FCC RF Test Report

APPLICANT	:	**Rolling Wireless S.à r.l.**
EQUIPMENT	:	**Module**
BRAND NAME	:	**Rolling Wireless**
MODEL NAME	:	**RL9424**
FCC ID	:	**2AX2URL9424**
STANDARD	:	**47 CFR Part 2, 27(M)**
CLASSIFICATION	:	**Licensed Non-Broadcast Station Transmitter (TNB)**
TEST DATE(S)	:	**Jun. 23, 2022 ~ Jun. 28, 2022**

We, Sporton International Inc. (ShenZhen), 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 Inc. (ShenZhen), the test report shall not be reproduced except in full.

Jason Jia

Approved by: Jason Jia

ACCREDITED Cert #5145.01

Sporton International Inc. (ShenZhen)

1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055

People's Republic of China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG262008	Rev. 01	Initial issue of report	Jul. 19, 2022

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	-	Report Only	-
	§27.50(h)(2)	Equivalent Isotropic Radiated Power (Band 7)	EIRP < 2Watt		-
3.5	N/A	Peak-to-Average Ratio	<13 dB	PASS	-
3.6	§2.1049	Occupied Bandwidth	-	Report Only	-
3.7	§27.53(m)(4)	Conducted Band Edge Measurement (Band 7)	§27.53(m)(4)	PASS	-
3.8	§2.1051 §27.53(m)(4)	Conducted Spurious Emission (Band 7)	< $55+10\log_{10}$(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 7)	< $55+10\log_{10}$(P[Watts])	PASS	Under limit 23.97 dB at 10204.360 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

Rolling Wireless S.à r.l.
15, rue Edward Steichen, 2540 Luxembourg

1.2 Manufacturer

Rolling Wireless S.à r.l.
15, rue Edward Steichen, 2540 Luxembourg

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Module
Brand Name	Rolling Wireless
Model Name	RL9424
FCC ID	2AX2URL9424
IMEI	Conducted: 350652510010014 Radiation: 350652510010063
HW Version	1.0
SW Version	AFPQ9X40A_01.04.03.00

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	LTE Band 7 : 2500 MHz ~ 2570 MHz
Rx Frequency	LTE Band 7 : 2620 MHz ~ 2690 MHz
Bandwidth	LTE Band 7 : 5MHz/ 10MHz / 15MHz / 20MHz
Maximum Output Power to Antenna	LTE Band 7 : 22.86 dBm
Antenna Gain	LTE Band 7 : 2.0 dBi
Type of Modulation	QPSK / 16QAM

Remark: There are two antennas on the jig, the main antenna supports TX/RX, and the diversity antenna supports RX only.

1.5 Modification of EUT

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

1.6 Maximum Conducted Power and Emission Designator

LTE Band 7		QPSK		16QAM	
BW (MHz)	Frequency Range (MHz)	Maximum Conducted power (W)	Emission Designator (99%OBW)	Maximum Conducted power (W)	Emission Designator (99%OBW)
5	2502.5 ~ 2567.5	0.1914	4M51G7D	0.1556	4M50W7D
10	2505.0 ~ 2565.0	0.1892	9M09G7D	0.1556	9M05W7D
15	2507.5 ~ 2562.5	0.1910	13M5G7D	0.1567	13M5W7D
20	2510.0 ~ 2560.0	0.1932	17M9G7D	0.1574	17M9W7D

1.7 Testing Location

Sporton International Inc. (Shenzhen) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Test Firm	Sporton International Inc. (Shenzhen)		
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	TH01-SZ	CN1256	421272

Test Firm	Sporton International Inc. (Shenzhen)		
Test Site Location	101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City Guangdong Province China 518103 TEL: +86-755-33202398		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH02-SZ	CN1256	421272

1.8 Test Software

Item	Site	Manufacture	Name	Version
1.	03CH02-SZ	AUDIX	E3	6.2009-8-24a

1.9 Applicable Standards

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

- 47 CFR Part 2, 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: All test items were verified and recorded according to the standards and without any deviation during the test.

2 Test Configuration of Equipment Under Test

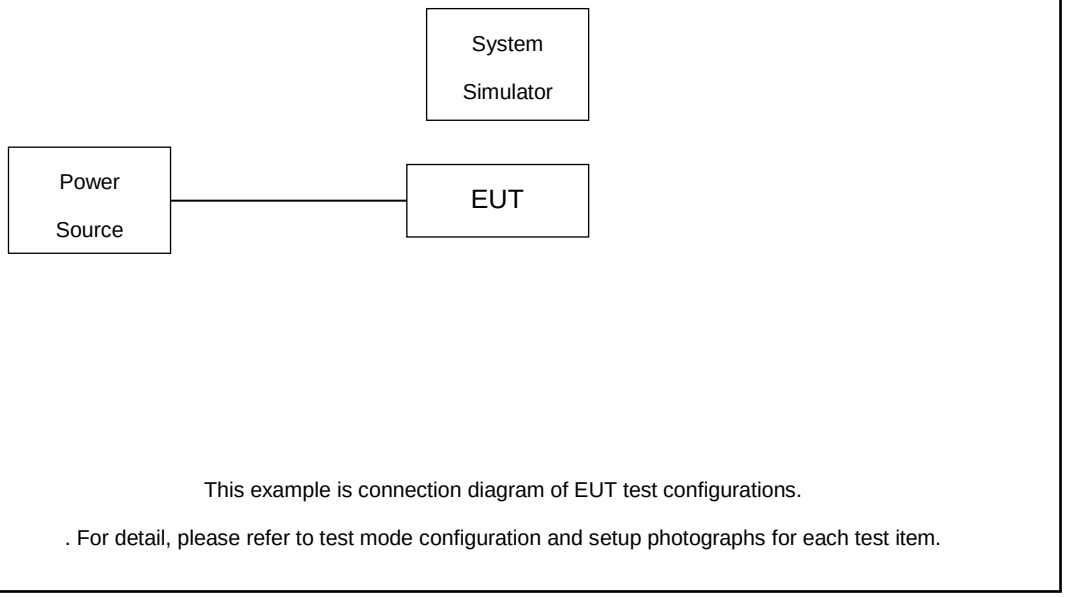
2.1 Test Mode

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

Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission. (Y-Plane)

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	7	-	-	v	v	v	v	v	v		v	v	v	v	v	v
Peak-to-Average Ratio	7	-	-				v	v	v		v		v	v	v	v
26dB and 99% Bandwidth	7	-	-	v	v	v	v	v	v				v	v	v	v
Conducted Band Edge	7	-	-	v	v	v	v	v	v		v		v	v		v
Conducted Spurious Emission	7	-	-	v	v	v	v	v	v		v			v	v	v
Frequency Stability	7	-	-		v			v					v		v	
E.R.P / E.I.R.P	7	-	-	v	v	v	v	v	v		v			v	v	v
Radiated Spurious Emission	7	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. 4. All test items are based on engineering evaluation.															

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
3.	Test Jig	N/A	N/A	N/A	N/A	N/A
4.	Antenna	N/A	N/A	N/A	N/A	N/A
5.	Adapter	N/A	N/A	N/A	Shielded,1.2m	N/A

2.4 Measurement Results Explanation Example

For all conducted test items:

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

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

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 5.0 dB and 10dB attenuator.

Example :

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

= 5.0 + 10 = 15.0 (dB)

2.5 Frequency List of Low/Middle/High Channels

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

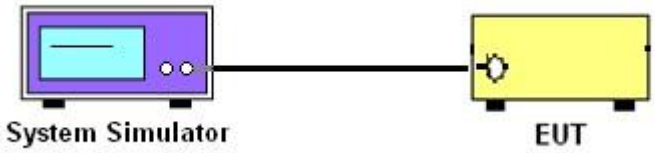
3 Conducted Test Items

3.1 Measuring Instruments

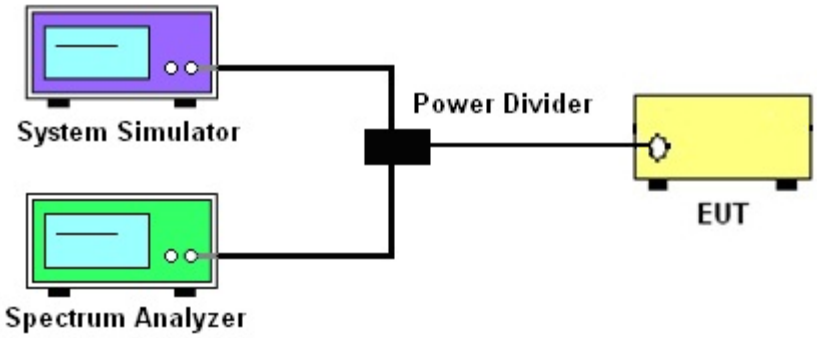
See list of measuring instruments of this test report.

3.2 Test Setup

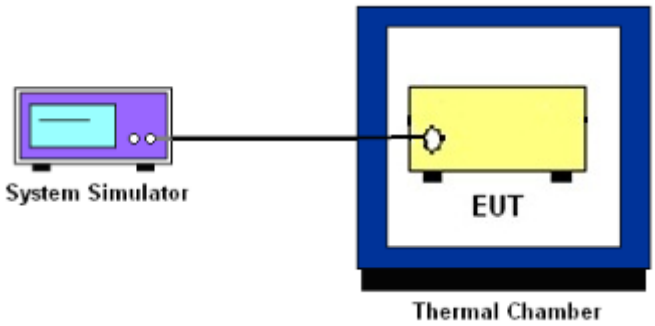
3.2.1 Conducted Output Power



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 LTE Band 7.

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.
10. When using the integration method, the starting frequency of the integration shall be centered at one-half of the RBW away from the band edge.

3.8 Conducted Spurious Emission

3.8.1 Description of Conducted Spurious Emission Measurement

For Band 7:

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. For Band 7

    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..

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.

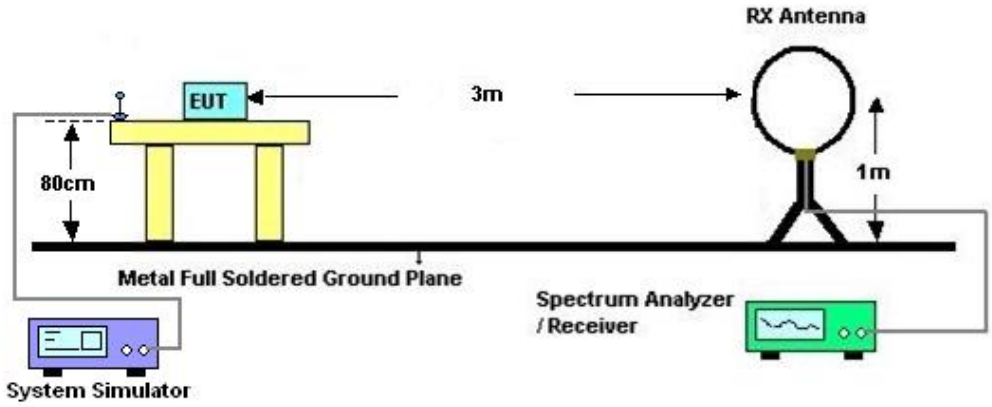
4 Radiated Test Items

4.1 Measuring Instruments

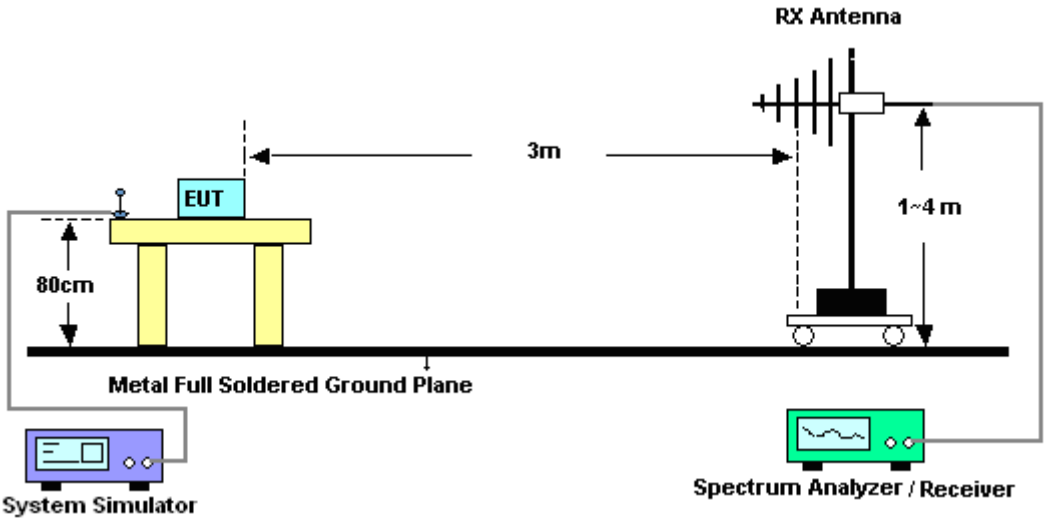
See list of measuring instruments of this test report.

4.2 Test Setup

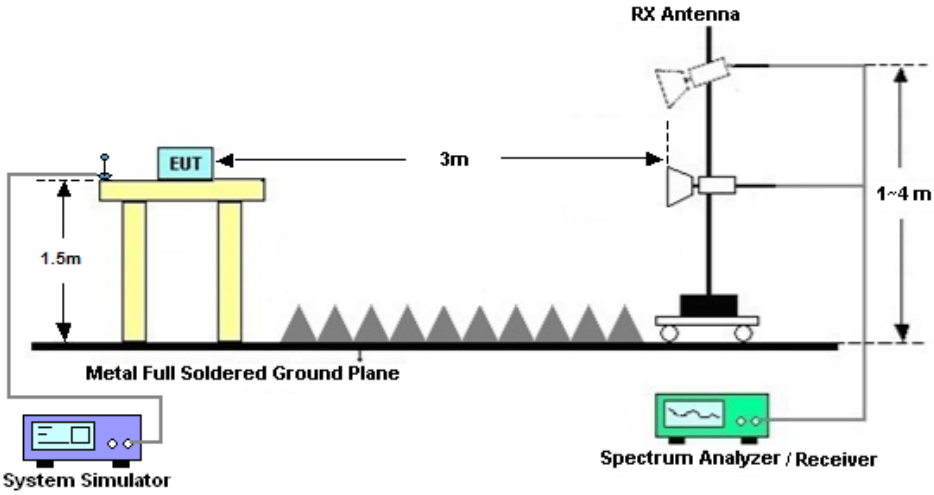
4.2.1 For radiated test below 30MHz



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.

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 7:
    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	101078	10Hz~40GHz	Apr. 07, 2022	Jun. 28, 2022	Apr. 06, 2023	Conducted (TH01-SZ)
Power Divider	TOJOIN	PS-2SM-04 265	60.06.020.007 7	0.4GHz~26.5GHz	Dec. 25, 2021	Jun. 28, 2022	Dec. 24, 2022	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 14, 2021	Jun. 28, 2022	Jul. 13, 2022	Conducted (TH01-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Jul. 14, 2021	Jun. 23, 2022	Jul. 13, 2022	Radiation (03CH02-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jun. 21, 2022	Jun. 23, 2022	Jun. 20, 2023	Radiation (03CH02-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	Oct. 22, 2021	Jun. 23, 2022	Oct. 21, 2022	Radiation (03CH02-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1355	1GHz~18GHz	Apr. 08, 2022	Jun. 23, 2022	Apr. 07. 2023	Radiation (03CH02-SZ)
HF Amplifier	MITEQ	TTA1840-35 -HG	1871923	18GHz~40GHz	Jul. 13, 2021	Jun. 23, 2022	Jul. 12, 2022	Radiation (03CH02-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 11, 2022	Jun. 23, 2022	Apr. 10, 2023	Radiation (03CH02-SZ)
LF Amplifier	Burgeon	BPA-530	102211	0.01~3000Mhz	Jul. 13, 2021	Jun. 23, 2022	Jul. 12, 2022	Radiation (03CH02-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270105	0.5GHz~26.5Ghz	Oct. 22, 2021	Jun. 23, 2022	Oct. 21, 2022	Radiation (03CH02-SZ)
AC Power Source	Chroma	61601	616010002470	N/A	NCR	Jun. 23, 2022	NCR	Radiation (03CH02-SZ)
Turn Table	Chaintek	T-200	N/A	0~360 degree	NCR	Jun. 23, 2022	NCR	Radiation (03CH02-SZ)
Antenna Mast	Chaintek	MBS-400	N/A	1 m~4 m	NCR	Jun. 23, 2022	NCR	Radiation (03CH02-SZ)

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))	**2.47dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.31dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.72dB**

Appendix A. Test Results of Conducted Test

Test Engineer :	Jason Zhang	Temperature :	24~26℃
		Relative Humidity :	50~53%

Conducted Output Power(Average power)

LTE Band 7:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				20850	21100	21350
Frequency (MHz)				2510	2535	2560
20	QPSK	1	0	22.84	22.86	22.72
20	QPSK	1	49	22.42	22.49	22.39
20	QPSK	1	99	22.55	22.66	22.61
20	QPSK	50	0	21.58	21.64	21.59
20	QPSK	50	24	21.57	21.63	21.52
20	QPSK	50	50	21.55	21.56	21.55
20	QPSK	100	0	21.49	21.57	21.45
20	16QAM	1	0	21.94	21.97	21.94
20	16QAM	1	49	21.64	21.76	21.70
20	16QAM	1	99	21.65	21.73	21.63
20	16QAM	50	0	20.53	20.60	20.51
20	16QAM	50	24	20.58	20.63	20.58
20	16QAM	50	50	20.53	20.59	20.51
20	16QAM	100	0	20.51	20.61	20.49
Channel				20825	21100	21375
Frequency (MHz)				2507.5	2535	2562.5
15	QPSK	1	0	22.81	22.81	22.70
15	QPSK	1	37	22.31	22.39	22.33
15	QPSK	1	74	22.51	22.55	22.56
15	QPSK	36	0	21.50	21.59	21.49
15	QPSK	36	20	21.56	21.54	21.41
15	QPSK	36	39	21.52	21.46	21.50
15	QPSK	75	0	21.42	21.55	21.39
15	16QAM	1	0	21.91	21.95	21.88
15	16QAM	1	37	21.62	21.73	21.66
15	16QAM	1	74	21.55	21.64	21.58
15	16QAM	36	0	20.44	20.50	20.49
15	16QAM	36	20	20.55	20.55	20.56
15	16QAM	36	39	20.49	20.53	20.50
15	16QAM	75	0	20.45	20.57	20.44
Channel				20800	21100	21400
Frequency (MHz)				2505	2535	2565
10	QPSK	1	0	22.77	22.77	22.69
10	QPSK	1	25	22.41	22.41	22.33
10	QPSK	1	49	22.46	22.58	22.49

10	QPSK	25	0	21.49	21.52	21.53
10	QPSK	25	12	21.55	21.62	21.48
10	QPSK	25	25	21.44	21.55	21.43
10	QPSK	50	0	21.43	21.55	21.37
10	16QAM	1	0	21.86	21.92	21.90
10	16QAM	1	25	21.62	21.68	21.69
10	16QAM	1	49	21.55	21.72	21.52
10	16QAM	25	0	20.52	20.50	20.44
10	16QAM	25	12	20.49	20.52	20.57
10	16QAM	25	25	20.47	20.49	20.42
10	16QAM	50	0	20.40	20.56	20.39
Channel				20775	21100	21425
Frequency (MHz)				2502.5	2535	2567.5
5	QPSK	1	0	22.82	22.75	22.67
5	QPSK	1	12	22.34	22.41	22.37
5	QPSK	1	24	22.53	22.55	22.49
5	QPSK	12	0	21.57	21.62	21.51
5	QPSK	12	7	21.54	21.60	21.51
5	QPSK	12	13	21.54	21.52	21.47
5	QPSK	25	0	21.44	21.53	21.35
5	16QAM	1	0	21.92	21.90	21.88
5	16QAM	1	12	21.59	21.71	21.62
5	16QAM	1	24	21.60	21.61	21.55
5	16QAM	12	0	20.44	20.51	20.43
5	16QAM	12	7	20.49	20.61	20.52
5	16QAM	12	13	20.48	20.52	20.48
5	16QAM	25	0	20.45	20.56	20.39
5	16QAM	50	0	21.78	21.84	21.78

EIRP

LTE Band 7 (GT - LC = 2.0 dB) QPSK			
Bandwidth	5M		
Channel	20775	21100	21425
	(Low)	(Mid)	(High)
Frequency (MHz)	2502.5	2535	2567.5
Conducted Power (dBm)	22.82	22.75	22.67
Conducted Power (Watts)	0.1914	0.1884	0.1849
EIRP(dBm)	24.82	24.75	24.67
EIRP(Watts)	0.3034	0.2985	0.2931

LTE Band 7 (GT - LC = 2.0 dB) QPSK									
Bandwidth	10M			15M			20M		
Channel	20800	21100	21400	20825	21100	21375	20850	21100	21350
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	2505	2535	2565	2507.5	2535	2562.5	2510	2535	2560
Conducted Power (dBm)	22.77	22.77	22.69	22.81	22.81	22.70	22.84	22.86	22.72
Conducted Power (Watts)	0.1892	0.1892	0.1858	0.1910	0.1910	0.1862	0.1923	0.1932	0.1871
EIRP(dBm)	24.77	24.77	24.69	24.81	24.81	24.70	24.84	24.86	24.72
EIRP(Watts)	0.2999	0.2999	0.2944	0.3027	0.3027	0.2951	0.3048	0.3062	0.2965

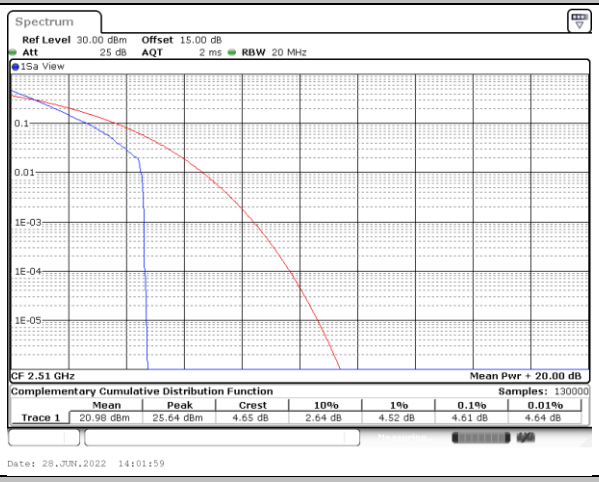
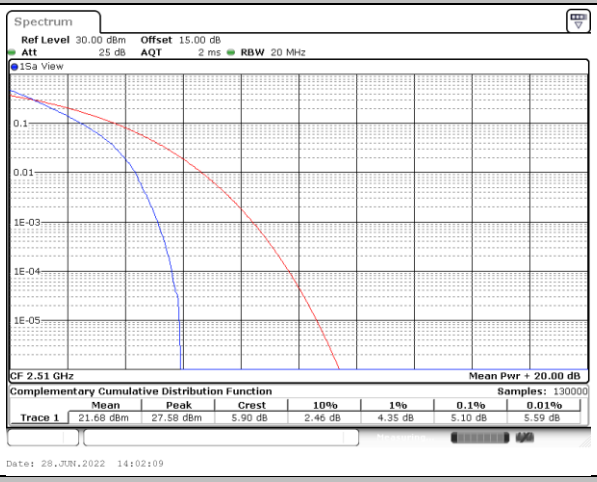
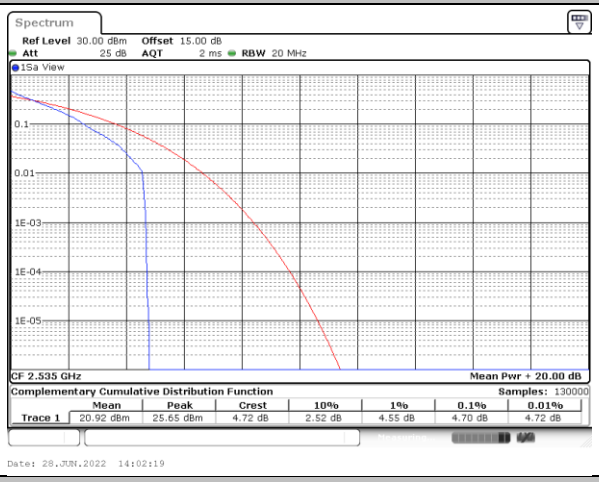
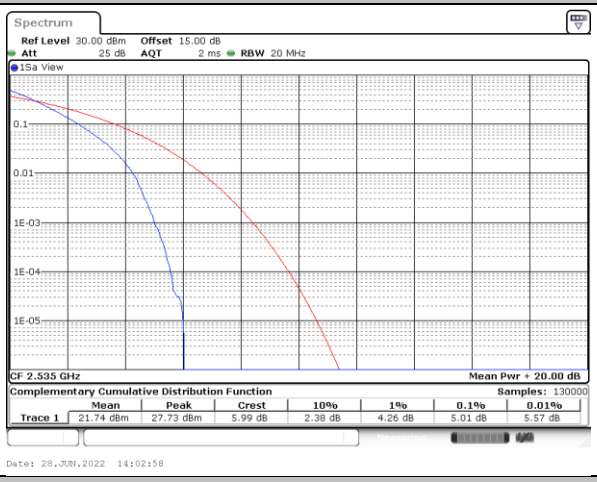
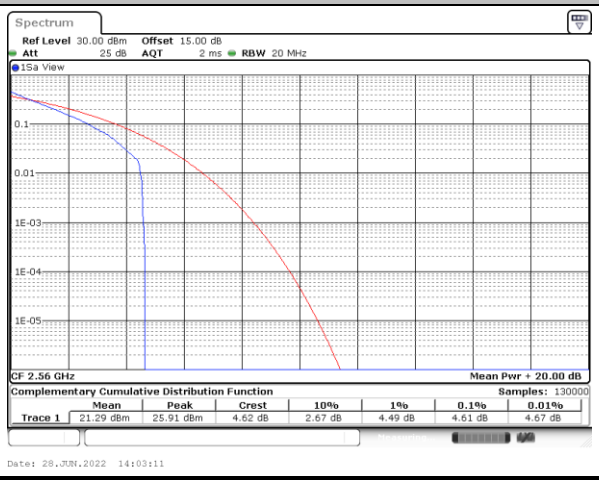
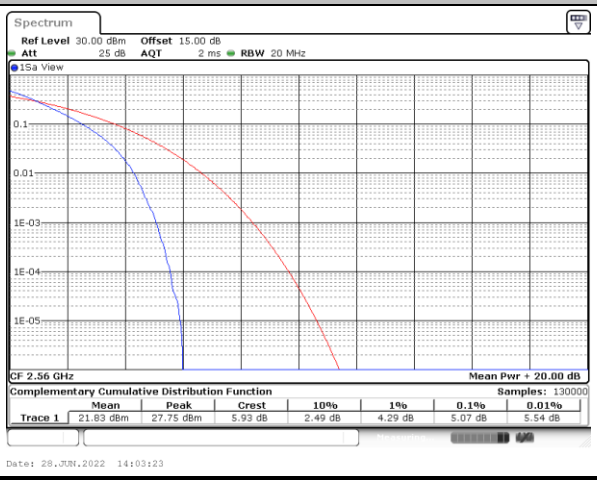
LTE Band 7 (GT - LC = 2.0 dB) 16QAM			
Bandwidth	**5M**		
Channel	**20775**	**21100**	**21425**
	(Low)	**(Mid)**	**(High)**
Frequency (MHz)	**2502.5**	**2535**	**2567.5**
Conducted Power (dBm)	21.92	21.90	21.88
Conducted Power (Watts)	0.1556	0.1549	0.1542
EIRP(dBm)	23.92	23.90	23.88
EIRP(Watts)	0.2466	0.2455	0.2443

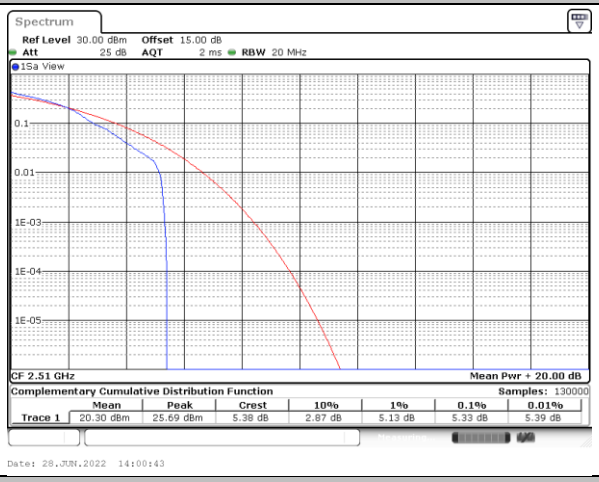
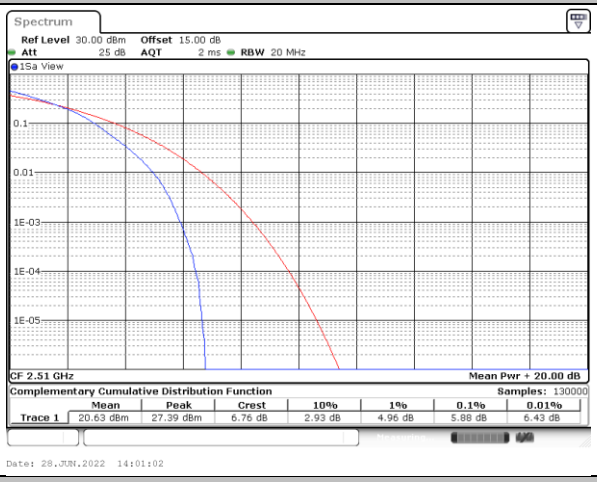
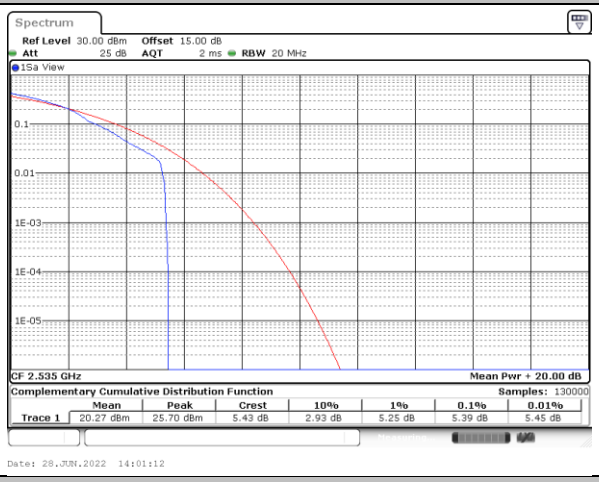
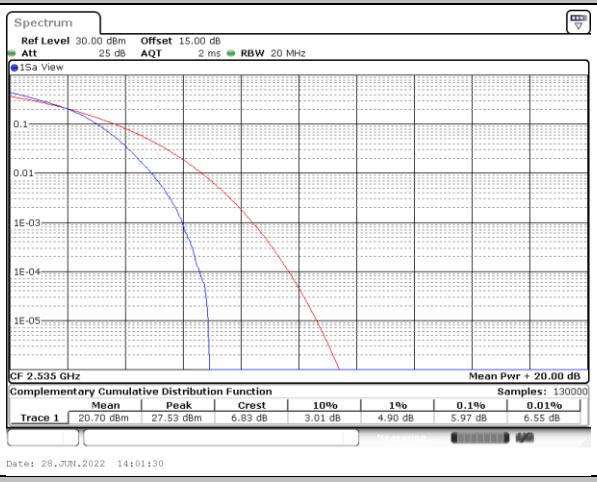
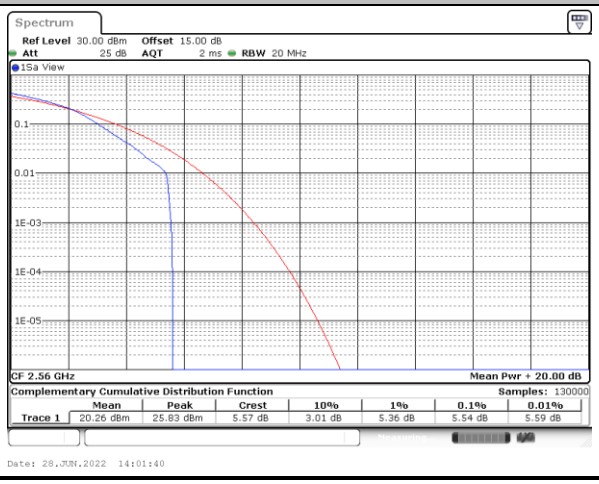
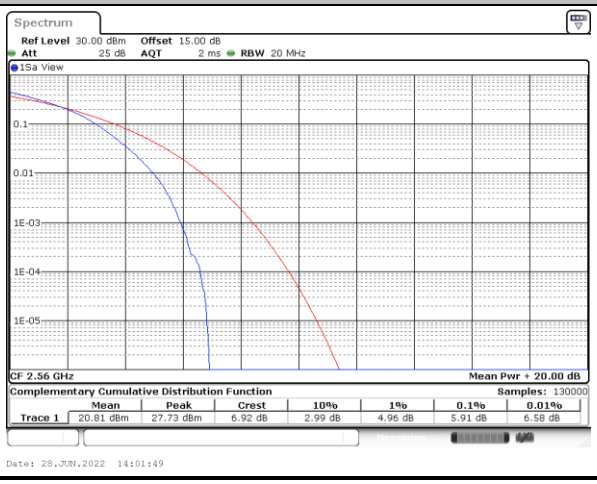
LTE Band 7 (GT - LC = 2.0 dB) 16QAM									
Bandwidth	**10M**			**15M**			**20M**		
Channel	**20800**	**21100**	**21400**	**20825**	**21100**	**21375**	**20850**	**21100**	**21350**
	(Low)	**(Mid)**	**(High)**	**(Low)**	**(Mid)**	**(High)**	**(Low)**	**(Mid)**	**(High)**
Frequency (MHz)	**2505**	**2535**	**2565**	**2507.5**	**2535**	**2562.5**	**2510**	**2535**	**2560**
Conducted Power (dBm)	21.86	21.92	21.90	21.91	21.95	21.88	21.94	21.97	21.94
Conducted Power (Watts)	0.1535	0.1556	0.1549	0.1552	0.1567	0.1542	0.1563	0.1574	0.1563
EIRP(dBm)	23.86	23.92	23.90	23.91	23.95	23.88	23.94	23.97	23.94
EIRP(Watts)	0.2432	0.2466	0.2455	0.2460	0.2483	0.2443	0.2477	0.2495	0.2477

LTE Band 7

Peak-to-Average Ratio

Mode	LTE Band 7 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.61	5.10	5.33	5.88	PASS
Middle CH	4.70	5.01	5.39	5.97	
Highest CH	4.61	5.07	5.54	5.91	

LTE Band 7 / 20MHz / QPSK	
Lowest Channel / 1RB	**Lowest Channel / Full RB**
	
Middle Channel / 1RB	**Middle Channel / Full RB**
	
Highest Channel / 1RB	**Highest Channel / Full RB**
	

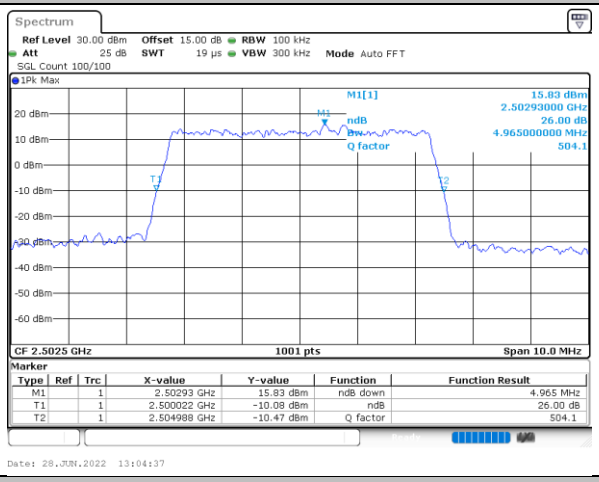
LTE Band 7 / 20MHz / 16QAM	
Lowest Channel / 1RB	**Lowest Channel / Full RB**
	
Middle Channel / 1RB	**Middle Channel / Full RB**
	
Highest Channel / 1RB	**Highest Channel / Full RB**
	

26dB Bandwidth

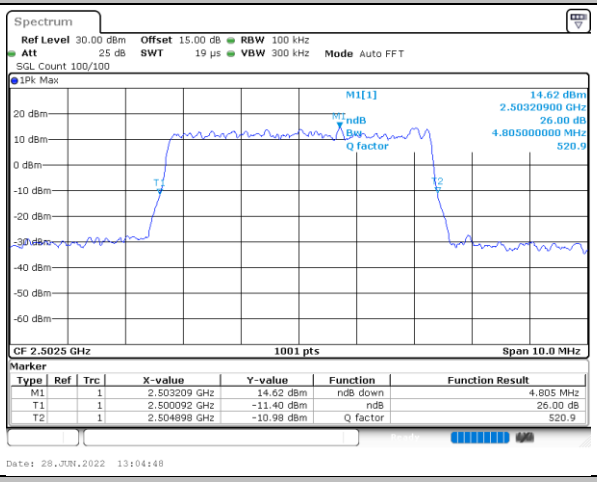
Mode	LTE Band 7 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.97	4.81	9.71	10.05	14.54	14.36	18.74	19.10
Middle CH	-	-	-	-	4.84	4.90	9.87	9.73	14.39	14.30	18.70	18.94
Highest CH	-	-	-	-	4.87	4.85	9.87	9.91	14.24	14.24	18.70	18.86

LTE Band 7

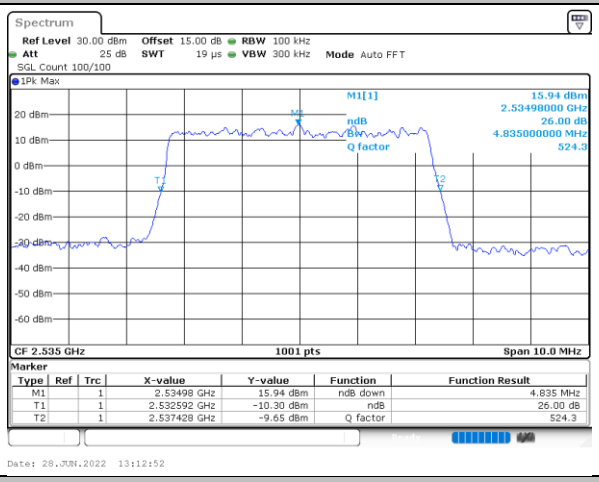
Lowest Channel / 5MHz / QPSK



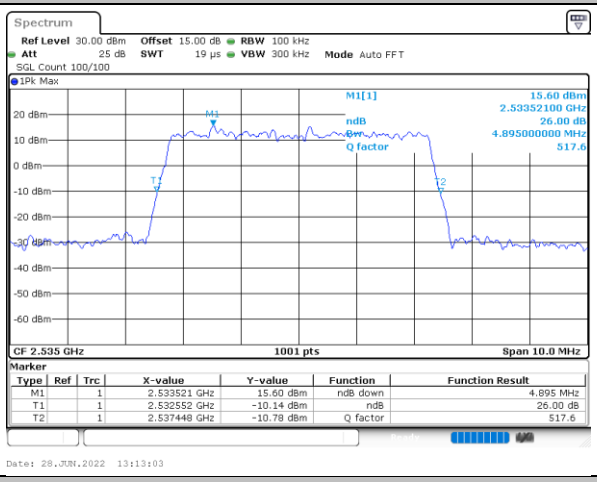
Lowest Channel / 5MHz / 16QAM



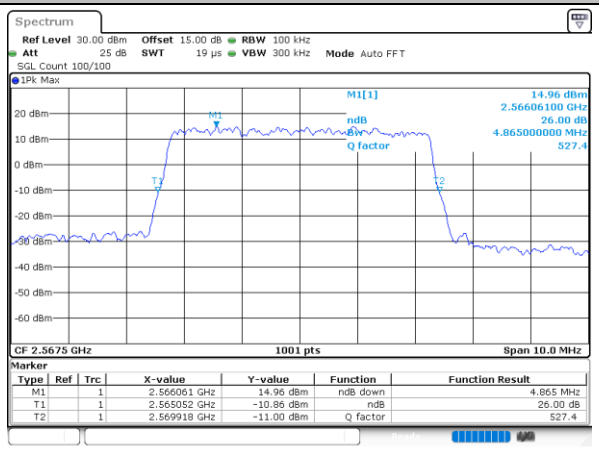
Middle Channel / 5MHz / QPSK



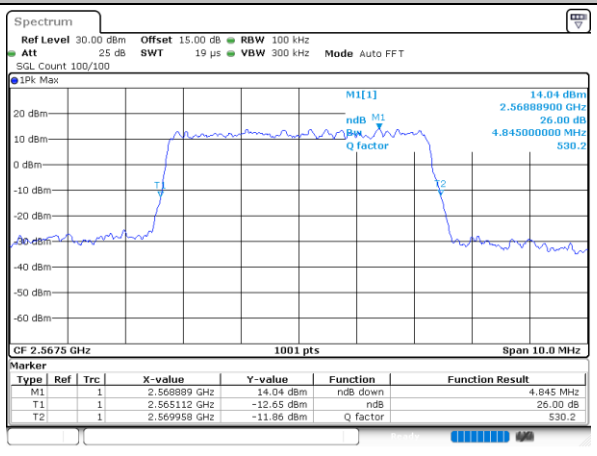
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

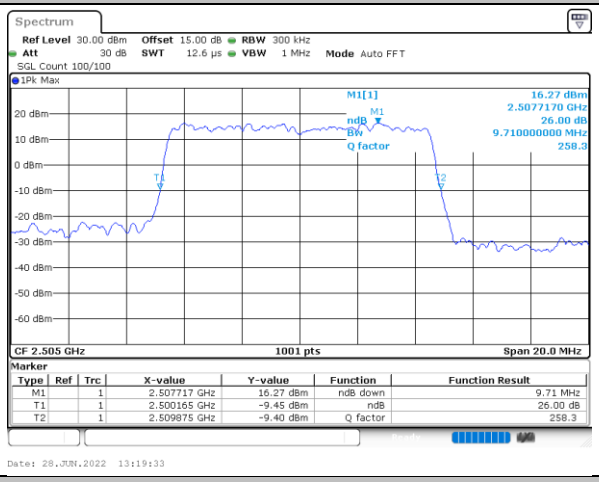


Highest Channel / 5MHz / 16QAM

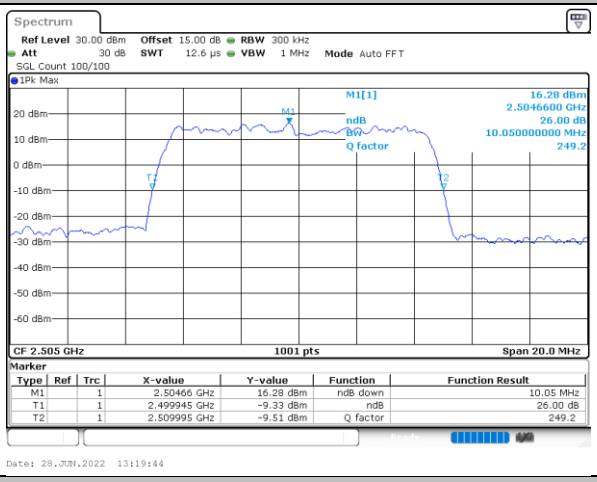


LTE Band 7

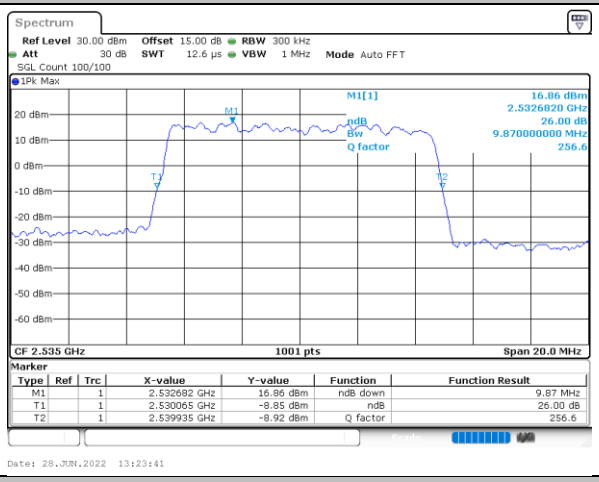
Lowest Channel / 10MHz / QPSK



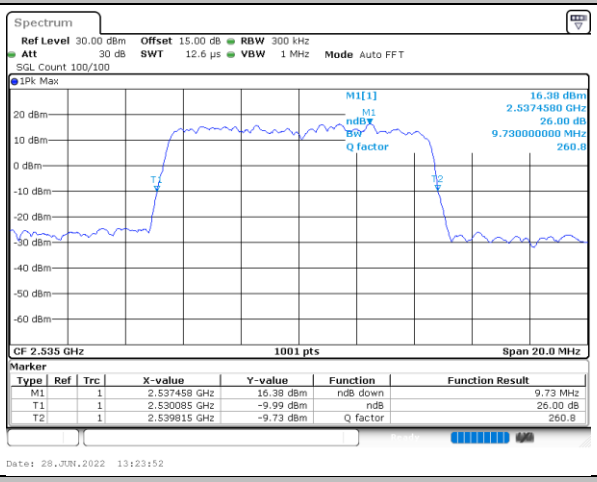
Lowest Channel / 10MHz / 16QAM



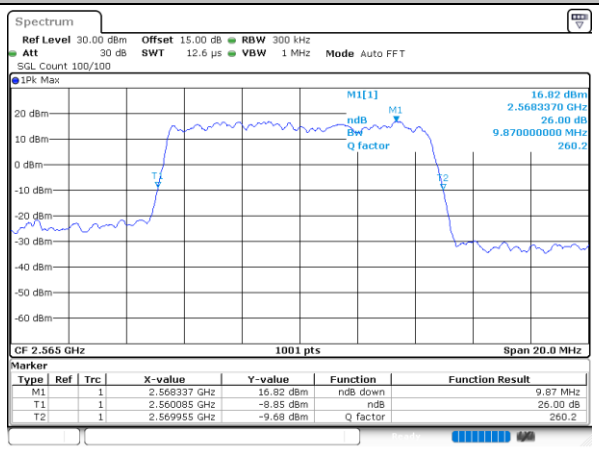
Middle Channel / 10MHz / QPSK



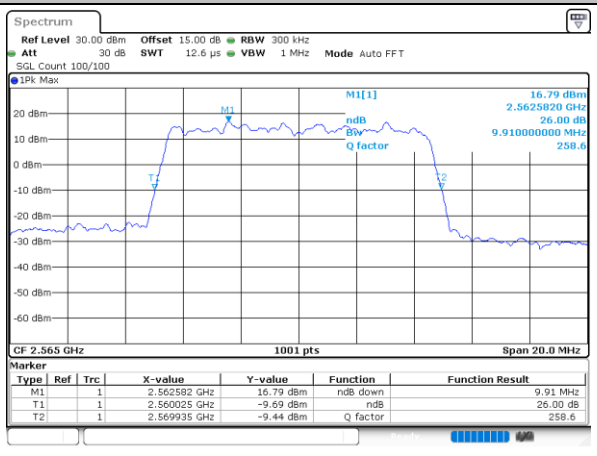
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK

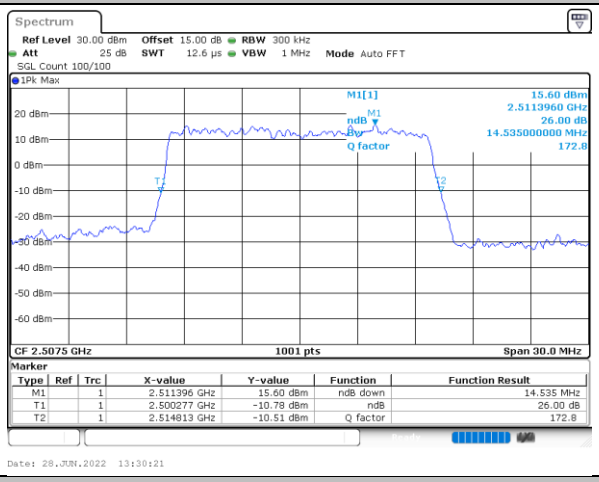


Highest Channel / 10MHz / 16QAM

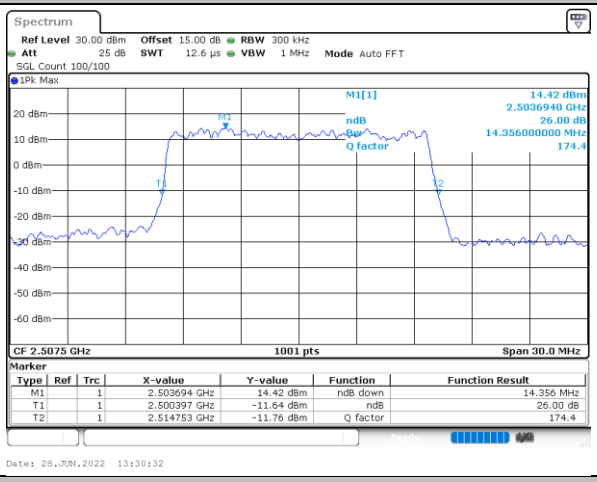


LTE Band 7

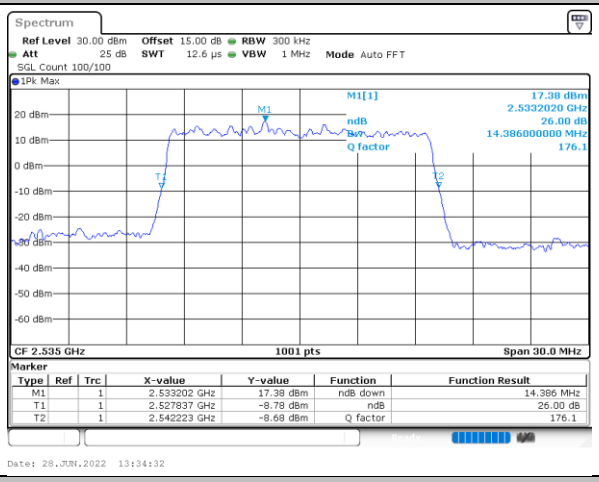
Lowest Channel / 15MHz / QPSK



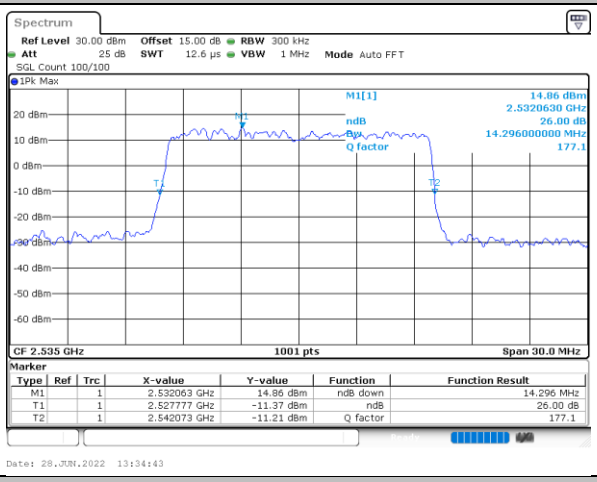
Lowest Channel / 15MHz / 16QAM



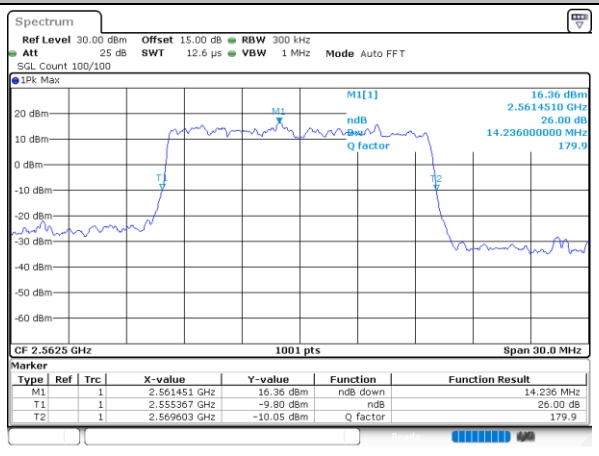
Middle Channel / 15MHz / QPSK



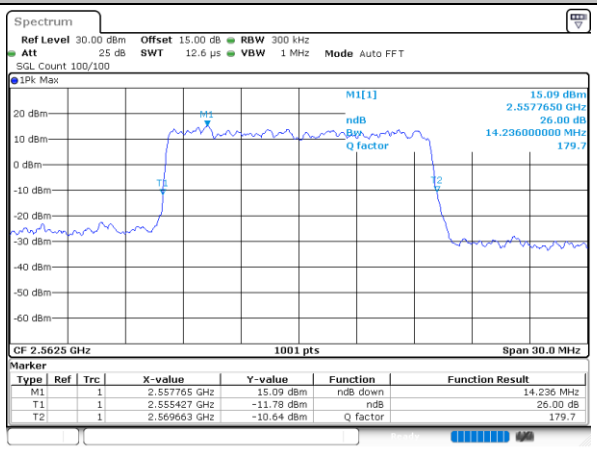
Middle Channel / 15MHz / 16QAM



Highest Channel / 15MHz / QPSK

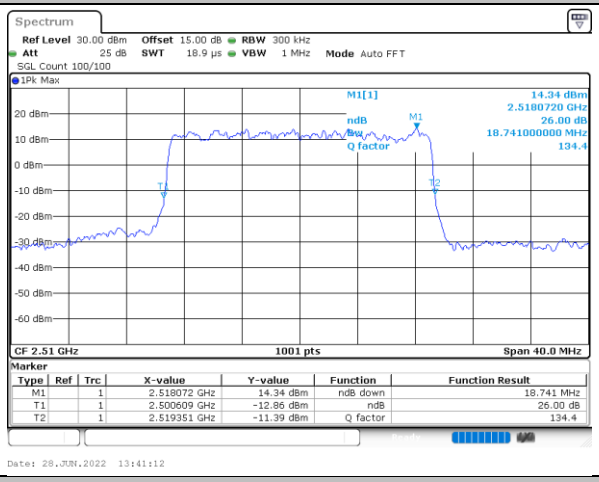


Highest Channel / 15MHz / 16QAM

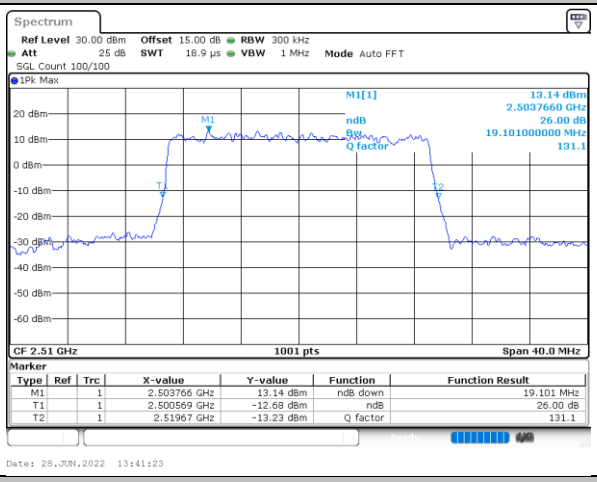


LTE Band 7

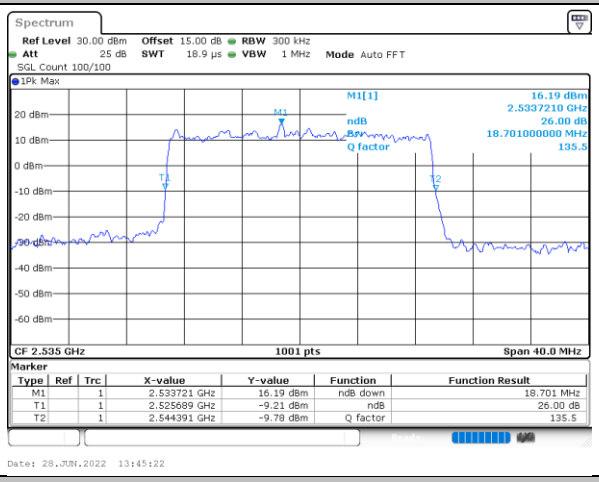
Lowest Channel / 20MHz / QPSK



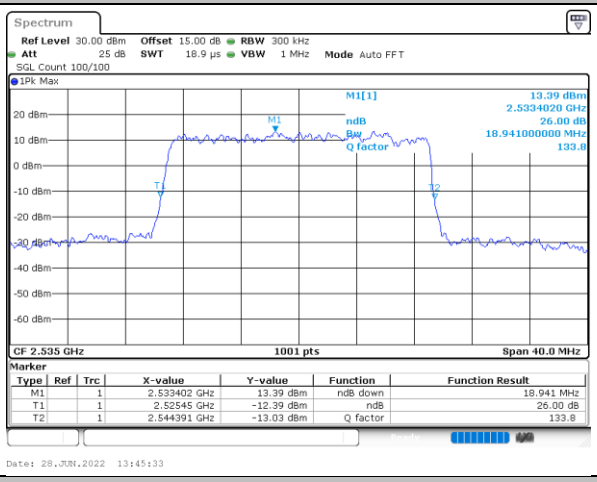
Lowest Channel / 20MHz / 16QAM



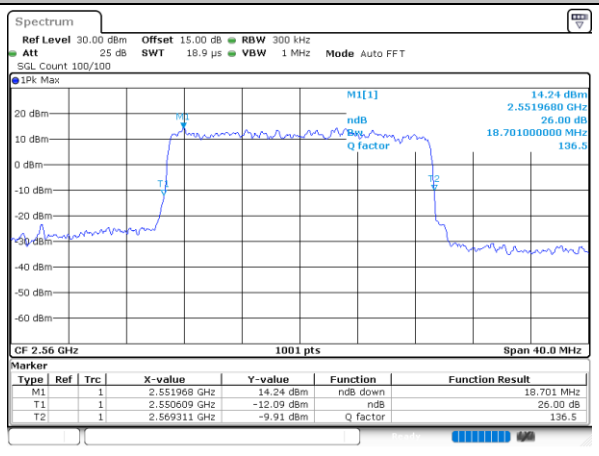
Middle Channel / 20MHz / QPSK



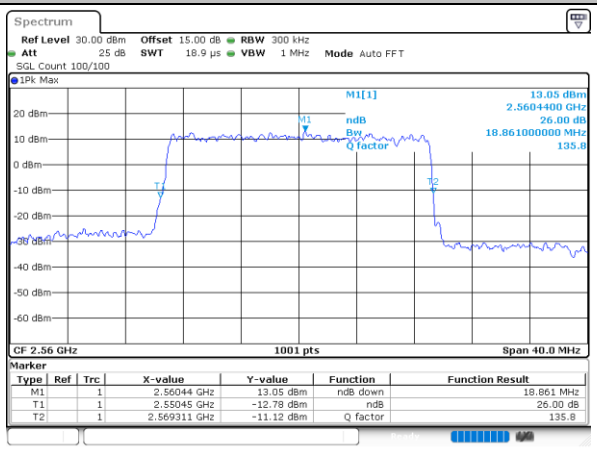
Middle Channel / 20MHz / 16QAM



Highest Channel / 20MHz / QPSK



Highest Channel / 20MHz / 16QAM

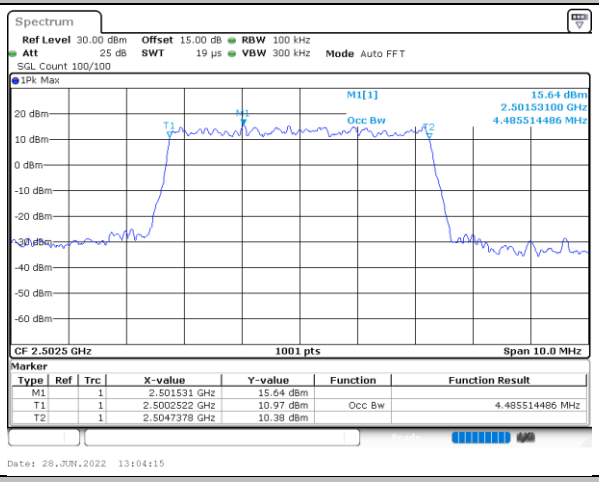


Occupied Bandwidth

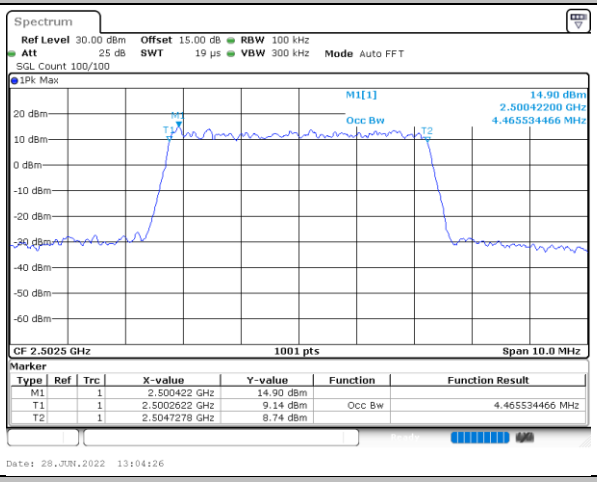
Mode	LTE Band 7 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.49	4.47	9.07	9.01	13.46	13.49	17.90	17.86
Middle CH	-	-	-	-	4.50	4.48	9.03	9.05	13.46	13.46	17.90	17.86
Highest CH	-	-	-	-	4.51	4.50	9.09	9.03	13.40	13.49	17.90	17.86

LTE Band 7

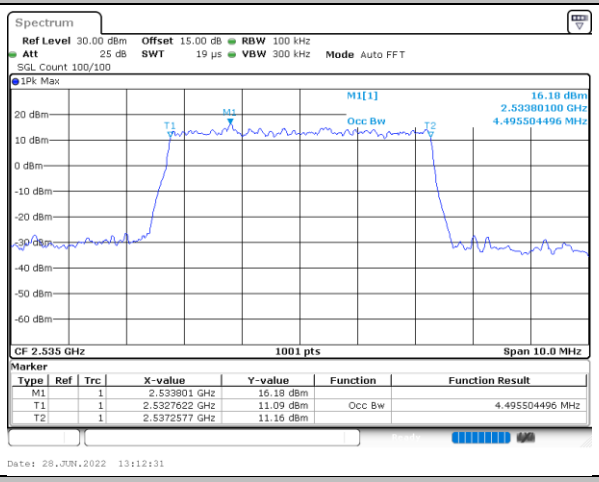
Lowest Channel / 5MHz / QPSK



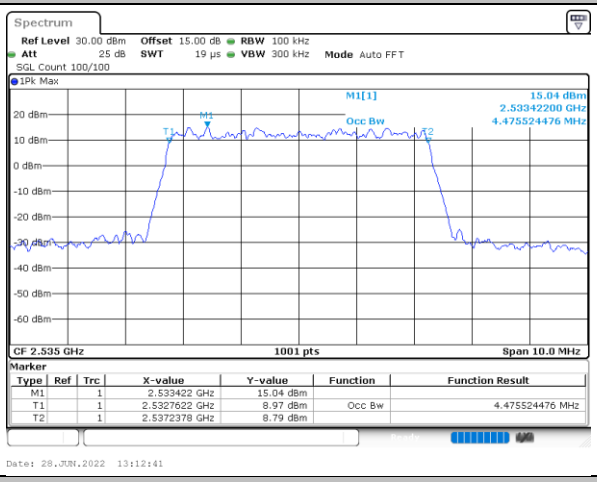
Lowest Channel / 5MHz / 16QAM



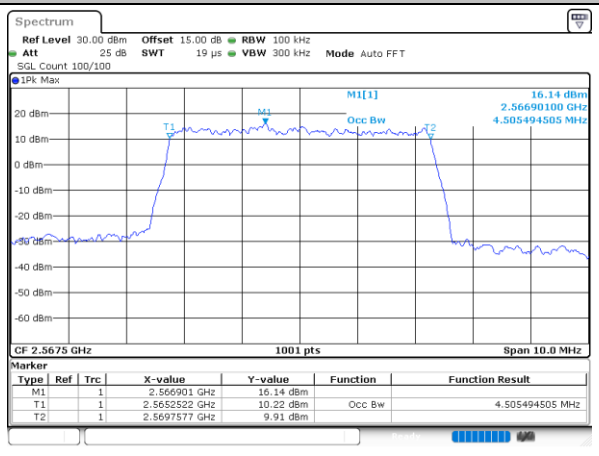
Middle Channel / 5MHz / QPSK



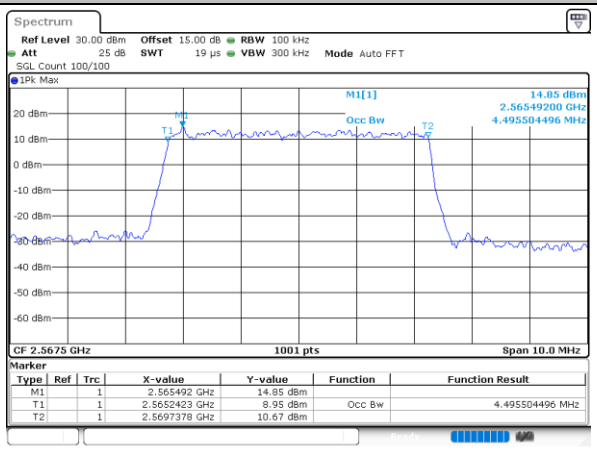
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

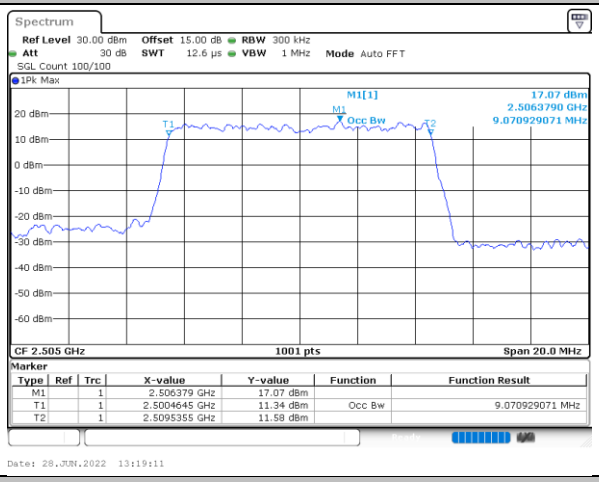


Highest Channel / 5MHz / 16QAM

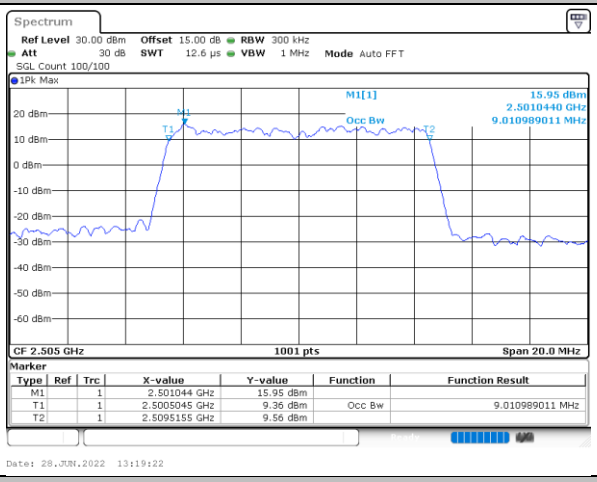


LTE Band 7

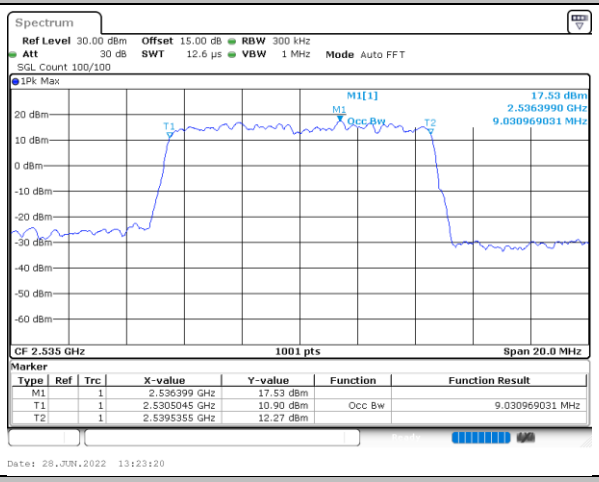
Lowest Channel / 10MHz / QPSK



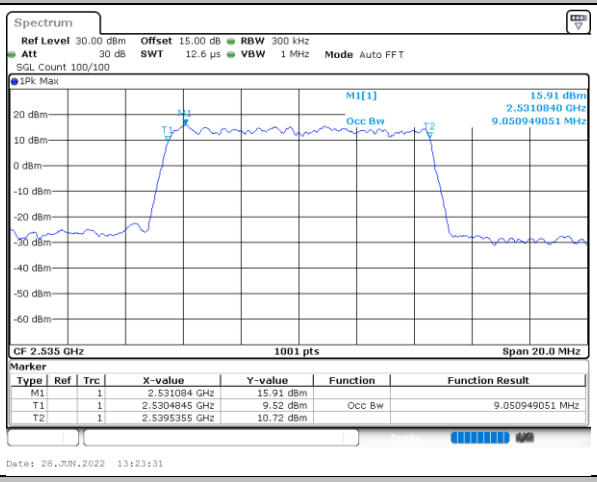
Lowest Channel / 10MHz / 16QAM



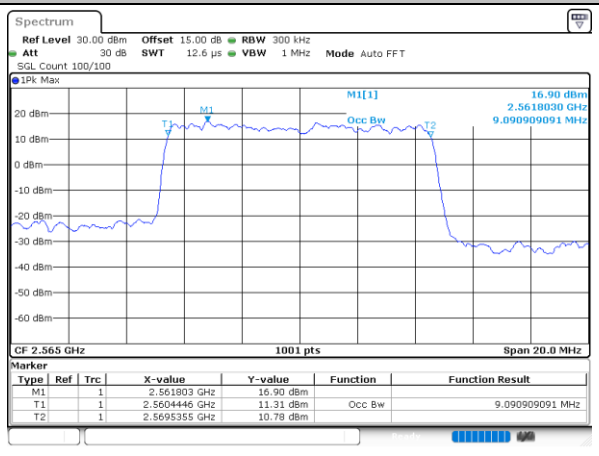
Middle Channel / 10MHz / QPSK



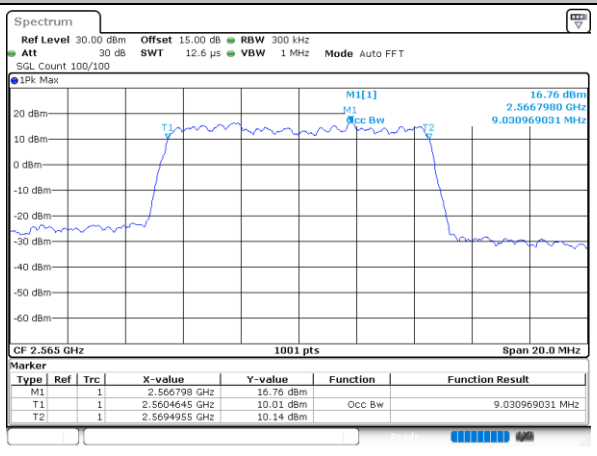
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK

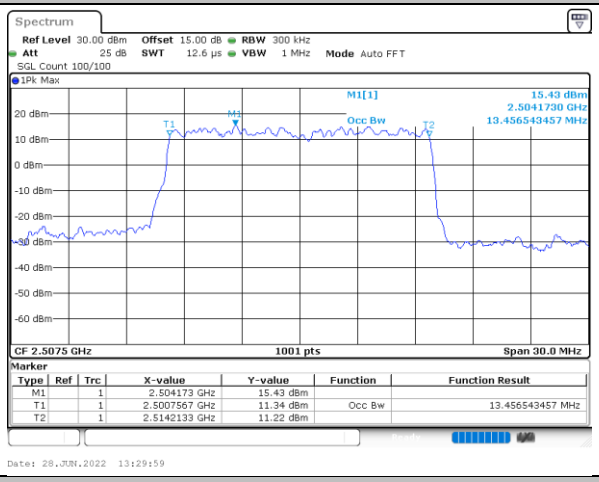


Highest Channel / 10MHz / 16QAM

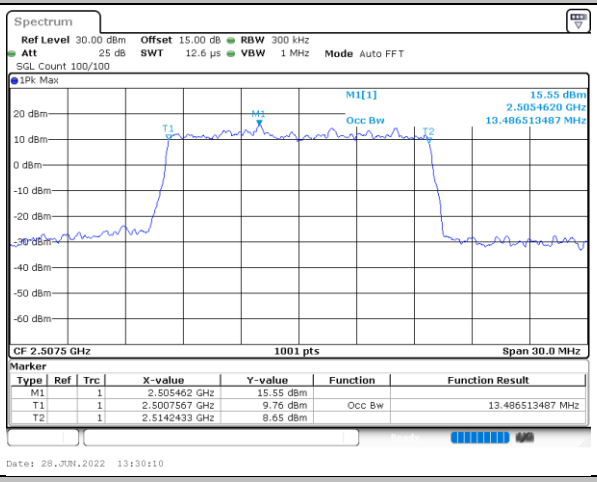


LTE Band 7

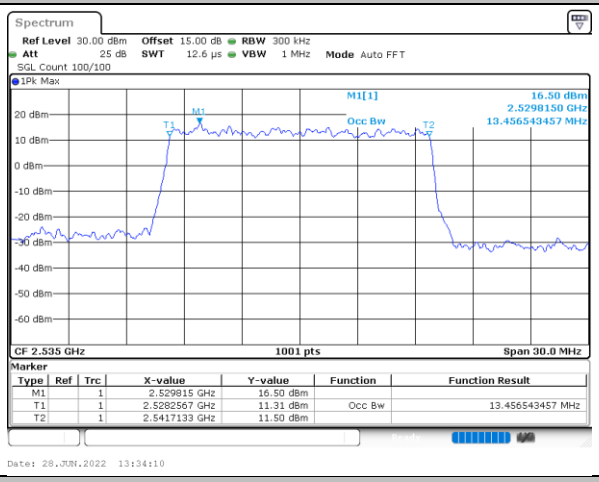
Lowest Channel / 15MHz / QPSK



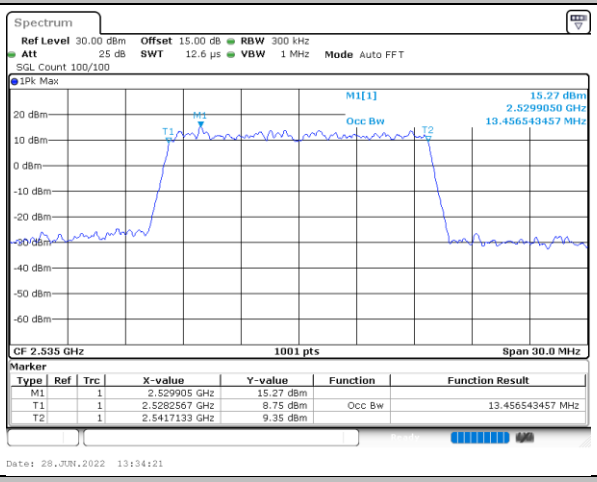
Lowest Channel / 15MHz / 16QAM



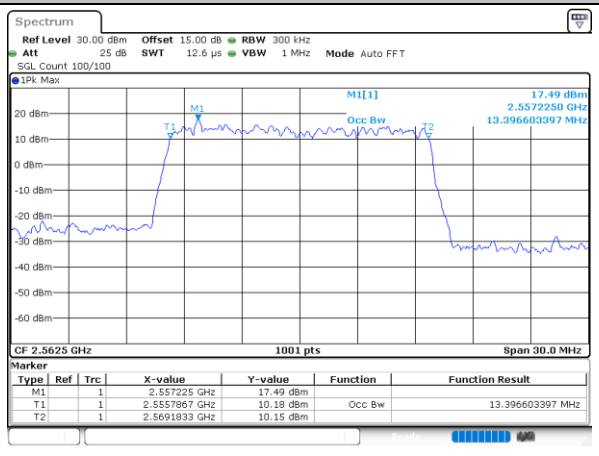
Middle Channel / 15MHz / QPSK



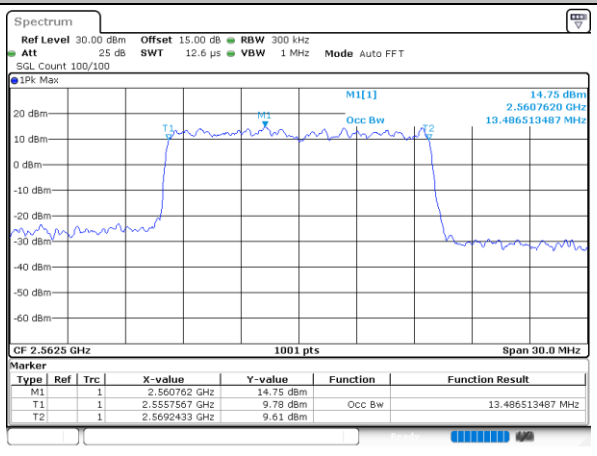
Middle Channel / 15MHz / 16QAM



Highest Channel / 15MHz / QPSK

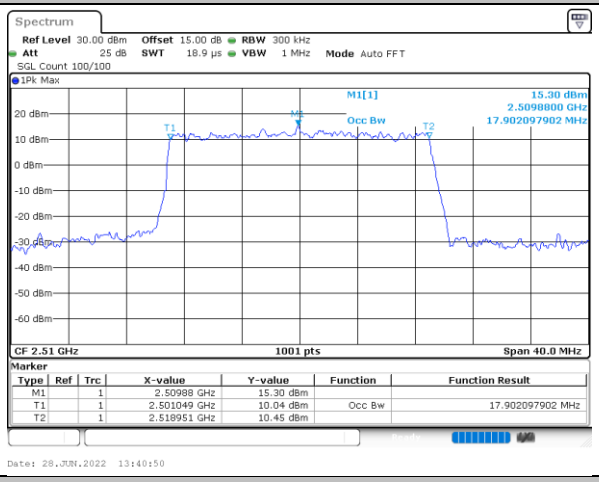


Highest Channel / 15MHz / 16QAM

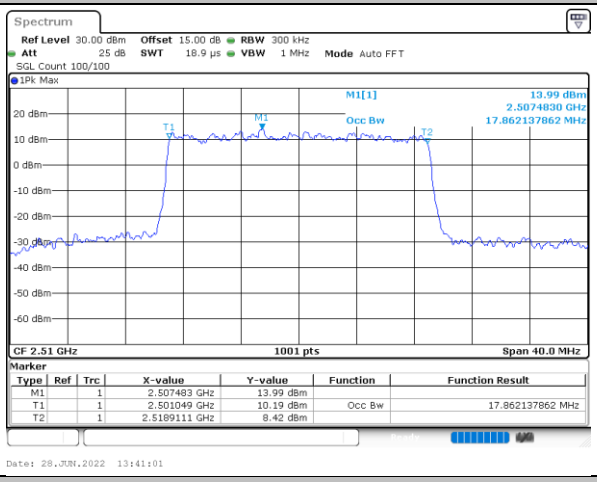


LTE Band 7

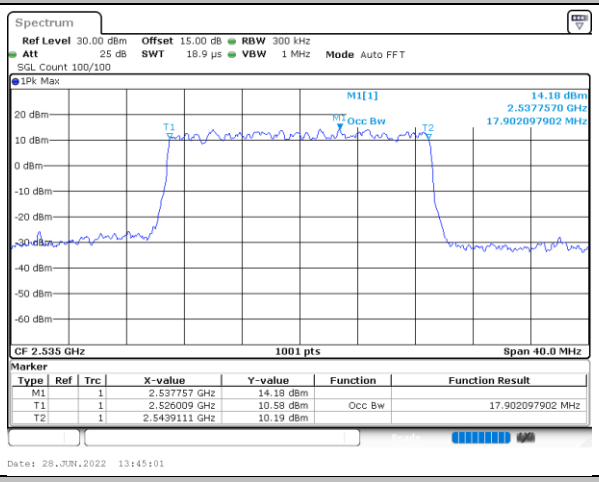
Lowest Channel / 20MHz / QPSK



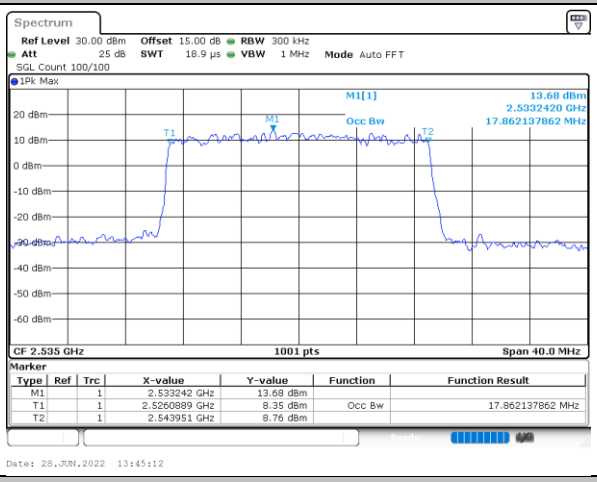
Lowest Channel / 20MHz / 16QAM



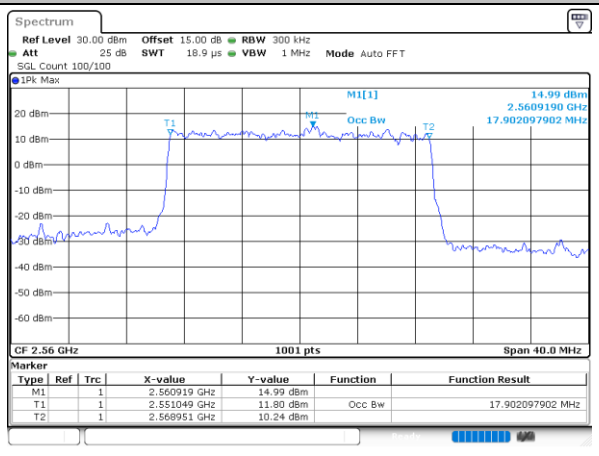
Middle Channel / 20MHz / QPSK



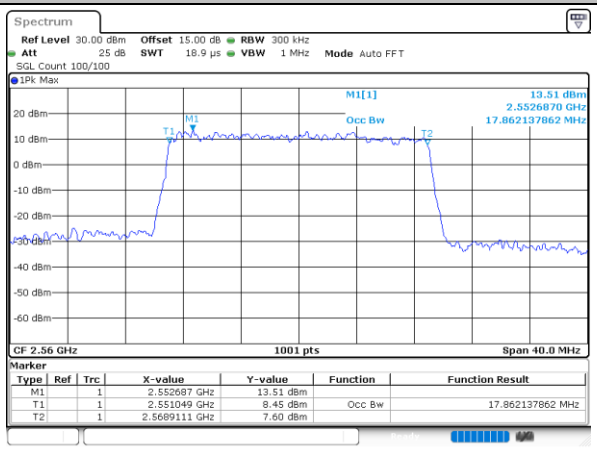
Middle Channel / 20MHz / 16QAM



Highest Channel / 20MHz / QPSK



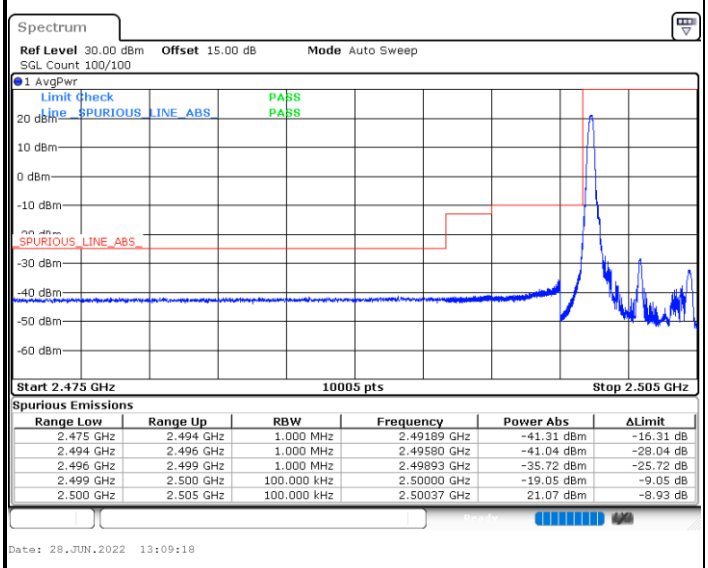
Highest Channel / 20MHz / 16QAM



Conducted Band Edge

LTE Band 7 / 5MHz / QPSK

Lowest Band Edge / 1 RB

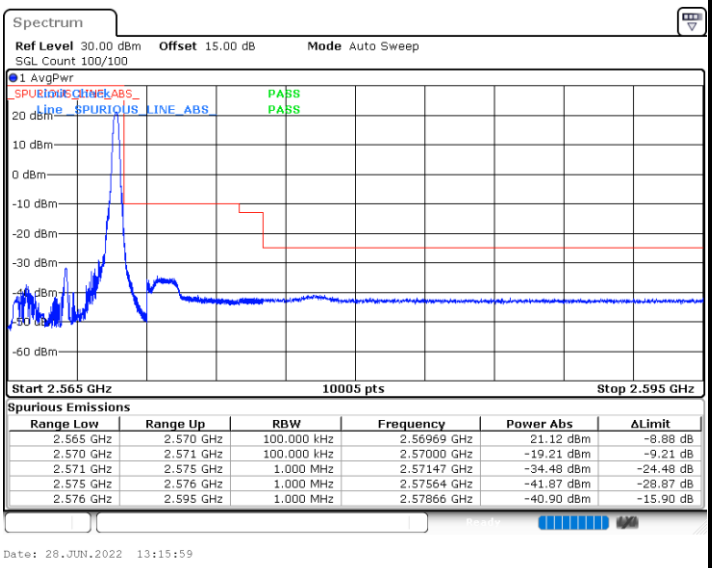


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.494 GHz	1.000 MHz	2.49189 GHz	-41.31 dBm	-16.31 dB
2.494 GHz	2.496 GHz	1.000 MHz	2.49580 GHz	-41.04 dBm	-28.04 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49893 GHz	-35.72 dBm	-25.72 dB
2.499 GHz	2.500 GHz	100.000 kHz	2.50000 GHz	-19.05 dBm	-9.05 dB
2.500 GHz	2.505 GHz	100.000 kHz	2.50037 GHz	21.07 dBm	-8.93 dB

Date: 28.JUN.2022 13:09:18

Highest Band Edge / 1 RB

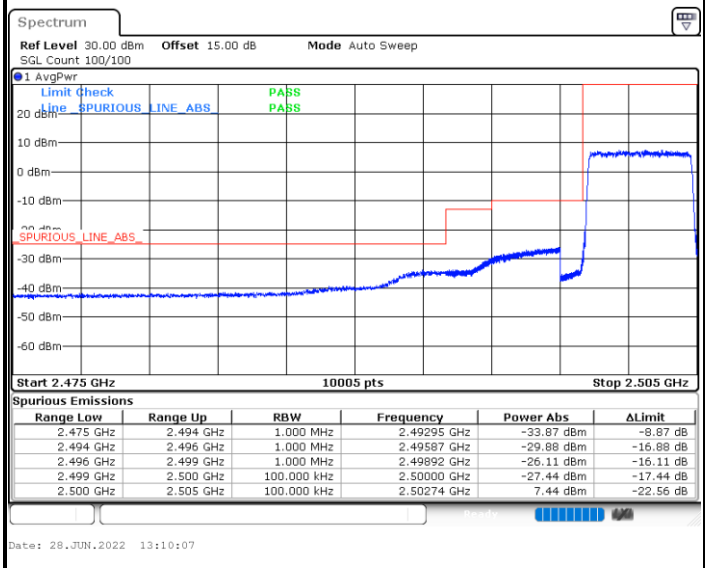


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.565 GHz	2.570 GHz	100.000 kHz	2.56969 GHz	21.12 dBm	-8.88 dB
2.570 GHz	2.571 GHz	100.000 kHz	2.57000 GHz	-19.21 dBm	-9.21 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57147 GHz	-34.48 dBm	-24.48 dB
2.575 GHz	2.576 GHz	1.000 MHz	2.57564 GHz	-41.87 dBm	-28.87 dB
2.576 GHz	2.595 GHz	1.000 MHz	2.57866 GHz	-40.90 dBm	-15.90 dB

Date: 28.JUN.2022 13:15:59

Lowest Band Edge / Full RB

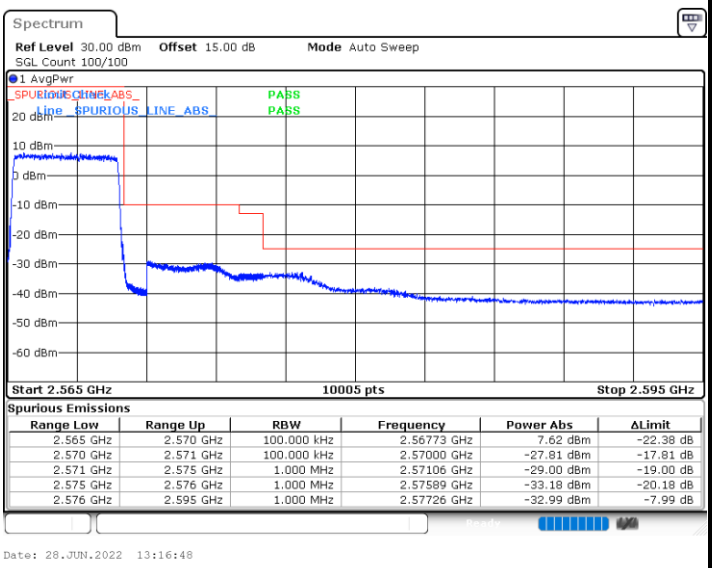


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.494 GHz	1.000 MHz	2.49295 GHz	-33.87 dBm	-8.87 dB
2.494 GHz	2.496 GHz	1.000 MHz	2.49587 GHz	-29.88 dBm	-16.88 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49892 GHz	-26.11 dBm	-16.11 dB
2.499 GHz	2.500 GHz	100.000 kHz	2.50000 GHz	-27.44 dBm	-17.44 dB
2.500 GHz	2.505 GHz	100.000 kHz	2.50274 GHz	7.44 dBm	-22.56 dB

Date: 28.JUN.2022 13:10:07

Highest Band Edge / Full RB



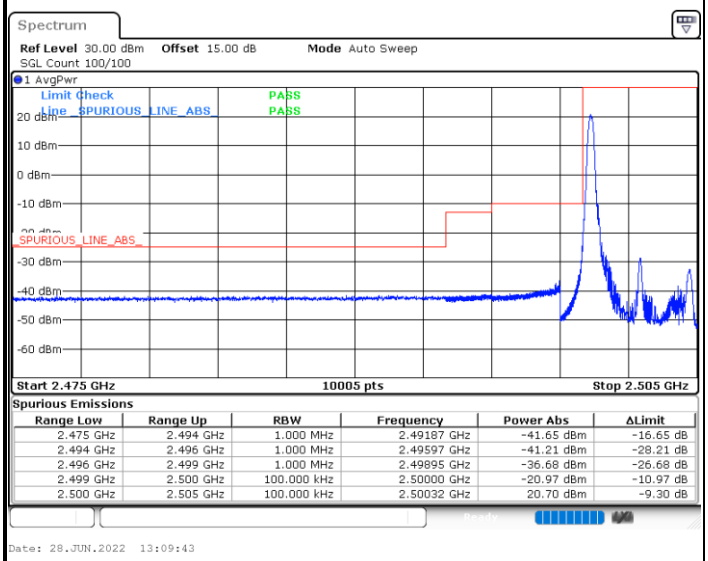
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.565 GHz	2.570 GHz	100.000 kHz	2.56773 GHz	7.62 dBm	-22.38 dB
2.570 GHz	2.571 GHz	100.000 kHz	2.57000 GHz	-27.81 dBm	-17.81 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57106 GHz	-29.00 dBm	-19.00 dB
2.575 GHz	2.576 GHz	1.000 MHz	2.57589 GHz	-33.18 dBm	-20.18 dB
2.576 GHz	2.595 GHz	1.000 MHz	2.57726 GHz	-32.99 dBm	-7.99 dB

Date: 28.JUN.2022 13:16:48

LTE Band 7 / 5MHz / 16QAM

Lowest Band Edge / 1 RB

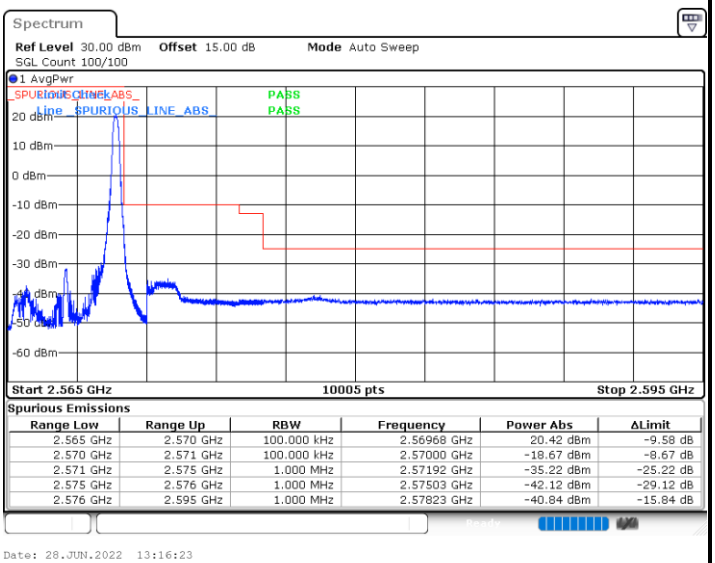


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.494 GHz	1.000 MHz	2.49187 GHz	-41.65 dBm	-16.65 dB
2.494 GHz	2.496 GHz	1.000 MHz	2.49597 GHz	-41.21 dBm	-28.21 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49895 GHz	-36.68 dBm	-26.68 dB
2.499 GHz	2.500 GHz	100.000 kHz	2.50000 GHz	-20.97 dBm	-10.97 dB
2.500 GHz	2.505 GHz	100.000 kHz	2.50032 GHz	20.70 dBm	-9.30 dB

Date: 28.JUN.2022 13:09:43

Highest Band Edge / 1 RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.565 GHz	2.570 GHz	100.000 kHz	2.56968 GHz	20.42 dBm	-9.58 dB
2.570 GHz	2.571 GHz	100.000 kHz	2.57000 GHz	-18.67 dBm	-8.67 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57192 GHz	-35.22 dBm	-25.22 dB
2.575 GHz	2.576 GHz	1.000 MHz	2.57503 GHz	-42.12 dBm	-29.12 dB
2.576 GHz	2.595 GHz	1.000 MHz	2.57823 GHz	-40.84 dBm	-15.84 dB

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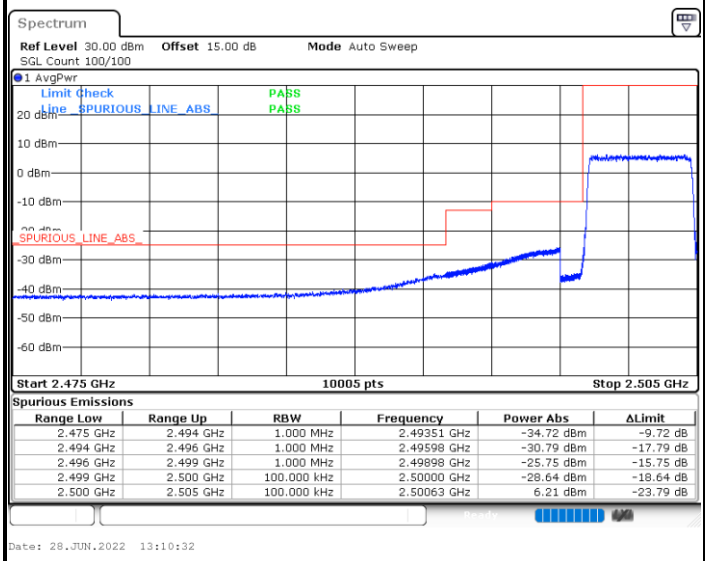
Lowest Band Edge / Full RB

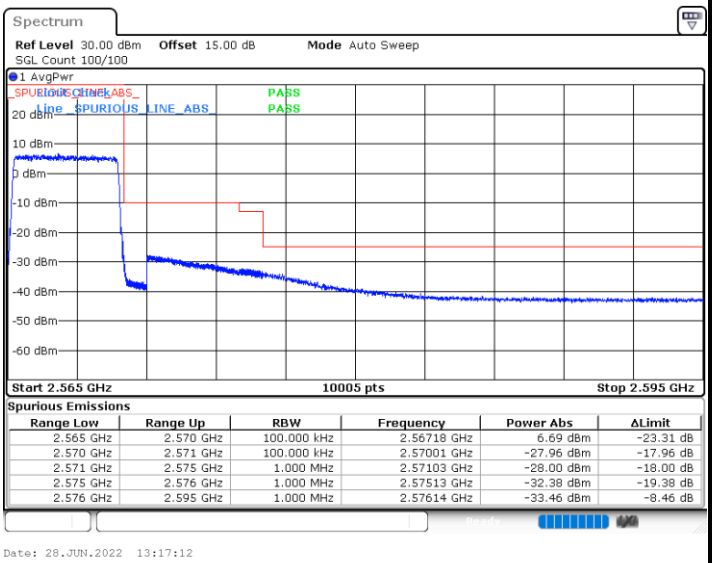


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.494 GHz	1.000 MHz	2.49351 GHz	-34.72 dBm	-9.72 dB
2.494 GHz	2.496 GHz	1.000 MHz	2.49598 GHz	-30.79 dBm	-17.79 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49898 GHz	-25.75 dBm	-15.75 dB
2.499 GHz	2.500 GHz	100.000 kHz	2.50000 GHz	-28.64 dBm	-18.64 dB
2.500 GHz	2.505 GHz	100.000 kHz	2.50063 GHz	6.21 dBm	-23.79 dB

Date: 28.JUN.2022 13:10:32

Highest Band Edge / Full RB



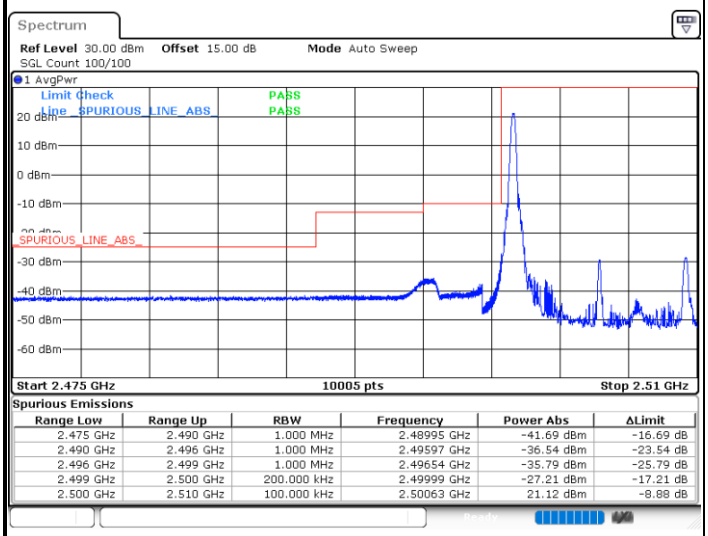
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.565 GHz	2.570 GHz	100.000 kHz	2.56718 GHz	6.69 dBm	-23.31 dB
2.570 GHz	2.571 GHz	100.000 kHz	2.57001 GHz	-27.96 dBm	-17.96 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57103 GHz	-28.00 dBm	-18.00 dB
2.575 GHz	2.576 GHz	1.000 MHz	2.57513 GHz	-32.38 dBm	-19.38 dB
2.576 GHz	2.595 GHz	1.000 MHz	2.57614 GHz	-33.46 dBm	-8.46 dB

Date: 28.JUN.2022 13:17:12

LTE Band 7 / 10MHz / QPSK

Lowest Band Edge / 1 RB

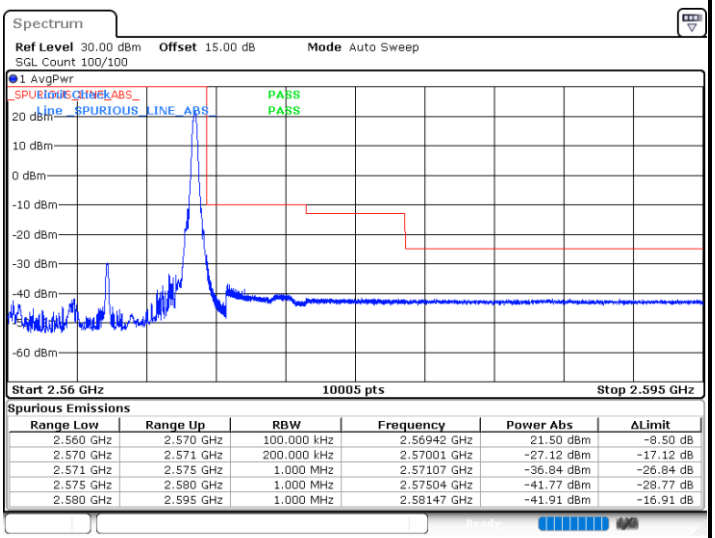


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.48995 GHz	-41.69 dBm	-16.69 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49597 GHz	-36.54 dBm	-23.54 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49654 GHz	-35.79 dBm	-25.79 dB
2.499 GHz	2.500 GHz	200.000 kHz	2.49999 GHz	-27.21 dBm	-17.21 dB
2.500 GHz	2.510 GHz	100.000 kHz	2.50063 GHz	21.12 dBm	-8.88 dB

Date: 28.JUN.2022 13:20:08

Highest Band Edge / 1 RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.560 GHz	2.570 GHz	100.000 kHz	2.56942 GHz	21.50 dBm	-8.50 dB
2.570 GHz	2.571 GHz	200.000 kHz	2.57001 GHz	-27.12 dBm	-17.12 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57107 GHz	-36.84 dBm	-26.84 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57504 GHz	-41.77 dBm	-28.77 dB
2.580 GHz	2.595 GHz	1.000 MHz	2.58147 GHz	-41.91 dBm	-16.91 dB

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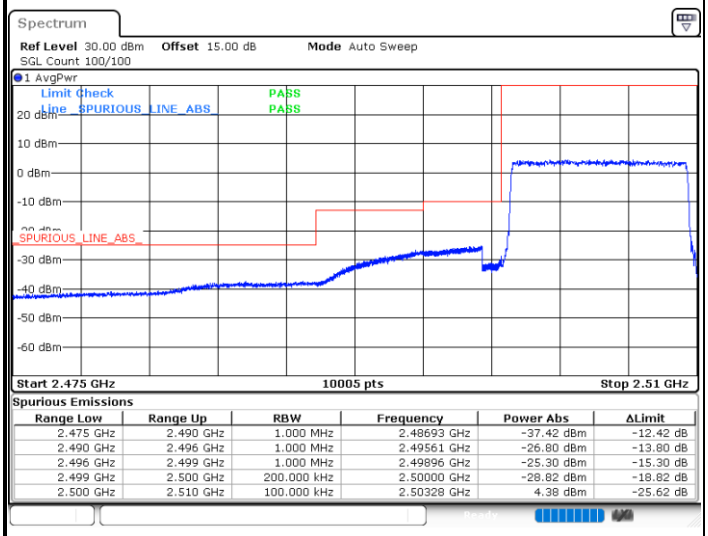
Lowest Band Edge / Full RB

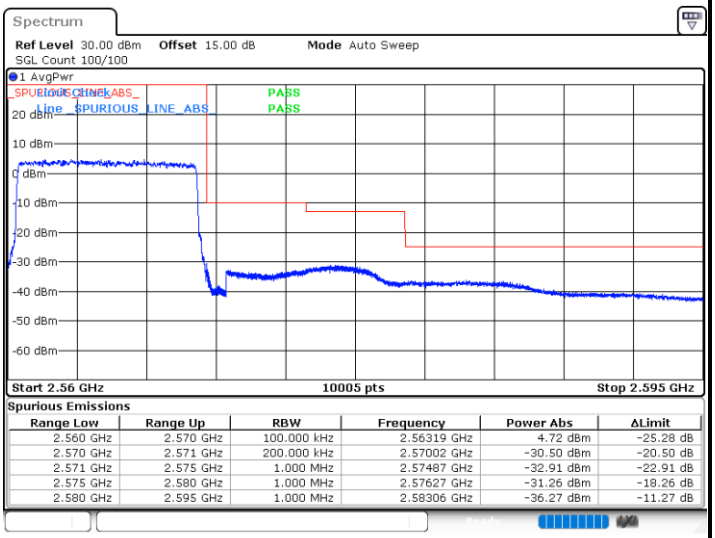


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.48693 GHz	-37.42 dBm	-12.42 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49561 GHz	-26.80 dBm	-13.80 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49896 GHz	-25.30 dBm	-15.30 dB
2.499 GHz	2.500 GHz	200.000 kHz	2.50000 GHz	-28.82 dBm	-18.82 dB
2.500 GHz	2.510 GHz	100.000 kHz	2.50328 GHz	4.38 dBm	-25.62 dB

Date: 28.JUN.2022 13:20:57

Highest Band Edge / Full RB



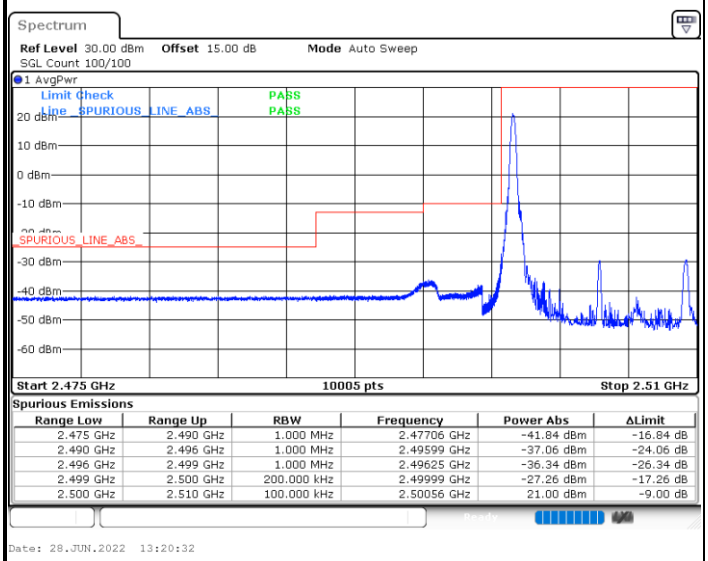
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.560 GHz	2.570 GHz	100.000 kHz	2.56319 GHz	4.72 dBm	-25.28 dB
2.570 GHz	2.571 GHz	200.000 kHz	2.57002 GHz	-30.50 dBm	-20.50 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57487 GHz	-32.91 dBm	-22.91 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57627 GHz	-31.26 dBm	-18.26 dB
2.580 GHz	2.595 GHz	1.000 MHz	2.58306 GHz	-36.27 dBm	-11.27 dB

Date: 28.JUN.2022 13:27:36

LTE Band 7 / 10MHz / 16QAM

Lowest Band Edge / 1 RB

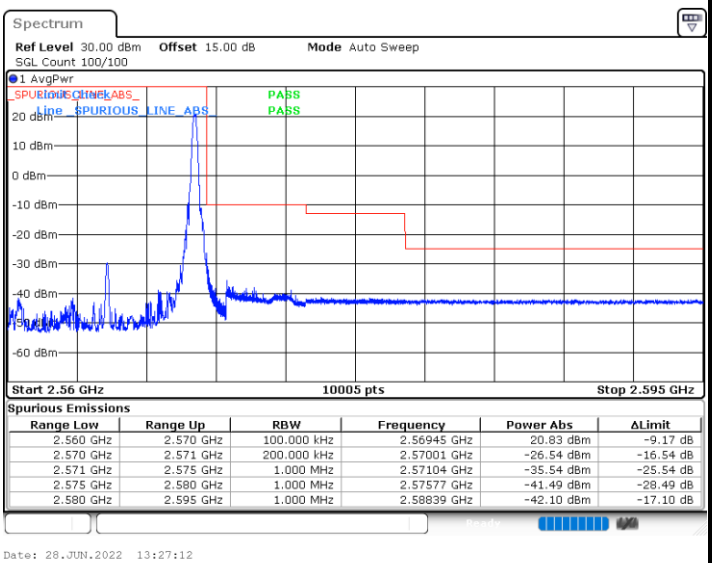


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.47706 GHz	-41.84 dBm	-16.84 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49599 GHz	-37.06 dBm	-24.06 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49625 GHz	-36.34 dBm	-26.34 dB
2.499 GHz	2.500 GHz	200.000 kHz	2.49999 GHz	-27.26 dBm	-17.26 dB
2.500 GHz	2.510 GHz	100.000 kHz	2.50056 GHz	21.00 dBm	-9.00 dB

Date: 28.JUN.2022 13:20:32

Highest Band Edge / 1 RB

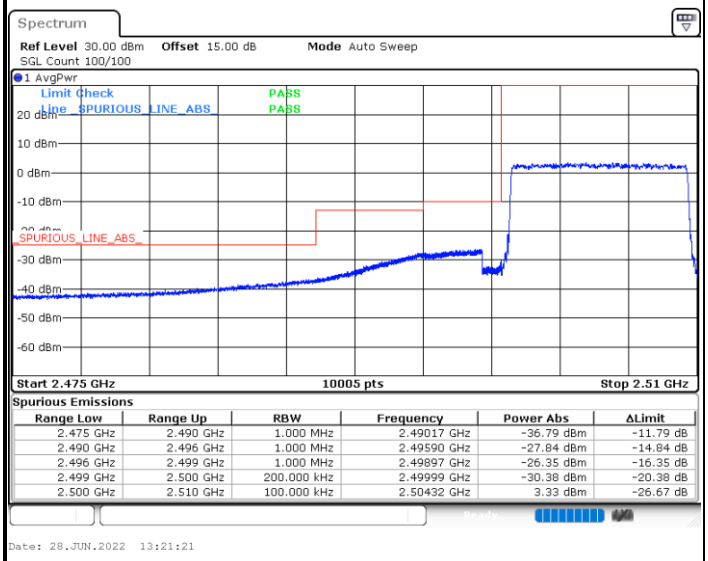


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.560 GHz	2.570 GHz	100.000 kHz	2.56945 GHz	20.83 dBm	-9.17 dB
2.570 GHz	2.571 GHz	200.000 kHz	2.57001 GHz	-26.54 dBm	-16.54 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57104 GHz	-35.54 dBm	-25.54 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57577 GHz	-41.49 dBm	-28.49 dB
2.580 GHz	2.595 GHz	1.000 MHz	2.58839 GHz	-42.10 dBm	-17.10 dB

Date: 28.JUN.2022 13:27:12

Lowest Band Edge / Full RB

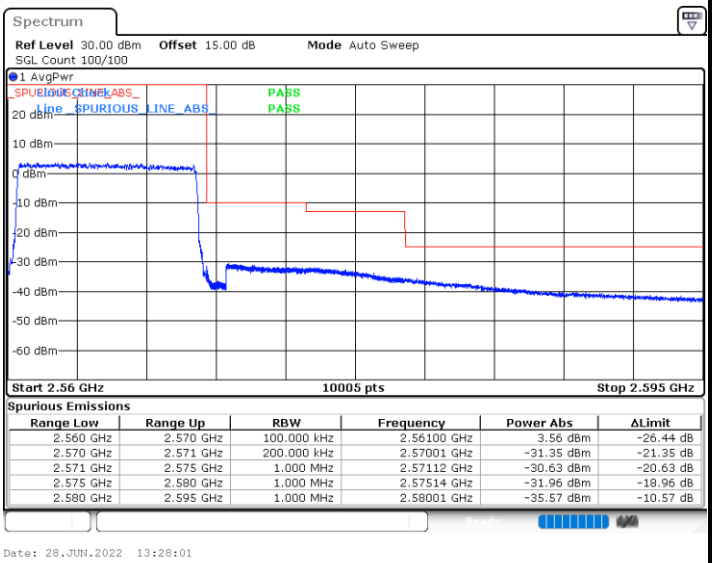


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.49017 GHz	-36.79 dBm	-11.79 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49590 GHz	-27.84 dBm	-14.84 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49897 GHz	-26.35 dBm	-16.35 dB
2.499 GHz	2.500 GHz	200.000 kHz	2.49999 GHz	-30.38 dBm	-20.38 dB
2.500 GHz	2.510 GHz	100.000 kHz	2.50432 GHz	3.33 dBm	-26.67 dB

Date: 28.JUN.2022 13:21:21

Highest Band Edge / Full RB



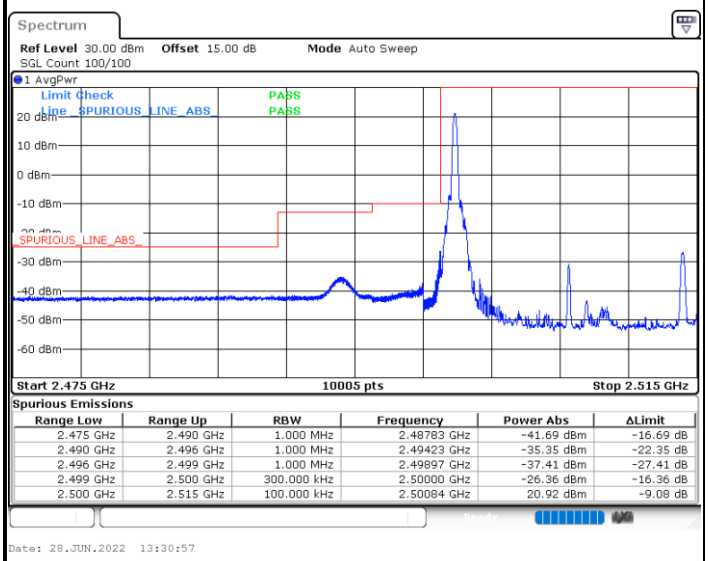
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.560 GHz	2.570 GHz	100.000 kHz	2.56100 GHz	3.56 dBm	-26.44 dB
2.570 GHz	2.571 GHz	200.000 kHz	2.57001 GHz	-31.35 dBm	-21.35 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57112 GHz	-30.63 dBm	-20.63 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57514 GHz	-31.96 dBm	-18.96 dB
2.580 GHz	2.595 GHz	1.000 MHz	2.58001 GHz	-35.57 dBm	-10.57 dB

Date: 28.JUN.2022 13:28:01

LTE Band 7 / 15MHz / QPSK

Lowest Band Edge / 1 RB

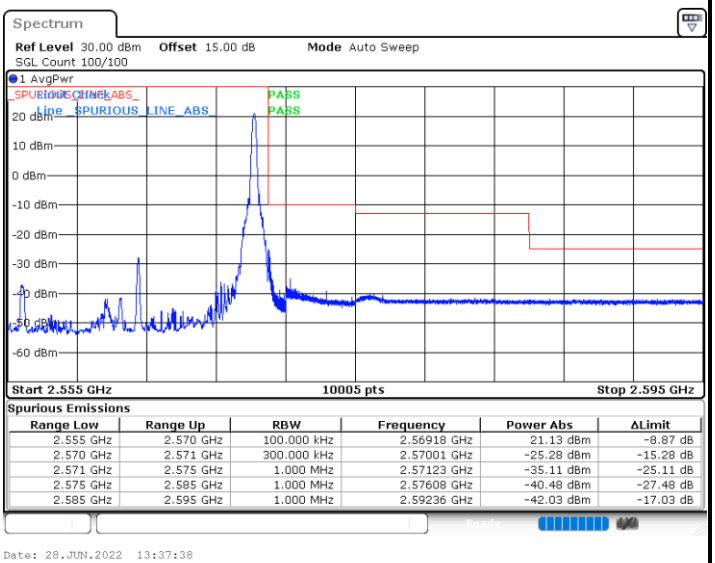


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.48783 GHz	-41.69 dBm	-16.69 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49423 GHz	-35.35 dBm	-22.35 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49897 GHz	-37.41 dBm	-27.41 dB
2.499 GHz	2.500 GHz	300.000 kHz	2.50000 GHz	-26.36 dBm	-16.36 dB
2.500 GHz	2.515 GHz	100.000 kHz	2.50084 GHz	20.92 dBm	-9.08 dB

Date: 28.JUN.2022 13:30:57

Highest Band Edge / 1 RB

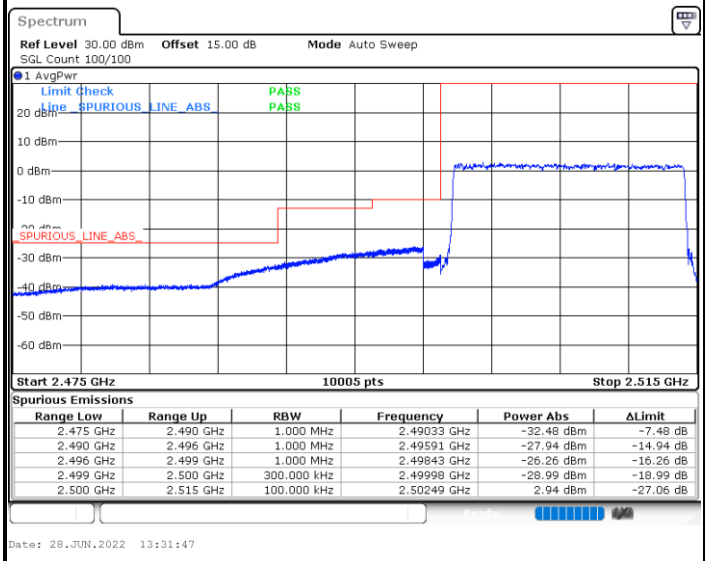


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.555 GHz	2.570 GHz	100.000 kHz	2.56918 GHz	21.13 dBm	-8.87 dB
2.570 GHz	2.571 GHz	300.000 kHz	2.57001 GHz	-25.28 dBm	-15.28 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57123 GHz	-35.11 dBm	-25.11 dB
2.575 GHz	2.585 GHz	1.000 MHz	2.57608 GHz	-40.48 dBm	-27.48 dB
2.585 GHz	2.595 GHz	1.000 MHz	2.59236 GHz	-42.03 dBm	-17.03 dB

Date: 28.JUN.2022 13:37:38

Lowest Band Edge / Full RB

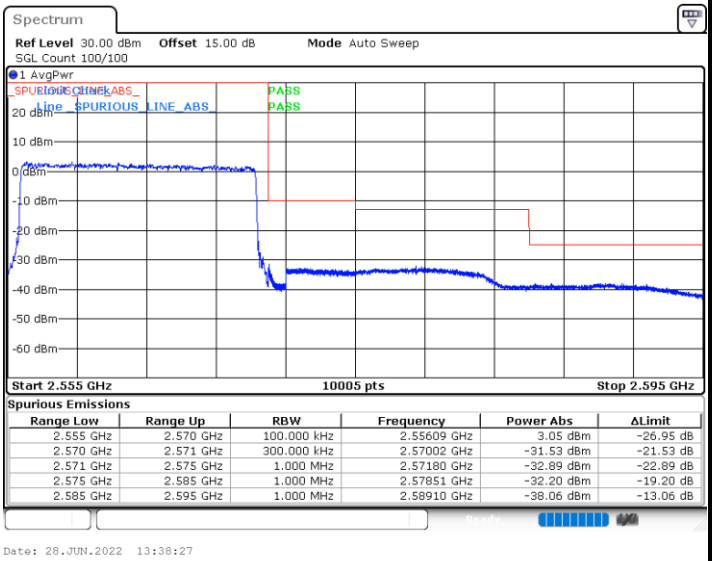


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.49033 GHz	-32.48 dBm	-7.48 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49591 GHz	-27.94 dBm	-14.94 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49843 GHz	-26.26 dBm	-16.26 dB
2.499 GHz	2.500 GHz	300.000 kHz	2.49998 GHz	-28.99 dBm	-18.99 dB
2.500 GHz	2.515 GHz	100.000 kHz	2.50249 GHz	2.94 dBm	-27.06 dB

Date: 28.JUN.2022 13:31:47

Highest Band Edge / Full RB



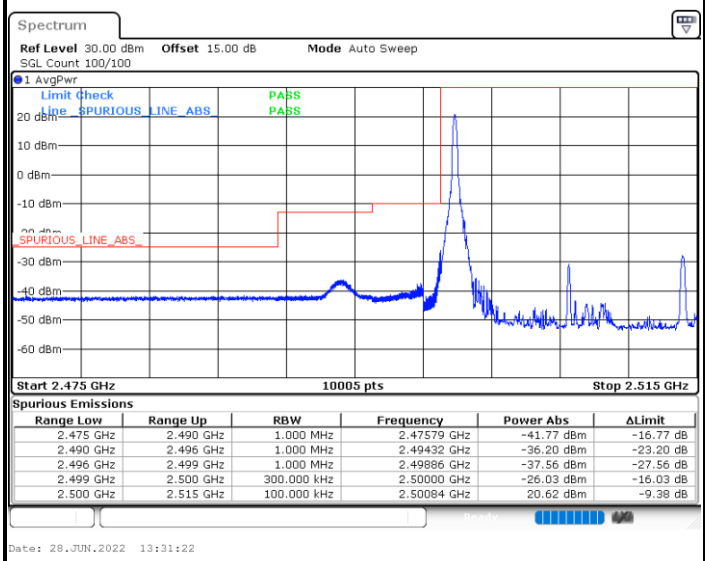
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.555 GHz	2.570 GHz	100.000 kHz	2.55609 GHz	3.05 dBm	-26.95 dB
2.570 GHz	2.571 GHz	300.000 kHz	2.57002 GHz	-31.53 dBm	-21.53 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57180 GHz	-32.89 dBm	-22.89 dB
2.575 GHz	2.585 GHz	1.000 MHz	2.57851 GHz	-32.20 dBm	-19.20 dB
2.585 GHz	2.595 GHz	1.000 MHz	2.58910 GHz	-38.06 dBm	-13.06 dB

Date: 28.JUN.2022 13:38:27

LTE Band 7 / 15MHz / 16QAM

Lowest Band Edge / 1 RB

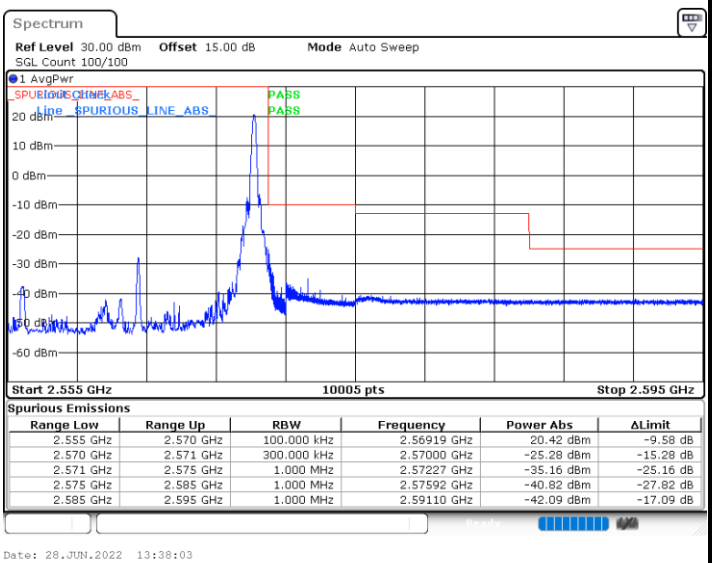


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.47579 GHz	-41.77 dBm	-16.77 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49432 GHz	-36.20 dBm	-23.20 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49886 GHz	-37.56 dBm	-27.56 dB
2.499 GHz	2.500 GHz	300.000 kHz	2.50000 GHz	-26.03 dBm	-16.03 dB
2.500 GHz	2.515 GHz	100.000 kHz	2.50084 GHz	20.62 dBm	-9.38 dB

Date: 28.JUN.2022 13:31:22

Highest Band Edge / 1 RB

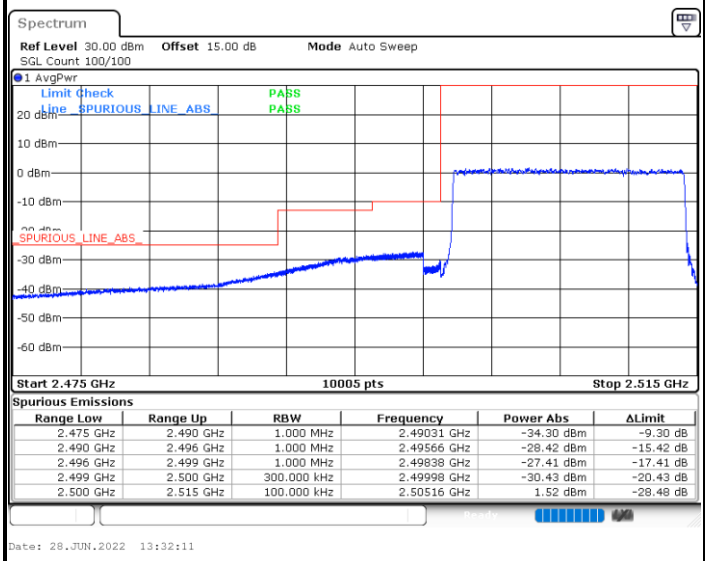


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.555 GHz	2.570 GHz	100.000 kHz	2.56919 GHz	20.42 dBm	-9.58 dB
2.570 GHz	2.571 GHz	300.000 kHz	2.57000 GHz	-25.28 dBm	-15.28 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57227 GHz	-35.16 dBm	-25.16 dB
2.575 GHz	2.585 GHz	1.000 MHz	2.57592 GHz	-40.82 dBm	-27.82 dB
2.585 GHz	2.595 GHz	1.000 MHz	2.59110 GHz	-42.09 dBm	-17.09 dB

Date: 28.JUN.2022 13:38:03

Lowest Band Edge / Full RB

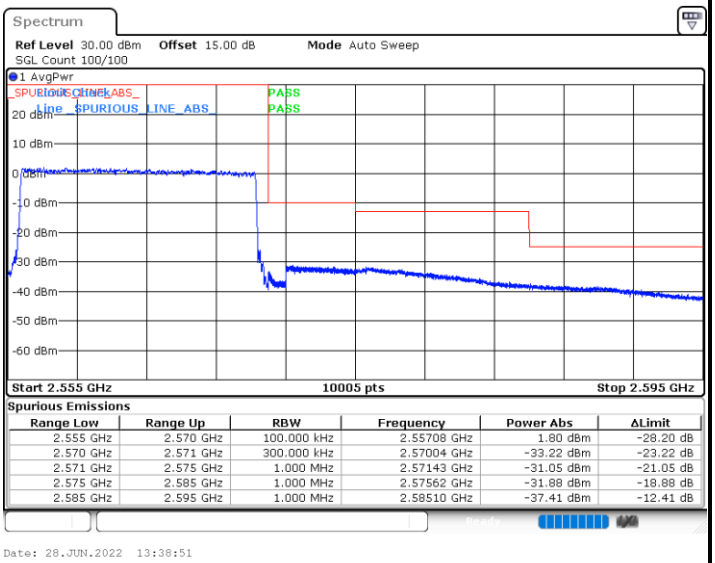


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.49031 GHz	-34.30 dBm	-9.30 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49566 GHz	-28.42 dBm	-15.42 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49838 GHz	-27.41 dBm	-17.41 dB
2.499 GHz	2.500 GHz	300.000 kHz	2.49998 GHz	-30.43 dBm	-20.43 dB
2.500 GHz	2.515 GHz	100.000 kHz	2.50516 GHz	1.52 dBm	-28.48 dB

Date: 28.JUN.2022 13:32:11

Highest Band Edge / Full RB



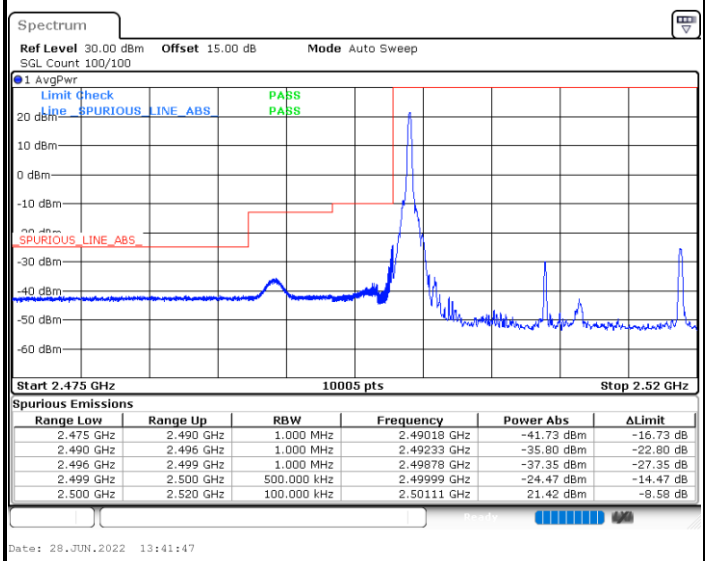
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.555 GHz	2.570 GHz	100.000 kHz	2.55708 GHz	1.80 dBm	-28.20 dB
2.570 GHz	2.571 GHz	300.000 kHz	2.57004 GHz	-33.22 dBm	-23.22 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57143 GHz	-31.05 dBm	-21.05 dB
2.575 GHz	2.585 GHz	1.000 MHz	2.57562 GHz	-31.88 dBm	-18.88 dB
2.585 GHz	2.595 GHz	1.000 MHz	2.58510 GHz	-37.41 dBm	-12.41 dB

Date: 28.JUN.2022 13:38:51

LTE Band 7 / 20MHz / QPSK

Lowest Band Edge / 1 RB

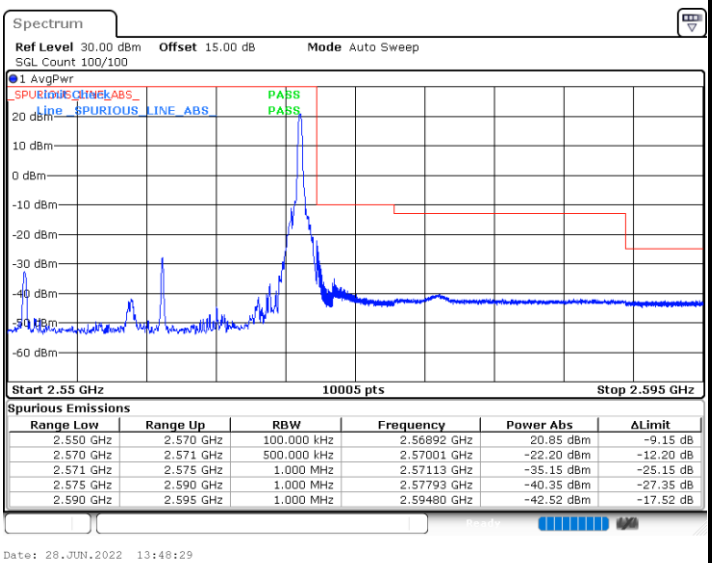


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.49018 GHz	-41.73 dBm	-16.73 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49233 GHz	-35.80 dBm	-22.80 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49878 GHz	-37.35 dBm	-27.35 dB
2.499 GHz	2.500 GHz	500.000 kHz	2.49999 GHz	-24.47 dBm	-14.47 dB
2.500 GHz	2.520 GHz	100.000 kHz	2.50111 GHz	21.42 dBm	-8.58 dB

Date: 28.JUN.2022 13:41:47

Highest Band Edge / 1 RB

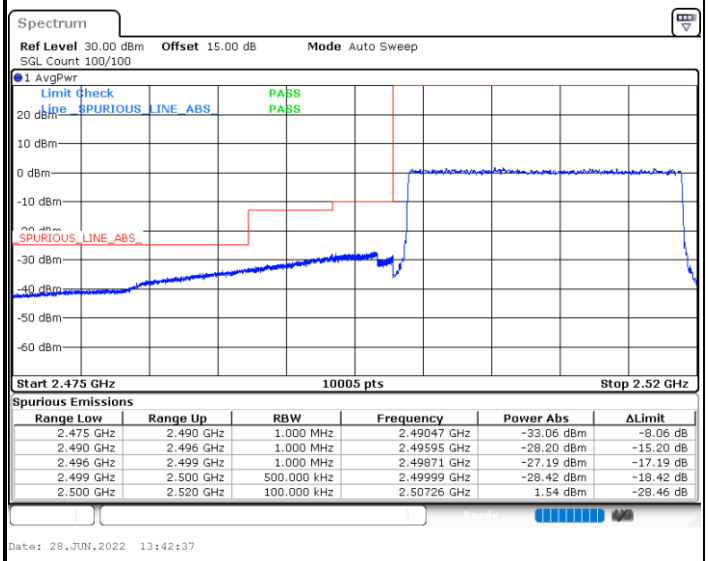


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.550 GHz	2.570 GHz	100.000 kHz	2.56892 GHz	20.85 dBm	-9.15 dB
2.570 GHz	2.571 GHz	500.000 kHz	2.57001 GHz	-22.20 dBm	-12.20 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57113 GHz	-35.15 dBm	-25.15 dB
2.575 GHz	2.590 GHz	1.000 MHz	2.57793 GHz	-40.35 dBm	-27.35 dB
2.590 GHz	2.595 GHz	1.000 MHz	2.59480 GHz	-42.52 dBm	-17.52 dB

Date: 28.JUN.2022 13:48:29

Lowest Band Edge / Full RB

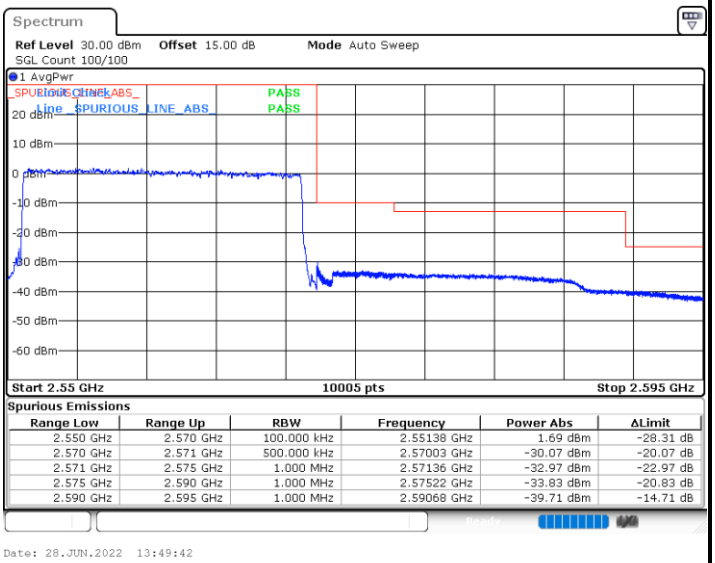


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.49047 GHz	-33.06 dBm	-8.06 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49595 GHz	-28.20 dBm	-15.20 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49871 GHz	-27.19 dBm	-17.19 dB
2.499 GHz	2.500 GHz	500.000 kHz	2.49999 GHz	-28.42 dBm	-18.42 dB
2.500 GHz	2.520 GHz	100.000 kHz	2.50726 GHz	1.54 dBm	-28.46 dB

Date: 28.JUN.2022 13:42:37

Highest Band Edge / Full RB



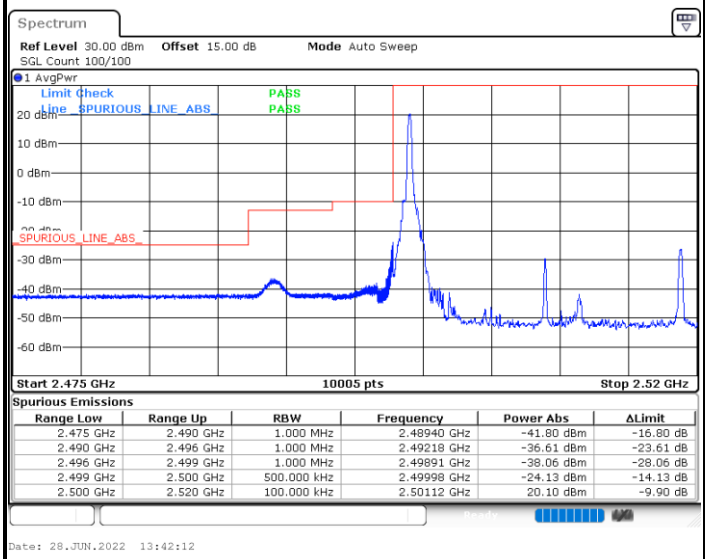
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.550 GHz	2.570 GHz	100.000 kHz	2.55138 GHz	1.69 dBm	-28.31 dB
2.570 GHz	2.571 GHz	500.000 kHz	2.57003 GHz	-30.07 dBm	-20.07 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57136 GHz	-32.97 dBm	-22.97 dB
2.575 GHz	2.590 GHz	1.000 MHz	2.57522 GHz	-33.83 dBm	-20.83 dB
2.590 GHz	2.595 GHz	1.000 MHz	2.59068 GHz	-39.71 dBm	-14.71 dB

Date: 28.JUN.2022 13:49:42

LTE Band 7 / 20MHz / 16QAM

Lowest Band Edge /1 RB

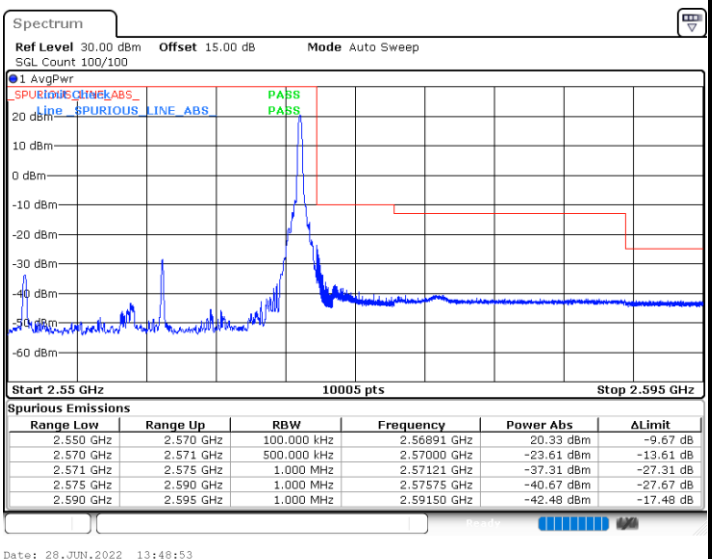


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.48940 GHz	-41.80 dBm	-16.80 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49218 GHz	-36.61 dBm	-23.61 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49891 GHz	-38.06 dBm	-28.06 dB
2.499 GHz	2.500 GHz	500.000 kHz	2.49998 GHz	-24.13 dBm	-14.13 dB
2.500 GHz	2.520 GHz	100.000 kHz	2.50112 GHz	20.10 dBm	-9.90 dB

Date: 28.JUN.2022 13:42:12

Highest Band Edge / 1RB

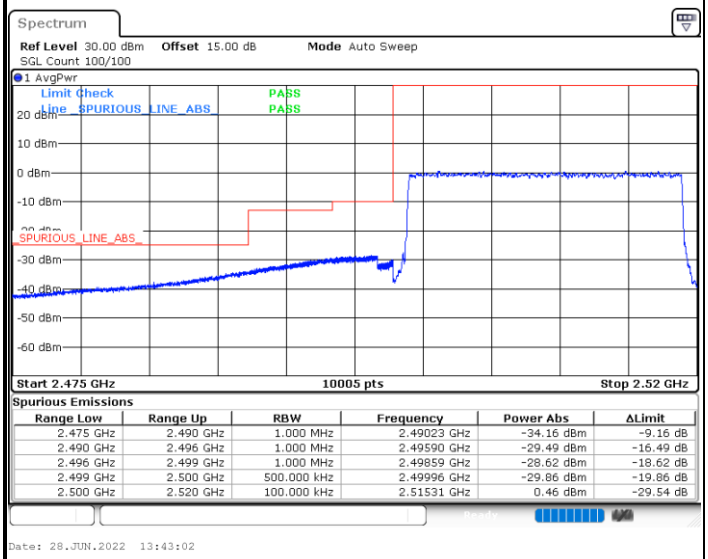


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.550 GHz	2.570 GHz	100.000 kHz	2.56891 GHz	20.33 dBm	-9.67 dB
2.570 GHz	2.571 GHz	500.000 kHz	2.57000 GHz	-23.61 dBm	-13.61 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57121 GHz	-37.31 dBm	-27.31 dB
2.575 GHz	2.590 GHz	1.000 MHz	2.57575 GHz	-40.67 dBm	-27.67 dB
2.590 GHz	2.595 GHz	1.000 MHz	2.59150 GHz	-42.48 dBm	-17.48 dB

Date: 28.JUN.2022 13:48:53

Lowest Band Edge / Full RB

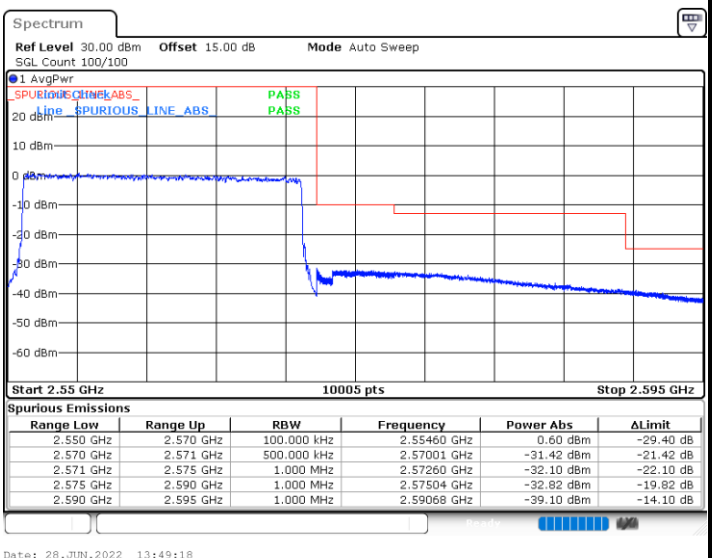


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.49023 GHz	-34.16 dBm	-9.16 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49590 GHz	-29.49 dBm	-16.49 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49859 GHz	-28.62 dBm	-18.62 dB
2.499 GHz	2.500 GHz	500.000 kHz	2.49996 GHz	-29.86 dBm	-19.86 dB
2.500 GHz	2.520 GHz	100.000 kHz	2.51531 GHz	0.46 dBm	-29.54 dB

Date: 28.JUN.2022 13:43:02

Highest Band Edge / Full RB



Spurious Emissions

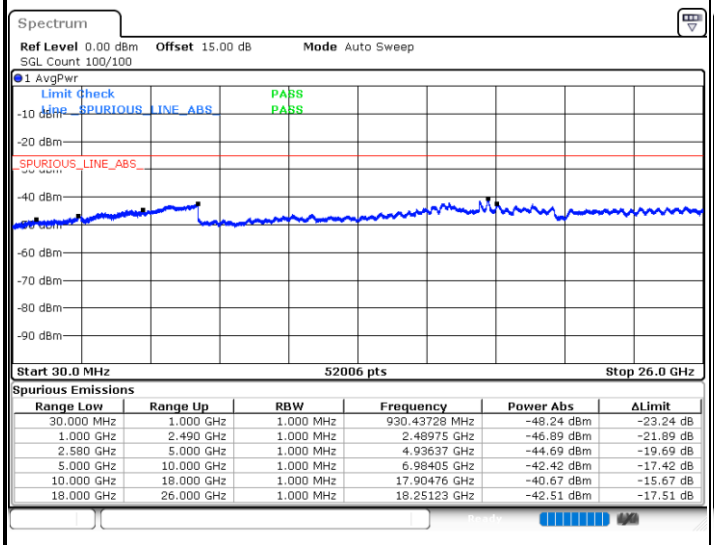
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.550 GHz	2.570 GHz	100.000 kHz	2.55460 GHz	0.60 dBm	-29.40 dB
2.570 GHz	2.571 GHz	500.000 kHz	2.57001 GHz	-31.42 dBm	-21.42 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57260 GHz	-32.10 dBm	-22.10 dB
2.575 GHz	2.590 GHz	1.000 MHz	2.57504 GHz	-32.82 dBm	-19.82 dB
2.590 GHz	2.595 GHz	1.000 MHz	2.59068 GHz	-39.10 dBm	-14.10 dB

Date: 28.JUN.2022 13:49:18

Conducted Spurious Emission

LTE Band 7 / 5MHz

Lowest Channel / QPSK

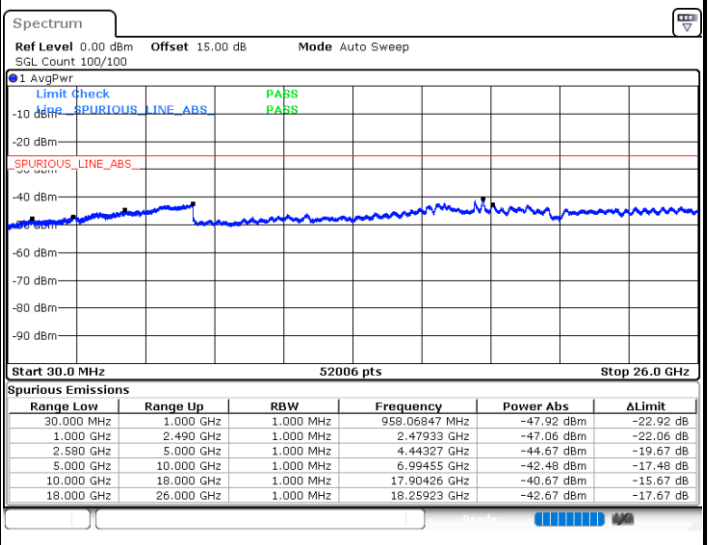


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	930.43728 MHz	-48.24 dBm	-23.24 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.48975 GHz	-46.89 dBm	-21.89 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.93637 GHz	-44.69 dBm	-19.69 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.98405 GHz	-42.42 dBm	-17.42 dB
10.000 GHz	18.000 GHz	1.000 MHz	17.90476 GHz	-40.67 dBm	-15.67 dB
18.000 GHz	26.000 GHz	1.000 MHz	18.25123 GHz	-42.51 dBm	-17.51 dB

Date: 28.JUN.2022 13:11:26

Lowest Channel / 16QAM

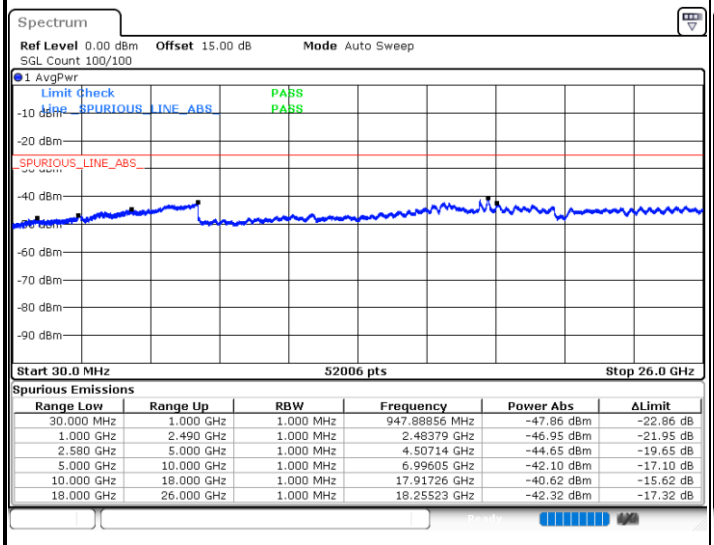


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	958.06847 MHz	-47.92 dBm	-22.92 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.47933 GHz	-47.06 dBm	-22.06 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.44327 GHz	-44.67 dBm	-19.67 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.99455 GHz	-42.48 dBm	-17.48 dB
10.000 GHz	18.000 GHz	1.000 MHz	17.90426 GHz	-40.67 dBm	-15.67 dB
18.000 GHz	26.000 GHz	1.000 MHz	18.25923 GHz	-42.67 dBm	-17.67 dB

Date: 28.JUN.2022 13:12:20

Middle Channel / QPSK

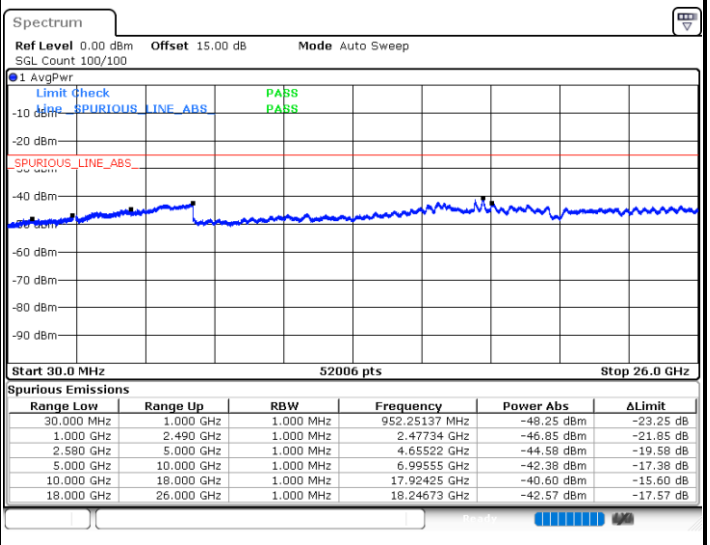


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	947.88856 MHz	-47.86 dBm	-22.86 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.48379 GHz	-46.95 dBm	-21.95 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.50714 GHz	-44.65 dBm	-19.65 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.99605 GHz	-42.10 dBm	-17.10 dB
10.000 GHz	18.000 GHz	1.000 MHz	17.91726 GHz	-40.62 dBm	-15.62 dB
18.000 GHz	26.000 GHz	1.000 MHz	18.25523 GHz	-42.32 dBm	-17.32 dB

Date: 28.JUN.2022 13:13:57

Middle Channel / 16QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	952.25137 MHz	-48.25 dBm	-23.25 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.47734 GHz	-46.85 dBm	-21.85 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.65522 GHz	-44.58 dBm	-19.58 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.99555 GHz	-42.38 dBm	-17.38 dB
10.000 GHz	18.000 GHz	1.000 MHz	17.92425 GHz	-40.60 dBm	-15.60 dB
18.000 GHz	26.000 GHz	1.000 MHz	18.24673 GHz	-42.57 dBm	-17.57 dB

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