FCC RF Test Report

FCC ID	:	UZ7ET45CB
EQUIPMENT	:	Tablet
BRAND NAME	:	Zebra
Model Name	:	ET45CB
APPLICANT	:	Zebra Technologies Corporation 1 Zebra Plaza, Holtsville, NY 11742
MANUFACTURER	:	Zebra Technologies Corporation 1 Zebra Plaza, Holtsville, NY 11742
STANDARD	:	47 CFR Part 2, Part 27 Subpart Q
CLASSIFICATION	:	PCS Licensed Transmitter (PCB)
TEST DATE(S)	:	Jun. 10, 2022 ~ Jul. 19, 2022

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.

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

Sporton International Inc. (Kunshan)
No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG230406D	Rev. 01	Initial issue of report	Aug. 12, 2022

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	—	Report Only	-
3.5	§27.50 (k)(4)	Peak-to-Average Ratio	<13dB	PASS	-
3.6	§27.50 (k)(3)	EIRP	EIRP < 1W (30dBm)	PASS	-
3.7	§2.1049	Occupied Bandwidth	—	Report Only	-
3.8	§2.1051 §27.53 (n)(2)	Conducted Band Edge Measurement	-13dBm/MHz	PASS	-
3.9	§2.1051 §27.53 (n)(2)	Conducted Spurious Emission	-13dBm/MHz	PASS	-
3.10	§2.1055 §27.54	Frequency Stability Temperature & Voltage	Within the band	PASS	-
4.4	§2.1053 §27.53 (n)(2)	Radiated Spurious Emission	-13dBm/MHz	PASS	Under limit 28.47 dB at 6984.000 MHz

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	Tablet
Brand Name	Zebra
Model Name	ET45CB
FCC ID	UZ7ET45CB
HW Version	EV2-2
SW Version	ET45-userdebug 11 11-10-12.00-RG-U00-PRD-GSE MXJ release-keys
MFD	30APR22
EUT Stage	Identical Prototype

Specification of Accessory				
Battery	**Brand Name**	Zebra	**Model Number**	BT-000456

Supported Unit Used in Test Configuration and System				
AC Adapter	**Brand Name**	Zebra	**Part Number**	PWR-WUA5V12W0US
Earphone 1	**Brand Name**	Zebra	**Part Number**	HDST-35MM-PTVP-01
Earphone 2	**Brand Name**	Zebra	**Part Number**	HDST-USBC-PTT1-01
USB Cable (Type C to Type A)	**Brand Name**	Zebra	**Part Number**	CBL-TC5X-USBC2A-01
Type C-Audio Cable (Type C to 3.5mm)	**Brand Name**	Zebra	**Part Number**	ADP-USBC-35MM1-01

1.2 Product Specification of Equipment Under Test

Product Feature	
Tx/Rx Frequency	LTE Band 42: 3450 MHz ~ 3550 MHz
Bandwidth	5MHz / 10MHz / 15MHz / 20MHz
Maximum Output Power to Antenna	LTE Band 42 : 23.44 dBm LTE Band 42 CA : 23.35 dBm
Antenna Gain	LTE Band 42 : 0.3 dBi
Type of Modulation	QPSK / 16QAM / 64QAM

1.3 Modification of EUT

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

1.4 Maximum EIRP Power and Emission Designator

LTE Band 42		QPSK		16QAM/64QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
20	3460 ~ 3540	0.2366	17M9G7D	0.1892	17M8W7D

LTE Band 42 CA	QPSK		16QAM/64QAM	
BW (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
20MHz+20MHz	0.2317	37M7G7D	0.2070	37M7W7D

Note:

1. All modulations have been tested, only the worst test results of PSK & QAM are shown in the report.
2. Based on engineering evaluation, only the maximum bandwidth and the worst modulation test results are shown in the report.

1.5 Testing Site

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 FAX : +86-512-57900958		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	03CH04-KS TH01-KS	CN1257	314309

1.6 Test Software

Item	Site	Manufacture	Name	Version
1.	03CH04-KS	AUDIX	E3	6.2009-8-24a

1.7 Applied Standards

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

- 47 CFR Part 2, Part 27 Subpart Q
- ANSI C63.26-2015
- FCC KDB 971168 Power Meas License Digital Systems D01 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.

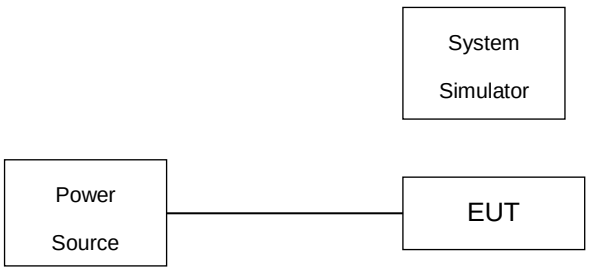
Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission.

Test Cases	Band	Bandwidth (MHz)	Modulation	RB #	Test Channel
		eg. 5M, 10M, 15M, 20M	eg. QPSK, 16QAM, 64QAM	1RB, Partial RB, Full RB	L/M/H
Max. Output Power	LTE Band 42	5M, 10M, 15M, 20M	QPSK, 16QAM, 64QAM	1RB, Partial RB, Full RB	L, M, H
Peak-to-Average Ratio	LTE Band 42	20M	QPSK, 16QAM, 64QAM	Full RB	M
E.I.R.P	LTE Band 42	5M, 10M, 15M, 20M	QPSK, 16QAM, 64QAM	1RB, Partial RB, Full RB	L, M, H
26dB and 99% Bandwidth	LTE Band 42	20M	QPSK, 16QAM	Full RB	M
Conducted Band Edge	LTE Band 42	5M, 10M, 15M, 20M	QPSK, 16QAM, 64QAM	1RB, Full RB	L, H
Conducted Spurious Emission	LTE Band 42	5M, 10M, 15M, 20M	QPSK	1RB	L, M, H
Frequency Stability	LTE Band 42	10M	QPSK	1RB	M
Radiated Spurious Emission	LTE Band 42	Worst case from maximum power			L, M, H

Note:
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.

Test Items	Band	Bandwidth (MHz)										Modulation				RB #			Test Channel		
		20+20	20+15	15+20	20+10	10+20	20+5	5+20	15+15	15+10	10+15	QPSK	16QAM	64QAM	256QAM	1	Half	Full	L	M	H
Max. Output Power	42C_CA	v	v	v	v	v	v	v	-	-	-	v	v	v	-	v	v	v	v	v	v
26dB and 99% Bandwidth	42C_CA	v							-	-	-	v	v		-			v		v	
Conducted Band Edge	42C_CA	v	v	v	v	v	v	v	-	-	-	v	v	v	-	v		v	v		v
Conducted Spurious Emission	42C_CA	v	v	v	v	v	v	v	-	-	-	v			-	v			v	v	v
E.I.R.P.	42C_CA	v	v	v	v	v	v	v	-	-	-	v	v	v	-	v			v	v	v
Radiated Spurious Emission	42C_CA	Worst Case																	v	v	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.																				

2.2 Connection Diagram of Test System



This example is connection diagram of EUT test configurations.

. For detail, please refer to test mode configuration and setup photographs for each test item.

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 and attenuator factor 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 and attenuator factor.

Offset = RF cable loss.

Following shows an offset computation example with cable loss 8.72 dB.

Example :

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 8.72 (dB)

2.5 Frequency List of Low/Middle/High Channels

LTE Band 42 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
20	Channel	42190	42590	42990
	Frequency	3460	3500	3540
15	Channel	42165	42590	43015
	Frequency	3457.5	3500	3542.5
10	Channel	42140	42590	43040
	Frequency	3455	3500	3545
5	Channel	42115	42590	43065
	Frequency	3452.5	3500	3547.5

LTE Band 42C_CA Channel and Frequency List					
BW [MHz]	Channel/Frequency(MHz)		Lowest	Middle	Highest
20 + 20	PCC	Channel	42190	42590	42792
		Frequency	3460	3500	3520.2
	SCC	Channel	42388	42788	42990
		Frequency	3479.8	3519.8	3540
20 + 15	PCC	Channel	42190	42590	42844
		Frequency	3460	3500	3525.4
	SCC	Channel	42361	42761	43015
		Frequency	3477.1	3517.1	3542.5
15 + 20	PCC	Channel	42165	42590	42819
		Frequency	3457.5	3500	3522.9
	SCC	Channel	42336	42761	42990
		Frequency	3474.6	3517.1	3540
20 + 10	PCC	Channel	42190	42590	42896
		Frequency	3460	3500	3530.6
	SCC	Channel	42334	42734	43040
		Frequency	3474.4	3514.4	3545
10 + 20	PCC	Channel	42140	42590	42846
		Frequency	3455	3500	3525.6
	SCC	Channel	42284	42734	42990
		Frequency	3469.4	3514.4	3540
20 + 5	PCC	Channel	42190	42590	42948
		Frequency	3460	3500	3535.8
	SCC	Channel	42307	42707	43065
		Frequency	3471.7	3511.7	3547.5
5 + 20	PCC	Channel	42115	42590	42873
		Frequency	3452.5	3500	3528.3
	SCC	Channel	42232	42707	42990
		Frequency	3464.2	3511.7	3540

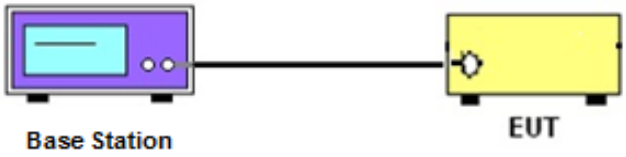
3 Conducted Test Items

3.1 Measuring Instruments

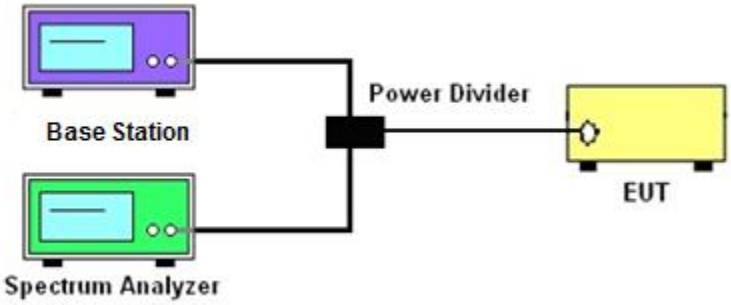
See list of measuring instruments of this test report.

3.2 Test Setup

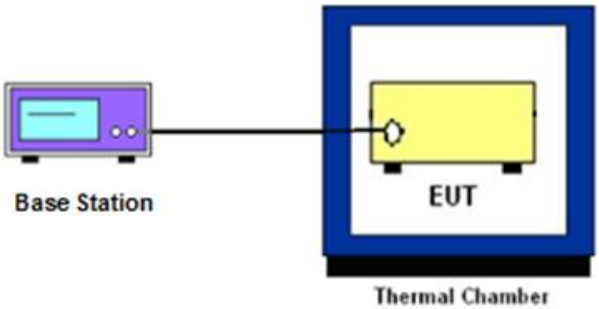
3.2.1 Conducted Output Power



3.2.2 Peak-to-Average Ratio, Occupied / 26dB Bandwidth, 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 Measurement

3.4.1 Description of the Conducted Output Power Measurement

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

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 EIRP

3.6.1 Description of EIRP Limit

§ 27.50 (k)(3)

Mobile devices are limited to 1Watt (30 dBm) EIRP. Mobile devices operating in these bands must employ a means for limiting power to the minimum necessary for successful communications

3.6.2 Test Procedures

1. According to KDB 412172 D01 Power Approach,
2. 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

3.7 Occupied Bandwidth

3.7.1 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.

3.7.2 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.

3.8 Conducted Band Edge Measurement

3.8.1 Description of Conducted Band Edge Measurement

§ 27.53 (n)(2)

For mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz.

Compliance with this paragraph is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz 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, but limited to a maximum of 200 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz.

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 band edges of low and high channels for the highest RF powers were measured.
4. Set RBW ≥ 1% EBW but limited to a maximum of 200 kHz in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz and 5 MHz removed from the band edge, set RBW ≥ 500KHz.
6. Beyond the 5 MHz removed from the band edge, set RBW = 1MHz.
7. Set spectrum analyzer with RMS detector.
8. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
9. Checked that all the results comply with the emission limit line.

3.9 Conducted Spurious Emission Measurement

3.9.1 Description of Conducted Spurious Emission Measurement

The power of any emission outside of the authorized operating frequency ranges shall not exceed −13 dBm/MHz.

It is measured by means of a calibrated spectrum analyzer and scanned from 9 kHz up to a frequency including its 10th harmonic.

3.9.2 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. Checked that all the results comply with the emission limit line.

3.10 Frequency Stability Measurement

3.10.1 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.

3.10.2 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.

3.10.3 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.

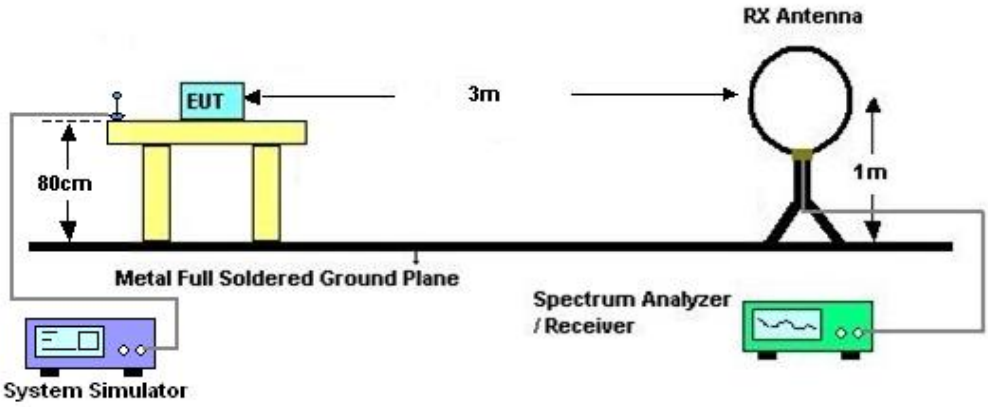
4 Radiated Test Items

4.1 Measuring Instruments

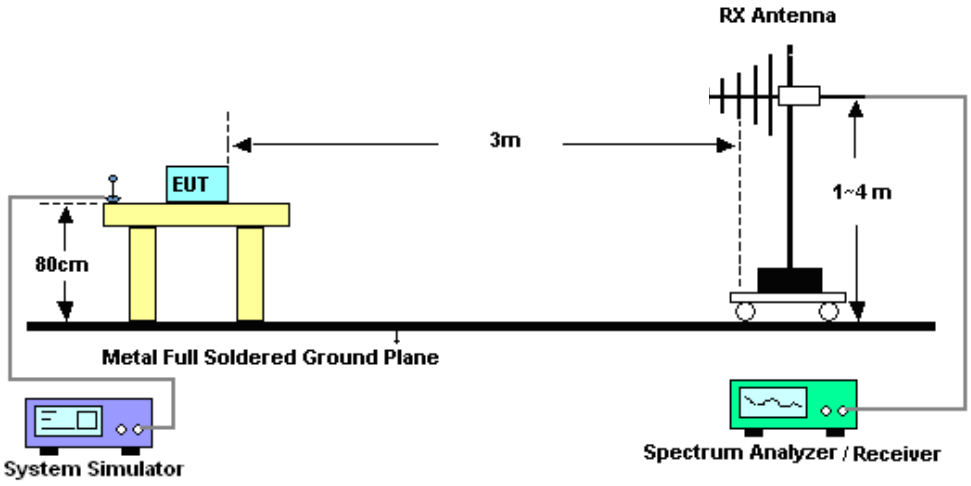
See list of measuring instruments of this test report.

4.2 Test Setup

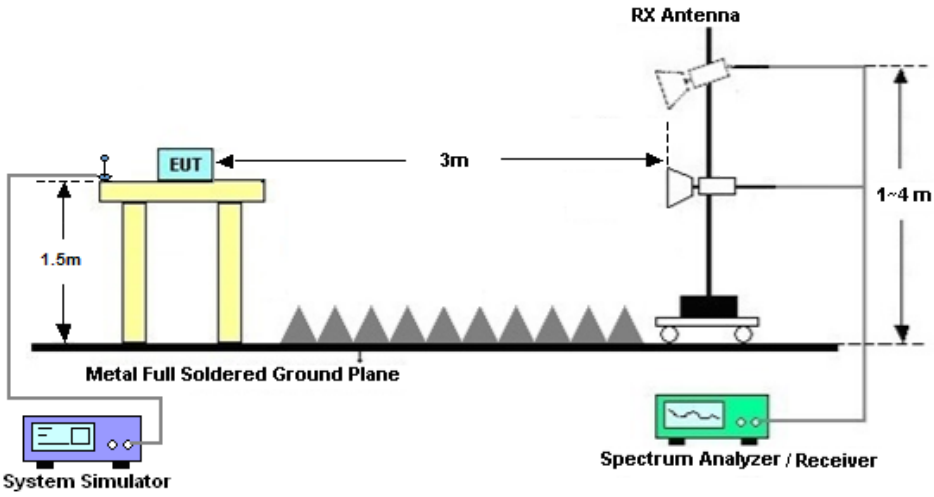
4.2.1 For radiated test below 30MHz



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 Measurement

4.4.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI/TIA-603-E. The power of any emission outside of the authorized operating frequency ranges shall not exceed −13 dBm/MHz.

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.
   EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
   ERP (dBm) = EIRP - 2.15
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

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. 14, 2021	Jun. 10, 2022~ Jul. 18, 2022	Oct. 13, 2022	Conducted (TH01-KS)
Power divider	STI	STI08-0055	-	0.5~40GHz	Aug. 26, 2021	Jun. 10, 2022~ Jul. 18, 2022	Aug. 25, 2022	Conducted (TH01-KS)
Temperature & humidity chamber	Hongzhan	LP-150U	H2014011440	-40~+150°C 20%~95%RH	Jul. 12, 2021	Jun. 10, 2022~ Jul. 18, 2022	Jul. 11, 2022	Conducted (TH01-KS)
Temperature & humidity chamber	Hongzhan	LP-150U	H2014011440	-40~+150°C 20%~95%RH	Jul. 11, 2022		Jul. 10, 2023	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010B	MY57541079	10Hz-44G,MAX 30dB	Oct. 14, 2021	Jul. 19, 2022	Oct. 13, 2022	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 30, 2021	Jul. 19, 2022	Oct. 29, 2022	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz-1GHz	May 30, 2022	Jul. 19, 2022	May 29, 2023	Radiation (03CH04-KS)
Horn Antenna	Schwarzbeck	BBHA9120D	1284	1GHz~18GHz	Oct. 18, 2021	Jul. 19, 2022	Oct. 18, 2022	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 05, 2022	Jul. 19, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	187289	9KHz-1GHz	Jan. 05, 2022	Jul. 19, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
Amplifier	MITEQ	EM18G40G GA	060728	18~40GHz	Jan. 05, 2022	Jul. 19, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
high gain Amplifier	MITEQ	AMF-7D-00 101800-30-1 0P	2025788	1Ghz-18Ghz	Jul. 30, 2021	Jul. 19, 2022	Jul. 29, 2022	Radiation (03CH04-KS)
Amplifier	Keysight	83017A	MY57280106	500MHz~26.5GHz	Oct. 13, 2021	Jul. 19, 2022	Oct. 12, 2022	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Jul. 19, 2022	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Jul. 19, 2022	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Jul. 19, 2022	NCR	Radiation (03CH04-KS)

NCR: No Calibration Required

6 Uncertainty of Evaluation

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 Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.3dB**

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

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

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

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

---------- THE END ----------

Appendix A. Test Results of Conducted Test

Test Engineer :	Lex Wu	Temperature :	22~23℃
		Relative Humidity :	40~42%

Conducted Output Power(Average power) and EIRP

LTE Band 42:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP(W)		
Channel				42190	42590	42990			
Frequency (MHz)				3460	3500	3540	L	M	H
20	QPSK	1	0	23.31	23.44	23.26	0.2296	0.2366	0.2270
20	QPSK	1	99	23.29	23.29	23.31	0.2286	0.2286	0.2296
20	QPSK	100	0	22.50	22.56	22.41	0.1905	0.1932	0.1866
20	16QAM	1	0	22.47	22.38	22.46	0.1892	0.1854	0.1888
20	64QAM	1	0	21.29	21.59	21.45	0.1442	0.1545	0.1496
Channel				42165	42590	43015	EIRP(W)		
Frequency (MHz)				3457.5	3500	3542.5	L	M	H
15	QPSK	1	0	23.26	23.38	23.09	0.2270	0.2333	0.2183
15	16QAM	1	0	22.26	22.24	22.43	0.1803	0.1795	0.1875
Channel				42140	42590	43040	EIRP(W)		
Frequency (MHz)				3455	3500	3545	L	M	H
10	QPSK	1	0	23.19	23.40	23.21	0.2234	0.2344	0.2244
10	16QAM	1	0	22.37	22.32	22.30	0.1849	0.1828	0.1820
Channel				42115	42590	43065	EIRP(W)		
Frequency (MHz)				3452.5	3500	3547.5	L	M	H
5	QPSK	1	0	23.13	23.32	23.18	0.2203	0.2301	0.2228
5	16QAM	1	0	22.43	22.22	22.41	0.1875	0.1786	0.1866

LTE Band 42 CA:

Combination 20MHz+20MHz (100RB+100RB)							
Channel	Modulation	PCC		SCC		Measured Power	EIRP(W)
		RB Size	RB offset	RB Size	RB offset		
L	QPSK	1	Max	1	0	23.26	0.2270
M	QPSK	1	Max	1	0	23.35	0.2317
H	QPSK	1	Max	1	0	23.12	0.2198
L	16QAM	1	Max	1	0	23.15	0.2213
M	16QAM	1	Max	1	0	23.20	0.2239
H	16QAM	1	Max	1	0	23.03	0.2153
L	64QAM	1	Max	1	0	22.74	0.2014
M	64QAM	1	Max	1	0	22.86	0.2070
H	64QAM	1	Max	1	0	22.65	0.1972
Combination 20MHz+15MHz (100RB+75RB)							
Channel	Modulation	PCC		SCC		Measured Power	EIRP(W)
		RB Size	RB offset	RB Size	RB offset		
M	QPSK	1	Max	1	0	23.28	0.2280
M	16QAM	1	Max	1	0	23.11	0.2193
Combination 15MHz+20MHz (100RB+75RB)							
Channel	Modulation	PCC		SCC		Measured Power	EIRP(W)
		RB Size	RB offset	RB Size	RB offset		
M	QPSK	1	Max	1	0	23.24	0.2259
M	16QAM	1	Max	1	0	23.08	0.2178
Combination 20MHz+10MHz (100RB+50RB)							
Channel	Modulation	PCC		SCC		Measured Power	EIRP(W)
		RB Size	RB offset	RB Size	RB offset		
M	QPSK	1	Max	1	0	23.20	0.2239
M	16QAM	1	Max	1	0	23.05	0.2163
Combination 10MHz+20MHz (50RB+100RB)							
Channel	Modulation	PCC		SCC		Measured Power	EIRP(W)
		RB Size	RB offset	RB Size	RB offset		
M	QPSK	1	Max	1	0	23.15	0.2213
M	16QAM	1	Max	1	0	23.00	0.2138
Combination 20MHz+5MHz (100RB+25RB)							
Channel	Modulation	PCC		SCC		Measured Power	EIRP(W)
		RB Size	RB offset	RB Size	RB offset		
M	QPSK	1	Max	1	0	23.10	0.2188
M	16QAM	1	Max	1	0	22.95	0.2113
Combination 5MHz+20MHz (25RB+100RB)							
Channel	Modulation	PCC		SCC		Measured Power	EIRP(W)
		RB Size	RB offset	RB Size	RB offset		
M	QPSK	1	Max	1	0	23.04	0.2158
M	16QAM	1	Max	1	0	22.92	0.2099

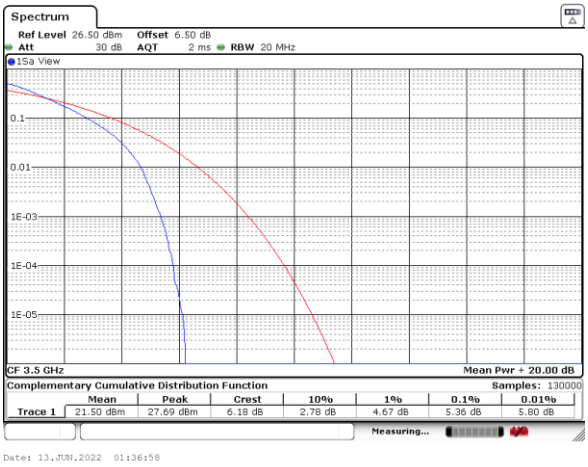
LTE Band 42

Peak-to-Average Ratio

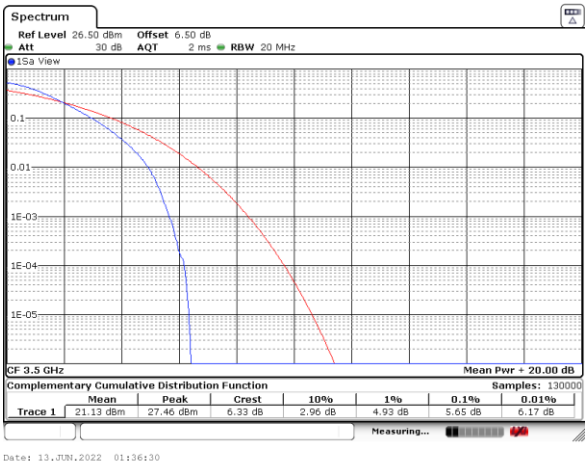
Mode	LTE Band 42 / 20MHz			
Mod.	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Result
Middle CH	5.36	5.65	5.94	PASS

LTE Band 42/ 20MHz

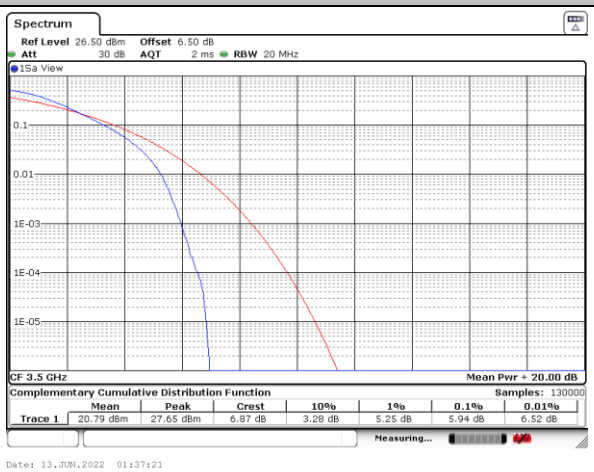
Middle Channel / Full RB / QPSK



Middle Channel / Full RB / 16QAM



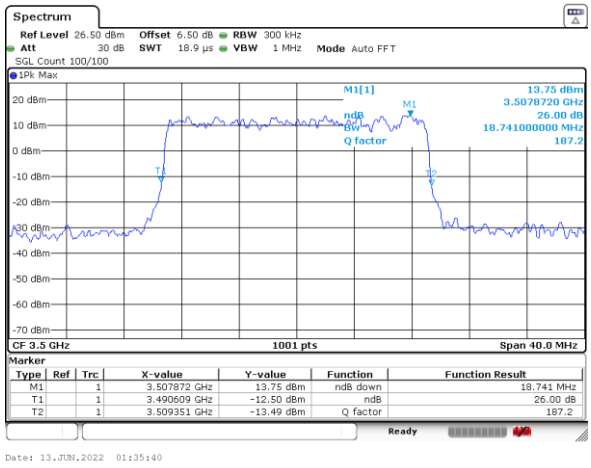
Middle Channel / Full RB / 64QAM

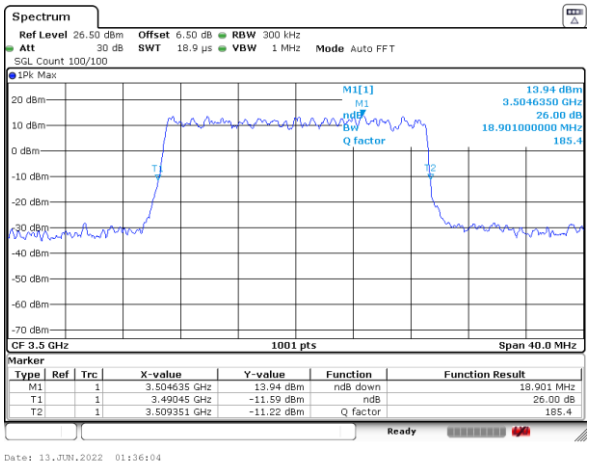


26dB Bandwidth

Mode	LTE Band 42 : 26dB BW(MHz)	
BW	20MHz	
Mod.	QPSK	16QAM
Middle CH	18.74	18.90

LTE Band 42	
Middle Channel / 20MHz / QPSK	Middle Channel / 20MHz / 16QAM

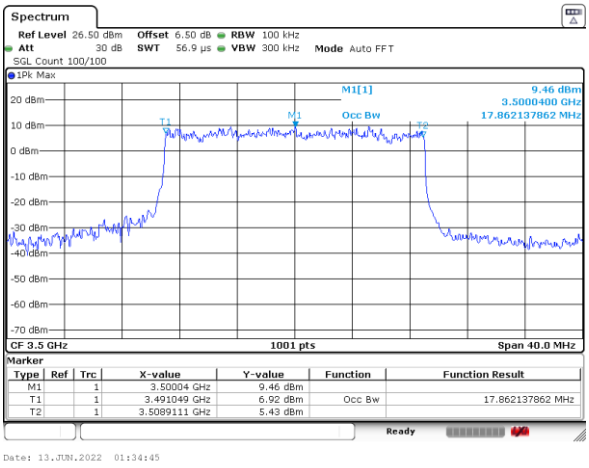


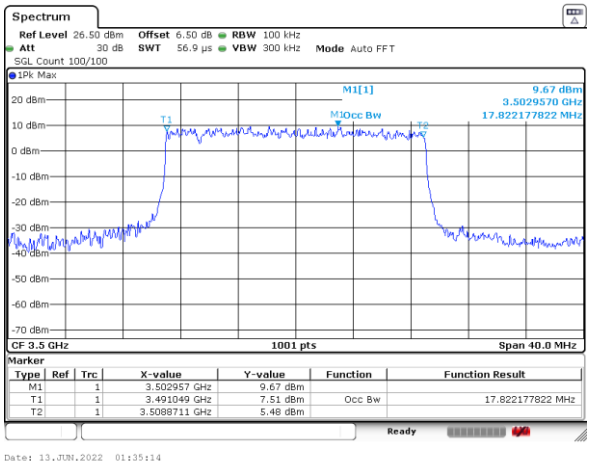


Occupied Bandwidth

Mode	LTE Band 42 : 99%OBW(MHz)	
BW	20MHz	
Mod.	QPSK	16QAM
Middle CH	17.86	17.82

LTE Band 42	
Middle Channel / 20MHz / QPSK	Middle Channel / 20MHz / 16QAM

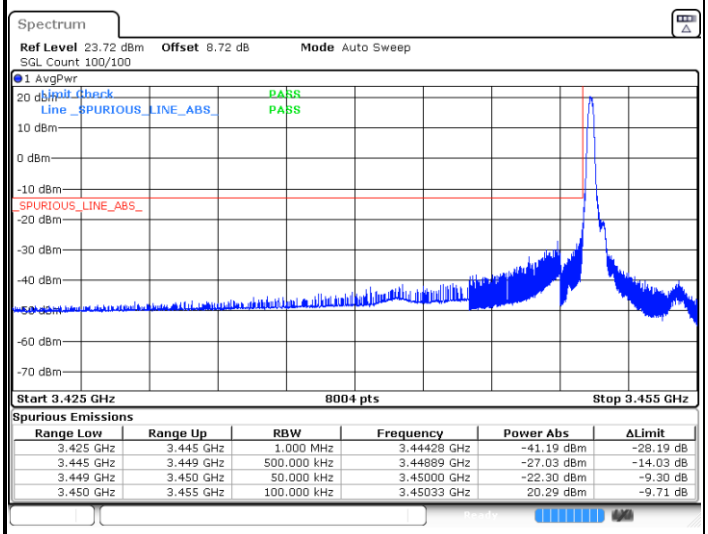




Conducted Band Edge

LTE Band 42 / 5MHz / QPSK

Lowest Band Edge / 1 RB

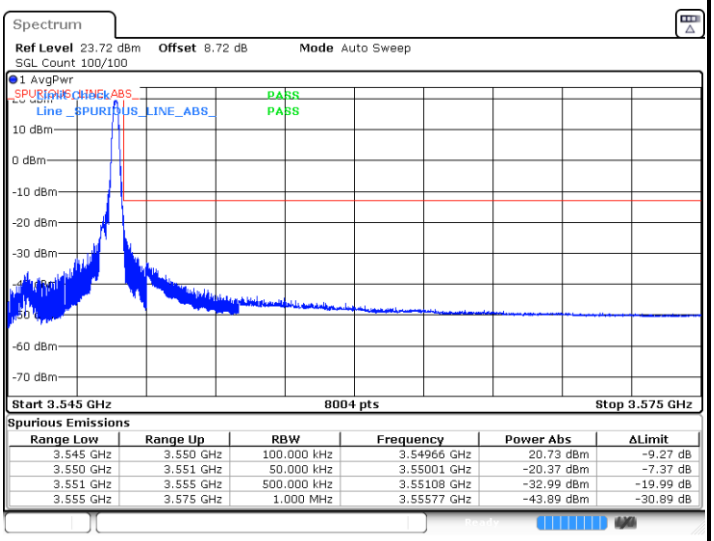


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.425 GHz	3.445 GHz	1.000 MHz	3.44428 GHz	-41.19 dBm	-28.19 dB
3.445 GHz	3.449 GHz	500.000 kHz	3.44889 GHz	-27.03 dBm	-14.03 dB
3.449 GHz	3.450 GHz	50.000 kHz	3.45000 GHz	-22.30 dBm	-9.30 dB
3.450 GHz	3.455 GHz	100.000 kHz	3.45033 GHz	20.29 dBm	-9.71 dB

Date: 11.JUN.2022 17:03:16

Highest Band Edge / 1 RB

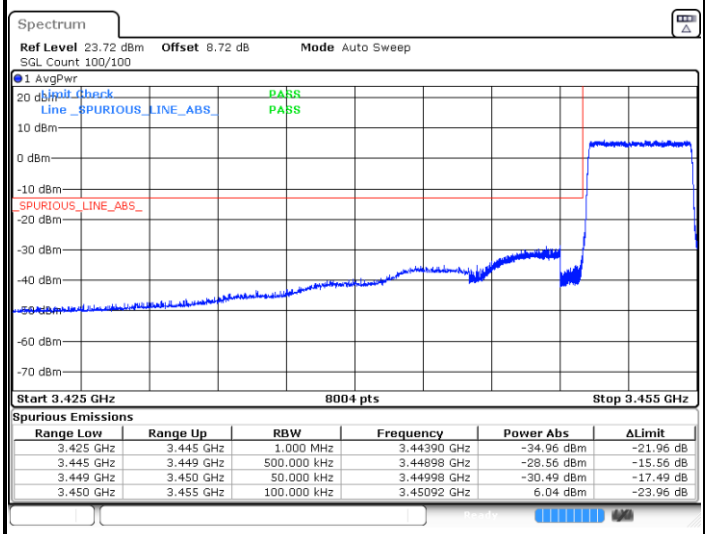


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.545 GHz	3.550 GHz	100.000 kHz	3.54966 GHz	20.73 dBm	-9.27 dB
3.550 GHz	3.551 GHz	50.000 kHz	3.55001 GHz	-20.37 dBm	-7.37 dB
3.551 GHz	3.555 GHz	500.000 kHz	3.55108 GHz	-32.99 dBm	-19.99 dB
3.555 GHz	3.575 GHz	1.000 MHz	3.55577 GHz	-43.89 dBm	-30.89 dB

Date: 11.JUN.2022 17:25:03

Lowest Band Edge / Full RB

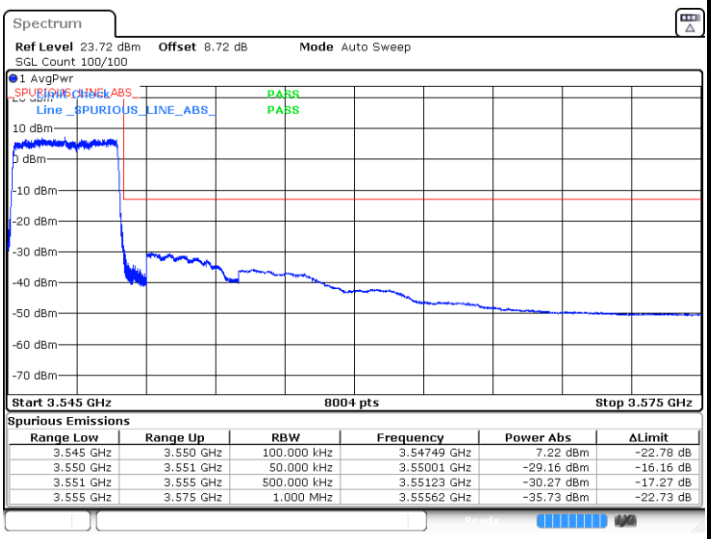


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.425 GHz	3.445 GHz	1.000 MHz	3.44390 GHz	-34.96 dBm	-21.96 dB
3.445 GHz	3.449 GHz	500.000 kHz	3.44898 GHz	-28.56 dBm	-15.56 dB
3.449 GHz	3.450 GHz	50.000 kHz	3.44998 GHz	-30.49 dBm	-17.49 dB
3.450 GHz	3.455 GHz	100.000 kHz	3.45092 GHz	6.04 dBm	-23.96 dB

Date: 11.JUN.2022 17:21:00

Highest Band Edge / Full RB



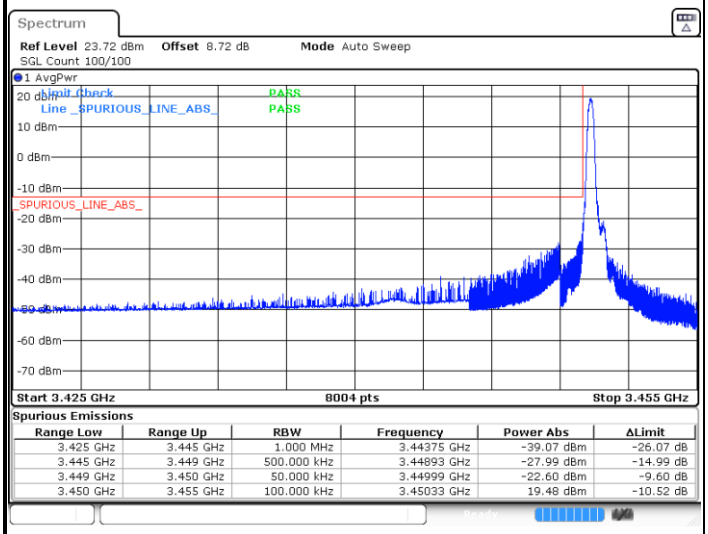
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.545 GHz	3.550 GHz	100.000 kHz	3.54749 GHz	7.22 dBm	-22.78 dB
3.550 GHz	3.551 GHz	50.000 kHz	3.55001 GHz	-29.16 dBm	-16.16 dB
3.551 GHz	3.555 GHz	500.000 kHz	3.55123 GHz	-30.27 dBm	-17.27 dB
3.555 GHz	3.575 GHz	1.000 MHz	3.55562 GHz	-35.73 dBm	-22.73 dB

Date: 11.JUN.2022 17:21:45

LTE Band 42 / 5MHz / 16QAM

Lowest Band Edge / 1RB

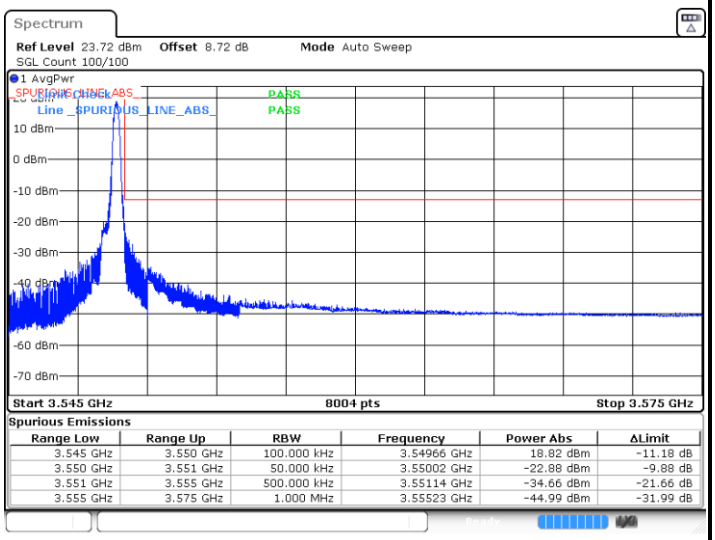


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.425 GHz	3.445 GHz	1.000 MHz	3.44375 GHz	-39.07 dBm	-26.07 dB
3.445 GHz	3.449 GHz	500.000 kHz	3.44893 GHz	-27.99 dBm	-14.99 dB
3.449 GHz	3.450 GHz	50.000 kHz	3.44999 GHz	-22.60 dBm	-9.60 dB
3.450 GHz	3.455 GHz	100.000 kHz	3.45033 GHz	19.48 dBm	-10.52 dB

Date: 11.JUN.2022 17:18:22

Highest Band Edge / 1 RB

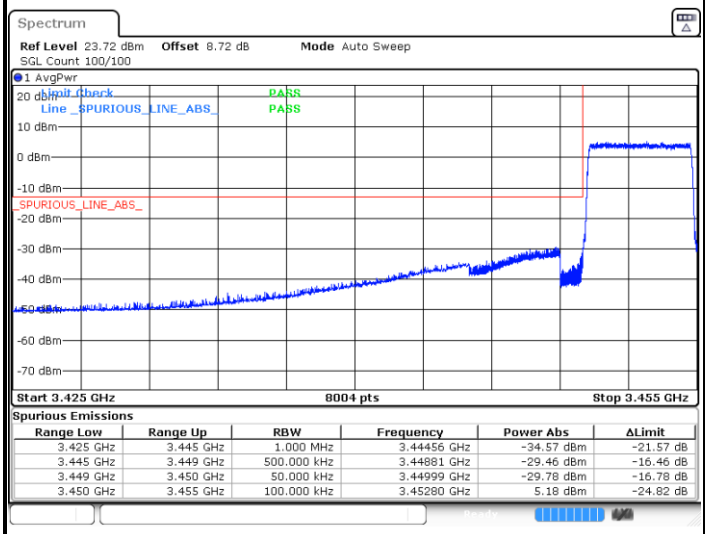


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.545 GHz	3.550 GHz	100.000 kHz	3.54966 GHz	18.82 dBm	-11.18 dB
3.550 GHz	3.551 GHz	50.000 kHz	3.55002 GHz	-22.88 dBm	-9.88 dB
3.551 GHz	3.555 GHz	500.000 kHz	3.55114 GHz	-34.66 dBm	-21.66 dB
3.555 GHz	3.575 GHz	1.000 MHz	3.55523 GHz	-44.99 dBm	-31.99 dB

Date: 11.JUN.2022 17:24:26

Lowest Band Edge / Full RB

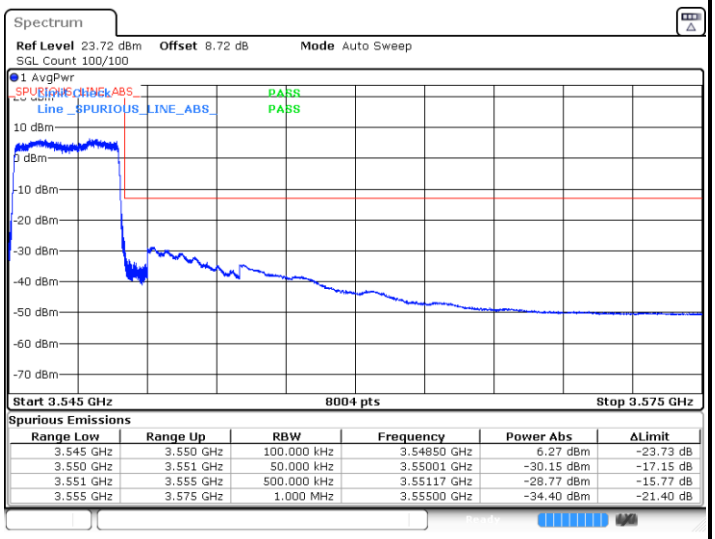


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.425 GHz	3.445 GHz	1.000 MHz	3.44456 GHz	-34.57 dBm	-21.57 dB
3.445 GHz	3.449 GHz	500.000 kHz	3.44881 GHz	-29.46 dBm	-16.46 dB
3.449 GHz	3.450 GHz	50.000 kHz	3.44999 GHz	-29.78 dBm	-16.78 dB
3.450 GHz	3.455 GHz	100.000 kHz	3.45280 GHz	5.18 dBm	-24.82 dB

Date: 11.JUN.2022 17:20:23

Highest Band Edge / Full RB



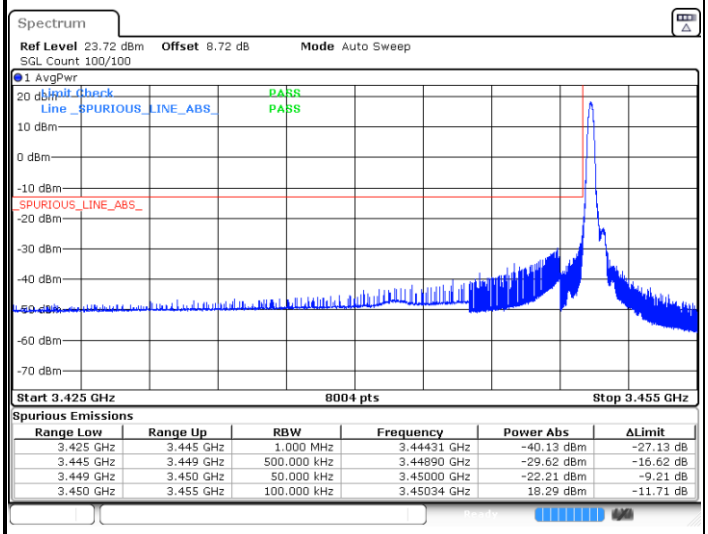
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.545 GHz	3.550 GHz	100.000 kHz	3.54850 GHz	6.27 dBm	-23.73 dB
3.550 GHz	3.551 GHz	50.000 kHz	3.55001 GHz	-30.15 dBm	-17.15 dB
3.551 GHz	3.555 GHz	500.000 kHz	3.55117 GHz	-28.77 dBm	-15.77 dB
3.555 GHz	3.575 GHz	1.000 MHz	3.55500 GHz	-34.40 dBm	-21.40 dB

Date: 11.JUN.2022 17:22:20

LTE Band 42 / 5MHz / 64QAM

Lowest Band Edge / 1RB

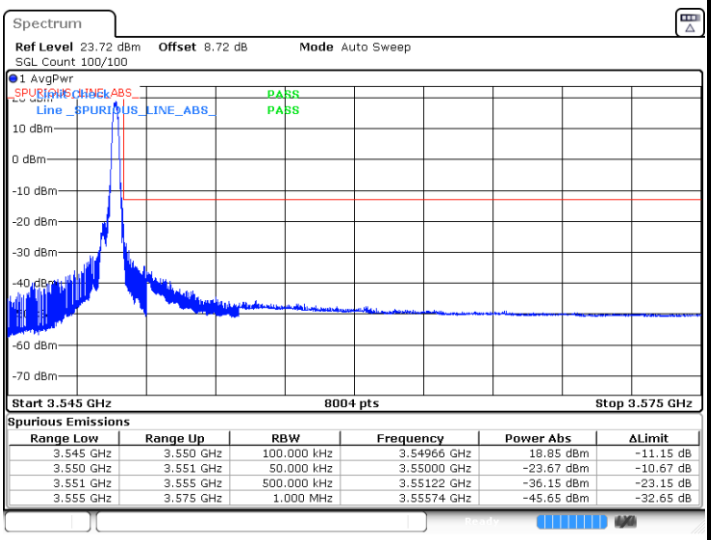


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.425 GHz	3.445 GHz	1.000 MHz	3.44431 GHz	-40.13 dBm	-27.13 dB
3.445 GHz	3.449 GHz	500.000 kHz	3.44890 GHz	-29.62 dBm	-16.62 dB
3.449 GHz	3.450 GHz	50.000 kHz	3.45000 GHz	-22.21 dBm	-9.21 dB
3.450 GHz	3.455 GHz	100.000 kHz	3.45034 GHz	18.29 dBm	-11.71 dB

Date: 11.JUN.2022 17:19:06

Highest Band Edge / 1 RB

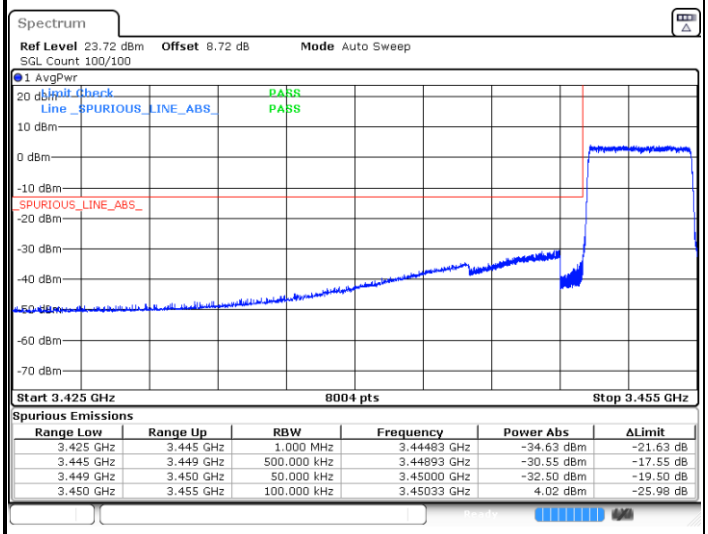


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.545 GHz	3.550 GHz	100.000 kHz	3.54966 GHz	18.85 dBm	-11.15 dB
3.550 GHz	3.551 GHz	50.000 kHz	3.55000 GHz	-23.67 dBm	-10.67 dB
3.551 GHz	3.555 GHz	500.000 kHz	3.55122 GHz	-36.15 dBm	-23.15 dB
3.555 GHz	3.575 GHz	1.000 MHz	3.55574 GHz	-45.65 dBm	-32.65 dB

Date: 11.JUN.2022 17:23:43

Lowest Band Edge / Full RB

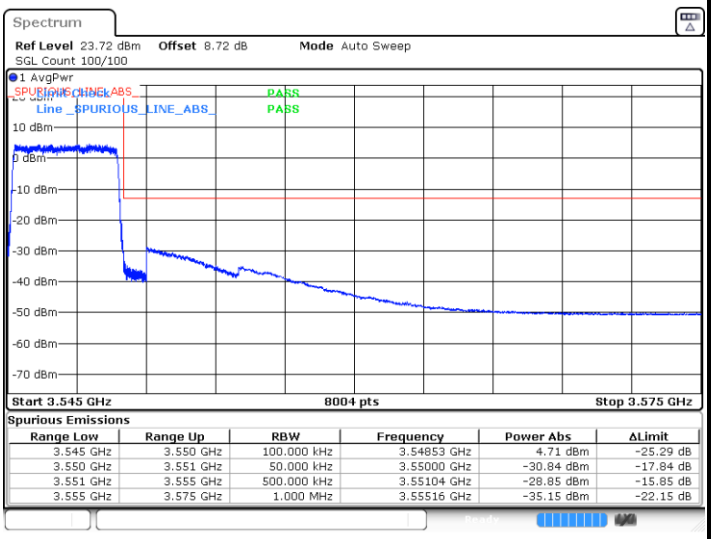


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.425 GHz	3.445 GHz	1.000 MHz	3.44483 GHz	-34.63 dBm	-21.63 dB
3.445 GHz	3.449 GHz	500.000 kHz	3.44893 GHz	-30.55 dBm	-17.55 dB
3.449 GHz	3.450 GHz	50.000 kHz	3.45000 GHz	-32.50 dBm	-19.50 dB
3.450 GHz	3.455 GHz	100.000 kHz	3.45033 GHz	4.02 dBm	-25.98 dB

Date: 11.JUN.2022 17:19:42

Highest Band Edge / Full RB



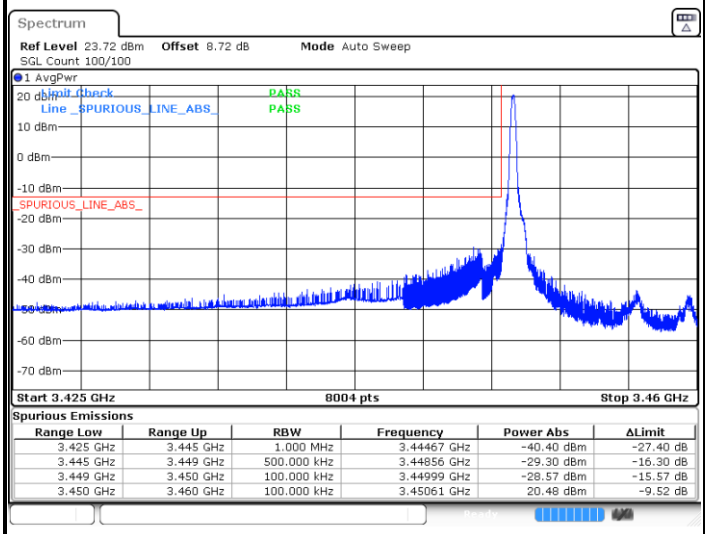
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.545 GHz	3.550 GHz	100.000 kHz	3.54853 GHz	4.71 dBm	-25.29 dB
3.550 GHz	3.551 GHz	50.000 kHz	3.55000 GHz	-30.84 dBm	-17.84 dB
3.551 GHz	3.555 GHz	500.000 kHz	3.55104 GHz	-28.85 dBm	-15.85 dB
3.555 GHz	3.575 GHz	1.000 MHz	3.55516 GHz	-35.15 dBm	-22.15 dB

Date: 11.JUN.2022 17:23:03

LTE Band 42 / 10MHz / QPSK

Lowest Band Edge / 1 RB

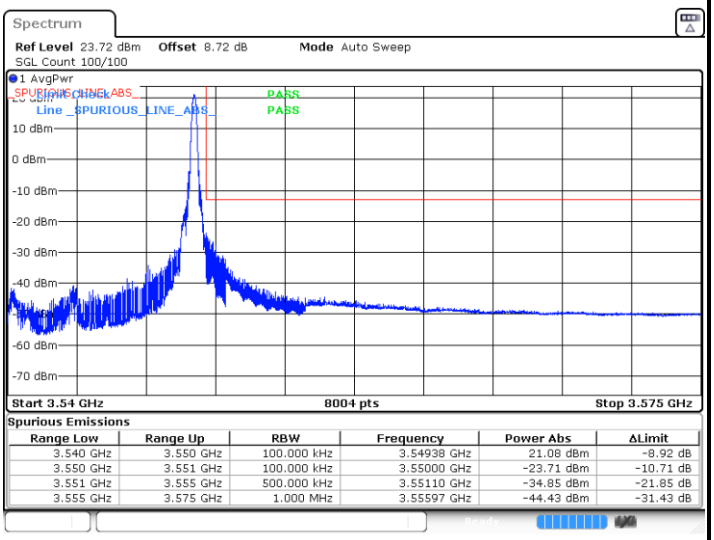


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.425 GHz	3.445 GHz	1.000 MHz	3.44467 GHz	-40.40 dBm	-27.40 dB
3.445 GHz	3.449 GHz	500.000 kHz	3.44856 GHz	-29.30 dBm	-16.30 dB
3.449 GHz	3.450 GHz	100.000 kHz	3.44999 GHz	-28.57 dBm	-15.57 dB
3.450 GHz	3.460 GHz	100.000 kHz	3.45061 GHz	20.48 dBm	-9.52 dB

Date: 11.JUN.2022 17:29:46

Highest Band Edge / 1 RB

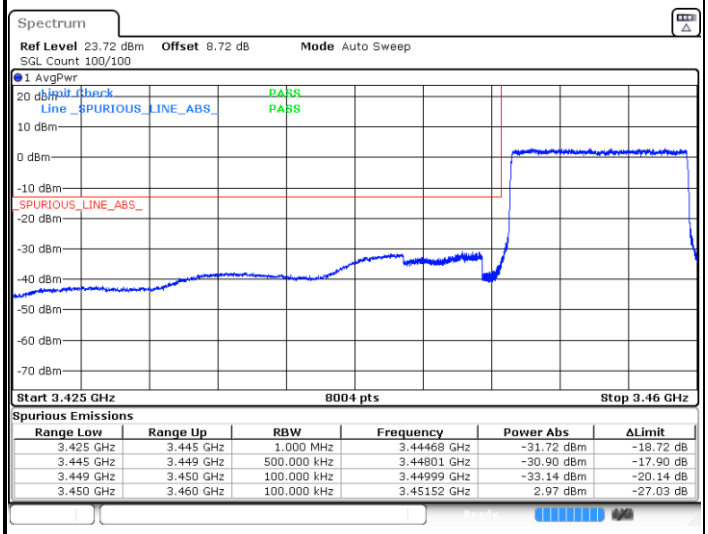


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.540 GHz	3.550 GHz	100.000 kHz	3.54938 GHz	21.08 dBm	-8.92 dB
3.550 GHz	3.551 GHz	100.000 kHz	3.55000 GHz	-23.71 dBm	-10.71 dB
3.551 GHz	3.555 GHz	500.000 kHz	3.55110 GHz	-34.85 dBm	-21.85 dB
3.555 GHz	3.575 GHz	1.000 MHz	3.55597 GHz	-44.43 dBm	-31.43 dB

Date: 11.JUN.2022 17:33:40

Lowest Band Edge / Full RB

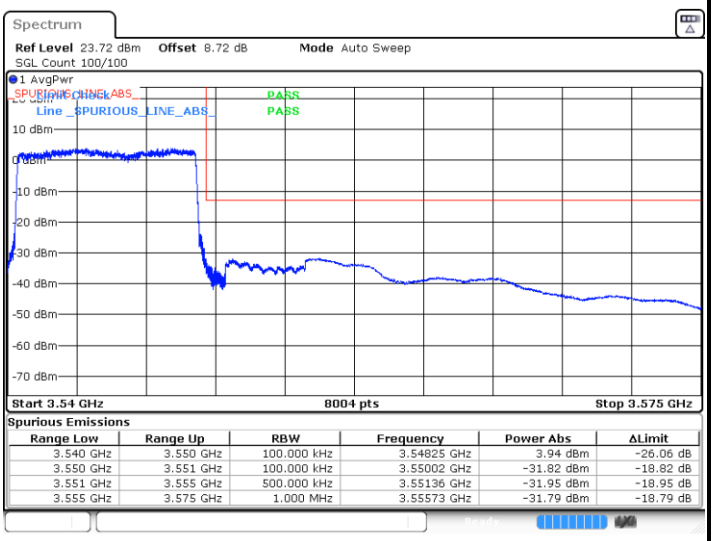


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.425 GHz	3.445 GHz	1.000 MHz	3.44468 GHz	-31.72 dBm	-18.72 dB
3.445 GHz	3.449 GHz	500.000 kHz	3.44801 GHz	-30.90 dBm	-17.90 dB
3.449 GHz	3.450 GHz	100.000 kHz	3.44999 GHz	-33.14 dBm	-20.14 dB
3.450 GHz	3.460 GHz	100.000 kHz	3.45152 GHz	2.97 dBm	-27.03 dB

Date: 11.JUN.2022 17:25:46

Highest Band Edge / Full RB



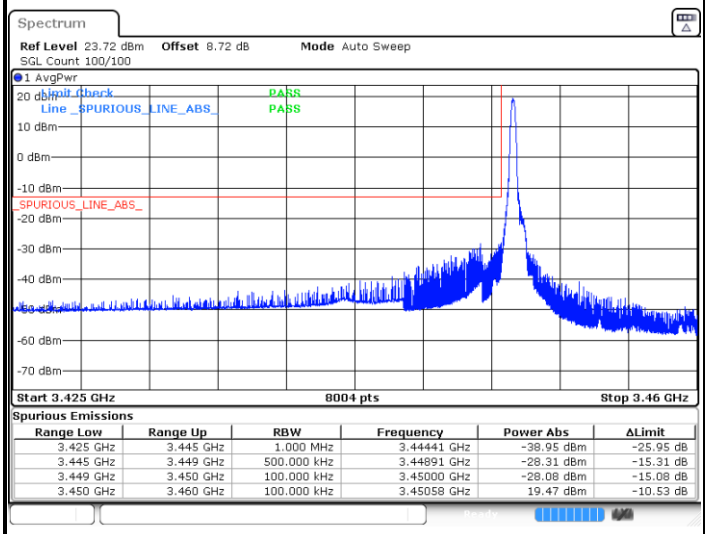
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.540 GHz	3.550 GHz	100.000 kHz	3.54825 GHz	3.94 dBm	-26.06 dB
3.550 GHz	3.551 GHz	100.000 kHz	3.55002 GHz	-31.82 dBm	-18.82 dB
3.551 GHz	3.555 GHz	500.000 kHz	3.55136 GHz	-31.95 dBm	-18.95 dB
3.555 GHz	3.575 GHz	1.000 MHz	3.55573 GHz	-31.79 dBm	-18.79 dB

Date: 11.JUN.2022 17:30:26

LTE Band 42 / 10MHz / 16QAM

Lowest Band Edge / 1 RB

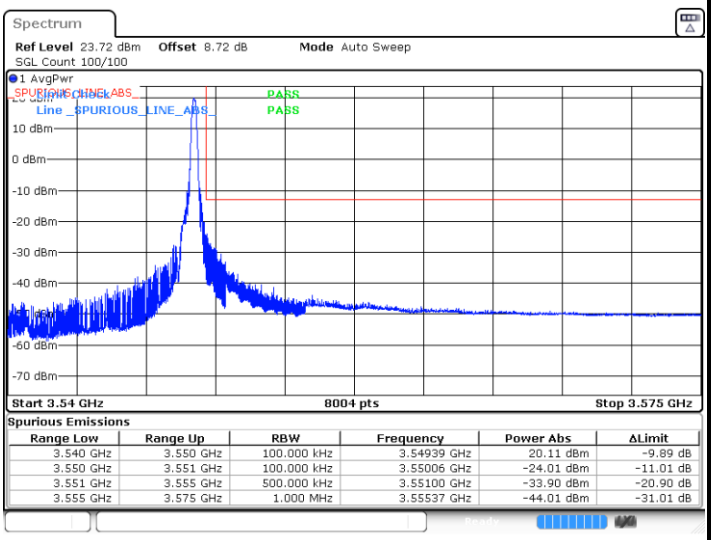


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.425 GHz	3.445 GHz	1.000 MHz	3.44441 GHz	-38.95 dBm	-25.95 dB
3.445 GHz	3.449 GHz	500.000 kHz	3.44891 GHz	-28.31 dBm	-15.31 dB
3.449 GHz	3.450 GHz	100.000 kHz	3.45000 GHz	-28.08 dBm	-15.08 dB
3.450 GHz	3.460 GHz	100.000 kHz	3.45058 GHz	19.47 dBm	-10.53 dB

Date: 11.JUN.2022 17:29:07

Highest Band Edge / 1 RB

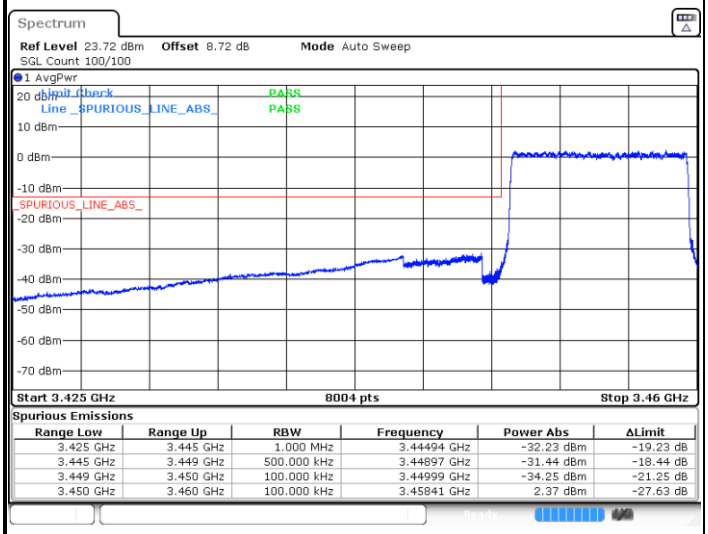


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.540 GHz	3.550 GHz	100.000 kHz	3.54939 GHz	20.11 dBm	-9.89 dB
3.550 GHz	3.551 GHz	100.000 kHz	3.55006 GHz	-24.01 dBm	-11.01 dB
3.551 GHz	3.555 GHz	500.000 kHz	3.55100 GHz	-33.90 dBm	-20.90 dB
3.555 GHz	3.575 GHz	1.000 MHz	3.55537 GHz	-44.01 dBm	-31.01 dB

Date: 11.JUN.2022 17:32:58

Lowest Band Edge / Full RB

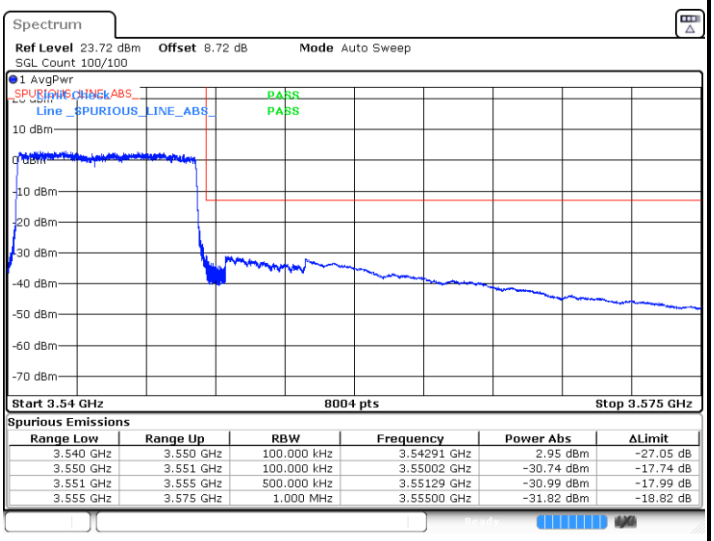


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.425 GHz	3.445 GHz	1.000 MHz	3.44494 GHz	-32.23 dBm	-19.23 dB
3.445 GHz	3.449 GHz	500.000 kHz	3.44897 GHz	-31.44 dBm	-18.44 dB
3.449 GHz	3.450 GHz	100.000 kHz	3.44999 GHz	-34.25 dBm	-21.25 dB
3.450 GHz	3.460 GHz	100.000 kHz	3.45841 GHz	2.37 dBm	-27.63 dB

Date: 11.JUN.2022 17:26:25

Highest Band Edge / Full RB



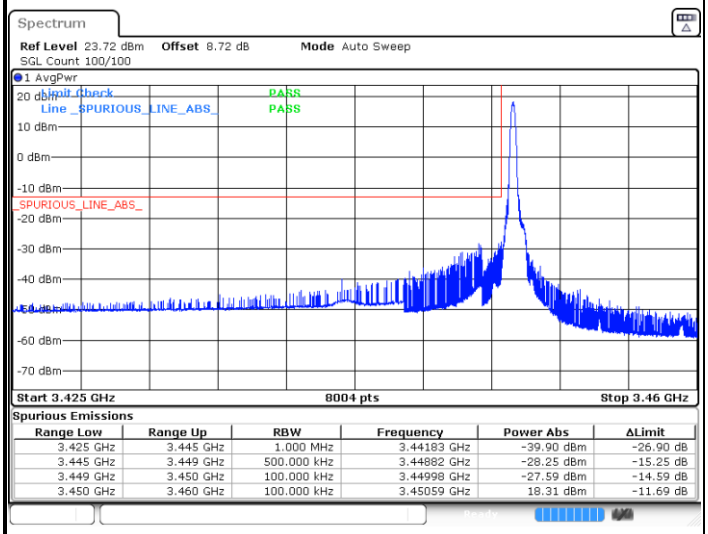
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.540 GHz	3.550 GHz	100.000 kHz	3.54291 GHz	2.95 dBm	-27.05 dB
3.550 GHz	3.551 GHz	100.000 kHz	3.55002 GHz	-30.74 dBm	-17.74 dB
3.551 GHz	3.555 GHz	500.000 kHz	3.55129 GHz	-30.99 dBm	-17.99 dB
3.555 GHz	3.575 GHz	1.000 MHz	3.55500 GHz	-31.82 dBm	-18.82 dB

Date: 11.JUN.2022 17:31:00

LTE Band 42 / 10MHz / 64QAM

Lowest Band Edge / 1 RB

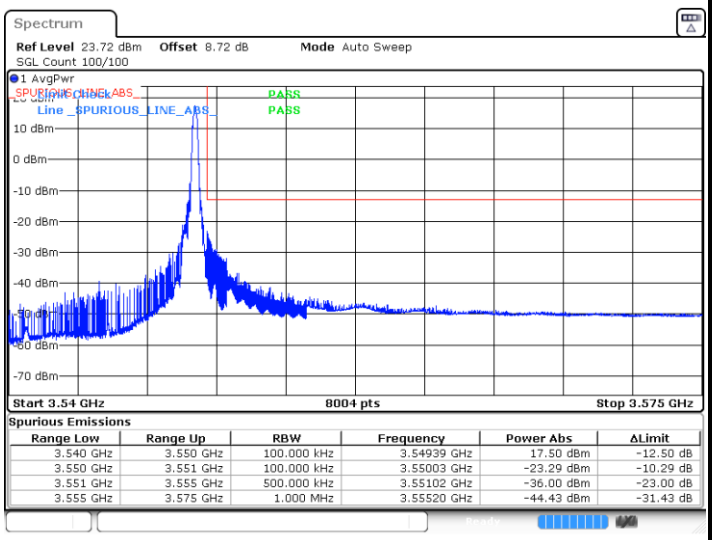


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.425 GHz	3.445 GHz	1.000 MHz	3.44183 GHz	-39.90 dBm	-26.90 dB
3.445 GHz	3.449 GHz	500.000 kHz	3.44882 GHz	-28.25 dBm	-15.25 dB
3.449 GHz	3.450 GHz	100.000 kHz	3.44998 GHz	-27.59 dBm	-14.59 dB
3.450 GHz	3.460 GHz	100.000 kHz	3.45059 GHz	18.31 dBm	-11.69 dB

Date: 11.JUN.2022 17:28:25

Highest Band Edge / 1 RB

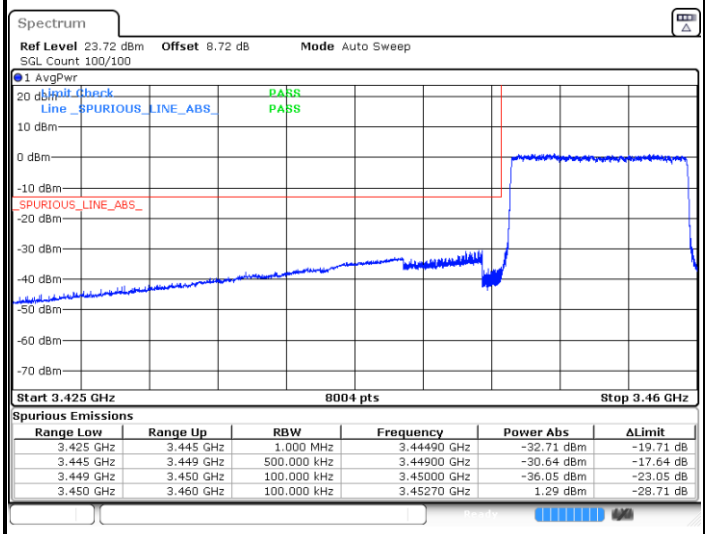


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.540 GHz	3.550 GHz	100.000 kHz	3.54939 GHz	17.50 dBm	-12.50 dB
3.550 GHz	3.551 GHz	100.000 kHz	3.55003 GHz	-23.29 dBm	-10.29 dB
3.551 GHz	3.555 GHz	500.000 kHz	3.55102 GHz	-36.00 dBm	-23.00 dB
3.555 GHz	3.575 GHz	1.000 MHz	3.55520 GHz	-44.43 dBm	-31.43 dB

Date: 11.JUN.2022 17:32:15

Lowest Band Edge / Full RB

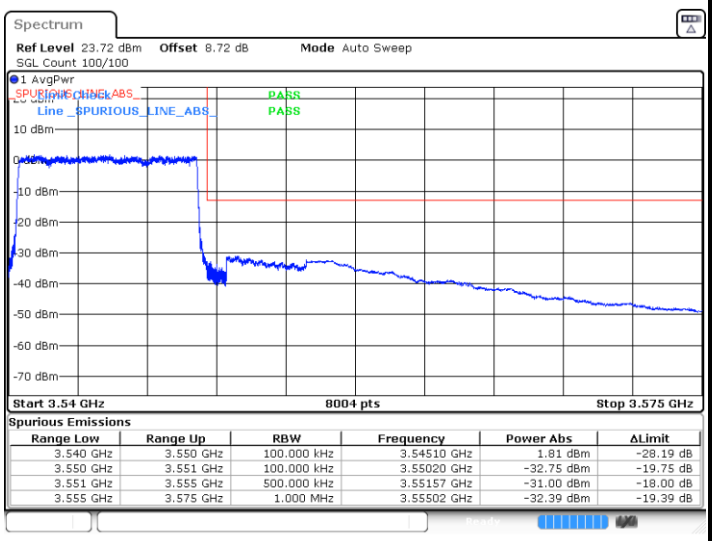


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.425 GHz	3.445 GHz	1.000 MHz	3.44490 GHz	-32.71 dBm	-19.71 dB
3.445 GHz	3.449 GHz	500.000 kHz	3.44900 GHz	-30.64 dBm	-17.64 dB
3.449 GHz	3.450 GHz	100.000 kHz	3.45000 GHz	-36.05 dBm	-23.05 dB
3.450 GHz	3.460 GHz	100.000 kHz	3.45270 GHz	1.29 dBm	-28.71 dB

Date: 11.JUN.2022 17:27:48

Highest Band Edge / Full RB



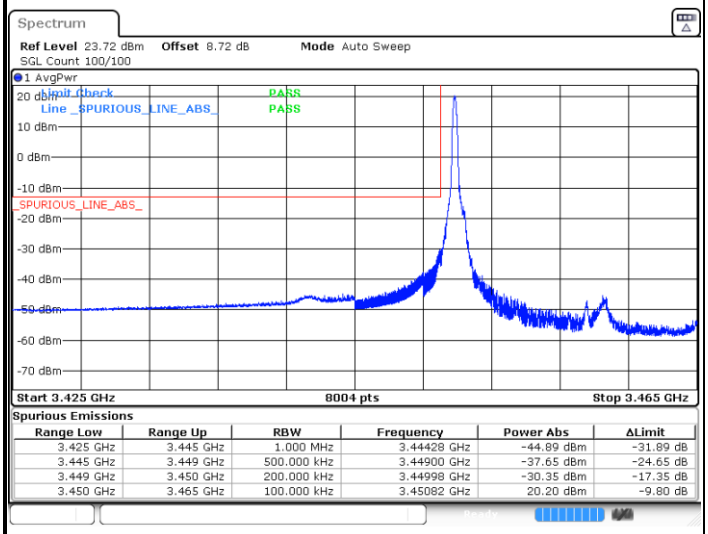
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.540 GHz	3.550 GHz	100.000 kHz	3.54510 GHz	1.81 dBm	-28.19 dB
3.550 GHz	3.551 GHz	100.000 kHz	3.55020 GHz	-32.75 dBm	-19.75 dB
3.551 GHz	3.555 GHz	500.000 kHz	3.55157 GHz	-31.00 dBm	-18.00 dB
3.555 GHz	3.575 GHz	1.000 MHz	3.55502 GHz	-32.39 dBm	-19.39 dB

Date: 11.JUN.2022 17:31:37

LTE Band 42 / 15MHz / QPSK

Lowest Band Edge / 1 RB

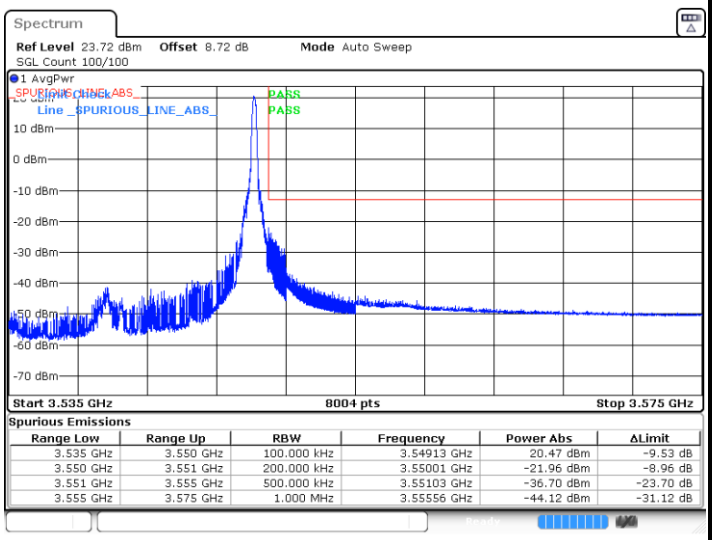


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.425 GHz	3.445 GHz	1.000 MHz	3.44428 GHz	-44.89 dBm	-31.89 dB
3.445 GHz	3.449 GHz	500.000 kHz	3.44900 GHz	-37.65 dBm	-24.65 dB
3.449 GHz	3.450 GHz	200.000 kHz	3.44998 GHz	-30.35 dBm	-17.35 dB
3.450 GHz	3.465 GHz	100.000 kHz	3.45082 GHz	20.20 dBm	-9.80 dB

Date: 11.JUN.2022 17:39:30

Highest Band Edge / 1 RB

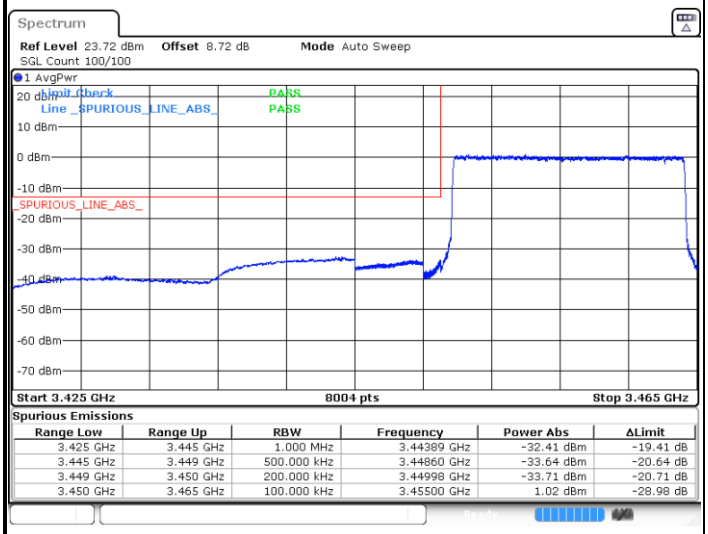


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.535 GHz	3.550 GHz	100.000 kHz	3.54913 GHz	20.47 dBm	-9.53 dB
3.550 GHz	3.551 GHz	200.000 kHz	3.55001 GHz	-21.96 dBm	-8.96 dB
3.551 GHz	3.555 GHz	500.000 kHz	3.55103 GHz	-36.70 dBm	-23.70 dB
3.555 GHz	3.575 GHz	1.000 MHz	3.55556 GHz	-44.12 dBm	-31.12 dB

Date: 11.JUN.2022 17:40:08

Lowest Band Edge / Full RB

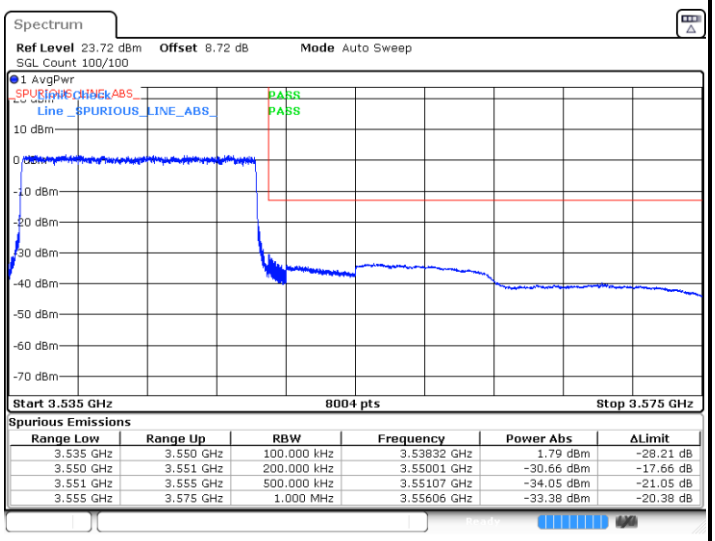


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.425 GHz	3.445 GHz	1.000 MHz	3.44389 GHz	-32.41 dBm	-19.41 dB
3.445 GHz	3.449 GHz	500.000 kHz	3.44860 GHz	-33.64 dBm	-20.64 dB
3.449 GHz	3.450 GHz	200.000 kHz	3.44998 GHz	-33.71 dBm	-20.71 dB
3.450 GHz	3.465 GHz	100.000 kHz	3.45500 GHz	1.02 dBm	-28.98 dB

Date: 11.JUN.2022 17:34:37

Highest Band Edge / Full RB



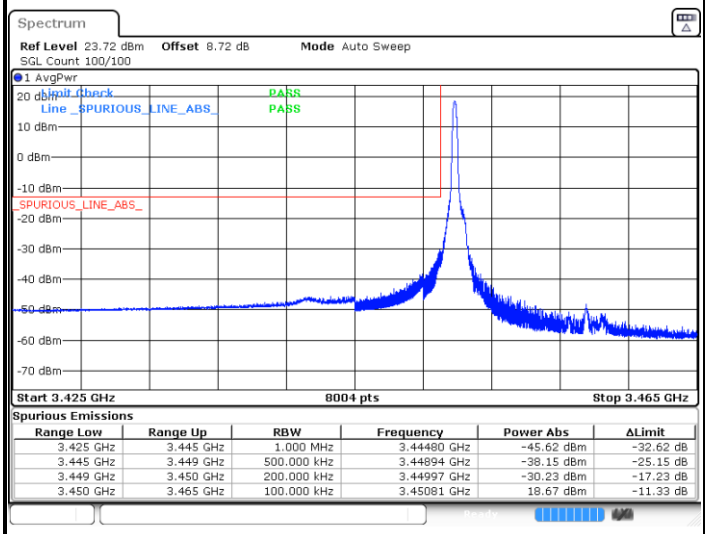
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.535 GHz	3.550 GHz	100.000 kHz	3.53832 GHz	1.79 dBm	-28.21 dB
3.550 GHz	3.551 GHz	200.000 kHz	3.55001 GHz	-30.66 dBm	-17.66 dB
3.551 GHz	3.555 GHz	500.000 kHz	3.55107 GHz	-34.05 dBm	-21.05 dB
3.555 GHz	3.575 GHz	1.000 MHz	3.55606 GHz	-33.38 dBm	-20.38 dB

Date: 11.JUN.2022 17:43:37

LTE Band 42 / 15MHz / 16QAM

Lowest Band Edge / 1 RB

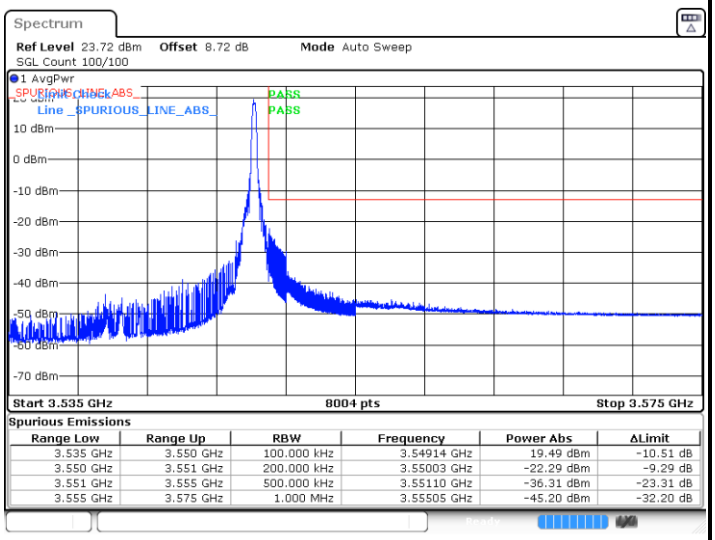


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.425 GHz	3.445 GHz	1.000 MHz	3.44480 GHz	-45.62 dBm	-32.62 dB
3.445 GHz	3.449 GHz	500.000 kHz	3.44894 GHz	-38.15 dBm	-25.15 dB
3.449 GHz	3.450 GHz	200.000 kHz	3.44997 GHz	-30.23 dBm	-17.23 dB
3.450 GHz	3.465 GHz	100.000 kHz	3.45081 GHz	18.67 dBm	-11.33 dB

Date: 11.JUN.2022 17:38:39

Highest Band Edge / 1 RB

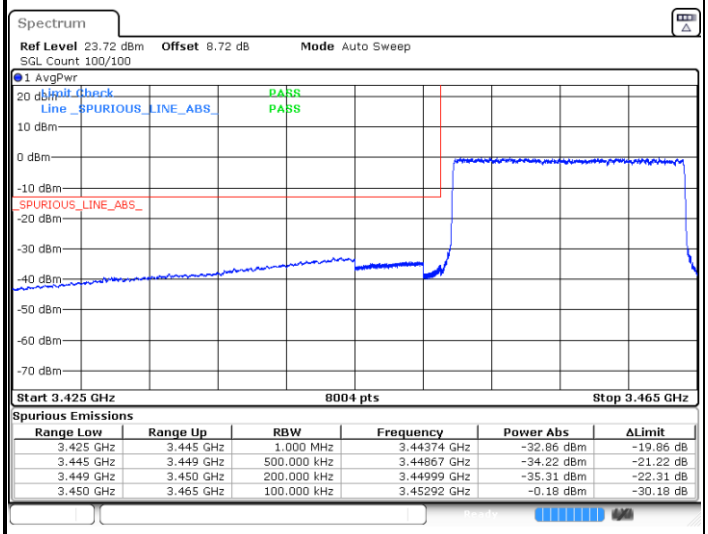


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.535 GHz	3.550 GHz	100.000 kHz	3.54914 GHz	19.49 dBm	-10.51 dB
3.550 GHz	3.551 GHz	200.000 kHz	3.55003 GHz	-22.29 dBm	-9.29 dB
3.551 GHz	3.555 GHz	500.000 kHz	3.55110 GHz	-36.31 dBm	-23.31 dB
3.555 GHz	3.575 GHz	1.000 MHz	3.55505 GHz	-45.20 dBm	-32.20 dB

Date: 11.JUN.2022 17:40:47

Lowest Band Edge / Full RB

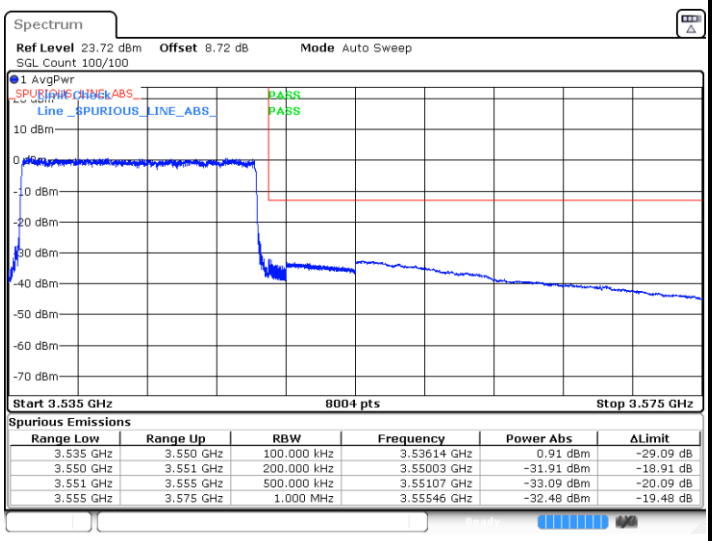


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.425 GHz	3.445 GHz	1.000 MHz	3.44374 GHz	-32.86 dBm	-19.86 dB
3.445 GHz	3.449 GHz	500.000 kHz	3.44867 GHz	-34.22 dBm	-21.22 dB
3.449 GHz	3.450 GHz	200.000 kHz	3.44999 GHz	-35.31 dBm	-22.31 dB
3.450 GHz	3.465 GHz	100.000 kHz	3.45292 GHz	-0.18 dBm	-30.18 dB

Date: 11.JUN.2022 17:35:36

Highest Band Edge / Full RB



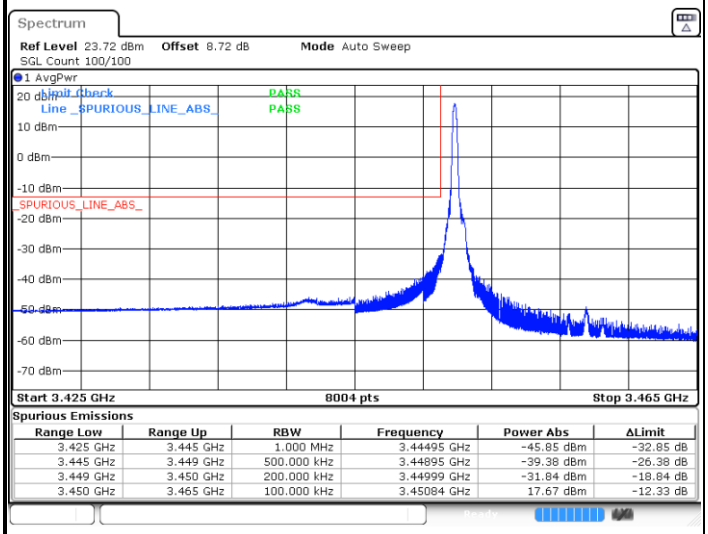
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.535 GHz	3.550 GHz	100.000 kHz	3.53614 GHz	0.91 dBm	-29.09 dB
3.550 GHz	3.551 GHz	200.000 kHz	3.55003 GHz	-31.91 dBm	-18.91 dB
3.551 GHz	3.555 GHz	500.000 kHz	3.55107 GHz	-33.09 dBm	-20.09 dB
3.555 GHz	3.575 GHz	1.000 MHz	3.55546 GHz	-32.48 dBm	-19.48 dB

Date: 11.JUN.2022 17:43:00

LTE Band 42 / 15MHz / 64QAM

Lowest Band Edge / 1 RB

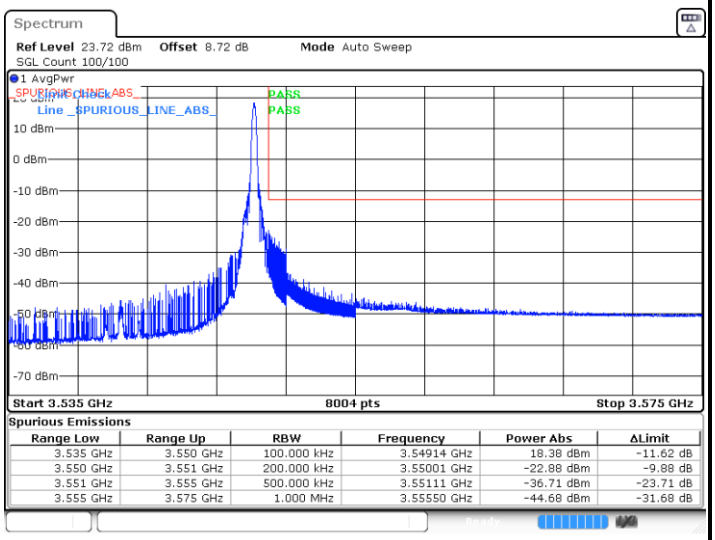


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.425 GHz	3.445 GHz	1.000 MHz	3.44495 GHz	-45.85 dBm	-32.85 dB
3.445 GHz	3.449 GHz	500.000 kHz	3.44895 GHz	-39.38 dBm	-26.38 dB
3.449 GHz	3.450 GHz	200.000 kHz	3.44999 GHz	-31.84 dBm	-18.84 dB
3.450 GHz	3.465 GHz	100.000 kHz	3.45084 GHz	17.67 dBm	-12.33 dB

Date: 11.JUN.2022 17:37:48

Highest Band Edge / 1 RB

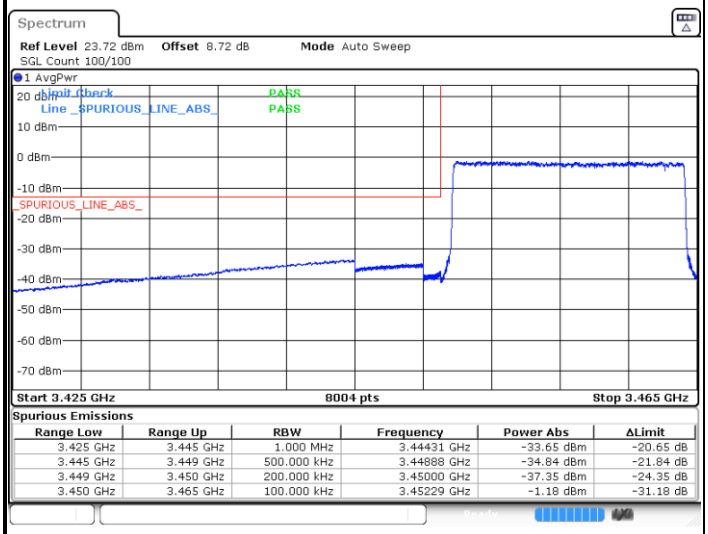


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.535 GHz	3.550 GHz	100.000 kHz	3.54914 GHz	18.38 dBm	-11.62 dB
3.550 GHz	3.551 GHz	200.000 kHz	3.55001 GHz	-22.88 dBm	-9.88 dB
3.551 GHz	3.555 GHz	500.000 kHz	3.55111 GHz	-36.71 dBm	-23.71 dB
3.555 GHz	3.575 GHz	1.000 MHz	3.55550 GHz	-44.68 dBm	-31.68 dB

Date: 11.JUN.2022 17:41:30

Lowest Band Edge / Full RB

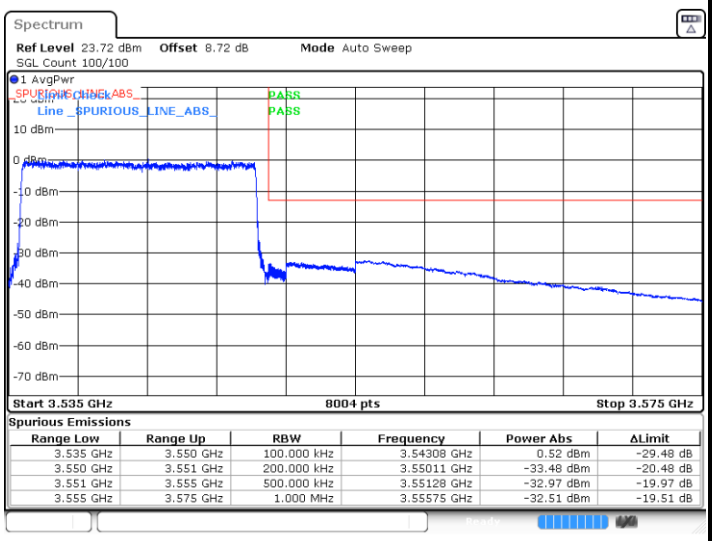


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.425 GHz	3.445 GHz	1.000 MHz	3.44431 GHz	-33.65 dBm	-20.65 dB
3.445 GHz	3.449 GHz	500.000 kHz	3.44888 GHz	-34.84 dBm	-21.84 dB
3.449 GHz	3.450 GHz	200.000 kHz	3.45000 GHz	-37.35 dBm	-24.35 dB
3.450 GHz	3.465 GHz	100.000 kHz	3.45229 GHz	-1.18 dBm	-31.18 dB

Date: 11.JUN.2022 17:37:00

Highest Band Edge / Full RB



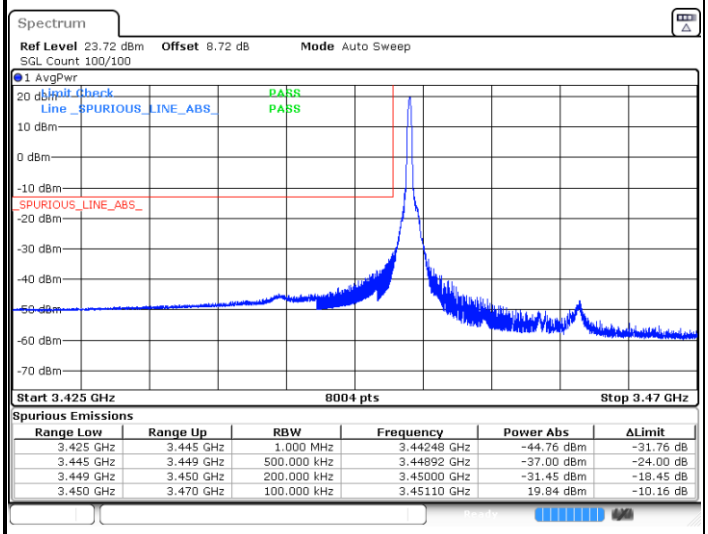
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.535 GHz	3.550 GHz	100.000 kHz	3.54308 GHz	0.52 dBm	-29.48 dB
3.550 GHz	3.551 GHz	200.000 kHz	3.55011 GHz	-33.48 dBm	-20.48 dB
3.551 GHz	3.555 GHz	500.000 kHz	3.55128 GHz	-32.97 dBm	-19.97 dB
3.555 GHz	3.575 GHz	1.000 MHz	3.55575 GHz	-32.51 dBm	-19.51 dB

Date: 11.JUN.2022 17:42:26

LTE Band 42 / 20MHz / QPSK

Lowest Band Edge / 1 RB

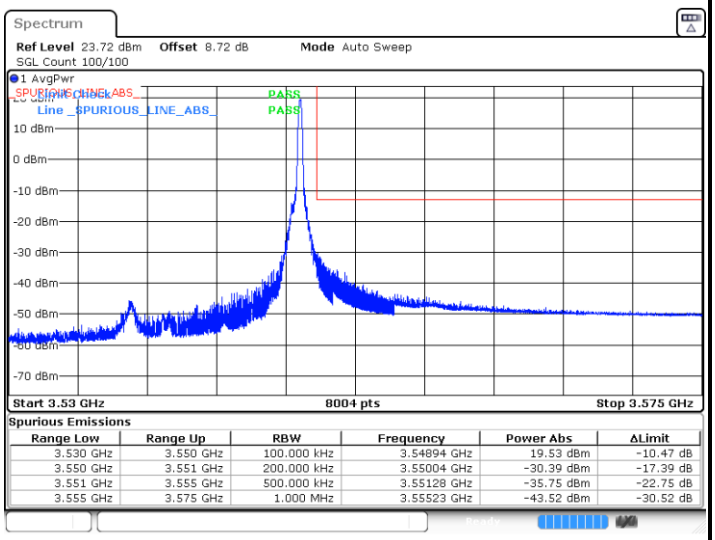


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.425 GHz	3.445 GHz	1.000 MHz	3.44248 GHz	-44.76 dBm	-31.76 dB
3.445 GHz	3.449 GHz	500.000 kHz	3.44892 GHz	-37.00 dBm	-24.00 dB
3.449 GHz	3.450 GHz	200.000 kHz	3.45000 GHz	-31.45 dBm	-18.45 dB
3.450 GHz	3.470 GHz	100.000 kHz	3.45110 GHz	19.84 dBm	-10.16 dB

Date: 11.JUN.2022 17:49:05

Highest Band Edge / 1 RB

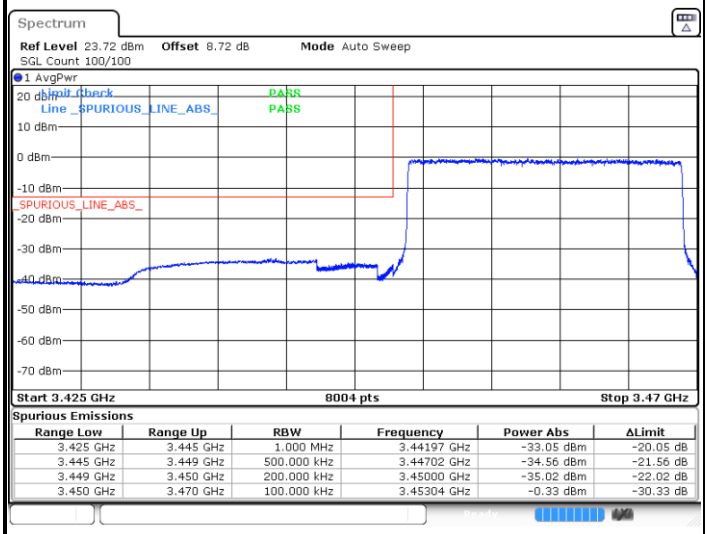


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.530 GHz	3.550 GHz	100.000 kHz	3.54894 GHz	19.53 dBm	-10.47 dB
3.550 GHz	3.551 GHz	200.000 kHz	3.55004 GHz	-30.39 dBm	-17.39 dB
3.551 GHz	3.555 GHz	500.000 kHz	3.55128 GHz	-35.75 dBm	-22.75 dB
3.555 GHz	3.575 GHz	1.000 MHz	3.55523 GHz	-43.52 dBm	-30.52 dB

Date: 11.JUN.2022 17:49:56

Lowest Band Edge / Full RB

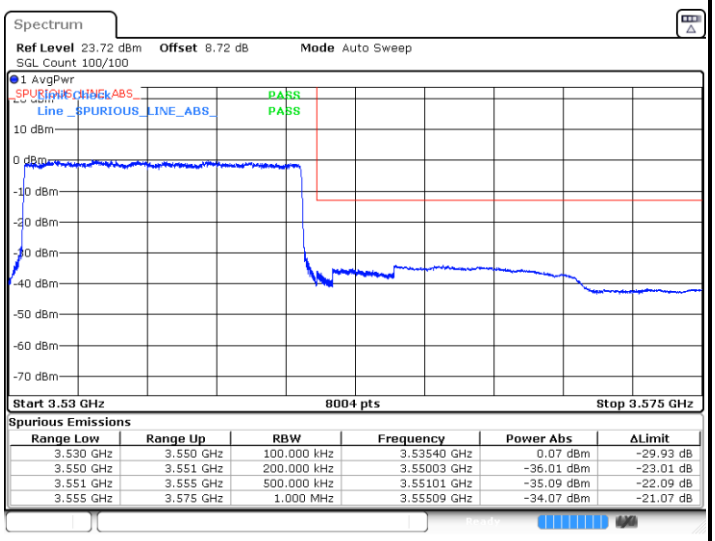


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.425 GHz	3.445 GHz	1.000 MHz	3.44197 GHz	-33.05 dBm	-20.05 dB
3.445 GHz	3.449 GHz	500.000 kHz	3.44702 GHz	-34.56 dBm	-21.56 dB
3.449 GHz	3.450 GHz	200.000 kHz	3.45000 GHz	-35.02 dBm	-22.02 dB
3.450 GHz	3.470 GHz	100.000 kHz	3.45304 GHz	-0.33 dBm	-30.33 dB

Date: 11.JUN.2022 17:44:29

Highest Band Edge / Full RB



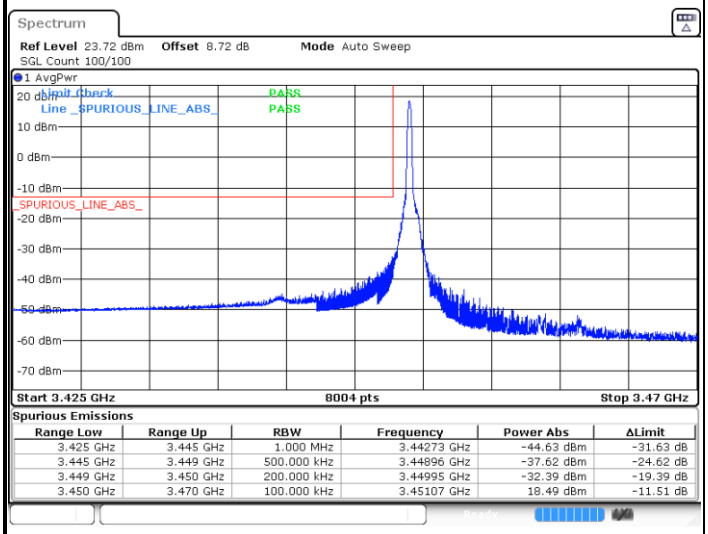
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.530 GHz	3.550 GHz	100.000 kHz	3.53540 GHz	0.07 dBm	-29.93 dB
3.550 GHz	3.551 GHz	200.000 kHz	3.55003 GHz	-36.01 dBm	-23.01 dB
3.551 GHz	3.555 GHz	500.000 kHz	3.55101 GHz	-35.09 dBm	-22.09 dB
3.555 GHz	3.575 GHz	1.000 MHz	3.55509 GHz	-34.07 dBm	-21.07 dB

Date: 11.JUN.2022 17:53:45

LTE Band 42 / 20MHz / 16QAM

Lowest Band Edge / 1 RB

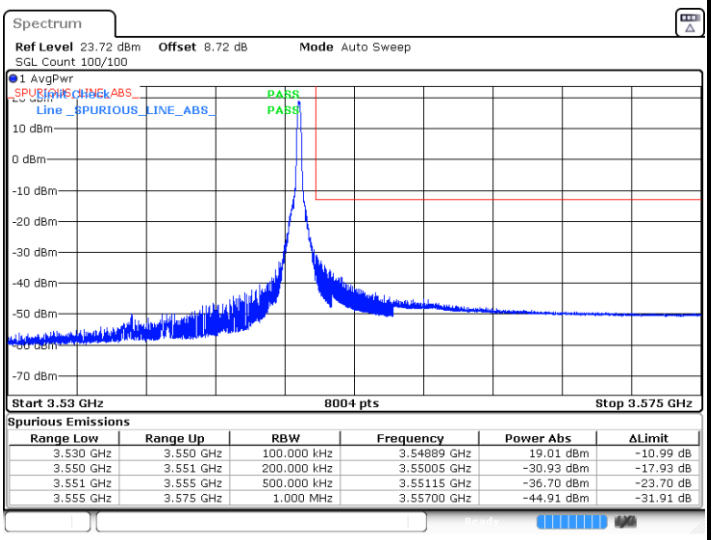


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.425 GHz	3.445 GHz	1.000 MHz	3.44273 GHz	-44.63 dBm	-31.63 dB
3.445 GHz	3.449 GHz	500.000 kHz	3.44896 GHz	-37.62 dBm	-24.62 dB
3.449 GHz	3.450 GHz	200.000 kHz	3.44995 GHz	-32.39 dBm	-19.39 dB
3.450 GHz	3.470 GHz	100.000 kHz	3.45107 GHz	18.49 dBm	-11.51 dB

Date: 11.JUN.2022 17:48:06

Highest Band Edge / 1 RB

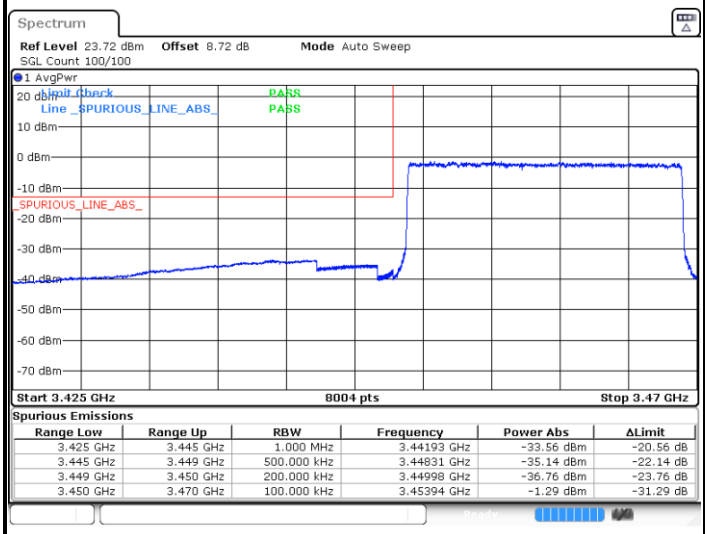


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.530 GHz	3.550 GHz	100.000 kHz	3.54889 GHz	19.01 dBm	-10.99 dB
3.550 GHz	3.551 GHz	200.000 kHz	3.55005 GHz	-30.93 dBm	-17.93 dB
3.551 GHz	3.555 GHz	500.000 kHz	3.55115 GHz	-36.70 dBm	-23.70 dB
3.555 GHz	3.575 GHz	1.000 MHz	3.55700 GHz	-44.91 dBm	-31.91 dB

Date: 11.JUN.2022 17:50:38

Lowest Band Edge / Full RB

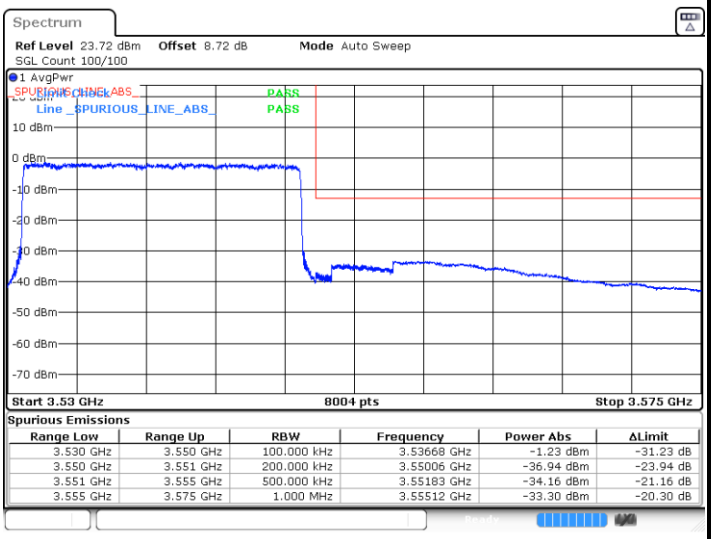


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.425 GHz	3.445 GHz	1.000 MHz	3.44193 GHz	-33.56 dBm	-20.56 dB
3.445 GHz	3.449 GHz	500.000 kHz	3.44831 GHz	-35.14 dBm	-22.14 dB
3.449 GHz	3.450 GHz	200.000 kHz	3.44998 GHz	-36.76 dBm	-23.76 dB
3.450 GHz	3.470 GHz	100.000 kHz	3.45394 GHz	-1.29 dBm	-31.29 dB

Date: 11.JUN.2022 17:45:25

Highest Band Edge / Full RB



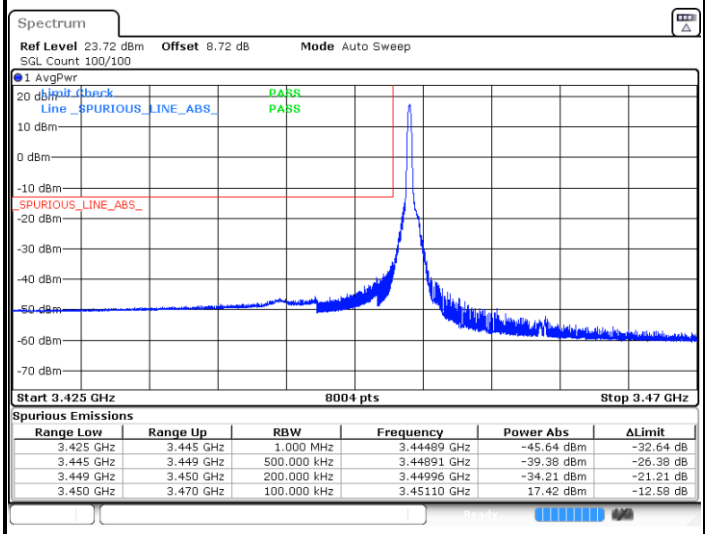
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.530 GHz	3.550 GHz	100.000 kHz	3.53668 GHz	-1.23 dBm	-31.23 dB
3.550 GHz	3.551 GHz	200.000 kHz	3.55006 GHz	-36.94 dBm	-23.94 dB
3.551 GHz	3.555 GHz	500.000 kHz	3.55183 GHz	-34.16 dBm	-21.16 dB
3.555 GHz	3.575 GHz	1.000 MHz	3.55512 GHz	-33.30 dBm	-20.30 dB

Date: 11.JUN.2022 17:53:03

LTE Band 42 / 20MHz / 64QAM

Lowest Band Edge / 1 RB

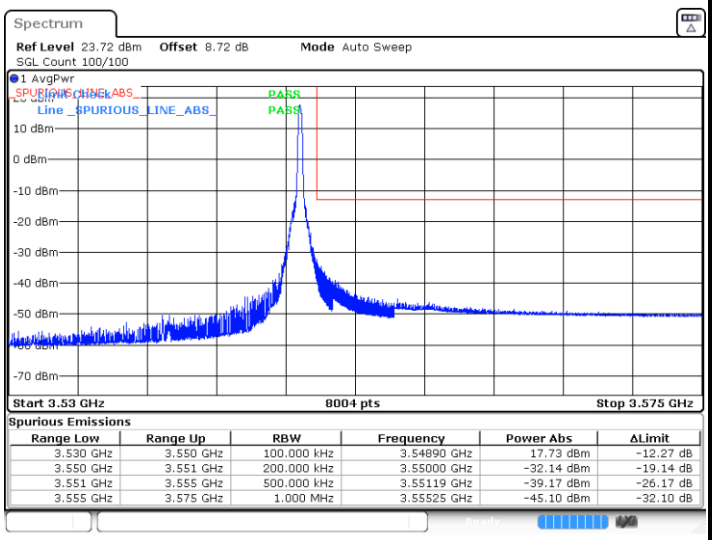


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.425 GHz	3.445 GHz	1.000 MHz	3.44489 GHz	-45.64 dBm	-32.64 dB
3.445 GHz	3.449 GHz	500.000 kHz	3.44891 GHz	-39.38 dBm	-26.38 dB
3.449 GHz	3.450 GHz	200.000 kHz	3.44996 GHz	-34.21 dBm	-21.21 dB
3.450 GHz	3.470 GHz	100.000 kHz	3.45110 GHz	17.42 dBm	-12.58 dB

Date: 11.JUN.2022 17:47:12

Highest Band Edge / 1 RB

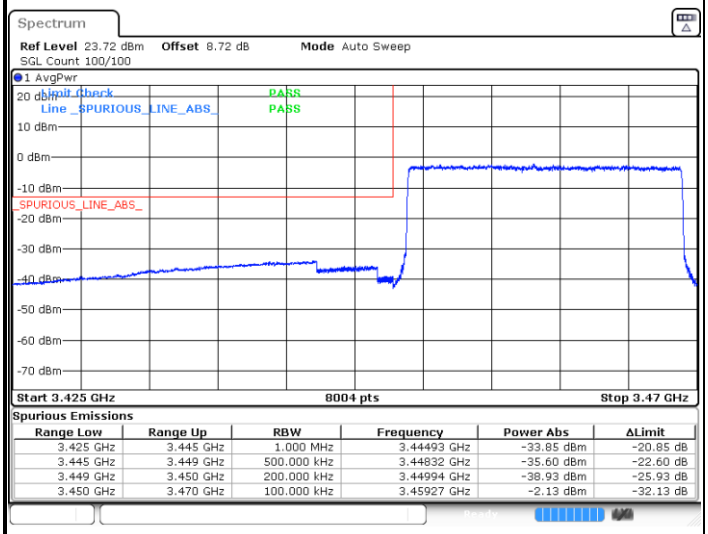


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.530 GHz	3.550 GHz	100.000 kHz	3.54890 GHz	17.73 dBm	-12.27 dB
3.550 GHz	3.551 GHz	200.000 kHz	3.55000 GHz	-32.14 dBm	-19.14 dB
3.551 GHz	3.555 GHz	500.000 kHz	3.55119 GHz	-39.17 dBm	-26.17 dB
3.555 GHz	3.575 GHz	1.000 MHz	3.55525 GHz	-45.10 dBm	-32.10 dB

Date: 11.JUN.2022 17:51:30

Lowest Band Edge / Full RB

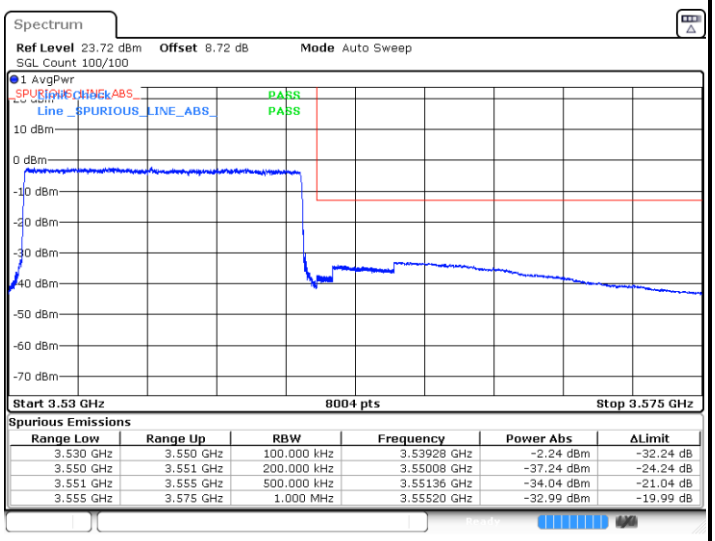


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.425 GHz	3.445 GHz	1.000 MHz	3.44493 GHz	-33.85 dBm	-20.85 dB
3.445 GHz	3.449 GHz	500.000 kHz	3.44832 GHz	-35.60 dBm	-22.60 dB
3.449 GHz	3.450 GHz	200.000 kHz	3.44994 GHz	-38.93 dBm	-25.93 dB
3.450 GHz	3.470 GHz	100.000 kHz	3.45927 GHz	-2.13 dBm	-32.13 dB

Date: 11.JUN.2022 17:46:19

Highest Band Edge / Full RB



Spurious Emissions

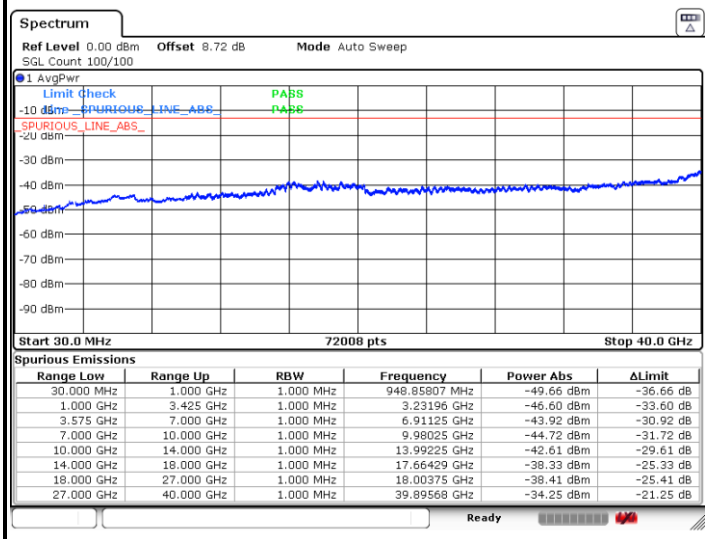
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.530 GHz	3.550 GHz	100.000 kHz	3.53928 GHz	-2.24 dBm	-32.24 dB
3.550 GHz	3.551 GHz	200.000 kHz	3.55008 GHz	-37.24 dBm	-24.24 dB
3.551 GHz	3.555 GHz	500.000 kHz	3.55136 GHz	-34.04 dBm	-21.04 dB
3.555 GHz	3.575 GHz	1.000 MHz	3.55520 GHz	-32.99 dBm	-19.99 dB

Date: 11.JUN.2022 17:52:17

Conducted Spurious Emission

LTE Band 42 / 5MHz

Lowest Channel / QPSK

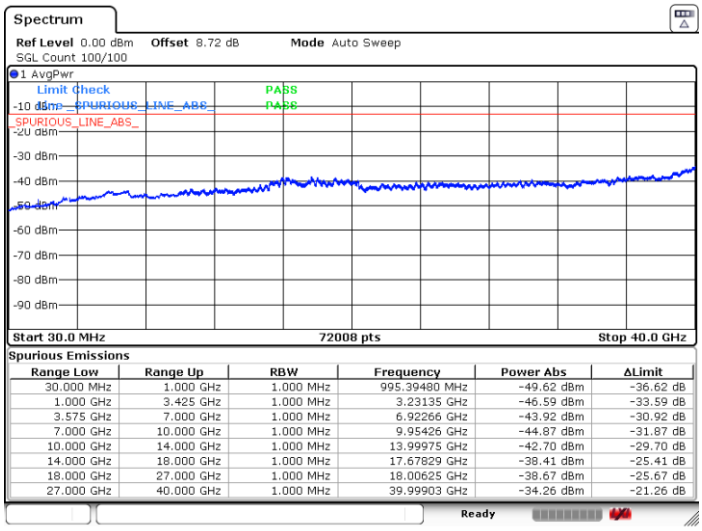


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	948.85807 MHz	-49.66 dBm	-36.66 dB
1.000 GHz	3.425 GHz	1.000 MHz	3.23196 GHz	-46.60 dBm	-33.60 dB
3.575 GHz	7.000 GHz	1.000 MHz	6.91125 GHz	-43.92 dBm	-30.92 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.98025 GHz	-44.72 dBm	-31.72 dB
10.000 GHz	14.000 GHz	1.000 MHz	13.99225 GHz	-42.61 dBm	-29.61 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.66429 GHz	-38.33 dBm	-25.33 dB
18.000 GHz	27.000 GHz	1.000 MHz	18.00375 GHz	-38.41 dBm	-25.41 dB
27.000 GHz	40.000 GHz	1.000 MHz	39.89568 GHz	-34.25 dBm	-21.25 dB

Date: 13.JUN.2022 00:41:32

Middle Channel / QPSK

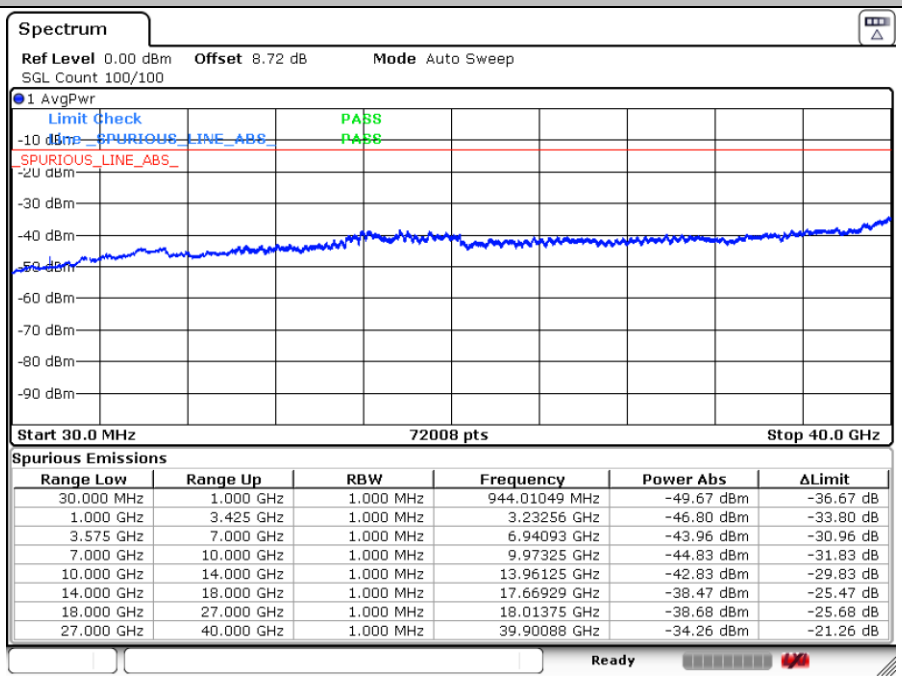


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	995.39480 MHz	-49.62 dBm	-36.62 dB
1.000 GHz	3.425 GHz	1.000 MHz	3.23135 GHz	-46.59 dBm	-33.59 dB
3.575 GHz	7.000 GHz	1.000 MHz	6.92266 GHz	-43.92 dBm	-30.92 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.95426 GHz	-44.87 dBm	-31.87 dB
10.000 GHz	14.000 GHz	1.000 MHz	13.99975 GHz	-42.70 dBm	-29.70 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.67829 GHz	-38.41 dBm	-25.41 dB
18.000 GHz	27.000 GHz	1.000 MHz	18.00625 GHz	-38.67 dBm	-25.67 dB
27.000 GHz	40.000 GHz	1.000 MHz	39.99903 GHz	-34.26 dBm	-21.26 dB

Date: 13.JUN.2022 00:43:42

Highest Channel / QPSK



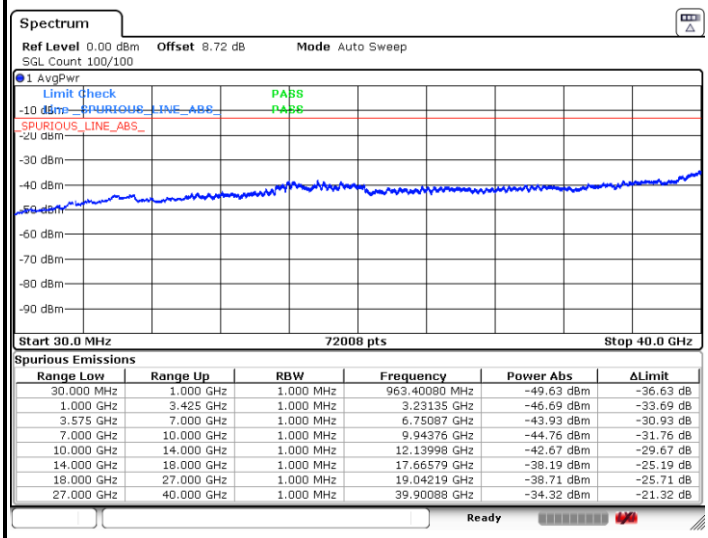
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	944.01049 MHz	-49.67 dBm	-36.67 dB
1.000 GHz	3.425 GHz	1.000 MHz	3.23256 GHz	-46.80 dBm	-33.80 dB
3.575 GHz	7.000 GHz	1.000 MHz	6.94093 GHz	-43.96 dBm	-30.96 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.97325 GHz	-44.83 dBm	-31.83 dB
10.000 GHz	14.000 GHz	1.000 MHz	13.96125 GHz	-42.83 dBm	-29.83 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.66929 GHz	-38.47 dBm	-25.47 dB
18.000 GHz	27.000 GHz	1.000 MHz	18.01375 GHz	-38.68 dBm	-25.68 dB
27.000 GHz	40.000 GHz	1.000 MHz	39.90088 GHz	-34.26 dBm	-21.26 dB

Date: 13.JUN.2022 00:45:01

LTE Band 42 / 10MHz

Lowest Channel / QPSK

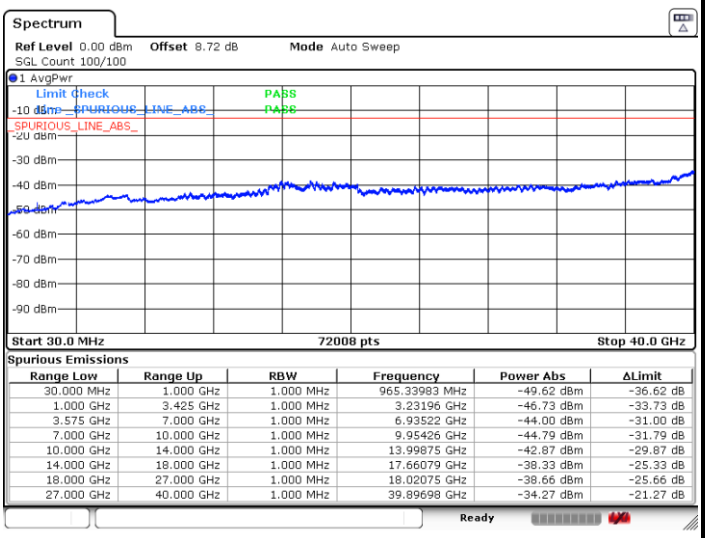


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	963.40080 MHz	-49.63 dBm	-36.63 dB
1.000 GHz	3.425 GHz	1.000 MHz	3.23135 GHz	-46.69 dBm	-33.69 dB
3.575 GHz	7.000 GHz	1.000 MHz	6.75087 GHz	-43.93 dBm	-30.93 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.94376 GHz	-44.76 dBm	-31.76 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.13998 GHz	-42.67 dBm	-29.67 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.66579 GHz	-38.19 dBm	-25.19 dB
18.000 GHz	27.000 GHz	1.000 MHz	19.04219 GHz	-38.71 dBm	-25.71 dB
27.000 GHz	40.000 GHz	1.000 MHz	39.90088 GHz	-34.32 dBm	-21.32 dB

Date: 13.JUN.2022 00:46:33

Middle Channel / QPSK

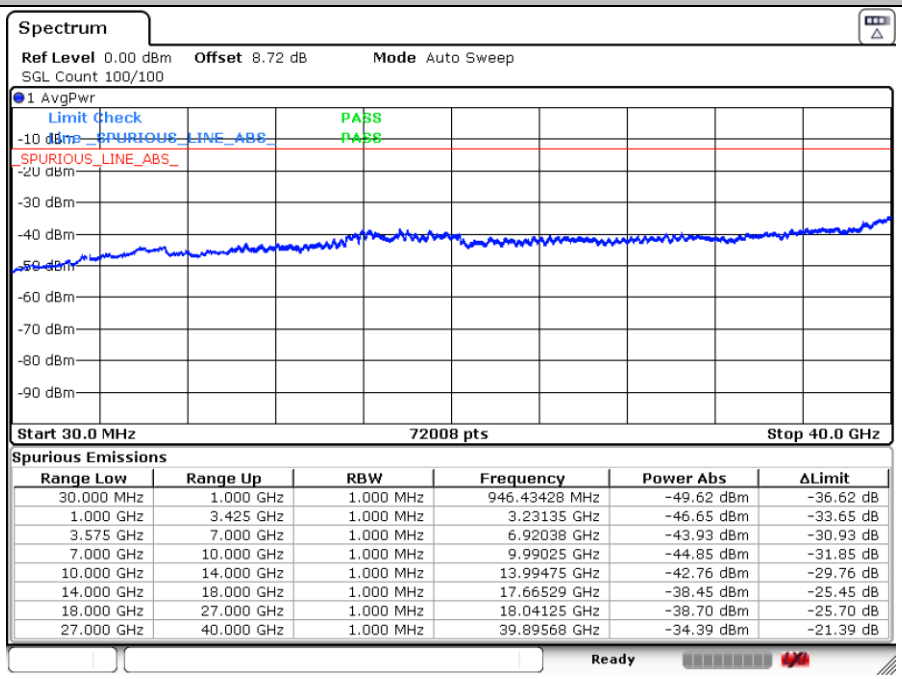


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	965.33983 MHz	-49.62 dBm	-36.62 dB
1.000 GHz	3.425 GHz	1.000 MHz	3.23196 GHz	-46.73 dBm	-33.73 dB
3.575 GHz	7.000 GHz	1.000 MHz	6.93522 GHz	-44.00 dBm	-31.00 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.95426 GHz	-44.79 dBm	-31.79 dB
10.000 GHz	14.000 GHz	1.000 MHz	13.99875 GHz	-42.87 dBm	-29.87 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.66079 GHz	-38.33 dBm	-25.33 dB
18.000 GHz	27.000 GHz	1.000 MHz	18.02075 GHz	-38.66 dBm	-25.66 dB
27.000 GHz	40.000 GHz	1.000 MHz	39.89698 GHz	-34.27 dBm	-21.27 dB

Date: 13.JUN.2022 00:47:54

Highest Channel / QPSK



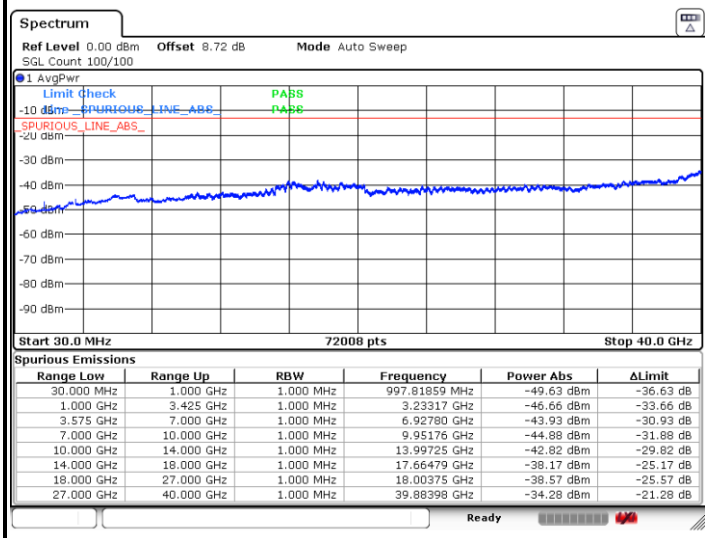
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	946.43428 MHz	-49.62 dBm	-36.62 dB
1.000 GHz	3.425 GHz	1.000 MHz	3.23135 GHz	-46.65 dBm	-33.65 dB
3.575 GHz	7.000 GHz	1.000 MHz	6.92038 GHz	-43.93 dBm	-30.93 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.99025 GHz	-44.85 dBm	-31.85 dB
10.000 GHz	14.000 GHz	1.000 MHz	13.99475 GHz	-42.76 dBm	-29.76 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.66529 GHz	-38.45 dBm	-25.45 dB
18.000 GHz	27.000 GHz	1.000 MHz	18.04125 GHz	-38.70 dBm	-25.70 dB
27.000 GHz	40.000 GHz	1.000 MHz	39.89568 GHz	-34.39 dBm	-21.39 dB

Date: 13.JUN.2022 00:49:16

LTE Band 42 / 15MHz

Lowest Channel / QPSK

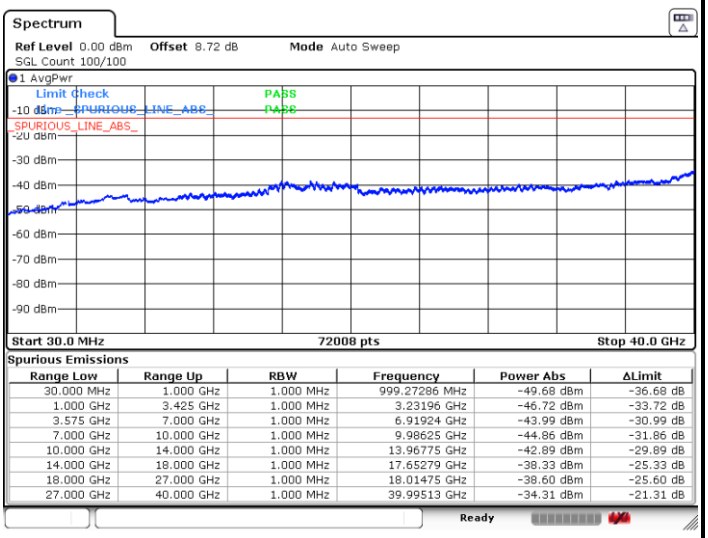


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	997.81859 MHz	-49.63 dBm	-36.63 dB
1.000 GHz	3.425 GHz	1.000 MHz	3.23317 GHz	-46.66 dBm	-33.66 dB
3.575 GHz	7.000 GHz	1.000 MHz	6.92780 GHz	-43.93 dBm	-30.93 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.95176 GHz	-44.88 dBm	-31.88 dB
10.000 GHz	14.000 GHz	1.000 MHz	13.99725 GHz	-42.82 dBm	-29.82 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.66479 GHz	-38.17 dBm	-25.17 dB
18.000 GHz	27.000 GHz	1.000 MHz	18.00375 GHz	-38.57 dBm	-25.57 dB
27.000 GHz	40.000 GHz	1.000 MHz	39.88398 GHz	-34.28 dBm	-21.28 dB

Date: 13.JUN.2022 00:51:05

Middle Channel / QPSK

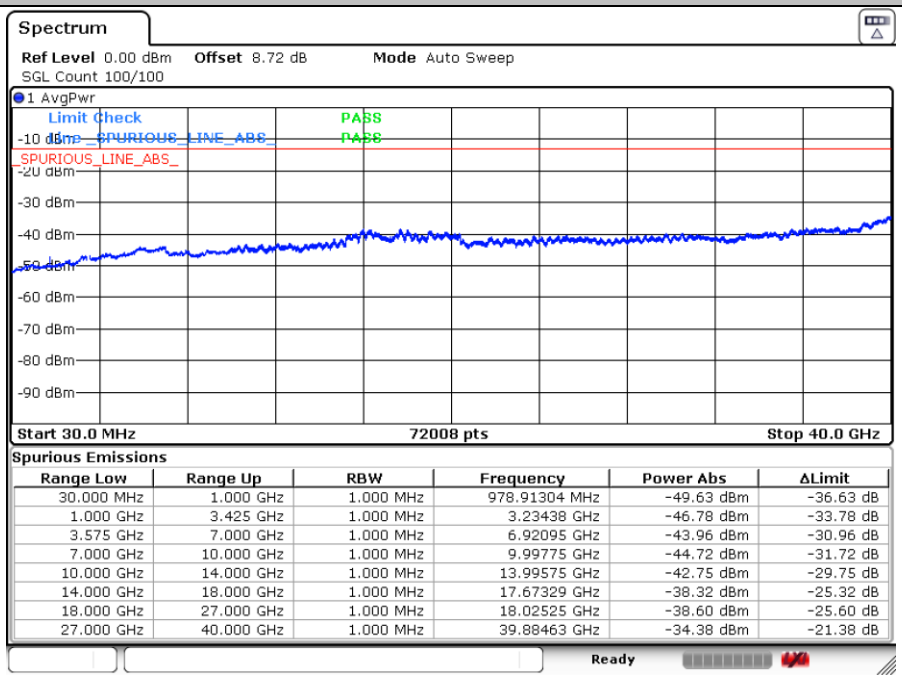


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	999.27286 MHz	-49.68 dBm	-36.68 dB
1.000 GHz	3.425 GHz	1.000 MHz	3.23196 GHz	-46.72 dBm	-33.72 dB
3.575 GHz	7.000 GHz	1.000 MHz	6.91924 GHz	-43.99 dBm	-30.99 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.98625 GHz	-44.86 dBm	-31.86 dB
10.000 GHz	14.000 GHz	1.000 MHz	13.96775 GHz	-42.89 dBm	-29.89 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.65279 GHz	-38.33 dBm	-25.33 dB
18.000 GHz	27.000 GHz	1.000 MHz	18.01475 GHz	-38.60 dBm	-25.60 dB
27.000 GHz	40.000 GHz	1.000 MHz	39.99513 GHz	-34.31 dBm	-21.31 dB

Date: 13.JUN.2022 00:52:31

Highest Channel / QPSK



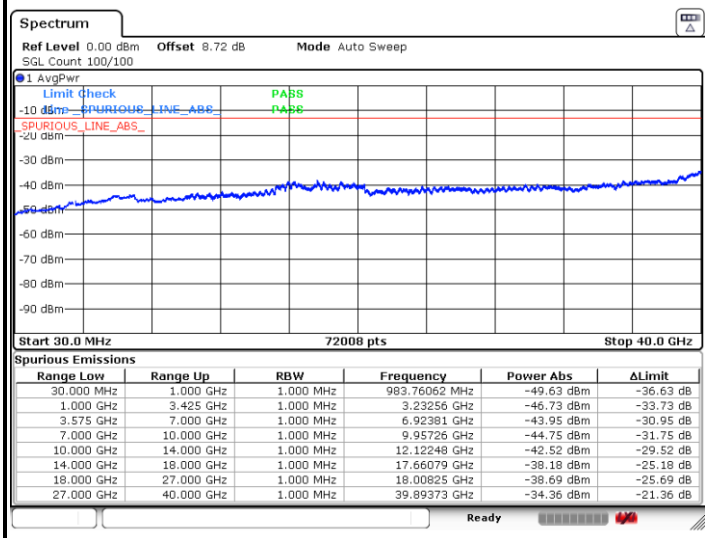
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	978.91304 MHz	-49.63 dBm	-36.63 dB
1.000 GHz	3.425 GHz	1.000 MHz	3.23438 GHz	-46.78 dBm	-33.78 dB
3.575 GHz	7.000 GHz	1.000 MHz	6.92095 GHz	-43.96 dBm	-30.96 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.99775 GHz	-44.72 dBm	-31.72 dB
10.000 GHz	14.000 GHz	1.000 MHz	13.99575 GHz	-42.75 dBm	-29.75 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.67329 GHz	-38.32 dBm	-25.32 dB
18.000 GHz	27.000 GHz	1.000 MHz	18.02525 GHz	-38.60 dBm	-25.60 dB
27.000 GHz	40.000 GHz	1.000 MHz	39.88463 GHz	-34.38 dBm	-21.38 dB

Date: 13.JUN.2022 00:53:56

LTE Band 42 / 20MHz

Lowest Channel / QPSK

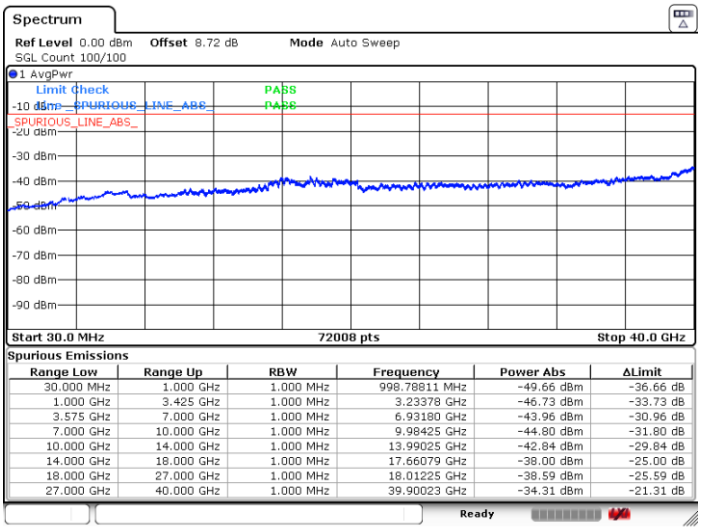


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	983.76062 MHz	-49.63 dBm	-36.63 dB
1.000 GHz	3.425 GHz	1.000 MHz	3.23256 GHz	-46.73 dBm	-33.73 dB
3.575 GHz	7.000 GHz	1.000 MHz	6.92381 GHz	-43.95 dBm	-30.95 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.95726 GHz	-44.75 dBm	-31.75 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.12248 GHz	-42.52 dBm	-29.52 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.66079 GHz	-38.18 dBm	-25.18 dB
18.000 GHz	27.000 GHz	1.000 MHz	18.00825 GHz	-38.69 dBm	-25.69 dB
27.000 GHz	40.000 GHz	1.000 MHz	39.89373 GHz	-34.36 dBm	-21.36 dB

Date: 13.JUN.2022 01:29:00

Middle Channel / QPSK

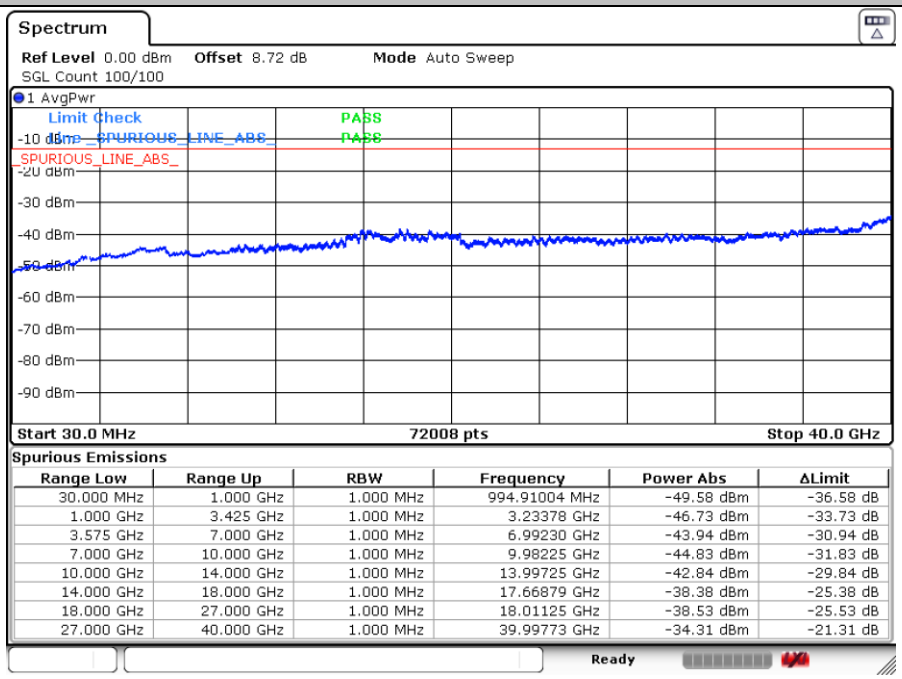


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	998.78811 MHz	-49.66 dBm	-36.66 dB
1.000 GHz	3.425 GHz	1.000 MHz	3.23378 GHz	-46.73 dBm	-33.73 dB
3.575 GHz	7.000 GHz	1.000 MHz	6.93180 GHz	-43.96 dBm	-30.96 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.98425 GHz	-44.80 dBm	-31.80 dB
10.000 GHz	14.000 GHz	1.000 MHz	13.99025 GHz	-42.84 dBm	-29.84 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.66079 GHz	-38.00 dBm	-25.00 dB
18.000 GHz	27.000 GHz	1.000 MHz	18.01225 GHz	-38.59 dBm	-25.59 dB
27.000 GHz	40.000 GHz	1.000 MHz	39.90023 GHz	-34.31 dBm	-21.31 dB

Date: 13.JUN.2022 01:30:22

Highest Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	994.91004 MHz	-49.58 dBm	-36.58 dB
1.000 GHz	3.425 GHz	1.000 MHz	3.23378 GHz	-46.73 dBm	-33.73 dB
3.575 GHz	7.000 GHz	1.000 MHz	6.99230 GHz	-43.94 dBm	-30.94 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.98225 GHz	-44.83 dBm	-31.83 dB
10.000 GHz	14.000 GHz	1.000 MHz	13.99725 GHz	-42.84 dBm	-29.84 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.66879 GHz	-38.38 dBm	-25.38 dB
18.000 GHz	27.000 GHz	1.000 MHz	18.01125 GHz	-38.53 dBm	-25.53 dB
27.000 GHz	40.000 GHz	1.000 MHz	39.99773 GHz	-34.31 dBm	-21.31 dB

Date: 13.JUN.2022 01:31:43

Frequency Stability

Test Conditions		LTE Band 42 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0024	PASS
40	Normal Voltage	0.0006	
30	Normal Voltage	0.0017	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0021	
0	Normal Voltage	0.0005	
-10	Normal Voltage	0.0013	
-20	Normal Voltage	0.0015	
-30	Normal Voltage	0.0003	
20	Maximum Voltage	0.0004	
20	Normal Voltage	0.0011	
20	Battery End Point	0.0006	

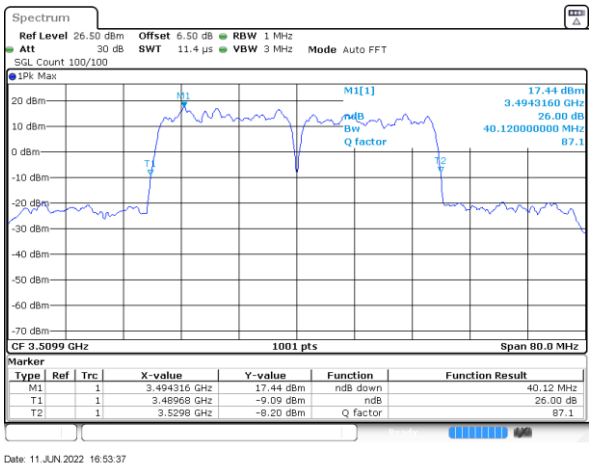
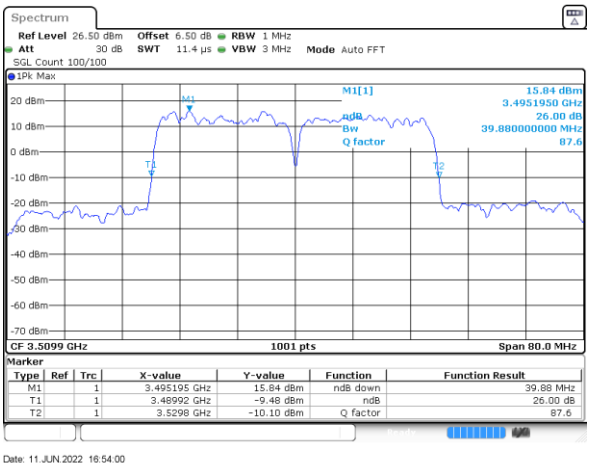
Note:

1. Normal Voltage =3.87V. ; Battery End Point (BEP) =3.55V. ; Maximum Voltage =4.45 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

LTE Band 42C

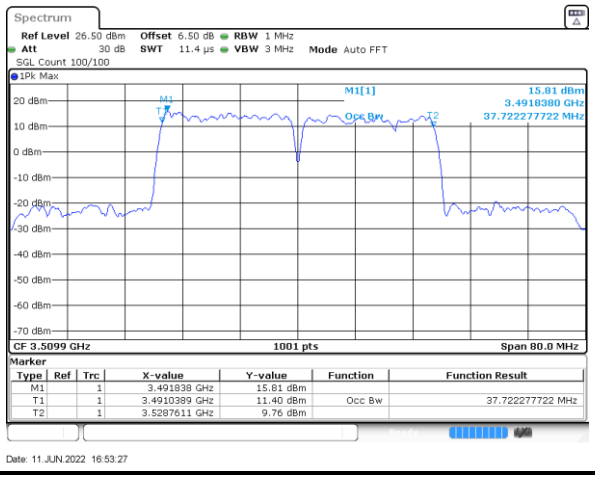
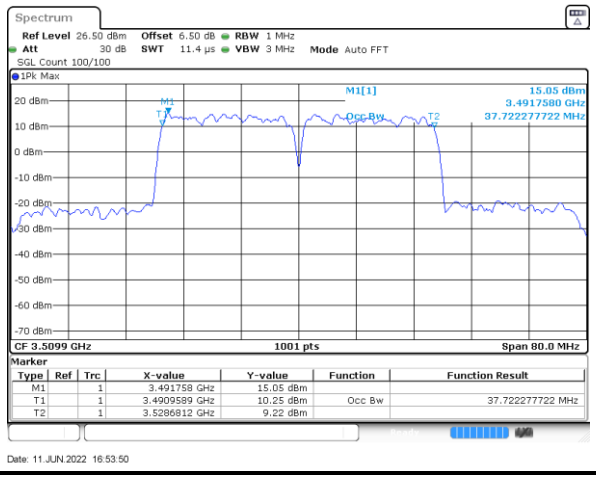
26dB Bandwidth

Mode	LTE Band 42C : 26dB BW(MHz)	
Mod.	QPSK	16QAM
BW	20MHz+20MHz	20MHz+20MHz
Middle CH	40.12	39.88

LTE Band 42C	
QPSK	16QAM
Middle Channel / 20MHz+20MHz	Middle Channel / 20MHz+20MHz
	

Occupied Bandwidth

Mode	LTE Band 42C : 99%OBW(MHz)	
Mod.	QPSK	16QAM
BW	20MHz+20MHz	20MHz+20MHz
Middle CH	37.72	37.72

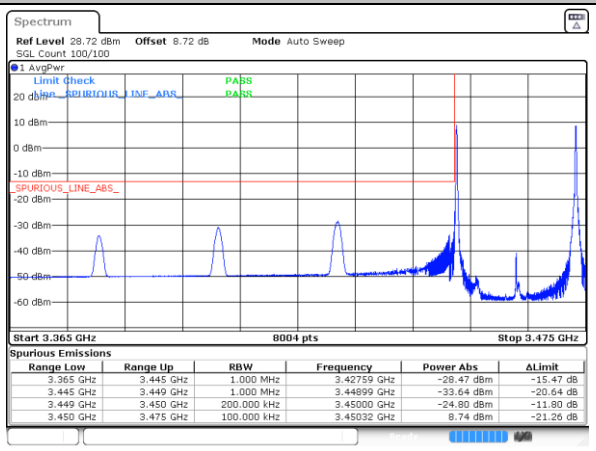
LTE Band 42C	
QPSK	16QAM
Middle Channel / 20MHz+20MHz	Middle Channel / 20MHz+20MHz
	

Conducted Band Edge

LTE Band 42C / 5MHz+20MHz

QPSK

Lowest Band Edge / 1RB0 and 1RB99



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.365 GHz	3.445 GHz	1.000 MHz	3.42759 GHz	-28.47 dBm	-15.47 dB
3.445 GHz	3.449 GHz	1.000 MHz	3.44899 GHz	-33.64 dBm	-20.64 dB
3.449 GHz	3.450 GHz	200.000 kHz	3.45000 GHz	-24.80 dBm	-11.80 dB
3.450 GHz	3.475 GHz	100.000 kHz	3.45032 GHz	8.74 dBm	-21.26 dB

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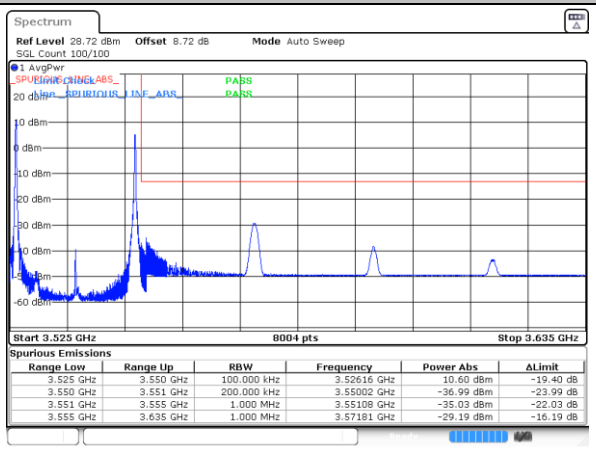
Highest Band Edge / 1RB0 and 1RB99

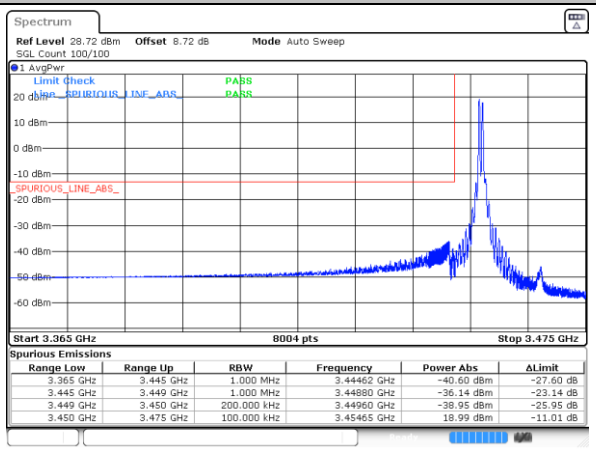


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.525 GHz	3.550 GHz	100.000 kHz	3.52616 GHz	10.60 dBm	-19.40 dB
3.550 GHz	3.551 GHz	200.000 kHz	3.55002 GHz	-36.99 dBm	-23.99 dB
3.551 GHz	3.555 GHz	1.000 MHz	3.55108 GHz	-35.03 dBm	-22.03 dB
3.555 GHz	3.635 GHz	1.000 MHz	3.57181 GHz	-29.19 dBm	-16.19 dB

Date: 10.JUN.2022 18:26:45

Lowest Band Edge / 1RB24 and 1RB0

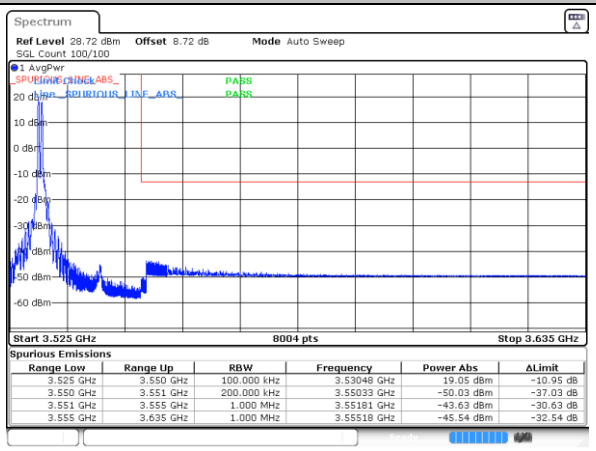


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.365 GHz	3.445 GHz	1.000 MHz	3.44462 GHz	-40.60 dBm	-27.60 dB
3.445 GHz	3.449 GHz	1.000 MHz	3.44880 GHz	-36.14 dBm	-23.14 dB
3.449 GHz	3.450 GHz	200.000 kHz	3.44960 GHz	-38.95 dBm	-25.95 dB
3.450 GHz	3.475 GHz	100.000 kHz	3.45465 GHz	18.99 dBm	-11.01 dB

Date: 11.JUN.2022 14:39:29

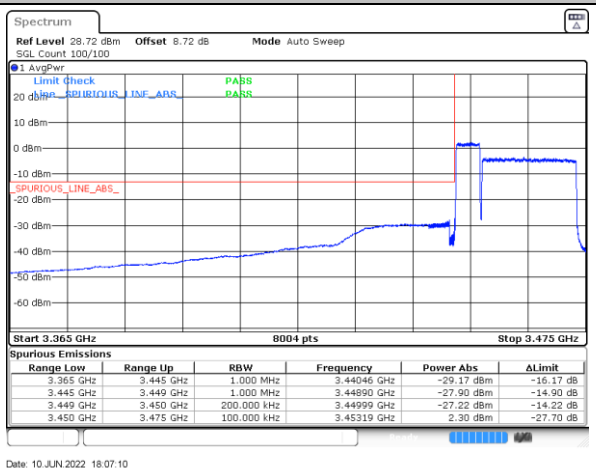
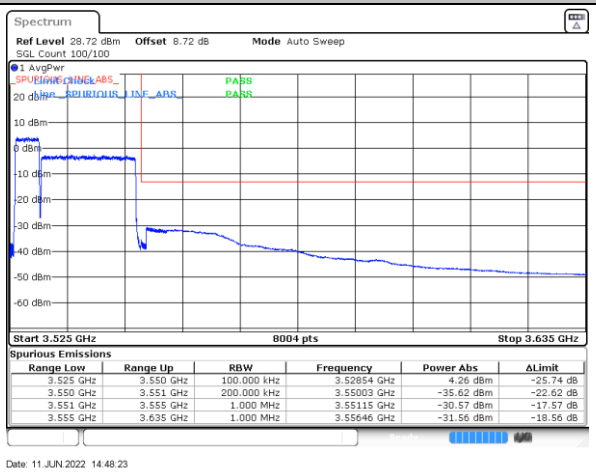
Highest Band Edge / 1RB24 and 1RB0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.525 GHz	3.550 GHz	100.000 kHz	3.53048 GHz	19.05 dBm	-10.95 dB
3.550 GHz	3.551 GHz	200.000 kHz	3.55033 GHz	-50.03 dBm	-37.03 dB
3.551 GHz	3.555 GHz	1.000 MHz	3.55181 GHz	-43.63 dBm	-30.63 dB
3.555 GHz	3.635 GHz	1.000 MHz	3.55518 GHz	-45.54 dBm	-32.54 dB

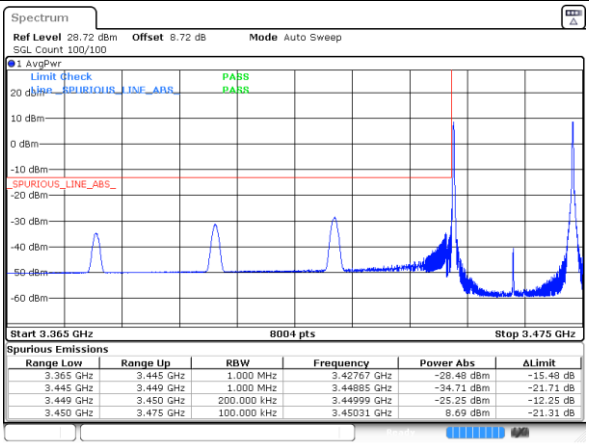
Date: 11.JUN.2022 14:46:23

Lowest Band Edge / Full RB	Highest Band Edge / Full RB
	

LTE Band 42C / 5MHz+20MHz

16QAM

Lowest Band Edge / 1RB0 and 1RB99



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.365 GHz	3.445 GHz	1.000 MHz	3.42767 GHz	-28.48 dBm	-15.48 dB
3.445 GHz	3.449 GHz	1.000 MHz	3.44885 GHz	-34.71 dBm	-21.71 dB
3.449 GHz	3.450 GHz	200.000 kHz	3.44999 GHz	-25.25 dBm	-12.25 dB
3.450 GHz	3.475 GHz	100.000 kHz	3.45031 GHz	8.69 dBm	-21.31 dB

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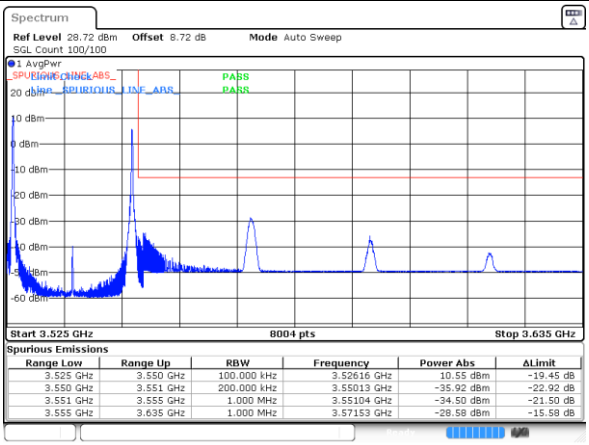
Highest Band Edge / 1RB0 and 1RB99



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.525 GHz	3.550 GHz	100.000 kHz	3.52616 GHz	10.55 dBm	-19.45 dB
3.550 GHz	3.551 GHz	200.000 kHz	3.55013 GHz	-35.92 dBm	-22.92 dB
3.551 GHz	3.555 GHz	1.000 MHz	3.55104 GHz	-34.50 dBm	-21.50 dB
3.555 GHz	3.635 GHz	1.000 MHz	3.57153 GHz	-28.58 dBm	-15.58 dB

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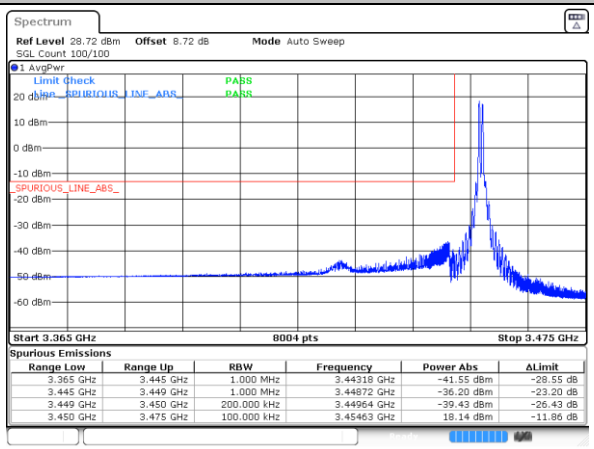
Lowest Band Edge / 1RB24 and 1RB0

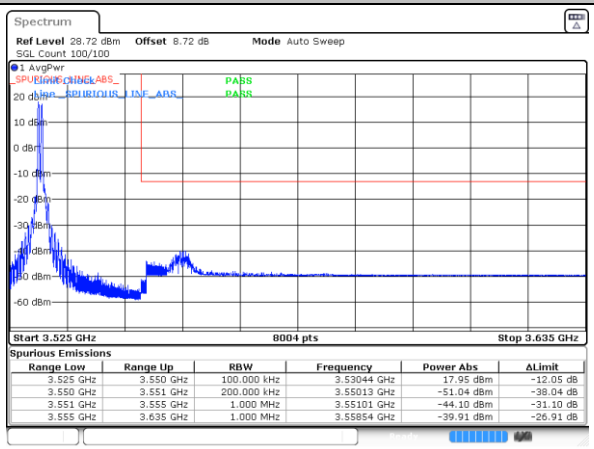


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.365 GHz	3.445 GHz	1.000 MHz	3.44318 GHz	-41.55 dBm	-28.55 dB
3.445 GHz	3.449 GHz	1.000 MHz	3.44872 GHz	-36.20 dBm	-23.20 dB
3.449 GHz	3.450 GHz	200.000 kHz	3.44964 GHz	-39.43 dBm	-26.43 dB
3.450 GHz	3.475 GHz	100.000 kHz	3.45463 GHz	18.14 dBm	-11.86 dB

Date: 11.JUN.2022 14:40:45

Highest Band Edge / 1RB24 and 1RB0

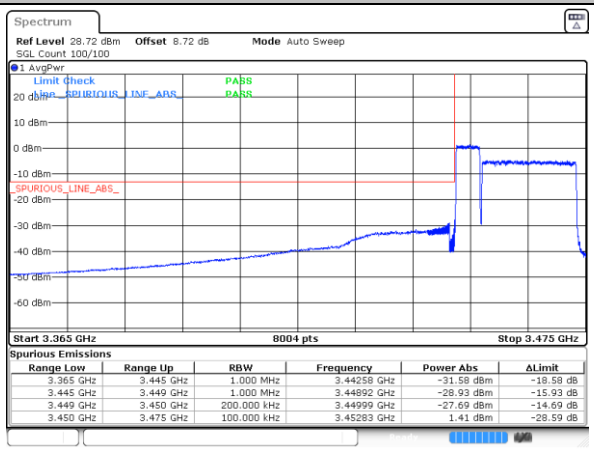


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.525 GHz	3.550 GHz	100.000 kHz	3.53044 GHz	17.95 dBm	-12.05 dB
3.550 GHz	3.551 GHz	200.000 kHz	3.55013 GHz	-51.04 dBm	-38.04 dB
3.551 GHz	3.555 GHz	1.000 MHz	3.55101 GHz	-44.10 dBm	-31.10 dB
3.555 GHz	3.635 GHz	1.000 MHz	3.55854 GHz	-39.91 dBm	-26.91 dB

Date: 11.JUN.2022 14:44:52

Lowest Band Edge / Full RB

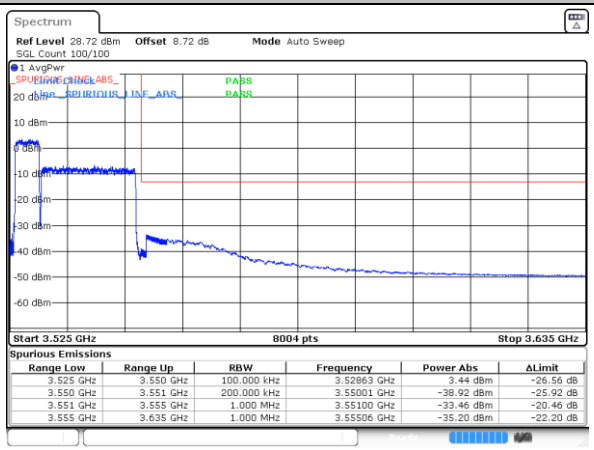


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.365 GHz	3.445 GHz	1.000 MHz	3.44258 GHz	-31.58 dBm	-18.58 dB
3.445 GHz	3.449 GHz	1.000 MHz	3.44892 GHz	-28.93 dBm	-15.93 dB
3.449 GHz	3.450 GHz	200.000 kHz	3.44999 GHz	-27.69 dBm	-14.69 dB
3.450 GHz	3.475 GHz	100.000 kHz	3.45283 GHz	1.41 dBm	-28.59 dB

Date: 10.JUN.2022 18:08:30

Highest Band Edge / Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.525 GHz	3.550 GHz	100.000 kHz	3.52863 GHz	3.44 dBm	-26.56 dB
3.550 GHz	3.551 GHz	200.000 kHz	3.55001 GHz	-38.92 dBm	-25.92 dB
3.551 GHz	3.555 GHz	1.000 MHz	3.55100 GHz	-33.46 dBm	-20.46 dB
3.555 GHz	3.635 GHz	1.000 MHz	3.55506 GHz	-35.20 dBm	-22.20 dB

Date: 10.JUN.2022 18:21:25