FCC RF Test Report

APPLICANT	: Xiaomi Communications Co., Ltd.
EQUIPMENT	: Mobile Phone
BRAND NAME	: POCO
MODEL NAME	: 24095PCADG
FCC ID	: 2AFZZRA8EG
STANDARD	: 47 CFR Part 22(H)
CLASSIFICATION	: PCS Licensed Transmitter Held to Ear (PCE)
TEST DATE(S)	: Jul. 23, 2024 ~ Aug. 22, 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

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG471506-01	Rev. 01	Initial issue of report	Sep. 10, 2024

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	-	Report Only	-
	§22.913(a)(5)	Effective Radiated Power (Band 5)	ERP < 7 Watt	PASS	-
3.5	N/A	Peak-to-Average Ratio	<13 dB	PASS	-
3.6	§2.1049	Occupied Bandwidth	-	Report Only	-
3.7	§2.1051 §22.917(a)	Conducted Band Edge Measurement (Band 5)	< 43+10log10(P[Watts])	PASS	-
3.8	§2.1051 §22.917(a)	Conducted Spurious Emission (Band 5)	< 43+10log10(P[Watts])	PASS	-
3.9	§2.1055 §22.355	Frequency Stability Temperature & Voltage	< 2.5 ppm for Part 22	PASS	-
4.4	§2.1053 §22.917(a)	Radiated Spurious Emission (Band 5)	< 43+10log$_{10}$(P[Watts])	PASS	Under limit 39.63 dB at 2496.00 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	POCO
Model Name	24095PCADG
FCC ID	2AFZZRA8EG
IMEI Code	Conducted: 862769070029589/862769070029597 Radiation: 862769070029282/862769070029290
HW Version	135300O16
SW Version	Xiaomi HyperOS 1.0
EUT Stage	Identical Prototype

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	LTE Band 5 : 824 MHz ~ 849 MHz
Rx Frequency	LTE Band 5 : 869 MHz ~ 894 MHz
Bandwidth	LTE Band 5 : 1.4MHz / 3MHz / 5MHz / 10MHz
Maximum Output Power to Antenna	<ANT1> LTE Band 5 : 24.32 dBm <ANT4> LTE Band 5 : 24.25 dBm
Antenna Gain	<ANT1> LTE Band 5 : -4 dBi <ANT4> LTE Band 5 : -5.9 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 1 for LTE Band 5 is shown in the report.

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 5		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	824.7 ~ 848.3	0.0644	1M10G7D	0.0527	1M09W7D
3	825.5 ~ 847.5	0.0655	2M70G7D	0.0537	2M72W7D
5	826.5 ~ 846.5	0.0649	4M50G7D	0.0530	4M48W7D
10	829.0 ~ 844.0	0.0656	8M99G7D	0.0540	9M05W7D

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 22(H)
- 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

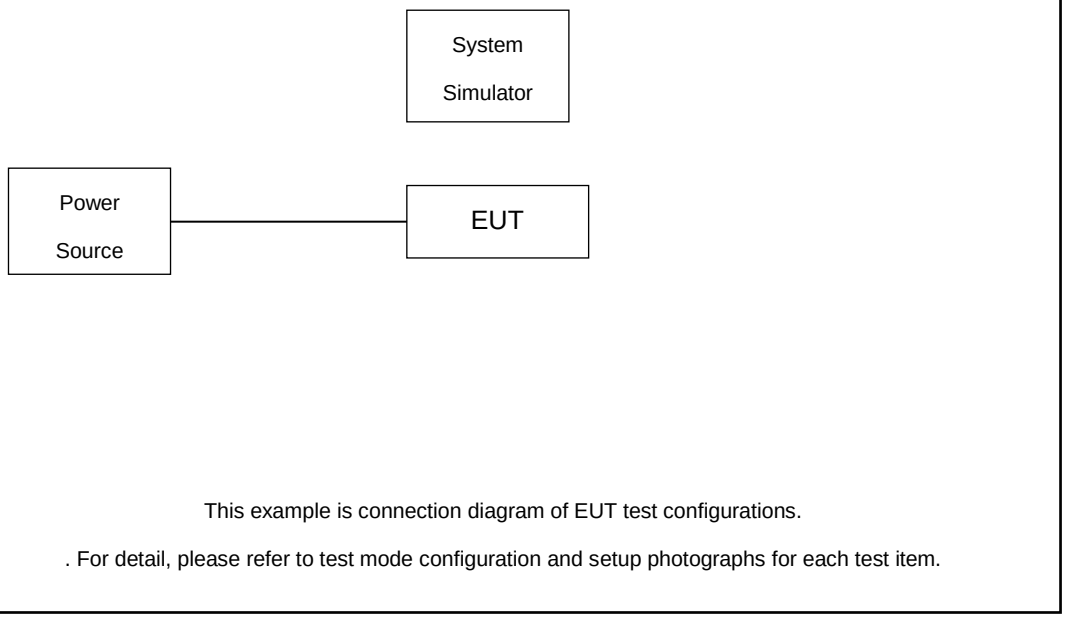
2.1 Test Mode

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. (X Plane)

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

2.2 Connection Diagram of Test System



This example is connection diagram of EUT test configurations.

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

2.3 Support Unit used in test configuration and system

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

2.4 Measurement Results Explanation Example

For all conducted test items:

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

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

Example :

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

= 5.0 (dB)

2.5 Frequency List of Low/Middle/High Channels

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

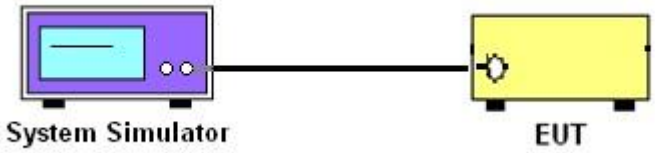
3 Conducted Test Items

3.1 Measuring Instruments

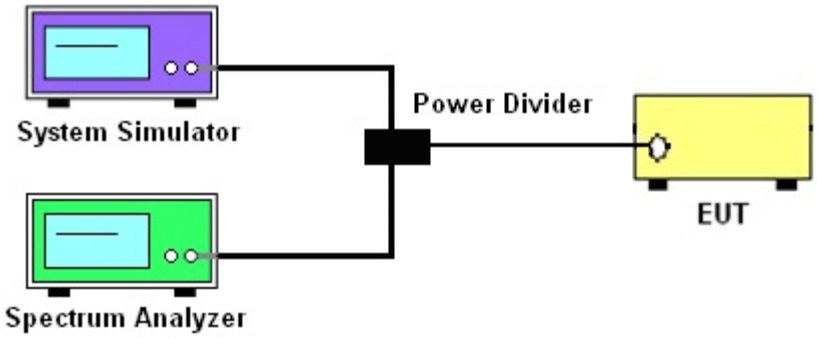
See list of measuring instruments of this test report.

3.2 Test Setup

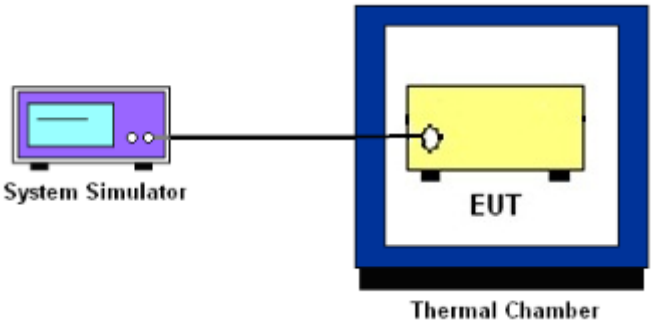
3.2.1 Conducted Output Power



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

3.4.1 Description of the Conducted Output Power Measurement and ERP Measurement

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

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

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

22.917(a)

For operations in the 824 – 849 MHz band, the FCC limit is 43 + $10\log_{10}$(P[Watts]) dB below the transmitter power P(Watts) in a 100kHz 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.

3.7.2 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 or a narrower RBW was used and the measured power was integrated over the full required measurement bandwidth of 1 MHz.
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 10^{th} harmonic.

3.8.2 Test Procedures

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

3.9 Frequency Stability

3.9.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center frequency.

3.9.2 Test Procedures for Temperature Variation

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

3.9.3 Test Procedures for Voltage Variation

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

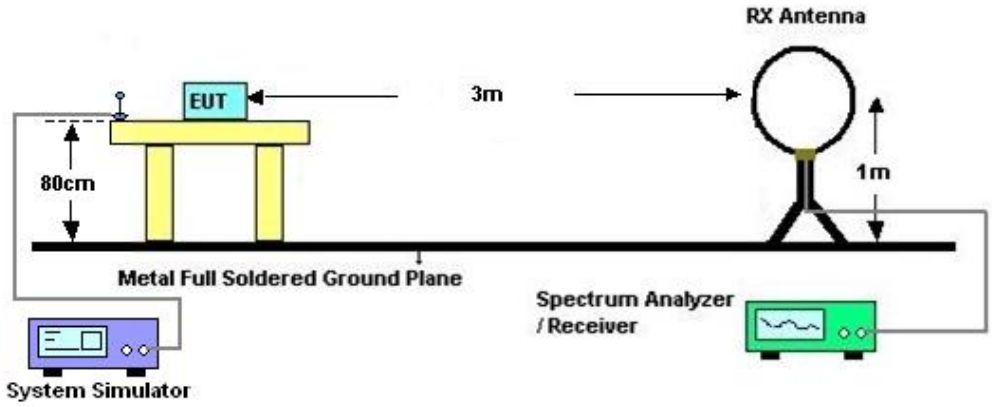
4 Radiated Test Items

4.1 Measuring Instruments

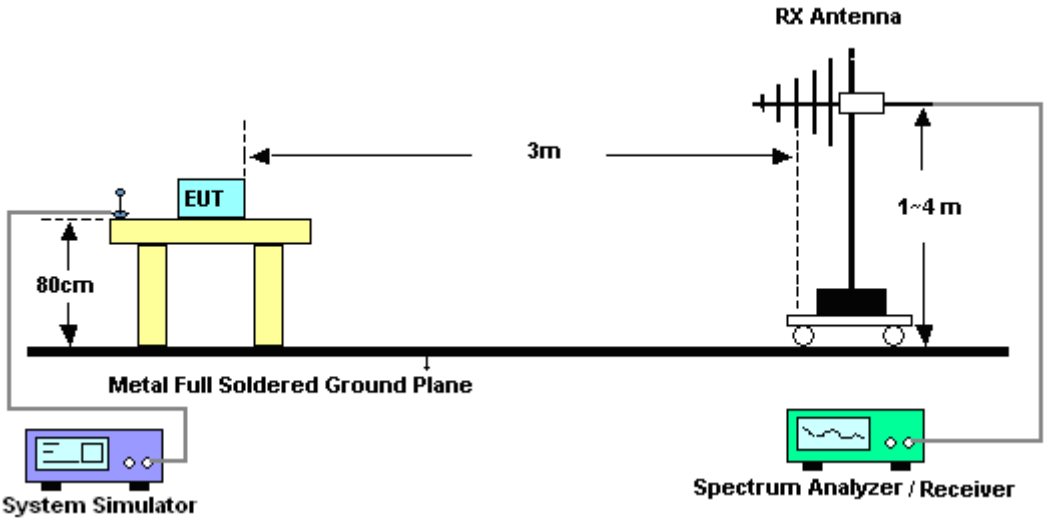
See list of measuring instruments of this test report.

4.2 Test Setup

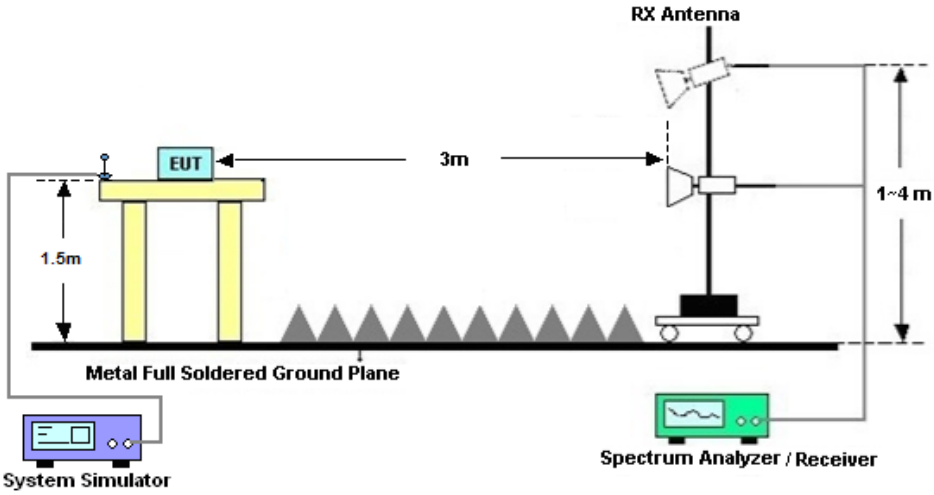
4.2.1 For radiated test below 30MHz



4.2.2 For radiated test from 30MHz to 1GHz



4.2.3 For radiated test above 1GHz



4.3 Test Result of Radiated Test

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

Please refer to Appendix B.

4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission

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

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	FSV40	101040	10Hz~40GHz	Oct. 11, 2023	Aug. 21, 2024~ Aug. 22, 2024	Oct. 10, 2024	Conducted (TH01-KS)
Power divider	STI	STI08-0055	-	0.5~40GHz	NCR	Aug. 21, 2024~ Aug. 22, 2024	NCR	Conducted (TH01-KS)
Temperature & humidity chamber	Hongzhan	LP-150U	H2014011440	-40~+150°C 20%~95%RH	Jul. 04, 2024	Aug. 21, 2024~ Aug. 22, 2024	Jul. 03, 2025	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010B	MY57471079	10Hz-44G,MAX 30dB	Oct. 11, 2023	Jul. 23, 2024~ Aug. 22, 2024	Oct. 10, 2024	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2E	101125	9kHz~30MHz	Sep. 11 2023	Jul. 23, 2024~ Aug. 22, 2024	Sep. 10, 2024	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	59913	30MHz-1GHz	Aug. 19, 2024	Jul. 23, 2024~ Aug. 22, 2024	Aug. 18, 2025	Radiation (03CH04-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75957	1GHz~18GHz	Oct. 23, 2023	Jul. 23, 2024~ Aug. 22, 2024	Oct. 22, 2024	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 27, 2024	Jul. 23, 2024~ Aug. 22, 2024	Jan. 26, 2025	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	413740	9KHz-1GHz	Jan. 03, 2024	Jul. 23, 2024~ Aug. 22, 2024	Jan. 02, 2025	Radiation (03CH04-KS)
Amplifier	EM	EM18G40GA	060728	18~40GHz	Jan. 02, 2024	Jul. 23, 2024~ Aug. 22, 2024	Jan. 01, 2025	Radiation (03CH04-KS)
high gain Amplifier	EM	EM01G18GA	060840	1Ghz-18Ghz	Oct. 11, 2023	Jul. 23, 2024~ Aug. 22, 2024	Oct. 10, 2024	Radiation (03CH04-KS)
Amplifier	EM	EM01G18GA	060892	1Ghz-18Ghz	Oct. 11, 2023	Jul. 23, 2024~ Aug. 22, 2024	Oct. 10, 2024	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Jul. 23, 2024~ Aug. 22, 2024	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Jul. 23, 2024~ Aug. 22, 2024	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Jul. 23, 2024~ Aug. 22, 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	±0.46 dB
Frequency Stability	±0. 4 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 :	Simle Wang	Temperature :	22~23℃
		Relative Humidity :	40~42%

Conducted Output Power(Average power) and ERP

LTE Band 5_ANT1:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	ERP(W)		
Channel				20450	20525	20600			
Frequency (MHz)				829	836.5	844	L	M	H
10	QPSK	1	0	24.17	24.18	24.32	0.0634	0.0635	0.0656
10	QPSK	1	49	24.12	24.15	24.22	0.0627	0.0631	0.0641
10	QPSK	50	0	23.26	23.31	23.45	0.0514	0.0520	0.0537
10	16QAM	1	0	23.33	23.43	23.47	0.0522	0.0535	0.0540
10	64QAM	1	0	22.32	22.35	22.41	0.0414	0.0417	0.0423
10	256QAM	1	0	19.39	19.41	19.54	0.0211	0.0212	0.0218
Channel				20425	20525	20625	ERP(W)		
Frequency (MHz)				826.5	836.5	846.5	L	M	H
5	QPSK	1	0	24.15	24.13	24.27	0.0631	0.0628	0.0649
5	16QAM	1	0	23.25	23.32	23.39	0.0513	0.0521	0.0530
Channel				20415	20525	20635	ERP(W)		
Frequency (MHz)				825.5	836.5	847.5	L	M	H
3	QPSK	1	0	24.16	24.17	24.31	0.0632	0.0634	0.0655
3	16QAM	1	0	23.34	23.37	23.45	0.0524	0.0527	0.0537
Channel				20407	20525	20643	ERP(W)		
Frequency (MHz)				824.7	836.5	848.3	L	M	H
1.4	QPSK	1	0	24.21	24.15	24.24	0.0640	0.0631	0.0644
1.4	16QAM	1	0	23.29	23.32	23.37	0.0518	0.0521	0.0527

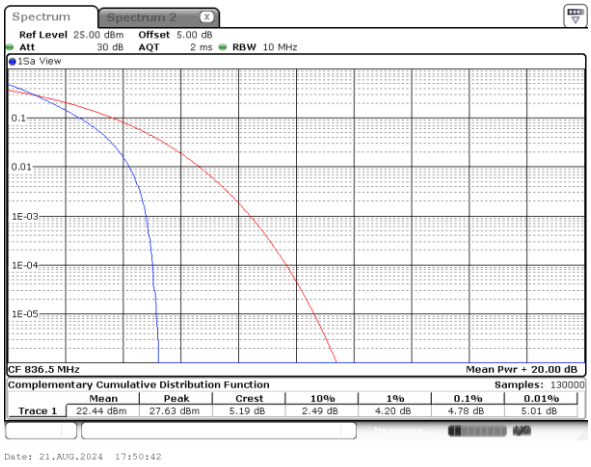
LTE Band 5

Peak-to-Average Ratio

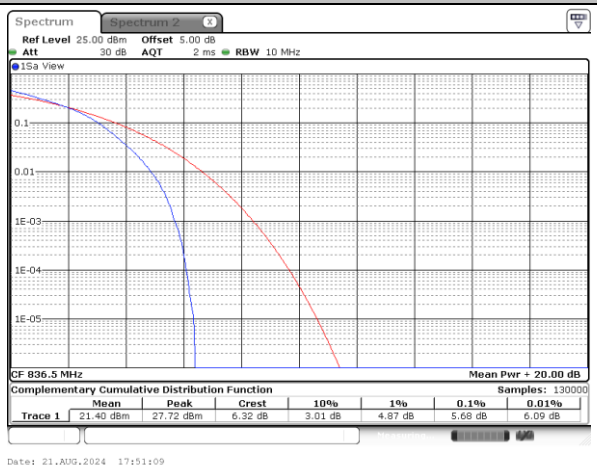
Mode	LTE Band 5 / 10MHz				
Mod.	QPSK	16QAM	64QAM	256Q	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	4.78	5.68	6.29	**6.55**	**PASS**

LTE Band 5 / 10MHz

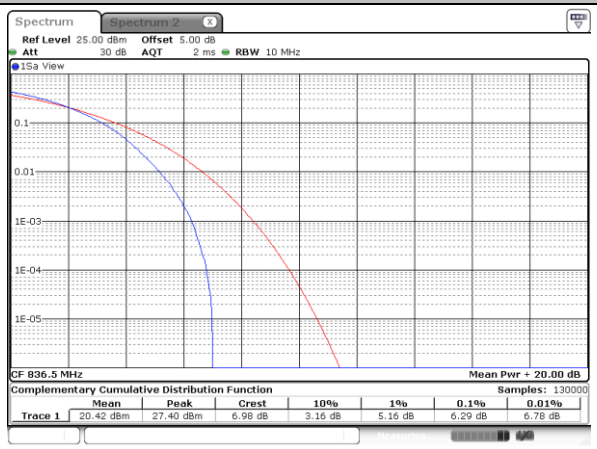
Middle Channel / Full RB/ QPSK



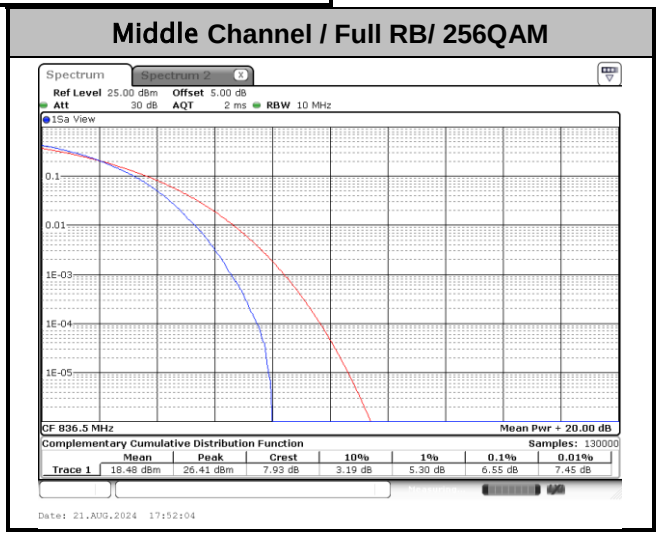
Middle Channel / Full RB/ 16QAM



Middle Channel / Full RB/ 64QAM



Middle Channel / Full RB/ 256QAM

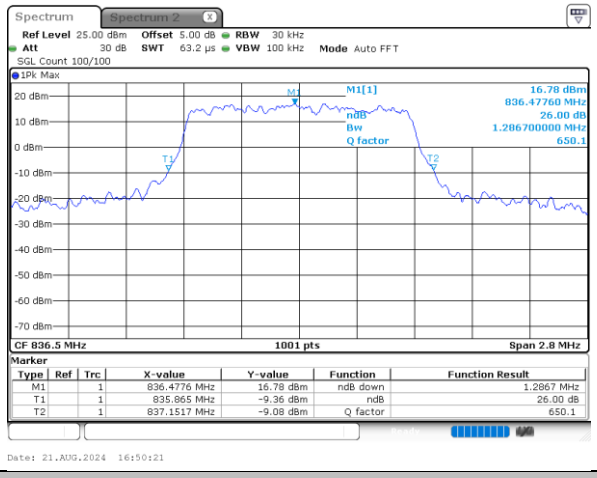


26dB Bandwidth

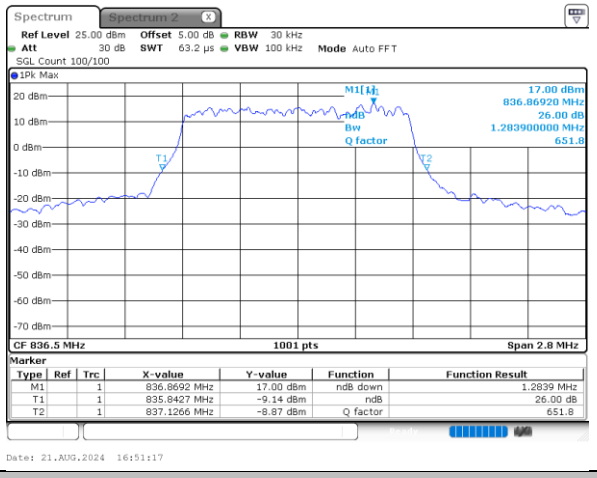
Mode	LTE Band 5 : 26dB BW(MHz)	
BW	1.4MHz	
Mod.	QPSK	16QAM
Middle CH	1.29	1.28
BW	3MHz	
Mod.	QPSK	16QAM
Middle CH	2.98	2.99
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	4.89	4.87
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.67	9.73

LTE Band 5

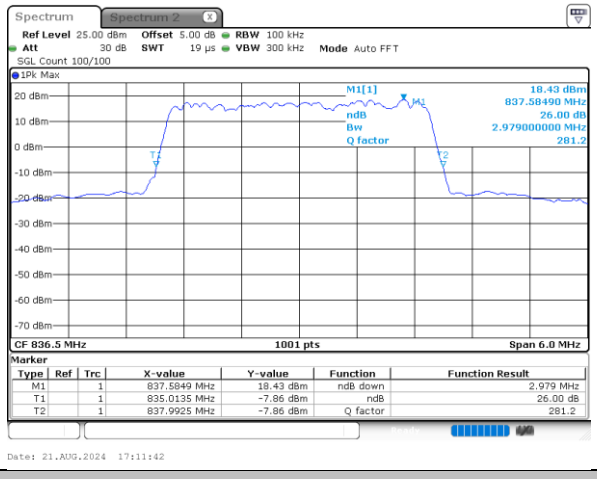
Middle Channel / 1.4MHz / QPSK



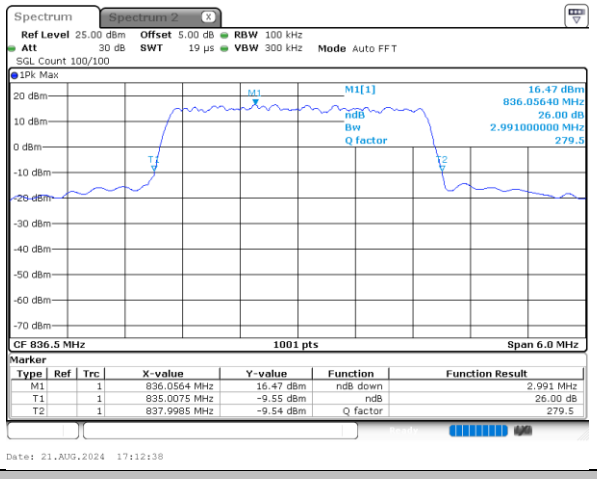
Middle Channel / 1.4MHz / 16QAM



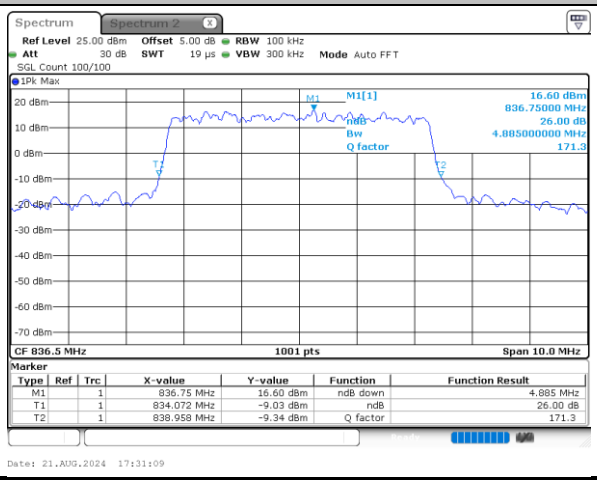
Middle Channel / 3MHz / QPSK



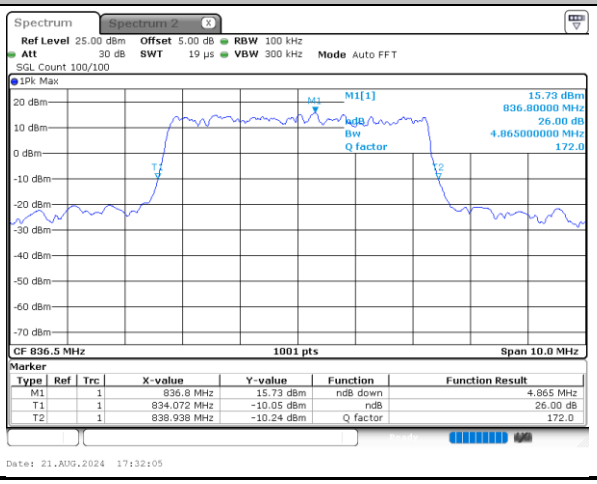
Middle Channel / 3MHz / 16QAM

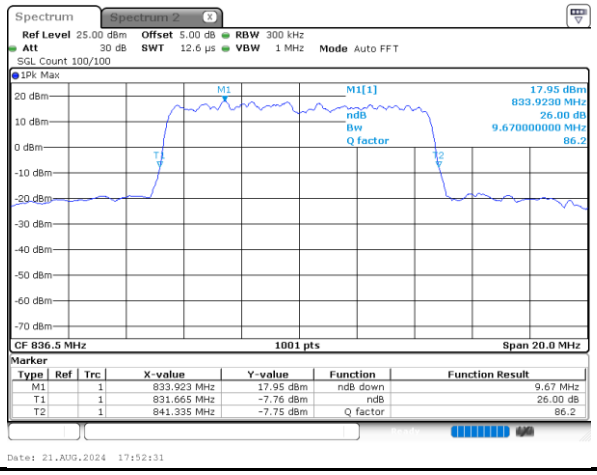
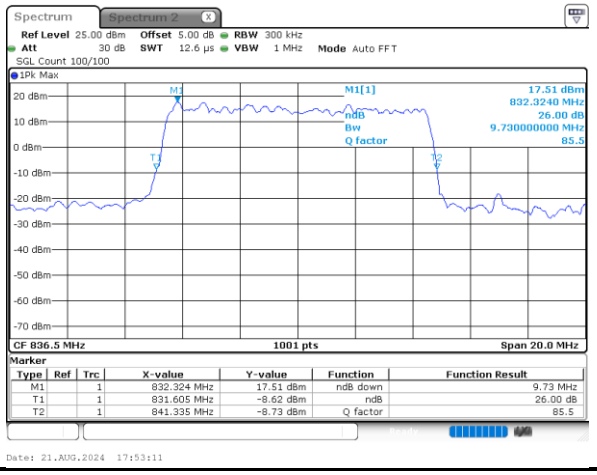


Middle Channel / 5MHz / QPSK



Middle Channel / 5MHz / 16QAM

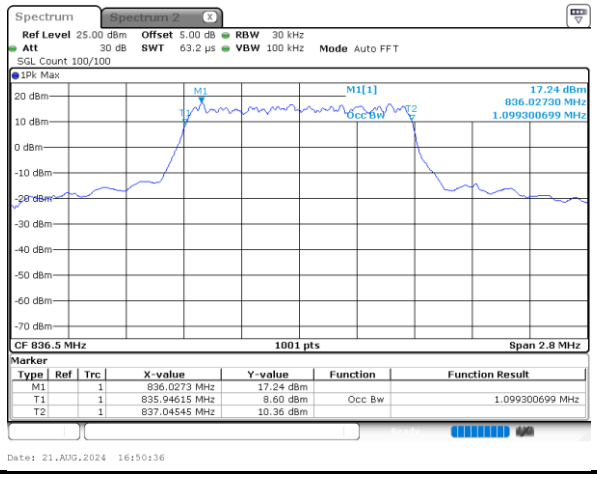


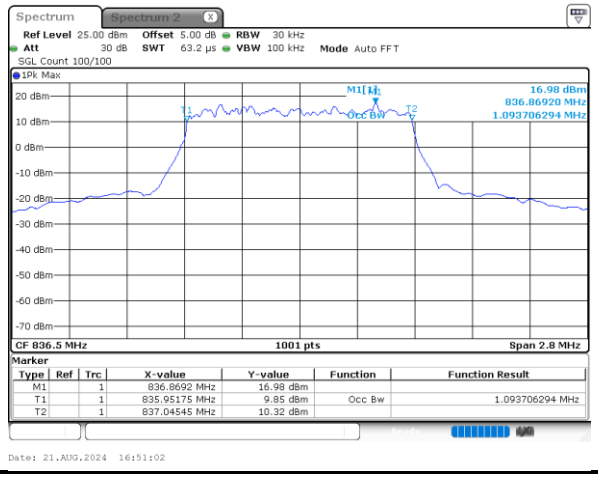
Middle Channel / 10MHz / QPSK	Middle Channel / 10MHz / 16QAM
	

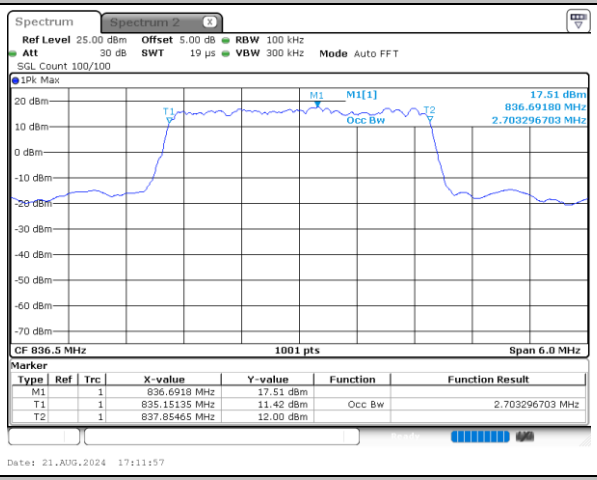
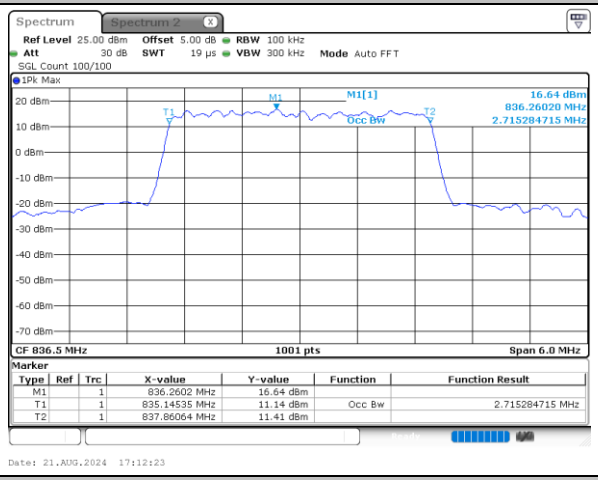
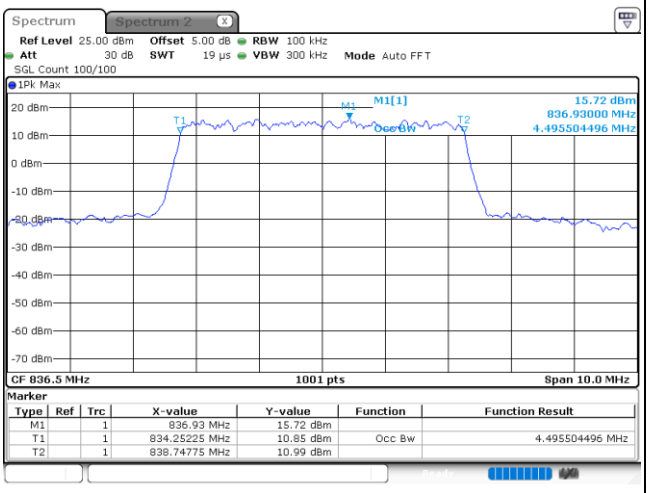
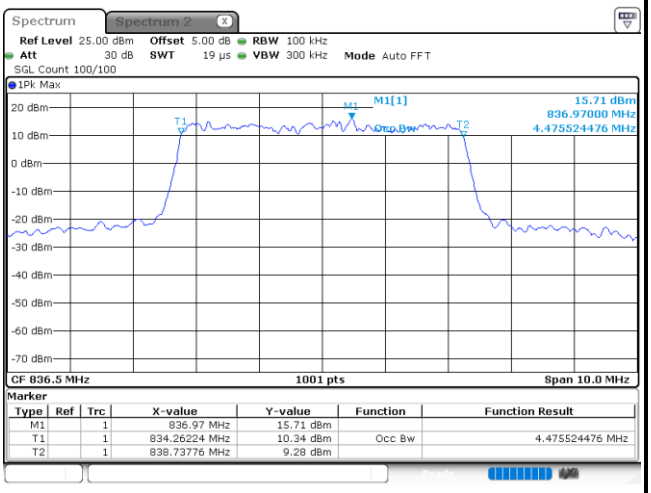
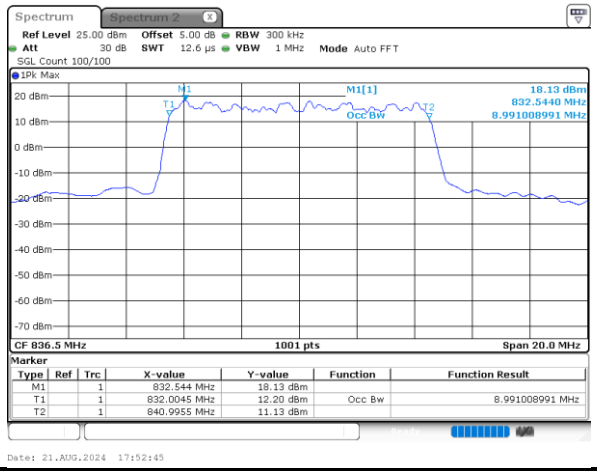
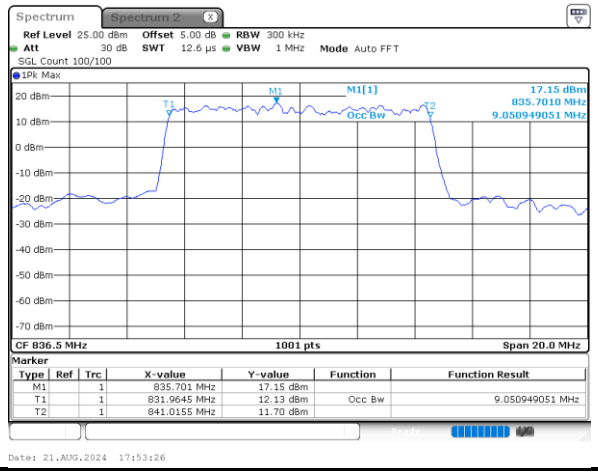
Occupied Bandwidth

Mode	LTE Band 5 : 99%OBW(MHz)	
BW	1.4MHz	
Mod.	QPSK	16QAM
Middle CH	1.10	1.09
BW	3MHz	
Mod.	QPSK	16QAM
Middle CH	2.70	2.72
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	4.50	4.48
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	8.99	9.05

LTE Band 5	
Middle Channel / 1.4MHz / QPSK	Middle Channel / 1.4MHz / 16QAM

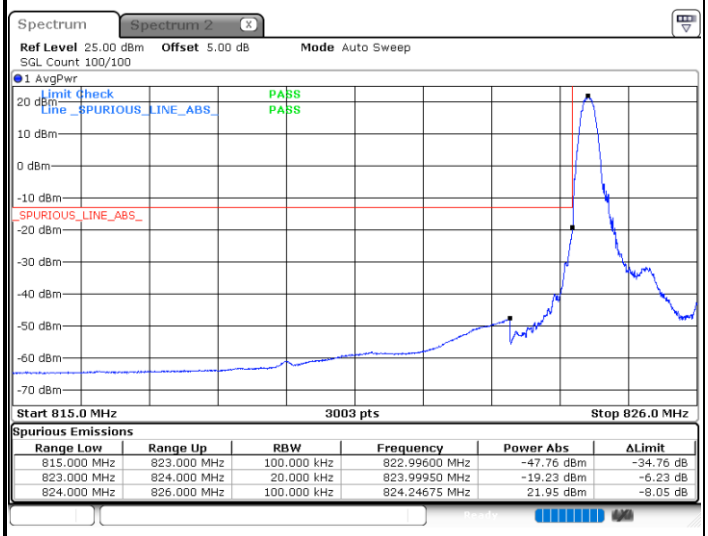


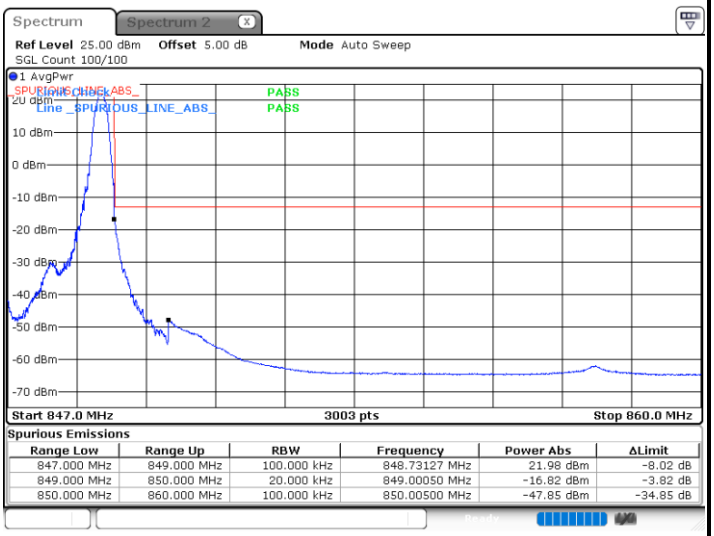


Middle Channel / 3MHz / QPSK	Middle Channel / 3MHz / 16QAM
	
Middle Channel / 5MHz / QPSK	Middle Channel / 5MHz / 16QAM
	
Middle Channel / 10MHz / QPSK	Middle Channel / 10MHz / 16QAM
	

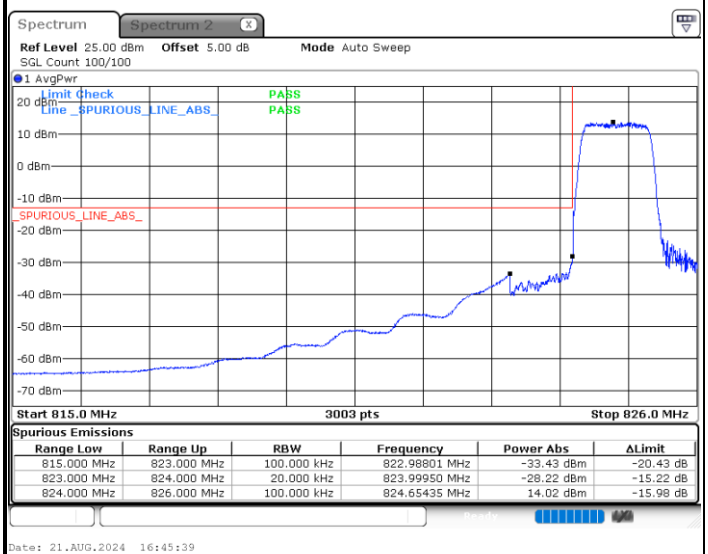
Conducted Band Edge

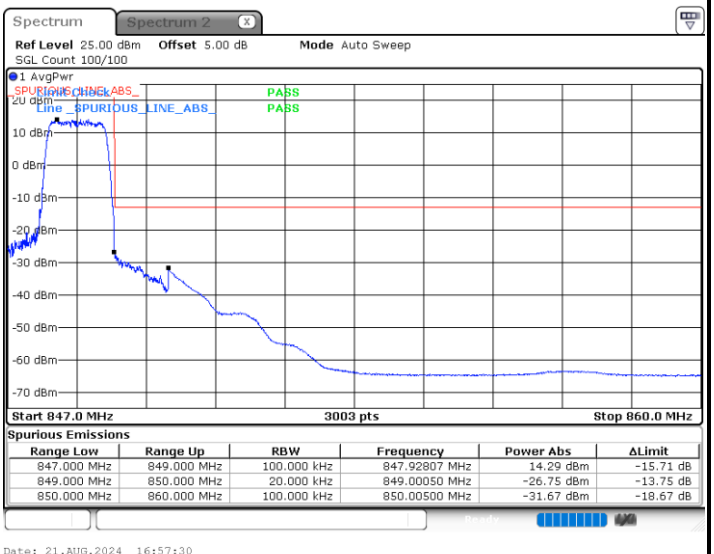
LTE Band 5 / 1.4MHz / QPSK	
Lowest Band Edge / 1RB	**Highest Band Edge / 1RB**

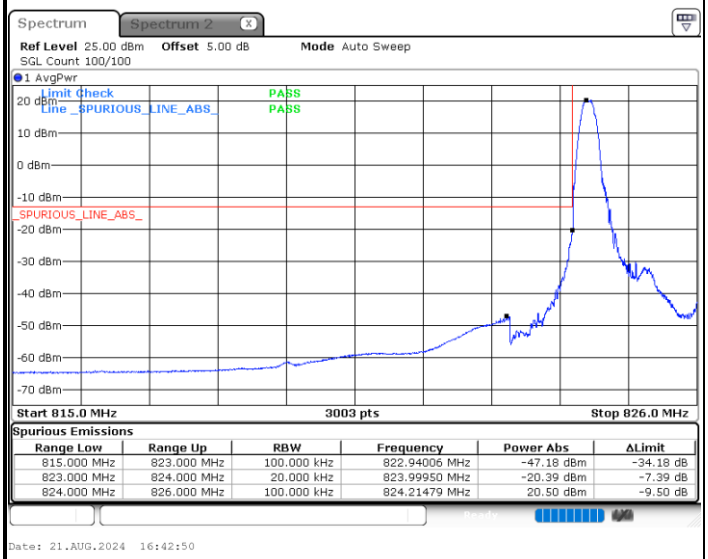
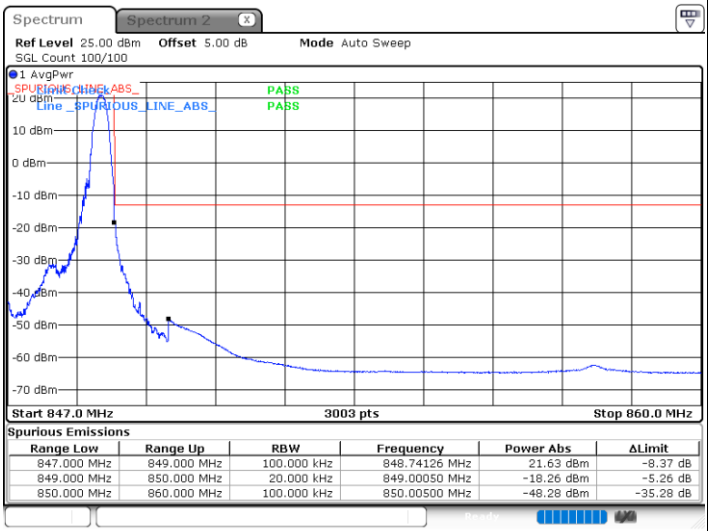
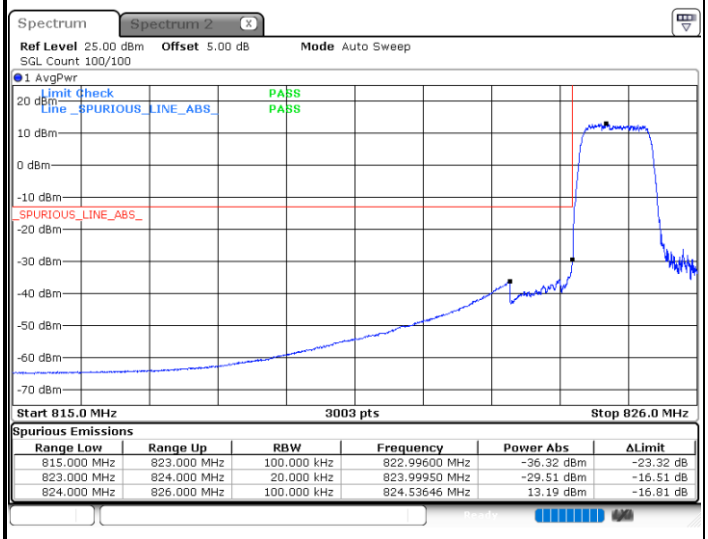
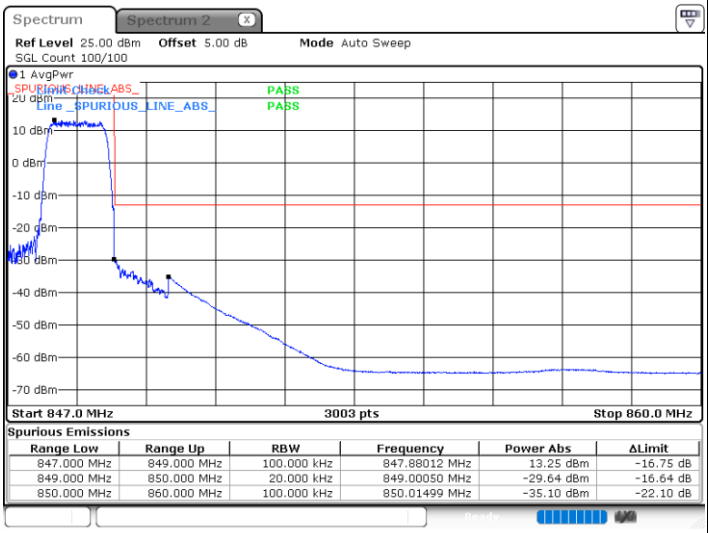




Lowest Band Edge / Full RB	Highest Band Edge / Full RB

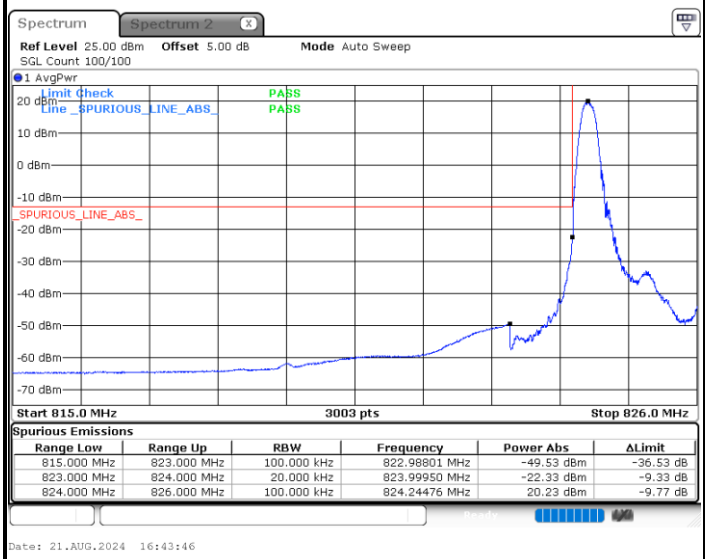




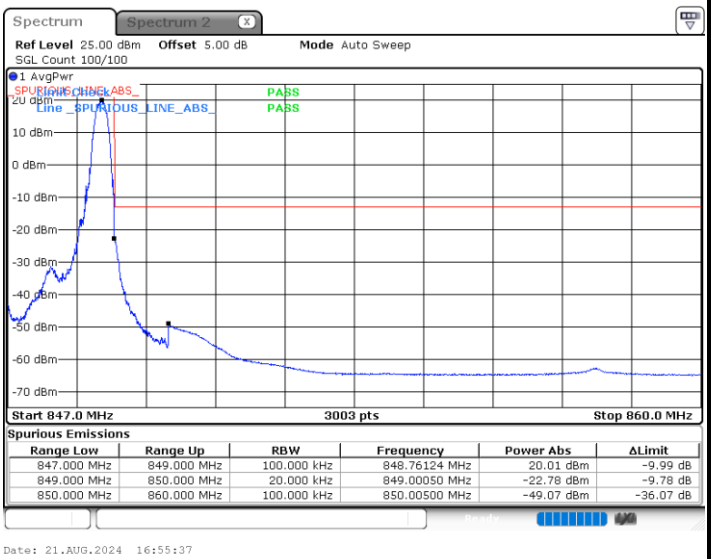
LTE Band 5 / 1.4MHz / 16QAM	
Lowest Band Edge / 1 RB	**Highest Band Edge / 1 RB**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

LTE Band 5 / 1.4MHz / 64QAM

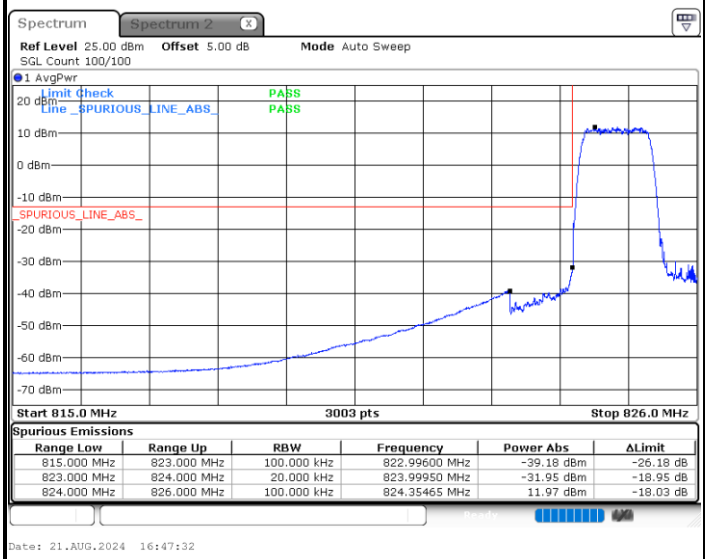
Lowest Band Edge / 1 RB



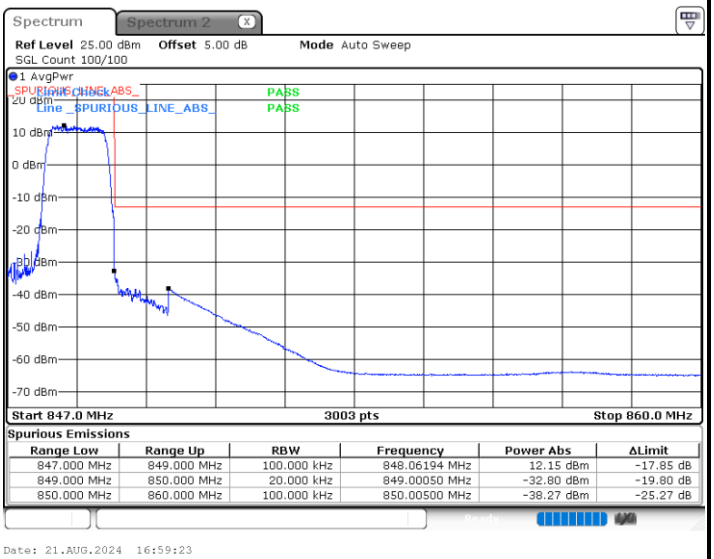
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB

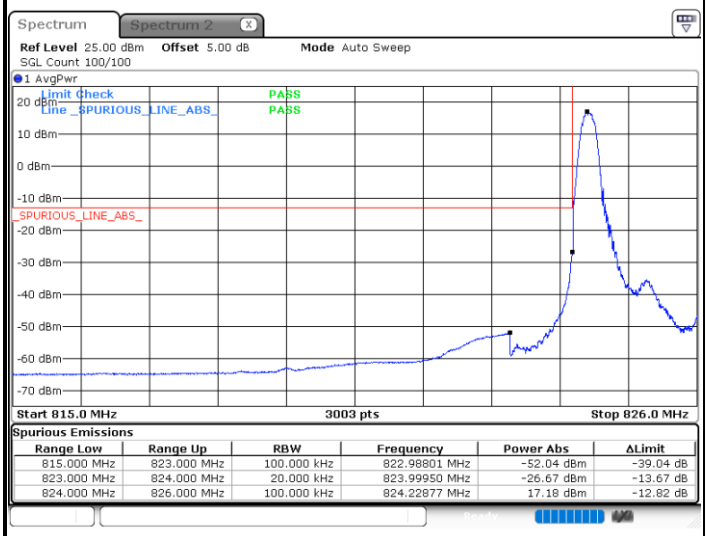


Highest Band Edge / Full RB



LTE Band 5 / 1.4MHz / 256QAM

Lowest Band Edge / 1 RB

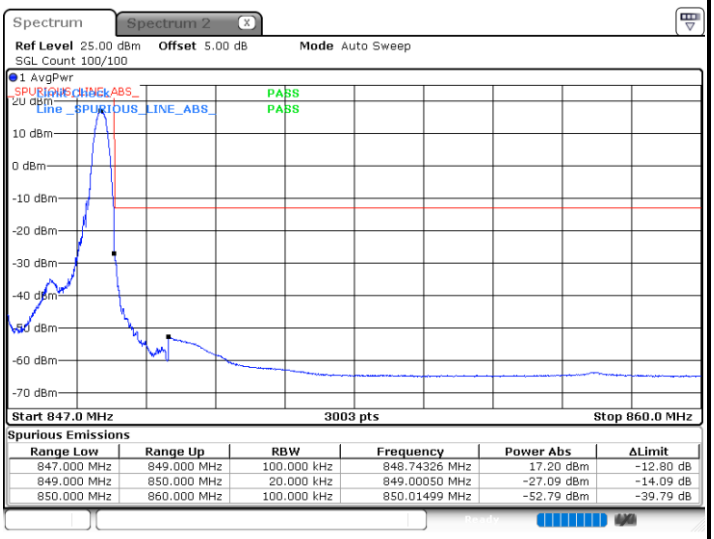


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.98801 MHz	-52.04 dBm	-39.04 dB
823.000 MHz	824.000 MHz	20.000 kHz	823.99950 MHz	-26.67 dBm	-13.67 dB
824.000 MHz	826.000 MHz	100.000 kHz	824.22877 MHz	17.18 dBm	-12.82 dB

Date: 21.AUG.2024 16:44:43

Highest Band Edge / 1 RB

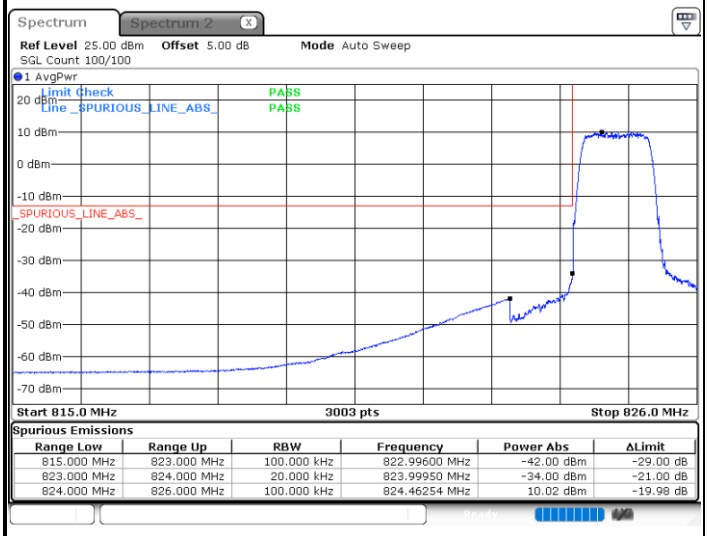


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
847.000 MHz	849.000 MHz	100.000 kHz	848.74326 MHz	17.20 dBm	-12.80 dB
849.000 MHz	850.000 MHz	20.000 kHz	849.00050 MHz	-27.09 dBm	-14.09 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.01499 MHz	-52.79 dBm	-39.79 dB

Date: 21.AUG.2024 16:56:34

Lowest Band Edge / Full RB

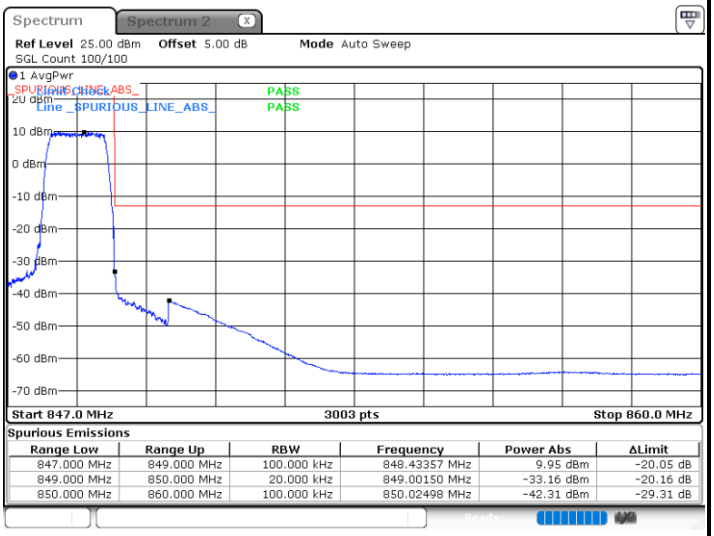


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.99600 MHz	-42.00 dBm	-29.00 dB
823.000 MHz	824.000 MHz	20.000 kHz	823.99950 MHz	-34.00 dBm	-21.00 dB
824.000 MHz	826.000 MHz	100.000 kHz	824.46254 MHz	10.02 dBm	-19.98 dB

Date: 21.AUG.2024 16:48:29

Highest Band Edge / Full RB



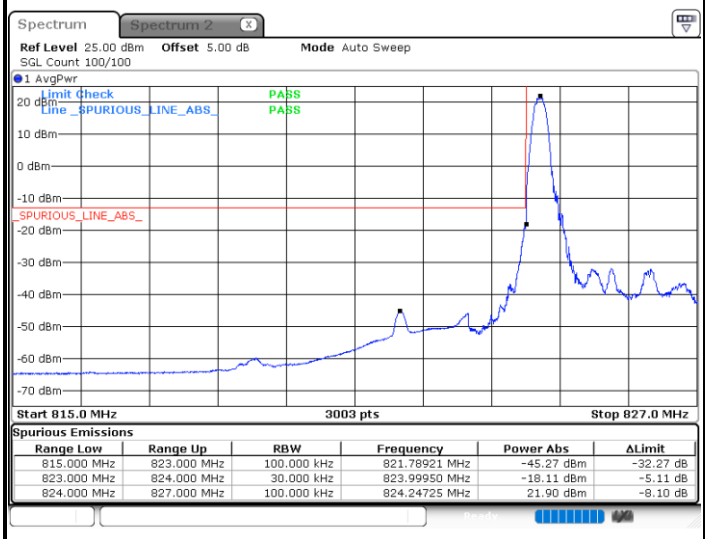
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
847.000 MHz	849.000 MHz	100.000 kHz	848.43357 MHz	9.95 dBm	-20.05 dB
849.000 MHz	850.000 MHz	20.000 kHz	849.00150 MHz	-33.16 dBm	-20.16 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.02498 MHz	-42.31 dBm	-29.31 dB

Date: 21.AUG.2024 17:00:20

LTE Band 5 / 3MHz / QPSK

Lowest Band Edge / 1RB

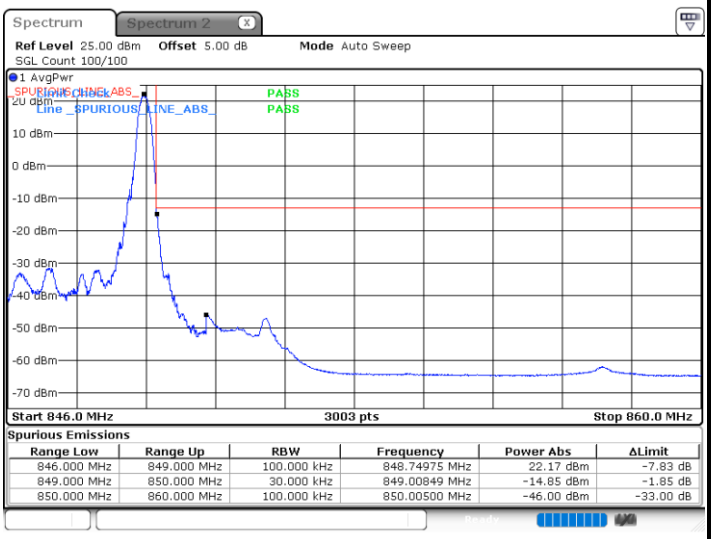


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	821.78921 MHz	-45.27 dBm	-32.27 dB
823.000 MHz	824.000 MHz	30.000 kHz	823.99950 MHz	-18.11 dBm	-5.11 dB
824.000 MHz	827.000 MHz	100.000 kHz	824.24725 MHz	21.90 dBm	-8.10 dB

Date: 21.AUG.2024 17:03:12

Highest Band Edge / 1 RB

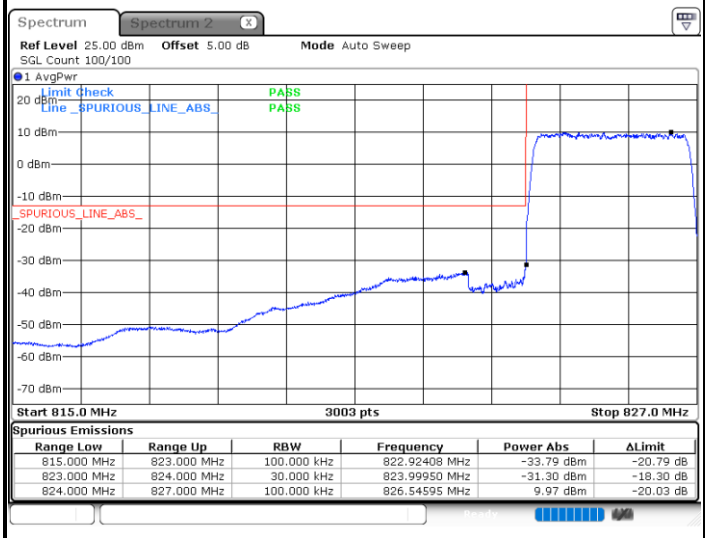


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
846.000 MHz	849.000 MHz	100.000 kHz	848.74975 MHz	22.17 dBm	-7.83 dB
849.000 MHz	850.000 MHz	30.000 kHz	849.00849 MHz	-14.85 dBm	-1.85 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.00500 MHz	-46.00 dBm	-33.00 dB

Date: 21.AUG.2024 17:15:02

Lowest Band Edge / Full RB

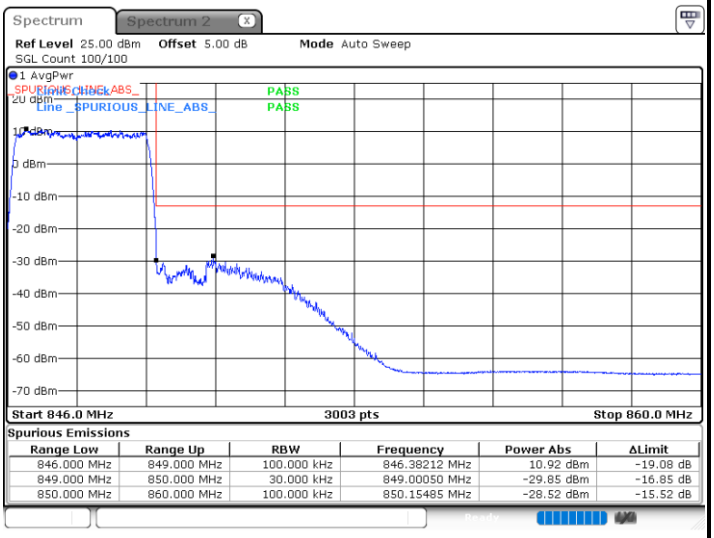


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.92408 MHz	-33.79 dBm	-20.79 dB
823.000 MHz	824.000 MHz	30.000 kHz	823.99950 MHz	-31.30 dBm	-18.30 dB
824.000 MHz	827.000 MHz	100.000 kHz	826.54595 MHz	9.97 dBm	-20.03 dB

Date: 21.AUG.2024 17:07:01

Highest Band Edge / Full RB



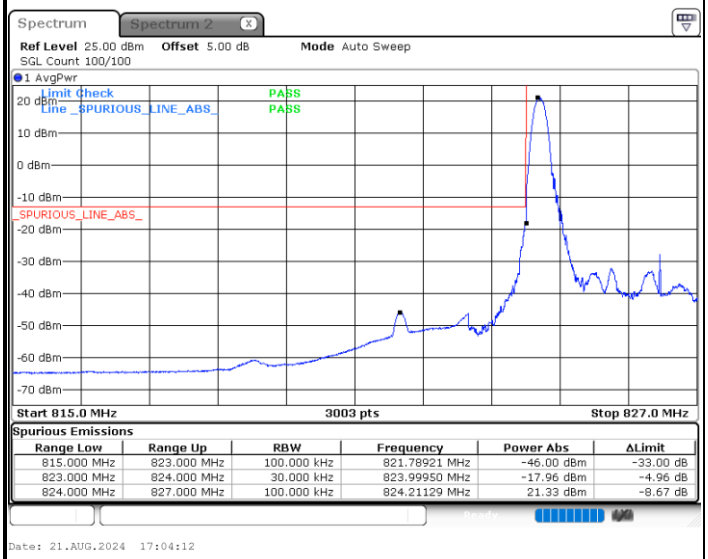
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
846.000 MHz	849.000 MHz	100.000 kHz	846.38212 MHz	10.92 dBm	-19.08 dB
849.000 MHz	850.000 MHz	30.000 kHz	849.00050 MHz	-29.85 dBm	-16.85 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.15485 MHz	-28.52 dBm	-15.52 dB

Date: 21.AUG.2024 17:18:51

LTE Band 5 / 3MHz / 16QAM

Lowest Band Edge / 1 RB

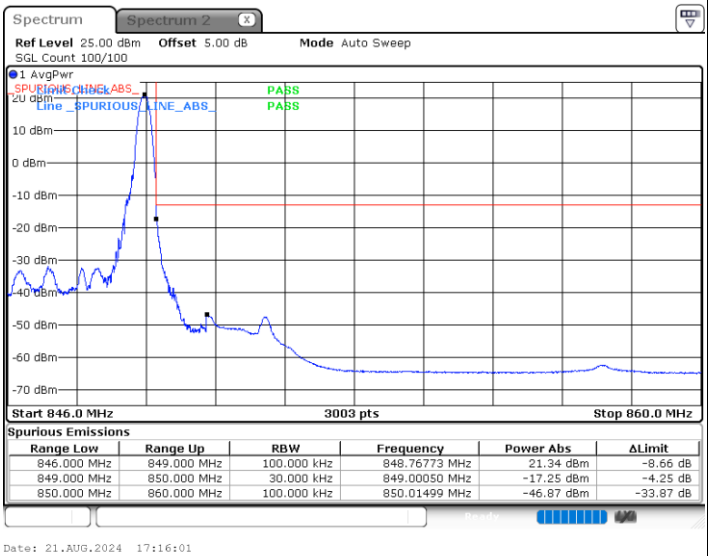


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	821.78921 MHz	-46.00 dBm	-33.00 dB
823.000 MHz	824.000 MHz	30.000 kHz	823.99950 MHz	-17.96 dBm	-4.96 dB
824.000 MHz	827.000 MHz	100.000 kHz	824.21129 MHz	21.33 dBm	-8.67 dB

Date: 21.AUG.2024 17:04:12

Highest Band Edge /1 RB

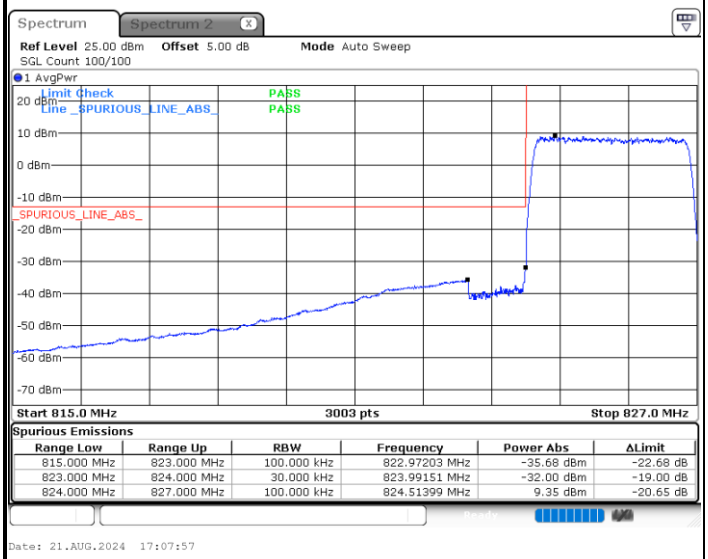


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
846.000 MHz	849.000 MHz	100.000 kHz	848.76773 MHz	21.34 dBm	-8.66 dB
849.000 MHz	850.000 MHz	30.000 kHz	849.00050 MHz	-17.25 dBm	-4.25 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.01499 MHz	-46.87 dBm	-33.87 dB

Date: 21.AUG.2024 17:16:01

Lowest Band Edge / Full RB

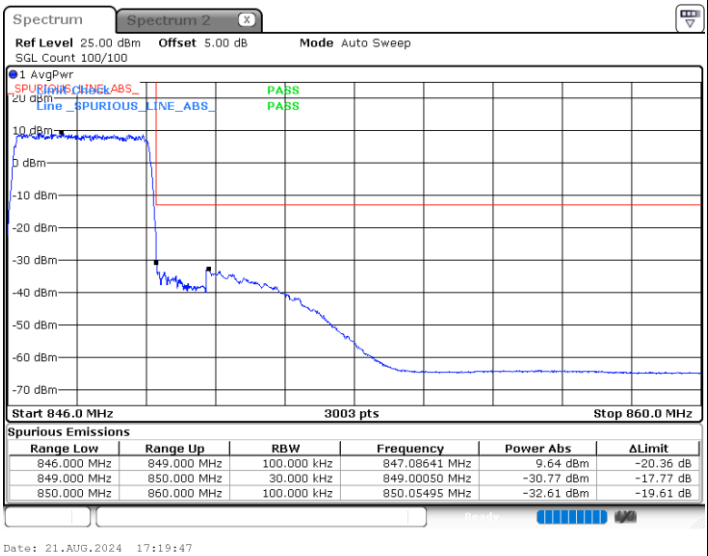


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.97203 MHz	-35.68 dBm	-22.68 dB
823.000 MHz	824.000 MHz	30.000 kHz	823.99151 MHz	-32.00 dBm	-19.00 dB
824.000 MHz	827.000 MHz	100.000 kHz	824.51399 MHz	9.35 dBm	-20.65 dB

Date: 21.AUG.2024 17:07:57

Highest Band Edge / Full RB



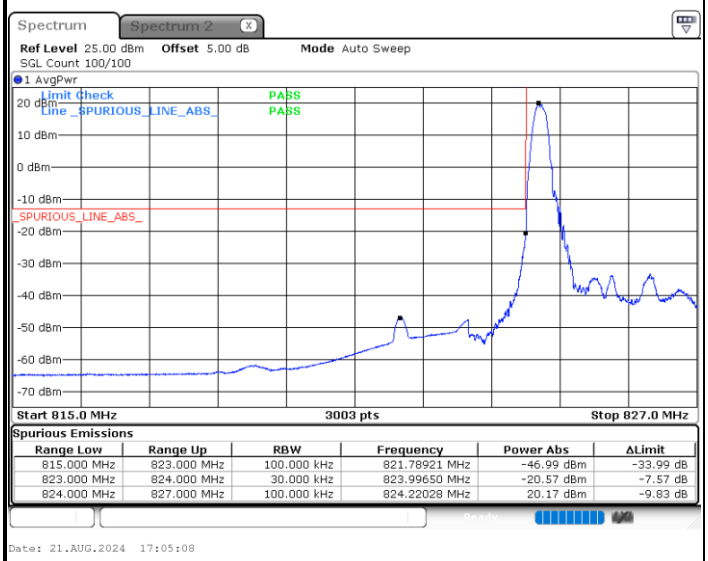
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
846.000 MHz	849.000 MHz	100.000 kHz	847.08641 MHz	9.64 dBm	-20.36 dB
849.000 MHz	850.000 MHz	30.000 kHz	849.00050 MHz	-30.77 dBm	-17.77 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.05495 MHz	-32.61 dBm	-19.61 dB

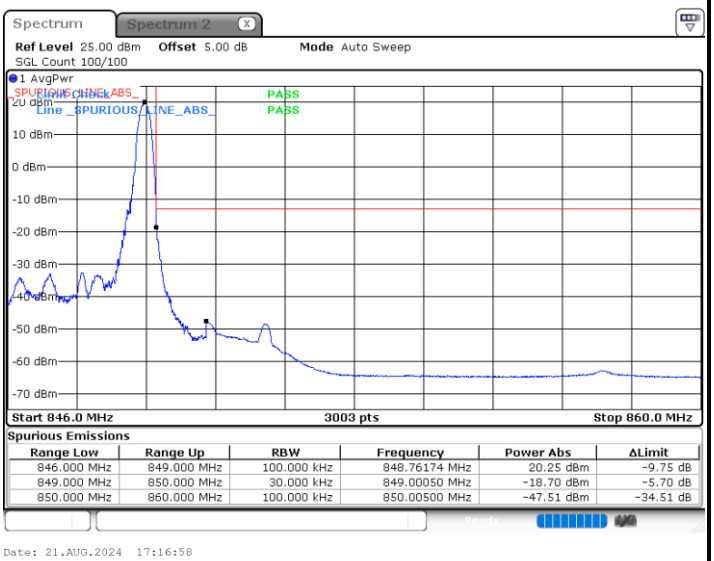
Date: 21.AUG.2024 17:19:47

LTE Band 5 / 3MHz / 64QAM

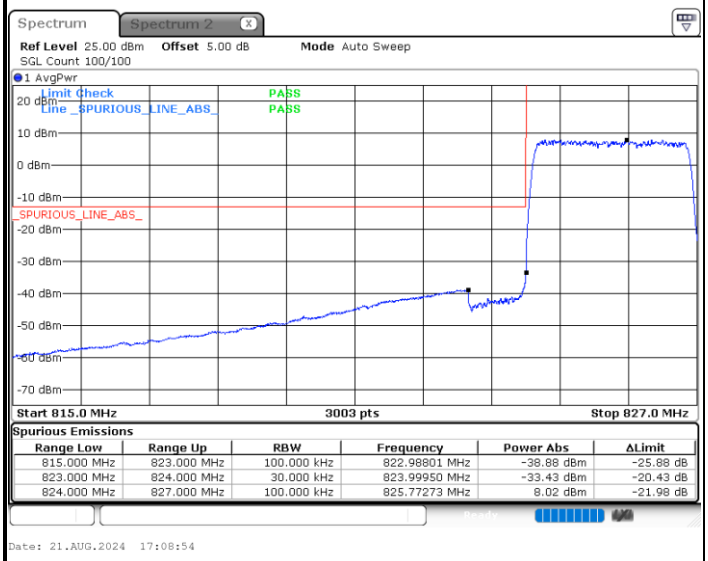
Lowest Band Edge / 1 RB



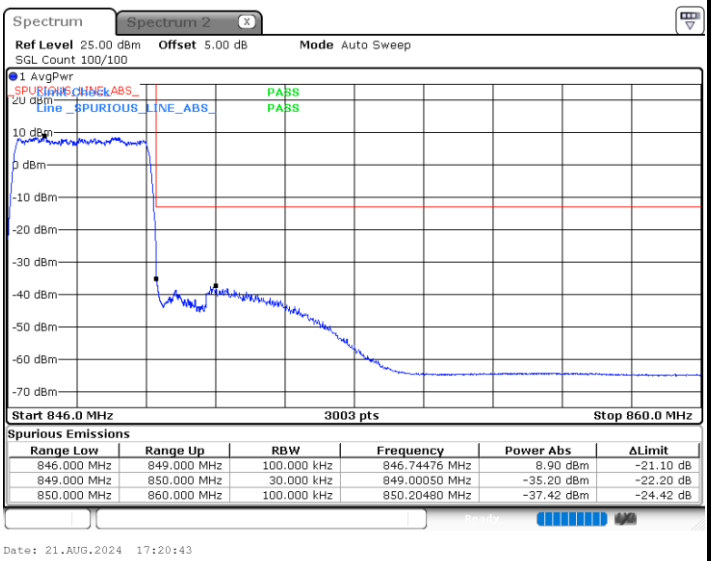
Highest Band Edge /1 RB



Lowest Band Edge / Full RB

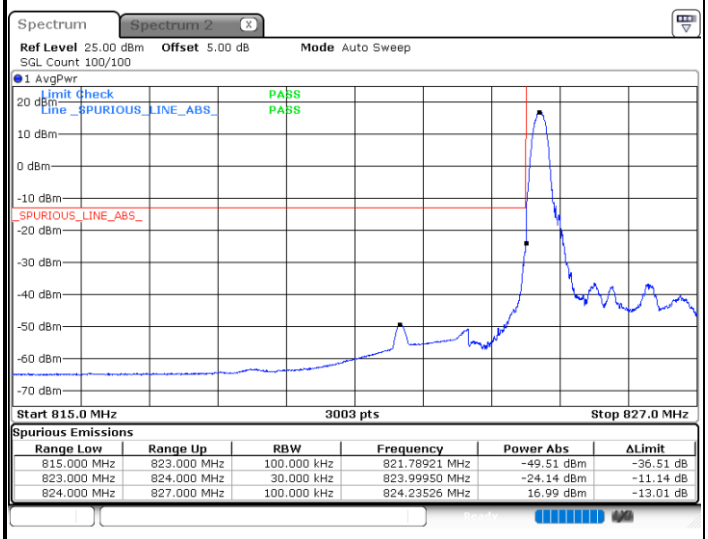


Highest Band Edge / Full RB



LTE Band 5 / 3MHz / 256QAM

Lowest Band Edge / 1 RB

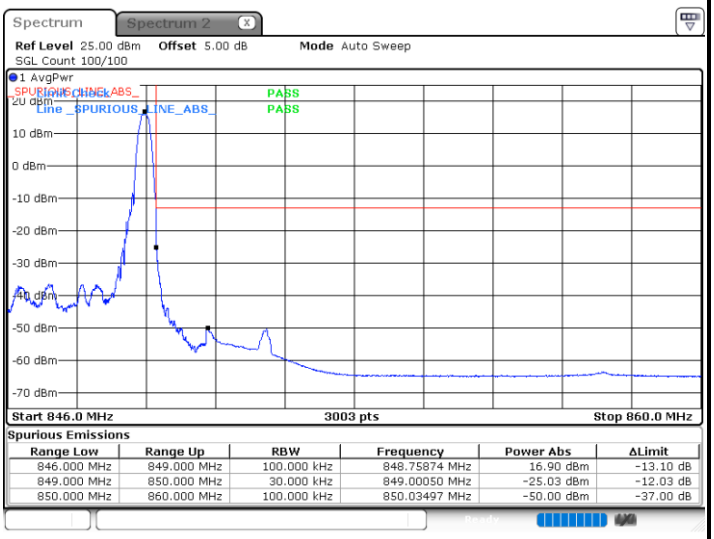


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	821.78921 MHz	-49.51 dBm	-36.51 dB
823.000 MHz	824.000 MHz	30.000 kHz	823.99950 MHz	-24.14 dBm	-11.14 dB
824.000 MHz	827.000 MHz	100.000 kHz	824.23526 MHz	16.99 dBm	-13.01 dB

Date: 21.AUG.2024 17:06:05

Highest Band Edge /1 RB

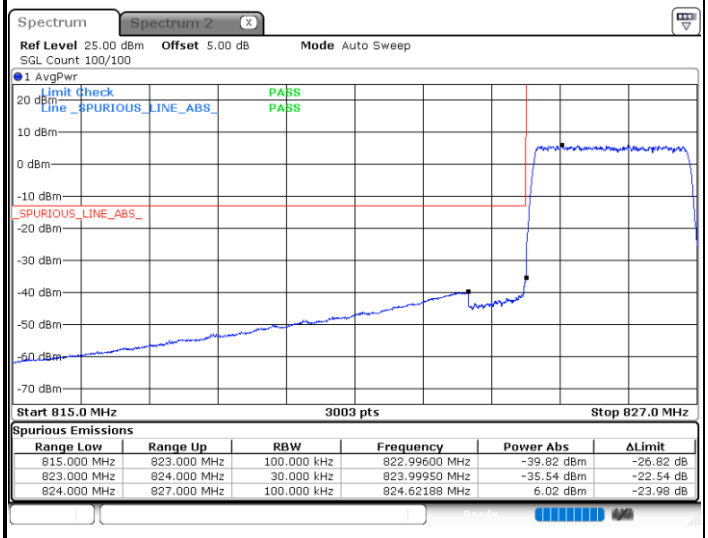


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
846.000 MHz	849.000 MHz	100.000 kHz	848.75874 MHz	16.90 dBm	-13.10 dB
849.000 MHz	850.000 MHz	30.000 kHz	849.00050 MHz	-25.03 dBm	-12.03 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.03497 MHz	-50.00 dBm	-37.00 dB

Date: 21.AUG.2024 17:17:54

Lowest Band Edge / Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.99600 MHz	-39.82 dBm	-26.82 dB
823.000 MHz	824.000 MHz	30.000 kHz	823.99950 MHz	-35.54 dBm	-22.54 dB
824.000 MHz	827.000 MHz	100.000 kHz	824.62188 MHz	6.02 dBm	-23.98 dB

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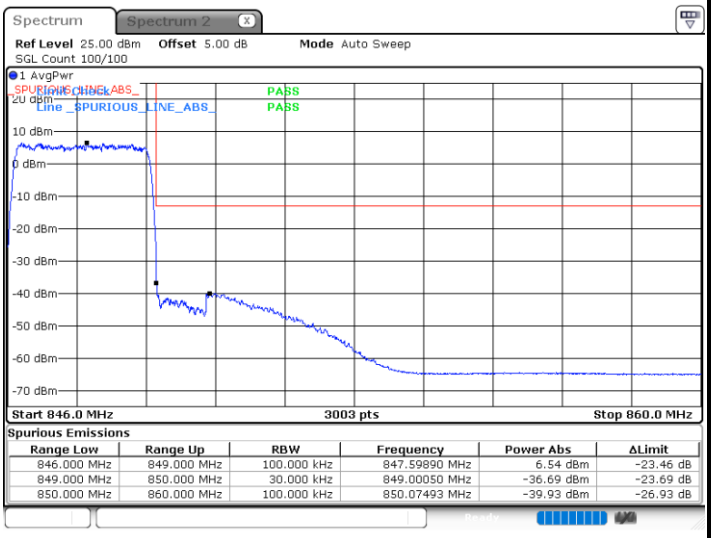
Highest Band Edge / Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
846.000 MHz	849.000 MHz	100.000 kHz	847.59890 MHz	6.54 dBm	-23.46 dB
849.000 MHz	850.000 MHz	30.000 kHz	849.00050 MHz	-36.69 dBm	-23.69 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.07493 MHz	-39.93 dBm	-26.93 dB

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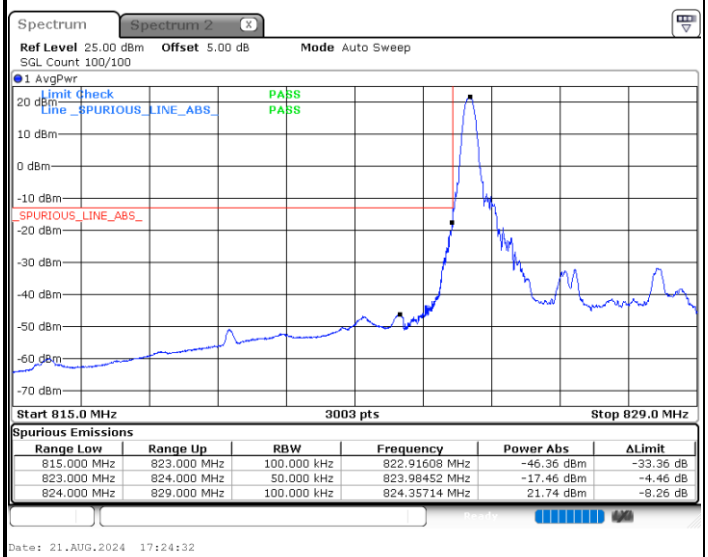
LTE Band 5 / 5MHz / QPSK

Lowest Band Edge / 1 RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.91608 MHz	-46.36 dBm	-33.36 dB
823.000 MHz	824.000 MHz	50.000 kHz	823.98452 MHz	-17.46 dBm	-4.46 dB
824.000 MHz	829.000 MHz	100.000 kHz	824.35714 MHz	21.74 dBm	-8.26 dB

Date: 21.AUG.2024 17:24:32

Highest Band Edge / 1 RB

Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
844.000 MHz	849.000 MHz	100.000 kHz	848.64286 MHz	21.81 dBm	-8.19 dB
849.000 MHz	850.000 MHz	50.000 kHz	849.00150 MHz	-17.03 dBm	-4.03 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.10490 MHz	-47.11 dBm	-34.11 dB

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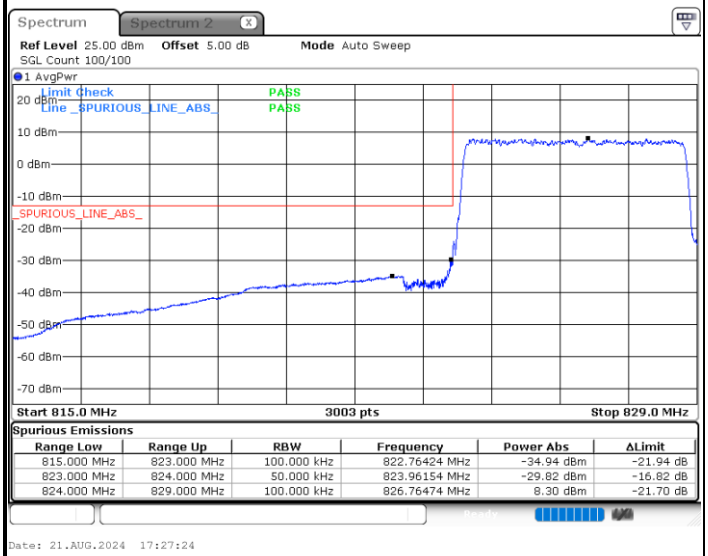
Lowest Band Edge / Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.76424 MHz	-34.94 dBm	-21.94 dB
823.000 MHz	824.000 MHz	50.000 kHz	823.96154 MHz	-29.82 dBm	-16.82 dB
824.000 MHz	829.000 MHz	100.000 kHz	826.76474 MHz	8.30 dBm	-21.70 dB

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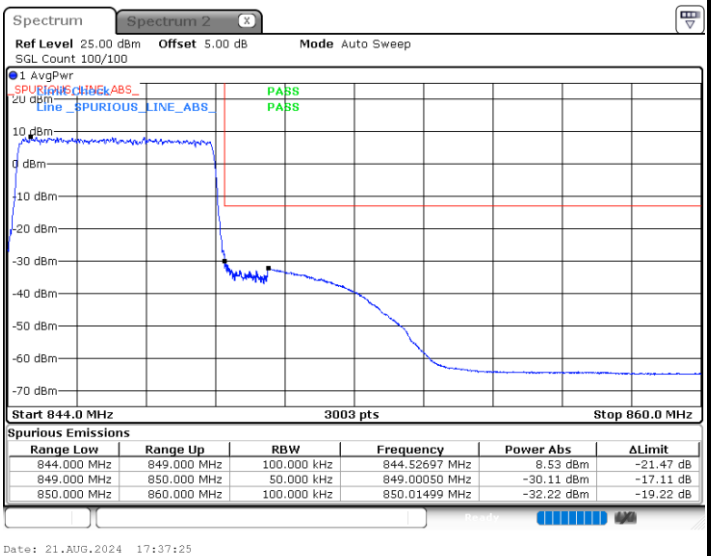
Highest Band Edge / Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
844.000 MHz	849.000 MHz	100.000 kHz	844.52697 MHz	8.53 dBm	-21.47 dB
849.000 MHz	850.000 MHz	50.000 kHz	849.00050 MHz	-30.11 dBm	-17.11 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.01499 MHz	-32.22 dBm	-19.22 dB

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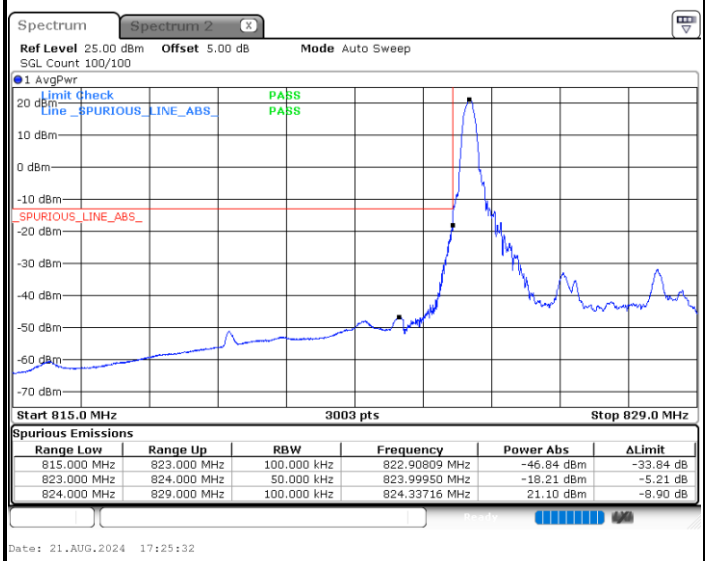
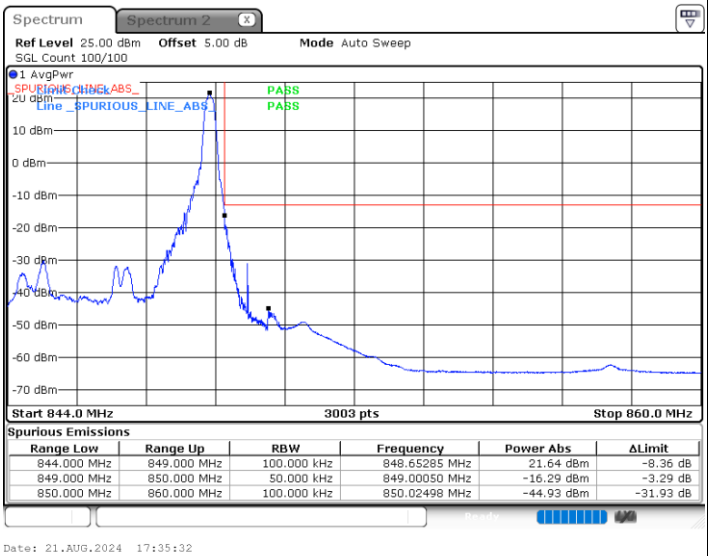
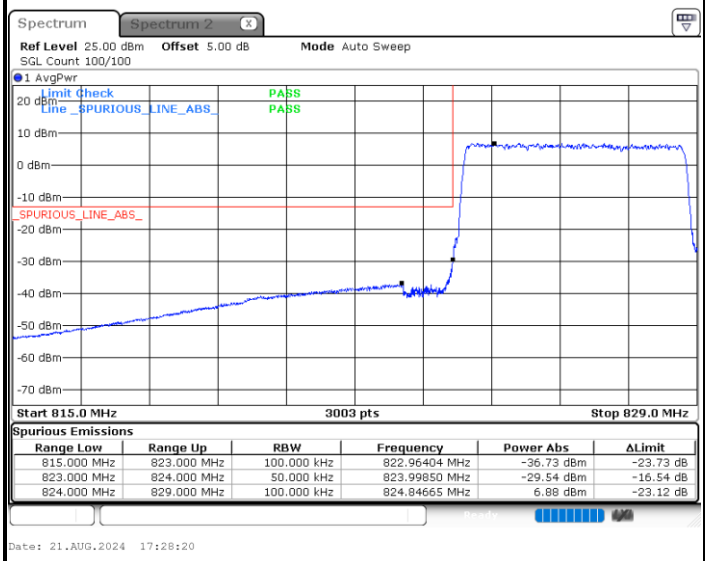
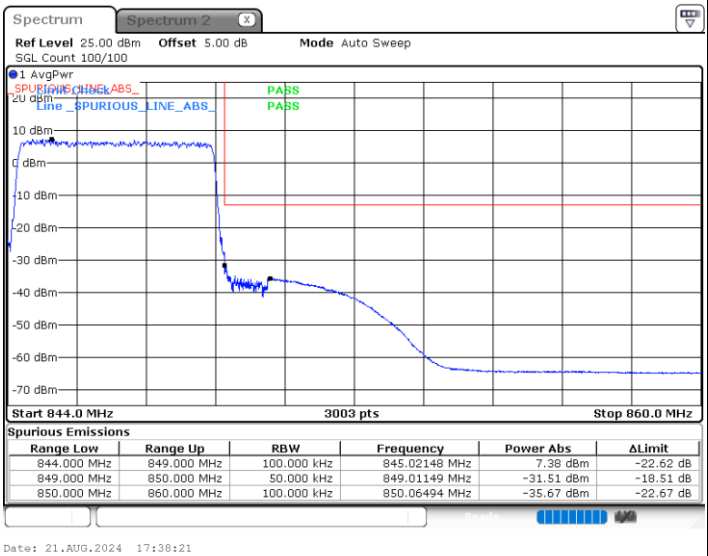
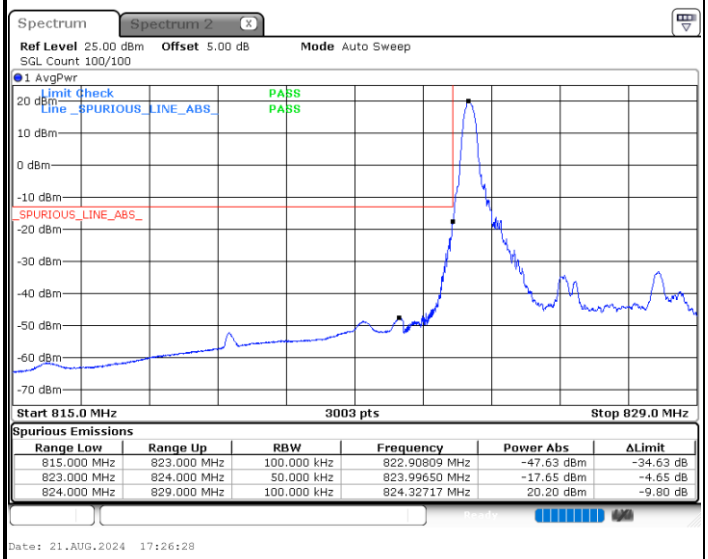
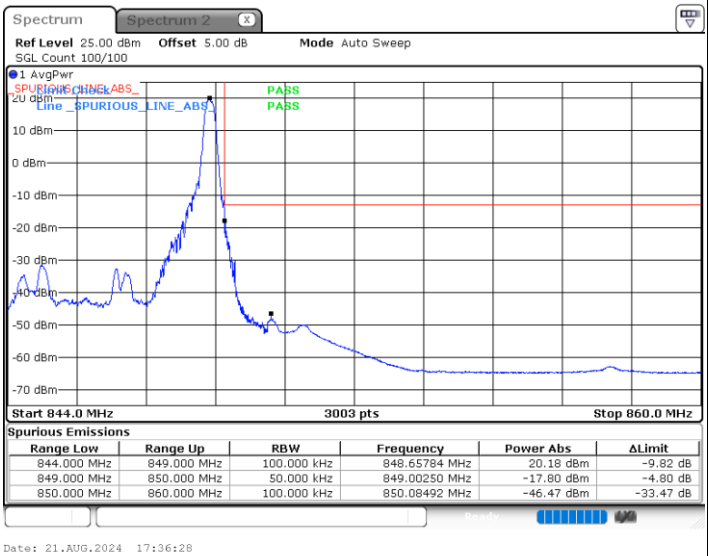
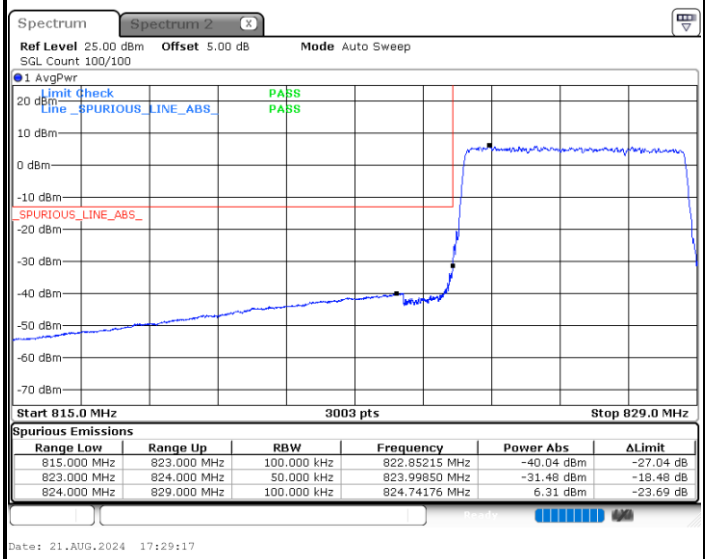
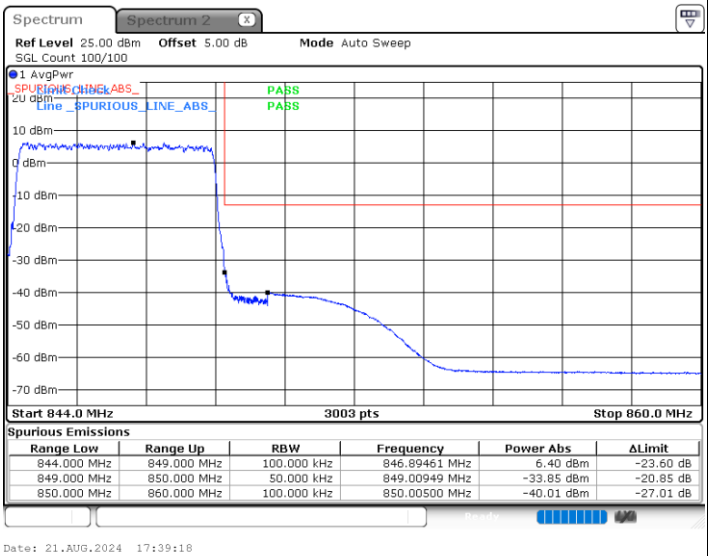
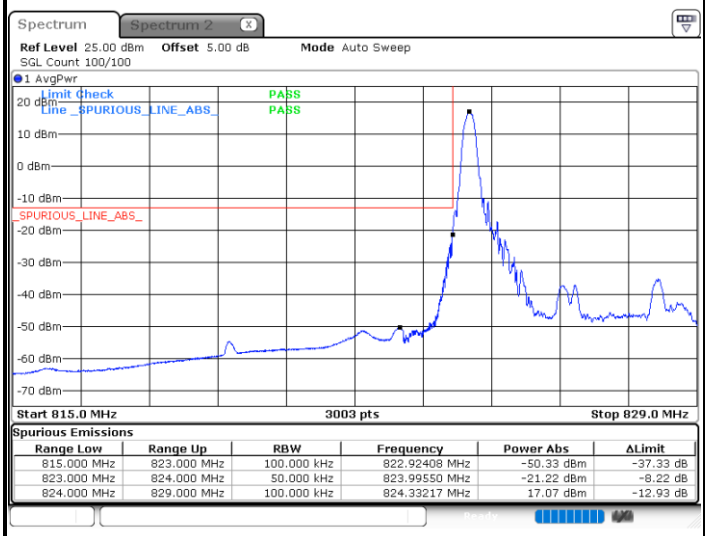
LTE Band 5 / 5MHz / 16QAM	
Lowest Band Edge / 1RB	**Highest Band Edge / 1 RB**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

LTE Band 5 / 5MHz / 64QAM	
Lowest Band Edge / 1RB	**Highest Band Edge / 1 RB**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

LTE Band 5 / 5MHz / 256QAM

Lowest Band Edge / 1RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.92408 MHz	-50.33 dBm	-37.33 dB
823.000 MHz	824.000 MHz	50.000 kHz	823.99550 MHz	-21.22 dBm	-8.22 dB
824.000 MHz	829.000 MHz	100.000 kHz	824.33217 MHz	17.07 dBm	-12.93 dB

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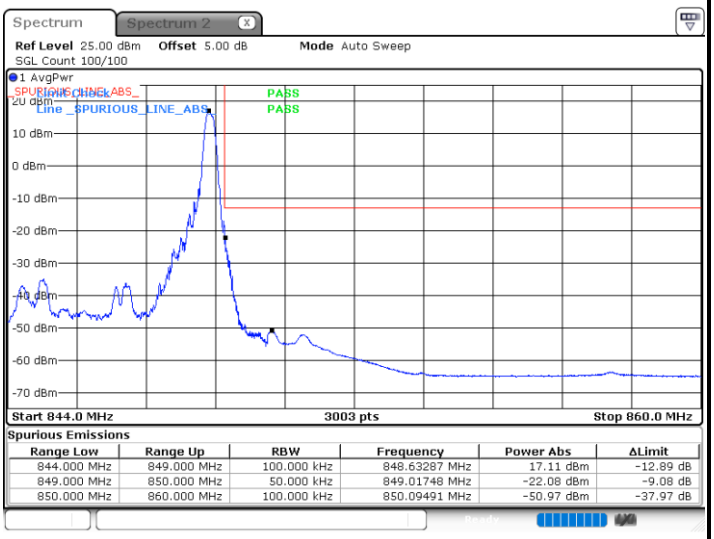
Highest Band Edge / 1 RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
844.000 MHz	849.000 MHz	100.000 kHz	848.63287 MHz	17.11 dBm	-12.89 dB
849.000 MHz	850.000 MHz	50.000 kHz	849.01748 MHz	-22.08 dBm	-9.08 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.09491 MHz	-50.97 dBm	-37.97 dB

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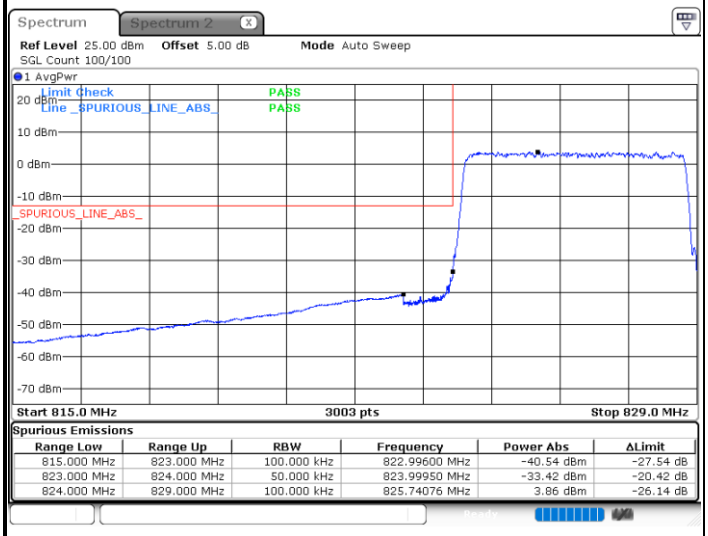
Lowest Band Edge / Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.99600 MHz	-40.54 dBm	-27.54 dB
823.000 MHz	824.000 MHz	50.000 kHz	823.99950 MHz	-33.42 dBm	-20.42 dB
824.000 MHz	829.000 MHz	100.000 kHz	825.74076 MHz	3.86 dBm	-26.14 dB

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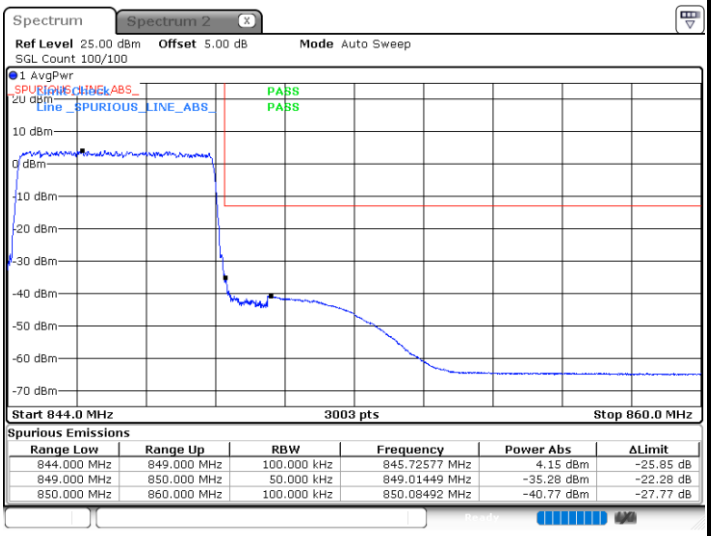
Highest Band Edge / Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
844.000 MHz	849.000 MHz	100.000 kHz	845.72577 MHz	4.15 dBm	-25.85 dB
849.000 MHz	850.000 MHz	50.000 kHz	849.01449 MHz	-35.28 dBm	-22.28 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.08492 MHz	-40.77 dBm	-27.77 dB

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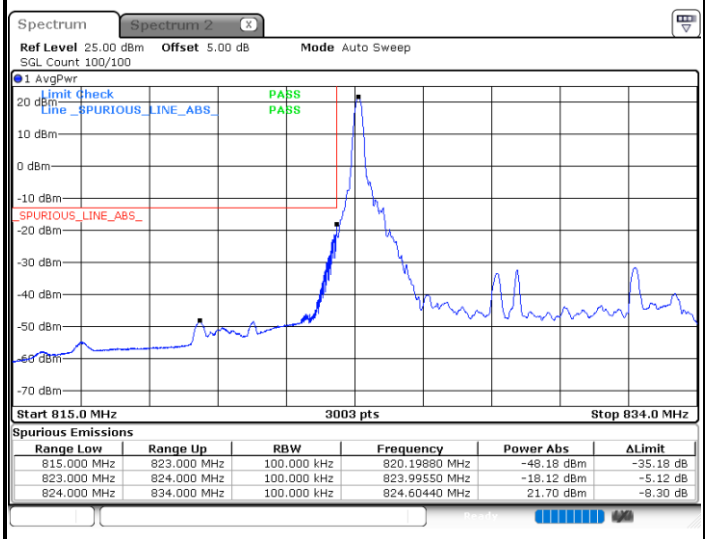
LTE Band 5 / 10MHz / QPSK

Lowest Band Edge / 1 RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	820.19880 MHz	-48.18 dBm	-35.18 dB
823.000 MHz	824.000 MHz	100.000 kHz	823.99550 MHz	-18.12 dBm	-5.12 dB
824.000 MHz	834.000 MHz	100.000 kHz	824.60440 MHz	21.70 dBm	-8.30 dB

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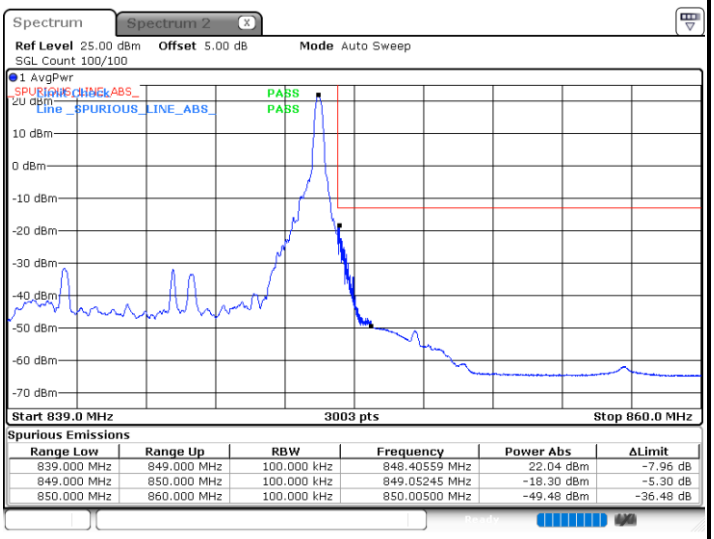
Highest Band Edge / 1 RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
839.000 MHz	849.000 MHz	100.000 kHz	848.40559 MHz	22.04 dBm	-7.96 dB
849.000 MHz	850.000 MHz	100.000 kHz	849.05245 MHz	-18.30 dBm	-5.30 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.00500 MHz	-49.48 dBm	-36.48 dB

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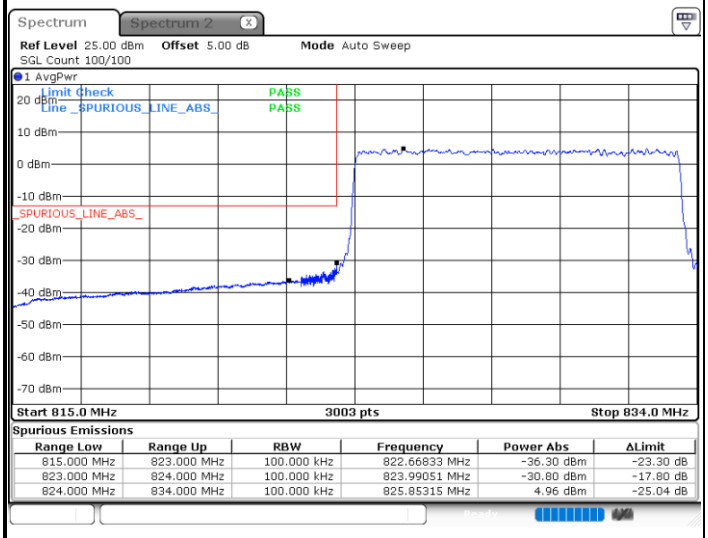
Lowest Band Edge / Full RB

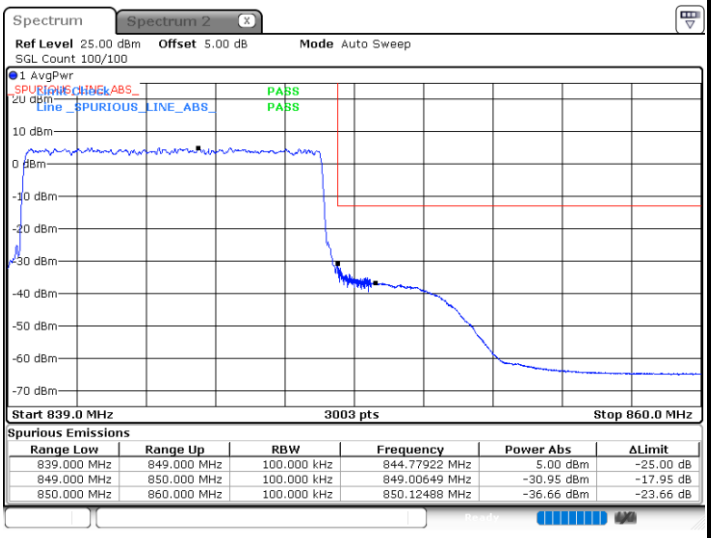


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.66833 MHz	-36.30 dBm	-23.30 dB
823.000 MHz	824.000 MHz	100.000 kHz	823.99051 MHz	-30.80 dBm	-17.80 dB
824.000 MHz	834.000 MHz	100.000 kHz	825.85315 MHz	4.96 dBm	-25.04 dB

Date: 21.AUG.2024 17:45:59

Highest Band Edge / Full RB



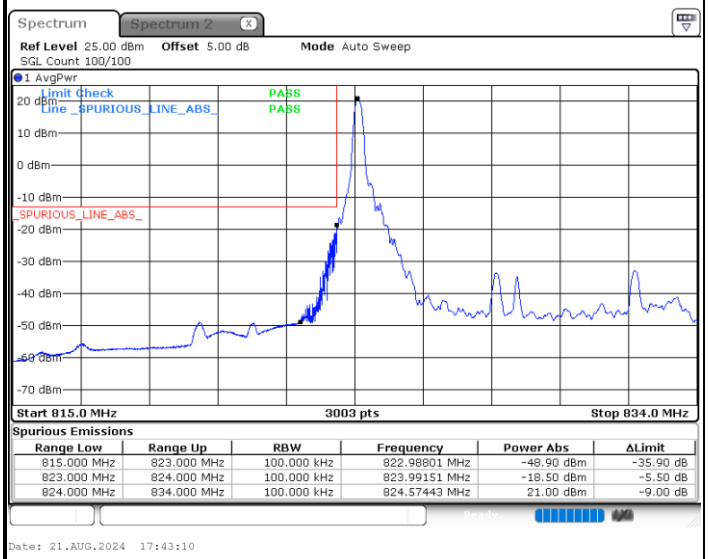
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
839.000 MHz	849.000 MHz	100.000 kHz	844.77922 MHz	5.00 dBm	-25.00 dB
849.000 MHz	850.000 MHz	100.000 kHz	849.00649 MHz	-30.95 dBm	-17.95 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.12488 MHz	-36.66 dBm	-23.66 dB

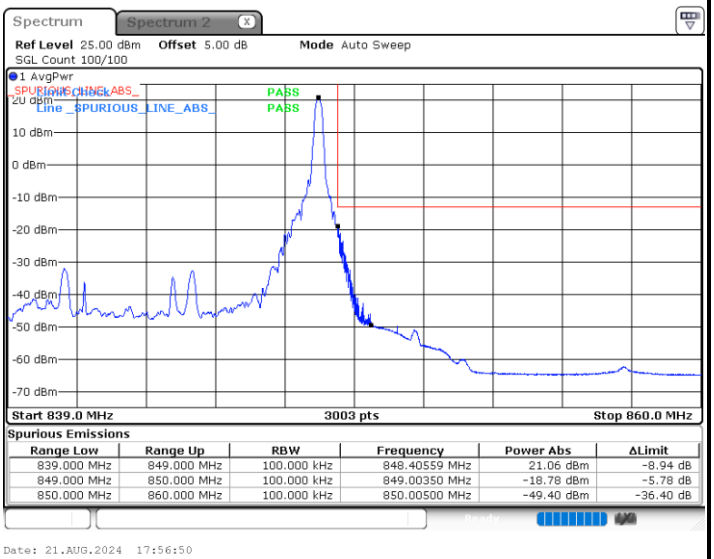
Date: 21.AUG.2024 17:59:39

LTE Band 5 / 10MHz / 16QAM

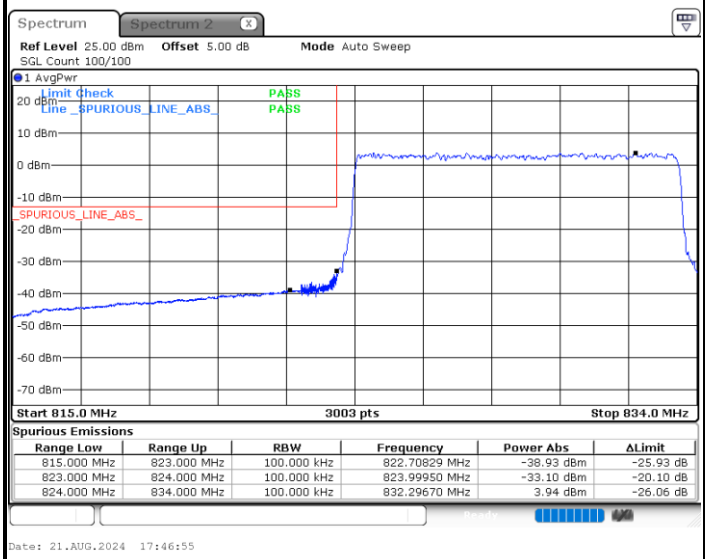
Lowest Band Edge / 1 RB



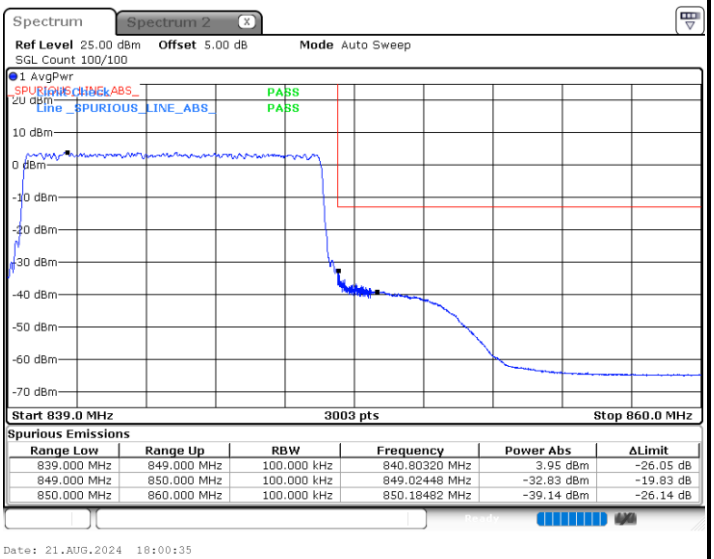
Highest Band Edge / 1 RB

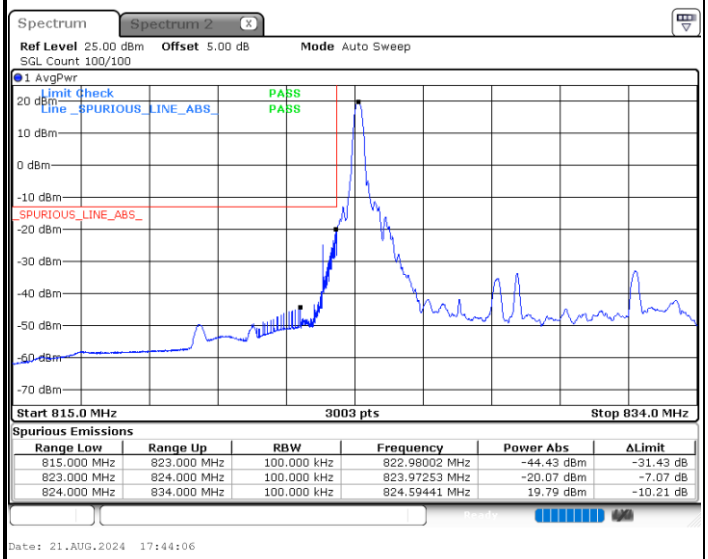
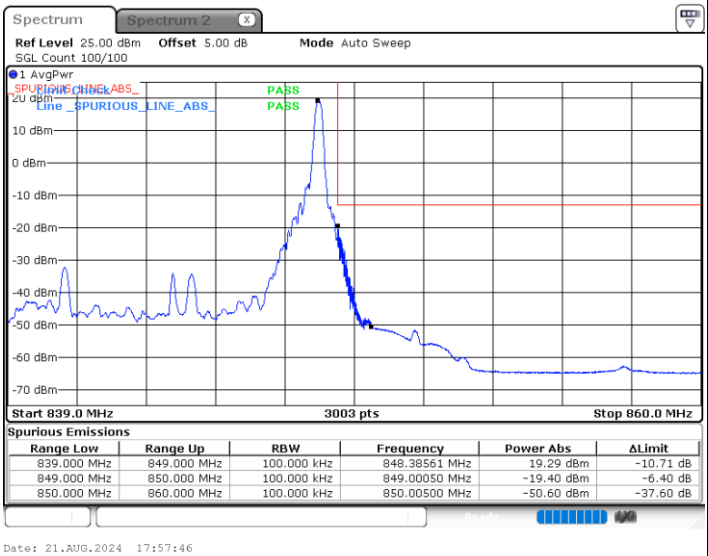
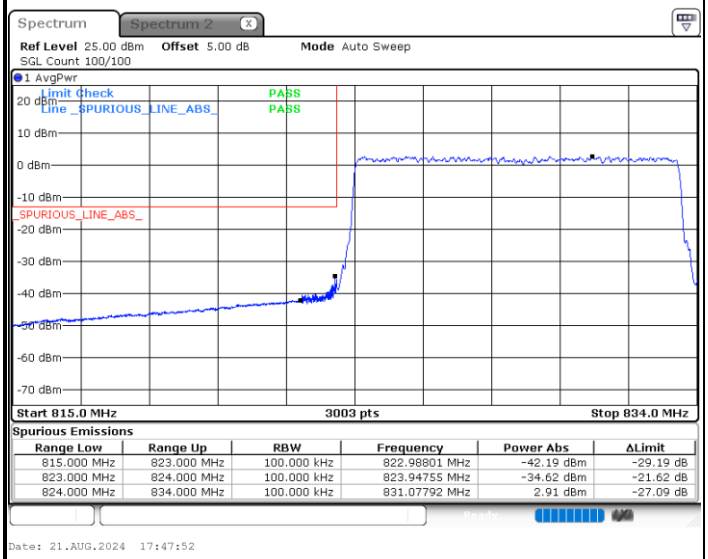
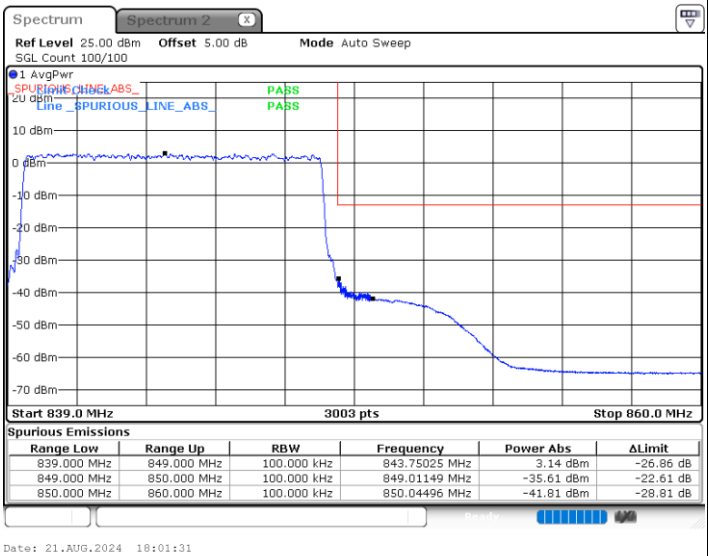


Lowest Band Edge / Full RB



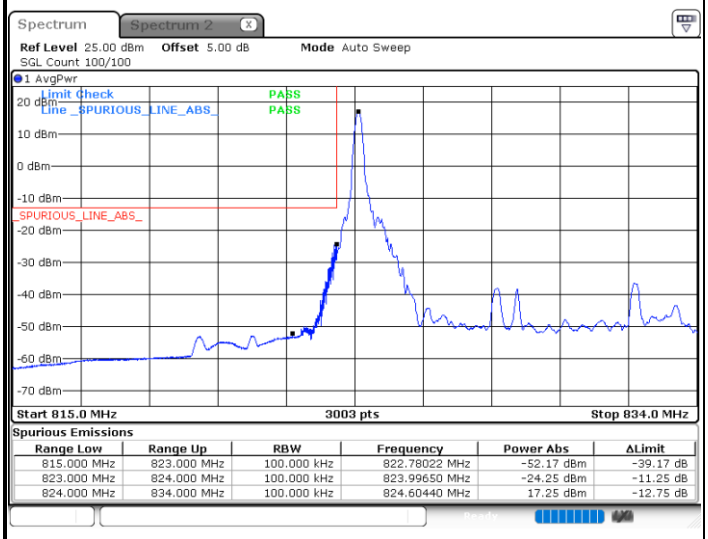
Highest Band Edge / Full RB



LTE Band 5 / 10MHz / 64QAM	
Lowest Band Edge / 1 RB	**Highest Band Edge / 1 RB**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

LTE Band 5 / 10MHz / 256QAM

Lowest Band Edge / 1 RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.78022 MHz	-52.17 dBm	-39.17 dB
823.000 MHz	824.000 MHz	100.000 kHz	823.99650 MHz	-24.25 dBm	-11.25 dB
824.000 MHz	834.000 MHz	100.000 kHz	824.60440 MHz	17.25 dBm	-12.75 dB

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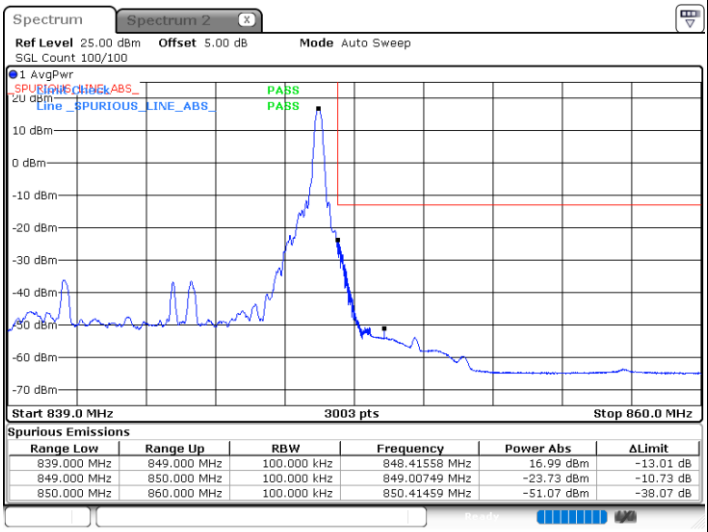
Highest Band Edge / 1 RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
839.000 MHz	849.000 MHz	100.000 kHz	848.41558 MHz	16.99 dBm	-13.01 dB
849.000 MHz	850.000 MHz	100.000 kHz	849.00749 MHz	-23.73 dBm	-10.73 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.41459 MHz	-51.07 dBm	-38.07 dB

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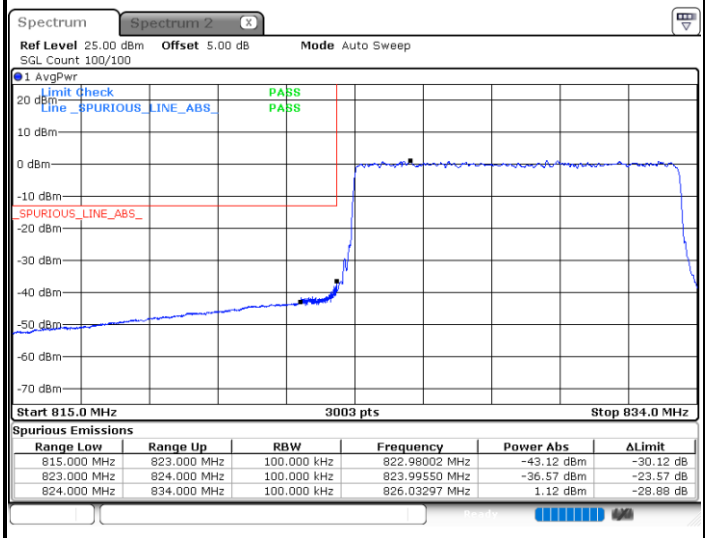
Lowest Band Edge / Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.98002 MHz	-43.12 dBm	-30.12 dB
823.000 MHz	824.000 MHz	100.000 kHz	823.99550 MHz	-36.57 dBm	-23.57 dB
824.000 MHz	834.000 MHz	100.000 kHz	826.03297 MHz	1.12 dBm	-28.88 dB

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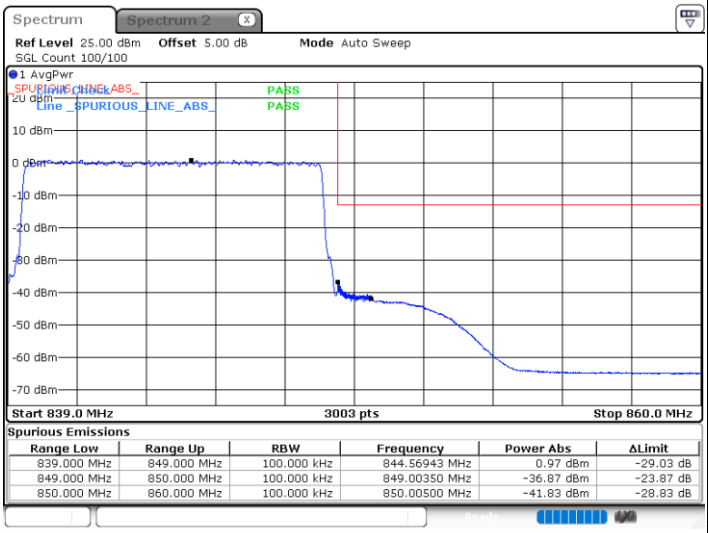
Highest Band Edge / Full RB



Spurious Emissions

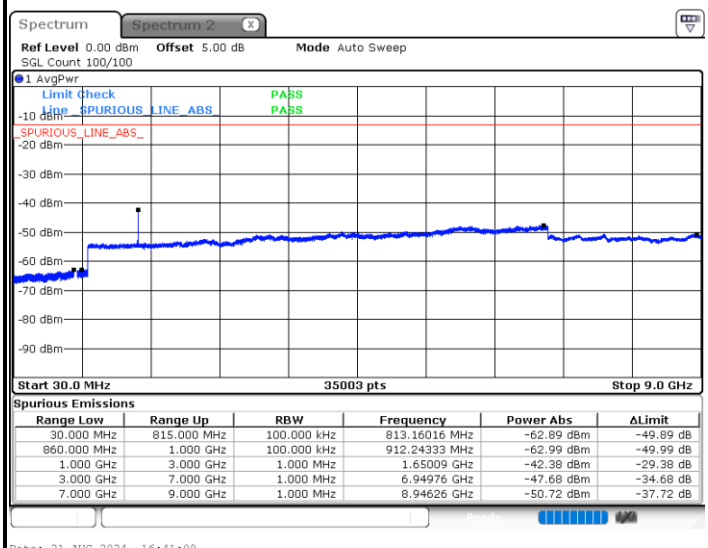
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
839.000 MHz	849.000 MHz	100.000 kHz	844.56943 MHz	0.97 dBm	-29.03 dB
849.000 MHz	850.000 MHz	100.000 kHz	849.00350 MHz	-36.87 dBm	-23.87 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.00500 MHz	-41.83 dBm	-28.83 dB

Date: 21.AUG.2024 18:02:28

Conducted Spurious Emission

LTE Band 5 / 1.4MHz

Lowest Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	813.16016 MHz	-62.89 dBm	-49.89 dB
860.000 MHz	1.000 GHz	100.000 kHz	912.24333 MHz	-62.99 dBm	-49.99 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.65009 GHz	-42.38 dBm	-29.38 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.94976 GHz	-47.68 dBm	-34.68 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.94626 GHz	-50.72 dBm	-37.72 dB

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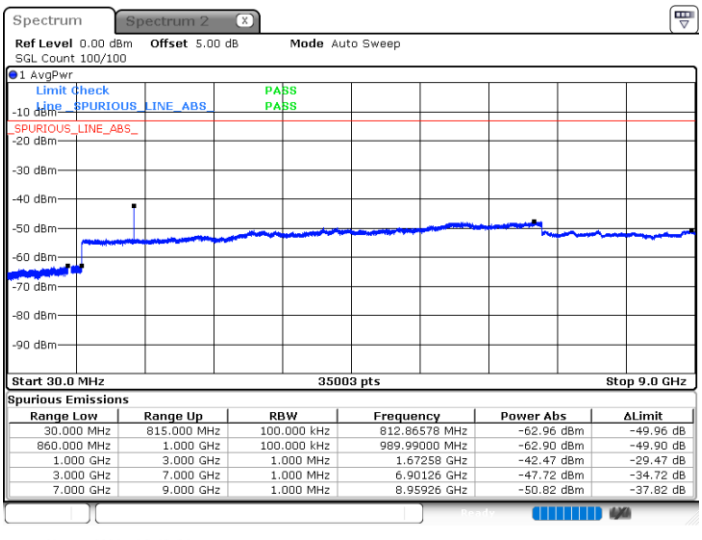
Middle Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	812.86578 MHz	-62.96 dBm	-49.96 dB
860.000 MHz	1.000 GHz	100.000 kHz	989.99000 MHz	-62.90 dBm	-49.90 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.67258 GHz	-42.47 dBm	-29.47 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.90126 GHz	-47.72 dBm	-34.72 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.95926 GHz	-50.82 dBm	-37.82 dB

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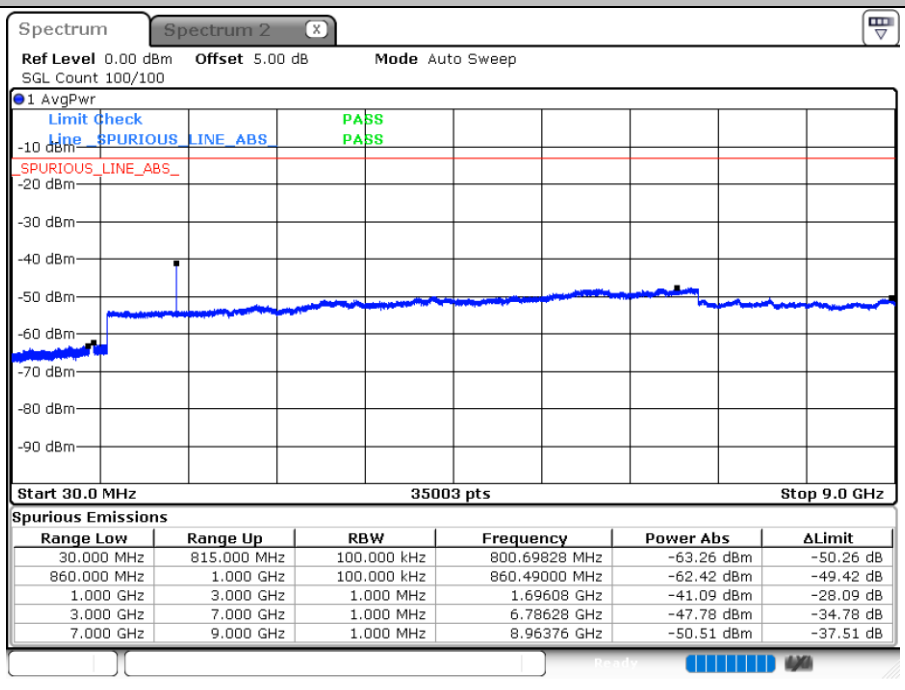
Highest Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	800.69828 MHz	-63.26 dBm	-50.26 dB
860.000 MHz	1.000 GHz	100.000 kHz	860.49000 MHz	-62.42 dBm	-49.42 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.69608 GHz	-41.09 dBm	-28.09 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.78628 GHz	-47.78 dBm	-34.78 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.96376 GHz	-50.51 dBm	-37.51 dB

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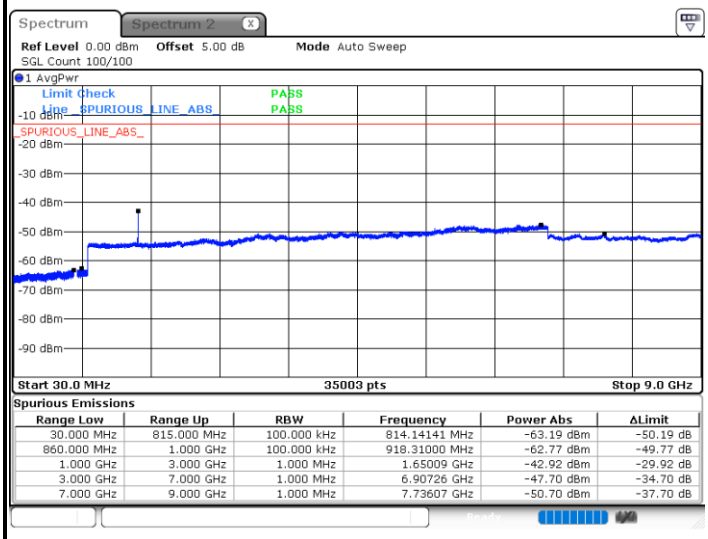
LTE Band 5 / 3MHz

Lowest Channel / QPSK

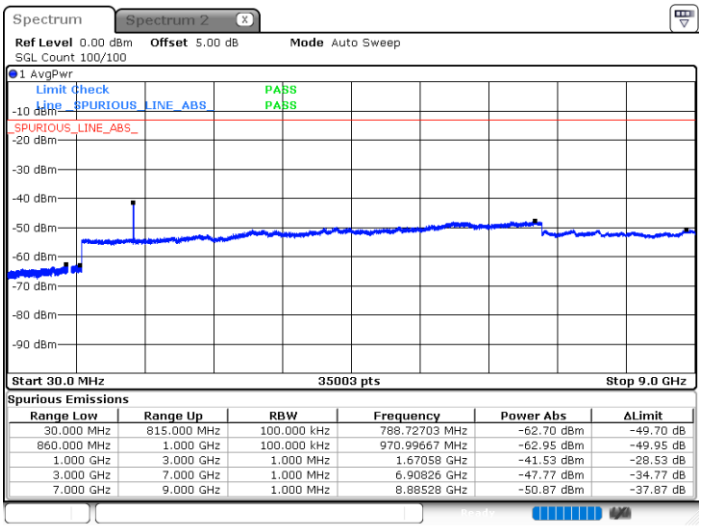


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	814.14141 MHz	-63.19 dBm	-50.19 dB
860.000 MHz	1.000 GHz	100.000 kHz	918.31000 MHz	-62.77 dBm	-49.77 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.65009 GHz	-42.92 dBm	-29.92 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.90726 GHz	-47.70 dBm	-34.70 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.73607 GHz	-50.70 dBm	-37.70 dB

Date: 21.AUG.2024 17:02:28

Middle Channel / QPSK

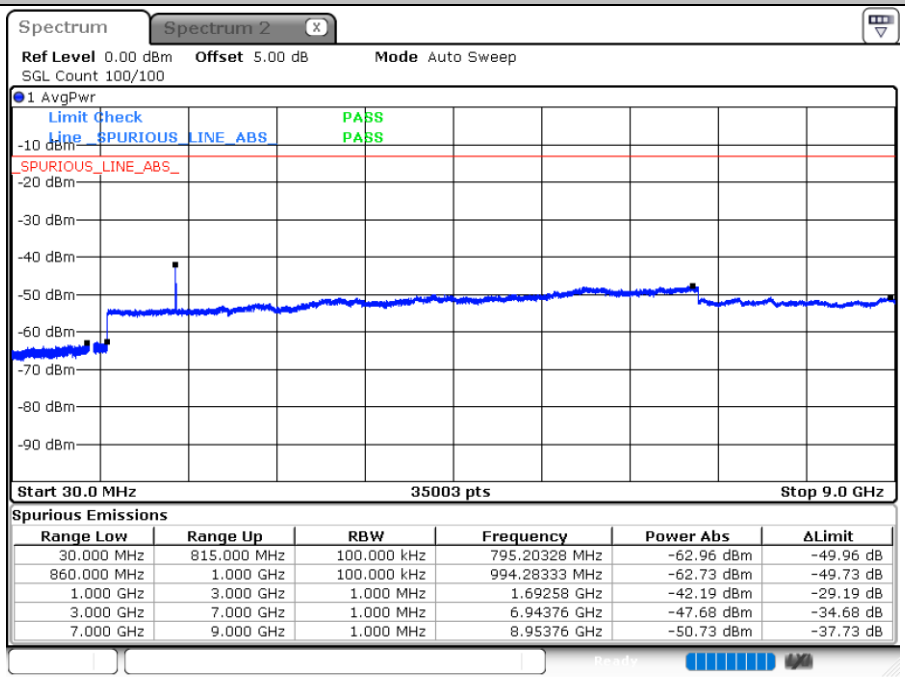


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	788.72703 MHz	-62.70 dBm	-49.70 dB
860.000 MHz	1.000 GHz	100.000 kHz	970.99667 MHz	-62.95 dBm	-49.95 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.67058 GHz	-41.53 dBm	-28.53 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.90826 GHz	-47.77 dBm	-34.77 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.88528 GHz	-50.87 dBm	-37.87 dB

Date: 21.AUG.2024 17:11:15

Highest Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	795.20328 MHz	-62.96 dBm	-49.96 dB
860.000 MHz	1.000 GHz	100.000 kHz	994.28333 MHz	-62.73 dBm	-49.73 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.69258 GHz	-42.19 dBm	-29.19 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.94376 GHz	-47.68 dBm	-34.68 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.95376 GHz	-50.73 dBm	-37.73 dB

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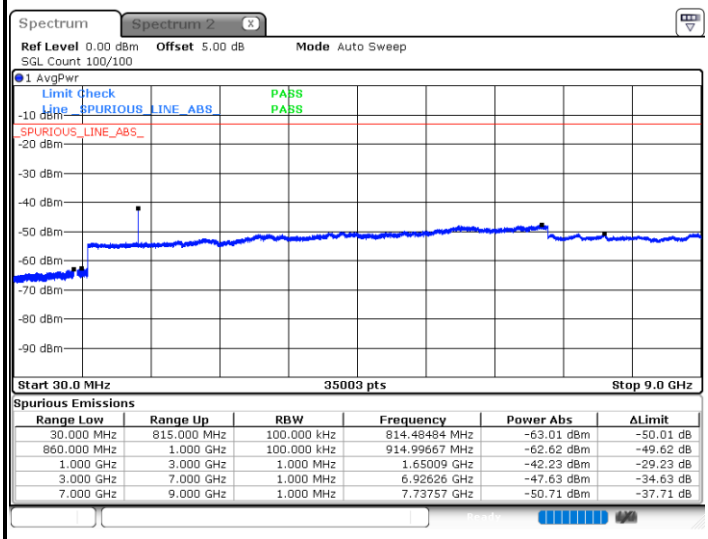
LTE Band 5 / 5MHz

Lowest Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	814.48484 MHz	-63.01 dBm	-50.01 dB
860.000 MHz	1.000 GHz	100.000 kHz	914.99667 MHz	-62.62 dBm	-49.62 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.65009 GHz	-42.23 dBm	-29.23 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.92626 GHz	-47.63 dBm	-34.63 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.73757 GHz	-50.71 dBm	-37.71 dB

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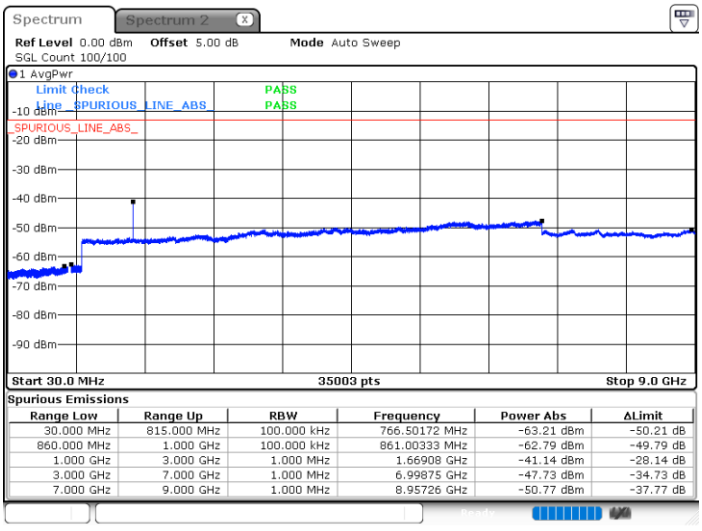
Middle Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	766.50172 MHz	-63.21 dBm	-50.21 dB
860.000 MHz	1.000 GHz	100.000 kHz	861.00333 MHz	-62.79 dBm	-49.79 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.66908 GHz	-41.14 dBm	-28.14 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99875 GHz	-47.73 dBm	-34.73 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.95726 GHz	-50.77 dBm	-37.77 dB

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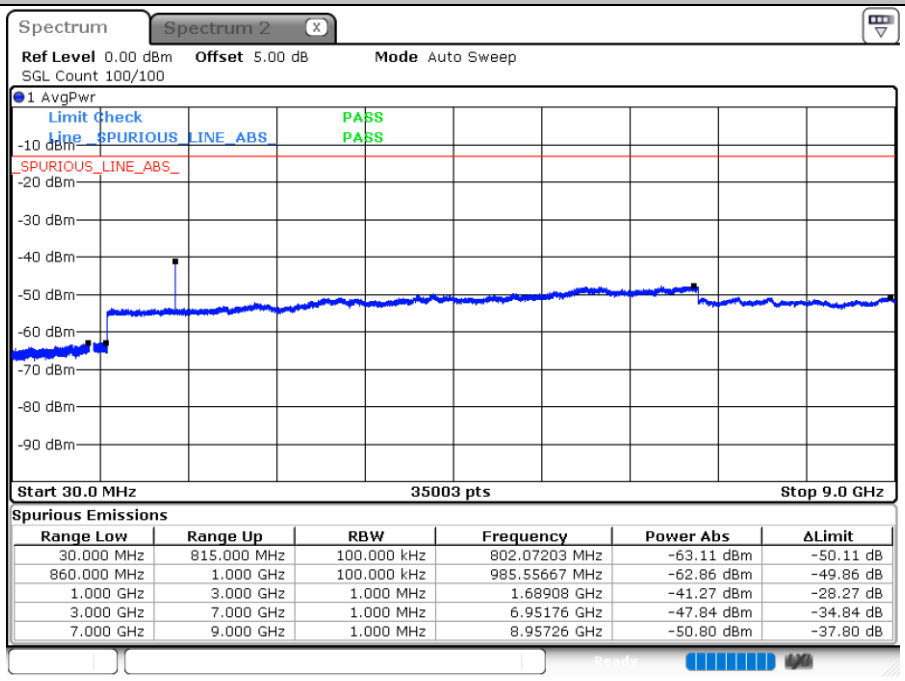
Highest Channel / QPSK



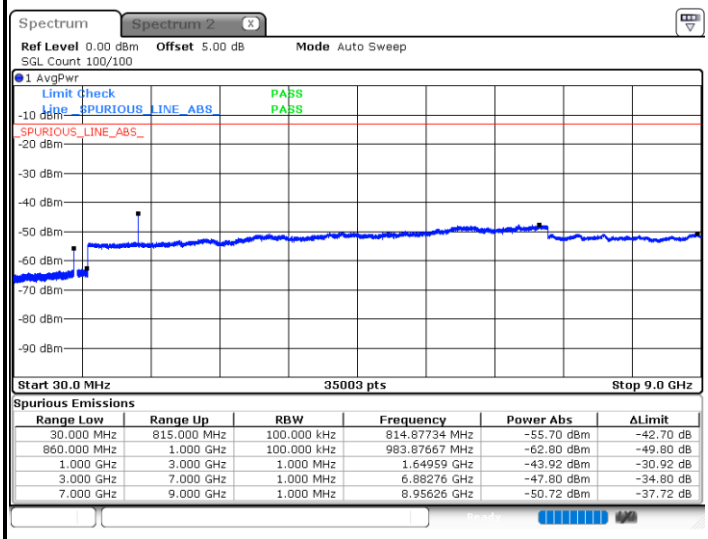
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	802.07203 MHz	-63.11 dBm	-50.11 dB
860.000 MHz	1.000 GHz	100.000 kHz	985.55667 MHz	-62.86 dBm	-49.86 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.68908 GHz	-41.27 dBm	-28.27 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.95176 GHz	-47.84 dBm	-34.84 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.95726 GHz	-50.80 dBm	-37.80 dB

Date: 21.AUG.2024 17:33:29

LTE Band 5 / 10MHz

Lowest Channel / QPSK

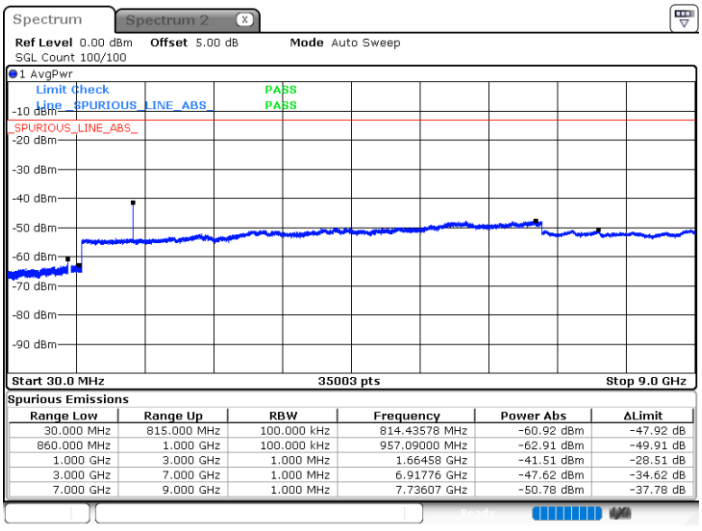


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	814.87734 MHz	-55.70 dBm	-42.70 dB
860.000 MHz	1.000 GHz	100.000 kHz	983.87667 MHz	-62.80 dBm	-49.80 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.64959 GHz	-43.92 dBm	-30.92 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.88276 GHz	-47.80 dBm	-34.80 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.95626 GHz	-50.72 dBm	-37.72 dB

Date: 21.AUG.2024 17:41:27

Middle Channel / QPSK

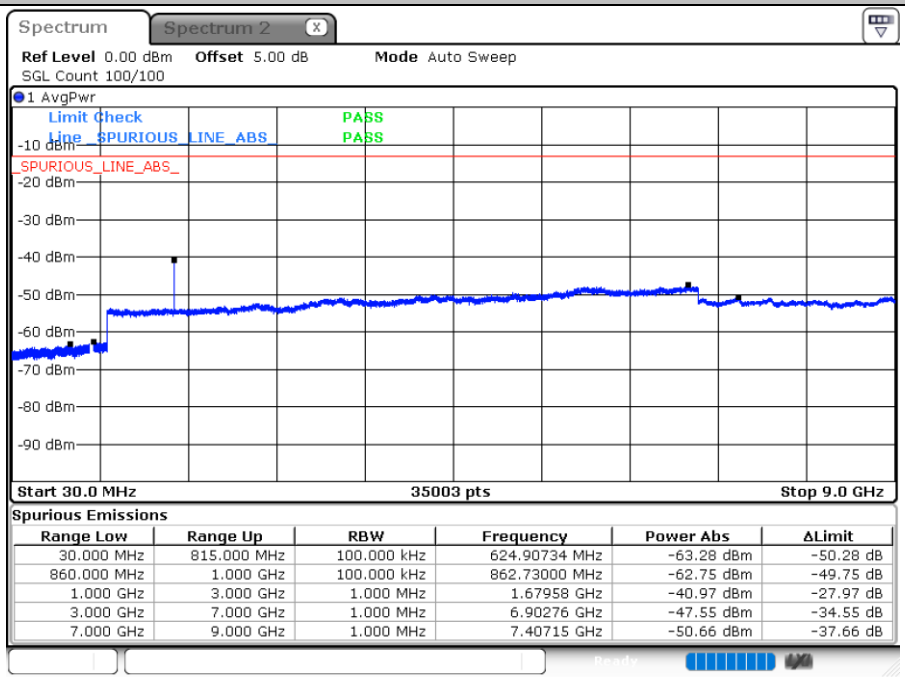


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	814.43578 MHz	-60.92 dBm	-47.92 dB
860.000 MHz	1.000 GHz	100.000 kHz	957.09000 MHz	-62.91 dBm	-49.91 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.66458 GHz	-41.51 dBm	-28.51 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.91776 GHz	-47.62 dBm	-34.62 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.73607 GHz	-50.78 dBm	-37.78 dB

Date: 21.AUG.2024 17:50:14

Highest Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	624.90734 MHz	-63.28 dBm	-50.28 dB
860.000 MHz	1.000 GHz	100.000 kHz	862.73000 MHz	-62.75 dBm	-49.75 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.67958 GHz	-40.97 dBm	-27.97 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.90276 GHz	-47.55 dBm	-34.55 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.40715 GHz	-50.66 dBm	-37.66 dB

Date: 21.AUG.2024 17:54:51

Frequency Stability

Test Conditions		LTE Band 5 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	2.5ppm
		Deviation (ppm)	Result
50	Normal Voltage	0.0017	PASS
40	Normal Voltage	0.0021	
30	Normal Voltage	0.0008	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0034	
0	Normal Voltage	0.0017	
-10	Normal Voltage	0.0022	
-20	Normal Voltage	0.0029	
-30	Normal Voltage	0.0016	
20	Maximum Voltage	0.0034	
20	Normal Voltage	0.0027	
20	Battery End Point	0.0014	

Note:

1. Normal Voltage =3.91 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.3 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

Test Engineer :	Chris	Temperature :	23~25℃
		Relative Humidity :	41~42%

RSE pretest all the supported Antennas, only the worst results are shown in the report.

LTE Band 5 / 10MHz / QPSK / ANT 1								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1664	-67.81	-13	-54.81	-74.78	1.58	10.70	H
	2496	-57.64	-13	-44.64	-65.89	2.102	12.50	H
	3328	-68.52	-13	-55.52	-77.41	2.856	13.90	H
	4160	-64.45	-13	-51.45	-72.91	2.689	13.30	H
	1664	-71.33	-13	-58.33	-78.30	1.58	10.70	V
	2496	-52.63	-13	-39.63	-60.88	2.10	12.50	V
	3328	-68.63	-13	-55.63	-77.52	2.86	13.90	V
	4160	-65.76	-13	-52.76	-74.22	2.69	13.30	V

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