FCC RF Test Report

APPLICANT	: Shenzhen Tinno Mobile Technology Corp.
EQUIPMENT	: Smartphone
BRAND NAME	: TINNO
MODEL NAME	: U705AA, U705AC
FCC ID	: XD6U705AA
STANDARD	: 47 CFR Part 2, 27D
CLASSIFICATION	: PCS Licensed Transmitter Held to Ear (PCE)

The product was received on Feb. 21, 2020 and completely tested on Apr. 29, 2020. 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
FG022101D	Rev. 01	Initial issue of report	May 08, 2020

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 Power Density	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 11.96 dB at 4611.000 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

Shenzhen Tinno Mobile Technology Corp.
4/F,H-3 Building,OCT Eastern Industrial Park. NO.1 XiangShan East Road,Nan Shan District,Shenzhen,P.R.China.

1.2 Manufacturer

Shenzhen Tinno Mobile Technology Corp.
4/F,H-3 Building,OCT Eastern Industrial Park. NO.1 XiangShan East Road,Nan Shan District,Shenzhen,P.R.China.

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Smartphone
Brand Name	TINNO
Model Name	U705AA, U705AC
FCC ID	XD6U705AA
EUT supports Radios application	GSM/WCDMA/LTE WLAN 2.4GHz 802.11b/g/n HT20/ WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE GNSS
IMEI Code	Conducted/ Radiation: 865638040006414
HW Version	V1.0
SW Version	U705AA: U705AAV01.16.11 U705AC: U705ACV01.43.01
EUT Stage	Identical Prototype

Note: There are two types of EUT, the model name: U705AA is the sample 1, the model name:U705AC is the sample 2, please refer to the product equality declaration is exhibited separately. According to the difference, we evaluate the sample 1 to perform full test.

1.4 Product Specification of Equipment Under Test

Product Feature	
Tx Frequency	LTE Band 30 : 2307.5 MHz ~ 2312.5 MHz
Rx Frequency	LTE Band 30 : 2352.5 MHz ~ 2357.5 MHz
Bandwidth	5MHz / 10MHz
Maximum Output Power to Antenna	LTE Band 30 : 21.15 dBm
Antenna Gain	LTE Band 30 : -0.70 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 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	-	0.1288	4M49W7D	-	0.1019
10	2310.0	9M03G7D	0.0057	0.1303	9M01W7D	-	0.0982

LTE Band 30		64QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum Conducted power(W)
5	2307.5 ~ 2312.5	4M50W7D	-	0.0776
10	2310.0	9M01W7D	-	0.0780

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	No. 3 Bldg the third floor of south, Shahe River west, Fengzeyuan Warehouse, Nanshan Shenzhen, 518055 People's Republic of China 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	Manufacture	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

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

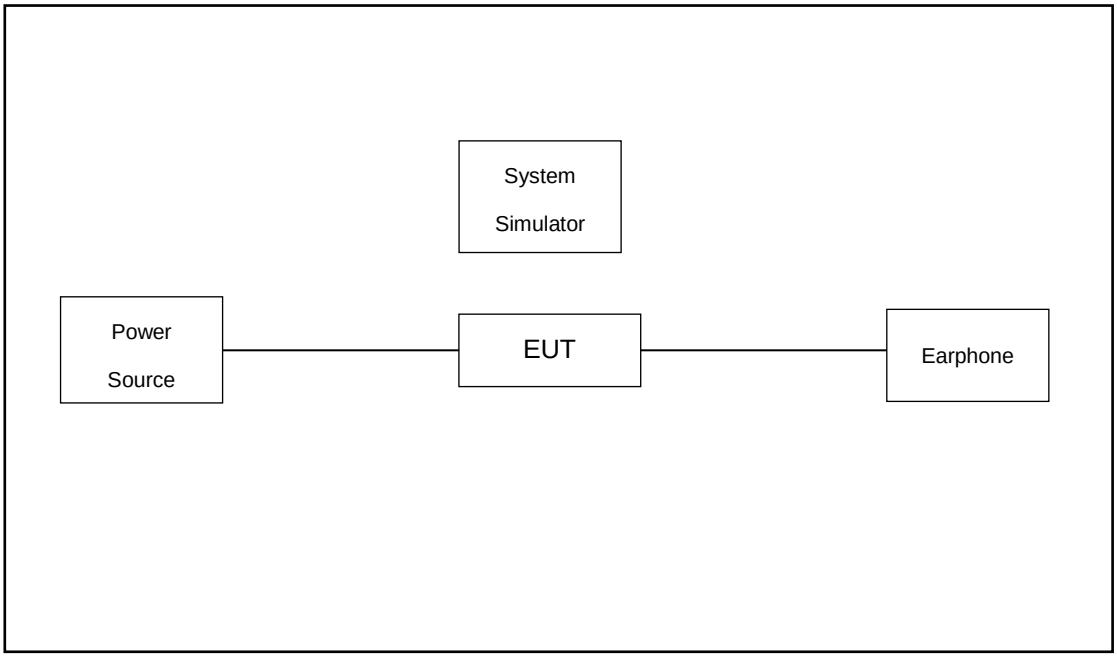
2.1 Test Mode

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	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 PSD	30	-	-	V		-	-	V	V	V	V			V	V	V
		-	-		V	-	-	V	V	V	V				V	
26dB and 99% Bandwidth	30	-	-	V		-	-	V	V	V			V	V	V	V
		-	-		V	-	-	V	V	V			V		V	
Conducted Band Edge	30	-	-	V		-	-	V	V	V	V		V	V		V
		-	-		V	-	-	V	V	V	V		V		V	
Conducted Spurious Emission	30	-	-	V		-	-	V	V	V	V			V	V	V
		-	-		V	-	-	V	V	V	V				V	
Frequency Stability	30	-	-		V	-	-	V					V		V	
Radiated Spurious Emission	30	-	-	V		-	-	V			V				V	
					V			V			V				V	
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.	LTE Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	DC Power Supply	GW INSTEK	GPS-3030D	N/A	N/A	Unshielded, 1.8 m
3.	Earphone	Apple	MC690ZP/A	N/A	Shielded,1.0m	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

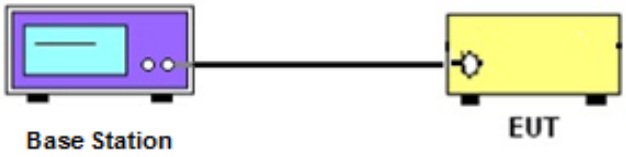
3 Conducted Test Items

3.1 Measuring Instruments

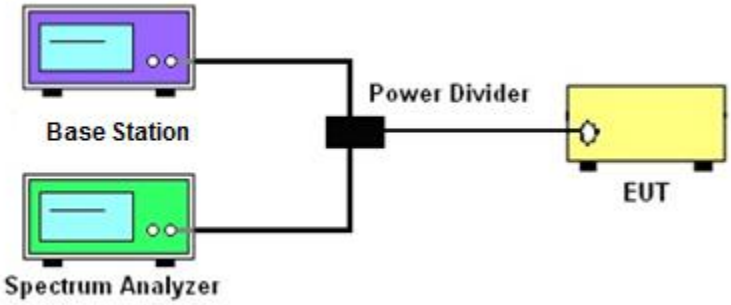
See list of measuring instruments of this test report.

3.2 Test Setup

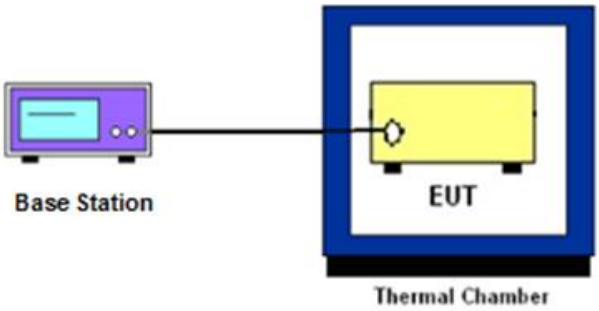
3.2.1 Conducted Output Power



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 Power Density

3.6.1 Description of EIRP Power Density

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. The testing follows ANSI C63.26 Section 5.2.4.5
2. Set instrument center frequency to OBW center frequency.
3. Set span to at least 1.5 times the OBW.
4. Set the RBW to the specified reference bandwidth (5MHz).
5. Set VBW ≥ 3 × RBW.
6. Detector = RMS (power averaging).
7. Ensure that the number of measurement points in the sweep ≥ 2 × span/RBW.
8. Sweep time = auto couple.
9. Employ trace averaging (RMS) mode over a minimum of 100 traces.
10. Use the peak marker function to determine the maximum amplitude level within the reference bandwidth (PSD).

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 30MHz 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.

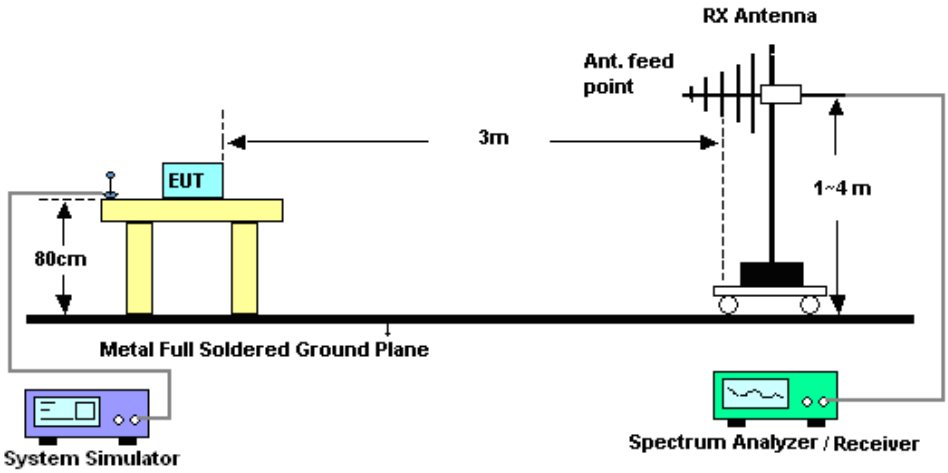
4 Radiated Test Items

4.1 Measuring Instruments

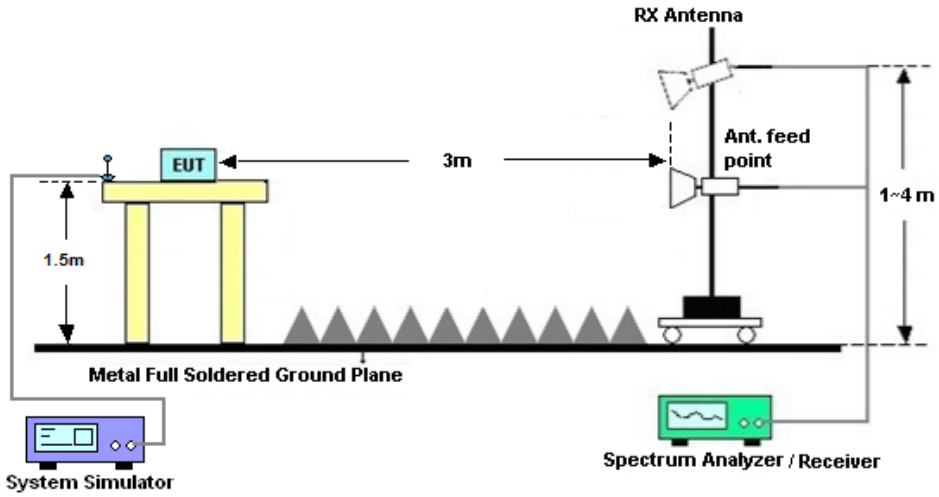
See list of measuring instruments of this test report.

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 C63.26. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 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. 18, 2019	Mar. 14, 2020~ Apr. 29, 2020	Apr. 17, 2020	Conducted (TH01-SZ)
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 16, 2020		Apr. 15, 2021	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Dec. 26, 2019	Mar. 14, 2020~ Apr. 29, 2020	Dec. 25, 2020	Conducted (TH01-SZ)
EMI Test Receiver&SA	Agilent	N9038A	MY52260185	20Hz~26.5GHz	Jul. 22, 2019	Mar. 10, 2020	Jul. 21, 2020	Radiation (03CH01-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270104	0.5GHz~26.5Ghz	Dec. 27, 2019	Mar. 10, 2020	Dec. 26, 2020	Radiation (03CH01-SZ
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	Jul. 19, 2019	Mar. 10, 2020	Jul. 18, 2020	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Aug. 27, 2019	Mar. 10, 2020	Aug. 26, 2020	Radiation (03CH01-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr.18, 2019	Mar. 10, 2020	Apr. 17, 2020	Radiation (03CH01-SZ)
LF Amplifier	Burgeon	BPA-530	102209	0.01~3000Mhz	Apr. 19, 2019	Mar. 10, 2020	Apr. 18, 2020	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	AMF-7D-00 101800-30-1 0P-R	1943528	1GHz~18GHz	Oct. 18,2019	Mar. 10, 2020	Oct. 17,2020	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	TTA1840-35 -HG	1871923	18GHz~40GHz	Jul. 22. 2019	Mar. 10, 2020	Jul. 21. 2020	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	616010001985	N/A	NCR	Mar. 10, 2020	NCR	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Mar. 10, 2020	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Mar. 10, 2020	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))	**2.5dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.5dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.0dB**

Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)

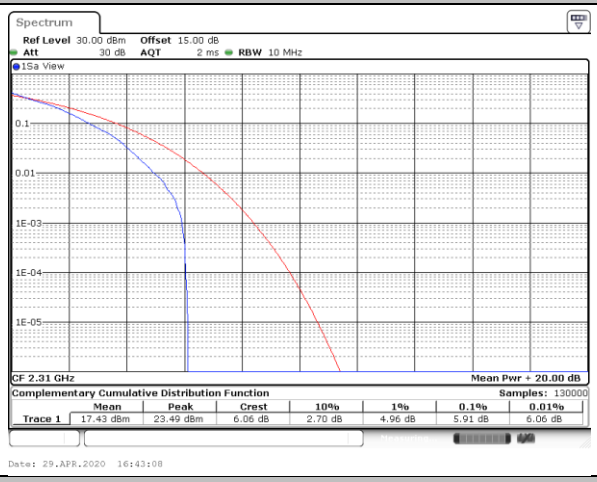
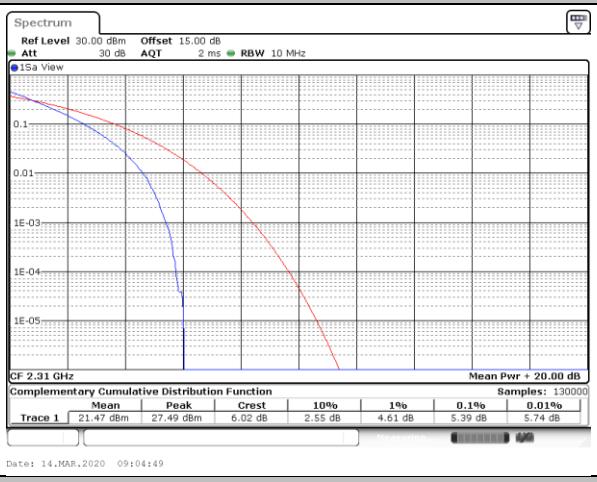
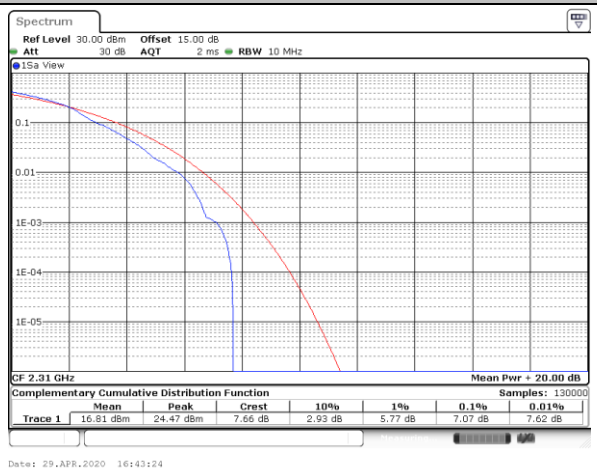
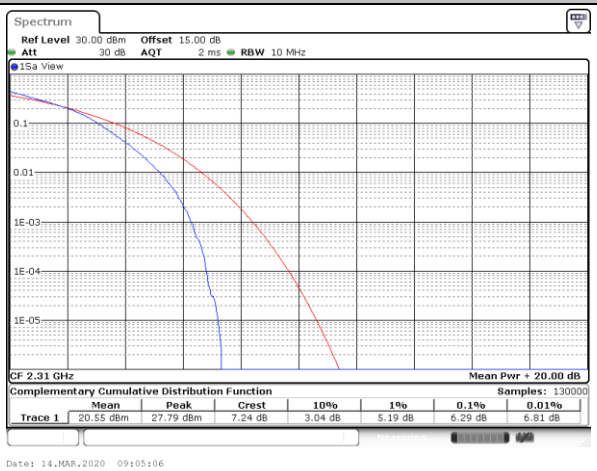
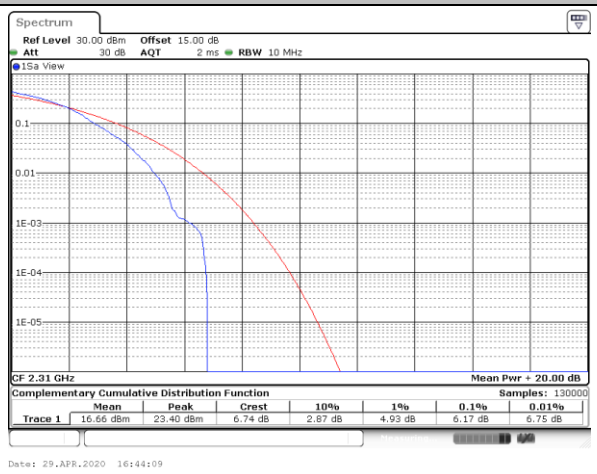
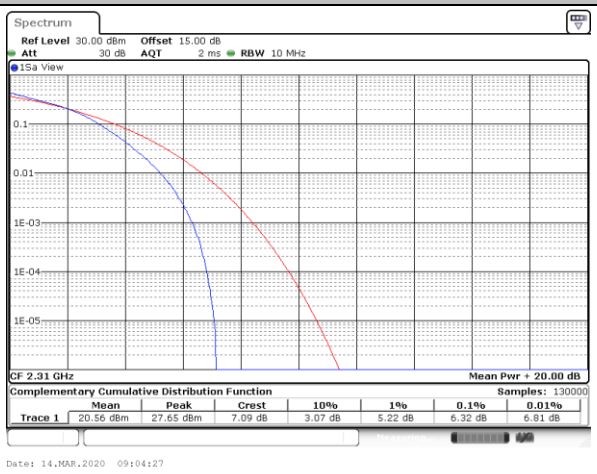
LTE Band 30 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	18.95	18.94	18.89
5	1	12		19.08	19.03	19.02
5	1	24		18.92	18.87	18.85
5	12	0		21.04	21.05	21.01
5	12	7		21.03	21.10	20.91
5	12	13		21.04	21.08	20.99
5	25	0		20.78	20.76	20.79
5	1	0	16-QAM	18.06	18.07	18.10
5	1	12		18.23	18.18	18.19
5	1	24		18.09	18.09	18.09
5	12	0		19.97	20.04	19.98
5	12	7		19.98	19.92	20.08
5	12	13		20.05	20.08	20.06
5	25	0		19.70	19.78	19.73
5	1	0	64QAM	17.14	17.17	17.16
5	1	12		17.21	17.25	17.28
5	1	24		17.11	17.18	17.14
5	12	0		18.87	18.86	18.90
5	12	7		18.89	18.89	18.88
5	12	13		18.85	18.87	18.86
5	25	0		18.64	18.61	18.67

10	1	0	QPSK	-	18.97	-
10	1	25			19.09	
10	1	49			18.93	
10	25	0			21.08	
10	25	12			21.15	
10	25	25			21.01	
10	50	0			20.81	
10	1	0	16-QAM		18.14	
10	1	25			18.28	
10	1	49			18.16	
10	25	0			19.85	
10	25	12			19.92	
10	25	25			19.81	
10	50	0			19.80	
10	1	0	64QAM		17.20	
10	1	25			17.30	
10	1	49			17.21	
10	25	0			18.89	
10	25	12			18.92	
10	25	25			18.83	
10	50	0			18.70	

LTE Band 30

Peak-to-Average Ratio

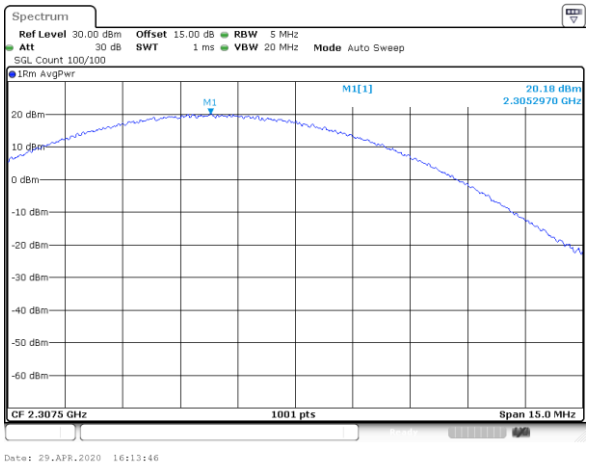
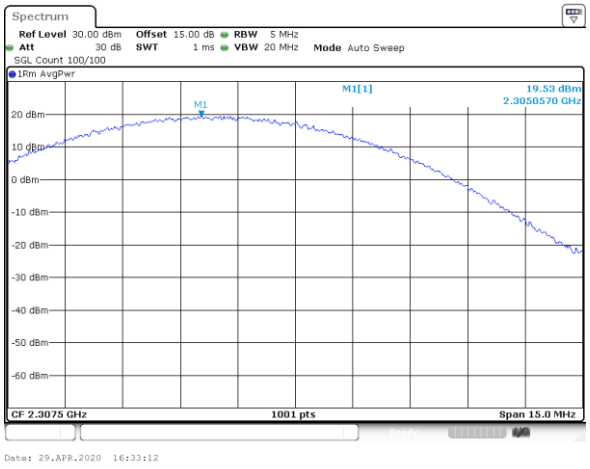
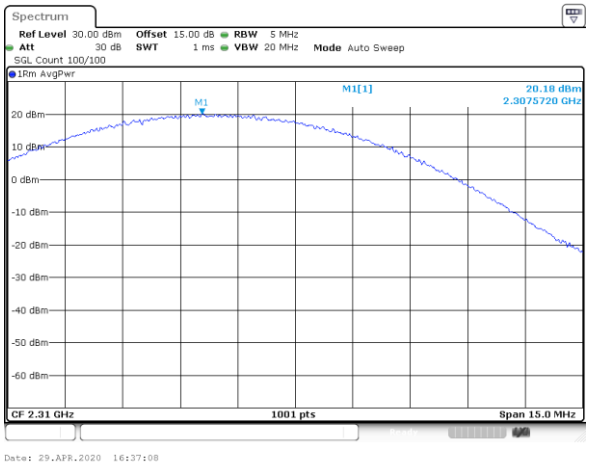
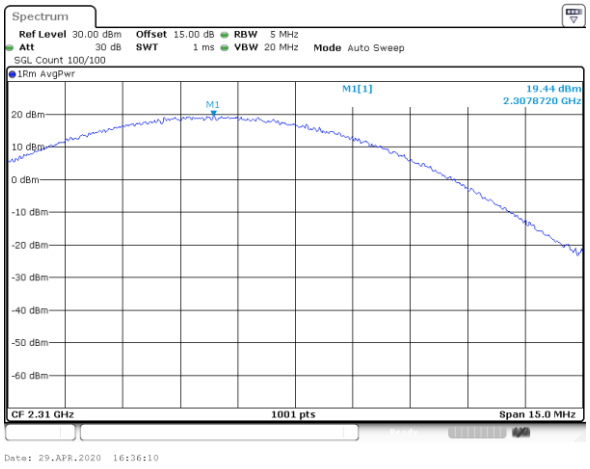
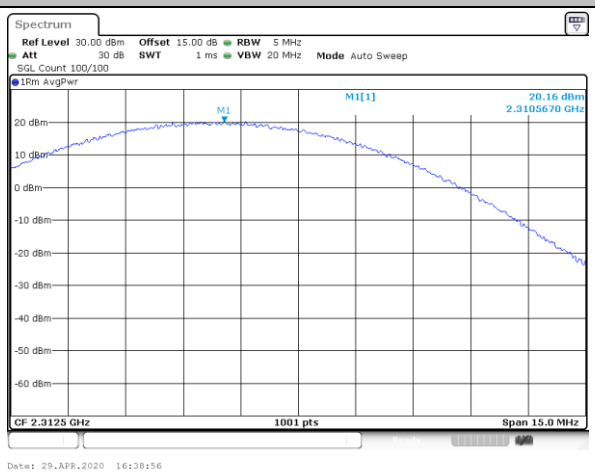
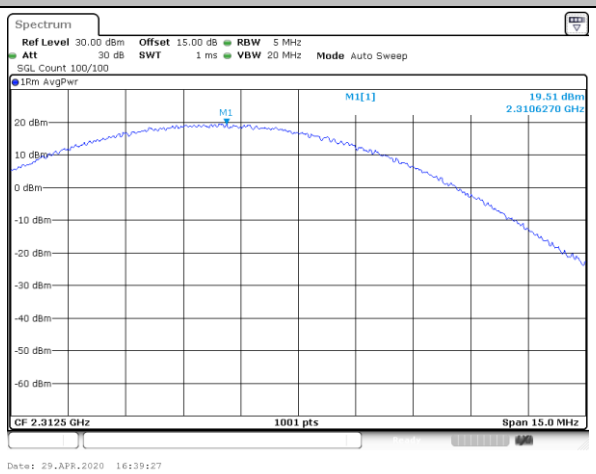
Mode	LTE Band 30 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	-	-	PASS
Middle CH	5.91	5.39	7.07	6.29	
Highest CH	-	-	-	-	
Mode	LTE Band 30 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	-	-	-	-	PASS
Middle CH	6.17	6.32	-	-	
Highest CH	-	-	-	-	

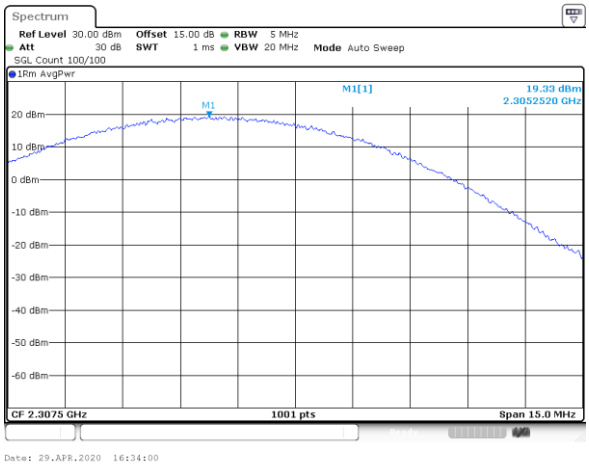
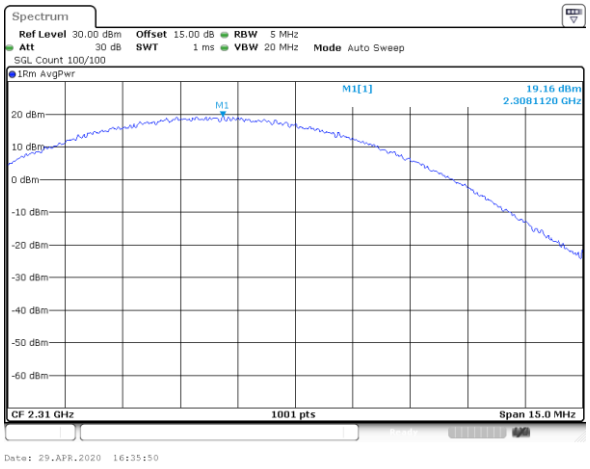
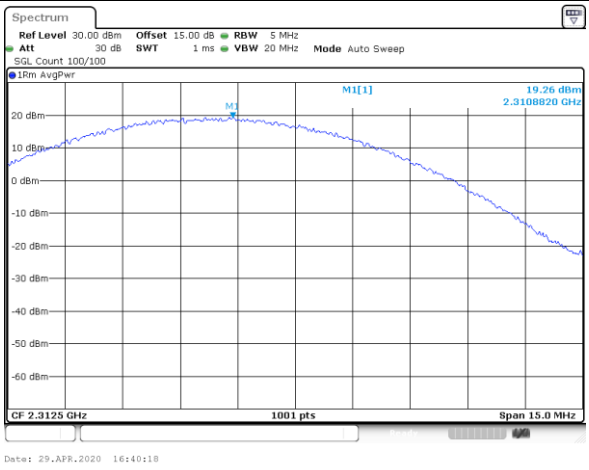
LTE Band 30 / 10MHz / QPSK	
Middle Channel / 1RB	**Middle Channel / Full RB**
	
LTE Band 30 / 10MHz / 16QAM	
Middle Channel / 1RB	**Middle Channel / Full RB**
	
LTE Band 30 / 10MHz / 64QAM	
Middle Channel / 1RB	**Middle Channel / Full RB**
	

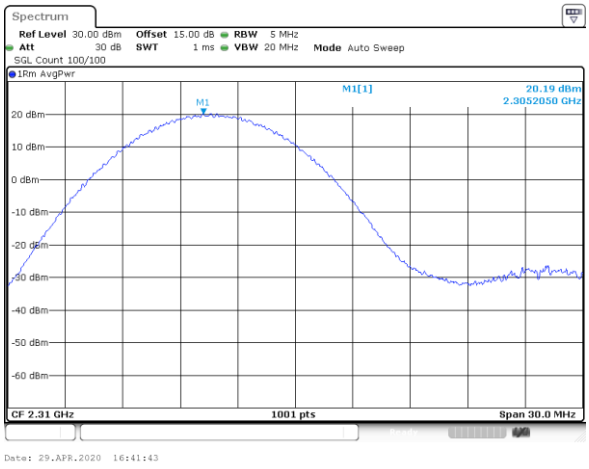
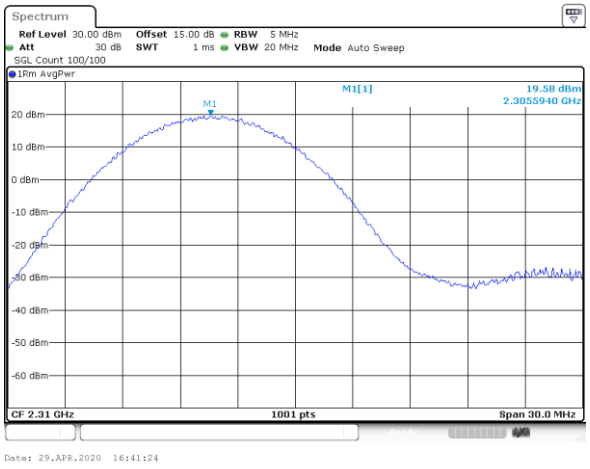
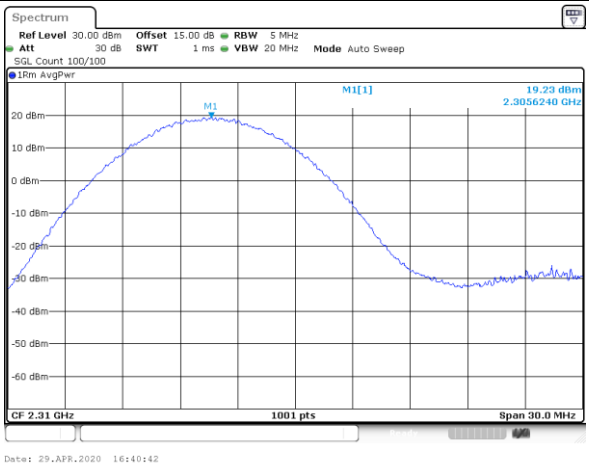
EIRP Power Density

Mode	LTE Band 30 : Conducted Power Density (dBm/5MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	20.18	19.53			-	-	-	-
Middle CH	-	-	-	-	20.18	19.44	20.19	19.58	-	-	-	-
Highest CH	-	-	-	-	20.16	19.51			-	-	-	-
Mode	LTE Band 30 : Conducted Power Density (dBm/5MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	19.33			-	-	-	-	-
Middle CH	-	-	-	-	19.16		19.23	-	-	-	-	-
Highest CH	-	-	-	-	19.26			-	-	-	-	-

Mode	LTE Band 30 : EIRP Power Density (dBm/5MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	19.48	18.83			-	-	-	-
Middle CH	-	-	-	-	19.48	18.74	19.49	18.88	-	-	-	-
Highest CH	-	-	-	-	19.46	18.81			-	-	-	-
Mode	LTE Band 30 : EIRP Power Density (dBm/5MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	18.63			-	-	-	-	-
Middle CH	-	-	-	-	18.46		18.53	-	-	-	-	-
Highest CH	-	-	-	-	18.56			-	-	-	-	-
Antenna Gain	-0.7 dBi											
Limit	250mW / 5MHz = 24dBm / 5MHz											
Result	Pass											

LTE Band 30 / 5MHz	
Lowest Channel / 5MHz / 1RB / QPSK	**Lowest Channel / 5MHz / 1RB / 16QAM**
	
Middle Channel / 5MHz / 1RB / QPSK	**Middle Channel / 5MHz / 1RB / 16QAM**
	
Highest Channel / 5MHz / 1RB / QPSK	**Highest Channel / 5MHz / 1RB / 16QAM**
	

LTE Band 30 / 5MHz	
Lowest Channel / 5MHz / 1RB / 64QAM	**Middle Channel / 5MHz / 1RB / 64QAM**
	
Highest Channel / 5MHz / 1RB / 64QAM	
	

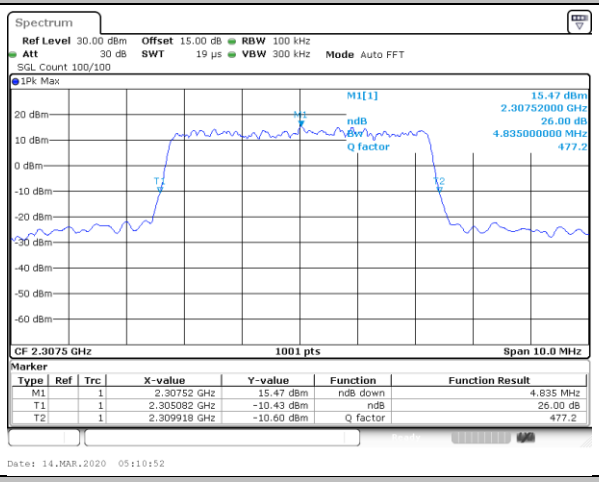
LTE Band 30 / 10MHz	
Lowest Channel / 10MHz / 1RB / QPSK	**Lowest Channel / 10MHz / 1RB / 16QAM**
	
Lowest Channel / 10MHz / 1RB / 64QAM	
	

26dB Bandwidth

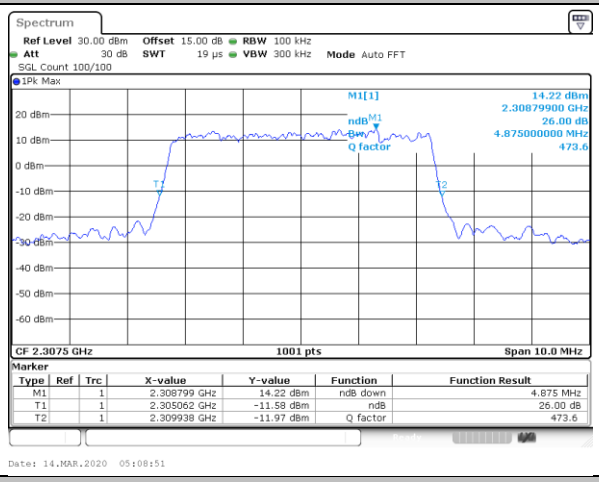
Mode	LTE Band 30 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.84	4.88	-	-	-	-	-	-
Middle CH	-	-	-	-	4.89	4.86	9.67	9.79	-	-	-	-
Highest CH	-	-	-	-	4.92	4.81	-	-	-	-	-	-
Mode	LTE Band 30 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.80	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.84	-	9.75	-	-	-	-	-
Highest CH	-	-	-	-	4.80	-	-	-	-	-	-	-

LTE Band 30

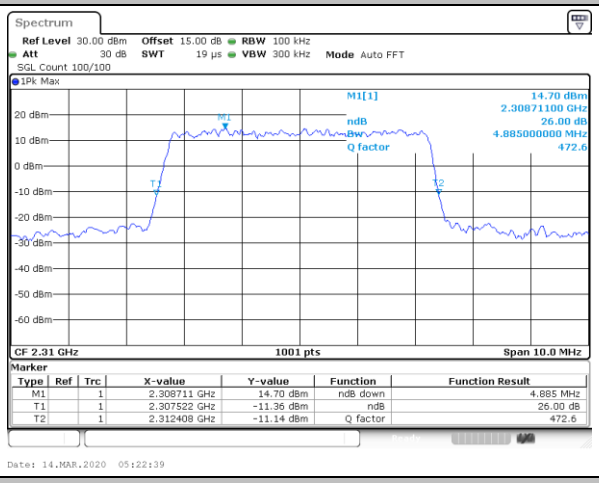
Lowest Channel / 5MHz / QPSK



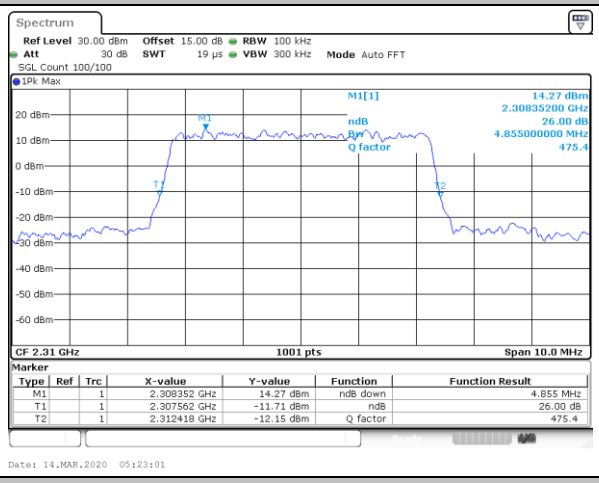
Lowest Channel / 5MHz / 16QAM



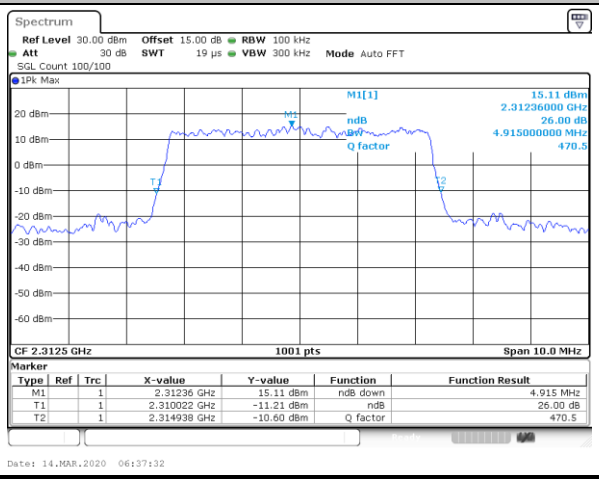
Middle Channel / 5MHz / QPSK



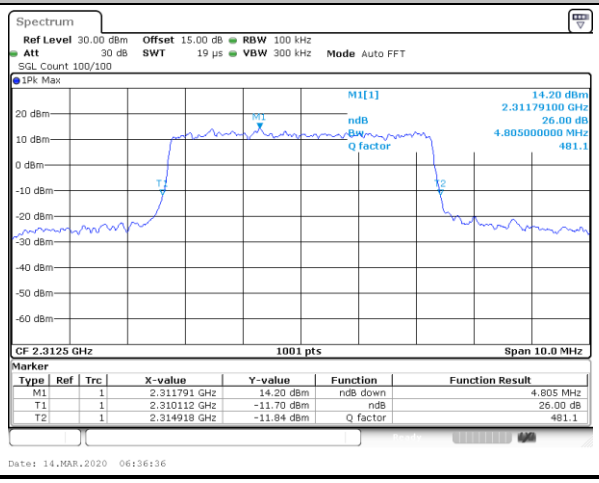
Middle Channel / 5MHz / 16QAM



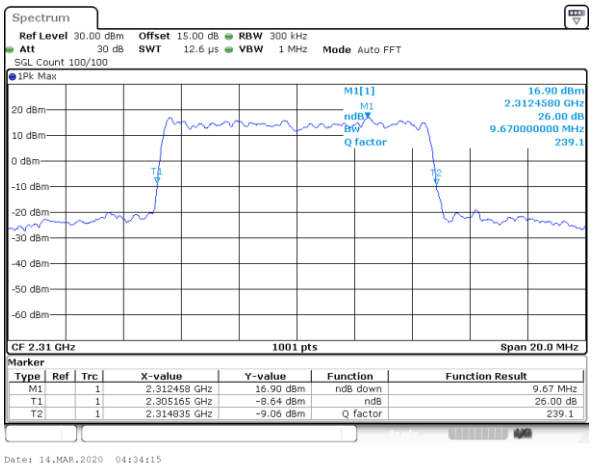
Highest Channel / 5MHz / QPSK

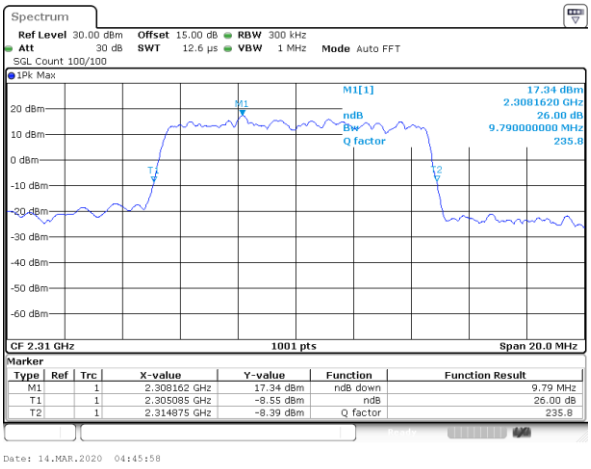


Highest Channel / 5MHz / 16QAM



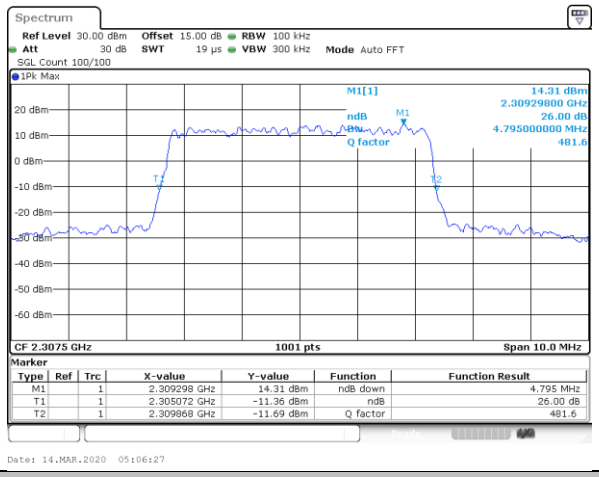
LTE Band 30	
Middle Channel / 10MHz / QPSK	**Middle Channel / 10MHz / 16QAM**



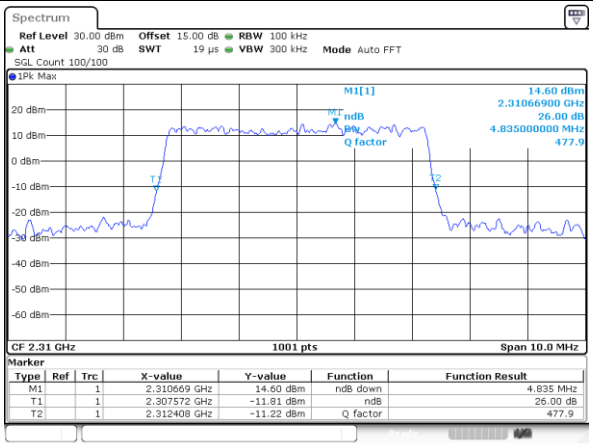


LTE Band 30

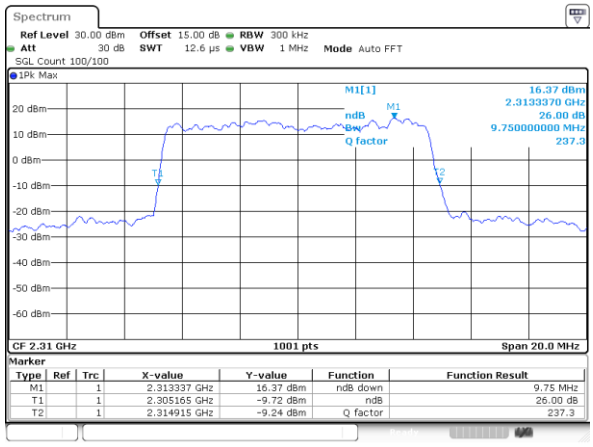
Lowest Channel / 5MHz / 64QAM



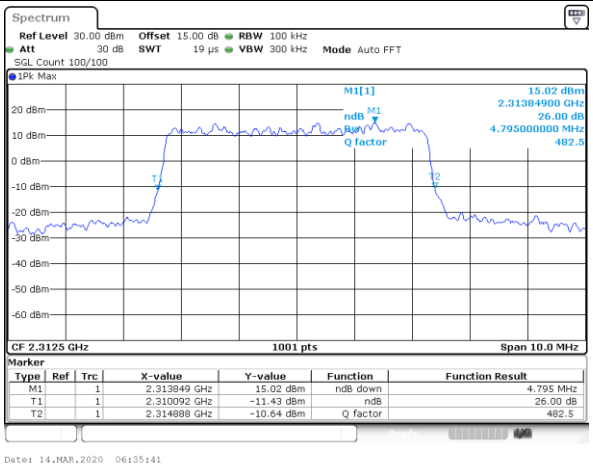
Middle Channel / 5MHz / 64QAM



Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM

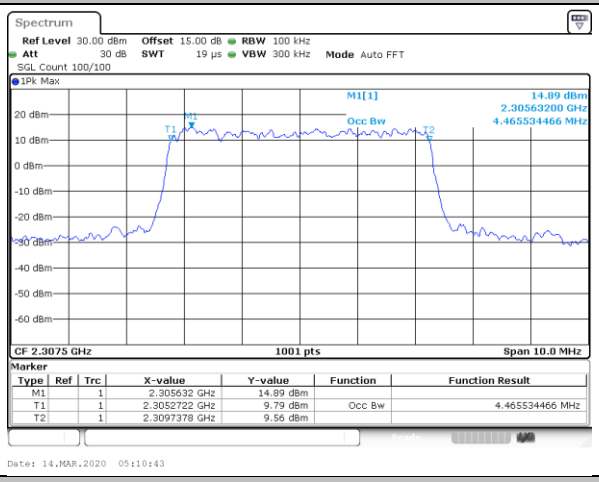


Occupied Bandwidth

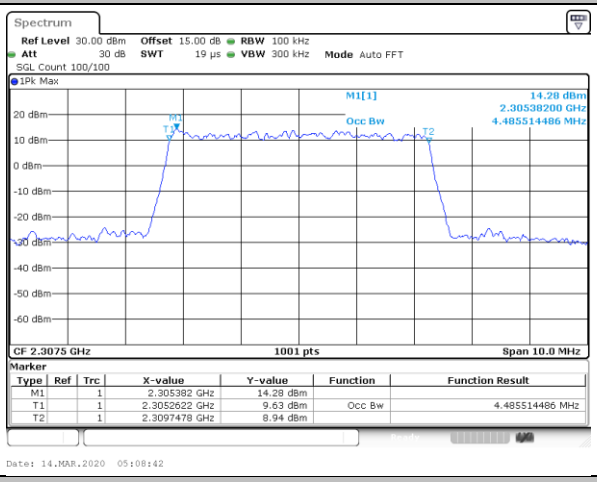
Mode	LTE Band 30 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.47	4.49	-	-	-	-	-	-
Middle CH	-	-	-	-	4.49	4.49	9.03	9.01	-	-	-	-
Highest CH	-	-	-	-	4.47	4.48	-	-	-	-	-	-
Mode	LTE Band 26 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.49	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.50	-	9.01	-	-	-	-	-
Highest CH	-	-	-	-	4.49	-	-	-	-	-	-	-

LTE Band 30

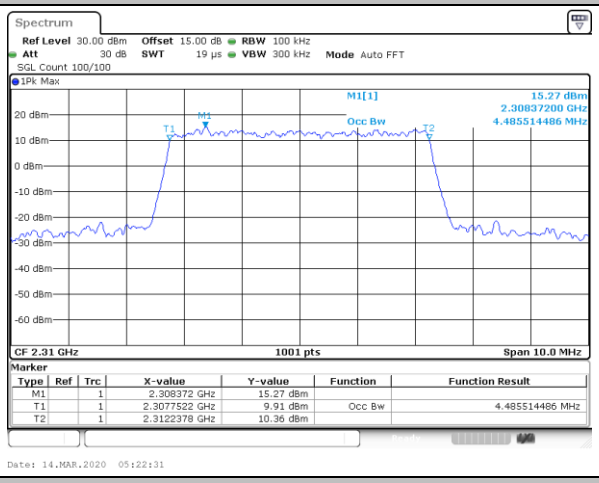
Lowest Channel / 5MHz / QPSK



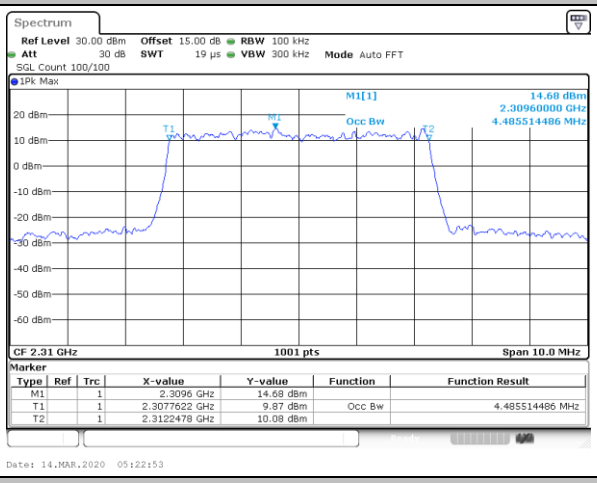
Lowest Channel / 5MHz / 16QAM



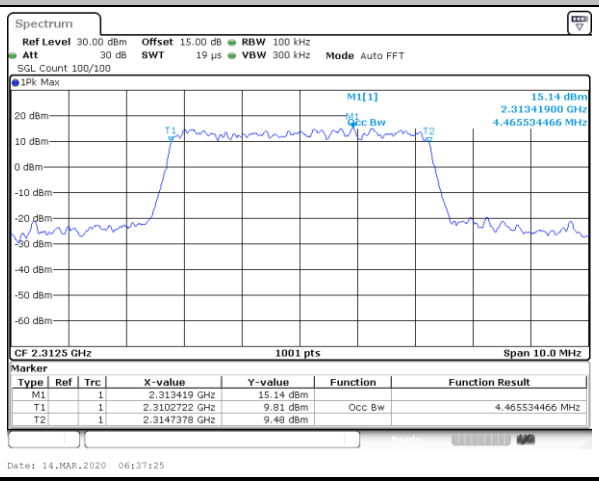
Middle Channel / 5MHz / QPSK



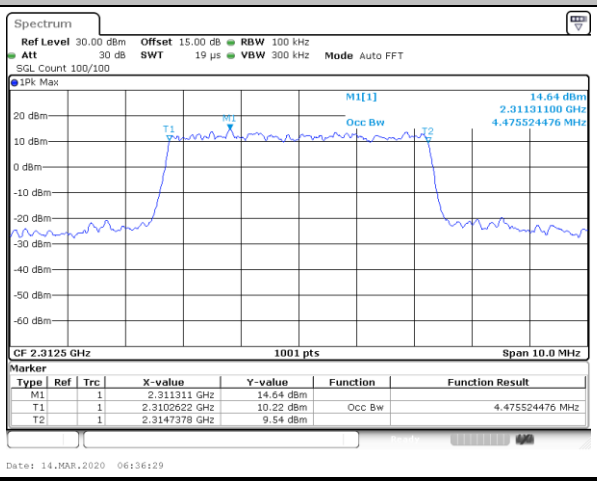
Middle Channel / 5MHz / 16QAM

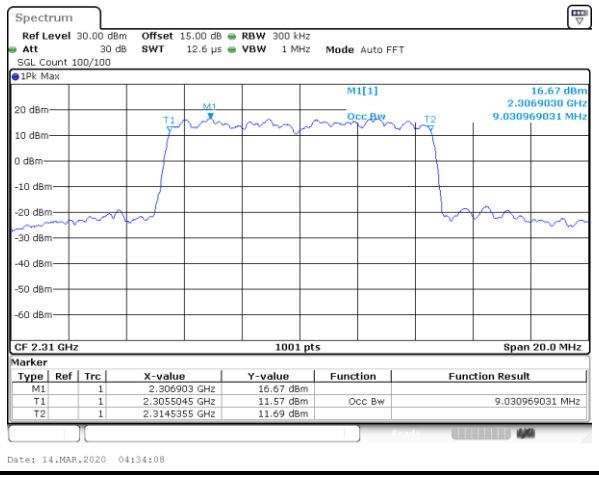
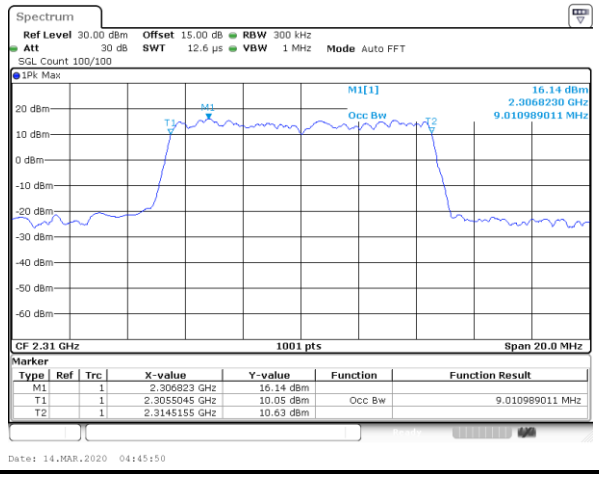


Highest Channel / 5MHz / QPSK



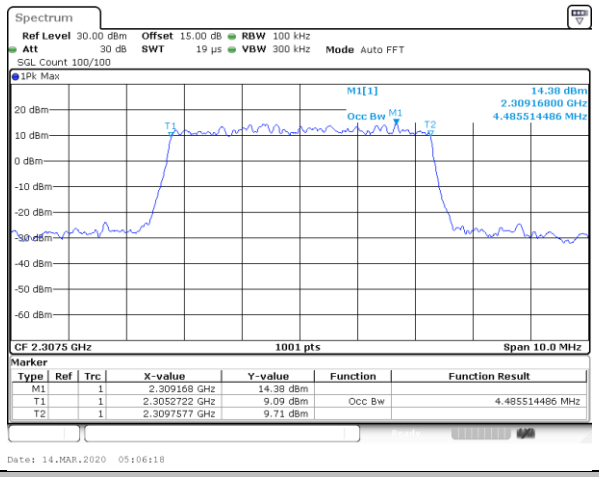
Highest Channel / 5MHz / 16QAM



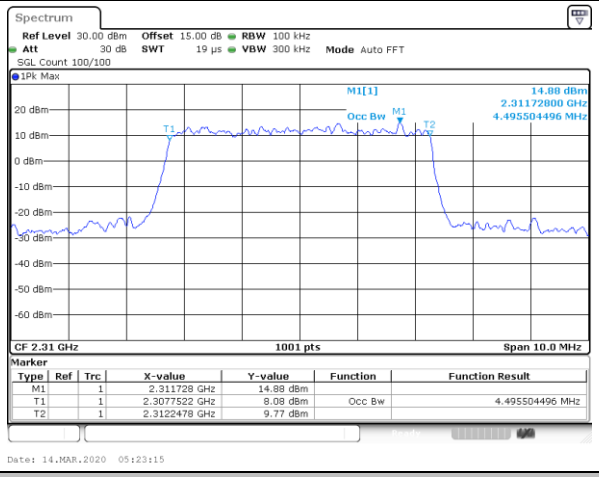
LTE Band 30	
Middle Channel / 10MHz / QPSK	**Middle Channel / 10MHz / 16QAM**
	

LTE Band 30

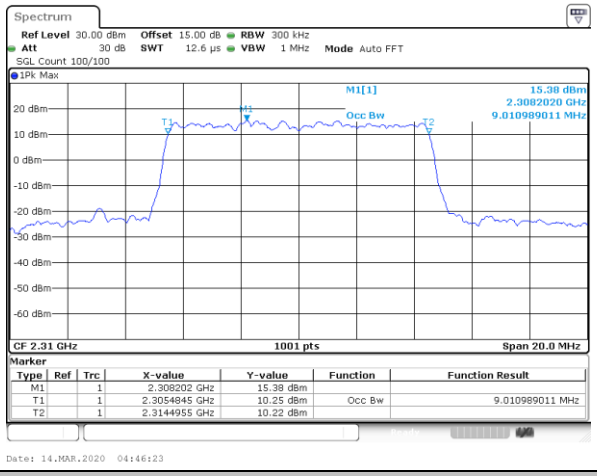
Lowest Channel / 5MHz / 64QAM



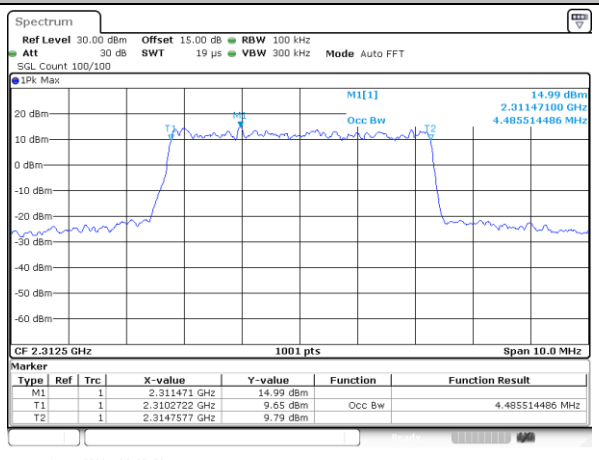
Middle Channel / 5MHz / 64QAM



Middle Channel / 10MHz / 64QAM



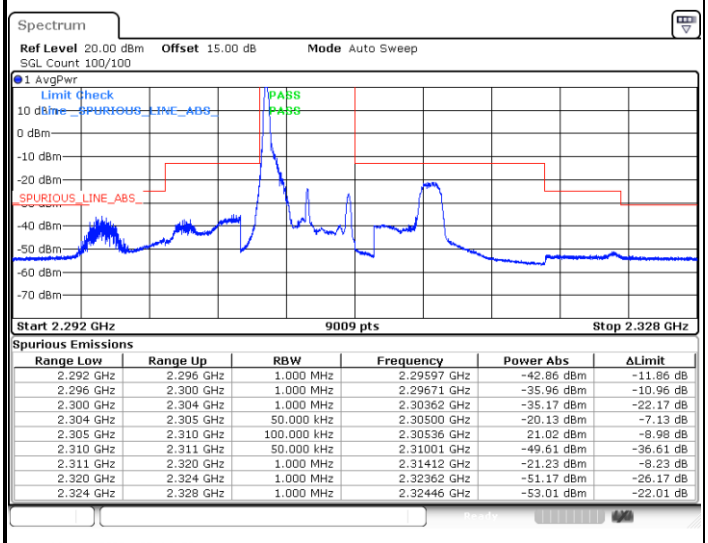
Highest Channel / 5MHz / 64QAM



Conducted Band Edge

LTE Band 30 / 5MHz / QPSK

Lowest Band Edge / 1 RB

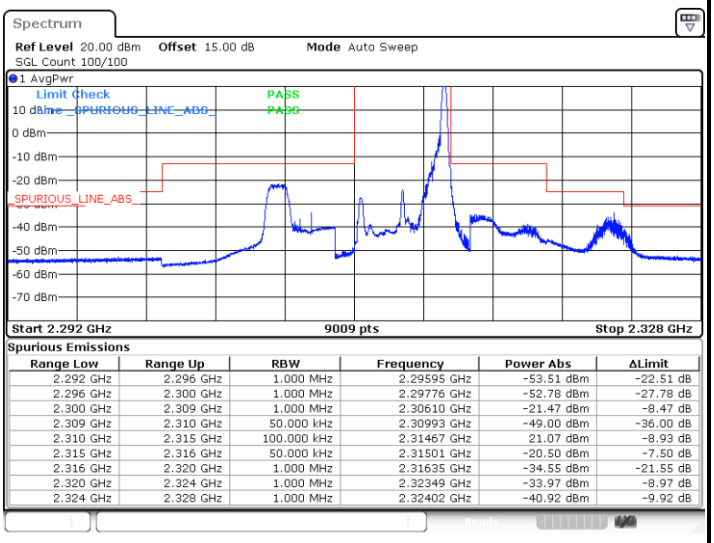


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29597 GHz	-42.86 dBm	-11.86 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29671 GHz	-35.96 dBm	-10.96 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30362 GHz	-35.17 dBm	-22.17 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-20.13 dBm	-7.13 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30536 GHz	21.02 dBm	-8.98 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31001 GHz	-49.61 dBm	-36.61 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31412 GHz	-21.23 dBm	-8.23 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32362 GHz	-51.17 dBm	-26.17 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32446 GHz	-53.01 dBm	-22.01 dB

Date: 14.MAR.2020 05:14:59

Highest Band Edge / 1 RB

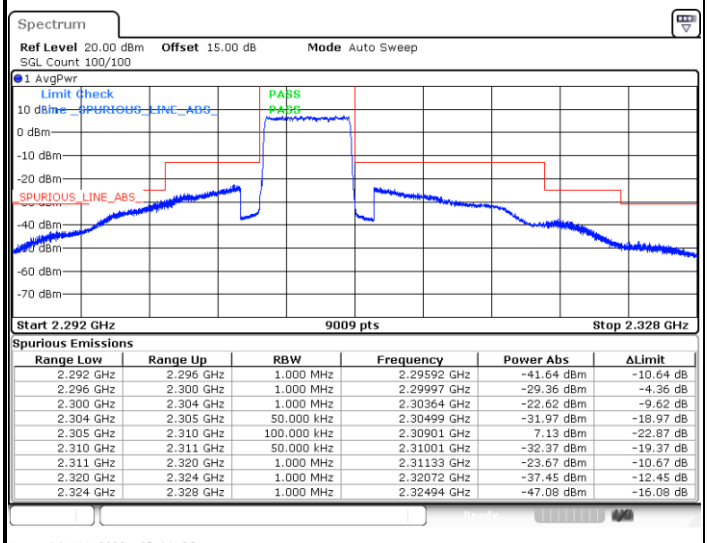


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29595 GHz	-53.51 dBm	-22.51 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29776 GHz	-52.78 dBm	-27.78 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30610 GHz	-21.47 dBm	-8.47 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.30993 GHz	-49.00 dBm	-36.00 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31467 GHz	21.07 dBm	-8.93 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31501 GHz	-20.50 dBm	-7.50 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31635 GHz	-34.55 dBm	-21.55 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32349 GHz	-33.97 dBm	-8.97 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32402 GHz	-40.92 dBm	-9.92 dB

Date: 14.MAR.2020 08:11:28

Lowest Band Edge / Full RB

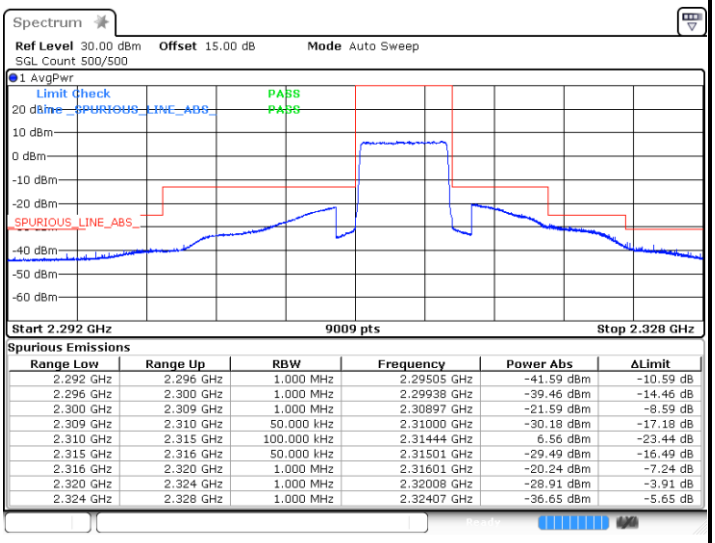


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29592 GHz	-41.64 dBm	-10.64 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29997 GHz	-29.36 dBm	-4.36 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30364 GHz	-22.62 dBm	-9.62 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30499 GHz	-31.97 dBm	-18.97 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30901 GHz	7.13 dBm	-22.87 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31001 GHz	-32.37 dBm	-19.37 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31133 GHz	-23.67 dBm	-10.67 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32072 GHz	-37.45 dBm	-12.45 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32494 GHz	-47.08 dBm	-16.08 dB

Date: 14.MAR.2020 05:11:26

Highest Band Edge / Full RB



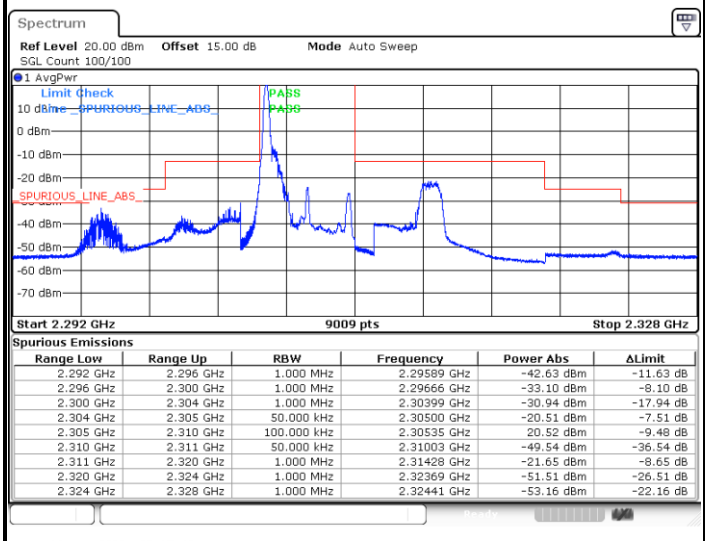
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29505 GHz	-41.59 dBm	-10.59 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29938 GHz	-39.46 dBm	-14.46 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30897 GHz	-21.59 dBm	-8.59 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.31000 GHz	-30.18 dBm	-17.18 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31444 GHz	6.56 dBm	-23.44 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31501 GHz	-29.49 dBm	-16.49 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31601 GHz	-20.24 dBm	-7.24 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32008 GHz	-28.91 dBm	-3.91 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32407 GHz	-36.65 dBm	-5.65 dB

Date: 23.MAR.2020 18:03:24

LTE Band 30 / 5MHz / 16QAM

Lowest Band Edge / 1RB

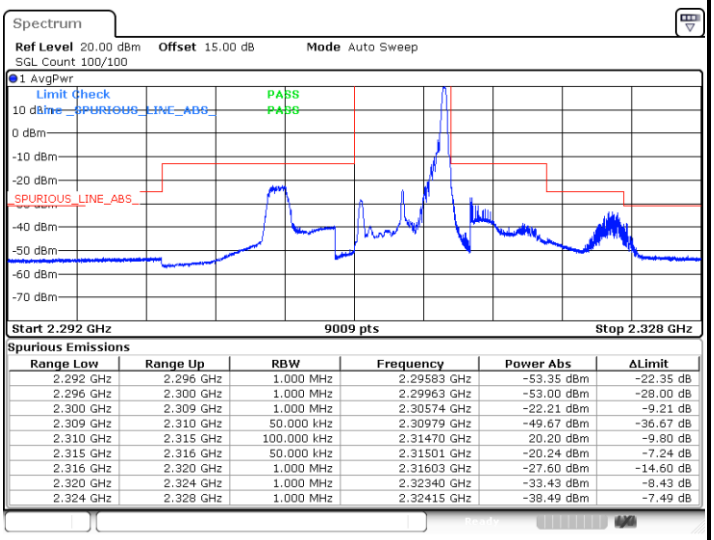


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29589 GHz	-42.63 dBm	-11.63 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29666 GHz	-33.10 dBm	-8.10 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30399 GHz	-30.94 dBm	-17.94 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-20.51 dBm	-7.51 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30535 GHz	20.52 dBm	-9.48 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31003 GHz	-49.54 dBm	-36.54 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31428 GHz	-21.65 dBm	-8.65 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32369 GHz	-51.51 dBm	-26.51 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32441 GHz	-53.16 dBm	-22.16 dB

Date: 14.MAR.2020 05:17:19

Highest Band Edge / 1 RB

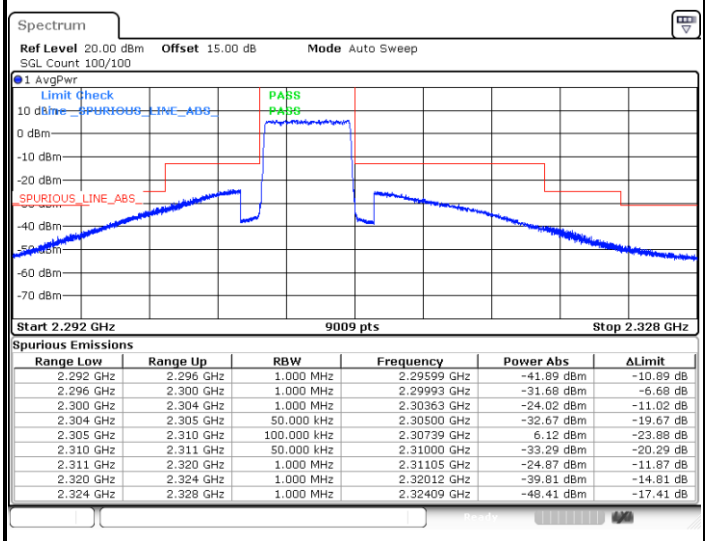


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29583 GHz	-53.35 dBm	-22.35 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29963 GHz	-53.00 dBm	-28.00 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30574 GHz	-22.21 dBm	-9.21 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.30979 GHz	-49.67 dBm	-36.67 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31470 GHz	20.20 dBm	-9.80 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31501 GHz	-20.24 dBm	-7.24 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31603 GHz	-27.60 dBm	-14.60 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32340 GHz	-33.43 dBm	-8.43 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32415 GHz	-38.49 dBm	-7.49 dB

Date: 14.MAR.2020 08:10:41

Lowest Band Edge / Full RB

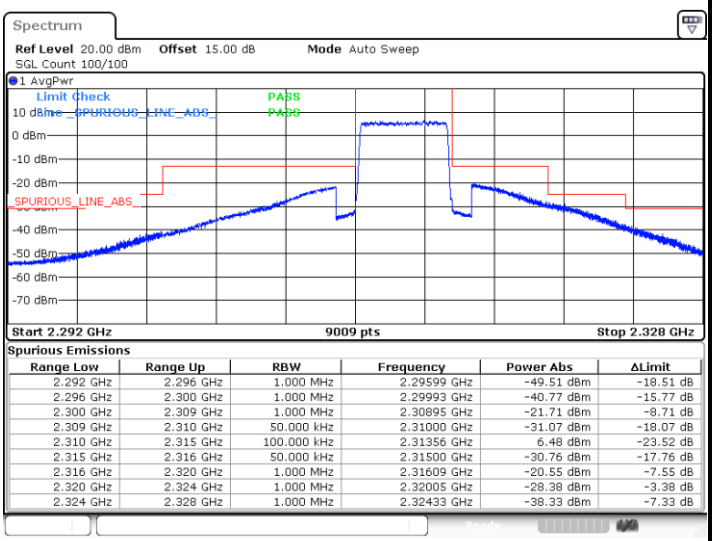


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29599 GHz	-41.89 dBm	-10.89 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29993 GHz	-31.68 dBm	-6.68 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30363 GHz	-24.02 dBm	-11.02 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-32.67 dBm	-19.67 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30739 GHz	6.12 dBm	-23.88 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31000 GHz	-33.29 dBm	-20.29 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31105 GHz	-24.87 dBm	-11.87 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32012 GHz	-39.81 dBm	-14.81 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32409 GHz	-48.41 dBm	-17.41 dB

Date: 14.MAR.2020 05:10:28

Highest Band Edge / Full RB



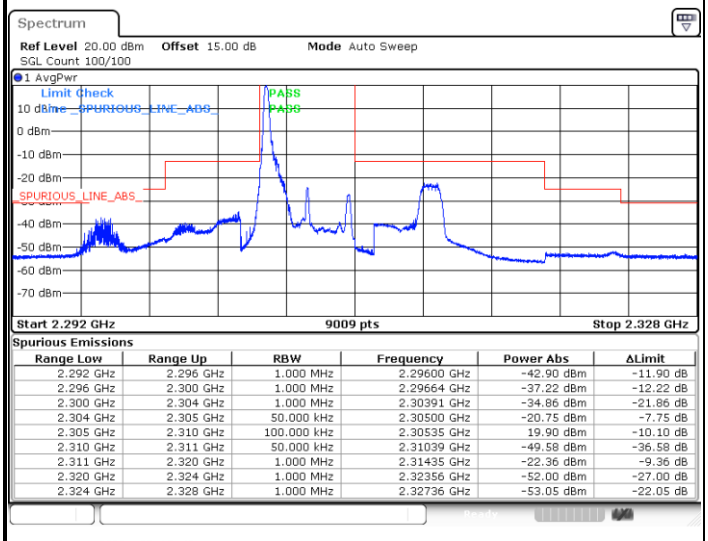
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29599 GHz	-49.51 dBm	-18.51 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29993 GHz	-40.77 dBm	-15.77 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30895 GHz	-21.71 dBm	-8.71 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.31000 GHz	-31.07 dBm	-18.07 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31356 GHz	6.48 dBm	-23.52 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31500 GHz	-30.76 dBm	-17.76 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31609 GHz	-20.55 dBm	-7.55 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32005 GHz	-28.38 dBm	-3.38 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32433 GHz	-38.33 dBm	-7.33 dB

Date: 14.MAR.2020 06:37:10

LTE Band 30 / 5MHz / 64QAM

Lowest Band Edge / 1RB

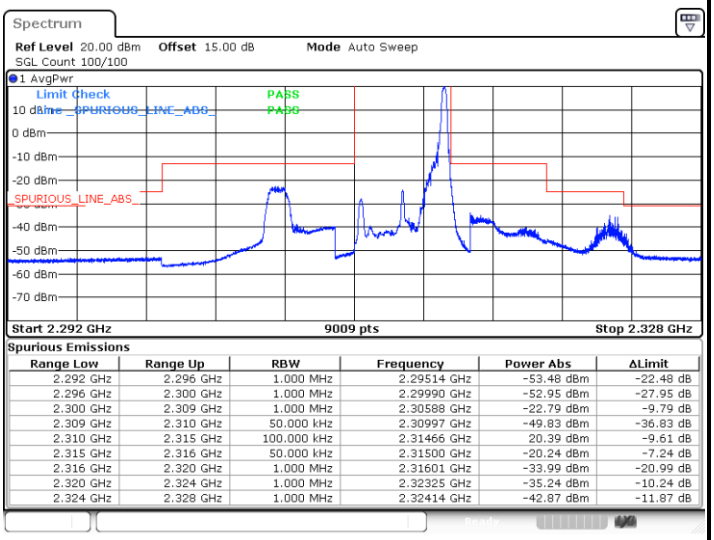


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29600 GHz	-42.90 dBm	-11.90 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29664 GHz	-37.22 dBm	-12.22 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30391 GHz	-34.86 dBm	-21.86 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-20.75 dBm	-7.75 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30535 GHz	19.90 dBm	-10.10 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31039 GHz	-49.58 dBm	-36.58 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31435 GHz	-22.36 dBm	-9.36 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32356 GHz	-52.00 dBm	-27.00 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32736 GHz	-53.05 dBm	-22.05 dB

Date: 14.MAR.2020 05:19:40

Highest Band Edge / 1 RB

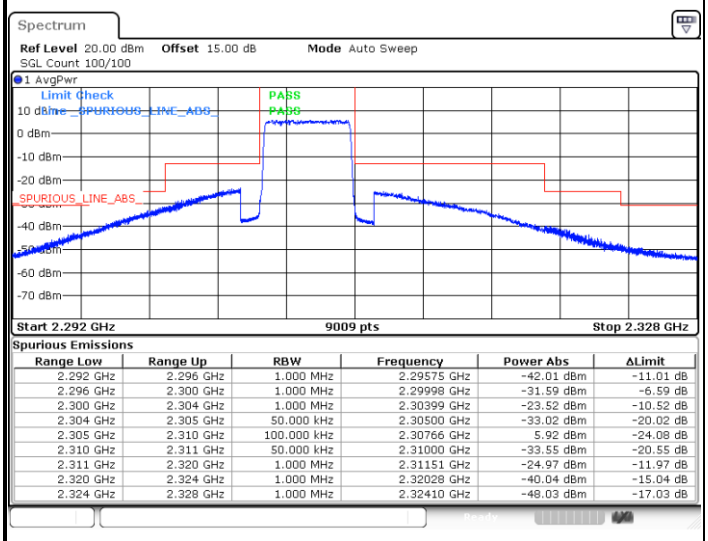


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29514 GHz	-53.48 dBm	-22.48 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29990 GHz	-52.95 dBm	-27.95 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30588 GHz	-22.79 dBm	-9.79 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.30997 GHz	-49.83 dBm	-36.83 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31466 GHz	20.39 dBm	-9.61 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31500 GHz	-20.24 dBm	-7.24 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31601 GHz	-33.99 dBm	-20.99 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32325 GHz	-35.24 dBm	-10.24 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32414 GHz	-42.87 dBm	-11.87 dB

Date: 14.MAR.2020 08:08:37

Lowest Band Edge / Full RB

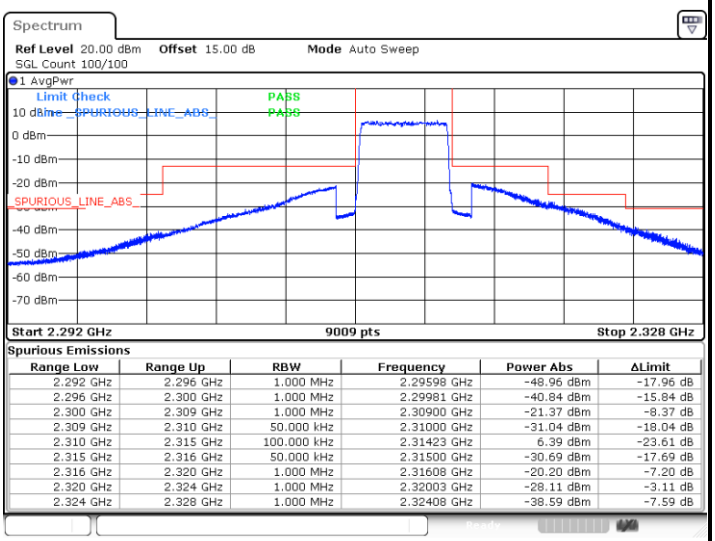


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29575 GHz	-42.01 dBm	-11.01 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29998 GHz	-31.59 dBm	-6.59 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30399 GHz	-23.52 dBm	-10.52 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-33.02 dBm	-20.02 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30766 GHz	5.92 dBm	-24.08 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31000 GHz	-33.55 dBm	-20.55 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31151 GHz	-24.97 dBm	-11.97 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32028 GHz	-40.04 dBm	-15.04 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32410 GHz	-48.03 dBm	-17.03 dB

Date: 14.MAR.2020 05:08:19

Highest Band Edge / Full RB



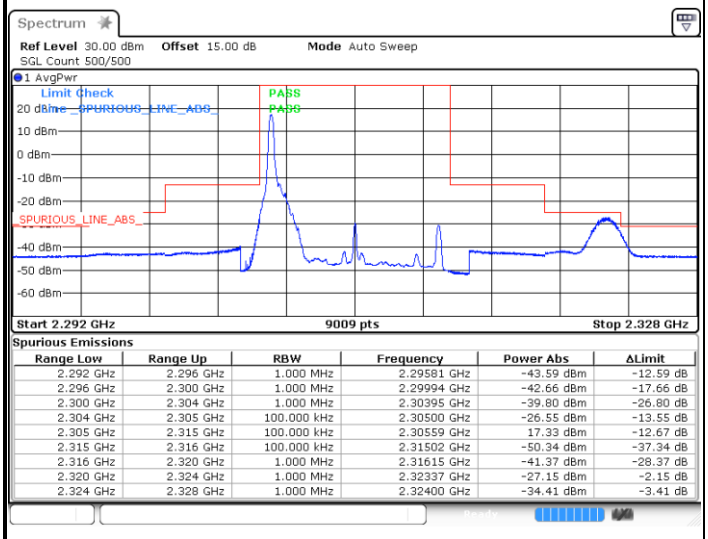
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29598 GHz	-48.96 dBm	-17.96 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29981 GHz	-40.84 dBm	-15.84 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30900 GHz	-21.37 dBm	-8.37 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.31000 GHz	-31.04 dBm	-18.04 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31423 GHz	6.39 dBm	-23.61 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31500 GHz	-30.69 dBm	-17.69 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31608 GHz	-20.20 dBm	-7.20 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32003 GHz	-28.11 dBm	-3.11 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32408 GHz	-38.59 dBm	-7.59 dB

Date: 14.MAR.2020 06:36:14

LTE Band 30 / 10MHz / QPSK

Lowest Band Edge / 1 RB

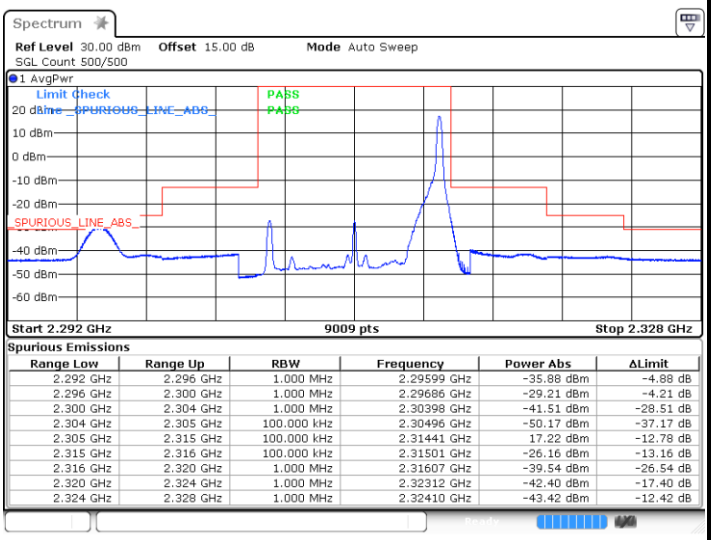


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29581 GHz	-43.59 dBm	-12.59 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29994 GHz	-42.66 dBm	-17.66 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30395 GHz	-39.80 dBm	-26.80 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-26.55 dBm	-13.55 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30559 GHz	17.33 dBm	-12.67 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31502 GHz	-50.34 dBm	-37.34 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31615 GHz	-41.37 dBm	-28.37 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32337 GHz	-27.15 dBm	-2.15 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32400 GHz	-34.41 dBm	-3.41 dB

Date: 23.MAR.2020 18:09:44

Highest Band Edge / 1 RB

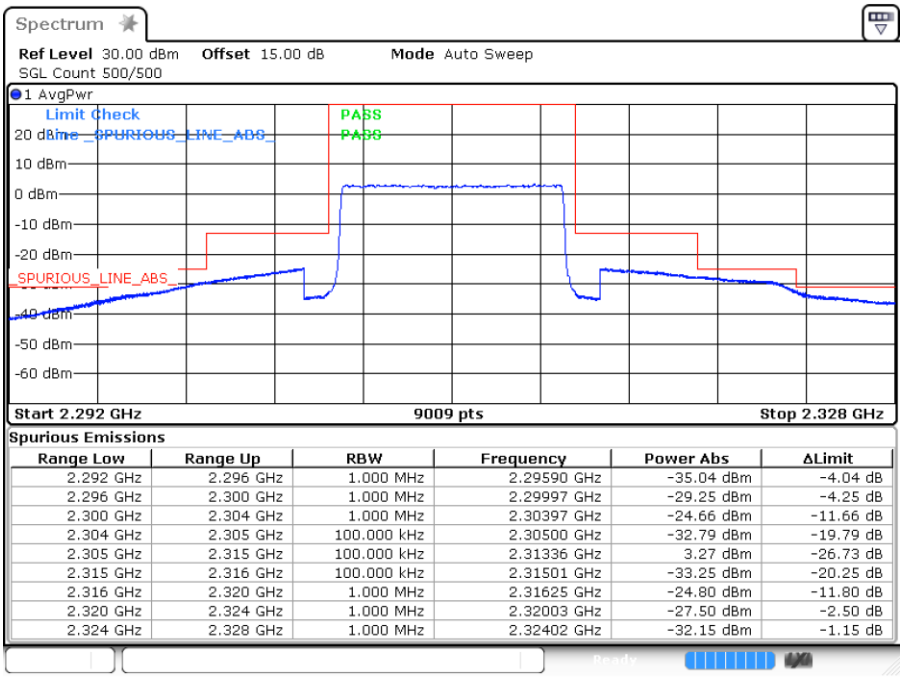


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29599 GHz	-35.88 dBm	-4.88 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29686 GHz	-29.21 dBm	-4.21 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30398 GHz	-41.51 dBm	-28.51 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30496 GHz	-50.17 dBm	-37.17 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31441 GHz	17.22 dBm	-12.78 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31501 GHz	-26.16 dBm	-13.16 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31607 GHz	-39.54 dBm	-26.54 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32312 GHz	-42.40 dBm	-17.40 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32410 GHz	-43.42 dBm	-12.42 dB

Date: 23.MAR.2020 18:15:03

Band Edge / Full RB



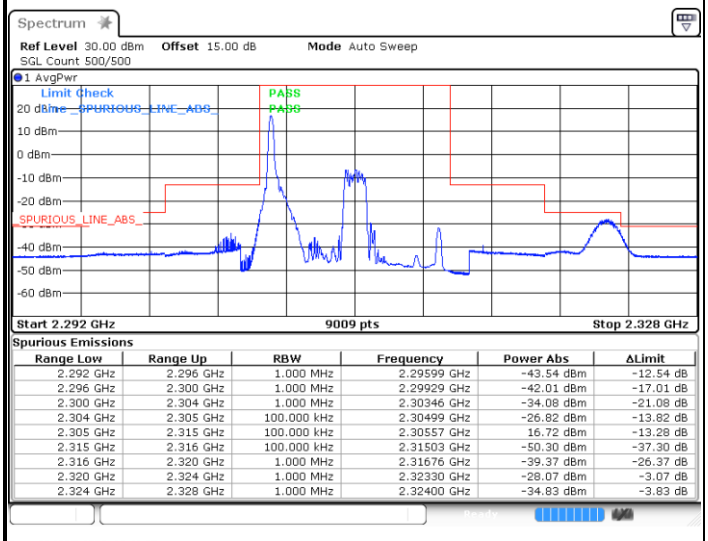
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29590 GHz	-35.04 dBm	-4.04 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29997 GHz	-29.25 dBm	-4.25 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30397 GHz	-24.66 dBm	-11.66 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-32.79 dBm	-19.79 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31336 GHz	3.27 dBm	-26.73 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31501 GHz	-33.25 dBm	-20.25 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31625 GHz	-24.80 dBm	-11.80 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32003 GHz	-27.50 dBm	-2.50 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32402 GHz	-32.15 dBm	-1.15 dB

Date: 23.MAR.2020 17:56:32

LTE Band 30 / 10MHz / 16QAM

Lowest Band Edge / 1 RB

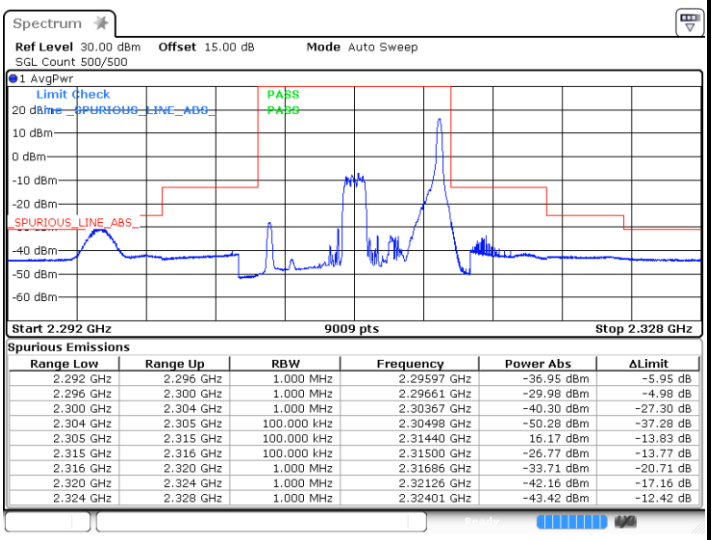


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29599 GHz	-43.54 dBm	-12.54 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29929 GHz	-42.01 dBm	-17.01 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30346 GHz	-34.08 dBm	-21.08 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30499 GHz	-26.82 dBm	-13.82 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30557 GHz	16.72 dBm	-13.28 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31503 GHz	-50.30 dBm	-37.30 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31676 GHz	-39.37 dBm	-26.37 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32330 GHz	-28.07 dBm	-3.07 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32400 GHz	-34.83 dBm	-3.83 dB

Date: 23.MAR.2020 18:11:05

Highest Band Edge / 1 RB

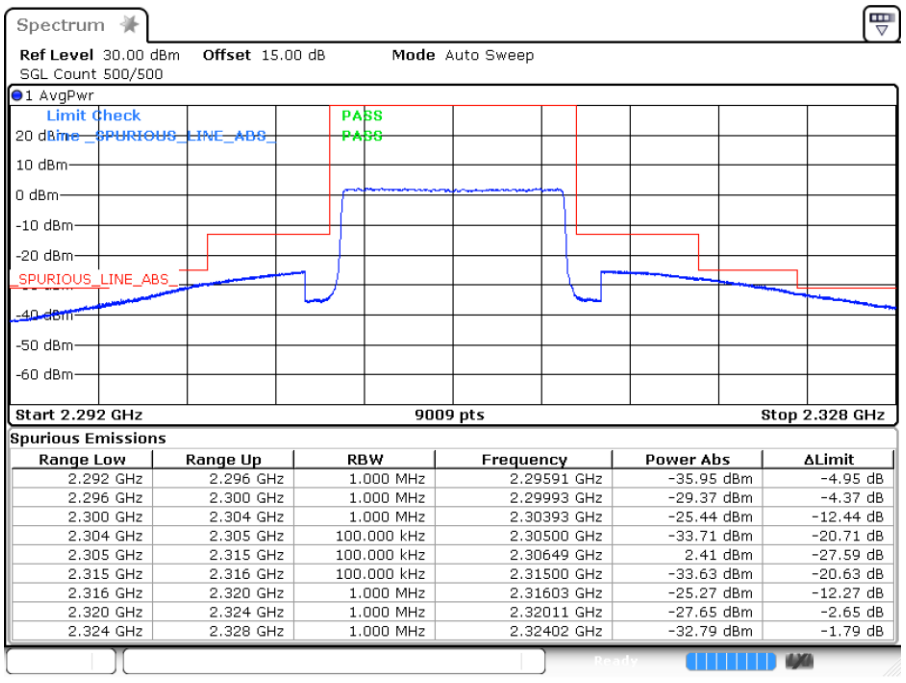


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29597 GHz	-36.95 dBm	-5.95 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29661 GHz	-29.98 dBm	-4.98 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30367 GHz	-40.30 dBm	-27.30 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30498 GHz	-50.28 dBm	-37.28 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31440 GHz	16.17 dBm	-13.83 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31500 GHz	-26.77 dBm	-13.77 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31686 GHz	-33.71 dBm	-20.71 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32126 GHz	-42.16 dBm	-17.16 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32401 GHz	-43.42 dBm	-12.42 dB

Date: 23.MAR.2020 18:13:53

Band Edge / Full RB



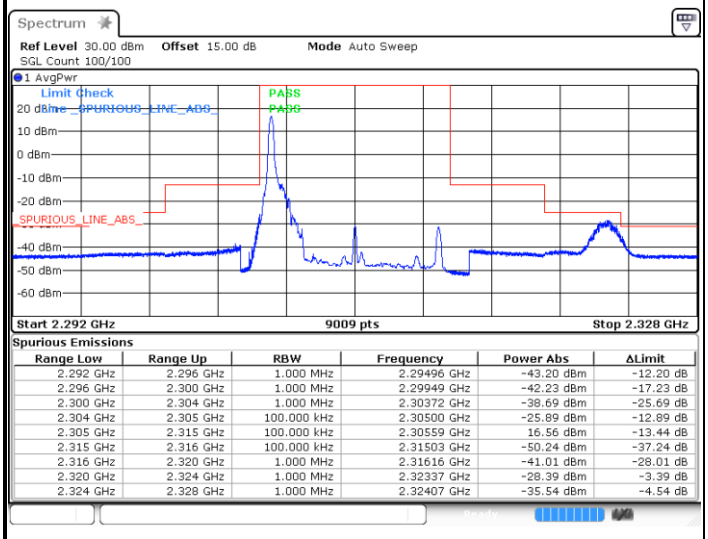
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29591 GHz	-35.95 dBm	-4.95 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29993 GHz	-29.37 dBm	-4.37 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30393 GHz	-25.44 dBm	-12.44 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-33.71 dBm	-20.71 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30649 GHz	2.41 dBm	-27.59 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31500 GHz	-33.63 dBm	-20.63 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31603 GHz	-25.27 dBm	-12.27 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32011 GHz	-27.65 dBm	-2.65 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32402 GHz	-32.79 dBm	-1.79 dB

Date: 23.MAR.2020 17:58:13

LTE Band 30 / 10MHz / 64QAM

Lowest Band Edge / 1 RB

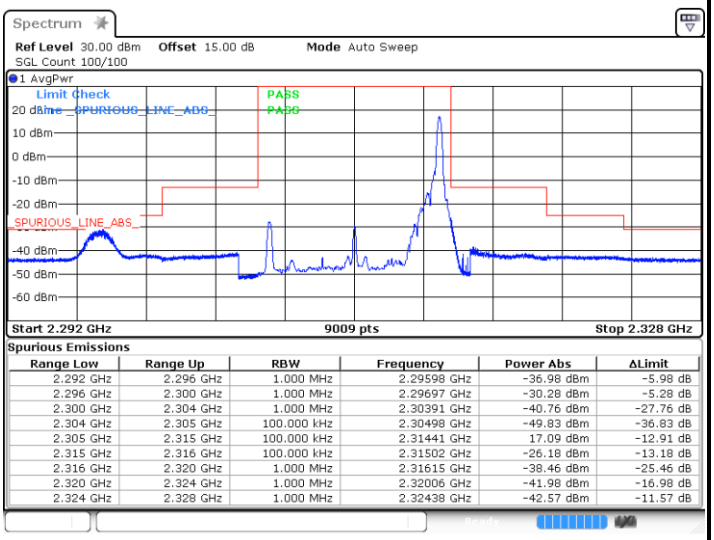


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29496 GHz	-43.20 dBm	-12.20 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29949 GHz	-42.23 dBm	-17.23 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30372 GHz	-38.69 dBm	-25.69 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-25.89 dBm	-12.89 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30559 GHz	16.56 dBm	-13.44 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31503 GHz	-50.24 dBm	-37.24 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31616 GHz	-41.01 dBm	-28.01 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32337 GHz	-28.39 dBm	-3.39 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32407 GHz	-35.54 dBm	-4.54 dB

Date: 23.MAR.2020 18:11:57

Highest Band Edge / 1 RB

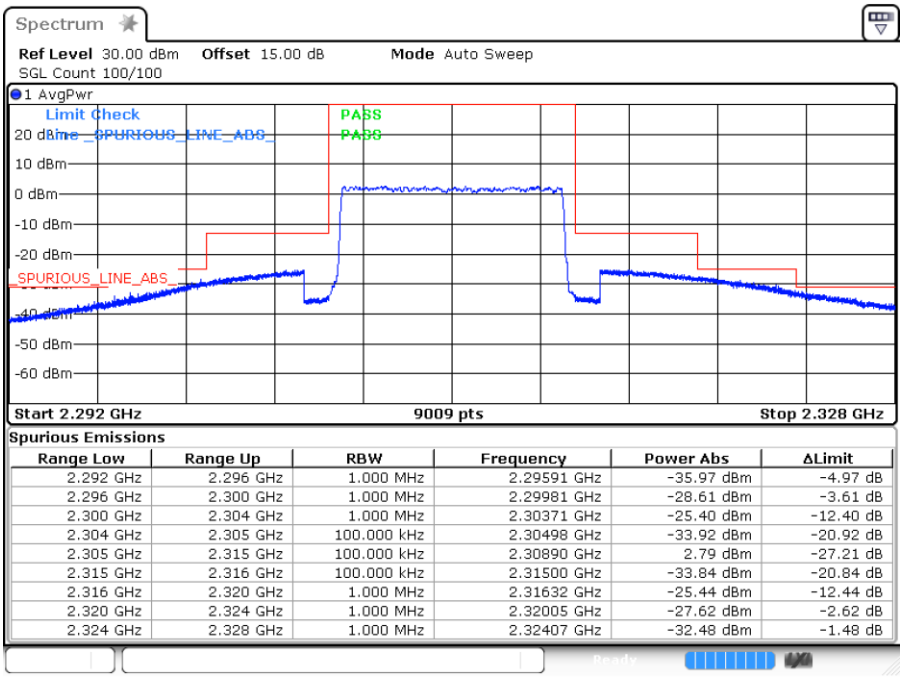


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29598 GHz	-36.98 dBm	-5.98 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29697 GHz	-30.28 dBm	-5.28 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30391 GHz	-40.76 dBm	-27.76 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30498 GHz	-49.83 dBm	-36.83 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31441 GHz	17.09 dBm	-12.91 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31502 GHz	-26.18 dBm	-13.18 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31615 GHz	-38.46 dBm	-25.46 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32006 GHz	-41.98 dBm	-16.98 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32438 GHz	-42.57 dBm	-11.57 dB

Date: 23.MAR.2020 18:12:44

Band Edge / Full RB



Spurious Emissions

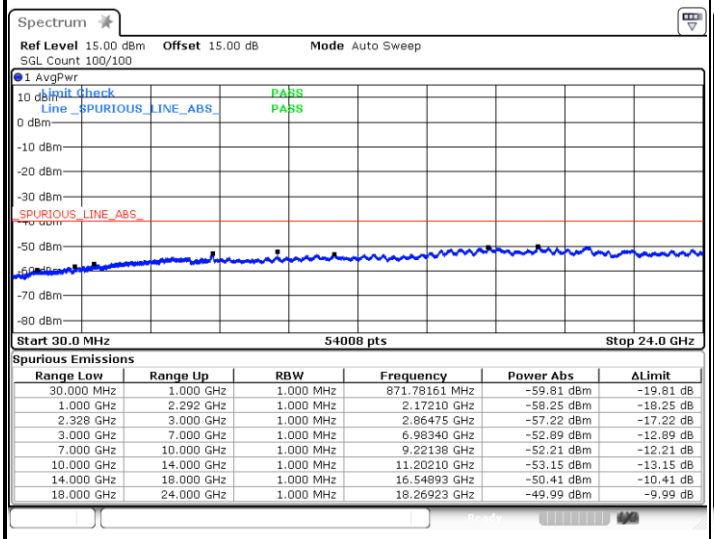
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29591 GHz	-35.97 dBm	-4.97 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29981 GHz	-28.61 dBm	-3.61 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30371 GHz	-25.40 dBm	-12.40 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30498 GHz	-33.92 dBm	-20.92 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30890 GHz	2.79 dBm	-27.21 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31500 GHz	-33.84 dBm	-20.84 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31632 GHz	-25.44 dBm	-12.44 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32005 GHz	-27.62 dBm	-2.62 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32407 GHz	-32.48 dBm	-1.48 dB

Date: 23.MAR.2020 18:00:07

Conducted Spurious Emission

LTE Band 30 / 5MHz

Lowest Channel / QPSK

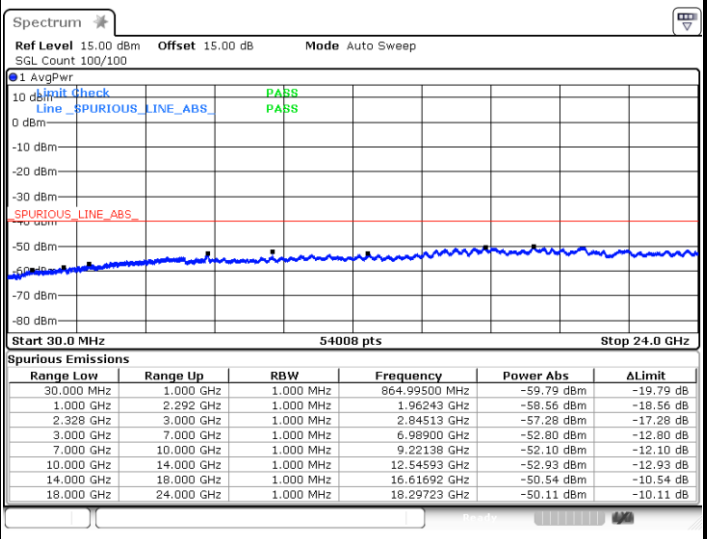


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	871.78161 MHz	-59.81 dBm	-19.81 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.17210 GHz	-58.25 dBm	-18.25 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.86475 GHz	-57.22 dBm	-17.22 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98340 GHz	-52.89 dBm	-12.89 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.22138 GHz	-52.21 dBm	-12.21 dB
10.000 GHz	14.000 GHz	1.000 MHz	11.20210 GHz	-53.15 dBm	-13.15 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.54893 GHz	-50.41 dBm	-10.41 dB
18.000 GHz	24.000 GHz	1.000 MHz	18.26923 GHz	-49.99 dBm	-9.99 dB

Date: 14.MAR.2020 02:54:25

Lowest Channel / 16QAM

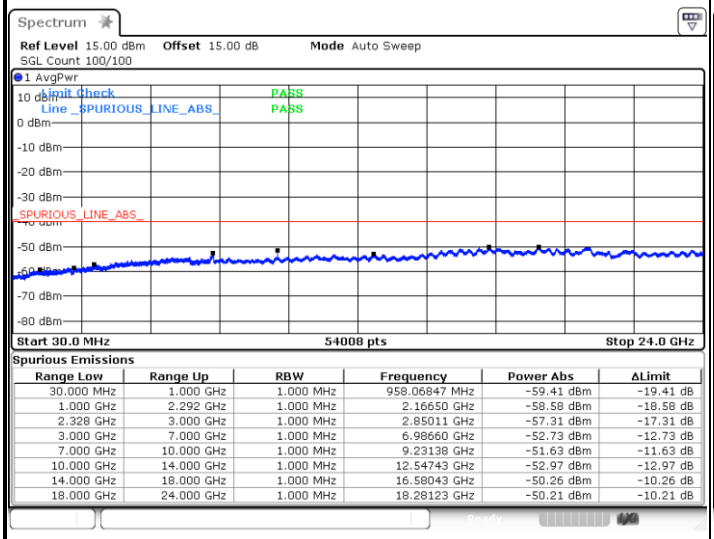


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	864.99500 MHz	-59.79 dBm	-19.79 dB
1.000 GHz	2.292 GHz	1.000 MHz	1.96243 GHz	-58.56 dBm	-18.56 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.84513 GHz	-57.28 dBm	-17.28 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98900 GHz	-52.80 dBm	-12.80 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.22138 GHz	-52.10 dBm	-12.10 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.54593 GHz	-52.93 dBm	-12.93 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.61692 GHz	-50.54 dBm	-10.54 dB
18.000 GHz	24.000 GHz	1.000 MHz	18.29723 GHz	-50.11 dBm	-10.11 dB

Date: 14.MAR.2020 02:57:02

Middle Channel / QPSK

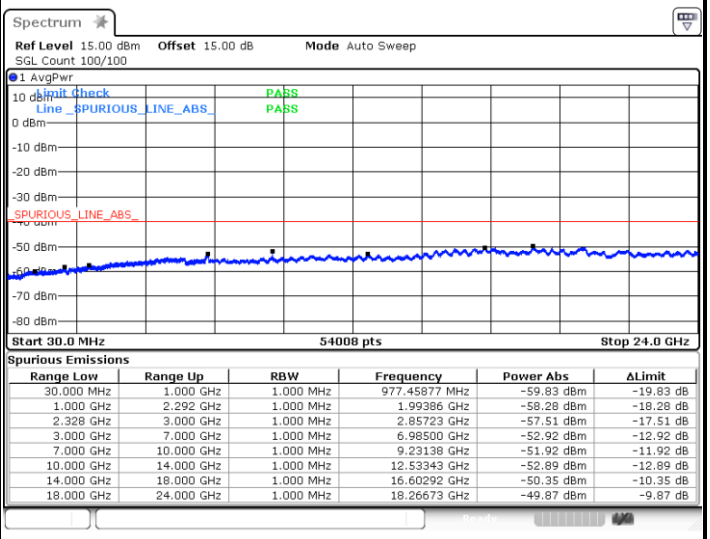


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	958.06847 MHz	-59.41 dBm	-19.41 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.16650 GHz	-58.58 dBm	-18.58 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.85011 GHz	-57.31 dBm	-17.31 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98660 GHz	-52.73 dBm	-12.73 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.23138 GHz	-51.63 dBm	-11.63 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.54743 GHz	-52.97 dBm	-12.97 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.58043 GHz	-50.26 dBm	-10.26 dB
18.000 GHz	24.000 GHz	1.000 MHz	18.28123 GHz	-50.21 dBm	-10.21 dB

Date: 14.MAR.2020 03:04:17

Middle Channel / 16QAM



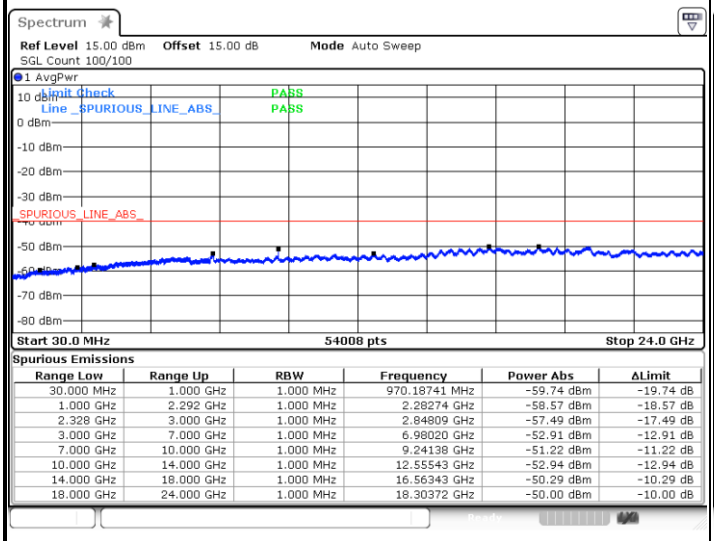
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	977.45877 MHz	-59.83 dBm	-19.83 dB
1.000 GHz	2.292 GHz	1.000 MHz	1.99386 GHz	-58.28 dBm	-18.28 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.85723 GHz	-57.51 dBm	-17.51 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98500 GHz	-52.92 dBm	-12.92 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.23138 GHz	-51.92 dBm	-11.92 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.53343 GHz	-52.89 dBm	-12.89 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.60292 GHz	-50.35 dBm	-10.35 dB
18.000 GHz	24.000 GHz	1.000 MHz	18.26673 GHz	-49.87 dBm	-9.87 dB

Date: 14.MAR.2020 03:02:39

LTE Band 30 / 5MHz

Highest Channel / QPSK

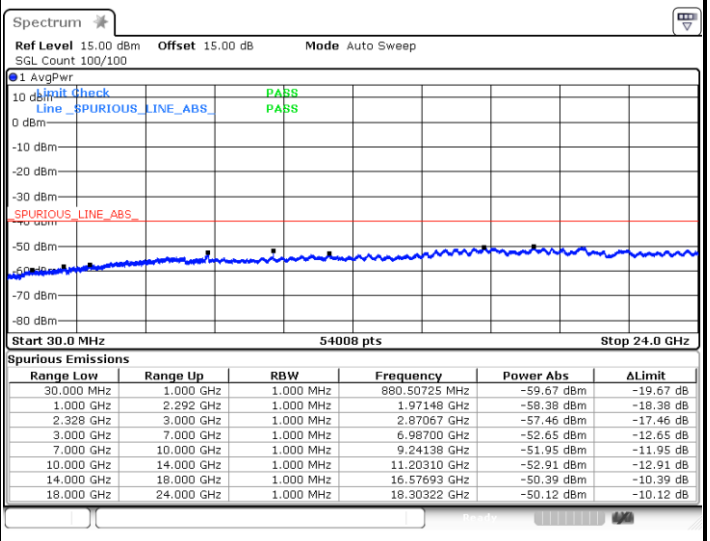


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	970.18741 MHz	-59.74 dBm	-19.74 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.28274 GHz	-58.57 dBm	-18.57 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.84809 GHz	-57.49 dBm	-17.49 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98020 GHz	-52.91 dBm	-12.91 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.24138 GHz	-51.22 dBm	-11.22 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.55543 GHz	-52.94 dBm	-12.94 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.56343 GHz	-50.29 dBm	-10.29 dB
18.000 GHz	24.000 GHz	1.000 MHz	18.30372 GHz	-50.00 dBm	-10.00 dB

Date: 14.MAR.2020 03:06:23

Highest Channel / 16QAM



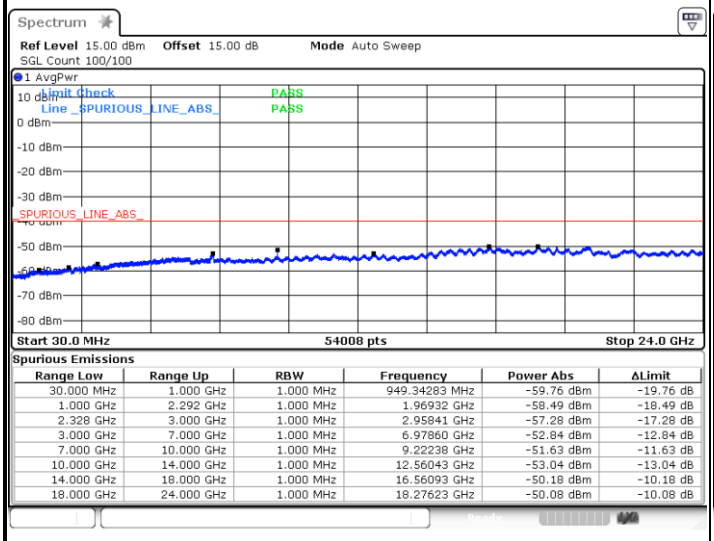
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	880.50725 MHz	-59.67 dBm	-19.67 dB
1.000 GHz	2.292 GHz	1.000 MHz	1.97148 GHz	-58.38 dBm	-18.38 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.87067 GHz	-57.46 dBm	-17.46 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98700 GHz	-52.65 dBm	-12.65 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.24138 GHz	-51.95 dBm	-11.95 dB
10.000 GHz	14.000 GHz	1.000 MHz	11.20310 GHz	-52.91 dBm	-12.91 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.57693 GHz	-50.39 dBm	-10.39 dB
18.000 GHz	24.000 GHz	1.000 MHz	18.30322 GHz	-50.12 dBm	-10.12 dB

Date: 14.MAR.2020 03:07:47

LTE Band 30 / 10MHz

Middle Channel / QPSK

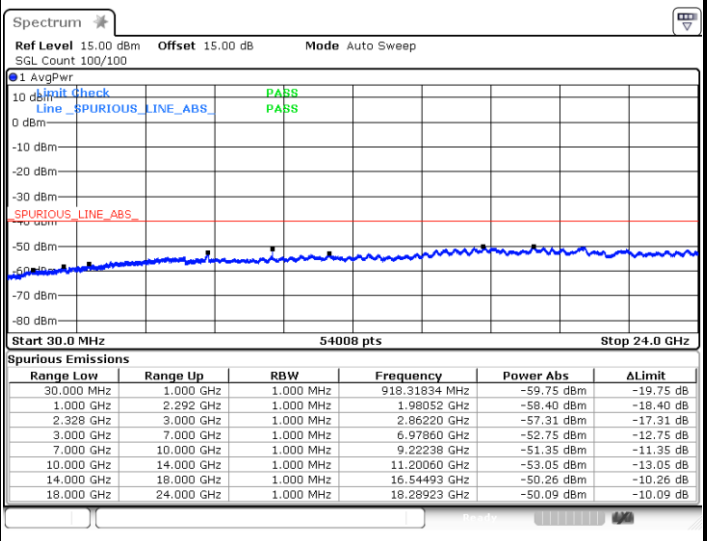


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	949.34283 MHz	-59.76 dBm	-19.76 dB
1.000 GHz	2.292 GHz	1.000 MHz	1.96932 GHz	-58.49 dBm	-18.49 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.95841 GHz	-57.28 dBm	-17.28 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.97860 GHz	-52.84 dBm	-12.84 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.22238 GHz	-51.63 dBm	-11.63 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.56043 GHz	-53.04 dBm	-13.04 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.56093 GHz	-50.18 dBm	-10.18 dB
18.000 GHz	24.000 GHz	1.000 MHz	18.27623 GHz	-50.08 dBm	-10.08 dB

Date: 14.MAR.2020 03:14:27

Middle Channel / 16QAM



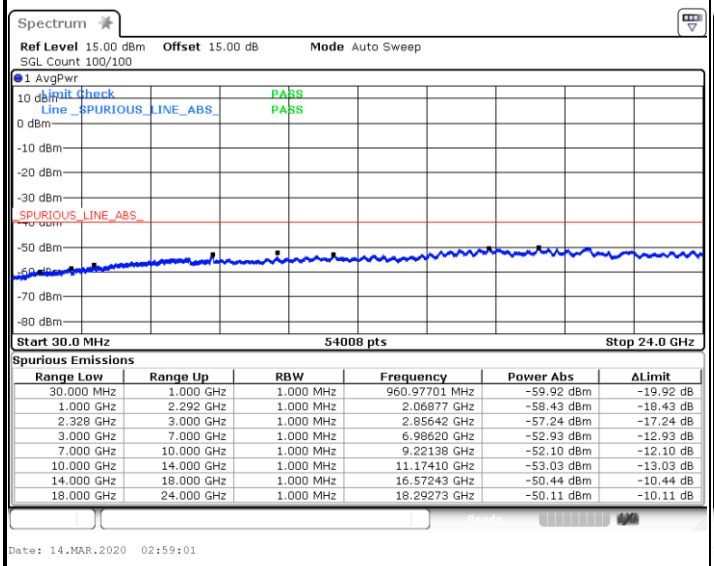
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	918.31834 MHz	-59.75 dBm	-19.75 dB
1.000 GHz	2.292 GHz	1.000 MHz	1.98052 GHz	-58.40 dBm	-18.40 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.86220 GHz	-57.31 dBm	-17.31 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.97860 GHz	-52.75 dBm	-12.75 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.22238 GHz	-51.35 dBm	-11.35 dB
10.000 GHz	14.000 GHz	1.000 MHz	11.20060 GHz	-53.05 dBm	-13.05 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.54493 GHz	-50.26 dBm	-10.26 dB
18.000 GHz	24.000 GHz	1.000 MHz	18.28923 GHz	-50.09 dBm	-10.09 dB

Date: 14.MAR.2020 03:12:36

LTE Band 30 / 5MHz

Lowest Channel / 64QAM

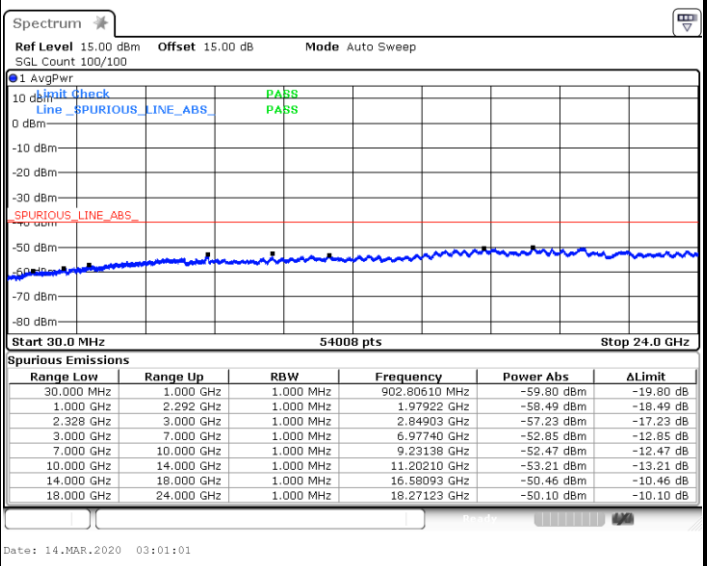


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	960.97701 MHz	-59.92 dBm	-19.92 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.06877 GHz	-58.43 dBm	-18.43 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.85642 GHz	-57.24 dBm	-17.24 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98620 GHz	-52.93 dBm	-12.93 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.22138 GHz	-52.10 dBm	-12.10 dB
10.000 GHz	14.000 GHz	1.000 MHz	11.17410 GHz	-53.03 dBm	-13.03 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.57243 GHz	-50.44 dBm	-10.44 dB
18.000 GHz	24.000 GHz	1.000 MHz	18.29273 GHz	-50.11 dBm	-10.11 dB

Date: 14.MAR.2020 02:59:01

Middle Channel / 64QAM

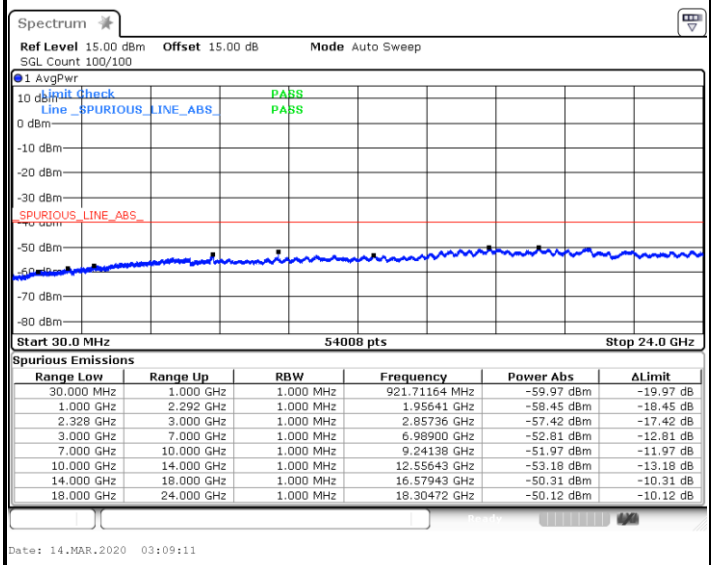


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	902.80610 MHz	-59.80 dBm	-19.80 dB
1.000 GHz	2.292 GHz	1.000 MHz	1.97922 GHz	-58.49 dBm	-18.49 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.84903 GHz	-57.23 dBm	-17.23 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.97740 GHz	-52.85 dBm	-12.85 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.23138 GHz	-52.47 dBm	-12.47 dB
10.000 GHz	14.000 GHz	1.000 MHz	11.20210 GHz	-53.21 dBm	-13.21 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.58093 GHz	-50.46 dBm	-10.46 dB
18.000 GHz	24.000 GHz	1.000 MHz	18.27123 GHz	-50.10 dBm	-10.10 dB

Date: 14.MAR.2020 03:01:01

Highest Channel / 64QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	921.71164 MHz	-59.97 dBm	-19.97 dB
1.000 GHz	2.292 GHz	1.000 MHz	1.95641 GHz	-58.45 dBm	-18.45 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.85736 GHz	-57.42 dBm	-17.42 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98900 GHz	-52.81 dBm	-12.81 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.24138 GHz	-51.97 dBm	-11.97 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.55643 GHz	-53.18 dBm	-13.18 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.57943 GHz	-50.31 dBm	-10.31 dB
18.000 GHz	24.000 GHz	1.000 MHz	18.30472 GHz	-50.12 dBm	-10.12 dB

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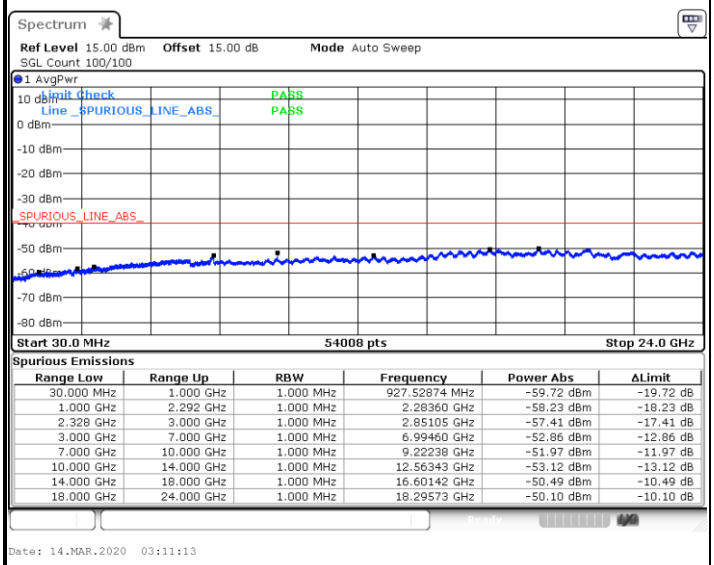
LTE Band 30 / 10MHz	
Middle Channel / 64QAM	



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	0.0015	PASS
40	Normal Voltage	0.0023	
30	Normal Voltage	0.0057	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0006	
0	Normal Voltage	0.0001	
-10	Normal Voltage	0.0047	
-20	Normal Voltage	0.0048	
-30	Normal Voltage	0.0051	
20	Maximum Voltage	0.0048	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0015	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.4 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 / 5MHz / 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	4615.50	-53.01	-40	-13.01	-52.25	-59.26	6.45	12.70	H
	6923.25	-58.79	-40	-18.79	-58.76	-62.19	8.40	11.80	H
	9231.00	-57.63	-40	-17.63	-58.55	-59.98	9.65	12.00	H
	4615.50	-56.26	-40	-16.26	-55.66	-62.51	6.45	12.70	V
	6923.25	-57.95	-40	-17.95	-59.02	-61.35	8.40	11.80	V
	9231.00	-55.45	-40	-15.45	-58.6	-57.80	9.65	12.00	V

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

LTE Band 30 / 10MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	4611.00	-51.96	-40	-11.96	-51.24	-58.21	6.45	12.70	H
	6916.50	-58.61	-40	-18.61	-58.58	-62.01	8.40	11.80	H
	9222.00	-56.01	-40	-16.01	-56.93	-58.36	9.65	12.00	H
	4611.00	-57.00	-40	-17.00	-56.41	-63.25	6.45	12.70	V
	6916.50	-57.74	-40	-17.74	-58.81	-61.14	8.40	11.80	V
	9222.00	-55.67	-40	-15.67	-58.82	-58.02	9.65	12.00	V

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