

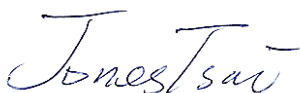
FCC RADIO TEST REPORT

FCC ID : 2AM8R-DCM-NA1-100
Equipment : DCM-NA1-100 (Device Connectivity Module)
Brand Name : DriverI/DCM
Model Name : DCM-NA1-100
Applicant : Netradyne Inc
9191 Towne Centre Drive, Suite 200, San
Diego, CA 92122
Manufacturer : VVDN Technology
B-22, Infocity Sector-34,
Gurgaon-122001, Haryana, India
Standard : 47 CFR Part 2, 22(H), 24(E), 27

The product was received on May 14, 2019 and testing was started from May 29, 2019 and completed on Sep. 03, 2019. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA-603-E and has been in compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

The test results in this partial report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.



Approved by: Jones Tsai

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



Table of Contents

History of this test report.....	3
Summary of Test Result.....	4
1 General Description	5
1.1 Product Feature of Equipment Under Test.....	5
1.2 Modification of EUT	5
1.3 Testing Location	5
1.4 Applicable Standards.....	6
2 Test Configuration of Equipment Under Test	7
2.1 Test Mode.....	7
2.2 Connection Diagram of Test System.....	8
2.3 Support Unit used in test configuration and system	8
2.4 Frequency List of Low/Middle/High Channels	9
3 Conducted Test Items.....	11
3.1 Measuring Instruments	11
3.2 Conducted Output Power	12
3.3 Conducted Band Edge	13
4 Radiated Test Items	14
4.1 Measuring Instruments	14
4.2 Radiated Spurious Emission Measurement	15
5 List of Measuring Equipment.....	16
6 Uncertainty of Evaluation	18
Appendix A. Test Results of Conducted Test	
Appendix B. Test Results of Radiated Test	
Appendix C. Test Setup Photographs	



History of this test report

Report No.	Version	Description	Issued Date
FG951441A	01	Initial issue of report	Aug. 29, 2019
FG951441A	02	Update test data of Conducted Band Edge Measurement and Radiated Spurious Emission	Sep. 04, 2019

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.2	§2.1046	Conducted Output Power	Reporting only	-
3.3	§2.1051 §22.917 (a) §24.238 (a) §27.53 (g) §27.53 (h)	Conducted Band Edge Measurement (Band 4) (Band 12) (Band 25) (Band 26)	Pass	-
4.2	§2.1053 §22.917 (a) §24.238 (a) §27.53 (g) §27.53 (h)	Radiated Spurious Emission (Band 4) (Band 12) (Band 25) (Band 26)	Pass	Under limit 1.57 dB at 3702.000 MHz

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Wii Chang

Report Producer: Aileen Huang



1 General Description

1.1 Product Feature of Equipment Under Test

LTE and GNSS.

Product Specification subjective to this standard	
Antenna Type	LTE: Coupling type (LDS) Antenna GPS / Glonass: Ceramic Patch Antenna

1.2 Modification of EUT

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

1.3 Testing Location

Test Site	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	Sporton Site No. TH05-HY
Test Engineer	Jacky Wang
Temperature	23~25°C
Relative Humidity	52~55%

Note: The test site complies with ANSI C63.4 2014 requirement.

Test Site	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	Sporton Site No. 03CH12-HY
Test Engineer	Jack Cheng, Lance Chiang and Chuan Chu
Temperature	23~24°C
Relative Humidity	63~66%

Note: The test site complies with ANSI C63.4 2014 requirement.

FCC Designation No.: TW1190 and TW0007



1.4 Applicable Standards

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

- ♦ ANSI C63.26-2015
- ♦ ANSI / TIA-603-E
- ♦ 47 CFR Part 2, 22(H), 24(E), 27
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01

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

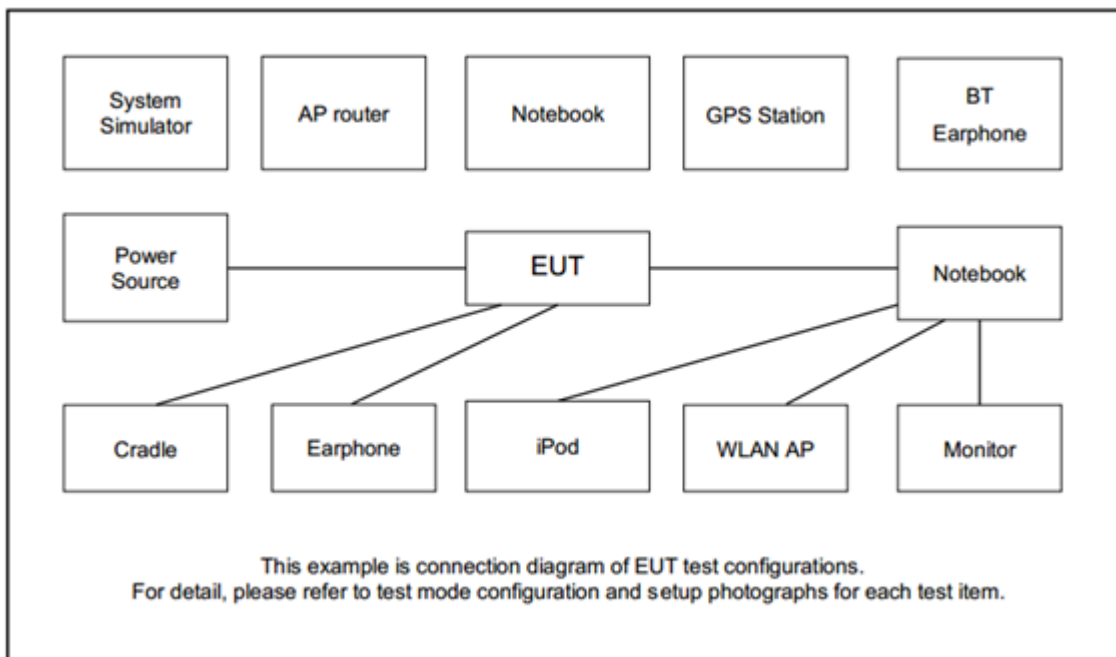
2.1 Test Mode

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.

For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X plane for LTE Band 4, 12 and Z plane for LTE Band 25, 26) were recorded in this report.

Test Items	Band	Bandwidth (MHz)						Modulation		RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	M	H
Max. Output Power	4	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	12	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
	26	v	v	v	v	v	-	v	v	v	v	v	v	v	v
Conducted Band Edge	4	v	v	v	v	v	v	v	v	v		v	v		v
	12	v	v	v	v	-	-	v	v	v		v	v		v
	25	v	v	v	v	v	v	v	v	v		v	v		v
	26	v	v	v	v	v	-	v	v	v		v	v		v
Radiated Spurious Emission	4	Worst Case											v	v	v
	12	Worst Case											v	v	v
	25	Worst Case											v	v	v
	26	Worst Case											v	v	v
Remark	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.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m

2.4 Frequency List of Low/Middle/High Channels

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

LTE Band 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 26 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
15	Channel	26865	26915	26965
	Frequency	831.5	836.5	841.5
10	Channel	26840	26915	26990
	Frequency	829.0	836.5	844.0
5	Channel	26815	26915	27015
	Frequency	826.5	836.5	846.5
3	Channel	26805	26915	27025
	Frequency	825.5	836.5	847.5
1.4	Channel	26797	26915	27033
	Frequency	824.7	836.5	848.3

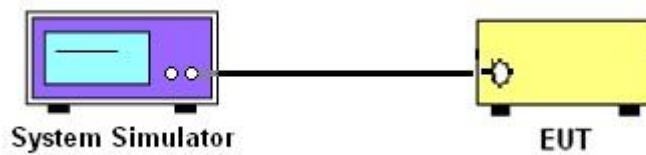
3 Conducted Test Items

3.1 Measuring Instruments

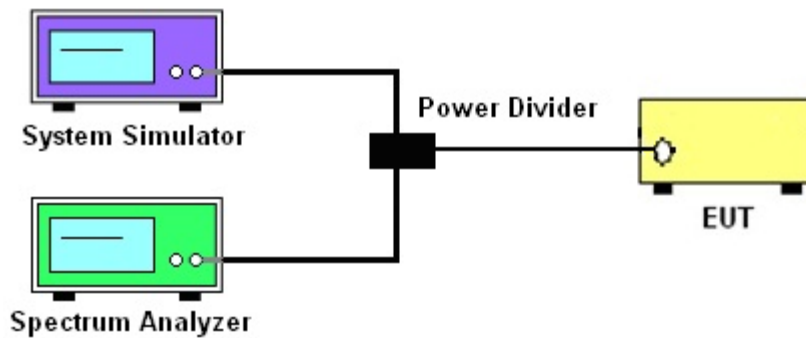
See list of measuring instruments of this test report.

3.1.1 Test Setup

3.1.2 Conducted Output Power



3.1.3 Conducted Band-Edge



3.1.4 Test Result of Conducted Test

Please refer to Appendix A.



3.2 Conducted Output Power

3.2.1 Description of the Conducted Output Power 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.

3.2.2 Test Procedures

1. The transmitter output port was connected to the system simulator.
2. Set EUT at maximum power through the system simulator.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure and record the power level from the system simulator.

3.3 Conducted Band Edge

3.3.1 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 (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.

3.3.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The band edges of low and high channels for the highest RF powers were measured.
3. Set RBW $\geq 1\%$ EBW in the 1MHz band immediately outside and adjacent to the band edge.
4. Beyond the 1 MHz band from the band edge, RBW=1MHz was used.
5. Set spectrum analyzer with RMS detector.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
7. Checked that all the results comply with the emission limit line.

The limit line is derived from $43 + 10\log(P)\text{dB}$ below the transmitter power $P(\text{Watts})$

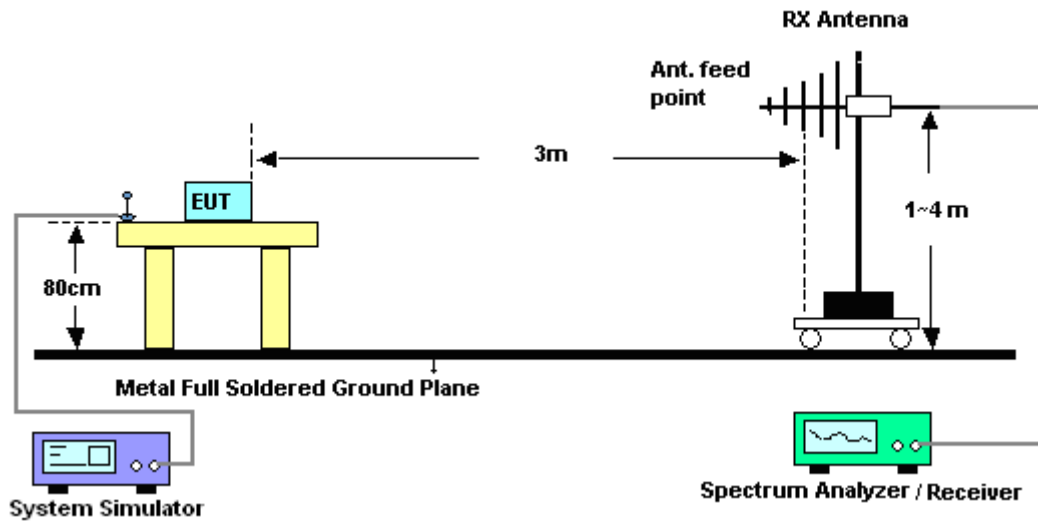
4 Radiated Test Items

4.1 Measuring Instruments

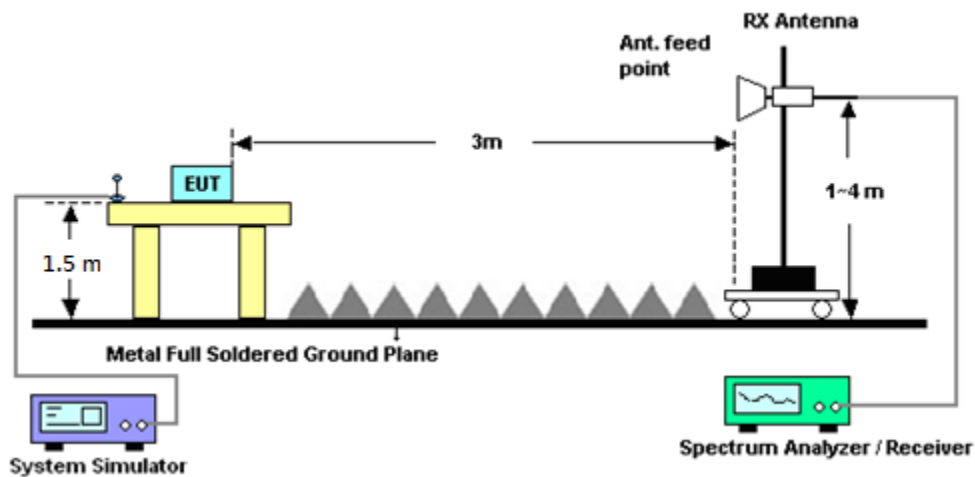
See list of measuring instruments of this test report.

4.1.1 Test Setup

For radiated test from 30MHz to 1GHz



For radiated test above 1GHz



4.1.2 Test Result of Radiated Test

Please refer to Appendix B.

4.2 Radiated Spurious Emission Measurement

4.2.1 Description of Radiated Spurious Emission Measurement

The radiated spurious emission was measured by substitution method according to ANSI / TIA-603-E. 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.

4.2.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 7 and ANSI / TIA-603-E Section 2.2.12.

1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. 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)



5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Jan. 07, 2019	May 31, 2019~ Sep. 03, 2019	Jan. 06, 2020	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D&00800 N1D01N-06	37059&01	30MHz~1GHz	Oct. 13, 2018	May 31, 2019~ Sep. 03, 2019	Oct. 12, 2019	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120D	9120D-132 8	1GHz ~ 18GHz	Oct. 19, 2018	May 31, 2019~ Sep. 03, 2019	Oct. 18, 2019	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120D	9120D-132 6	1GHz ~ 18GHz	Oct. 30, 2018	May 31, 2019~ Sep. 03, 2019	Oct. 29, 2019	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA 9170	BBHA9170 584	18GHz ~ 40GHz	Dec. 05, 2018	May 31, 2019~ Sep. 03, 2019	Dec. 04, 2019	Radiation (03CH12-HY)
Preamplifier	COM-POWER	PA-103	161075	10MHz~1GHz	Mar. 25, 2019	May 31, 2019~ Sep. 03, 2019	Mar. 24, 2020	Radiation (03CH12-HY)
Preamplifier	Agilent	8449B	3008A023 75	1GHz~26.5GHz	May 28, 2018	May 31, 2019~ Sep. 03, 2019	May 27, 2020	Radiation (03CH12-HY)
Preamplifier	Jet-Power	JPA0118-55-3 03	171000180 0055007	1GHz~18GHz	Apr. 01, 2019	May 31, 2019~ Sep. 03, 2019	Mar. 31, 2020	Radiation (03CH12-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz ~ 40GHz	Dec. 06, 2018	May 31, 2019~ Sep. 03, 2019	Dec. 05, 2019	Radiation (03CH12-HY)
EMI Test Receiver	Rohde & Schwarz	ESU26	100390	20Hz~26.5GHz	Dec. 26, 2018	May 31, 2019~ Sep. 03, 2019	Dec. 25, 2019	Radiation (03CH12-HY)
Signal Generator	Rohde & Schwarz	SMB100A	175727	100kHz~40GHz	Dec. 23, 2018	May 31, 2019~ Sep. 03, 2019	Dec. 22, 2019	Radiation (03CH12-HY)
Filter	Wainwright	WLK4-1000-1 530-6000-40S S	SN11	1 GHz Lowpass	Sep. 16, 2018	May 31, 2019~ Sep. 03, 2019	Sep. 15, 2019	Radiation (03CH12-HY)
Filter	Wainwright	WHKX12-108 0-1200-1500- 60SS	SN2	1.2G High Pass	Sep. 16, 2018	May 31, 2019~ Sep. 03, 2019	Sep. 15, 2019	Radiation (03CH12-HY)
Filter	Wainwright	WHKX12-270 0-3000-18000 -60ST	SN3	3GHz High Pass	Jul. 05, 2018	May 31, 2019	Jul. 04, 2019	Radiation (03CH12-HY)
Filter	Wainwright	WHKX12-270 0-3000-18000 -60ST	SN2	3GHz High Pass	Jul. 15, 2019	Sep. 03, 2019	Jul. 14, 2020	Radiation (03CH12-HY)
Filter	Woken	WHKX8-5272. 5-6750-18000 -40ST	SN2	6.75G Highpass	Sep. 17, 2018	May 31, 2019~ Sep. 03, 2019	Sep.16, 2019	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126E	0058/126E	30M-18G	Mar. 13, 2019	May 31, 2019~ Sep. 03, 2019	Mar. 12, 2020	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30M~40GHz	Oct. 16, 2018	May 31, 2019~ Sep. 03, 2019	Oct. 15, 2019	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	800740/2	30M~40GHz	Oct. 16, 2018	May 31, 2019~ Sep. 03, 2019	Oct. 15, 2019	Radiation (03CH12-HY)
Antenna Mast	EMEC	AM-BS-4500- B	N/A	1m~4m	N/A	May 31, 2019~ Sep. 03, 2019	N/A	Radiation (03CH12-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	May 31, 2019~ Sep. 03, 2019	N/A	Radiation (03CH12-HY)
Software	Audix	E3 6.2009-8-24	RK-00098 9	N/A	N/A	May 31, 2019~ Sep. 03, 2019	N/A	Radiation (03CH12-HY)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Base Station	Anritsu	MT8820C	6201026480	-	Dec. 24, 2018	May 29, 2019	Dec. 23, 2019	Conducted (TH05-HY)
Base Station (Measure)	Anritsu	MT8821C	6201664755	GSM / GPRS / WCDMA / LTE FDD/TDD with 44) / LTE-3CC DLCA, 2CC ULCA	Mar. 03, 2019	Sep. 02, 2019	Mar. 02, 2020	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV40	101397	10Hz~40GHz	Nov. 13, 2018	Sep. 02, 2019	Nov. 12, 2019	Conducted (TH05-HY)
Coupler	Warison	20dB 25W SMA Directional Coupler	#A	1-18GHz	Jan. 14, 2019	Sep. 02, 2019	Jan. 13, 2020	Conducted (TH05-HY)



6 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.36
---	------

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.70
---	------

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.98
---	------



Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)

LTE Band 25 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	22.62	22.79	22.49
20	1	49		22.72	22.68	22.38
20	1	99		22.78	22.65	22.42
20	50	0		21.47	21.59	21.33
20	50	24		21.39	21.46	21.26
20	50	50		21.51	21.52	21.25
20	100	0		21.47	21.47	21.30
20	1	0	16-QAM	21.60	21.65	21.53
20	1	49		21.69	21.69	21.40
20	1	99		21.74	21.62	21.51
20	50	0		20.44	20.50	20.27
20	50	24		20.42	20.49	20.29
20	50	50		20.49	20.56	20.20
20	100	0		20.45	20.49	20.32
15	1	0	QPSK	22.54	22.66	22.33
15	1	37		22.59	22.57	22.27
15	1	74		22.56	22.57	22.42
15	36	0		21.40	21.47	21.28
15	36	20		21.47	21.47	21.18
15	36	39		21.32	21.52	21.17
15	75	0		21.31	21.38	21.24
15	1	0	16-QAM	21.24	21.70	21.47
15	1	37		21.61	21.58	21.14
15	1	74		21.26	21.49	21.40
15	36	0		20.39	20.50	20.30
15	36	20		20.47	20.46	20.20
15	36	39		20.32	20.57	20.22
15	75	0		20.31	20.40	20.18



LTE Band 25 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.67	22.60	22.26
10	1	25		22.66	22.58	22.36
10	1	49		22.69	22.54	22.35
10	25	0		21.55	21.59	21.21
10	25	12		21.52	21.48	21.32
10	25	25		21.52	21.62	21.19
10	50	0		21.30	21.37	21.13
10	1	0	16-QAM	21.49	21.65	21.30
10	1	25		21.49	21.66	21.34
10	1	49		21.56	21.57	21.35
10	25	0		20.65	20.63	20.31
10	25	12		20.53	20.51	20.35
10	25	25		20.50	20.55	20.24
10	50	0		20.41	20.38	20.16
5	1	0	QPSK	22.22	22.40	22.14
5	1	12		22.35	22.36	22.00
5	1	24		22.40	22.32	22.06
5	12	0		21.16	21.26	20.95
5	12	7		21.03	21.15	20.91
5	12	13		21.11	21.16	20.89
5	25	0		21.09	21.07	20.93
5	1	0	16-QAM	21.23	21.33	21.18
5	1	12		21.36	21.38	21.02
5	1	24		21.36	21.29	21.12
5	12	0		20.04	20.19	19.94
5	12	7		20.04	20.16	19.99
5	12	13		20.13	20.25	19.83
5	25	0		20.12	20.18	19.98



LTE Band 25 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.54	22.58	22.49
3	1	8		22.69	22.67	22.30
3	1	14		22.76	22.55	22.35
3	8	0		21.39	21.54	21.25
3	8	4		21.36	21.36	21.19
3	8	7		21.51	21.52	21.23
3	15	0		21.38	21.43	21.28
3	1	0	16-QAM	21.58	21.65	21.49
3	1	8		21.65	21.60	21.35
3	1	14		21.65	21.61	21.41
3	8	0		20.37	20.43	20.24
3	8	4		20.35	20.42	20.24
3	8	7		20.46	20.54	20.10
3	15	0		20.35	20.40	20.30
1.4	1	0	QPSK	22.59	22.61	22.48
1.4	1	3		22.66	22.65	22.38
1.4	1	5		22.78	22.58	22.38
1.4	3	0		21.73	21.90	21.66
1.4	3	1		21.65	21.80	21.50
1.4	3	3		21.76	21.86	21.50
1.4	6	0		21.40	21.38	21.26
1.4	1	0	16-QAM	21.59	21.58	21.51
1.4	1	3		21.63	21.69	21.32
1.4	1	5		21.70	21.60	21.43
1.4	3	0		20.76	20.83	20.56
1.4	3	1		20.74	20.79	20.62
1.4	3	3		20.76	20.89	20.50
1.4	6	0		20.40	20.47	20.25



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	22.66	22.67	22.84
20	1	49		22.72	22.73	22.79
20	1	99		22.74	22.69	22.72
20	50	0		21.48	21.49	21.49
20	50	24		21.48	21.53	21.48
20	50	50		21.43	21.58	21.55
20	100	0		21.53	21.60	21.54
20	1	0	16-QAM	21.61	21.64	21.65
20	1	49		21.57	21.76	21.67
20	1	99		21.49	21.74	21.53
20	50	0		20.40	20.49	20.51
20	50	24		20.39	20.53	20.57
20	50	50		20.45	20.47	20.58
20	100	0		20.54	20.59	20.55
15	1	0	QPSK	22.65	22.67	22.74
15	1	37		22.69	22.71	22.74
15	1	74		22.63	22.69	22.77
15	36	0		21.39	21.60	21.62
15	36	20		21.54	21.59	21.54
15	36	39		21.48	21.58	21.49
15	75	0		21.47	21.52	21.58
15	1	0	16-QAM	21.74	21.61	21.52
15	1	37		21.75	21.72	21.62
15	1	74		21.71	21.63	21.79
15	36	0		20.44	20.58	20.67
15	36	20		20.59	20.60	20.59
15	36	39		20.53	20.55	20.63
15	75	0		20.38	20.52	20.52



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.65	22.67	22.77
10	1	25		22.55	22.74	22.71
10	1	49		22.68	22.76	22.77
10	25	0		21.48	21.62	21.62
10	25	12		21.62	21.66	21.61
10	25	25		21.60	21.73	21.60
10	50	0		21.44	21.56	21.47
10	1	0	16-QAM	21.76	21.76	21.92
10	1	25		21.56	21.69	21.83
10	1	49		21.66	22.05	21.65
10	25	0		20.52	20.64	20.70
10	25	12		20.66	20.70	20.64
10	25	25		20.66	20.64	20.72
10	50	0		20.48	20.52	20.55
5	1	0	QPSK	22.69	22.69	22.74
5	1	12		22.65	22.67	22.77
5	1	24		22.59	22.78	22.68
5	12	0		21.64	21.80	21.75
5	12	7		21.61	21.76	21.66
5	12	13		21.63	21.69	21.66
5	25	0		21.58	21.59	21.65
5	1	0	16-QAM	21.58	21.65	21.83
5	1	12		21.46	21.57	21.71
5	1	24		21.63	21.69	21.47
5	12	0		20.68	20.70	20.84
5	12	7		20.71	20.67	20.83
5	12	13		20.57	20.74	20.65
5	25	0		20.62	20.71	20.68



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.81	22.65	22.69
3	1	8		22.69	22.70	22.69
3	1	14		22.55	22.75	22.81
3	8	0		21.69	21.69	21.86
3	8	4		21.71	21.78	21.74
3	8	7		21.68	21.79	21.69
3	15	0		21.64	21.70	21.67
3	1	0	16-QAM	21.60	21.59	21.78
3	1	8		21.56	21.75	21.67
3	1	14		21.74	21.63	21.74
3	8	0		20.74	20.62	20.83
3	8	4		20.71	20.73	20.66
3	8	7		20.70	20.77	20.81
3	15	0		20.69	20.74	20.68
1.4	1	0	QPSK	22.75	22.74	22.67
1.4	1	3		22.67	22.69	22.72
1.4	1	5		22.69	22.72	22.71
1.4	3	0		22.65	22.68	22.66
1.4	3	1		22.64	22.68	22.74
1.4	3	3		22.66	22.66	22.66
1.4	6	0		21.78	21.78	21.69
1.4	1	0	16-QAM	21.71	21.60	21.63
1.4	1	3		21.79	21.71	21.70
1.4	1	5		21.57	21.73	21.66
1.4	3	0		21.66	21.73	21.69
1.4	3	1		21.79	21.67	21.67
1.4	3	3		21.74	21.74	21.69
1.4	6	0		20.72	20.75	20.77



LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.68	22.85	22.94
10	1	25		22.88	22.77	22.81
10	1	49		22.88	22.82	22.78
10	25	0		21.71	21.82	21.71
10	25	12		21.76	21.71	21.62
10	25	25		21.79	21.59	21.78
10	50	0		21.50	21.44	21.63
10	1	0	16-QAM	21.54	21.89	21.67
10	1	25		22.03	21.53	21.90
10	1	49		21.68	21.53	21.94
10	25	0		20.93	20.76	20.79
10	25	12		20.75	20.80	20.85
10	25	25		20.95	20.74	20.97
10	50	0		20.61	20.66	20.69
5	1	0	QPSK	22.61	22.79	22.73
5	1	12		22.58	22.72	22.67
5	1	24		22.91	22.81	22.82
5	12	0		21.80	21.80	21.94
5	12	7		21.82	21.92	22.03
5	12	13		21.81	21.65	21.82
5	25	0		21.59	21.68	21.77
5	1	0	16-QAM	21.78	21.91	21.73
5	1	12		21.51	21.60	21.80
5	1	24		21.84	21.74	21.53
5	12	0		20.84	20.85	21.00
5	12	7		20.94	20.74	20.95
5	12	13		21.00	20.90	21.02
5	25	0		20.80	20.83	20.91



LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.69	22.80	22.80
3	1	8		22.60	22.64	22.69
3	1	14		22.68	22.77	22.75
3	8	0		21.89	21.90	21.97
3	8	4		21.69	21.89	21.93
3	8	7		21.71	21.80	21.87
3	15	0		21.59	21.82	21.91
3	1	0	16-QAM	21.88	21.87	21.90
3	1	8		21.55	21.57	21.67
3	1	14		21.92	21.63	21.87
3	8	0		20.89	20.83	20.96
3	8	4		20.87	20.79	21.00
3	8	7		20.77	20.95	21.01
3	15	0		20.78	20.80	21.01
1.4	1	0	QPSK	22.74	22.72	22.84
1.4	1	3		22.79	22.73	22.76
1.4	1	5		22.89	22.66	22.65
1.4	3	0		22.67	22.72	22.65
1.4	3	1		22.67	22.80	22.63
1.4	3	3		22.65	22.59	22.69
1.4	6	0		21.75	21.96	21.75
1.4	1	0	16-QAM	21.83	21.89	21.80
1.4	1	3		21.66	21.69	21.84
1.4	1	5		21.81	21.77	21.74
1.4	3	0		21.95	21.79	21.62
1.4	3	1		21.84	21.80	21.83
1.4	3	3		21.65	21.87	21.90
1.4	6	0		20.91	20.90	20.89



LTE Band 26 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	22.80	23.06	22.88
15	1	37		22.85	22.93	22.82
15	1	74		22.83	22.87	22.96
15	36	0		21.61	21.74	21.65
15	36	20		21.66	21.70	21.55
15	36	39		21.62	21.62	21.50
15	75	0		21.59	21.59	21.54
15	1	0	16-QAM	21.90	21.68	21.84
15	1	37		21.95	21.81	21.68
15	1	74		21.73	21.74	22.35
15	36	0		20.70	20.76	20.62
15	36	20		20.65	20.58	20.50
15	36	39		20.59	20.68	20.44
15	75	0		20.59	20.57	20.46
10	1	0	QPSK	22.84	22.88	22.84
10	1	25		22.79	22.89	22.58
10	1	49		22.90	22.60	23.02
10	25	0		21.71	21.84	21.68
10	25	12		21.72	21.83	21.57
10	25	25		21.78	21.82	21.61
10	50	0		21.55	21.61	21.46
10	1	0	16-QAM	22.12	21.88	21.78
10	1	25		21.75	21.84	21.66
10	1	49		21.68	21.72	22.30
10	25	0		20.80	20.79	20.58
10	25	12		20.70	20.78	20.60
10	25	25		20.75	20.77	20.65
10	50	0		20.61	20.58	20.47



LTE Band 26 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.89	22.98	22.68
5	1	12		22.88	22.85	22.65
5	1	24		22.89	22.89	22.85
5	12	0		21.92	21.88	21.71
5	12	7		21.91	21.85	21.70
5	12	13		21.83	21.84	21.82
5	25	0		21.84	21.74	21.60
5	1	0	16-QAM	21.76	21.80	21.71
5	1	12		21.71	21.86	21.72
5	1	24		21.82	21.90	21.61
5	12	0		20.88	20.82	20.65
5	12	7		20.87	20.83	20.77
5	12	13		20.79	20.94	20.88
5	25	0		20.79	20.79	20.66
3	1	0	QPSK	22.97	22.96	22.71
3	1	8		22.96	23.05	22.75
3	1	14		22.83	22.86	22.79
3	8	0		22.00	21.94	21.78
3	8	4		21.96	21.92	21.79
3	8	7		21.90	21.84	21.89
3	15	0		21.86	21.91	21.76
3	1	0	16-QAM	21.86	22.04	21.69
3	1	8		21.83	21.73	21.59
3	1	14		21.82	21.85	21.67
3	8	0		20.96	20.93	20.81
3	8	4		21.00	20.92	20.73
3	8	7		20.89	20.89	20.79
3	15	0		20.89	20.89	20.79

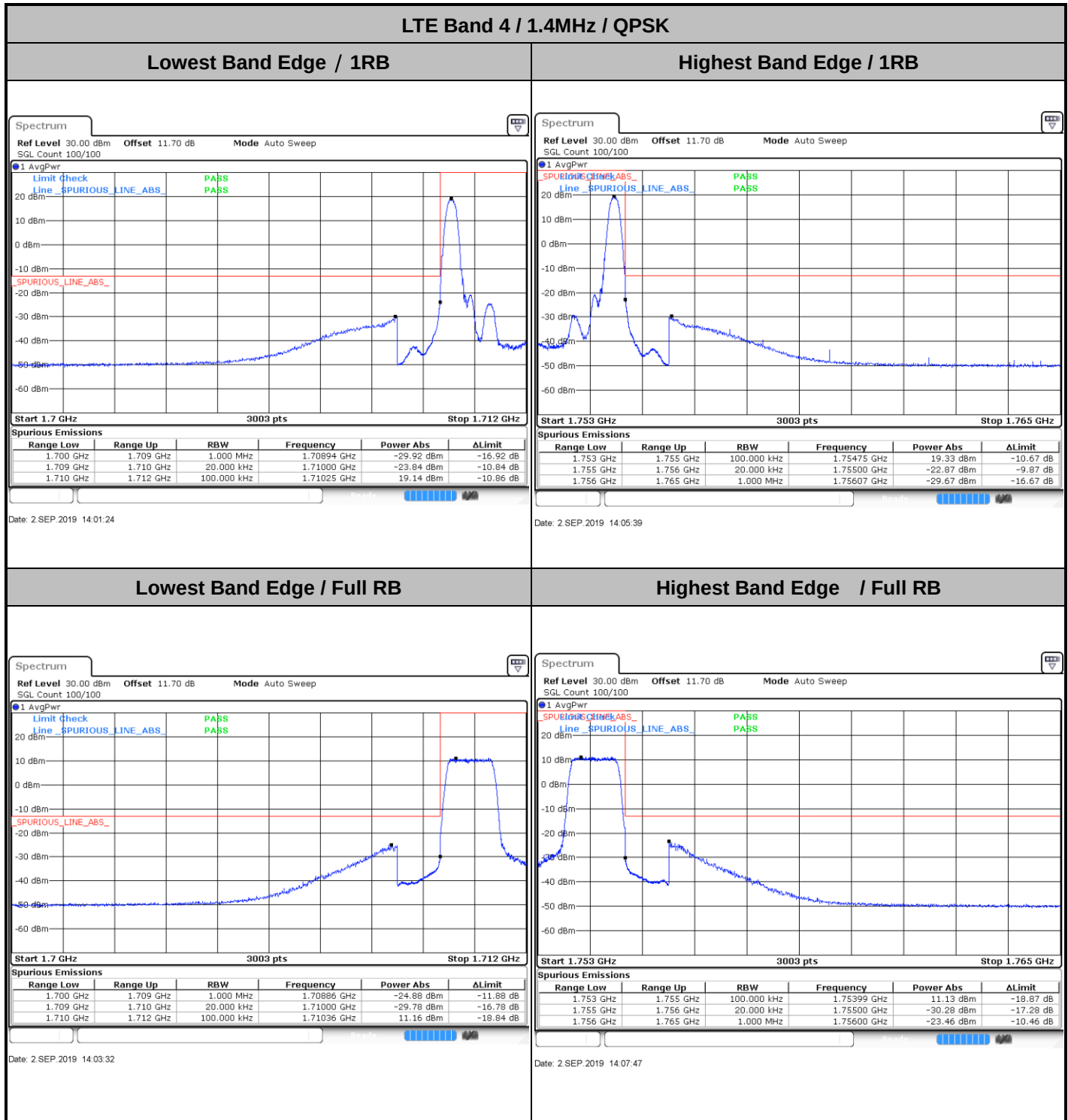


LTE Band 26 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	22.88	22.91	22.79
1.4	1	3		22.82	22.88	22.82
1.4	1	5		22.92	22.79	22.93
1.4	3	0		22.86	22.88	22.80
1.4	3	1		22.83	22.92	22.76
1.4	3	3		22.98	22.80	22.90
1.4	6	0		21.95	21.91	21.83
1.4	1	0	16-QAM	21.78	21.90	21.83
1.4	1	3		21.78	21.75	21.78
1.4	1	5		21.93	21.81	21.81
1.4	3	0		21.84	21.98	21.71
1.4	3	1		21.86	21.88	21.71
1.4	3	3		21.95	21.88	21.58
1.4	6	0		20.93	20.95	20.93



LTE Band 4

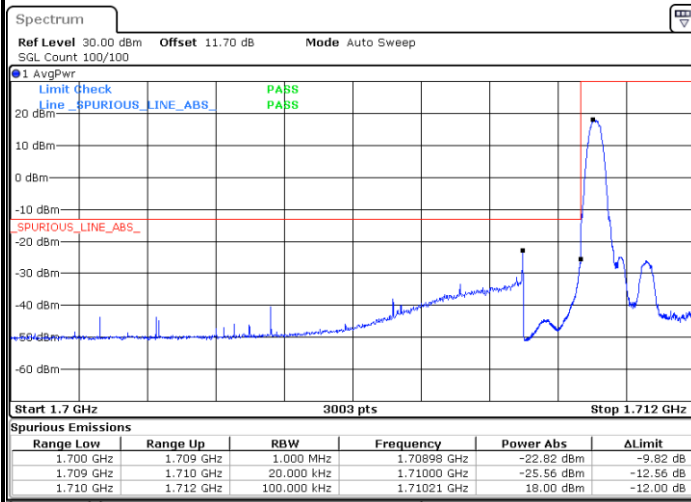
Conducted Band Edge



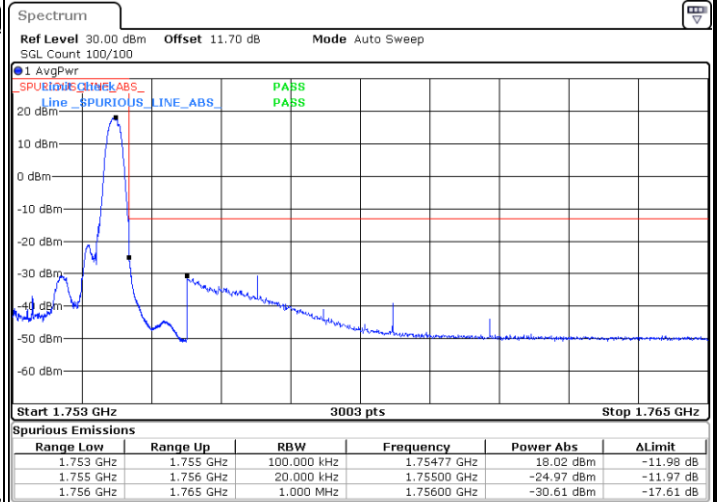


LTE Band 4 / 1.4MHz / 16QAM

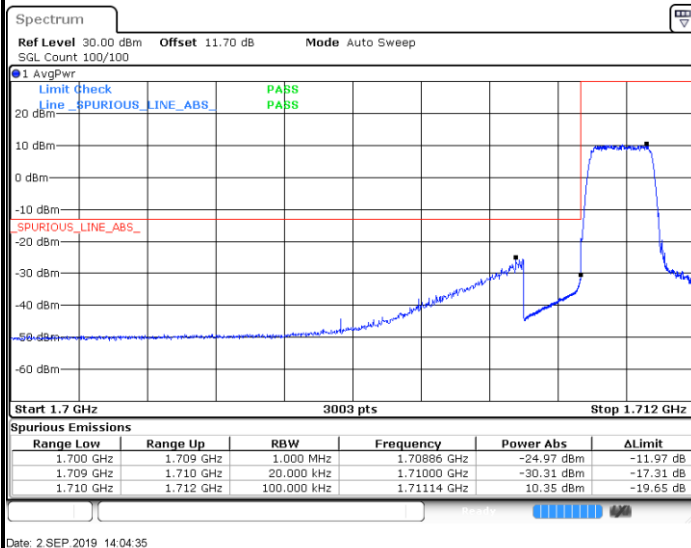
Lowest Band Edge / 1 RB



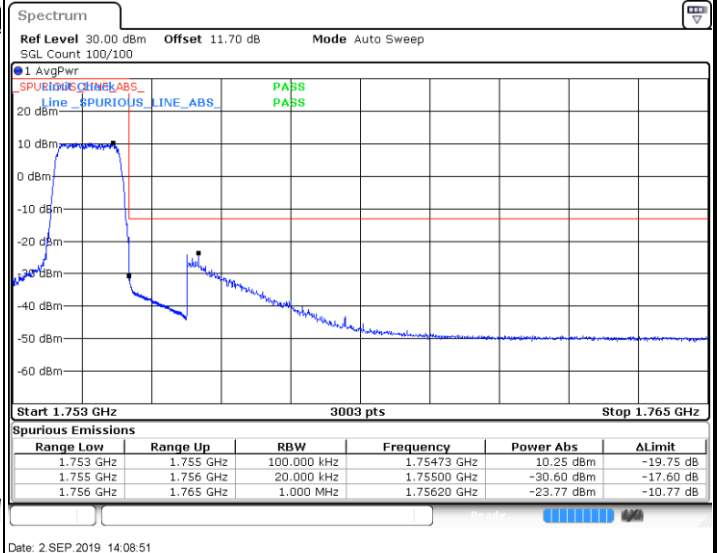
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



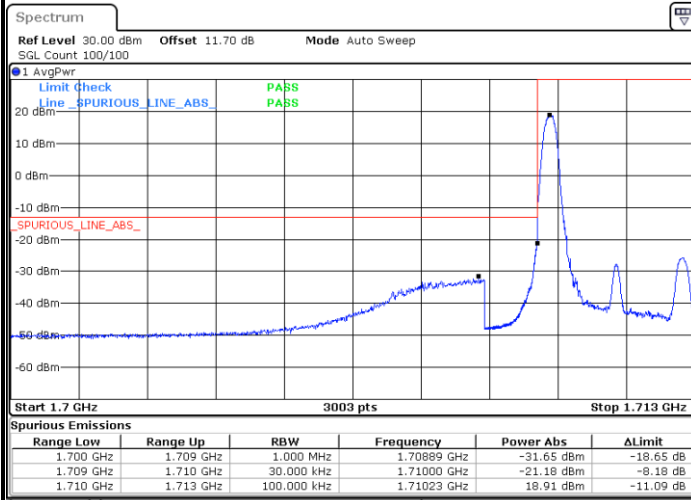
Highest Band Edge / Full RB



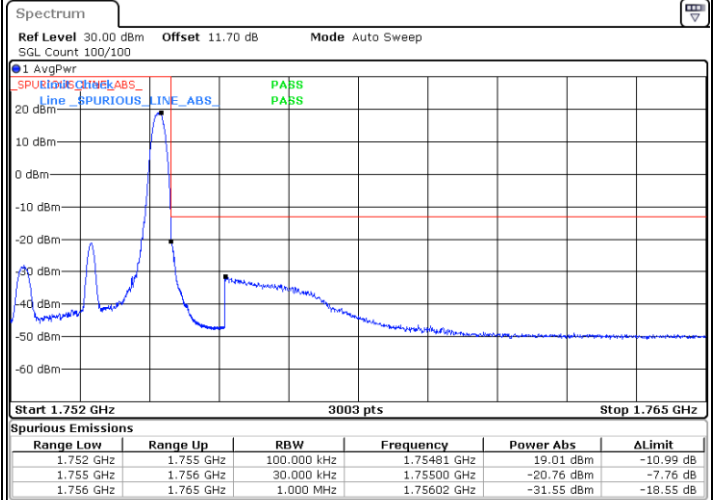


LTE Band 4 / 3MHz / QPSK

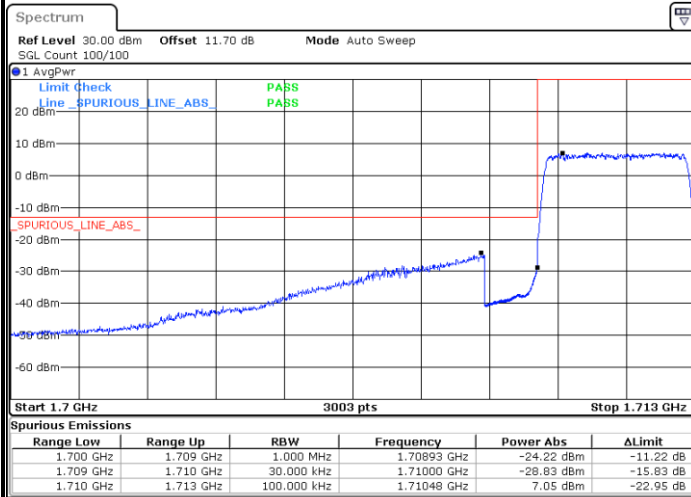
Lowest Band Edge / 1RB



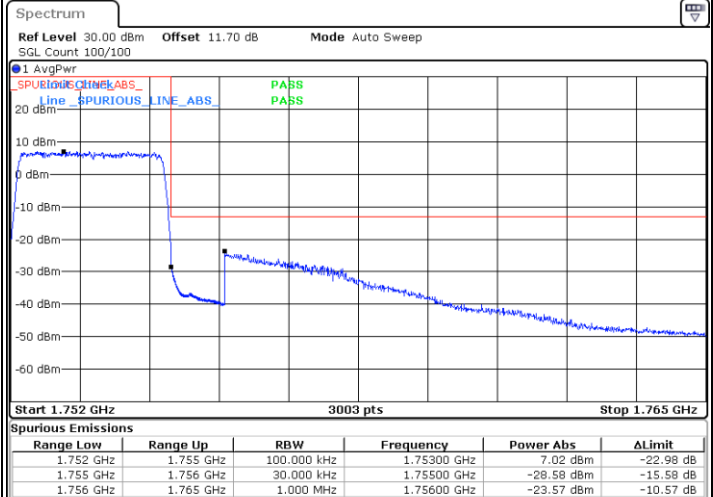
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



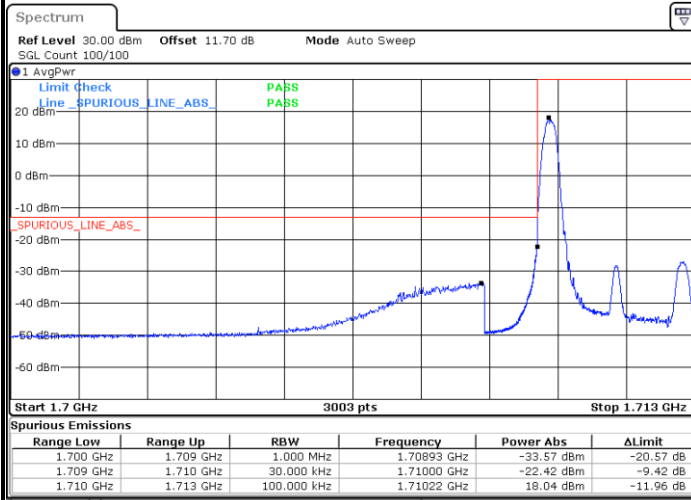
Highest Band Edge / Full RB



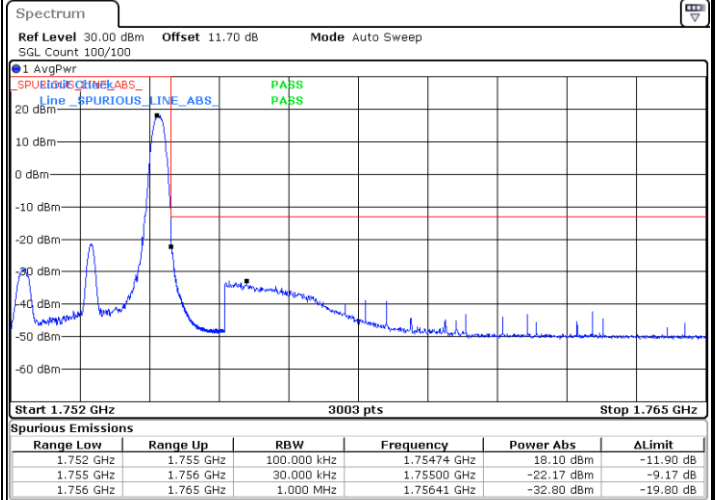


LTE Band 4 / 3MHz / 16QAM

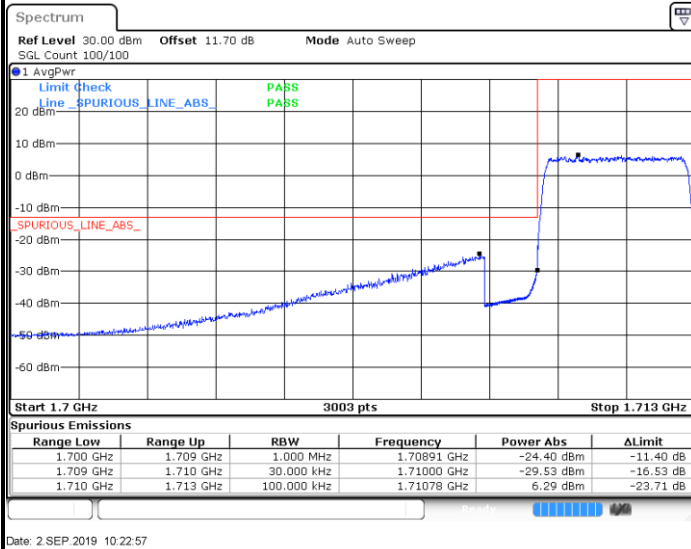
Lowest Band Edge / 1 RB



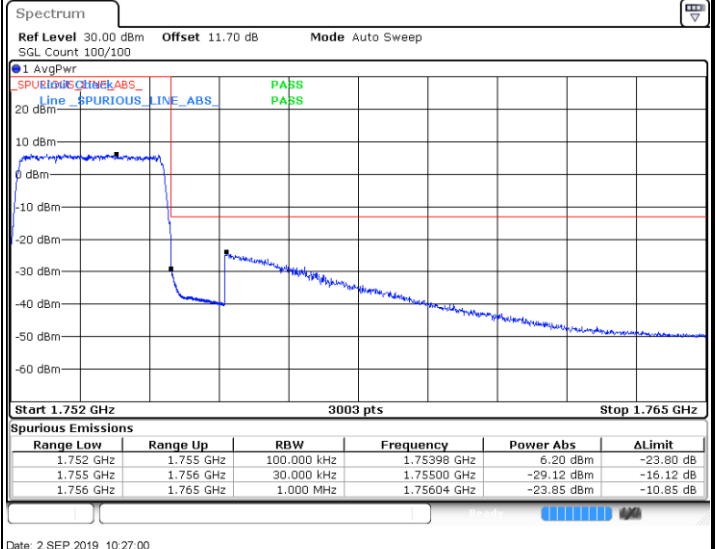
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



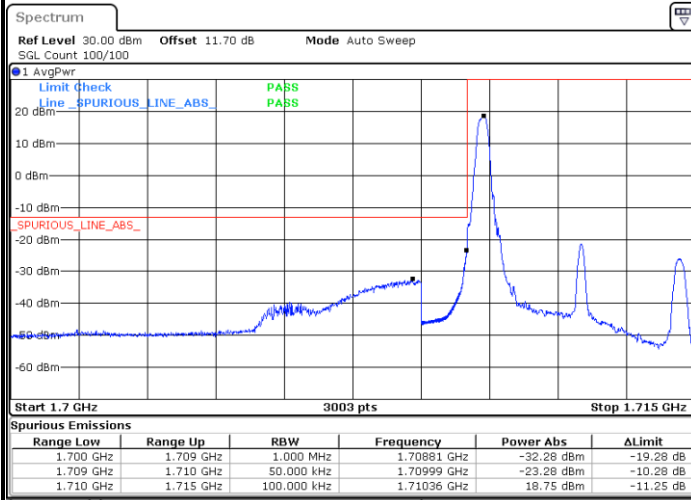
Highest Band Edge / Full RB



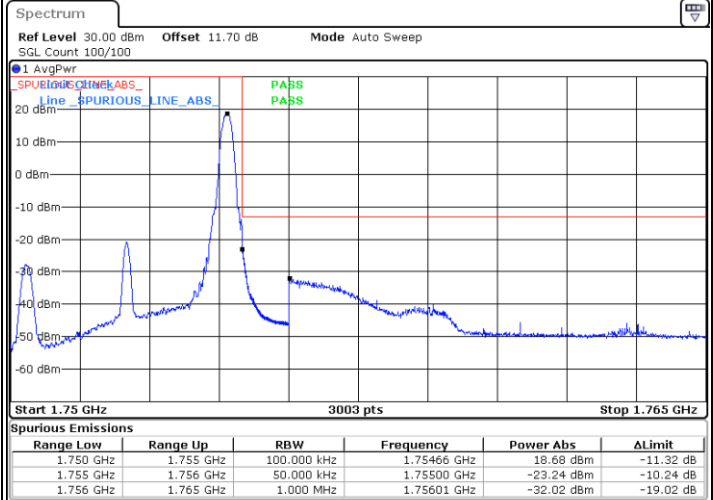


LTE Band 4 / 5MHz / QPSK

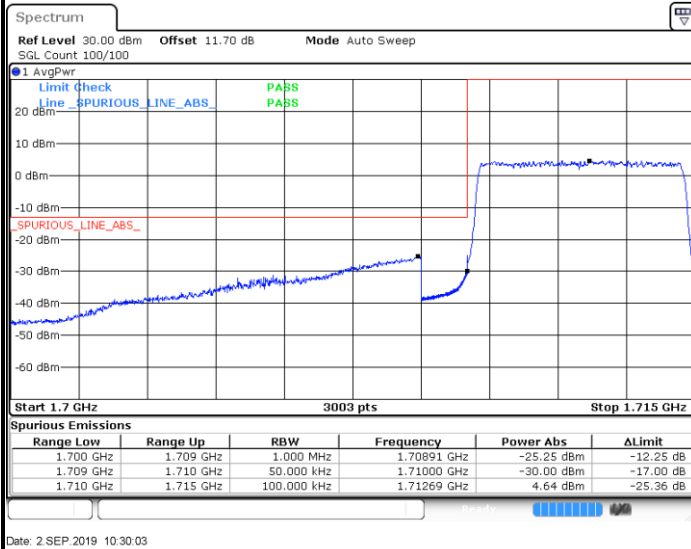
Lowest Band Edge / 1 RB



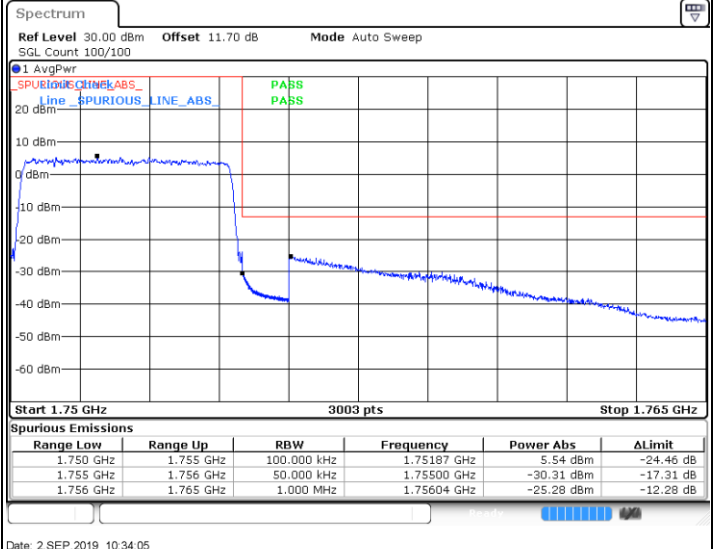
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



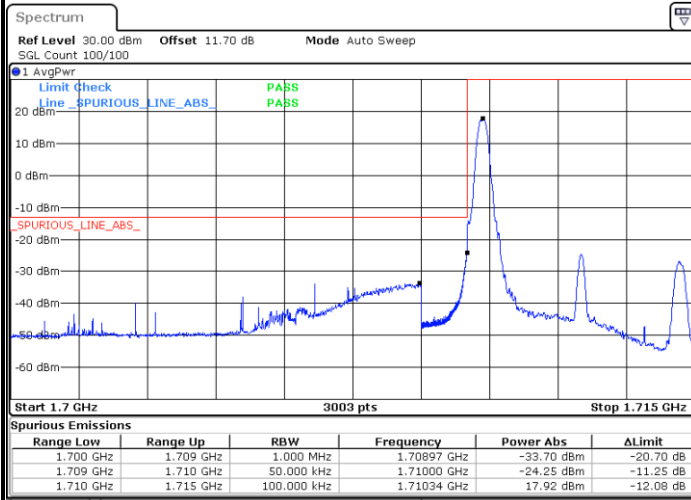
Highest Band Edge / Full RB



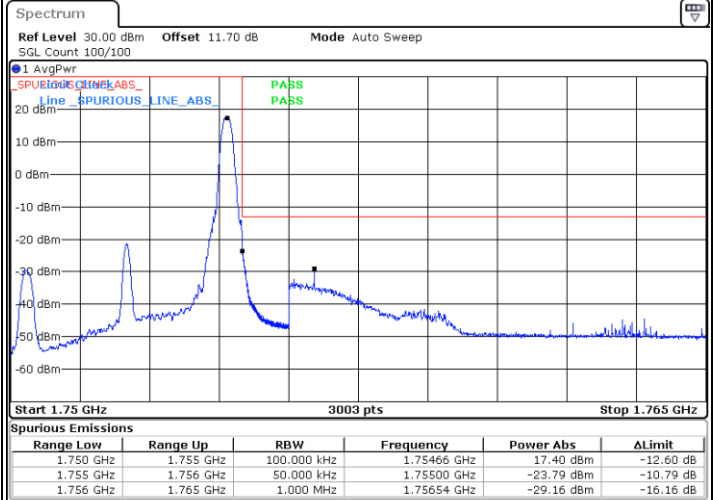


LTE Band 4 / 5MHz / 16QAM

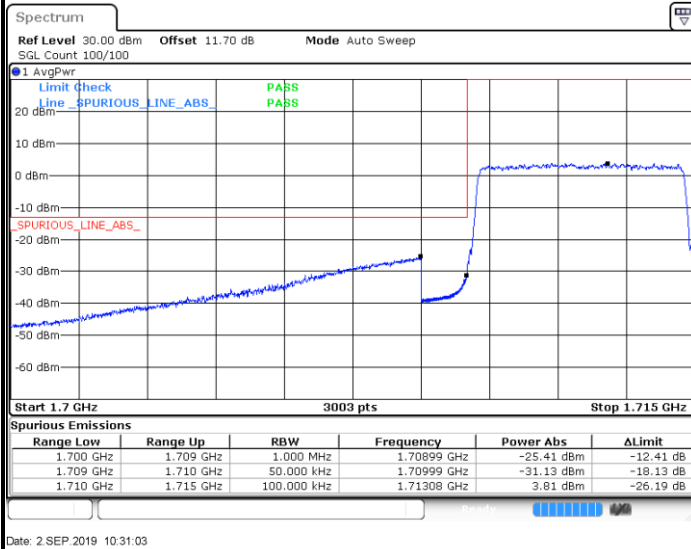
Lowest Band Edge / 1RB



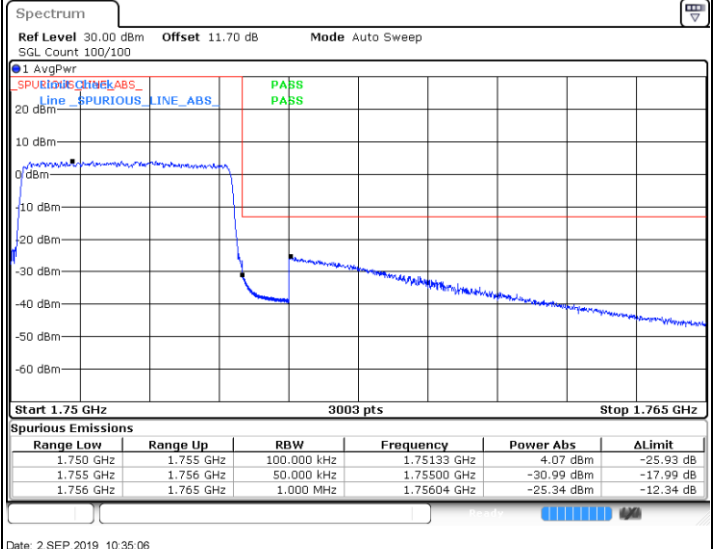
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



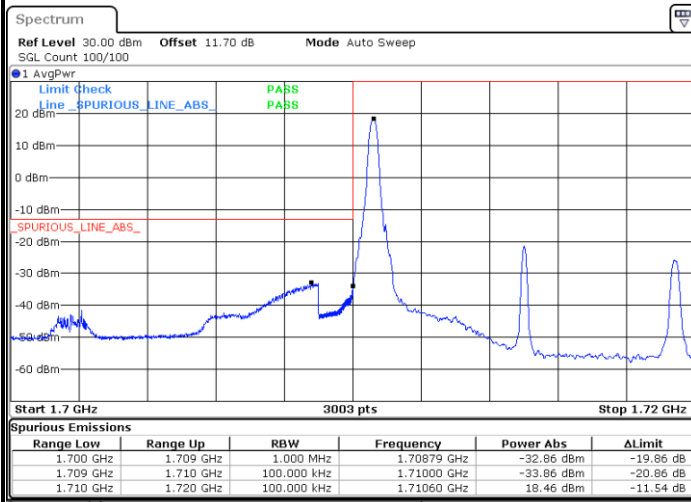
Highest Band Edge / Full RB



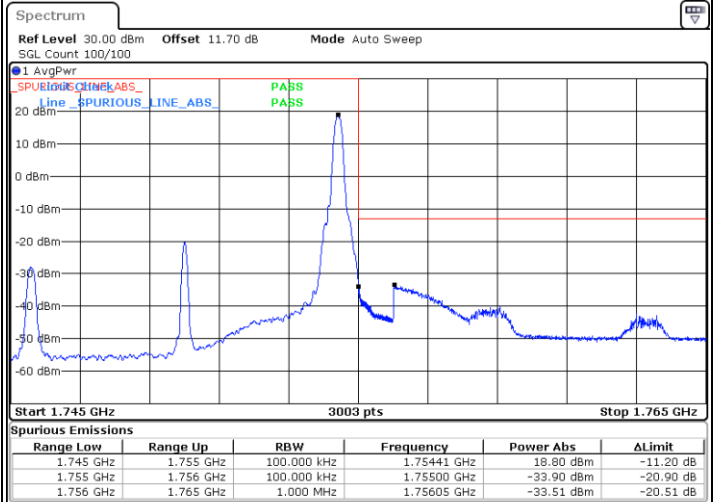


LTE Band 4 / 10MHz / QPSK

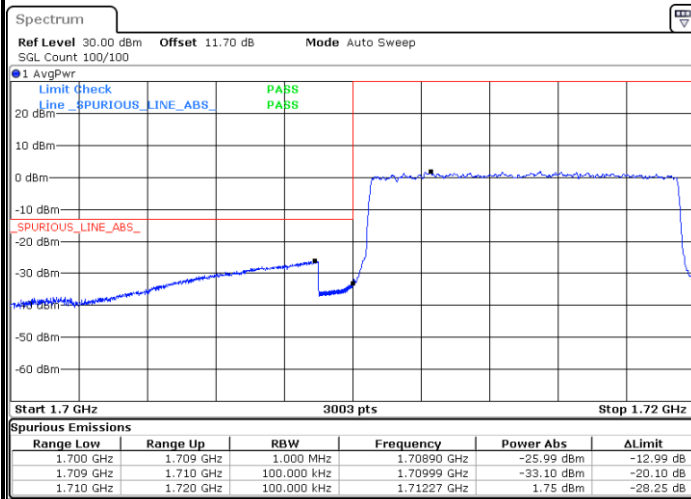
Lowest Band Edge / 1 RB



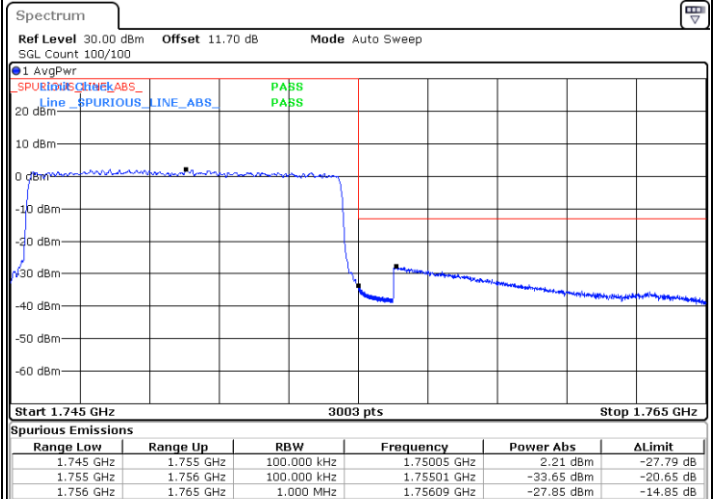
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



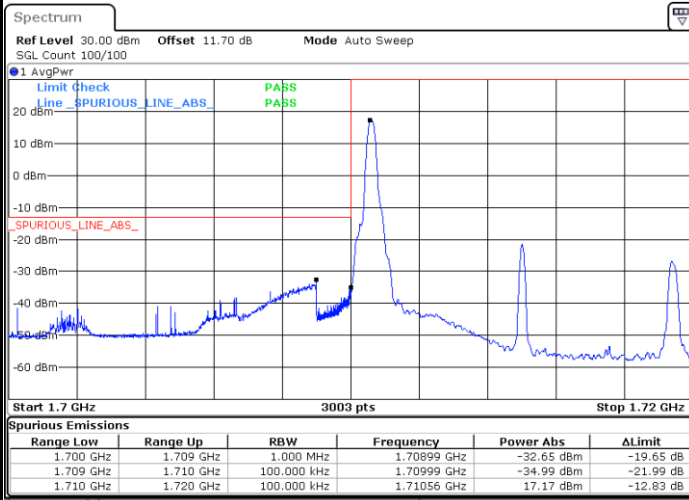
Highest Band Edge / Full RB



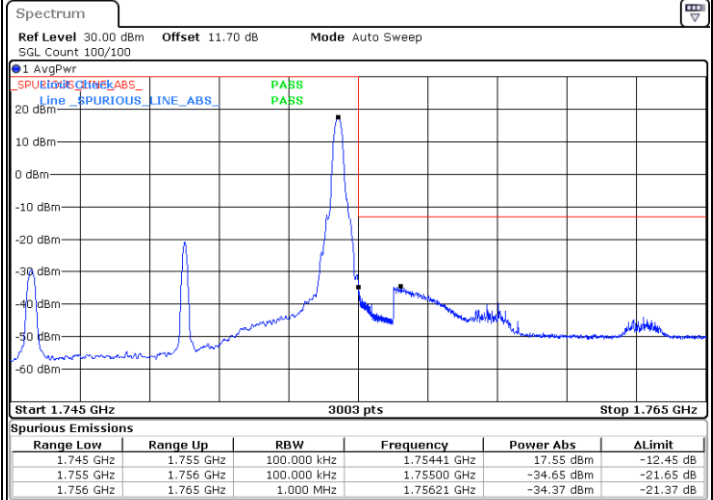


LTE Band 4 / 10MHz / 16QAM

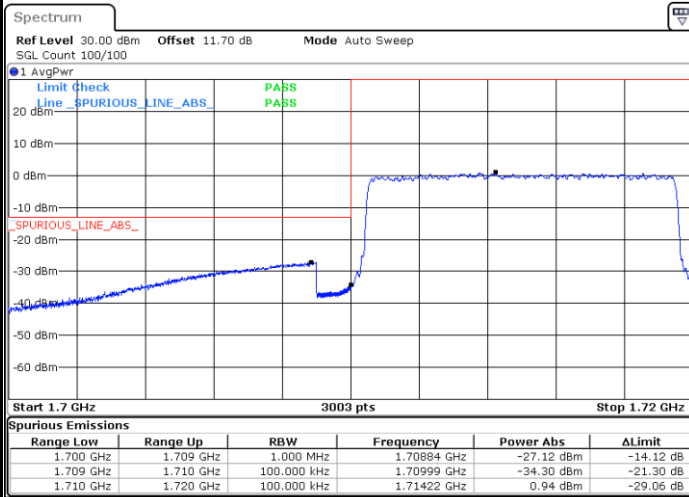
Lowest Band Edge / 1 RB



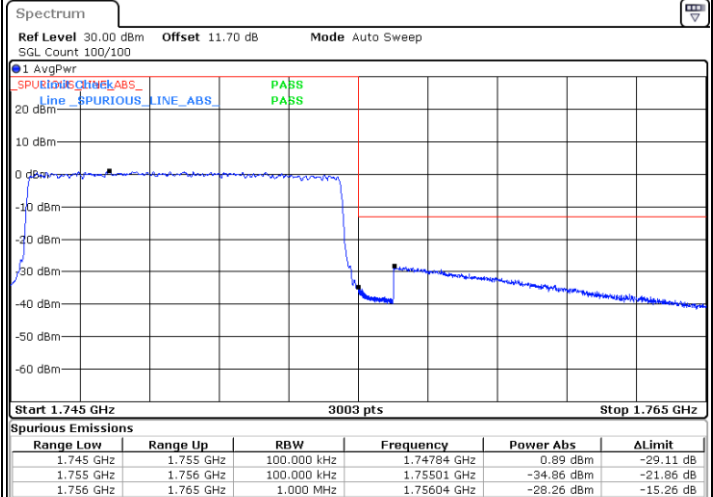
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



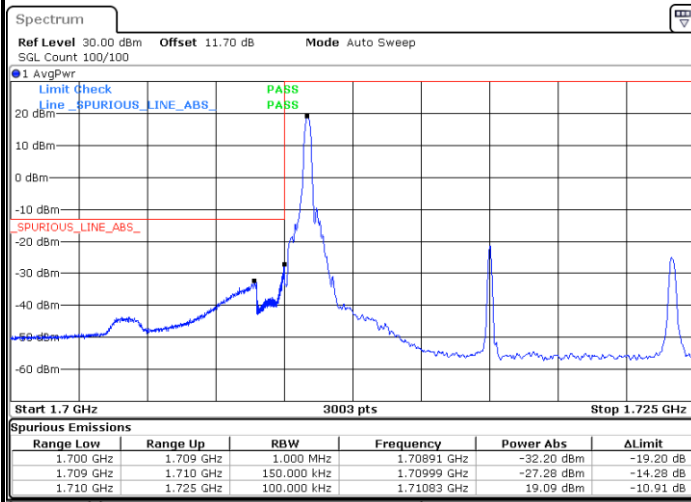
Highest Band Edge / Full RB



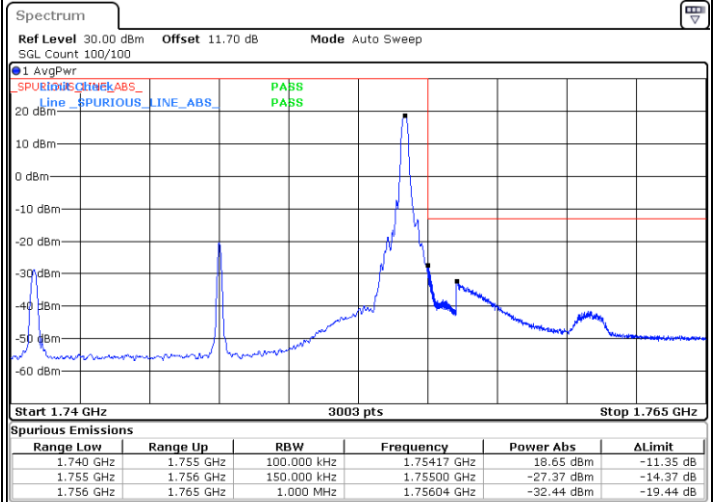


LTE Band 4 / 15MHz / QPSK

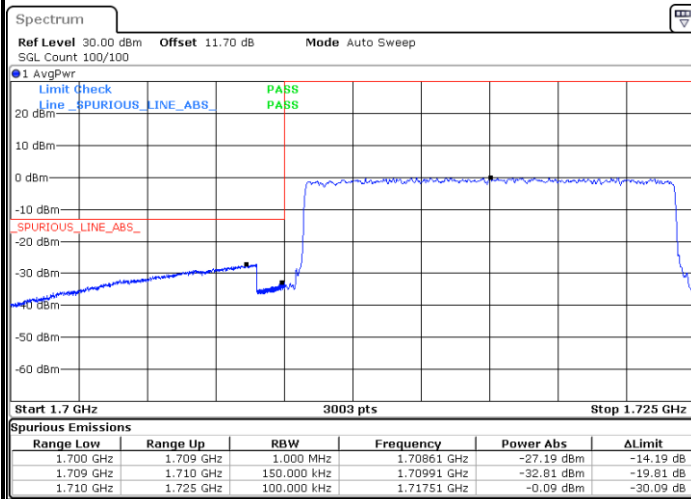
Lowest Band Edge / 1 RB



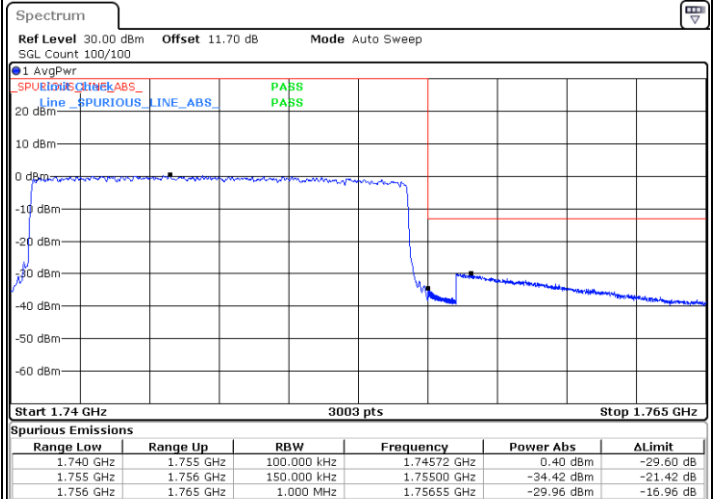
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



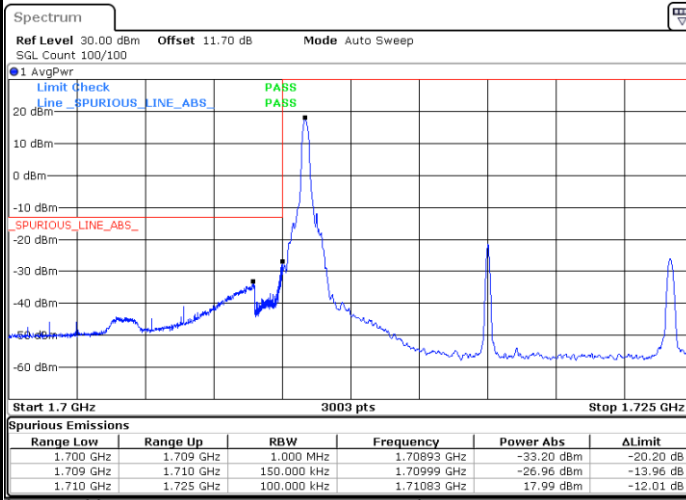
Highest Band Edge / Full RB





LTE Band 4 / 15MHz / 16QAM

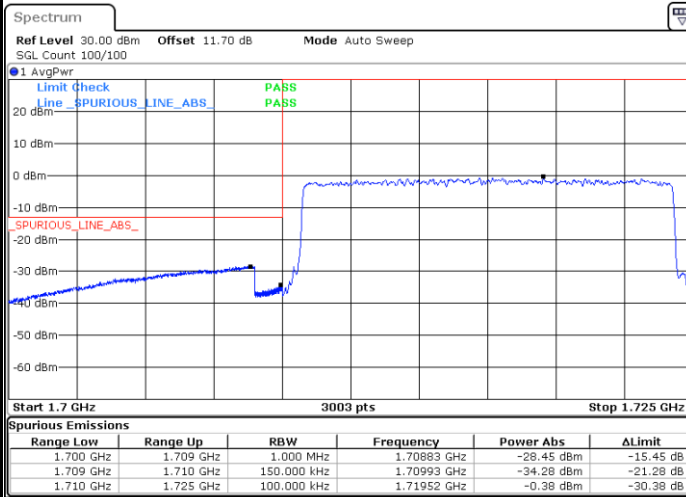
Lowest Band Edge / 1 RB



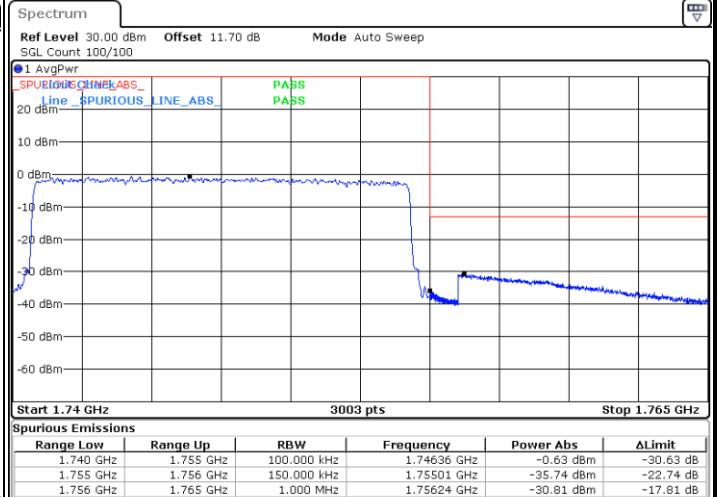
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



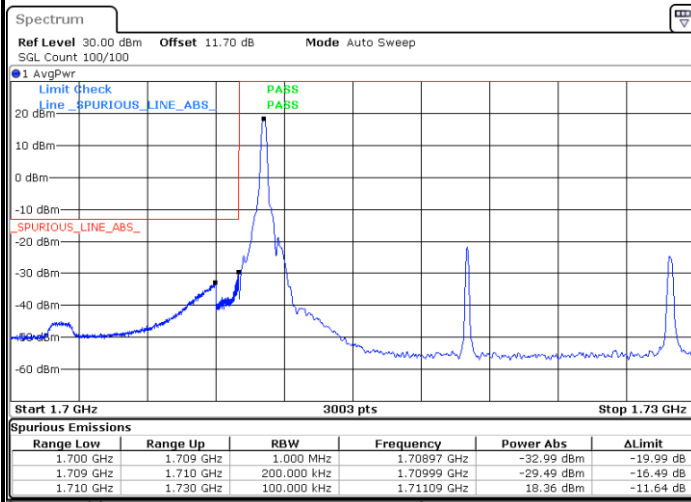
Highest Band Edge / Full RB



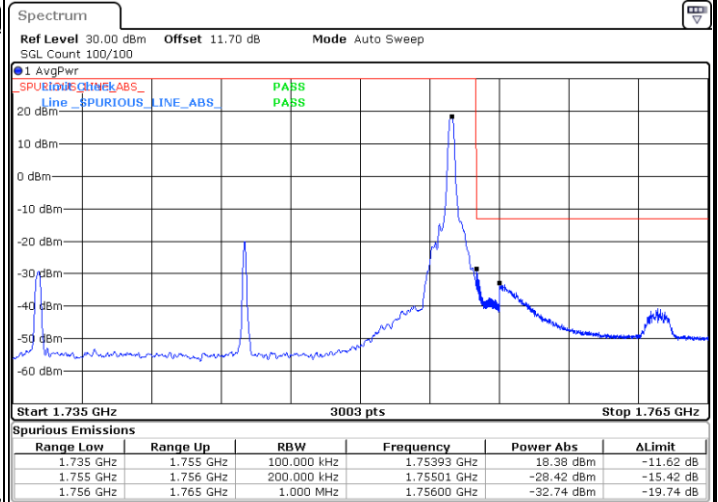


LTE Band 4 / 20MHz / QPSK

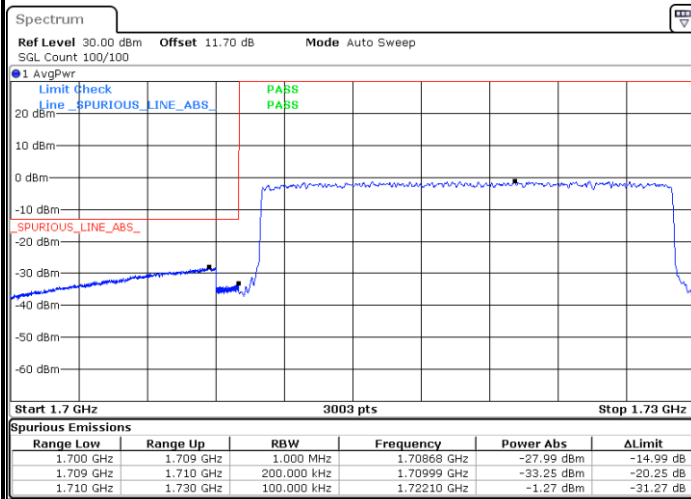
Lowest Band Edge / 1 RB



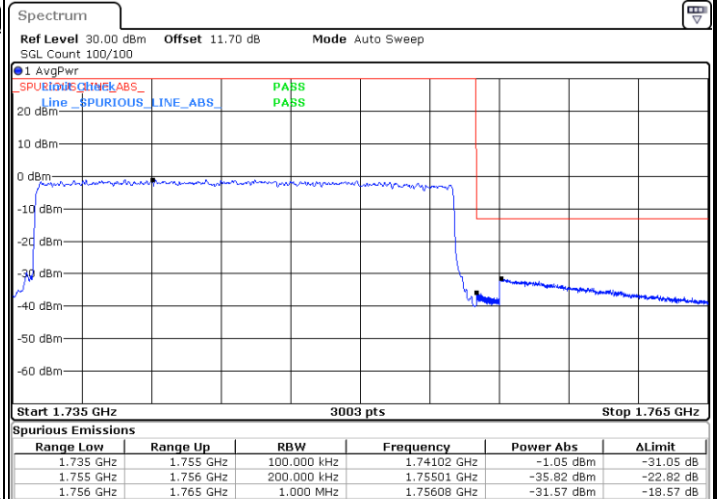
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



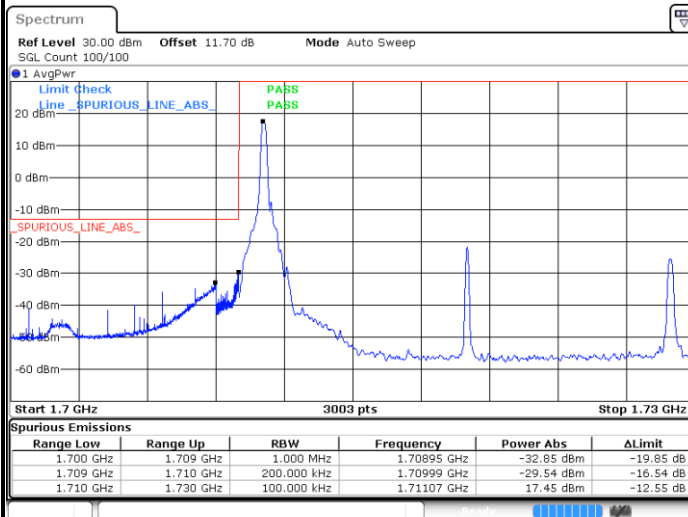
Highest Band Edge / Full RB



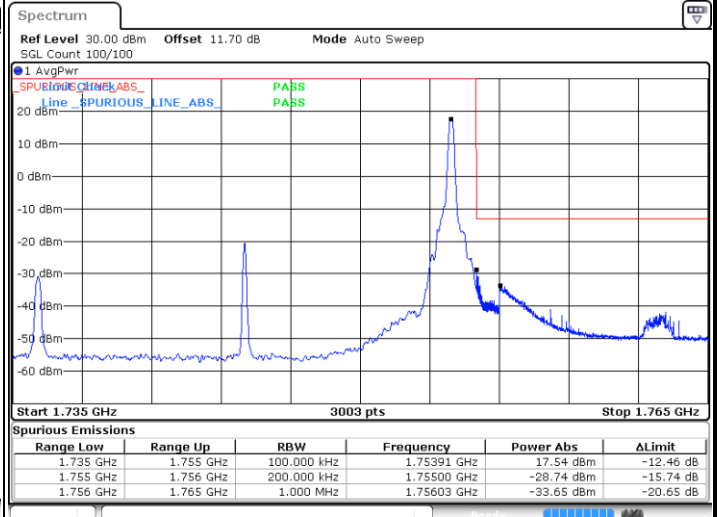


LTE Band 4 / 20MHz / 16QAM

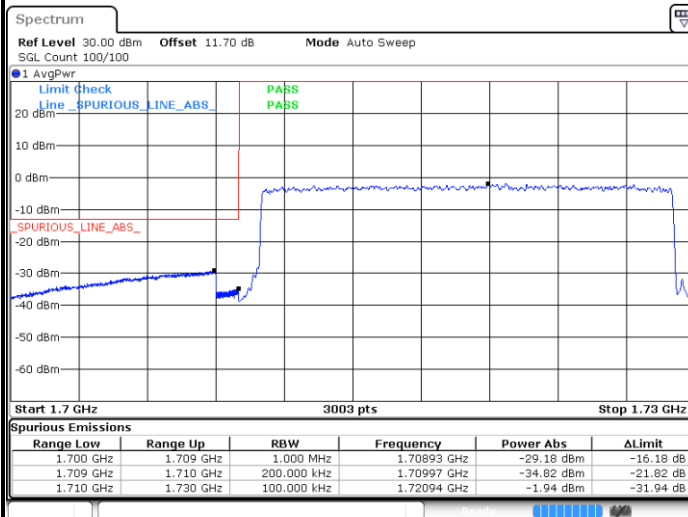
Lowest Band Edge / 1 RB



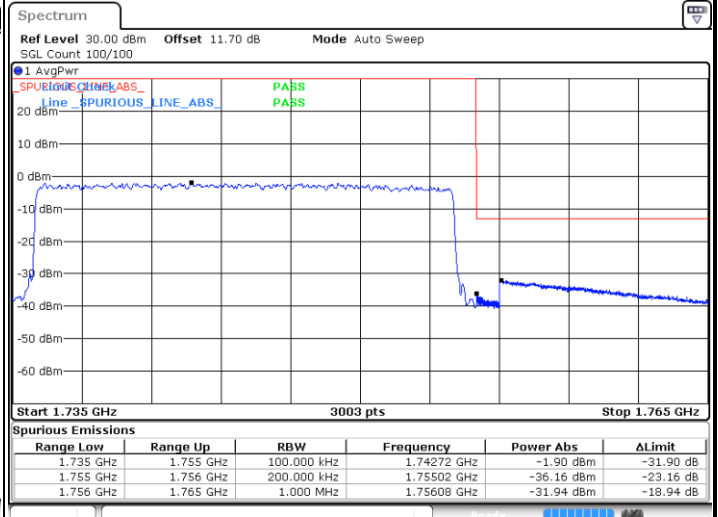
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB



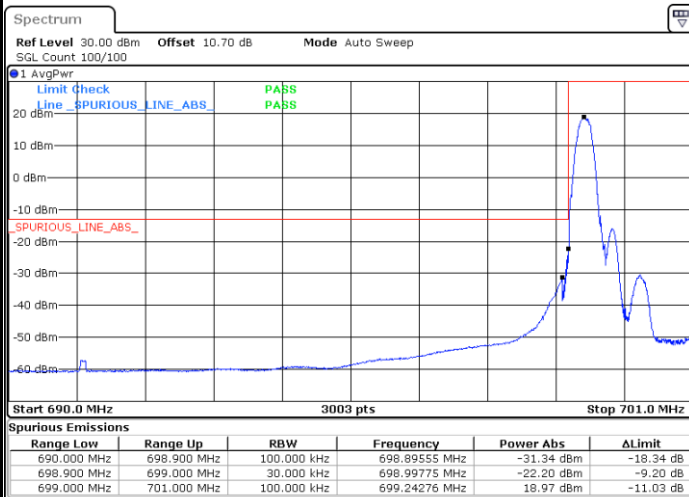


LTE Band 12

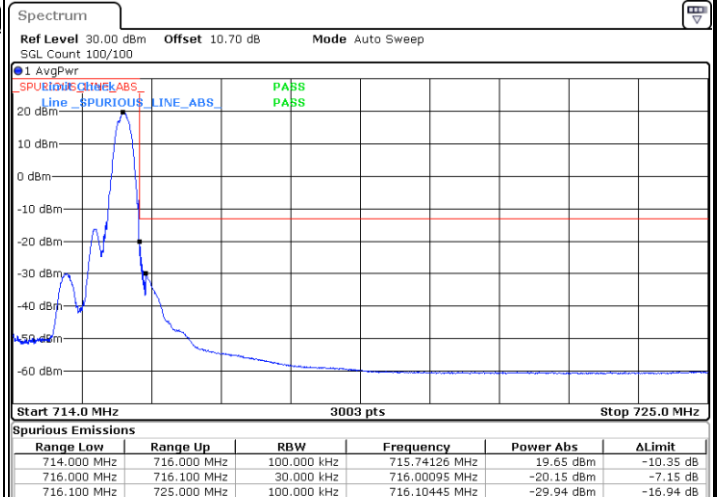
Conducted Band Edge

LTE Band 12 / 1.4MHz / QPSK

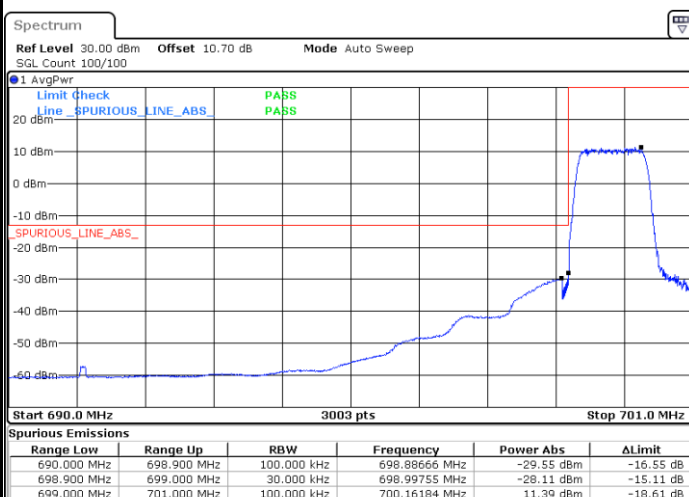
Lowest Band Edge / 1 RB



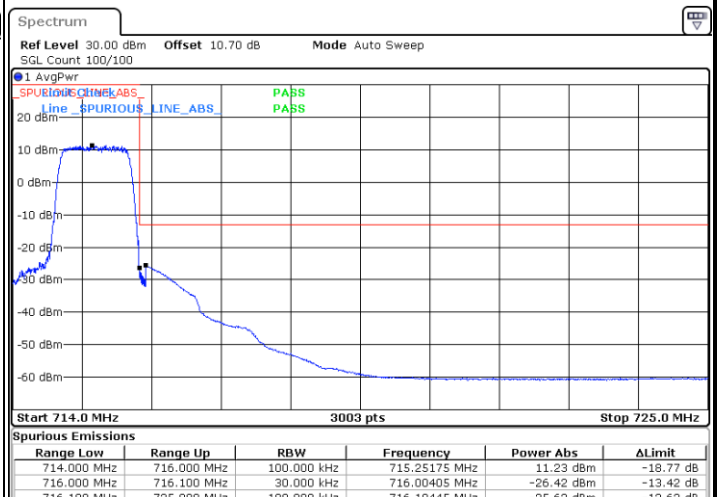
Highest Band Edge / 1RB



Lowest Band Edge / Full RB



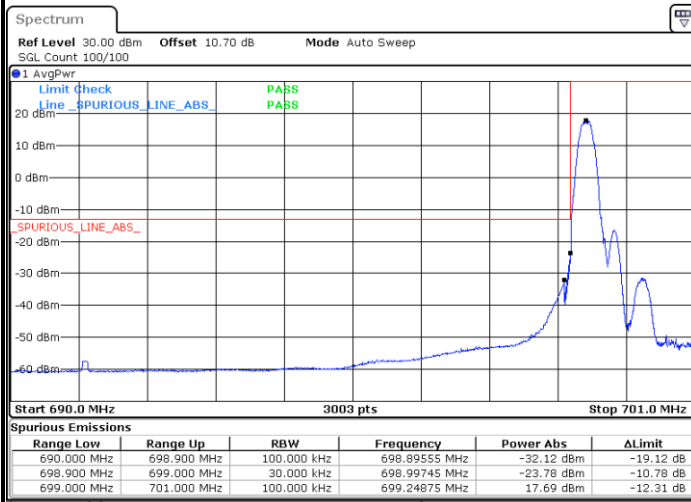
Highest Band Edge / Full RB



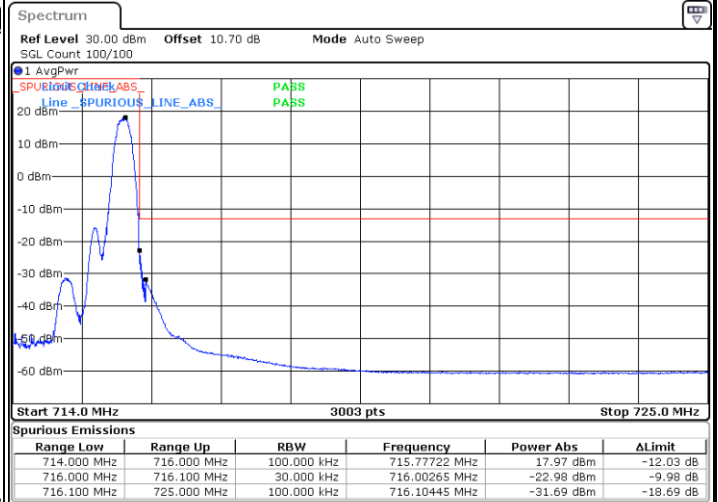


LTE Band 12 / 1.4MHz / 16QAM

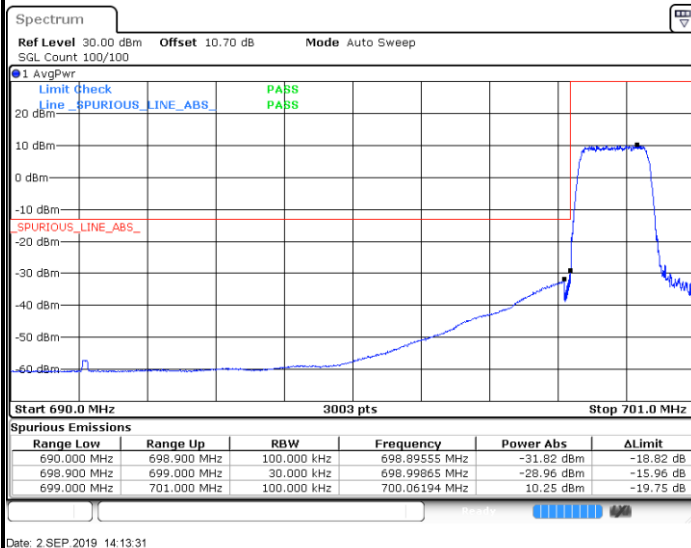
Lowest Band Edge / 1 RB



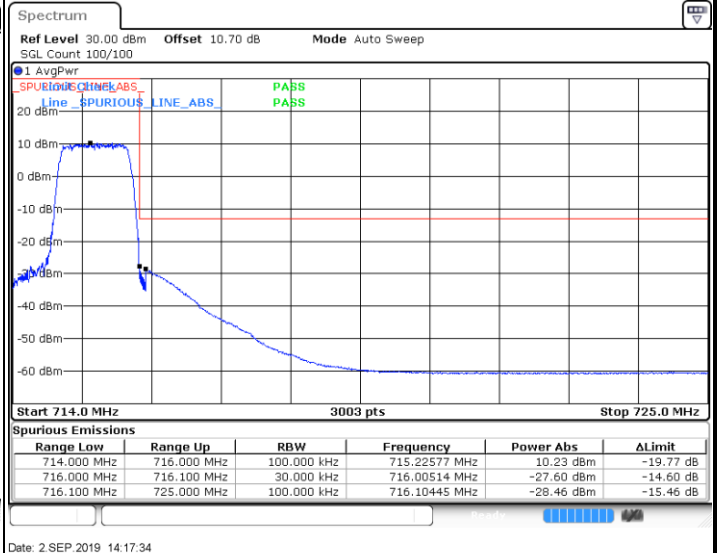
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



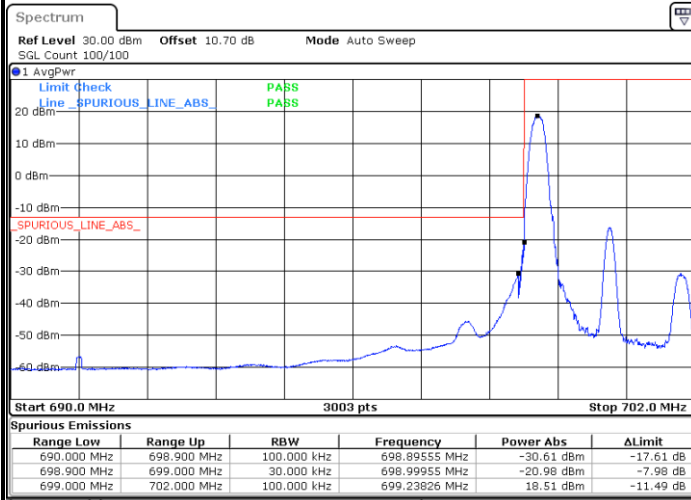
Highest Band Edge / Full RB



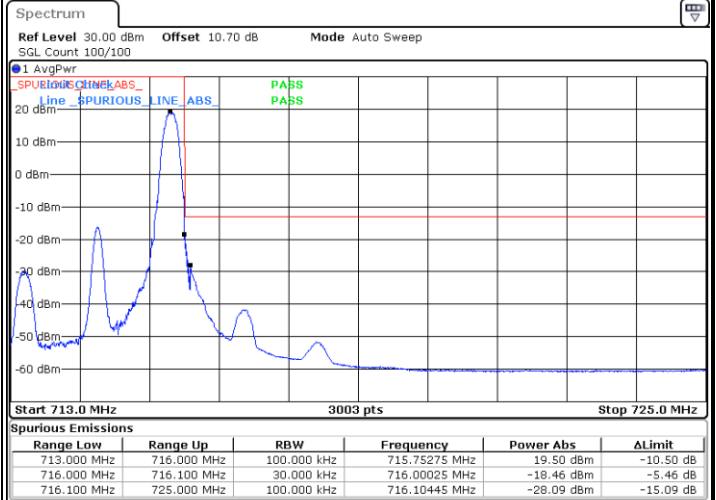


LTE Band 12 / 3MHz / QPSK

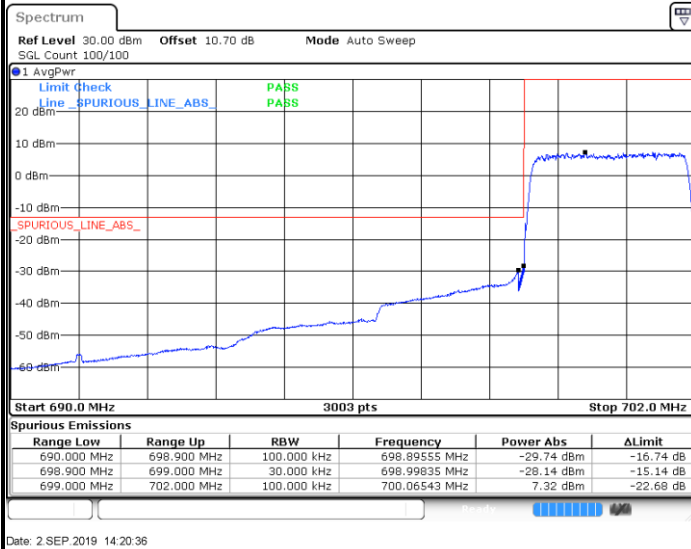
Lowest Band Edge / 1RB



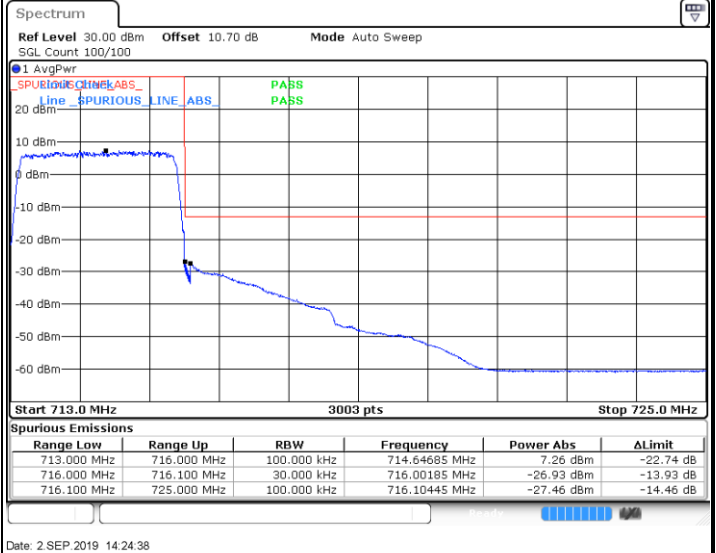
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



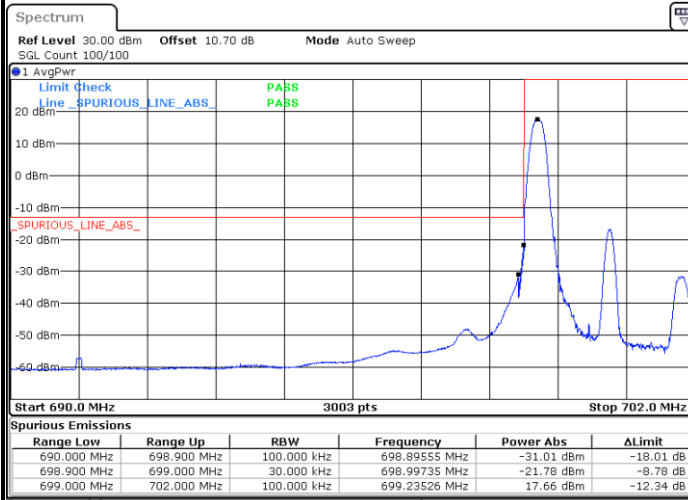
Highest Band Edge / Full RB



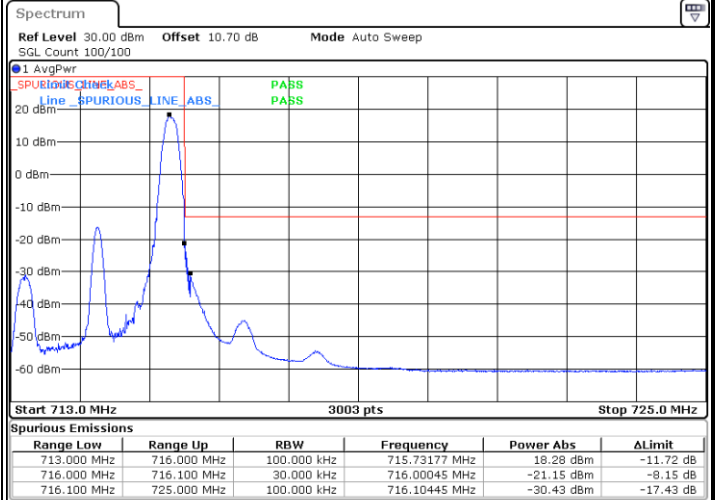


LTE Band 12 / 3MHz / 16QAM

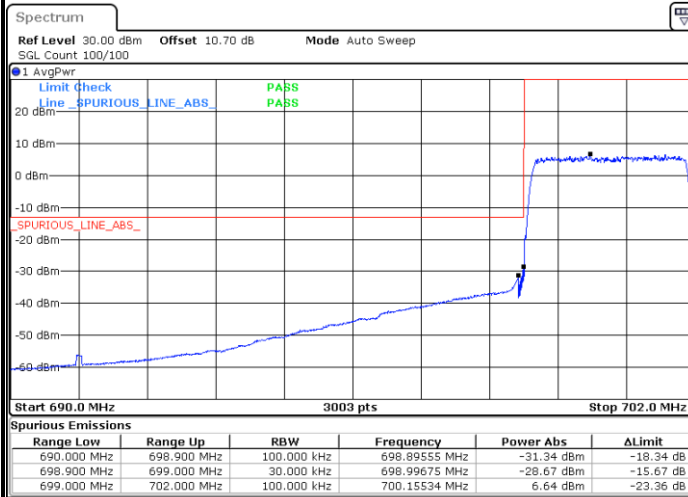
Lowest Band Edge / 1 RB



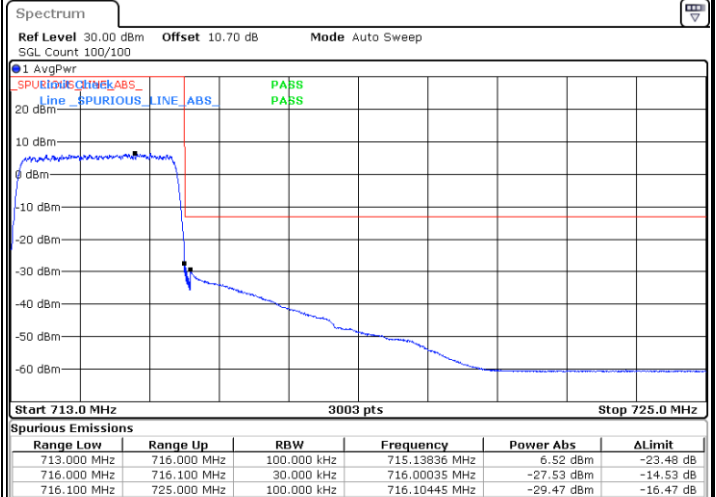
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



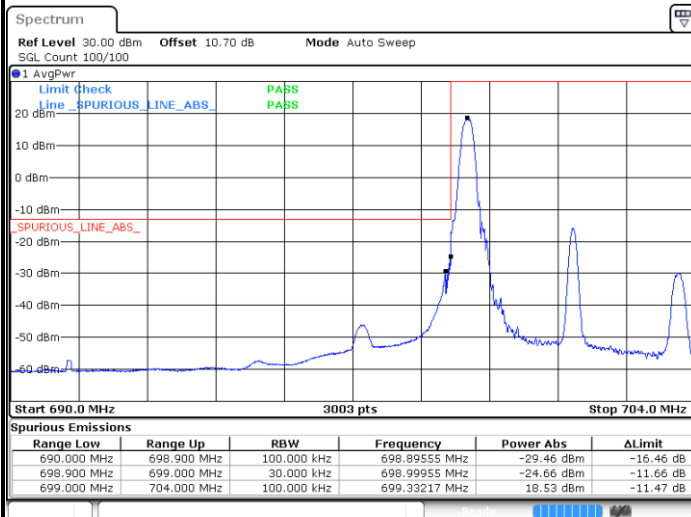
Highest Band Edge / Full RB



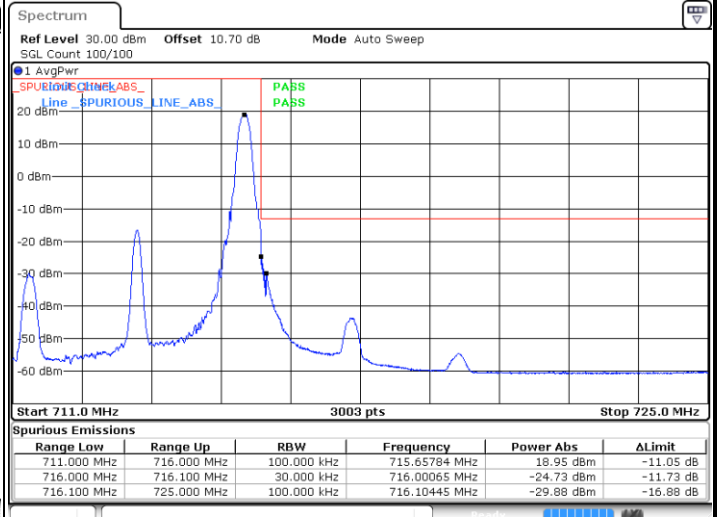


LTE Band 12 / 5MHz / QPSK

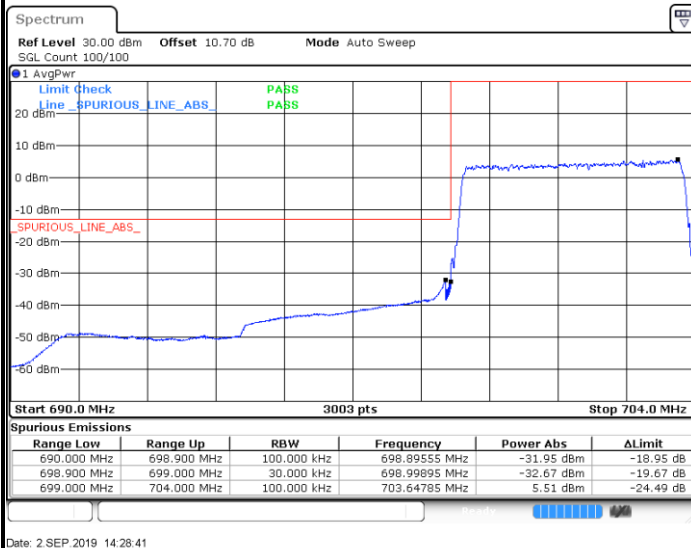
Lowest Band Edge / 1 RB



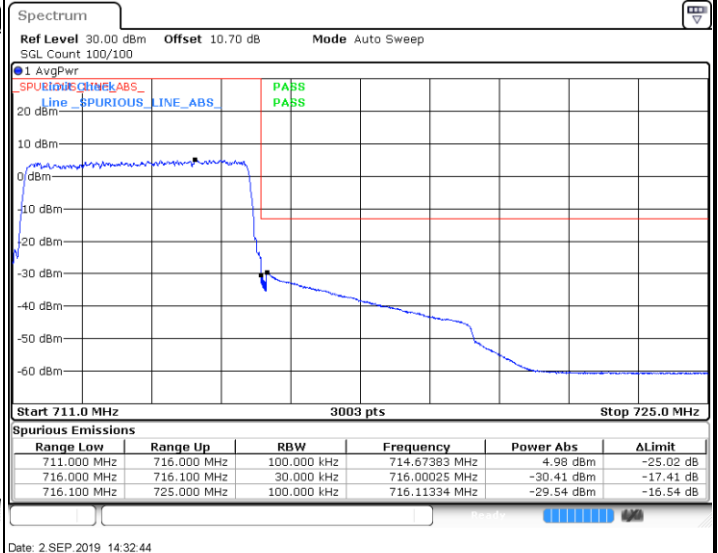
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



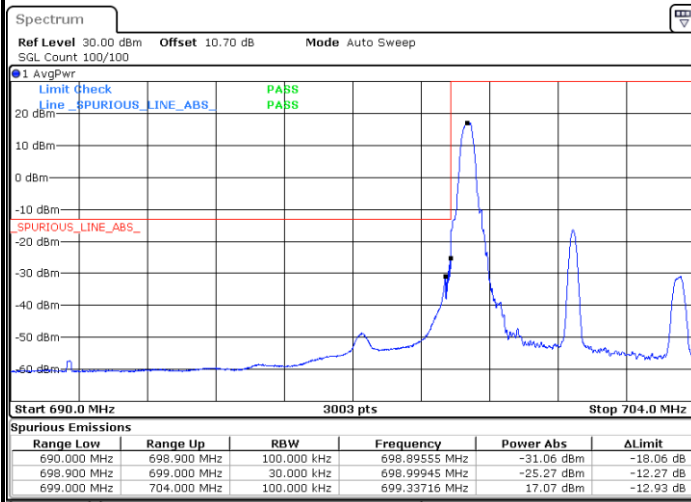
Highest Band Edge / Full RB



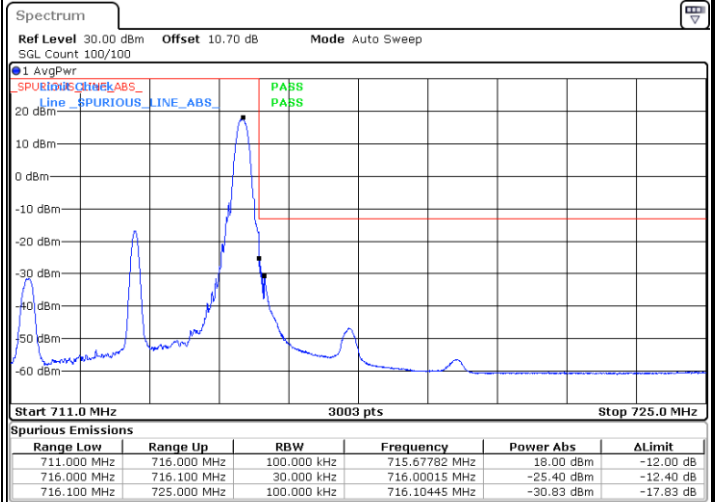


LTE Band 12 / 5MHz / 16QAM

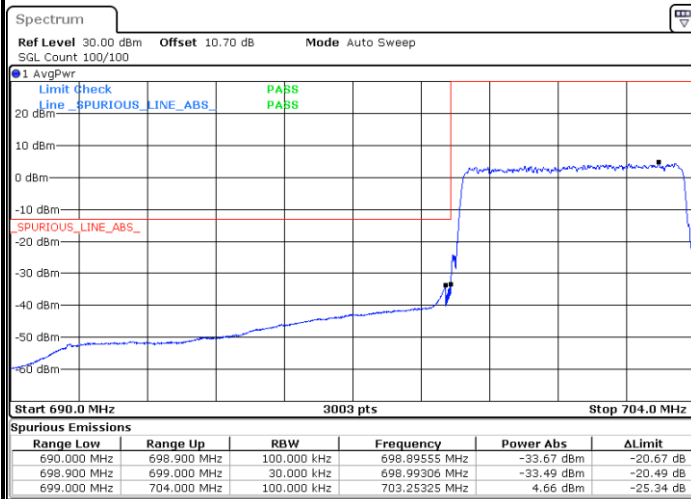
Lowest Band Edge / 1RB



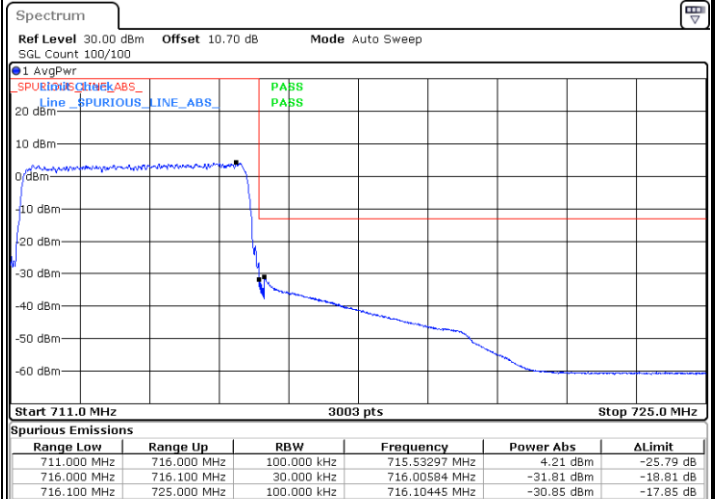
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



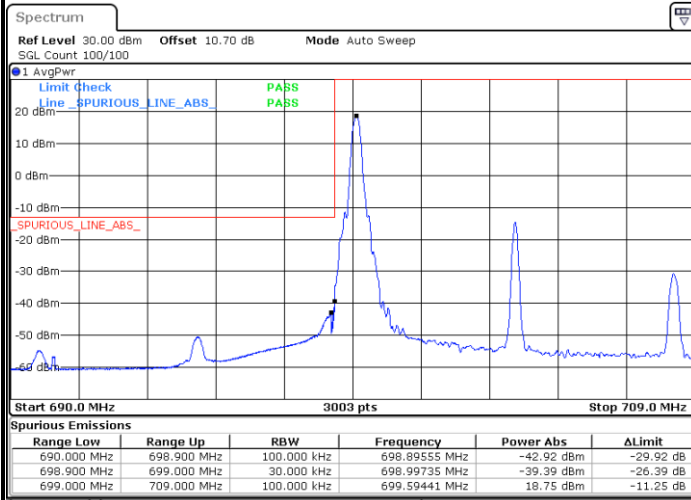
Highest Band Edge / Full RB



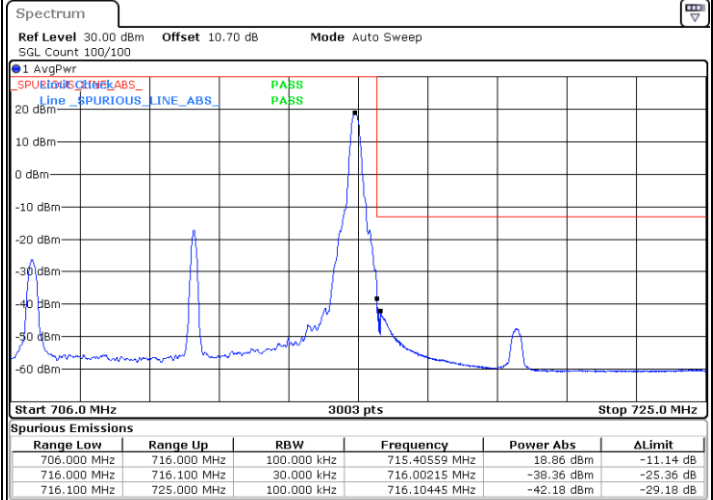


LTE Band 12 / 10MHz / QPSK

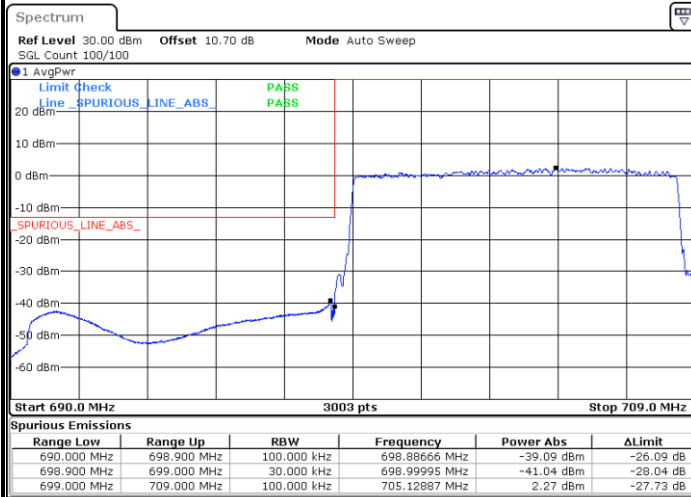
Lowest Band Edge / 1 RB



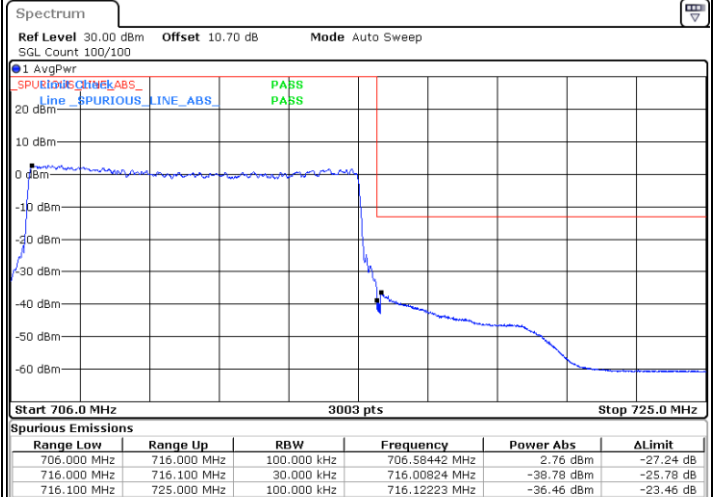
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



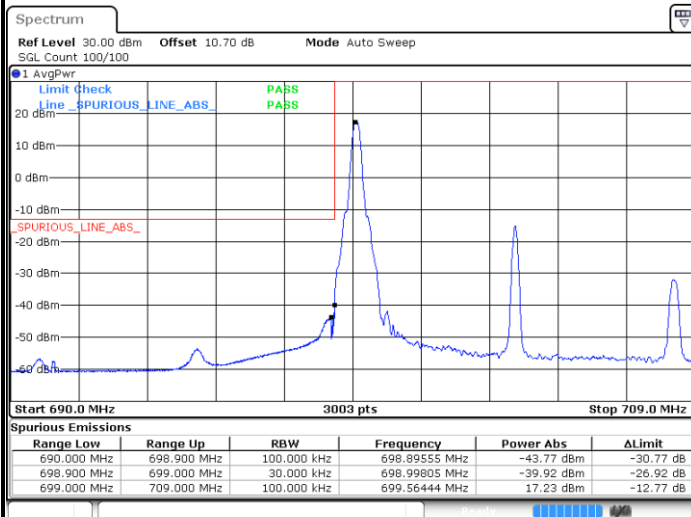
Highest Band Edge / Full RB



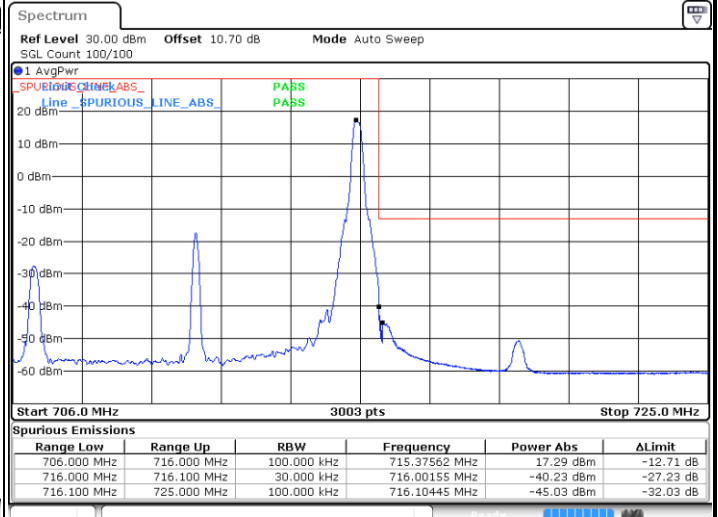


LTE Band 12 / 10MHz / 16QAM

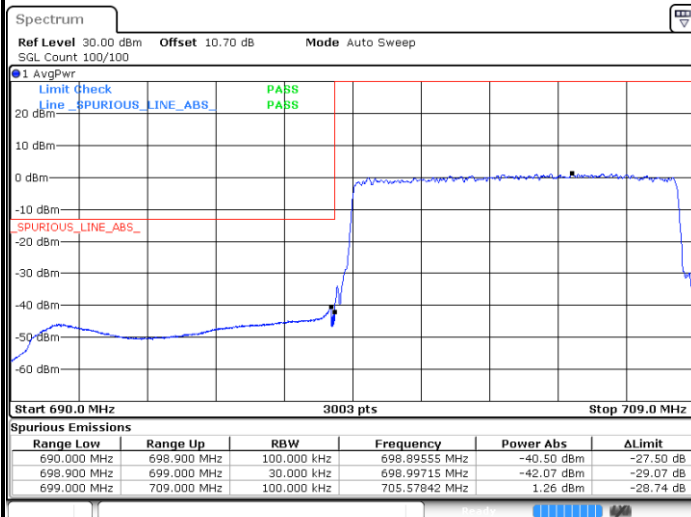
Lowest Band Edge / 1 RB



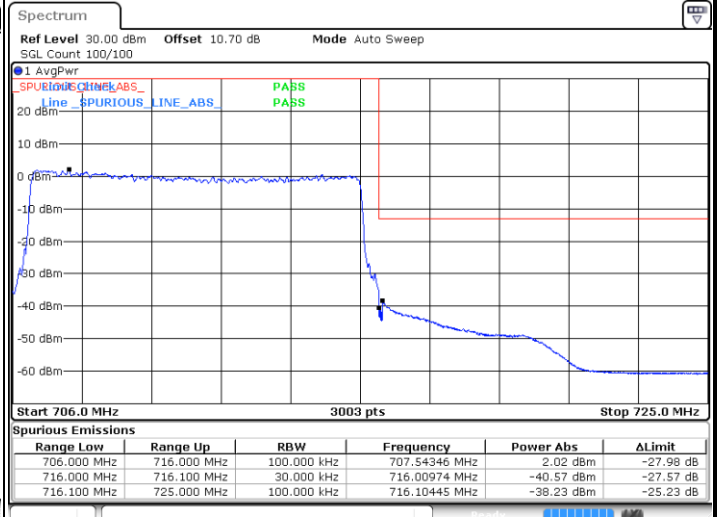
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB



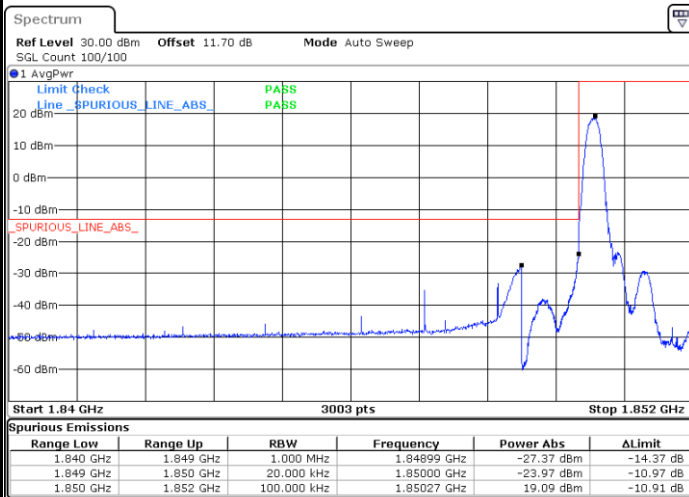


LTE Band 25

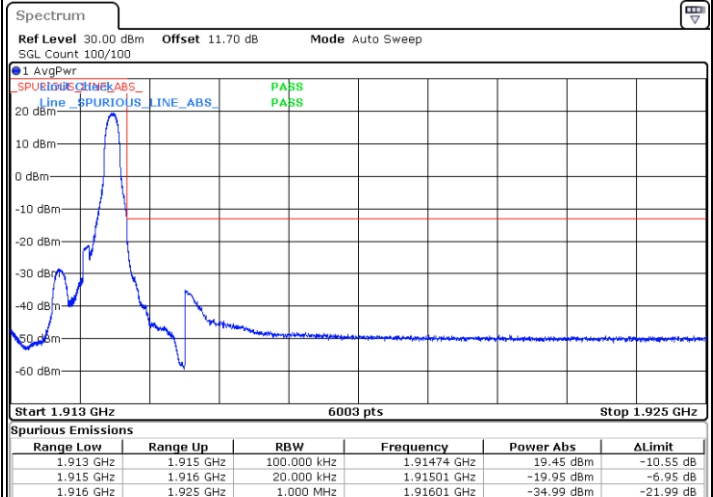
Conducted Band Edge

LTE Band 25 / 1.4MHz / QPSK

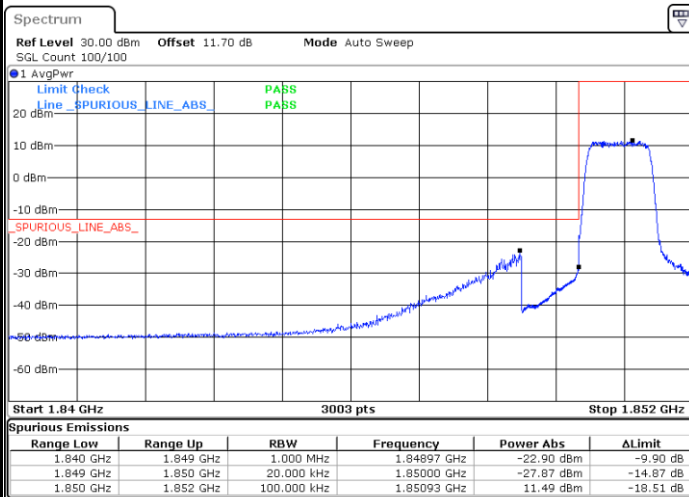
Lowest Band Edge / 1RB



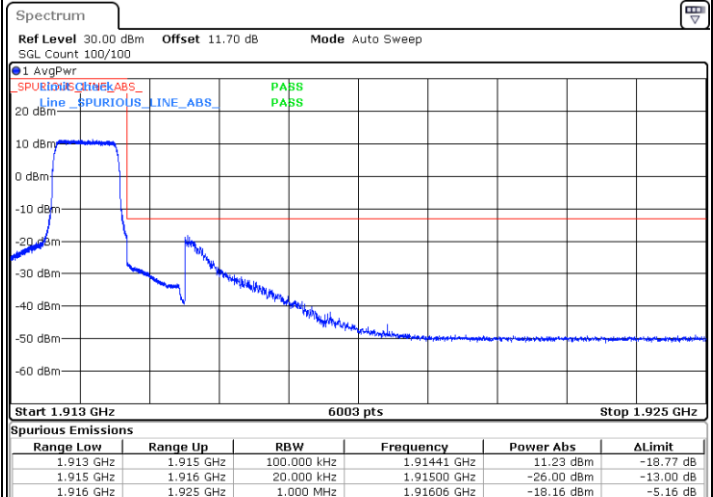
Highest Band Edge / 1RB



Lowest Band Edge / Full RB



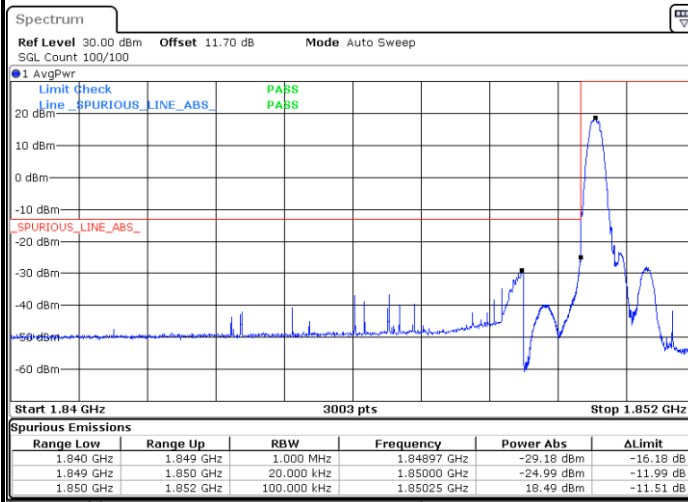
Highest Band Edge / Full RB



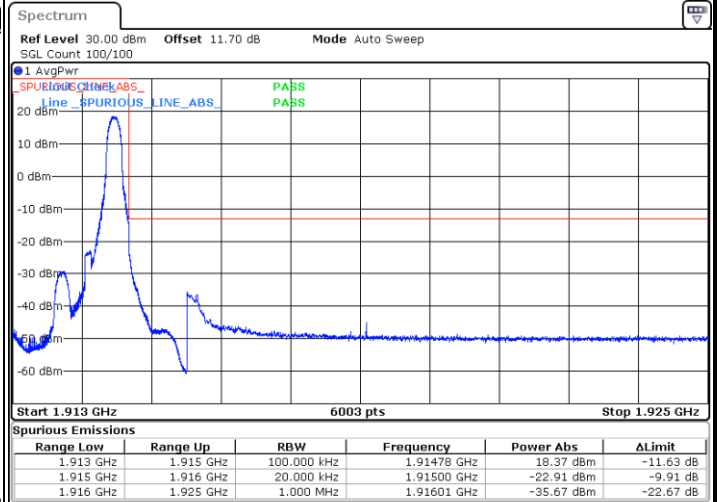


LTE Band 25 / 1.4MHz / 16QAM

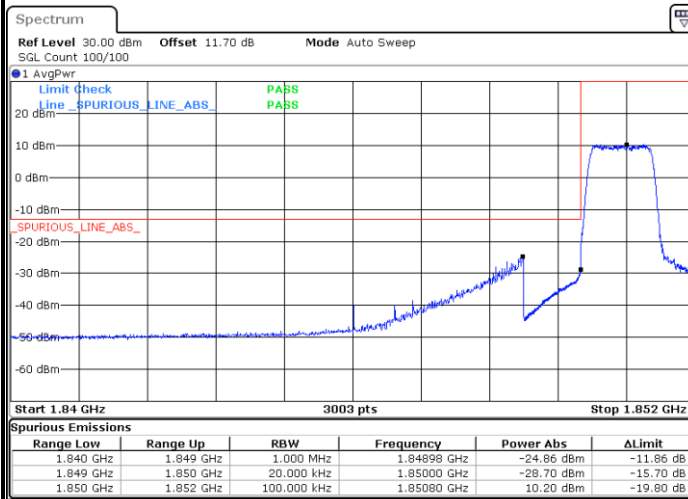
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

