FCC RF Test Report

APPLICANT	:	Motorola Mobility LLC
EQUIPMENT	:	Mobile Cellular Phone
BRAND NAME	:	Motorola
MODEL NAME	:	XT2341-3
FCC ID	:	IHDT56AM2
STANDARD	:	47 CFR Part 2, 22(H), 27(M)
CLASSIFICATION	:	PCS Licensed Transmitter Held to Ear (PCE)
TEST DATE(S)	:	Apr. 11, 2023 ~ May 05, 2023

We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.26-2015 and shown compliance with the applicable technical standards.

This report contains data that were produced under subcontract by Sporton International Inc. (Shenzhen)

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (Kunshan), the test report shall not be reproduced except in full.

Jason Jia

Approved by: Jason Jia

ACCREDITED
Cert #5145.02

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APPENDIX A. TEST RESULTS OF CONDUCTED TEST

APPENDIX B. TEST RESULTS OF RADIATED TEST

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG332010B	Rev. 01	Initial issue of report	May 30, 2023

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	-	Report Only	-
	§22.913(a)(5)	Effective Radiated Power (Band 5)	ERP < 7 Watt	PASS	-
	§27.50(h)(2)	Equivalent Isotropic Radiated Power (Band 38) (Band 41)	EIRP < 2Watt		-
3.5	N/A	Peak-to-Average Ratio	<13 dB	PASS	-
3.6	§2.1049	Occupied Bandwidth	-	Report Only	-
3.7	§2.1051 §22.917(a)	Conducted Band Edge Measurement (Band 5)	< 43+10log10(P[Watts])	PASS	-
	§27.53(m)(4)	Conducted Band Edge Measurement (Band 38) (Band 41)	§27.53(m)(4)		
3.8	§2.1051 §22.917(a)	Conducted Spurious Emission (Band 5)	< 43+10log10(P[Watts])	PASS	-
	§2.1051 §27.53(m)(4)	Conducted Spurious Emission (Band 38) (Band 41)	< 55+10$\log_{10}$(P[Watts])		
3.9	§2.1055 §22.355	Frequency Stability Temperature & Voltage	< 2.5 ppm for Part 22	PASS	-
	§2.1055 §27.54		Within Authorized Band		
4.4	§2.1053 §22.917(a)	Radiated Spurious Emission (Band 5)	< 43+10$\log_{10}$(P[Watts])	PASS	Under limit 29.13 dB at 10336.00 MHz
	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (Band 38) (Band 41)	< 55+10$\log_{10}$(P[Watts])		

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section “Measurement Uncertainty”

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

1 General Description

1.1 Applicant

Motorola Mobility LLC
222 W,Merchandise Mart Plaza, Chicago IL 60654 USA

1.2 Manufacturer

Motorola Mobility LLC
222 W,Merchandise Mart Plaza, Chicago IL 60654 USA

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2341-3
FCC ID	IHDT56AM2
IMEI Code	Conducted: 356184890006556/356184890006564 Radiation: 356184890014436/356184890014444
HW Version	DVT2
SW Version	TLA33.30
EUT Stage	Identical Prototype

Remark: There are two types of EUT, the sample 1 is 1st source + Battery 1 and the sample 2 is 2nd source + Battery 2. The difference could refer to the XT2341-3_Operational Description of Product Equality Declaration which is exhibit separately. According to the difference, we evaluate the sample 1 to perform full test.

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	LTE Band 5 : 824 MHz ~ 849 MHz LTE Band 38 : 2570 MHz ~ 2620 MHz LTE Band 41 : 2535 MHz ~ 2655 MHz
Rx Frequency	LTE Band 5 : 869 MHz ~ 894 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41 : 2535 MHz ~ 2655 MHz
Bandwidth	LTE Band 5 : 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 38/41 : 5MHz / 10MHz / 15MHz / 20MHz
Maximum Output Power to Antenna	LTE Band 5 : 22.84 dBm LTE Band 38 : 22.25 dBm LTE Band 41 : 22.75 dBm
Antenna Gain	LTE Band 5 : -5.4 dBi LTE Band 38 : -0.7 dBi LTE Band 41 : -0.7 dBi
Type of Modulation	QPSK / 16QAM

1.5 Modification of EUT

No modifications are made to the EUT during all test items.

1.6 Specification of Accessory

Specification of Accessory				
AC Adapter 1(US)	**Brand Name**	Motorola (Salcomp)	**Model Name**	MC-201L
AC Adapter 1(EU)	**Brand Name**	Motorola (Salcomp)	**Model Name**	MC-202L
AC Adapter 1(AR)	**Brand Name**	Motorola (Salcomp)	**Model Name**	MC-206L
AC Adapter 1(BR)	**Brand Name**	Motorola (Salcomp)	**Model Name**	MC-207L
AC Adapter 1(CHILE)	**Brand Name**	Motorola (Salcomp)	**Model Name**	MC-209L
AC Adapter 2(US)	**Brand Name**	Motorola (aohai)	**Model Name**	MC-201L
AC Adapter 2(EU)	**Brand Name**	Motorola (aohai)	**Model Name**	MC-202L
AC Adapter 2(AR)	**Brand Name**	Motorola (aohai)	**Model Name**	MC-206L
AC Adapter 3(US)	**Brand Name**	Motorola (aohai)	**Model Name**	MC-101
AC Adapter 3(EU)	**Brand Name**	Motorola (aohai)	**Model Name**	MC-102
AC Adapter 3(UK)	**Brand Name**	Motorola (aohai)	**Model Name**	MC-103
AC Adapter 3(AU)	**Brand Name**	Motorola (aohai)	**Model Name**	MC-105
AC Adapter 4(US)	**Brand Name**	Motorola (Chenyang)	**Model Name**	MC-101
AC Adapter 4(EU)	**Brand Name**	Motorola (Chenyang)	**Model Name**	MC-102
AC Adapter 4(UK)	**Brand Name**	Motorola (Chenyang)	**Model Name**	MC-103
AC Adapter 4(AU)	**Brand Name**	Motorola (Chenyang)	**Model Name**	MC-105
AC Adapter 5(US)	**Brand Name**	Motorola (Salcomp)	**Model Name**	MC-101
AC Adapter 5(EU)	**Brand Name**	Motorola (Salcomp)	**Model Name**	MC-102
AC Adapter 5(UK)	**Brand Name**	Motorola (Salcomp)	**Model Name**	MC-103
AC Adapter 5(AU)	**Brand Name**	Motorola (Salcomp)	**Model Name**	MC-105
Battery 1	**Brand Name**	Motorola (ATL)	**Model Name**	PC50
Battery 2	**Brand Name**	Motorola (SCUD)	**Model Name**	PC50
Earphone 1	**Brand Name**	Motorola (New leader)	**Model Name**	NLD-EM313A-20SF
Earphone 2	**Brand Name**	Motorola (JWELL)	**Model Name**	JWEP1205-L20H
USB Cable 1	**Brand Name**	Motorola(SAIBAO)	**Model Name**	SLQ-A214A
USB Cable 2	**Brand Name**	Motorola(JWELL)	**Model Name**	ATOC

1.7 Maximum ERP/EIRP Power and Emission Designator

LTE Band 5		QPSK		16QAM	
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)
10	829.0 ~ 844.0	0.0338	9M01G7D	0.0272	9M05W7D
LTE Band 38		**QPSK**		**16QAM**	
BW (MHz)	**Frequency Range (MHz)**	**Maximum EIRP(W)**	**Emission Designator (99%OBW)**	**Maximum EIRP(W)**	**Emission Designator (99%OBW)**
20	2580.0 ~ 2610.0	0.1429	17M9G7D	0.1183	17M9W7D
LTE Band 41		**QPSK**		**16QAM**	
BW (MHz)	**Frequency Range (MHz)**	**Maximum EIRP(W)**	**Emission Designator (99%OBW)**	**Maximum EIRP(W)**	**Emission Designator (99%OBW)**
20	2545.0 ~ 2645.0	0.1603	17M9G7D	0.1306	17M9W7D

Note:

1. LTE Band 41 overlaps the entire frequency range of LTE Band 38. Therefore, the test results provided in this report covers Band 41 as well as Band 38.
2. All modulations have been tested, and only the worst test results of PSK & QAM are shown in the report.

1.8 Testing Location

Sporton International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	TH01-KS	CN1257	314309

Sporton International Inc. (ShenZhen) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Test Firm	Sporton International Inc. (ShenZhen)		
Test Site Location	101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City Guangdong Province China 518103 TEL: +86-755-33202398		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	03CH04-SZ	CN1256	421272

1.9 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH04-SZ	AUDIX	E3	6.2009-8-24

1.10 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR Part 2, 22(H), 27(M)
- ANSI C63.26-2015
- FCC KDB 971168 D01 Power Meas License Digital Systems v03r01
- FCC KDB 412172 D01 Determining ERP and EIRP v01r01

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

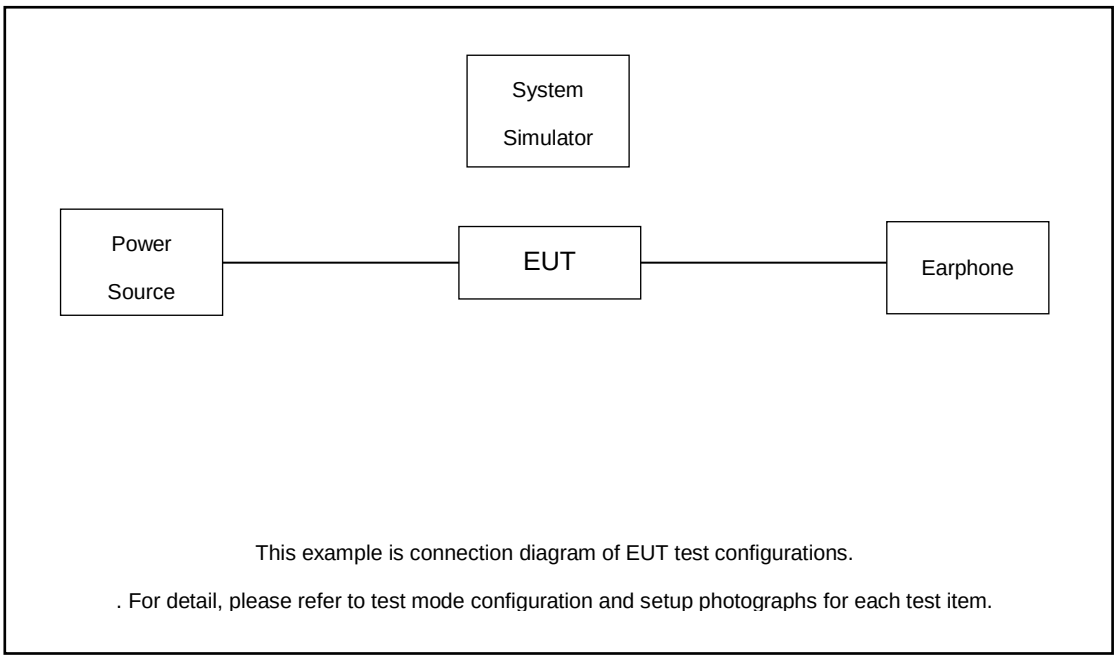
2.1 Test Mode

Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas License Digital Systems v03r01 with maximum output power.

Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission.

Test Items	Band	Bandwidth (MHz)						Modulation			RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
Max. Output Power	5	v	v	v	v	-	-	v	v	-	v		v	v	v	v
	38	-	-	v	v	v	v	v	v	-	v		v	v	v	v
	41	-	-	v	v	v	v	v	v	-	v		v	v	v	v
Peak-to-Average Ratio	5				v	-	-	v	v	-			v		v	
	41	-	-				v	v	v	-			v		v	
26dB and 99% Bandwidth	5				v	-	-	v	v	-			v		v	
	41	-	-	v	v	v	v	v	v	-			v		v	
Conducted Band Edge	5	v	v	v	v	-	-	v	v	-	v		v	v		v
	41	-	-	v	v	v	v	v	v	-	v		v	v		v
Conducted Spurious Emission	5	v	v	v	v	-	-	v		-	v			v	v	v
	41	-	-	v	v	v	v	v		-	v			v	v	v
Frequency Stability	5				v	-	-	v		-			v		v	
	41	-	-		v			v		-			v		v	
E.R.P / E.I.R.P	5	v	v	v	v	-	-	v	v	-	v			v	v	v
	38	-	-	v	v	v	v	v	v	-	v			v	v	v
	41	-	-	v	v	v	v	v	v	-	v			v	v	v
Radiated Spurious Emission	5	Worst Case													v	
	41	Worst Case													v	
Note	1. The mark "**v** " means that this configuration is chosen for testing 2. The mark "-" means that this bandwidth is not supported. 3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported. 4. LTE Band 41 overlaps the entire frequency range of LTE Band 38. Therefore, the test results provided in this report covers Band 41 as well as Band 38.															

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	Power Supply	GWINSTEK	PSS-2002	N/A	N/A	Unshielded, 1.8 m
2.	LTE Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss.

Offset = RF cable loss.

Following shows an offset computation example with cable loss 4.6 dB.

Example :

Offset(dB) = RF cable loss(dB).

= 4.6 (dB)

2.5 Frequency List of Low/Middle/High Channels

LTE Band 5 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	20450	20525	20600
	Frequency	829	836.5	844
5	Channel	20425	20525	20625
	Frequency	826.5	836.5	846.5
3	Channel	20415	20525	20635
	Frequency	825.5	836.5	847.5
1.4	Channel	20407	20525	20643
	Frequency	824.7	836.5	848.3

LTE Band 38 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	37850	38000	38150
	Frequency	2580	2595	2610
15	Channel	37825	38000	38175
	Frequency	2577.5	2595	2612.5
10	Channel	37800	38000	38200
	Frequency	2575	2595	2615
5	Channel	37775	38000	38225
	Frequency	2572.5	2595	2617.5

LTE Band 41 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	40140	40640	41140
	Frequency	2545	2595	2645
15	Channel	40115	40640	41165
	Frequency	2542.5	2595	2647.5
10	Channel	40090	40640	41190
	Frequency	2540	2595	2650
5	Channel	40065	40640	41215
	Frequency	2537.5	2595	2652.5

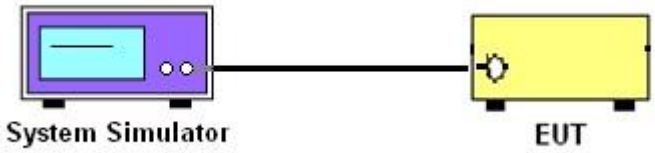
3 Conducted Test Items

3.1 Measuring Instruments

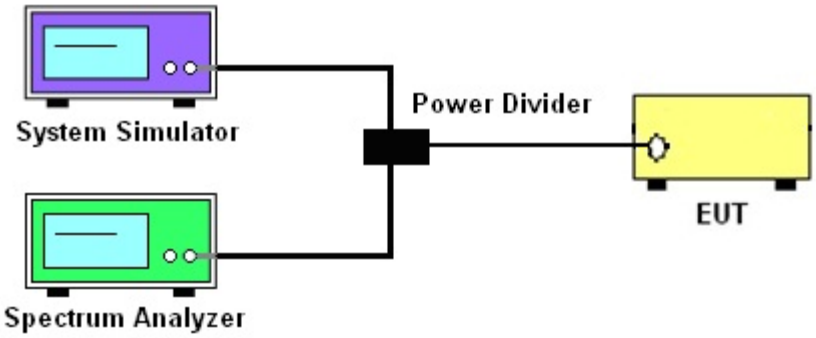
See list of measuring instruments of this test report.

3.2 Test Setup

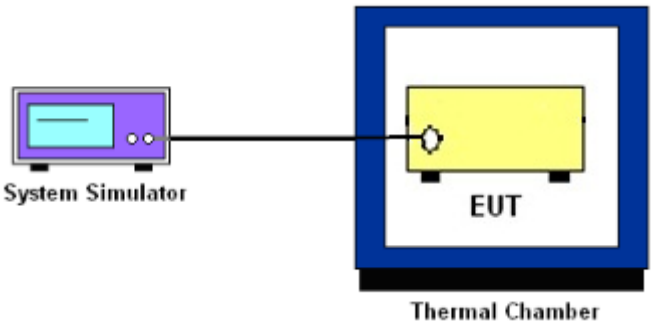
3.2.1 Conducted Output Power



3.2.2 Peak-to-Average Ratio, Occupied Bandwidth ,Conducted Band-Edge and Conducted Spurious Emission



3.2.3 Frequency Stability



3.3 Test Result of Conducted Test

Please refer to Appendix A.

3.4 Conducted Output Power and ERP/EIRP

3.4.1 Description of the Conducted Output Power Measurement and ERP/EIRP Measurement

A system simulator was used to establish communication with the EUT. Its parameters were set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

The ERP of mobile transmitters must not exceed 7 Watts for LTE Band 5.

The EIRP of mobile transmitters must not exceed 2 Watts for Band 38 and Band 41.

According to KDB 412172 D01 Power Approach,

EIRP = $P_T + G_T – L_C$, ERP = EIRP -2.15, where

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

L_C = signal attenuation in the connecting cable between the transmitter and antenna in dB

3.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2
2. The transmitter output port was connected to the system simulator.
3. Set EUT at maximum power through the system simulator.
4. Select lowest, middle, and highest channels for each band and different modulation.
5. Measure and record the power level from the system simulator.

3.5 Peak-to-Average Ratio

3.5.1 Description of the PAR Measurement

Power Complementary Cumulative Distribution Function (CCDF) curves provide a means for characterizing the power peaks of a digitally modulated signal on a statistical basis. A CCDF curve depicts the probability of the peak signal amplitude exceeding the average power level. Most contemporary measurement instrumentation include the capability to produce CCDF curves for an input signal provided that the instrument's resolution bandwidth can be set wide enough to accommodate the entire input signal bandwidth. 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.

3.5.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2.3.4 (CCDF).
2. The EUT was connected to spectrum and system simulator via a power divider.
3. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
4. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
5. Record the deviation as Peak to Average Ratio.

3.6 Occupied Bandwidth

3.6.1 Description of Occupied Bandwidth Measurement

The occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

3.6.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.4
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
4. The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
5. Set the detection mode to peak, and the trace mode to max hold.
6. Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace.
   (this is the reference value)
7. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
8. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “–X dB down amplitude” determined in step 6. If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.
9. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

3.7 Conducted Band Edge

3.7.1 Description of Conducted Band Edge Measurement

22.917(a)

For operations in the 824 – 849 MHz band, the FCC limit is 43 + $10\log_{10}$(P[Watts]) dB below the transmitter power P(Watts) in a 100kHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

27.53(m)(4)

For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

3.7.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured.
4. Set RBW >= 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz band from the band edge, RBW=1MHz was used
6. Set spectrum analyzer with RMS detector.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
8. Checked that all the results comply with the emission limit line.

   Example:

   The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)

   = P(W)- [43 + 10log(P)] (dB)

   = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB) = -13dBm.
9. For LTE Band 38, 41, the other 40 dB, and 55 dB have additionally applied same calculation above.
10. When using the integration method, the starting frequency of the integration shall be centered at one-half of the RBW away from the band edge.

3.8 Conducted Spurious Emission

3.8.1 Description of Conducted Spurious Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

For Band 38,41:

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 55 + 10 log (P) dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

3.8.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
4. The middle channel for the highest RF power within the transmitting frequency was measured.
5. The conducted spurious emission for the whole frequency range was taken.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
7. Set spectrum analyzer with RMS detector.
8. Taking the record of maximum spurious emission.
9. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
10. The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
    = P(W)- [43 + 10log(P)] (dB)
    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
    = -13dBm.
11. For Band 38, 41
    The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)
    = P(W)- [55+ 10log(P)] (dB)
    = [30+ 10log(P)] (dBm) - [55+ 10log(P)] (dB)
    = -25dBm.

3.9 Frequency Stability

3.9.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center frequency.

3.9.2 Test Procedures for Temperature Variation

1. The testing follows ANSI C63.26 section 5.6.4
2. The EUT was set up in the thermal chamber and connected with the system simulator.
3. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
4. With power OFF, the temperature was raised in 10°C step up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

3.9.3 Test Procedures for Voltage Variation

1. The testing follows ANSI C63.26 section 5.6.5
2. The EUT was placed in a temperature chamber at 20±5°C and connected with the system simulator.
3. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value for other than hand carried battery equipment.
4. For hand carried, battery powered equipment, reduce the primary ac or dc supply voltage to the battery operating end point, which shall be specified by the manufacturer.
5. The variation in frequency was measured for the worst case.

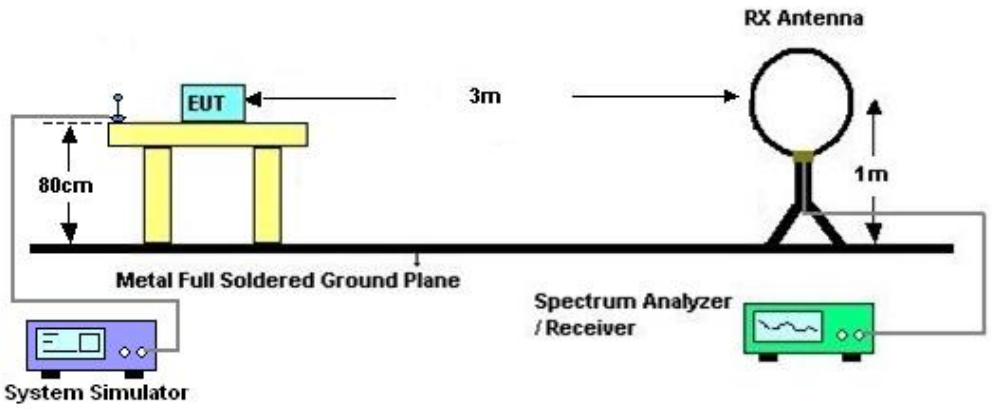
4 Radiated Test Items

4.1 Measuring Instruments

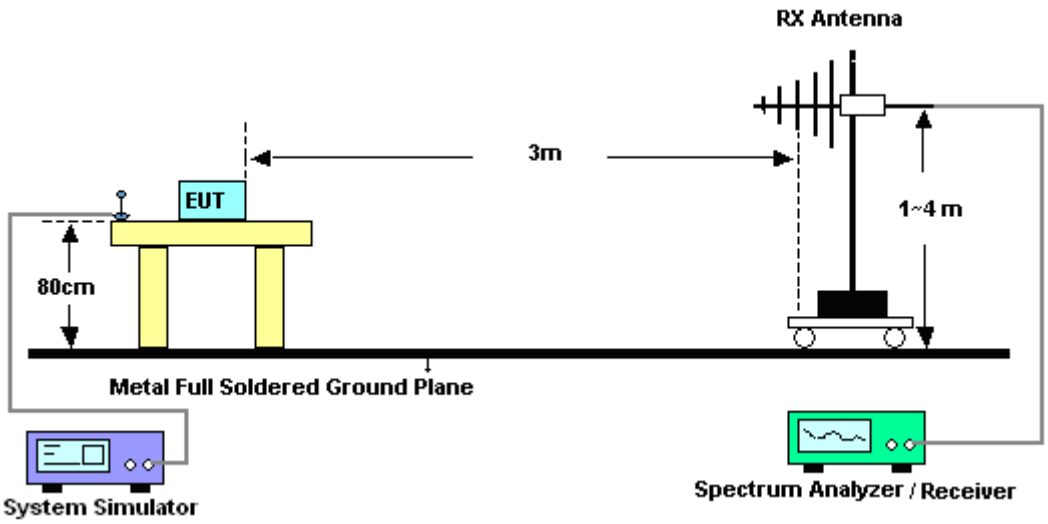
See list of measuring instruments of this test report.

4.2 Test Setup

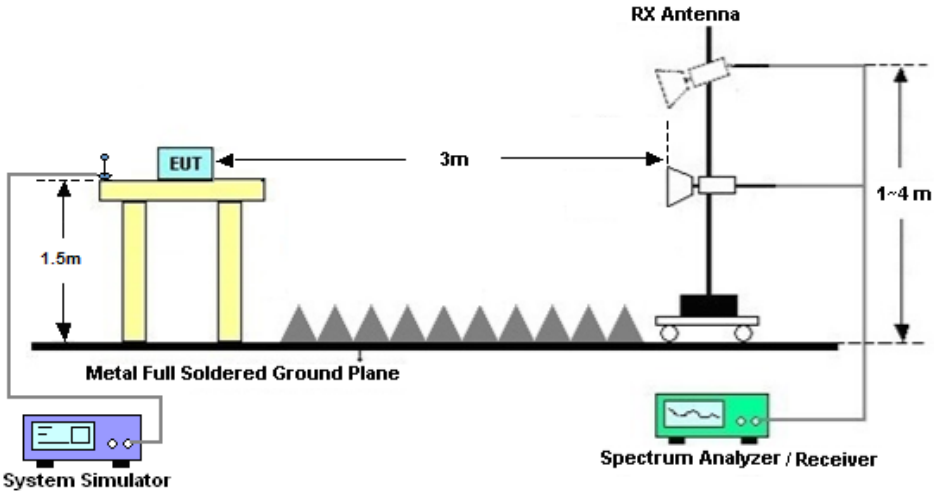
4.2.1 For radiated test below 30MHz



4.2.2 For radiated test from 30MHz to 1GHz



4.2.3 For radiated test above 1GHz



4.3 Test Result of Radiated Test

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.

Please refer to Appendix B.

4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI C63.26. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

For Band 38, 41

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 55 + 10 log (P) dB.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

4.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.5
2. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
6. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
7. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
8. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
9. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
10. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
11. ERP (dBm) = EIRP - 2.15
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
    The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
    = P(W)- [43 + 10log(P)] (dB)
    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
    = -13dBm.
13. For Band 38, 41:
    The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)

5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Oct. 12, 2022	Apr. 11, 2023~ Apr. 26, 2023	Oct. 11, 2023	Conducted (TH01-KS)
Power divider	STI	STI08-0055	-	0.5~40GHz	NCR	Apr. 11, 2023~ Apr. 26, 2023	NCR	Conducted (TH01-KS)
Temperature & humidity chamber	Hongzhan	LP-150U	H2014011440	-40~+150°C 20%~95%RH	Jul. 15, 2022	Apr. 11, 2023~ Apr. 26, 2023	Jul. 14, 2023	Conducted (TH01-KS)
EMI Test Receiver	R&S	ESR7	101404	9kHz~7GHz	Oct. 19, 2022	May 05, 2023	Oct. 18, 2023	Radiation (03CH04-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Jul. 07, 2022	May 05, 2023	Jul. 06, 2023	Radiation (03CH04-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jun. 28, 2022	May 05, 2023	Jun. 27, 2024	Radiation (03CH04-SZ)
Bilog Antenna	TeseQ	CBL6111D	41909	30MHz~1GHz	Apr. 26, 2023	May 05, 2023	Apr. 25, 2024	Radiation (03CH04-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1474	1GHz~18GHz	Jul. 07, 2022	May 05, 2023	Jul. 06, 2023	Radiation (03CH04-SZ)
Horn Antenna	SCHWARZBECK	BBHA9170	9170#679	15GHz~40GHz	Jul. 07, 2022	May 05, 2023	Jul. 06, 2023	Radiation (03CH04-SZ)
Amplifier	Burgeon	BPA-530	102211	0.01Hz ~3000MHz	Oct. 19, 2022	May 05, 2023	Oct. 18, 2023	Radiation (03CH04-SZ)
HF Amplifier	MITEQ	AMF-7D-00 101800-30-1 0P-R	1943528	1GHz~18GHz	Oct. 19, 2022	May 05, 2023	Oct. 18, 2023	Radiation (03CH04-SZ)
HF Amplifier	MITEQ	TTA1840-35 -HG	1871923	18GHz~40GHz	Jul. 06, 2022	May 05, 2023	Jul. 05, 2023	Radiation (03CH04-SZ)
Amplifier	Agilent Technologies	83017A	MY57280136	500MHz~26.5GHz	Sep. 30, 2022	May 05, 2023	Sep. 29, 2023	Radiation (03CH04-SZ)
AC Power Source	APC	AFV-S-600B	F119050019	N/A	Nov. 10, 2022	May 05, 2023	Nov. 09, 2023	Radiation (03CH04-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	May 05, 2023	NCR	Radiation (03CH04-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	May 05, 2023	NCR	Radiation (03CH04-SZ)

NCR: No Calibration Required

6 Measurement Uncertainty

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.26-2015. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of Conducted Measurement

Test Item	Uncertainty
Conducted Power	±0.46 dB
Conducted Emissions	±0.48 dB
Occupied Channel Bandwidth	±0.1 %

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.8 dB

Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.1 dB

Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.9 dB

Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power) and ERP/EIRP

LTE Band 5:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	ERP(W)		
Channel				20450	20525	20600			
Frequency (MHz)				829	836.5	844	L	M	H
10	QPSK	1	0	22.76	22.84	22.83	0.0332	0.0338	0.0337
10	QPSK	1	49	22.67	22.78	22.69	0.0325	0.0333	0.0327
10	QPSK	50	0	21.66	21.68	21.56	0.0258	0.0259	0.0252
10	16QAM	1	0	21.90	21.87	21.84	0.0272	0.0270	0.0269
Channel				20425	20525	20625	ERP(W)		
Frequency (MHz)				826.5	836.5	846.5	L	M	H
5	QPSK	1	0	22.61	22.65	22.75	0.0321	0.0324	0.0331
5	16QAM	1	0	21.71	21.68	21.72	0.0261	0.0259	0.0261
Channel				20415	20525	20635	ERP(W)		
Frequency (MHz)				825.5	836.5	847.5	L	M	H
3	QPSK	1	0	22.67	22.71	22.72	0.0325	0.0328	0.0329
3	16QAM	1	0	21.90	21.81	21.66	0.0272	0.0267	0.0258
Channel				20407	20525	20643	ERP(W)		
Frequency (MHz)				824.7	836.5	848.3	L	M	H
1.4	QPSK	1	0	22.49	22.67	22.60	0.0312	0.0325	0.0320
1.4	16QAM	1	0	21.33	21.47	21.57	0.0239	0.0247	0.0252

LTE Band38:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP(W)		
Channel				37850	38000	38150			
Frequency (MHz)				2580	2595	2610	L	M	H
20	QPSK	1	0	22.18	22.25	22.21	0.1406	0.1429	0.1416
20	QPSK	1	99	22.09	22.21	22.19	0.1377	0.1416	0.1409
20	QPSK	100	0	21.16	21.23	21.08	0.1112	0.1130	0.1091
20	16QAM	1	0	21.36	21.43	21.38	0.1164	0.1183	0.1169
Channel				37825	38000	38175	EIRP(W)		
Frequency (MHz)				2577.5	2595	2612.5	L	M	H
15	QPSK	1	0	22.01	22.07	22.15	0.1352	0.1371	0.1396
15	16QAM	1	0	21.34	21.31	21.36	0.1159	0.1151	0.1164
Channel				37800	38000	38200	EIRP(W)		
Frequency (MHz)				2575	2595	2615	L	M	H
10	QPSK	1	0	22.09	22.19	22.18	0.1377	0.1409	0.1406
10	16QAM	1	0	21.25	21.24	21.24	0.1135	0.1132	0.1132
Channel				37775	38000	38225	EIRP(W)		
Frequency (MHz)				2572.5	2595	2617.5	L	M	H
5	QPSK	1	0	22.08	22.22	22.09	0.1374	0.1419	0.1377

5	16QAM	1	0	21.18	21.38	21.36	0.1117	0.1169	0.1164

LTE Band 41:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Low Ch. / Freq.	Power High Ch. / Freq.	EIRP(W)		
Channel				40140	40640	41140			
Frequency (MHz)				2545	2595	2645	L	M	H
20	QPSK	1	0	22.71	22.75	22.65	0.1589	0.1603	0.1567
20	QPSK	1	99	22.60	22.71	22.62	0.1549	0.1589	0.1556
20	QPSK	100	0	21.50	21.62	21.57	0.1202	0.1236	0.1222
20	16QAM	1	0	21.75	21.86	21.84	0.1274	0.1306	0.1300
Channel				40115	40640	41165	EIRP(W)		
Frequency (MHz)				2542.5	2595	2647.5	L	M	H
15	QPSK	1	0	22.65	22.72	22.55	0.1567	0.1592	0.1531
15	16QAM	1	0	21.68	21.81	21.68	0.1253	0.1291	0.1253
Channel				40090	40640	41190	EIRP(W)		
Frequency (MHz)				2540	2595	2650	L	M	H
10	QPSK	1	0	22.55	22.71	22.50	0.1531	0.1589	0.1514
10	16QAM	1	0	21.58	21.81	21.78	0.1225	0.1291	0.1282
Channel				40065	40640	41215	EIRP(W)		
Frequency (MHz)				2537.5	2595	2652.5	L	M	H
5	QPSK	1	0	22.67	22.72	22.52	0.1574	0.1592	0.1521
5	16QAM	1	0	21.68	21.80	21.74	0.1253	0.1288	0.1271

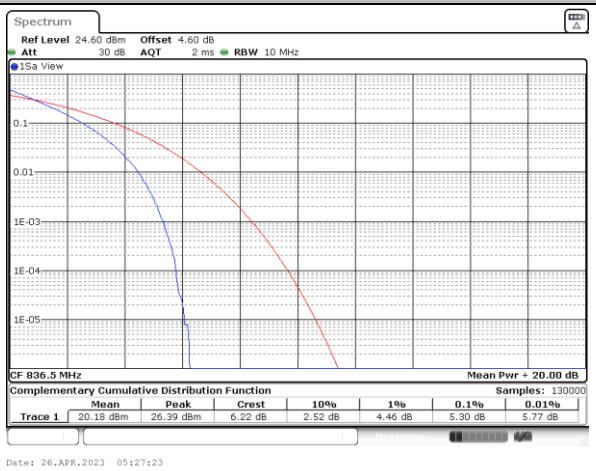
LTE Band 5

Peak-to-Average Ratio

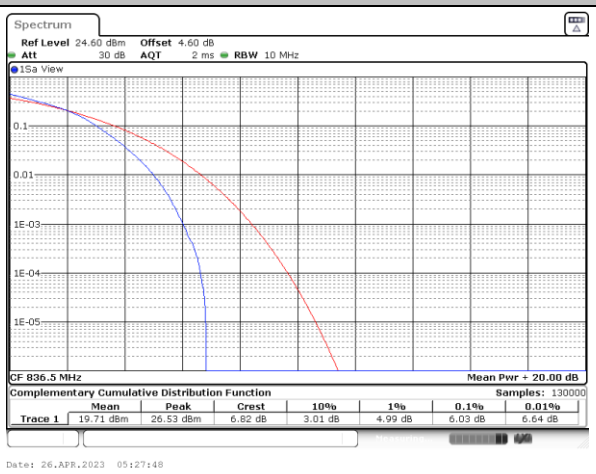
Mode	LTE Band 5 / 10MHz			
Mod.	QPSK	16QAM		Limit: 13dB
RB Size	Full RB	Full RB		Result
Middle CH	5.30	6.03		PASS

LTE Band 5 / 10MHz

Middle Channel / Full RB/ QPSK



Middle Channel / Full RB/ 16QAM

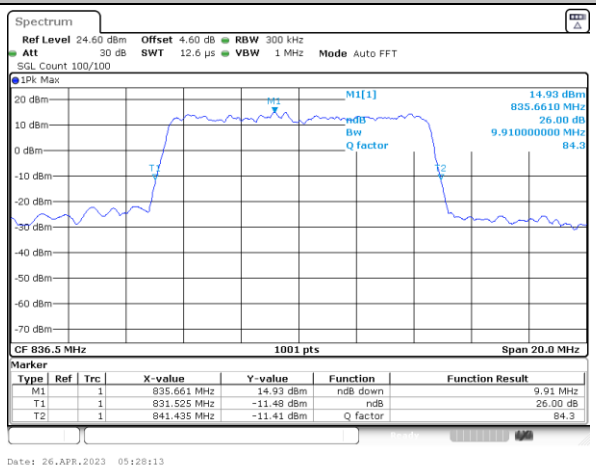


26dB Bandwidth

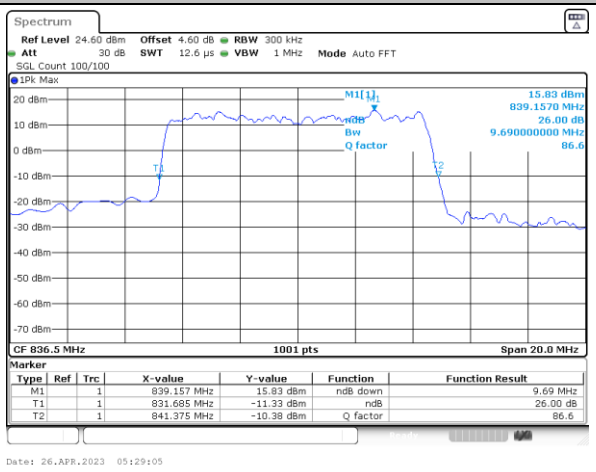
Mode	LTE Band 5 : 26dB BW(MHz)	
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.91	9.69

LTE Band 5

Middle Channel / 10MHz / QPSK



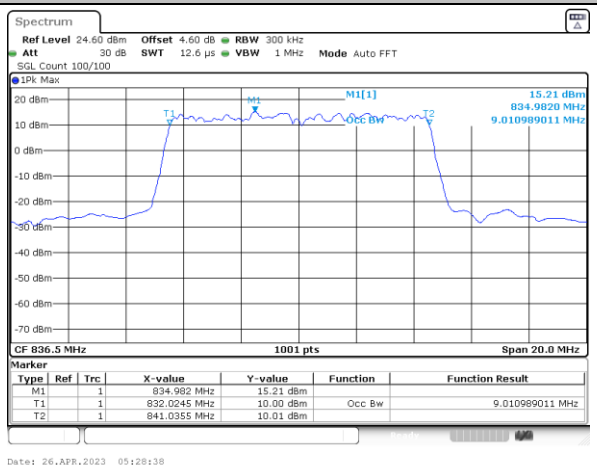
Middle Channel / 10MHz / 16QAM

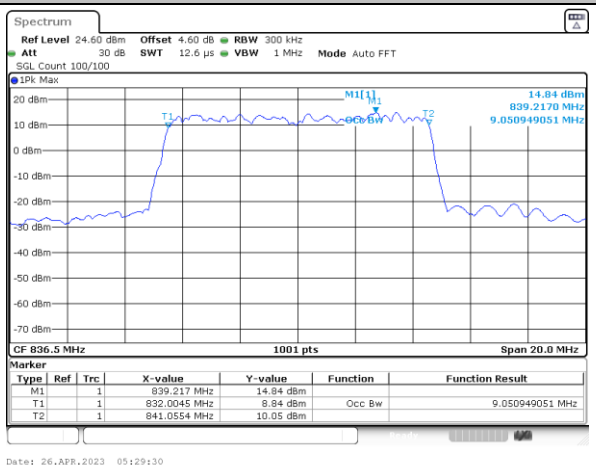


Occupied Bandwidth

Mode	LTE Band 5 : 99%OBW(MHz)	
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.01	9.05

LTE Band 5	
Middle Channel / 10MHz / QPSK	Middle Channel / 10MHz / 16QAM

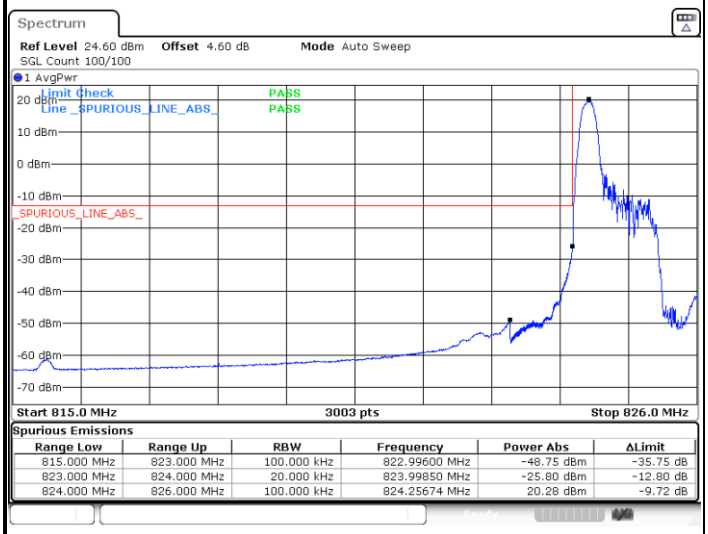




Conducted Band Edge

LTE Band 5 / 1.4MHz / QPSK

Lowest Band Edge / 1RB

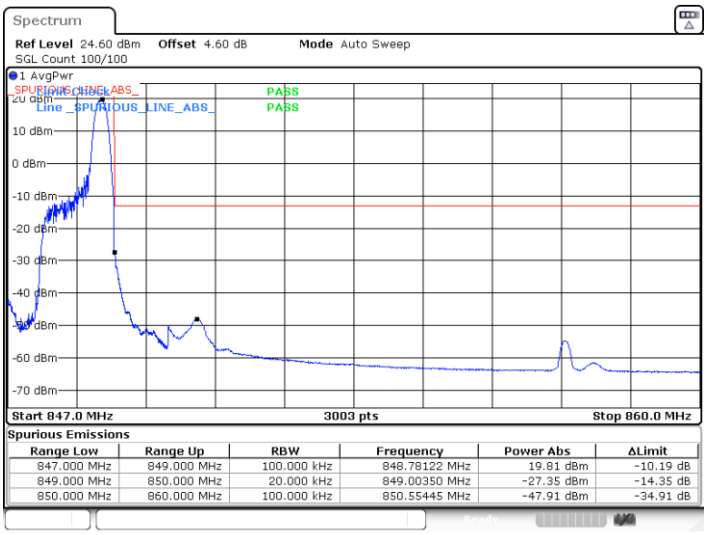


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.99600 MHz	-48.75 dBm	-35.75 dB
823.000 MHz	824.000 MHz	20.000 kHz	823.99850 MHz	-25.80 dBm	-12.80 dB
824.000 MHz	826.000 MHz	100.000 kHz	824.25674 MHz	20.28 dBm	-9.72 dB

Date: 26.APR.2023 04:09:55

Highest Band Edge / 1RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
847.000 MHz	849.000 MHz	100.000 kHz	848.78122 MHz	19.81 dBm	-10.19 dB
849.000 MHz	850.000 MHz	20.000 kHz	849.00350 MHz	-27.35 dBm	-14.35 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.55445 MHz	-47.91 dBm	-34.91 dB

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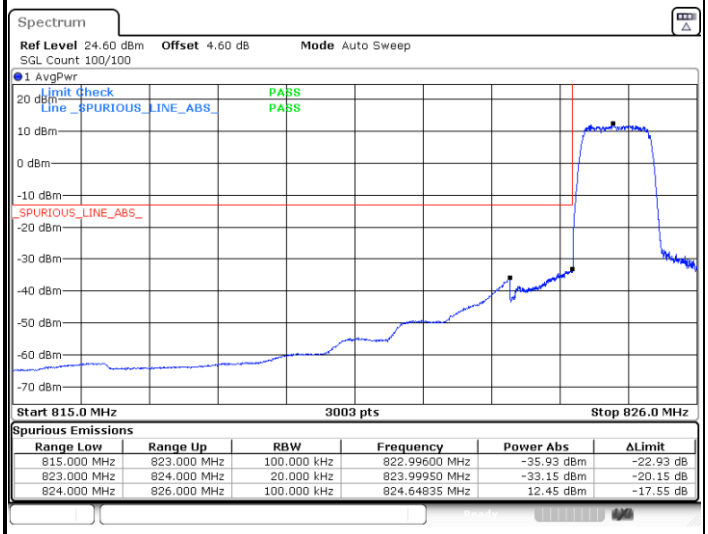
Lowest Band Edge / Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.99600 MHz	-35.93 dBm	-22.93 dB
823.000 MHz	824.000 MHz	20.000 kHz	823.99950 MHz	-33.15 dBm	-20.15 dB
824.000 MHz	826.000 MHz	100.000 kHz	824.64835 MHz	12.45 dBm	-17.55 dB

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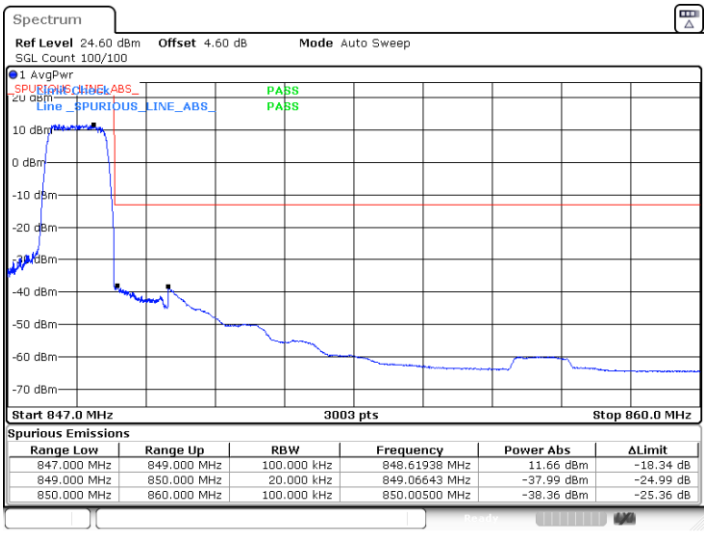
Highest Band Edge / Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
847.000 MHz	849.000 MHz	100.000 kHz	848.61938 MHz	11.66 dBm	-18.34 dB
849.000 MHz	850.000 MHz	20.000 kHz	849.06643 MHz	-37.99 dBm	-24.99 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.00500 MHz	-38.36 dBm	-25.36 dB

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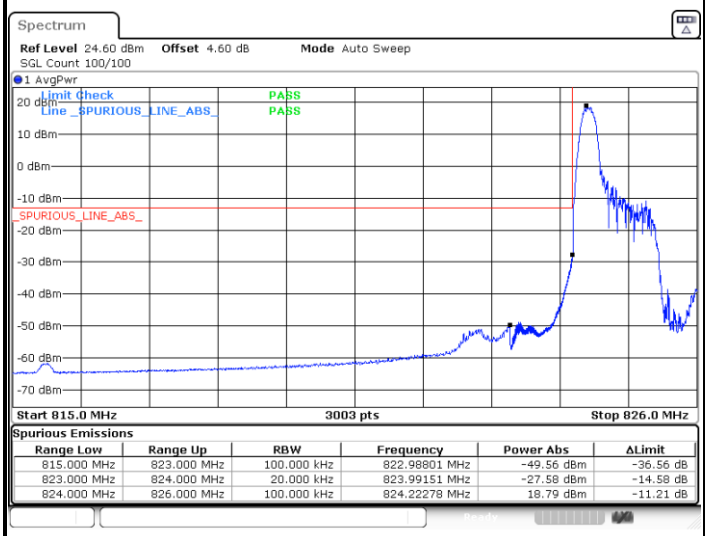
LTE Band 5 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB

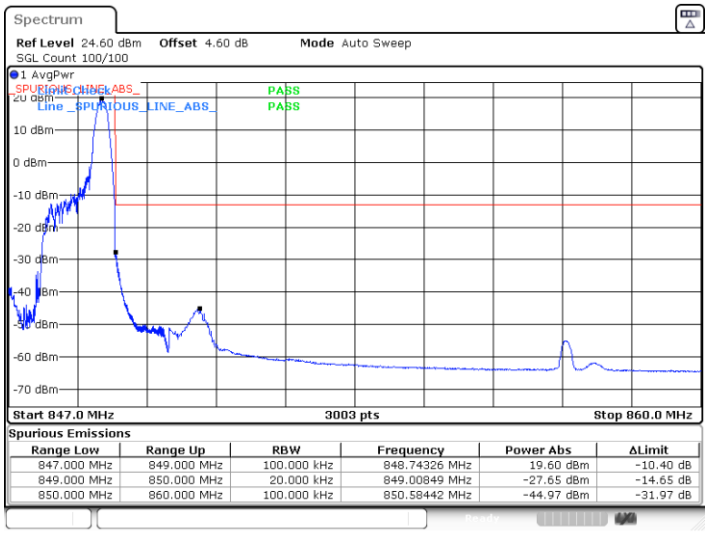


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.98801 MHz	-49.56 dBm	-36.56 dB
823.000 MHz	824.000 MHz	20.000 kHz	823.99151 MHz	-27.58 dBm	-14.58 dB
824.000 MHz	826.000 MHz	100.000 kHz	824.22278 MHz	18.79 dBm	-11.21 dB

Date: 26.APR.2023 04:11:51

Highest Band Edge / 1 RB

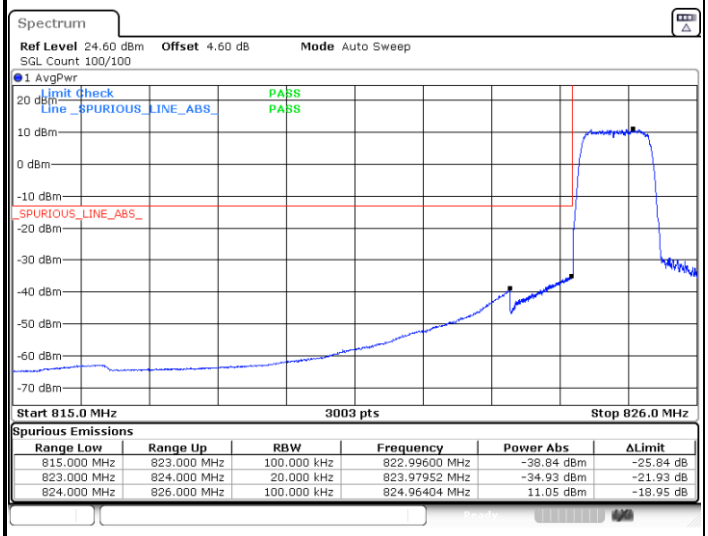


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
847.000 MHz	849.000 MHz	100.000 kHz	848.74326 MHz	19.60 dBm	-10.40 dB
849.000 MHz	850.000 MHz	20.000 kHz	849.00849 MHz	-27.65 dBm	-14.65 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.58442 MHz	-44.97 dBm	-31.97 dB

Date: 26.APR.2023 04:22:21

Lowest Band Edge / Full RB

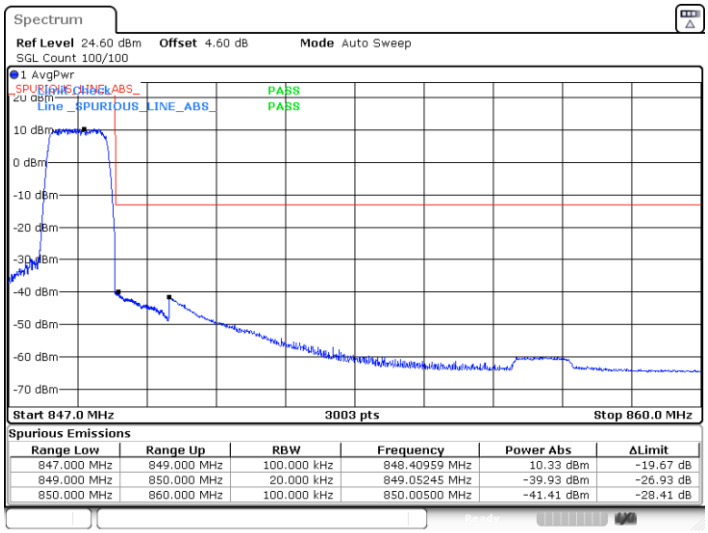


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.99600 MHz	-38.84 dBm	-25.84 dB
823.000 MHz	824.000 MHz	20.000 kHz	823.97952 MHz	-34.93 dBm	-21.93 dB
824.000 MHz	826.000 MHz	100.000 kHz	824.96404 MHz	11.05 dBm	-18.95 dB

Date: 26.APR.2023 04:15:42

Highest Band Edge / Full RB



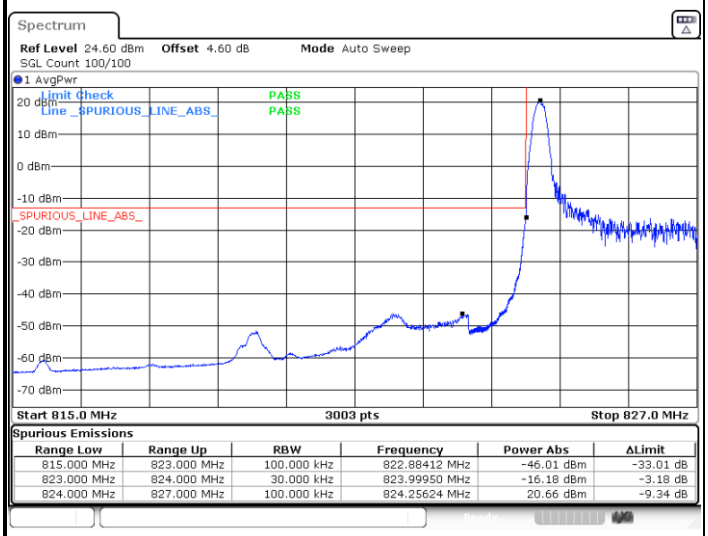
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
847.000 MHz	849.000 MHz	100.000 kHz	848.40959 MHz	10.33 dBm	-19.67 dB
849.000 MHz	850.000 MHz	20.000 kHz	849.05245 MHz	-39.93 dBm	-26.93 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.00500 MHz	-41.41 dBm	-28.41 dB

Date: 26.APR.2023 04:26:11

LTE Band 5 / 3MHz / QPSK

Lowest Band Edge / 1RB

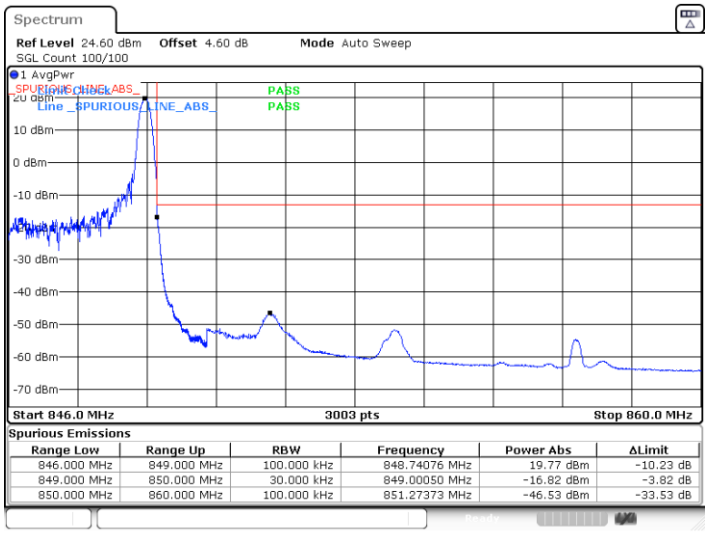


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.88412 MHz	-46.01 dBm	-33.01 dB
823.000 MHz	824.000 MHz	30.000 kHz	823.99950 MHz	-16.18 dBm	-3.18 dB
824.000 MHz	827.000 MHz	100.000 kHz	824.25624 MHz	20.66 dBm	-9.34 dB

Date: 26.APR.2023 04:29:32

Highest Band Edge / 1 RB

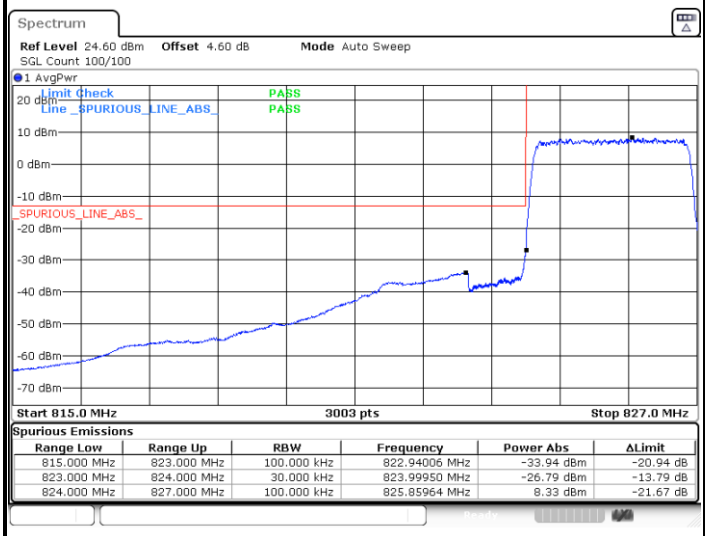


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
846.000 MHz	849.000 MHz	100.000 kHz	848.74076 MHz	19.77 dBm	-10.23 dB
849.000 MHz	850.000 MHz	30.000 kHz	849.00050 MHz	-16.82 dBm	-3.82 dB
850.000 MHz	860.000 MHz	100.000 kHz	851.27373 MHz	-46.53 dBm	-33.53 dB

Date: 26.APR.2023 04:40:06

Lowest Band Edge / Full RB

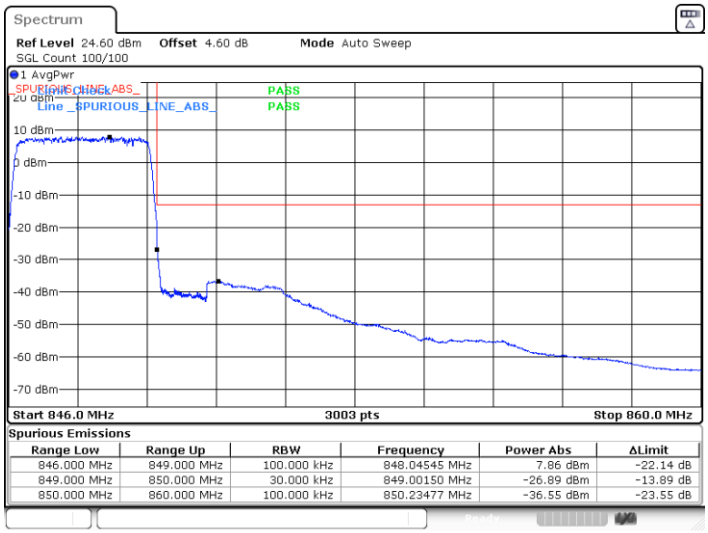


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.94006 MHz	-33.94 dBm	-20.94 dB
823.000 MHz	824.000 MHz	30.000 kHz	823.99950 MHz	-26.79 dBm	-13.79 dB
824.000 MHz	827.000 MHz	100.000 kHz	825.85964 MHz	8.33 dBm	-21.67 dB

Date: 26.APR.2023 04:33:21

Highest Band Edge / Full RB



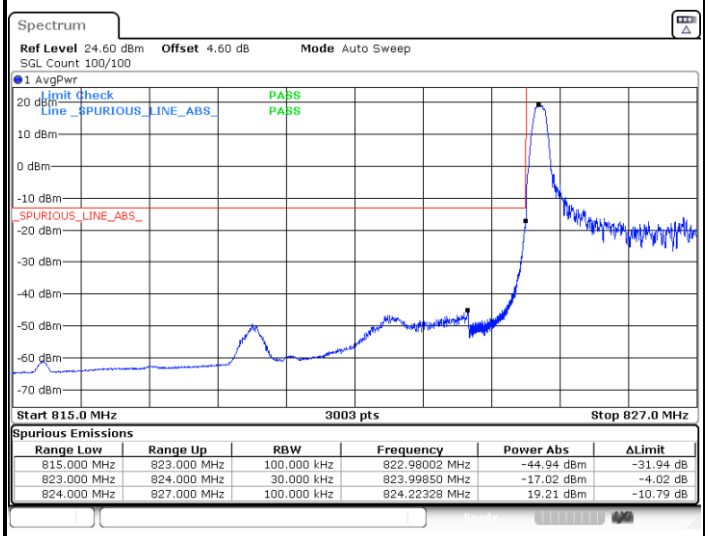
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
846.000 MHz	849.000 MHz	100.000 kHz	848.04545 MHz	7.86 dBm	-22.14 dB
849.000 MHz	850.000 MHz	30.000 kHz	849.00150 MHz	-26.89 dBm	-13.89 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.23477 MHz	-36.55 dBm	-23.55 dB

Date: 26.APR.2023 04:43:55

LTE Band 5 / 3MHz / 16QAM

Lowest Band Edge / 1 RB

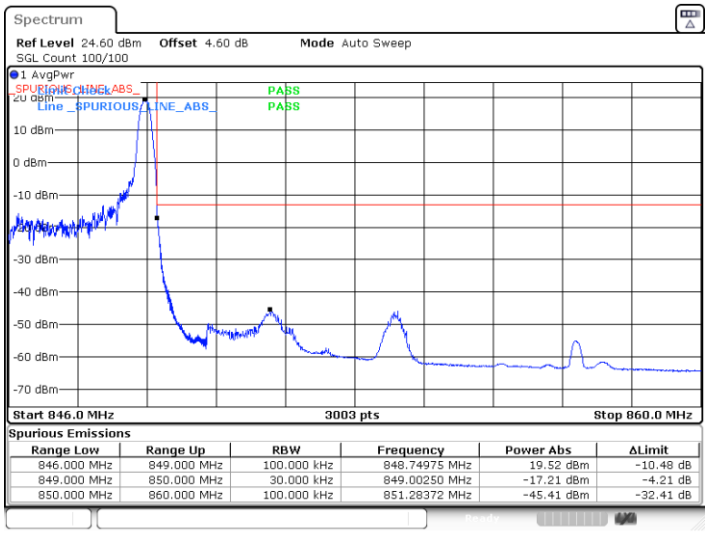


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.98002 MHz	-44.94 dBm	-31.94 dB
823.000 MHz	824.000 MHz	30.000 kHz	823.99850 MHz	-17.02 dBm	-4.02 dB
824.000 MHz	827.000 MHz	100.000 kHz	824.22328 MHz	19.21 dBm	-10.79 dB

Date: 26.APR.2023 04:31:27

Highest Band Edge /1 RB

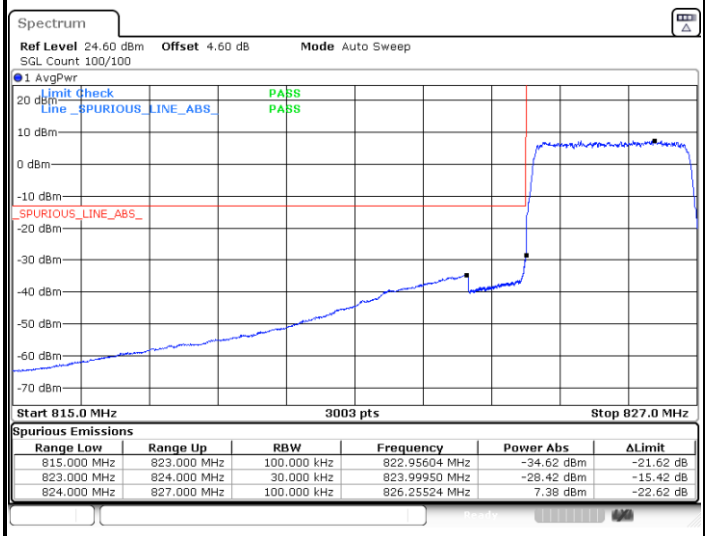


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
846.000 MHz	849.000 MHz	100.000 kHz	848.74975 MHz	19.52 dBm	-10.48 dB
849.000 MHz	850.000 MHz	30.000 kHz	849.00250 MHz	-17.21 dBm	-4.21 dB
850.000 MHz	860.000 MHz	100.000 kHz	851.28372 MHz	-45.41 dBm	-32.41 dB

Date: 26.APR.2023 04:42:00

Lowest Band Edge / Full RB

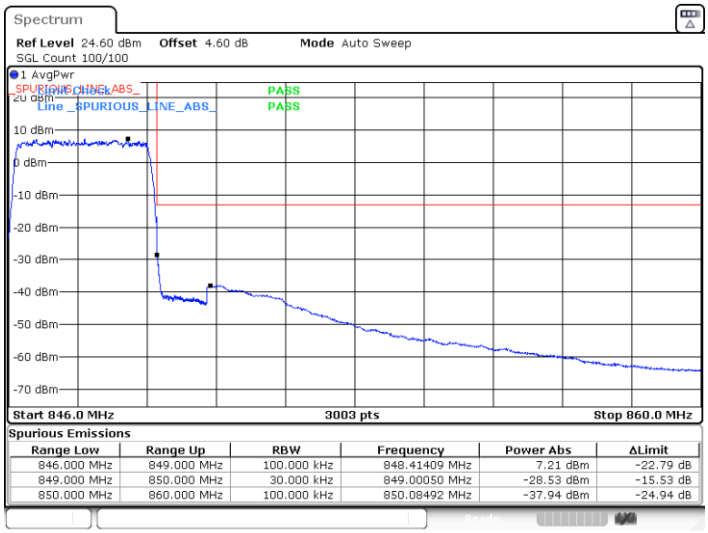


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.95604 MHz	-34.62 dBm	-21.62 dB
823.000 MHz	824.000 MHz	30.000 kHz	823.99950 MHz	-28.42 dBm	-15.42 dB
824.000 MHz	827.000 MHz	100.000 kHz	826.25524 MHz	7.38 dBm	-22.62 dB

Date: 26.APR.2023 04:35:15

Highest Band Edge / Full RB



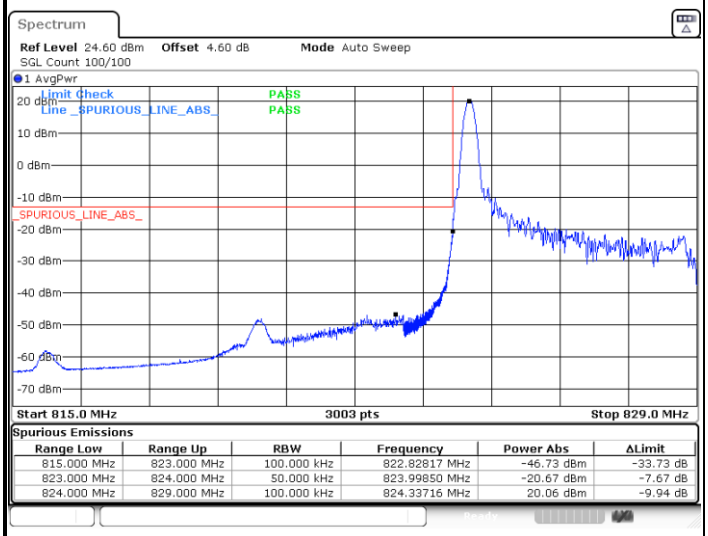
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
846.000 MHz	849.000 MHz	100.000 kHz	848.41409 MHz	7.21 dBm	-22.79 dB
849.000 MHz	850.000 MHz	30.000 kHz	849.00050 MHz	-28.53 dBm	-15.53 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.08492 MHz	-37.94 dBm	-24.94 dB

Date: 26.APR.2023 04:45:49

LTE Band 5 / 5MHz / QPSK

Lowest Band Edge / 1 RB

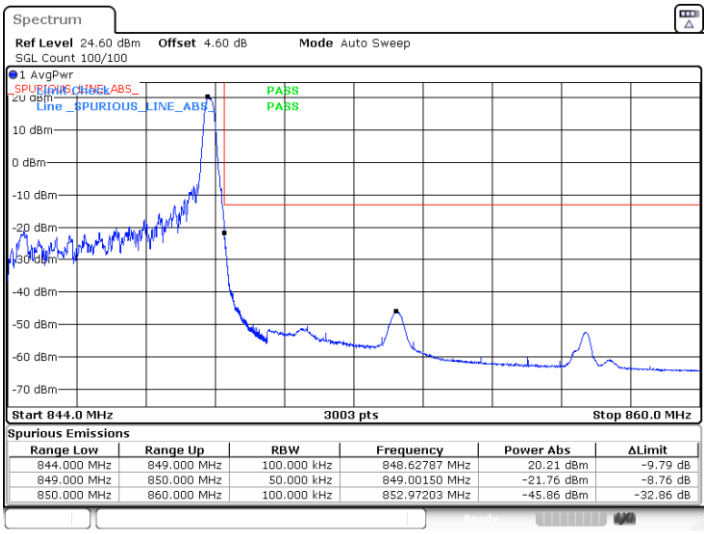


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.82817 MHz	-46.73 dBm	-33.73 dB
823.000 MHz	824.000 MHz	50.000 kHz	823.99850 MHz	-20.67 dBm	-7.67 dB
824.000 MHz	829.000 MHz	100.000 kHz	824.33716 MHz	20.06 dBm	-9.94 dB

Date: 26.APR.2023 04:49:13

Highest Band Edge / 1 RB

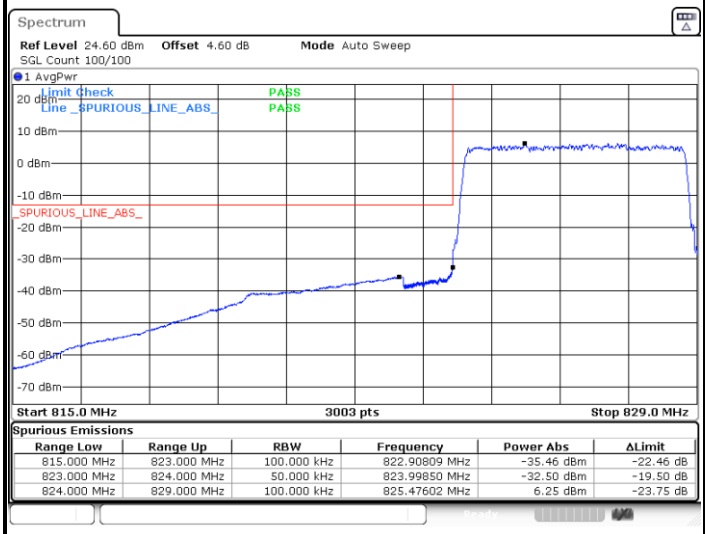


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
844.000 MHz	849.000 MHz	100.000 kHz	848.62787 MHz	20.21 dBm	-9.79 dB
849.000 MHz	850.000 MHz	50.000 kHz	849.00150 MHz	-21.76 dBm	-8.76 dB
850.000 MHz	860.000 MHz	100.000 kHz	852.97203 MHz	-45.86 dBm	-32.86 dB

Date: 26.APR.2023 04:59:48

Lowest Band Edge / Full RB

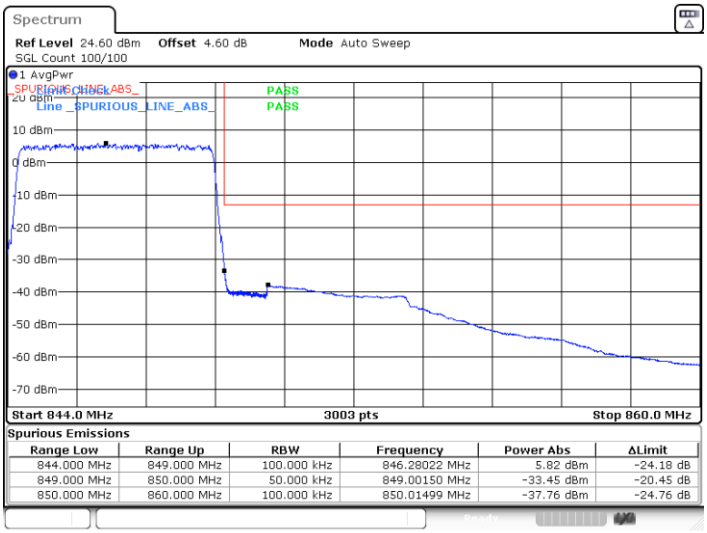


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.90809 MHz	-35.46 dBm	-22.46 dB
823.000 MHz	824.000 MHz	50.000 kHz	823.99850 MHz	-32.50 dBm	-19.50 dB
824.000 MHz	829.000 MHz	100.000 kHz	825.47602 MHz	6.25 dBm	-23.75 dB

Date: 26.APR.2023 04:53:02

Highest Band Edge / Full RB



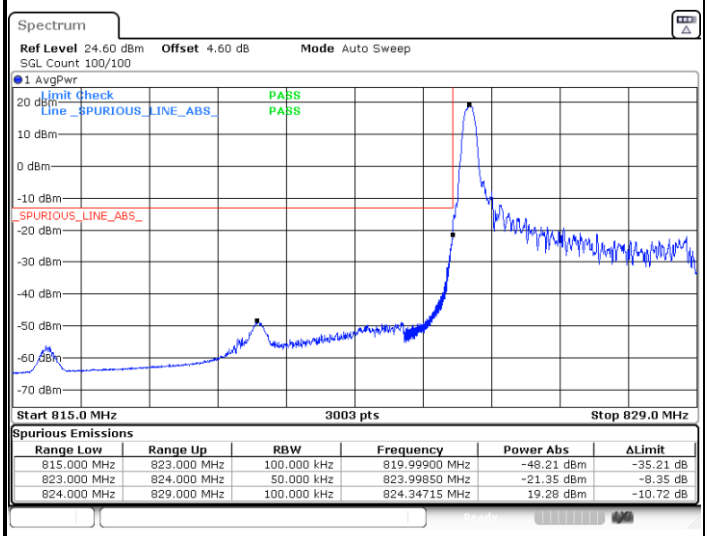
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
844.000 MHz	849.000 MHz	100.000 kHz	846.28022 MHz	5.82 dBm	-24.18 dB
849.000 MHz	850.000 MHz	50.000 kHz	849.00150 MHz	-33.45 dBm	-20.45 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.01499 MHz	-37.76 dBm	-24.76 dB

Date: 26.APR.2023 05:03:36

LTE Band 5 / 5MHz / 16QAM

Lowest Band Edge / 1RB

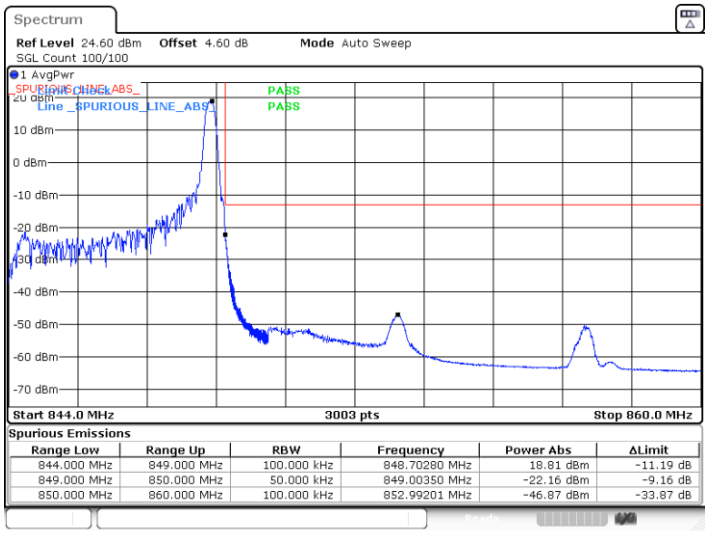


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	819.99900 MHz	-48.21 dBm	-35.21 dB
823.000 MHz	824.000 MHz	50.000 kHz	823.99850 MHz	-21.35 dBm	-8.35 dB
824.000 MHz	829.000 MHz	100.000 kHz	824.34715 MHz	19.28 dBm	-10.72 dB

Date: 26.APR.2023 04:51:07

Highest Band Edge / 1 RB

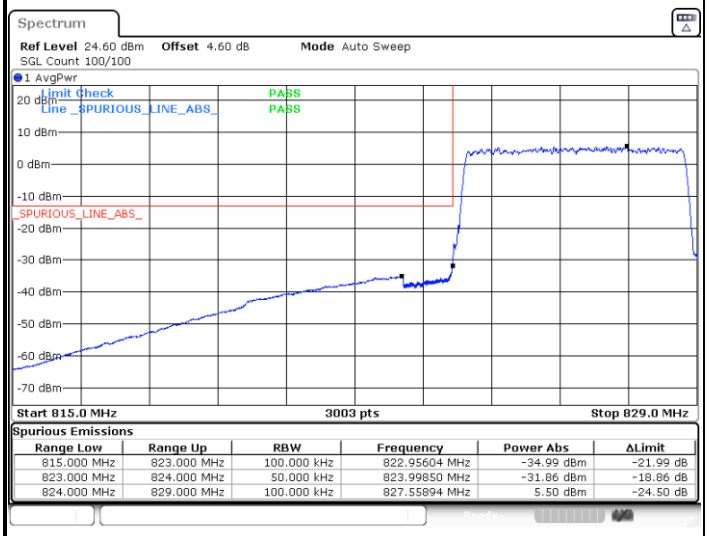


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
844.000 MHz	849.000 MHz	100.000 kHz	848.70280 MHz	18.81 dBm	-11.19 dB
849.000 MHz	850.000 MHz	50.000 kHz	849.00350 MHz	-22.16 dBm	-9.16 dB
850.000 MHz	860.000 MHz	100.000 kHz	852.99201 MHz	-46.87 dBm	-33.87 dB

Date: 26.APR.2023 05:01:42

Lowest Band Edge / Full RB

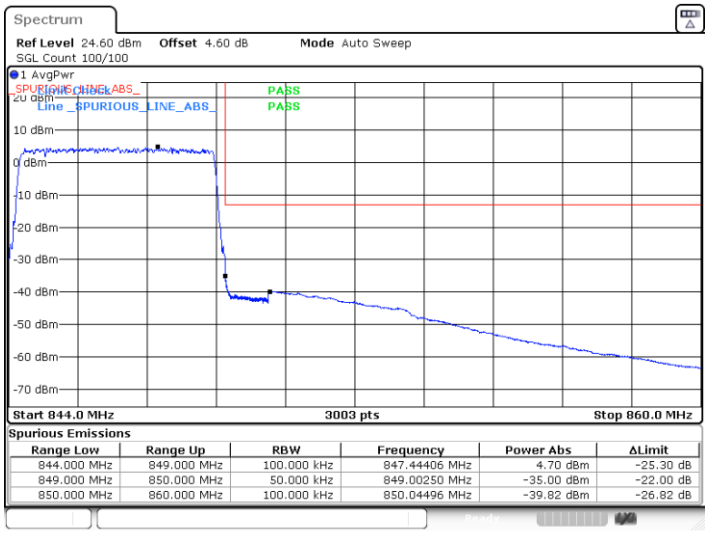


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.95604 MHz	-34.99 dBm	-21.99 dB
823.000 MHz	824.000 MHz	50.000 kHz	823.99850 MHz	-31.86 dBm	-18.86 dB
824.000 MHz	829.000 MHz	100.000 kHz	827.55894 MHz	5.50 dBm	-24.50 dB

Date: 26.APR.2023 04:54:56

Highest Band Edge / Full RB



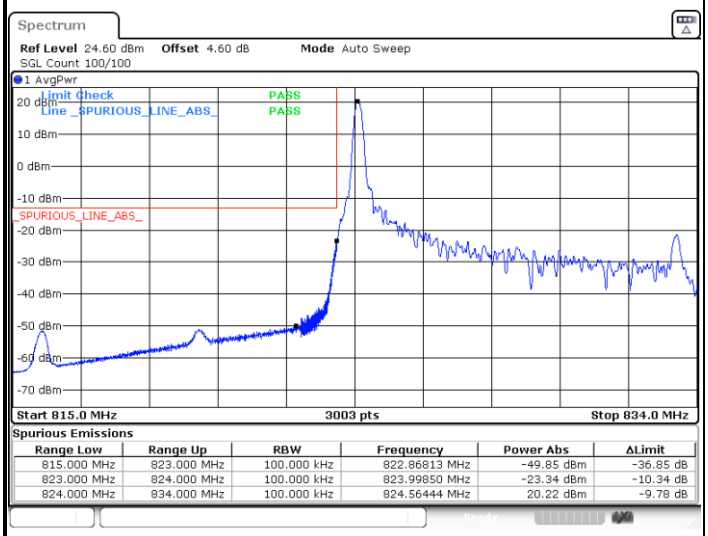
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
844.000 MHz	849.000 MHz	100.000 kHz	847.44406 MHz	4.70 dBm	-25.30 dB
849.000 MHz	850.000 MHz	50.000 kHz	849.00250 MHz	-35.00 dBm	-22.00 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.04496 MHz	-39.82 dBm	-26.82 dB

Date: 26.APR.2023 05:05:31

LTE Band 5 / 10MHz / QPSK

Lowest Band Edge / 1 RB

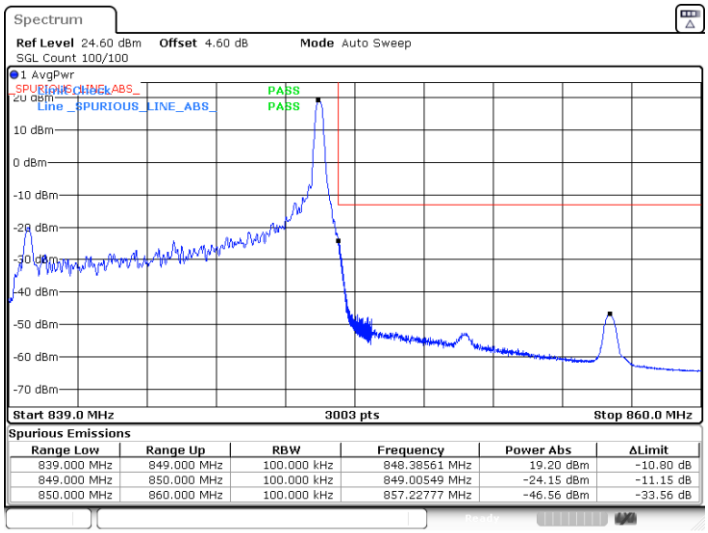


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.86813 MHz	-49.85 dBm	-36.85 dB
823.000 MHz	824.000 MHz	100.000 kHz	823.99850 MHz	-23.34 dBm	-10.34 dB
824.000 MHz	834.000 MHz	100.000 kHz	824.56444 MHz	20.22 dBm	-9.78 dB

Date: 26.APR.2023 05:08:54

Highest Band Edge / 1 RB

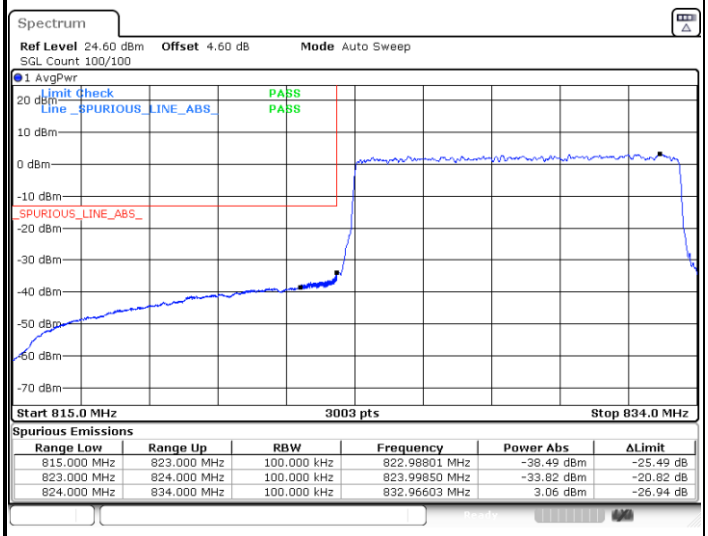


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
839.000 MHz	849.000 MHz	100.000 kHz	848.38561 MHz	19.20 dBm	-10.80 dB
849.000 MHz	850.000 MHz	100.000 kHz	849.00549 MHz	-24.15 dBm	-11.15 dB
850.000 MHz	860.000 MHz	100.000 kHz	857.22777 MHz	-46.56 dBm	-33.56 dB

Date: 26.APR.2023 05:19:28

Lowest Band Edge / Full RB

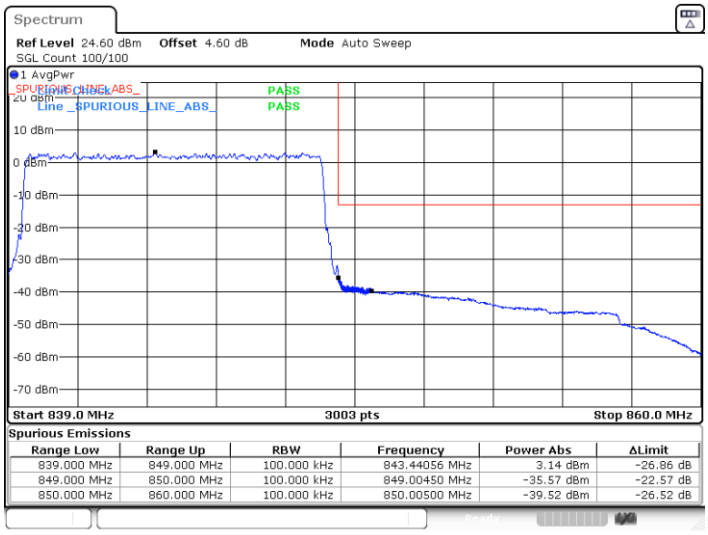


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.98801 MHz	-38.49 dBm	-25.49 dB
823.000 MHz	824.000 MHz	100.000 kHz	823.99850 MHz	-33.82 dBm	-20.82 dB
824.000 MHz	834.000 MHz	100.000 kHz	832.96603 MHz	3.06 dBm	-26.94 dB

Date: 26.APR.2023 05:12:43

Highest Band Edge / Full RB



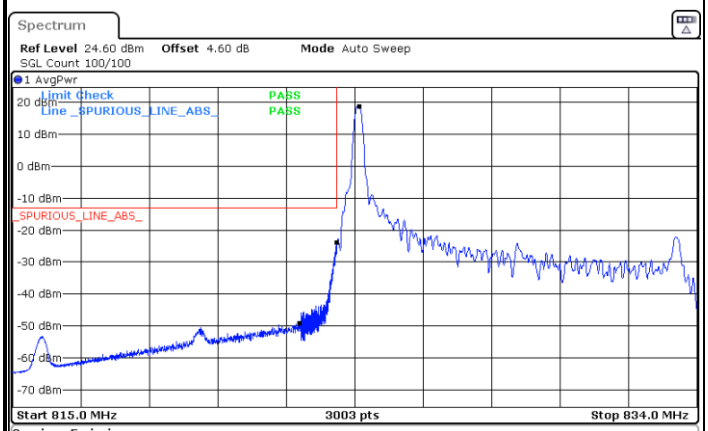
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
839.000 MHz	849.000 MHz	100.000 kHz	843.44056 MHz	3.14 dBm	-26.86 dB
849.000 MHz	850.000 MHz	100.000 kHz	849.00450 MHz	-35.57 dBm	-22.57 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.00500 MHz	-39.52 dBm	-26.52 dB

Date: 26.APR.2023 05:25:01

LTE Band 5 / 10MHz / 16QAM

Lowest Band Edge / 1 RB

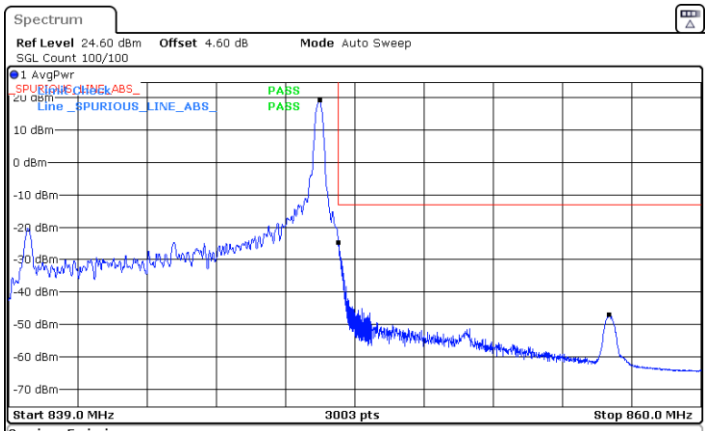


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.97203 MHz	-49.03 dBm	-36.03 dB
823.000 MHz	824.000 MHz	100.000 kHz	823.99850 MHz	-23.91 dBm	-10.91 dB
824.000 MHz	834.000 MHz	100.000 kHz	824.61439 MHz	18.63 dBm	-11.37 dB

Date: 26.APR.2023 05:10:48

Highest Band Edge / 1 RB

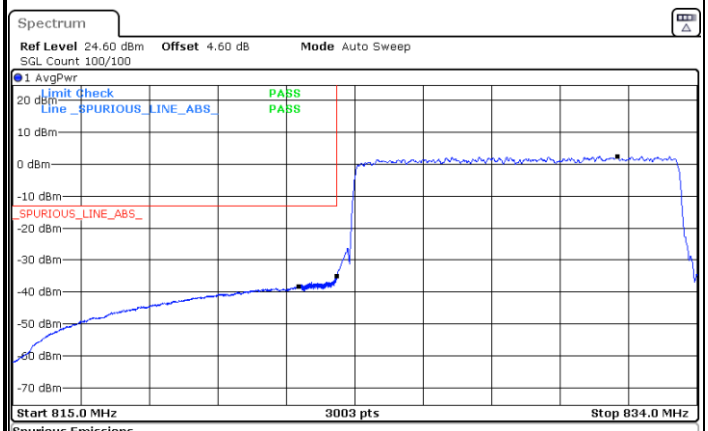


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
839.000 MHz	849.000 MHz	100.000 kHz	848.42557 MHz	19.09 dBm	-10.91 dB
849.000 MHz	850.000 MHz	100.000 kHz	849.00350 MHz	-24.67 dBm	-11.67 dB
850.000 MHz	860.000 MHz	100.000 kHz	857.19780 MHz	-46.92 dBm	-33.92 dB

Date: 26.APR.2023 05:23:08

Lowest Band Edge / Full RB

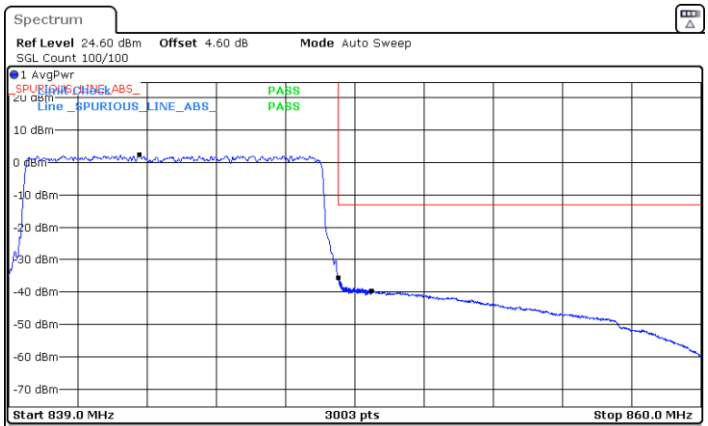


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.94006 MHz	-38.38 dBm	-25.38 dB
823.000 MHz	824.000 MHz	100.000 kHz	823.99950 MHz	-34.89 dBm	-21.89 dB
824.000 MHz	834.000 MHz	100.000 kHz	831.78721 MHz	2.34 dBm	-27.66 dB

Date: 26.APR.2023 05:14:37

Highest Band Edge / Full RB



Spurious Emissions

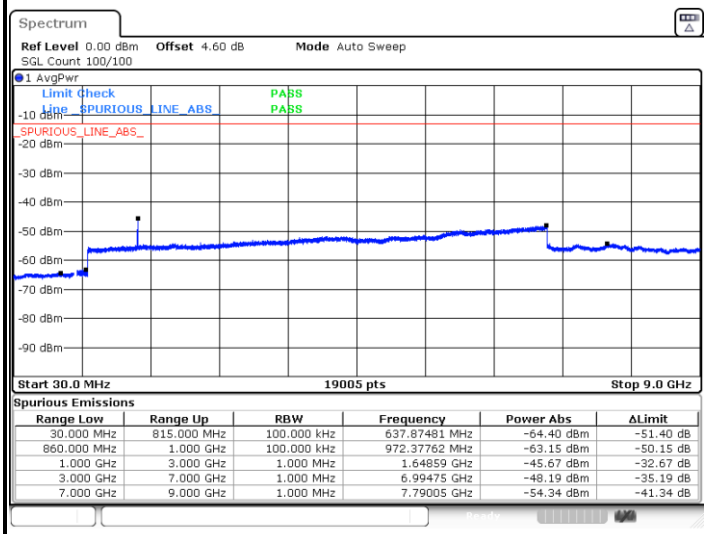
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
839.000 MHz	849.000 MHz	100.000 kHz	842.95105 MHz	2.38 dBm	-27.62 dB
849.000 MHz	850.000 MHz	100.000 kHz	849.00350 MHz	-35.68 dBm	-22.68 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.00500 MHz	-39.70 dBm	-26.70 dB

Date: 26.APR.2023 05:26:56

Conducted Spurious Emission

LTE Band 5 / 1.4MHz

Lowest Channel / QPSK

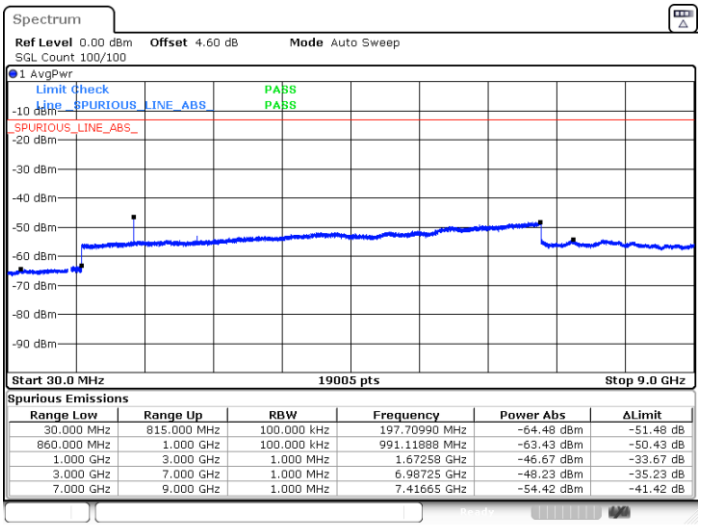


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	637.87481 MHz	-64.40 dBm	-51.40 dB
860.000 MHz	1.000 GHz	100.000 kHz	972.37762 MHz	-63.15 dBm	-50.15 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.64859 GHz	-45.67 dBm	-32.67 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99475 GHz	-48.19 dBm	-35.19 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.79005 GHz	-54.34 dBm	-41.34 dB

Date: 26.APR.2023 04:07:59

Middle Channel / QPSK

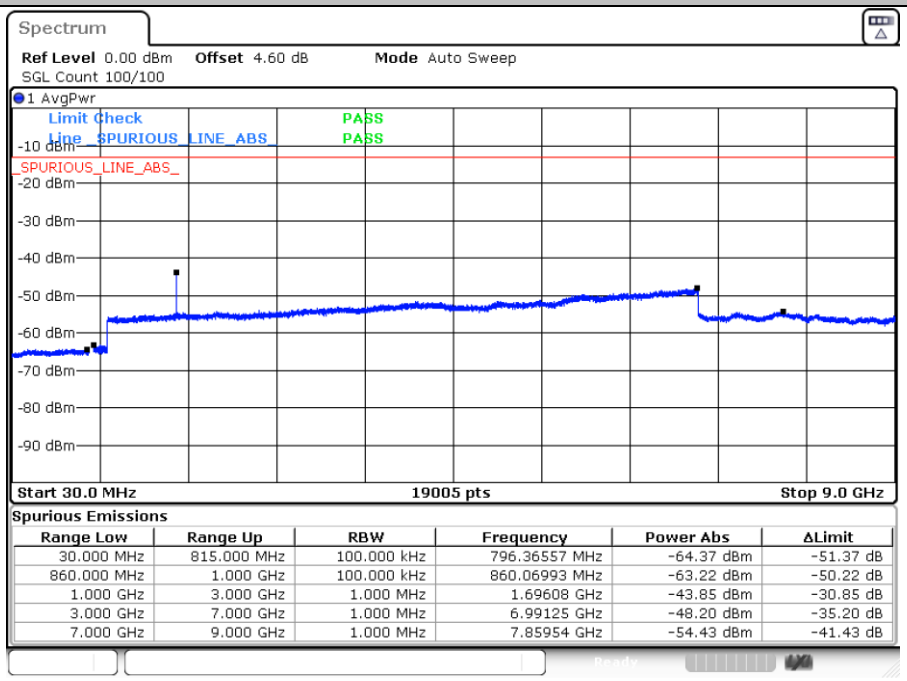


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	197.70990 MHz	-64.48 dBm	-51.48 dB
860.000 MHz	1.000 GHz	100.000 kHz	991.11888 MHz	-63.43 dBm	-50.43 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.67258 GHz	-46.67 dBm	-33.67 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98725 GHz	-48.23 dBm	-35.23 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.41665 GHz	-54.42 dBm	-41.42 dB

Date: 26.APR.2023 04:17:07

Highest Channel / QPSK



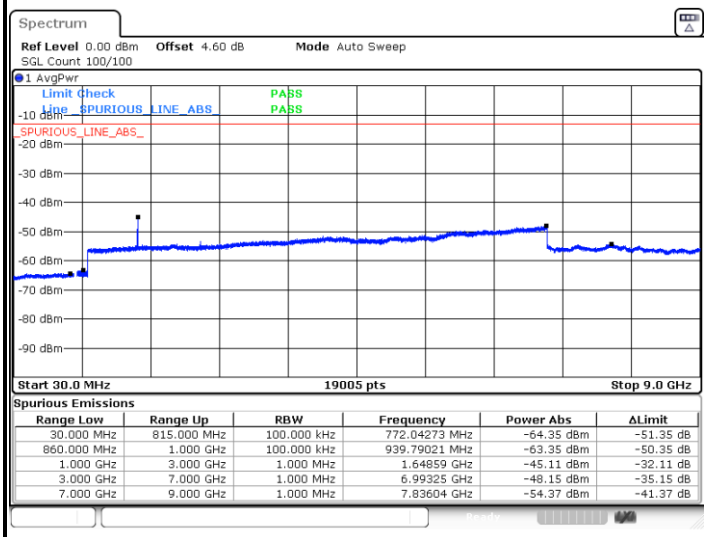
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	796.36557 MHz	-64.37 dBm	-51.37 dB
860.000 MHz	1.000 GHz	100.000 kHz	860.06993 MHz	-63.22 dBm	-50.22 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.69608 GHz	-43.85 dBm	-30.85 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99125 GHz	-48.20 dBm	-35.20 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.85954 GHz	-54.43 dBm	-41.43 dB

Date: 26.APR.2023 04:18:33

LTE Band 5 / 3MHz

Lowest Channel / QPSK

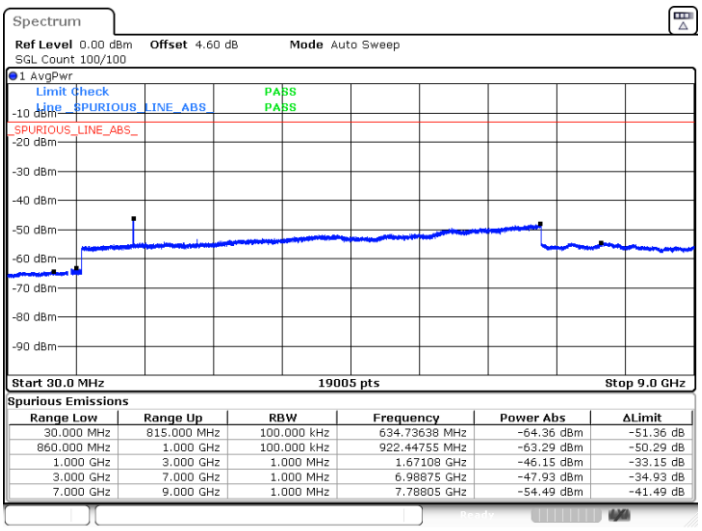


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	772.04273 MHz	-64.35 dBm	-51.35 dB
860.000 MHz	1.000 GHz	100.000 kHz	939.79021 MHz	-63.35 dBm	-50.35 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.64859 GHz	-45.11 dBm	-32.11 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99325 GHz	-48.15 dBm	-35.15 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.83604 GHz	-54.37 dBm	-41.37 dB

Date: 26.APR.2023 04:27:38

Middle Channel / QPSK

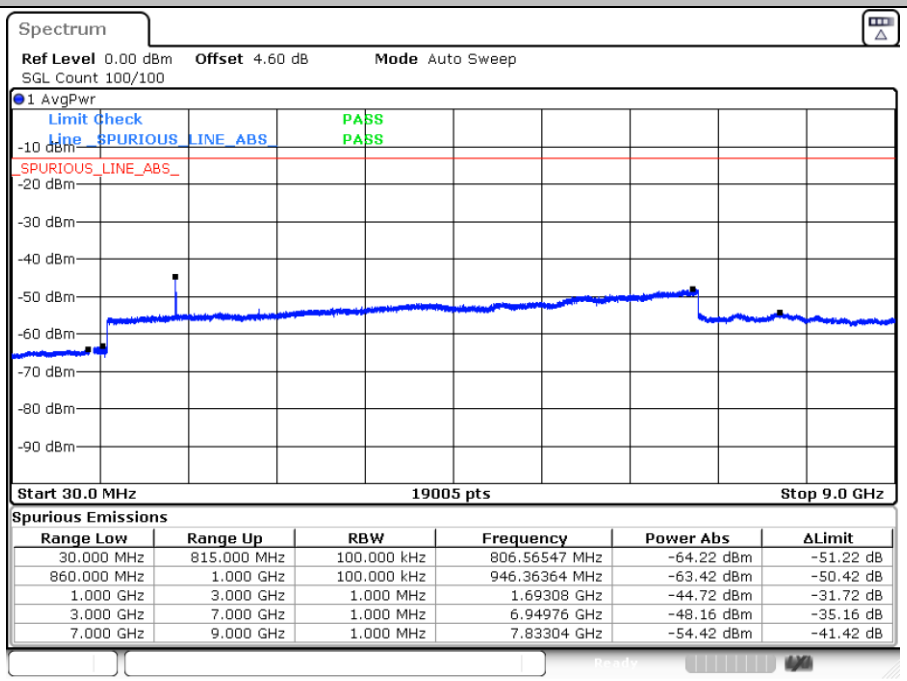


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	634.73638 MHz	-64.36 dBm	-51.36 dB
860.000 MHz	1.000 GHz	100.000 kHz	922.44755 MHz	-63.29 dBm	-50.29 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.67108 GHz	-46.15 dBm	-33.15 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98875 GHz	-47.93 dBm	-34.93 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.78805 GHz	-54.49 dBm	-41.49 dB

Date: 26.APR.2023 04:36:42

Highest Channel / QPSK



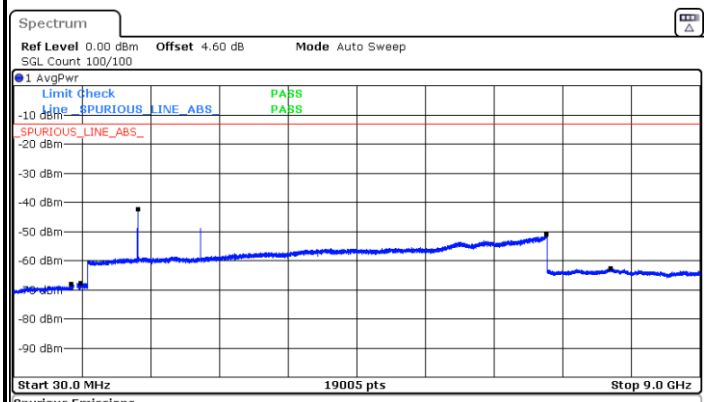
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	806.56547 MHz	-64.22 dBm	-51.22 dB
860.000 MHz	1.000 GHz	100.000 kHz	946.36364 MHz	-63.42 dBm	-50.42 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.69308 GHz	-44.72 dBm	-31.72 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.94976 GHz	-48.16 dBm	-35.16 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.83304 GHz	-54.42 dBm	-41.42 dB

Date: 26.APR.2023 04:38:10

LTE Band 5 / 5MHz

Lowest Channel / QPSK

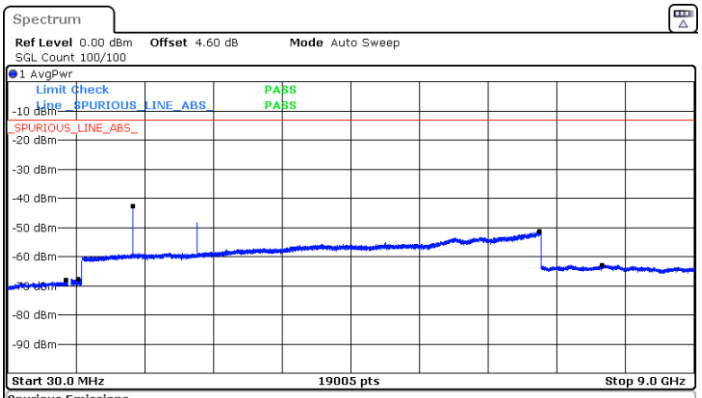


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	779.49650 MHz	-68.01 dBm	-55.01 dB
860.000 MHz	1.000 GHz	100.000 kHz	900.20979 MHz	-67.63 dBm	-54.63 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.64909 GHz	-42.39 dBm	-29.39 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98925 GHz	-51.14 dBm	-38.14 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.83054 GHz	-62.67 dBm	-49.67 dB

Date: 26.APR.2023 04:47:18

Middle Channel / QPSK

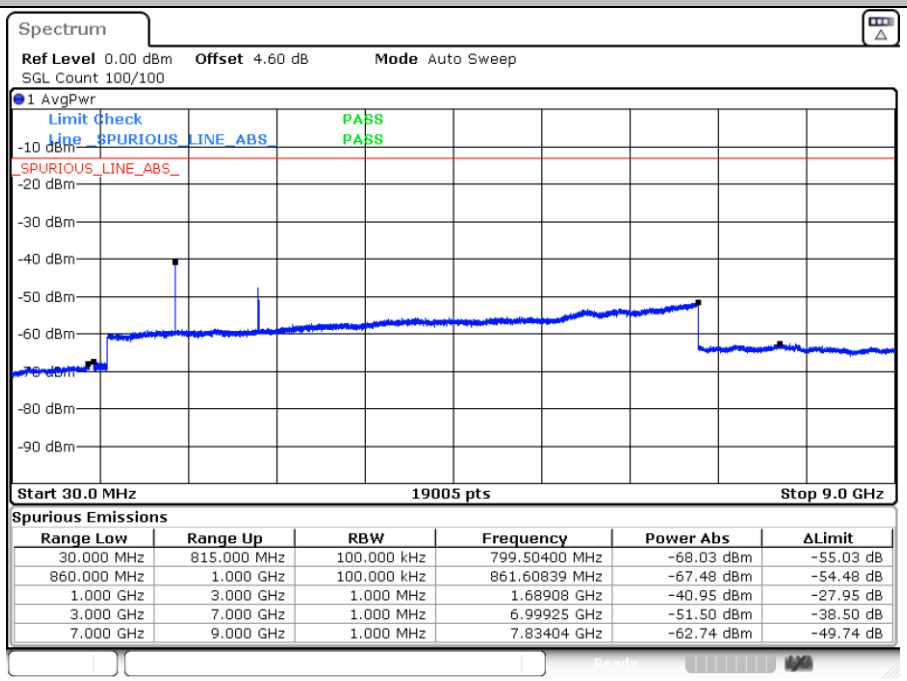


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	789.30410 MHz	-68.20 dBm	-55.20 dB
860.000 MHz	1.000 GHz	100.000 kHz	954.75524 MHz	-67.73 dBm	-54.73 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.66908 GHz	-42.56 dBm	-29.56 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98175 GHz	-51.37 dBm	-38.37 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.79755 GHz	-62.88 dBm	-49.88 dB

Date: 26.APR.2023 04:56:24

Highest Channel / QPSK



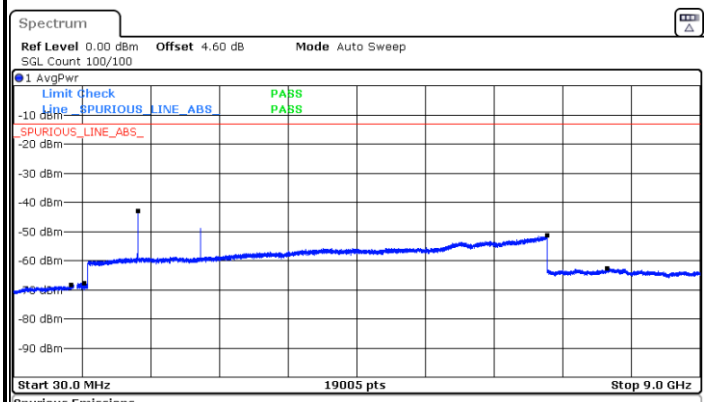
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	799.50400 MHz	-68.03 dBm	-55.03 dB
860.000 MHz	1.000 GHz	100.000 kHz	861.60839 MHz	-67.48 dBm	-54.48 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.68908 GHz	-40.95 dBm	-27.95 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99925 GHz	-51.50 dBm	-38.50 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.83404 GHz	-62.74 dBm	-49.74 dB

Date: 26.APR.2023 04:57:53

LTE Band 5 / 10MHz

Lowest Channel / QPSK

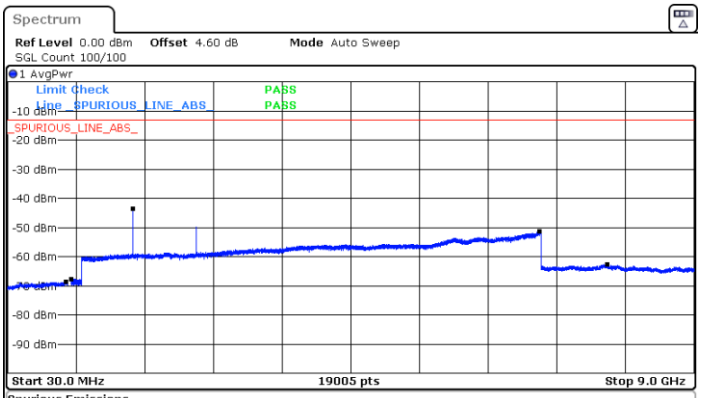


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	779.49650 MHz	-68.26 dBm	-55.26 dB
860.000 MHz	1.000 GHz	100.000 kHz	952.51748 MHz	-67.76 dBm	-54.76 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.64959 GHz	-43.10 dBm	-30.10 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99925 GHz	-51.42 dBm	-38.42 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.79005 GHz	-62.74 dBm	-49.74 dB

Date: 26.APR.2023 05:07:00

Middle Channel / QPSK

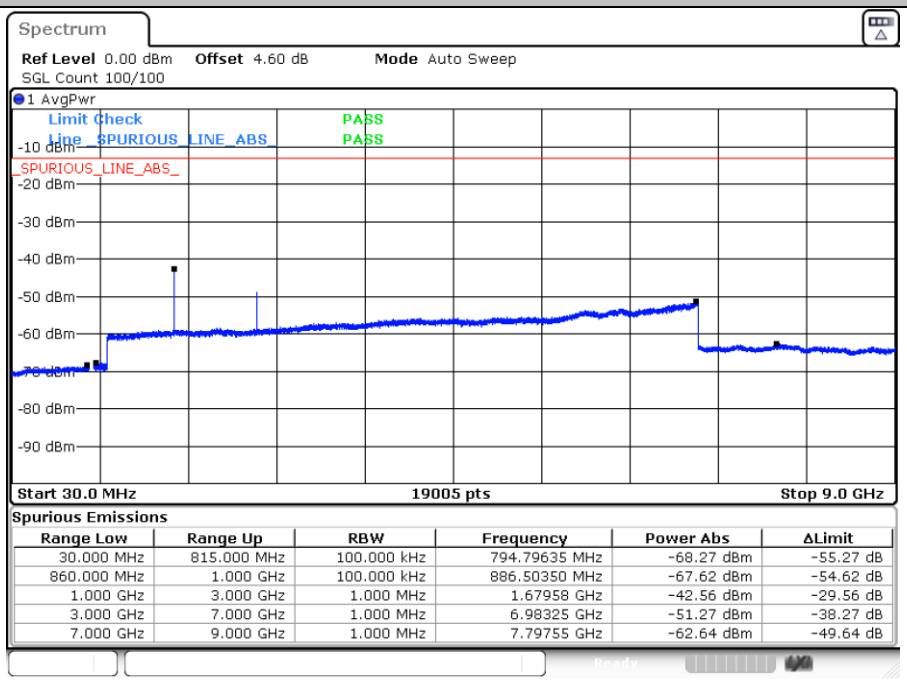


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	786.95027 MHz	-68.60 dBm	-55.60 dB
860.000 MHz	1.000 GHz	100.000 kHz	860.76923 MHz	-67.63 dBm	-54.63 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.66458 GHz	-43.48 dBm	-30.48 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.97575 GHz	-51.40 dBm	-38.40 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.86103 GHz	-62.73 dBm	-49.73 dB

Date: 26.APR.2023 05:16:04

Highest Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	794.79635 MHz	-68.27 dBm	-55.27 dB
860.000 MHz	1.000 GHz	100.000 kHz	886.50350 MHz	-67.62 dBm	-54.62 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.67958 GHz	-42.56 dBm	-29.56 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98325 GHz	-51.27 dBm	-38.27 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.79755 GHz	-62.64 dBm	-49.64 dB

Date: 26.APR.2023 05:17:32

Frequency Stability

Test Conditions		LTE Band 5 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	2.5PPM
		Deviation (ppm)	Result
50	Normal Voltage	0.0006	PASS
40	Normal Voltage	0.0018	
30	Normal Voltage	0.0085	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0099	
0	Normal Voltage	0.0000	
-10	Normal Voltage	0.0018	
-20	Normal Voltage	0.0071	
-30	Normal Voltage	0.0061	
20	Maximum Voltage	0.0017	
20	Normal Voltage	0.0013	
20	Battery End Point	0.0102	

Note:

1. Normal Voltage =3.91 V. ; Battery End Point (BEP) =3.4 V. ; Maximum Voltage =4.5 V.

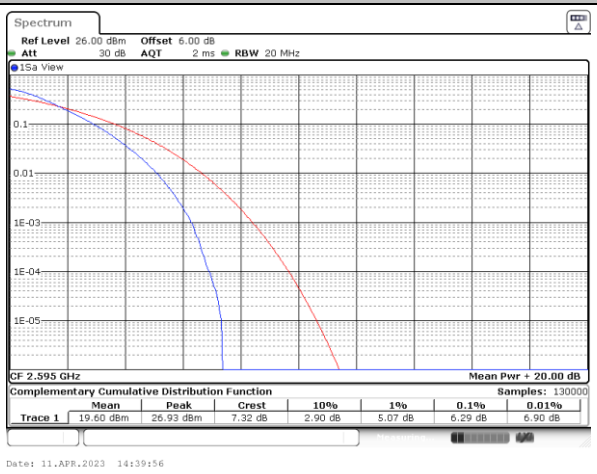
LTE Band 41

Peak-to-Average Ratio

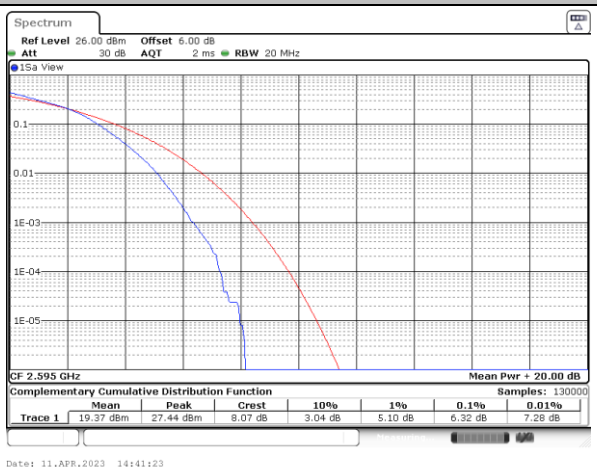
Mode	LTE Band 41 / 20MHz		
Mod.	QPSK	16QAM	Limit: 13dB
RB Size	Full RB	Full RB	Result
Middle CH	6.29	6.32	PASS

LTE Band 41 / 20MHz

Middle Channel / Full RB / QPSK

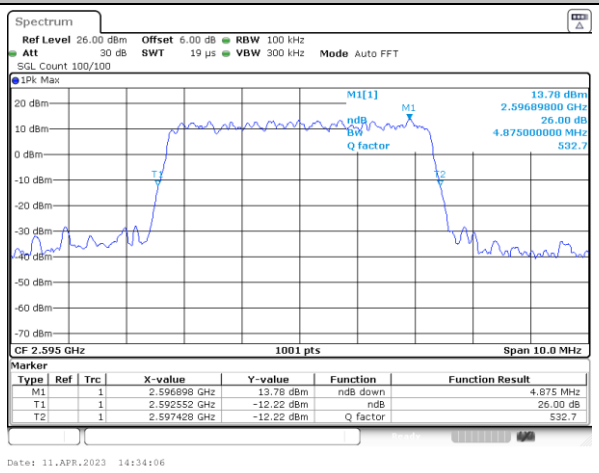
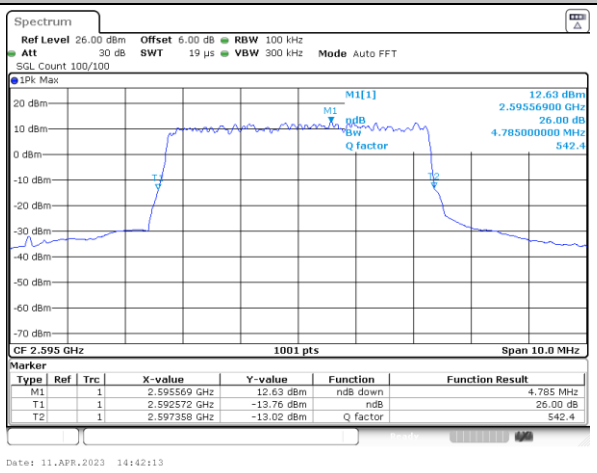


Middle Channel / Full RB / 16QAM



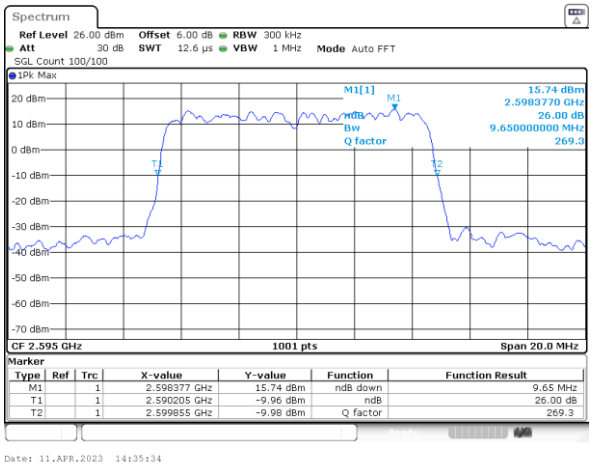
26dB Bandwidth

Mode	LTE Band 41 : 26dB BW(MHz)	
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	4.88	4.79
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.65	9.95
BW	15MHz	
Mod.	QPSK	16QAM
Middle CH	14.81	14.45
BW	20MHz	
Mod.	QPSK	16QAM
Middle CH	18.94	18.98

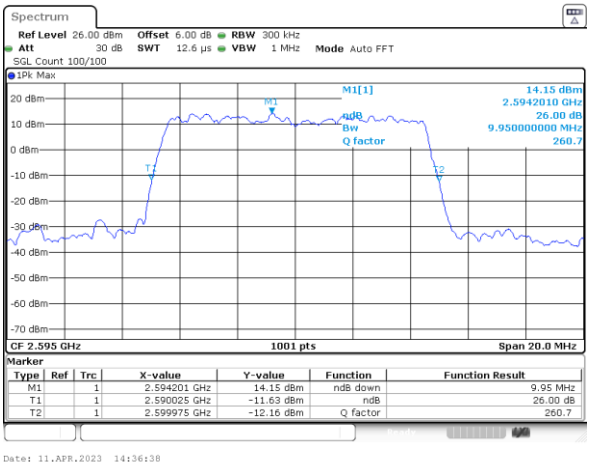
LTE Band 41	
Middle Channel / 5MHz / QPSK	Middle Channel / 5MHz / 16QAM
	

LTE Band 41

Middle Channel / 10MHz / QPSK

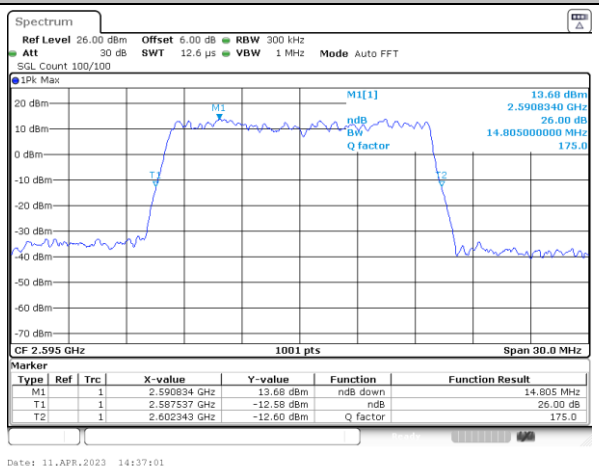


Middle Channel / 10MHz / 16QAM

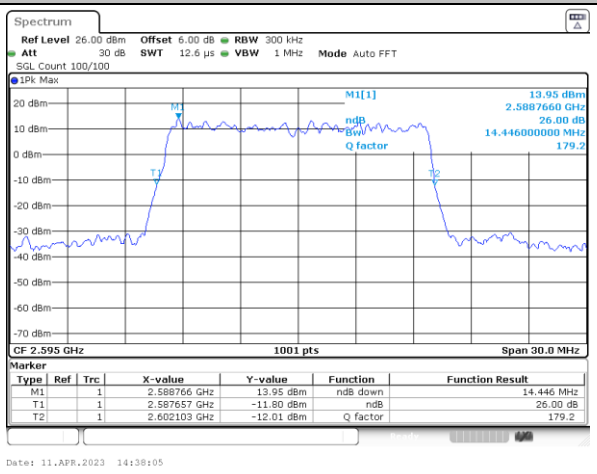


LTE Band 41

Middle Channel / 15MHz / QPSK

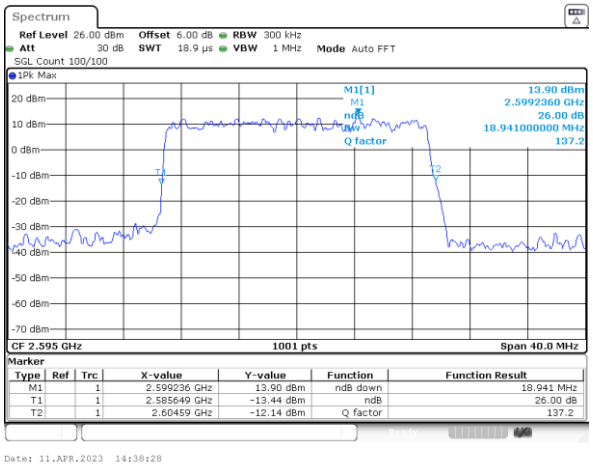


Middle Channel / 15MHz / 16QAM

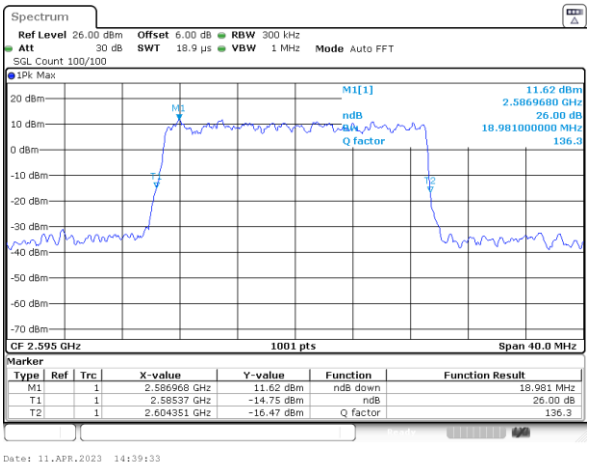


LTE Band 41

Middle Channel / 20MHz / QPSK



Middle Channel / 20MHz / 16QAM

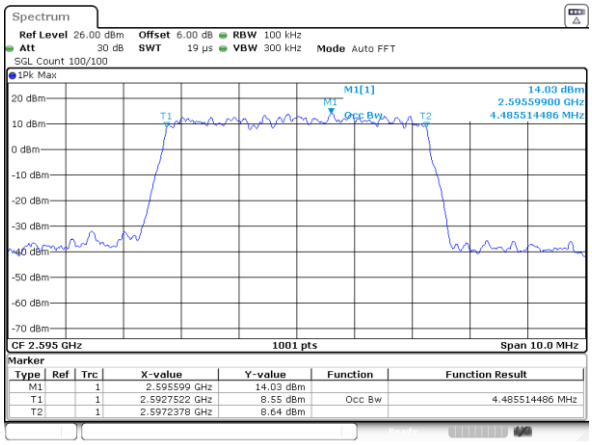


Occupied Bandwidth

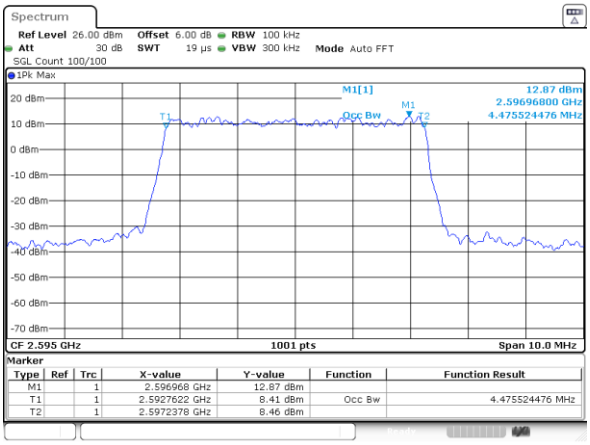
Mode	LTE Band 41 : 99%OBW(MHz)	
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	4.49	4.48
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.01	8.99
BW	15MHz	
Mod.	QPSK	16QAM
Middle CH	13.55	13.37
BW	20MHz	
Mod.	QPSK	16QAM
Middle CH	17.94	17.90

LTE Band 41

Middle Channel / 5MHz / QPSK

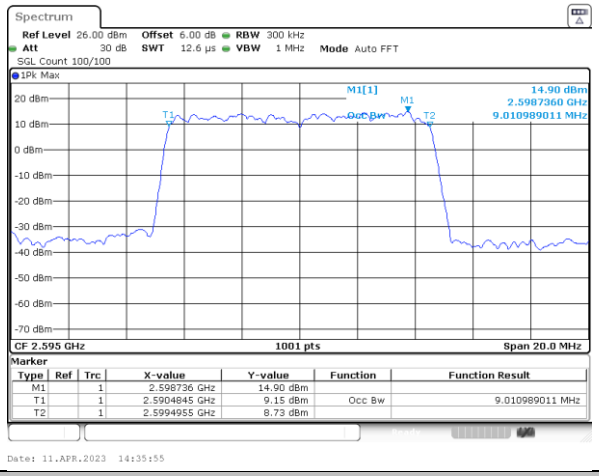


Middle Channel / 5MHz / 16QAM

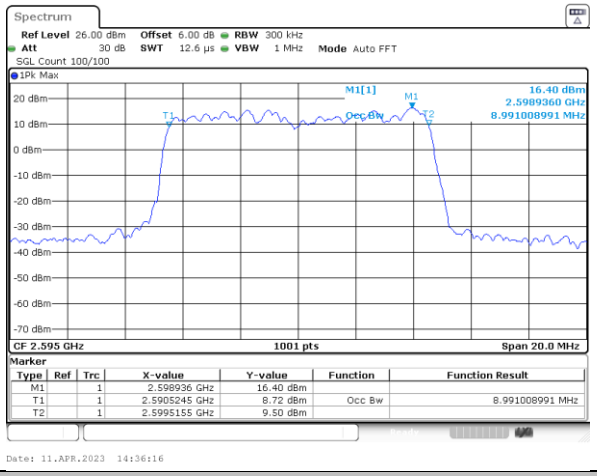


LTE Band 41

Middle Channel / 10MHz / QPSK

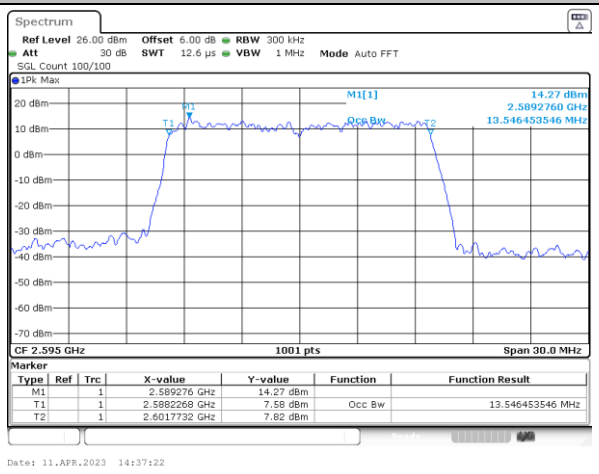


Middle Channel / 10MHz / 16QAM

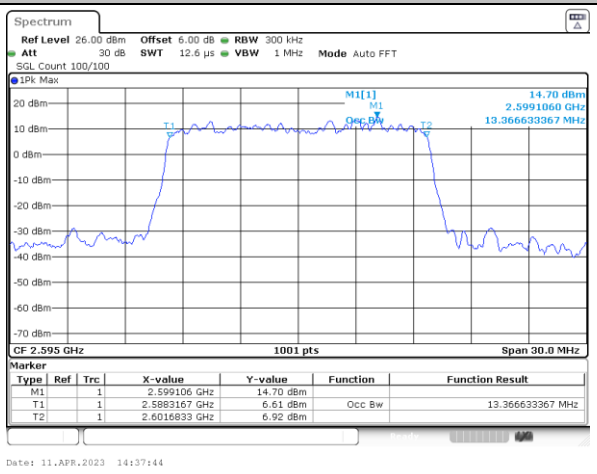


LTE Band 41

Middle Channel / 15MHz / QPSK

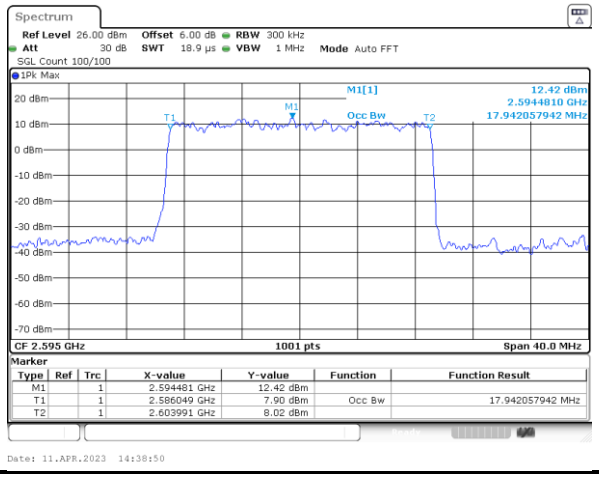


Middle Channel / 15MHz / 16QAM

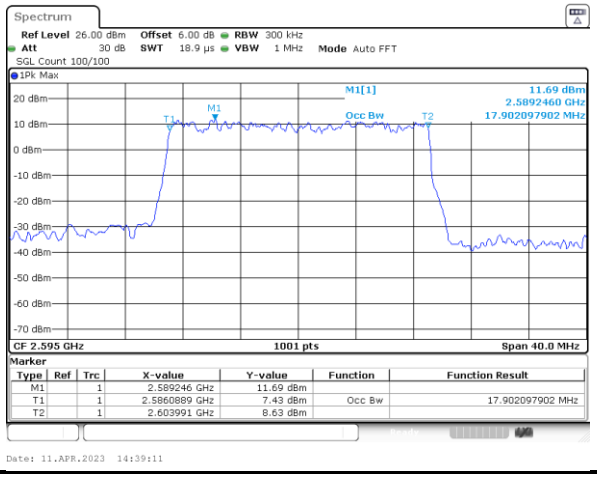


LTE Band 41

Middle Channel / 20MHz / QPSK



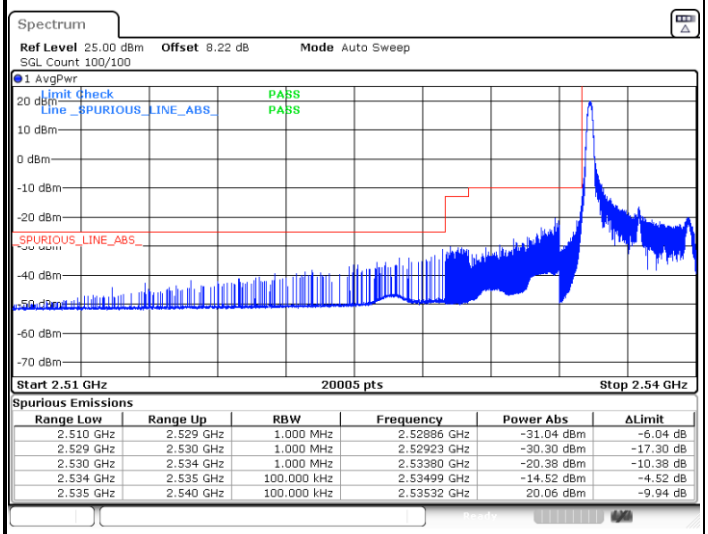
Middle Channel / 20MHz / 16QAM



Conducted Band Edge

LTE Band 41 / 5MHz / QPSK

Lowest Band Edge / 1 RB

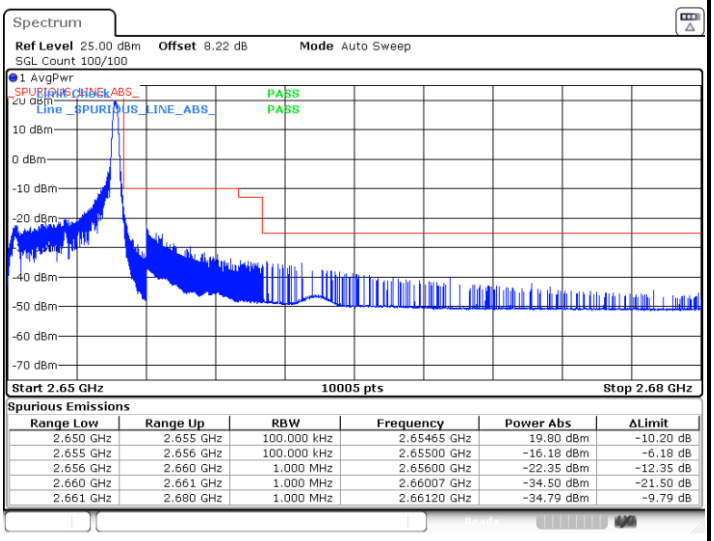


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.510 GHz	2.529 GHz	1.000 MHz	2.52886 GHz	-31.04 dBm	-6.04 dB
2.529 GHz	2.530 GHz	1.000 MHz	2.52923 GHz	-30.30 dBm	-17.30 dB
2.530 GHz	2.534 GHz	1.000 MHz	2.53380 GHz	-20.38 dBm	-10.38 dB
2.534 GHz	2.535 GHz	100.000 kHz	2.53499 GHz	-14.52 dBm	-4.52 dB
2.535 GHz	2.540 GHz	100.000 kHz	2.53532 GHz	20.06 dBm	-9.94 dB

Date: 11.APR.2023 13:22:43

Highest Band Edge / 1 RB

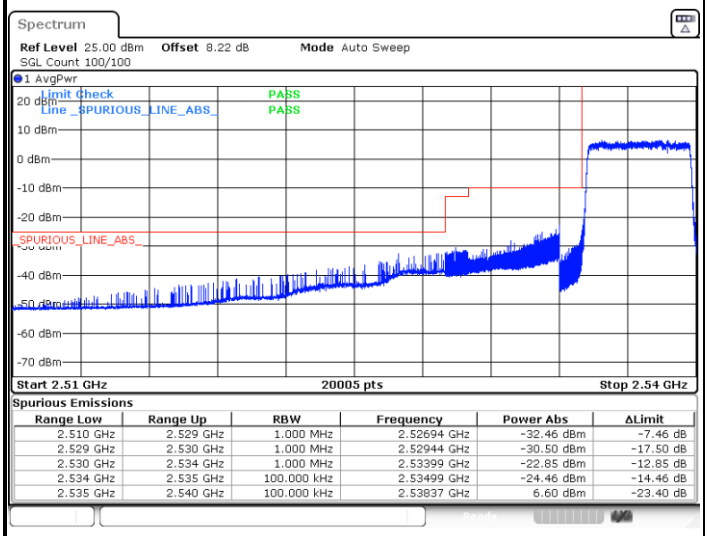


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.650 GHz	2.655 GHz	100.000 kHz	2.65465 GHz	19.80 dBm	-10.20 dB
2.655 GHz	2.656 GHz	100.000 kHz	2.65500 GHz	-16.18 dBm	-6.18 dB
2.656 GHz	2.660 GHz	1.000 MHz	2.65600 GHz	-22.35 dBm	-12.35 dB
2.660 GHz	2.661 GHz	1.000 MHz	2.66007 GHz	-34.50 dBm	-21.50 dB
2.661 GHz	2.680 GHz	1.000 MHz	2.66120 GHz	-34.79 dBm	-9.79 dB

Date: 11.APR.2023 14:52:18

Lowest Band Edge / Full RB

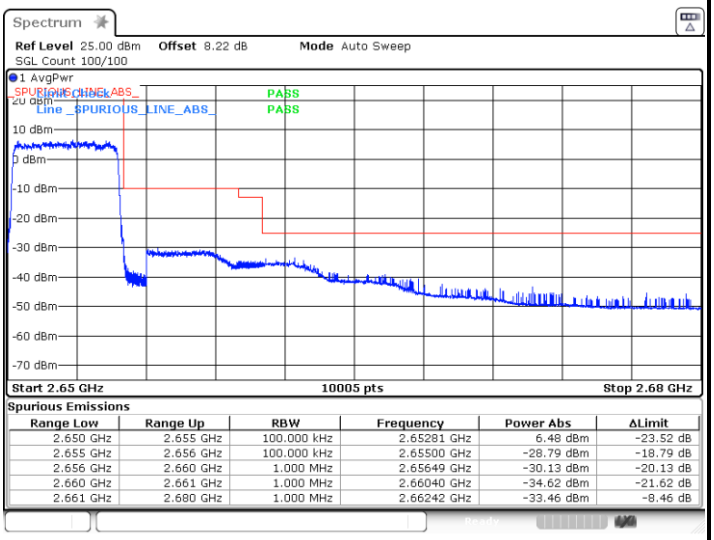


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.510 GHz	2.529 GHz	1.000 MHz	2.52694 GHz	-32.46 dBm	-7.46 dB
2.529 GHz	2.530 GHz	1.000 MHz	2.52944 GHz	-30.50 dBm	-17.50 dB
2.530 GHz	2.534 GHz	1.000 MHz	2.53399 GHz	-22.85 dBm	-12.85 dB
2.534 GHz	2.535 GHz	100.000 kHz	2.53499 GHz	-24.46 dBm	-14.46 dB
2.535 GHz	2.540 GHz	100.000 kHz	2.53837 GHz	6.60 dBm	-23.40 dB

Date: 11.APR.2023 13:25:27

Highest Band Edge / Full RB



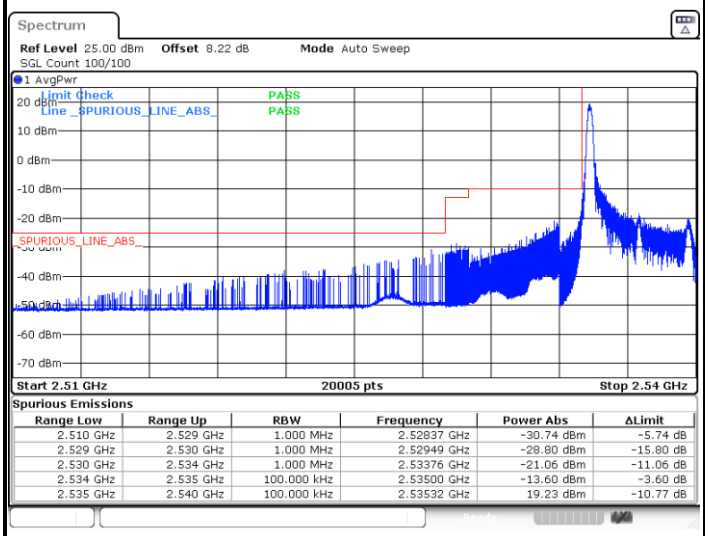
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.650 GHz	2.655 GHz	100.000 kHz	2.65281 GHz	6.48 dBm	-23.52 dB
2.655 GHz	2.656 GHz	100.000 kHz	2.65500 GHz	-28.79 dBm	-18.79 dB
2.656 GHz	2.660 GHz	1.000 MHz	2.65649 GHz	-30.13 dBm	-20.13 dB
2.660 GHz	2.661 GHz	1.000 MHz	2.66040 GHz	-34.62 dBm	-21.62 dB
2.661 GHz	2.680 GHz	1.000 MHz	2.66242 GHz	-33.46 dBm	-8.46 dB

Date: 11.APR.2023 14:55:28

LTE Band 41 / 5MHz / 16QAM

Lowest Band Edge / 1RB

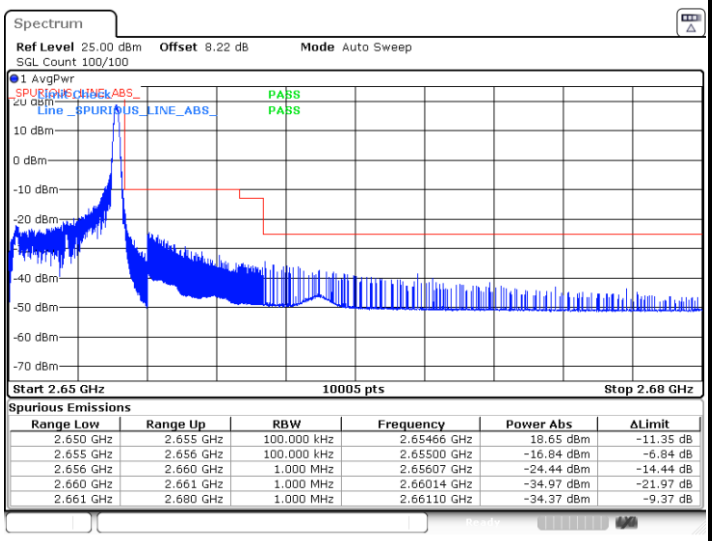


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.510 GHz	2.529 GHz	1.000 MHz	2.52837 GHz	-30.74 dBm	-5.74 dB
2.529 GHz	2.530 GHz	1.000 MHz	2.52949 GHz	-28.80 dBm	-15.80 dB
2.530 GHz	2.534 GHz	1.000 MHz	2.53376 GHz	-21.06 dBm	-11.06 dB
2.534 GHz	2.535 GHz	100.000 kHz	2.53500 GHz	-13.60 dBm	-3.60 dB
2.535 GHz	2.540 GHz	100.000 kHz	2.53532 GHz	19.23 dBm	-10.77 dB

Date: 11.APR.2023 13:24:05

Highest Band Edge / 1 RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.650 GHz	2.655 GHz	100.000 kHz	2.65466 GHz	18.65 dBm	-11.35 dB
2.655 GHz	2.656 GHz	100.000 kHz	2.65500 GHz	-16.84 dBm	-6.84 dB
2.656 GHz	2.660 GHz	1.000 MHz	2.65607 GHz	-24.44 dBm	-14.44 dB
2.660 GHz	2.661 GHz	1.000 MHz	2.66014 GHz	-34.97 dBm	-21.97 dB
2.661 GHz	2.680 GHz	1.000 MHz	2.66110 GHz	-34.37 dBm	-9.37 dB

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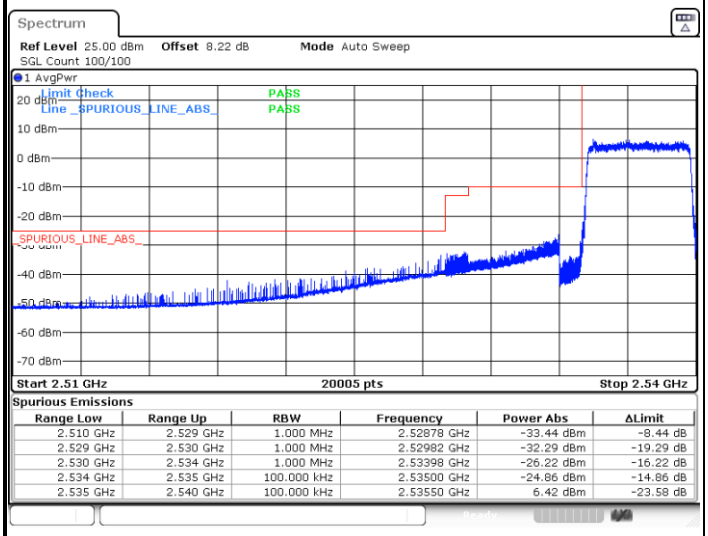
Lowest Band Edge / Full RB

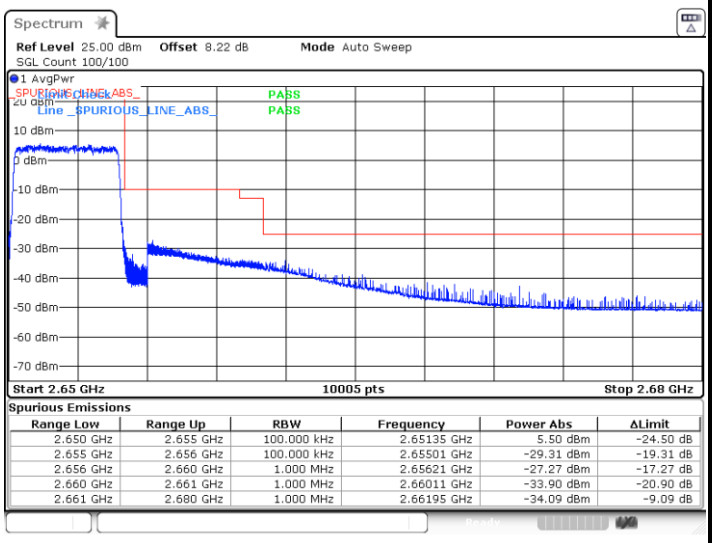


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.510 GHz	2.529 GHz	1.000 MHz	2.52878 GHz	-33.44 dBm	-8.44 dB
2.529 GHz	2.530 GHz	1.000 MHz	2.52982 GHz	-32.29 dBm	-19.29 dB
2.530 GHz	2.534 GHz	1.000 MHz	2.53398 GHz	-26.22 dBm	-16.22 dB
2.534 GHz	2.535 GHz	100.000 kHz	2.53500 GHz	-24.86 dBm	-14.86 dB
2.535 GHz	2.540 GHz	100.000 kHz	2.53550 GHz	6.42 dBm	-23.58 dB

Date: 11.APR.2023 13:26:50

Highest Band Edge / Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.650 GHz	2.655 GHz	100.000 kHz	2.65135 GHz	5.50 dBm	-24.50 dB
2.655 GHz	2.656 GHz	100.000 kHz	2.65501 GHz	-29.31 dBm	-19.31 dB
2.656 GHz	2.660 GHz	1.000 MHz	2.65621 GHz	-27.27 dBm	-17.27 dB
2.660 GHz	2.661 GHz	1.000 MHz	2.66011 GHz	-33.90 dBm	-20.90 dB
2.661 GHz	2.680 GHz	1.000 MHz	2.66195 GHz	-34.09 dBm	-9.09 dB

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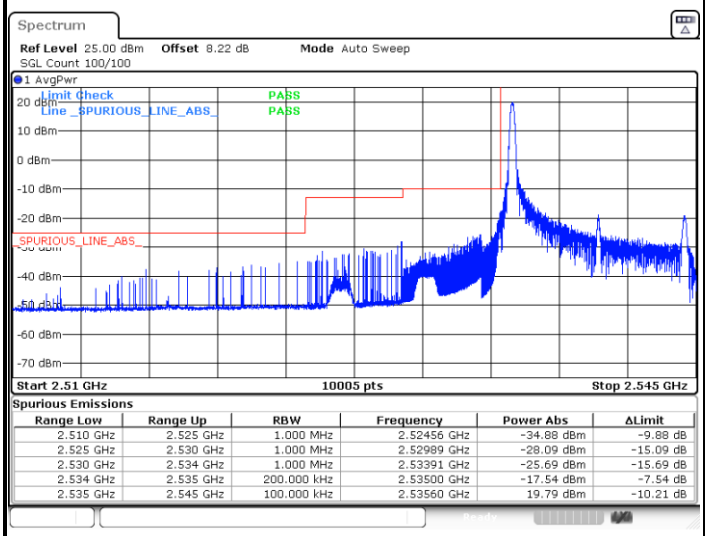
LTE Band 41 / 10MHz / QPSK

Lowest Band Edge / 1 RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.510 GHz	2.525 GHz	1.000 MHz	2.52456 GHz	-34.88 dBm	-9.88 dB
2.525 GHz	2.530 GHz	1.000 MHz	2.52989 GHz	-28.09 dBm	-15.09 dB
2.530 GHz	2.534 GHz	1.000 MHz	2.53391 GHz	-25.69 dBm	-15.69 dB
2.534 GHz	2.535 GHz	200.000 kHz	2.53500 GHz	-17.54 dBm	-7.54 dB
2.535 GHz	2.545 GHz	100.000 kHz	2.53560 GHz	19.79 dBm	-10.21 dB

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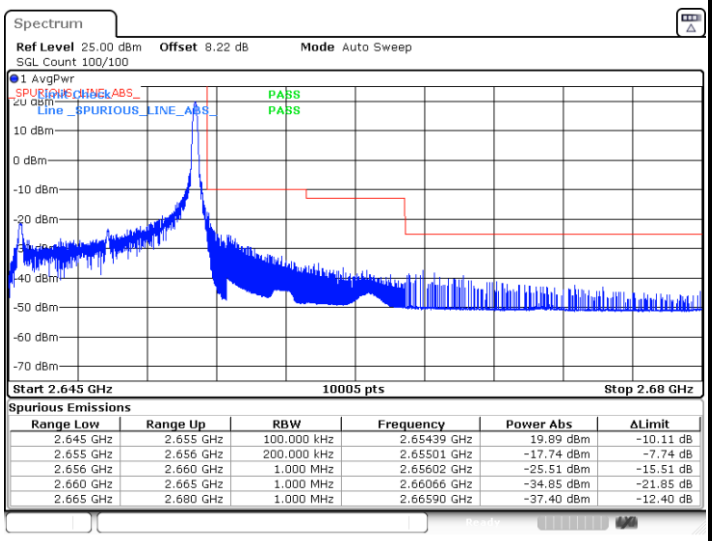
Highest Band Edge / 1 RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.645 GHz	2.655 GHz	100.000 kHz	2.65439 GHz	19.89 dBm	-10.11 dB
2.655 GHz	2.656 GHz	200.000 kHz	2.65501 GHz	-17.74 dBm	-7.74 dB
2.656 GHz	2.660 GHz	1.000 MHz	2.65602 GHz	-25.51 dBm	-15.51 dB
2.660 GHz	2.665 GHz	1.000 MHz	2.66066 GHz	-34.85 dBm	-21.85 dB
2.665 GHz	2.680 GHz	1.000 MHz	2.66590 GHz	-37.40 dBm	-12.40 dB

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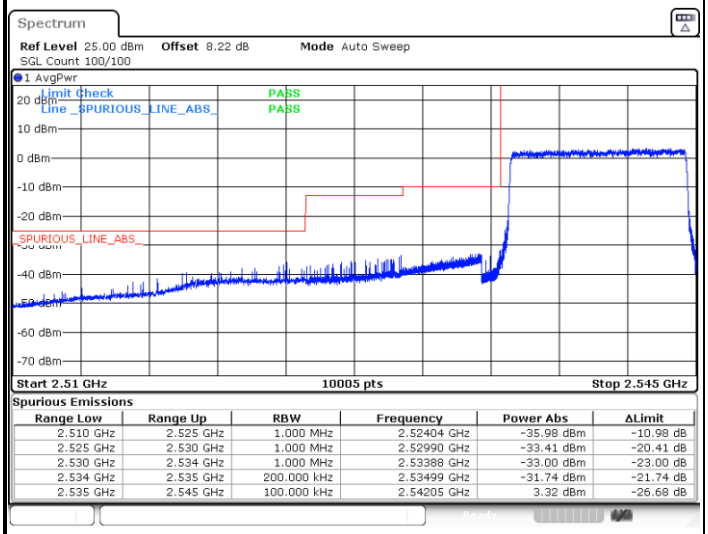
Lowest Band Edge / Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.510 GHz	2.525 GHz	1.000 MHz	2.52404 GHz	-35.98 dBm	-10.98 dB
2.525 GHz	2.530 GHz	1.000 MHz	2.52990 GHz	-33.41 dBm	-20.41 dB
2.530 GHz	2.534 GHz	1.000 MHz	2.53388 GHz	-33.00 dBm	-23.00 dB
2.534 GHz	2.535 GHz	200.000 kHz	2.53499 GHz	-31.74 dBm	-21.74 dB
2.535 GHz	2.545 GHz	100.000 kHz	2.54205 GHz	3.32 dBm	-26.68 dB

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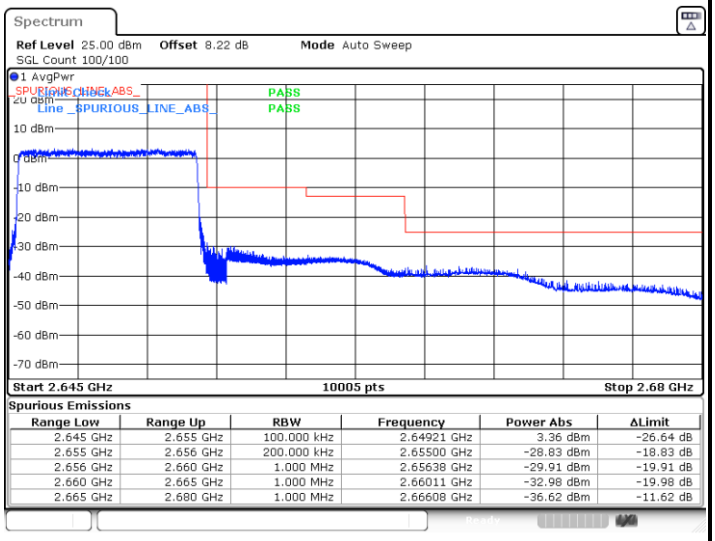
Highest Band Edge / Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.645 GHz	2.655 GHz	100.000 kHz	2.64921 GHz	3.36 dBm	-26.64 dB
2.655 GHz	2.656 GHz	200.000 kHz	2.65500 GHz	-28.83 dBm	-18.83 dB
2.656 GHz	2.660 GHz	1.000 MHz	2.65638 GHz	-29.91 dBm	-19.91 dB
2.660 GHz	2.665 GHz	1.000 MHz	2.66011 GHz	-32.98 dBm	-19.98 dB
2.665 GHz	2.680 GHz	1.000 MHz	2.66608 GHz	-36.62 dBm	-11.62 dB

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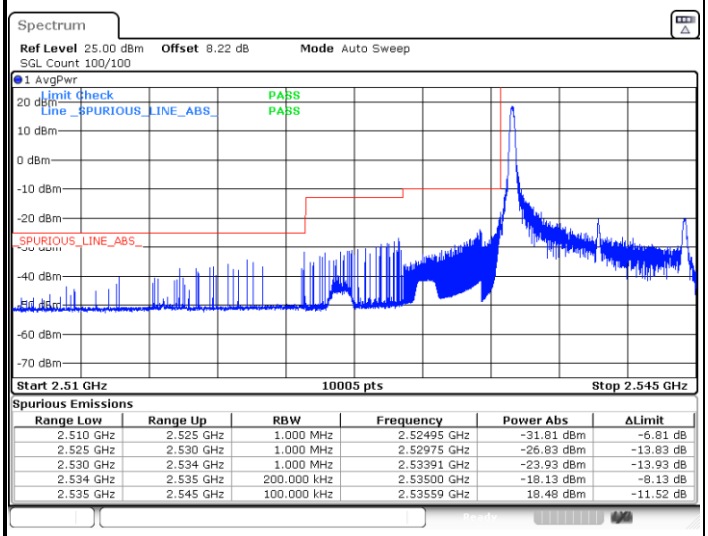
LTE Band 41 / 10MHz / 16QAM

Lowest Band Edge / 1 RB

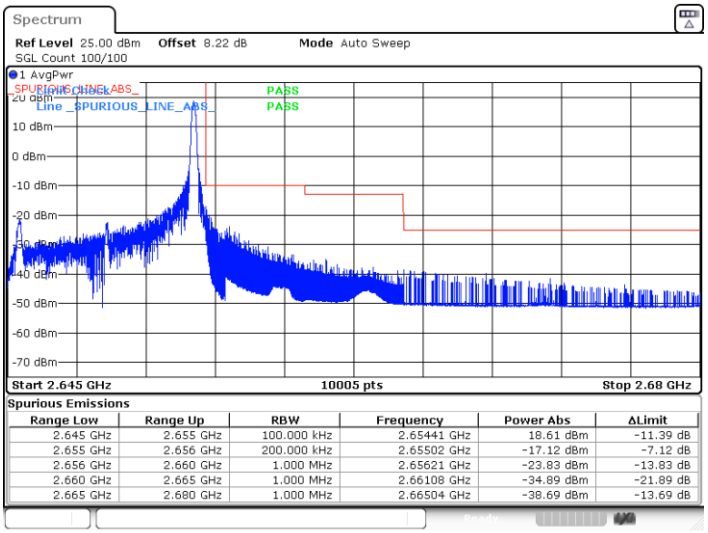


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.510 GHz	2.525 GHz	1.000 MHz	2.52495 GHz	-31.81 dBm	-6.81 dB
2.525 GHz	2.530 GHz	1.000 MHz	2.52975 GHz	-26.83 dBm	-13.83 dB
2.530 GHz	2.534 GHz	1.000 MHz	2.53391 GHz	-23.93 dBm	-13.93 dB
2.534 GHz	2.535 GHz	200.000 kHz	2.53500 GHz	-18.13 dBm	-8.13 dB
2.535 GHz	2.545 GHz	100.000 kHz	2.53559 GHz	18.48 dBm	-11.52 dB

Date: 11.APR.2023 13:39:07

Highest Band Edge / 1 RB

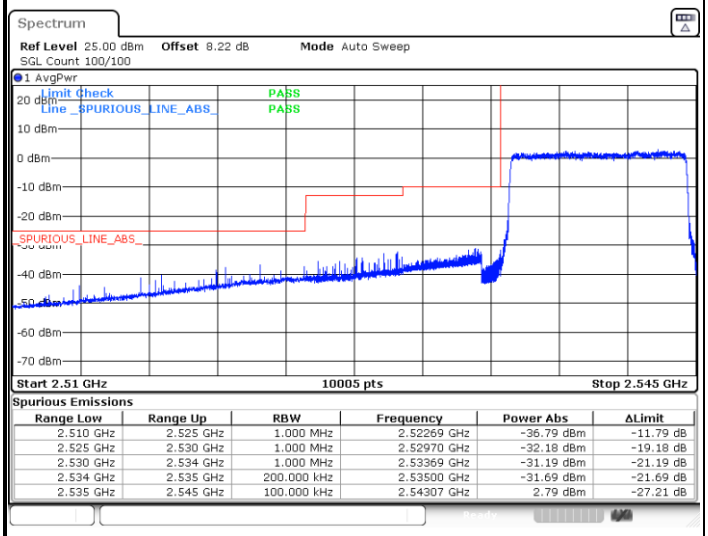


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.645 GHz	2.655 GHz	100.000 kHz	2.65441 GHz	18.61 dBm	-11.39 dB
2.655 GHz	2.656 GHz	200.000 kHz	2.65502 GHz	-17.12 dBm	-7.12 dB
2.656 GHz	2.660 GHz	1.000 MHz	2.65621 GHz	-23.83 dBm	-13.83 dB
2.660 GHz	2.665 GHz	1.000 MHz	2.66108 GHz	-34.89 dBm	-21.89 dB
2.665 GHz	2.680 GHz	1.000 MHz	2.66504 GHz	-38.69 dBm	-13.69 dB

Date: 11.APR.2023 13:47:19

Lowest Band Edge / Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.510 GHz	2.525 GHz	1.000 MHz	2.52269 GHz	-36.79 dBm	-11.79 dB
2.525 GHz	2.530 GHz	1.000 MHz	2.52970 GHz	-32.18 dBm	-19.18 dB
2.530 GHz	2.534 GHz	1.000 MHz	2.53369 GHz	-31.19 dBm	-21.19 dB
2.534 GHz	2.535 GHz	200.000 kHz	2.53500 GHz	-31.69 dBm	-21.69 dB
2.535 GHz	2.545 GHz	100.000 kHz	2.54307 GHz	2.79 dBm	-27.21 dB

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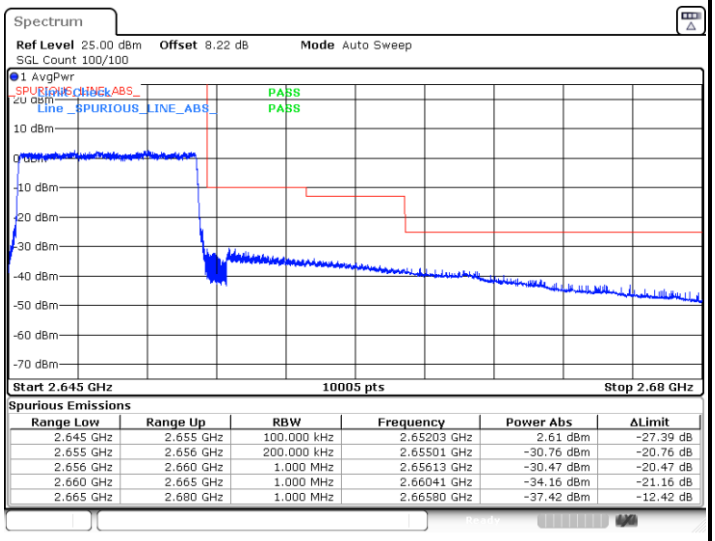
Highest Band Edge / Full RB



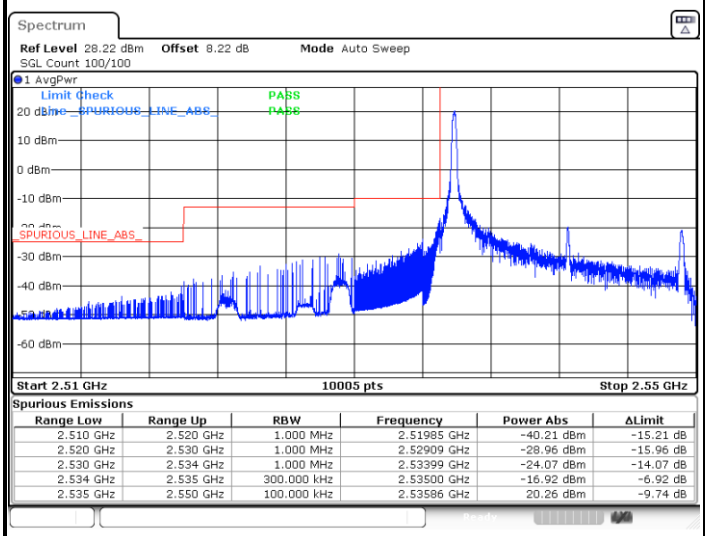
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.645 GHz	2.655 GHz	100.000 kHz	2.65203 GHz	2.61 dBm	-27.39 dB
2.655 GHz	2.656 GHz	200.000 kHz	2.65501 GHz	-30.76 dBm	-20.76 dB
2.656 GHz	2.660 GHz	1.000 MHz	2.65613 GHz	-30.47 dBm	-20.47 dB
2.660 GHz	2.665 GHz	1.000 MHz	2.66041 GHz	-34.16 dBm	-21.16 dB
2.665 GHz	2.680 GHz	1.000 MHz	2.66580 GHz	-37.42 dBm	-12.42 dB

Date: 11.APR.2023 13:50:01

LTE Band 41 / 15MHz / QPSK

Lowest Band Edge / 1 RB

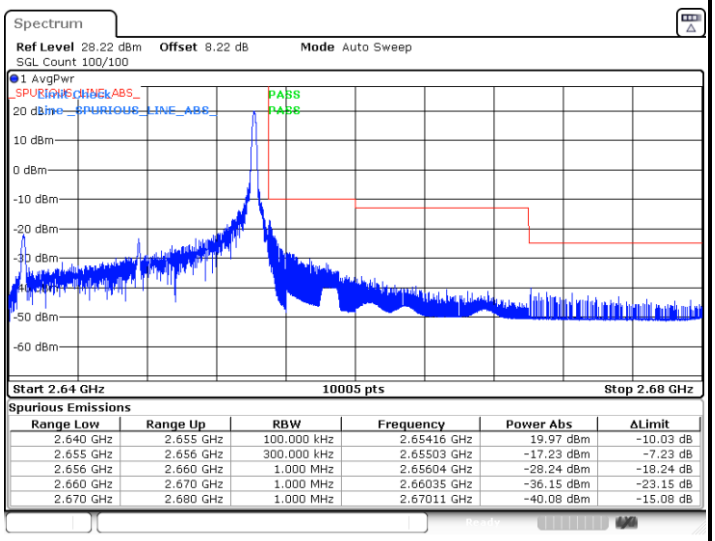


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.510 GHz	2.520 GHz	1.000 MHz	2.51985 GHz	-40.21 dBm	-15.21 dB
2.520 GHz	2.530 GHz	1.000 MHz	2.52909 GHz	-28.96 dBm	-15.96 dB
2.530 GHz	2.534 GHz	1.000 MHz	2.53399 GHz	-24.07 dBm	-14.07 dB
2.534 GHz	2.535 GHz	300.000 kHz	2.53500 GHz	-16.92 dBm	-6.92 dB
2.535 GHz	2.550 GHz	100.000 kHz	2.53586 GHz	20.26 dBm	-9.74 dB

Date: 11.APR.2023 13:52:48

Highest Band Edge / 1 RB

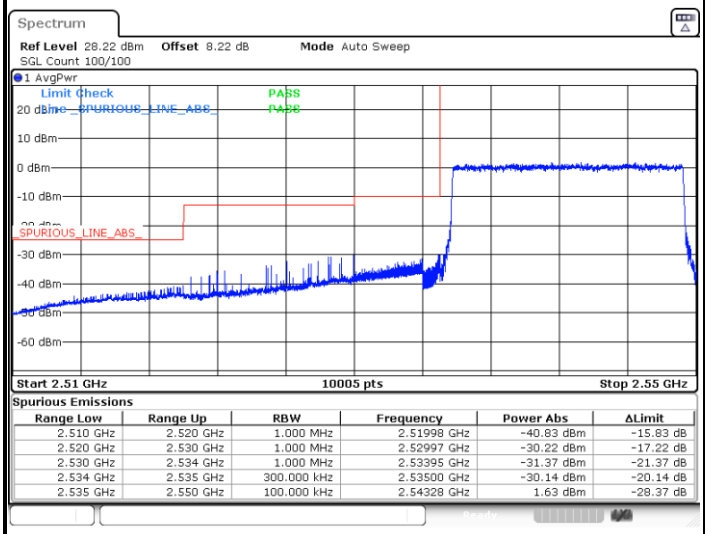


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.640 GHz	2.655 GHz	100.000 kHz	2.65416 GHz	19.97 dBm	-10.03 dB
2.655 GHz	2.656 GHz	300.000 kHz	2.65503 GHz	-17.23 dBm	-7.23 dB
2.656 GHz	2.660 GHz	1.000 MHz	2.65604 GHz	-28.24 dBm	-18.24 dB
2.660 GHz	2.670 GHz	1.000 MHz	2.66035 GHz	-36.15 dBm	-23.15 dB
2.670 GHz	2.680 GHz	1.000 MHz	2.67011 GHz	-40.08 dBm	-15.08 dB

Date: 11.APR.2023 14:01:07

Lowest Band Edge / Full RB

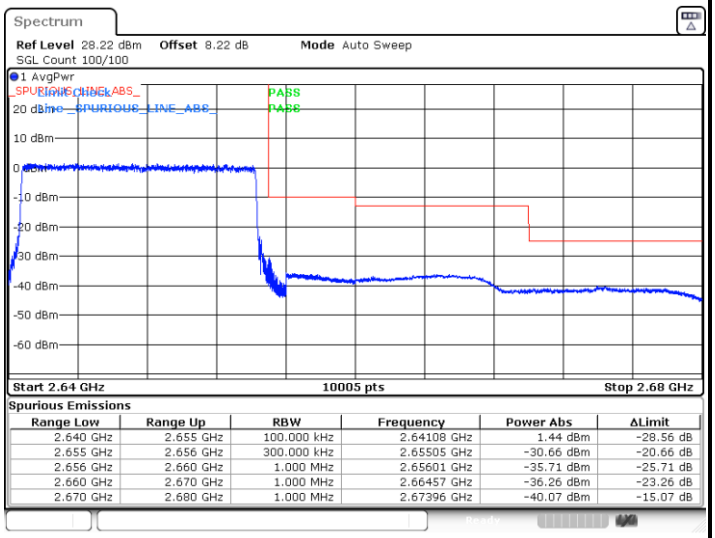


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.510 GHz	2.520 GHz	1.000 MHz	2.51998 GHz	-40.83 dBm	-15.83 dB
2.520 GHz	2.530 GHz	1.000 MHz	2.52997 GHz	-30.22 dBm	-17.22 dB
2.530 GHz	2.534 GHz	1.000 MHz	2.53395 GHz	-31.37 dBm	-21.37 dB
2.534 GHz	2.535 GHz	300.000 kHz	2.53500 GHz	-30.14 dBm	-20.14 dB
2.535 GHz	2.550 GHz	100.000 kHz	2.54328 GHz	1.63 dBm	-28.37 dB

Date: 11.APR.2023 13:55:34

Highest Band Edge / Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.640 GHz	2.655 GHz	100.000 kHz	2.64108 GHz	1.44 dBm	-28.56 dB
2.655 GHz	2.656 GHz	300.000 kHz	2.65505 GHz	-30.66 dBm	-20.66 dB
2.656 GHz	2.660 GHz	1.000 MHz	2.65601 GHz	-35.71 dBm	-25.71 dB
2.660 GHz	2.670 GHz	1.000 MHz	2.66457 GHz	-36.26 dBm	-23.26 dB
2.670 GHz	2.680 GHz	1.000 MHz	2.67396 GHz	-40.07 dBm	-15.07 dB

Date: 11.APR.2023 14:03:55