FCC RADIO TEST REPORT

FCC ID	:	**XIA-NTC225**
Equipment	:	**4G LTE Cat1 Industrial IoT Router**
Brand Name	:	NetCommWireless
Model Name	:	**NTC-225**
Applicant	:	**NetComm Wireless Pty Ltd** **Level 5, 18-20 Orion Road, Lane Cove NSW 2066 Australia**
Manufacturer	:	**Casa Systems Inc.** **100 Old River Road Andover, MA 01810 USA**
Standard	:	**FCC 47 CFR Part 2, 27**

The product was received on Aug. 30, 2022 and testing was performed from Oct. 01, 2022 to Oct. 07, 2022. We, Sporton International Inc. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA-603-E and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval from Sporton International Inc. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Louis Wu

Approved by: Louis Wu

Sporton International Inc. EMC & Wireless Communications Laboratory
No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)

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History of this test report

Report No.	Version	Description	Issue Date
FG283102	01	Initial issue of report	Oct. 17, 2022

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.2	§2.1046	Conducted Output Power	Reporting only	-
	§27.50 (b)(10)	Effective Radiated Power (Band 13)	Pass	
	§27.50 (d)(4)	Equivalent Isotropic Radiated Power (Band 4)		
3.3	§27.50 (d)(5)	Peak-to-Average Ratio	Pass	-
3.4	§2.1049	Occupied Bandwidth	Reporting only	-
3.5	§2.1051 §27.53 (c)(2)(4) §27.53 (h)	Conducted Band Edge Measurement (Band 4) (Band 13) Conducted Band Edge Measurement	Pass	-
3.6	§2.1051 §27.53 (c)(2) §27.53 (h)	Conducted Spurious Emission (Band 4) (Band 13) Conducted Spurious Emission	Pass	-
3.7	§2.1055 §27.54	Frequency Stability Temperature & Voltage	Pass	-
4.2	§2.1053 §27.53 (c)(2) §27.53 (f) §27.53 (h)	Radiated Spurious Emission (Band 4) (Band 13)	Pass	7.80 dB under the limit at 1559.000 MHz

Declaration of Conformity:
1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers. It's means measurement values may risk exceeding the limit of regulation standards, if measurement uncertainty is include in test results. 2. The measurement uncertainty please refer to report "Uncertainty of Evaluation".
Comments and Explanations:
The product specifications of the EUT presented in the report are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Keven Cheng

Report Producer: Clio Lo

1 General Description

1.1 Product Feature of Equipment Under Test

Items	Description
EUT Power Type	From power adapter Note: The EUT was tested with a 12V power adapter and the device supports 10-35V.
EUT Type	☐ Base Station ☒ Mobile Station ☐ Fixed Subscriber Station
TX Frequency (MHz)	LTE Band 4: 1.4 MHz: 1710.7 MHz ~ 1754.3 MHz 3 MHz: 1711.5 MHz ~ 1753.5 MHz 5 MHz: 1712.5 MHz ~ 1752.5 MHz 10 MHz: 1715.0 MHz ~ 1750.0 MHz 15 MHz: 1717.5 MHz ~ 1747.5 MHz 20 MHz: 1720.0 MHz ~ 1745.0 MHz
	LTE Band 13: 5 MHz: 779.5 MHz ~ 784.5 MHz 10 MHz: 782.0 MHz
RX Frequency (MHz)	LTE Band 4: 1.4 MHz: 2110.7 MHz ~ 2154.3 MHz 3 MHz: 2111.5 MHz ~ 2153.5 MHz 5 MHz: 2112.5 MHz ~ 2152.5 MHz 10 MHz: 2115.0 MHz ~ 2150.0 MHz 15 MHz: 2117.5 MHz ~ 2147.5 MHz 20 MHz: 2120.0 MHz ~ 2145.0 MHz
	LTE Band 13: 5 MHz: 748.5 MHz ~ 753.5 MHz 10 MHz: 751.0 MHz
Bandwidth (MHz)	LTE Band 4: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz
	LTE Band 13: 5 MHz, 10 MHz
Maximum Output Power to Antenna (dBm)	LTE Band 4: 1.4 MHz: 21.81 dBm, 3 MHz: 21.75 dBm, 5 MHz: 21.94 dBm, 10 MHz: 21.71 dBm, 15 MHz: 21.77 dBm, 20 MHz: 22.00 dBm
	LTE Band 13: 5 MHz: 22.11 dBm, 10 MHz: 22.13 dBm

Items	Description
99% Occupied Bandwidth (MHz)	LTE Band 4: 1.4 MHz: 1.09 MHz, 3 MHz: 2.71 MHz, 5 MHz: 4.50 MHz, 10 MHz: 8.95 MHz, 15 MHz: 13.40 MHz, 20 MHz: 17.78 MHz
	LTE Band 13: 5 MHz: 4.49 MHz, 10 MHz: 8.99 MHz
Type of Modulation	QPSK / 16QAM

Accessories Information				
AC Adapter	**Brand Name**	NA	**Model Name**	S018BAM1200150
	Power Rating	I/P: 100-240Vac, 0.5 A, O/P: 12Vdc, 1.5A		
	Power Cord	1.5 meter, non-shielded cable, w/o ferrite core		
RJ45 Cable	**Brand Name**	NA	**Model Name**	NA
	Signal Line	1.5 meter, non-shielded cable		
Antenna	**Brand Name**	NA	**Model Name**	NANT-00001
DIN rail mounting bracket	**Brand Name**	NA	**Model Name**	NA

Remark: The EUT's information above is declared by manufacturer. Please refer to Comments and Explanations in report summary.

1.2 Antenna Information

Ant.	Brand	Model Name	Type	Connector	Antenna Gain (dBi)	
					LTE Band 4	LTE Band 13
1	NetCommWireless	NANT-00001	Dipole	SMA	3.28	4.71
2	NetCommWireless	NANT-00001	Dipole	SMA	3.28	4.71

Remark: The EUT has two antennas.
The EUT support 1TX, 2RX functions:
Only Main port can be used as transmitting function.
Main port and Aux port could receive simultaneously.

1.3 Modification of EUT

No modifications made to the EUT during the testing.

1.4 Testing Location

Test Site	Sporton International Inc. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	**Sporton Site No.**
	TH03-HY
Test Engineer	Bryant Liu
Temperature (℃)	22.1~23.2
Relative Humidity (%)	53~55

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	**Sporton Site No.**
	03CH12-HY (TAF Code: 3786)
Test Engineer	Jesse Fan
Temperature (℃)	20~25
Relative Humidity (%)	50~60
Remark	The Radiated Emission test item subcontracted to Sporton International Inc. Wensan Laboratory.

Note: The test site complies with ANSI C63.4 2014 requirement.

FCC Designation No.: TW1190 and TW3786

1.5 Applicable Standards

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

- ANSI C63.26-2015
- ANSI / TIA-603-E
- FCC 47 CFR Part 2, 27
- FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- FCC KDB 412172 D01 Determining ERP and EIRP v01r01
- FCC KDB 414788 D01 Radiated Test Site v01r01.

Remark:

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.
3. The TAF code is not including all the FCC KDB listed without accreditation.

2 Test Configuration of Equipment Under Test

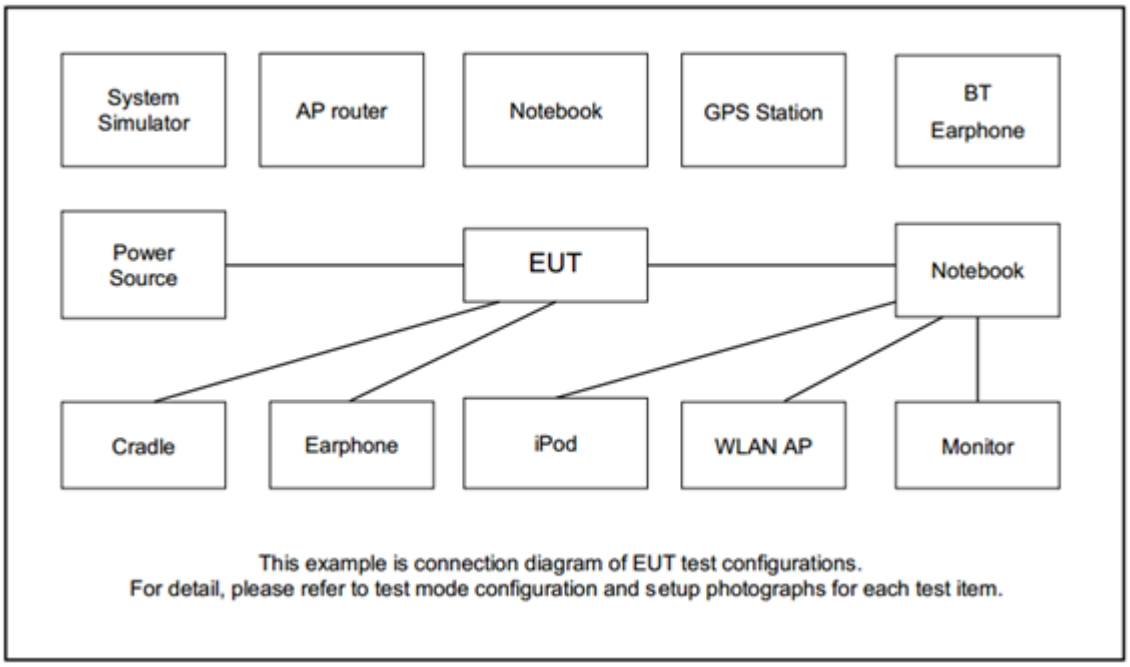
2.1 Test Mode

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.

For radiated measurement, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in two antenna polarization (Horizontal and Vertical), and adjusting the measurement antenna orientation, following C63.26 exploratory test procedures and only the worst case emissions were reported in this report..

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	4	v	v	v	v	v	v	v	v		v	v	v	v	v	v
	13	-	-	v	v	-	-	v	v		v	v	v	v	v	v
Peak-to-Average Ratio	4						v	v	v				v		v	
	13	-	-		v	-	-	v	v				v		v	
26dB and 99% Bandwidth	4	v	v	v	v	v	v	v	v				v		v	
	13	-	-	v	v	-	-	v	v				v		v	
Conducted Band Edge	4	v	v	v	v	v	v	v	v		v		v	v		v
	13	-	-	v	v	-	-	v	v		v		v	v		v
Conducted Spurious Emission	4	v	v	v	v	v	v	v			v			v	v	v
	13	-	-	v	v	-	-	v			v			v	v	v
Frequency Stability	4				v			v					v		v	
	13	-	-		v	-	-	v					v		v	
E.R.P / E.I.R.P	4	v	v	v	v	v	v	v	v		Max. Power					
	13	-	-	v	v	-	-	v	v							
Radiated Spurious Emission	4	Worst Case												v	v	v
	13	Worst Case												v	v	v
Remark	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 frequency bands the bandwidth 10/15/20 MHz full RU size is 27 RB with 16QAM. 5. One representative bandwidth is selected to perform PAR and frequency stability.															

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

For Test Site: 03CH12-HY

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	Base station	Anritsu	MT8821C	N/A
2	SIM card	N/A	N/A	N/A

For Test Site: TH03-HY

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	Base station	Anritsu	MT8821C	N/A
2	SIM card	N/A	N/A	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 4.2 dB and 10dB attenuator.

Example :

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

= 4.2 + 10 = 14.2 (dB)

2.5 Frequency List of Low/Middle/High Channels

LTE Band 4 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
20	Channel	20050	20175	20300
	Frequency	1720	1732.5	1745
15	Channel	20025	20175	20325
	Frequency	1717.5	1732.5	1747.5
10	Channel	20000	20175	20350
	Frequency	1715	1732.5	1750
5	Channel	19975	20175	20375
	Frequency	1712.5	1732.5	1752.5
3	Channel	19965	20175	20385
	Frequency	1711.5	1732.5	1753.5
1.4	Channel	19957	20175	20393
	Frequency	1710.7	1732.5	1754.3

LTE Band 13 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
10	Channel	-	23230	-
	Frequency	-	782	-
5	Channel	23205	23230	23255
	Frequency	779.5	782	784.5

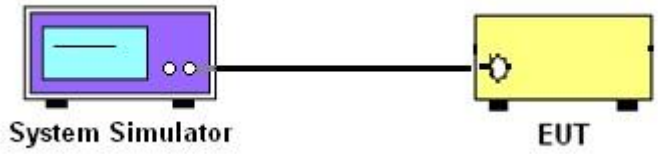
3 Conducted Test Items

3.1 Measuring Instruments

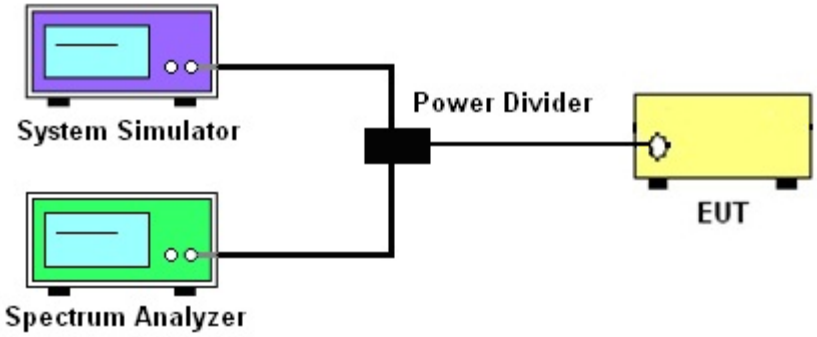
See list of measuring instruments of this test report.

3.1.1 Test Setup

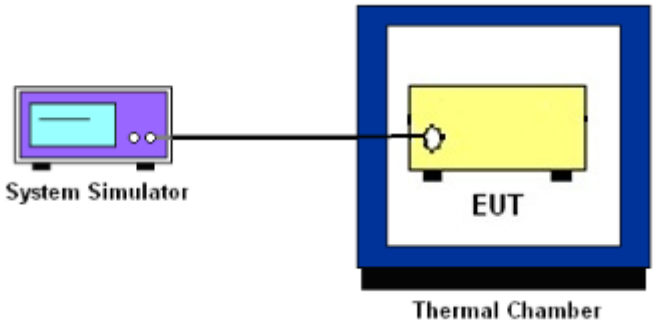
3.1.2 Conducted Output Power



3.1.3 Peak-to-Average Ratio, Occupied Bandwidth ,Conducted Band-Edge and Conducted Spurious Emission



3.1.4 Frequency Stability



3.1.5 Test Result of Conducted Test

Please refer to Appendix A.

3.2 Conducted Output Power and ERP/EIRP

3.2.1 Description of the Conducted Output Power Measurement and ERP/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 3 Watts for LTE Band 13

The EIRP of mobile transmitters must not exceed 1 Watts for LTE Band 4

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

3.2.2 Test Procedures

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

3.3 Peak-to-Average Ratio

3.3.1 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.

3.3.2 Test Procedures

The testing follows ANSI C63.26-2015 Section 5.2.6

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

3.4 Occupied Bandwidth

3.4.1 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.

3.4.2 Test Procedures

The testing follows ANSI C63.26-2015 Section 5.4.3 (26dB) and Section 5.4.4 (99OB)

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. 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.
3. 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.
4. Set the detection mode to peak, and the trace mode to max hold.
5. 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)
6. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
7. 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.
8. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

3.5 Conducted Band Edge

3.5.1 Description of Conducted Band Edge Measurement

27.53 (c)

For operations in the 776-788 MHz band, the FCC limit is 43 + $10\log_{10}$(P[Watts]) dB below the transmitter power P(Watts) in a 100 kHz bandwidth. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed. In addition, the power of any unwanted emissions in any 6.25 kHz bandwidth for all frequencies between 763-775 MHz and 793-806 MHz shall be attenuated below the transmitter power, P (dBW), by at least 65 + 10 log10 p(watts), dB, for mobile and portable equipment.

27.53 (h)

For operations in the 1710 – 1755 MHz band, 1755-1780 MHz, the FCC limit is 43 + 10log10(P[Watts]) dB below the transmitter power P(Watts) in a 1 MHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

3.5.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The band edges of low and high channels for the highest RF powers were measured.
3. Set RBW >= 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
4. Beyond the 1 MHz band from the band edge, RBW=1MHz was used.
5. Set spectrum analyzer with RMS detector.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
7. Checked that all the results comply with the emission limit line.
   The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)

3.6 Conducted Spurious Emission

3.6.1 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.

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

3.6.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. The middle channel for the highest RF power within the transmitting frequency was measured.
4. The conducted spurious emission for the whole frequency range was taken.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
6. Set spectrum analyzer with RMS detector.
7. Taking the record of maximum spurious emission.
8. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
9. The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)

3.7 Frequency Stability

3.7.1 Description of Frequency Stability Measurement

27.54

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

3.7.2 Test Procedures for Temperature Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

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

3.7.3 Test Procedures for Voltage Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

1. The EUT was placed in a temperature chamber at 20±5° C and connected with the system simulator.
2. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
3. The variation in frequency was measured for the worst case.

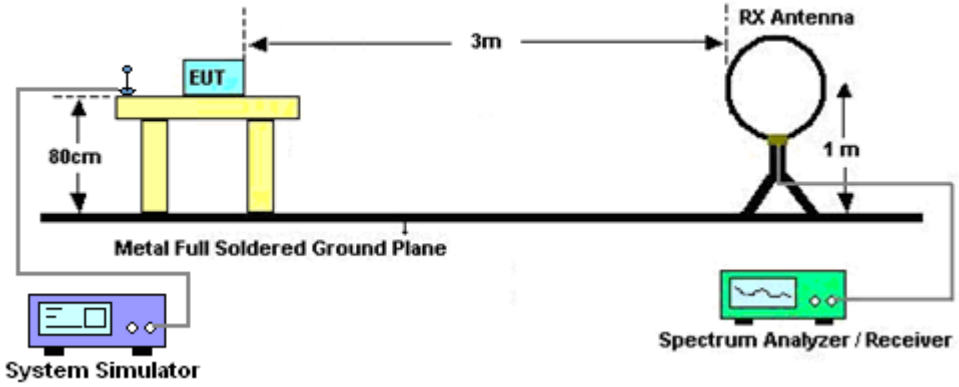
4 Radiated Test Items

4.1 Measuring Instruments

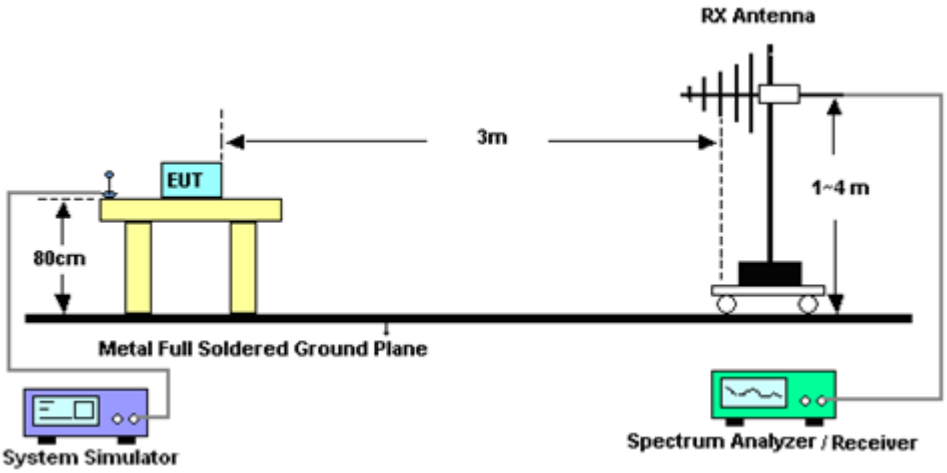
See list of measuring instruments of this test report.

4.1.1 Test Setup

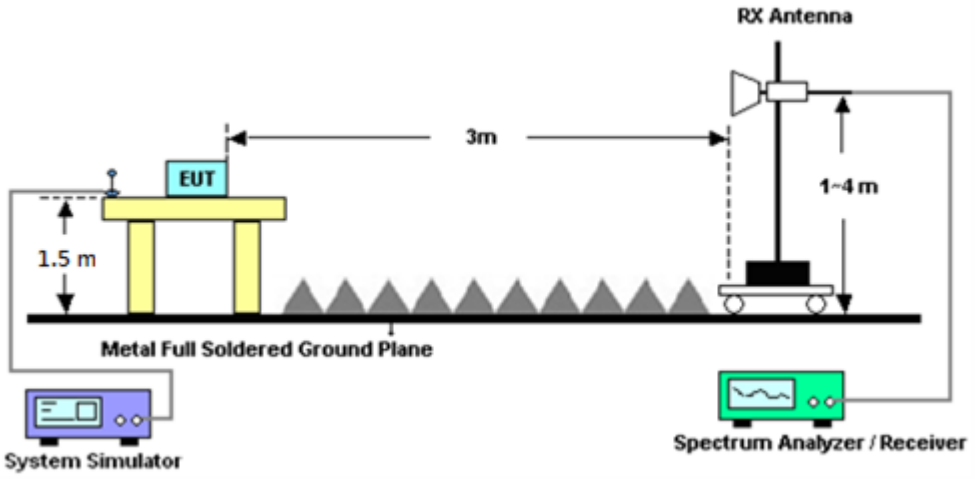
For radiated test below 30MHz



For radiated test from 30MHz to 1GHz



For radiated test above 1GHz



4.1.2 Test Result of Radiated Test

Please refer to Appendix B.

Note:

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.

There is adequate comparison measurement of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.

4.2 Radiated Spurious Emission Measurement

4.2.1 Description of Radiated Spurious Emission Measurement

The radiated spurious emission was measured by substitution method according to ANSI / TIA-603-E. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

For LTE Band 13

For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to −70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and −80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

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

4.2.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 7 and ANSI / TIA-603-E Section 2.2.12.

1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

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

    EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain

    ERP (dBm) = EIRP - 2.15

5 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	May 13, 2022	Oct. 07, 2022	May 12, 2023	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01 N-06	40103 & 07	30MHz~1GHz	Apr. 24, 2022	Oct. 07, 2022	Apr. 23, 2023	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D & N-6-06	35414 & AT-N0602	30MHz~1GHz	Oct. 09, 2021	Oct. 07, 2022	Oct. 08, 2022	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1328	1GHz~18GHz	Dec. 03, 2021	Oct. 07, 2022	Dec. 02, 2022	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1212	1GHz~18GHz	Mar. 10, 2022	Oct. 07, 2022	Mar. 09, 2023	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	18GHz~40GHz	Nov. 30, 2021	Oct. 07, 2022	Nov. 29, 2022	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170576	18GHz~40GHz	May 14, 2022	Oct. 07, 2022	May 13, 2023	Radiation (03CH12-HY)
Preamplifier	COM-POWER	PA-103	161075	10MHz~1GHz	Mar. 23, 2022	Oct. 07, 2022	Mar. 22, 2023	Radiation (03CH12-HY)
Preamplifier	Aglient	8449B	3008A02375	1GHz~26.5GHz	May 24, 2022	Oct. 07, 2022	May 23, 2023	Radiation (03CH12-HY)
Preamplifier	Aglient	8449B	3008A02375	1GHz~26.5GHz	May 24, 2022	Oct. 07, 2022	May 23, 2023	Radiation (03CH12-HY)
Preamplifier	E-INSTRUMENT TECH LTD.	ERA-100M-18G-56-01-A70	EC1900270	1GHz-18GHz	Dec. 27, 2021	Oct. 07, 2022	Dec. 26, 2022	Radiation (03CH12-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz~40GHz	Dec. 24, 2021	Oct. 07, 2022	Dec. 23, 2022	Radiation (03CH12-HY)
Spectrum Analyzer	Keysight	N9010A	MY53470118	10Hz~44GHz	Jan. 12, 2022	Oct. 07, 2022	Jan. 11, 2023	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	9kHz~30MHz	Mar. 10, 2022	Oct. 07, 2022	Mar. 09, 2023	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126E	0058/126E	30MHz~18GHz	Dec. 10, 2021	Oct. 07, 2022	Dec. 09, 2022	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz~40GHz	Feb. 21, 2022	Oct. 07, 2022	Feb. 20, 2023	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803953/2	30MHz~40GHz	Mar. 08, 2022	Oct. 07, 2022	Mar. 07, 2023	Radiation (03CH12-HY)
Filter	Wainwright	WHKX12-1080-1200-15000-60SS	SN1	1.2GHz High Pass Filter	Mar. 15, 2021	Oct. 07, 2022	Mar. 14, 2023	Radiation (03CH12-HY)
Filter	Wainwright	WHKX12-2700-3000-18000-60ST	SN2	3GHz High Pass Filter	Jul. 11, 2022	Oct. 07, 2022	Jul. 10, 2023	Radiation (03CH12-HY)
Filter	Wainwright	WLKS1200-12SS	SN2	1.2GHz Low Pass Filter	Mar. 15, 2022	Oct. 07, 2022	Mar. 14, 2023	Radiation (03CH12-HY)

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	TECPEL	DTM-303B	TP140349	N/A	Sep. 30, 2022	Oct. 07, 2022	Sep. 29, 2023	Radiation (03CH12-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Oct. 07, 2022	N/A	Radiation (03CH12-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Oct. 07, 2022	N/A	Radiation (03CH12-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Oct. 07, 2022	N/A	Radiation (03CH12-HY)
Software	Audix	E3 6.2009-8-24	RK-000989	N/A	N/A	Oct. 07, 2022	N/A	Radiation (03CH12-HY)
Radio Communication Analyzer	Anritsu	MT8821C	6262025280	LTE FDD/TDD LTE-2CC DLCA/ULCA	Oct. 29, 2021	Oct. 01, 2022~ Oct. 05, 2022	Oct. 28, 2022	Conducted (TH03-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV40	101908	10Hz~40GHz	Sep. 27, 2022	Oct. 01, 2022~ Oct. 05, 2022	Sep. 26, 2023	Conducted (TH03-HY)
Thermal Chamber	ESPEC	SH-641	92013720	-40℃ ~90℃	Sep. 07, 2022	Oct. 01, 2022~ Oct. 05, 2022	Sep. 06, 2023	Conducted (TH03-HY)
Coupler	Warison	20dB 25W SMA Directional Coupler	#B	1-18GHz	Jan. 07, 2022	Oct. 01, 2022~ Oct. 05, 2022	Jan. 06, 2023	Conducted (TH03-HY)

6 Uncertainty of Evaluation

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

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

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.25 dB**

Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power & ERP/EIRP)

LTE Band 4 Maximum Average Power [dBm] (GT - LC = 3.28 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
20	1	0	QPSK	21.76	22.00	21.76	25.28	0.3373
20	1	49		21.51	21.74	21.49		
20	1	99		21.50	21.76	21.46		
20	50	0		20.78	21.01	20.74		
20	50	24		20.48	20.74	20.45		
20	50	50		20.40	20.66	20.39		
20	100	0		20.25	20.33	20.11		
20	1	0	16-QAM	20.52	20.81	20.52	24.19	0.2624
20	1	49		20.30	20.55	20.26		
20	1	99		20.14	20.40	20.14		
20	12	0		20.66	20.91	20.66		
20	12	24		20.29	20.56	20.31		
20	12	50		20.41	20.68	20.44		
20	27	0		19.64	19.94	19.74		
Limit	EIRP < 1W			Result			Pass	

LTE Band 4 Maximum Average Power [dBm] (GT - LC = 3.28 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
15	1	0	QPSK	21.62	21.77	21.60	25.05	0.3199
15	1	37		21.46	21.59	21.53		
15	1	74		21.53	21.59	21.55		
15	36	0		20.77	20.83	20.78		
15	36	20		20.52	20.55	20.49		
15	36	39		20.45	20.55	20.36		
15	75	0		20.28	20.30	20.15		
15	1	0	16-QAM	20.55	20.97	20.56	24.25	0.2661
15	1	37		20.34	20.40	20.26		
15	1	74		20.19	20.38	20.13		
15	12	0		20.67	20.91	20.61		
15	12	20		20.36	20.61	20.33		
15	12	39		20.39	20.47	20.39		
15	27	0		19.70	19.87	19.68		
Limit	EIRP < 1W			Result			Pass	

LTE Band 4 Maximum Average Power [dBm] (GT - LC = 3.28 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
10	1	0	QPSK	21.56	21.71	21.62	24.99	0.3155
10	1	25		21.71	21.68	21.63		
10	1	49		21.58	21.56	21.55		
10	25	0		21.02	21.01	21.09		
10	25	12		20.92	20.91	20.87		
10	25	25		20.94	20.98	20.95		
10	50	0		20.98	20.73	20.99		
10	1	0	16-QAM	20.76	20.80	20.75	24.08	0.2559
10	1	25		20.78	20.71	20.78		
10	1	49		20.55	20.50	20.58		
10	12	0		19.86	19.87	19.81		
10	12	12		19.70	19.67	19.63		
10	12	25		19.70	19.69	19.75		
10	27	0		19.77	19.73	19.72		
Limit	EIRP < 1W			Result			Pass	

LTE Band 4 Maximum Average Power [dBm] (GT - LC = 3.28 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
5	1	0	QPSK	21.67	21.80	21.94	25.22	0.3327
5	1	12		21.63	21.73	21.77		
5	1	24		21.48	21.63	21.66		
5	12	0		20.91	21.11	21.19		
5	12	7		20.79	20.94	21.02		
5	12	13		20.84	21.03	21.10		
5	25	0		20.85	21.04	21.08		
5	1	0	16-QAM	20.64	20.82	20.83	24.14	0.2594
5	1	12		20.64	20.79	20.86		
5	1	24		20.41	20.60	20.67		
5	12	0		19.70	19.90	19.94		
5	12	7		19.61	19.73	19.80		
5	12	13		19.63	19.78	19.87		
5	25	0		19.64	19.79	19.88		
Limit	EIRP < 1W			Result			Pass	

LTE Band 4 Maximum Average Power [dBm] (GT - LC = 3.28 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
3	1	0	QPSK	21.50	21.64	21.75	25.03	0.3184
3	1	8		21.44	21.56	21.66		
3	1	14		21.33	21.43	21.52		
3	8	0		20.77	20.94	21.00		
3	8	4		20.61	20.81	20.88		
3	8	7		20.65	20.84	21.00		
3	15	0		20.75	20.93	20.98		
3	1	0	16-QAM	20.53	20.66	20.65	24.02	0.2523
3	1	8		20.53	20.67	20.74		
3	1	14		20.31	20.42	20.55		
3	8	0		19.57	19.76	19.81		
3	8	4		19.48	19.57	19.64		
3	8	7		19.44	19.63	19.75		
3	15	0		19.51	19.64	19.71		
Limit	EIRP < 1W			Result			Pass	

LTE Band 4 Maximum Average Power [dBm] (GT - LC = 3.28 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP (W)
1.4	1	0	QPSK	21.50	21.70	21.81	25.09	0.3228
1.4	1	3		21.46	21.53	21.65		
1.4	1	5		21.28	21.51	21.51		
1.4	3	0		21.49	21.70	21.77		
1.4	3	1		21.47	21.63	21.65		
1.4	3	3		21.34	21.50	21.56		
1.4	6	0		20.75	20.89	20.91		
1.4	1	0	16-QAM	20.54	20.68	20.67	23.99	0.2506
1.4	1	3		20.49	20.67	20.70		
1.4	1	5		20.21	20.41	20.54		
1.4	3	0		20.45	20.66	20.64		
1.4	3	1		20.50	20.65	20.71		
1.4	3	3		20.27	20.45	20.47		
1.4	6	0		19.45	19.66	19.77		
Limit	EIRP < 1W			Result			Pass	

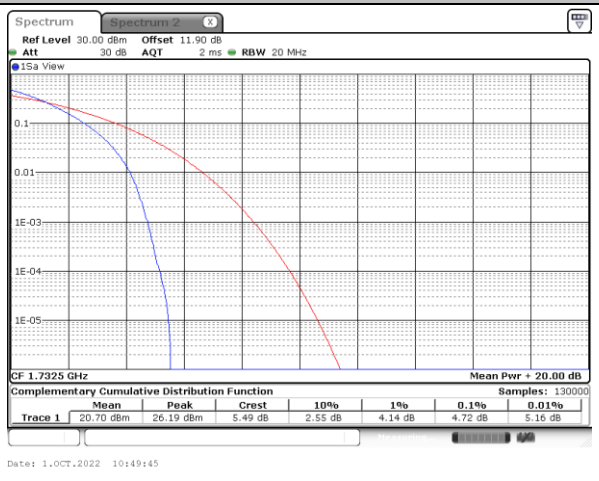
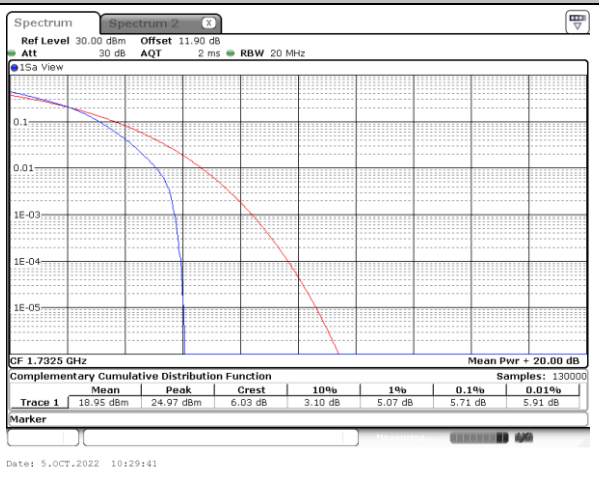
LTE Band 13 Maximum Average Power [dBm] (GT - LC = 4.71 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
10	1	0	QPSK	-	22.13	-	24.69	0.2944
10	1	25			22.05			
10	1	49			21.90			
10	25	0			21.18			
10	25	12			21.20			
10	25	25			21.31			
10	50	0			21.01			
10	1	0	16-QAM		21.10		24.45	0.2786
10	1	25			21.89			
10	1	49			21.10			
10	25	0			19.94			
10	25	12			20.24			
10	25	25			20.23			
10	50	0			20.11			
Limit	ERP < 3W			Result			Pass	

LTE Band 13 Maximum Average Power [dBm] (GT - LC = 4.71 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP (W)
5	1	0	QPSK	22.04	22.06	22.11	24.67	0.2931
5	1	12		22.04	22.01	22.04		
5	1	24		21.88	21.80	21.88		
5	12	0		21.09	21.15	21.16		
5	12	7		21.14	21.19	21.13		
5	12	13		21.26	21.30	21.28		
5	25	0		20.91	20.97	20.96		
5	1	0	16-QAM	21.04	21.08	21.09	24.41	0.2761
5	1	12		21.81	21.83	21.85		
5	1	24		21.00	21.08	21.09		
5	12	0		19.87	19.92	19.90		
5	12	7		20.14	20.14	20.23		
5	12	13		20.13	20.14	20.21		
5	25	0		20.01	20.08	20.08		
Limit	ERP < 3W			Result			Pass	

LTE Band 4

Peak-to-Average Ratio

Mode	LTE Band 4 / 20MHz				
Mod.	QPSK	16QAM	64QAM	256QAM	Limit: 13dB
RB Size	Full RB	27 RB 0	Full RB	Full RB	Result
Middle CH	4.72	5.71	-	-	PASS

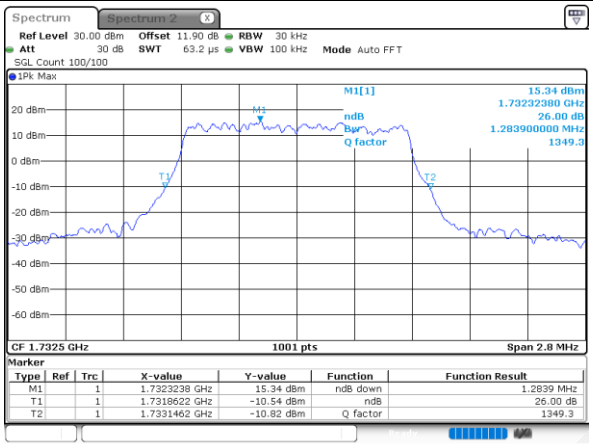
LTE Band 4 / 20MHz / QPSK	LTE Band 4 / 20MHz / 16QAM
Middle Channel / Full RB	Middle Channel / 27 RB 0
	

26dB Bandwidth

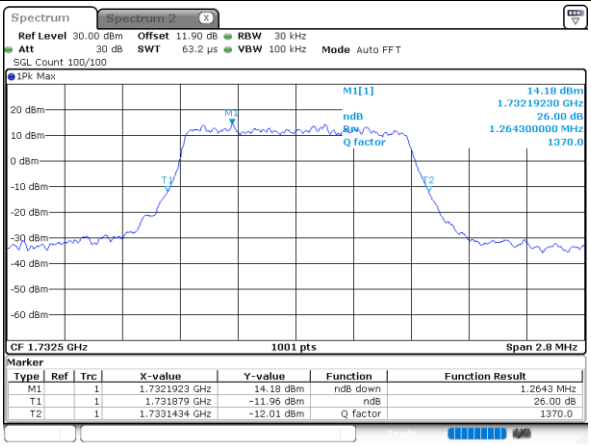
Mode	LTE Band 4 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	1.28	1.26	3.02	3.05	4.92	4.87	9.99	5.51	14.24	5.66	18.94	5.91

LTE Band 4

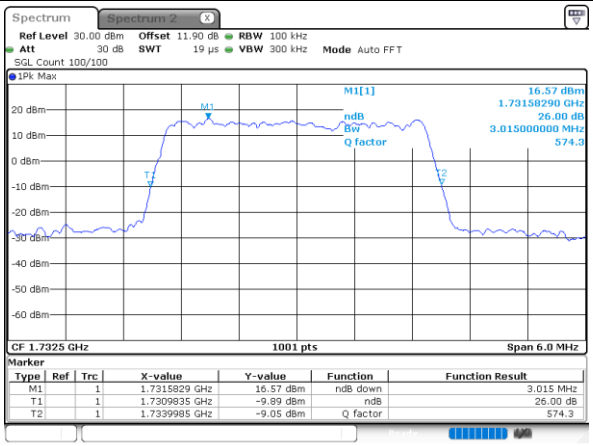
Middle Channel / 1.4MHz / QPSK



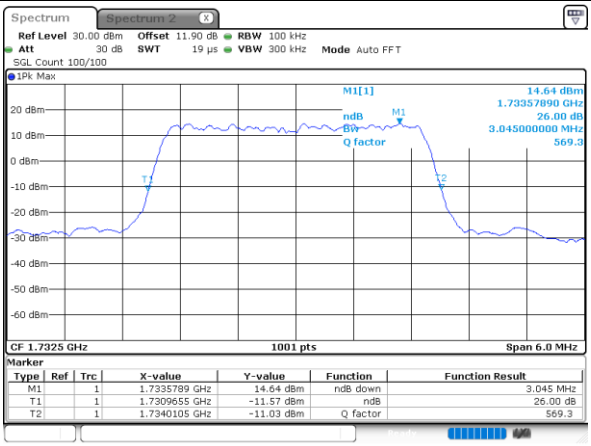
Middle Channel / 1.4MHz / 16QAM



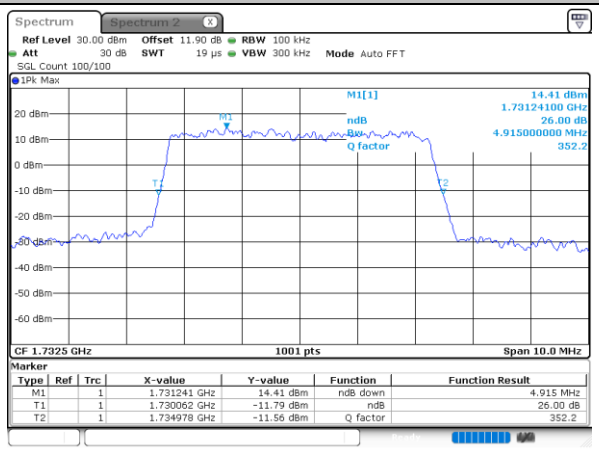
Middle Channel / 3MHz / QPSK



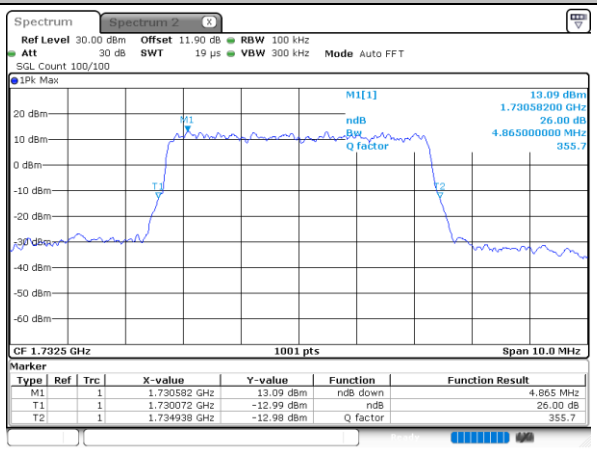
Middle Channel / 3MHz / 16QAM



Middle Channel / 5MHz / QPSK

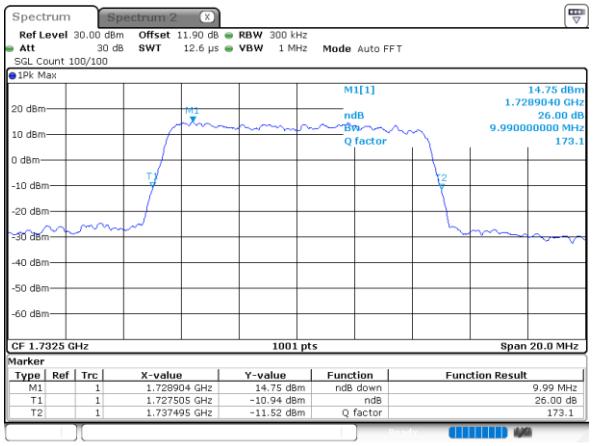


Middle Channel / 5MHz / 16QAM

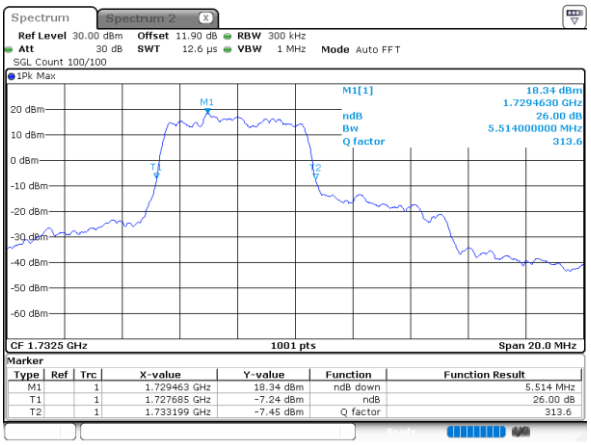


LTE Band 4

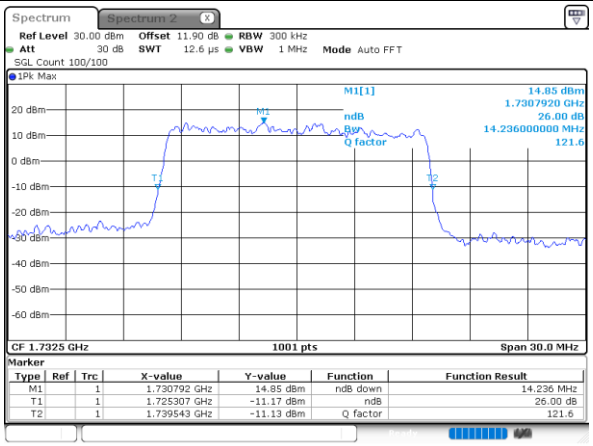
Middle Channel / 10MHz / QPSK



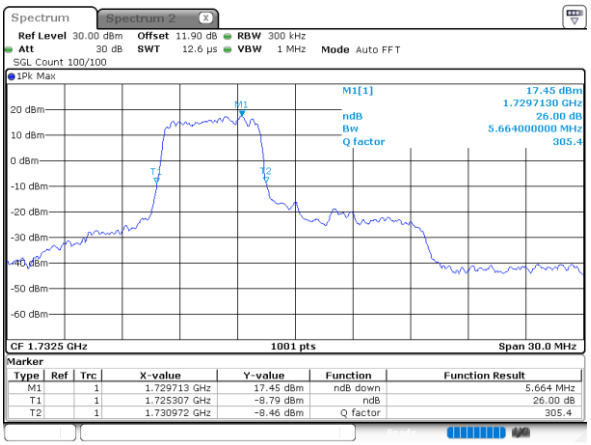
Middle Channel / 10MHz / 16QAM



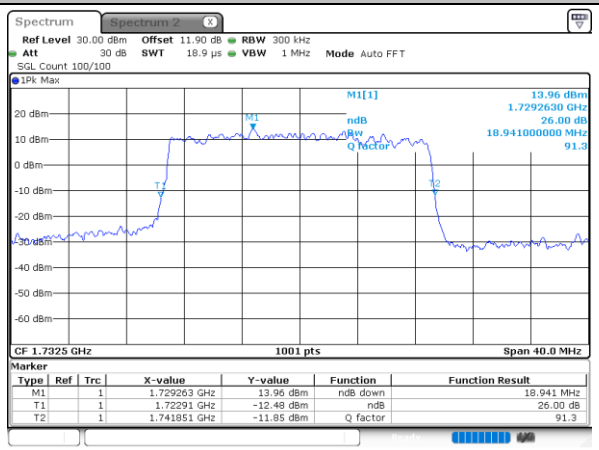
Middle Channel / 15MHz / QPSK



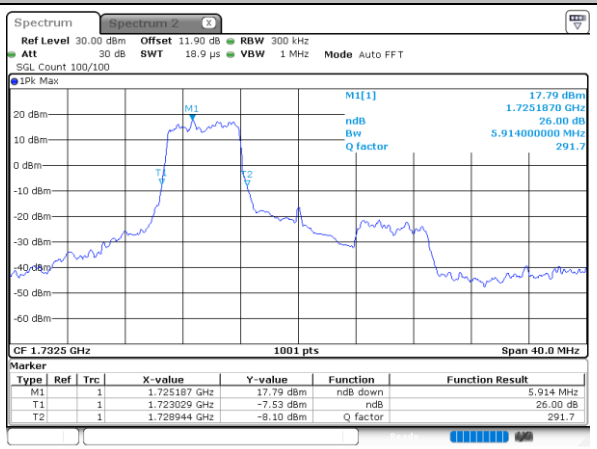
Middle Channel / 15MHz / 16QAM



Middle Channel / 20MHz / QPSK



Middle Channel / 20MHz / 16QAM

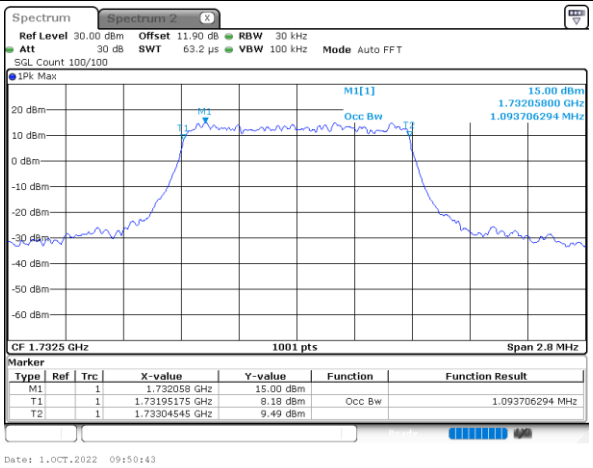


Occupied Bandwidth

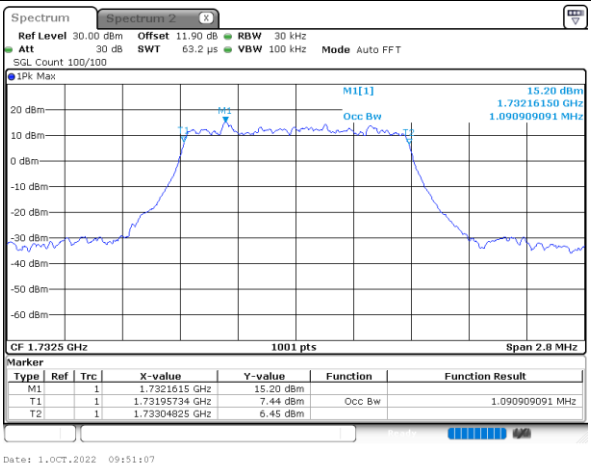
Mode	LTE Band 4 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	1.09	1.09	2.71	2.71	4.50	4.49	8.95	5.03	13.40	5.00	17.78	5.19

LTE Band 4

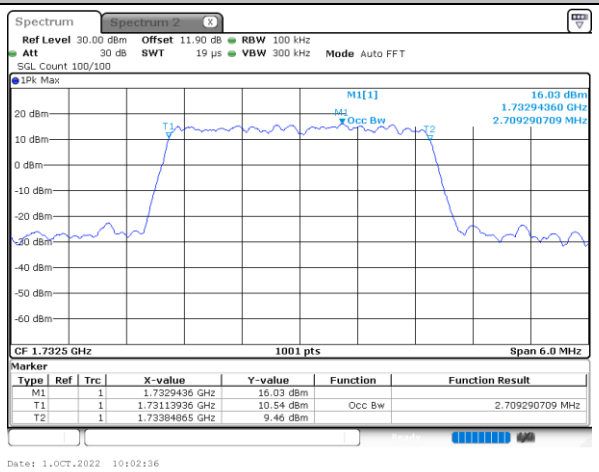
Middle Channel / 1.4MHz / QPSK



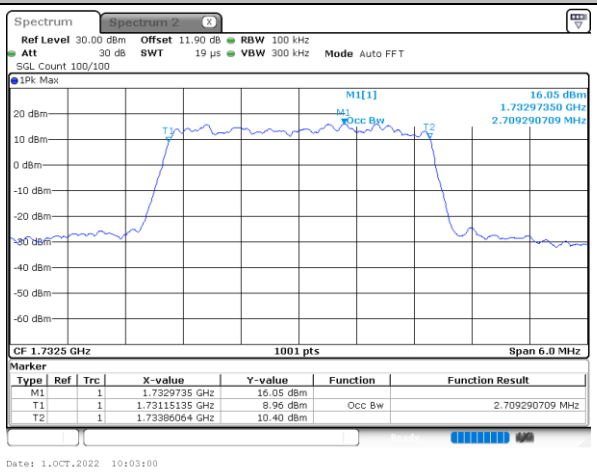
Middle Channel / 1.4MHz / 16QAM



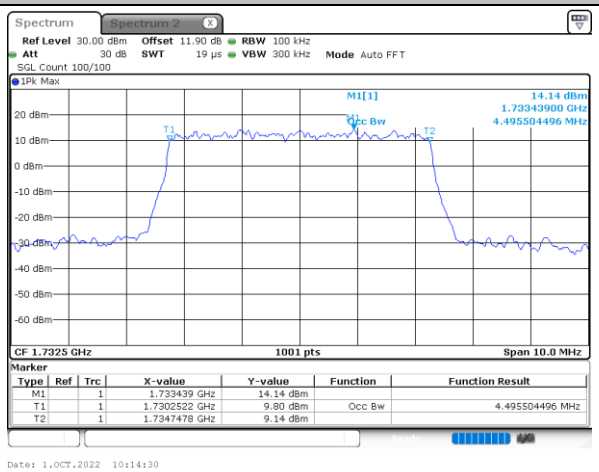
Middle Channel / 3MHz / QPSK



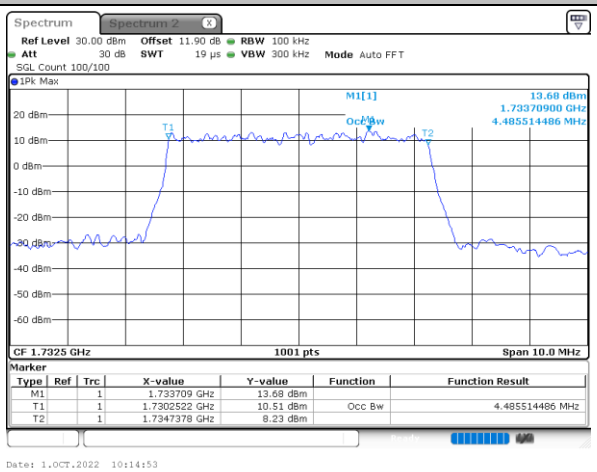
Middle Channel / 3MHz / 16QAM



Middle Channel / 5MHz / QPSK

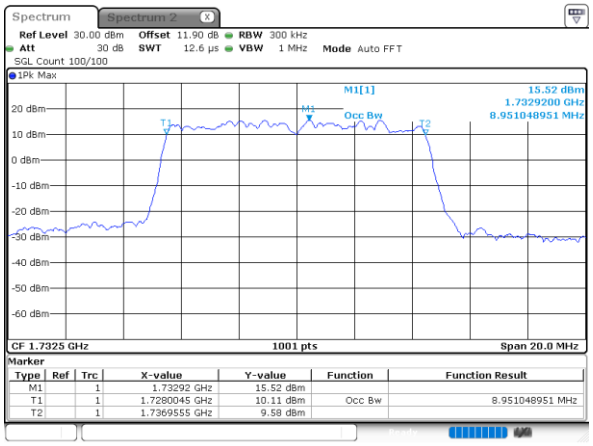


Middle Channel / 5MHz / 16QAM

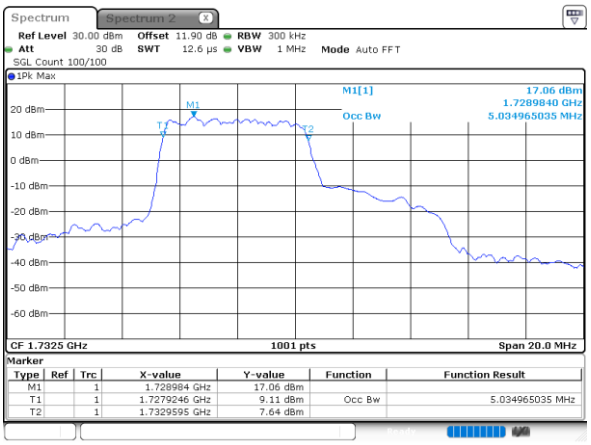


LTE Band 4

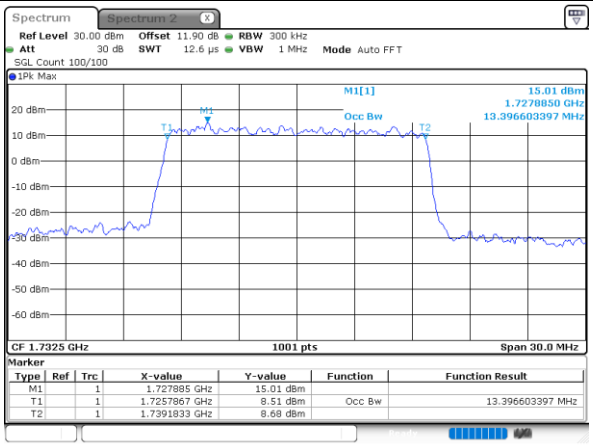
Middle Channel / 10MHz / QPSK



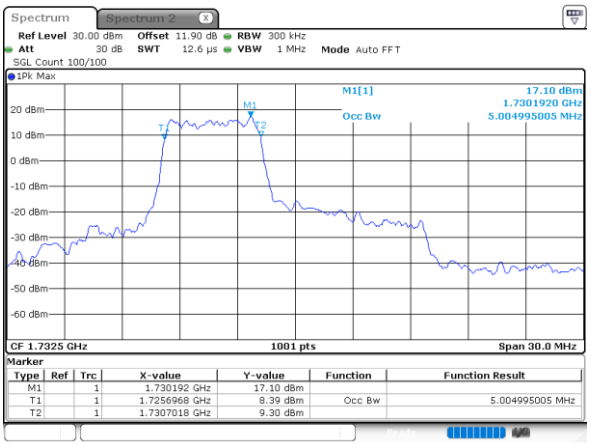
Middle Channel / 10MHz / 16QAM



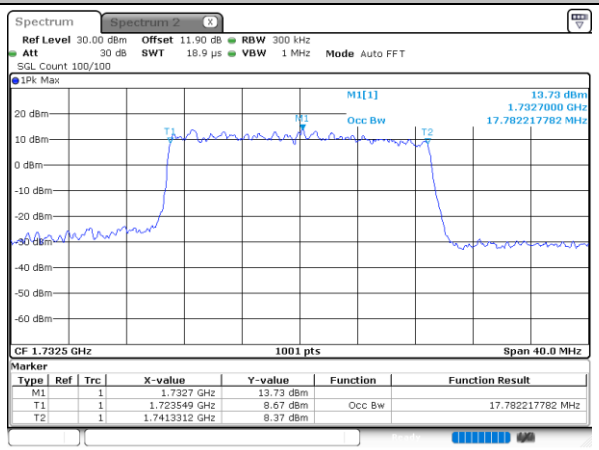
Middle Channel / 15MHz / QPSK



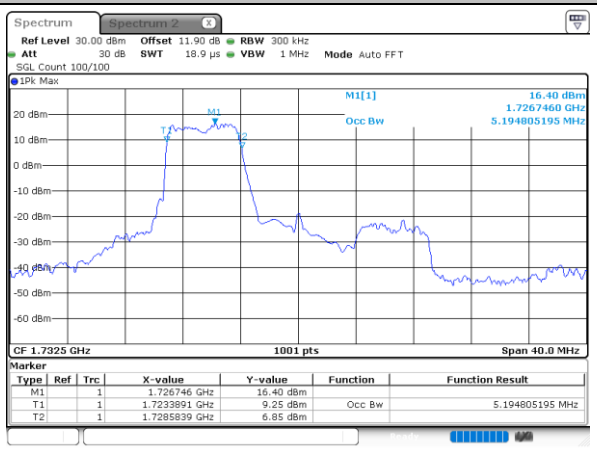
Middle Channel / 15MHz / 16QAM



Middle Channel / 20MHz / QPSK



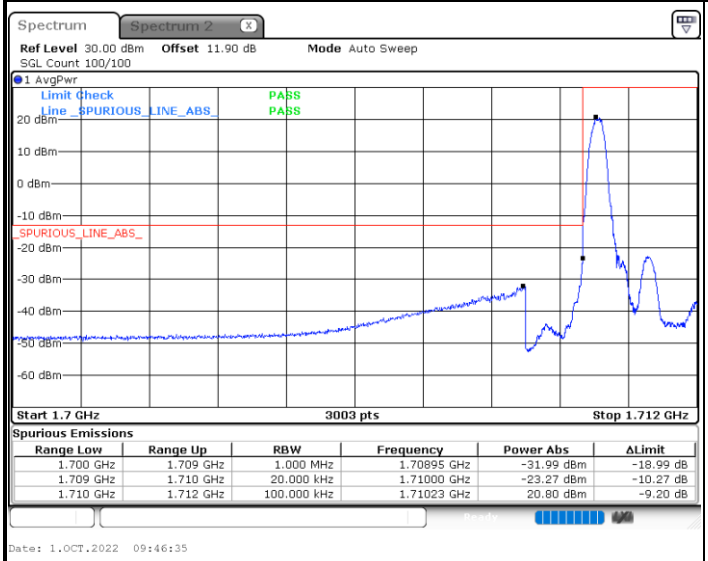
Middle Channel / 20MHz / 16QAM



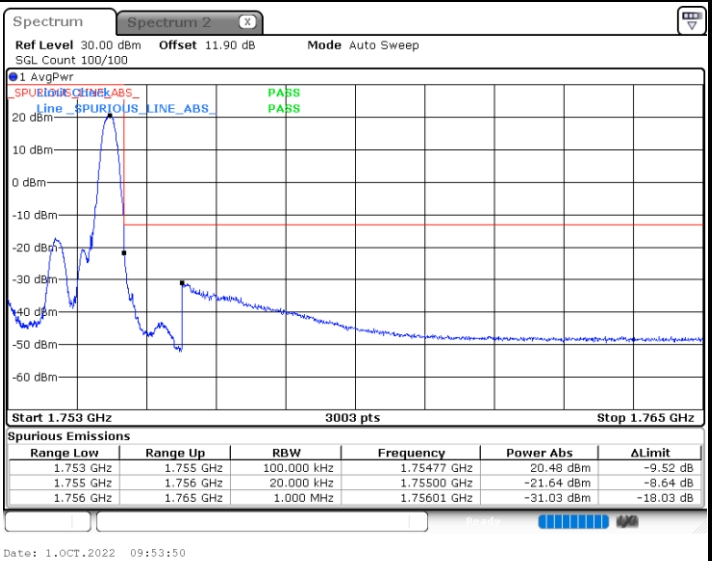
Conducted Band Edge

LTE Band 4 / 1.4MHz / QPSK

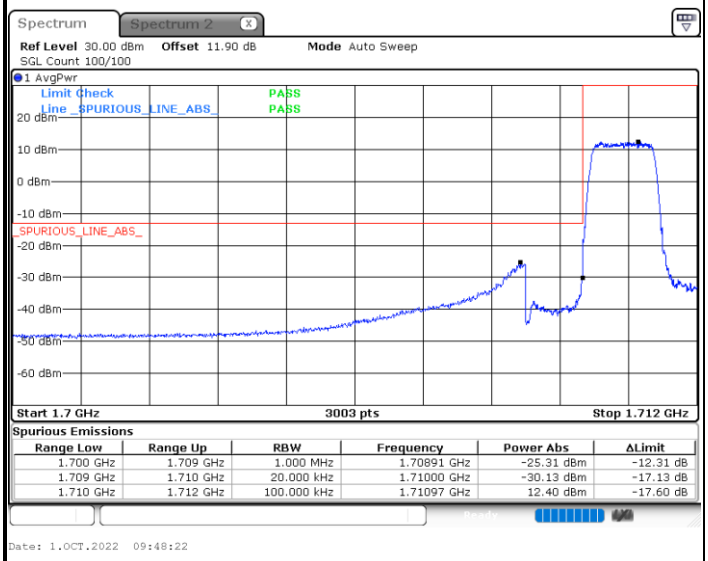
Lowest Band Edge / 1RB



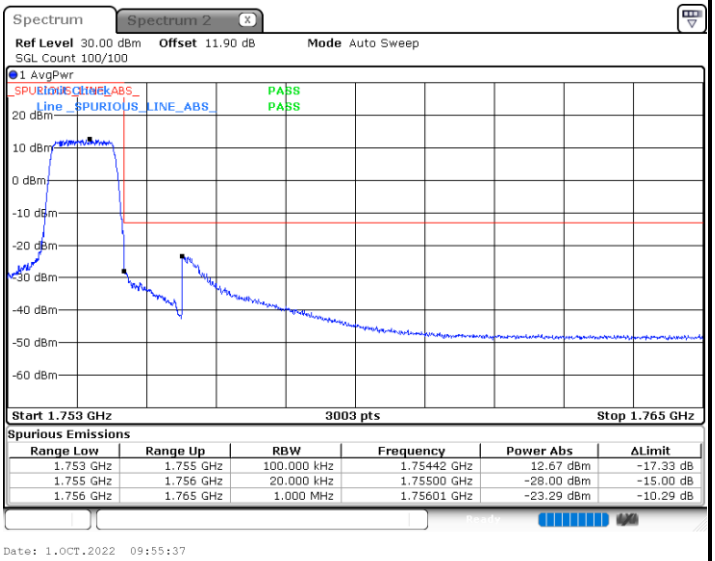
Highest Band Edge / 1RB



Lowest Band Edge / Full RB

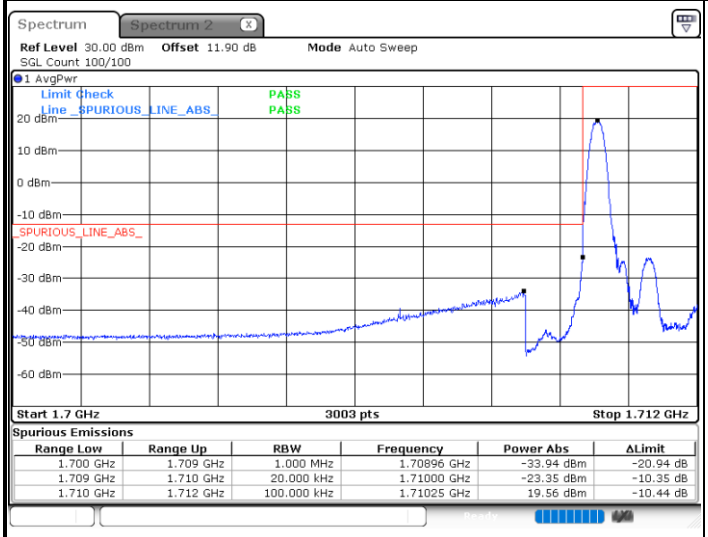


Highest Band Edge / Full RB

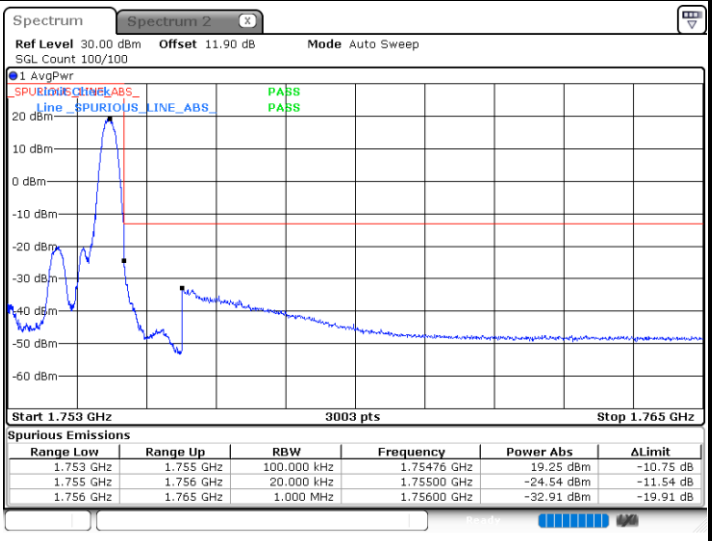


LTE Band 4 / 1.4MHz / 16QAM

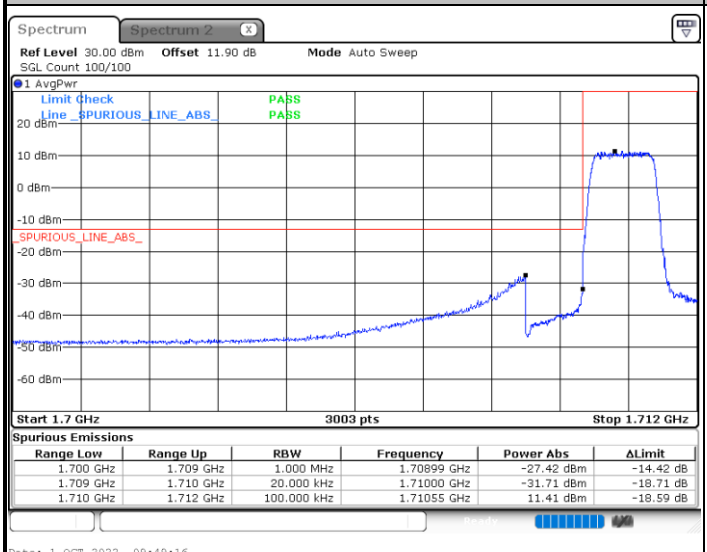
Lowest Band Edge / 1 RB



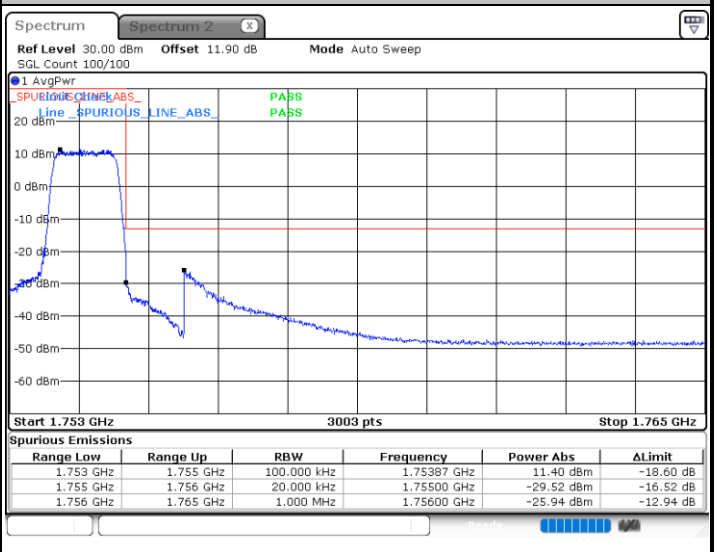
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB

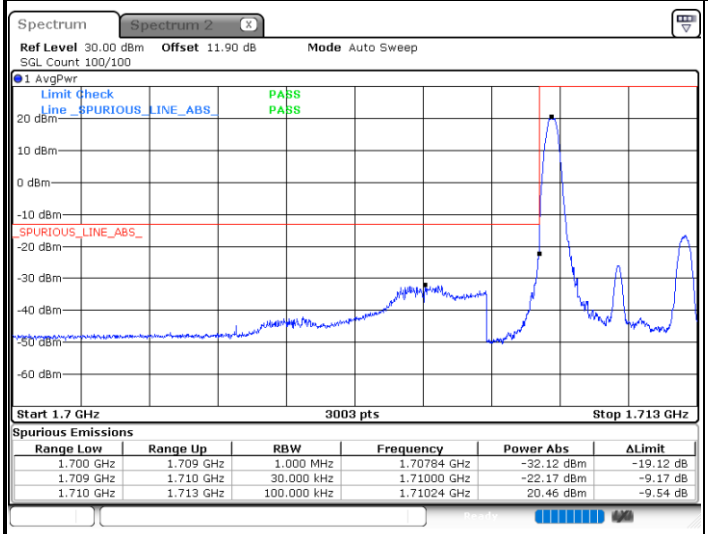


Highest Band Edge / Full RB



LTE Band 4 / 3MHz / QPSK

Lowest Band Edge / 1RB

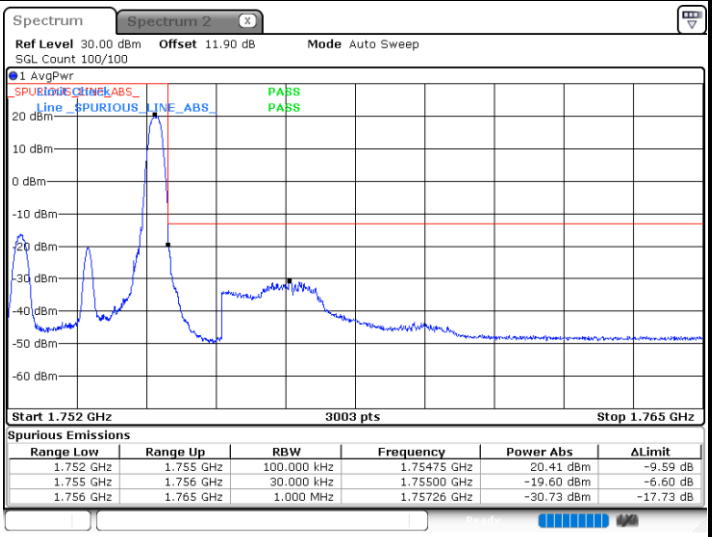


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70784 GHz	-32.12 dBm	-19.12 dB
1.709 GHz	1.710 GHz	30.000 kHz	1.71000 GHz	-22.17 dBm	-9.17 dB
1.710 GHz	1.713 GHz	100.000 kHz	1.71024 GHz	20.46 dBm	-9.54 dB

Date: 1.OCT.2022 09:58:28

Highest Band Edge / 1 RB

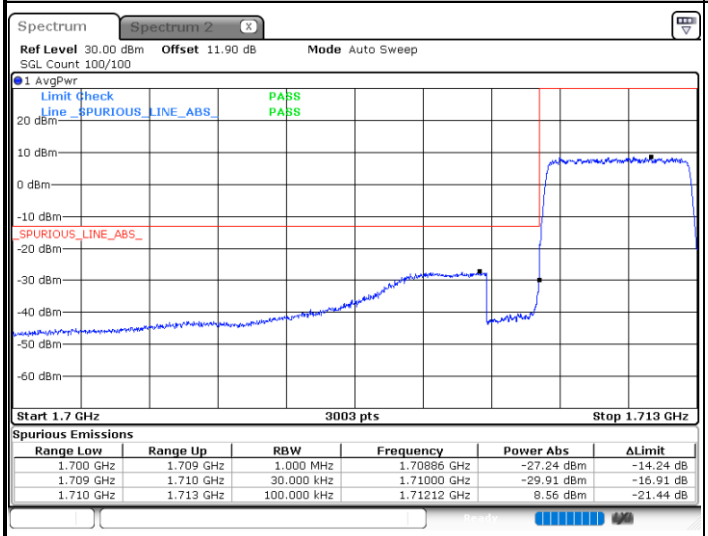


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.752 GHz	1.755 GHz	100.000 kHz	1.75475 GHz	20.41 dBm	-9.59 dB
1.755 GHz	1.756 GHz	30.000 kHz	1.75500 GHz	-19.60 dBm	-6.60 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75726 GHz	-30.73 dBm	-17.73 dB

Date: 1.OCT.2022 10:05:43

Lowest Band Edge / Full RB

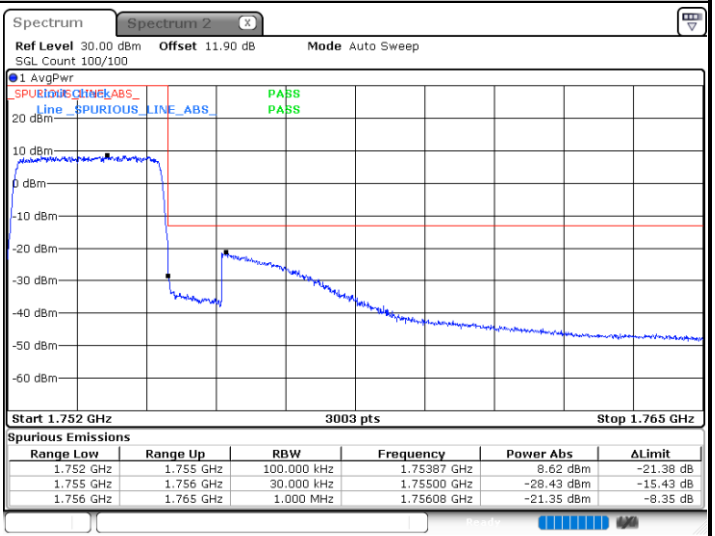


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70886 GHz	-27.24 dBm	-14.24 dB
1.709 GHz	1.710 GHz	30.000 kHz	1.71000 GHz	-29.91 dBm	-16.91 dB
1.710 GHz	1.713 GHz	100.000 kHz	1.71212 GHz	8.56 dBm	-21.44 dB

Date: 1.OCT.2022 10:00:15

Highest Band Edge / Full RB



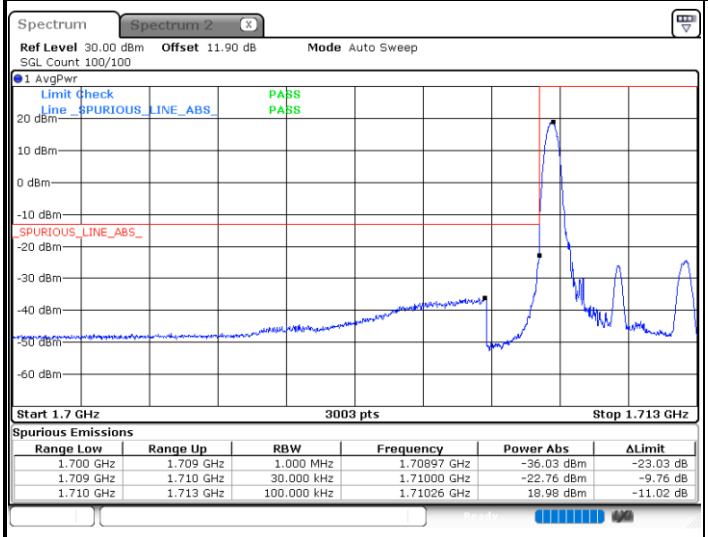
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.752 GHz	1.755 GHz	100.000 kHz	1.75387 GHz	8.62 dBm	-21.38 dB
1.755 GHz	1.756 GHz	30.000 kHz	1.75500 GHz	-28.43 dBm	-15.43 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75608 GHz	-21.35 dBm	-8.35 dB

Date: 1.OCT.2022 10:07:30

LTE Band 4 / 3MHz / 16QAM

Lowest Band Edge / 1 RB

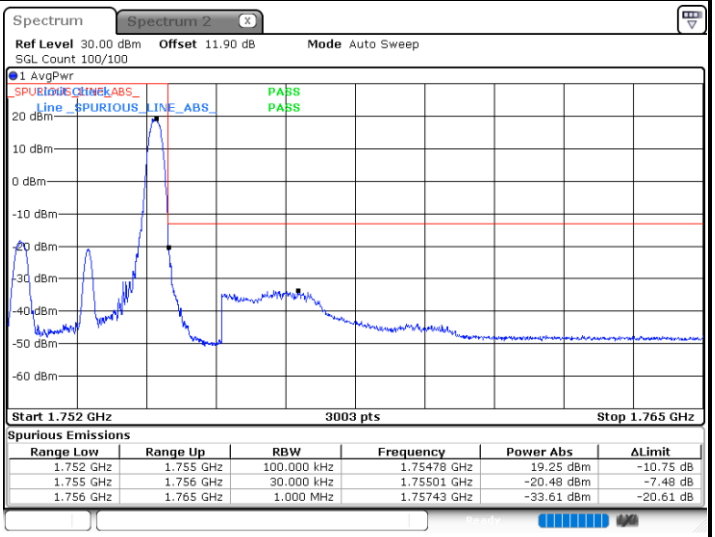


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70897 GHz	-36.03 dBm	-23.03 dB
1.709 GHz	1.710 GHz	30.000 kHz	1.71000 GHz	-22.76 dBm	-9.76 dB
1.710 GHz	1.713 GHz	100.000 kHz	1.71026 GHz	18.98 dBm	-11.02 dB

Date: 1.OCT.2022 09:59:22

Highest Band Edge /1 RB

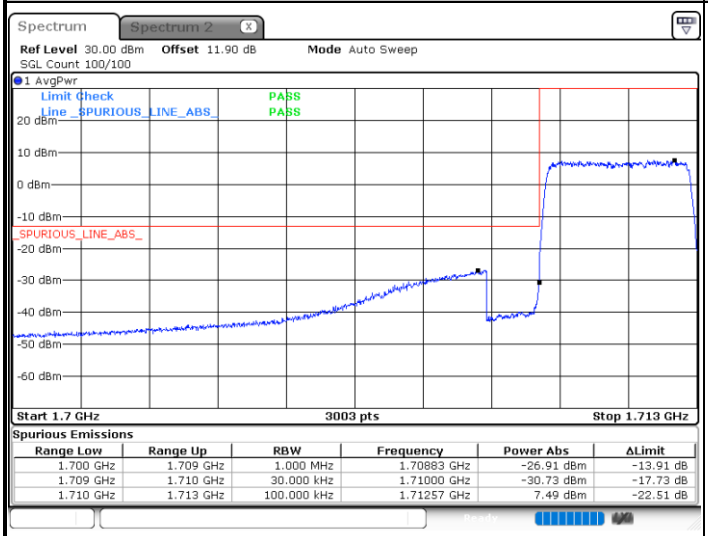


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.752 GHz	1.755 GHz	100.000 kHz	1.75478 GHz	19.25 dBm	-10.75 dB
1.755 GHz	1.756 GHz	30.000 kHz	1.75501 GHz	-20.48 dBm	-7.48 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75743 GHz	-33.61 dBm	-20.61 dB

Date: 1.OCT.2022 10:06:36

Lowest Band Edge / Full RB

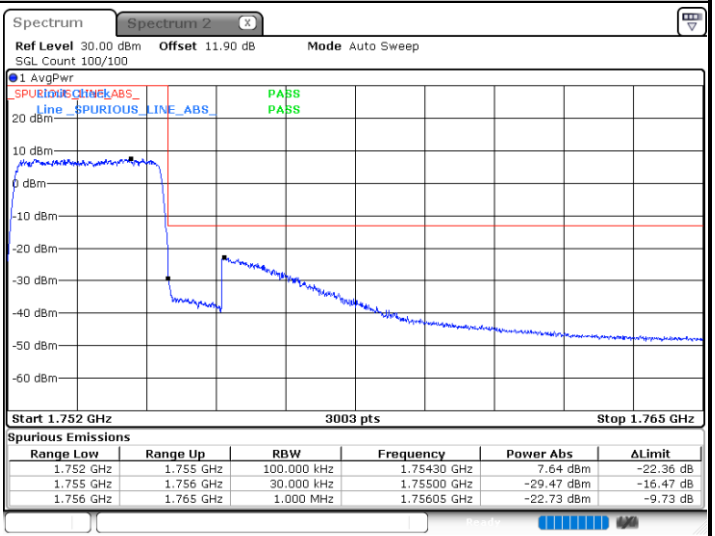


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70883 GHz	-26.91 dBm	-13.91 dB
1.709 GHz	1.710 GHz	30.000 kHz	1.71000 GHz	-30.73 dBm	-17.73 dB
1.710 GHz	1.713 GHz	100.000 kHz	1.71257 GHz	7.49 dBm	-22.51 dB

Date: 1.OCT.2022 10:01:09

Highest Band Edge / Full RB



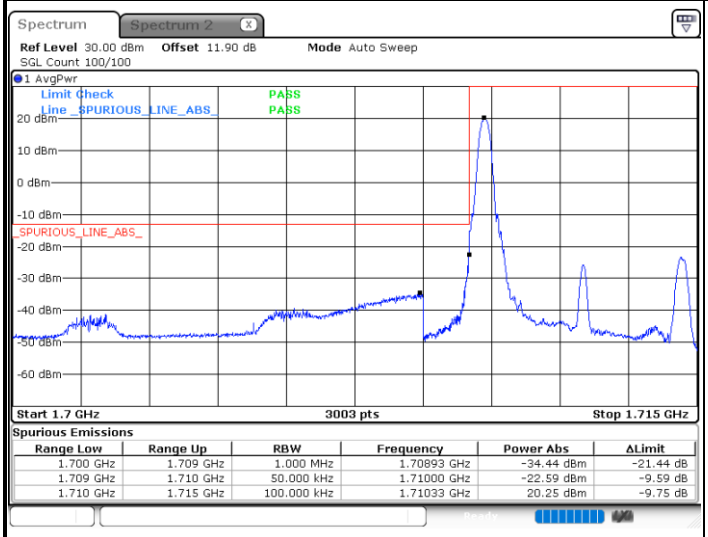
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.752 GHz	1.755 GHz	100.000 kHz	1.75430 GHz	7.64 dBm	-22.36 dB
1.755 GHz	1.756 GHz	30.000 kHz	1.75500 GHz	-29.47 dBm	-16.47 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75605 GHz	-22.73 dBm	-9.73 dB

Date: 1.OCT.2022 10:08:23

LTE Band 4 / 5MHz / QPSK

Lowest Band Edge / 1 RB

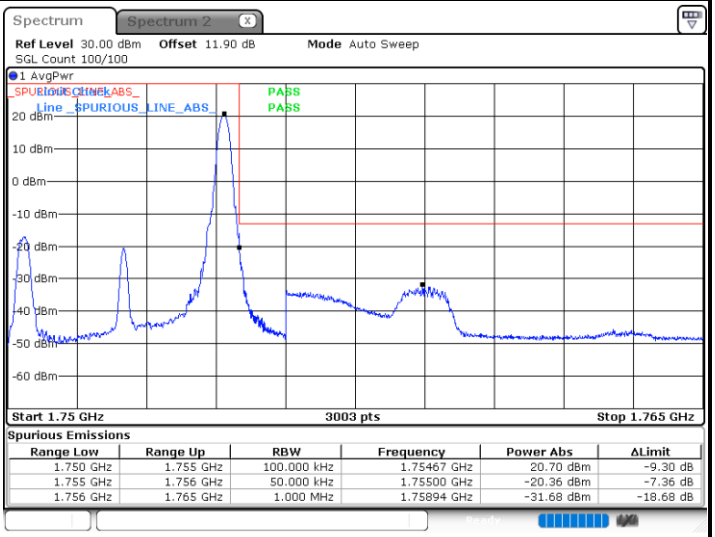


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70893 GHz	-34.44 dBm	-21.44 dB
1.709 GHz	1.710 GHz	50.000 kHz	1.71000 GHz	-22.59 dBm	-9.59 dB
1.710 GHz	1.715 GHz	100.000 kHz	1.71033 GHz	20.25 dBm	-9.75 dB

Date: 1.OCT.2022 10:10:21

Highest Band Edge / 1 RB

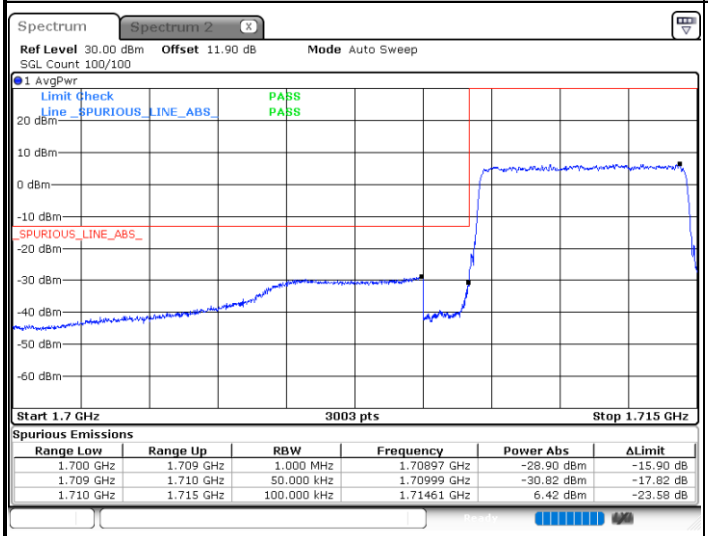


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.750 GHz	1.755 GHz	100.000 kHz	1.75467 GHz	20.70 dBm	-9.30 dB
1.755 GHz	1.756 GHz	50.000 kHz	1.75500 GHz	-20.36 dBm	-7.36 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75894 GHz	-31.68 dBm	-18.68 dB

Date: 1.OCT.2022 10:17:37

Lowest Band Edge / Full RB

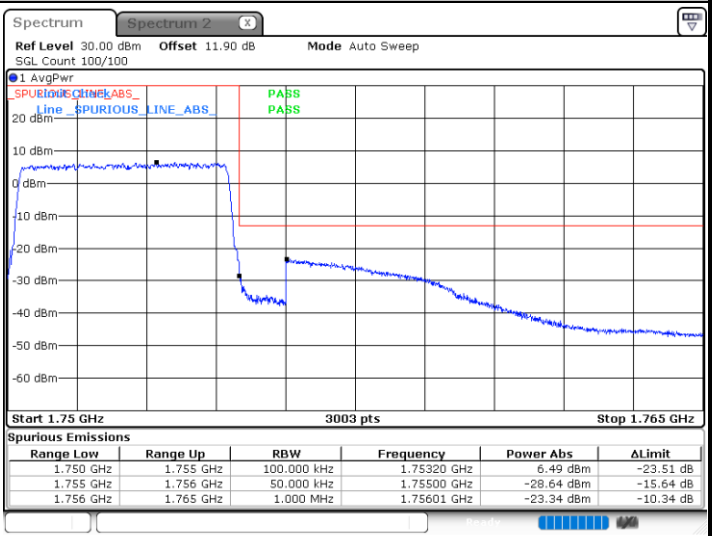


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70897 GHz	-28.90 dBm	-15.90 dB
1.709 GHz	1.710 GHz	50.000 kHz	1.70999 GHz	-30.82 dBm	-17.82 dB
1.710 GHz	1.715 GHz	100.000 kHz	1.71461 GHz	6.42 dBm	-23.58 dB

Date: 1.OCT.2022 10:12:09

Highest Band Edge / Full RB



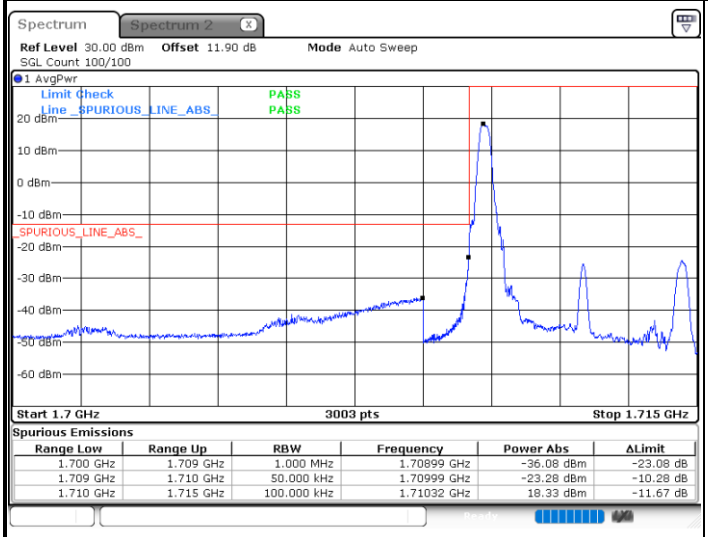
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.750 GHz	1.755 GHz	100.000 kHz	1.75320 GHz	6.49 dBm	-23.51 dB
1.755 GHz	1.756 GHz	50.000 kHz	1.75500 GHz	-28.64 dBm	-15.64 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75601 GHz	-23.34 dBm	-10.34 dB

Date: 1.OCT.2022 10:19:25

LTE Band 4 / 5MHz / 16QAM

Lowest Band Edge / 1RB

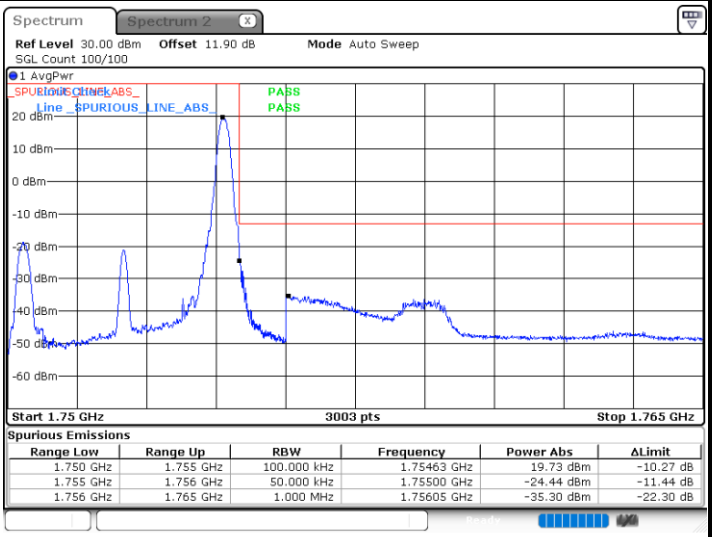


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70899 GHz	-36.08 dBm	-23.08 dB
1.709 GHz	1.710 GHz	50.000 kHz	1.70999 GHz	-23.28 dBm	-10.28 dB
1.710 GHz	1.715 GHz	100.000 kHz	1.71032 GHz	18.33 dBm	-11.67 dB

Date: 1.OCT.2022 10:11:15

Highest Band Edge / 1 RB

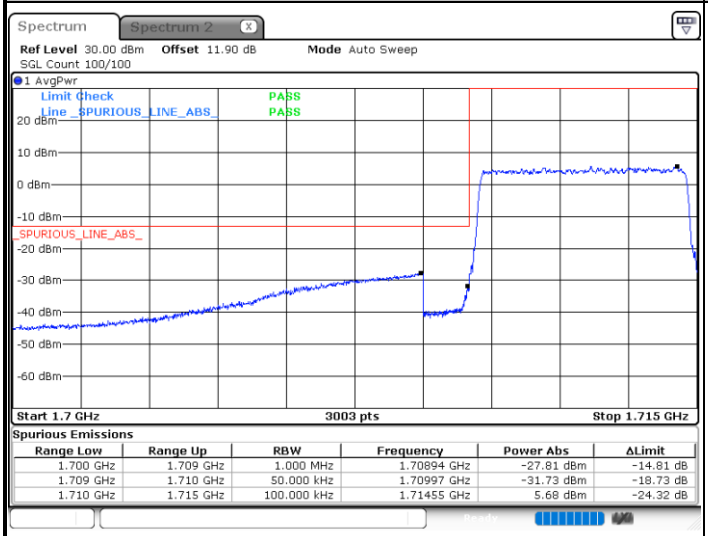


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.750 GHz	1.755 GHz	100.000 kHz	1.75463 GHz	19.73 dBm	-10.27 dB
1.755 GHz	1.756 GHz	50.000 kHz	1.75500 GHz	-24.44 dBm	-11.44 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75605 GHz	-35.30 dBm	-22.30 dB

Date: 1.OCT.2022 10:18:31

Lowest Band Edge / Full RB

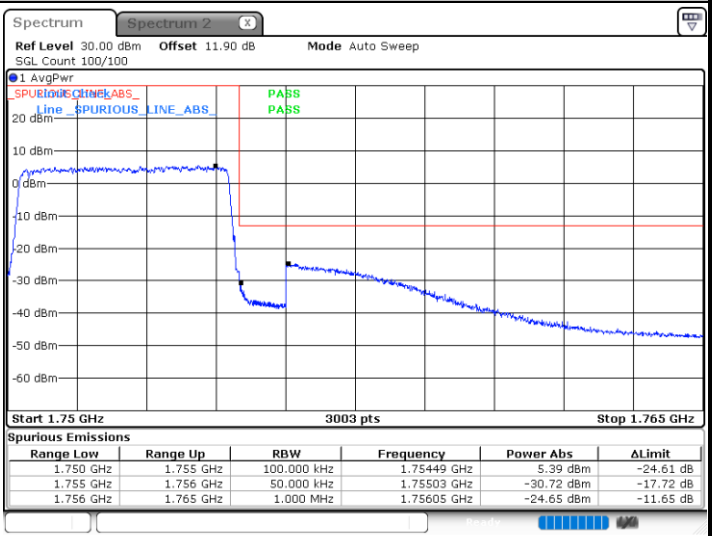


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70894 GHz	-27.81 dBm	-14.81 dB
1.709 GHz	1.710 GHz	50.000 kHz	1.70997 GHz	-31.73 dBm	-18.73 dB
1.710 GHz	1.715 GHz	100.000 kHz	1.71455 GHz	5.68 dBm	-24.32 dB

Date: 1.OCT.2022 10:13:02

Highest Band Edge / Full RB



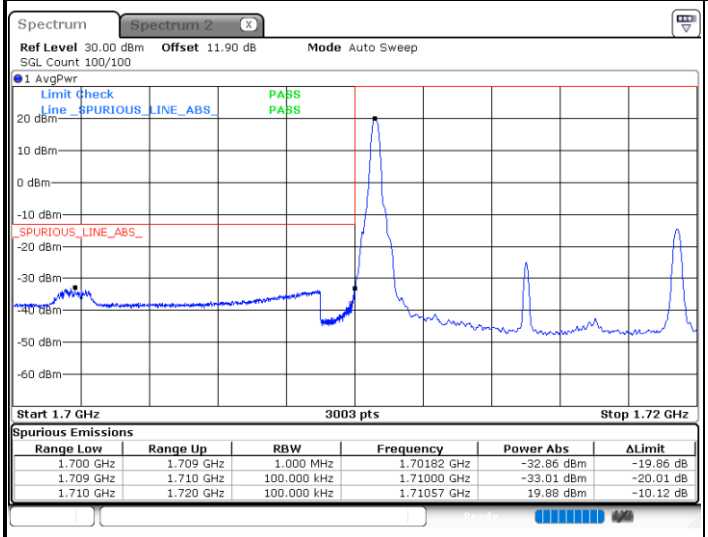
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.750 GHz	1.755 GHz	100.000 kHz	1.75449 GHz	5.39 dBm	-24.61 dB
1.755 GHz	1.756 GHz	50.000 kHz	1.75503 GHz	-30.72 dBm	-17.72 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75605 GHz	-24.65 dBm	-11.65 dB

Date: 1.OCT.2022 10:20:18

LTE Band 4 / 10MHz / QPSK

Lowest Band Edge / 1 RB

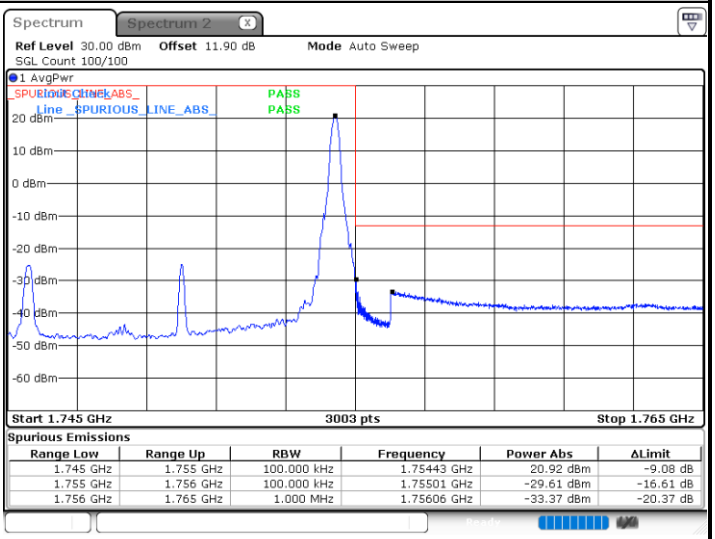


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70182 GHz	-32.86 dBm	-19.86 dB
1.709 GHz	1.710 GHz	100.000 kHz	1.71000 GHz	-33.01 dBm	-20.01 dB
1.710 GHz	1.720 GHz	100.000 kHz	1.71057 GHz	19.88 dBm	-10.12 dB

Date: 5.OCT.2022 10:11:35

Highest Band Edge / 1 RB

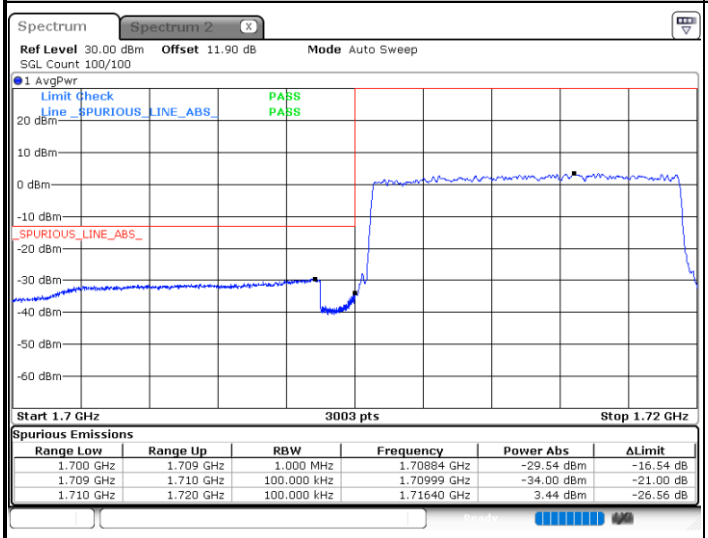


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.745 GHz	1.755 GHz	100.000 kHz	1.75443 GHz	20.92 dBm	-9.08 dB
1.755 GHz	1.756 GHz	100.000 kHz	1.75501 GHz	-29.61 dBm	-16.61 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75606 GHz	-33.37 dBm	-20.37 dB

Date: 5.OCT.2022 10:17:07

Lowest Band Edge / Full RB

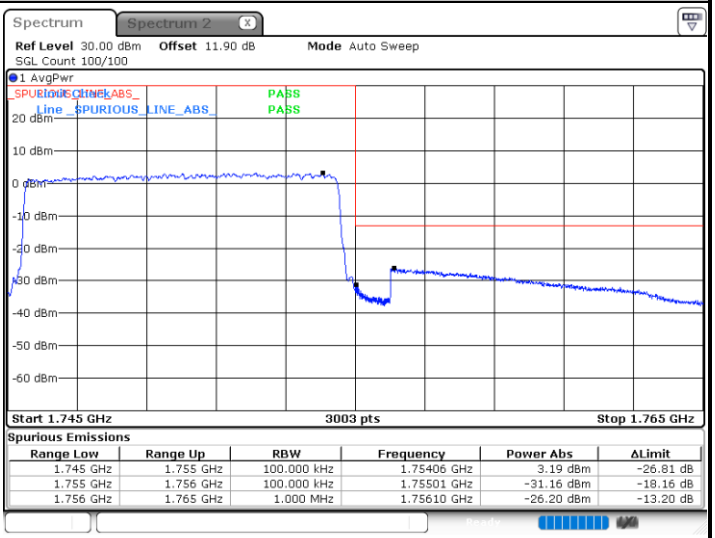


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70884 GHz	-29.54 dBm	-16.54 dB
1.709 GHz	1.710 GHz	100.000 kHz	1.70999 GHz	-34.00 dBm	-21.00 dB
1.710 GHz	1.720 GHz	100.000 kHz	1.71640 GHz	3.44 dBm	-26.56 dB

Date: 5.OCT.2022 10:13:22

Highest Band Edge / Full RB



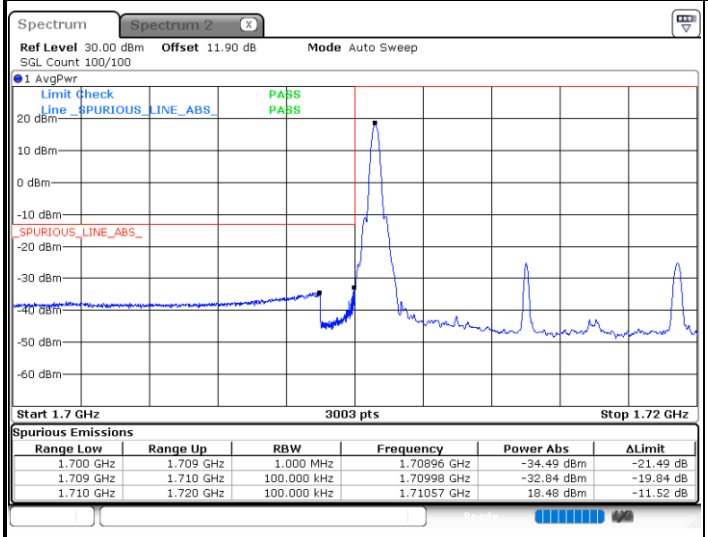
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.745 GHz	1.755 GHz	100.000 kHz	1.75406 GHz	3.19 dBm	-26.81 dB
1.755 GHz	1.756 GHz	100.000 kHz	1.75501 GHz	-31.16 dBm	-18.16 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75610 GHz	-26.20 dBm	-13.20 dB

Date: 5.OCT.2022 10:18:54

LTE Band 4 / 10MHz / 16QAM

Lowest Band Edge / 1 RB

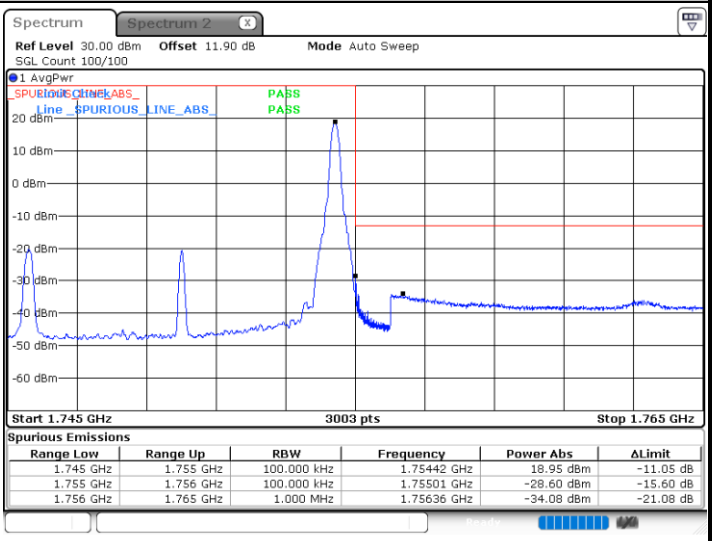


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70896 GHz	-34.49 dBm	-21.49 dB
1.709 GHz	1.710 GHz	100.000 kHz	1.70998 GHz	-32.84 dBm	-19.84 dB
1.710 GHz	1.720 GHz	100.000 kHz	1.71057 GHz	18.48 dBm	-11.52 dB

Date: 5.OCT.2022 10:12:28

Highest Band Edge / 1 RB

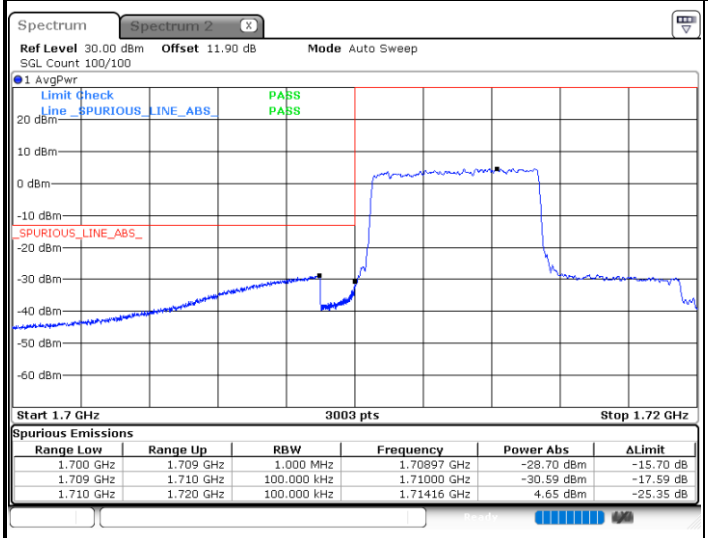


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.745 GHz	1.755 GHz	100.000 kHz	1.75442 GHz	18.95 dBm	-11.05 dB
1.755 GHz	1.756 GHz	100.000 kHz	1.75501 GHz	-28.60 dBm	-15.60 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75636 GHz	-34.08 dBm	-21.08 dB

Date: 5.OCT.2022 10:18:01

Lowest Band Edge / 27 RB 0

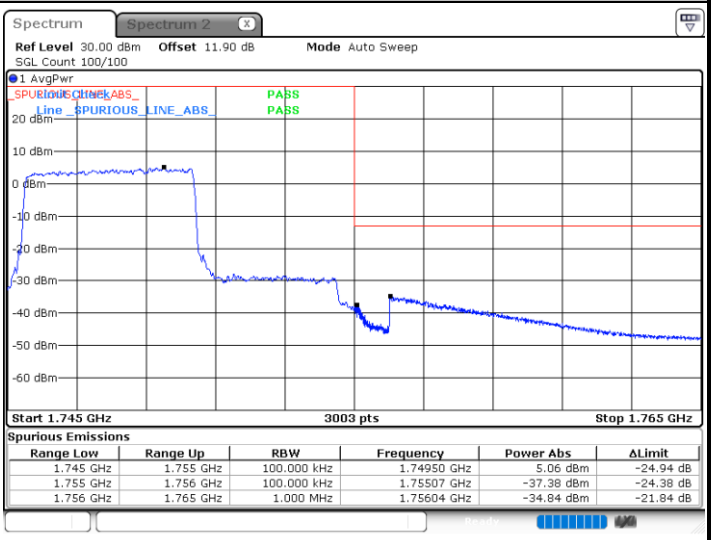


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70897 GHz	-28.70 dBm	-15.70 dB
1.709 GHz	1.710 GHz	100.000 kHz	1.71000 GHz	-30.59 dBm	-17.59 dB
1.710 GHz	1.720 GHz	100.000 kHz	1.71416 GHz	4.65 dBm	-25.35 dB

Date: 5.OCT.2022 10:22:27

Highest Band Edge / 27 RB 0



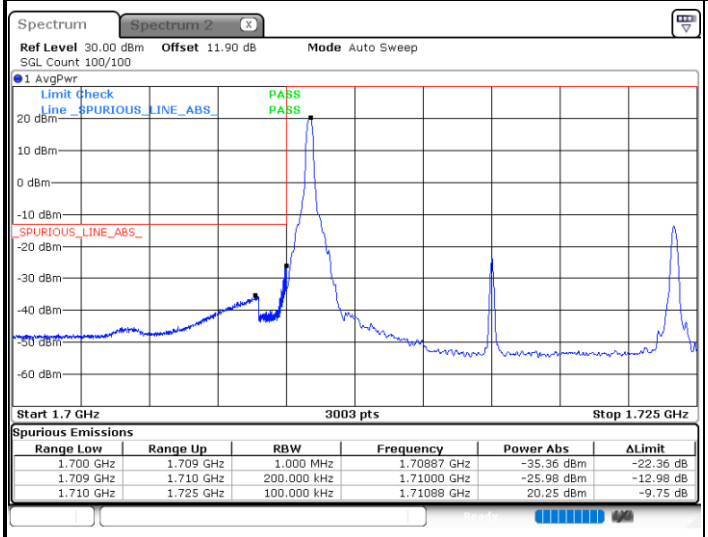
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.745 GHz	1.755 GHz	100.000 kHz	1.74950 GHz	5.06 dBm	-24.94 dB
1.755 GHz	1.756 GHz	100.000 kHz	1.75507 GHz	-37.38 dBm	-24.38 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75604 GHz	-34.84 dBm	-21.84 dB

Date: 5.OCT.2022 10:23:20

LTE Band 4 / 15MHz / QPSK

Lowest Band Edge / 1 RB

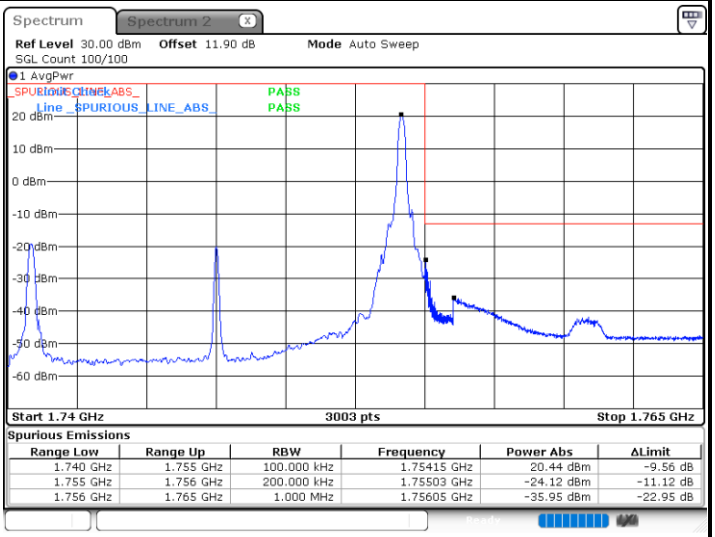


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70887 GHz	-35.36 dBm	-22.36 dB
1.709 GHz	1.710 GHz	200.000 kHz	1.71000 GHz	-25.98 dBm	-12.98 dB
1.710 GHz	1.725 GHz	100.000 kHz	1.71088 GHz	20.25 dBm	-9.75 dB

Date: 1.OCT.2022 10:31:35

Highest Band Edge / 1 RB

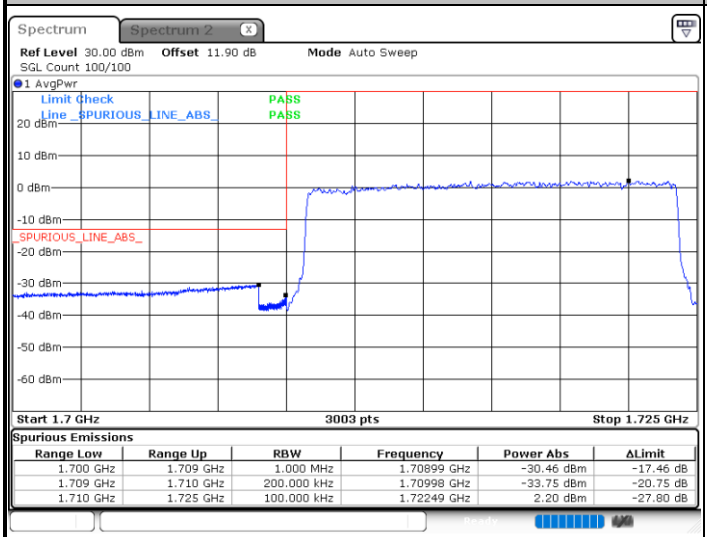


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.740 GHz	1.755 GHz	100.000 kHz	1.75415 GHz	20.44 dBm	-9.56 dB
1.755 GHz	1.756 GHz	200.000 kHz	1.75503 GHz	-24.12 dBm	-11.12 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75605 GHz	-35.95 dBm	-22.95 dB

Date: 1.OCT.2022 10:37:09

Lowest Band Edge / Full RB

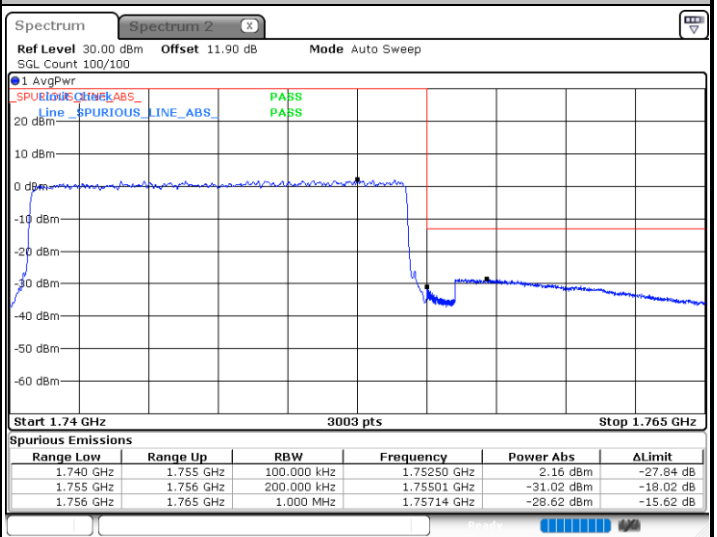


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70899 GHz	-30.46 dBm	-17.46 dB
1.709 GHz	1.710 GHz	200.000 kHz	1.70998 GHz	-33.75 dBm	-20.75 dB
1.710 GHz	1.725 GHz	100.000 kHz	1.72249 GHz	2.20 dBm	-27.80 dB

Date: 1.OCT.2022 10:33:23

Highest Band Edge / Full RB



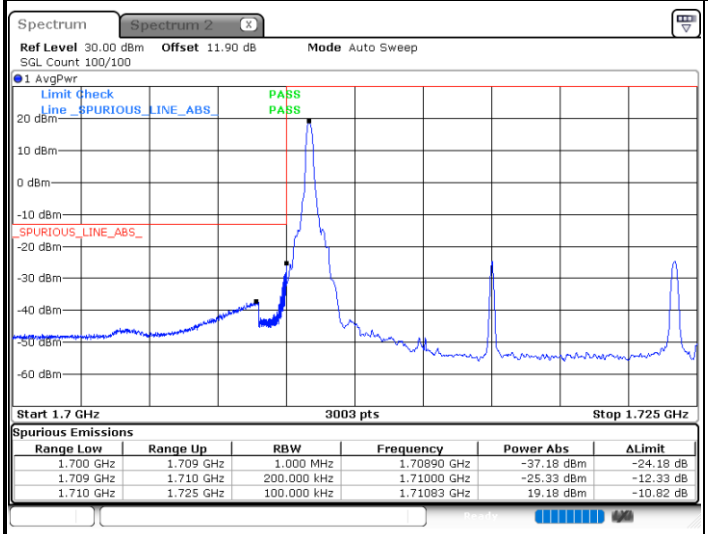
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.740 GHz	1.755 GHz	100.000 kHz	1.75250 GHz	2.16 dBm	-27.84 dB
1.755 GHz	1.756 GHz	200.000 kHz	1.75501 GHz	-31.02 dBm	-18.02 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75714 GHz	-28.62 dBm	-15.62 dB

Date: 1.OCT.2022 10:38:57

LTE Band 4 / 15MHz / 16QAM

Lowest Band Edge / 1 RB

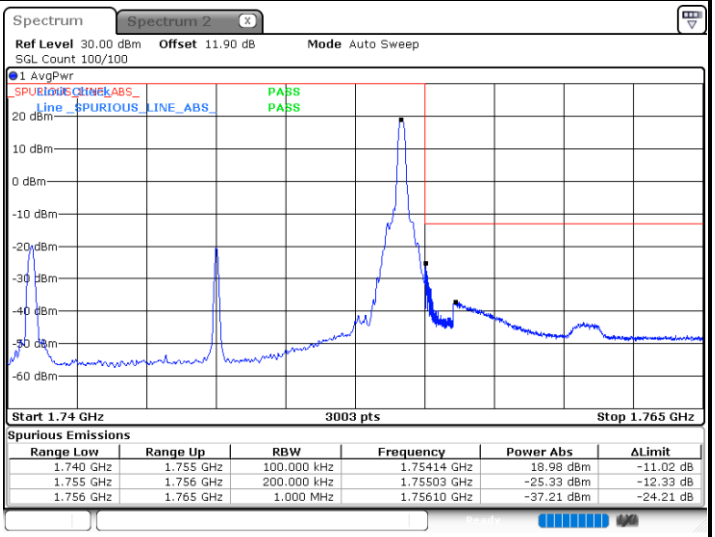


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70890 GHz	-37.18 dBm	-24.18 dB
1.709 GHz	1.710 GHz	200.000 kHz	1.71000 GHz	-25.33 dBm	-12.33 dB
1.710 GHz	1.725 GHz	100.000 kHz	1.71083 GHz	19.18 dBm	-10.82 dB

Date: 1.OCT.2022 10:32:29

Highest Band Edge / 1 RB

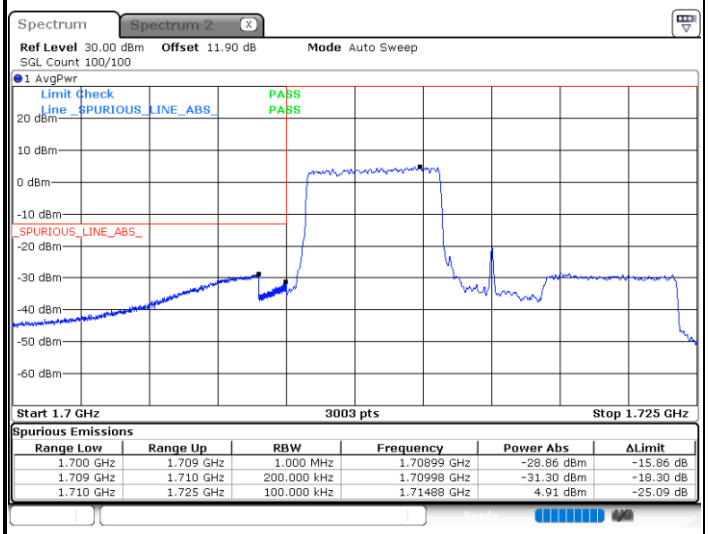


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.740 GHz	1.755 GHz	100.000 kHz	1.75414 GHz	18.98 dBm	-11.02 dB
1.755 GHz	1.756 GHz	200.000 kHz	1.75503 GHz	-25.33 dBm	-12.33 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75610 GHz	-37.21 dBm	-24.21 dB

Date: 1.OCT.2022 10:38:03

Lowest Band Edge / 27 RB 0

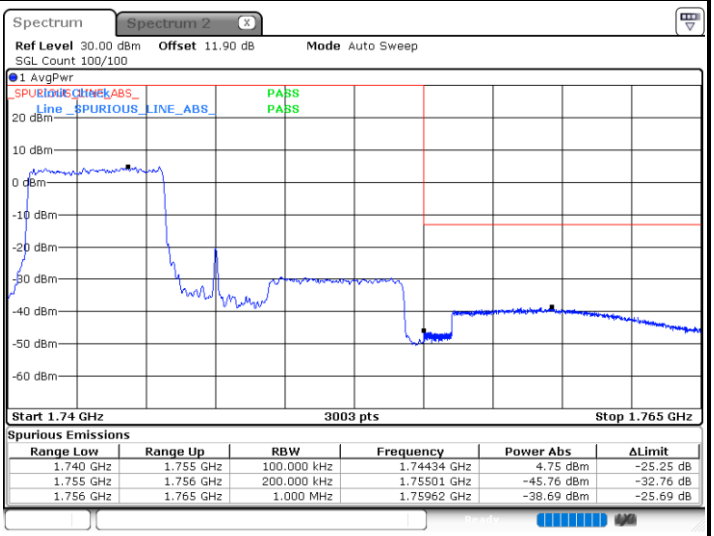


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70899 GHz	-28.86 dBm	-15.86 dB
1.709 GHz	1.710 GHz	200.000 kHz	1.70998 GHz	-31.30 dBm	-18.30 dB
1.710 GHz	1.725 GHz	100.000 kHz	1.71488 GHz	4.91 dBm	-25.09 dB

Date: 5.OCT.2022 10:25:48

Highest Band Edge / 27 RB 0



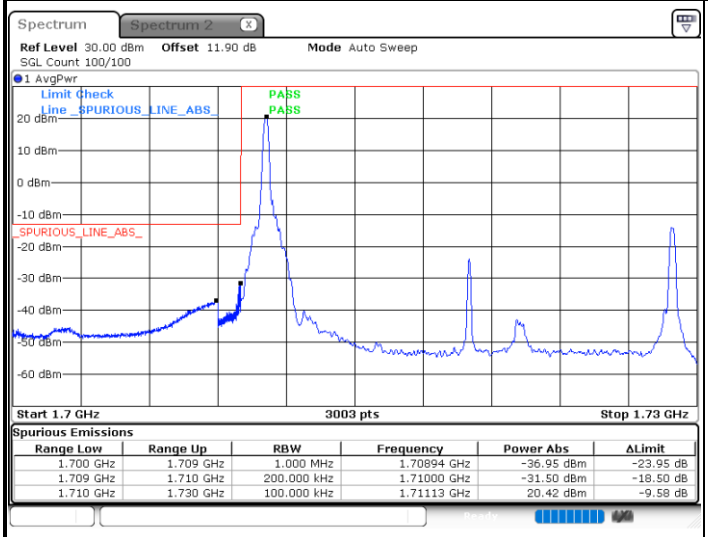
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.740 GHz	1.755 GHz	100.000 kHz	1.74434 GHz	4.75 dBm	-25.25 dB
1.755 GHz	1.756 GHz	200.000 kHz	1.75501 GHz	-45.76 dBm	-32.76 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75962 GHz	-38.69 dBm	-25.69 dB

Date: 5.OCT.2022 10:26:41

LTE Band 4 / 20MHz / QPSK

Lowest Band Edge / 1 RB

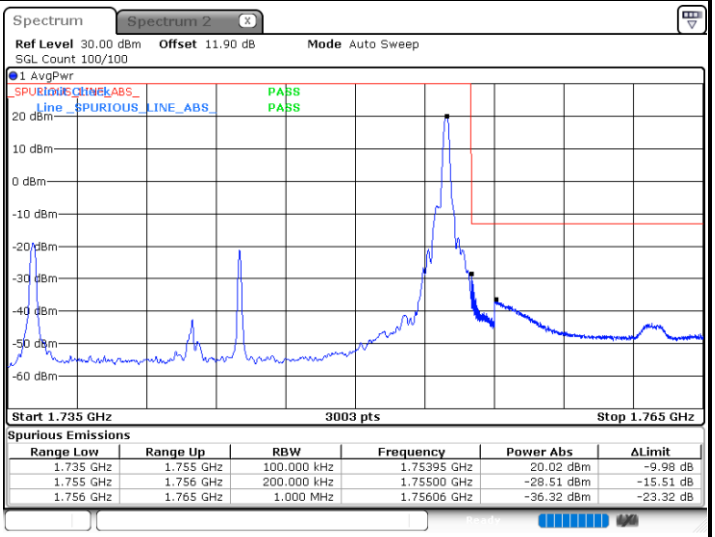


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70894 GHz	-36.95 dBm	-23.95 dB
1.709 GHz	1.710 GHz	200.000 kHz	1.71000 GHz	-31.50 dBm	-18.50 dB
1.710 GHz	1.730 GHz	100.000 kHz	1.71113 GHz	20.42 dBm	-9.58 dB

Date: 1.OCT.2022 10:40:55

Highest Band Edge / 1 RB

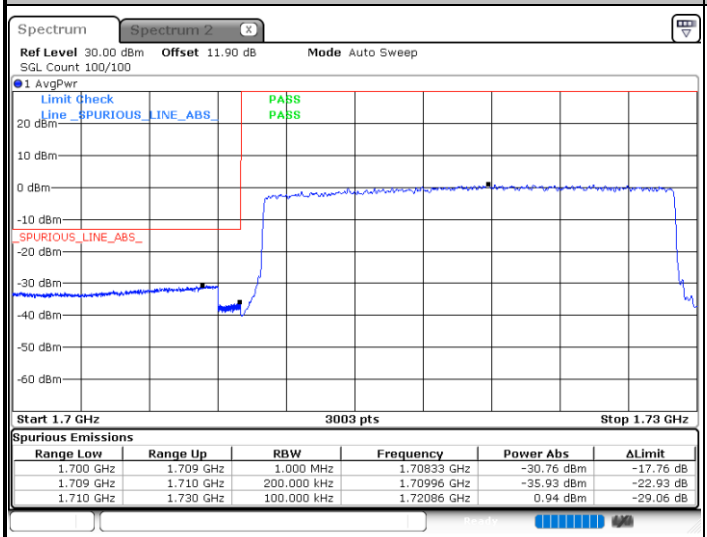


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.735 GHz	1.755 GHz	100.000 kHz	1.75395 GHz	20.02 dBm	-9.98 dB
1.755 GHz	1.756 GHz	200.000 kHz	1.75500 GHz	-28.51 dBm	-15.51 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75606 GHz	-36.32 dBm	-23.32 dB

Date: 1.OCT.2022 10:46:29

Lowest Band Edge / Full RB

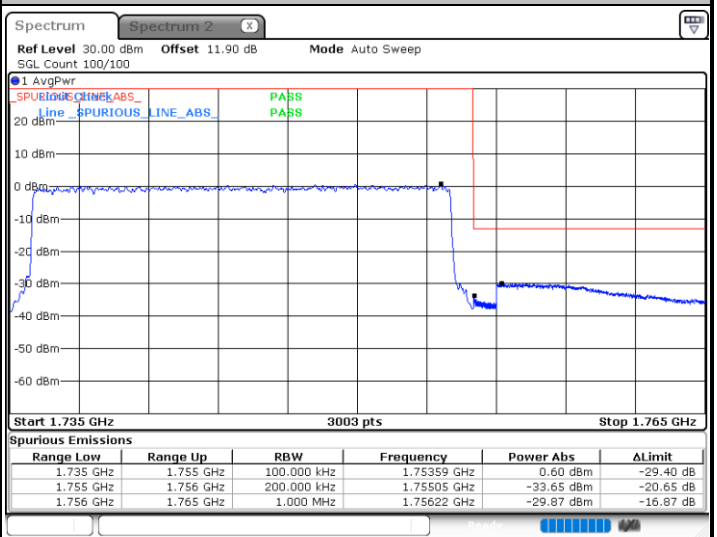


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70833 GHz	-30.76 dBm	-17.76 dB
1.709 GHz	1.710 GHz	200.000 kHz	1.70996 GHz	-35.93 dBm	-22.93 dB
1.710 GHz	1.730 GHz	100.000 kHz	1.72086 GHz	0.94 dBm	-29.06 dB

Date: 1.OCT.2022 10:42:42

Highest Band Edge / Full RB



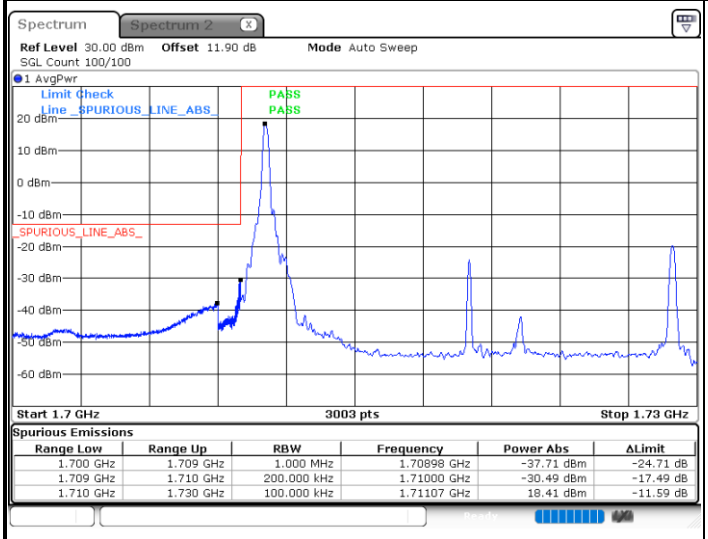
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.735 GHz	1.755 GHz	100.000 kHz	1.75359 GHz	0.60 dBm	-29.40 dB
1.755 GHz	1.756 GHz	200.000 kHz	1.75505 GHz	-33.65 dBm	-20.65 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75622 GHz	-29.87 dBm	-16.87 dB

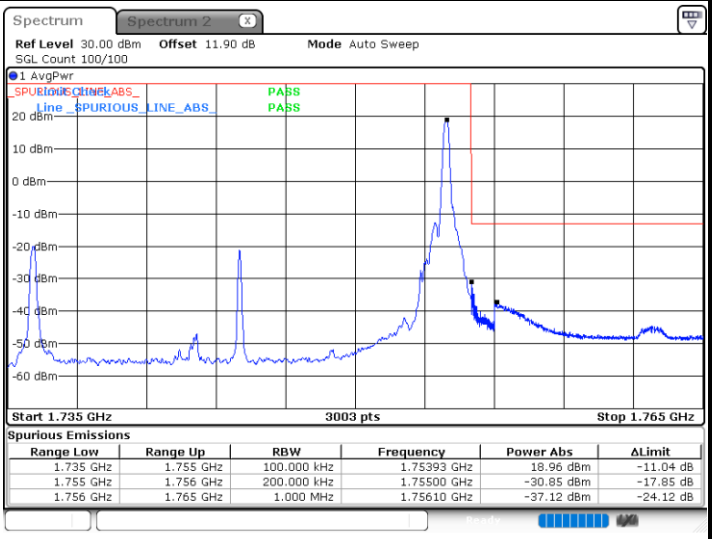
Date: 1.OCT.2022 10:48:16

LTE Band 4 / 20MHz / 16QAM

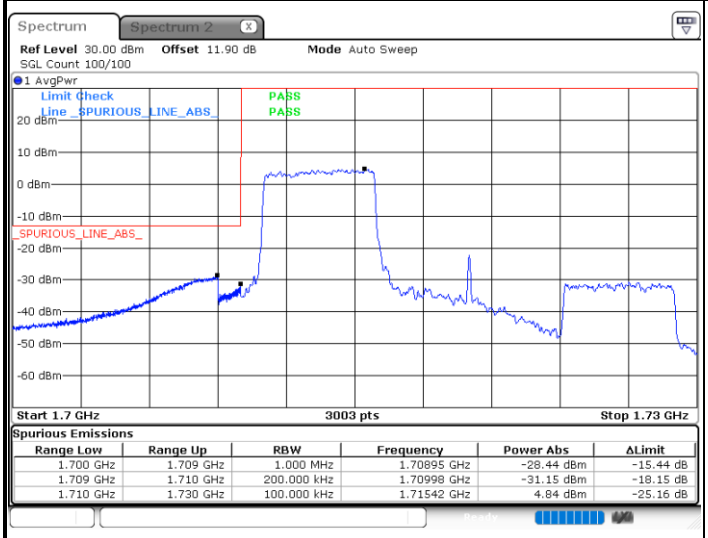
Lowest Band Edge / 1 RB



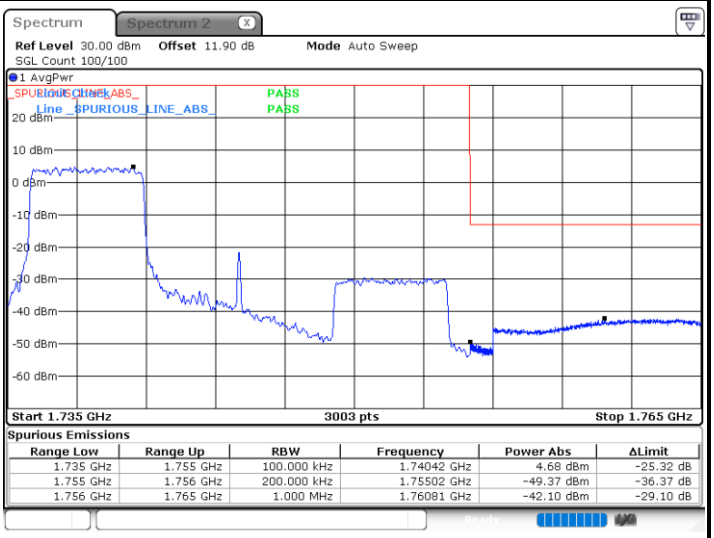
Highest Band Edge / 1 RB



Lowest Band Edge / 27 RB 0



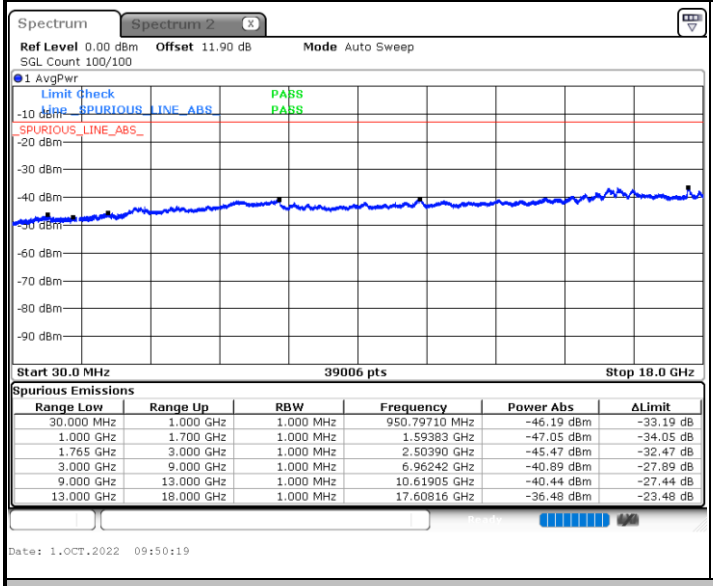
Highest Band Edge / 27 RB 0



Conducted Spurious Emission

LTE Band 4 / 1.4MHz

Lowest Channel / QPSK

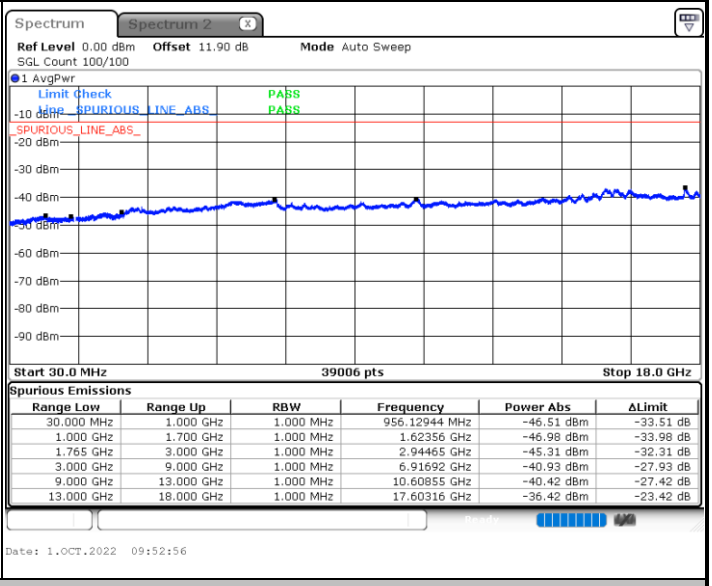


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	950.79710 MHz	-46.19 dBm	-33.19 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.59383 GHz	-47.05 dBm	-34.05 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.50390 GHz	-45.47 dBm	-32.47 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.96242 GHz	-40.89 dBm	-27.89 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.61905 GHz	-40.44 dBm	-27.44 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.60816 GHz	-36.48 dBm	-23.48 dB

Date: 1.OCT.2022 09:50:19

Middle Channel / QPSK

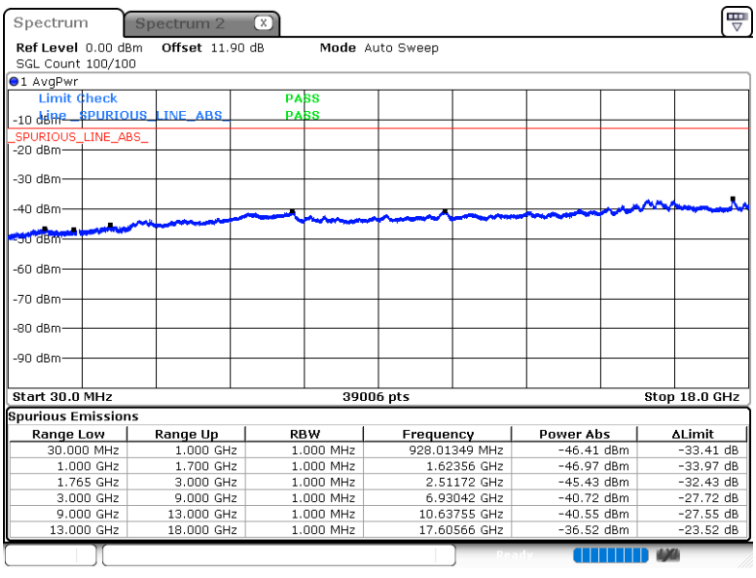


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	956.12944 MHz	-46.51 dBm	-33.51 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.62356 GHz	-46.98 dBm	-33.98 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.94465 GHz	-45.31 dBm	-32.31 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.91692 GHz	-40.93 dBm	-27.93 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.60855 GHz	-40.42 dBm	-27.42 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.60316 GHz	-36.42 dBm	-23.42 dB

Date: 1.OCT.2022 09:52:56

Highest Channel / QPSK



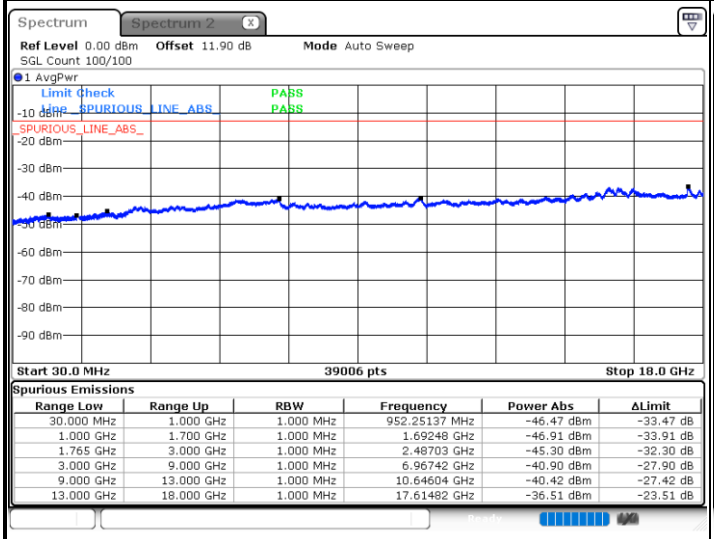
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	928.01349 MHz	-46.41 dBm	-33.41 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.62356 GHz	-46.97 dBm	-33.97 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.51172 GHz	-45.43 dBm	-32.43 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.93042 GHz	-40.72 dBm	-27.72 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.63755 GHz	-40.55 dBm	-27.55 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.60566 GHz	-36.52 dBm	-23.52 dB

Date: 1.OCT.2022 09:57:33

LTE Band 4 / 3MHz

Lowest Channel / QPSK

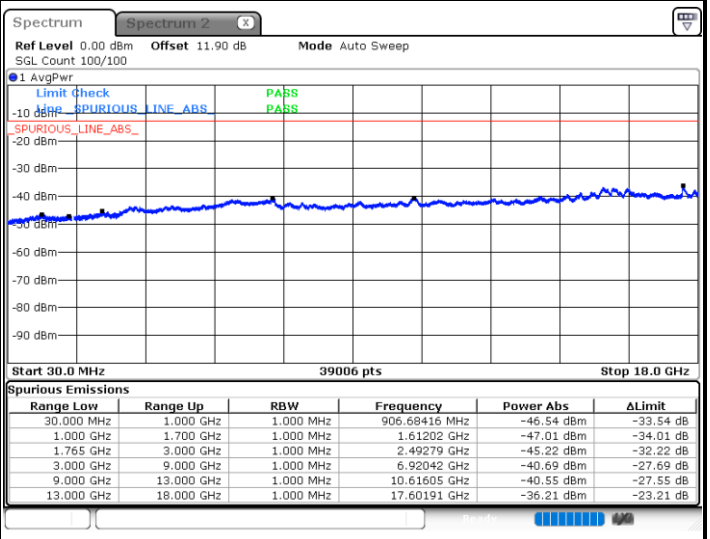


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	952.25137 MHz	-46.47 dBm	-33.47 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69248 GHz	-46.91 dBm	-33.91 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.48703 GHz	-45.30 dBm	-32.30 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.96742 GHz	-40.90 dBm	-27.90 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.64604 GHz	-40.42 dBm	-27.42 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.61482 GHz	-36.51 dBm	-23.51 dB

Date: 1.OCT.2022 10:02:12

Middle Channel / QPSK

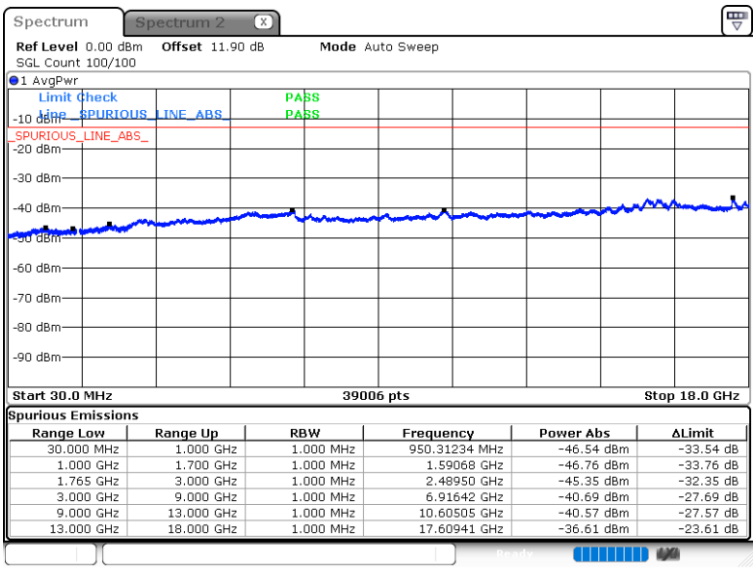


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	906.68416 MHz	-46.54 dBm	-33.54 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.61202 GHz	-47.01 dBm	-34.01 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.49279 GHz	-45.22 dBm	-32.22 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.92042 GHz	-40.69 dBm	-27.69 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.61605 GHz	-40.55 dBm	-27.55 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.60191 GHz	-36.21 dBm	-23.21 dB

Date: 1.OCT.2022 10:04:50

Highest Channel / QPSK



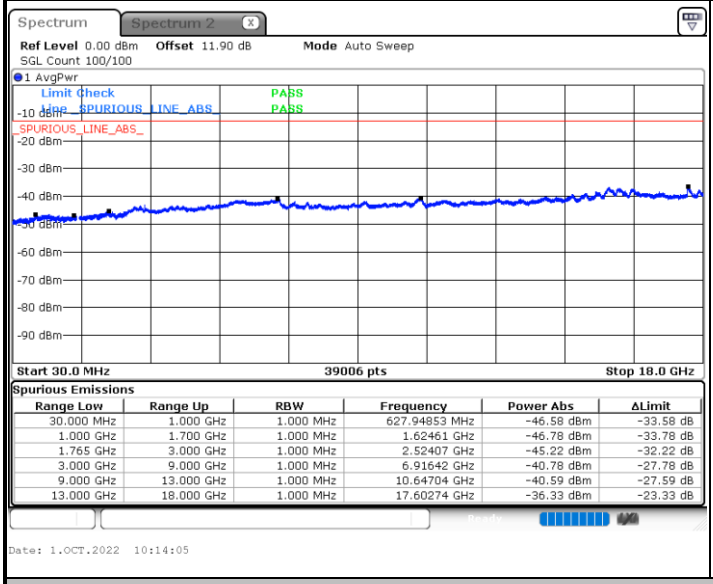
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	950.31234 MHz	-46.54 dBm	-33.54 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.59068 GHz	-46.76 dBm	-33.76 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.48950 GHz	-45.35 dBm	-32.35 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.91642 GHz	-40.69 dBm	-27.69 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.60505 GHz	-40.57 dBm	-27.57 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.60941 GHz	-36.61 dBm	-23.61 dB

Date: 1.OCT.2022 10:09:26

LTE Band 4 / 5MHz

Lowest Channel / QPSK

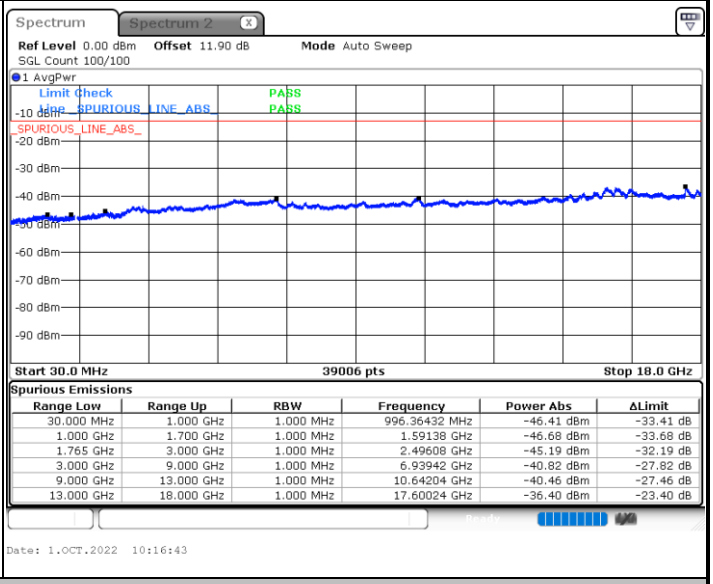


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	627.94853 MHz	-46.58 dBm	-33.58 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.62461 GHz	-46.78 dBm	-33.78 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.52407 GHz	-45.22 dBm	-32.22 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.91642 GHz	-40.78 dBm	-27.78 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.64704 GHz	-40.59 dBm	-27.59 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.60274 GHz	-36.33 dBm	-23.33 dB

Date: 1.OCT.2022 10:14:05

Middle Channel / QPSK

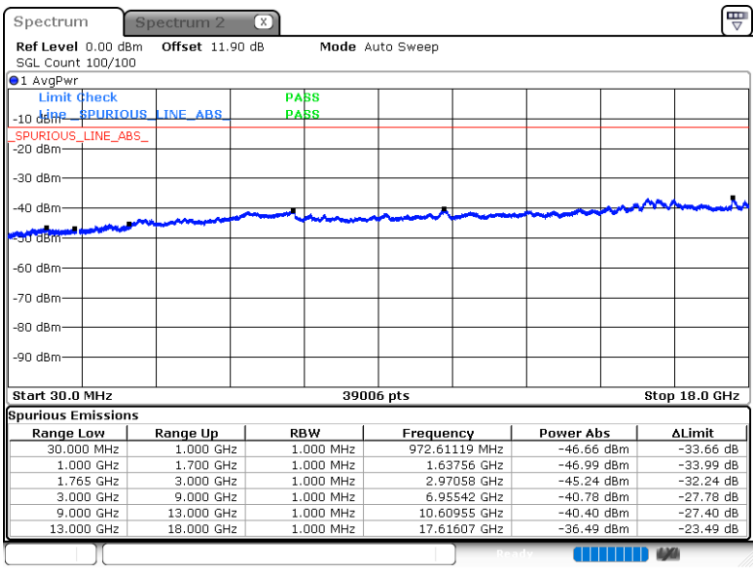


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	996.36432 MHz	-46.41 dBm	-33.41 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.59138 GHz	-46.68 dBm	-33.68 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.49608 GHz	-45.19 dBm	-32.19 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.93942 GHz	-40.82 dBm	-27.82 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.64204 GHz	-40.46 dBm	-27.46 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.60024 GHz	-36.40 dBm	-23.40 dB

Date: 1.OCT.2022 10:16:43

Highest Channel / QPSK



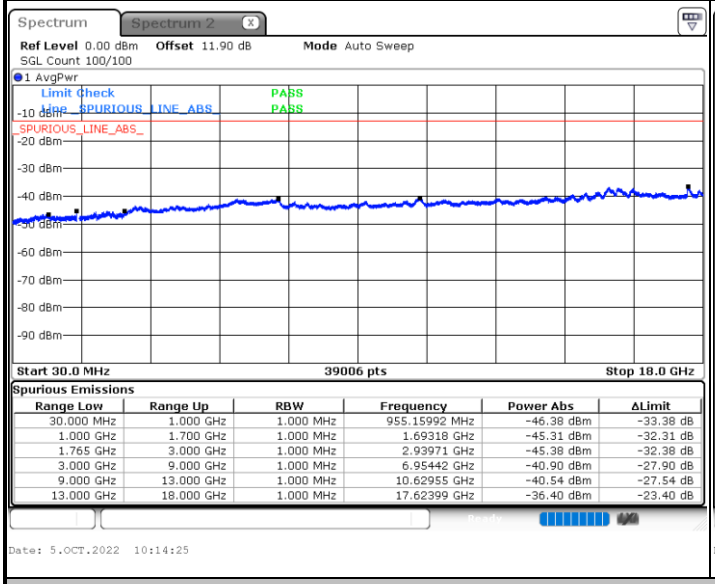
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	972.61119 MHz	-46.66 dBm	-33.66 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.63756 GHz	-46.99 dBm	-33.99 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.97058 GHz	-45.24 dBm	-32.24 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.95542 GHz	-40.78 dBm	-27.78 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.60955 GHz	-40.40 dBm	-27.40 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.61607 GHz	-36.49 dBm	-23.49 dB

Date: 1.OCT.2022 10:21:21

LTE Band 4 / 10MHz

Lowest Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	955.15992 MHz	-46.38 dBm	-33.38 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69318 GHz	-45.31 dBm	-32.31 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.93971 GHz	-45.38 dBm	-32.38 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.95442 GHz	-40.90 dBm	-27.90 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.62955 GHz	-40.54 dBm	-27.54 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.62399 GHz	-36.40 dBm	-23.40 dB

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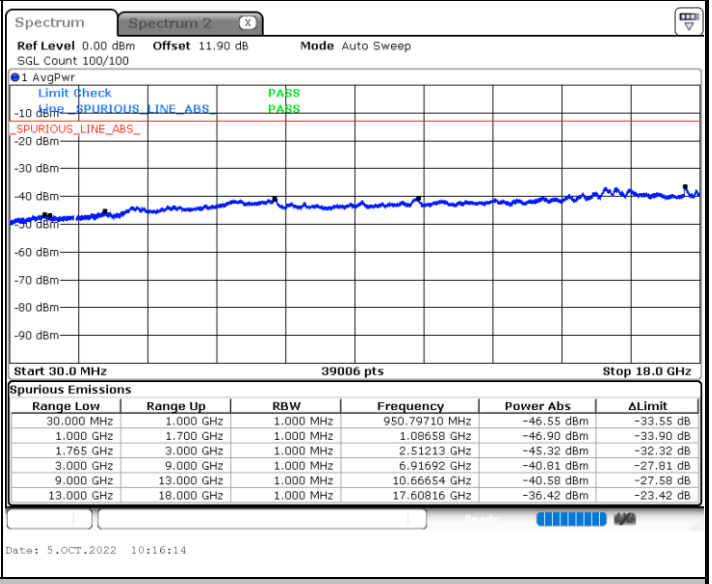
Middle Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	950.79710 MHz	-46.55 dBm	-33.55 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.08658 GHz	-46.90 dBm	-33.90 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.51213 GHz	-45.32 dBm	-32.32 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.91692 GHz	-40.81 dBm	-27.81 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.66654 GHz	-40.58 dBm	-27.58 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.60816 GHz	-36.42 dBm	-23.42 dB

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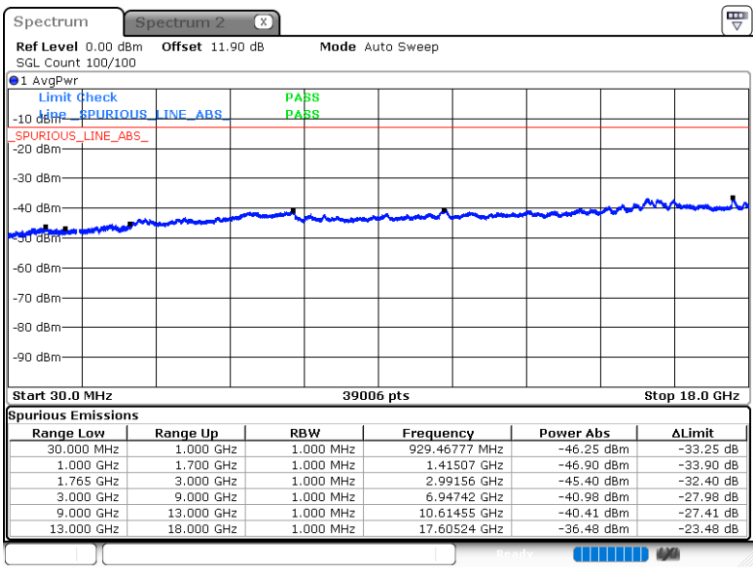
Highest Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	929.46777 MHz	-46.25 dBm	-33.25 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.41507 GHz	-46.90 dBm	-33.90 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.99156 GHz	-45.40 dBm	-32.40 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.94742 GHz	-40.98 dBm	-27.98 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.61455 GHz	-40.41 dBm	-27.41 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.60524 GHz	-36.48 dBm	-23.48 dB

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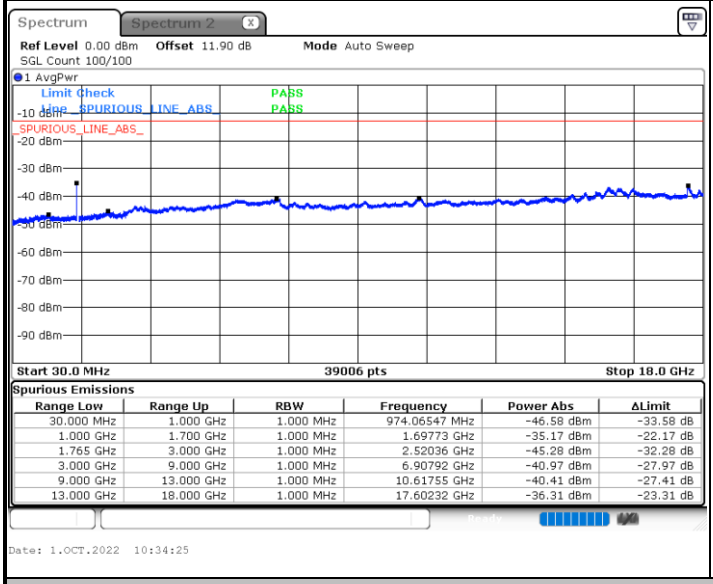
LTE Band 4 / 15MHz

Lowest Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	974.06547 MHz	-46.58 dBm	-33.58 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69773 GHz	-35.17 dBm	-22.17 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.52036 GHz	-45.28 dBm	-32.28 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.90792 GHz	-40.97 dBm	-27.97 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.61755 GHz	-40.41 dBm	-27.41 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.60232 GHz	-36.31 dBm	-23.31 dB

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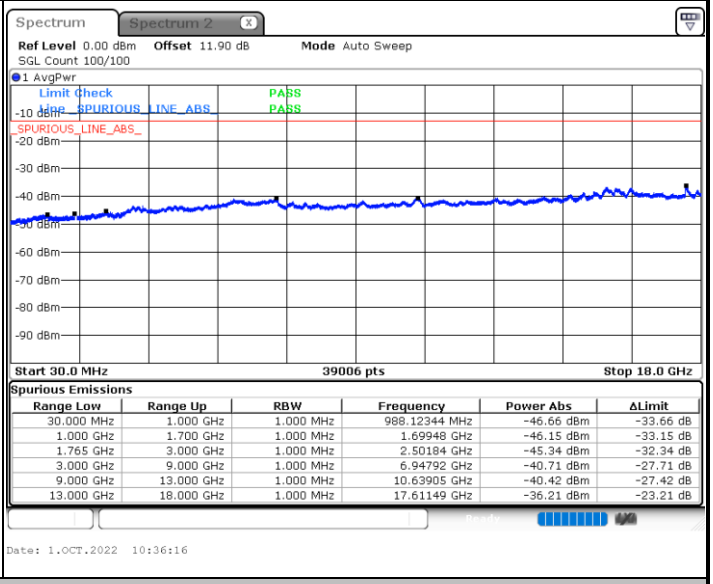
Middle Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	988.12344 MHz	-46.66 dBm	-33.66 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69948 GHz	-46.15 dBm	-33.15 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.50184 GHz	-45.34 dBm	-32.34 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.94792 GHz	-40.71 dBm	-27.71 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.63905 GHz	-40.42 dBm	-27.42 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.61149 GHz	-36.21 dBm	-23.21 dB

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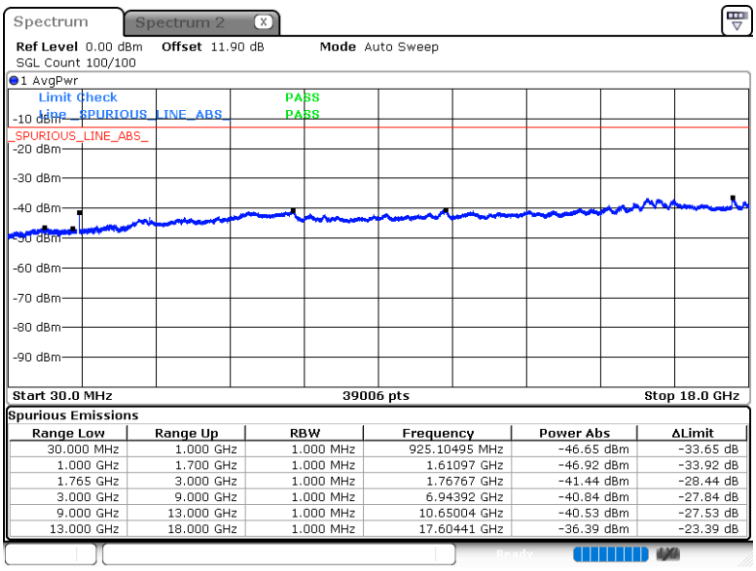
Highest Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	925.10495 MHz	-46.65 dBm	-33.65 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.61097 GHz	-46.92 dBm	-33.92 dB
1.765 GHz	3.000 GHz	1.000 MHz	1.76767 GHz	-41.44 dBm	-28.44 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.94392 GHz	-40.84 dBm	-27.84 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.65004 GHz	-40.53 dBm	-27.53 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.60441 GHz	-36.39 dBm	-23.39 dB

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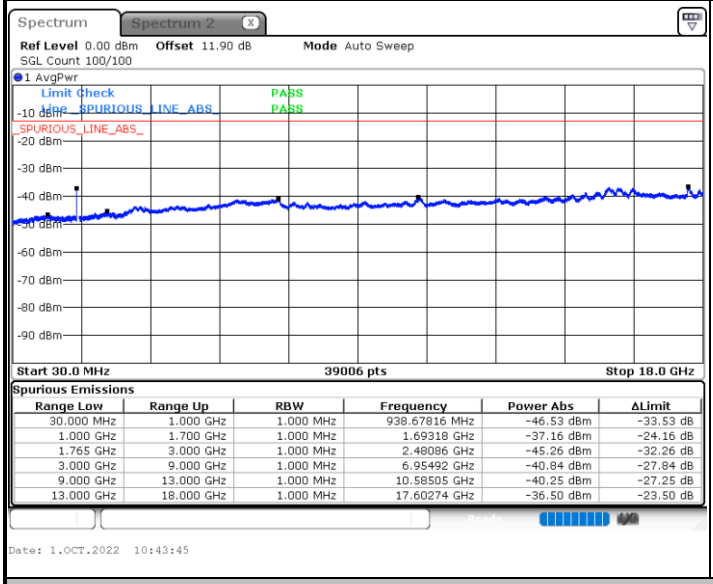
LTE Band 4 / 20MHz

Lowest Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	938.67816 MHz	-46.53 dBm	-33.53 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69318 GHz	-37.16 dBm	-24.16 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.48086 GHz	-45.26 dBm	-32.26 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.95492 GHz	-40.84 dBm	-27.84 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.58505 GHz	-40.25 dBm	-27.25 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.60274 GHz	-36.50 dBm	-23.50 dB

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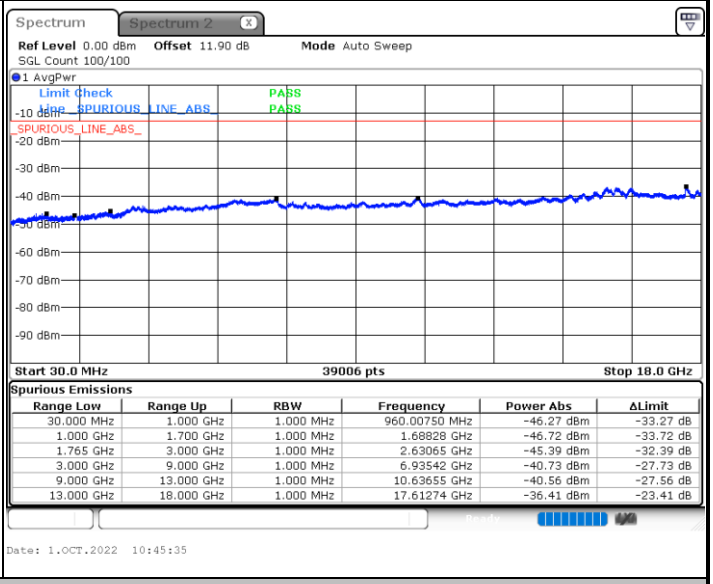
Middle Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	960.00750 MHz	-46.27 dBm	-33.27 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.68828 GHz	-46.72 dBm	-33.72 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.63065 GHz	-45.39 dBm	-32.39 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.93542 GHz	-40.73 dBm	-27.73 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.63655 GHz	-40.56 dBm	-27.56 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.61274 GHz	-36.41 dBm	-23.41 dB

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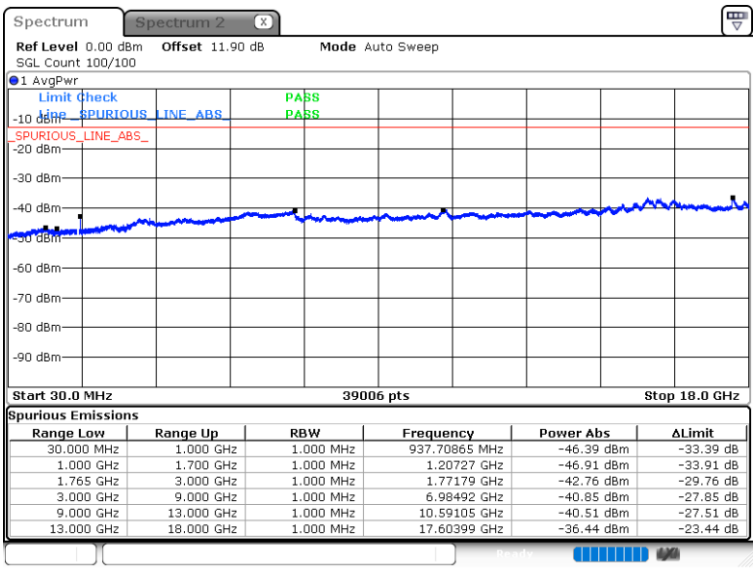
Highest Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	937.70865 MHz	-46.39 dBm	-33.39 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.20727 GHz	-46.91 dBm	-33.91 dB
1.765 GHz	3.000 GHz	1.000 MHz	1.77179 GHz	-42.76 dBm	-29.76 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98492 GHz	-40.85 dBm	-27.85 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.59105 GHz	-40.51 dBm	-27.51 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.60399 GHz	-36.44 dBm	-23.44 dB

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