FCC Radio Test Report

FCC ID: N7NRC76C

Report No.	:	BTL-FCCP-1-2203T030
Equipment	:	Module
Model Name	:	RC7612, RC7612-1
Brand Name	:	AirPrime
Applicant	:	Sierra Wireless, Inc.
Address	:	13811 Wireless Way, Richmond, BC V6V 3A4, Canada
Manufacturer	:	Sierra Wireless, Inc.
Address	:	13811 Wireless Way, Richmond, BC V6V 3A4, Canada
Radio Function	:	WCDMA Band V, LTE Band 5
FCC Rule Part(s)	:	FCC CFR Title 47, Part 22, Subpart H
Measurement Procedure(s)	:	ANSI C63.26-2015 ANSI/TIA-603-E-2016 FCC KDB 971168 D01 Power Meas License Digital Systems v03r01
Date of Receipt	:	2022/3/4
Date of Test	:	2022/3/4 ~ 2022/4/26
Issued Date	:	2022/6/21

The above equipment has been tested and found in compliance with the requirement of the above standards by BTL Inc.

Prepared by : Eric Lee, Engineer

Approved by : Jerry Chuang, Supervisor

BTL Inc.
No.18, Ln. 171, Sec. 2, Jiuzong Rd., Neihu Dist., Taipei City 114, Taiwan
Tel: +886-2-2657-3299 Fax: +886-2-2657-3331 Web: www.newbtl.com

Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

BTL's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. **BTL** shall have no liability for any declarations, inferences or generalizations drawn by the client or others from **BTL** issued reports.

This report is the confidential property of the client. As a mutual protection to the clients, the public and ourselves, the test report shall not be reproduced, except in full, without our written approval.

BTL's laboratory quality assurance procedures are in compliance with the **ISO/IEC 17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

BTL is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.

CONTENTS

REVISION HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-1-2203T030	R00	Original Report.	2022/6/21	Valid

1 SUMMARY OF TEST RESULTS

Test procedures according to the technical standards.

Standard(s) Section	Description	Test Result	Judgement	Remark
15.207	AC Power Line Conducted Emissions	------	N/A	NOTE (3)
2.1046 22.913(a)(5)	Conducted Output Power Effective Radiated Power (ERP)	APPENDIX A	Pass	------
2.1049	Occupied Bandwidth	APPENDIX B	Pass	------
2.1051 22.917(a)	Conducted Spurious Emissions	APPENDIX C	Pass	------
2.1053 22.917(a)	Radiated Spurious Emissions	APPENDIX D	Pass	------
2.1051 22.917(a)	Band Edge Measurements	APPENDIX E	Pass	------
-	Peak To Average Ratio	APPENDIX F	Pass	Record Only
2.1055 22.355	Frequency Stability	APPENDIX G	Pass	------

NOTE:
(1) ”N/A” denotes test is not applicable in this Test Report.
(2) The report format version is TP.1.1.1.
(3) This is a DC input device.

1.1 TEST FACILITY

The test facilities used to collect the test data in this report:

No. 68-1, Ln. 169, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan
The test sites and facilities are covered under FCC RN: 674415 and DN: TW0659.

☐ C05 ☐ CB08 ☐ CB11 ☒ CB15 ☐ CB16
☒ SR05

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y ± U**, where expanded uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k = 2**, providing a level of confidence of approximately **95 %**. The measurement instrumentation uncertainty considerations contained in CISPR 16-4-2. The BTL measurement uncertainty is less than the CISPR 16-4-2 U_{cispr} requirement.

A. Radiated Spurious Emissions test:

Test Site	Measurement Frequency Range	U,(dB)
CB15	0.03 GHz ~ 0.2 GHz	4.17
	0.2 GHz ~ 1 GHz	4.72
	1 GHz ~ 6 GHz	5.21
	6 GHz ~ 18 GHz	5.51
	18 GHz ~ 26 GHz	3.69
	26 GHz ~ 40 GHz	4.23

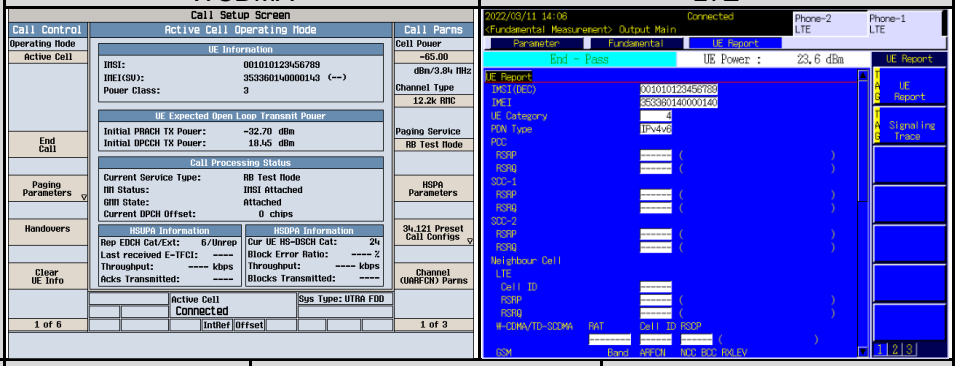
NOTE:
Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

1.3 TEST ENVIRONMENT CONDITIONS

Test Item	Environment Condition	Test Voltage	Tested by
Conducted Output Power	24.6 °C, 67 %	DC 3.7V	Paul Shen
Occupied Bandwidth	24.6 °C, 67 %	DC 3.7V	Paul Shen
Conducted Spurious Emissions	24.6 °C, 67 %	DC 3.7V	Paul Shen
Radiated Spurious Emissions and Effective Radiated Power	Refer to data	DC 3.7V	Vincent Lee
Band Edge	24.6 °C, 67 %	DC 3.7V	Paul Shen
Peak to Average Ratio	24.6 °C, 67 %	DC 3.7V	Paul Shen
Frequency Stability	Normal and Extreme		Paul Shen

2 GENERAL INFORMATION

2.1 DESCRIPTION OF EUT

Equipment	Module
Model Name	RC7612, RC7612-1
Brand Name	AirPrime
Model Difference	The hardware of the two models is the same, only the software is different. RC7612 is LTE Category 4 RC7612-1 is LTE Category 1
Power Source	DC Voltage supplied from host equipment.
Power Rating	DC 3.7V
Products Covered	N/A
IEMI No.	WCDMA / LTE 

Operation Frequency	Band	UL Frequency (MHz)	DL Frequency (MHz)
	WCDMA V	824 ~ 849	869 ~ 894
	LTE 5	824 ~ 849	869 ~ 894

Maximum ERP	Band	BW (MHz)	Mode	Power (W)
	WCDMA V	-	-	0.151
	LTE 5	1.4	QPSK	0.080
			16QAM	0.066
		3	QPSK	0.081
			16QAM	0.067
		5	QPSK	0.082
			16QAM	0.068
		10	QPSK	0.083
			16QAM	0.069

Test Model	RC7612
Sample Status	Engineering Sample
EUT Modification(s)	N/A

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

(2) Channel List:

WCDMA Band V				
Test Frequency ID	UARFCN	Frequency of Uplink (MHz)	UARFCN	Frequency of Downlink (MHz)
Low Range	4132	826.4	4357	871.4
Mid Range	4183	836.6	4408	881.5
High Range	4233	846.6	4458	891.6

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

(3) Table for Filed Antenna:

Antenna	Manufacture	Part Number	Type	Connector	Gain (dBi)	Note
1	PulseLARSEN Antennas	SPDA24617/3900	Dipole	SMA-M	1	WCDMA Band V
					1	LTE Band 5

2.2 TEST MODES

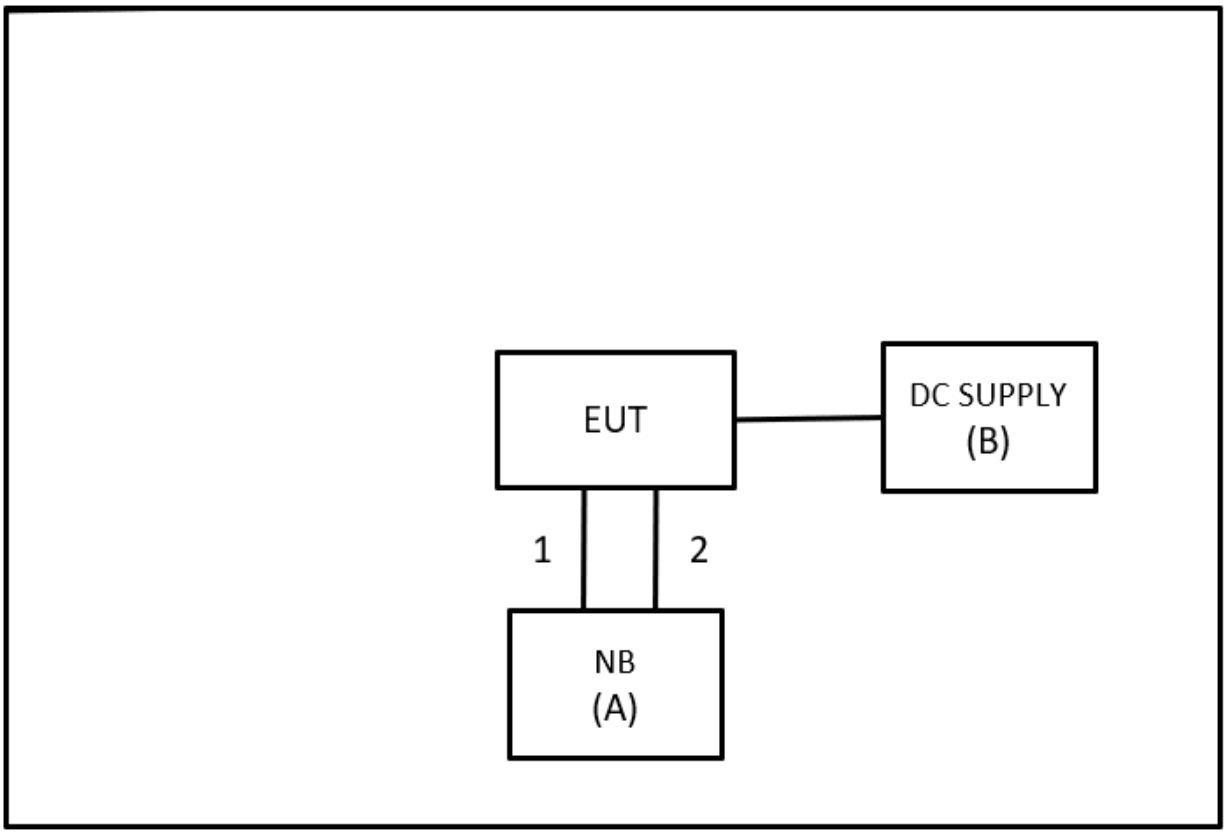
WCDMA BAND V MODE			
Test Item	Available Channel	Tested Channel	Mode
Conducted Output Power and Effective Radiated Power	4132 to 4233	4132, 4183, 4233	WCDMA, HSDPA, HSUPA, HSPA+
Occupied Bandwidth	4132 to 4233	4132, 4183, 4233	WCDMA
Conducted Spurious Emissions	4132 to 4233	4183	WCDMA
Radiated Spurious Emissions	4132 to 4233	4183	WCDMA
Band Edge	4132 to 4233	4132, 4233	WCDMA
Peak to Average Ratio	4132 to 4233	4132, 4183, 4233	WCDMA
Frequency Stability	4132 to 4233	4183	WCDMA

LTE BAND 5 MODE					
Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
Conducted Output Power	20407 to 20643	20407, 20525, 20643	1.4MHz	QPSK, 16QAM,64QAM	1RB/3RB/6RB
	20415 to 20635	20415, 20525, 20635	3MHz	QPSK, 16QAM,64QAM	1RB/8RB/15RB
	20425 to 20625	20425, 20525, 20625	5MHz	QPSK, 16QAM,64QAM	1RB/12RB/25RB
	20450 to 20600	20450, 20525, 20600	10MHz	QPSK, 16QAM,64QAM	1RB/25RB/50RB
Effective Radiated Power	20450 to 20600	20450, 20525, 20600	10MHz	QPSK	1RB/25RB/50RB
Occupied Bandwidth	20407 to 20643	20407, 20525, 20643	1.4MHz	QPSK, 16QAM,64QAM	6RB
	20415 to 20635	20415, 20525, 20635	3MHz	QPSK, 16QAM,64QAM	15RB
	20425 to 20625	20425, 20525, 20625	5MHz	QPSK, 16QAM,64QAM	25RB
	20450 to 20600	20450, 20525, 20600	10MHz	QPSK, 16QAM,64QAM	50RB
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/15RB
	20425 to 20625	20425, 20625	5MHz	QPSK	1RB/25RB
	20450 to 20600	20450, 20600	10MHz	QPSK	1RB/50RB
Peak To Average Ratio	20407 to 20643	20407, 20525, 20643	1.4MHz	QPSK, 16QAM,64QAM	1RB
	20415 to 20635	20415, 20525, 20635	3MHz	QPSK, 16QAM,64QAM	1RB
	20425 to 20625	20425, 20525, 20625	5MHz	QPSK, 16QAM,64QAM	1RB
	20450 to 20600	20450, 20525, 20600	10MHz	QPSK, 16QAM,64QAM	1RB
Frequency Stability	20407 to 20643	20525	1.4MHz	QPSK	1RB
	20415 to 20635	20525	3MHz	QPSK	1RB
	20425 to 20625	20525	5MHz	QPSK	1RB
	20450 to 20600	20525	10MHz	QPSK	1RB

NOTE:
(1) All X, Y and Z axes are evaluated, but only the worst case (X axis) is recorded.
(2) For Radiated Spurious Emissions both QPSK, 16QAM and 64QAM are evaluated, but only the worst case (QPSK) is recorded.

2.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Equipment letters and Cable numbers refer to item numbers described in the tables of clause 2.4.



2.4 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.	Remarks
A	NB	HP	TPN-I119	N/A	Furnished by test lab.
B	DC Power Supply	ABM	8303D	N/A	Furnished by test lab.

Item	Shielded	Ferrite Core	Length	Cable Type	Remarks
1	N/A	N/A	0.5m	Micro USB Cable	Furnished by test lab.
2	N/A	N/A	1m	Micro USB Cable	Furnished by test lab.

3 CONDUCTED OUTPUT POWER AND EFFECTIVE RADIATED POWER MEASUREMENT

3.1 LIMIT

The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts (38.45 dBm).

NOTE:
(1) The test result calculated as following:
Measurement Value = Reading Level + Correct Factor
Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use)
Margin Level = Measurement Value - Limit Value
Calculation example:

Reading Level		Correct Factor		Measurement Value
-29.66	+	34.26	=	4.60

Measurement Value		Limit Value		Margin Level
4.60	-	38.45	=	-33.85

3.2 TEST PROCEDURE

The testing follows FCC KDB 971168 v03r01 Section 5.

EIRP / ERP Power Measurement:
EIRP = Conducted Power + Antenna gain.
ERP power = EIPR power - 2.15 dBi.

Conducted Measurement:

The EUT was set up for the maximum power with 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.

Radiated Measurement:

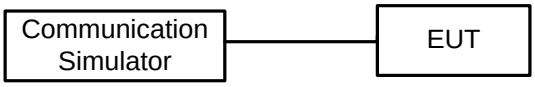
a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.
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. ERP can be calculated form EIRP by subtracting the gain of dipole, ERP = EIPR - 2.15dBi..
e. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

3.3 DEVIATION FROM TEST STANDARD

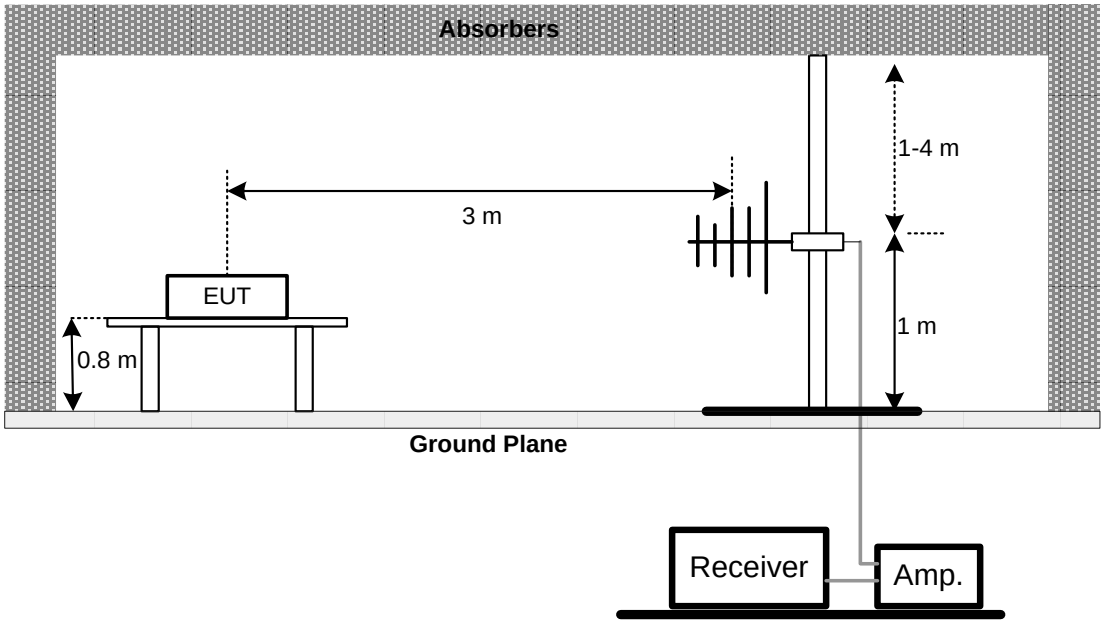
No deviation.

3.4 TEST SETUP

Conducted Measurement:



Radiated Measurement:



3.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

3.6 TEST RESULT

Please refer to the APPENDIX A.

4 OCCUPIED BANDWIDTH MEASUREMENT

4.1 TEST PROCEDURE

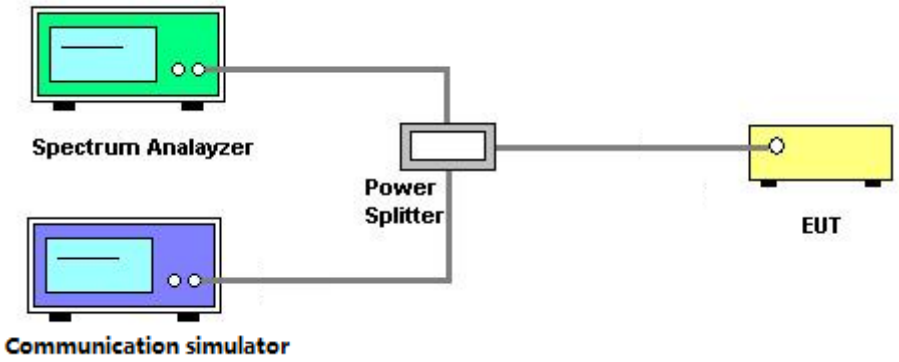
The testing follows FCC KDB 971168 v03r01 Section 4.

a. 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.
b. The EUT was connected to spectrum analyzer and system simulator via a power divider.
c. RBW = (1% ~ 5%)*EBW
   VBW ≥ 3 * RBW.
d. Set spectrum analyzer with Peak detector.

4.2 DEVIATION FROM TEST STANDARD

No deviation.

4.3 TEST SETUP



4.4 TEST RESULT

Please refer to the APPENDIX B

5 CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

5.1 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.

5.2 TEST PROCEDURE

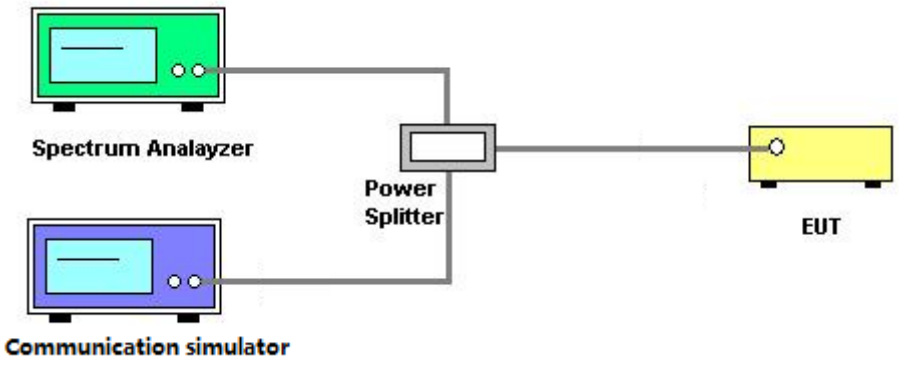
The testing follows FCC KDB 971168 v03r01 Section 6.

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

5.3 DEVIATION FROM TEST STANDARD

No deviation.

5.4 TEST SETUP



5.5 TEST RESULT

Please refer to the APPENDIX C

6 RADIATED SPURIOUS EMISSIONS TEST

6.1 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.

NOTE:
(1) The test result calculated as following:
Measurement Value = Reading Level + Correct Factor
Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use)
Margin Level = Measurement Value - Limit Value
Calculation example:

Reading Level		Correct Factor		Measurement Value
-50.43	+	-2.11	=	-52.54

Measurement Value		Limit Value		Margin Level
-52.54	-	-13	=	-39.54

6.2 TEST PROCEDURE

The testing follows FCC KDB 971168 v03r01 Section 6.2.

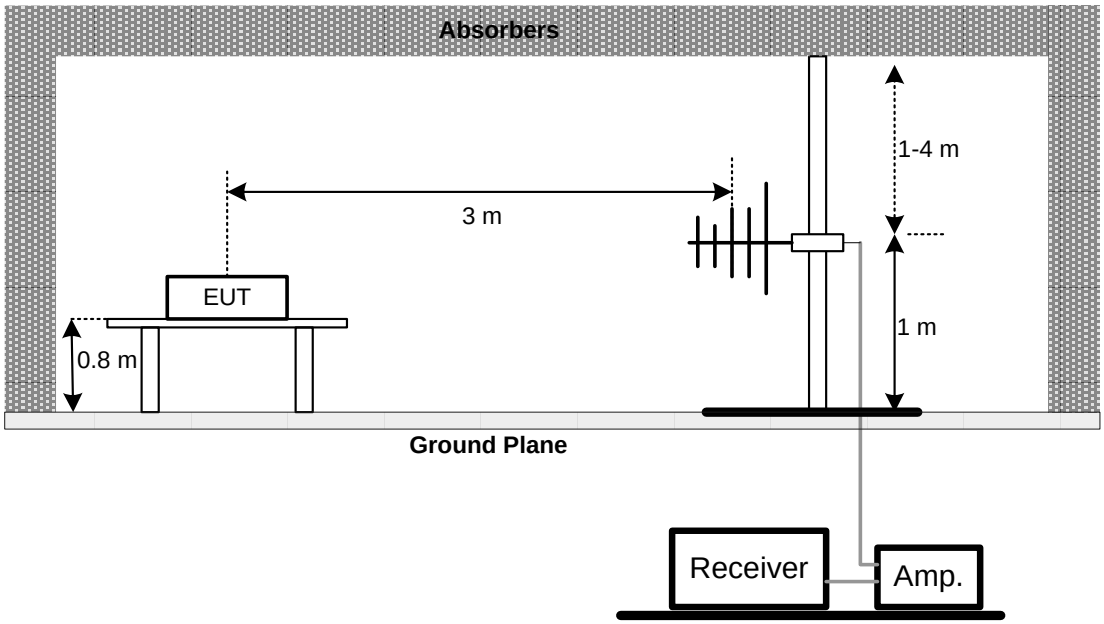
a. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.
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. ERP can be calculated form EIRP by subtracting the gain of dipole, ERP = EIPR - 2.15dBi.
e. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

6.3 DEVIATION FROM TEST STANDARD

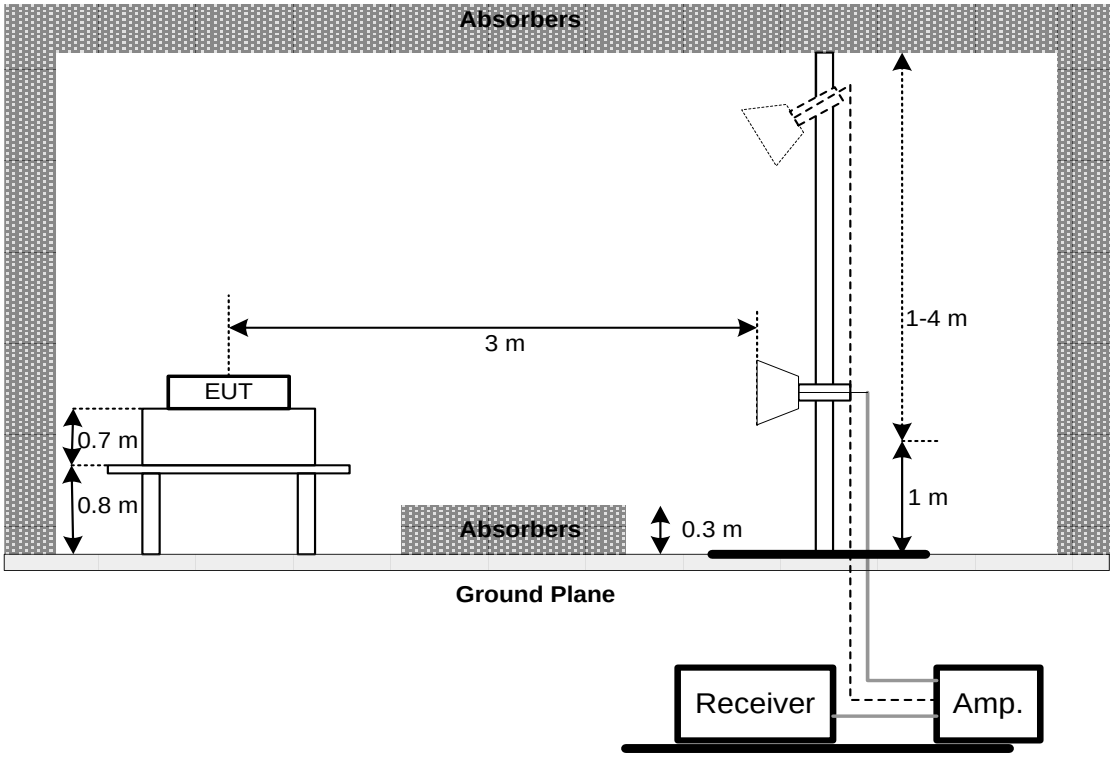
No deviation.

6.4 TEST SETUP

30 MHz to 1 GHz



Above 1 GHz



6.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

6.6 TEST RESULT

Please refer to the APPENDIX D

7 BAND EDGE MEASUREMENT

7.1 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.

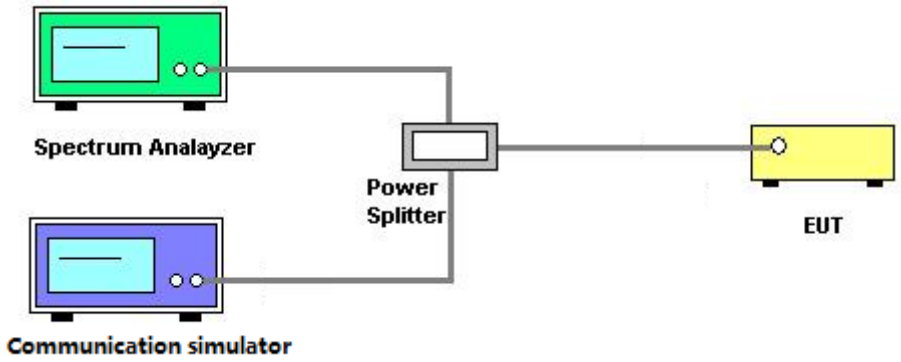
7.2 TEST PROCEDURE

The testing follows FCC KDB 971168 v03r01 Section 6.
a. All measurements were done at low and high operational frequency range.
b. Record the max trace plot into the test report.

7.3 DEVIATION FROM TEST STANDARD

No deviation.

7.4 TEST SETUP



7.5 TEST RESULT

Please refer to the APPENDIX E

8 PEAK TO AVERAGE RATIO MEASUREMENT

8.1 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.

8.2 TEST PROCEDURE

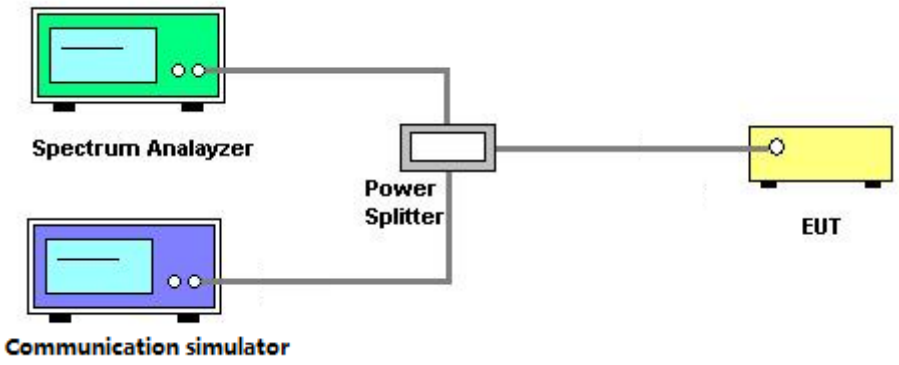
The testing follows FCC KDB 971168 v03r01 Section 5.7.

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

8.3 DEVIATION FROM TEST STANDARD

No deviation.

8.4 TEST SETUP



8.5 TEST RESULT

Please refer to the APPENDIX F

9 FREQUENCY STABILITY MEASUREMENT

9.1 LIMIT

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

9.2 TEST PROCEDURE

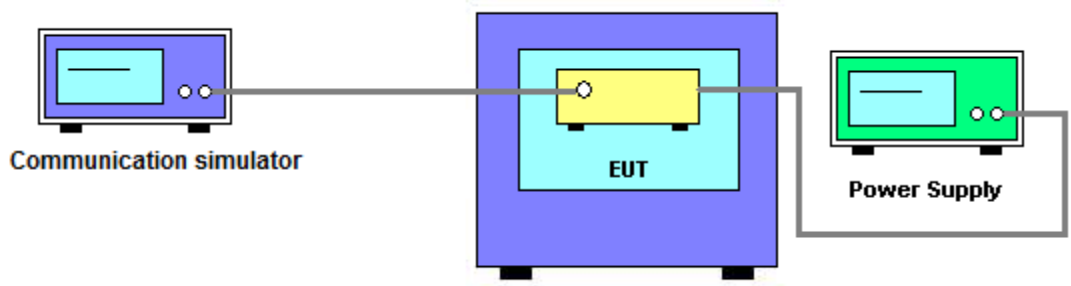
The testing follows FCC KDB 971168 v03r01 Section 9.

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°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.
d. The frequency error was recorded frequency error from the communication simulator.

9.3 DEVIATION FROM TEST STANDARD

No deviation.

9.4 TEST SETUP



9.5 TEST RESULT

Please refer to the APPENDIX G

10 LIST OF MEASURING EQUIPMENTS

Conducted Output Power						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	8960 Series 10 Wireless Com Test Set	Agilent	E5515C	GB47390193	2021/7/23	2022/7/22
2	Radio Communication Analyzer	Anritsu	MT8820C	6201381608	2021/12/15	2022/12/14

Effective Radiated Power and Radiated Spurious Emissions						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Preamplifier	EMCI	EMC02325	980217	2021/4/8	2022/4/7
2	Preamplifier	EMCI	EMC012645B	980222	2021/4/8	2022/4/7
3	Test Cable	EMCI	EMC104-SM-100 0	180809	2021/4/8	2022/4/7
4	Test Cable	EMCI	EMC104-SM-SM-3000	151205	2021/4/8	2022/4/7
5	Test Cable	EMCI	EMC-SM-SM-700 0	180408	2021/4/8	2022/4/7
6	MXE EMI Receiver	Agilent	N9038A	MY56400087	2021/5/27	2022/5/26
7	Signal Analyzer	Agilent	N9010A	MY56480554	2021/8/25	2022/8/24
8	Horn Ant	SCHWARZBECK	BBHA 9120D	9120D-1342	2021/6/2	2022/6/1
9	Horn Ant	Schwarzbeck	BBHA 9170	340	2021/7/9	2022/7/8
10	Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	9168-352	2021/8/11	2022/8/10
11	5dB Attenuator	EMCI	EMCI-N-6-05	AT-N0625	2021/8/11	2022/8/10
12	Measurement Software	EZ	EZ_EMC (Version NB-03A1-01)	N/A	N/A	N/A
13	8960 Series 10 Wireless Com Test Set	Agilent	E5515C	GB47390193	2021/7/23	2022/7/22
14	Radio Communication Analyzer (LTE)	Anritsu	MT8821C	6262044728	2021/11/28	2022/11/27

Frequency Stability Measurement						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	8960 Series 10 Wireless Com Test Set	Agilent	E5515C	GB47390193	2021/7/23	2022/7/22
2	Radio Communication Analyzer	Anritsu	MT8820C	6201381608	2021/5/27	2022/5/26
3	Thermal Chamber	HOLINK	H-T-1F-D	BA03101701	2021/6/28	2022/6/27

Others Conducted Measurement						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	8960 Series 10 Wireless Com Test Set	Agilent	E5515C	GB47390193	2021/6/8	2022/6/7
2	Radio Communication Analyzer	Anritsu	MT8820C	6201381608	2021/5/27	2022/5/26
3	Spectrum Analyzer	Agilent	N9010A	MY54200240	2021/5/27	2022/5/26

Remark: "N/A" denotes no model name, no serial no. or no calibration specified.
All calibration period of equipment list is one year.

11 EUT TEST PHOTO

Please refer to document Appendix No.: TP-2203T030-FCCP-1 (APPENDIX-TEST PHOTOS).

12 EUT PHOTOS

Please refer to document Appendix No.: EP-2203T030-2 (APPENDIX-EUT PHOTOS).

APPENDIX A CONDUCTED OUTPUT POWER AND EFFECTIVE RADIATED POWER

Conducted Output Power:

Band	Mode	UL/DL Channel No.	Frequency(MHz)	Average power(dBm)	ERP Power (dBm)	ERP Power (W)
WCDMA Band V	Rel 99	4132/4357	826.4	22.80	21.65	0.146
		4183/4408	836.6	22.94	21.79	0.151
		4233/4458	846.6	22.88	21.73	0.149

Band	Sub-test	UL/DL Channel No.	Frequency(MHz)	Average power(dBm)	ERP Power (dBm)	ERP Power (W)
HSDPA V	1	4132/4357	826.4	22.63	21.48	0.141
		4183/4408	836.6	22.84	21.69	0.148
		4233/4458	846.6	22.72	21.57	0.144
	2	4132/4357	826.4	22.18	21.03	0.127
		4183/4408	836.6	22.39	21.24	0.133
		4233/4458	846.6	22.27	21.12	0.129
	3	4132/4357	826.4	21.73	20.58	0.114
		4183/4408	836.6	21.94	20.79	0.120
		4233/4458	846.6	21.82	20.67	0.117
	4	4132/4357	826.4	21.65	20.50	0.112
		4183/4408	836.6	21.87	20.72	0.118
		4233/4458	846.6	21.75	20.60	0.115

Band	Sub-test	UL/DL Channel No.	Frequency(MHz)	Average power(dBm)	ERP Power (dBm)	ERP Power (W)
HSUPA V	1	4132/4357	826.4	22.73	21.58	0.144
		4183/4408	836.6	22.87	21.72	0.149
		4233/4458	846.6	22.81	21.66	0.147
	2	4132/4357	826.4	20.79	19.64	0.092
		4183/4408	836.6	20.93	19.78	0.095
		4233/4458	846.6	20.87	19.72	0.094
	3	4132/4357	826.4	21.85	20.70	0.117
		4183/4408	836.6	21.99	20.84	0.121
		4233/4458	846.6	21.93	20.78	0.120
	4	4132/4357	826.4	20.73	19.58	0.091
		4183/4408	836.6	20.87	19.72	0.094
		4233/4458	846.6	20.81	19.66	0.092
	5	4132/4357	826.4	22.64	21.49	0.141
		4183/4408	836.6	22.78	21.63	0.146
		4233/4458	846.6	22.72	21.57	0.144

Band	UL/DL Channel No.	Frequency(MHz)	Average power(dBm)	ERP Power (dBm)	ERP Power (W)
HSPA+ V	4132/4357	826.4	22.61	21.46	0.140
	4183/4408	836.6	22.85	21.70	0.148
	4233/4458	846.6	22.69	21.54	0.143

NOTE:
(1) EIRP = Average power + Antenna gain.
(2) ERP = EIRP - 2.15.
(3) $P(W) = 1\ W \cdot 10^{(P(dBm)/10)} / 1000$
(4) The maximum antenna gain is applied.

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	ERP power (dBm)	ERP power (W)
5	1.4	20407	824.7	QPSK	1	0	0	22.18	19.0	0.080
					1	2	0	22.01	18.9	0.077
					1	5	0	21.74	18.6	0.072
					3	0	0	22.18	19.0	0.080
					3	1	0	22.01	18.9	0.077
					3	2	0	21.74	18.6	0.072
					6	0	1	21.24	18.1	0.064
				16QAM	1	0	1	21.36	18.2	0.066
					1	2	1	21.32	18.2	0.066
					1	5	1	20.81	17.7	0.058
					3	0	1	21.36	18.2	0.066
					3	1	1	21.32	18.2	0.066
					3	2	1	20.81	17.7	0.058
					6	0	2	20.33	17.2	0.052
		20525	836.5	QPSK	1	0	0	22.10	19.0	0.079
					1	2	0	21.99	18.8	0.077
					1	5	0	21.96	18.8	0.076
					3	0	0	22.10	19.0	0.079
					3	1	0	21.99	18.8	0.077
					3	2	0	21.96	18.8	0.076
					6	0	1	21.16	18.0	0.063
				16QAM	1	0	1	21.28	18.1	0.065
					1	2	1	21.24	18.1	0.064
					1	5	1	21.03	17.9	0.061
					3	0	1	21.28	18.1	0.065
					3	1	1	21.24	18.1	0.064
					3	2	1	21.03	17.9	0.061
					6	0	2	20.50	17.4	0.054
		20643	848.3	QPSK	1	0	0	21.89	18.7	0.075
					1	2	0	21.88	18.7	0.075
					1	5	0	21.97	18.8	0.076
					3	0	0	21.89	18.7	0.075
					3	1	0	21.88	18.7	0.075
					3	2	0	21.97	18.8	0.076
					6	0	1	21.17	18.0	0.063
				16QAM	1	0	1	21.07	17.9	0.062
					1	2	1	21.03	17.9	0.061
					1	5	1	21.04	17.9	0.062
					3	0	1	21.07	17.9	0.062
					3	1	1	21.03	17.9	0.061
					3	2	1	21.04	17.9	0.062
					6	0	2	20.60	17.5	0.056

NOTE:
(1) EIRP = Average power + Antenna gain.
(2) ERP = EIRP - 2.15.
(3) $P(W) = 1\ W \cdot 10^{(P(dBm)\ /\ 10)} / 1000$
(4) The maximum antenna gain is applied.

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	ERP power (dBm)	ERP power (W)
5	3	20415	825.5	QPSK	1	0	0	22.23	19.1	0.081
					1	7	0	22.06	18.9	0.078
					1	14	0	21.79	18.6	0.073
					8	0	1	21.34	18.2	0.066
					8	4	1	21.10	18.0	0.062
					8	7	1	20.97	17.8	0.061
					15	0	1	21.29	18.1	0.065
				16QAM	1	0	1	21.41	18.3	0.067
					1	7	1	21.37	18.2	0.066
					1	14	1	20.86	17.7	0.059
					8	0	2	20.24	17.1	0.051
					8	4	2	20.20	17.1	0.051
					8	7	2	19.82	16.7	0.046
					15	0	2	20.38	17.2	0.053
		20525	836.5	QPSK	1	0	0	22.15	19.0	0.079
					1	7	0	22.04	18.9	0.077
					1	14	0	22.01	18.9	0.077
					8	0	1	21.26	18.1	0.065
					8	4	1	21.08	17.9	0.062
					8	7	1	21.19	18.0	0.064
					15	0	1	21.21	18.1	0.064
				16QAM	1	0	1	21.33	18.2	0.066
					1	7	1	21.29	18.1	0.065
					1	14	1	21.08	17.9	0.062
					8	0	2	20.16	17.0	0.050
					8	4	2	20.18	17.0	0.050
					8	7	2	20.04	16.9	0.049
					15	0	2	20.30	17.2	0.052
		20635	847.5	QPSK	1	0	0	21.94	18.8	0.076
					1	7	0	21.93	18.8	0.076
					1	14	0	22.02	18.9	0.077
					8	0	1	21.05	17.9	0.062
					8	4	1	20.97	17.8	0.061
					8	7	1	21.20	18.1	0.064
					15	0	1	21.22	18.1	0.064
				16QAM	1	0	1	21.12	18.0	0.063
					1	7	1	21.08	17.9	0.062
					1	14	1	21.09	17.9	0.062
					8	0	2	19.95	16.8	0.048
					8	4	2	20.07	16.9	0.049
					8	7	2	20.05	16.9	0.049
					15	0	2	20.09	16.9	0.049

NOTE:
(1) EIRP = Average power + Antenna gain.
(2) ERP = EIRP - 2.15.
(3) $P(W) = 1\ W \cdot 10^{(P(dBm)\ /\ 10)} / 1000$
(4) The maximum antenna gain is applied.

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	ERP power (dBm)	ERP power (W)
5	5	20425	826.5	QPSK	1	0	0	22.28	19.1	0.082
					1	12	0	22.11	19.0	0.079
					1	24	0	21.84	18.7	0.074
					12	0	1	21.39	18.2	0.067
					12	6	1	21.15	18.0	0.063
					12	11	1	21.02	17.9	0.061
					25	0	1	21.34	18.2	0.066
				16QAM	1	0	1	21.46	18.3	0.068
					1	12	1	21.42	18.3	0.067
					1	24	1	20.91	17.8	0.060
					12	0	2	20.29	17.1	0.052
					12	6	2	20.25	17.1	0.051
					12	11	2	19.87	16.7	0.047
					25	0	2	20.43	17.3	0.053
		20525	836.5	QPSK	1	0	0	22.20	19.1	0.080
					1	12	0	22.09	18.9	0.078
					1	24	0	22.06	18.9	0.078
					12	0	1	21.31	18.2	0.065
					12	6	1	21.13	18.0	0.063
					12	11	1	21.24	18.1	0.064
					25	0	1	21.26	18.1	0.065
				16QAM	1	0	1	21.38	18.2	0.067
					1	12	1	21.34	18.2	0.066
					1	24	1	21.13	18.0	0.063
					12	0	2	20.21	17.1	0.051
					12	6	2	20.23	17.1	0.051
					12	11	2	20.09	16.9	0.049
					25	0	2	20.35	17.2	0.052
		20625	846.5	QPSK	1	0	0	21.99	18.8	0.077
					1	12	0	21.98	18.8	0.076
					1	24	0	22.07	18.9	0.078
					12	0	1	21.10	18.0	0.062
					12	6	1	21.02	17.9	0.061
					12	11	1	21.25	18.1	0.065
					25	0	1	21.27	18.1	0.065
				16QAM	1	0	1	21.17	18.0	0.063
					1	12	1	21.13	18.0	0.063
					1	24	1	21.14	18.0	0.063
					12	0	2	20.00	16.9	0.048
					12	6	2	20.12	17.0	0.050
					12	11	2	20.10	17.0	0.050
					25	0	2	20.14	17.0	0.050

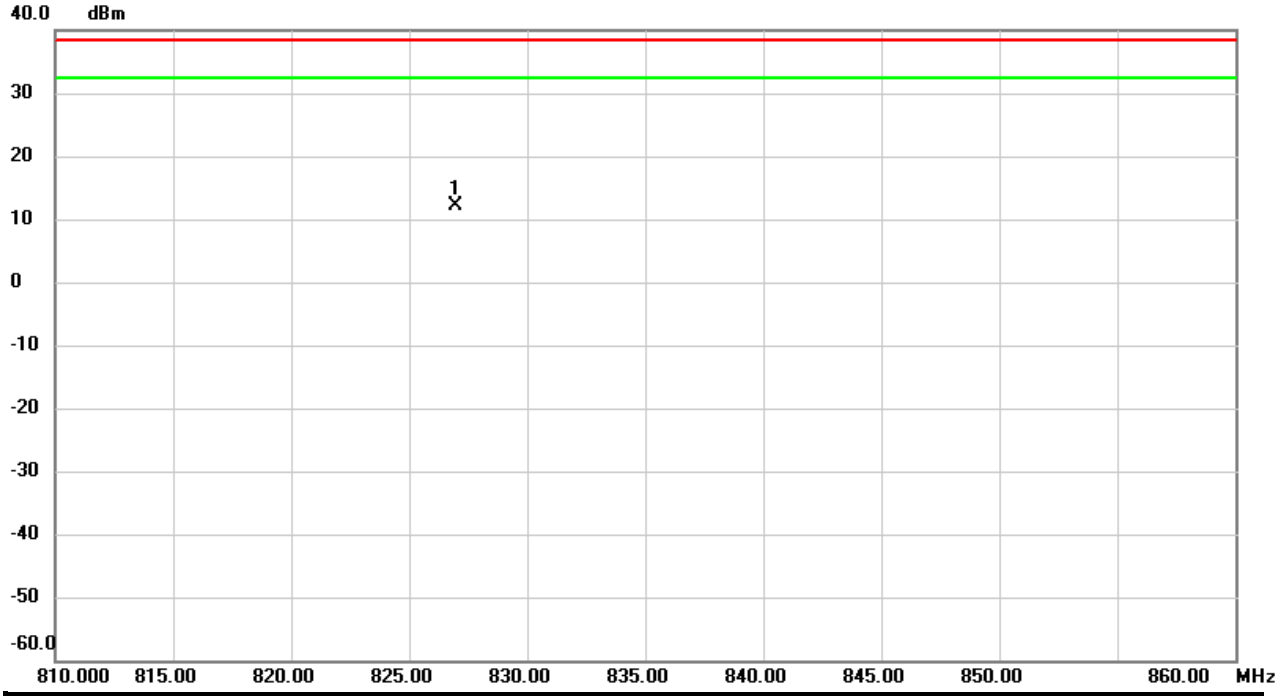
NOTE:
(1) EIRP = Average power + Antenna gain.
(2) ERP = EIRP - 2.15.
(3) $P(W) = 1\ W \cdot 10^{(P(dBm)\ /\ 10)} / 1000$
(4) The maximum antenna gain is applied.

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	ERP power (dBm)	ERP power (W)
5	10	20450	829.0	QPSK	1	0	0	22.33	19.2	0.083
					1	24	0	22.16	19.0	0.080
					1	49	0	21.89	18.7	0.075
					25	0	1	21.44	18.3	0.067
					25	12	1	21.20	18.1	0.064
					25	24	1	21.07	17.9	0.062
					50	0	1	21.39	18.2	0.067
				16QAM	1	0	1	21.51	18.4	0.069
					1	24	1	21.47	18.3	0.068
					1	49	1	20.96	17.8	0.060
					25	0	2	20.34	17.2	0.052
					25	12	2	20.30	17.2	0.052
					25	24	2	19.92	16.8	0.048
					50	0	2	20.48	17.3	0.054
		20525	836.5	QPSK	1	0	0	22.25	19.1	0.081
					1	24	0	22.14	19.0	0.079
					1	49	0	22.11	19.0	0.079
					25	0	1	21.36	18.2	0.066
					25	12	1	21.18	18.0	0.064
					25	24	1	21.29	18.1	0.065
					50	0	1	21.31	18.2	0.065
				16QAM	1	0	1	21.43	18.3	0.067
					1	24	1	21.39	18.2	0.067
					1	49	1	21.18	18.0	0.064
					25	0	2	20.26	17.1	0.051
					25	12	2	20.28	17.1	0.052
					25	24	2	20.14	17.0	0.050
					50	0	2	20.40	17.3	0.053
		20600	844.0	QPSK	1	0	0	22.04	18.9	0.077
					1	24	0	22.03	18.9	0.077
					1	49	0	22.12	19.0	0.079
					25	0	1	21.15	18.0	0.063
					25	12	1	21.07	17.9	0.062
					25	24	1	21.30	18.2	0.065
					50	0	1	21.32	18.2	0.066
				16QAM	1	0	1	21.22	18.1	0.064
					1	24	1	21.18	18.0	0.064
					1	49	1	21.19	18.0	0.064
					25	0	2	20.05	16.9	0.049
					25	12	2	20.17	17.0	0.050
					25	24	2	20.15	17.0	0.050
					50	0	2	20.19	17.0	0.051

NOTE:
(1) EIRP = Average power + Antenna gain.
(2) ERP = EIRP - 2.15.
(3) $P(W) = 1\ W \cdot 10^{(P(dBm)\ /\ 10)} / 1000$
(4) The maximum antenna gain is applied.

Effective Radiated Power:

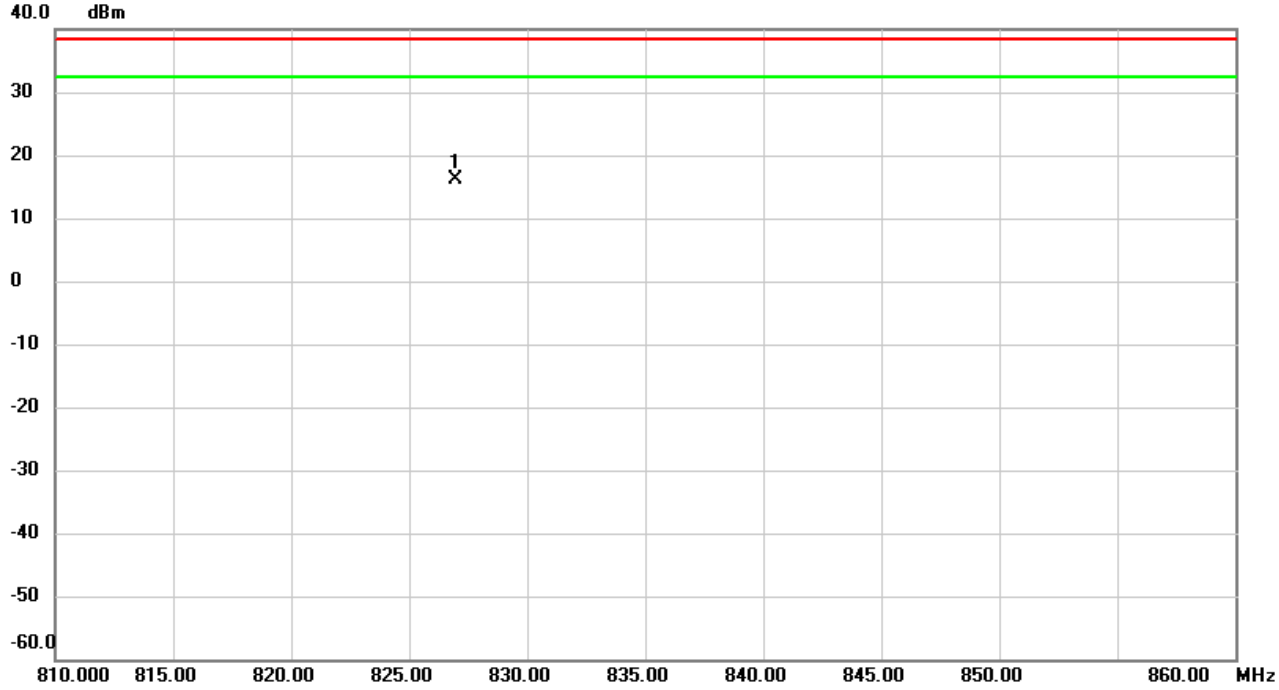
Test Mode	WCDMA Band V	Test Date	2022/3/10
Test Channel	CH4132	Polarization	Vertical
Temp	21°C	Hum.	64%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	826.9583	-21.76	34.00	12.24	38.45	-26.21	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

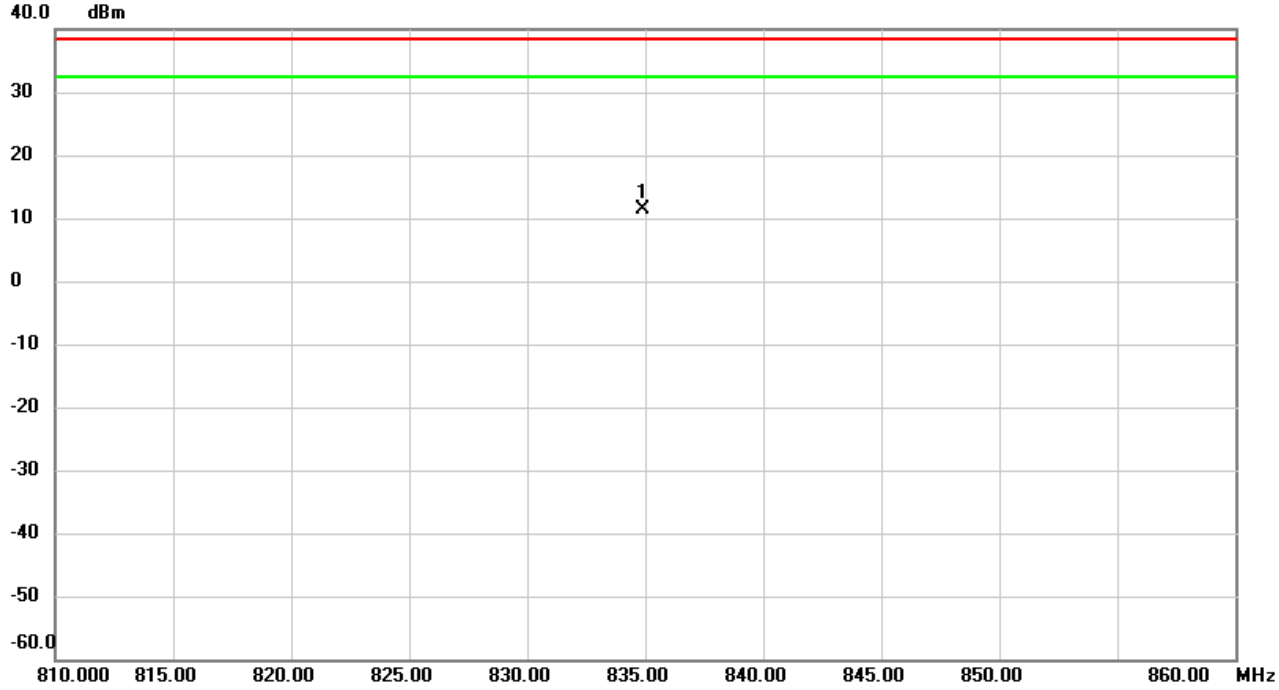
Test Mode	WCDMA Band V	Test Date	2022/3/10
Test Channel	CH4132	Polarization	Horizontal
Temp	21°C	Hum.	64%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	826.9850	-17.32	33.49	16.17	38.45	-22.28	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

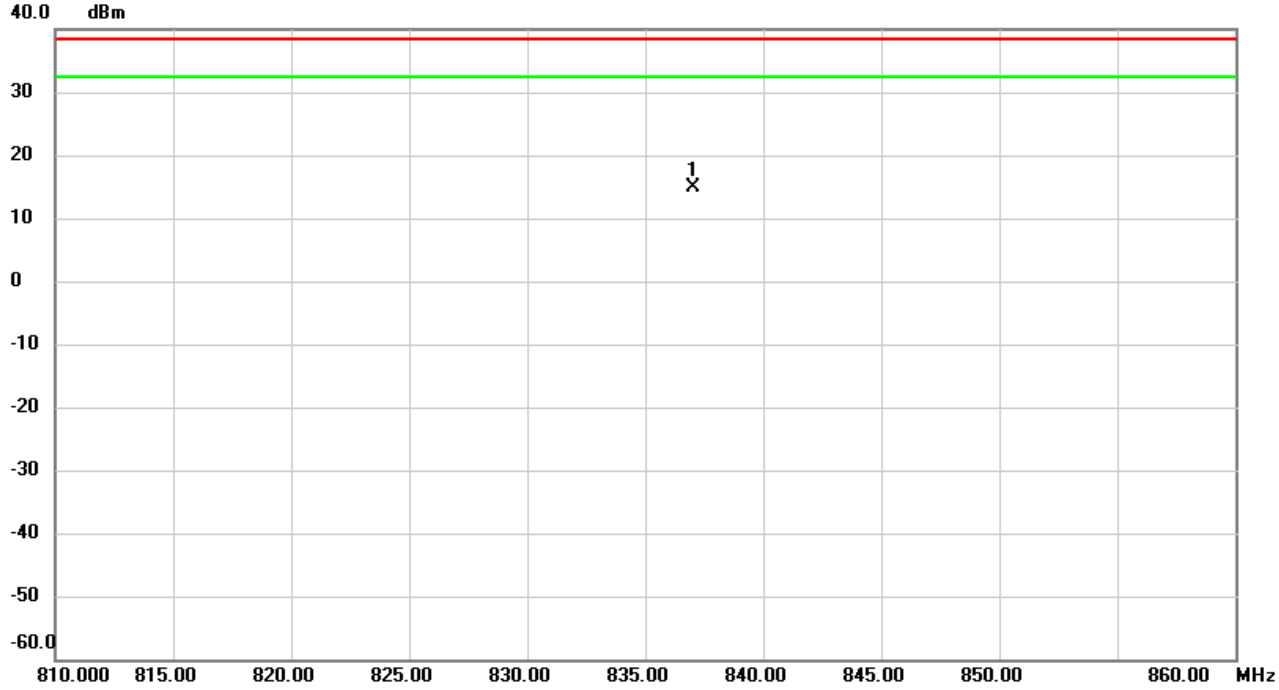
Test Mode	WCDMA Band V	Test Date	2022/3/10
Test Channel	CH4183	Polarization	Vertical
Temp	21°C	Hum.	64%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	834.9250	-22.55	33.90	11.35	38.45	-27.10	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

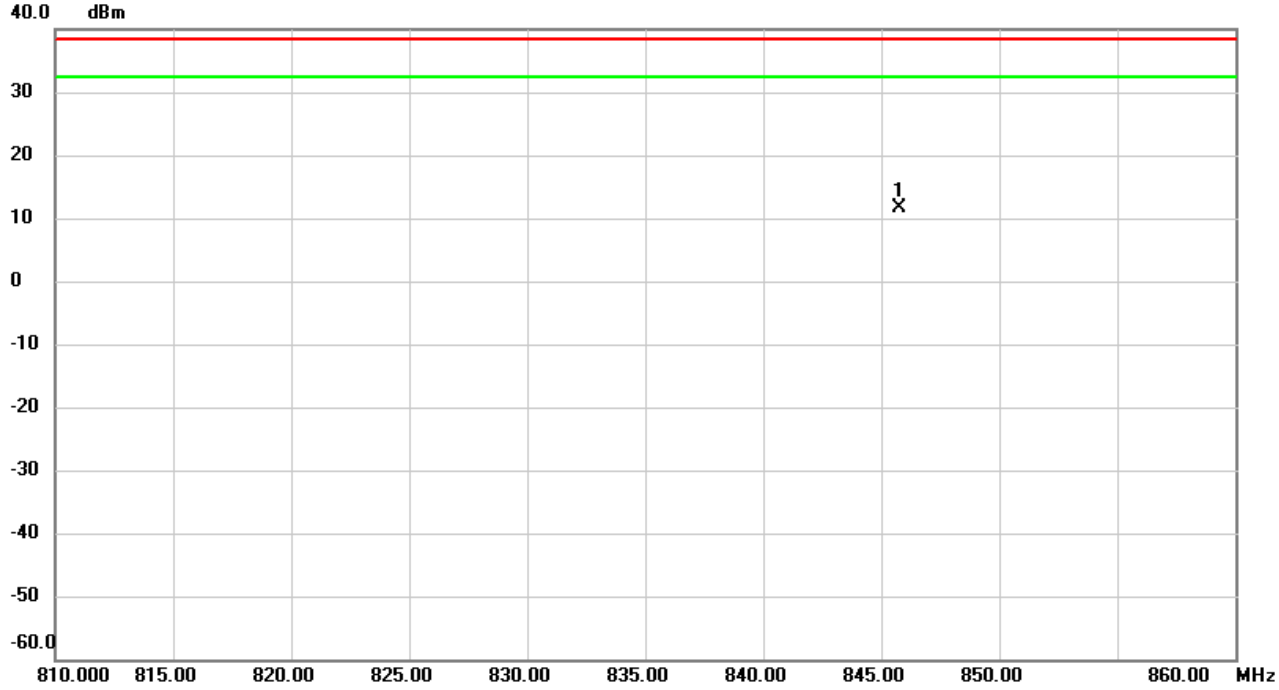
Test Mode	WCDMA Band V	Test Date	2022/3/10
Test Channel	CH4183	Polarization	Horizontal
Temp	21°C	Hum.	64%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	837.0033	-18.31	33.23	14.92	38.45	-23.53	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

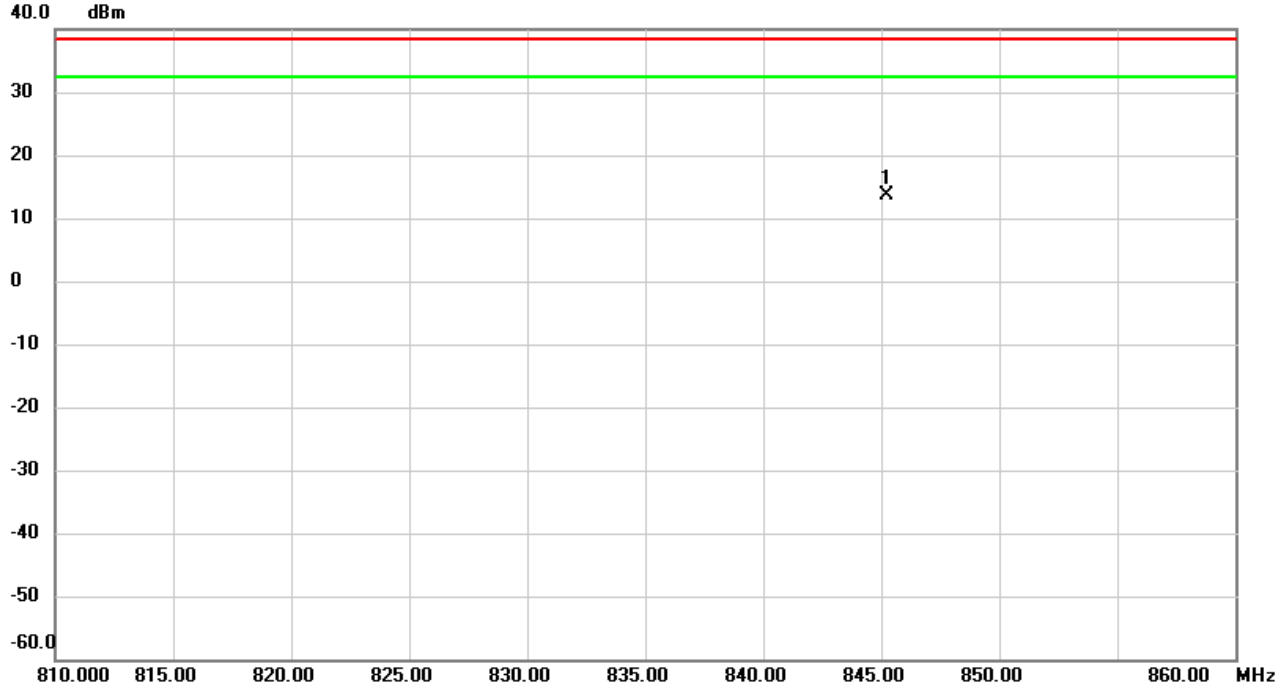
Test Mode	WCDMA Band V	Test Date	2022/3/10
Test Channel	CH4233	Polarization	Vertical
Temp	21°C	Hum.	64%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	845.7500	-22.21	33.77	11.56	38.45	-26.89	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

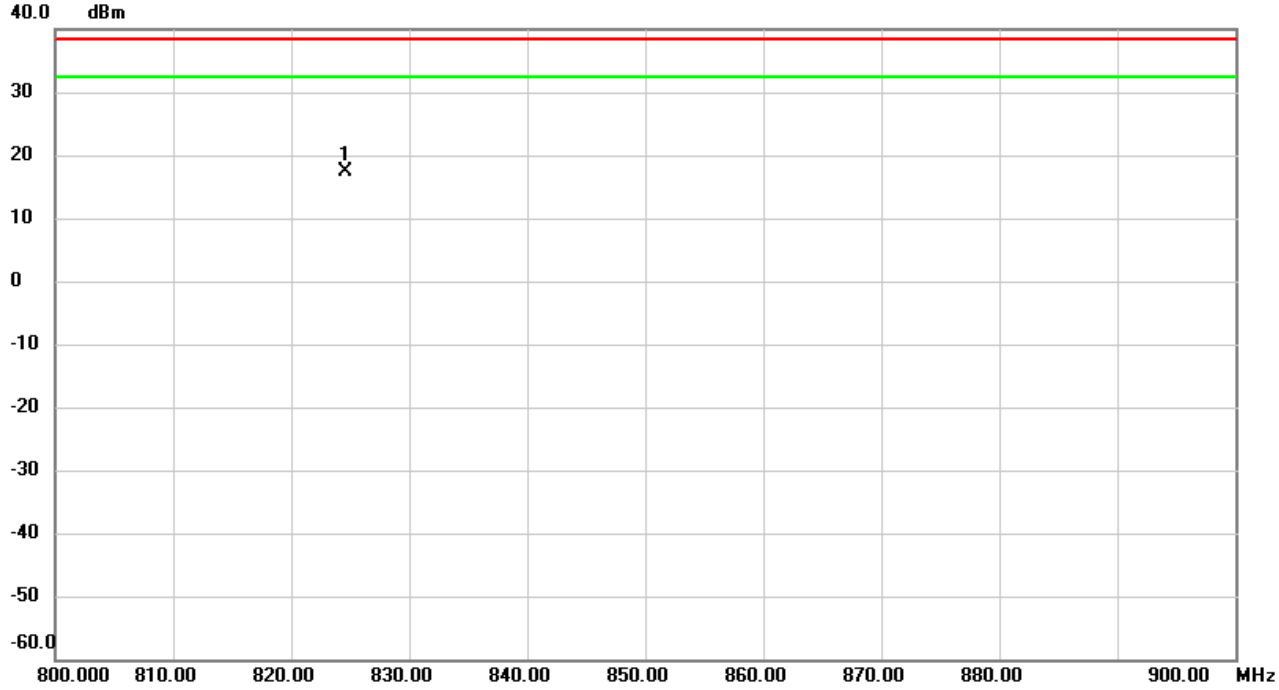
Test Mode	WCDMA Band V	Test Date	2022/3/10
Test Channel	CH4233	Polarization	Horizontal
Temp	21°C	Hum.	64%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	845.2467	-19.29	33.02	13.73	38.45	-24.72	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

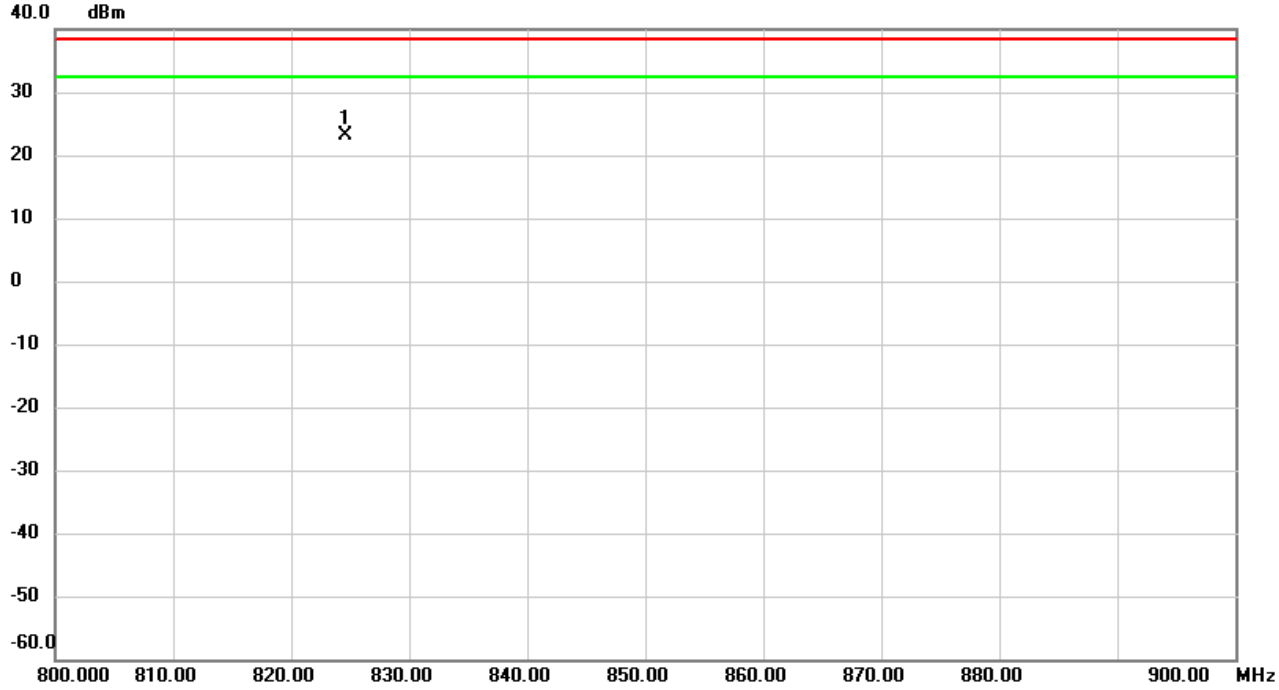
Test Mode	LTE Band 5	Test Date	2022/3/10
Test Channel	CH20450	Polarization	Vertical
Temp	21°C	Hum.	64%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	824.5566	-16.68	34.03	17.35	38.45	-21.10	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

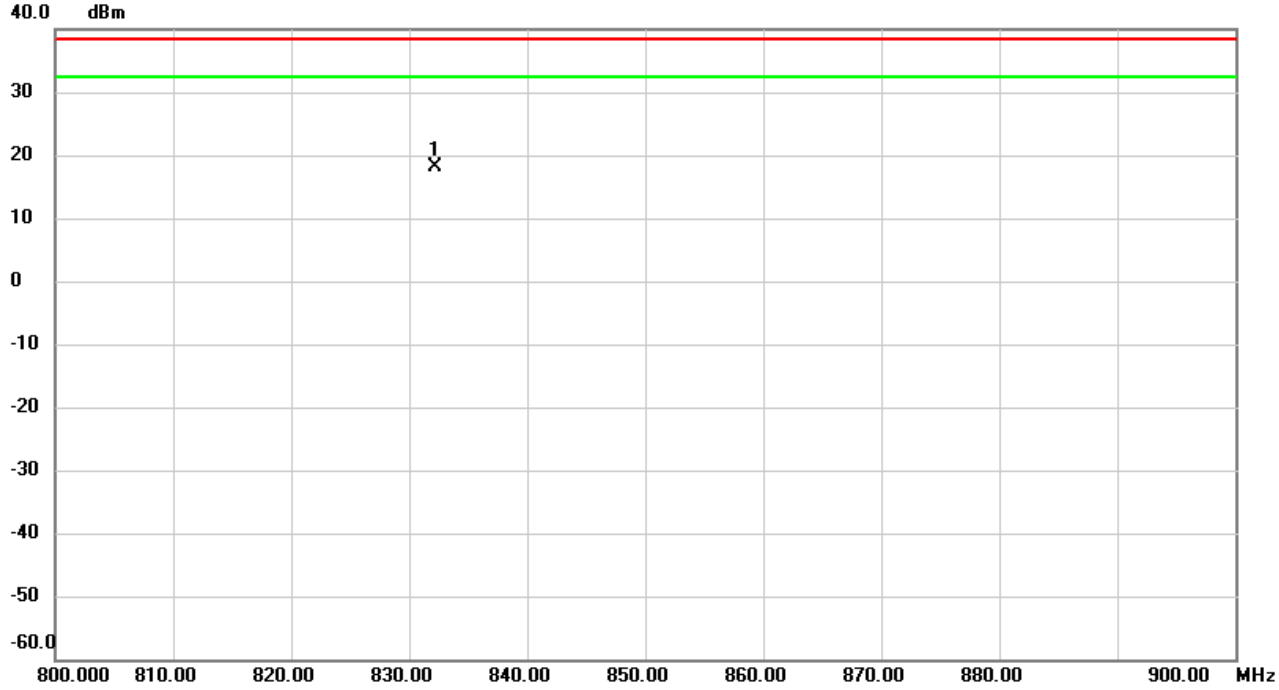
Test Mode	LTE Band 5	Test Date	2022/3/10
Test Channel	CH20450	Polarization	Horizontal
Temp	21°C	Hum.	64%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	824.6400	-10.34	33.55	23.21	38.45	-15.24	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

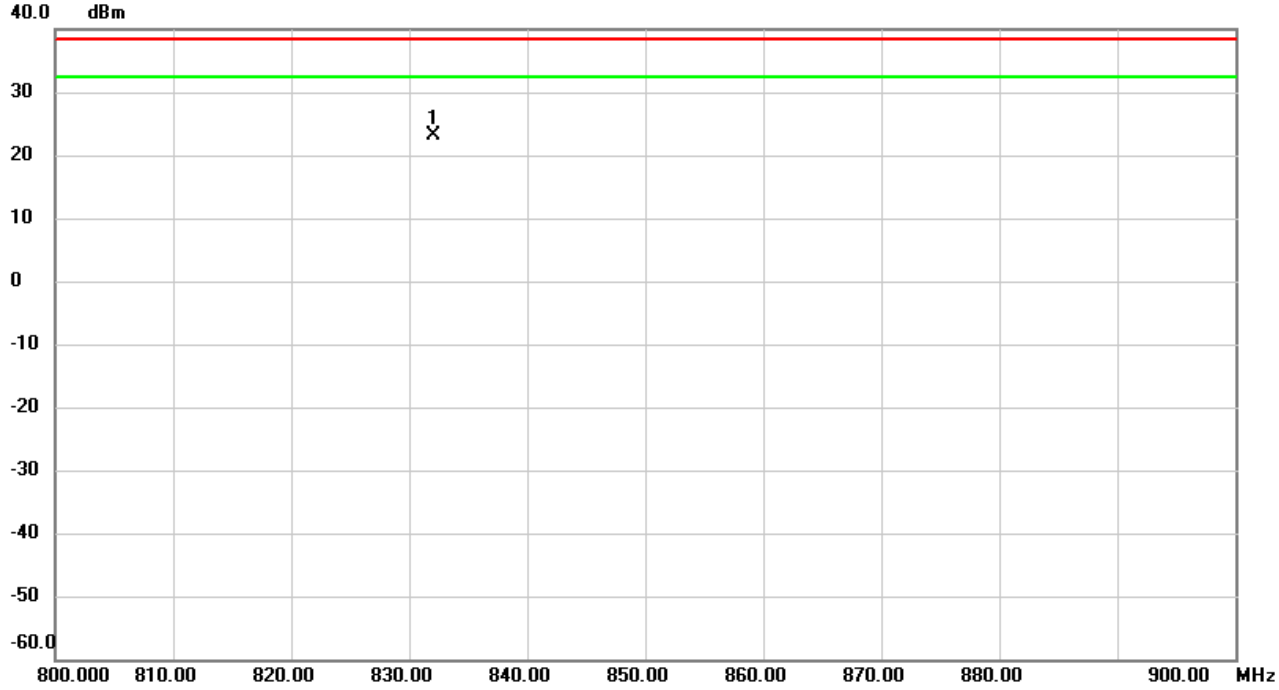
Test Mode	LTE Band 5	Test Date	2022/3/10
Test Channel	CH20525	Polarization	Vertical
Temp	21°C	Hum.	64%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	832.1400	-15.76	33.93	18.17	38.45	-20.28	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

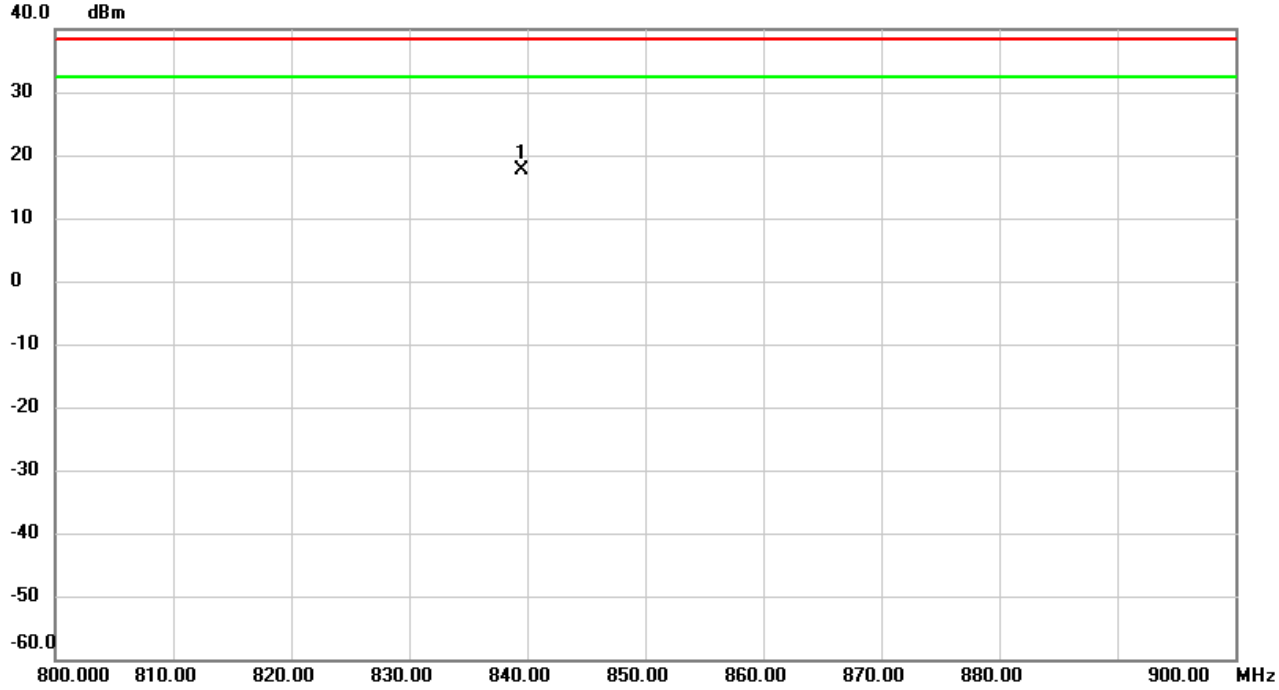
Test Mode	LTE Band 5	Test Date	2022/3/10
Test Channel	CH20525	Polarization	Horizontal
Temp	21°C	Hum.	64%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	832.0533	-10.12	33.36	23.24	38.45	-15.21	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

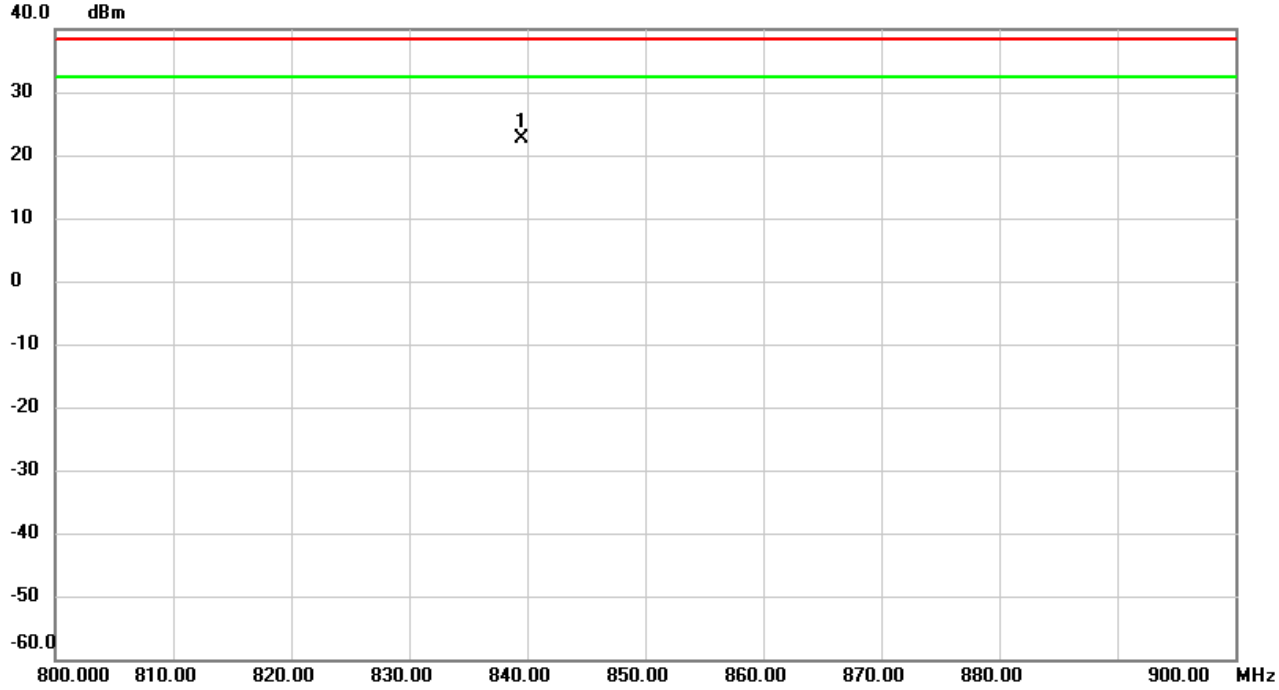
Test Mode	LTE Band 5	Test Date	2022/3/10
Test Channel	CH20600	Polarization	Vertical
Temp	21°C	Hum.	64%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	839.5400	-16.25	33.85	17.60	38.45	-20.85	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	LTE Band 5	Test Date	2022/3/10
Test Channel	CH20600	Polarization	Horizontal
Temp	21°C	Hum.	64%

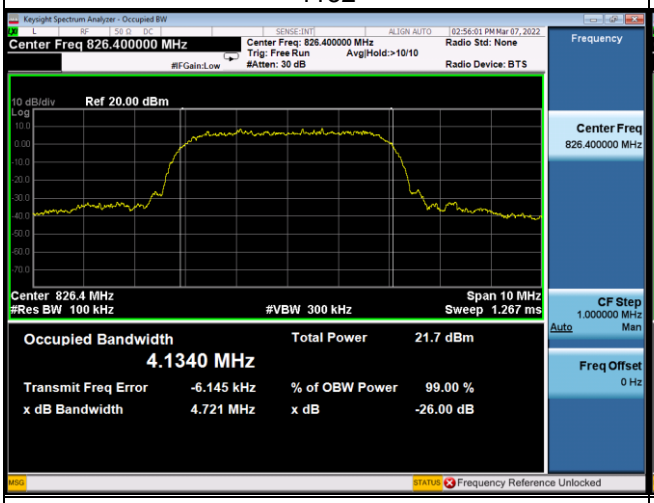
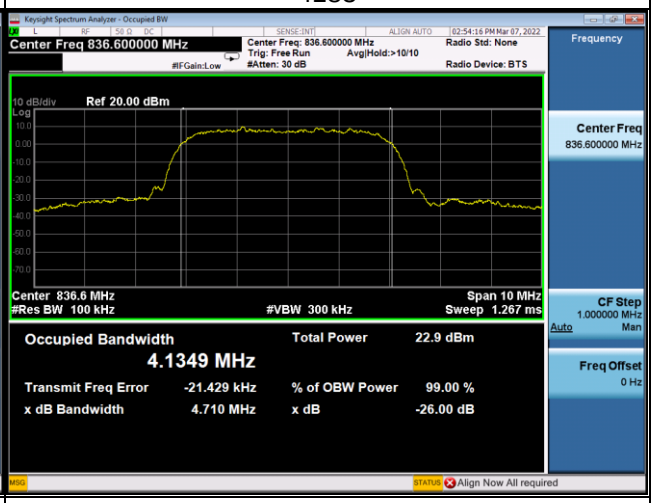
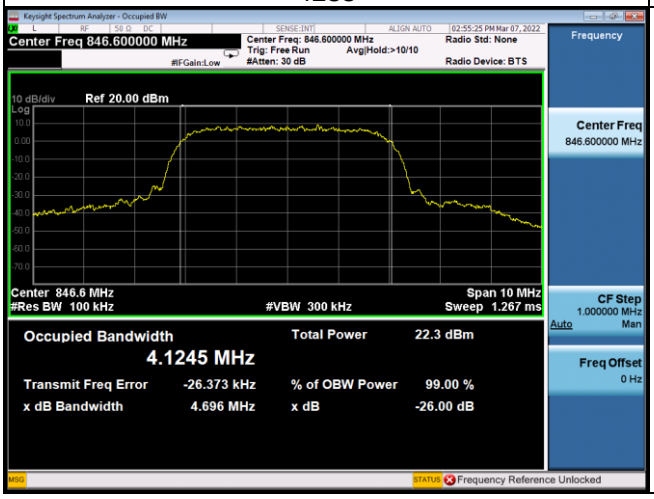


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	839.5300	-10.49	33.17	22.68	38.45	-15.77	peak	

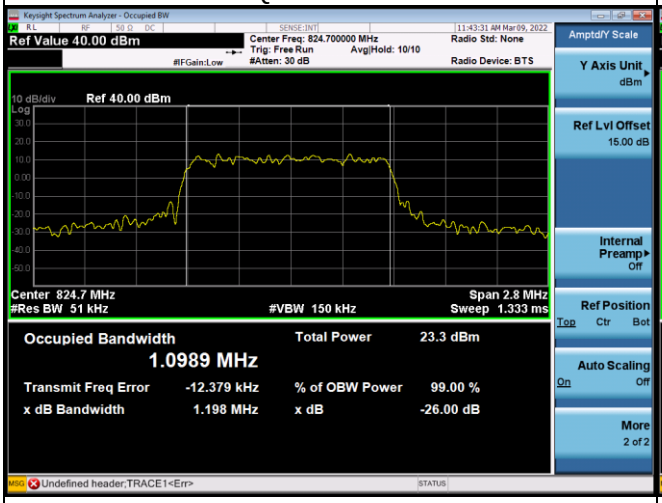
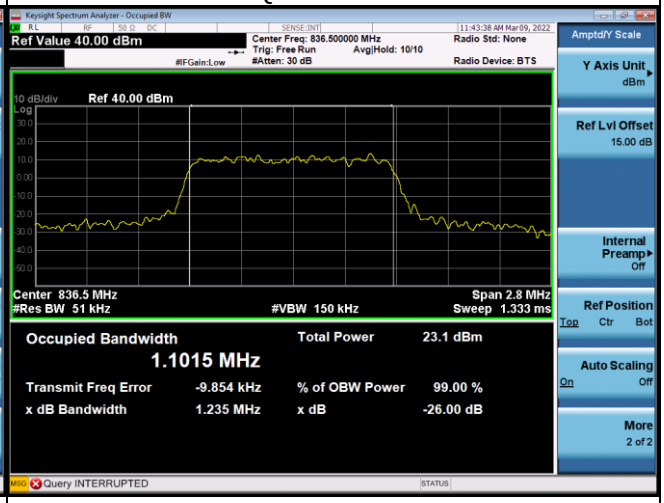
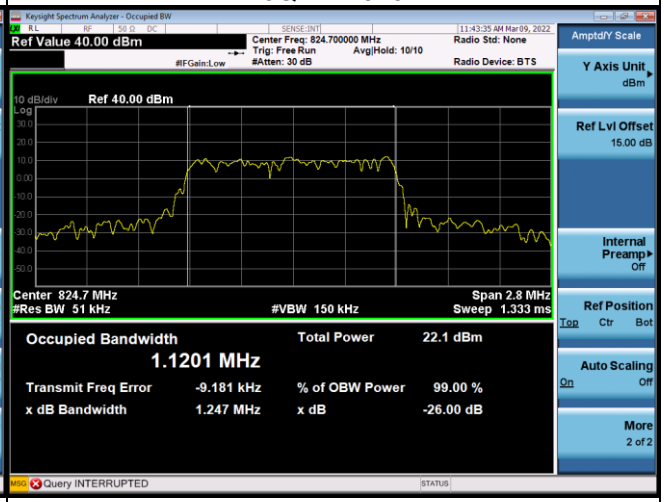
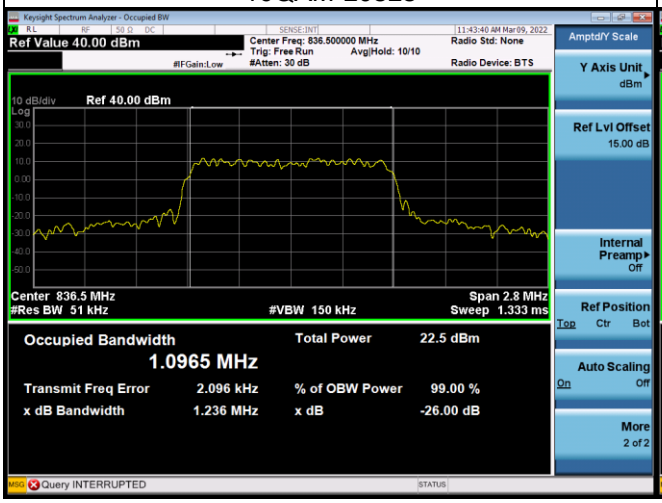
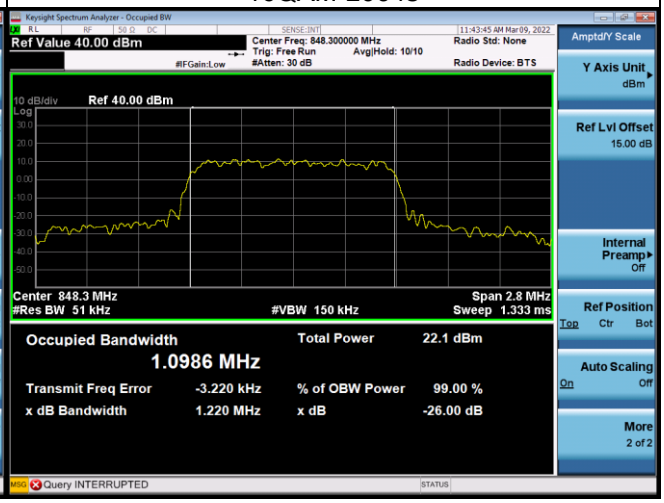
REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

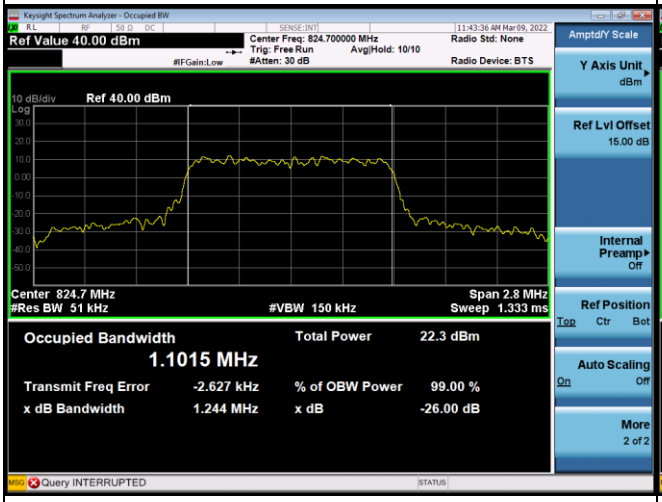
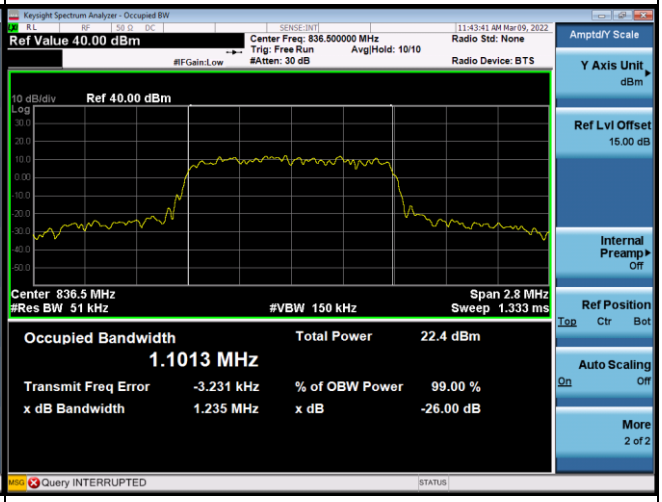
APPENDIX B OCCUPIED BANDWIDTH

WCDMA Band V_WCDMA					
QPSK					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
4132	826.4	4.1340	4132	826.4	4.721
4183	836.6	4.1349	4183	836.3	4.710
4233	846.6	4.1245	4233	846.6	4.696

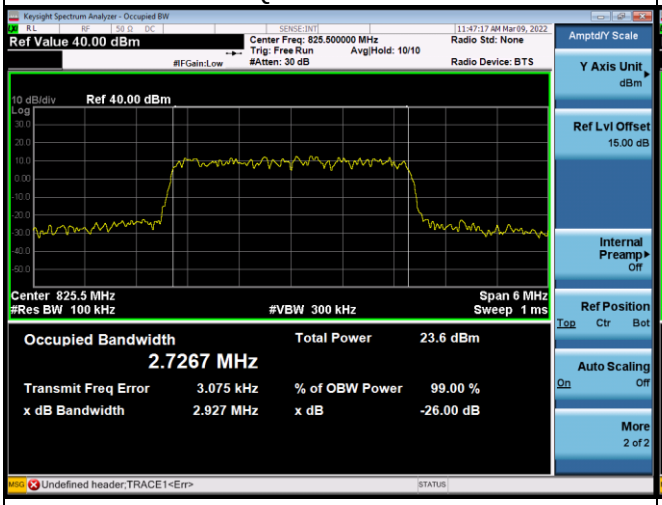
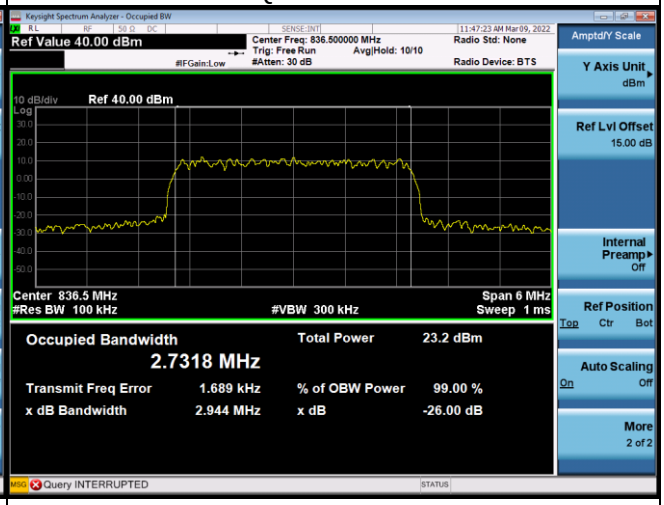
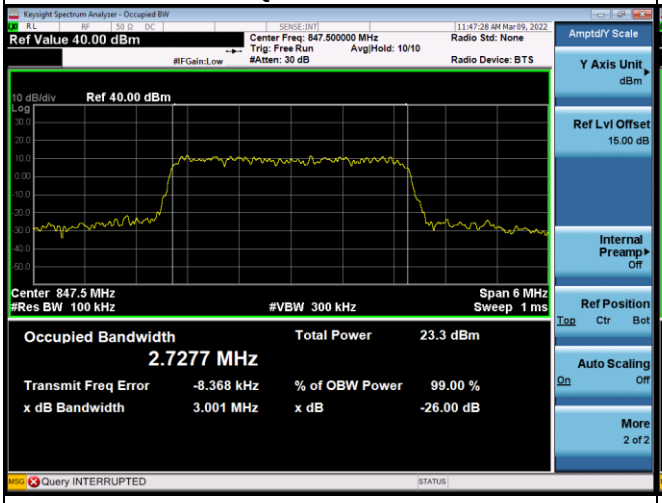
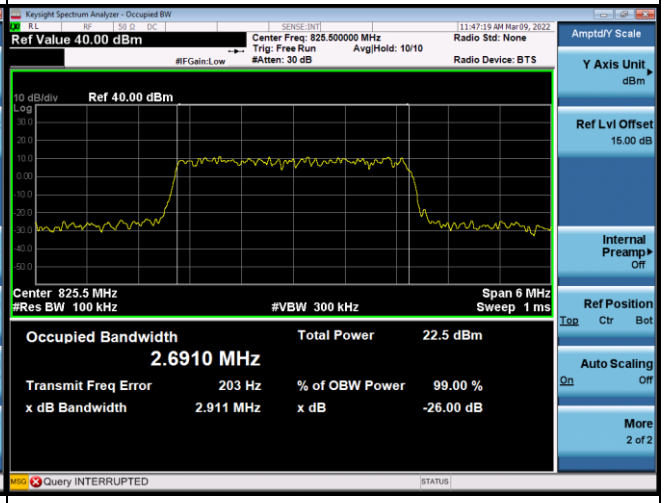
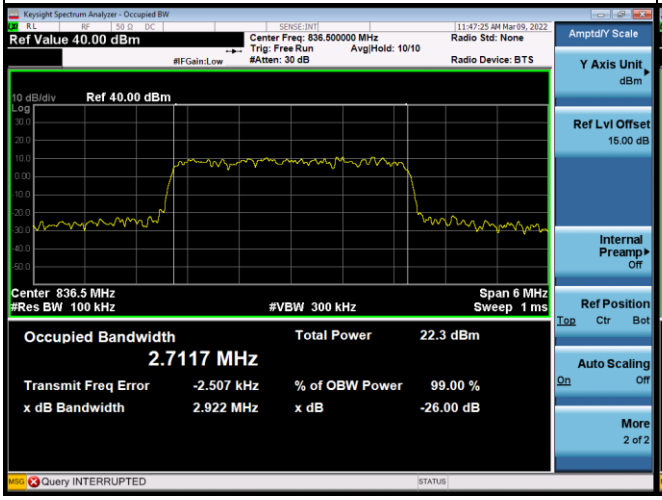
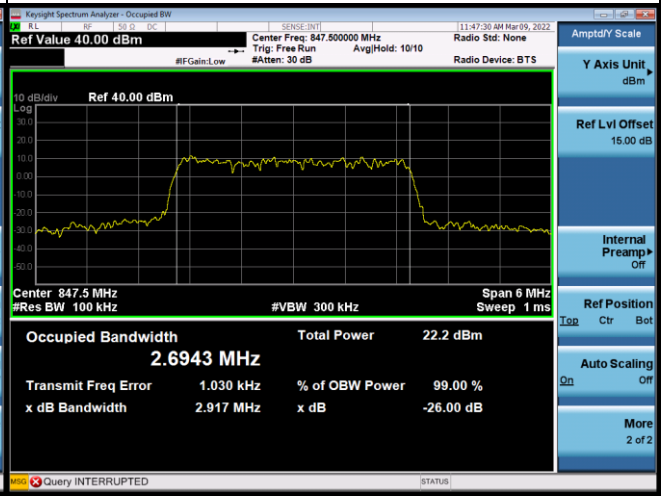
Spectrum Plot	
4132	4183
	
4233	-
	-

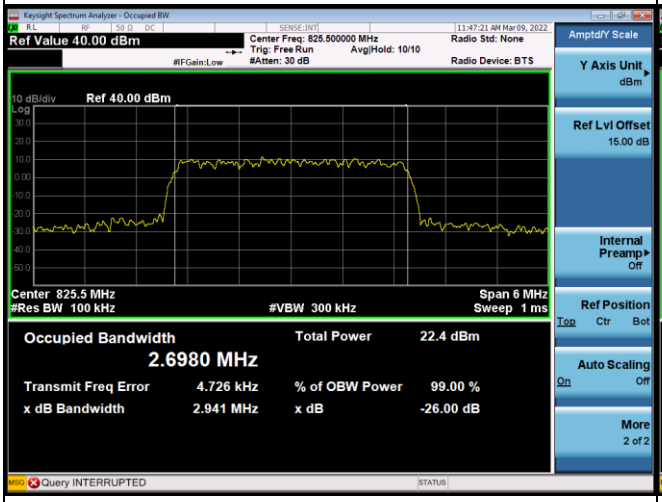
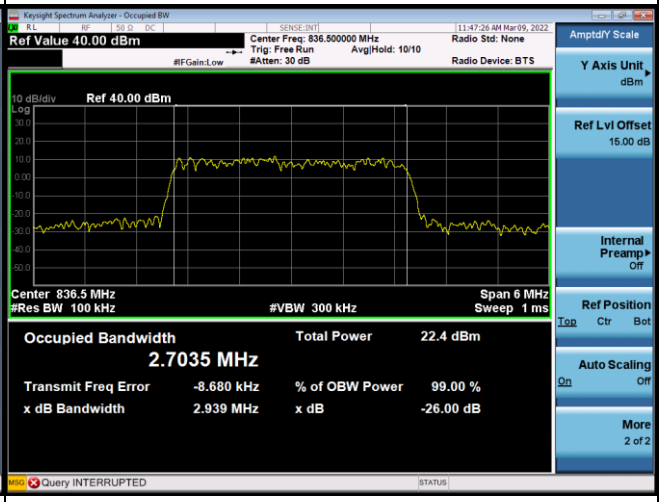
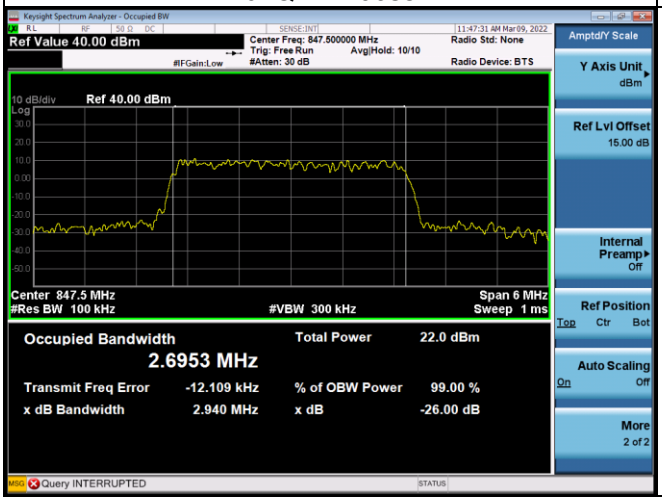
LTE Band 5_1.4M					
QPSK					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
20407	824.7	1.0989	20407	824.7	1.198
20525	836.5	1.1015	20525	836.5	1.235
20643	848.3	1.1000	20643	848.3	1.275
16QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
20407	824.7	1.1201	20407	824.7	1.247
20525	836.5	1.0965	20525	836.5	1.236
20643	848.3	1.0986	20643	848.3	1.220
64QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
20407	824.7	1.1015	20407	824.7	1.244
20525	836.5	1.1013	20525	836.5	1.235
20643	848.3	1.0991	20643	848.3	1.242

Spectrum Plot	
QPSK-20407	QPSK-20525
	
QPSK-20643	16QAM-20407
	
16QAM-20525	16QAM-20643
	

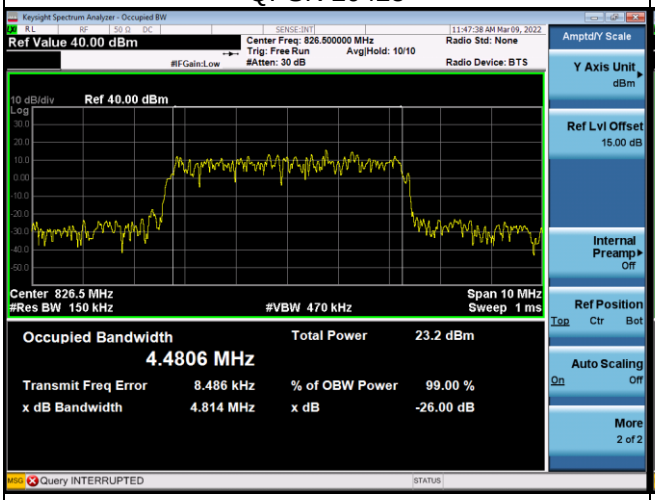
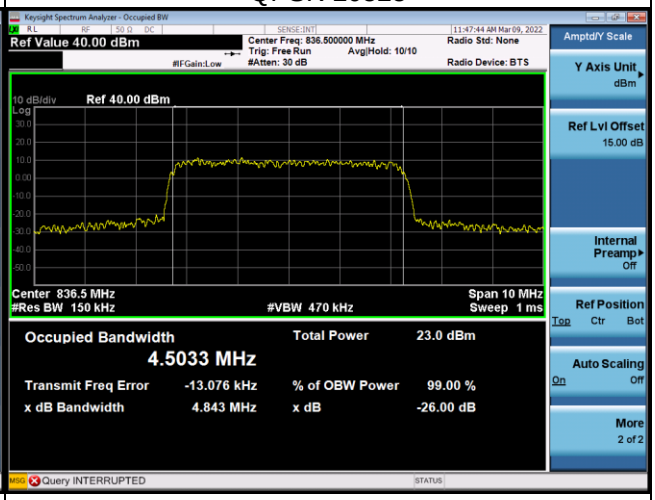
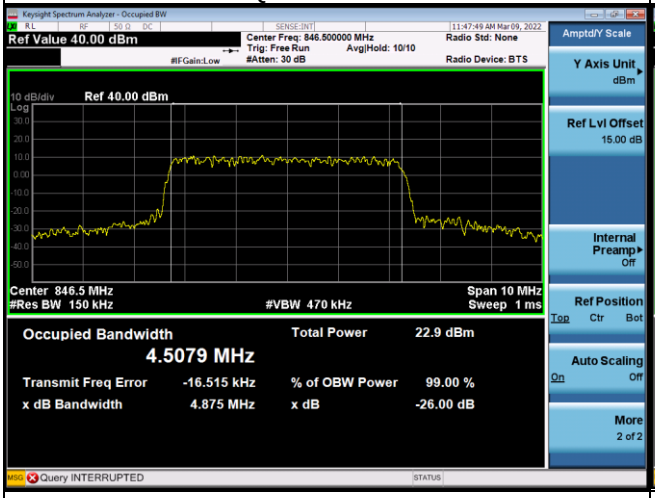
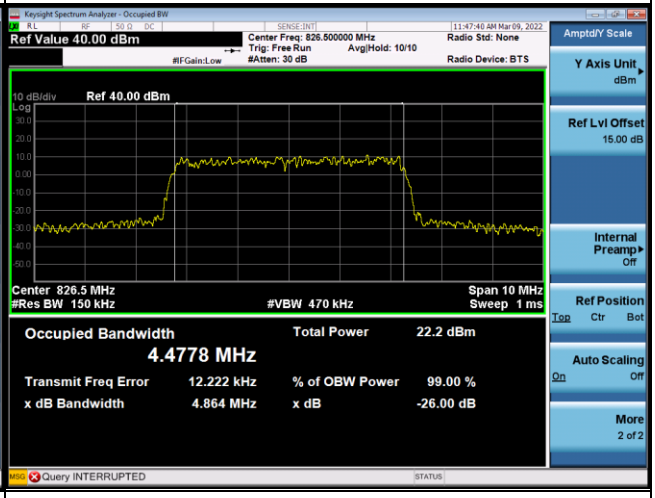
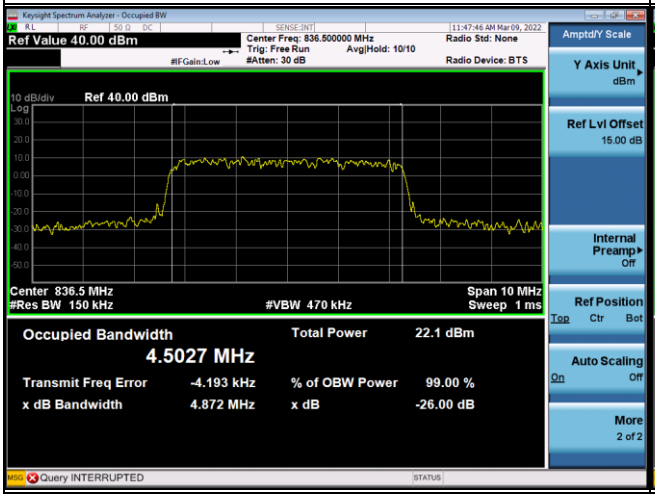
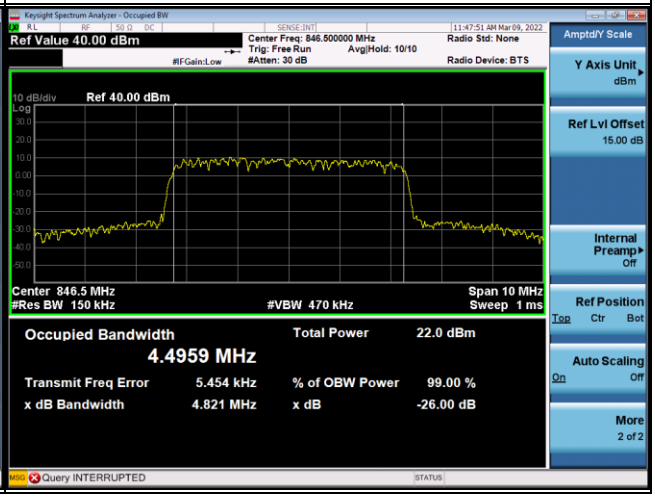
64QAM-20407	64QAM-20525
	
64QAM-20643	-
	-

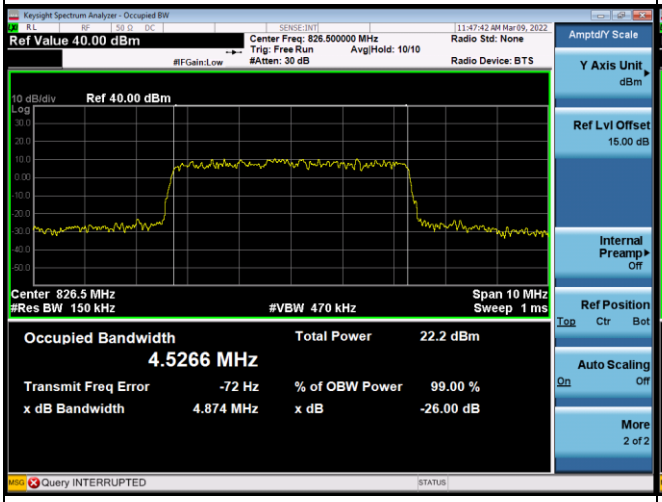
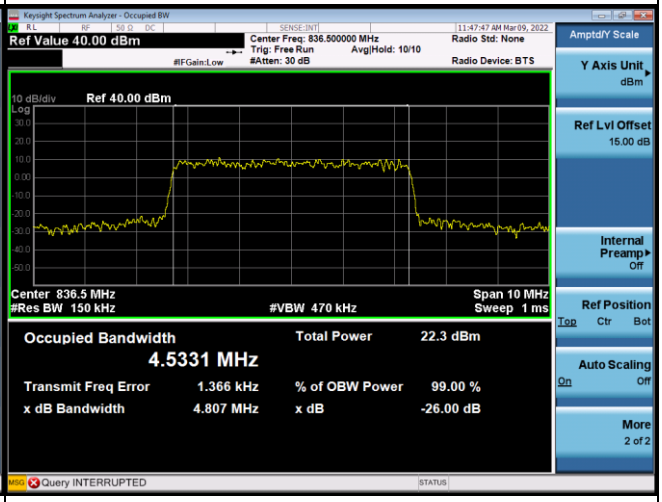
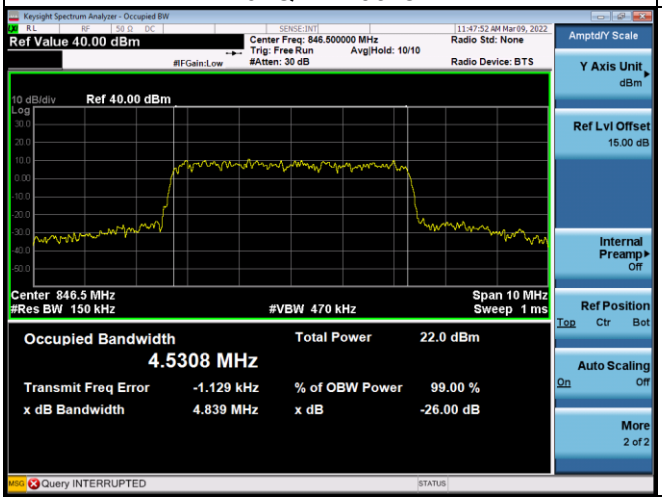
LTE Band 5_3M					
QPSK					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
20415	825.5	2.7267	20415	825.5	2.927
20525	836.5	2.7318	20525	836.5	2.944
20635	847.5	2.7277	20635	847.5	3.001
16QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
20415	825.5	2.6910	20415	825.5	2.911
20525	836.5	2.7117	20525	836.5	2.922
20635	847.5	2.6943	20635	847.5	2.917
64QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
20415	825.5	2.6980	20415	825.5	2.941
20525	836.5	2.7035	20525	836.5	2.939
20635	847.5	2.6953	20635	847.5	2.940

Spectrum Plot	
QPSK-20415	QPSK-20525
	
QPSK-20635	16QAM-20415
	
16QAM-20525	16QAM-20635
	

64QAM-20415	64QAM-20525
	
64QAM-20635	-
	-

LTE Band 5_5M					
QPSK					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
20425	826.5	4.4806	20425	826.5	4.814
20525	836.5	4.5033	20525	836.5	4.843
20625	846.5	4.5079	20625	846.5	4.875
16QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
20425	826.5	4.4778	20425	826.5	7.864
20525	836.5	4.5027	20525	836.5	4.872
20625	846.5	4.4959	20625	846.5	4.821
64QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
20425	826.5	4.5266	20425	826.5	4.874
20525	836.5	4.5331	20525	836.5	4.807
20625	846.5	4.5308	20625	846.5	4.839

Spectrum Plot	
QPSK-20425	QPSK-20525
	
QPSK-20625	16QAM-20425
	
16QAM-20525	16QAM-20625
	

64QAM-20425	64QAM-20525
	
64QAM-20625	-
	-

LTE Band 5_10M					
QPSK					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
20450	829.0	8.9309	20450	829.0	9.404
20525	836.5	8.9603	20525	836.5	9.454
20600	844.0	8.9109	20600	844.0	9.417
16QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
20450	829.0	8.9314	20450	829.0	9.450
20525	836.5	8.9163	20525	836.5	9.453
20600	844.0	8.8992	20600	844.0	9.515
64QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
20450	829.0	8.9605	20450	829.0	9.479
20525	836.5	8.9810	20525	836.5	9.606
20600	844.0	8.9198	20600	844.0	9.483