FCC RF Test Report

APPLICANT	:	Motorola Mobility LLC
EQUIPMENT	:	Mobile Cellular Phone
BRAND NAME	:	Motorola
MODEL NAME	:	XT2165-1, XT2165-2
FCC ID	:	IHDT56ZP4
STANDARD	:	47 CFR Part 2, 27D
CLASSIFICATION	:	PCS Licensed Transmitter Held to Ear (PCE)
TEST DATE(S)	:	Aug. 29, 2021 ~ Sep. 05, 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

ACCREDITED Cert #5145.01

Sporton International (ShenZhen) Inc.

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People's Republic of China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG170628-01D	Rev. 01	Initial issue of report	Sep. 16, 2021

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	—	Report Only	-
3.5	-	Peak-to-Average Ratio	—	Report Only	
3.6	§27.50 (a)(3)	EIRP	EIRP < 250mW/5MHz	PASS	-
3.7	§2.1049	Occupied Bandwidth	—	Report Only	-
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 8.78 dB at 6916.500 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

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

1.2 Manufacturer

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

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2165-1, XT2165-2
FCC ID	IHDT56ZP4
IMEI Code	Conducted: 357571280009365 Radiation: 357571280016279
HW Version	DVT2
SW Version	RRQ31.Q3-51
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 : 22.57 dBm
Antenna Gain	For Ant1: LTE Band 30 : -0.96 dBi For Ant2: LTE Band 30 : -4.27 dBi
Type of Modulation	QPSK / 16QAM / 64QAM

1.5 Modification of EUT

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

1.6 Maximum EIRP Power and Emission Designator

LTE Band 30		QPSK		16QAM/64QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
5	2307.5 ~ 2312.5	0.1445	4M49G7D	0.1208	4M50W7D
10	2310.0	0.1449	9M01G7D	0.1180	9M07W7D

1.7 Testing Site

<FCC>-SZ

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.**
	03CH01-SZ	CN1256	421272

1.8 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH01-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.

1.10 Specification of Accessory

Specification of Accessory				
AC Adapter 1	**Brand Name**	Motorola(AOHAI)	**Model Name**	MC-101
AC Adapter 2	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-101
AC Adapter 3	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-101
Battery	**Brand Name**	Motorola (Sunwoda)	**Model Name**	JK50
USB Cable 1	**Brand Name**	Motorola (Cabletech)	**Model Name**	SC18C49697
USB Cable 2	**Brand Name**	Motorola (Saibao)	**Model Name**	SC18C24367
USB Cable 3	**Brand Name**	Motorola (Luxshare)	**Model Name**	SC18C24368
USB Cable 4	**Brand Name**	Motorola (Saibao)	**Model Name**	SC18D22297
USB Cable 5	**Brand Name**	Motorola (Luxshare)	**Model Name**	SC18D22299
USB Cable 6	**Brand Name**	Motorola (Cabletech)	**Model Name**	SC18D22298

2 Test Configuration of Equipment Under Test

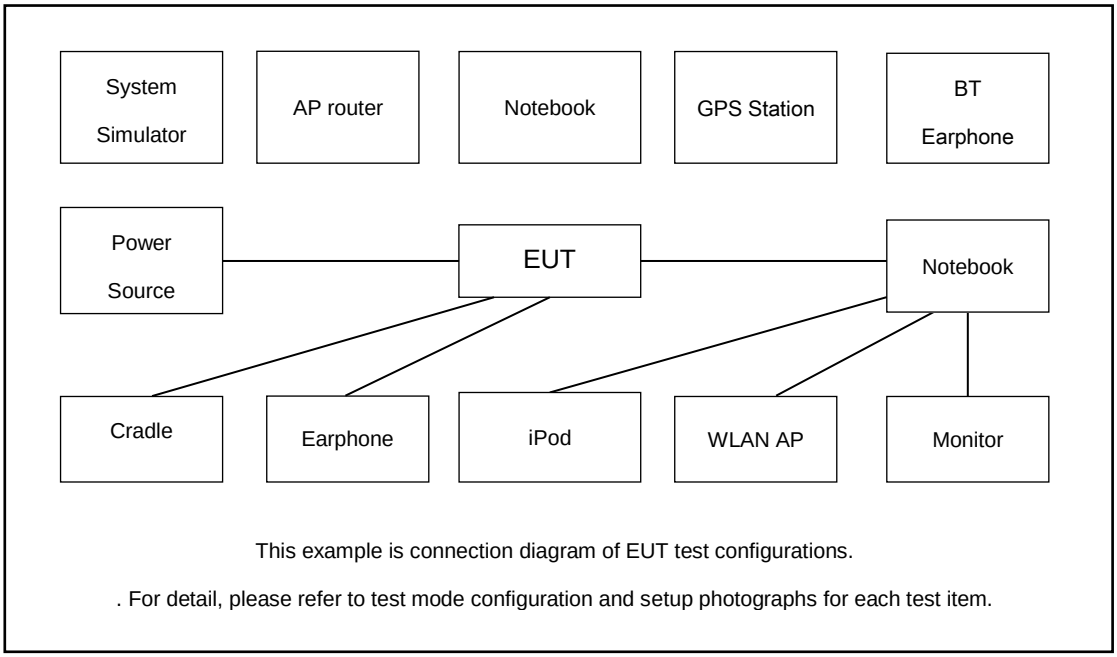
2.1 Test Mode

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	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	
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	
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

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

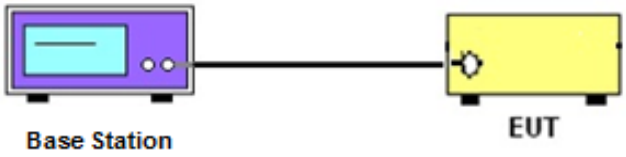
3 Conducted Test Items

3.1 Measuring Instruments

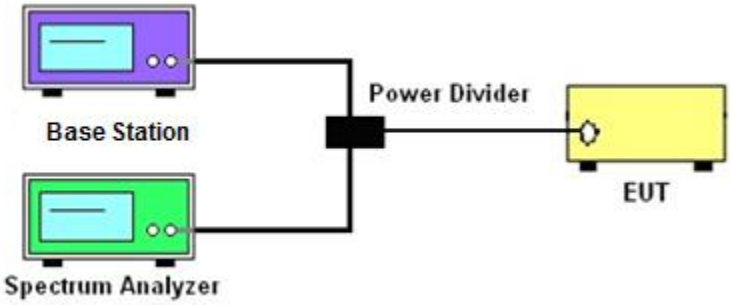
See list of measuring instruments of this test report.

3.2 Test Setup

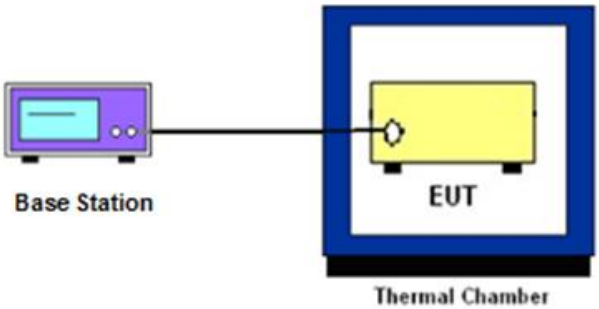
3.2.1 Conducted Output Power



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 or a narrower RBW was used and the measured power was integrated over the full required measurement bandwidth of 1 MHz.
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.

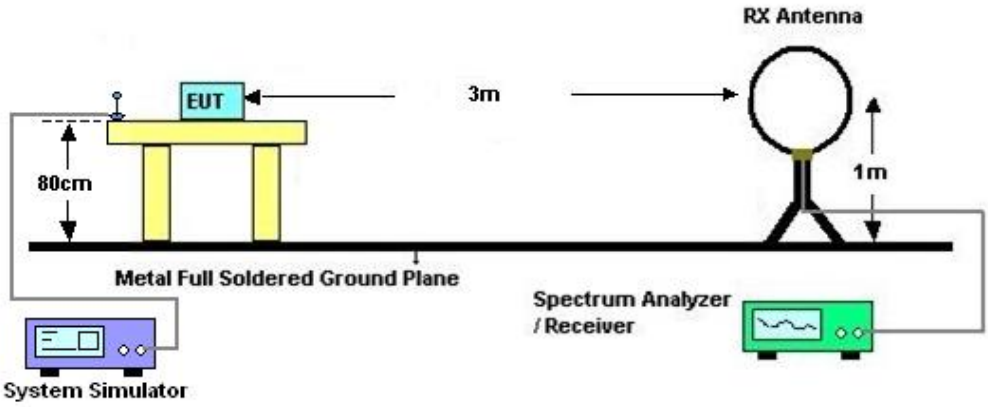
4 Radiated Test Items

4.1 Measuring Instruments

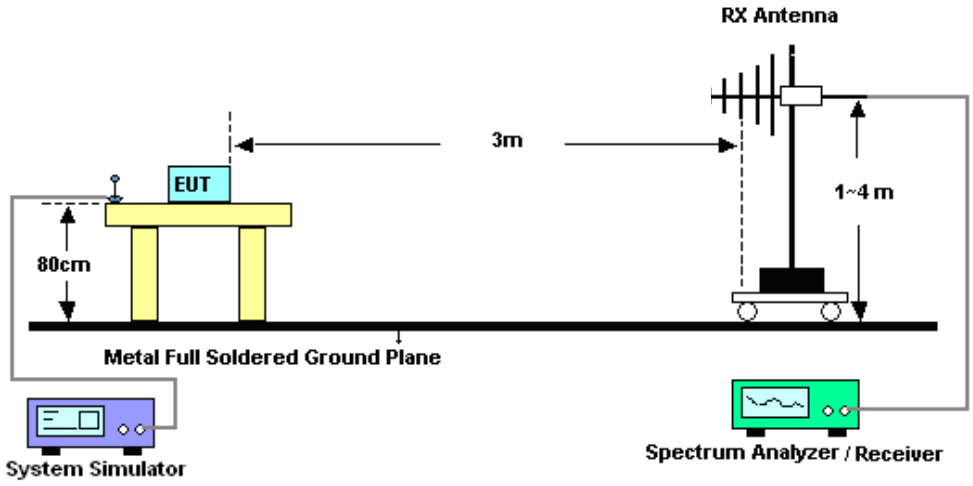
See list of measuring instruments of this test report.

4.2 Test Setup

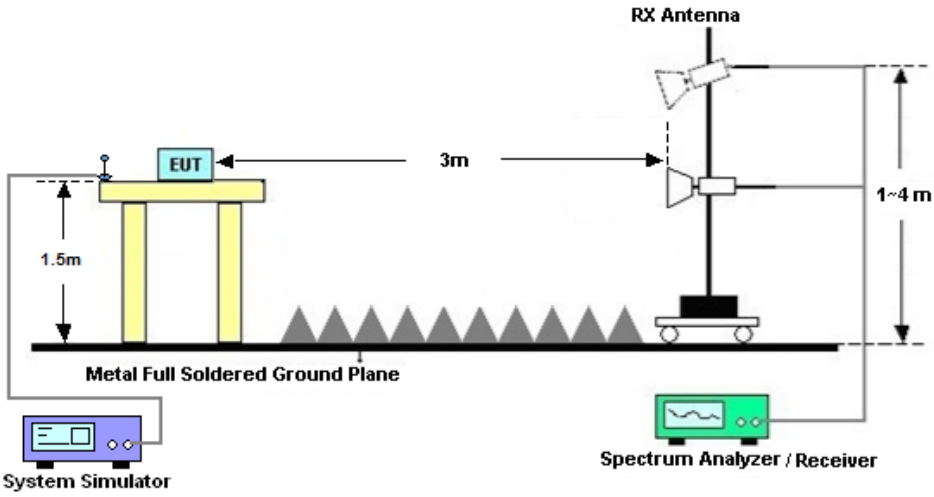
4.2.1 For radiated test below 30MHz



4.2.2 For radiated test from 30MHz to 1GHz



4.2.3 For radiated test above 1GHz



4.3 Test Result of Radiated Test

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

Please refer to Appendix B.

4.4 Radiated Spurious Emission Measurement

4.4.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI/TIA-603-E. The power of any emission outside of the authorized operating frequency ranges 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. 08, 2021	Aug. 29, 2021~ Aug. 30, 2021	Apr. 07, 2022	Conducted (TH01-SZ)
DC Power Supply	TTI	PL330P	290070	Max 32V，3A	Oct. 15, 2020	Aug. 29, 2021~ Aug. 30, 2021	Oct. 14, 2021	Conducted (TH01-SZ)
Power Divider	TOJOIN	PS-2SM-04 265	60.06.020.007 7	0.4GHz~26.5GHz	Dec. 26, 2020	Aug. 29, 2021~ Aug. 30, 2021	Dec. 25, 2021	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 14, 2021	Aug. 29, 2021~ Aug. 30, 2021	Jul. 13, 2022	Conducted (TH01-SZ)
EMI Test Receiver&SA	Agilent	N9038A	MY52260185	20Hz~26.5GHz	Dec. 03, 2020	Sep. 05, 2021	Dec. 02, 2021	Radiation (03CH01-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jun. 22, 2020	Sep. 05, 2021	Jun. 21, 2022	Radiation (03CH01-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270105	0.5GHz~26.5Ghz	Oct. 16, 2020	Sep. 05, 2021	Oct. 15, 2021	Radiation (03CH01-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	Jul. 15, 2021	Sep. 05, 2021	Jul. 14, 2022	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Jul. 24, 2021	Sep. 05, 2021	Jul. 23, 2022	Radiation (03CH01-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 11, 2021	Sep. 05, 2021	Apr. 10, 2022	Radiation (03CH01-SZ)
LF Amplifier	Burgeon	BPA-530	102209	0.01~3000Mhz	Apr. 07, 2021	Sep. 05, 2021	Apr. 06, 2022	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	AMF-7D-00 101800-30-1 0P-R	1943528	1GHz~18GHz	Oct. 15, 2020	Sep. 05, 2021	Oct. 14, 2021	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	TTA1840-35 -HG	1871923	18GHz~40GHz	Jul. 20. 2021	Sep. 05, 2021	Jul. 19. 2022	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	61601000198 5	N/A	NCR	Sep. 05, 2021	NCR	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Sep. 05, 2021	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Sep. 05, 2021	NCR	Radiation (03CH01-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))	**2.48dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.53dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.02dB**

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

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	22.21	22.24	22.26
5	1	12		22.56	22.53	22.53
5	1	24		22.19	22.20	22.23
5	12	0		21.36	21.39	21.40
5	12	7		21.42	21.45	21.46
5	12	13		21.40	21.42	21.43
5	25	0		21.39	21.41	21.42
5	1	0	16-QAM	21.51	21.53	21.46
5	1	12		21.78	21.74	21.77
5	1	24		21.44	21.48	21.52
5	12	0		20.40	20.43	20.44
5	12	7		20.48	20.49	20.51
5	12	13		20.45	20.44	20.47
5	25	0		20.43	20.43	20.44
5	1	0	64QAM	20.50	20.48	20.51
5	1	12		20.73	20.82	20.71
5	1	24		20.44	20.43	20.46
5	12	0		19.45	19.45	19.46
5	12	7		19.52	19.52	19.52
5	12	13		19.45	19.44	19.46
5	25	0		19.42	19.45	19.45

10	1	0	QPSK	-	22.31	-
10	1	25			22.57	
10	1	49			22.27	
10	25	0			21.43	
10	25	12			21.40	
10	25	25			21.39	
10	50	0			21.42	
10	1	0	16-QAM		21.61	
10	1	25			21.68	
10	1	49			21.54	
10	25	0			20.46	
10	25	12			20.43	
10	25	25			20.43	
10	50	0			20.45	
10	1	0	64QAM		20.56	
10	1	25			20.61	
10	1	49			20.48	
10	25	0			19.47	
10	25	12			19.45	
10	25	25			19.43	
10	50	0			19.46	

EIRP

LTE Band 30 (GT - LC = -0.96 dB) QPSK (dBm/5MHz)			
Bandwidth	5M		
Channel	27685	27710	27735
	(Low)	(Mid)	(High)
Frequency (MHz)	2307.5	2310	2312.5
Conducted Power (dBm)	22.56	22.53	22.53
Conducted Power (Watts)	0.1803	0.1791	0.1791
EIRP(dBm)	21.60	21.57	21.57
EIRP(Watts)	0.1445	0.1435	0.1435
Limit	250mW / 5MHz = 24dBm / 5MHz		PASS

LTE Band 30 (GT - LC = -0.96 dB) QPSK (dBm/5MHz)			
Bandwidth	10M		
Channel		27710	
		(Mid)	
Frequency (MHz)		2310	
Conducted Power (dBm)		22.57	
Conducted Power (Watts)		0.1807	
EIRP(dBm)		21.61	
EIRP(Watts)		0.1449	
Limit	250mW / 5MHz = 24dBm / 5MHz		PASS

LTE Band 30 (GT - LC = -0.96 dB) 16QAM (dBm/5MHz)			
Bandwidth	5M		
Channel	27685	27710	27735
	(Low)	(Mid)	(High)
Frequency (MHz)	2307.5	2310	2312.5
Conducted Power (dBm)	21.78	21.74	21.77
Conducted Power (Watts)	0.1507	0.1493	0.1503
EIRP(dBm)	20.82	20.78	20.81
EIRP(Watts)	0.1208	0.1197	0.1205
Limit	250mW / 5MHz = 24dBm / 5MHz		PASS

LTE Band 30 (GT - LC = -0.96 dB) 16QAM (dBm/5MHz)			
Bandwidth	10M		
Channel		27710	
		(Mid)	
Frequency (MHz)		2310	
Conducted Power (dBm)		21.68	
Conducted Power (Watts)		0.1472	
EIRP(dBm)		20.72	
EIRP(Watts)		0.1180	
Limit	250mW / 5MHz = 24dBm / 5MHz		PASS

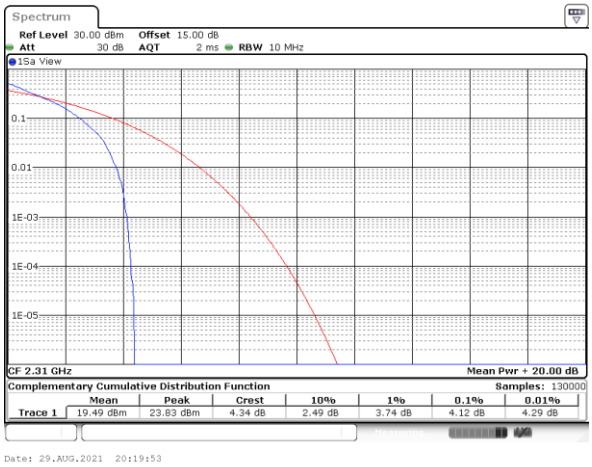
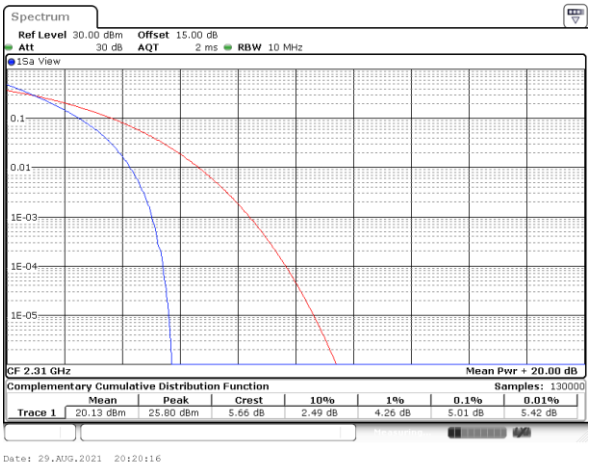
LTE Band 30 (GT - LC = -0.96 dB) 64QAM (dBm/5MHz)			
Bandwidth	5M		
Channel	27685	27710	27735
	(Low)	(Mid)	(High)
Frequency (MHz)	2307.5	2310	2312.5
Conducted Power (dBm)	20.73	20.82	20.71
Conducted Power (Watts)	0.1183	0.1208	0.1178
EIRP(dBm)	19.77	19.86	19.75
EIRP(Watts)	0.0948	0.0968	0.0944
Limit	250mW / 5MHz = 24dBm / 5MHz		PASS

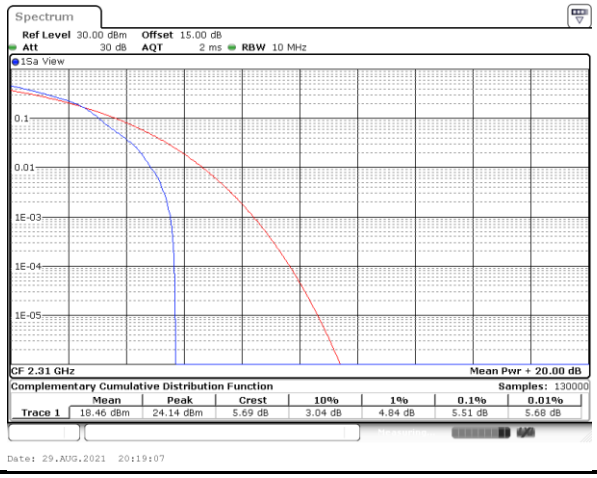
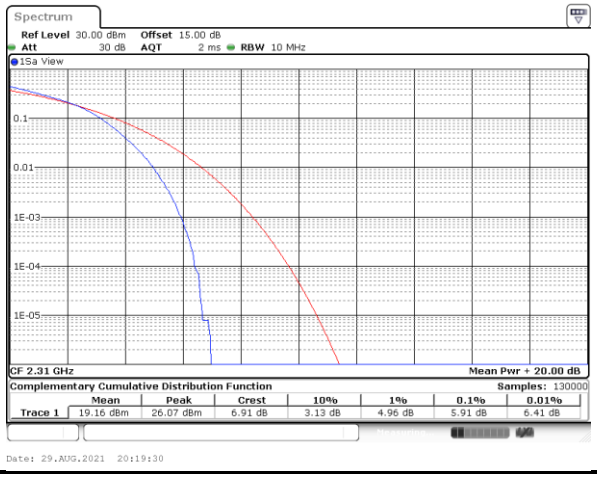
LTE Band 30 (GT - LC = -0.96 dB) 64QAM (dBm/5MHz)			
Bandwidth	10M		
Channel		27710	
		(Mid)	
Frequency (MHz)		2310	
Conducted Power (dBm)		20.61	
Conducted Power (Watts)		0.1151	
EIRP(dBm)		19.65	
EIRP(Watts)		0.0923	
Limit	250mW / 5MHz = 24dBm / 5MHz		PASS

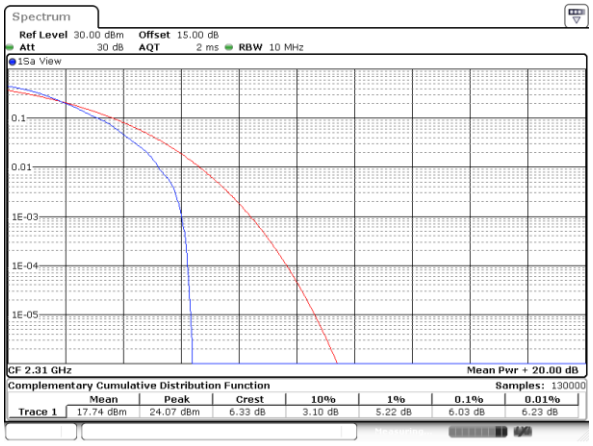
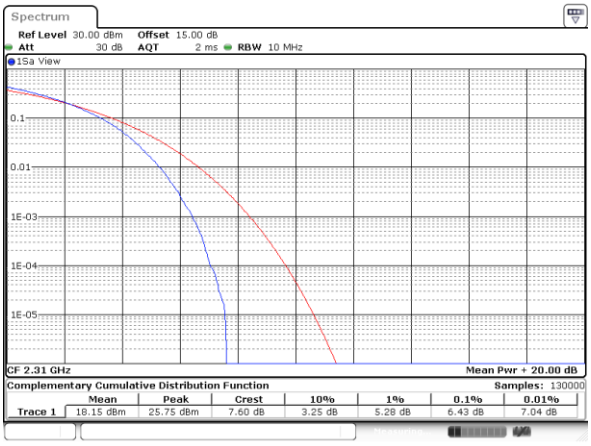
LTE Band 30

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	4.12	5.01	5.51	5.91	
Highest CH	-	-	-	-	
Mode	LTE Band 30 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	-	-	-	-	PASS
Middle CH	6.03	6.43	-	-	
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**
	

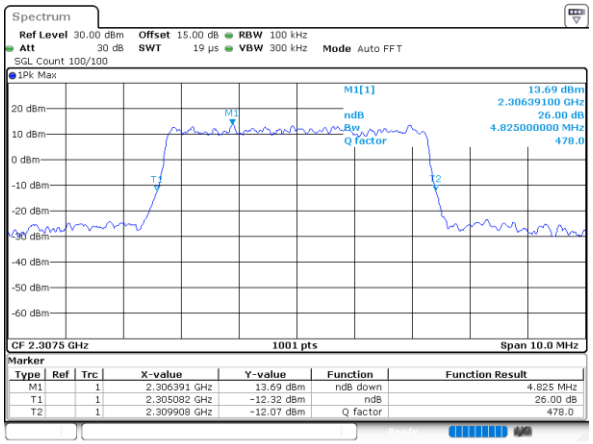
LTE Band 30 / 10MHz / 64QAM	
Middle Channel / 1RB	**Middle Channel / Full RB**
	

26dB Bandwidth

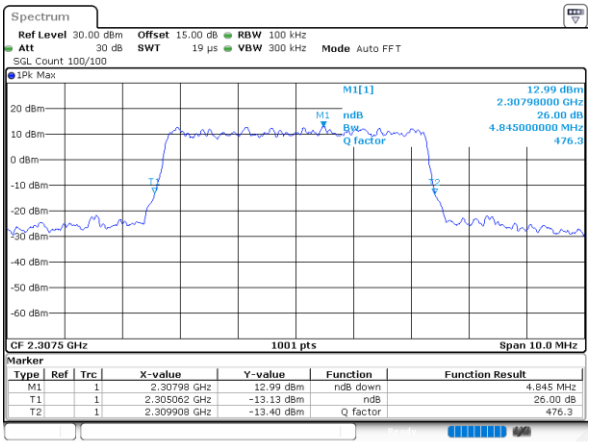
Mode	LTE Band 30 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.83	4.85	-	-	-	-	-	-
Middle CH	-	-	-	-	4.82	4.78	9.67	9.75	-	-	-	-
Highest CH	-	-	-	-	4.89	4.92	-	-	-	-	-	-
Mode	LTE Band 30 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.95	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.84	-	9.69	-	-	-	-	-
Highest CH	-	-	-	-	4.90	-	-	-	-	-	-	-

LTE Band 30

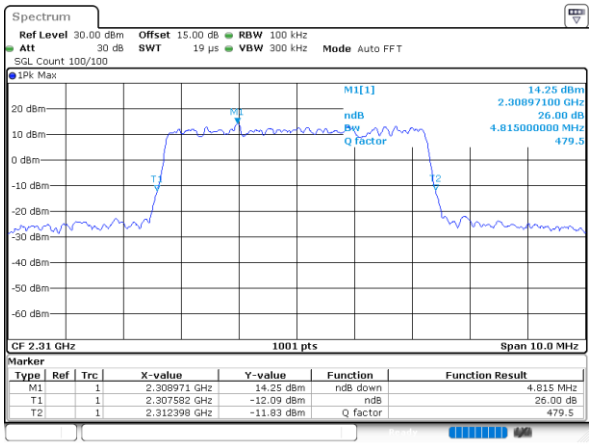
Lowest Channel / 5MHz / QPSK



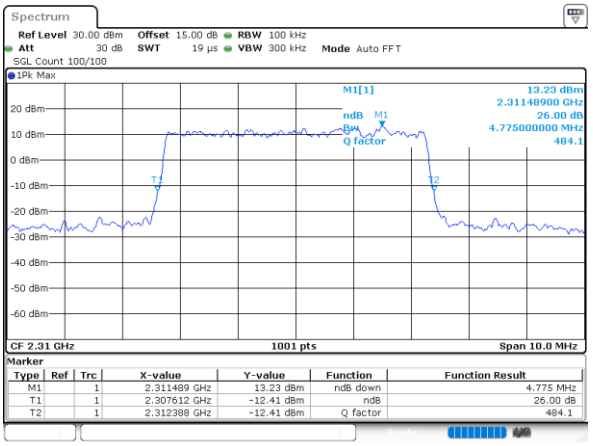
Lowest Channel / 5MHz / 16QAM



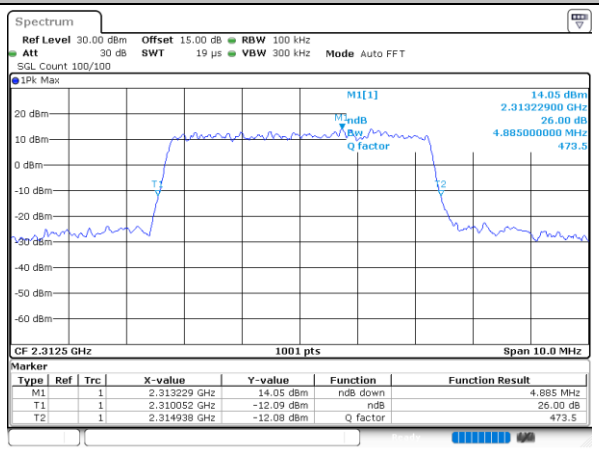
Middle Channel / 5MHz / QPSK



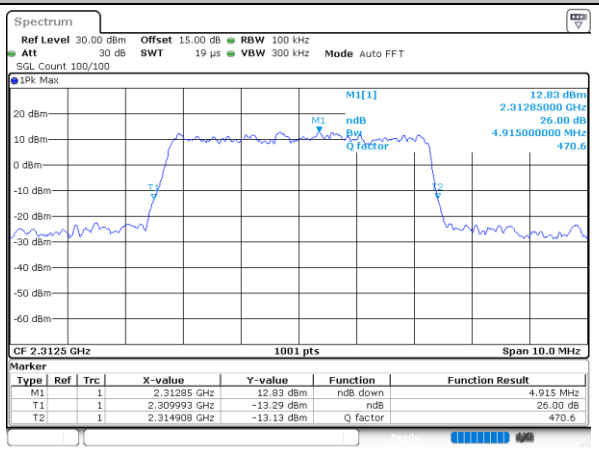
Middle Channel / 5MHz / 16QAM



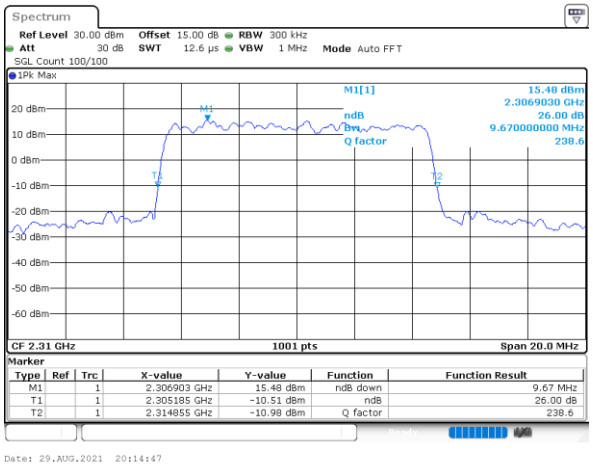
Highest Channel / 5MHz / QPSK

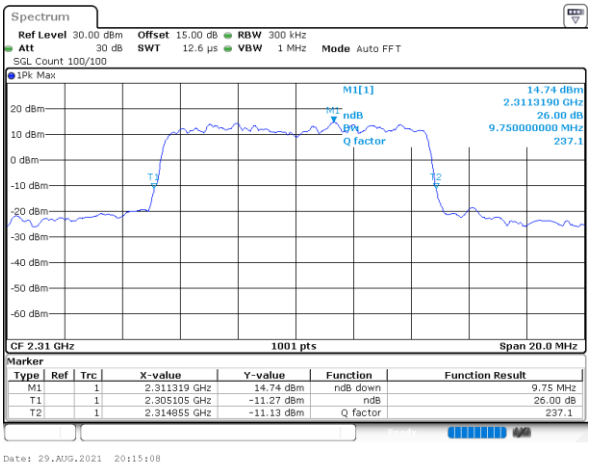


Highest Channel / 5MHz / 16QAM



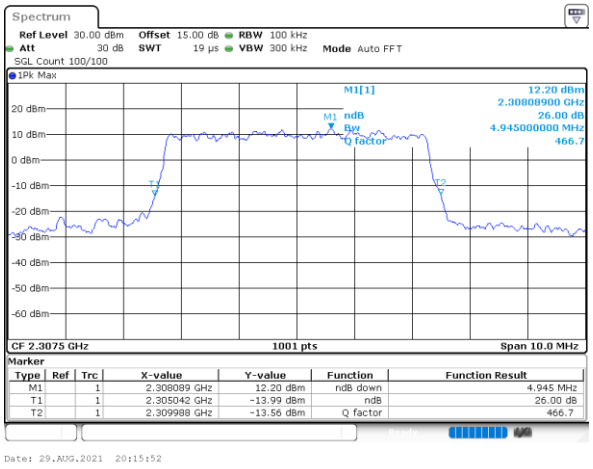
LTE Band 30	
Middle Channel / 10MHz / QPSK	**Middle Channel / 10MHz / 16QAM**



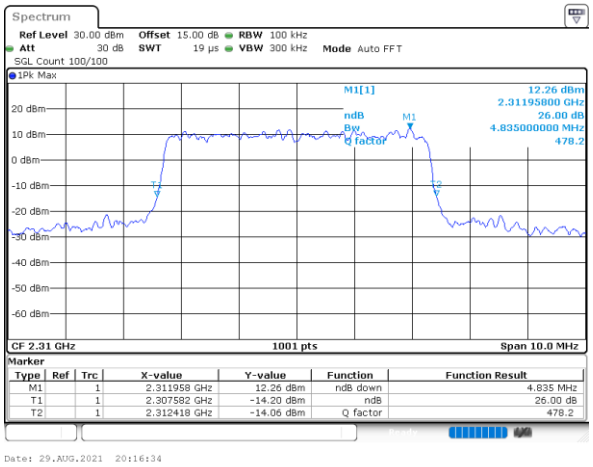


LTE Band 30

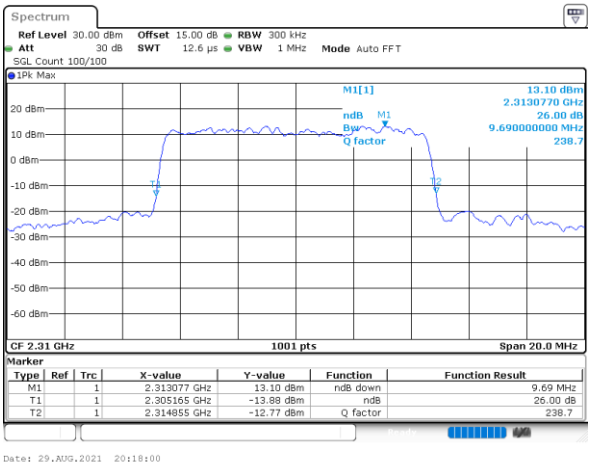
Lowest Channel / 5MHz / 64QAM



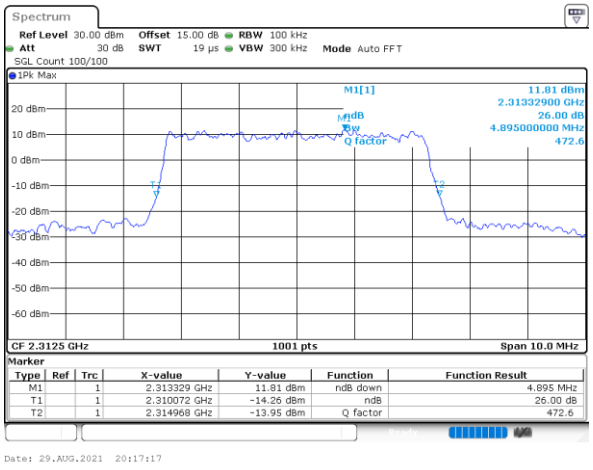
Middle Channel / 5MHz / 64QAM



Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM

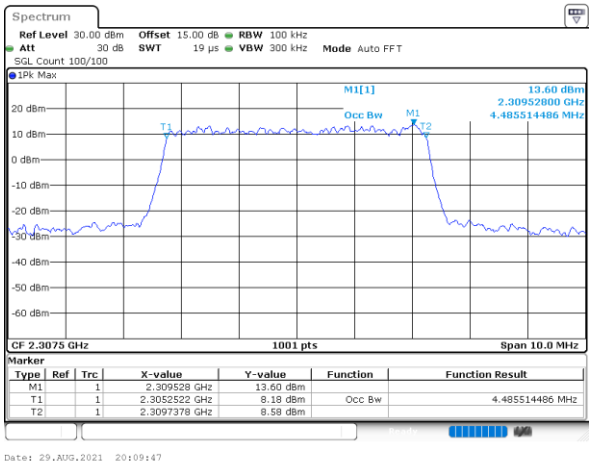


Occupied Bandwidth

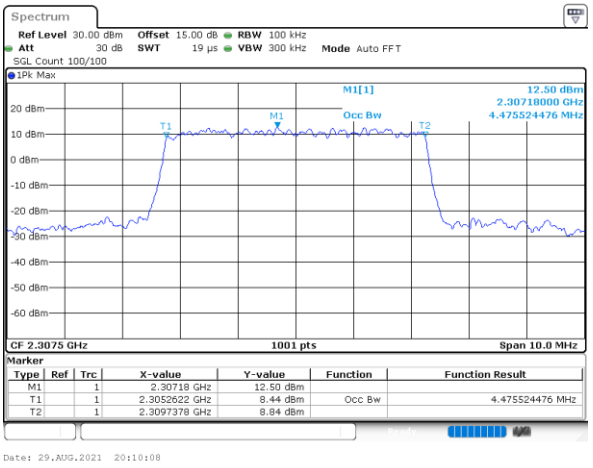
Mode	LTE Band 30 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.49	4.48	-	-	-	-	-	-
Middle CH	-	-	-	-	4.49	4.49	9.01	9.07	-	-	-	-
Highest CH	-	-	-	-	4.49	4.48	-	-	-	-	-	-
Mode	LTE Band 26 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.49	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.50	-	9.05	-	-	-	-	-
Highest CH	-	-	-	-	4.50	-	-	-	-	-	-	-

LTE Band 30

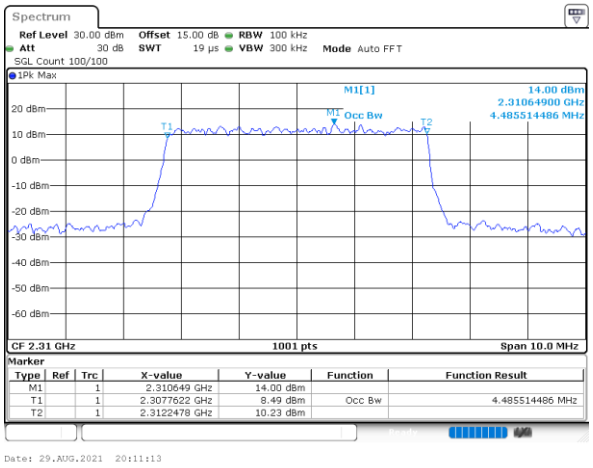
Lowest Channel / 5MHz / QPSK



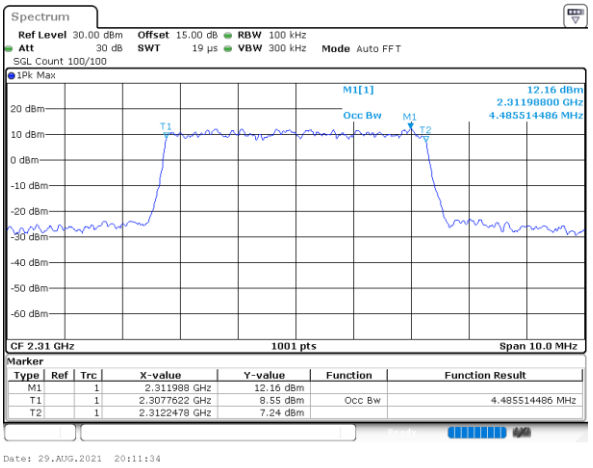
Lowest Channel / 5MHz / 16QAM



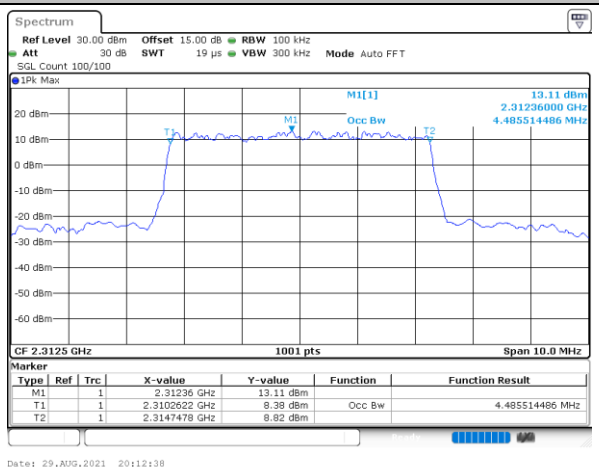
Middle Channel / 5MHz / QPSK



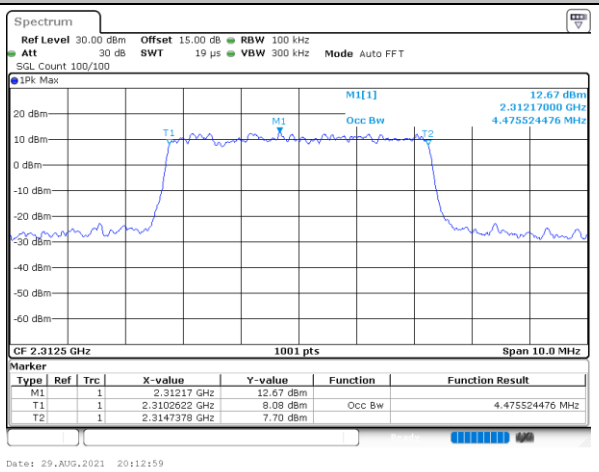
Middle Channel / 5MHz / 16QAM



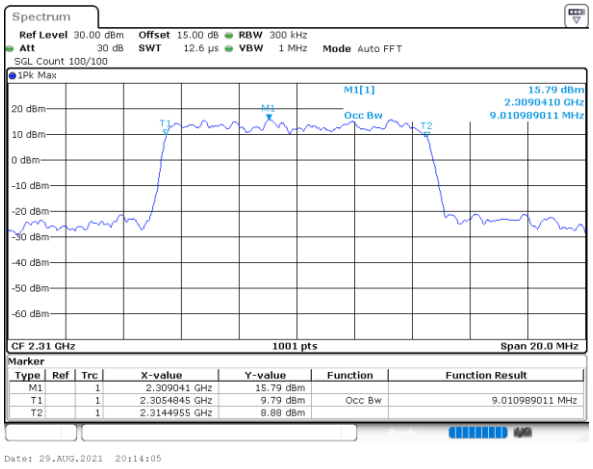
Highest Channel / 5MHz / QPSK

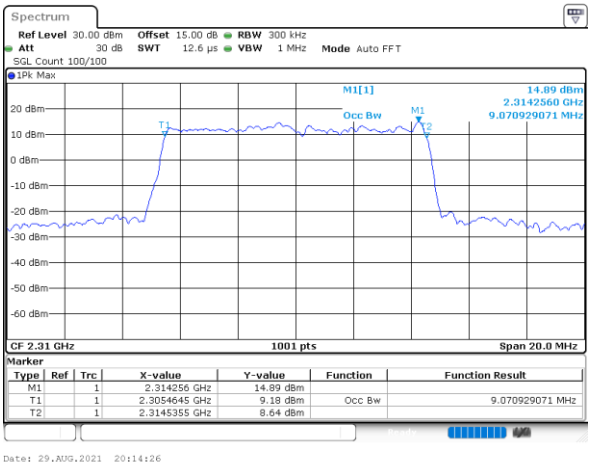


Highest Channel / 5MHz / 16QAM



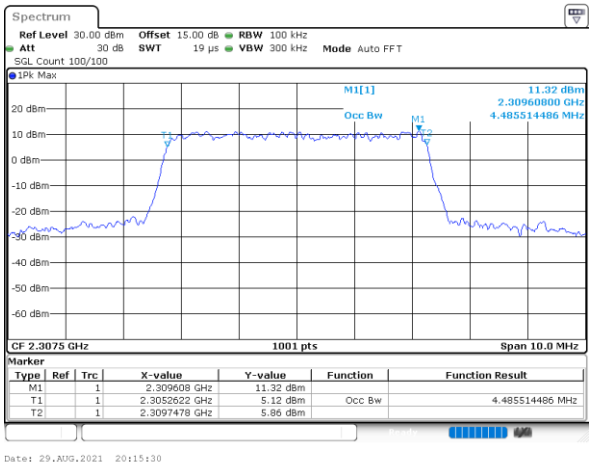
LTE Band 30	
Middle Channel / 10MHz / QPSK	**Middle Channel / 10MHz / 16QAM**



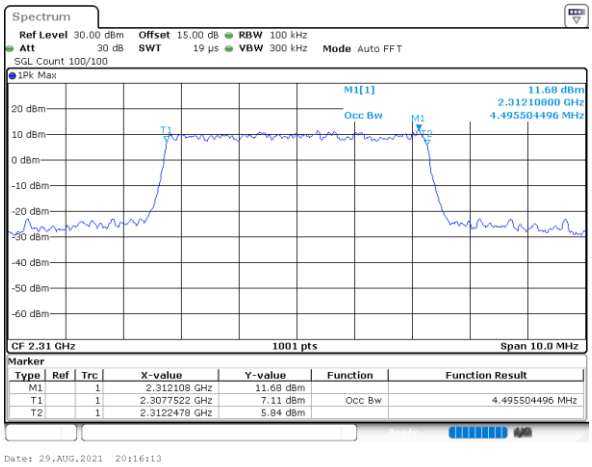


LTE Band 30

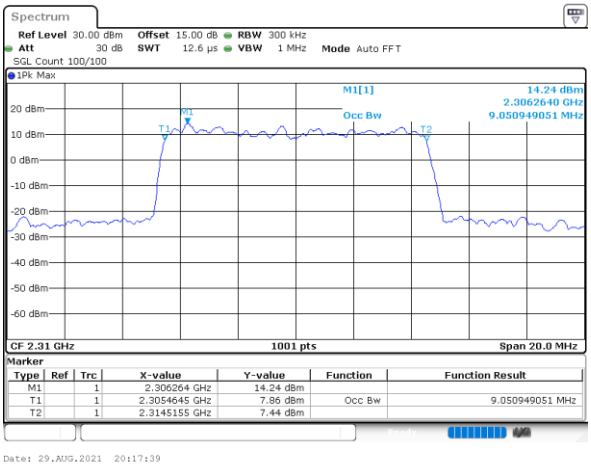
Lowest Channel / 5MHz / 64QAM



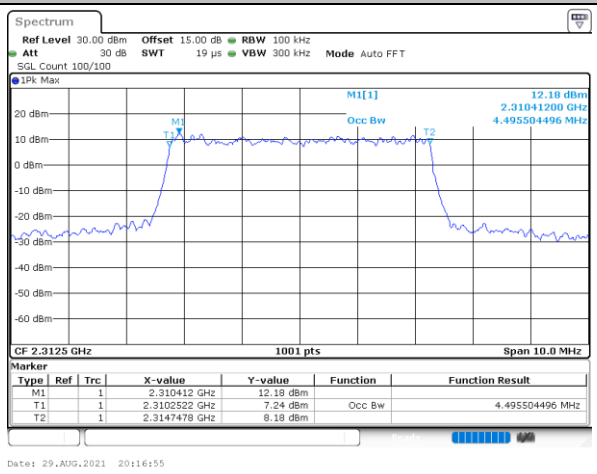
Middle Channel / 5MHz / 64QAM



Middle Channel / 10MHz / 64QAM



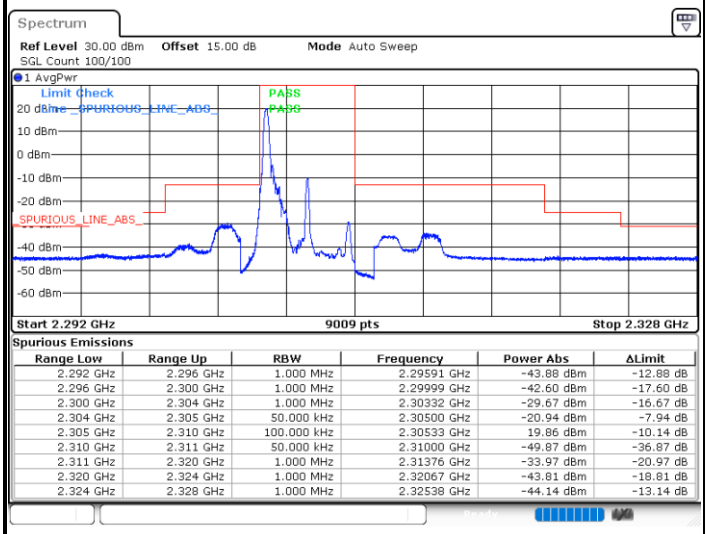
Highest Channel / 5MHz / 64QAM



Conducted Band Edge

LTE Band 30 / 5MHz / QPSK

Lowest Band Edge / 1 RB

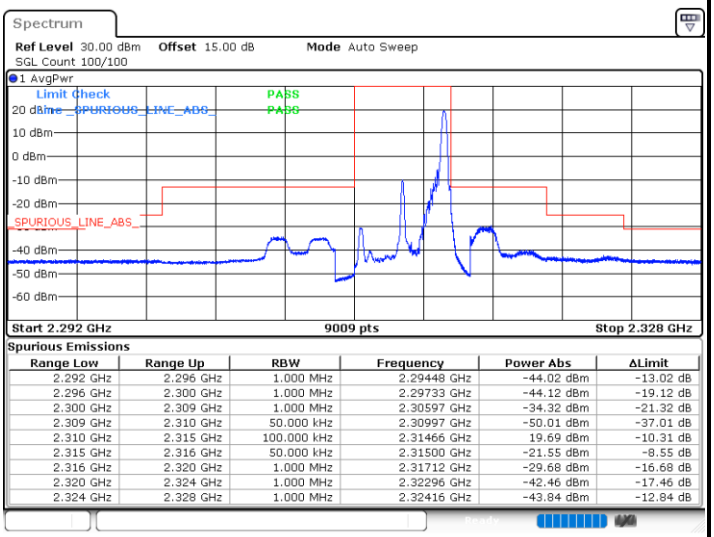


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29591 GHz	-43.88 dBm	-12.88 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29999 GHz	-42.60 dBm	-17.60 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30332 GHz	-29.67 dBm	-16.67 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-20.94 dBm	-7.94 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30533 GHz	19.86 dBm	-10.14 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31000 GHz	-49.87 dBm	-36.87 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31376 GHz	-33.97 dBm	-20.97 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32067 GHz	-43.81 dBm	-18.81 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32538 GHz	-44.14 dBm	-13.14 dB

Date: 29.AUG.2021 19:04:44

Highest Band Edge / 1 RB

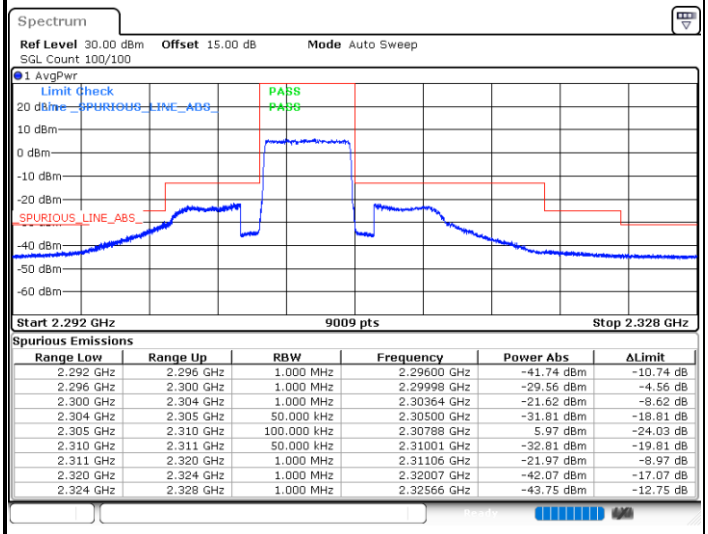


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29448 GHz	-44.02 dBm	-13.02 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29733 GHz	-44.12 dBm	-19.12 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30597 GHz	-34.32 dBm	-21.32 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.30997 GHz	-50.01 dBm	-37.01 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31466 GHz	19.69 dBm	-10.31 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31500 GHz	-21.55 dBm	-8.55 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31712 GHz	-29.68 dBm	-16.68 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32296 GHz	-42.46 dBm	-17.46 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32416 GHz	-43.84 dBm	-12.84 dB

Date: 29.AUG.2021 19:10:20

Lowest Band Edge / Full RB

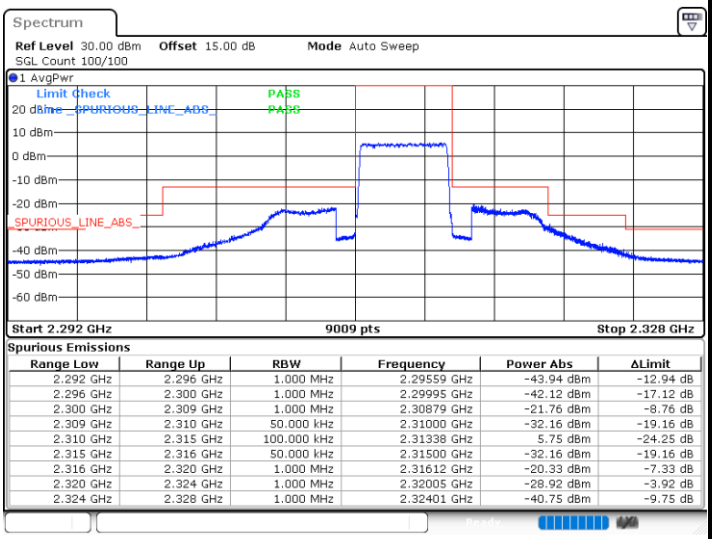


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29600 GHz	-41.74 dBm	-10.74 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29998 GHz	-29.56 dBm	-4.56 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30364 GHz	-21.62 dBm	-8.62 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-31.81 dBm	-18.81 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30788 GHz	5.97 dBm	-24.03 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31001 GHz	-32.81 dBm	-19.81 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31106 GHz	-21.97 dBm	-8.97 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32007 GHz	-42.07 dBm	-17.07 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32566 GHz	-43.75 dBm	-12.75 dB

Date: 29.AUG.2021 19:07:32

Highest Band Edge / Full RB



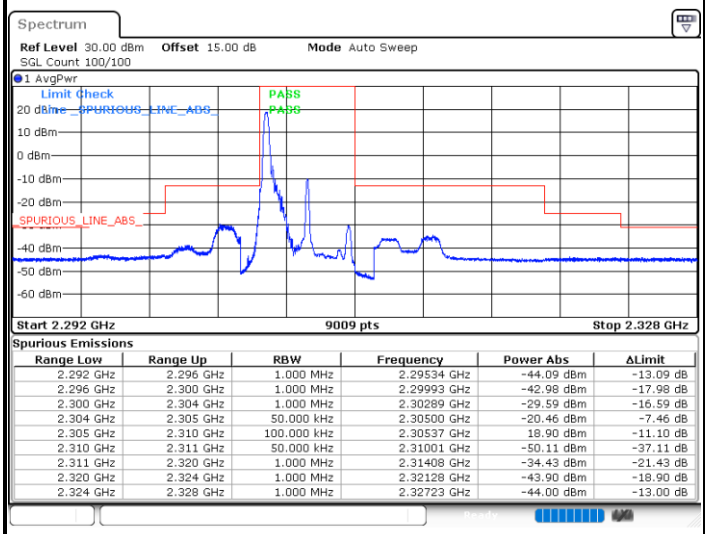
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29559 GHz	-43.94 dBm	-12.94 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29995 GHz	-42.12 dBm	-17.12 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30879 GHz	-21.76 dBm	-8.76 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.31000 GHz	-32.16 dBm	-19.16 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31338 GHz	5.75 dBm	-24.25 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31500 GHz	-32.16 dBm	-19.16 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31612 GHz	-20.33 dBm	-7.33 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32005 GHz	-28.92 dBm	-3.92 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32401 GHz	-40.75 dBm	-9.75 dB

Date: 29.AUG.2021 19:13:08

LTE Band 30 / 5MHz / 16QAM

Lowest Band Edge / 1RB

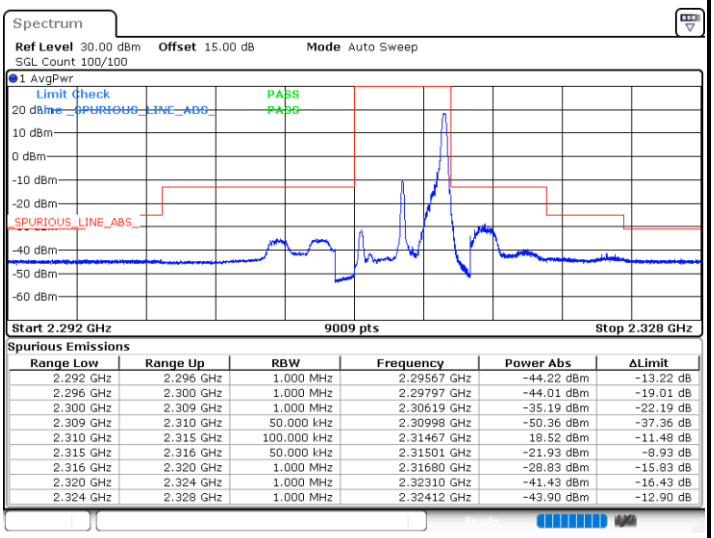


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29534 GHz	-44.09 dBm	-13.09 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29993 GHz	-42.98 dBm	-17.98 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30289 GHz	-29.59 dBm	-16.59 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-20.46 dBm	-7.46 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30537 GHz	18.90 dBm	-11.10 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31001 GHz	-50.11 dBm	-37.11 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31408 GHz	-34.43 dBm	-21.43 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32128 GHz	-43.90 dBm	-18.90 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32723 GHz	-44.00 dBm	-13.00 dB

Date: 29.AUG.2021 19:05:40

Highest Band Edge / 1 RB

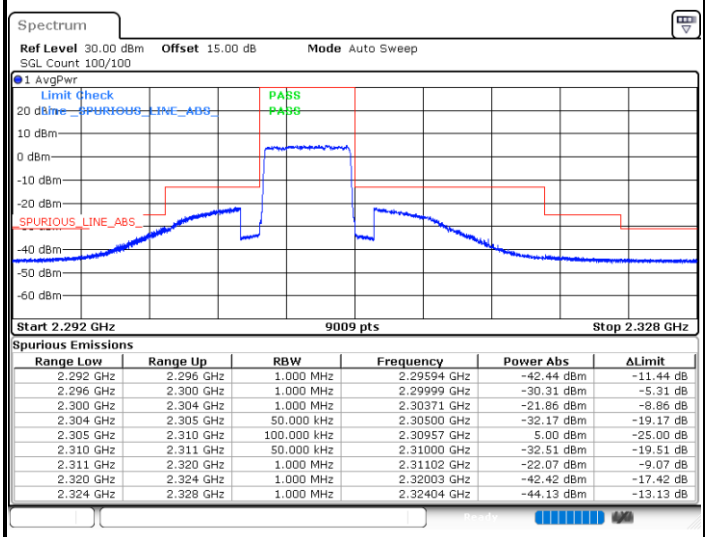


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29567 GHz	-44.22 dBm	-13.22 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29797 GHz	-44.01 dBm	-19.01 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30619 GHz	-35.19 dBm	-22.19 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.30998 GHz	-50.36 dBm	-37.36 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31467 GHz	18.52 dBm	-11.48 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31501 GHz	-21.93 dBm	-8.93 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31680 GHz	-28.83 dBm	-15.83 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32310 GHz	-41.43 dBm	-16.43 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32412 GHz	-43.90 dBm	-12.90 dB

Date: 29.AUG.2021 19:11:16

Lowest Band Edge / Full RB

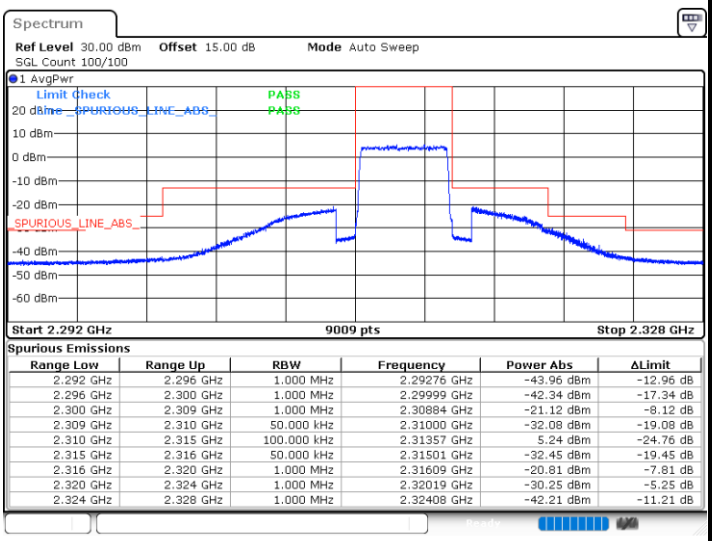


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29594 GHz	-42.44 dBm	-11.44 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29999 GHz	-30.31 dBm	-5.31 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30371 GHz	-21.86 dBm	-8.86 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-32.17 dBm	-19.17 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30957 GHz	5.00 dBm	-25.00 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31000 GHz	-32.51 dBm	-19.51 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31102 GHz	-22.07 dBm	-9.07 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32003 GHz	-42.42 dBm	-17.42 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32404 GHz	-44.13 dBm	-13.13 dB

Date: 29.AUG.2021 19:08:28

Highest Band Edge / Full RB



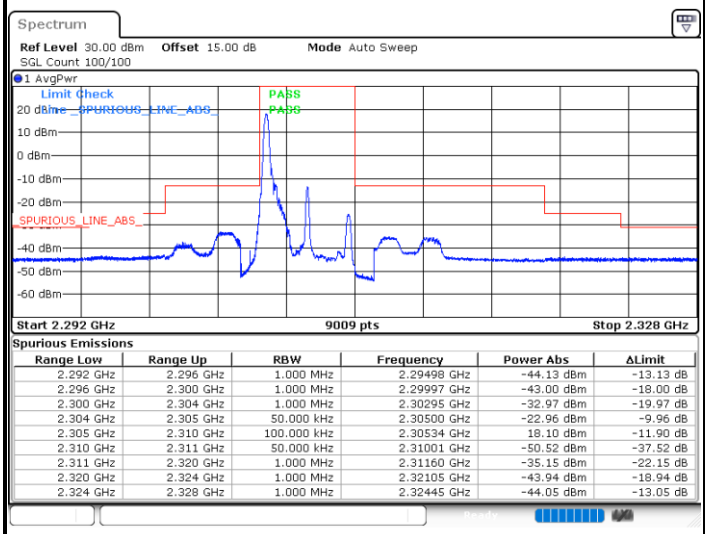
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29276 GHz	-43.96 dBm	-12.96 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29999 GHz	-42.34 dBm	-17.34 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30884 GHz	-21.12 dBm	-8.12 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.31000 GHz	-32.08 dBm	-19.08 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31357 GHz	5.24 dBm	-24.76 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31501 GHz	-32.45 dBm	-19.45 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31609 GHz	-20.81 dBm	-7.81 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32019 GHz	-30.25 dBm	-5.25 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32408 GHz	-42.21 dBm	-11.21 dB

Date: 29.AUG.2021 19:14:04

LTE Band 30 / 5MHz / 64QAM

Lowest Band Edge / 1RB

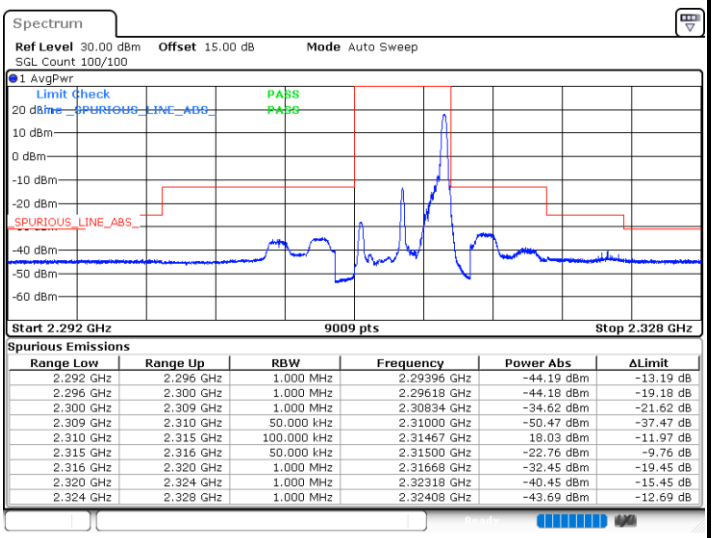


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29498 GHz	-44.13 dBm	-13.13 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29997 GHz	-43.00 dBm	-18.00 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30295 GHz	-32.97 dBm	-19.97 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-22.96 dBm	-9.96 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30534 GHz	18.10 dBm	-11.90 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31001 GHz	-50.52 dBm	-37.52 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31160 GHz	-35.15 dBm	-22.15 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32105 GHz	-43.94 dBm	-18.94 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32445 GHz	-44.05 dBm	-13.05 dB

Date: 29.AUG.2021 19:06:36

Highest Band Edge / 1 RB

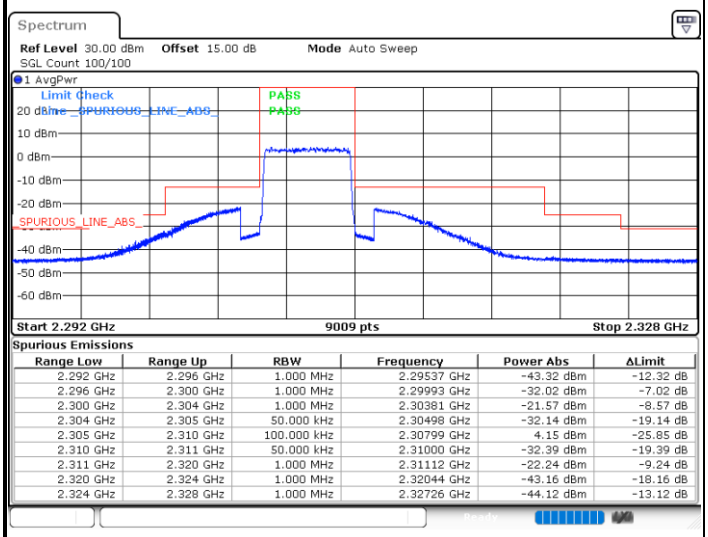


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29396 GHz	-44.19 dBm	-13.19 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29618 GHz	-44.18 dBm	-19.18 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30834 GHz	-34.62 dBm	-21.62 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.31000 GHz	-50.47 dBm	-37.47 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31467 GHz	18.03 dBm	-11.97 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31500 GHz	-22.76 dBm	-9.76 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31668 GHz	-32.45 dBm	-19.45 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32318 GHz	-40.45 dBm	-15.45 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32408 GHz	-43.69 dBm	-12.69 dB

Date: 29.AUG.2021 19:12:12

Lowest Band Edge / Full RB

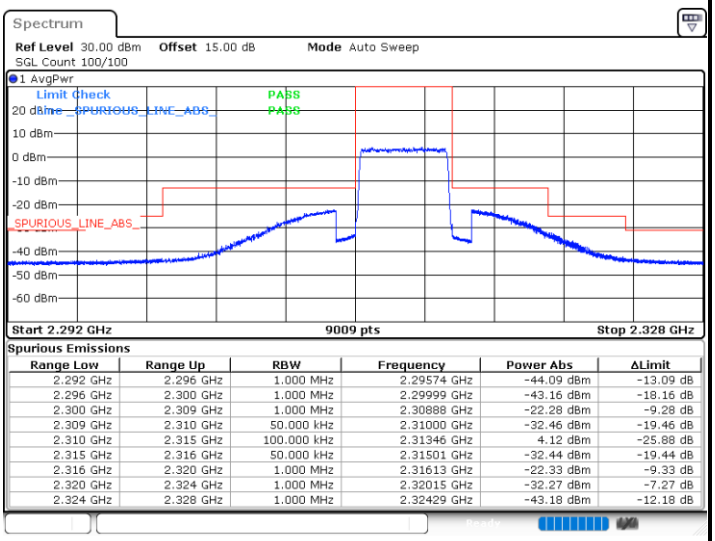


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29537 GHz	-43.32 dBm	-12.32 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29993 GHz	-32.02 dBm	-7.02 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30381 GHz	-21.57 dBm	-8.57 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30498 GHz	-32.14 dBm	-19.14 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30799 GHz	4.15 dBm	-25.85 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31000 GHz	-32.39 dBm	-19.39 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31112 GHz	-22.24 dBm	-9.24 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32044 GHz	-43.16 dBm	-18.16 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32726 GHz	-44.12 dBm	-13.12 dB

Date: 29.AUG.2021 19:09:24

Highest Band Edge / Full RB



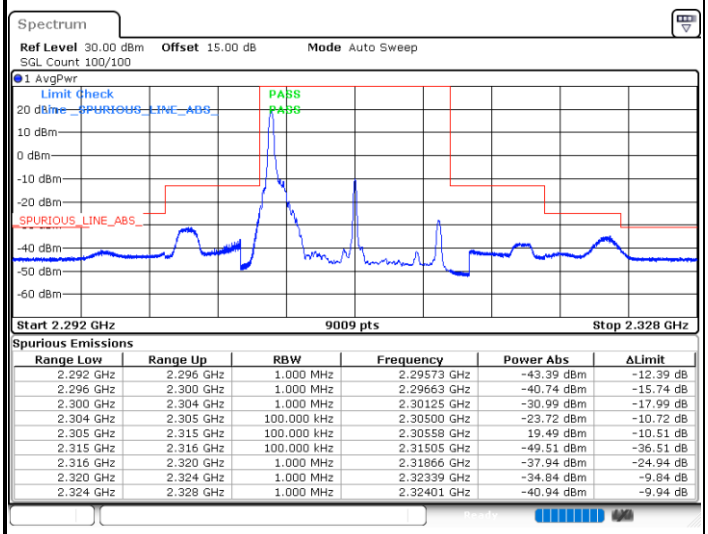
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29574 GHz	-44.09 dBm	-13.09 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29999 GHz	-43.16 dBm	-18.16 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30888 GHz	-22.28 dBm	-9.28 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.31000 GHz	-32.46 dBm	-19.46 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31346 GHz	4.12 dBm	-25.88 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31501 GHz	-32.44 dBm	-19.44 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31613 GHz	-22.33 dBm	-9.33 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32015 GHz	-32.27 dBm	-7.27 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32429 GHz	-43.18 dBm	-12.18 dB

Date: 29.AUG.2021 19:14:59

LTE Band 30 / 10MHz / QPSK

Lowest Band Edge / 1 RB

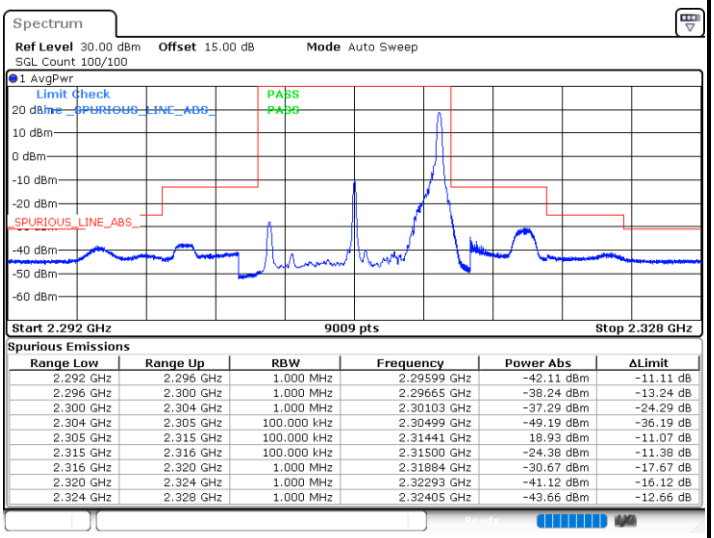


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29573 GHz	-43.39 dBm	-12.39 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29663 GHz	-40.74 dBm	-15.74 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30125 GHz	-30.99 dBm	-17.99 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-23.72 dBm	-10.72 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30558 GHz	19.49 dBm	-10.51 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31505 GHz	-49.51 dBm	-36.51 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31866 GHz	-37.94 dBm	-24.94 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32339 GHz	-34.84 dBm	-9.84 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32401 GHz	-40.94 dBm	-9.94 dB

Date: 29.AUG.2021 19:15:56

Highest Band Edge / 1 RB

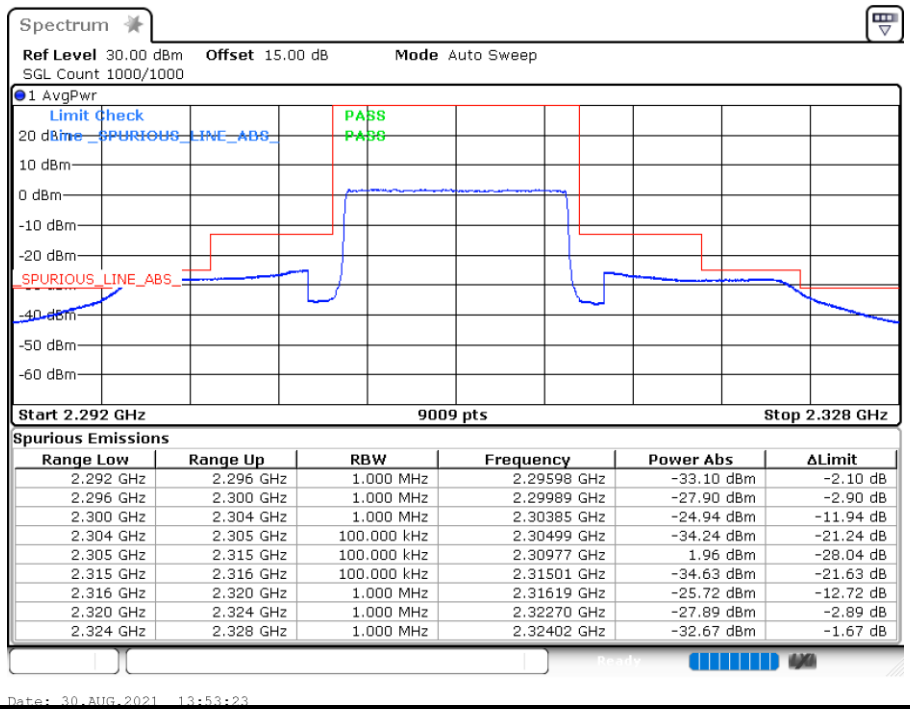


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29599 GHz	-42.11 dBm	-11.11 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29665 GHz	-38.24 dBm	-13.24 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30103 GHz	-37.29 dBm	-24.29 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30499 GHz	-49.19 dBm	-36.19 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31441 GHz	18.93 dBm	-11.07 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31500 GHz	-24.38 dBm	-11.38 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31884 GHz	-30.67 dBm	-17.67 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32293 GHz	-41.12 dBm	-16.12 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32405 GHz	-43.66 dBm	-12.66 dB

Date: 29.AUG.2021 19:18:42

Band Edge / Full RB



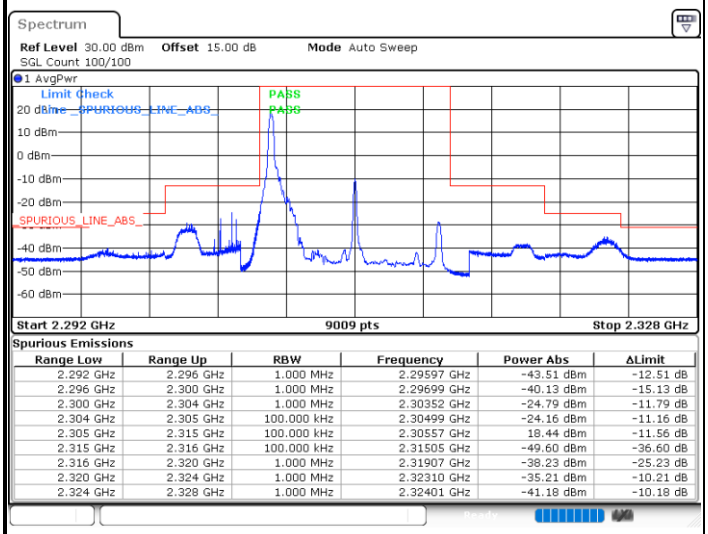
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29598 GHz	-33.10 dBm	-2.10 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29989 GHz	-27.90 dBm	-2.90 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30385 GHz	-24.94 dBm	-11.94 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30499 GHz	-34.24 dBm	-21.24 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30977 GHz	1.96 dBm	-28.04 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31501 GHz	-34.63 dBm	-21.63 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31619 GHz	-25.72 dBm	-12.72 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32270 GHz	-27.89 dBm	-2.89 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32402 GHz	-32.67 dBm	-1.67 dB

Date: 30.AUG.2021 13:53:23

LTE Band 30 / 10MHz / 16QAM

Lowest Band Edge / 1 RB

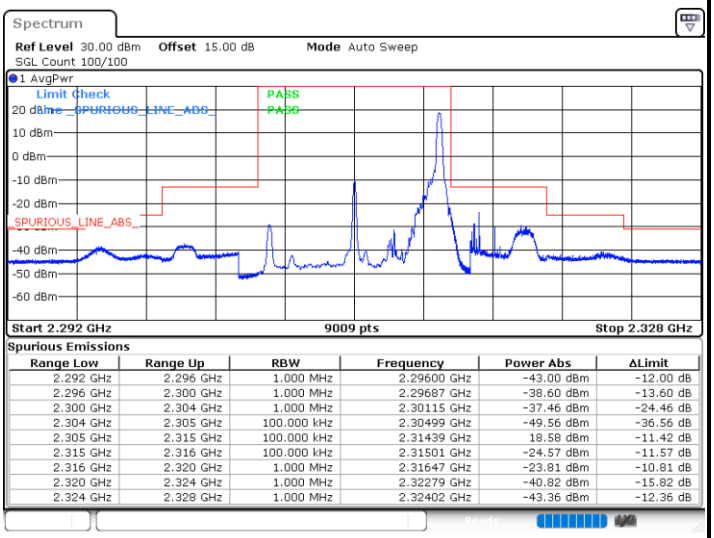


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29597 GHz	-43.51 dBm	-12.51 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29699 GHz	-40.13 dBm	-15.13 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30352 GHz	-24.79 dBm	-11.79 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30499 GHz	-24.16 dBm	-11.16 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30557 GHz	18.44 dBm	-11.56 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31505 GHz	-49.60 dBm	-36.60 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31907 GHz	-38.23 dBm	-25.23 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32310 GHz	-35.21 dBm	-10.21 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32401 GHz	-41.18 dBm	-10.18 dB

Date: 29.AUG.2021 19:16:51

Highest Band Edge / 1 RB

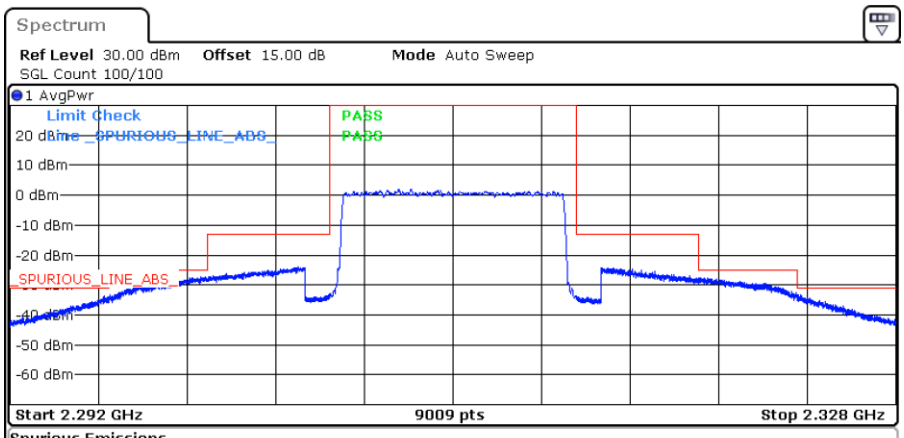


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29600 GHz	-43.00 dBm	-12.00 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29687 GHz	-38.60 dBm	-13.60 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30115 GHz	-37.46 dBm	-24.46 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30499 GHz	-49.56 dBm	-36.56 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31439 GHz	18.58 dBm	-11.42 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31501 GHz	-24.57 dBm	-11.57 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31647 GHz	-23.81 dBm	-10.81 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32279 GHz	-40.82 dBm	-15.82 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32402 GHz	-43.36 dBm	-12.36 dB

Date: 29.AUG.2021 19:19:37

Band Edge / Full RB



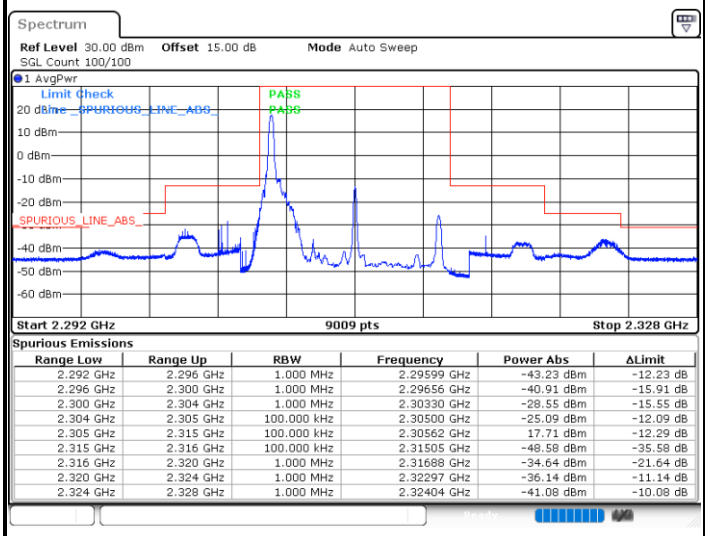
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29583 GHz	-33.85 dBm	-2.85 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29992 GHz	-27.24 dBm	-2.24 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30369 GHz	-23.86 dBm	-10.86 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30494 GHz	-33.32 dBm	-20.32 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30830 GHz	2.10 dBm	-27.90 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31500 GHz	-33.66 dBm	-20.66 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31652 GHz	-24.22 dBm	-11.22 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32004 GHz	-27.58 dBm	-2.58 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32402 GHz	-33.25 dBm	-2.25 dB

Date: 29.AUG.2021 19:22:23

LTE Band 30 / 10MHz / 64QAM

Lowest Band Edge / 1 RB

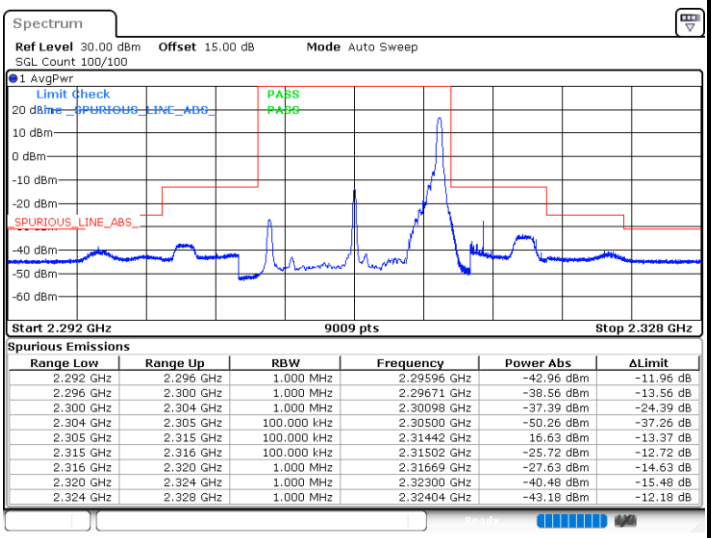


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29599 GHz	-43.23 dBm	-12.23 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29656 GHz	-40.91 dBm	-15.91 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30330 GHz	-28.55 dBm	-15.55 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-25.09 dBm	-12.09 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30562 GHz	17.71 dBm	-12.29 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31505 GHz	-48.58 dBm	-35.58 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31688 GHz	-34.64 dBm	-21.64 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32297 GHz	-36.14 dBm	-11.14 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32404 GHz	-41.08 dBm	-10.08 dB

Date: 29.AUG.2021 19:17:46

Highest Band Edge / 1 RB

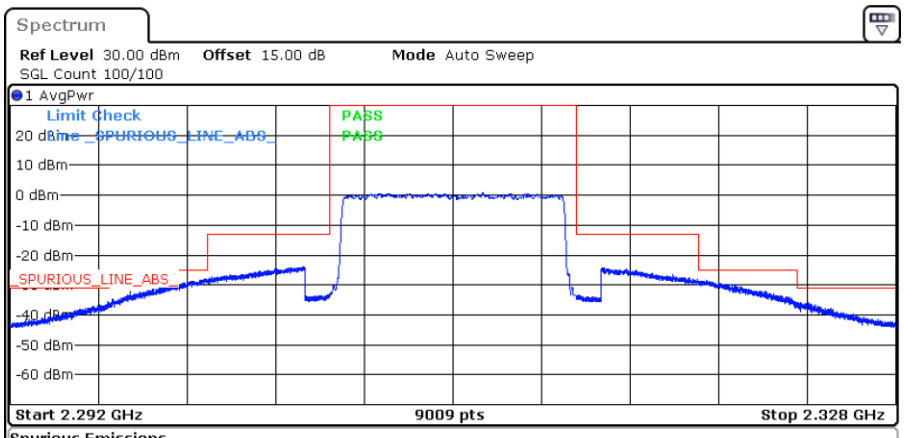


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29596 GHz	-42.96 dBm	-11.96 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29671 GHz	-38.56 dBm	-13.56 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30098 GHz	-37.39 dBm	-24.39 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-50.26 dBm	-37.26 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31442 GHz	16.63 dBm	-13.37 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31502 GHz	-25.72 dBm	-12.72 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31669 GHz	-27.63 dBm	-14.63 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32300 GHz	-40.48 dBm	-15.48 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32404 GHz	-43.18 dBm	-12.18 dB

Date: 29.AUG.2021 19:20:33

Band Edge / Full RB



Spurious Emissions

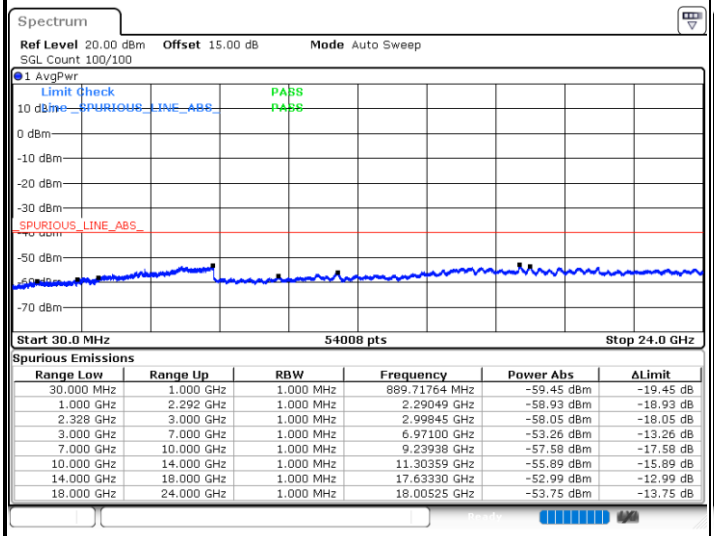
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29595 GHz	-35.61 dBm	-4.61 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29997 GHz	-27.89 dBm	-2.89 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30390 GHz	-24.00 dBm	-11.00 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30498 GHz	-33.09 dBm	-20.09 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31121 GHz	0.63 dBm	-29.37 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31508 GHz	-33.45 dBm	-20.45 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31612 GHz	-24.21 dBm	-11.21 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32029 GHz	-28.54 dBm	-3.54 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32411 GHz	-35.74 dBm	-4.74 dB

Date: 29.AUG.2021 19:23:18

Conducted Spurious Emission

LTE Band 30 / 5MHz

Lowest Channel / QPSK

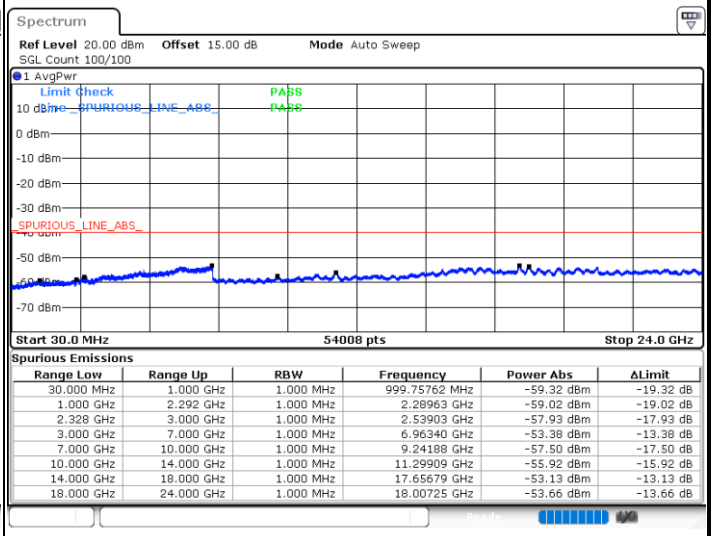


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	889.71764 MHz	-59.45 dBm	-19.45 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.29049 GHz	-58.93 dBm	-18.93 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.99845 GHz	-58.05 dBm	-18.05 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.97100 GHz	-53.26 dBm	-13.26 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.23938 GHz	-57.58 dBm	-17.58 dB
10.000 GHz	14.000 GHz	1.000 MHz	11.30359 GHz	-55.89 dBm	-15.89 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.63330 GHz	-52.99 dBm	-12.99 dB
18.000 GHz	24.000 GHz	1.000 MHz	18.00525 GHz	-53.75 dBm	-13.75 dB

Date: 29.AUG.2021 19:51:39

Lowest Channel / 16QAM

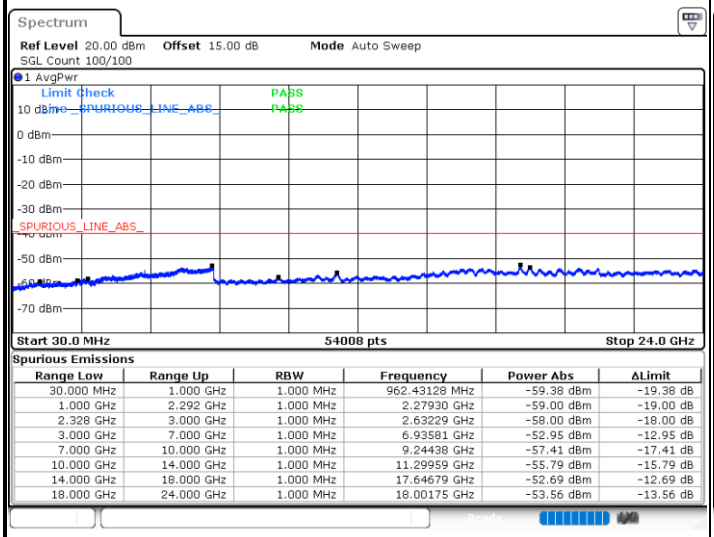


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	999.75762 MHz	-59.32 dBm	-19.32 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.28963 GHz	-59.02 dBm	-19.02 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.53903 GHz	-57.93 dBm	-17.93 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.96340 GHz	-53.38 dBm	-13.38 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.24188 GHz	-57.50 dBm	-17.50 dB
10.000 GHz	14.000 GHz	1.000 MHz	11.29909 GHz	-55.92 dBm	-15.92 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.65679 GHz	-53.13 dBm	-13.13 dB
18.000 GHz	24.000 GHz	1.000 MHz	18.00725 GHz	-53.66 dBm	-13.66 dB

Date: 29.AUG.2021 19:52:33

Middle Channel / QPSK

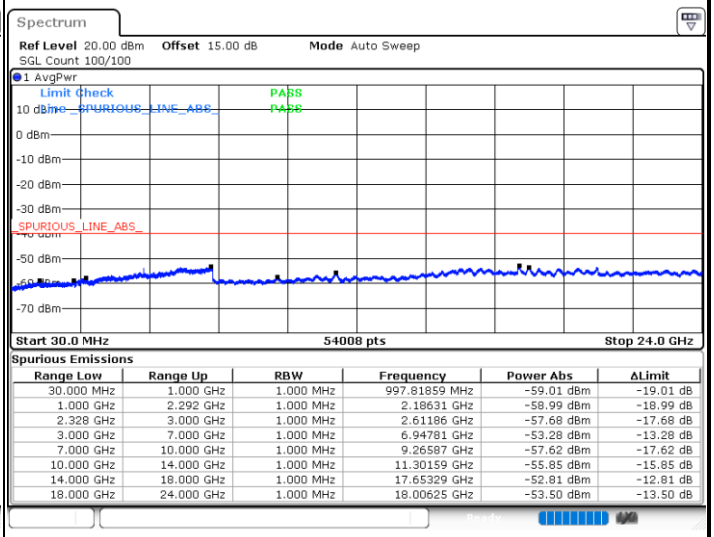


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	962.43128 MHz	-59.38 dBm	-19.38 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.27930 GHz	-59.00 dBm	-19.00 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.63229 GHz	-58.00 dBm	-18.00 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.93581 GHz	-52.95 dBm	-12.95 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.24438 GHz	-57.41 dBm	-17.41 dB
10.000 GHz	14.000 GHz	1.000 MHz	11.29959 GHz	-55.79 dBm	-15.79 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.64679 GHz	-52.69 dBm	-12.69 dB
18.000 GHz	24.000 GHz	1.000 MHz	18.00175 GHz	-53.56 dBm	-13.56 dB

Date: 29.AUG.2021 19:53:28

Middle Channel / 16QAM



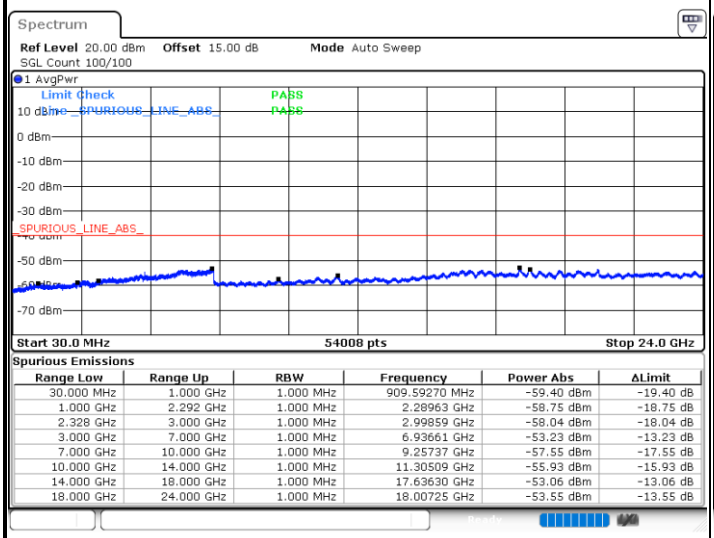
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	997.81859 MHz	-59.01 dBm	-19.01 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.18631 GHz	-58.99 dBm	-18.99 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.61186 GHz	-57.68 dBm	-17.68 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.94781 GHz	-53.28 dBm	-13.28 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.26587 GHz	-57.62 dBm	-17.62 dB
10.000 GHz	14.000 GHz	1.000 MHz	11.30159 GHz	-55.85 dBm	-15.85 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.65329 GHz	-52.81 dBm	-12.81 dB
18.000 GHz	24.000 GHz	1.000 MHz	18.00625 GHz	-53.50 dBm	-13.50 dB

Date: 29.AUG.2021 19:54:22

LTE Band 30 / 5MHz

Highest Channel / QPSK

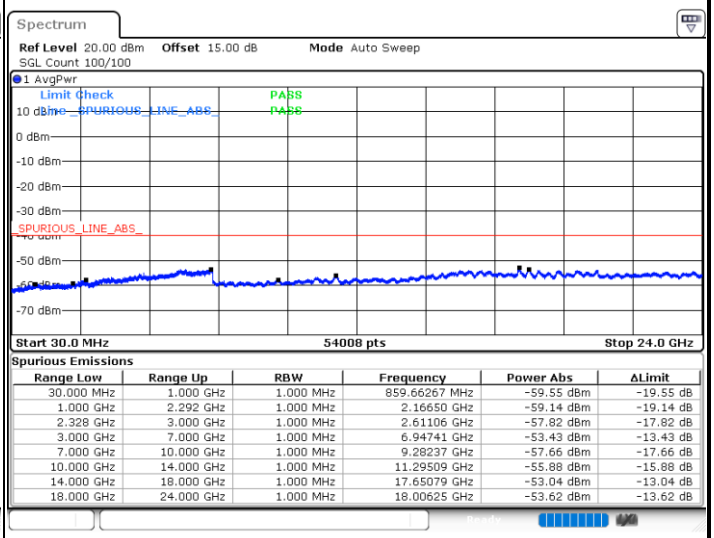


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	909.59270 MHz	-59.40 dBm	-19.40 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.28963 GHz	-58.75 dBm	-18.75 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.99859 GHz	-58.04 dBm	-18.04 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.93661 GHz	-53.23 dBm	-13.23 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.25737 GHz	-57.55 dBm	-17.55 dB
10.000 GHz	14.000 GHz	1.000 MHz	11.30509 GHz	-55.93 dBm	-15.93 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.63630 GHz	-53.06 dBm	-13.06 dB
18.000 GHz	24.000 GHz	1.000 MHz	18.00725 GHz	-53.55 dBm	-13.55 dB

Date: 29.AUG.2021 19:55:16

Highest Channel / 16QAM



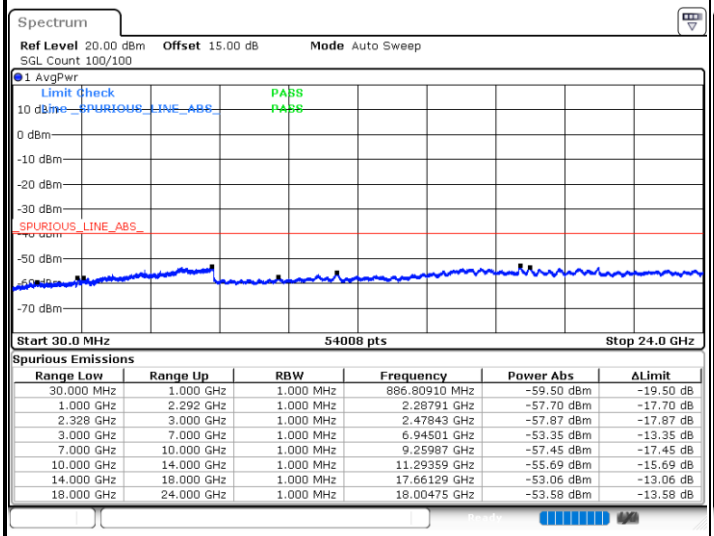
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	859.66267 MHz	-59.55 dBm	-19.55 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.16650 GHz	-59.14 dBm	-19.14 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.61106 GHz	-57.82 dBm	-17.82 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.94741 GHz	-53.43 dBm	-13.43 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.28237 GHz	-57.66 dBm	-17.66 dB
10.000 GHz	14.000 GHz	1.000 MHz	11.29509 GHz	-55.88 dBm	-15.88 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.65079 GHz	-53.04 dBm	-13.04 dB
18.000 GHz	24.000 GHz	1.000 MHz	18.00625 GHz	-53.62 dBm	-13.62 dB

Date: 29.AUG.2021 19:56:11

LTE Band 30 / 10MHz

Middle Channel / QPSK

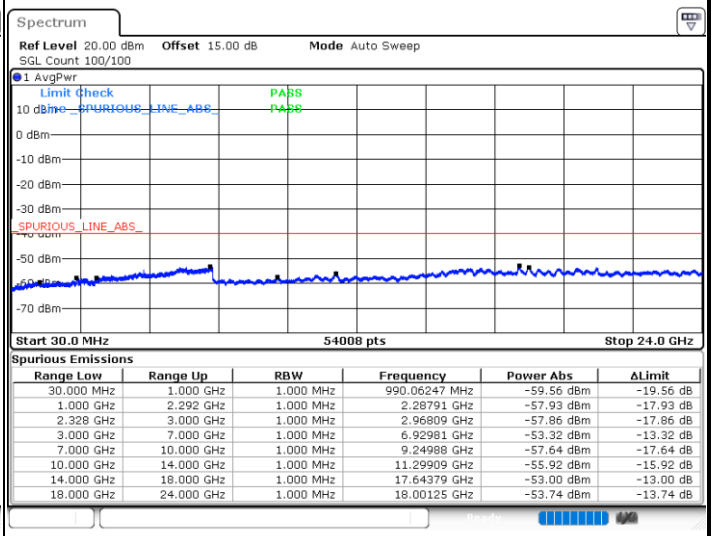


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	886.80910 MHz	-59.50 dBm	-19.50 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.28791 GHz	-57.70 dBm	-17.70 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.47843 GHz	-57.87 dBm	-17.87 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.94501 GHz	-53.35 dBm	-13.35 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.25987 GHz	-57.45 dBm	-17.45 dB
10.000 GHz	14.000 GHz	1.000 MHz	11.29359 GHz	-55.69 dBm	-15.69 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.66129 GHz	-53.06 dBm	-13.06 dB
18.000 GHz	24.000 GHz	1.000 MHz	18.00475 GHz	-53.58 dBm	-13.58 dB

Date: 29.AUG.2021 20:00:44

Middle Channel / 16QAM



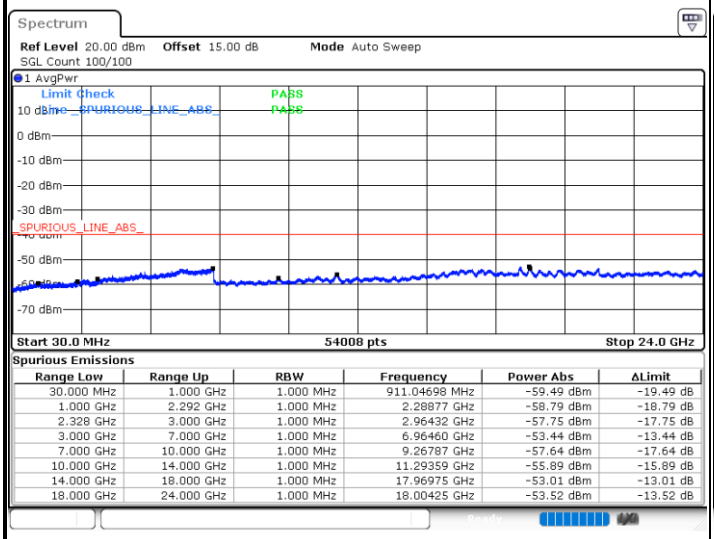
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	990.06247 MHz	-59.56 dBm	-19.56 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.28791 GHz	-57.93 dBm	-17.93 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.96809 GHz	-57.86 dBm	-17.86 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.92981 GHz	-53.32 dBm	-13.32 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.24988 GHz	-57.64 dBm	-17.64 dB
10.000 GHz	14.000 GHz	1.000 MHz	11.29909 GHz	-55.92 dBm	-15.92 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.64379 GHz	-53.00 dBm	-13.00 dB
18.000 GHz	24.000 GHz	1.000 MHz	18.00125 GHz	-53.74 dBm	-13.74 dB

Date: 29.AUG.2021 20:01:38

LTE Band 30 / 5MHz

Lowest Channel / 64QAM

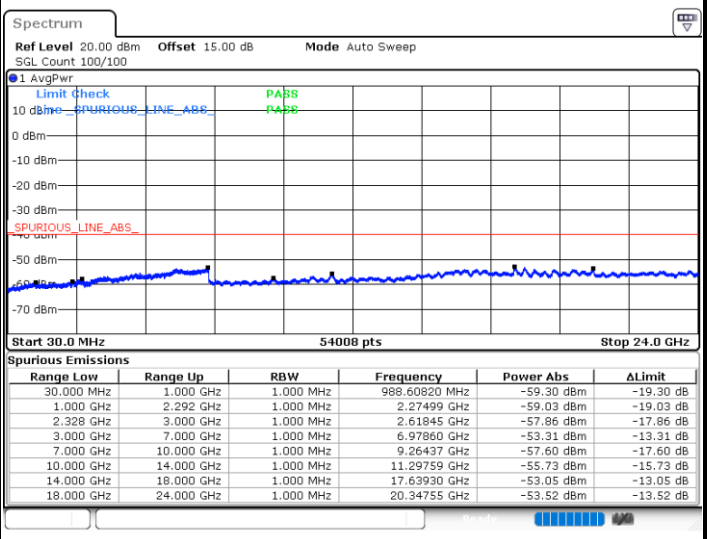


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	911.04698 MHz	-59.49 dBm	-19.49 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.28877 GHz	-58.79 dBm	-18.79 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.96432 GHz	-57.75 dBm	-17.75 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.96460 GHz	-53.44 dBm	-13.44 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.26787 GHz	-57.64 dBm	-17.64 dB
10.000 GHz	14.000 GHz	1.000 MHz	11.29359 GHz	-55.89 dBm	-15.89 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.96975 GHz	-53.01 dBm	-13.01 dB
18.000 GHz	24.000 GHz	1.000 MHz	18.00425 GHz	-53.52 dBm	-13.52 dB

Date: 29.AUG.2021 19:57:06

Middle Channel / 64QAM

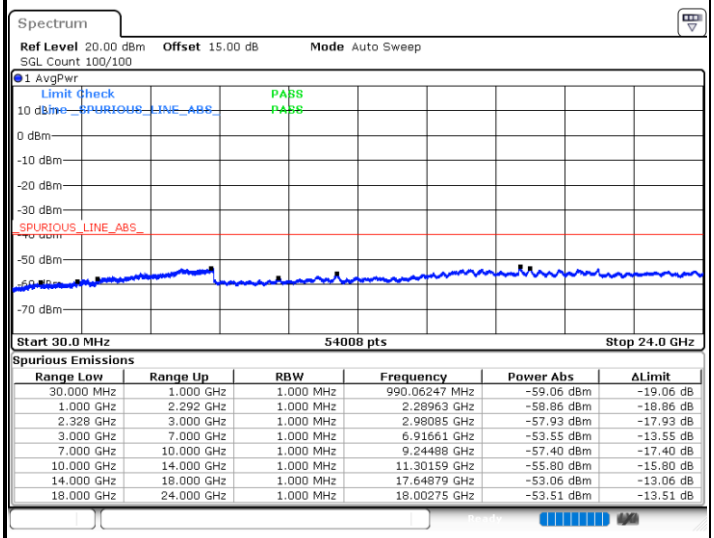


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	988.60820 MHz	-59.30 dBm	-19.30 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.27499 GHz	-59.03 dBm	-19.03 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.61845 GHz	-57.86 dBm	-17.86 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.97860 GHz	-53.31 dBm	-13.31 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.26437 GHz	-57.60 dBm	-17.60 dB
10.000 GHz	14.000 GHz	1.000 MHz	11.29759 GHz	-55.73 dBm	-15.73 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.63930 GHz	-53.05 dBm	-13.05 dB
18.000 GHz	24.000 GHz	1.000 MHz	20.34755 GHz	-53.52 dBm	-13.52 dB

Date: 29.AUG.2021 19:58:00

Highest Channel / 64QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	990.06247 MHz	-59.06 dBm	-19.06 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.28963 GHz	-58.86 dBm	-18.86 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.98085 GHz	-57.93 dBm	-17.93 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.91661 GHz	-53.55 dBm	-13.55 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.24488 GHz	-57.40 dBm	-17.40 dB
10.000 GHz	14.000 GHz	1.000 MHz	11.30159 GHz	-55.80 dBm	-15.80 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.64879 GHz	-53.06 dBm	-13.06 dB
18.000 GHz	24.000 GHz	1.000 MHz	18.00275 GHz	-53.51 dBm	-13.51 dB

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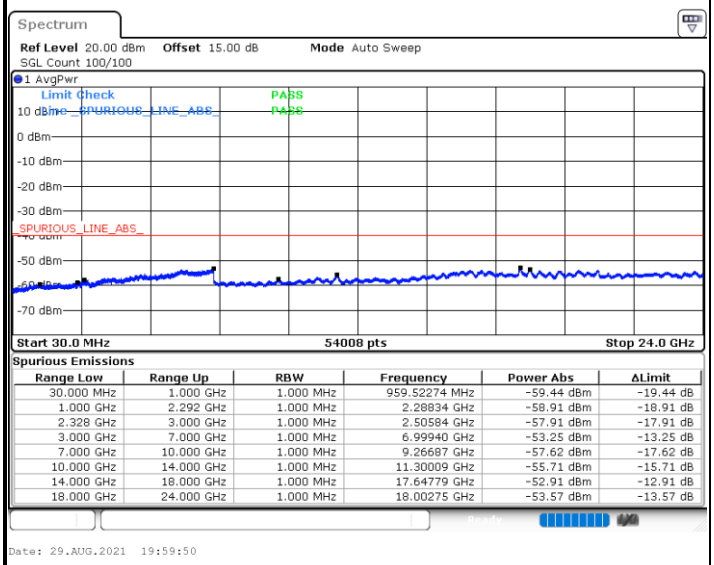
LTE Band 30 / 10MHz	
Middle Channel / 64QAM	



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	959.52274 MHz	-59.44 dBm	-19.44 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.28834 GHz	-58.91 dBm	-18.91 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.50584 GHz	-57.91 dBm	-17.91 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99940 GHz	-53.25 dBm	-13.25 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.26687 GHz	-57.62 dBm	-17.62 dB
10.000 GHz	14.000 GHz	1.000 MHz	11.30009 GHz	-55.71 dBm	-15.71 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.64779 GHz	-52.91 dBm	-12.91 dB
18.000 GHz	24.000 GHz	1.000 MHz	18.00275 GHz	-53.57 dBm	-13.57 dB

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	0.0001	PASS
40	Normal Voltage	0.0004	
30	Normal Voltage	0.0005	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0059	
0	Normal Voltage	0.0007	
-10	Normal Voltage	0.0001	
-20	Normal Voltage	0.0006	
-30	Normal Voltage	0.0005	
20	Maximum Voltage	0.0004	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0009	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 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

For Ant1:

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	4611.00	-51.35	-40	-11.35	-75.46	-57.60	6.45	12.70	H
	6916.50	-49.24	-40	-9.24	-74.90	-52.64	8.40	11.80	H
	9222.00	-56.29	-40	-16.29	-83.47	-58.64	9.65	12.00	H
	4611.00	-54.11	-40	-14.11	-78.35	-60.36	6.45	12.70	V
	6916.50	-52.58	-40	-12.58	-79.34	-55.98	8.40	11.80	V
	9222.00	-53.92	-40	-13.92	-83.33	-56.27	9.65	12.00	V

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

For Ant2:

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	4611.00	-52.30	-40	-12.30	-76.41	-58.55	6.45	12.70	H
	6916.50	-48.78	-40	-8.78	-74.44	-52.18	8.40	11.80	H
	9222.00	-56.16	-40	-16.16	-83.34	-58.51	9.65	12.00	H
	4611.00	-53.69	-40	-13.69	-77.93	-59.94	6.45	12.70	V
	6916.50	-52.98	-40	-12.98	-79.74	-56.38	8.40	11.80	V
	9222.00	-54.01	-40	-14.01	-83.42	-56.36	9.65	12.00	V

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