FCC RF Test Report

APPLICANT	:	Motorola Mobility LLC
EQUIPMENT	:	Mobile Phone
BRAND NAME	:	Motorola,Lenovo
MODEL NAME	:	XT2155-3, XT2155-4
FCC ID	:	IHDT56ZW5
STANDARD	:	47 CFR Part 2, 22(H), 27(M)
CLASSIFICATION	:	PCS Licensed Transmitter Held to Ear (PCE)
Test Date(s)	:	May 21, 2021 ~ May 28, 2021

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

Alex Wang

Approved by: Alex Wang / 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

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG142611-02B	Rev. 01	Initial issue of report	Jul. 01, 2021

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	-
	§27.50(h)(2)	Equivalent Isotropic Radiated Power (Band 7) (Band 38) (Band 41)	EIRP < 2Watt	PASS	-
3.6	§2.1049	Occupied Bandwidth	Reporting Only	PASS	-
3.7	§27.53(m)(4)	Conducted Band Edge Measurement (Band 38) (Band 41)	§27.53(m)(4)	PASS	-
3.8	§2.1051 §27.53(m)(4)	Conducted Spurious Emission (Band 38) (Band 41)	< $55+10\log_{10}$(P[Watts])	PASS	-
3.9	§2.1055 §27.54	Frequency Stability Temperature & Voltage	Within Authorized Band	PASS	-
4.4	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (Band 38) (Band 41)	< $55+10\log_{10}$(P[Watts])	PASS	Under limit 24.56 dB at 5172.000 MHz

Declaration of Conformity:

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

Comments and Explanations:

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

1 General Description

1.1 Applicant

Motorola Mobility LLC
222 W, Merchandise Mart Plaza,Chicago,IL60654 USA

1.2 Manufacturer

Motorola Mobility LLC
222 W, Merchandise Mart Plaza,Chicago,IL60654 USA

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Phone
Brand Name	Motorola,Lenovo
Model Name	XT2155-3, XT2155-4
FCC ID	IHDT56ZW5
EUT supports Radios application	GSM/WCDMA/LTE WLAN 2.4GHz 802.11b/g/n HT20 Bluetooth BR/EDR/LE FM Receiver, and GNSS
IMEI Code	Conducted: N/A Radiation: 356671880005978/356671880005974
HW Version	DVT2
SW Version	RON31.179-2
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	LTE Band 5 : 824 MHz ~ 849 MHz LTE Band 7 : 2500 MHz ~ 2570 MHz LTE Band 38 : 2570 MHz ~ 2620 MHz LTE Band 41 : 2535 MHz ~ 2655 MHz
Rx Frequency	LTE Band 5 : 869 MHz ~ 894 MHz LTE Band 7 : 2620 MHz ~ 2690 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41 : 2535 MHz ~ 2655 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 5 : 23.31 dBm LTE Band 7 : 23.56 dBm LTE Band 38 : 23.26 dBm LTE Band 41 : 23.45 dBm
Antenna Gain	LTE Band 5 : -3.6 dBi LTE Band 7 : -2.3 dBi LTE Band 38 : -2.3 dBi LTE Band 41 : -2.3 dBi
Type of Modulation	QPSK / 16QAM / 64QAM

1.5 Modification of EUT

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

1.6 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: XT2155-3, XT2155-4, FCC ID: IHDT56ZW5) is electrically identical to the reference device (Model: XT2155-1, FCC ID: IHDT56ZW4) 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 B (Sporton RF Report No. FG142611B for the reference device Model: XT2155-1, FCC ID: IHDT56ZW4).

1.6.3 Reference detail Section:

Equipment Class	Reference FCC ID	Folder Test	Report Title/Section
PCE	IHDT56ZW4	FG142611B	All sections applicable for LTE Band 5/7 except ERP/EIRP

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: IHDT56ZW4.

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	IHDT56ZW4 Worst Result	IHDT56ZW5 Worst Result	Difference (dB)
Radiated Spurious Emission (dBm)	Part22H LTE B5	-51.20	-51.45	-0.25
	Part27M LTE B7	-48.44	-47.49	0.95

1.7 Maximum ERP/EIRP Power and Emission Designator

LTE Band 5		QPSK		16QAM/64QAM	
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)
10	829.0 ~ 844.0	0.0570	-	0.0478	-
LTE Band 7		**QPSK**		**16QAM/64QAM**	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
20	2510.0 ~ 2560.0	0.1337	-	0.1153	-
LTE Band 38		**QPSK**		**16QAM/64QAM**	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
20	2580.0 ~ 2610.0	0.1247	17M9G7D	0.0895	17M9W7D
LTE Band 41		**QPSK**		**16QAM/64QAM**	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
20	2545.0 ~ 2645.0	0.1303	17M9G7D	0.0925	17M9W7D

Note: LTE Band 41 overlaps the entire frequency range of LTE Band 38. Therefore, the test results provided in this report covers Band 41 as well as Band 38.

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.**
	03CH04-KS TH01-KS	CN1257	314309

1.9 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH04-KS	AUDIX	E3	6.2009-8-24a

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.

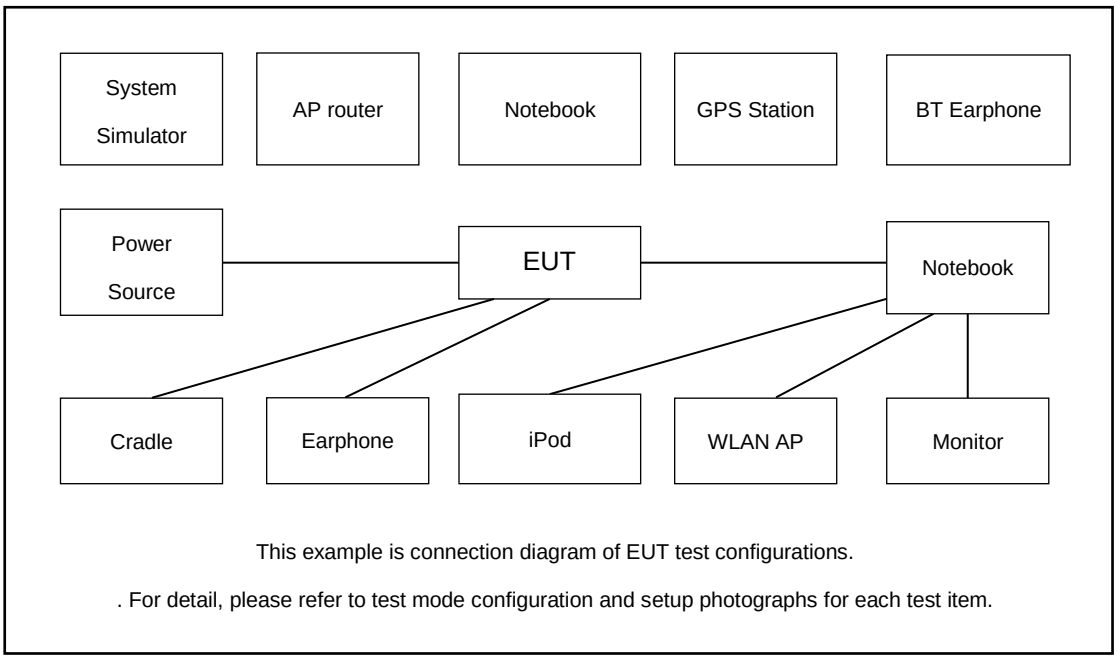
Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission.

Test Items	Band	Bandwidth (MHz)						Modulation			RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
Max. Output Power	5	v	v	v	v	-	-	v	v	v	v	v	v	v	v	v
	7	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v
	38	-	-	v	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	v
Peak-to-Average Ratio	41	-	-				v	v	v	v			v		v	
26dB and 99% Bandwidth	41	-	-				v	v	v				v		v	
Conducted Band Edge	41	-	-	v	v	v	v	v	v	v	v		v	v		v
Conducted Spurious Emission	41	-	-	v	v	v	v	v			v			v	v	v
Frequency Stability	41	-	-		v			v					v		v	
E.R.P / E.I.R.P	5	v	v	v	v	-	-	v	v	v	v			v	v	v
	7	-	-	v	v	v	v	v	v	v	v			v	v	v
	38	-	-	v	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	v
Radiated Spurious Emission	41	Worst Case													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.
4. LTE Band 41 overlaps the entire frequency range of LTE Band 38. Therefore, the test results provided in this report covers Band 41 as well as Band 38.

2.2 Connection Diagram of Test System



This example is connection diagram of EUT test configurations.

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

2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	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 8.22 dB.

Example :

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

= 8.22 (dB)

2.5 Frequency List of Low/Middle/High Channels

LTE Band 5 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
10	Channel	20450	20525	20600
	Frequency	829	836.5	844
5	Channel	20425	20525	20625
	Frequency	826.5	836.5	846.5
3	Channel	20415	20525	20635
	Frequency	825.5	836.5	847.5
1.4	Channel	20407	20525	20643
	Frequency	824.7	836.5	848.3

LTE Band 7 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
20	Channel	20850	21100	21350
	Frequency	2510	2535	2560
15	Channel	20825	21100	21375
	Frequency	2507.5	2535	2562.5
10	Channel	20800	21100	21400
	Frequency	2505	2535	2565
5	Channel	20775	21100	21425
	Frequency	2502.5	2535	2567.5

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

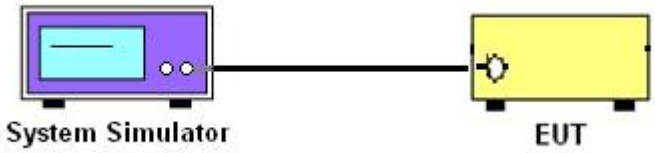
3 Conducted Test Items

3.1 Measuring Instruments

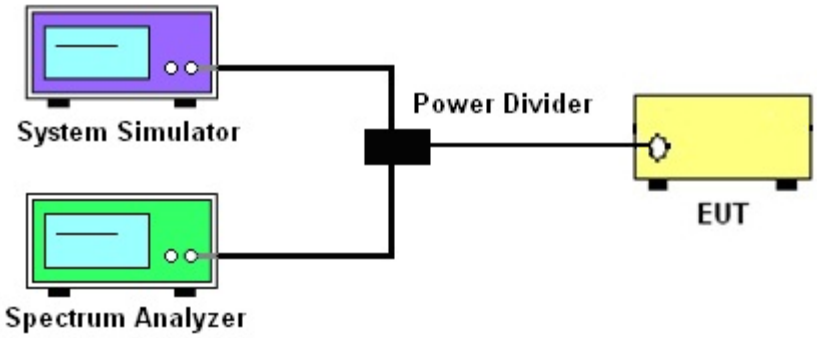
See list of measuring instruments of this test report.

3.2 Test Setup

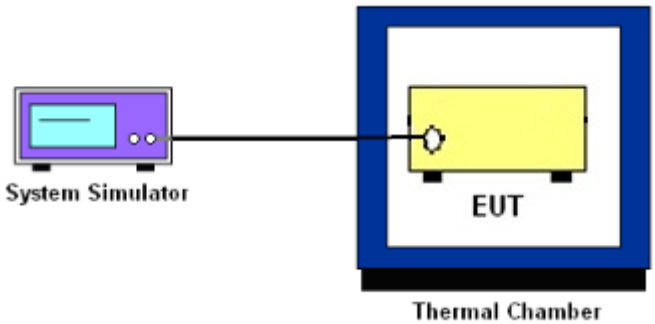
3.2.1 Conducted Output Power



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 ERP/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 ERP of mobile transmitters must not exceed 7 Watts for LTE Band 5

The EIRP of mobile transmitters must not exceed 2 Watts for and Band 7 and 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 or a narrower RBW was used and the measured power was integrated over the full required measurement bandwidth of 1 MHz.
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 38, 41, 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 10^{th} 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.

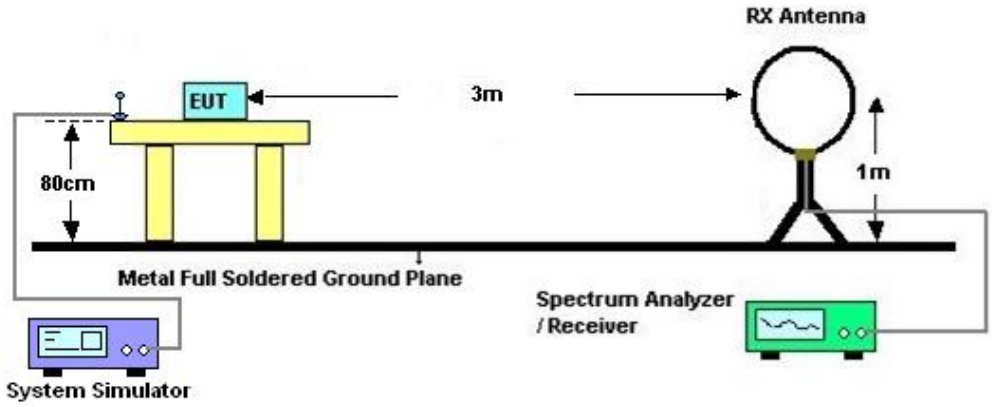
4 Radiated Test Items

4.1 Measuring Instruments

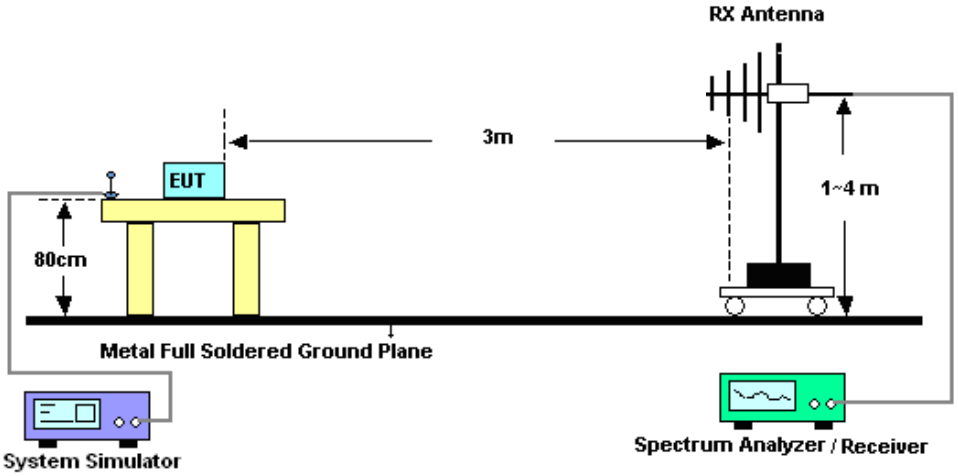
See list of measuring instruments of this test report.

4.2 Test Setup

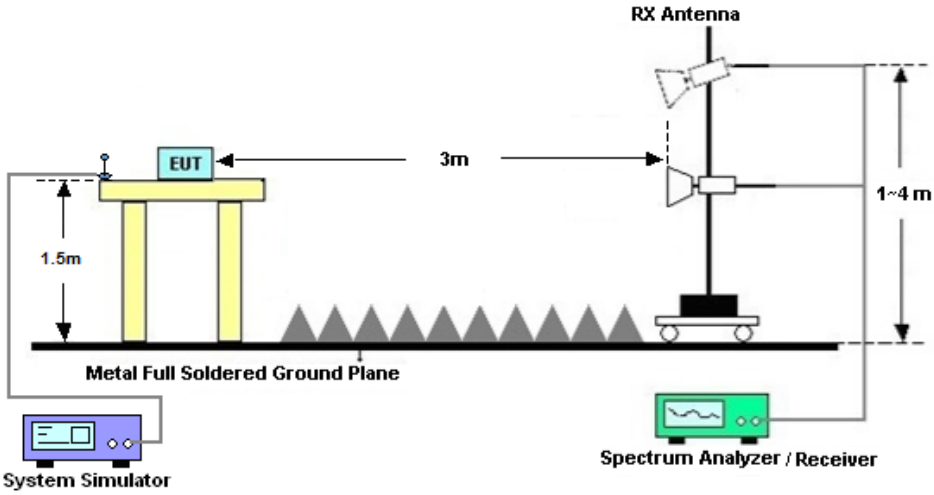
4.2.1 For radiated test below 30MHz



4.2.2 For radiated test from 30MHz to 1GHz



4.2.3 For radiated test above 1GHz



4.3 Test Result of Radiated Test

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

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 7

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.

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

4.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.5
2. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
6. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
7. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
8. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
9. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
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. 01, 2020	May 21, 2021~ May 28, 2021	Oct. 31, 2021	Conducted (TH01-KS)
Power divider	STI	STI08-0055	-	0.5~40GHz	Aug. 27, 2020	May 21, 2021~ May 28, 2021	Aug. 26, 2021	Conducted (TH01-KS)
Temperature & humidity chamber	Hongzhan	LP-150U	H2014011440	-40~+150°C 20%~95%RH	Jul. 03, 2020	May 21, 2021~ May 28, 2021	Jul. 02, 2021	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz-44G,MAX 30dB	Apr. 13, 2021	May 24, 2021	Apr. 12, 2022	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Nov. 1, 2020	May 24, 2021	Oct. 31, 2021	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz-1GHz	Jun. 08, 2020	May 24, 2021	Jun. 07, 2021	Radiation (03CH04-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75957	1GHz~18GHz	Nov. 01, 2020	May 24, 2021	Oct. 31, 2021	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101115	18GHz~40GHz	Jan. 06, 2021	May 24, 2021	Jan. 05, 2022	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	187289	9KHz-1GHz	Jan. 06, 2021	May 24, 2021	Jan. 05, 2022	Radiation (03CH04-KS)
Amplifier	MITEQ	EM18G40GGA	060728	18~40GHz	Jan. 07, 2021	May 24, 2021	Jan. 06, 2022	Radiation (03CH04-KS)
high gain Amplifier	MITEQ	AMF-7D-00101800-30-10P	2025788	1Ghz-18Ghz	Jan. 06, 2021	May 24, 2021	Jan. 05, 2022	Radiation (03CH04-KS)
Amplifier	Keysight	83017A	MY57280106	500MHz~26.5GHz	Oct. 14, 2020	May 24, 2021	Oct. 13, 2021	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	May 24, 2021	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	May 24, 2021	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	May 24, 2021	NCR	Radiation (03CH04-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))	**3.3dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.8dB**

Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power) and ERP/EIRP

LTE Band 5									
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	ERP(W)		
Channel				20450	20525	20600			
Frequency (MHz)				829	836.5	844	L	M	H
10	QPSK	1	0	23.22	23.31	23.11	0.0558	0.0570	0.0545
10	QPSK	1	49	23.07	22.99	23.24	0.0540	0.0530	0.0561
10	QPSK	50	0	22.08	22.20	22.07	0.0430	0.0442	0.0429
10	16QAM	1	0	22.18	22.54	22.48	0.0440	0.0478	0.0471
10	64QAM	1	0	21.22	21.49	21.51	0.0352	0.0375	0.0377
Channel				20425	20525	20625	ERP(W)		
Frequency (MHz)				826.5	836.5	846.5	L	M	H
5	QPSK	1	0	22.91	22.82	23.18	0.0520	0.0509	0.0553
5	16QAM	1	0	22.09	22.40	22.32	0.0431	0.0462	0.0454
Channel				20415	20525	20635	ERP(W)		
Frequency (MHz)				825.5	836.5	847.5	L	M	H
3	QPSK	1	0	23.09	23.31	22.98	0.0542	0.0570	0.0528
3	16QAM	1	0	22.22	22.52	22.44	0.0444	0.0475	0.0467
Channel				20407	20525	20643	ERP(W)		
Frequency (MHz)				824.7	836.5	848.3	L	M	H
1.4	QPSK	1	0	23.10	22.74	22.69	0.0543	0.0500	0.0494
1.4	16QAM	1	0	21.98	22.33	22.38	0.0420	0.0455	0.0460

LTE Band 7									
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP(W)		
Channel				20850	20850	21350			
Frequency (MHz)				2510	2535	2560	L	M	H
20	QPSK	1	0	23.16	23.56	23.39	0.1219	0.1337	0.1285
20	QPSK	1	99	23.17	23.19	23.38	0.1222	0.1227	0.1282
20	QPSK	100	0	22.18	22.37	22.40	0.0973	0.1016	0.1023
20	16QAM	1	0	22.92	22.81	22.73	0.1153	0.1125	0.1104
20	64QAM	1	0	21.21	21.44	21.64	0.0778	0.0820	0.0859
Channel				20825	21100	21375	EIRP(W)		
Frequency (MHz)				2507.5	2535	2562.5	L	M	H
15	QPSK	1	0	23.17	23.38	23.48	0.1222	0.1282	0.1312
15	16QAM	1	0	22.74	22.81	22.86	0.1107	0.1125	0.1138
Channel				20800	21100	21400	EIRP(W)		
Frequency (MHz)				2505	2535	2565	L	M	H
10	QPSK	1	0	22.99	23.50	23.35	0.1172	0.1318	0.1274
10	16QAM	1	0	22.83	22.71	22.73	0.1130	0.1099	0.1104
Channel				20775	21100	21425	EIRP(W)		
Frequency (MHz)				2502.5	2535	2567.5	L	M	H
5	QPSK	1	0	23.09	23.53	23.34	0.1199	0.1327	0.1271
5	16QAM	1	0	22.65	22.73	22.85	0.1084	0.1104	0.1135

LTE Band 38									
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP		
Channel				37850	38000	38150			
Frequency (MHz)				2580	2595	2610	L	M	H
20	QPSK	1	0	23.26	23.11	23.19	0.1247	0.1205	0.1227
20	QPSK	1	99	23.25	23.13	23.13	0.1245	0.1211	0.1211
20	QPSK	100	0	21.78	21.85	21.72	0.0887	0.0902	0.0875
20	16QAM	1	0	21.77	21.82	21.52	0.0885	0.0895	0.0836
20	64QAM	1	0	20.59	20.85	20.72	0.0675	0.0716	0.0695
Channel				37825	38000	38175	EIRP		
Frequency (MHz)				2577.5	2595	2612.5	L	M	H
15	QPSK	1	0	23.19	22.91	23.05	0.1227	0.1151	0.1189
15	16QAM	1	0	21.43	21.56	21.58	0.0818	0.0843	0.0847
Channel				37800	38000	38200	EIRP		
Frequency (MHz)				2575	2595	2615	L	M	H
10	QPSK	1	0	23.03	22.92	23.09	0.1183	0.1153	0.1199
10	16QAM	1	0	21.67	21.79	21.45	0.0865	0.0889	0.0822
Channel				37775	38000	38225	EIRP		
Frequency (MHz)				2572.5	2595	2617.5	L	M	H
5	QPSK	1	0	23.00	22.98	22.99	0.1175	0.1169	0.1172
5	16QAM	1	0	21.65	21.70	21.55	0.0861	0.0871	0.0841

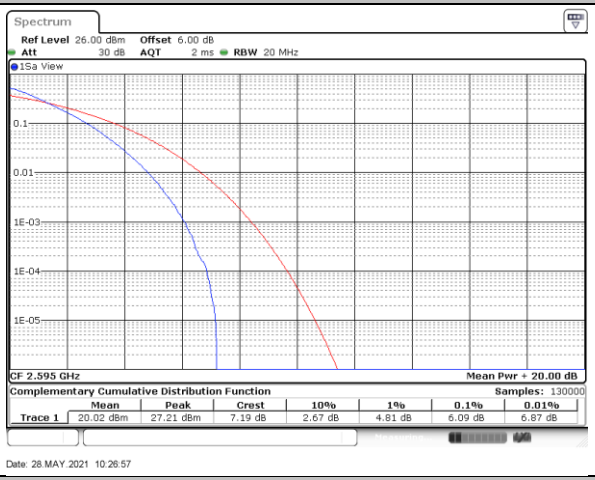
LTE Band 41									
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Low Ch. / Freq.	Power High Ch. / Freq.	EIRP		
Channel				40140	40640	41140			
Frequency (MHz)				2545	2595	2645	L	M	H
20	QPSK	1	0	23.21	23.45	23.26	0.1233	0.1303	0.1247
20	QPSK	1	99	23.25	23.22	23.26	0.1245	0.1236	0.1247
20	QPSK	100	0	21.91	22.22	21.79	0.0914	0.0982	0.0889
20	16QAM	1	0	21.77	21.96	21.57	0.0885	0.0925	0.0845
20	64QAM	1	0	20.78	21.03	20.61	0.0705	0.0746	0.0678
Channel				40115	40640	41165	EIRP		
Frequency (MHz)				2542.5	2595	2647.5	L	M	H
15	QPSK	1	0	23.37	23.25	23.22	0.1279	0.1245	0.1236
15	16QAM	1	0	21.53	21.79	21.51	0.0838	0.0889	0.0834
Channel				40090	40640	41190	EIRP		
Frequency (MHz)				2540	2595	2650	L	M	H
10	QPSK	1	0	23.01	23.20	23.21	0.1178	0.1230	0.1233
10	16QAM	1	0	21.64	21.81	21.33	0.0859	0.0893	0.0800
Channel				40065	40640	41215	EIRP		
Frequency (MHz)				2537.5	2595	2652.5	L	M	H
5	QPSK	1	0	23.38	23.16	23.11	0.1282	0.1219	0.1205
5	16QAM	1	0	21.72	21.77	21.49	0.0875	0.0885	0.0830

LTE Band 41

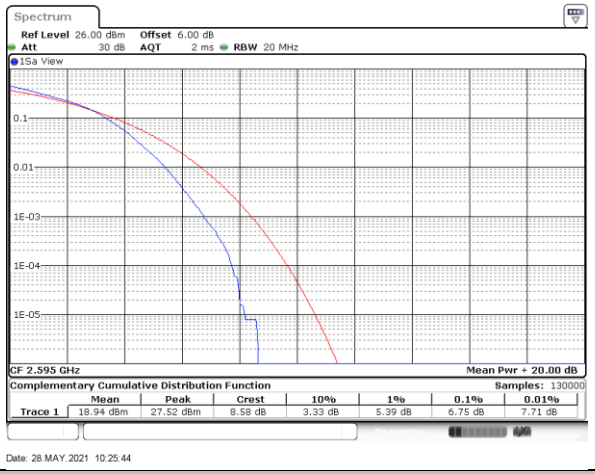
Peak-to-Average Ratio

Mode	LTE Band 41 / 20MHz			
Mod.	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Result
Middle CH	6.09	6.75	6.9	PASS

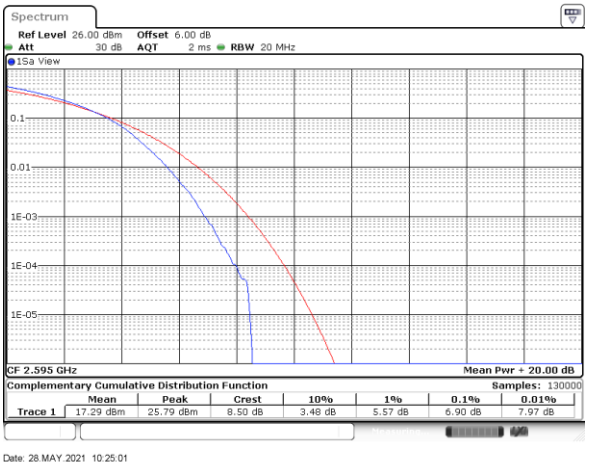
LTE Band 41 / 20MHz
Middle Channel / Full RB / QPSK



Middle Channel / Full RB / 16QAM



Middle Channel / Full RB / 64QAM

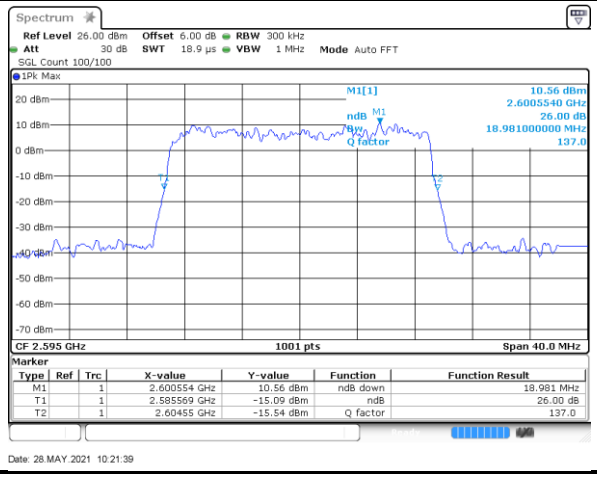


26dB Bandwidth

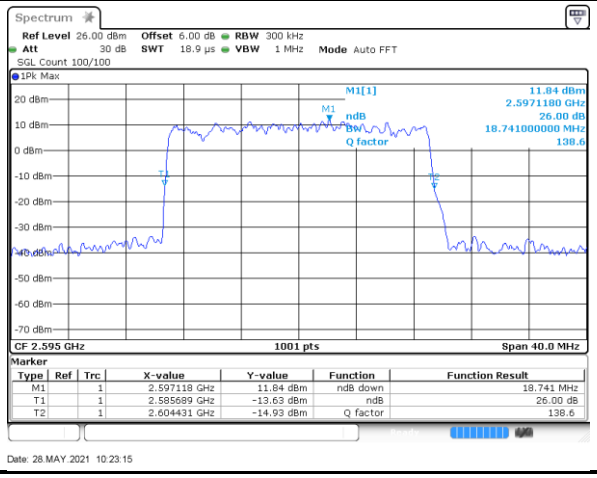
Mode	LTE Band 41 : 26dB BW(MHz)	
BW	20MHz	
Mod.	QPSK	16QAM
Middle CH	18.98	18.74

LTE Band 41

Middle Channel / 20MHz / QPSK



Middle Channel / 20MHz / 16QAM

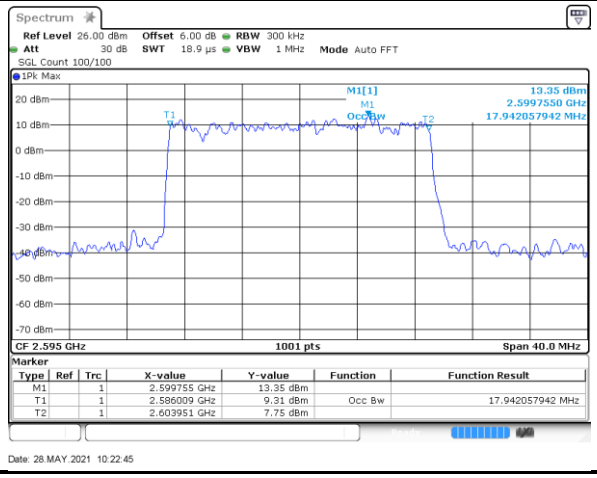


Occupied Bandwidth

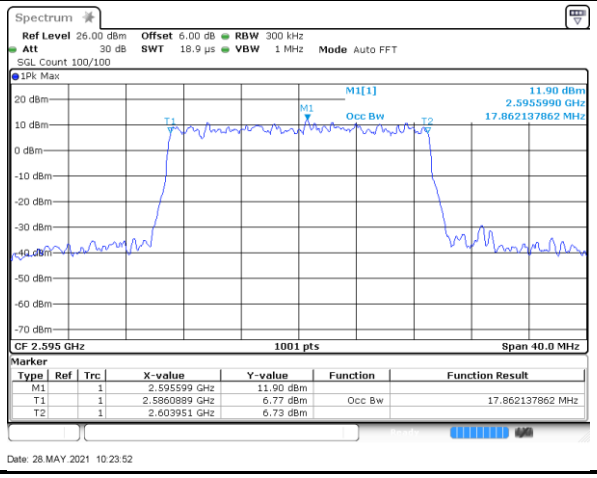
Mode	LTE Band 41 : 99%OBW(MHz)	
BW	20MHz	
Mod.	QPSK	16QAM
Middle CH	17.94	17.86

LTE Band 41

Middle Channel / 20MHz / QPSK



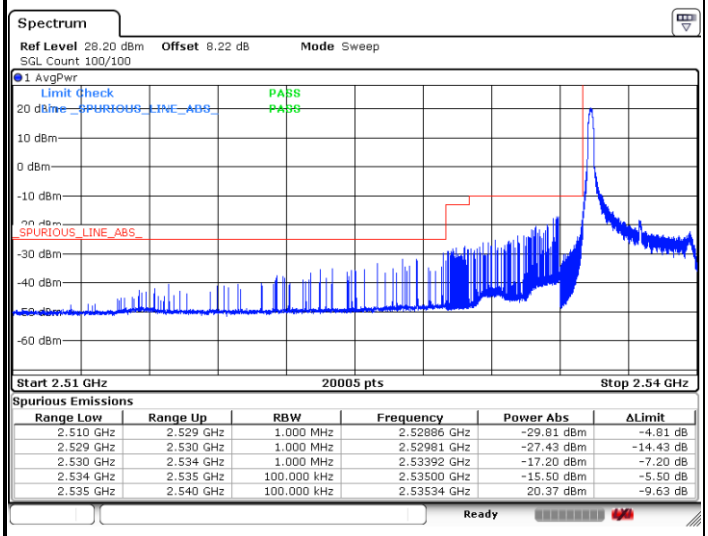
Middle Channel / 20MHz / 16QAM



Conducted Band Edge

LTE Band 41 / 5MHz / QPSK

Lowest Band Edge / 1 RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.510 GHz	2.529 GHz	1.000 MHz	2.52886 GHz	-29.81 dBm	-4.81 dB
2.529 GHz	2.530 GHz	1.000 MHz	2.52981 GHz	-27.43 dBm	-14.43 dB
2.530 GHz	2.534 GHz	1.000 MHz	2.53392 GHz	-17.20 dBm	-7.20 dB
2.534 GHz	2.535 GHz	100.000 kHz	2.53500 GHz	-15.50 dBm	-5.50 dB
2.535 GHz	2.540 GHz	100.000 kHz	2.53534 GHz	20.37 dBm	-9.63 dB

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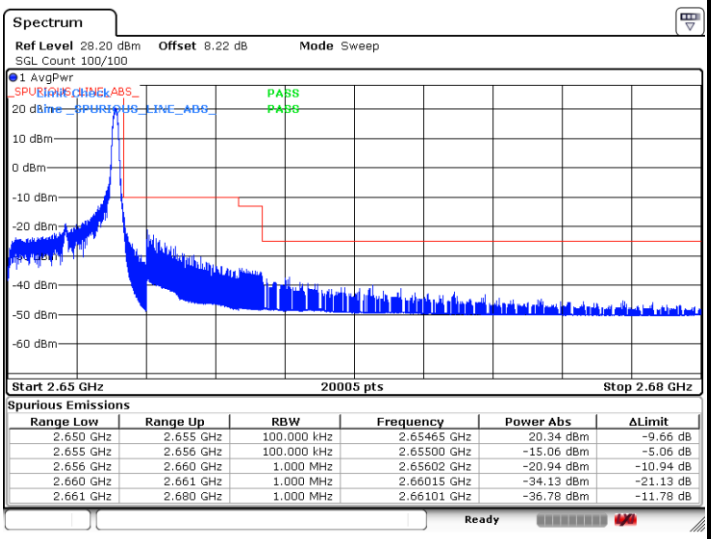
Highest Band Edge / 1 RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.650 GHz	2.655 GHz	100.000 kHz	2.65465 GHz	20.34 dBm	-9.66 dB
2.655 GHz	2.656 GHz	100.000 kHz	2.65500 GHz	-15.06 dBm	-5.06 dB
2.656 GHz	2.660 GHz	1.000 MHz	2.65602 GHz	-20.94 dBm	-10.94 dB
2.660 GHz	2.661 GHz	1.000 MHz	2.66015 GHz	-34.13 dBm	-21.13 dB
2.661 GHz	2.680 GHz	1.000 MHz	2.66101 GHz	-36.78 dBm	-11.78 dB

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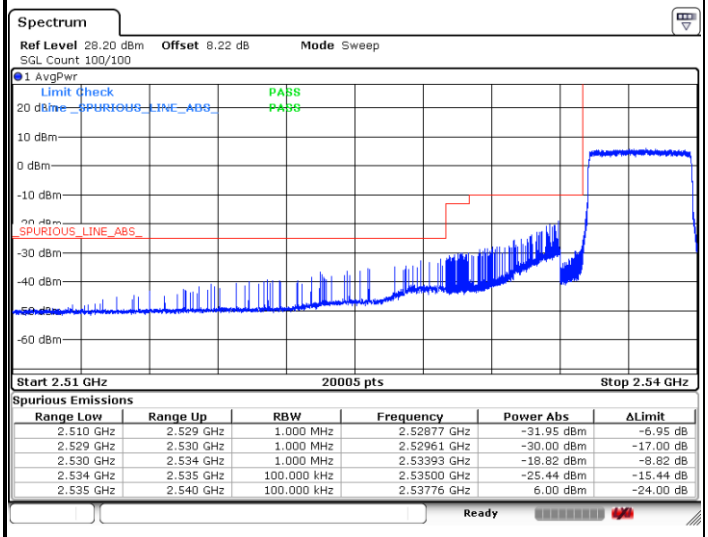
Lowest Band Edge / Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.510 GHz	2.529 GHz	1.000 MHz	2.52877 GHz	-31.95 dBm	-6.95 dB
2.529 GHz	2.530 GHz	1.000 MHz	2.52961 GHz	-30.00 dBm	-17.00 dB
2.530 GHz	2.534 GHz	1.000 MHz	2.53393 GHz	-18.82 dBm	-8.82 dB
2.534 GHz	2.535 GHz	100.000 kHz	2.53500 GHz	-25.44 dBm	-15.44 dB
2.535 GHz	2.540 GHz	100.000 kHz	2.53776 GHz	6.00 dBm	-24.00 dB

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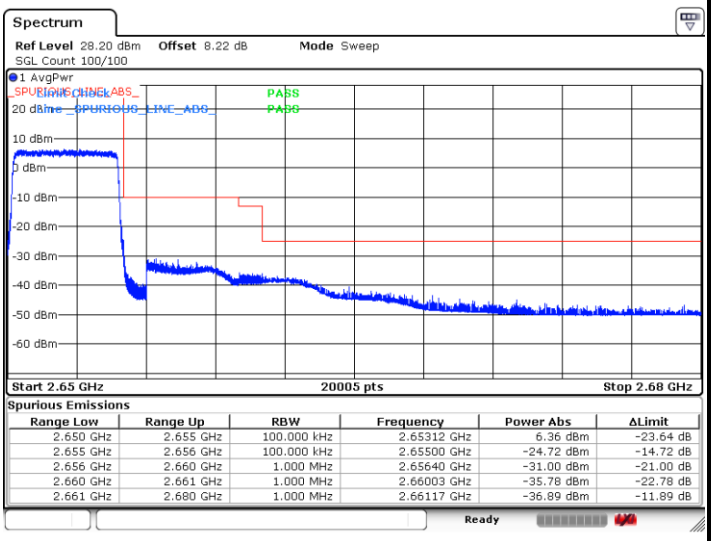
Highest Band Edge / Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.650 GHz	2.655 GHz	100.000 kHz	2.65312 GHz	6.36 dBm	-23.64 dB
2.655 GHz	2.656 GHz	100.000 kHz	2.65500 GHz	-24.72 dBm	-14.72 dB
2.656 GHz	2.660 GHz	1.000 MHz	2.65640 GHz	-31.00 dBm	-21.00 dB
2.660 GHz	2.661 GHz	1.000 MHz	2.66003 GHz	-35.78 dBm	-22.78 dB
2.661 GHz	2.680 GHz	1.000 MHz	2.66117 GHz	-36.89 dBm	-11.89 dB

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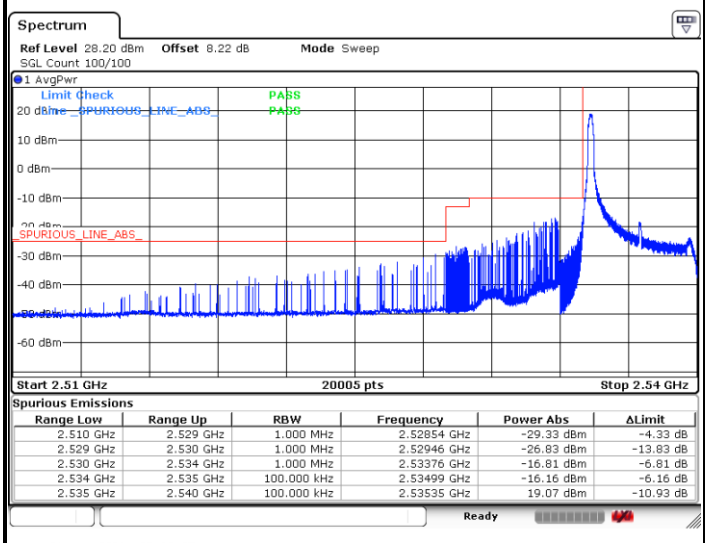
LTE Band 41 / 5MHz / 16QAM

Lowest Band Edge / 1RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.510 GHz	2.529 GHz	1.000 MHz	2.52854 GHz	-29.33 dBm	-4.33 dB
2.529 GHz	2.530 GHz	1.000 MHz	2.52946 GHz	-26.83 dBm	-13.83 dB
2.530 GHz	2.534 GHz	1.000 MHz	2.53376 GHz	-16.81 dBm	-6.81 dB
2.534 GHz	2.535 GHz	100.000 kHz	2.53499 GHz	-16.16 dBm	-6.16 dB
2.535 GHz	2.540 GHz	100.000 kHz	2.53535 GHz	19.07 dBm	-10.93 dB

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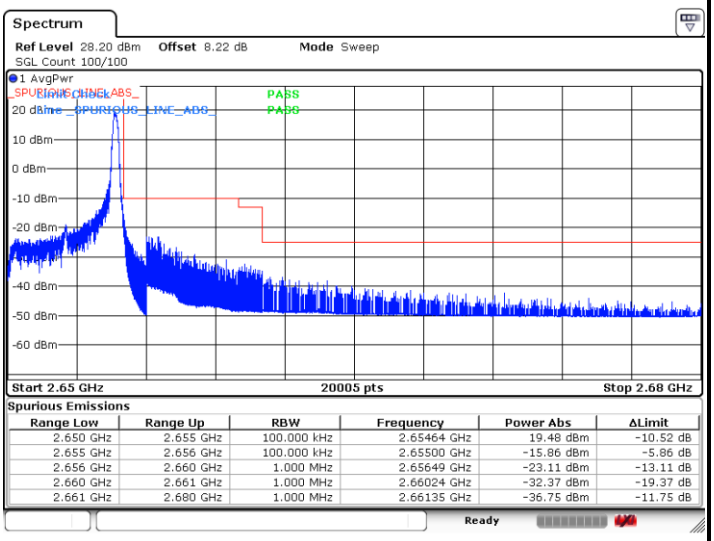
Highest Band Edge / 1 RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.650 GHz	2.655 GHz	100.000 kHz	2.65464 GHz	19.48 dBm	-10.52 dB
2.655 GHz	2.656 GHz	100.000 kHz	2.65500 GHz	-15.86 dBm	-5.86 dB
2.656 GHz	2.660 GHz	1.000 MHz	2.65649 GHz	-23.11 dBm	-13.11 dB
2.660 GHz	2.661 GHz	1.000 MHz	2.66024 GHz	-32.37 dBm	-19.37 dB
2.661 GHz	2.680 GHz	1.000 MHz	2.66135 GHz	-36.75 dBm	-11.75 dB

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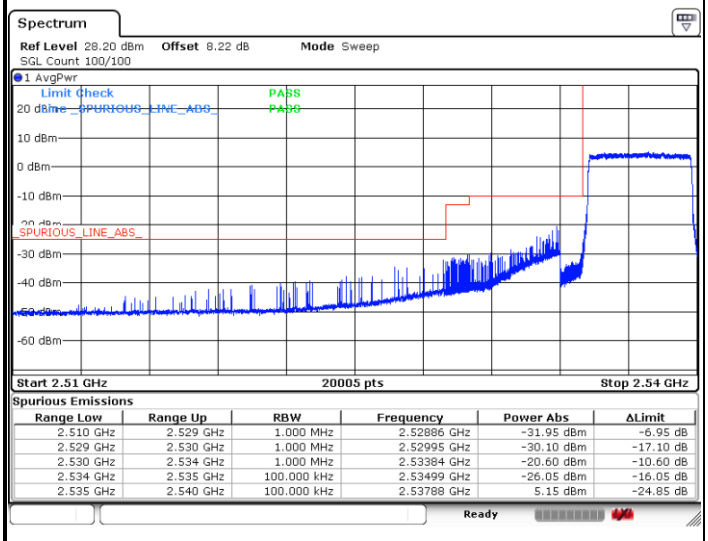
Lowest Band Edge / Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.510 GHz	2.529 GHz	1.000 MHz	2.52886 GHz	-31.95 dBm	-6.95 dB
2.529 GHz	2.530 GHz	1.000 MHz	2.52995 GHz	-30.10 dBm	-17.10 dB
2.530 GHz	2.534 GHz	1.000 MHz	2.53384 GHz	-20.60 dBm	-10.60 dB
2.534 GHz	2.535 GHz	100.000 kHz	2.53499 GHz	-26.05 dBm	-16.05 dB
2.535 GHz	2.540 GHz	100.000 kHz	2.53788 GHz	5.15 dBm	-24.85 dB

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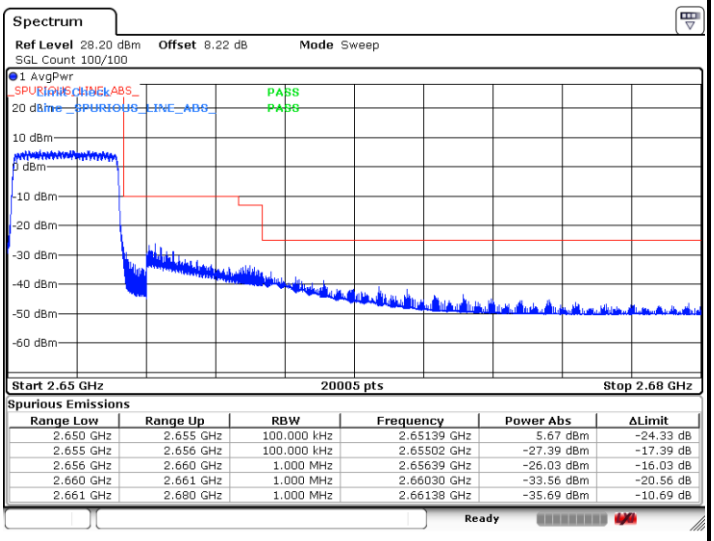
Highest Band Edge / Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.650 GHz	2.655 GHz	100.000 kHz	2.65139 GHz	5.67 dBm	-24.33 dB
2.655 GHz	2.656 GHz	100.000 kHz	2.65502 GHz	-27.39 dBm	-17.39 dB
2.656 GHz	2.660 GHz	1.000 MHz	2.65639 GHz	-26.03 dBm	-16.03 dB
2.660 GHz	2.661 GHz	1.000 MHz	2.66030 GHz	-33.56 dBm	-20.56 dB
2.661 GHz	2.680 GHz	1.000 MHz	2.66138 GHz	-35.69 dBm	-10.69 dB

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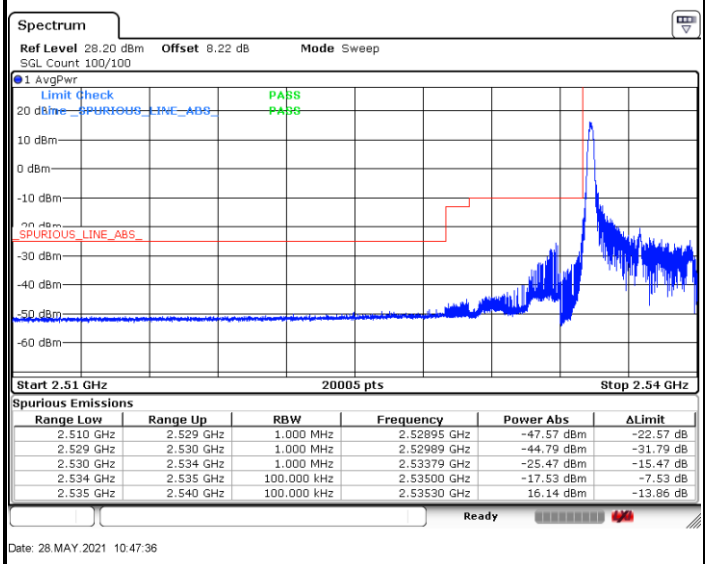
LTE Band 41 / 5MHz / 64QAM

Lowest Band Edge / 1RB

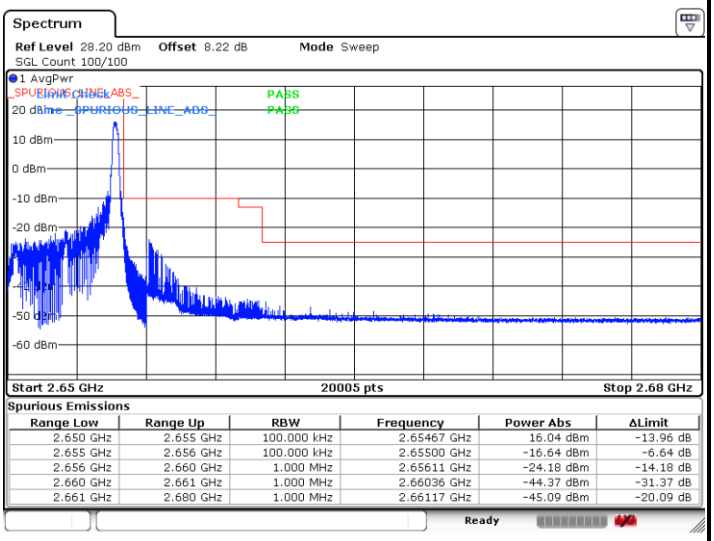


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.510 GHz	2.529 GHz	1.000 MHz	2.52895 GHz	-47.57 dBm	-22.57 dB
2.529 GHz	2.530 GHz	1.000 MHz	2.52989 GHz	-44.79 dBm	-31.79 dB
2.530 GHz	2.534 GHz	1.000 MHz	2.53379 GHz	-25.47 dBm	-15.47 dB
2.534 GHz	2.535 GHz	100.000 kHz	2.53500 GHz	-17.53 dBm	-7.53 dB
2.535 GHz	2.540 GHz	100.000 kHz	2.53530 GHz	16.14 dBm	-13.86 dB

Date: 28.MAY.2021 10:47:36

Highest Band Edge / 1 RB

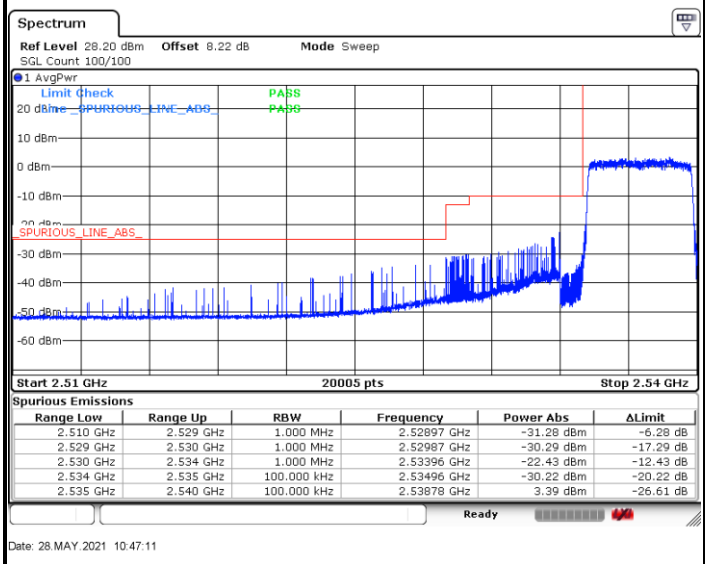


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.650 GHz	2.655 GHz	100.000 kHz	2.65467 GHz	16.04 dBm	-13.96 dB
2.655 GHz	2.656 GHz	100.000 kHz	2.65500 GHz	-16.64 dBm	-6.64 dB
2.656 GHz	2.660 GHz	1.000 MHz	2.65611 GHz	-24.18 dBm	-14.18 dB
2.660 GHz	2.661 GHz	1.000 MHz	2.66036 GHz	-44.37 dBm	-31.37 dB
2.661 GHz	2.680 GHz	1.000 MHz	2.66117 GHz	-45.09 dBm	-20.09 dB

Date: 28.MAY.2021 10:52:15

Lowest Band Edge / Full RB

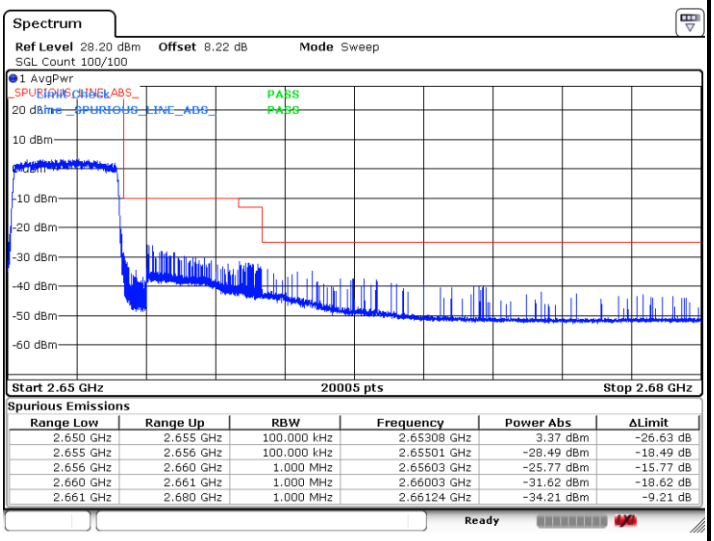


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.510 GHz	2.529 GHz	1.000 MHz	2.52897 GHz	-31.28 dBm	-6.28 dB
2.529 GHz	2.530 GHz	1.000 MHz	2.52987 GHz	-30.29 dBm	-17.29 dB
2.530 GHz	2.534 GHz	1.000 MHz	2.53396 GHz	-22.43 dBm	-12.43 dB
2.534 GHz	2.535 GHz	100.000 kHz	2.53496 GHz	-30.22 dBm	-20.22 dB
2.535 GHz	2.540 GHz	100.000 kHz	2.53878 GHz	3.39 dBm	-26.61 dB

Date: 28.MAY.2021 10:47:11

Highest Band Edge / Full RB



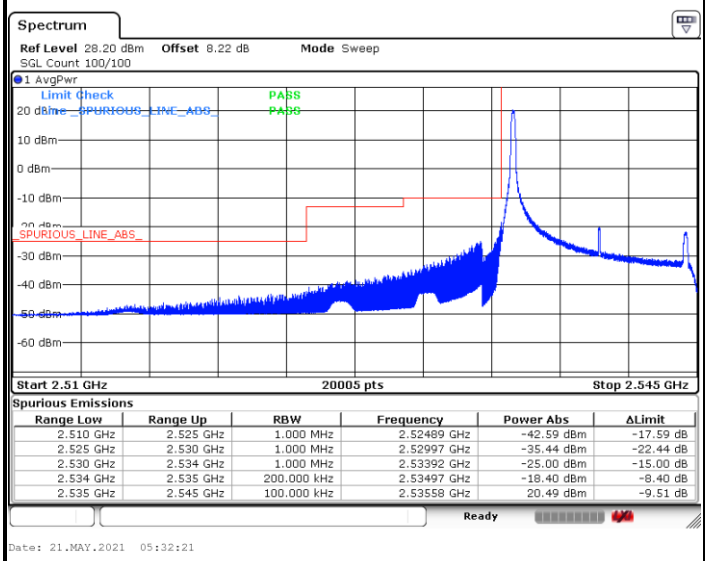
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.650 GHz	2.655 GHz	100.000 kHz	2.65308 GHz	3.37 dBm	-26.63 dB
2.655 GHz	2.656 GHz	100.000 kHz	2.65501 GHz	-28.49 dBm	-18.49 dB
2.656 GHz	2.660 GHz	1.000 MHz	2.65603 GHz	-25.77 dBm	-15.77 dB
2.660 GHz	2.661 GHz	1.000 MHz	2.66003 GHz	-31.62 dBm	-18.62 dB
2.661 GHz	2.680 GHz	1.000 MHz	2.66124 GHz	-34.21 dBm	-9.21 dB

Date: 28.MAY.2021 10:51:19

LTE Band 41 / 10MHz / QPSK

Lowest Band Edge / 1 RB

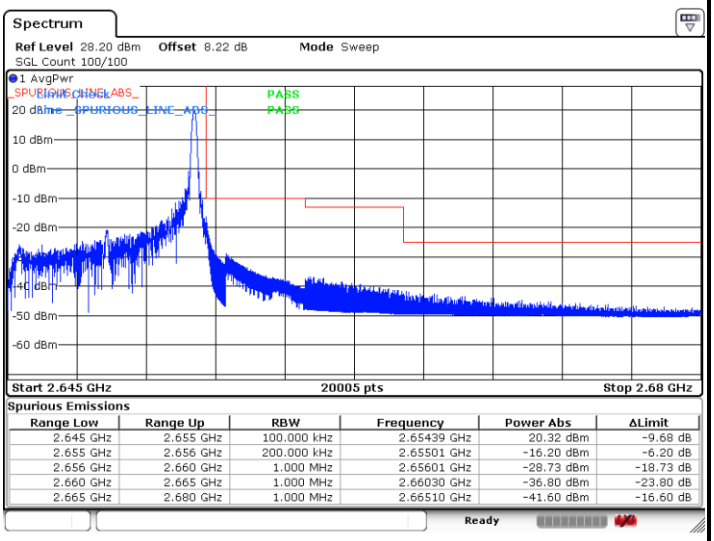


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.510 GHz	2.525 GHz	1.000 MHz	2.52489 GHz	-42.59 dBm	-17.59 dB
2.525 GHz	2.530 GHz	1.000 MHz	2.52997 GHz	-35.44 dBm	-22.44 dB
2.530 GHz	2.534 GHz	1.000 MHz	2.53392 GHz	-25.00 dBm	-15.00 dB
2.534 GHz	2.535 GHz	200.000 kHz	2.53497 GHz	-18.40 dBm	-8.40 dB
2.535 GHz	2.545 GHz	100.000 kHz	2.53558 GHz	20.49 dBm	-9.51 dB

Date: 21.MAY.2021 05:32:21

Highest Band Edge / 1 RB

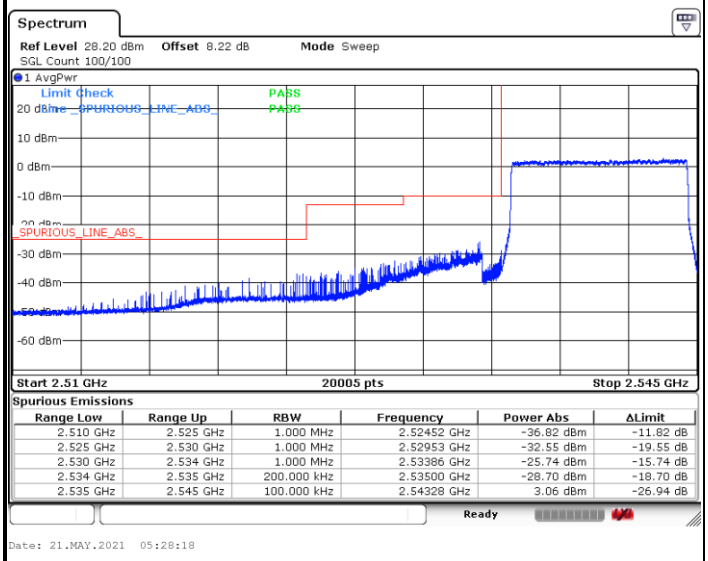


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.645 GHz	2.655 GHz	100.000 kHz	2.65439 GHz	20.32 dBm	-9.68 dB
2.655 GHz	2.656 GHz	200.000 kHz	2.65501 GHz	-16.20 dBm	-6.20 dB
2.656 GHz	2.660 GHz	1.000 MHz	2.65601 GHz	-28.73 dBm	-18.73 dB
2.660 GHz	2.665 GHz	1.000 MHz	2.66030 GHz	-36.80 dBm	-23.80 dB
2.665 GHz	2.680 GHz	1.000 MHz	2.66510 GHz	-41.60 dBm	-16.60 dB

Date: 21.MAY.2021 07:36:54

Lowest Band Edge / Full RB

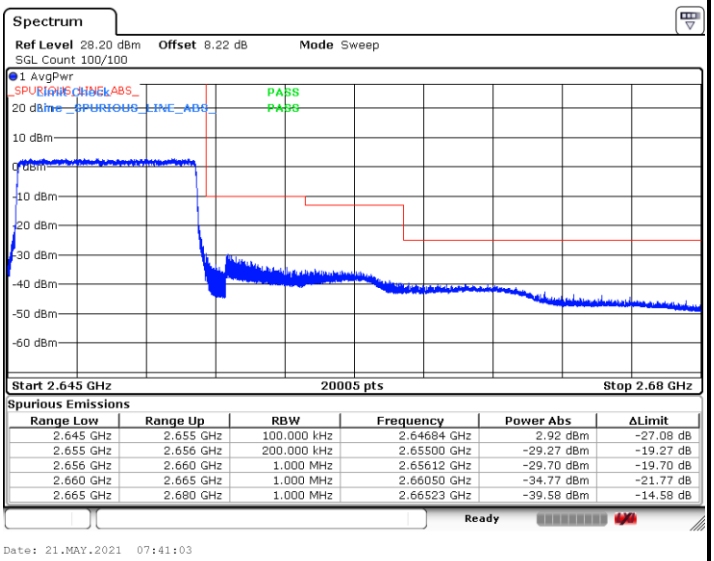


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.510 GHz	2.525 GHz	1.000 MHz	2.52452 GHz	-36.82 dBm	-11.82 dB
2.525 GHz	2.530 GHz	1.000 MHz	2.52953 GHz	-32.55 dBm	-19.55 dB
2.530 GHz	2.534 GHz	1.000 MHz	2.53386 GHz	-25.74 dBm	-15.74 dB
2.534 GHz	2.535 GHz	200.000 kHz	2.53500 GHz	-28.70 dBm	-18.70 dB
2.535 GHz	2.545 GHz	100.000 kHz	2.54328 GHz	3.06 dBm	-26.94 dB

Date: 21.MAY.2021 05:28:18

Highest Band Edge / Full RB



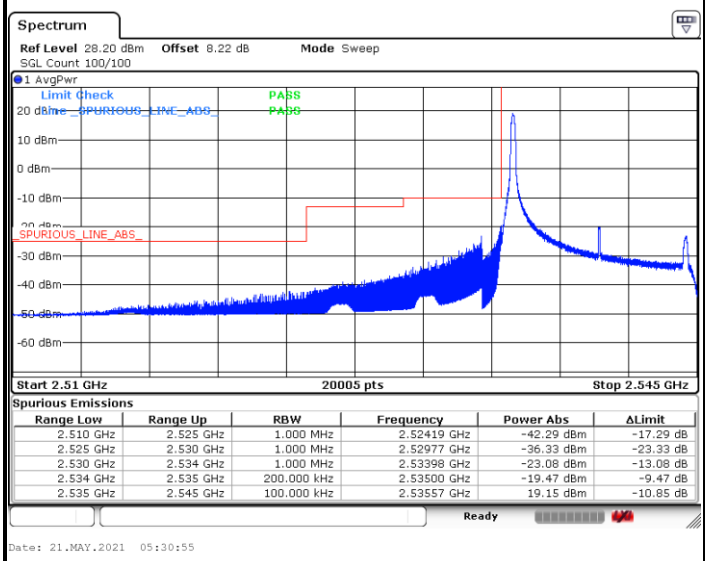
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.645 GHz	2.655 GHz	100.000 kHz	2.64684 GHz	2.92 dBm	-27.08 dB
2.655 GHz	2.656 GHz	200.000 kHz	2.65500 GHz	-29.27 dBm	-19.27 dB
2.656 GHz	2.660 GHz	1.000 MHz	2.65612 GHz	-29.70 dBm	-19.70 dB
2.660 GHz	2.665 GHz	1.000 MHz	2.66050 GHz	-34.77 dBm	-21.77 dB
2.665 GHz	2.680 GHz	1.000 MHz	2.66523 GHz	-39.58 dBm	-14.58 dB

Date: 21.MAY.2021 07:41:03

LTE Band 41 / 10MHz / 16QAM

Lowest Band Edge / 1 RB

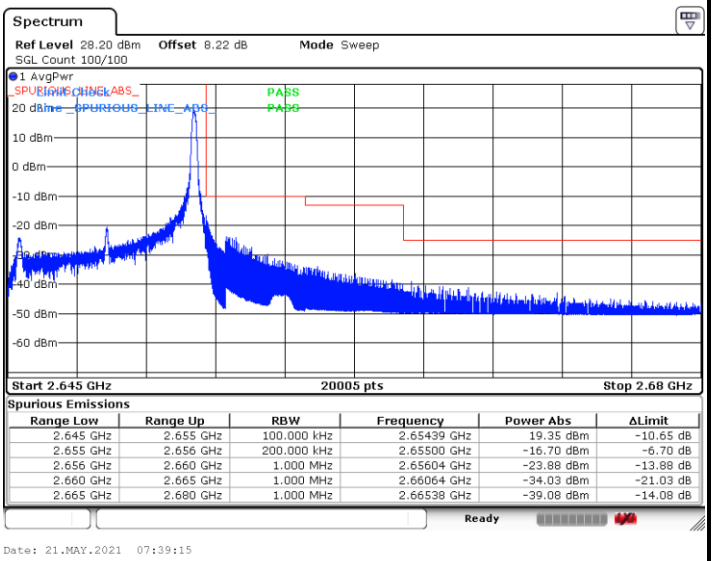


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.510 GHz	2.525 GHz	1.000 MHz	2.52419 GHz	-42.29 dBm	-17.29 dB
2.525 GHz	2.530 GHz	1.000 MHz	2.52977 GHz	-36.33 dBm	-23.33 dB
2.530 GHz	2.534 GHz	1.000 MHz	2.53398 GHz	-23.08 dBm	-13.08 dB
2.534 GHz	2.535 GHz	200.000 kHz	2.53500 GHz	-19.47 dBm	-9.47 dB
2.535 GHz	2.545 GHz	100.000 kHz	2.53557 GHz	19.15 dBm	-10.85 dB

Date: 21.MAY.2021 05:30:55

Highest Band Edge / 1 RB

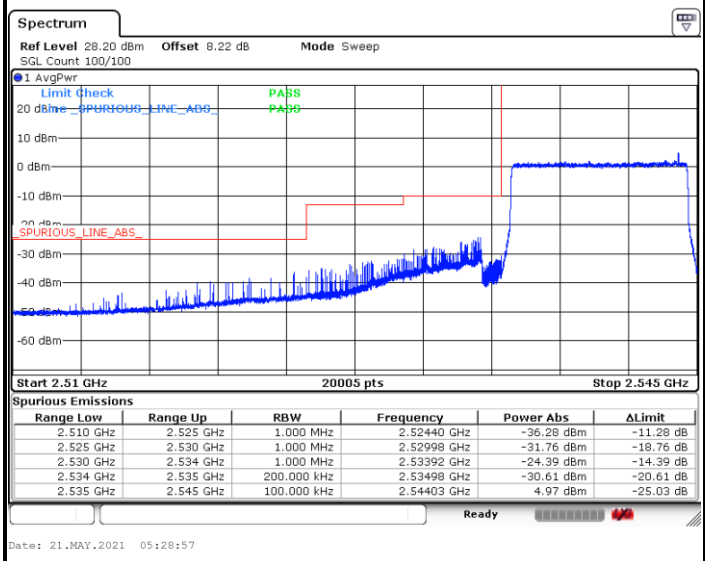


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.645 GHz	2.655 GHz	100.000 kHz	2.65439 GHz	19.35 dBm	-10.65 dB
2.655 GHz	2.656 GHz	200.000 kHz	2.65500 GHz	-16.70 dBm	-6.70 dB
2.656 GHz	2.660 GHz	1.000 MHz	2.65604 GHz	-23.88 dBm	-13.88 dB
2.660 GHz	2.665 GHz	1.000 MHz	2.66064 GHz	-34.03 dBm	-21.03 dB
2.665 GHz	2.680 GHz	1.000 MHz	2.66538 GHz	-39.08 dBm	-14.08 dB

Date: 21.MAY.2021 07:39:15

Lowest Band Edge / Full RB

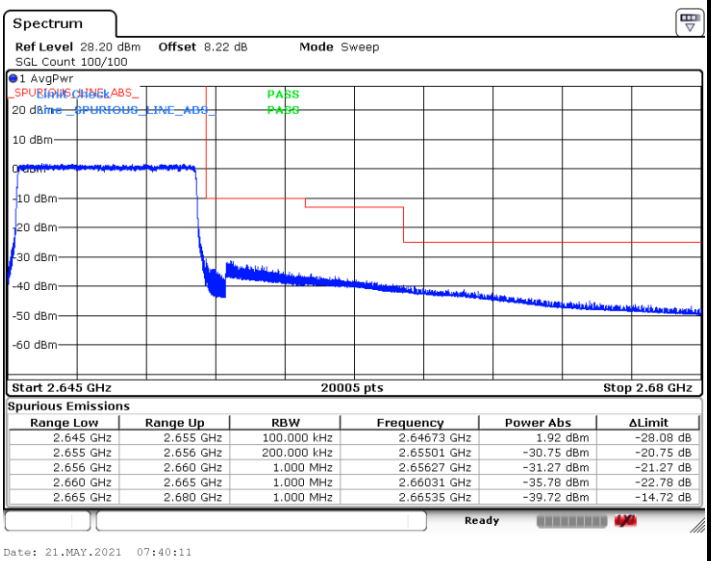


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.510 GHz	2.525 GHz	1.000 MHz	2.52440 GHz	-36.28 dBm	-11.28 dB
2.525 GHz	2.530 GHz	1.000 MHz	2.52998 GHz	-31.76 dBm	-18.76 dB
2.530 GHz	2.534 GHz	1.000 MHz	2.53392 GHz	-24.39 dBm	-14.39 dB
2.534 GHz	2.535 GHz	200.000 kHz	2.53498 GHz	-30.61 dBm	-20.61 dB
2.535 GHz	2.545 GHz	100.000 kHz	2.54403 GHz	4.97 dBm	-25.03 dB

Date: 21.MAY.2021 05:28:57

Highest Band Edge / Full RB



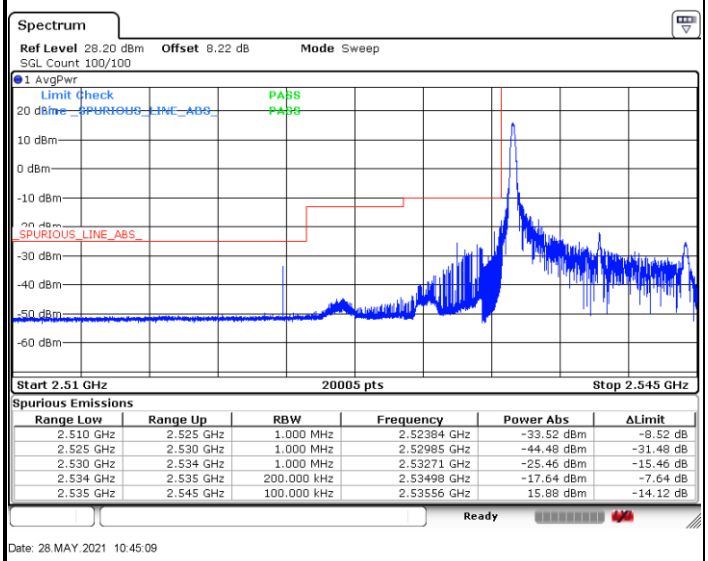
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.645 GHz	2.655 GHz	100.000 kHz	2.64673 GHz	1.92 dBm	-28.08 dB
2.655 GHz	2.656 GHz	200.000 kHz	2.65501 GHz	-30.75 dBm	-20.75 dB
2.656 GHz	2.660 GHz	1.000 MHz	2.65627 GHz	-31.27 dBm	-21.27 dB
2.660 GHz	2.665 GHz	1.000 MHz	2.66031 GHz	-35.78 dBm	-22.78 dB
2.665 GHz	2.680 GHz	1.000 MHz	2.66535 GHz	-39.72 dBm	-14.72 dB

Date: 21.MAY.2021 07:40:11

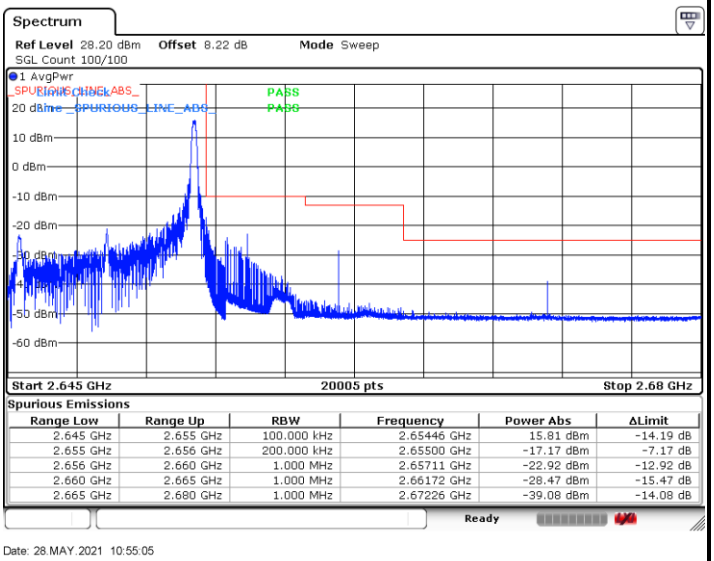
LTE Band 41 / 10MHz / 64QAM

Lowest Band Edge / 1 RB



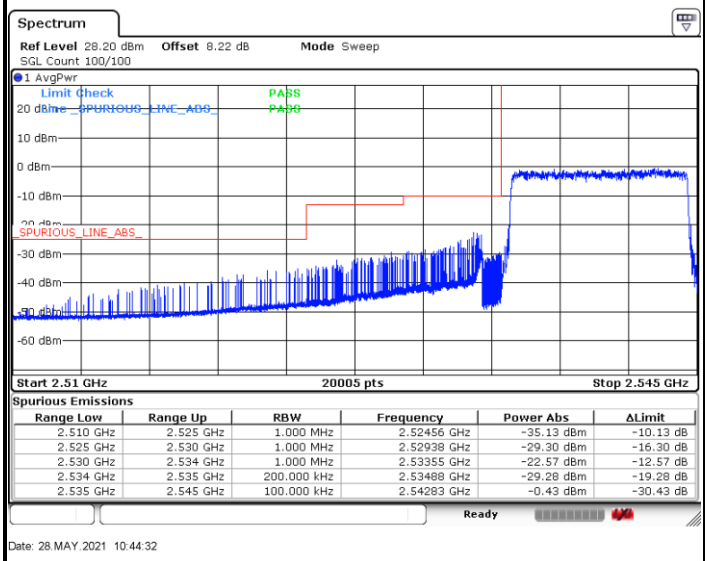
Date: 28.MAY.2021 10:45:09

Highest Band Edge / 1 RB



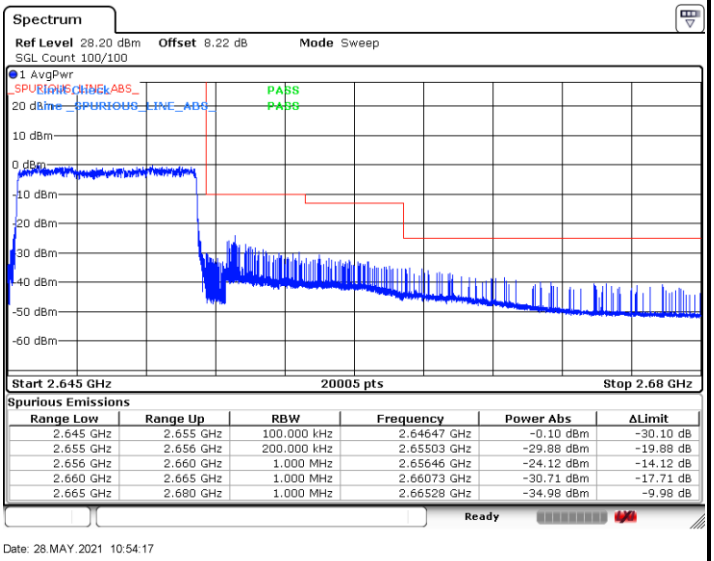
Date: 28.MAY.2021 10:55:05

Lowest Band Edge / Full RB



Date: 28.MAY.2021 10:44:32

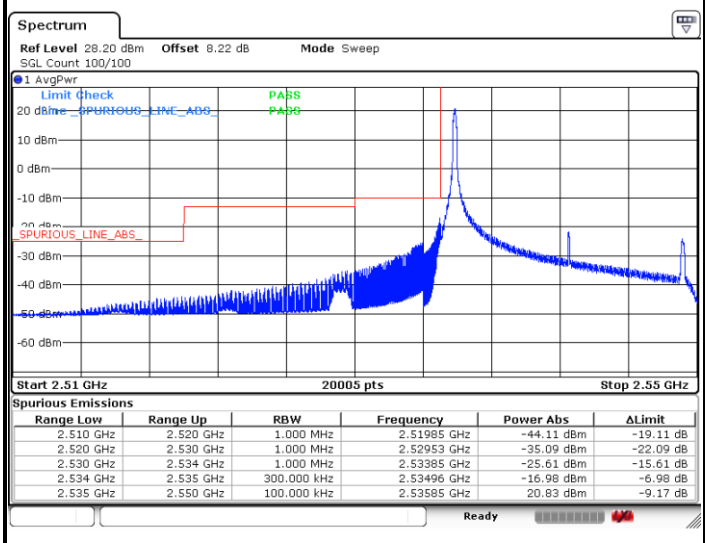
Highest Band Edge / Full RB



Date: 28.MAY.2021 10:54:17

LTE Band 41 / 15MHz / QPSK

Lowest Band Edge / 1 RB

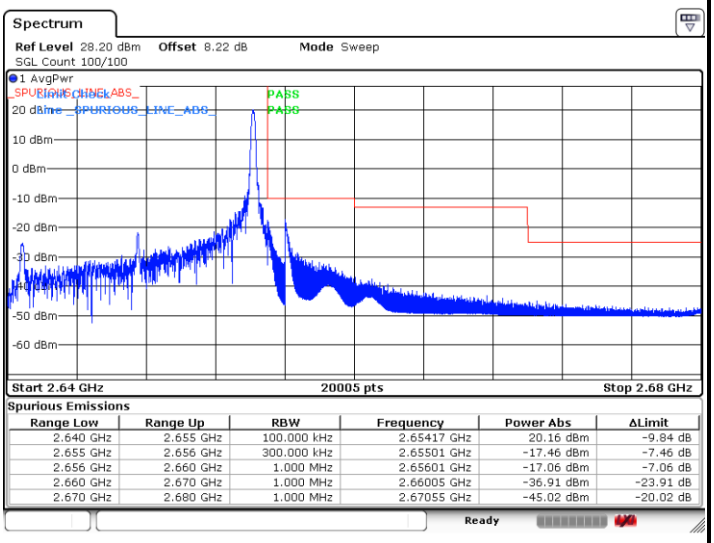


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.510 GHz	2.520 GHz	1.000 MHz	2.51985 GHz	-44.11 dBm	-19.11 dB
2.520 GHz	2.530 GHz	1.000 MHz	2.52953 GHz	-35.09 dBm	-22.09 dB
2.530 GHz	2.534 GHz	1.000 MHz	2.53385 GHz	-25.61 dBm	-15.61 dB
2.534 GHz	2.535 GHz	300.000 kHz	2.53496 GHz	-16.98 dBm	-6.98 dB
2.535 GHz	2.550 GHz	100.000 kHz	2.53585 GHz	20.83 dBm	-9.17 dB

Date: 21.MAY.2021 05:46:15

Highest Band Edge / 1 RB

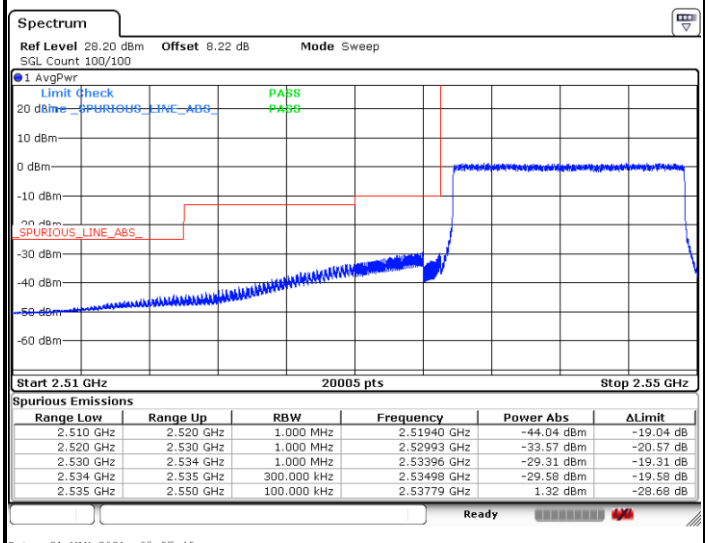


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.640 GHz	2.655 GHz	100.000 kHz	2.65417 GHz	20.16 dBm	-9.84 dB
2.655 GHz	2.656 GHz	300.000 kHz	2.65501 GHz	-17.46 dBm	-7.46 dB
2.656 GHz	2.660 GHz	1.000 MHz	2.65601 GHz	-17.06 dBm	-7.06 dB
2.660 GHz	2.670 GHz	1.000 MHz	2.66005 GHz	-36.91 dBm	-23.91 dB
2.670 GHz	2.680 GHz	1.000 MHz	2.67055 GHz	-45.02 dBm	-20.02 dB

Date: 21.MAY.2021 07:25:20

Lowest Band Edge / Full RB

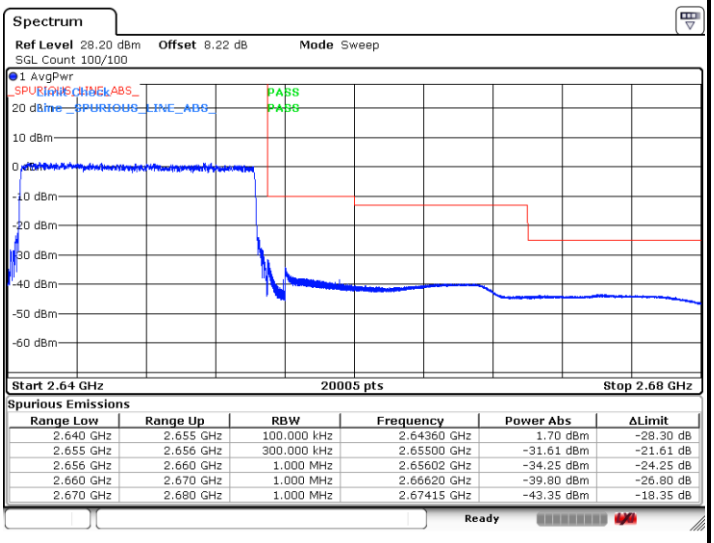


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.510 GHz	2.520 GHz	1.000 MHz	2.51940 GHz	-44.04 dBm	-19.04 dB
2.520 GHz	2.530 GHz	1.000 MHz	2.52993 GHz	-33.57 dBm	-20.57 dB
2.530 GHz	2.534 GHz	1.000 MHz	2.53396 GHz	-29.31 dBm	-19.31 dB
2.534 GHz	2.535 GHz	300.000 kHz	2.53498 GHz	-29.58 dBm	-19.58 dB
2.535 GHz	2.550 GHz	100.000 kHz	2.53779 GHz	1.32 dBm	-28.68 dB

Date: 21.MAY.2021 05:37:49

Highest Band Edge / Full RB



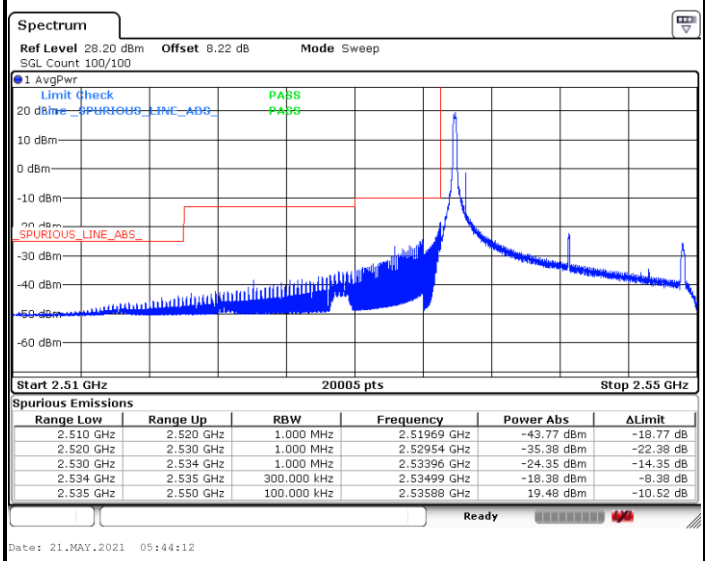
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.640 GHz	2.655 GHz	100.000 kHz	2.64360 GHz	1.70 dBm	-28.30 dB
2.655 GHz	2.656 GHz	300.000 kHz	2.65500 GHz	-31.61 dBm	-21.61 dB
2.656 GHz	2.660 GHz	1.000 MHz	2.65602 GHz	-34.25 dBm	-24.25 dB
2.660 GHz	2.670 GHz	1.000 MHz	2.66620 GHz	-39.80 dBm	-26.80 dB
2.670 GHz	2.680 GHz	1.000 MHz	2.67415 GHz	-43.35 dBm	-18.35 dB

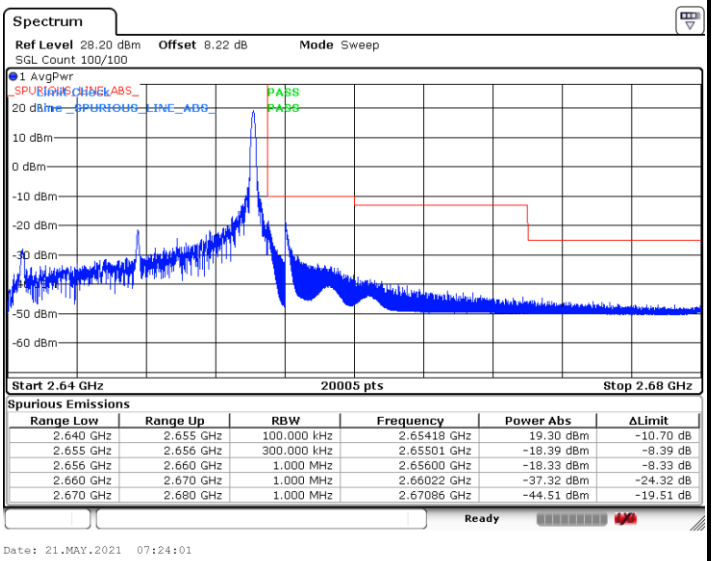
Date: 21.MAY.2021 07:21:03

LTE Band 41 / 15MHz / 16QAM

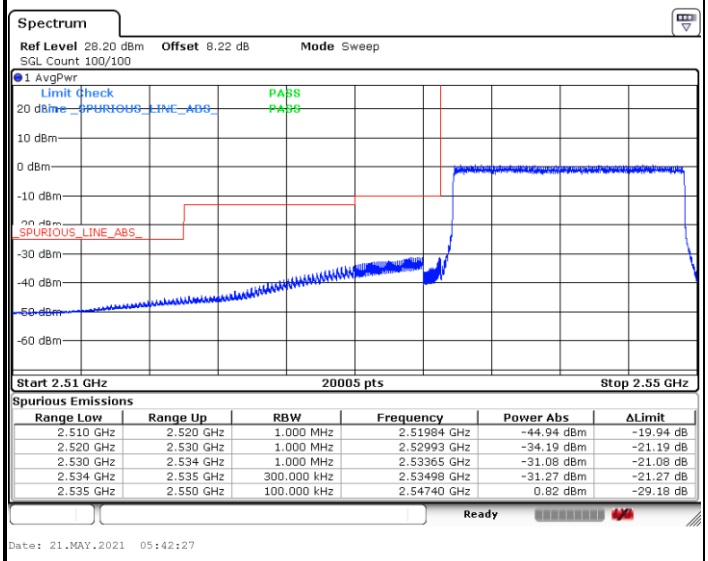
Lowest Band Edge / 1 RB



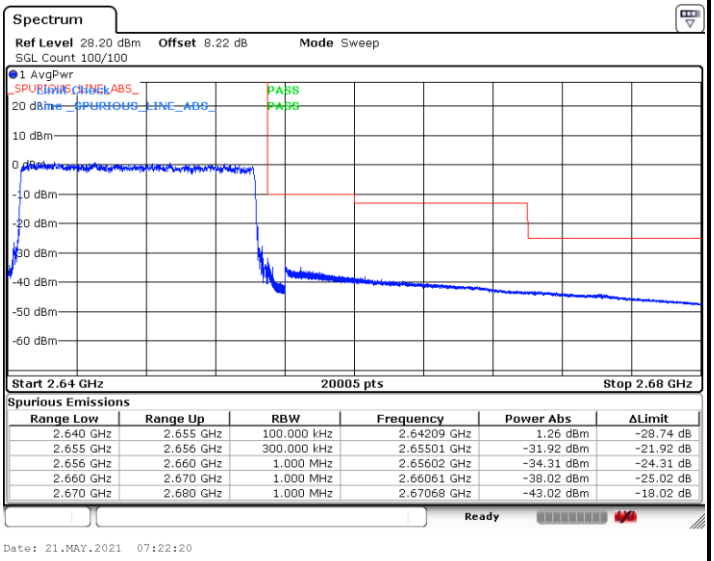
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB

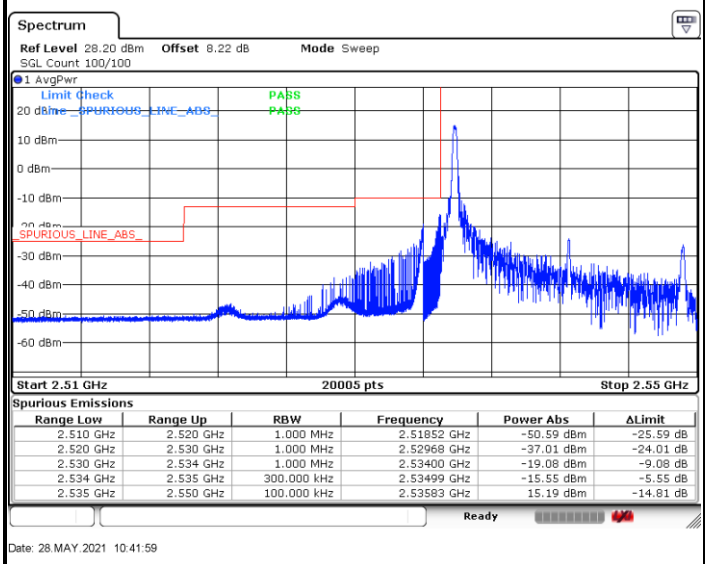


Highest Band Edge / Full RB



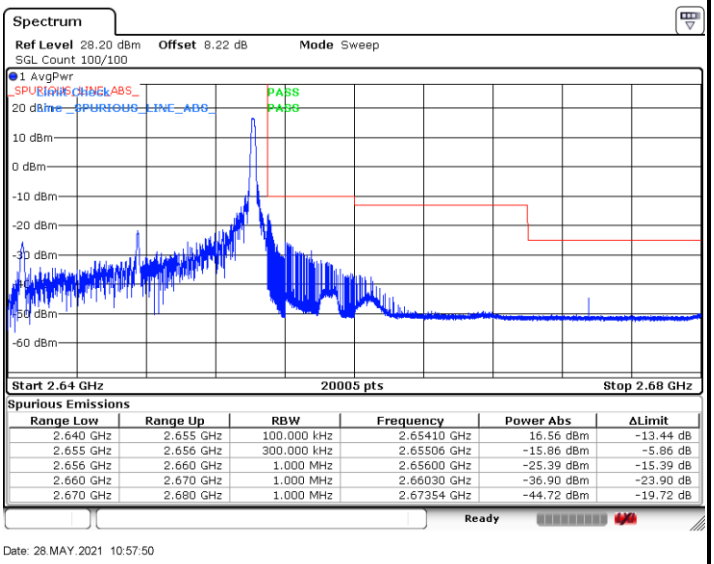
LTE Band 41 / 15MHz / 64QAM

Lowest Band Edge / 1 RB



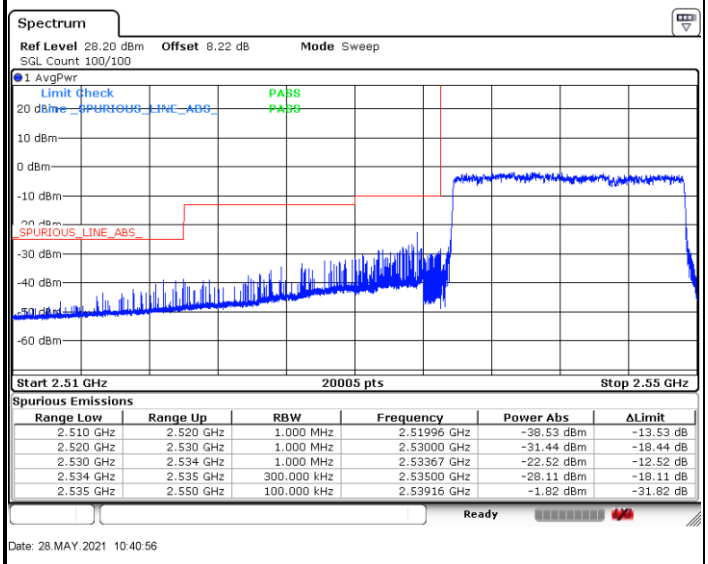
Date: 28.MAY.2021 10:41:59

Highest Band Edge / 1 RB



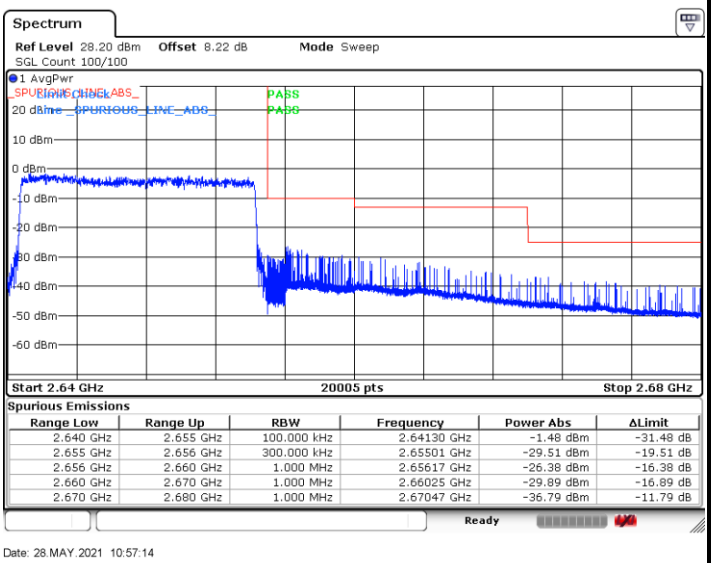
Date: 28.MAY.2021 10:57:50

Lowest Band Edge / Full RB



Date: 28.MAY.2021 10:40:56

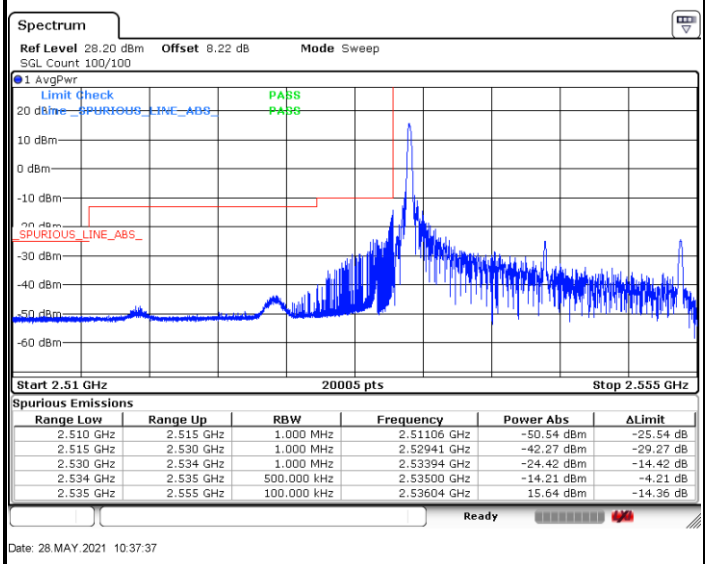
Highest Band Edge / Full RB



Date: 28.MAY.2021 10:57:14

LTE Band 41 / 20MHz / QPSK

Lowest Band Edge / 1 RB

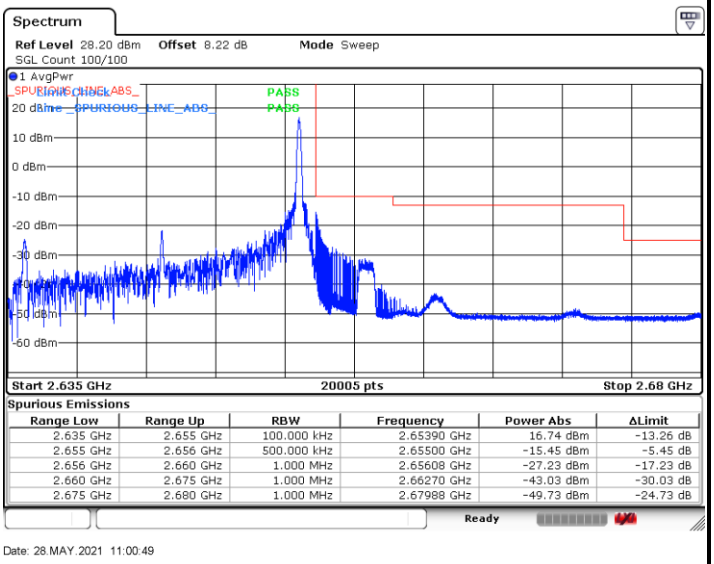


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.510 GHz	2.515 GHz	1.000 MHz	2.51106 GHz	-50.54 dBm	-25.54 dB
2.515 GHz	2.530 GHz	1.000 MHz	2.52941 GHz	-42.27 dBm	-29.27 dB
2.530 GHz	2.534 GHz	1.000 MHz	2.53394 GHz	-24.42 dBm	-14.42 dB
2.534 GHz	2.535 GHz	500.000 kHz	2.53500 GHz	-14.21 dBm	-4.21 dB
2.535 GHz	2.555 GHz	100.000 kHz	2.53604 GHz	15.64 dBm	-14.36 dB

Date: 28.MAY.2021 10:37:37

Highest Band Edge / 1 RB

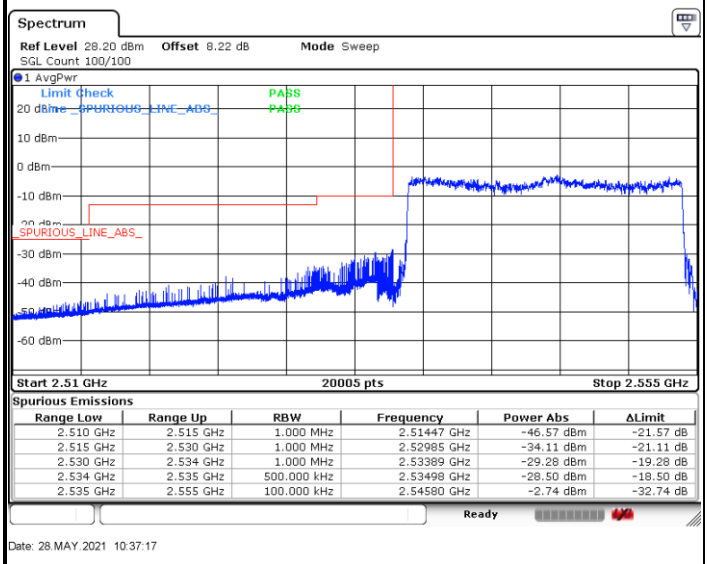


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.635 GHz	2.655 GHz	100.000 kHz	2.65390 GHz	16.74 dBm	-13.26 dB
2.655 GHz	2.656 GHz	500.000 kHz	2.65500 GHz	-15.45 dBm	-5.45 dB
2.656 GHz	2.660 GHz	1.000 MHz	2.65608 GHz	-27.23 dBm	-17.23 dB
2.660 GHz	2.675 GHz	1.000 MHz	2.66270 GHz	-43.03 dBm	-30.03 dB
2.675 GHz	2.680 GHz	1.000 MHz	2.67988 GHz	-49.73 dBm	-24.73 dB

Date: 28.MAY.2021 11:00:49

Lowest Band Edge / Full RB

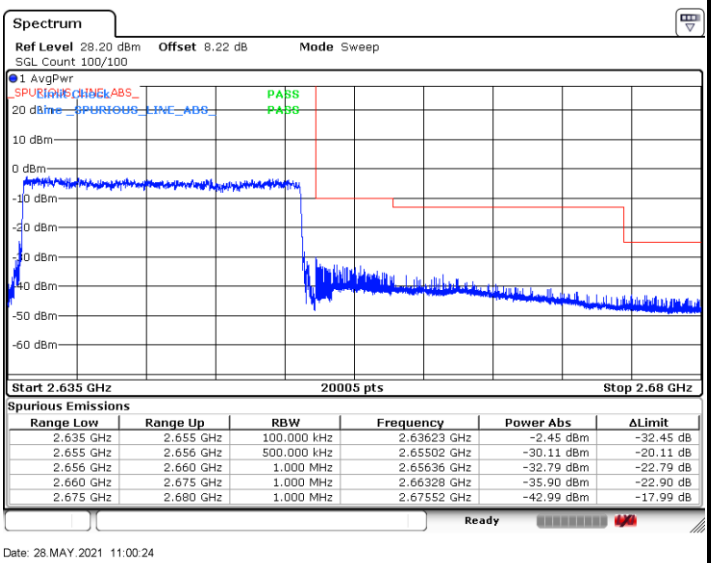


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.510 GHz	2.515 GHz	1.000 MHz	2.51447 GHz	-46.57 dBm	-21.57 dB
2.515 GHz	2.530 GHz	1.000 MHz	2.52985 GHz	-34.11 dBm	-21.11 dB
2.530 GHz	2.534 GHz	1.000 MHz	2.53389 GHz	-29.28 dBm	-19.28 dB
2.534 GHz	2.535 GHz	500.000 kHz	2.53498 GHz	-28.50 dBm	-18.50 dB
2.535 GHz	2.555 GHz	100.000 kHz	2.54580 GHz	-2.74 dBm	-32.74 dB

Date: 28.MAY.2021 10:37:17

Highest Band Edge / Full RB



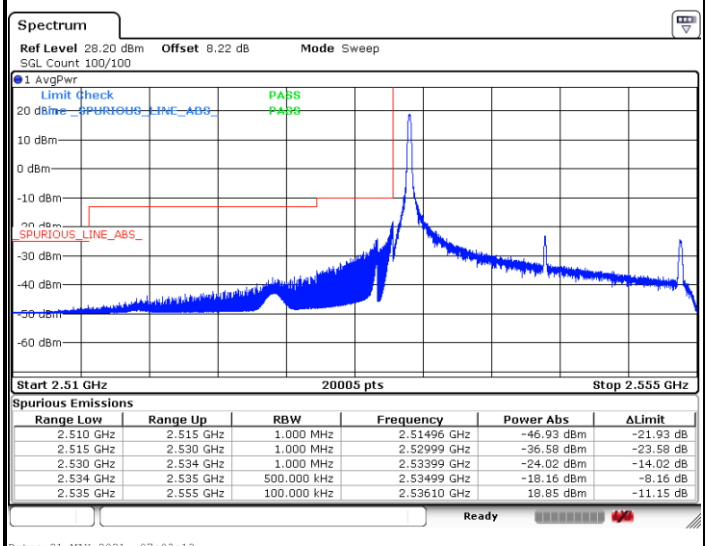
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.635 GHz	2.655 GHz	100.000 kHz	2.63623 GHz	-2.45 dBm	-32.45 dB
2.655 GHz	2.656 GHz	500.000 kHz	2.65502 GHz	-30.11 dBm	-20.11 dB
2.656 GHz	2.660 GHz	1.000 MHz	2.65636 GHz	-32.79 dBm	-22.79 dB
2.660 GHz	2.675 GHz	1.000 MHz	2.66328 GHz	-35.90 dBm	-22.90 dB
2.675 GHz	2.680 GHz	1.000 MHz	2.67552 GHz	-42.99 dBm	-17.99 dB

Date: 28.MAY.2021 11:00:24

LTE Band 41 / 20MHz / 16QAM

Lowest Band Edge / 1 RB

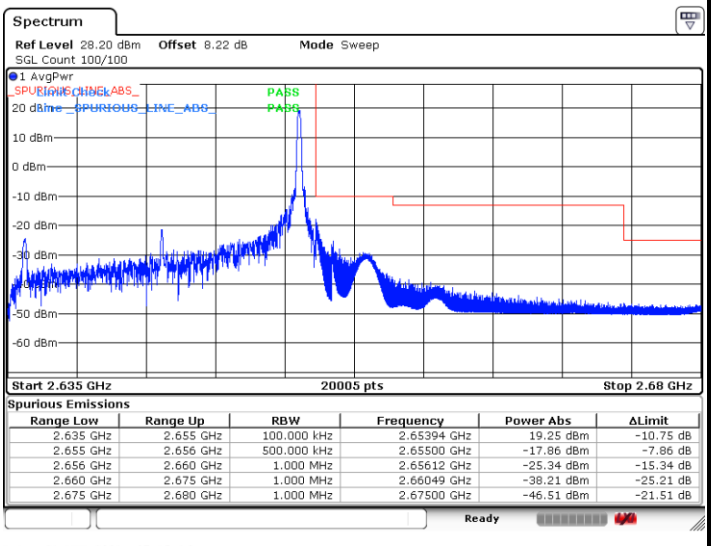


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.510 GHz	2.515 GHz	1.000 MHz	2.51496 GHz	-46.93 dBm	-21.93 dB
2.515 GHz	2.530 GHz	1.000 MHz	2.52999 GHz	-36.58 dBm	-23.58 dB
2.530 GHz	2.534 GHz	1.000 MHz	2.53399 GHz	-24.02 dBm	-14.02 dB
2.534 GHz	2.535 GHz	500.000 kHz	2.53499 GHz	-18.16 dBm	-8.16 dB
2.535 GHz	2.555 GHz	100.000 kHz	2.53610 GHz	18.85 dBm	-11.15 dB

Date: 21.MAY.2021 07:03:13

Highest Band Edge / 1 RB

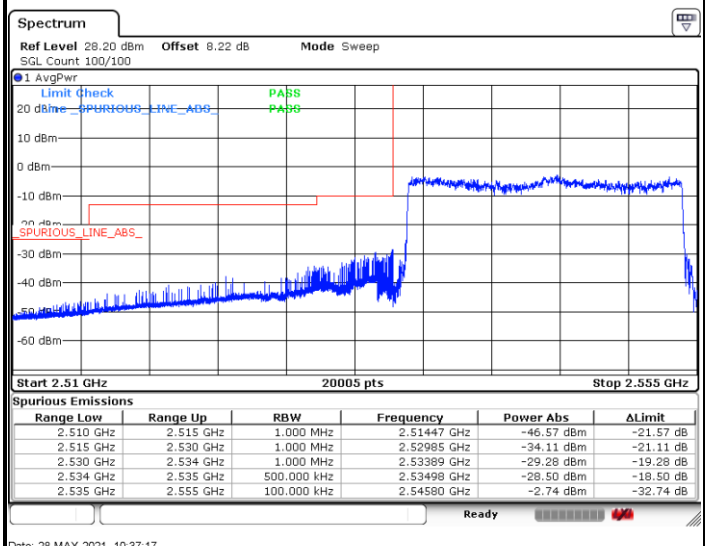


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.635 GHz	2.655 GHz	100.000 kHz	2.65394 GHz	19.25 dBm	-10.75 dB
2.655 GHz	2.656 GHz	500.000 kHz	2.65500 GHz	-17.86 dBm	-7.86 dB
2.656 GHz	2.660 GHz	1.000 MHz	2.65612 GHz	-25.34 dBm	-15.34 dB
2.660 GHz	2.675 GHz	1.000 MHz	2.66049 GHz	-38.21 dBm	-25.21 dB
2.675 GHz	2.680 GHz	1.000 MHz	2.67500 GHz	-46.51 dBm	-21.51 dB

Date: 21.MAY.2021 07:15:16

Lowest Band Edge / Full RB

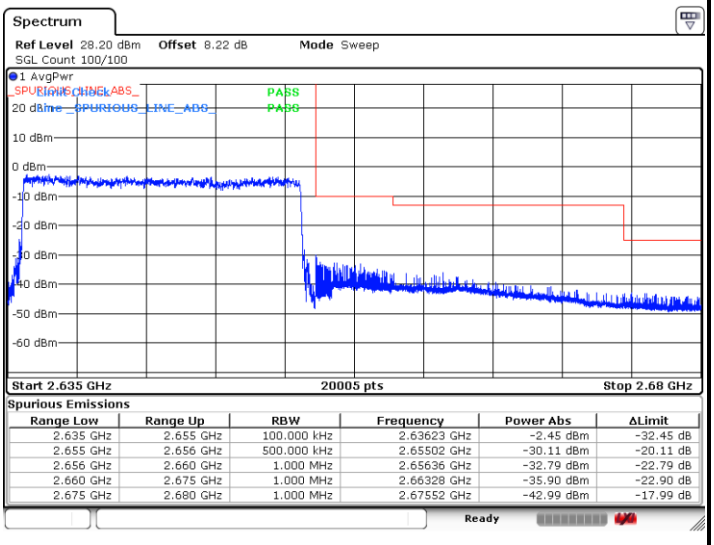


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.510 GHz	2.515 GHz	1.000 MHz	2.51447 GHz	-46.57 dBm	-21.57 dB
2.515 GHz	2.530 GHz	1.000 MHz	2.52985 GHz	-34.11 dBm	-21.11 dB
2.530 GHz	2.534 GHz	1.000 MHz	2.53389 GHz	-29.28 dBm	-19.28 dB
2.534 GHz	2.535 GHz	500.000 kHz	2.53498 GHz	-28.50 dBm	-18.50 dB
2.535 GHz	2.555 GHz	100.000 kHz	2.54580 GHz	-2.74 dBm	-32.74 dB

Date: 28.MAY.2021 10:37:17

Highest Band Edge / Full RB



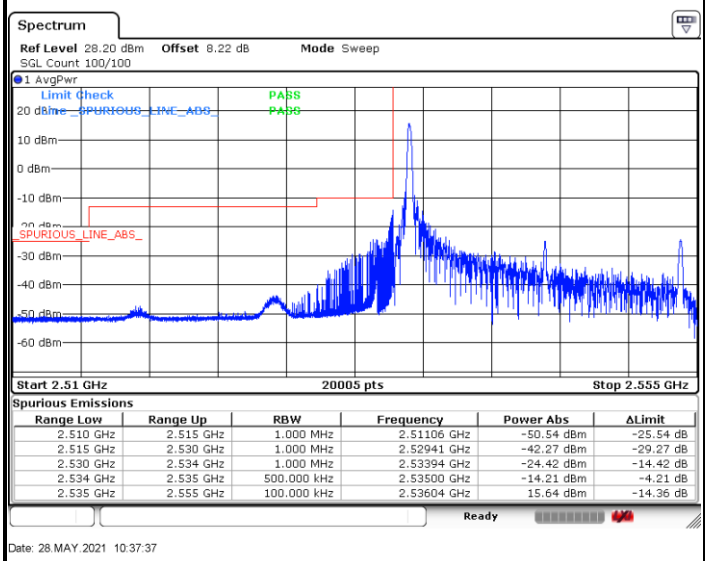
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.635 GHz	2.655 GHz	100.000 kHz	2.63623 GHz	-2.45 dBm	-32.45 dB
2.655 GHz	2.656 GHz	500.000 kHz	2.65502 GHz	-30.11 dBm	-20.11 dB
2.656 GHz	2.660 GHz	1.000 MHz	2.65636 GHz	-32.79 dBm	-22.79 dB
2.660 GHz	2.675 GHz	1.000 MHz	2.66328 GHz	-35.90 dBm	-22.90 dB
2.675 GHz	2.680 GHz	1.000 MHz	2.67552 GHz	-42.99 dBm	-17.99 dB

Date: 28.MAY.2021 11:00:24

LTE Band 41 / 20MHz / 64QAM

Lowest Band Edge / 1 RB

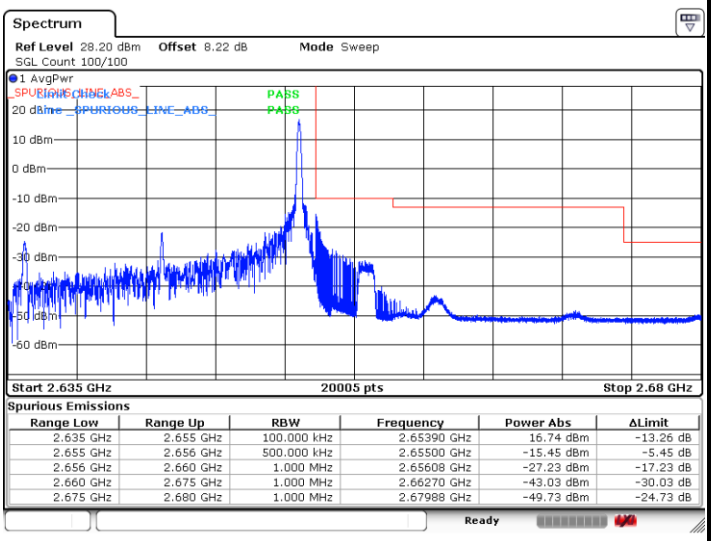


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.510 GHz	2.515 GHz	1.000 MHz	2.51106 GHz	-50.54 dBm	-25.54 dB
2.515 GHz	2.530 GHz	1.000 MHz	2.52941 GHz	-42.27 dBm	-29.27 dB
2.530 GHz	2.534 GHz	1.000 MHz	2.53394 GHz	-24.42 dBm	-14.42 dB
2.534 GHz	2.535 GHz	500.000 kHz	2.53500 GHz	-14.21 dBm	-4.21 dB
2.535 GHz	2.555 GHz	100.000 kHz	2.53604 GHz	15.64 dBm	-14.36 dB

Date: 28.MAY.2021 10:37:37

Highest Band Edge / 1 RB

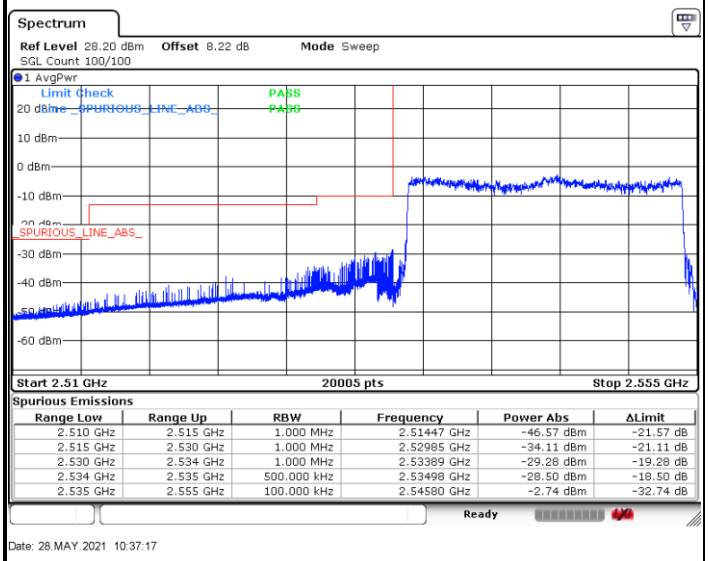


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.635 GHz	2.655 GHz	100.000 kHz	2.65390 GHz	16.74 dBm	-13.26 dB
2.655 GHz	2.656 GHz	500.000 kHz	2.65500 GHz	-15.45 dBm	-5.45 dB
2.656 GHz	2.660 GHz	1.000 MHz	2.65608 GHz	-27.23 dBm	-17.23 dB
2.660 GHz	2.675 GHz	1.000 MHz	2.66270 GHz	-43.03 dBm	-30.03 dB
2.675 GHz	2.680 GHz	1.000 MHz	2.67988 GHz	-49.73 dBm	-24.73 dB

Date: 28.MAY.2021 11:00:49

Lowest Band Edge / Full RB

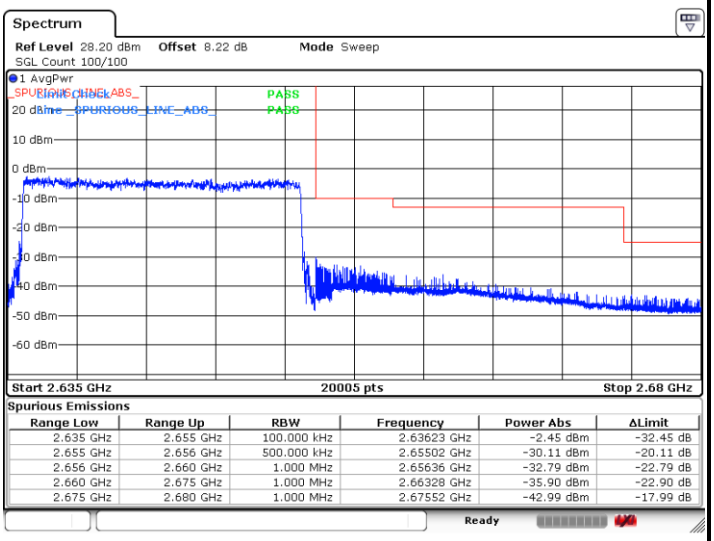


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.510 GHz	2.515 GHz	1.000 MHz	2.51447 GHz	-46.57 dBm	-21.57 dB
2.515 GHz	2.530 GHz	1.000 MHz	2.52985 GHz	-34.11 dBm	-21.11 dB
2.530 GHz	2.534 GHz	1.000 MHz	2.53389 GHz	-29.28 dBm	-19.28 dB
2.534 GHz	2.535 GHz	500.000 kHz	2.53498 GHz	-28.50 dBm	-18.50 dB
2.535 GHz	2.555 GHz	100.000 kHz	2.54580 GHz	-2.74 dBm	-32.74 dB

Date: 28.MAY.2021 10:37:17

Highest Band Edge / Full RB



Spurious Emissions

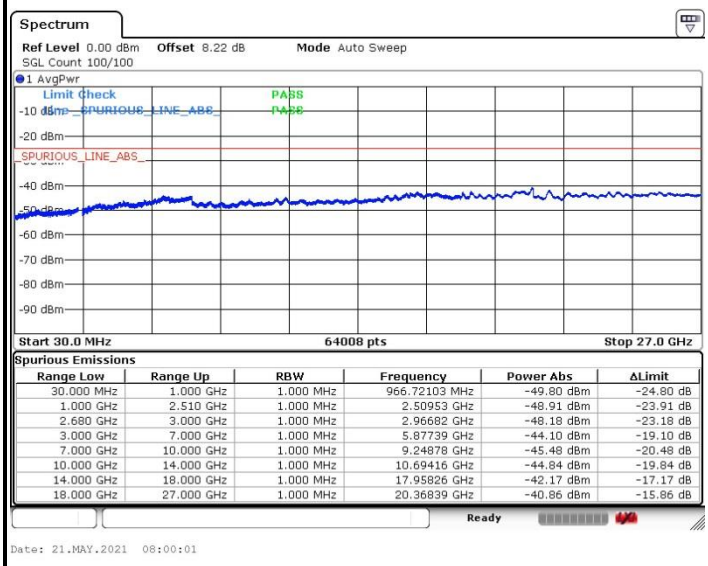
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.635 GHz	2.655 GHz	100.000 kHz	2.63623 GHz	-2.45 dBm	-32.45 dB
2.655 GHz	2.656 GHz	500.000 kHz	2.65502 GHz	-30.11 dBm	-20.11 dB
2.656 GHz	2.660 GHz	1.000 MHz	2.65636 GHz	-32.79 dBm	-22.79 dB
2.660 GHz	2.675 GHz	1.000 MHz	2.66328 GHz	-35.90 dBm	-22.90 dB
2.675 GHz	2.680 GHz	1.000 MHz	2.67552 GHz	-42.99 dBm	-17.99 dB

Date: 28.MAY.2021 11:00:24

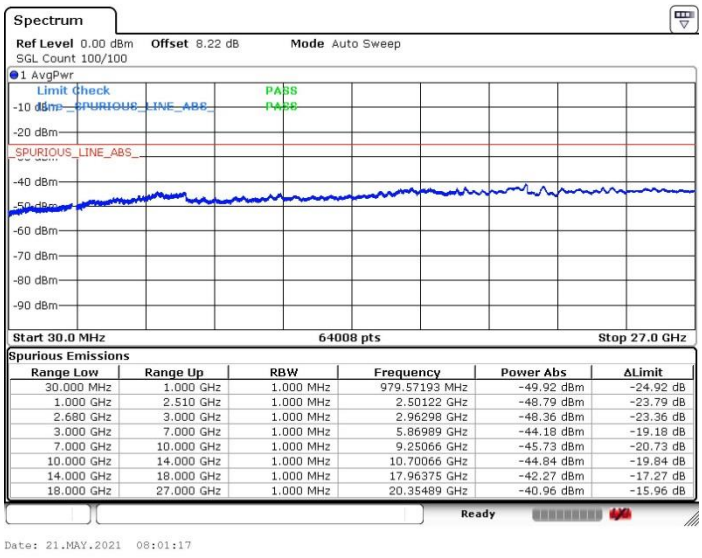
Conducted Spurious Emission

LTE Band 41 / 5MHz

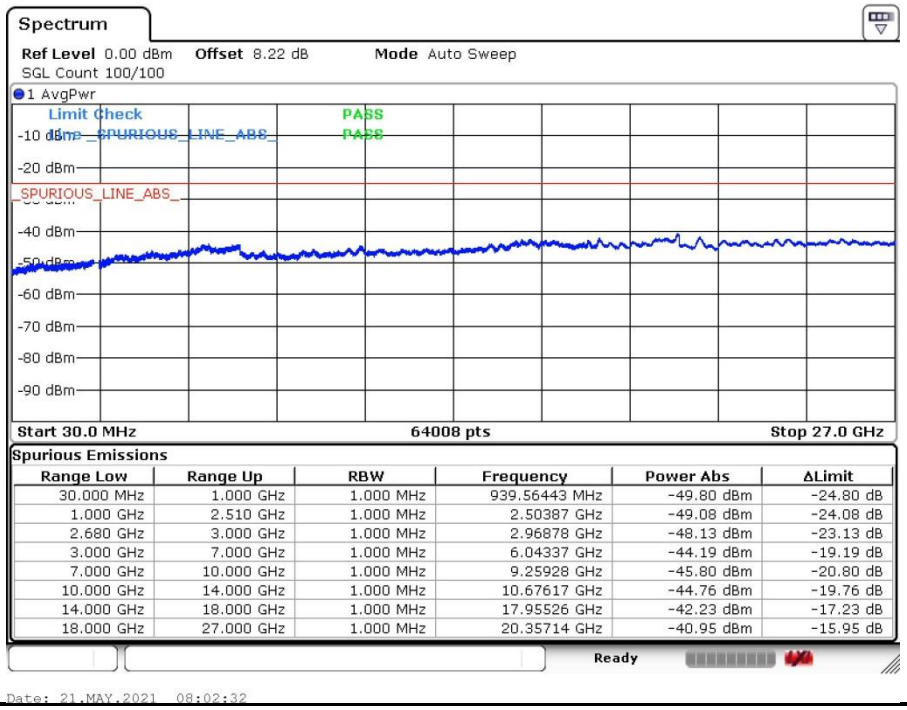
Lowest Channel / QPSK



Middle Channel / QPSK

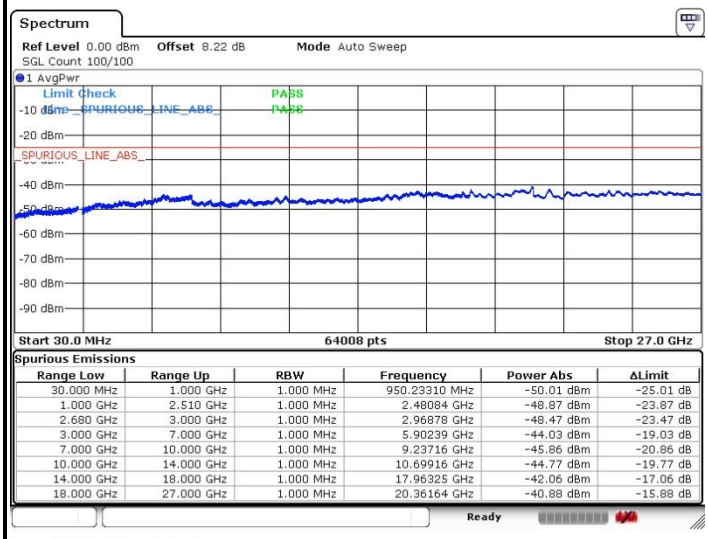


Highest Channel / QPSK



LTE Band 41 / 10MHz

Lowest Channel / QPSK

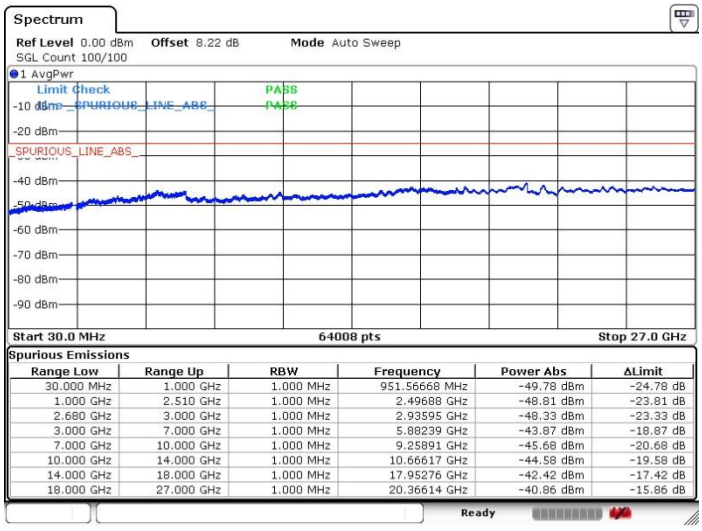


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	950.23310 MHz	-50.01 dBm	-25.01 dB
1.000 GHz	2.510 GHz	1.000 MHz	2.48084 GHz	-48.87 dBm	-23.87 dB
2.680 GHz	3.000 GHz	1.000 MHz	2.96878 GHz	-48.47 dBm	-23.47 dB
3.000 GHz	7.000 GHz	1.000 MHz	5.90239 GHz	-44.03 dBm	-19.03 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.23716 GHz	-45.86 dBm	-20.86 dB
10.000 GHz	14.000 GHz	1.000 MHz	10.69916 GHz	-44.77 dBm	-19.77 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.96325 GHz	-42.06 dBm	-17.06 dB
18.000 GHz	27.000 GHz	1.000 MHz	20.36164 GHz	-40.88 dBm	-15.88 dB

Date: 21.MAY.2021 08:03:41

Middle Channel / QPSK

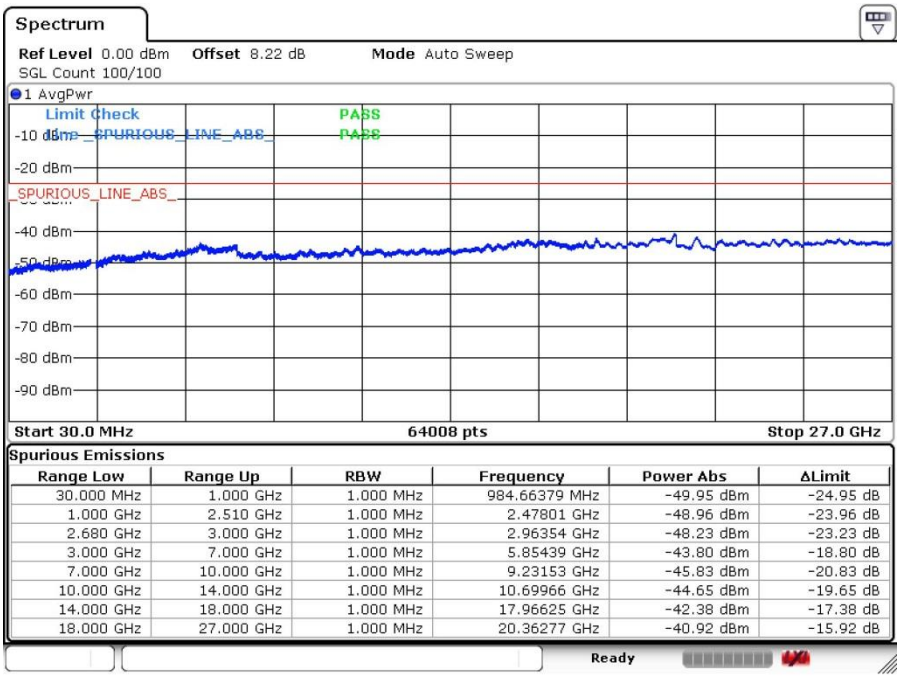


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	951.56668 MHz	-49.78 dBm	-24.78 dB
1.000 GHz	2.510 GHz	1.000 MHz	2.49688 GHz	-48.81 dBm	-23.81 dB
2.680 GHz	3.000 GHz	1.000 MHz	2.93595 GHz	-48.33 dBm	-23.33 dB
3.000 GHz	7.000 GHz	1.000 MHz	5.88239 GHz	-43.87 dBm	-18.87 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.25891 GHz	-45.68 dBm	-20.68 dB
10.000 GHz	14.000 GHz	1.000 MHz	10.66617 GHz	-44.58 dBm	-19.58 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.95276 GHz	-42.42 dBm	-17.42 dB
18.000 GHz	27.000 GHz	1.000 MHz	20.36614 GHz	-40.86 dBm	-15.86 dB

Date: 21.MAY.2021 08:04:52

Highest Channel / QPSK



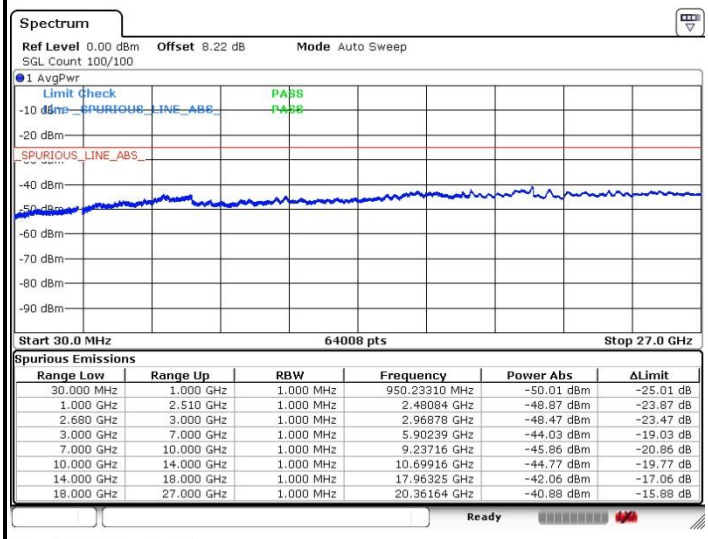
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	984.66379 MHz	-49.95 dBm	-24.95 dB
1.000 GHz	2.510 GHz	1.000 MHz	2.47801 GHz	-48.96 dBm	-23.96 dB
2.680 GHz	3.000 GHz	1.000 MHz	2.96354 GHz	-48.23 dBm	-23.23 dB
3.000 GHz	7.000 GHz	1.000 MHz	5.85439 GHz	-43.80 dBm	-18.80 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.23153 GHz	-45.83 dBm	-20.83 dB
10.000 GHz	14.000 GHz	1.000 MHz	10.69966 GHz	-44.65 dBm	-19.65 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.96625 GHz	-42.38 dBm	-17.38 dB
18.000 GHz	27.000 GHz	1.000 MHz	20.36277 GHz	-40.92 dBm	-15.92 dB

Date: 21.MAY.2021 08:06:01

LTE Band 41 / 15MHz

Lowest Channel / QPSK

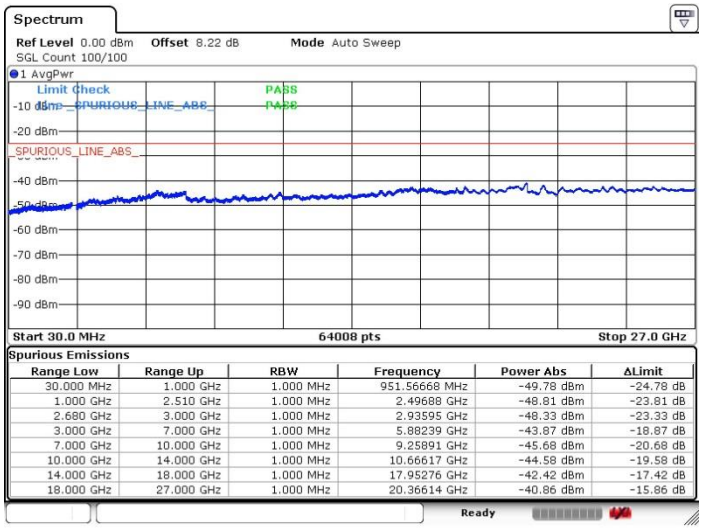


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	950.23310 MHz	-50.01 dBm	-25.01 dB
1.000 GHz	2.510 GHz	1.000 MHz	2.48084 GHz	-48.87 dBm	-23.87 dB
2.680 GHz	3.000 GHz	1.000 MHz	2.96878 GHz	-48.47 dBm	-23.47 dB
3.000 GHz	7.000 GHz	1.000 MHz	5.90239 GHz	-44.03 dBm	-19.03 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.23716 GHz	-45.86 dBm	-20.86 dB
10.000 GHz	14.000 GHz	1.000 MHz	10.69916 GHz	-44.77 dBm	-19.77 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.96325 GHz	-42.06 dBm	-17.06 dB
18.000 GHz	27.000 GHz	1.000 MHz	20.36164 GHz	-40.88 dBm	-15.88 dB

Date: 21.MAY.2021 08:03:41

Middle Channel / QPSK

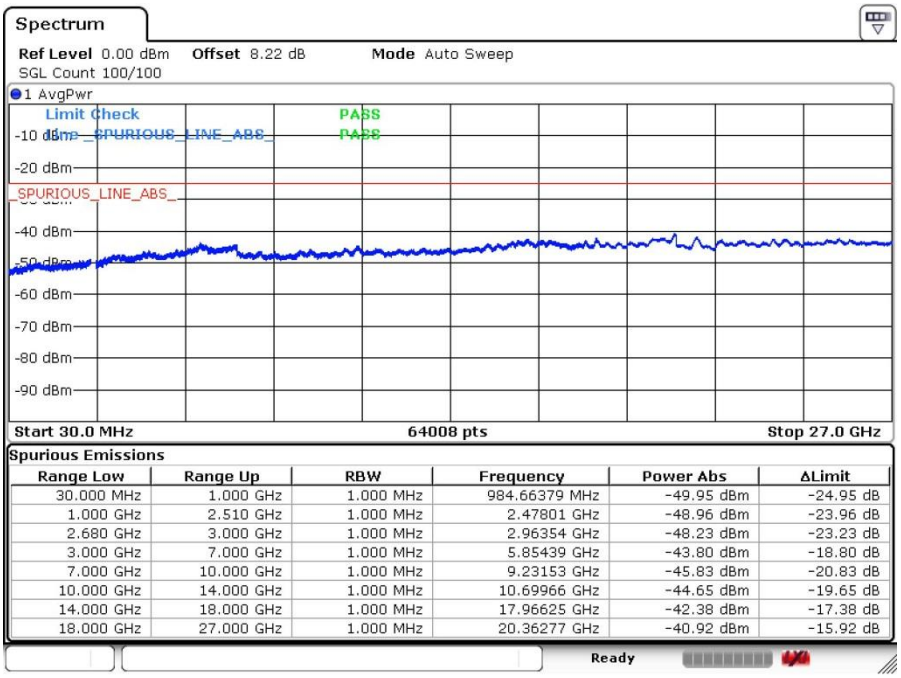


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	951.56668 MHz	-49.78 dBm	-24.78 dB
1.000 GHz	2.510 GHz	1.000 MHz	2.49688 GHz	-48.81 dBm	-23.81 dB
2.680 GHz	3.000 GHz	1.000 MHz	2.93595 GHz	-48.33 dBm	-23.33 dB
3.000 GHz	7.000 GHz	1.000 MHz	5.88239 GHz	-43.87 dBm	-18.87 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.25891 GHz	-45.68 dBm	-20.68 dB
10.000 GHz	14.000 GHz	1.000 MHz	10.66617 GHz	-44.58 dBm	-19.58 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.95276 GHz	-42.42 dBm	-17.42 dB
18.000 GHz	27.000 GHz	1.000 MHz	20.36614 GHz	-40.86 dBm	-15.86 dB

Date: 21.MAY.2021 08:04:52

Highest Channel / QPSK



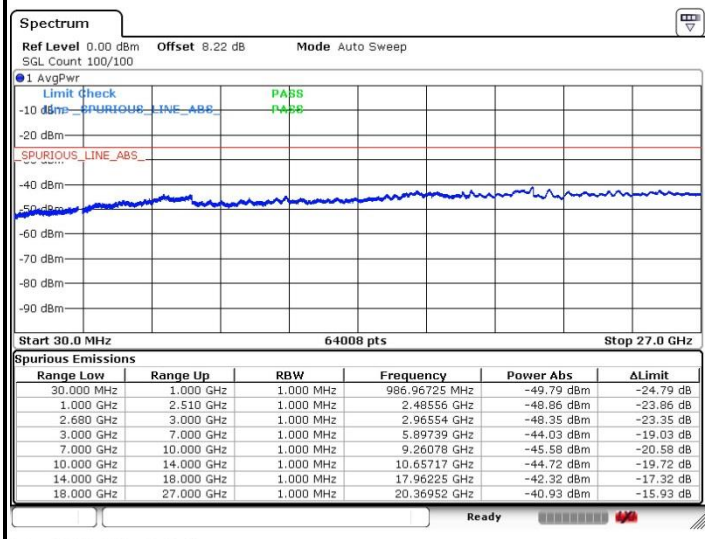
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	984.66379 MHz	-49.95 dBm	-24.95 dB
1.000 GHz	2.510 GHz	1.000 MHz	2.47801 GHz	-48.96 dBm	-23.96 dB
2.680 GHz	3.000 GHz	1.000 MHz	2.96354 GHz	-48.23 dBm	-23.23 dB
3.000 GHz	7.000 GHz	1.000 MHz	5.85439 GHz	-43.80 dBm	-18.80 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.23153 GHz	-45.83 dBm	-20.83 dB
10.000 GHz	14.000 GHz	1.000 MHz	10.69966 GHz	-44.65 dBm	-19.65 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.96625 GHz	-42.38 dBm	-17.38 dB
18.000 GHz	27.000 GHz	1.000 MHz	20.36277 GHz	-40.92 dBm	-15.92 dB

Date: 21.MAY.2021 08:06:01

LTE Band 41 / 20MHz

Lowest Channel / QPSK

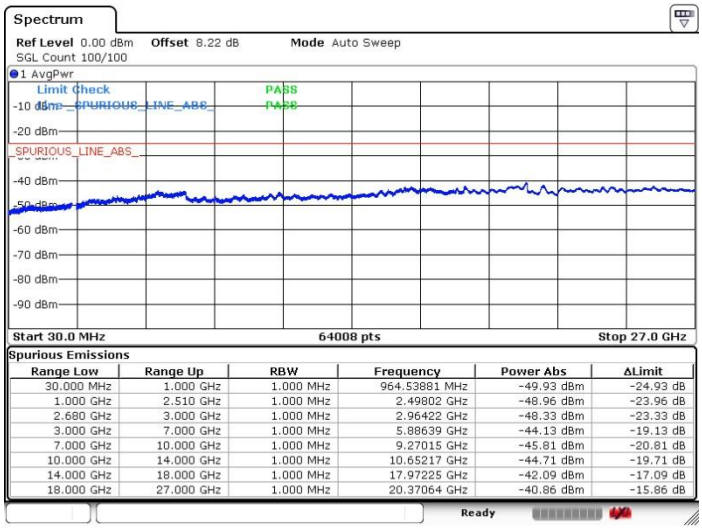


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	986.96725 MHz	-49.79 dBm	-24.79 dB
1.000 GHz	2.510 GHz	1.000 MHz	2.48556 GHz	-48.86 dBm	-23.86 dB
2.680 GHz	3.000 GHz	1.000 MHz	2.96554 GHz	-48.35 dBm	-23.35 dB
3.000 GHz	7.000 GHz	1.000 MHz	5.89739 GHz	-44.03 dBm	-19.03 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.26078 GHz	-45.58 dBm	-20.58 dB
10.000 GHz	14.000 GHz	1.000 MHz	10.65717 GHz	-44.72 dBm	-19.72 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.96225 GHz	-42.32 dBm	-17.32 dB
18.000 GHz	27.000 GHz	1.000 MHz	20.36952 GHz	-40.93 dBm	-15.93 dB

Date: 21.MAY.2021 08:12:29

Middle Channel / QPSK

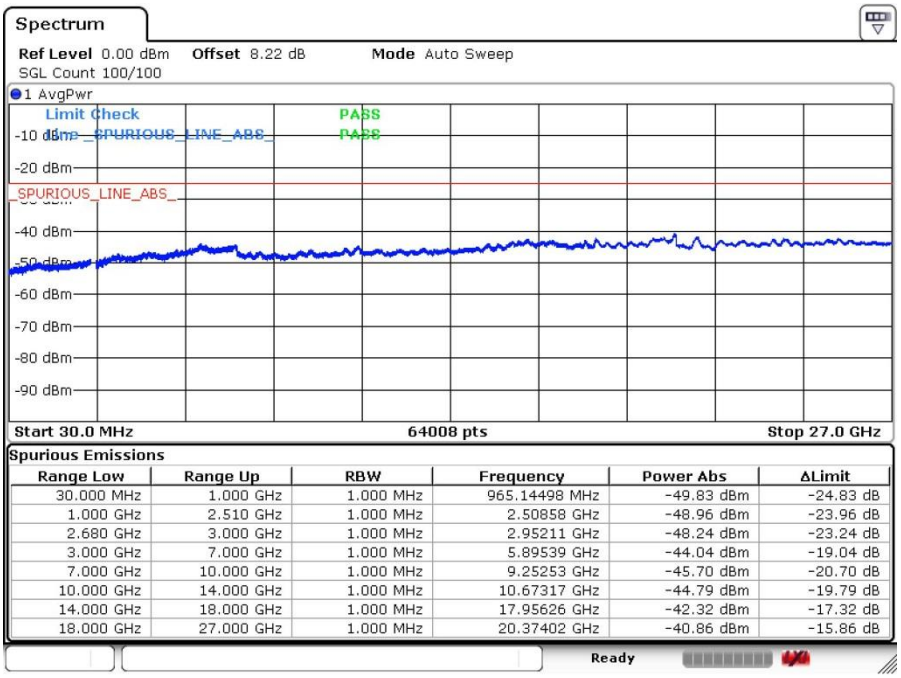


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	964.53881 MHz	-49.93 dBm	-24.93 dB
1.000 GHz	2.510 GHz	1.000 MHz	2.49802 GHz	-48.96 dBm	-23.96 dB
2.680 GHz	3.000 GHz	1.000 MHz	2.96422 GHz	-48.33 dBm	-23.33 dB
3.000 GHz	7.000 GHz	1.000 MHz	5.88639 GHz	-44.13 dBm	-19.13 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.27015 GHz	-45.81 dBm	-20.81 dB
10.000 GHz	14.000 GHz	1.000 MHz	10.65217 GHz	-44.71 dBm	-19.71 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.97225 GHz	-42.09 dBm	-17.09 dB
18.000 GHz	27.000 GHz	1.000 MHz	20.37064 GHz	-40.86 dBm	-15.86 dB

Date: 21.MAY.2021 08:10:50

Highest Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	965.14498 MHz	-49.83 dBm	-24.83 dB
1.000 GHz	2.510 GHz	1.000 MHz	2.50858 GHz	-48.96 dBm	-23.96 dB
2.680 GHz	3.000 GHz	1.000 MHz	2.95211 GHz	-48.24 dBm	-23.24 dB
3.000 GHz	7.000 GHz	1.000 MHz	5.89539 GHz	-44.04 dBm	-19.04 dB
7.000 GHz	10.000 GHz	1.000 MHz	9.25253 GHz	-45.70 dBm	-20.70 dB
10.000 GHz	14.000 GHz	1.000 MHz	10.67317 GHz	-44.79 dBm	-19.79 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.95626 GHz	-42.32 dBm	-17.32 dB
18.000 GHz	27.000 GHz	1.000 MHz	20.37402 GHz	-40.86 dBm	-15.86 dB

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Frequency Stability

Test Conditions		LTE Band 41 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.002	PASS
40	Normal Voltage	0.0004	
30	Normal Voltage	0.0021	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0016	
0	Normal Voltage	0.0020	
-10	Normal Voltage	0.0021	
-20	Normal Voltage	0.0002	
-30	Normal Voltage	0.0002	
20	Maximum Voltage	0.0016	
20	Normal Voltage	0.0005	
20	Battery End Point	0.0004	

Note:

1. Normal Voltage =3.8 V.；Battery End Point (BEP) =3.6 V.；Maximum Voltage =4.4V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

LTE Band 41 / 20MHz / 16QAM								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	5172	-53.40	-25	-28.40	-63.61	3.03	13.24	H
	7760	-61.60	-25	-36.60	-71.05	3.56	13.01	H
	10340	-59.57	-25	-34.57	-69.09	3.92	13.44	H
	5172	-49.56	-25	-24.56	-59.77	3.03	13.24	V
	7760	-61.39	-25	-36.39	-70.84	3.56	13.01	V
	10340	-59.91	-25	-34.91	-69.43	3.92	13.44	V

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

Appendix D. Reference Report

Please refer to Sporton report number FG142611B which is issued separately.