FCC RF Test Report

APPLICANT	:	ZTE CORPORATION
EQUIPMENT	:	LTE/WCDMA Tablet
BRAND NAME	:	ZTE
MODEL NAME	:	K92
FCC ID	:	SRQ-K92
STANDARD	:	FCC 47 CFR Part 2, 27
CLASSIFICATION	:	PCS Licensed Transmitter (PCB)

The product was received on Mar. 10, 2017 and completely tested on Apr. 27, 2017. We, SPORTON INTERNATIONAL (KunShan) INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI / TIA / EIA-603-D-2010 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 (KunShan) INC., the test report shall not be reproduced except in full.

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APPENDIX B. TEST RESULTS OF RADIATED TEST

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG731003C	Rev. 01	Initial issue of report	May 08, 2017

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
3.5	-	Peak-to-Average Ratio	<13dB	N/A	Reporting only
3.6	§27.50 (a)(3)	EIRP Power Density	EIRP < 250mW/5MHz	PASS	-
3.7	§2.1049	Occupied Bandwidth	Reporting Only	PASS	-
3.8	§2.1051 §27.53 (a)(4)	Conducted Band Edge Measurement	Refer standard	PASS	-
3.9	§2.1051 §27.53 (a)(4)	Conducted Spurious Emission	< $70+10\log_{10}$(P[Watts])	PASS	-
3.10	§2.1055 §27.54	Frequency Stability Temperature & Voltage	Within the band	PASS	-
4.4	§2.1053 §27.53 (a)(4)	Radiated Spurious Emission	< $70+10\log_{10}$(P[Watts])	PASS	Under limit 18.80 dB at 9220.000 MHz

1 General Description

1.1 Applicant

ZTE CORPORATION

ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P. R. China

1.2 Manufacturer

ZTE CORPORATION

ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P. R. China

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	LTE/WCDMA Tablet
Brand Name	ZTE
Model Name	K92
FCC ID	SRQ-K92
EUT supports Radios application	WCDMA/HSPA/DC-HSDPA/HSPA+ (16QAM uplink is not supported)/LTE/ WLAN 2.4GHz 802.11b/g/n HT20/HT40 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth v3.0 + EDR/Bluetooth v4.0 LE/ Bluetooth v4.1 LE/Bluetooth v4.2 LE
IMEI Code	Conducted: 863862030008287 Radiation: 863862030007537
HW Version	K92HWB01
SW Version	K92V1.0.0B01
EUT Stage	Identical Prototype

1.4 Product Specification of Equipment Under Test

Product Feature	
Tx Frequency	LTE Band 30 : 2307.5 MHz ~ 2312.5 MHz
Rx Frequency	LTE Band 30 : 2352.5 MHz ~ 2357.5 MHz
Bandwidth	5MHz / 10MHz
Maximum Output Power to Antenna	LTE Band 30 : 23.67 dBm
Antenna Type	PIFA Antenna
Type of Modulation	QPSK / 16QAM

1.5 Modification of EUT

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

1.6 Maximum Frequency Tolerance and Emission Designator

LTE Band 30		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum Conducted power(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum Conducted power(W)
5	2307.5 ~ 2312.5	4M49G7D	-	0.2323	4M48W7D	-	0.1791
10	2310.0	9M01G7D	0.0018	0.2328	9M01W7D	-	0.1977

1.7 Testing Site

Test Site	Sporton International (KunShan) INC.		
Test Site Location	No.3-2, Pingxiang Road, Kunshan Development Zone, Jiangsu, China TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958		
Test Site No.	Sporton Site No.		FCC Registration No.
	TH01-KS	03CH03-KS	306251

1.8 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-D-2010
- FCC KDB 971168 D01 Power Meas. License Digital Systems v02r02

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

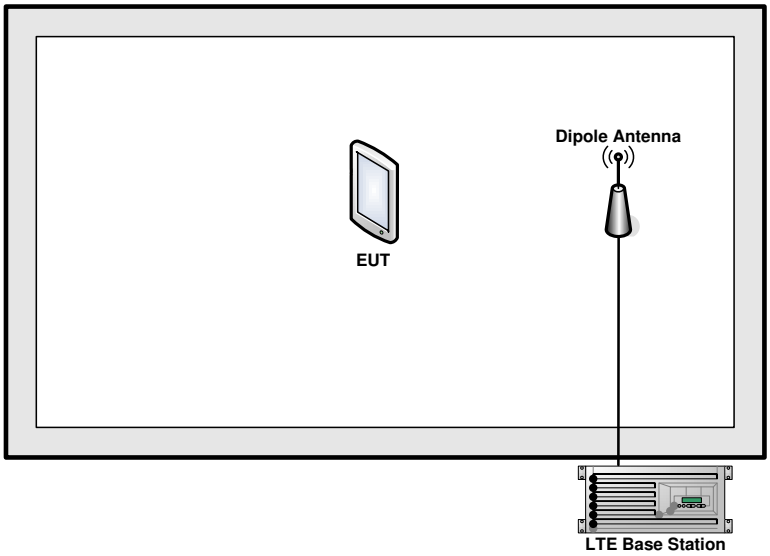
2.1 Test Mode

Antenna port conducted and radiated test items listed below are performed according to K DB 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	1	Half	Full	L	M	H
Max. Output Power	30	-	-	v		-	-	v	v	v	v	v	v	v	v
		-	-		v	-	-	v	v	v	v	v		v	
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	-	-	v	v	v				v	
26dB and 99% Bandwidth	30	-	-	v		-	-	v	v			v	v	v	v
		-	-		v	-	-	v	v			v		v	
Conducted Band Edge	30	-	-	v		-	-	v	v	v		v	v		v
		-	-		v	-	-	v	v	v		v		v	
Conducted Spurious Emission	30	-	-	v		-	-	v	v	v			v	v	v
		-	-		v	-	-	v	v	v				v	
Frequency Stability	30	-	-		v	-	-	v				v		v	
Radiated Spurious Emission	30	-	-	v		-	-	v		v				v	
					v			v		v				v	
Note	1. The mark “v “ means that this configuration is chosen for testing 2. The mark “-“ means that this bandwidth is not supported. 3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.														

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	LTE Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss 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.

Offset = RF cable loss.

Following shows an offset computation example with cable loss 5.8 dB.

Example :

Offset(dB) = RF cable loss(dB).

= 5.8 (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

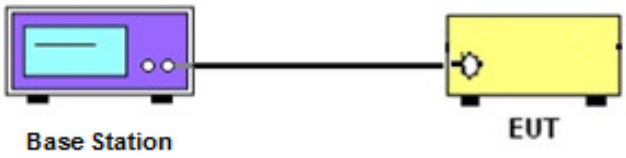
3 Conducted Test Items

3.1 Measuring Instruments

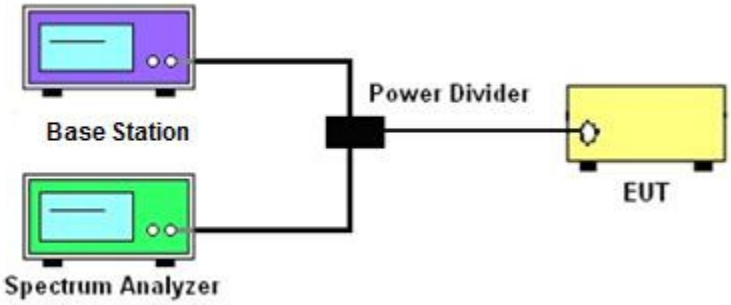
See list of measuring instruments of this test report.

3.2 Test Setup

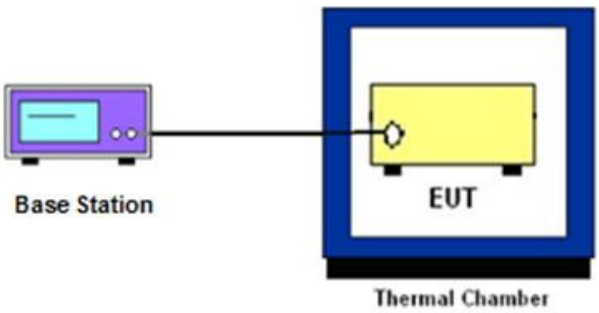
3.2.1 Conducted Output Power



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 base station.
2. Set EUT at maximum power through base station.
3. Select lowest, middle, and highest channels for each band and different modulation.

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.
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. Set instrument center frequency to OBW center frequency.
2. Set span to at least 1.5 times the OBW.
3. Set the RBW to the specified reference bandwidth (often 1 MHz).
4. Set VBW ≥ 3 × RBW.
5. Detector = RMS (power averaging).
6. Ensure that the number of measurement points in the sweep ≥ 2 × span/RBW.
7. Sweep time = auto couple.
8. Employ trace averaging (RMS) mode over a minimum of 100 traces.
9. 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 26dB 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 26 dB.
The 26 dB emission bandwidth(EBW) 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 EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The 26dB and 99% occupied bandwidth (BW) of the middle channel for the highest RF powers with full RB sizes were measured.

3.8 Conducted Band Edge Measurement

3.8.1 Description of Conducted Band Edge Measurement

27.53 (a)(4)

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

(i) By a factor of not less than: 43 + 10 log (P) dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, not less than 55 + 10 log (P) dB on all frequencies between 2320 and 2324 MHz and on all frequencies between 2341 and 2345 MHz, not less than 61 + 10 log (P) dB on all frequencies between 2324 and 2328 MHz and on all frequencies between 2337 and 2341 MHz, and not less than 67 + 10 log (P) dB on all frequencies between 2328 and 2337 MHz;

(ii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2300 and 2305 MHz, 55 + 10 log (P) dB on all frequencies between 2296 and 2300 MHz, 61 + 10 log (P) dB on all frequencies between 2292 and 2296 MHz, 67 + 10 log (P) dB on all frequencies between 2288 and 2292 MHz, and 70 + 10 log (P) dB below 2288 MHz;

(iii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2360 and 2365 MHz, and not less than 70 + 10 log (P) dB above 2365 MHz.

3.8.2 Test Procedures

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The band edges of low and high channels were measured with RBW ≥ 1% EBW set in Spectrum Analyzer, while the EUT was transmitting under maximum power.
3. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
4. The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
   = P(W)- [43 + 10log(P)] (dB) = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB) = -13dBm.

3.9 Conducted Spurious Emission Measurement

3.9.1 Description of Conducted Spurious Emission Measurement

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

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

3.9.2 Test Procedures

1. The EUT was connected to spectrum analyzer and base station via 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, taking the record of maximum spurious emission.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
7. The limit line is derived from 70 + 10log(P)dB below the transmitter power P(Watts)
   = P(W)- [70 + 10log(P)] (dB)
   = [30 + 10log(P)] (dBm) - [70 + 10log(P)] (dB)
   = -40dBm.

3.10 Frequency Stability Measurement

3.10.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center frequency.

3.10.2 Test Procedures for Temperature Variation

1. The EUT was set up in the thermal chamber and connected with the base station.
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.

3.10.3 Test Procedures for Voltage Variation

1. The EUT was placed in a temperature chamber at 25±5° C and connected with the base station.
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.

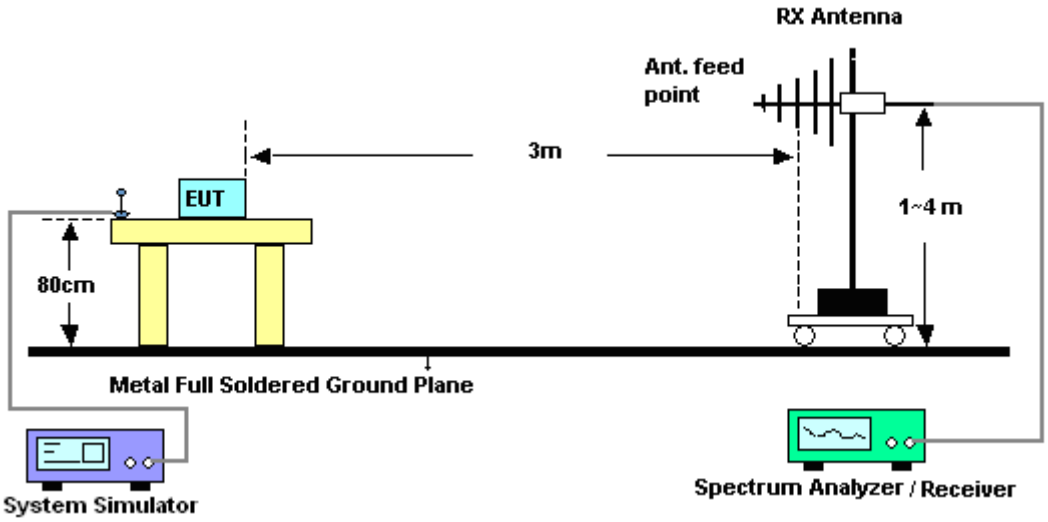
4 Radiated Test Items

4.1 Measuring Instruments

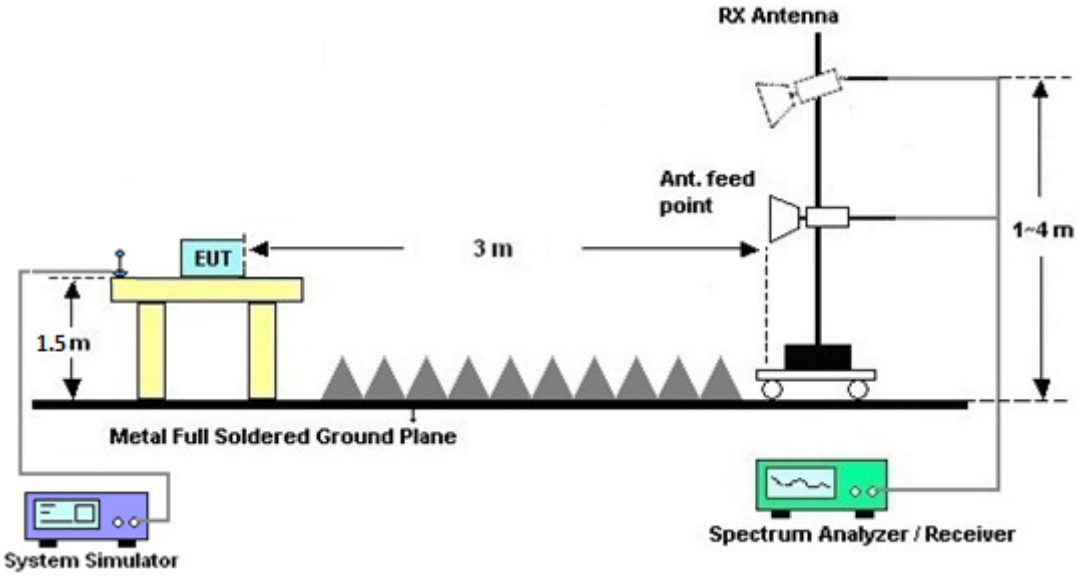
See list of measuring instruments of this test report.

4.2 Test Setup

4.2.1 For radiated test from 30MHz to 1GHz



4.2.2 For radiated test above 1GHz



4.3 Test Result of Radiated Test

Please refer to Appendix B.

4.4 Radiated Spurious Emission Measurement

4.4.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI / TIA / EIA-603-D-2010.

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.

4.4.2 Test Procedures

1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, Sweep = 500ms, Taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
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.
11. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain

5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Aug. 09, 2016	Mar. 25, 2017	Aug. 08, 2017	Conducted (TH01-KS)
Thermal Chamber	Ten Billion	TTC-B3S	TBN-960502	-40~+150°C	Oct. 13, 2016	Mar. 25, 2017	Oct. 12, 2017	Conducted (TH01-KS)
Radio communication	Anritsu	MT8820C	6201300652	2G/3G/LTE Band	Aug. 08, 2016	Mar. 25, 2017	Aug. 07, 2017	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz~44GHz	Apr. 18, 2017	Apr. 27, 2017	Apr.17, 2018	Radiation (03CH03-KS)
Bilog Antenna	TeseQ	CBL6112D	35406	25MHz~2GHz	Apr. 22, 2017	Apr. 27, 2017	Apr 21, 2018	Radiation (03CH03-KS)
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1356	1GHz~18GHz	Apr. 22, 2017	Apr. 27, 2017	Apr 21, 2018	Radiation (03CH03-KS)
SHF-EHF Horn	com-power	AH-840	101070	18GHz ~40GHz	Oct. 19, 2016	Apr. 27, 2017	Oct. 18, 2017	Radiation (03CH03-KS)
Amplifier	SONOMA	310N	187289	9kHz~1GHz	Aug. 09, 2016	Apr. 27, 2017	Aug. 08, 2017	Radiation (03CH03-KS)
High Gain Amplifier	MITEQ	AMF-7D-00101800-30-10P	1943529	1GHz~18GHz	Jan. 19, 2017	Apr. 27, 2017	Jan. 18, 2018	Radiation (03CH03-KS)
Amplifier	Agilent	8449B	3008A02370	1GHz~26.5GHz	Oct. 13, 2016	Apr. 27, 2017	Oct. 12, 2017	Radiation (03CH03-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Apr. 27, 2017	NCR	Radiation (03CH03-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Apr. 27, 2017	NCR	Radiation (03CH03-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Apr. 27, 2017	NCR	Radiation (03CH03-KS)

NCR: No Calibration Required

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))	2.8dB

Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.3dB

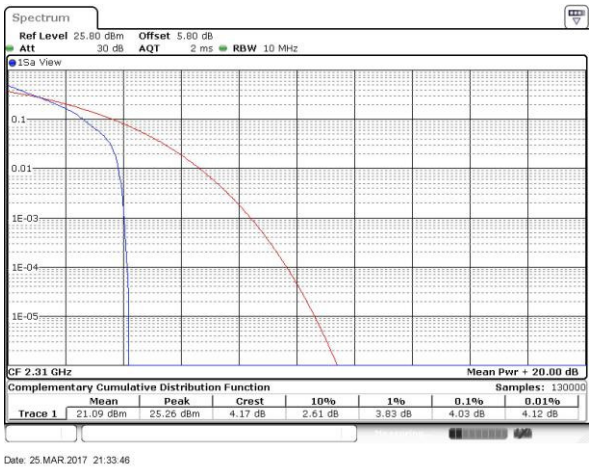
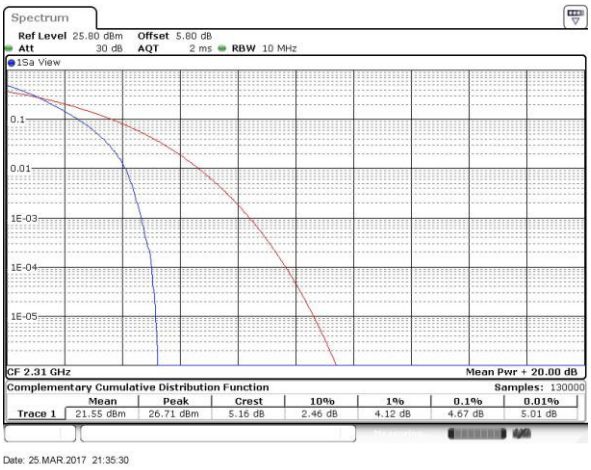
Appendix A. Test Results of Conducted Test

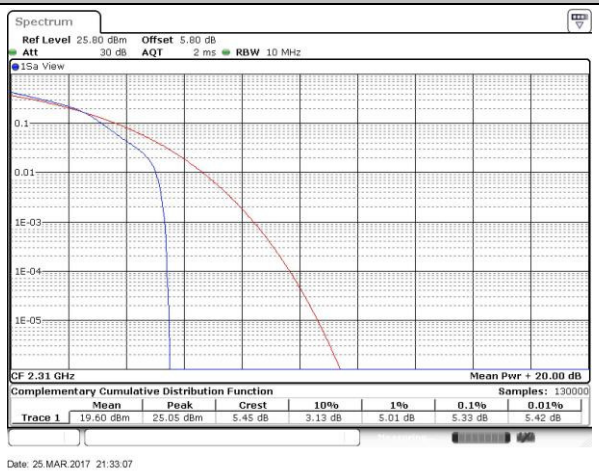
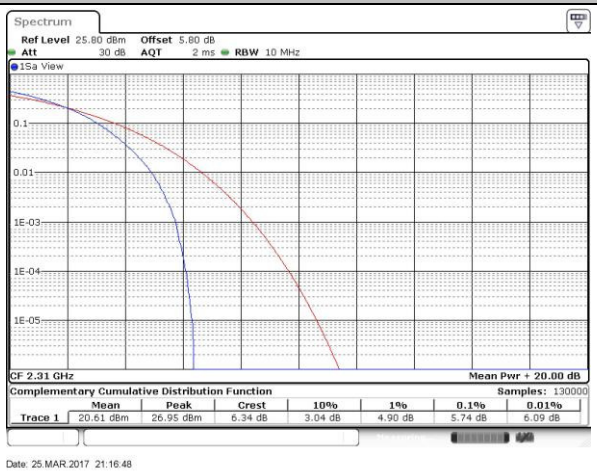
Conducted Output Power(Average power)

LTE Band 30 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.42	23.43	23.45
5	1	12		23.59	23.63	23.66
5	1	24		23.22	23.39	23.64
5	12	0		22.64	22.59	22.64
5	12	7		22.64	22.69	22.67
5	12	13		22.54	22.63	22.65
5	25	0		22.56	22.62	22.66
5	1	0	16-QAM	22.53	22.33	22.34
5	1	12		22.30	22.52	22.29
5	1	24		22.30	22.06	22.34
5	12	0		21.53	21.32	21.57
5	12	7		21.34	21.41	21.57
5	12	13		21.47	21.54	21.55
5	25	0		21.46	21.38	21.39
10	1	0	QPSK		23.56	
10	1	25			23.67	
10	1	49			23.45	
10	25	0			22.68	
10	25	12			22.63	
10	25	25			22.65	
10	50	0			22.61	
10	1	0	16-QAM		22.96	
10	1	25			22.55	
10	1	49			22.65	
10	25	0			21.57	
10	25	12			21.58	
10	25	25			21.58	
10	50	0			21.56	

Peak-to-Average Ratio

Mode	LTE Band 30 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Middle CH	4.03	4.67	5.33	5.74	PASS

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

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

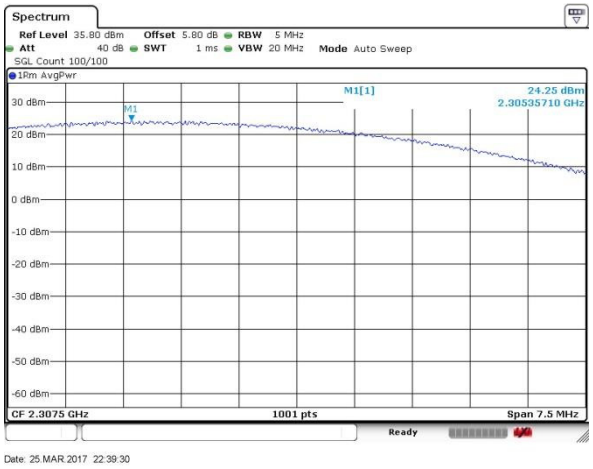
EIRP Power Density

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					24.25	22.97						
Middle CH					24.21	22.32	24.08	22.62				
Highest CH					23.85	22.95						

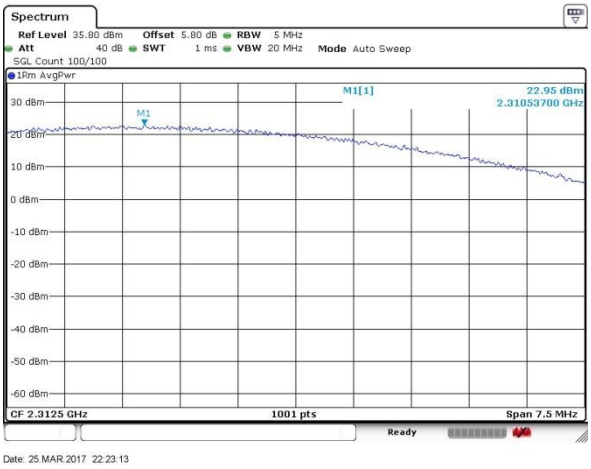
Mode	LTE Band 30 : EIRP Power Density (dBm/5MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH					21.25	19.97						
Middle CH					21.21	19.32	21.08	19.62				
Highest CH					20.85	19.95						
Antenna Gain	-3dBi											
Limit	250mW / 5MHz = 24dBm / 5MHz											
Result	Pass											

LTE Band 30 / 5MHz

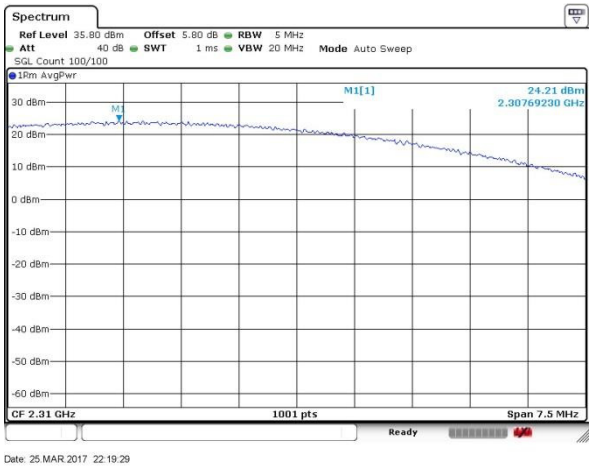
Lowest Channel / 5MHz / 1RB0 / QPSK



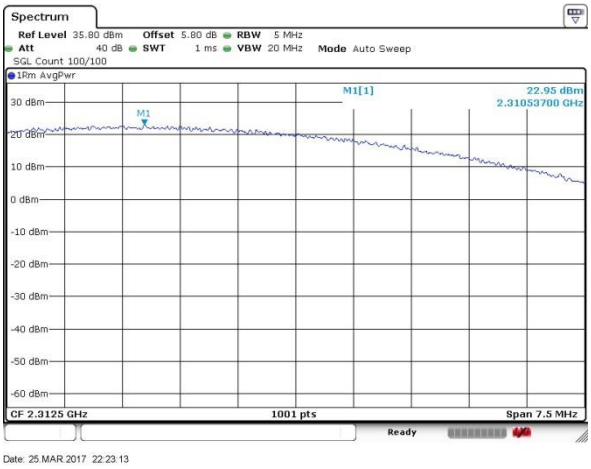
Lowest Channel / 5MHz / 1RB0 / 16QAM



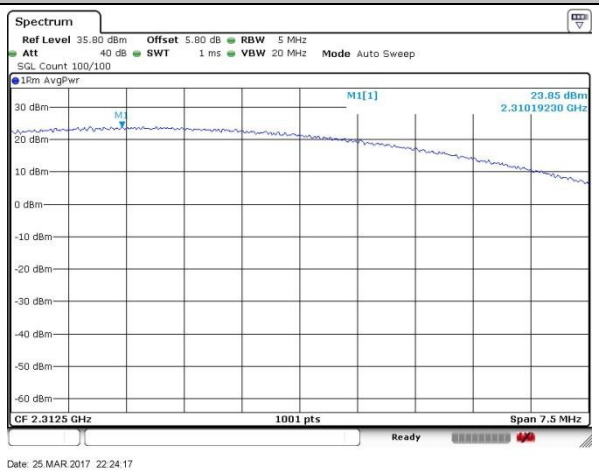
Middle Channel / 5MHz / 1RB0 / QPSK



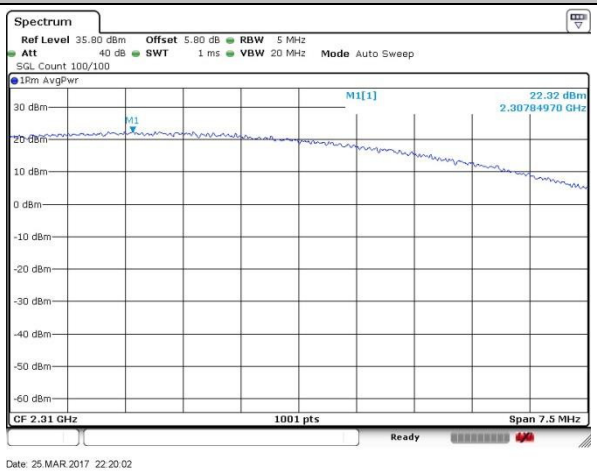
Middle Channel / 5MHz / 1RBmax / 16QAM

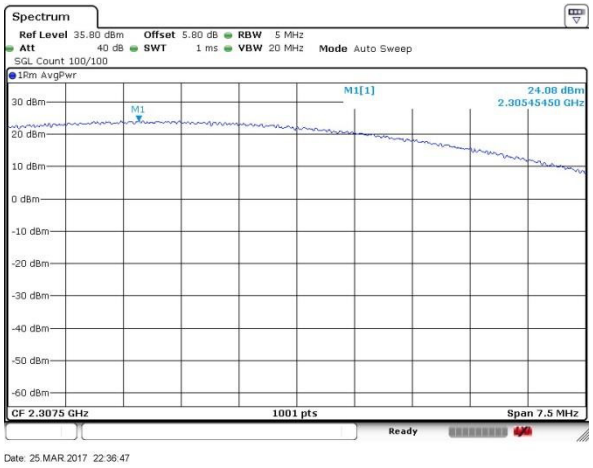
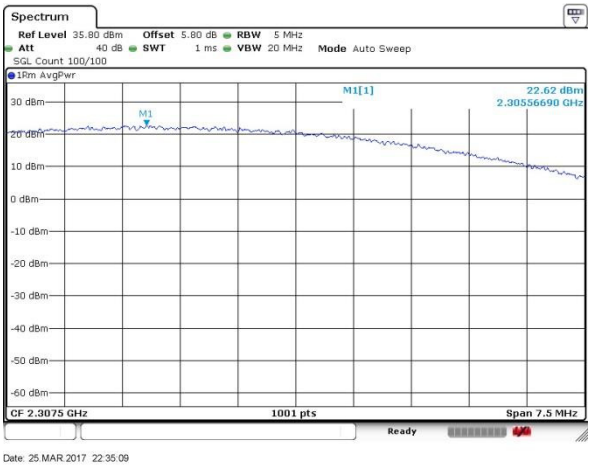


Highest Channel / 5MHz / Full RB / QPSK



Highest Channel / 5MHz / Full RB / 16QAM



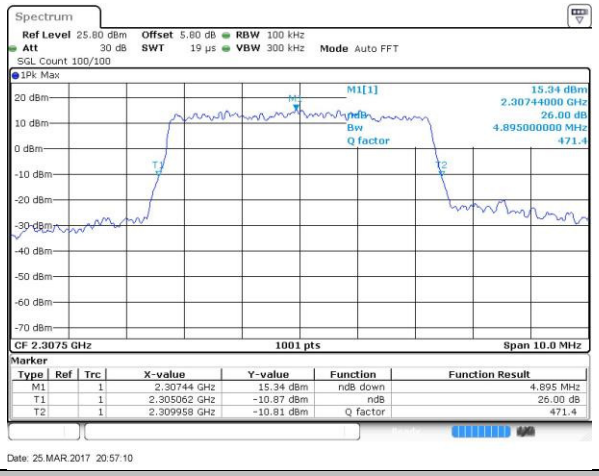
LTE Band 30 / 10MHz	
Lowest Channel / 10MHz / 1RB0 / QPSK	**Lowest Channel / 10MHz / 1RB0 / 16QAM**
	

26dB Bandwidth

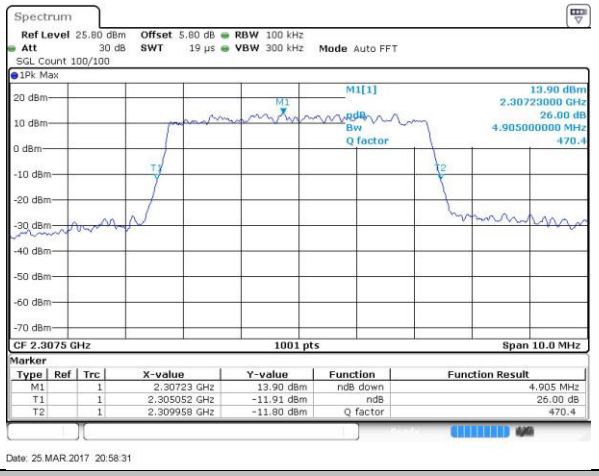
Mode	LTE Band 30 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH					4.895	4.905	-	-				
Middle CH					4.885	4.915	9.87	9.89				
Highest CH					4.915	4.945	-	-				

LTE Band 30

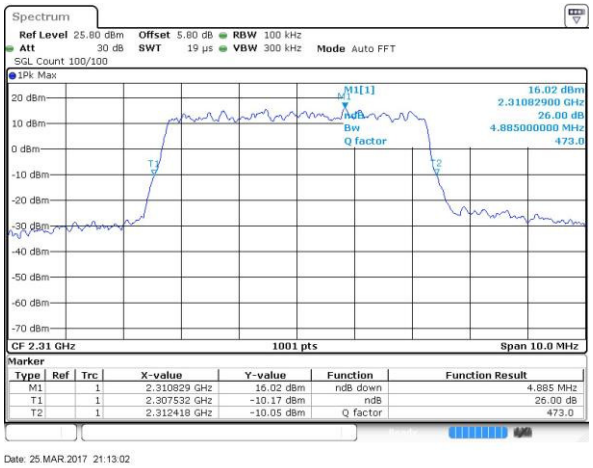
Lowest Channel / 5MHz / QPSK



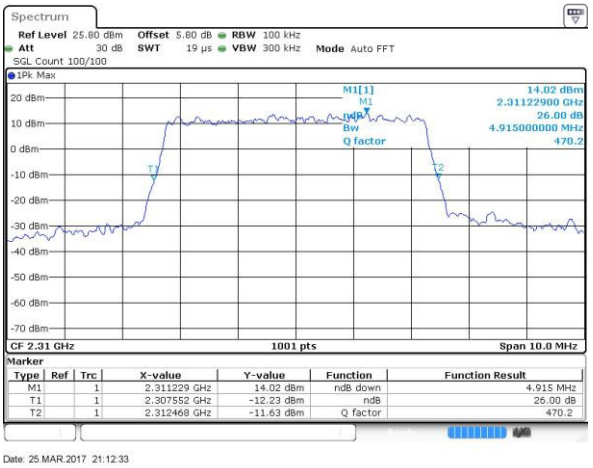
Lowest Channel / 5MHz / 16QAM



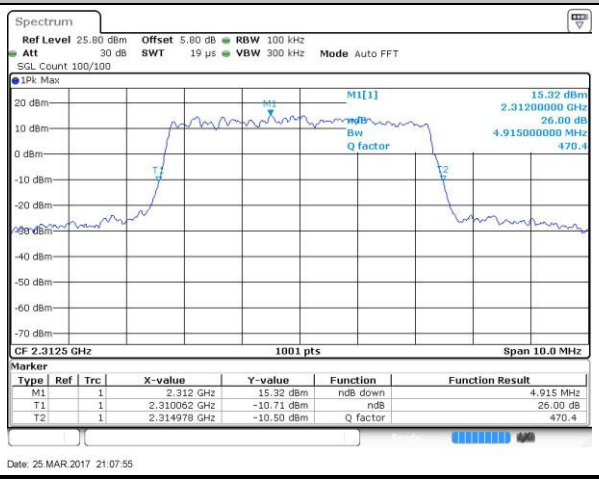
Middle Channel / 5MHz / QPSK



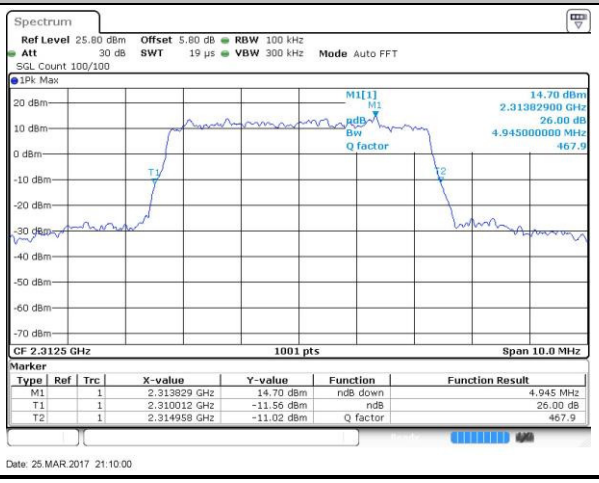
Middle Channel / 5MHz / 16QAM

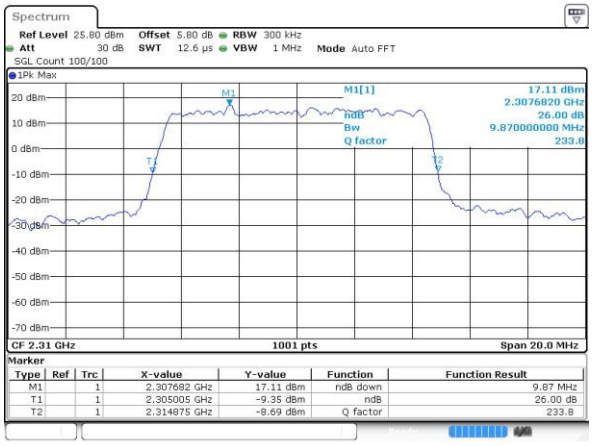
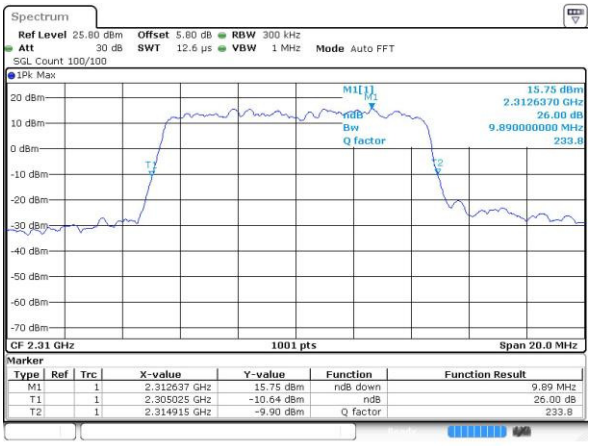


Highest Channel / 5MHz / QPSK



Highest Channel / 5MHz / 16QAM



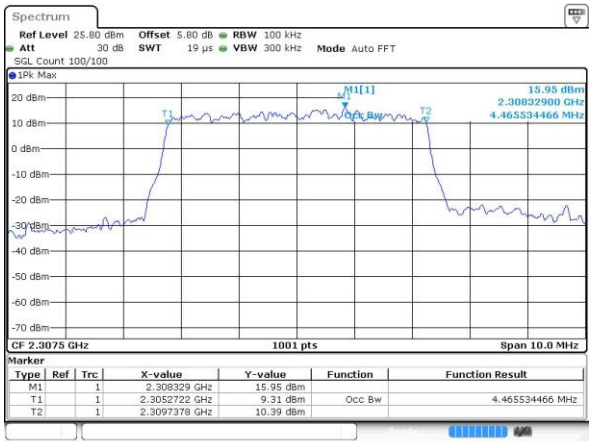
LTE Band 30	
Middle Channel / 10MHz / QPSK	**Middle Channel / 10MHz / 16QAM**
	

Occupied Bandwidth

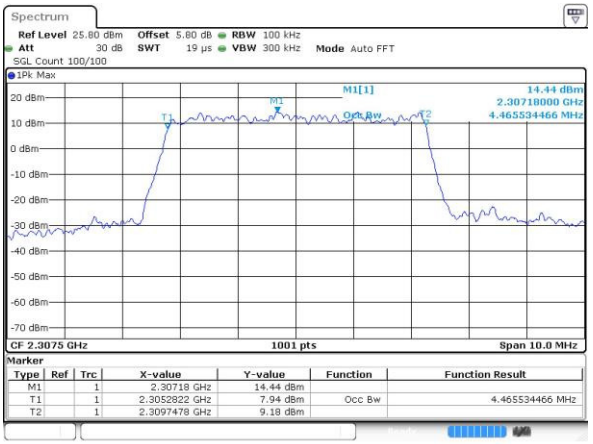
Mode	LTE Band 30 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH					4.47	4.47						
Middle CH					4.49	4.48	9.01	9.01				
Highest CH					4.49	4.48						

LTE Band 30

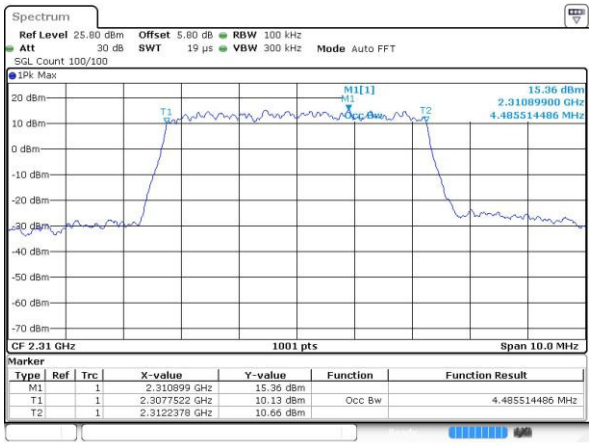
Lowest Channel / 5MHz / QPSK



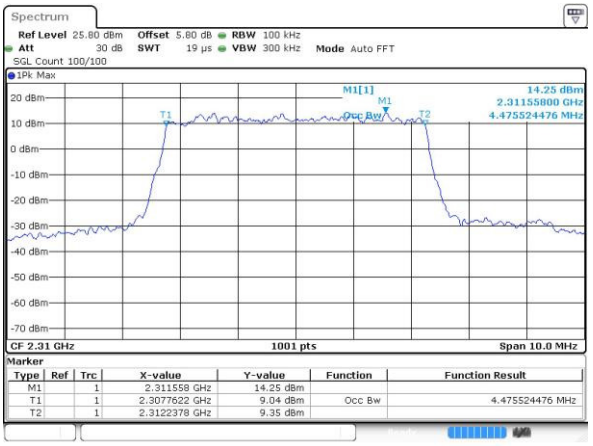
Lowest Channel / 5MHz / 16QAM



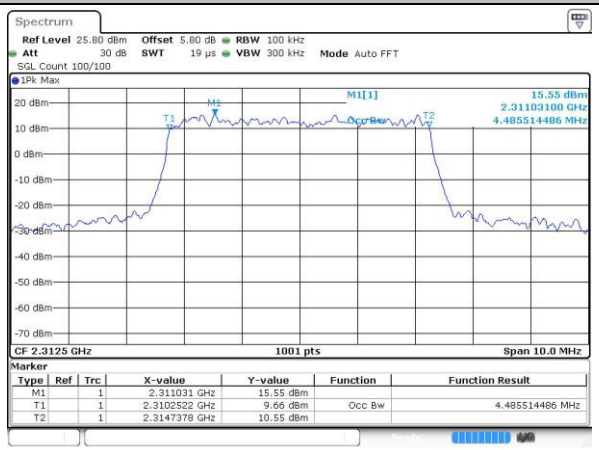
Middle Channel / 5MHz / QPSK



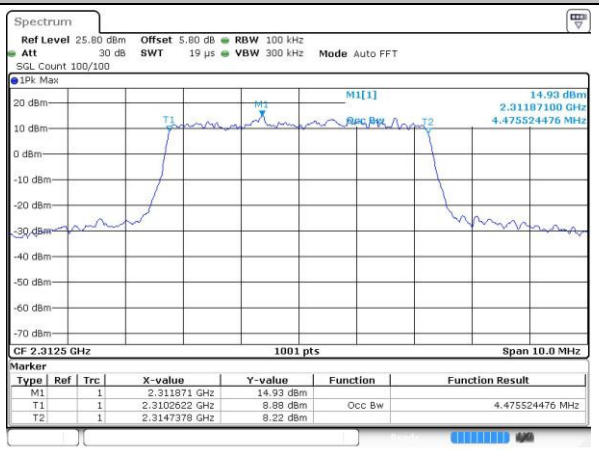
Middle Channel / 5MHz / 16QAM

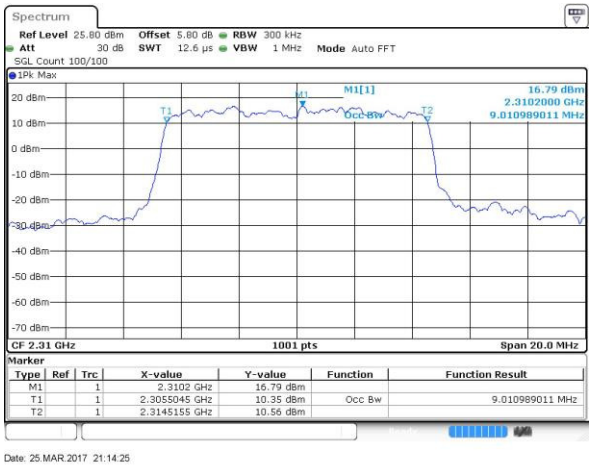
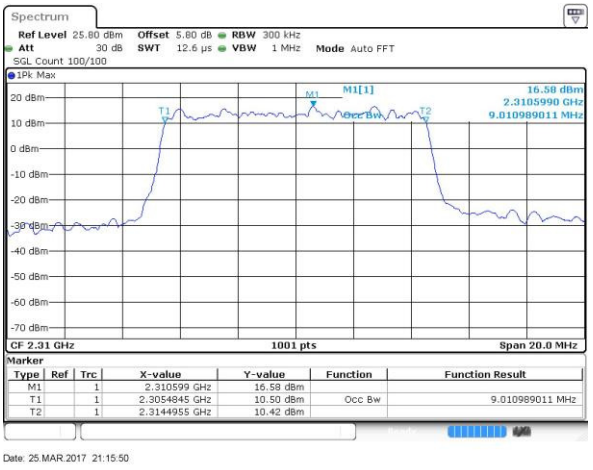


Highest Channel / 5MHz / QPSK



Highest Channel / 5MHz / 16QAM

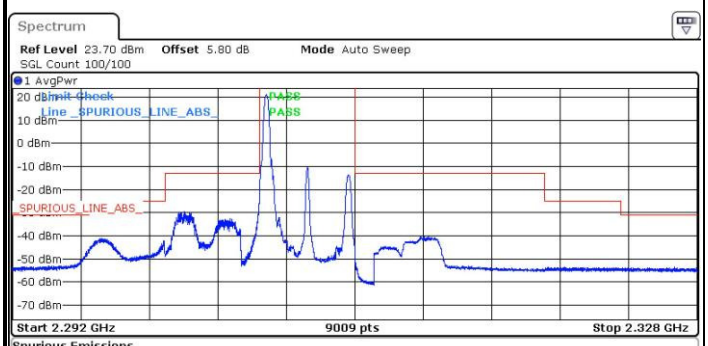


LTE Band 30	
Middle Channel / 10MHz / QPSK	**Middle Channel / 10MHz / 16QAM**
	

Conducted Band Edge

LTE Band 30 / 5MHz / QPSK

Lowest Band Edge / 1 RB

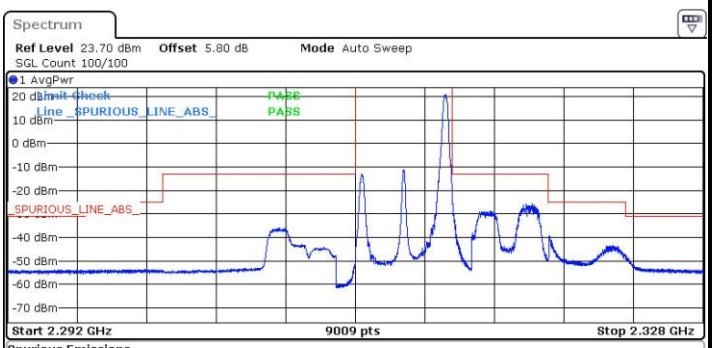


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29595 GHz	-46.15 dBm	-15.15 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29659 GHz	-41.02 dBm	-16.02 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30102 GHz	-29.46 dBm	-16.46 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-21.02 dBm	-8.02 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30535 GHz	21.18 dBm	-8.82 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31000 GHz	-49.97 dBm	-36.97 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31387 GHz	-40.21 dBm	-27.21 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32105 GHz	-53.62 dBm	-28.62 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32683 GHz	-53.57 dBm	-22.57 dB

Date: 25.MAR.2017 21:02:12

Highest Band Edge / 1 RB

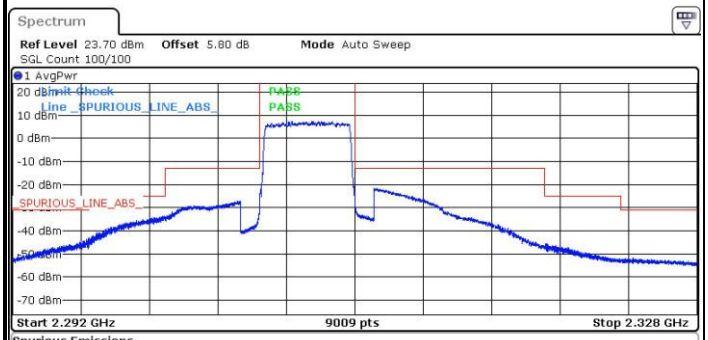


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29556 GHz	-53.72 dBm	-22.72 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29919 GHz	-53.47 dBm	-28.47 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30606 GHz	-35.88 dBm	-22.88 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.31000 GHz	-50.49 dBm	-37.49 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31465 GHz	20.83 dBm	-9.17 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31500 GHz	-20.77 dBm	-7.77 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31883 GHz	-25.64 dBm	-12.64 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32002 GHz	-39.10 dBm	-14.10 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32402 GHz	-47.84 dBm	-16.84 dB

Date: 25.MAR.2017 21:13:59

Lowest Band Edge / Full RB

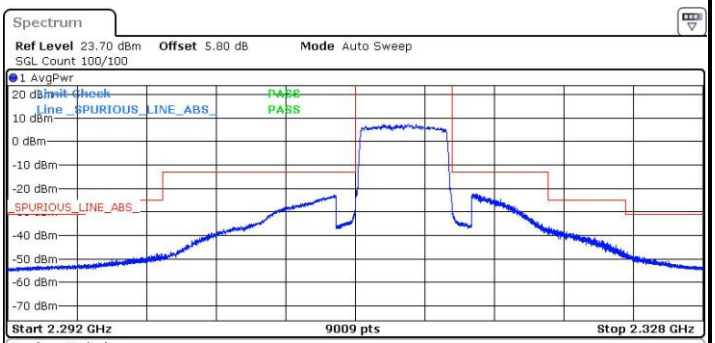


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29597 GHz	-43.50 dBm	-12.50 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29999 GHz	-33.69 dBm	-8.69 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30398 GHz	-27.15 dBm	-14.15 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-30.39 dBm	-17.39 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30650 GHz	7.32 dBm	-22.68 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31000 GHz	-28.57 dBm	-15.57 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31100 GHz	-21.61 dBm	-8.61 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32006 GHz	-45.61 dBm	-20.61 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32464 GHz	-51.71 dBm	-20.71 dB

Date: 25.MAR.2017 20:57:59

Highest Band Edge / Full RB



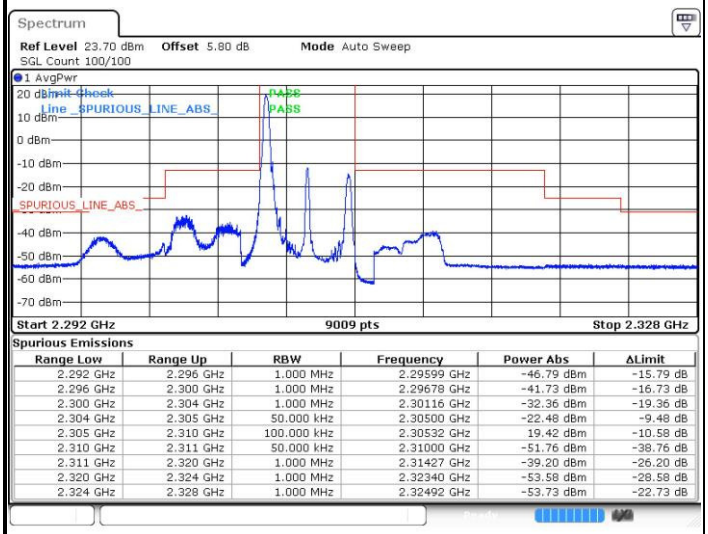
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29598 GHz	-52.50 dBm	-21.50 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29998 GHz	-47.83 dBm	-22.83 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30889 GHz	-22.92 dBm	-9.92 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.31000 GHz	-28.65 dBm	-15.65 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31315 GHz	7.38 dBm	-22.62 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31500 GHz	-29.25 dBm	-16.25 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31629 GHz	-22.18 dBm	-9.18 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32003 GHz	-36.35 dBm	-11.35 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32410 GHz	-46.96 dBm	-15.96 dB

Date: 25.MAR.2017 21:09:08

LTE Band 30 / 5MHz / 16QAM

Lowest Band Edge / 1RB

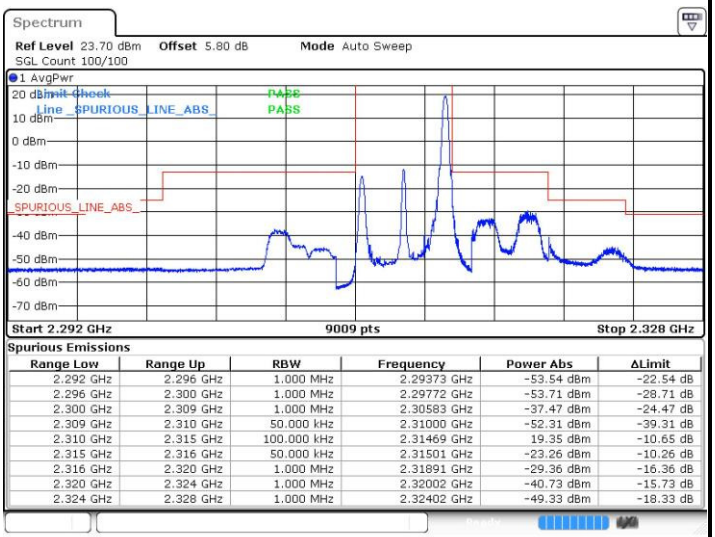


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29599 GHz	-46.79 dBm	-15.79 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29678 GHz	-41.73 dBm	-16.73 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30116 GHz	-32.36 dBm	-19.36 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-22.48 dBm	-9.48 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30532 GHz	19.42 dBm	-10.58 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31000 GHz	-51.76 dBm	-38.76 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31427 GHz	-39.20 dBm	-26.20 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32340 GHz	-53.58 dBm	-28.58 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32492 GHz	-53.73 dBm	-22.73 dB

Date: 25.MAR.2017 21:00:26

Highest Band Edge / 1 RB

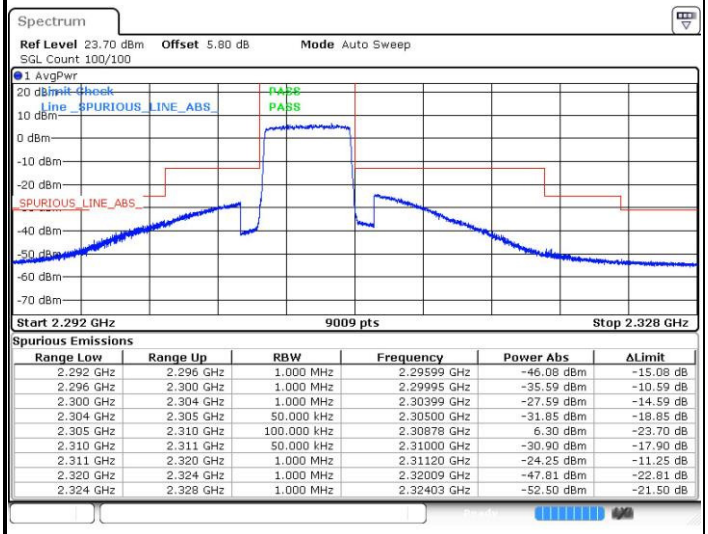


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29373 GHz	-53.54 dBm	-22.54 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29772 GHz	-53.71 dBm	-28.71 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30583 GHz	-37.47 dBm	-24.47 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.31000 GHz	-52.31 dBm	-39.31 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31469 GHz	19.35 dBm	-10.65 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31501 GHz	-23.26 dBm	-10.26 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31891 GHz	-29.36 dBm	-16.36 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32002 GHz	-40.73 dBm	-15.73 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32402 GHz	-49.33 dBm	-18.33 dB

Date: 25.MAR.2017 21:11:27

Lowest Band Edge / Full RB

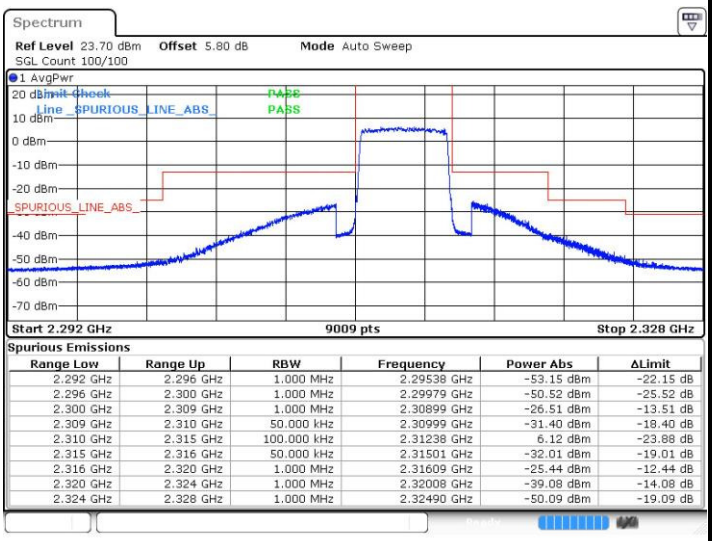


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29599 GHz	-46.08 dBm	-15.08 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29995 GHz	-35.59 dBm	-10.59 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30399 GHz	-27.59 dBm	-14.59 dB
2.304 GHz	2.305 GHz	50.000 kHz	2.30500 GHz	-31.85 dBm	-18.85 dB
2.305 GHz	2.310 GHz	100.000 kHz	2.30878 GHz	6.30 dBm	-23.70 dB
2.310 GHz	2.311 GHz	50.000 kHz	2.31000 GHz	-30.90 dBm	-17.90 dB
2.311 GHz	2.320 GHz	1.000 MHz	2.31120 GHz	-24.25 dBm	-11.25 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32009 GHz	-47.81 dBm	-22.81 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32403 GHz	-52.50 dBm	-21.50 dB

Date: 25.MAR.2017 20:59:15

Highest Band Edge / Full RB



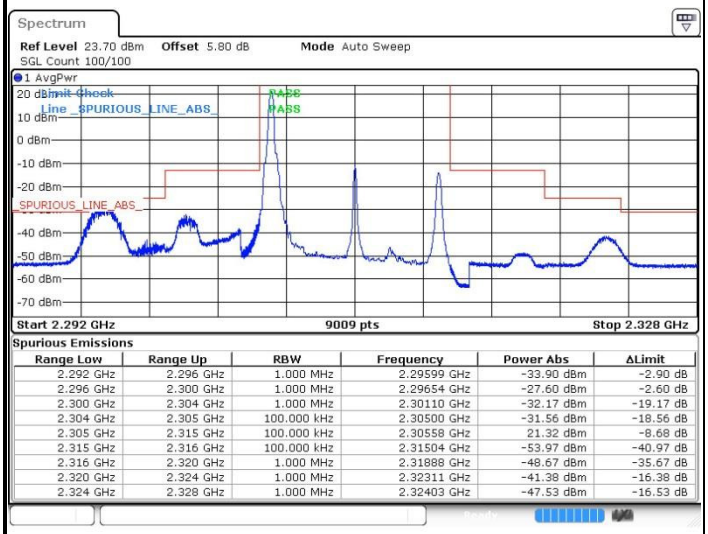
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29538 GHz	-53.15 dBm	-22.15 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29979 GHz	-50.52 dBm	-25.52 dB
2.300 GHz	2.309 GHz	1.000 MHz	2.30899 GHz	-26.51 dBm	-13.51 dB
2.309 GHz	2.310 GHz	50.000 kHz	2.30999 GHz	-31.40 dBm	-18.40 dB
2.310 GHz	2.315 GHz	100.000 kHz	2.31238 GHz	6.12 dBm	-23.88 dB
2.315 GHz	2.316 GHz	50.000 kHz	2.31501 GHz	-32.01 dBm	-19.01 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31609 GHz	-25.44 dBm	-12.44 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32008 GHz	-39.08 dBm	-14.08 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32490 GHz	-50.09 dBm	-19.09 dB

Date: 25.MAR.2017 21:10:37

LTE Band 30 / 10MHz / QPSK

Band Edge / 1 RB

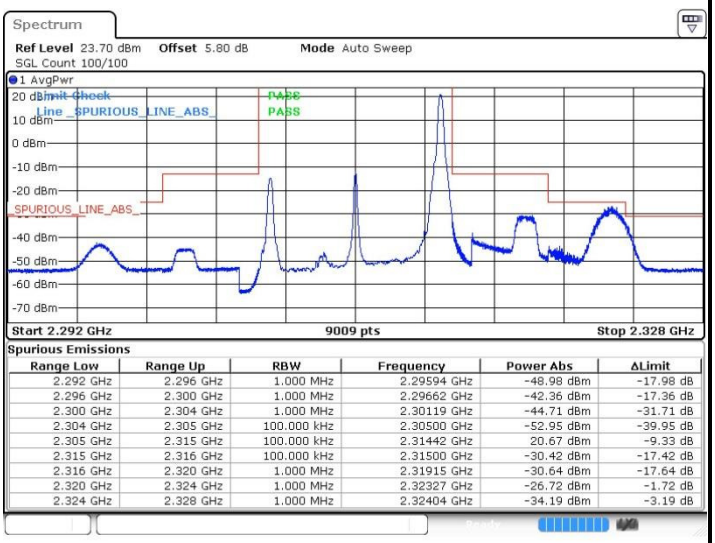


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29599 GHz	-33.90 dBm	-2.90 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29654 GHz	-27.60 dBm	-2.60 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30110 GHz	-32.17 dBm	-19.17 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-31.56 dBm	-18.56 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30558 GHz	21.32 dBm	-8.68 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31504 GHz	-53.97 dBm	-40.97 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31888 GHz	-48.67 dBm	-35.67 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32311 GHz	-41.38 dBm	-16.38 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32403 GHz	-47.53 dBm	-16.53 dB

Date: 25.MAR.2017 21:22:14

Band Edge / 1 RBmax

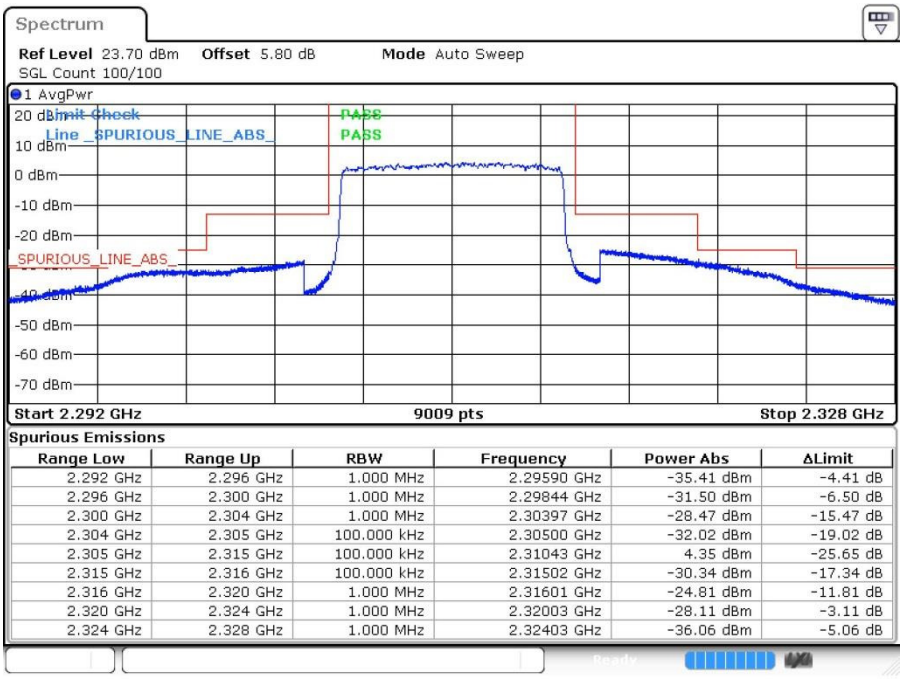


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29594 GHz	-48.98 dBm	-17.98 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29662 GHz	-42.36 dBm	-17.36 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30119 GHz	-44.71 dBm	-31.71 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-52.95 dBm	-39.95 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31442 GHz	20.67 dBm	-9.33 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31500 GHz	-30.42 dBm	-17.42 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31915 GHz	-30.64 dBm	-17.64 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32327 GHz	-26.72 dBm	-1.72 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32404 GHz	-34.19 dBm	-3.19 dB

Date: 25.MAR.2017 21:43:54

Band Edge / Full RB



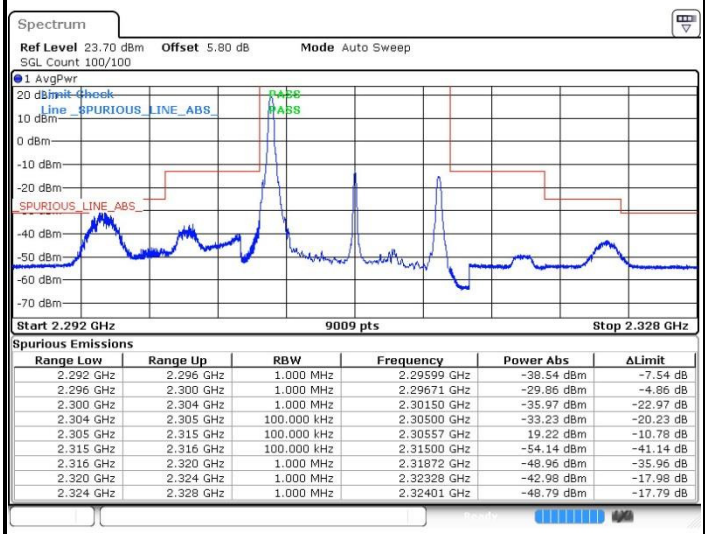
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29590 GHz	-35.41 dBm	-4.41 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29844 GHz	-31.50 dBm	-6.50 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30397 GHz	-28.47 dBm	-15.47 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-32.02 dBm	-19.02 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31043 GHz	4.35 dBm	-25.65 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31502 GHz	-30.34 dBm	-17.34 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31601 GHz	-24.81 dBm	-11.81 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32003 GHz	-28.11 dBm	-3.11 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32403 GHz	-36.06 dBm	-5.06 dB

Date: 25.MAR.2017 21:15:00

LTE Band 30 / 10MHz / 16QAM

Band Edge / 1 RB

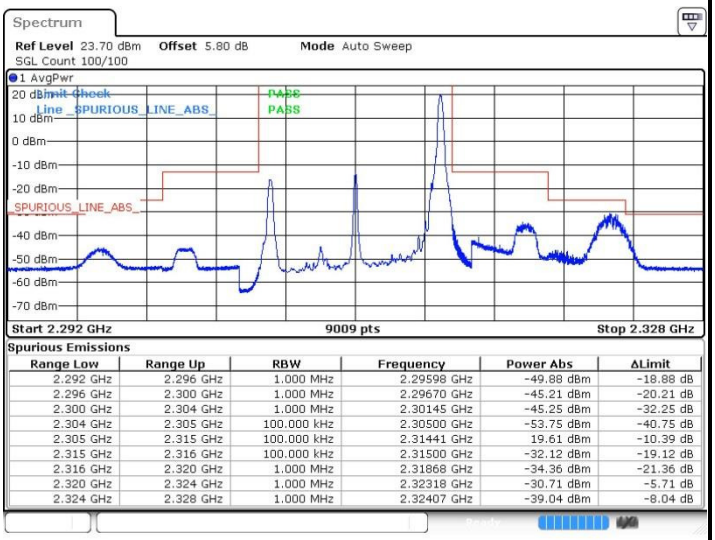


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29599 GHz	-38.54 dBm	-7.54 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29671 GHz	-29.86 dBm	-4.86 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30150 GHz	-35.97 dBm	-22.97 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-33.23 dBm	-20.23 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30557 GHz	19.22 dBm	-10.78 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31500 GHz	-54.14 dBm	-41.14 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31872 GHz	-48.96 dBm	-35.96 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32328 GHz	-42.98 dBm	-17.98 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32401 GHz	-48.79 dBm	-17.79 dB

Date: 25.MAR.2017 21:19:49

Band Edge / 1 RBmax

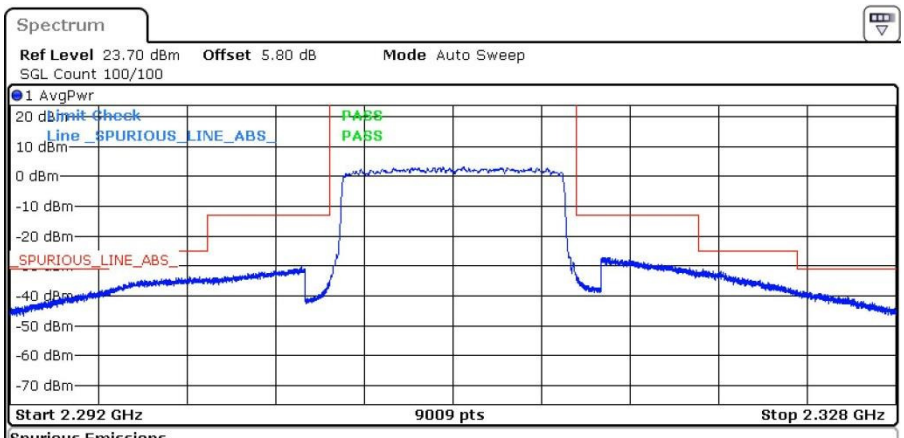


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29598 GHz	-49.88 dBm	-18.88 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29670 GHz	-45.21 dBm	-20.21 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30145 GHz	-45.25 dBm	-32.25 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-53.75 dBm	-40.75 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31441 GHz	19.61 dBm	-10.39 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31500 GHz	-32.12 dBm	-19.12 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31868 GHz	-34.36 dBm	-21.36 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32318 GHz	-30.71 dBm	-5.71 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32407 GHz	-39.04 dBm	-8.04 dB

Date: 25.MAR.2017 21:44:29

Band Edge / Full RB



Spurious Emissions

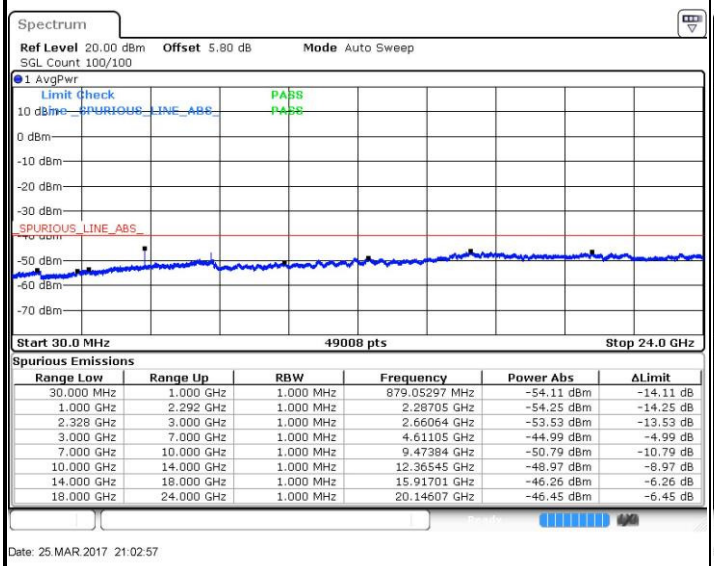
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.292 GHz	2.296 GHz	1.000 MHz	2.29591 GHz	-37.99 dBm	-6.99 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29931 GHz	-33.53 dBm	-8.53 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30386 GHz	-30.31 dBm	-17.31 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-34.63 dBm	-21.63 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31041 GHz	3.27 dBm	-26.73 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31502 GHz	-33.15 dBm	-20.15 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31606 GHz	-27.16 dBm	-14.16 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32017 GHz	-30.89 dBm	-5.89 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32423 GHz	-38.41 dBm	-7.41 dB

Date: 25.MAR.2017 21:16:27

Conducted Spurious Emission

LTE Band 30 / 5MHz

Lowest Channel / QPSK

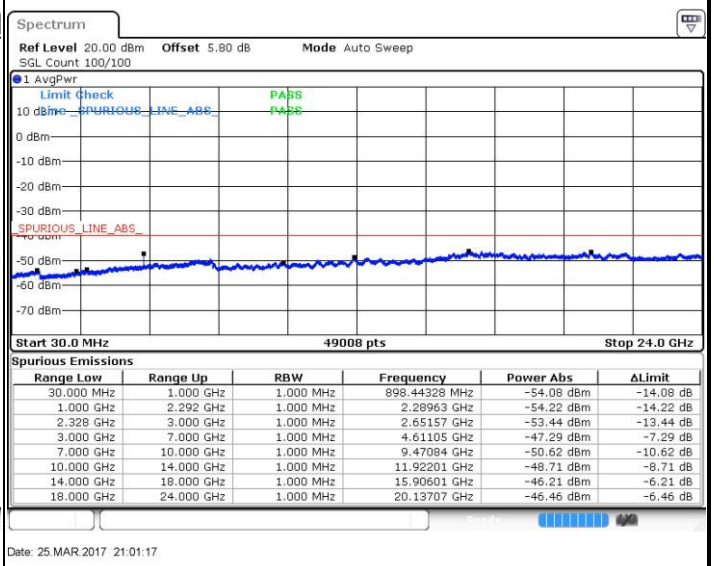


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	879.05297 MHz	-54.11 dBm	-14.11 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.28705 GHz	-54.25 dBm	-14.25 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.66064 GHz	-53.53 dBm	-13.53 dB
3.000 GHz	7.000 GHz	1.000 MHz	4.61105 GHz	-44.99 dBm	-4.99 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.47384 GHz	-50.79 dBm	-10.79 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.36545 GHz	-48.97 dBm	-8.97 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.91701 GHz	-46.26 dBm	-6.26 dB
18.000 GHz	24.000 GHz	1.000 MHz	20.14607 GHz	-46.45 dBm	-6.45 dB

Date: 25.MAR.2017 21:02:57

Lowest Channel / 16QAM

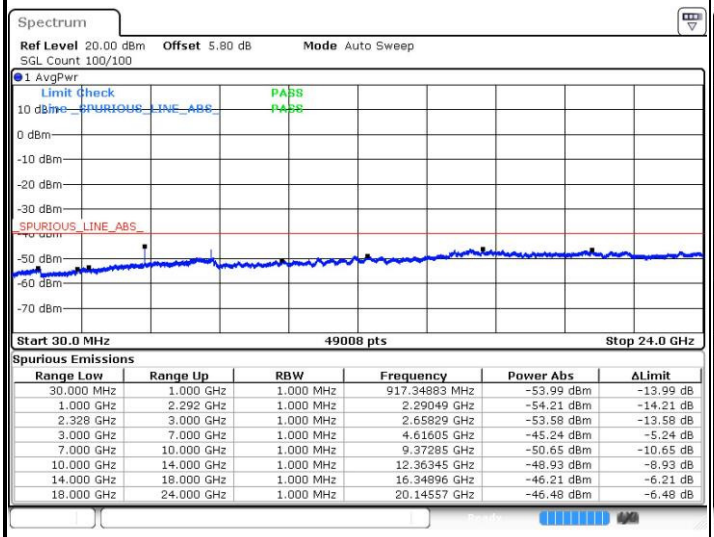


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	898.44328 MHz	-54.08 dBm	-14.08 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.28963 GHz	-54.22 dBm	-14.22 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.65157 GHz	-53.44 dBm	-13.44 dB
3.000 GHz	7.000 GHz	1.000 MHz	4.61105 GHz	-47.29 dBm	-7.29 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.47084 GHz	-50.62 dBm	-10.62 dB
10.000 GHz	14.000 GHz	1.000 MHz	11.92201 GHz	-48.71 dBm	-8.71 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.90601 GHz	-46.21 dBm	-6.21 dB
18.000 GHz	24.000 GHz	1.000 MHz	20.13707 GHz	-46.46 dBm	-6.46 dB

Date: 25.MAR.2017 21:01:17

Middle Channel / QPSK

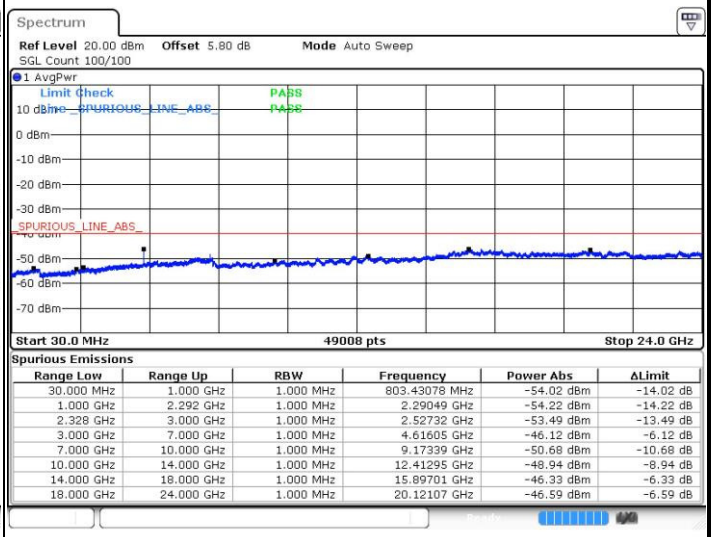


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	917.34883 MHz	-53.99 dBm	-13.99 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.29049 GHz	-54.21 dBm	-14.21 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.65829 GHz	-53.58 dBm	-13.58 dB
3.000 GHz	7.000 GHz	1.000 MHz	4.61605 GHz	-45.24 dBm	-5.24 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.37285 GHz	-50.65 dBm	-10.65 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.36345 GHz	-48.93 dBm	-8.93 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.34896 GHz	-46.21 dBm	-6.21 dB
18.000 GHz	24.000 GHz	1.000 MHz	20.14557 GHz	-46.48 dBm	-6.48 dB

Date: 25.MAR.2017 21:03:53

Middle Channel / 16QAM



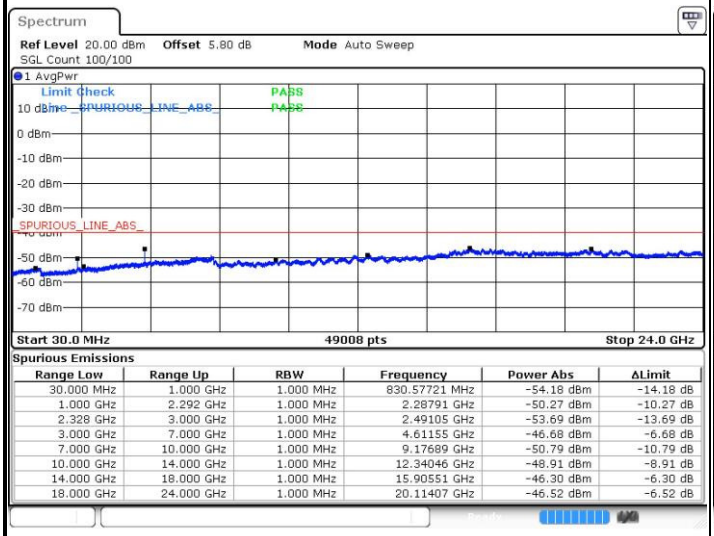
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	803.43078 MHz	-54.02 dBm	-14.02 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.29049 GHz	-54.22 dBm	-14.22 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.52732 GHz	-53.49 dBm	-13.49 dB
3.000 GHz	7.000 GHz	1.000 MHz	4.61605 GHz	-46.12 dBm	-6.12 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.17339 GHz	-50.68 dBm	-10.68 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.41295 GHz	-48.94 dBm	-8.94 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.89701 GHz	-46.33 dBm	-6.33 dB
18.000 GHz	24.000 GHz	1.000 MHz	20.12107 GHz	-46.59 dBm	-6.59 dB

Date: 25.MAR.2017 21:04:46

LTE Band 30 / 5MHz

Highest Channel / QPSK

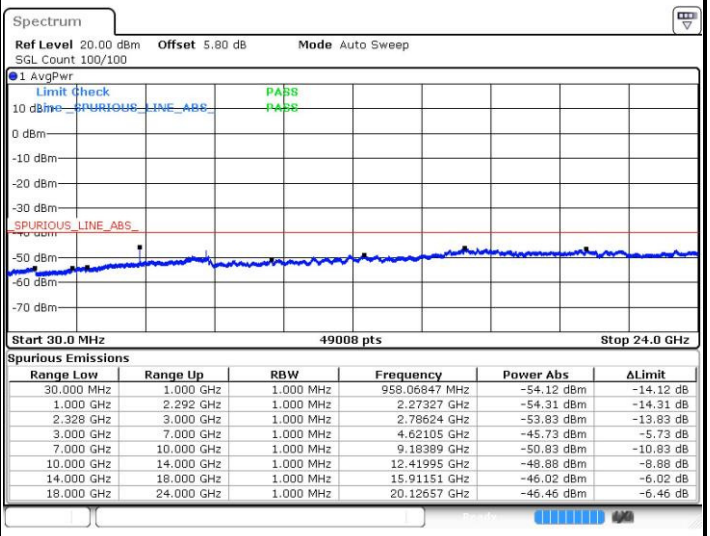


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	830.57721 MHz	-54.18 dBm	-14.18 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.28791 GHz	-50.27 dBm	-10.27 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.49105 GHz	-53.69 dBm	-13.69 dB
3.000 GHz	7.000 GHz	1.000 MHz	4.61155 GHz	-46.68 dBm	-6.68 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.17689 GHz	-50.79 dBm	-10.79 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.34046 GHz	-48.91 dBm	-8.91 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.90551 GHz	-46.30 dBm	-6.30 dB
18.000 GHz	24.000 GHz	1.000 MHz	20.11407 GHz	-46.52 dBm	-6.52 dB

Date: 25.MAR.2017 21:17:49

Highest Channel / 16QAM



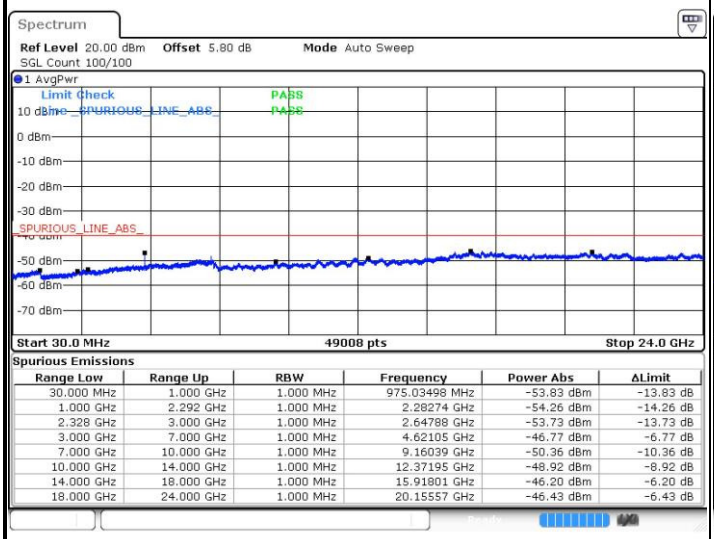
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	958.06847 MHz	-54.12 dBm	-14.12 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.27327 GHz	-54.31 dBm	-14.31 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.78624 GHz	-53.83 dBm	-13.83 dB
3.000 GHz	7.000 GHz	1.000 MHz	4.62105 GHz	-45.73 dBm	-5.73 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.18389 GHz	-50.83 dBm	-10.83 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.41995 GHz	-48.88 dBm	-8.88 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.91151 GHz	-46.02 dBm	-6.02 dB
18.000 GHz	24.000 GHz	1.000 MHz	20.12657 GHz	-46.46 dBm	-6.46 dB

Date: 25.MAR.2017 21:07:02

LTE Band 30 / 10MHz

Middle Channel / QPSK

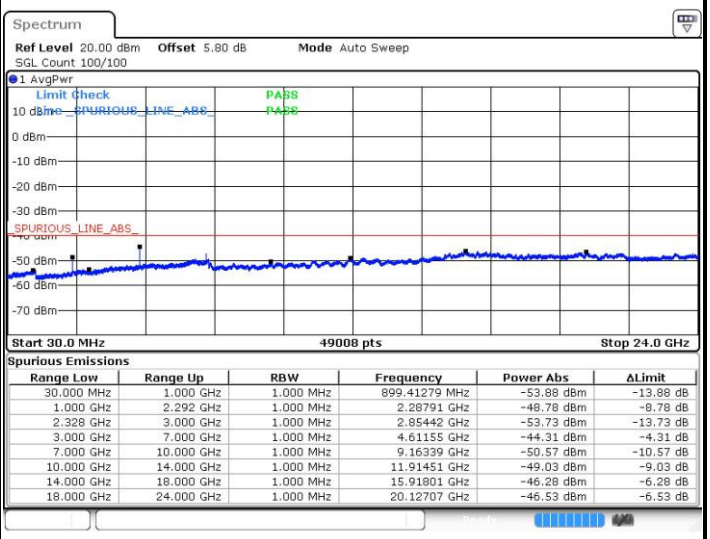


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	975.03498 MHz	-53.83 dBm	-13.83 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.28274 GHz	-54.26 dBm	-14.26 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.64788 GHz	-53.73 dBm	-13.73 dB
3.000 GHz	7.000 GHz	1.000 MHz	4.62105 GHz	-46.77 dBm	-6.77 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.16039 GHz	-50.36 dBm	-10.36 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.37195 GHz	-48.92 dBm	-8.92 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.91801 GHz	-46.20 dBm	-6.20 dB
18.000 GHz	24.000 GHz	1.000 MHz	20.15557 GHz	-46.43 dBm	-6.43 dB

Date: 25.MAR.2017 21:06:05

Middle Channel / 16QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	899.41279 MHz	-53.88 dBm	-13.88 dB
1.000 GHz	2.292 GHz	1.000 MHz	2.28791 GHz	-48.78 dBm	-8.78 dB
2.328 GHz	3.000 GHz	1.000 MHz	2.85442 GHz	-53.73 dBm	-13.73 dB
3.000 GHz	7.000 GHz	1.000 MHz	4.61155 GHz	-44.31 dBm	-4.31 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.16339 GHz	-50.57 dBm	-10.57 dB
10.000 GHz	14.000 GHz	1.000 MHz	11.91451 GHz	-49.03 dBm	-9.03 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.91801 GHz	-46.28 dBm	-6.28 dB
18.000 GHz	24.000 GHz	1.000 MHz	20.12707 GHz	-46.53 dBm	-6.53 dB

Date: 25.MAR.2017 21:21:21

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	0.0008	PASS
40	Normal Voltage	0.0018	
30	Normal Voltage	0.0001	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0018	
0	Normal Voltage	0.0014	
-10	Normal Voltage	0.0017	
-20	Normal Voltage	0.0001	
-30	Normal Voltage	0.0004	
20	Maximum Voltage	0.0018	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0008	

Note:

1. Normal Voltage =3.85 V.；Battery End Point (BEP) =3.6 V.；Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

LTE Band 30 / 5MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	4612	-65.24	-40	-25.24	-58.01	-71.77	2.07	8.60	H
	6916	-62.75	-40	-22.75	-58.11	-70.82	2.60	10.67	H
	9220	-59.11	-40	-19.11	-64.53	-68.07	3.27	12.23	H
	4612	-65.38	-40	-25.38	-58.32	-71.91	2.07	8.60	V
	6916	-60.72	-40	-20.72	-57.42	-68.79	2.60	10.67	V
	9220	-61.34	-40	-21.34	-65.46	-70.30	3.27	12.23	V

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

LTE Band 30 / 10MHz / QPSK / RB Size 1 Offset 0									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	4612	-64.98	-40	-24.98	-57.75	-71.51	2.07	8.60	H
	6916	-62.62	-40	-22.62	-57.98	-70.69	2.60	10.67	H
	9220	-58.80	-40	-18.80	-64.22	-67.76	3.27	12.23	H
	4612	-63.28	-40	-23.28	-56.22	-69.81	2.07	8.60	V
	6916	-59.41	-40	-19.41	-56.11	-67.48	2.60	10.67	V
	9220	-59.87	-40	-19.87	-63.99	-68.83	3.27	12.23	V

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