



FCC RF Test Report

APPLICANT : Xiaomi Communications Co., Ltd.
EQUIPMENT : Mobile Phone
BRAND NAME : MI
MODEL NAME : M1903F10G
FCC ID : 2AFZZ-XMSF10G
STANDARD : 47 CFR Part 2, 22(H), 24(E), 27(L), 27(M)
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)

The product was received on Jun. 11, 2019 and completely tested on Jun. 20, 2019. We, Sporton International (Kunshan) Inc., 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 (Kunshan) Inc., the test report shall not be reproduced except in full.

Jason Jia

Reviewed by: Jason Jia / Supervisor

James Huang

Approved by: James Huang / Manager



Sporton International (Kunshan) Inc.

**No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300
People's Republic of China**



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG931204-03B	Rev. 01	Initial issue of report	Jun. 24, 2019



SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
-	§2.1046	Conducted Output Power	Reporting Only	Not Required	-
	§22.913(a)(5)	Effective Radiated Power (Band 5)	ERP < 7 Watt	Not Required	
	§24.232(c) §27.50(h)(2)	Equivalent Isotropic Radiated Power (Band 2) (Band 7)	EIRP < 2Watt	Not Required	
-	§24.232(d)	Peak-to-Average Ratio	<13 dB	Not Required	-
-	§2.1049	Occupied Bandwidth	Reporting Only	Not Required	-
3.1	§2.1051 §22.917(a) §24.238(a)	Conducted Band Edge Measurement (Band 2) (Band 5)	< 43+10log ₁₀ (P[Watts])	PASS	-
	§27.53(m)(4)	Conducted Band Edge Measurement (Band 7)	§27.53(m)(4)		
3.2	§2.1051 §22.917(a) §24.238(a)	Conducted Spurious Emission (Band 2) (Band 5)	< 43+10log ₁₀ (P[Watts])	PASS	-
	§2.1051 §27.53(m)(4)	Conducted Spurious Emission (Band 7)	< 55+10log ₁₀ (P[Watts])		
-	§2.1055 §22.355	Frequency Stability Temperature & Voltage	< 2.5 ppm for Part 22	Not Required	-
	§2.1055 §24.235 §27.54		Within Authorized Band		
4.4	§2.1053 §22.917(a) §24.238(a)	Radiated Spurious Emission (Band 2) (Band 5)	< 43+10log ₁₀ (P[Watts])	PASS	Under limit 27.42 dB at 7580 MHz
	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (Band 7)	< 55+10log ₁₀ (P[Watts])		



1 General Description

1.1 Applicant

Xiaomi Communications Co., Ltd.

The Rainbow City of China Resources, NO.68, Qinghe Middle Street, Haidian District, Beijing, China

1.2 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Phone
Brand Name	MI
Model Name	M1903F10G
FCC ID	2AFZZ-XMSF10G
EUT supports Radios application	GSM/GPRS/EGPRS/WCDMA/HSPA/ DC-HSDPA/HSPA+(16QAM uplink is not supported)/LTE WLAN 2.4GHz 802.11b/g/n HT20 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth BR /EDR/ LE FM Receiver /NFC /GNSS
IMEI Code	Conducted: Radiation: 866962040422515/866962040422523
HW Version	P2
SW Version	MIUI 10
EUT Stage	Identical Prototype

Remark:

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. There are two types of EUT sample 1 and sample 2, the differences between two samples is for memory, sample 1 is 6+64GB capacity and sample 2 is 6+128GB capacity.
3. This is a variant report for M1903F10G, the change note could be referred to the product equality declaration which is exhibit separately. According to the change, only the conducted band-edge/CSE/RSE of LTE Band 2/5/7 are verified from original report FG931204B.
4. Verify the conducted power is close to the original report, so all of the conducted power refer to the original report FG931204B.



1.3 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	LTE Band 2 : 1850.7 MHz ~ 1909.3 MHz LTE Band 4 : 1710.7 MHz ~ 1754.3 MHz LTE Band 5 : 824.7 MHz ~ 848.3 MHz LTE Band 7 : 2502.5 MHz ~ 2567.5 MHz LTE Band 38 : 2572.5MHz ~ 2617.5MHz
Rx Frequency	LTE Band 2 : 1930.7 MHz ~ 1989.3 MHz LTE Band 4 : 2110.7 MHz ~ 2154.3 MHz LTE Band 5 : 869.7 MHz ~ 893.3 MHz LTE Band 7 : 2622.5MHz ~ 2687.5 MHz LTE Band 38 : 2572.5MHz ~ 2617.5MHz
Bandwidth	LTE Band 2 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 4 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 5 : 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 7 : 5MHz / 10MHz / 15MHz / 20MHz LTE Band 38 : 5MHz / 10MHz / 15MHz / 20MHz
Antenna Gain	Top Antenna : LTE Band 2 : -2.14 dBi LTE Band 4 : -1.65 dBi LTE Band 5 : -3.78 dBi LTE Band 7 : -0.23 dBi LTE Band 38 : 0.30 dBi Bottom Antenna : LTE Band 2 : -0.18 dBi LTE Band 4 : 0.50 dBi LTE Band 5 : -2.70 dBi LTE Band 7 : -0.60 dBi LTE Band 38 : -0.61 dBi
Type of Modulation	QPSK / 16QAM / 64QAM / 256QAM(Downlink only)

1.4 Modification of EUT

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



1.5 Testing Location

<FCC>-KS

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

Test Firm	Sporton International (Kunshan) Inc.		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158 FAX : +86-512-57900958		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH04-KS TH01-KS	CN1257	314309

1.6 Applicable Standards

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

- ♦ 47 CFR Part 2, 22(H), 24(E), 27(L), 27(M)
- ♦ 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

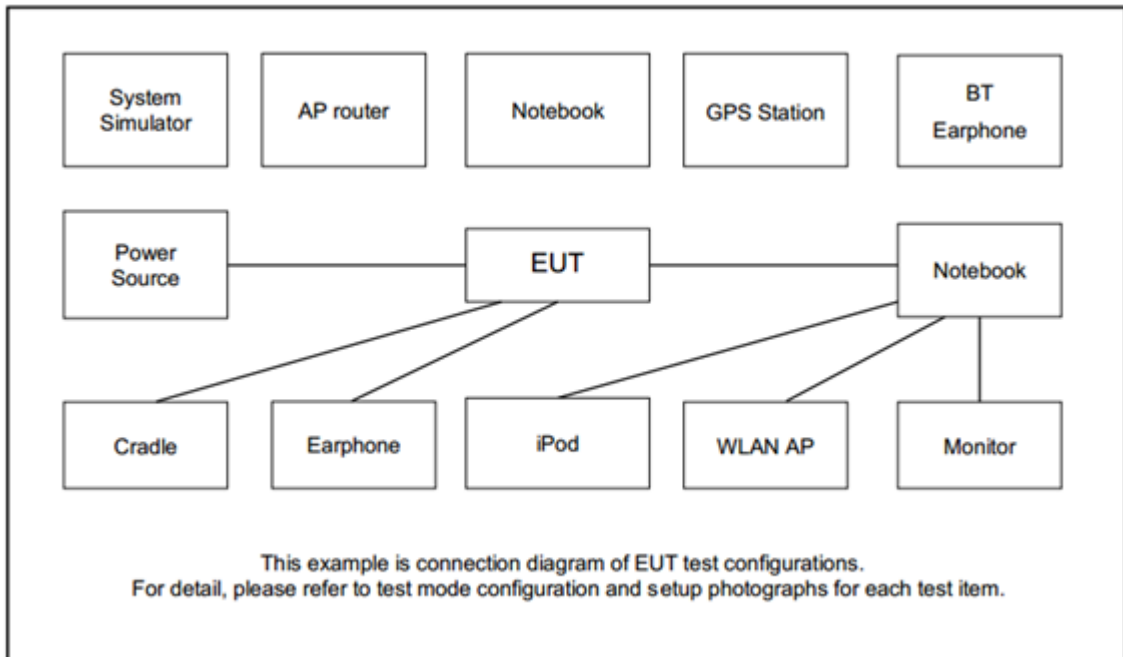
2.1 Test Mode

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	16QAM	64QAM	1	Half	Full	L	M	H
Conducted Band Edge	2	v	v	v	v	v	v	v	v	v	v		v	v		v
	5	v	v	v	v	-	-	v	v	v	v		v	v		v
	7	-	-	v	v	v	v	v	v	v	v		v	v		v
Conducted Spurious Emission	2	v	v	v	v	v	v	v	v	v	v			v	v	v
	5	v	v	v	v	-	-	v	v	v	v			v	v	v
	7	-	-	v	v	v	v	v	v	v	v			v	v	v
Radiated Spurious Emission	2	Worst Case											v	v	v	
	5	Worst Case											v	v	v	
	7	Worst Case											v	v	v	
Note	1. The mark "v" means that this configuration is chosen for testing 2. The mark "-" means that this bandwidth is not supported. 3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.															

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	Power Supply	GWINSTEK	PSS-2002	N/A	N/A	Unshielded, 1.8 m
2.	LTE Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
3.	Earphone	Lenovo	SH100	N/A	N/A	N/A

2.4 Measurement Results Explanation Example

For all conducted test items:

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

The spectrum analyzer offset is derived from RF cable loss.

Offset = RF cable loss.

Following shows an offset computation example with cable loss 4.6dB

Example :

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)}. \\ &= 4.6 \text{ (dB)} \end{aligned}$$



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

LTE Band 7 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	20850	21100	21350
	Frequency	2510	2535	2560
15	Channel	20825	21100	21375
	Frequency	2507.5	2535	2562.5
10	Channel	20800	21100	21400
	Frequency	2505	2535	2565
5	Channel	20775	21100	21425
	Frequency	2502.5	2535	2567.5



3 Conducted Test Items

3.1 Conducted Band Edge

3.1.1 Description of Conducted Band Edge Measurement

22.917(a)

For operations in the 824 – 849 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 100kHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

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 (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 $P(\text{Watts})$ 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 $P(\text{Watts})$ 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.

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.



27.53(m)(4)

For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

3.1.2 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 band edges of low and high channels for the highest RF powers were measured.
4. Set RBW $\geq 1\%$ EBW in the 1MHz band immediately outside and adjacent to the band edge.
5. 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.
6. Set spectrum analyzer with RMS detector.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
8. Checked that all the results comply with the emission limit line.

Example:

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

9. For LTE Band 7, 38, 41, the other 40 dB, and 55 dB have additionally applied same calculation above.



3.2 Conducted Spurious Emission

3.2.1 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.

For Band 7,38,41:

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 $55 + 10 \log (P)$ dB.

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

3.2.2 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)
 $= P(W) - [43 + 10\log(P)]$ (dB)
 $= [30 + 10\log(P)]$ (dBm) - $[43 + 10\log(P)]$ (dB)
 $= -13$ dBm.
11. For Band 7, 38, 41
The limit line is derived from $55 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [55 + 10\log(P)]$ (dB)
 $= [30 + 10\log(P)]$ (dBm) - $[55 + 10\log(P)]$ (dB)
 $= -25$ dBm.

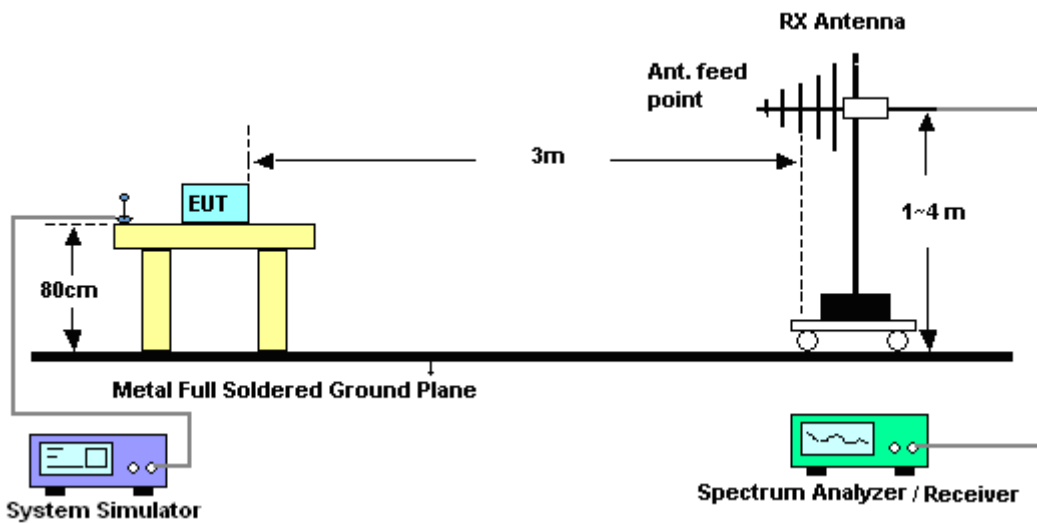
4 Radiated Test Items

4.1 Measuring Instruments

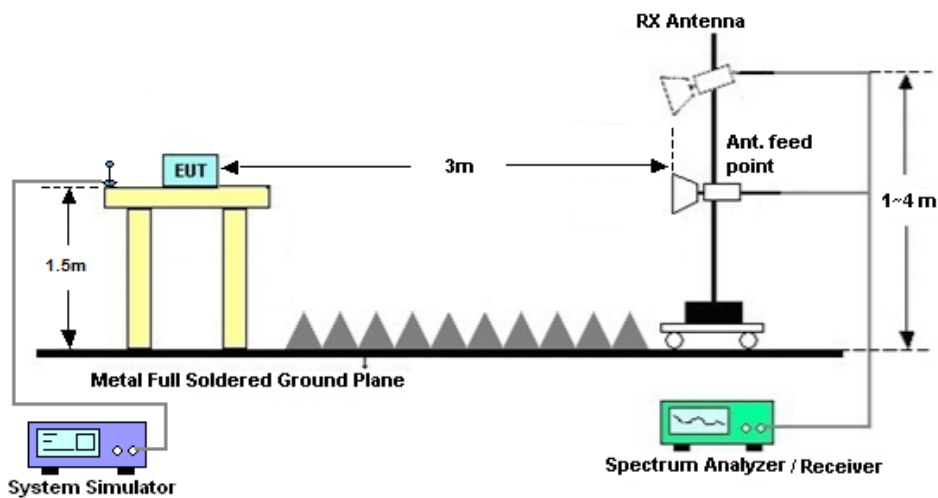
See list of measuring instruments of this test report.

4.2 Test Setup

4.2.1 For radiated test from 30MHz to 1GHz



4.2.2 For radiated test above 1GHz



4.3 Test Result of Radiated Test

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 Band 7

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 $55 + 10 \log (P)$ dB.

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

4.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.5
2. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
6. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
7. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
8. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
9. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
10. $EIRP (dBm) = S.G. Power - Tx Cable Loss + Tx Antenna Gain$
11. $ERP (dBm) = EIRP - 2.15$
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

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

13. For Band 7, 38, 41:

The limit line is derived from $55 + 10\log(P)$ dB below the transmitter power P(Watts)



5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Aug. 07, 2018	Jun. 20, 2019	Aug. 06, 2019	Conducted (TH01-KS)
Thermal Chamber	Hongzhan	LP-150U	H2014011440	-40~+150°C 20%~95%RH	Jun. 27, 2018	Jun. 20, 2019	Jun. 26, 2019	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150208	10Hz-44GHz	Oct. 10, 2018	Jun. 19, 2019	Oct. 09, 2019	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	44483	30MHz-1GHz	Dec. 28, 2018	Jun. 19, 2019	Dec. 27, 2019	Radiation (03CH04-KS)
Horn Antenna	Schwarzbeck	BBHA9120D	1648	1GHz~18GHz	Jan. 27, 2019	Jun. 19, 2019	Jan. 26, 2020	Radiation (03CH04-KS)
SHF-EHF Horn	Schwarzbeck	BBHA 9170	BBHA170249	15GHz~40GHz	Jan. 05, 2019	Jun. 19, 2019	Jan. 04, 2020	Radiation (03CH04-KS)
Amplifier	Burgeon	BPA-530	102219	0.01MHz ~3000MHz	Nov. 19, 2018	Jun. 19, 2019	Nov. 18, 2019	Radiation (03CH04-KS)
Amplifier	MITEQ	TTA1840-35 -HG	2014749	18~40GHz	Jan. 14, 2019	Jun. 19, 2019	Jan. 13, 2020	Radiation (03CH04-KS)
Amplifier	Keysight	83017A	MY53270319	500MHz~26.5GHz	Oct. 12, 2018	Jun. 19, 2019	Oct. 11, 2019	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Jun. 19, 2019	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Jun. 19, 2019	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Jun. 19, 2019	NCR	Radiation (03CH04-KS)

NCR: No Calibration Required



6 Uncertainty of Evaluation

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 Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.0dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.1dB
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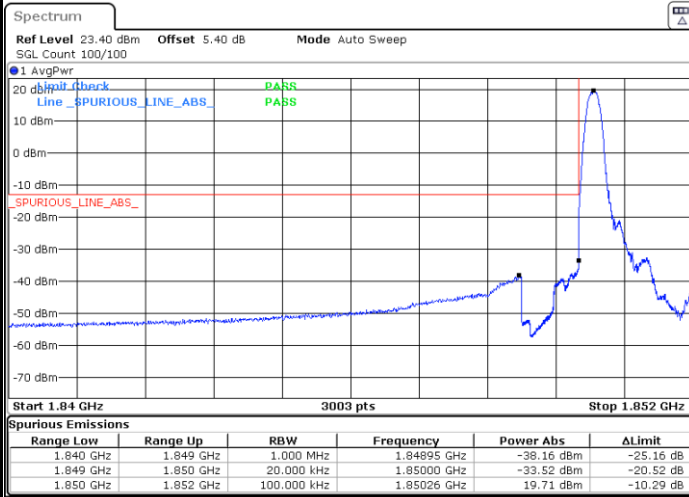
Appendix A. Test Results of Conducted Test

Conducted Band Edge



LTE Band 2 / 1.4MHz / QPSK

Lowest Band Edge / 1RB



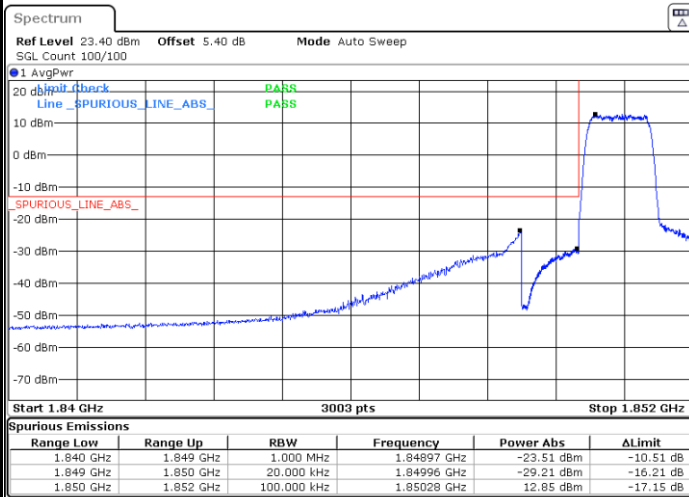
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Highest Band Edge / 1RB



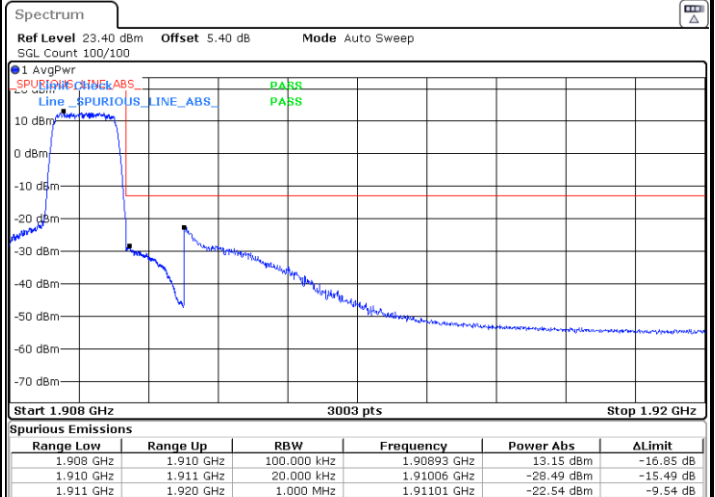
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Lowest Band Edge / Full RB



Date: 20 JUN 2019 12:03:39

Highest Band Edge / Full RB

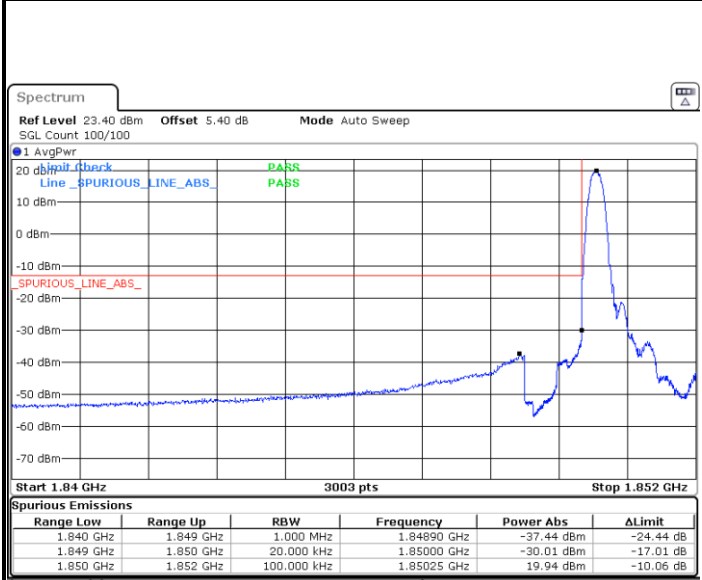


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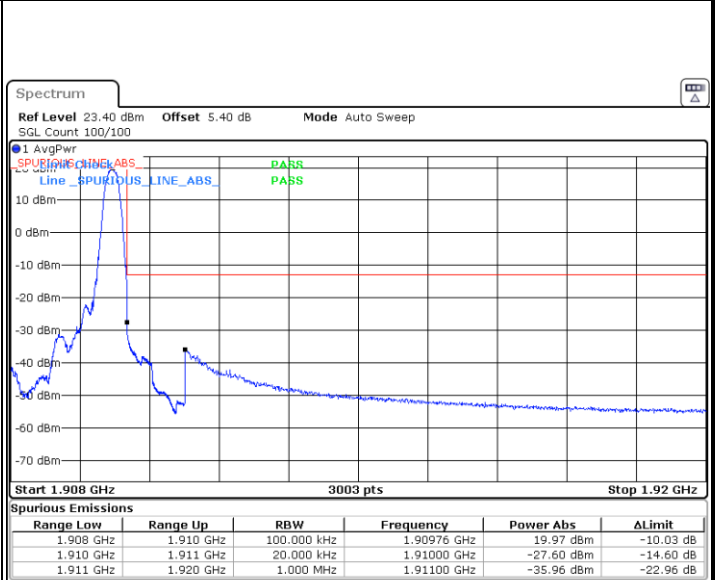
LTE Band 2 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



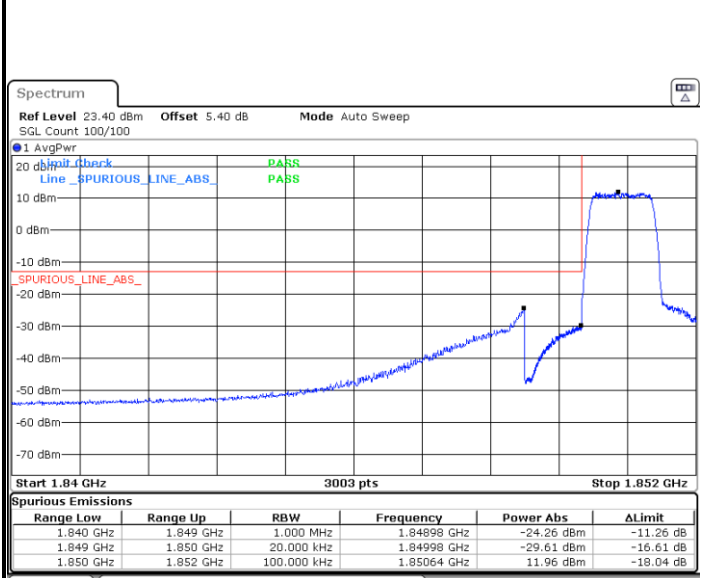
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Highest Band Edge / 1 RB



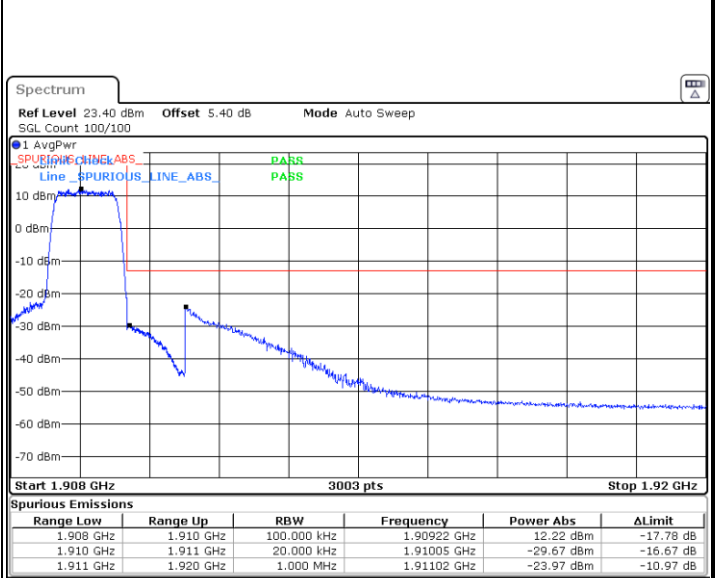
Date: 20 JUN 2019 12:10:41

Lowest Band Edge / Full RB



Date: 20 JUN 2019 12:04:46

Highest Band Edge / Full RB

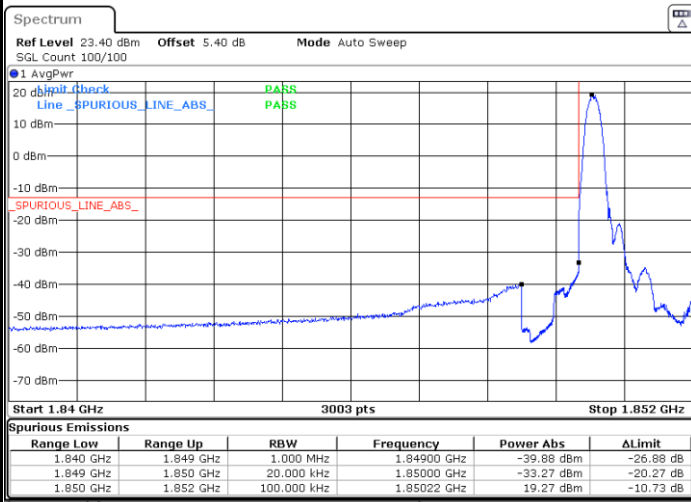


Date: 20 JUN 2019 12:12:56



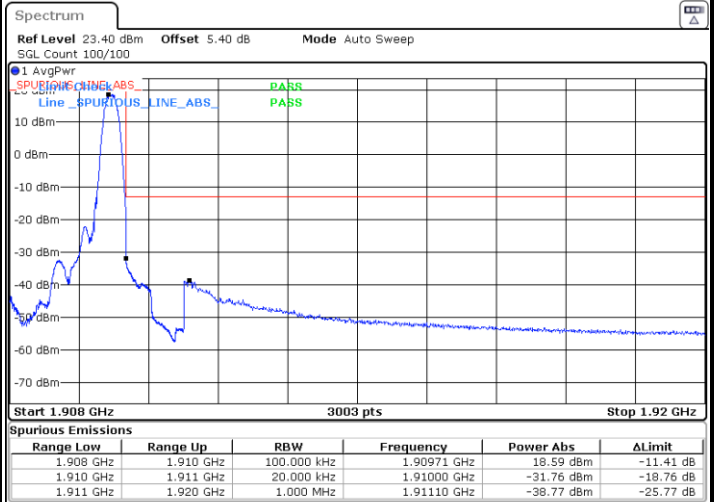
LTE Band 2 / 1.4MHz / 64QAM

Lowest Band Edge / 1 RB



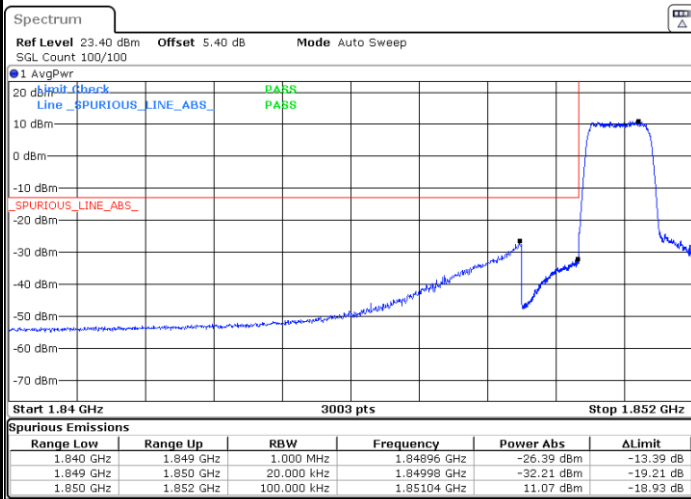
Date: 20 JUN 2019 13:28:19

Highest Band Edge / 1 RB



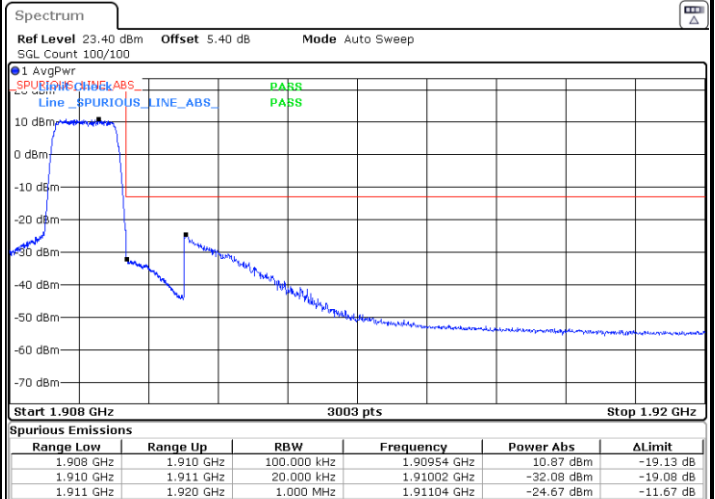
Date: 20 JUN 2019 13:30:34

Lowest Band Edge / Full RB



Date: 20 JUN 2019 13:29:26

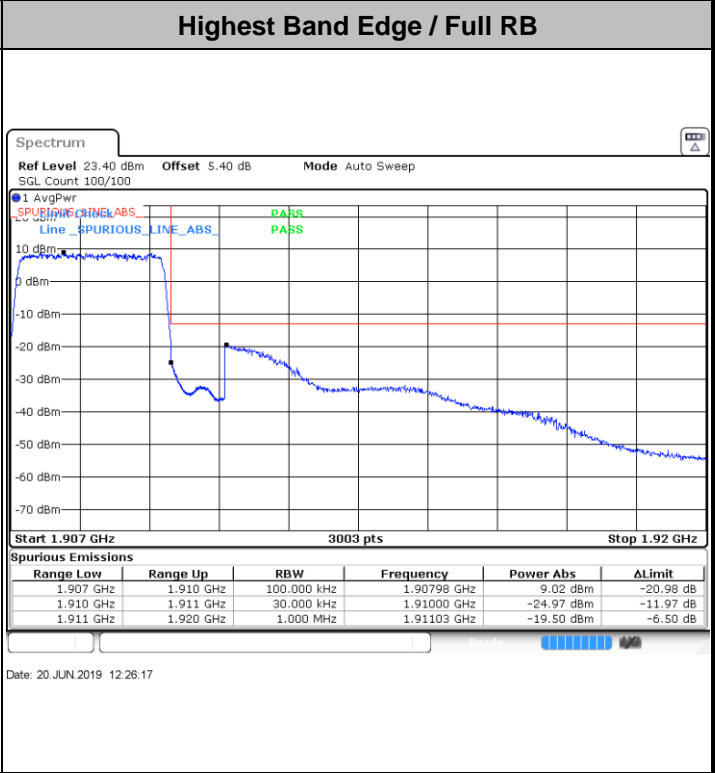
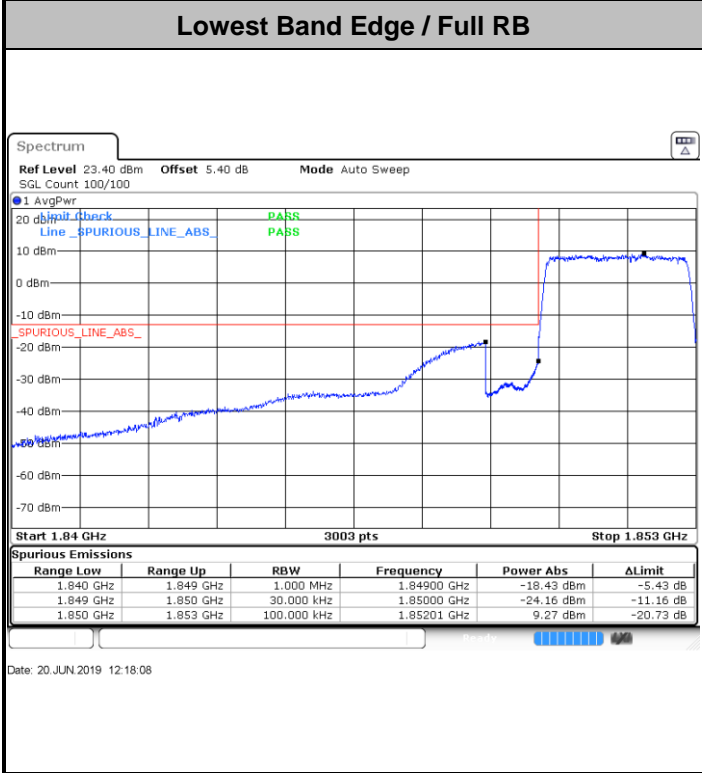
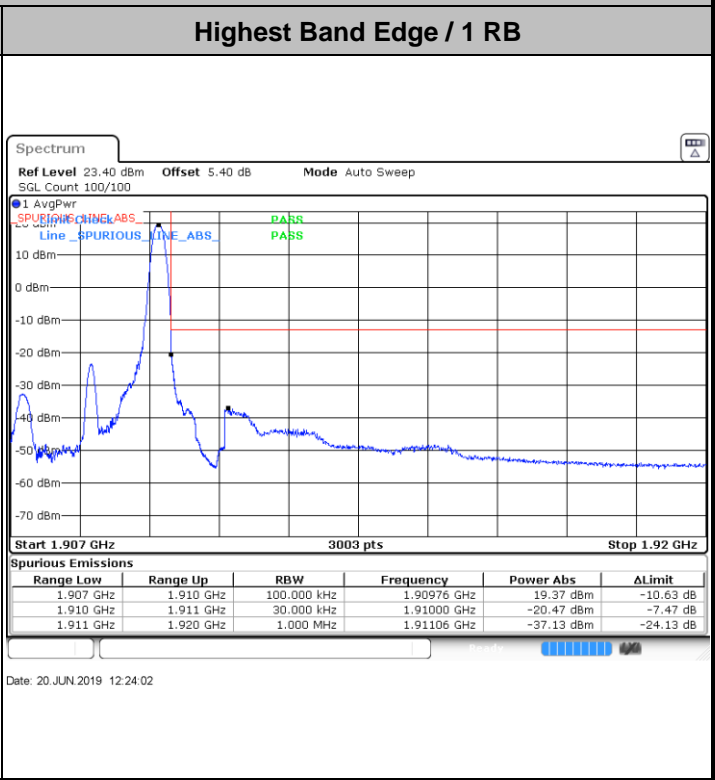
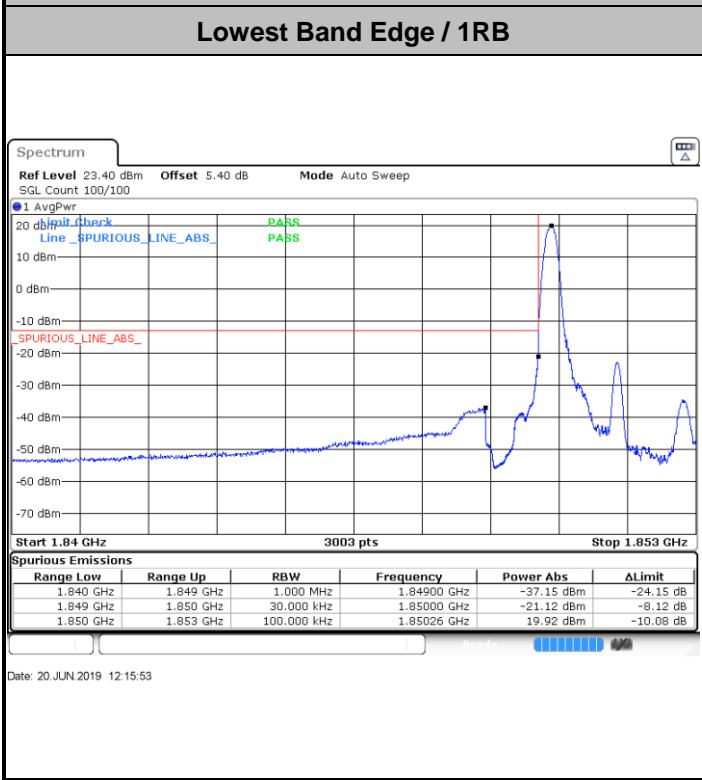
Highest Band Edge / Full RB



Date: 20 JUN 2019 13:31:41



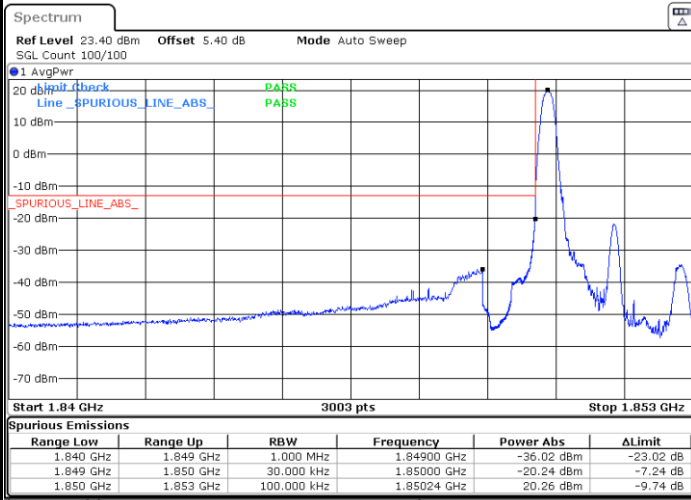
LTE Band 2 / 3MHz / QPSK





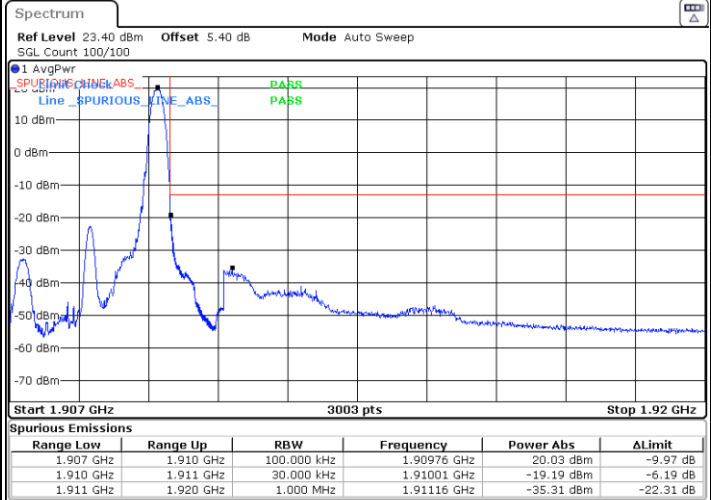
LTE Band 2 / 3MHz / 16QAM

Lowest Band Edge / 1 RB



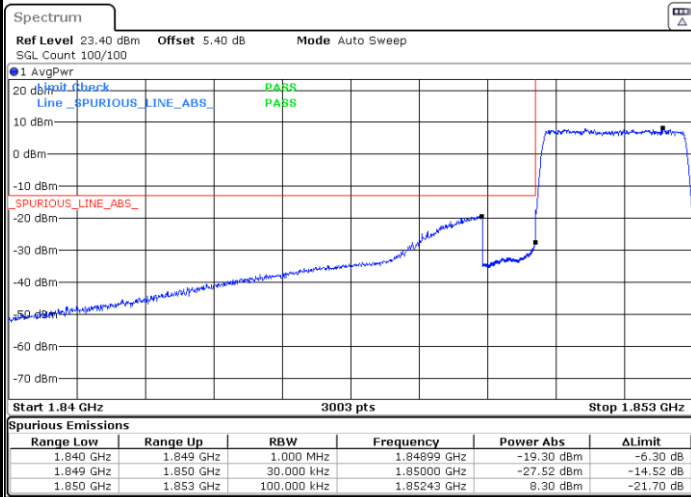
Date: 20 JUN 2019 12:17:00

Highest Band Edge / 1 RB



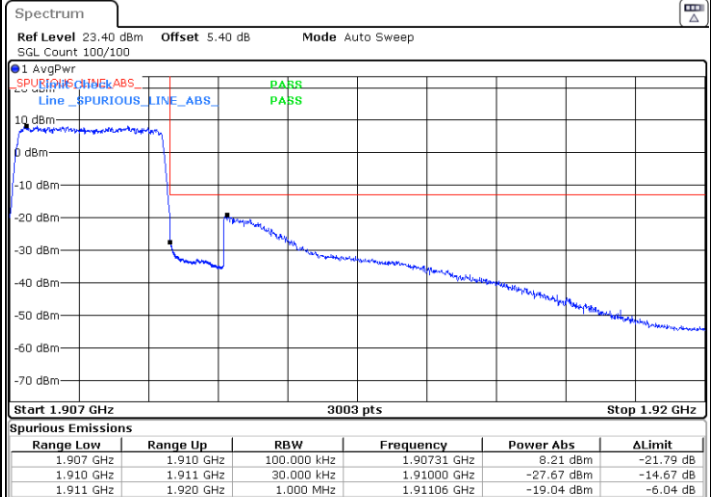
Date: 20 JUN 2019 12:25:10

Lowest Band Edge / Full RB



Date: 20 JUN 2019 12:19:15

Highest Band Edge / Full RB

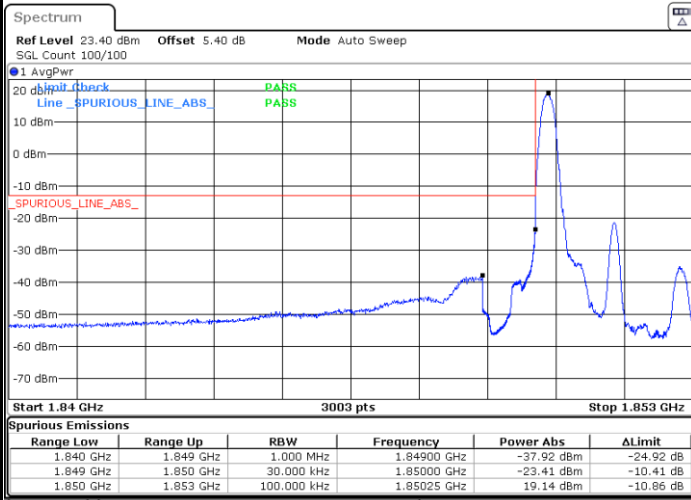


Date: 20 JUN 2019 12:27:25



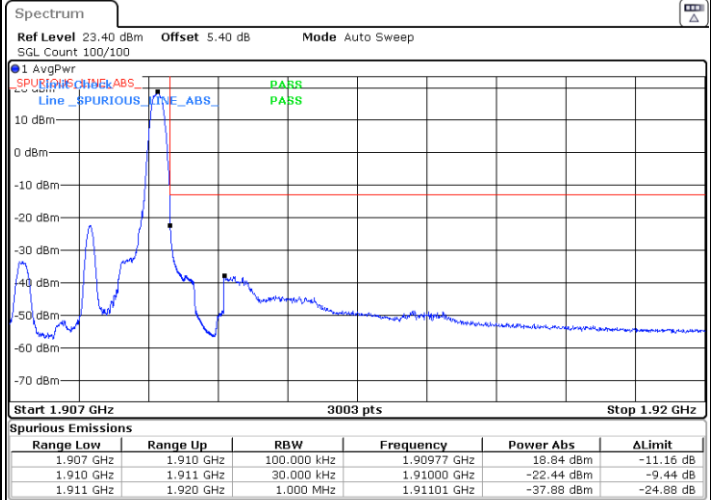
LTE Band 2 / 3MHz / 64QAM

Lowest Band Edge / 1 RB



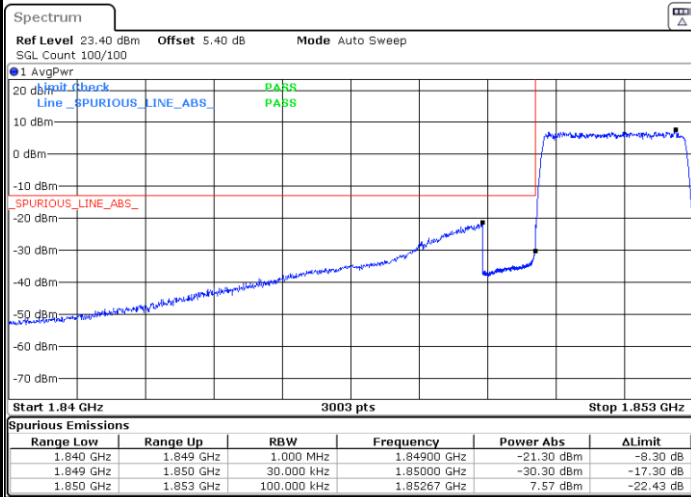
Date: 20 JUN 2019 13:32:49

Highest Band Edge / 1 RB



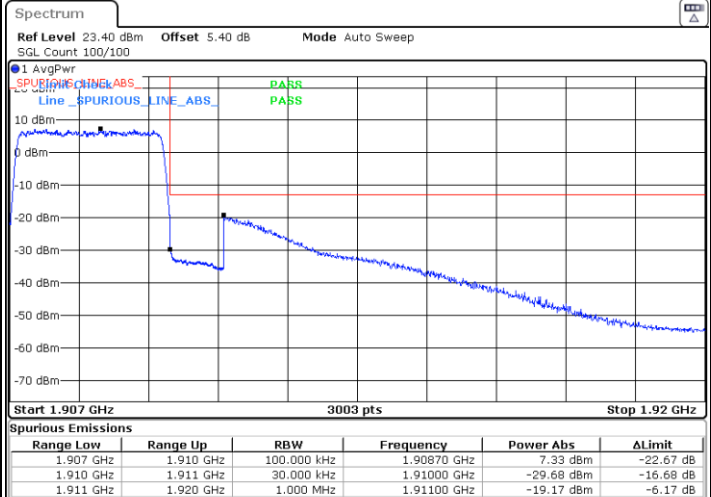
Date: 20 JUN 2019 13:36:12

Lowest Band Edge / Full RB



Date: 20 JUN 2019 13:33:56

Highest Band Edge / Full RB

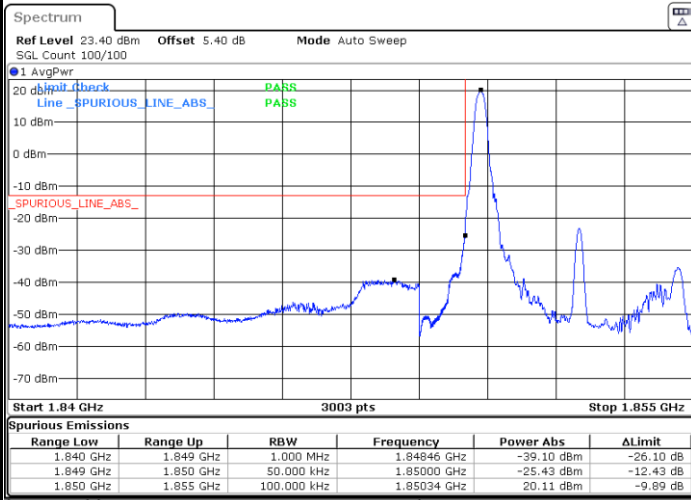


Date: 20 JUN 2019 13:35:04



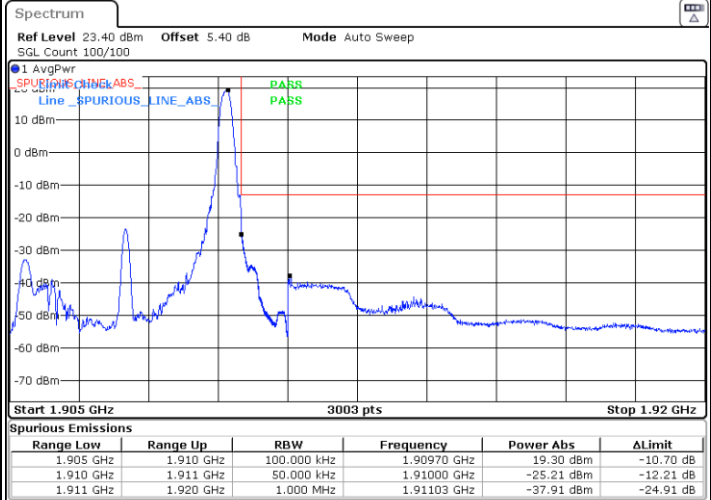
LTE Band 2 / 5MHz / QPSK

Lowest Band Edge / 1 RB



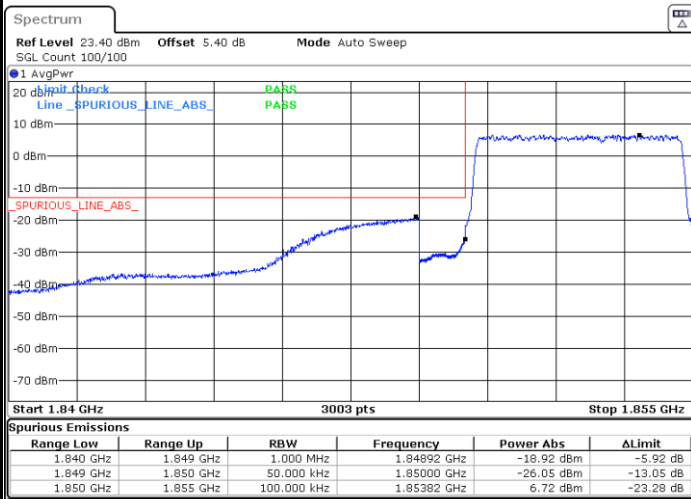
Date: 20 JUN 2019 12:30:22

Highest Band Edge / 1 RB



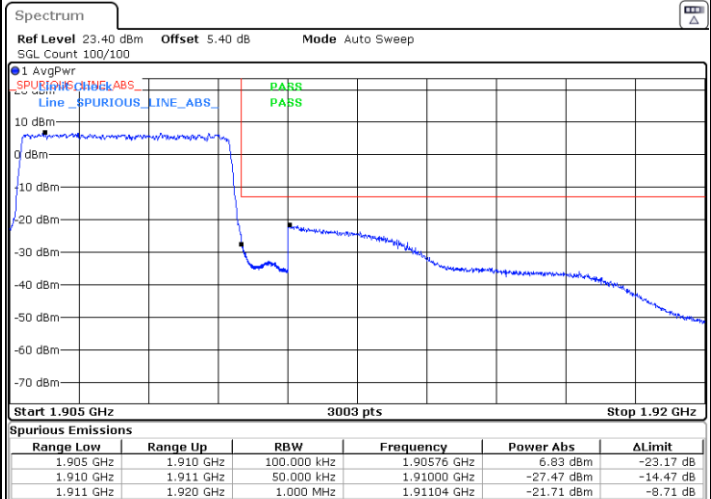
Date: 20 JUN 2019 12:38:31

Lowest Band Edge / Full RB



Date: 20 JUN 2019 12:32:37

Highest Band Edge / Full RB

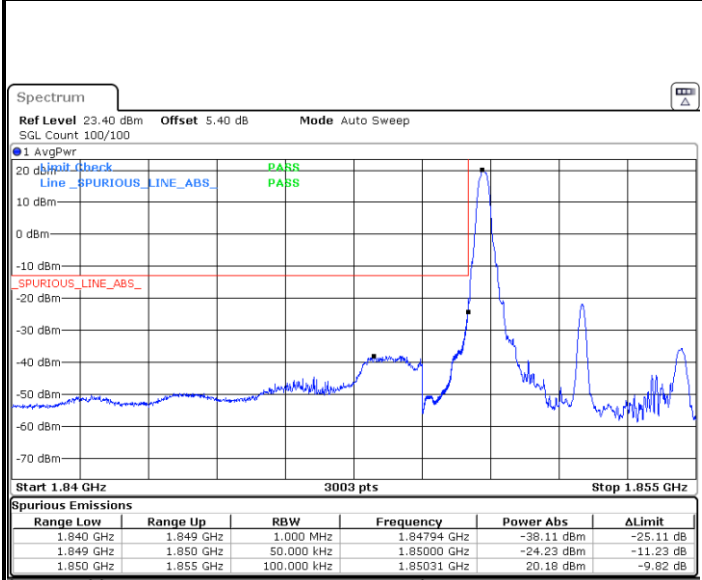


Date: 20 JUN 2019 12:40:46



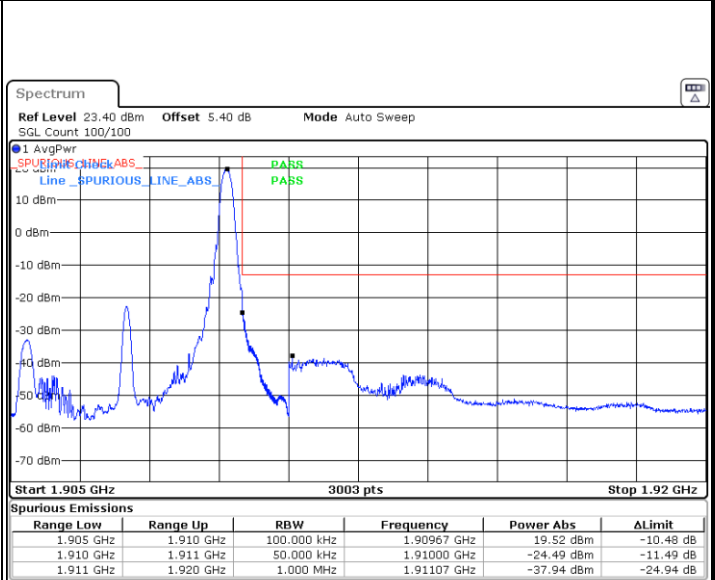
LTE Band 2 / 5MHz / 16QAM

Lowest Band Edge / 1RB



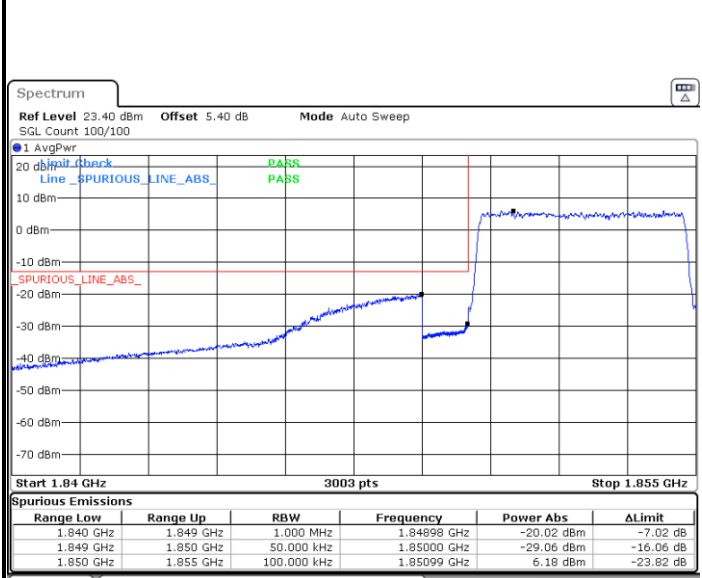
Date: 20 JUN 2019 12:31:29

Highest Band Edge / 1 RB



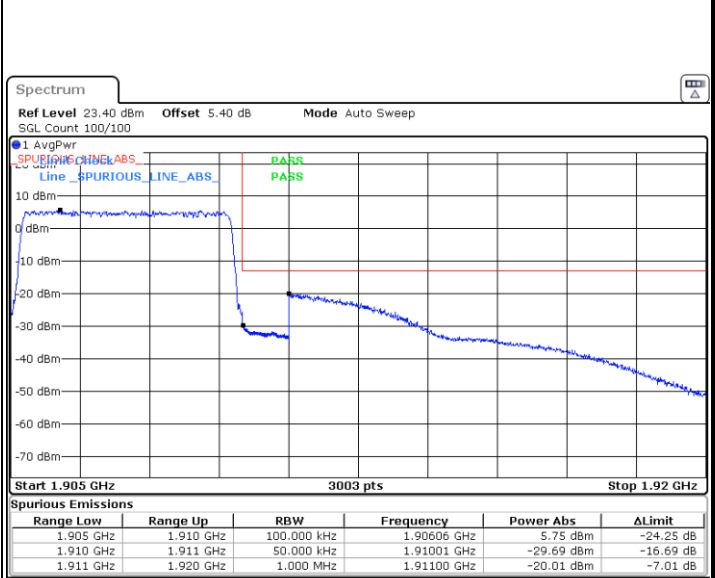
Date: 20 JUN 2019 12:39:39

Lowest Band Edge / Full RB



Date: 20 JUN 2019 12:33:45

Highest Band Edge / Full RB

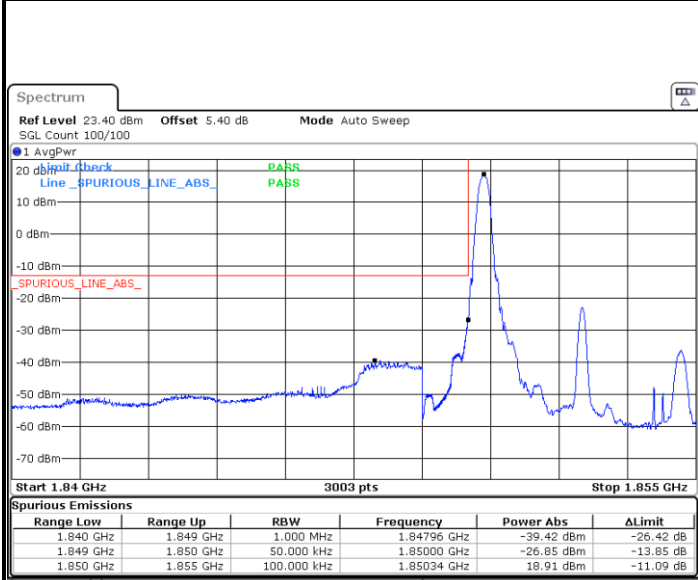


Date: 20 JUN 2019 12:41:54



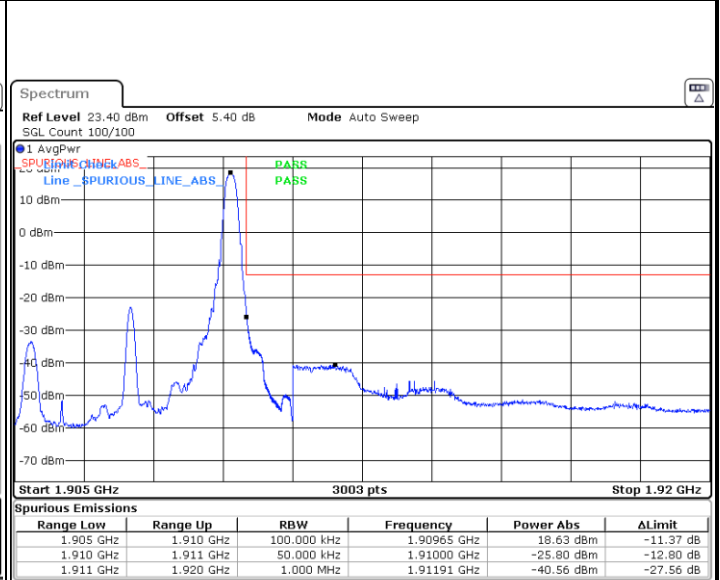
LTE Band 2 / 5MHz / 64QAM

Lowest Band Edge / 1RB



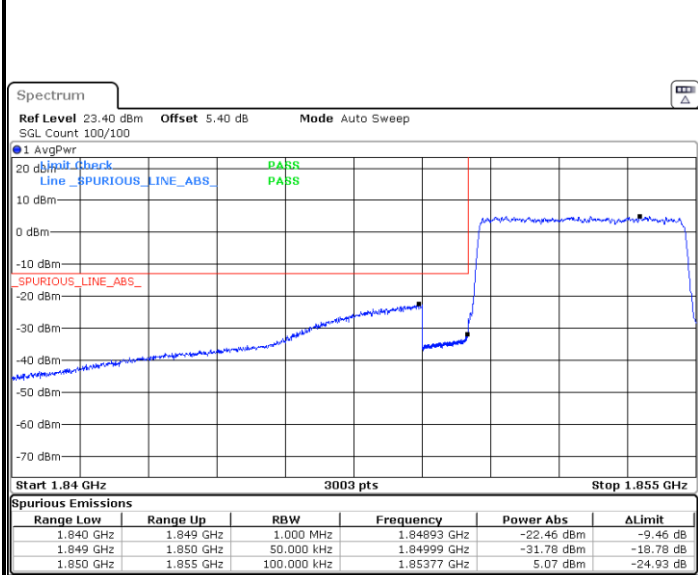
Date: 20 JUN 2019 13:37:19

Highest Band Edge / 1 RB



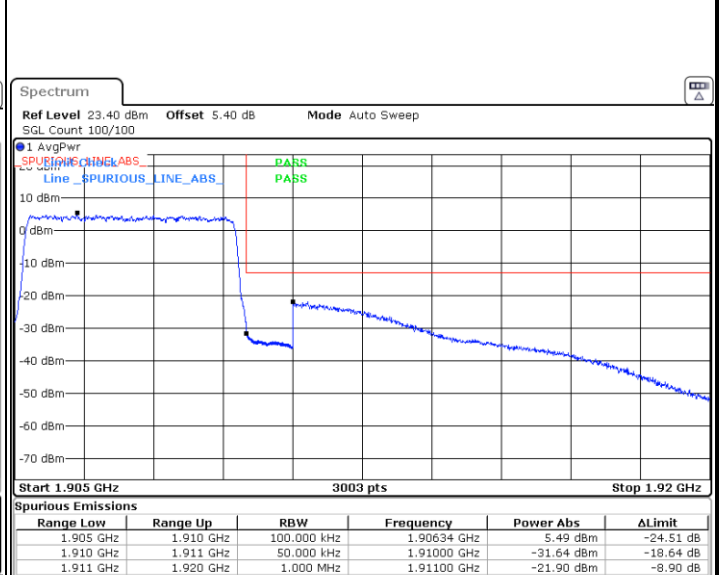
Date: 20 JUN 2019 13:40:42

Lowest Band Edge / Full RB



Date: 20 JUN 2019 13:38:27

Highest Band Edge / Full RB

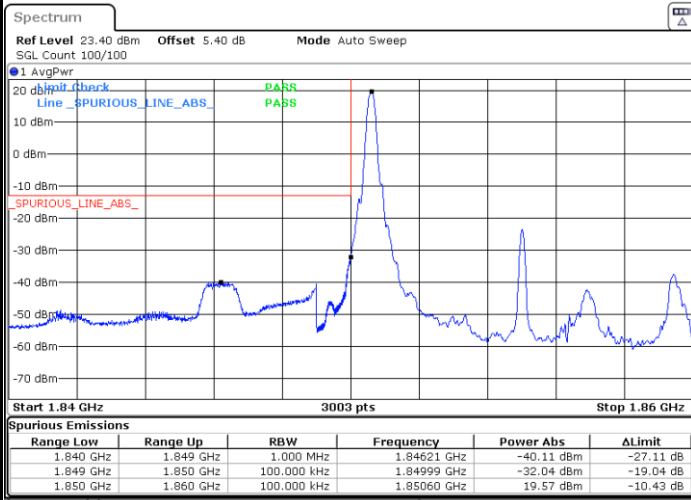


Date: 20 JUN 2019 13:39:34



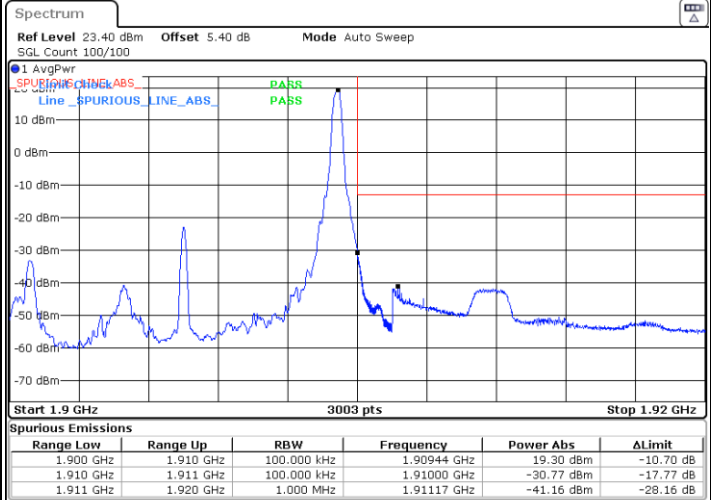
LTE Band 2 / 10MHz / QPSK

Lowest Band Edge / 1 RB



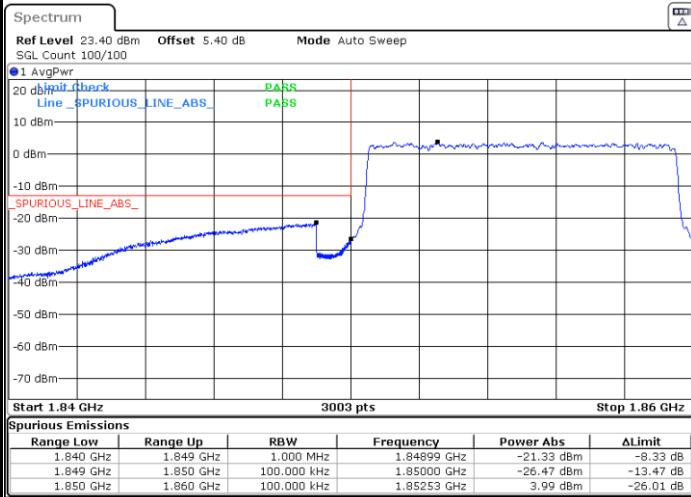
Date: 20 JUN 2019 12:44:51

Highest Band Edge / 1 RB



Date: 20 JUN 2019 12:53:00

Lowest Band Edge / Full RB



Date: 20 JUN 2019 12:47:06

Highest Band Edge / Full RB

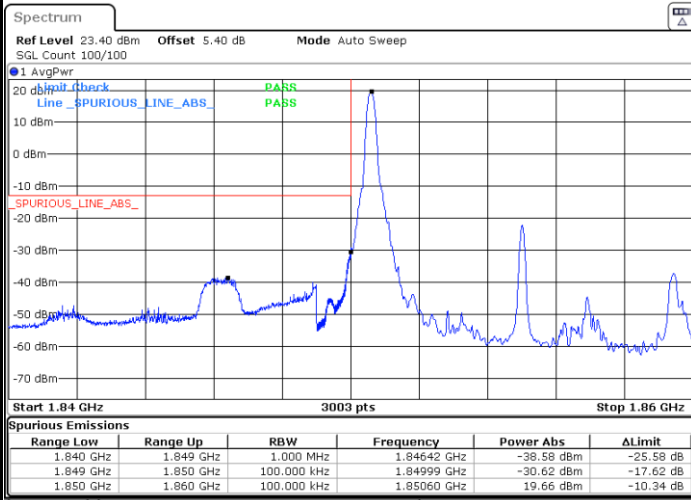


Date: 20 JUN 2019 12:55:15



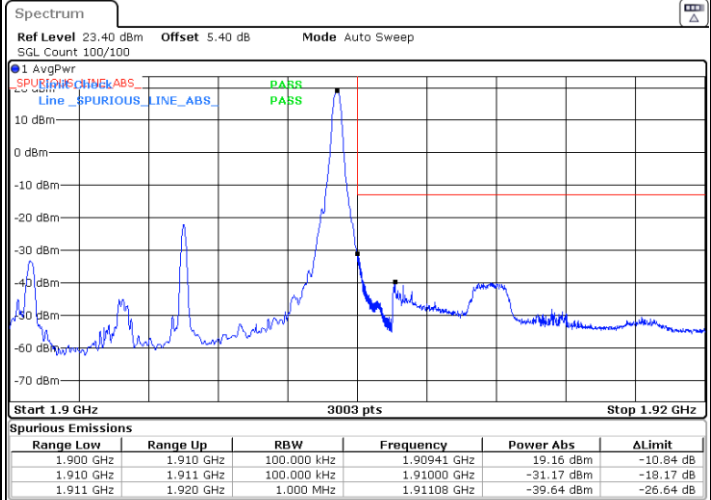
LTE Band 2 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



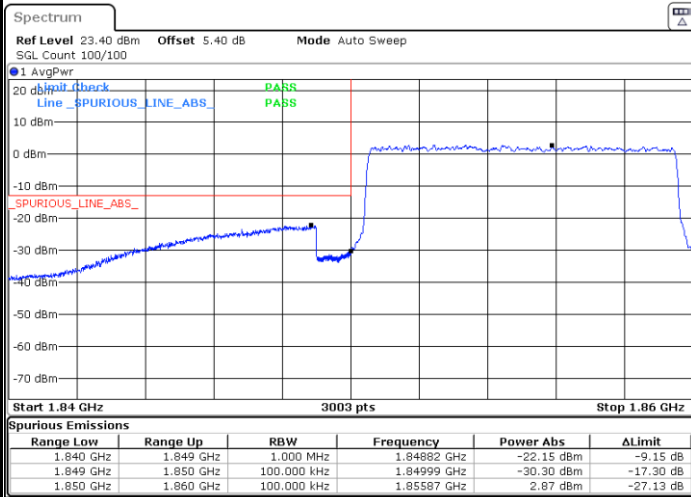
Date: 20 JUN 2019 12:45:59

Highest Band Edge / 1 RB



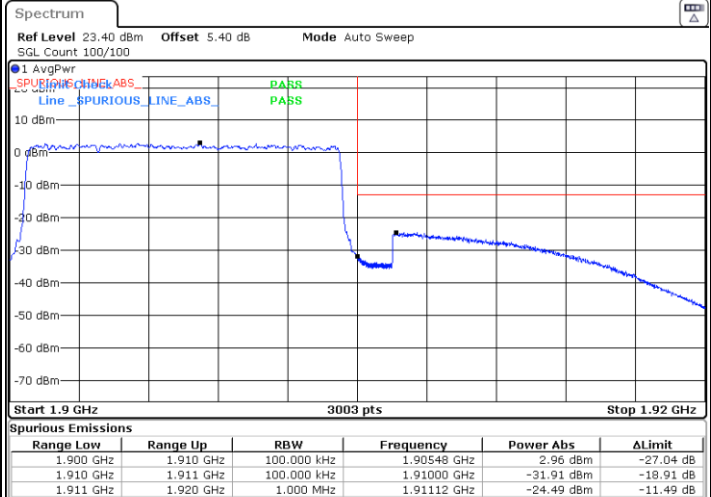
Date: 20 JUN 2019 12:54:08

Lowest Band Edge / Full RB



Date: 20 JUN 2019 12:48:14

Highest Band Edge / Full RB

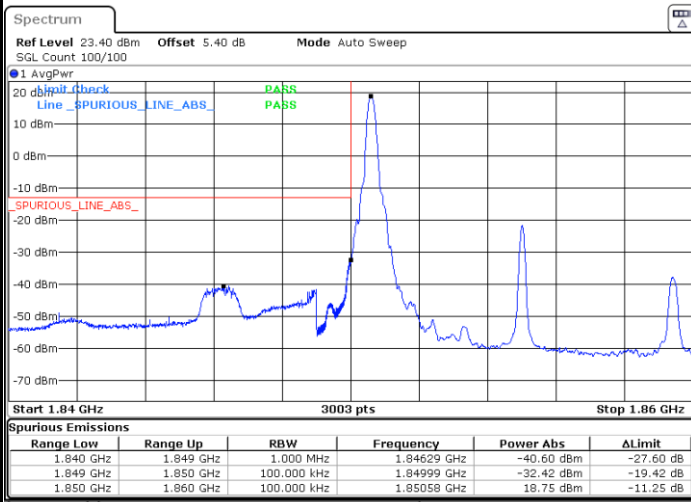


Date: 20 JUN 2019 12:56:23



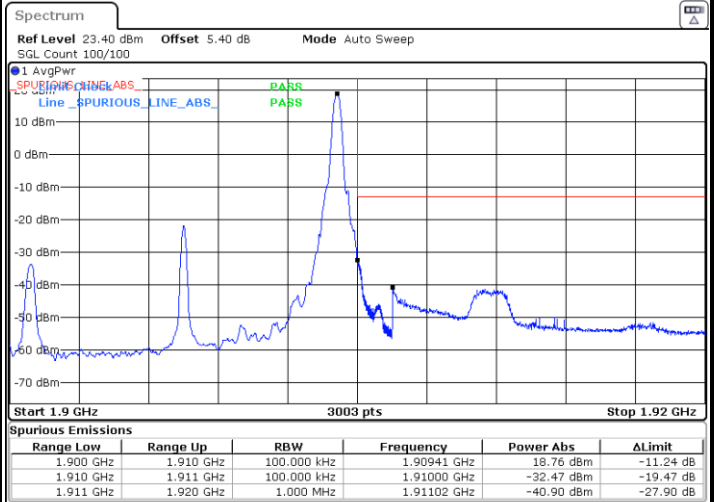
LTE Band 2 / 10MHz / 64QAM

Lowest Band Edge / 1 RB



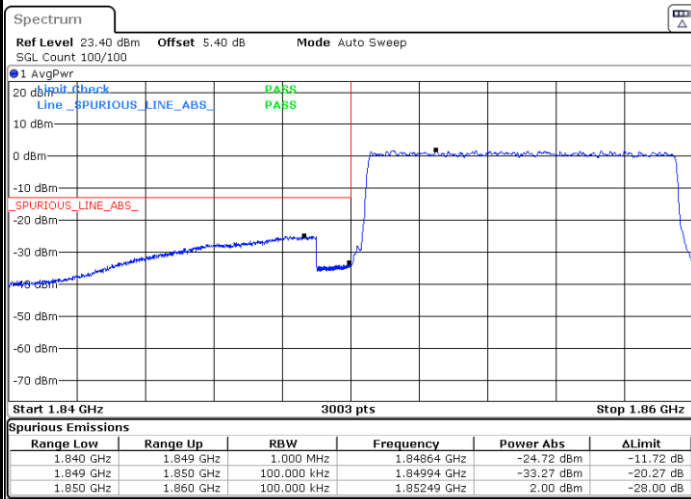
Date: 20 JUN 2019 13:41:49

Highest Band Edge / 1 RB



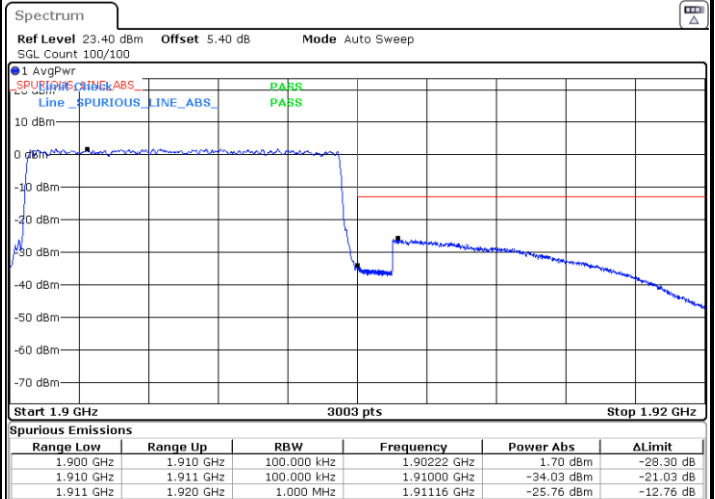
Date: 20 JUN 2019 13:45:12

Lowest Band Edge / Full RB



Date: 20 JUN 2019 13:42:57

Highest Band Edge / Full RB

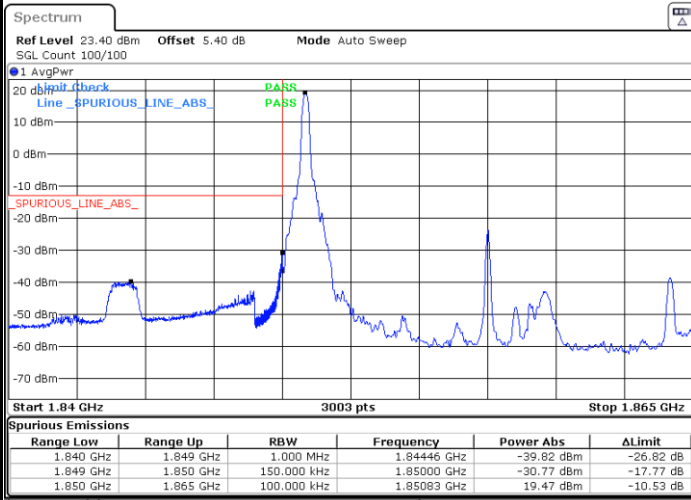


Date: 20 JUN 2019 13:44:04



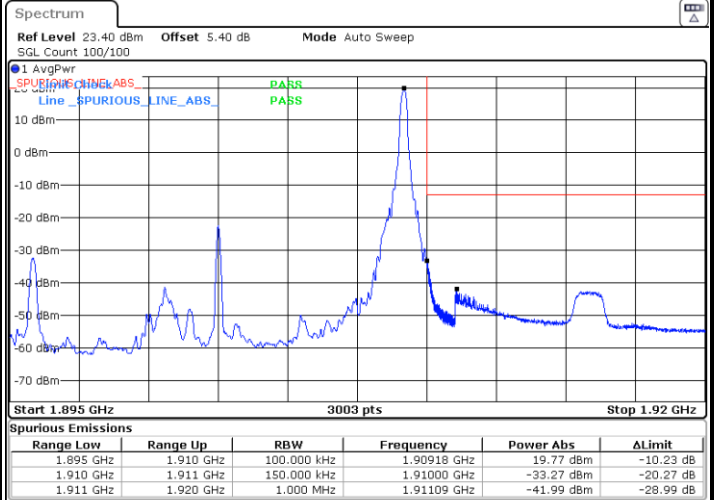
LTE Band 2 / 15MHz / QPSK

Lowest Band Edge / 1 RB



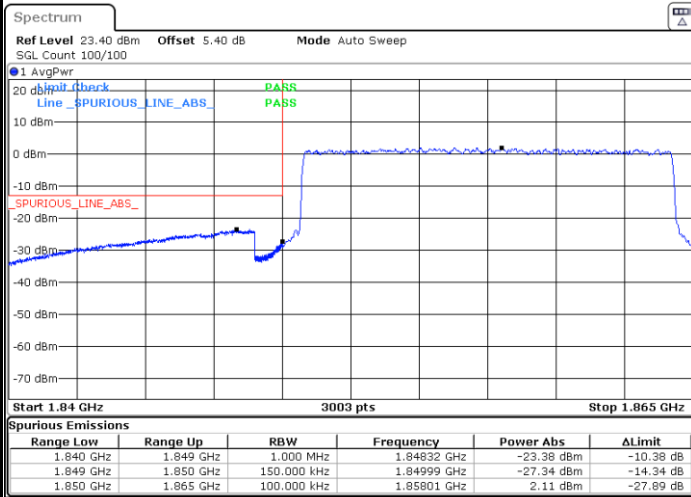
Date: 20 JUN 2019 12:59:20

Highest Band Edge / 1 RB



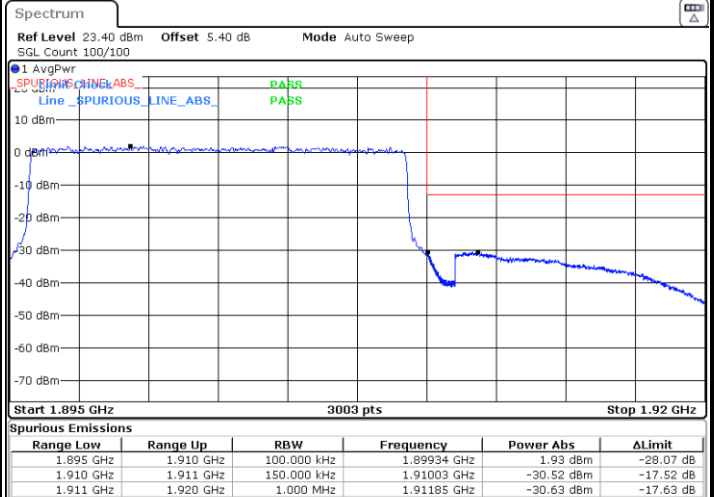
Date: 20 JUN 2019 13:07:30

Lowest Band Edge / Full RB



Date: 20 JUN 2019 13:01:35

Highest Band Edge / Full RB

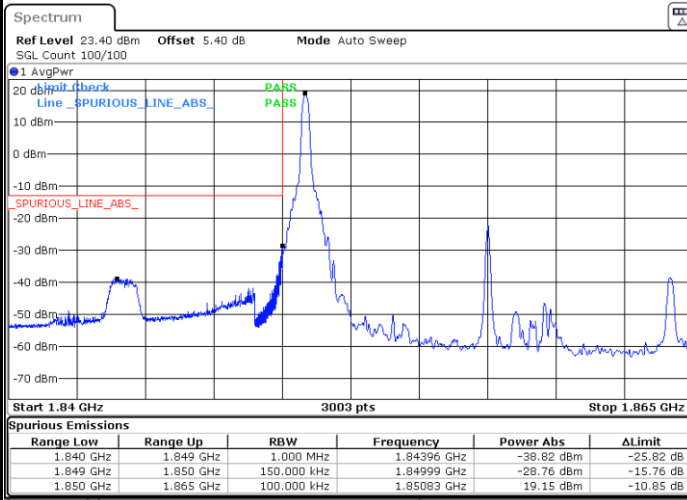


Date: 20 JUN 2019 13:09:45



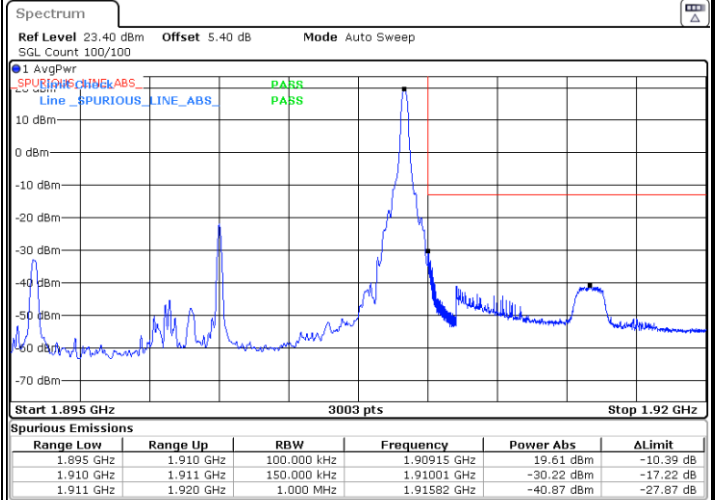
LTE Band 2 / 15MHz / 16QAM

Lowest Band Edge / 1 RB



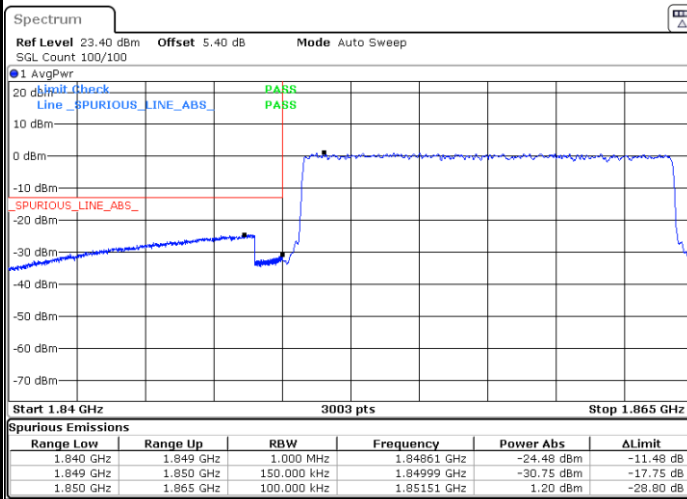
Date: 20 JUN 2019 13:00:28

Highest Band Edge / 1 RB



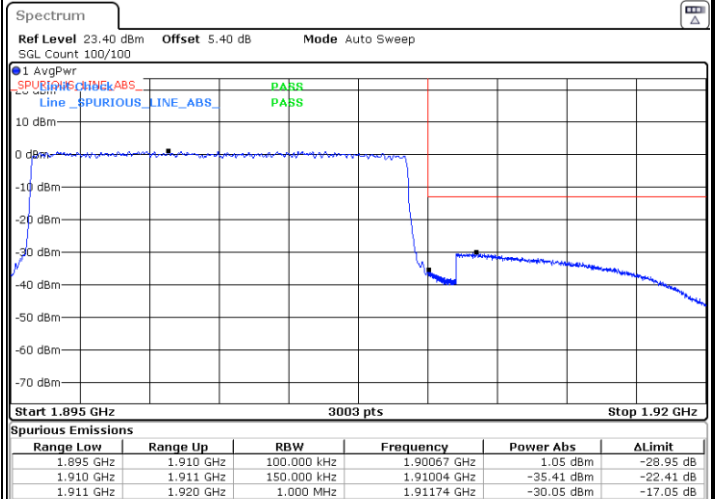
Date: 20 JUN 2019 13:08:37

Lowest Band Edge / Full RB



Date: 20 JUN 2019 13:02:43

Highest Band Edge / Full RB

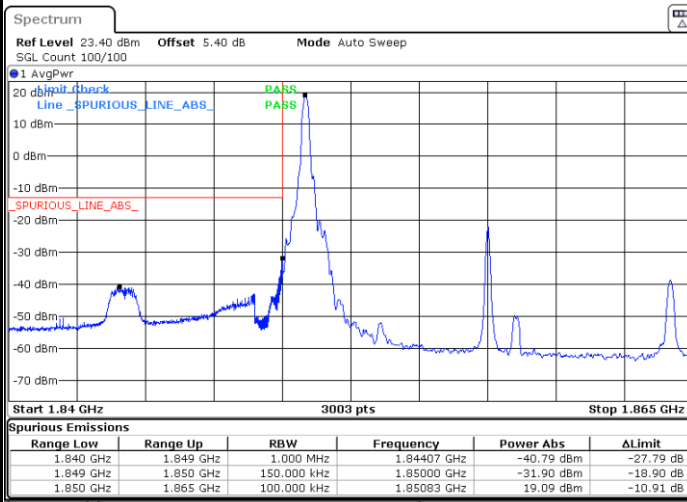


Date: 20 JUN 2019 13:10:52



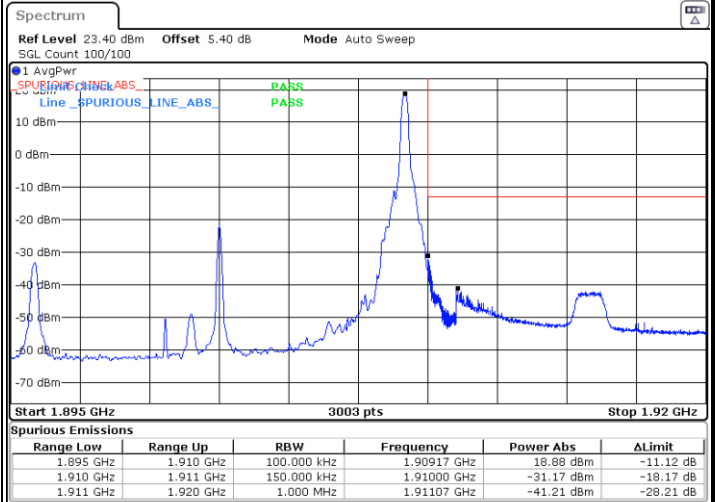
LTE Band 2 / 15MHz / 64QAM

Lowest Band Edge / 1 RB



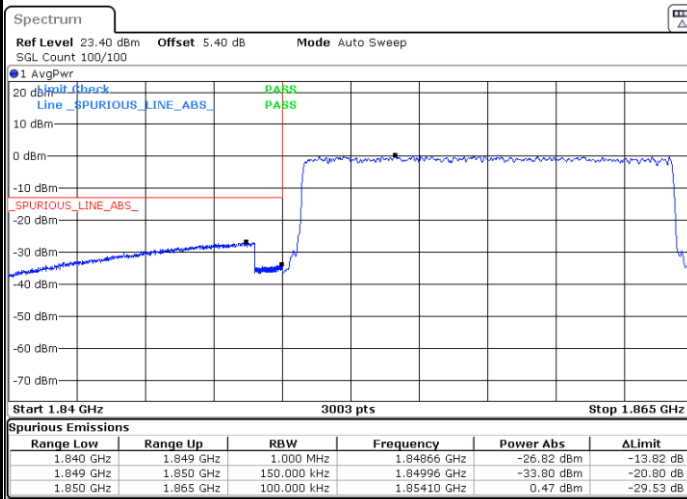
Date: 20 JUN 2019 13:46:19

Highest Band Edge / 1 RB



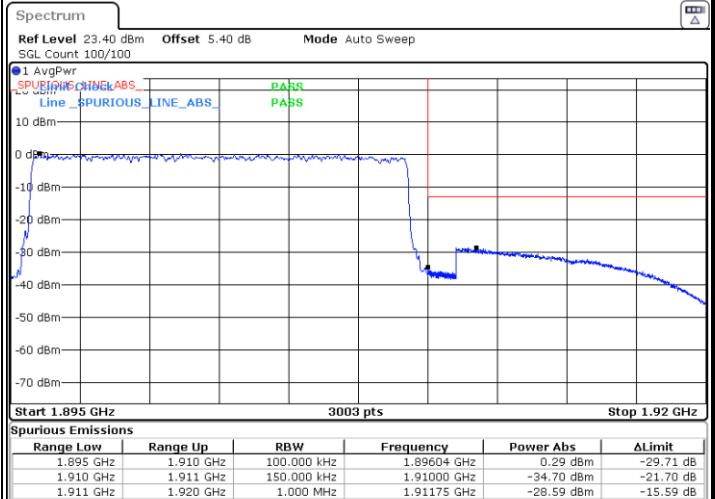
Date: 20 JUN 2019 13:49:42

Lowest Band Edge / Full RB



Date: 20 JUN 2019 13:47:27

Highest Band Edge / Full RB

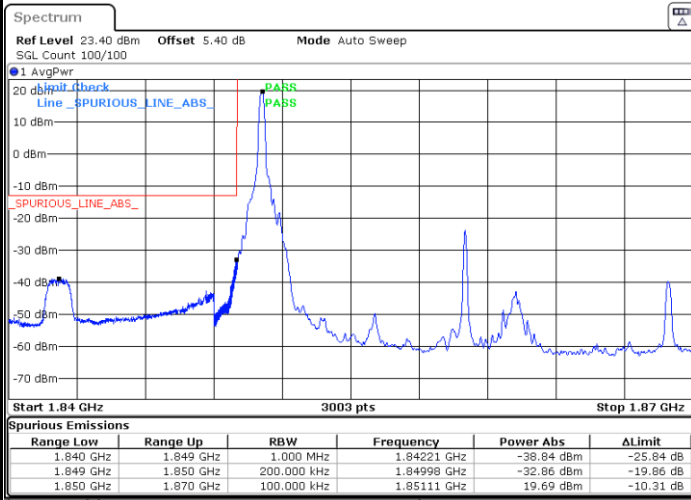


Date: 20 JUN 2019 13:48:34



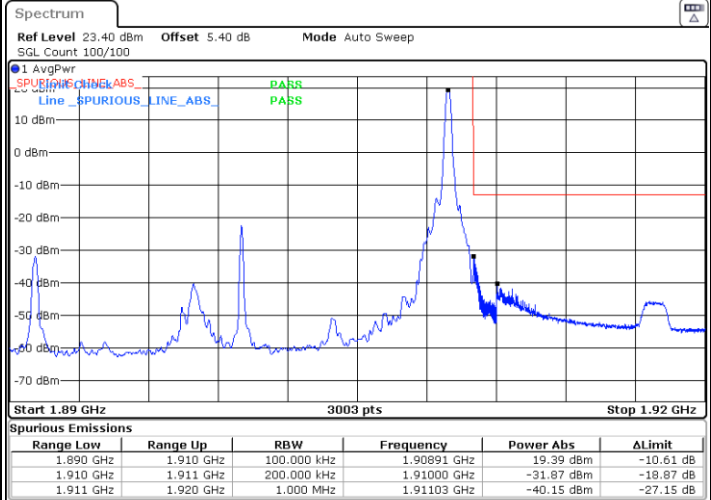
LTE Band 2 / 20MHz / QPSK

Lowest Band Edge / 1 RB



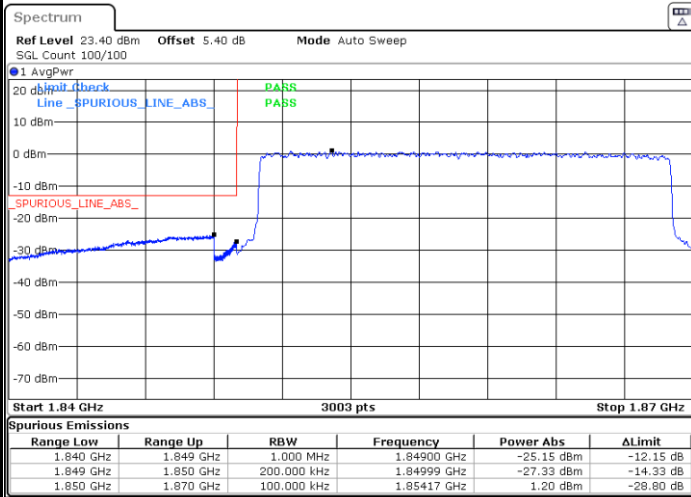
Date: 20 JUN 2019 13:13:49

Highest Band Edge / 1 RB



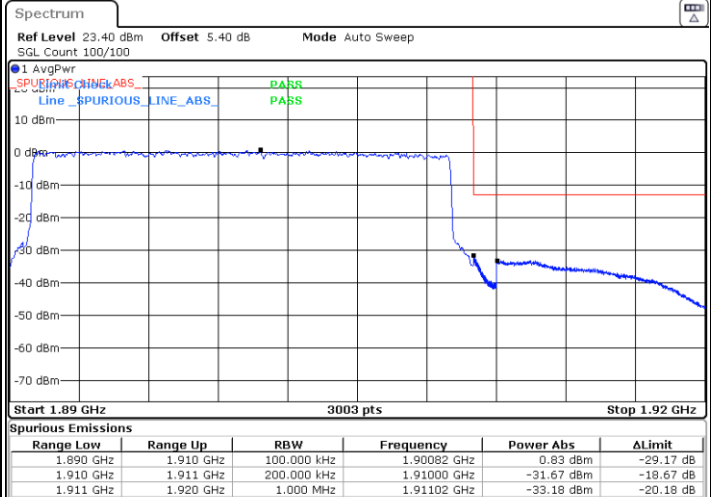
Date: 20 JUN 2019 13:21:59

Lowest Band Edge / Full RB



Date: 20 JUN 2019 13:16:04

Highest Band Edge / Full RB

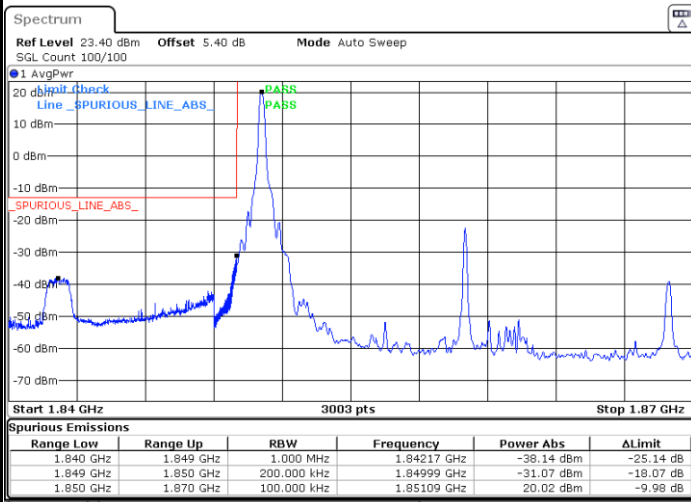


Date: 20 JUN 2019 13:24:14



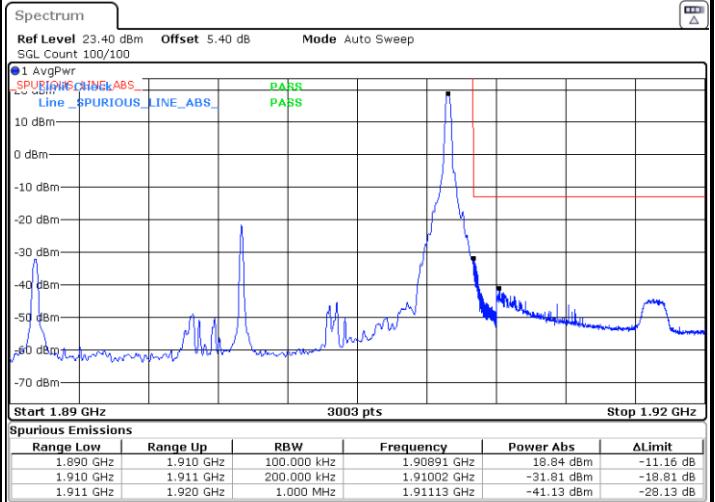
LTE Band 2 / 20MHz / 16QAM

Lowest Band Edge / 1 RB



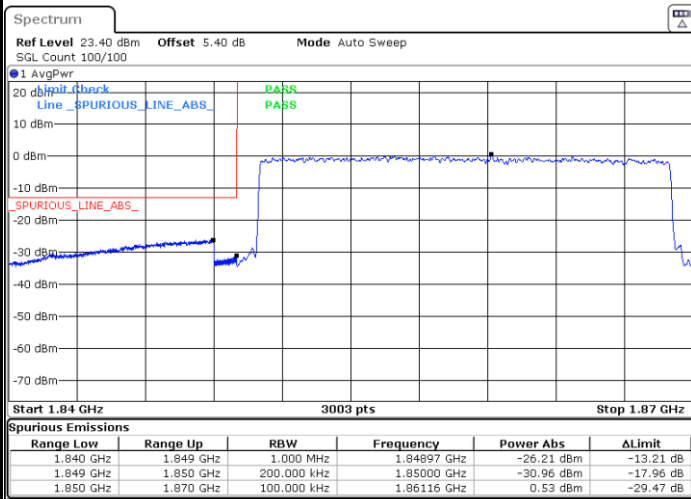
Date: 20 JUN 2019 13:14:57

Highest Band Edge / 1 RB



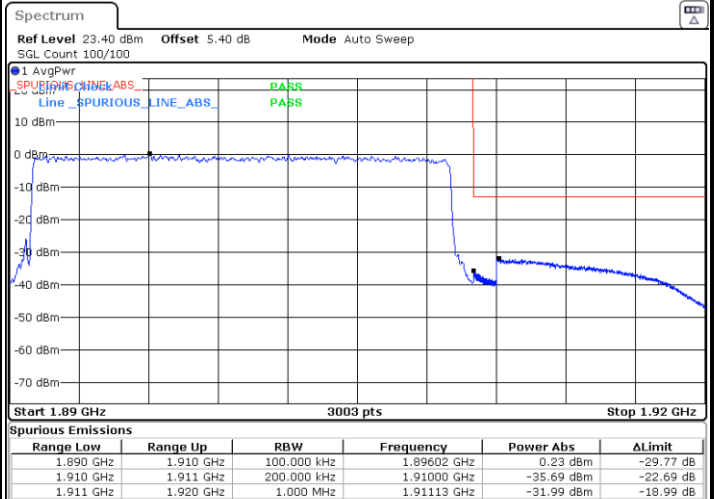
Date: 20 JUN 2019 13:23:06

Lowest Band Edge / Full RB



Date: 20 JUN 2019 13:17:12

Highest Band Edge / Full RB

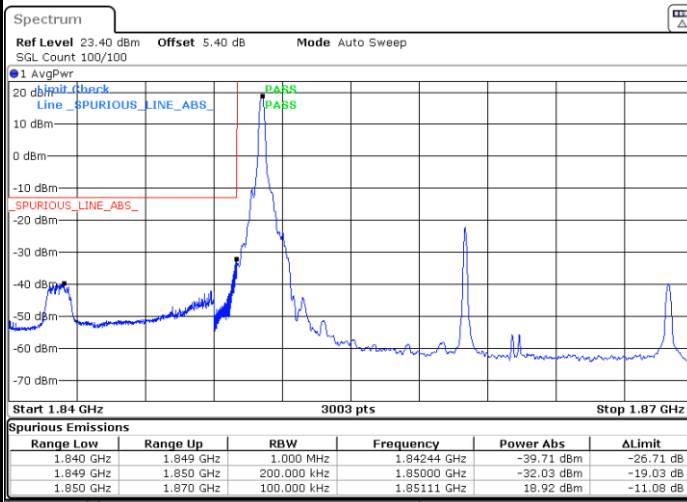


Date: 20 JUN 2019 13:25:21



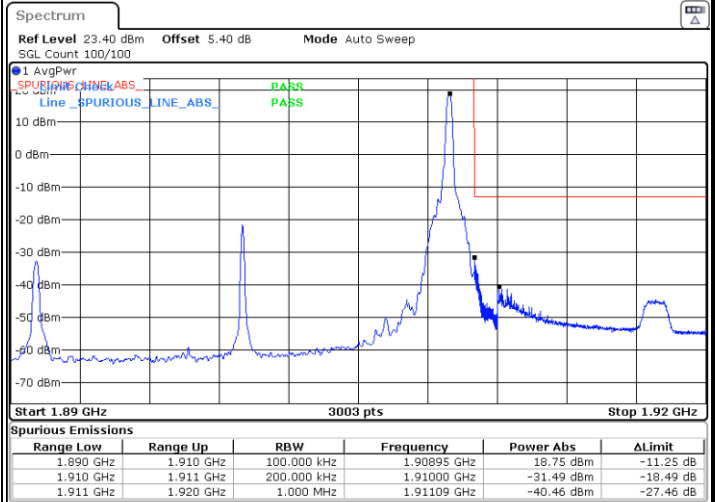
LTE Band 2 / 20MHz / 64QAM

Lowest Band Edge / 1 RB



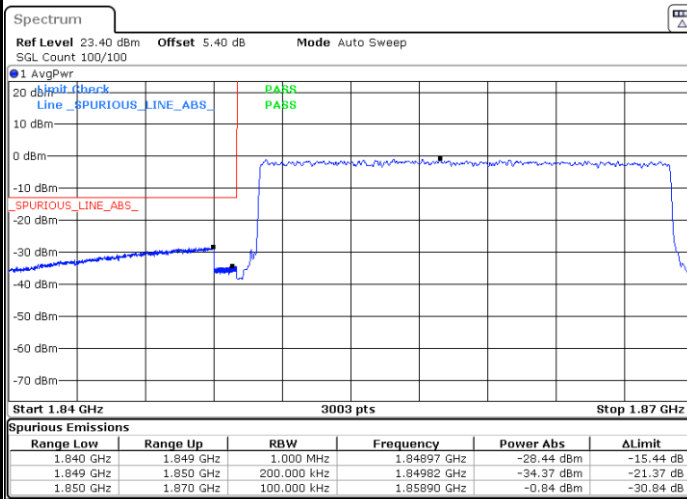
Date: 20 JUN 2019 13:50:49

Highest Band Edge / 1 RB



Date: 20 JUN 2019 13:54:12

Lowest Band Edge / Full RB



Date: 20 JUN 2019 13:51:57

Highest Band Edge / Full RB

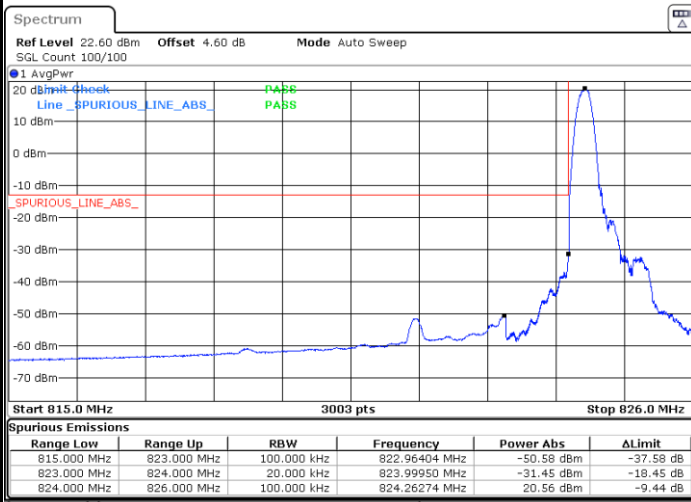


Date: 20 JUN 2019 13:53:04



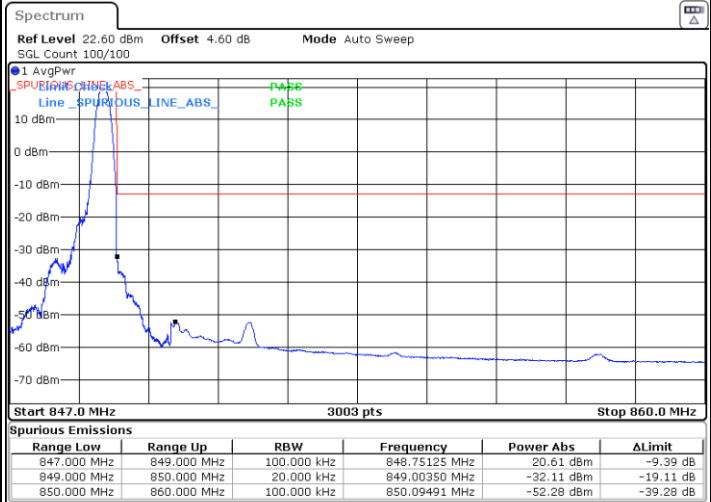
LTE Band 5 / 1.4MHz / QPSK

Lowest Band Edge / 1RB



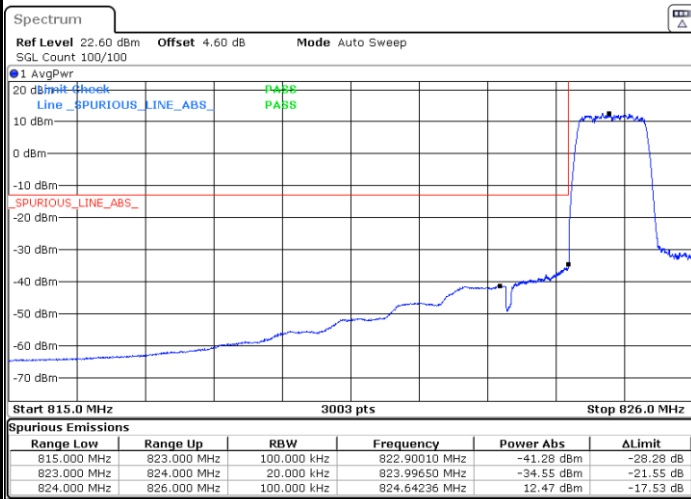
Date: 20 JUN 2019 14:15:21

Highest Band Edge / 1RB



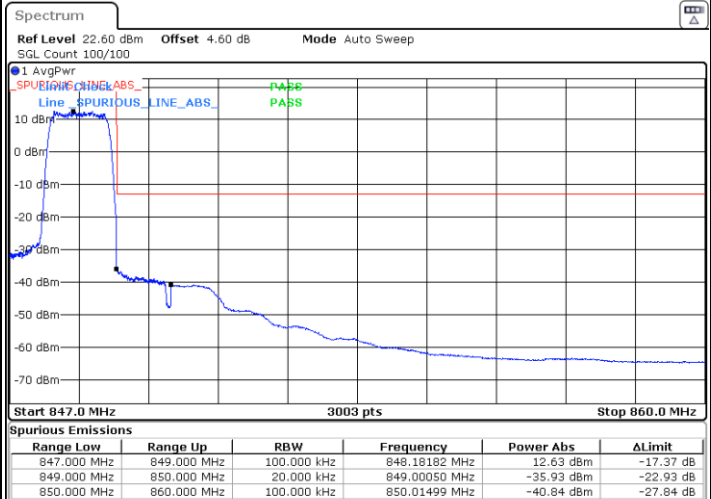
Date: 20 JUN 2019 14:28:44

Lowest Band Edge / Full RB



Date: 20 JUN 2019 14:18:36

Highest Band Edge / Full RB

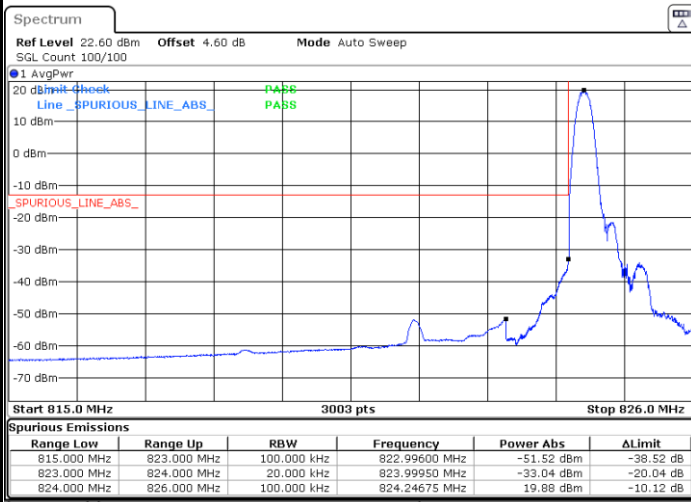


Date: 20 JUN 2019 14:25:29



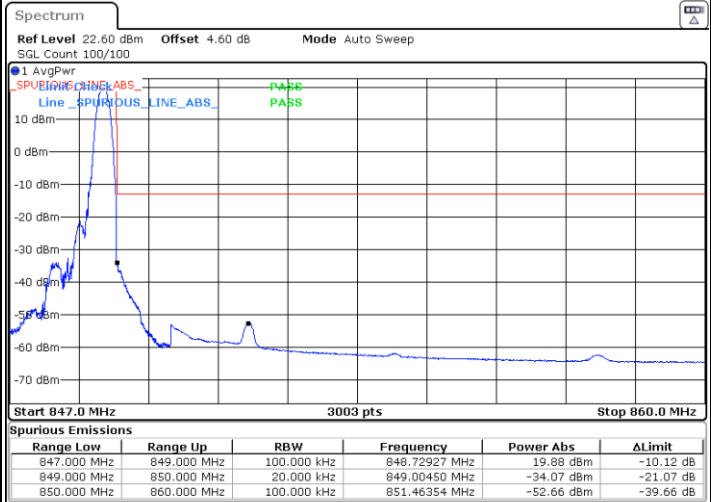
LTE Band 5 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



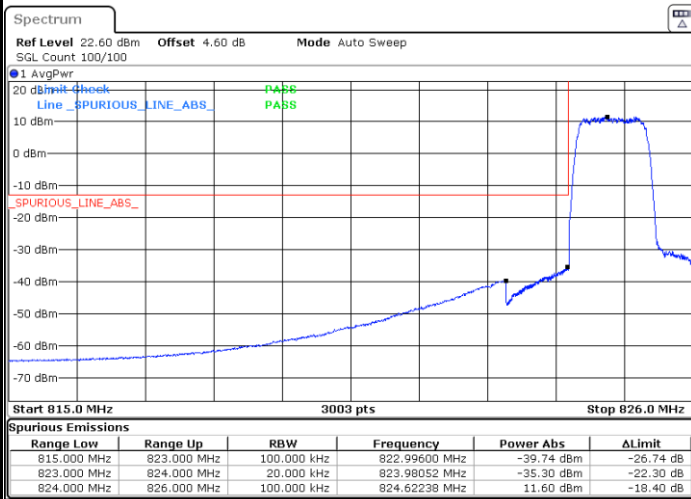
Date: 20 JUN 2019 14:16:58

Highest Band Edge / 1 RB



Date: 20 JUN 2019 14:30:22

Lowest Band Edge / Full RB



Date: 20 JUN 2019 14:20:13

Highest Band Edge / Full RB

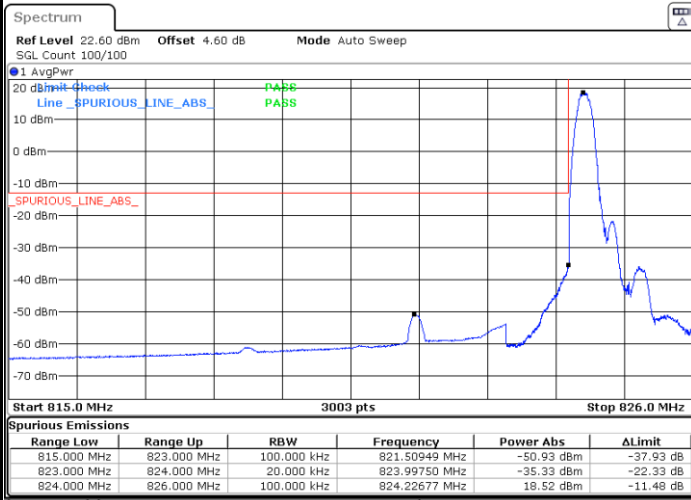


Date: 20 JUN 2019 14:27:07



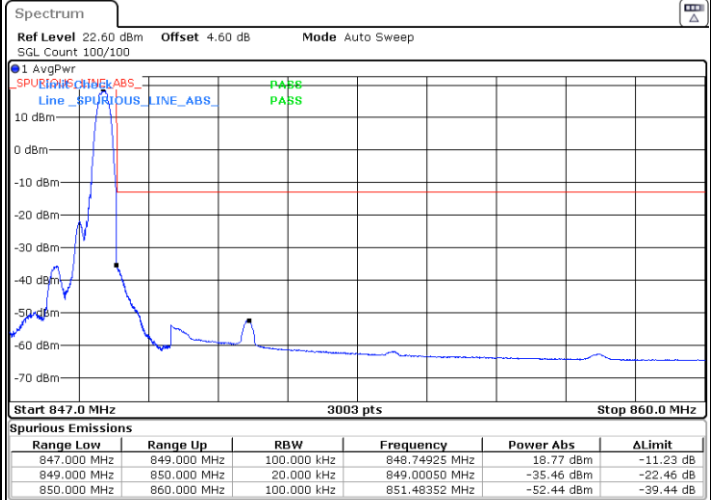
LTE Band 5 / 1.4MHz / 64QAM

Lowest Band Edge / 1 RB



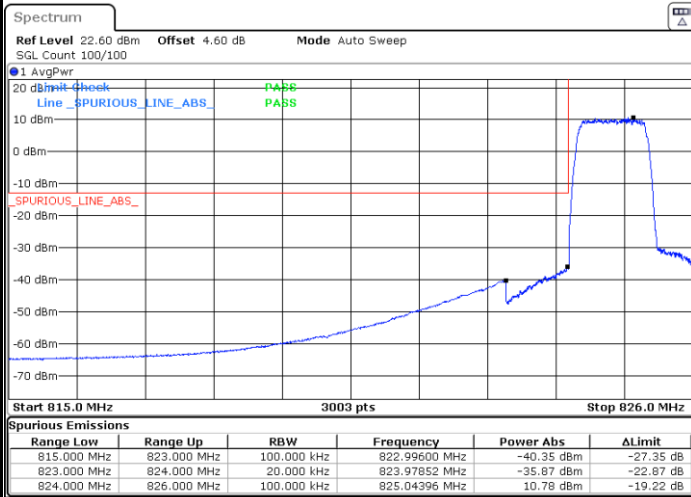
Date: 20 JUN 2019 15:33:41

Highest Band Edge / 1 RB



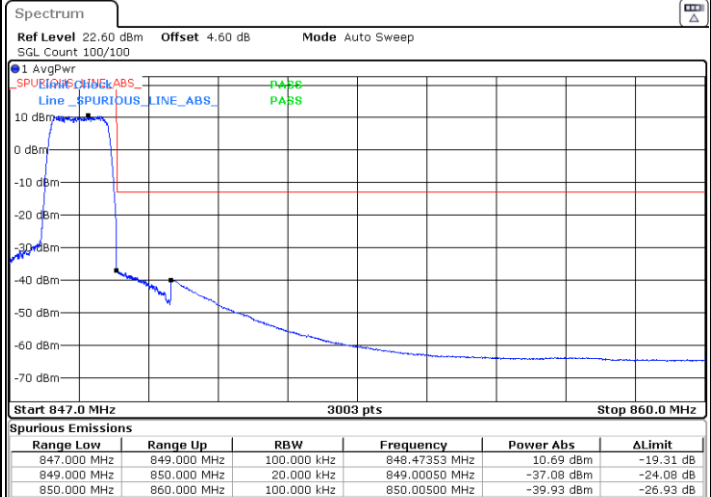
Date: 20 JUN 2019 15:38:45

Lowest Band Edge / Full RB



Date: 20 JUN 2019 15:32:04

Highest Band Edge / Full RB

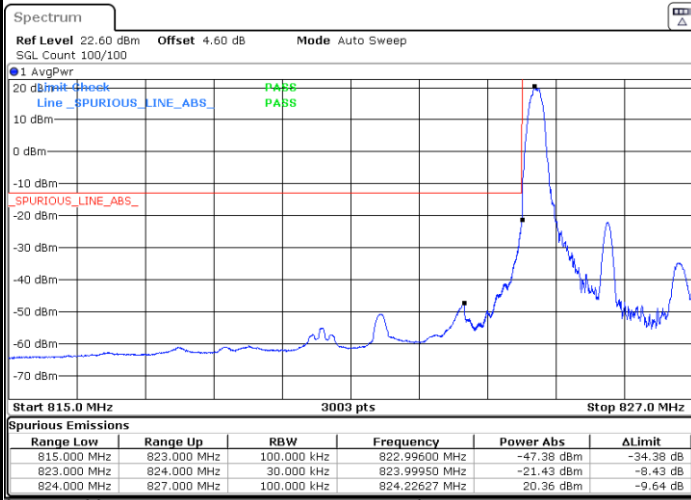


Date: 20 JUN 2019 15:37:08



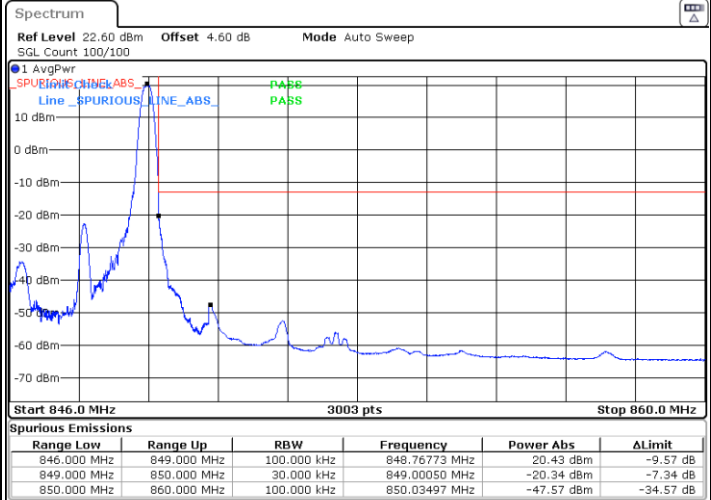
LTE Band 5 / 3MHz / QPSK

Lowest Band Edge / 1RB



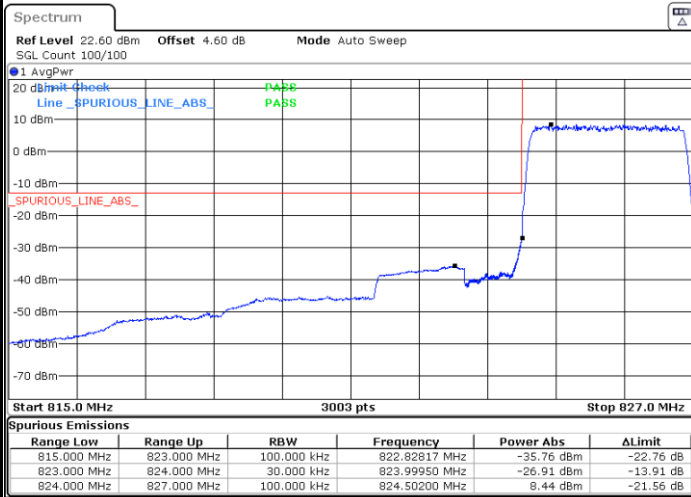
Date: 20 JUN 2019 14:33:59

Highest Band Edge / 1 RB



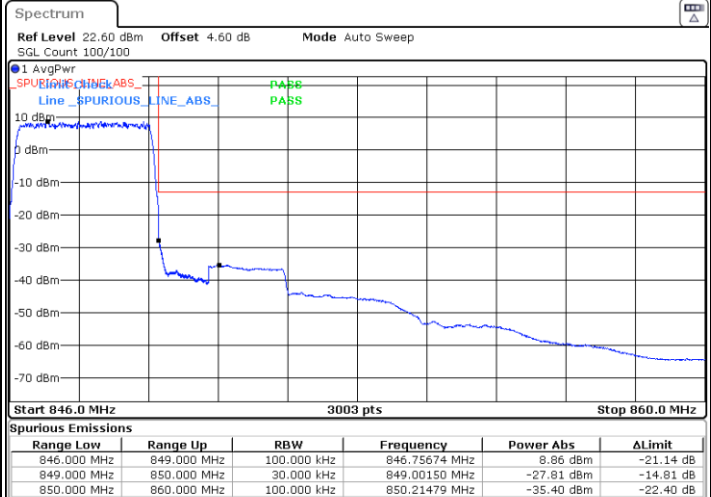
Date: 20 JUN 2019 14:44:08

Lowest Band Edge / Full RB



Date: 20 JUN 2019 14:37:14

Highest Band Edge / Full RB

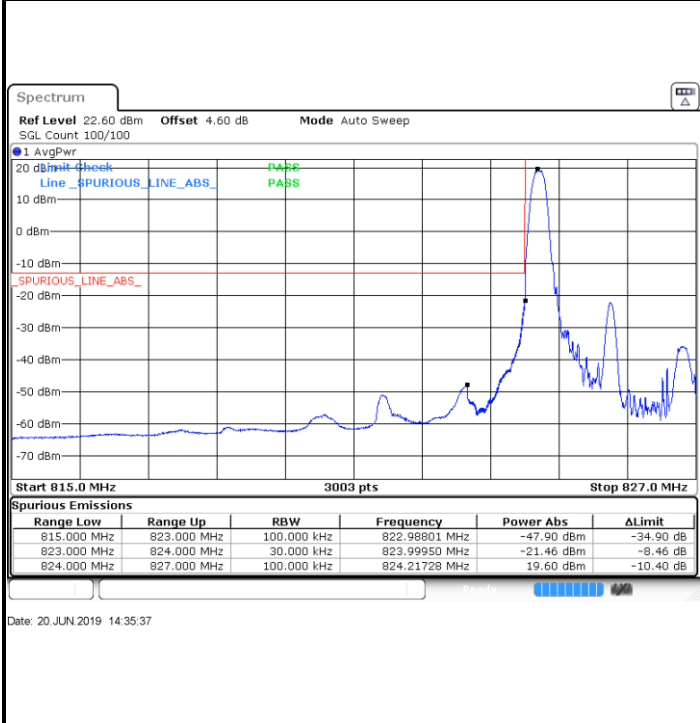


Date: 20 JUN 2019 14:47:23

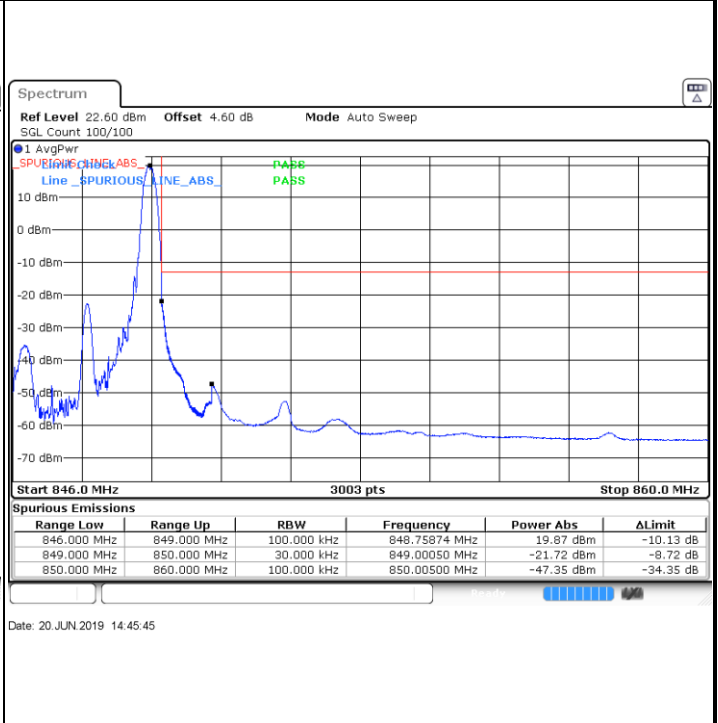


LTE Band 5 / 3MHz / 16QAM

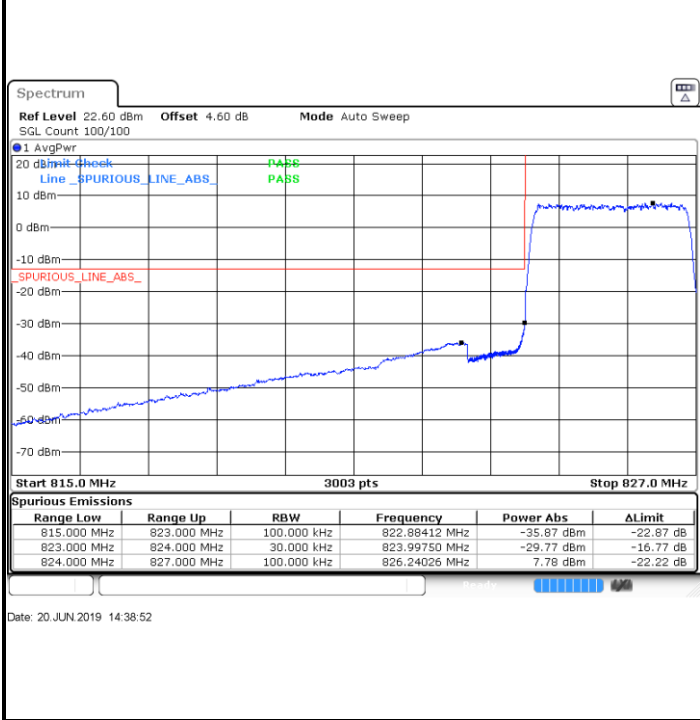
Lowest Band Edge / 1 RB



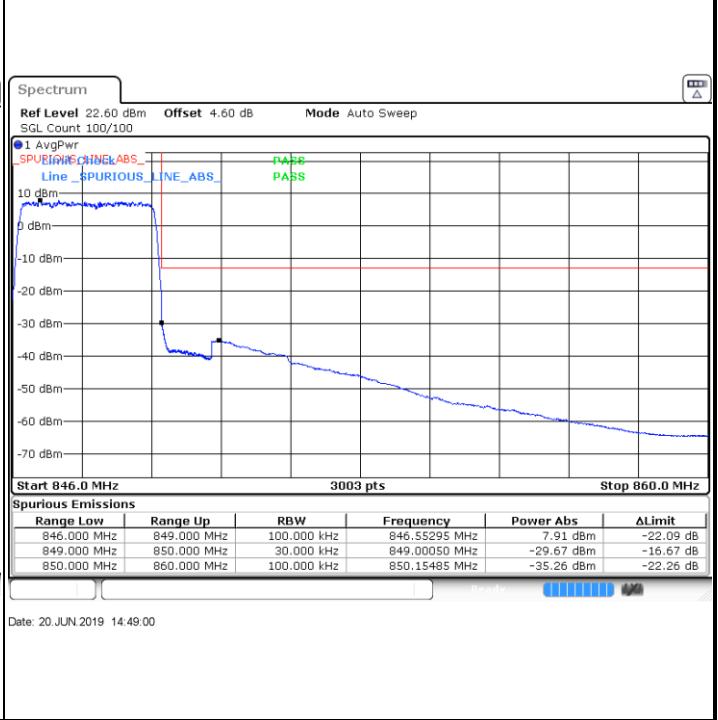
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



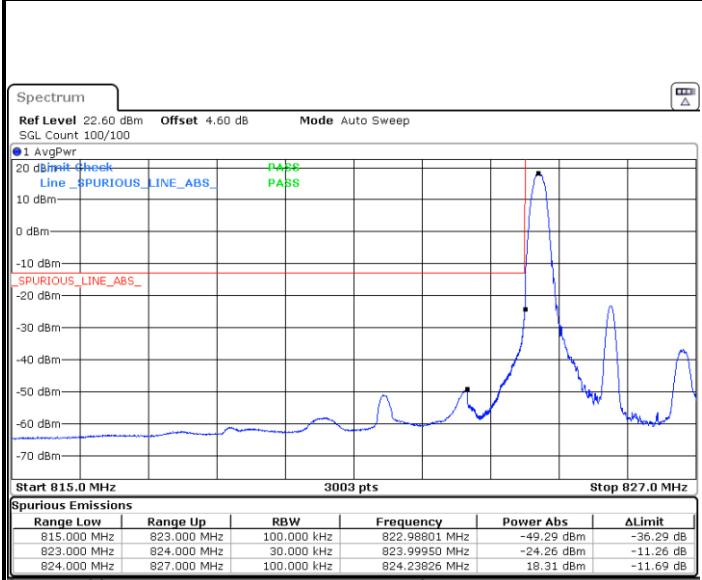
Highest Band Edge / Full RB



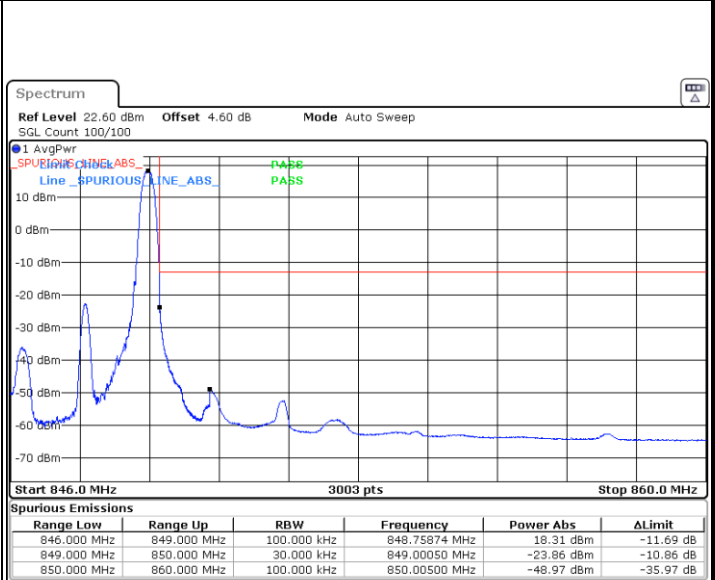


LTE Band 5 / 3MHz / 64QAM

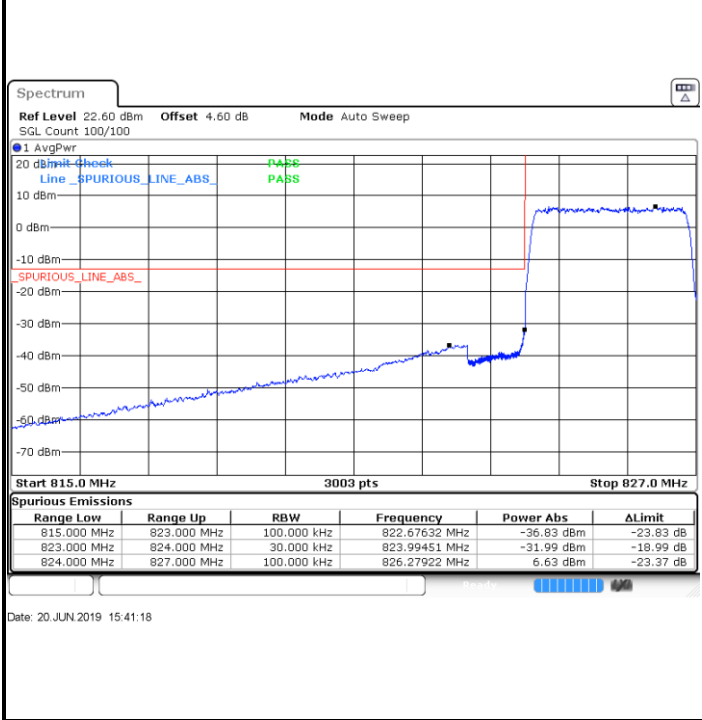
Lowest Band Edge / 1 RB



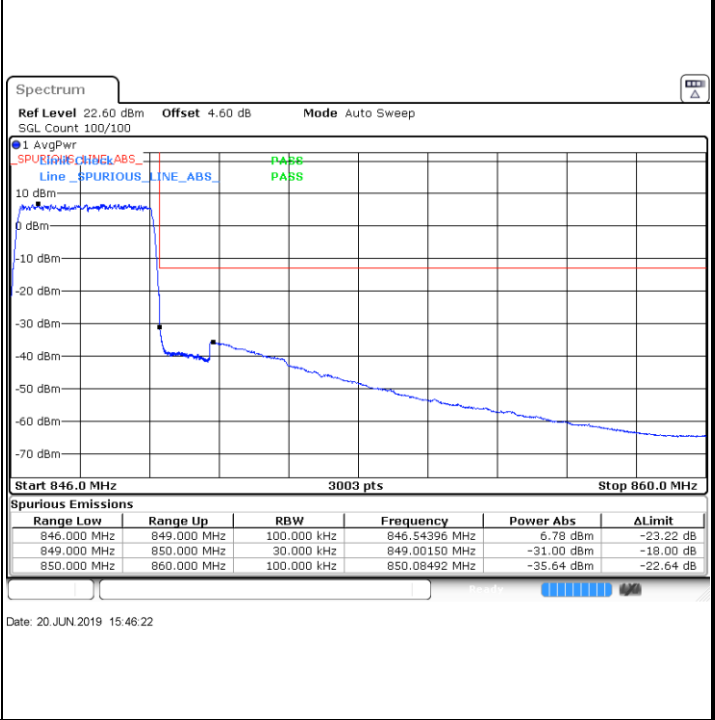
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



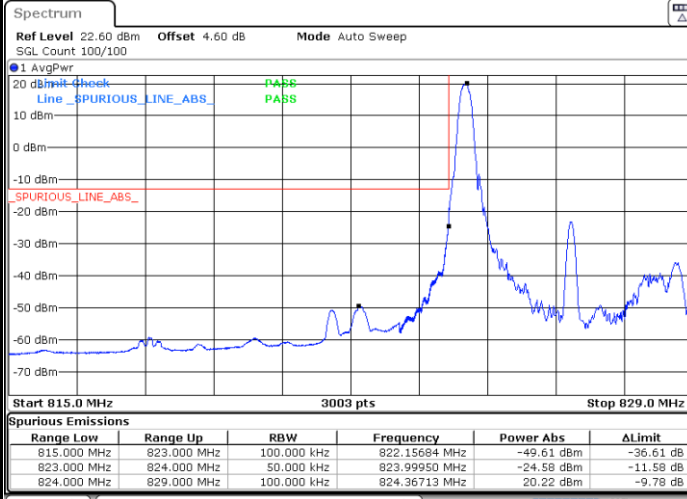
Highest Band Edge / Full RB





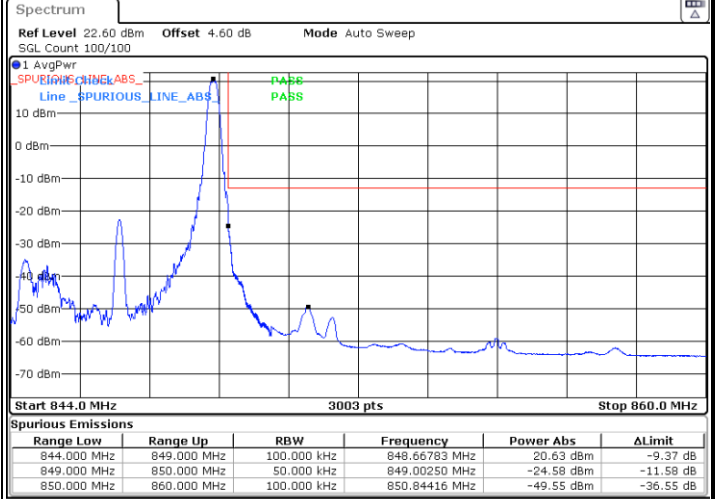
LTE Band 5 / 5MHz / QPSK

Lowest Band Edge / 1 RB



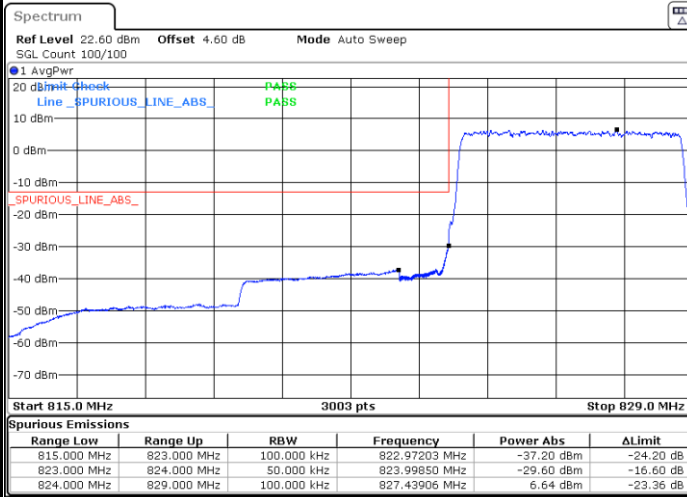
Date: 20 JUN 2019 14:52:27

Highest Band Edge / 1 RB



Date: 20 JUN 2019 15:02:36

Lowest Band Edge / Full RB



Date: 20 JUN 2019 14:55:42

Highest Band Edge / Full RB



Date: 20 JUN 2019 15:05:51