



# FCC RF Test Report

**APPLICANT** : Xiaomi Communications Co., Ltd.  
**EQUIPMENT** : Mobile Phone  
**BRAND NAME** : Redmi  
**MODEL NAME** : 25080RABDG  
**FCC ID** : 2AFZZRABDG  
**STANDARD** : 47 CFR Part 27(F), 27(H)  
**CLASSIFICATION** : PCS Licensed Transmitter Held to Ear (PCE)  
**TEST DATE(S)** : Jun. 30, 2025 ~ Jul. 16, 2025

We, Sporton International Inc. (ShenZhen), would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.26-2015 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (ShenZhen), the test report shall not be reproduced except in full.

*Fly Liang*



Approved by: Fly Liang

**Sporton International Inc. (ShenZhen)**

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**People's Republic of China**



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### 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	PASS	-
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 12) (Band 13) (Band 17)	< 43+10log <sub>10</sub> (P[Watts])	PASS	Under limit 21.10 dB at 1559.50 MHz

**Conformity Assessment Condition:**

- 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.
- 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	Redmi
Model Name	25080RABDG
FCC ID	2AFZZRABDG
IMEI Code	Conducted: 862542070023583/862542070023591 Radiation: 862542070040926/862542070040934
HW Version	135100P16
SW Version	Xiaomi HyperOS 2.0
EUT Stage	Identical Prototype

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

## 1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
<b>Tx Frequency</b>	LTE Band 12 : 699 MHz ~ 716 MHz LTE Band 13 : 777 MHz ~ 787 MHz LTE Band 17 : 704 MHz ~ 716 MHz
<b>Rx Frequency</b>	LTE Band 12 : 729 MHz ~ 746 MHz LTE Band 13 : 746 MHz ~ 756 MHz LTE Band 17 : 734 MHz ~ 746 MHz
<b>Bandwidth</b>	LTE Band 12 : 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 13 : 5MHz / 10MHz LTE Band 17 : 5MHz / 10MHz
<b>Maximum Output Power to Antenna</b>	<Ant.0> LTE Band 12 : 24.45 dBm LTE Band 13 : 24.33 dBm LTE Band 17 : 24.44 dBm <Ant.2> LTE Band 12 : 24.55 dBm LTE Band 13 : 24.55 dBm LTE Band 17 : 24.54 dBm
<b>Antenna Gain</b>	<Ant.0> LTE Band 12 : -4.0 dBi LTE Band 13 : -4.7 dBi LTE Band 17 : -4.0 dBi <Ant.2> LTE Band 12 : -5.2 dBi LTE Band 13 : -7.8 dBi LTE Band 17 : -5.2 dBi
<b>Type of Modulation</b>	QPSK / 16QAM / 64QAM/ 256QAM

Note:

1. The maximum EIRP is calculated from max output power and max antenna gain, so only the maximum EIRP of Antenna 0 for LTE B12/13/17 is shown in the report.
2. For LTE B12/13/17, only the test data of Ant.2 is showed in the report according to the maximum conducted power for conducted test items.

## 1.5 Modification of EUT

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



### 1.6 Maximum ERP 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	0.0671	1M09G7D	0.0536	1M10W7D
3	700.5 ~ 714.5	0.0659	2M72G7D	0.0547	2M73W7D
5	701.5 ~ 713.5	0.0670	4M49G7D	0.0548	4M48W7D
10	704.0 ~ 711.0	0.0676	9M03G7D	0.0556	9M01W7D
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	0.0555	4M51G7D	0.0461	4M50W7D
10	782.0	0.0560	8M99G7D	0.0471	8M97W7D
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	0.0671	4M49G7D	0.0558	4M48W7D
10	709.0 ~ 711.0	0.0675	9M03G7D	0.0564	9M01W7D

**Note:**

- 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.
- 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. (ShenZhen) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

<b>Test Firm</b>	Sporton International Inc. (ShenZhen)		
<b>Test Site Location</b>	101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City, Guangdong Province 518103 People's Republic of China TEL: +86-755-86066985		
<b>Test Site No.</b>	<b>Sporton Site No.</b>	<b>FCC Designation No.</b>	<b>FCC Test Firm Registration No.</b>
	TH01-SZ 03CH01-SZ	CN1256	421272



### 1.8 Test Software

Item	Site	Manufacture	Name	Version
1.	03CH01-SZ	AUDIX	E3	6.2009-8-24

### 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(F), 27(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

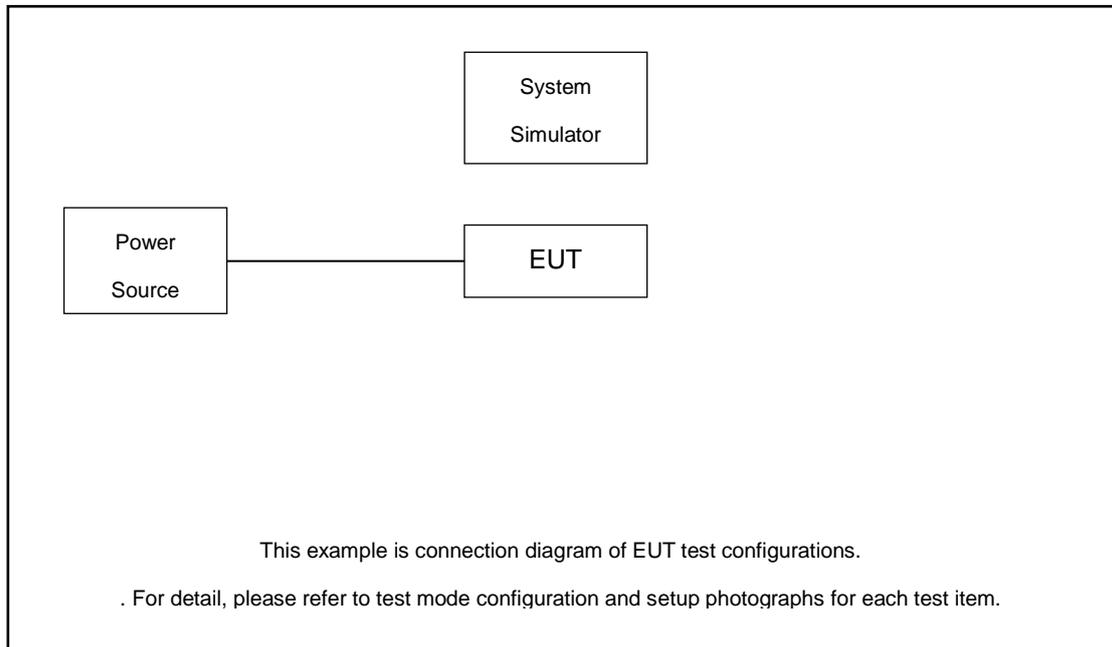
### 2.1 Test Mode

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.

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	12	v	v	v	v	-	-	v	v	v	v	v	v	v	v	v	v	
	13	-	-	v	v	-	-	v	v	v	v	v	v	v	v	v	v	
	17	-	-	v	v	-	-	v	v	v	v	v	v	v	v	v	v	
Peak-to-Average Ratio	12				v	-	-	v	v	v				v		v		
	13	-	-		v	-	-	v	v	v				v		v		
26dB and 99% Bandwidth	12	v	v	v	v	-	-	v	v					v		v		
	13	-	-	v	v	-	-	v	v					v		v		
Conducted Band Edge	12	v	v	v	v	-	-	v	v	v		v		v	v		v	
	13	-	-	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	v	
	13	-	-	v	v	-	-	v	v	v	v	v	v	v	v	v	v	
	17	-	-	v	v	-	-	v	v	v	v	v	v	v	v	v	v	
Radiated Spurious Emission	12	Worst Case															v	
	13	Worst Case															v	
Note	<ol style="list-style-type: none"> <li>The mark "v " means that this configuration is chosen for testing</li> <li>The mark "- " means that this bandwidth is not supported.</li> <li>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.</li> <li>For QAM modulation mode, the whole testing has assessed 16QAM&amp;64QAM mode by referring to the higher conducted power.</li> </ol>																	

## 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 and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

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

*Offset = RF cable loss + attenuator factor.*

Following shows an offset computation example with cable loss 4.0 dB and 10dB attenuator.

Example :

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)}. \\ &= 4.0 + 10 = 14.0 \text{ (dB)} \end{aligned}$$



### 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

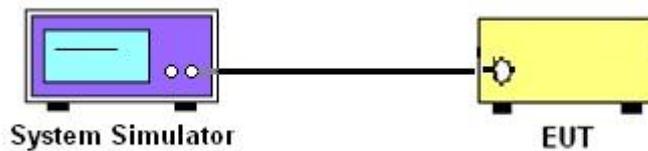
### 3 Conducted Test Items

#### 3.1 Measuring Instruments

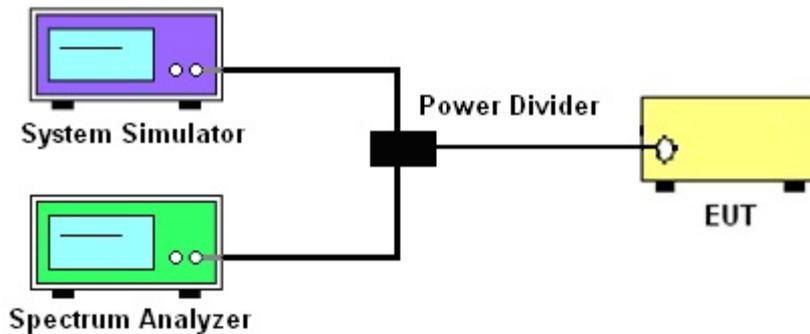
See list of measuring instruments of this test report.

#### 3.2 Test Setup

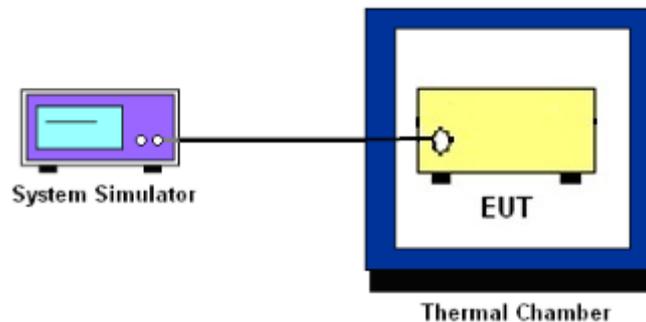
##### 3.2.1 Conducted Output Power



##### 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

#### 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 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  $43 + 10\log_{10}(P[\text{Watts}])$  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  $65 + 10 \log_{10} p(\text{watts})$ , dB, for mobile and portable equipment.

27.53 (g)

For operations in the 600MHz band and 698 -746 MHz band, the FCC limit is  $43 + 10\log_{10}(P[\text{Watts}])$  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  $\geq$  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:

$$\begin{aligned} &\text{The limit line is derived from } 43 + 10\log(P)\text{dB below the transmitter power } P(\text{Watts}) \\ &= P(\text{W}) - [43 + 10\log(P)] \text{ (dB)} \\ &= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)} = -13\text{dBm}. \end{aligned}$$

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<sup>th</sup> 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  $43 + 10\log(P)$ 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  $-30^{\circ}\text{C}$  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  $10^{\circ}\text{C}$  step up to  $50^{\circ}\text{C}$ . 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  $20\pm 5^{\circ}\text{C}$  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.

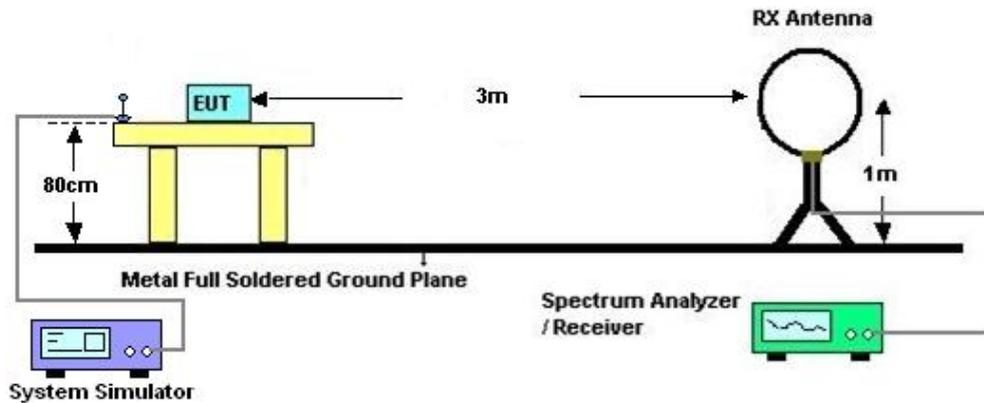
## 4 Radiated Test Items

### 4.1 Measuring Instruments

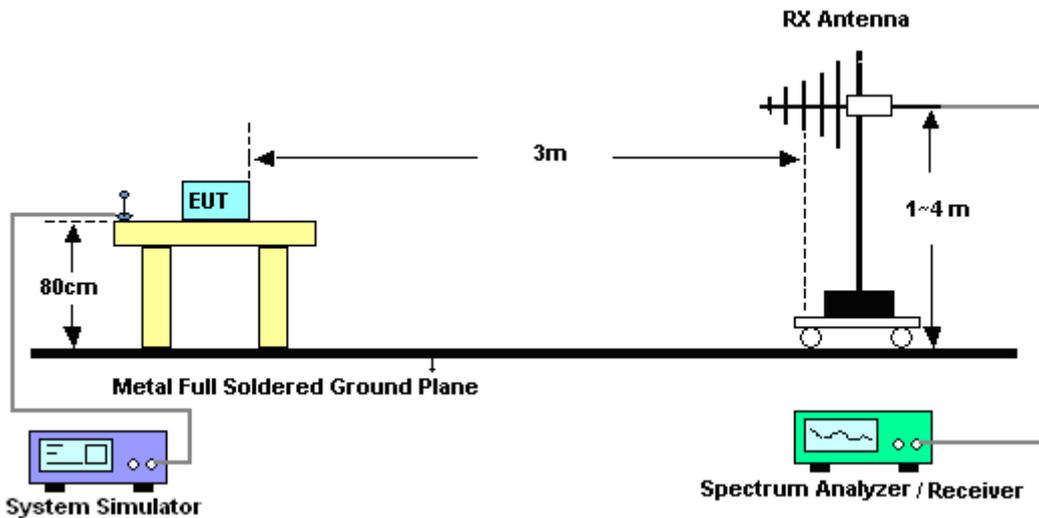
See list of measuring instruments of this test report.

### 4.2 Test Setup

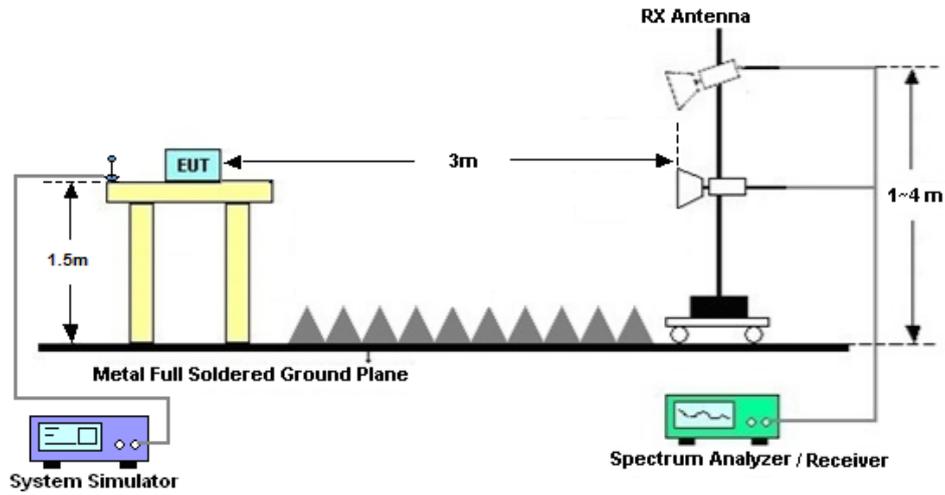
#### 4.2.1 For radiated test below 30MHz



#### 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  $43 + 10\log(P)$ dB below the transmitter power P(Watts)  
=  $P(W) - [43 + 10\log(P)] (dB)$   
=  $[30 + 10\log(P)] (dBm) - [43 + 10\log(P)] (dB)$   
=  $-13dBm$ .



## 5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 02, 2025	Jun. 30, 2025~ Jul. 02, 2025	Apr. 01, 2026	Conducted (TH01-SZ)
DC Power Supply	TTI	PL330P	290070	Max 32V , 3A	Oct.14,2024	Jun. 30, 2025~ Jul. 02, 2025	Oct. 13, 2025	Conducted (TH01-SZ)
Power Divider	Titan	P02N005180	923402	0.4GHz~26.5GHz	Nov. 08, 2024	Jun. 30, 2025~ Jul. 02, 2025	Nov. 07, 2025	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 03, 2024	Jun. 30, 2025~ Jul. 02, 2025	Jul. 02, 2025	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 02, 2025		Jul. 01, 2026	Conducted (TH01-SZ)
EMI Test Receiver&SA	Agilent	N9038A	MY52260185	20Hz~26.5GHz	Dec. 25, 2024	Jul. 16, 2025	Dec. 24, 2025	Radiation (03CH01-SZ)
Loop Antenna	R&S	HFH2-Z2E	101141	9kHz~30MHz	Dec. 28, 2024	Jul. 16, 2025	Dec. 27, 2025	Radiation (03CH01-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270105	0.5GHz~26.5GHz	Oct. 14, 2024	Jul. 16, 2025	Oct. 13, 2025	Radiation (03CH01-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	Oct. 24, 2023	Jul. 16, 2025	Oct. 23, 2025	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Jul. 04, 2025	Jul. 16, 2025	Jul. 03, 2026	Radiation (03CH01-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 03, 2025	Jul. 16, 2025	Apr. 02, 2027	Radiation (03CH01-SZ)
LF Amplifier	EM Electronics	EM330	060788	20MHz-3GHz	Dec. 25, 2024	Jul. 16, 2025	Dec. 24, 2025	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	AMF-7D-00101800-30-10P-R	1943528	1GHz~18GHz	Oct. 14, 2024	Jul. 16, 2025	Oct. 13, 2025	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 03, 2025	Jul. 16, 2025	Jul. 02, 2026	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	616010001985	N/A	Oct. 14, 2024	Jul. 16, 2025	Oct. 13, 2025	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Jul. 16, 2025	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Jul. 16, 2025	NCR	Radiation (03CH01-SZ)

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	±1.34 dB
Occupied Channel Bandwidth	±0.012 MHz
Conducted Power	±1.34 dB
Peak to Average Ratio	±1.34 dB
Frequency Stability	±1.3 Hz

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.48 dB
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### Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.53 dB
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### Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.02 dB
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----- THE END -----



### Appendix A. Test Results of Conducted Test

Test Engineer :	Nina Cheng	Temperature :	24~26°C
		Relative Humidity :	50~53%

### Conducted Output Power(Average power) and ERP

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BW [MHz]	Modulation	RB Size	RB Offset	Power Low	Power Middle	Power High	ERP(W)		
				Ch. / Freq.	Ch. / Freq.	Ch. / Freq.	L	M	H
Channel				23060	23095	23130			
Frequency (MHz)				704	707.5	711	L	M	H
10	QPSK	1	0	24.40	24.45	24.31	0.0668	0.0676	0.0655
10	QPSK	1	25	24.22	24.29	24.06	0.0641	0.0652	0.0618
10	QPSK	1	49	24.18	24.33	24.11	0.0635	0.0658	0.0625
10	QPSK	25	0	23.17	23.32	23.07	0.0504	0.0521	0.0492
10	QPSK	25	12	23.18	23.26	23.09	0.0505	0.0514	0.0494
10	QPSK	25	25	23.18	23.26	23.11	0.0505	0.0514	0.0497
10	QPSK	50	0	23.19	23.30	23.09	0.0506	0.0519	0.0494
10	16QAM	1	0	23.45	23.60	23.43	0.0537	0.0556	0.0535
10	16QAM	1	25	23.45	23.55	23.38	0.0537	0.0550	0.0528
10	16QAM	1	49	23.46	23.56	23.34	0.0538	0.0551	0.0524
10	16QAM	25	0	22.22	22.30	22.12	0.0405	0.0412	0.0395
10	16QAM	25	12	22.16	22.26	22.13	0.0399	0.0408	0.0396
10	16QAM	25	25	22.09	22.23	22.11	0.0393	0.0406	0.0394
10	16QAM	50	0	22.22	22.27	22.05	0.0405	0.0409	0.0389
10	64QAM	1	0	22.40	22.50	22.25	0.0422	0.0432	0.0407
10	64QAM	1	25	22.39	22.45	22.21	0.0421	0.0427	0.0404
10	64QAM	1	49	22.34	22.44	22.20	0.0416	0.0426	0.0403
10	64QAM	25	0	21.13	21.30	21.12	0.0315	0.0327	0.0314
10	64QAM	25	12	21.02	21.16	20.99	0.0307	0.0317	0.0305
10	64QAM	25	25	21.09	21.15	20.95	0.0312	0.0316	0.0302
10	64QAM	50	0	21.24	21.28	21.16	0.0323	0.0326	0.0317
10	256QAM	1	0	19.38	19.53	19.35	0.0210	0.0218	0.0209
10	256QAM	1	25	19.35	19.42	19.25	0.0209	0.0212	0.0204
10	256QAM	1	49	19.29	19.39	19.27	0.0206	0.0211	0.0205
10	256QAM	25	0	19.14	19.29	19.17	0.0199	0.0206	0.0200
10	256QAM	25	12	19.18	19.23	19.04	0.0201	0.0203	0.0195
10	256QAM	25	25	19.08	19.25	19.12	0.0196	0.0204	0.0198
10	256QAM	50	0	19.24	19.29	19.17	0.0204	0.0206	0.0200
Channel				23035	23095	23155	ERP(W)		



Frequency (MHz)				701.5	707.5	713.5	L	M	H
5	QPSK	1	0	24.36	24.41	24.21	0.0662	0.0670	0.0640
5	QPSK	1	12	24.17	24.27	23.97	0.0634	0.0649	0.0605
5	QPSK	1	24	24.14	24.20	24.10	0.0630	0.0638	0.0624
5	QPSK	12	0	23.14	23.19	23.02	0.0500	0.0506	0.0486
5	QPSK	12	7	23.17	23.22	23.07	0.0504	0.0509	0.0492
5	QPSK	12	13	23.05	23.20	23.05	0.0490	0.0507	0.0490
5	QPSK	25	0	23.11	23.21	23.07	0.0497	0.0508	0.0492
5	16QAM	1	0	23.32	23.47	23.37	0.0521	0.0540	0.0527
5	16QAM	1	12	23.32	23.54	23.27	0.0521	0.0548	0.0515
5	16QAM	1	24	23.39	23.54	23.32	0.0530	0.0548	0.0521
5	16QAM	12	0	22.19	22.20	22.05	0.0402	0.0403	0.0389
5	16QAM	12	7	22.07	22.14	22.12	0.0391	0.0397	0.0395
5	16QAM	12	13	22.06	22.20	22.01	0.0390	0.0403	0.0385
5	16QAM	25	0	22.12	22.17	21.95	0.0395	0.0400	0.0380
5	64QAM	1	0	22.27	22.35	22.10	0.0409	0.0417	0.0394
5	64QAM	1	12	22.37	22.38	22.14	0.0419	0.0420	0.0397
5	64QAM	1	24	22.29	22.39	22.09	0.0411	0.0421	0.0393
5	64QAM	12	0	21.11	21.16	21.06	0.0313	0.0317	0.0310
5	64QAM	12	7	20.97	21.08	20.87	0.0303	0.0311	0.0296
5	64QAM	12	13	21.02	21.11	20.85	0.0307	0.0313	0.0295
5	64QAM	25	0	21.23	21.26	21.11	0.0322	0.0324	0.0313
5	256QAM	1	0	19.34	19.39	19.32	0.0208	0.0211	0.0207
5	256QAM	1	12	19.29	19.38	19.18	0.0206	0.0210	0.0201
5	256QAM	1	24	19.19	19.26	19.22	0.0201	0.0205	0.0203
5	256QAM	12	0	19.07	19.24	19.15	0.0196	0.0204	0.0200
5	256QAM	12	7	19.09	19.15	19.03	0.0197	0.0200	0.0194
5	256QAM	12	13	18.95	19.14	19.02	0.0191	0.0199	0.0194
5	256QAM	25	0	19.23	19.21	19.15	0.0203	0.0202	0.0200
Channel				23025	23095	23165	ERP(W)		
Frequency (MHz)				700.5	707.5	714.5	L	M	H
3	QPSK	1	0	24.34	24.29	24.26	0.0659	0.0652	0.0647
3	QPSK	1	8	24.16	24.26	24.00	0.0632	0.0647	0.0610
3	QPSK	1	14	24.13	24.30	24.04	0.0628	0.0653	0.0615
3	QPSK	8	0	23.03	23.29	22.98	0.0488	0.0518	0.0482
3	QPSK	8	4	23.15	23.14	23.02	0.0501	0.0500	0.0486
3	QPSK	8	7	23.17	23.22	23.07	0.0504	0.0509	0.0492
3	QPSK	15	0	23.15	23.25	23.00	0.0501	0.0513	0.0484
3	16QAM	1	0	23.42	23.48	23.33	0.0533	0.0541	0.0522
3	16QAM	1	8	23.35	23.51	23.30	0.0525	0.0545	0.0519
3	16QAM	1	14	23.38	23.53	23.25	0.0528	0.0547	0.0513
3	16QAM	8	0	22.18	22.22	22.10	0.0401	0.0405	0.0394
3	16QAM	8	4	22.13	22.15	22.02	0.0396	0.0398	0.0386
3	16QAM	8	7	22.03	22.16	22.03	0.0387	0.0399	0.0387
3	16QAM	15	0	22.16	22.26	21.91	0.0399	0.0408	0.0377



3	64QAM	1	0	22.37	22.48	22.18	0.0419	0.0430	0.0401
3	64QAM	1	8	22.33	22.42	22.07	0.0415	0.0424	0.0391
3	64QAM	1	14	22.20	22.31	22.07	0.0403	0.0413	0.0391
3	64QAM	8	0	21.08	21.21	21.11	0.0311	0.0321	0.0313
3	64QAM	8	4	20.90	21.07	20.85	0.0299	0.0310	0.0295
3	64QAM	8	7	21.06	21.07	20.87	0.0310	0.0310	0.0296
3	64QAM	15	0	21.21	21.17	21.02	0.0321	0.0318	0.0307
3	256QAM	1	0	19.29	19.51	19.28	0.0206	0.0217	0.0206
3	256QAM	1	8	19.28	19.37	19.21	0.0206	0.0210	0.0202
3	256QAM	1	14	19.27	19.30	19.14	0.0205	0.0207	0.0199
3	256QAM	8	0	19.02	19.19	19.12	0.0194	0.0201	0.0198
3	256QAM	8	4	19.12	19.09	18.99	0.0198	0.0197	0.0192
3	256QAM	8	7	18.95	19.14	19.07	0.0191	0.0199	0.0196
3	256QAM	15	0	19.10	19.17	19.13	0.0197	0.0200	0.0199
Channel				23017	23095	23173	ERP(W)		
Frequency (MHz)				699.7	707.5	715.3	L	M	H
1.4	QPSK	1	0	24.29	24.40	24.22	0.0652	0.0668	0.0641
1.4	QPSK	1	3	24.34	24.28	24.35	0.0659	0.0650	0.0661
1.4	QPSK	1	5	24.28	24.27	24.15	0.0650	0.0649	0.0631
1.4	QPSK	3	0	24.36	24.42	24.27	0.0662	0.0671	0.0649
1.4	QPSK	3	1	24.14	24.36	24.37	0.0630	0.0662	0.0664
1.4	QPSK	3	3	24.35	24.24	24.26	0.0661	0.0644	0.0647
1.4	QPSK	6	0	23.50	23.66	23.55	0.0543	0.0564	0.0550
1.4	16QAM	1	0	23.41	23.44	23.37	0.0532	0.0536	0.0527
1.4	16QAM	1	3	23.31	23.42	23.44	0.0520	0.0533	0.0536
1.4	16QAM	1	5	23.13	23.28	23.11	0.0499	0.0516	0.0497
1.4	16QAM	3	0	23.03	23.16	23.12	0.0488	0.0502	0.0498
1.4	16QAM	3	1	23.09	22.91	22.97	0.0494	0.0474	0.0481
1.4	16QAM	3	3	22.89	23.26	23.10	0.0472	0.0514	0.0495
1.4	16QAM	6	0	22.20	22.30	22.41	0.0403	0.0412	0.0423
1.4	64QAM	1	0	22.10	22.23	22.31	0.0394	0.0406	0.0413
1.4	64QAM	1	3	22.16	22.37	22.23	0.0399	0.0419	0.0406
1.4	64QAM	1	5	22.36	22.57	22.27	0.0418	0.0439	0.0409
1.4	64QAM	3	0	22.11	22.42	22.02	0.0394	0.0424	0.0386
1.4	64QAM	3	1	22.02	22.19	22.10	0.0386	0.0402	0.0394
1.4	64QAM	3	3	21.92	22.37	21.93	0.0378	0.0419	0.0378
1.4	64QAM	6	0	21.14	21.38	21.43	0.0316	0.0333	0.0337
1.4	256QAM	1	0	19.12	19.32	19.02	0.0198	0.0207	0.0194
1.4	256QAM	1	3	19.13	19.20	19.24	0.0199	0.0202	0.0204
1.4	256QAM	1	5	19.11	19.01	19.05	0.0198	0.0193	0.0195
1.4	256QAM	3	0	19.28	19.30	19.21	0.0206	0.0207	0.0202
1.4	256QAM	3	1	19.19	19.27	19.21	0.0201	0.0205	0.0202
1.4	256QAM	3	3	19.19	19.43	19.09	0.0201	0.0213	0.0197
1.4	256QAM	6	0	19.27	19.41	19.35	0.0205	0.0212	0.0209



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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		24.33			0.0560	
10	QPSK	1	25		24.27			0.0552	
10	QPSK	1	49		24.22			0.0546	
10	QPSK	25	0		23.27			0.0439	
10	QPSK	25	12		23.17			0.0429	
10	QPSK	25	25		23.07			0.0419	
10	QPSK	50	0		23.25			0.0437	
10	16QAM	1	0		23.58			0.0471	
10	16QAM	1	25		23.46			0.0458	
10	16QAM	1	49		23.33			0.0445	
10	16QAM	25	0		22.21			0.0344	
10	16QAM	25	12		22.16			0.0340	
10	16QAM	25	25		22.01			0.0328	
10	16QAM	50	0		22.18			0.0341	
10	64QAM	1	0		22.51			0.0368	
10	64QAM	1	25		22.46			0.0364	
10	64QAM	1	49		22.36			0.0356	
10	64QAM	25	0		21.21			0.0273	
10	64QAM	25	12		21.14			0.0269	
10	64QAM	25	25		21.10			0.0266	
10	64QAM	50	0		21.27			0.0277	
10	256QAM	1	0		19.42			0.0181	
10	256QAM	1	25		19.36			0.0178	
10	256QAM	1	49		19.22			0.0173	
10	256QAM	25	0		19.20			0.0172	
10	256QAM	25	12		19.15			0.0170	
10	256QAM	25	25		19.05			0.0166	
10	256QAM	50	0		19.21			0.0172	
Channel				23205	23230	23255	ERP(W)		
Frequency (MHz)				779.5	782	784.5	L	M	H
5	QPSK	1	0	24.25	24.29	24.17	0.0550	0.0555	0.0540
5	QPSK	1	12	24.15	24.21	23.99	0.0537	0.0545	0.0518
5	QPSK	1	24	23.98	24.07	23.85	0.0516	0.0527	0.0501
5	QPSK	12	0	23.08	23.14	23.01	0.0420	0.0426	0.0413
5	QPSK	12	7	22.90	23.05	22.86	0.0403	0.0417	0.0399
5	QPSK	12	13	22.84	22.95	22.71	0.0397	0.0407	0.0385
5	QPSK	25	0	23.09	23.20	23.03	0.0421	0.0432	0.0415
5	16QAM	1	0	23.37	23.49	23.33	0.0449	0.0461	0.0445
5	16QAM	1	12	23.23	23.38	23.14	0.0435	0.0450	0.0426
5	16QAM	1	24	23.11	23.19	22.93	0.0423	0.0431	0.0406



5	16QAM	12	0	21.93	22.11	21.96	0.0322	0.0336	0.0324
5	16QAM	12	7	22.00	22.05	21.80	0.0327	0.0331	0.0313
5	16QAM	12	13	21.87	21.92	21.75	0.0318	0.0321	0.0309
5	16QAM	25	0	21.93	22.11	21.98	0.0322	0.0336	0.0326
5	64QAM	1	0	22.22	22.38	22.14	0.0344	0.0357	0.0338
5	64QAM	1	12	22.29	22.35	22.19	0.0350	0.0355	0.0342
5	64QAM	1	24	22.17	22.28	22.03	0.0340	0.0349	0.0330
5	64QAM	12	0	21.12	21.18	21.00	0.0267	0.0271	0.0260
5	64QAM	12	7	20.95	21.07	20.95	0.0257	0.0264	0.0257
5	64QAM	12	13	20.86	21.00	20.83	0.0252	0.0260	0.0250
5	64QAM	25	0	21.01	21.15	20.97	0.0261	0.0269	0.0258
5	256QAM	1	0	19.11	19.29	19.17	0.0168	0.0175	0.0171
5	256QAM	1	12	19.12	19.28	19.06	0.0169	0.0175	0.0166
5	256QAM	1	24	18.97	19.14	18.97	0.0163	0.0169	0.0163
5	256QAM	12	0	19.09	19.14	18.99	0.0167	0.0169	0.0164
5	256QAM	12	7	18.95	19.11	18.95	0.0162	0.0168	0.0162
5	256QAM	12	13	18.88	19.00	18.89	0.0160	0.0164	0.0160
5	256QAM	25	0	19.00	19.12	18.96	0.0164	0.0169	0.0163

LTE Band 17\_ANT0

BW [MHz]	Modulation	RB Size	RB Offset	Power Low	Power Middle	Power High	ERP(W)		
				Ch. / Freq.	Ch. / Freq.	Ch. / Freq.	L	M	H
Channel				23780	23790	23800			
Frequency (MHz)				709	710	711	L	M	H
10	QPSK	1	0	24.42	24.44	24.43	0.0671	0.0675	0.0673
10	QPSK	1	25	24.31	24.33	24.23	0.0655	0.0658	0.0643
10	QPSK	1	49	24.36	24.39	24.27	0.0662	0.0667	0.0649
10	QPSK	25	0	23.35	23.39	23.30	0.0525	0.0530	0.0519
10	QPSK	25	12	23.20	23.32	23.18	0.0507	0.0521	0.0505
10	QPSK	25	25	23.20	23.32	23.18	0.0507	0.0521	0.0505
10	QPSK	50	0	23.24	23.35	23.33	0.0512	0.0525	0.0522
10	16QAM	1	0	23.56	23.66	23.53	0.0551	0.0564	0.0547
10	16QAM	1	25	23.47	23.54	23.45	0.0540	0.0548	0.0537
10	16QAM	1	49	23.44	23.55	23.44	0.0536	0.0550	0.0536
10	16QAM	25	0	22.30	22.33	22.25	0.0412	0.0415	0.0407
10	16QAM	25	12	22.12	22.23	22.11	0.0395	0.0406	0.0394
10	16QAM	25	25	22.19	22.22	22.18	0.0402	0.0405	0.0401
10	16QAM	50	0	22.28	22.32	22.24	0.0410	0.0414	0.0406
10	64QAM	1	0	22.54	22.53	22.39	0.0436	0.0435	0.0421
10	64QAM	1	25	22.37	22.39	22.37	0.0419	0.0421	0.0419
10	64QAM	1	49	22.35	22.43	22.35	0.0417	0.0425	0.0417
10	64QAM	25	0	21.31	21.34	21.23	0.0328	0.0330	0.0322
10	64QAM	25	12	21.22	21.26	21.16	0.0321	0.0324	0.0317
10	64QAM	25	25	21.18	21.24	21.19	0.0318	0.0323	0.0319
10	64QAM	50	0	21.32	21.33	21.23	0.0329	0.0330	0.0322



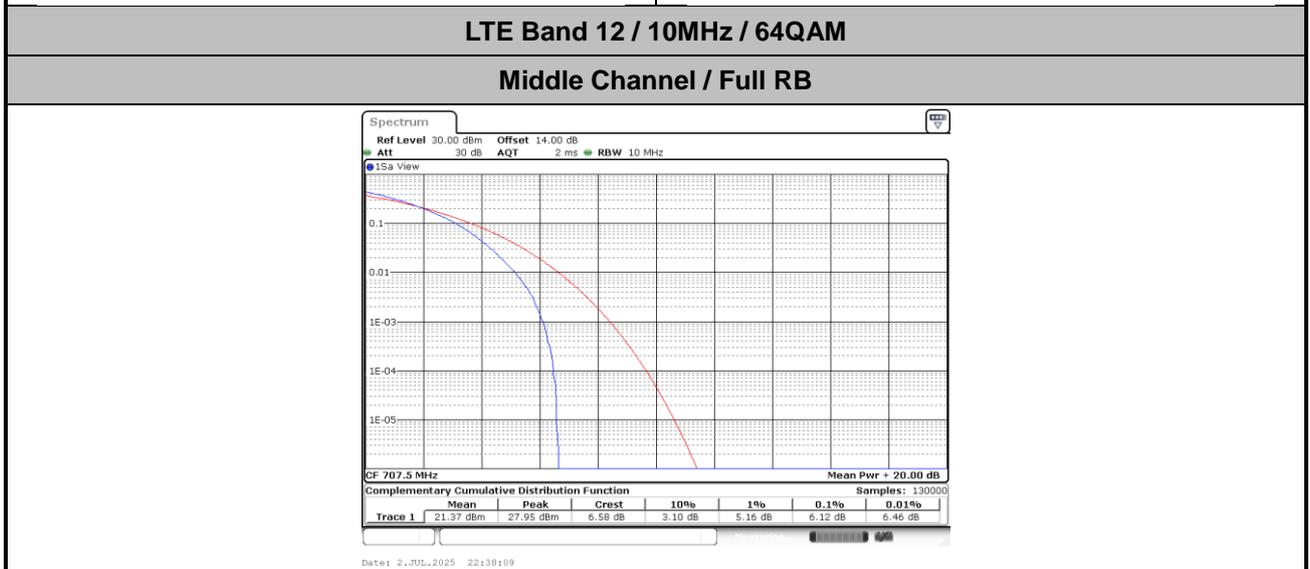
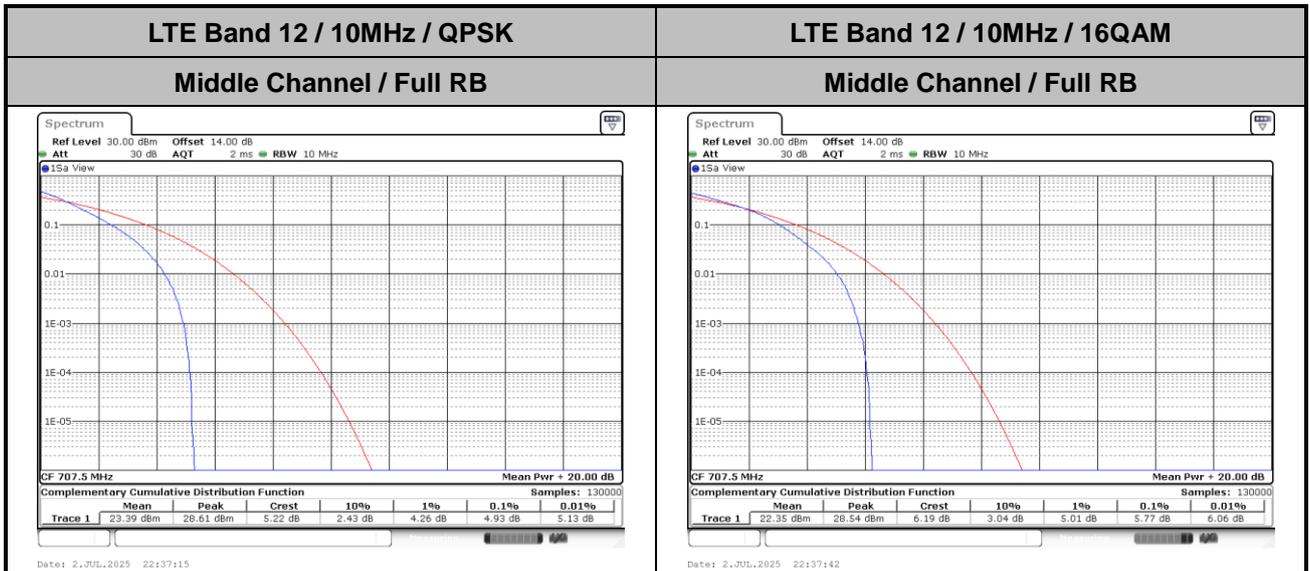
10	256QAM	1	0	19.48	19.52	19.39	0.0215	0.0217	0.0211
10	256QAM	1	25	19.38	19.41	19.35	0.0210	0.0212	0.0209
10	256QAM	1	49	19.24	19.37	19.23	0.0204	0.0210	0.0203
10	256QAM	25	0	19.31	19.34	19.25	0.0207	0.0208	0.0204
10	256QAM	25	12	19.17	19.19	19.10	0.0200	0.0201	0.0197
10	256QAM	25	25	19.11	19.24	19.17	0.0198	0.0204	0.0200
10	256QAM	50	0	19.21	19.31	19.20	0.0202	0.0207	0.0202
Channel				23755	23790	23825	ERP(W)		
Frequency (MHz)				706.5	710	713.5	L	M	H
5	QPSK	1	0	24.42	24.38	24.29	0.0671	0.0665	0.0652
5	QPSK	1	12	24.18	24.20	24.11	0.0635	0.0638	0.0625
5	QPSK	1	24	24.22	24.28	24.14	0.0641	0.0650	0.0630
5	QPSK	12	0	23.25	23.34	23.23	0.0513	0.0524	0.0511
5	QPSK	12	7	23.06	23.19	23.15	0.0491	0.0506	0.0501
5	QPSK	12	13	23.16	23.20	23.04	0.0502	0.0507	0.0489
5	QPSK	25	0	23.11	23.33	23.32	0.0497	0.0522	0.0521
5	16QAM	1	0	23.54	23.62	23.46	0.0548	0.0558	0.0538
5	16QAM	1	12	23.38	23.45	23.39	0.0528	0.0537	0.0530
5	16QAM	1	24	23.42	23.50	23.39	0.0533	0.0543	0.0530
5	16QAM	12	0	22.24	22.26	22.10	0.0406	0.0408	0.0394
5	16QAM	12	7	22.07	22.20	22.03	0.0391	0.0403	0.0387
5	16QAM	12	13	22.05	22.11	22.11	0.0389	0.0394	0.0394
5	16QAM	25	0	22.18	22.21	22.16	0.0401	0.0404	0.0399
5	64QAM	1	0	22.43	22.47	22.29	0.0425	0.0429	0.0411
5	64QAM	1	12	22.28	22.26	22.35	0.0410	0.0408	0.0417
5	64QAM	1	24	22.29	22.40	22.22	0.0411	0.0422	0.0405
5	64QAM	12	0	21.16	21.19	21.14	0.0317	0.0319	0.0316
5	64QAM	12	7	21.16	21.19	21.14	0.0317	0.0319	0.0316
5	64QAM	12	13	21.05	21.10	21.05	0.0309	0.0313	0.0309
5	64QAM	25	0	21.18	21.19	21.22	0.0318	0.0319	0.0321
5	256QAM	1	0	19.34	19.41	19.25	0.0208	0.0212	0.0204
5	256QAM	1	12	19.26	19.34	19.28	0.0205	0.0208	0.0206
5	256QAM	1	24	19.19	19.30	19.20	0.0201	0.0207	0.0202
5	256QAM	12	0	19.17	19.29	19.16	0.0200	0.0206	0.0200
5	256QAM	12	7	19.03	19.06	19.07	0.0194	0.0195	0.0196
5	256QAM	12	13	19.01	19.15	19.05	0.0193	0.0200	0.0195
5	256QAM	25	0	19.10	19.29	19.13	0.0197	0.0206	0.0199



# LTE Band 12

## Peak-to-Average Ratio

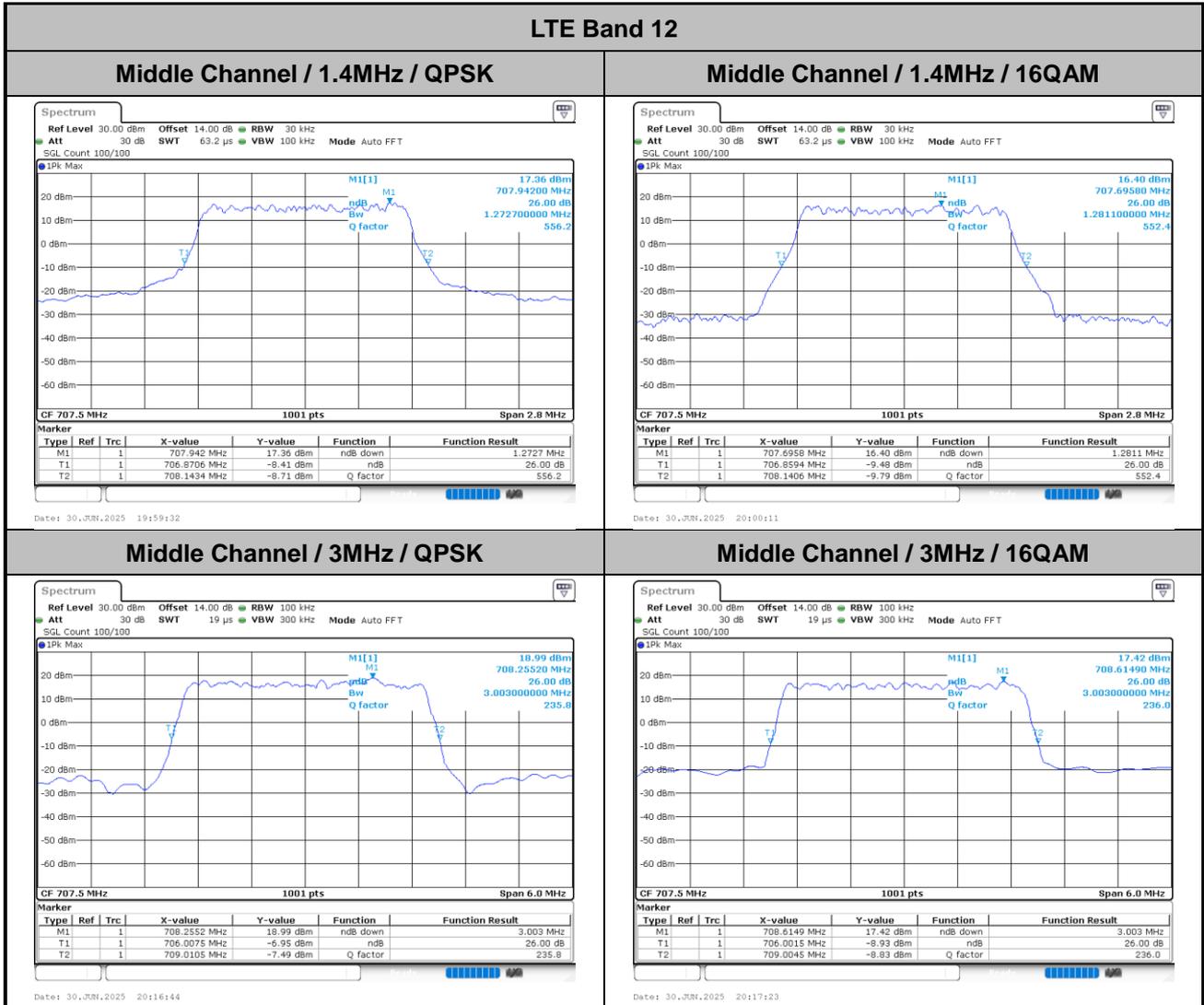
Mode	LTE Band 12 / 10MHz			
Mod.	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Result
Middle CH	4.93	5.77	6.12	PASS





## 26dB Bandwidth

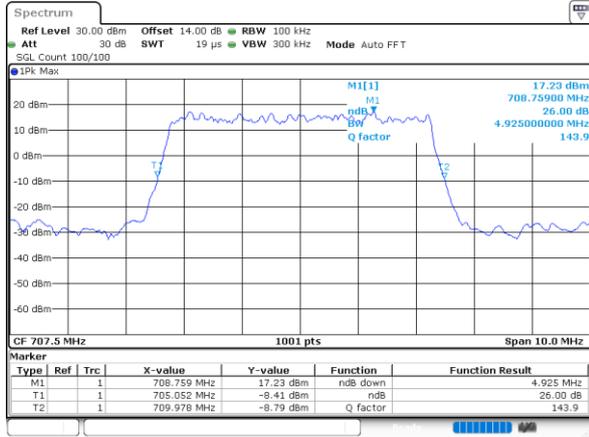
Mode	LTE Band 12 : 26dB BW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	1.27	1.28	3.00	3.00	4.93	4.87	9.77	9.81	-	-	-	-





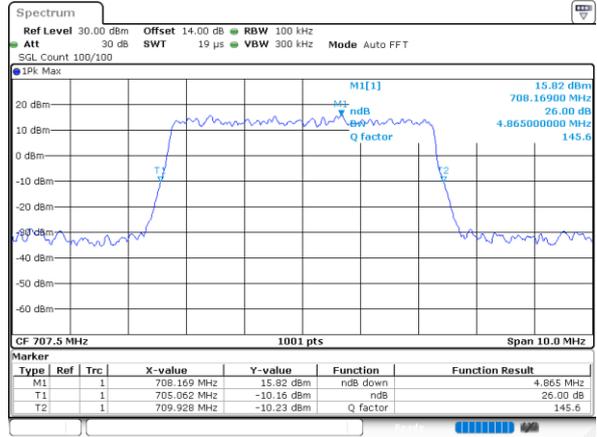
LTE Band 12

Middle Channel / 5MHz / QPSK



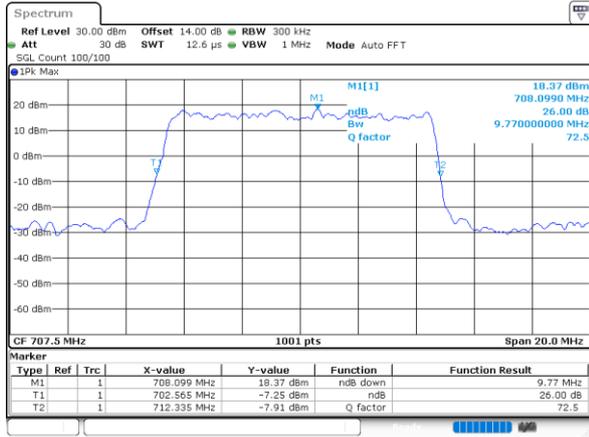
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Middle Channel / 5MHz / 16QAM



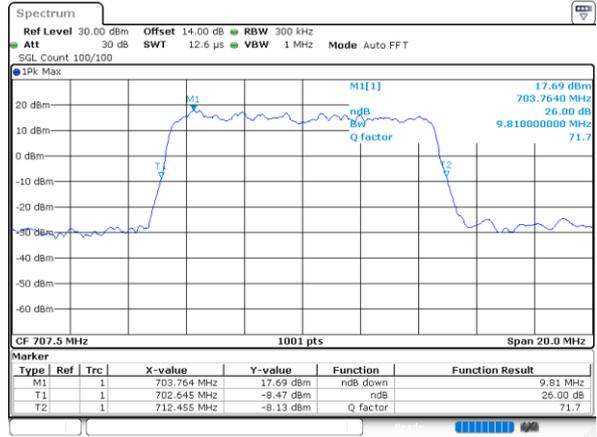
Date: 30 JUN 2025 20:42:41

Middle Channel / 10MHz / QPSK



Date: 30 JUN 2025 20:58:38

Middle Channel / 10MHz / 16QAM

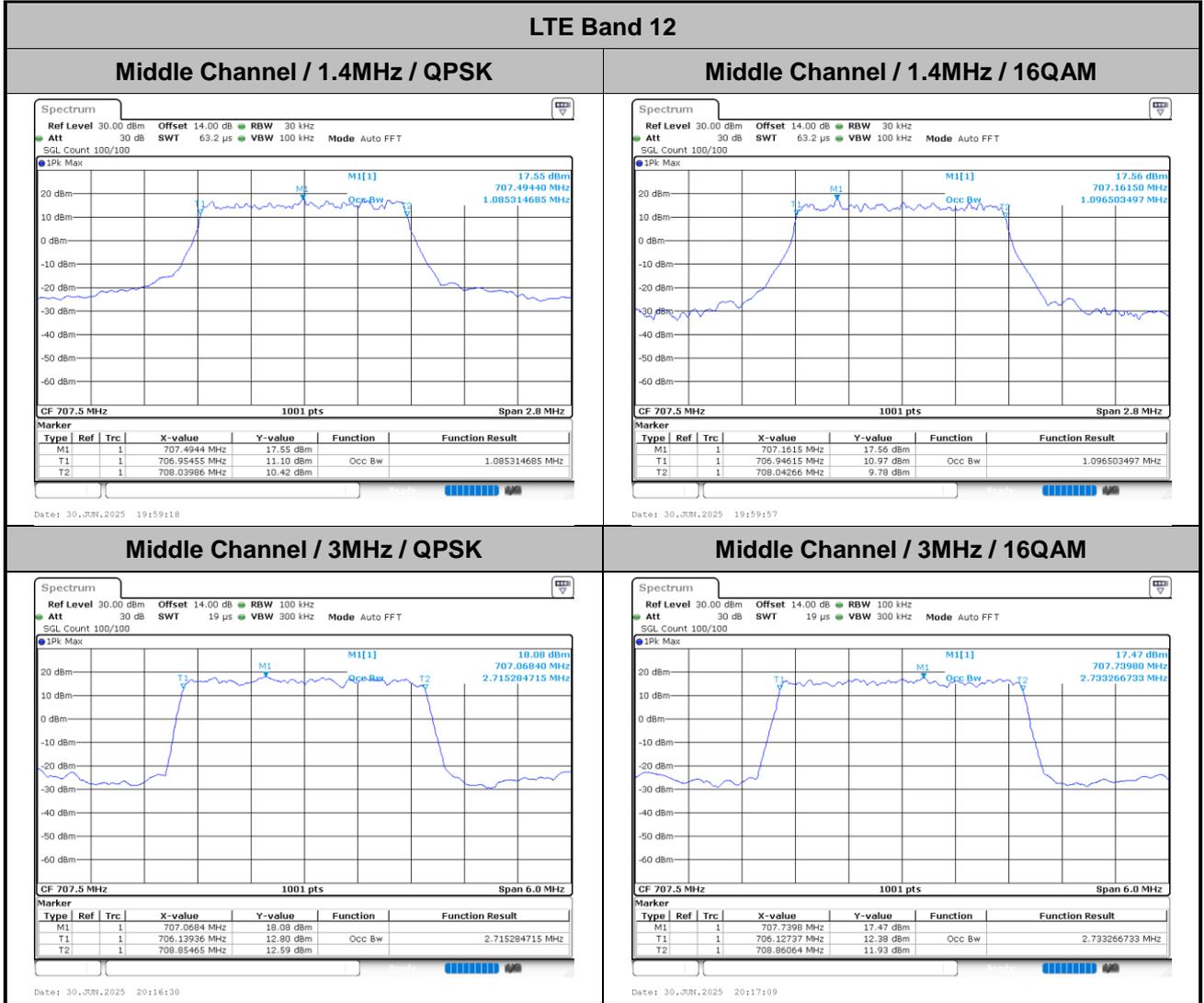


Date: 30 JUN 2025 20:59:17



# Occupied Bandwidth

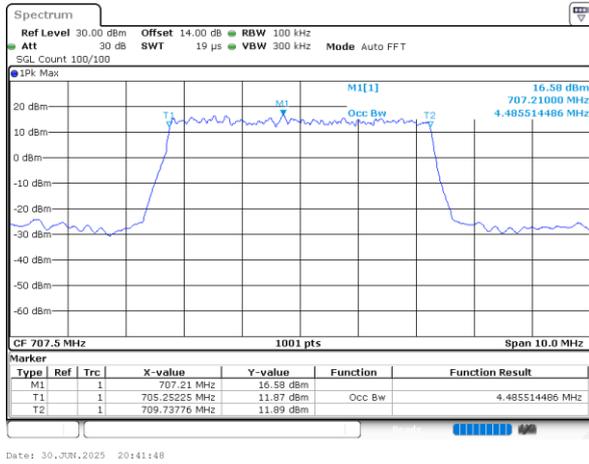
Mode	LTE Band 12 : 99%OBW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	1.09	1.10	2.72	2.73	4.49	4.48	9.03	9.01	-	-	-	-





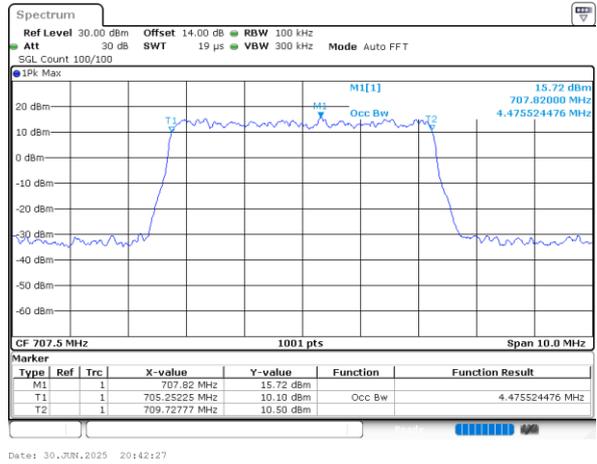
LTE Band 12

Middle Channel / 5MHz / QPSK



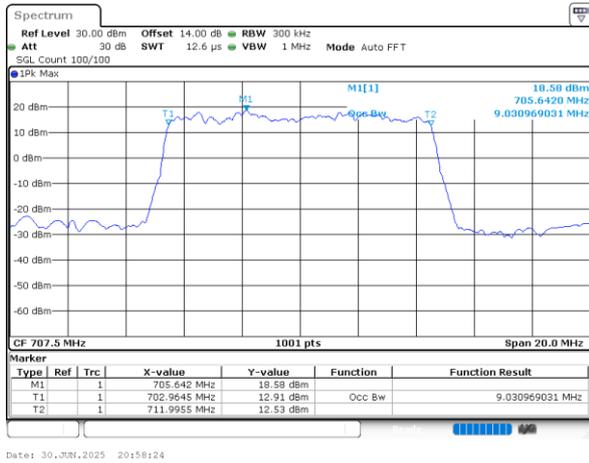
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Middle Channel / 5MHz / 16QAM



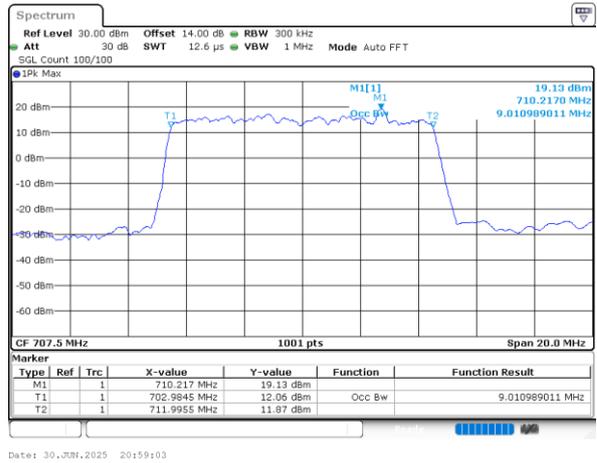
Date: 30 JUN 2025 20:42:27

Middle Channel / 10MHz / QPSK



Date: 30 JUN 2025 20:58:24

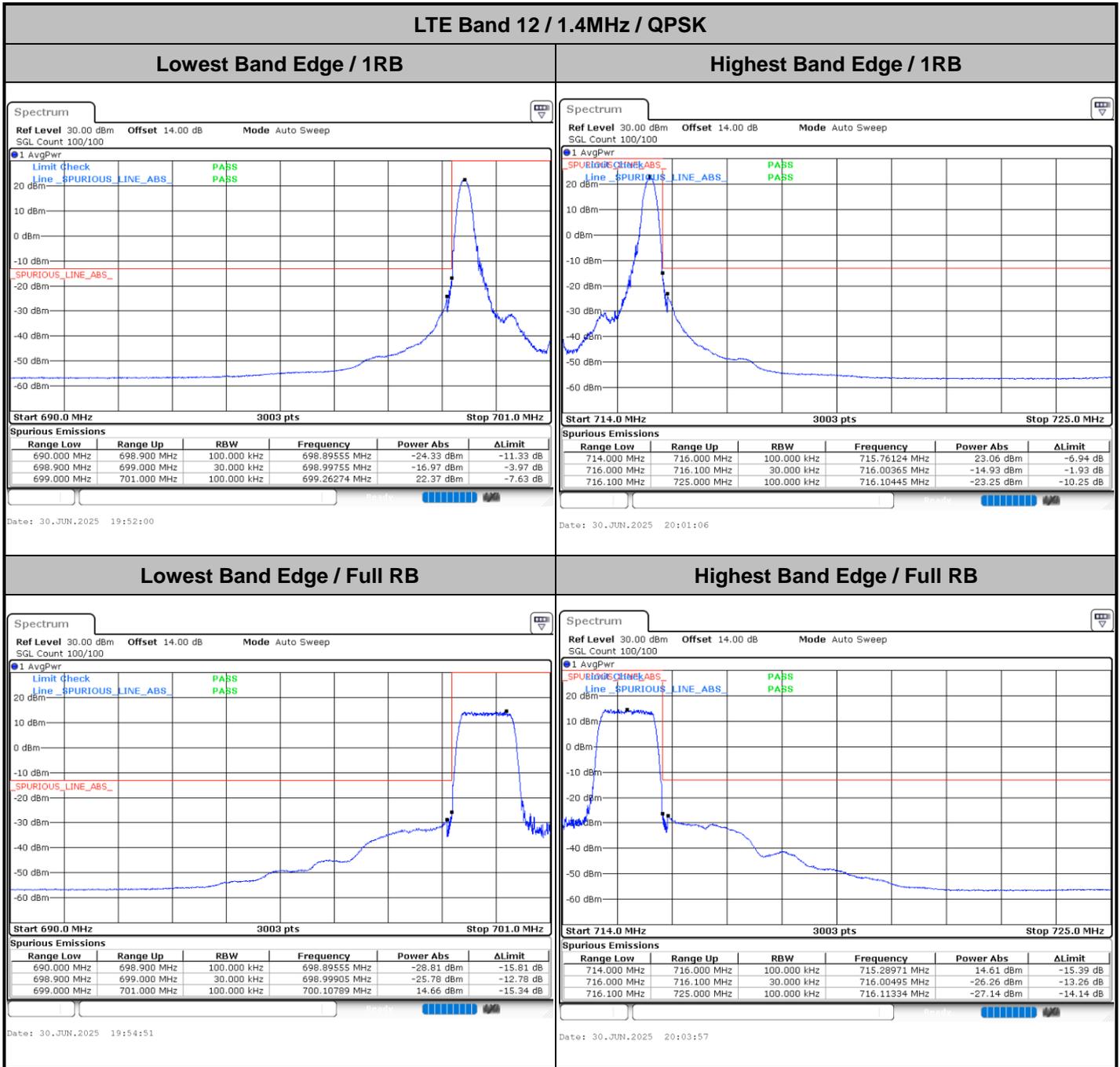
Middle Channel / 10MHz / 16QAM



Date: 30 JUN 2025 20:59:03



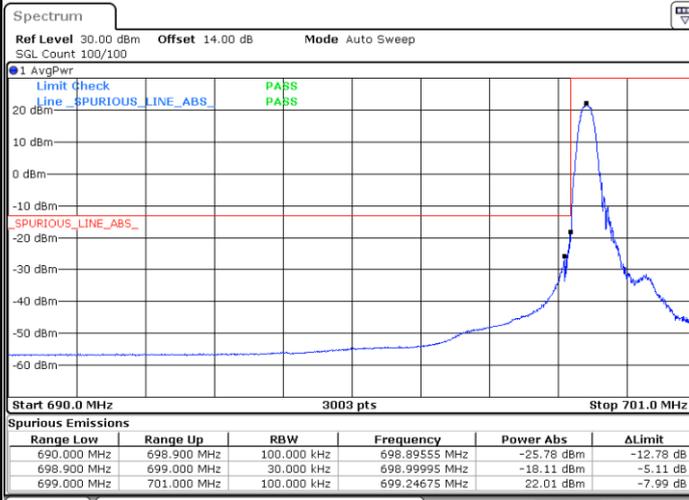
# Conducted Band Edge





LTE Band 12 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



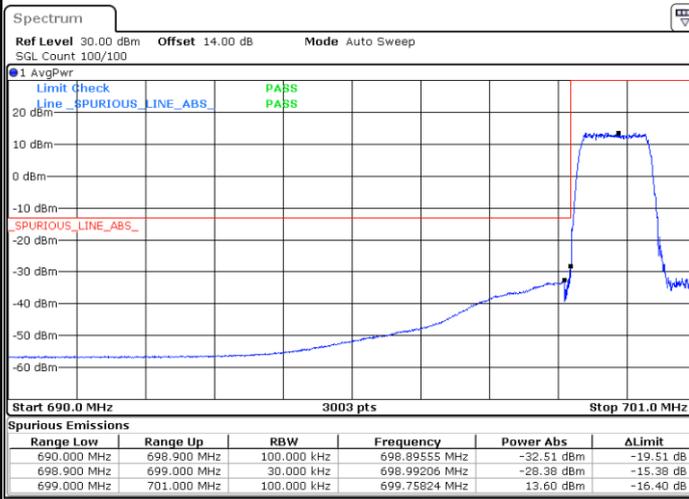
Date: 30 JUN 2025 19:52:59

Highest Band Edge / 1 RB



Date: 30 JUN 2025 20:02:06

Lowest Band Edge / Full RB



Date: 30 JUN 2025 19:55:47

Highest Band Edge / Full RB

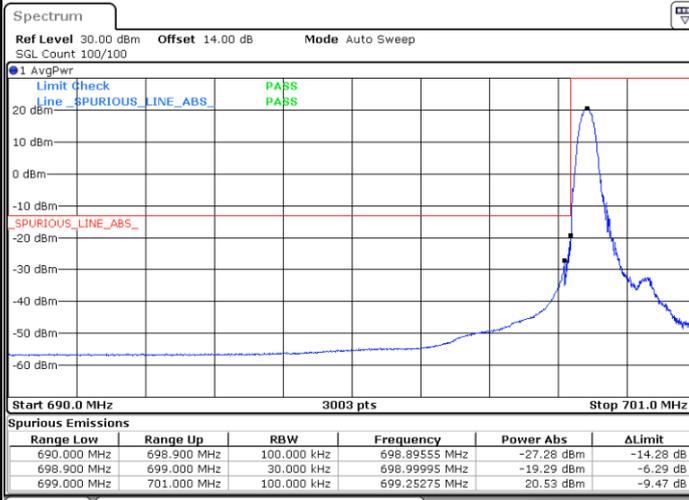


Date: 30 JUN 2025 20:04:53



LTE Band 12 / 1.4MHz / 64QAM

Lowest Band Edge / 1 RB



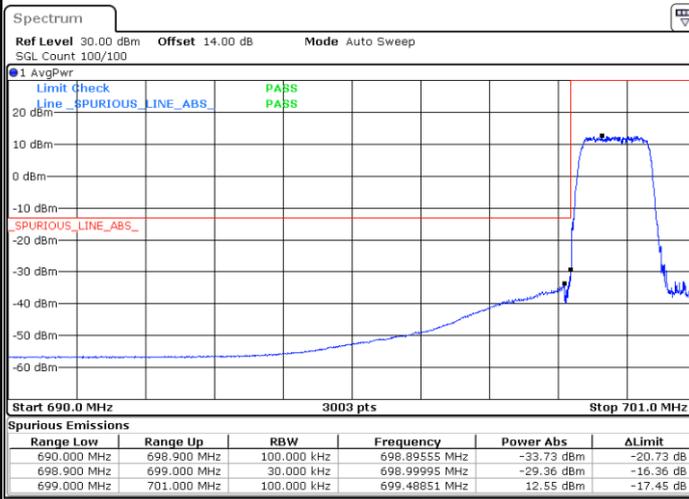
Date: 30 JUN 2025 19:53:55

Highest Band Edge / 1 RB



Date: 30 JUN 2025 20:03:01

Lowest Band Edge / Full RB



Date: 30 JUN 2025 19:56:42

Highest Band Edge / Full RB

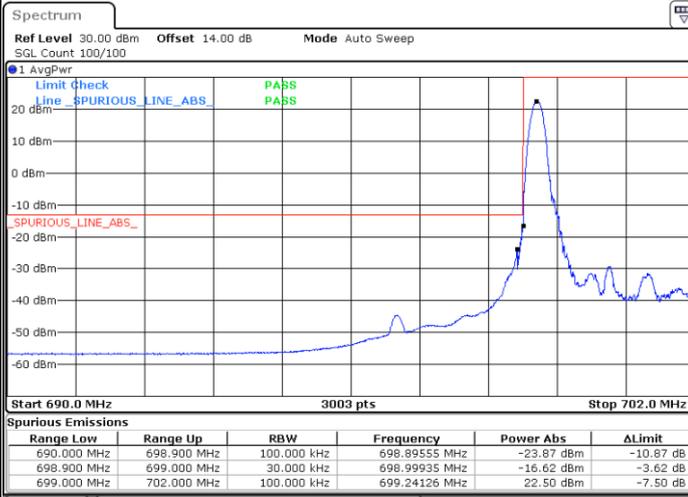


Date: 30 JUN 2025 20:05:49



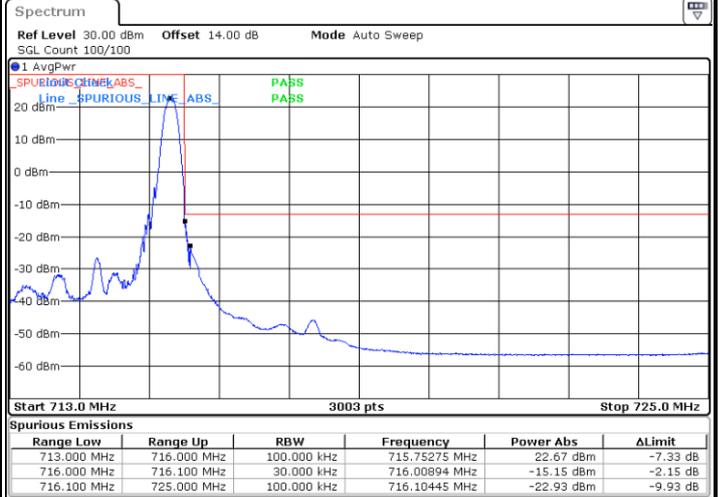
LTE Band 12 / 3MHz / QPSK

Lowest Band Edge / 1RB



Date: 30 JUN 2025 20:09:12

Highest Band Edge / 1RB



Date: 30 JUN 2025 20:18:18

Lowest Band Edge / Full RB



Date: 30 JUN 2025 20:12:03

Highest Band Edge / Full RB

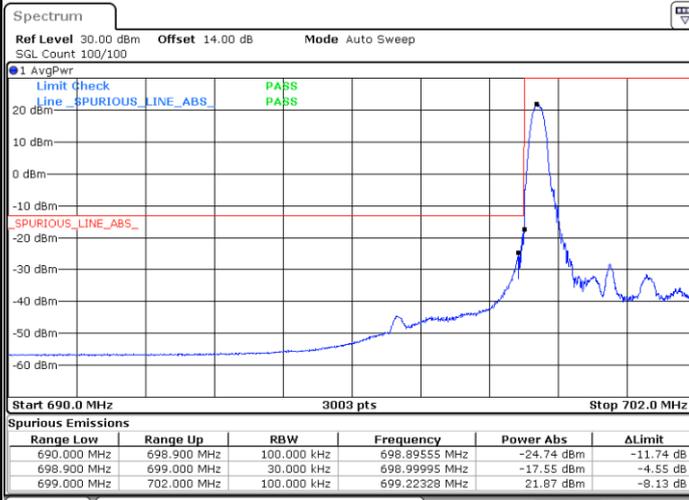


Date: 30 JUN 2025 20:21:12



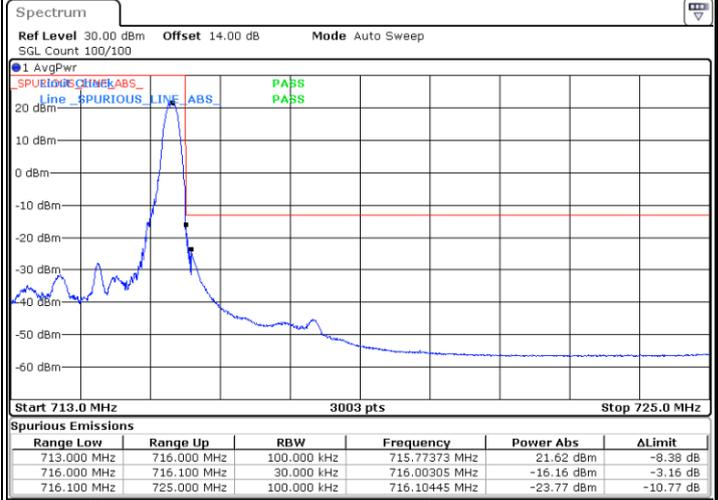
LTE Band 12 / 3MHz / 16QAM

Lowest Band Edge / 1 RB



Date: 30 JUN 2025 20:10:11

Highest Band Edge / 1 RB



Date: 30 JUN 2025 20:19:21

Lowest Band Edge / Full RB



Date: 30 JUN 2025 20:12:59

Highest Band Edge / Full RB

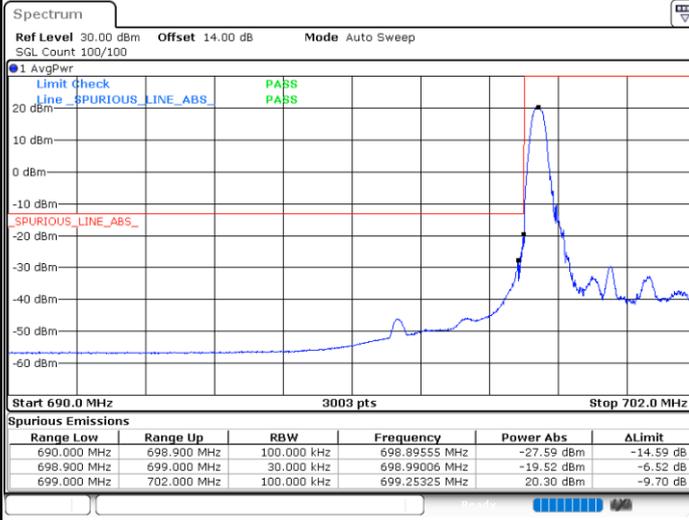


Date: 30 JUN 2025 20:22:08



LTE Band 12 / 3MHz / 64QAM

Lowest Band Edge / 1 RB



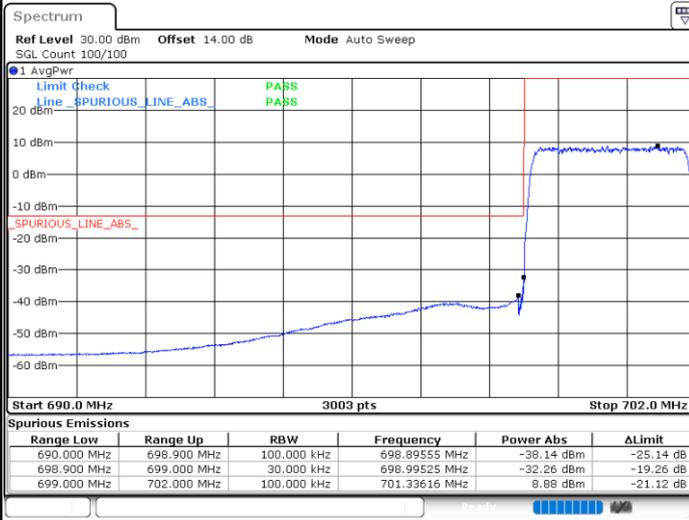
Date: 30 JUN 2025 20:11:07

Highest Band Edge / 1 RB



Date: 30 JUN 2025 20:20:16

Lowest Band Edge / Full RB



Date: 30 JUN 2025 20:13:54

Highest Band Edge / Full RB

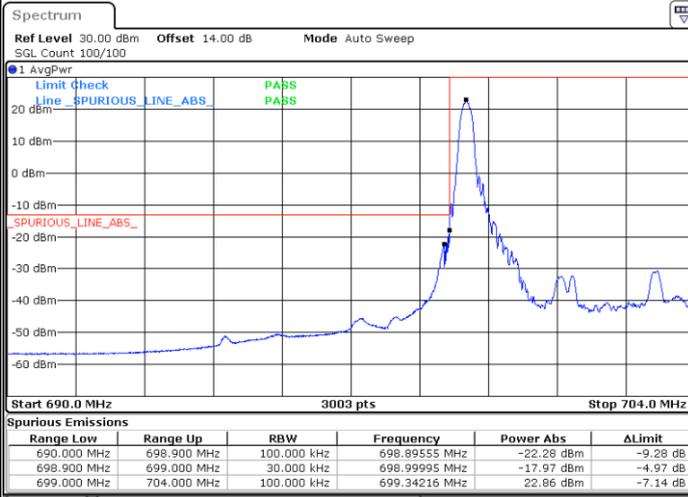


Date: 30 JUN 2025 20:23:04



LTE Band 12 / 5MHz / QPSK

Lowest Band Edge / 1RB



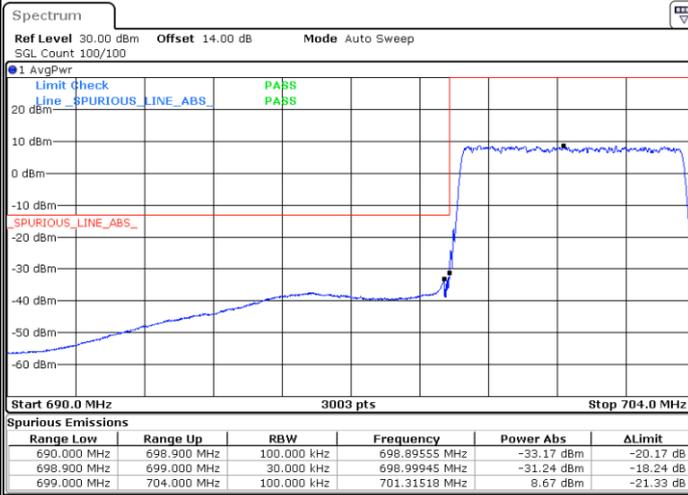
Date: 30 JUN 2025 20:34:30

Highest Band Edge / 1RB



Date: 30 JUN 2025 20:43:36

Lowest Band Edge / Full RB



Date: 30 JUN 2025 20:37:21

Highest Band Edge / Full RB

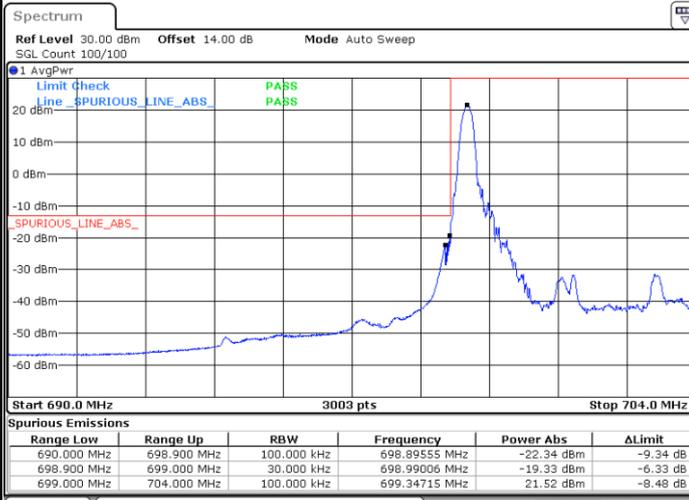


Date: 30 JUN 2025 20:46:31



LTE Band 12 / 5MHz / 16QAM

Lowest Band Edge / 1 RB



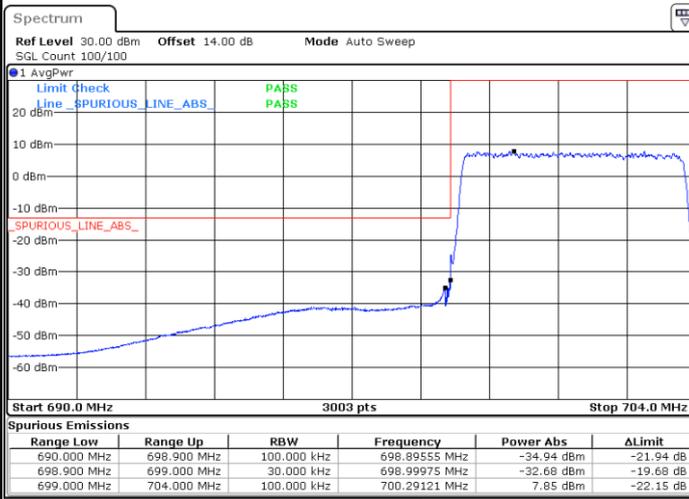
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Highest Band Edge / 1 RB



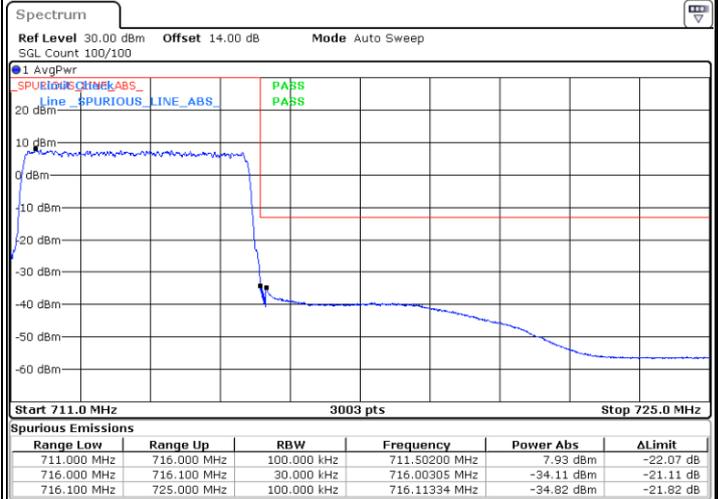
Date: 30 JUN 2025 20:44:39

Lowest Band Edge / Full RB



Date: 30 JUN 2025 20:38:17

Highest Band Edge / Full RB

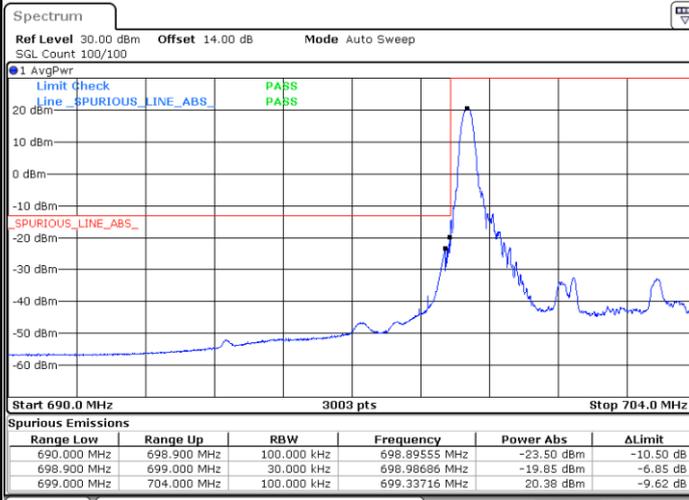


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LTE Band 12 / 5MHz / 64QAM

Lowest Band Edge / 1 RB



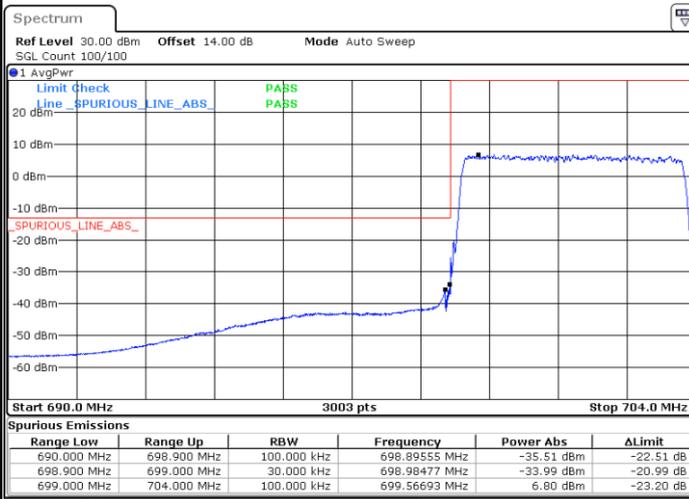
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Highest Band Edge / 1 RB



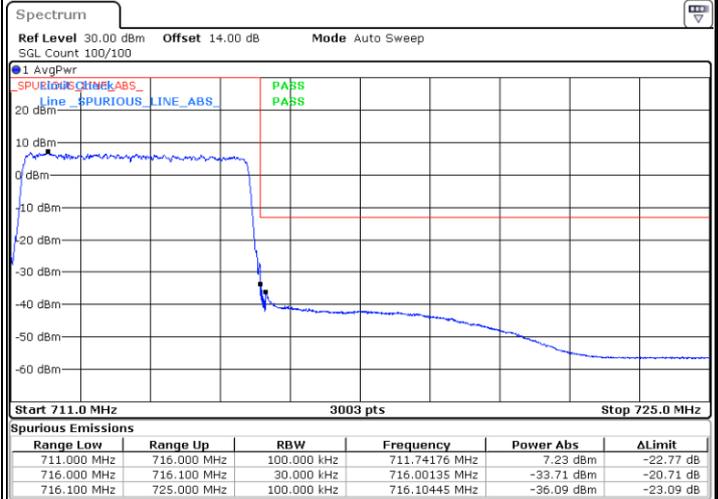
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Lowest Band Edge / Full RB



Date: 30 JUN 2025 20:39:12

Highest Band Edge / Full RB

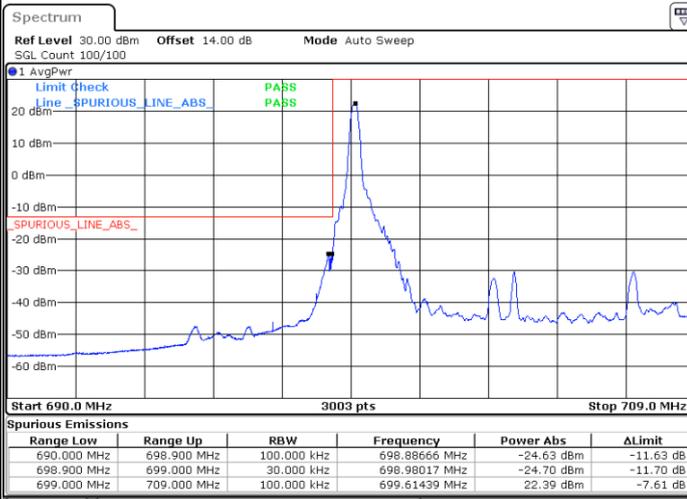


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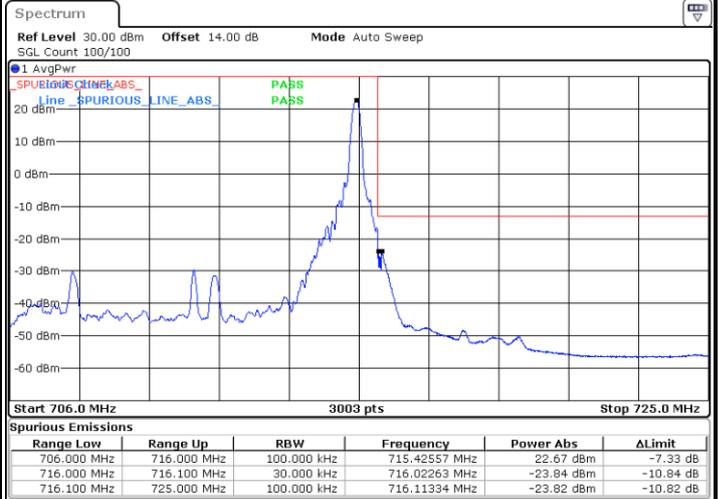
LTE Band 12 / 10MHz / QPSK

Lowest Band Edge / 1RB



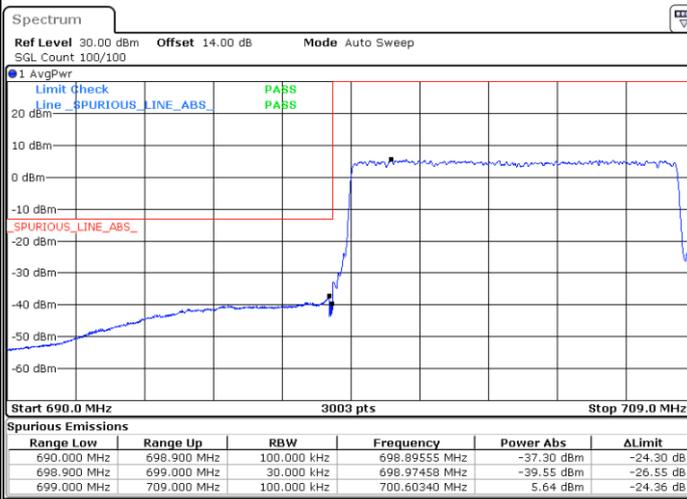
Date: 30 JUN 2025 20:51:06

Highest Band Edge / 1RB



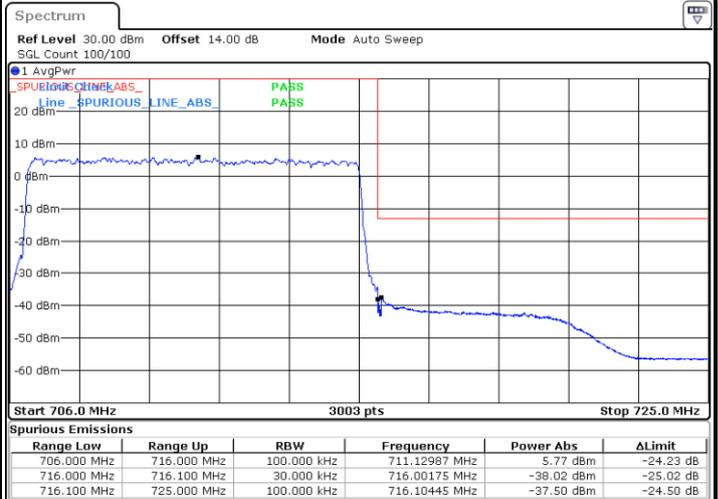
Date: 30 JUN 2025 21:00:12

Lowest Band Edge / Full RB



Date: 30 JUN 2025 20:53:57

Highest Band Edge / Full RB

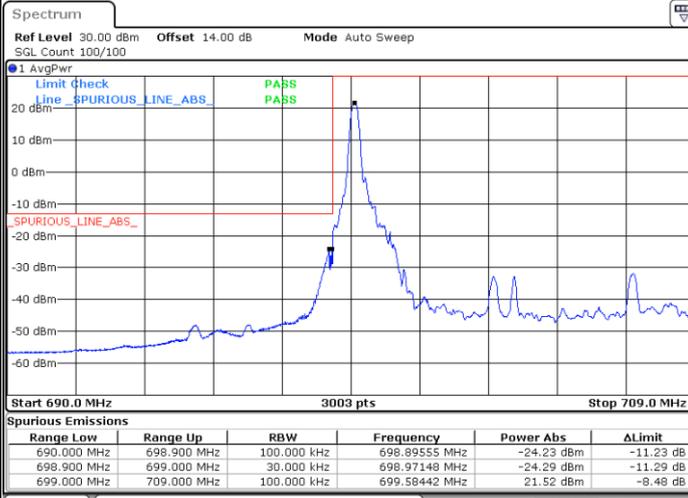


Date: 30 JUN 2025 21:03:06



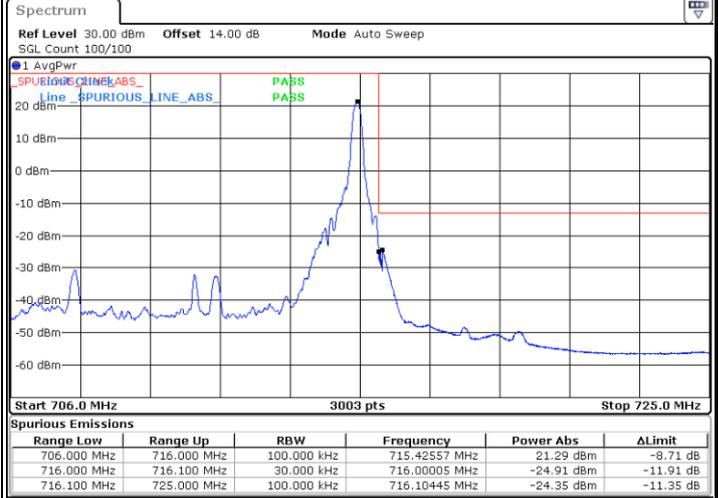
LTE Band 12 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



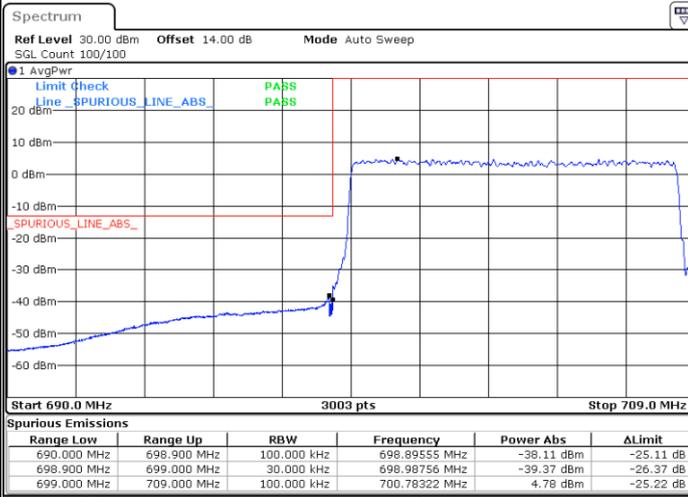
Date: 30 JUN 2025 20:52:05

Highest Band Edge / 1 RB



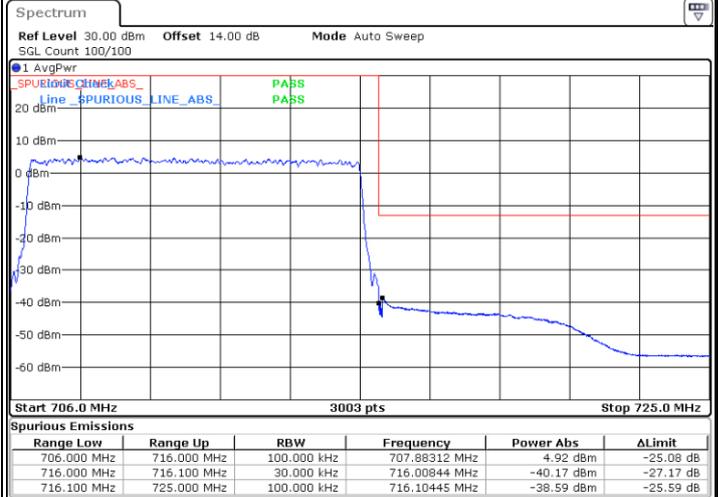
Date: 30 JUN 2025 21:01:15

Lowest Band Edge / Full RB



Date: 30 JUN 2025 20:54:52

Highest Band Edge / Full RB

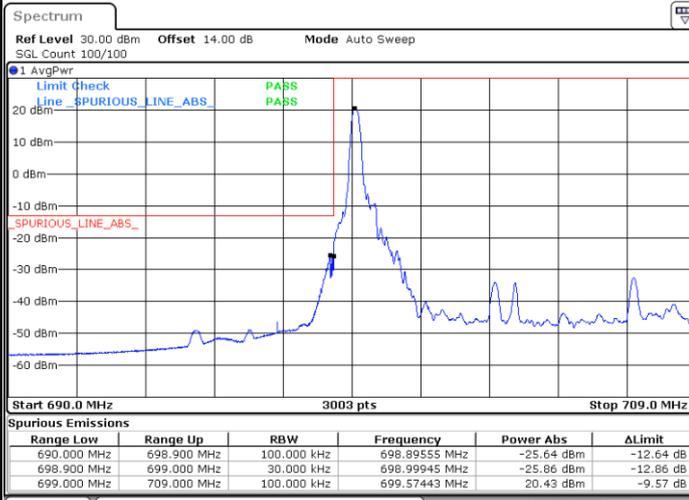


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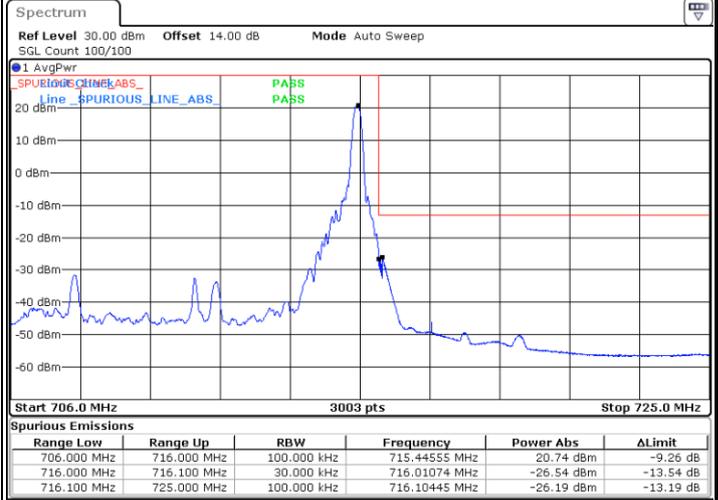
LTE Band 12 / 10MHz / 64QAM

Lowest Band Edge / 1 RB



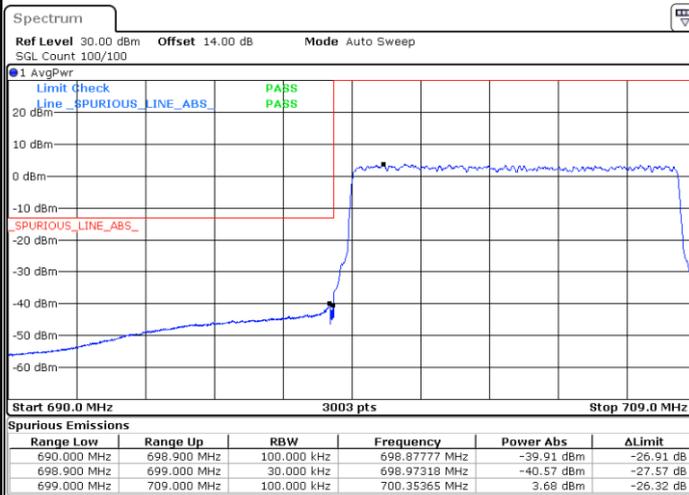
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Highest Band Edge / 1 RB



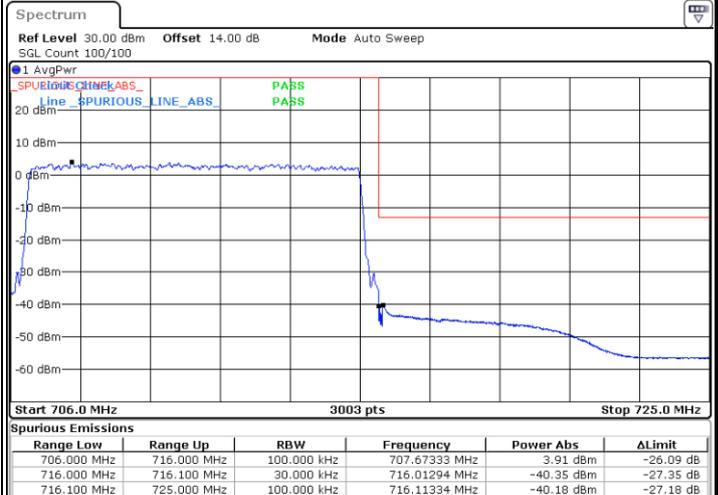
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Lowest Band Edge / Full RB



Date: 30 JUN 2025 20:55:48

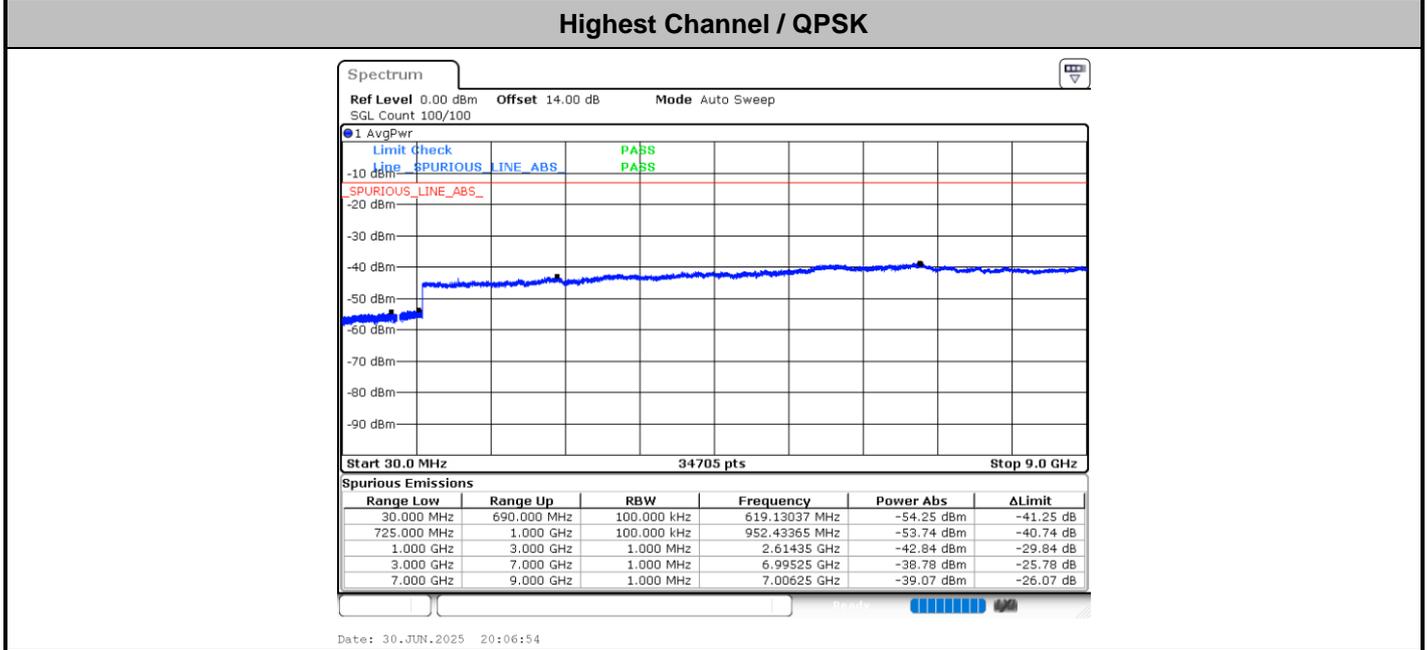
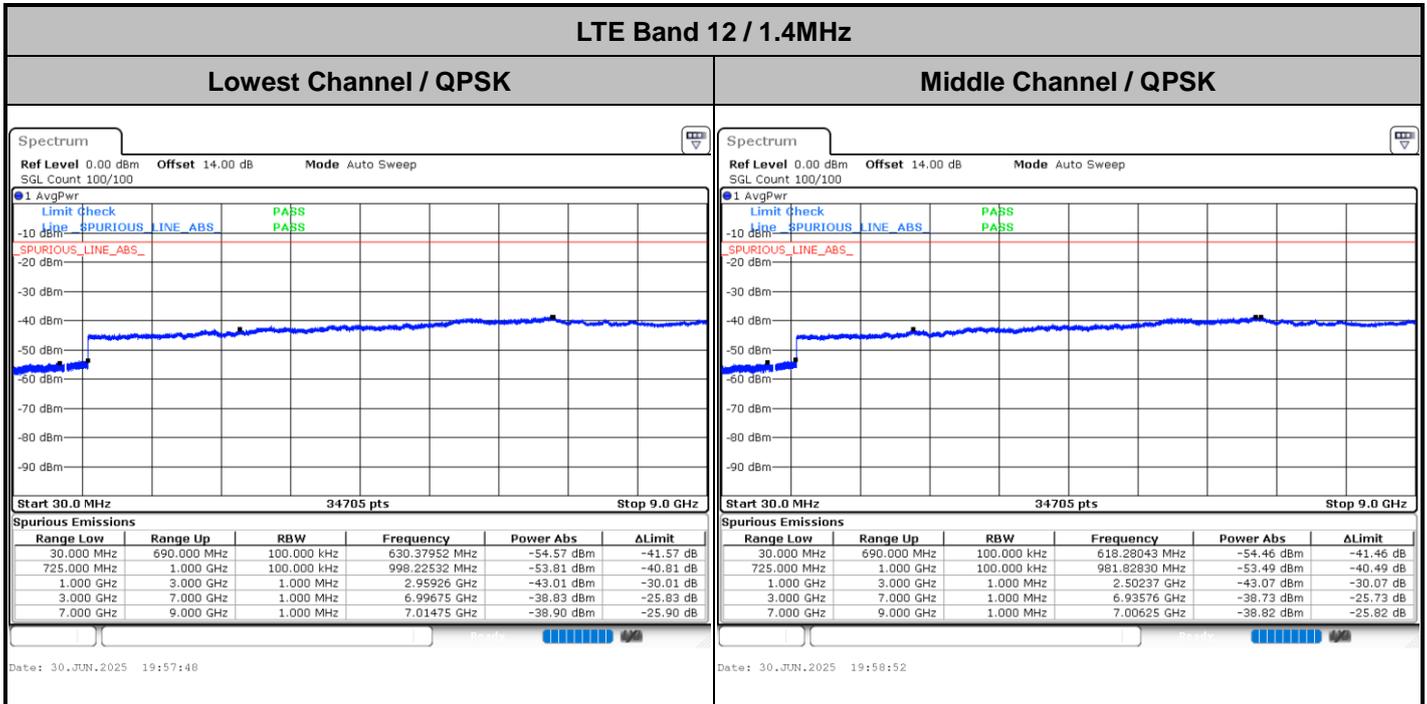
Highest Band Edge / Full RB



Date: 30 JUN 2025 21:04:58



# Conducted Spurious Emission

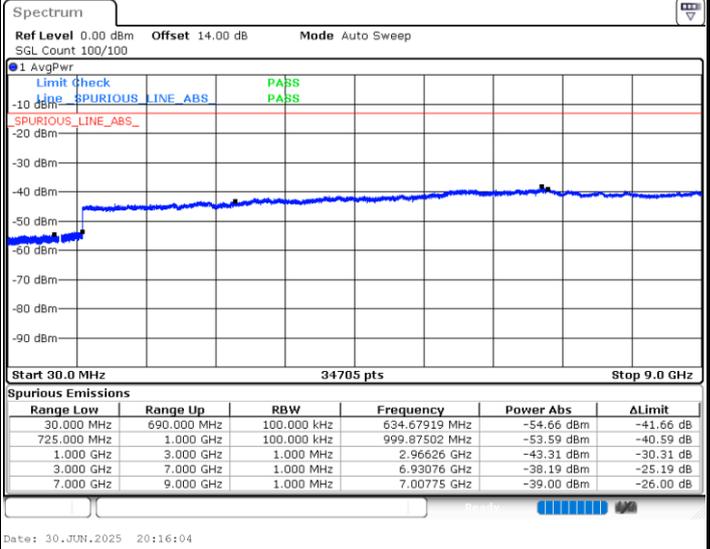
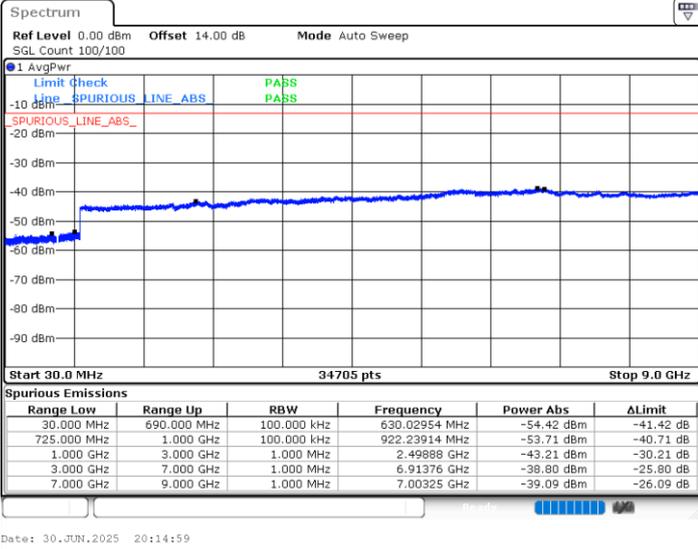




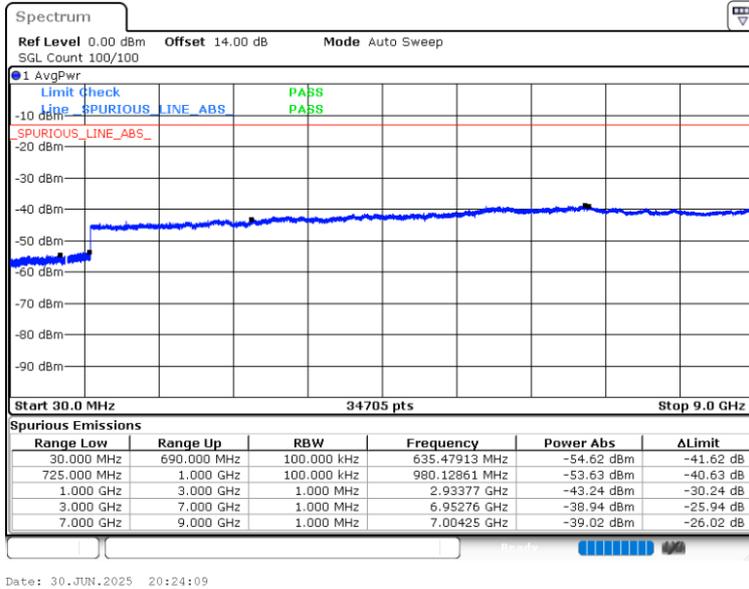
LTE Band 12 / 3MHz

Lowest Channel / QPSK

Middle Channel / QPSK



Highest Channel / QPSK

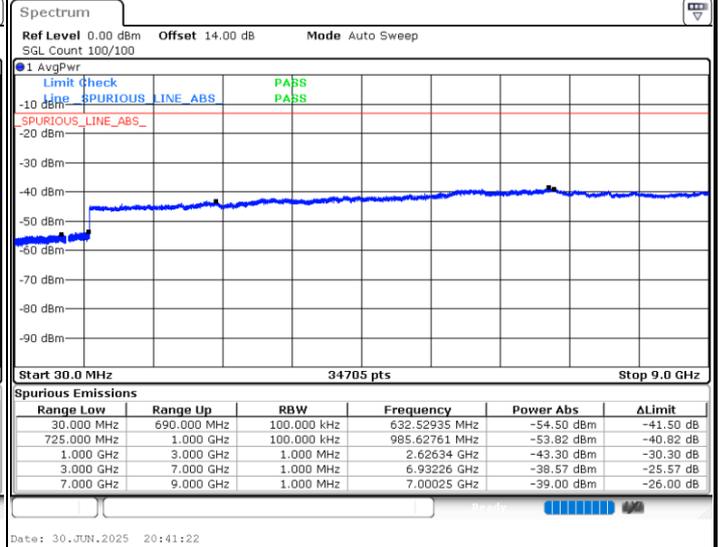
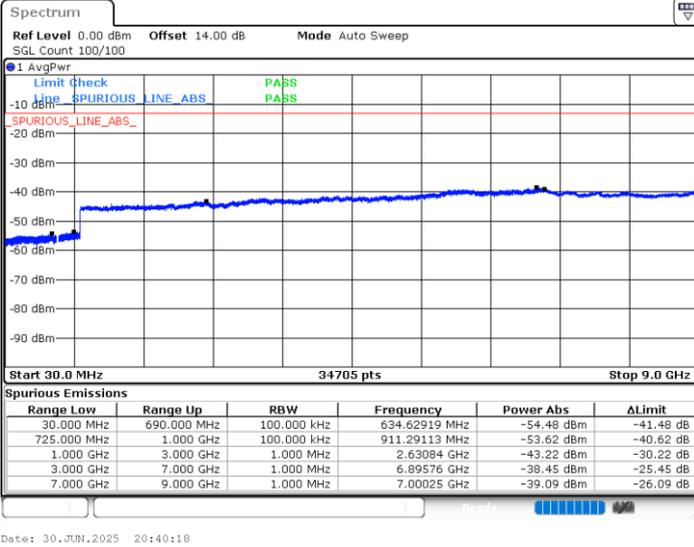




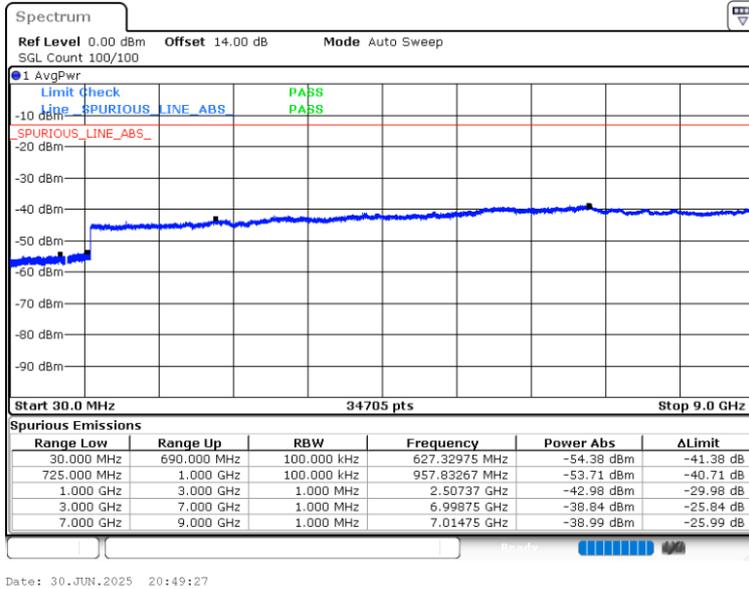
LTE Band 12 / 5MHz

Lowest Channel / QPSK

Middle Channel / QPSK



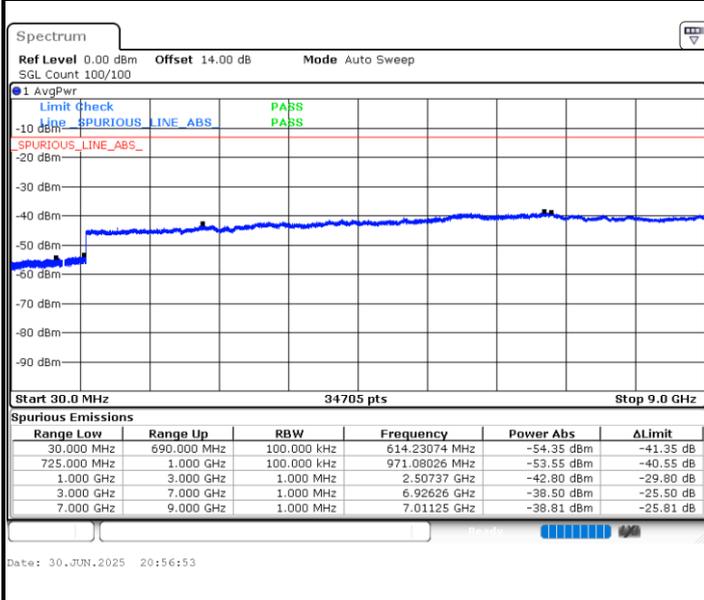
Highest Channel / QPSK



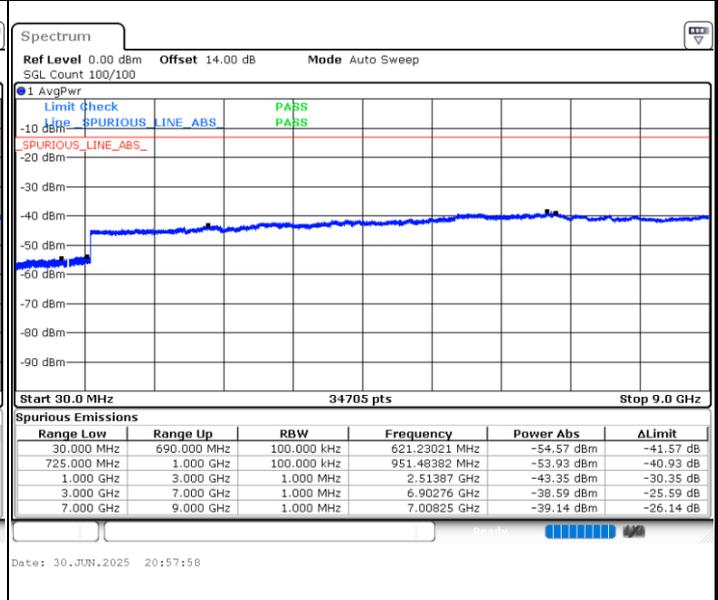


**LTE Band 12 / 10MHz**

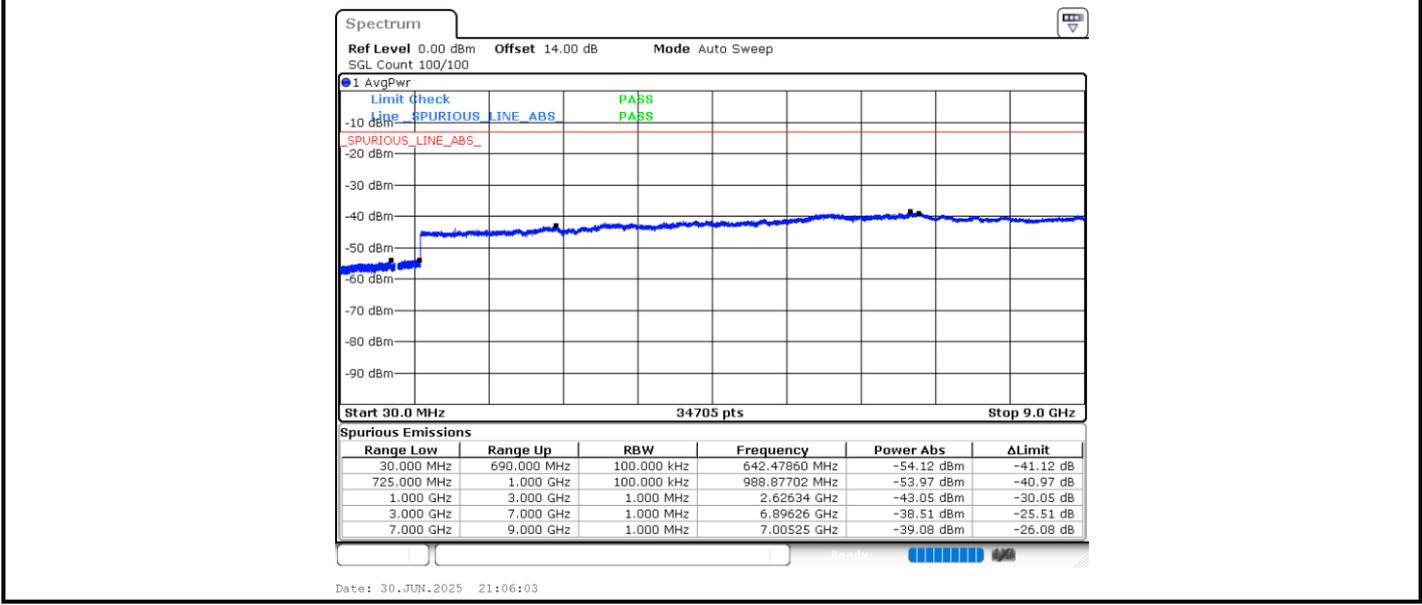
**Lowest Channel / QPSK**



**Middle Channel / QPSK**



**Highest Channel / QPSK**





Frequency Stability

Test Conditions		LTE Band 12 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 1.4MHz	Note 2.
		Frequency Offset ( $\Delta f$ ) (Hz)	Result
50	Normal Voltage	0.0164	PASS
40	Normal Voltage	0.0004	
30	Normal Voltage	0.0040	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0016	
0	Normal Voltage	0.0025	
-10	Normal Voltage	0.0093	
-20	Normal Voltage	0.0082	
-30	Normal Voltage	0.0021	
20	Maximum Voltage	0.0204	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0030	

Note:

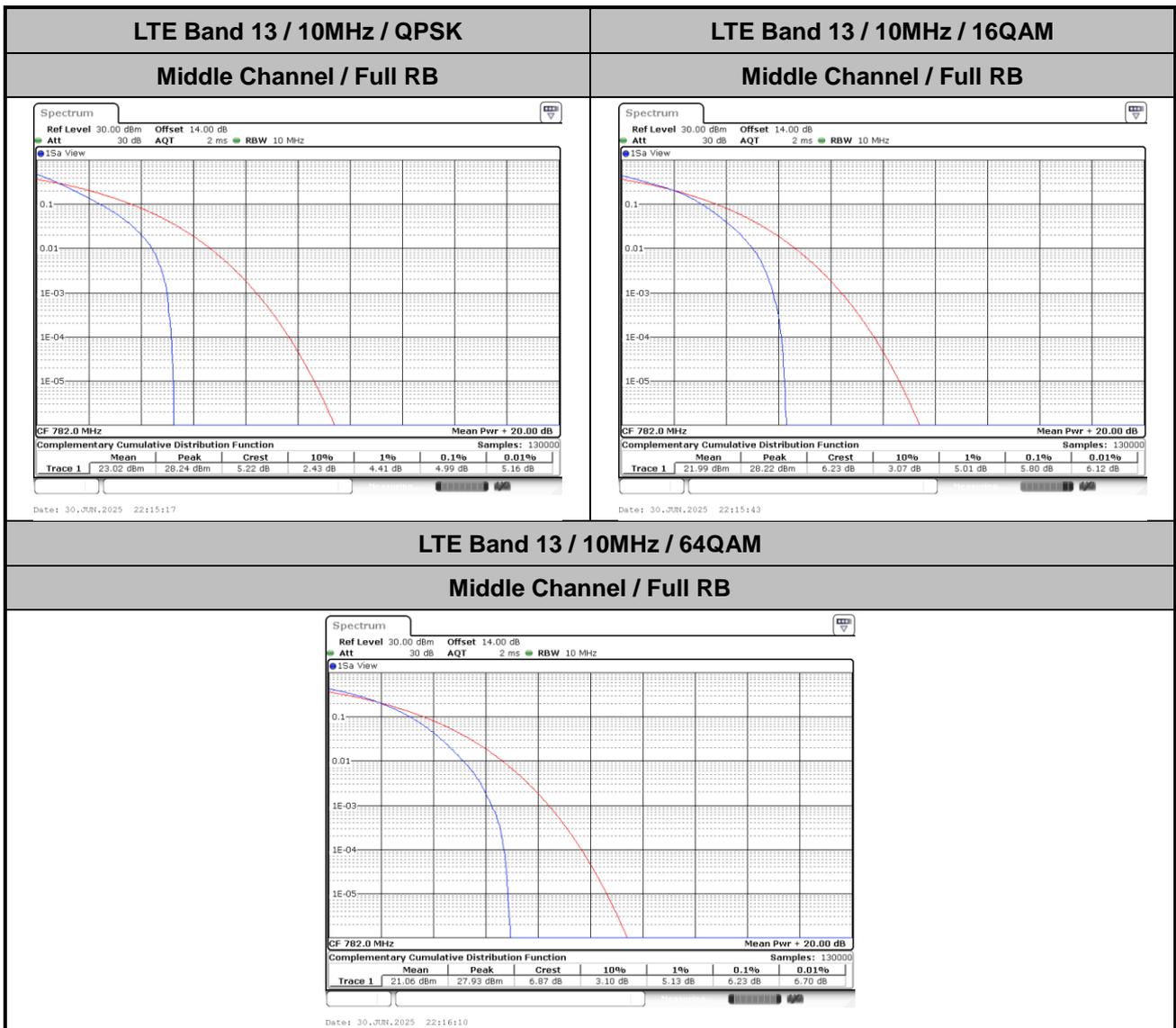
1. Normal Voltage = 3.89 V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage = 4.3 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



# LTE Band 13

## Peak-to-Average Ratio

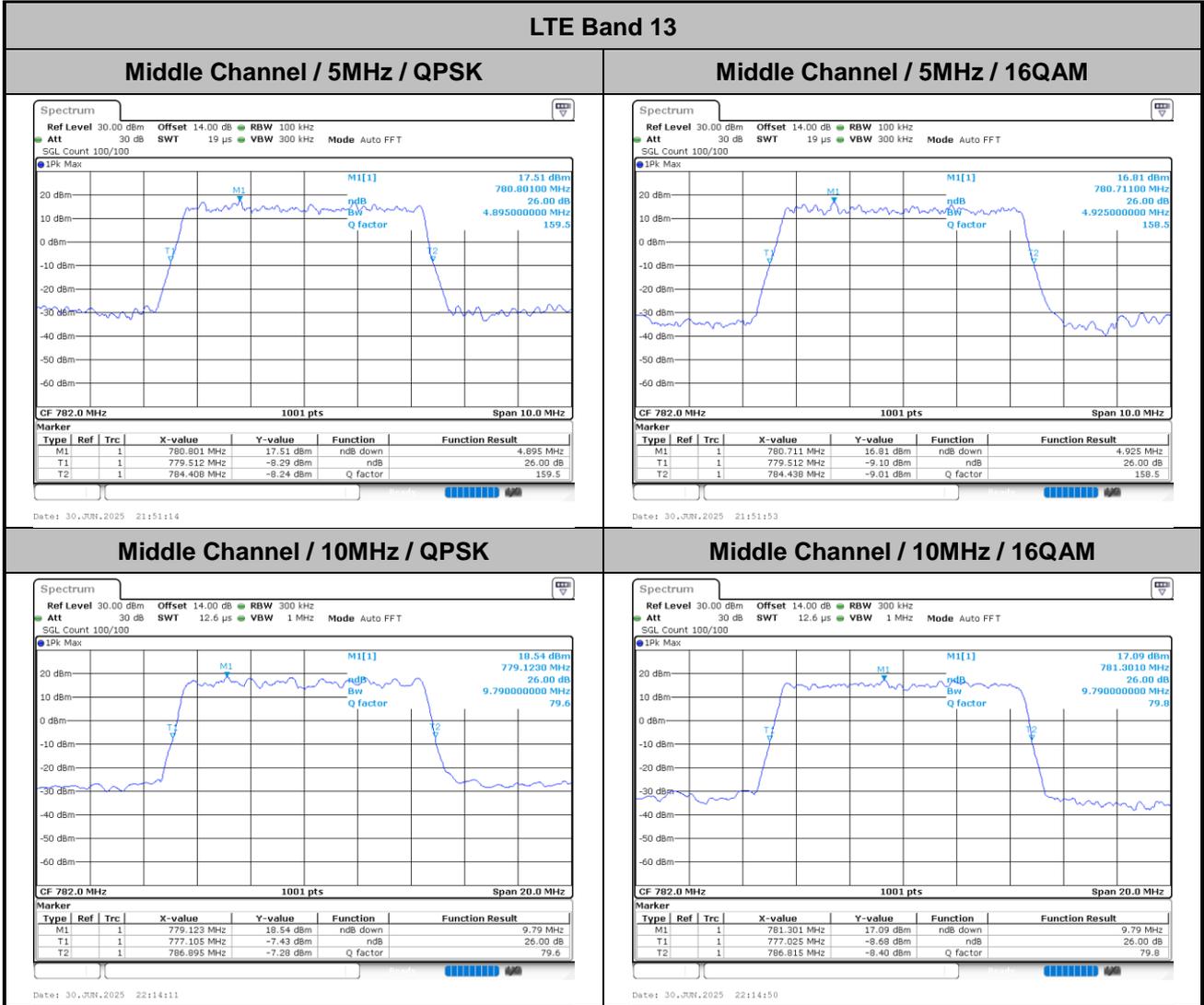
Mode	LTE Band 13 / 10MHz			
Mod.	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Result
Middle CH	4.99	5.80	6.23	PASS





## 26dB Bandwidth

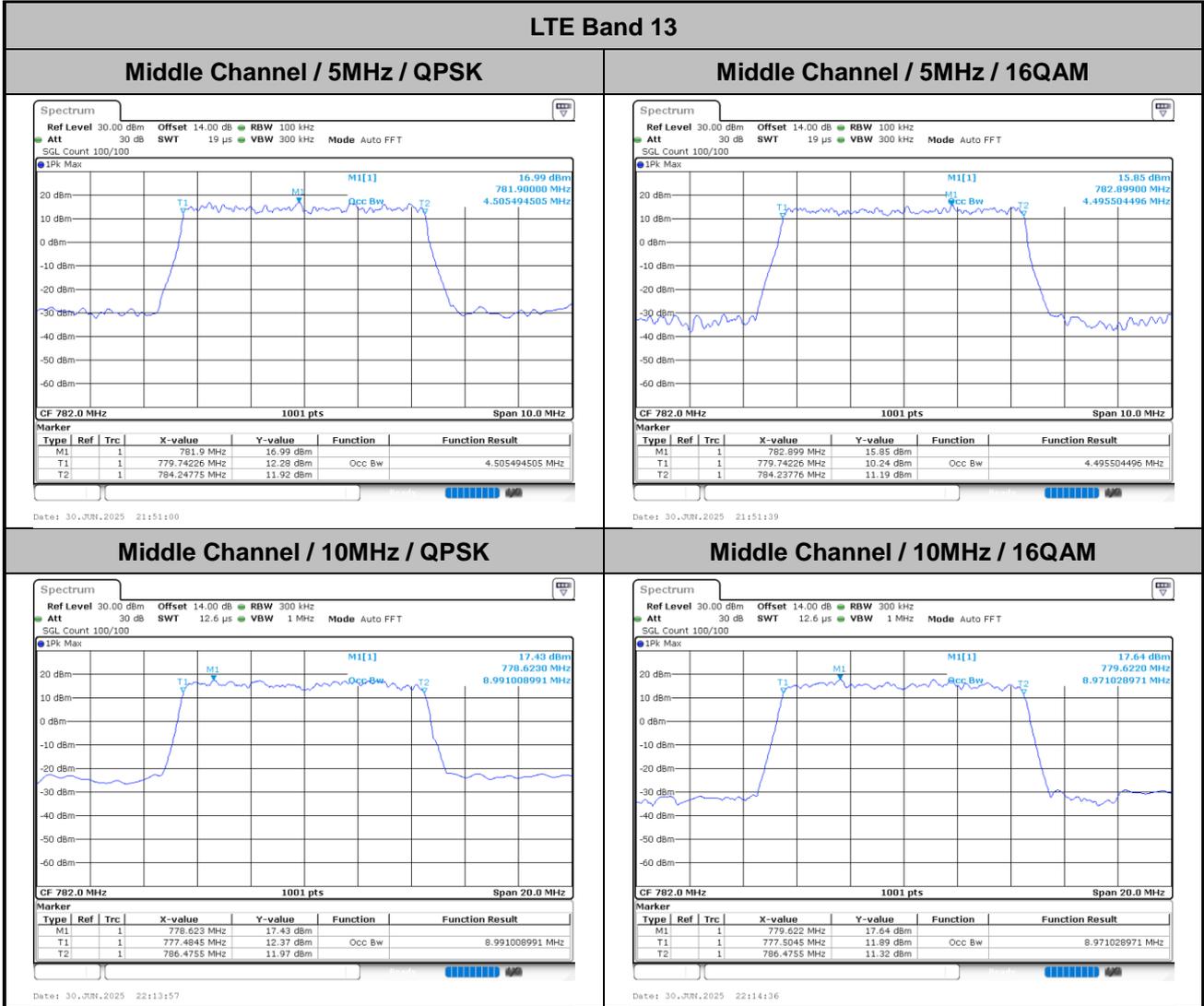
Mode	LTE Band 13 : 26dB BW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	-	-	-	-	4.90	4.93	9.79	9.79	-	-	-	-





# Occupied Bandwidth

Mode	LTE Band 13 : 99%OBW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	-	-	-	-	4.51	4.50	8.99	8.97	-	-	-	-



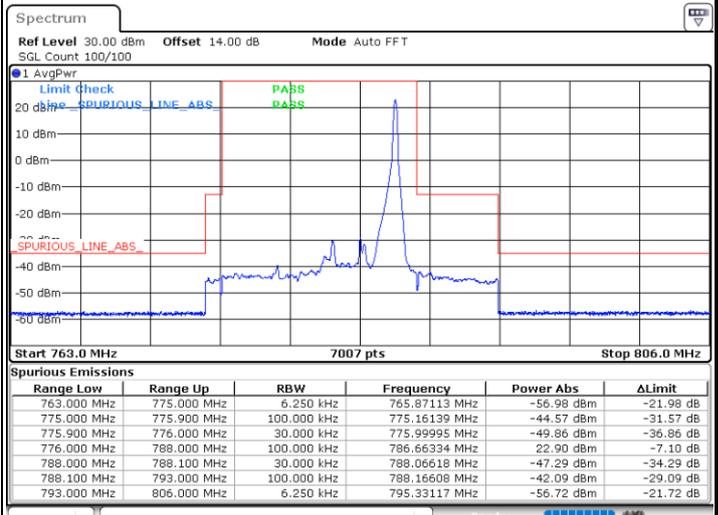
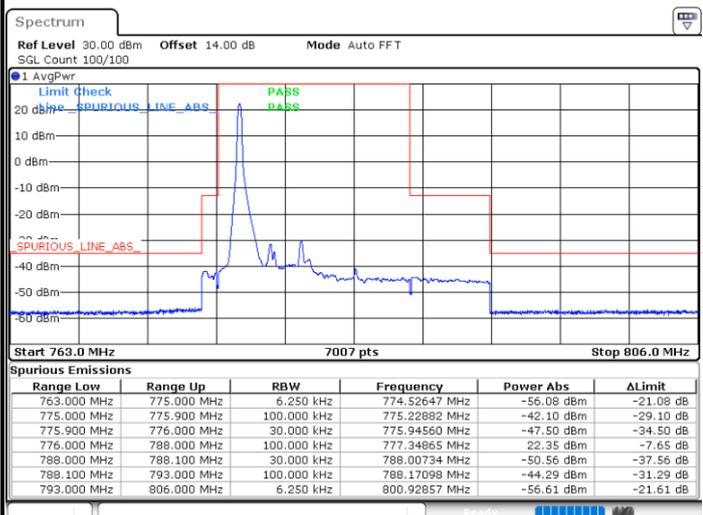


# Conducted Band Edge

## LTE Band 13 / 5MHz / QPSK

### Lowest Band Edge / 1 RB

### Highest Band Edge / 1 RB

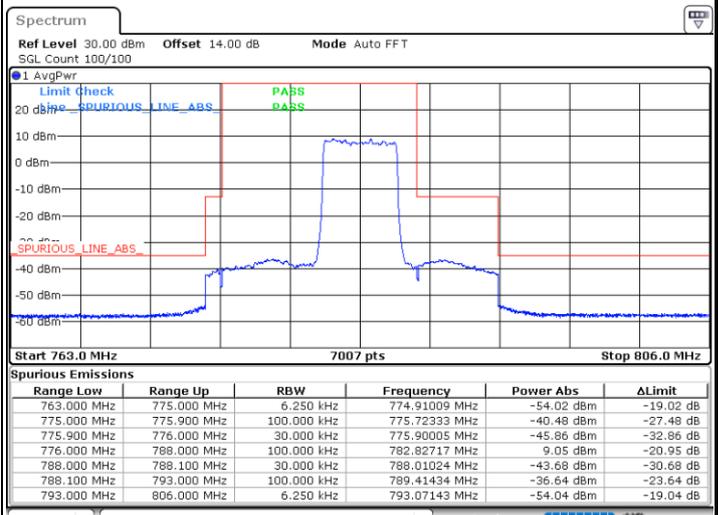
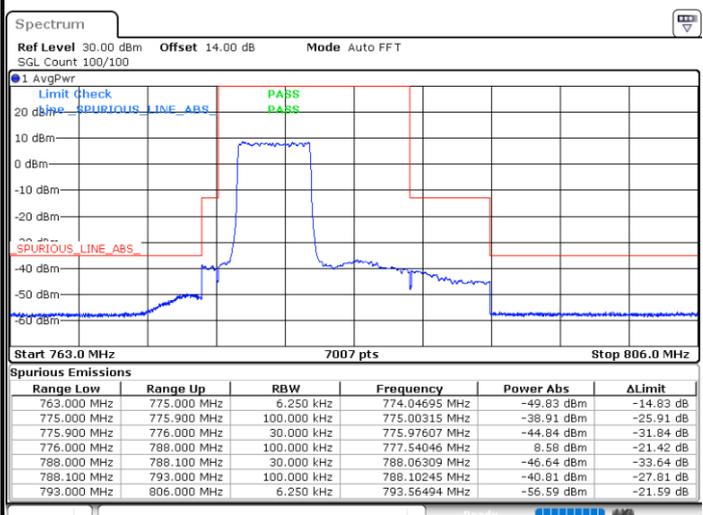


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### Lowest Band Edge / Full RB

### Highest Band Edge / Full RB



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