FCC RF Test Report

APPLICANT	: Xiaomi Communications Co., Ltd.
EQUIPMENT	: Mobile Phone
BRAND NAME	: Xiaomi
MODEL NAME	: 24129PN74G
FCC ID	: 2AFZZPN74G
STANDARD	: 47 CFR Part 27(H), 27(F)
CLASSIFICATION	: PCS Licensed Transmitter Held to Ear (PCE)
TEST DATE(S)	: Oct. 15, 2024

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

Jason Jia

Approved by: Jason Jia

ACCREDITED Cert #5145.02

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

TABLE OF CONTENTS

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG482619P	Rev. 01	Initial issue of report	Oct. 16, 2024

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	-	Report Only	-
	§27.50(b)(10) §27.50(c)(10)	Effective Radiated Power (Band 12) (Band 13) (Band 17)	ERP < 3 Watt		-
3.5	N/A	Peak-to-Average Ratio	<13 dB	PASS	-
3.6	§2.1049	Occupied Bandwidth	-	Report Only	-
3.7	§2.1051 §27.53(c)(2)(4) §27.53(g)	Conducted Band Edge Measurement (Band 12) (Band 13) (Band 17)	< 43+10log10(P[Watts])	PASS	-
3.8	§2.1051 §27.53(c)(2) §27.53(g)	Conducted Spurious Emission (Band 12) (Band 13) (Band 17)	< 43+10log10(P[Watts])	PASS	-
3.9	§2.1055 §27.54	Frequency Stability Temperature & Voltage	Within Authorized Band	PASS	-
4.4	§2.1053 §27.53(c)(2) §27.53(f) §27.53(g)	Radiated Spurious Emission (Band 2) (Band 4) (Band 5) (Band 12) (Band 13) (Band 17) (Band 25) (Band 26) (Band 66) (Band 71)	< $43+10\log_{10}$(P[Watts])	PASS	Under limit 33.31 dB at 2336.00 MHz

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section “Measurement Uncertainty”

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

1 General Description

1.1 Applicant

Xiaomi Communications Co., Ltd.
#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

1.2 Manufacturer

Xiaomi Communications Co., Ltd.
#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Phone
Brand Name	Xiaomi
Model Name	24129PN74G
FCC ID	2AFZZPN74G
IMEI Code	Conducted: 864868070035782/864868070035790 Radiation: 864868070038067/864868070038075
HW Version	1352000O3
SW Version	Xiaomi HyperOS 2.0
EUT Stage	Identical Prototype

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	LTE Band 12 : 699 MHz ~ 716 MHz LTE Band 13 : 777 MHz ~ 787 MHz LTE Band 17 : 704 MHz ~ 716 MHz
Rx Frequency	LTE Band 12 : 729 MHz ~ 746 MHz LTE Band 13 : 746 MHz ~ 756 MHz LTE Band 17 : 734 MHz ~ 746 MHz
Bandwidth	LTE Band 12 : 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 13 : 5MHz / 10MHz LTE Band 17 : 5MHz / 10MHz
Maximum Output Power to Antenna	<ANT0> LTE Band 12 : 24.80 dBm LTE Band 13 : 25.14 dBm LTE Band 17 : 24.78 dBm <ANT1> LTE Band 12 : 24.15 dBm LTE Band 13 : 24.53 dBm LTE Band 17 : 24.10 dBm
Antenna Gain	<ANT0> LTE Band 12 : -3.7 dBi LTE Band 13 : -4.4 dBi LTE Band 17 : -3.7 dBi <ANT1> LTE Band 12 : -3.6 dBi LTE Band 13 : -3.6 dBi LTE Band 17 : -3.6 dBi
Type of Modulation	QPSK / 16QAM / 64QAM / 256QAM

Note:

1. The maximum ERP is calculated from max output power and max antenna gain, only the maximum ERP of Antenna 0 for LTE Band 12/17 and Antenna 1 for LTE Band 13 are shown in the report.
2. For conducted test items of B12/13, only the test data of the worse Ant.0 is shown in the report according to the maximum power, B17 is covered by B12.

1.5 Modification of EUT

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

1.6 Maximum ERP Power and Emission Designator

LTE Band 12		QPSK		16QAM/64QAM/256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)
1.4	699.7 ~ 715.3	0.0774	1M09G7D	0.0604	1M13W7D
3	700.5 ~ 714.5	0.0774	2M72G7D	0.0600	2M70W7D
5	701.5 ~ 713.5	0.0766	4M51G7D	0.0598	4M49W7D
10	704.0 ~ 711.0	0.0785	9M03G7D	0.0617	9M03W7D
LTE Band 13		**QPSK**		**16QAM/64QAM/256QAM**	
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)
5	779.5 ~ 784.5	0.0746	4M49G7D	0.0589	4M50W7D
10	782.0	0.0755	9M05G7D	0.0593	9M03W7D
LTE Band 17		**QPSK**		**16QAM/64QAM/256QAM**	
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)
5	706.5 ~ 713.5	0.0769	4M51G7D	0.0604	4M49W7D
10	709.0 ~ 711.0	0.0782	9M03G7D	0.0618	9M03W7D

Note:

1. LTE Band 12 overlaps the entire frequency range of LTE Band 17. Therefore, the test results provided in this report covers Band 12 as well as Band 17.
2. All modulations have been tested, and only the worst test results of PSK & QAM are shown in the report.

1.7 Testing Location

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

Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH04-KS TH01-KS	CN1257	314309

1.8 Test Software

Item	Site	Manufacture	Name	Version
1.	TH01-KS	SPORTON	FCC LTE_Ver2.0 Auto_china_210503	2.0
2.	03CH04-KS	AUDIX	E3	210616

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 27(H), 27(F)
- ANSI C63.26-2015
- FCC KDB 971168 D01 Power Meas License Digital Systems v03r01
- FCC KDB 412172 D01 Determining ERP and EIRP v01r01

Remark:

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

2 Test Configuration of Equipment Under Test

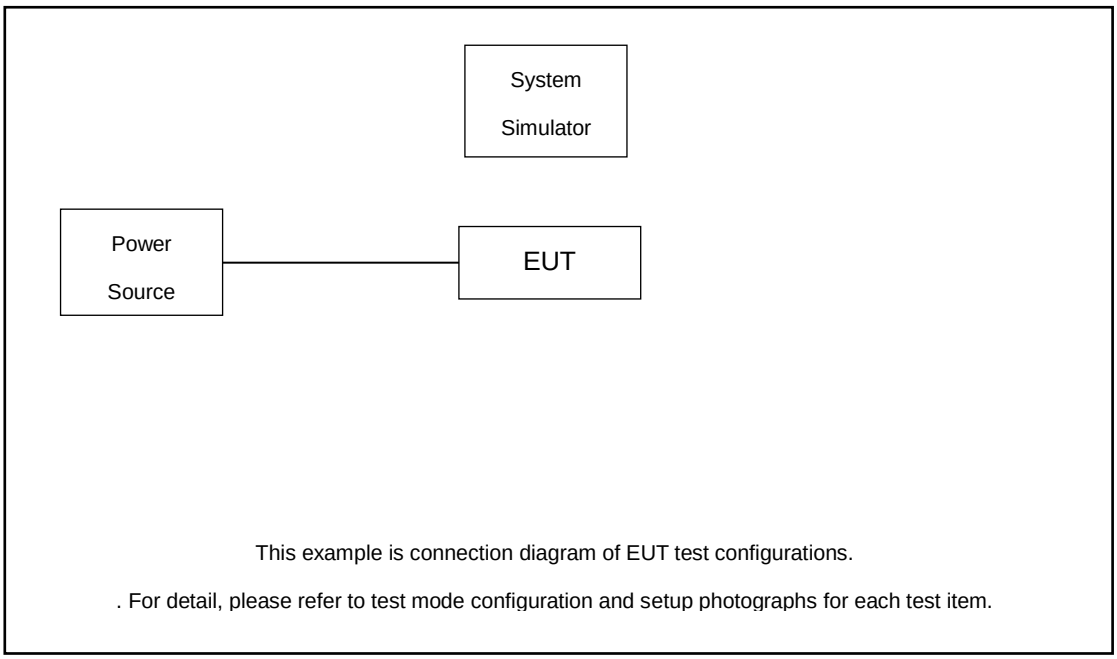
2.1 Test Mode

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

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

Test Items	Band	Bandwidth (MHz)						Modulation				RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64 QAM	256 QAM	1	Half	Full	L	M	H
Max. Output Power	12	v	v	v	v	-	-	v	v	v	v	v		v	v	v	v
	13	-	-	v	v	-	-	v	v	v	v	v		v	v	v	v
	17	-	-	v	v	-	-	v	v	v	v	v		v	v	v	v
Peak-to-Average Ratio	12				v	-	-	v	v	v	v			v		v	
	13	-	-		v	-	-	v	v	v	v			v		v	
26dB and 99% Bandwidth	12	v	v	v	v	-	-	v	v	v	v			v		v	
	13	-	-	v	v	-	-	v	v	v	v			v		v	
Conducted Band Edge	12	v	v	v	v	-	-	v	v	v	v	v		v	v		v
	13	-	-	v	v	-	-	v	v	v	v	v		v	v		v
Conducted Spurious Emission	12	v	v	v	v	-	-	v				v			v	v	v
	13	-	-	v	v	-	-	v				v			v	v	v
Frequency Stability	12				v	-	-	v						v		v	
	13	-	-		v	-	-	v						v		v	
E.R.P	12	v	v	v	v	-	-	v	v	v	v	v		v	v	v	v
	13	-	-	v	v	-	-	v	v	v	v	v		v	v	v	v
	17	-	-	v	v	-	-	v	v	v	v	v		v	v	v	v
Radiated Spurious Emission	12	Worst Case													v	v	v
	13	Worst Case													v	v	v
Note	1. The mark "**v** " means that this configuration is chosen for testing 2. The mark "-" means that this bandwidth is not supported. 3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.																

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

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

2.4 Measurement Results Explanation Example

For all conducted test items:

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

The spectrum analyzer offset is derived from RF cable loss.

Offset = RF cable loss.

Following shows an offset computation example with cable loss 4.6 dB.

Example :

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

= 4.6 (dB)

2.5 Frequency List of Low/Middle/High Channels

LTE Band 12 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
10	Channel	23060	23095	23130
	Frequency	704	707.5	711
5	Channel	23035	23095	23155
	Frequency	701.5	707.5	713.5
3	Channel	23025	23095	23165
	Frequency	700.5	707.5	714.5
1.4	Channel	23017	23095	23173
	Frequency	699.7	707.5	715.3

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

LTE Band 17 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
10	Channel	23780	23790	23800
	Frequency	709	710	711
5	Channel	23755	23790	23825
	Frequency	706.5	710	713.5

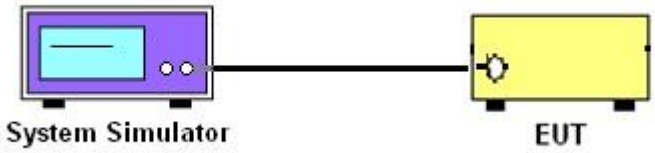
3 Conducted Test Items

3.1 Measuring Instruments

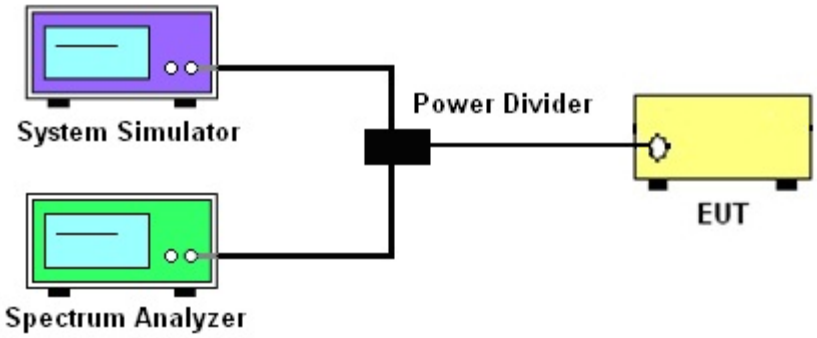
See list of measuring instruments of this test report.

3.2 Test Setup

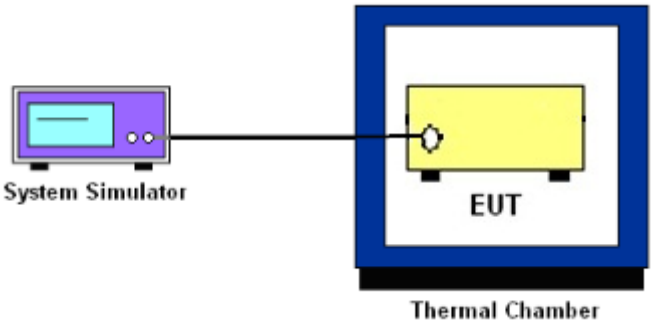
3.2.1 Conducted Output Power



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



3.2.3 Frequency Stability



3.3 Test Result of Conducted Test

Please refer to Appendix A.

3.4 Conducted Output Power and ERP/EIRP

3.4.1 Description of the Conducted Output Power Measurement and 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 12, Band 13 and Band 17.

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 (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 (g)

For operations in the 600MHz band and 698 -746 MHz band, the FCC limit is 43 + 10log10(P[Watts]) dB below the transmitter power P(Watts) in a 100 kHz bandwidth. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

3.7.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
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.
   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.
8. 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

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 10th harmonic.

3.8.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
4. The middle channel for the highest RF power within the transmitting frequency was measured.
5. The conducted spurious emission for the whole frequency range was taken.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
7. Set spectrum analyzer with RMS detector.
8. Taking the record of maximum spurious emission.
9. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
10. The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
    = P(W)- [43 + 10log(P)] (dB)
    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
    = -13dBm.

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.

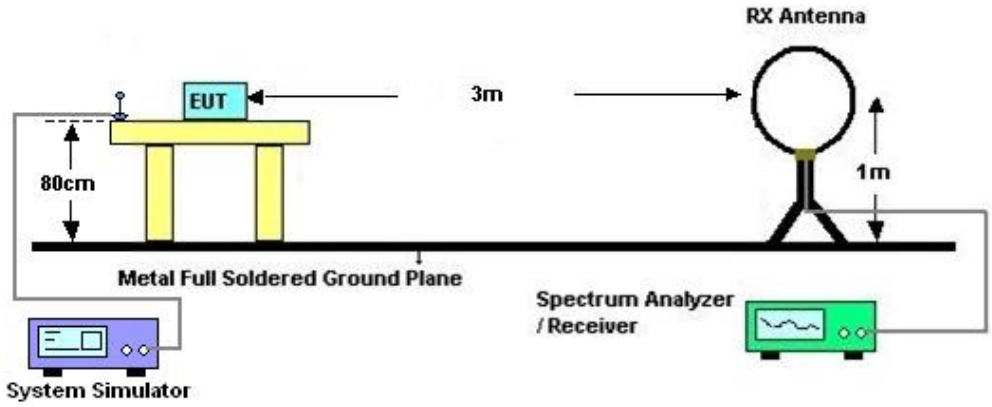
4 Radiated Test Items

4.1 Measuring Instruments

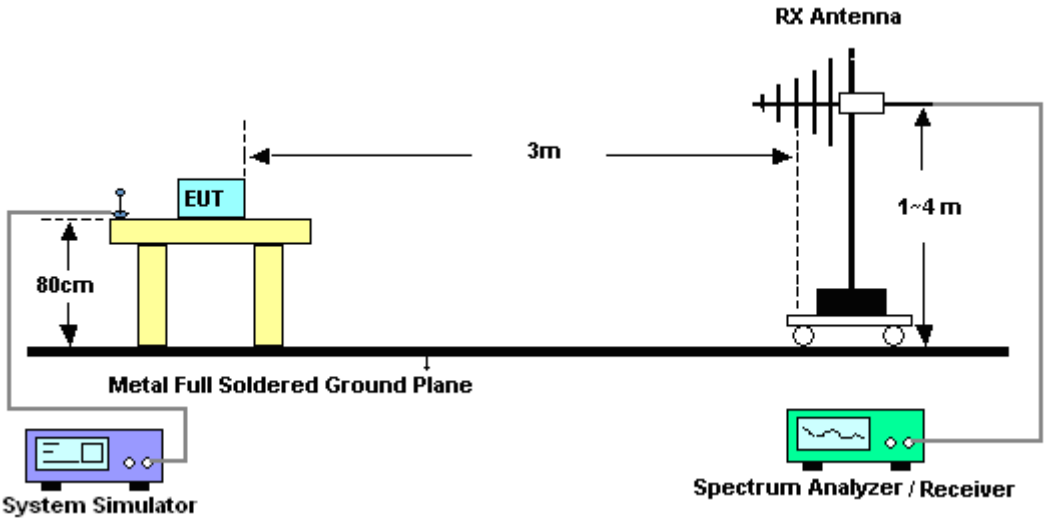
See list of measuring instruments of this test report.

4.2 Test Setup

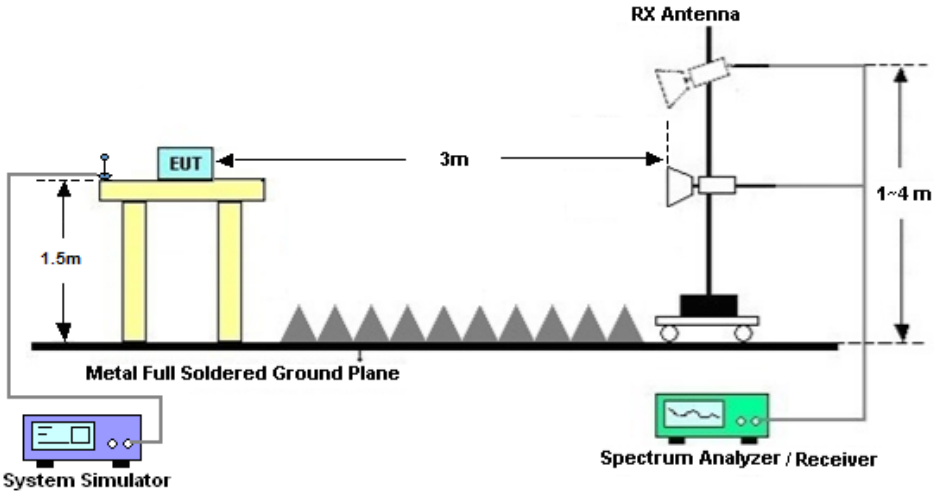
4.2.1 For radiated test below 30MHz



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. 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.

4.4.2 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.

5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV30	101338	10Hz~30GHz	Jan. 05, 2024	Oct. 15, 2024	Jan. 04, 2025	Conducted (TH01-KS)
Power divider	STI	STI08-0055	-	0.5~40GHz	NCR	Oct. 15, 2024	NCR	Conducted (TH01-KS)
Temperature & humidity	Hongzhan	LP-150U	H2014011440	-40~+150°C 20%~95%RH	Jul. 04, 2024	Oct. 15, 2024	Jul. 03, 2025	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010B	MY57471079	10Hz-44G,MAX 30dB	Oct. 11, 2023	Oct. 15, 2024	Oct. 10, 2024	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2E	101125	9kHz~30MHz	Sep. 08, 2024	Oct. 15, 2024	Sep. 07, 2025	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	44483	30MHz-1GHz	Dec. 06, 2023	Oct. 15, 2024	Dec. 05, 2024	Radiation (03CH04-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75957	1GHz~18GHz	Oct. 23, 2023	Oct. 15, 2024	Oct. 22, 2024	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 27, 2024	Oct. 15, 2024	Jan. 26, 2025	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	413740	9KHz-1GHz	Jan. 03, 2024	Oct. 15, 2024	Jan. 02, 2025	Radiation (03CH04-KS)
Amplifier	EM	EM18G40GA	060728	18~40GHz	Jan. 02, 2024	Oct. 15, 2024	Jan. 01, 2025	Radiation (03CH04-KS)
high gain Amplifier	EM	EM01G18GA	060840	1Ghz-18Ghz	Oct. 10, 2024	Oct. 15, 2024	Oct. 09, 2025	Radiation (03CH04-KS)
Amplifier	EM	EM01G18GA	060892	1Ghz-18Ghz	Oct. 10, 2024	Oct. 15, 2024	Oct. 09, 2025	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Oct. 15, 2024	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Oct. 15, 2024	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Oct. 15, 2024	NCR	Radiation (03CH04-KS)

NCR: No Calibration Required

6 Measurement Uncertainty

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 Conducted Measurement

Test Item	Uncertainty
Conducted Spurious Emission & Bandedge	±2.22 dB
Occupied Channel Bandwidth	±0.1%
Conducted Power	±0.50 dB
Peak to Average Ratio	±0.50 dB
Frequency Stability	±0.04 Hz

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.83 dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.83 dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.82 dB

---------- THE END ----------

Appendix A. Test Results of Conducted Test

Test Engineer :	Smile Wang	Temperature :	22~23℃
		Relative Humidity :	40~42%

Conducted Output Power(Average power) and ERP

LTE Band 12_ANT0:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	ERP(W)		
Channel				23060	23095	23130			
Frequency (MHz)				704	707.5	711	L	M	H
10	QPSK	1	0	24.72	24.80	24.73	0.0771	0.0785	0.0773
10	QPSK	1	49	24.60	24.69	24.71	0.0750	0.0766	0.0769
10	QPSK	50	0	23.71	23.79	23.75	0.0611	0.0622	0.0617
10	16QAM	1	0	23.75	23.73	23.72	0.0617	0.0614	0.0612
10	64QAM	1	0	22.70	22.79	22.75	0.0484	0.0494	0.0490
10	256QAM	1	0	19.67	19.87	19.74	0.0241	0.0252	0.0245
Channel				23035	23095	23155	ERP(W)		
Frequency (MHz)				701.5	707.5	713.5	L	M	H
5	QPSK	1	0	24.63	24.65	24.69	0.0755	0.0759	0.0766
5	16QAM	1	0	23.62	23.60	23.62	0.0598	0.0596	0.0598
Channel				23025	23095	23165	ERP(W)		
Frequency (MHz)				700.5	707.5	714.5	L	M	H
3	QPSK	1	0	24.66	24.74	24.69	0.0760	0.0774	0.0766
3	16QAM	1	0	23.63	23.62	23.59	0.0600	0.0598	0.0594
Channel				23017	23095	23173	ERP(W)		
Frequency (MHz)				699.7	707.5	715.3	L	M	H
1.4	QPSK	1	0	24.66	24.74	24.61	0.0760	0.0774	0.0752
1.4	16QAM	1	0	23.66	23.60	23.64	0.0604	0.0596	0.0601

LTE Band 13_ANT1:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	ERP(W)		
Channel					23230				
Frequency (MHz)					782			M	
10	QPSK	1	0		24.53			0.0755	
10	QPSK	1	49		24.45			0.0741	
10	QPSK	50	0		23.54			0.0601	
10	16QAM	1	0		23.48			0.0593	
10	64QAM	1	0		22.52			0.0475	
10	256QAM	1	0		19.53			0.0239	
Channel				23205	23230	23255	ERP(W)		
Frequency (MHz)				779.5	782	784.5	L	M	H
5	QPSK	1	0	24.42	24.48	24.43	0.0736	0.0746	0.0738
5	16QAM	1	0	23.45	23.42	23.45	0.0589	0.0585	0.0589

LTE Band 17_ANT0:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	ERP(W)		
Channel				23780	23790	23800			
Frequency (MHz)				709	710	711	L	M	H
10	QPSK	1	0	24.76	24.78	24.74	0.0778	0.0782	0.0774
10	QPSK	1	49	24.75	24.69	24.67	0.0776	0.0766	0.0762
10	QPSK	50	0	23.77	23.79	23.74	0.0619	0.0622	0.0615
10	16QAM	1	0	23.72	23.76	23.72	0.0612	0.0618	0.0612
10	64QAM	1	0	22.66	22.72	22.75	0.0480	0.0486	0.0490
10	256QAM	1	0	19.71	19.85	19.74	0.0243	0.0251	0.0245
Channel				23755	23790	23825	ERP(W)		
Frequency (MHz)				706.5	710	713.5	L	M	H
5	QPSK	1	0	24.70	24.68	24.71	0.0767	0.0764	0.0769
5	16QAM	1	0	23.65	23.66	23.66	0.0603	0.0604	0.0604

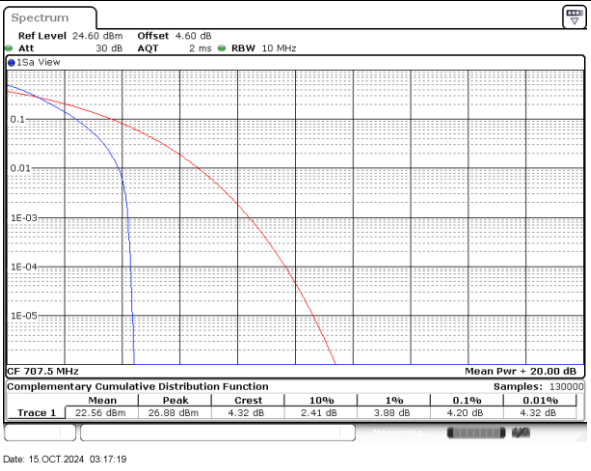
LTE Band 12

Peak-to-Average Ratio

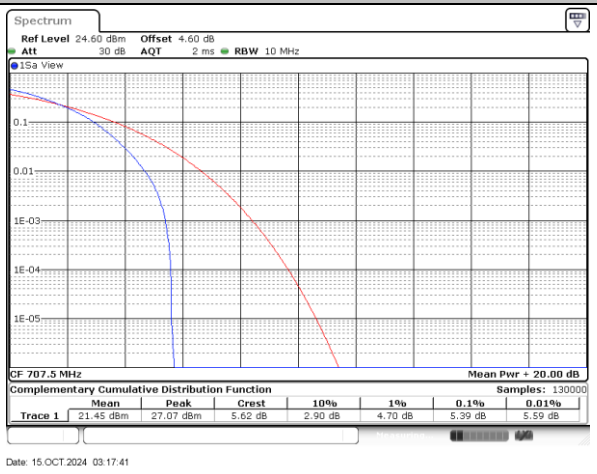
Mode	LTE Band 12 / 10MHz				
Mod.	QPSK	16QAM	64QAM	256QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	4.20	5.39	6.06	6.32	PASS

LTE Band 12 / 10MHz

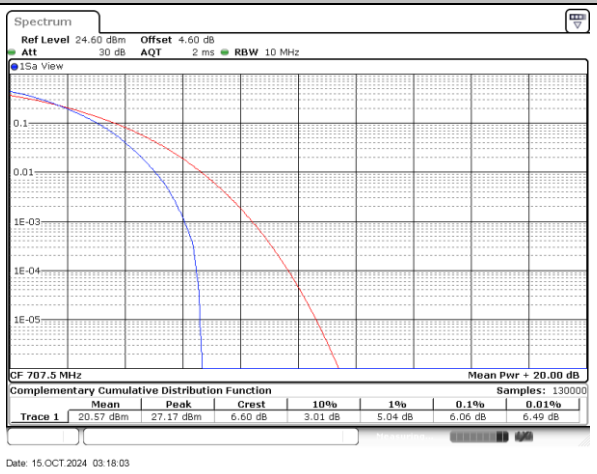
Middle Channel / Full RB/ QPSK



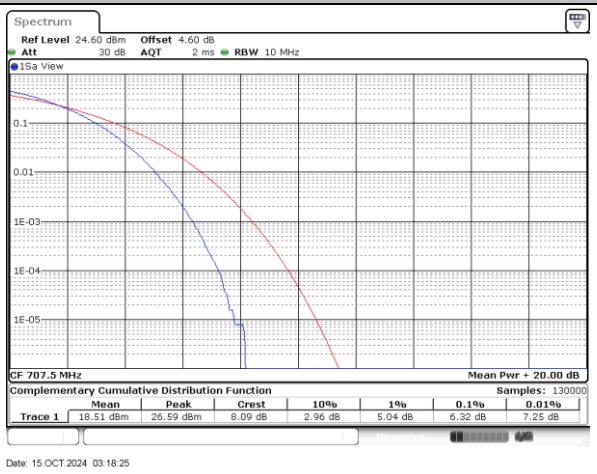
Middle Channel / Full RB/ 16QAM



Middle Channel / Full RB/ 64QAM



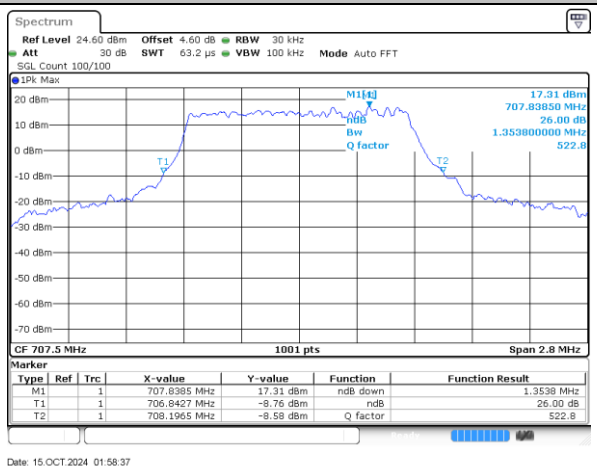
Middle Channel / Full RB/ 256QAM

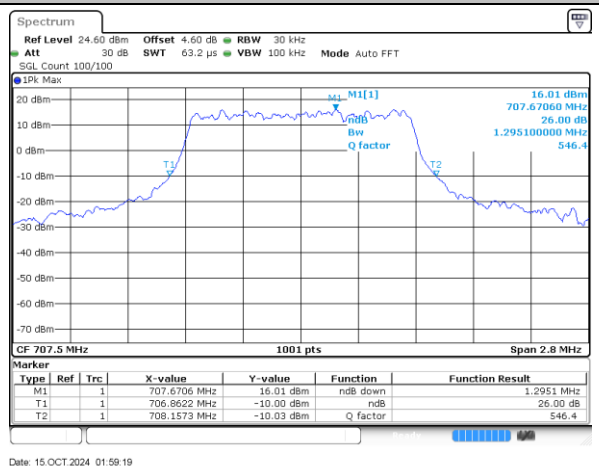


26dB Bandwidth

Mode	LTE Band 12 : 26dB BW(MHz)	
BW	1.4MHz	
Mod.	QPSK	16QAM
Middle CH	1.3538	1.2951
BW	3MHz	
Mod.	QPSK	16QAM
Middle CH	3.0749	3.039
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	5.145	5.165
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.95	9.89

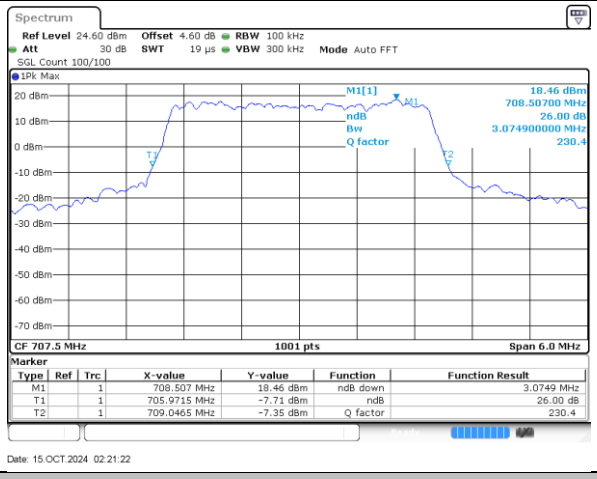
LTE Band 12	
Middle Channel / 1.4MHz / QPSK	Middle Channel / 1.4MHz / 16QAM



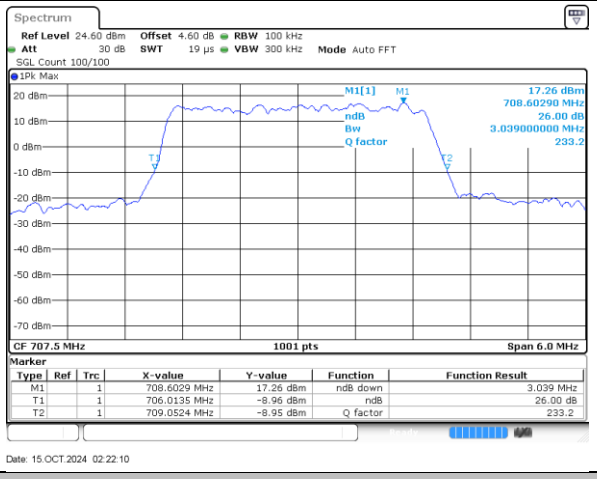


LTE Band 12

Middle Channel / 3MHz / QPSK

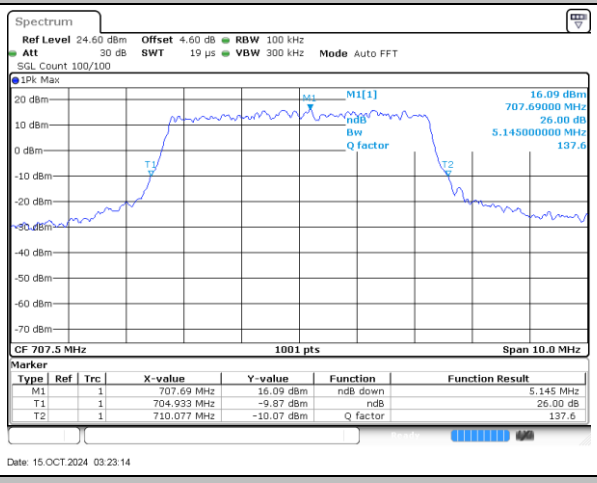


Middle Channel / 3MHz / 16QAM

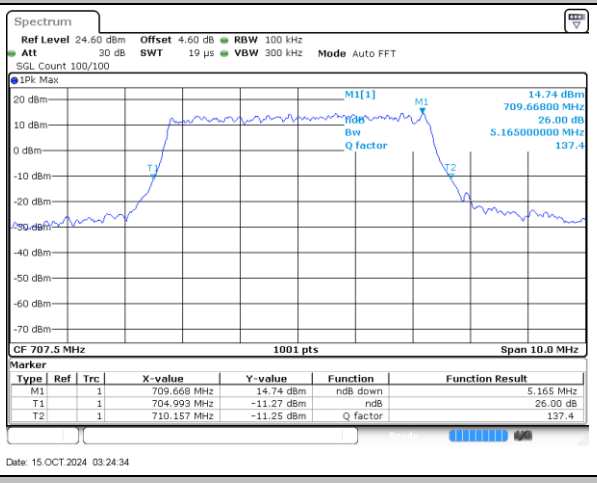


LTE Band 12

Middle Channel / 5MHz / QPSK

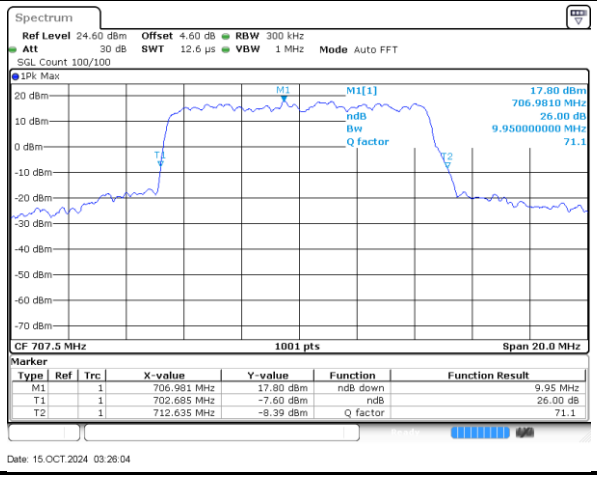


Middle Channel / 5MHz / 16QAM

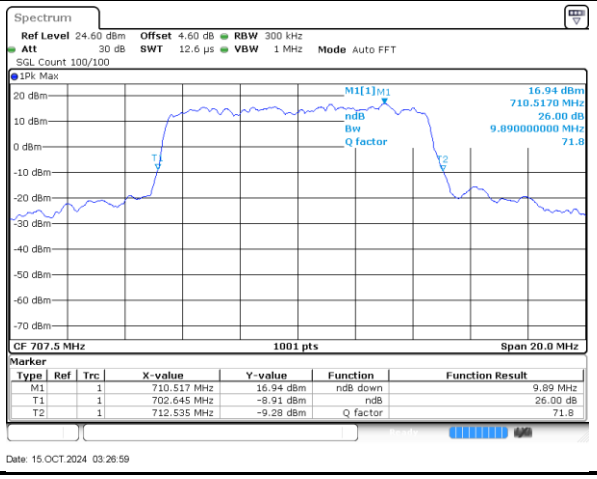


LTE Band 12

Middle Channel / 10MHz / QPSK



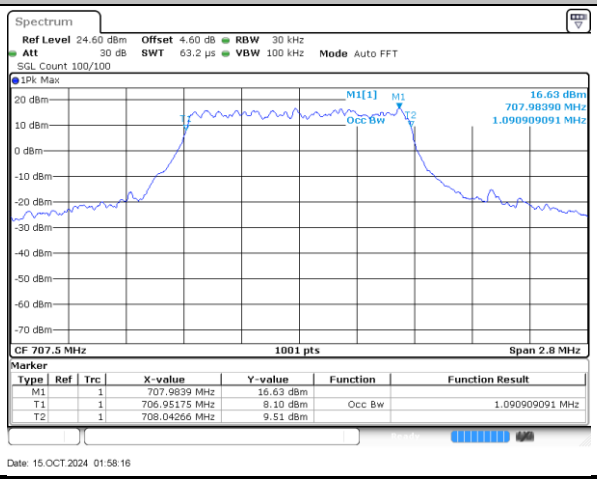
Middle Channel / 10MHz / 16QAM

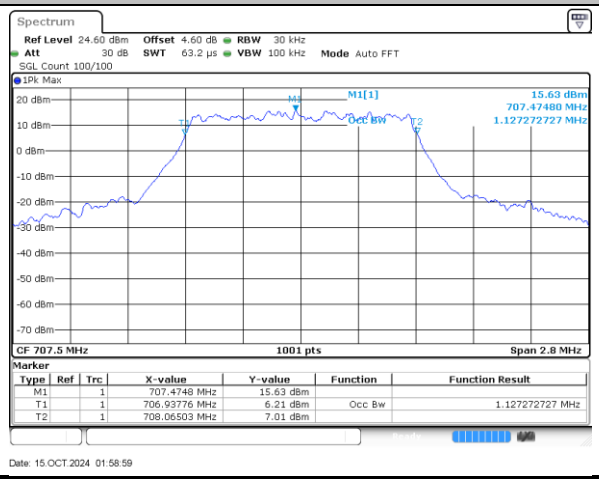


Occupied Bandwidth

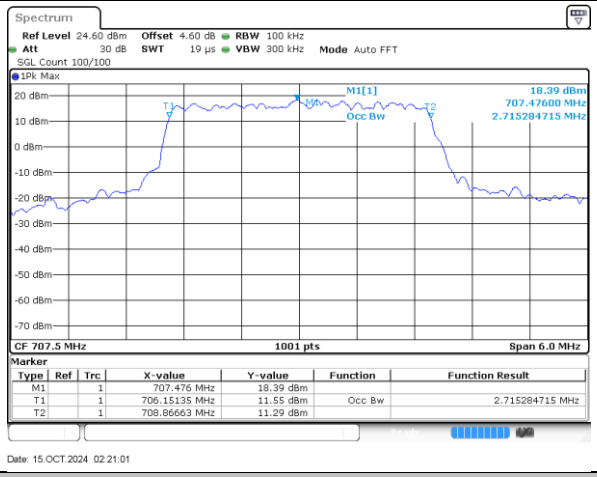
Mode	LTE Band 12 : 99%OBW(MHz)	
BW	1.4MHz	
Mod.	QPSK	16QAM
Middle CH	1.091	1.127
BW	3MHz	
Mod.	QPSK	16QAM
Middle CH	2.715	2.703
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	4.505	4.486
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.031	9.031

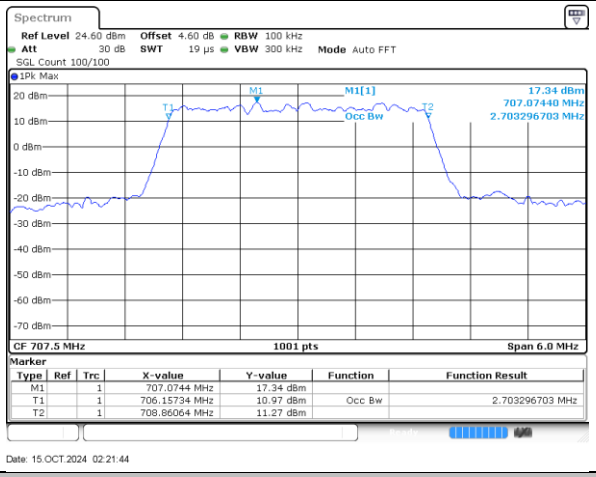
LTE Band 12	
Middle Channel / 1.4MHz / QPSK	Middle Channel / 1.4MHz / 16QAM



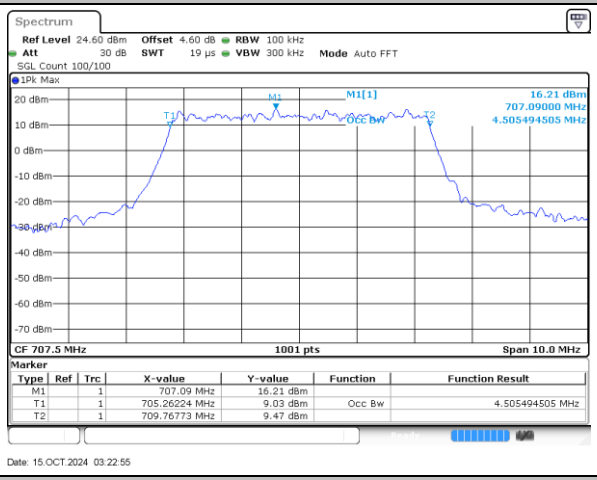


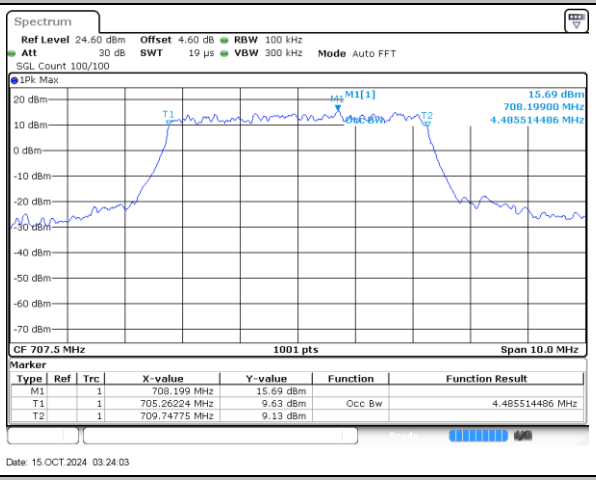
LTE Band 12	
Middle Channel / 3MHz / QPSK	Middle Channel / 3MHz / 16QAM



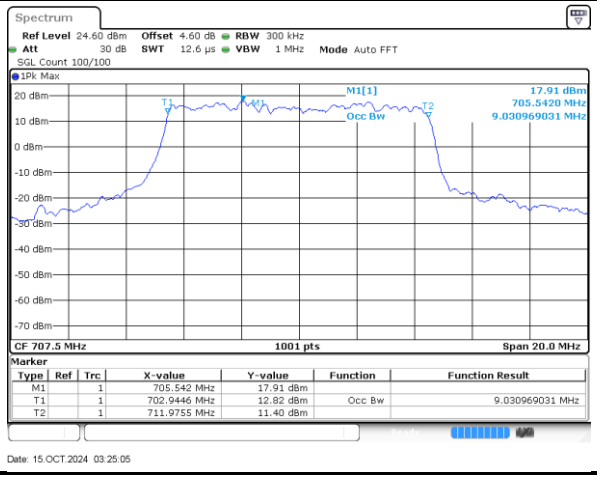


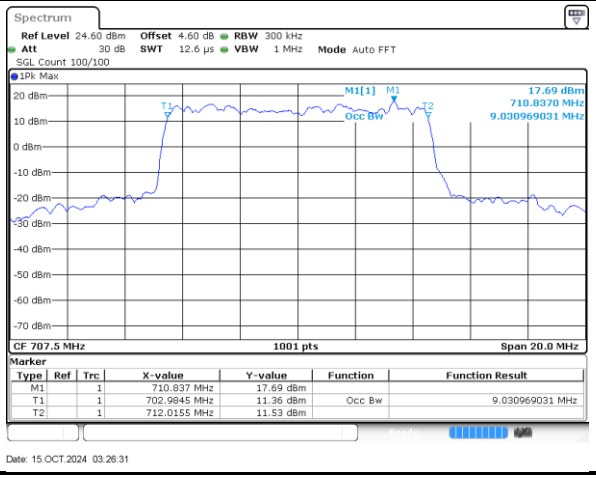
LTE Band 12	
Middle Channel / 5MHz / QPSK	Middle Channel / 5MHz / 16QAM





LTE Band 12	
Middle Channel / 10MHz / QPSK	Middle Channel / 10MHz / 16QAM

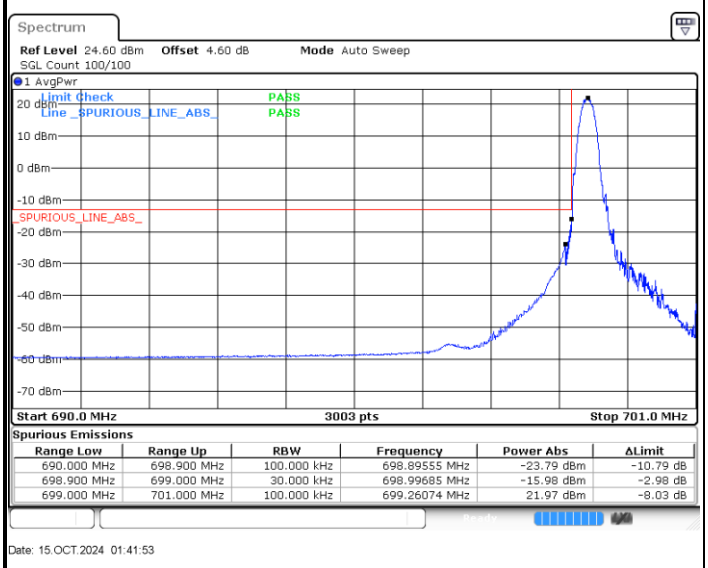




Conducted Band Edge

LTE Band 12 / 1.4MHz / QPSK

Lowest Band Edge / 1RB

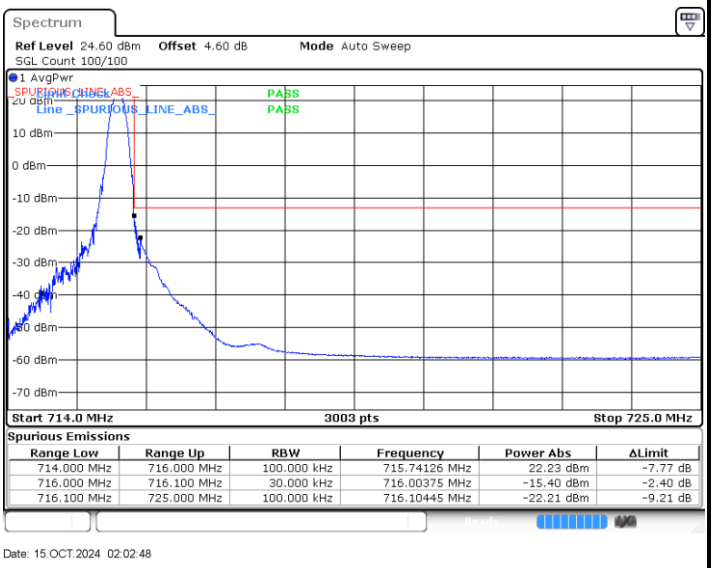


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-23.79 dBm	-10.79 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99685 MHz	-15.98 dBm	-2.98 dB
699.000 MHz	701.000 MHz	100.000 kHz	699.26074 MHz	21.97 dBm	-8.03 dB

Date: 15.OCT.2024 01:41:53

Highest Band Edge / 1RB

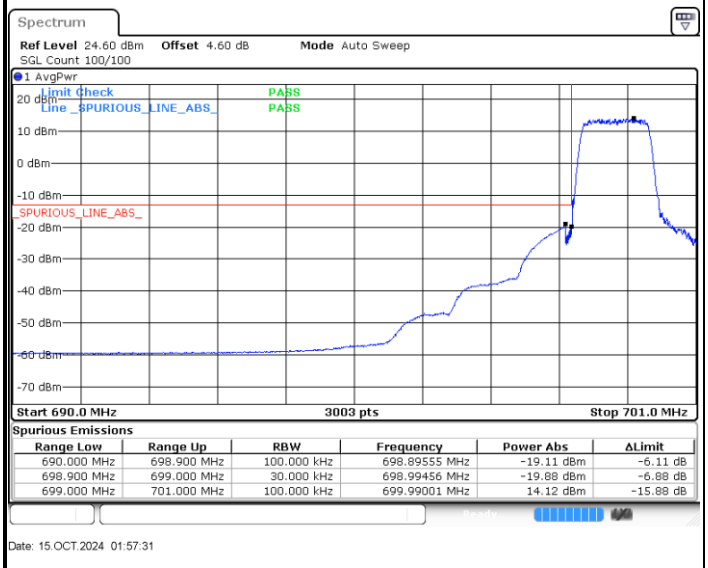


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
714.000 MHz	716.000 MHz	100.000 kHz	715.74126 MHz	22.23 dBm	-7.77 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00375 MHz	-15.40 dBm	-2.40 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-22.21 dBm	-9.21 dB

Date: 15.OCT.2024 02:02:48

Lowest Band Edge / Full RB

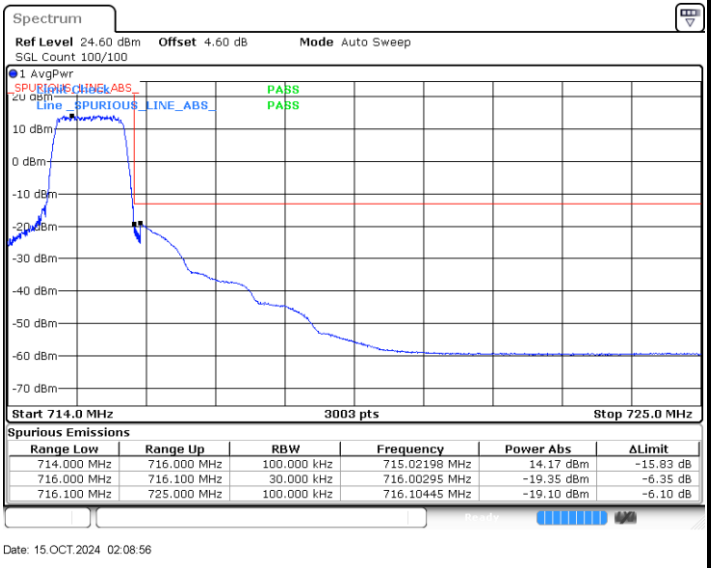


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-19.11 dBm	-6.11 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99456 MHz	-19.88 dBm	-6.88 dB
699.000 MHz	701.000 MHz	100.000 kHz	699.99001 MHz	14.12 dBm	-15.88 dB

Date: 15.OCT.2024 01:57:31

Highest Band Edge / Full RB



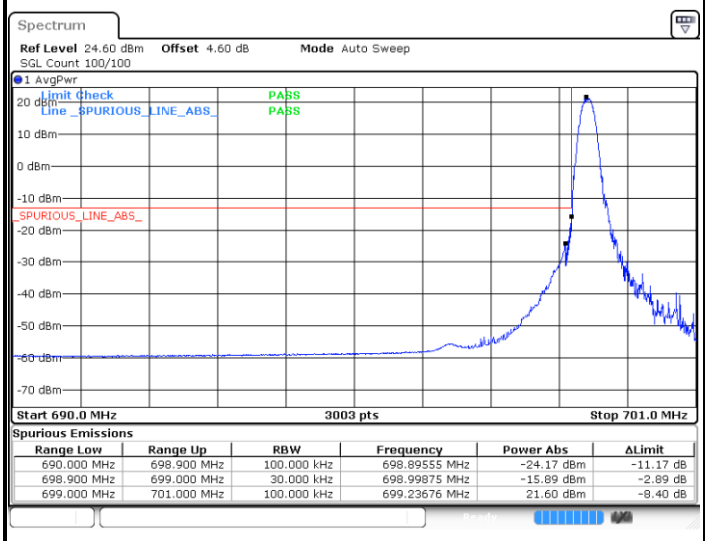
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
714.000 MHz	716.000 MHz	100.000 kHz	715.02198 MHz	14.17 dBm	-15.83 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00295 MHz	-19.35 dBm	-6.35 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-19.10 dBm	-6.10 dB

Date: 15.OCT.2024 02:08:56

LTE Band 12 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB

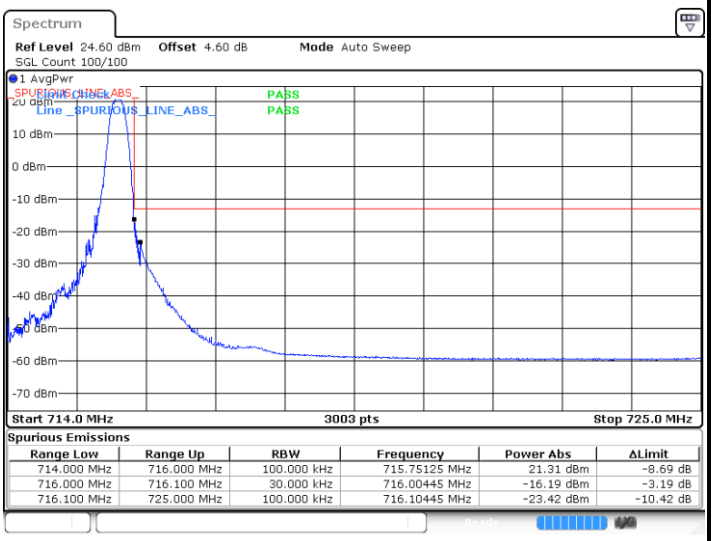


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-24.17 dBm	-11.17 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99875 MHz	-15.89 dBm	-2.89 dB
699.000 MHz	701.000 MHz	100.000 kHz	699.23676 MHz	21.60 dBm	-8.40 dB

Date: 15.OCT.2024 01:42:35

Highest Band Edge / 1 RB

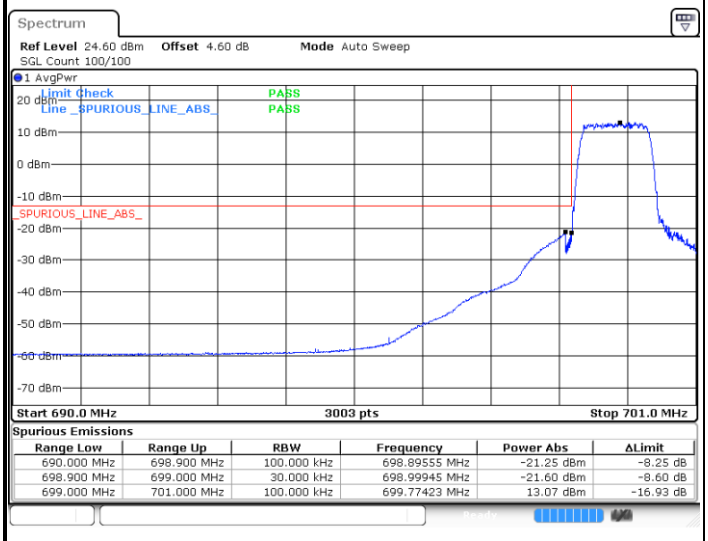


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
714.000 MHz	716.000 MHz	100.000 kHz	715.75125 MHz	21.31 dBm	-8.69 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00445 MHz	-16.19 dBm	-3.19 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-23.42 dBm	-10.42 dB

Date: 15.OCT.2024 02:03:35

Lowest Band Edge / Full RB

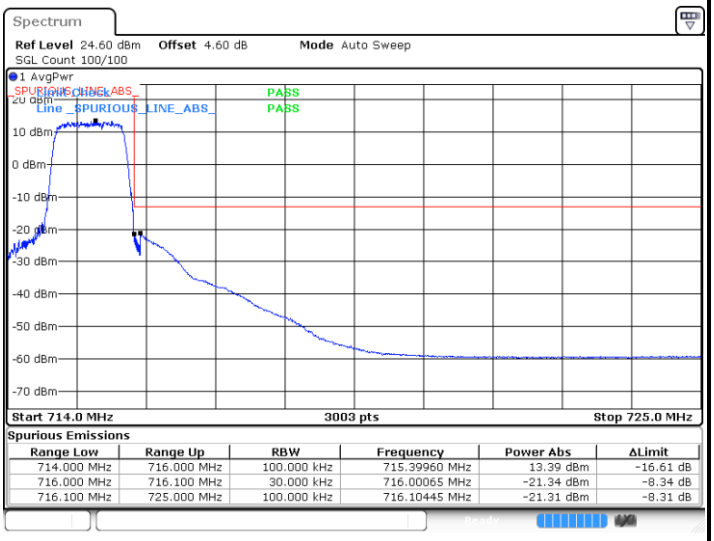


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-21.25 dBm	-8.25 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99945 MHz	-21.60 dBm	-8.60 dB
699.000 MHz	701.000 MHz	100.000 kHz	699.77423 MHz	13.07 dBm	-16.93 dB

Date: 15.OCT.2024 01:56:43

Highest Band Edge / Full RB



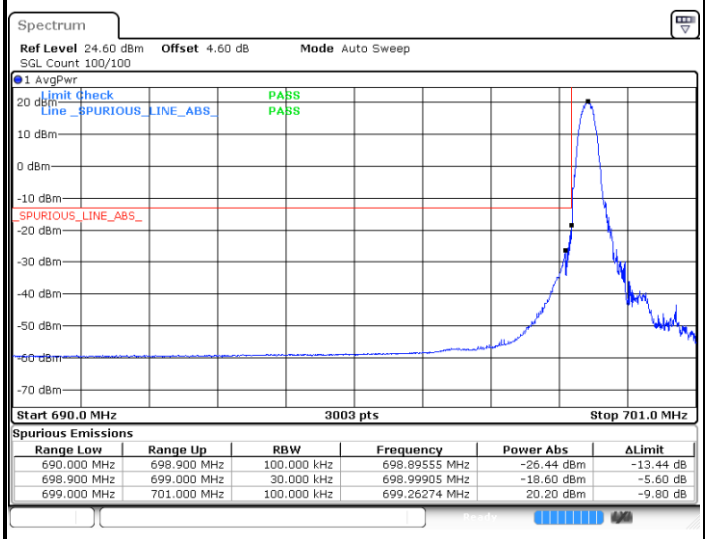
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
714.000 MHz	716.000 MHz	100.000 kHz	715.39960 MHz	13.39 dBm	-16.61 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00065 MHz	-21.34 dBm	-8.34 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-21.31 dBm	-8.31 dB

Date: 15.OCT.2024 02:08:09

LTE Band 12 / 1.4MHz / 64QAM

Lowest Band Edge / 1 RB

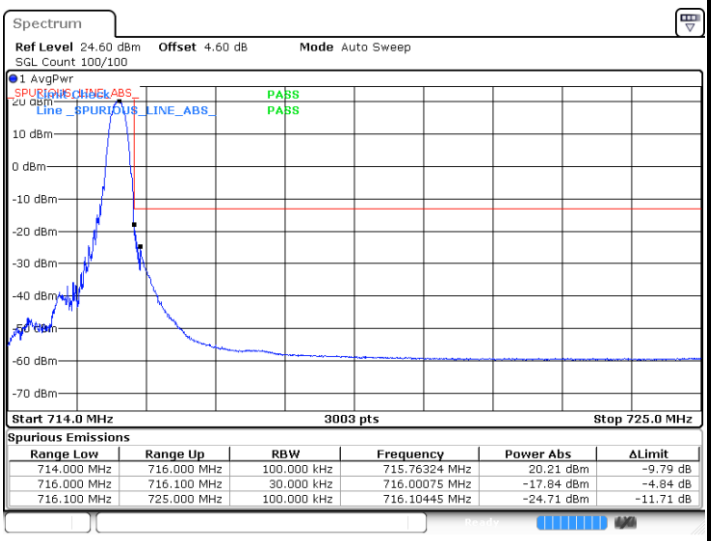


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-26.44 dBm	-13.44 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99905 MHz	-18.60 dBm	-5.60 dB
699.000 MHz	701.000 MHz	100.000 kHz	699.26274 MHz	20.20 dBm	-9.80 dB

Date: 15.OCT.2024 01:46:37

Highest Band Edge / 1 RB

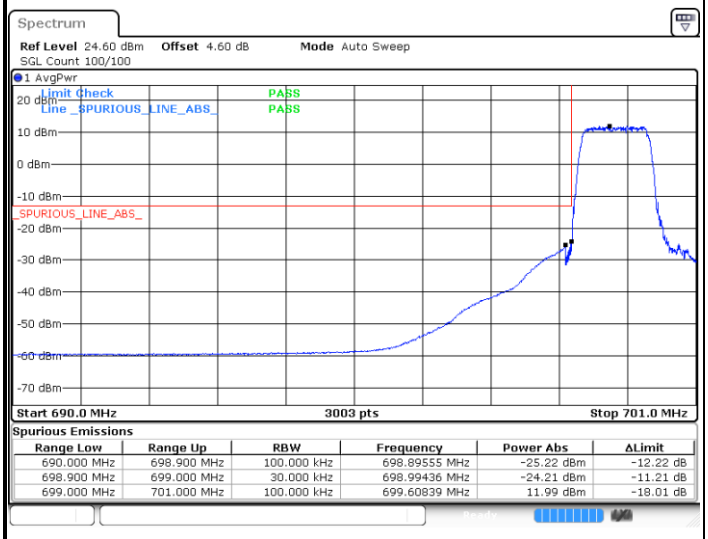


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
714.000 MHz	716.000 MHz	100.000 kHz	715.76324 MHz	20.21 dBm	-9.79 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00075 MHz	-17.84 dBm	-4.84 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-24.71 dBm	-11.71 dB

Date: 15.OCT.2024 02:04:21

Lowest Band Edge / Full RB

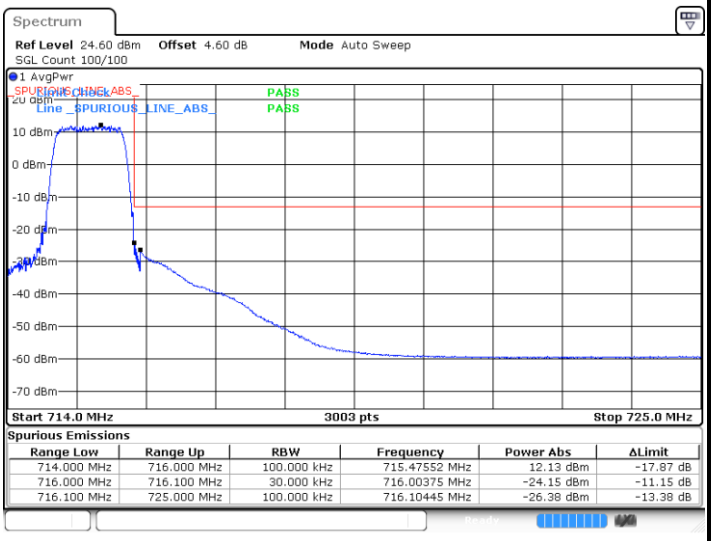


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-25.22 dBm	-12.22 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99436 MHz	-24.21 dBm	-11.21 dB
699.000 MHz	701.000 MHz	100.000 kHz	699.60839 MHz	11.99 dBm	-18.01 dB

Date: 15.OCT.2024 01:55:55

Highest Band Edge / Full RB



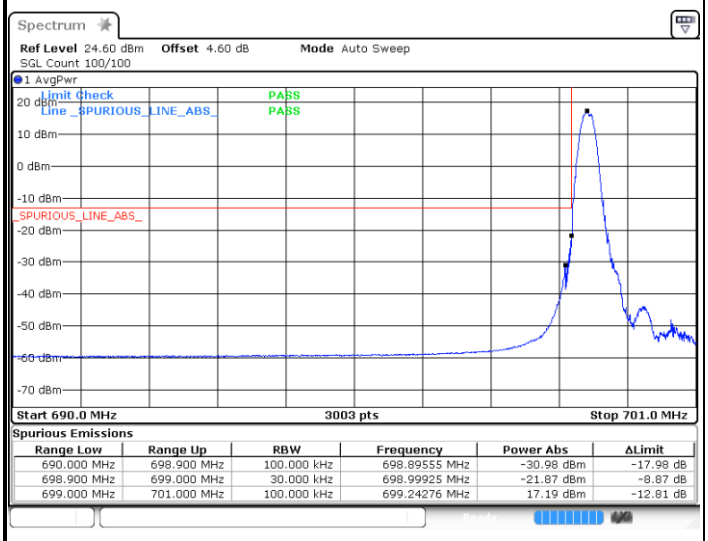
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
714.000 MHz	716.000 MHz	100.000 kHz	715.47552 MHz	12.13 dBm	-17.87 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00375 MHz	-24.15 dBm	-11.15 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-26.38 dBm	-13.38 dB

Date: 15.OCT.2024 02:07:15

LTE Band 12 / 1.4MHz / 256QAM

Lowest Band Edge / 1 RB

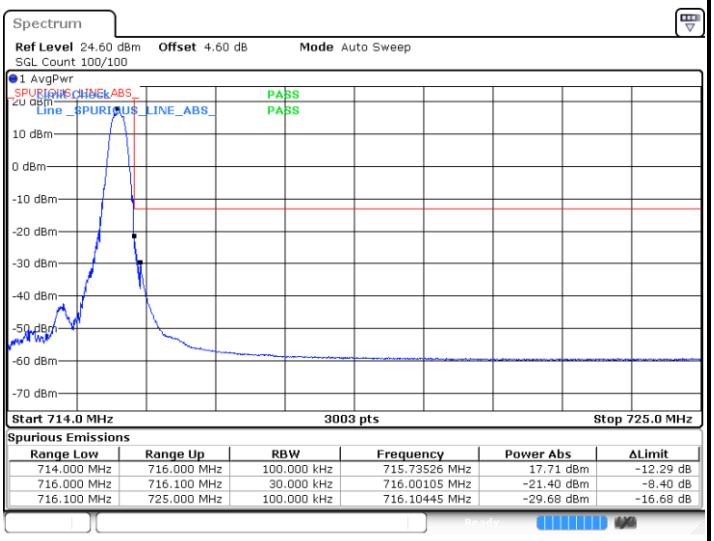


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-30.98 dBm	-17.98 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99925 MHz	-21.87 dBm	-8.87 dB
699.000 MHz	701.000 MHz	100.000 kHz	699.24276 MHz	17.19 dBm	-12.81 dB

Date: 15.OCT.2024 01:52:08

Highest Band Edge / 1 RB

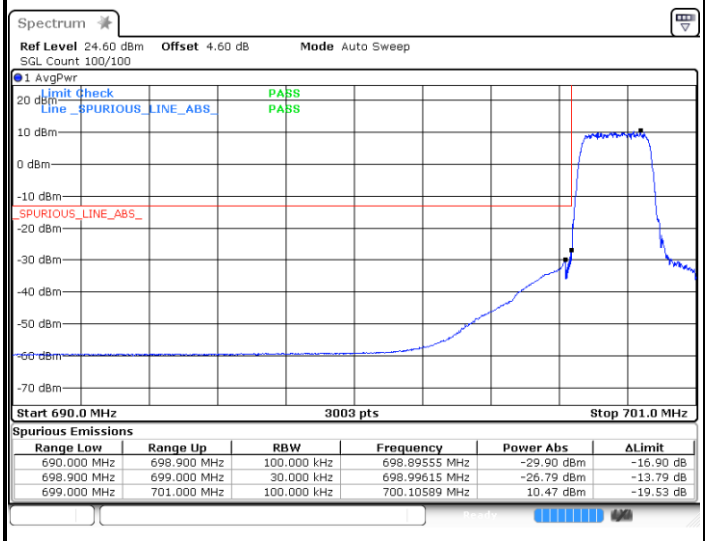


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
714.000 MHz	716.000 MHz	100.000 kHz	715.73526 MHz	17.71 dBm	-12.29 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00105 MHz	-21.40 dBm	-8.40 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-29.68 dBm	-16.68 dB

Date: 15.OCT.2024 02:05:12

Lowest Band Edge / Full RB

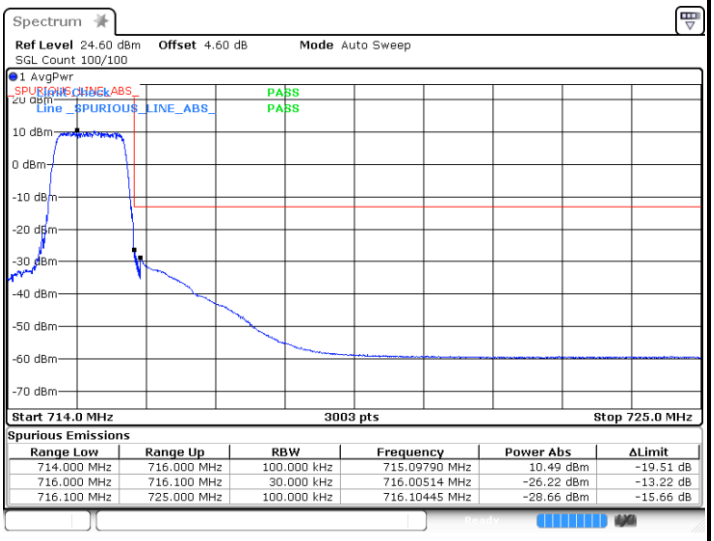


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-29.90 dBm	-16.90 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99615 MHz	-26.79 dBm	-13.79 dB
699.000 MHz	701.000 MHz	100.000 kHz	700.10589 MHz	10.47 dBm	-19.53 dB

Date: 15.OCT.2024 01:55:02

Highest Band Edge / Full RB



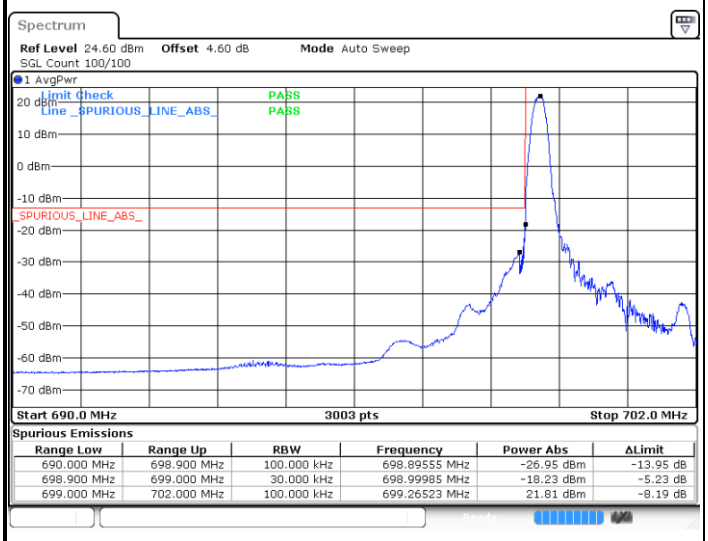
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
714.000 MHz	716.000 MHz	100.000 kHz	715.09790 MHz	10.49 dBm	-19.51 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00514 MHz	-26.22 dBm	-13.22 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-28.66 dBm	-15.66 dB

Date: 15.OCT.2024 02:06:24

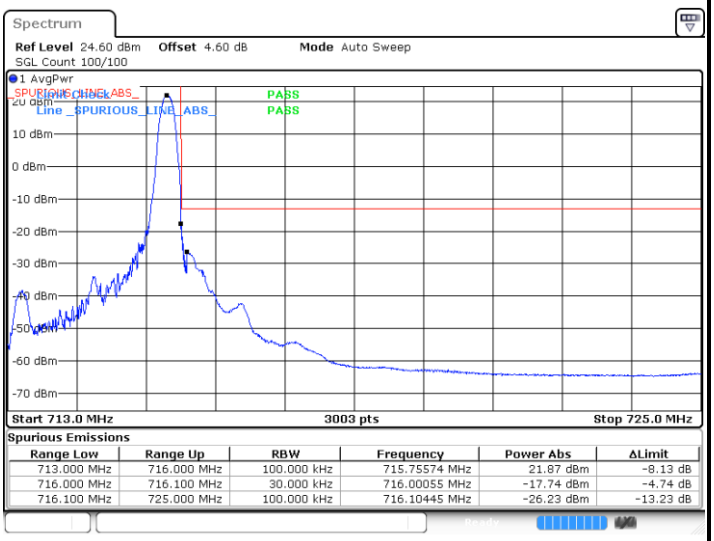
LTE Band 12 / 3MHz / QPSK

Lowest Band Edge / 1RB



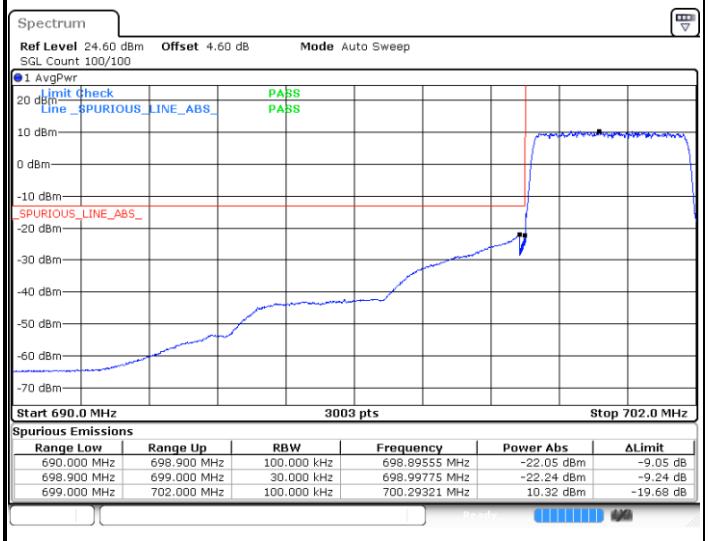
Date: 15.OCT.2024 02:11:59

Highest Band Edge / 1 RB



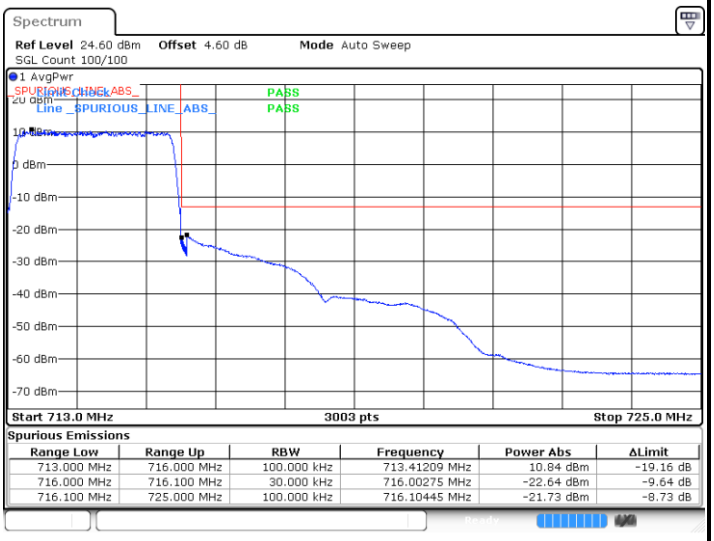
Date: 15.OCT.2024 02:26:00

Lowest Band Edge / Full RB



Date: 15.OCT.2024 02:20:22

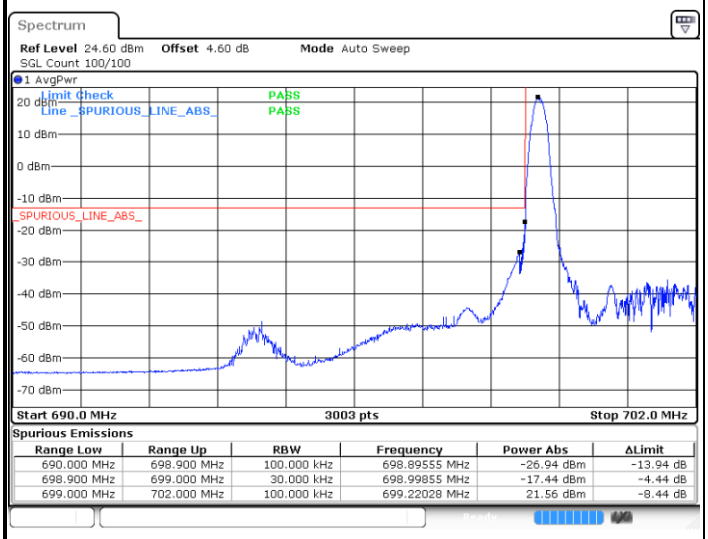
Highest Band Edge / Full RB



Date: 15.OCT.2024 02:31:44

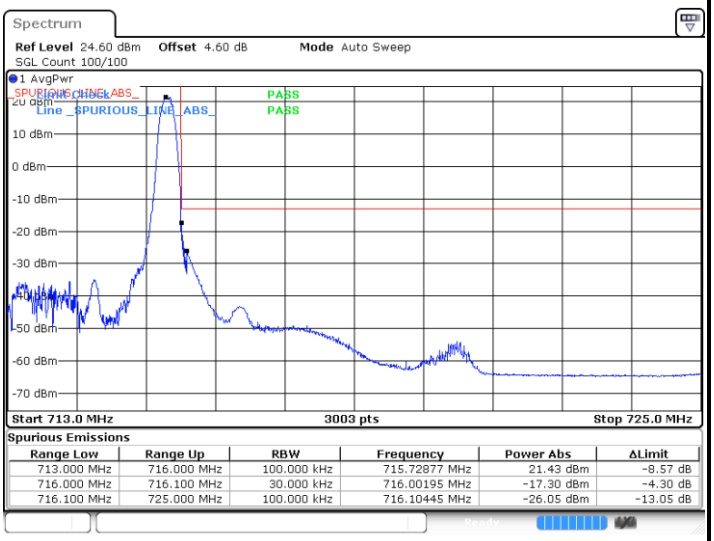
LTE Band 12 / 3MHz / 16QAM

Lowest Band Edge / 1 RB



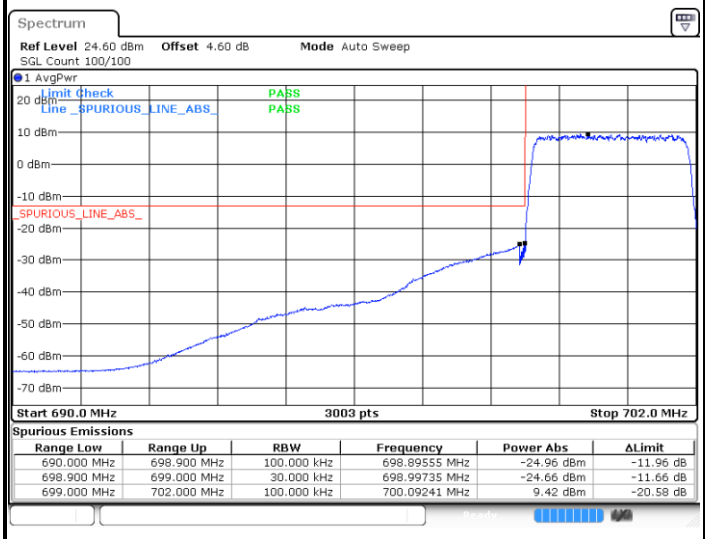
Date: 15.OCT.2024 02:12:52

Highest Band Edge /1 RB



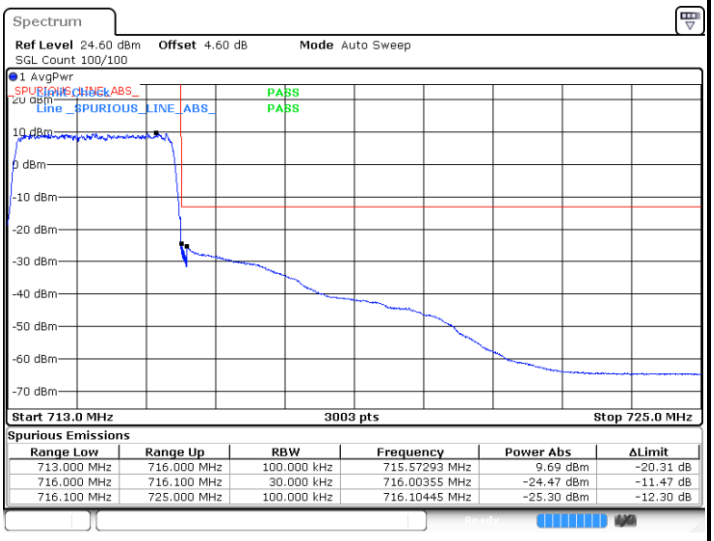
Date: 15.OCT.2024 02:26:48

Lowest Band Edge / Full RB



Date: 15.OCT.2024 02:19:36

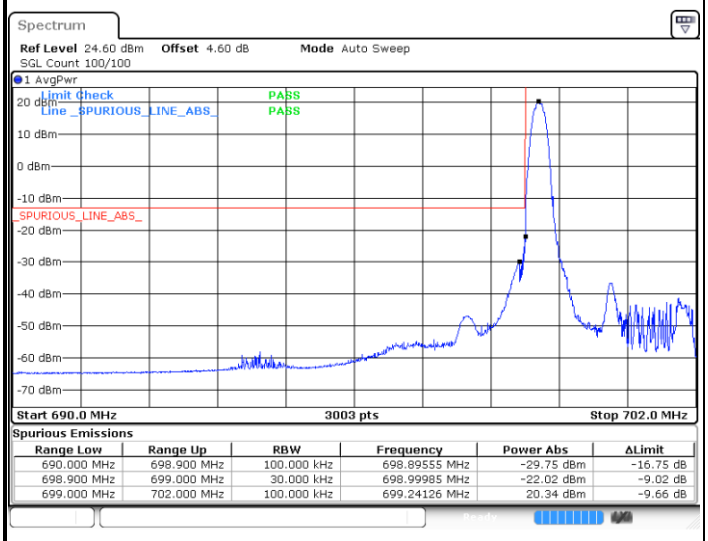
Highest Band Edge / Full RB



Date: 15.OCT.2024 02:30:56

LTE Band 12 / 3MHz / 64QAM

Lowest Band Edge / 1 RB

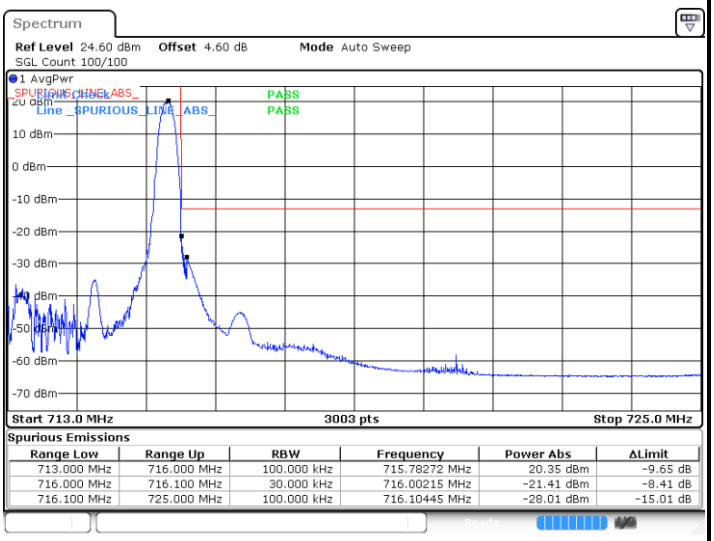


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-29.75 dBm	-16.75 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99985 MHz	-22.02 dBm	-9.02 dB
699.000 MHz	702.000 MHz	100.000 kHz	699.24126 MHz	20.34 dBm	-9.66 dB

Date: 15.OCT.2024 02:13:55

Highest Band Edge /1 RB

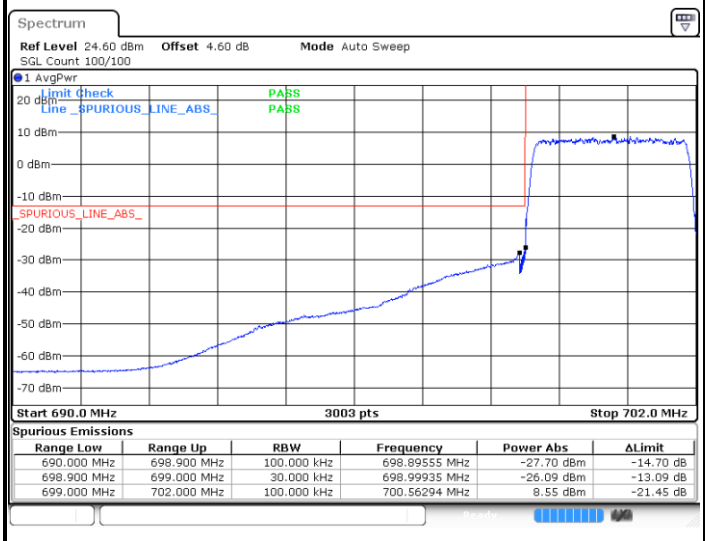


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
713.000 MHz	716.000 MHz	100.000 kHz	715.78272 MHz	20.35 dBm	-9.65 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00215 MHz	-21.41 dBm	-8.41 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-28.01 dBm	-15.01 dB

Date: 15.OCT.2024 02:27:37

Lowest Band Edge / Full RB

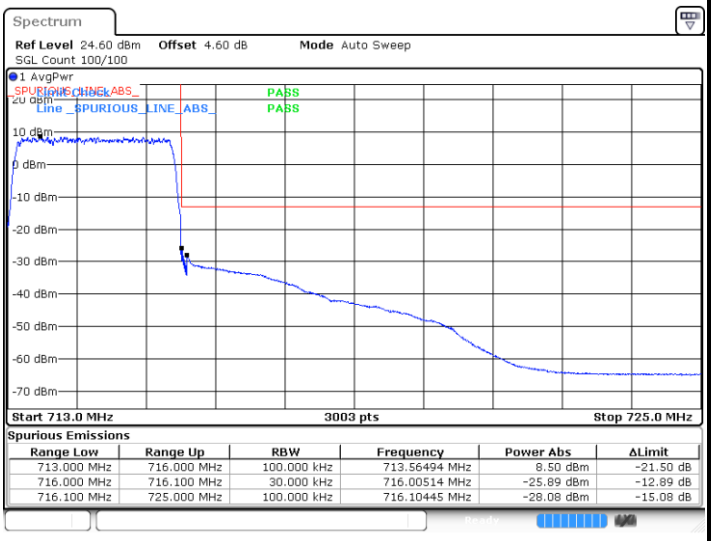


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-27.70 dBm	-14.70 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99935 MHz	-26.09 dBm	-13.09 dB
699.000 MHz	702.000 MHz	100.000 kHz	700.56294 MHz	8.55 dBm	-21.45 dB

Date: 15.OCT.2024 02:18:46

Highest Band Edge / Full RB



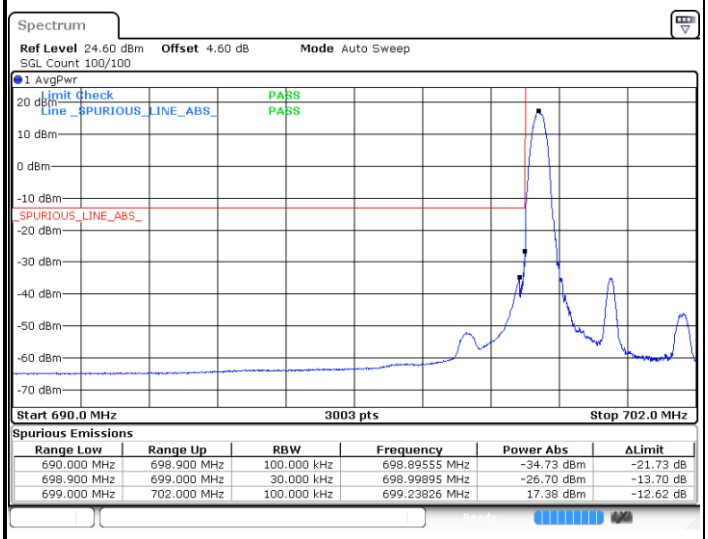
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
713.000 MHz	716.000 MHz	100.000 kHz	713.56494 MHz	8.50 dBm	-21.50 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00514 MHz	-25.89 dBm	-12.89 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-28.08 dBm	-15.08 dB

Date: 15.OCT.2024 02:30:08

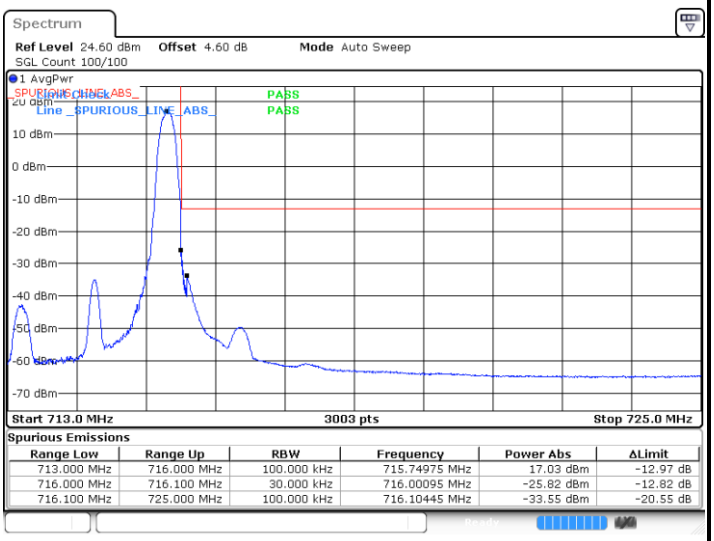
LTE Band 12 / 3MHz / 256QAM

Lowest Band Edge / 1 RB



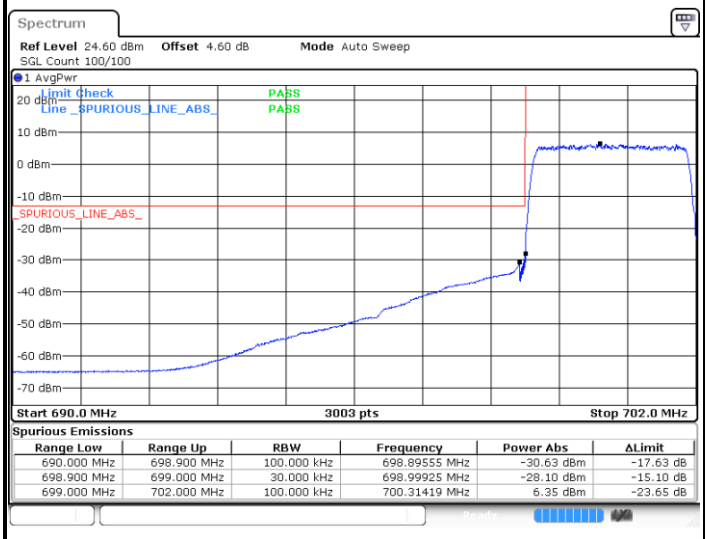
Date: 15.OCT.2024 02:17:02

Highest Band Edge /1 RB



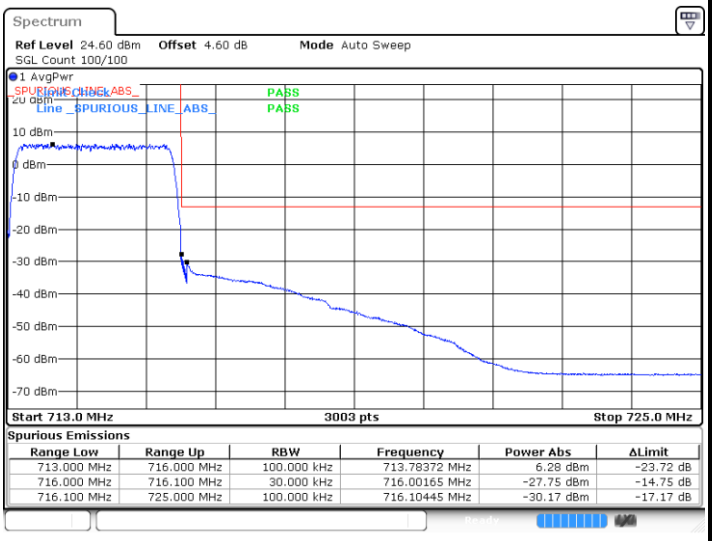
Date: 15.OCT.2024 02:28:33

Lowest Band Edge / Full RB



Date: 15.OCT.2024 02:17:58

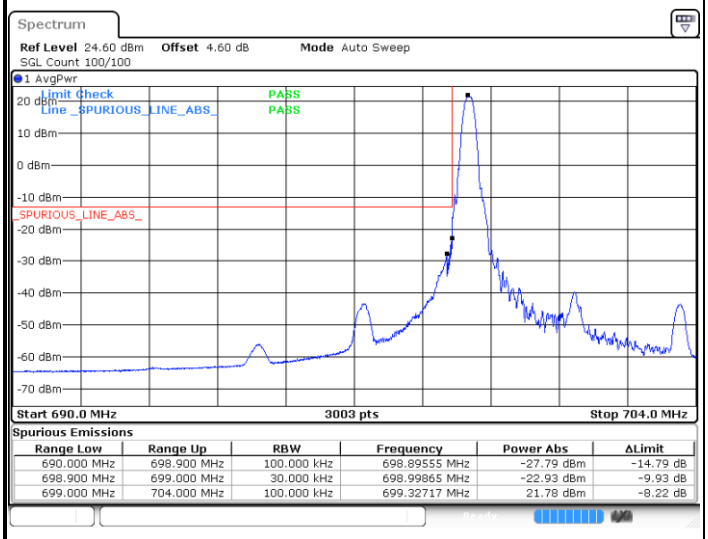
Highest Band Edge / Full RB



Date: 15.OCT.2024 02:29:19

LTE Band 12 / 5MHz / QPSK

Lowest Band Edge / 1 RB

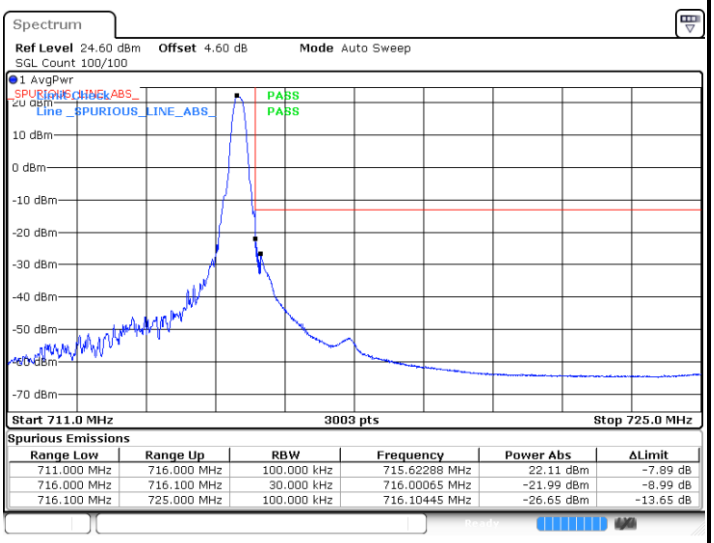


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-27.79 dBm	-14.79 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99865 MHz	-22.93 dBm	-9.93 dB
699.000 MHz	704.000 MHz	100.000 kHz	699.32717 MHz	21.78 dBm	-8.22 dB

Date: 15.OCT.2024 02:34:25

Highest Band Edge / 1 RB

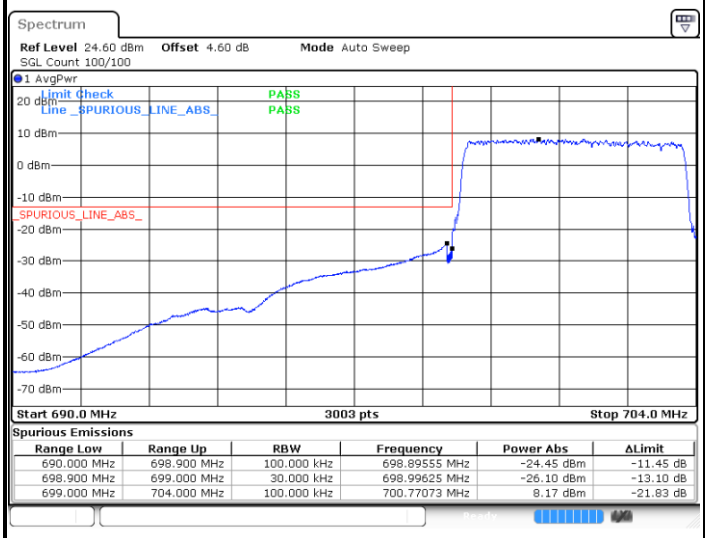


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
711.000 MHz	716.000 MHz	100.000 kHz	715.62288 MHz	22.11 dBm	-7.89 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00065 MHz	-21.99 dBm	-8.99 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-26.65 dBm	-13.65 dB

Date: 15.OCT.2024 02:46:20

Lowest Band Edge / Full RB

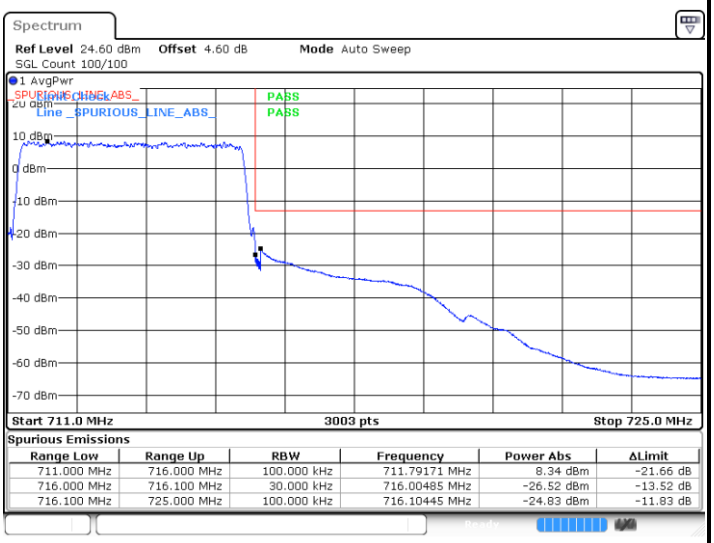


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-24.45 dBm	-11.45 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99625 MHz	-26.10 dBm	-13.10 dB
699.000 MHz	704.000 MHz	100.000 kHz	700.77073 MHz	8.17 dBm	-21.83 dB

Date: 15.OCT.2024 02:42:31

Highest Band Edge / Full RB



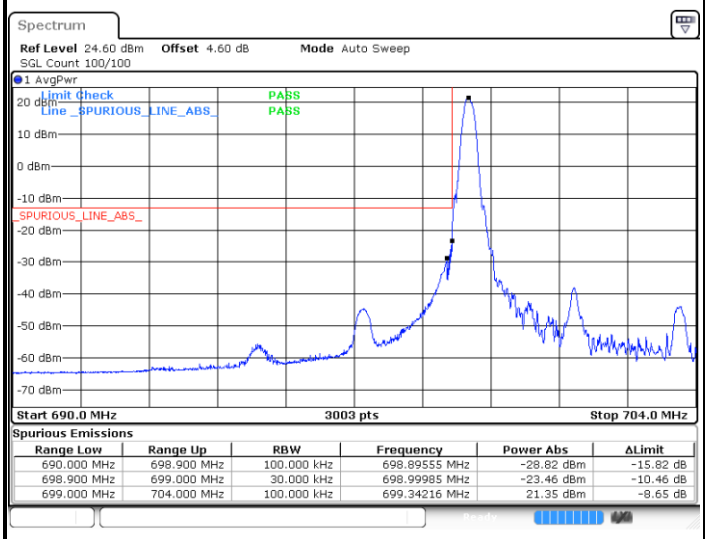
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
711.000 MHz	716.000 MHz	100.000 kHz	711.79171 MHz	8.34 dBm	-21.66 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00485 MHz	-26.52 dBm	-13.52 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-24.83 dBm	-11.83 dB

Date: 15.OCT.2024 02:54:26

LTE Band 12 / 5MHz / 16QAM

Lowest Band Edge / 1RB

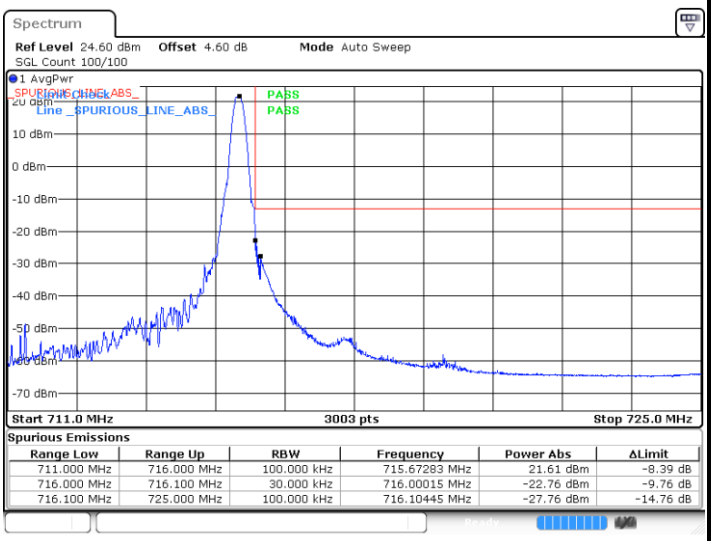


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-28.82 dBm	-15.82 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99985 MHz	-23.46 dBm	-10.46 dB
699.000 MHz	704.000 MHz	100.000 kHz	699.34216 MHz	21.35 dBm	-8.65 dB

Date: 15.OCT.2024 02:35:34

Highest Band Edge / 1 RB

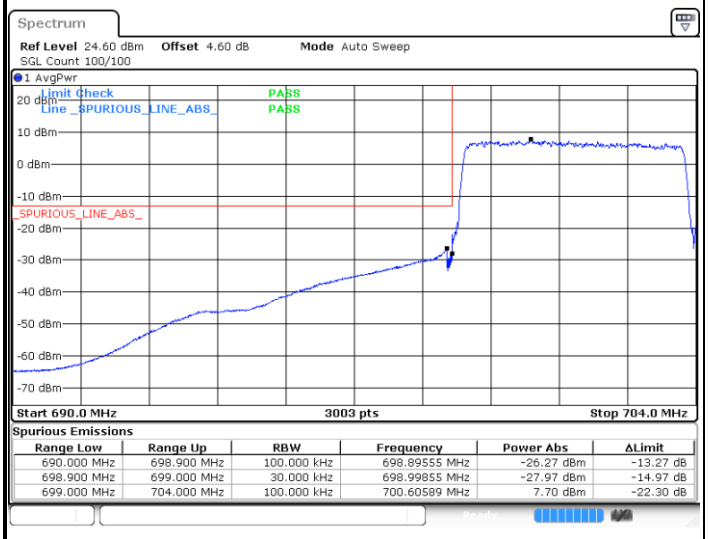


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
711.000 MHz	716.000 MHz	100.000 kHz	715.67283 MHz	21.61 dBm	-8.39 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00015 MHz	-22.76 dBm	-9.76 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-27.76 dBm	-14.76 dB

Date: 15.OCT.2024 02:47:29

Lowest Band Edge / Full RB

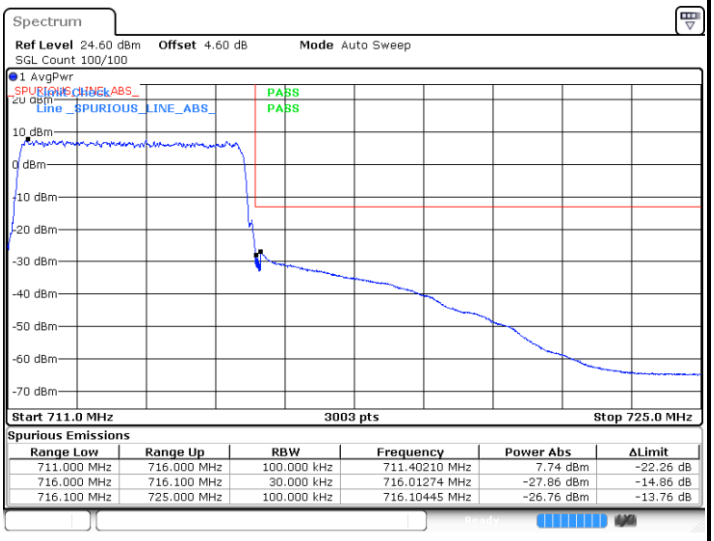


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-26.27 dBm	-13.27 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99855 MHz	-27.97 dBm	-14.97 dB
699.000 MHz	704.000 MHz	100.000 kHz	700.60589 MHz	7.70 dBm	-22.30 dB

Date: 15.OCT.2024 02:41:21

Highest Band Edge / Full RB



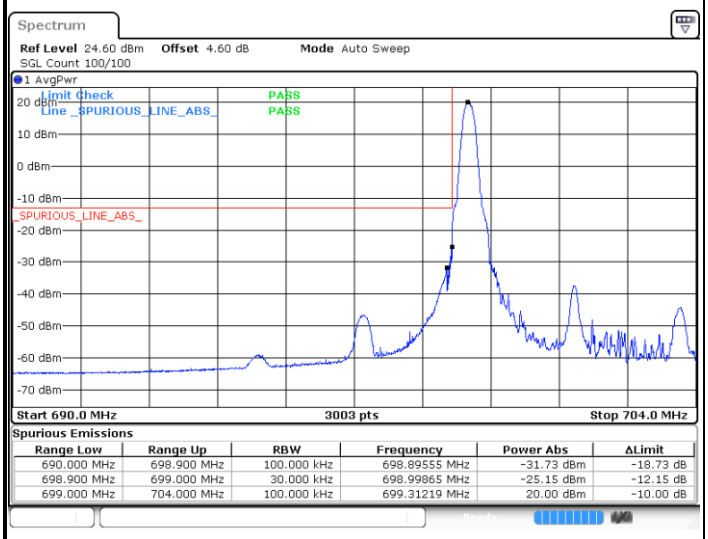
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
711.000 MHz	716.000 MHz	100.000 kHz	711.40210 MHz	7.74 dBm	-22.26 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.01274 MHz	-27.86 dBm	-14.86 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-26.76 dBm	-13.76 dB

Date: 15.OCT.2024 02:53:17

LTE Band 12 / 5MHz / 64QAM

Lowest Band Edge / 1RB

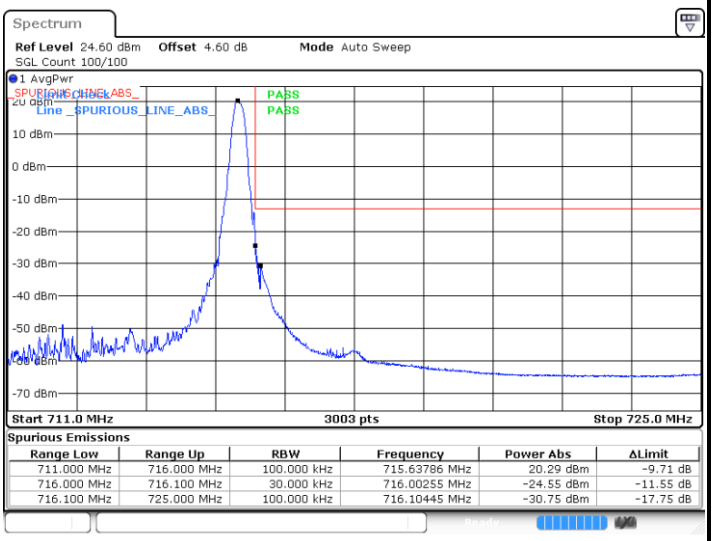


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-31.73 dBm	-18.73 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99865 MHz	-25.15 dBm	-12.15 dB
699.000 MHz	704.000 MHz	100.000 kHz	699.31219 MHz	20.00 dBm	-10.00 dB

Date: 15.OCT.2024 02:36:44

Highest Band Edge / 1 RB

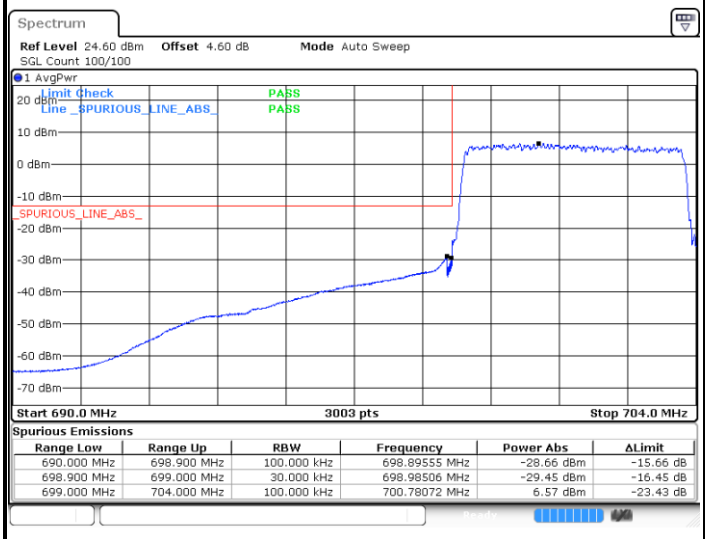


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
711.000 MHz	716.000 MHz	100.000 kHz	715.63786 MHz	20.29 dBm	-9.71 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00255 MHz	-24.55 dBm	-11.55 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-30.75 dBm	-17.75 dB

Date: 15.OCT.2024 02:48:38

Lowest Band Edge / Full RB

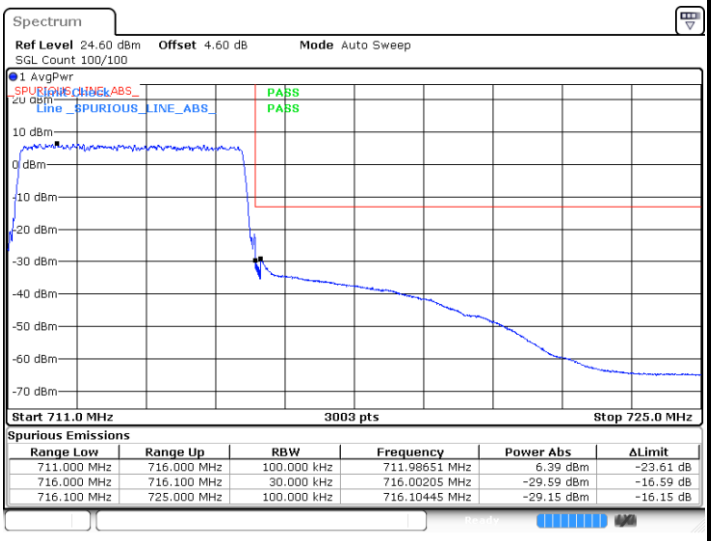


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-28.66 dBm	-15.66 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.98506 MHz	-29.45 dBm	-16.45 dB
699.000 MHz	704.000 MHz	100.000 kHz	700.78072 MHz	6.57 dBm	-23.43 dB

Date: 15.OCT.2024 02:40:12

Highest Band Edge / Full RB



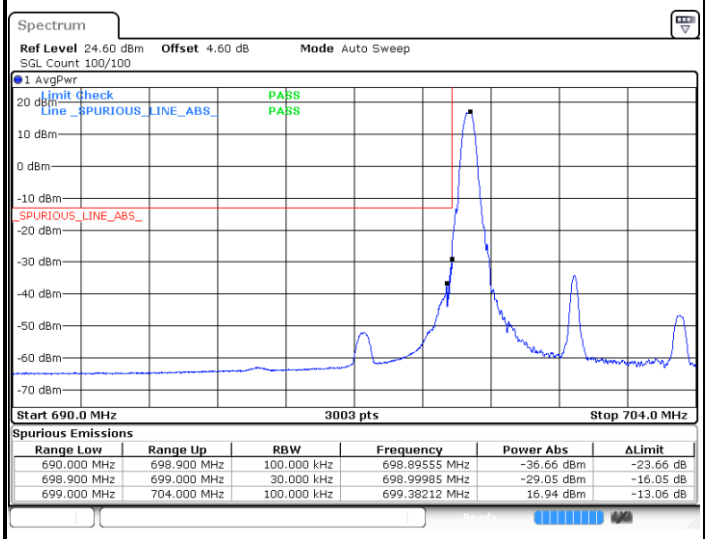
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
711.000 MHz	716.000 MHz	100.000 kHz	711.98651 MHz	6.39 dBm	-23.61 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00205 MHz	-29.59 dBm	-16.59 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-29.15 dBm	-16.15 dB

Date: 15.OCT.2024 02:52:07

LTE Band 12 / 5MHz / 256QAM

Lowest Band Edge / 1RB

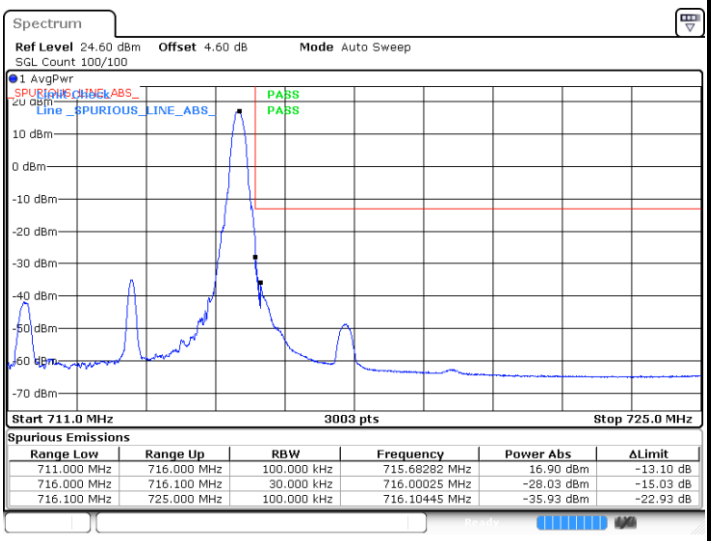


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-36.66 dBm	-23.66 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99985 MHz	-29.05 dBm	-16.05 dB
699.000 MHz	704.000 MHz	100.000 kHz	699.38212 MHz	16.94 dBm	-13.06 dB

Date: 15.OCT.2024 02:37:53

Highest Band Edge / 1 RB

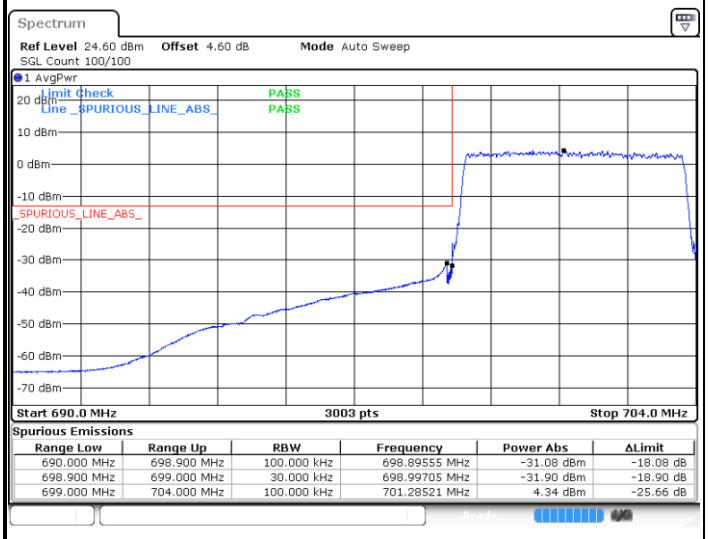


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
711.000 MHz	716.000 MHz	100.000 kHz	715.68282 MHz	16.90 dBm	-13.10 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00025 MHz	-28.03 dBm	-15.03 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-35.93 dBm	-22.93 dB

Date: 15.OCT.2024 02:49:48

Lowest Band Edge / Full RB

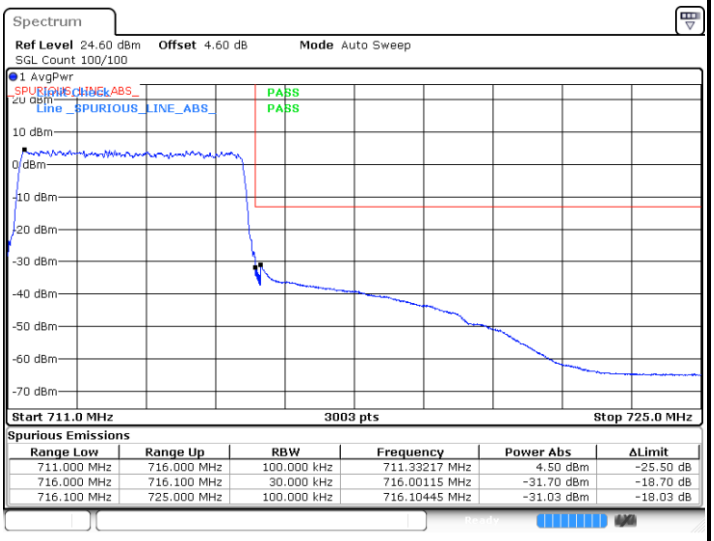


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-31.08 dBm	-18.08 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99705 MHz	-31.90 dBm	-18.90 dB
699.000 MHz	704.000 MHz	100.000 kHz	701.28521 MHz	4.34 dBm	-25.66 dB

Date: 15.OCT.2024 02:39:03

Highest Band Edge / Full RB



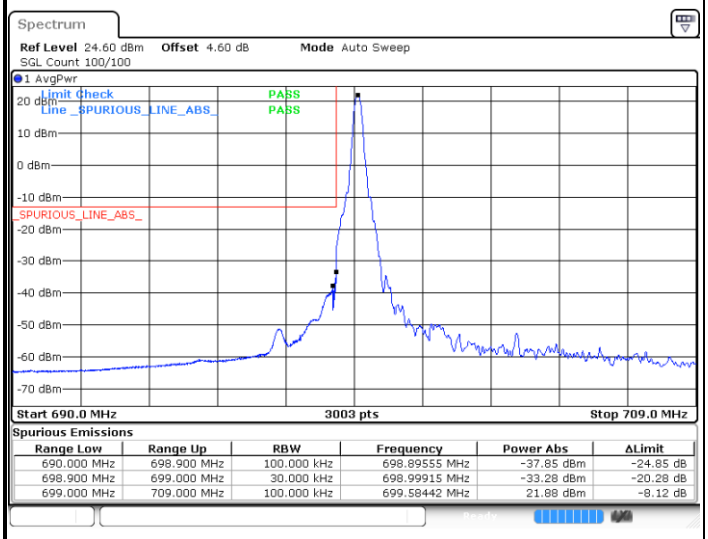
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
711.000 MHz	716.000 MHz	100.000 kHz	711.33217 MHz	4.50 dBm	-25.50 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00115 MHz	-31.70 dBm	-18.70 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-31.03 dBm	-18.03 dB

Date: 15.OCT.2024 02:50:57

LTE Band 12 / 10MHz / QPSK

Lowest Band Edge / 1 RB

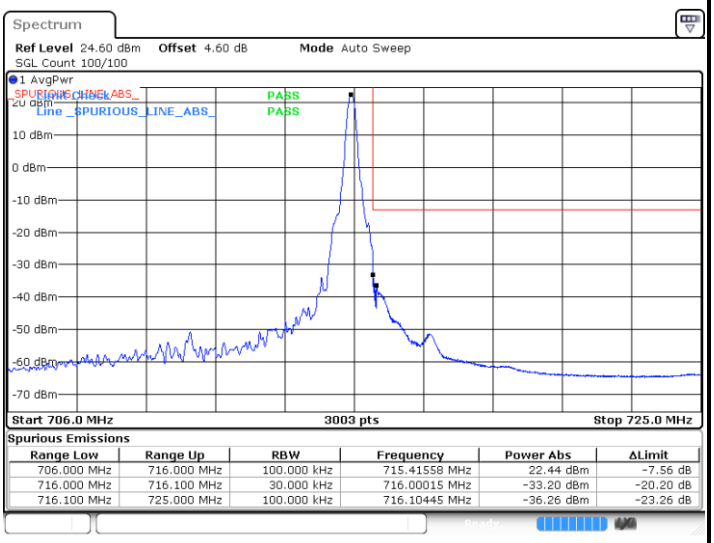


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-37.85 dBm	-24.85 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99915 MHz	-33.28 dBm	-20.28 dB
699.000 MHz	709.000 MHz	100.000 kHz	699.58442 MHz	21.88 dBm	-8.12 dB

Date: 15.OCT.2024 02:56:56

Highest Band Edge / 1 RB

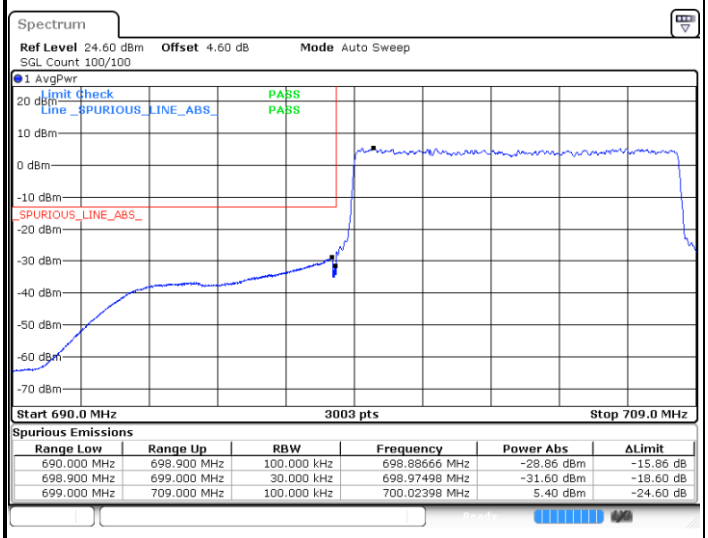


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
706.000 MHz	716.000 MHz	100.000 kHz	715.41558 MHz	22.44 dBm	-7.56 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00015 MHz	-33.20 dBm	-20.20 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-36.26 dBm	-23.26 dB

Date: 15.OCT.2024 03:08:51

Lowest Band Edge / Full RB

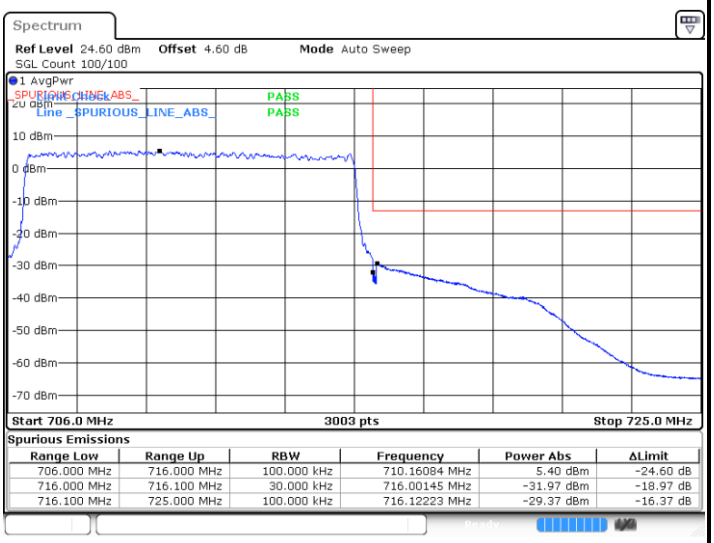


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.88666 MHz	-28.86 dBm	-15.86 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.97498 MHz	-31.60 dBm	-18.60 dB
699.000 MHz	709.000 MHz	100.000 kHz	700.02398 MHz	5.40 dBm	-24.60 dB

Date: 15.OCT.2024 03:05:02

Highest Band Edge / Full RB



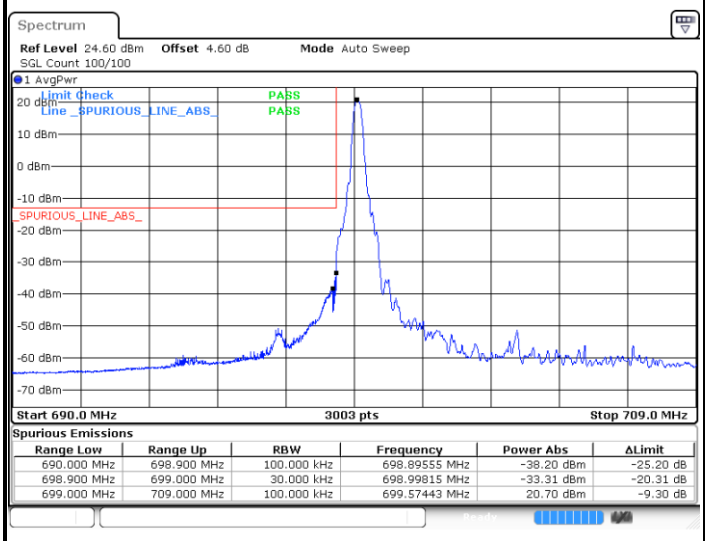
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
706.000 MHz	716.000 MHz	100.000 kHz	710.16084 MHz	5.40 dBm	-24.60 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00145 MHz	-31.97 dBm	-18.97 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.12223 MHz	-29.37 dBm	-16.37 dB

Date: 15.OCT.2024 03:16:57

LTE Band 12 / 10MHz / 16QAM

Lowest Band Edge / 1 RB

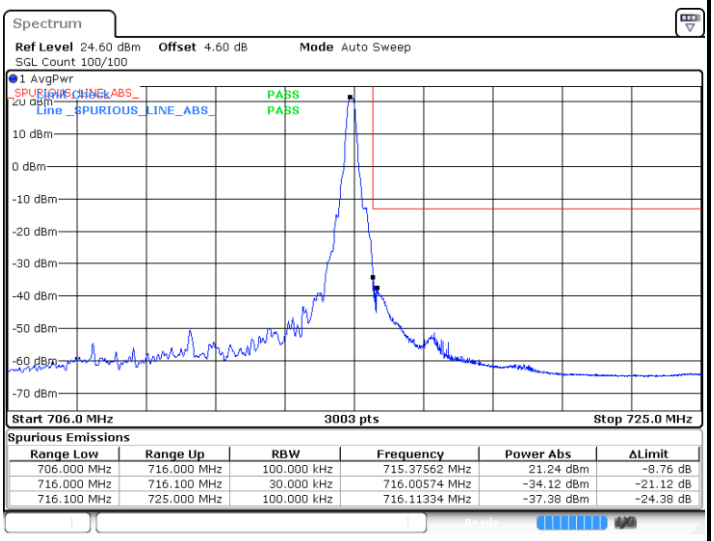


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-38.20 dBm	-25.20 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99815 MHz	-33.31 dBm	-20.31 dB
699.000 MHz	709.000 MHz	100.000 kHz	699.57443 MHz	20.70 dBm	-9.30 dB

Date: 15.OCT.2024 02:58:06

Highest Band Edge / 1 RB

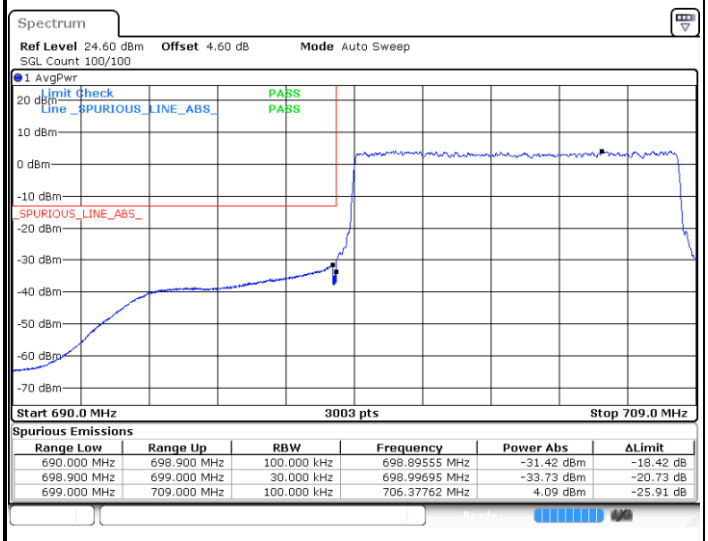


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
706.000 MHz	716.000 MHz	100.000 kHz	715.37562 MHz	21.24 dBm	-8.76 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00574 MHz	-34.12 dBm	-21.12 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.11334 MHz	-37.38 dBm	-24.38 dB

Date: 15.OCT.2024 03:10:00

Lowest Band Edge / Full RB

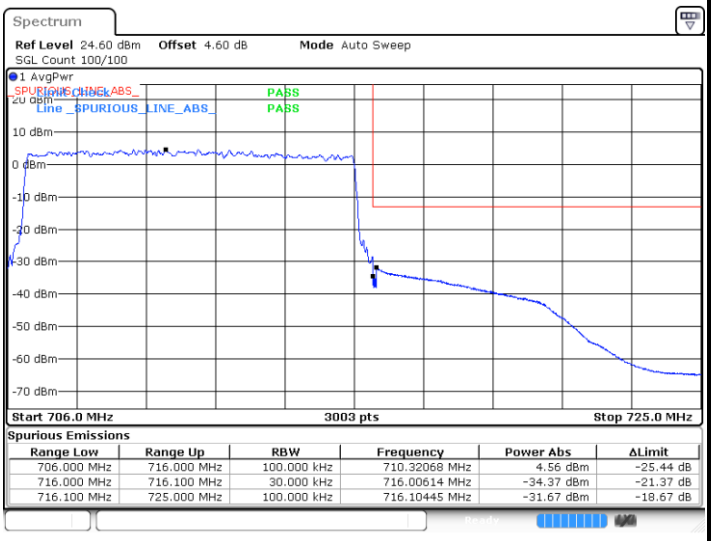


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-31.42 dBm	-18.42 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99695 MHz	-33.73 dBm	-20.73 dB
699.000 MHz	709.000 MHz	100.000 kHz	706.37762 MHz	4.09 dBm	-25.91 dB

Date: 15.OCT.2024 03:03:53

Highest Band Edge / Full RB



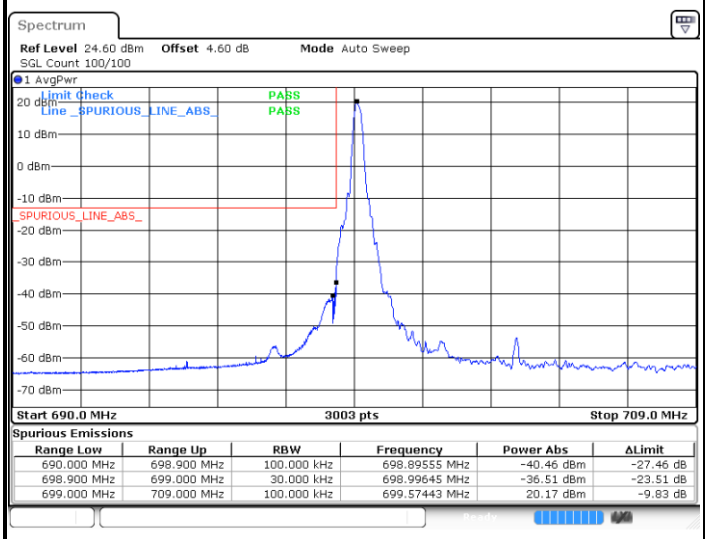
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
706.000 MHz	716.000 MHz	100.000 kHz	710.32068 MHz	4.56 dBm	-25.44 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00614 MHz	-34.37 dBm	-21.37 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-31.67 dBm	-18.67 dB

Date: 15.OCT.2024 03:15:47

LTE Band 12 / 10MHz / 64QAM

Lowest Band Edge / 1 RB

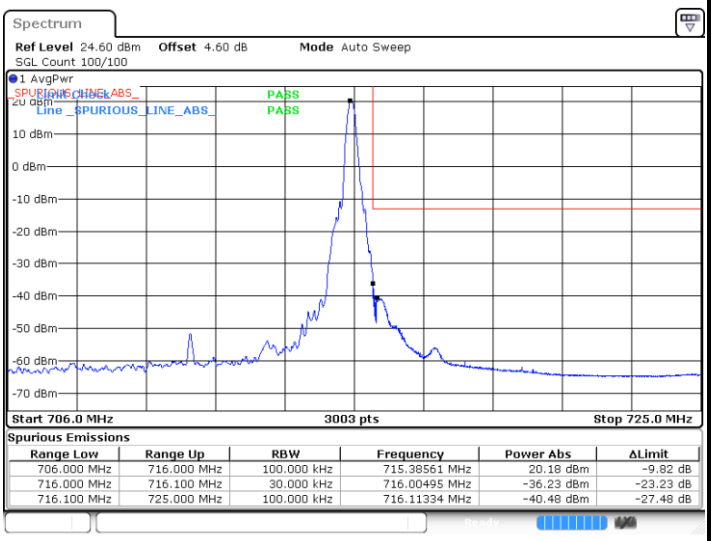


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-40.46 dBm	-27.46 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99645 MHz	-36.51 dBm	-23.51 dB
699.000 MHz	709.000 MHz	100.000 kHz	699.57443 MHz	20.17 dBm	-9.83 dB

Date: 15.OCT.2024 02:59:15

Highest Band Edge / 1 RB

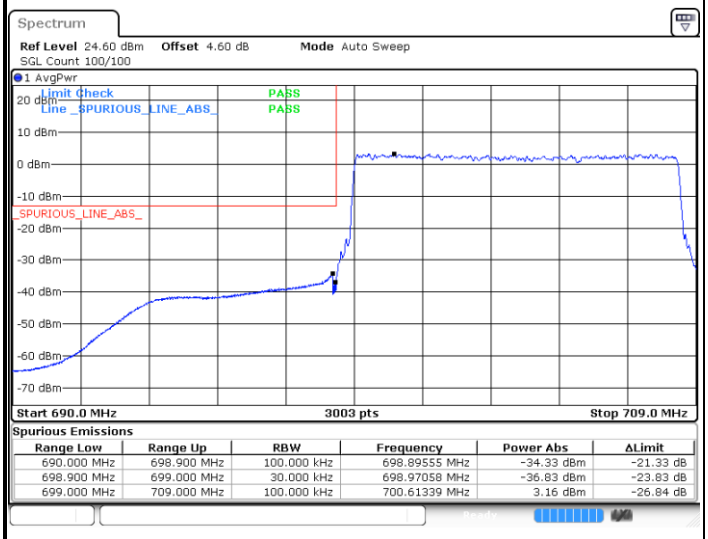


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
706.000 MHz	716.000 MHz	100.000 kHz	715.38561 MHz	20.18 dBm	-9.82 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00495 MHz	-36.23 dBm	-23.23 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.11334 MHz	-40.48 dBm	-27.48 dB

Date: 15.OCT.2024 03:11:09

Lowest Band Edge / Full RB

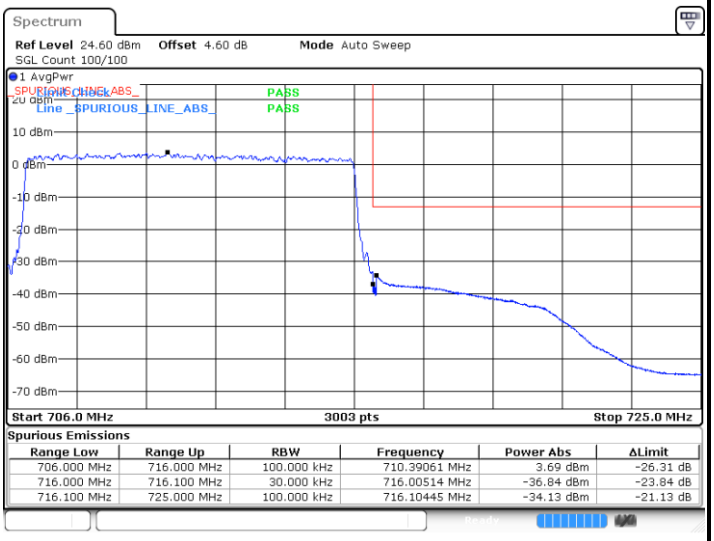


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-34.33 dBm	-21.33 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.97058 MHz	-36.83 dBm	-23.83 dB
699.000 MHz	709.000 MHz	100.000 kHz	700.61339 MHz	3.16 dBm	-26.84 dB

Date: 15.OCT.2024 03:02:43

Highest Band Edge / Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
706.000 MHz	716.000 MHz	100.000 kHz	710.39061 MHz	3.69 dBm	-26.31 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00514 MHz	-36.84 dBm	-23.84 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-34.13 dBm	-21.13 dB

Date: 15.OCT.2024 03:14:38