FCC RF Test Report

APPLICANT	**:**	**Fibocom Wireless Inc.**
EQUIPMENT	**:**	**5G Module**
BRAND NAME	**:**	**Fibocom**
MODEL NAME	**:**	**FM350-GL**
FCC ID	**:**	**ZMOFM350GL**
STANDARD	**:**	**47 CFR Part 2, 27**
CLASSIFICATION	**:**	**PCS Licensed Transmitter (PCB)**

The product was received on May 18, 2020 and completely tested on Jan. 11, 2021. We, Sporton International (Shenzhen) 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 (Shenzhen) Inc., the test report shall not be reproduced except in full.

Reviewed by: Derreck Chen / Supervisor

Approved by: Eric Shih / Manager

Cert #5145.01

Sporton International (ShenZhen) Inc.

1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055

People's Republic of China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG051802E	Rev. 01	Initial issue of report	Apr. 02, 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 < 250mW/5MHz	PASS	-
3.7	§2.1049	Occupied Bandwidth	Reporting Only	PASS	-
3.8	§2.1051 §27.53 (a)(4)	Conducted Band Edge Measurement	Refer standard	PASS	-
3.9	§2.1051 §27.53 (a)(4)	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)(4)	Radiated Spurious Emission	< $70+10\log_{10}$(P[Watts])	PASS	Under limit 14.38 dB at 9222.000 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	FM350-GL
FCC ID	ZMOFM350GL
EUT supports Radios application	WCDMA/LTE/5G NR GNSS
IMEI Code	Conducted: 862146050001310 Radiation: 882146050002276
HW Version	V1.0.6
SW Version	81600.0000.00.09.03.03
EUT Stage	Identical Prototype

1.4 Product Specification of Equipment Under Test

Product Feature	
Tx Frequency	LTE Band 30 : 2305 MHz ~ 2315 MHz
Rx Frequency	LTE Band 30 : 2350 MHz ~ 2360 MHz
Bandwidth	5MHz / 10MHz
Maximum Output Power to Antenna	LTE Band 30 : 21.88 dBm
Antenna Gain	LTE Band 30 : 1.0 dBi
Type of Modulation	QPSK / 16QAM / 64QAM / 256QAM

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	4M49G7D	-	0.1538	4M50W7D	-	0.1324
10	2310.0	8M97G7D	0.0014	0.1542	9M05W7D	-	0.1288

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	4M53W7D	-	0.1038
10	2310.0	9M07W7D	-	0.1019

1.7 Testing Site

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

Test Firm	Sporton International (Shenzhen) Inc.		
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	TH01-SZ	CN1256	421272

Test Firm	Sporton International (Shenzhen) Inc.		
Test Site Location	101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City Guangdong Province China 518103 TEL: +86-755-33202398		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH03-SZ	CN1256	421272

1.8 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH03-SZ	AUDIX	E3	6.2009-8-24

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

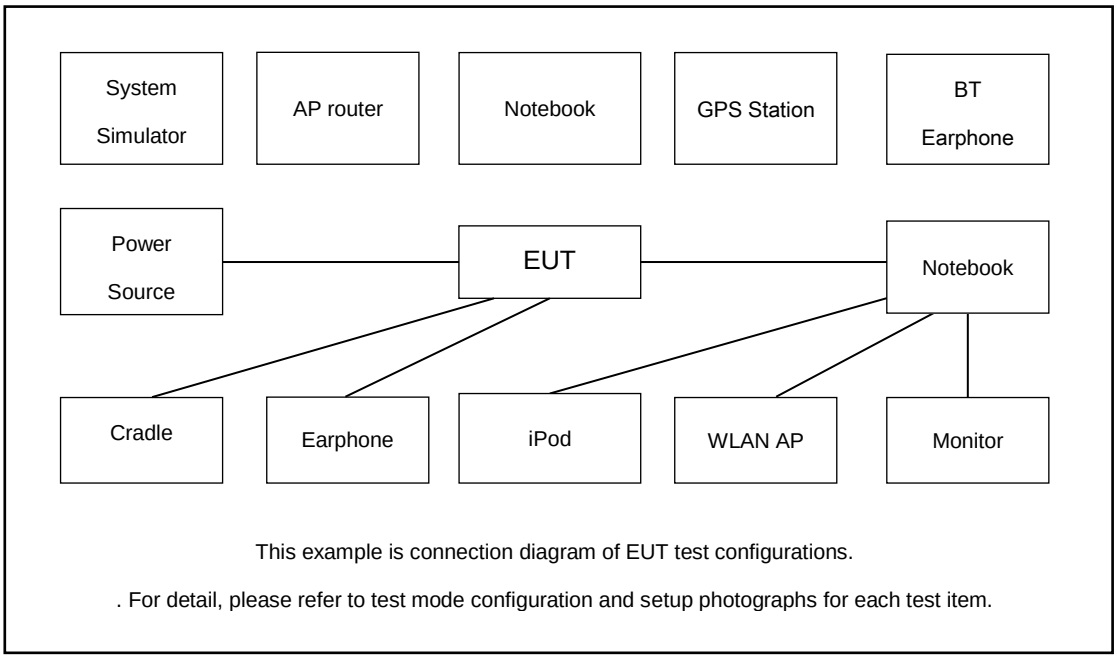
Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v03r01 with maximum output power.

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	
Note	1. The mark “v “ means that this configuration is chosen for testing 2. The mark “-“ means that this bandwidth is not supported. 3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported. 4. For modulation of 256QAM, the maximum power of 256QAM is lower than other modulation (QPSK/16QAM/64QAM), therefore, according to engineering evaluation, we choose higher																

	power (QPSK/16QAM/64QAM) to perform all tests and show in the report.

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
3.	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 5.0 dB and 10dB attenuator.

Example :

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

= 5.0 + 10 = 15.0 (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

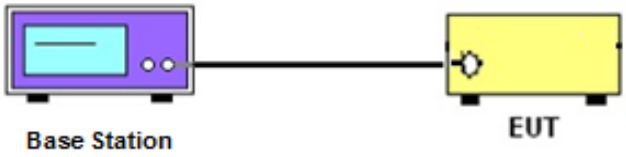
3 Conducted Test Items

3.1 Measuring Instruments

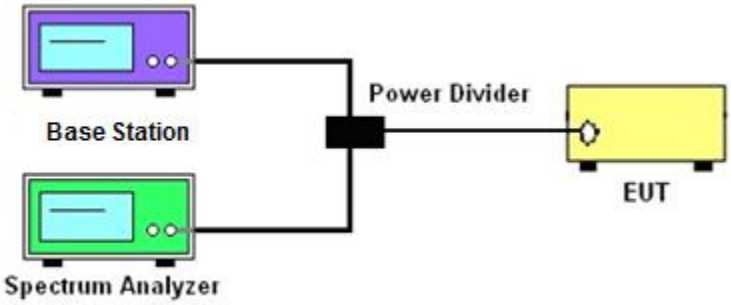
See list of measuring instruments of this test report.

3.2 Test Setup

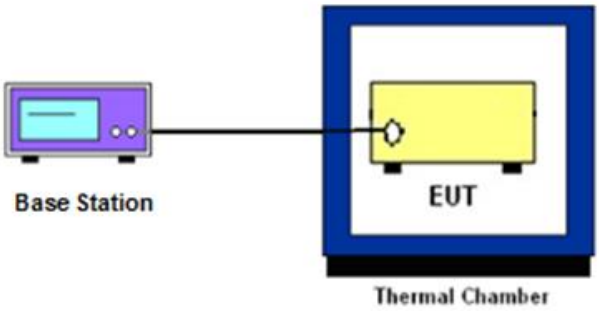
3.2.1 Conducted Output Power



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 mobile and portable stations transmitting in the 2305-2315 MHz band or the 2350-2360 MHz band, the average EIRP must not exceed 50 milliwatts within any 1 megahertz of authorized bandwidth, *except that* for mobile and portable stations compliant with 3GPP LTE standards or another advanced mobile broadband protocol that avoids concentrating energy at the edge of the operating band the average EIRP must not exceed 250 milliwatts within any 5 megahertz of authorized bandwidth but may exceed 50 milliwatts within any 1 megahertz of authorized bandwidth. For mobile and portable stations using time division duplexing (TDD) technology, the duty cycle must not exceed 38 percent in the 2305-2315 MHz and 2350-2360 MHz bands. Mobile and portable stations using FDD technology are restricted to transmitting in the 2305-2315 MHz band. Power averaging shall not include intervals in which the transmitter is off.

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)(4)

For mobile and portable stations operating in the 2305-2315 MHz and 2350-2360 MHz bands:

(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 10^{th} 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.

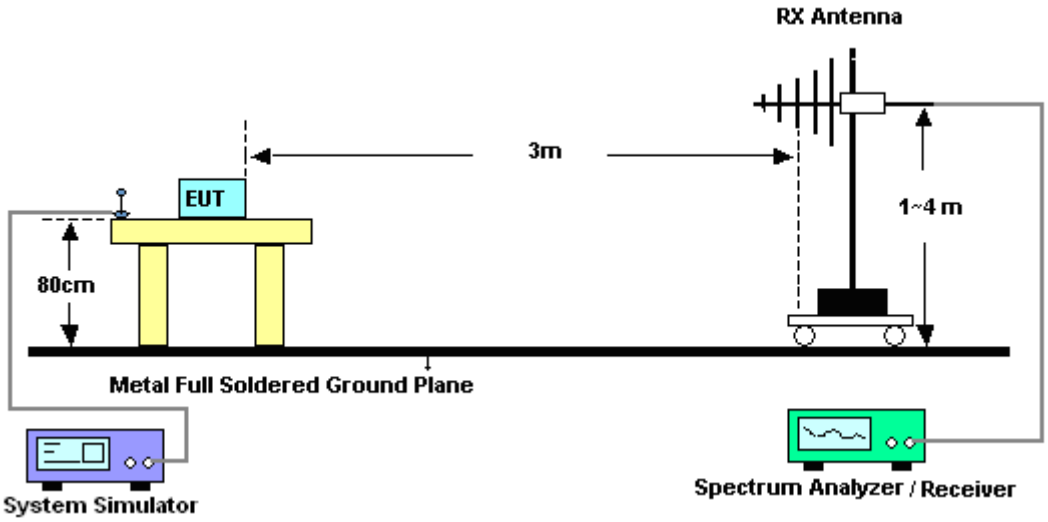
4 Radiated Test Items

4.1 Measuring Instruments

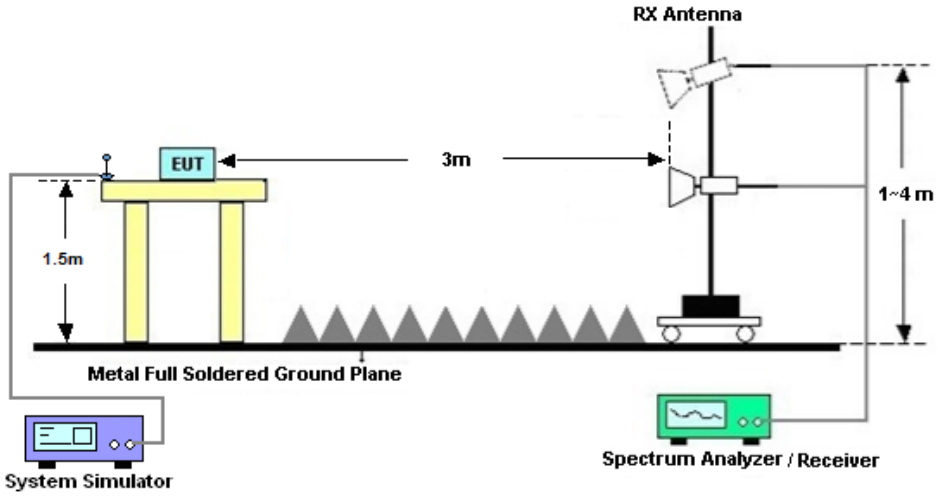
See list of measuring instruments of this test report.

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	101078	10Hz~40GHz	Apr. 17, 2020	Dec. 19, 2020~ Dec. 21, 2020	Apr. 16, 2021	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 22, 2020	Dec. 19, 2020~ Dec. 21, 2020	Jul. 21, 2021	Conducted (TH01-SZ)
EMI Test Receiver&SA	KEYSIGHT	N9038A	MY54450083	20Hz~8.4GHz	Apr. 17, 2020	Jan. 11, 2021	Apr. 16, 2021	Radiation (03CH03-SZ)
EXA Spectrum Anaiyzer	KEYSIGHT	N9010A	MY55150246	10Hz~44GHz;	Apr. 17, 2020	Jan. 11, 2021	Apr. 16, 2021	Radiation (03CH03-SZ)
Bilog Antenna	TeseQ	CBL6112D	35408	30MHz-2GHz	Jun. 22, 2020	Jan. 11, 2021	Jun. 21, 2021	Radiation (03CH03-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1355	1GHz~18GHz	Apr. 30, 2020	Jan. 11, 2021	Apr. 29, 2021	Radiation (03CH03-SZ)
Amplifier	Burgeon	BPA-530	102210	0.01Hz ~3000MHz	Oct. 17, 2020	Jan. 11, 2021	Oct. 16, 2021	Radiation (03CH03-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 21, 2020	Jan. 11, 2021	Jul. 20, 2021	Radiation (03CH03-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 23, 2020	Jan. 11, 2021	Apr. 22, 2021	Radiation (03CH03-SZ)
Amplifier	Agilent Technologies	83017A	MY395013002	500MHz~26.5GHz	Dec. 25, 2020	Jan. 11, 2021	Dec. 24, 2021	Radiation (03CH03-SZ)
AC Power Source	Chroma	61601	616010001985	N/A	NCR	Jan. 11, 2021	NCR	Radiation (03CH03-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Jan. 11, 2021	NCR	Radiation (03CH03-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Jan. 11, 2021	NCR	Radiation (03CH03-SZ)

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))	**3.0dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.6dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.8dB**

Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel					27710	
Frequency (MHz)					2310	
10	QPSK	1	0		21.60	
10	QPSK	1	25		21.88	
10	QPSK	1	49		21.72	
10	QPSK	25	0		20.56	
10	QPSK	25	12		20.55	
10	QPSK	25	25		20.50	
10	QPSK	50	0		20.52	
10	16QAM	1	0		21.10	
10	16QAM	1	25		20.66	
10	16QAM	1	49		20.80	
10	16QAM	25	0		19.67	
10	16QAM	25	12		19.73	
10	16QAM	25	25		19.55	
10	16QAM	50	0		19.68	
10	64QAM	1	0		19.64	
10	64QAM	1	25		19.58	
10	64QAM	1	49		20.08	
10	64QAM	25	0		18.59	
10	64QAM	25	12		18.71	
10	64QAM	25	25		18.52	
10	64QAM	50	0		18.52	

Channel				27685	27710	27735
Frequency (MHz)				2307.5	2310	2312.5
5	QPSK	1	0	21.66	21.83	21.82
5	QPSK	1	12	21.87	21.78	21.82
5	QPSK	1	24	21.76	21.76	21.80
5	QPSK	12	0	20.60	20.84	20.86
5	QPSK	12	7	20.72	20.72	20.81
5	QPSK	12	13	20.70	20.62	20.77
5	QPSK	25	0	20.73	20.70	20.72
5	16QAM	1	0	21.17	21.15	21.22
5	16QAM	1	12	20.87	21.07	20.98
5	16QAM	1	24	20.65	21.15	20.74
5	16QAM	12	0	19.68	19.77	19.84
5	16QAM	12	7	19.66	19.78	19.81
5	16QAM	12	13	19.70	19.60	19.69
5	16QAM	25	0	19.74	19.81	19.82
5	64QAM	1	0	20.00	20.05	20.08
5	64QAM	1	12	19.78	19.81	19.82
5	64QAM	1	24	20.01	20.16	19.91
5	64QAM	12	0	18.66	18.73	18.98
5	64QAM	12	7	18.68	18.73	18.74
5	64QAM	12	13	18.64	18.56	18.76
5	64QAM	25	0	18.71	18.69	18.80

EIRP

LTE Band 30 (GT - LC = 1.0 dB) QPSK (dBm/5MHz)			
Bandwidth	5M		
Channel	27685	27710	27735
	(Low)	(Mid)	(High)
Frequency (MHz)	2307.5	2310	2312.5
Conducted Power (dBm)	21.87	21.78	21.82
Conducted Power (Watts)	0.1538	0.1507	0.1521
EIRP(dBm)	22.87	22.78	22.82
EIRP(Watts)	0.1936	0.1897	0.1914
Limit	250mW / 5MHz = 24dBm / 5MHz		PASS

LTE Band 30 (GT - LC = 1.0 dB) QPSK (dBm/5MHz)			
Bandwidth	10M		
Channel		27710	
		(Mid)	
Frequency (MHz)		2310	
Conducted Power (dBm)		21.88	
Conducted Power (Watts)		0.1542	
EIRP(dBm)		22.88	
EIRP(Watts)		0.1941	
Limit	250mW / 5MHz = 24dBm / 5MHz		PASS

LTE Band 30 (GT - LC = 1.0 dB) 16QAM (dBm/5MHz)			
Bandwidth	5M		
Channel	27685	27710	27735
	(Low)	(Mid)	(High)
Frequency (MHz)	2307.5	2310	2312.5
Conducted Power (dBm)	21.17	21.15	21.22
Conducted Power (Watts)	0.1309	0.1303	0.1324
EIRP(dBm)	22.17	22.15	22.22
EIRP(Watts)	0.1648	0.1641	0.1667
Limit	250mW / 5MHz = 24dBm / 5MHz		PASS

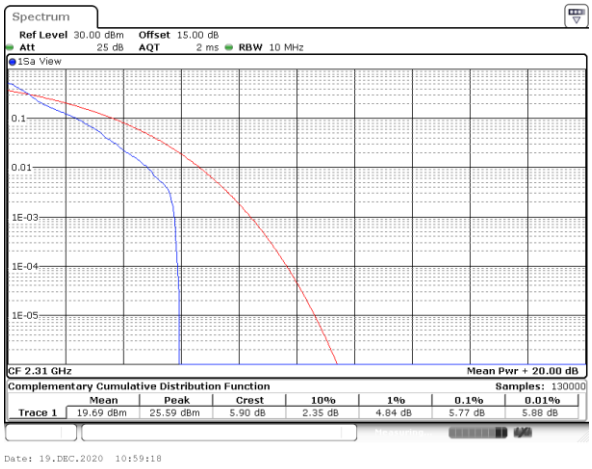
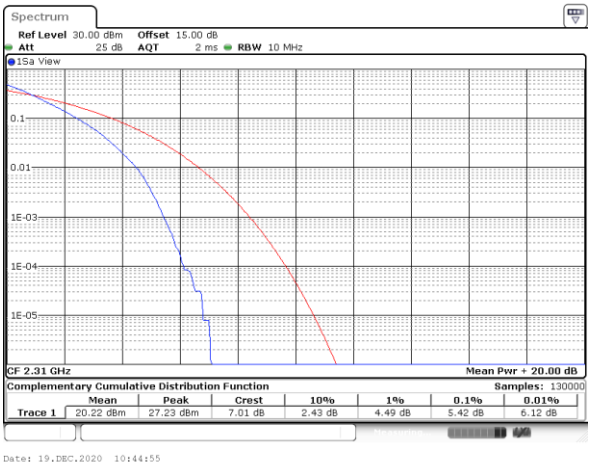
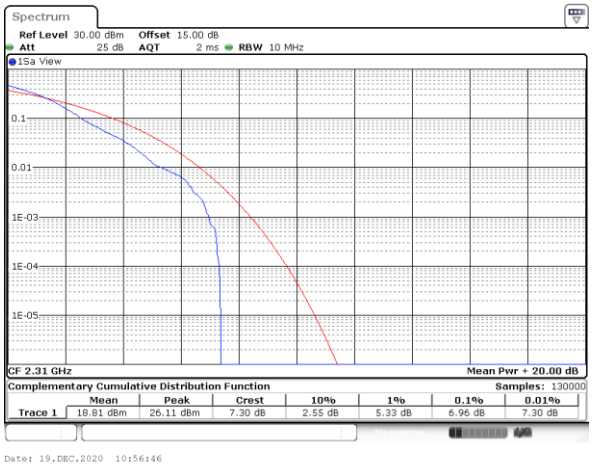
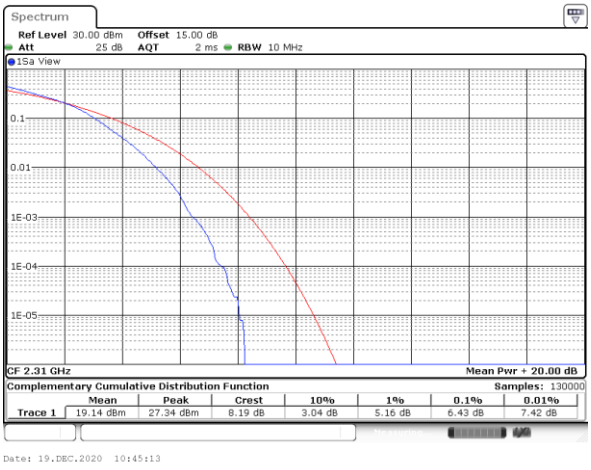
LTE Band 30 (GT - LC = 1.0 dB) 16QAM (dBm/5MHz)			
Bandwidth	10M		
Channel		27710	
		(Mid)	
Frequency (MHz)		2310	
Conducted Power (dBm)		21.10	
Conducted Power (Watts)		0.1288	
EIRP(dBm)		22.10	
EIRP(Watts)		0.1622	
Limit	250mW / 5MHz = 24dBm / 5MHz		PASS

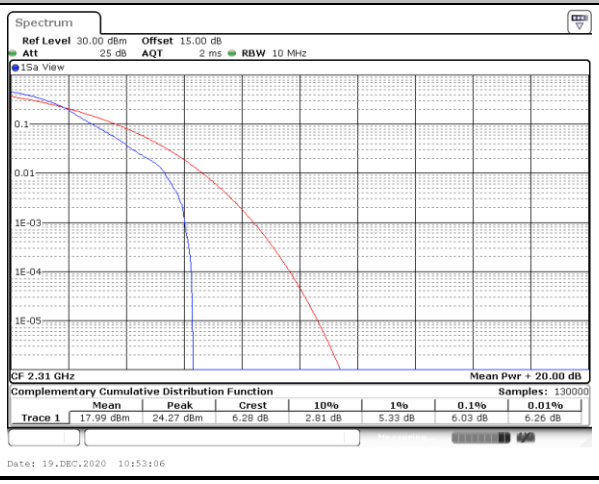
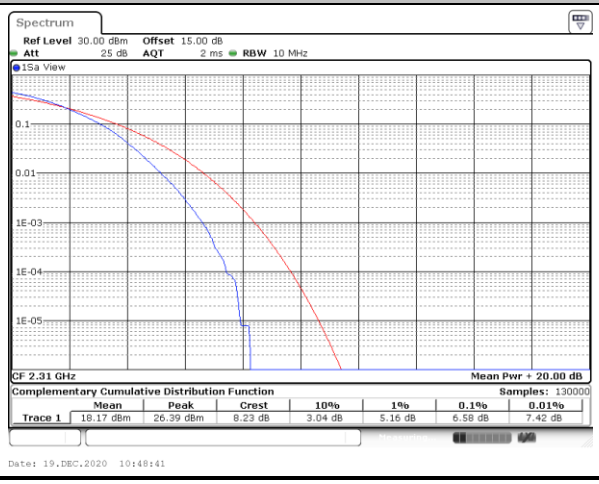
LTE Band 30 (GT - LC = 1.0 dB) 64QAM (dBm/5MHz)			
Bandwidth	5M		
Channel	27685	27710	27735
	(Low)	(Mid)	(High)
Frequency (MHz)	2307.5	2310	2312.5
Conducted Power (dBm)	20.01	20.16	19.91
Conducted Power (Watts)	0.1002	0.1038	0.0979
EIRP(dBm)	21.01	21.16	20.91
EIRP(Watts)	0.1262	0.1306	0.1233
Limit	250mW / 5MHz = 24dBm / 5MHz		PASS

LTE Band 30 (GT - LC = 1.0 dB) 64QAM (dBm/5MHz)			
Bandwidth	10M		
Channel		27710	
		(Mid)	
Frequency (MHz)		2310	
Conducted Power (dBm)		20.08	
Conducted Power (Watts)		0.1019	
EIRP(dBm)		21.08	
EIRP(Watts)		0.1282	
Limit	250mW / 5MHz = 24dBm / 5MHz		PASS

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	5.77	5.42	6.96	6.43	
Highest CH	-	-	-	-	
Mode	LTE Band 30 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	-	-	-	-	PASS
Middle CH	6.03	6.58	-	-	
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**
	

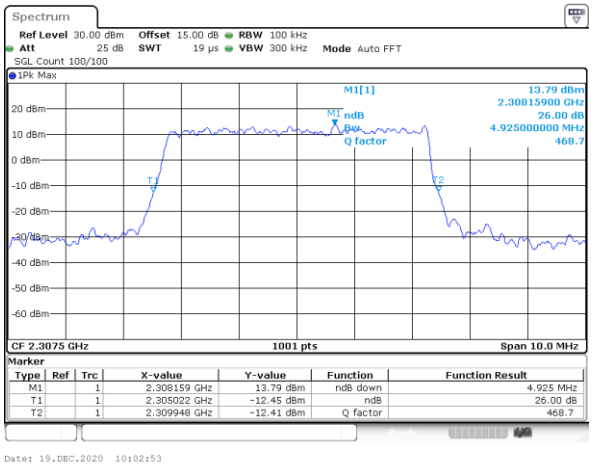
LTE Band 30 / 10MHz / 64QAM	
Middle Channel / 1RB	**Middle Channel / Full RB**
	

26dB Bandwidth

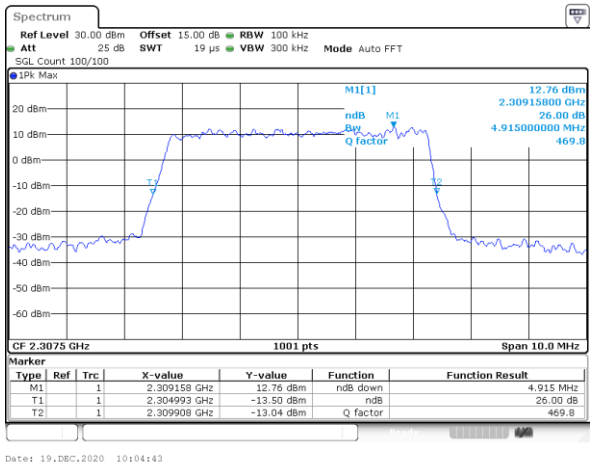
Mode	LTE Band 30 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.93	4.92	-	-	-	-	-	-
Middle CH	-	-	-	-	4.80	4.89	9.75	9.75	-	-	-	-
Highest CH	-	-	-	-	4.89	4.89	-	-	-	-	-	-
Mode	LTE Band 30 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.89	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.84	-	9.75	-	-	-	-	-
Highest CH	-	-	-	-	4.88	-	-	-	-	-	-	-

LTE Band 30

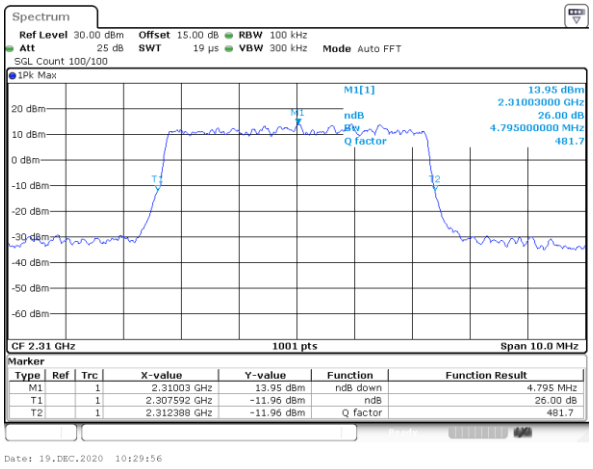
Lowest Channel / 5MHz / QPSK



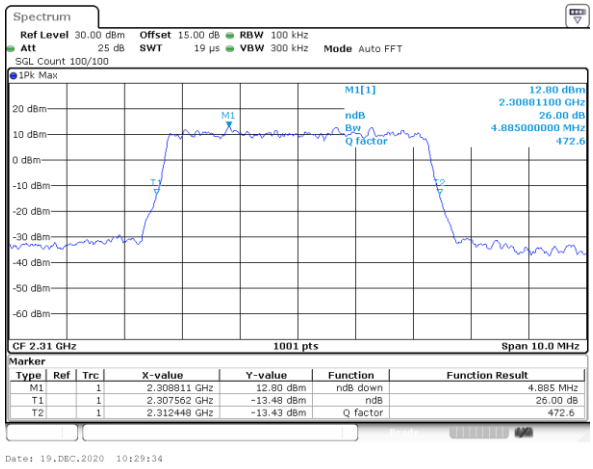
Lowest Channel / 5MHz / 16QAM



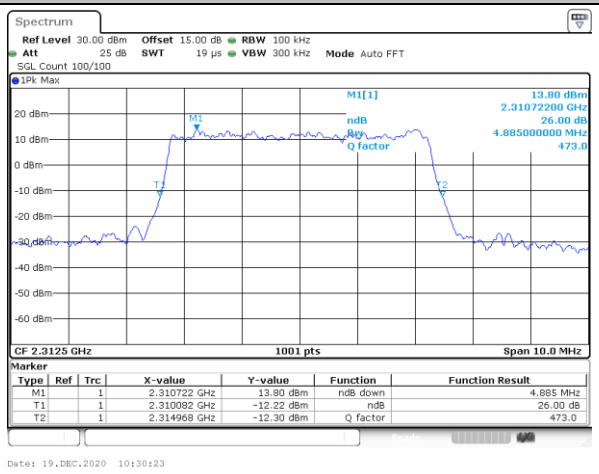
Middle Channel / 5MHz / QPSK



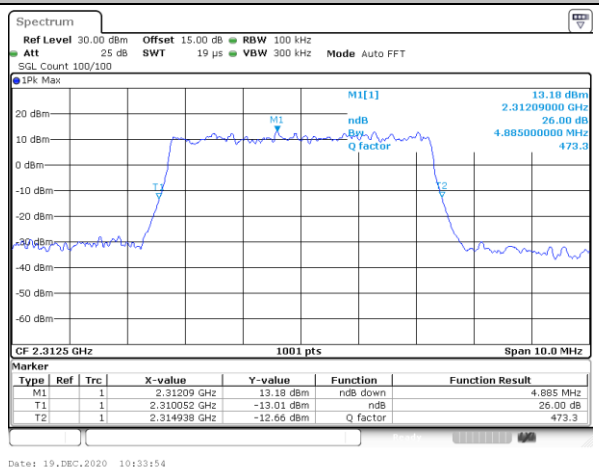
Middle Channel / 5MHz / 16QAM



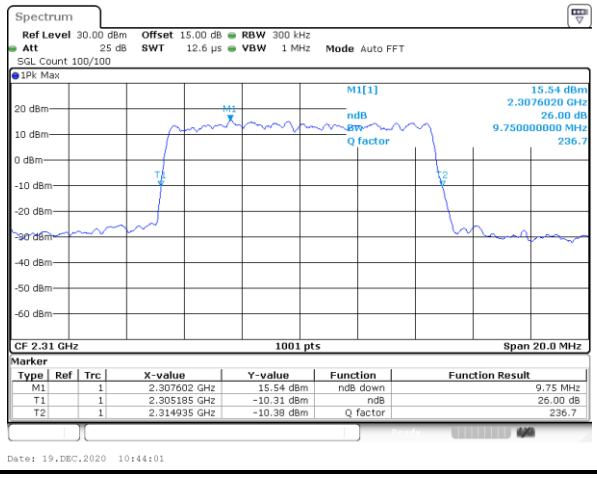
Highest Channel / 5MHz / QPSK

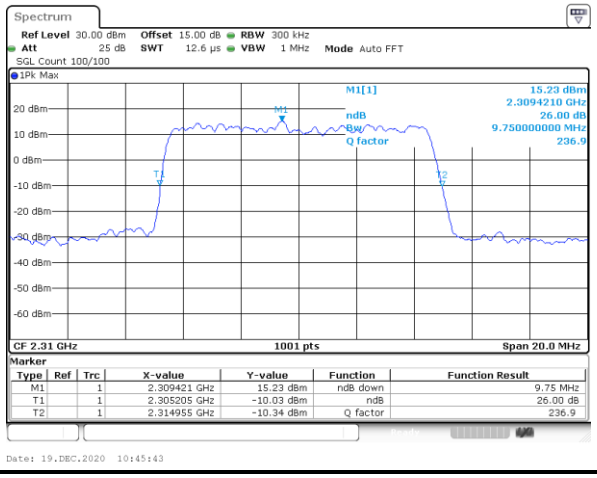


Highest Channel / 5MHz / 16QAM



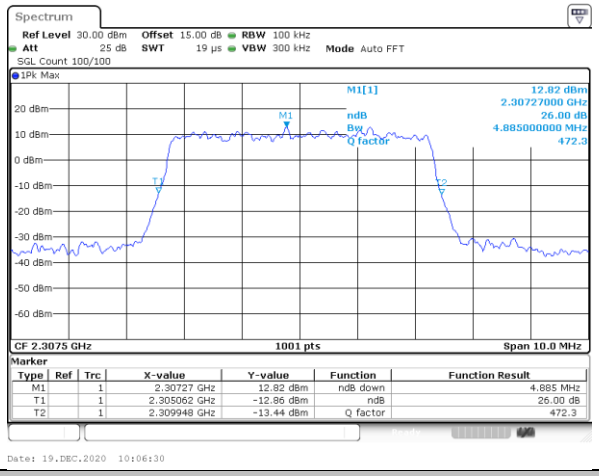
LTE Band 30	
Middle Channel / 10MHz / QPSK	**Middle Channel / 10MHz / 16QAM**



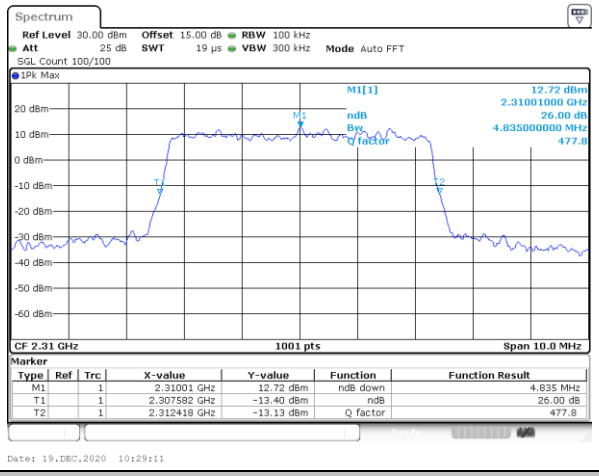


LTE Band 30

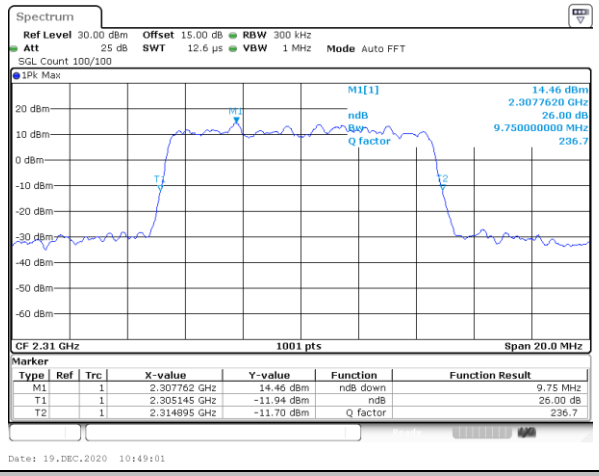
Lowest Channel / 5MHz / 64QAM



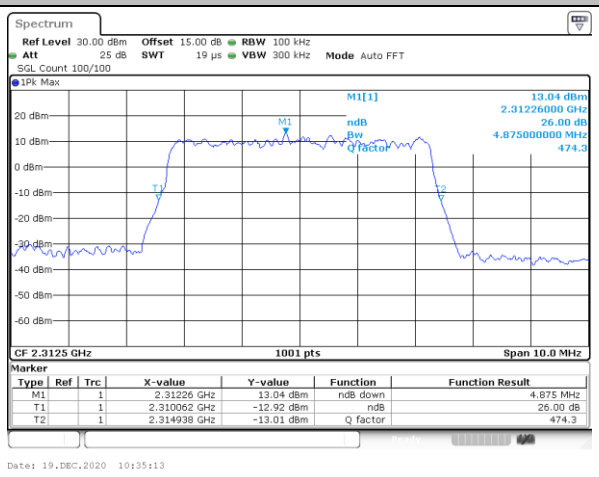
Middle Channel / 5MHz / 64QAM



Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM

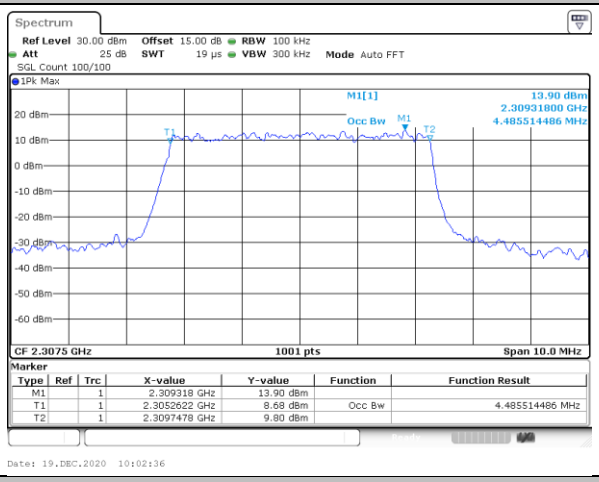


Occupied Bandwidth

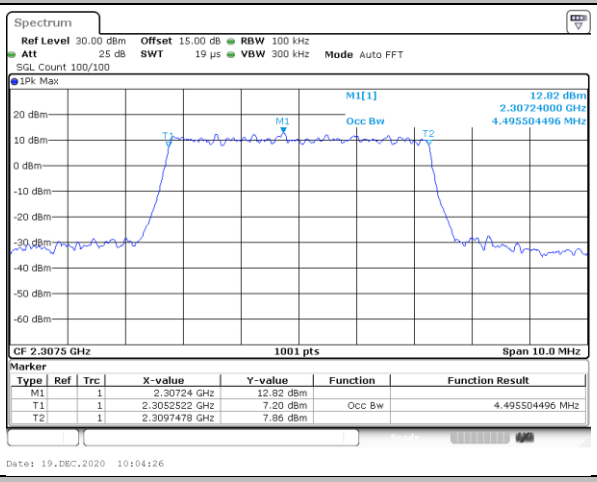
Mode	LTE Band 30 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.49	4.50	-	-	-	-	-	-
Middle CH	-	-	-	-	4.49	4.49	8.97	9.05	-	-	-	-
Highest CH	-	-	-	-	4.49	4.50	-	-	-	-	-	-
Mode	LTE Band 26 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.49	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.53	-	9.07	-	-	-	-	-
Highest CH	-	-	-	-	4.48	-	-	-	-	-	-	-

LTE Band 30

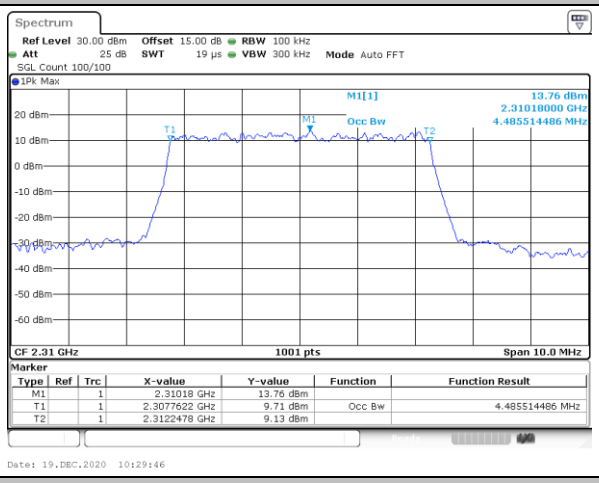
Lowest Channel / 5MHz / QPSK



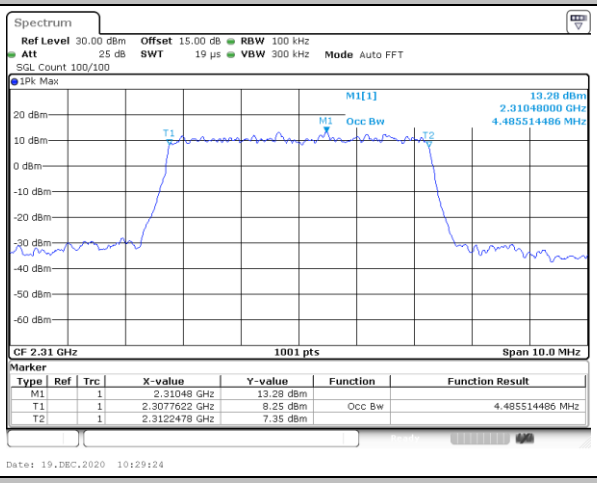
Lowest Channel / 5MHz / 16QAM



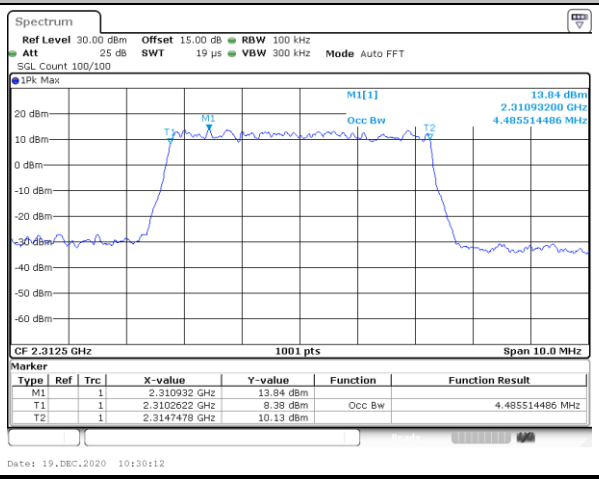
Middle Channel / 5MHz / QPSK



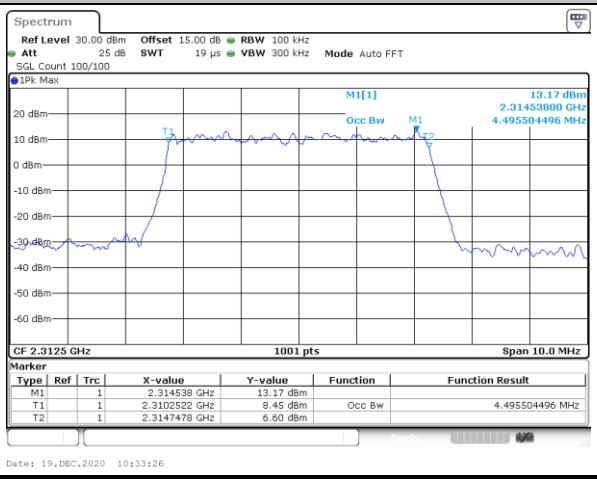
Middle Channel / 5MHz / 16QAM

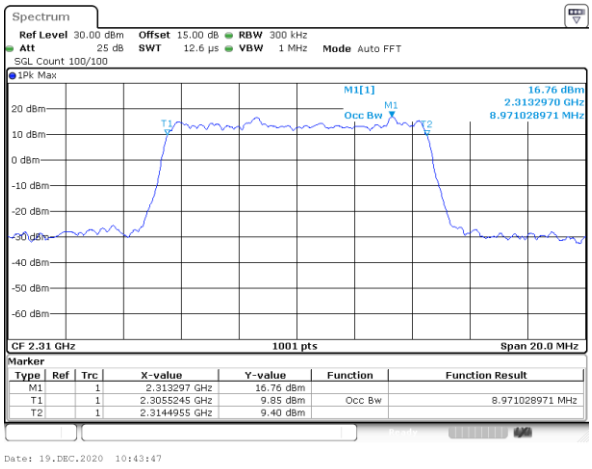
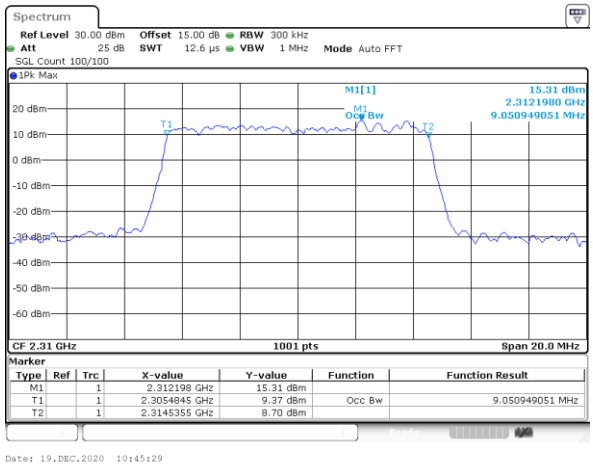


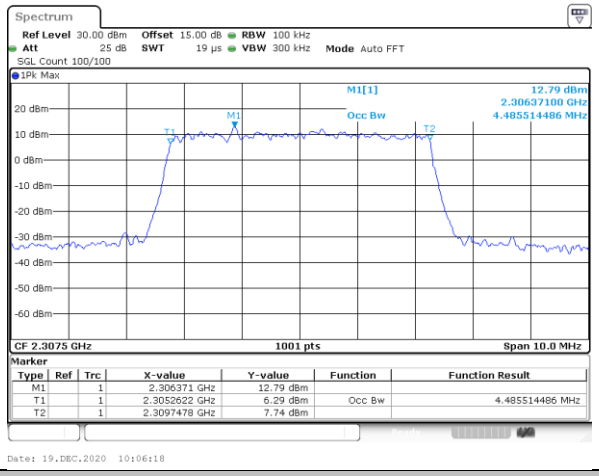
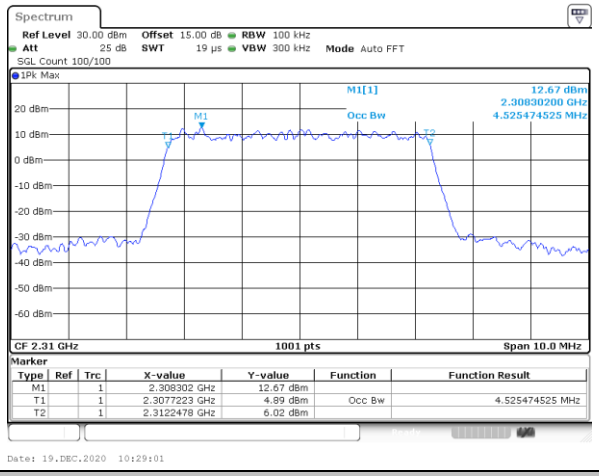
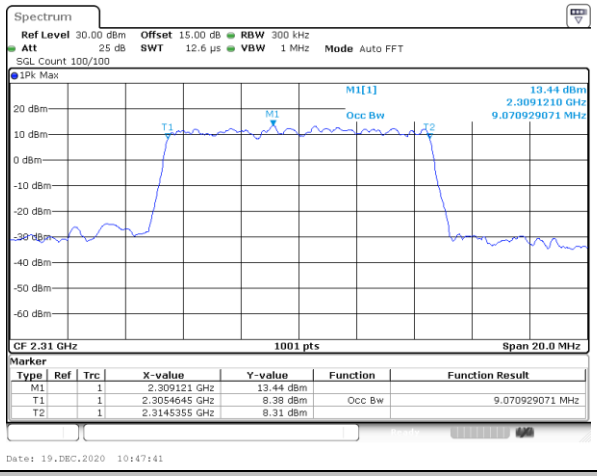
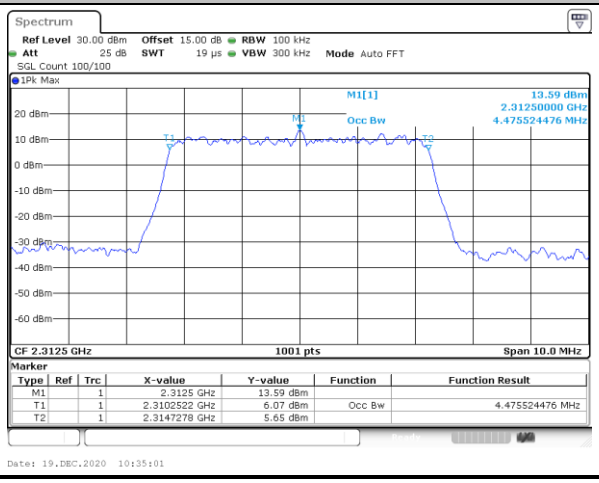
Highest Channel / 5MHz / QPSK



Highest Channel / 5MHz / 16QAM



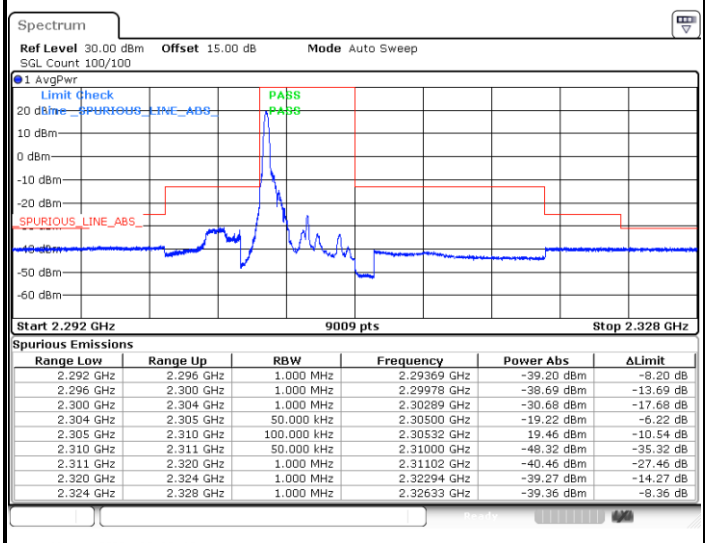
LTE Band 30	
Middle Channel / 10MHz / QPSK	**Middle Channel / 10MHz / 16QAM**
	

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	2.29369 GHz	-39.20 dBm	-8.20 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29978 GHz	-38.69 dBm	-13.69 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30289 GHz	-30.68 dBm	-17.68 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-19.22 dBm	-6.22 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30532 GHz	19.46 dBm	-10.54 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31000 GHz	-48.32 dBm	-35.32 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31102 GHz	-40.46 dBm	-27.46 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32294 GHz	-39.27 dBm	-14.27 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32633 GHz	-39.36 dBm	-8.36 dB

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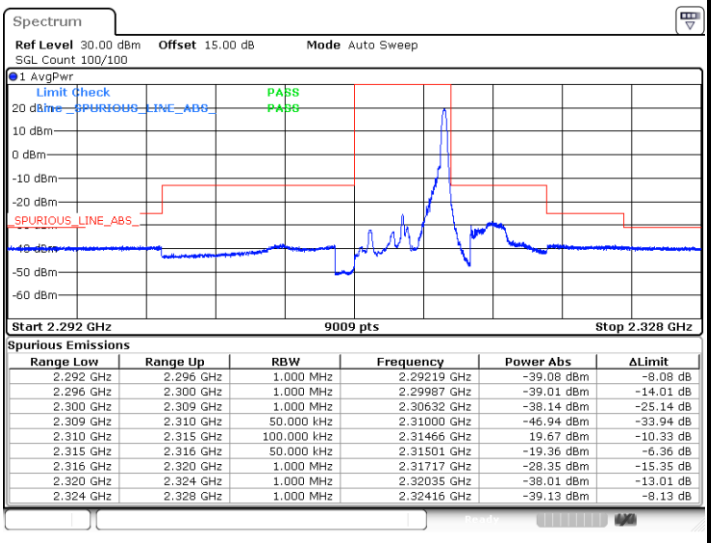
Highest Band Edge / 1 RB

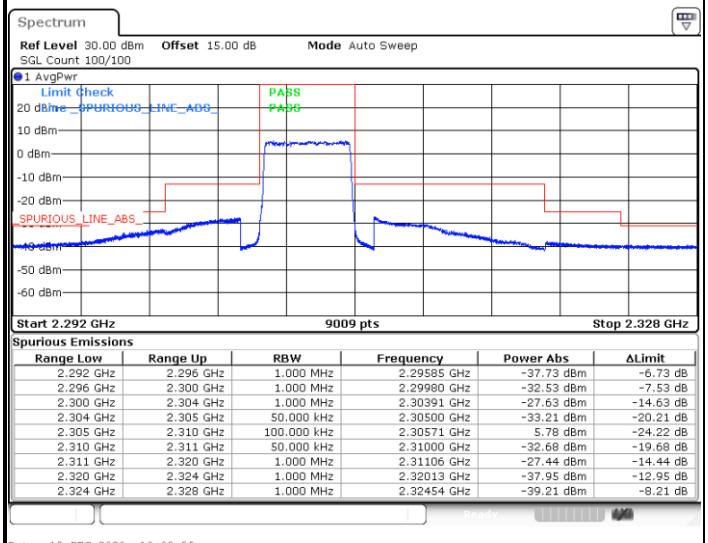


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29219 GHz	-39.08 dBm	-8.08 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29987 GHz	-39.01 dBm	-14.01 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30632 GHz	-38.14 dBm	-25.14 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.31000 GHz	-46.94 dBm	-33.94 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31466 GHz	19.67 dBm	-10.33 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31501 GHz	-19.36 dBm	-6.36 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31717 GHz	-28.35 dBm	-15.35 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32035 GHz	-38.01 dBm	-13.01 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32416 GHz	-39.13 dBm	-8.13 dB

Date: 19.DEC.2020 10:41:18

Lowest Band Edge / Full RB

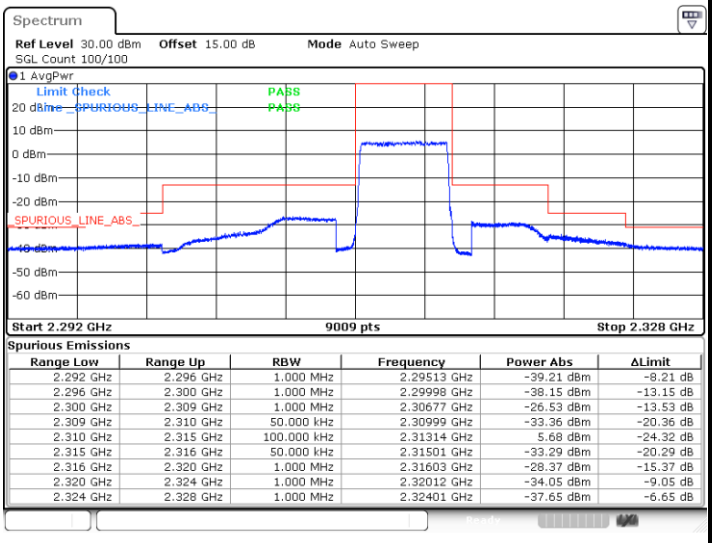


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29585 GHz	-37.73 dBm	-6.73 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29980 GHz	-32.53 dBm	-7.53 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30391 GHz	-27.63 dBm	-14.63 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-33.21 dBm	-20.21 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30571 GHz	5.78 dBm	-24.22 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31000 GHz	-32.68 dBm	-19.68 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31106 GHz	-27.44 dBm	-14.44 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32013 GHz	-37.95 dBm	-12.95 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32454 GHz	-39.21 dBm	-8.21 dB

Date: 19.DEC.2020 10:03:59

Highest Band Edge / Full RB



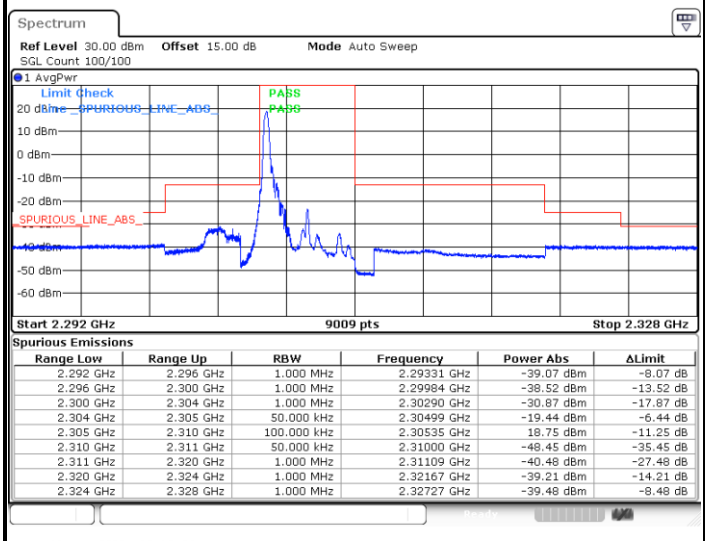
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29513 GHz	-39.21 dBm	-8.21 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29998 GHz	-38.15 dBm	-13.15 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30677 GHz	-26.53 dBm	-13.53 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.30999 GHz	-33.36 dBm	-20.36 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31314 GHz	5.68 dBm	-24.32 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31501 GHz	-33.29 dBm	-20.29 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31603 GHz	-28.37 dBm	-15.37 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32012 GHz	-34.05 dBm	-9.05 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32401 GHz	-37.65 dBm	-6.65 dB

Date: 19.DEC.2020 10:33:06

LTE Band 30 / 5MHz / 16QAM

Lowest Band Edge / 1RB

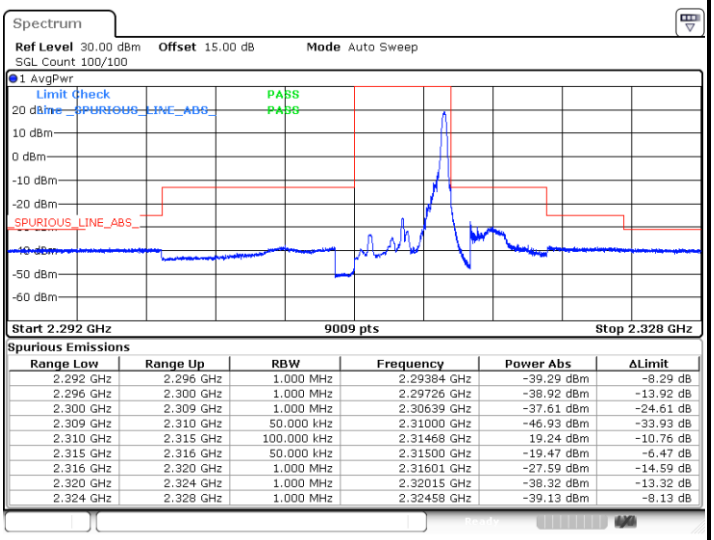


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29331 GHz	-39.07 dBm	-8.07 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29984 GHz	-38.52 dBm	-13.52 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30290 GHz	-30.87 dBm	-17.87 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30499 GHz	-19.44 dBm	-6.44 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30535 GHz	18.75 dBm	-11.25 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31000 GHz	-48.45 dBm	-35.45 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31109 GHz	-40.48 dBm	-27.48 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32167 GHz	-39.21 dBm	-14.21 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32727 GHz	-39.48 dBm	-8.48 dB

Date: 19.DEC.2020 10:18:04

Highest Band Edge / 1 RB

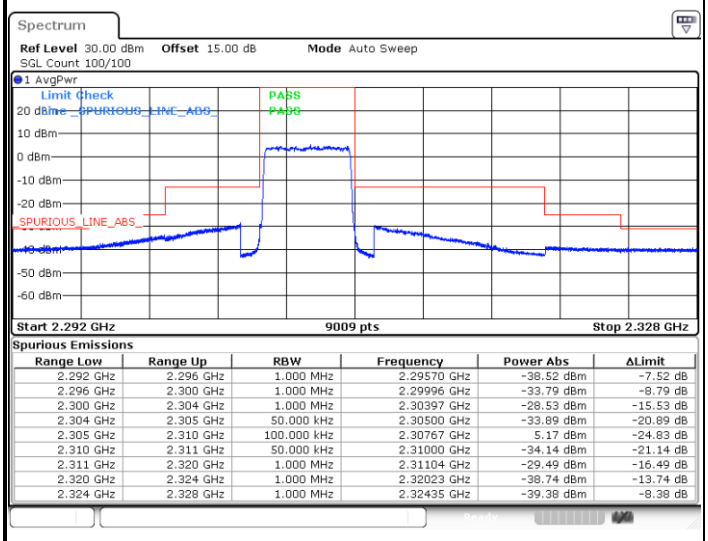


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29384 GHz	-39.29 dBm	-8.29 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29726 GHz	-38.92 dBm	-13.92 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30639 GHz	-37.61 dBm	-24.61 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.31000 GHz	-46.93 dBm	-33.93 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31468 GHz	19.24 dBm	-10.76 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31500 GHz	-19.47 dBm	-6.47 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31601 GHz	-27.59 dBm	-14.59 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32015 GHz	-38.32 dBm	-13.32 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32458 GHz	-39.13 dBm	-8.13 dB

Date: 19.DEC.2020 10:42:05

Lowest Band Edge / Full RB

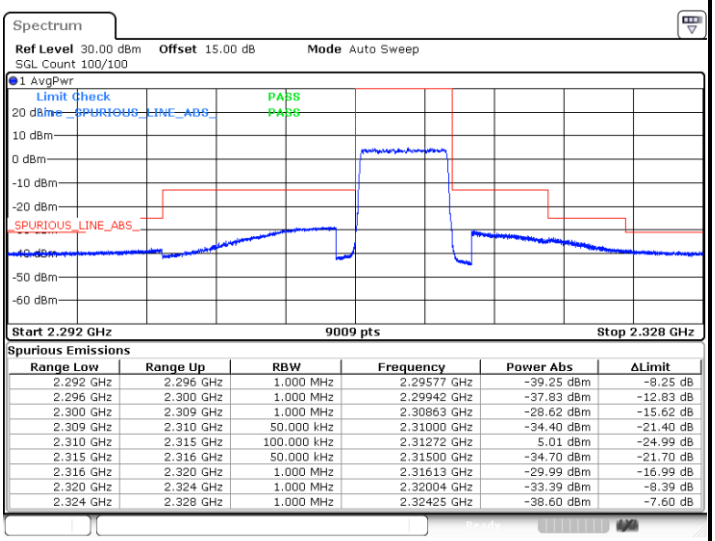


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29570 GHz	-38.52 dBm	-7.52 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29996 GHz	-33.79 dBm	-8.79 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30397 GHz	-28.53 dBm	-15.53 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-33.89 dBm	-20.89 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30767 GHz	5.17 dBm	-24.83 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31000 GHz	-34.14 dBm	-21.14 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31104 GHz	-29.49 dBm	-16.49 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32023 GHz	-38.74 dBm	-13.74 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32435 GHz	-39.38 dBm	-8.38 dB

Date: 19.DEC.2020 10:05:54

Highest Band Edge / Full RB



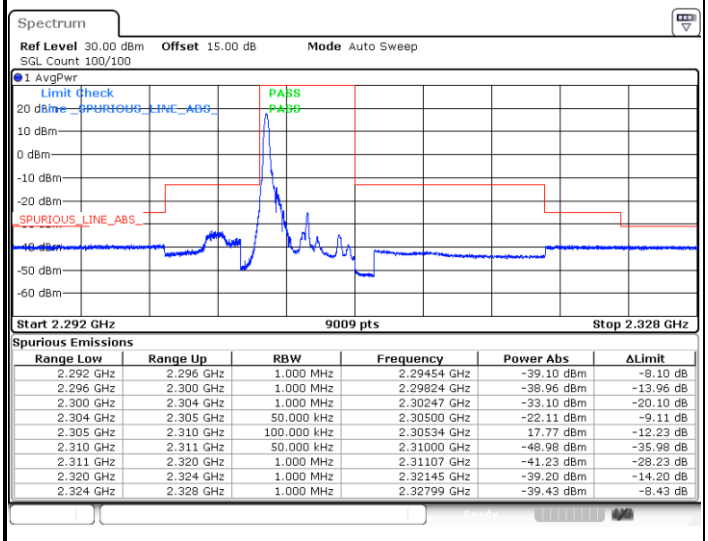
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29577 GHz	-39.25 dBm	-8.25 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29942 GHz	-37.83 dBm	-12.83 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30863 GHz	-28.62 dBm	-15.62 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.31000 GHz	-34.40 dBm	-21.40 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31272 GHz	5.01 dBm	-24.99 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31500 GHz	-34.70 dBm	-21.70 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31613 GHz	-29.99 dBm	-16.99 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32004 GHz	-33.39 dBm	-8.39 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32425 GHz	-38.60 dBm	-7.60 dB

Date: 19.DEC.2020 10:34:40

LTE Band 30 / 5MHz / 64QAM

Lowest Band Edge / 1RB

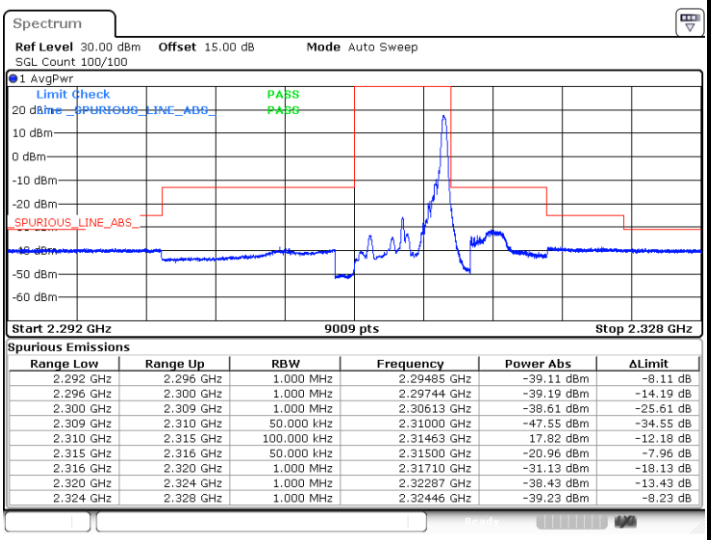


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29454 GHz	-39.10 dBm	-8.10 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29824 GHz	-38.96 dBm	-13.96 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30247 GHz	-33.10 dBm	-20.10 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-22.11 dBm	-9.11 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30534 GHz	17.77 dBm	-12.23 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31000 GHz	-48.98 dBm	-35.98 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31107 GHz	-41.23 dBm	-28.23 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32145 GHz	-39.20 dBm	-14.20 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32799 GHz	-39.43 dBm	-8.43 dB

Date: 19.DEC.2020 10:09:02

Highest Band Edge / 1 RB

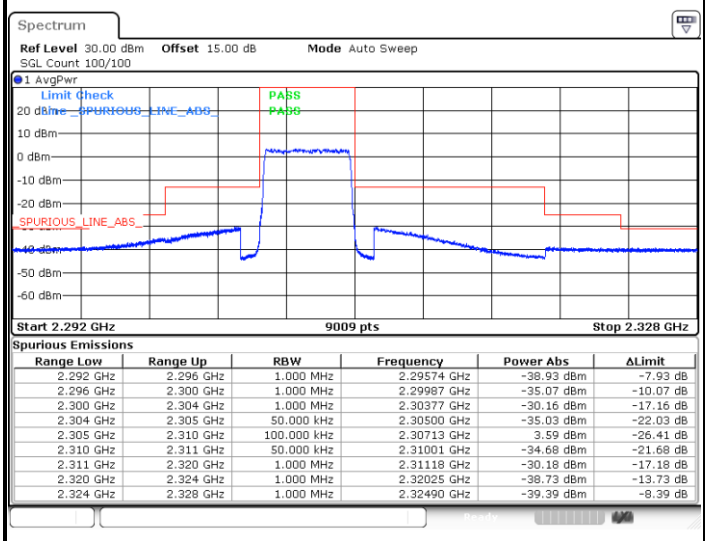


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29485 GHz	-39.11 dBm	-8.11 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29744 GHz	-39.19 dBm	-14.19 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30613 GHz	-38.61 dBm	-25.61 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.31000 GHz	-47.55 dBm	-34.55 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31463 GHz	17.82 dBm	-12.18 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31500 GHz	-20.96 dBm	-7.96 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31710 GHz	-31.13 dBm	-18.13 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32287 GHz	-38.43 dBm	-13.43 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32446 GHz	-39.23 dBm	-8.23 dB

Date: 19.DEC.2020 10:42:47

Lowest Band Edge / Full RB

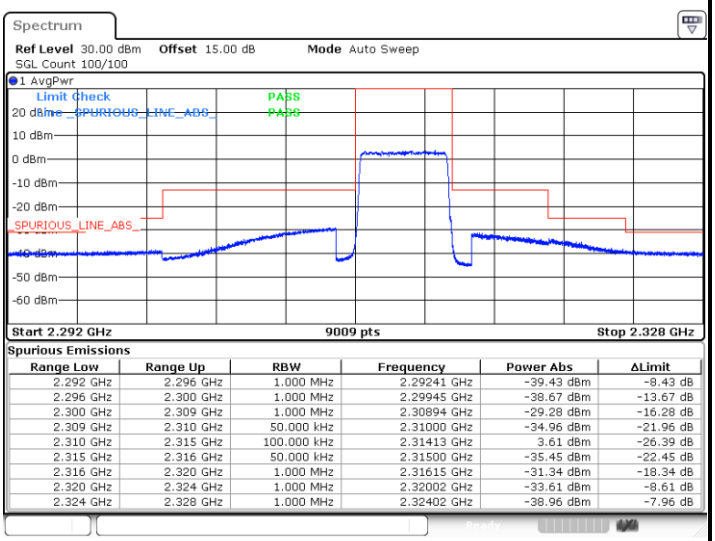


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29574 GHz	-38.93 dBm	-7.93 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29987 GHz	-35.07 dBm	-10.07 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30377 GHz	-30.16 dBm	-17.16 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-35.03 dBm	-22.03 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30713 GHz	3.59 dBm	-26.41 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31001 GHz	-34.68 dBm	-21.68 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31118 GHz	-30.18 dBm	-17.18 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32025 GHz	-38.73 dBm	-13.73 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32490 GHz	-39.39 dBm	-8.39 dB

Date: 19.DEC.2020 10:07:57

Highest Band Edge / Full RB



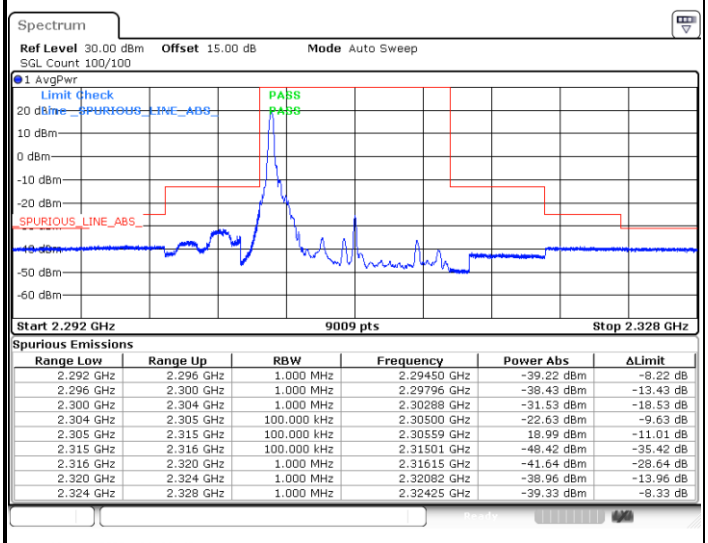
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29241 GHz	-39.43 dBm	-8.43 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29945 GHz	-38.67 dBm	-13.67 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30894 GHz	-29.28 dBm	-16.28 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.31000 GHz	-34.96 dBm	-21.96 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31413 GHz	3.61 dBm	-26.39 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31500 GHz	-35.45 dBm	-22.45 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31615 GHz	-31.34 dBm	-18.34 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32002 GHz	-33.61 dBm	-8.61 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32402 GHz	-38.96 dBm	-7.96 dB

Date: 19.DEC.2020 10:35:50

LTE Band 30 / 10MHz / QPSK

Lowest Band Edge / 1 RB

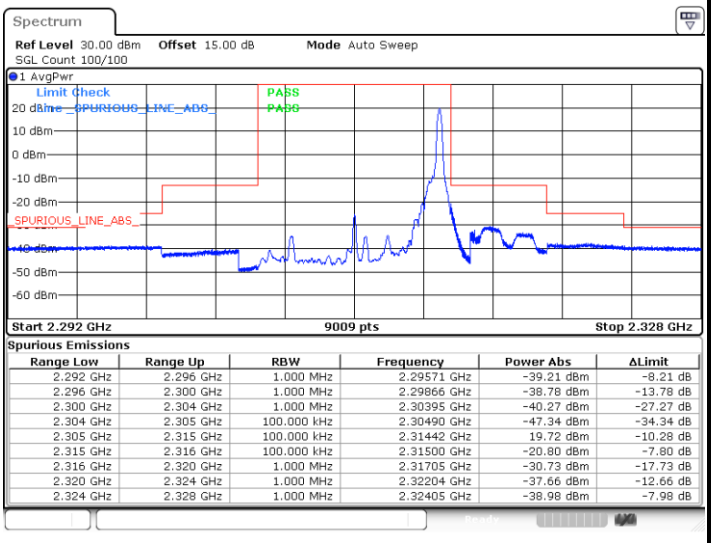


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29450 GHz	-39.22 dBm	-8.22 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29796 GHz	-38.43 dBm	-13.43 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30288 GHz	-31.53 dBm	-18.53 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-22.63 dBm	-9.63 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30559 GHz	18.99 dBm	-11.01 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31501 GHz	-48.42 dBm	-35.42 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31615 GHz	-41.64 dBm	-28.64 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32082 GHz	-38.96 dBm	-13.96 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32425 GHz	-39.33 dBm	-8.33 dB

Date: 19.DEC.2020 11:01:43

Highest Band Edge / 1 RB

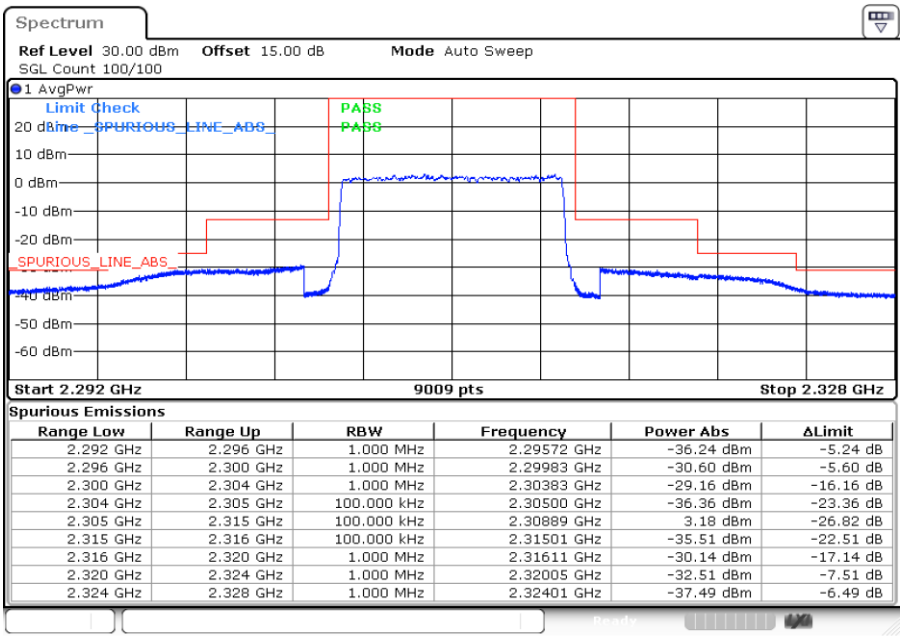


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29571 GHz	-39.21 dBm	-8.21 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29866 GHz	-38.78 dBm	-13.78 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30395 GHz	-40.27 dBm	-27.27 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30490 GHz	-47.34 dBm	-34.34 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31442 GHz	19.72 dBm	-10.28 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31500 GHz	-20.80 dBm	-7.80 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31705 GHz	-30.73 dBm	-17.73 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32204 GHz	-37.66 dBm	-12.66 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32405 GHz	-38.98 dBm	-7.98 dB

Date: 19.DEC.2020 11:02:56

Band Edge / Full RB



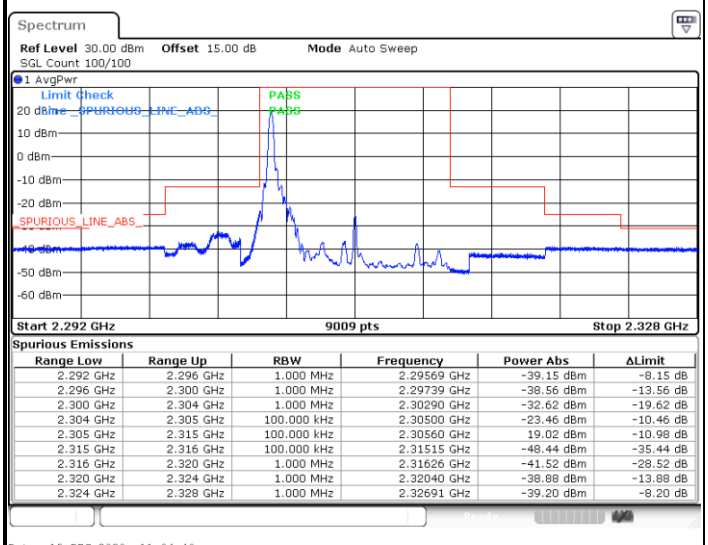
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29572 GHz	-36.24 dBm	-5.24 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29983 GHz	-30.60 dBm	-5.60 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30383 GHz	-29.16 dBm	-16.16 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-36.36 dBm	-23.36 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30889 GHz	3.18 dBm	-26.82 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31501 GHz	-35.51 dBm	-22.51 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31611 GHz	-30.14 dBm	-17.14 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32005 GHz	-32.51 dBm	-7.51 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32401 GHz	-37.49 dBm	-6.49 dB

Date: 19.DEC.2020 10:44:33

LTE Band 30 / 10MHz / 16QAM

Lowest Band Edge / 1 RB

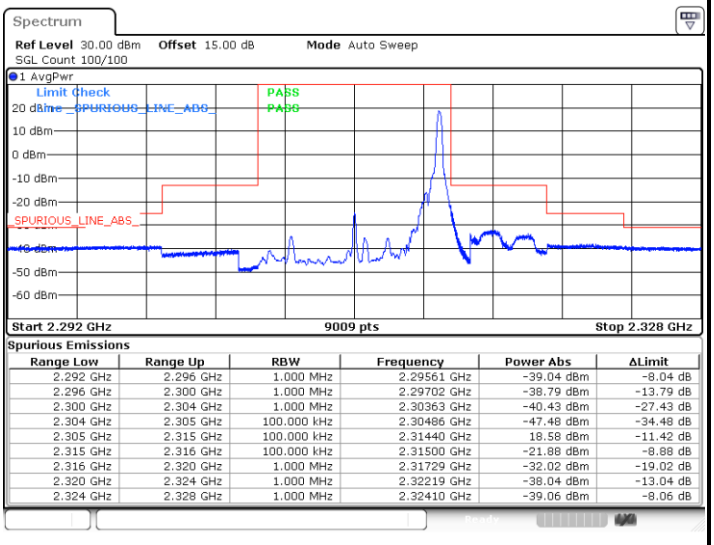


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29569 GHz	-39.15 dBm	-8.15 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29739 GHz	-38.56 dBm	-13.56 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30290 GHz	-32.62 dBm	-19.62 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-23.46 dBm	-10.46 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30560 GHz	19.02 dBm	-10.98 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31515 GHz	-48.44 dBm	-35.44 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31626 GHz	-41.52 dBm	-28.52 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32040 GHz	-38.88 dBm	-13.88 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32691 GHz	-39.20 dBm	-8.20 dB

Date: 19.DEC.2020 11:04:40

Highest Band Edge / 1 RB

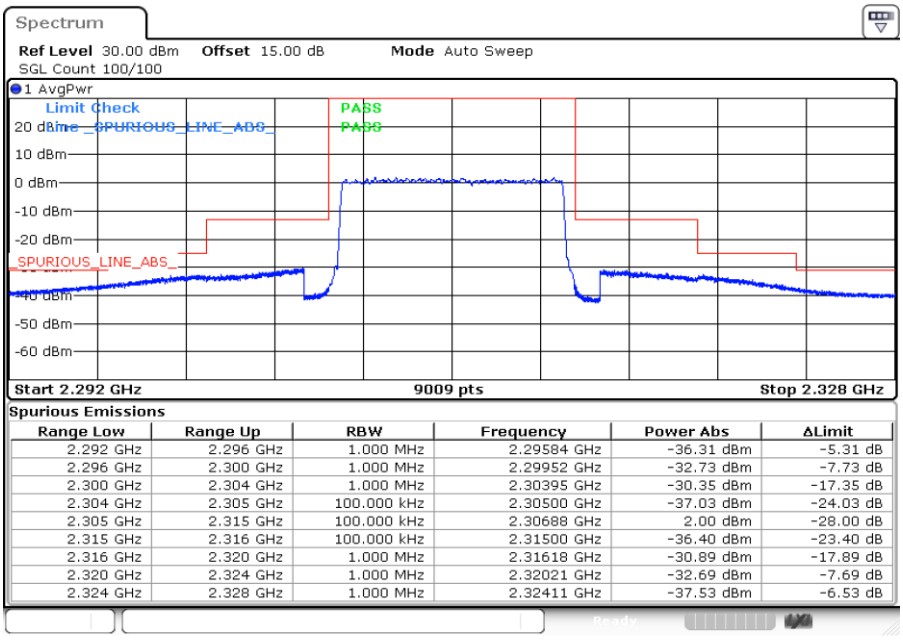


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29561 GHz	-39.04 dBm	-8.04 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29702 GHz	-38.79 dBm	-13.79 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30363 GHz	-40.43 dBm	-27.43 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30486 GHz	-47.48 dBm	-34.48 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31440 GHz	18.58 dBm	-11.42 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31500 GHz	-21.88 dBm	-8.88 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31729 GHz	-32.02 dBm	-19.02 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32219 GHz	-38.04 dBm	-13.04 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32410 GHz	-39.06 dBm	-8.06 dB

Date: 19.DEC.2020 11:03:46

Band Edge / Full RB



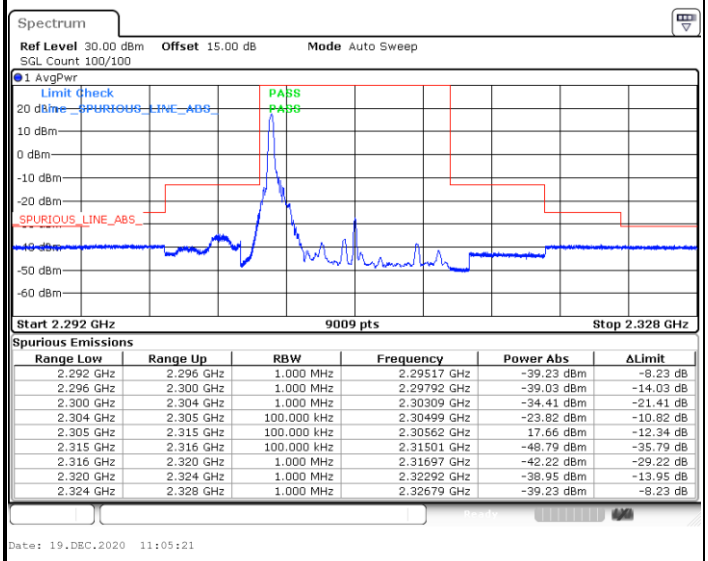
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29584 GHz	-36.31 dBm	-5.31 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29952 GHz	-32.73 dBm	-7.73 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30395 GHz	-30.35 dBm	-17.35 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-37.03 dBm	-24.03 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30688 GHz	2.00 dBm	-28.00 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31500 GHz	-36.40 dBm	-23.40 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31618 GHz	-30.89 dBm	-17.89 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32021 GHz	-32.69 dBm	-7.69 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32411 GHz	-37.53 dBm	-6.53 dB

Date: 19.DEC.2020 10:47:07

LTE Band 30 / 10MHz / 64QAM

Lowest Band Edge / 1 RB

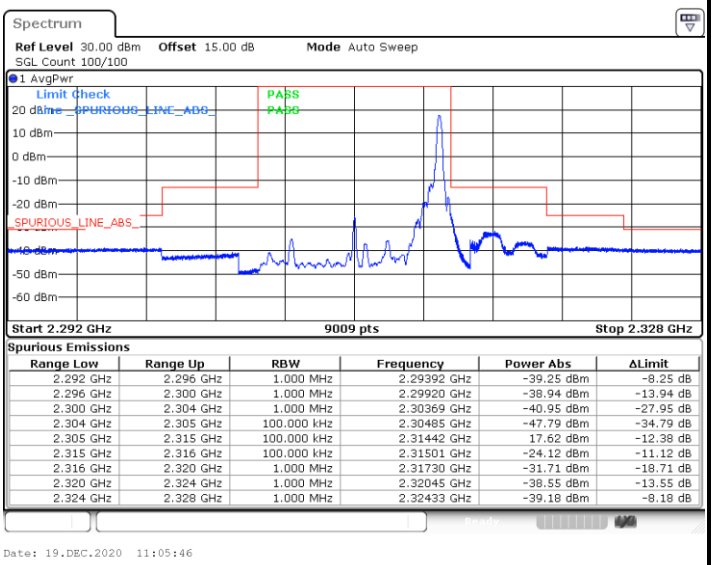


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29517 GHz	-39.23 dBm	-8.23 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29792 GHz	-39.03 dBm	-14.03 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30309 GHz	-34.41 dBm	-21.41 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30499 GHz	-23.82 dBm	-10.82 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30562 GHz	17.66 dBm	-12.34 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31501 GHz	-48.79 dBm	-35.79 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31697 GHz	-42.22 dBm	-29.22 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32292 GHz	-38.95 dBm	-13.95 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32679 GHz	-39.23 dBm	-8.23 dB

Date: 19.DEC.2020 11:05:21

Highest Band Edge / 1 RB

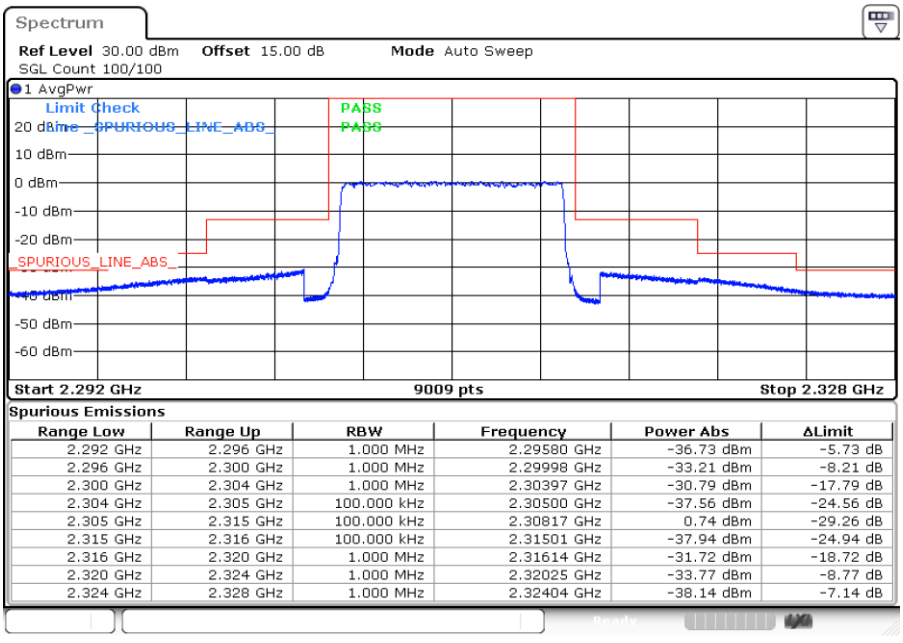


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29392 GHz	-39.25 dBm	-8.25 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29920 GHz	-38.94 dBm	-13.94 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30369 GHz	-40.95 dBm	-27.95 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30485 GHz	-47.79 dBm	-34.79 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31442 GHz	17.62 dBm	-12.38 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31501 GHz	-24.12 dBm	-11.12 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31730 GHz	-31.71 dBm	-18.71 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32045 GHz	-38.55 dBm	-13.55 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32433 GHz	-39.18 dBm	-8.18 dB

Date: 19.DEC.2020 11:05:46

Band Edge / Full RB



Spurious Emissions

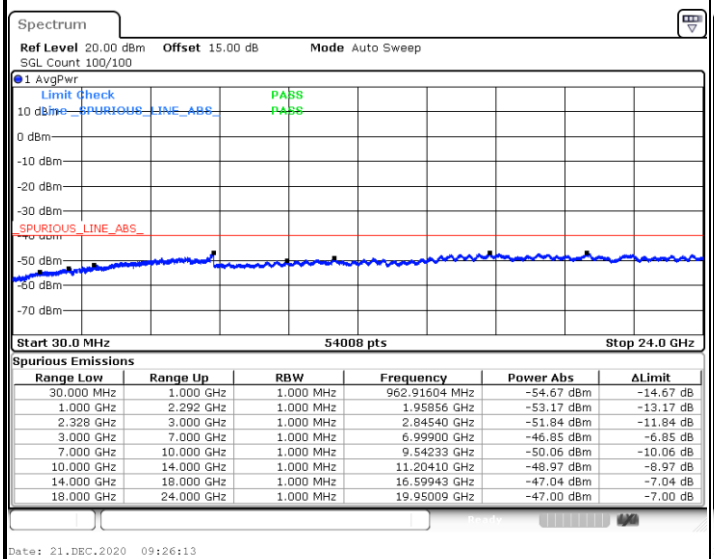
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29580 GHz	-36.73 dBm	-5.73 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29998 GHz	-33.21 dBm	-8.21 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30397 GHz	-30.79 dBm	-17.79 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-37.56 dBm	-24.56 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30817 GHz	0.74 dBm	-29.26 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31501 GHz	-37.94 dBm	-24.94 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31614 GHz	-31.72 dBm	-18.72 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32025 GHz	-33.77 dBm	-8.77 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32404 GHz	-38.14 dBm	-7.14 dB

Date: 19.DEC.2020 10:49:28

Conducted Spurious Emission

LTE Band 30 / 5MHz

Lowest Channel / QPSK

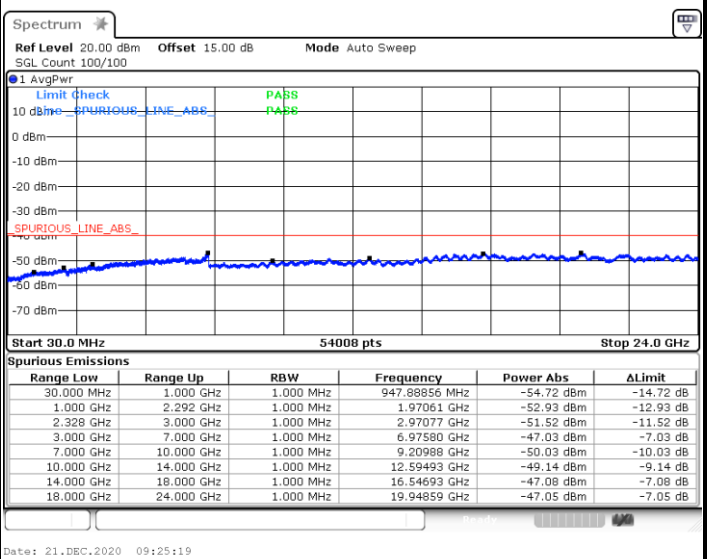


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	962.91604 MHz	-54.67 dBm	-14.67 dB
1.000 GHz	2.292 GHz	1.000 MHz	1.95856 GHz	-53.17 dBm	-13.17 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.84540 GHz	-51.84 dBm	-11.84 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99900 GHz	-46.85 dBm	-6.85 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.54233 GHz	-50.06 dBm	-10.06 dB
10.000 GHz	14.000 GHz	1.000 MHz	11.20410 GHz	-48.97 dBm	-8.97 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.59943 GHz	-47.04 dBm	-7.04 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.95009 GHz	-47.00 dBm	-7.00 dB

Date: 21.DEC.2020 09:26:13

Lowest Channel / 16QAM

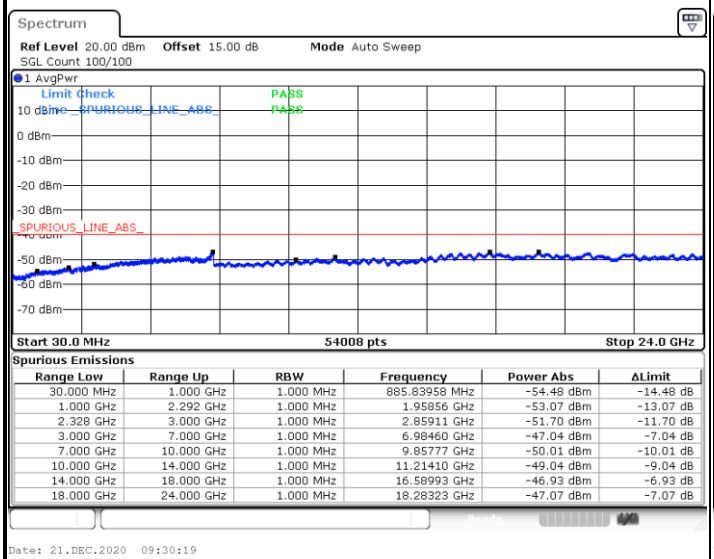


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	947.88856 MHz	-54.72 dBm	-14.72 dB
1.000 GHz	2.292 GHz	1.000 MHz	1.97061 GHz	-52.93 dBm	-12.93 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.97077 GHz	-51.52 dBm	-11.52 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.97580 GHz	-47.03 dBm	-7.03 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.20988 GHz	-50.03 dBm	-10.03 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.59493 GHz	-49.14 dBm	-9.14 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.54693 GHz	-47.08 dBm	-7.08 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.94859 GHz	-47.05 dBm	-7.05 dB

Date: 21.DEC.2020 09:25:19

Middle Channel / QPSK

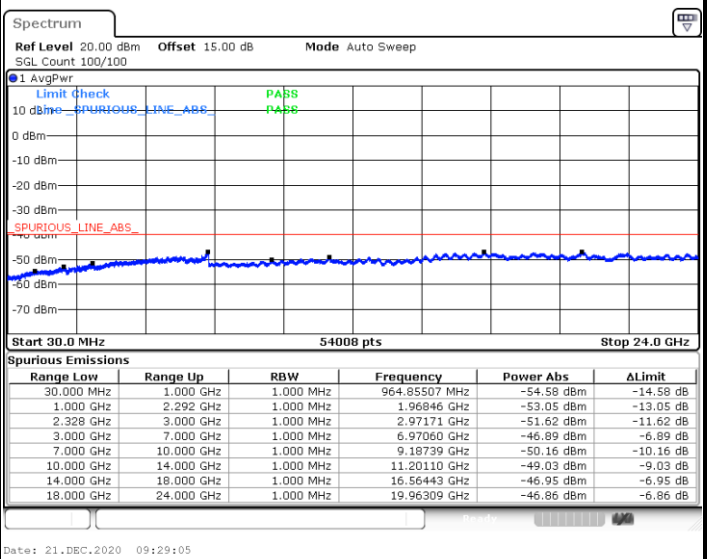


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	885.83958 MHz	-54.48 dBm	-14.48 dB
1.000 GHz	2.292 GHz	1.000 MHz	1.95856 GHz	-53.07 dBm	-13.07 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.85911 GHz	-51.70 dBm	-11.70 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98460 GHz	-47.04 dBm	-7.04 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.85777 GHz	-50.01 dBm	-10.01 dB
10.000 GHz	14.000 GHz	1.000 MHz	11.21410 GHz	-49.04 dBm	-9.04 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.58993 GHz	-46.93 dBm	-6.93 dB
18.000 GHz	24.000 GHz	1.000 MHz	18.28323 GHz	-47.07 dBm	-7.07 dB

Date: 21.DEC.2020 09:30:19

Middle Channel / 16QAM



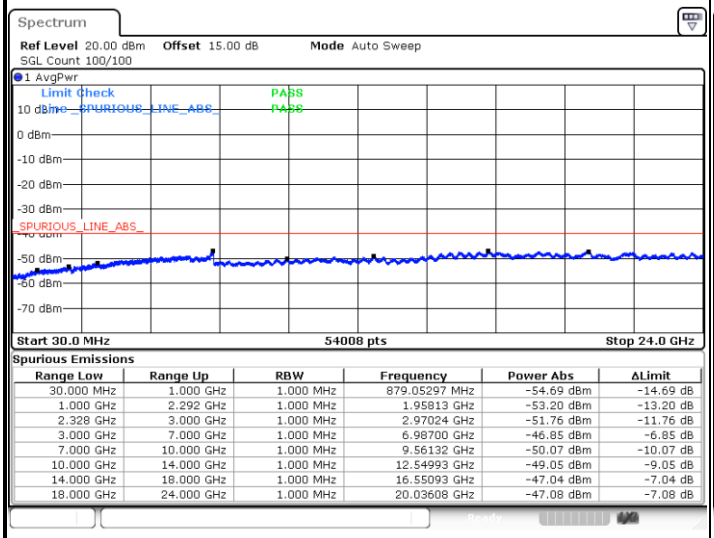
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	964.85507 MHz	-54.58 dBm	-14.58 dB
1.000 GHz	2.292 GHz	1.000 MHz	1.96846 GHz	-53.05 dBm	-13.05 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.97171 GHz	-51.62 dBm	-11.62 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.97060 GHz	-46.89 dBm	-6.89 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.18739 GHz	-50.16 dBm	-10.16 dB
10.000 GHz	14.000 GHz	1.000 MHz	11.20110 GHz	-49.03 dBm	-9.03 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.56443 GHz	-46.95 dBm	-6.95 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.96309 GHz	-46.86 dBm	-6.86 dB

Date: 21.DEC.2020 09:29:05

LTE Band 30 / 5MHz

Highest Channel / QPSK

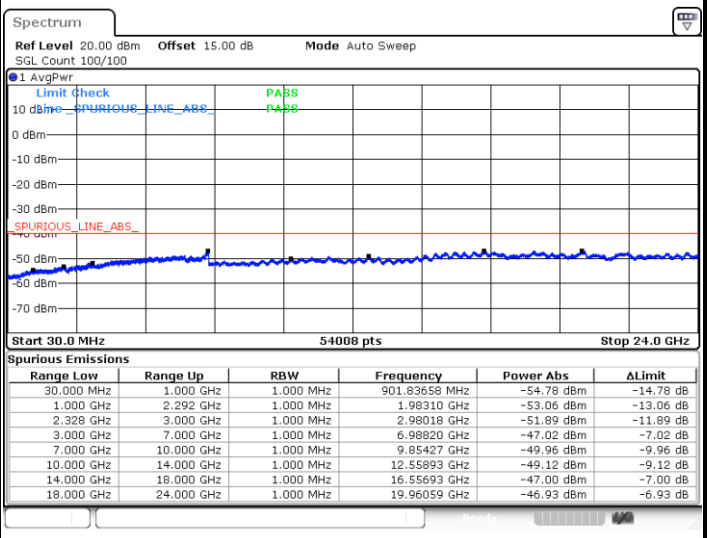


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	879.05297 MHz	-54.69 dBm	-14.69 dB
1.000 GHz	2.292 GHz	1.000 MHz	1.95813 GHz	-53.20 dBm	-13.20 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.97024 GHz	-51.76 dBm	-11.76 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98700 GHz	-46.85 dBm	-6.85 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.56132 GHz	-50.07 dBm	-10.07 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.54993 GHz	-49.05 dBm	-9.05 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.55093 GHz	-47.04 dBm	-7.04 dB
18.000 GHz	24.000 GHz	1.000 MHz	20.03608 GHz	-47.08 dBm	-7.08 dB

Date: 21.DEC.2020 09:31:25

Highest Channel / 16QAM



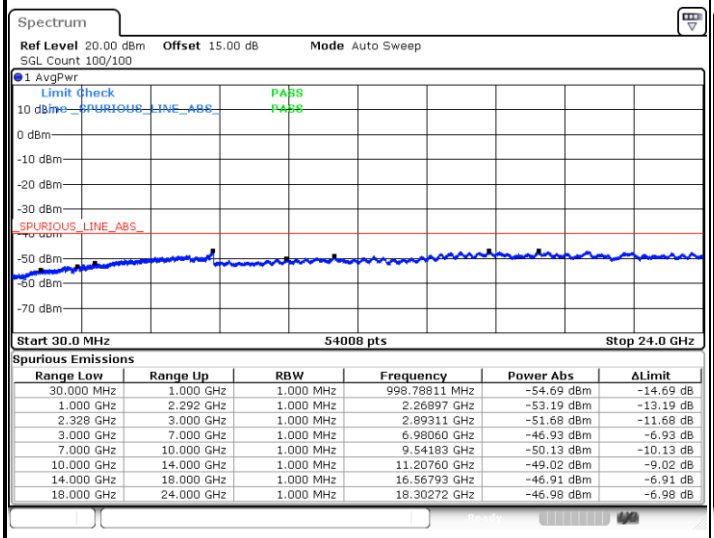
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	901.83658 MHz	-54.78 dBm	-14.78 dB
1.000 GHz	2.292 GHz	1.000 MHz	1.98310 GHz	-53.06 dBm	-13.06 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.98018 GHz	-51.89 dBm	-11.89 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98820 GHz	-47.02 dBm	-7.02 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.85427 GHz	-49.96 dBm	-9.96 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.55893 GHz	-49.12 dBm	-9.12 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.55693 GHz	-47.00 dBm	-7.00 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.96059 GHz	-46.93 dBm	-6.93 dB

Date: 21.DEC.2020 09:32:22

LTE Band 30 / 10MHz

Middle Channel / QPSK

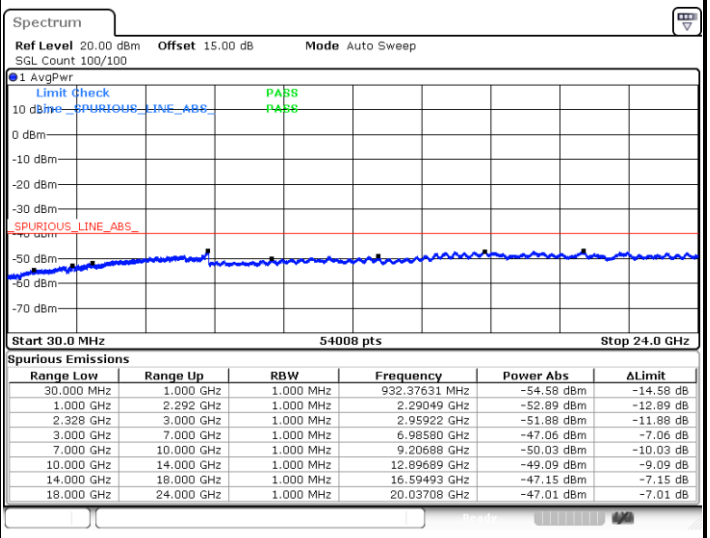


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	998.78811 MHz	-54.69 dBm	-14.69 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.26897 GHz	-53.19 dBm	-13.19 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.89311 GHz	-51.68 dBm	-11.68 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98060 GHz	-46.93 dBm	-6.93 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.54183 GHz	-50.13 dBm	-10.13 dB
10.000 GHz	14.000 GHz	1.000 MHz	11.20760 GHz	-49.02 dBm	-9.02 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.56793 GHz	-46.91 dBm	-6.91 dB
18.000 GHz	24.000 GHz	1.000 MHz	18.30272 GHz	-46.98 dBm	-6.98 dB

Date: 21.DEC.2020 09:39:33

Middle Channel / 16QAM



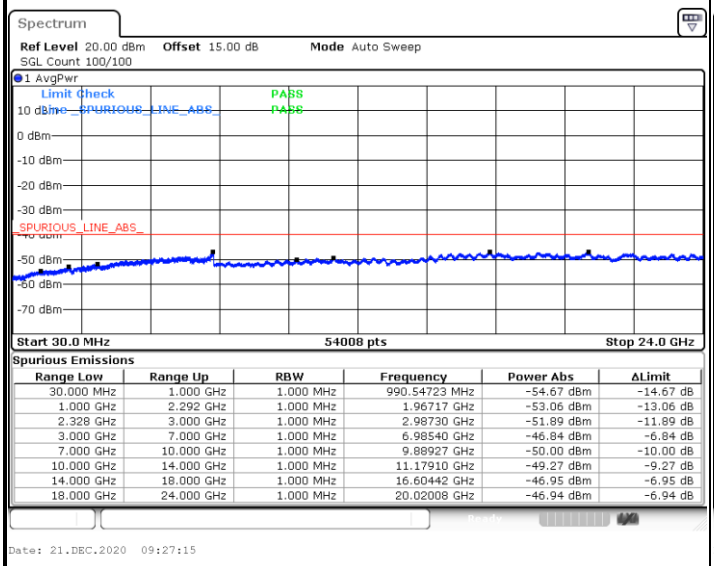
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	932.37631 MHz	-54.58 dBm	-14.58 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.29049 GHz	-52.89 dBm	-12.89 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.95922 GHz	-51.88 dBm	-11.88 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98580 GHz	-47.06 dBm	-7.06 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.20688 GHz	-50.03 dBm	-10.03 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.89689 GHz	-49.09 dBm	-9.09 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.59493 GHz	-47.15 dBm	-7.15 dB
18.000 GHz	24.000 GHz	1.000 MHz	20.03708 GHz	-47.01 dBm	-7.01 dB

Date: 21.DEC.2020 09:38:20

LTE Band 30 / 5MHz

Lowest Channel / 64QAM

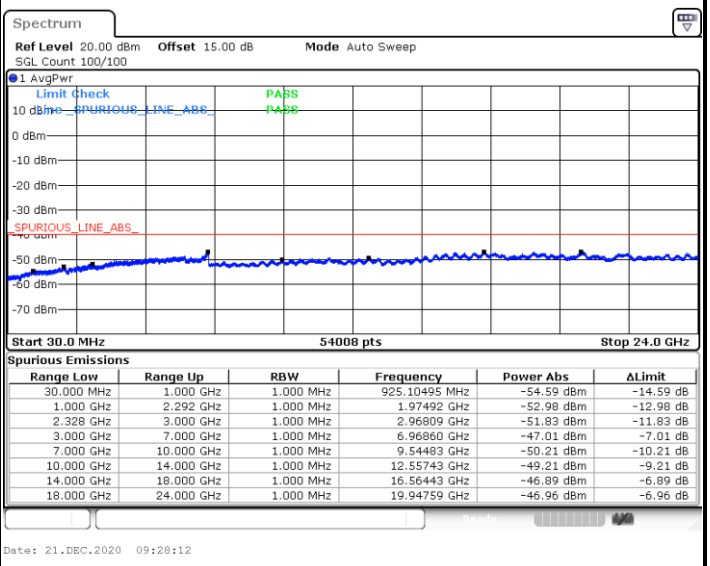


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	990.54723 MHz	-54.67 dBm	-14.67 dB
1.000 GHz	2.292 GHz	1.000 MHz	1.96717 GHz	-53.06 dBm	-13.06 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.98730 GHz	-51.89 dBm	-11.89 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98540 GHz	-46.84 dBm	-6.84 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.88927 GHz	-50.00 dBm	-10.00 dB
10.000 GHz	14.000 GHz	1.000 MHz	11.17910 GHz	-49.27 dBm	-9.27 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.60442 GHz	-46.95 dBm	-6.95 dB
18.000 GHz	24.000 GHz	1.000 MHz	20.02008 GHz	-46.94 dBm	-6.94 dB

Date: 21.DEC.2020 09:27:15

Middle Channel / 64QAM

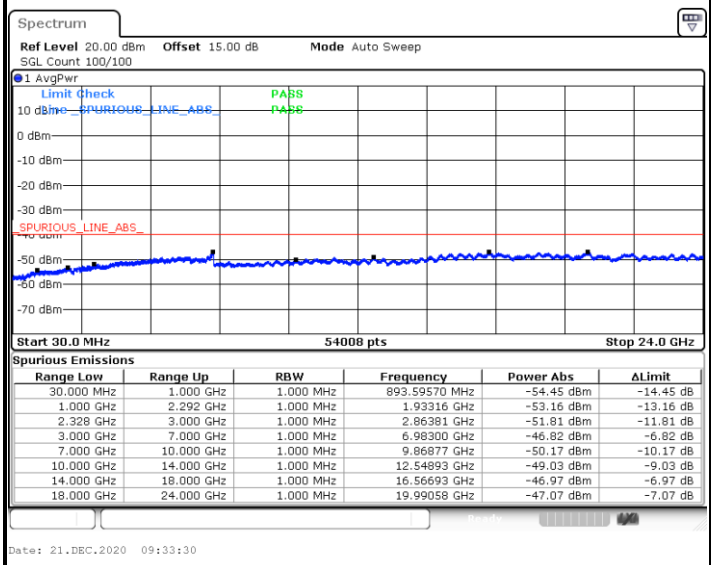


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	925.10495 MHz	-54.59 dBm	-14.59 dB
1.000 GHz	2.292 GHz	1.000 MHz	1.97492 GHz	-52.98 dBm	-12.98 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.96809 GHz	-51.83 dBm	-11.83 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.96860 GHz	-47.01 dBm	-7.01 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.54483 GHz	-50.21 dBm	-10.21 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.55743 GHz	-49.21 dBm	-9.21 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.56443 GHz	-46.89 dBm	-6.89 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.94759 GHz	-46.96 dBm	-6.96 dB

Date: 21.DEC.2020 09:28:12

Highest Channel / 64QAM

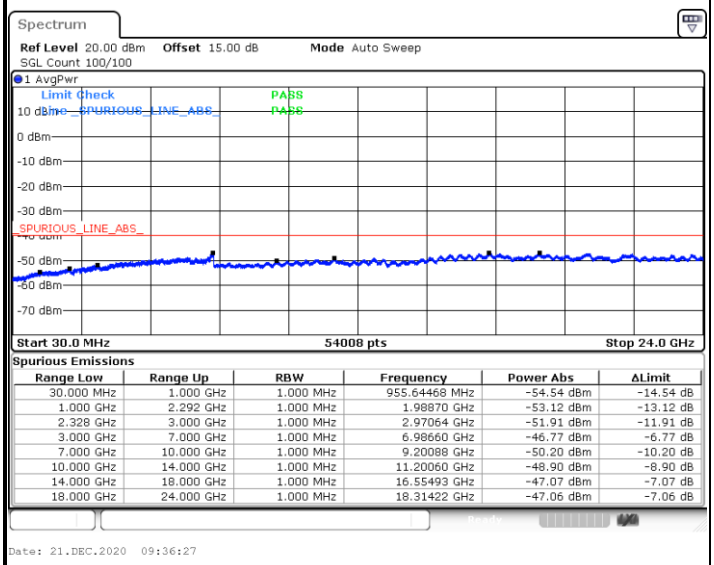


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	893.59570 MHz	-54.45 dBm	-14.45 dB
1.000 GHz	2.292 GHz	1.000 MHz	1.93316 GHz	-53.16 dBm	-13.16 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.86381 GHz	-51.81 dBm	-11.81 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98300 GHz	-46.82 dBm	-6.82 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.86877 GHz	-50.17 dBm	-10.17 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.54893 GHz	-49.03 dBm	-9.03 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.56693 GHz	-46.97 dBm	-6.97 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.99058 GHz	-47.07 dBm	-7.07 dB

Date: 21.DEC.2020 09:33:30

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	955.64468 MHz	-54.54 dBm	-14.54 dB
1.000 GHz	2.292 GHz	1.000 MHz	1.98870 GHz	-53.12 dBm	-13.12 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.97054 GHz	-51.91 dBm	-11.91 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98660 GHz	-46.77 dBm	-6.77 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.20088 GHz	-50.20 dBm	-10.20 dB
10.000 GHz	14.000 GHz	1.000 MHz	11.20060 GHz	-48.90 dBm	-8.90 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.55493 GHz	-47.07 dBm	-7.07 dB
18.000 GHz	24.000 GHz	1.000 MHz	18.31422 GHz	-47.06 dBm	-7.06 dB

Date: 21.DEC.2020 09:36:27

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	0.0004	PASS
40	Normal Voltage	0.0008	
30	Normal Voltage	0.0006	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0009	
0	Normal Voltage	0.0003	
-10	Normal Voltage	0.0002	
-20	Normal Voltage	0.0007	
-30	Normal Voltage	0.0014	
20	Maximum Voltage	0.0013	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0005	

Note:

1. Normal Voltage =3.3 V. ; Battery End Point (BEP) =3.14 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

LTE Band 30 / 10MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	4611.50	-62.28	-40	-22.28	-55.07	-68.53	6.45	12.70	H
	6916.50	-59.29	-40	-19.29	-54.68	-62.69	8.40	11.80	H
	9222.00	-54.38	-40	-14.38	-55.46	-56.73	9.65	12.00	H
	4611.50	-62.45	-40	-22.45	-55.09	-68.70	6.45	12.70	V
	6916.50	-59.27	-40	-19.27	-54.62	-62.67	8.40	11.80	V
	9222.00	-54.76	-40	-14.76	-55.42	-57.11	9.65	12.00	V

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