FCC/IC RF Test Report

APPLICANT	:	**Sierra Wireless Inc.**
EQUIPMENT	:	**Radio Module**
BRAND NAME	:	**AirPrime**
MODEL NAME	:	**EM7565-9**
FCC ID	:	**N7NEM75L**
IC	:	**2417C-EM75L**
STANDARD	:	**FCC 47 CFR Part 2, 27** **IC RSS-195 Issue 2**
CLASSIFICATION	:	**PCS Licensed Transmitter (PCB)**

The product was received on Sep, 19, 2017 and completely tested on Oct. 06, 2017. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI / TIA / EIA-603-E 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 INC., the test report shall not be reproduced except in full.

Reviewed by: Joseph Lin / Supervisor

Approved by: Jones Tsai / Manager

Testing Laboratory 1190

SPORTON INTERNATIONAL INC.
No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG791919C	Rev. 01	Initial issue of report	Oct. 13, 2017

SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.4	§2.1046	RSS-Gen(6.12)	Conducted Output Power	Reporting Only	PASS	-
3.5	-	RSS-195(5.5.1)	Peak-to-Average Ratio	<13dB	N/A	Reporting only
3.6	§27.50 (a)(3)	RSS-195(5.5)	EIRP Power Density	EIRP < 250mW/5MHz	PASS	-
3.7	§2.1049	RSS-GEN(6.6)	Occupied Bandwidth	Reporting Only	PASS	-
3.8	§2.1051 §27.53 (a)(4)	RSS-195(5.6)	Conducted Band Edge Measurement	Refer standard	PASS	-
3.9	§2.1051 §27.53 (a)(4)	RSS-195(5.6)	Conducted Spurious Emission	For Part 27 < $70+10\log_{10}(P[Watts])$ For RSS 195 < $43+10\log_{10}(P[Watts])$	PASS	-
3.10	§2.1055 §27.54	RSS-195(5.4)	Frequency Stability Temperature & Voltage	Within the band	PASS	-
4.4	§2.1053 §27.53 (a)(4)	RSS-195(5.6)	Radiated Spurious Emission	For Part 27 < $70+10\log_{10}(P[Watts])$ For RSS 195 < $43+10\log_{10}(P[Watts])$	PASS	Under limit 1.11 dB at 6930.000 MHz

1 General Description

1.1 Applicant

Sierra Wireless Inc.
13811 Wireless Way Richmond, BC Canada V6V 3A4

1.2 Manufacturer

Sierra Wireless Inc.
13811 Wireless Way Richmond, BC Canada V6V 3A4

1.3 Product Feature of Equipment Under Test

WCDMA/LTE

1.4 Modification of EUT

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

1.5 Testing Site

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW1190 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

Test Site	SPORTON INTERNATIONAL INC.		
Test Site Location	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978		
Test Site No.	**Sporton Site No.**		**IC Registration No.**
	TH05-HY	03CH07-HY	4086B-5

1.6 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 / TIA / EIA-603-E
- FCC KDB 971168 Power Meas License Digital Systems D01 v02r02
- ANSI C63.26-2015
- IC RSS-Gen Issue 4
- RSS-195 Issue 2

Remark: All test items were verified and recorded according to the standards and without any deviation during the test.

2 Test Configuration of Equipment Under Test

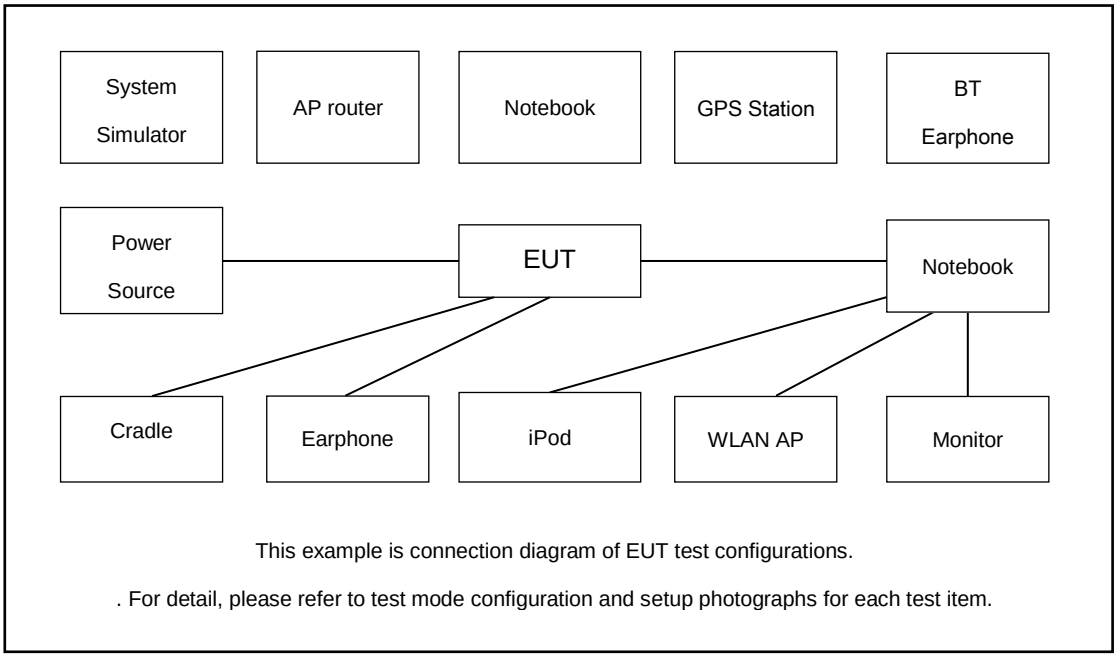
2.1 Test Mode

Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v02r02 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
Peak-to-Average Ratio	30	-	-			-	-	v	v	v	v		v		v	
E.I.R.P PSD	30	-	-		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	
Radiated Spurious Emission	30	-	-	Worst case		-	-	v	Pre-test		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



This example is connection diagram of EUT test configurations.

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

2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	Base Station	Anritsu	8820C	N/A	N/A	Unshielded, 1.8 m

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.2 dB and 10dB attenuator.

Example :

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

= 4.2 + 10 = 14.2 (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

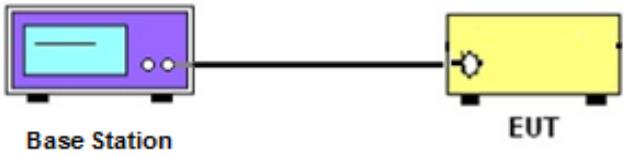
3 Conducted Test Items

3.1 Measuring Instruments

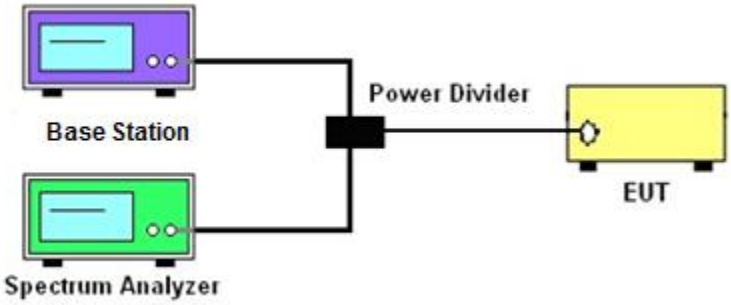
See list of measuring instruments of this test report.

3.2 Test Setup

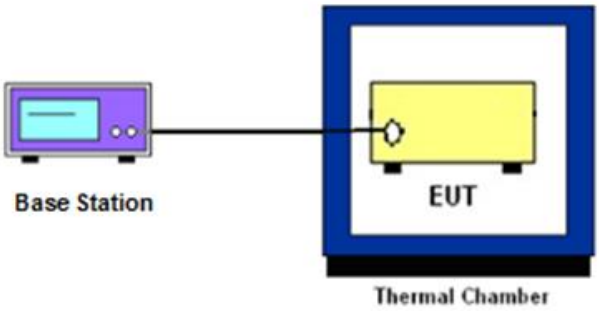
3.2.1 Conducted Output Power



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 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.

3.5 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 FCC KDB 971168 v02r02 Section 5.7.1 and ANSI C63.26 Section 5.2.3.4.
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 FCC KDB 971168 v02r02 Section 5.7.1 and ANSI C63.26 Section 5.2.4.1
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 FCC KDB 971168 v02r02 Section 4.1 and 4.2 and 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.

RSS-195 5.6.2

For mobile and portable stations:

(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, 70 + 10 log (P) dB on all frequencies between 2200 and 2288 MHz, and not less than 43 + 10 log (P) dB below 2200 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 on all frequencies between 2365 and 2395 MHz, and not less than 43 + 10 log (P) dB above 2395 MHz;

3.8.2 Test Procedures

1. The testing follows FCC KDB 971168 v02r02 Section 6.0 and 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

27.53 (a)(4)

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.

RSS-195(5.6)

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 43 + 10 log (P) dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30MHz up to a frequency including its 10th harmonic.

3.9.2 Test Procedures

1. The testing follows FCC KDB 971168 v02r02 Section 6.0 and 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
11. 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.
12. The limit line 70+10log(P) below the transmitter power is selected which is much worse.

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 FCC KDB 971168 v02r02 Section 9.0 and ANSI C63.26 Section 5.6.
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 FCC KDB 971168 v02r02 Section 9.0 and ANSI C63.26 Section 5.6.
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 measured at the input to the EUT.
4. The variation in frequency was measured for the worst case.

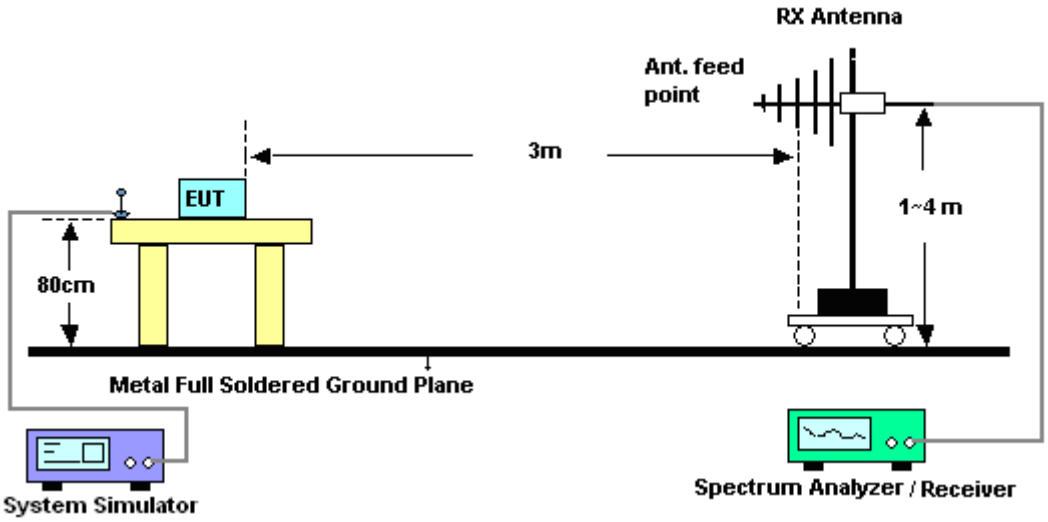
4 Radiated Test Items

4.1 Measuring Instruments

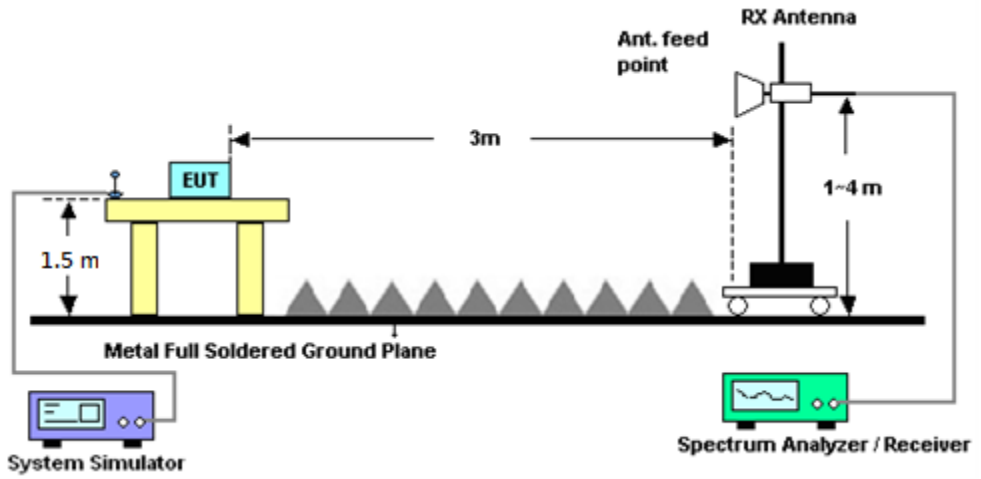
See list of measuring instruments of this test report.

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

27.53 (a)(4)

The radiated spurious emission was measured by substitution method according to ANSI / TIA / EIA-603-E. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 70 + 10 log (P) dB.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

RSS-195(5.6)

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 43 + 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 FCC KDB 971168 v02r02 Section 5.8 and ANSI / TIA-603-E Section 2.2.12 and ANSI C63.26 Section 5.5.3 Measurement of spurious emissions using substitution method. .
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.
    For IC
11. The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
12. The limit line 70+10log(P) below the transmitter power is selected which is much worse.

5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
LTE Base Station	Anritsu	MT8820C	6201432821	GSM/GPRS /WCDMA/LTE	Oct. 11, 2016	Sep. 19, 2017 ~ Oct. 04, 2017	Oct. 10, 2017	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV40	101397	10Hz~40GHz	Nov. 04, 2016	Sep. 19, 2017 ~ Oct. 04, 2017	Nov. 03, 2017	Conducted (TH05-HY)
Temperature Chamber	ESPEC	SH-641	92013720	-30℃~70℃	Aug. 28, 2017	Sep. 19, 2017 ~ Oct. 04, 2017	Aug. 27, 2018	Conducted (TH05-HY)
Programmable Power Supply	GW Instek	PSS-2005	EL890089	1V~20V 0.5A~5A	Jan. 12, 2017	Sep. 19, 2017 ~ Oct. 04, 2017	Jan. 11, 2018	Conducted (TH05-HY)
Coupler	Warison	1-18GHz 20dB 25WSMA Directional Coupler	#B	1G~18GHz	Feb. 20, 2017	Sep. 19, 2017 ~ Oct. 04, 2017	Feb. 19, 2018	Conducted (DF02-HY)
Bilog Antenna	Schaffner	CBL6111C	2726	30MHz ~ 1GHz	N/A	Sep. 23, 2017 ~ Oct. 06, 2017	N/A	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Aug. 23, 2017	Sep. 23, 2017 ~ Oct. 06, 2017	Aug. 22, 2018	Radiation (03CH07-HY)
Preamplifier	MITEQ	AMF-7D-00101800-30-10P	1590075	1GHz ~ 18GHz	Apr. 25, 2017	Sep. 23, 2017 ~ Oct. 06, 2017	Apr. 24, 2018	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	10MHz-1GHz	Mar. 14, 2017	Sep. 23, 2017 ~ Oct. 06, 2017	Mar. 13, 2018	Radiation (03CH07-HY)
EMI Test Receiver	Agilent	N9038A (MXE)	MY53290053	20Hz to 26.5GHz	Jan. 12, 2017	Sep. 23, 2017 ~ Oct. 06, 2017	Jan. 11, 2018	Radiation (03CH07-HY)
Horn Antenna	ESCO	3117	00066584	1GHz~18GHz	Sep. 06, 2017	Sep. 23, 2017 ~ Oct. 06, 2017	Sep. 05, 2018	Radiation (03CH07-HY)
Antenna Mast	Max-Full	MFA520BS	N/A	1m~4m	N/A	Sep. 23, 2017 ~ Oct. 06, 2017	N/A	Radiation (03CH07-HY)
Turn Table	ChainTek	Chaintek 3000	N/A	0~360 Degree	N/A	Sep. 23, 2017 ~ Oct. 06, 2017	N/A	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170584	18GHz- 40GHz	Nov. 08, 2016	Sep. 23, 2017 ~ Oct. 06, 2017	Nov. 07, 2017	Radiation (03CH07-HY)
Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz, VSWR : 2.5:1 max	Jul. 18, 2017	Sep. 23, 2017 ~ Oct. 06, 2017	Jul. 17, 2018	Radiation (03CH07-HY)
Signal Generator	Rohde & Schwarz	SMF100A	101107	100kHz~40GHz	May 22, 2017	Sep. 23, 2017 ~ Oct. 06, 2017	May 21, 2018	Radiation (03CH07-HY)

6 Uncertainty of Evaluation

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.05**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.44**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.95**

Appendix A. Test Results of Conducted Test

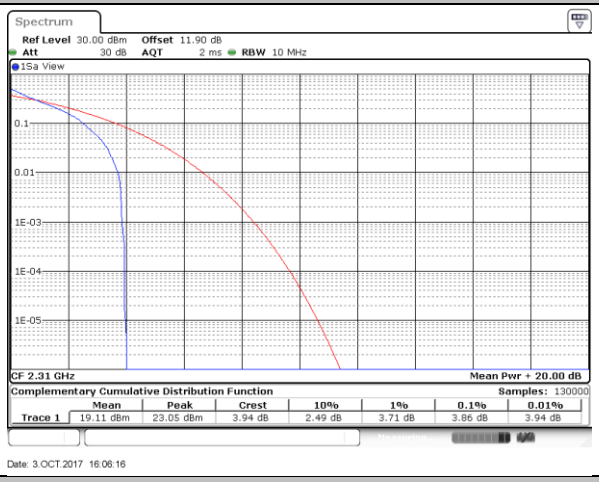
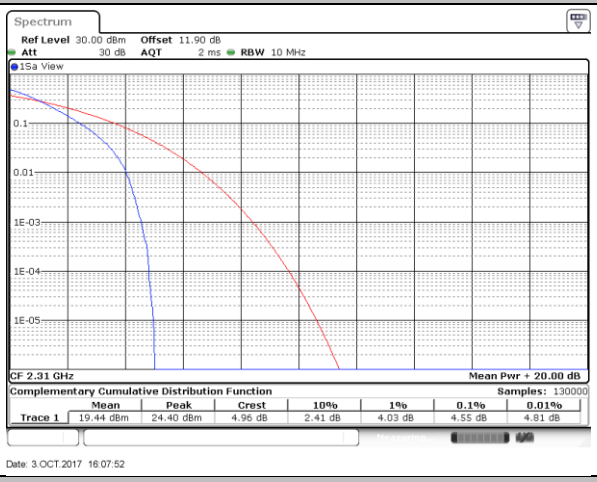
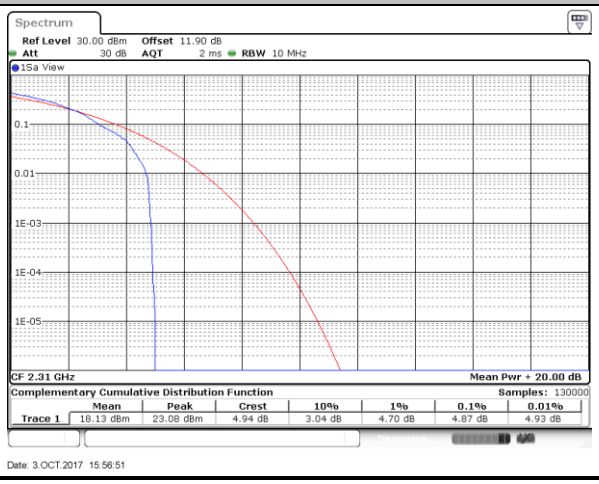
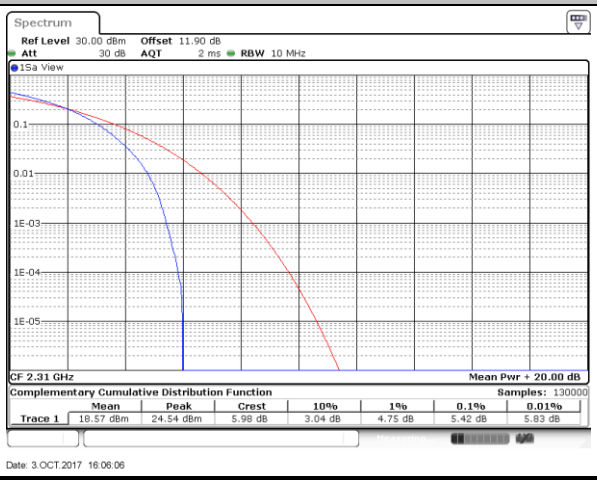
Conducted Output Power(Average power)

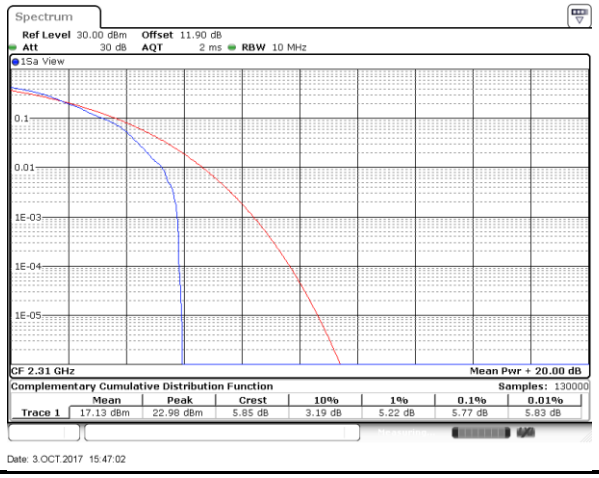
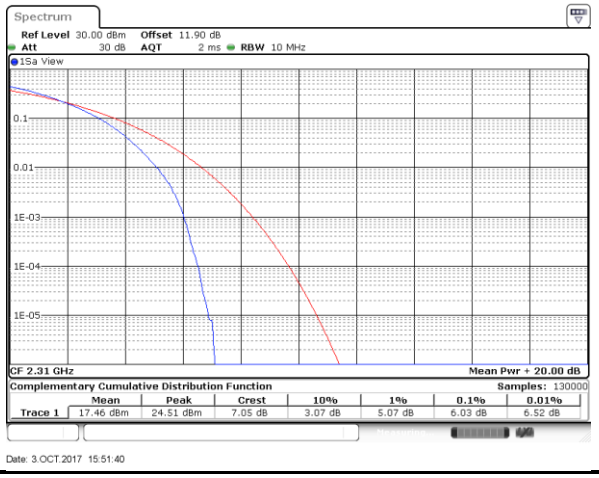
LTE Band 30 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	0.00	21.40	0.00
10	1	25			21.26	
10	1	49			21.22	
10	25	0			20.31	
10	25	12			20.32	
10	25	25			20.23	
10	50	0			20.31	
10	1	0	16-QAM		20.65	
10	1	25			20.52	
10	1	49			20.48	
10	25	0			19.32	
10	25	12			19.33	
10	25	25			19.23	
10	50	0			19.32	
10	1	0	64-QAM		19.57	
10	1	25			19.45	
10	1	49			19.41	
10	25	0			18.32	
10	25	12			18.36	
10	25	25			18.25	
10	50	0			18.35	
5	1	0	QPSK	21.33	21.28	**21.43**
5	1	12		21.31	21.24	21.31
5	1	24		21.25	21.30	21.34
5	12	0		20.32	20.32	20.42
5	12	7		20.38	20.34	20.37
5	12	13		20.25	20.29	20.34
5	25	0		20.34	20.31	20.36
5	1	0	16-QAM	20.61	20.53	20.68
5	1	12		20.60	20.55	20.56
5	1	24		20.51	20.55	20.58
5	12	0		19.39	19.31	19.45
5	12	7		19.37	19.34	19.39
5	12	13		19.24	19.30	19.34
5	25	0		19.36	19.33	19.35
5	1	0	64-QAM	19.54	19.49	19.66
5	1	12		19.50	19.48	19.51
5	1	24		19.43	19.50	19.55
5	12	0		18.39	18.36	18.51
5	12	7		18.43	18.37	18.42
5	12	13		18.32	18.37	18.42
5	25	0		18.34	18.32	18.38

LTE Band 30

Peak-to-Average Ratio

Mode	LTE Band 30 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	-	-	PASS
Middle CH	3.86	4.55	4.87	5.42	
Highest CH	-	-	-	-	
Mode	LTE Band 30 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	-	-	-	-	PASS
Middle CH	5.77	6.03	-	-	
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**
	

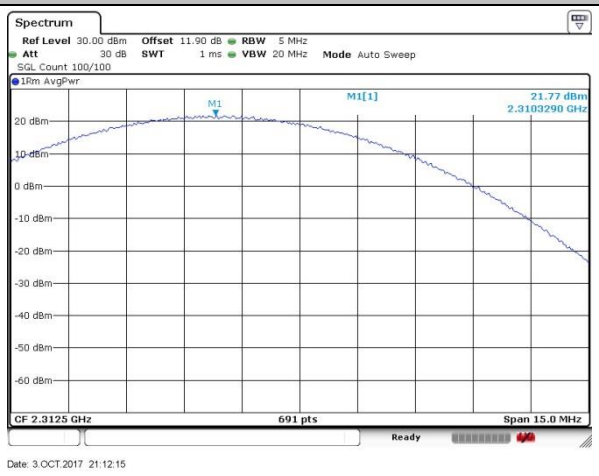
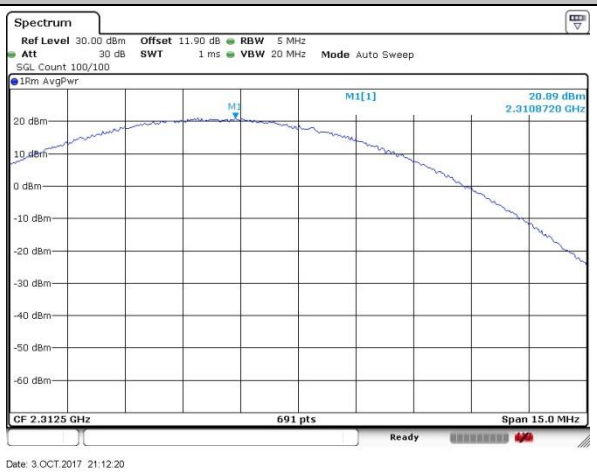
EIRP Power Density

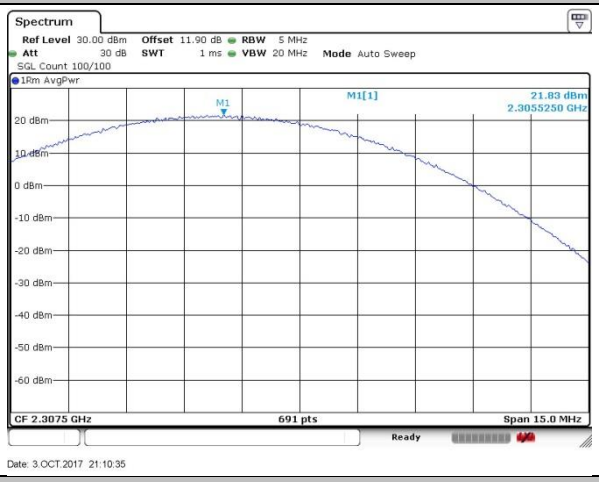
Mode	LTE Band 30 : Conducted Power Density (dBm/5MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	21.83	21.09	-	-	-	-	-	-
Middle CH	-	-	-	-	21.51	21.05	21.7	20.96	-	-	-	-
Highest CH	-	-	-	-	21.77	20.89	-	-	-	-	-	-

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	-	-	-	-	22.83	22.09	-	-	-	-	-	-
Middle CH	-	-	-	-	22.51	22.05	22.7	21.96	-	-	-	-
Highest CH	-	-	-	-	22.77	21.89	-	-	-	-	-	-
Antenna Gain	1 dBi											
Limit	250mW / 5MHz = 24dBm / 5MHz											
Result	Pass											

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	-	-	-	-	20.9	-	-	-	-	-	-	-
Middle CH	-	-	-	-	20.91	-	20.83	-	-	-	-	-
Highest CH	-	-	-	-	21.1	-	-	-	-	-	-	-

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	-	-	-	-	21.9			-	-	-	-	-
Middle CH	-	-	-	-	21.91		21.83	-	-	-	-	-
Highest CH	-	-	-	-	22.1			-	-	-	-	-
Antenna Gain	1 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 / 10MHz	
Lowest Channel / 10MHz / 1RB0 / QPSK	**Lowest Channel / 10MHz / 1RB0 / 16QAM**
	
Lowest Channel / 10MHz / 1RB0 / 64QAM	
	

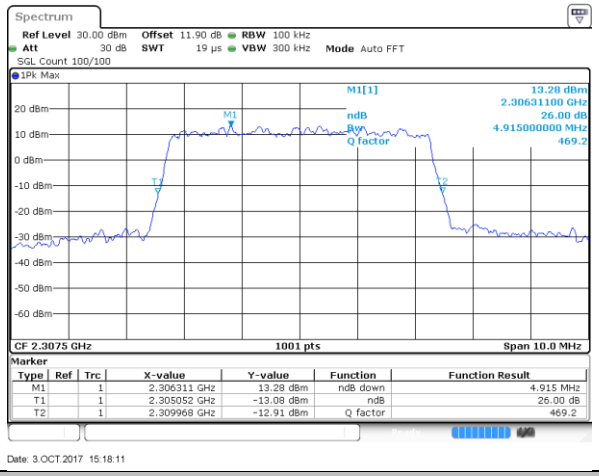
26dB Bandwidth

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	-	-	-	-	4.915	4.835	-	-	-	-	-	-
Middle CH	-	-	-	-	4.915	4.915	9.81	9.79	-	-	-	-
Highest CH	-	-	-	-	4.925	4.855	-	-	-	-	-	-

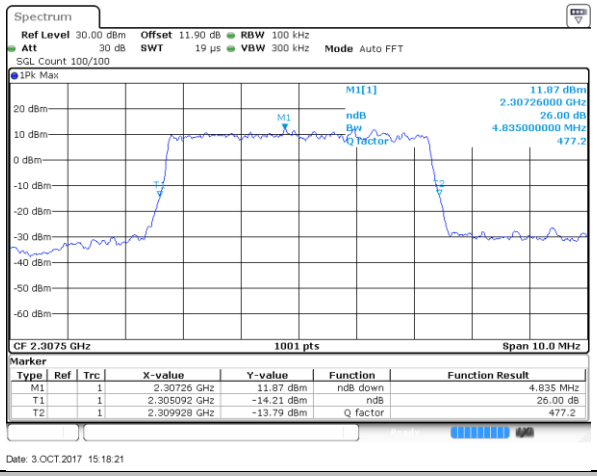
Mode	LTE Band 30 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.865	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.925	-	9.69	-	-	-	-	-
Highest CH	-	-	-	-	4.905	-	-	-	-	-	-	-

LTE Band 30

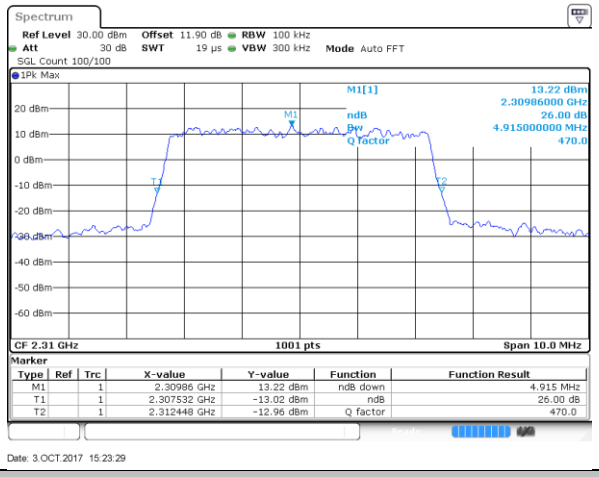
Lowest Channel / 5MHz / QPSK



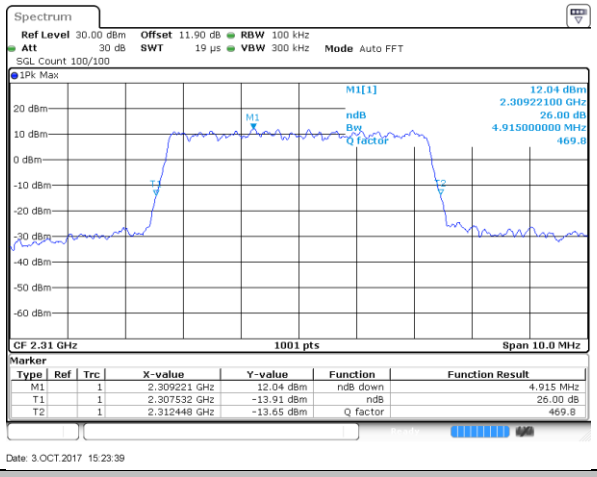
Lowest Channel / 5MHz / 16QAM



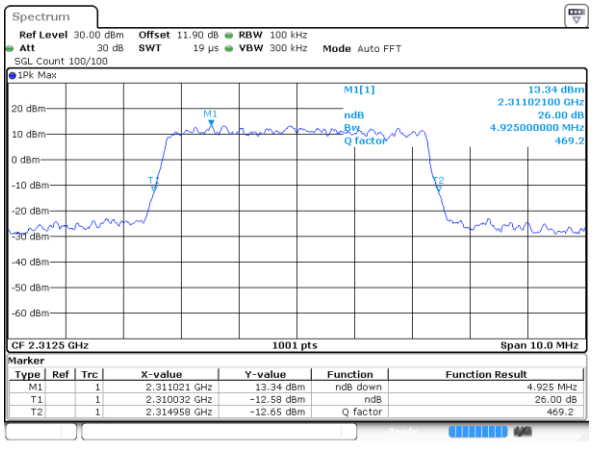
Middle Channel / 5MHz / QPSK



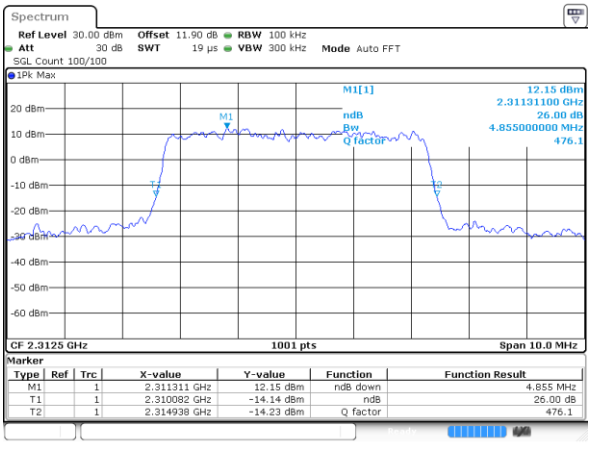
Middle Channel / 5MHz / 16QAM

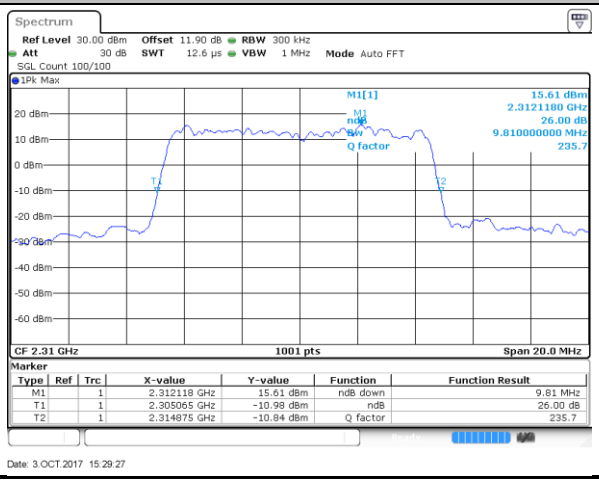
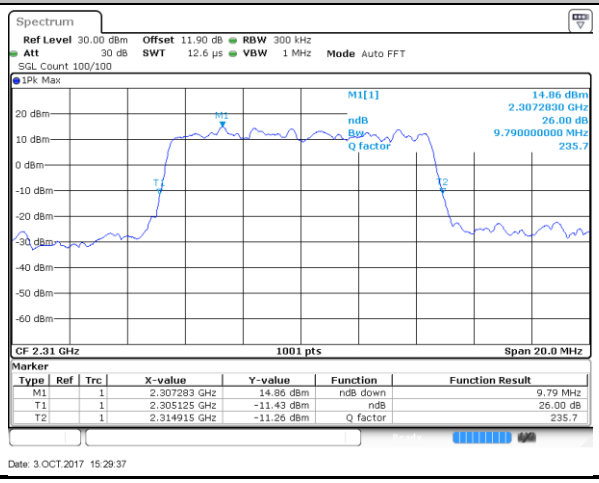


Highest Channel / 5MHz / QPSK



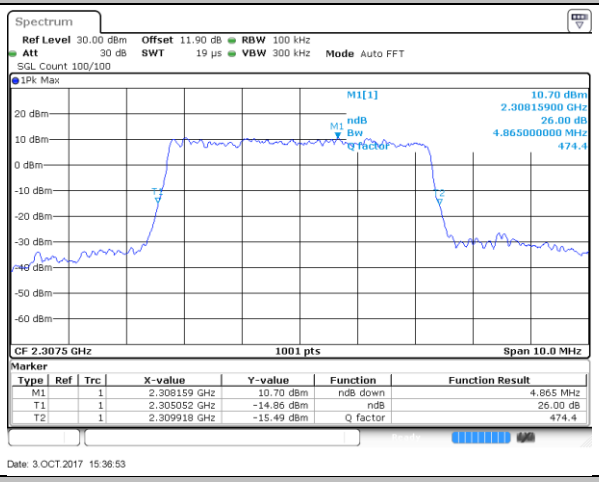
Highest Channel / 5MHz / 16QAM



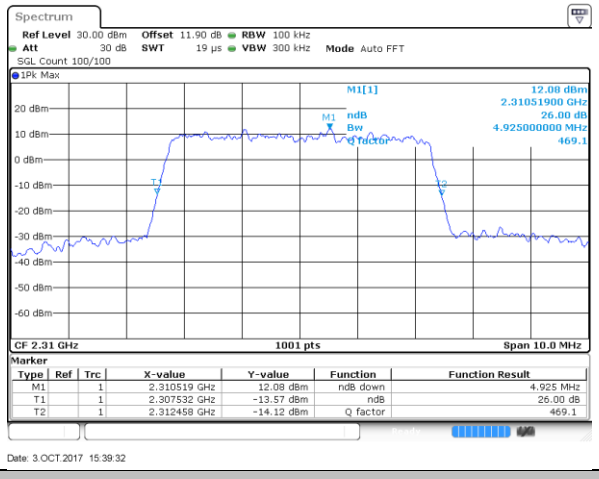
LTE Band 30	
Middle Channel / 10MHz / QPSK	**Middle Channel / 10MHz / 16QAM**
	

LTE Band 30

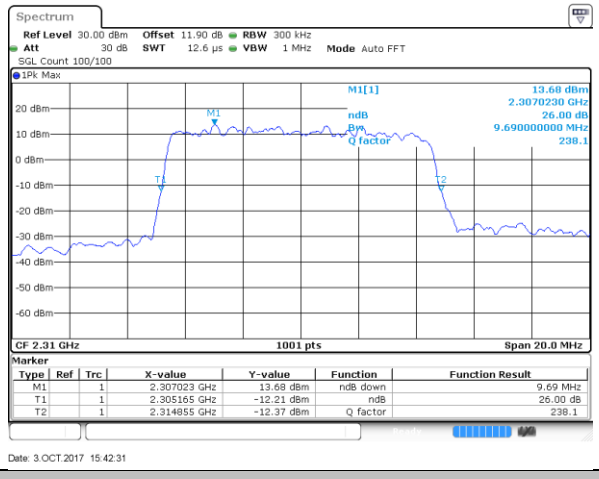
Lowest Channel / 5MHz / 64QAM



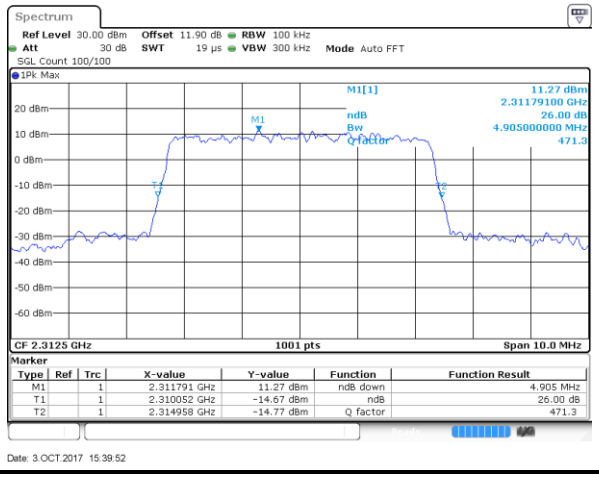
Middle Channel / 5MHz / 64QAM



Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM



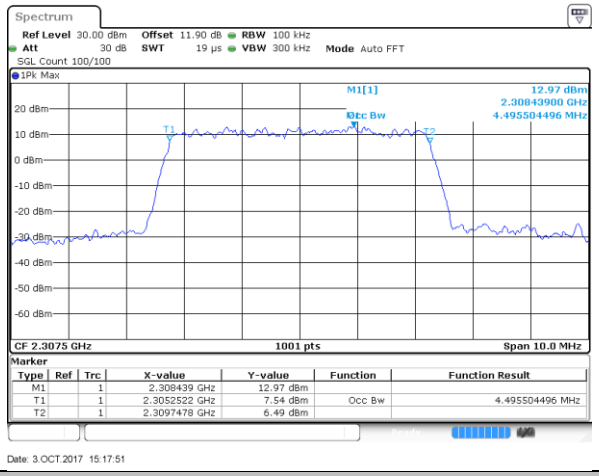
Occupied Bandwidth

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	-	-	-	-	4.5	4.47	-	-	-	-	-	-
Middle CH	-	-	-	-	4.51	4.48	8.99	9.05	-	-	-	-
Highest CH	-	-	-	-	4.49	4.47	-	-	-	-	-	-

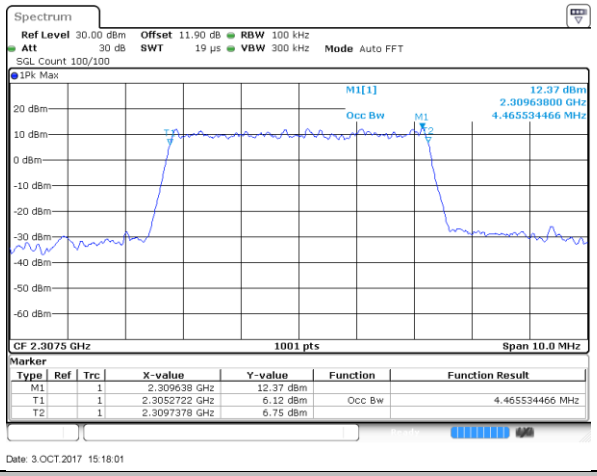
Mode	LTE Band 30 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.5	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.49	-	8.99	-	-	-	-	-
Highest CH	-	-	-	-	4.48	-	-	-	-	-	-	-

LTE Band 30

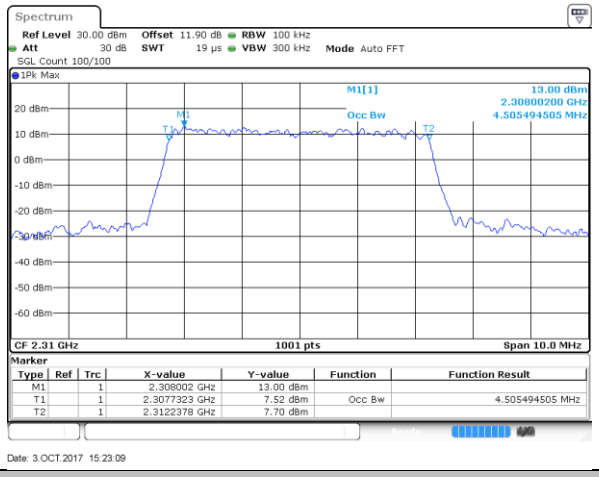
Lowest Channel / 5MHz / QPSK



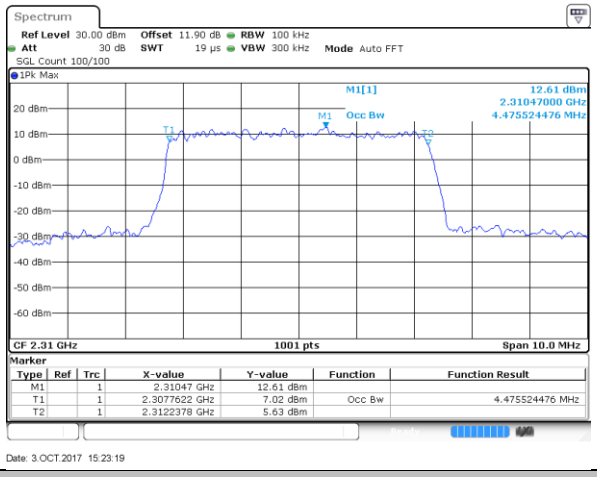
Lowest Channel / 5MHz / 16QAM



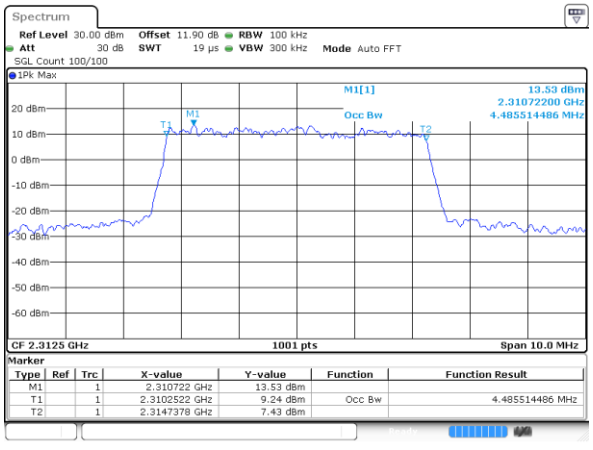
Middle Channel / 5MHz / QPSK



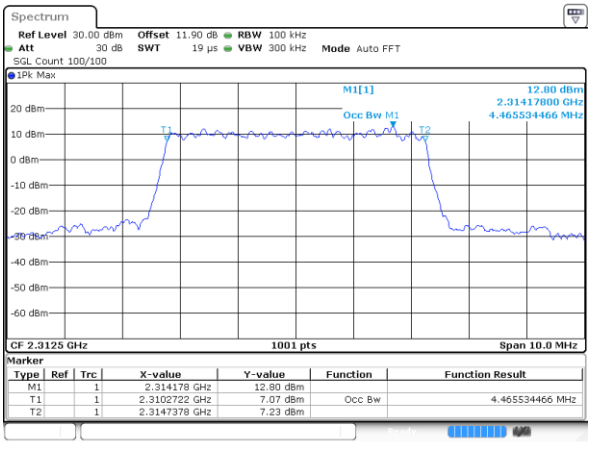
Middle Channel / 5MHz / 16QAM



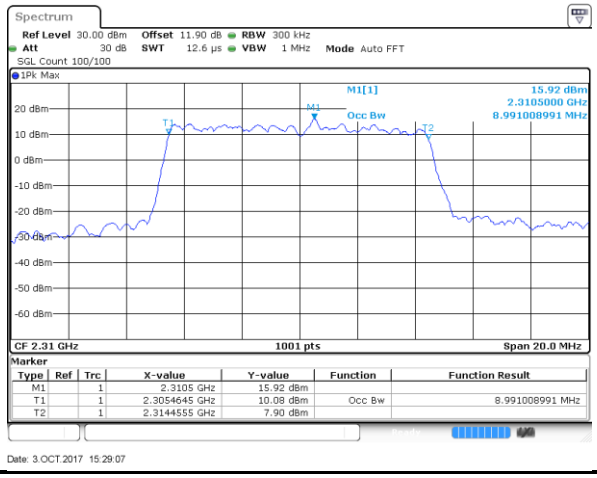
Highest Channel / 5MHz / QPSK

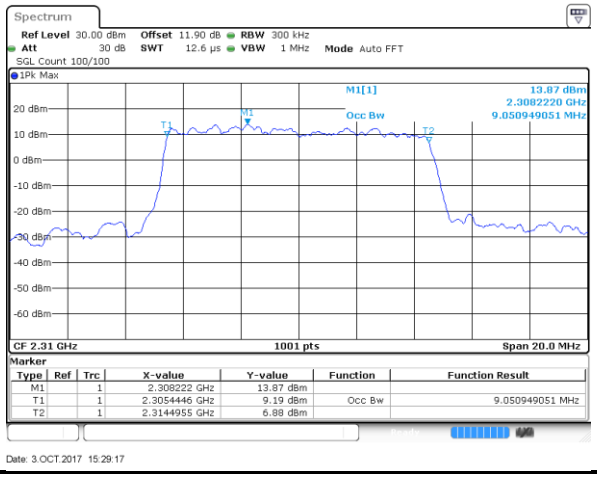


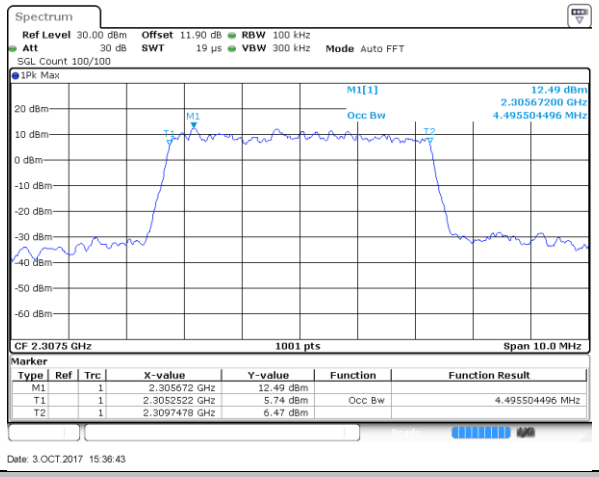
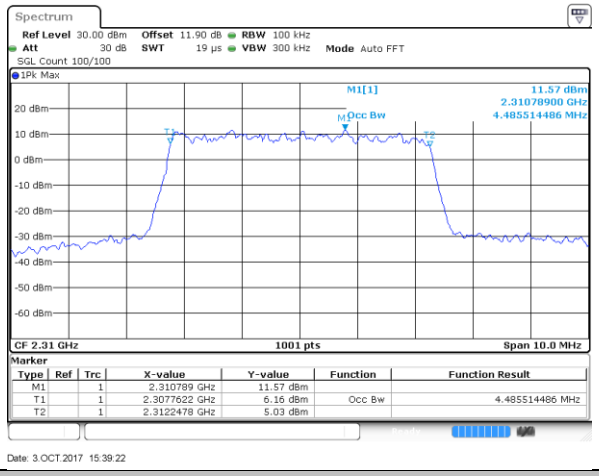
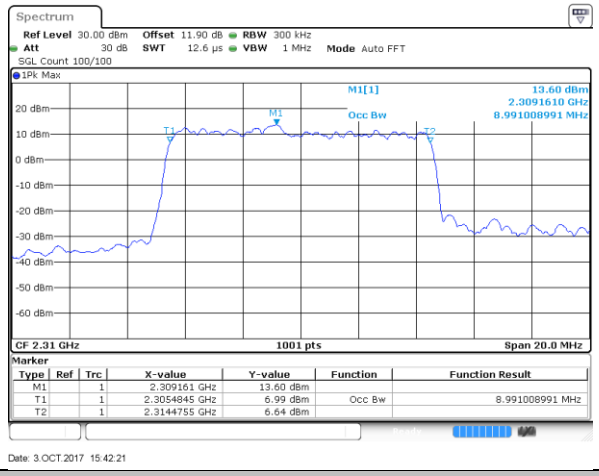
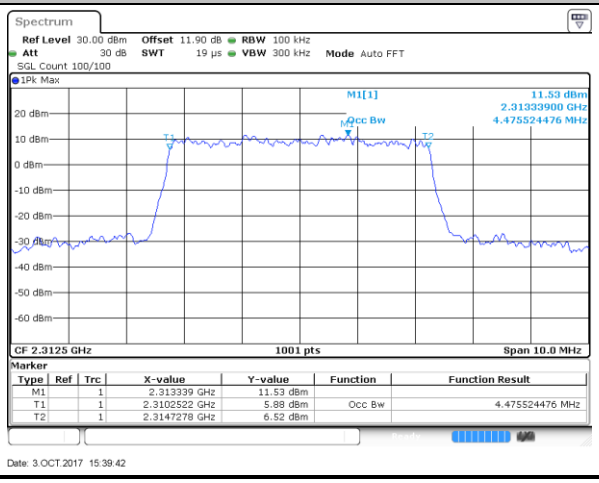
Highest Channel / 5MHz / 16QAM



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



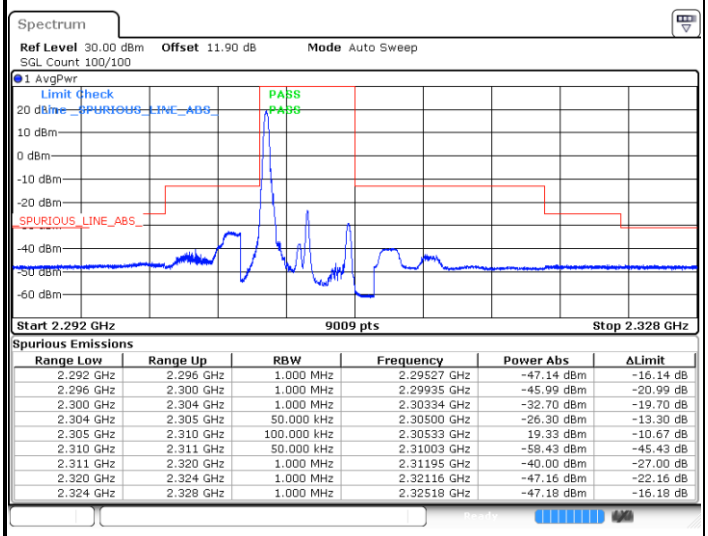


LTE Band 30	
Lowest Channel / 5MHz / 64QAM	
	
Middle Channel / 5MHz / 64QAM	**Middle Channel / 10MHz / 64QAM**
	
Highest Channel / 5MHz / 64QAM	
	

Conducted Band Edge

LTE Band 30 / 5MHz / QPSK

Lowest Band Edge / 1 RB

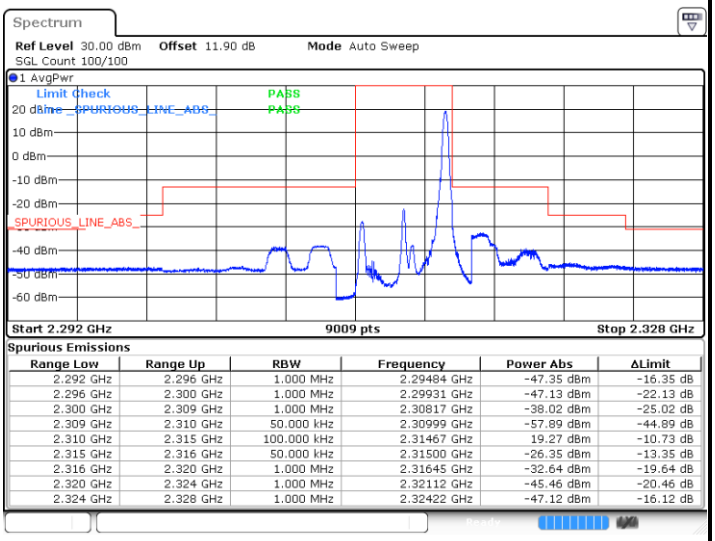


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29527 GHz	-47.14 dBm	-16.14 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29935 GHz	-45.99 dBm	-20.99 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30334 GHz	-32.70 dBm	-19.70 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-26.30 dBm	-13.30 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30533 GHz	19.33 dBm	-10.67 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31003 GHz	-58.43 dBm	-45.43 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31195 GHz	-40.00 dBm	-27.00 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32116 GHz	-47.16 dBm	-22.16 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32518 GHz	-47.18 dBm	-16.18 dB

Date: 3.OCT.2017 15:19:30

Highest Band Edge / 1 RB

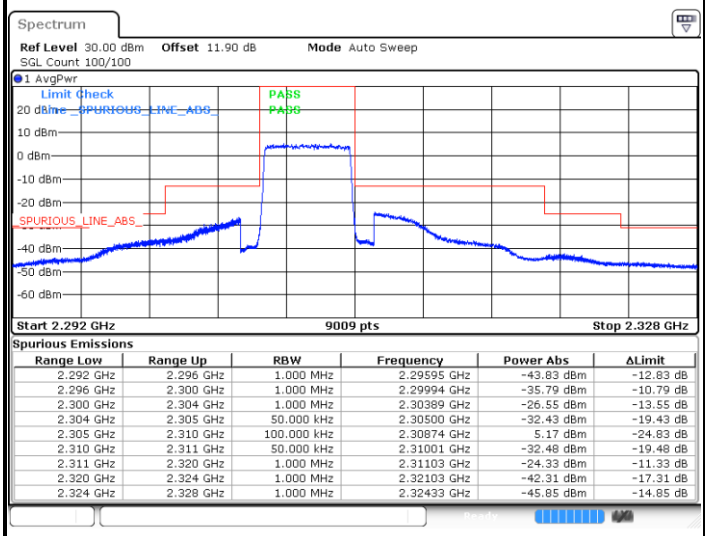


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29484 GHz	-47.35 dBm	-16.35 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29931 GHz	-47.13 dBm	-22.13 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30817 GHz	-38.02 dBm	-25.02 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.30999 GHz	-57.89 dBm	-44.89 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31467 GHz	19.27 dBm	-10.73 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31500 GHz	-26.35 dBm	-13.35 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31645 GHz	-32.64 dBm	-19.64 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32112 GHz	-45.46 dBm	-20.46 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32422 GHz	-47.12 dBm	-16.12 dB

Date: 3.OCT.2017 15:25:28

Lowest Band Edge / Full RB

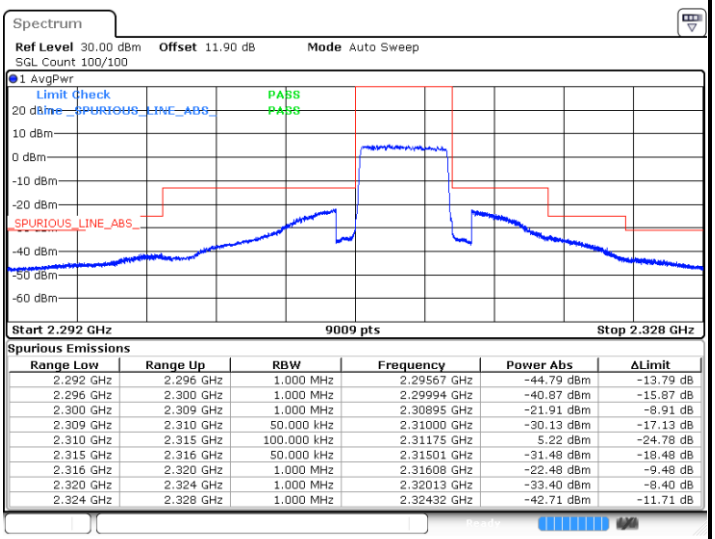


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29595 GHz	-43.83 dBm	-12.83 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29994 GHz	-35.79 dBm	-10.79 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30389 GHz	-26.55 dBm	-13.55 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-32.43 dBm	-19.43 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30874 GHz	5.17 dBm	-24.83 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31001 GHz	-32.48 dBm	-19.48 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31103 GHz	-24.33 dBm	-11.33 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32103 GHz	-42.31 dBm	-17.31 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32433 GHz	-45.85 dBm	-14.85 dB

Date: 3.OCT.2017 15:21:49

Highest Band Edge / Full RB



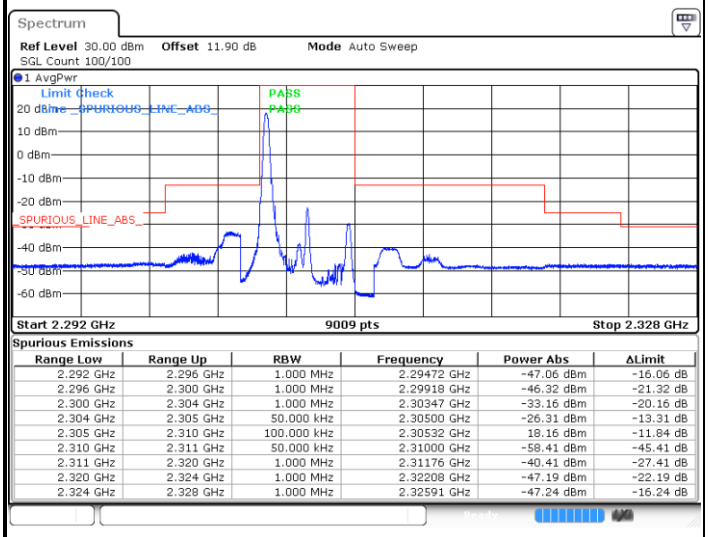
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29567 GHz	-44.79 dBm	-13.79 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29994 GHz	-40.87 dBm	-15.87 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30895 GHz	-21.91 dBm	-8.91 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.31000 GHz	-30.13 dBm	-17.13 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31175 GHz	5.22 dBm	-24.78 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31501 GHz	-31.48 dBm	-18.48 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31608 GHz	-22.48 dBm	-9.48 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32013 GHz	-33.40 dBm	-8.40 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32432 GHz	-42.71 dBm	-11.71 dB

Date: 3.OCT.2017 15:27:47

LTE Band 30 / 5MHz / 16QAM

Lowest Band Edge / 1RB

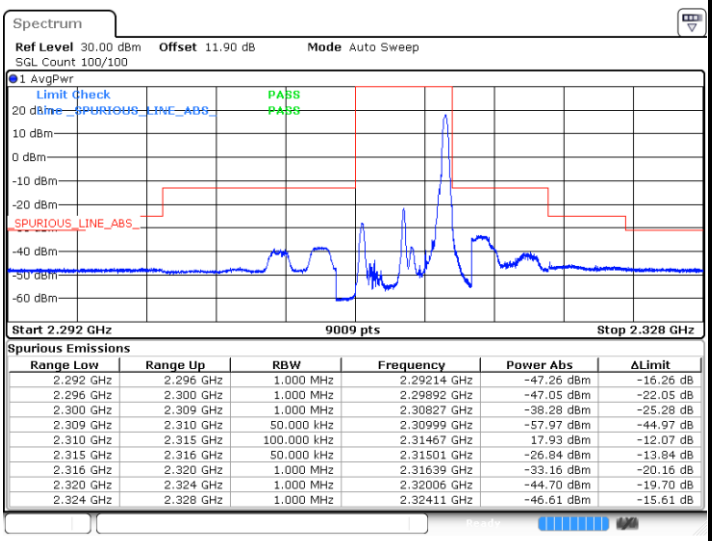


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29472 GHz	-47.06 dBm	-16.06 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29918 GHz	-46.32 dBm	-21.32 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30347 GHz	-33.16 dBm	-20.16 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-26.31 dBm	-13.31 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30532 GHz	18.16 dBm	-11.84 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31000 GHz	-58.41 dBm	-45.41 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31176 GHz	-40.41 dBm	-27.41 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32208 GHz	-47.19 dBm	-22.19 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32591 GHz	-47.24 dBm	-16.24 dB

Date: 3.OCT.2017 15:20:39

Highest Band Edge / 1 RB

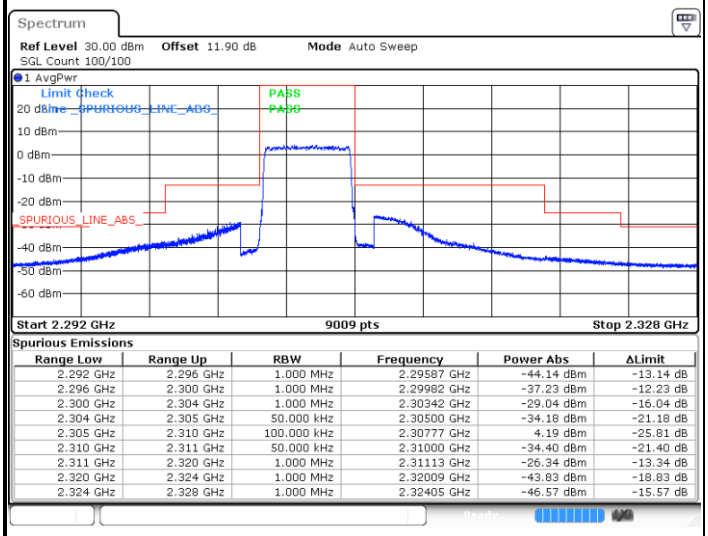


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29214 GHz	-47.26 dBm	-16.26 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29892 GHz	-47.05 dBm	-22.05 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30827 GHz	-38.28 dBm	-25.28 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.30999 GHz	-57.97 dBm	-44.97 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31467 GHz	17.93 dBm	-12.07 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31501 GHz	-26.84 dBm	-13.84 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31639 GHz	-33.16 dBm	-20.16 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32006 GHz	-44.70 dBm	-19.70 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32411 GHz	-46.61 dBm	-15.61 dB

Date: 3.OCT.2017 15:26:37

Lowest Band Edge / Full RB

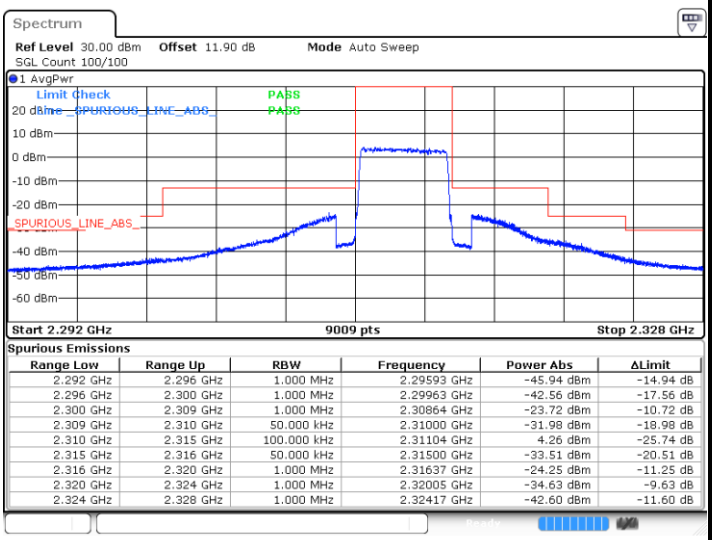


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29587 GHz	-44.14 dBm	-13.14 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29982 GHz	-37.23 dBm	-12.23 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30342 GHz	-29.04 dBm	-16.04 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-34.18 dBm	-21.18 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30777 GHz	4.19 dBm	-25.81 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31000 GHz	-34.40 dBm	-21.40 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31113 GHz	-26.34 dBm	-13.34 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32009 GHz	-43.83 dBm	-18.83 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32405 GHz	-46.57 dBm	-15.57 dB

Date: 3.OCT.2017 15:22:58

Highest Band Edge / Full RB



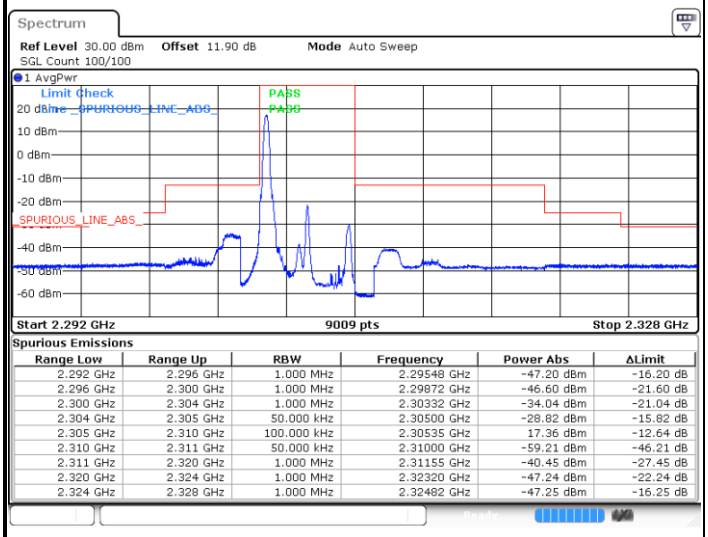
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29593 GHz	-45.94 dBm	-14.94 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29963 GHz	-42.56 dBm	-17.56 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30864 GHz	-23.72 dBm	-10.72 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.31000 GHz	-31.98 dBm	-18.98 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31104 GHz	4.26 dBm	-25.74 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31500 GHz	-33.51 dBm	-20.51 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31637 GHz	-24.25 dBm	-11.25 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32005 GHz	-34.63 dBm	-9.63 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32417 GHz	-42.60 dBm	-11.60 dB

Date: 3.OCT.2017 15:28:56

LTE Band 30 / 5MHz / 64QAM

Lowest Band Edge / 1RB

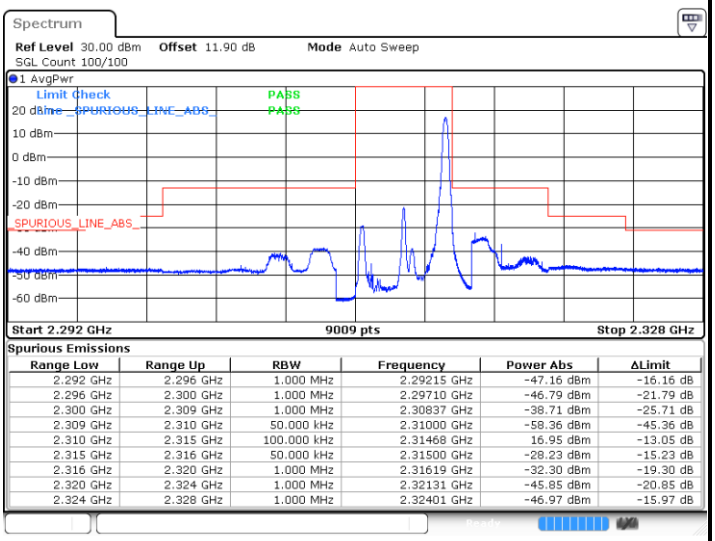


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29548 GHz	-47.20 dBm	-16.20 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29872 GHz	-46.60 dBm	-21.60 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30332 GHz	-34.04 dBm	-21.04 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-28.82 dBm	-15.82 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30535 GHz	17.36 dBm	-12.64 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31000 GHz	-59.21 dBm	-46.21 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31155 GHz	-40.45 dBm	-27.45 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32320 GHz	-47.24 dBm	-22.24 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32482 GHz	-47.25 dBm	-16.25 dB

Date: 3.OCT.2017 15:38:02

Highest Band Edge / 1 RB

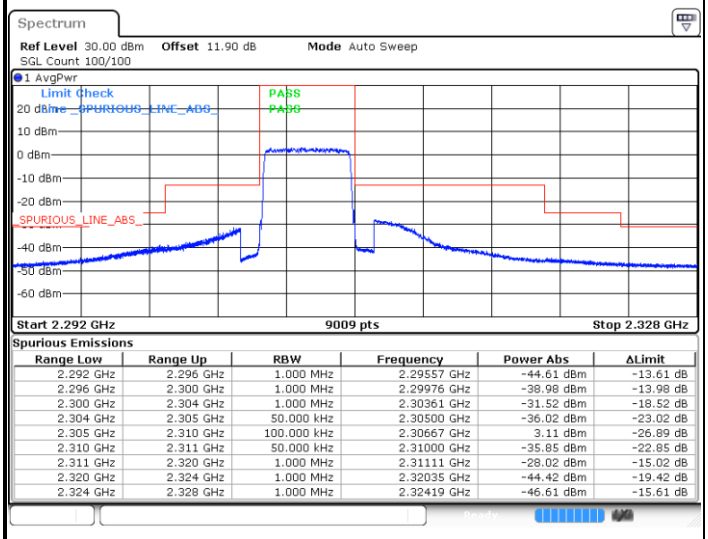


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29215 GHz	-47.16 dBm	-16.16 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29710 GHz	-46.79 dBm	-21.79 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30837 GHz	-38.71 dBm	-25.71 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.31000 GHz	-58.36 dBm	-45.36 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31468 GHz	16.95 dBm	-13.05 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31500 GHz	-28.23 dBm	-15.23 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31619 GHz	-32.30 dBm	-19.30 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32131 GHz	-45.85 dBm	-20.85 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32401 GHz	-46.97 dBm	-15.97 dB

Date: 3.OCT.2017 15:41:01

Lowest Band Edge / Full RB

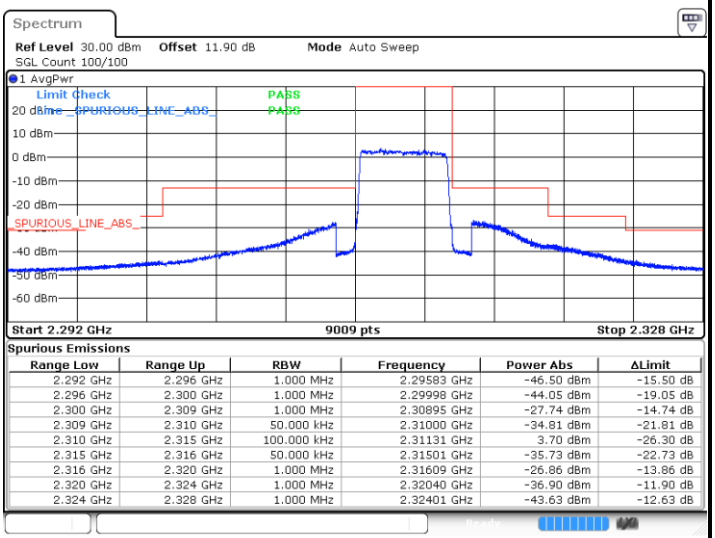


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29557 GHz	-44.61 dBm	-13.61 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29976 GHz	-38.98 dBm	-13.98 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30361 GHz	-31.52 dBm	-18.52 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-36.02 dBm	-23.02 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30667 GHz	3.11 dBm	-26.89 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31000 GHz	-35.85 dBm	-22.85 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31111 GHz	-28.02 dBm	-15.02 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32035 GHz	-44.42 dBm	-19.42 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32419 GHz	-46.61 dBm	-15.61 dB

Date: 3.OCT.2017 15:39:12

Highest Band Edge / Full RB



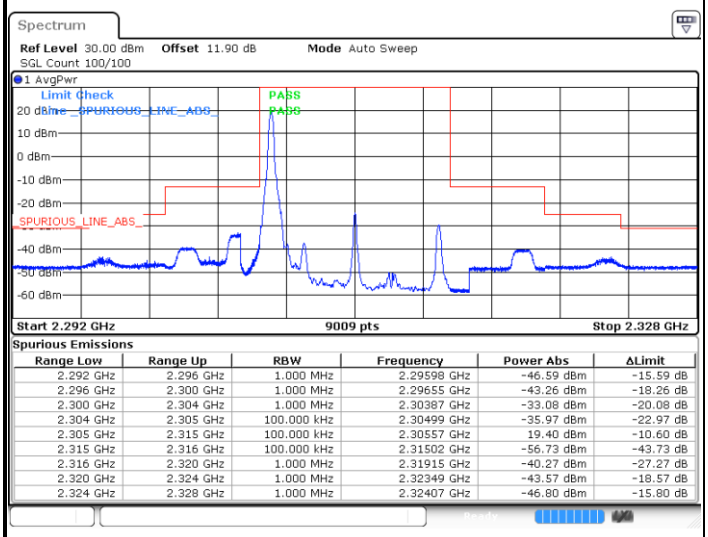
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29583 GHz	-46.50 dBm	-15.50 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29998 GHz	-44.05 dBm	-19.05 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30895 GHz	-27.74 dBm	-14.74 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.31000 GHz	-34.81 dBm	-21.81 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31131 GHz	3.70 dBm	-26.30 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31501 GHz	-35.73 dBm	-22.73 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31609 GHz	-26.86 dBm	-13.86 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32040 GHz	-36.90 dBm	-11.90 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32401 GHz	-43.63 dBm	-12.63 dB

Date: 3.OCT.2017 15:42:10

LTE Band 30 / 10MHz / QPSK

Lowest Band Edge / 1 RB

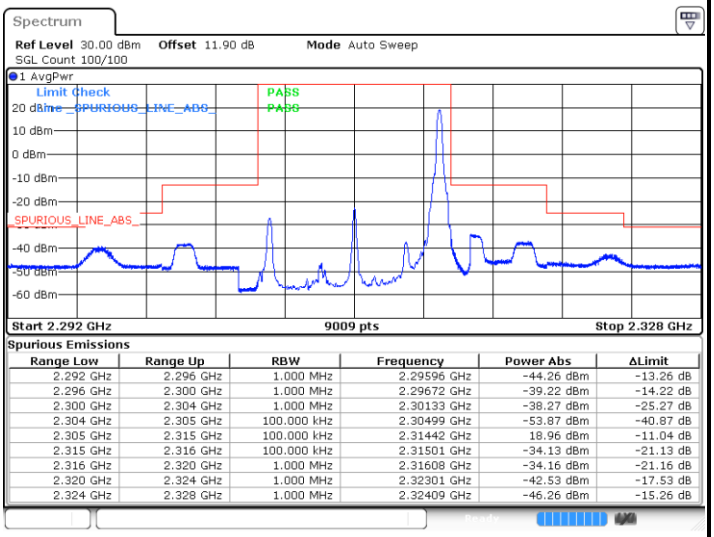


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29598 GHz	-46.59 dBm	-15.59 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29655 GHz	-43.26 dBm	-18.26 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30387 GHz	-33.08 dBm	-20.08 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30499 GHz	-35.97 dBm	-22.97 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30557 GHz	19.40 dBm	-10.60 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31502 GHz	-56.73 dBm	-43.73 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31915 GHz	-40.27 dBm	-27.27 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32349 GHz	-43.57 dBm	-18.57 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32407 GHz	-46.80 dBm	-15.80 dB

Date: 3.OCT.2017 15:30:46

Highest Band Edge / 1 RB

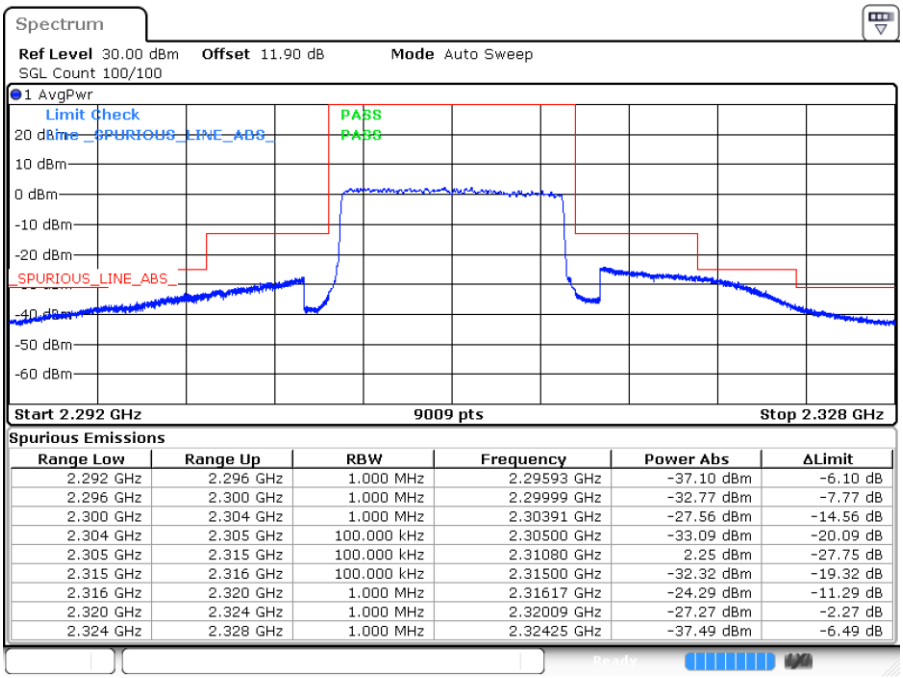


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29596 GHz	-44.26 dBm	-13.26 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29672 GHz	-39.22 dBm	-14.22 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30133 GHz	-38.27 dBm	-25.27 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30499 GHz	-53.87 dBm	-40.87 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31442 GHz	18.96 dBm	-11.04 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31501 GHz	-34.13 dBm	-21.13 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31608 GHz	-34.16 dBm	-21.16 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32301 GHz	-42.53 dBm	-17.53 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32409 GHz	-46.26 dBm	-15.26 dB

Date: 3.OCT.2017 15:33:04

Band Edge / Full RB



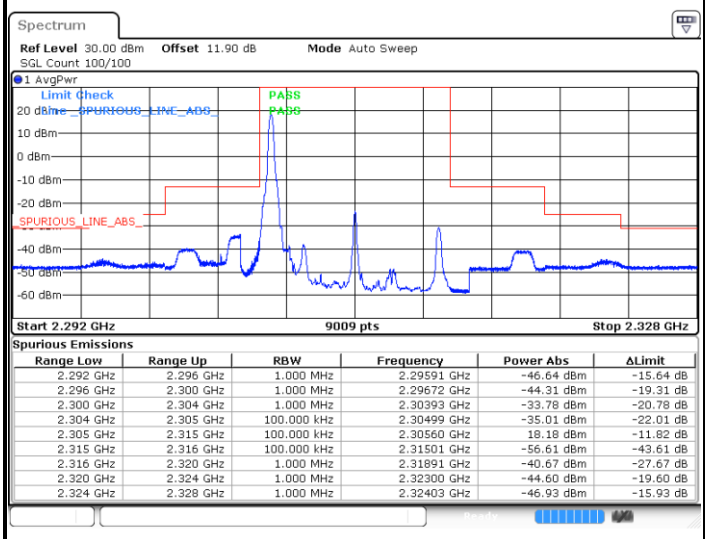
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29593 GHz	-37.10 dBm	-6.10 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29999 GHz	-32.77 dBm	-7.77 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30391 GHz	-27.56 dBm	-14.56 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-33.09 dBm	-20.09 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31080 GHz	2.25 dBm	-27.75 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31500 GHz	-32.32 dBm	-19.32 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31617 GHz	-24.29 dBm	-11.29 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32009 GHz	-27.27 dBm	-2.27 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32425 GHz	-37.49 dBm	-6.49 dB

Date: 3.OCT.2017 15:35:23

LTE Band 30 / 10MHz / 16QAM

Lowest Band Edge / 1 RB

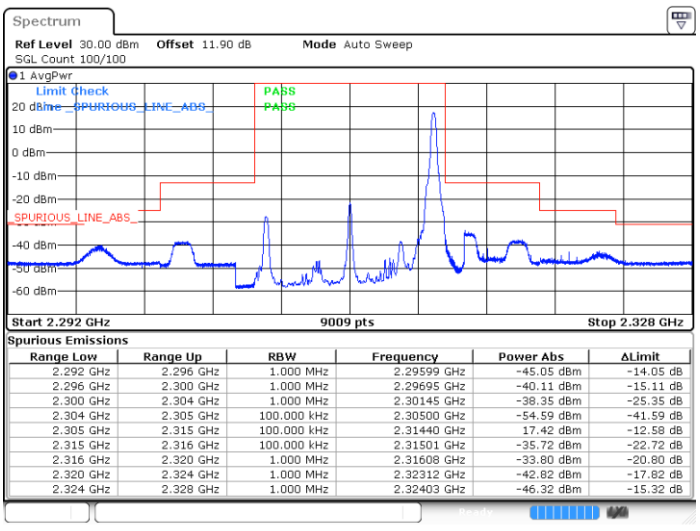


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29591 GHz	-46.64 dBm	-15.64 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29672 GHz	-44.31 dBm	-19.31 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30393 GHz	-33.78 dBm	-20.78 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30499 GHz	-35.01 dBm	-22.01 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30560 GHz	18.18 dBm	-11.82 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31501 GHz	-56.61 dBm	-43.61 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31891 GHz	-40.67 dBm	-27.67 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32300 GHz	-44.60 dBm	-19.60 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32403 GHz	-46.93 dBm	-15.93 dB

Date: 3.OCT.2017 15:31:55

Highest Band Edge / 1 RB

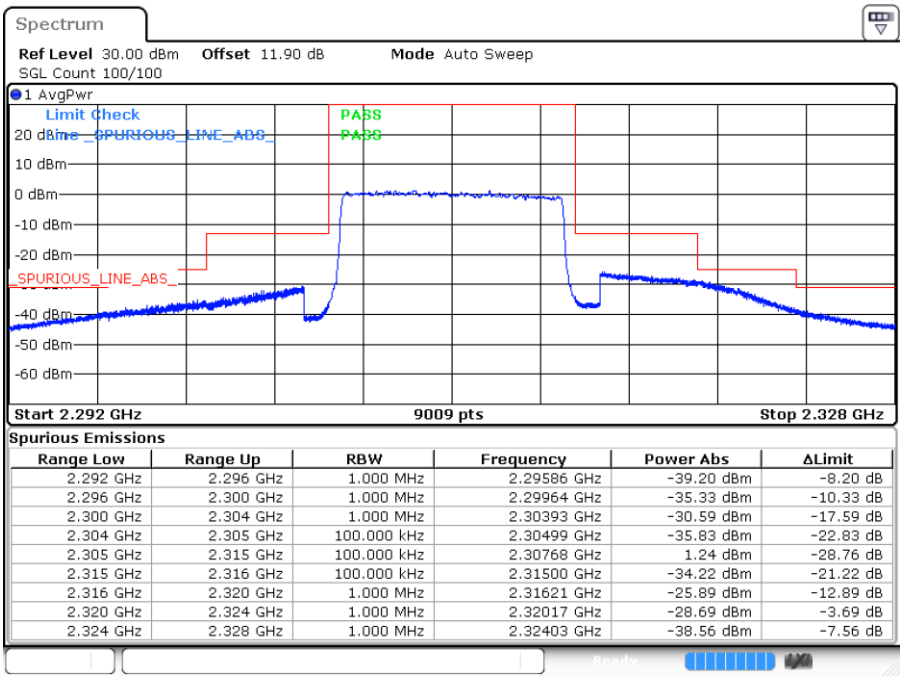


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29599 GHz	-45.05 dBm	-14.05 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29695 GHz	-40.11 dBm	-15.11 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30145 GHz	-38.35 dBm	-25.35 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-54.59 dBm	-41.59 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31440 GHz	17.42 dBm	-12.58 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31501 GHz	-35.72 dBm	-22.72 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31608 GHz	-33.80 dBm	-20.80 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32312 GHz	-42.82 dBm	-17.82 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32403 GHz	-46.32 dBm	-15.32 dB

Date: 3.OCT.2017 15:34:14

Band Edge / Full RB



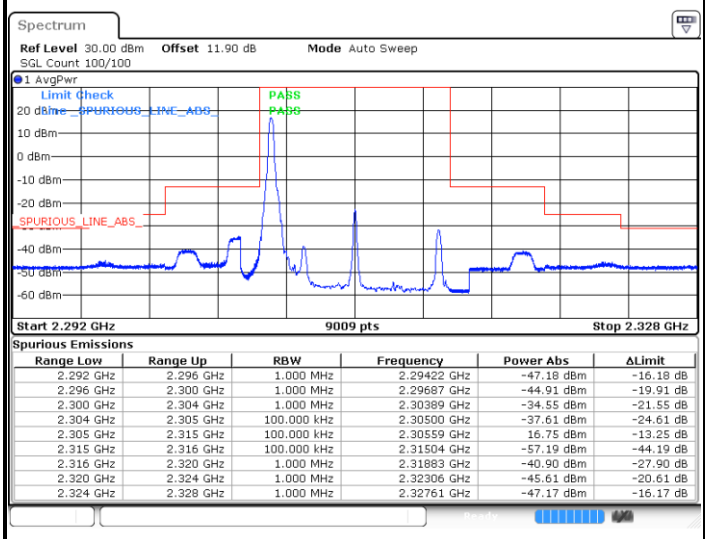
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29586 GHz	-39.20 dBm	-8.20 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29964 GHz	-35.33 dBm	-10.33 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30393 GHz	-30.59 dBm	-17.59 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30499 GHz	-35.83 dBm	-22.83 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30768 GHz	1.24 dBm	-28.76 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31500 GHz	-34.22 dBm	-21.22 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31621 GHz	-25.89 dBm	-12.89 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32017 GHz	-28.69 dBm	-3.69 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32403 GHz	-38.56 dBm	-7.56 dB

Date: 3.OCT.2017 15:36:33

LTE Band 30 / 10MHz / 64QAM

Lowest Band Edge / 1 RB

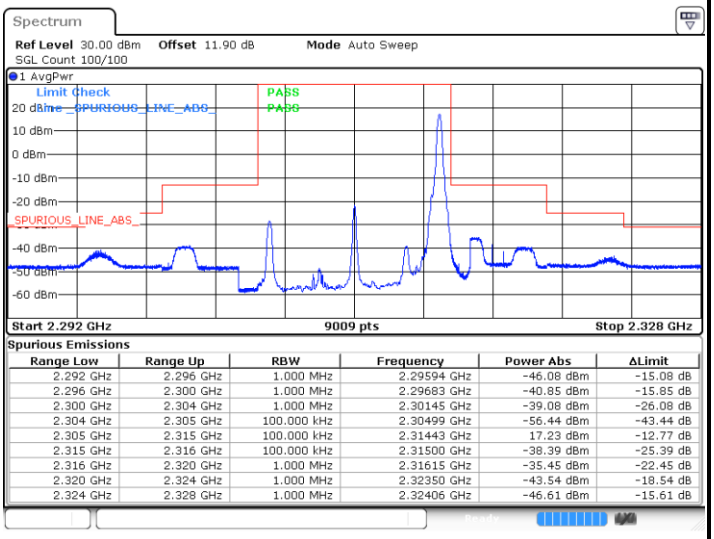


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29422 GHz	-47.18 dBm	-16.18 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29687 GHz	-44.91 dBm	-19.91 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30389 GHz	-34.55 dBm	-21.55 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-37.61 dBm	-24.61 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30559 GHz	16.75 dBm	-13.25 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31504 GHz	-57.19 dBm	-44.19 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31883 GHz	-40.90 dBm	-27.90 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32306 GHz	-45.61 dBm	-20.61 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32761 GHz	-47.17 dBm	-16.17 dB

Date: 3.OCT.2017 15:43:40

Highest Band Edge / 1 RB

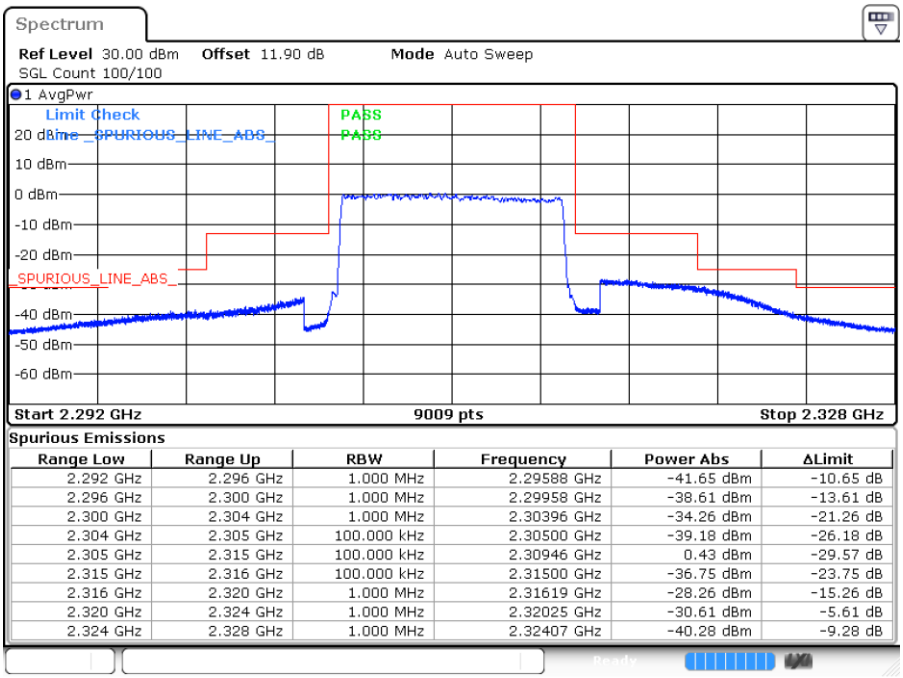


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29594 GHz	-46.08 dBm	-15.08 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29683 GHz	-40.85 dBm	-15.85 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30145 GHz	-39.08 dBm	-26.08 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30499 GHz	-56.44 dBm	-43.44 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31443 GHz	17.23 dBm	-12.77 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31500 GHz	-38.39 dBm	-25.39 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31615 GHz	-35.45 dBm	-22.45 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32350 GHz	-43.54 dBm	-18.54 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32406 GHz	-46.61 dBm	-15.61 dB

Date: 3.OCT.2017 15:44:49

Band Edge / Full RB



Spurious Emissions

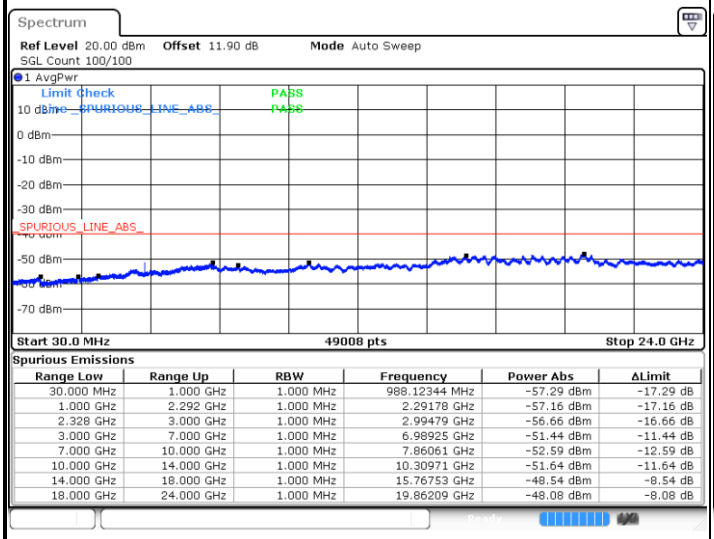
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29588 GHz	-41.65 dBm	-10.65 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29958 GHz	-38.61 dBm	-13.61 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30396 GHz	-34.26 dBm	-21.26 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-39.18 dBm	-26.18 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30946 GHz	0.43 dBm	-29.57 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31500 GHz	-36.75 dBm	-23.75 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31619 GHz	-28.26 dBm	-15.26 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32025 GHz	-30.61 dBm	-5.61 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32407 GHz	-40.28 dBm	-9.28 dB

Date: 3.OCT.2017 15:45:58

Conducted Spurious Emission

LTE Band 30 / 5MHz

Lowest Channel / QPSK

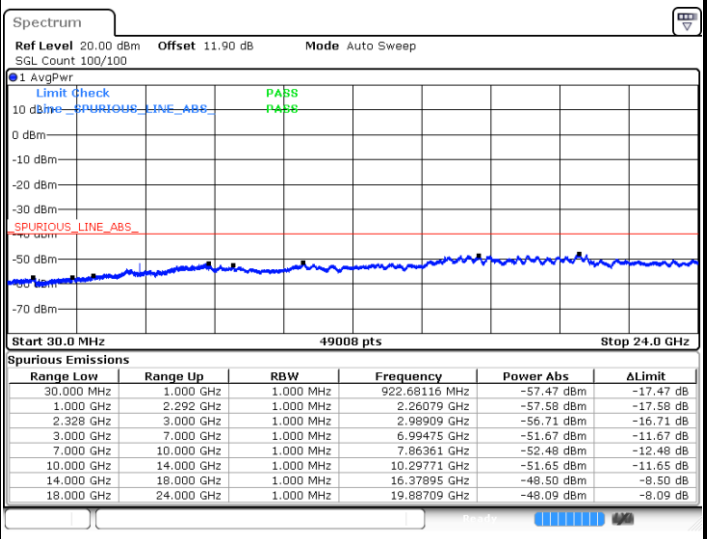


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	988.12344 MHz	-57.29 dBm	-17.29 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.29178 GHz	-57.16 dBm	-17.16 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.99479 GHz	-56.66 dBm	-16.66 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98925 GHz	-51.44 dBm	-11.44 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.86061 GHz	-52.59 dBm	-12.59 dB
10.000 GHz	14.000 GHz	1.000 MHz	10.30971 GHz	-51.64 dBm	-11.64 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.76753 GHz	-48.54 dBm	-8.54 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.86209 GHz	-48.08 dBm	-8.08 dB

Date: 2.OCT.2017 10:52:51

Lowest Channel / 16QAM

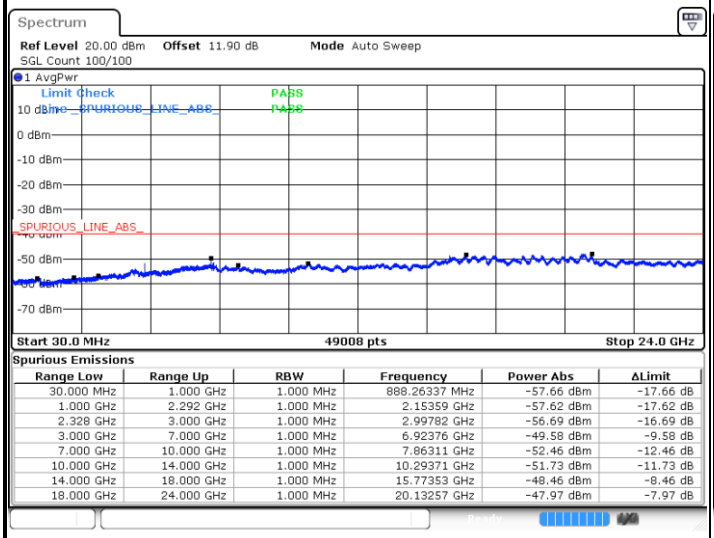


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	922.68116 MHz	-57.47 dBm	-17.47 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.26079 GHz	-57.58 dBm	-17.58 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.98909 GHz	-56.71 dBm	-16.71 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99475 GHz	-51.67 dBm	-11.67 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.86361 GHz	-52.48 dBm	-12.48 dB
10.000 GHz	14.000 GHz	1.000 MHz	10.29771 GHz	-51.65 dBm	-11.65 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.37895 GHz	-48.50 dBm	-8.50 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.88709 GHz	-48.09 dBm	-8.09 dB

Date: 2.OCT.2017 10:53:44

Middle Channel / QPSK

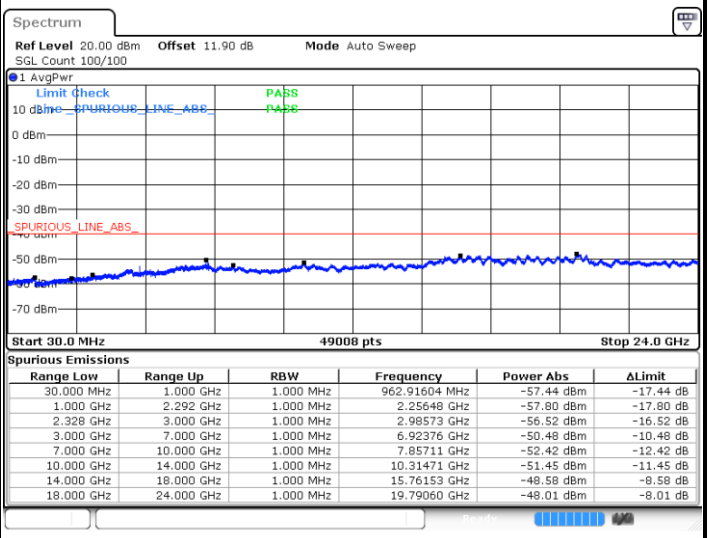


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	888.26337 MHz	-57.66 dBm	-17.66 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.15359 GHz	-57.62 dBm	-17.62 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.99782 GHz	-56.69 dBm	-16.69 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.92376 GHz	-49.58 dBm	-9.58 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.86311 GHz	-52.46 dBm	-12.46 dB
10.000 GHz	14.000 GHz	1.000 MHz	10.29371 GHz	-51.73 dBm	-11.73 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.77353 GHz	-48.46 dBm	-8.46 dB
18.000 GHz	24.000 GHz	1.000 MHz	20.13257 GHz	-47.97 dBm	-7.97 dB

Date: 2.OCT.2017 10:54:37

Middle Channel / 16QAM



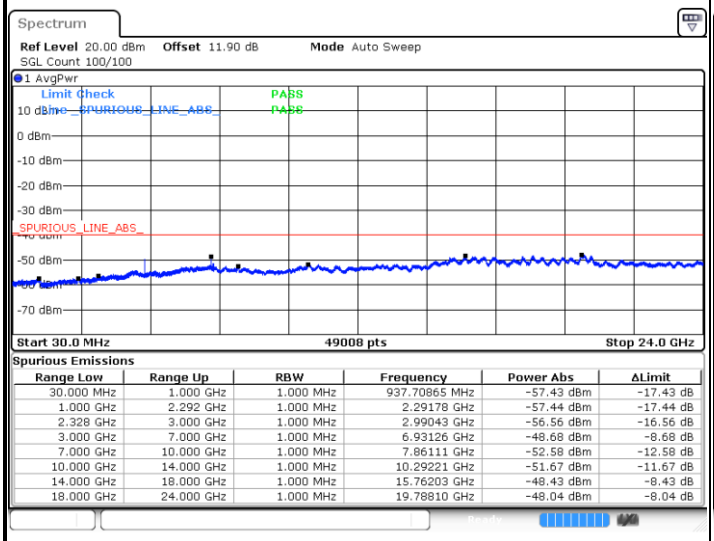
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	962.91604 MHz	-57.44 dBm	-17.44 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.25648 GHz	-57.80 dBm	-17.80 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.98573 GHz	-56.52 dBm	-16.52 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.92376 GHz	-50.48 dBm	-10.48 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.85711 GHz	-52.42 dBm	-12.42 dB
10.000 GHz	14.000 GHz	1.000 MHz	10.31471 GHz	-51.45 dBm	-11.45 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.76153 GHz	-48.58 dBm	-8.58 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.79060 GHz	-48.01 dBm	-8.01 dB

Date: 2.OCT.2017 10:55:30

LTE Band 30 / 5MHz

Highest Channel / QPSK

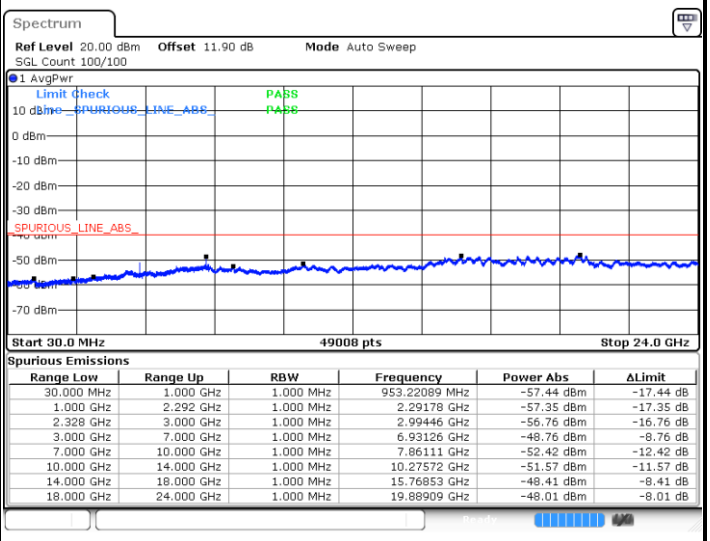


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	937.70865 MHz	-57.43 dBm	-17.43 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.29178 GHz	-57.44 dBm	-17.44 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.99043 GHz	-56.56 dBm	-16.56 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.93126 GHz	-48.68 dBm	-8.68 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.86111 GHz	-52.58 dBm	-12.58 dB
10.000 GHz	14.000 GHz	1.000 MHz	10.29221 GHz	-51.67 dBm	-11.67 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.76203 GHz	-48.43 dBm	-8.43 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.78810 GHz	-48.04 dBm	-8.04 dB

Date: 2.OCT.2017 10:56:24

Highest Channel / 16QAM



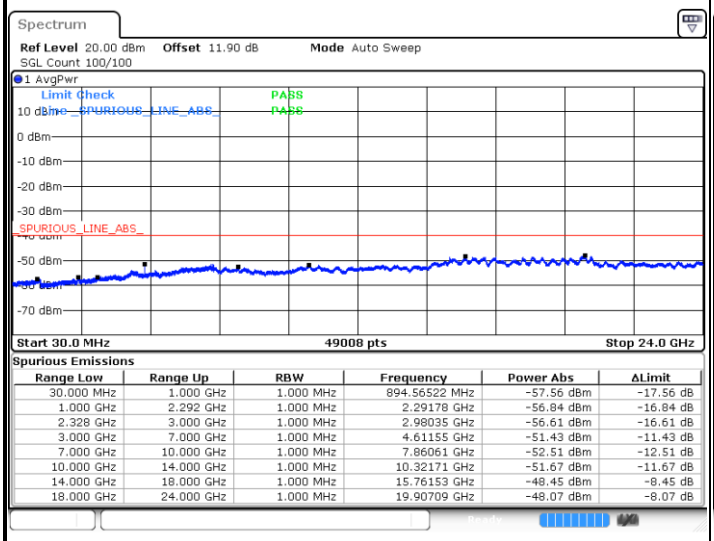
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	953.22089 MHz	-57.44 dBm	-17.44 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.29178 GHz	-57.35 dBm	-17.35 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.99446 GHz	-56.76 dBm	-16.76 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.93126 GHz	-48.76 dBm	-8.76 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.86111 GHz	-52.42 dBm	-12.42 dB
10.000 GHz	14.000 GHz	1.000 MHz	10.27572 GHz	-51.57 dBm	-11.57 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.76853 GHz	-48.41 dBm	-8.41 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.88909 GHz	-48.01 dBm	-8.01 dB

Date: 2.OCT.2017 10:57:17

LTE Band 30 / 10MHz

Middle Channel / QPSK

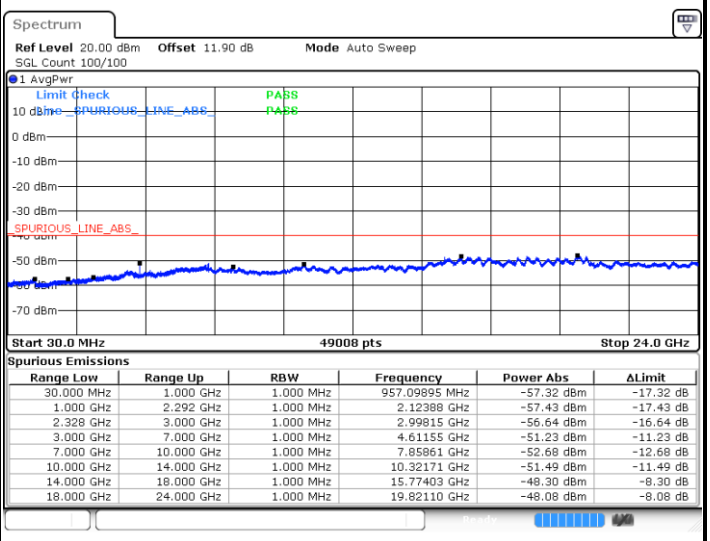


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	894.56522 MHz	-57.56 dBm	-17.56 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.29178 GHz	-56.84 dBm	-16.84 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.98035 GHz	-56.61 dBm	-16.61 dB
3.000 GHz	7.000 GHz	1.000 MHz	4.61155 GHz	-51.43 dBm	-11.43 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.86061 GHz	-52.51 dBm	-12.51 dB
10.000 GHz	14.000 GHz	1.000 MHz	10.32171 GHz	-51.67 dBm	-11.67 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.76153 GHz	-48.45 dBm	-8.45 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.90709 GHz	-48.07 dBm	-8.07 dB

Date: 2.OCT.2017 10:58:10

Middle Channel / 16QAM



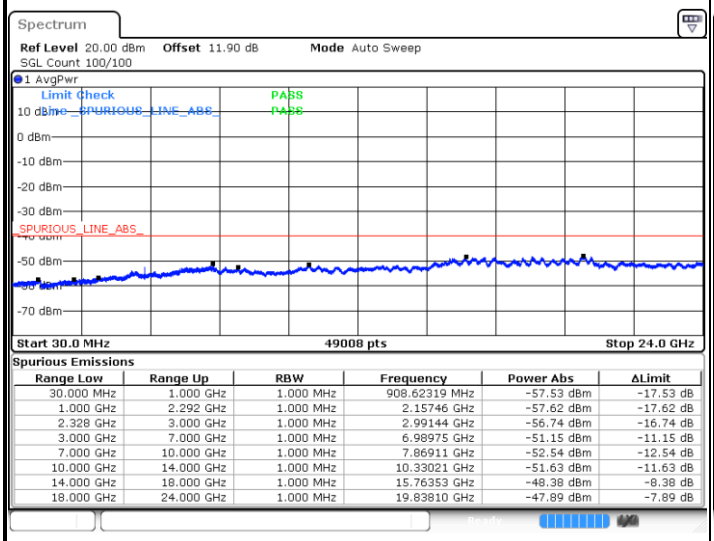
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	957.09895 MHz	-57.32 dBm	-17.32 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.12388 GHz	-57.43 dBm	-17.43 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.99815 GHz	-56.64 dBm	-16.64 dB
3.000 GHz	7.000 GHz	1.000 MHz	4.61155 GHz	-51.23 dBm	-11.23 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.85861 GHz	-52.68 dBm	-12.68 dB
10.000 GHz	14.000 GHz	1.000 MHz	10.32171 GHz	-51.49 dBm	-11.49 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.77403 GHz	-48.30 dBm	-8.30 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.82110 GHz	-48.08 dBm	-8.08 dB

Date: 2.OCT.2017 10:59:03

LTE Band 30 / 5MHz

Lowest Channel / 64QAM

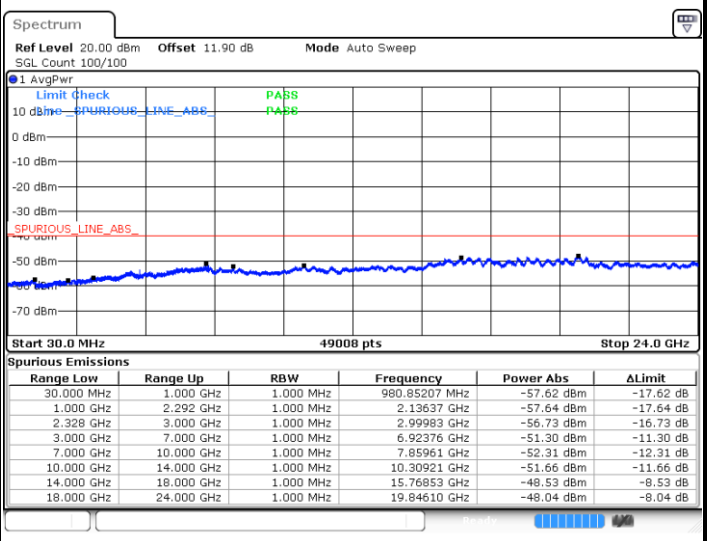


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	908.62319 MHz	-57.53 dBm	-17.53 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.15746 GHz	-57.62 dBm	-17.62 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.99144 GHz	-56.74 dBm	-16.74 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98975 GHz	-51.15 dBm	-11.15 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.86911 GHz	-52.54 dBm	-12.54 dB
10.000 GHz	14.000 GHz	1.000 MHz	10.33021 GHz	-51.63 dBm	-11.63 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.76353 GHz	-48.38 dBm	-8.38 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.83810 GHz	-47.89 dBm	-7.89 dB

Date: 2.OCT.2017 11:00:14

Middle Channel / 64QAM

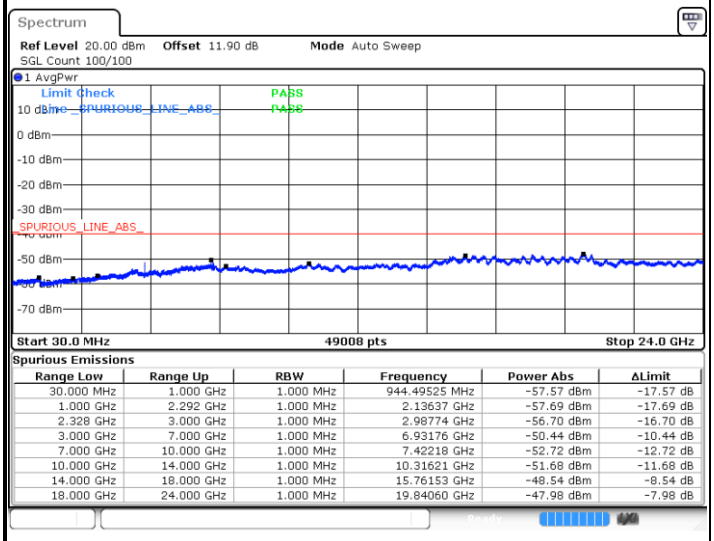


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	980.85207 MHz	-57.62 dBm	-17.62 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.13637 GHz	-57.64 dBm	-17.64 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.99983 GHz	-56.73 dBm	-16.73 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.92376 GHz	-51.30 dBm	-11.30 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.85961 GHz	-52.31 dBm	-12.31 dB
10.000 GHz	14.000 GHz	1.000 MHz	10.30921 GHz	-51.66 dBm	-11.66 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.76853 GHz	-48.53 dBm	-8.53 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.84610 GHz	-48.04 dBm	-8.04 dB

Date: 2.OCT.2017 11:01:07

Highest Channel / 64QAM

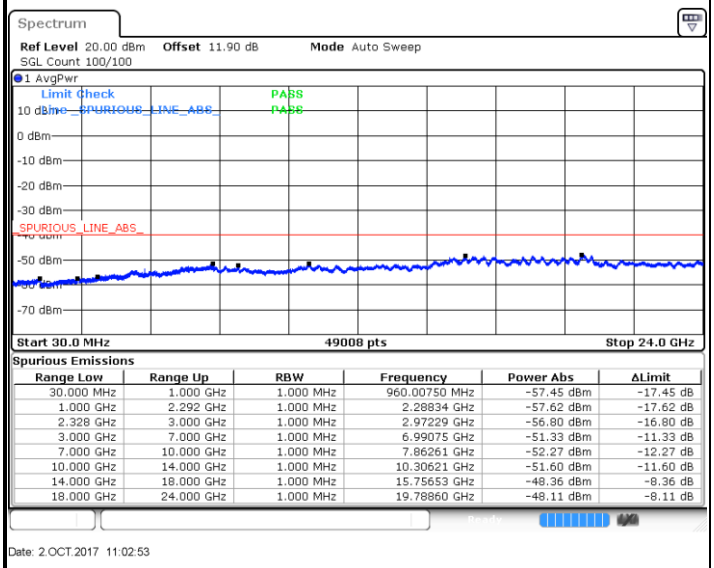


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	944.49525 MHz	-57.57 dBm	-17.57 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.13637 GHz	-57.69 dBm	-17.69 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.98774 GHz	-56.70 dBm	-16.70 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.93176 GHz	-50.44 dBm	-10.44 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.42218 GHz	-52.72 dBm	-12.72 dB
10.000 GHz	14.000 GHz	1.000 MHz	10.31621 GHz	-51.68 dBm	-11.68 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.76153 GHz	-48.54 dBm	-8.54 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.84060 GHz	-47.98 dBm	-7.98 dB

Date: 2.OCT.2017 11:02:00

LTE Band 30 / 10MHz	
Middle Channel / 64QAM	



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	960.00750 MHz	-57.45 dBm	-17.45 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.28834 GHz	-57.62 dBm	-17.62 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.97229 GHz	-56.80 dBm	-16.80 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99075 GHz	-51.33 dBm	-11.33 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.86261 GHz	-52.27 dBm	-12.27 dB
10.000 GHz	14.000 GHz	1.000 MHz	10.30621 GHz	-51.60 dBm	-11.60 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.75653 GHz	-48.36 dBm	-8.36 dB
18.000 GHz	24.000 GHz	1.000 MHz	19.78860 GHz	-48.11 dBm	-8.11 dB

Date: 2.OCT.2017 11:02:53

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	0.0064	PASS
40	Normal Voltage	0.0006	
30	Normal Voltage	0.0047	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0047	
0	Normal Voltage	0.0059	
-10	Normal Voltage	0.0003	
-20	Normal Voltage	0.0007	
-30	Normal Voltage	0.0056	
20	Maximum Voltage	0.0053	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0057	

Note:

1. Normal Voltage =3.3 V.；Battery End Point (BEP) =3.135 V.；Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

LTE Band 30

LTE Band 30 / 5MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	4614	-55.06	-40	-15.06	-52.66	-61.87	2.11	8.93	H
	6918	-46.01	-40	-6.01	-50.44	-54.09	2.62	10.70	H
	11520	-51.29	-40	-11.29	-63.93	-60.91	2.68	12.30	H
									H
									H
									H
									H
	4614	-58.02	-40	-18.02	-55.62	-64.83	2.11	8.93	V
	6918	-44.39	-40	-4.39	-48.69	-52.47	2.62	10.70	V
	11520	-47.55	-40	-7.55	-60.12	-57.17	2.68	12.30	V
									V
									V
									V
									V

Middle	4614	-54.86	-13	-41.86	-52.56	-61.67	2.11	8.93	H
	6924	-45.36	-13	-32.36	-49.75	-53.45	2.62	10.71	H
	11538	-54.07	-13	-41.07	-66.7	-63.69	2.68	12.30	H
									H
									H
									H
									H
	4614	-56.87	-13	-43.87	-54.57	-63.68	2.11	8.93	V
	6924	-43.35	-13	-30.35	-47.8	-51.44	2.62	10.71	V
	11538	-48.53	-13	-35.53	-61.06	-58.15	2.68	12.30	V
									V
									V
									V
									V
Highest	4620	-56.67	-40	-16.67	-54.04	-63.49	2.12	8.94	H
	6930	-47.68	-40	-7.68	-51.7	-55.78	2.61	10.72	H
	9234	-57.72	-40	-17.72	-63.81	-67.79	2.53	12.61	H
	11556	-51.33	-40	-11.33	-63.66	-60.95	2.68	12.30	H
									H
									H
									H
	4620	-56.34	-40	-16.34	-53.7	-63.16	2.12	8.94	V
	6930	-41.11	-40	-1.11	-48.66	-49.21	2.61	10.72	V
	9234	-55.17	-40	-15.17	-61.67	-65.24	2.53	12.61	V
	11556	-46.63	-40	-6.63	-58.88	-56.25	2.68	12.30	V
									V
									V
									V

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

LTE Band 30 / 10MHz / QPSK									
Channel	Frequency (MHz)	ERP (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	4614	-55.94	-40	-15.94	-53.32	-62.75	2.11	8.93	H
	6918	-46.56	-40	-6.56	-50.63	-54.64	2.62	10.70	H
	9216	-57.93	-40	-17.93	-64.08	-68.01	2.53	12.61	H
	11538	-53.91	-40	-13.91	-66.25	-63.53	2.68	12.30	H
									H
									H
									H
	4614	-55.27	-40	-15.27	-52.64	-62.08	2.11	8.93	V
	6918	-45.16	-40	-5.16	-49.26	-53.24	2.62	10.70	V
	9216	-54.83	-40	-14.83	-61.38	-64.91	2.53	12.61	V
	11538	-45.97	-40	-5.97	-58.28	-55.59	2.68	12.30	V
	13842	-53.52	-40	-13.52	-66.32	-64.42	3.14	14.04	V
									V
									V

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