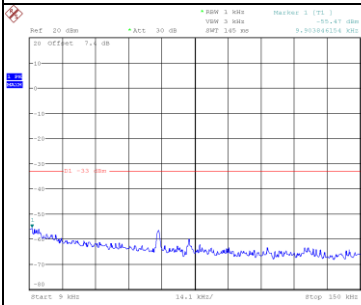


Date: 29_AUG_2022 18:40:42

Date: 29_AUG_2022 18:42:06

Date: 29_AUG_2022 19:16:48

GSM850_EDGE_CH190 Spectrum Plot

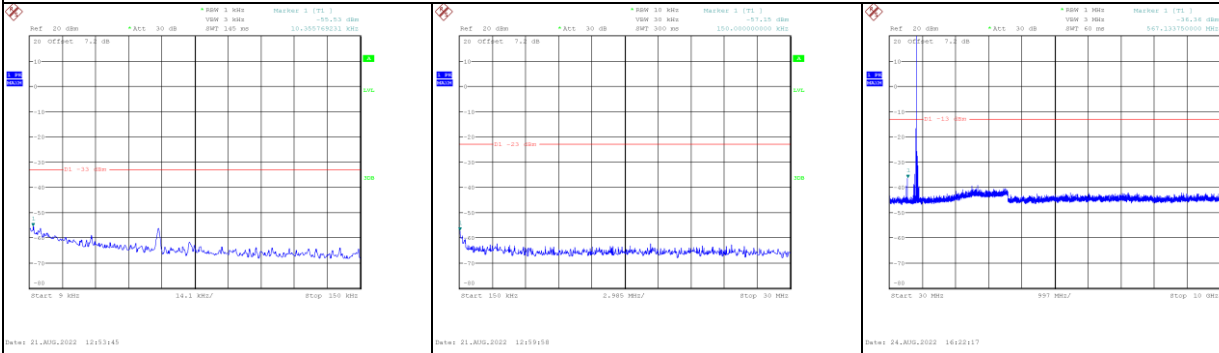


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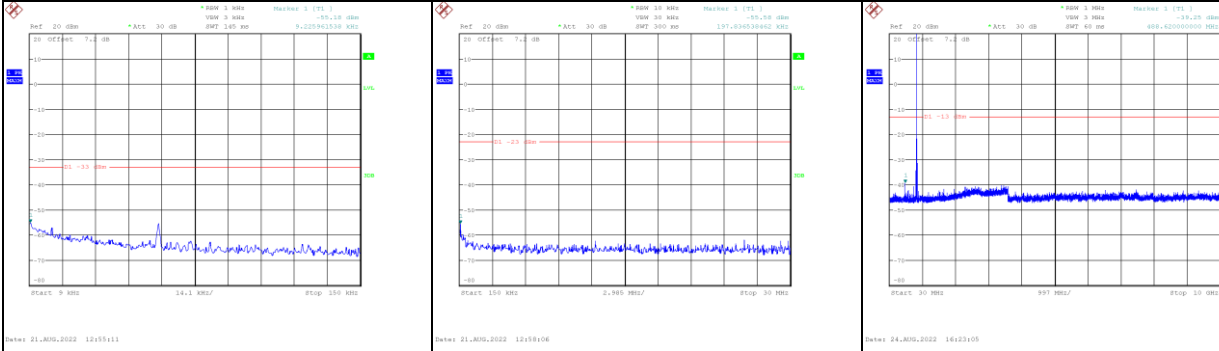
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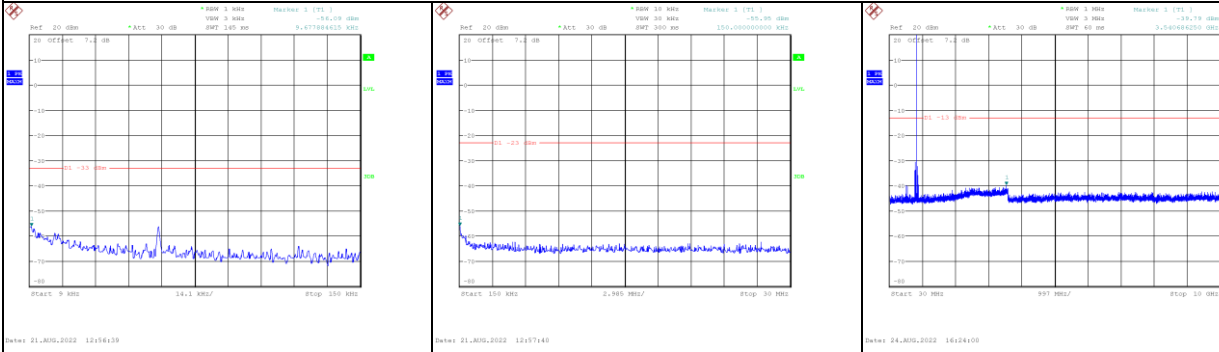
LTE Band 5_1.4MHz_CH20525 Spectrum Plot



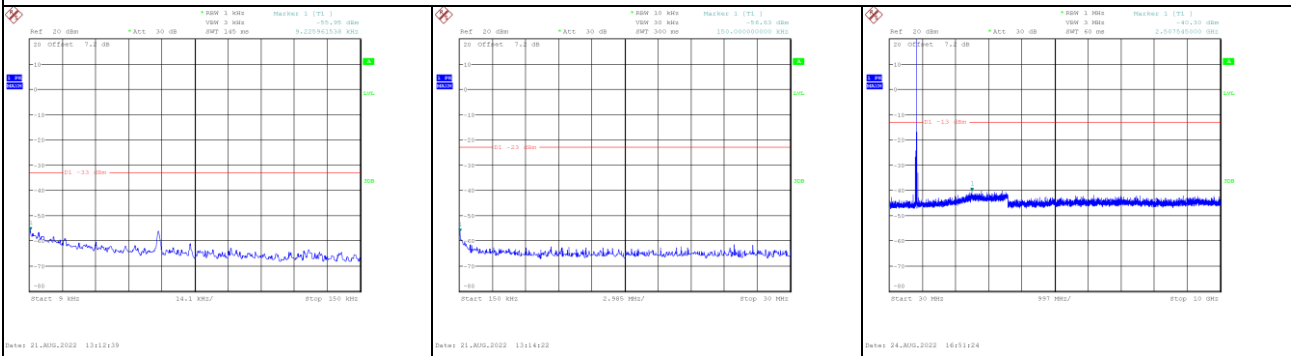
LTE Band 5_5MHz_CH20525 Spectrum Plot



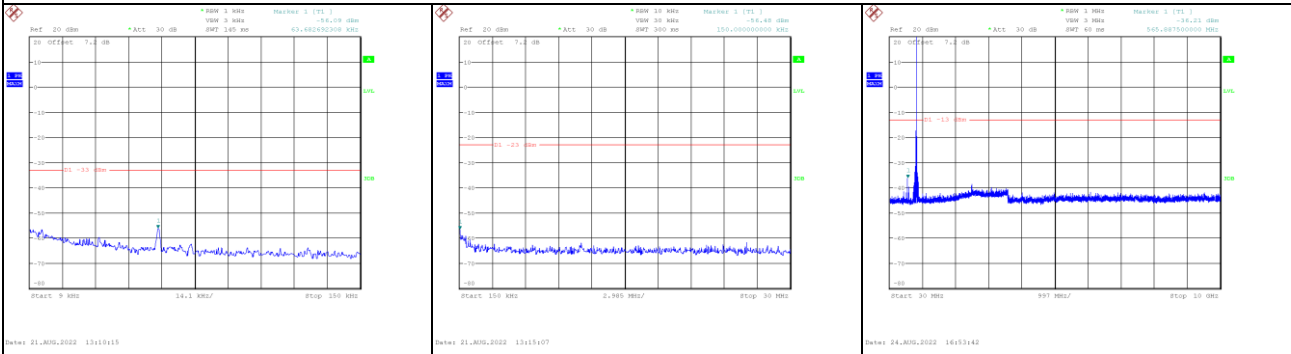
LTE Band 5_10M_CH20525 Spectrum Plot



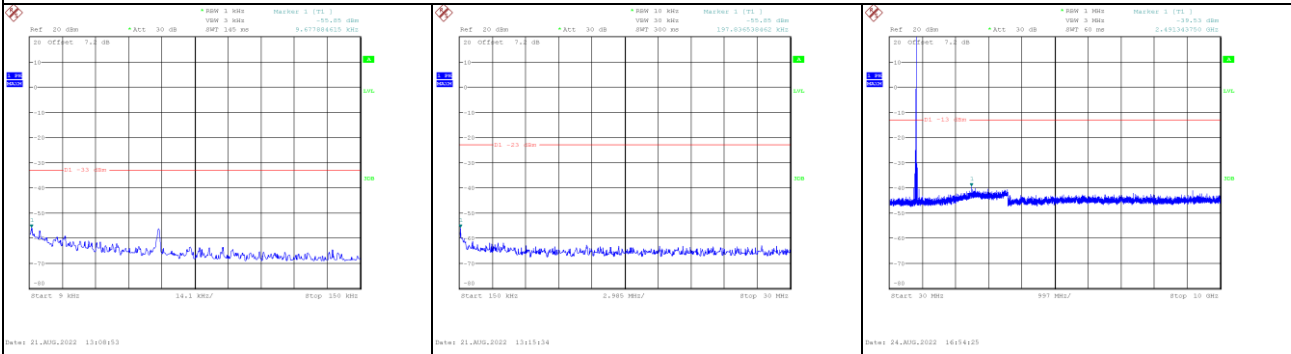
LTE Band 26_1.4MHz_CH26915 Spectrum Plot



LTE Band 26_5MHz_CH26915 Spectrum Plot



LTE Band 26_15MHz_CH26915 Spectrum Plot



APPENDIX D - RADIATED SPURIOUS EMISSIONS (9KHZ TO 30MHZ)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

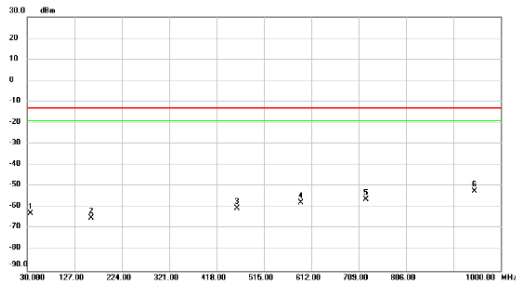
There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

APPENDIX E - RADIATED SPURIOUS EMISSIONS (30MHZ TO 1000MHZ)

Test Mode : GSM850_TX CH190_GPRS

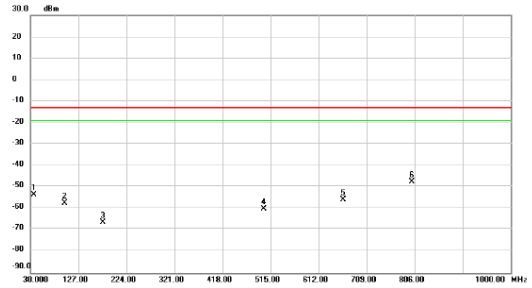
Test Mode : GSM850_TX CH190_GPRS

Vertical



No. Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measurement dBm	Limit dBm	Margin dB	Detector	Comment
1	37.275	-48.08	-14.89	-62.97	-13.00	-49.97	peak	
2	160.950	-56.01	-8.92	-64.93	-13.00	-51.93	peak	
3	480.195	-58.18	-2.40	-60.58	-13.00	-47.58	peak	
4	590.660	-58.11	0.27	-57.84	-13.00	-44.84	peak	
5	723.550	-57.72	1.61	-56.11	-13.00	-43.11	peak	
6 *	945.680	-56.36	4.07	-52.29	-13.00	-39.29	peak	

Horizontal

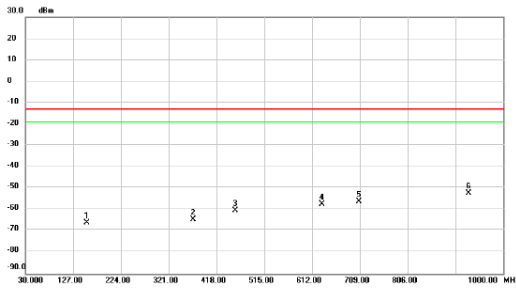


No. Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measurement dBm	Limit dBm	Margin dB	Detector	Comment
1	37.275	-39.24	-14.30	-53.54	-13.00	-40.54	peak	
2	99.355	-50.68	-6.90	-57.58	-13.00	-44.58	peak	
3	176.470	-55.89	-10.57	-66.46	-13.00	-53.46	peak	
4	501.905	-58.80	-1.49	-60.29	-13.00	-47.29	peak	
5	661.470	-57.18	1.21	-55.97	-13.00	-42.97	peak	
6 *	799.695	-49.88	2.40	-47.48	-13.00	-34.48	peak	

Test Mode : LTE Band 5_TX CH20525_1.4MHz

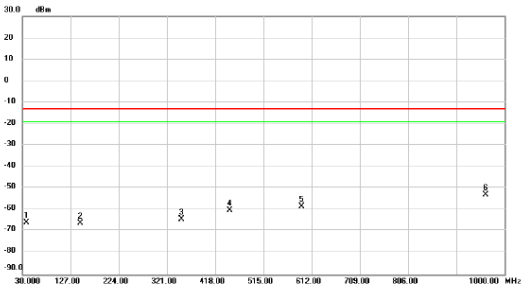
Test Mode : LTE Band 5_TX CH20525_1.4MHz

Vertical



No. Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measurement dBm	Limit dBm	Margin dB	Detector	Comment
1	155.130	-56.65	-9.47	-66.12	-13.00	-53.12	peak	
2	370.470	-61.20	-3.60	-64.80	-13.00	-51.80	peak	
3	456.315	-58.03	-2.30	-60.33	-13.00	-47.33	peak	
4	631.885	-58.34	0.99	-57.35	-13.00	-44.35	peak	
5	707.060	-57.43	1.25	-56.18	-13.00	-43.18	peak	
6 *	929.675	-56.36	4.06	-52.30	-13.00	-39.30	peak	

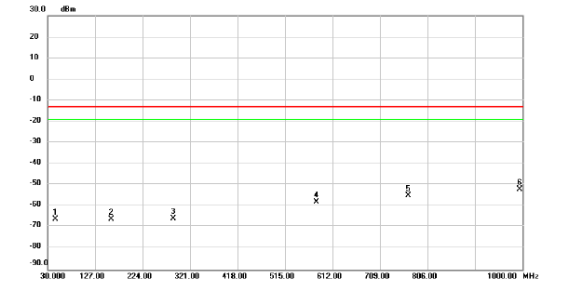
Horizontal



No. Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measurement dBm	Limit dBm	Margin dB	Detector	Comment
1	37.760	-52.44	-13.26	-65.70	-13.00	-52.70	peak	
2	146.400	-55.05	-11.22	-66.27	-13.00	-53.27	peak	
3	349.615	-60.74	-3.58	-64.32	-13.00	-51.32	peak	
4	446.615	-57.71	-2.42	-60.13	-13.00	-47.13	peak	
5	592.115	-58.36	-0.04	-58.40	-13.00	-45.40	peak	
6 *	961.200	-56.83	3.96	-52.87	-13.00	-39.87	peak	

Test Mode : LTE Band 5_TX CH20525_5MHz

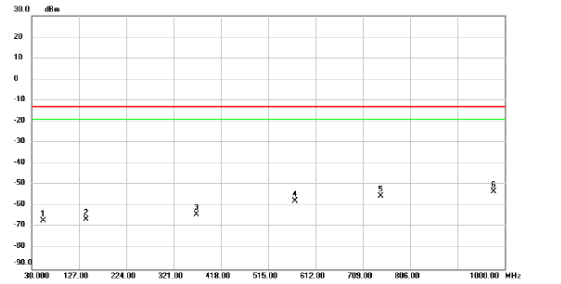
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBm	dB	dBm	dBm	dB		
1		46.490	-59.52	-6.69	-66.21	-13.00	-53.21	peak	
2		159.980	-57.32	-8.95	-66.27	-13.00	-53.27	peak	
3		287.050	-61.05	-4.92	-65.97	-13.00	-52.97	peak	
4		578.020	-58.07	-0.05	-58.12	-13.00	-45.12	peak	
5		768.715	-57.40	2.33	-55.07	-13.00	-42.07	peak	
6 *		994.180	-56.60	4.47	-52.13	-13.00	-39.13	peak	

Test Mode : LTE Band 5_TX CH20525_5MHz

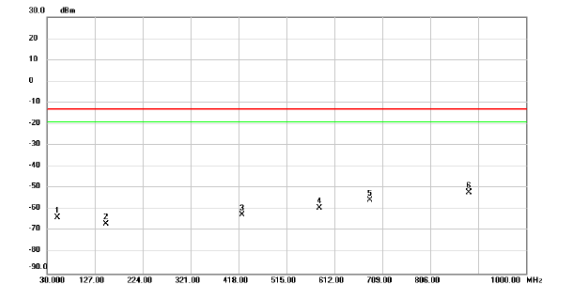
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBm	dB	dBm	dBm	dB		
1		53.785	-67.43	0.45	-66.98	-13.00	-53.98	peak	
2		141.560	-55.47	-11.12	-66.59	-13.00	-53.59	peak	
3		368.530	-60.39	-3.55	-63.94	-13.00	-50.94	peak	
4		569.320	-57.05	-0.63	-57.68	-13.00	-44.68	peak	
5		745.860	-57.49	2.13	-55.36	-13.00	-42.36	peak	
6 *		976.720	-57.37	4.18	-53.19	-13.00	-40.19	peak	

Test Mode : LTE Band 5_TX CH20525_10MHz

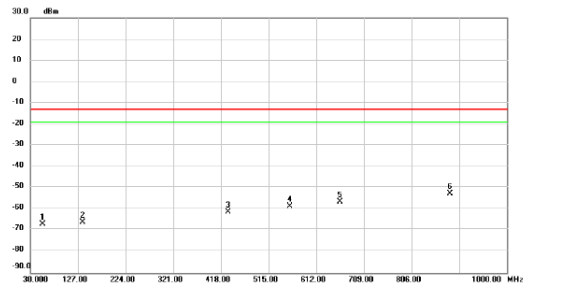
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBm	dB	dBm	dBm	dB		
1		51.825	-60.77	-2.87	-63.64	-13.00	-50.64	peak	
2		149.795	-56.77	-10.00	-66.77	-13.00	-53.77	peak	
3		424.790	-60.39	-2.26	-62.65	-13.00	-49.65	peak	
4		581.445	-59.37	0.01	-59.36	-13.00	-46.36	peak	
5		683.295	-56.66	1.14	-55.52	-13.00	-42.52	peak	
6 *		884.570	-56.02	3.90	-52.12	-13.00	-39.12	peak	

Test Mode : LTE Band 5_TX CH20525_10MHz

Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBm	dB	dBm	dBm	dB		
1		55.220	-67.67	0.59	-67.08	-13.00	-54.08	peak	
2		136.700	-55.40	-10.65	-66.05	-13.00	-53.05	peak	
3		433.035	-58.72	-2.48	-61.20	-13.00	-48.20	peak	
4		558.165	-57.84	-0.91	-58.75	-13.00	-45.75	peak	
5		660.500	-57.63	1.22	-56.41	-13.00	-43.41	peak	
6 *		884.085	-56.23	3.58	-52.65	-13.00	-39.65	peak	

Test Mode : LTE Band 26_TX CH26915_1.4MHz

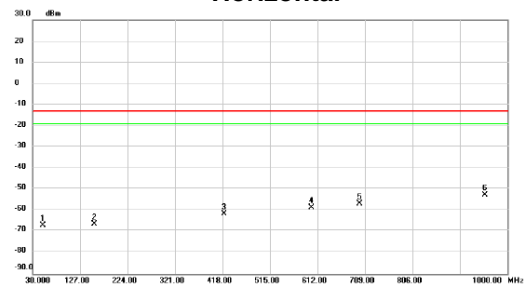
Vertical



No. Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measurement dBm	Limit dBm	Margin dB	Detector	Comment
1	53.280	-60.58	-2.94	-63.52	-13.00	-50.52	peak	
2	155.615	-55.96	-9.41	-65.37	-13.00	-52.37	peak	
3	484.930	-59.67	-1.96	-61.63	-13.00	-48.63	peak	
4	603.755	-57.72	0.58	-57.14	-13.00	-44.14	peak	
5	755.560	-57.12	2.24	-54.88	-13.00	-41.88	peak	
6 *	978.660	-56.44	4.33	-52.11	-13.00	-39.11	peak	

Test Mode : LTE Band 26_TX CH26915_1.4MHz

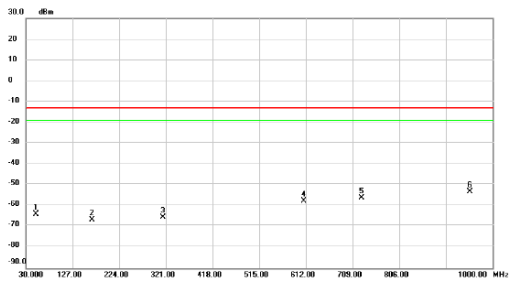
Horizontal



No. Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measurement dBm	Limit dBm	Margin dB	Detector	Comment
1	51.340	-67.24	0.08	-67.16	-13.00	-54.16	peak	
2	156.585	-55.28	-11.08	-66.36	-13.00	-53.36	peak	
3	420.910	-58.88	-2.90	-61.78	-13.00	-48.78	peak	
4	598.875	-58.83	0.16	-58.67	-13.00	-45.67	peak	
5	698.330	-57.68	0.90	-56.78	-13.00	-43.78	peak	
6 *	953.925	-56.64	3.86	-52.78	-13.00	-39.78	peak	

Test Mode : LTE Band 26_TX CH26915_5MHz

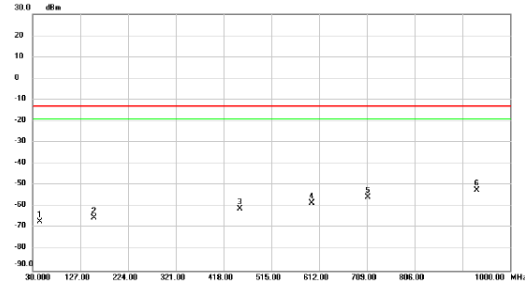
Vertical



No. Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measurement dBm	Limit dBm	Margin dB	Detector	Comment
1	51.825	-61.05	-2.87	-63.92	-13.00	-50.92	peak	
2	167.255	-57.96	-8.70	-66.66	-13.00	-53.66	peak	
3	314.695	-60.55	-4.95	-65.50	-13.00	-52.50	peak	
4	607.635	-58.53	0.64	-57.89	-13.00	-44.89	peak	
5	727.430	-57.95	1.69	-56.26	-13.00	-43.26	peak	
6 *	952.955	-57.25	4.10	-53.15	-13.00	-40.15	peak	

Test Mode : LTE Band 26_TX CH26915_5MHz

Horizontal

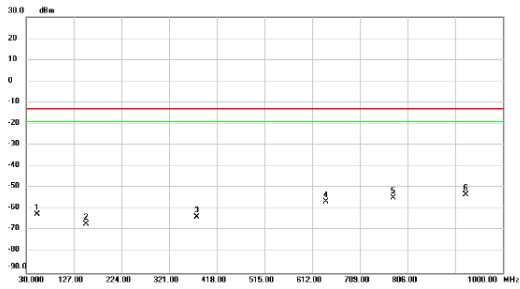


No. Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measurement dBm	Limit dBm	Margin dB	Detector	Comment
1	45.035	-62.19	-4.82	-67.01	-13.00	-54.01	peak	
2	154.160	-54.14	-11.16	-65.30	-13.00	-52.30	peak	
3	450.495	-58.64	-2.52	-61.16	-13.00	-48.16	peak	
4	597.450	-58.47	0.08	-58.39	-13.00	-45.38	peak	
5	711.425	-56.79	1.20	-55.59	-13.00	-42.59	peak	
6 *	932.585	-56.15	3.77	-52.38	-13.00	-39.38	peak	

Test Mode : LTE Band 26_TX CH26915_15MHz

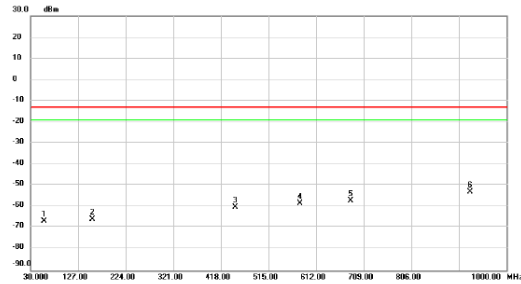
Test Mode : LTE Band 26_TX CH26915_15MHz

Vertical



No. Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measurement dBm	Limit dBm	Margin dB	Detector	Comment
1	52.310	-59.55	-2.90	-62.45	-13.00	-49.45	peak	
2	152.705	-57.24	-9.72	-66.96	-13.00	-53.96	peak	
3	377.260	-60.27	-3.33	-63.60	-13.00	-50.60	peak	
4	640.130	-57.60	1.11	-56.49	-13.00	-43.49	peak	
5	776.415	-57.11	2.42	-54.69	-13.00	-41.69	peak	
6 *	924.340	-57.32	4.06	-53.26	-13.00	-40.26	peak	

Horizontal

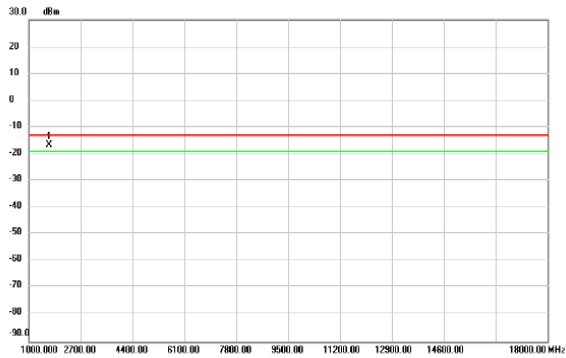


No. Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measurement dBm	Limit dBm	Margin dB	Detector	Comment
1	57.645	-66.62	0.01	-66.61	-13.00	-53.61	peak	
2	156.100	-54.78	-11.09	-65.87	-13.00	-52.87	peak	
3	447.100	-57.76	-2.43	-60.19	-13.00	-47.19	peak	
4	578.535	-58.02	-0.39	-58.41	-13.00	-45.41	peak	
5	681.840	-58.30	1.04	-57.26	-13.00	-44.26	peak	
6 *	925.310	-56.66	3.75	-52.91	-13.00	-39.91	peak	

APPENDIX F - RADIATED SPURIOUS EMISSIONS (ABOVE 1000MHZ)

Test Mode : GSM850_TX CH190_GPRS

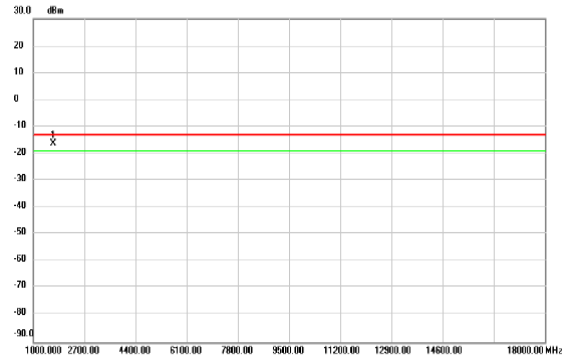
Vertical



No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBm	dB	dBm	dBm	dB		
1 *	1671.500	-2.86	-13.69	-16.55	-13.00	-3.55	peak	

Test Mode : GSM850_TX CH190_GPRS

Horizontal



No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBm	dB	dBm	dBm	dB		
1 *	1671.500	-2.09	-14.23	-16.32	-13.00	-3.32	peak	

Test Mode : LTE Band 5_TX CH20525_1.4MHz

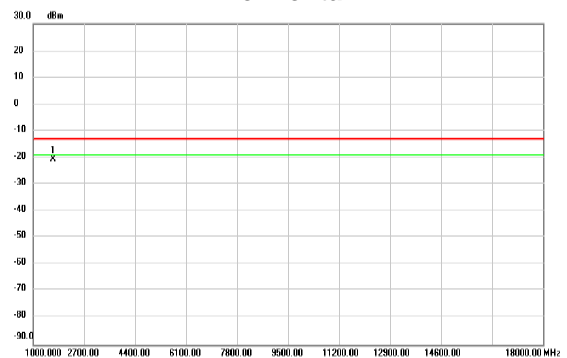
Vertical



No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBm	dB	dBm	dBm	dB		
1 *	1671.500	-8.69	-13.69	-22.38	-13.00	-9.38	peak	

Test Mode : LTE Band 5_TX CH20525_1.4MHz

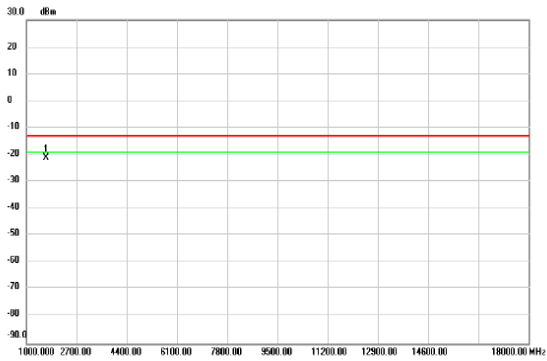
Horizontal



No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBm	dB	dBm	dBm	dB		
1 *	1671.500	-6.24	-14.23	-20.47	-13.00	-7.47	peak	

Test Mode : LTE Band 5_TX CH20525_5MHz

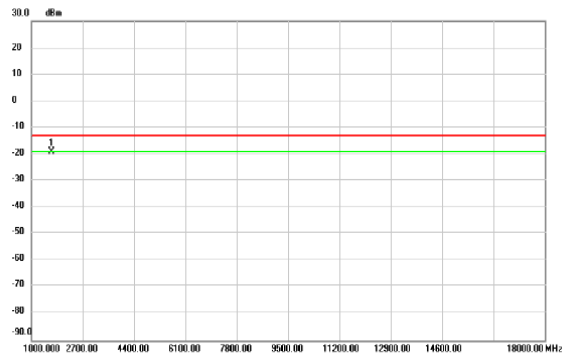
Vertical



No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBm	dB	dBm	dBm	dB		
1 *	1671.500	-7.53	-13.69	-21.22	-13.00	-8.22	peak	

Test Mode : LTE Band 5_TX CH20525_5MHz

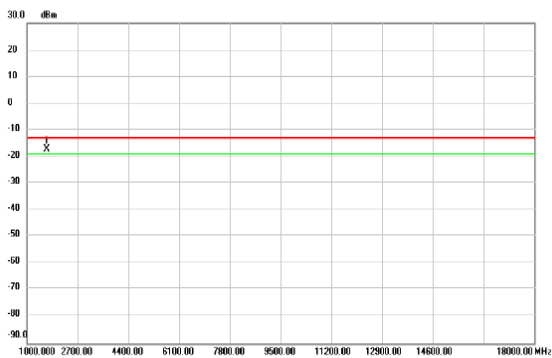
Horizontal



No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBm	dB	dBm	dBm	dB		
1 *	1671.500	-4.84	-14.23	-19.07	-13.00	-6.07	peak	

Test Mode : LTE Band 5_TX CH20525_10MHz

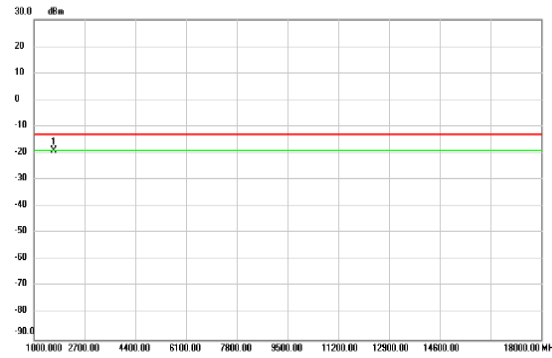
Vertical



No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBm	dB	dBm	dBm	dB		
1 *	1663.000	-3.66	-13.70	-17.36	-13.00	-4.36	peak	

Test Mode : LTE Band 5_TX CH20525_10MHz

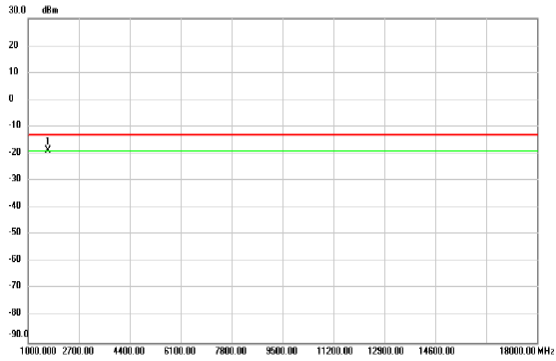
Horizontal



No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBm	dB	dBm	dBm	dB		
1 *	1663.000	-4.74	-14.25	-18.99	-13.00	-5.99	peak	

Test Mode : LTE Band 26_TX CH26915_1.4MHz

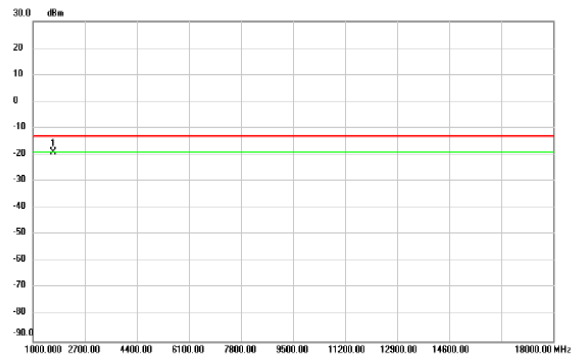
Vertical



No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBm	dB	dBm	dBm	dB		
1 *	1671.500	-5.08	-13.68	-18.77	-13.00	-5.77	peak	

Test Mode : LTE Band 26_TX CH26915_1.4MHz

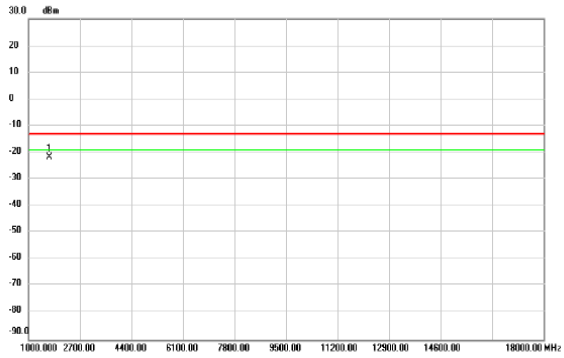
Horizontal



No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBm	dB	dBm	dBm	dB		
1 *	1671.500	-4.93	-14.23	-19.16	-13.00	-6.16	peak	

Test Mode : LTE Band 26_TX CH26915_5MHz

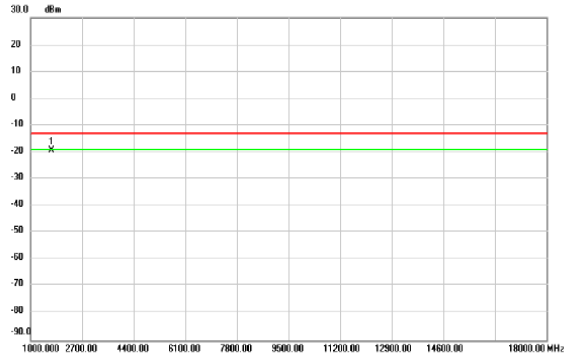
Vertical



No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBm	dB	dBm	dBm	dB		
1 *	1688.500	-8.14	-13.65	-21.79	-13.00	-8.79	peak	

Test Mode : LTE Band 26_TX CH26915_5MHz

Horizontal

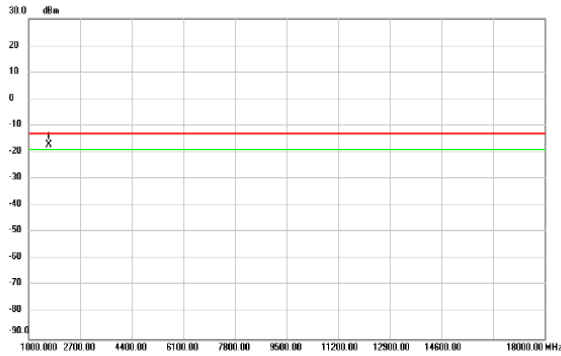


No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBm	dB	dBm	dBm	dB		
1 *	1688.500	-5.21	-14.20	-19.41	-13.00	-6.41	peak	

Test Mode : LTE Band 26_TX CH26915_15MHz

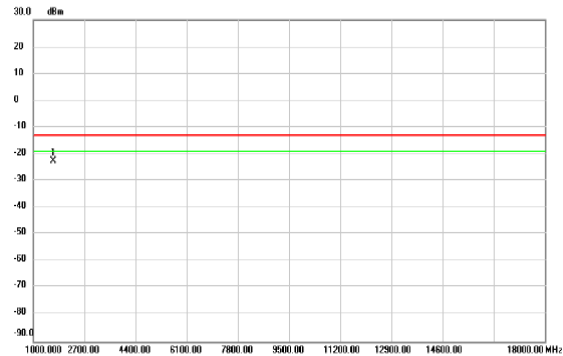
Test Mode : LTE Band 26_TX CH26915_15MHz

Vertical



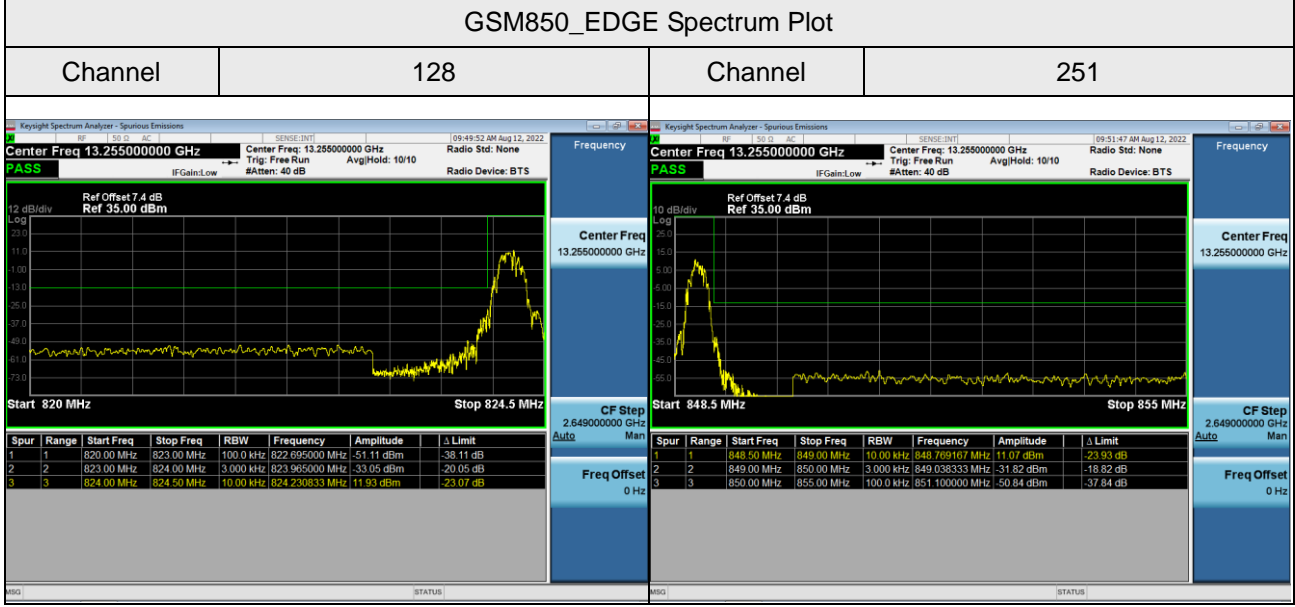
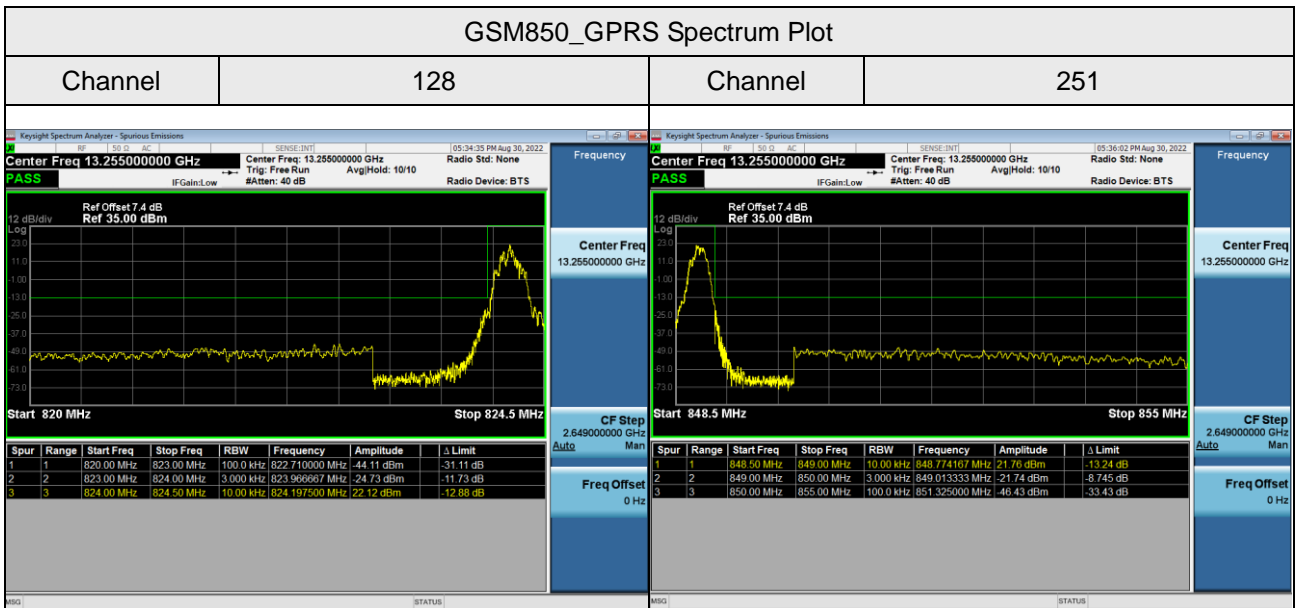
No. Mk.	Freq	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBm	dB	dBm	dBm	dB		
1 *	1663.000	-3.41	-13.70	-17.11	-13.00	-4.11	peak	

Horizontal

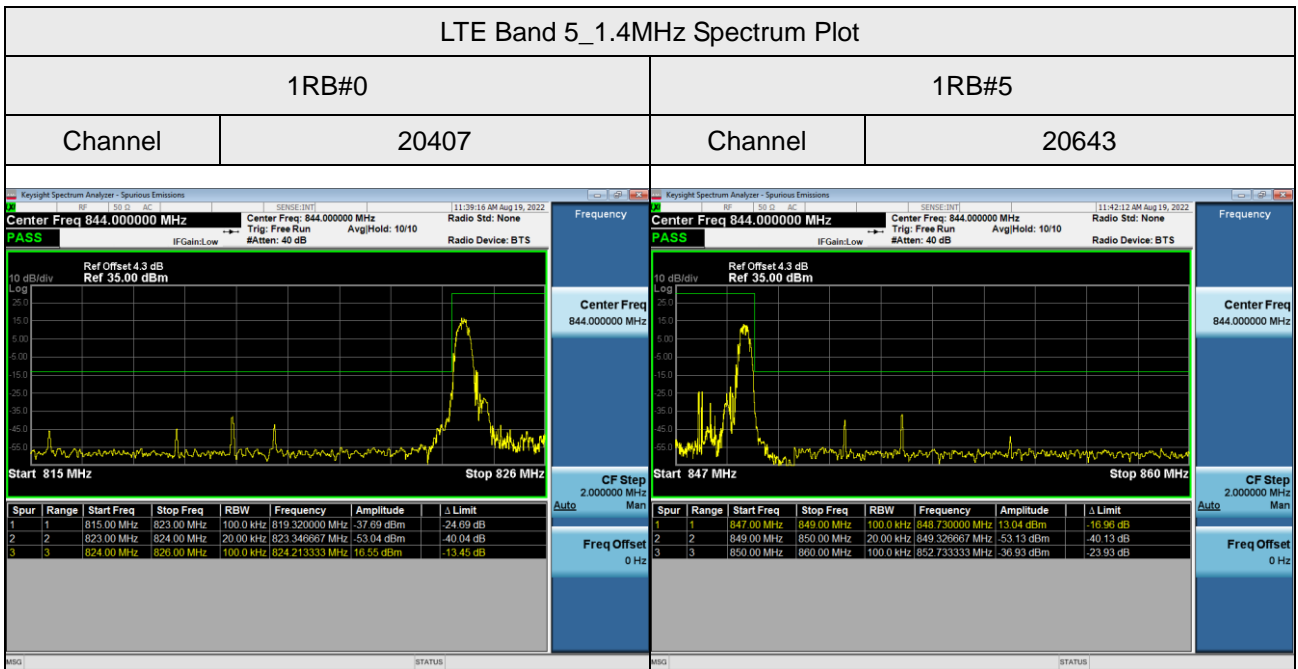


No. Mk.	Freq	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBm	dB	dBm	dBm	dB		
1 *	1663.000	-8.47	-14.25	-22.72	-13.00	-9.72	peak	

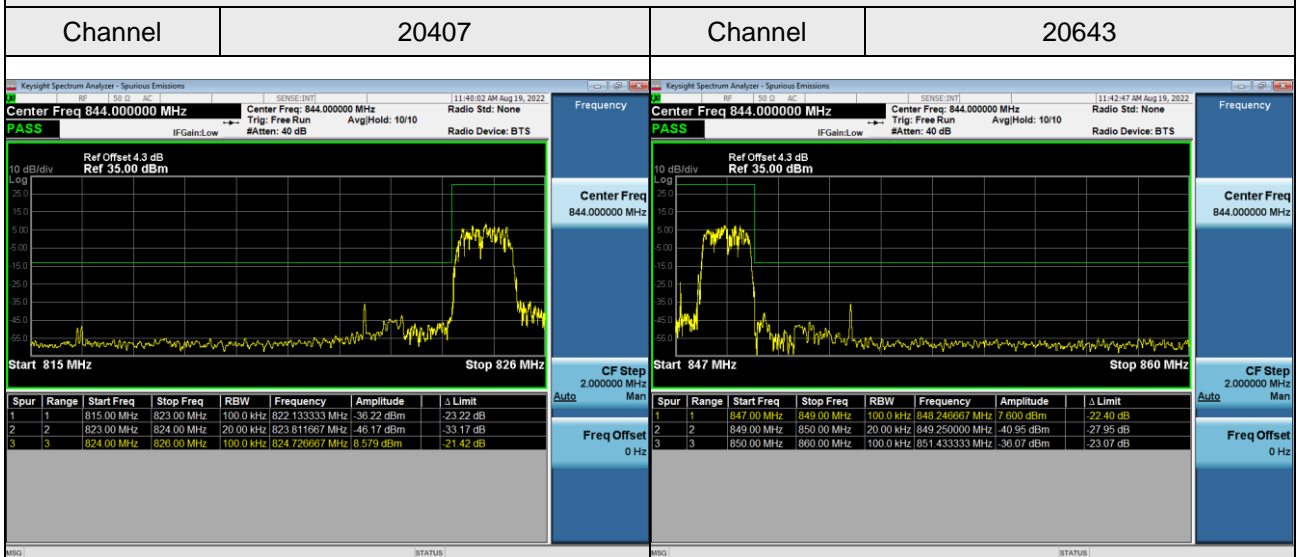
APPENDIX G - BAND EDGE



LTE Band 5_1.4MHz Spectrum Plot



6RB#0



LTE Band 5_3MHz Spectrum Plot

1RB#0

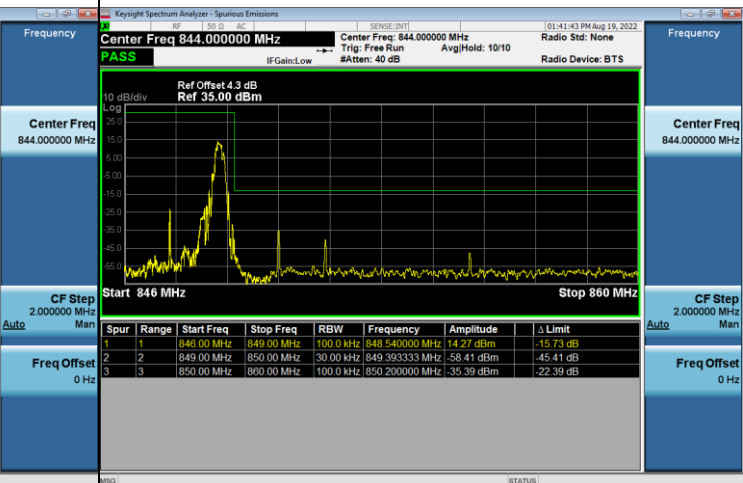
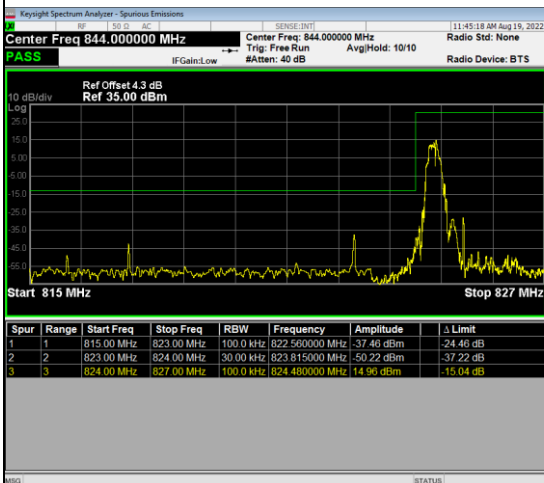
1RB#5

Channel

20415

Channel

20635



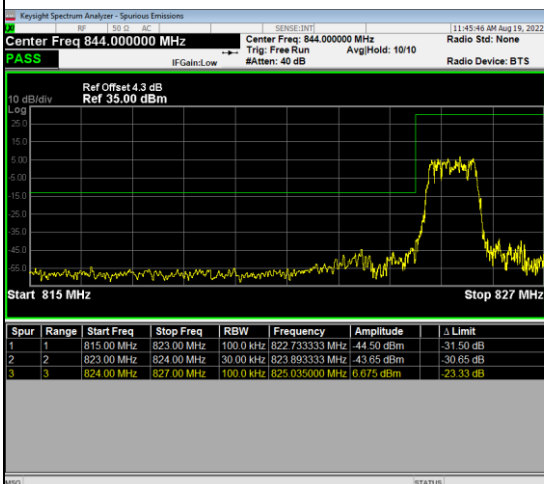
6RB#0

Channel

20415

Channel

20635



LTE Band 5_5MHz Spectrum Plot

1RB#0

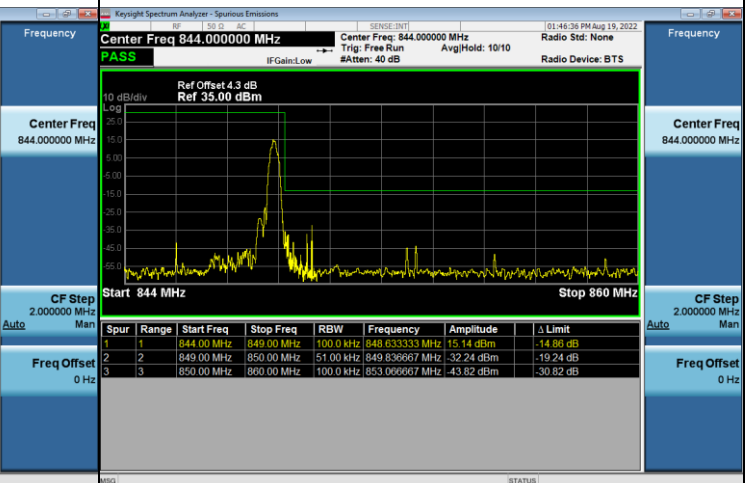
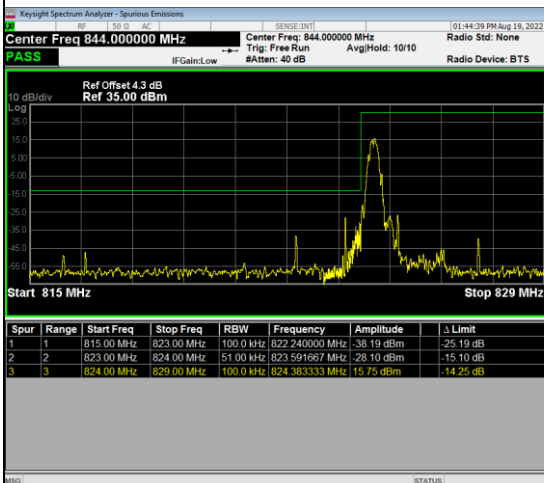
1RB#5

Channel

20425

Channel

20625



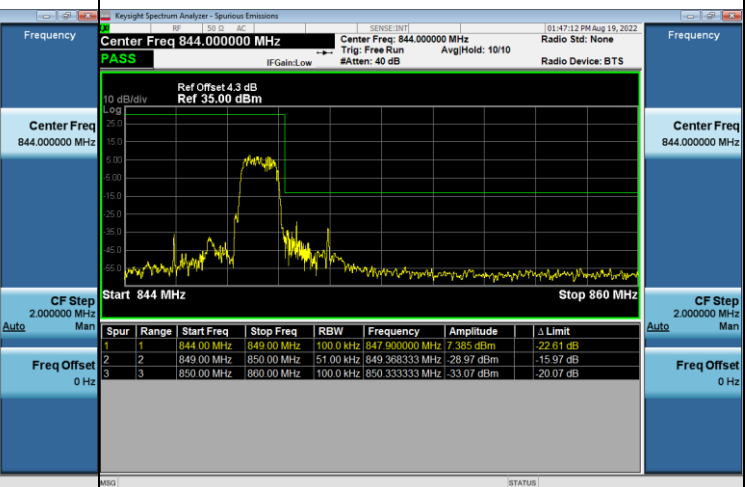
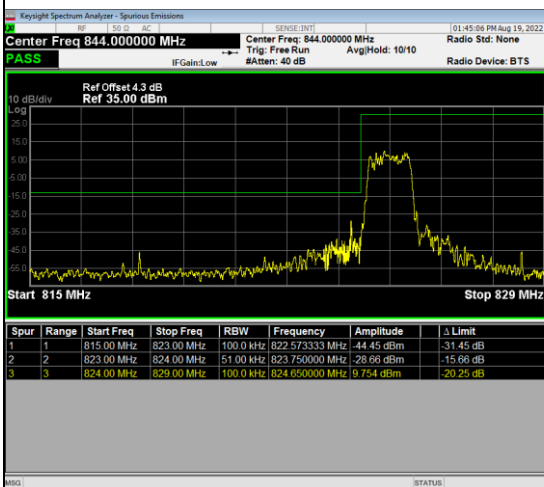
6RB#0

Channel

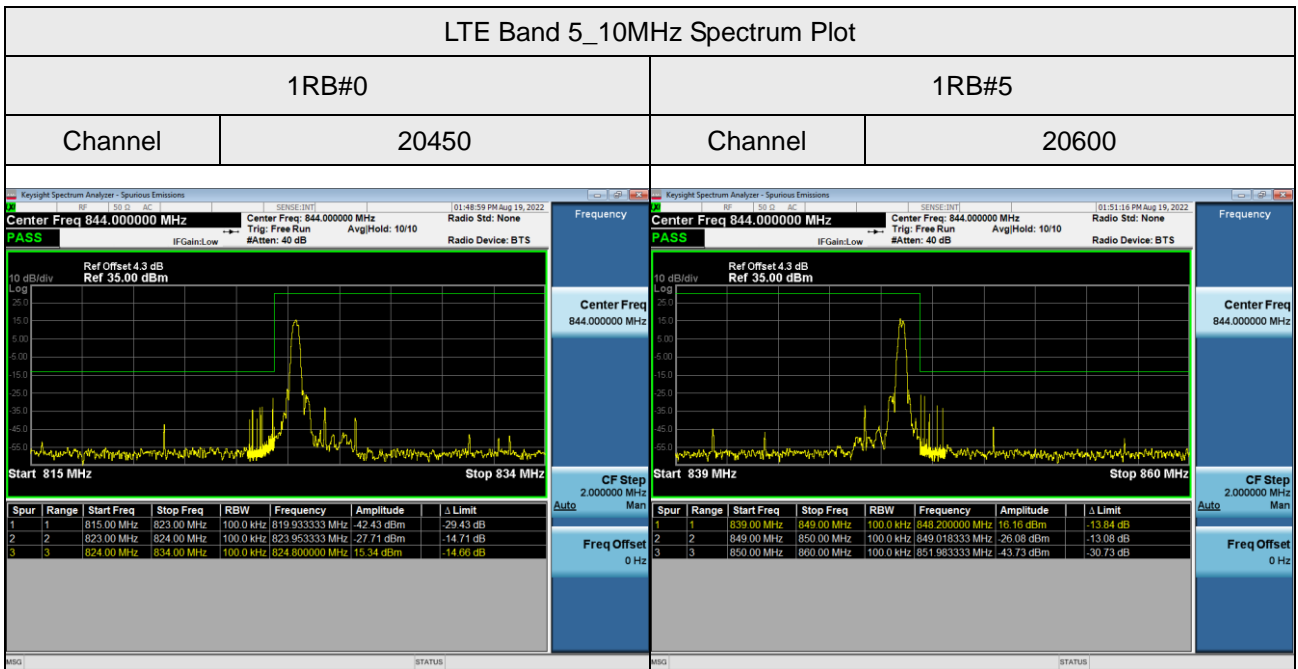
20425

Channel

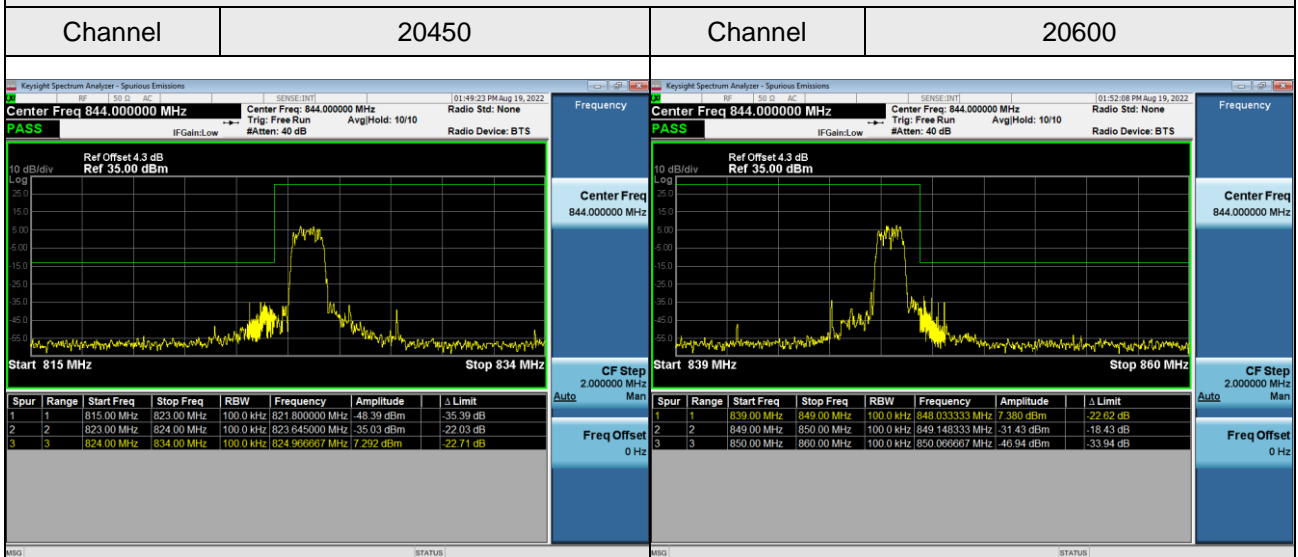
20625



LTE Band 5_10MHz Spectrum Plot



6RB#0



LTE Band 26_1.4MHz Spectrum Plot

1RB#0

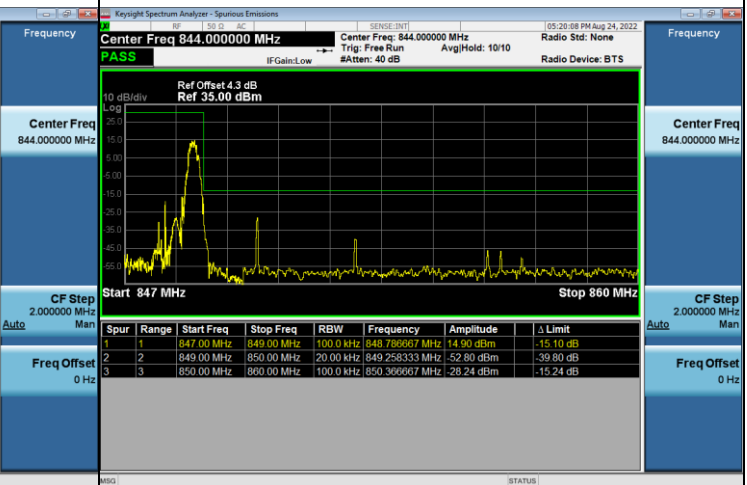
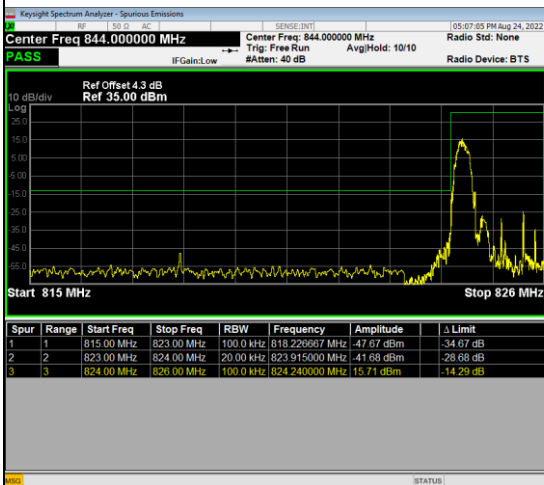
1RB#5

Channel

26797

Channel

27033



6RB#0

Channel

26797

Channel

27033

