



FCC RF Test Report

APPLICANT : Nokia Shanghai Bell Co., Ltd.
EQUIPMENT : Nokia FastMile 5G Receiver
BRAND NAME : Nokia
MODEL NAME : 5G16-B
FCC ID : 2ADZR5G16B
STANDARD : 47 CFR Part 2, 24(E), 27(L)
CLASSIFICATION : PCS Licensed Transmitter (PCB)
TEST DATE(S) : Jun. 23, 2024 ~ Jul. 16, 2024

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

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

Jason Jia



Approved by: Jason Jia

Sporton International Inc. (ShenZhen)

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

People's Republic of China



TABLE OF CONTENTS

REVISION HISTORY 4
SUMMARY OF TEST RESULT 5
1 GENERAL DESCRIPTION 6
1.1 Applicant 6
1.2 Manufacturer 6
1.3 Product Feature of Equipment Under Test 6
1.4 Product Specification of Equipment Under Test 6
1.5 Modification of EUT 7
1.6 Maximum EIRP Power and Emission Designator 7
1.7 Testing Location 8
1.8 Test Software 9
1.9 Applicable Standards 9
2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST 10
2.1 Test Mode 10
2.2 Connection Diagram of Test System 11
2.3 Support Unit used in test configuration and system 11
2.4 Measurement Results Explanation Example 11
2.5 Frequency List of Low/Middle/High Channels 12
3 CONDUCTED TEST ITEMS 14
3.1 Measuring Instruments 14
3.2 Test Setup 14
3.3 Test Result of Conducted Test 14
3.4 Conducted Output Power and EIRP 15
3.5 Peak-to-Average Ratio 16
3.6 Occupied Bandwidth 17
3.7 Conducted Band Edge 18
3.8 Conducted Spurious Emission 19
3.9 Frequency Stability 20
4 RADIATED TEST ITEMS 21
4.1 Measuring Instruments 21
4.2 Test Setup 21
4.3 Test Result of Radiated Test 22
4.4 Radiated Spurious Emission 23
5 LIST OF MEASURING EQUIPMENT 24
6 MEASUREMENT UNCERTAINTY 25
APPENDIX A. TEST RESULTS OF CONDUCTED TEST A1
A1. Conducted Output Power(Average power) and EIRP A1
A2. LTE Band 25 A5
A2.1 Peak-to-Average Ratio A5
A2.2 26dB Bandwidth A6
A2.3 Occupied Bandwidth A9
A2.4 Conducted Band Edge A12
A2.5 Conducted Spurious Emission A30
A2.6 Frequency Stability A36
A3. LTE Band 66 A37
A3.1 Peak-to-Average Ratio A37



A3.2 26dB Bandwidth A39
 A3.3 Occupied Bandwidth A42
 A3.4 Conducted Band Edge A45
 A3.5 Conducted Spurious Emission A63
 A3.6 Frequency Stability A69

APPENDIX B. TEST RESULTS OF RADIATED TEST..... B1

APPENDIX C. SETUP PHOTOGRAPHS C1



SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	-	Report Only	-
	§24.232(c)	Equivalent Isotropic Radiated Power (Band 2) (Band 25)	EIRP < 2Watt	PASS	-
	§27.50(d)(4)	Equivalent Isotropic Radiated Power (Band 4) (Band 66)	EIRP < 1Watt		-
3.5	§24.232(d)	Peak-to-Average Ratio	<13 dB	PASS	-
3.6	§2.1049	Occupied Bandwidth	-	Report Only	-
3.7	§2.1051 §24.238(a) §27.53(h)	Conducted Band Edge Measurement (Band 2) (Band 4) (Band 25) (Band 66)	< 43+10log10(P[Watts])	PASS	-
3.8	§2.1051 §24.238(a) §27.53(h)	Conducted Spurious Emission (Band 2) (Band 4) (Band 25) (Band 66)	< 43+10log10(P[Watts])	PASS	-
3.9	§2.1055 §24.235 §27.54	Frequency Stability Temperature & Voltage	Within Authorized Band	PASS	-
4.4	§2.1053 §24.238(a) §27.53(h)	Radiated Spurious Emission (Band 2) (Band 4) (Band 25) (Band 66)	< 43+10log ₁₀ (P[Watts])	PASS	Under limit 30.58 dB at 9367.500 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

Nokia Shanghai Bell Co., Ltd.

388#, Ningqiao Road, China (Shanghai) Pilot Free Trade Zone, Shanghai 201206, China

1.2 Manufacturer

Nokia Solutions and Networks Oy

Karakaari 7, 02610 Espoo, Finland

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Nokia FastMile 5G Receiver
Brand Name	Nokia
Model Name	5G16-B
FCC ID	2ADZR5G16B
IMEI Code	Conducted: 358937920000081 Radiation: 358937920000248
HW Version	3TG02508Axxx(x:A~Z)
SW Version	5GReceiver-HG-2_D240200BieT0001E0643
EUT Stage	Identical Prototype

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	LTE Band 2 : 1850 MHz – 1910 MHz LTE Band 4 : 1710 MHz – 1755 MHz LTE Band 25 : 1850 MHz – 1915 MHz LTE Band 66 : 1710 MHz – 1755 MHz
Rx Frequency	LTE Band 2 : 1930 MHz – 1990 MHz LTE Band 4 : 2110 MHz – 2155 MHz LTE Band 25 : 1930 MHz – 1995 MHz LTE Band 66 : 2110 MHz – 2155 MHz
Bandwidth	LTE Band 2 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 4 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 25 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 66 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz
Maximum Output Power to Antenna	<Ant. 0> LTE Band 2 : 24.03 dBm LTE Band 4 : 23.44 dBm LTE Band 25 : 24.04 dBm LTE Band 66 : 23.50 dBm



Antenna Gain	<Ant. 0>
	LTE Band 2 : 3.5 dBi
	LTE Band 4 : 3.3 dBi
	LTE Band 25 : 3.5 dBi
	LTE Band 66 : 3.3 dBi
Type of Modulation	QPSK / 16QAM / 64QAM / 256QAM

Note: There are two Samples under test, Sample 1 is 1st antenna, Sample 2 is 2nd antenna and they are with the same Gain but different manufacturers. According to the difference, we choose sample 1 to full test and the sample 2 is verified the worse case for Radiation Spurious Emission among LTE WWAN Bands which can refer to FG341901-02C.

Specification of Accessory			
AC Adapter	Brand Name	NOKIA	Model Name G1418B-540-028-2.5G

1.5 Modification of EUT

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

1.6 Maximum EIRP Power and Emission Designator

LTE Band 2		QPSK		16QAM/64QAM/256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
1.4	1850.7 – 1909.3	0.5598	1M09G7D	0.4355	1M09W7D
3	1851.5 – 1908.5	0.5623	2M73G7D	0.4613	2M71W7D
5	1852.5 – 1907.5	0.5559	4M49G7D	0.4560	4M51W7D
10	1855.0 – 1905.0	0.5623	8M95G7D	0.4592	9M05W7D
15	1857.5 – 1902.5	0.5610	13M5G7D	0.4603	13M4W7D
20	1860.0 – 1900.0	0.5662	17M9G7D	0.4624	17M9W7D
LTE Band 25		QPSK		16QAM/64QAM/256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
1.4	1850.7 – 1914.3	0.5383	1M09G7D	0.4345	1M09W7D
3	1851.5 – 1913.5	0.5321	2M73G7D	0.4539	2M71W7D
5	1852.5 – 1912.5	0.5408	4M49G7D	0.4550	4M51W7D
10	1855.0 – 1910.0	0.5346	8M95G7D	0.4487	9M05W7D
15	1857.5 – 1907.5	0.5333	13M5G7D	0.4560	13M4W7D
20	1860.0 – 1905.0	0.5675	17M9G7D	0.4571	17M9W7D



LTE Band 4		QPSK		16QAM/64QAM/256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
1.4	1710.7 – 1754.3	0.4477	1M09G7D	0.386	1M09W7D
3	1711.5 – 1753.5	0.4467	2M70G7D	0.4121	2M71W7D
5	1712.5 – 1752.5	0.4446	4M48G7D	0.4130	4M49W7D
10	1715.0 – 1750.0	0.4498	9M03G7D	0.4102	8M97W7D
15	1717.5 – 1747.5	0.4457	13M4G7D	0.4102	13M4W7D
20	1720.0 – 1745.0	0.4721	17M9G7D	0.4159	17M8W7D
LTE Band 66		QPSK		16QAM/64QAM/256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
1.4	1710.7 – 1754.3	0.4656	1M09G7D	0.3972	1M09W7D
3	1711.5 – 1753.5	0.4613	2M70G7D	0.4217	2M71W7D
5	1712.5 – 1752.5	0.4603	4M48G7D	0.4217	4M49W7D
10	1715.0 – 1750.0	0.4645	9M03G7D	0.4236	8M97W7D
15	1717.5 – 1747.5	0.4667	13M4G7D	0.4227	13M4W7D
20	1720.0 – 1745.0	0.4786	17M9G7D	0.4246	17M8W7D

Note:

1. LTE Band 66 overlaps the entire frequency range of LTE Band 4. Therefore, the test results provided in this report covers Band 66 as well as Band 4.
2. LTE Band 25 overlaps the entire frequency range of LTE Band 2. Therefore, the test results provided in this report covers Band 25 as well as Band 2.
3. All modulations have been tested, 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.

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



Test Firm	Sporton International Inc. (ShenZhen)		
Test Site Location	101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City, Guangdong Province 518103 People's Republic of China TEL: +86-755-86066985		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH02-SZ	CN1256	421272

1.8 Test Software

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

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 2, 24(E), 27(L)
- ♦ 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

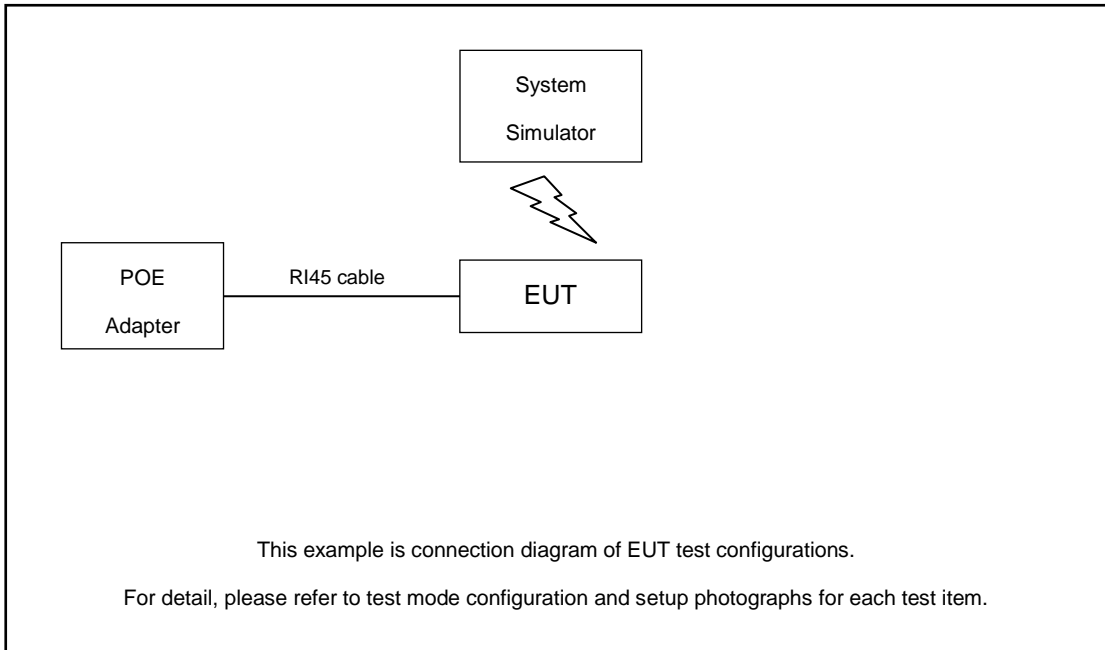
2.1 Test Mode

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/Y 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	2	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	
	4	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	
	25	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	
	66	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	
Peak-to-Average Ratio	25						v	v	v	v				v		v		
	66						v	v	v	v				v		v		
26dB and 99% Bandwidth	25	v	v	v	v	v	v	v	v					v		v		
	66	v	v	v	v	v	v	v	v					v		v		
Conducted Band Edge	25	v	v	v	v	v	v	v	v	v			v		v		v	
	66	v	v	v	v	v	v	v	v	v			v		v		v	
Conducted Spurious Emission	25	v	v	v	v	v	v	v					v		v	v	v	
	66	v	v	v	v	v	v	v					v		v	v	v	
Frequency Stability	25				v			v							v		v	
	66				v			v							v		v	
E.I.R.P	2	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	
	4	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	
	25	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	
	66	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	
Radiated Spurious Emission	25	Worst Case															v	
	66	Worst Case															v	
Note	<ol style="list-style-type: none"> The mark "v" means that this configuration is chosen for testing The mark "-" means that this bandwidth is not supported. 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. For QAM modulation mode, the whole testing has assessed 16QAM&64QAM mode by referring to the higher conducted power. 																	

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.	Base Station	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.5 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 4.5 dB and 10dB attenuator.

Example :

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)}. \\ &= 4.5 + 10 = 14.5 \text{ (dB)} \end{aligned}$$



2.5 Frequency List of Low/Middle/High Channels

LTE Band 2 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	18700	18900	19100
	Frequency	1860	1880	1900
15	Channel	18675	18900	19125
	Frequency	1857.5	1880	1902.5
10	Channel	18650	18900	19150
	Frequency	1855	1880	1905
5	Channel	18625	18900	19175
	Frequency	1852.5	1880	1907.5
3	Channel	18615	18900	19185
	Frequency	1851.5	1880	1908.5
1.4	Channel	18607	18900	19193
	Frequency	1850.7	1880	1909.3

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



LTE Band 25 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	26140	26340	26590
	Frequency	1860	1880	1905
15	Channel	26115	26340	26615
	Frequency	1857.5	1880	1907.5
10	Channel	26090	26340	26640
	Frequency	1855	1880	1910
5	Channel	26065	26340	26665
	Frequency	1852.5	1880	1912.5
3	Channel	26055	26340	26675
	Frequency	1851.5	1880	1913.5
1.4	Channel	26047	26340	26683
	Frequency	1850.7	1880	1914.3

LTE Band 66 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	132072	132197	132322
	Frequency	1720	1732.5	1745
15	Channel	132047	132197	132347
	Frequency	1717.5	1732.5	1747.5
10	Channel	132022	132197	132372
	Frequency	1715	1732.5	1750
5	Channel	131997	132197	132397
	Frequency	1712.5	1732.5	1752.5
3	Channel	131987	132197	132407
	Frequency	1711.5	1732.5	1753.5
1.4	Channel	131979	132197	132415
	Frequency	1710.7	1732.5	1754.3

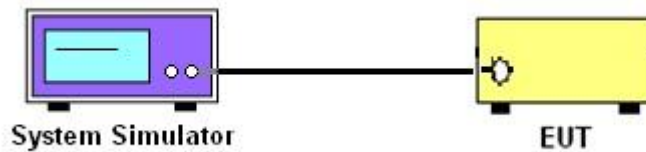
3 Conducted Test Items

3.1 Measuring Instruments

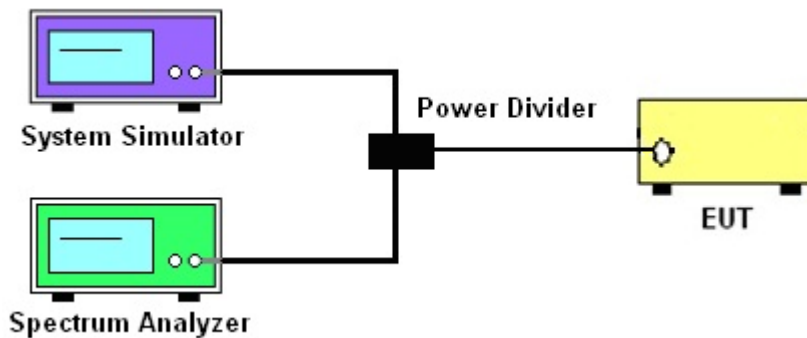
See list of measuring instruments of this test report.

3.2 Test Setup

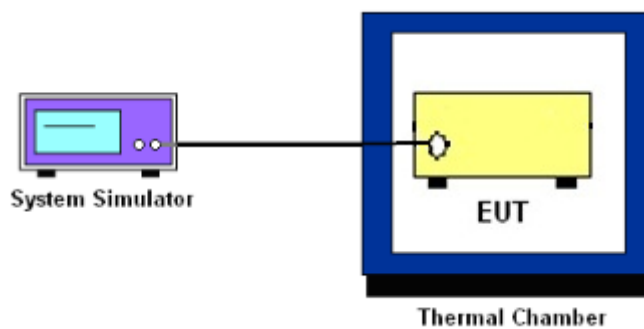
3.2.1 Conducted Output Power



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 EIRP

3.4.1 Description of the Conducted Output Power Measurement and EIRP Measurement

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

The EIRP must not exceed 2 Watts for LTE Band 2 and Band 25

The EIRP must not exceed 1 Watts for LTE Band 4 and Band 66.

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

24.238 (a)

For operations in the 1850-1910 and 1930-1990 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 1MHz bandwidth. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

27.53 (h)

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

3.7.2 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 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:

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

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 10th harmonic.

3.8.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
4. The middle channel for the highest RF power within the transmitting frequency was measured.
5. The conducted spurious emission for the whole frequency range was taken.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
7. Set spectrum analyzer with RMS detector.
8. Taking the record of maximum spurious emission.
9. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
10. The limit line is derived from $43 + 10\log(P)$ 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. The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ ($\pm 2.5\text{ppm}$) 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 $20\pm 5^{\circ}\text{C}$ 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.

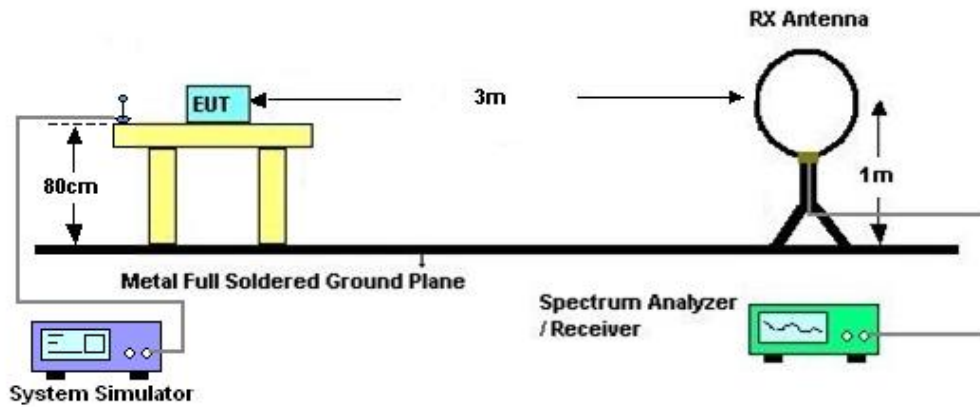
4 Radiated Test Items

4.1 Measuring Instruments

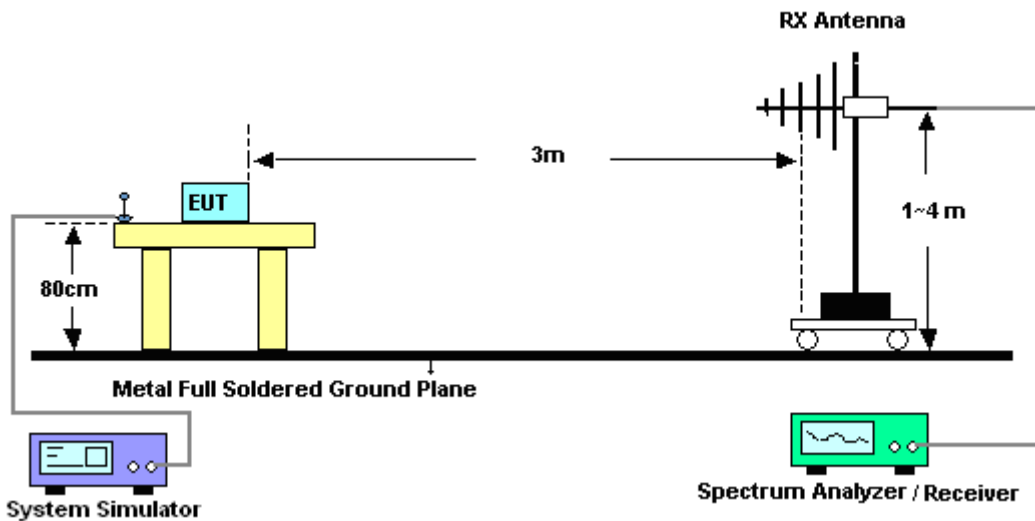
See list of measuring instruments of this test report.

4.2 Test Setup

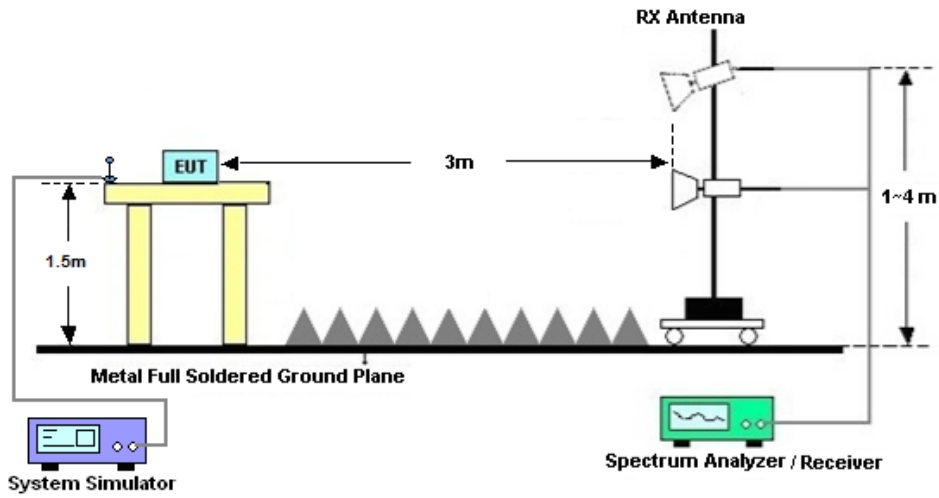
For radiated test below 30MHz



For radiated test from 30MHz to 1GHz



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. $EIRP \text{ (dBm)} = S.G. \text{ Power} - Tx \text{ Cable Loss} + Tx \text{ Antenna Gain}$
11. $ERP \text{ (dBm)} = EIRP - 2.15$
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)
= $P(W) - [43 + 10\log(P)] \text{ (dB)}$
= $[30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$
= -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. 09, 2024	Jun. 23, 2024~ Jul. 16, 2024	Apr. 08, 2025	Conducted (TH01-SZ)
Power Divider	TOJOIN	PS-2SM-04 265	60.06.020.007 7	0.4GHz~26.5GHz	Dec. 25, 2023	Jun. 23, 2024~ Jul. 16, 2024	Dec. 24, 2024	Conducted (TH01-SZ)
Power Divider	SOLVANG TECHNOLOGY	STI08-0055	-	Max 40GHz	Mar. 20, 2024	Jun. 23, 2024~ Jul. 16, 2024	Mar. 19, 2025	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 05, 2023	Jun. 23, 2024~ Jul. 16, 2024	Jul. 04, 2024	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 04, 2024		Jul. 03, 2025	Conducted (TH01-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Jul. 07, 2023	Jun. 24, 2024	Jul. 06, 2024	Radiation (03CH02-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jul. 28, 2022	Jun. 24, 2024	Jul. 27, 2024	Radiation (03CH02-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz~2GHz	Oct. 24, 2023	Jun. 24, 2024	Oct. 23, 2025	Radiation (03CH02-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Jul. 08, 2023	Jun. 24, 2024	Jul. 07, 2024	Radiation (03CH02-SZ)
HF Amplifier	MITEQ	TTA1840-35 -HG	1871923	18GHz~40GHz	Jul. 07, 2023	Jun. 24, 2024	Jul. 06, 2024	Radiation (03CH02-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz~40GHz	Apr. 09, 2024	Jun. 24, 2024	Apr. 08, 2025	Radiation (03CH02-SZ)
LF Amplifier	Burgeon	BPA-530	102211	0.01~3000Mhz	Oct. 18, 2023	Jun. 24, 2024	Oct. 17, 2024	Radiation (03CH02-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270105	0.5GHz~26.5Ghz	Oct. 18, 2023	Jun. 24, 2024	Oct. 17, 2024	Radiation (03CH02-SZ)
AC Power Source	Chroma	61601	616010003043	N/A	Oct. 18, 2023	Jun. 24, 2024	Oct. 17, 2024	Radiation (03CH02-SZ)
Turn Table	Chaintek	T-200	N/A	0~360 degree	NCR	Jun. 24, 2024	NCR	Radiation (03CH02-SZ)
Antenna Mast	Chaintek	MBS-400	N/A	1 m~4 m	NCR	Jun. 24, 2024	NCR	Radiation (03CH02-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))	2.47 dB
---	---------

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

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

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

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

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



Appendix A. Test Results of Conducted Test

Test Engineer :	Lorenzo Liu	Temperature :	24~26°C
		Relative Humidity :	50~53%

A1. Conducted Output Power(Average power) and EIRP

LTE Band 2_ANT.0

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP(W)		
							L	M	H
Channel				18700	18900	19100			
Frequency (MHz)				1860	1880	1900	L	M	H
20	QPSK	1	0	23.98	24.03	24.00	0.5598	0.5662	0.5623
20	QPSK	1	49	23.98	24.01	24.00	0.5598	0.5636	0.5623
20	QPSK	1	99	23.93	23.99	23.94	0.5534	0.5610	0.5546
20	QPSK	50	0	23.07	23.11	23.08	0.4539	0.4581	0.4550
20	QPSK	50	24	22.92	22.97	22.91	0.4385	0.4436	0.4375
20	QPSK	50	50	23.16	23.22	23.20	0.4634	0.4699	0.4677
20	QPSK	100	0	23.18	23.19	23.12	0.4656	0.4667	0.4592
20	16QAM	1	0	23.14	23.15	23.07	0.4613	0.4624	0.4539
20	64QAM	1	0	21.93	21.99	21.97	0.3491	0.3540	0.3524
20	256QAM	1	0	19.00	19.07	18.99	0.1778	0.1807	0.1774
Channel				18675	18900	19125	EIRP(W)		
Frequency (MHz)				1857.5	1880	1902.5	L	M	H
15	QPSK	1	0	23.97	23.99	23.92	0.5585	0.5610	0.5521
15	16QAM	1	0	23.13	23.12	23.03	0.4603	0.4592	0.4498
Channel				18650	18900	19150	EIRP(W)		
Frequency (MHz)				1855	1880	1905	L	M	H
10	QPSK	1	0	23.90	24.00	23.92	0.5495	0.5623	0.5521
10	16QAM	1	0	23.11	23.12	22.99	0.4581	0.4592	0.4457
Channel				18625	18900	19175	EIRP(W)		
Frequency (MHz)				1852.5	1880	1907.5	L	M	H
5	QPSK	1	0	23.95	23.95	23.94	0.5559	0.5559	0.5546
5	16QAM	1	0	23.09	23.09	23.04	0.4560	0.4560	0.4508
Channel				18615	18900	19185	EIRP(W)		
Frequency (MHz)				1851.5	1880	1908.5	L	M	H
3	QPSK	1	0	23.96	24.00	23.99	0.5572	0.5623	0.5610
3	16QAM	1	0	23.12	23.14	23.01	0.4592	0.4613	0.4477
Channel				18607	18900	19193	EIRP(W)		
Frequency (MHz)				1850.7	1880	1909.3	L	M	H
1.4	QPSK	1	0	23.97	23.98	23.97	0.5585	0.5598	0.5585
1.4	16QAM	1	0	22.85	22.89	22.85	0.4315	0.4355	0.4315



LTE Band 4_ANT.0

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP(W)		
Channel				20050	20175	20300	EIRP(W)		
Frequency (MHz)				1720	1732.5	1745	L	M	H
20	QPSK	1	0	23.20	23.24	23.21	0.4467	0.4508	0.4477
20	QPSK	1	49	23.17	23.22	23.20	0.4436	0.4487	0.4467
20	QPSK	1	99	23.38	23.44	23.42	0.4656	0.4721	0.4699
20	QPSK	50	0	22.48	22.56	22.54	0.3784	0.3855	0.3837
20	QPSK	50	24	22.53	22.61	22.58	0.3828	0.3899	0.3873
20	QPSK	50	50	22.53	22.56	22.48	0.3828	0.3855	0.3784
20	QPSK	100	0	22.54	22.62	22.60	0.3837	0.3908	0.3890
20	16QAM	1	0	22.84	22.89	22.84	0.4111	0.4159	0.4111
20	64QAM	1	0	21.66	21.69	21.61	0.3133	0.3155	0.3097
20	256QAM	1	0	18.53	18.56	18.52	0.1524	0.1535	0.1521
Channel				20025	20175	20325	EIRP(W)		
Frequency (MHz)				1717.5	1732.5	1747.5	L	M	H
15	QPSK	1	0	23.19	23.16	23.16	0.4457	0.4426	0.4426
15	16QAM	1	0	22.82	22.82	22.83	0.4093	0.4093	0.4102
Channel				20000	20175	20350	EIRP(W)		
Frequency (MHz)				1715	1732.5	1750	L	M	H
10	QPSK	1	0	23.19	23.23	23.16	0.4457	0.4498	0.4426
10	16QAM	1	0	22.77	22.83	22.76	0.4046	0.4102	0.4036
Channel				19975	20175	20375	EIRP(W)		
Frequency (MHz)				1712.5	1732.5	1752.5	L	M	H
5	QPSK	1	0	23.17	23.18	23.14	0.4436	0.4446	0.4406
5	16QAM	1	0	22.82	22.86	22.82	0.4093	0.4130	0.4093
Channel				19965	20175	20385	EIRP(W)		
Frequency (MHz)				1711.5	1732.5	1753.5	L	M	H
3	QPSK	1	0	23.19	23.20	23.17	0.4457	0.4467	0.4436
3	16QAM	1	0	22.78	22.85	22.81	0.4055	0.4121	0.4083
Channel				19950	20175	20393	EIRP(W)		
Frequency (MHz)				1710	1732.5	1754.3	L	M	H
1.4	QPSK	1	0	23.12	23.21	23.13	0.4385	0.4477	0.4395
1.4	16QAM	1	0	22.51	22.53	22.57	0.3811	0.3828	0.3864



LTE Band 25_ANT.0

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP(W)		
Channel				26140	26340	26590			
Frequency (MHz)				1860	1880	1905	L	M	H
20	QPSK	1	0	23.78	23.84	23.81	0.5346	0.5420	0.5383
20	QPSK	1	49	23.88	24.04	23.98	0.5470	0.5675	0.5598
20	QPSK	1	99	23.77	23.82	23.74	0.5333	0.5395	0.5297
20	QPSK	50	0	22.91	22.98	22.97	0.4375	0.4446	0.4436
20	QPSK	50	24	22.91	22.95	22.87	0.4375	0.4416	0.4335
20	QPSK	50	50	23.06	23.12	23.06	0.4529	0.4592	0.4529
20	QPSK	100	0	23.02	23.07	22.99	0.4487	0.4539	0.4457
20	16QAM	1	0	23.09	23.10	23.09	0.4560	0.4571	0.4560
20	64QAM	1	0	22.06	22.07	22.01	0.3597	0.3606	0.3556
20	256QAM	1	0	18.87	18.91	18.85	0.1726	0.1742	0.1718
Channel				26115	26340	26615	EIRP(W)		
Frequency (MHz)				1857.5	1880	1907.5	L	M	H
15	QPSK	1	0	23.77	23.77	23.76	0.5333	0.5333	0.5321
15	16QAM	1	0	23.07	23.09	23.05	0.4539	0.4560	0.4519
Channel				26090	26340	26640	EIRP(W)		
Frequency (MHz)				1855	1880	1910	L	M	H
10	QPSK	1	0	23.75	23.78	23.74	0.5309	0.5346	0.5297
10	16QAM	1	0	23.01	23.02	23.02	0.4477	0.4487	0.4487
Channel				26065	26340	26665	EIRP(W)		
Frequency (MHz)				1852.5	1880	1912.5	L	M	H
5	QPSK	1	0	23.76	23.83	23.76	0.5321	0.5408	0.5321
5	16QAM	1	0	23.05	23.08	23.06	0.4519	0.4550	0.4529
Channel				26055	26340	26675	EIRP(W)		
Frequency (MHz)				1851.5	1880	1913.5	L	M	H
3	QPSK	1	0	23.76	23.76	23.74	0.5321	0.5321	0.5297
3	16QAM	1	0	23.01	23.07	23.01	0.4477	0.4539	0.4477
Channel				26047	26340	26683	EIRP(W)		
Frequency (MHz)				1850.7	1880	1914.3	L	M	H
1.4	QPSK	1	0	23.70	23.81	23.74	0.5248	0.5383	0.5297
1.4	16QAM	1	0	22.85	22.88	22.82	0.4315	0.4345	0.4285



LTE Band 66_ANT.0

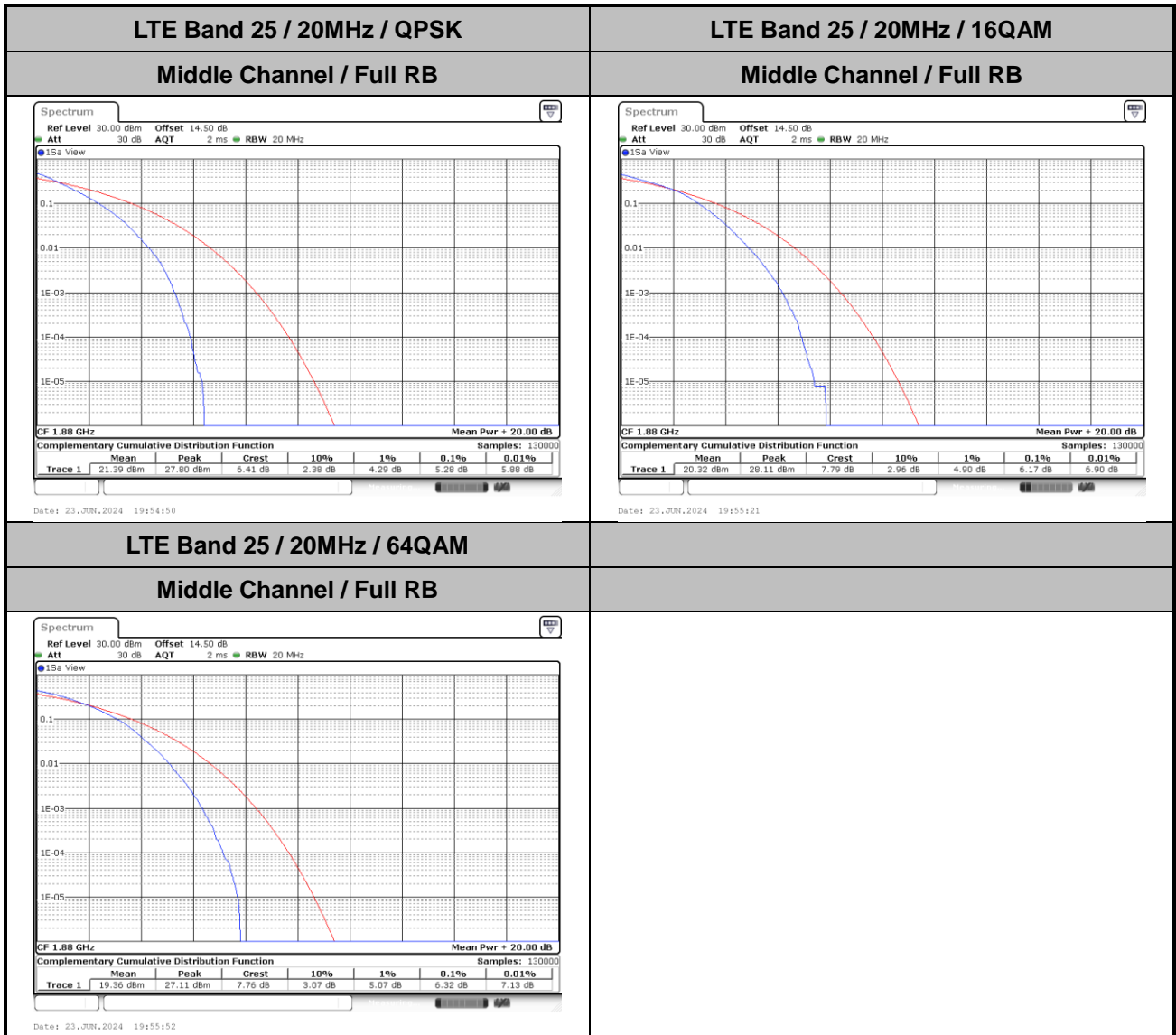
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP(W)		
Channel				132072	132197	132322			
Frequency (MHz)				1720	1732.5	1745	L	M	H
20	QPSK	1	0	23.38	23.40	23.35	0.4656	0.4677	0.4624
20	QPSK	1	49	23.31	23.34	23.30	0.4581	0.4613	0.4571
20	QPSK	1	99	23.46	23.50	23.40	0.4742	0.4786	0.4677
20	QPSK	50	0	22.75	22.79	22.75	0.4027	0.4064	0.4027
20	QPSK	50	24	22.70	22.72	22.65	0.3981	0.3999	0.3936
20	QPSK	50	50	22.77	22.81	22.73	0.4046	0.4083	0.4009
20	QPSK	100	0	22.79	22.83	22.75	0.4064	0.4102	0.4027
20	16QAM	1	0	22.97	22.98	22.91	0.4236	0.4246	0.4178
20	64QAM	1	0	21.76	21.80	21.76	0.3206	0.3236	0.3206
20	256QAM	1	0	18.55	18.63	18.60	0.1531	0.1560	0.1549
Channel				132047	132197	132347	EIRP(W)		
Frequency (MHz)				1717.5	1732.5	1747.5	L	M	H
15	QPSK	1	0	23.34	23.39	23.27	0.4613	0.4667	0.4539
15	16QAM	1	0	22.95	22.96	22.84	0.4217	0.4227	0.4111
Channel				132022	132197	132372	EIRP(W)		
Frequency (MHz)				1715	1732.5	1750	L	M	H
10	QPSK	1	0	23.37	23.37	23.29	0.4645	0.4645	0.4560
10	16QAM	1	0	22.90	22.97	22.84	0.4169	0.4236	0.4111
Channel				131997	132197	132397	EIRP(W)		
Frequency (MHz)				1712.5	1732.5	1752.5	L	M	H
5	QPSK	1	0	23.30	23.33	23.29	0.4571	0.4603	0.4560
5	16QAM	1	0	22.95	22.93	22.83	0.4217	0.4198	0.4102
Channel				131987	132197	132407	EIRP(W)		
Frequency (MHz)				1711.5	1732.5	1753.5	L	M	H
3	QPSK	1	0	23.32	23.34	23.29	0.4592	0.4613	0.4560
3	16QAM	1	0	22.90	22.95	22.87	0.4169	0.4217	0.4140
Channel				131979	132197	132415	EIRP(W)		
Frequency (MHz)				1710.7	1732.5	1754.3	L	M	H
1.4	QPSK	1	0	23.34	23.38	23.27	0.4613	0.4656	0.4539
1.4	16QAM	1	0	22.68	22.69	22.58	0.3963	0.3972	0.3873



A2. LTE Band 25

A2.1 Peak-to-Average Ratio

Mode	LTE Band 25 / 20MHz			
Mod.	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Result
Middle CH	5.28	6.17	6.32	PASS





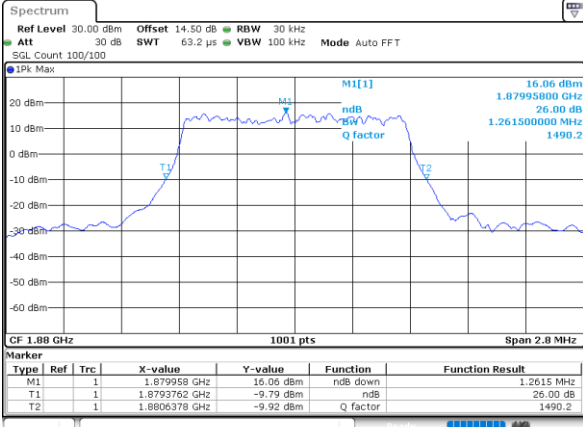
A2.2 26dB Bandwidth

Mode	LTE Band 25 : 26dB BW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
BW												
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	1.26	1.29	2.99	2.94	4.81	4.87	9.83	9.73	14.42	14.27	19.10	18.62



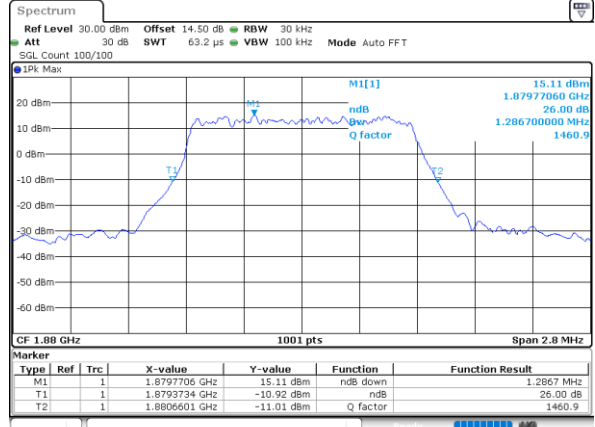
LTE Band 25

Middle Channel / 1.4MHz / QPSK



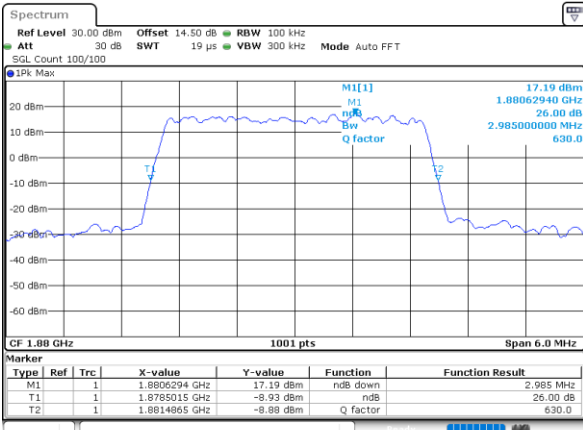
Date: 23_JUN,2024 18:16:25

Middle Channel / 1.4MHz / 16QAM



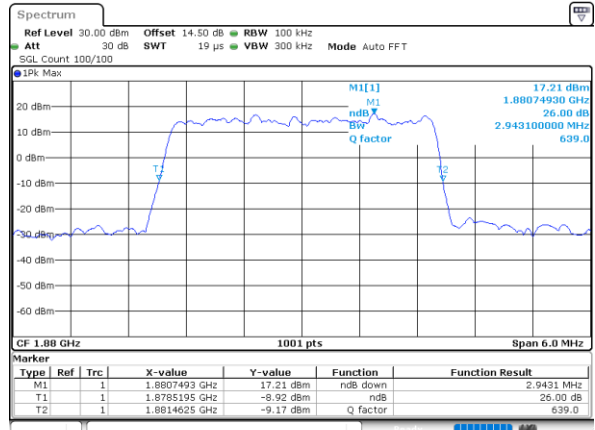
Date: 23_JUN,2024 18:17:08

Middle Channel / 3MHz / QPSK



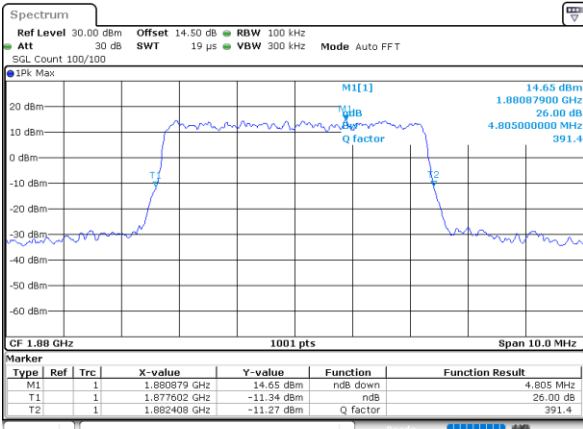
Date: 23_JUN,2024 18:35:52

Middle Channel / 3MHz / 16QAM



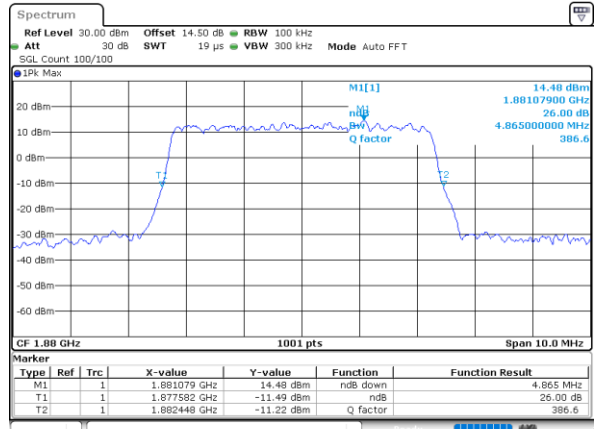
Date: 23_JUN,2024 18:36:36

Middle Channel / 5MHz / QPSK



Date: 23_JUN,2024 18:55:20

Middle Channel / 5MHz / 16QAM

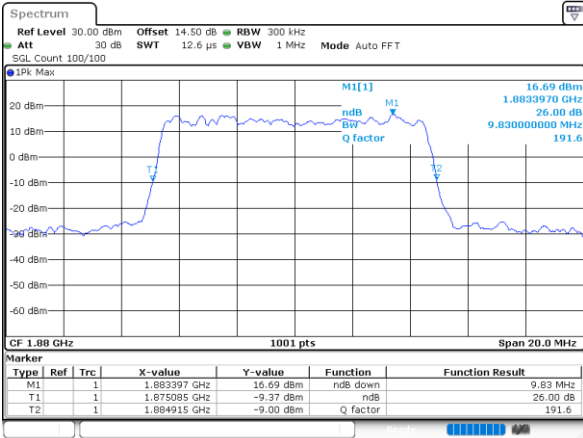


Date: 23_JUN,2024 18:56:03



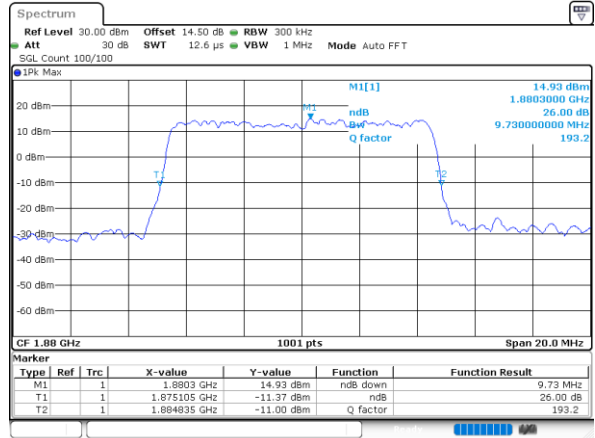
LTE Band 25

Middle Channel / 10MHz / QPSK



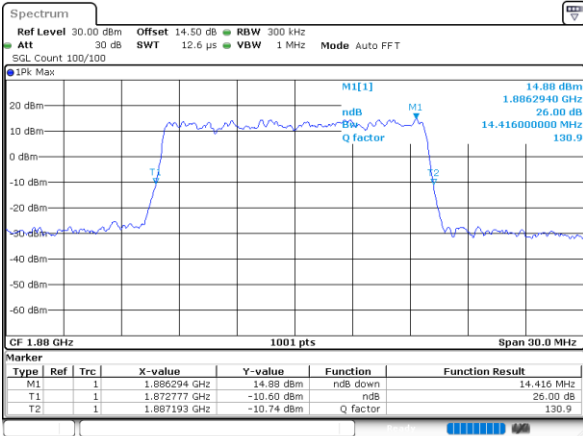
Date: 23 JUN 2024 19:14:46

Middle Channel / 10MHz / 16QAM



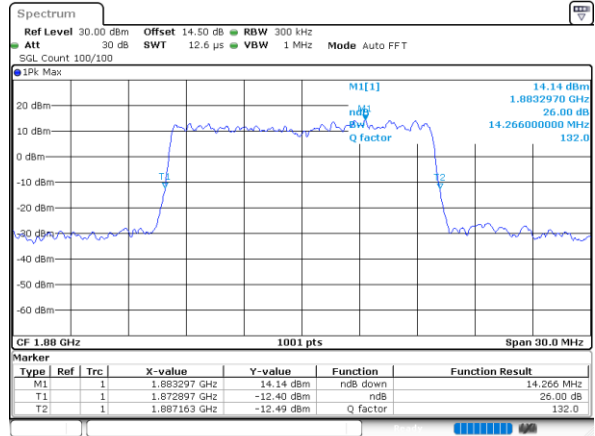
Date: 23 JUN 2024 19:15:29

Middle Channel / 15MHz / QPSK



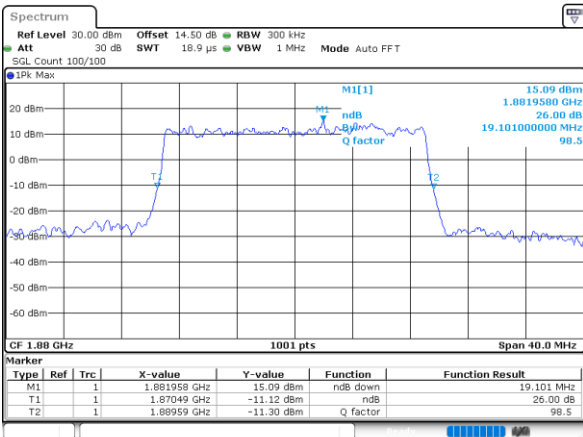
Date: 23 JUN 2024 19:34:11

Middle Channel / 15MHz / 16QAM



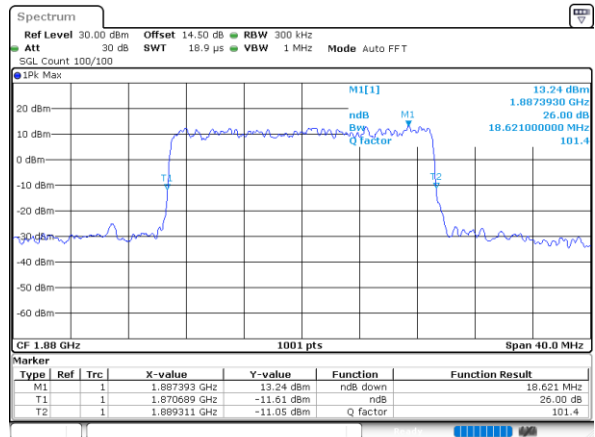
Date: 23 JUN 2024 19:34:54

Middle Channel / 20MHz / QPSK



Date: 23 JUN 2024 19:53:36

Middle Channel / 20MHz / 16QAM



Date: 23 JUN 2024 19:54:20



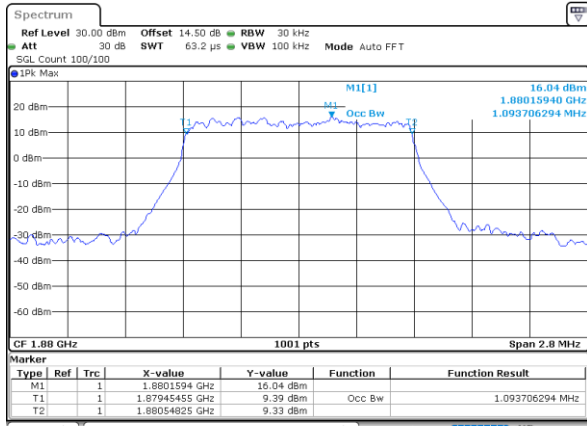
A2.3 Occupied Bandwidth

Mode	LTE Band 25 : 99%OBW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
BW												
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	1.09	1.09	2.73	2.71	4.49	4.51	8.95	9.05	13.49	13.40	17.90	17.86



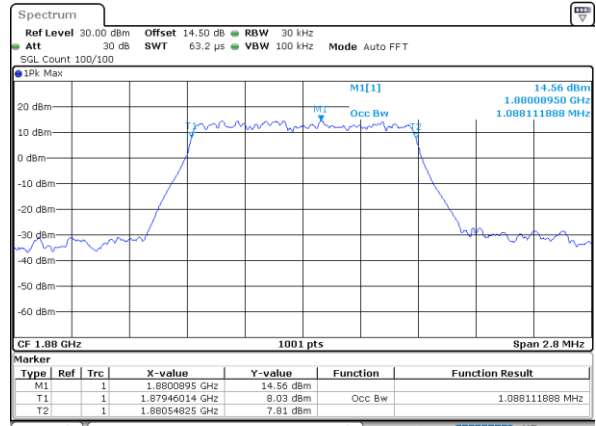
LTE Band 25

Middle Channel / 1.4MHz / QPSK



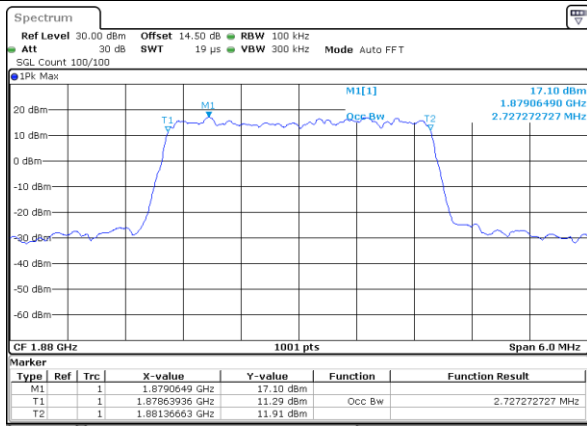
Date: 23 JUN 2024 18:16:11

Middle Channel / 1.4MHz / 16QAM



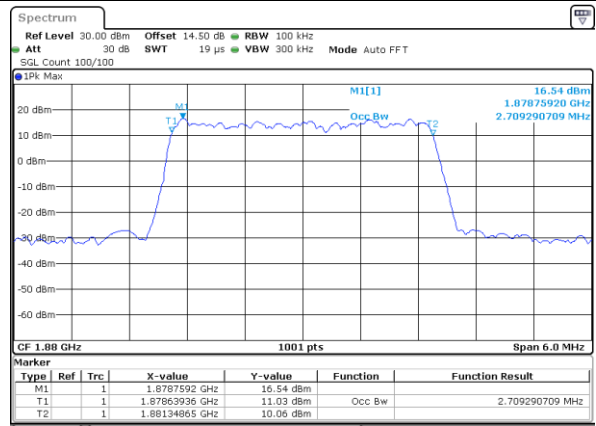
Date: 23 JUN 2024 18:16:54

Middle Channel / 3MHz / QPSK



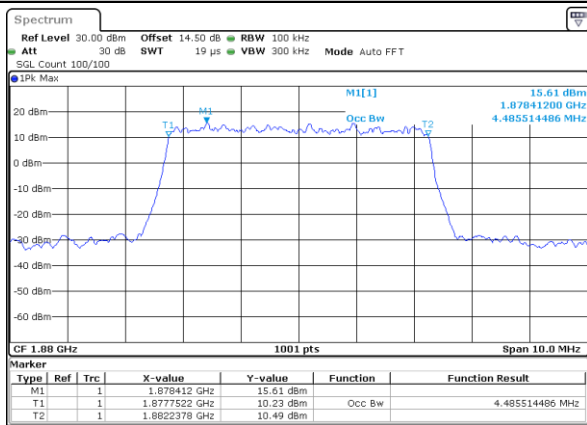
Date: 23 JUN 2024 18:35:08

Middle Channel / 3MHz / 16QAM



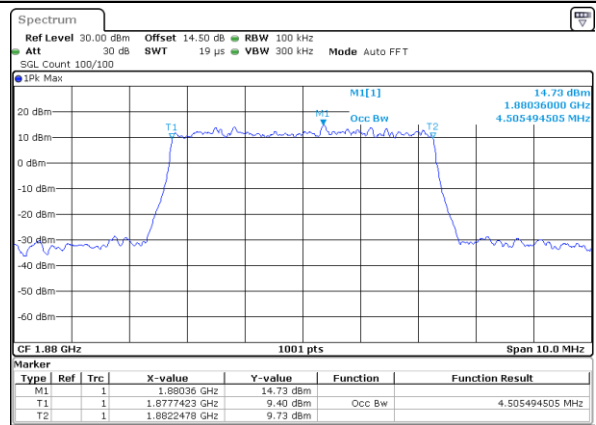
Date: 23 JUN 2024 18:36:22

Middle Channel / 5MHz / QPSK



Date: 23 JUN 2024 18:55:05

Middle Channel / 5MHz / 16QAM

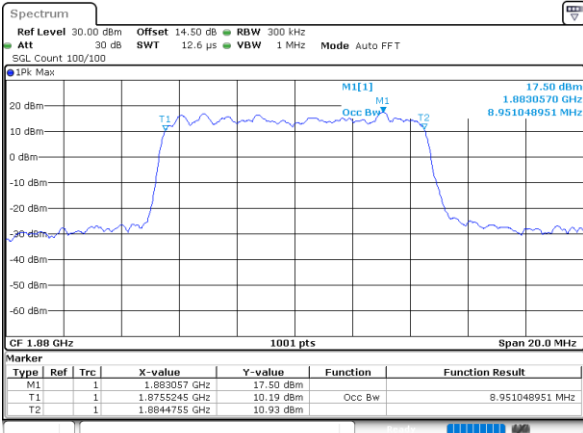


Date: 23 JUN 2024 18:55:49



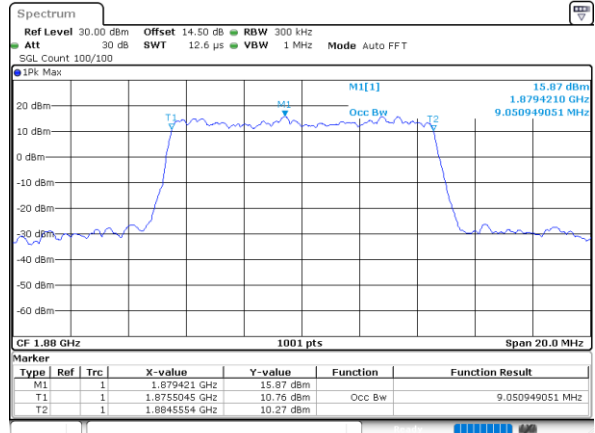
LTE Band 25

Middle Channel / 10MHz / QPSK



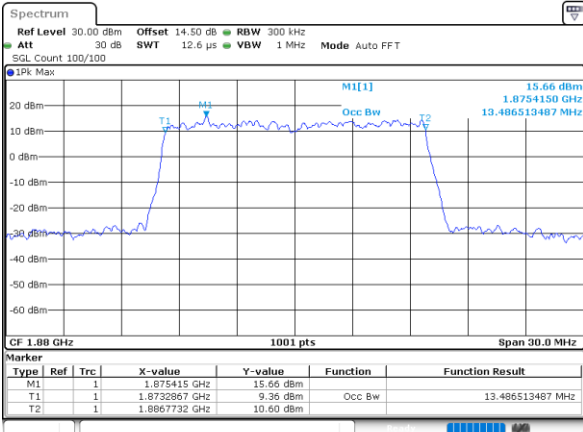
Date: 23 JUN 2024 19:14:32

Middle Channel / 10MHz / 16QAM



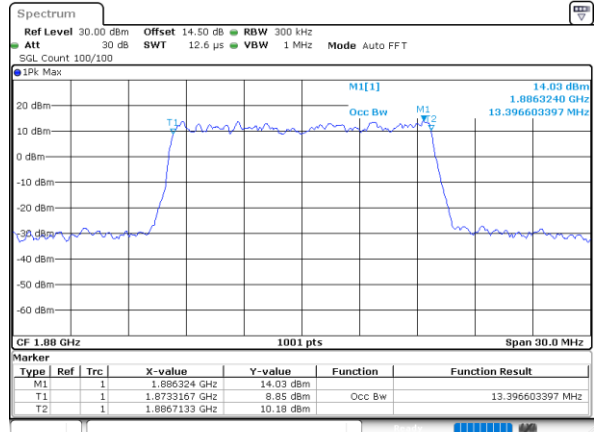
Date: 23 JUN 2024 19:15:15

Middle Channel / 15MHz / QPSK



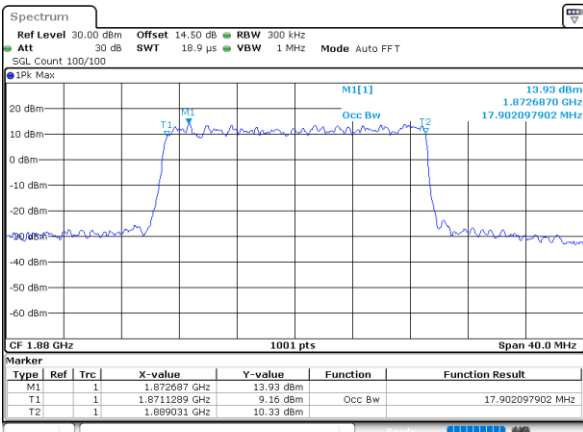
Date: 23 JUN 2024 19:33:56

Middle Channel / 15MHz / 16QAM



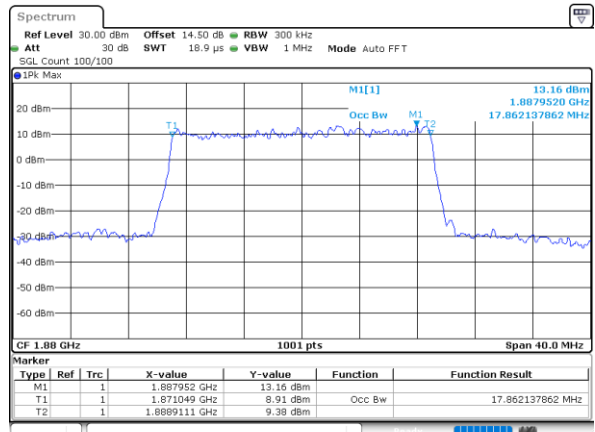
Date: 23 JUN 2024 19:34:40

Middle Channel / 20MHz / QPSK



Date: 23 JUN 2024 19:53:22

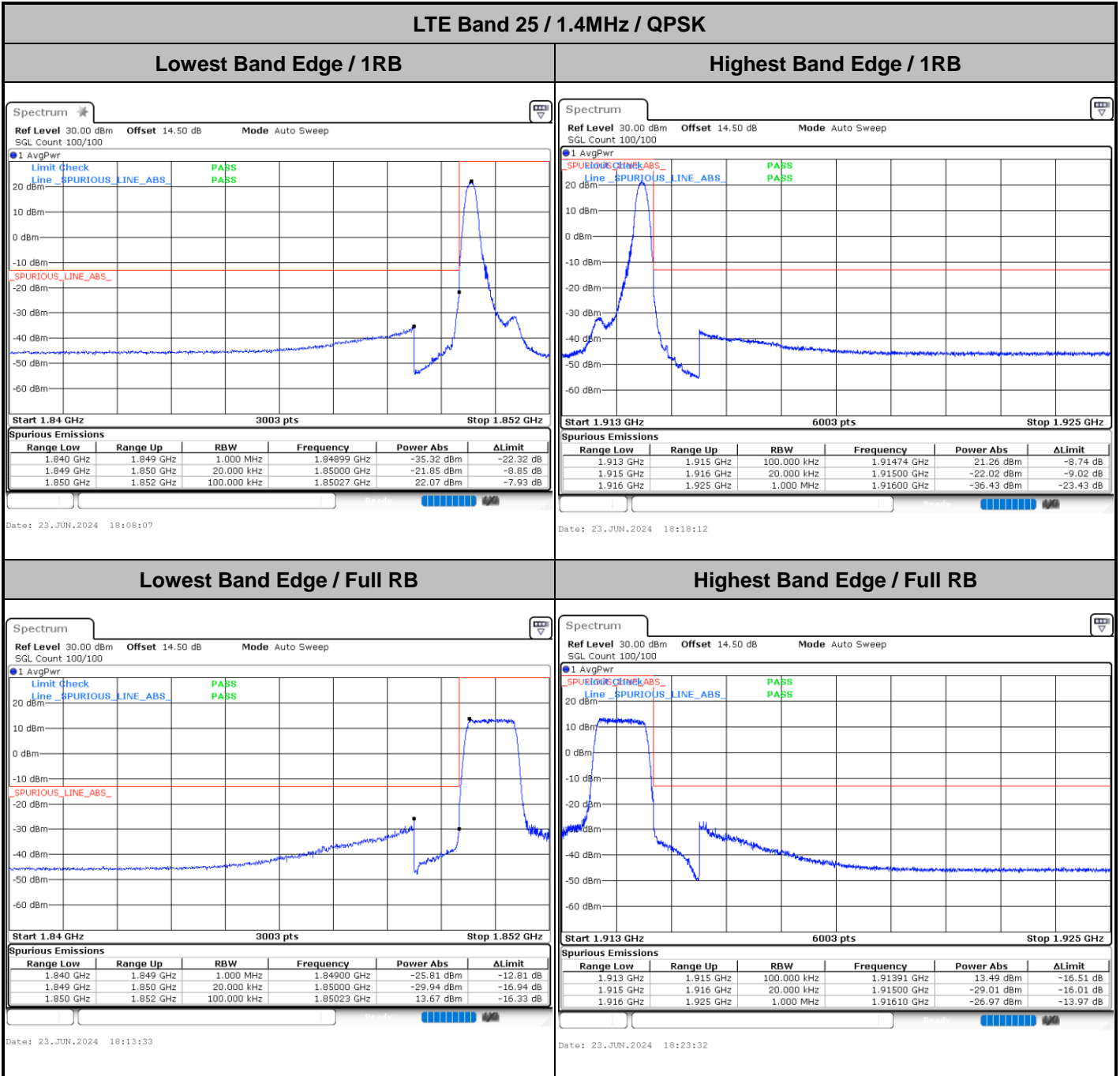
Middle Channel / 20MHz / 16QAM



Date: 23 JUN 2024 19:54:06



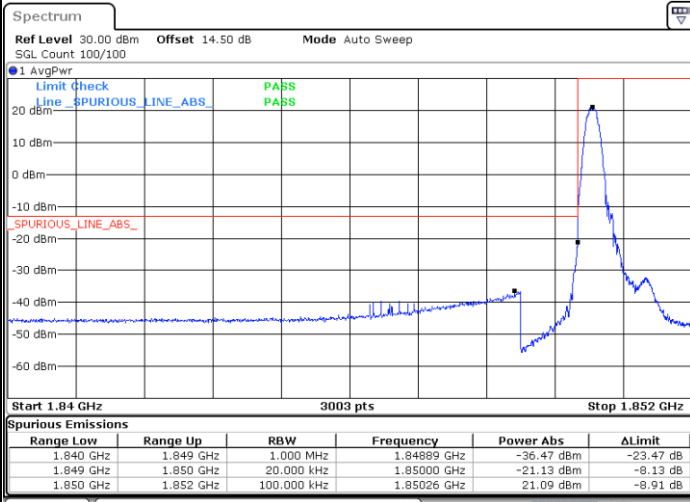
A2.4 Conducted Band Edge





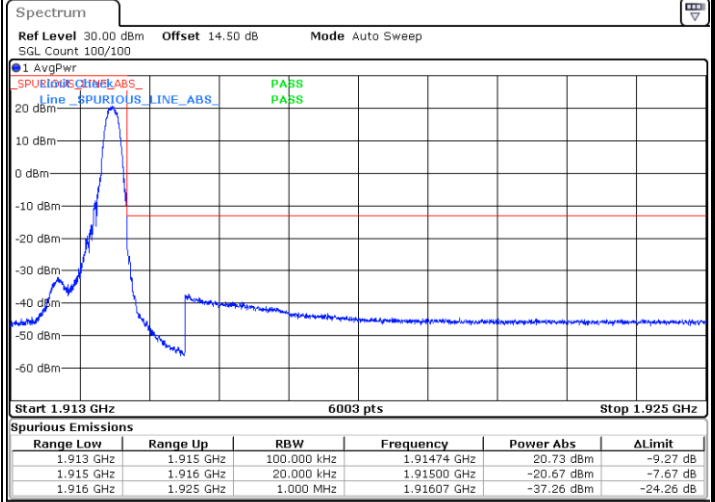
LTE Band 25 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



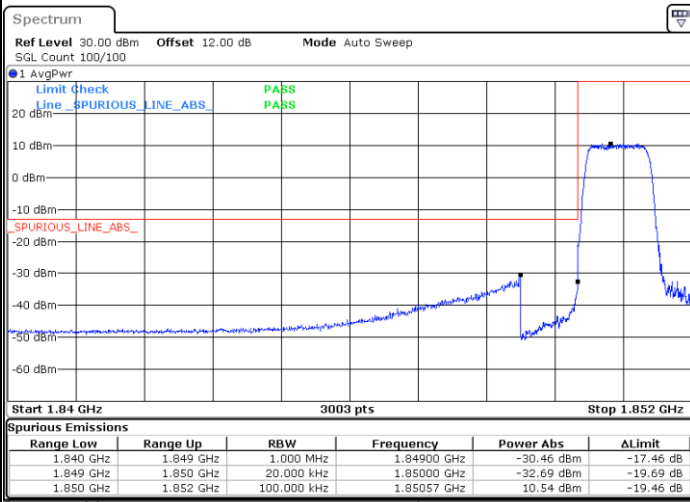
Date: 23.JUN.2024 18:09:11

Highest Band Edge / 1 RB



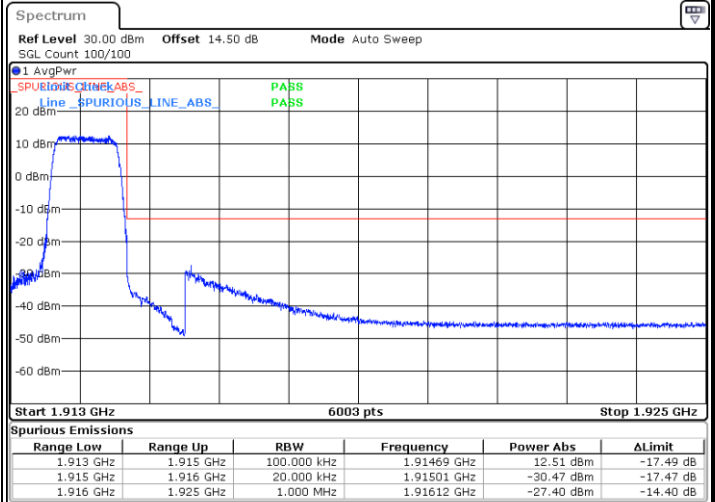
Date: 23.JUN.2024 18:19:16

Lowest Band Edge / Full RB



Date: 23.JUN.2024 18:12:28

Highest Band Edge / Full RB

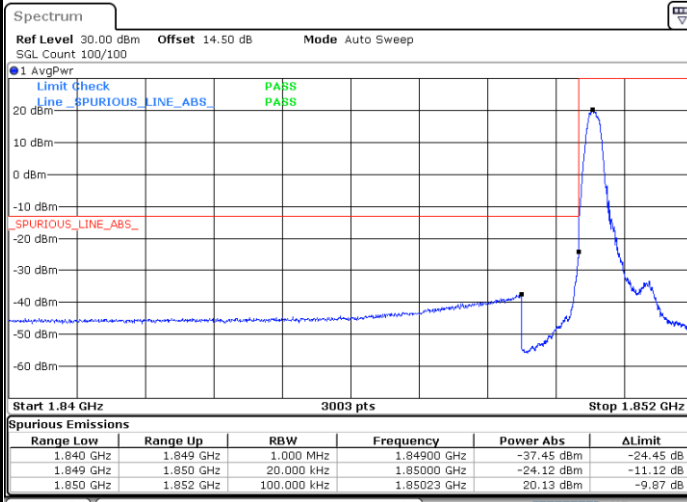


Date: 23.JUN.2024 18:22:28



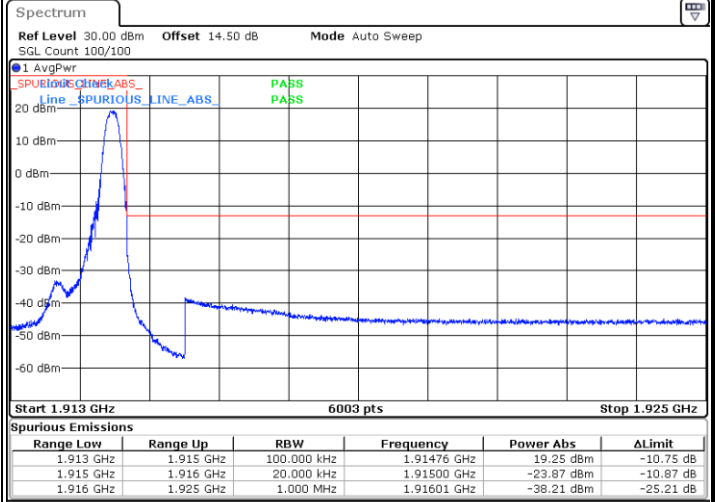
LTE Band 25 / 1.4MHz / 64QAM

Lowest Band Edge / 1 RB



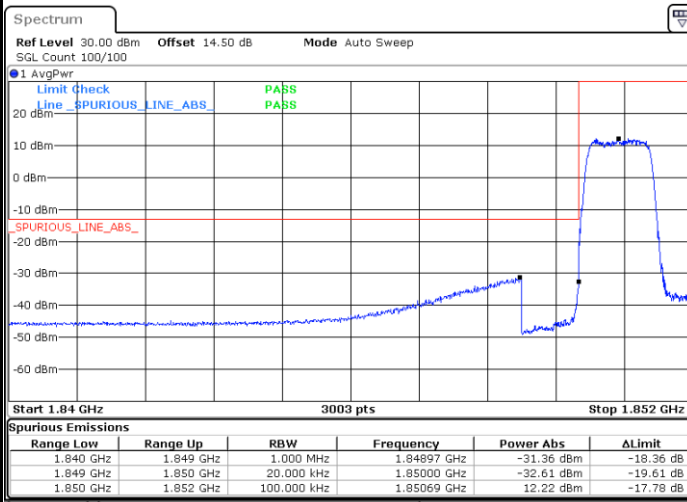
Date: 23.JUN.2024 18:10:15

Highest Band Edge / 1 RB



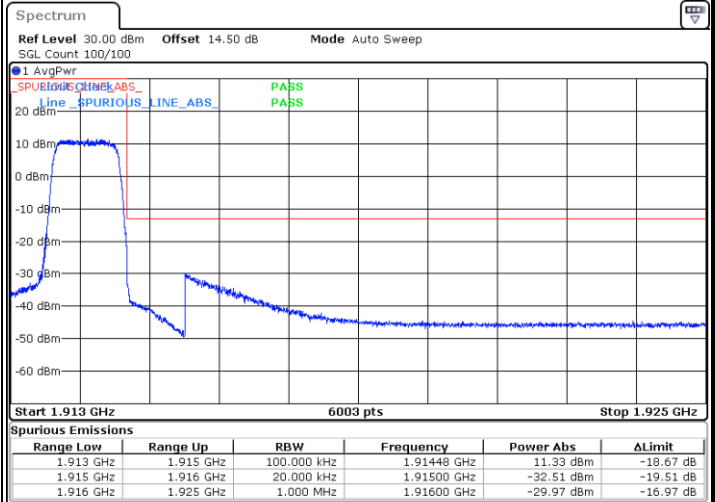
Date: 23.JUN.2024 18:20:20

Lowest Band Edge / Full RB



Date: 23.JUN.2024 18:11:19

Highest Band Edge / Full RB

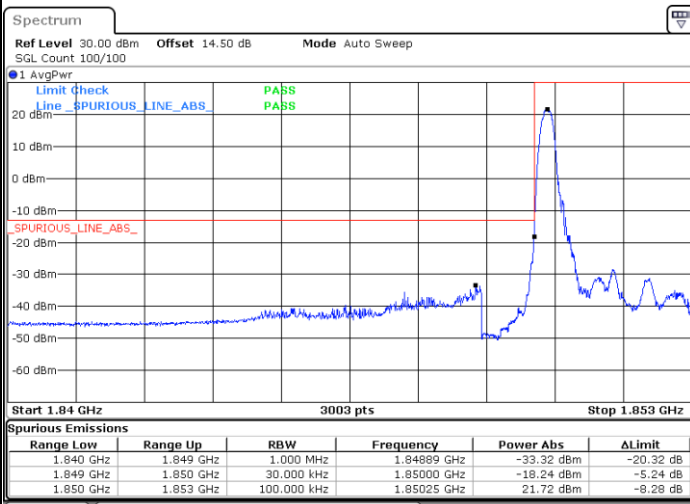


Date: 23.JUN.2024 18:21:24



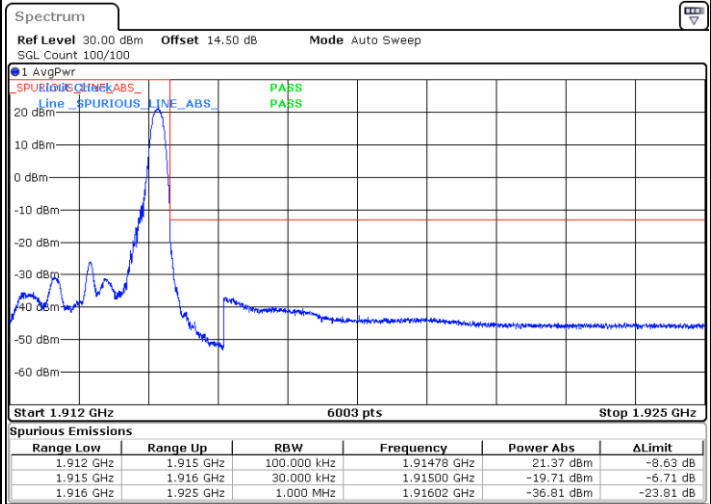
LTE Band 25 / 3MHz / QPSK

Lowest Band Edge / 1RB



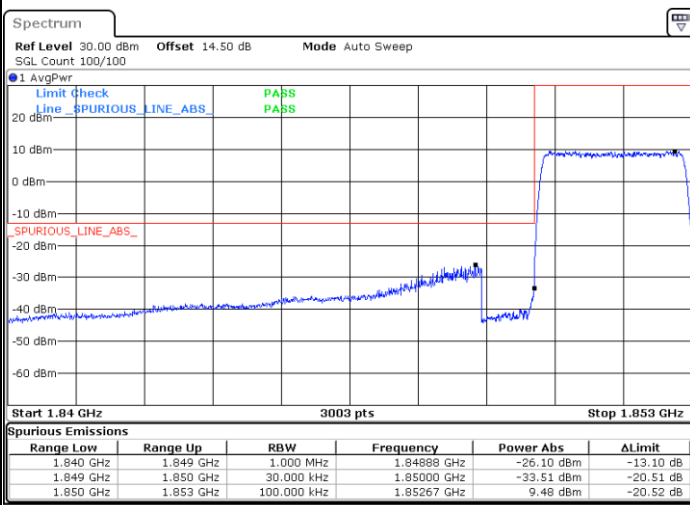
Date: 23 JUN 2024 18:27:39

Highest Band Edge / 1RB



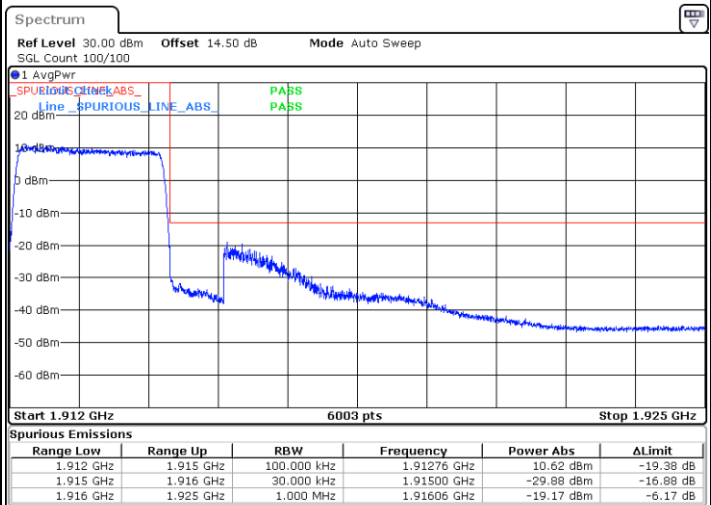
Date: 23 JUN 2024 18:37:40

Lowest Band Edge / Full RB



Date: 23 JUN 2024 18:33:01

Highest Band Edge / Full RB

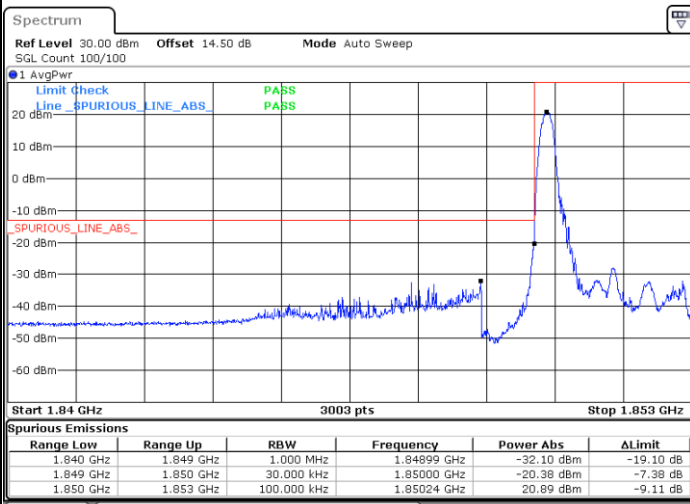


Date: 23 JUN 2024 18:43:00



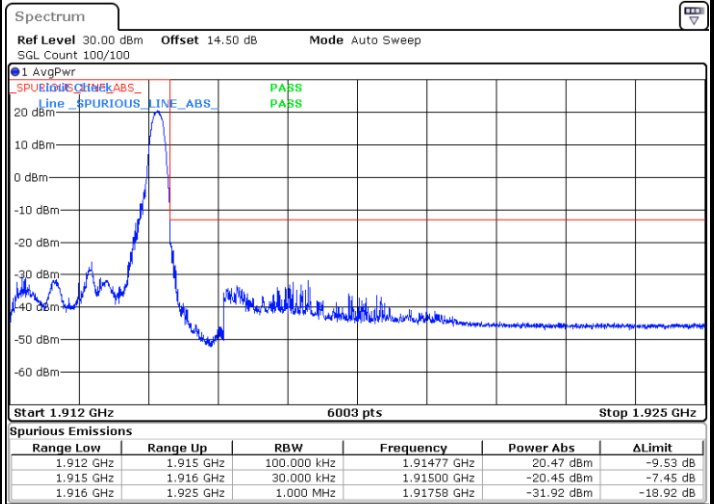
LTE Band 25 / 3MHz / 16QAM

Lowest Band Edge / 1 RB



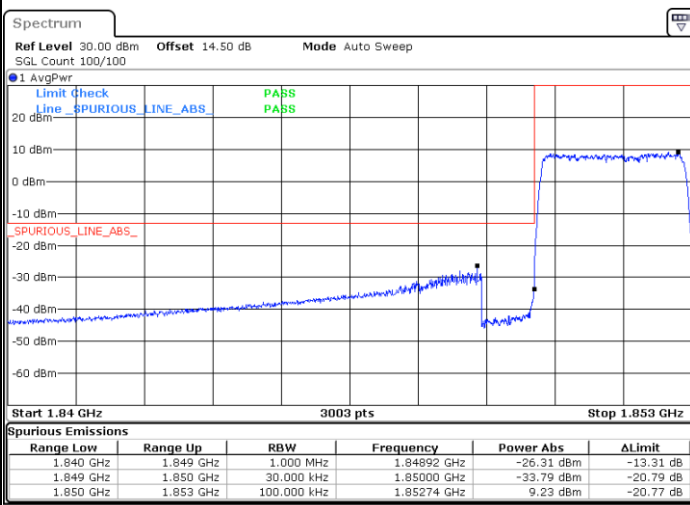
Date: 23.JUN.2024 18:28:44

Highest Band Edge / 1 RB



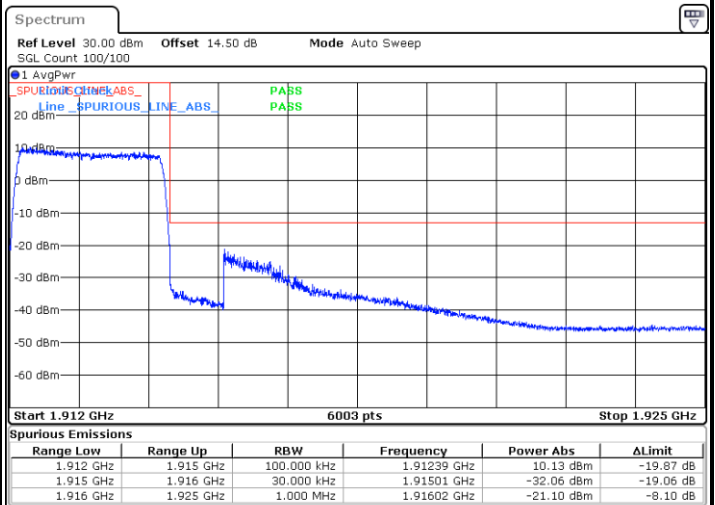
Date: 23.JUN.2024 18:38:44

Lowest Band Edge / Full RB



Date: 23.JUN.2024 18:31:57

Highest Band Edge / Full RB

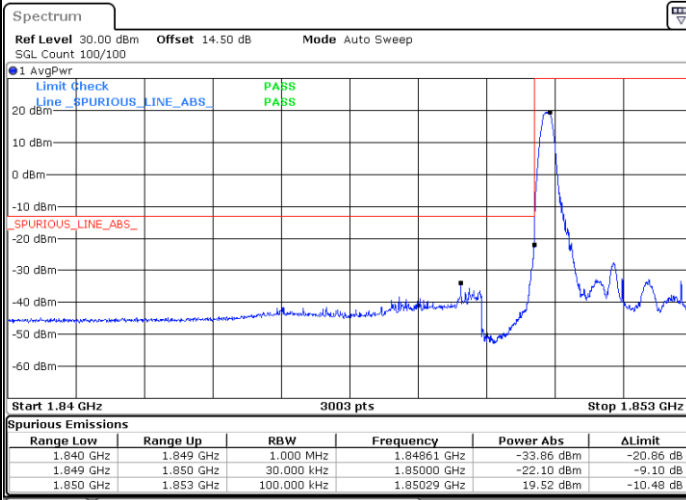


Date: 23.JUN.2024 18:41:56



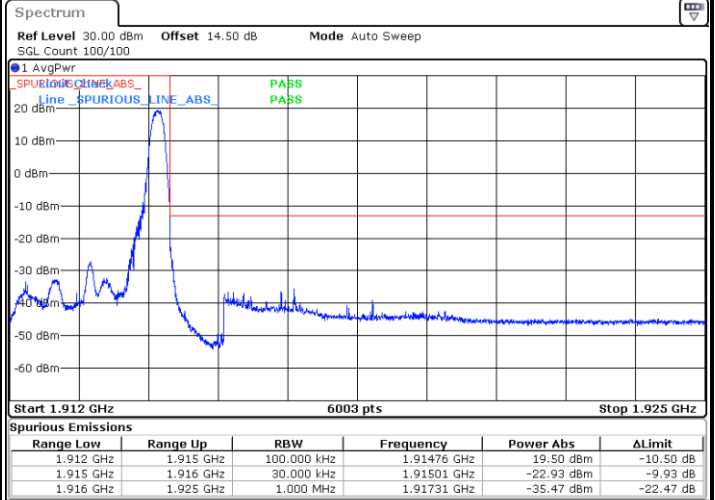
LTE Band 25 / 3MHz / 64QAM

Lowest Band Edge / 1 RB



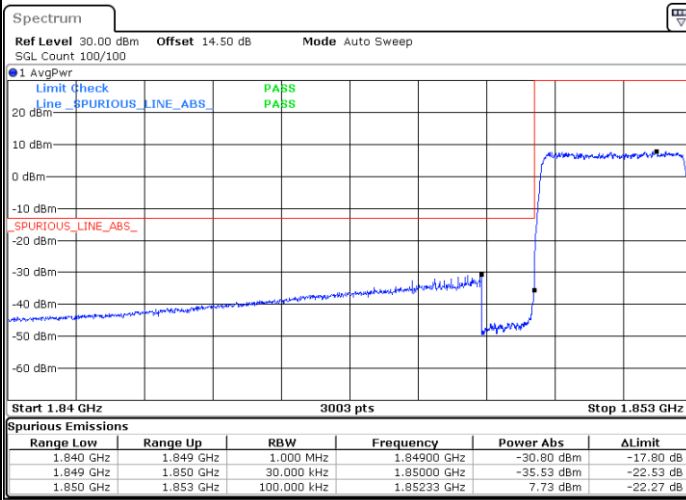
Date: 23.JUN.2024 18:29:48

Highest Band Edge / 1 RB



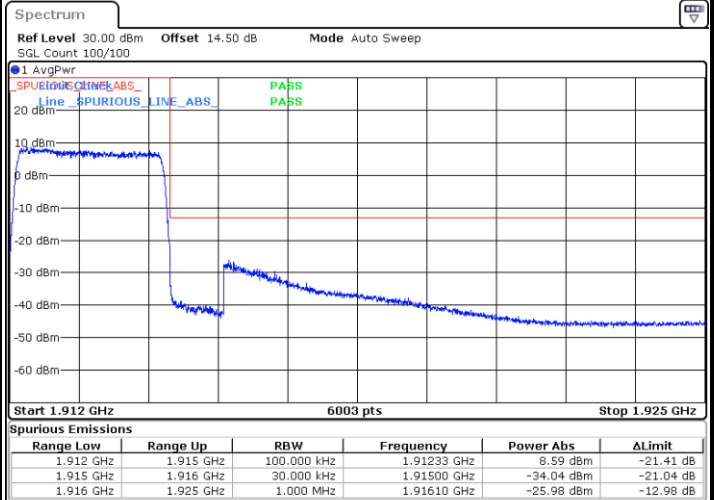
Date: 23.JUN.2024 18:39:48

Lowest Band Edge / Full RB



Date: 23.JUN.2024 18:30:53

Highest Band Edge / Full RB

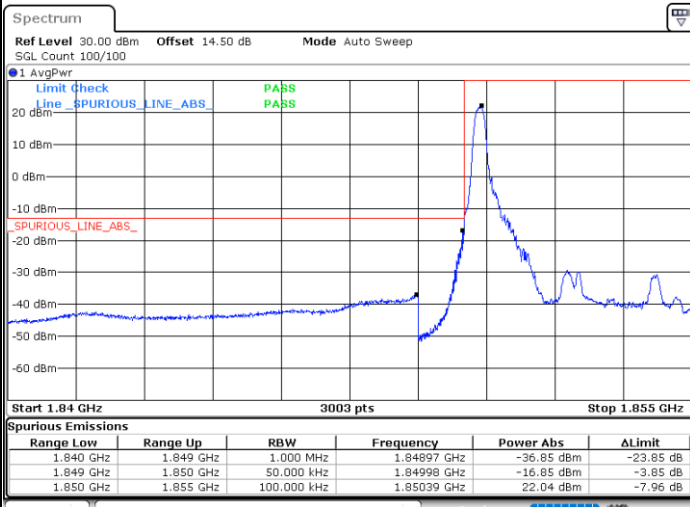


Date: 23.JUN.2024 18:40:52



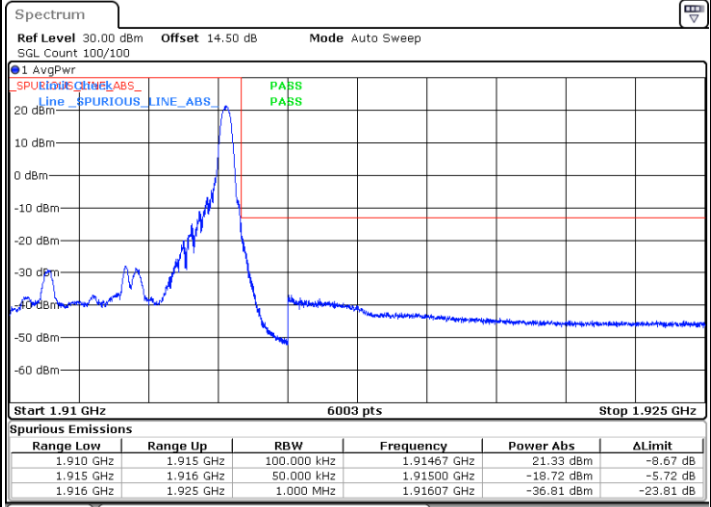
LTE Band 25 / 5MHz / QPSK

Lowest Band Edge / 1RB



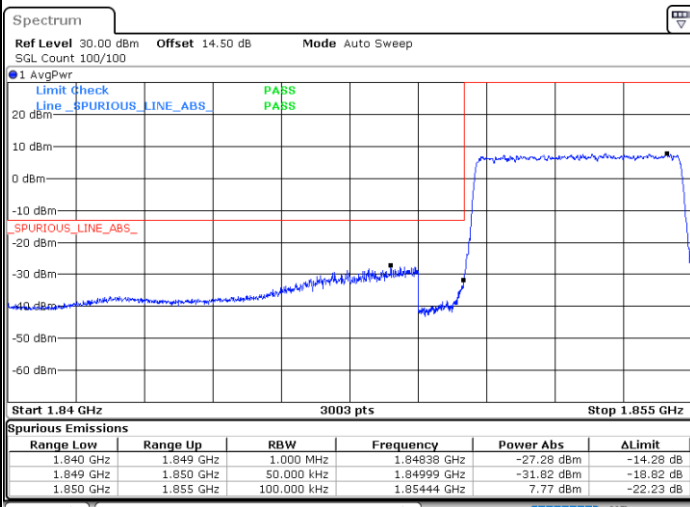
Date: 23.JUN.2024 18:47:08

Highest Band Edge / 1RB



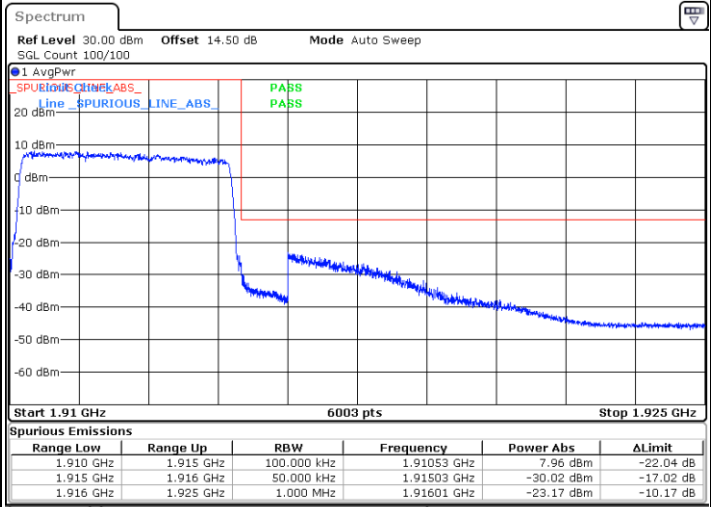
Date: 23.JUN.2024 18:57:07

Lowest Band Edge / Full RB



Date: 23.JUN.2024 18:52:28

Highest Band Edge / Full RB

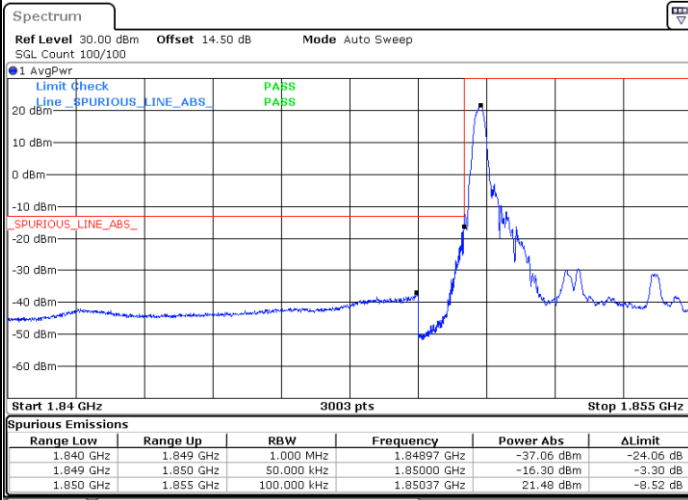


Date: 23.JUN.2024 19:02:27



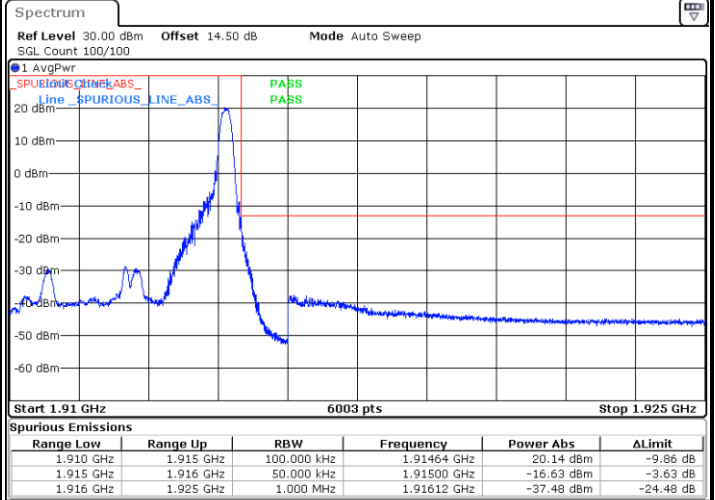
LTE Band 25 / 5MHz / 16QAM

Lowest Band Edge / 1 RB



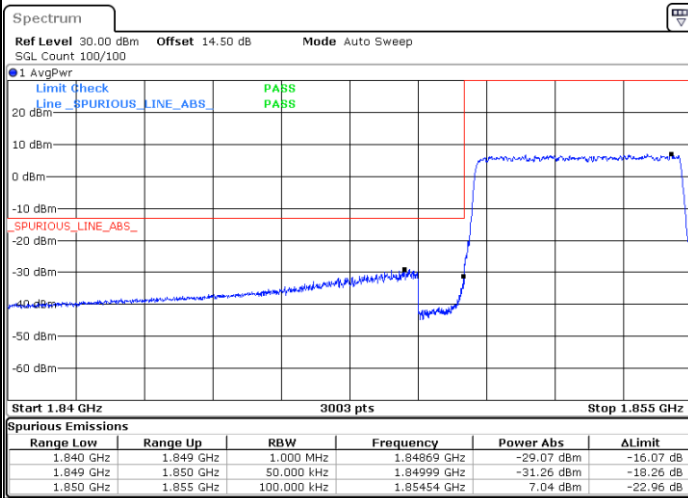
Date: 23.JUN.2024 18:48:12

Highest Band Edge / 1 RB



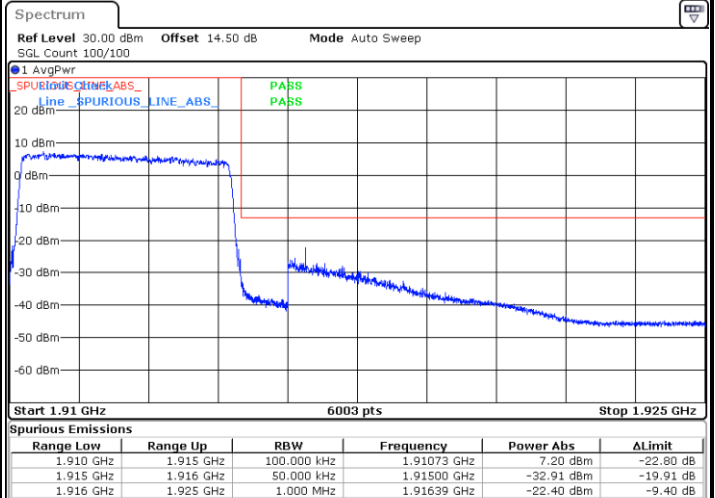
Date: 23.JUN.2024 18:58:11

Lowest Band Edge / Full RB



Date: 23.JUN.2024 18:51:24

Highest Band Edge / Full RB

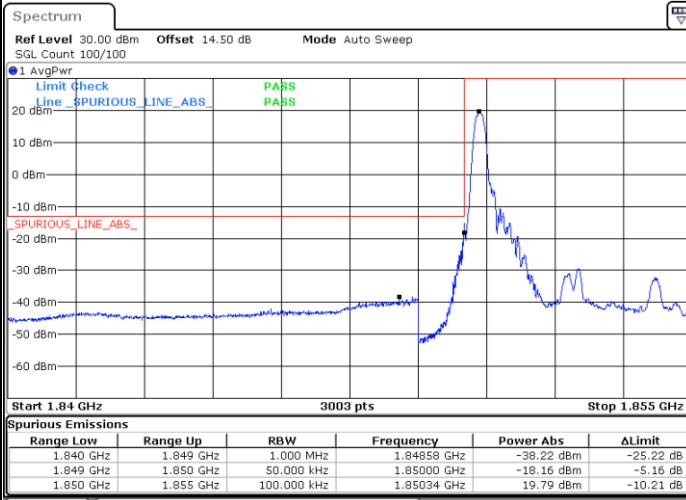


Date: 23.JUN.2024 19:01:23



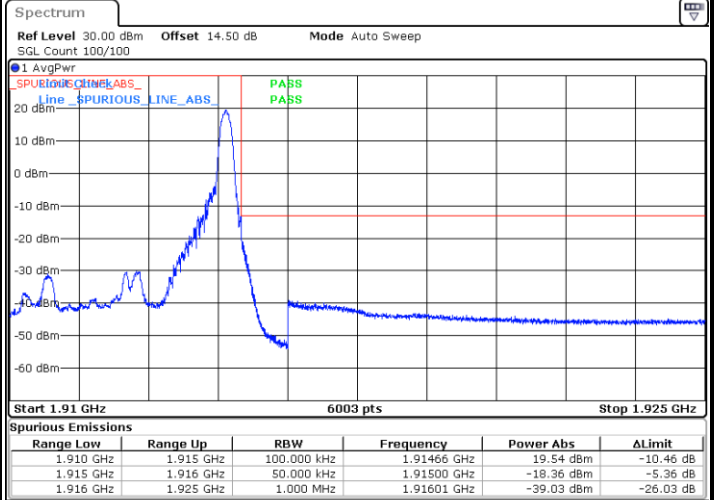
LTE Band 25 / 5MHz / 64QAM

Lowest Band Edge / 1 RB



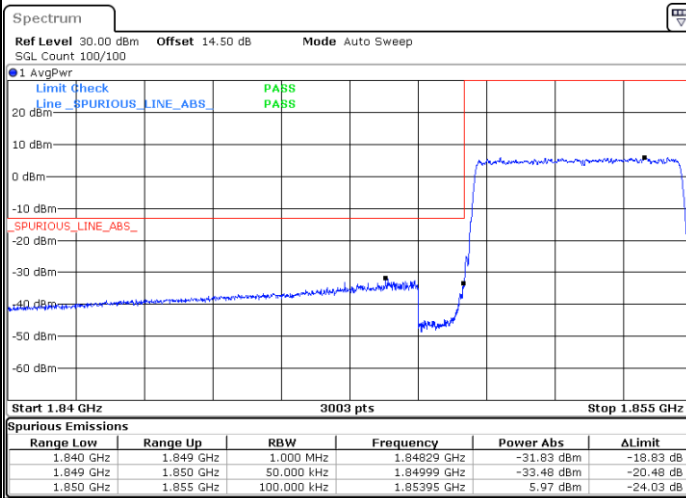
Date: 23.JUN.2024 18:49:16

Highest Band Edge / 1 RB



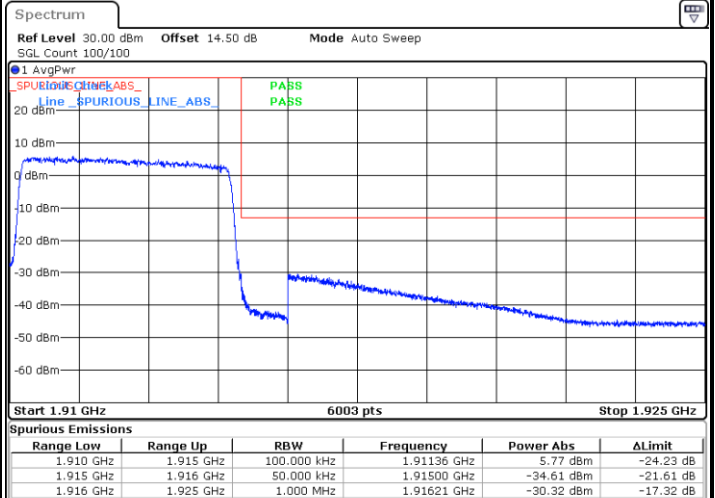
Date: 23.JUN.2024 18:59:15

Lowest Band Edge / Full RB



Date: 23.JUN.2024 18:50:20

Highest Band Edge / Full RB

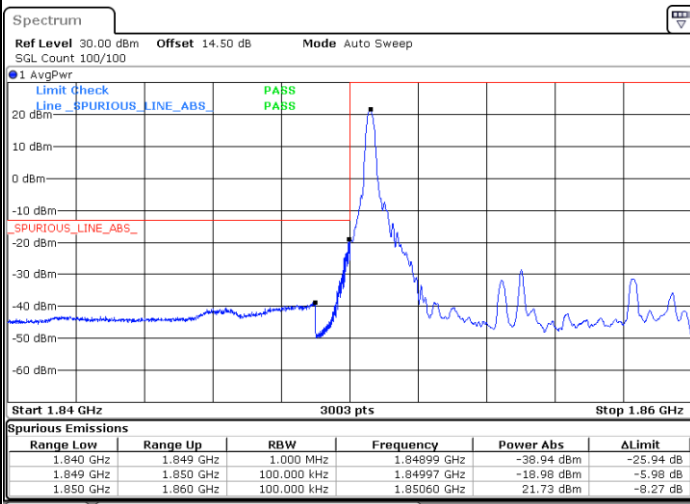


Date: 23.JUN.2024 19:00:19



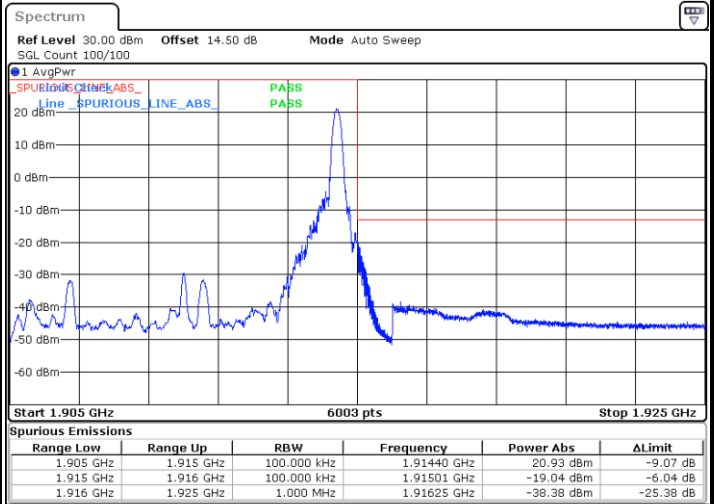
LTE Band 25 / 10MHz / QPSK

Lowest Band Edge / 1RB



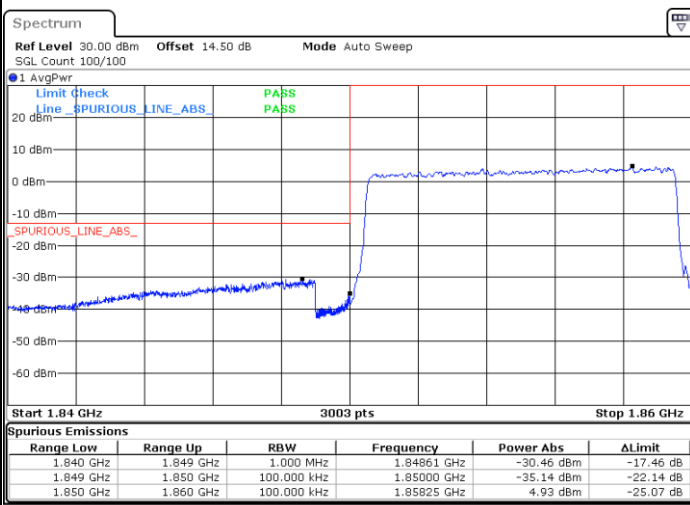
Date: 23.JUN.2024 19:06:34

Highest Band Edge / 1RB



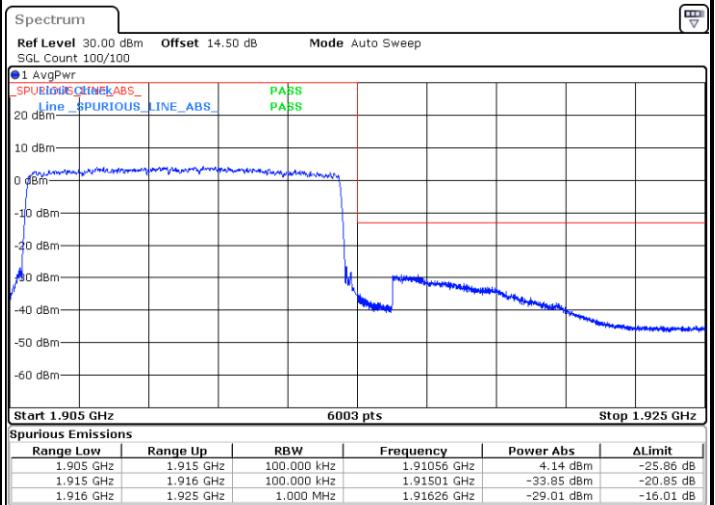
Date: 23.JUN.2024 19:16:33

Lowest Band Edge / Full RB



Date: 23.JUN.2024 19:11:55

Highest Band Edge / Full RB

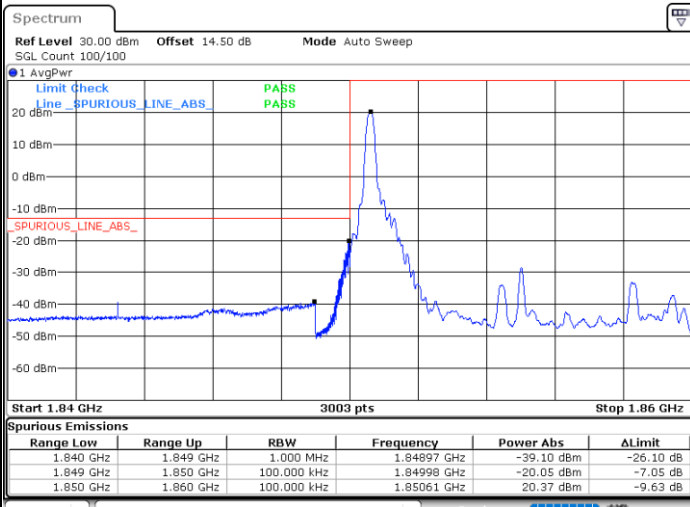


Date: 23.JUN.2024 19:21:53



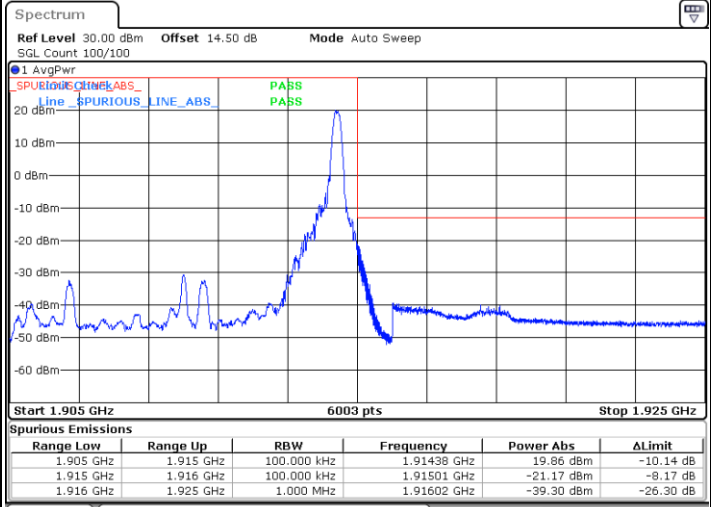
LTE Band 25 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



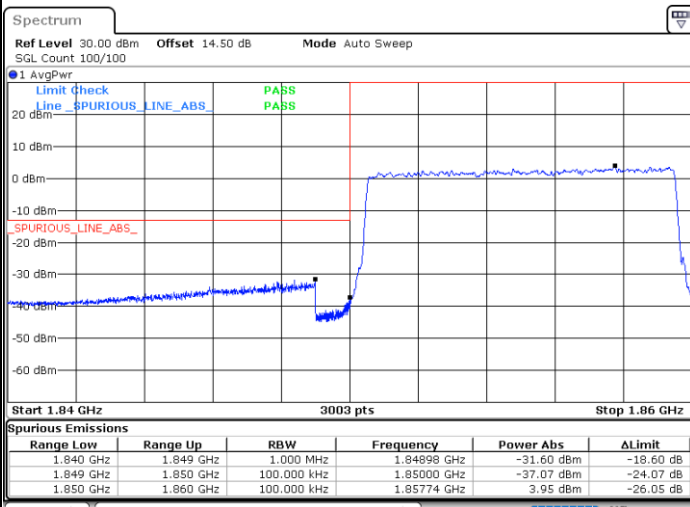
Date: 23.JUN.2024 19:07:38

Highest Band Edge / 1 RB



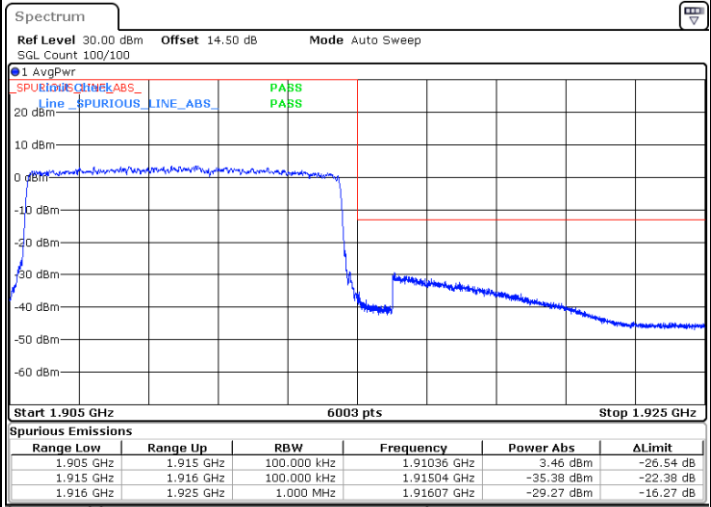
Date: 23.JUN.2024 19:17:37

Lowest Band Edge / Full RB



Date: 23.JUN.2024 19:10:51

Highest Band Edge / Full RB

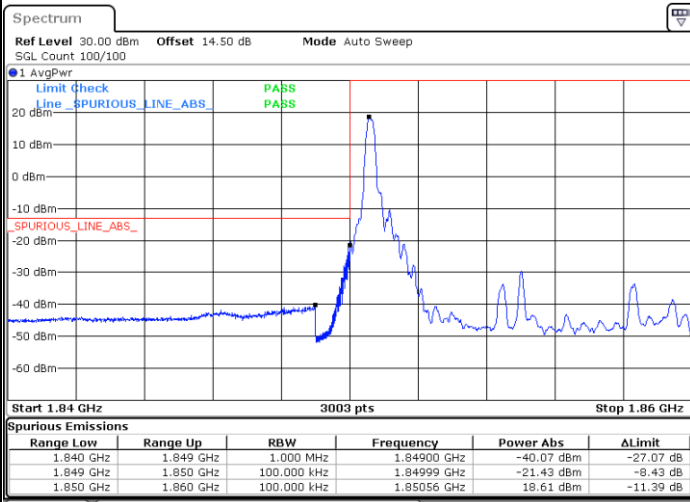


Date: 23.JUN.2024 19:20:49



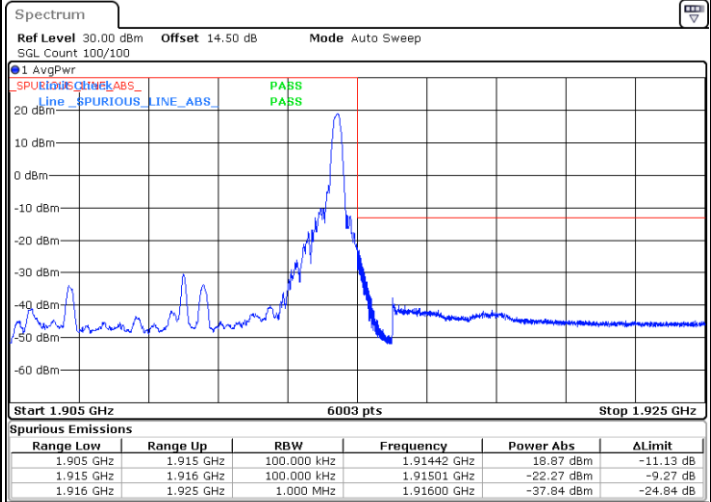
LTE Band 25 / 10MHz / 64QAM

Lowest Band Edge / 1 RB



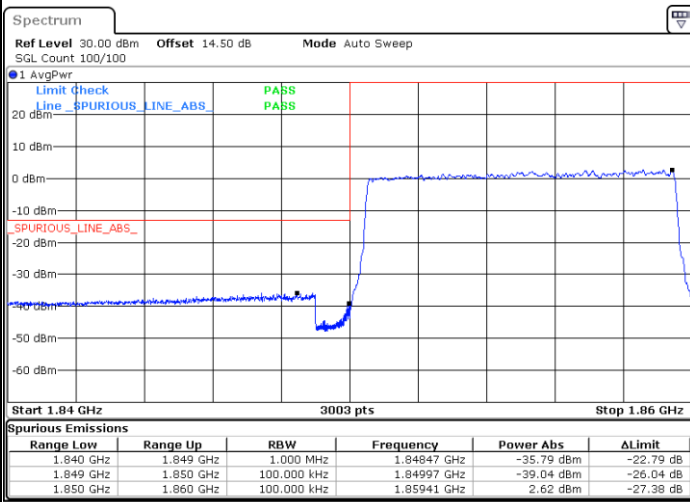
Date: 23.JUN.2024 19:08:42

Highest Band Edge / 1 RB



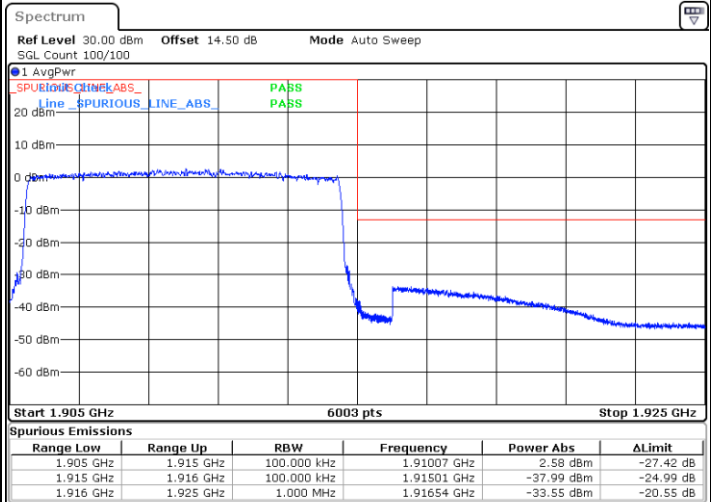
Date: 23.JUN.2024 19:18:41

Lowest Band Edge / Full RB



Date: 23.JUN.2024 19:09:47

Highest Band Edge / Full RB

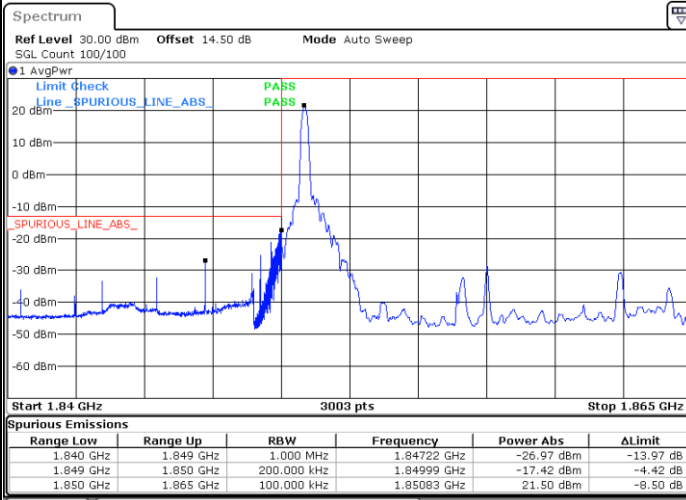


Date: 23.JUN.2024 19:19:45



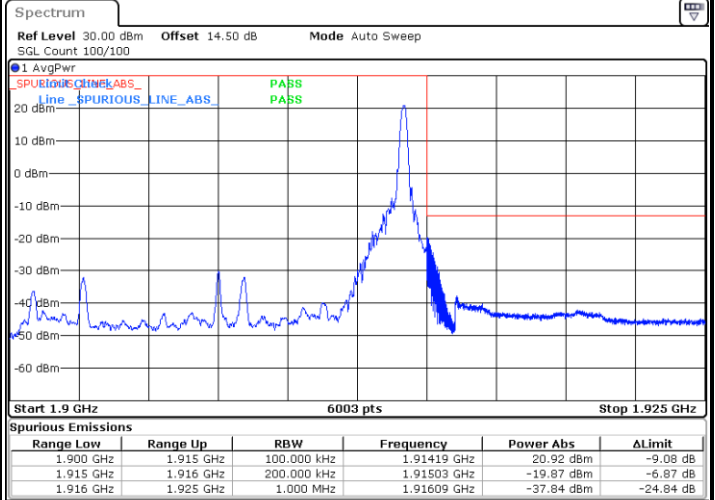
LTE Band 25 / 15MHz / QPSK

Lowest Band Edge / 1RB



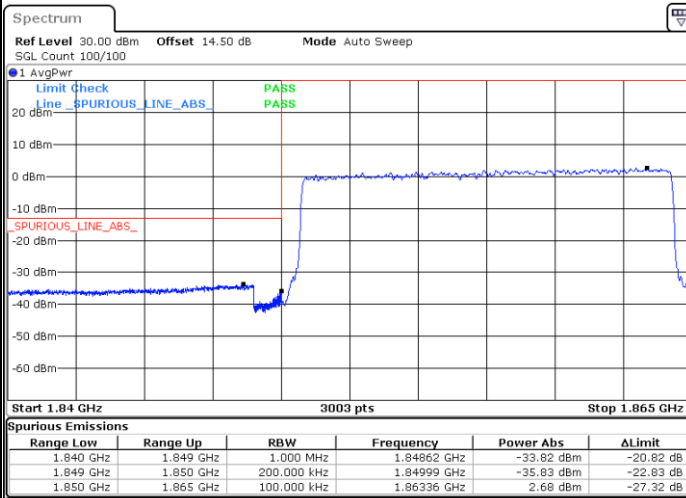
Date: 23.JUN.2024 19:26:00

Highest Band Edge / 1RB



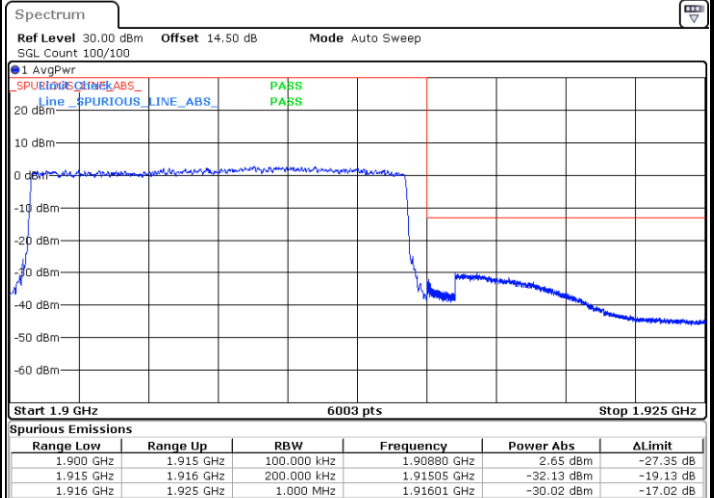
Date: 23.JUN.2024 19:35:58

Lowest Band Edge / Full RB



Date: 23.JUN.2024 19:31:20

Highest Band Edge / Full RB

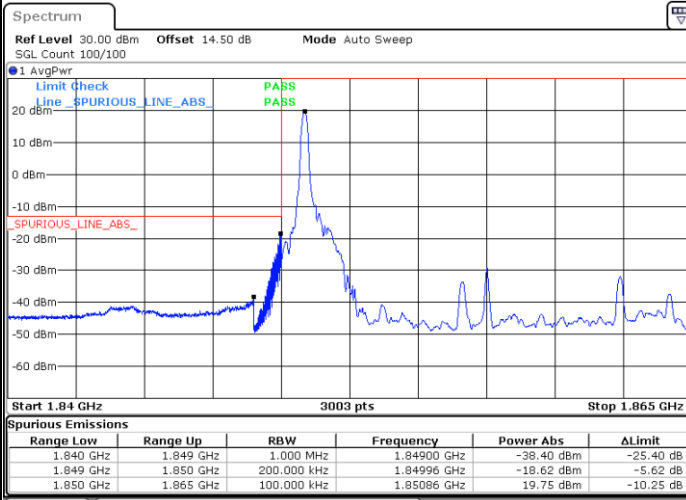


Date: 23.JUN.2024 19:41:18



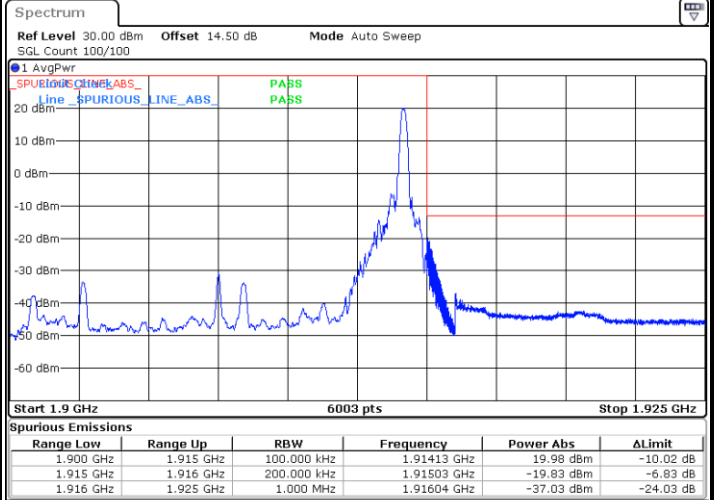
LTE Band 25 / 15MHz / 16QAM

Lowest Band Edge / 1 RB



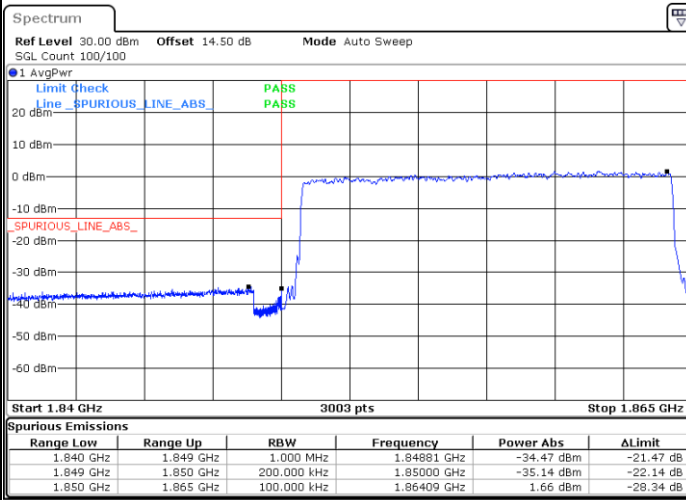
Date: 23.JUN.2024 19:27:04

Highest Band Edge / 1 RB



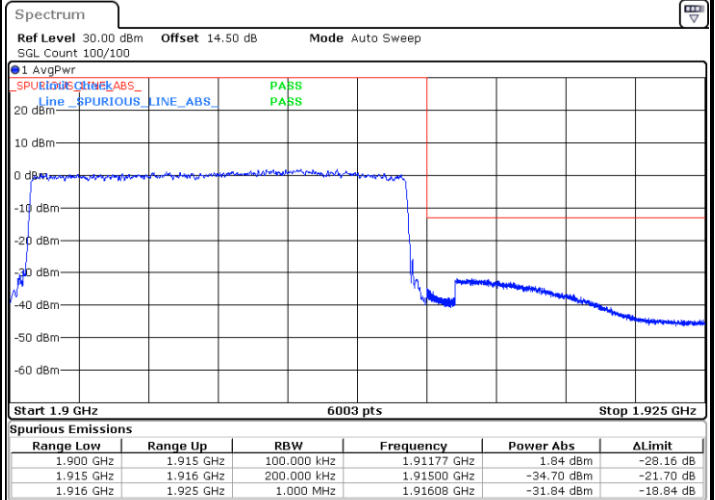
Date: 23.JUN.2024 19:37:02

Lowest Band Edge / Full RB



Date: 23.JUN.2024 19:30:16

Highest Band Edge / Full RB

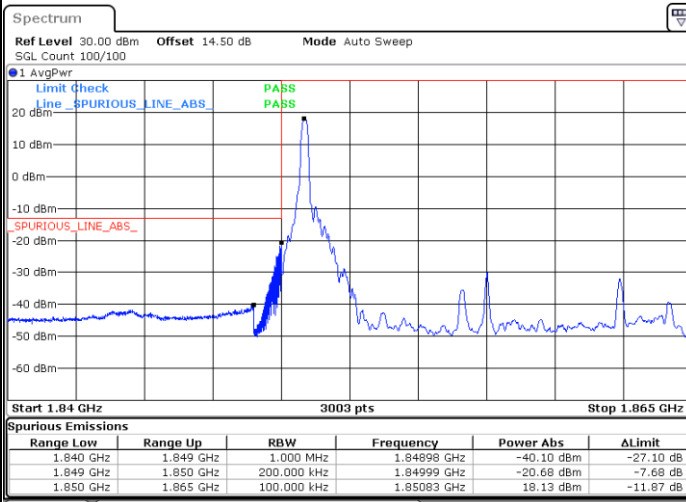


Date: 23.JUN.2024 19:40:14



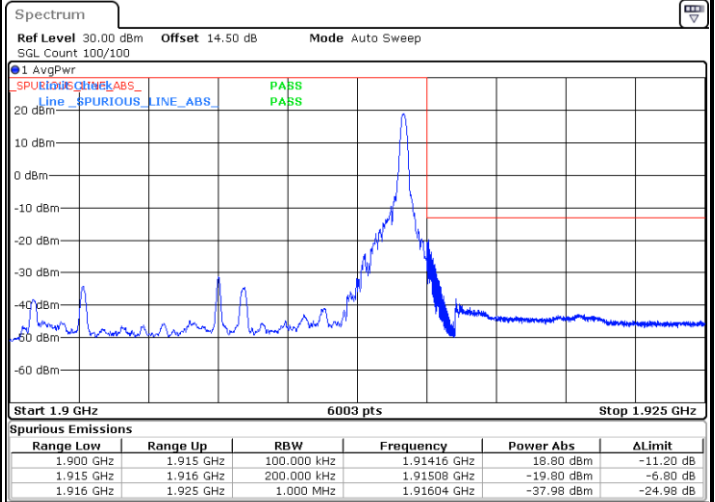
LTE Band 25 / 15MHz / 64QAM

Lowest Band Edge / 1 RB



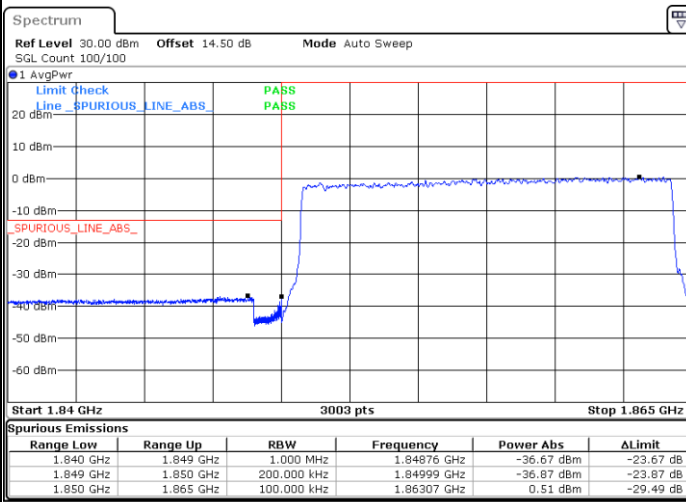
Date: 23.JUN.2024 19:28:08

Highest Band Edge / 1 RB



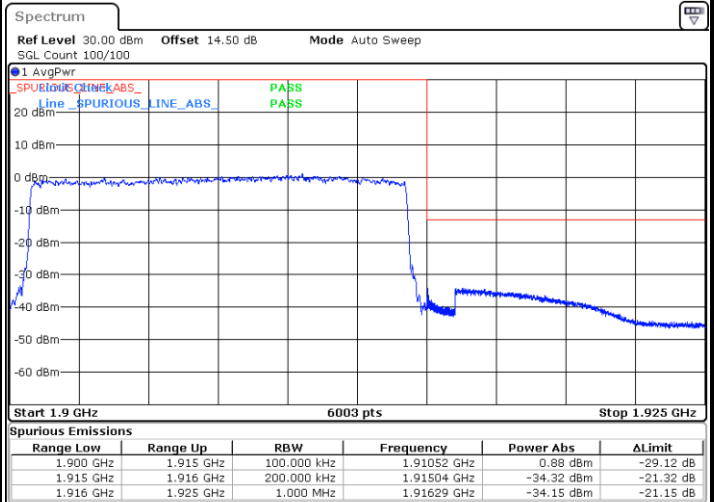
Date: 23.JUN.2024 19:38:06

Lowest Band Edge / Full RB



Date: 23.JUN.2024 19:29:12

Highest Band Edge / Full RB

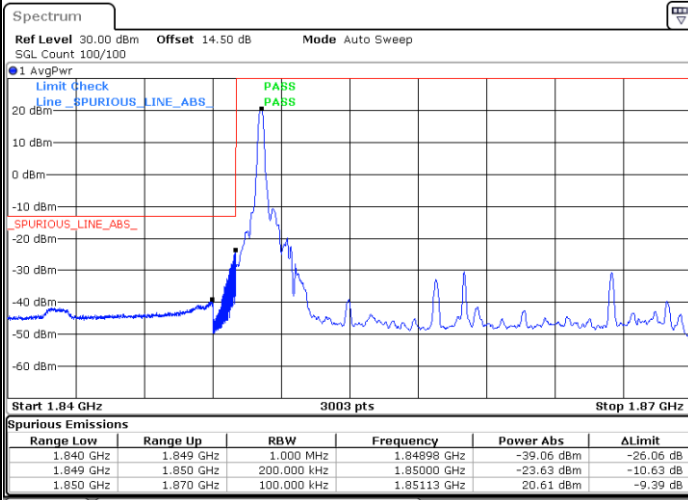


Date: 23.JUN.2024 19:39:10



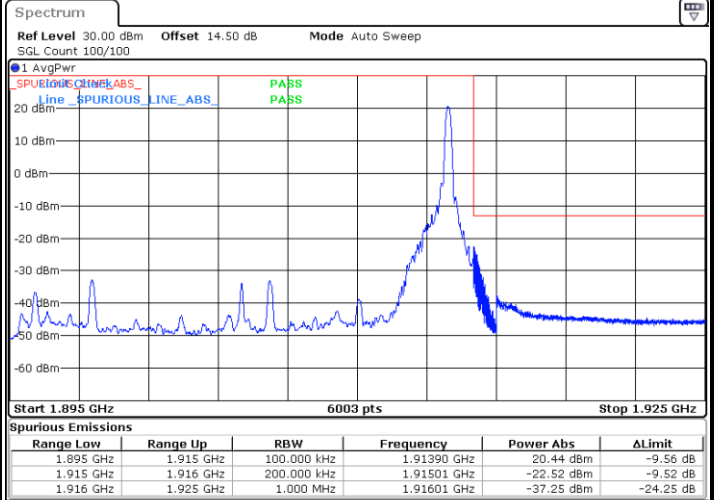
LTE Band 25 / 20MHz / QPSK

Lowest Band Edge / 1RB



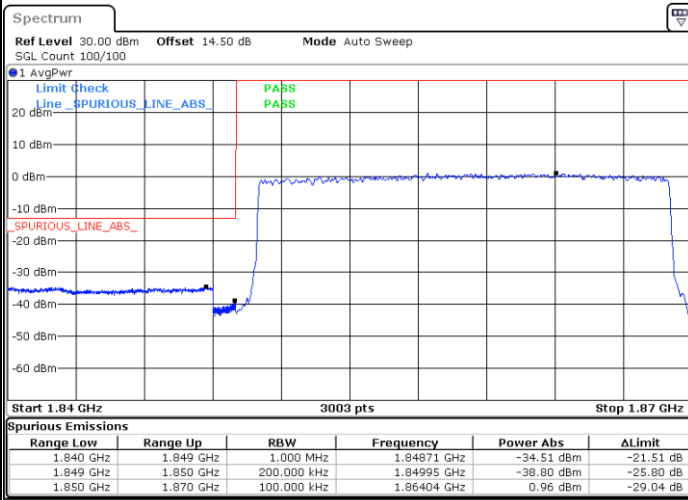
Date: 23.JUN.2024 19:45:24

Highest Band Edge / 1RB



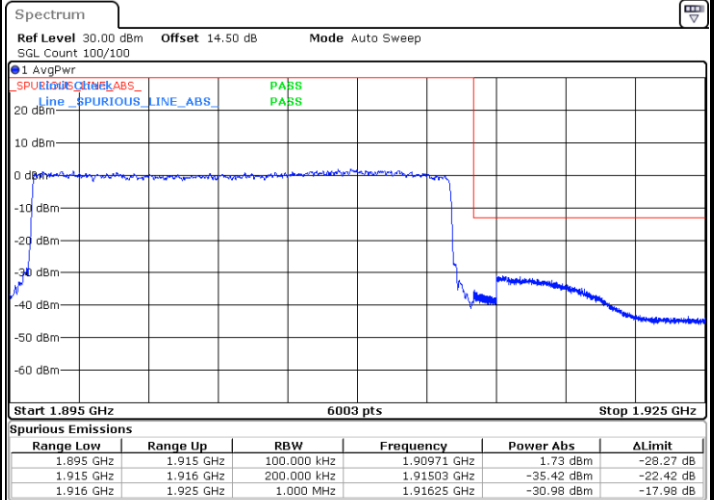
Date: 23.JUN.2024 19:56:56

Lowest Band Edge / Full RB



Date: 23.JUN.2024 19:50:45

Highest Band Edge / Full RB

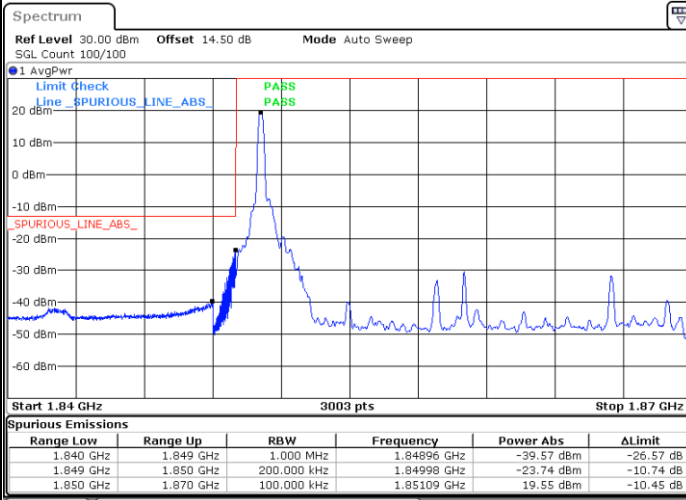


Date: 23.JUN.2024 20:02:16



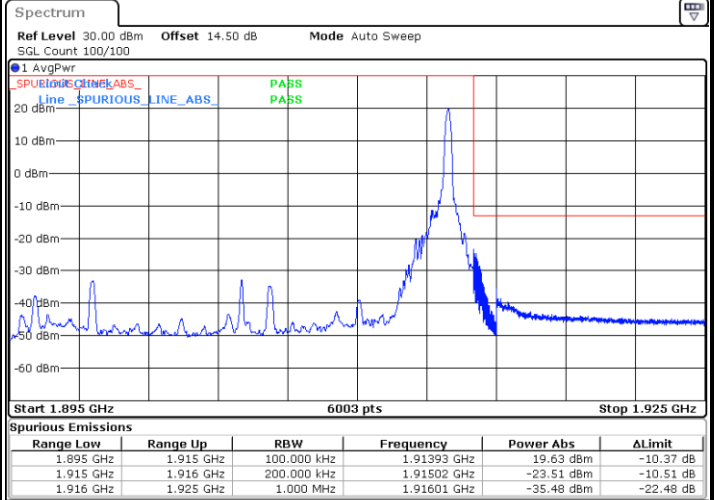
LTE Band 25 / 20MHz / 16QAM

Lowest Band Edge / 1 RB



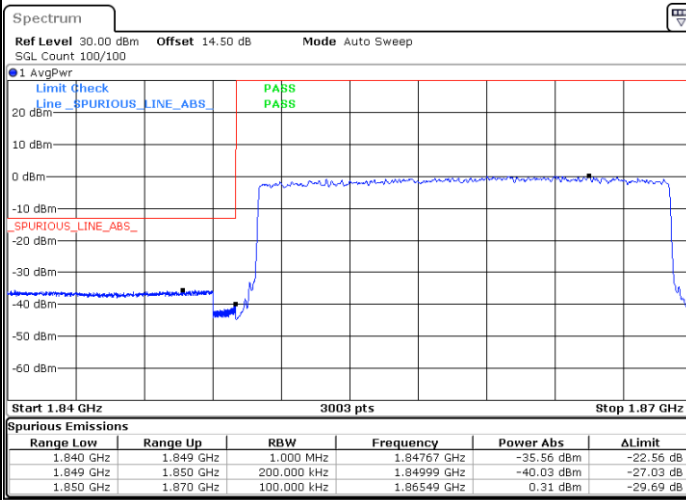
Date: 23.JUN.2024 19:46:28

Highest Band Edge / 1 RB



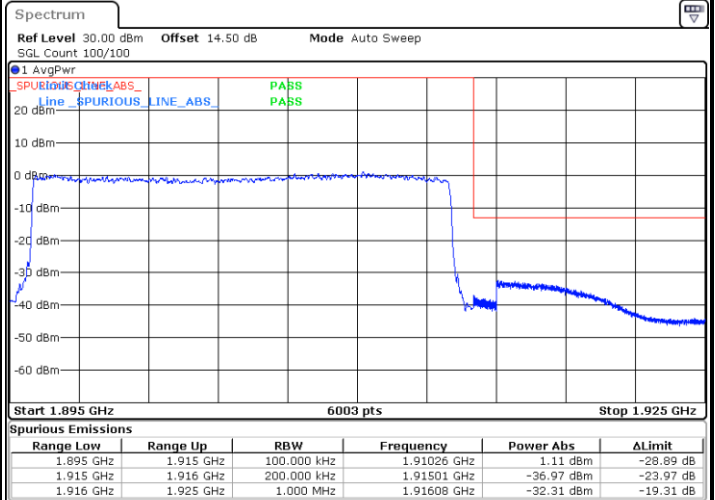
Date: 23.JUN.2024 19:58:00

Lowest Band Edge / Full RB



Date: 23.JUN.2024 19:49:40

Highest Band Edge / Full RB

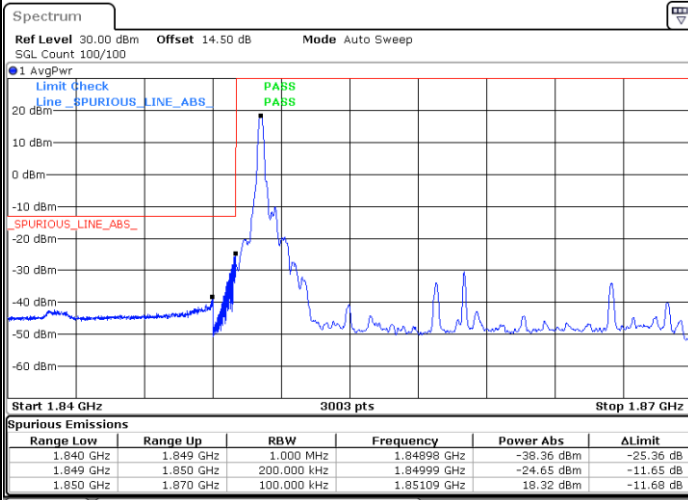


Date: 23.JUN.2024 20:01:12



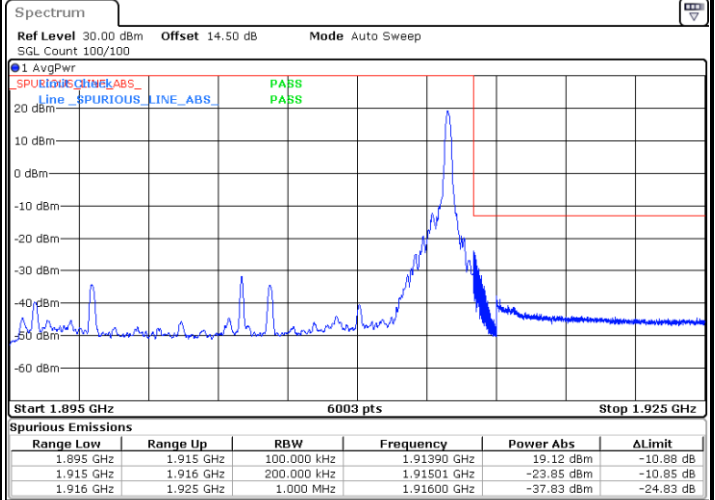
LTE Band 25 / 20MHz / 64QAM

Lowest Band Edge / 1 RB



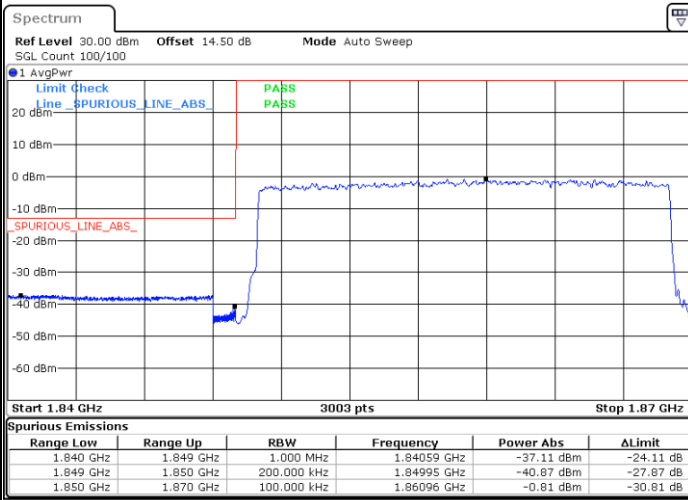
Date: 23.JUN.2024 19:47:32

Highest Band Edge / 1 RB



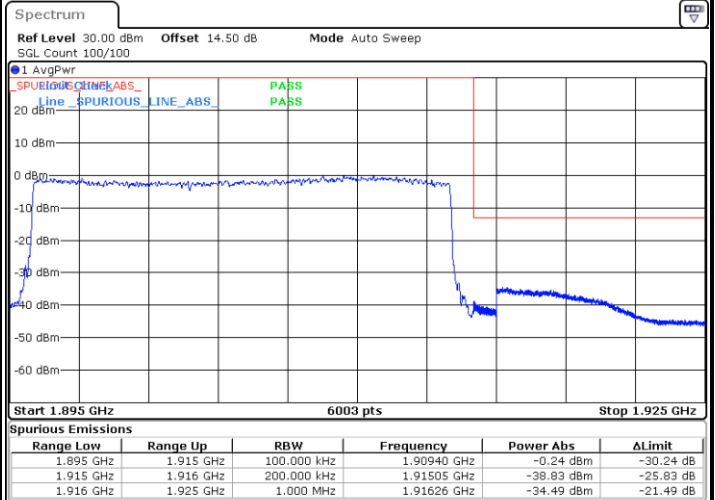
Date: 23.JUN.2024 19:59:04

Lowest Band Edge / Full RB



Date: 23.JUN.2024 19:48:36

Highest Band Edge / Full RB



Date: 23.JUN.2024 20:00:08



A2.5 Conducted Spurious Emission

