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	:	**FCC 47 CFR Part 2, and 90(S)**

The product was received on May 14, 2019 and testing was started from May 29, 2019 and completed on Sep. 02, 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.

Jones Tsai

Approved by: Jones Tsai

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

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

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History of this test report

Report No.	Version	Description	Issued Date
FG951441B	01	Initial issue of report	Aug. 29, 2019
FG951441B	02	Add test data for Emission masks – In-band emissions	Sep. 04, 2019

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.2	§2.1046 §90.635	Conducted Output Power	Pass	-
3.3	§2.1051 §90.691	Emission masks – In-band emissions	Pass	-
3.4	§2.1053 §90.691	Field Strength of Spurious Radiation	Pass	Under limit 13.58 dB at 2448.000 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 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 Site

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℃
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℃
Relative Humidity	63~66%

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

FCC Designation No.: TW1190 and TW0007

1.4 Applied Standards

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

- FCC 47 CFR Part 2, 90
- ANSI / TIA-603-E
- ANSI C63.26-2015
- FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- Interim Guidance for Equipment Authorization of Devices with Channel Bandwidths Combined Across Two Contiguous Service Rule Allocations OET/Lab/EACB, June 6, 2013

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

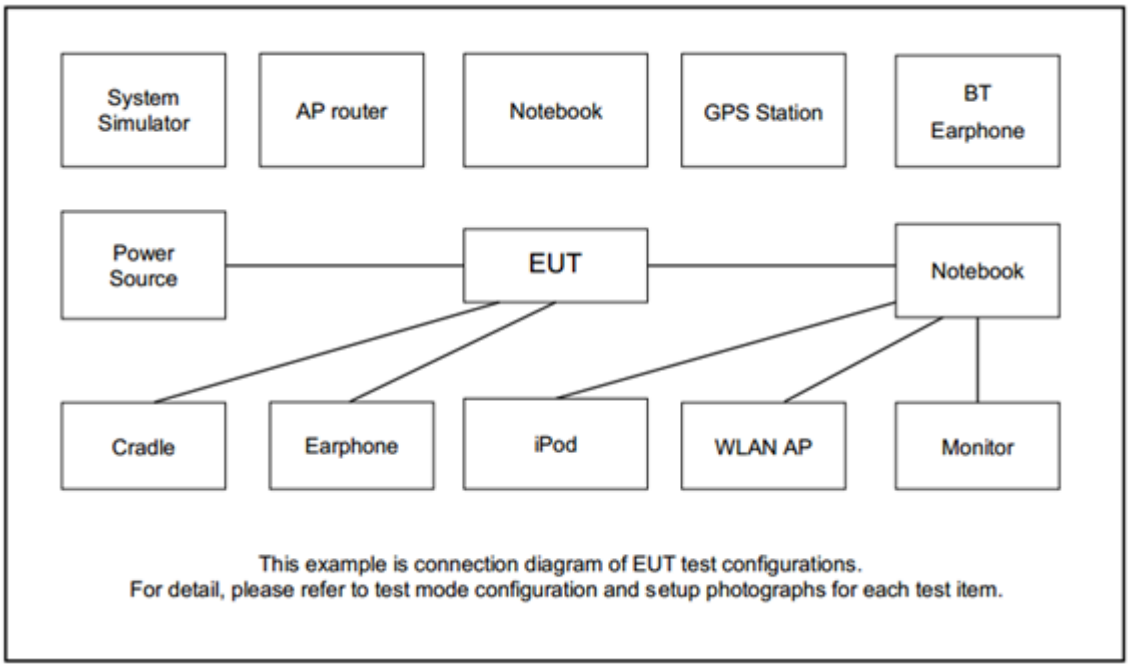
During all testing, EUT is in link mode with base station emulator at maximum power level.

For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Z plane) were recorded in this report.

Frequency range investigated for radiated emission is 30 MHz to 9000 MHz.

Conducted Test Cases	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	26	v	v	v	v	v	-	v	v	v	v	v	v	v	v
Emission masks In-band emissions	26	v	v	v	v	v	-	v	v	v		v	v		v
Radiated Spurious Emission	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. LTE Band26 transmit frequency for part22 rule is 824MHz-849MHz, for part90 rule is 814MHz-824MHz. ERP over 15MHz bandwidth complies the ERP limit line of part22 rule, therefore ERP of the partial frequency spectrum which falls within part 22 also complies.														

2.2 Connection Diagram of Test System



This example is connection diagram of EUT test configurations.
For detail, please refer to test mode configuration and setup photographs for each test item.

2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m

2.4 Frequency List of Low/Middle/High Channels

LTE Band 26 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
15	Channel	26765	-	-
	Frequency	821.5	-	-
10	Channel	-	26740	-
	Frequency	-	819	-
5	Channel	26715	26740	26765
	Frequency	816.5	819	821.5
3	Channel	26705	26740	26775
	Frequency	815.5	819	822.5
1.4	Channel	26697	26740	26783
	Frequency	814.7	819	823.3

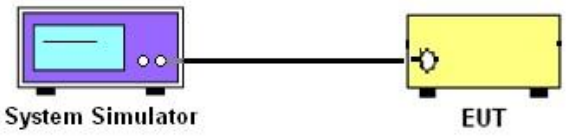
3 Conducted Test Items

3.1 Measuring Instruments

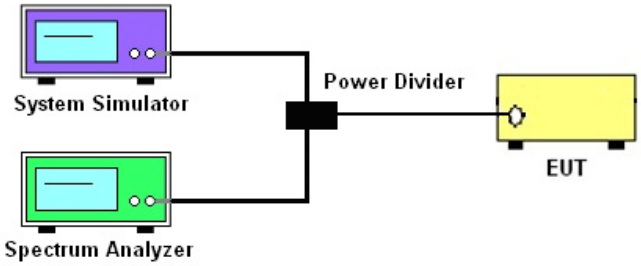
See list of measuring instruments of this test report.

3.1.1 Test Setup

3.1.2 Conducted Output Power



3.1.3 Conducted Band-Edge, Emission Mask



3.1.4 Test Result of Conducted Test

Please refer to Appendix A.

3.2 Conducted Output Power Measurement

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 enforce EUT transmitting at the maximum 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 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 Emissions Mask Measurement

3.3.1 Description of Emissions Mask Measurement

Equipment used in this licensed to EA or non-EA systems shall comply with the emission mask provisions of FCC Part 90.691.(a)

(a) Out-of-band emission requirement shall apply only to the "outer" channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 Log_{10}(f/6.1) decibels or 50 + 10 Log_{10}(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log_{10}(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

3.3.2 Test Procedures

1. The EUT was connected to spectrum analyzer and base station via power divider.
2. The emissions mask of low and high channels for the highest RF powers were measured.
3. Set RBW and VBW 3 times of RBW to make the measurement with the spectrum analyzer's, and according to KDB 971168 D02 Misc Rev Approve License Devices v02r01 standards, set RBW = 300 Hz to make offsets less than 37.5 kHz from a channel edge , RBW = 100 kHz to make offsets greater than 37.5 kHz, that is allowed.
4. The test results were shown below plots with a correction offset factor including cable loss, insertion loss of power divider.

3.4 Field Strength of Spurious Radiation Measurement

3.4.1 Description of Field Strength of Spurious Radiated Measurement

The radiated spurious emission was measured by substitution method according to ANSI / TIA-603-E. The power of any emission FCC Part 90.691 on any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth at least 43 + 10 log (P) dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

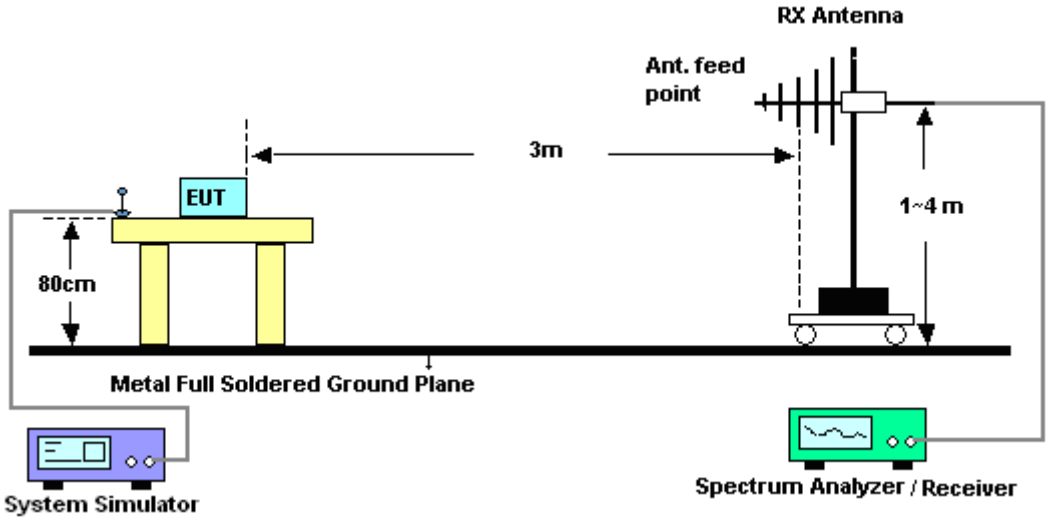
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43+10\log_{10}(P[Watts])$ dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

3.4.2 Test Procedures

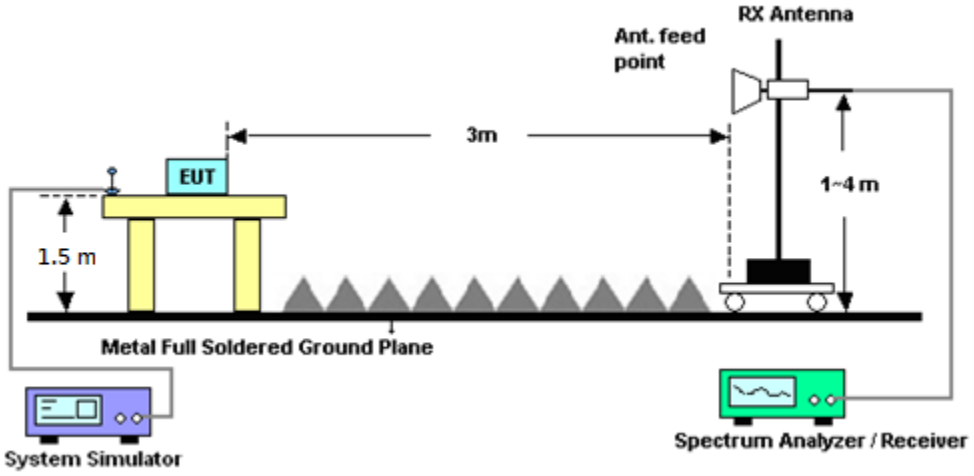
1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position 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. For testing below 1GHz, make the measurement with the spectrum analyzer's RBW = 100 kHz, VBW = 3MHz, Sweep = 500ms, Taking the record of maximum spurious emission.
6. For testing above 1GHz, make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, Sweep = 500ms, Taking the record of maximum spurious emission.
7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
9. Taking the record of output power at antenna port.
10. Repeat step 7 to step 8 for another polarization.
11. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
12. ERP (dBm) = EIRP - 2.15
13. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
14. The limit line is derived from 43 + 10log(P) dB below the transmitter power P(Watts)

3.4.3 Test Setup

For radiated test from 30MHz to 1GHz



For radiated test above 1GHz



3.4.4 Test Result of Field Strength of Spurious Radiated

Please refer to Appendix B.

4 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	Jan. 06, 2020	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D&00800N1D01N-06	37059&01	30MHz~1GHz	Oct. 13, 2018	May 31, 2019	Oct. 12, 2019	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1328	1GHz ~ 18GHz	Oct. 19, 2018	May 31, 2019	Oct. 18, 2019	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1326	1GHz ~ 18GHz	Oct. 30, 2018	May 31, 2019	Oct. 29, 2019	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170584	18GHz ~ 40GHz	Dec. 05, 2018	May 31, 2019	Dec. 04, 2019	Radiation (03CH12-HY)
Preamplifier	COM-POWER	PA-103	161075	10MHz~1GHz	Mar. 25, 2019	May 31, 2019	Mar. 24, 2020	Radiation (03CH12-HY)
Preamplifier	Agilent	8449B	3008A02375	1GHz~26.5Ghz	May 28, 2018	May 31, 2019	May 27, 2020	Radiation (03CH12-HY)
Preamplifier	Jet-Power	JPA0118-55-303	1710001800055007	1GHz~18GHz	Apr. 01, 2019	May 31, 2019	Mar. 31, 2020	Radiation (03CH12-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz ~ 40GHz	Dec. 06, 2018	May 31, 2019	Dec. 05, 2019	Radiation (03CH12-HY)
EMI Test Receiver	Rohde & Schwarz	ESU26	100390	20Hz~26.5GHz	Dec. 26, 2018	May 31, 2019	Dec. 25, 2019	Radiation (03CH12-HY)
Signal Generator	Rohde & Schwarz	SMB100A	175727	100kHz~40GHz	Dec. 23, 2018	May 31, 2019	Dec. 22, 2019	Radiation (03CH12-HY)
Filter	Wainwright	WLK4-1000-1530-6000-40SS	SN11	1 GHz Lowpass	Sep. 16, 2018	May 31, 2019	Sep. 15, 2019	Radiation (03CH12-HY)
Filter	Wainwright	WHKX12-1080-1200-1500-60SS	SN2	1.2G High Pass	Sep. 16, 2018	May 31, 2019	Sep. 15, 2019	Radiation (03CH12-HY)
Filter	Wainwright	WHKX12-2700-3000-18000-60ST	SN3	3GHz High Pass	Jul. 05, 2018	May 31, 2019	Jul. 04, 2019	Radiation (03CH12-HY)
Filter	Woken	WHKX8-5272.5-6750-18000-40ST	SN2	6.75G Highpass	Sep. 17, 2018	May 31, 2019	Sep.16, 2019	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126E	0058/126E	30M-18G	Mar. 13, 2019	May 31, 2019	Mar. 12, 2020	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30M~40GHz	Oct. 16, 2018	May 31, 2019	Oct. 15, 2019	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	800740/2	30M~40GHz	Oct. 16, 2018	May 31, 2019	Oct. 15, 2019	Radiation (03CH12-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	May 31, 2019	N/A	Radiation (03CH12-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	May 31, 2019	N/A	Radiation (03CH12-HY)
Software	Audix	E3 6.2009-8-24	RK-000989	N/A	N/A	May 31, 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)

5 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 26 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	22.80	-	-
15	1	37		22.85	-	-
15	1	74		22.83	-	-
15	36	0		21.61	-	-
15	36	20		21.66	-	-
15	36	39		21.62	-	-
15	75	0		21.59	-	-
15	1	0	16-QAM	21.90	-	-
15	1	37		21.95	-	-
15	1	74		21.73	-	-
15	36	0		20.70	-	-
15	36	20		20.65	-	-
15	36	39		20.59	-	-
15	75	0		20.59	-	-
10	1	0	QPSK	-	22.88	-
10	1	25		-	22.89	-
10	1	49		-	22.60	-
10	25	0		-	21.84	-
10	25	12		-	21.83	-
10	25	25		-	21.82	-
10	50	0		-	21.61	-
10	1	0	16-QAM	-	21.88	-
10	1	25		-	21.84	-
10	1	49		-	21.72	-
10	25	0		-	20.79	-
10	25	12		-	20.78	-
10	25	25		-	20.77	-
10	50	0		-	20.58	-

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

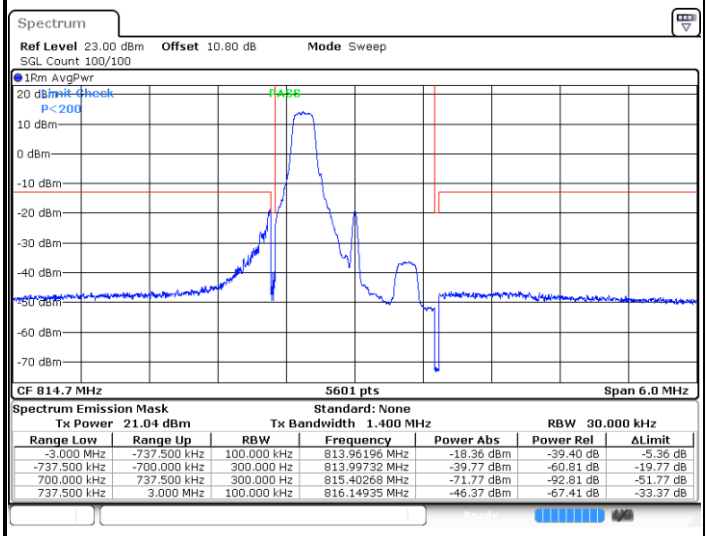
LTE Band 26 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	22.88	22.91	22.79
1.4	1	3		22.82	22.88	22.82
1.4	1	5		22.92	22.79	22.93
1.4	3	0		22.86	22.88	22.80
1.4	3	1		22.83	22.92	22.76
1.4	3	3		22.98	22.80	22.90
1.4	6	0		21.95	21.91	21.83
1.4	1	0	16-QAM	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 26_Part 90S

Emission masks – In-band emissions

LTE Band 26 / 1.4MHz / QPSK

Lowest Band Edge / 1RB



Spectrum Emission Mask Standard: None
Tx Power 21.04 dBm Tx Bandwidth 1.400 MHz RBW 30.000 kHz

Range Low	Range Up	RBW	Frequency	Power Abs	Power Rel	ΔLimit
-3.000 MHz	-737.500 kHz	100.000 kHz	813.96196 MHz	-18.36 dBm	-39.40 dB	-5.36 dB
-737.500 kHz	-700.000 kHz	300.000 Hz	813.99732 MHz	-39.77 dBm	-60.81 dB	-19.77 dB
700.000 kHz	737.500 kHz	300.000 Hz	815.40268 MHz	-71.77 dBm	-92.81 dB	-51.77 dB
737.500 kHz	3.000 MHz	100.000 kHz	816.14935 MHz	-46.37 dBm	-67.41 dB	-33.37 dB

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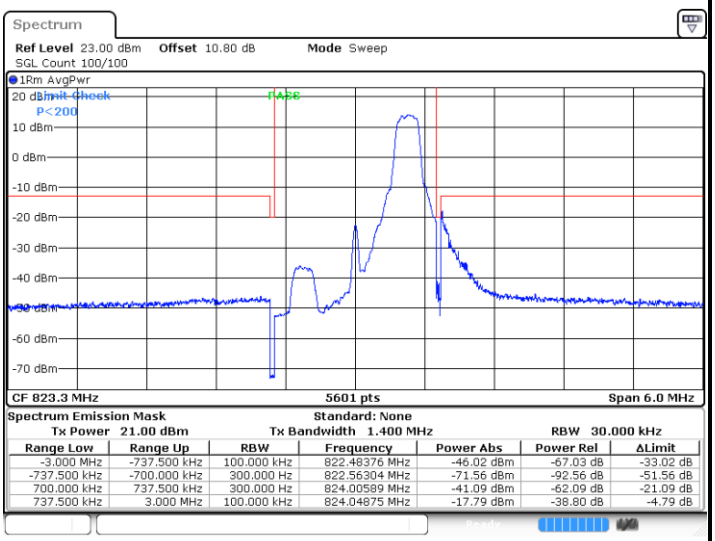
Highest Band Edge / 1RB



Spectrum Emission Mask Standard: None
Tx Power 21.00 dBm Tx Bandwidth 1.400 MHz RBW 30.000 kHz

Range Low	Range Up	RBW	Frequency	Power Abs	Power Rel	ΔLimit
-3.000 MHz	-737.500 kHz	100.000 kHz	822.48376 MHz	-46.02 dBm	-67.03 dB	-33.02 dB
-737.500 kHz	-700.000 kHz	300.000 Hz	822.56304 MHz	-71.56 dBm	-92.56 dB	-51.56 dB
700.000 kHz	737.500 kHz	300.000 Hz	824.00589 MHz	-41.09 dBm	-62.09 dB	-21.09 dB
737.500 kHz	3.000 MHz	100.000 kHz	824.04875 MHz	-17.79 dBm	-38.80 dB	-4.79 dB

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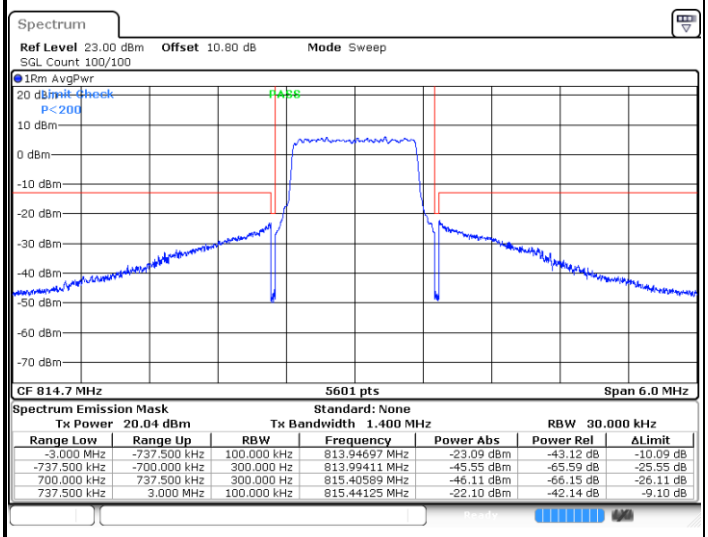
Lowest Band Edge / Full RB

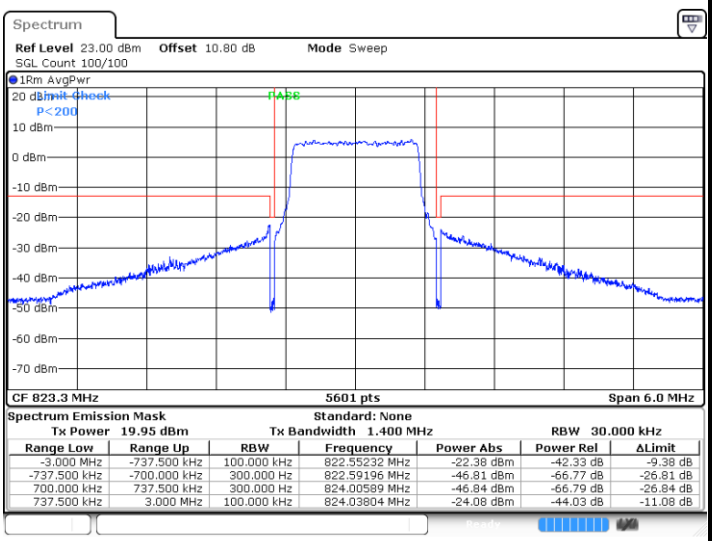


Spectrum Emission Mask Standard: None
Tx Power 20.04 dBm Tx Bandwidth 1.400 MHz RBW 30.000 kHz

Range Low	Range Up	RBW	Frequency	Power Abs	Power Rel	ΔLimit
-3.000 MHz	-737.500 kHz	100.000 kHz	813.94697 MHz	-23.09 dBm	-43.12 dB	-10.09 dB
-737.500 kHz	-700.000 kHz	300.000 Hz	813.99411 MHz	-45.55 dBm	-65.59 dB	-25.55 dB
700.000 kHz	737.500 kHz	300.000 Hz	815.40589 MHz	-46.11 dBm	-66.15 dB	-26.11 dB
737.500 kHz	3.000 MHz	100.000 kHz	815.44125 MHz	-22.10 dBm	-42.14 dB	-9.10 dB

Date: 2.SEP.2019 16:09:52

Highest Band Edge / Full RB



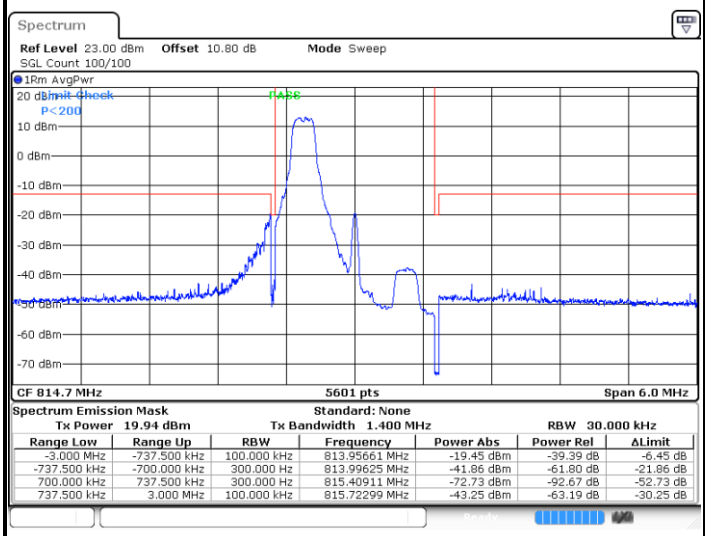
Spectrum Emission Mask Standard: None
Tx Power 19.95 dBm Tx Bandwidth 1.400 MHz RBW 30.000 kHz

Range Low	Range Up	RBW	Frequency	Power Abs	Power Rel	ΔLimit
-3.000 MHz	-737.500 kHz	100.000 kHz	822.55232 MHz	-22.38 dBm	-42.33 dB	-9.38 dB
-737.500 kHz	-700.000 kHz	300.000 Hz	822.59196 MHz	-46.81 dBm	-66.77 dB	-26.81 dB
700.000 kHz	737.500 kHz	300.000 Hz	824.00589 MHz	-46.84 dBm	-66.79 dB	-26.84 dB
737.500 kHz	3.000 MHz	100.000 kHz	824.03804 MHz	-24.08 dBm	-44.03 dB	-11.08 dB

Date: 2.SEP.2019 16:12:33

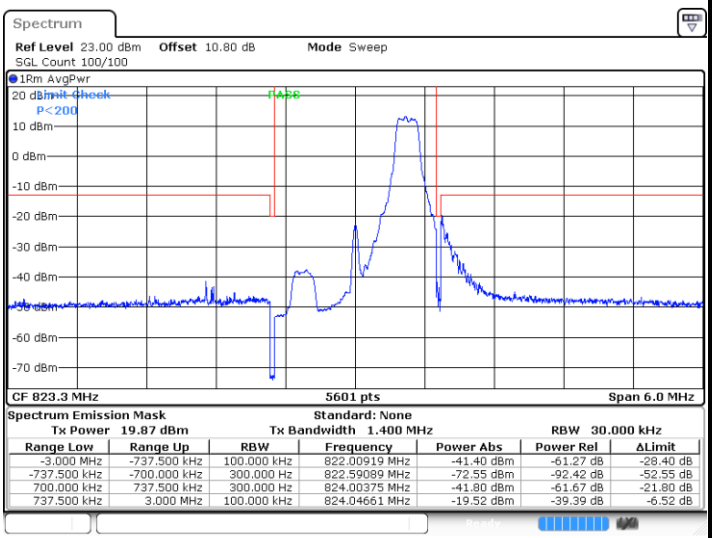
LTE Band 26 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



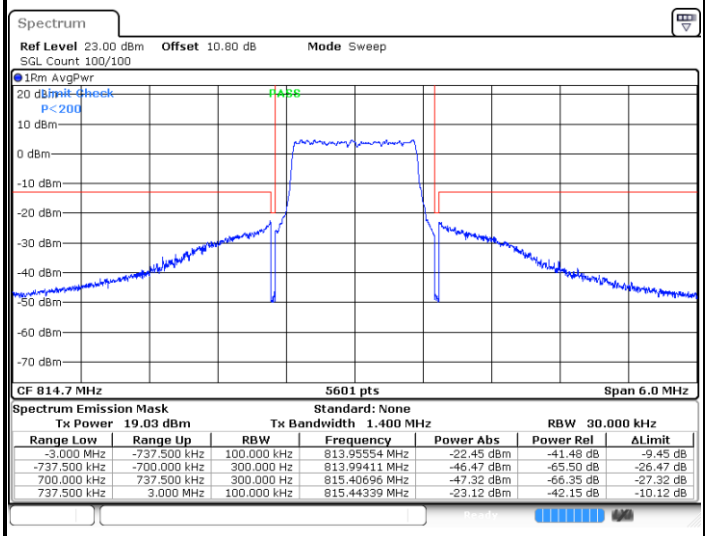
Date: 2.SEP.2019 16:09:12

Highest Band Edge / 1 RB



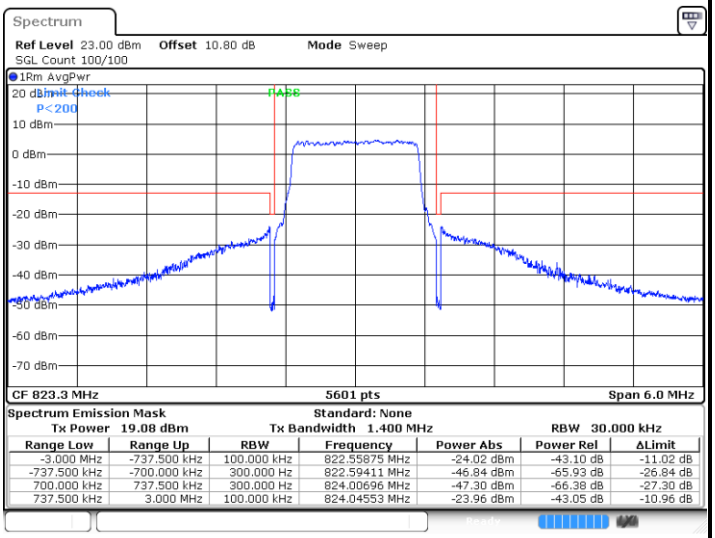
Date: 2.SEP.2019 16:11:52

Lowest Band Edge / Full RB



Date: 2.SEP.2019 16:10:32

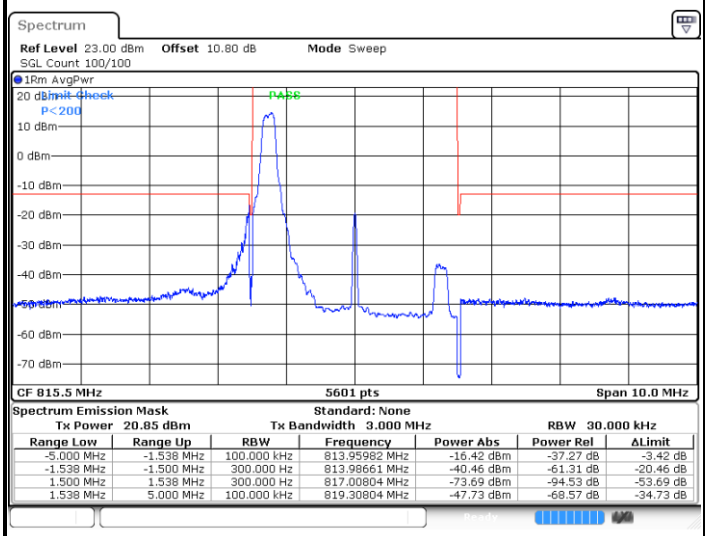
Highest Band Edge / Full RB



Date: 2.SEP.2019 16:13:13

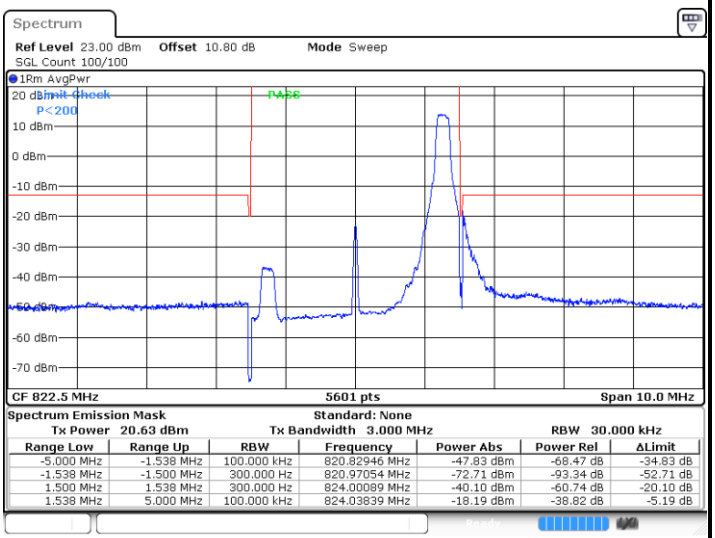
LTE Band 26 / 3MHz / QPSK

Lowest Band Edge / 1RB



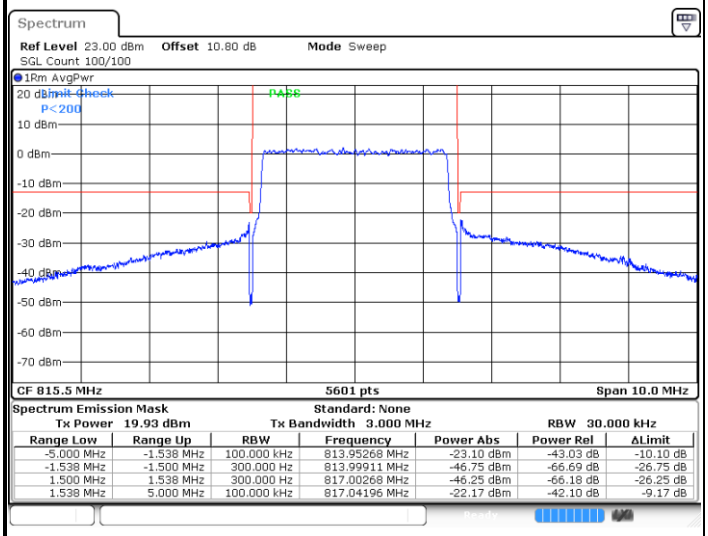
Date: 2.SEP.2019 16:13:54

Highest Band Edge / 1 RB



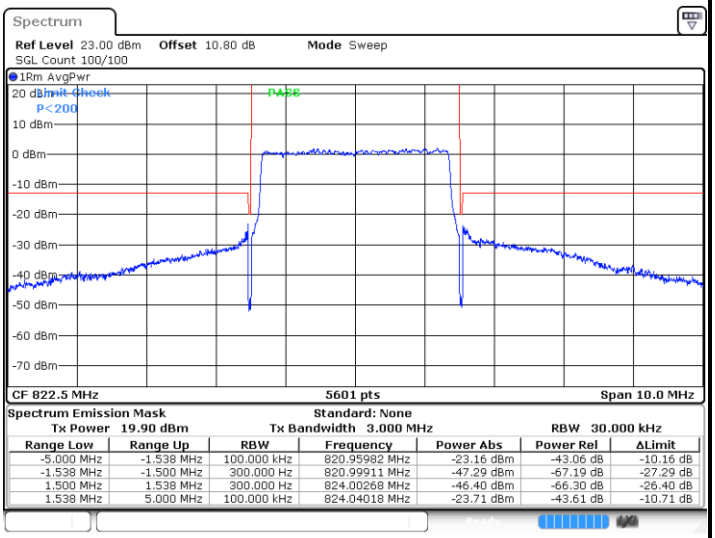
Date: 2.SEP.2019 16:16:36

Lowest Band Edge / Full RB

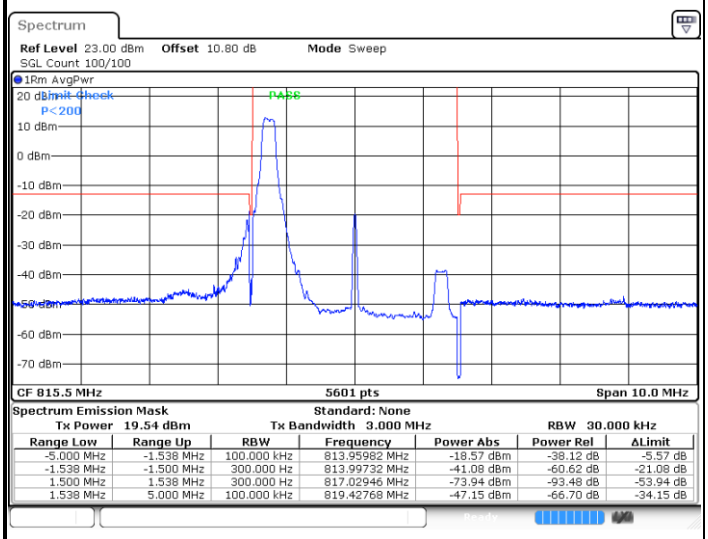
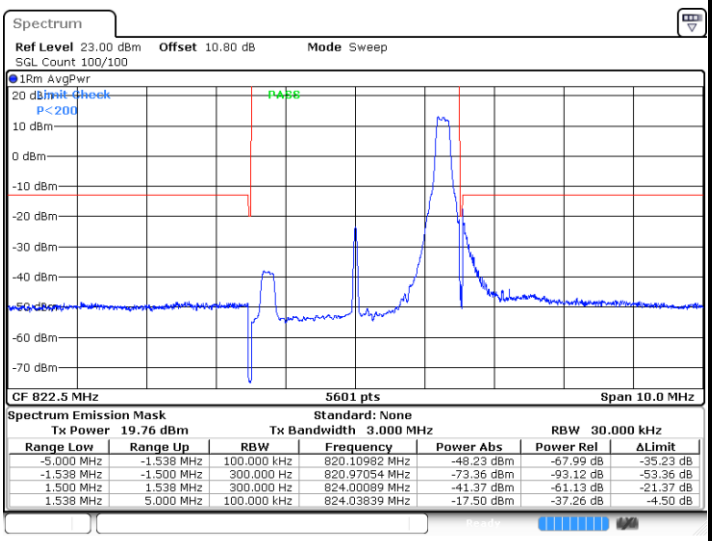
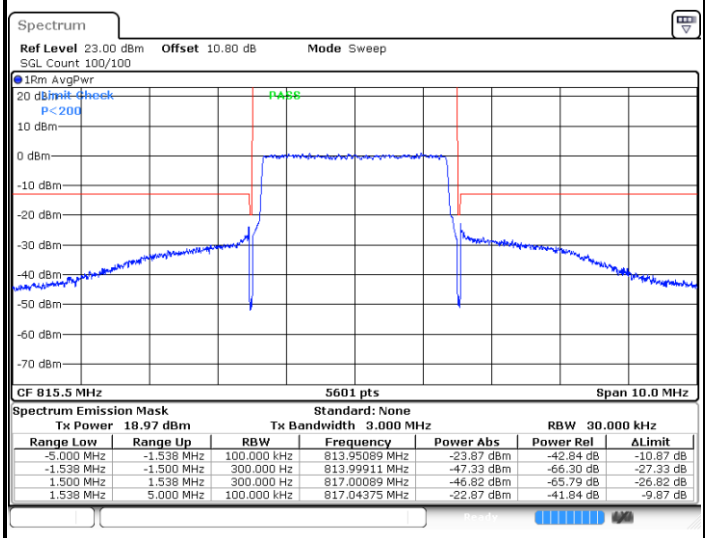
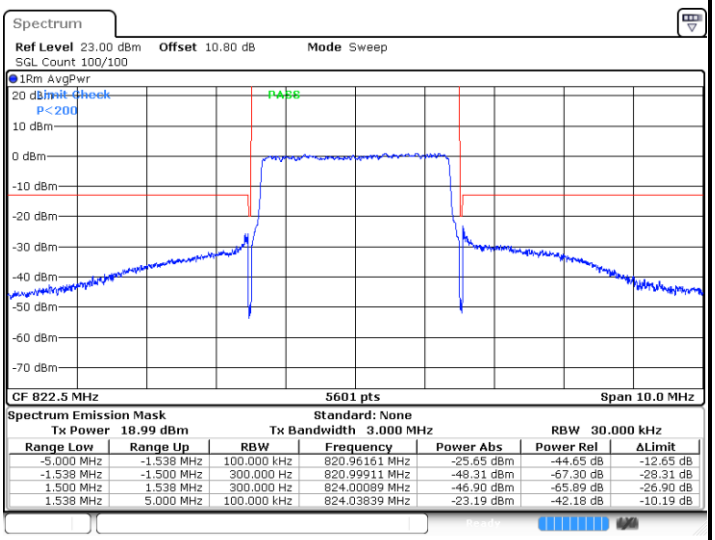


Date: 2.SEP.2019 16:15:15

Highest Band Edge / Full RB

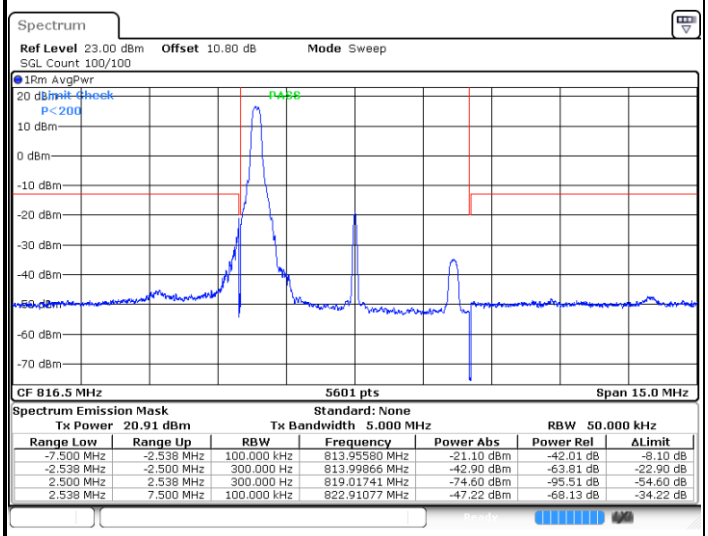


Date: 2.SEP.2019 16:17:57

LTE Band 26 / 3MHz / 16QAM	
Lowest Band Edge / 1 RB	**Highest Band Edge /1 RB**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

LTE Band 26 / 5MHz / QPSK

Lowest Band Edge / 1 RB

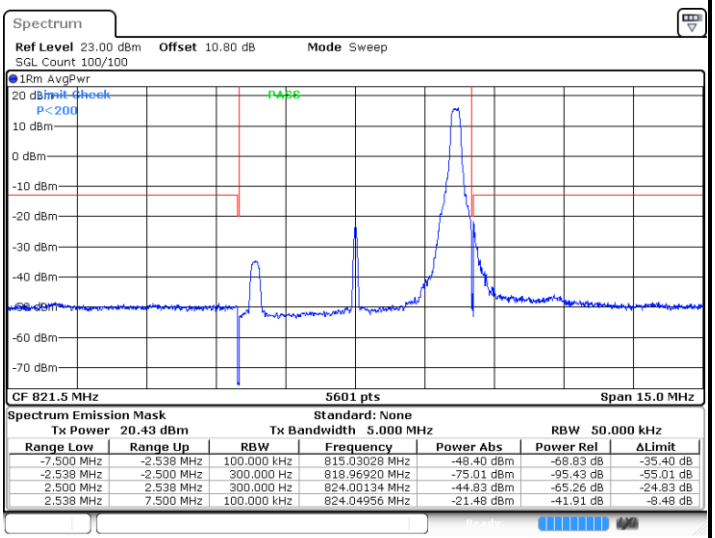


Spectrum Emission Mask Standard: None
Tx Power 20.91 dBm Tx Bandwidth 5.000 MHz RBW 50.000 kHz

Range Low	Range Up	RBW	Frequency	Power Abs	Power Rel	ΔLimit
-7.500 MHz	-2.538 MHz	100.000 kHz	813.95580 MHz	-21.10 dBm	-42.01 dB	-8.10 dB
-2.538 MHz	-2.500 MHz	300.000 Hz	813.99866 MHz	-42.90 dBm	-63.81 dB	-22.90 dB
2.500 MHz	2.538 MHz	300.000 Hz	819.01741 MHz	-74.60 dBm	-95.51 dB	-54.60 dB
2.538 MHz	7.500 MHz	100.000 kHz	822.91077 MHz	-47.22 dBm	-68.13 dB	-34.22 dB

Date: 2.SEP.2019 16:19:18

Highest Band Edge / 1 RB

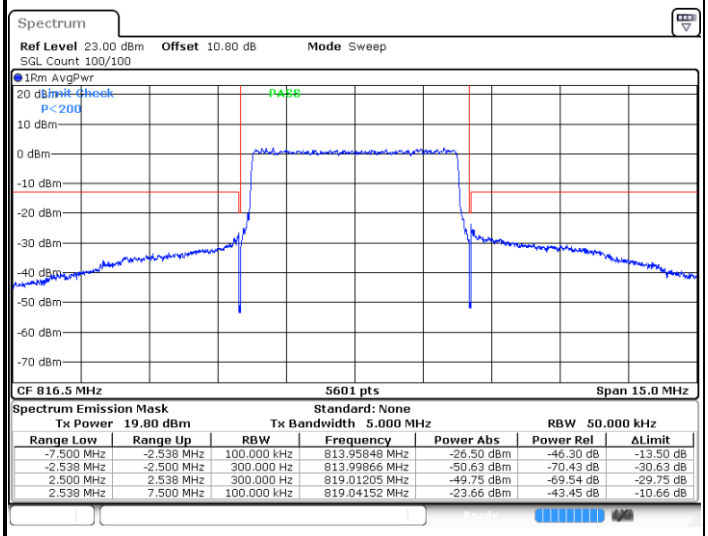


Spectrum Emission Mask Standard: None
Tx Power 20.43 dBm Tx Bandwidth 5.000 MHz RBW 50.000 kHz

Range Low	Range Up	RBW	Frequency	Power Abs	Power Rel	ΔLimit
-7.500 MHz	-2.538 MHz	100.000 kHz	815.03028 MHz	-48.40 dBm	-68.83 dB	-35.40 dB
-2.538 MHz	-2.500 MHz	300.000 Hz	818.96920 MHz	-75.01 dBm	-95.43 dB	-55.01 dB
2.500 MHz	2.538 MHz	300.000 Hz	824.00134 MHz	-44.83 dBm	-65.26 dB	-24.83 dB
2.538 MHz	7.500 MHz	100.000 kHz	824.04956 MHz	-21.48 dBm	-41.91 dB	-8.48 dB

Date: 2.SEP.2019 16:21:59

Lowest Band Edge / Full RB

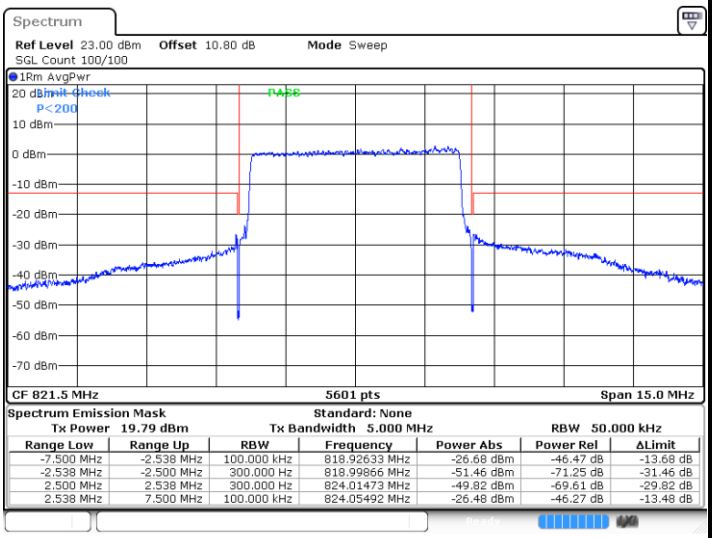


Spectrum Emission Mask Standard: None
Tx Power 19.80 dBm Tx Bandwidth 5.000 MHz RBW 50.000 kHz

Range Low	Range Up	RBW	Frequency	Power Abs	Power Rel	ΔLimit
-7.500 MHz	-2.538 MHz	100.000 kHz	813.95848 MHz	-26.50 dBm	-46.30 dB	-13.50 dB
-2.538 MHz	-2.500 MHz	300.000 Hz	813.99866 MHz	-50.63 dBm	-70.43 dB	-30.63 dB
2.500 MHz	2.538 MHz	300.000 Hz	819.01205 MHz	-49.75 dBm	-69.54 dB	-29.75 dB
2.538 MHz	7.500 MHz	100.000 kHz	819.04152 MHz	-23.66 dBm	-43.45 dB	-10.66 dB

Date: 2.SEP.2019 16:20:38

Highest Band Edge / Full RB



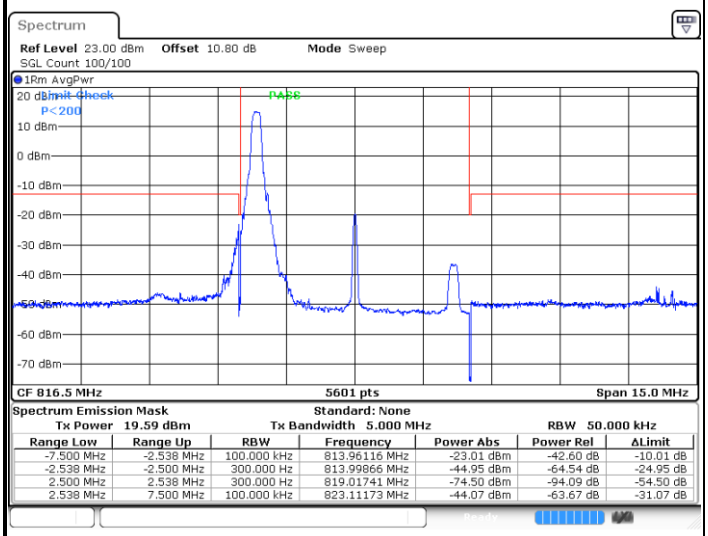
Spectrum Emission Mask Standard: None
Tx Power 19.79 dBm Tx Bandwidth 5.000 MHz RBW 50.000 kHz

Range Low	Range Up	RBW	Frequency	Power Abs	Power Rel	ΔLimit
-7.500 MHz	-2.538 MHz	100.000 kHz	818.92633 MHz	-26.68 dBm	-46.47 dB	-13.68 dB
-2.538 MHz	-2.500 MHz	300.000 Hz	818.99866 MHz	-51.46 dBm	-71.25 dB	-31.46 dB
2.500 MHz	2.538 MHz	300.000 Hz	824.01473 MHz	-49.82 dBm	-69.61 dB	-29.82 dB
2.538 MHz	7.500 MHz	100.000 kHz	824.05492 MHz	-26.48 dBm	-46.27 dB	-13.48 dB

Date: 2.SEP.2019 16:23:19

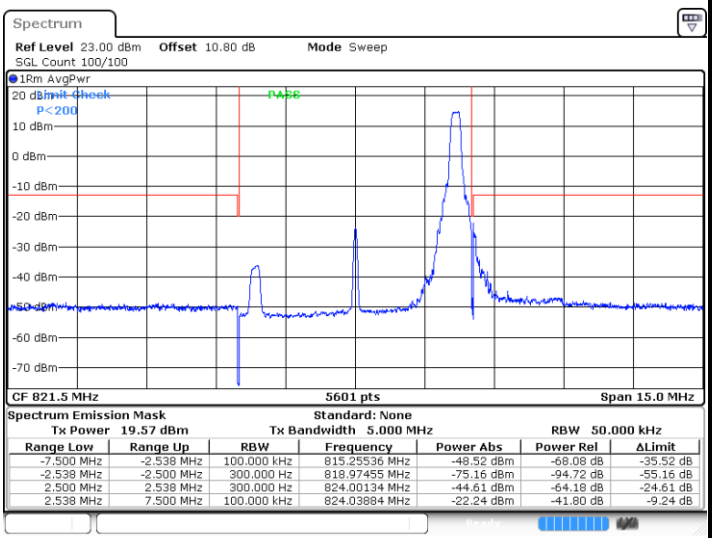
LTE Band 26 / 5MHz / 16QAM

Lowest Band Edge / 1RB



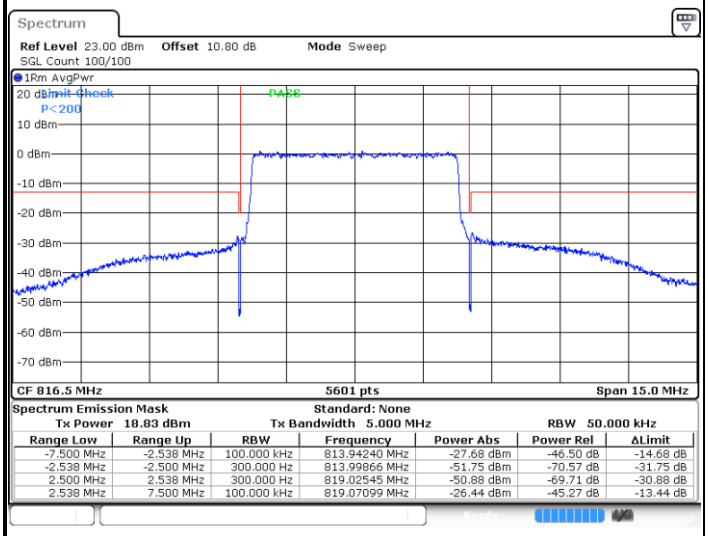
Date: 2.SEP.2019 16:19:58

Highest Band Edge / 1 RB



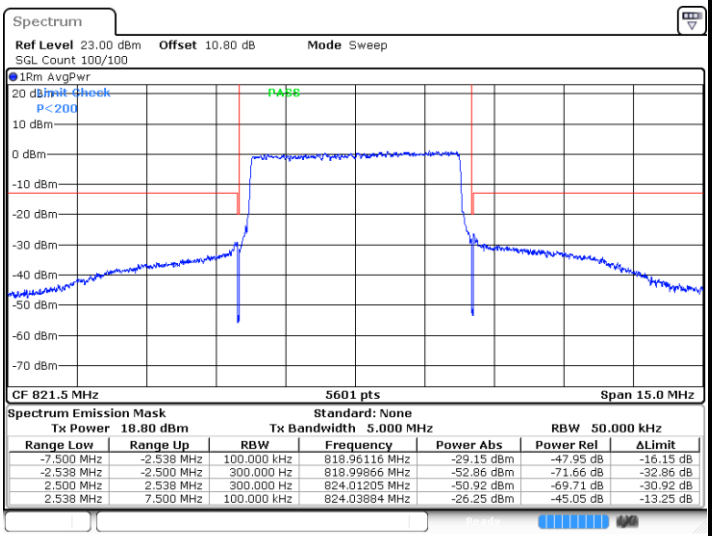
Date: 2.SEP.2019 16:22:39

Lowest Band Edge / Full RB



Date: 2.SEP.2019 16:21:19

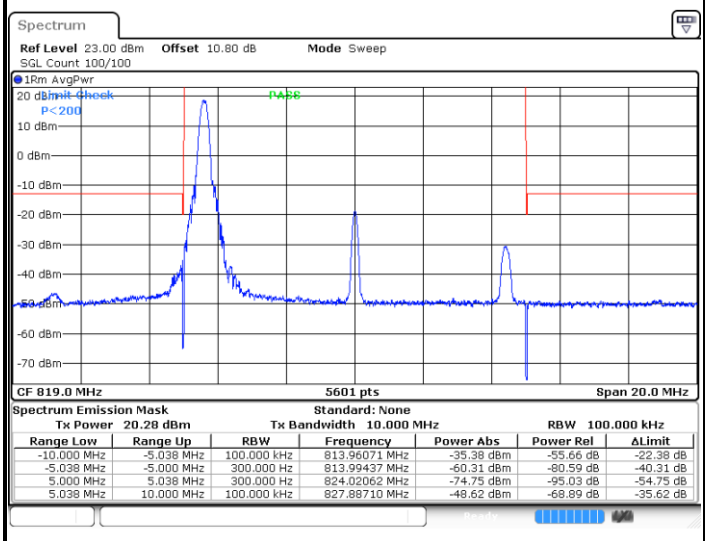
Highest Band Edge / Full RB



Date: 2.SEP.2019 16:24:00

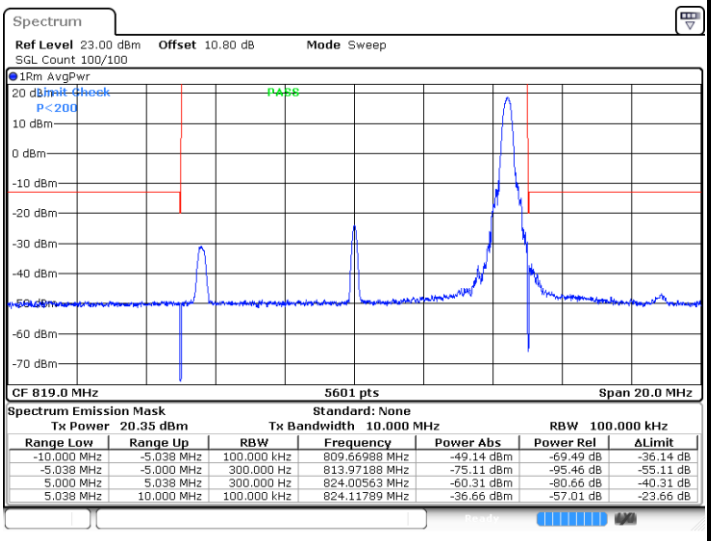
LTE Band 26 / 10MHz / QPSK

Lowest Band Edge / 1 RB



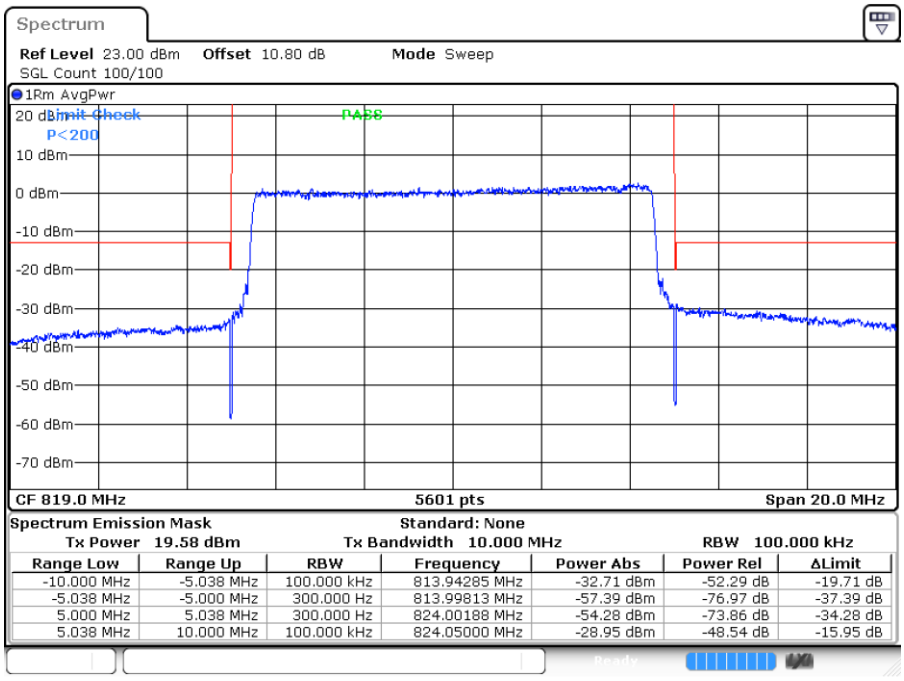
Date: 2.SEP.2019 16:24:40

Highest Band Edge / 1 RB



Date: 2.SEP.2019 16:26:01

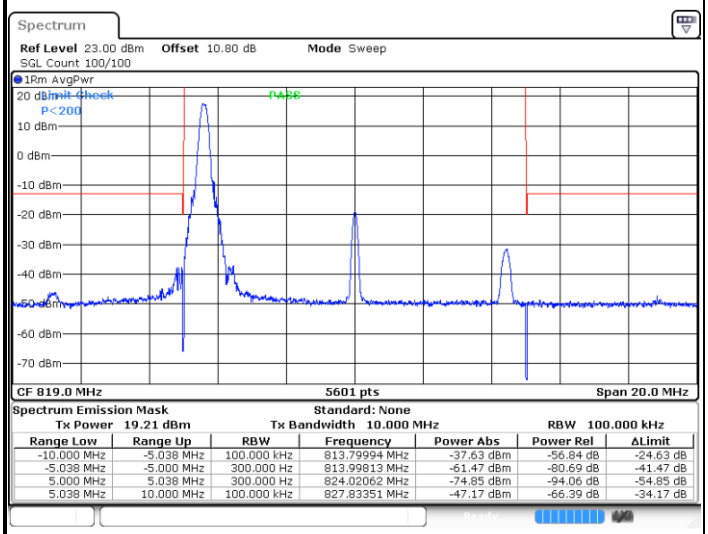
Band Edge / Full RB



Date: 2.SEP.2019 16:27:21

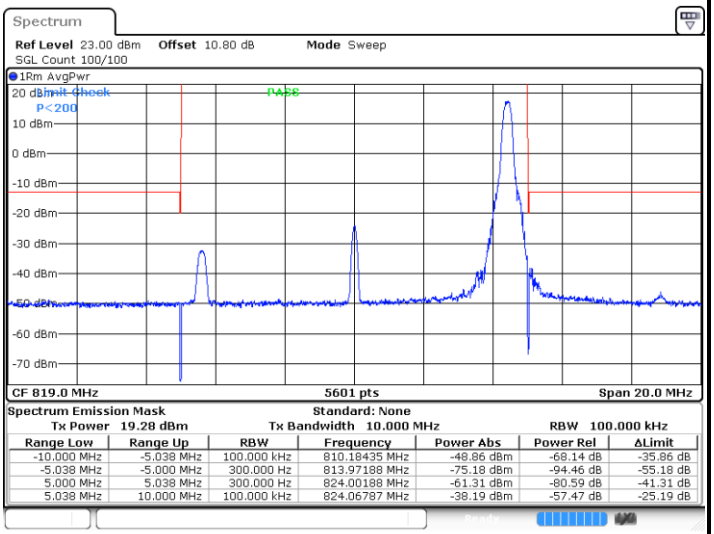
LTE Band 26 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



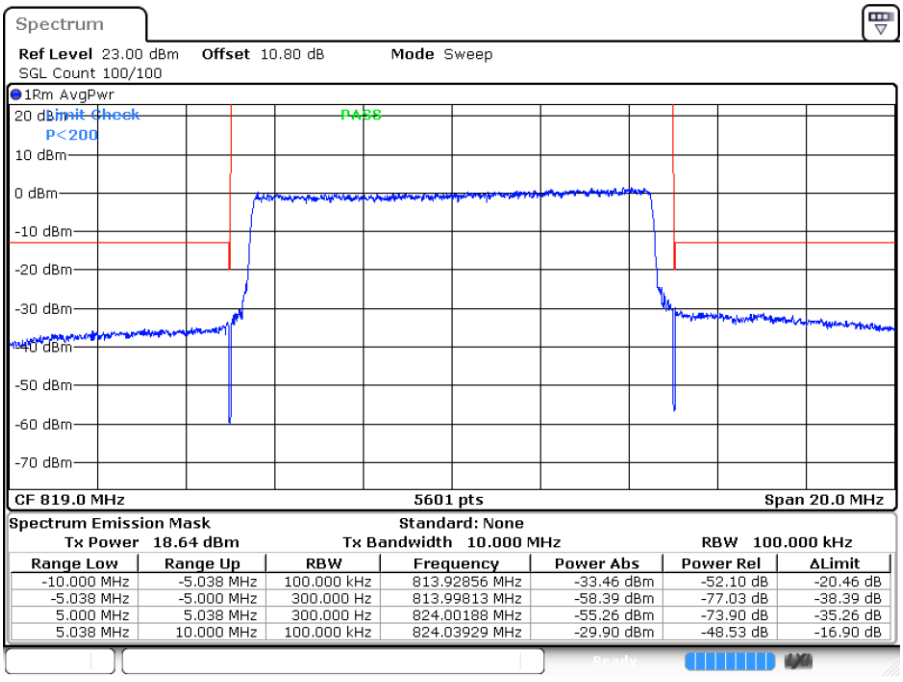
Date: 2.SEP.2019 16:25:20

Highest Band Edge / 1 RB



Date: 2.SEP.2019 16:26:41

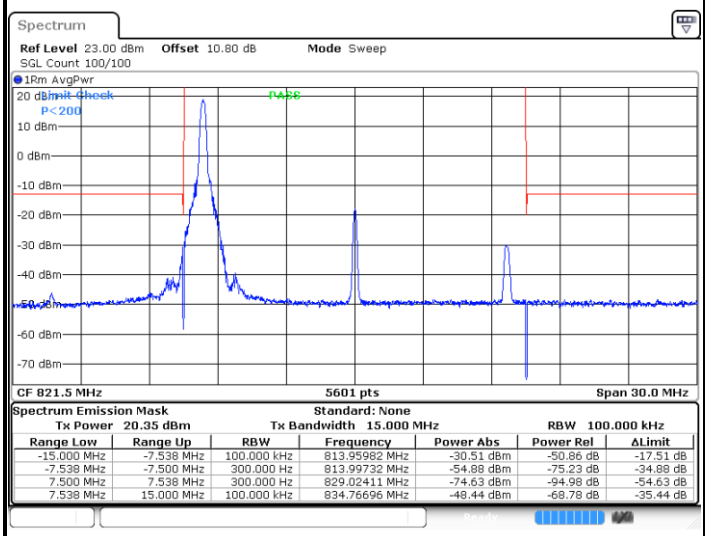
Band Edge / Full RB



Date: 2.SEP.2019 16:28:01

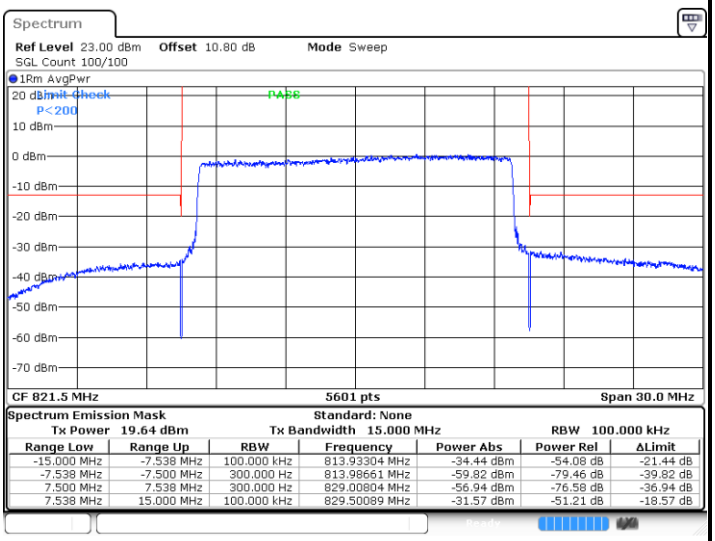
LTE Band 26 / 15MHz QPSK

Lowest Band Edge / 1 RB



Date: 2.SEP.2019 16:28:42

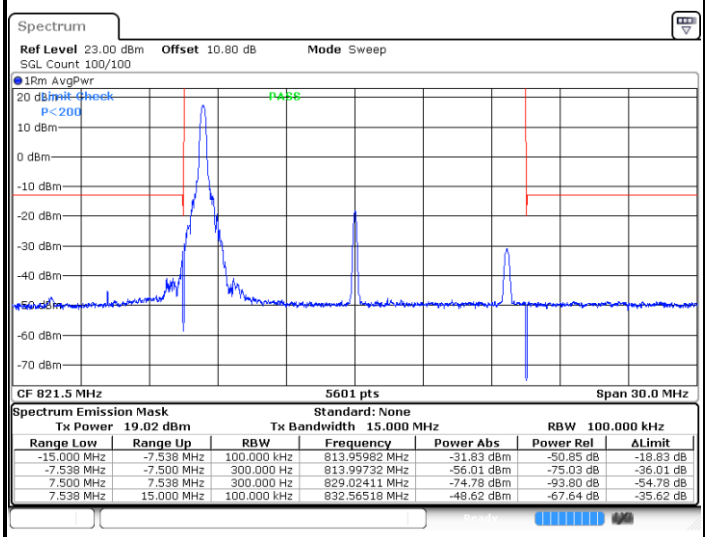
Lowest Band Edge / Full RB



Date: 2.SEP.2019 16:31:23

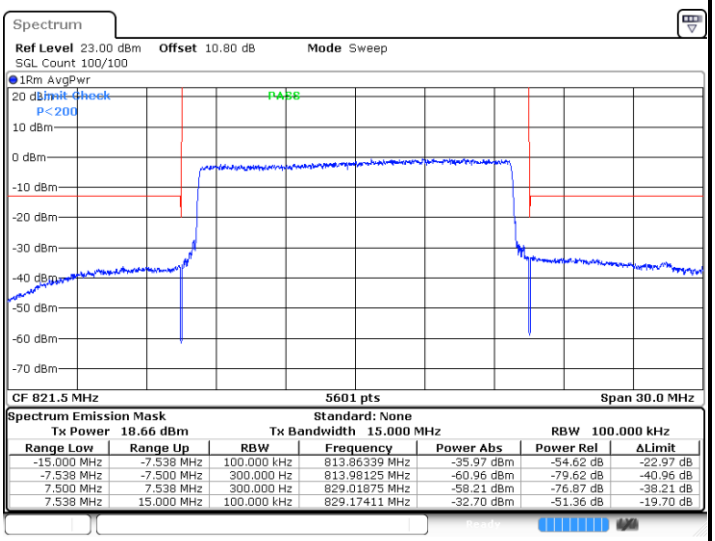
LTE Band 26 / 15MHz 16QAM

Lowest Band Edge / 1 RB



Date: 2.SEP.2019 16:29:22

Lowest Band Edge / Full RB



Date: 2.SEP.2019 16:32:03

Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

LTE Band 26

LTE Band 26 / 3MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1632	-31.02	-13	-18.02	-54.06	-36.56	0.91	8.60	H
	2448	-35.13	-13	-22.13	-62.45	-42.47	1.14	10.63	H
	3264	-41.29	-13	-28.29	-70.03	-49.76	1.32	11.93	H
									H
									H
									H
									H
	1632	-27.35	-13	-14.35	-49.92	-32.89	0.91	8.60	V
	2448	-26.58	-13	-13.58	-54	-33.92	1.14	10.63	V
	3264	-41.20	-13	-28.20	-70.42	-49.67	1.32	11.93	V
									V
									V
									V
									V

Middle	1640	-41.72	-13	-28.72	-51.81	-47.28	0.92	8.63	H
	2456	-48.94	-13	-35.94	-63.27	-56.29	1.14	10.64	H
	3280	-50.79	-13	-37.79	-66.49	-59.29	1.32	11.97	H
									H
									H
									H
									H
	1640	-38.42	-13	-25.42	-47.97	-43.98	0.92	8.63	V
	2456	-38.43	-13	-25.43	-52.89	-45.78	1.14	10.64	V
	3280	-51.36	-13	-38.36	-67.53	-59.86	1.32	11.97	V
									V
									V
									V
									V
Highest	1648	-39.48	-13	-26.48	-49.58	-45.07	0.92	8.66	H
	2472	-49.26	-13	-36.26	-63.58	-56.63	1.14	10.66	H
	3288	-47.82	-13	-34.82	-63.48	-56.34	1.32	11.99	H
									H
									H
									H
									H
	16448	-35.65	-13	-22.65	-45.21	-46.20	3.12	15.82	V
	2472	-41.54	-13	-28.54	-56.04	-48.91	1.14	10.66	V
	3288	-49.91	-13	-36.91	-66.03	-58.43	1.32	11.99	V
									V
									V
									V
									V

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

LTE Band 26 / 10MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1640	-41.38	-13	-28.38	-51.47	-46.94	0.92	8.63	H
	2456	-49.28	-13	-36.28	-63.61	-56.63	1.14	10.64	H
	3280	-50.90	-13	-37.90	-66.6	-59.40	1.32	11.97	H
									H
									H
									H
									H
	1640	-38.58	-13	-25.58	-47.41	-44.15	0.92	8.63	V
	2456	-39.51	-13	-26.51	-53.97	-46.86	1.14	10.64	V
	3280	-51.57	-13	-38.57	-67.74	-60.07	1.32	11.97	V
									V
									V
									V
									V

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

LTE Band 26 / 15MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1640	-40.59	-13	-27.59	-50.68	-46.15	0.92	8.63	H
	2464	-50.89	-13	-37.89	-65.21	-58.25	1.14	10.65	H
	3288	-47.33	-13	-34.33	-62.99	-55.85	1.32	11.99	H
									H
									H
									H
									H
	1640	-36.86	-13	-23.86	-46.41	-42.42	0.92	8.63	V
	2464	-42.62	-13	-29.62	-57.07	-49.98	1.14	10.65	V
	3288	-49.45	-13	-36.45	-65.57	-57.97	1.32	11.99	V
									V
									V
									V
									V

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