FCC RF Test Report

APPLICANT	:	HMD Global Oy
EQUIPMENT	:	Mobile Phone
BRAND NAME	:	NOKIA
MODEL NAME	:	TA-1283
FCC ID	:	2AJOTTA-1283
STANDARD	:	47 CFR Part 2, 22(H), 27(M)
CLASSIFICATION	:	PCS Licensed Transmitter Held to Ear (PCE)

The product was received on Jul. 03, 2020 and completely tested on Aug. 26, 2020. We, Sporton International (Kunshan) Inc., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.26-2015 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International (Kunshan) Inc., the test report shall not be reproduced except in full.

Jason Jia

Reviewed by: Jason Jia / Supervisor

James Huang

Approved by: James Huang / Manager

ACCREDITED
Cert #5145.02

Sporton International (Kunshan) Inc.
No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China

TABLE OF CONTENTS

REVISION HISTORY **3**

SUMMARY OF TEST RESULT **4**

1 GENERAL DESCRIPTION **5**

1.1 Applicant 5
1.2 Manufacturer 5
1.3 Product Feature of Equipment Under Test 5
1.4 Product Specification of Equipment Under Test 6
1.5 Modification of EUT 6
1.6 Re-use of Measured Data 7
1.7 Maximum EIRP Power, Frequency Tolerance, and Emission Designator 8
1.8 Testing Location 8
1.9 Test Software 9
1.10 Applicable Standards 9

2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST **10**

2.1 Test Mode 10
2.2 Connection Diagram of Test System 11
2.3 Support Unit used in test configuration and system 11
2.4 Measurement Results Explanation Example 11
2.5 Frequency List of Low/Middle/High Channels 12

3 CONDUCTED TEST ITEMS **13**

3.1 Measuring Instruments 13
3.2 Test Setup 13
3.3 Test Result of Conducted Test 13
3.4 Conducted Output Power and EIRP 14
3.5 Peak-to-Average Ratio 15
3.6 Occupied Bandwidth 16
3.7 Conducted Band Edge 17
3.8 Conducted Spurious Emission 18
3.9 Frequency Stability 19

4 RADIATED TEST ITEMS **20**

4.1 Measuring Instruments 20
4.2 Test Setup 20
4.3 Test Result of Radiated Test 20
4.4 Radiated Spurious Emission 21

5 LIST OF MEASURING EQUIPMENT **22**

6 UNCERTAINTY OF EVALUATION **23**

APPENDIX A. TEST RESULTS OF CONDUCTED TEST

APPENDIX B. TEST RESULTS OF RADIATED TEST

APPENDIX C. TEST SETUP PHOTOGRAPHS

APPENDIX D. REFERENCE REPORT

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG070302B	Rev. 01	Initial issue of report	Sep. 07, 2020

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
	§22.913(a)(5)	Effective Radiated Power (Band 5)	ERP < 7 Watt	PASS	-
	§24.232(c) §27.50(h)(2)	Equivalent Isotropic Radiated Power (Band 7) (Band 38) (Band 41)	EIRP < 2Watt	PASS	-
3.5	N/A	Peak-to-Average Ratio	<13 dB	PASS	-
3.6	§2.1049	Occupied Bandwidth	Reporting Only	PASS	-
3.7	§2.1051 §22.917(a)	Conducted Band Edge Measurement (Band 5)	< 43+10log10(P[Watts])	PASS	-
	§27.53(m)(4)	Conducted Band Edge Measurement (Band 7) (Band 38) (Band 41)	§27.53(m)(4)	PASS	-
3.8	§2.1051 §22.917(a)	Conducted Spurious Emission (Band 5)	< 43+10log10(P[Watts])	PASS	-
	§2.1051 §27.53(m)(4)	Conducted Spurious Emission (Band 7) (Band 38) (Band 41)	< 55+10$\log_{10}$(P[Watts])	PASS	-
3.9	§2.1055 §22.355	Frequency Stability Temperature & Voltage	< 2.5 ppm for Part 22	PASS	-
	§2.1055 §27.54		Within Authorized Band	PASS	-
4.4	§2.1053 §22.917(a)	Radiated Spurious Emission (Band 5)	< 43+10$\log_{10}$(P[Watts])	PASS	-
	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (Band 7) (Band 38) (Band 41)	< 55+10$\log_{10}$(P[Watts])	PASS	Under limit 31.48 dB at 7760.00 MHz

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1 General Description

1.1 Applicant

HMD Global Oy
Bertel Jungin aukio 9, 02600 Espoo, Finland

1.2 Manufacturer

HMD Global Oy
Bertel Jungin aukio 9, 02600 Espoo, Finland

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Phone
Brand Name	NOKIA
Model Name	TA-1283
FCC ID	2AJOTTA-1283
EUT supports Radios application	GSM/WCDMA/LTE/NFC WLAN 2.4GHz 802.11b/g/n HT20/HT40 Bluetooth BR/EDR/LE FM Receiver and GNSS
IMEI Code	Conducted: 353184110008047/353184110008054 Radiation: N/A
HW Version	MB_V3
SW Version	0-00WW-A01
EUT Stage	Identical Prototype

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	LTE Band 5 : 824.7 MHz ~ 848.3 MHz LTE Band 7 : 2502.5 MHz ~ 2567.5 MHz LTE Band 38 : 2572.5MHz ~ 2617.5MHz LTE Band 41 : 2537.5MHz ~ 2652.5 MHz
Rx Frequency	LTE Band 5 : 869.7 MHz ~ 893.3 MHz LTE Band 7 : 2622.5MHz ~ 2687.5 MHz LTE Band 38 : 2572.5MHz ~ 2617.5MHz LTE Band 41 : 2537.5MHz ~ 2652.5 MHz
Bandwidth	LTE Band 5 : 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 7 : 5MHz/ 10MHz / 15MHz / 20MHz LTE Band 38 : 5MHz / 10MHz / 15MHz / 20MHz LTE Band 41 : 5MHz / 10MHz / 15MHz / 20MHz
Maximum Output Power to Antenna	LTE Band 38 : 23.04 dBm LTE Band 41 : 23.41 dBm
Antenna Gain	LTE Band 38 : -5.0 dBi LTE Band 41 : -5.0 dBi
Type of Modulation	QPSK / 16QAM

Note: Only the additional B38/41 are full tested, all the other test results of B5/7 are data re-use from original report FG070302-01B.

1.5 Modification of EUT

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

1.6 Re-use of Measured Data

1.6.1 Introduction Section

This application re-uses data collected on a similar device. The subject device of this application (Model: TA-1283, FCC ID: 2AJOTTA-1283) is electrically identical to the reference device (Model: TA-1285, FCC ID: 2AJOTTA-1285) for the portions of the circuitry corresponding to the data being re-used, as treated by KDB Publication 484596 D01.

1.6.2 Difference Section

For details concerning the similarity with respect to component placement, mechanical/electrical design etc., please refer to the Product Equality Declaration.

The re-used RF data includes the following bands provided in Appendix D (Sporton RF Report No. FG070302-01B for the reference device Model: TA-1285, FCC ID: 2AJOTTA-1285).

1.6.3 Reference detail Section:

Equipment Class	Reference FCC ID	Report Number	Report Title/Section
PCE	2AJOTTA-1285	FG070302-01B	All sections applicable for LTE Band 5/7

1.6.4 Spot Check Verification Data Section

In order to confirm hardware similarity of the subject device with the reference device, spot check measurements were performed on the subject device for the following test items, the test result were consistent with FCC ID: 2AJOTTA-1285.

Assertions concerning the similarity of these devices are based on representations by the applicant. The applicant accepts full responsibility for the validity of the similarity claim, and for the determination that verification test data are sufficient to support it.

Test Item	Mode	2AJOTTA-1285 Worst Result	2AJOTTA-1283 Worst Result	Difference (dB)
Radiated Spurious Emission (dBm)	LTE Band 5	-57.51	-55.12	-2.39
	LTE Band 7	-43.05	-48.26	5.21

1.7 Maximum EIRP Power, Frequency Tolerance, and Emission Designator

LTE Band 38		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
5	2572.5 ~ 2617.5	4M48G7D	-	0.0612	4M50W7D	-	0.0489
10	2575.0 ~ 2615.0	9M03G7D	0.0039	0.0632	9M01W7D	-	0.0488
15	2577.5 ~ 2612.5	13M5G7D	-	0.0628	13M4W7D	-	0.0476
20	2580.0 ~ 2610.0	18M3G7D	-	0.0637	18M3W7D	-	0.0488
LTE Band 41		**QPSK**			**16QAM**		
BW (MHz)	**Frequency Range (MHz)**	**Emission Designator (99%OBW)**	**Frequency Tolerance (ppm)**	**Maximum EIRP(W)**	**Emission Designator (99%OBW)**	**Frequency Tolerance (ppm)**	**Maximum EIRP(W)**
5	2537.5 ~ 2652.5	4M50G7D	-	0.0656	4M50W7D	-	0.0498
10	2540.0 ~ 2650.0	9M07G7D	0.0040	0.0678	9M05W7D	-	0.0512
15	2542.5 ~ 2647.5	13M4G7D	-	0.0693	13M5W7D	-	0.0515
20	2545.0 ~ 2645.0	18M5G7D	-	0.0679	18M3W7D	-	0.0500

1.8 Testing Location

Sporton International (Kunshan) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International (Kunshan) Inc.		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158 FAX : +86-512-57900958		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	03CH05-KS TH01-KS	CN1257	314309

1.9 Test Software

Item	Site	Manufacture	Name	Version
1.	03CH05-KS	AUDIX	E3	6.2009-8-24al

1.10 Applicable Standards

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

- 47 CFR Part 2, 22(H), 27(M),
- ANSI C63.26-2015
- FCC KDB 971168 D01 Power Meas License Digital Systems v03r01
- FCC KDB 412172 D01 Determining ERP and EIRP v01r01

Remark:

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

2 Test Configuration of Equipment Under Test

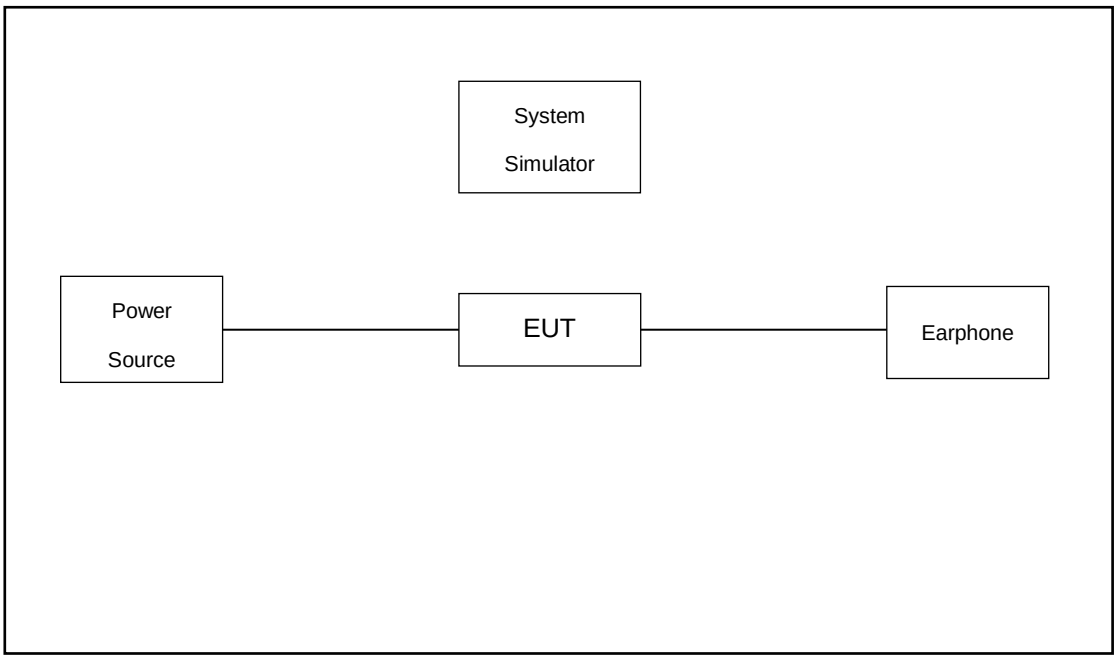
2.1 Test Mode

Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas License Digital Systems v03r01 with maximum output power.

Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission.

Test Items	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	38	-	-	v	v	v	v	v	v	v	v	v	v	v	v
	41	-	-	v	v	v	v	v	v	v	v	v	v	v	v
Peak-to-Average Ratio	38	-	-				v	v	v	v		v	v	v	v
	41	-	-				v	v	v	v		v	v	v	v
26dB and 99% Bandwidth	38	-	-	v	v	v	v	v	v			v	v	v	v
	41	-	-	v	v	v	v	v	v			v	v	v	v
Conducted Band Edge	38	-	-	v	v	v	v	v	v	v		v	v		v
	41	-	-	v	v	v	v	v	v	v		v	v		v
Conducted Spurious Emission	38	-	-	v	v	v	v	v	v	v			v	v	v
	41	-	-	v	v	v	v	v	v	v			v	v	v
Frequency Stability	38	-	-		v			v				v		v	
	41	-	-		v			v				v		v	
E.R.P / E.I.R.P	38	-	-	v	v	v	v	v	v	v			v	v	v
	41	-	-	v	v	v	v	v	v	v			v	v	v
Radiated Spurious Emission	38	Worst Case											v	v	v
	41	Worst Case											v	v	v
Note	1. The mark "**v** " means that this configuration is chosen for testing 2. The mark "-" means that this bandwidth is not supported. 3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.														

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	Power Supply	GWINSTEK	PSS-2002	N/A	N/A	Unshielded, 1.8 m
2.	LTE Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss 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 6.0 dB.

Example :

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

= 6.0 (dB)

2.5 Frequency List of Low/Middle/High Channels

LTE Band 38 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
20	Channel	37850	38000	38150
	Frequency	2580	2595	2610
15	Channel	37825	38000	38175
	Frequency	2577.5	2595	2612.5
10	Channel	37800	38000	38200
	Frequency	2575	2595	2615
5	Channel	37775	38000	38225
	Frequency	2572.5	2595	2617.5

LTE Band 41 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
20	Channel	40140	40640	41140
	Frequency	2545	2595	2645
15	Channel	40115	40640	41165
	Frequency	2542.5	2595	2647.5
10	Channel	40090	40640	41190
	Frequency	2540	2595	2650
5	Channel	40065	40640	41215
	Frequency	2537.5	2595	2652.5

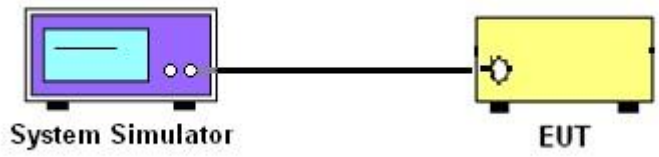
3 Conducted Test Items

3.1 Measuring Instruments

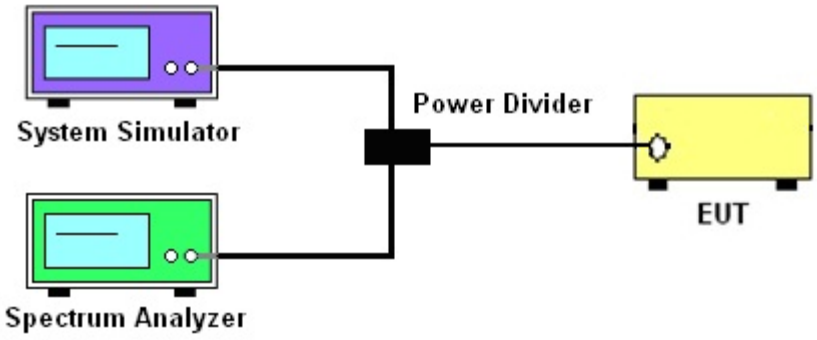
See list of measuring instruments of this test report.

3.2 Test Setup

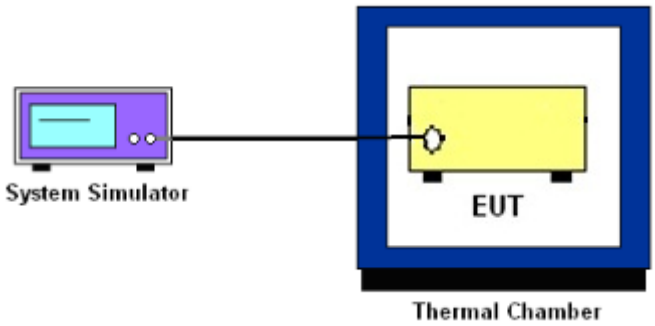
3.2.1 Conducted Output Power



3.2.2 Peak-to-Average Ratio, Occupied Bandwidth, Conducted 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 and EIRP

3.4.1 Description of the Conducted Output Power Measurement and EIRP Measurement

A system simulator was used to establish communication with the EUT. Its parameters were set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

The EIRP of mobile transmitters must not exceed 2 Watts for Band 38 and Band 41.

According to KDB 412172 D01 Power Approach,

EIRP = $P_T + G_T – L_C$, ERP = EIRP -2.15, where

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

L_C = signal attenuation in the connecting cable between the transmitter and antenna in dB

3.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2
2. The transmitter output port was connected to the system simulator.
3. Set EUT at maximum power through the system simulator.
4. Select lowest, middle, and highest channels for each band and different modulation.
5. Measure and record the power level from the system simulator.

3.5 Peak-to-Average Ratio

3.5.1 Description of the PAR Measurement

Power Complementary Cumulative Distribution Function (CCDF) curves provide a means for characterizing the power peaks of a digitally modulated signal on a statistical basis. A CCDF curve depicts the probability of the peak signal amplitude exceeding the average power level. Most contemporary measurement instrumentation include the capability to produce CCDF curves for an input signal provided that the instrument's resolution bandwidth can be set wide enough to accommodate the entire input signal bandwidth. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

3.5.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2.3.4 (CCDF).
2. The EUT was connected to spectrum and system simulator via a power divider.
3. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
4. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
5. Record the deviation as Peak to Average Ratio.

3.6 Occupied Bandwidth

3.6.1 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.

3.6.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.4
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
4. The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
5. Set the detection mode to peak, and the trace mode to max hold.
6. Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace.
   (this is the reference value)
7. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
8. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “–X dB down amplitude” determined in step 6. If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.
9. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

3.7 Conducted Band Edge

3.7.1 Description of Conducted Band Edge Measurement

27.53(m)(4)

For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

3.7.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured.
4. Set RBW >= 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz band from the band edge, RBW=1MHz was used.
6. Set spectrum analyzer with RMS detector.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
8. Checked that all the results comply with the emission limit line.

   Example:

   The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)

   = P(W)- [43 + 10log(P)] (dB)

   = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB) = -13dBm.
9. For LTE Band 7, the other 40 dB, and 55 dB have additionally applied same calculation above.

3.8 Conducted Spurious Emission

3.8.1 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 43 + 10 log (P) dB.

For Band 38, 41:

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 55 + 10 log (P) dB.

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

3.8.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The 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 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.
11. For Band 38, 41
    The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)
    = P(W)- [55+ 10log(P)] (dB)
    = [30+ 10log(P)] (dBm) - [55+ 10log(P)] (dB)
    = -25dBm.

3.9 Frequency Stability

3.9.1 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.

3.9.2 Test Procedures for Temperature Variation

1. The testing follows ANSI C63.26 section 5.6.4
2. The EUT was set up in the thermal chamber and connected with the system simulator.
3. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
4. With power OFF, the temperature was raised in 10°C step up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

3.9.3 Test Procedures for Voltage Variation

1. The testing follows ANSI C63.26 section 5.6.5
2. The EUT was placed in a temperature chamber at 20±5°C and connected with the system simulator.
3. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value for other than hand carried battery equipment.
4. For hand carried, battery powered equipment, reduce the primary ac or dc supply voltage to the battery operating end point, which shall be specified by the manufacturer.
5. The variation in frequency was measured for the worst case.

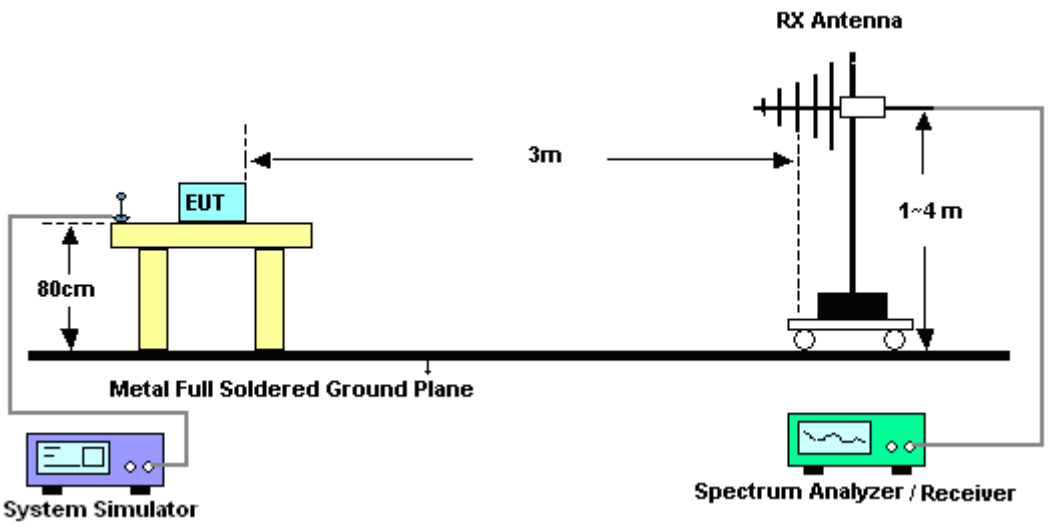
4 Radiated Test Items

4.1 Measuring Instruments

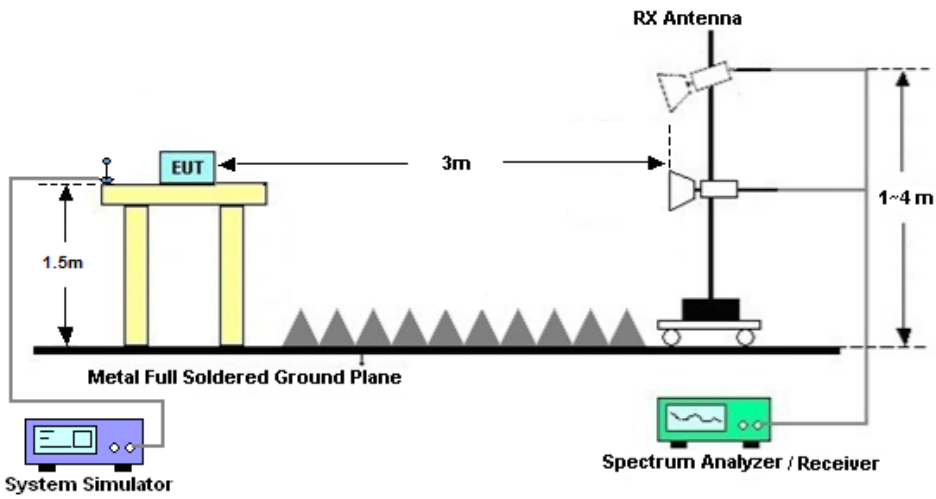
See list of measuring instruments of this test report.

4.2 Test Setup

4.2.1 For radiated test from 30MHz to 1GHz



4.2.2 For radiated test above 1GHz



4.3 Test Result of Radiated Test

Please refer to Appendix B.

4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI C63.26. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

For Band 38, 41

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 55 + 10 log (P) dB.

4.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.5
2. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
6. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
7. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
8. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
9. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
10. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
11. ERP (dBm) = EIRP - 2.15
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
    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.
13. For Band 38, 41:
    The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)

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	Nov. 02, 2019	Aug. 08, 2020~ Aug. 11, 2020	Nov. 01, 2020	Conducted (TH01-KS)
Thermal Chamber	Ten Billion	TTC-B3S	TBN-960502	-40~+150°C	Oct. 28, 2019	Aug. 08, 2020~ Aug. 11, 2020	Oct. 27, 2020	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz-44G,MAX 30dB	Apr. 15, 2020	Aug. 26, 2020	Apr. 14, 2021	Radiation (03CH05-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz-1GHz	May 30, 2020	Aug. 26, 2020	May 29, 2021	Radiation (03CH05-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00218652	1GHz~18GHz	Apr. 26, 2020	Aug. 26, 2020	Apr. 25, 2021	Radiation (03CH05-KS)
SHF-EHF Horn	Com-power	AH-840	101115	18GHz~40GHz	Nov. 10, 2019	Aug. 26, 2020	Nov. 09, 2020	Radiation (03CH05-KS)
Amplifier	SONOMA	310N	187289	9KHz-1GHz	Apr. 14, 2020	Aug. 26, 2020	Apr. 13, 2021	Radiation (03CH05-KS)
Amplifier	MITEQ	EM18G40G GA	060728	18~40GHz	Jan. 08, 2020	Aug. 26, 2020	Jan. 07, 2021	Radiation (03CH05-KS)
high gain Amplifier	MITEQ	AMF-7D-00 101800-30-1 0P	2012228	1Ghz-18Ghz	Oct. 18, 2019	Aug. 26, 2020	Oct. 17, 2020	Radiation (03CH05-KS)
Amplifier	Keysight	83017A	MY53270316	500MHz~26.5GHz	Oct. 18, 2019	Aug. 26, 2020	Oct. 17, 2020	Radiation (03CH05-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Aug. 26, 2020	NCR	Radiation (03CH05-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Aug. 26, 2020	NCR	Radiation (03CH05-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Aug. 26, 2020	NCR	Radiation (03CH05-KS)

NCR: No Calibration Required

6 Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.26-2015. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.5dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.1dB**

Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)

LTE Band 38

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				37850	38000	38150
Frequency (MHz)				2580	2595	2610
20	QPSK	1	0	22.76	23.04	23.01
20	QPSK	1	49	22.88	22.87	23.01
20	QPSK	1	99	22.89	22.96	22.98
20	QPSK	50	0	21.61	21.86	21.84
20	QPSK	50	24	21.60	21.75	21.85
20	QPSK	50	50	21.60	21.78	21.82
20	QPSK	100	0	21.67	21.69	21.86
20	16QAM	1	0	21.78	21.87	21.88
20	16QAM	1	49	21.70	21.88	21.81
20	16QAM	1	99	21.62	21.84	21.83
20	16QAM	50	0	20.67	20.58	20.97
20	16QAM	50	24	20.58	20.76	20.72
20	16QAM	50	50	20.81	20.66	21.04
20	16QAM	100	0	20.76	20.81	20.88
Channel				37825	38000	38175
Frequency (MHz)				2577.5	2595	2612.5
15	QPSK	1	0	22.70	22.98	22.89
15	QPSK	1	37	22.57	22.70	22.78
15	QPSK	1	74	22.67	22.55	22.76
15	QPSK	36	0	21.68	21.65	21.74
15	QPSK	36	20	21.52	21.66	21.80
15	QPSK	36	39	21.64	21.50	21.79
15	QPSK	75	0	21.52	21.56	21.63
15	16QAM	1	0	21.65	21.63	21.56
15	16QAM	1	37	21.56	21.56	21.70
15	16QAM	1	74	21.78	21.59	21.58
15	16QAM	36	0	20.73	20.53	20.51
15	16QAM	36	20	20.62	20.65	20.61
15	16QAM	36	39	20.65	20.55	20.77
15	16QAM	75	0	20.87	20.61	20.73
Channel				37800	38000	38200
Frequency (MHz)				2575	2595	2615
10	QPSK	1	0	22.69	23.01	22.98
10	QPSK	1	25	22.70	22.80	22.82

10	QPSK	1	49	22.61	22.88	22.83
10	QPSK	25	0	21.79	21.74	21.78
10	QPSK	25	12	21.75	21.73	21.70
10	QPSK	25	25	21.57	21.67	21.73
10	QPSK	50	0	21.66	21.68	21.69
10	16QAM	1	0	21.56	21.88	21.83
10	16QAM	1	25	21.71	21.72	21.82
10	16QAM	1	49	21.78	21.54	21.80
10	16QAM	25	0	21.06	20.78	20.89
10	16QAM	25	12	20.84	21.05	20.85
10	16QAM	25	25	21.02	20.91	20.92
10	16QAM	50	0	20.84	20.75	20.81
Channel				37775	38000	38225
Frequency (MHz)				2572.5	2595	2617.5
5	QPSK	1	0	22.68	22.52	22.65
5	QPSK	1	12	22.87	22.76	22.78
5	QPSK	1	24	22.74	22.61	22.74
5	QPSK	12	0	21.63	21.65	21.68
5	QPSK	12	7	21.67	21.73	21.81
5	QPSK	12	13	21.69	21.71	22.00
5	QPSK	25	0	21.52	21.69	21.90
5	16QAM	1	0	21.88	21.89	21.57
5	16QAM	1	12	21.65	21.57	21.78
5	16QAM	1	24	21.60	21.76	21.77
5	16QAM	12	0	20.71	20.57	20.80
5	16QAM	12	7	20.90	20.82	20.70
5	16QAM	12	13	20.80	20.64	20.81
5	16QAM	25	0	21.05	20.79	20.80

LTE Band 41

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				40140	40640	41140
Frequency (MHz)				2545	2595	2645
20	QPSK	1	0	23.32	23.28	23.25
20	QPSK	1	49	23.30	23.19	23.27
20	QPSK	1	99	23.12	23.12	23.14
20	QPSK	50	0	22.20	22.25	22.20
20	QPSK	50	24	22.24	22.21	22.17
20	QPSK	50	50	22.09	22.01	22.18
20	QPSK	100	0	22.22	22.12	22.16
20	16QAM	1	0	21.99	21.63	21.61
20	16QAM	1	49	21.87	21.78	21.79
20	16QAM	1	99	21.88	21.68	21.77
20	16QAM	50	0	21.03	21.01	21.22
20	16QAM	50	24	21.21	21.05	21.14
20	16QAM	50	50	21.09	21.23	21.12
20	16QAM	100	0	21.37	21.08	21.10
Channel				40115	40640	41165
Frequency (MHz)				2542.5	2595	2647.5
15	QPSK	1	0	23.39	23.24	23.25
15	QPSK	1	37	23.41	23.12	23.34
15	QPSK	1	74	23.23	23.08	23.22
15	QPSK	36	0	22.33	22.12	22.19
15	QPSK	36	20	22.34	22.09	22.26
15	QPSK	36	39	22.28	21.94	22.24
15	QPSK	75	0	22.32	22.08	22.27
15	16QAM	1	0	22.10	21.96	22.08
15	16QAM	1	37	22.12	21.79	22.04
15	16QAM	1	74	22.09	21.82	22.01
15	16QAM	36	0	21.12	20.91	21.23
15	16QAM	36	20	21.21	20.85	21.20
15	16QAM	36	39	21.22	20.63	21.32
15	16QAM	75	0	21.39	20.98	21.44
Channel				40090	40640	41190
Frequency (MHz)				2540	2595	2650
10	QPSK	1	0	23.31	23.09	23.18
10	QPSK	1	25	23.23	23.12	23.20
10	QPSK	1	49	23.22	23.15	23.19
10	QPSK	25	0	22.16	22.12	22.24
10	QPSK	25	12	22.21	22.19	22.23
10	QPSK	25	25	22.18	22.14	22.21
10	QPSK	50	0	22.24	22.16	22.27
10	16QAM	1	0	21.75	22.09	22.01

10	16QAM	1	25	22.01	22.01	22.09
10	16QAM	1	49	22.05	22.09	22.05
10	16QAM	25	0	21.28	21.12	21.31
10	16QAM	25	12	21.12	21.19	21.28
10	16QAM	25	25	21.21	21.18	21.22
10	16QAM	50	0	21.40	21.08	21.39
Channel				40065	40640	41215
Frequency (MHz)				2537.5	2595	2652.5
5	QPSK	1	0	23.01	23.08	23.17
5	QPSK	1	12	23.12	23.04	23.12
5	QPSK	1	24	23.09	23.09	23.16
5	QPSK	12	0	22.29	22.12	22.35
5	QPSK	12	7	22.28	22.19	22.22
5	QPSK	12	13	22.17	22.15	22.17
5	QPSK	25	0	22.13	22.05	22.19
5	16QAM	1	0	21.57	21.86	21.80
5	16QAM	1	12	21.78	21.68	21.67
5	16QAM	1	24	21.97	21.86	21.59
5	16QAM	12	0	21.29	21.32	21.16
5	16QAM	12	7	21.28	21.19	21.20
5	16QAM	12	13	21.34	21.08	21.21
5	16QAM	25	0	21.12	21.09	21.23

ERP/EIRP

LTE Band 38 (GT - LC = -5.0 dB) QPSK			
Bandwidth	5M		
Channel	37775	38000	38225
	(Low)	(Mid)	(High)
Frequency (MHz)	2572.5	2595	2617.5
Conducted Power (dBm)	22.87	22.76	22.78
Conducted Power (Watts)	0.1936	0.1888	0.1897
EIRP(dBm)	17.87	17.76	17.78
EIRP(Watts)	0.0612	0.0597	0.0600

LTE Band 38 (GT - LC = -5.0 dB) QPSK									
Bandwidth	10M			15M			20M		
Channel	37800	38000	38200	37825	38000	38175	37850	38000	38150
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(Mid)
Frequency (MHz)	2575	2595	2615	2577.5	2595	2612.5	2580	2595	2610
Conducted Power (dBm)	22.69	23.01	22.98	22.70	22.98	22.89	22.76	23.04	23.01
Conducted Power (Watts)	0.1858	0.2000	0.1986	0.1862	0.1986	0.1945	0.1888	0.2014	0.2000
EIRP(dBm)	17.69	18.01	17.98	17.70	17.98	17.89	17.76	18.04	18.01
EIRP(Watts)	0.0587	0.0632	0.0628	0.0589	0.0628	0.0615	0.0597	0.0637	0.0632

LTE Band 38 (GT - LC = -5.0 dB) 16QAM			
Bandwidth	5M		
Channel	37775	38000	38225
	(Low)	(Mid)	(High)
Frequency (MHz)	2572.5	2595	2617.5
Conducted Power (dBm)	21.88	21.89	21.57
Conducted Power (Watts)	0.1542	0.1545	0.1435
EIRP(dBm)	16.88	16.89	16.57
EIRP(Watts)	0.0488	0.0489	0.0454

LTE Band 38 (GT - LC = -5.0 dB) 16QAM									
Bandwidth	10M			15M			20M		
Channel	37800	38000	38200	37825	38000	38175	37850	38000	38150
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(Mid)
Frequency (MHz)	2575	2595	2615	2577.5	2595	2612.5	2580	2595	2610
Conducted Power (dBm)	21.56	21.88	21.83	21.78	21.59	21.58	21.78	21.87	21.88
Conducted Power (Watts)	0.1432	0.1542	0.1524	0.1507	0.1442	0.1439	0.1507	0.1538	0.1542
EIRP(dBm)	16.56	16.88	16.83	16.78	16.59	16.58	16.78	16.87	16.88
EIRP(Watts)	0.0453	0.0488	0.0482	0.0476	0.0456	0.0455	0.0476	0.0486	0.0488

LTE Band 41 (G_T - L_C = -5.0 dB) QPSK									
Bandwidth	5M			10M			15M		
Channel	40065	40640	41215	40090	40640	41190	40115	40640	41165
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	2537.5	2595	2652.5	2540	2595	2650	2542.5	2595	2647.5
Conducted Power (dBm)	23.01	23.08	23.17	23.31	23.09	23.18	23.41	23.12	23.34
Conducted Power (Watts)	0.2000	0.2032	0.2075	0.2143	0.2037	0.2080	0.2193	0.2051	0.2158
EIRP(dBm)	18.01	18.08	18.17	18.31	18.09	18.18	18.41	18.12	18.34
EIRP(Watts)	0.0632	0.0643	0.0656	0.0678	0.0644	0.0658	0.0693	0.0649	0.0682

LTE Band 41 (G_T - L_C = -5.0 dB) QPSK			
Bandwidth	20M		
Channel	40140	40640	41140
	(Low)	(Mid)	(High)
Frequency (MHz)	2545	2595	2645
Conducted Power (dBm)	23.32	23.28	23.25
Conducted Power (Watts)	0.2148	0.2128	0.2113
EIRP(dBm)	18.32	18.28	18.25
EIRP(Watts)	0.0679	0.0673	0.0668

LTE Band 41 (G_T - L_C = -5.0 dB) 16QAM									
Bandwidth	5M			10M			15M		
Channel	40065	40640	41215	40090	40640	41190	40115	40640	41165
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	2537.5	2595	2652.5	2540	2595	2650	2542.5	2595	2647.5
Conducted Power (dBm)	21.97	21.86	21.59	22.05	22.09	22.05	22.12	21.79	22.04
Conducted Power (Watts)	0.1574	0.1535	0.1442	0.1603	0.1618	0.1603	0.1629	0.1510	0.1600
EIRP(dBm)	16.97	16.86	16.59	17.05	17.09	17.05	17.12	16.79	17.04
EIRP(Watts)	0.0498	0.0485	0.0456	0.0507	0.0512	0.0507	0.0515	0.0478	0.0506

LTE Band 41 (G_T - L_C = -5.0 dB) 16QAM			
Bandwidth	20M		
Channel	40140	40640	41140
	(Low)	(Mid)	(High)
Frequency (MHz)	2545	2595	2645
Conducted Power (dBm)	21.99	21.63	21.61
Conducted Power (Watts)	0.1581	0.1455	0.1449
EIRP(dBm)	16.99	16.63	16.61
EIRP(Watts)	0.0500	0.0460	0.0458

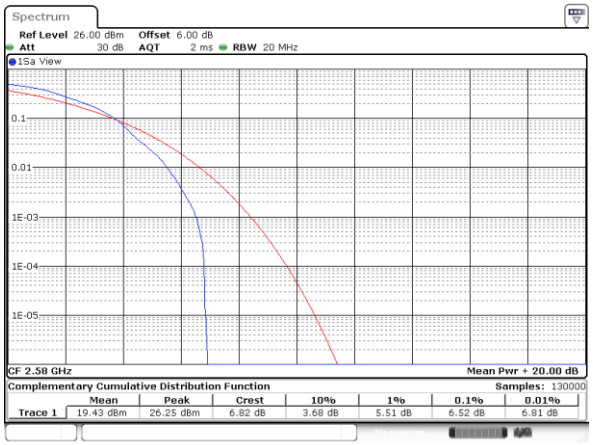
LTE Band 38

Peak-to-Average Ratio

Mode	LTE Band 38 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	6.52	5.10	6.03	6.99	PASS
Middle CH	6.38	5.51	5.86	6.61	
Highest CH	5.68	6.32	5.68	6.03	

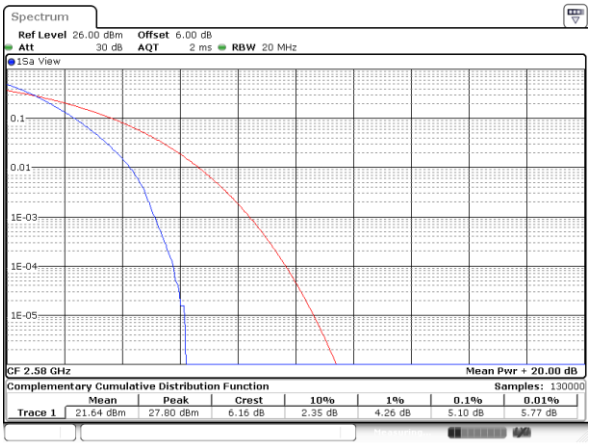
LTE Band 38 / 20MHz / QPSK

Lowest Channel / 1RB



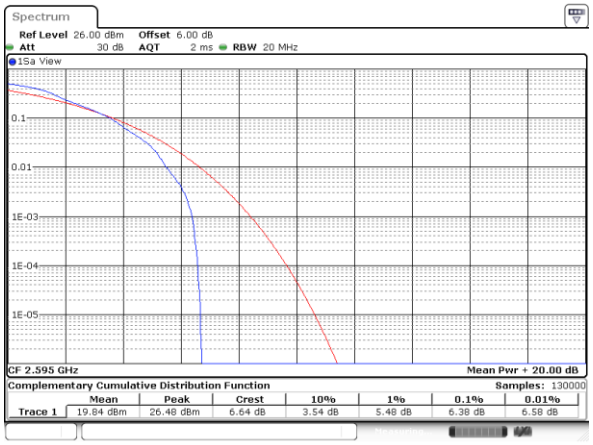
Date: 8.AUG.2020 23:04:49

Lowest Channel / Full RB



Date: 8.AUG.2020 23:05:16

Middle Channel / 1RB



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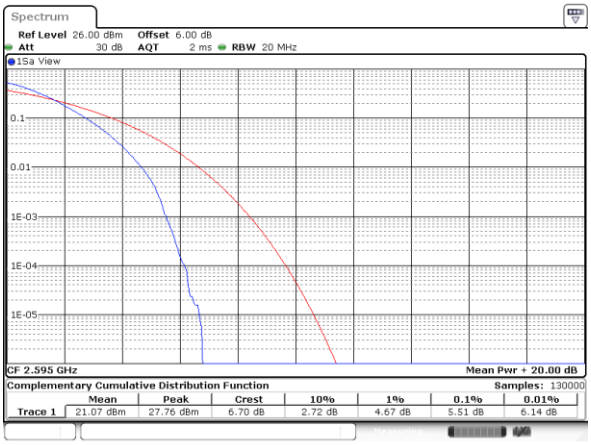
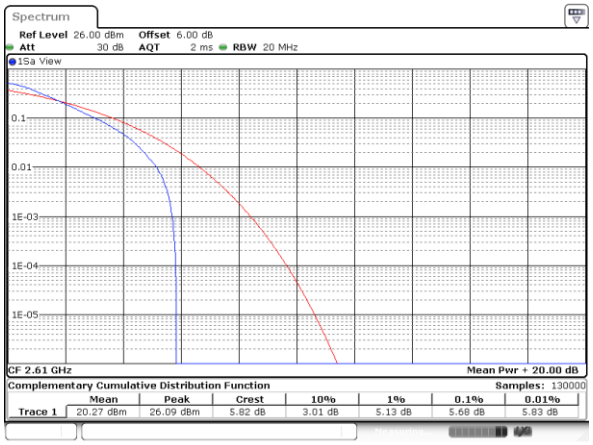
Middle Channel / Full RB



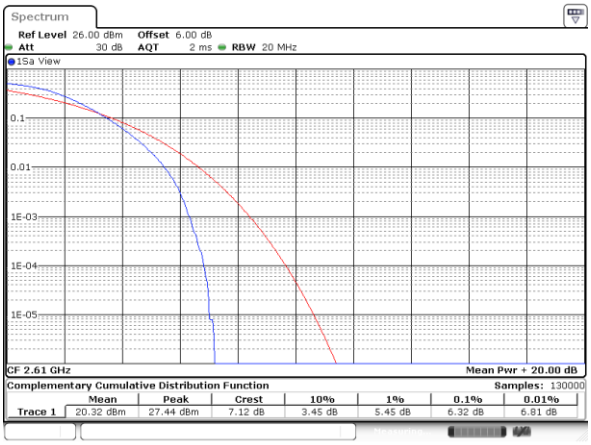
Date: 8.AUG.2020 23:07:42

Highest Channel / 1RB



Date: 8.AUG.2020 23:08:21

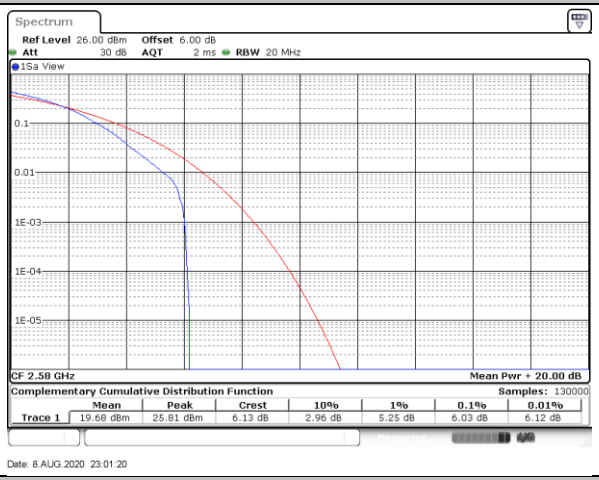
Highest Channel / Full RB



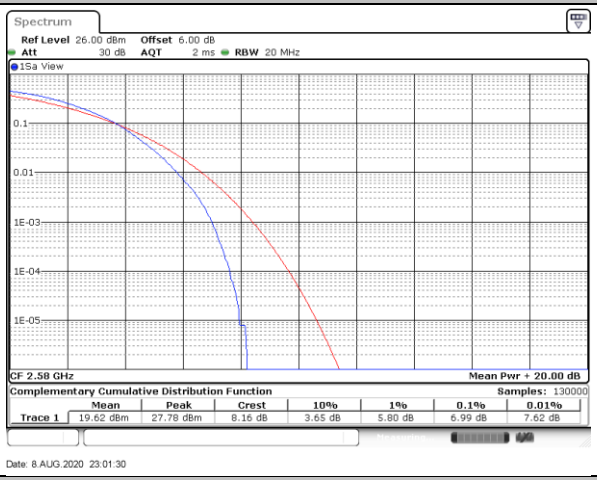
Date: 8.AUG.2020 23:08:35

LTE Band 38 / 20MHz / 16QAM

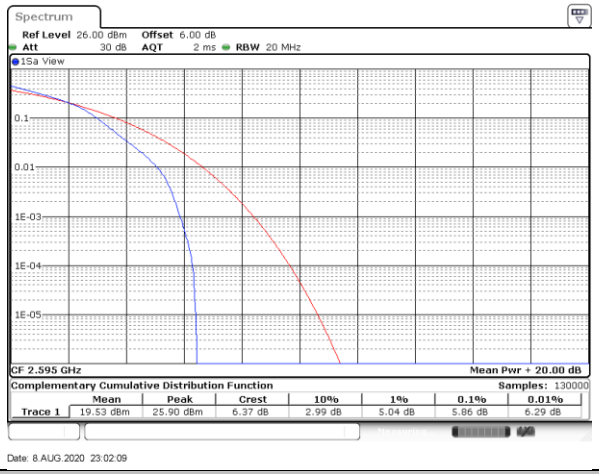
Lowest Channel / 1RB



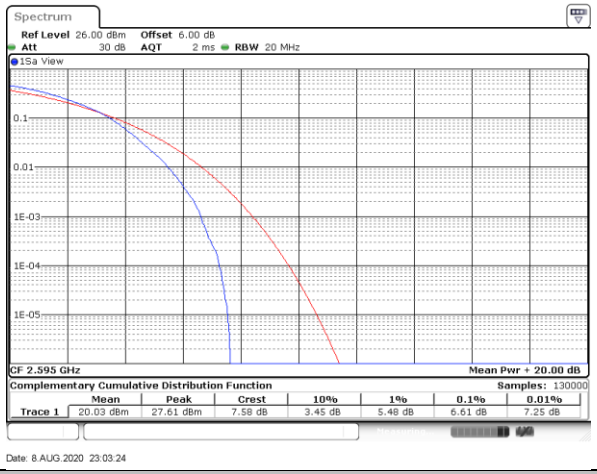
Lowest Channel / Full RB



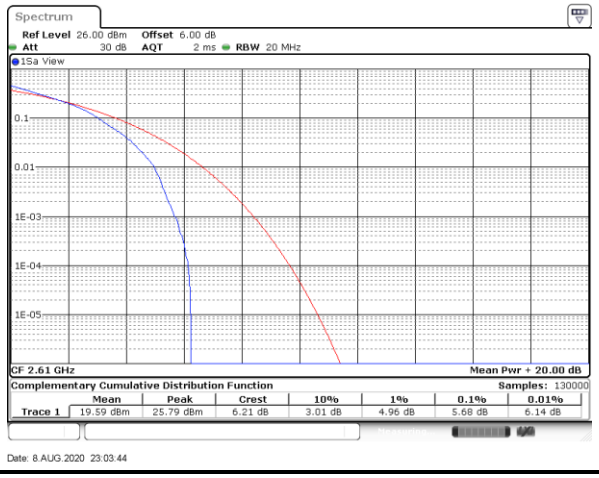
Middle Channel / 1RB



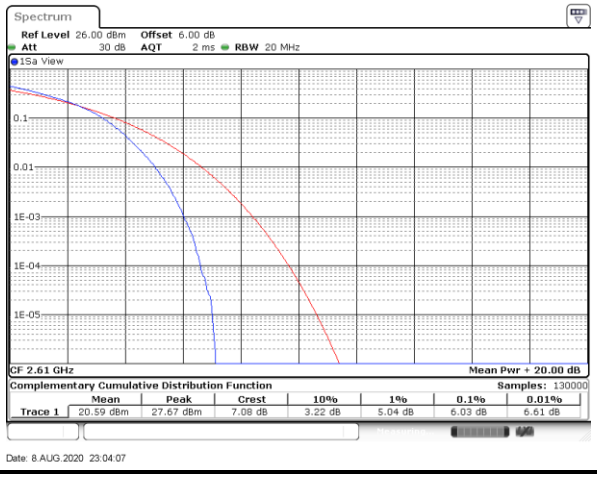
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB

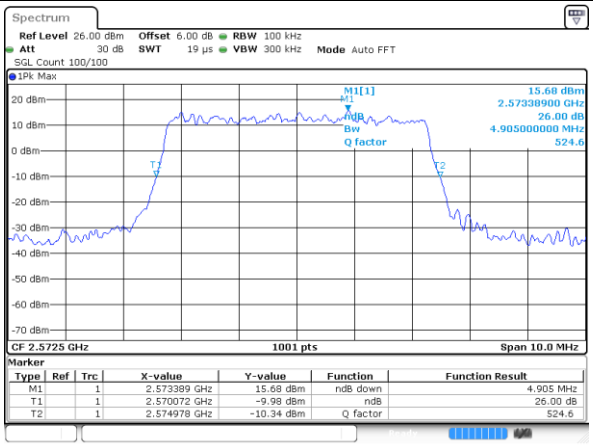


26dB Bandwidth

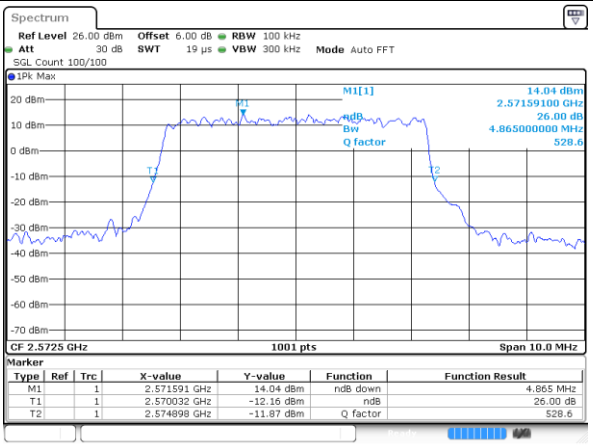
Mode	LTE Band 38 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.91	4.87	9.73	9.81	14.48	14.60	20.10	20.06
Middle CH	-	-	-	-	4.84	4.72	9.79	9.75	14.36	14.42	20.10	20.14
Highest CH	-	-	-	-	4.96	4.90	9.81	9.75	14.51	14.15	20.10	20.06

LTE Band 38

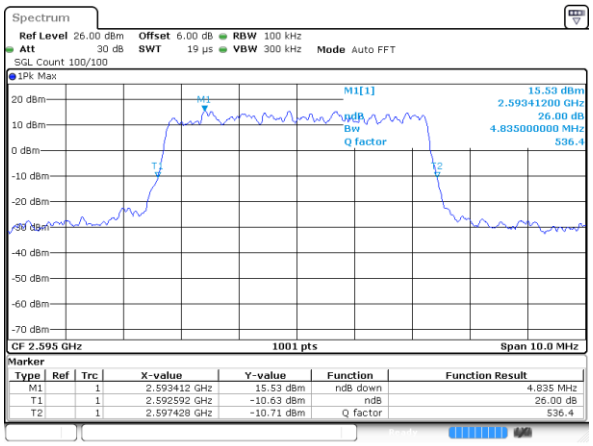
Lowest Channel / 5MHz / QPSK



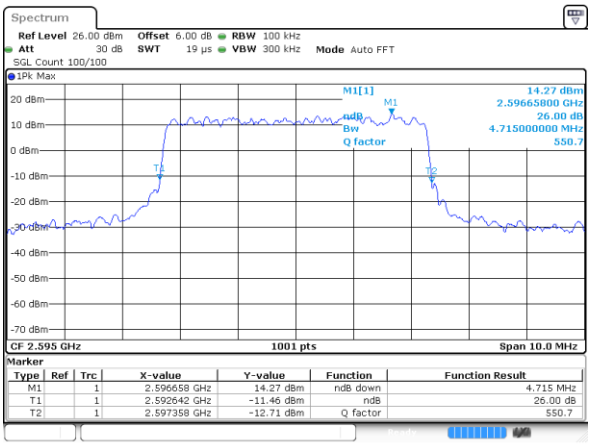
Lowest Channel / 5MHz / 16QAM



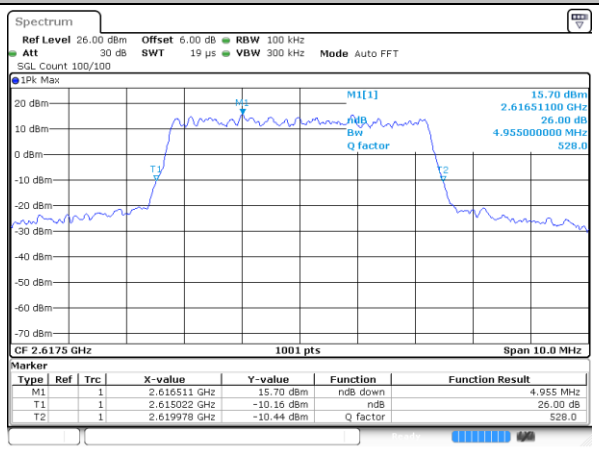
Middle Channel / 5MHz / QPSK



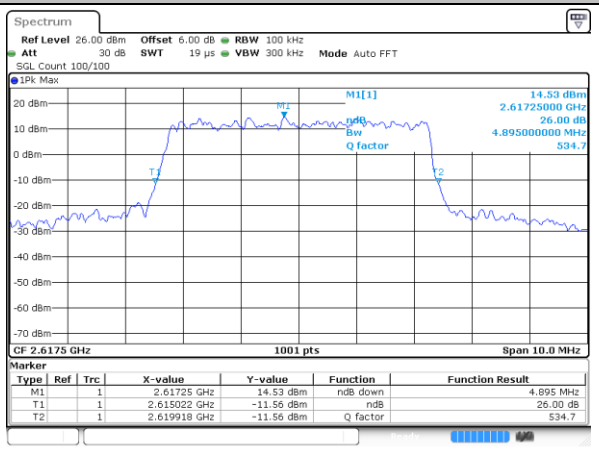
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

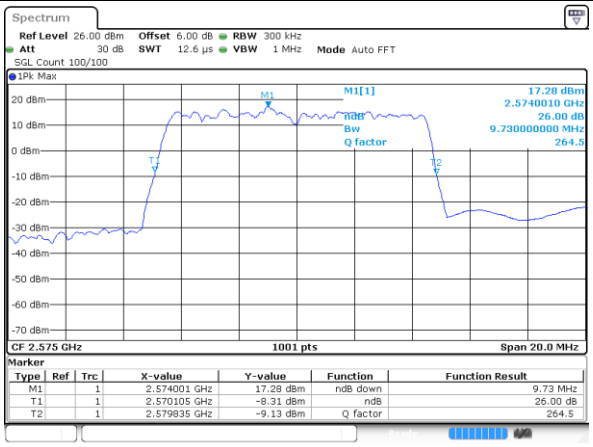


Highest Channel / 5MHz / 16QAM



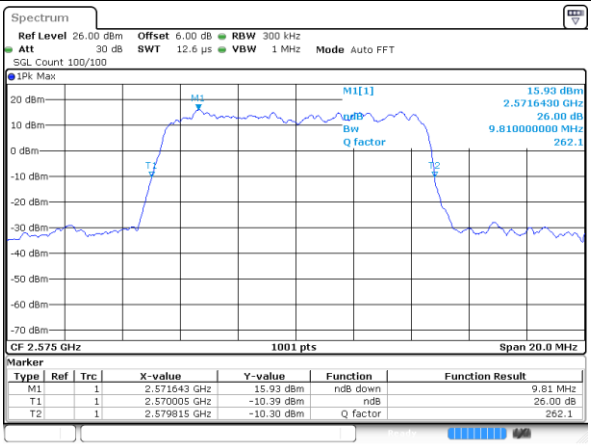
LTE Band 38

Lowest Channel / 10MHz / QPSK



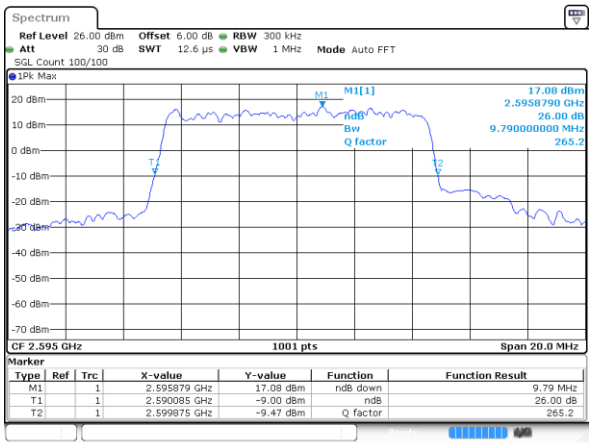
Date: 8.AUG.2020 22:34:44

Lowest Channel / 10MHz / 16QAM



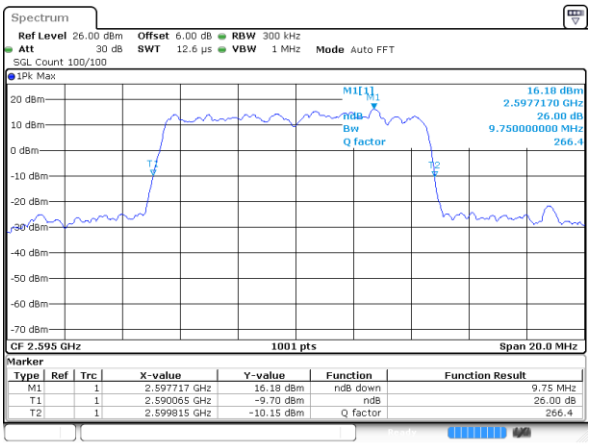
Date: 8.AUG.2020 22:34:54

Middle Channel / 10MHz / QPSK



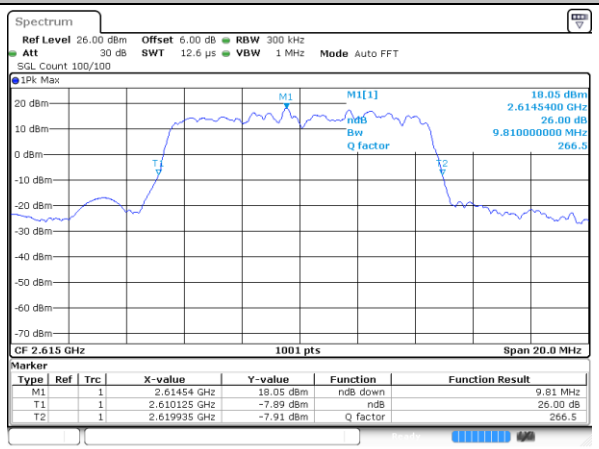
Date: 8.AUG.2020 22:35:25

Middle Channel / 10MHz / 16QAM



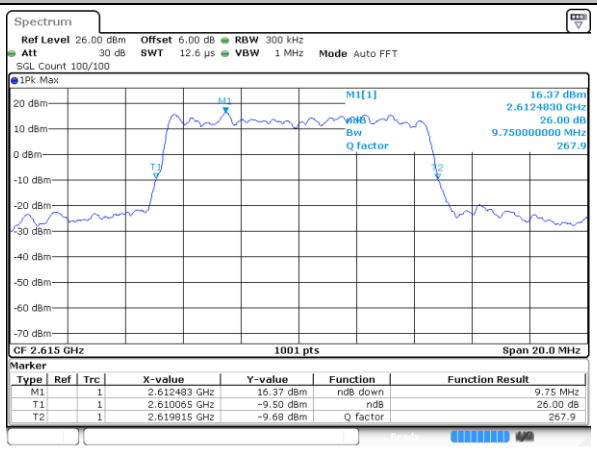
Date: 8.AUG.2020 22:35:35

Highest Channel / 10MHz / QPSK



Date: 8.AUG.2020 22:36:05

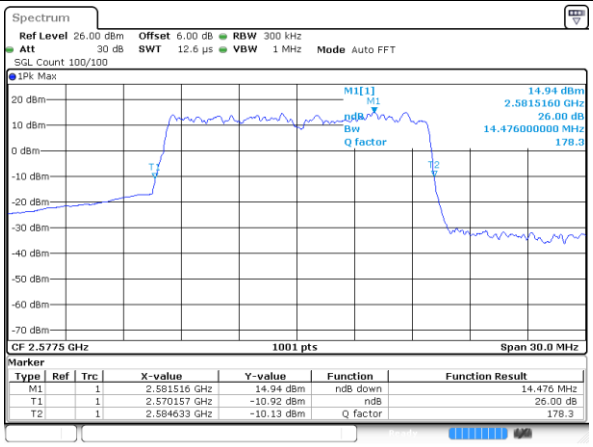
Highest Channel / 10MHz / 16QAM



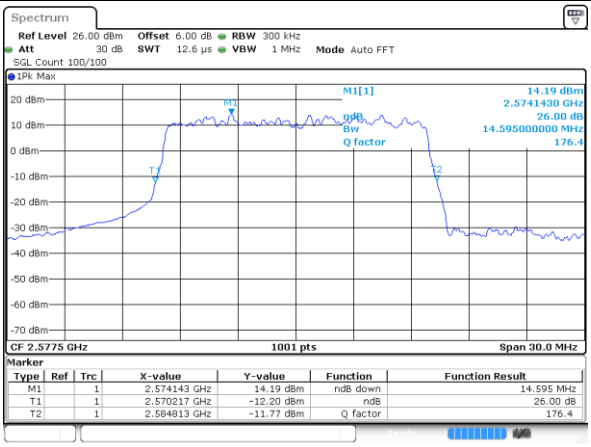
Date: 8.AUG.2020 22:36:15

LTE Band 38

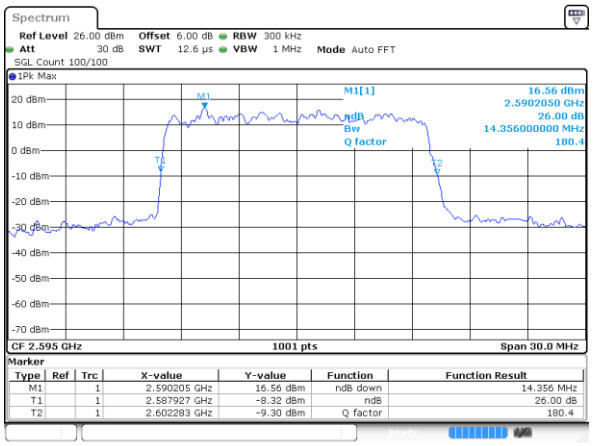
Lowest Channel / 15MHz / QPSK



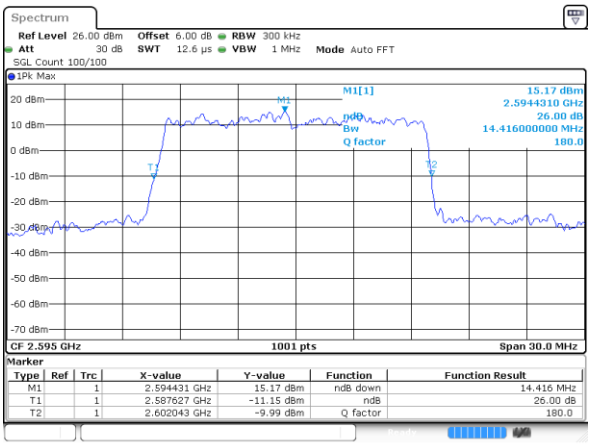
Lowest Channel / 15MHz / 16QAM



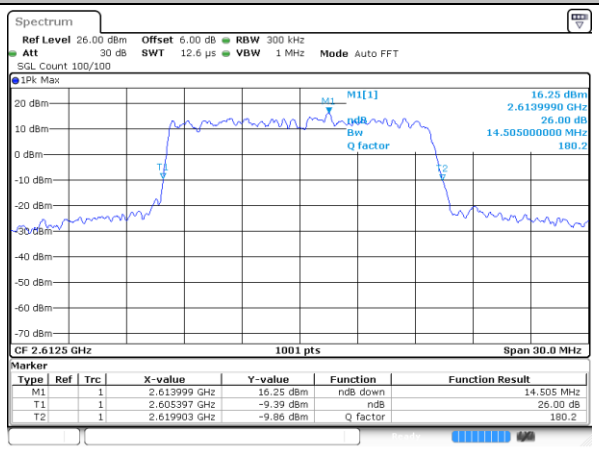
Middle Channel / 15MHz / QPSK



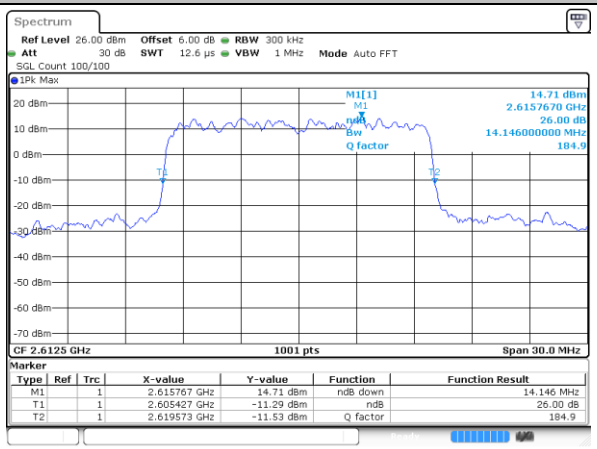
Middle Channel / 15MHz / 16QAM



Highest Channel / 15MHz / QPSK

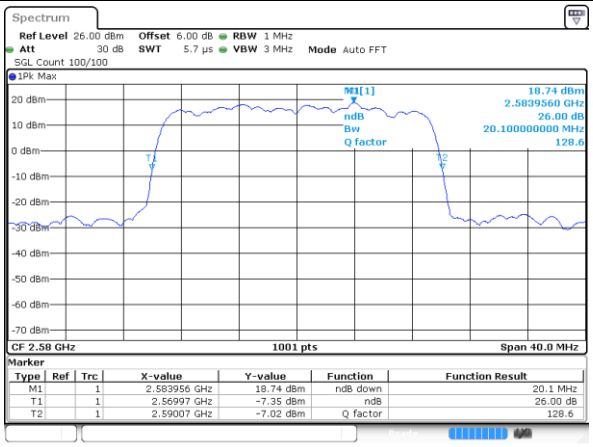


Highest Channel / 15MHz / 16QAM

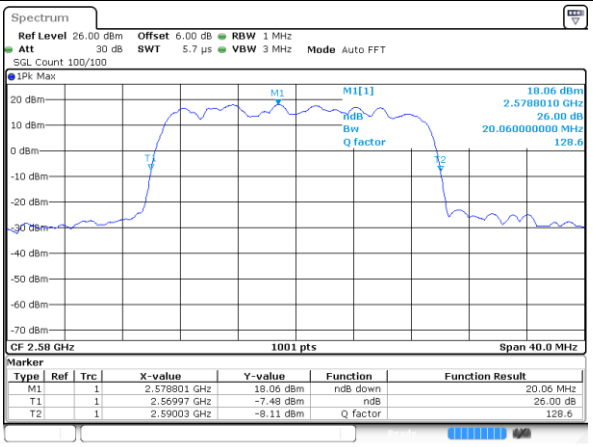


LTE Band 38

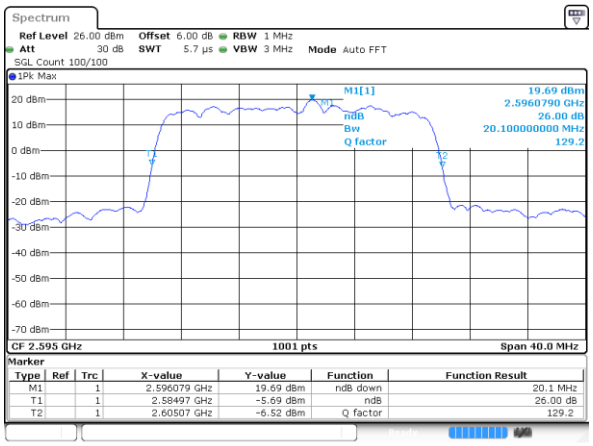
Lowest Channel / 20MHz / QPSK



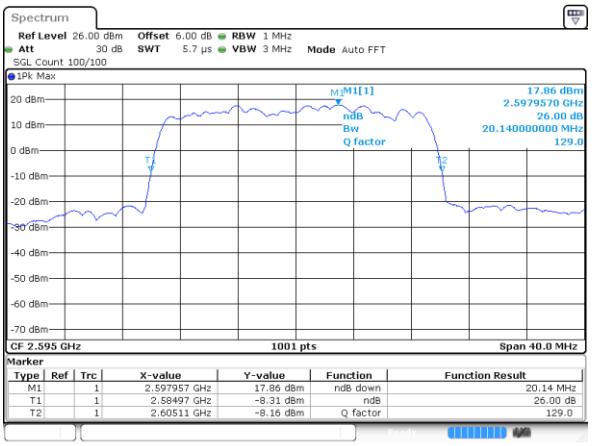
Lowest Channel / 20MHz / 16QAM



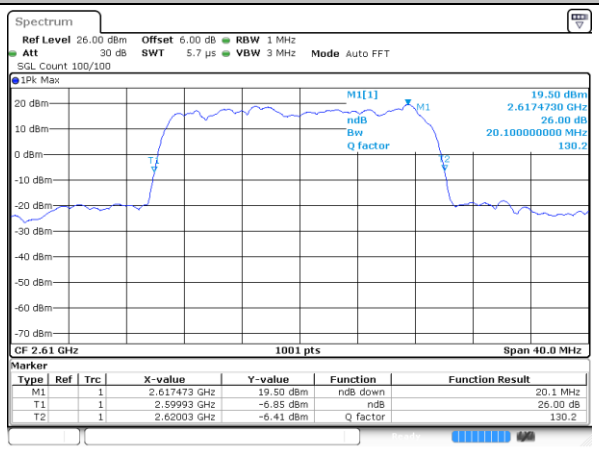
Middle Channel / 20MHz / QPSK



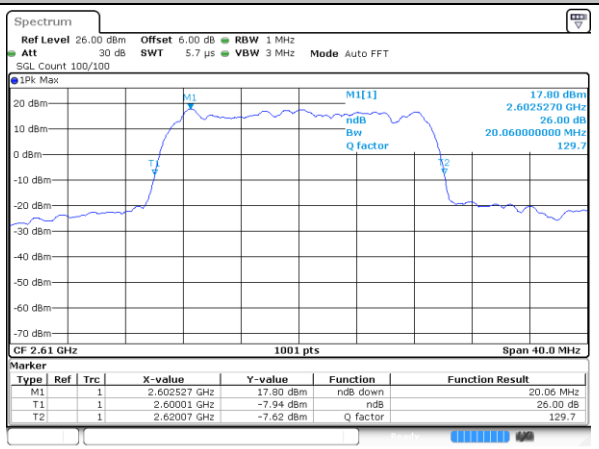
Middle Channel / 20MHz / 16QAM



Highest Channel / 20MHz / QPSK



Highest Channel / 20MHz / 16QAM

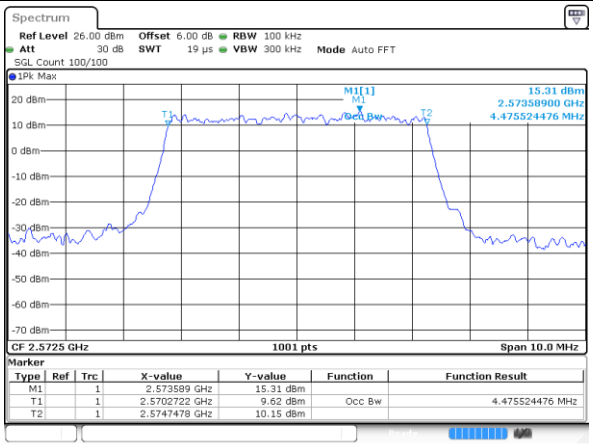


Occupied Bandwidth

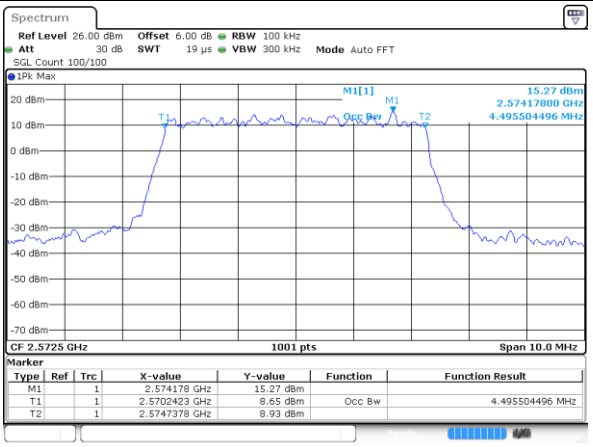
Mode	LTE Band 38 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.48	4.50	9.03	8.99	13.43	13.40	18.26	18.30
Middle CH	-	-	-	-	4.47	4.49	8.99	9.01	13.40	13.34	18.26	18.26
Highest CH	-	-	-	-	4.47	4.50	8.95	8.97	13.46	13.40	18.30	18.30

LTE Band 38

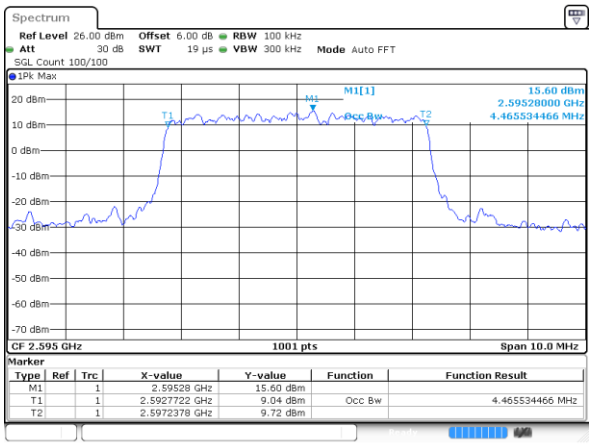
Lowest Channel / 5MHz / QPSK



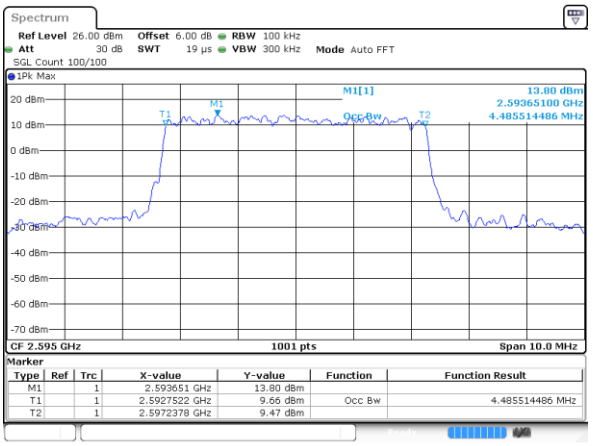
Lowest Channel / 5MHz / 16QAM



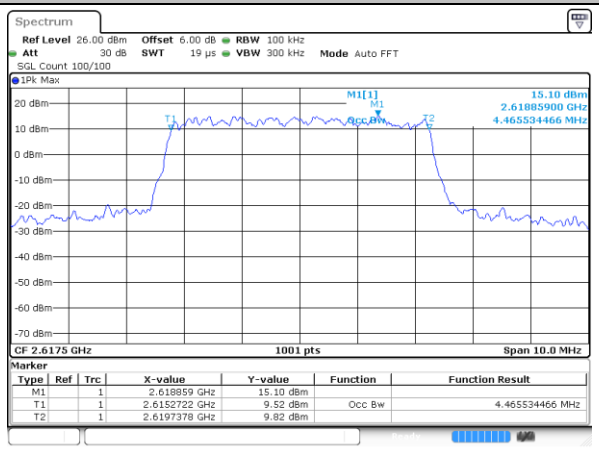
Middle Channel / 5MHz / QPSK



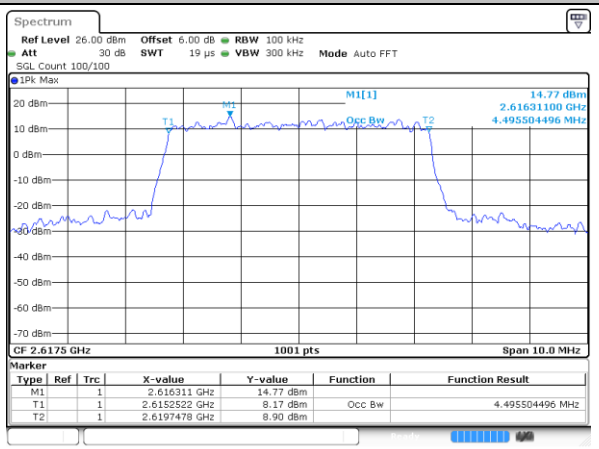
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

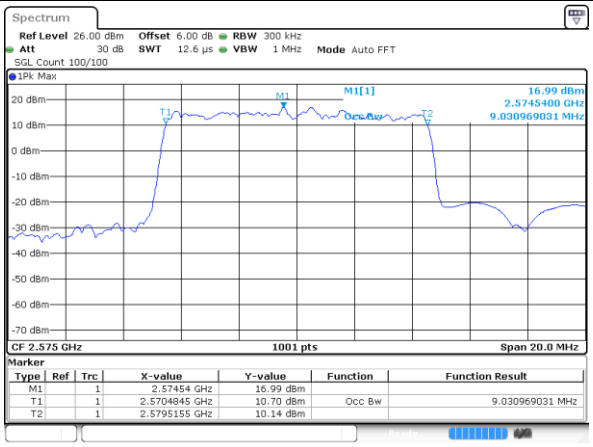


Highest Channel / 5MHz / 16QAM

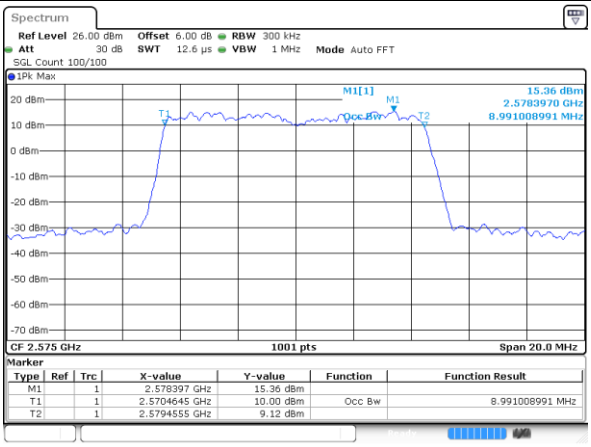


LTE Band 38

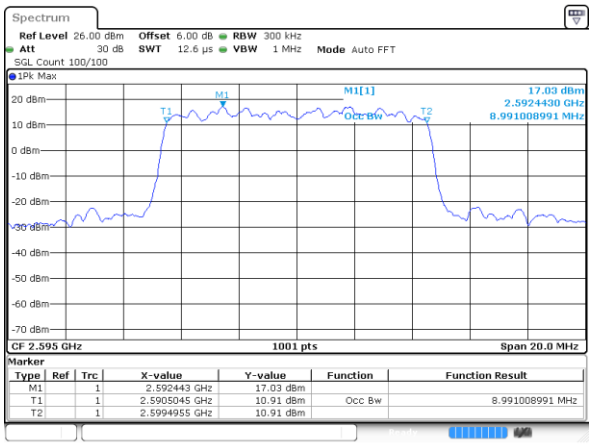
Lowest Channel / 10MHz / QPSK



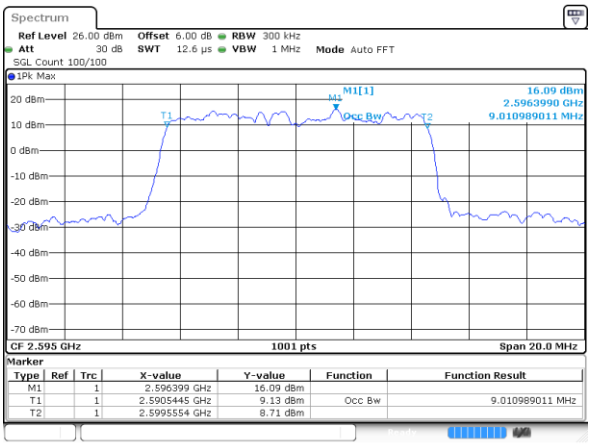
Lowest Channel / 10MHz / 16QAM



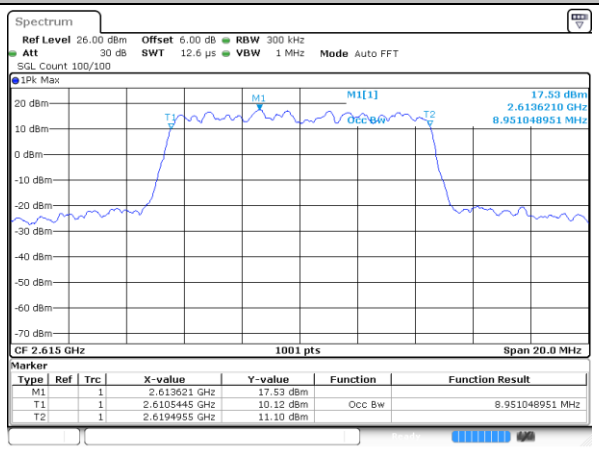
Middle Channel / 10MHz / QPSK



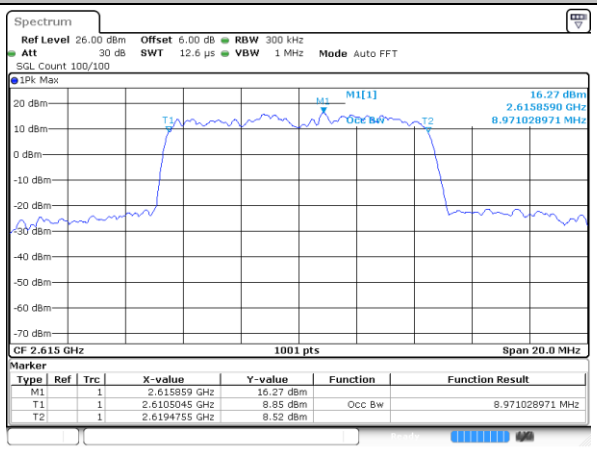
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK

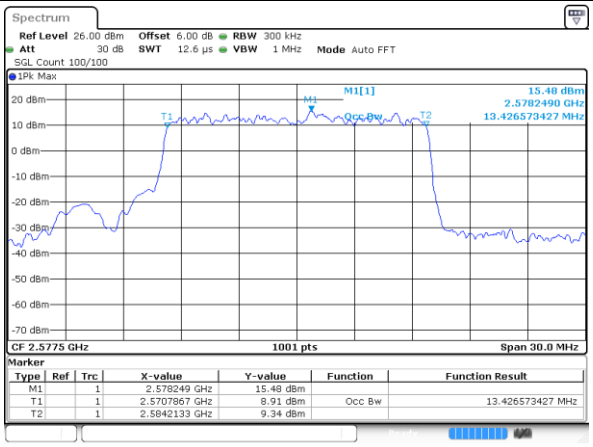


Highest Channel / 10MHz / 16QAM

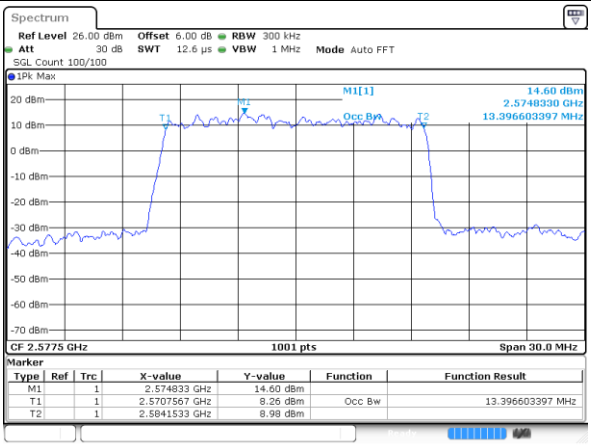


LTE Band 38

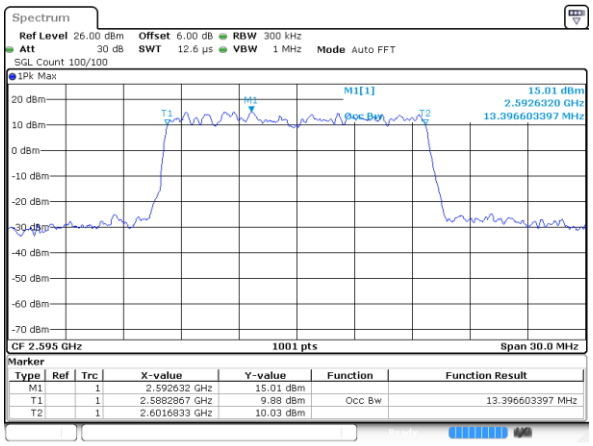
Lowest Channel / 15MHz / QPSK



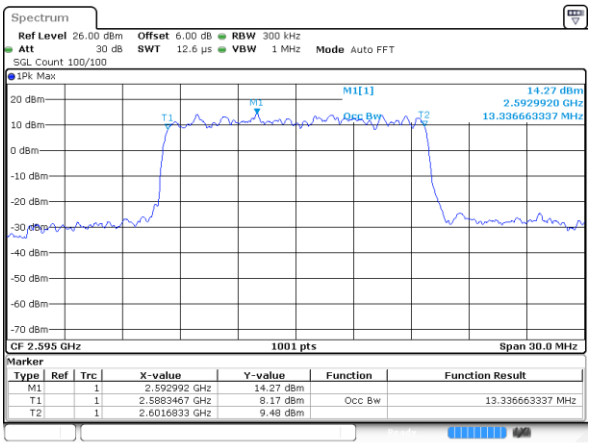
Lowest Channel / 15MHz / 16QAM



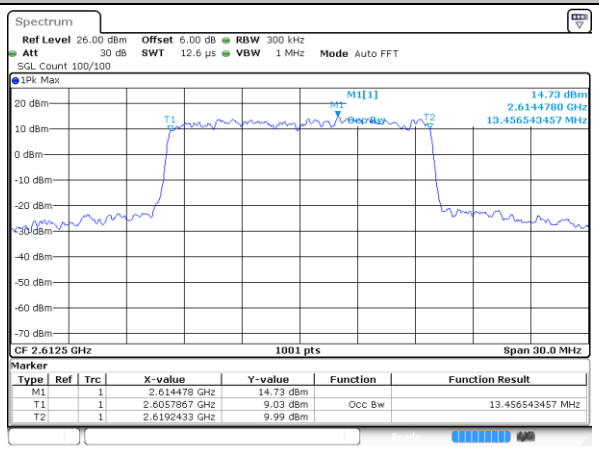
Middle Channel / 15MHz / QPSK



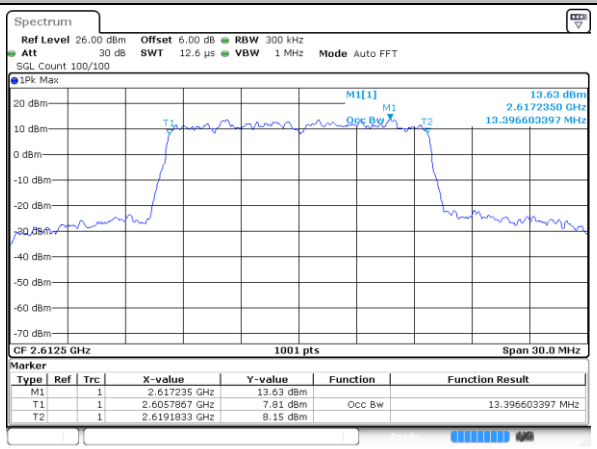
Middle Channel / 15MHz / 16QAM



Highest Channel / 15MHz / QPSK

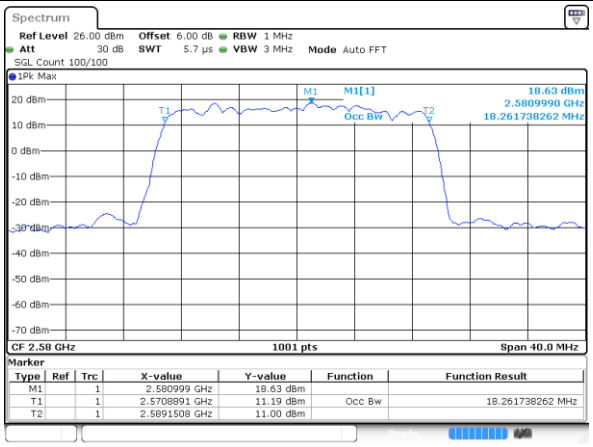


Highest Channel / 15MHz / 16QAM

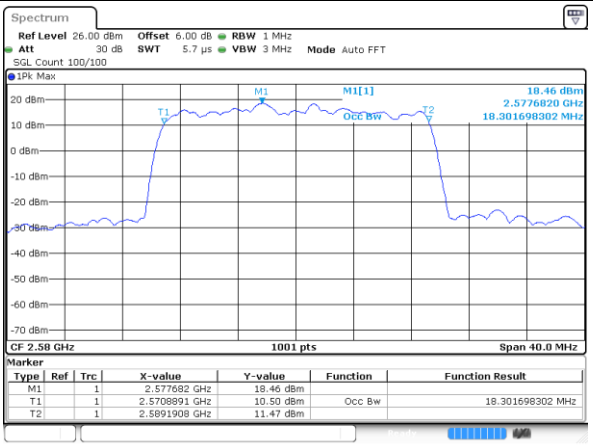


LTE Band 38

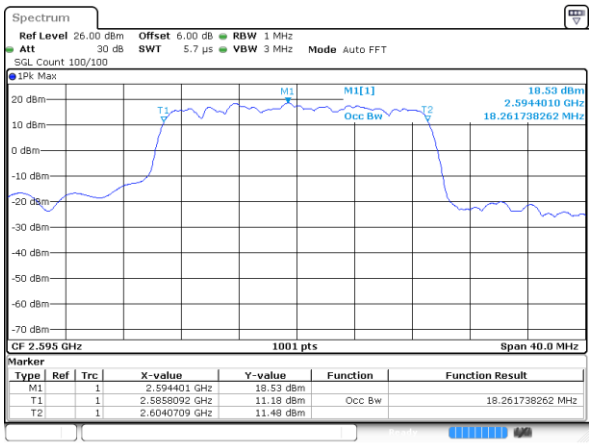
Lowest Channel / 20MHz / QPSK



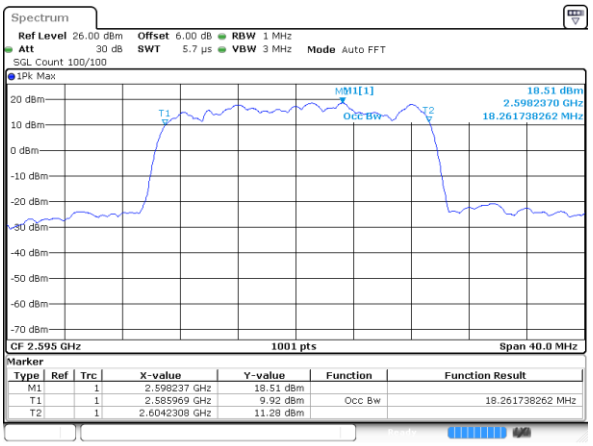
Lowest Channel / 20MHz / 16QAM



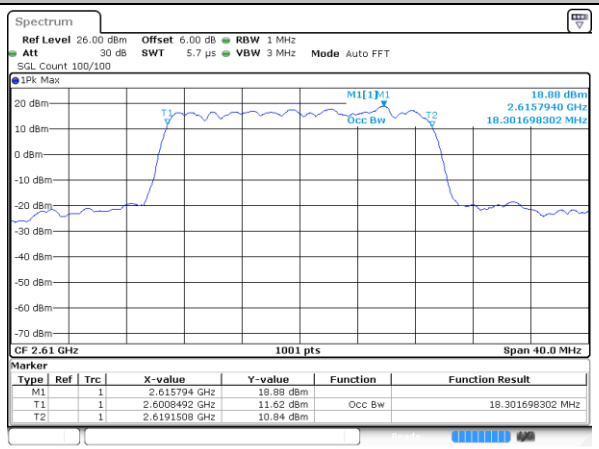
Middle Channel / 20MHz / QPSK



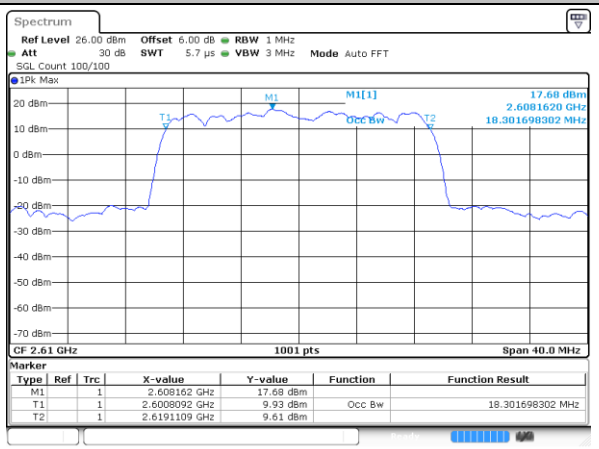
Middle Channel / 20MHz / 16QAM



Highest Channel / 20MHz / QPSK



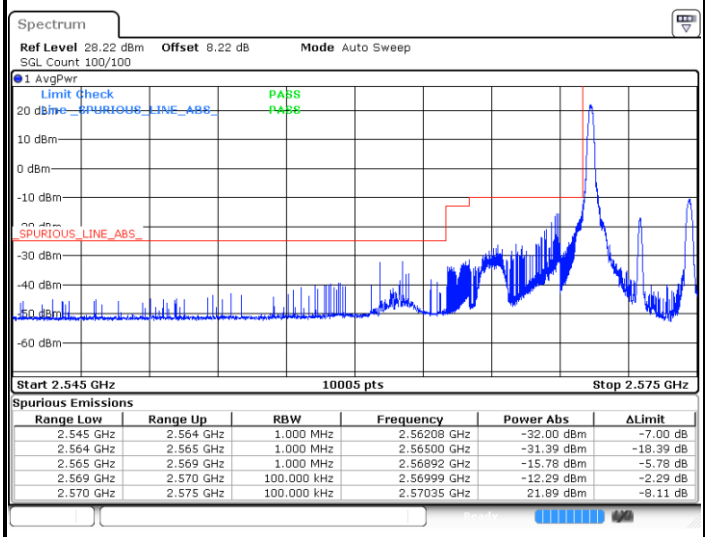
Highest Channel / 20MHz / 16QAM



Conducted Band Edge

LTE Band 38 / 5MHz / QPSK

Lowest Band Edge / 1 RB

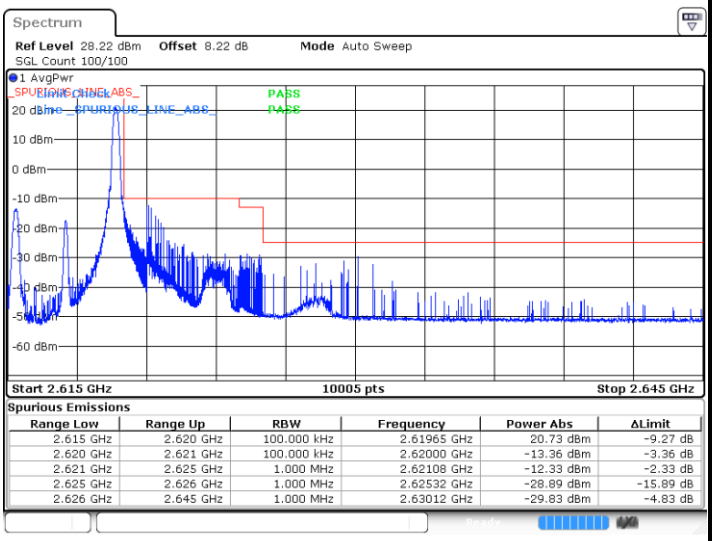


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.545 GHz	2.564 GHz	1.000 MHz	2.56208 GHz	-32.00 dBm	-7.00 dB
2.564 GHz	2.565 GHz	1.000 MHz	2.56500 GHz	-31.39 dBm	-18.39 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56892 GHz	-15.78 dBm	-5.78 dB
2.569 GHz	2.570 GHz	100.000 kHz	2.56999 GHz	-12.29 dBm	-2.29 dB
2.570 GHz	2.575 GHz	100.000 kHz	2.57035 GHz	21.89 dBm	-8.11 dB

Date: 8.AUG.2020 23:59:30

Highest Band Edge / 1 RB

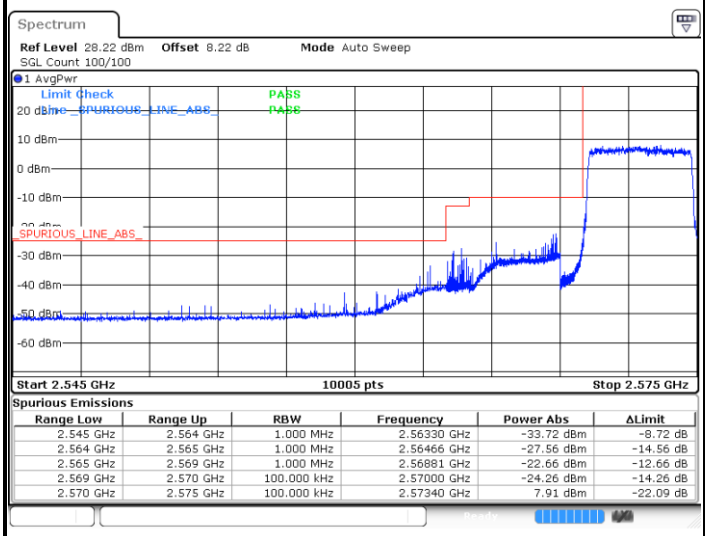


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.615 GHz	2.620 GHz	100.000 kHz	2.61965 GHz	20.73 dBm	-9.27 dB
2.620 GHz	2.621 GHz	100.000 kHz	2.62000 GHz	-13.36 dBm	-3.36 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62108 GHz	-12.33 dBm	-2.33 dB
2.625 GHz	2.626 GHz	1.000 MHz	2.62532 GHz	-28.89 dBm	-15.89 dB
2.626 GHz	2.645 GHz	1.000 MHz	2.63012 GHz	-29.83 dBm	-4.83 dB

Date: 9.AUG.2020 00:06:19

Lowest Band Edge / Full RB

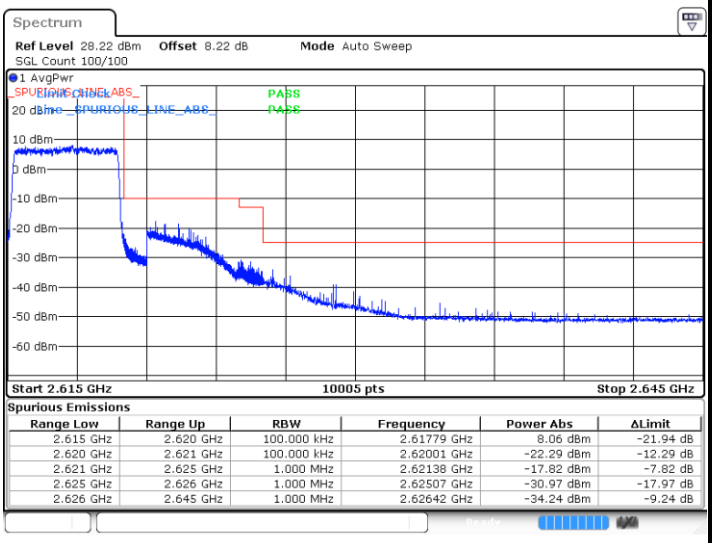


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.545 GHz	2.564 GHz	1.000 MHz	2.56330 GHz	-33.72 dBm	-8.72 dB
2.564 GHz	2.565 GHz	1.000 MHz	2.56466 GHz	-27.56 dBm	-14.56 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56881 GHz	-22.66 dBm	-12.66 dB
2.569 GHz	2.570 GHz	100.000 kHz	2.57000 GHz	-24.26 dBm	-14.26 dB
2.570 GHz	2.575 GHz	100.000 kHz	2.57340 GHz	7.91 dBm	-22.09 dB

Date: 9.AUG.2020 00:01:46

Highest Band Edge / Full RB



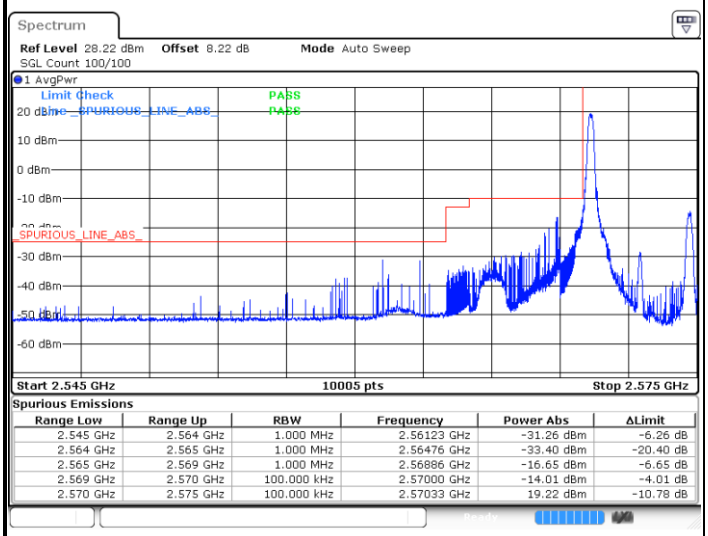
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.615 GHz	2.620 GHz	100.000 kHz	2.61779 GHz	8.06 dBm	-21.94 dB
2.620 GHz	2.621 GHz	100.000 kHz	2.62001 GHz	-22.29 dBm	-12.29 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62138 GHz	-17.82 dBm	-7.82 dB
2.625 GHz	2.626 GHz	1.000 MHz	2.62507 GHz	-30.97 dBm	-17.97 dB
2.626 GHz	2.645 GHz	1.000 MHz	2.62642 GHz	-34.24 dBm	-9.24 dB

Date: 9.AUG.2020 00:04:02

LTE Band 38 / 5MHz / 16QAM

Lowest Band Edge / 1RB

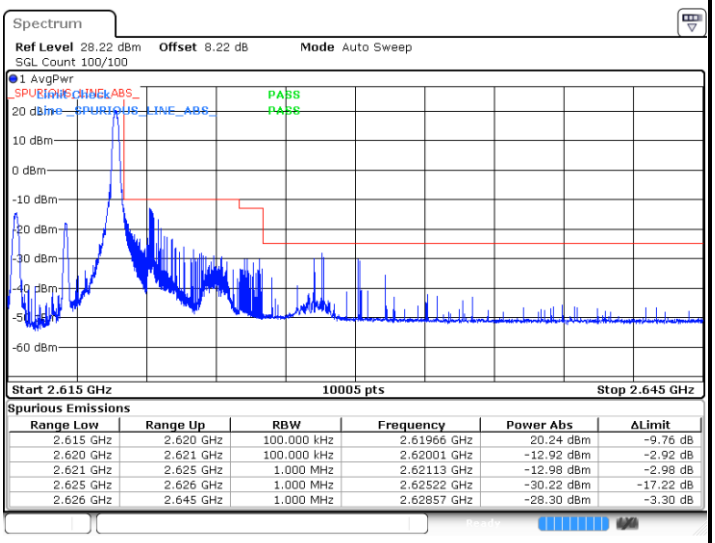


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.545 GHz	2.564 GHz	1.000 MHz	2.56123 GHz	-31.26 dBm	-6.26 dB
2.564 GHz	2.565 GHz	1.000 MHz	2.56476 GHz	-33.40 dBm	-20.40 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56886 GHz	-16.65 dBm	-6.65 dB
2.569 GHz	2.570 GHz	100.000 kHz	2.57000 GHz	-14.01 dBm	-4.01 dB
2.570 GHz	2.575 GHz	100.000 kHz	2.57033 GHz	19.22 dBm	-10.78 dB

Date: 9.AUG.2020 00:00:38

Highest Band Edge / 1 RB

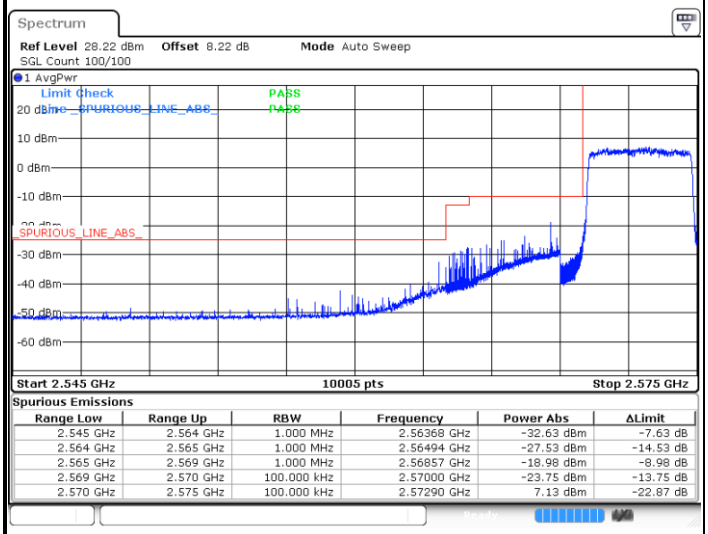


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.615 GHz	2.620 GHz	100.000 kHz	2.61966 GHz	20.24 dBm	-9.76 dB
2.620 GHz	2.621 GHz	100.000 kHz	2.62001 GHz	-12.92 dBm	-2.92 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62113 GHz	-12.98 dBm	-2.98 dB
2.625 GHz	2.626 GHz	1.000 MHz	2.62522 GHz	-30.22 dBm	-17.22 dB
2.626 GHz	2.645 GHz	1.000 MHz	2.62857 GHz	-28.30 dBm	-3.30 dB

Date: 9.AUG.2020 00:07:27

Lowest Band Edge / Full RB

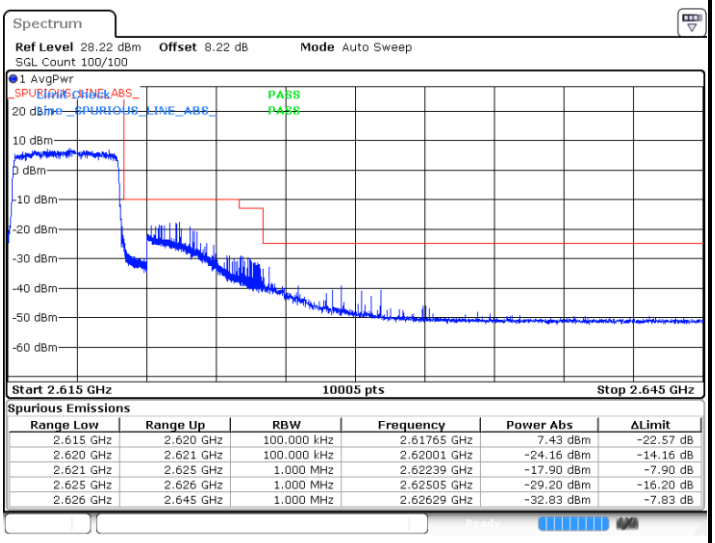


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.545 GHz	2.564 GHz	1.000 MHz	2.56368 GHz	-32.63 dBm	-7.63 dB
2.564 GHz	2.565 GHz	1.000 MHz	2.56494 GHz	-27.53 dBm	-14.53 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56857 GHz	-18.98 dBm	-8.98 dB
2.569 GHz	2.570 GHz	100.000 kHz	2.57000 GHz	-23.75 dBm	-13.75 dB
2.570 GHz	2.575 GHz	100.000 kHz	2.57290 GHz	7.13 dBm	-22.87 dB

Date: 9.AUG.2020 00:02:54

Highest Band Edge / Full RB



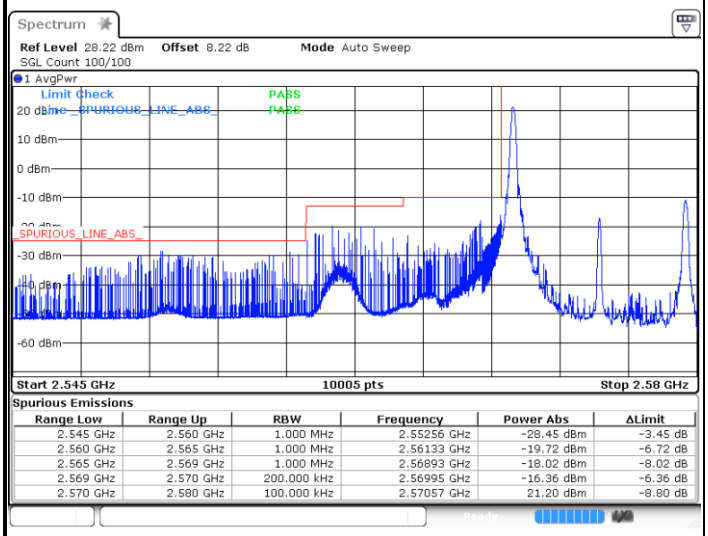
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.615 GHz	2.620 GHz	100.000 kHz	2.61765 GHz	7.43 dBm	-22.57 dB
2.620 GHz	2.621 GHz	100.000 kHz	2.62001 GHz	-24.16 dBm	-14.16 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62239 GHz	-17.90 dBm	-7.90 dB
2.625 GHz	2.626 GHz	1.000 MHz	2.62505 GHz	-29.20 dBm	-16.20 dB
2.626 GHz	2.645 GHz	1.000 MHz	2.62629 GHz	-32.83 dBm	-7.83 dB

Date: 9.AUG.2020 00:05:10

LTE Band 38 / 10MHz / QPSK

Lowest Band Edge / 1 RB

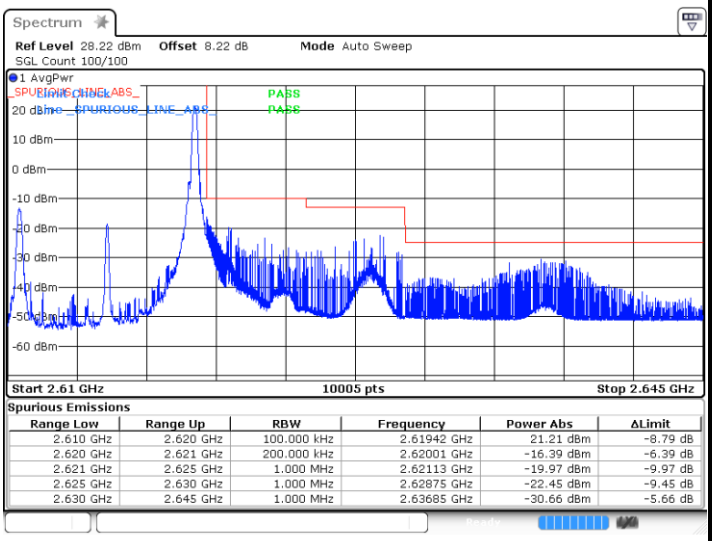


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.545 GHz	2.560 GHz	1.000 MHz	2.55256 GHz	-28.45 dBm	-3.45 dB
2.560 GHz	2.565 GHz	1.000 MHz	2.56133 GHz	-19.72 dBm	-6.72 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56893 GHz	-18.02 dBm	-8.02 dB
2.569 GHz	2.570 GHz	200.000 kHz	2.56995 GHz	-16.36 dBm	-6.36 dB
2.570 GHz	2.580 GHz	100.000 kHz	2.57057 GHz	21.20 dBm	-8.80 dB

Date: 9.AUG.2020 00:53:04

Highest Band Edge / 1 RB

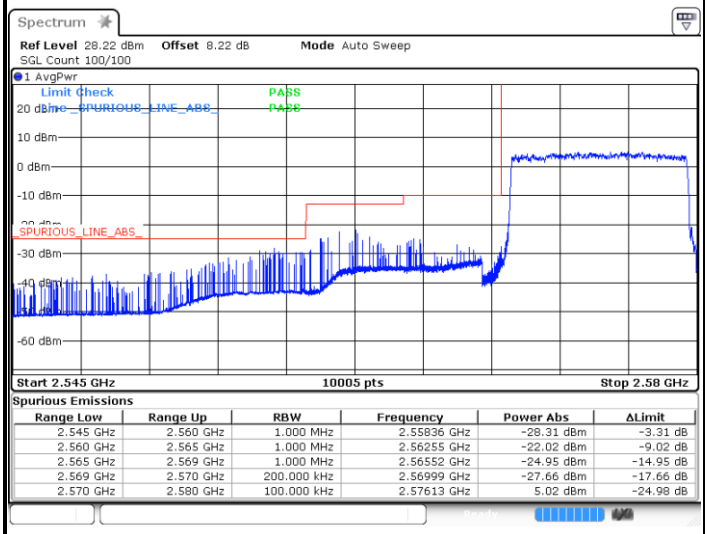


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.610 GHz	2.620 GHz	100.000 kHz	2.61942 GHz	21.21 dBm	-8.79 dB
2.620 GHz	2.621 GHz	200.000 kHz	2.62001 GHz	-16.39 dBm	-6.39 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62113 GHz	-19.97 dBm	-9.97 dB
2.625 GHz	2.630 GHz	1.000 MHz	2.62875 GHz	-22.45 dBm	-9.45 dB
2.630 GHz	2.645 GHz	1.000 MHz	2.63685 GHz	-30.66 dBm	-5.66 dB

Date: 9.AUG.2020 00:54:56

Lowest Band Edge / Full RB

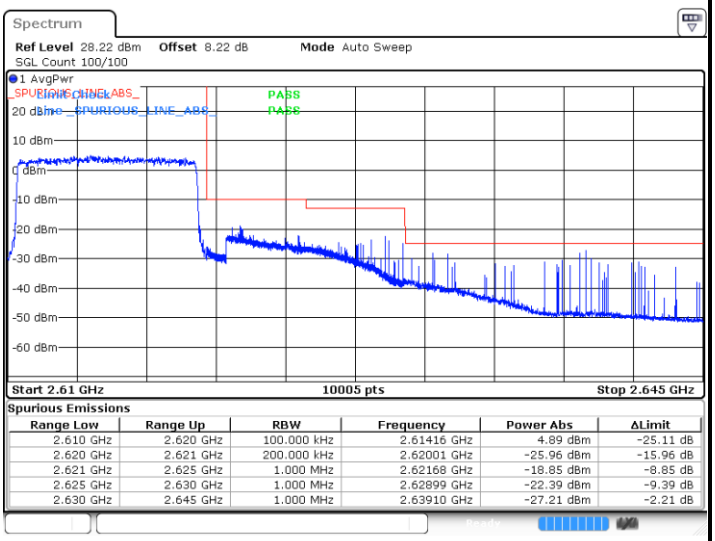


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.545 GHz	2.560 GHz	1.000 MHz	2.55836 GHz	-28.31 dBm	-3.31 dB
2.560 GHz	2.565 GHz	1.000 MHz	2.56255 GHz	-22.02 dBm	-9.02 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56552 GHz	-24.95 dBm	-14.95 dB
2.569 GHz	2.570 GHz	200.000 kHz	2.56999 GHz	-27.66 dBm	-17.66 dB
2.570 GHz	2.580 GHz	100.000 kHz	2.57613 GHz	5.02 dBm	-24.98 dB

Date: 9.AUG.2020 00:54:11

Highest Band Edge / Full RB



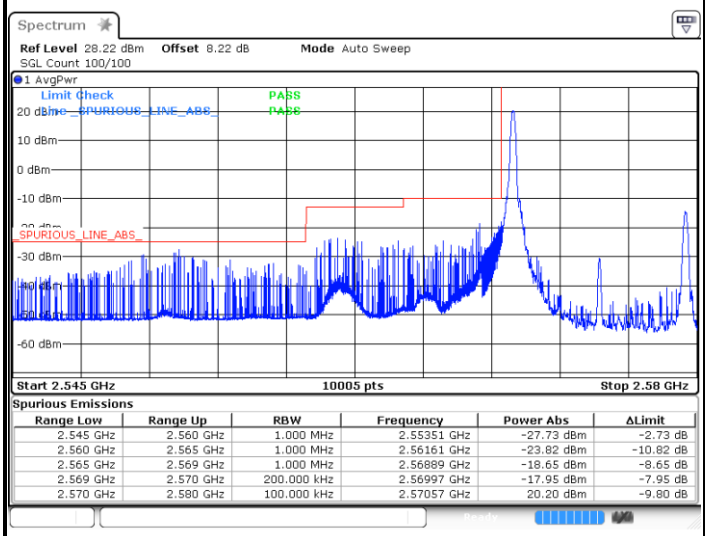
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.610 GHz	2.620 GHz	100.000 kHz	2.61416 GHz	4.89 dBm	-25.11 dB
2.620 GHz	2.621 GHz	200.000 kHz	2.62001 GHz	-25.96 dBm	-15.96 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62168 GHz	-18.85 dBm	-8.85 dB
2.625 GHz	2.630 GHz	1.000 MHz	2.62899 GHz	-22.39 dBm	-9.39 dB
2.630 GHz	2.645 GHz	1.000 MHz	2.63910 GHz	-27.21 dBm	-2.21 dB

Date: 9.AUG.2020 00:13:08

LTE Band 38 / 10MHz / 16QAM

Lowest Band Edge / 1 RB

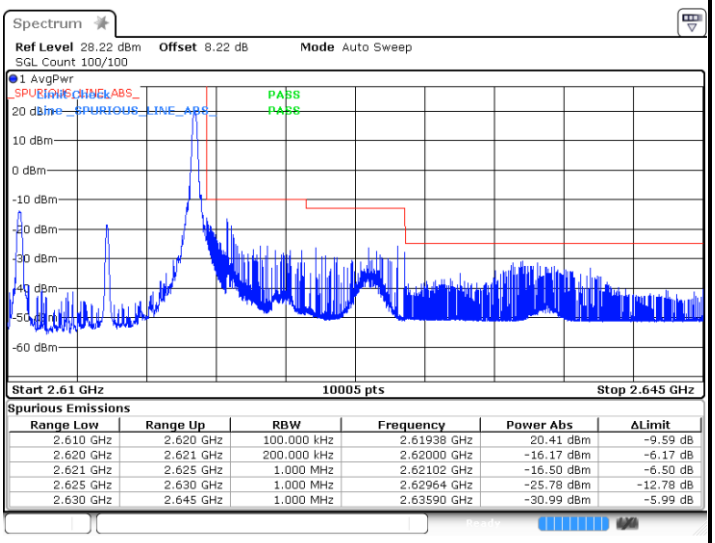


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.545 GHz	2.560 GHz	1.000 MHz	2.55351 GHz	-27.73 dBm	-2.73 dB
2.560 GHz	2.565 GHz	1.000 MHz	2.56161 GHz	-23.82 dBm	-10.82 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56889 GHz	-18.65 dBm	-8.65 dB
2.569 GHz	2.570 GHz	200.000 kHz	2.56997 GHz	-17.95 dBm	-7.95 dB
2.570 GHz	2.580 GHz	100.000 kHz	2.57057 GHz	20.20 dBm	-9.80 dB

Date: 9.AUG.2020 00:53:26

Highest Band Edge / 1 RB

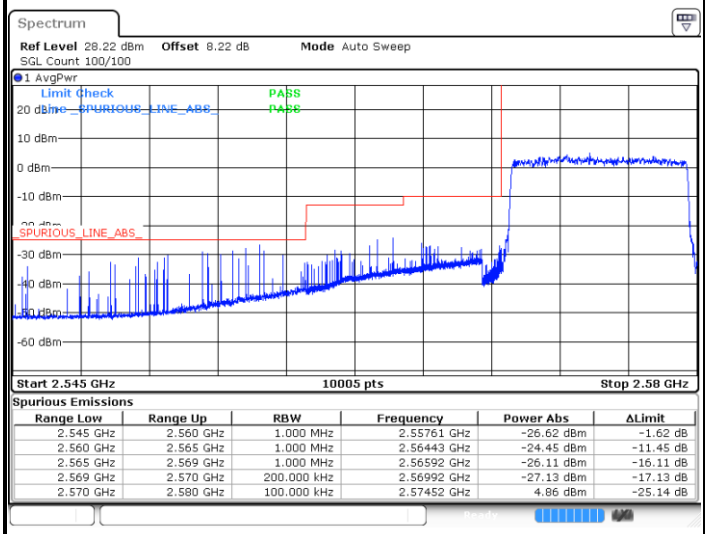


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.610 GHz	2.620 GHz	100.000 kHz	2.61938 GHz	20.41 dBm	-9.59 dB
2.620 GHz	2.621 GHz	200.000 kHz	2.62000 GHz	-16.17 dBm	-6.17 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62102 GHz	-16.50 dBm	-6.50 dB
2.625 GHz	2.630 GHz	1.000 MHz	2.62964 GHz	-25.78 dBm	-12.78 dB
2.630 GHz	2.645 GHz	1.000 MHz	2.63590 GHz	-30.99 dBm	-5.99 dB

Date: 9.AUG.2020 00:55:21

Lowest Band Edge / Full RB

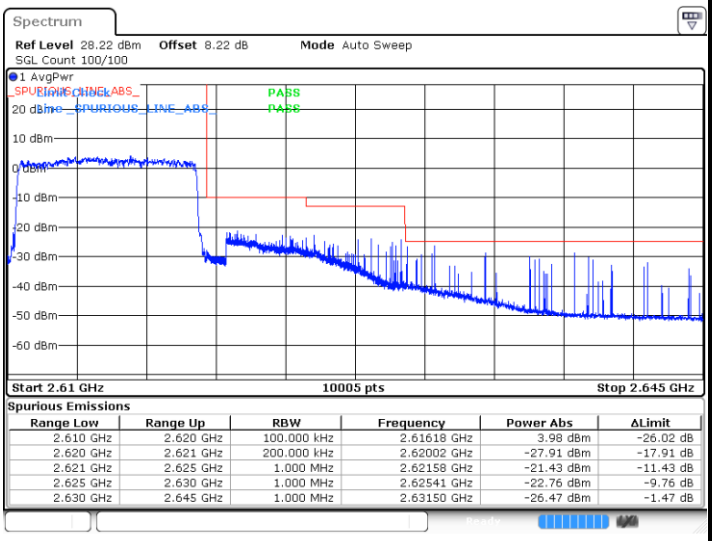


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.545 GHz	2.560 GHz	1.000 MHz	2.55761 GHz	-26.62 dBm	-1.62 dB
2.560 GHz	2.565 GHz	1.000 MHz	2.56443 GHz	-24.45 dBm	-11.45 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56592 GHz	-26.11 dBm	-16.11 dB
2.569 GHz	2.570 GHz	200.000 kHz	2.56992 GHz	-27.13 dBm	-17.13 dB
2.570 GHz	2.580 GHz	100.000 kHz	2.57452 GHz	4.86 dBm	-25.14 dB

Date: 9.AUG.2020 00:11:59

Highest Band Edge / Full RB



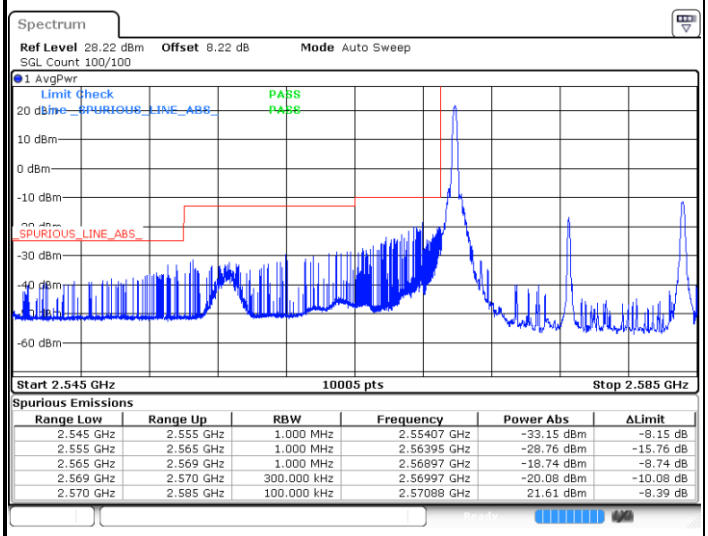
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.610 GHz	2.620 GHz	100.000 kHz	2.61618 GHz	3.98 dBm	-26.02 dB
2.620 GHz	2.621 GHz	200.000 kHz	2.62002 GHz	-27.91 dBm	-17.91 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62158 GHz	-21.43 dBm	-11.43 dB
2.625 GHz	2.630 GHz	1.000 MHz	2.62541 GHz	-22.76 dBm	-9.76 dB
2.630 GHz	2.645 GHz	1.000 MHz	2.63150 GHz	-26.47 dBm	-1.47 dB

Date: 9.AUG.2020 00:14:16

TE Band 38 / 15MHz / QPSK

Lowest Band Edge / 1 RB

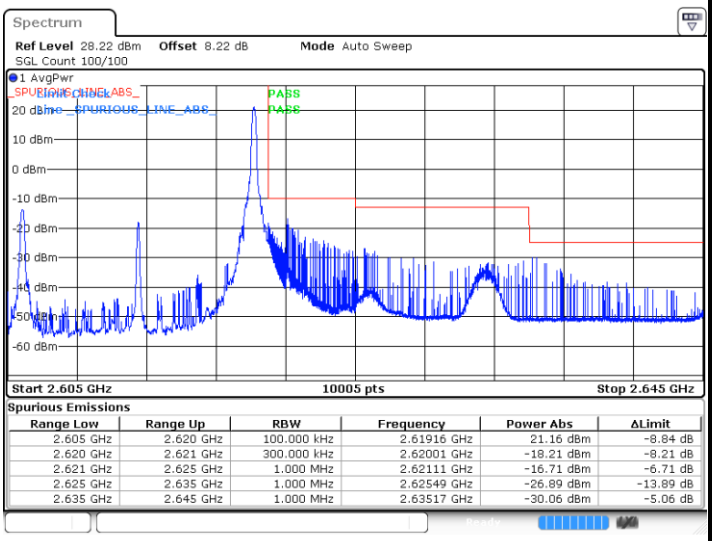


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.545 GHz	2.555 GHz	1.000 MHz	2.55407 GHz	-33.15 dBm	-8.15 dB
2.555 GHz	2.565 GHz	1.000 MHz	2.56395 GHz	-28.76 dBm	-15.76 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56897 GHz	-18.74 dBm	-8.74 dB
2.569 GHz	2.570 GHz	300.000 kHz	2.56997 GHz	-20.08 dBm	-10.08 dB
2.570 GHz	2.585 GHz	100.000 kHz	2.57088 GHz	21.61 dBm	-8.39 dB

Date: 9.AUG.2020 00:17:40

Highest Band Edge / 1 RB

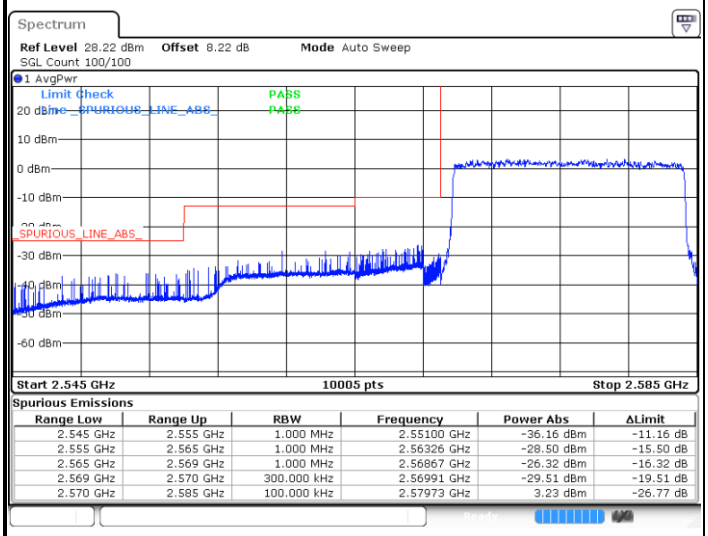


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.605 GHz	2.620 GHz	100.000 kHz	2.61916 GHz	21.16 dBm	-8.84 dB
2.620 GHz	2.621 GHz	300.000 kHz	2.62001 GHz	-18.21 dBm	-8.21 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62111 GHz	-16.71 dBm	-6.71 dB
2.625 GHz	2.635 GHz	1.000 MHz	2.62549 GHz	-26.89 dBm	-13.89 dB
2.635 GHz	2.645 GHz	1.000 MHz	2.63517 GHz	-30.06 dBm	-5.06 dB

Date: 9.AUG.2020 00:24:29

Lowest Band Edge / Full RB

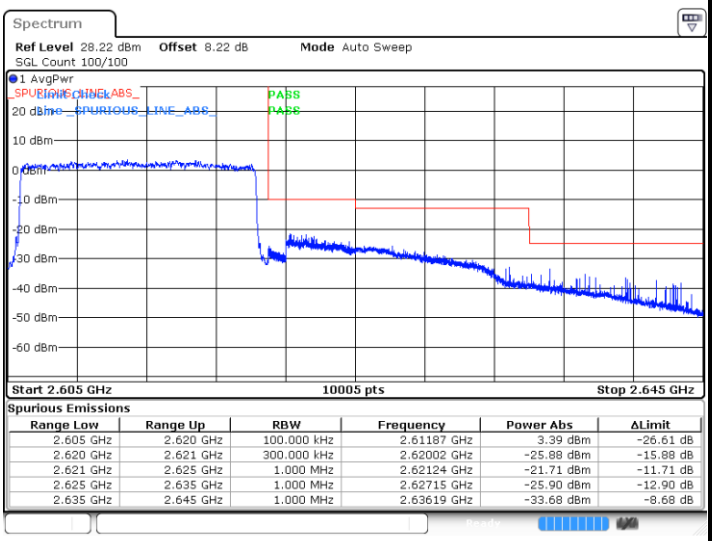


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.545 GHz	2.555 GHz	1.000 MHz	2.55100 GHz	-36.16 dBm	-11.16 dB
2.555 GHz	2.565 GHz	1.000 MHz	2.56326 GHz	-28.50 dBm	-15.50 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56867 GHz	-26.32 dBm	-16.32 dB
2.569 GHz	2.570 GHz	300.000 kHz	2.56991 GHz	-29.51 dBm	-19.51 dB
2.570 GHz	2.585 GHz	100.000 kHz	2.57973 GHz	3.23 dBm	-26.77 dB

Date: 9.AUG.2020 00:19:56

Highest Band Edge / Full RB



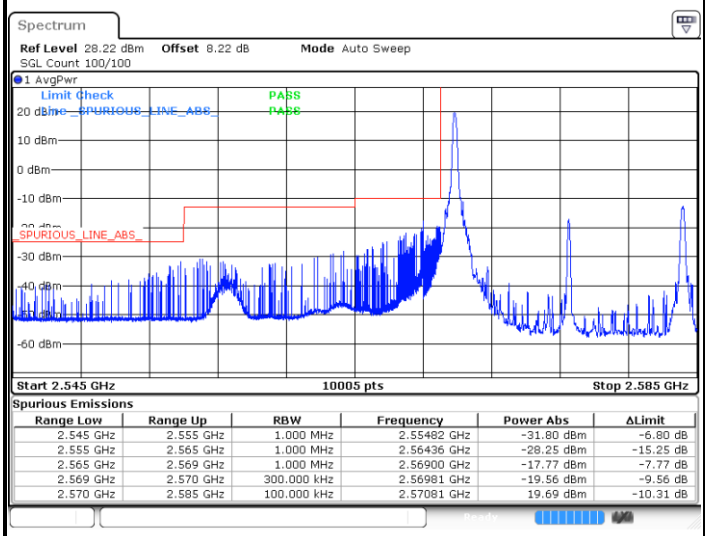
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.605 GHz	2.620 GHz	100.000 kHz	2.61187 GHz	3.39 dBm	-26.61 dB
2.620 GHz	2.621 GHz	300.000 kHz	2.62002 GHz	-25.88 dBm	-15.88 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62124 GHz	-21.71 dBm	-11.71 dB
2.625 GHz	2.635 GHz	1.000 MHz	2.62715 GHz	-25.90 dBm	-12.90 dB
2.635 GHz	2.645 GHz	1.000 MHz	2.63619 GHz	-33.68 dBm	-8.68 dB

Date: 9.AUG.2020 00:22:13

LTE Band 38 / 15MHz / 16QAM

Lowest Band Edge / 1 RB

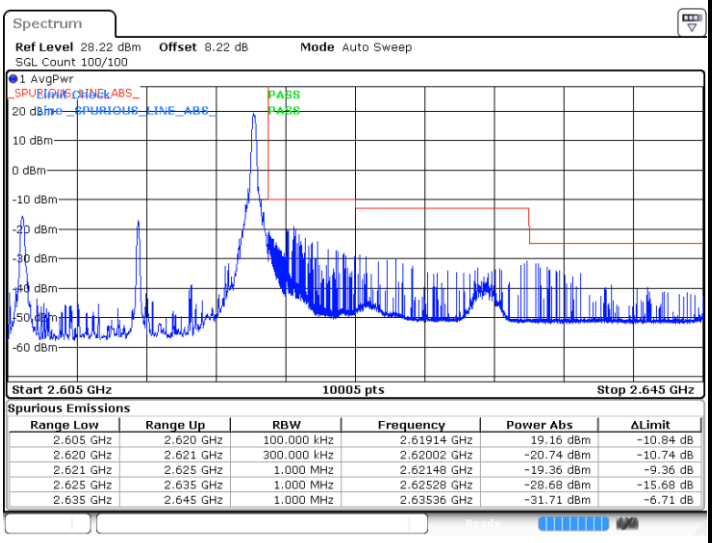


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.545 GHz	2.555 GHz	1.000 MHz	2.55482 GHz	-31.80 dBm	-6.80 dB
2.555 GHz	2.565 GHz	1.000 MHz	2.56436 GHz	-28.25 dBm	-15.25 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56900 GHz	-17.77 dBm	-7.77 dB
2.569 GHz	2.570 GHz	300.000 kHz	2.56981 GHz	-19.56 dBm	-9.56 dB
2.570 GHz	2.585 GHz	100.000 kHz	2.57081 GHz	19.69 dBm	-10.31 dB

Date: 9.AUG.2020 00:18:48

Highest Band Edge / 1 RB

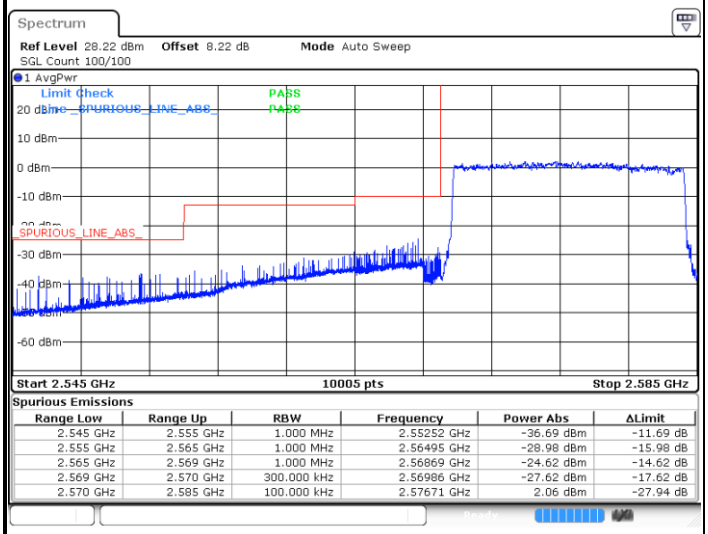


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.605 GHz	2.620 GHz	100.000 kHz	2.61914 GHz	19.16 dBm	-10.84 dB
2.620 GHz	2.621 GHz	300.000 kHz	2.62002 GHz	-20.74 dBm	-10.74 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62148 GHz	-19.36 dBm	-9.36 dB
2.625 GHz	2.635 GHz	1.000 MHz	2.62528 GHz	-28.68 dBm	-15.68 dB
2.635 GHz	2.645 GHz	1.000 MHz	2.63536 GHz	-31.71 dBm	-6.71 dB

Date: 9.AUG.2020 00:25:37

Lowest Band Edge / Full RB

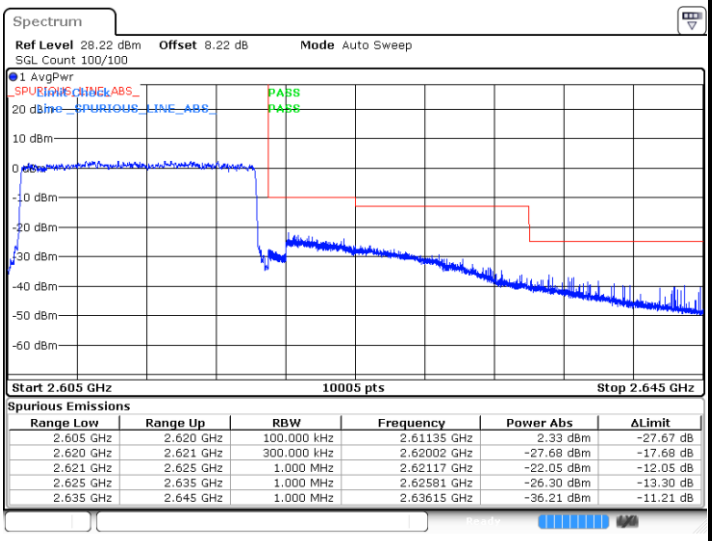


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.545 GHz	2.555 GHz	1.000 MHz	2.55252 GHz	-36.69 dBm	-11.69 dB
2.555 GHz	2.565 GHz	1.000 MHz	2.56495 GHz	-28.98 dBm	-15.98 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56869 GHz	-24.62 dBm	-14.62 dB
2.569 GHz	2.570 GHz	300.000 kHz	2.56986 GHz	-27.62 dBm	-17.62 dB
2.570 GHz	2.585 GHz	100.000 kHz	2.57671 GHz	2.06 dBm	-27.94 dB

Date: 9.AUG.2020 00:21:05

Highest Band Edge / Full RB



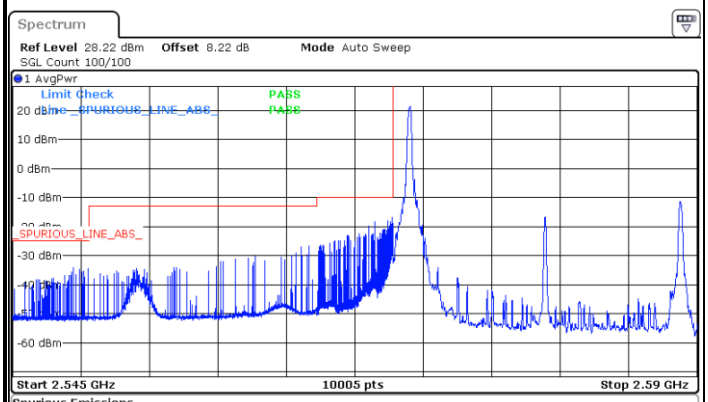
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.605 GHz	2.620 GHz	100.000 kHz	2.61135 GHz	2.33 dBm	-27.67 dB
2.620 GHz	2.621 GHz	300.000 kHz	2.62002 GHz	-27.68 dBm	-17.68 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62117 GHz	-22.05 dBm	-12.05 dB
2.625 GHz	2.635 GHz	1.000 MHz	2.62581 GHz	-26.30 dBm	-13.30 dB
2.635 GHz	2.645 GHz	1.000 MHz	2.63615 GHz	-36.21 dBm	-11.21 dB

Date: 9.AUG.2020 00:23:21

LTE Band 38 / 20MHz / QPSK

Lowest Band Edge / 1 RB

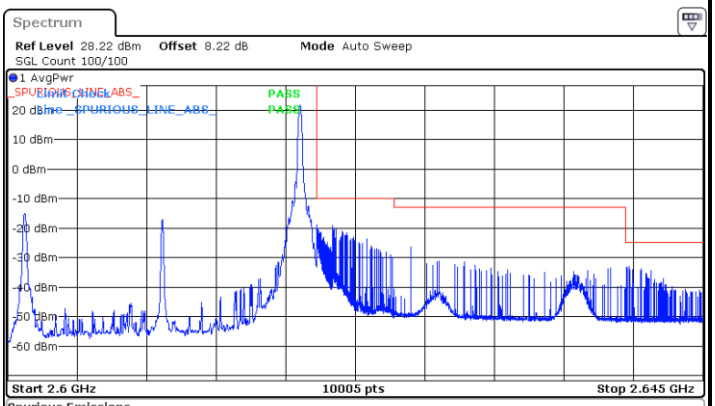


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.545 GHz	2.550 GHz	1.000 MHz	2.54901 GHz	-34.23 dBm	-9.23 dB
2.550 GHz	2.565 GHz	1.000 MHz	2.56449 GHz	-26.64 dBm	-13.64 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56879 GHz	-18.45 dBm	-8.45 dB
2.569 GHz	2.570 GHz	500.000 kHz	2.56997 GHz	-16.94 dBm	-6.94 dB
2.570 GHz	2.590 GHz	100.000 kHz	2.57113 GHz	21.39 dBm	-8.61 dB

Date: 9.AUG.2020 00:26:45

Highest Band Edge / 1 RB

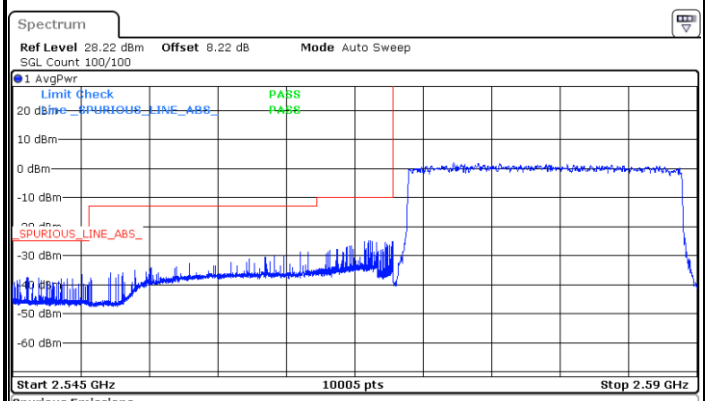


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.600 GHz	2.620 GHz	100.000 kHz	2.61892 GHz	21.77 dBm	-8.23 dB
2.620 GHz	2.621 GHz	500.000 kHz	2.62000 GHz	-18.96 dBm	-8.96 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62104 GHz	-19.26 dBm	-9.26 dB
2.625 GHz	2.640 GHz	1.000 MHz	2.62608 GHz	-26.36 dBm	-13.36 dB
2.640 GHz	2.645 GHz	1.000 MHz	2.64020 GHz	-32.95 dBm	-7.95 dB

Date: 9.AUG.2020 00:33:34

Lowest Band Edge / Full RB

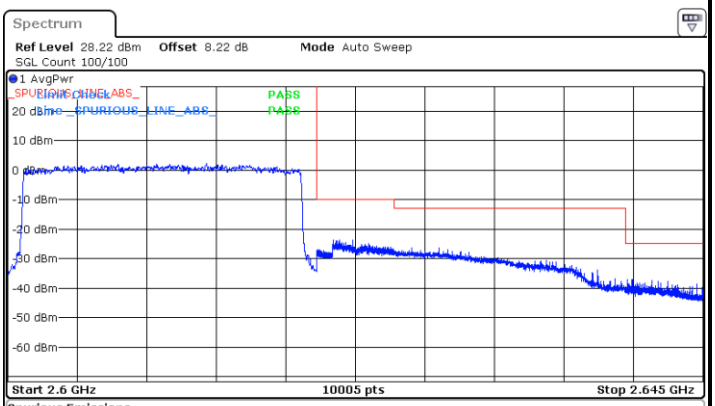


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.545 GHz	2.550 GHz	1.000 MHz	2.54957 GHz	-36.59 dBm	-11.59 dB
2.550 GHz	2.565 GHz	1.000 MHz	2.56440 GHz	-28.77 dBm	-15.77 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56853 GHz	-24.93 dBm	-14.93 dB
2.569 GHz	2.570 GHz	500.000 kHz	2.56996 GHz	-25.30 dBm	-15.30 dB
2.570 GHz	2.590 GHz	100.000 kHz	2.57399 GHz	1.99 dBm	-28.01 dB

Date: 9.AUG.2020 00:29:02

Highest Band Edge / Full RB



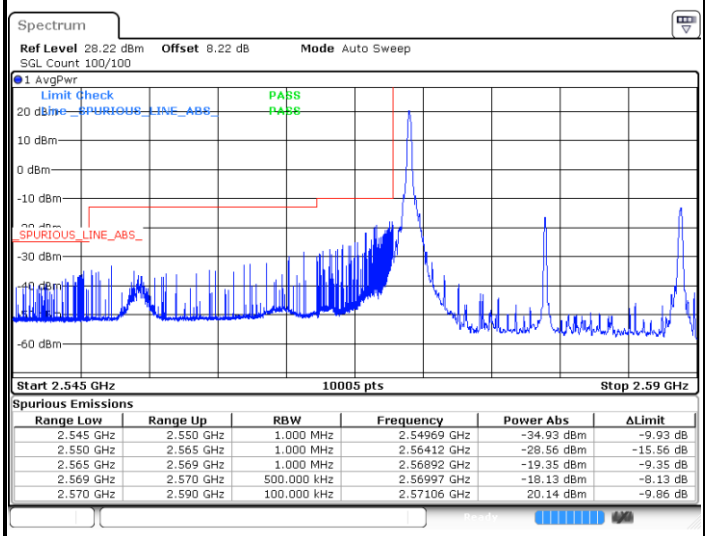
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.600 GHz	2.620 GHz	100.000 kHz	2.61287 GHz	2.11 dBm	-27.89 dB
2.620 GHz	2.621 GHz	500.000 kHz	2.62005 GHz	-26.91 dBm	-16.91 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62150 GHz	-23.70 dBm	-13.70 dB
2.625 GHz	2.640 GHz	1.000 MHz	2.62793 GHz	-26.36 dBm	-13.36 dB
2.640 GHz	2.645 GHz	1.000 MHz	2.64043 GHz	-37.22 dBm	-12.22 dB

Date: 9.AUG.2020 00:31:18

LTE Band 38 / 20MHz / 16QAM

Lowest Band Edge / 1 RB

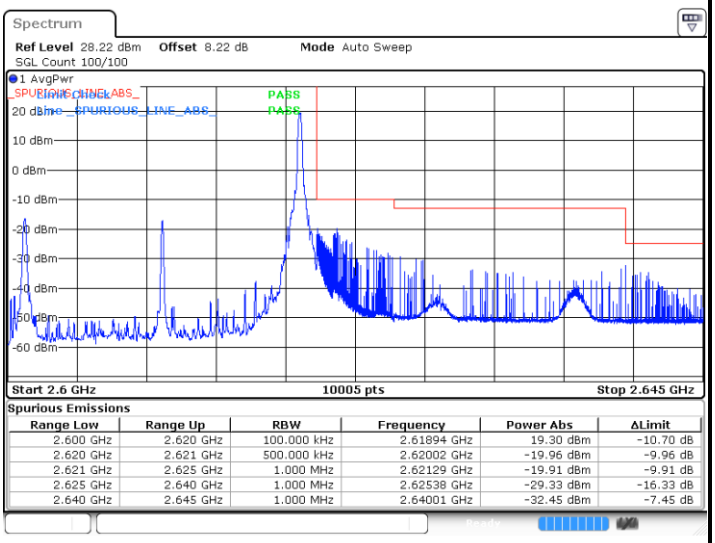


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.545 GHz	2.550 GHz	1.000 MHz	2.54969 GHz	-34.93 dBm	-9.93 dB
2.550 GHz	2.565 GHz	1.000 MHz	2.56412 GHz	-28.56 dBm	-15.56 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56892 GHz	-19.35 dBm	-9.35 dB
2.569 GHz	2.570 GHz	500.000 kHz	2.56997 GHz	-18.13 dBm	-8.13 dB
2.570 GHz	2.590 GHz	100.000 kHz	2.57106 GHz	20.14 dBm	-9.86 dB

Date: 9.AUG.2020 00:27:54

Highest Band Edge / 1 RB

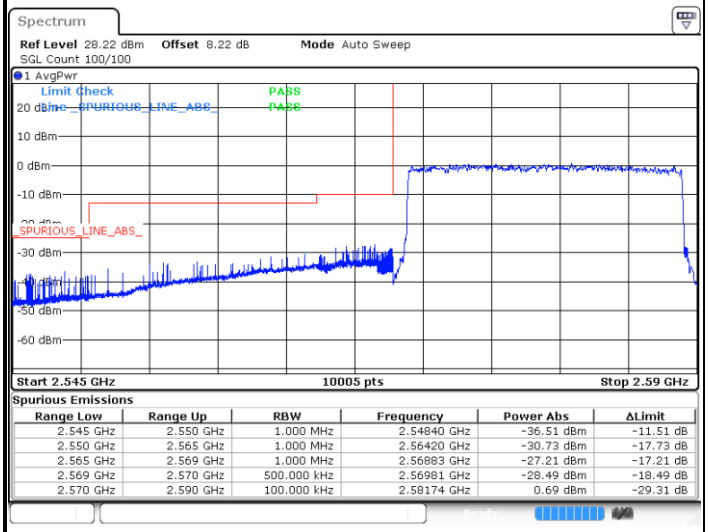


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.600 GHz	2.620 GHz	100.000 kHz	2.61894 GHz	19.30 dBm	-10.70 dB
2.620 GHz	2.621 GHz	500.000 kHz	2.62002 GHz	-19.96 dBm	-9.96 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62129 GHz	-19.91 dBm	-9.91 dB
2.625 GHz	2.640 GHz	1.000 MHz	2.62538 GHz	-29.33 dBm	-16.33 dB
2.640 GHz	2.645 GHz	1.000 MHz	2.64001 GHz	-32.45 dBm	-7.45 dB

Date: 9.AUG.2020 00:34:43

Lowest Band Edge / Full RB

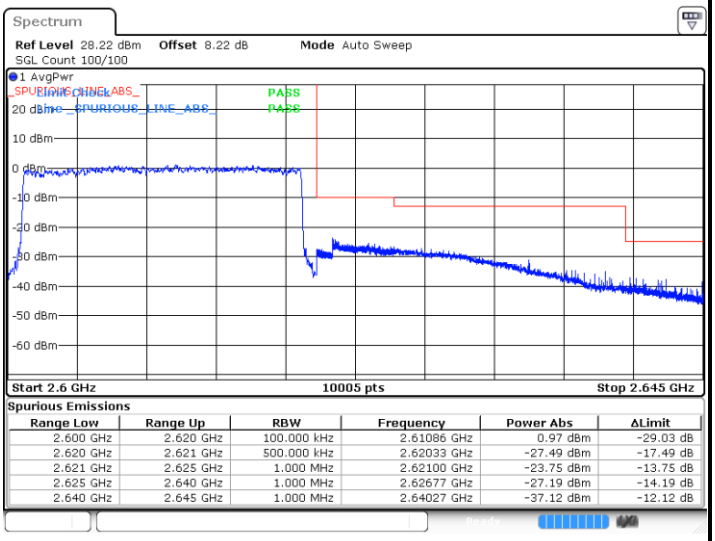


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.545 GHz	2.550 GHz	1.000 MHz	2.54840 GHz	-36.51 dBm	-11.51 dB
2.550 GHz	2.565 GHz	1.000 MHz	2.56420 GHz	-30.73 dBm	-17.73 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56883 GHz	-27.21 dBm	-17.21 dB
2.569 GHz	2.570 GHz	500.000 kHz	2.56981 GHz	-28.49 dBm	-18.49 dB
2.570 GHz	2.590 GHz	100.000 kHz	2.58174 GHz	0.69 dBm	-29.31 dB

Date: 9.AUG.2020 00:30:10

Highest Band Edge / Full RB



Spurious Emissions

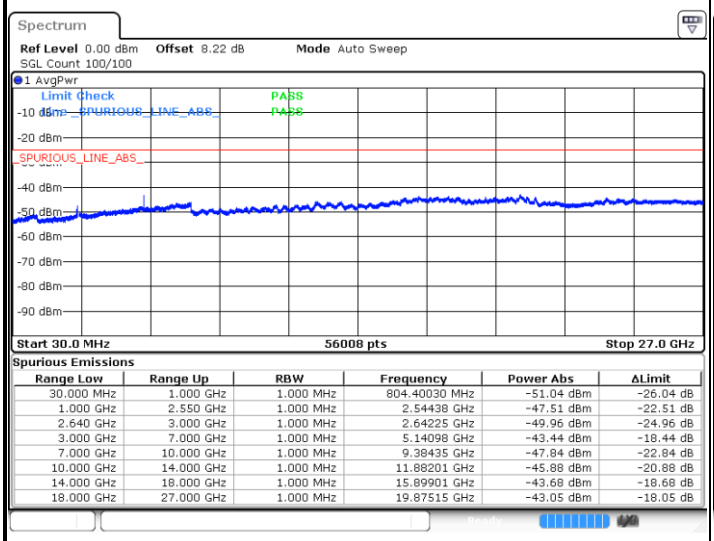
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.600 GHz	2.620 GHz	100.000 kHz	2.61086 GHz	0.97 dBm	-29.03 dB
2.620 GHz	2.621 GHz	500.000 kHz	2.62033 GHz	-27.49 dBm	-17.49 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62100 GHz	-23.75 dBm	-13.75 dB
2.625 GHz	2.640 GHz	1.000 MHz	2.62677 GHz	-27.19 dBm	-14.19 dB
2.640 GHz	2.645 GHz	1.000 MHz	2.64027 GHz	-37.12 dBm	-12.12 dB

Date: 9.AUG.2020 00:32:26

Conducted Spurious Emission

LTE Band 38 / 5MHz

Lowest Channel / QPSK

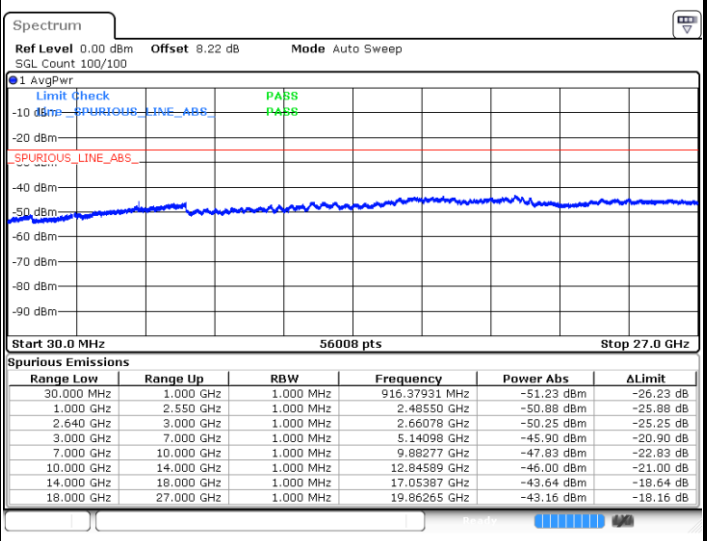


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	804.40030 MHz	-51.04 dBm	-26.04 dB
1.000 GHz	2.550 GHz	1.000 MHz	2.54438 GHz	-47.51 dBm	-22.51 dB
2.640 GHz	3.000 GHz	1.000 MHz	2.64225 GHz	-49.96 dBm	-24.96 dB
3.000 GHz	7.000 GHz	1.000 MHz	5.14098 GHz	-43.44 dBm	-18.44 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.38435 GHz	-47.84 dBm	-22.84 dB
10.000 GHz	14.000 GHz	1.000 MHz	11.88201 GHz	-45.88 dBm	-20.88 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.89901 GHz	-43.68 dBm	-18.68 dB
18.000 GHz	27.000 GHz	1.000 MHz	19.87515 GHz	-43.05 dBm	-18.05 dB

Date: 8.AUG.2020 23:11:03

Lowest Channel / 16QAM

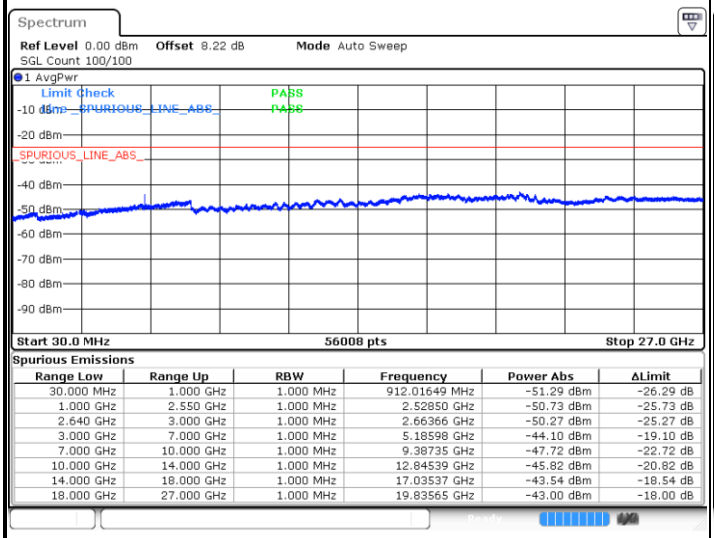


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	916.37931 MHz	-51.23 dBm	-26.23 dB
1.000 GHz	2.550 GHz	1.000 MHz	2.48550 GHz	-50.88 dBm	-25.88 dB
2.640 GHz	3.000 GHz	1.000 MHz	2.66078 GHz	-50.25 dBm	-25.25 dB
3.000 GHz	7.000 GHz	1.000 MHz	5.14098 GHz	-45.90 dBm	-20.90 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.88277 GHz	-47.83 dBm	-22.83 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.84589 GHz	-46.00 dBm	-21.00 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.05387 GHz	-43.64 dBm	-18.64 dB
18.000 GHz	27.000 GHz	1.000 MHz	19.86265 GHz	-43.16 dBm	-18.16 dB

Date: 8.AUG.2020 23:11:58

Middle Channel / QPSK

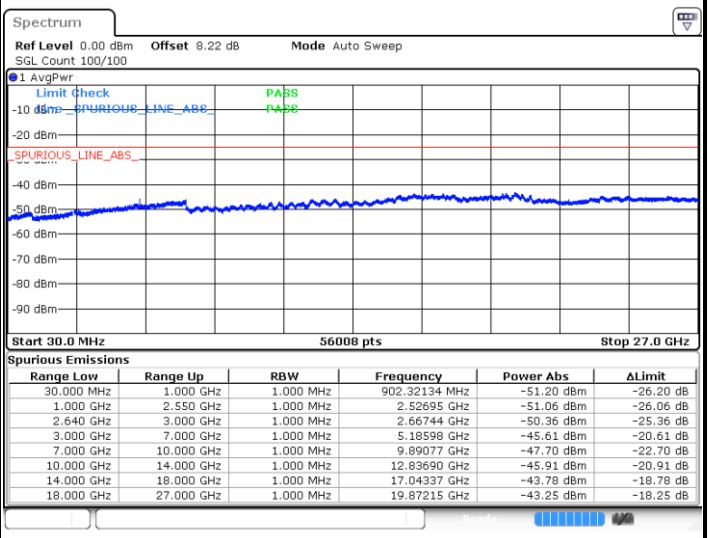


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	912.01649 MHz	-51.29 dBm	-26.29 dB
1.000 GHz	2.550 GHz	1.000 MHz	2.52850 GHz	-50.73 dBm	-25.73 dB
2.640 GHz	3.000 GHz	1.000 MHz	2.66366 GHz	-50.27 dBm	-25.27 dB
3.000 GHz	7.000 GHz	1.000 MHz	5.18598 GHz	-44.10 dBm	-19.10 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.38735 GHz	-47.72 dBm	-22.72 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.84539 GHz	-45.82 dBm	-20.82 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.03537 GHz	-43.54 dBm	-18.54 dB
18.000 GHz	27.000 GHz	1.000 MHz	19.83565 GHz	-43.00 dBm	-18.00 dB

Date: 8.AUG.2020 23:12:53

Middle Channel / 16QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	902.32134 MHz	-51.20 dBm	-26.20 dB
1.000 GHz	2.550 GHz	1.000 MHz	2.52695 GHz	-51.06 dBm	-26.06 dB
2.640 GHz	3.000 GHz	1.000 MHz	2.66744 GHz	-50.36 dBm	-25.36 dB
3.000 GHz	7.000 GHz	1.000 MHz	5.18598 GHz	-45.61 dBm	-20.61 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.89077 GHz	-47.70 dBm	-22.70 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.83690 GHz	-45.91 dBm	-20.91 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.04337 GHz	-43.78 dBm	-18.78 dB
18.000 GHz	27.000 GHz	1.000 MHz	19.87215 GHz	-43.25 dBm	-18.25 dB

Date: 8.AUG.2020 23:13:48