FCC RADIO TEST REPORT

FCC ID	:	**2ABZ2-EF136**
Equipment	:	**Smart Phone**
Brand Name	:	**ONEPLUS**
Model Name	:	**LE2115**
Applicant	:	**OnePlus Technology (Shenzhen) Co., Ltd. 18C02, 18C03, 18C04 and 18C05, Shum Yip Terra Building, Binhe Avenue North, Futian District, Shenzhen**
Manufacturer	:	**OnePlus Technology (Shenzhen) Co., Ltd. 18C02, 18C03, 18C04 and 18C05, Shum Yip Terra Building, Binhe Avenue North, Futian District, Shenzhen**
Standard	:	**FCC 47 CFR Part 2, Part 27(D)**

The product was received on Dec. 15, 2020 and testing was started from Dec. 20, 2020 and completed on Jan. 05 , 2021. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA-603-E and has been in compliance with the applicable technical standards.

The test results in this partial report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Louis Wu

Approved by: Louis Wu

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)

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History of this test report

Report No.	Version	Description	Issued Date
FG0O2626-07C	01	Initial issue of report	Feb. 08, 2021

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.2	§2.1046	Conducted Output Power and Effective Isotropic Radiated Power	Reporting only	-
3.3	-	Peak-to-Average Ratio	Reporting only	-
3.4	§2.1049	Occupied Bandwidth	Reporting only	-
3.5	§2.1051 §27.53 (a)(4)	Conducted Band Edge Measurement	Pass	-
3.6	§2.1051 §27.53 (a)(4)	Conducted Spurious Emission	Pass	-
3.7	§2.1055 §27.54	Frequency Stability Temperature & Voltage	Pass	-
Remark: Since the test data is not affected by model name changing, the FG0O2626-07C report reuse test data from the FG0O2626-02C report.				

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.

Reviewed by: Wii Chang

Report Producer: Tina Chuang

1 General Description

1.1 Product Feature of Equipment Under Test

GSM/CDMA/WCDMA/LTE/5G NR, Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n/ac/ax, Wi-Fi 5GHz 802.11a/n/ac/ax, NFC, GNSS, ANT+, and WPC/WPT

Product Specification subjective to this standard	
Antenna Type	WWAN: <Down Antenna>: Coupling type (LDS) Antenna <Upper Antenna>: Coupling type (LDS) Antenna Bluetooth: PIFA Antenna WLAN: <Ant. 4>: PIFA Antenna <Ant. 6>: PIFA Antenna NFC: Loop Antenna BDS/Galileo/GLONASS/GPS/SBAS: PIFA Antenna ANT+: PIFA Antenna WPC/WPT: Loop Antenna
Antenna Gain	<Upper Antenna>: -3.0 dBi <Down Antenna >: -2.0 dBi

Remark: The above EUT's information was declared by manufacturer. Please refer to Comments and Explanations in report summary.

1.2 Modification of EUT

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

1.3 Testing Site

Test Site	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	**Sporton Site No.**
	TH05-HY
Test Engineer	Bryant Liu
Temperature	22~24℃
Relative Humidity	55~56%

FCC Designation No. TW1190

1.4 Applied Standards

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

- ANSI C63.26-2015
- FCC 47 CFR Part 2, Part 27(D)
- ANSI / TIA-603-E
- 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.
3. The TAF code is not including all the FCC KDB listed without accreditation.

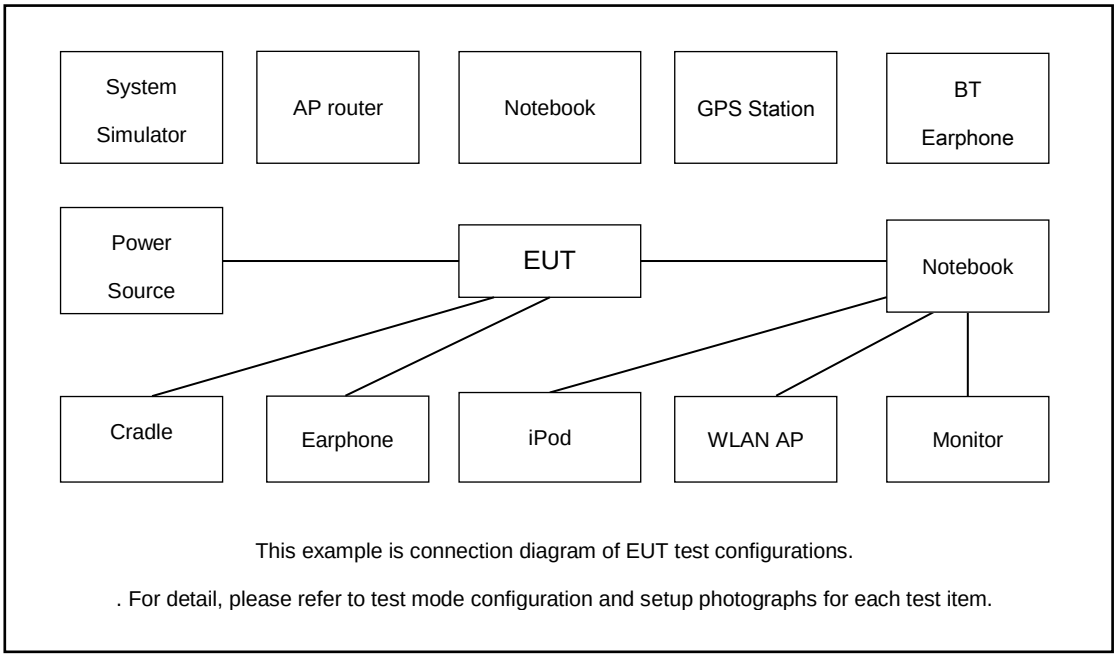
2 Test Configuration of Equipment Under Test

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.

Test Items	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
Peak-to-Average Ratio	30	-	-	v	v	-	-	v	v	v	v		v	v	v	v
26dB and 99% Bandwidth	30	-	-	v	v	-	-	v	v	v			v	v	v	v
Conducted Band Edge	30	-	-	v	v	-	-	v	v	v	v		v	v		v
Conducted Spurious Emission	30	-	-	v	v	-	-	v	v	v	v			v	v	v
Frequency Stability	30	-	-	v	v	-	-	v	v	v			v		v	
Remark	1. The mark "**v** " means that this configuration is chosen for testing 2. The mark "-" means that this bandwidth is not supported. 3. All test items were performed with Down Antenna.															

2.2 Connection Diagram of Test System



This example is connection diagram of EUT test configurations.

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

2.3 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 4.2 dB and 10dB attenuator.

Example :

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

= 4.2 + 10 = 14.2 (dB)

2.4 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

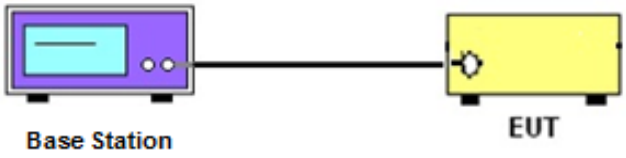
3 Conducted Test Items

3.1 Measuring Instruments

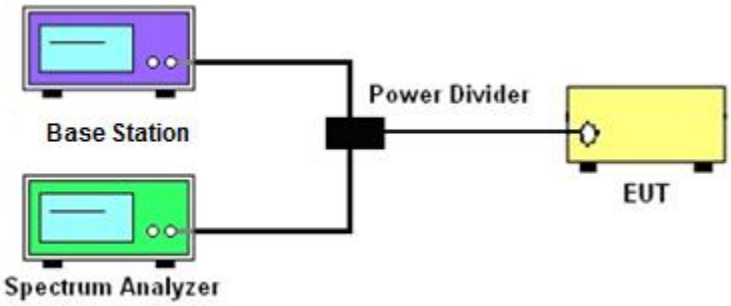
See list of measuring instruments of this test report.

3.1.1 Test Setup

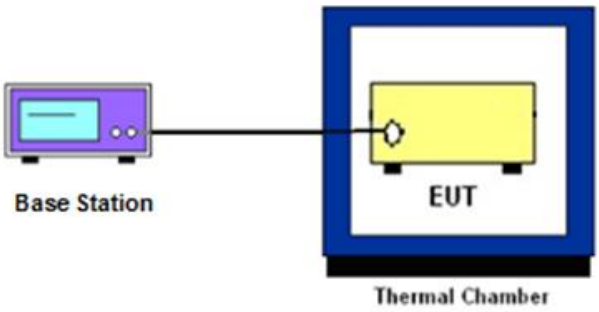
3.1.2 Conducted Output Power



3.1.3 Peak-to-Average Ratio, Occupied Bandwidth, 26dB Bandwidth ,Band-Edge and Conducted Spurious Emission



3.1.4 Frequency Stability



3.1.5 Test Result of Conducted Test

Please refer to Appendix A.

3.2 Conducted Output Power Measurement

3.2.1 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.

According to KDB 412172 D01 Power Approach,

EIRP = $P_T + G_T – L_C$, 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

3.2.2 Test Procedures

1. The transmitter output port was connected to the system simulator.
2. Set EUT at maximum power through the system simulator.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure and record the power level from the system simulator.

3.3 Peak-to-Average Ratio

3.3.1 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.

3.3.2 Test Procedures

The testing follows ANSI C63.26-2015 Section 5.2.6

1. The EUT was connected to spectrum and system simulator via a power divider.
2. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
3. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
4. Record the deviation as Peak to Average Ratio.

3.4 Occupied Bandwidth

3.4.1 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.

3.4.2 Test Procedures

The testing follows ANSI C63.26-2015 Section 5.4.3 (26dB) and Section 5.4.4 (99OB)

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. 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.
3. 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.
4. Set the detection mode to peak, and the trace mode to max hold.
5. 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)
6. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
7. 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.
8. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

3.5 Conducted Band Edge

3.5.1 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.

3.5.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The band edges of low and high channels for the highest RF powers were measured.
3. Set RBW >= 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
4. Beyond the 1 MHz band from the band edge, RBW=1MHz was used.
5. Set spectrum analyzer with RMS detector.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
7. Checked that all the results comply with the emission limit line.
   The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)

3.6 Conducted Spurious Emission

3.6.1 Description of Conducted Spurious Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 70 + 10 log (P) dB.

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

3.6.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. 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.
3. The middle channel for the highest RF power within the transmitting frequency was measured.
4. The conducted spurious emission for the whole frequency range was taken.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
6. Set spectrum analyzer with RMS detector.
7. Taking the record of maximum spurious emission.
8. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
9. The limit line is derived from 70 + 10log(P)dB below the transmitter power P(Watts)

3.7 Frequency Stability

3.7.1 Description of Frequency Stability Measurement

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

3.7.2 Test Procedures for Temperature Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

1. The EUT was set up in the thermal chamber and connected with the system simulator.
2. 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.
3. 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.

3.7.3 Test Procedures for Voltage Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

1. The EUT was placed in a temperature chamber at 20±5° C and connected with the system simulator.
2. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
3. The variation in frequency was measured for the worst case.

4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	Rohde & Schwarz	FSV40	101397	10Hz~40GHz	Nov. 27, 2020	Dec. 20, 2020~ Jan. 05, 2021	Nov. 26, 2021	Conducted (TH05-HY)
Temperature Chamber	ESPEC	SU-241	92003713	-30℃~95℃	May 15, 2020	Dec. 20, 2020~ Jan. 05, 2021	May 14, 2021	Conducted (TH05-HY)
Programmable Power Supply	GW Instek	PSS-2005	EL890089	1V~20V 0.5A~5A	Feb. 21, 2020	Dec. 20, 2020~ Jan. 05, 2021	Feb. 20, 2021	Conducted (TH05-HY)
Coupler	Warison	20dB 25W SMA Directional Coupler	#A	1-18GHz	Jan. 13, 2020	Dec. 20, 2020~ Jan. 05, 2021	Jan. 12, 2021	Conducted (TH05-HY)

Appendix A. Test Results of Conducted and EIRPTest

Conducted Output Power(Average power and EIRP)

<Down Antenna>

LTE Band 30 Maximum Average Power [dBm] (GT - LC = -2 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
10	1	0	QPSK	-	**24.08**	-	22.08	0.1614
10	1	25			23.83			
10	1	49			24.01			
10	25	0			23.01			
10	25	12			22.99			
10	25	25			23.03			
10	50	0			21.00			
10	1	0	16-QAM		23.24		21.24	0.1330
10	1	25			23.10			
10	1	49			23.17			
10	25	0			21.98			
10	25	12			22.10			
10	25	25			22.13			
10	50	0			20.99			
10	1	0	64-QAM		22.16		20.16	0.1038
10	1	25			21.93			
10	1	49			22.09			
10	25	0			20.91			
10	25	12			20.77			
10	25	25			20.46			
10	50	0			20.64			
10	1	0	256-QAM		19.03		17.11	0.0514
10	1	25			19.11			
10	1	49			19.05			
10	25	0			18.93			
10	25	12			19.05			
10	25	25			19.08			
10	50	0			19.02			

LTE Band 30 Maximum Average Power [dBm] (GT - LC = -2 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
5	1	0	QPSK	23.82	23.77	23.72	21.98	0.1578
5	1	12		23.92	23.86	23.91		
5	1	24		23.91	23.98	23.90		
5	12	0		22.95	22.90	22.94		
5	12	7		23.05	23.01	22.99		
5	12	13		23.03	22.98	23.04		
5	25	0		22.48	22.52	22.44		
5	1	0	16-QAM	23.02	22.91	22.99	21.29	0.1346
5	1	12		23.23	23.08	23.18		
5	1	24		23.19	23.16	23.29		
5	12	0		21.96	21.91	21.94		
5	12	7		22.05	22.06	22.09		
5	12	13		22.04	22.07	22.13		
5	25	0		22.04	22.01	22.05		
5	1	0	64-QAM	22.04	21.74	21.34	20.10	0.1023
5	1	12		22.10	21.70	21.68		
5	1	24		22.08	21.69	21.82		
5	12	0		21.03	20.84	20.40		
5	12	7		21.08	20.66	20.43		
5	12	13		21.04	20.48	20.43		
5	25	0		21.05	20.60	20.35		
5	1	0	256-QAM	19.03	19.05	19.07	17.84	0.0608
5	1	12		19.12	19.12	19.11		
5	1	24		19.10	19.13	19.20		
5	12	0		18.91	**19.84**	18.96		
5	12	7		19.03	19.04	19.07		
5	12	13		19.04	19.06	19.04		
5	25	0		19.01	19.00	19.03		

<Upper Antenna>

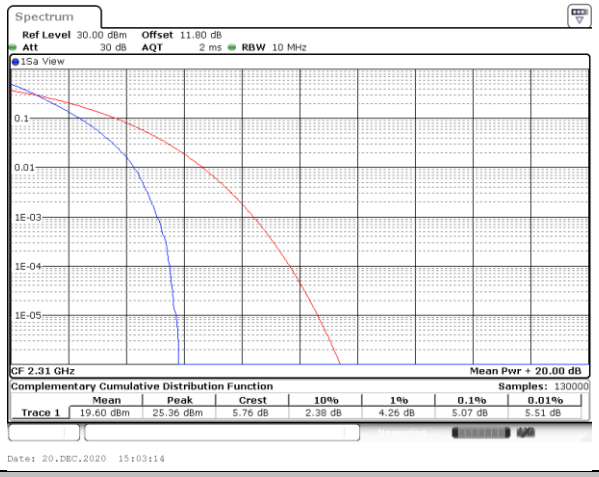
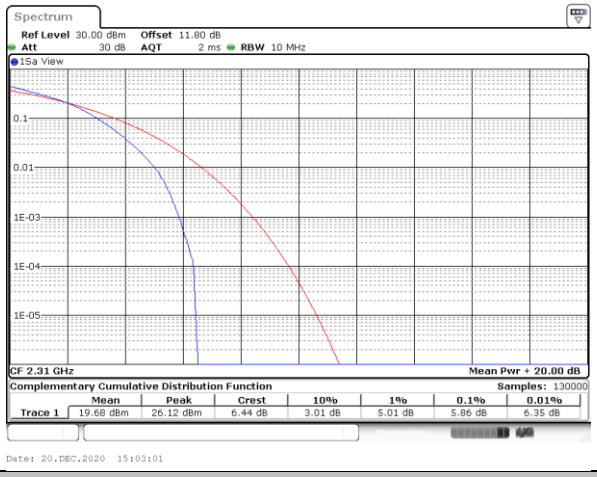
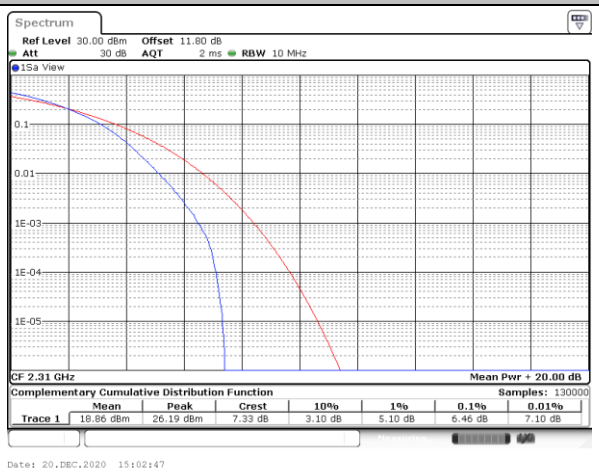
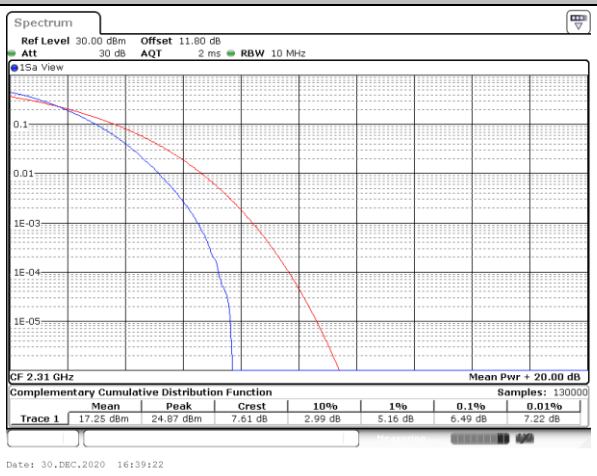
LTE Band 30 Maximum Average Power [dBm] (GT - LC = -3 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
10	1	0	QPSK	-	23.58	-	20.73	0.1183
10	1	25			23.73			
10	1	49			23.67			
10	25	0			22.68			
10	25	12			22.84			
10	25	25			22.77			
10	50	0			20.84			
10	1	0	16-QAM		23.03		20.06	0.1014
10	1	25			23.02			
10	1	49			23.06			
10	25	0			21.80			
10	25	12			21.83			
10	25	25			21.85			
10	50	0			20.81			
10	1	0	64-QAM		21.91		19.09	0.0811
10	1	25			21.88			
10	1	49			22.09			
10	25	0			20.76			
10	25	12			20.89			
10	25	25			20.80			
10	50	0			20.85			
10	1	0	256-QAM		18.78		15.85	0.0385
10	1	25			18.81			
10	1	49			18.85			
10	25	0			18.68			
10	25	12			18.74			
10	25	25			18.81			
10	50	0			18.75			

LTE Band 30 Maximum Average Power [dBm] (GT - LC = -3 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
5	1	0	QPSK	23.60	23.59	23.68	20.80	0.1202
5	1	12		**23.80**	23.75	23.74		
5	1	24		23.72	23.75	23.75		
5	12	0		22.69	22.70	22.72		
5	12	7		22.83	22.79	22.86		
5	12	13		22.77	22.84	22.76		
5	25	0		22.29	22.30	22.29		
5	1	0	16-QAM	22.87	22.88	23.03	20.05	0.1012
5	1	12		23.05	22.95	22.98		
5	1	24		22.88	23.03	23.05		
5	12	0		21.69	21.75	21.71		
5	12	7		21.86	21.89	21.81		
5	12	13		21.81	21.78	21.81		
5	25	0		21.80	21.74	21.84		
5	1	0	64-QAM	21.84	21.83	21.69	19.04	0.0802
5	1	12		21.83	21.84	21.77		
5	1	24		22.04	21.89	21.94		
5	12	0		20.70	20.71	20.78		
5	12	7		20.88	20.82	20.82		
5	12	13		20.86	20.85	20.75		
5	25	0		20.87	20.81	20.64		
5	1	0	256-QAM	18.74	18.81	18.77	15.95	0.0394
5	1	12		18.91	18.90	18.92		
5	1	24		18.85	**18.95**	**18.95**		
5	12	0		18.71	18.68	18.71		
5	12	7		18.80	18.84	18.83		
5	12	13		18.77	18.81	18.77		
5	25	0		18.79	18.76	18.80		

LTE Band 30

Peak-to-Average Ratio

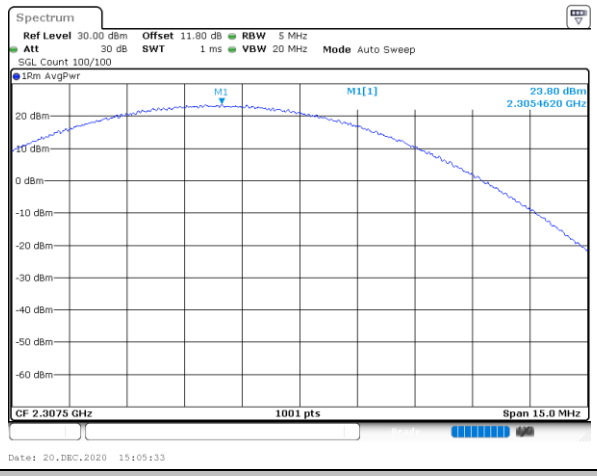
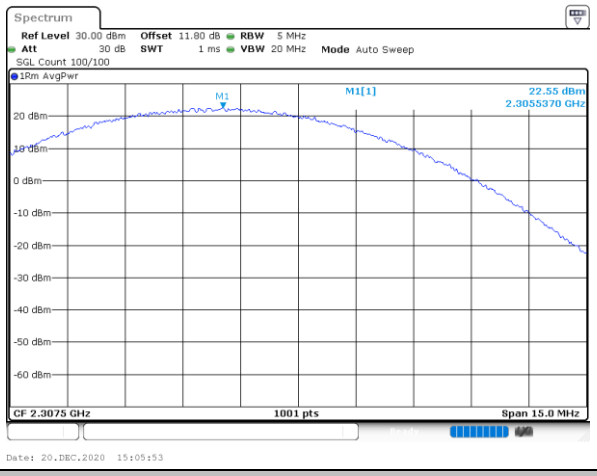
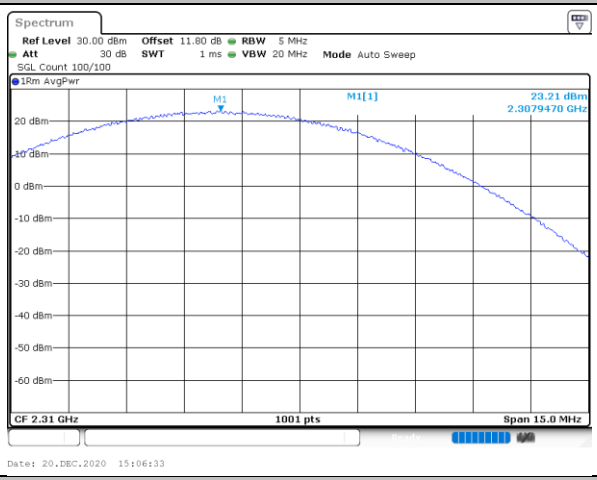
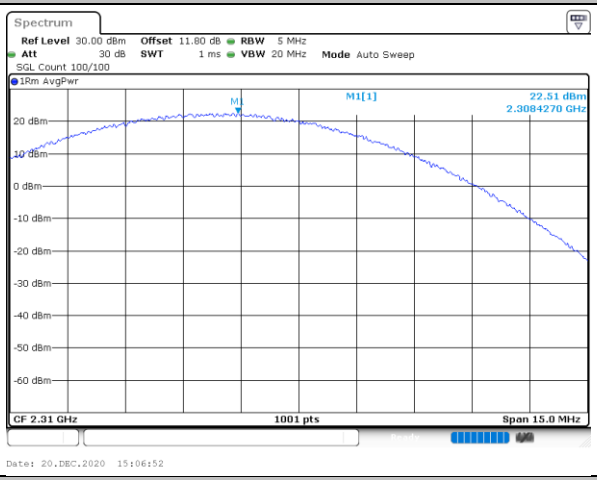
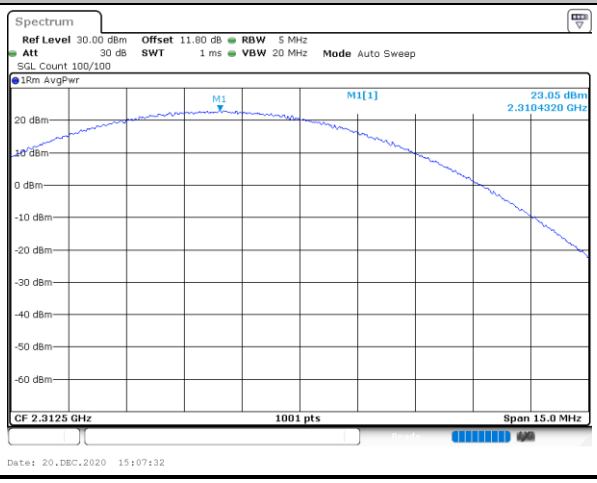
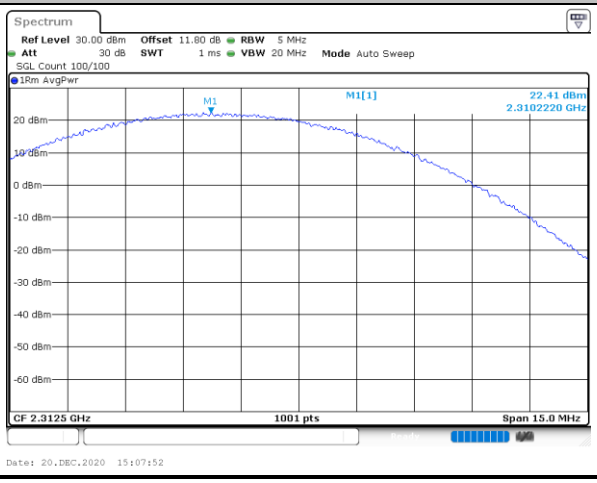
Mode	LTE Band 30 / 10MHz				
Mod.	QPSK	16QAM	64QAM	256QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	5.07	5.86	6.46	6.49	PASS

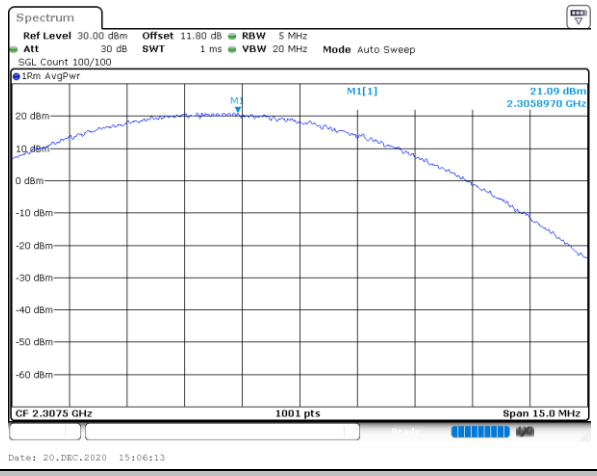
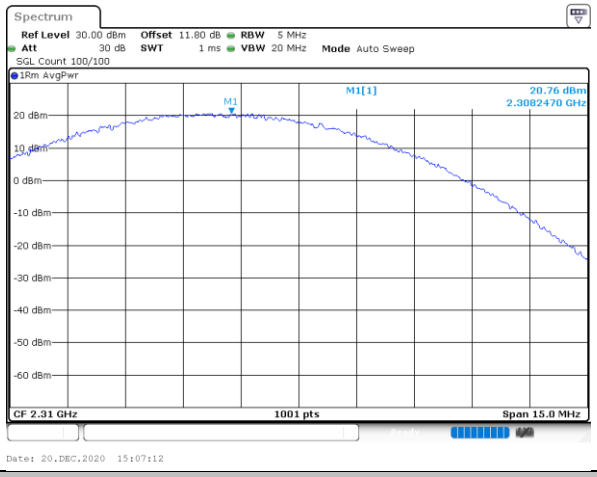
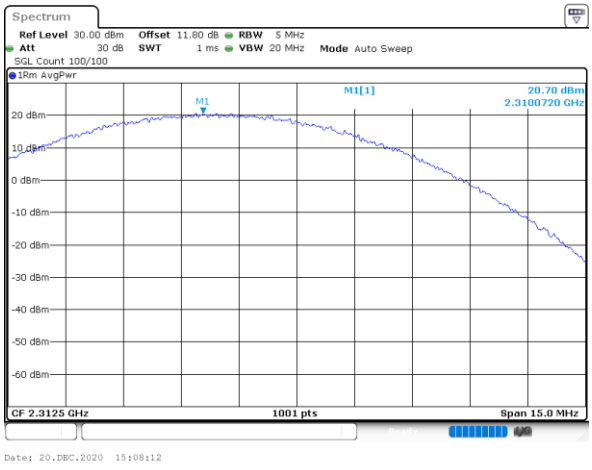
LTE Band 30 / 10MHz / QPSK	LTE Band 30 / 10MHz / 16QAM
Middle Channel / Full RB	Middle Channel / Full RB
	
LTE Band 30 / 10MHz / 64QAM	LTE Band 30 / 10MHz / 256QAM
Middle Channel / Full RB	Middle Channel / Full RB
	

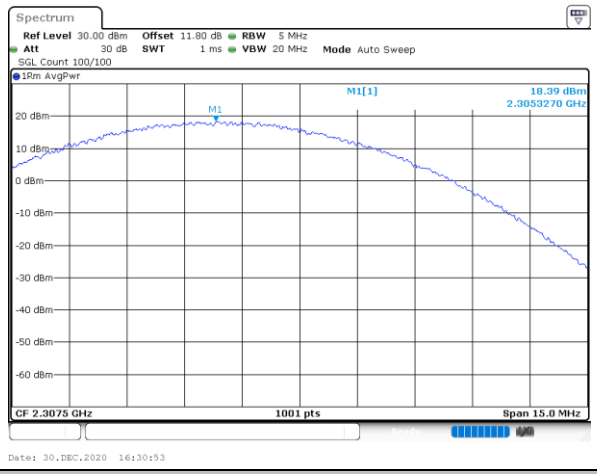
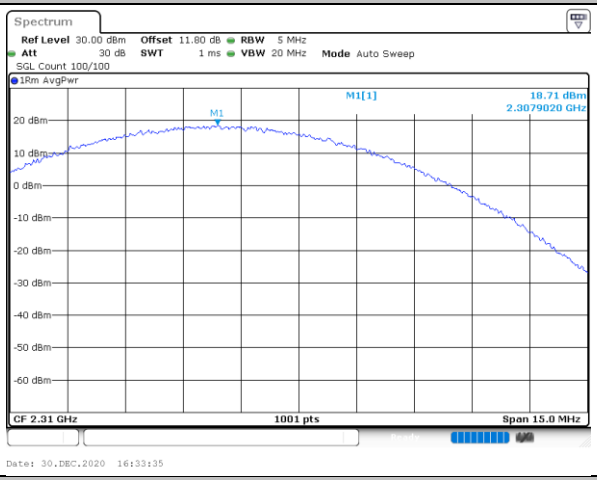
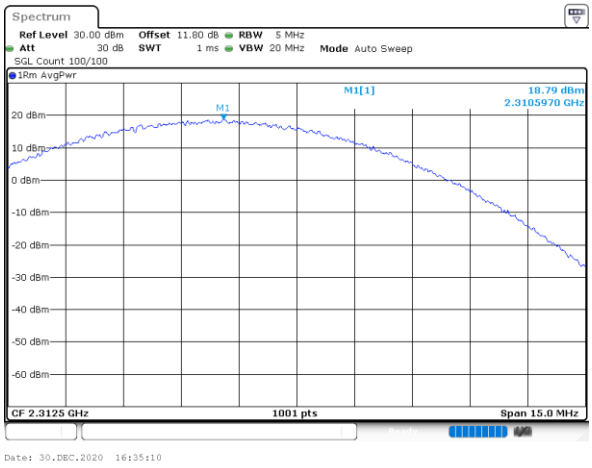
EIRP Power Density

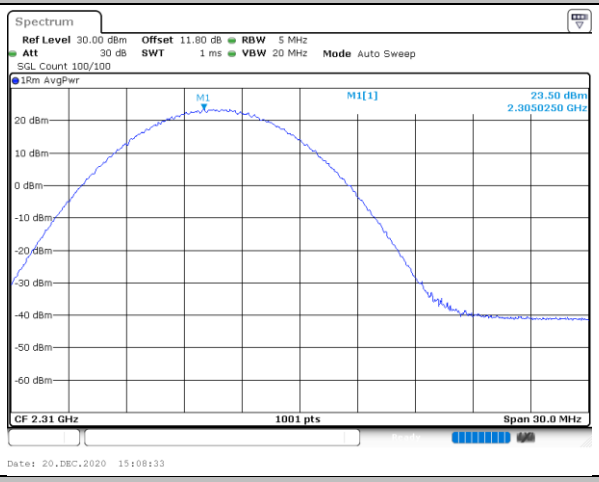
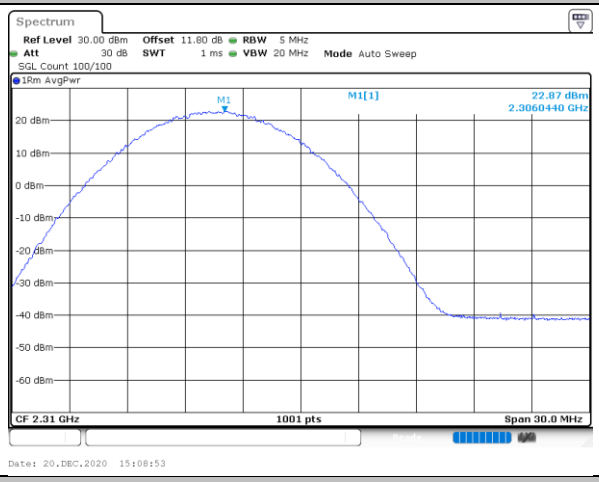
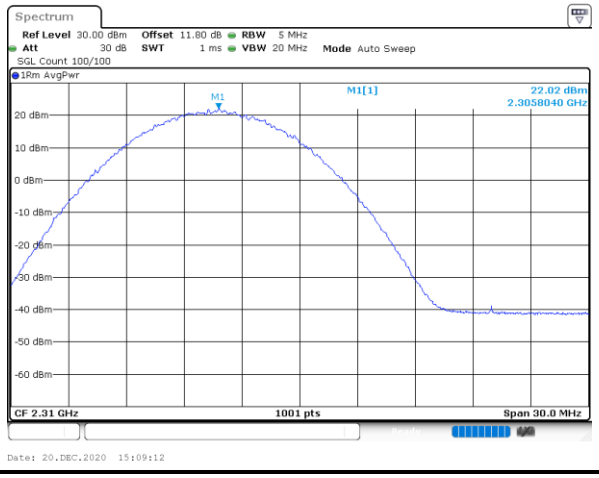
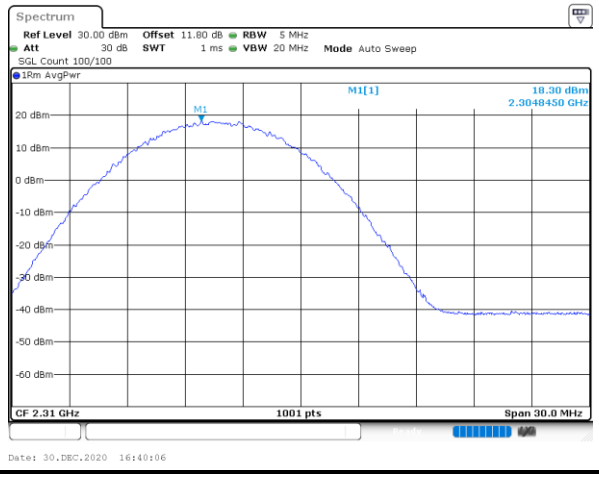
Mode	LTE Band 30 : Conducted Power Density (dBm/5MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	23.80	22.55	-	-	-	-	-	-
Middle CH	-	-	-	-	23.21	22.51	23.50	22.87	-	-	-	-
Highest CH	-	-	-	-	23.05	22.41	-	-	-	-	-	-
Mode	LTE Band 30 : Conducted Power Density (dBm/5MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Lowest CH	-	-	-	-	21.09	18.39	-	-	-	-	-	-
Middle CH	-	-	-	-	20.76	18.72	22.02	18.30	-	-	-	-
Highest CH	-	-	-	-	20.70	18.79	-	-	-	-	-	-

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	-	-	-	-	21.80	20.55			-	-	-	-
Middle CH	-	-	-	-	21.21	20.51	21.50	20.87	-	-	-	-
Highest CH	-	-	-	-	21.05	20.41			-	-	-	-
Mode	LTE Band 30 : EIRP Power Density (dBm/5MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Lowest CH	-	-	-	-	19.09	16.39	-	-	-	-	-	-
Middle CH	-	-	-	-	18.76	16.72	20.02	16.30-	-	-	-	-
Highest CH	-	-	-	-	18.70	16.79	-	-	-	-	-	-
Antenna Gain	-2 dBi											
Limit	250mW / 5MHz = 24dBm / 5MHz											
Result	Pass											

LTE Band 30 / 5MHz	
Lowest Channel / 5MHz / 1RB0 / QPSK	**Lowest Channel / 5MHz / 1RB0 / 16QAM**
	
Middle Channel / 5MHz / 1RB0 / QPSK	**Middle Channel / 5MHz / 1RB0 / 16QAM**
	
Highest Channel / 5MHz / 1RB0 / QPSK	**Highest Channel / 5MHz / 1RB0 / 16QAM**
	

LTE Band 30 / 5MHz	
Lowest Channel / 5MHz / 1RB0 / 64QAM	**Middle Channel / 5MHz / 1RB0 / 64QAM**
	
Highest Channel / 5MHz / 1RB0 / 64QAM	
	

LTE Band 30 / 5MHz	
Lowest Channel / 5MHz / 1RB0 / 256QAM	**Middle Channel / 5MHz / 1RB0 / 256QAM**
	
Highest Channel / 5MHz / 1RB0 / 256QAM	
	

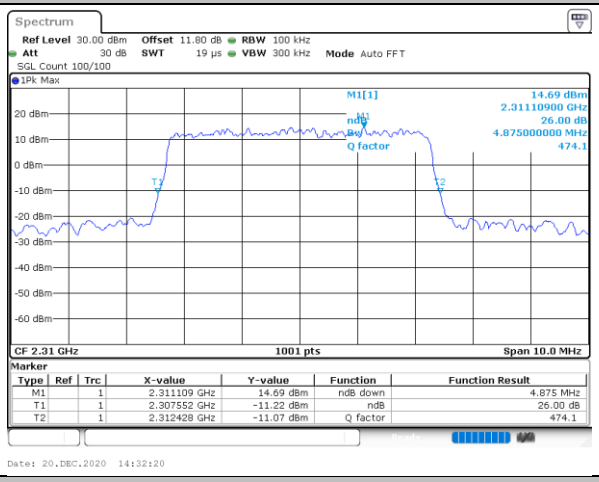
LTE Band 30 / 10MHz	
Lowest Channel / 10MHz / 1RB0 / QPSK	**Lowest Channel / 10MHz / 1RB0 / 16QAM**
	
Lowest Channel / 10MHz / 1RB0 / 64QAM	**Lowest Channel / 10MHz / 1RB0 / 256QAM**
	

26dB Bandwidth

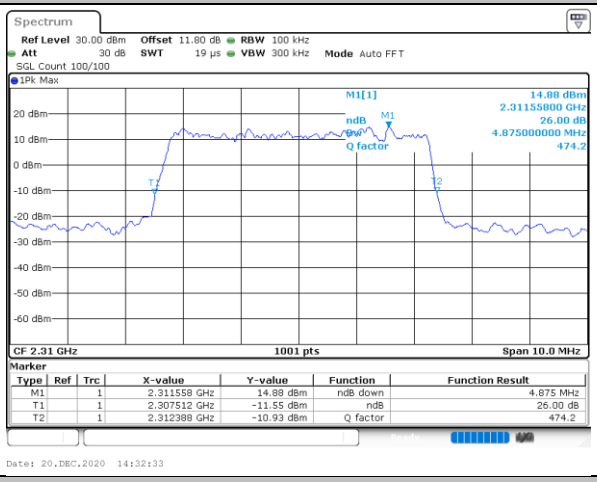
Mode	LTE Band 30 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	-	-	-	-	4.88	4.88	9.65	9.73	-	-	-	-
Mode	LTE Band 30 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM
Middle CH	-	-	-	-	4.93	4.92	9.75	9.75	-	-	-	-

LTE Band 30

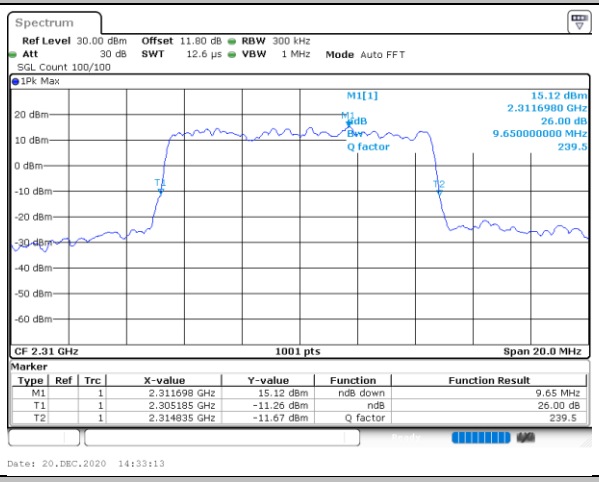
Middle Channel / 5MHz / QPSK



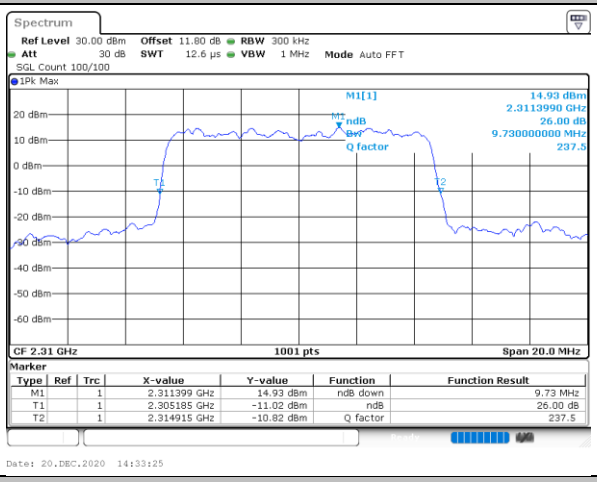
Middle Channel / 5MHz / 16QAM



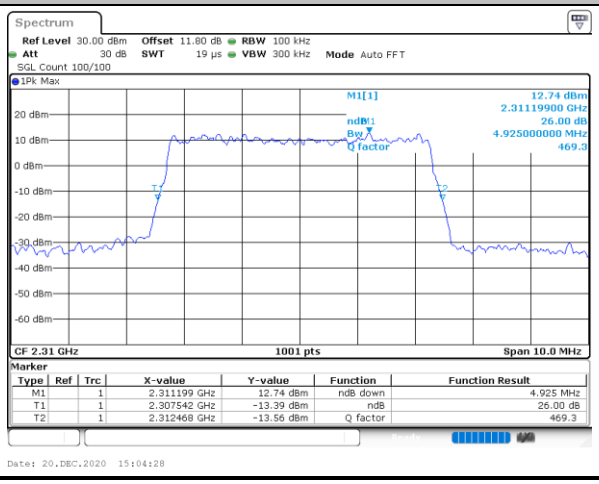
Middle Channel / 10MHz / QPSK



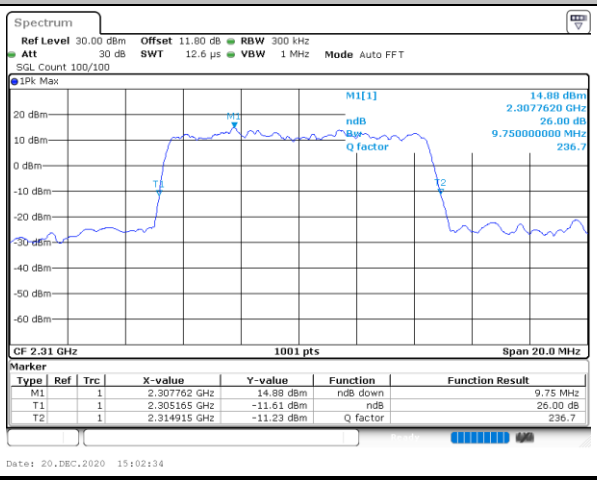
Middle Channel / 10MHz / 16QAM

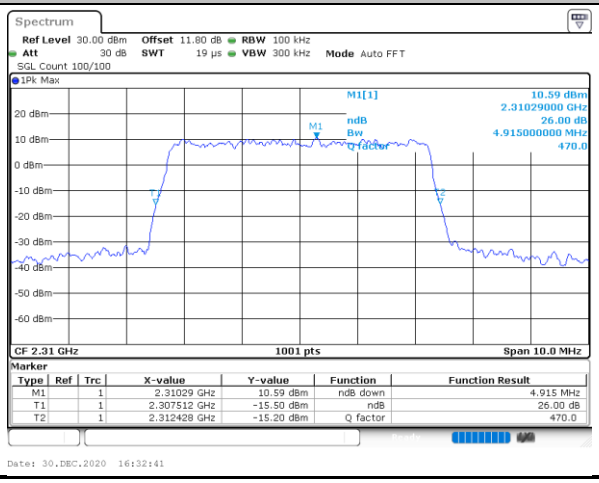
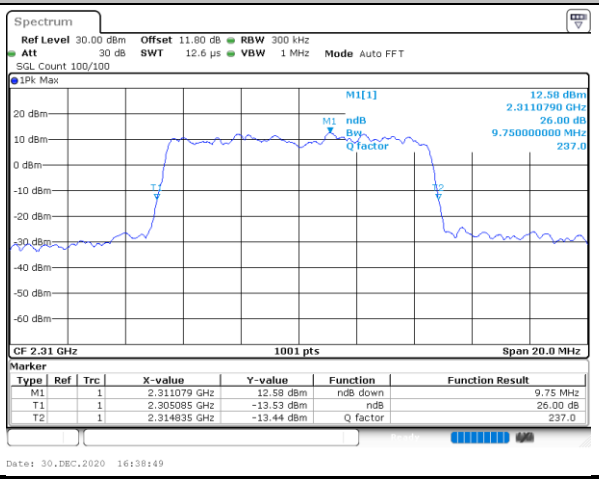


Middle Channel / 5MHz / 64QAM



Middle Channel / 10MHz / 64QAM



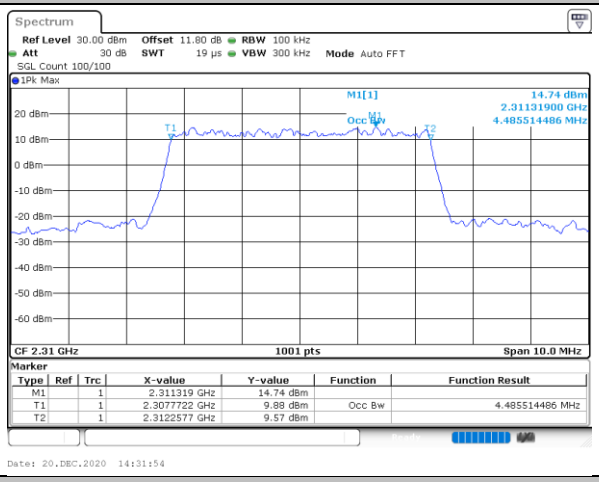
LTE Band 30	
Middle Channel / 5MHz / 256QAM	**Middle Channel / 10MHz / 256QAM**
	

Occupied Bandwidth

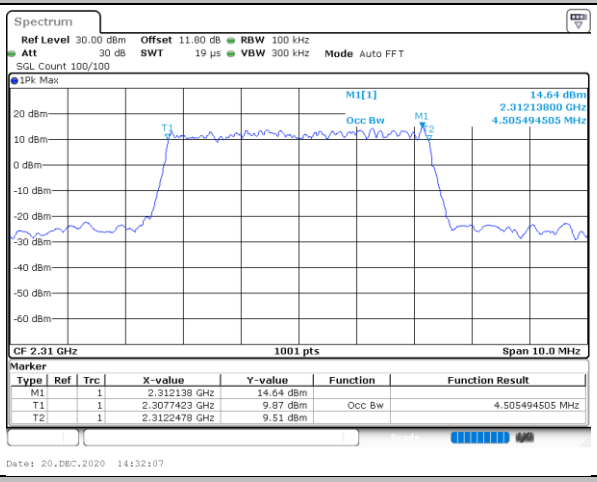
Mode	LTE Band 30 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	-	-	-	-	4.49	4.51	8.95	9.01	-	-	-	-
Mode	LTE Band 30 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM
Middle CH	-	-	-	-	4.49	4.48	9.05	8.99	-	-	-	-

LTE Band 30

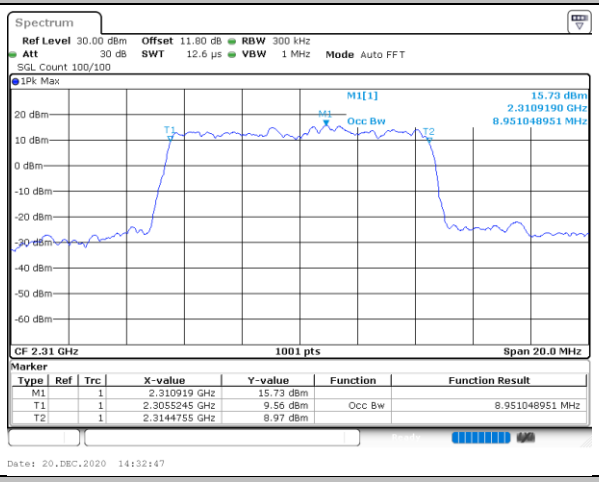
Middle Channel / 5MHz / QPSK



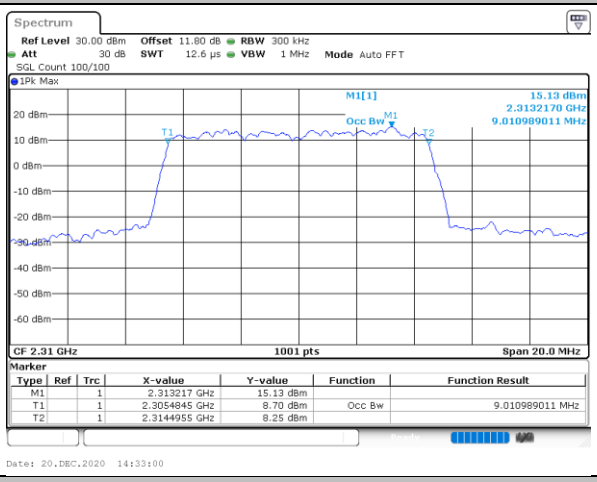
Middle Channel / 5MHz / 16QAM



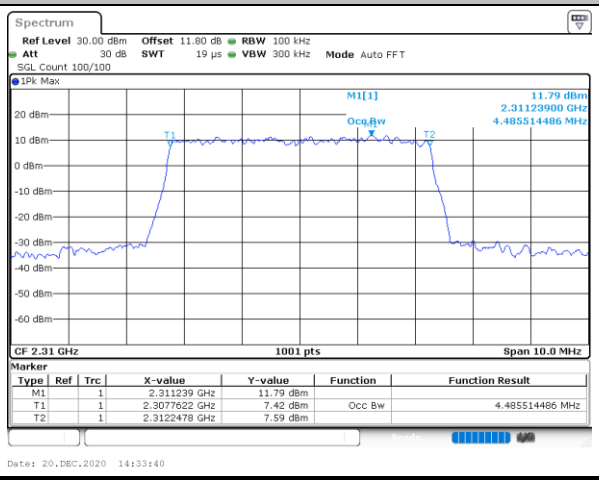
Middle Channel / 10MHz / QPSK



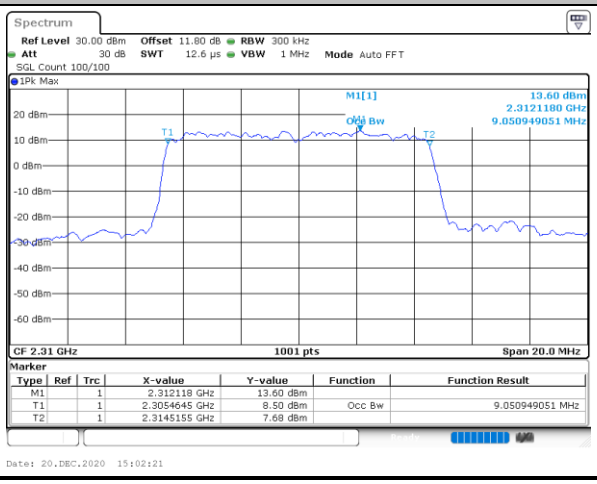
Middle Channel / 10MHz / 16QAM



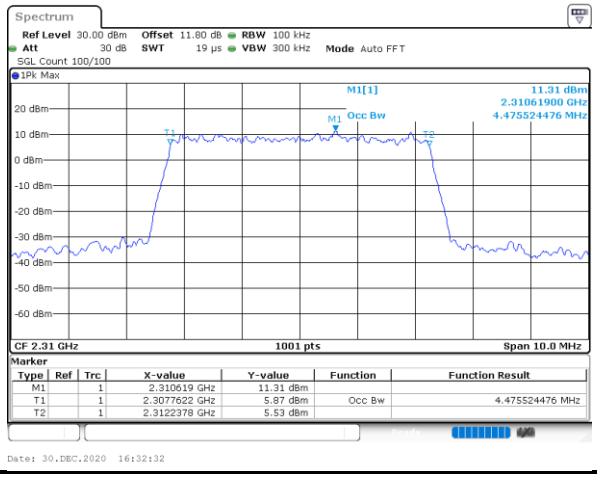
Middle Channel / 5MHz / 64QAM

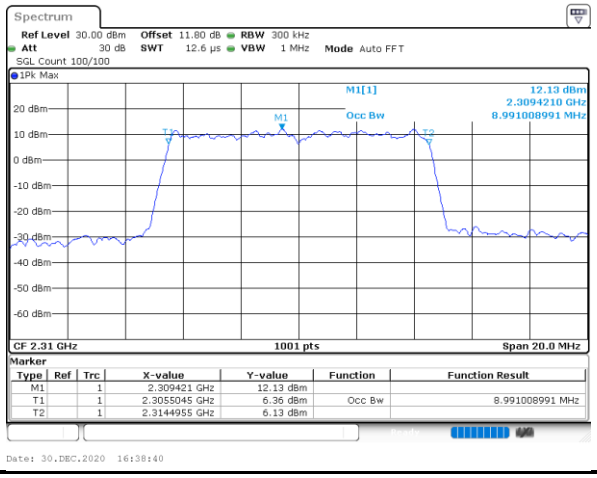


Middle Channel / 10MHz / 64QAM



LTE Band 30	
Middle Channel / 5MHz / 256QAM	**Middle Channel / 10MHz / 256QAM**

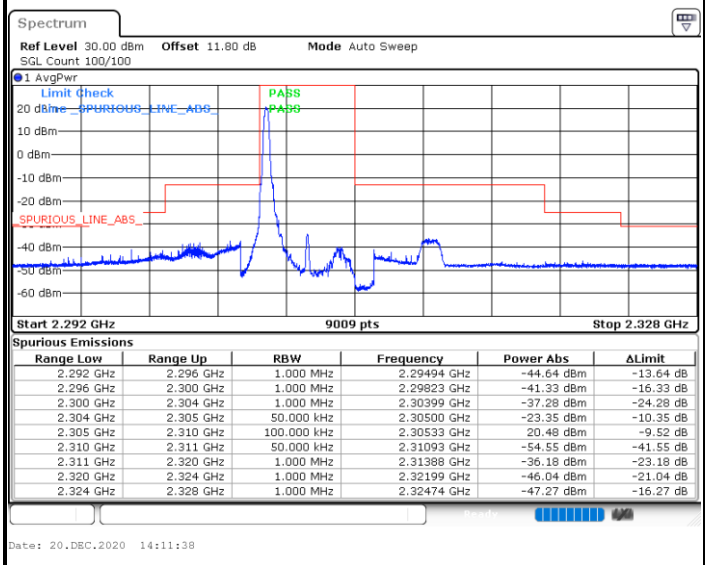




Conducted Band Edge

LTE Band 30 / 5MHz / QPSK

Lowest Band Edge / 1 RB

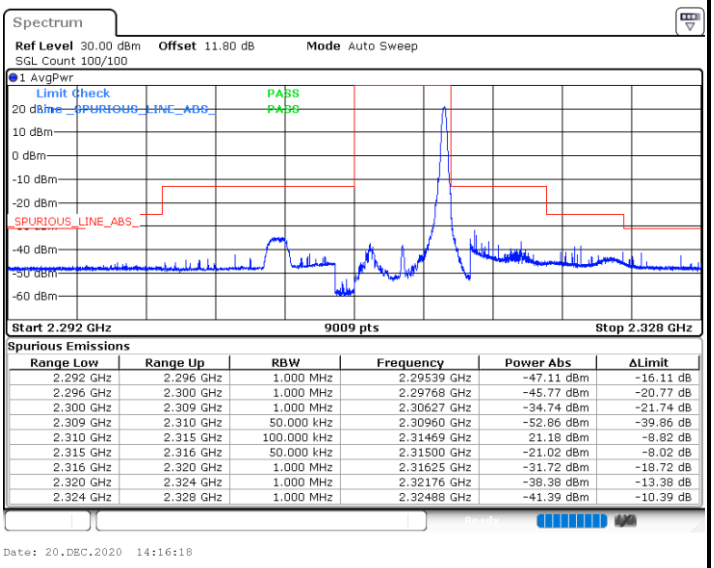


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29494 GHz	-44.64 dBm	-13.64 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29823 GHz	-41.33 dBm	-16.33 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30399 GHz	-37.28 dBm	-24.28 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-23.35 dBm	-10.35 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30533 GHz	20.48 dBm	-9.52 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31093 GHz	-54.55 dBm	-41.55 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31388 GHz	-36.18 dBm	-23.18 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32199 GHz	-46.04 dBm	-21.04 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32474 GHz	-47.27 dBm	-16.27 dB

Date: 20.DEC.2020 14:11:38

Highest Band Edge / 1 RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29539 GHz	-47.11 dBm	-16.11 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29768 GHz	-45.77 dBm	-20.77 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30627 GHz	-34.74 dBm	-21.74 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.30960 GHz	-52.86 dBm	-39.86 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31469 GHz	21.18 dBm	-8.82 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31500 GHz	-21.02 dBm	-8.02 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31625 GHz	-31.72 dBm	-18.72 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32176 GHz	-38.38 dBm	-13.38 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32488 GHz	-41.39 dBm	-10.39 dB

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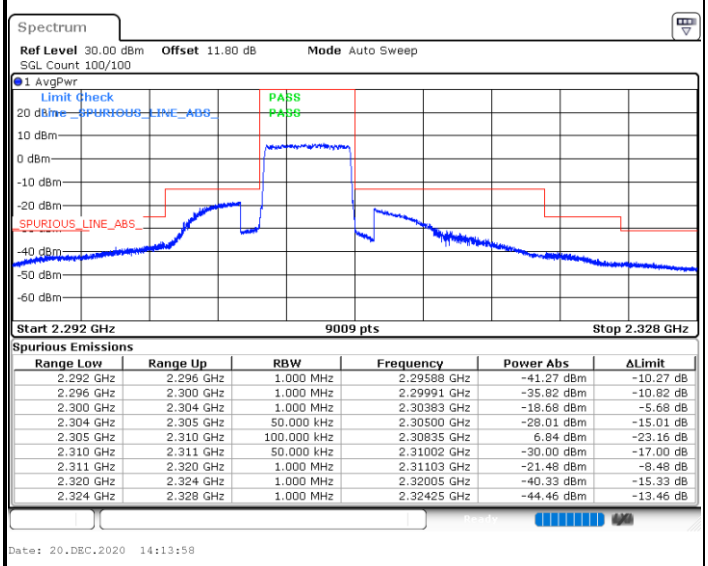
Lowest Band Edge / Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29588 GHz	-41.27 dBm	-10.27 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29991 GHz	-35.82 dBm	-10.82 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30383 GHz	-18.68 dBm	-5.68 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-28.01 dBm	-15.01 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30835 GHz	6.84 dBm	-23.16 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31002 GHz	-30.00 dBm	-17.00 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31103 GHz	-21.48 dBm	-8.48 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32005 GHz	-40.33 dBm	-15.33 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32425 GHz	-44.46 dBm	-13.46 dB

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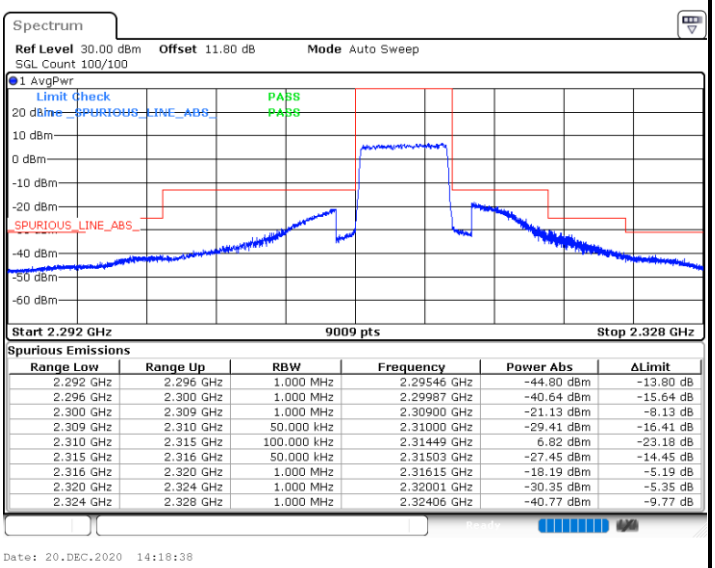
Highest Band Edge / Full RB



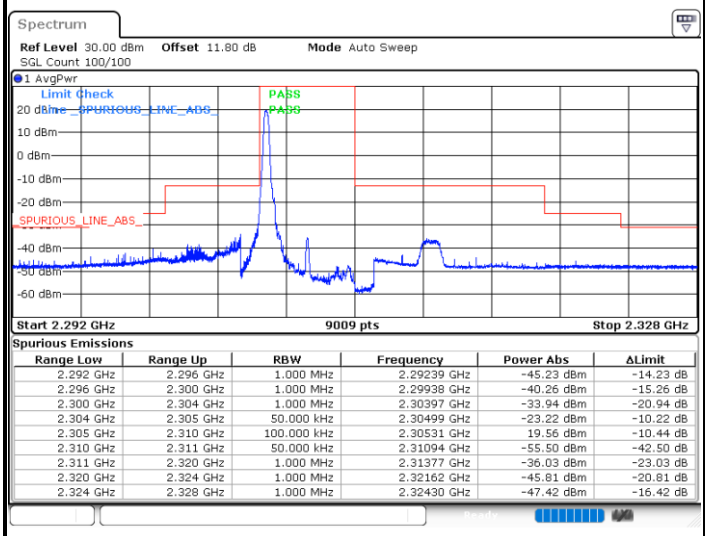
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29546 GHz	-44.80 dBm	-13.80 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29987 GHz	-40.64 dBm	-15.64 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30900 GHz	-21.13 dBm	-8.13 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.31000 GHz	-29.41 dBm	-16.41 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31449 GHz	6.82 dBm	-23.18 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31503 GHz	-27.45 dBm	-14.45 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31615 GHz	-18.19 dBm	-5.19 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32001 GHz	-30.35 dBm	-5.35 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32406 GHz	-40.77 dBm	-9.77 dB

Date: 20.DEC.2020 14:18:38

LTE Band 30 / 5MHz / 16QAM

Lowest Band Edge / 1 RB

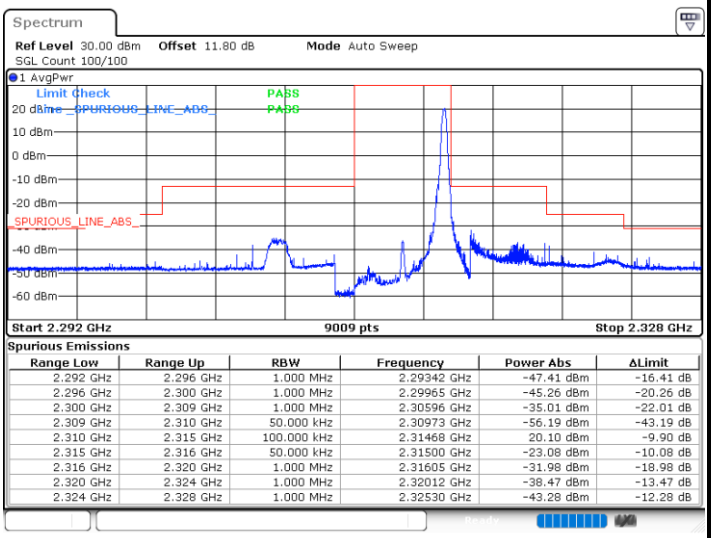


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29239 GHz	-45.23 dBm	-14.23 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29938 GHz	-40.26 dBm	-15.26 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30397 GHz	-33.94 dBm	-20.94 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30499 GHz	-23.22 dBm	-10.22 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30531 GHz	19.56 dBm	-10.44 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31094 GHz	-55.50 dBm	-42.50 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31377 GHz	-36.03 dBm	-23.03 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32162 GHz	-45.81 dBm	-20.81 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32430 GHz	-47.42 dBm	-16.42 dB

Date: 20.DEC.2020 14:12:25

Highest Band Edge / 1 RB

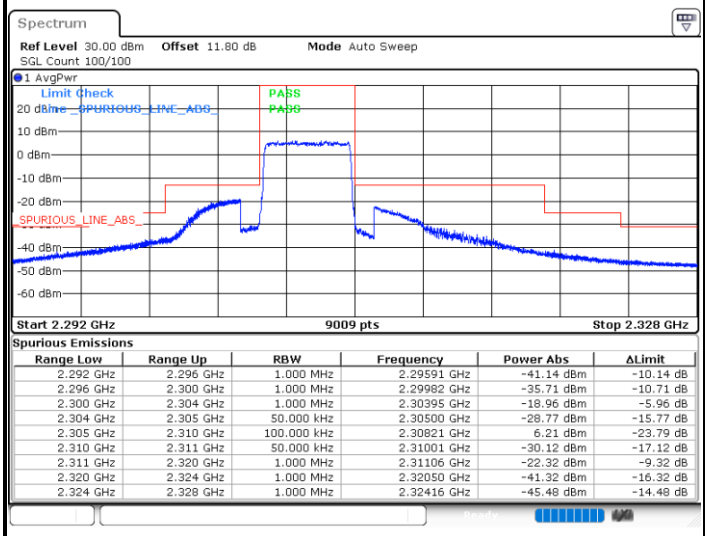


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29342 GHz	-47.41 dBm	-16.41 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29965 GHz	-45.26 dBm	-20.26 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30596 GHz	-35.01 dBm	-22.01 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.30973 GHz	-56.19 dBm	-43.19 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31468 GHz	20.10 dBm	-9.90 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31500 GHz	-23.08 dBm	-10.08 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31605 GHz	-31.98 dBm	-18.98 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32012 GHz	-38.47 dBm	-13.47 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32530 GHz	-43.28 dBm	-12.28 dB

Date: 20.DEC.2020 14:17:05

Lowest Band Edge / Full RB

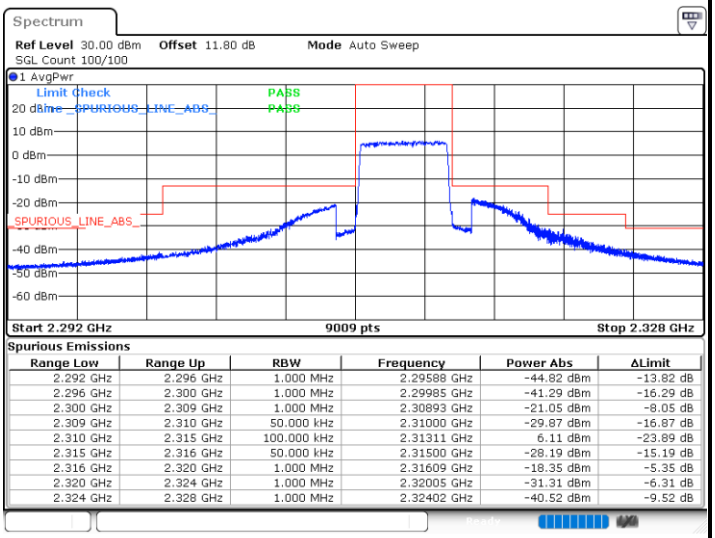


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29591 GHz	-41.14 dBm	-10.14 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29982 GHz	-35.71 dBm	-10.71 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30395 GHz	-18.96 dBm	-5.96 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-28.77 dBm	-15.77 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30821 GHz	6.21 dBm	-23.79 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31001 GHz	-30.12 dBm	-17.12 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31106 GHz	-22.32 dBm	-9.32 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32050 GHz	-41.32 dBm	-16.32 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32416 GHz	-45.48 dBm	-14.48 dB

Date: 20.DEC.2020 14:14:45

Highest Band Edge / Full RB



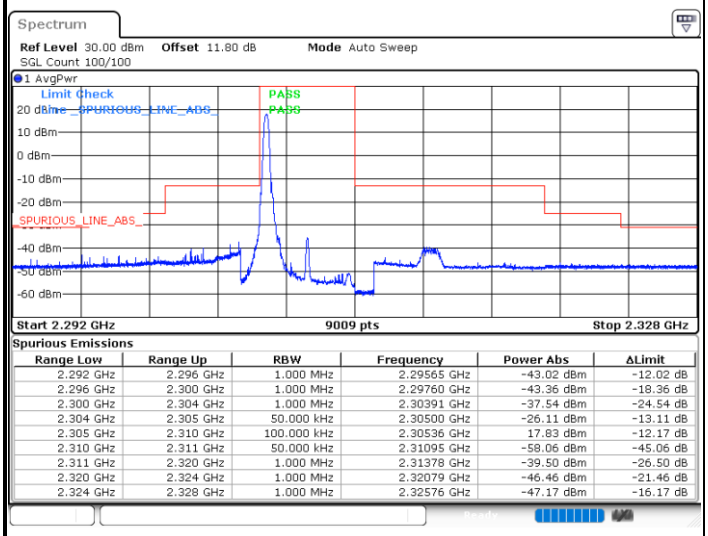
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29588 GHz	-44.82 dBm	-13.82 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29985 GHz	-41.29 dBm	-16.29 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30893 GHz	-21.05 dBm	-8.05 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.31000 GHz	-29.87 dBm	-16.87 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31311 GHz	6.11 dBm	-23.89 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31500 GHz	-28.19 dBm	-15.19 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31609 GHz	-18.35 dBm	-5.35 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32005 GHz	-31.31 dBm	-6.31 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32402 GHz	-40.52 dBm	-9.52 dB

Date: 20.DEC.2020 14:19:25

LTE Band 30 / 5MHz / 64QAM

Lowest Band Edge / 1 RB

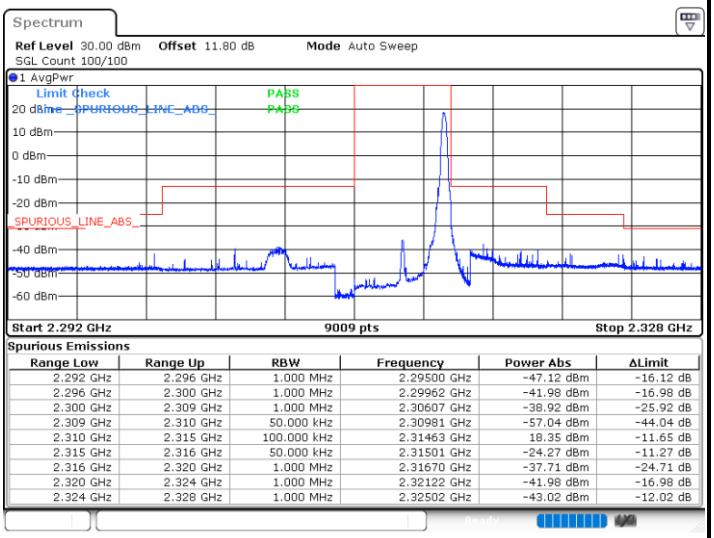


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29565 GHz	-43.02 dBm	-12.02 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29760 GHz	-43.36 dBm	-18.36 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30391 GHz	-37.54 dBm	-24.54 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-26.11 dBm	-13.11 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30536 GHz	17.83 dBm	-12.17 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31095 GHz	-58.06 dBm	-45.06 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31378 GHz	-39.50 dBm	-26.50 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32079 GHz	-46.46 dBm	-21.46 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32576 GHz	-47.17 dBm	-16.17 dB

Date: 20.DEC.2020 14:13:12

Highest Band Edge / 1 RB

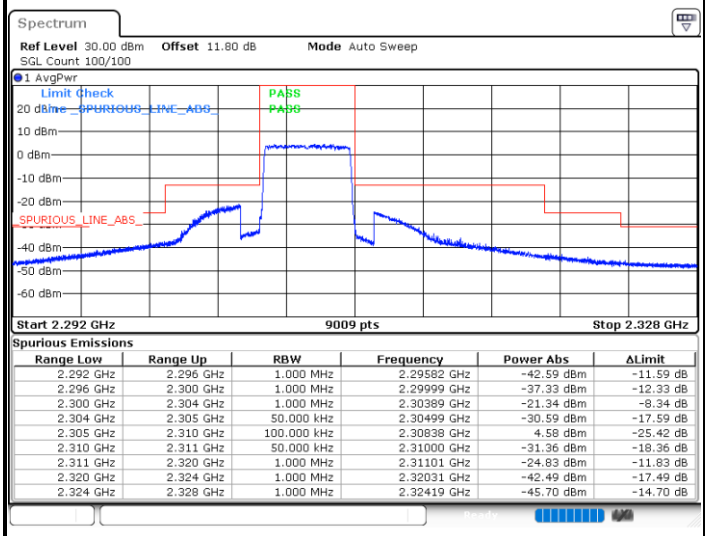


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29500 GHz	-47.12 dBm	-16.12 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29962 GHz	-41.98 dBm	-16.98 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30607 GHz	-38.92 dBm	-25.92 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.30981 GHz	-57.04 dBm	-44.04 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31463 GHz	18.35 dBm	-11.65 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31501 GHz	-24.27 dBm	-11.27 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31670 GHz	-37.71 dBm	-24.71 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32122 GHz	-41.98 dBm	-16.98 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32502 GHz	-43.02 dBm	-12.02 dB

Date: 20.DEC.2020 14:17:52

Lowest Band Edge / Full RB

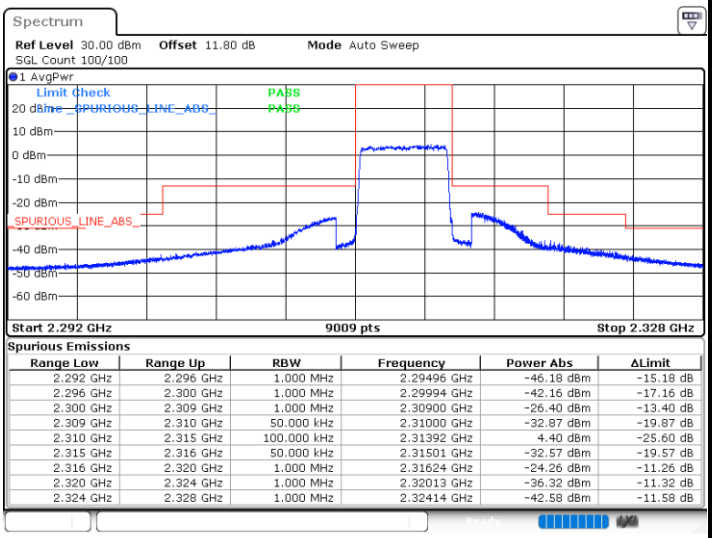


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29582 GHz	-42.59 dBm	-11.59 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29999 GHz	-37.33 dBm	-12.33 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30389 GHz	-21.34 dBm	-8.34 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30499 GHz	-30.59 dBm	-17.59 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30838 GHz	4.58 dBm	-25.42 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31000 GHz	-31.36 dBm	-18.36 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31101 GHz	-24.83 dBm	-11.83 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32031 GHz	-42.49 dBm	-17.49 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32419 GHz	-45.70 dBm	-14.70 dB

Date: 20.DEC.2020 14:15:32

Highest Band Edge / Full RB



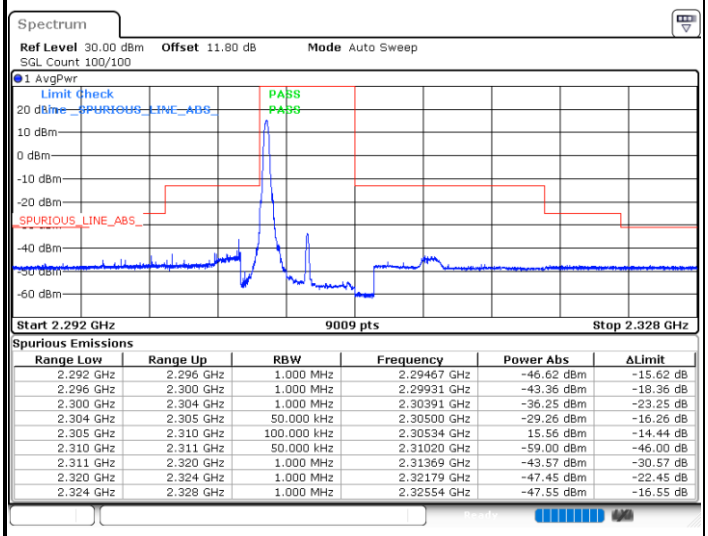
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29496 GHz	-46.18 dBm	-15.18 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29994 GHz	-42.16 dBm	-17.16 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30900 GHz	-26.40 dBm	-13.40 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.31000 GHz	-32.87 dBm	-19.87 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31392 GHz	4.40 dBm	-25.60 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31501 GHz	-32.57 dBm	-19.57 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31624 GHz	-24.26 dBm	-11.26 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32013 GHz	-36.32 dBm	-11.32 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32414 GHz	-42.58 dBm	-11.58 dB

Date: 20.DEC.2020 14:20:12

LTE Band 30 / 5MHz / 256QAM

Lowest Band Edge / 1 RB

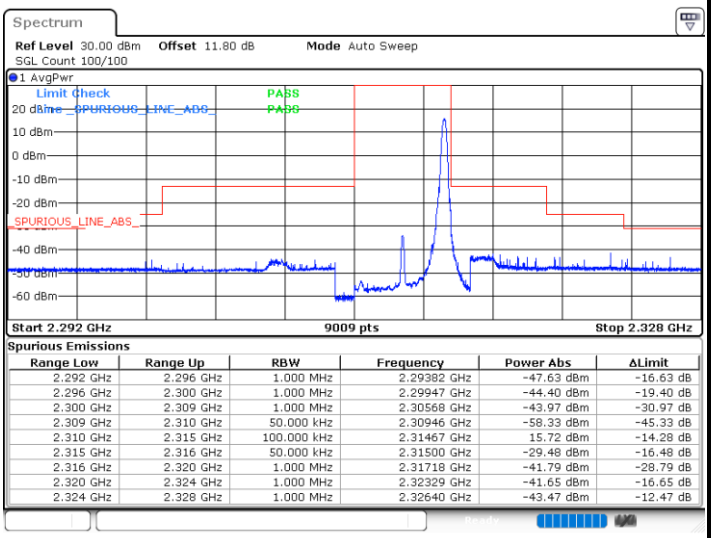


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29467 GHz	-46.62 dBm	-15.62 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29931 GHz	-43.36 dBm	-18.36 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30391 GHz	-36.25 dBm	-23.25 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-29.26 dBm	-16.26 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30534 GHz	15.56 dBm	-14.44 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31020 GHz	-59.00 dBm	-46.00 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31369 GHz	-43.57 dBm	-30.57 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32179 GHz	-47.45 dBm	-22.45 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32554 GHz	-47.55 dBm	-16.55 dB

Date: 30.DEC.2020 16:30:34

Highest Band Edge / 1 RB

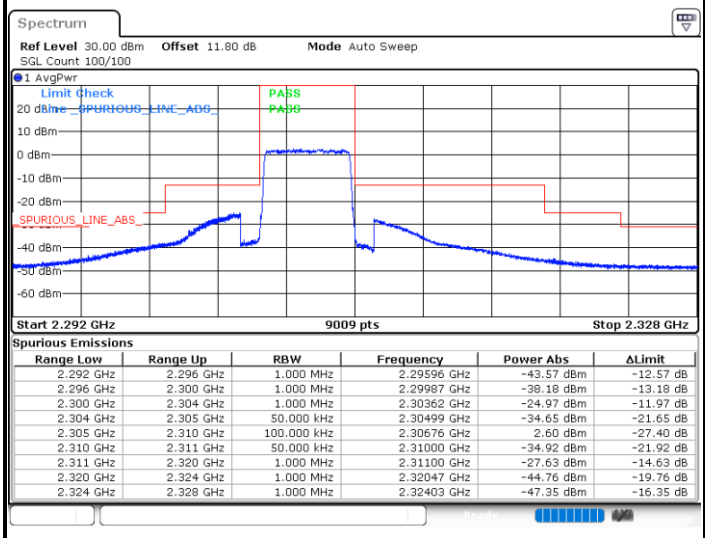


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29382 GHz	-47.63 dBm	-16.63 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29947 GHz	-44.40 dBm	-19.40 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30568 GHz	-43.97 dBm	-30.97 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.30946 GHz	-58.33 dBm	-45.33 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31467 GHz	15.72 dBm	-14.28 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31500 GHz	-29.48 dBm	-16.48 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31718 GHz	-41.79 dBm	-28.79 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32329 GHz	-41.65 dBm	-16.65 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32640 GHz	-43.47 dBm	-12.47 dB

Date: 30.DEC.2020 16:35:47

Lowest Band Edge / Full RB

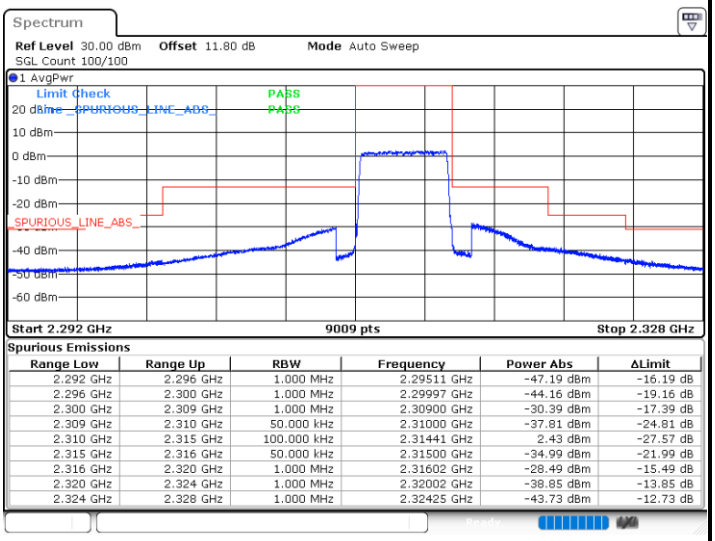


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29596 GHz	-43.57 dBm	-12.57 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29987 GHz	-38.18 dBm	-13.18 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30362 GHz	-24.97 dBm	-11.97 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30499 GHz	-34.65 dBm	-21.65 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30676 GHz	2.60 dBm	-27.40 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31000 GHz	-34.92 dBm	-21.92 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31100 GHz	-27.63 dBm	-14.63 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32047 GHz	-44.76 dBm	-19.76 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32403 GHz	-47.35 dBm	-16.35 dB

Date: 30.DEC.2020 16:31:20

Highest Band Edge / Full RB



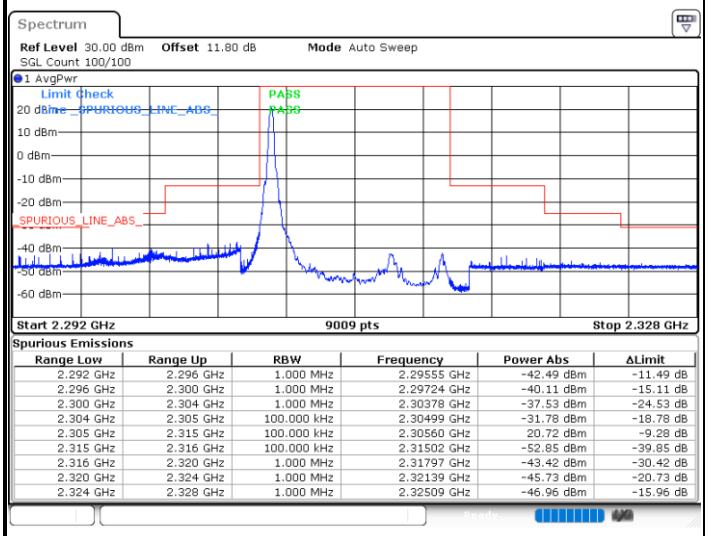
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29511 GHz	-47.19 dBm	-16.19 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29997 GHz	-44.16 dBm	-19.16 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30900 GHz	-30.39 dBm	-17.39 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.31000 GHz	-37.81 dBm	-24.81 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31441 GHz	2.43 dBm	-27.57 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31500 GHz	-34.99 dBm	-21.99 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31602 GHz	-28.49 dBm	-15.49 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32002 GHz	-38.85 dBm	-13.85 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32425 GHz	-43.73 dBm	-12.73 dB

Date: 30.DEC.2020 16:34:30

LTE Band 30 / 10MHz / QPSK

Lowest Band Edge / 1 RB

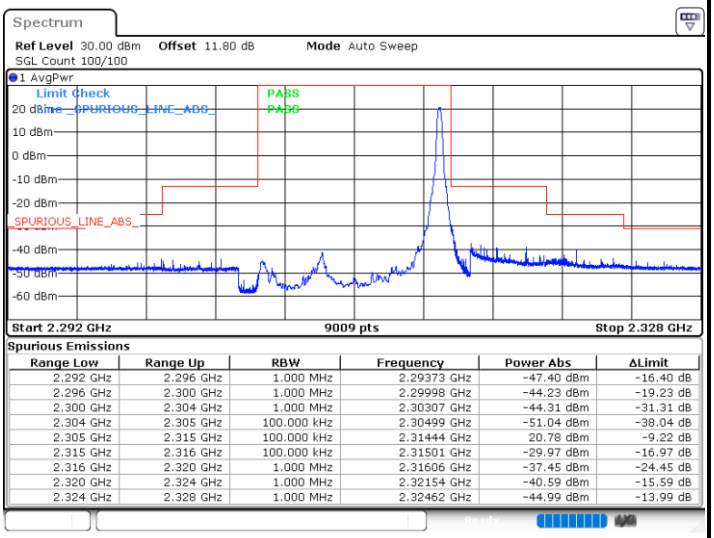


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29555 GHz	-42.49 dBm	-11.49 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29724 GHz	-40.11 dBm	-15.11 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30378 GHz	-37.53 dBm	-24.53 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30499 GHz	-31.78 dBm	-18.78 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30560 GHz	20.72 dBm	-9.28 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31502 GHz	-52.85 dBm	-39.85 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31797 GHz	-43.42 dBm	-30.42 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32139 GHz	-45.73 dBm	-20.73 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32509 GHz	-46.96 dBm	-15.96 dB

Date: 20.DEC.2020 14:21:00

Highest Band Edge / 1 RB

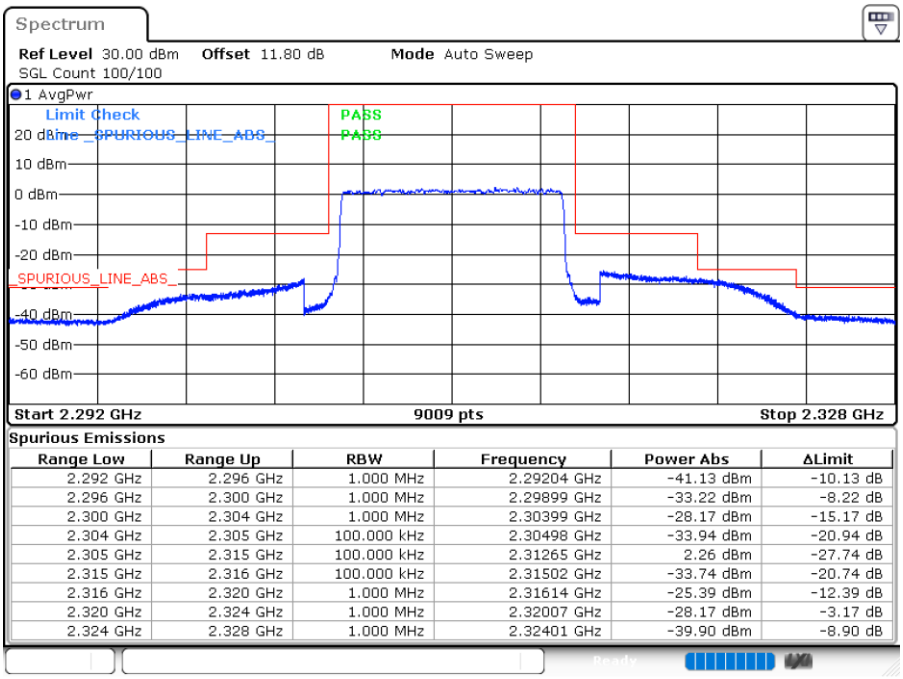


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29373 GHz	-47.40 dBm	-16.40 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29998 GHz	-44.23 dBm	-19.23 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30307 GHz	-44.31 dBm	-31.31 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30499 GHz	-51.04 dBm	-38.04 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31444 GHz	20.78 dBm	-9.22 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31501 GHz	-29.97 dBm	-16.97 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31606 GHz	-37.45 dBm	-24.45 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32154 GHz	-40.59 dBm	-15.59 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32462 GHz	-44.99 dBm	-13.99 dB

Date: 20.DEC.2020 14:23:18

Band Edge / Full RB



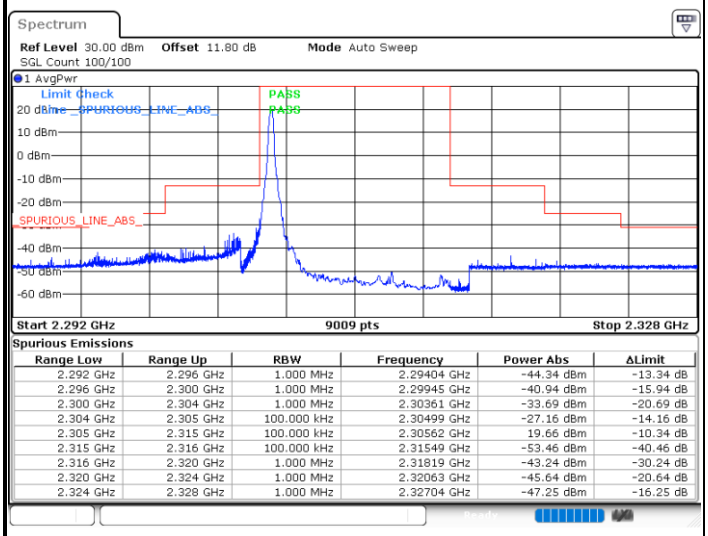
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29204 GHz	-41.13 dBm	-10.13 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29899 GHz	-33.22 dBm	-8.22 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30399 GHz	-28.17 dBm	-15.17 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30498 GHz	-33.94 dBm	-20.94 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31265 GHz	2.26 dBm	-27.74 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31502 GHz	-33.74 dBm	-20.74 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31614 GHz	-25.39 dBm	-12.39 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32007 GHz	-28.17 dBm	-3.17 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32401 GHz	-39.90 dBm	-8.90 dB

Date: 20.DEC.2020 15:14:53

LTE Band 30 / 10MHz / 16QAM

Lowest Band Edge / 1 RB

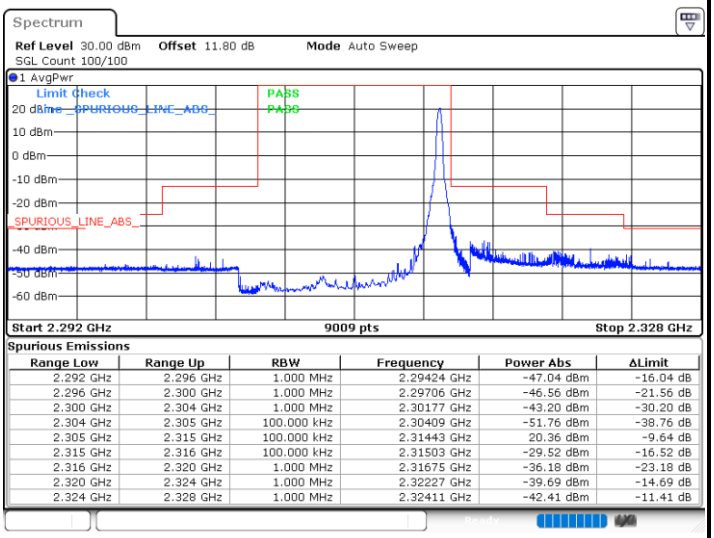


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29404 GHz	-44.34 dBm	-13.34 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29945 GHz	-40.94 dBm	-15.94 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30361 GHz	-33.69 dBm	-20.69 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30499 GHz	-27.16 dBm	-14.16 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30562 GHz	19.66 dBm	-10.34 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31549 GHz	-53.46 dBm	-40.46 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31819 GHz	-43.24 dBm	-30.24 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32063 GHz	-45.64 dBm	-20.64 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32704 GHz	-47.25 dBm	-16.25 dB

Date: 20.DEC.2020 14:21:46

Highest Band Edge / 1 RB

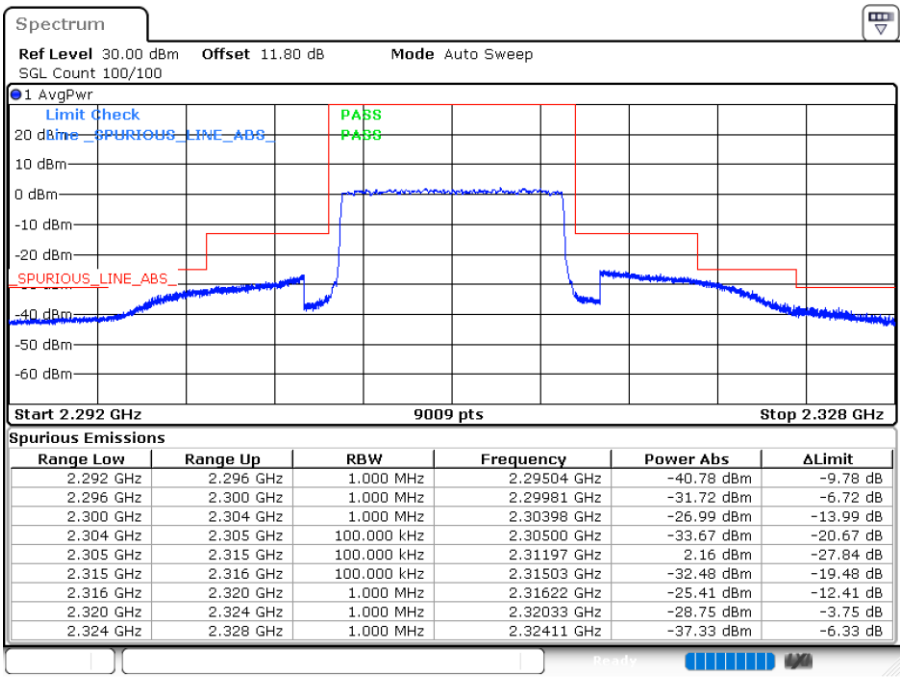


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29424 GHz	-47.04 dBm	-16.04 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29706 GHz	-46.56 dBm	-21.56 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30177 GHz	-43.20 dBm	-30.20 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30409 GHz	-51.76 dBm	-38.76 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31443 GHz	20.36 dBm	-9.64 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31503 GHz	-29.52 dBm	-16.52 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31675 GHz	-36.18 dBm	-23.18 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32227 GHz	-39.69 dBm	-14.69 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32411 GHz	-42.41 dBm	-11.41 dB

Date: 20.DEC.2020 14:24:04

Band Edge / Full RB



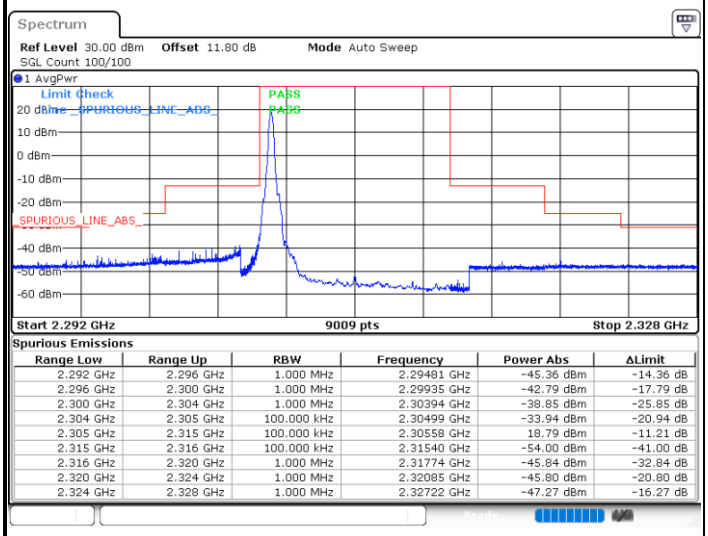
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29504 GHz	-40.78 dBm	-9.78 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29981 GHz	-31.72 dBm	-6.72 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30398 GHz	-26.99 dBm	-13.99 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-33.67 dBm	-20.67 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31197 GHz	2.16 dBm	-27.84 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31503 GHz	-32.48 dBm	-19.48 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31622 GHz	-25.41 dBm	-12.41 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32033 GHz	-28.75 dBm	-3.75 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32411 GHz	-37.33 dBm	-6.33 dB

Date: 20.DEC.2020 14:26:22

LTE Band 30 / 10MHz / 64QAM

Lowest Band Edge / 1 RB

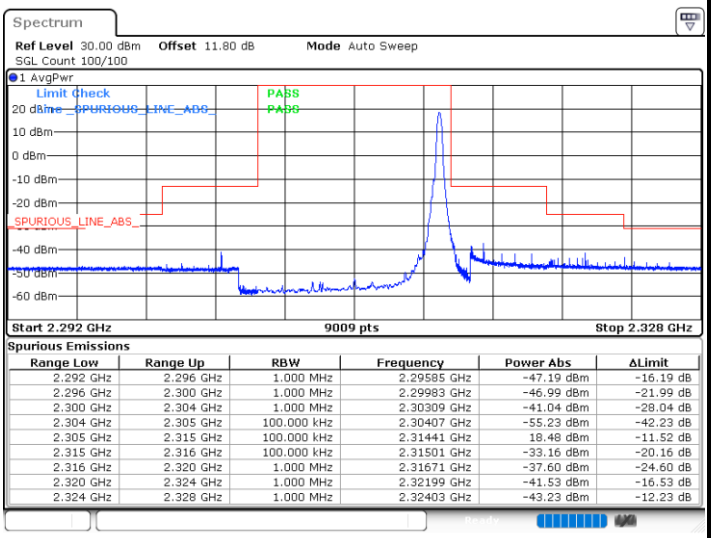


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29481 GHz	-45.36 dBm	-14.36 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29935 GHz	-42.79 dBm	-17.79 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30394 GHz	-38.85 dBm	-25.85 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30499 GHz	-33.94 dBm	-20.94 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30558 GHz	18.79 dBm	-11.21 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31540 GHz	-54.00 dBm	-41.00 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31774 GHz	-45.84 dBm	-32.84 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32085 GHz	-45.80 dBm	-20.80 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32722 GHz	-47.27 dBm	-16.27 dB

Date: 20.DEC.2020 14:22:32

Highest Band Edge / 1 RB

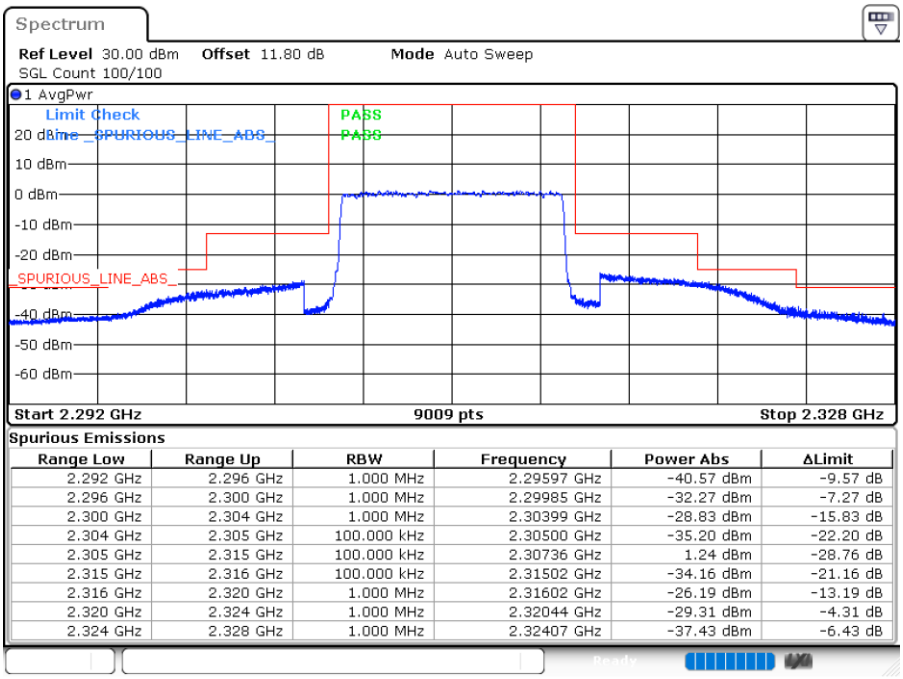


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29585 GHz	-47.19 dBm	-16.19 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29983 GHz	-46.99 dBm	-21.99 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30309 GHz	-41.04 dBm	-28.04 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30407 GHz	-55.23 dBm	-42.23 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31441 GHz	18.48 dBm	-11.52 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31501 GHz	-33.16 dBm	-20.16 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31671 GHz	-37.60 dBm	-24.60 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32199 GHz	-41.53 dBm	-16.53 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32403 GHz	-43.23 dBm	-12.23 dB

Date: 20.DEC.2020 14:24:50

Band Edge / Full RB



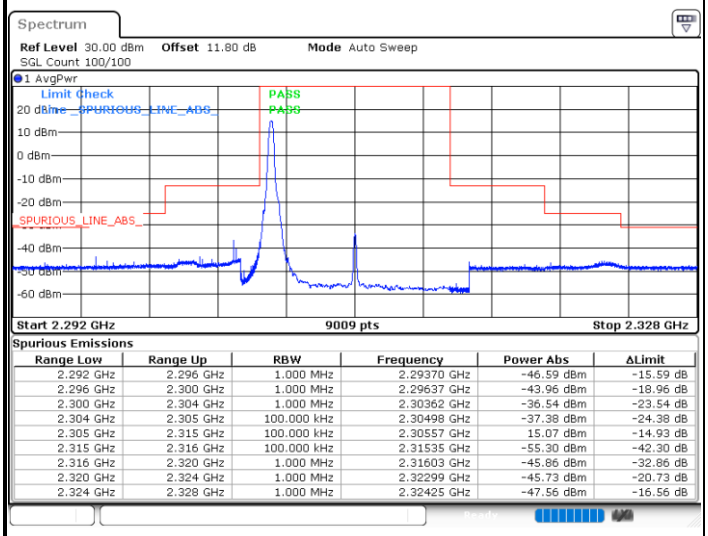
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29597 GHz	-40.57 dBm	-9.57 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29985 GHz	-32.27 dBm	-7.27 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30399 GHz	-28.83 dBm	-15.83 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-35.20 dBm	-22.20 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30736 GHz	1.24 dBm	-28.76 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31502 GHz	-34.16 dBm	-21.16 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31602 GHz	-26.19 dBm	-13.19 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32044 GHz	-29.31 dBm	-4.31 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32407 GHz	-37.43 dBm	-6.43 dB

Date: 20.DEC.2020 14:27:08

LTE Band 30 / 10MHz / 256QAM

Lowest Band Edge / 1 RB

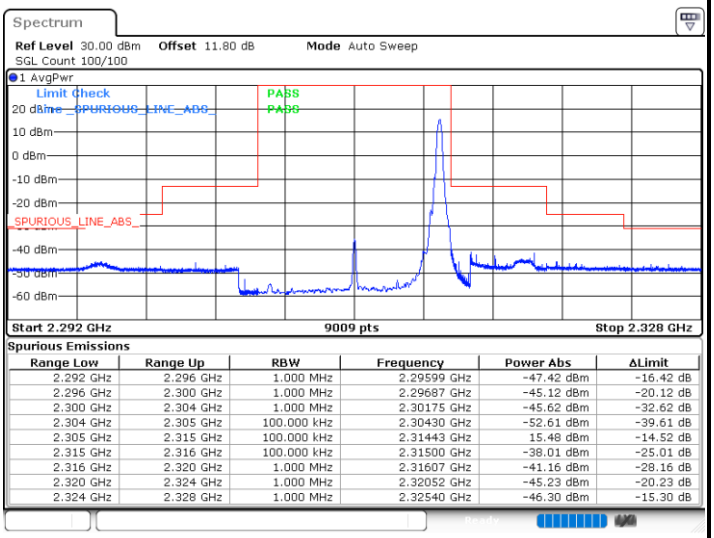


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29370 GHz	-46.59 dBm	-15.59 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29637 GHz	-43.96 dBm	-18.96 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30362 GHz	-36.54 dBm	-23.54 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30498 GHz	-37.38 dBm	-24.38 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30557 GHz	15.07 dBm	-14.93 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31535 GHz	-55.30 dBm	-42.30 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31603 GHz	-45.86 dBm	-32.86 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32299 GHz	-45.73 dBm	-20.73 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32425 GHz	-47.56 dBm	-16.56 dB

Date: 30.DEC.2020 16:39:47

Highest Band Edge / 1 RB

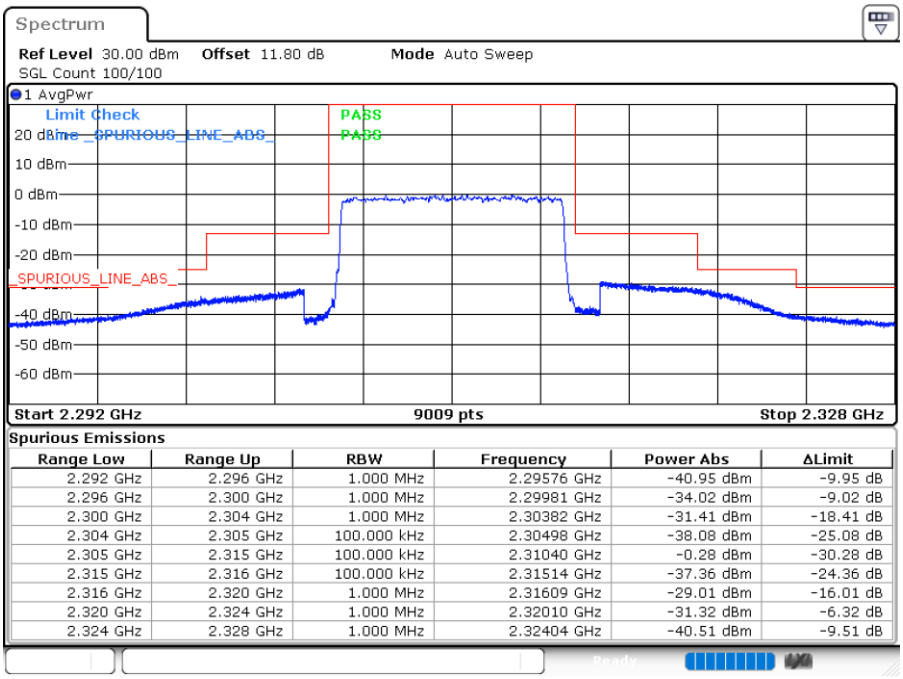


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29599 GHz	-47.42 dBm	-16.42 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29687 GHz	-45.12 dBm	-20.12 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30175 GHz	-45.62 dBm	-32.62 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30430 GHz	-52.61 dBm	-39.61 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31443 GHz	15.48 dBm	-14.52 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31500 GHz	-38.01 dBm	-25.01 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31607 GHz	-41.16 dBm	-28.16 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32052 GHz	-45.23 dBm	-20.23 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32540 GHz	-46.30 dBm	-15.30 dB

Date: 30.DEC.2020 16:40:28

Band Edge / Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29576 GHz	-40.95 dBm	-9.95 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29981 GHz	-34.02 dBm	-9.02 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30382 GHz	-31.41 dBm	-18.41 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30498 GHz	-38.08 dBm	-25.08 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31040 GHz	-0.28 dBm	-30.28 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31514 GHz	-37.36 dBm	-24.36 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31609 GHz	-29.01 dBm	-16.01 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32010 GHz	-31.32 dBm	-6.32 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32404 GHz	-40.51 dBm	-9.51 dB

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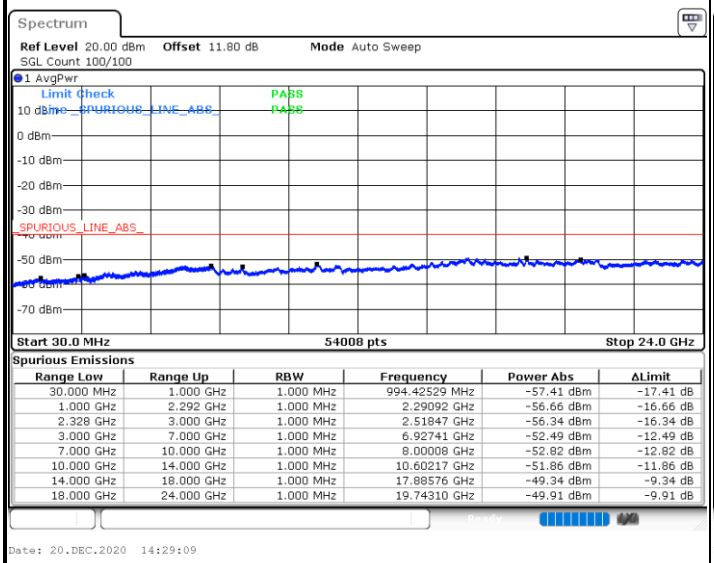
Conducted Spurious Emission

LTE Band 30 / 5MHz

Lowest Channel / QPSK

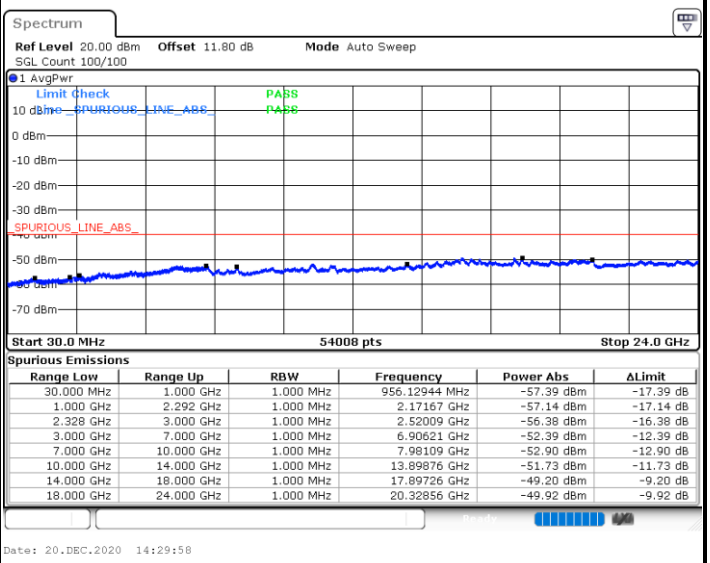


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	994.42529 MHz	-57.41 dBm	-17.41 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.29092 GHz	-56.66 dBm	-16.66 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.51847 GHz	-56.34 dBm	-16.34 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.92741 GHz	-52.49 dBm	-12.49 dB
7.000 GHz	10.000 GHz	1.000 MHz	8.00008 GHz	-52.82 dBm	-12.82 dB
10.000 GHz	14.000 GHz	1.000 MHz	10.60217 GHz	-51.86 dBm	-11.86 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.88576 GHz	-49.34 dBm	-9.34 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.74310 GHz	-49.91 dBm	-9.91 dB

Date: 20.DEC.2020 14:29:09

Middle Channel / QPSK

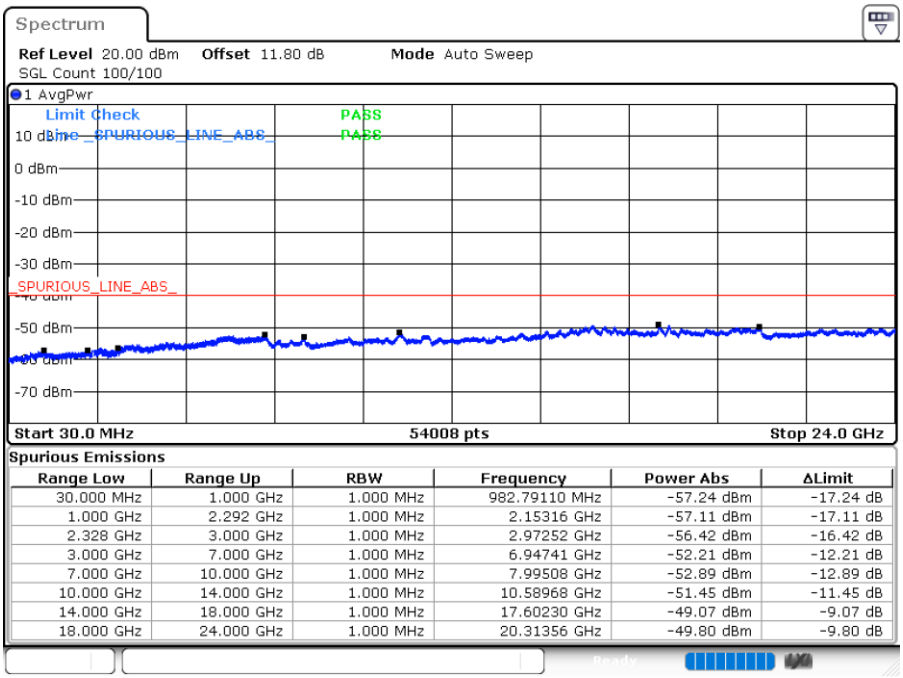


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	956.12944 MHz	-57.39 dBm	-17.39 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.17167 GHz	-57.14 dBm	-17.14 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.52009 GHz	-56.38 dBm	-16.38 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.90621 GHz	-52.39 dBm	-12.39 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.98109 GHz	-52.90 dBm	-12.90 dB
10.000 GHz	14.000 GHz	1.000 MHz	13.89876 GHz	-51.73 dBm	-11.73 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.89726 GHz	-49.20 dBm	-9.20 dB
18.000 GHz	24.000 GHz	1.000 MHz	20.32856 GHz	-49.92 dBm	-9.92 dB

Date: 20.DEC.2020 14:29:58

Highest Channel / QPSK

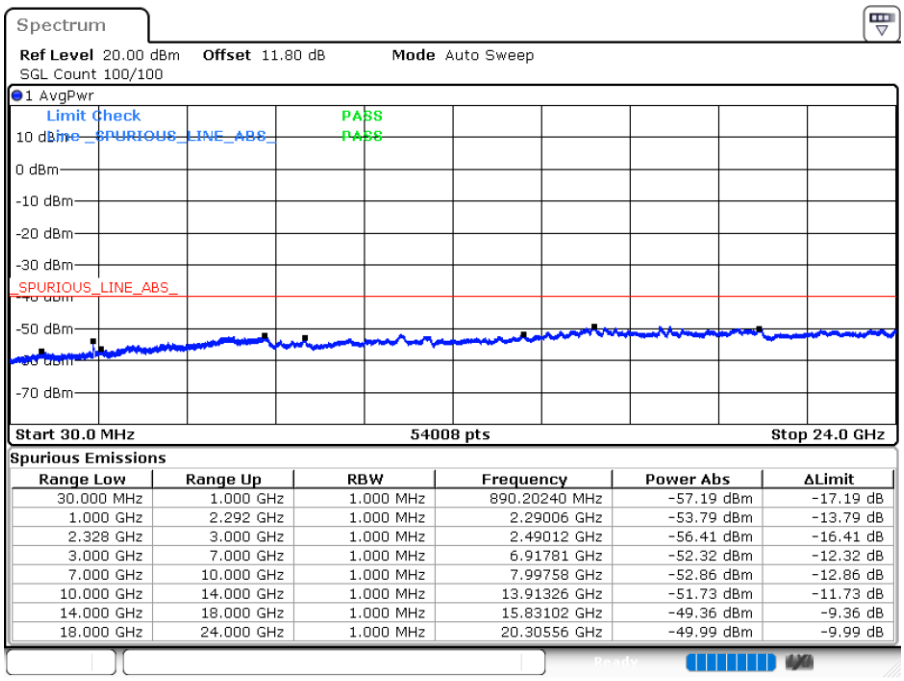


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	982.79110 MHz	-57.24 dBm	-17.24 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.15316 GHz	-57.11 dBm	-17.11 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.97252 GHz	-56.42 dBm	-16.42 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.94741 GHz	-52.21 dBm	-12.21 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.99508 GHz	-52.89 dBm	-12.89 dB
10.000 GHz	14.000 GHz	1.000 MHz	10.58968 GHz	-51.45 dBm	-11.45 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.60230 GHz	-49.07 dBm	-9.07 dB
18.000 GHz	24.000 GHz	1.000 MHz	20.31356 GHz	-49.80 dBm	-9.80 dB

Date: 20.DEC.2020 14:30:48

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	890.20240 MHz	-57.19 dBm	-17.19 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.29006 GHz	-53.79 dBm	-13.79 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.49012 GHz	-56.41 dBm	-16.41 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.91781 GHz	-52.32 dBm	-12.32 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.99758 GHz	-52.86 dBm	-12.86 dB
10.000 GHz	14.000 GHz	1.000 MHz	13.91326 GHz	-51.73 dBm	-11.73 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.83102 GHz	-49.36 dBm	-9.36 dB
18.000 GHz	24.000 GHz	1.000 MHz	20.30556 GHz	-49.99 dBm	-9.99 dB

Date: 20.DEC.2020 14:31:39

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	0.0014	PASS
40	Normal Voltage	0.0005	
30	Normal Voltage	0.0023	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0014	
0	Normal Voltage	0.0068	
-10	Normal Voltage	0.0000	
-20	Normal Voltage	0.0008	
-30	Normal Voltage	0.0053	
20	Maximum Voltage	0.0046	
20	Normal Voltage	0.0014	
20	Battery End Point	0.0023	

Note:

1. Normal Voltage =7.74 V.；Battery End Point (BEP) =7.2 V.；Maximum Voltage =8.9 V.

2. Note: The frequency fundamental emissions stay within the authorized frequency block.

———THE END———