FCC RF Test Report

APPLICANT	:	Fibocom Wireless Inc.
EQUIPMENT	:	5G Module
BRAND NAME	:	Fibocom
MODEL NAME	:	FM150-NA
FCC ID	:	ZMOFM150NA
STANDARD	:	47 CFR Part 2, 27D
CLASSIFICATION	:	PCS Licensed Transmitter (PCB)

The product was received on May 14, 2020 and completely tested on Aug. 25, 2020. We, Sporton International (Kunshan) Inc., 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 (Kunshan) Inc., the test report shall not be reproduced except in full.

Jason Jia

Reviewed by: Jason Jia / Supervisor

James Huang

Approved by: James Huang / Manager

ACCREDITED
Cert #5145.02

Sporton International (Kunshan) Inc.

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
FG051416-03F	Rev. 01	Initial issue of report	Mar. 12, 2021

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
3.5	-	Peak-to-Average Ratio	<13dB	N/A	Reporting only
3.6	§27.50 (a)(3)	EIRP	EIRP < 2W/5MHz	PASS	-
3.7	§2.1049	Occupied Bandwidth	Reporting Only	PASS	-
3.8	§2.1051 §27.53 (a)(3)	Conducted Band Edge Measurement	Refer standard	PASS	-
3.9	§2.1051 §27.53 (a)(3)	Conducted Spurious Emission	< $70+10\log_{10}$(P[Watts])	PASS	-
3.10	§2.1055 §27.54	Frequency Stability Temperature & Voltage	Within the band	PASS	-
4.4	§2.1053 §27.53 (a)(3)	Radiated Spurious Emission	< $70+10\log_{10}$(P[Watts])	PASS	Under limit 17.53 dB at 6916.000 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 Applicant

Fibocom Wireless Inc.
1101,Tower A, Building 6, Shenzhen International Innovation Valley, Dashi 1st Rd, Nanshan, Shenzhen, China

1.2 Manufacturer

Fibocom Wireless Inc.
1101,Tower A, Building 6, Shenzhen International Innovation Valley, Dashi 1st Rd, Nanshan, Shenzhen, China

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	5G Module
Brand Name	Fibocom
Model Name	FM150-NA
FCC ID	ZMOFM150NA
EUT supports Radios application	WCDMA/LTE/5G NR/GNSS
IMEI Code	Conducted: 867654040313583 RSE: 867654040317451
HW Version	V1.0.1
SW Version	89601.1000.00.03.04.33
EUT Stage	Identical Prototype

Remark: This is a variant report for FM150-NA. For change note, please refer the product equality declaration exhibit separately. Based on the similarity between current and previous project, only the power for 256QAM modulation was added , all the other test results were leveraged from original report which can be referred to Sporton Report Number FG051416E.

1.4 Product Specification of Equipment Under Test

Product Feature	
Tx Frequency	LTE Band 30 : 2307.5 MHz ~ 2312.5 MHz
Rx Frequency	LTE Band 30 : 2352.5 MHz ~ 2357.5 MHz
Bandwidth	5MHz / 10MHz
Maximum Output Power to Antenna	LTE Band 30 : 22.96 dBm
Type of Modulation	QPSK / 16QAM / 64QAM / 256QAM

Remark: This module is limited to installation in fixed applications.

WWAN ANTENNA GAIN (dBi)		
Frequency Band	**ANT.1： GHT-019A**	**ANT.2： AN0750-64S01BSM**
LTE Band 30	0.22	**0.46**

Remark: Between the two type of antennas, only the worst antenna gain evaluated test is shown in bold.

1.5 Modification of EUT

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

1.6 Maximum Conducted Power, Frequency Tolerance and Emission Designator

LTE Band 30		QPSK			16QAM		
BW (MHz)	**Frequency Range (MHz)**	**Emission Designator (99%OBW)**	**Frequency Tolerance (ppm)**	**Maximum Conducted power (W)**	**Emission Designator (99%OBW)**	**Frequency Tolerance (ppm)**	**Maximum Conducted power (W)**
5	2307.5 ~ 2312.5	4M50G7D	-	0.1977	4M52W7D	-	0.1762
10	2310.0	8M99G7D	0.0017	0.1910	8M97W7D	-	0.1746

LTE Band 30		64QAM		
BW (MHz)	**Frequency Range (MHz)**	**Emission Designator (99%OBW)**	**Frequency Tolerance (ppm)**	**Maximum Conducted power (W)**
5	2307.5 ~ 2312.5	4M50W7D	-	0.1064
10	2310.0	9M01W7D	-	0.1064

1.7 Testing Site

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

Test Firm	Sporton International (Kunshan) Inc.		
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.**
	03CH02-KS TH01-KS	CN1257	314309

1.8 Test Software

Item	Site	Manufacture	Name	Version
1.	03CH02-KS	AUDIX	E3	6.2009-8-24a

1.9 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(D)
- 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

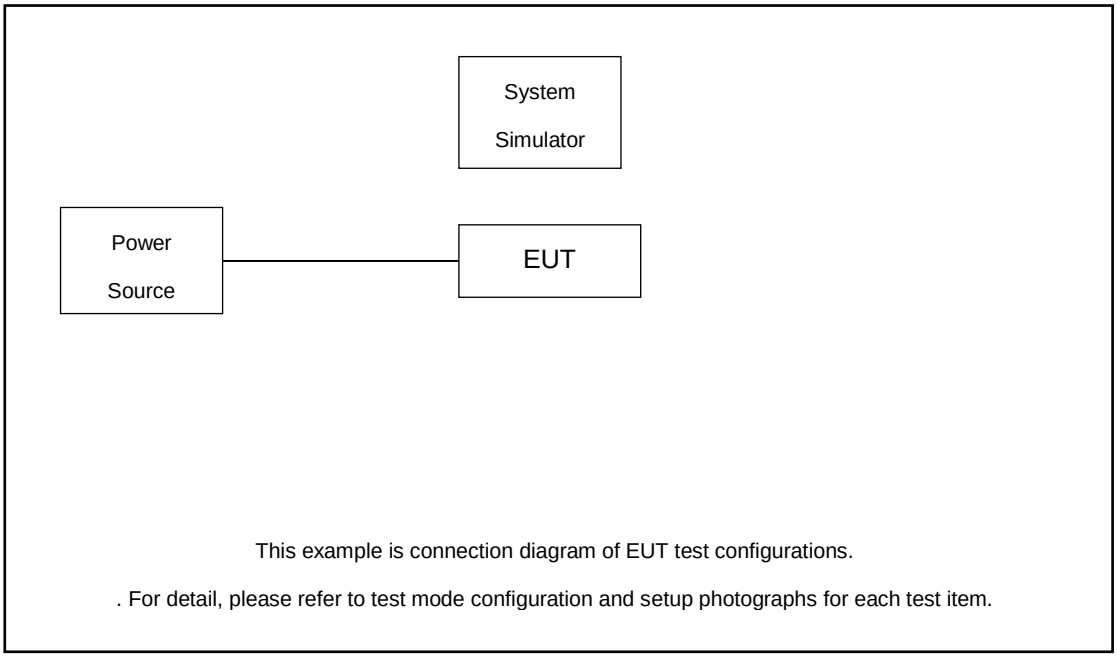
2.1 Test Mode

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.

Conducted Test Cases	Band	Bandwidth (MHz)						Modulation				RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	256QAM	1	Half	Full	L	M	H
Max. Output Power	30	-	-	V		-	-	V	V	V	V	V	V	V	V	V	V
		-	-		V	-	-	V	V	V	V	V	V	V		V	
Peak-to-Average Ratio	30	-	-		V	-	-	V	V	V	-	V		V		V	
E.I.R.P	30	-	-	V		-	-	V	V	V	-	V			V	V	V
		-	-		V	-	-	V	V	V	-	V				V	
26dB and 99% Bandwidth	30	-	-	V		-	-	V	V	V	-			V	V	V	V
		-	-		V	-	-	V	V	V	-			V		V	
Conducted Band Edge	30	-	-	V		-	-	V	V	V	-	V		V	V		V
		-	-		V	-	-	V	V	V	-	V		V		V	
Conducted Spurious Emission	30	-	-	V		-	-	V	V	V	-	V			V	V	V
		-	-		V	-	-	V	V	V	-	V				V	
Frequency Stability	30	-	-		V	-	-	V			-			V		V	
Radiated Spurious Emission	30	-	-	V		-	-	V			-	V			V	V	V
					V			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



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
3.	Antenna	N/A	N/A	N/A	N/A	N/A
4.	Adapter	N/A	N/A	N/A	N/A	N/A
5.	Test jig	N/A	N/A	N/A	N/A	N/A

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 + attenuator factor.

Following shows an offset computation example with cable loss 5.4 dB.

Example : *Offset(dB) = RF cable loss(dB).*

= 5.4 (dB)

2.5 Frequency List of Low/Middle/High Channels

LTE Band 30 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
10	Channel	-	27710	-
	Frequency	-	2310	-
5	Channel	27685	27710	27735
	Frequency	2307.5	2310	2312.5

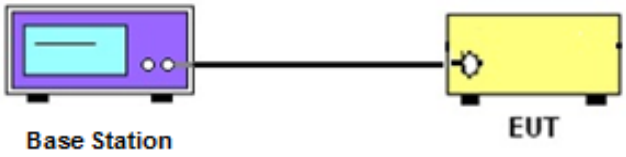
3 Conducted Test Items

3.1 Measuring Instruments

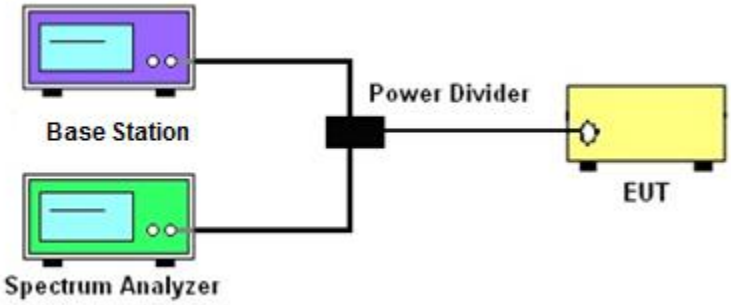
See list of measuring instruments of this test report.

3.2 Test Setup

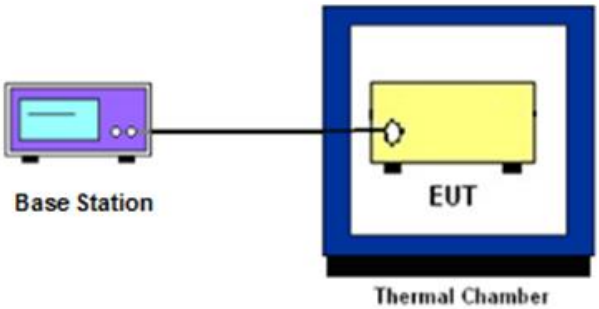
3.2.1 Conducted Output Power



3.2.2 Peak-to-Average Ratio, Occupied / 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

For fixed stations transmitting in the 2305-2315 MHz band or the 2350-2360 MHz band, the average EIRP must not exceed 2 watts within any 5 megahertz of authorized bandwidth.

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 (a)(3)

For fixed stations operating in the 2305-2315 MHz and 2350-2360 MHz bands transmitting with 2 watts per 5 megahertz average EIRP or less:

(i) By a factor of not less than: 43 + 10 log (P) dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, not less than 55 + 10 log (P) dB on all frequencies between 2320 and 2324 MHz and on all frequencies between 2341 and 2345 MHz, not less than 61 + 10 log (P) dB on all frequencies between 2324 and 2328 MHz and on all frequencies between 2337 and 2341 MHz, and not less than 67 + 10 log (P) dB on all frequencies between 2328 and 2337 MHz;

(ii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2300 and 2305 MHz, 55 + 10 log (P) dB on all frequencies between 2296 and 2300 MHz, 61 + 10 log (P) dB on all frequencies between 2292 and 2296 MHz, 67 + 10 log (P) dB on all frequencies between 2288 and 2292 MHz, and 70 + 10 log (P) dB below 2288 MHz;

(iii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2360 and 2365 MHz, and not less than 70 + 10 log (P) dB above 2365 MHz.

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 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.

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 must be lower than the transmitter power (P) by a factor of at least 70 + 10 log (P) dB.

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. The limit line is derived from 70 + 10log(P)dB below the transmitter power P(Watts)
    = P(W)- [70 + 10log(P)] (dB)
    = [30 + 10log(P)] (dBm) - [70 + 10log(P)] (dB)
    = -40dBm

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. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center frequency.

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.

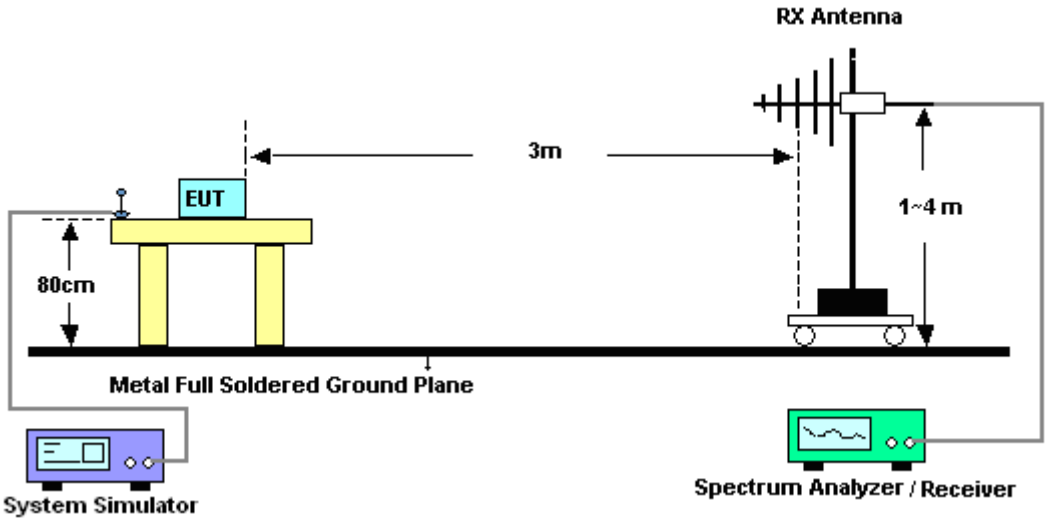
4 Radiated Test Items

4.1 Measuring Instruments

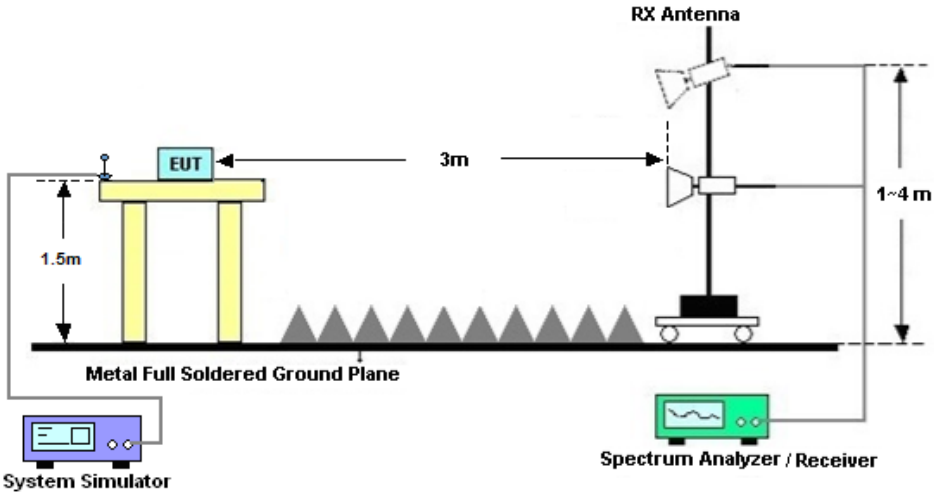
See list of measuring instruments of this test report.

4.2 Test Setup

4.2.1 For radiated test from 30MHz to 1GHz



4.2.2 For radiated test above 1GHz



4.3 Test Result of Radiated Test

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 must be attenuated below the transmitter power (P) by a factor of at least 70 + 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.
   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.
    The limit line is derived from 70 + 10log(P)dB below the transmitter power P(Watts)
    = P(W)- [70 + 10log(P)] (dB)
    = [30 + 10log(P)] (dBm) - [70 + 10log(P)] (dB)
    = -40dBm.

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	Nov. 02, 2019	Jul. 26, 2020~ Aug. 25, 2020	Nov. 01, 2020	Conducted (TH01-KS)
Thermal Chamber	Ten Billion	TTC-B3S	TBN-960502	-40~+150°C	Oct. 28, 2019	Jul. 26, 2020~ Aug. 25, 2020	Oct. 27, 2020	Conducted (TH01-KS)
EMI Test Receiver	R&S	ESR7	101403	9kHz~7GHz;Max 30dBm	Oct. 18, 2019	Aug. 10, 2020	Oct. 17, 2020	Radiation (03CH02-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55370528	10Hz-44G,MAX 30dB	Oct. 18, 2019	Aug. 10, 2020	Oct. 17, 2020	Radiation (03CH02-KS)
Bilog Antenna	TeseQ	CBL6111D	44483	30MHz-1GHz	Dec. 30, 2019	Aug. 10, 2020	Dec. 29, 2020	Radiation (03CH02-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75957	1GHz~18GHz	Nov. 10, 2019	Aug. 10, 2020	Nov. 09, 2020	Radiation (03CH02-KS)
high gain Amplifier	MITEQ	AMF-7D-00 101800-30-1 0P	2025788	100MHz-18GHz	Jan. 03, 2020	Aug. 10, 2020	Jan. 02, 2021	Radiation (03CH02-KS)
SHF-EHF Horn	Com-power	AH-840	101115	18GHz~40GHz	Nov. 10, 2019	Aug. 10, 2020	Nov. 09, 2020	Radiation (03CH02-KS)
Amplifier	SONOMA	310N	187289	9KHz-1GHz	Jan. 03, 2020	Aug. 10, 2020	Jan. 02, 2021	Radiation (03CH02-KS)
Amplifier	Keysight	83017A	MY53270316	500MHz~26.5GHz	Oct, 18, 2019	Aug. 10, 2020	Oct, 17, 2020	Radiation (03CH02-KS)
Amplifier	MITEQ	EM18G40G GA	060728	18~40GHz	Jan. 08, 2020	Aug. 10, 2020	Jan. 07, 2021	Radiation (03CH02-KS)
AC Power Source	Chroma	61601	616010002473	N/A	NCR	Aug. 10, 2020	NCR	Radiation (03CH02-KS)
Turn Table	MF	MF7802	N/A	0~360 degree	NCR	Aug. 10, 2020	NCR	Radiation (03CH02-KS)
Antenna Mast	MF	MF7802	N/A	1 m~4 m	NCR	Aug. 10, 2020	NCR	Radiation (03CH02-KS)

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))	**2.5dB**

Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.1dB**

Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)

LTE Band 30 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.96	22.93	22.11
5	1	12		22.91	22.79	22.14
5	1	24		22.90	22.90	22.05
5	12	0		21.98	21.92	21.16
5	12	7		22.06	21.93	21.20
5	12	13		22.08	21.99	21.14
5	25	0		22.10	22.02	21.21
5	1	0	16-QAM	22.37	22.43	21.28
5	1	12		22.10	22.23	21.22
5	1	24		22.14	22.46	21.58
5	12	0		21.00	21.03	20.15
5	12	7		21.05	21.06	20.23
5	12	13		21.11	21.03	20.19
5	25	0		20.92	20.99	20.21
5	1	0	64QAM	20.14	20.23	19.42
5	1	12		20.21	20.04	18.99
5	1	24		20.27	19.98	19.22
5	12	0		20.11	20.09	19.24
5	12	7		20.05	20.13	19.31
5	12	13		20.02	20.10	19.18
5	25	0		19.99	19.95	19.20
5	1	0	256QAM	17.33	17.10	17.23

LTE Band 30 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	-	22.81	-
10	1	25			22.79	
10	1	49			22.80	
10	25	0			21.92	
10	25	12			21.88	
10	25	25			21.83	
10	50	0			21.94	
10	1	0	16-QAM		22.42	
10	1	25			22.10	
10	1	49			22.30	
10	25	0			20.99	
10	25	12			21.04	
10	25	25			20.91	
10	50	0			20.81	
10	1	0	64QAM		20.27	
10	1	25			20.20	
10	1	49			20.17	
10	25	0			20.00	
10	25	12			19.98	
10	25	25			19.93	
10	50	0			19.99	
10	1	0	256QAM		17.35	

EIRP

LTE Band 30 (GT - LC = 0.46 dB) QPSK (dBm/5MHz)			
Bandwidth	5M		
Channel	27685	27710	27735
	(Low)	(Mid)	(High)
Frequency (MHz)	2307.5	2310	2312.5
Conducted Power (dBm)	22.96	22.93	22.11
Conducted Power (Watts)	0.1977	0.1963	0.1626
EIRP(dBm)	23.42	23.39	22.57
EIRP(Watts)	0.2198	0.2183	0.1807
Limit	2W / 5MHz = 33dBm / 5MHz		PASS

LTE Band 30 (GT - LC = 0.46 dB) QPSK (dBm/5MHz)			
Bandwidth	10M		
Channel		27710	
		(Mid)	
Frequency (MHz)		2310	
Conducted Power (dBm)		22.81	
Conducted Power (Watts)		0.1910	
EIRP(dBm)		23.27	
EIRP(Watts)		0.2123	
Limit	2W / 5MHz = 33dBm / 5MHz		PASS

LTE Band 30 (GT - LC =0.46 dB) 16QAM (dBm/5MHz)			
Bandwidth	5M		
Channel	27685	27710	27735
	(Low)	(Mid)	(High)
Frequency (MHz)	2307.5	2310	2312.5
Conducted Power (dBm)	22.14	22.46	21.58
Conducted Power (Watts)	0.1637	0.1762	0.1439
EIRP(dBm)	22.60	22.92	22.04
EIRP(Watts)	0.1820	0.1959	0.1600
Limit	2W / 5MHz = 33dBm / 5MHz		PASS

LTE Band 30 (GT - LC = 0.46 dB) 16QAM (dBm/5MHz)			
Bandwidth	10M		
Channel		27710	
		(Mid)	
Frequency (MHz)		2310	
Conducted Power (dBm)		22.42	
Conducted Power (Watts)		0.1746	
EIRP(dBm)		22.88	
EIRP(Watts)		0.1941	
Limit	2W / 5MHz = 33dBm / 5MHz		PASS

LTE Band 30 (GT - LC = 0.46 dB) 64QAM (dBm/5MHz)			
Bandwidth	5M		
Channel	27685	27710	27735
	(Low)	(Mid)	(High)
Frequency (MHz)	2307.5	2310	2312.5
Conducted Power (dBm)	20.27	19.98	19.22
Conducted Power (Watts)	0.1064	0.0995	0.0836
EIRP(dBm)	20.73	20.44	19.68
EIRP(Watts)	0.1183	0.1107	0.0929
Limit	2W / 5MHz = 33dBm / 5MHz		PASS

LTE Band 30 (GT - LC = 0.46 dB) 64QAM (dBm/5MHz)			
Bandwidth	10M		
Channel		27710	
		(Mid)	
Frequency (MHz)		2310	
Conducted Power (dBm)		20.27	
Conducted Power (Watts)		0.1064	
EIRP(dBm)		20.73	
EIRP(Watts)		0.1183	
Limit	2W / 5MHz = 33dBm / 5MHz		PASS

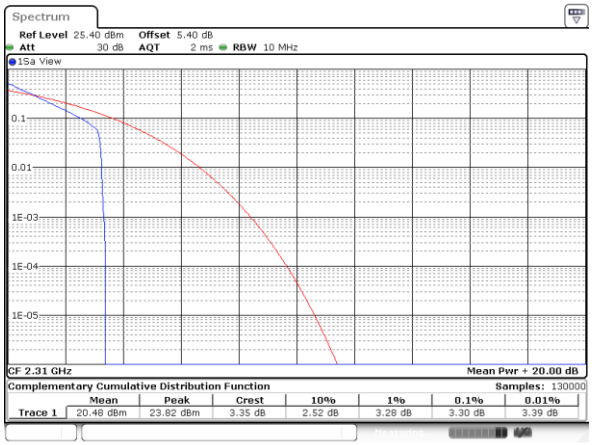
LTE Band 30

Peak-to-Average Ratio

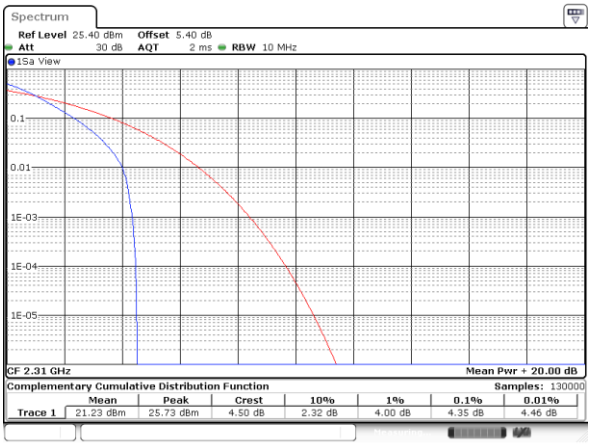
Mode	LTE Band 30 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	-	-	PASS
Middle CH	3.30	4.35	4.58	5.48	
Highest CH	-	-	-	-	
Mode	LTE Band 30 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	-	-	-	-	PASS
Middle CH	6.35	6.17	-	-	
Highest CH	-	-	-	-	

LTE Band 30 / 10MHz / QPSK

Middle Channel / 1RB

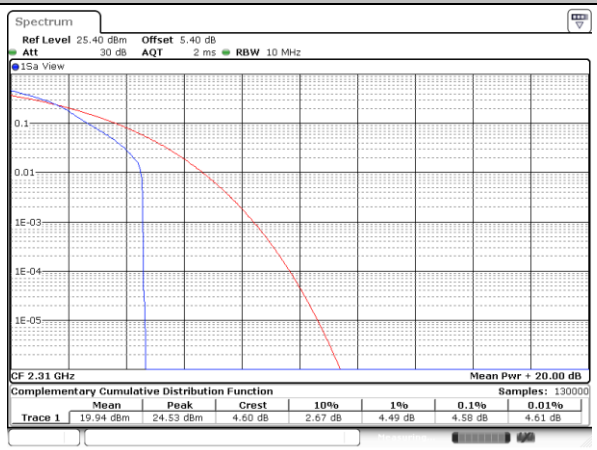


Middle Channel / Full RB

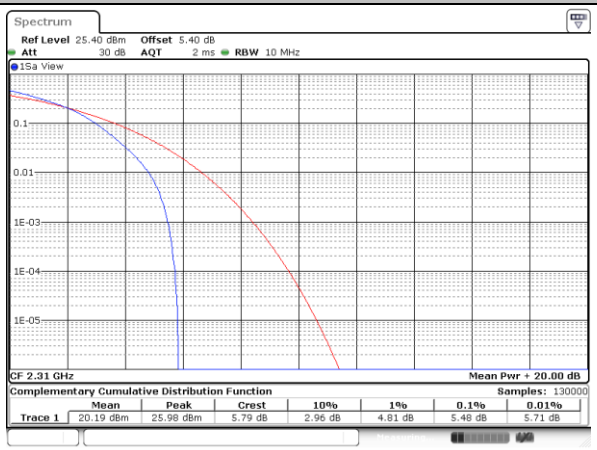


LTE Band 30 / 10MHz / 16QAM

Middle Channel / 1RB

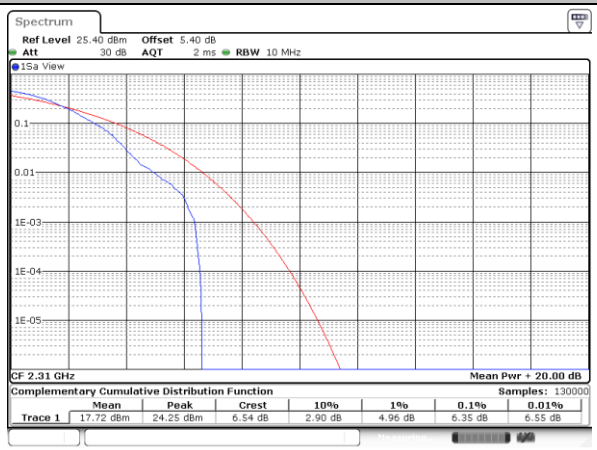


Middle Channel / Full RB

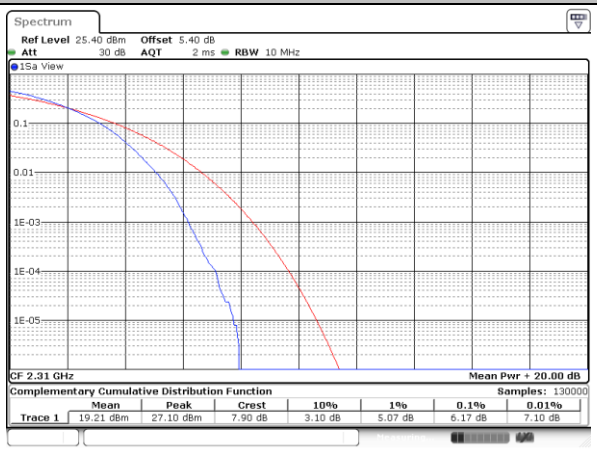


LTE Band 30 / 10MHz / 64QAM

Middle Channel / 1RB



Middle Channel / Full RB

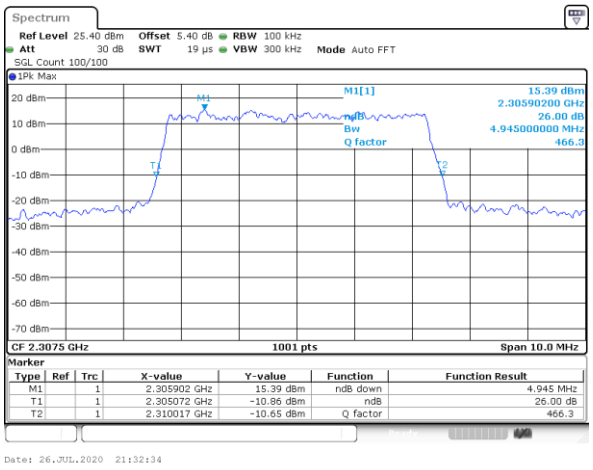


26dB Bandwidth

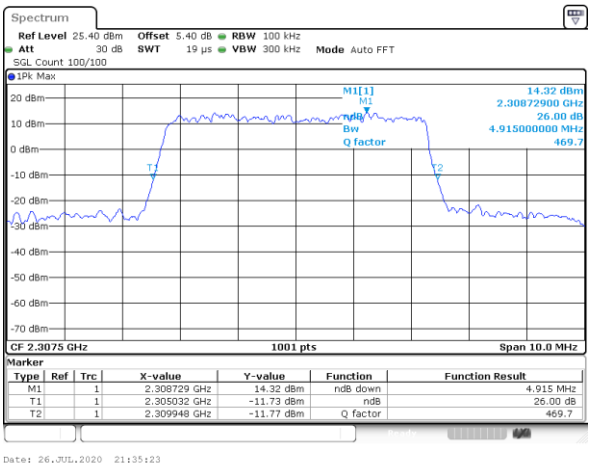
Mode	LTE Band 30 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.95	4.92	-	-	-	-	-	-
Middle CH	-	-	-	-	4.77	4.88	9.73	9.73	-	-	-	-
Highest CH	-	-	-	-	4.87	4.83	-	-	-	-	-	-
Mode	LTE Band 30 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.93	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.89	-	9.79	-	-	-	-	-
Highest CH	-	-	-	-	4.90	-	-	-	-	-	-	-

LTE Band 30

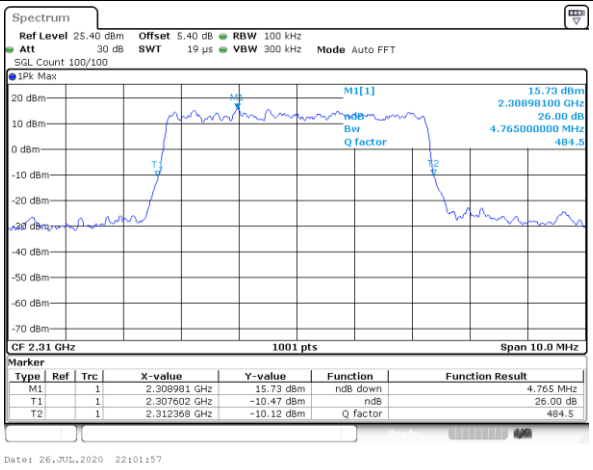
Lowest Channel / 5MHz / QPSK



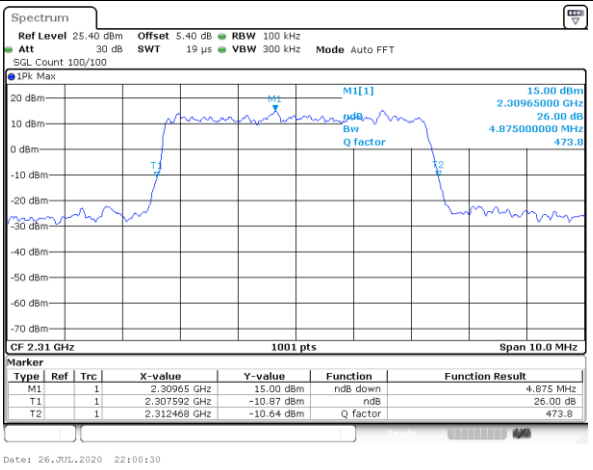
Lowest Channel / 5MHz / 16QAM



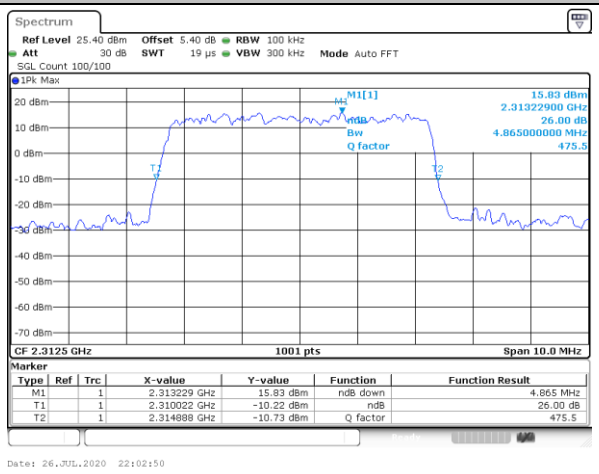
Middle Channel / 5MHz / QPSK



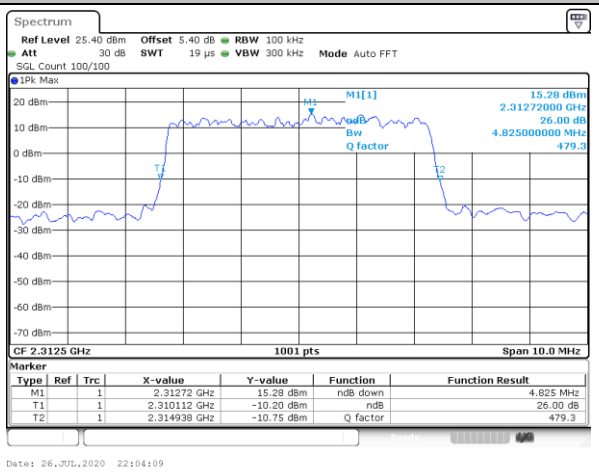
Middle Channel / 5MHz / 16QAM



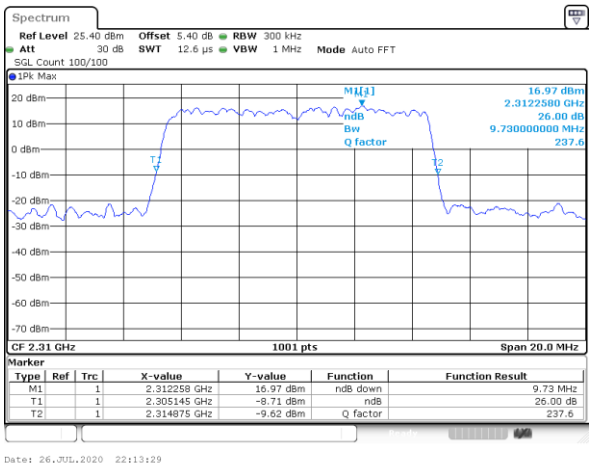
Highest Channel / 5MHz / QPSK

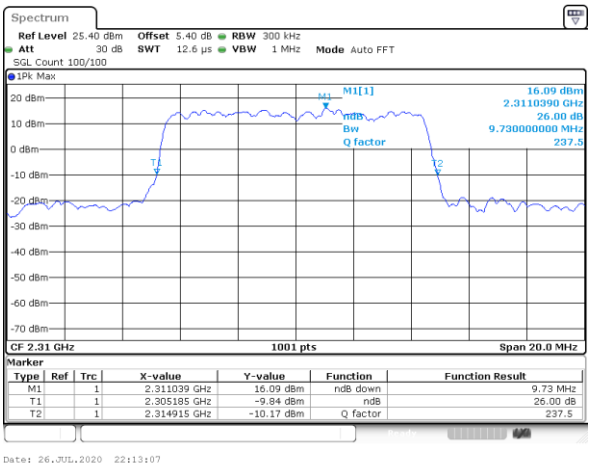


Highest Channel / 5MHz / 16QAM



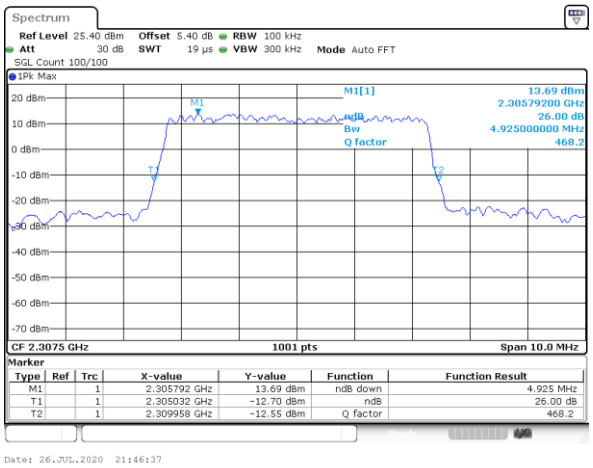
LTE Band 30	
Middle Channel / 10MHz / QPSK	**Middle Channel / 10MHz / 16QAM**



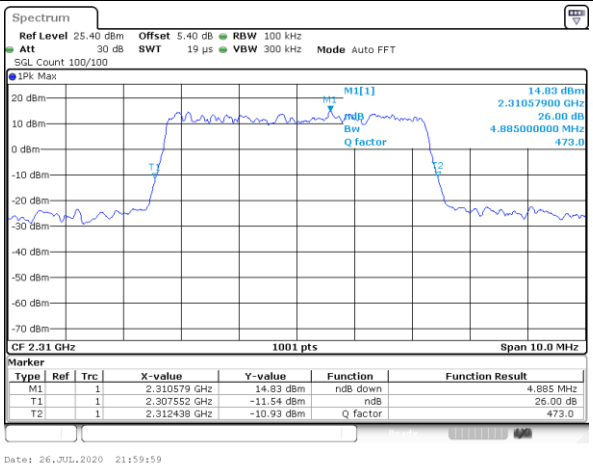


LTE Band 30

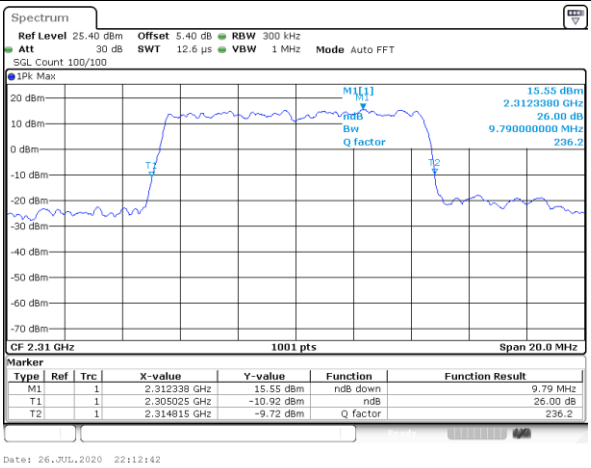
Lowest Channel / 5MHz / 64QAM



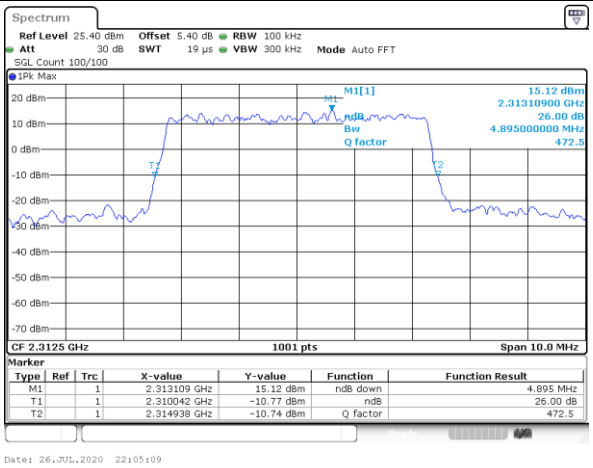
Middle Channel / 5MHz / 64QAM



Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM

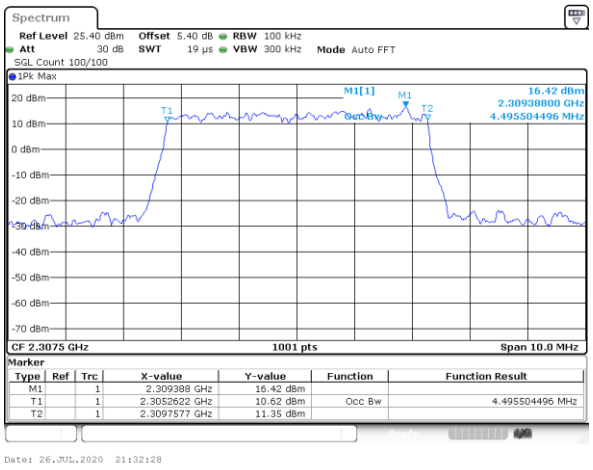


Occupied Bandwidth

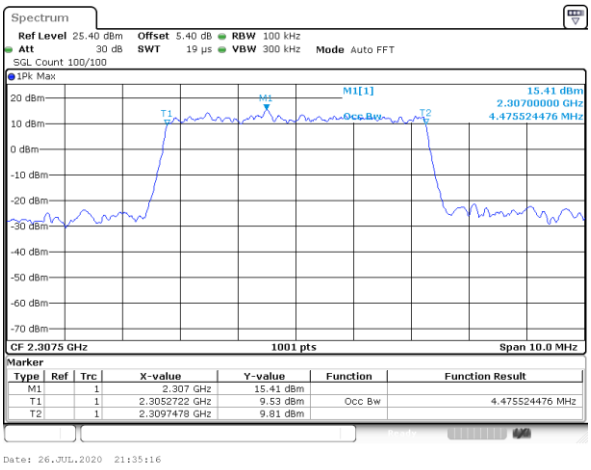
Mode	LTE Band 30 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.50	4.48	-	-	-	-	-	-
Middle CH	-	-	-	-	4.50	4.52	8.99	8.97	-	-	-	-
Highest CH	-	-	-	-	4.47	4.48	-	-	-	-	-	-
Mode	LTE Band 26 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.47	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.50	-	9.01	-	-	-	-	-
Highest CH	-	-	-	-	4.48	-	-	-	-	-	-	-

LTE Band 30

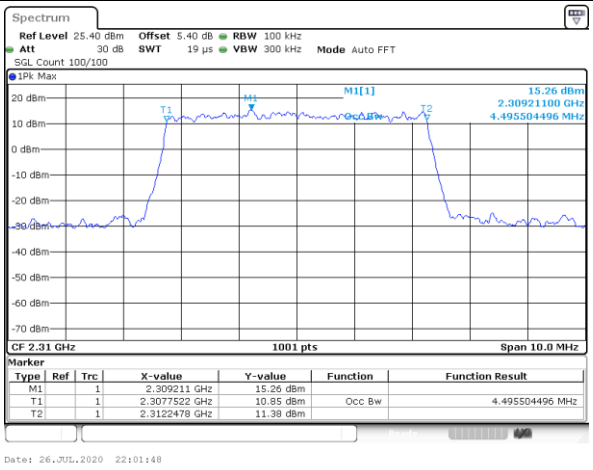
Lowest Channel / 5MHz / QPSK



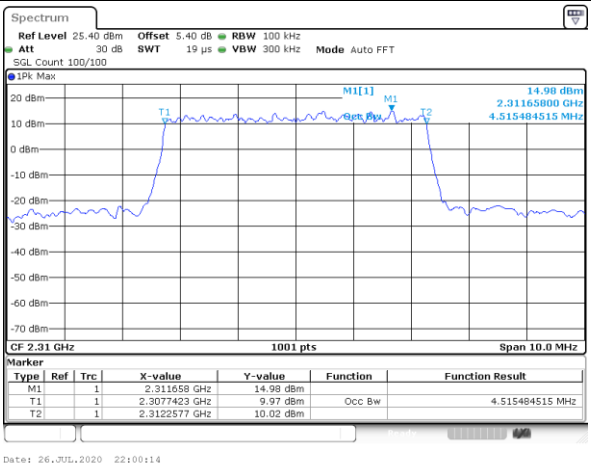
Lowest Channel / 5MHz / 16QAM



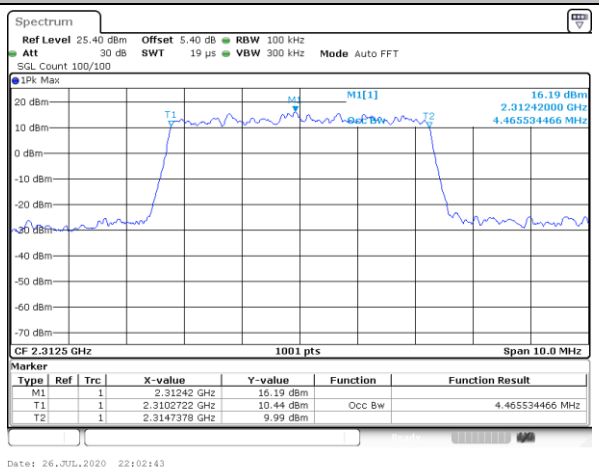
Middle Channel / 5MHz / QPSK



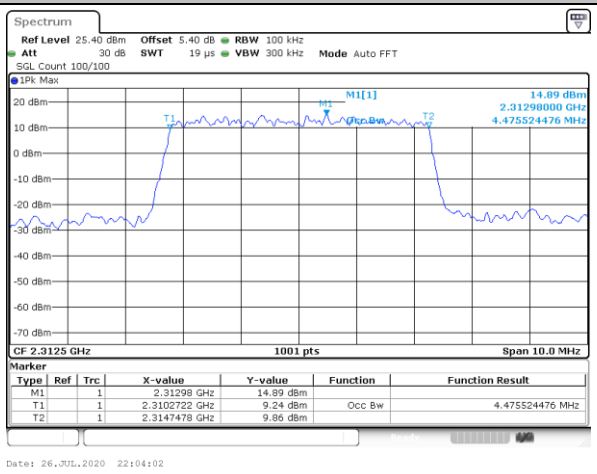
Middle Channel / 5MHz / 16QAM



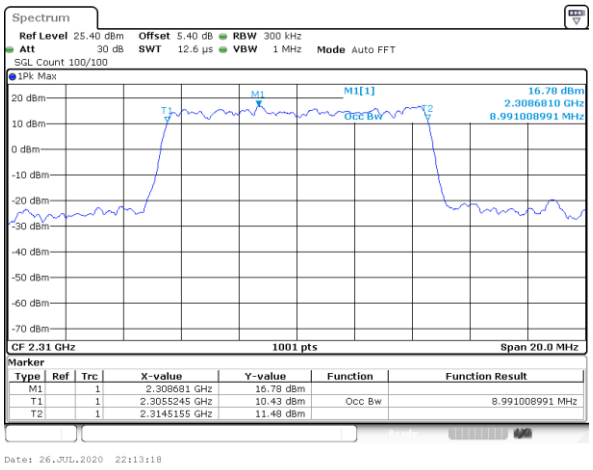
Highest Channel / 5MHz / QPSK

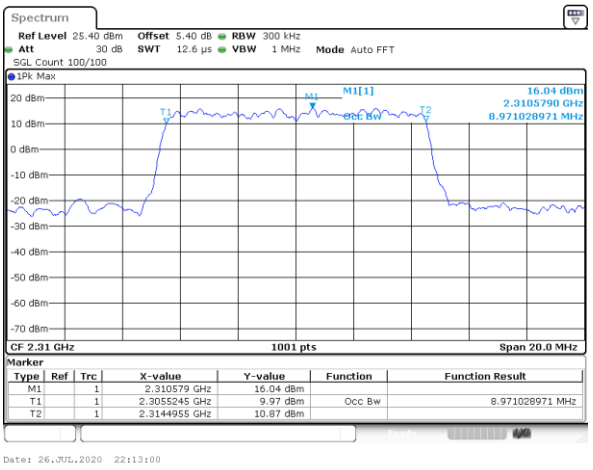


Highest Channel / 5MHz / 16QAM



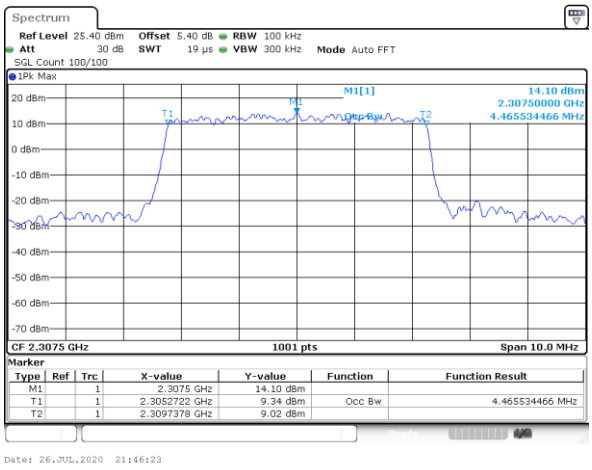
LTE Band 30	
Middle Channel / 10MHz / QPSK	Middle Channel / 10MHz / 16QAM



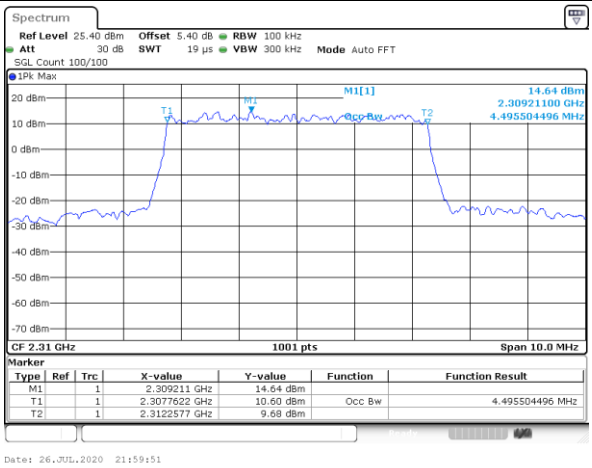


LTE Band 30

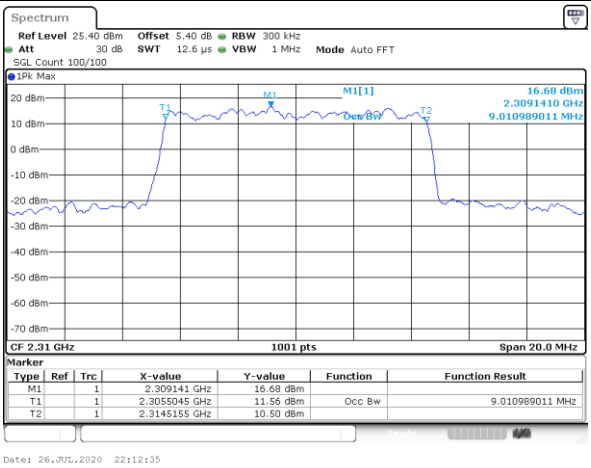
Lowest Channel / 5MHz / 64QAM



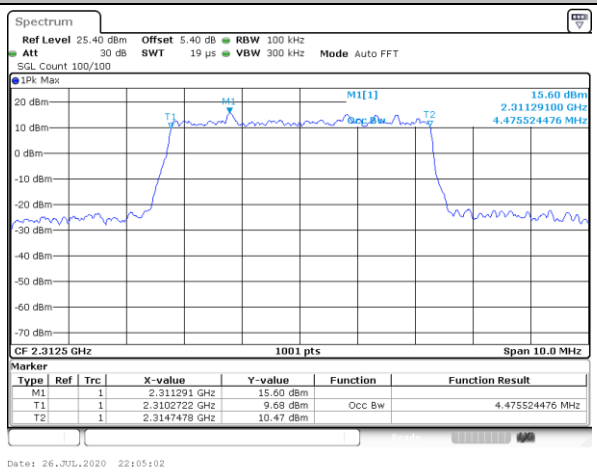
Middle Channel / 5MHz / 64QAM



Middle Channel / 10MHz / 64QAM



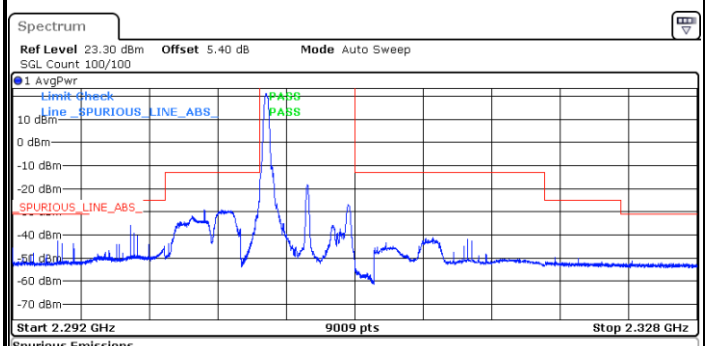
Highest Channel / 5MHz / 64QAM



Conducted Band Edge

LTE Band 30 / 5MHz / QPSK

Lowest Band Edge / 1 RB

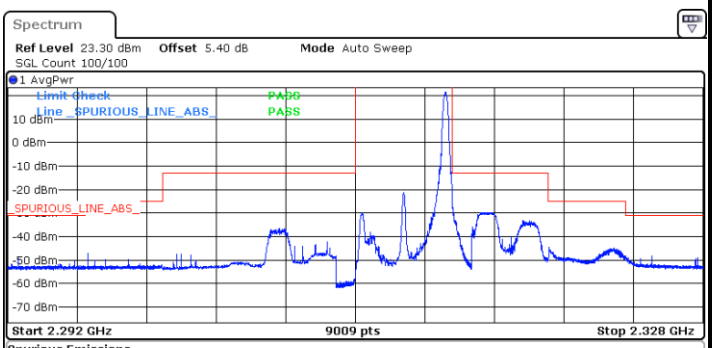


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29437 GHz	-42.45 dBm	-11.45 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29821 GHz	-35.89 dBm	-10.89 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30209 GHz	-29.08 dBm	-16.08 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-23.52 dBm	-10.52 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30534 GHz	21.07 dBm	-8.93 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31001 GHz	-54.29 dBm	-41.29 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31412 GHz	-40.95 dBm	-27.95 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32054 GHz	-49.77 dBm	-24.77 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32458 GHz	-51.11 dBm	-20.11 dB

Date: 26.JUL.2020 21:53:31

Highest Band Edge / 1 RB

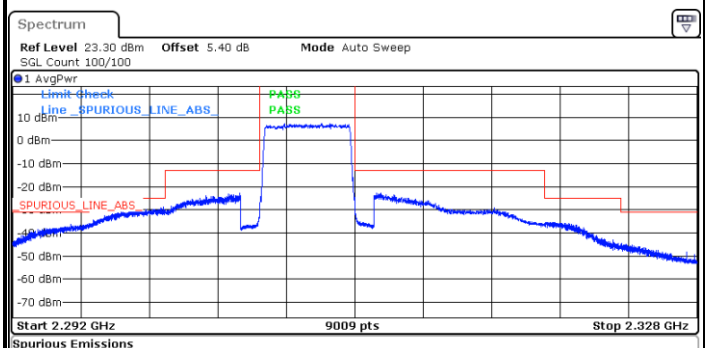


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29255 GHz	-49.36 dBm	-18.36 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29614 GHz	-47.27 dBm	-22.27 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30606 GHz	-36.74 dBm	-23.74 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.30999 GHz	-56.49 dBm	-43.49 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31466 GHz	21.56 dBm	-8.44 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31500 GHz	-23.46 dBm	-10.46 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31655 GHz	-29.75 dBm	-16.75 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32002 GHz	-44.40 dBm	-19.40 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32534 GHz	-48.22 dBm	-17.22 dB

Date: 26.JUL.2020 22:09:40

Lowest Band Edge / Full RB

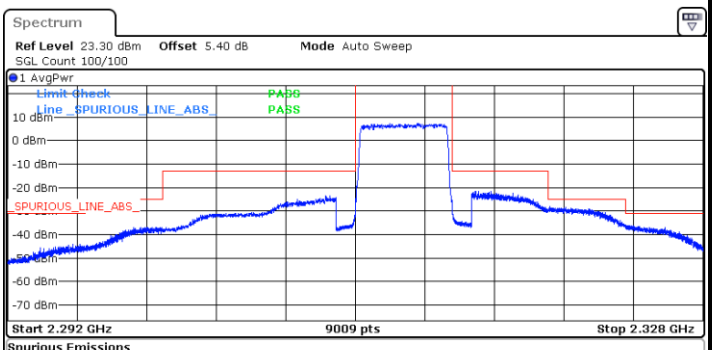


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29593 GHz	-36.20 dBm	-5.20 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29995 GHz	-28.85 dBm	-3.85 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30393 GHz	-22.94 dBm	-9.94 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-31.41 dBm	-18.41 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30826 GHz	7.25 dBm	-22.75 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31000 GHz	-30.46 dBm	-17.46 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31113 GHz	-22.69 dBm	-9.69 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32005 GHz	-35.34 dBm	-10.34 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32404 GHz	-44.50 dBm	-13.50 dB

Date: 26.JUL.2020 21:33:05

Highest Band Edge / Full RB



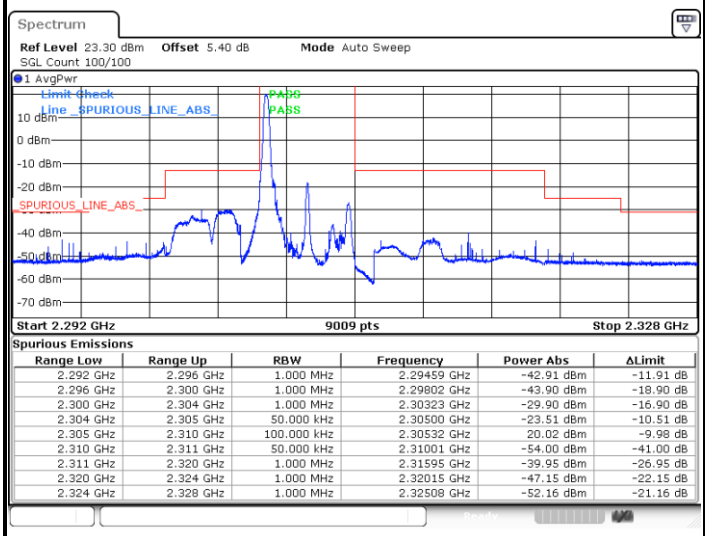
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29575 GHz	-44.09 dBm	-13.09 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29888 GHz	-36.81 dBm	-11.81 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30847 GHz	-23.63 dBm	-10.63 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.31000 GHz	-30.69 dBm	-17.69 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31321 GHz	7.29 dBm	-22.71 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31500 GHz	-29.67 dBm	-16.67 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31624 GHz	-21.47 dBm	-8.47 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32005 GHz	-28.11 dBm	-3.11 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32421 GHz	-36.10 dBm	-5.10 dB

Date: 26.JUL.2020 22:03:34

LTE Band 30 / 5MHz / 16QAM

Lowest Band Edge / 1RB

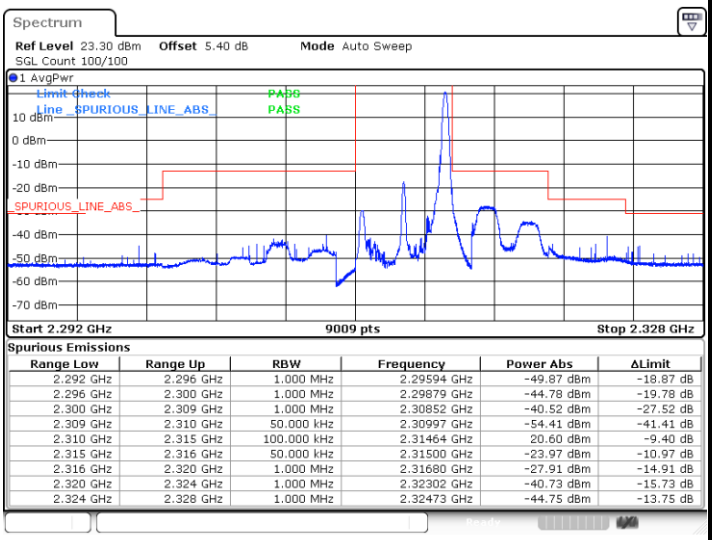


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29459 GHz	-42.91 dBm	-11.91 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29802 GHz	-43.90 dBm	-18.90 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30323 GHz	-29.90 dBm	-16.90 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-23.51 dBm	-10.51 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30532 GHz	20.02 dBm	-9.98 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31001 GHz	-54.00 dBm	-41.00 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31595 GHz	-39.95 dBm	-26.95 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32015 GHz	-47.15 dBm	-22.15 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32508 GHz	-52.16 dBm	-21.16 dB

Date: 26.JUL.2020 21:51:45

Highest Band Edge / 1 RB

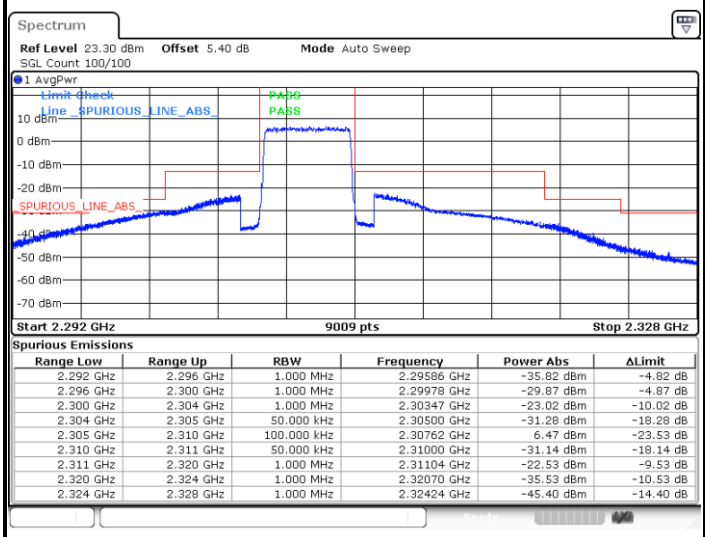


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29594 GHz	-49.87 dBm	-18.87 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29879 GHz	-44.78 dBm	-19.78 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30852 GHz	-40.52 dBm	-27.52 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.30997 GHz	-54.41 dBm	-41.41 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31464 GHz	20.60 dBm	-9.40 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31500 GHz	-23.97 dBm	-10.97 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31680 GHz	-27.91 dBm	-14.91 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32302 GHz	-40.73 dBm	-15.73 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32473 GHz	-44.75 dBm	-13.75 dB

Date: 26.JUL.2020 22:10:37

Lowest Band Edge / Full RB

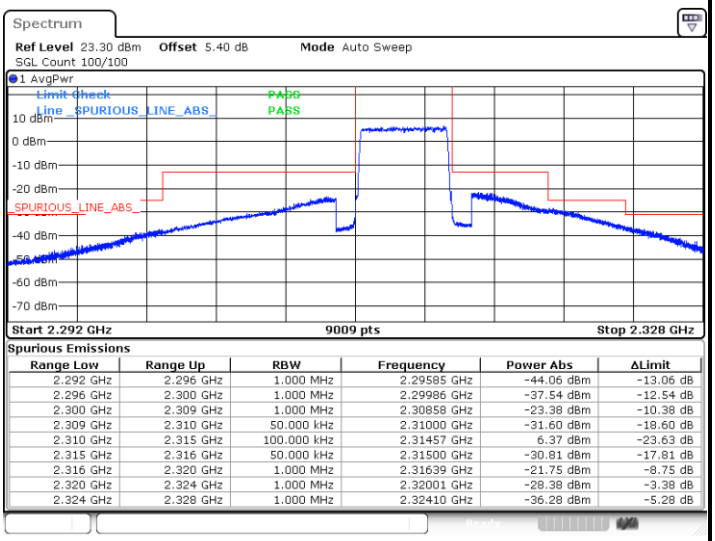


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29586 GHz	-35.82 dBm	-4.82 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29978 GHz	-29.87 dBm	-4.87 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30347 GHz	-23.02 dBm	-10.02 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-31.28 dBm	-18.28 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30762 GHz	6.47 dBm	-23.53 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31000 GHz	-31.14 dBm	-18.14 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31104 GHz	-22.53 dBm	-9.53 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32070 GHz	-35.53 dBm	-10.53 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32424 GHz	-45.40 dBm	-14.40 dB

Date: 26.JUL.2020 21:36:02

Highest Band Edge / Full RB



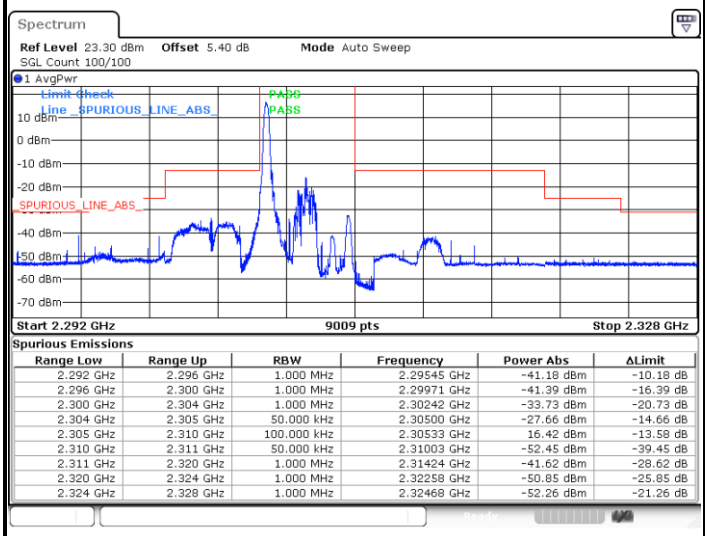
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29585 GHz	-44.06 dBm	-13.06 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29986 GHz	-37.54 dBm	-12.54 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30858 GHz	-23.38 dBm	-10.38 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.31000 GHz	-31.60 dBm	-18.60 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31457 GHz	6.37 dBm	-23.63 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31500 GHz	-30.81 dBm	-17.81 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31639 GHz	-21.75 dBm	-8.75 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32001 GHz	-28.38 dBm	-3.38 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32410 GHz	-36.28 dBm	-5.28 dB

Date: 26.JUL.2020 22:04:40

LTE Band 30 / 5MHz / 64QAM

Lowest Band Edge / 1RB

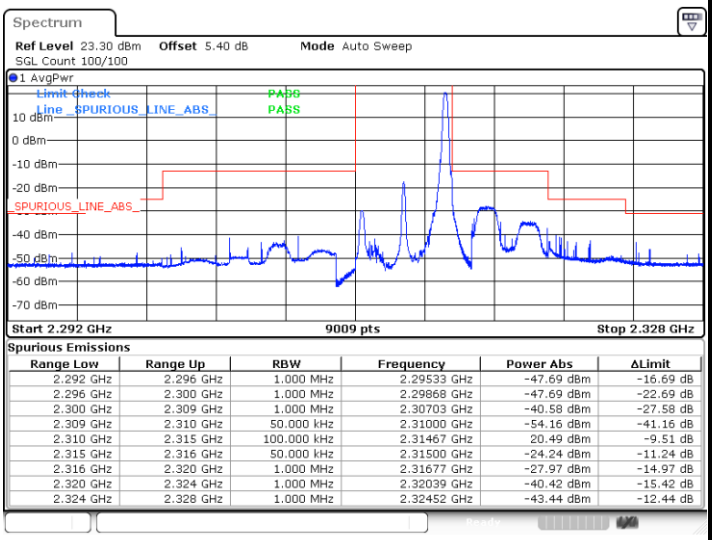


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29545 GHz	-41.18 dBm	-10.18 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29971 GHz	-41.39 dBm	-16.39 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30242 GHz	-33.73 dBm	-20.73 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-27.66 dBm	-14.66 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30533 GHz	16.42 dBm	-13.58 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31003 GHz	-52.45 dBm	-39.45 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31424 GHz	-41.62 dBm	-28.62 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32258 GHz	-50.85 dBm	-25.85 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32468 GHz	-52.26 dBm	-21.26 dB

Date: 26.JUL.2020 21:49:38

Highest Band Edge / 1 RB

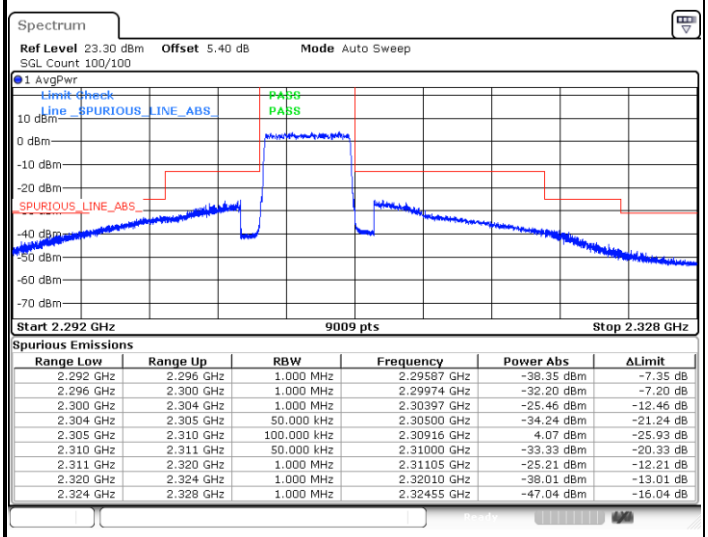


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29533 GHz	-47.69 dBm	-16.69 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29868 GHz	-47.69 dBm	-22.69 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30703 GHz	-40.58 dBm	-27.58 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.31000 GHz	-54.16 dBm	-41.16 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31467 GHz	20.49 dBm	-9.51 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31500 GHz	-24.24 dBm	-11.24 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31677 GHz	-27.97 dBm	-14.97 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32039 GHz	-40.42 dBm	-15.42 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32452 GHz	-43.44 dBm	-12.44 dB

Date: 26.JUL.2020 22:11:38

Lowest Band Edge / Full RB

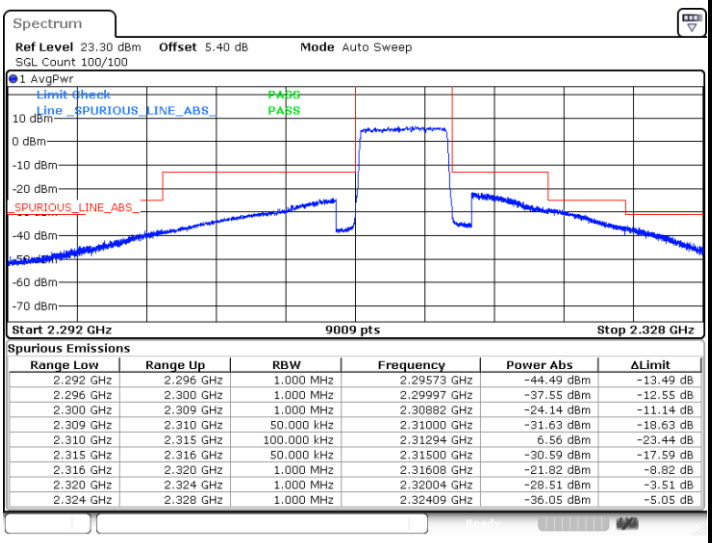


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29587 GHz	-38.35 dBm	-7.35 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29974 GHz	-32.20 dBm	-7.20 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30397 GHz	-25.46 dBm	-12.46 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-34.24 dBm	-21.24 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30916 GHz	4.07 dBm	-25.93 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31000 GHz	-33.33 dBm	-20.33 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31105 GHz	-25.21 dBm	-12.21 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32010 GHz	-38.01 dBm	-13.01 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32455 GHz	-47.04 dBm	-16.04 dB

Date: 26.JUL.2020 21:47:20

Highest Band Edge / Full RB



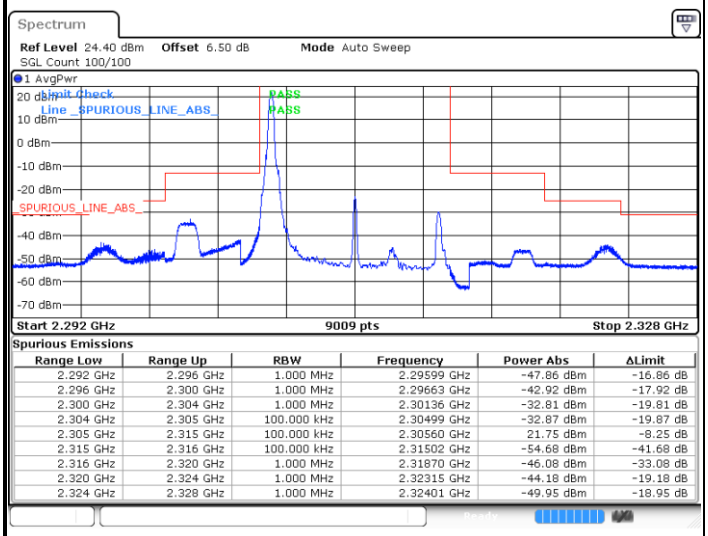
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29573 GHz	-44.49 dBm	-13.49 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29997 GHz	-37.55 dBm	-12.55 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30882 GHz	-24.14 dBm	-11.14 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.31000 GHz	-31.63 dBm	-18.63 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31294 GHz	6.56 dBm	-23.44 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31500 GHz	-30.59 dBm	-17.59 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31608 GHz	-21.82 dBm	-8.82 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32004 GHz	-28.51 dBm	-3.51 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32409 GHz	-36.05 dBm	-5.05 dB

Date: 26.JUL.2020 22:05:44

LTE Band 30 / 10MHz / QPSK

Lowest Band Edge / 1 RB

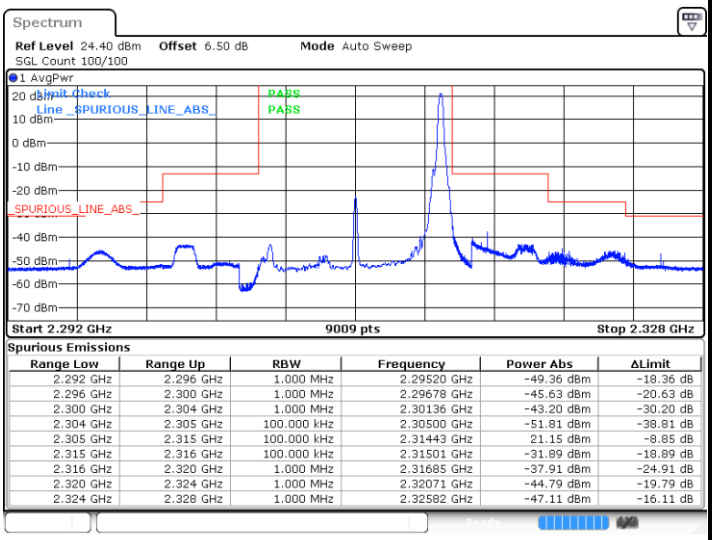


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29599 GHz	-47.86 dBm	-16.86 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29663 GHz	-42.92 dBm	-17.92 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30136 GHz	-32.81 dBm	-19.81 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30499 GHz	-32.87 dBm	-19.87 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30560 GHz	21.75 dBm	-8.25 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31502 GHz	-54.68 dBm	-41.68 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31870 GHz	-46.08 dBm	-33.08 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32315 GHz	-44.18 dBm	-19.18 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32401 GHz	-49.95 dBm	-18.95 dB

Date: 7.AUG.2020 01:30:48

Highest Band Edge / 1 RB

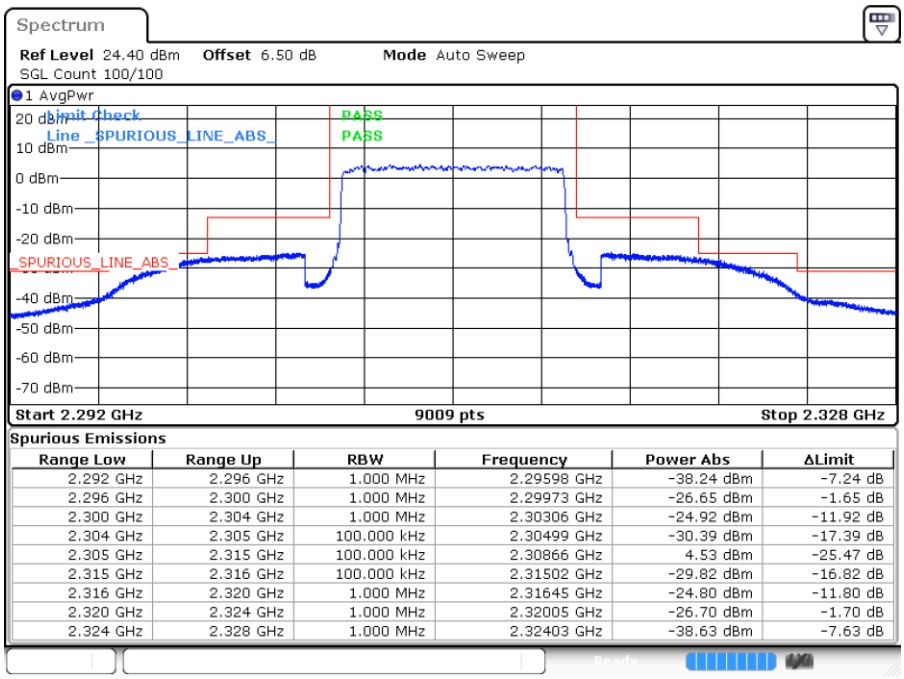


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29520 GHz	-49.36 dBm	-18.36 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29678 GHz	-45.63 dBm	-20.63 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30136 GHz	-43.20 dBm	-30.20 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-51.81 dBm	-38.81 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31443 GHz	21.15 dBm	-8.85 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31501 GHz	-31.89 dBm	-18.89 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31685 GHz	-37.91 dBm	-24.91 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32071 GHz	-44.79 dBm	-19.79 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32582 GHz	-47.11 dBm	-16.11 dB

Date: 7.AUG.2020 01:31:12

Band Edge / Full RB



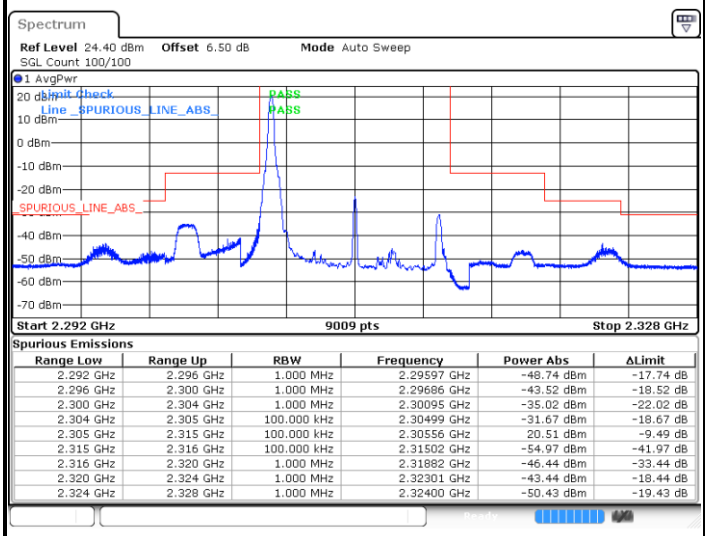
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29598 GHz	-38.24 dBm	-7.24 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29973 GHz	-26.65 dBm	-1.65 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30306 GHz	-24.92 dBm	-11.92 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30499 GHz	-30.39 dBm	-17.39 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30866 GHz	4.53 dBm	-25.47 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31502 GHz	-29.82 dBm	-16.82 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31645 GHz	-24.80 dBm	-11.80 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32005 GHz	-26.70 dBm	-1.70 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32403 GHz	-38.63 dBm	-7.63 dB

Date: 7.AUG.2020 01:32:24

LTE Band 30 / 10MHz / 16QAM

Lowest Band Edge / 1 RB

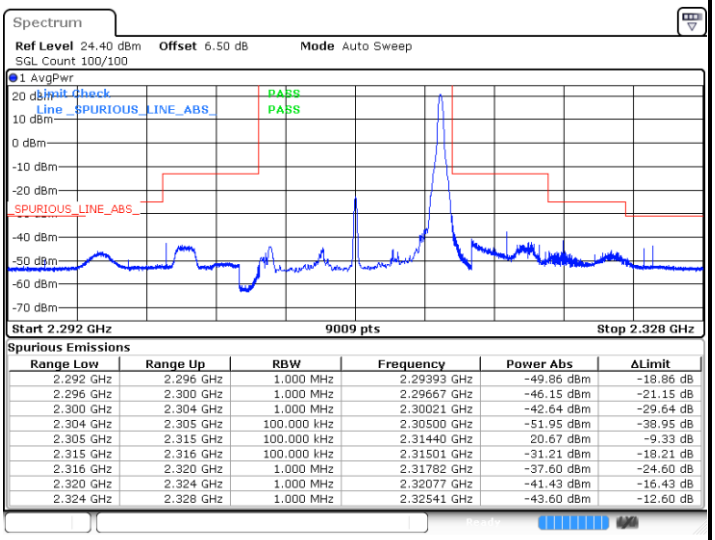


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29597 GHz	-48.74 dBm	-17.74 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29686 GHz	-43.52 dBm	-18.52 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30095 GHz	-35.02 dBm	-22.02 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30499 GHz	-31.67 dBm	-18.67 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30556 GHz	20.51 dBm	-9.49 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31502 GHz	-54.97 dBm	-41.97 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31882 GHz	-46.44 dBm	-33.44 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32301 GHz	-43.44 dBm	-18.44 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32400 GHz	-50.43 dBm	-19.43 dB

Date: 7.AUG.2020 01:30:28

Highest Band Edge / 1 RB

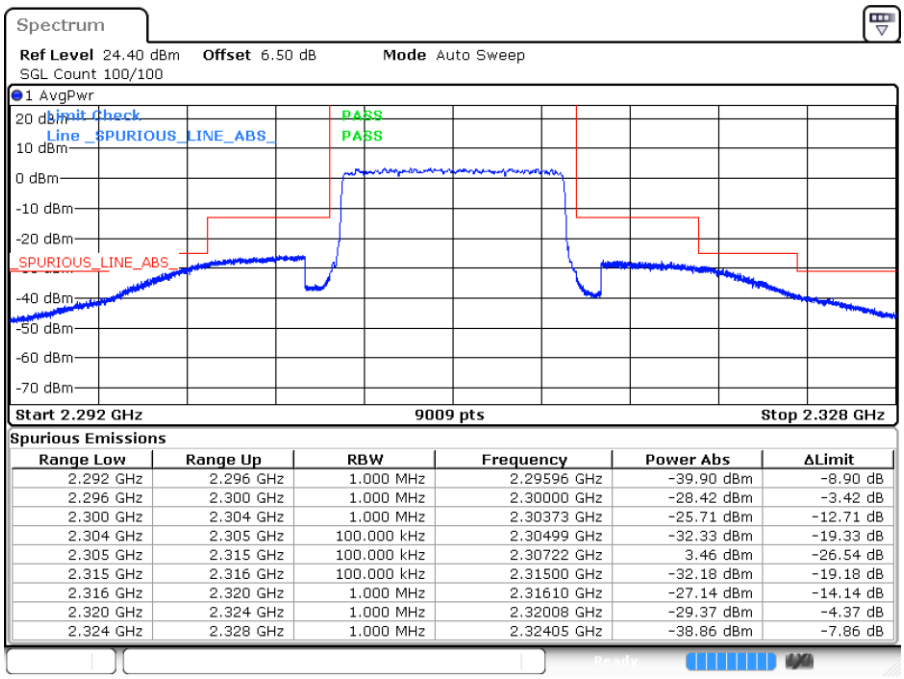


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29393 GHz	-49.86 dBm	-18.86 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29667 GHz	-46.15 dBm	-21.15 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30021 GHz	-42.64 dBm	-29.64 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-51.95 dBm	-38.95 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31440 GHz	20.67 dBm	-9.33 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31501 GHz	-31.21 dBm	-18.21 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31782 GHz	-37.60 dBm	-24.60 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32077 GHz	-41.43 dBm	-16.43 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32541 GHz	-43.60 dBm	-12.60 dB

Date: 7.AUG.2020 01:31:35

Band Edge / Full RB



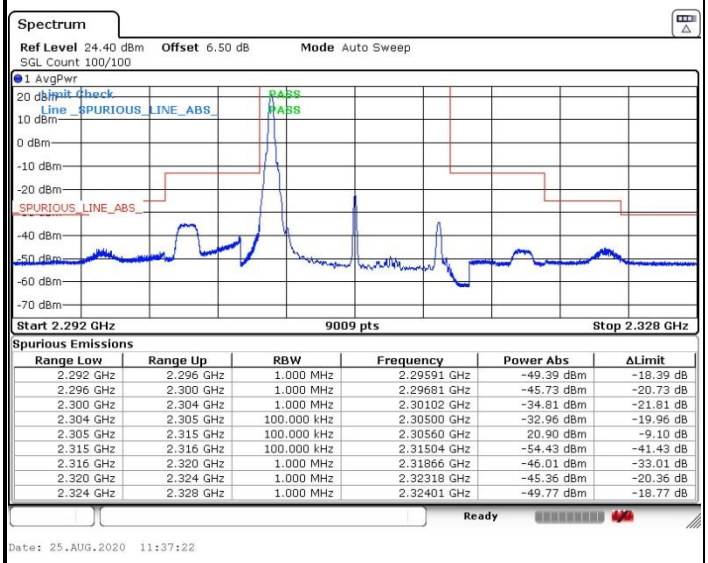
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29596 GHz	-39.90 dBm	-8.90 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.30000 GHz	-28.42 dBm	-3.42 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30373 GHz	-25.71 dBm	-12.71 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30499 GHz	-32.33 dBm	-19.33 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30722 GHz	3.46 dBm	-26.54 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31500 GHz	-32.18 dBm	-19.18 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31610 GHz	-27.14 dBm	-14.14 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32008 GHz	-29.37 dBm	-4.37 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32405 GHz	-38.86 dBm	-7.86 dB

Date: 7.AUG.2020 01:32:04

LTE Band 30 / 10MHz / 64QAM

Lowest Band Edge / 1 RB

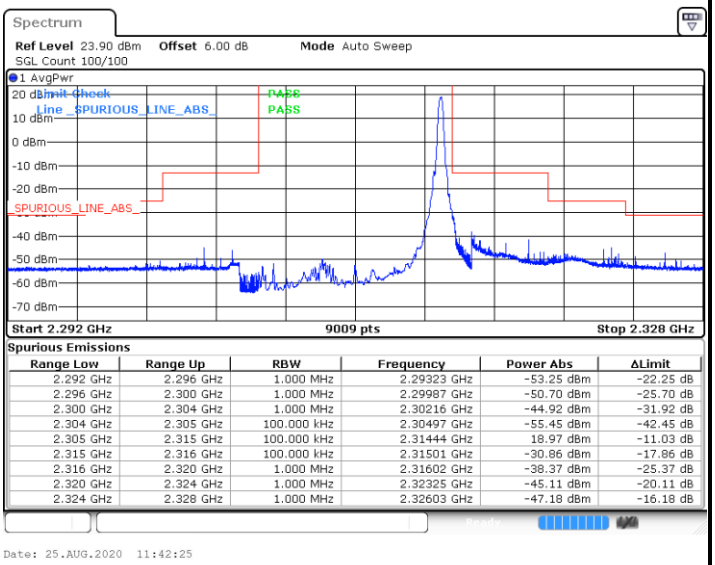


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29591 GHz	-49.39 dBm	-18.39 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29681 GHz	-45.73 dBm	-20.73 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30102 GHz	-34.81 dBm	-21.81 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-32.96 dBm	-19.96 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30560 GHz	20.90 dBm	-9.10 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31504 GHz	-54.43 dBm	-41.43 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31866 GHz	-46.01 dBm	-33.01 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32318 GHz	-45.36 dBm	-20.36 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32401 GHz	-49.77 dBm	-18.77 dB

Date: 25.AUG.2020 11:37:22

Highest Band Edge / 1 RB

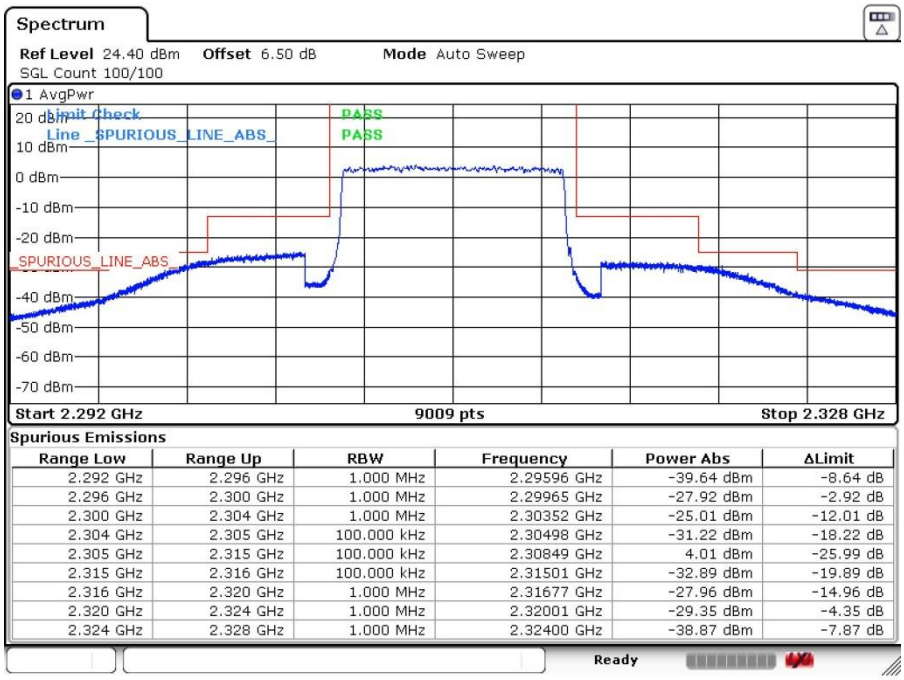


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29323 GHz	-53.25 dBm	-22.25 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29987 GHz	-50.70 dBm	-25.70 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30216 GHz	-44.92 dBm	-31.92 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30497 GHz	-55.45 dBm	-42.45 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31444 GHz	18.97 dBm	-11.03 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31501 GHz	-30.86 dBm	-17.86 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31602 GHz	-38.37 dBm	-25.37 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32325 GHz	-45.11 dBm	-20.11 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32603 GHz	-47.18 dBm	-16.18 dB

Date: 25.AUG.2020 11:42:25

Band Edge / Full RB



Spurious Emissions

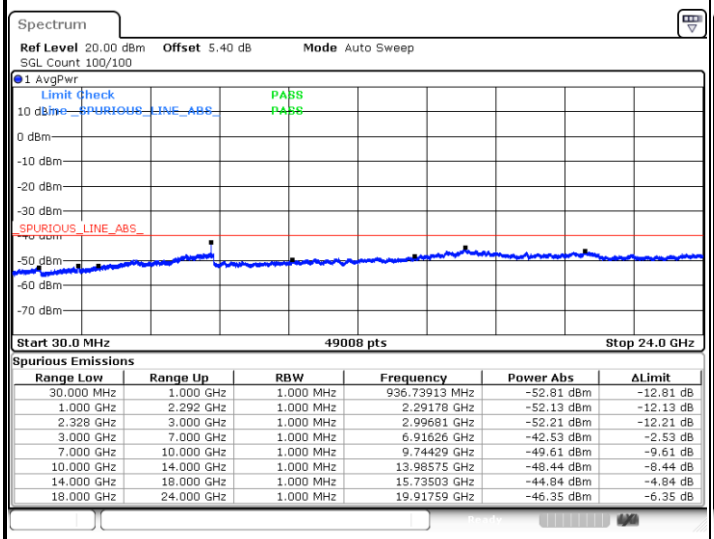
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29596 GHz	-39.64 dBm	-8.64 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29965 GHz	-27.92 dBm	-2.92 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30352 GHz	-25.01 dBm	-12.01 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30498 GHz	-31.22 dBm	-18.22 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30849 GHz	4.01 dBm	-25.99 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31501 GHz	-32.89 dBm	-19.89 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31677 GHz	-27.96 dBm	-14.96 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32001 GHz	-29.35 dBm	-4.35 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32400 GHz	-38.87 dBm	-7.87 dB

Date: 25.AUG.2020 11:35:29

Conducted Spurious Emission

LTE Band 30 / 5MHz

Lowest Channel / QPSK

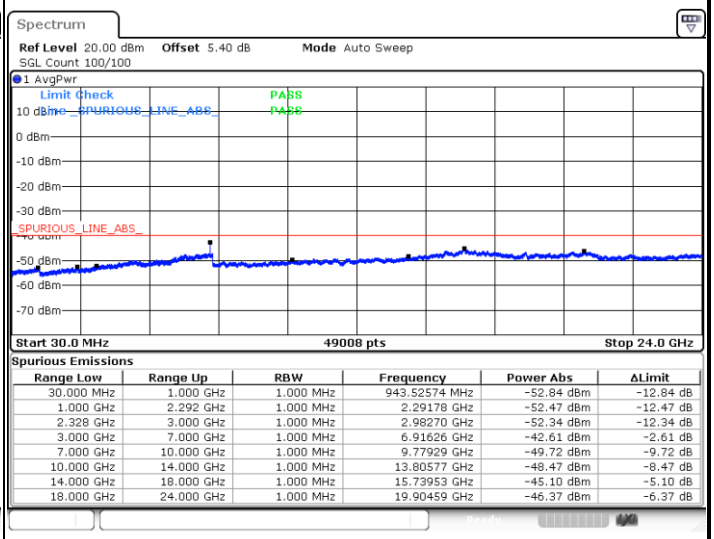


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	936.73913 MHz	-52.81 dBm	-12.81 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.29178 GHz	-52.13 dBm	-12.13 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.99681 GHz	-52.21 dBm	-12.21 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.91626 GHz	-42.53 dBm	-2.53 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.74429 GHz	-49.61 dBm	-9.61 dB
10.000 GHz	14.000 GHz	1.000 MHz	13.98575 GHz	-48.44 dBm	-8.44 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.73503 GHz	-44.84 dBm	-4.84 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.91759 GHz	-46.35 dBm	-6.35 dB

Date: 26.JUL.2020 21:54:34

Lowest Channel / 16QAM

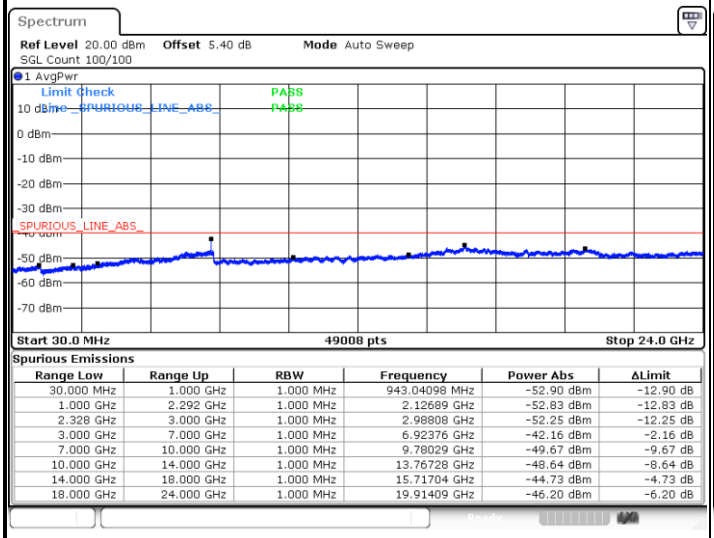


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	943.52574 MHz	-52.84 dBm	-12.84 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.29178 GHz	-52.47 dBm	-12.47 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.98270 GHz	-52.34 dBm	-12.34 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.91626 GHz	-42.61 dBm	-2.61 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.77929 GHz	-49.72 dBm	-9.72 dB
10.000 GHz	14.000 GHz	1.000 MHz	13.80577 GHz	-48.47 dBm	-8.47 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.73953 GHz	-45.10 dBm	-5.10 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.90459 GHz	-46.37 dBm	-6.37 dB

Date: 26.JUL.2020 21:52:31

Middle Channel / QPSK

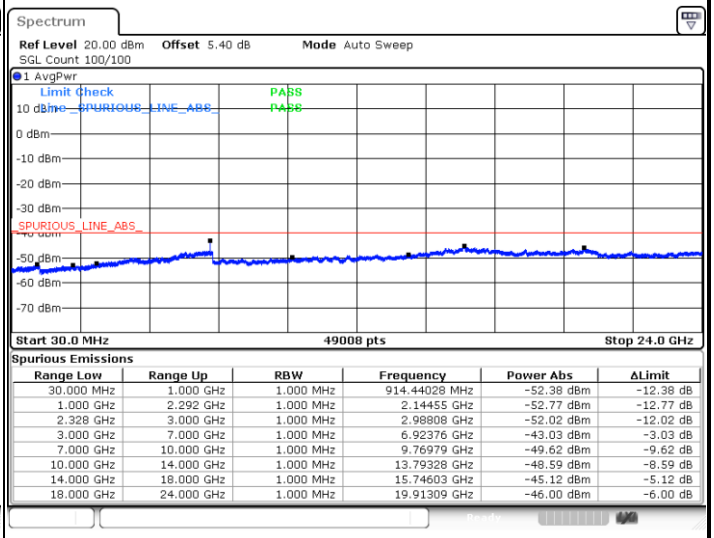


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	943.04098 MHz	-52.90 dBm	-12.90 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.12689 GHz	-52.83 dBm	-12.83 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.98808 GHz	-52.25 dBm	-12.25 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.92376 GHz	-42.16 dBm	-2.16 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.78029 GHz	-49.67 dBm	-9.67 dB
10.000 GHz	14.000 GHz	1.000 MHz	13.76728 GHz	-48.64 dBm	-8.64 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.71704 GHz	-44.73 dBm	-4.73 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.91409 GHz	-46.20 dBm	-6.20 dB

Date: 26.JUL.2020 21:56:48

Middle Channel / 16QAM



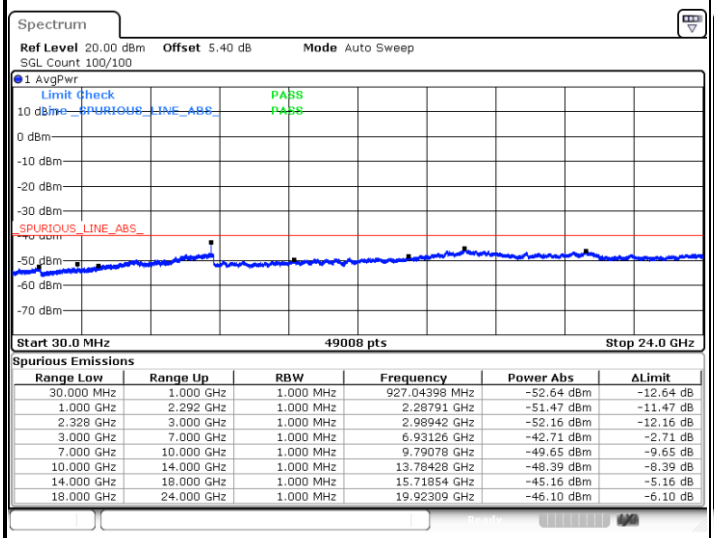
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	914.44028 MHz	-52.38 dBm	-12.38 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.14455 GHz	-52.77 dBm	-12.77 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.98808 GHz	-52.02 dBm	-12.02 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.92376 GHz	-43.03 dBm	-3.03 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.76979 GHz	-49.62 dBm	-9.62 dB
10.000 GHz	14.000 GHz	1.000 MHz	13.79328 GHz	-48.59 dBm	-8.59 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.74603 GHz	-45.12 dBm	-5.12 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.91309 GHz	-46.00 dBm	-6.00 dB

Date: 26.JUL.2020 21:57:41

LTE Band 30 / 5MHz

Highest Channel / QPSK

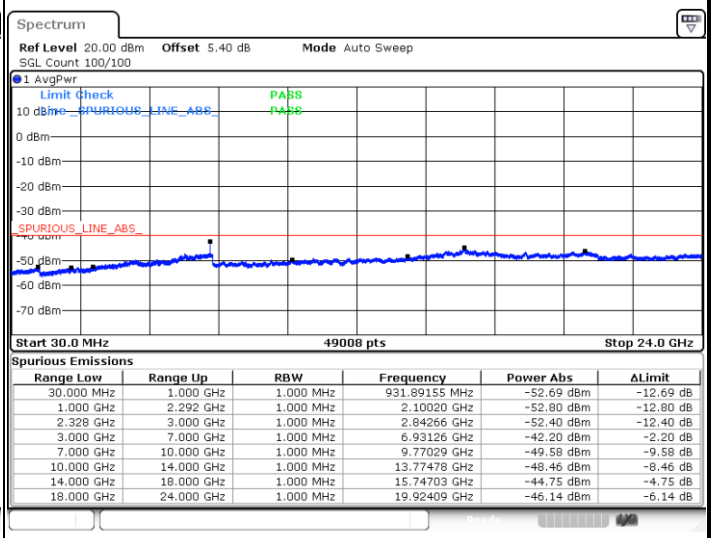


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	927.04398 MHz	-52.64 dBm	-12.64 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.28791 GHz	-51.47 dBm	-11.47 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.98942 GHz	-52.16 dBm	-12.16 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.93126 GHz	-42.71 dBm	-2.71 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.79078 GHz	-49.65 dBm	-9.65 dB
10.000 GHz	14.000 GHz	1.000 MHz	13.78428 GHz	-48.39 dBm	-8.39 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.71854 GHz	-45.16 dBm	-5.16 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.92309 GHz	-46.10 dBm	-6.10 dB

Date: 26.JUL.2020 22:08:48

Highest Channel / 16QAM



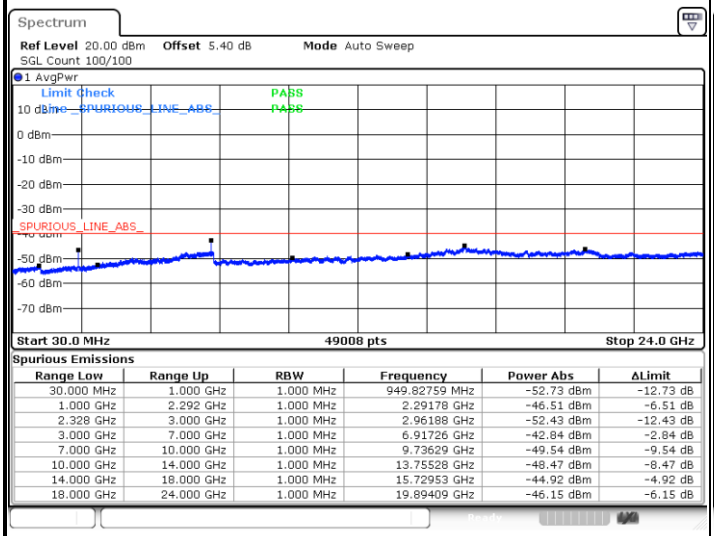
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	931.89155 MHz	-52.69 dBm	-12.69 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.10020 GHz	-52.80 dBm	-12.80 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.84266 GHz	-52.40 dBm	-12.40 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.93126 GHz	-42.20 dBm	-2.20 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.77029 GHz	-49.58 dBm	-9.58 dB
10.000 GHz	14.000 GHz	1.000 MHz	13.77478 GHz	-48.46 dBm	-8.46 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.74703 GHz	-44.75 dBm	-4.75 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.92409 GHz	-46.14 dBm	-6.14 dB

Date: 26.JUL.2020 22:07:42

LTE Band 30 / 10MHz

Middle Channel / QPSK

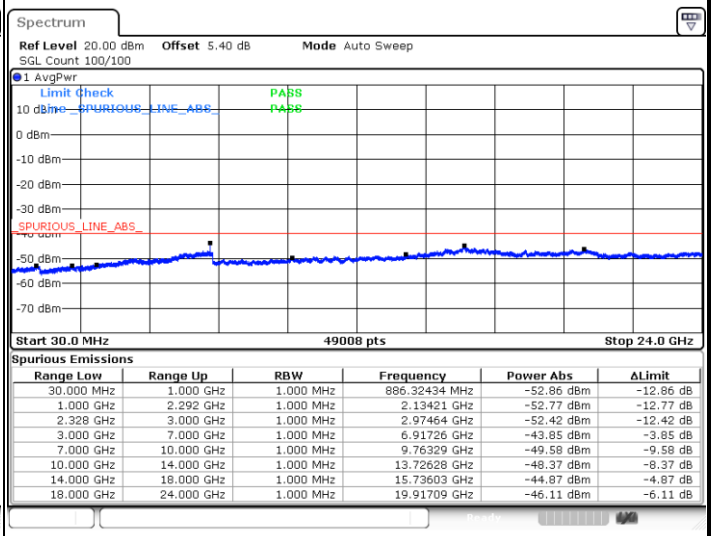


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	949.82759 MHz	-52.73 dBm	-12.73 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.29178 GHz	-46.51 dBm	-6.51 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.96188 GHz	-52.43 dBm	-12.43 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.91726 GHz	-42.84 dBm	-2.84 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.73629 GHz	-49.54 dBm	-9.54 dB
10.000 GHz	14.000 GHz	1.000 MHz	13.75528 GHz	-48.47 dBm	-8.47 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.72953 GHz	-44.92 dBm	-4.92 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.89409 GHz	-46.15 dBm	-6.15 dB

Date: 26.JUL.2020 22:33:01

Middle Channel / 16QAM



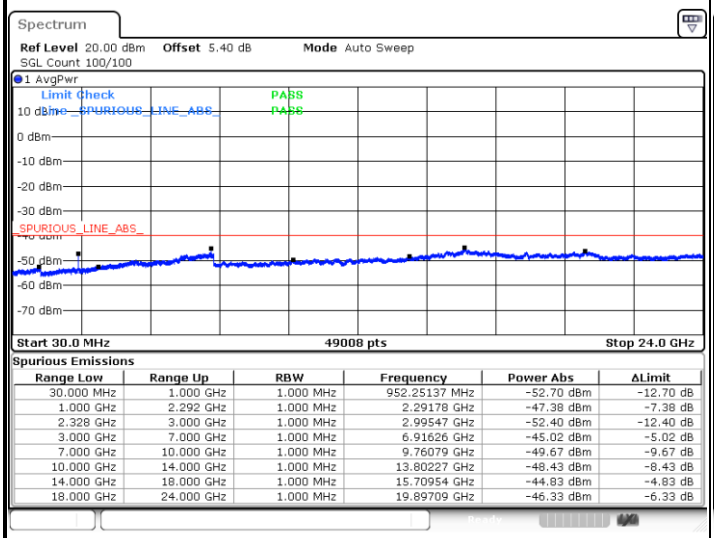
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	886.32434 MHz	-52.86 dBm	-12.86 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.13421 GHz	-52.77 dBm	-12.77 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.97464 GHz	-52.42 dBm	-12.42 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.91726 GHz	-43.85 dBm	-3.85 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.76329 GHz	-49.58 dBm	-9.58 dB
10.000 GHz	14.000 GHz	1.000 MHz	13.72628 GHz	-48.37 dBm	-8.37 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.73603 GHz	-44.87 dBm	-4.87 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.91709 GHz	-46.11 dBm	-6.11 dB

Date: 26.JUL.2020 22:34:17

LTE Band 30 / 5MHz

Lowest Channel / 64QAM

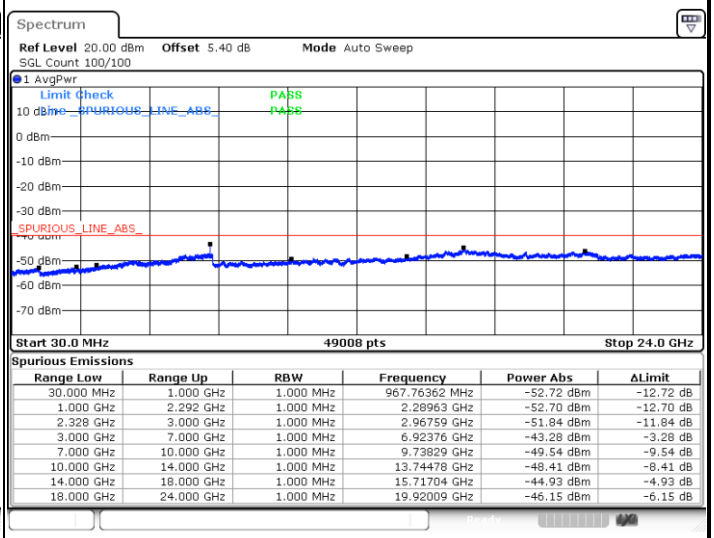


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	952.25137 MHz	-52.70 dBm	-12.70 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.29178 GHz	-47.38 dBm	-7.38 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.99547 GHz	-52.40 dBm	-12.40 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.91626 GHz	-45.02 dBm	-5.02 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.76079 GHz	-49.67 dBm	-9.67 dB
10.000 GHz	14.000 GHz	1.000 MHz	13.80227 GHz	-48.43 dBm	-8.43 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.70954 GHz	-44.83 dBm	-4.83 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.89709 GHz	-46.33 dBm	-6.33 dB

Date: 26.JUL.2020 21:50:41

Middle Channel / 64QAM

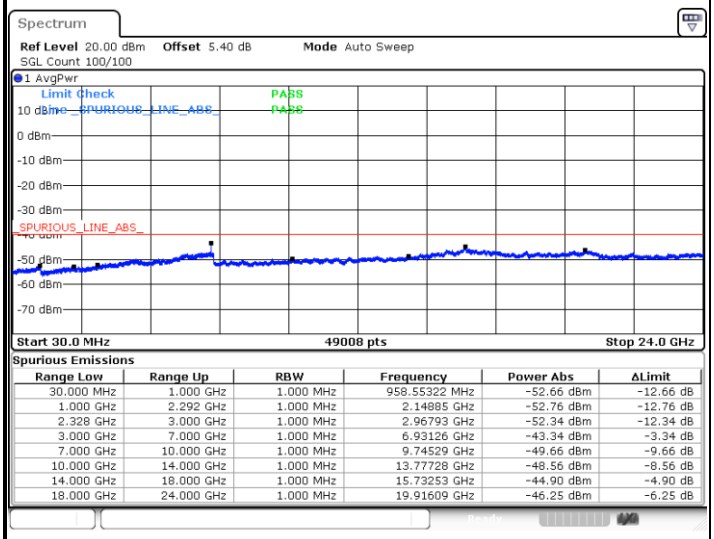


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	967.76362 MHz	-52.72 dBm	-12.72 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.28963 GHz	-52.70 dBm	-12.70 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.96759 GHz	-51.84 dBm	-11.84 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.92376 GHz	-43.28 dBm	-3.28 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.73829 GHz	-49.54 dBm	-9.54 dB
10.000 GHz	14.000 GHz	1.000 MHz	13.74478 GHz	-48.41 dBm	-8.41 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.71704 GHz	-44.93 dBm	-4.93 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.92009 GHz	-46.15 dBm	-6.15 dB

Date: 26.JUL.2020 21:59:17

Highest Channel / 64QAM



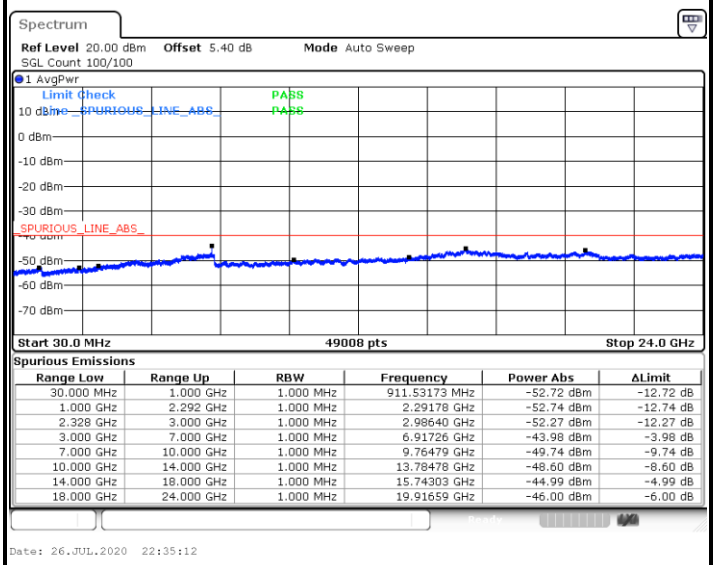
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	958.55322 MHz	-52.66 dBm	-12.66 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.14885 GHz	-52.76 dBm	-12.76 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.96793 GHz	-52.34 dBm	-12.34 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.93126 GHz	-43.34 dBm	-3.34 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.74529 GHz	-49.66 dBm	-9.66 dB
10.000 GHz	14.000 GHz	1.000 MHz	13.77728 GHz	-48.56 dBm	-8.56 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.73253 GHz	-44.90 dBm	-4.90 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.91609 GHz	-46.25 dBm	-6.25 dB

Date: 26.JUL.2020 22:06:40

LTE Band 30 / 10MHz

Middle Channel / 64QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	911.53173 MHz	-52.72 dBm	-12.72 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.29178 GHz	-52.74 dBm	-12.74 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.98640 GHz	-52.27 dBm	-12.27 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.91726 GHz	-43.98 dBm	-3.98 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.76479 GHz	-49.74 dBm	-9.74 dB
10.000 GHz	14.000 GHz	1.000 MHz	13.78478 GHz	-48.60 dBm	-8.60 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.74303 GHz	-44.99 dBm	-4.99 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.91659 GHz	-46.00 dBm	-6.00 dB

Date: 26.JUL.2020 22:35:12

Frequency Stability

Test Conditions		LTE Band 30 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0007	PASS
40	Normal Voltage	0.0002	
30	Normal Voltage	0.0016	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0013	
0	Normal Voltage	0.0017	
-10	Normal Voltage	0.0016	
-20	Normal Voltage	0.0003	
-30	Normal Voltage	0.0001	
20	Maximum Voltage	0.0017	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0015	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.135 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

Ant 1

LTE Band 30 / 5MHz / QPSK / RB Size 1 Offset 0								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	4612	-61.64	-40	-21.64	-73.10	2.84	14.30	H
	6916	-59.49	-40	-19.49	-69.43	3.49	13.43	H
	9220	-57.97	-40	-17.97	-68.21	3.85	14.09	H
	4612	-59.84	-40	-19.84	-71.30	2.84	14.30	V
	6916	-57.53	-40	-17.53	-67.47	3.49	13.43	V
	9220	-58.64	-40	-18.64	-68.88	3.85	14.09	V
Middle	4616	-61.41	-40	-21.41	-72.87	2.84	14.30	H
	6924	-59.54	-40	-19.54	-69.48	3.49	13.43	H
	9230	-58.43	-40	-18.43	-68.67	3.85	14.09	H
	4616	-62.16	-40	-22.16	-73.62	2.84	14.30	V
	6924	-59.72	-40	-19.72	-69.66	3.49	13.43	V
	9230	-58.71	-40	-18.71	-68.95	3.85	14.09	V
Highest	4620	-61.35	-40	-21.35	-72.81	2.84	14.30	H
	6932	-59.53	-40	-19.53	-69.47	3.49	13.43	H
	9240	-57.98	-40	-17.98	-68.22	3.85	14.09	H
	4620	-60.24	-40	-20.24	-71.70	2.84	14.30	V
	6932	-58.21	-40	-18.21	-68.15	3.49	13.43	V
	9240	-58.71	-40	-18.71	-68.95	3.85	14.09	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 30 / 10MHz / QPSK / RB Size 1 Offset 0								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	4612	-61.76	-40	-21.76	-73.22	2.84	14.30	H
	6916	-59.62	-40	-19.62	-69.56	3.49	13.43	H
	9220	-58.56	-40	-18.56	-68.80	3.85	14.09	H
	4612	-61.33	-40	-21.33	-72.79	2.84	14.30	V
	6916	-57.81	-40	-17.81	-67.75	3.49	13.43	V
	9220	-58.88	-40	-18.88	-69.12	3.85	14.09	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Ant 2

LTE Band 30 / 5MHz / QPSK / RB Size 1 Offset 0								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	4610	-63.07	-40	-23.07	-69.68	2.79	9.40	H
	6915	-62.65	-40	-22.65	-70.69	3.42	11.46	H
	9225	-61.91	-40	-21.91	-70.04	4.00	12.13	H
	4610	-61.21	-40	-21.21	-67.82	2.79	9.40	V
	6915.75	-59.74	-40	-19.74	-67.78	3.42	11.46	V
	9225	-60.75	-40	-20.75	-68.88	4.00	12.13	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.