FCC 47 CFR PART 22 SUBPART H AND PART 24 SUBPART E

TEST REPORT

For

Zonar Connect

Trade Name: ZONAR

Model: 20081

Issued to

Zonar Systems Inc
18200 Cascade Ave South Suite 200
Seattle Washington United States

Issued by

Compliance Certification Services Inc.
No.11, Wugong 6th Rd., Wugu Dist.,
New Taipei City 24891, Taiwan. (R.O.C.)
http://www.ccsrf.com
service@ccsrf.com
Issued Date: October 28, 2016

Testing Laboratory
1309

Revision History

Rev.		Issue Date		Revisions	Effect Page	Revised By
00		October 28, 2016		Initial Issue	ALL	Doris Chu

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1. TEST RESULT CERTIFICATION

Applicant:	Zonar Systems Inc 18200 Cascade Ave South Suite 200 Seattle Washington United States
Manufacturer:	First International Computer 8F, No.300, Yang Guang St., NeiHu, Taipei, Taiwan 114
Equipment Under Test:	Zonar Connect
Trade Name:	ZONAR
Model:	20081
Date of Test:	September 1 ~ November 7, 2016

APPLICABLE STANDARDS	
STANDARD	**TEST RESULT**
FCC 47 CFR PART 22 SUBPART H AND PART 24 SUBPART E	No non-compliance noted

We hereby certify that:

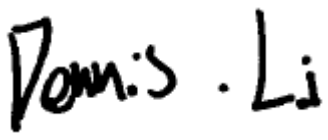
The above equipment was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in TIA/EIA-603-D:2010 and the energy emitted by the sample EUT tested as described in this report is in compliance with radiated emission limits of FCC Rule FCC PART 22 Subpart H, PART 24 Subpart E.

The test results of this report relate only to the tested sample identified in this report.

Approved by:

Sam Chuang
Manager
Compliance Certification Services Inc.

Tested by:



Dennis Li
Engineer
Compliance Certification Services Inc.

2. EUT DESCRIPTION

Product	Zonar Connect	
Trade Name	ZONAR	
Model:	20081	
Model Discrepancy	N/A	
Received Date	April 15, 2016	
Power Supply	VDC from Power Adapter DARFON / B112-51(SOY-0500250US) I/P: 100-240Vac, 0.4A, 50-60Hz O/P: 5Vdc, 2.5A	
Modulation Technique	LTE Band 2	QPSK, 16QAM
	LTE Band 5	QPSK, 16QAM
Antenna Specification	Dipole Antenna LTE Band 2: Gain: -0.19dBi LTE Band 5: Gain: 0.13dBi	

Remark: *The sample selected for test was engineering sample that approximated to production product and was provided by manufacturer.*

Emission Designator						
Band	**Frequency Range(MHz)**	**BW (MHz)**	**QPSK**		**16QAM**	
			Emission Designator (99% OBW)	**Maximum EIRP (W)**	**Emission Designator (99% OBW)**	**Maximum EIRP (W)**
2	**1850.7MHz ~1909.2MHz**	**1.4**	1M11G7D	0.160	1M12D7W	0.174
	1851.5MHz ~1908.4MHz	**3**	2M69G7D	0.161	2M69D7W	0.179
	1852.5MHz ~1907.5MHz	**5**	4M52G7D	0.161	4M50D7W	0.158
	1855MHz ~1905MHz	**10**	9M00G7D	0.149	9M00D7W	0.141
	1857.5MHz ~1902.5MHz	**15**	13M4G7D	0.177	13M4D7W	0.154
	1860MHz ~1900MHz	**20**	18M0G7D	0.178	18M0D7W	0.156
Band	**Frequency Range(MHz)**	**BW (MHz)**	**QPSK**		**16QAM**	
			Emission Designator (99% OBW)	**Maximum ERP (W)**	**Emission Designator (99% OBW)**	**Maximum ERP (W)**
5	**824.7MHz ~848.2MHz**	**1.4**	1M09G7D	0.214	1M09D7W	0.200
	825.5MHz~847.4MHz	**3**	2M68G7D	0.210	2M68D7W	0.197
	826.5MHz ~846.5MHz	**5**	4M47G7D	0.345	4M46D7W	0.340
	829MHz ~844MHz	**10**	8M94G7D	0.348	8M91D7W	0.345

3. TEST METHODOLOGY

Both conducted and radiated testing were performed according to TIA/EIA-603-D: 2010, FCC CFR 47, Part 2 and Part 22 Subpart H & Part 24 Subpart E.

3.1 EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

3.2 DESCRIPTION OF TEST MODES

The EUT (Model: 20081) had been tested under operating condition.
The EUT be set in maximum power transmission via call box during testing.

LTE Band 2: 1850MHz ~ 1910MHz

Three channels had been tested for each channel bandwidth.

Channel	1.4MHz		3MHz		5MHz	
	Channel	Frequency(MHz)	Channel	Frequency(MHz)	Channel	Frequency(MHz)
Lowest	18607	1850.7	18615	1851.5	18625	1852.5
Middle	18900	1880.0	18900	1880.0	18900	1880.0
Highest	19193	1909.2	19184	1908.4	19175	1907.5
Channel	10MHz		15MHz		20MHz	
	Channel	Frequency(MHz)	Channel	Frequency(MHz)	Channel	Frequency(MHz)
Lowest	18650	1855.0	18675	1857.5	18700	1860.0
Middle	18900	1880.0	18900	1880.0	18900	1880.0
Highest	19150	1905.0	19125	1902.5	19100	1900.0

LTE Band 5: 824MHz ~ 849MHz

Three channels had been tested for each channel bandwidth.

Channel	1.4MHz		3MHz	
	Channel	Frequency(MHz)	Channel	Frequency(MHz)
Lowest	20407	824.7	20415	825.5
Middle	20525	836.5	20525	836.5
Highest	20642	848.2	20634	847.4
Channel	5MHz		10MHz	
	Channel	Frequency(MHz)	Channel	Frequency(MHz)
Lowest	20425	826.5	20450	829.0
Middle	20525	836.5	20525	836.5
Highest	20625	846.5	20600	844.0

Radiated Emission Measurement	
Test Condition	**Band edge, Emission for Unwanted and Fundamental**
Voltage/Hz	**120V/60Hz**
Test Mode	**Mode 1: Adapter Mode** **Mode 2: USB Charge Mode(Link mode)**
Worst Mode	☒ **Mode 1** ☐ **Mode 2**
Position	☐ Placed in fixed position. ☒ Placed in fixed position at X-Plane (E2-Plane) ☐ Placed in fixed position at Y-Plane (E1-Plane) ☐ Placed in fixed position at Z-Plane (H-Plane)

Remark: The worst mode was record in this test report.

4. INSTRUMENT CALIBRATION

4.1 MEASURING INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

4.2 MEASUREMENT EQUIPMENT USED

Equipment Used for Emissions Measurement

Remark: *Each piece of equipment is scheduled for calibration once a year.*

Conducted Emissions Test Site					
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Date**	**Calibration Due**
Spectrum Analyzer	R&S	FSV 40	101073	2015/10/04	2016/10/03
Spectrum Analyzer	R&S	FSV 40	0229	2016/05/11	2017/05/10
Communication Analyzer	Anritsu	MT-8820C	6201240043	2016/2/18	2017/2/17

Wugu 966 Chamber A					
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Date**	**Calibration Due**
Signal Analyzer	Agilent	E4407B	MY44212686	2016/4/9	2017/4/8
Pre-Amplifier	MITEQ	AFS44-00102650-42-10P-44	1042473	2016/7/6	2017/7/5
Bilog Antenna	Sunol Sciences	JB1	A052609	2016/3/20	2017/3/21
Horn Antenna	SCHWARZBECK	BBHA 9120D	779	2016/3/9	2017/3/8
Pre-Amplifier	MITEQ	AMF-6F-260400-40-8P	985646	2016/1/14	2017/1/13
Horn Antenna	EMCO	3116	26370	2016/1/15	2017/1/14
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R	N.C.R
Turn Table	CCS	CC-T-1F	N/A	N.C.R	N.C.R
Communication Analyzer	Anritsu	MT-8820C	6201240043	2016/2/18	2017/2/17
Software	EZ-EMC (CCS-3A1RE)				

4.3 MEASUREMENT UNCERTAINTY

PARAMETER	UNCERTAINTY
3M Semi Anechoic Chamber / 30M~200M	+/- 4.0138
3M Semi Anechoic Chamber / 200M~1000M	+/- 3.9483
3M Semi Anechoic Chamber / 1G~8G	+/- 2.5975
3M Semi Anechoic Chamber / 8G~18G	+/- 2.6112
3M Semi Anechoic Chamber / 18G~26G	+/- 2.7389
3M Semi Anechoic Chamber / 26G~40G	+/- 2.9683

***Remark**: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.*

5. FACILITIES AND ACCREDITATIONS

5.1 FACILITIES

All measurement facilities used to collect the measurement data are located at

☐ No.199, Chunghsen Road, Hsintien City, Taipei Hsien, Taiwan, R.O.C.
Tel: 886-2-2217-0894 / Fax: 886-2-2217-1029

☒ No.11, Wugong 6th Rd., Wugu Dist., New Taipei City 24891, Taiwan. (R.O.C.)
Tel: 886-2-2299-9720 / Fax: 886-2-2298-4045

☐ No.81-1, Lane 210, Bade 2nd Rd., Lujhu Township, Taoyuan County 33841, TAIWAN, R.O.C.
Tel: 886-3-324-0332 / Fax: 886-3-324-5235

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.10: 2013 and CISPR Publication 22.

5.2 EQUIPMENT

Radiated emissions are measured with one or more of the following types of linearly polarized antennas: tuned dipole, biconical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements.

Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers.

Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to CISPR Publication 16-1, “Radio Interference Measuring Apparatus and Measurement Methods.”

5.3 LABORATORY ACCREDITATIONS AND LISTING

The test facilities used to perform radiated and conducted emissions tests are accredited by American Association for Laboratory Accreditation Program for the specific scope accreditation under Lab Code: 0824-01 to perform Electromagnetic Interference tests according to FCC Part 15 and CISPR 22 requirements. In addition, the test facilities are listed with Industry Canada, Certification and Engineering Bureau, IC 2324G-1 for 3M Semi Anechoic Chamber A, 2324G-2 for 3M Semi Anechoic Chamber B.

5.4 TABLE OF ACCREDITATIONS AND LISTINGS

Country	Agency	Scope of Accreditation	Logo
USA	FCC	3M Semi Anechoic Chamber (FCC MRA: TW1039) to perform FCC Part 15 measurements	FCC MRA: TW1039
Taiwan	TAF	LP0002, RTTE01, FCC Method-47 CFR Part 15 Subpart C, D, E, RSS-210, RSS-310 IDA TS SRD, AS/NZS 4268, AS/NZS 4771, TS 12.1 & 12,2, ETSI EN 300 440-1, ETSI EN 300 440-2, ETSI EN 300 328, ETSI EN 300 220-1, ETSI EN 300 220-2, ETSI EN 301 893, ETSI EN 301 489-1/3/7/17 FCC OET Bulletin 65 + Supplement C, EN 50360, EN 50361, EN 50371, RSS 102, EN 50383, EN 50385, EN 50392, IEC 62209, CNS 14958-1, CNS 14959 FCC Method –47 CFR Part 15 Subpart B IEC / EN 61000-3-2, IEC / EN 61000-3-3, IEC / EN 61000-4-2/3/4/5/6/8/11	TAF Testing Laboratory 1309
Canada	Industry Canada	3M Semi Anechoic Chamber (IC 2324G-1 / IC 2324G-2) to perform	Canada IC 2324G-1 IC 2324G-2

** No part of this report may be used to claim or imply product endorsement by A2LA or any agency of the US Government.*

6. SETUP OF EQUIPMENT UNDER TEST

6.1 SETUP CONFIGURATION OF EUT

See test photographs attached in Appendix II for the actual connections between EUT and support equipment.

6.2 SUPPORT EQUIPMENT

No	Equipment	Brand	Model	Series No.	FCC ID	Data Cable	Power Cord
1	Zonar Connect Dock	ZONAR	20082	N/A	N/A	N/A	N/A

Remark:

1. *All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.*
2. *Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.*

7. FCC PART 22 & 24 REQUIREMENTS

7.1 OUTPUT POWER MEASUREMENT

Test Procedures

CONDUCTED POWER MEASUREMENT:

1. The transmitter output power was connected to the call box.
2. Set EUT at maximum output power via call box.
3. Set Call box at lowest, middle and highest channels for each band and modulation.

TEST RESULTS
LTE Band 5

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Average Power (W)
5	1.4	20407	824.7	QPSK	1	0	0	22.4	0.174
					1	2	0	21.9	0.153
					1	5	0	21.9	0.153
					3	0	0	22.4	0.172
					3	1	0	21.9	0.153
					3	2	0	21.9	0.153
					6	0	1	21.1	0.127
				16QAM	1	0	1	21.7	0.146
					1	2	1	21.3	0.133
					1	5	1	21.3	0.133
					3	0	1	21.7	0.146
					3	1	1	21.3	0.133
					3	2	1	21.3	0.133
					6	0	2	20.2	0.104
		20525	836.5	QPSK	1	0	0	22.4	0.172
					1	2	0	22.1	0.160
					1	5	0	21.9	0.153
					3	0	0	22.4	0.172
					3	1	0	22.1	0.160
					3	2	0	21.9	0.153
					6	0	1	21.2	0.130
				16QAM	1	0	1	21.6	0.143
					1	2	1	21.2	0.130
					1	5	1	21.2	0.130
					3	0	1	21.6	0.143
					3	1	1	21.2	0.130
					3	2	1	21.2	0.130
					6	0	2	20.5	0.112
		20642	848.2	QPSK	1	0	0	22.5	0.176
					1	2	0	22.2	0.164
					1	5	0	21.9	0.153
					3	0	0	22.5	0.176
					3	1	0	22.2	0.164
					3	2	0	21.9	0.153
					6	0	1	21.1	0.127
				16QAM	1	0	1	21.7	0.146
					1	2	1	21.5	0.140
					1	5	1	21.3	0.133
					3	0	1	21.7	0.146
					3	1	1	21.5	0.140
					3	2	1	21.3	0.133
					6	0	2	20.6	0.115

LTE Band 5

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Average Power (W)
5	3	20415	825.5	QPSK	1	0	0	22.4	0.174
					1	7	0	21.9	0.155
					1	14	0	21.9	0.155
					8	0	1	21.7	0.148
					8	4	1	21.2	0.132
					8	7	1	21.2	0.132
					15	0	1	21.1	0.129
				16QAM	1	0	1	21.7	0.148
					1	7	1	21.3	0.135
					1	14	1	21.3	0.135
					8	0	2	20.7	0.117
					8	4	2	20.3	0.107
					8	7	2	20.3	0.107
					15	0	2	20.2	0.105
		20525	836.5	QPSK	1	0	0	22.4	0.174
					1	7	0	22.1	0.162
					1	14	0	21.9	0.155
					8	0	1	21.7	0.148
					8	4	1	21.4	0.138
					8	7	1	21.3	0.135
					15	0	1	21.2	0.132
				16QAM	1	0	1	21.6	0.145
					1	7	1	21.2	0.132
					1	14	1	21.2	0.132
					8	0	2	20.7	0.117
					8	4	2	20.4	0.110
					8	7	2	20.3	0.107
					15	0	2	20.2	0.105
		20634	847.4	QPSK	1	0	0	22.5	0.178
					1	7	0	22.2	0.166
					1	14	0	21.9	0.155
					8	0	1	21.7	0.148
					8	4	1	21.5	0.141
					8	7	1	21.2	0.132
					15	0	1	21.1	0.129
				16QAM	1	0	1	21.7	0.148
					1	7	1	21.5	0.141
					1	14	1	21.3	0.135
					8	0	2	20.9	0.123
					8	4	2	20.5	0.112
					8	7	2	20.3	0.107
					15	0	2	20.2	0.105

LTE Band 5

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Average Power (W)
5	5	20425	826.5	QPSK	1	0	0	22.5	0.176
					1	12	0	22.0	0.157
					1	24	0	22.0	0.157
					12	0	1	21.8	0.150
					12	6	1	21.3	0.133
					12	11	1	21.3	0.133
					25	0	1	21.2	0.130
				16QAM	1	0	1	21.8	0.150
					1	12	1	21.4	0.136
					1	24	1	21.4	0.136
					12	0	2	20.8	0.119
					12	6	2	20.4	0.108
					12	11	2	20.4	0.108
					25	0	2	20.3	0.106
		20525	836.5	QPSK	1	0	0	22.5	0.176
					1	12	0	22.2	0.164
					1	24	0	22.0	0.157
					12	0	1	21.8	0.150
					12	6	1	21.5	0.140
					12	11	1	21.4	0.136
					25	0	1	21.3	0.133
				16QAM	1	0	1	21.7	0.146
					1	12	1	21.3	0.133
					1	24	1	21.3	0.133
					12	0	2	20.8	0.119
					12	6	2	20.5	0.111
					12	11	2	20.4	0.108
					25	0	2	20.3	0.106
		20625	846.5	QPSK	1	0	0	22.6	0.180
					1	12	0	22.3	0.168
					1	24	0	22.0	0.157
					12	0	1	21.8	0.150
					12	6	1	21.6	0.143
					12	11	1	21.3	0.133
					25	0	1	21.2	0.130
				16QAM	1	0	1	21.8	0.150
					1	12	1	21.6	0.143
					1	24	1	21.4	0.136
					12	0	2	21.0	0.124
					12	6	2	20.6	0.114
					12	11	2	20.4	0.108
					25	0	2	20.3	0.106

LTE Band 5

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Average Power (W)
5	10	20450	829.0	QPSK	1	0	0	22.5	0.178
					1	24	0	22.0	0.158
					1	49	0	22.0	0.158
					25	0	1	21.8	0.151
					25	12	1	21.3	0.135
					25	24	1	21.3	0.135
					50	0	1	21.2	0.132
				16QAM	1	0	1	21.8	0.151
					1	24	1	21.4	0.138
					1	49	1	21.4	0.138
					25	0	2	20.8	0.120
					25	12	2	20.4	0.110
					25	24	2	20.4	0.110
					50	0	2	20.3	0.107
		20525	836.5	QPSK	1	0	0	22.5	0.178
					1	24	0	22.2	0.166
					1	49	0	22.0	0.158
					25	0	1	21.8	0.151
					25	12	1	21.5	0.141
					25	24	1	21.4	0.138
					50	0	1	21.3	0.135
				16QAM	1	0	1	21.7	0.148
					1	24	1	21.3	0.135
					1	49	1	21.3	0.135
					25	0	2	20.8	0.120
					25	12	2	20.5	0.112
					25	24	2	20.4	0.110
					50	0	2	20.3	0.107
		20600	844.0	QPSK	1	0	0	22.6	0.182
					1	24	0	22.3	0.170
					1	49	0	22.0	0.158
					25	0	1	21.8	0.151
					25	12	1	21.6	0.145
					25	24	1	21.3	0.135
					50	0	1	21.2	0.132
				16QAM	1	0	1	21.8	0.151
					1	24	1	21.6	0.145
					1	49	1	21.4	0.138
					25	0	2	21.0	0.126
					25	12	2	20.6	0.115
					25	24	2	20.4	0.110
					50	0	2	20.3	0.107

LTE Band 2

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Average Power (W)
2	1.4	18607	1850.7	QPSK	1	0	0	22.6	0.180
					1	2	0	22.4	0.172
					1	5	0	22.5	0.176
					3	0	0	22.6	0.180
					3	1	0	22.4	0.172
					3	2	0	22.5	0.176
					6	0	1	21.6	0.143
				16QAM	1	0	1	21.8	0.150
					1	2	1	21.5	0.140
					1	5	1	21.6	0.143
					3	0	1	21.8	0.150
					3	1	1	21.5	0.140
					3	2	1	21.6	0.143
					6	0	2	20.6	0.114
		18900	1880.0	QPSK	1	0	0	22.6	0.180
					1	2	0	22.6	0.180
					1	5	0	22.4	0.172
					3	0	0	22.6	0.180
					3	1	0	22.6	0.180
					3	2	0	22.4	0.172
					6	0	1	21.4	0.136
				16QAM	1	0	1	21.8	0.150
					1	2	1	21.8	0.150
					1	5	1	21.4	0.136
					3	0	1	21.8	0.150
					3	1	1	21.8	0.150
					3	2	1	21.4	0.136
					6	0	2	20.5	0.112
		19192	1909.2	QPSK	1	0	0	22.4	0.172
					1	2	0	22.3	0.168
					1	5	0	22.4	0.172
					3	0	0	22.4	0.172
					3	1	0	22.3	0.168
					3	2	0	22.4	0.172
					6	0	1	21.5	0.140
				16QAM	1	0	1	21.6	0.143
					1	2	1	21.5	0.140
					1	5	1	21.4	0.136
					3	0	1	21.6	0.143
					3	1	1	21.5	0.140
					3	2	1	21.4	0.136
					6	0	2	20.6	0.115

LTE Band 2

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Average Power (W)
2	3	18615	1851.5	QPSK	1	0	0	22.6	0.182
					1	7	0	22.4	0.174
					1	14	0	22.5	0.178
					8	0	1	21.8	0.151
					8	4	1	21.6	0.145
					8	7	1	21.6	0.145
					15	0	1	21.6	0.145
				16QAM	1	0	1	21.8	0.151
					1	7	1	21.5	0.141
					1	14	1	21.6	0.145
					8	0	2	20.8	0.120
					8	4	2	20.5	0.112
					8	7	2	20.5	0.112
					15	0	2	20.6	0.115
		18900	1880.0	QPSK	1	0	0	22.6	0.182
					1	7	0	22.6	0.182
					1	14	0	22.4	0.174
					8	0	1	21.8	0.151
					8	4	1	21.6	0.145
					8	7	1	21.4	0.138
					15	0	1	21.4	0.138
				16QAM	1	0	1	21.8	0.151
					1	7	1	21.8	0.151
					1	14	1	21.4	0.138
					8	0	2	20.8	0.120
					8	4	2	20.8	0.120
					8	7	2	20.5	0.112
					15	0	2	20.5	0.112
		19184	1908.4	QPSK	1	0	0	22.4	0.174
					1	7	0	22.3	0.170
					1	14	0	22.4	0.174
					8	0	1	21.5	0.141
					8	4	1	21.4	0.138
					8	7	1	21.4	0.138
					15	0	1	21.5	0.141
				16QAM	1	0	1	21.6	0.145
					1	7	1	21.5	0.141
					1	14	1	21.4	0.138
					8	0	2	20.6	0.115
					8	4	2	20.5	0.112
					8	7	2	20.6	0.115
					15	0	2	20.6	0.115

LTE Band 2

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Average Power (W)
2	5	18625	1852.5	QPSK	1	0	0	22.7	0.184
					1	12	0	22.5	0.176
					1	24	0	22.6	0.180
					12	0	1	21.9	0.153
					12	6	1	21.7	0.146
					12	11	1	21.7	0.146
					25	0	1	21.7	0.146
				16QAM	1	0	1	21.9	0.153
					1	12	1	21.6	0.143
					1	24	1	21.7	0.146
					12	0	2	20.9	0.122
					12	6	2	20.6	0.114
					12	11	2	20.6	0.114
					25	0	2	20.7	0.116
		18900	1880.0	QPSK	1	0	0	22.7	0.184
					1	12	0	22.7	0.184
					1	24	0	22.5	0.176
					12	0	1	21.9	0.153
					12	6	1	21.7	0.146
					12	11	1	21.5	0.140
					25	0	1	21.5	0.140
				16QAM	1	0	1	21.9	0.153
					1	12	1	21.9	0.153
					1	24	1	21.5	0.140
					12	0	2	20.9	0.122
					12	6	2	20.9	0.122
					12	11	2	20.6	0.114
					25	0	2	20.6	0.114
		19175	1907.5	QPSK	1	0	0	22.5	0.176
					1	12	0	22.4	0.172
					1	24	0	22.5	0.176
					12	0	1	21.6	0.143
					12	6	1	21.5	0.140
					12	11	1	21.5	0.140
					25	0	1	21.6	0.143
				16QAM	1	0	1	21.7	0.146
					1	12	1	21.6	0.143
					1	24	1	21.5	0.140
					12	0	2	20.7	0.116
					12	6	2	20.6	0.114
					12	11	2	20.7	0.116
					25	0	2	20.6	0.114

LTE Band 2

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Average Power (W)
2	10	18650	1855.0	QPSK	1	0	0	22.7	0.186
					1	24	0	22.5	0.178
					1	49	0	22.6	0.182
					25	0	1	21.9	0.155
					25	12	1	21.7	0.148
					25	24	1	21.7	0.148
					50	0	1	21.7	0.148
				16QAM	1	0	1	21.9	0.155
					1	24	1	21.6	0.145
					1	49	1	21.7	0.148
					25	0	2	20.9	0.123
					25	12	2	20.6	0.115
					25	24	2	20.6	0.115
					50	0	2	20.7	0.117
		18900	1880.0	QPSK	1	0	0	22.7	0.186
					1	24	0	22.7	0.186
					1	49	0	22.5	0.178
					25	0	1	21.9	0.155
					25	12	1	21.7	0.148
					25	24	1	21.5	0.141
					50	0	1	21.5	0.141
				16QAM	1	0	1	21.9	0.155
					1	24	1	21.9	0.155
					1	49	1	21.5	0.141
					25	0	2	20.9	0.123
					25	12	2	20.9	0.123
					25	24	2	20.6	0.115
					50	0	2	20.6	0.115
		19150	1905.0	QPSK	1	0	0	22.5	0.178
					1	24	0	22.4	0.174
					1	49	0	22.5	0.178
					25	0	1	21.6	0.145
					25	12	1	21.5	0.141
					25	24	1	21.5	0.141
					50	0	1	21.6	0.145
				16QAM	1	0	1	21.7	0.148
					1	24	1	21.6	0.145
					1	49	1	21.5	0.141
					25	0	2	20.7	0.117
					25	12	2	20.6	0.115
					25	24	2	20.7	0.117
					50	0	2	20.6	0.115

LTE Band 2

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Average Power (W)
2	15	18675	1857.5	QPSK	1	0	0	22.8	0.188
					1	37	0	22.6	0.180
					1	74	0	22.7	0.184
					36	0	1	22.0	0.157
					36	18	1	21.8	0.150
					36	35	1	21.8	0.150
					75	0	1	21.8	0.150
				16QAM	1	0	1	22.0	0.157
					1	37	1	21.7	0.146
					1	74	1	21.8	0.150
					36	0	2	21.0	0.124
					36	18	2	20.7	0.116
					36	35	2	20.7	0.116
					75	0	2	20.8	0.119
		18900	1880.0	QPSK	1	0	0	22.8	0.188
					1	37	0	22.8	0.188
					1	74	0	22.6	0.180
					36	0	1	22.0	0.157
					36	18	1	21.8	0.150
					36	35	1	21.6	0.143
					75	0	1	21.6	0.143
				16QAM	1	0	1	22.0	0.157
					1	37	1	22.0	0.157
					1	74	1	21.6	0.143
					36	0	2	21.0	0.124
					36	18	2	21.0	0.124
					36	35	2	20.7	0.116
					75	0	2	20.7	0.116
		19125	1902.5	QPSK	1	0	0	22.6	0.180
					1	37	0	22.5	0.176
					1	74	0	22.6	0.180
					36	0	1	21.7	0.146
					36	18	1	21.6	0.143
					36	35	1	21.6	0.143
					75	0	1	21.7	0.146
				16QAM	1	0	1	21.8	0.150
					1	37	1	21.7	0.146
					1	74	1	21.6	0.143
					36	0	2	20.8	0.119
					36	18	2	20.7	0.116
					36	35	2	20.8	0.119
					75	0	2	20.7	0.116

LTE Band 2

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	Average Power (W)
2	20	18700	1860.0	QPSK	1	0	0	22.8	0.191
					1	49	0	22.6	0.182
					1	99	0	22.7	0.186
					50	0	1	22.0	0.158
					50	24	1	21.8	0.151
					50	49	1	21.8	0.151
					100	0	1	21.8	0.151
				16QAM	1	0	1	22.0	0.158
					1	49	1	21.7	0.148
					1	99	1	21.8	0.151
					50	0	2	21.0	0.126
					50	24	2	20.7	0.117
					50	49	2	20.7	0.117
					100	0	2	20.8	0.120
		18900	1880.0	QPSK	1	0	0	22.8	0.191
					1	49	0	22.8	0.191
					1	99	0	22.6	0.182
					50	0	1	22.0	0.158
					50	24	1	21.8	0.151
					50	49	1	21.6	0.145
					100	0	1	21.6	0.145
				16QAM	1	0	1	22.0	0.158
					1	49	1	22.0	0.158
					1	99	1	21.6	0.145
					50	0	2	21.0	0.126
					50	24	2	21.0	0.126
					50	49	2	20.7	0.117
					100	0	2	20.7	0.117
		19100	1900.0	QPSK	1	0	0	22.6	0.182
					1	49	0	22.5	0.178
					1	99	0	22.6	0.182
					50	0	1	21.7	0.148
					50	24	1	21.6	0.145
					50	49	1	21.6	0.145
					100	0	1	21.7	0.148
				16QAM	1	0	1	21.8	0.151
					1	49	1	21.7	0.148
					1	99	1	21.6	0.145
					50	0	2	20.8	0.120
					50	24	2	20.7	0.117
					50	49	2	20.8	0.120
					100	0	2	20.7	0.117

7.2 ERP & EIRP MEASUREMENT

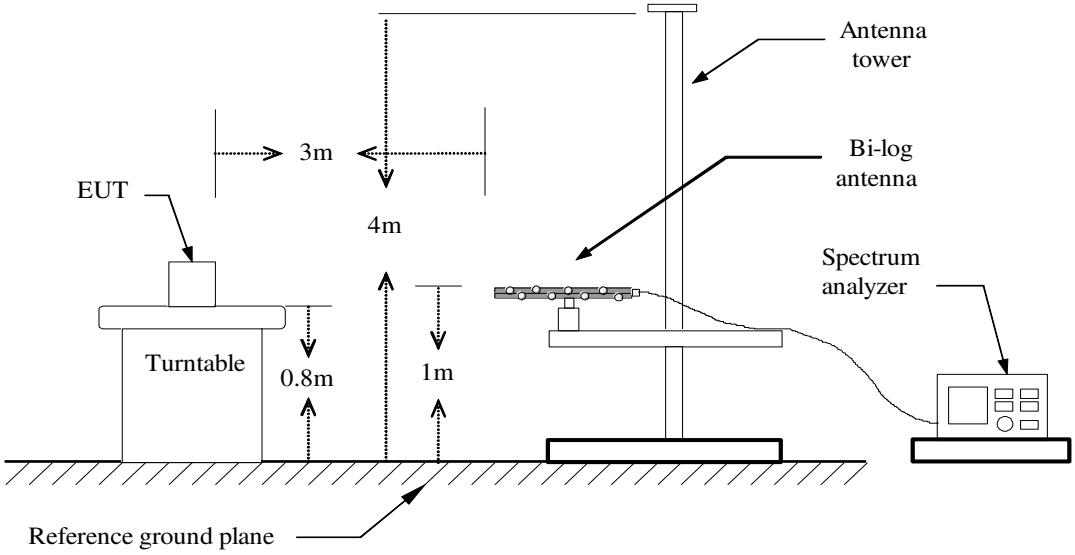
LIMIT

According to FCC §2.1046
FCC 22.913(b):
The Effective Radiated Power (ERP) of mobile transmitters must not exceed 7 Watts.
FCC 24.232(b):

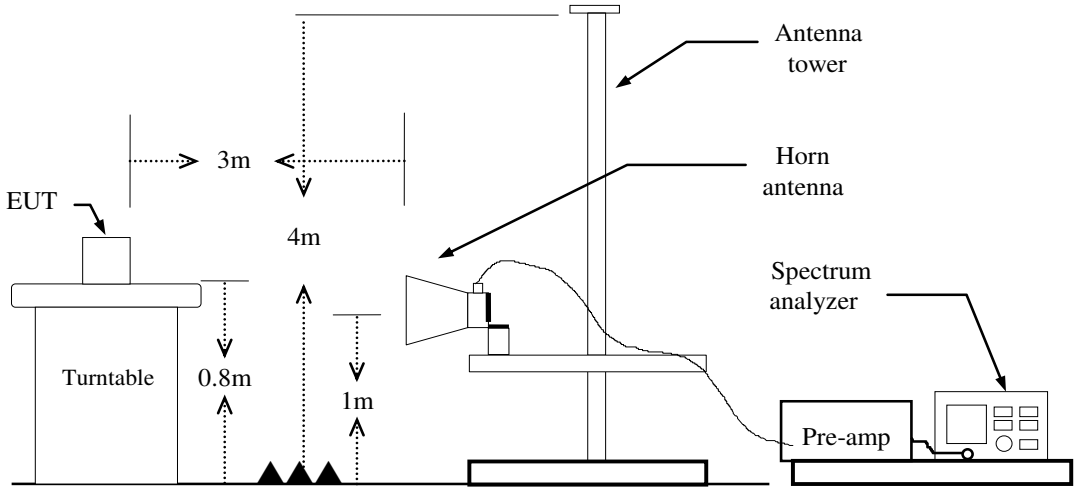
The equivalent Isotropic Radiated Power (EIRP) must not exceed 2 Watts.

Test Configuration

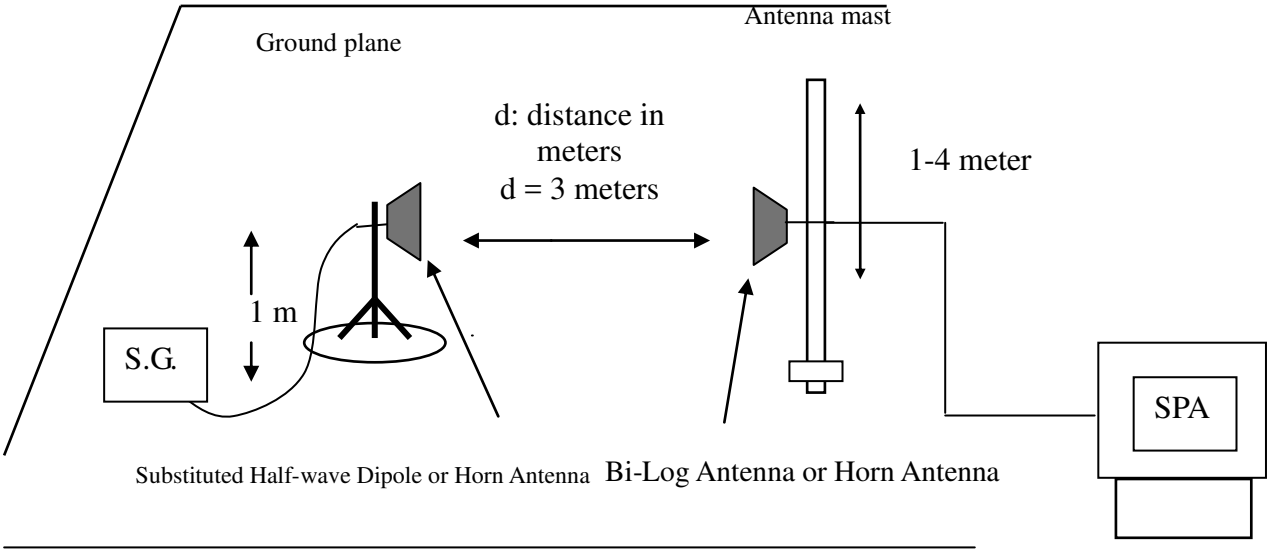
Below 1 GHz



Above 1 GHz



For Substituted Method Test Set-UP



TEST PROCEDURE

1. The EUT was placed on a non-conductive rotating platform (0.8m for below 1G and above 1G) in a semi-chamber. The radiated emission at the fundamental frequency was measured at 3m and SA with RMS detector per section 5, KDB 971168 D01.

2. During the measurement, the call box parameters were set to get the maximum output power of the EUT. The maximum emission was recorded from spectrum analyzer power level (LVL) from 360 degrees rotation of turntable and the test antenna raised and lowered over a range from 1m to 4m in both horizontally and vertically polarized orientations.

3. EIRP was measured method according to TIA/EIA-603-D:2010. The EUT was replaced by the substitution antenna at same location, and then record the maximum Analyzer reading through raised and lowered the test antenna.

ERP = S.G. output (dBm) + Antenna Gain (dBi) – Cable (dB)-2.15
EIRP = S.G. output (dBm) + Antenna Gain (dBi) – Cable (dB)

TEST RESULTS

No non-compliance noted.

LTE Band 2

BW: 1.4MHz / RB=1, RB Offset=0

Band	BW (MHz)	Channel	Mode	UL RB Allocation	UL RB offset	Vertical		Horizontal	
						EIRP (dBm)	EIRP (W)	EIRP (dBm)	EIRP (W)
2	1.4	Lowest	QPSK	1	0	20.28	0.107	21.94	0.156
		Middle		1	0	20.77	0.119	22.03	0.160
		Highest		1	0	22.01	0.159	21.78	0.151
		Lowest	16 QAM	1	0	20.26	0.106	20.34	0.108
		Middle		1	0	20.88	0.122	20.97	0.125
		Highest		1	0	21.89	0.155	22.41	0.174

BW: 3MHz / RB=1, RB Offset=0

Band	BW (MHz)	Channel	Mode	UL RB Allocation	UL RB offset	Vertical		Horizontal	
						EIRP (dBm)	EIRP (W)	EIRP (dBm)	EIRP (W)
2	3	Lowest	QPSK	1	0	20.31	0.107	21.88	0.154
		Middle		1	0	20.79	0.120	21.98	0.158
		Highest		1	0	22.06	0.161	21.63	0.146
		Lowest	16 QAM	1	0	20.23	0.105	20.21	0.105
		Middle		1	0	20.73	0.118	20.73	0.118
		Highest		1	0	21.91	0.155	22.54	0.179

BW: 5MHz / RB=1, RB Offset=0

Band	BW (MHz)	Channel	Mode	UL RB Allocation	UL RB offset	Vertical		Horizontal	
						EIRP (dBm)	EIRP (W)	EIRP (dBm)	EIRP (W)
2	5	Lowest	QPSK	1	0	20.36	0.109	20.47	0.111
		Middle		1	0	21.01	0.126	20.46	0.111
		Highest		1	0	22.06	0.161	21.89	0.155
		Lowest	16 QAM	1	0	20.27	0.106	20.53	0.113
		Middle		1	0	20.88	0.122	20.17	0.104
		Highest		1	0	21.99	0.158	21.60	0.145

BW: 10MHz / RB=1, RB Offset=0

Band	BW (MHz)	Channel	Mode	UL RB Allocation	UL RB offset	Vertical		Horizontal	
						EIRP (dBm)	EIRP (W)	EIRP (dBm)	EIRP (W)
2	10	Lowest	QPSK	1	0	20.48	0.112	20.97	0.125
		Middle		1	0	20.83	0.121	20.55	0.114
		Highest		1	0	21.72	0.149	21.64	0.146
		Lowest	16 QAM	1	0	20.38	0.109	20.48	0.112
		Middle		1	0	20.74	0.119	21.01	0.126
		Highest		1	0	21.50	0.141	21.09	0.129

BW: 15MHz / RB=1, RB Offset=0

Band	BW (MHz)	Channel	Mode	UL RB Allocation	UL RB offset	Vertical		Horizontal	
						EIRP (dBm)	EIRP (W)	EIRP (dBm)	EIRP (W)
2	15	Lowest	QPSK	1	0	20.21	0.105	20.08	0.102
		Middle		1	0	20.47	0.111	21.36	0.137
		Highest		1	0	21.93	0.156	22.47	0.177
		Lowest	16 QAM	1	0	20.13	0.103	20.28	0.107
		Middle		1	0	20.64	0.116	20.24	0.106
		Highest		1	0	21.87	0.154	21.75	0.150

BW: 20MHz / RB=1, RB Offset=0

Band	BW (MHz)	Channel	Mode	UL RB Allocation	UL RB offset	Vertical		Horizontal	
						EIRP (dBm)	EIRP (W)	EIRP (dBm)	EIRP (W)
2	20	Lowest	QPSK	1	0	20.35	0.108	20.14	0.103
		Middle		1	0	20.55	0.114	21.41	0.138
		Highest		1	0	22.03	0.160	22.50	0.178
		Lowest	16 QAM	1	0	20.29	0.107	20.31	0.107
		Middle		1	0	20.70	0.117	20.30	0.107
		Highest		1	0	21.94	0.156	21.79	0.151

LTE Band 5

BW: 1.4MHz / RB=1, RB Offset=0

Band	BW (MHz)	Channel	Mode	UL RB Allocation	UL RB offset	Vertical		Horizontal	
						ERP (dBm)	ERP (W)	ERP (dBm)	ERP (W)
5	1.4	Lowest	QPSK	1	0	21.51	0.142	22.15	0.164
		Middle		1	0	22.04	0.160	19.56	0.090
		Highest		1	0	23.31	0.214	19.56	0.090
		Lowest	16 QAM	1	0	21.46	0.140	20.45	0.111
		Middle		1	0	21.91	0.155	19.11	0.081
		Highest		1	0	23.01	0.200	20.25	0.106

BW: 3MHz / RB=1, RB Offset=0

Band	BW (MHz)	Channel	Mode	UL RB Allocation	UL RB offset	Vertical		Horizontal	
						ERP (dBm)	ERP (W)	ERP (dBm)	ERP (W)
5	3	Lowest	QPSK	1	0	21.43	0.139	22.08	0.161
		Middle		1	0	21.98	0.158	19.51	0.089
		Highest		1	0	23.22	0.210	19.49	0.089
		Lowest	16 QAM	1	0	21.37	0.137	20.37	0.109
		Middle		1	0	21.86	0.153	19.08	0.081
		Highest		1	0	22.94	0.197	20.18	0.104

BW: 5MHz / RB=1, RB Offset=0

Band	BW (MHz)	Channel	Mode	UL RB Allocation	UL RB offset	Vertical		Horizontal	
						ERP (dBm)	ERP (W)	ERP (dBm)	ERP (W)
5	5	Lowest	QPSK	1	0	23.76	0.238	22.31	0.170
		Middle		1	0	24.22	0.264	24.67	0.293
		Highest		1	0	25.38	0.345	22.99	0.199
		Lowest	16 QAM	1	0	23.65	0.232	22.96	0.198
		Middle		1	0	24.09	0.256	23.14	0.206
		Highest		1	0	25.32	0.340	23.95	0.248

BW: 10MHz / RB=1, RB Offset=0

Band	BW (MHz)	Channel	Mode	UL RB Allocation	UL RB offset	Vertical		Horizontal	
						ERP (dBm)	ERP (W)	ERP (dBm)	ERP (W)
5	10	Lowest	QPSK	1	0	23.64	0.231	20.03	0.101
		Middle		1	0	24.24	0.265	21.76	0.150
		Highest		1	0	25.42	0.348	20.56	0.114
		Lowest	16 QAM	1	0	23.60	0.229	19.98	0.100
		Middle		1	0	24.10	0.257	22.51	0.178
		Highest		1	0	25.38	0.345	20.56	0.114

7.3 FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT

LIMIT

According to FCC §2.1055, FCC §22.355, .FCC §24.235.

Frequency Tolerance: +/- 2.5ppm

Test Procedure

Use Anritsu 8820 with frequency Error measurement capability.
Temp = -30 to +50℃
Voltage= 85% to 115% of the nominal value for AC powered equipment.

NOTE: *The frequency error was recorded frequency error from the communication simulator.*

TEST RESULTS

No non-compliance noted.

Test Results

FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT:

LTE Band 2

Reference Frequency: LTE Band 2, 1880 MHz at 20(°C)				
Limit: 2.5 ppm = 4700Hz				
Power Supply (Vac)	Environment Temperature (°C)	BW: 10M Frequency Error(Hz)	Frequency Error (ppm)	Limit (ppm)
120	50	-2.28	-0.0012	+/- 2.5
120	40	-0.76	-0.0004	
120	30	-1.60	-0.0009	
120	20	-5.00	-0.0026	
120	10	-2.43	-0.0013	
120	0	-6.12	-0.0033	
120	-10	-3.99	-0.0021	
120	-20	-4.53	-0.0024	
120	-30	-2.28	-0.0012	

LTE Band 5

Reference Frequency: LTE Band 5, 836.5 MHz at 20(°C)				
Limit: 2.5 ppm = 2091.25Hz				
Power Supply (Vac)	Environment Temperature (°C)	BW: 10M Frequency Error(Hz)	Frequency Error (ppm)	Limit (ppm)
120	50	-1.65	-0.0020	+/- 2.5
120	40	-2.32	-0.0028	
120	30	-1.54	-0.0018	
120	20	-0.99	-0.0012	
120	10	-1.54	-0.0018	
120	0	-1.75	-0.0021	
120	-10	-3.46	-0.0041	
120	-20	-0.70	-0.0008	
120	-30	-1.65	-0.0020	

FREQUENCY STABILITY V.S. VOLTAGE MEASUREMENT:

LTE Band 2

Reference Frequency: LTE Band 2, 1880 MHz at 20(°C)				
Limit: 2.5 ppm = 2091.25Hz				
Power Supply (Vac)	Environment Temperature (°C)	BW: 20M Frequency Error(Hz)	Frequency Error (ppm)	Limit (ppm)
138	20	-3.88	-0.0021	+/- 2.5
120		-4.92	-0.0026	
102		-4.86	-0.0026	

LTE Band 5

Reference Frequency: LTE Band 5, 836.5 MHz at 20(°C)				
Limit: 2.5 ppm = 2091.25Hz				
Power Supply (Vac)	Environment Temperature (°C)	BW: 10M Frequency Error(Hz)	Frequency Error (ppm)	Limit (ppm)
138	20	-2.22	-0.0027	+/- 2.5
120		-0.99	-0.0012	
102		-3.02	-0.0036	

7.4 OCCUPIED BANDWIDTH MEASUREMENT

Limits

For Reporting purposes only.

TEST PROCEDURES

KDB 971168 D01 v02r02 - Section 4.2

1. The occupied bandwidth was measured with the spectrum analyzer at the lowest, middle and highest channels in each band and different modulation. The 99% and -26dB bandwidth was measured and recorded.
2. RBW = 1-5% of the expected OBW
3. VBW ≥ 3 x RBW
4. Detector = Peak
5. Trace mode = max. hold

LTE Band 2

Band	BW (MHz)	Channel	Mode	UL RB Allocation	UL RB offset	OBW(99%)(MHz)	26 dB Bandwidth(MHz)
2	1.4	Middle	QPSK	6	0	1.1114	1.5195
		Middle	16QAM	6	0	1.1244	1.7540
	3	Middle	QPSK	15	0	2.6917	3.0478
		Middle	16QAM	15	0	2.6917	3.0564
	5	Middle	QPSK	25	0	4.5151	5.2970
		Middle	16QAM	25	0	4.5007	5.3260
	10	Middle	QPSK	50	0	9.0014	10.1300
		Middle	16QAM	50	0	9.0014	9.9860
	15	Middle	QPSK	75	0	13.4153	14.5880
		Middle	16QAM	75	0	13.4153	14.7610
	20	Middle	QPSK	100	0	18.0028	19.7540
		Middle	16QAM	100	0	18.0028	19.5660

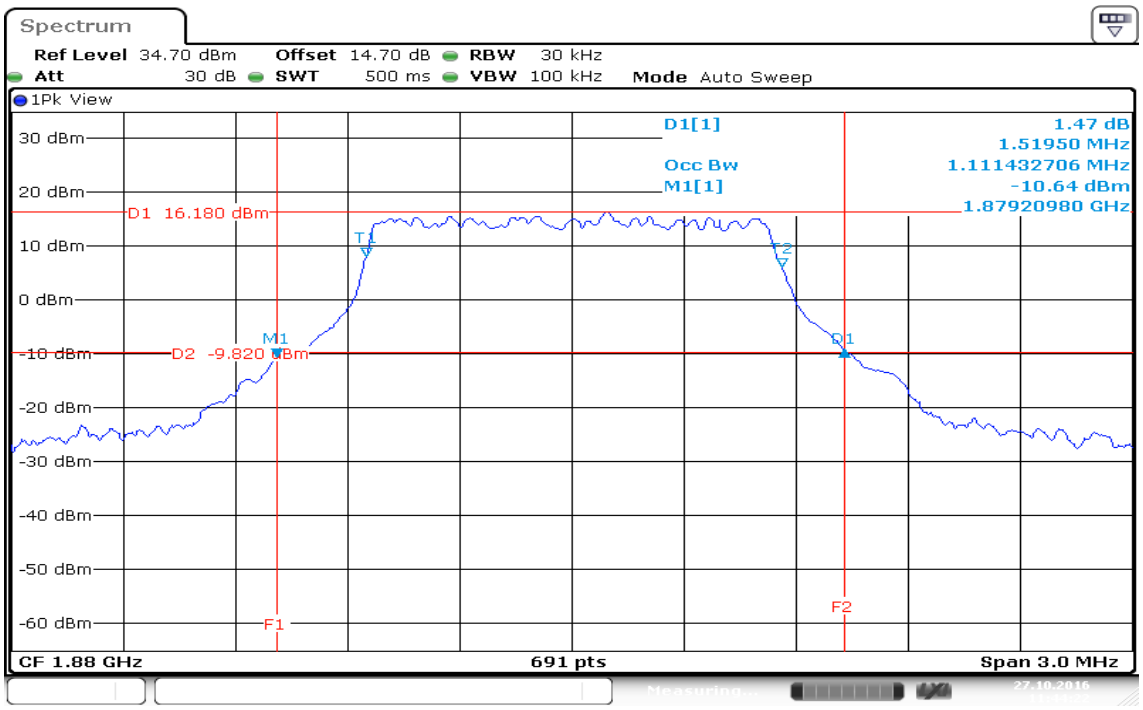
LTE Band 5

Band	BW (MHz)	Channel	Mode	UL RB Allocation	UL RB offset	OBW(99%)(MHz)	26 dB Bandwidth(MHz)
5	1.4	Middle	QPSK	6	0	1.0940	1.3849
		Middle	16QAM	6	0	1.0940	1.3806
	3	Middle	QPSK	15	0	2.6830	3.0391
		Middle	16QAM	15	0	2.6830	3.0738
	5	Middle	QPSK	25	0	4.4717	4.8630
		Middle	16QAM	25	0	4.4573	4.8190
	10	Middle	QPSK	50	0	8.9435	9.3740
		Middle	16QAM	50	0	8.9146	9.4030

LTE Band 2

BW: 1.4MHz / QPSK / RB =6, RB Offset = 0

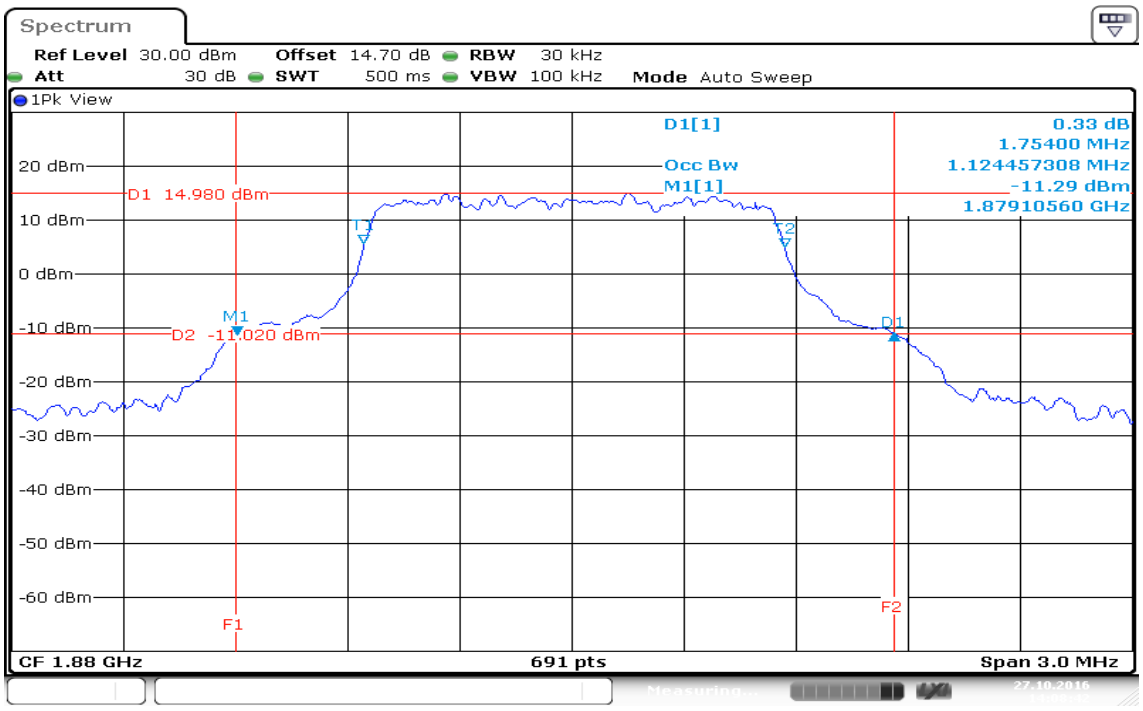
CH Mid



Date: 27.OCT.2016 11:44:22

BW: 1.4MHz / 16QAM / RB =6, RB Offset = 0

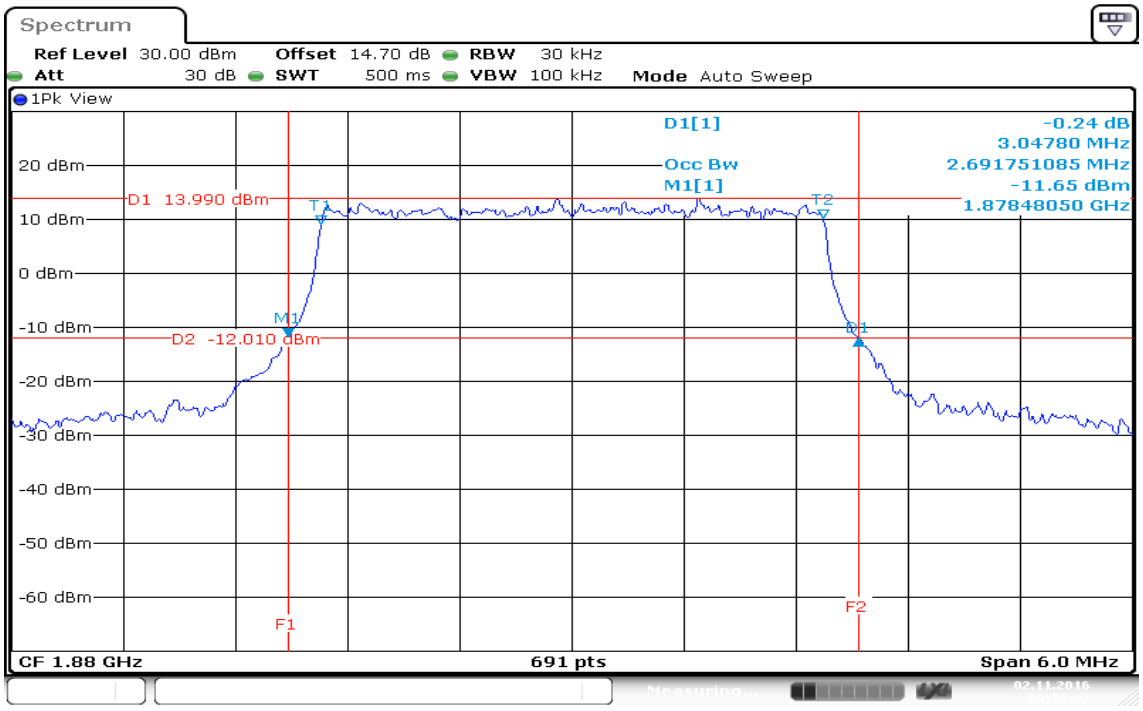
CH Mid



Date: 27.OCT.2016 14:08:43

BW: 3MHz / QPSK / RB =15, RB Offset = 0

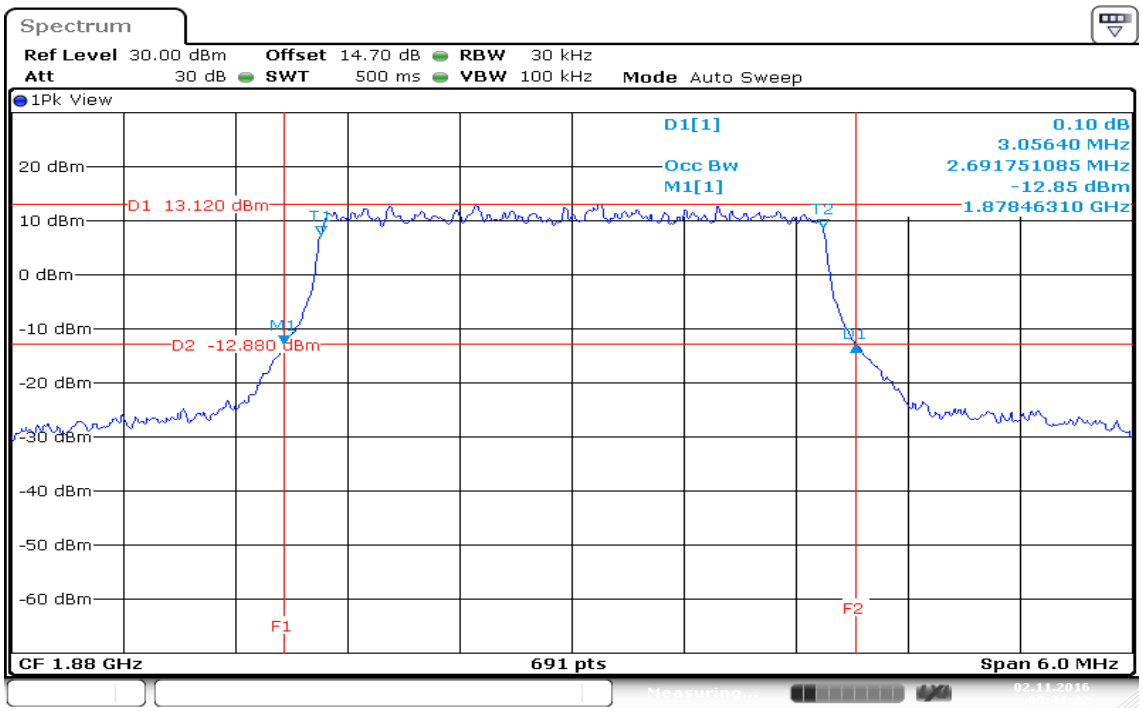
CH Mid



Date: 2.NOV.2016 09:38:47

BW: 3MHz / 16QAM / RB =15, RB Offset = 0

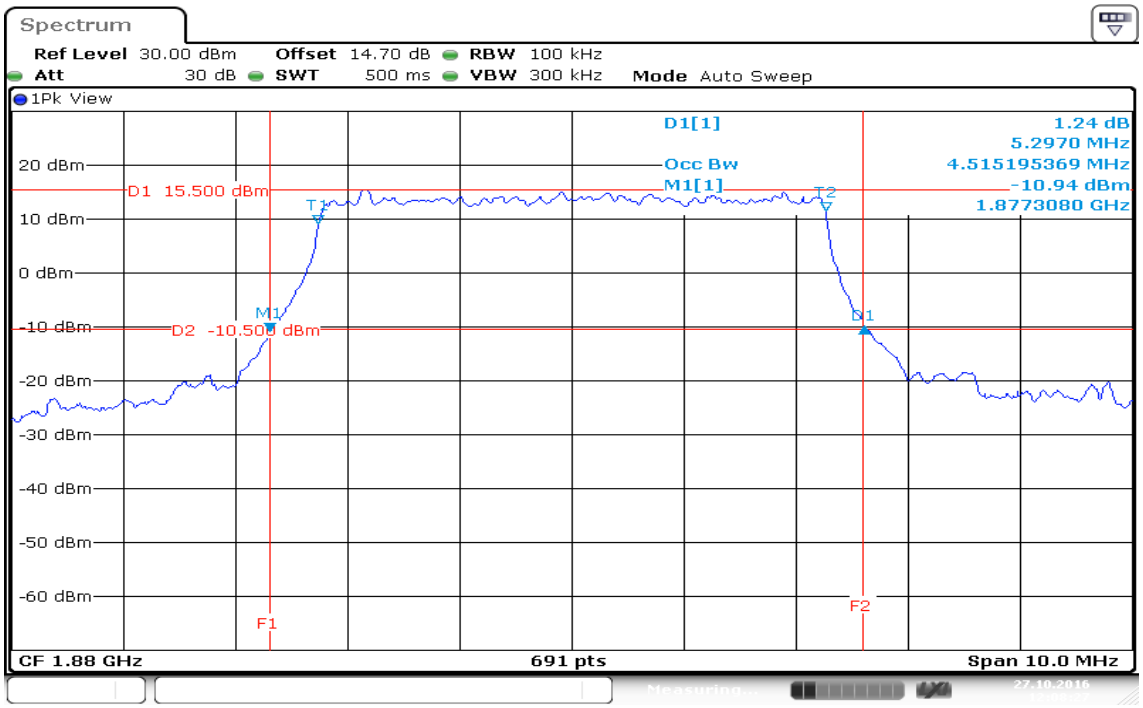
CH Mid



Date: 2.NOV.2016 09:41:23

BW: 5MHz / QPSK / RB =25, RB Offset = 0

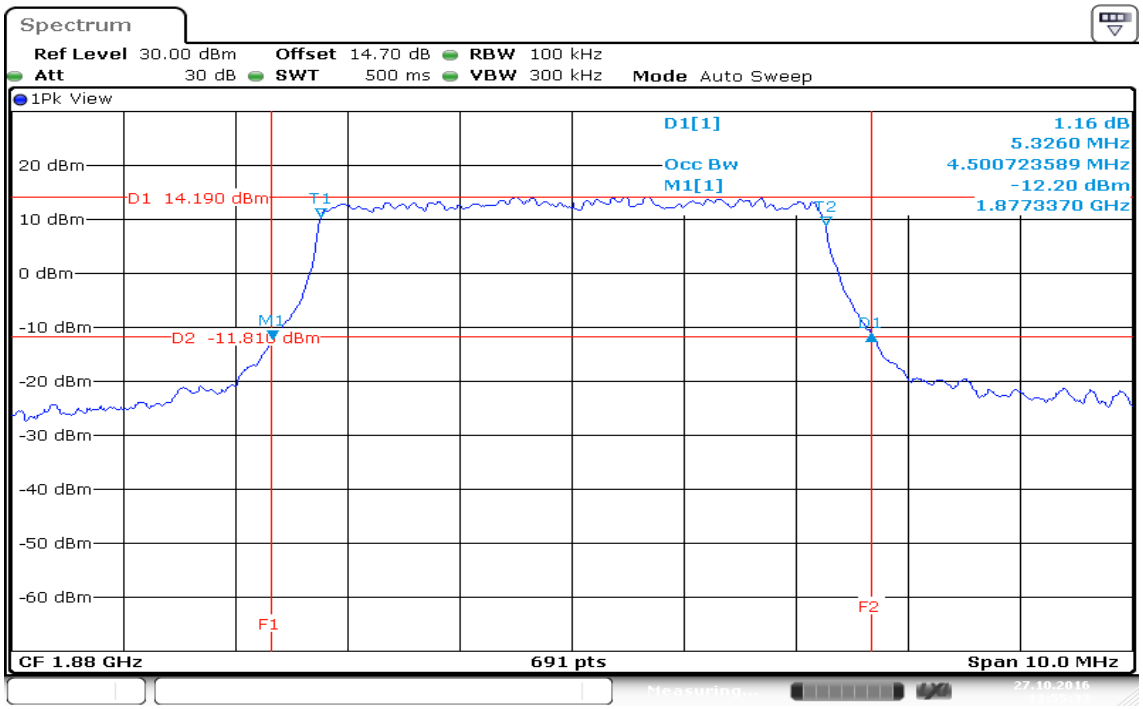
CH Mid



Date: 27.OCT.2016 12:08:27

BW: 5MHz / 16QAM / RB =25, RB Offset = 0

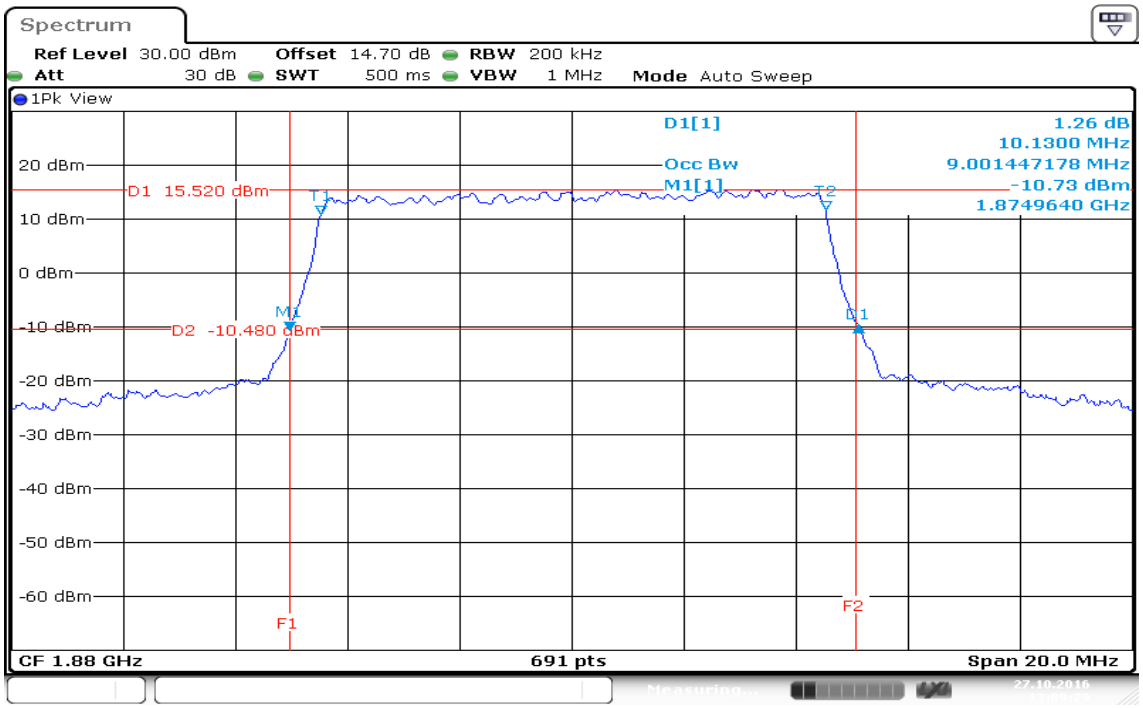
CH Mid



Date: 27.OCT.2016 13:55:33

BW: 10MHz / QPSK / RB =50, RB Offset = 0

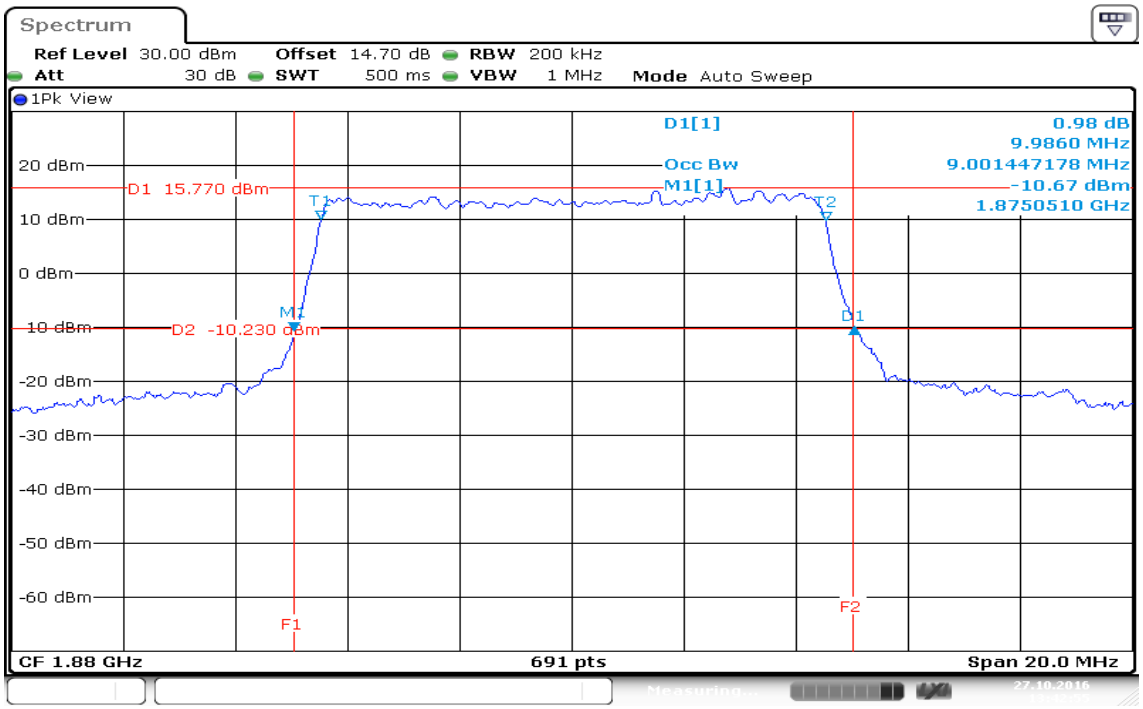
CH Mid



Date: 27.OCT.2016 13:09:30

BW: 10MHz / 16QAM / RB =50, RB Offset = 0

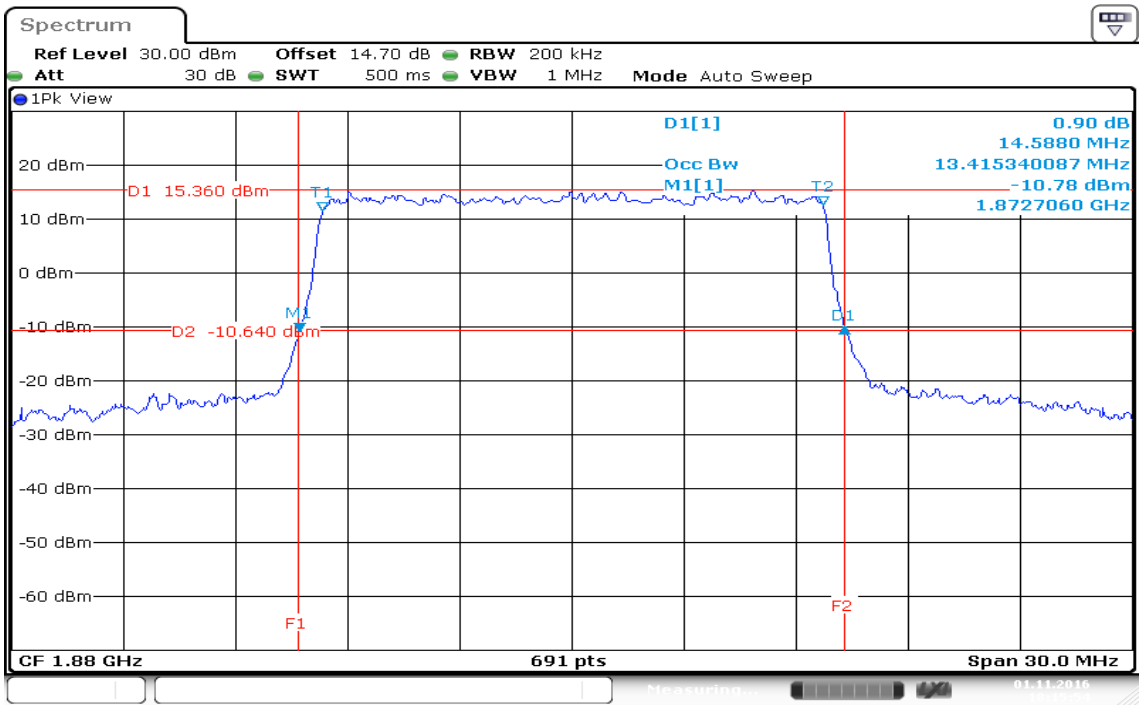
CH Mid



Date: 27.OCT.2016 13:42:55

BW: 15MHz / QPSK / RB =75, RB Offset = 0

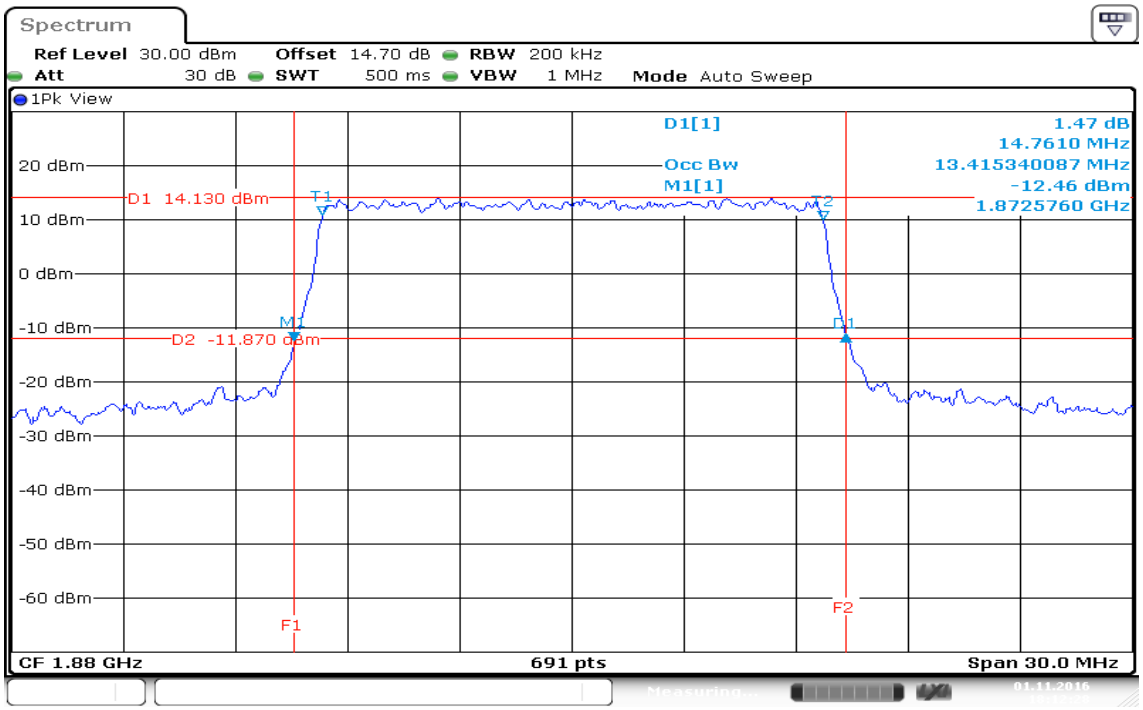
CH Mid



Date: 1.NOV.2016 18:15:54

BW: 15MHz / 16QAM / RB =75, RB Offset = 0

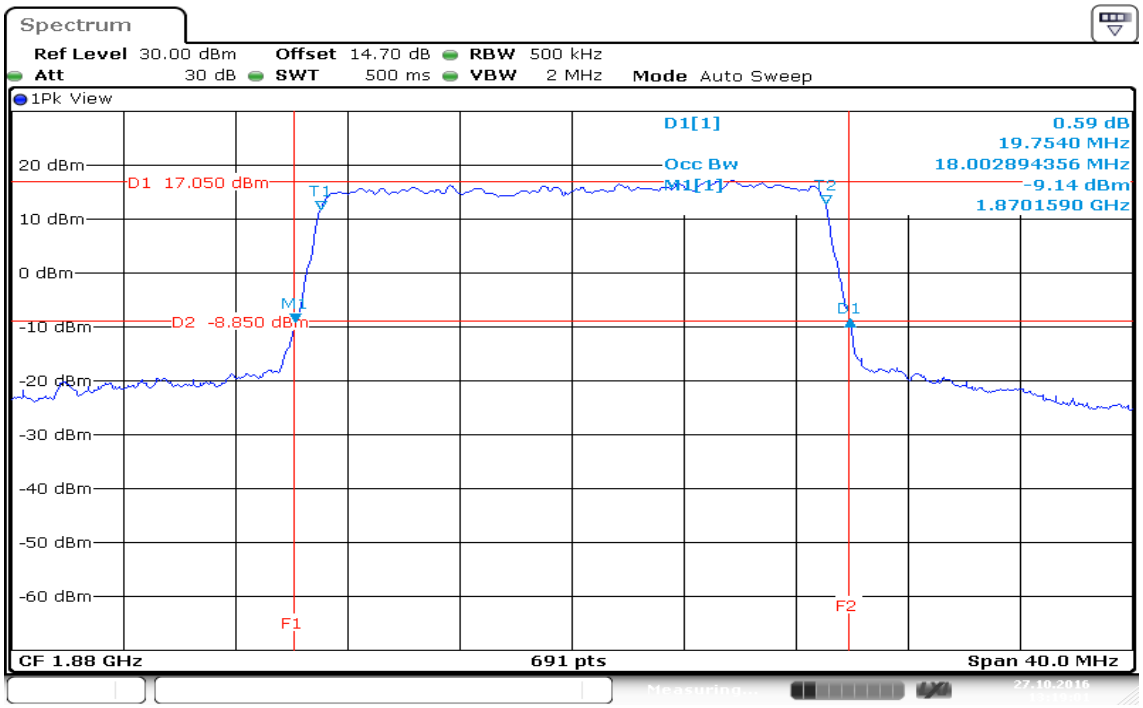
CH Mid



Date: 1.NOV.2016 18:12:29

BW: 20MHz / QPSK / RB =100, RB Offset = 0

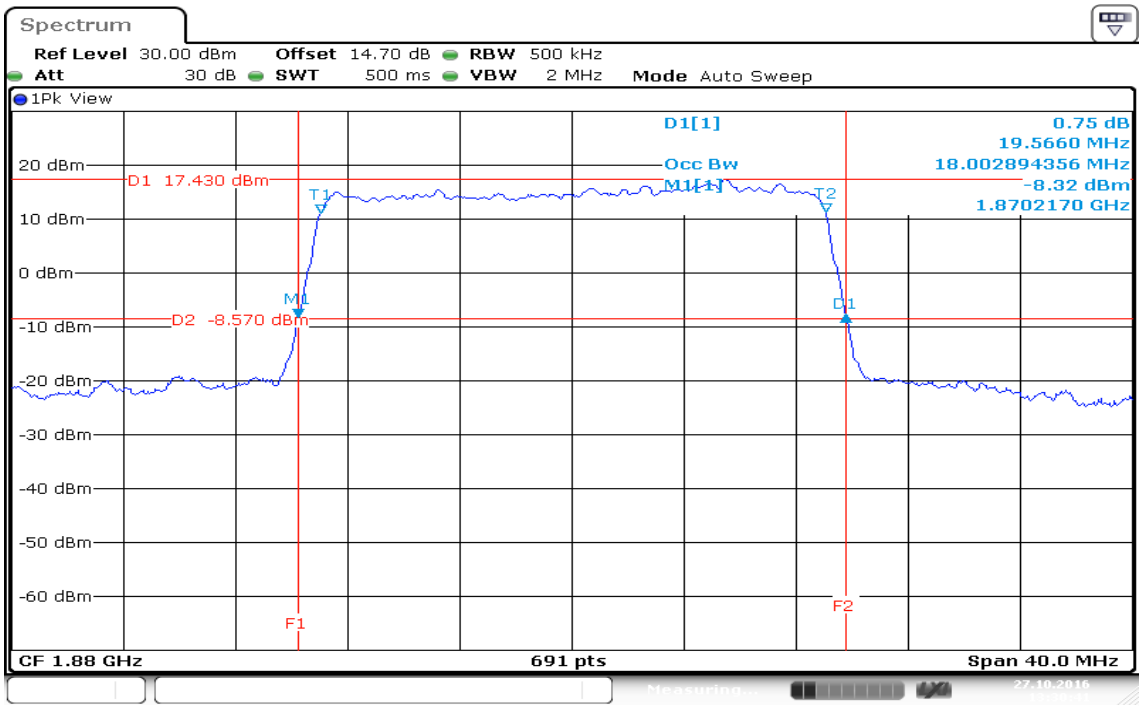
CH Mid



Date: 27.OCT.2016 13:19:01

BW: 20MHz / 16QAM / RB =100, RB Offset = 0

CH Mid

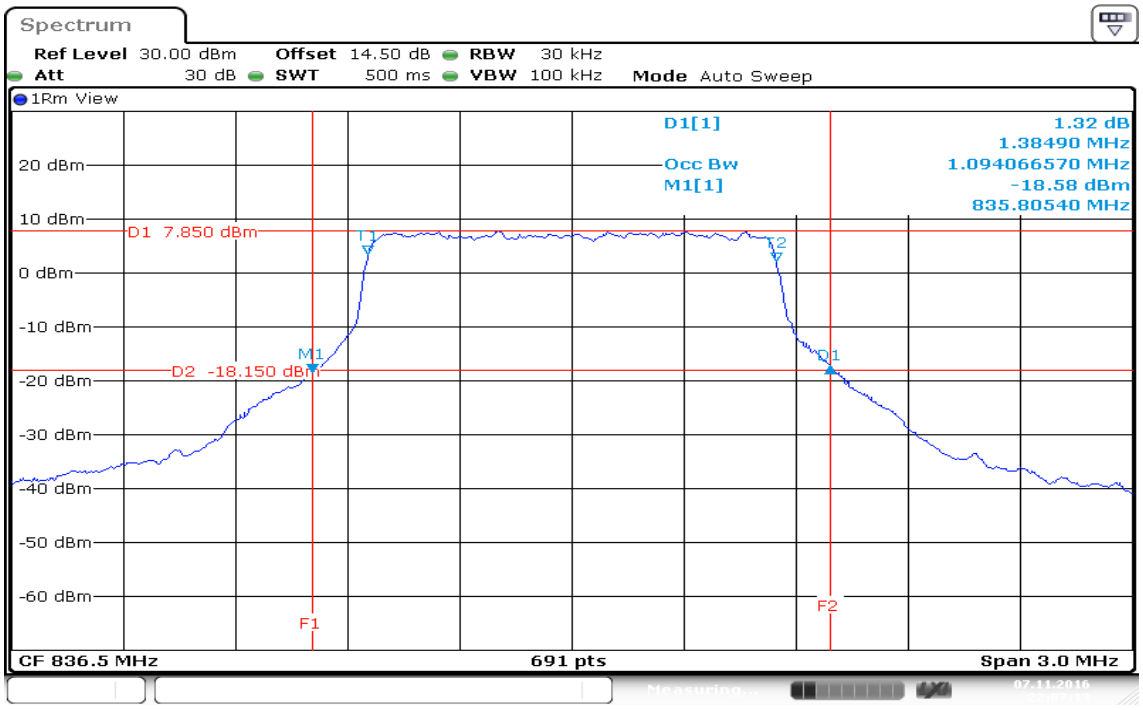


Date: 27.OCT.2016 13:30:42

LTE Band 5

BW: 1.4MHz / QPSK / RB =6, RB Offset = 0

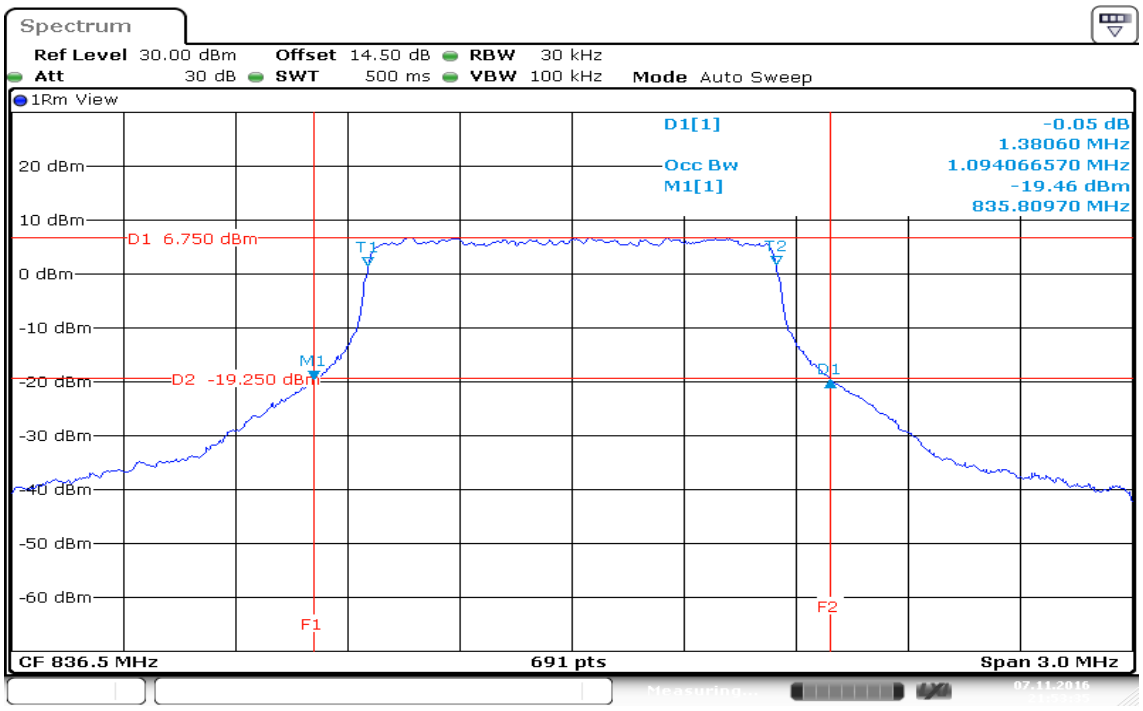
CH Mid



Date: 7.NOV.2016 22:07:13

BW: 1.4MHz / 16QAM / RB =6, RB Offset = 0

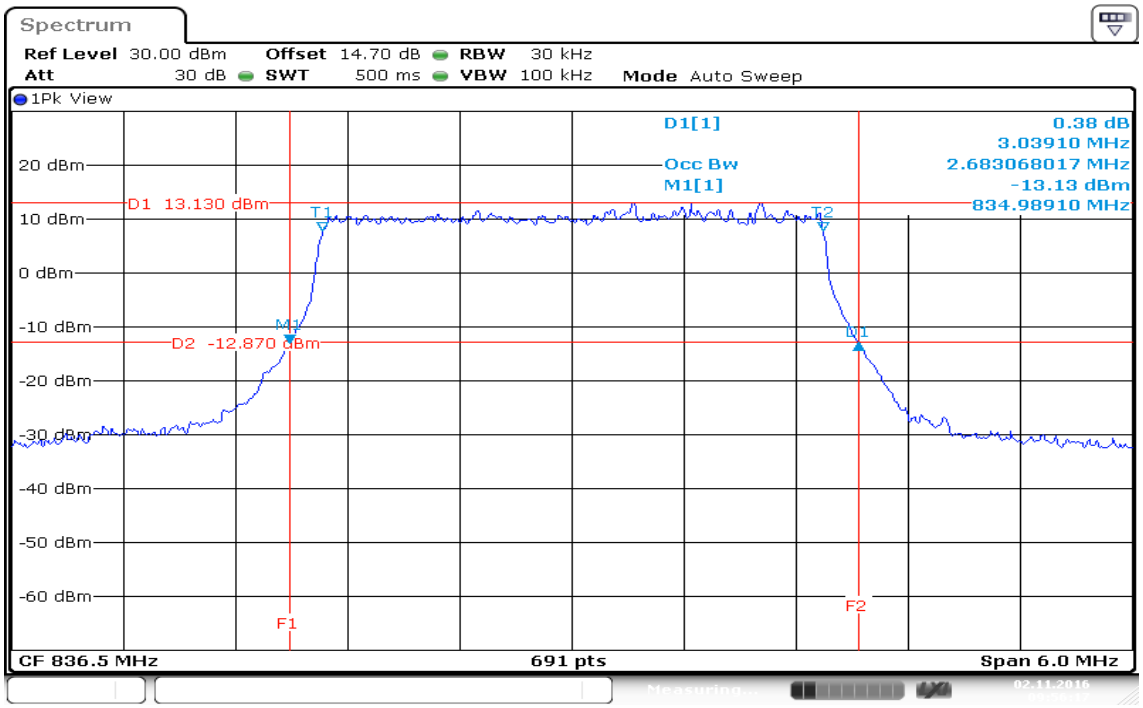
CH Mid



Date: 7.NOV.2016 21:53:35

BW: 3MHz / QPSK / RB =15, RB Offset = 0

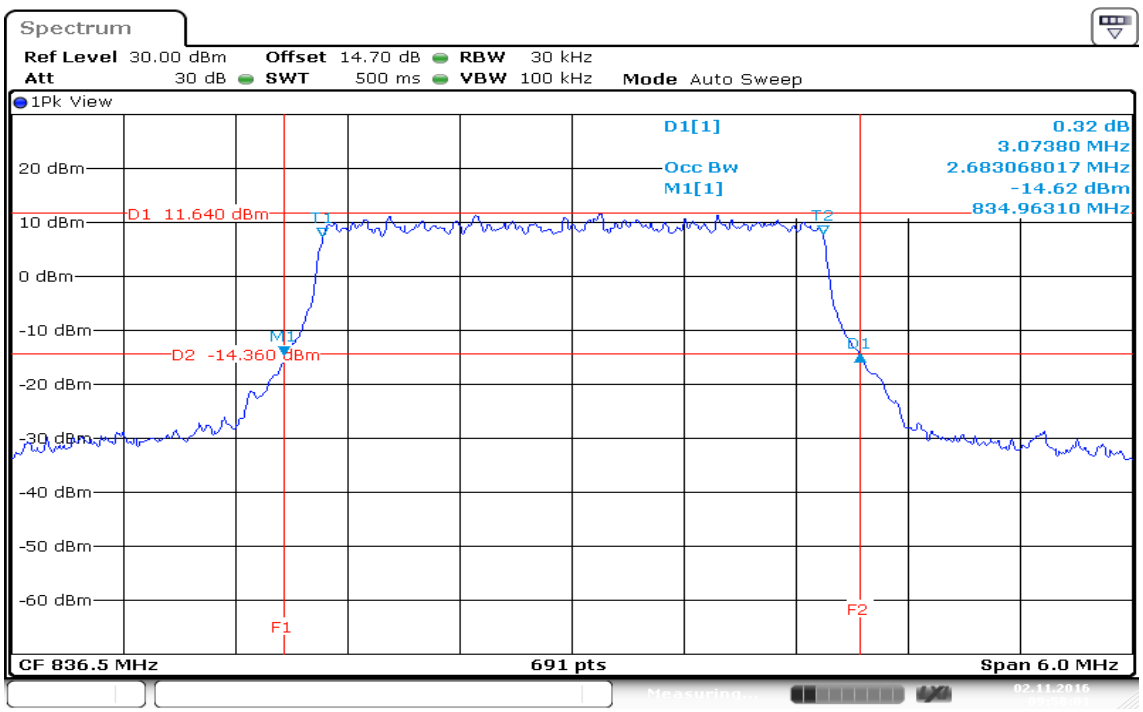
CH Mid



Date: 2.NOV.2016 09:56:17

BW: 3MHz / 16QAM / RB =15, RB Offset = 0

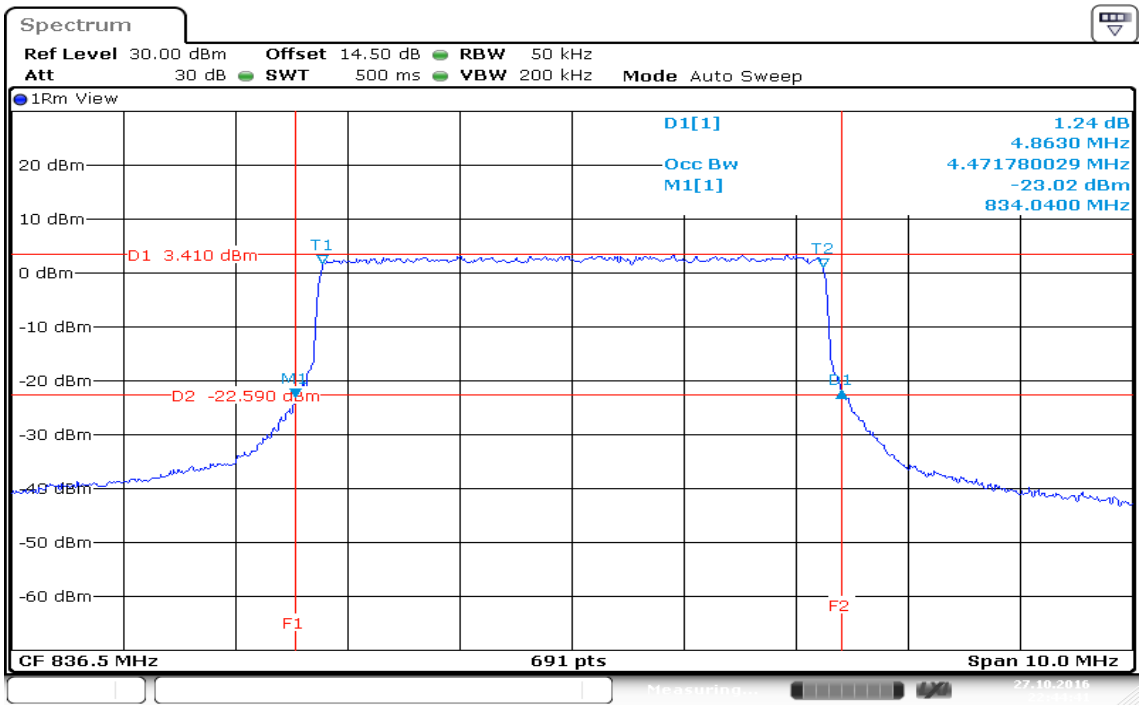
CH Mid



Date: 2.NOV.2016 09:58:01

BW: 5MHz / QPSK / RB =25, RB Offset = 0

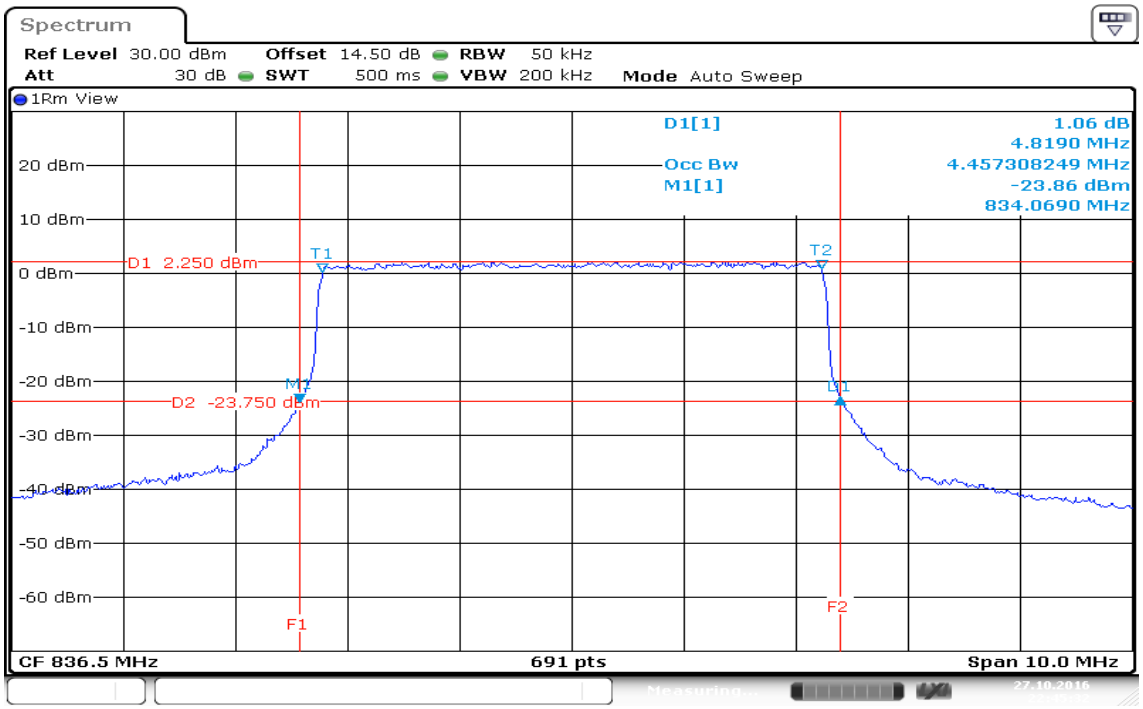
CH Mid



Date: 27.OCT.2016 22:44:42

BW: 5MHz / 16QAM / RB =25, RB Offset = 0

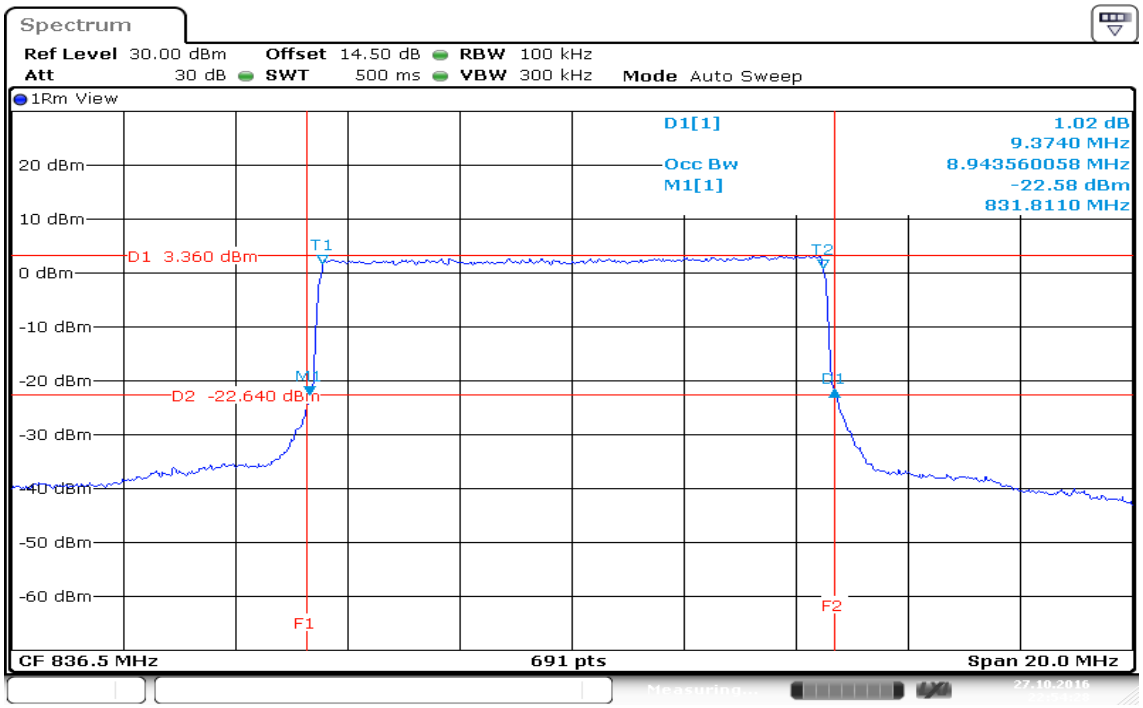
CH Mid



Date: 27.OCT.2016 22:45:33

BW: 10MHz / QPSK / RB =50, RB Offset = 0

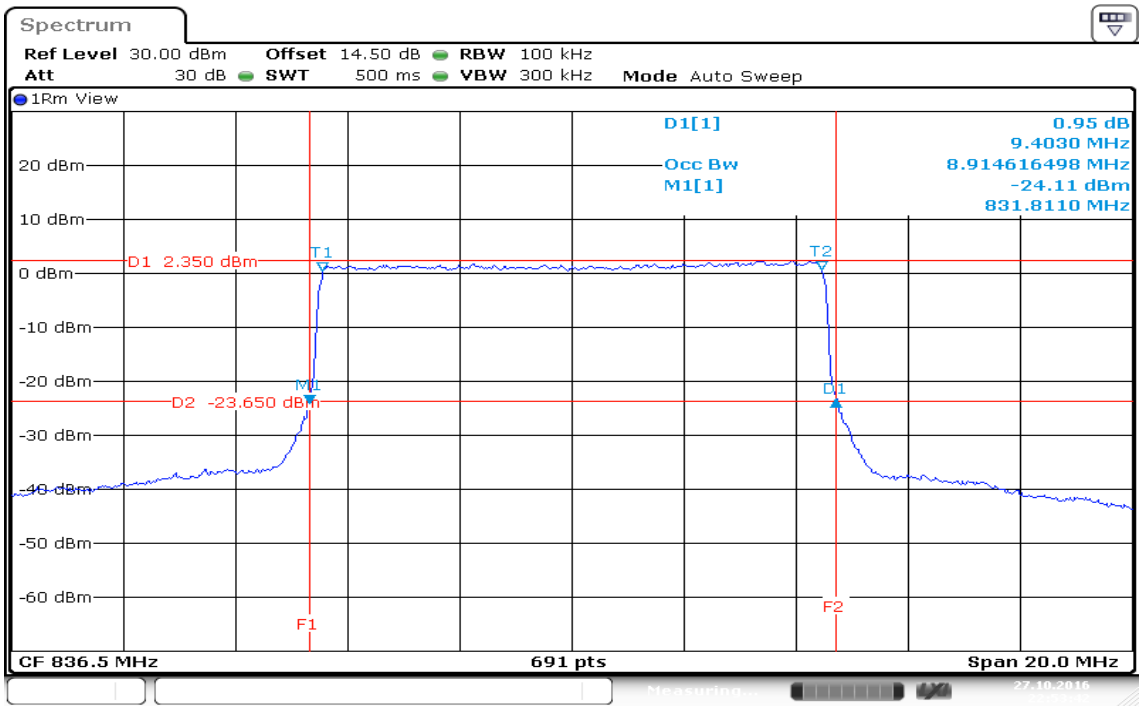
CH Mid



Date: 27.OCT.2016 22:54:29

BW: 10MHz / 16QAM / RB =50, RB Offset = 0

CH Mid



Date: 27.OCT.2016 22:53:42

7.5 PEAK TO AVERAGE POWER RATIO

Limit

In measuring transmissions in this band using an average power technique, the peak to average power ratio (PAPR) of the transmission may not exceed 13 dB.

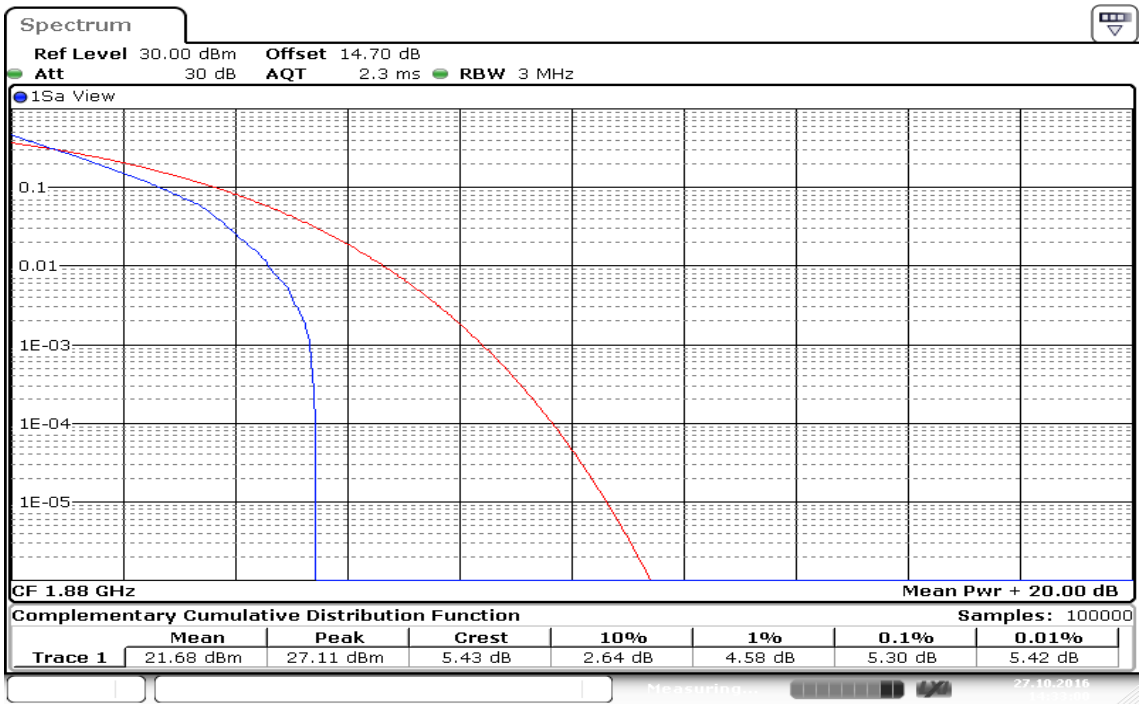
Test Procedures

1. According to KDB 971168 D01, section 5.7.1
2. The EUT was connect to spectrum analyzer and call box.
3. Set the CCDF function in spectrum analyzer.
4. The highest RF output power were measured and recorded the maximum PAPR level associated with a probability of 0.1%.
5. Record the Peak to Average Power Ratio.

LTE Band 2

BW: 1.4MHz / QPSK / RB =1, RB Offset = 0

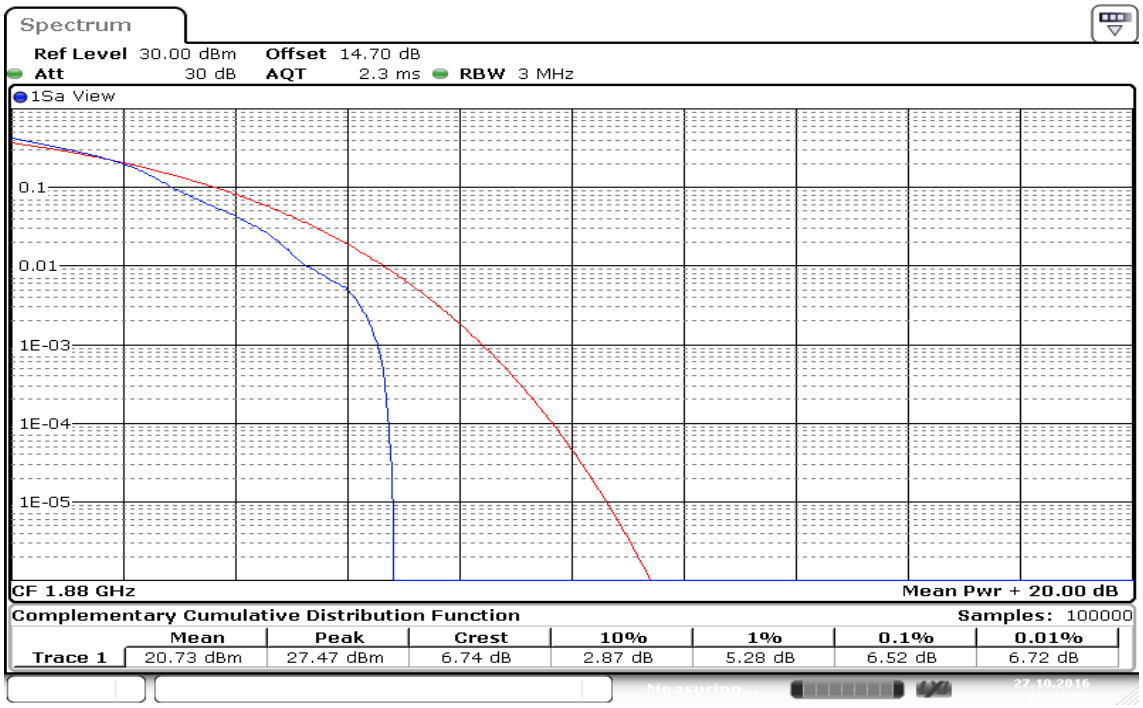
CH Mid



Date: 27.OCT.2016 14:33:01

BW: 1.4MHz / 16QAM / RB =1, RB Offset = 0

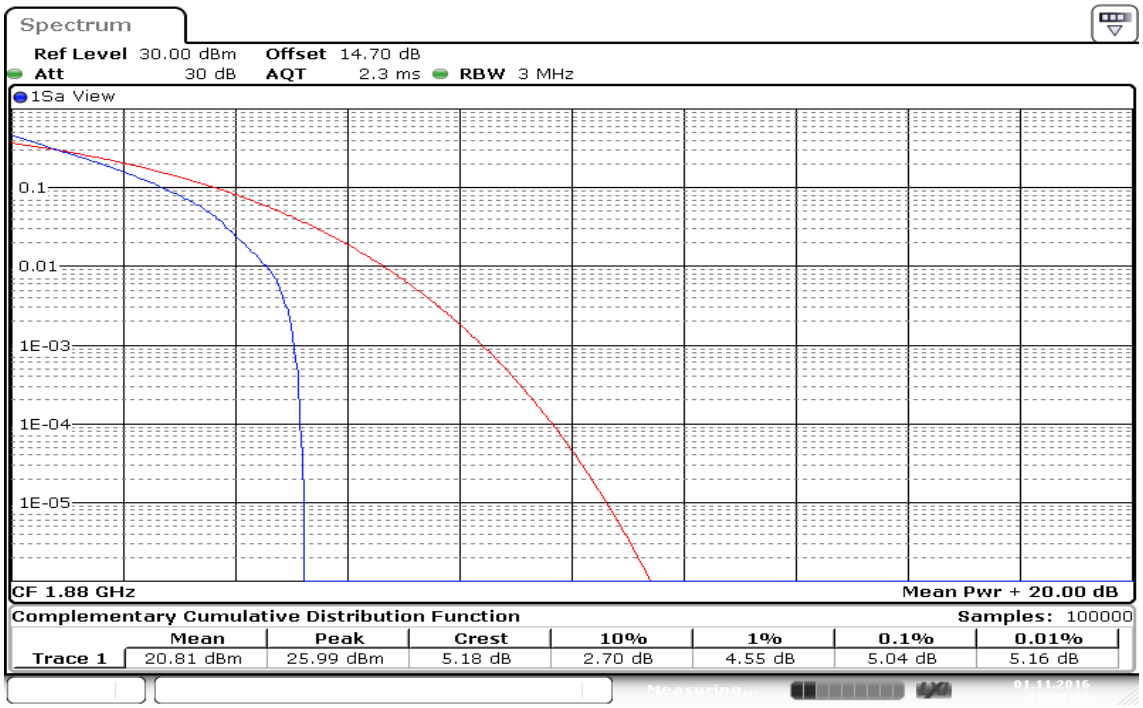
CH Mid



Date: 27.OCT.2016 15:31:34

BW: 3MHz / QPSK / RB =1, RB Offset = 0

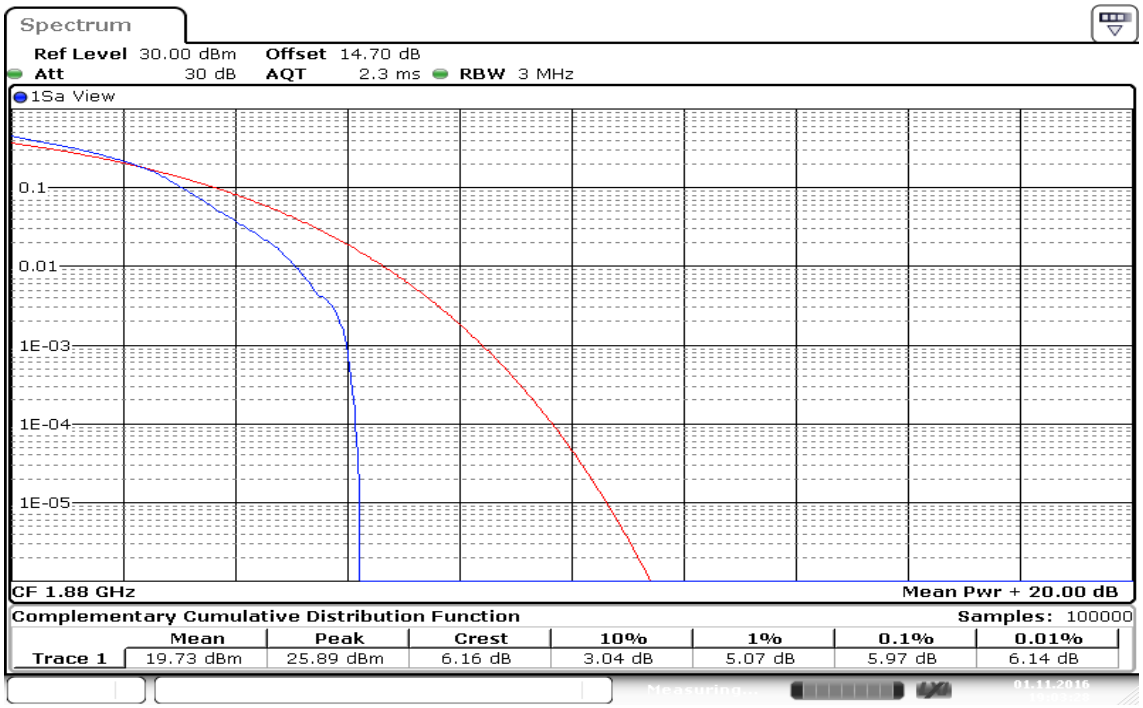
CH Mid



Date: 1.NOV.2016 19:02:09

BW: 3MHz / 16QAM / RB =1, RB Offset = 0

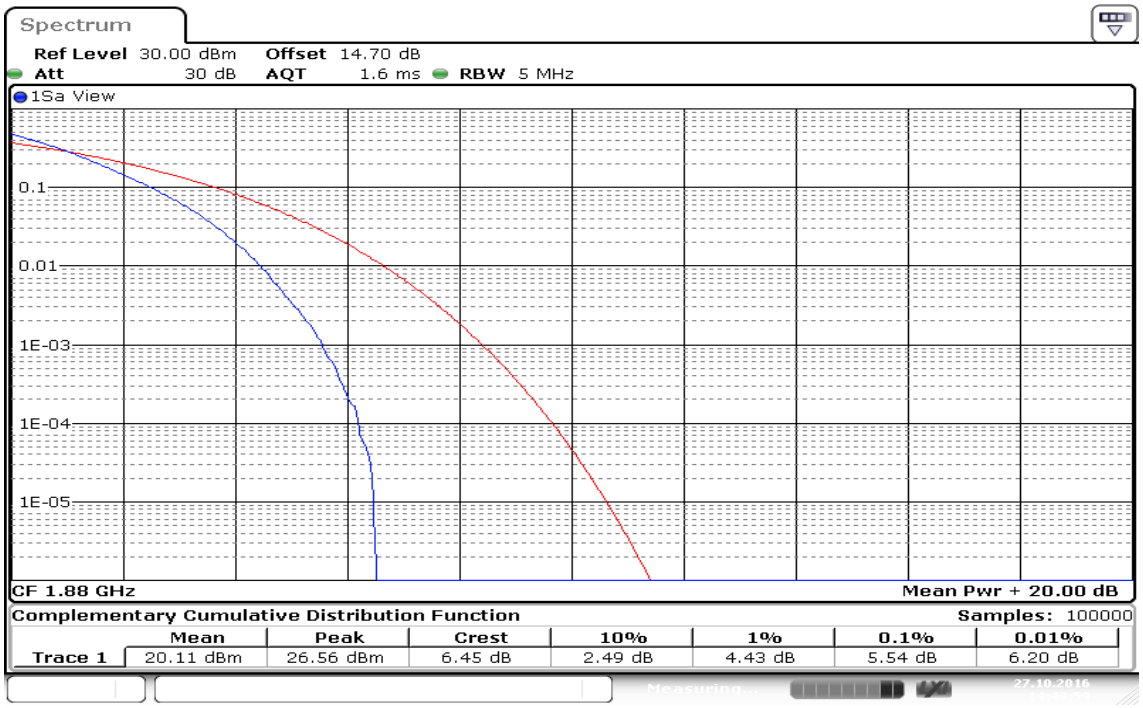
CH Mid



Date: 1.NOV.2016 19:03:29

BW: 5MHz / QPSK / RB =1, RB Offset = 0

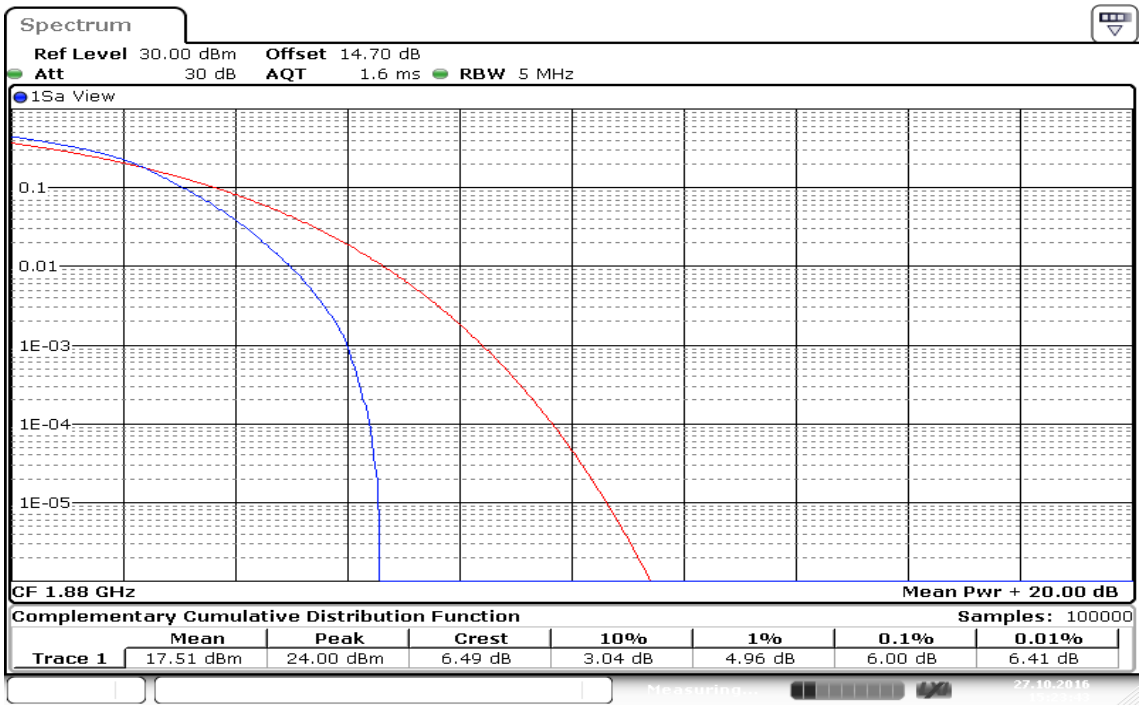
CH Mid



Date: 27.OCT.2016 14:49:59

BW: 5MHz / 16QAM / RB =1, RB Offset = 0

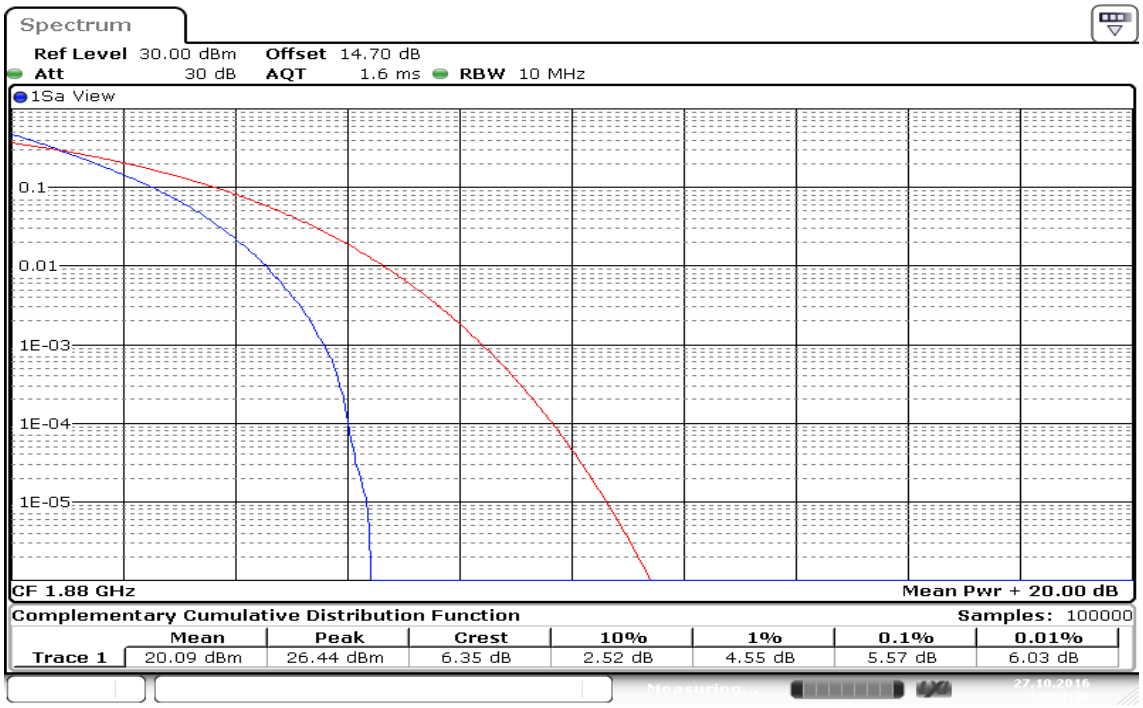
CH Mid



Date: 27.OCT.2016 15:23:43

BW: 10MHz / QPSK /RB =1, RB Offset = 0

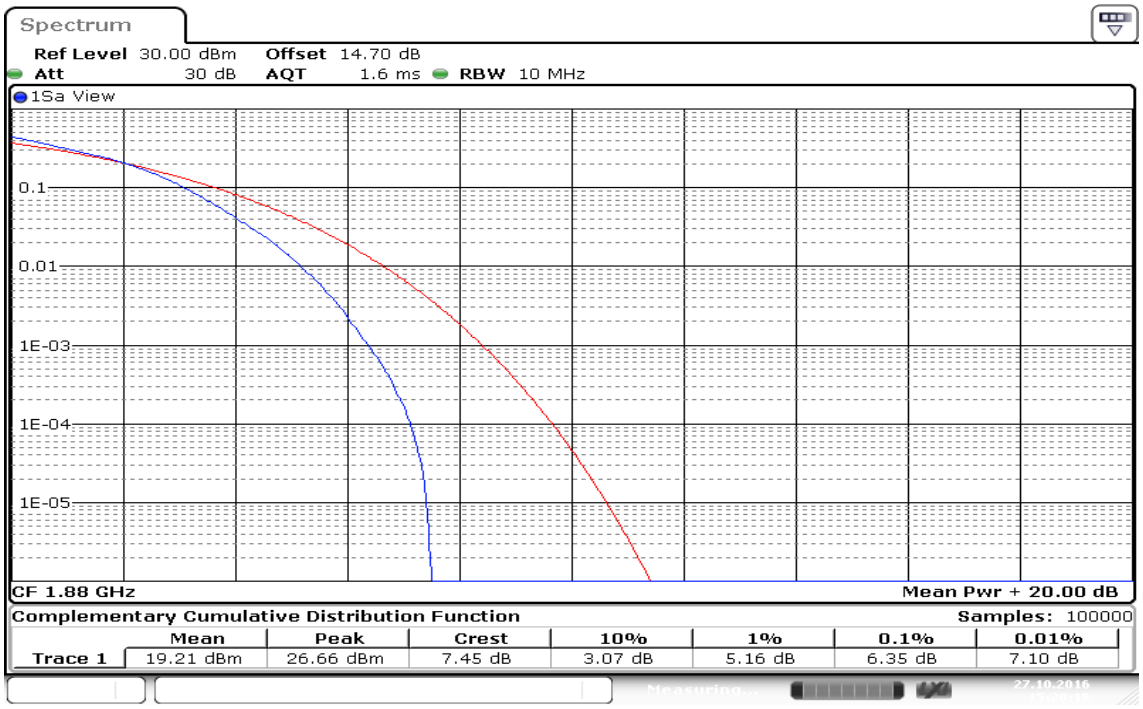
CH Mid



Date: 27.OCT.2016 14:54:30

BW: 10MHz / 16QAM /RB =1, RB Offset = 0

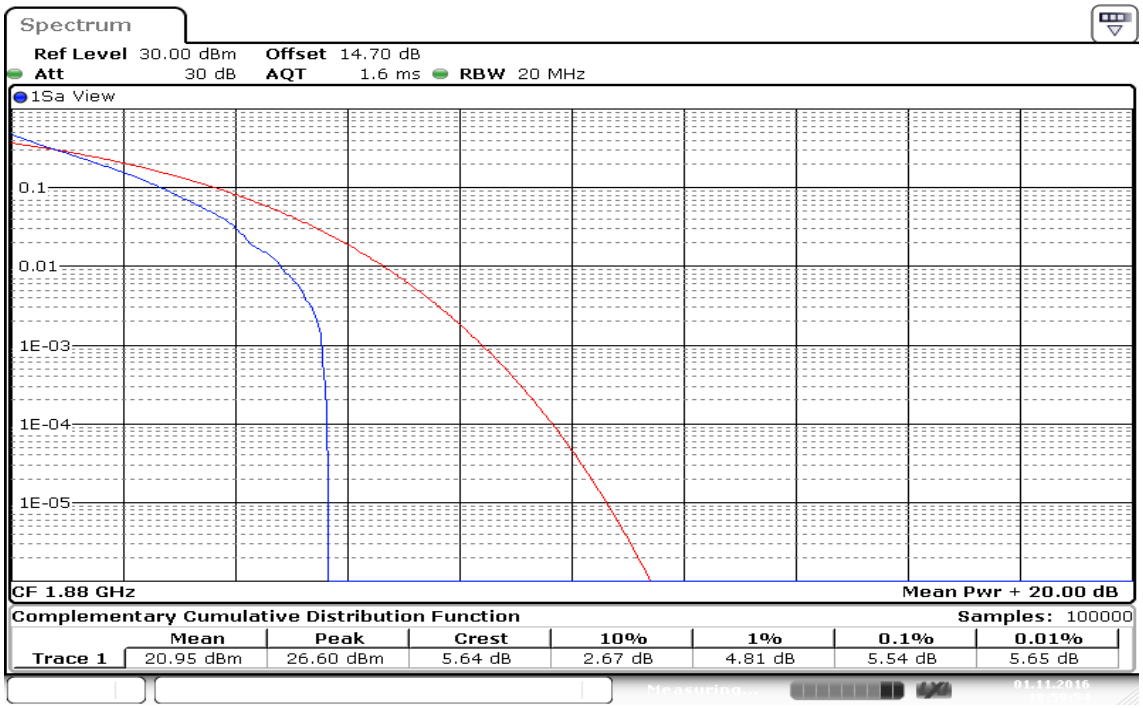
CH Mid



Date: 27.OCT.2016 15:20:18

BW: 15MHz / QPSK /RB =1, RB Offset = 0

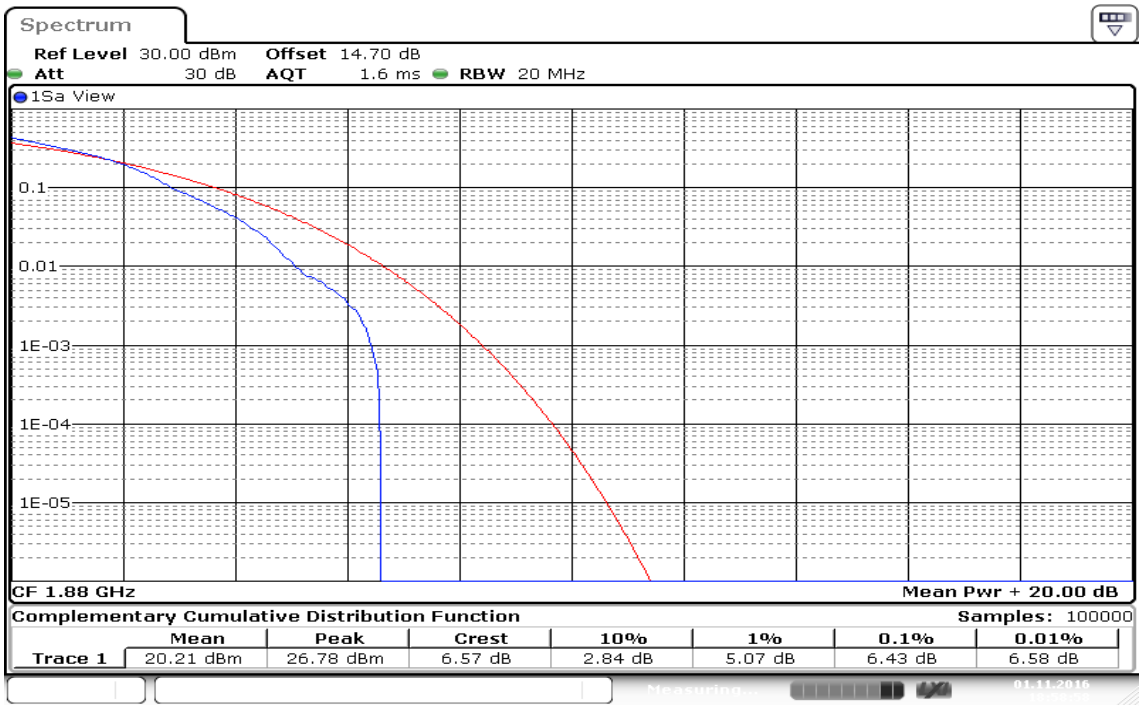
CH Mid



Date: 1.NOV.2016 18:59:54

BW: 15MHz / 16QAM /RB =1, RB Offset = 0

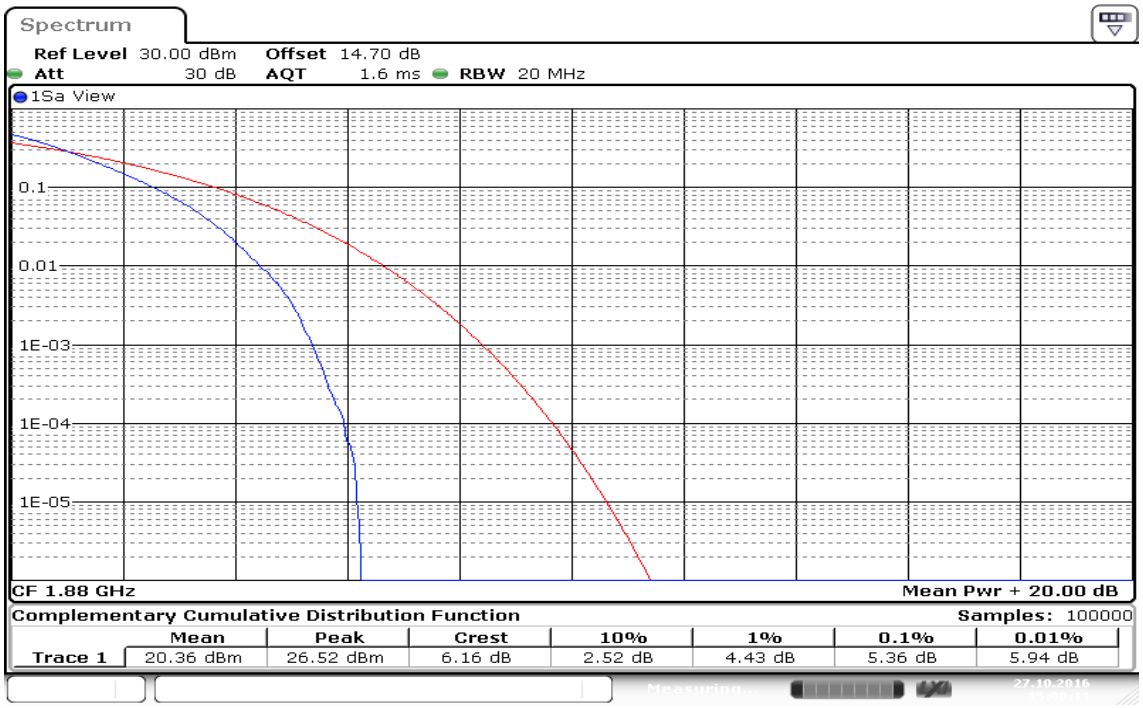
CH Mid



Date: 1.NOV.2016 18:58:58

BW: 20MHz / QPSK / 16QAM /RB =1, RB Offset = 0

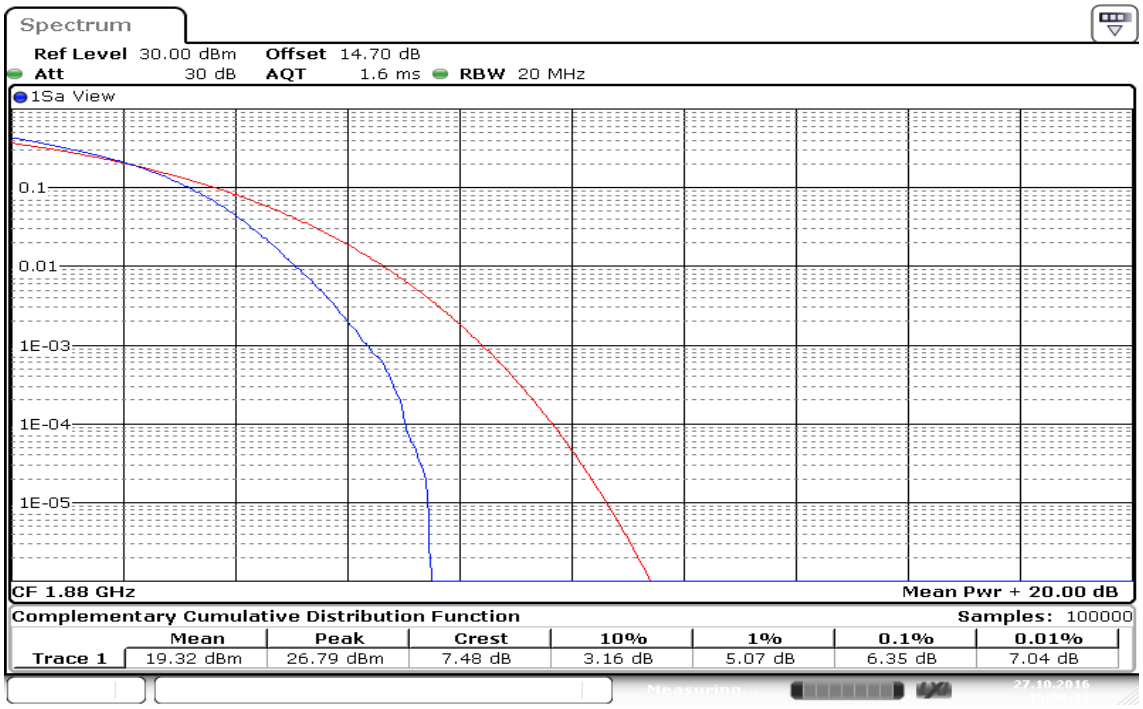
CH Mid



Date: 27.OCT.2016 15:00:11

BW: 20MHz / 16QAM / RB =1, RB Offset = 0

CH Mid

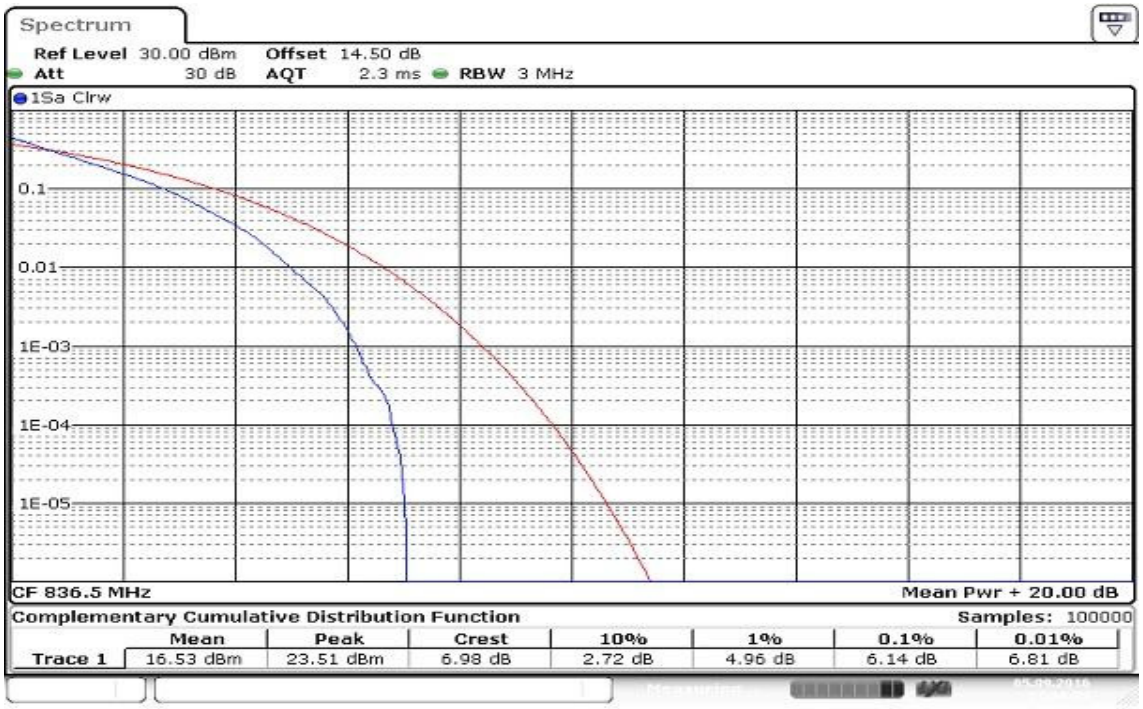


Date: 27.OCT.2016 15:08:13

LTE Band 5

BW: 1.4MHz / QPSK / RB =1, RB Offset = 0

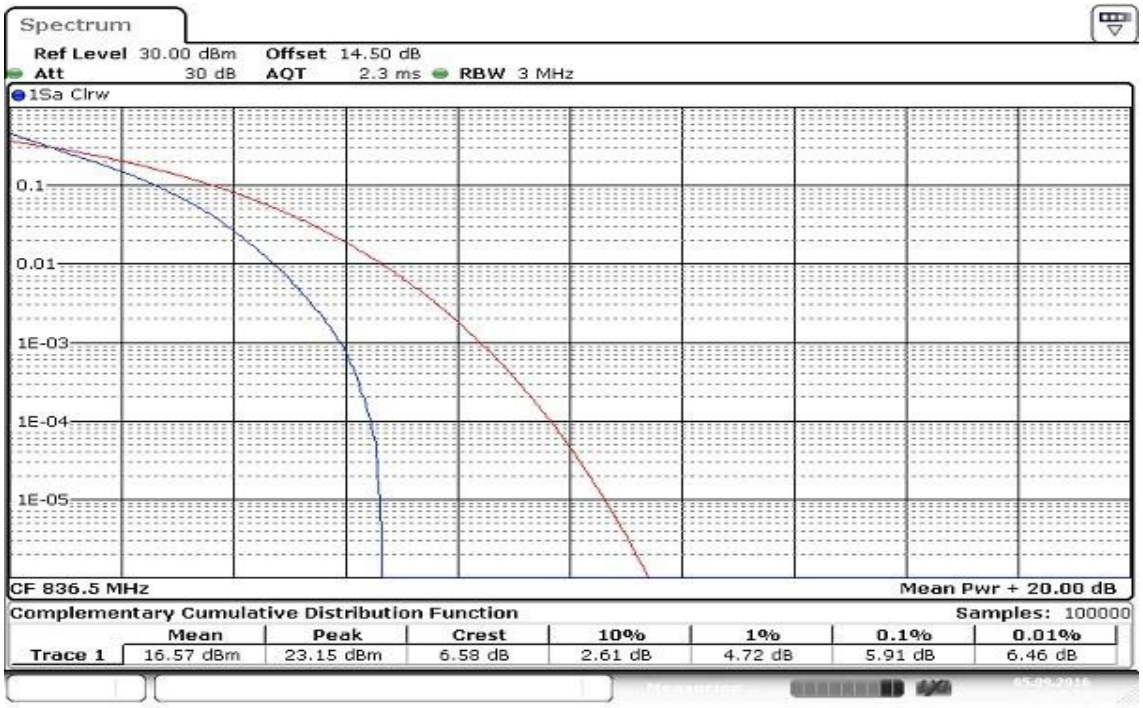
CH Mid



Date: 5.SEP.2016 11:03:24

BW: 1.4MHz / 16QAM / RB =1, RB Offset = 0

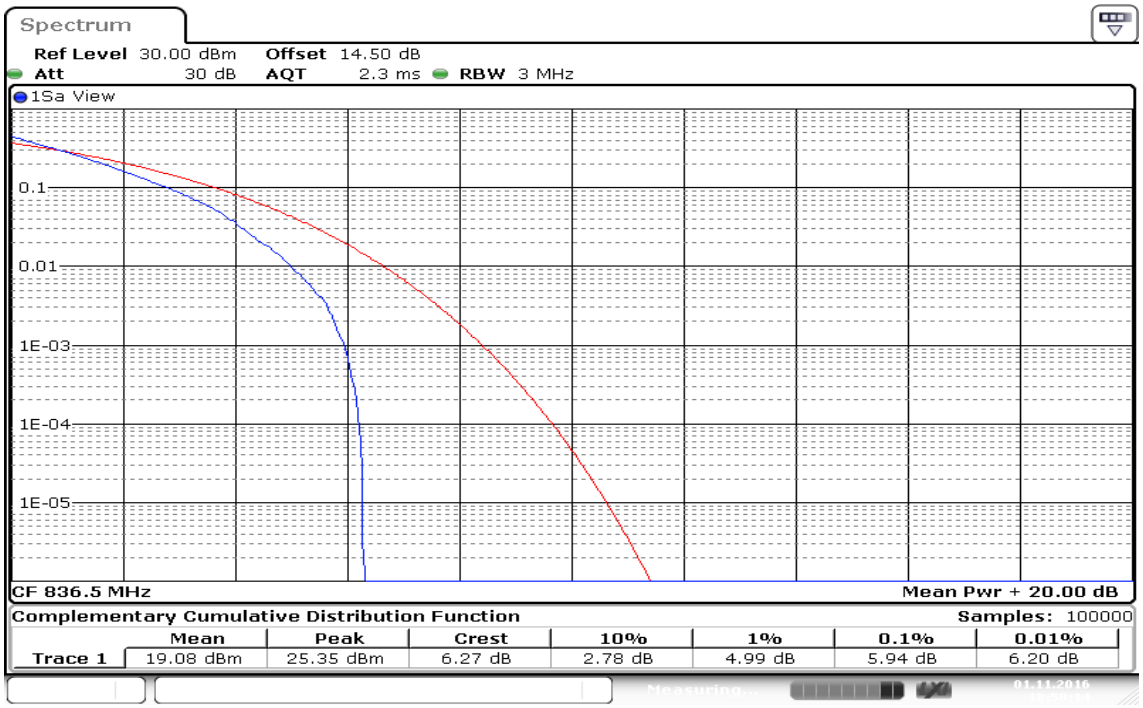
CH Mid



Date: 5.SEP.2016 10:56:22

BW: 3MHz / QPSK / RB =1, RB Offset = 0

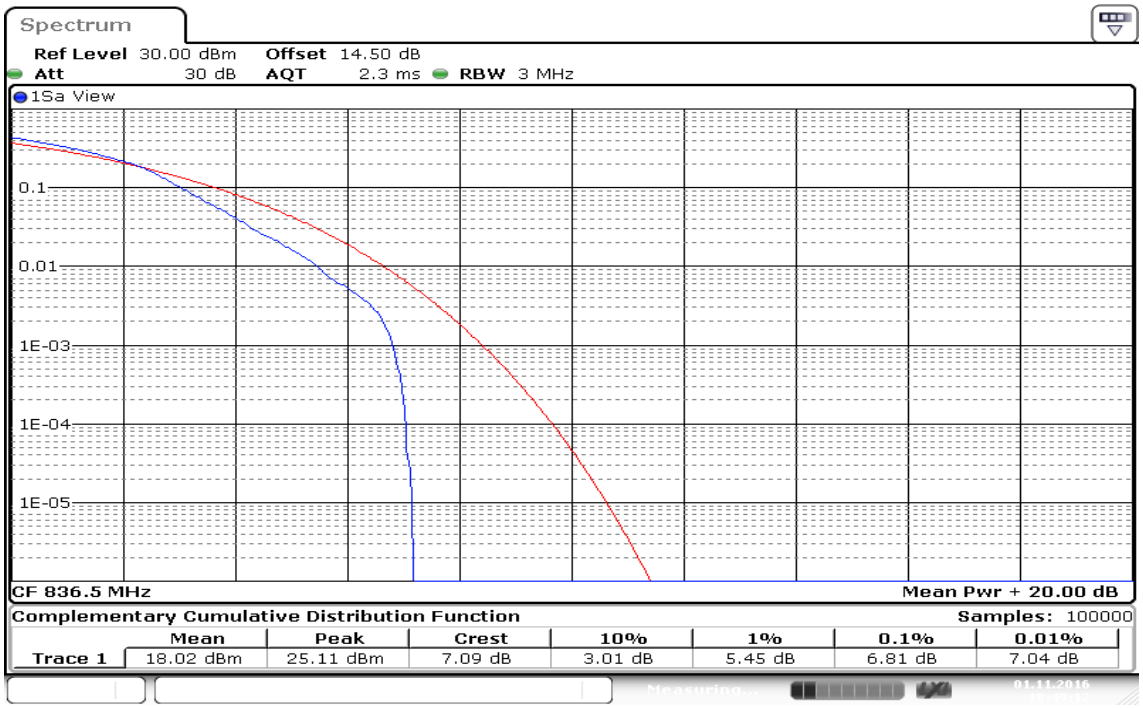
CH Mid



Date: 1.NOV.2016 18:50:14

BW: 3MHz / 16QAM / RB =1, RB Offset = 0

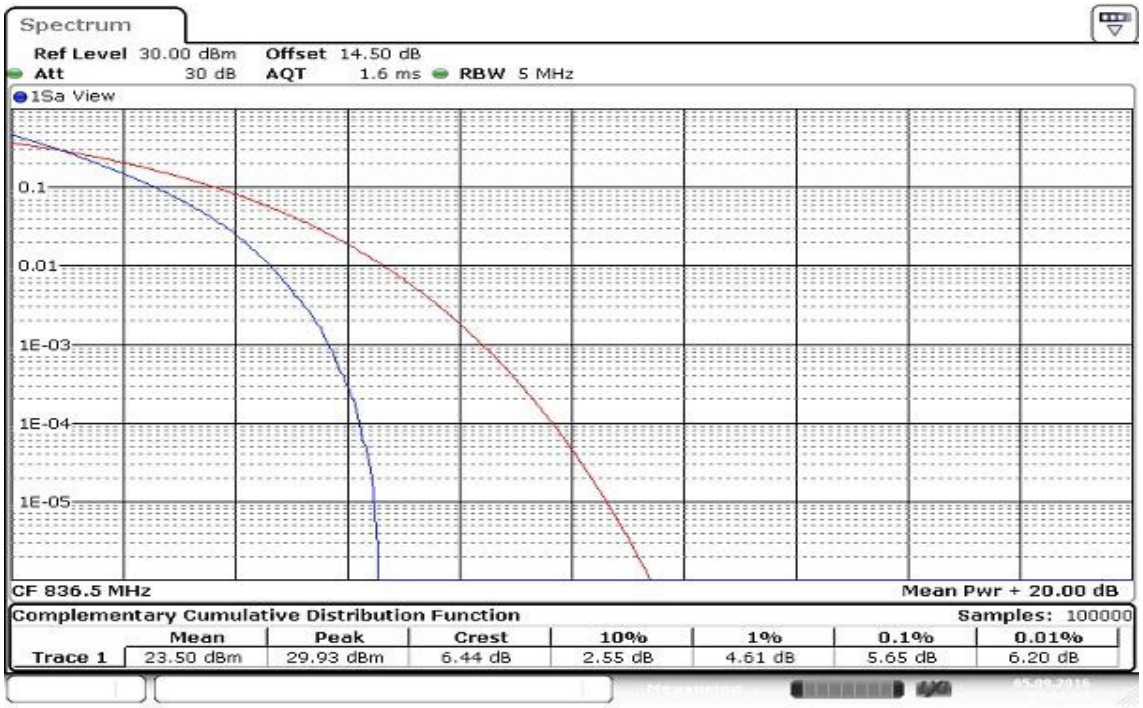
CH Mid



Date: 1.NOV.2016 18:49:13

BW: 5MHz / QPSK / RB =1, RB Offset = 0

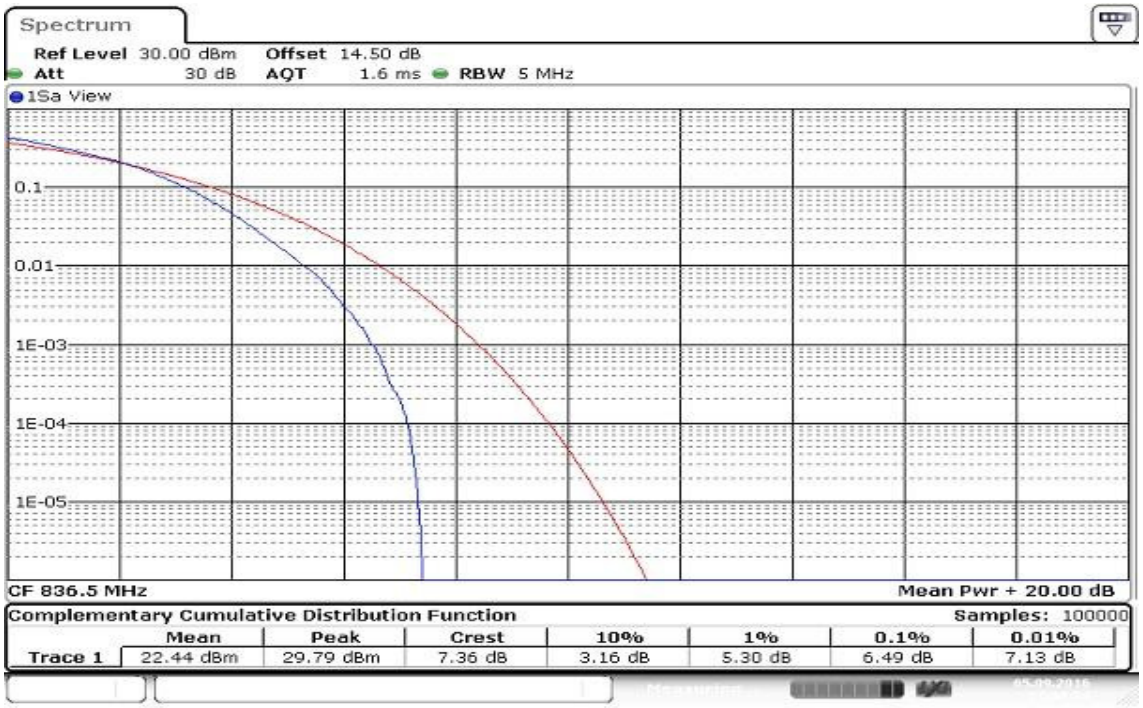
CH Mid



Date: 5.SEP.2016 11:12:55

BW: 5MHz / 16QAM / RB =1, RB Offset = 0

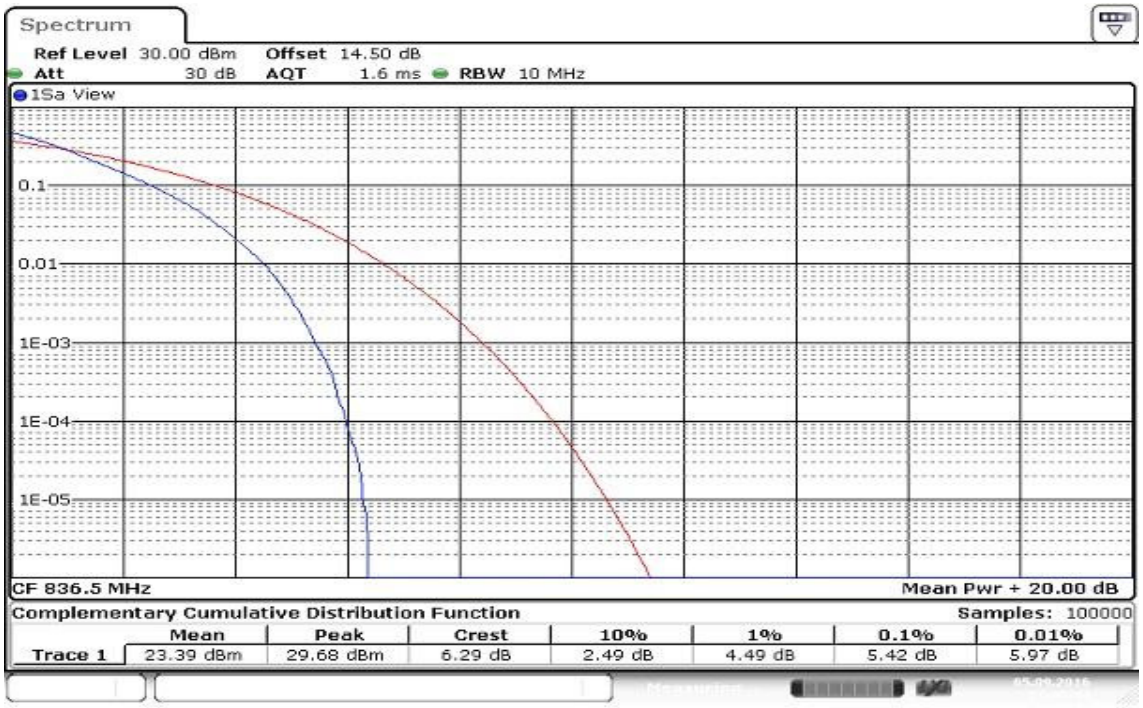
CH Mid



Date: 5.SEP.2016 11:07:34

BW: 10MHz / QPSK / RB =1, RB Offset = 0

CH Mid



Date: 5.SEP.2016 11:15:45

BW: 10MHz / 16QAM / RB =1, RB Offset = 0

CH Mid

Date: 5.SEP.2016 11:21:03

7.6 BAND EDGE MEASUREMENT

Limit

FCC §22.917(a), Band 5

For operations in the 824-849 MHz band ,Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

FCC §24.238(a), Band 2

For operations in the 1850-1910 and 1930-1950 MHz band , Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

Test Procedures

KDB 971168 D01 v02r02 - Section 6.0

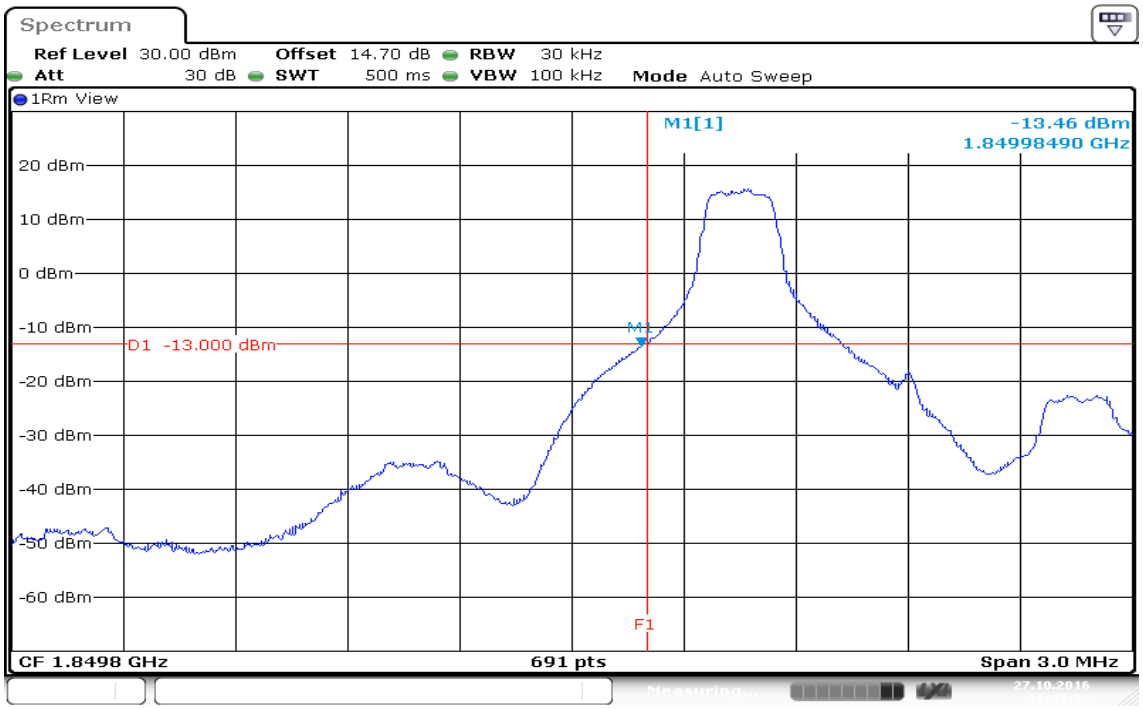
1. RBW ≥ 1% of the emission bandwidth
2. VBW ≥ 3 x RBW
3. Span was set large enough so as to capture all out of emissions near the band edge.

Test Results:

LTE Band 2

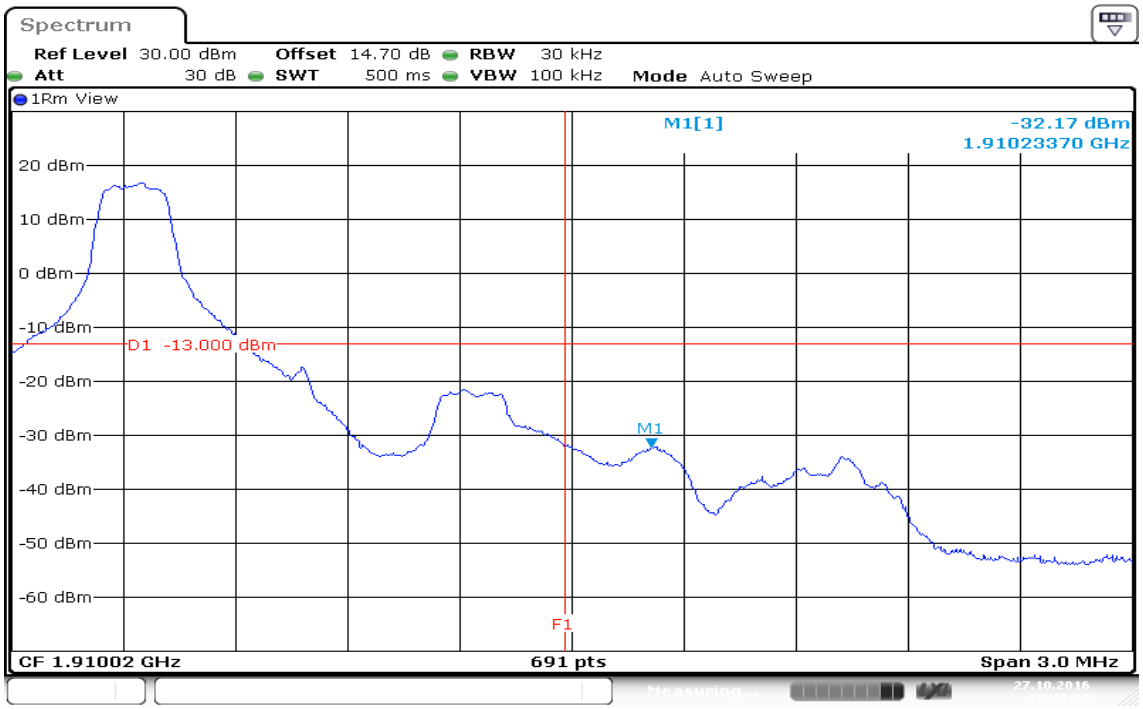
BW: 1.4MHz / QPSK / RB= 1, RB Offset = 0

LOWER BAND EDGE



Date: 27.OCT.2016 17:45:50

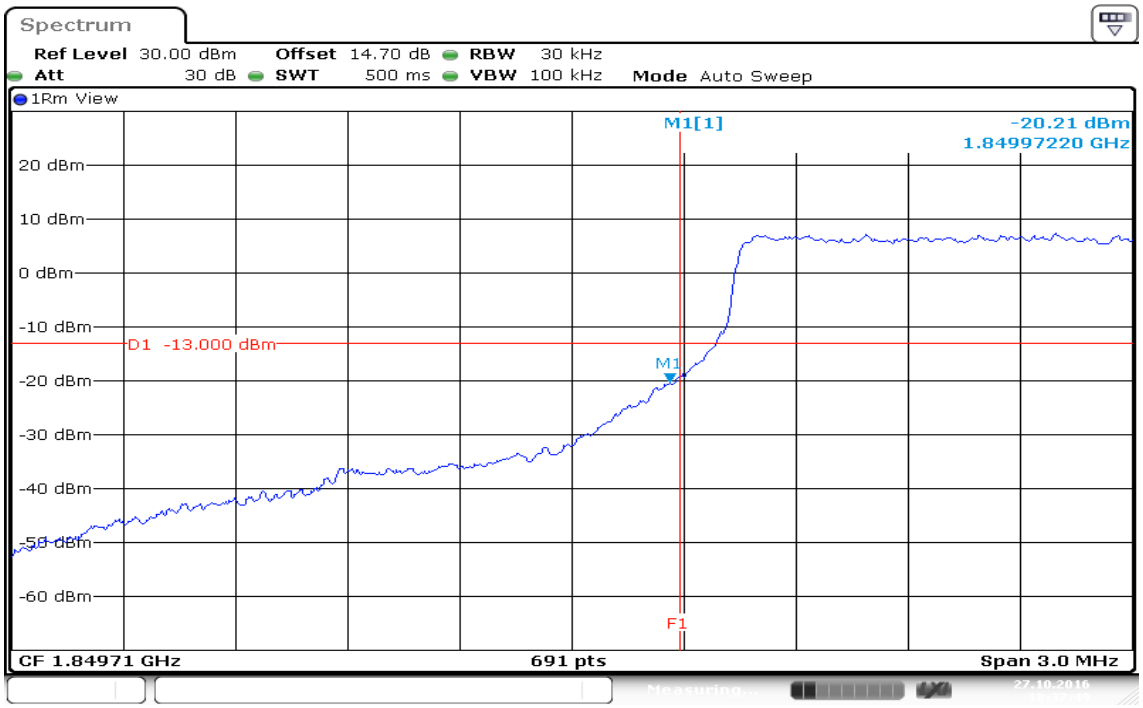
HIGHER BAND EDGE



Date: 27.OCT.2016 17:49:23

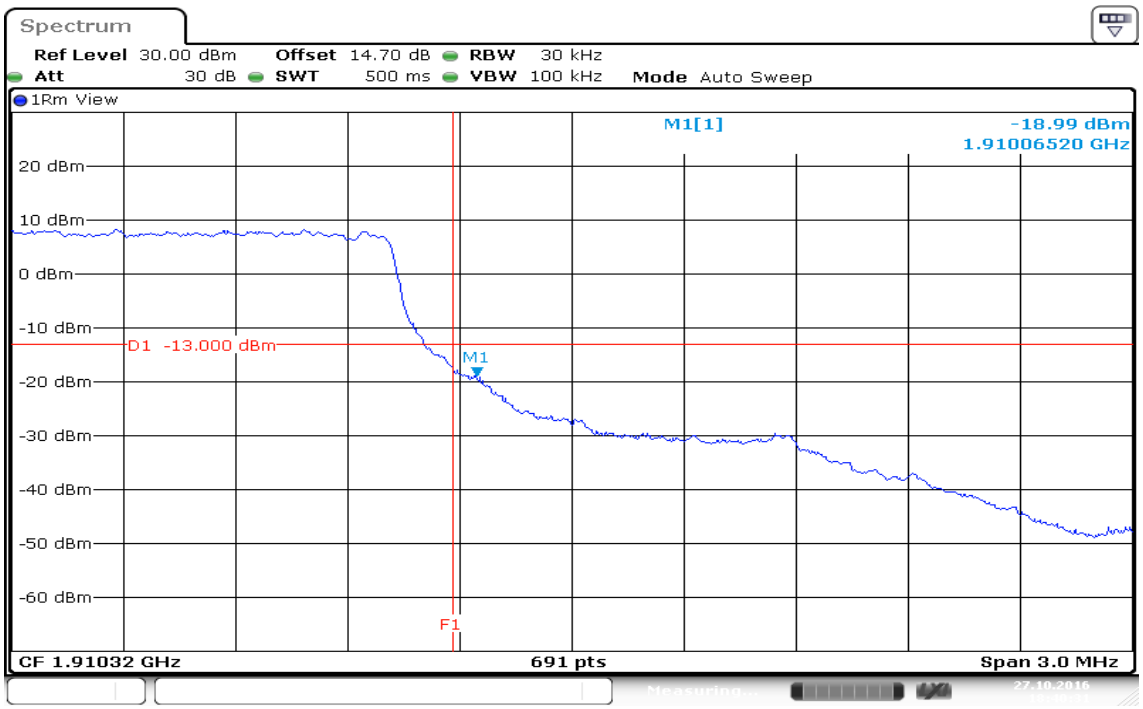
BW: 1.4MHz / QPSK / RB= 6, RB Offset = 0

LOWER BAND EDGE



Date: 27.OCT.2016 18:37:49

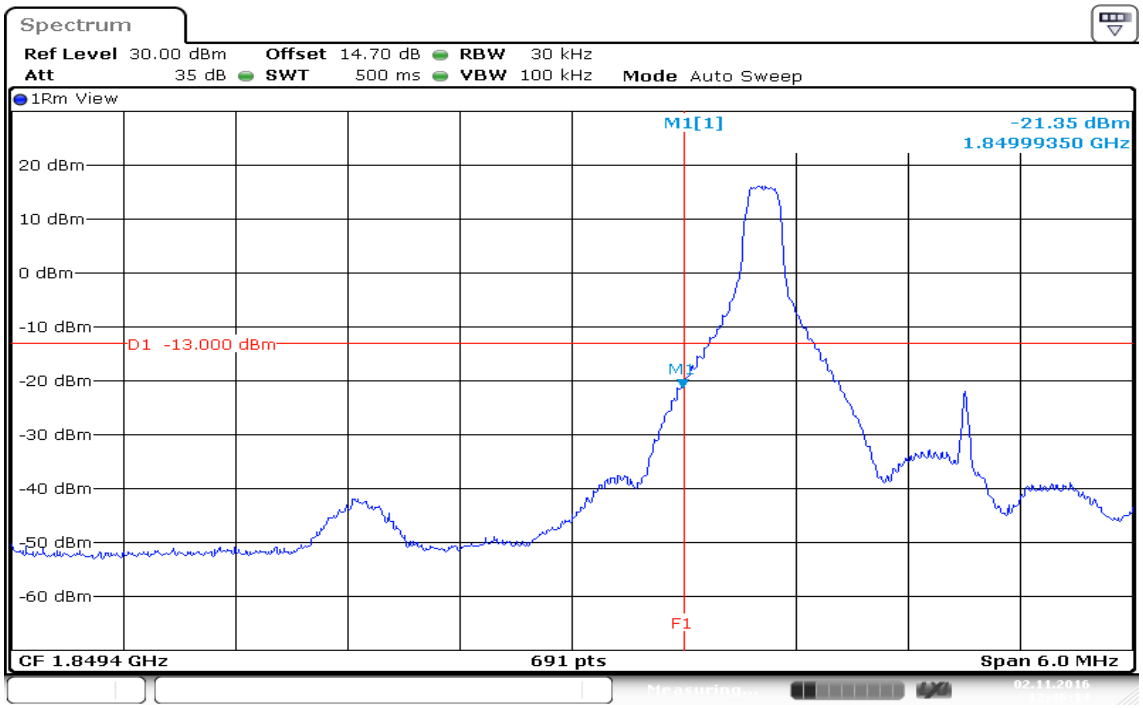
HIGHER BAND EDGE



Date: 27.OCT.2016 18:40:31

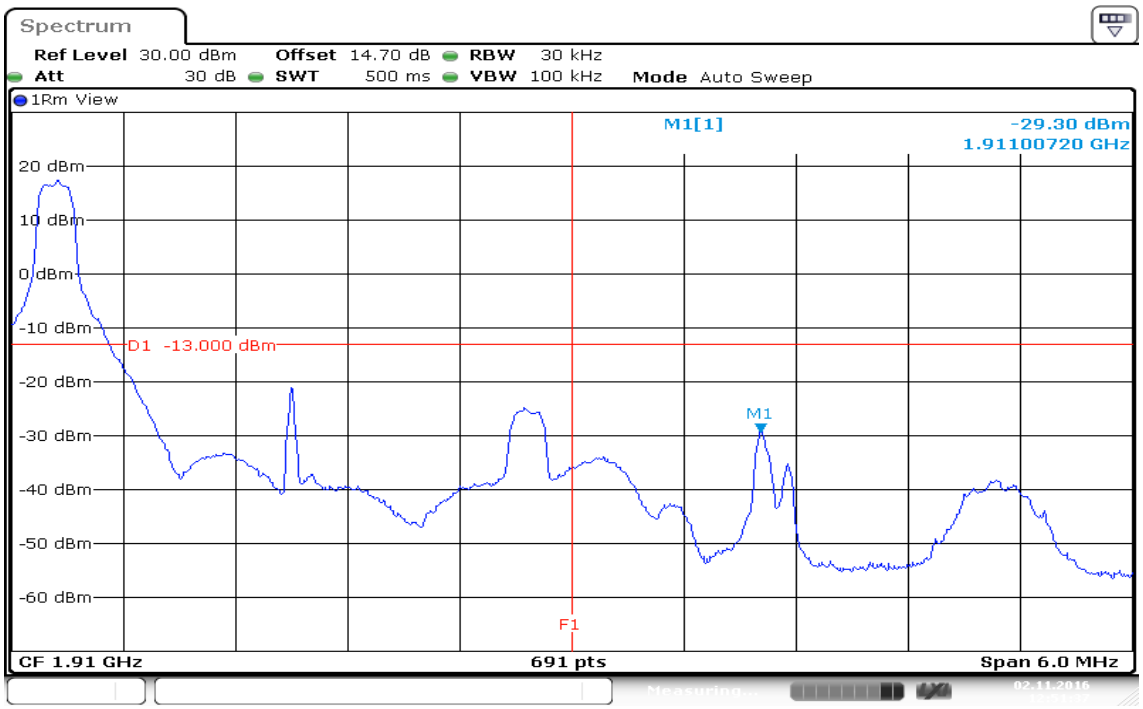
BW: 3MHz / QPSK / RB= 1, RB Offset = 0

LOWER BAND EDGE



Date: 2.NOV.2016 12:46:15

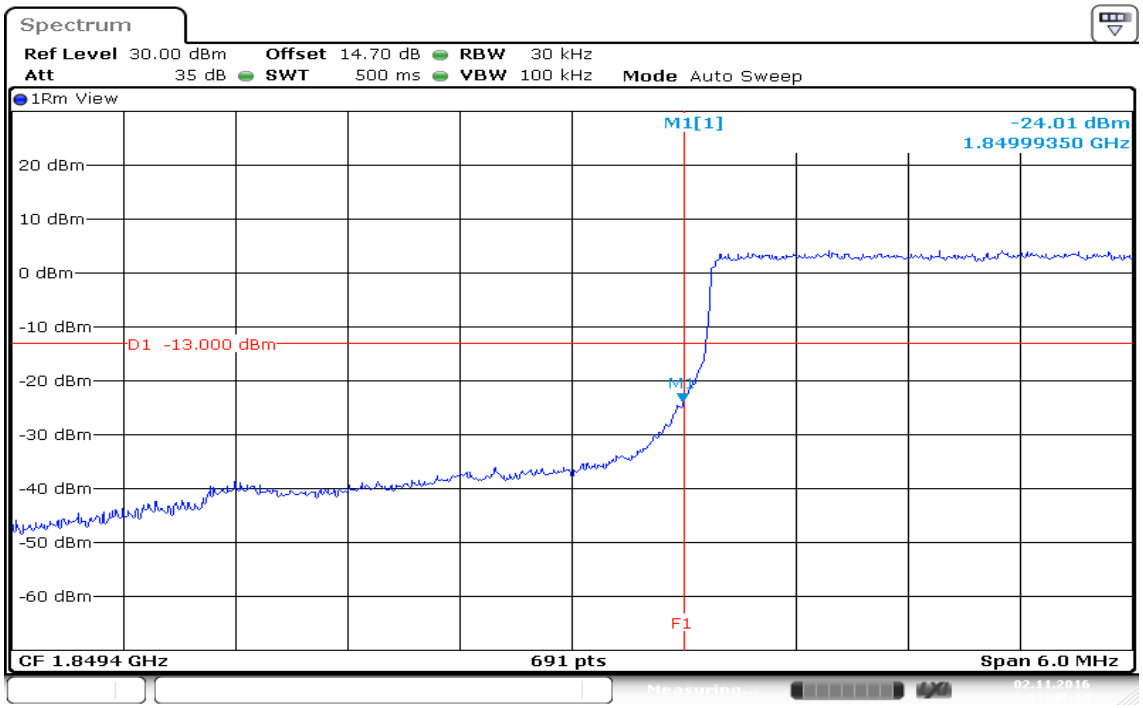
HIGHER BAND EDGE



Date: 2.NOV.2016 12:51:37

BW: 3MHz / QPSK / RB=15, RB Offset = 0

LOWER BAND EDGE



Date: 2.NOV.2016 12:40:14

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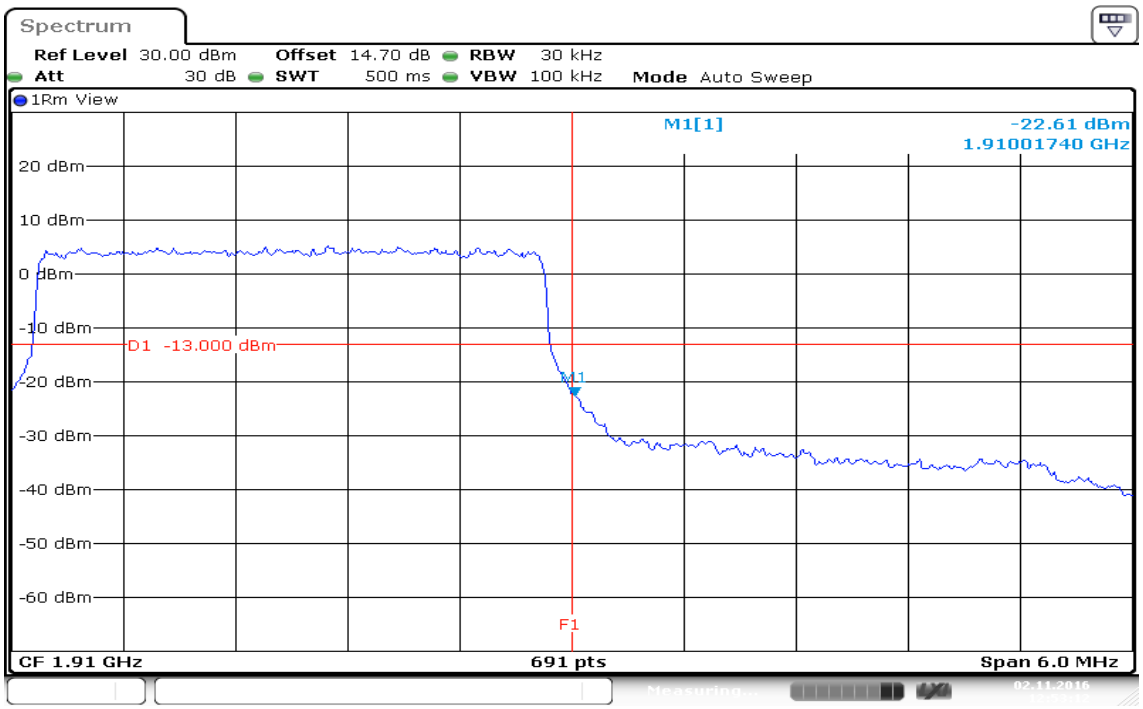
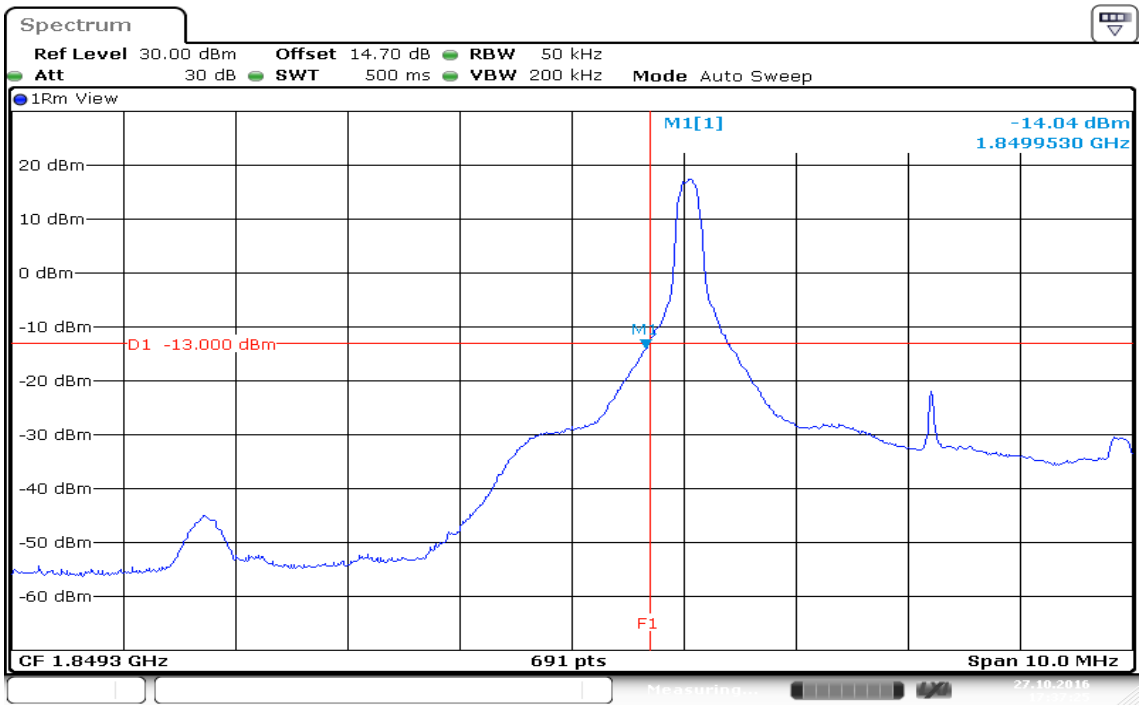


Date: 2.NOV.2016 12:53:12

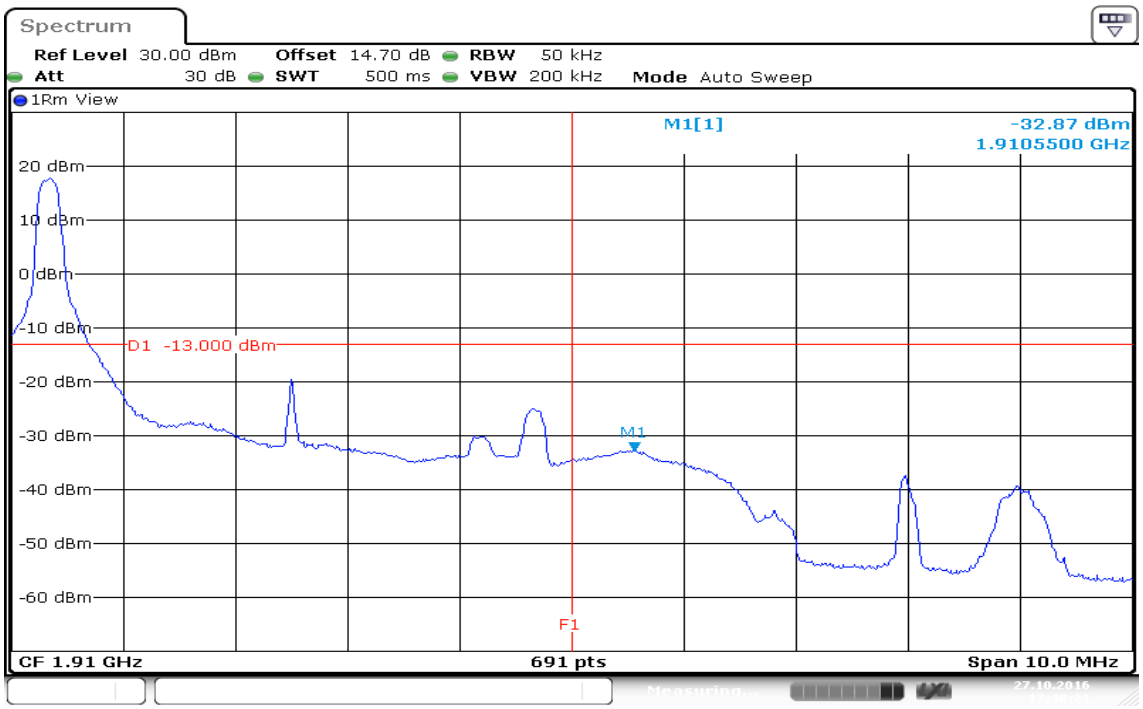
BW: 5MHz / QPSK / RB= 1, RB Offset = 0

LOWER BAND EDGE



Date: 27.OCT.2016 17:37:25

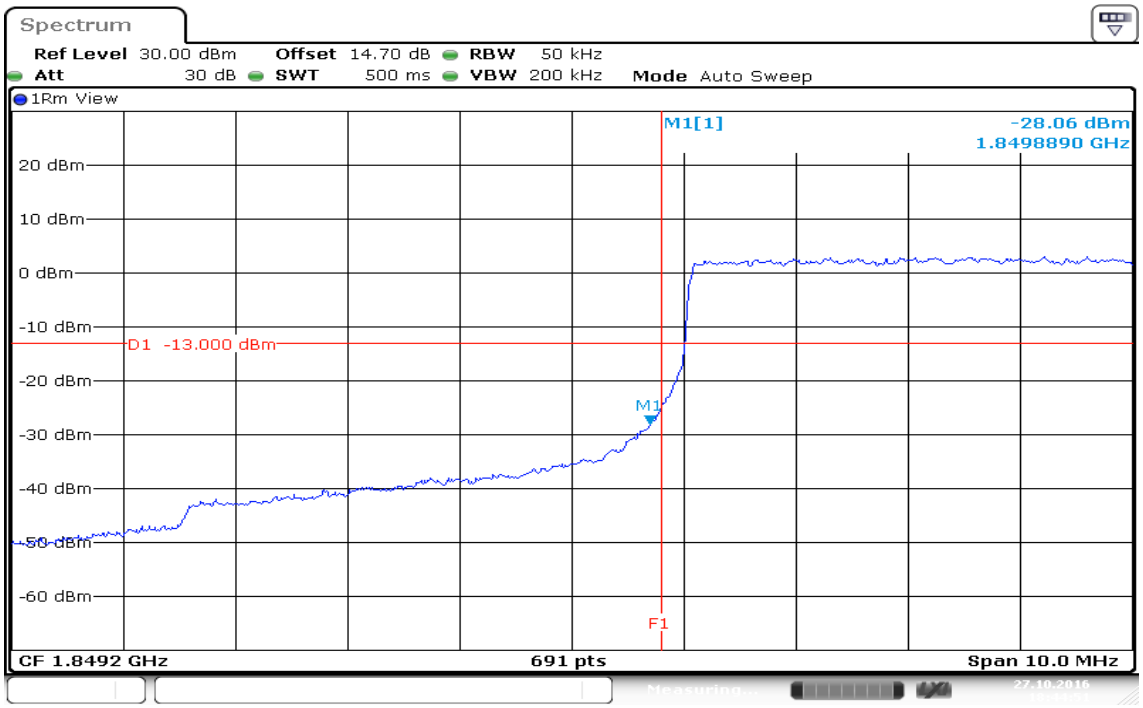
HIGHER BAND EDGE



Date: 27.OCT.2016 17:40:21

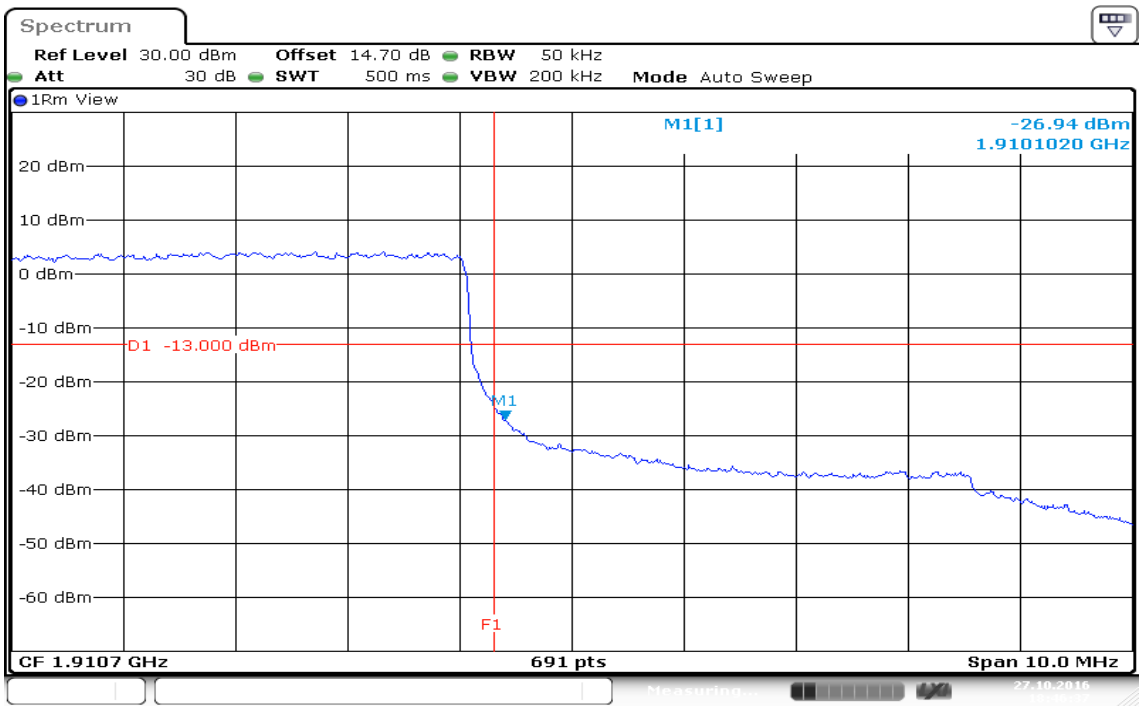
BW: 5MHz / QPSK / RB=25, RB Offset = 0

LOWER BAND EDGE



Date: 27.OCT.2016 18:44:50

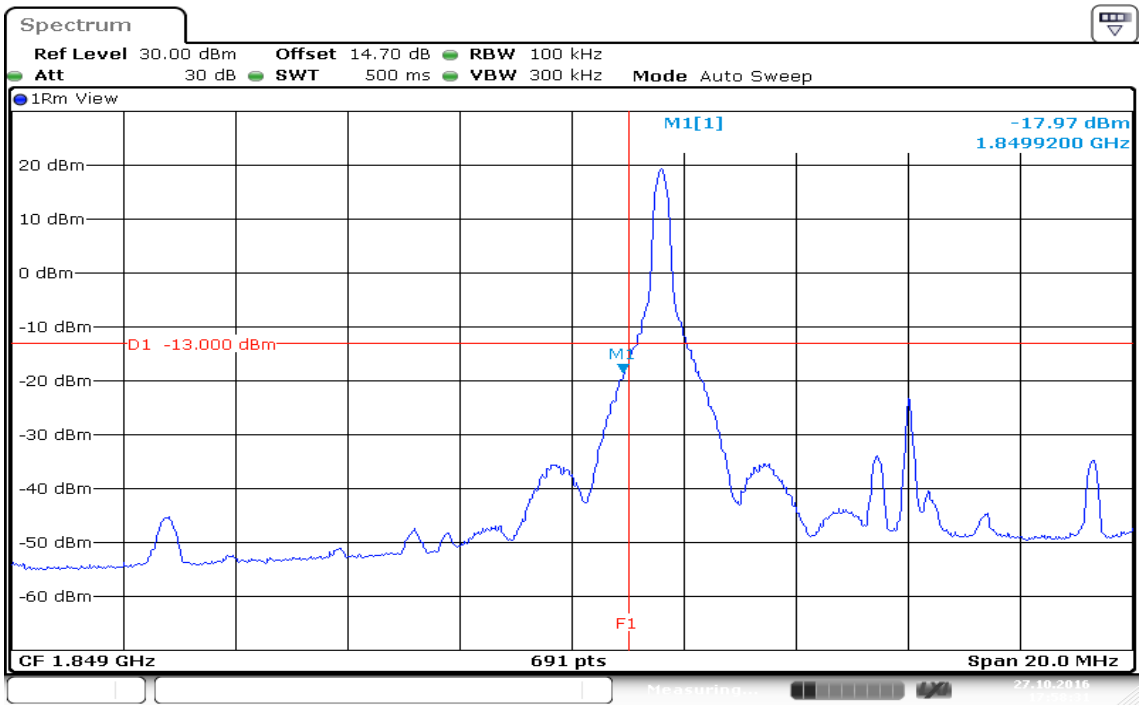
HIGHER BAND EDGE



Date: 27.OCT.2016 18:46:38

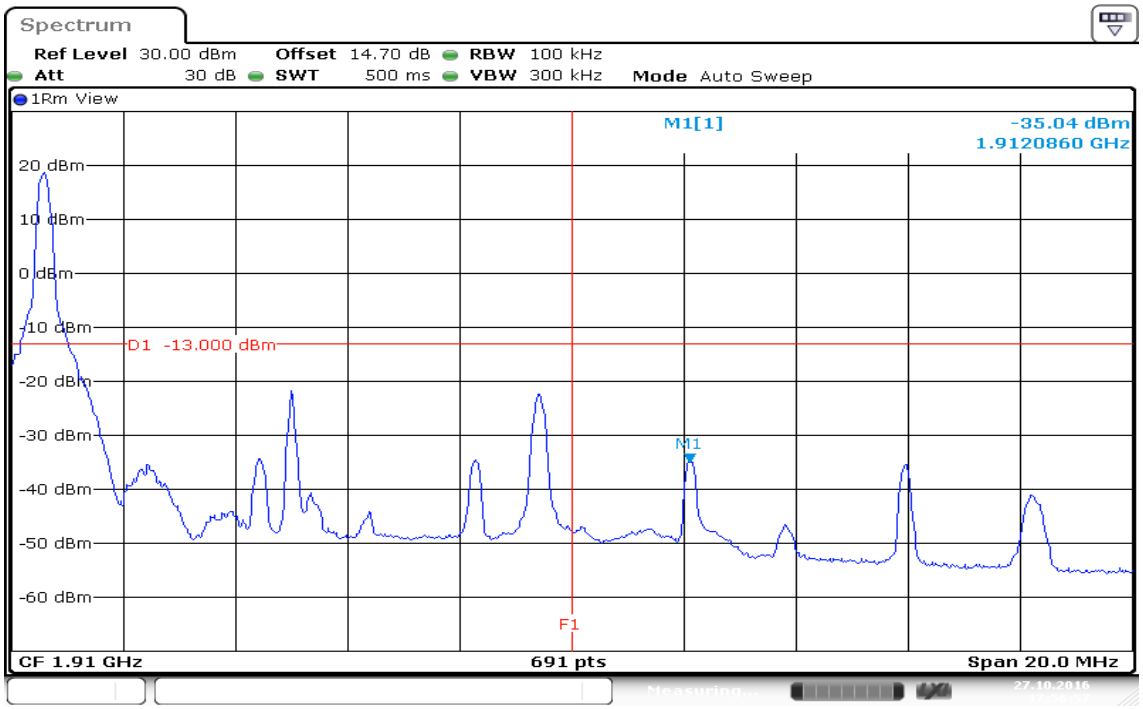
BW: 10MHz / QPSK / RB=1 RB Offset = 0

LOWER BAND EDGE



Date: 27.OCT.2016 17:58:31

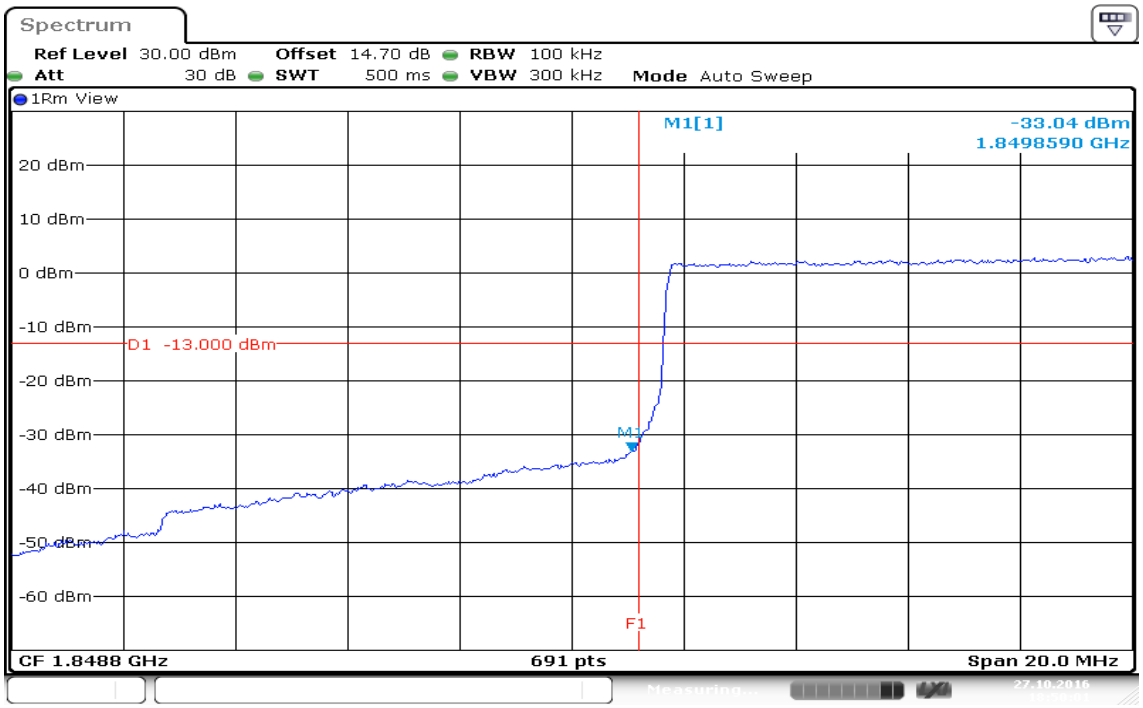
HIGHER BAND EDGE



Date: 27.OCT.2016 17:56:57

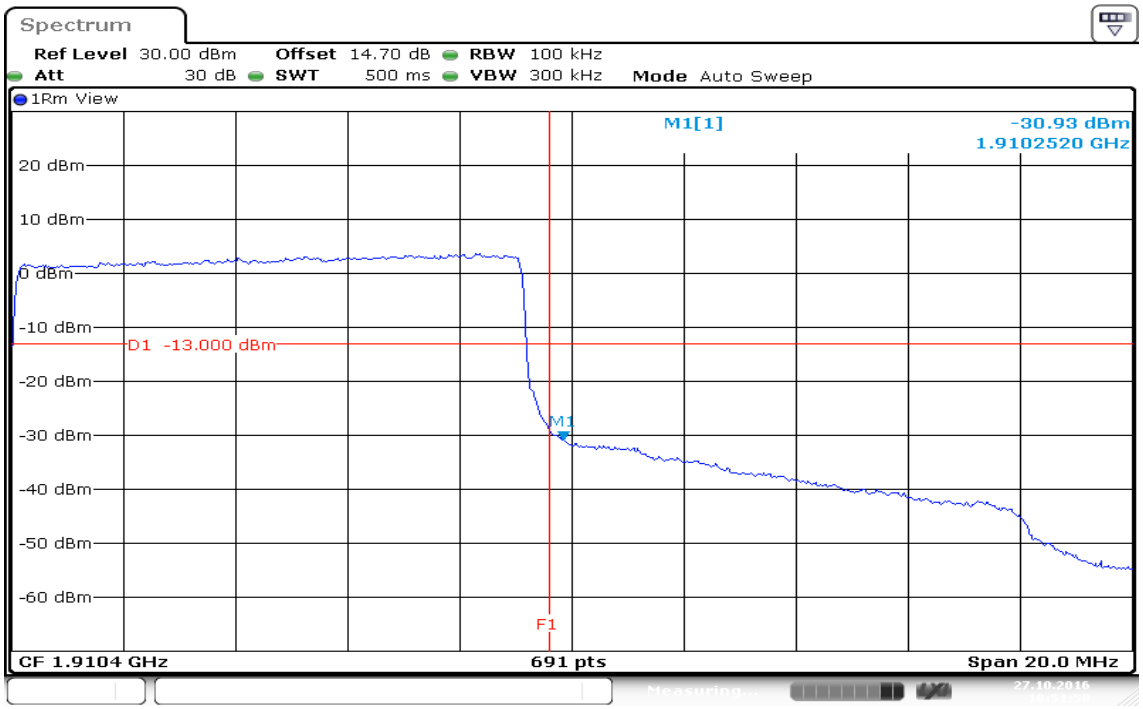
BW: 10MHz / QPSK / RB=50RB Offset = 0

LOWER BAND EDGE



Date: 27.OCT.2016 18:50:01

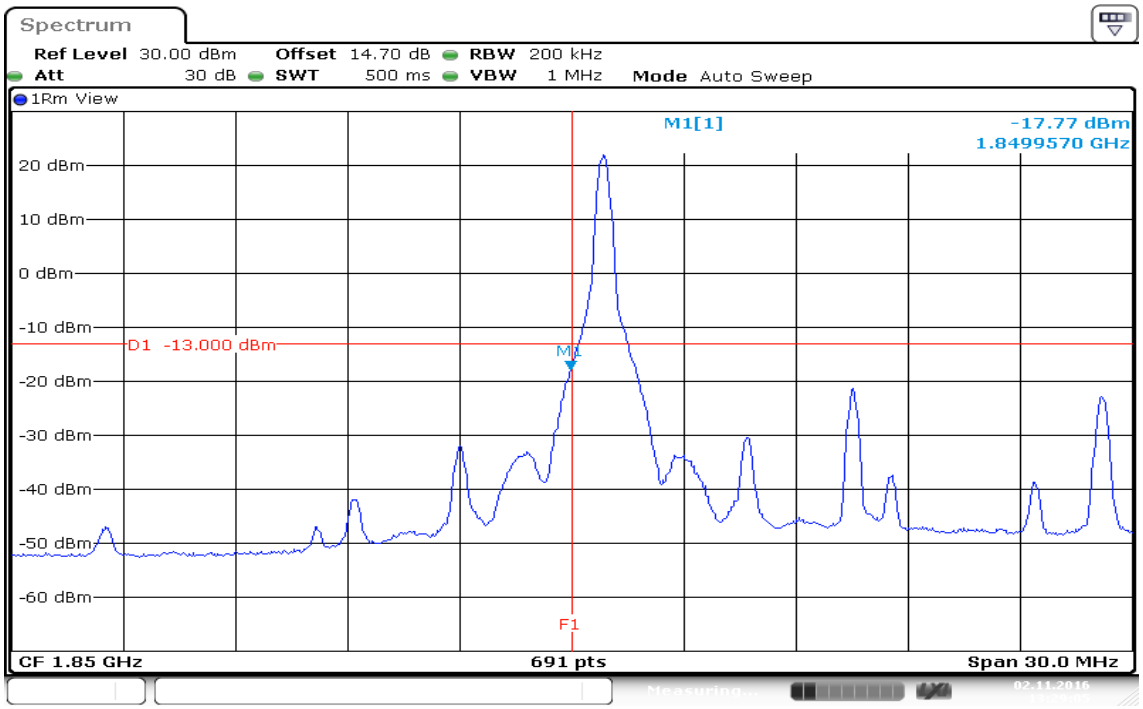
HIGHER BAND EDGE



Date: 27.OCT.2016 18:51:59

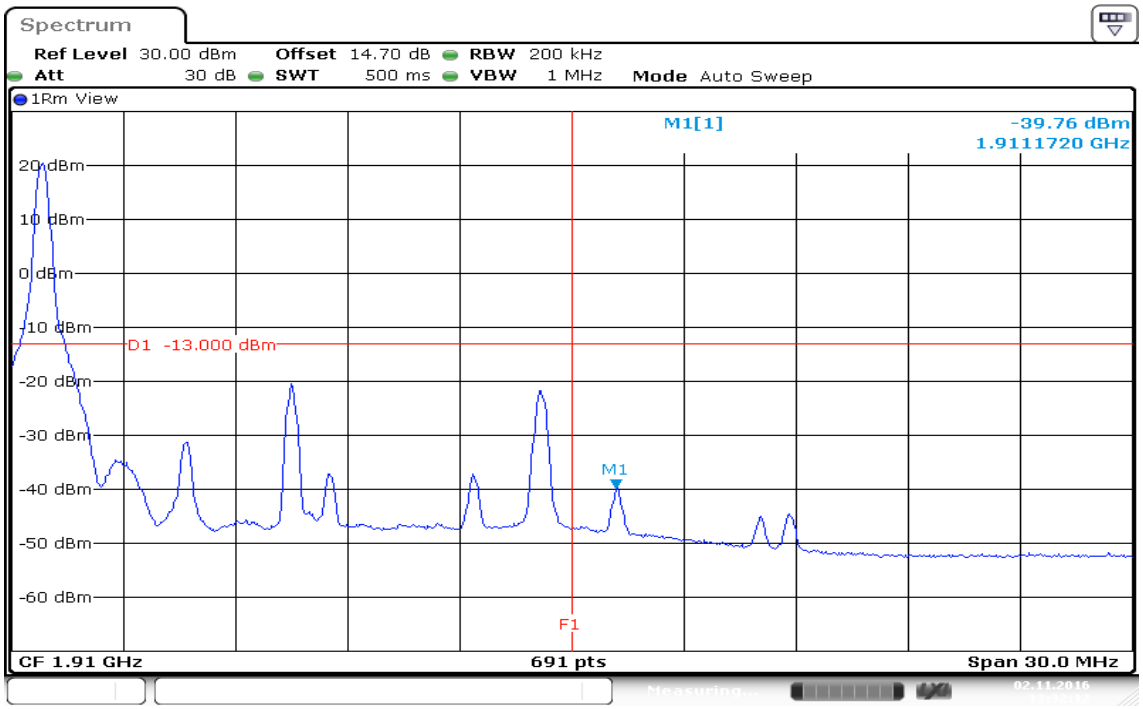
BW: 15MHz / QPSK / RB=1 RB Offset = 0

LOWER BAND EDGE



Date: 2.NOV.2016 13:29:05

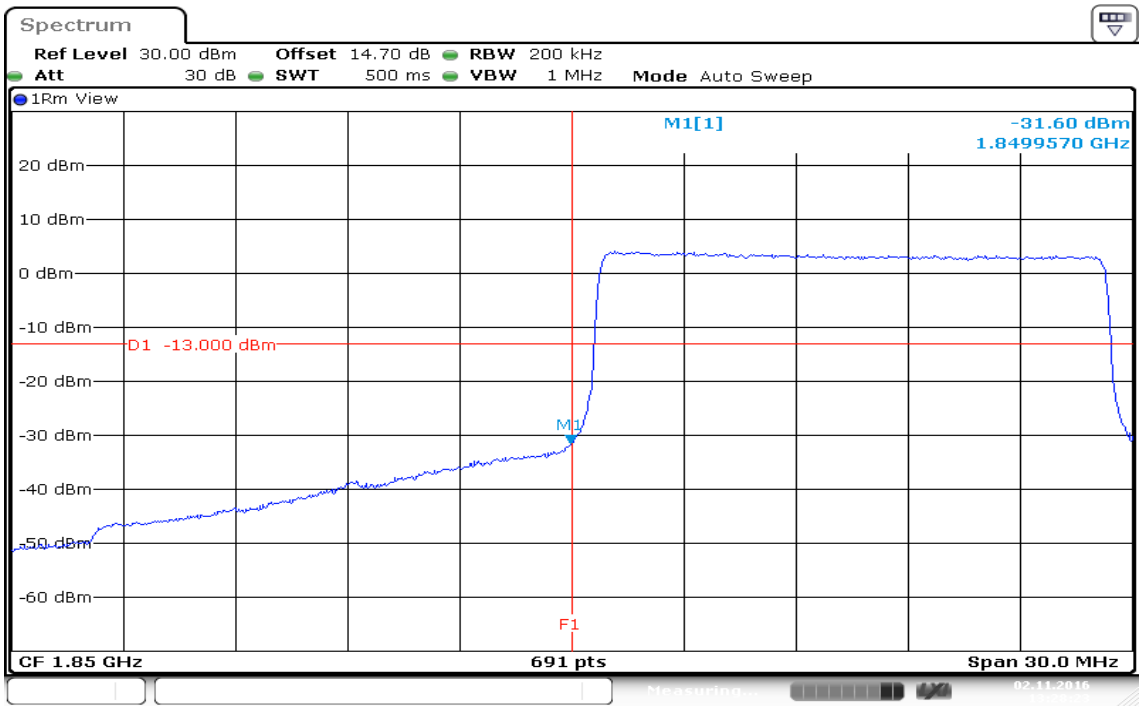
HIGHER BAND EDGE



Date: 2.NOV.2016 13:32:12

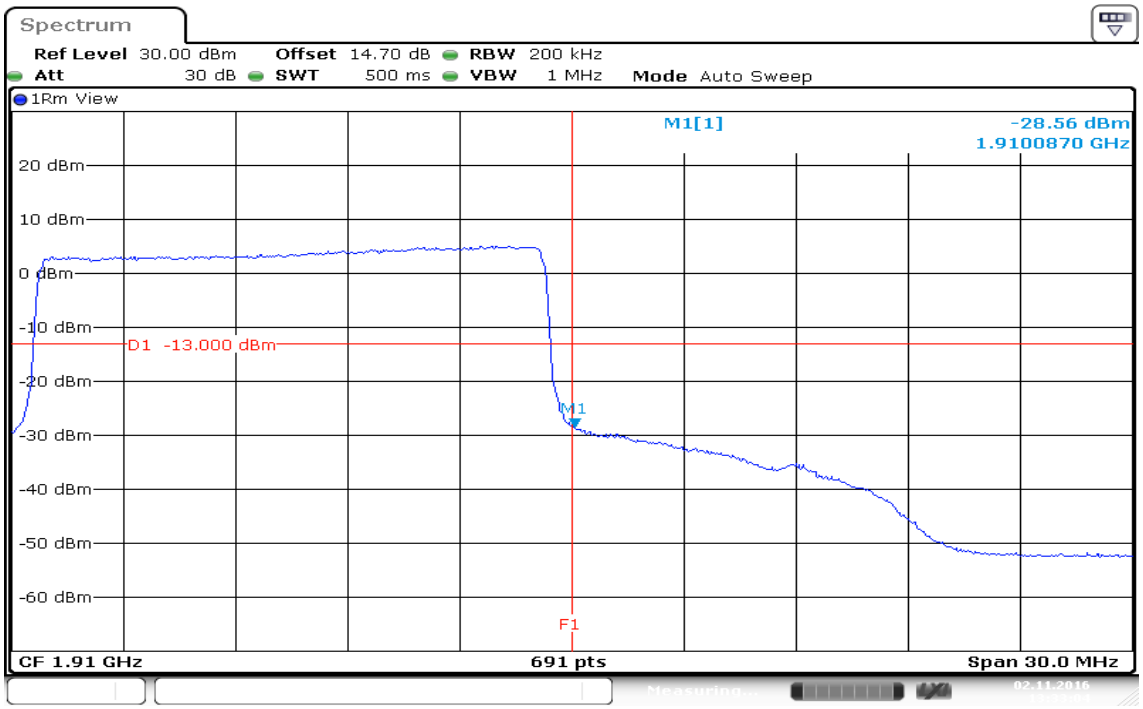
BW: 15MHz / QPSK / RB=75RB Offset = 0

LOWER BAND EDGE



Date: 2.NOV.2016 13:28:24

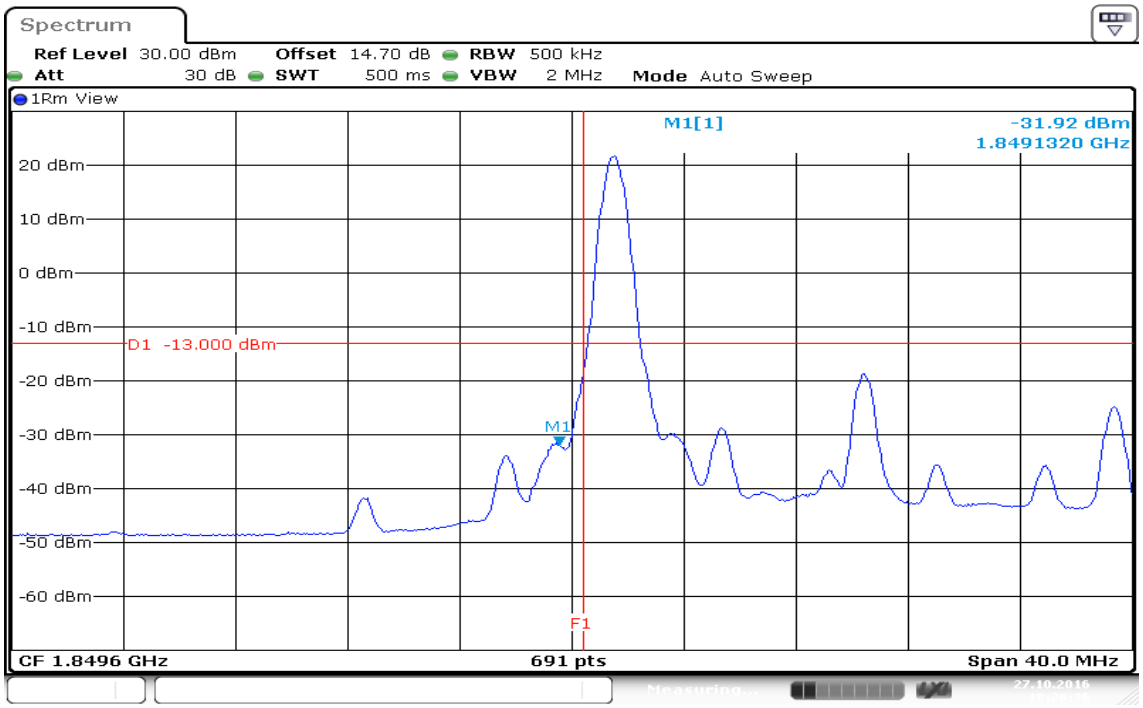
HIGHER BAND EDGE



Date: 2.NOV.2016 13:33:04

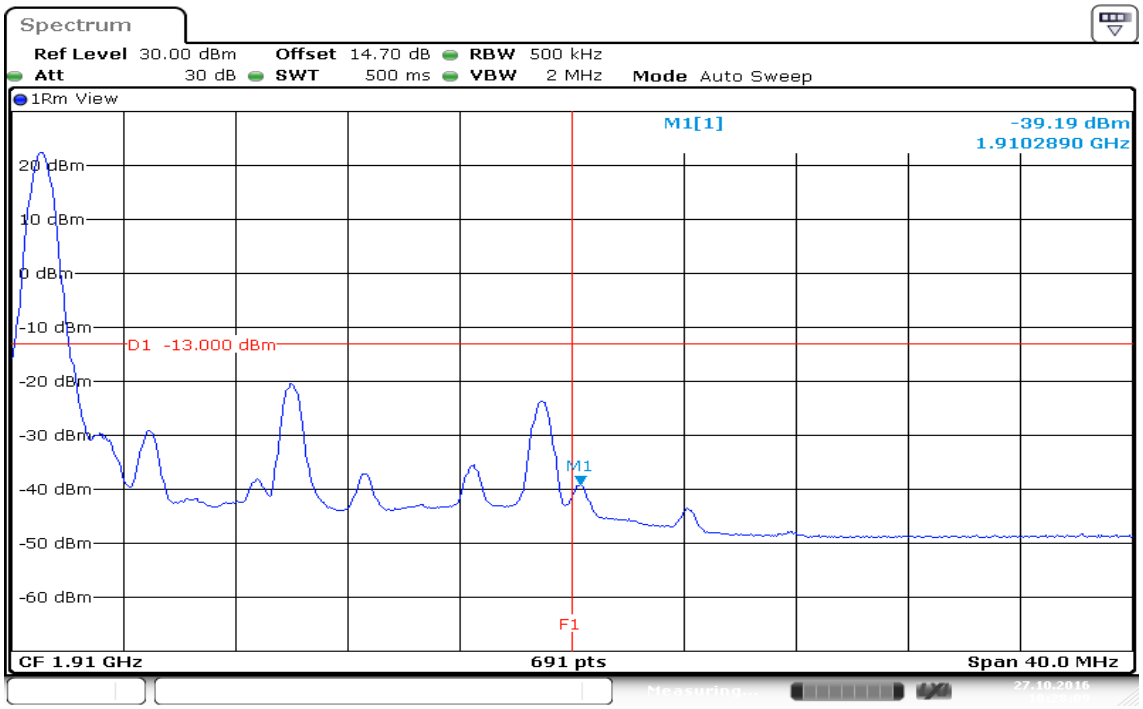
BW: 20MHz / QPSK / RB=1RB Offset = 0

LOWER BAND EDGE



Date: 27.OCT.2016 18:26:37

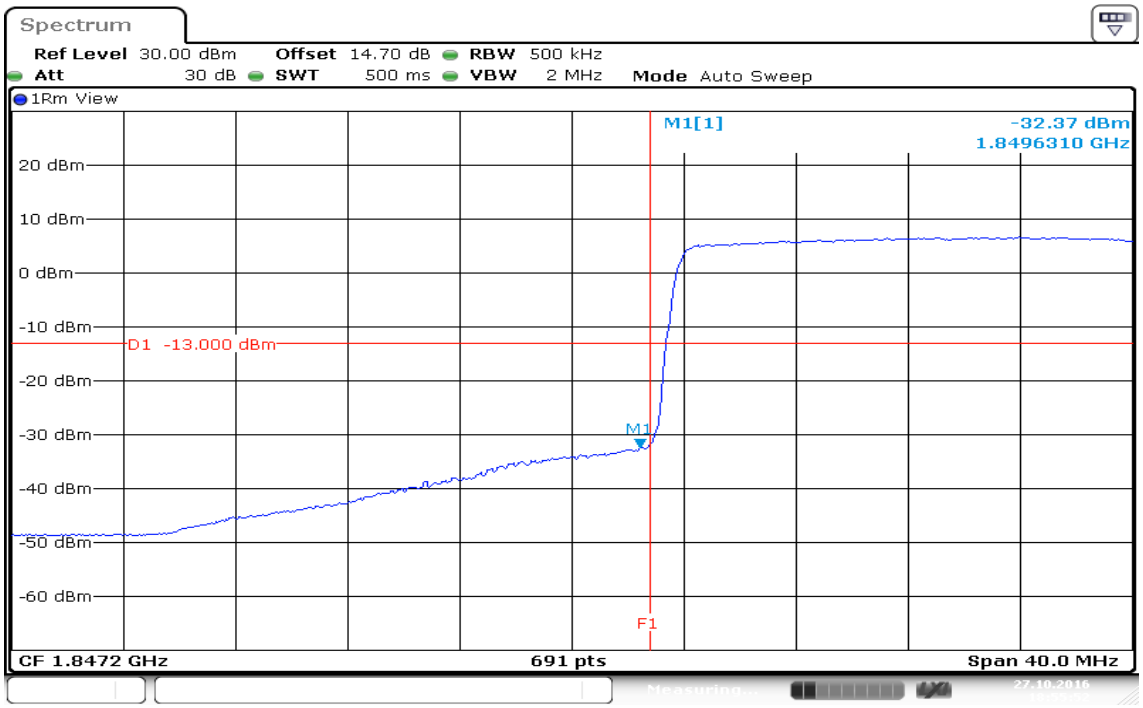
HIGHER BAND EDGE



Date: 27.OCT.2016 18:28:09

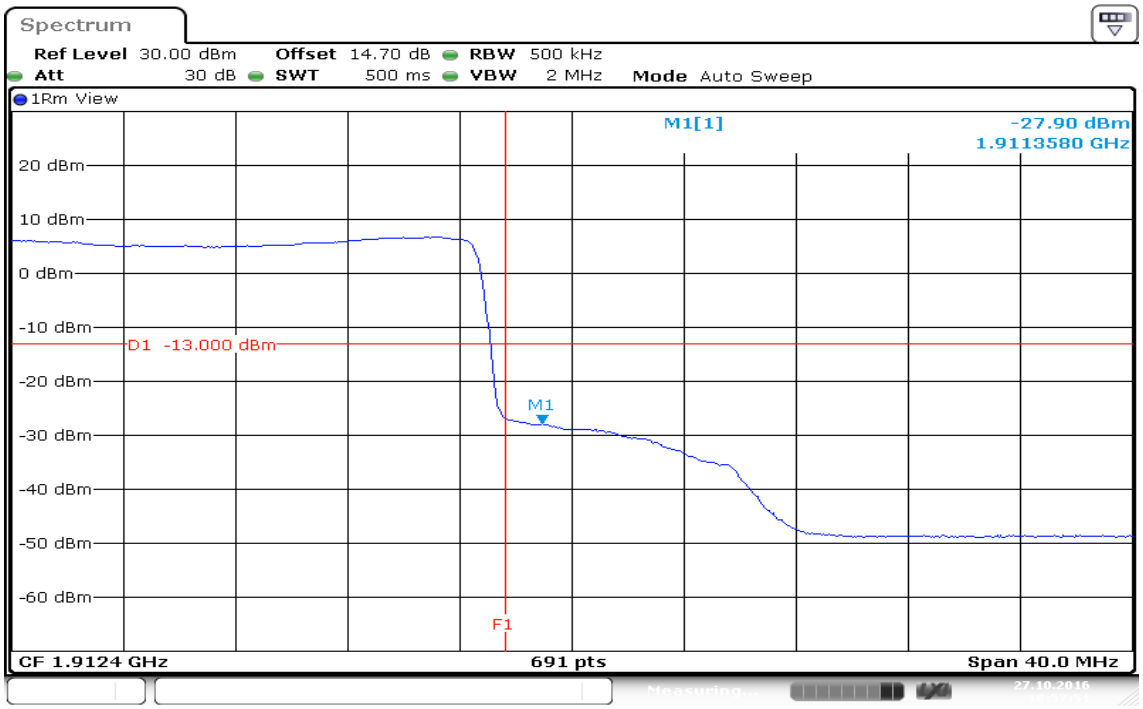
BW: 20MHz / QPSK / RB=100RB Offset = 0

LOWER BAND EDGE



Date: 27.OCT.2016 18:55:52

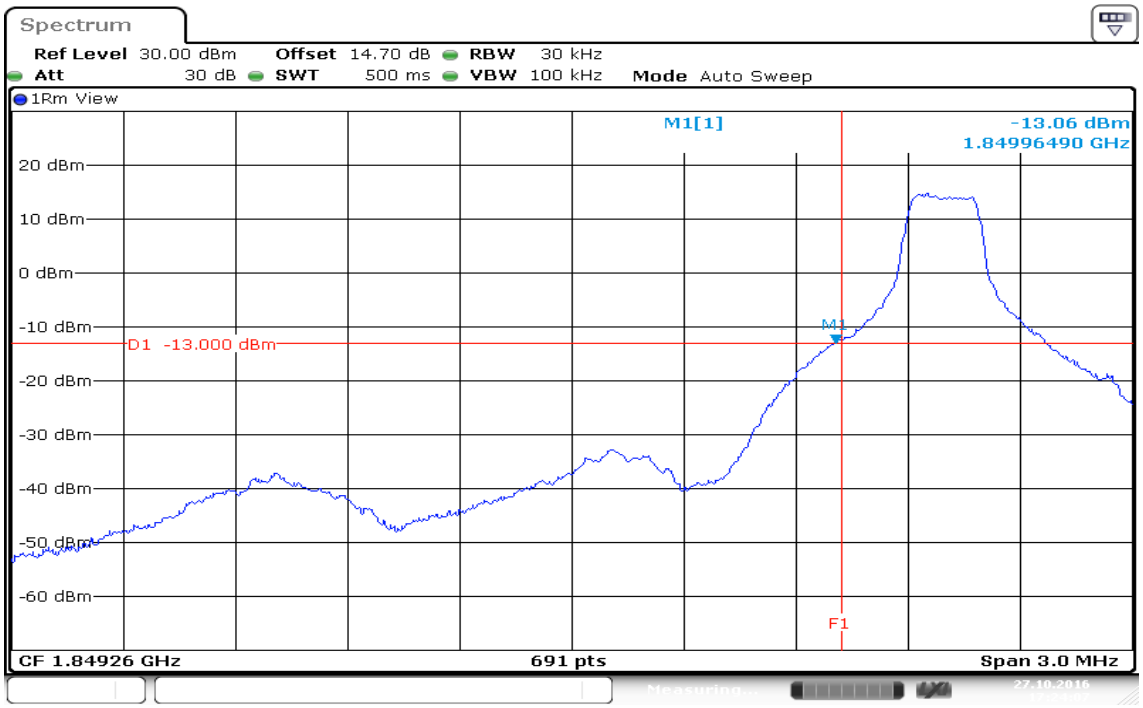
HIGHER BAND EDGE



Date: 27.OCT.2016 18:57:51

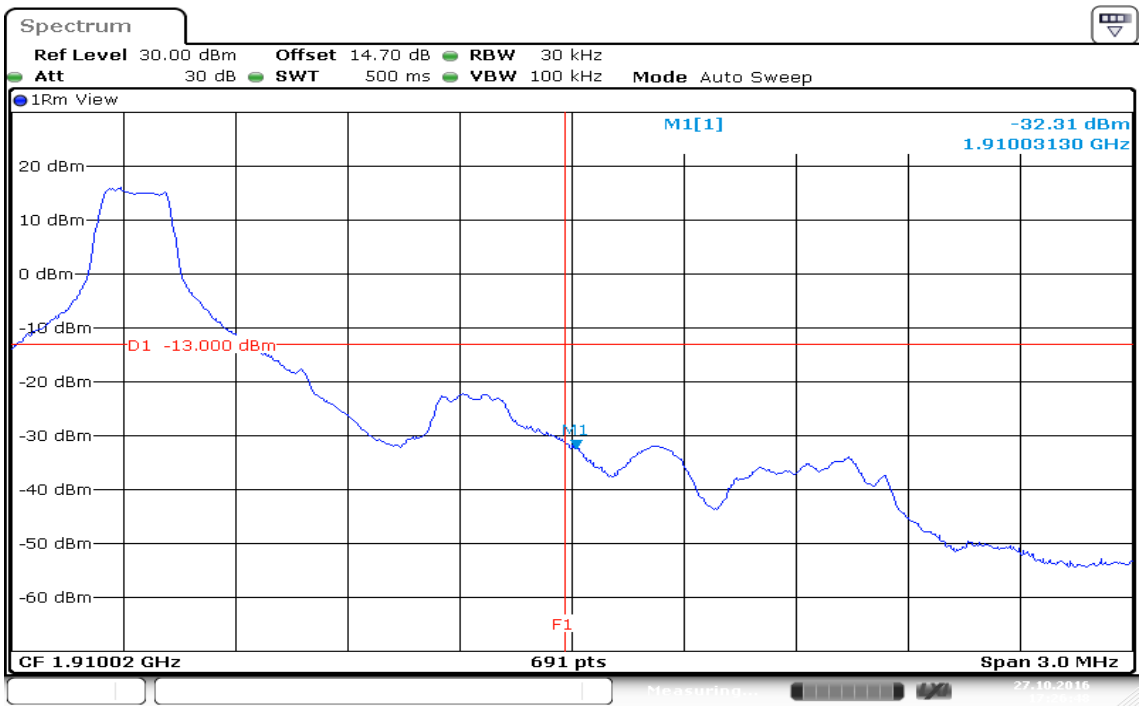
BW: 1.4MHz / 16QAM / RB= 1, RB Offset = 0

LOWER BAND EDGE



Date: 27.OCT.2016 17:24:07

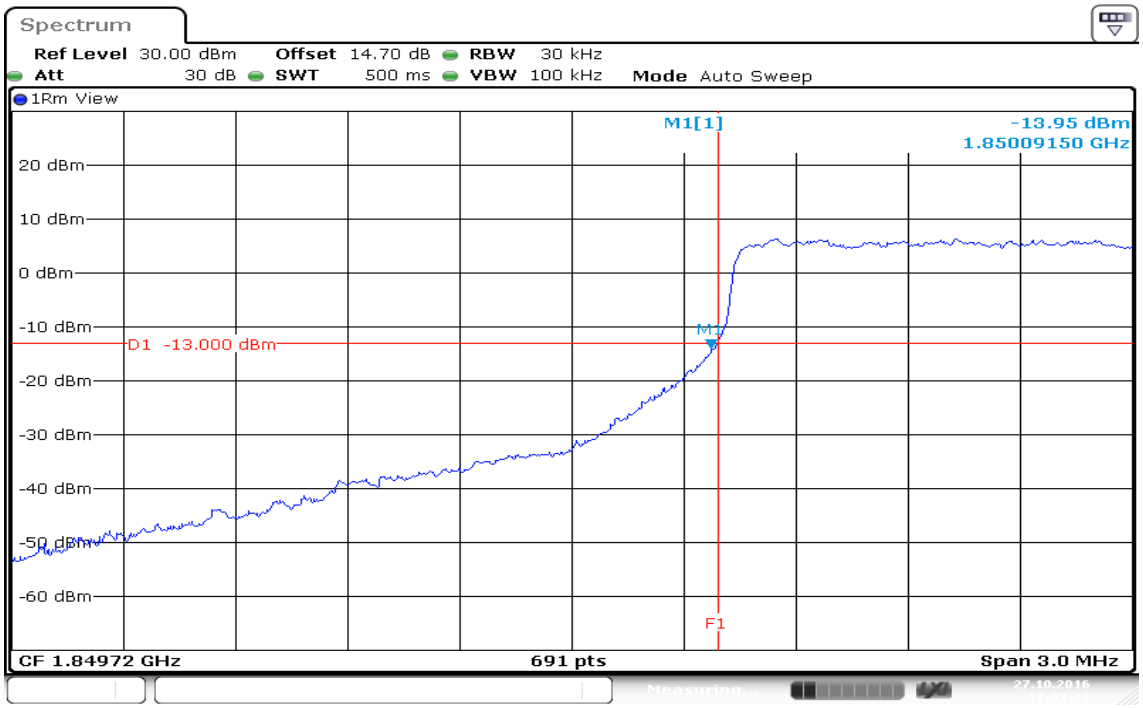
HIGHER BAND EDGE



Date: 27.OCT.2016 17:26:48

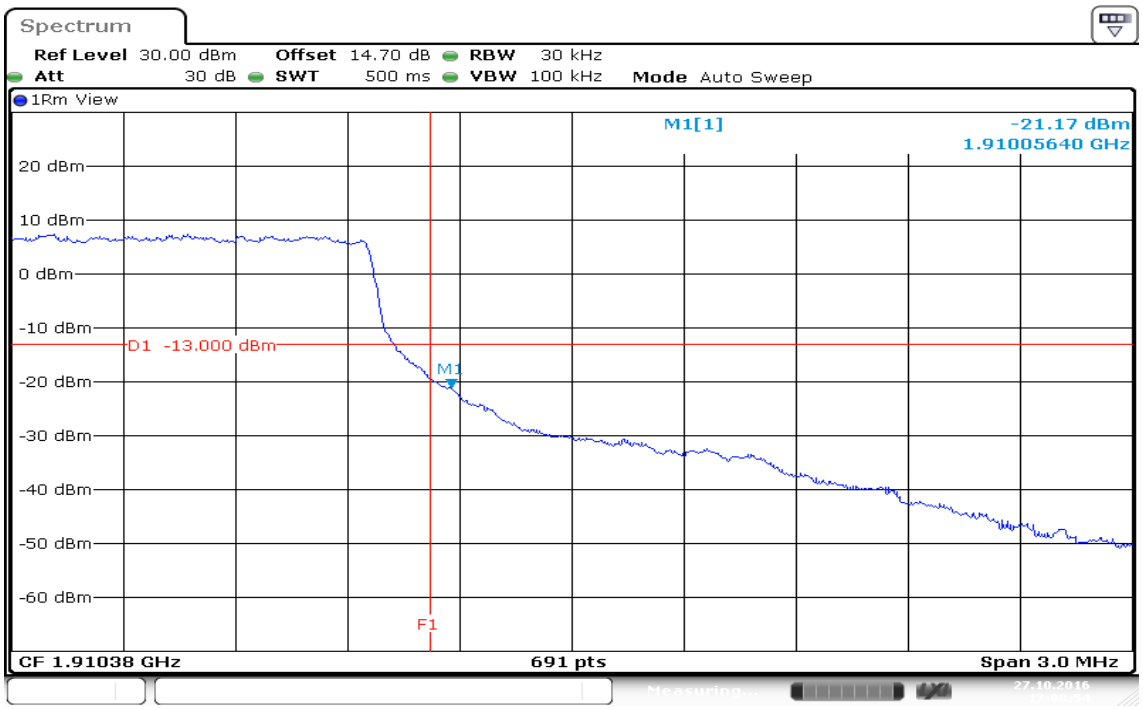
BW: 1.4MHz / 16QAM / RB= 6, RB Offset = 0

LOWER BAND EDGE



Date: 27.OCT.2016 17:07:21

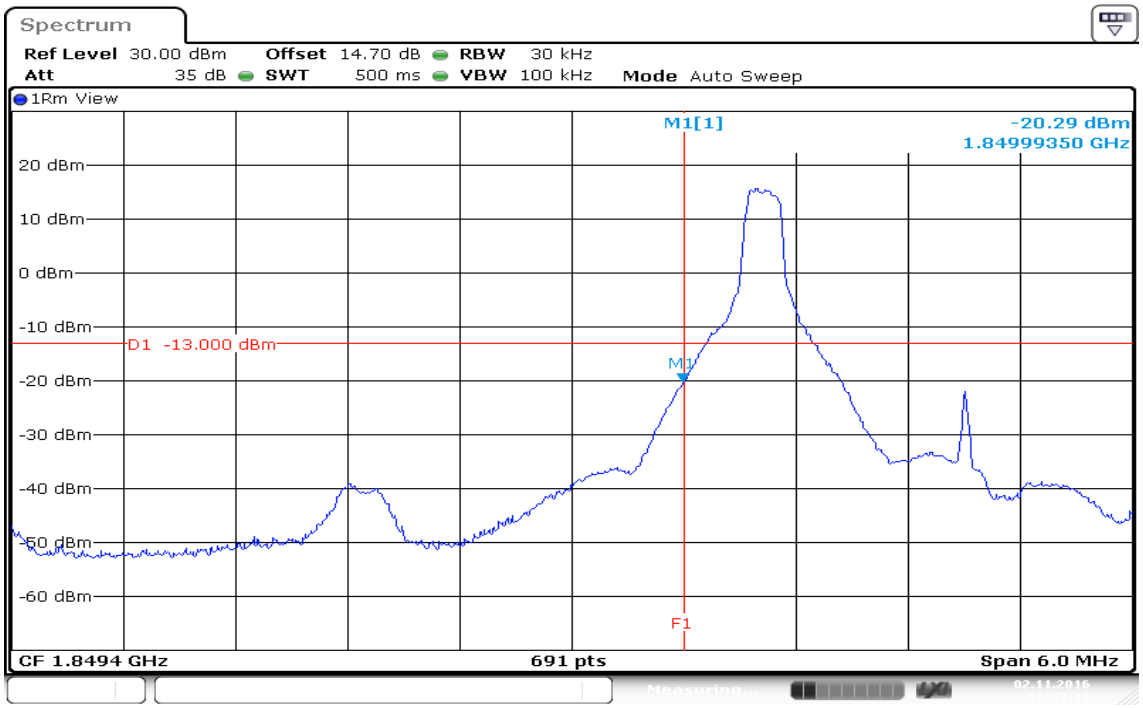
HIGHER BAND EDGE



Date: 27.OCT.2016 17:08:54

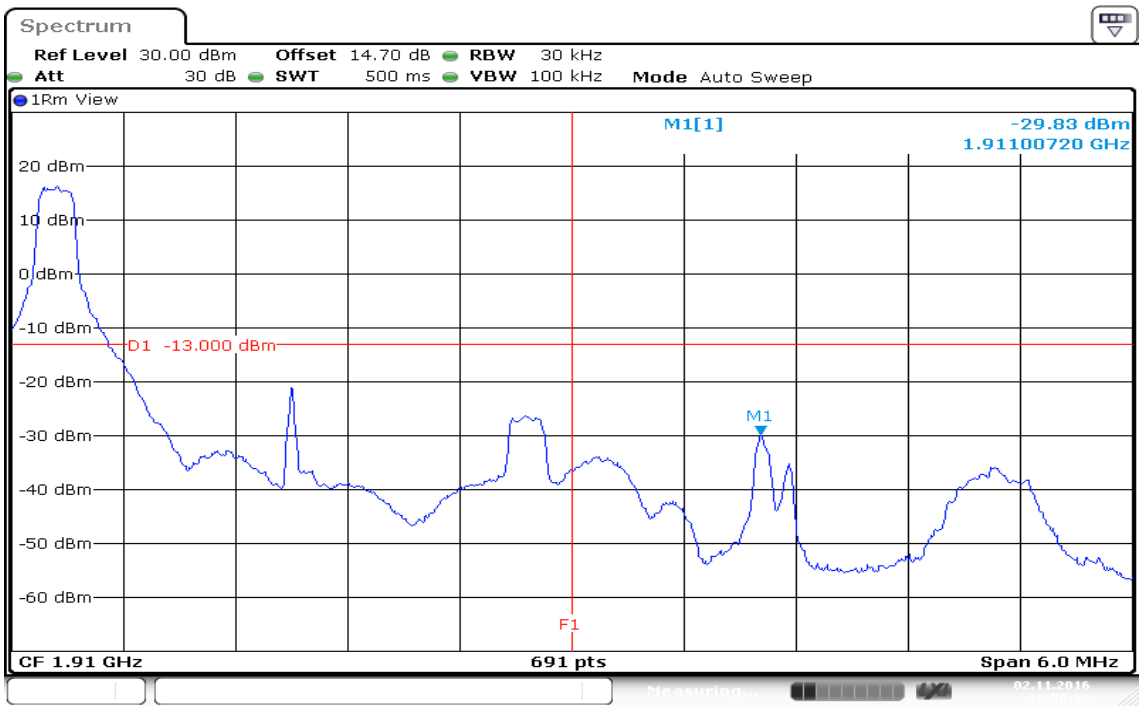
BW: 3MHz / 16QAM / RB= 1, RB Offset = 0

LOWER BAND EDGE



Date: 2.NOV.2016 12:47:11

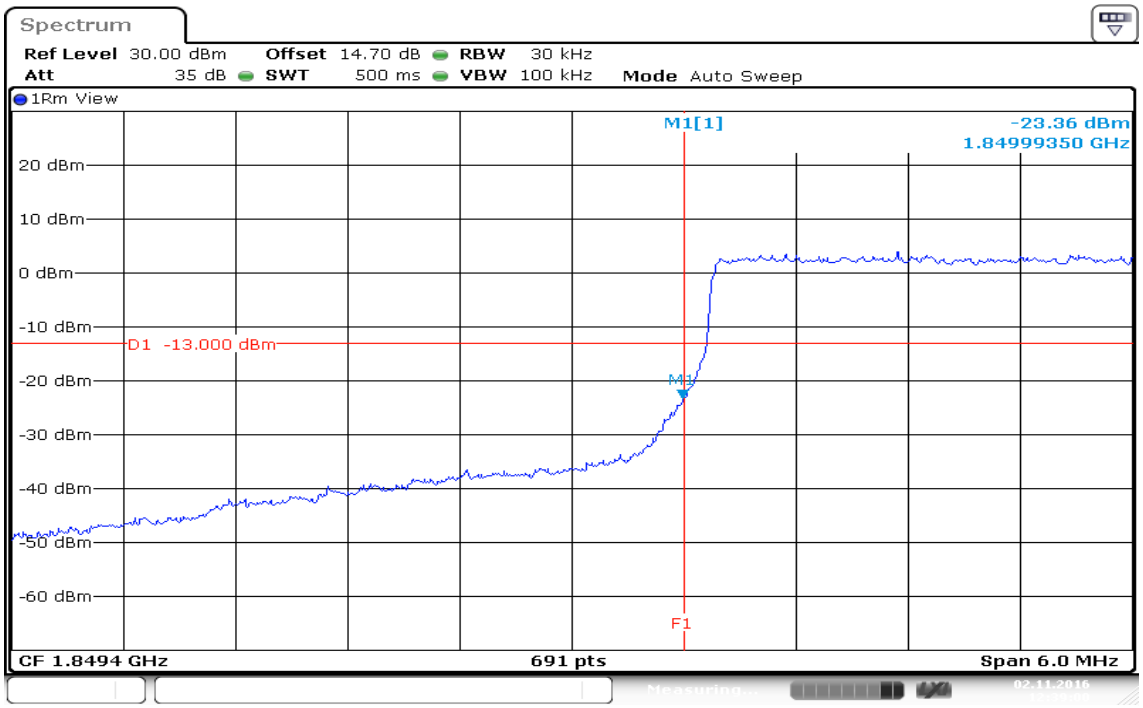
HIGHER BAND EDGE



Date: 2.NOV.2016 12:50:53

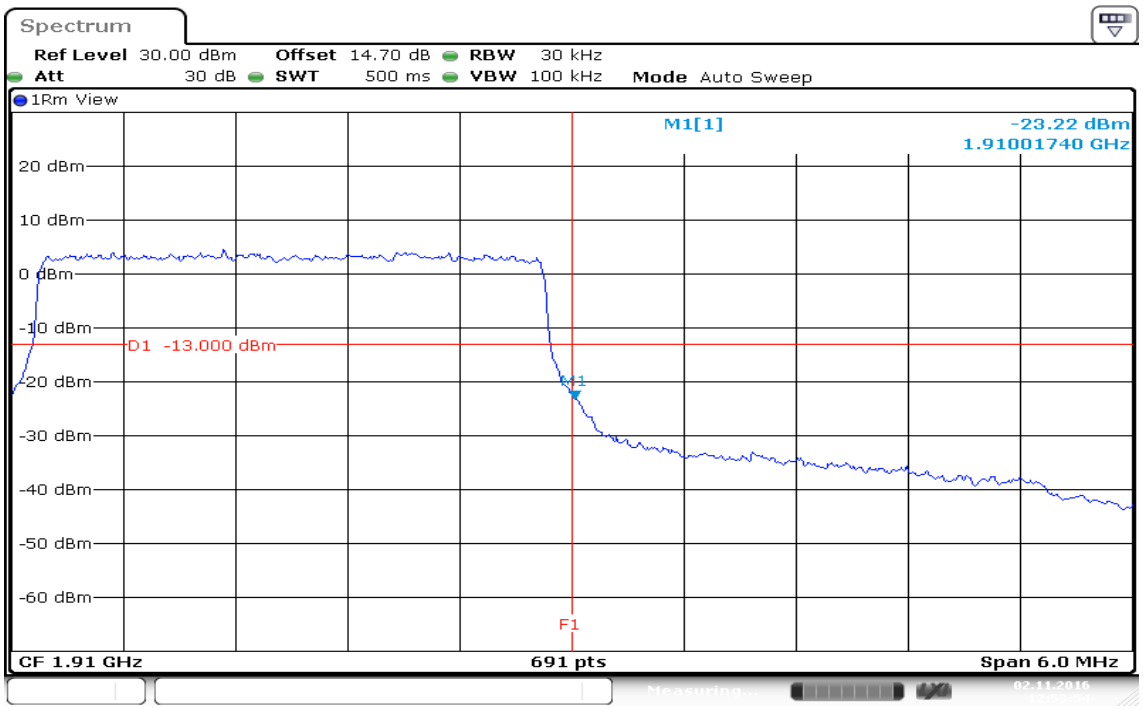
BW: 3MHz / 16QAM / RB= 15, RB Offset = 0

LOWER BAND EDGE



Date: 2.NOV.2016 12:39:01

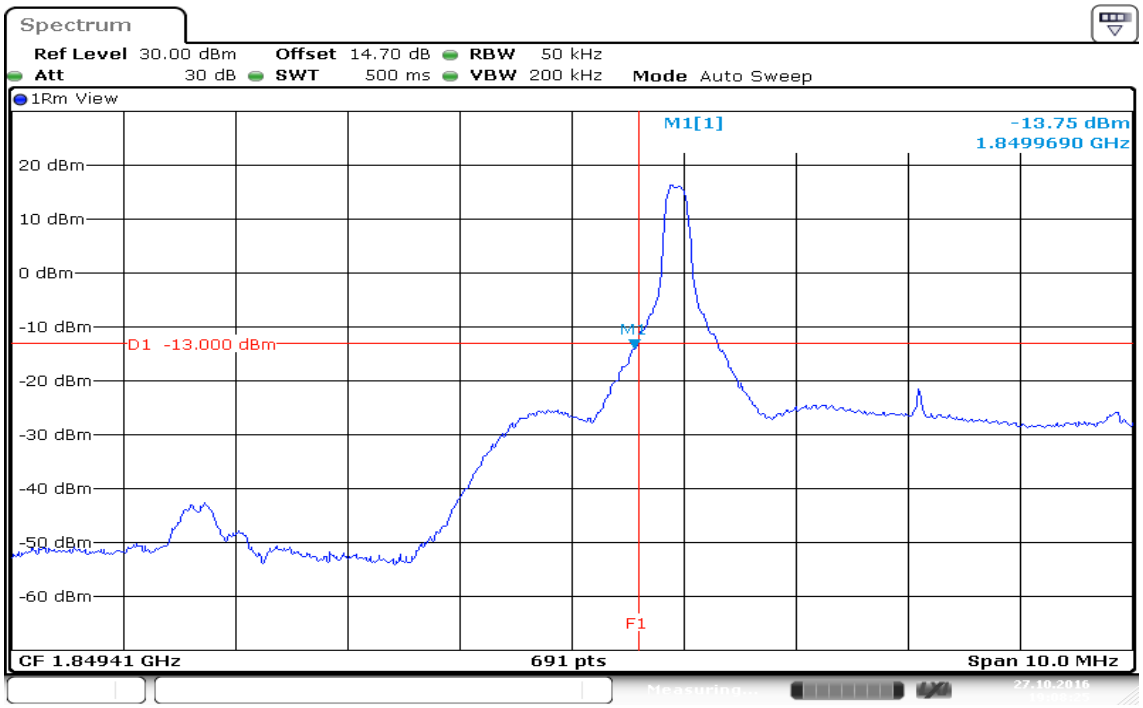
HIGHER BAND EDGE



Date: 2.NOV.2016 12:53:54

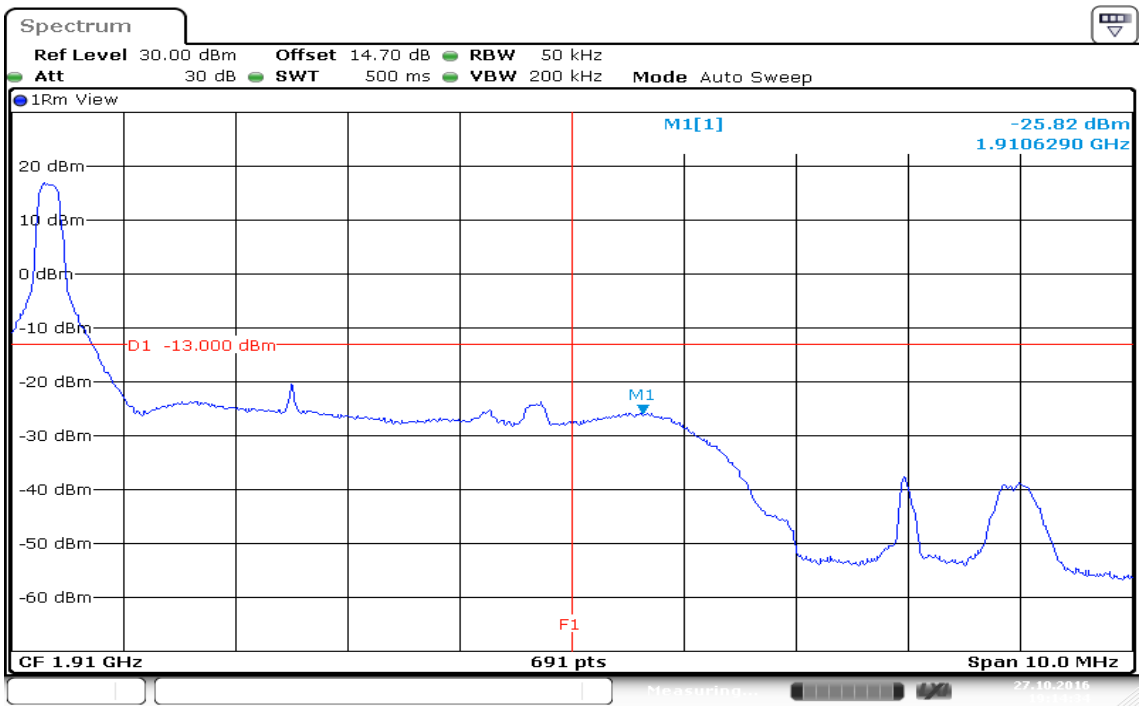
BW: 5MHz / 16QAM / RB= 1, RB Offset = 0

LOWER BAND EDGE



Date: 27.OCT.2016 19:08:26

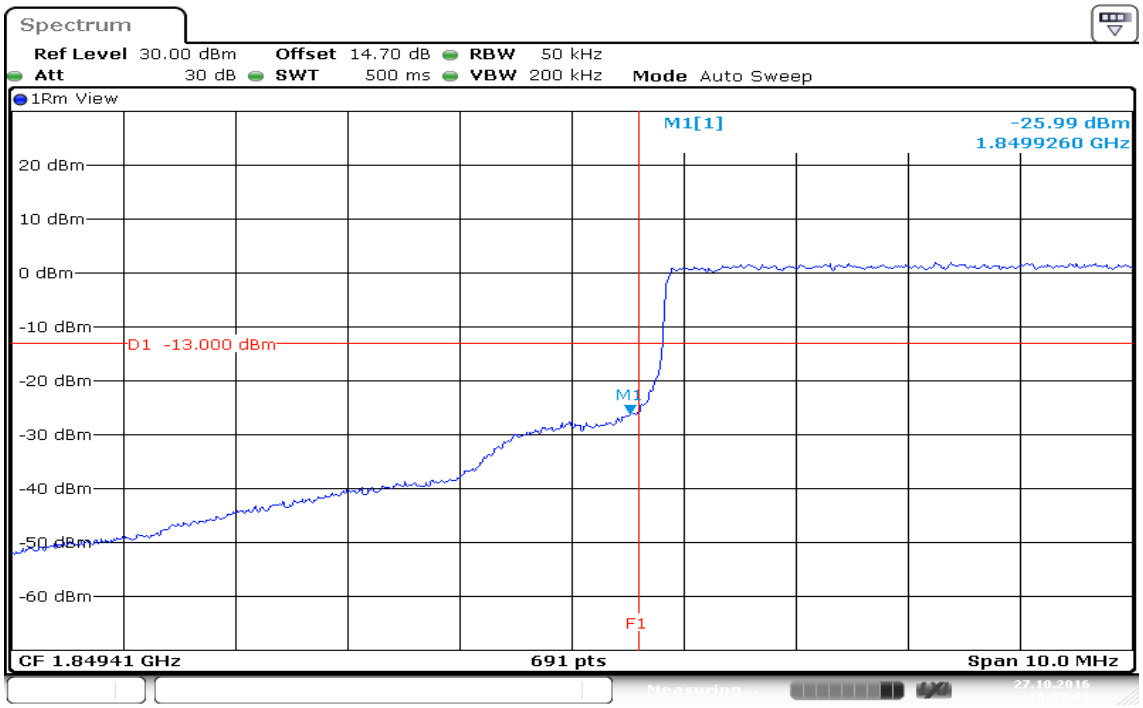
HIGHER BAND EDGE



Date: 27.OCT.2016 19:14:34

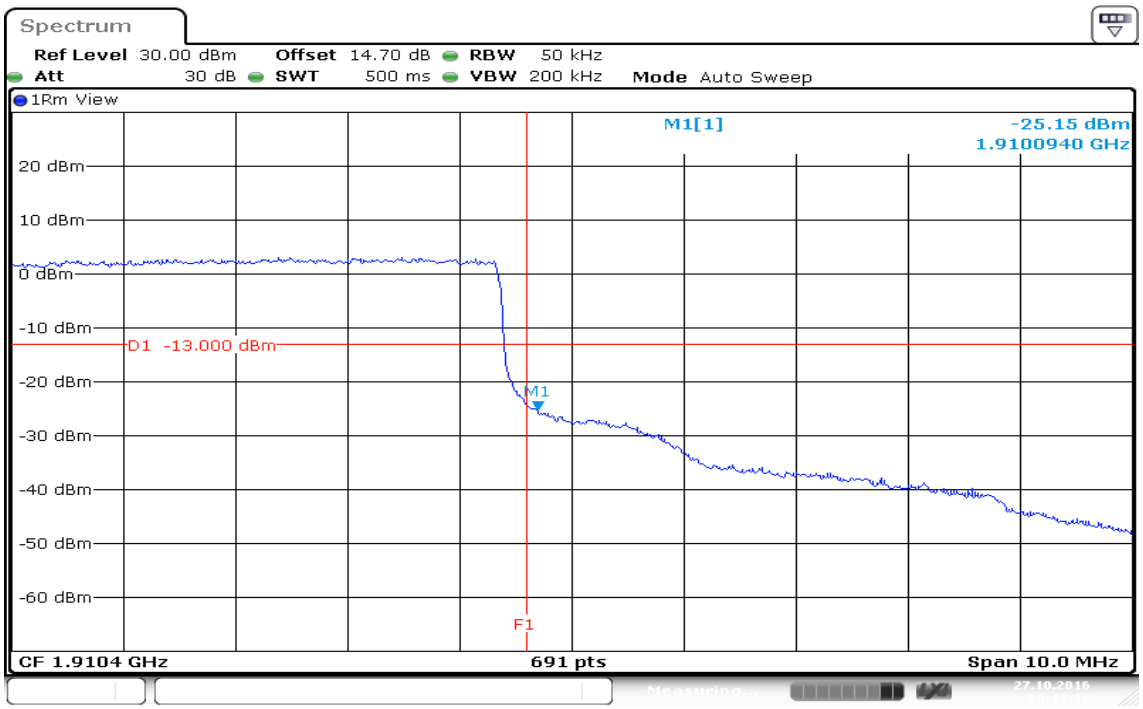
BW: 5MHz / 16QAM/ RB=25, RB Offset = 0

LOWER BAND EDGE



Date: 27.OCT.2016 19:07:01

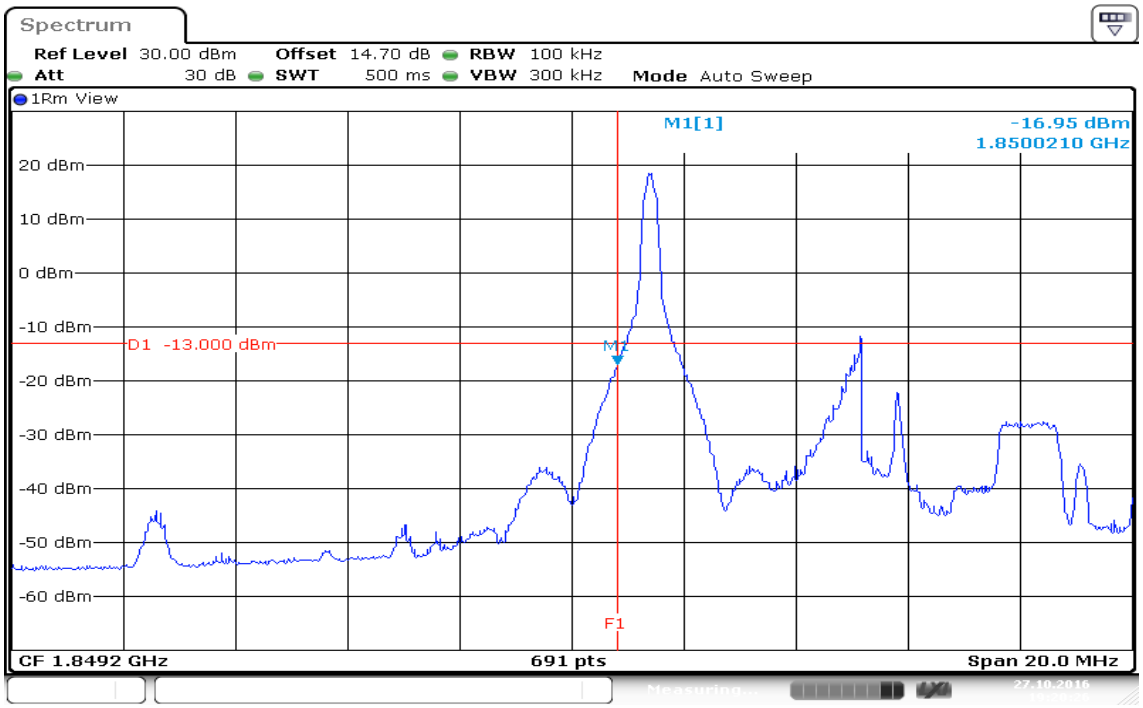
HIGHER BAND EDGE



Date: 27.OCT.2016 19:13:16

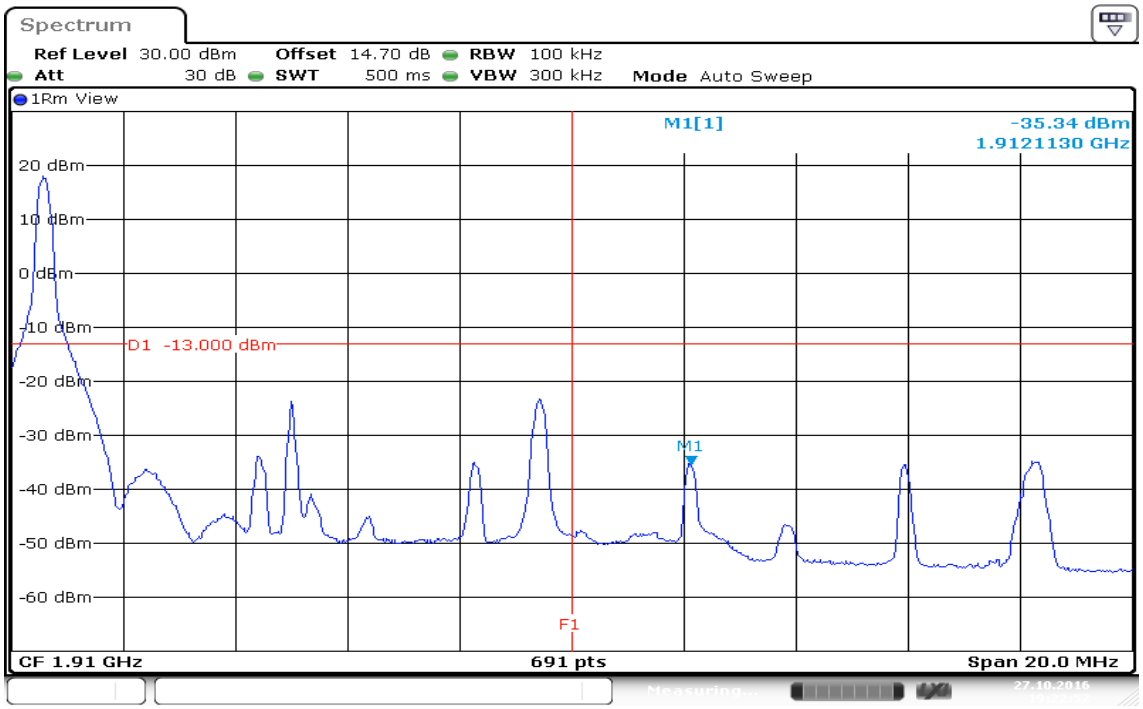
BW: 10MHz / 16QAM / RB=1 RB Offset = 0

LOWER BAND EDGE



Date: 27.OCT.2016 19:20:26

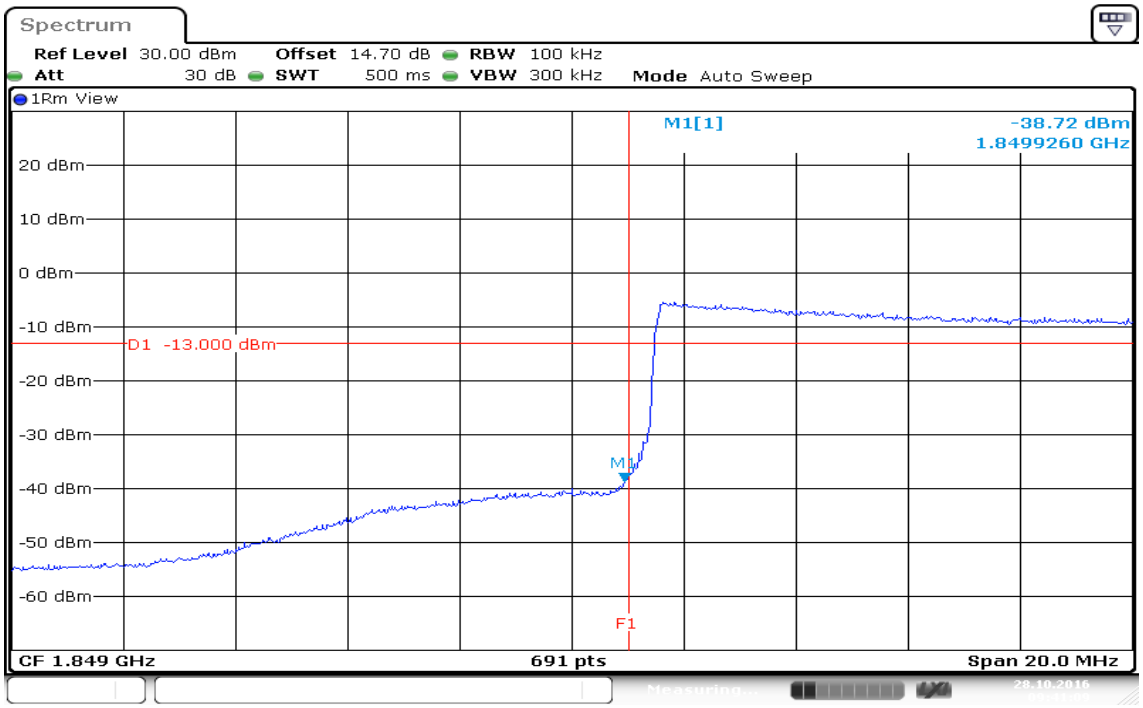
HIGHER BAND EDGE



Date: 27.OCT.2016 19:22:53

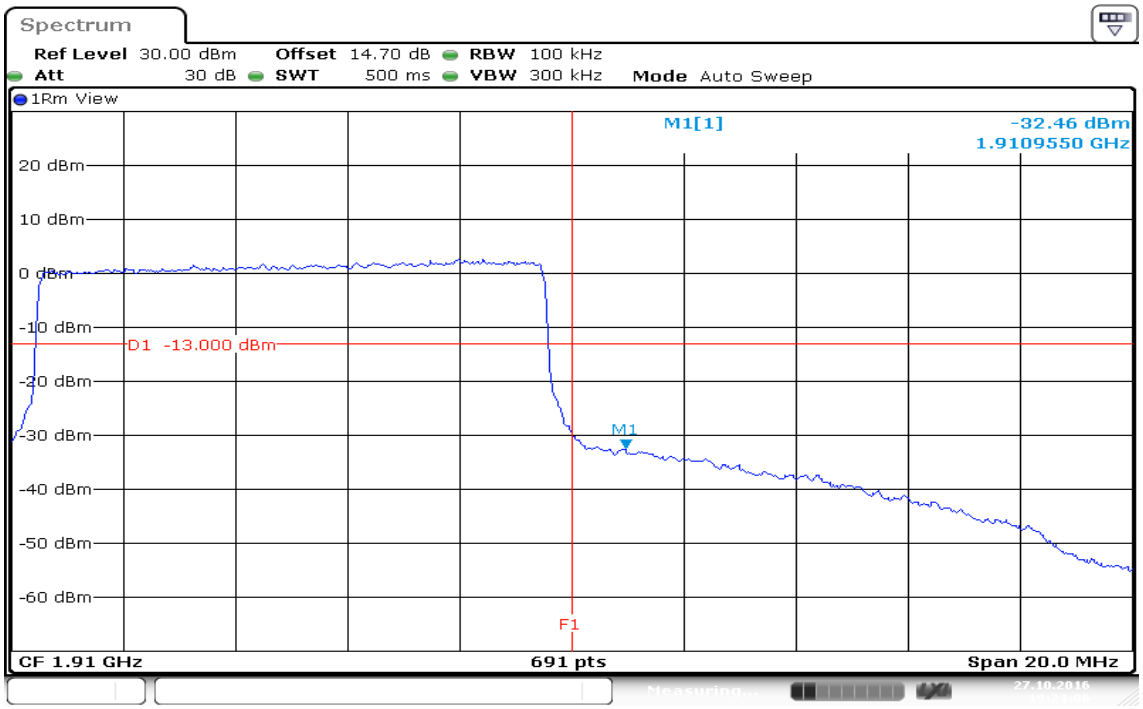
BW: 10MHz / 16QAM / RB=50RB Offset = 0

LOWER BAND EDGE



Date: 28.OCT.2016 09:41:09

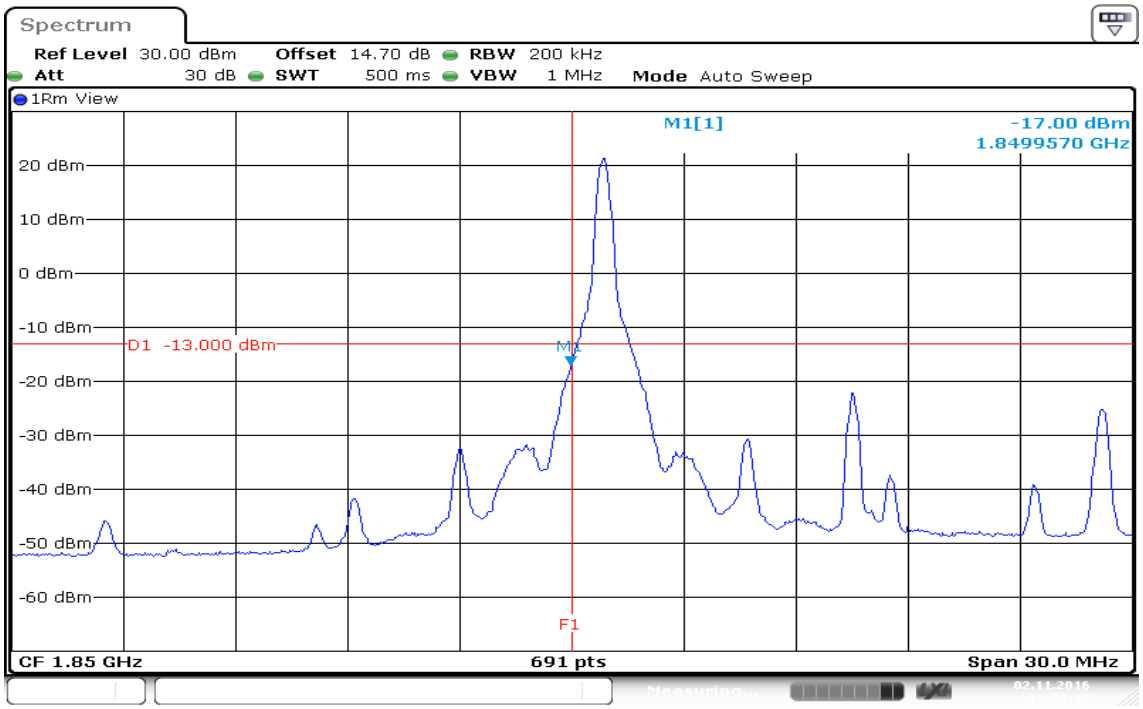
HIGHER BAND EDGE



Date: 27.OCT.2016 19:24:07

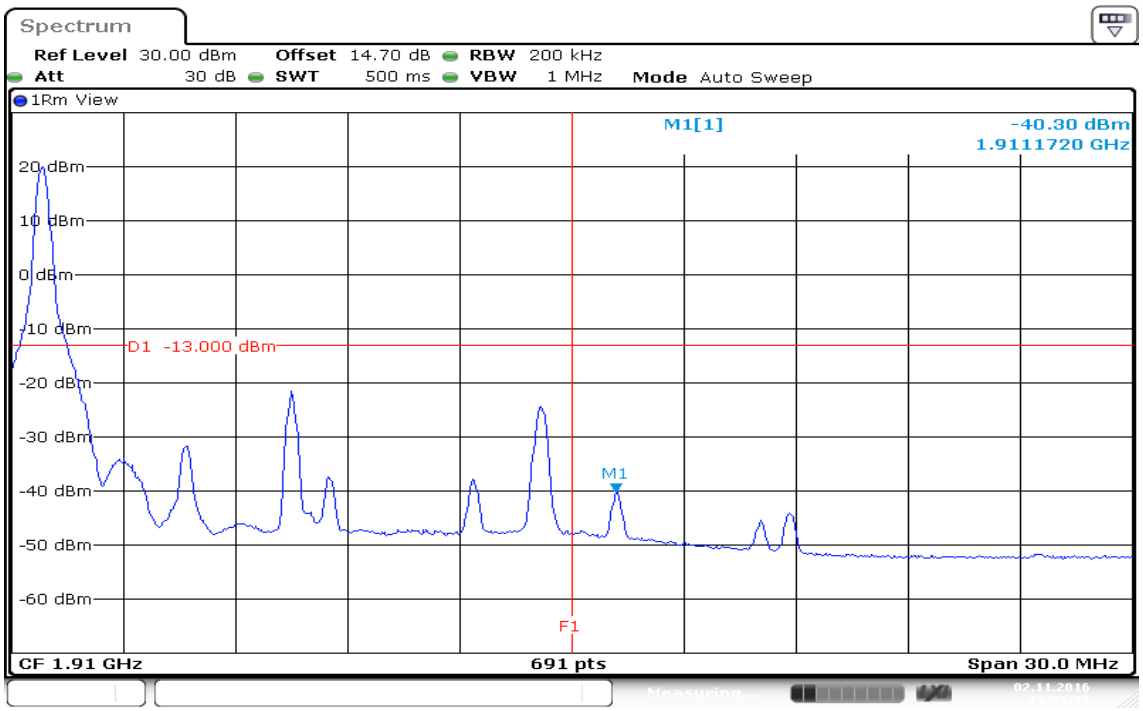
BW: 15MHz / 16QAM / RB=1 RB Offset = 0

LOWER BAND EDGE



Date: 2.NOV.2016 13:29:47

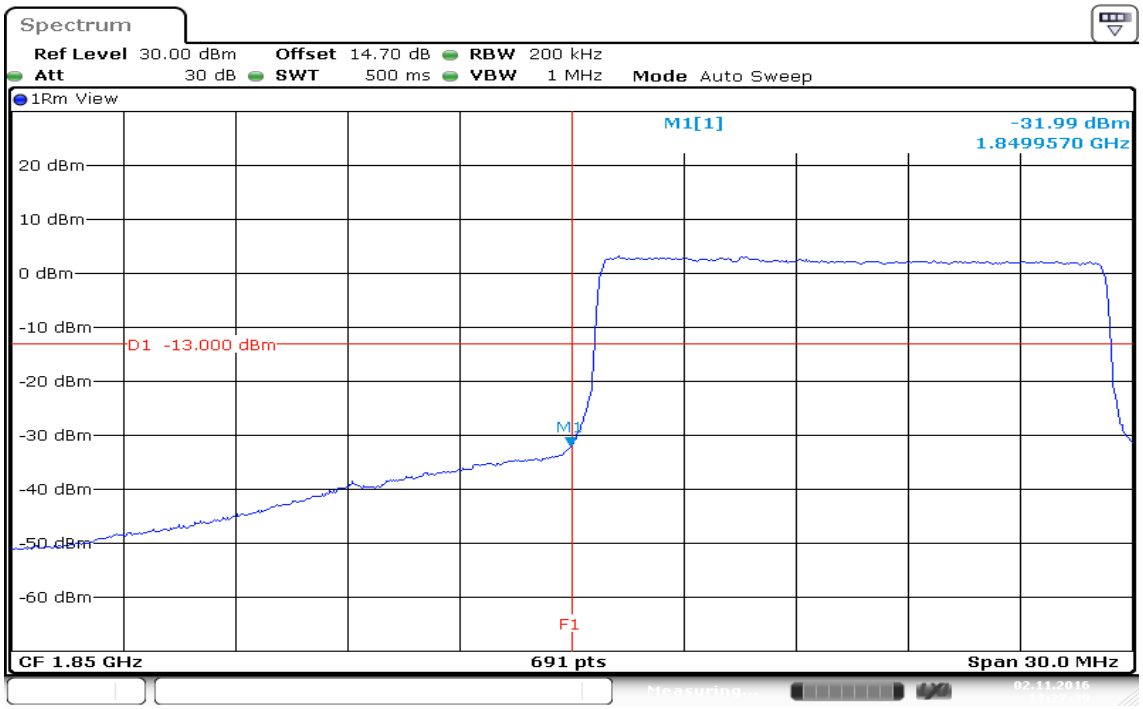
HIGHER BAND EDGE



Date: 2.NOV.2016 13:31:33

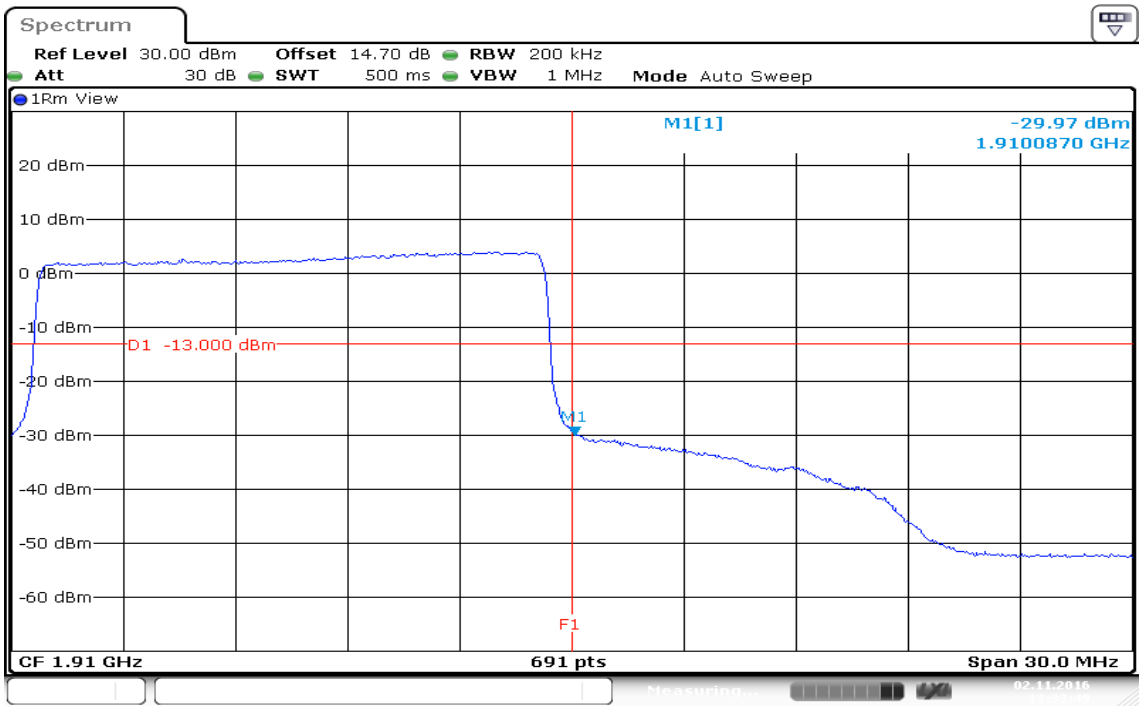
BW: 15MHz / 16QAM / RB=75RB Offset = 0

LOWER BAND EDGE



Date: 2.NOV.2016 13:27:40

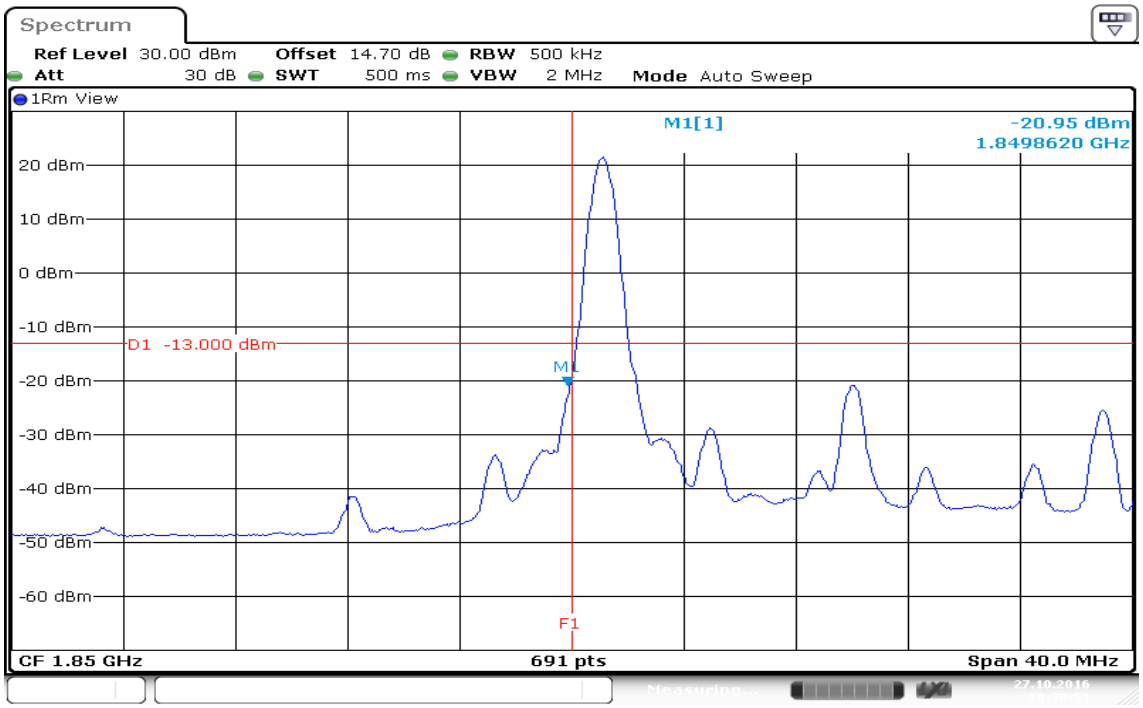
HIGHER BAND EDGE



Date: 2.NOV.2016 13:33:50

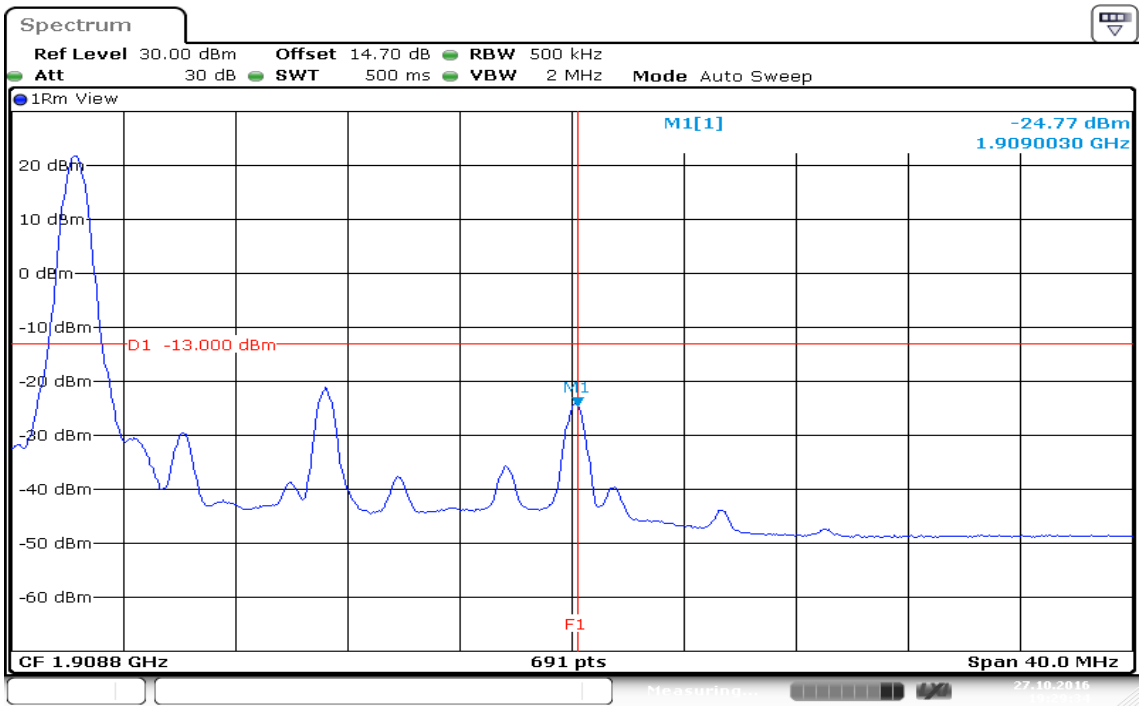
BW: 20MHz / 16QAM/ RB=1RB Offset = 0

LOWER BAND EDGE



Date: 27.OCT.2016 19:30:52

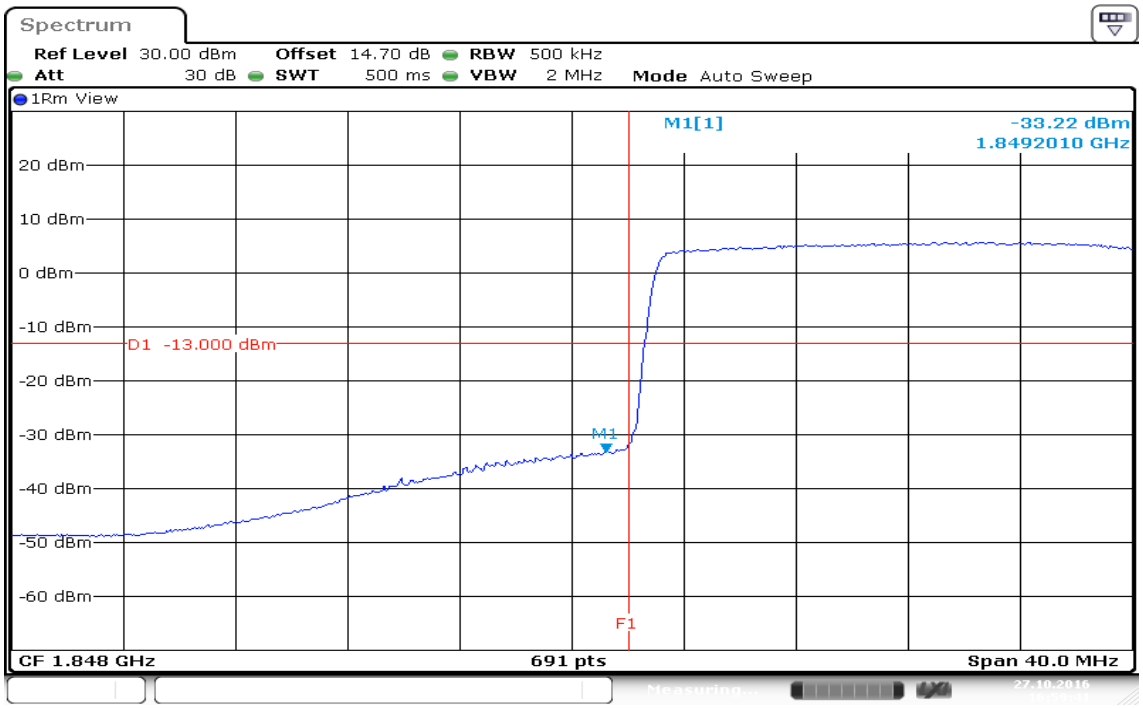
HIGHER BAND EDGE



Date: 27.OCT.2016 19:29:34

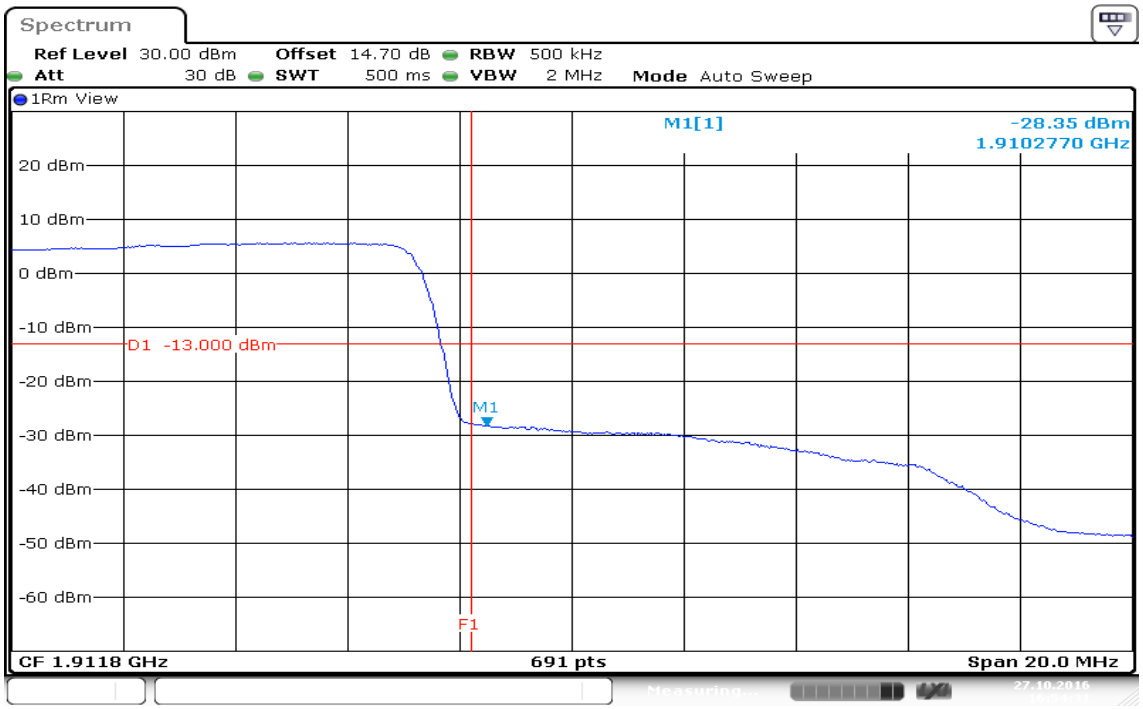
BW: 20MHz / 16QAM / RB=100RB Offset = 0

LOWER BAND EDGE



Date: 27.OCT.2016 16:59:41

HIGHER BAND EDGE

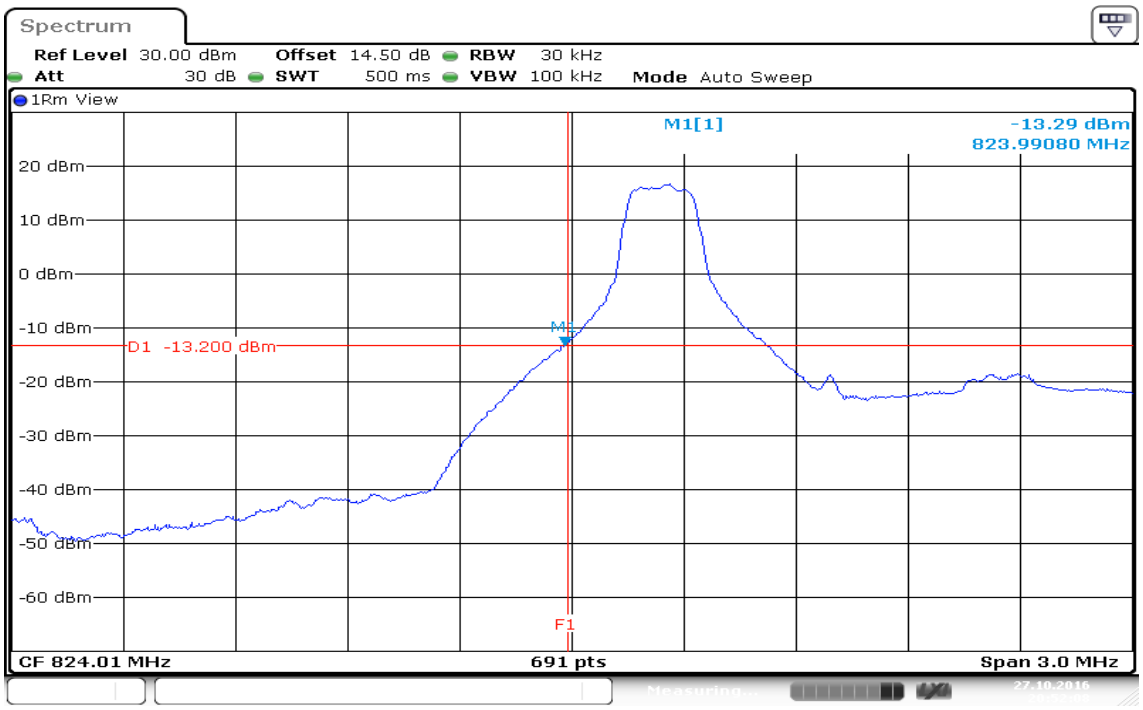


Date: 27.OCT.2016 16:54:31

LTE Band 5

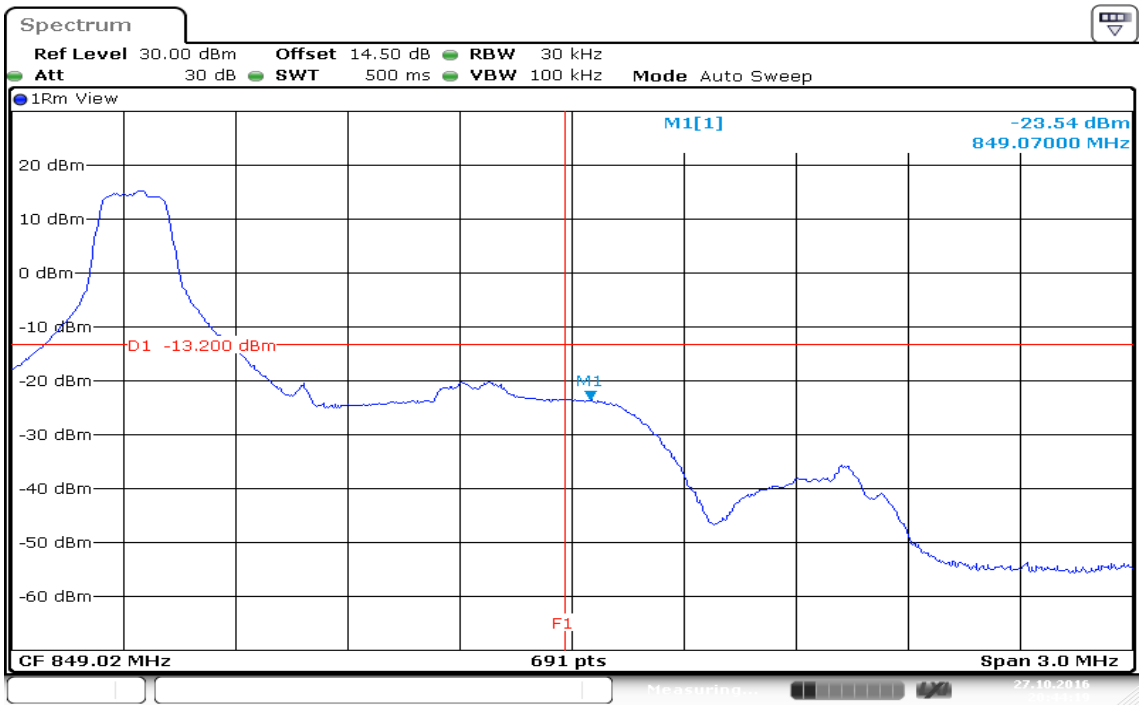
BW: 1.4MHz / QPSK / RB= 1, RB Offset = 0

LOWER BAND EDGE



Date: 27.OCT.2016 20:52:08

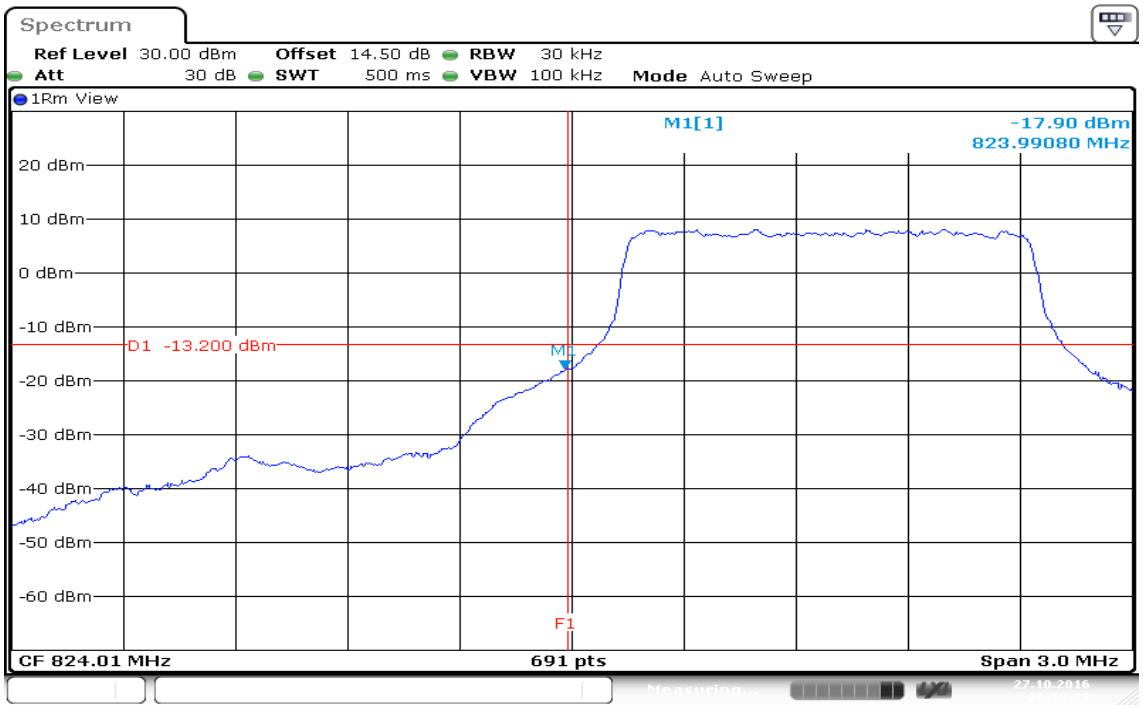
HIGHER BAND EDGE



Date: 27.OCT.2016 20:44:19

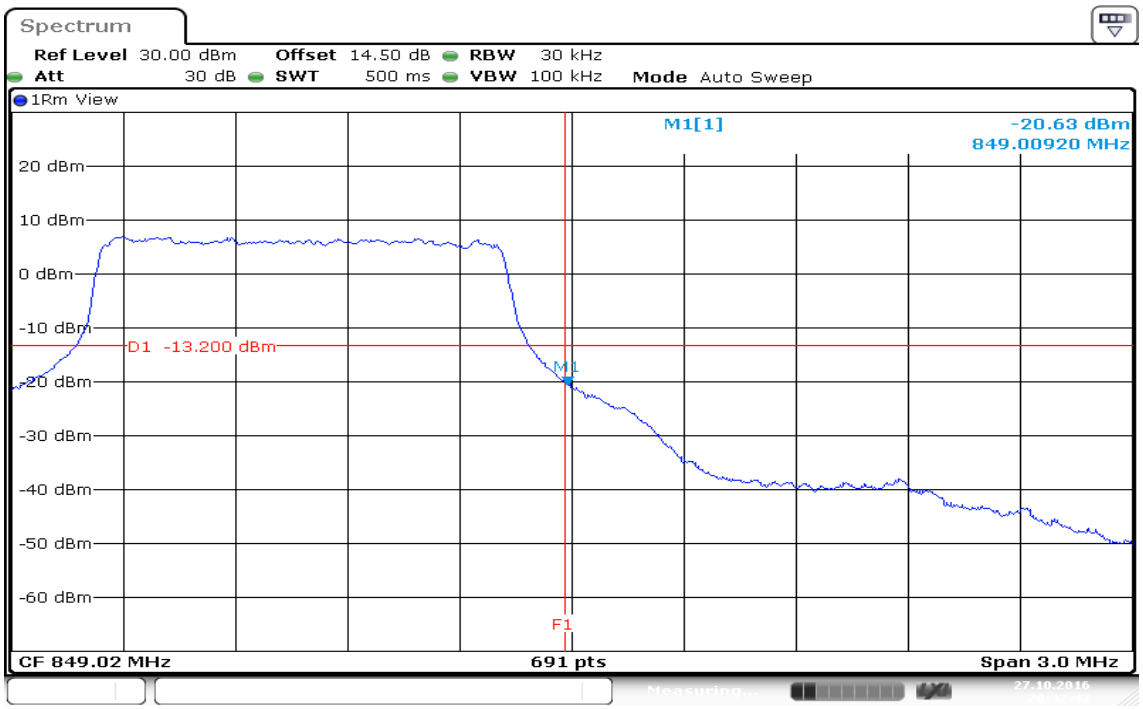
BW:1.4MHz / QPSK / RB= 6, RB Offset = 0

LOWER BAND EDGE



Date: 27.OCT.2016 20:50:23

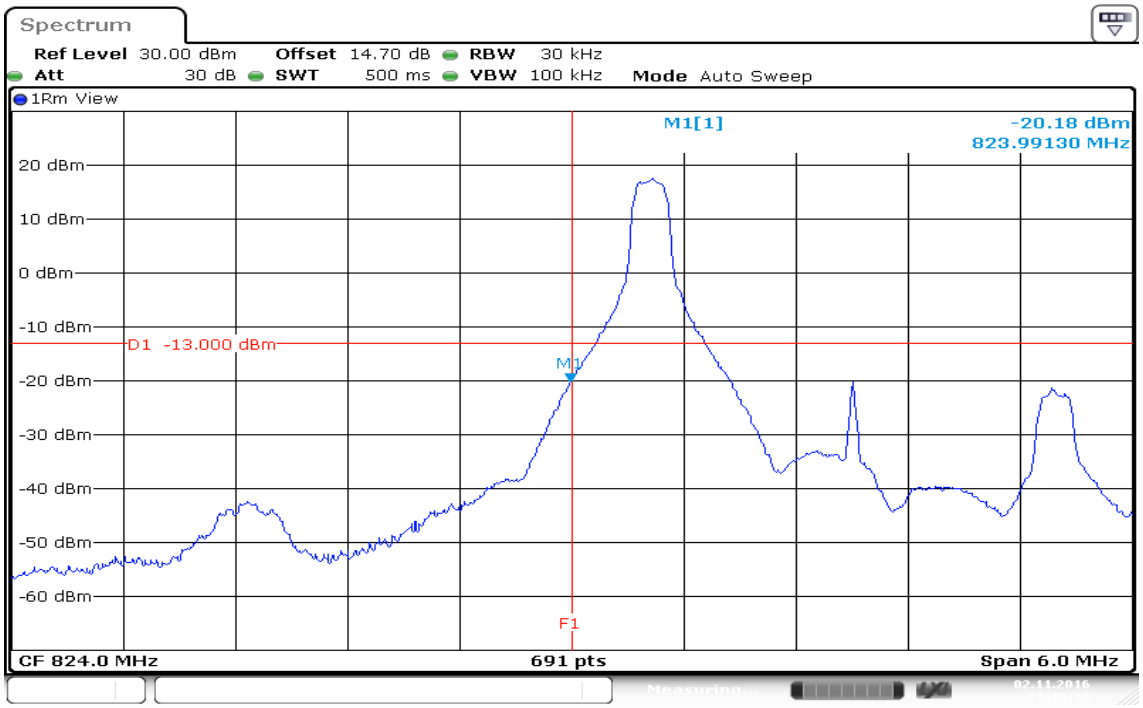
HIGHER BAND EDGE



Date: 27.OCT.2016 20:42:44

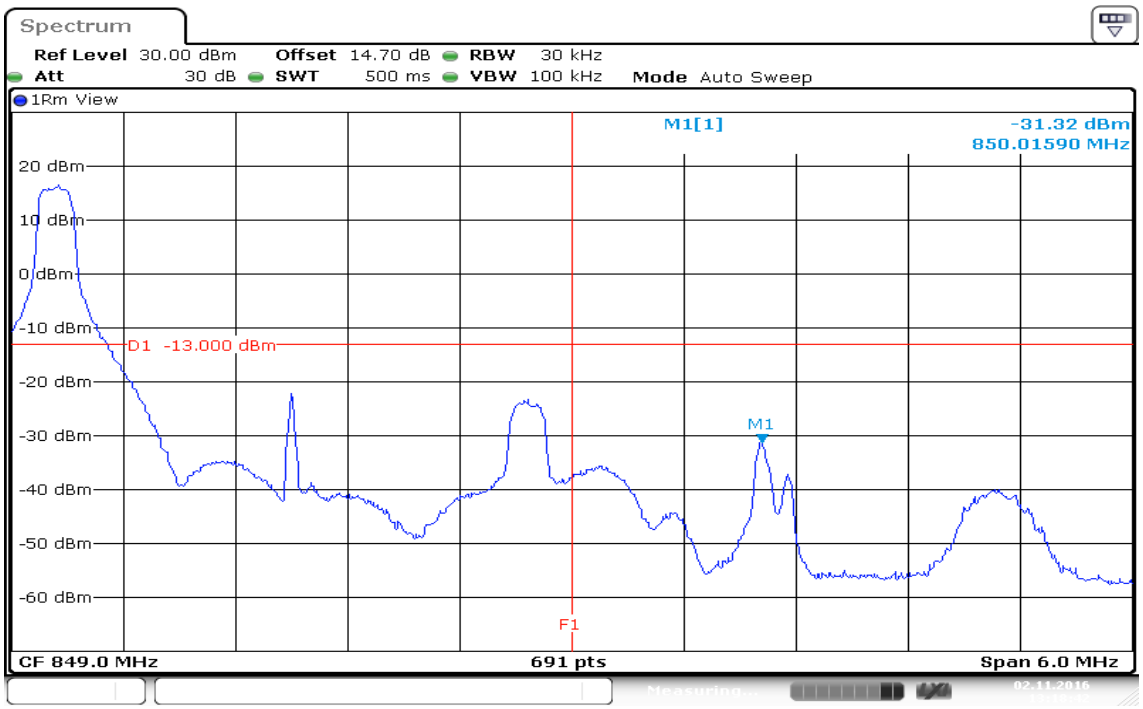
BW: 3MHz / QPSK / RB= 1, RB Offset = 0

LOWER BAND EDGE



Date: 2.NOV.2016 13:15:33

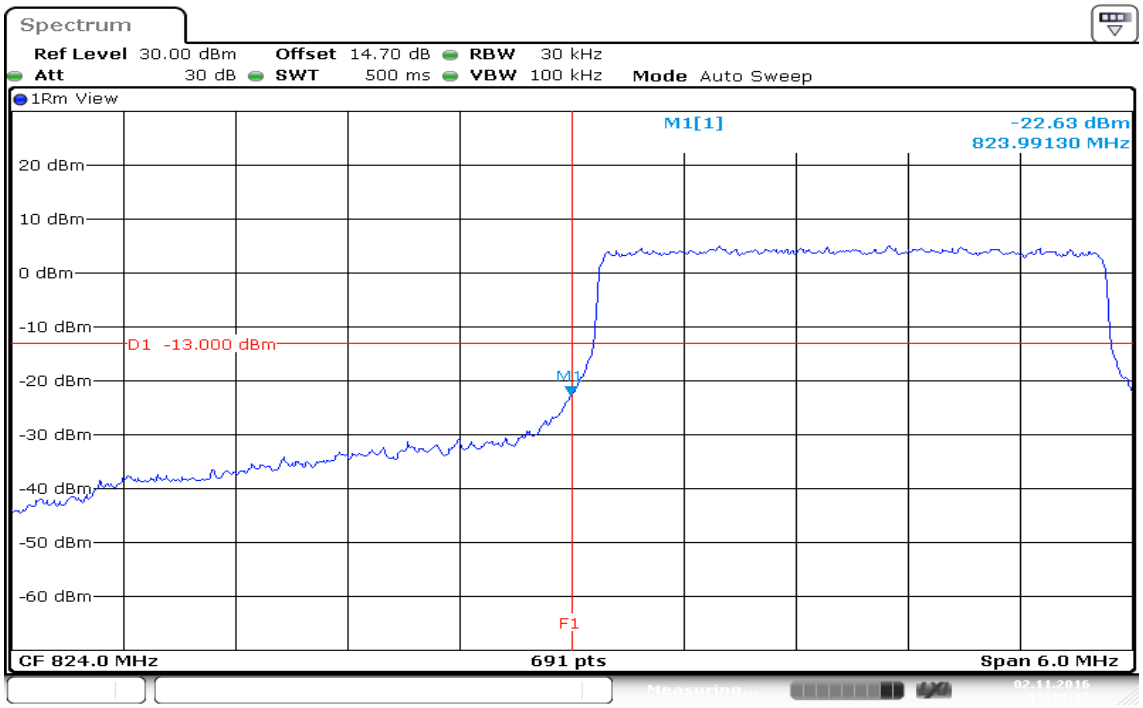
HIGHER BAND EDGE



Date: 2.NOV.2016 13:18:43

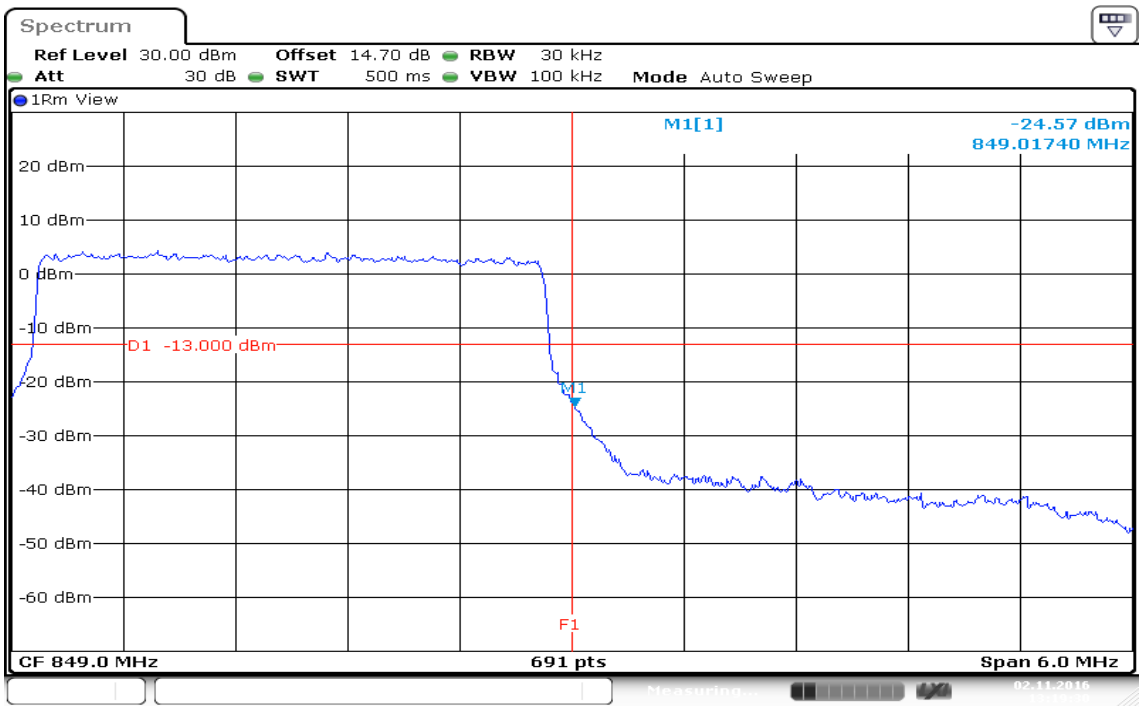
BW:3MHz / QPSK / RB= 15, RB Offset = 0

LOWER BAND EDGE



Date: 2.NOV.2016 13:14:17

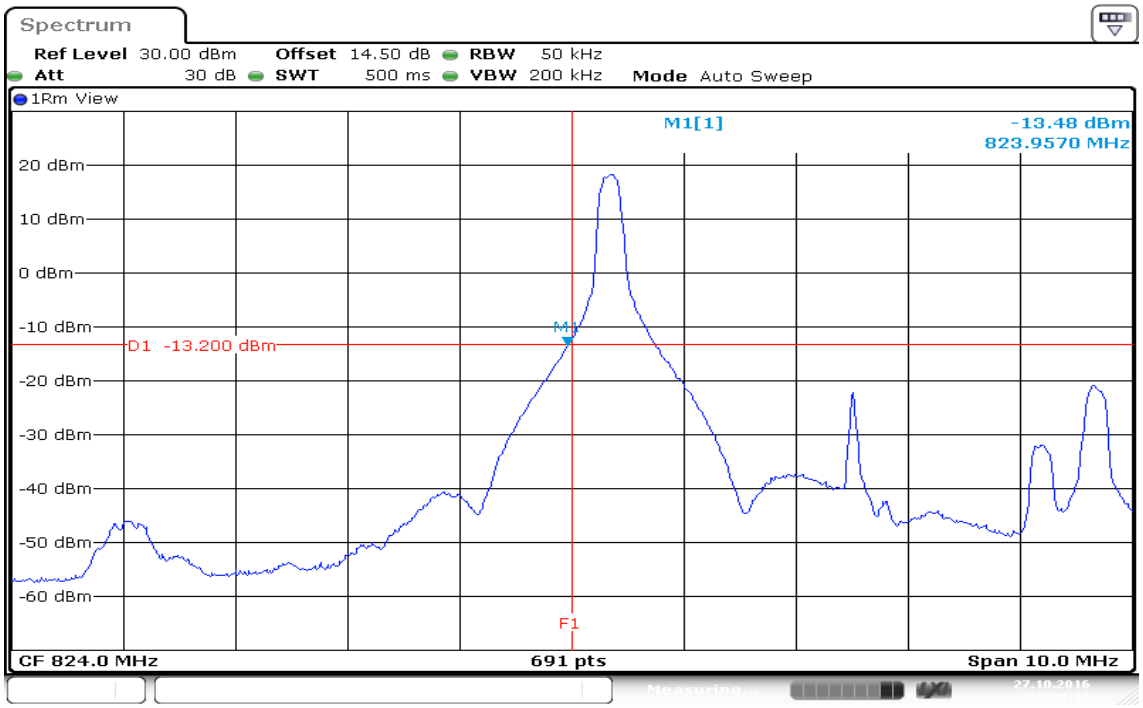
HIGHER BAND EDGE



Date: 2.NOV.2016 13:19:31

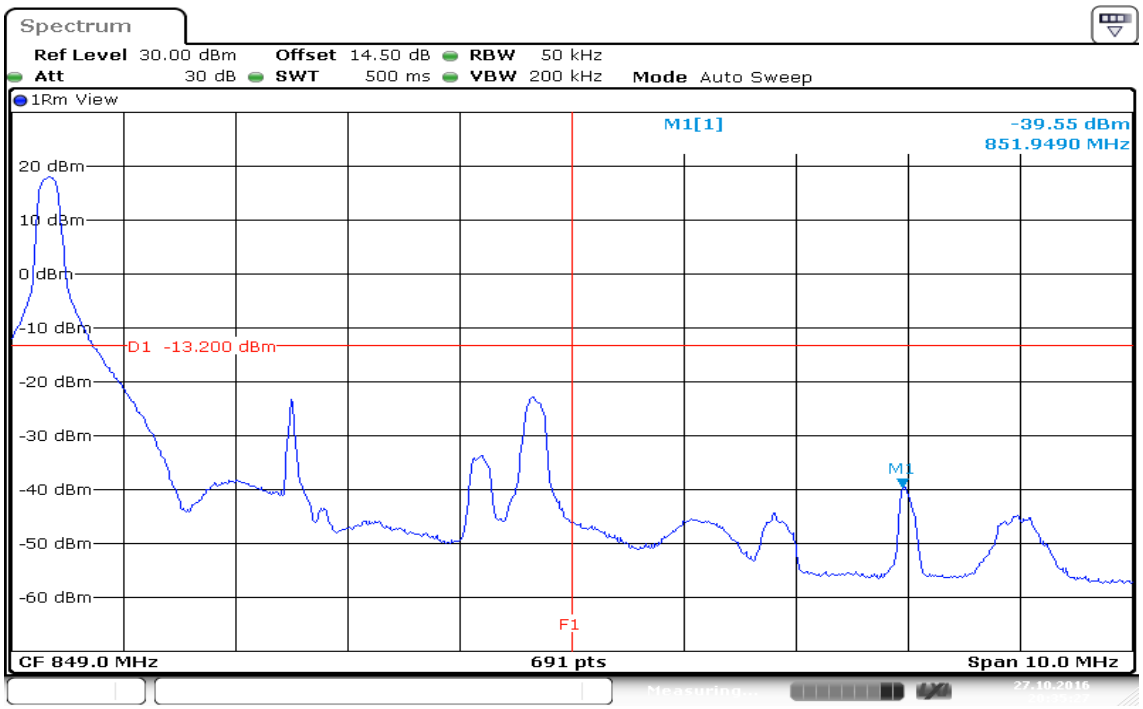
BW: 5MHz / QPSK / RB= 1, RB Offset = 0

LOWER BAND EDGE



Date: 27.OCT.2016 20:30:31

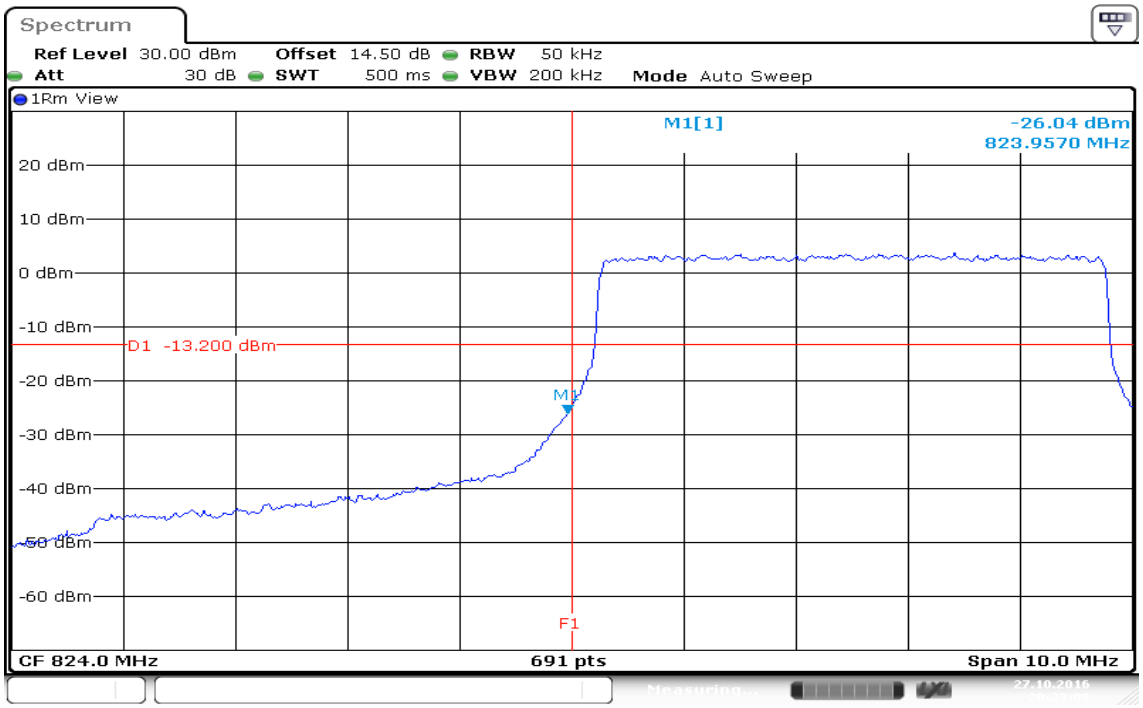
HIGHER BAND EDGE



Date: 27.OCT.2016 20:35:28

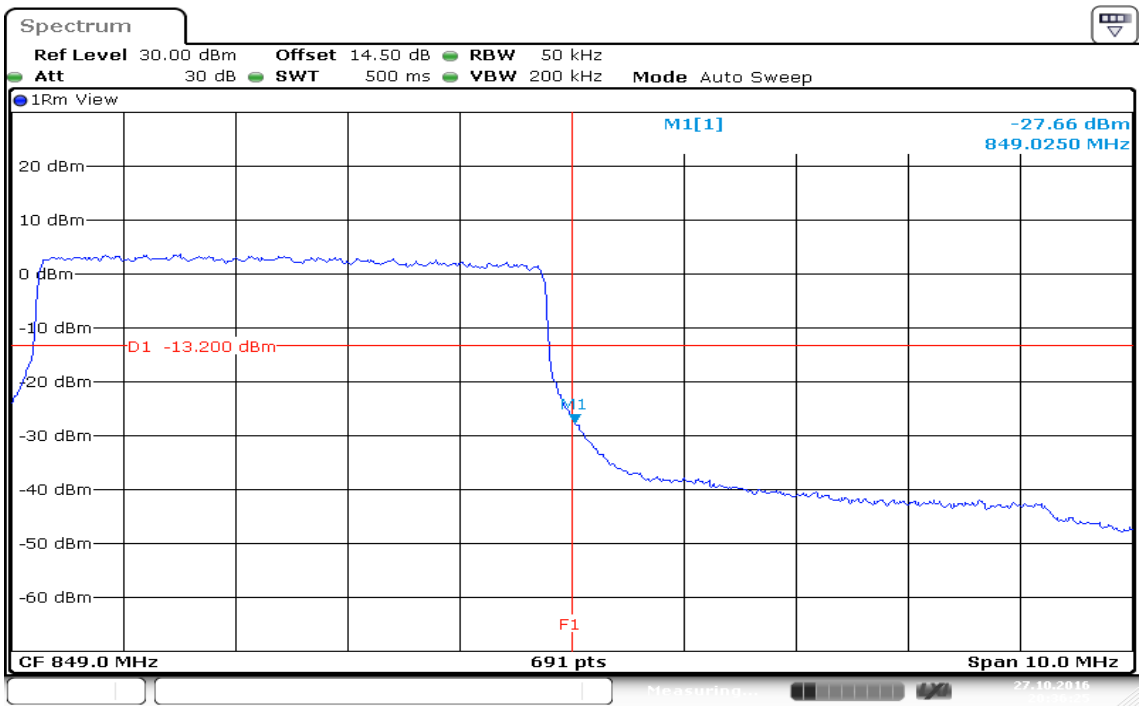
BW:5MHz / QPSK / RB= 25, RB Offset = 0

LOWER BAND EDGE



Date: 27.OCT.2016 20:29:08

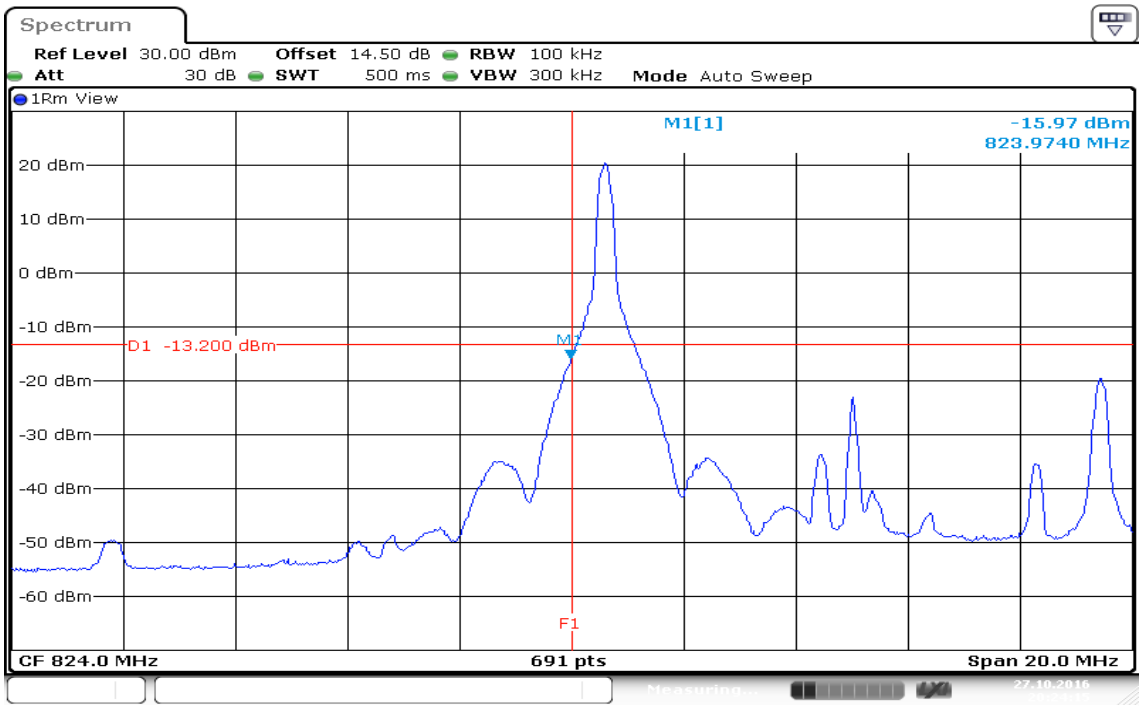
HIGHER BAND EDGE



Date: 27.OCT.2016 20:36:25

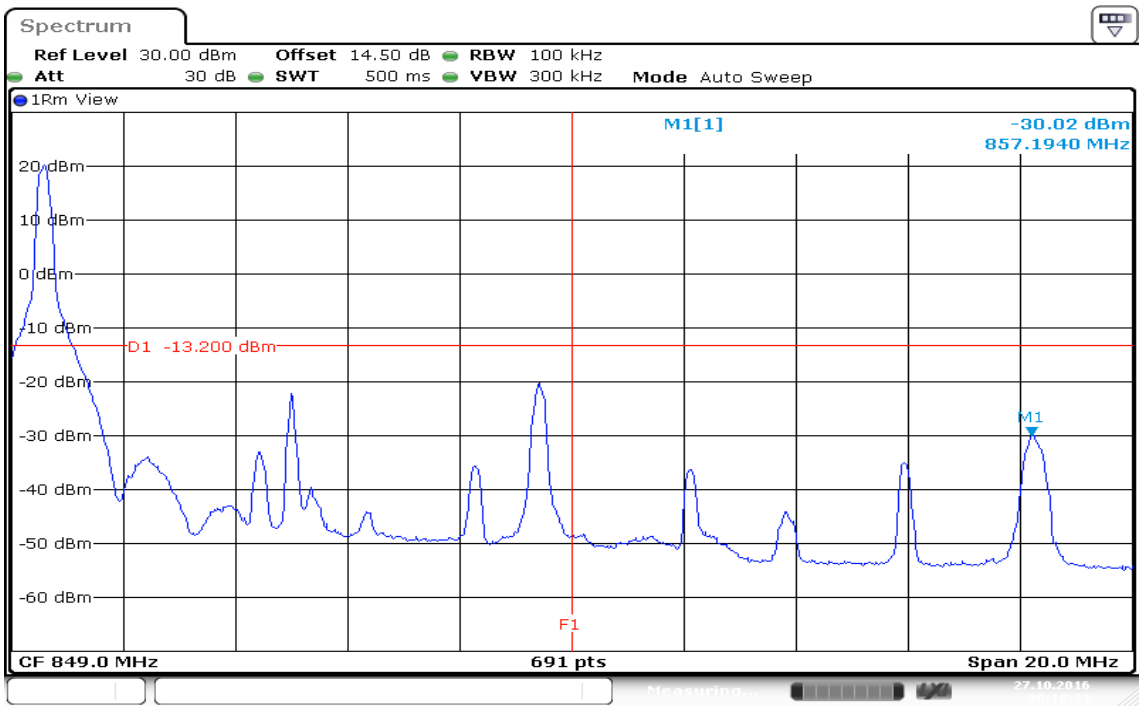
BW: 10MHz / QPSK / RB= 1, RB Offset = 0

LOWER BAND EDGE



Date: 27.OCT.2016 20:24:16

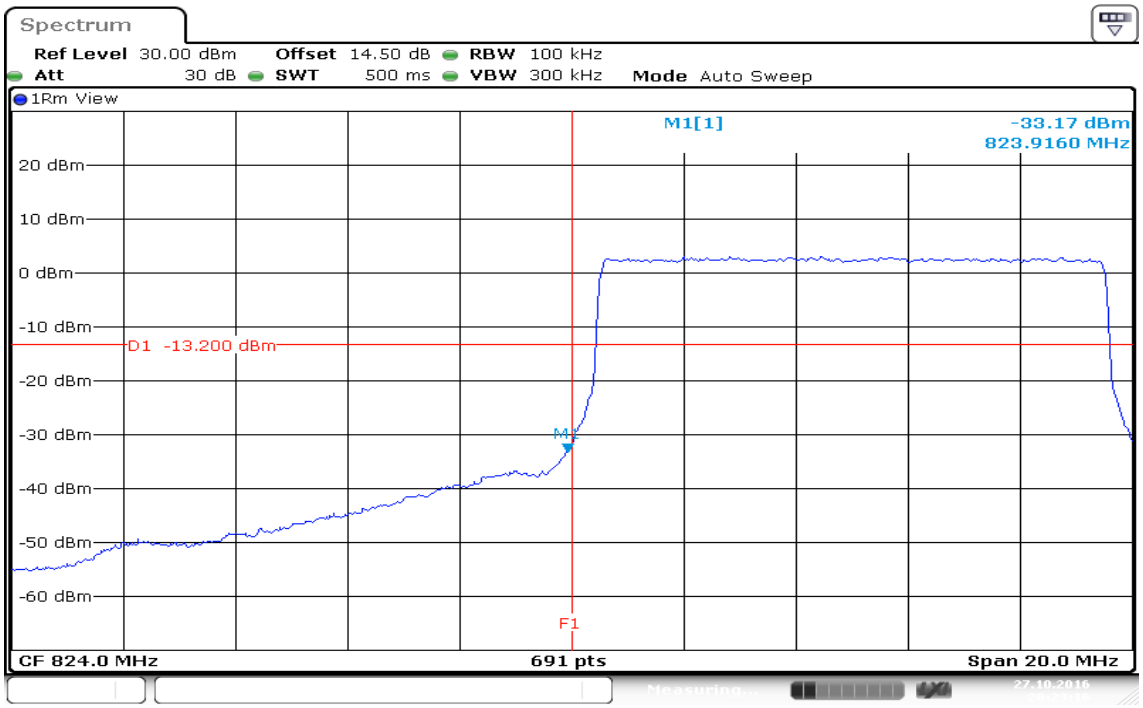
HIGHER BAND EDGE



Date: 27.OCT.2016 20:18:34

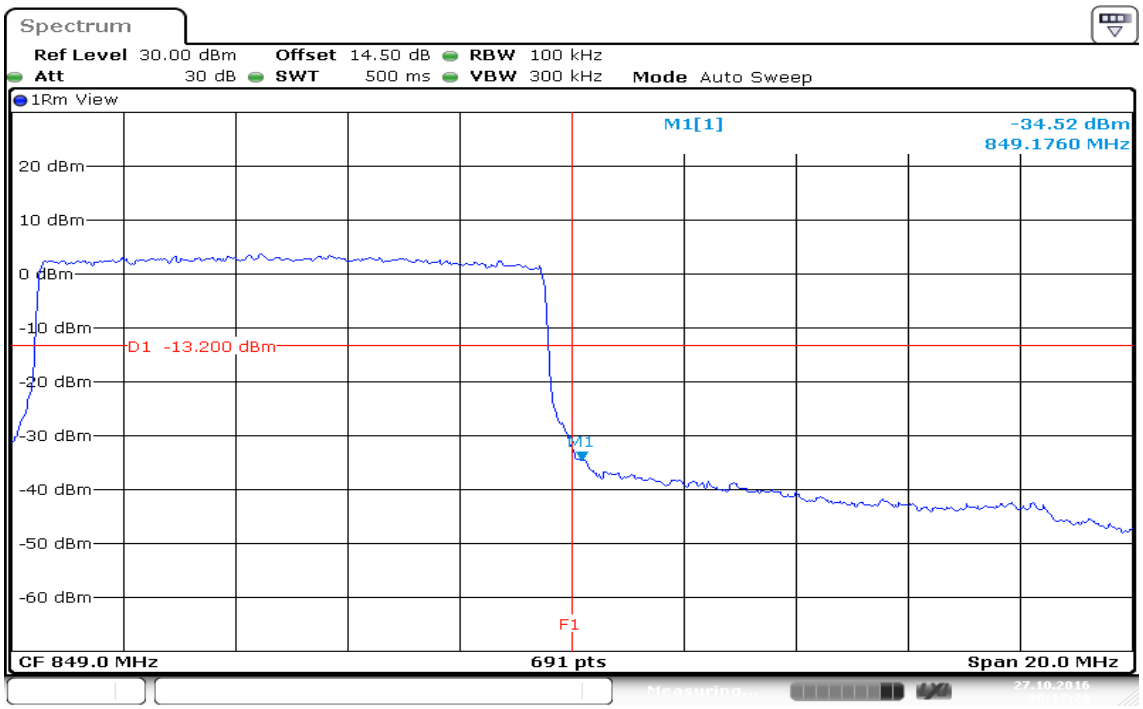
BW:10MHz / QPSK / RB= 50, RB Offset = 0

LOWER BAND EDGE



Date: 27.OCT.2016 20:23:16

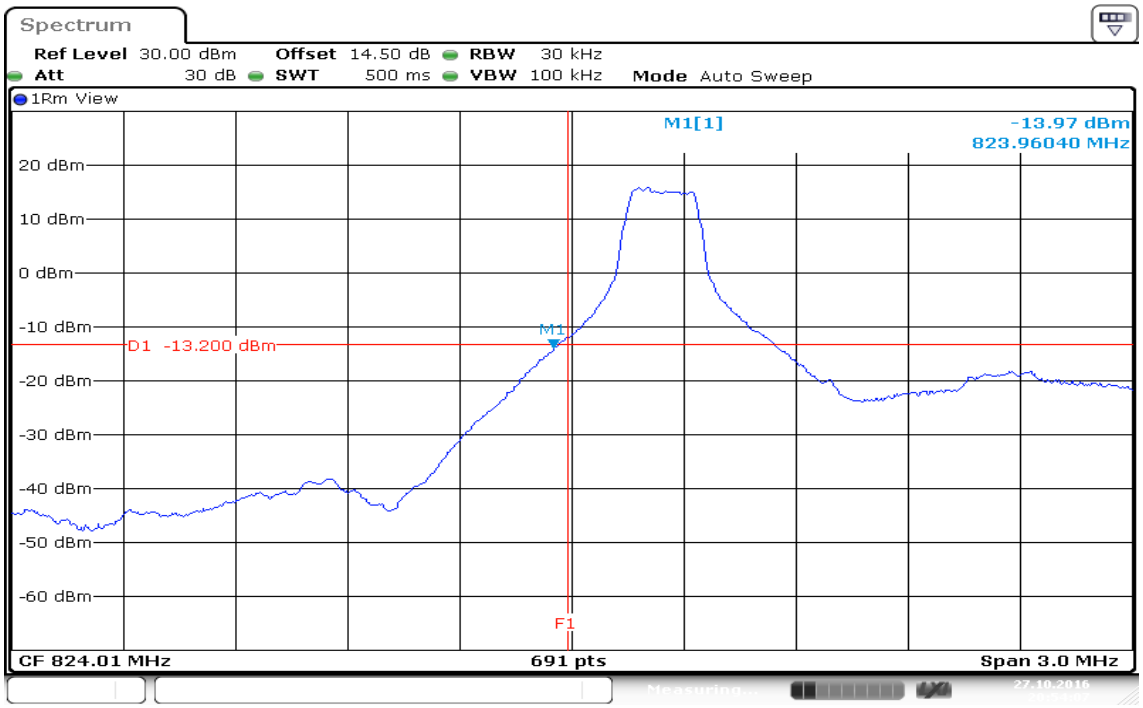
HIGHER BAND EDGE



Date: 27.OCT.2016 20:17:21

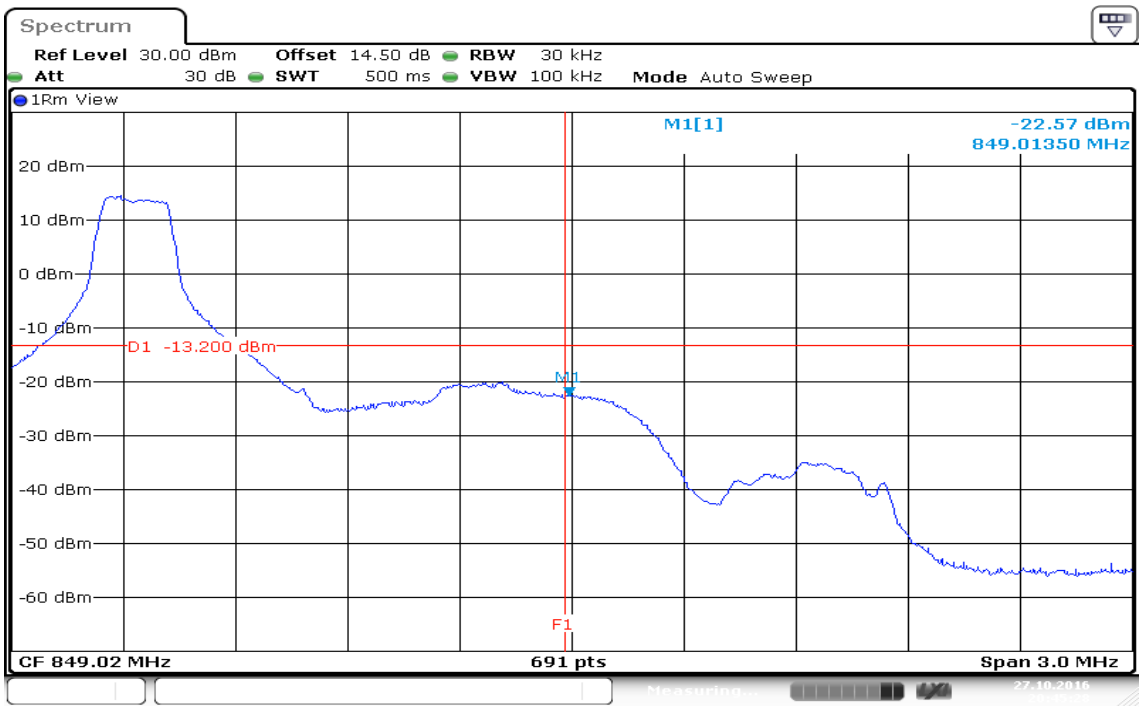
BW: 1.4MHz / 16QAM / RB= 1, RB Offset = 0

LOWER BAND EDGE



Date: 27.OCT.2016 20:54:07

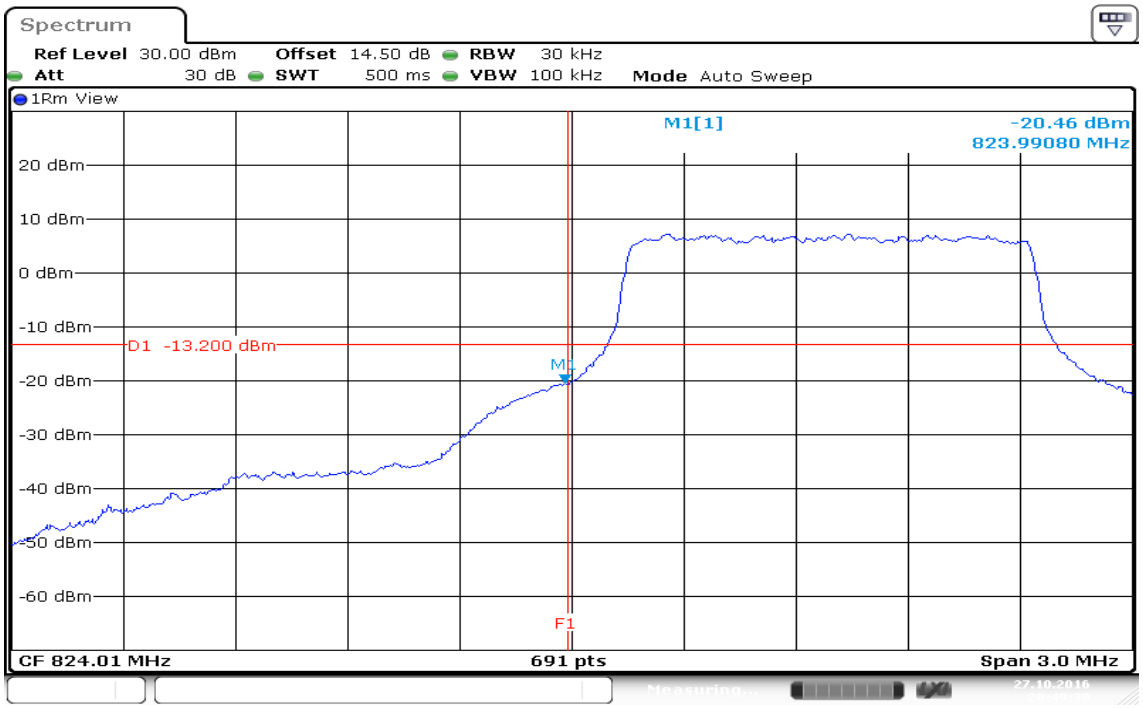
HIGHER BAND EDGE



Date: 27.OCT.2016 20:45:29

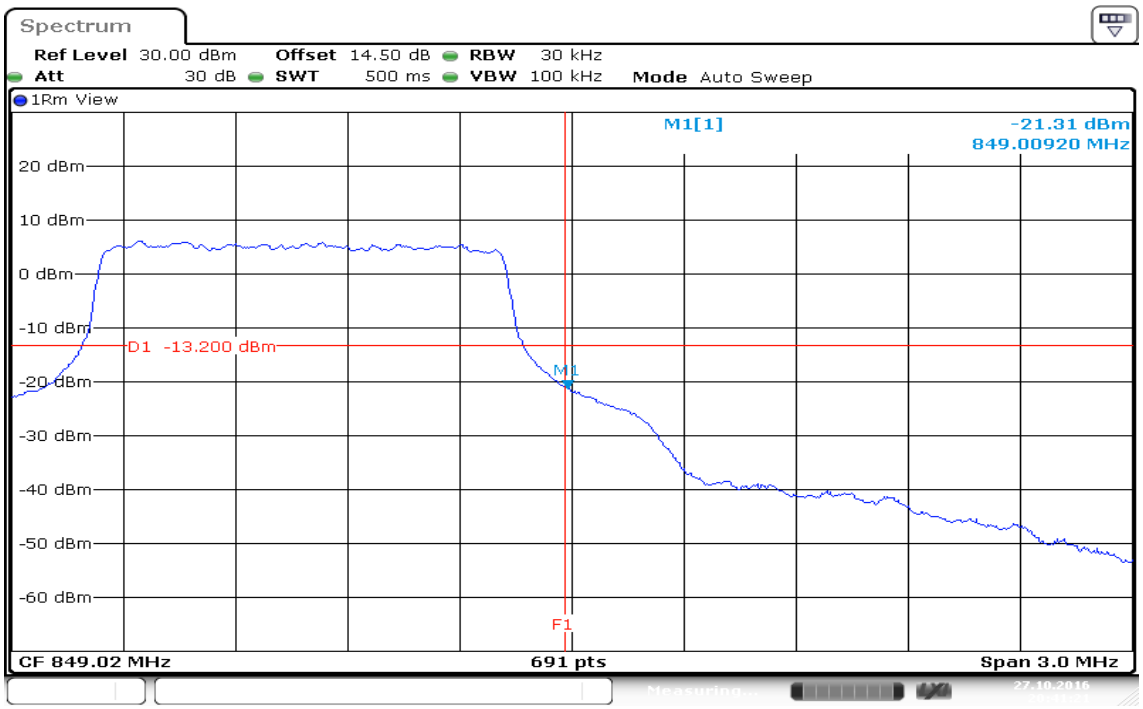
BW:1.4MHz / 16QAM / RB= 6, RB Offset = 0

LOWER BAND EDGE



Date: 27.OCT.2016 20:49:30

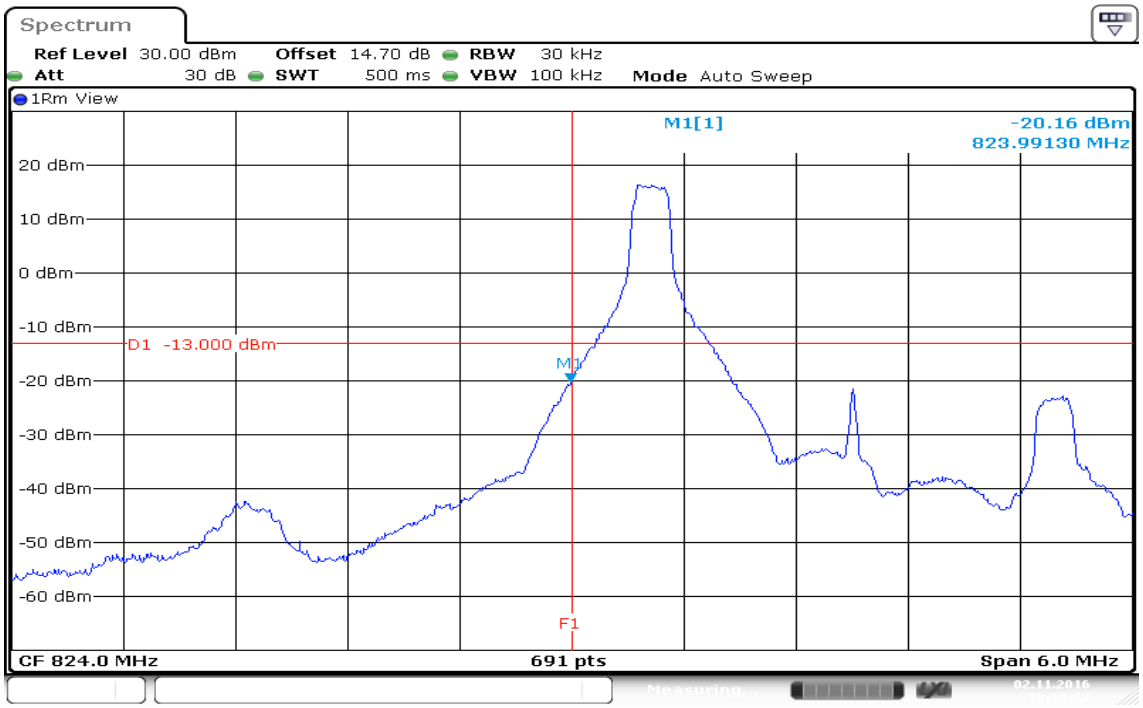
HIGHER BAND EDGE



Date: 27.OCT.2016 20:41:21

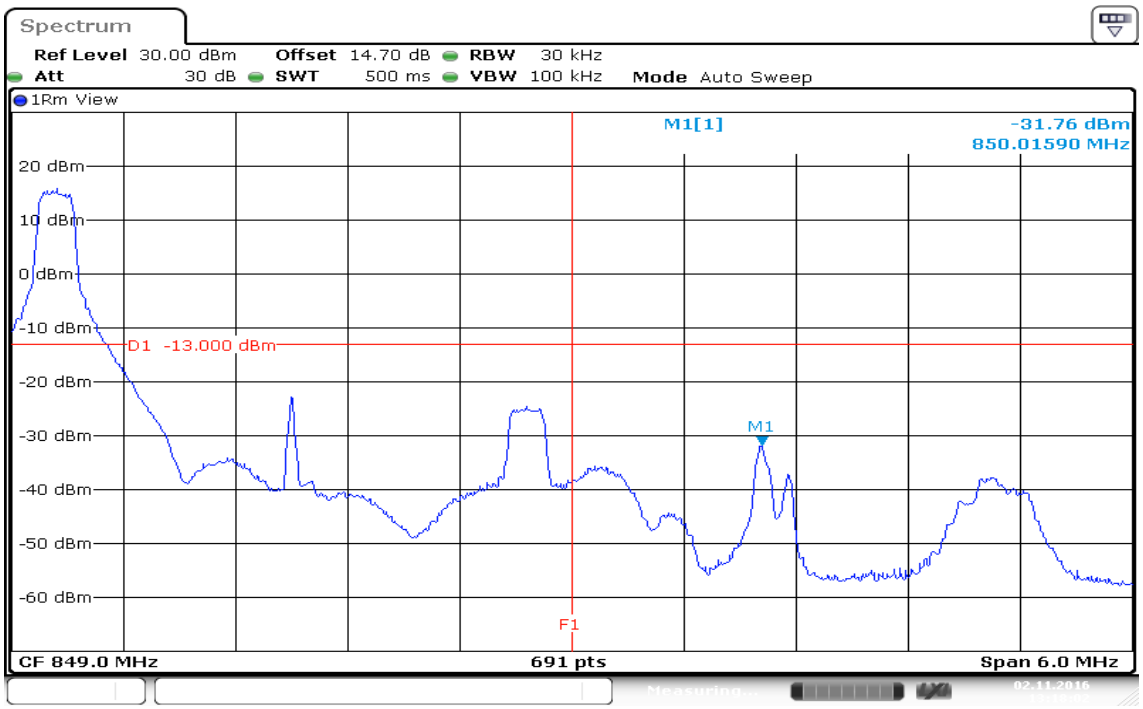
BW: 3MHz / 16QAM / RB= 1, RB Offset = 0

LOWER BAND EDGE



Date: 2.NOV.2016 13:16:23

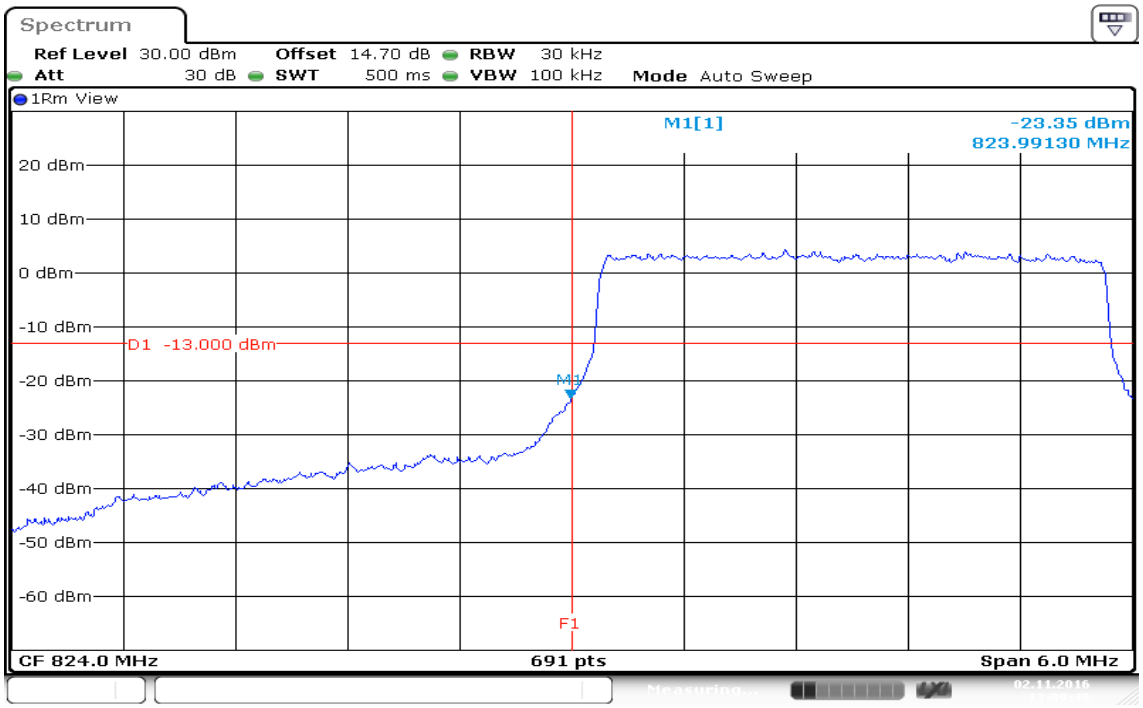
HIGHER BAND EDGE



Date: 2.NOV.2016 13:18:03

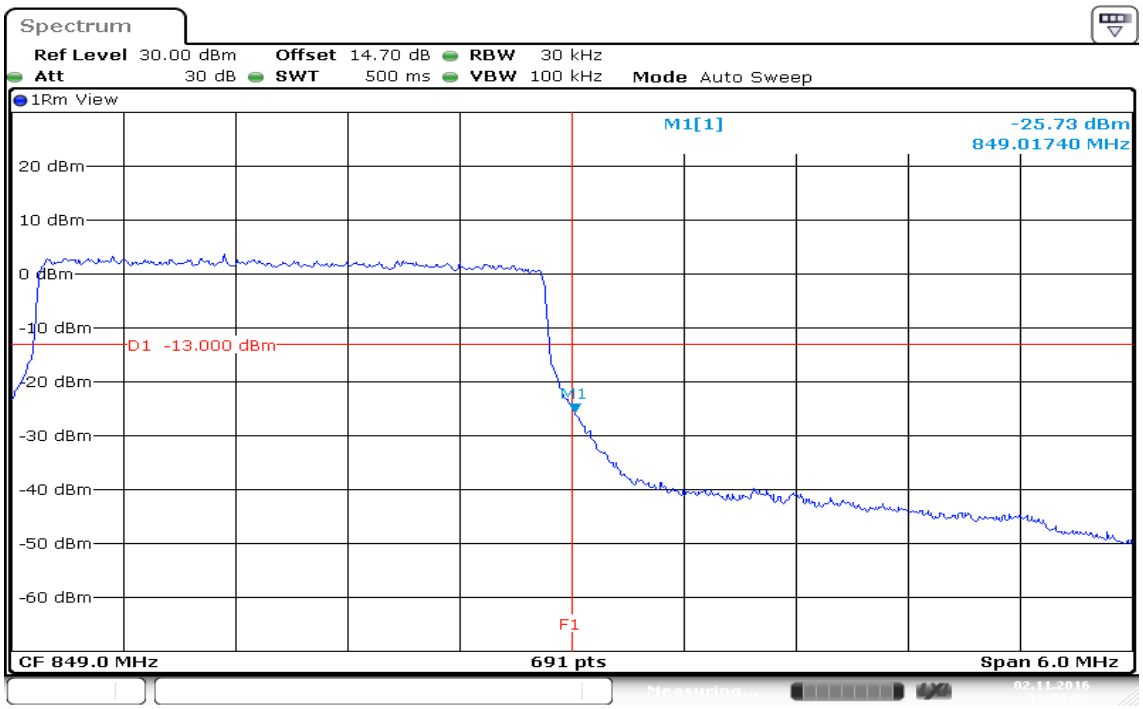
BW:3MHz / 16QAM / RB= 15, RB Offset = 0

LOWER BAND EDGE



Date: 2.NOV.2016 13:09:48

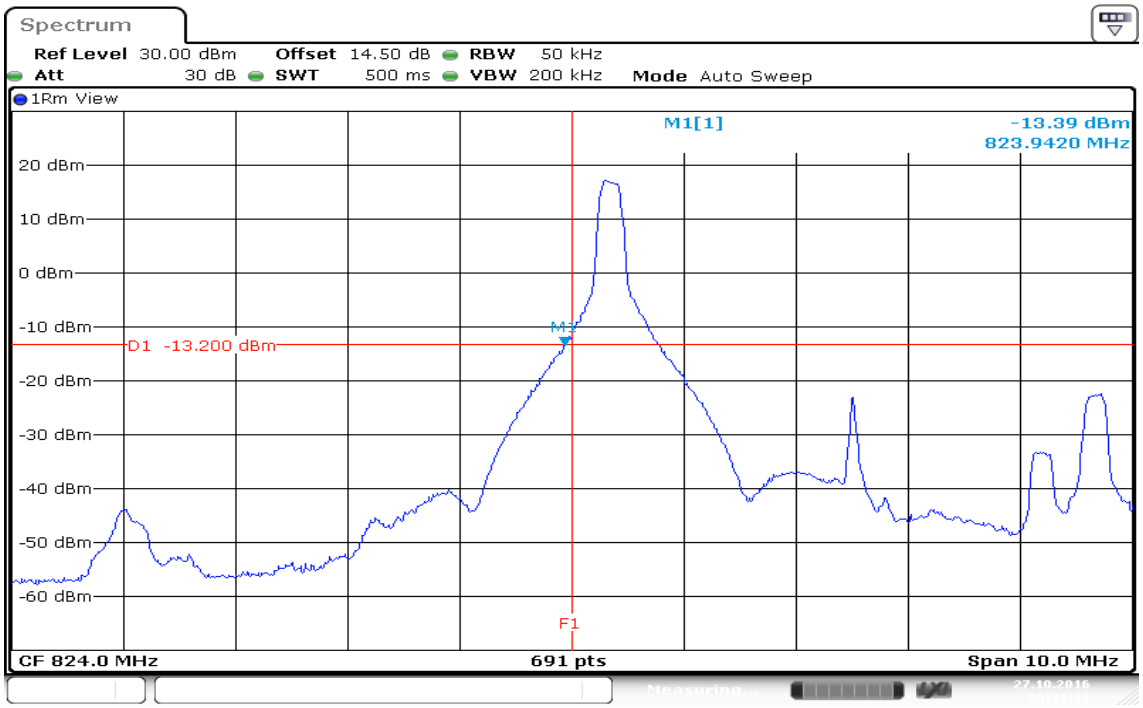
HIGHER BAND EDGE



Date: 2.NOV.2016 13:20:06

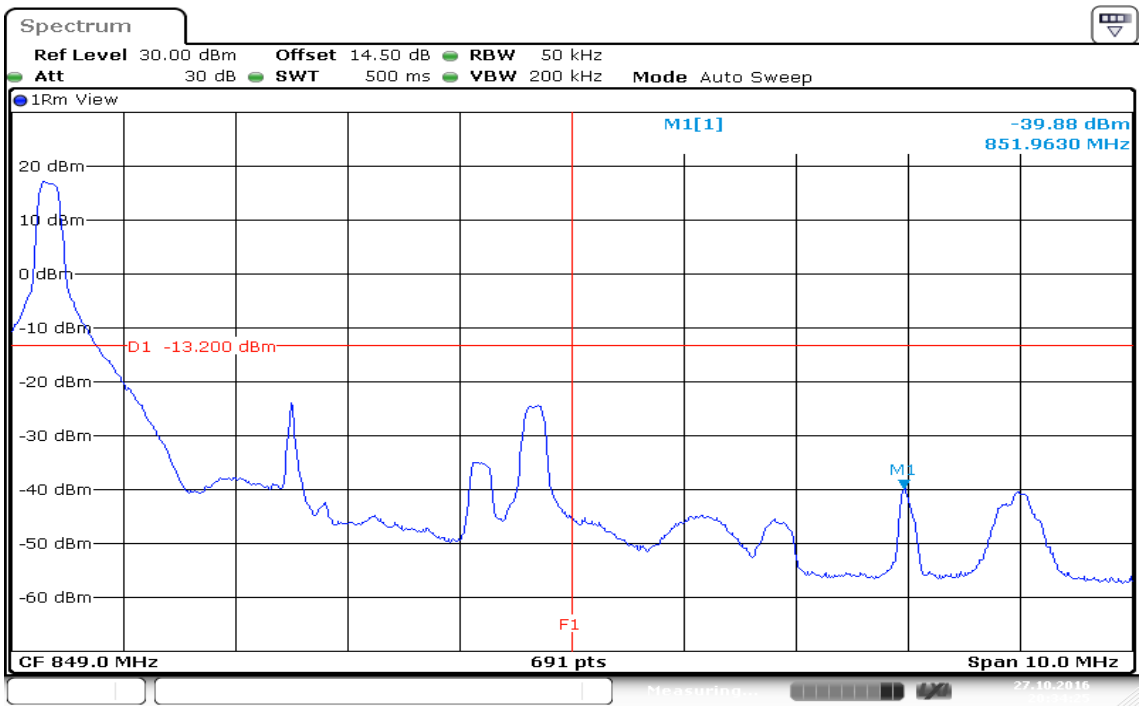
BW: 5MHz / 16QAM / RB= 1, RB Offset = 0

LOWER BAND EDGE



Date: 27.OCT.2016 20:31:39

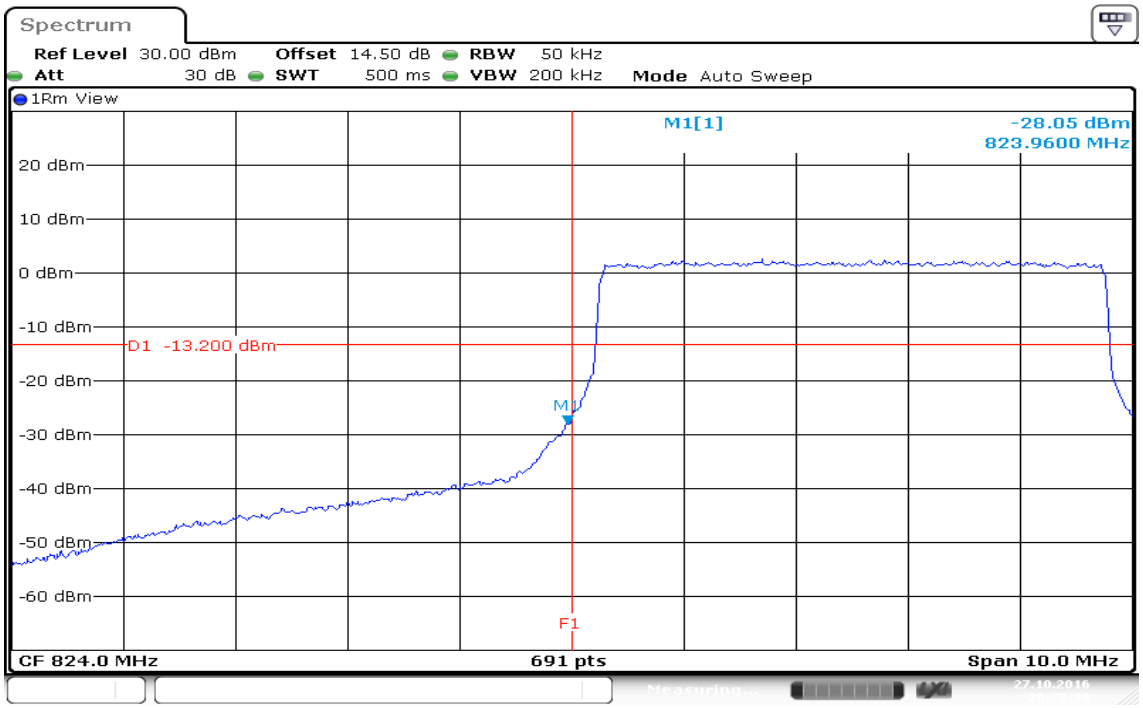
HIGHER BAND EDGE



Date: 27.OCT.2016 20:34:26

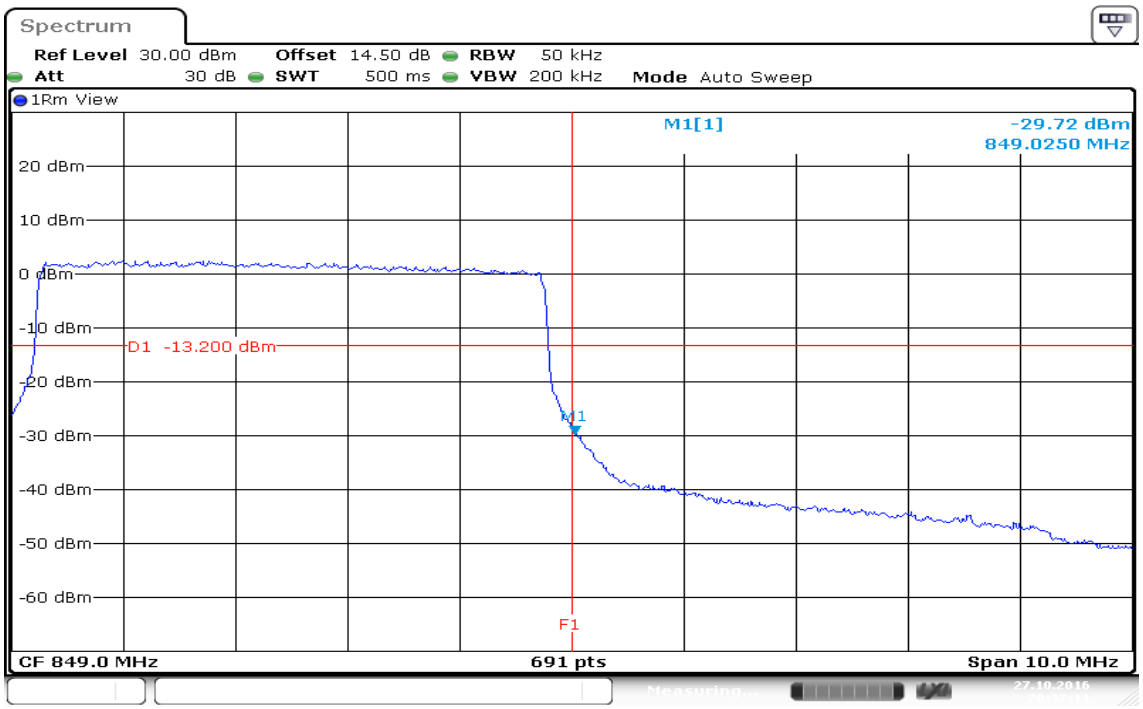
BW:5MHz / 16QAM / RB= 25, RB Offset = 0

LOWER BAND EDGE



Date: 27.OCT.2016 20:28:10

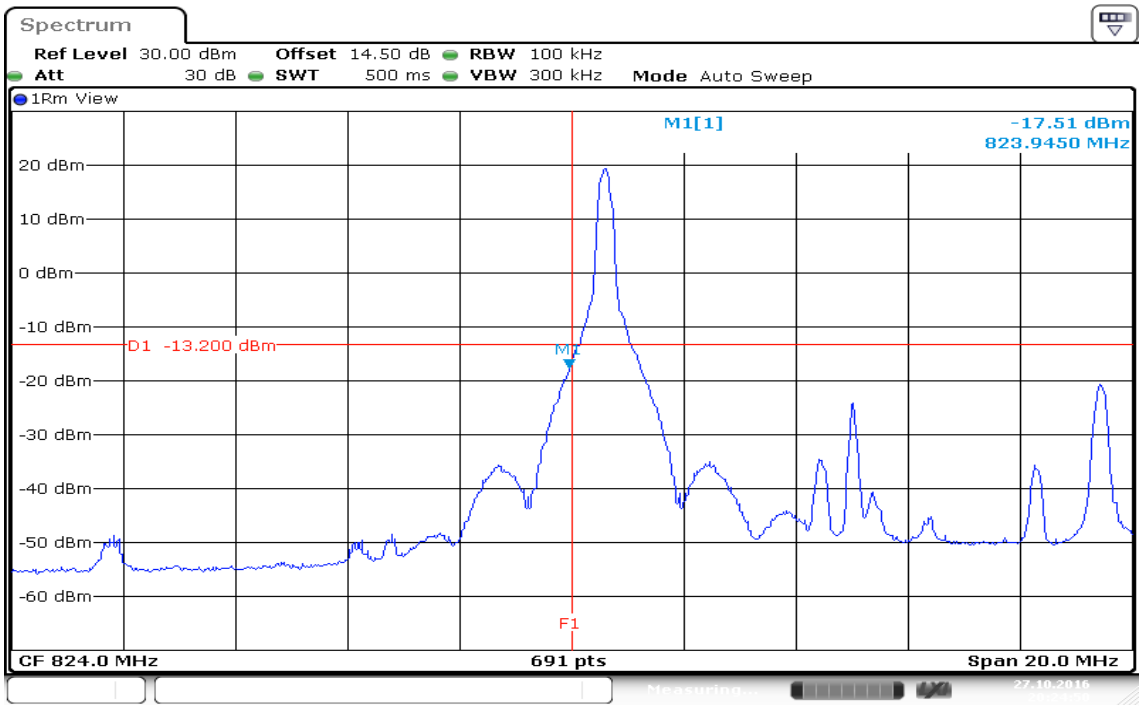
HIGHER BAND EDGE



Date: 27.OCT.2016 20:37:11

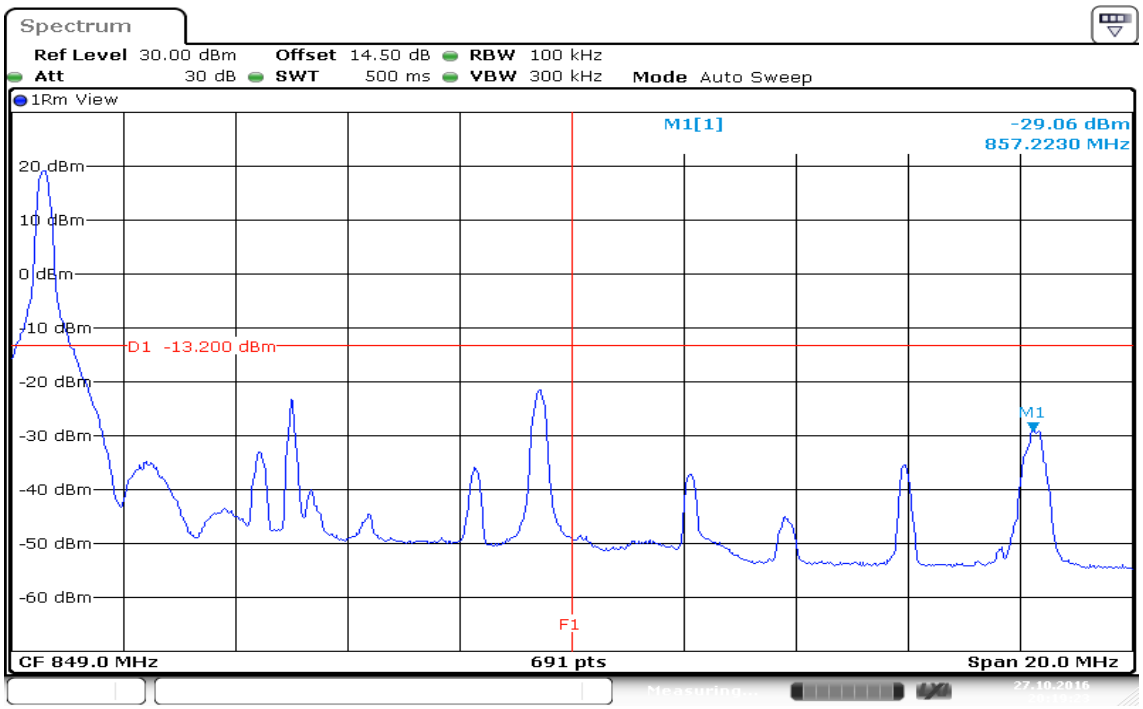
BW: 10MHz / 16QAM / RB= 1, RB Offset = 0

LOWER BAND EDGE



Date: 27.OCT.2016 20:24:51

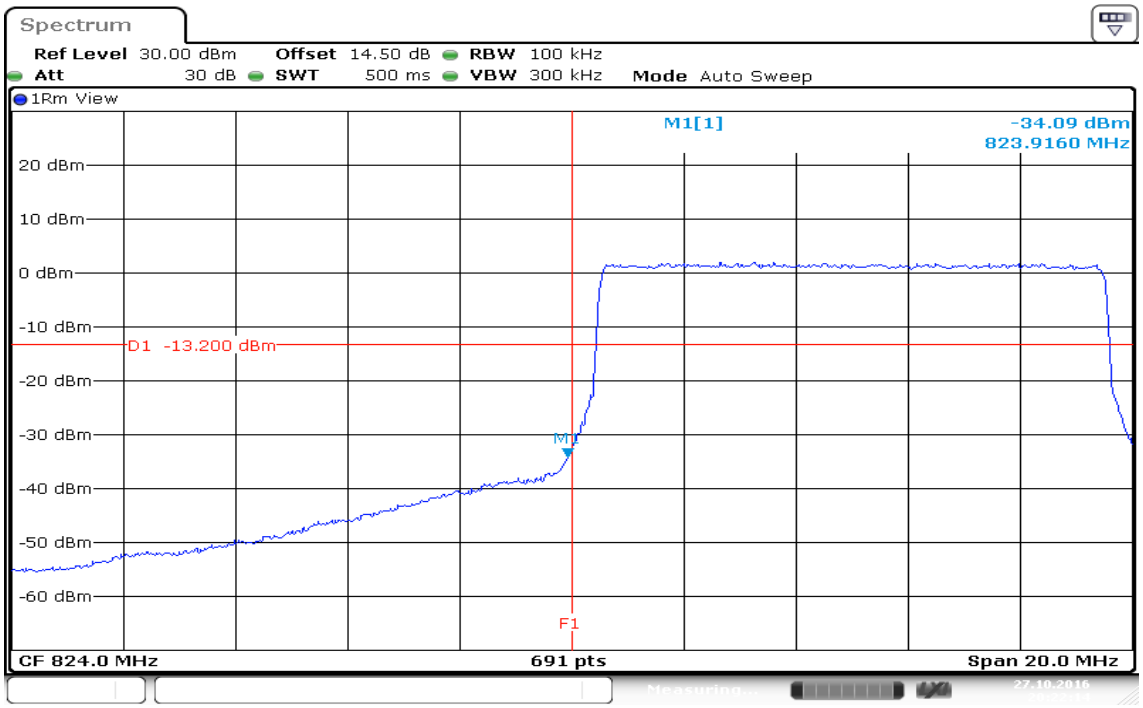
HIGHER BAND EDGE



Date: 27.OCT.2016 20:19:23

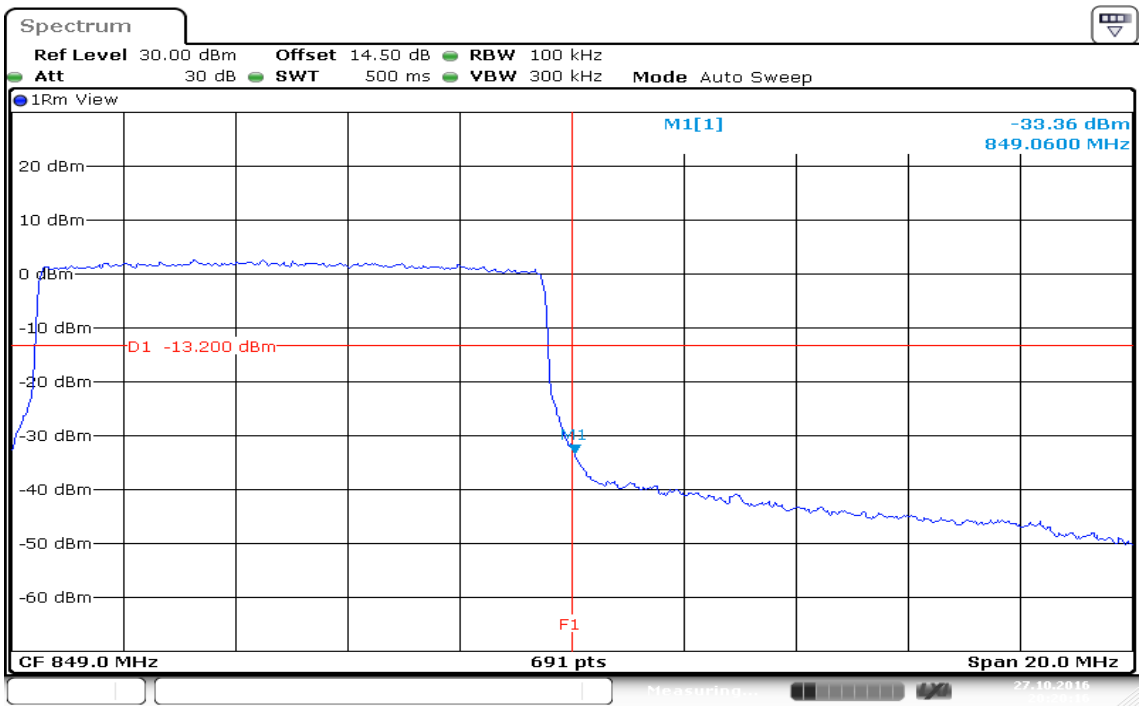
BW:10MHz / 16QAM / RB= 50, RB Offset = 0

LOWER BAND EDGE



Date: 27.OCT.2016 20:22:15

HIGHER BAND EDGE



Date: 27.OCT.2016 20:20:16

7.7 CONDUCTED SPURIOUS EMISSIONS

Limits

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 +10 log10(P) dB. The limit of emission equal to –13dBm

Test Procedures

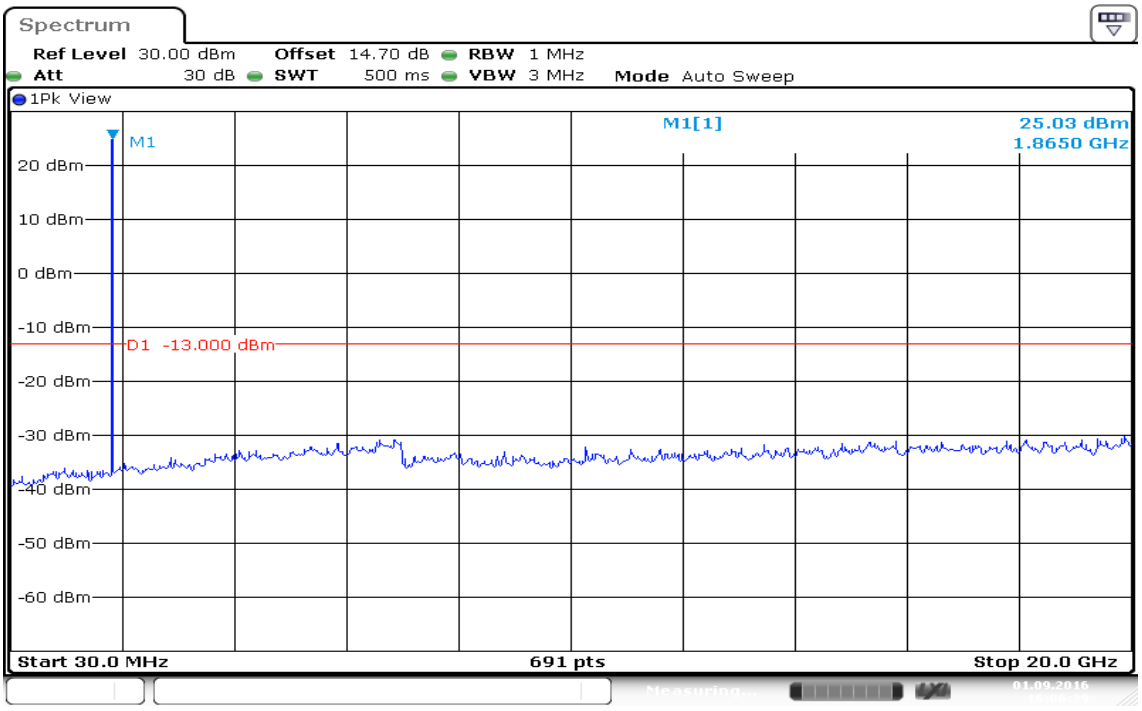
1. According to KDB 971168 D01, section 6.0
2. The EUT was connect to spectrum analyzer and call box.
3. The RF output of EUT was connected to the spectrum analyzer.
4. Set the spectrum analyzer , RBW=1MHz, VBW=3MHz.
5. Record the maximum spurious emission.
6. The fundamental frequency should be excluded against the limit in operating band.

Test Results

LTE Band 2

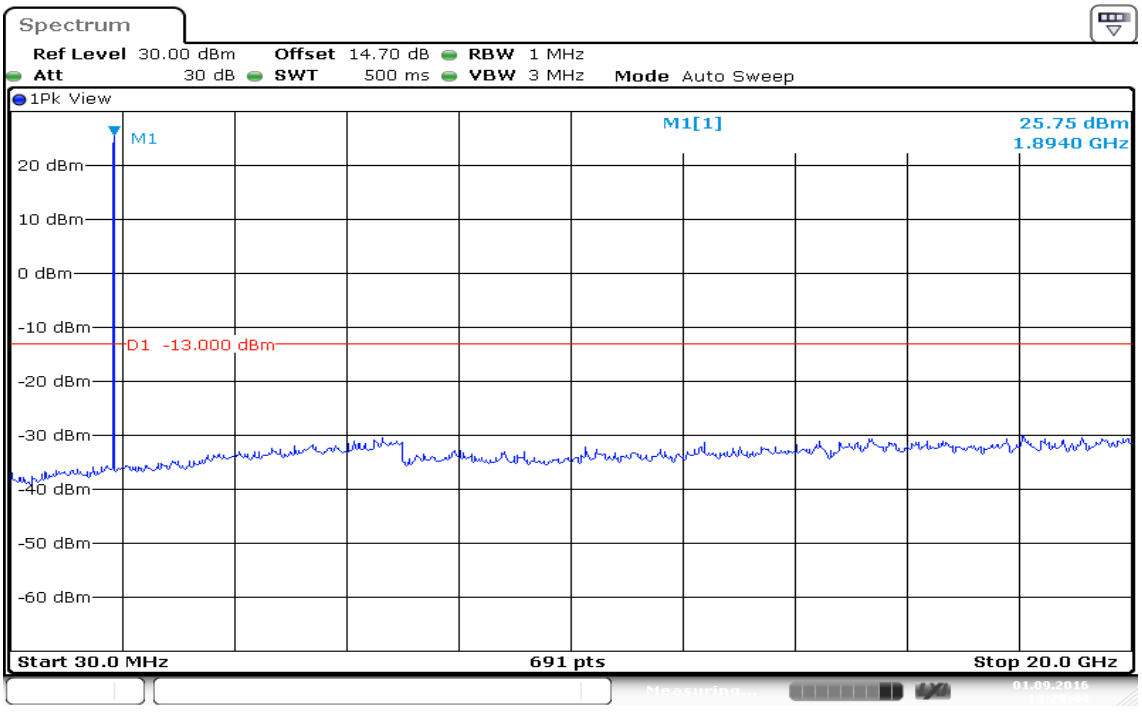
BW: 1.4MHz / QPSK / RB =1, RB Offset = 0

CH Low



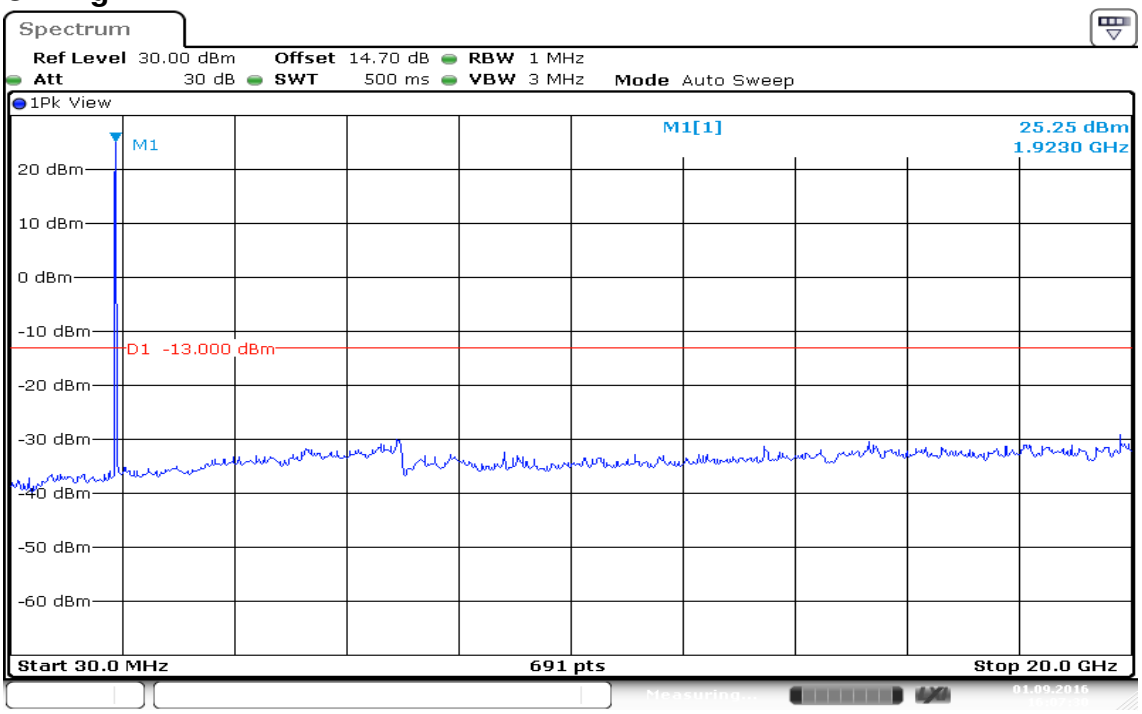
Date: 1.SEP.2016 16:06:38

CH Mid



Date: 1.SEP.2016 14:29:44

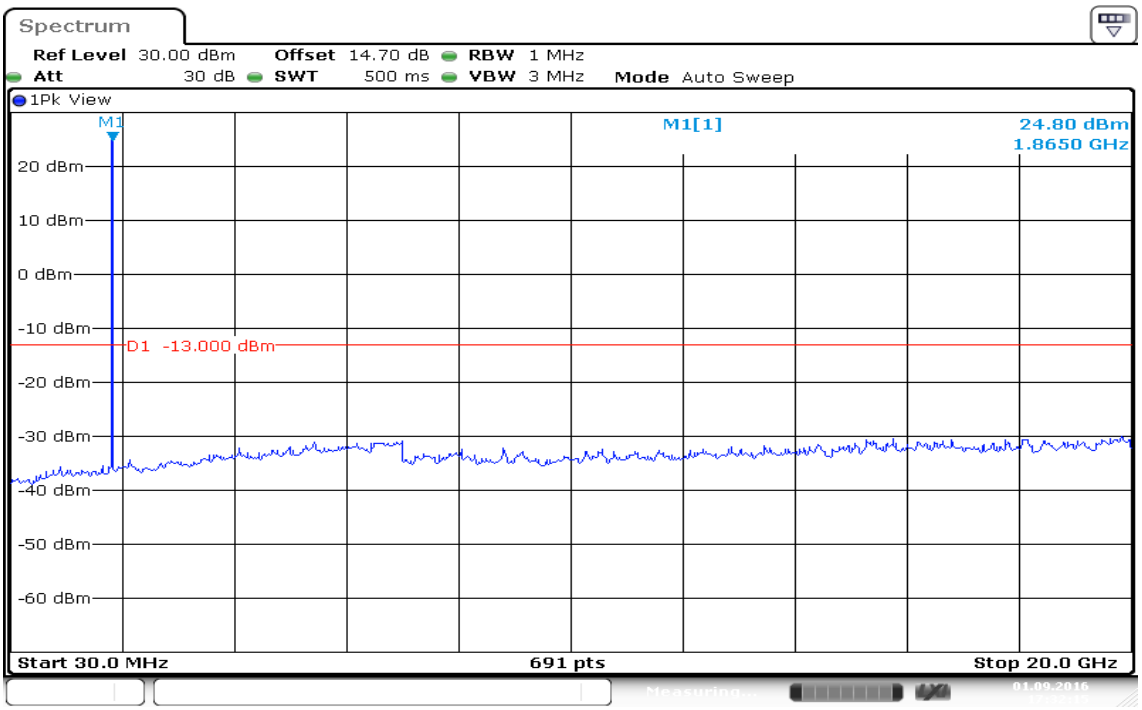
CH High



Date: 1.SEP.2016 16:07:30

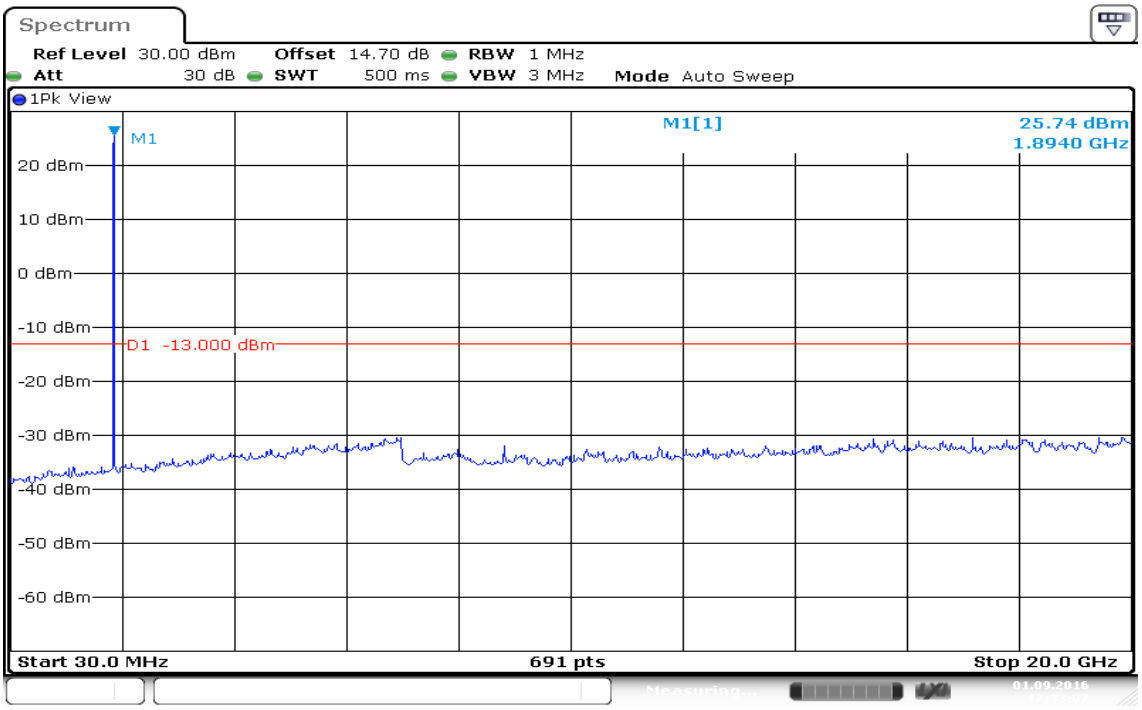
BW: 1.4MHz / 16QAM / RB =1, RB Offset = 0

CH Low



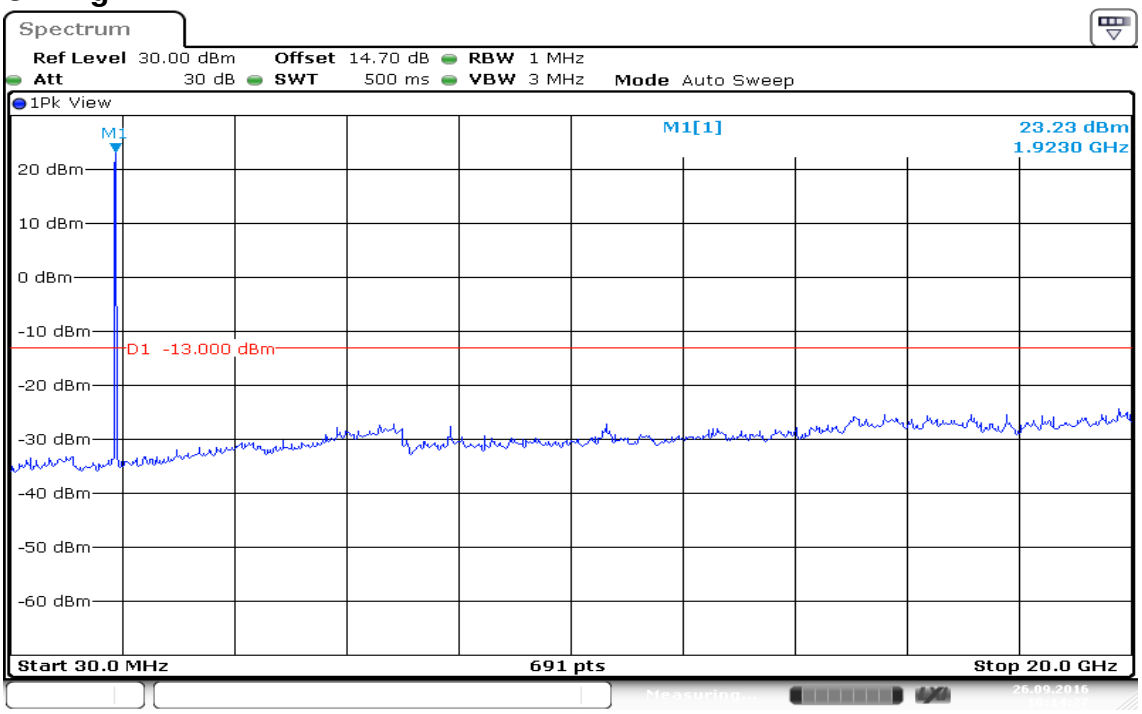
Date: 1.SEP.2016 17:32:14

CH Mid



Date: 1.SEP.2016 17:33:07

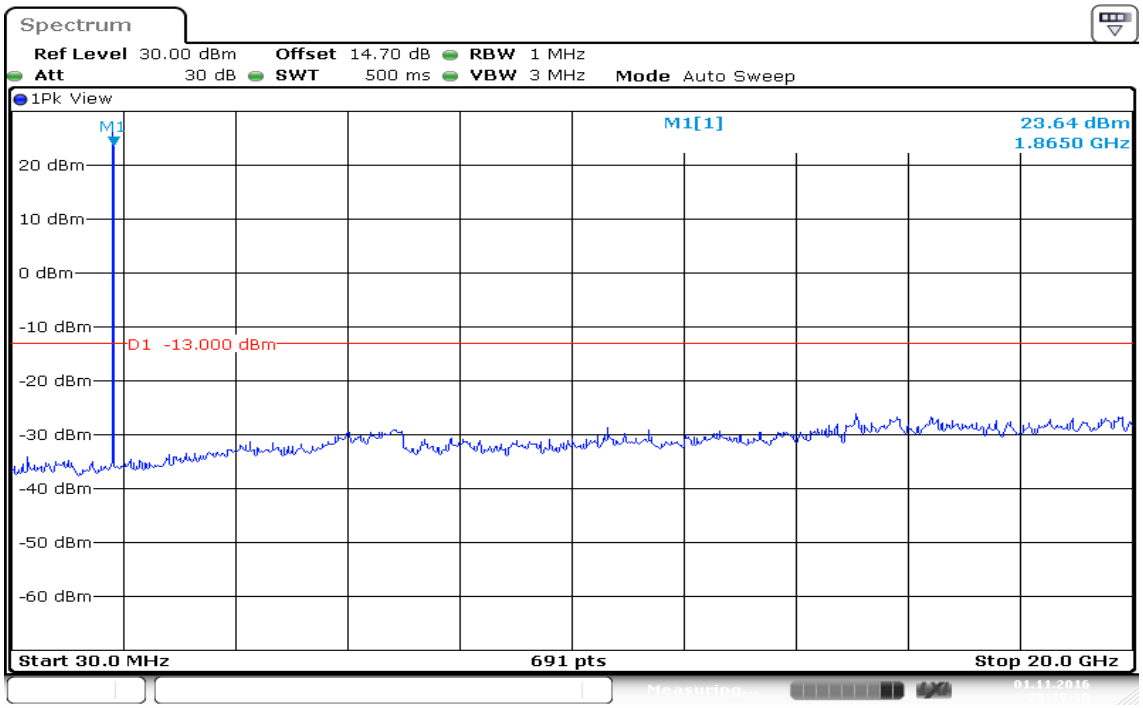
CH High



Date: 26.SEP.2016 10:14:28

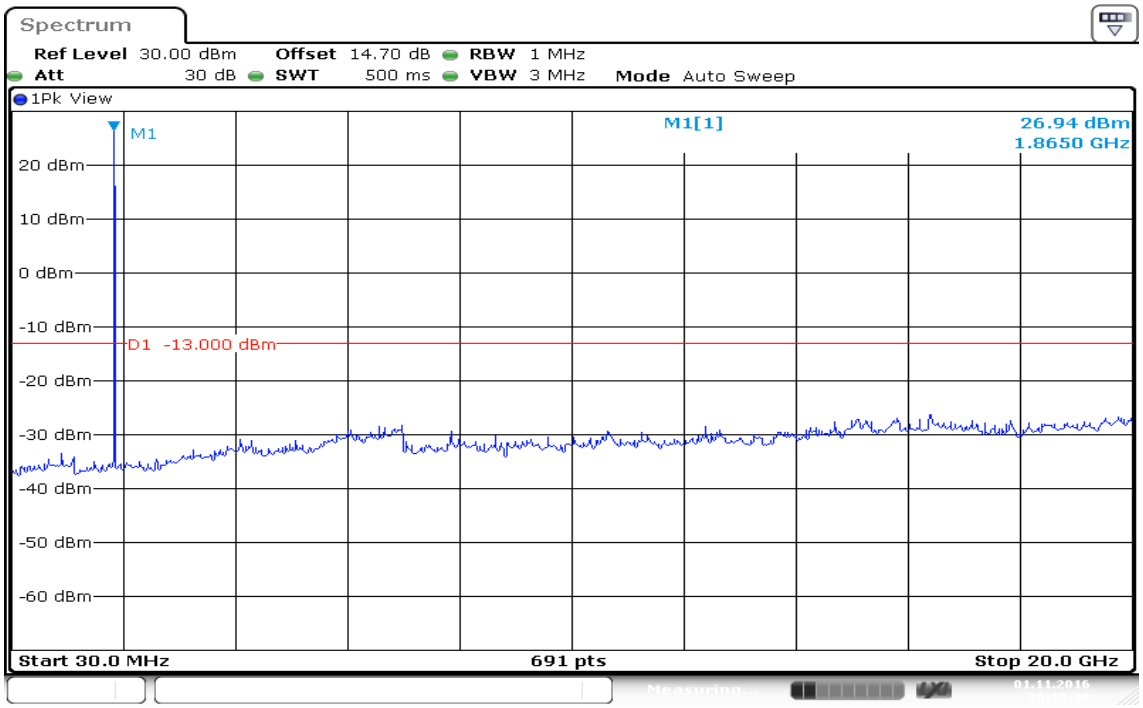
BW: 3MHz / QPSK / RB =1, RB Offset = 0

CH Low



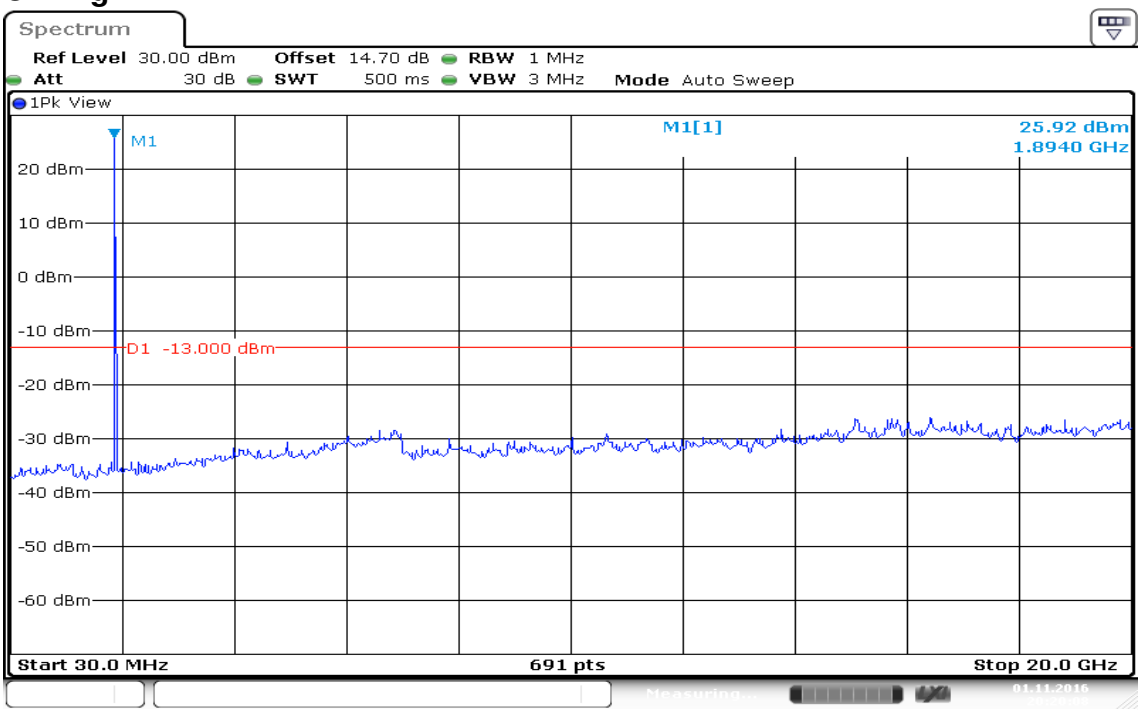
Date: 1.NOV.2016 20:19:10

CH Mid



Date: 1.NOV.2016 20:19:41

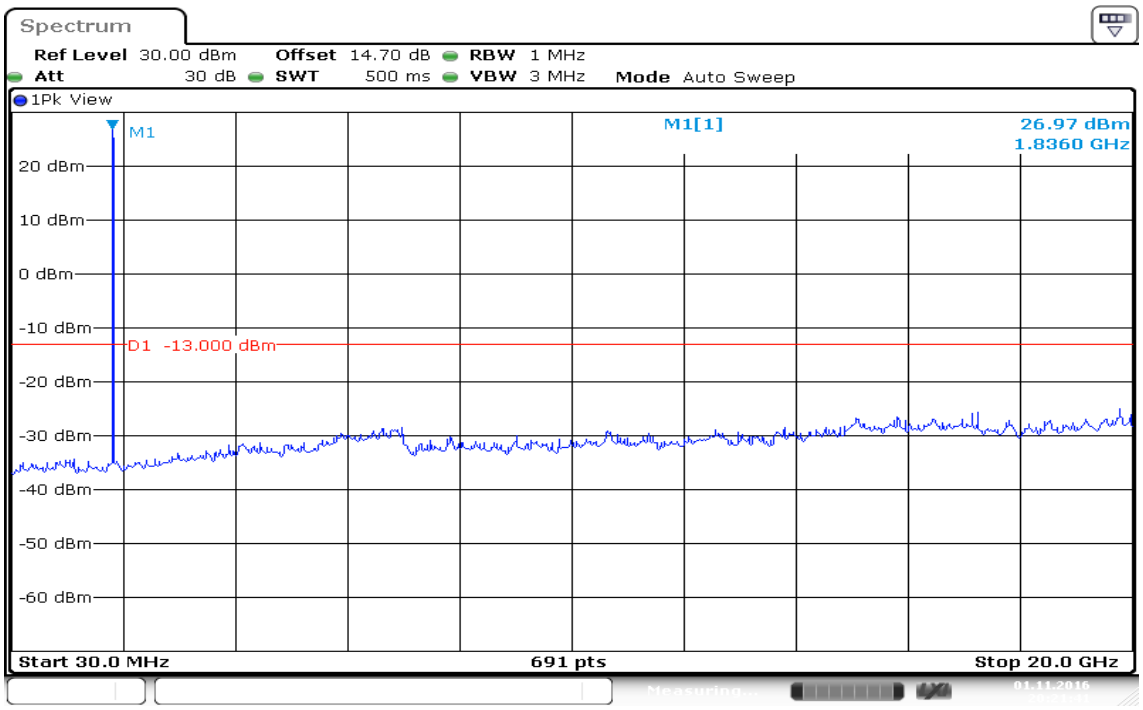
CH High



Date: 1.NOV.2016 20:20:08

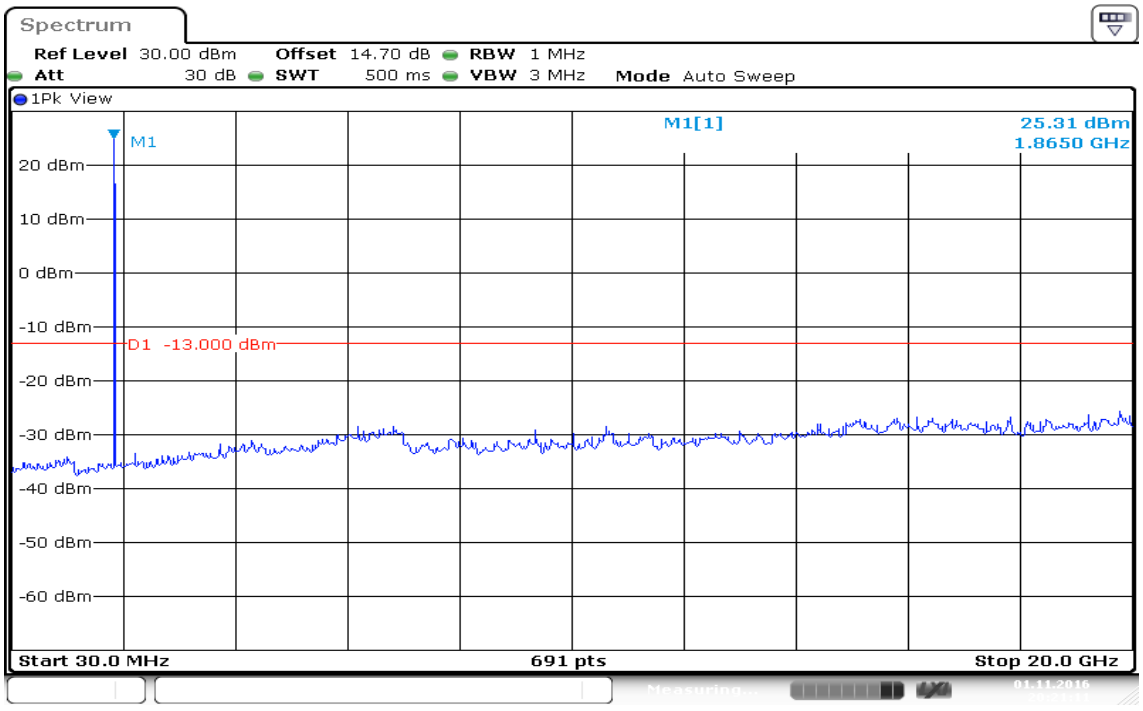
BW: 3MHz / 16QAM / RB =1, RB Offset = 0

CH Low



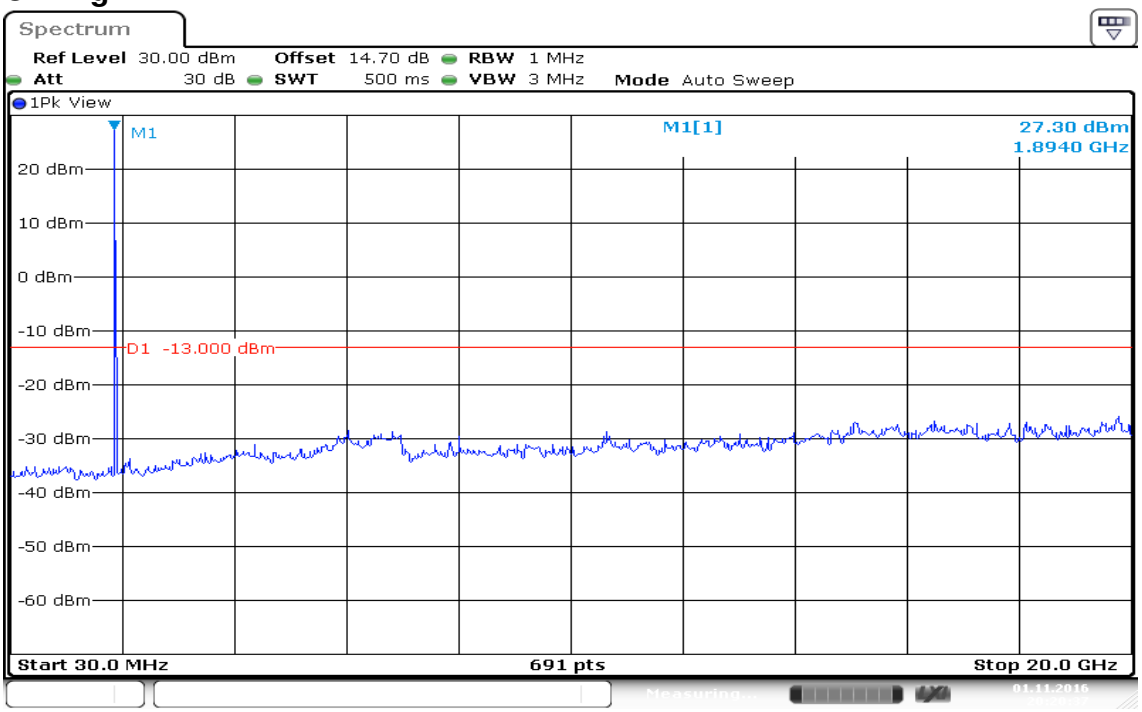
Date: 1.NOV.2016 20:21:41

CH Mid



Date: 1.NOV.2016 20:21:12

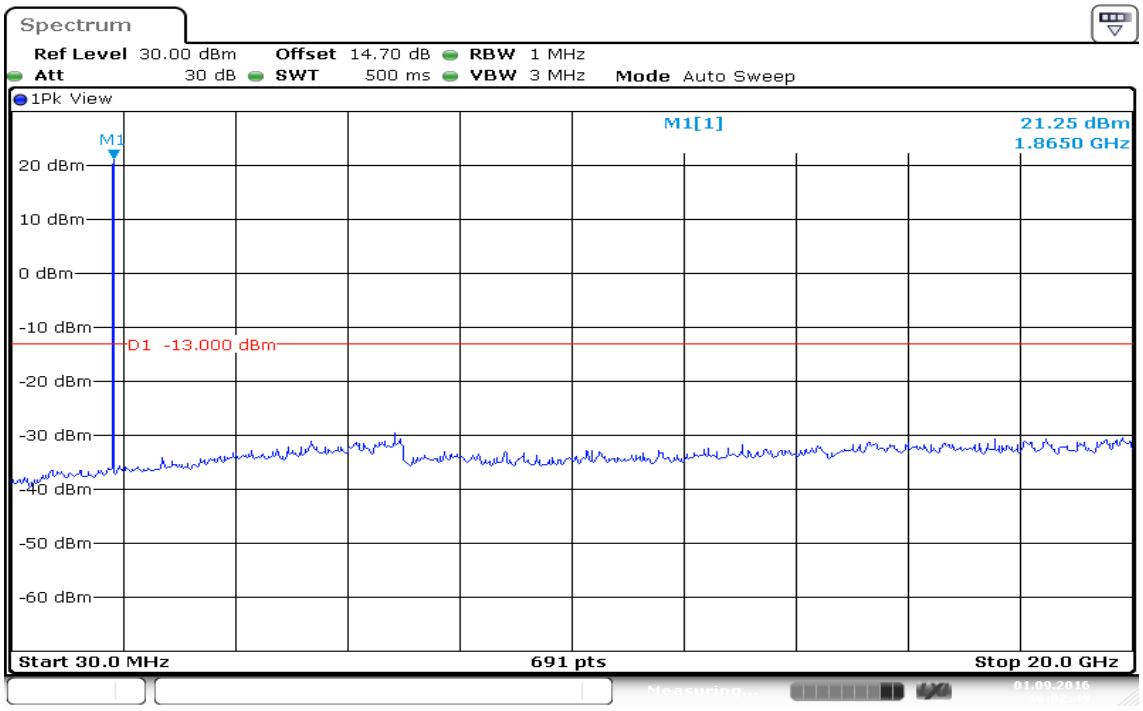
CH High



Date: 1.NOV.2016 20:20:38

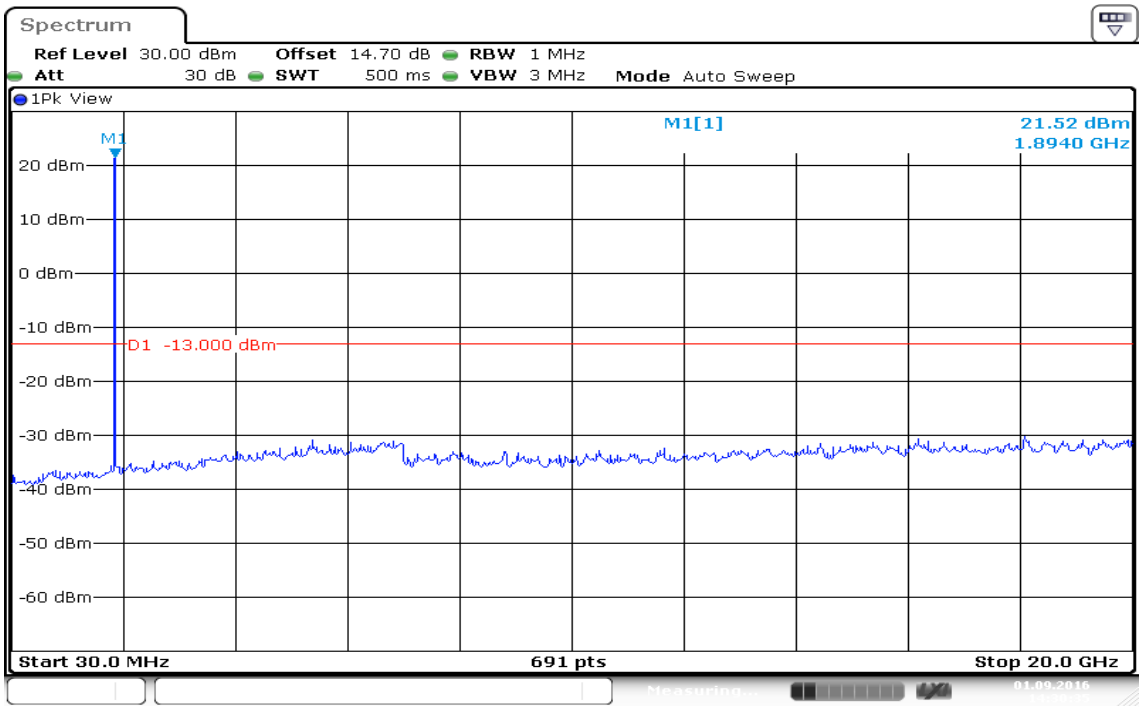
BW: 5MHz / QPSK / RB =1, RB Offset = 0

CH Low



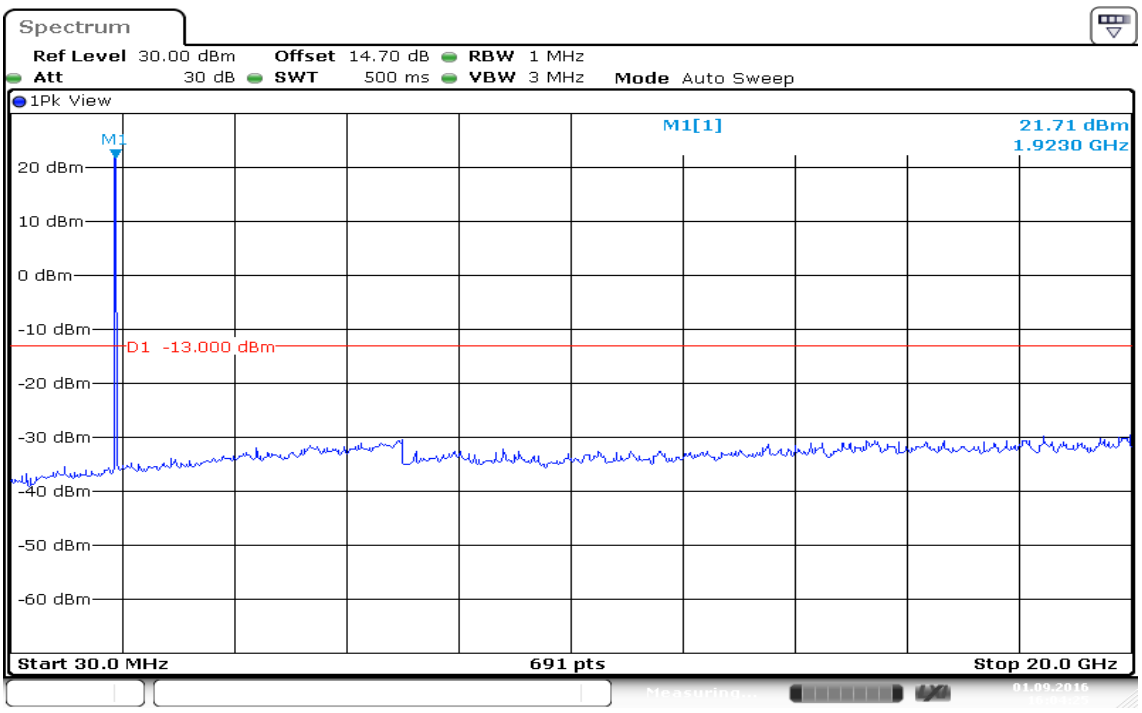
Date: 1.SEP.2016 16:02:49

CH Mid



Date: 1.SEP.2016 14:30:35

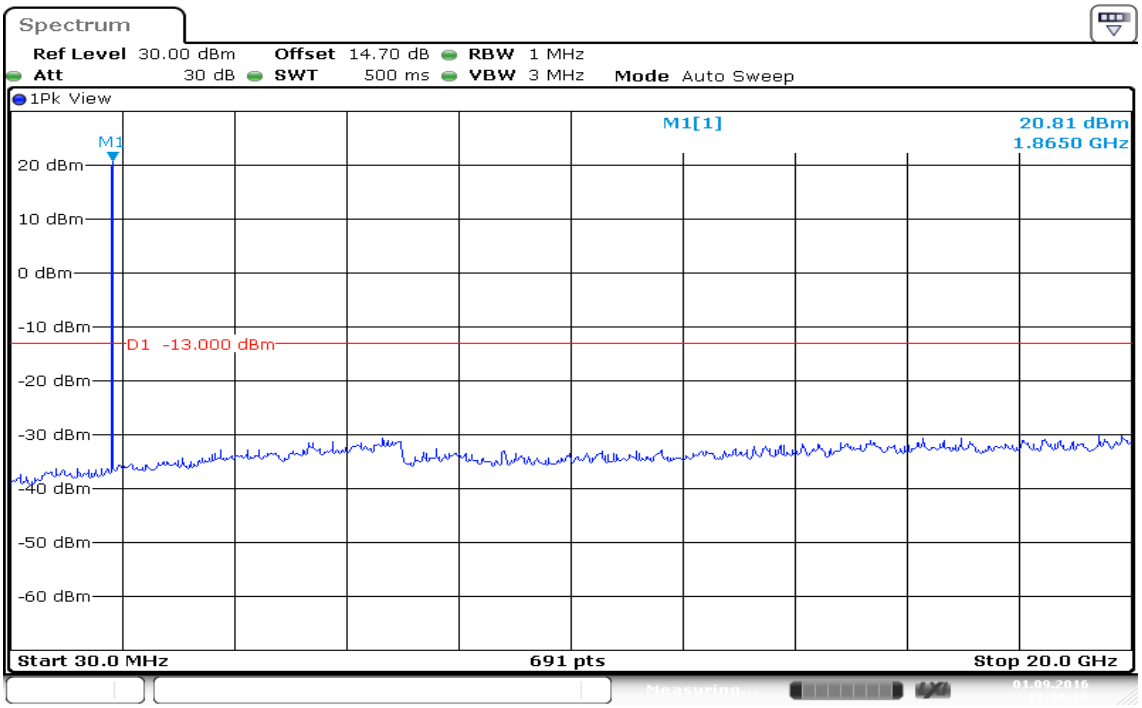
CH High



Date: 1.SEP.2016 16:04:25

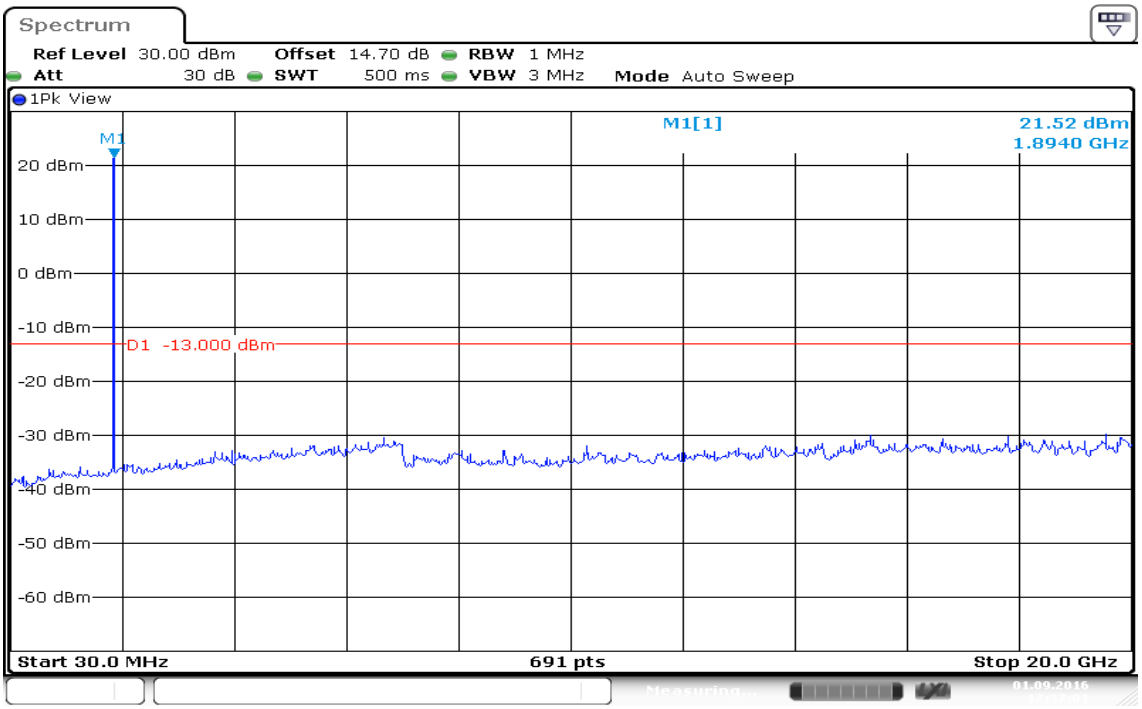
BW: 5MHz / 16QAM / RB =1, RB Offset = 0

CH Low



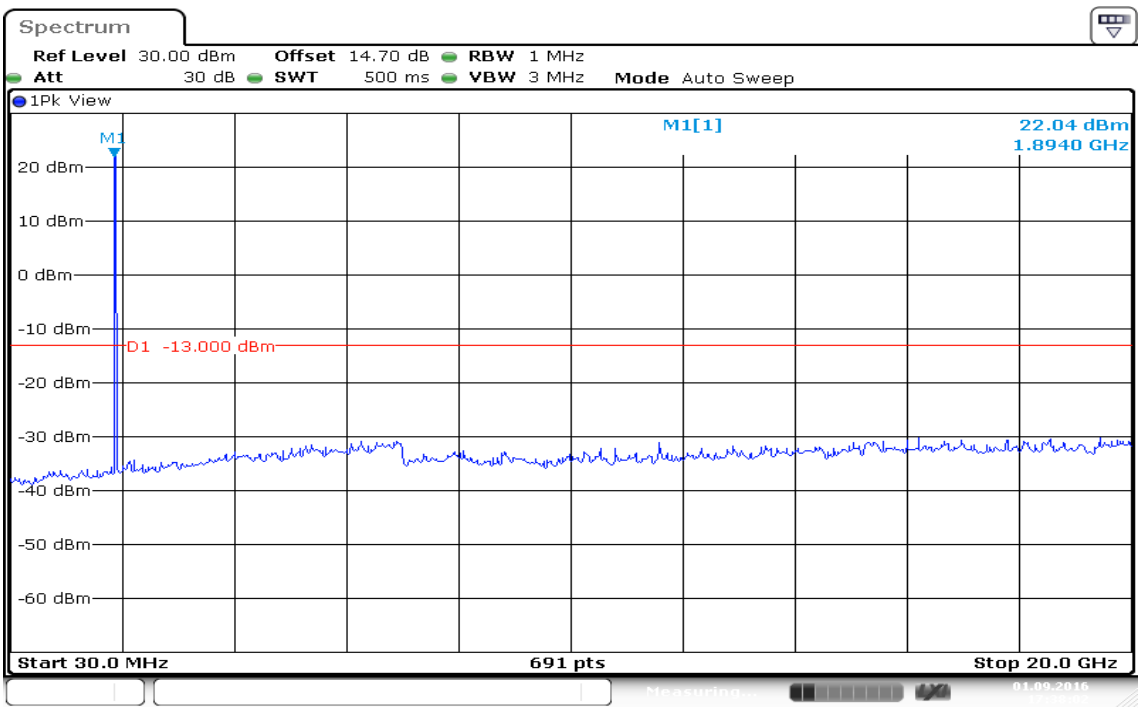
Date: 1.SEP.2016 17:36:16

CH Mid



Date: 1.SEP.2016 17:37:01

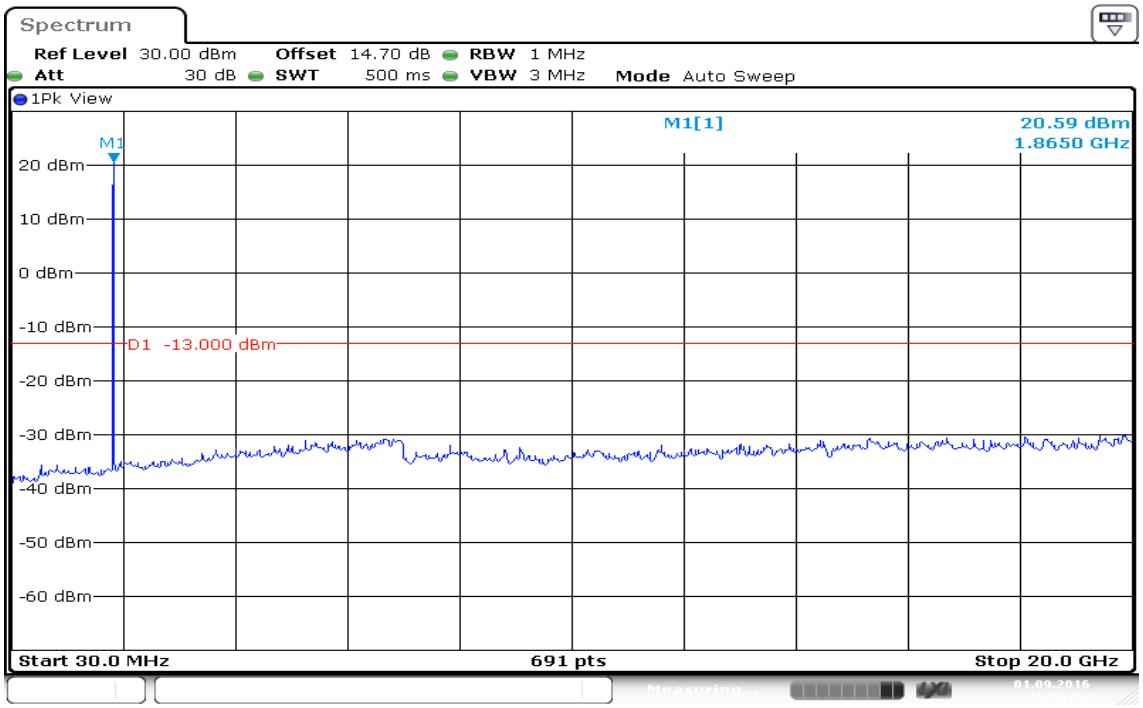
CH High



Date: 1.SEP.2016 17:38:02

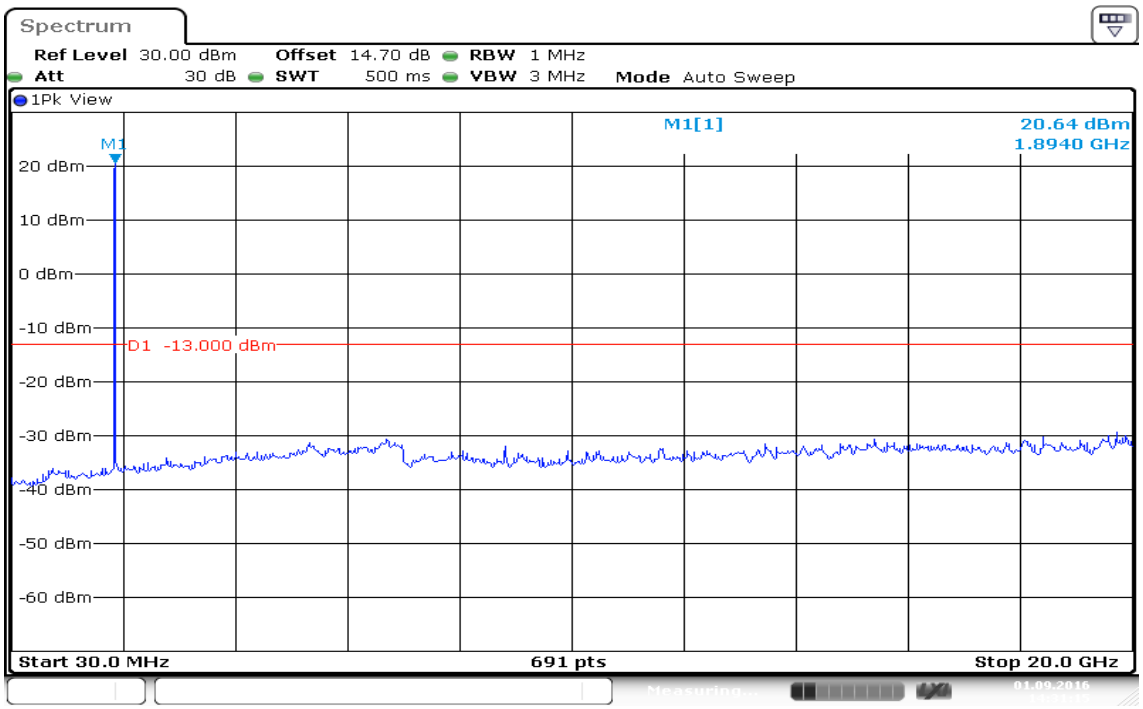
BW: 10MHz / QPSK / RB =1, RB Offset = 0

CH Low



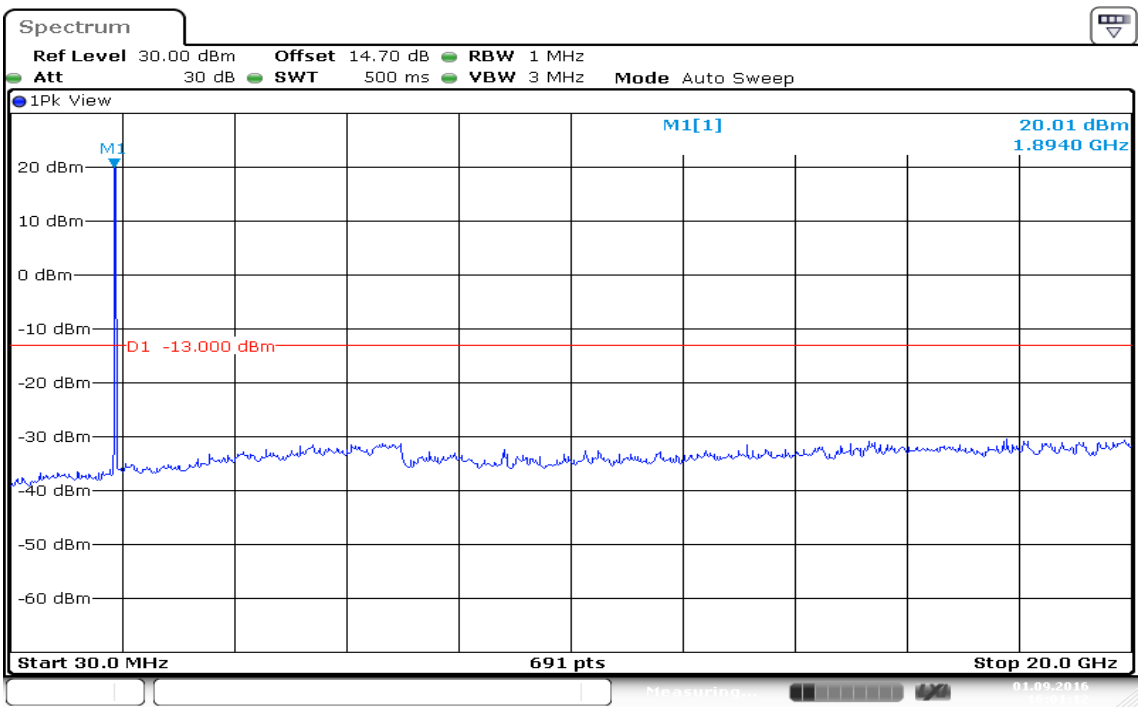
Date: 1.SEP.2016 15:59:52

CH Mid



Date: 1.SEP.2016 14:31:15

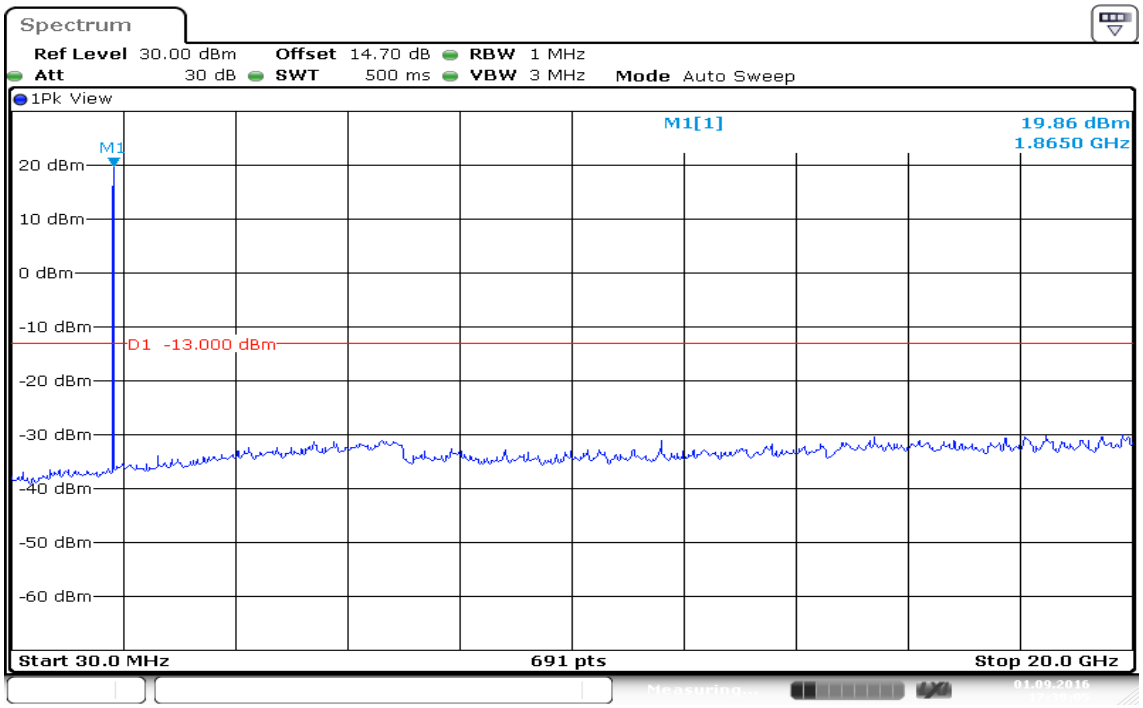
CH High



Date: 1.SEP.2016 16:01:12

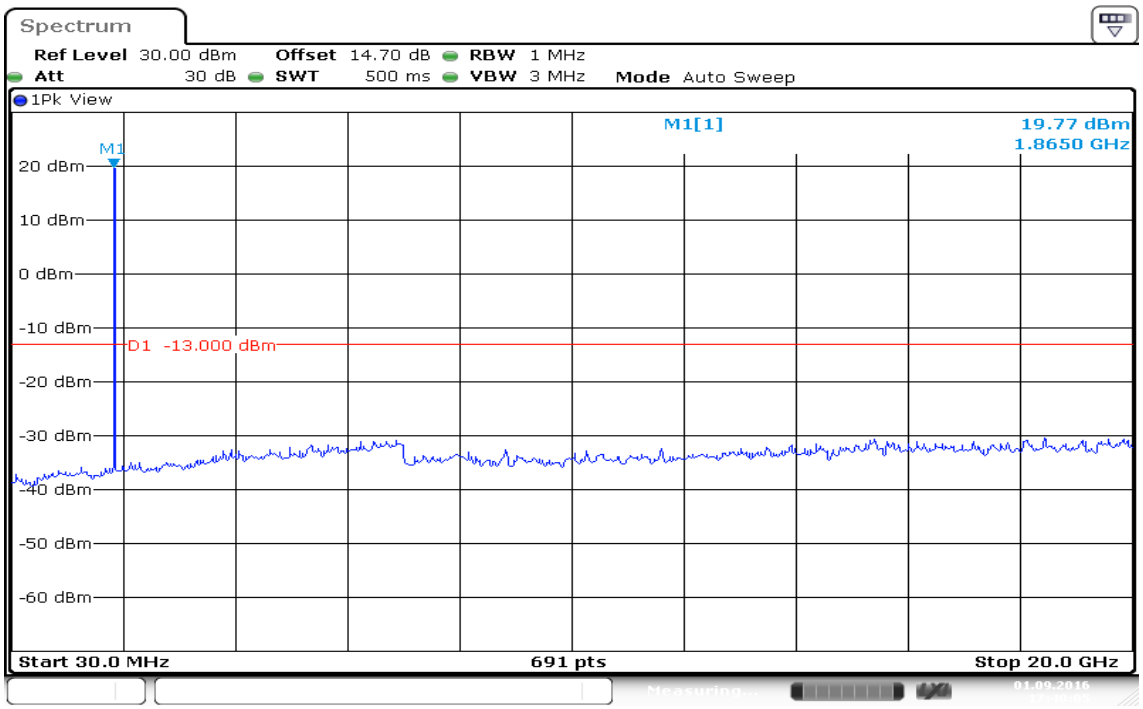
BW: 10MHz / 16QAM / RB =1, RB Offset = 0

CH Low



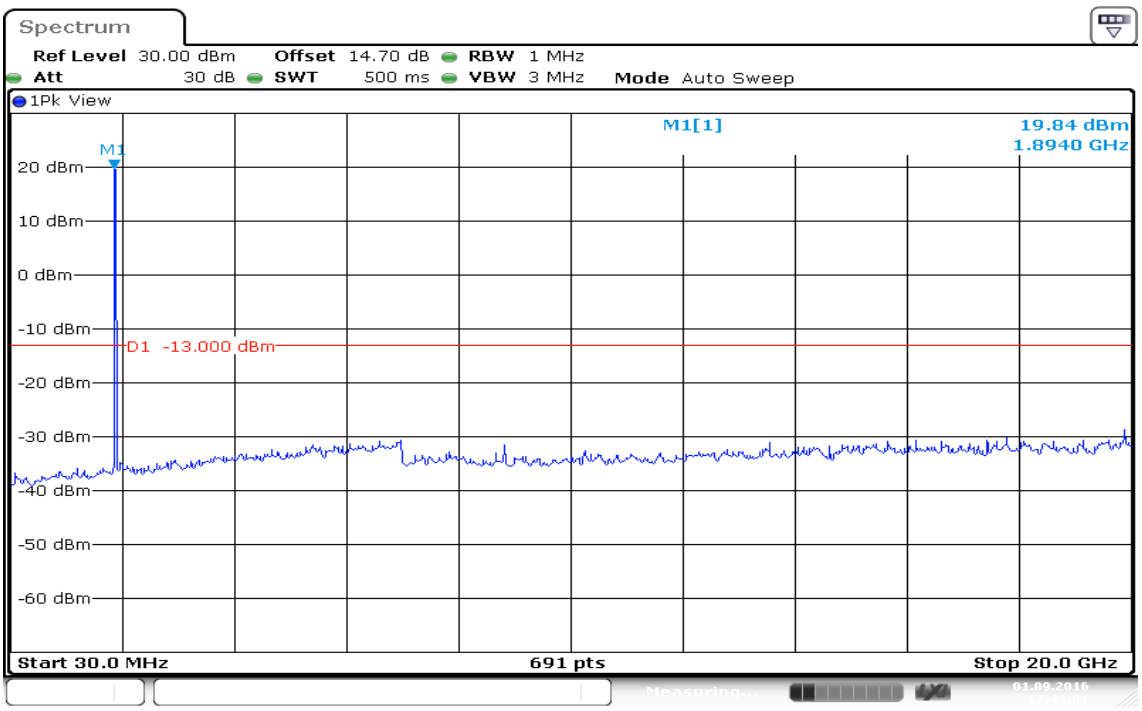
Date: 1.SEP.2016 17:39:05

CH Mid



Date: 1.SEP.2016 17:40:05

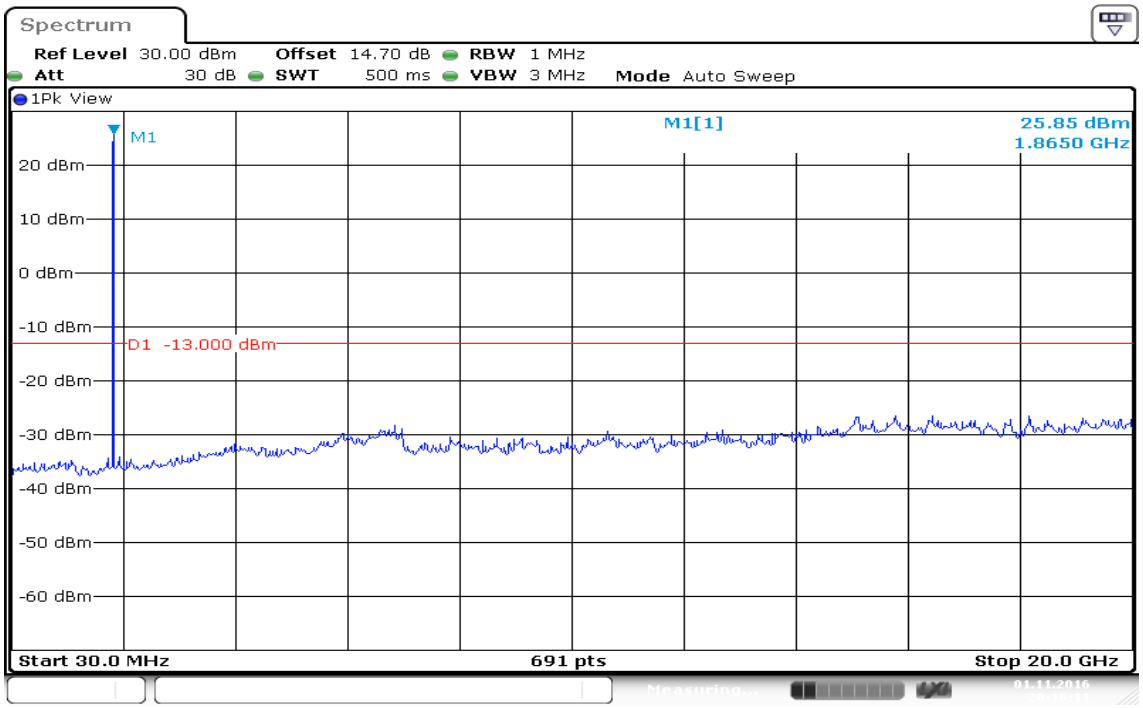
CH High



Date: 1.SEP.2016 17:41:01

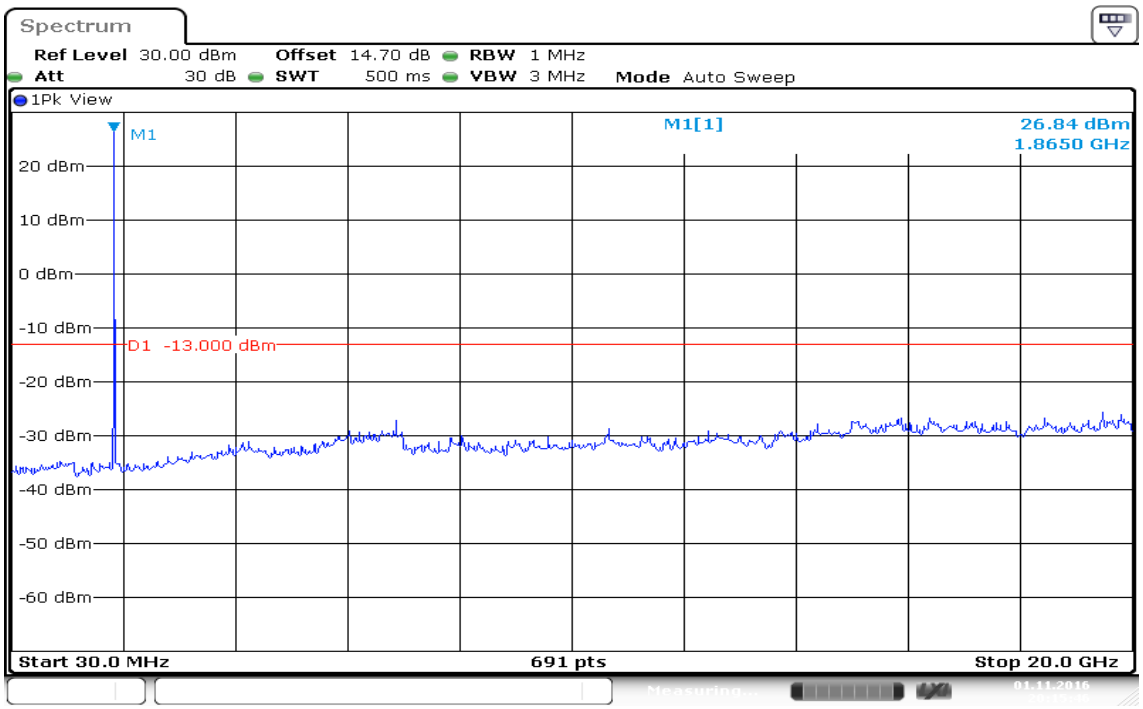
BW: 15MHz / QPSK / RB =1, RB Offset = 0

CH Low



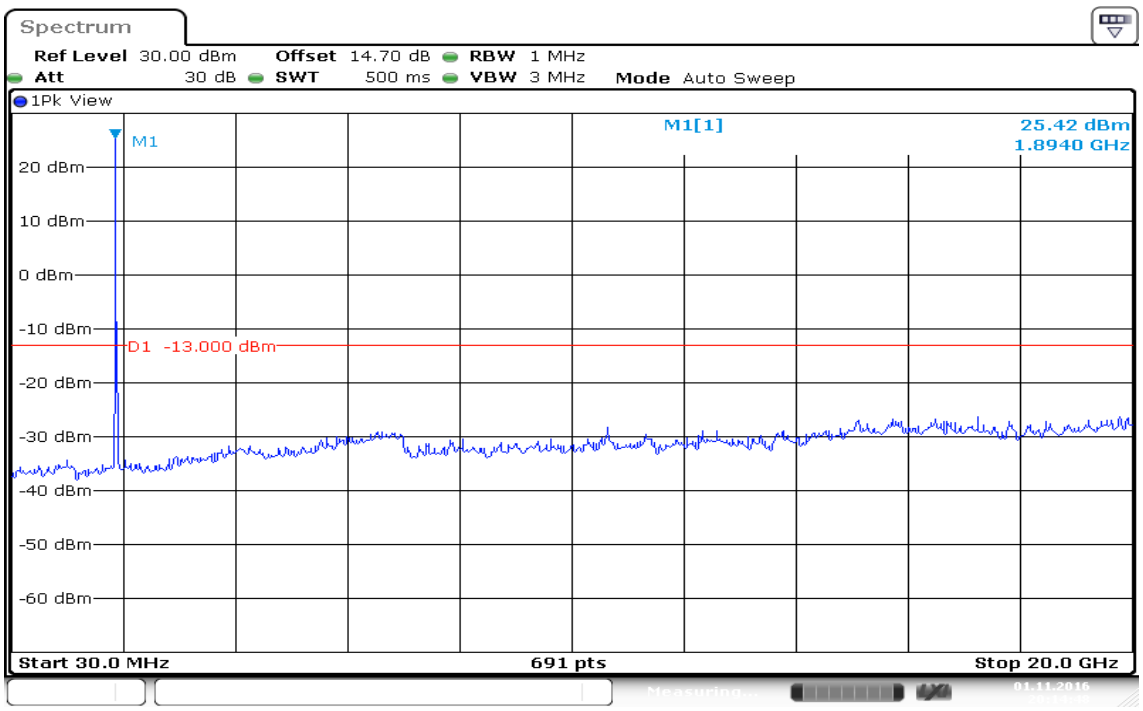
Date: 1.NOV.2016 20:16:12

CH Mid



Date: 1.NOV.2016 20:15:46

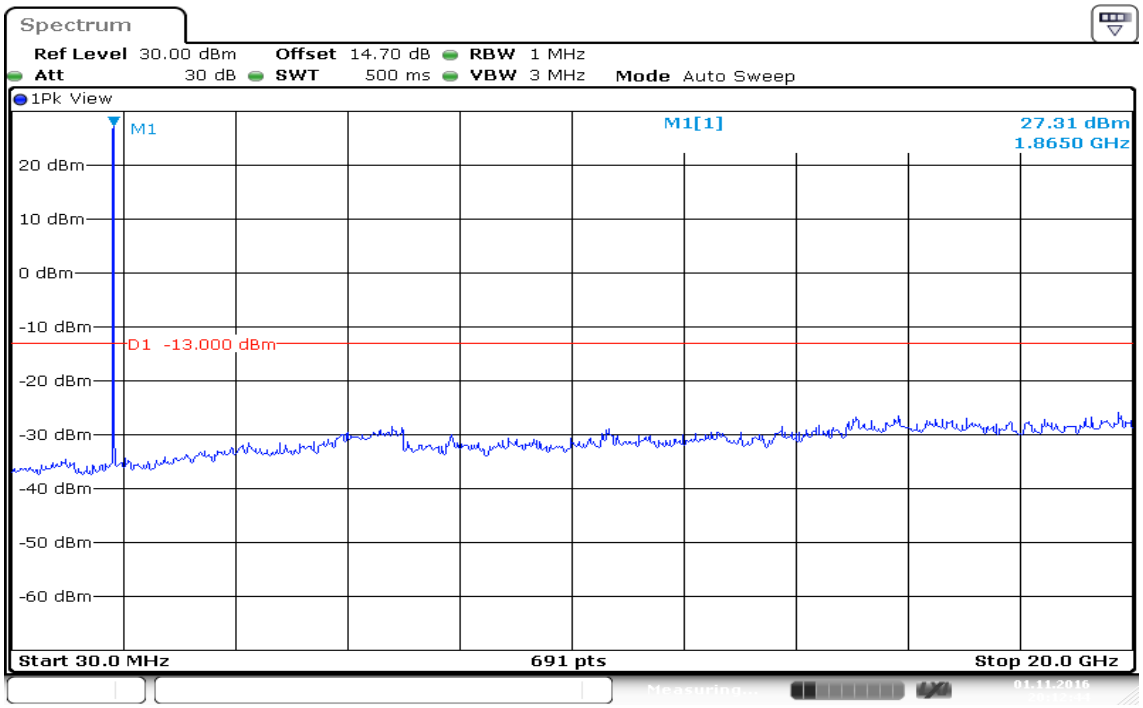
CH High



Date: 1.NOV.2016 20:14:49

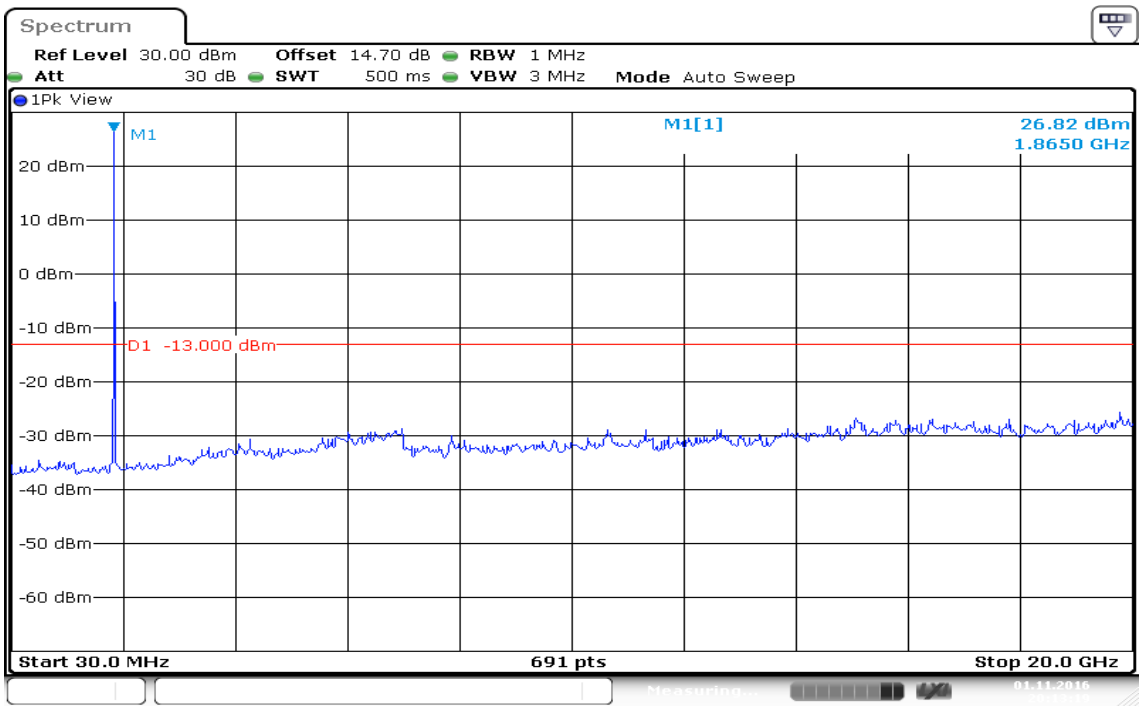
BW: 15MHz / 16QAM / RB =1, RB Offset = 0

CH Low



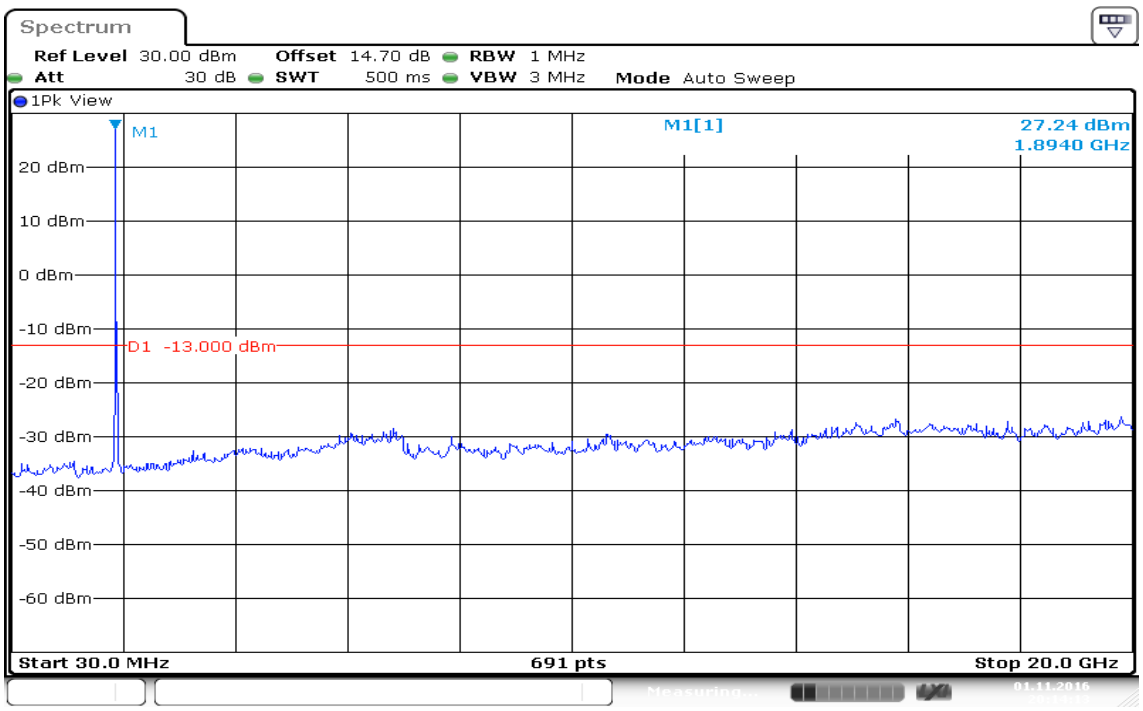
Date: 1.NOV.2016 20:12:45

CH Mid



Date: 1.NOV.2016 20:13:19

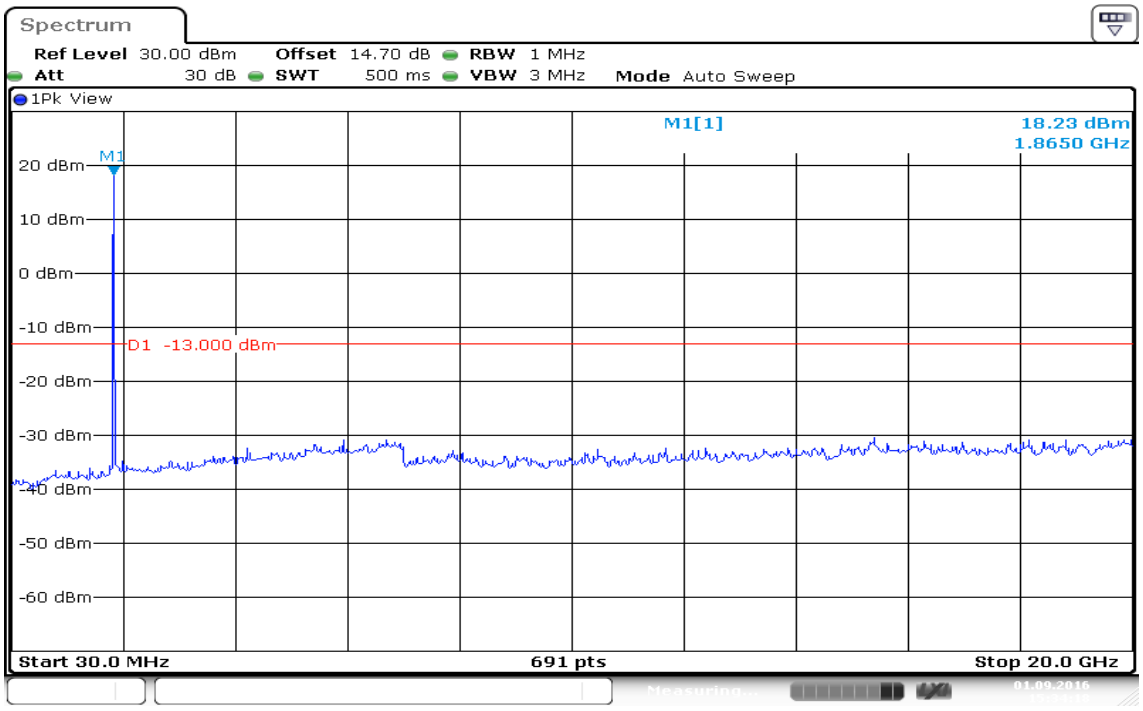
CH High



Date: 1.NOV.2016 20:14:13

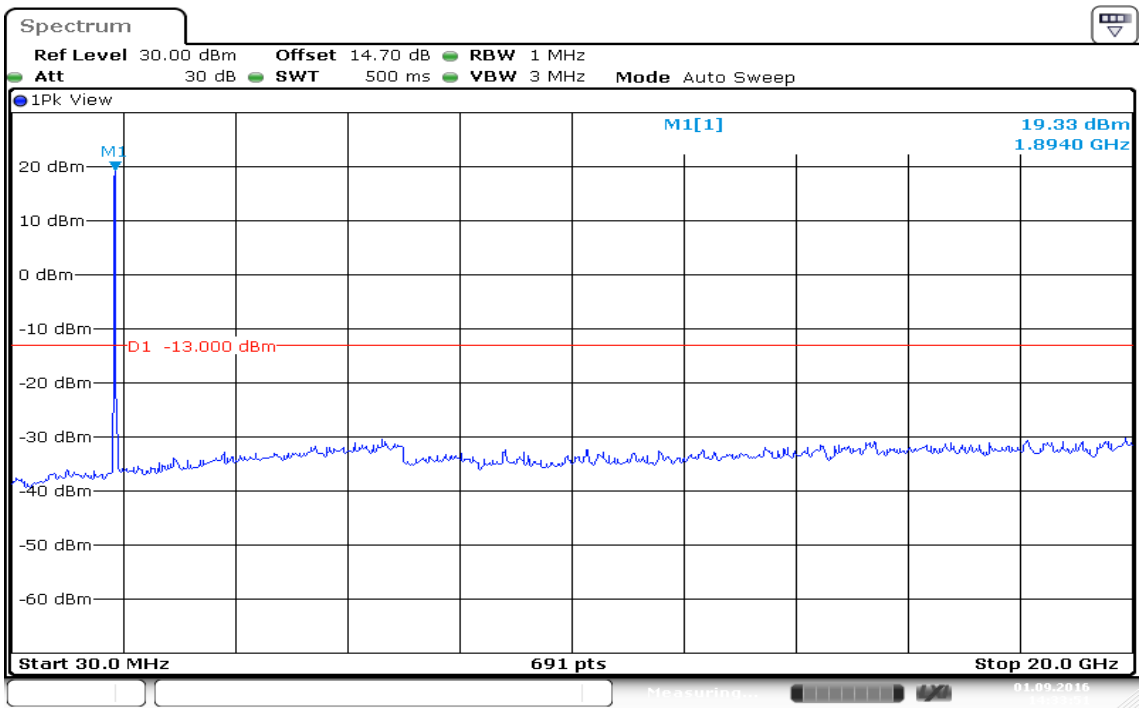
BW: 20MHz / QPSK / RB =1, RB Offset = 0

CH Low



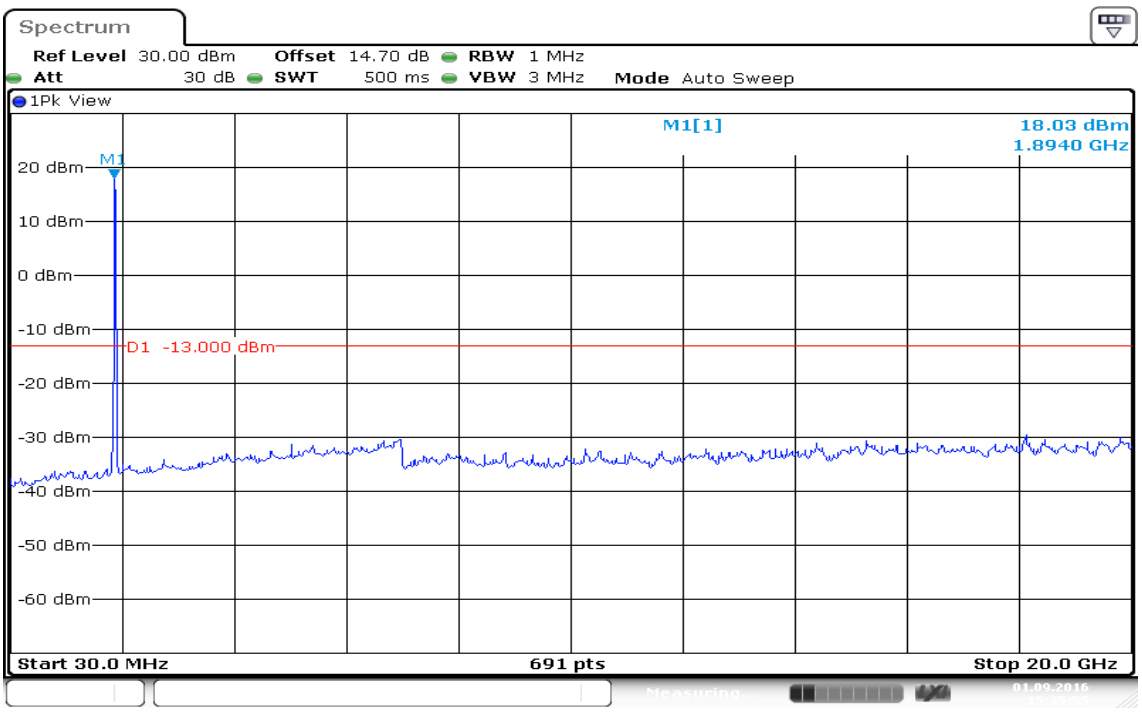
Date: 1.SEP.2016 15:34:18

CH Mid



Date: 1.SEP.2016 14:33:51

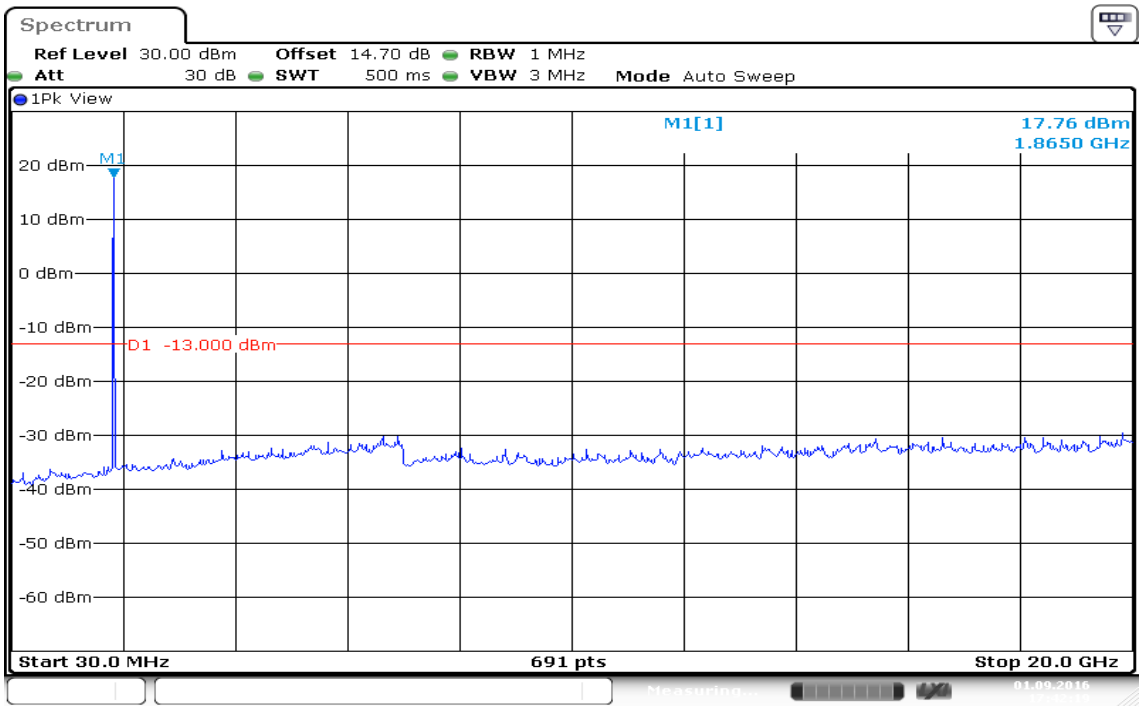
CH High



Date: 1.SEP.2016 15:35:55

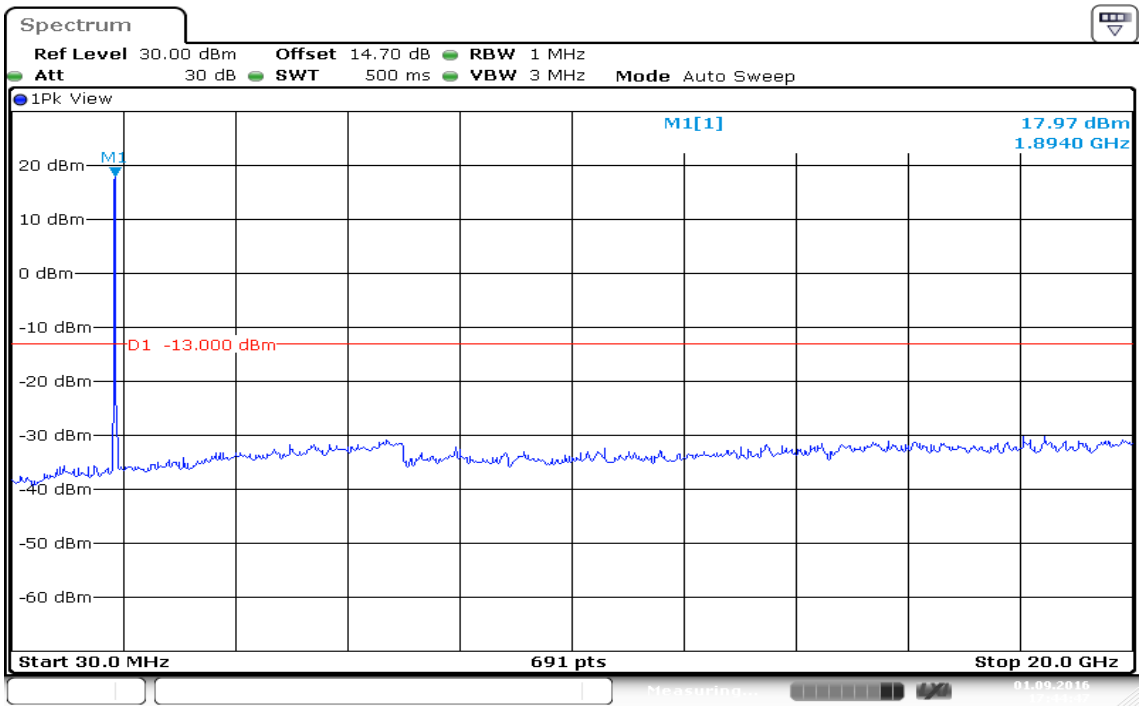
BW: 20MHz / 16QAM / RB =1, RB Offset = 0

CH Low



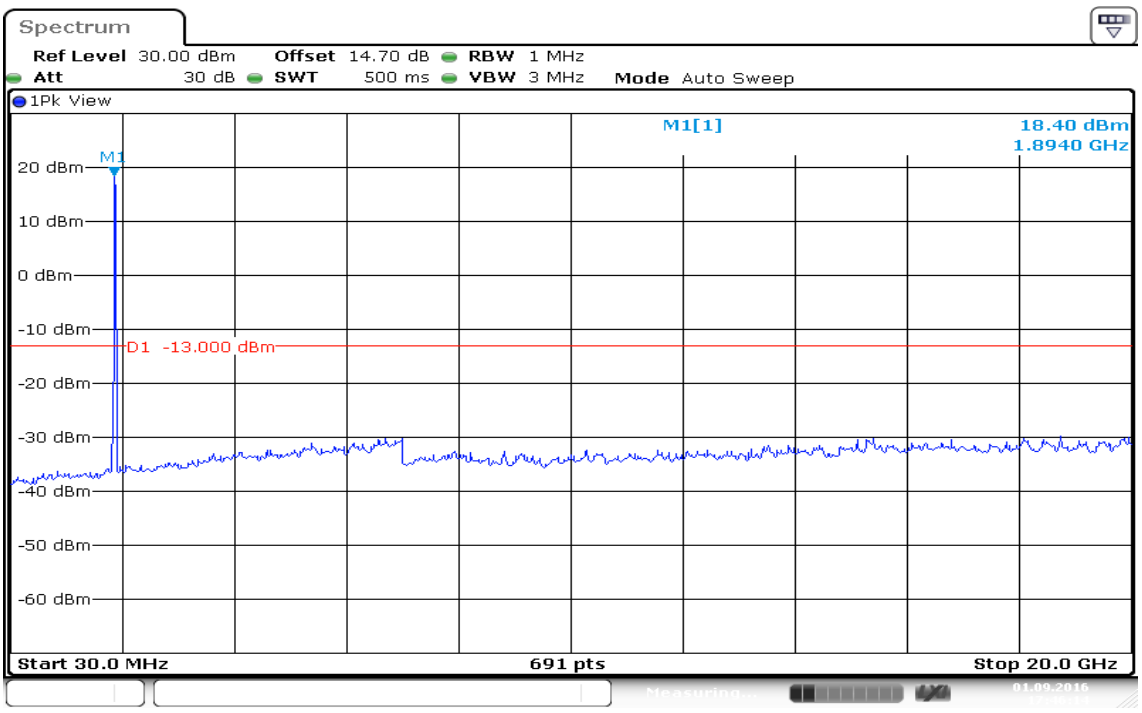
Date: 1.SEP.2016 17:42:19

CH Mid



Date: 1.SEP.2016 17:44:47

CH High

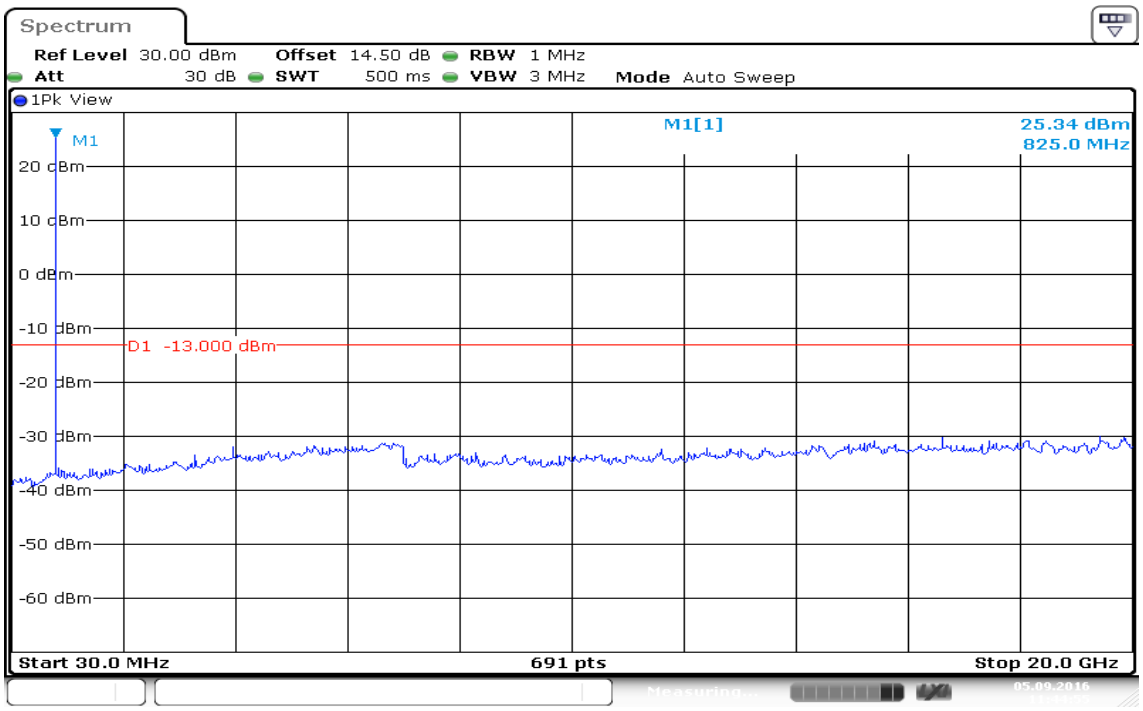


Date: 1.SEP.2016 17:46:14

LTE Band 5

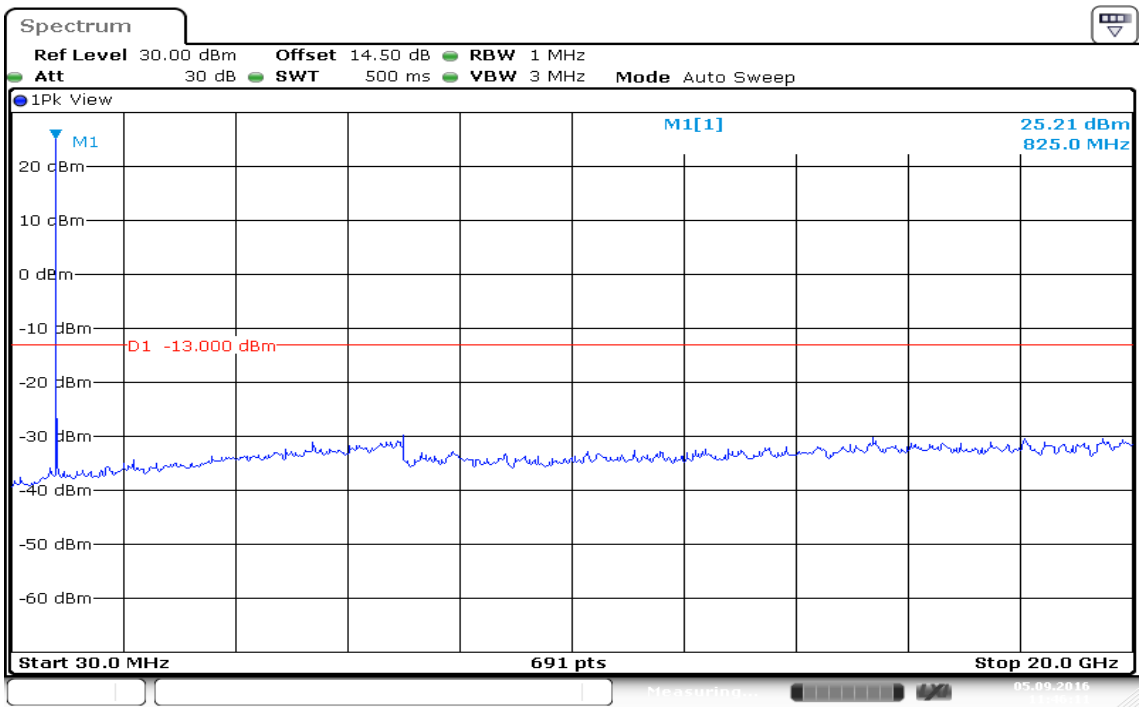
BW: 1.4MHz / QPSK/ RB =1, RB Offset = 0

CH Low



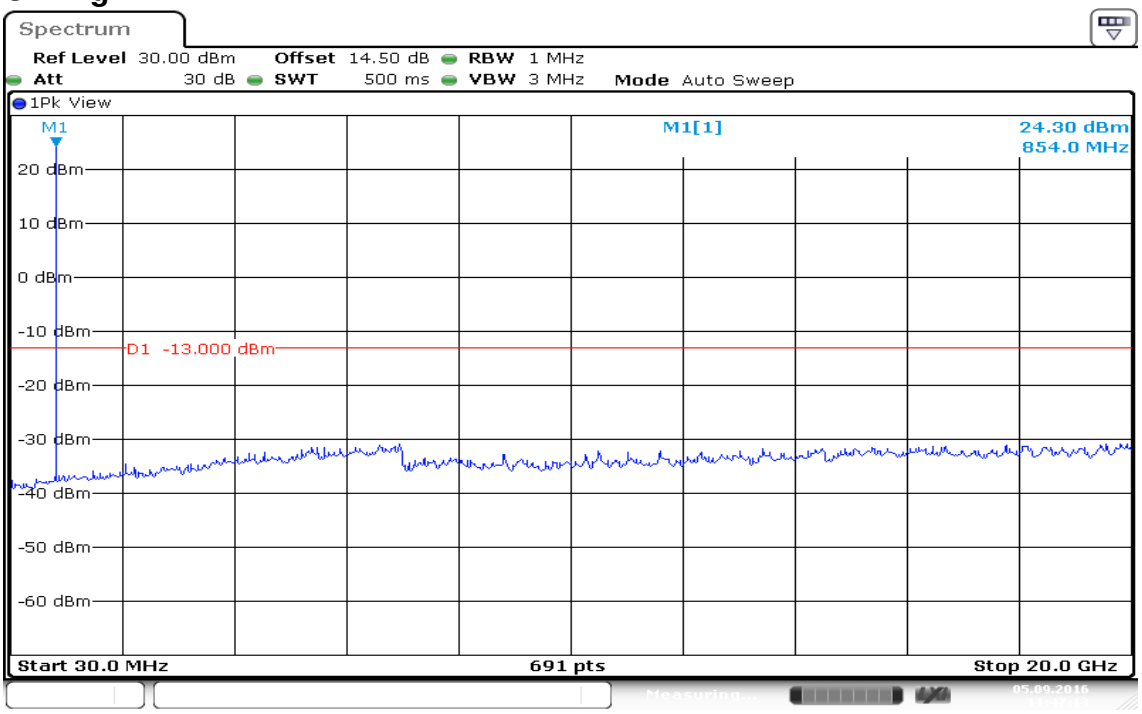
Date: 5.SEP.2016 11:44:56

CH Mid



Date: 5.SEP.2016 11:46:12

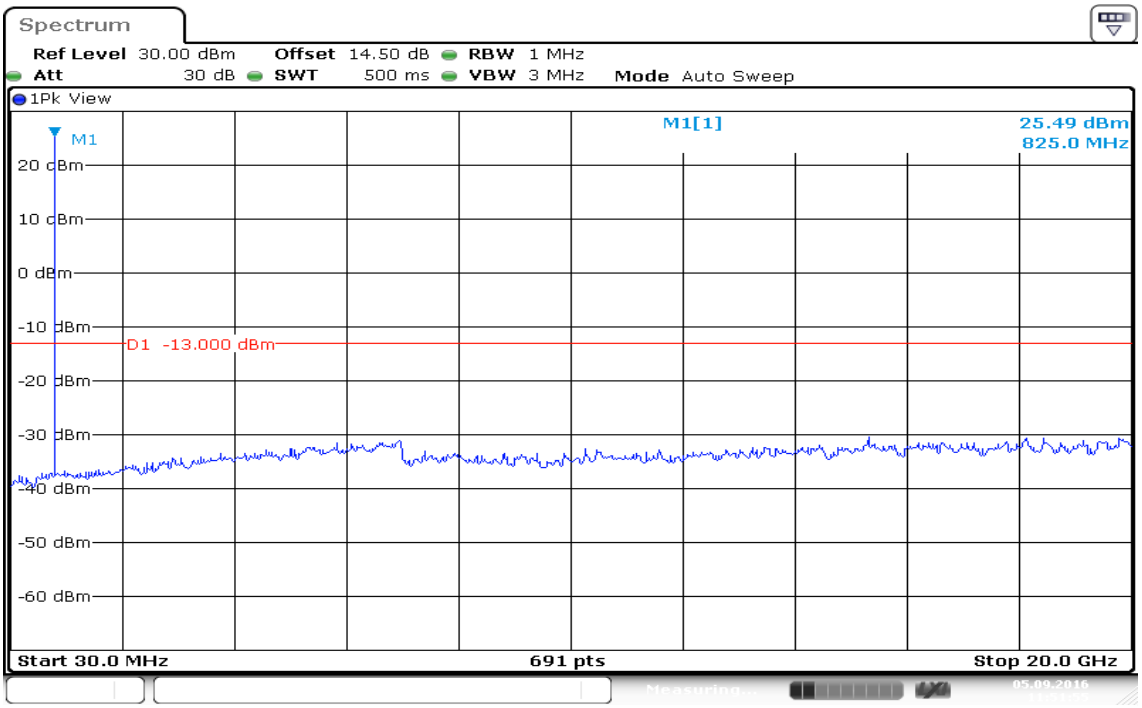
CH High



Date: 5.SEP.2016 11:47:13

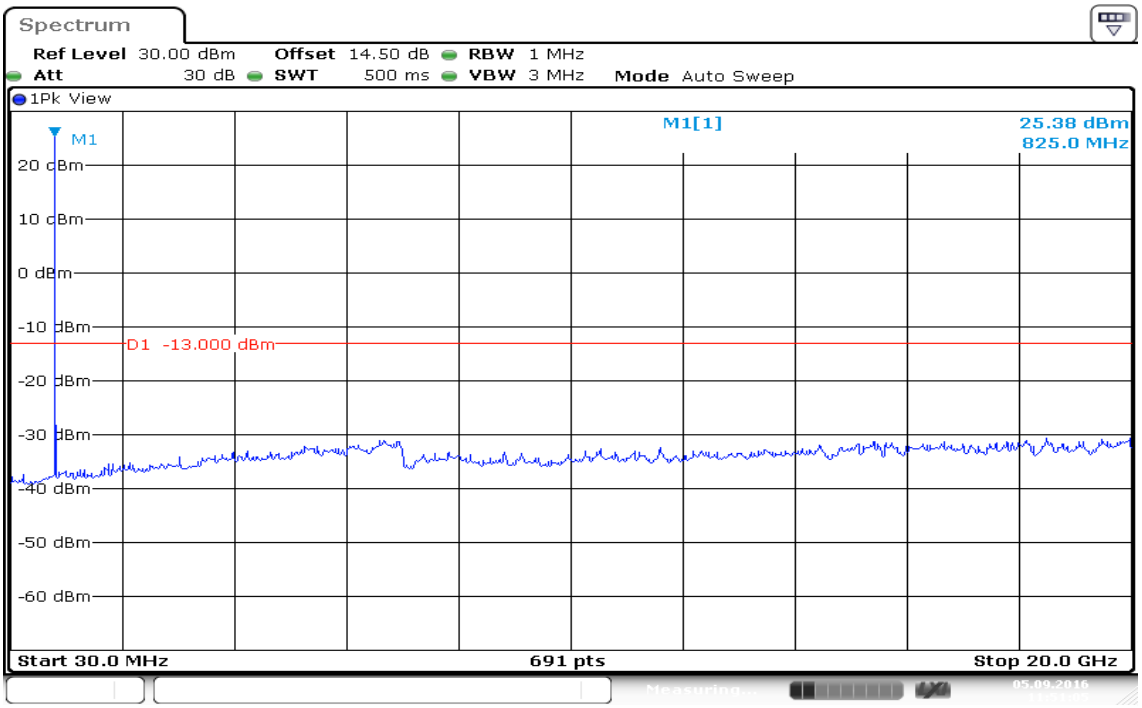
BW: 1.4MHz / 16QAM/ RB =1, RB Offset = 0

CH Low



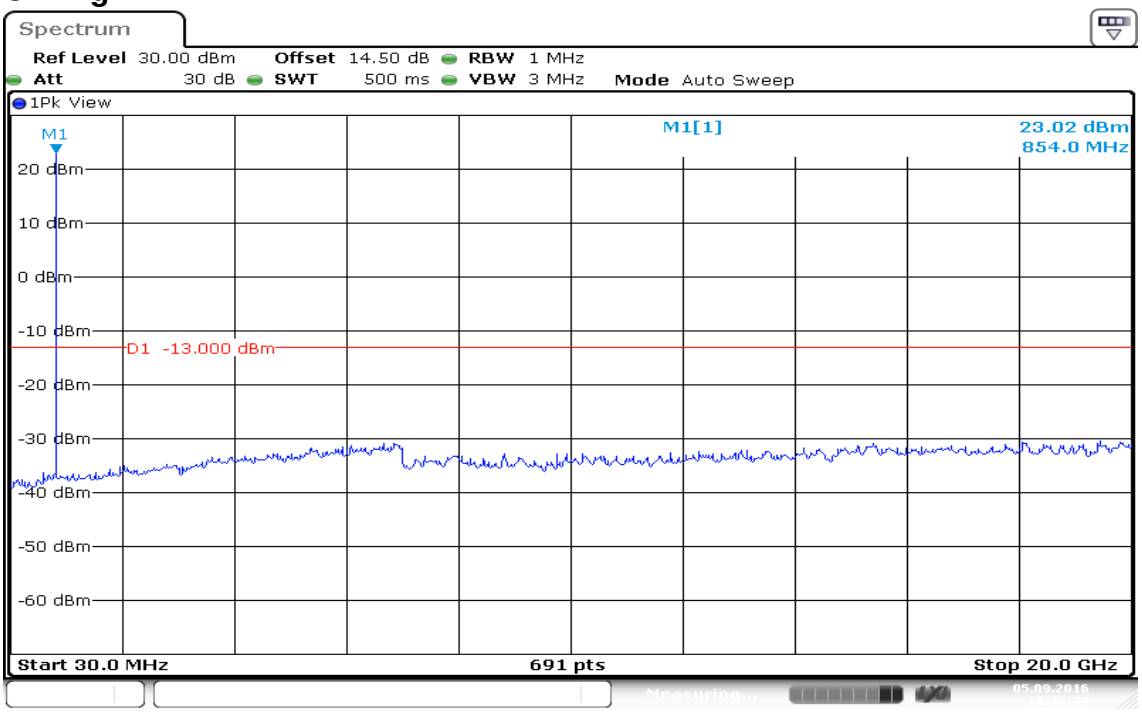
Date: 5.SEP.2016 11:51:55

CH Mid



Date: 5.SEP.2016 11:51:06

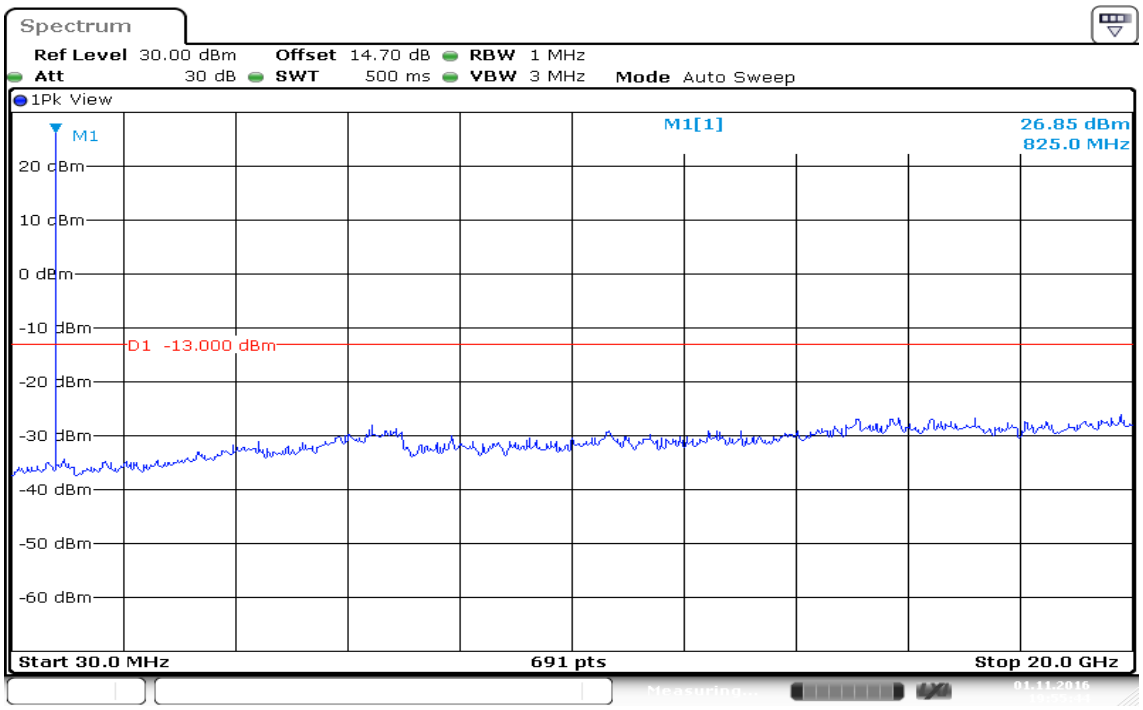
CH High



Date: 5.SEP.2016 11:48:46

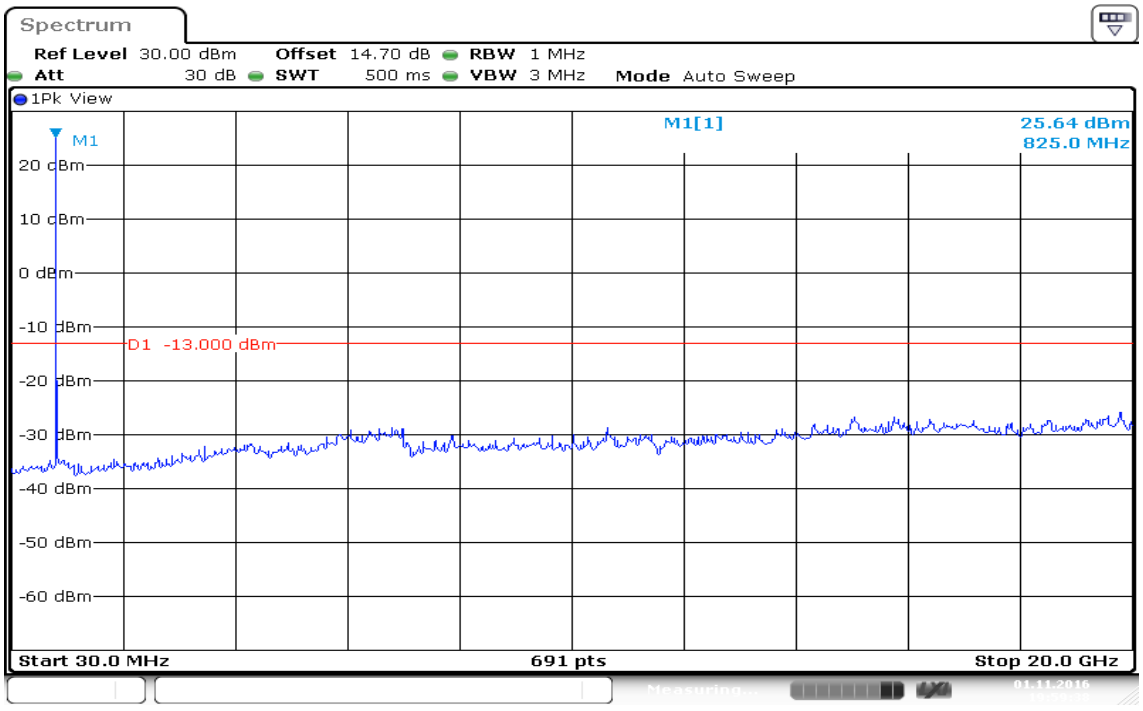
BW: 3MHz / QPSK / RB =1, RB Offset = 0

CH Low



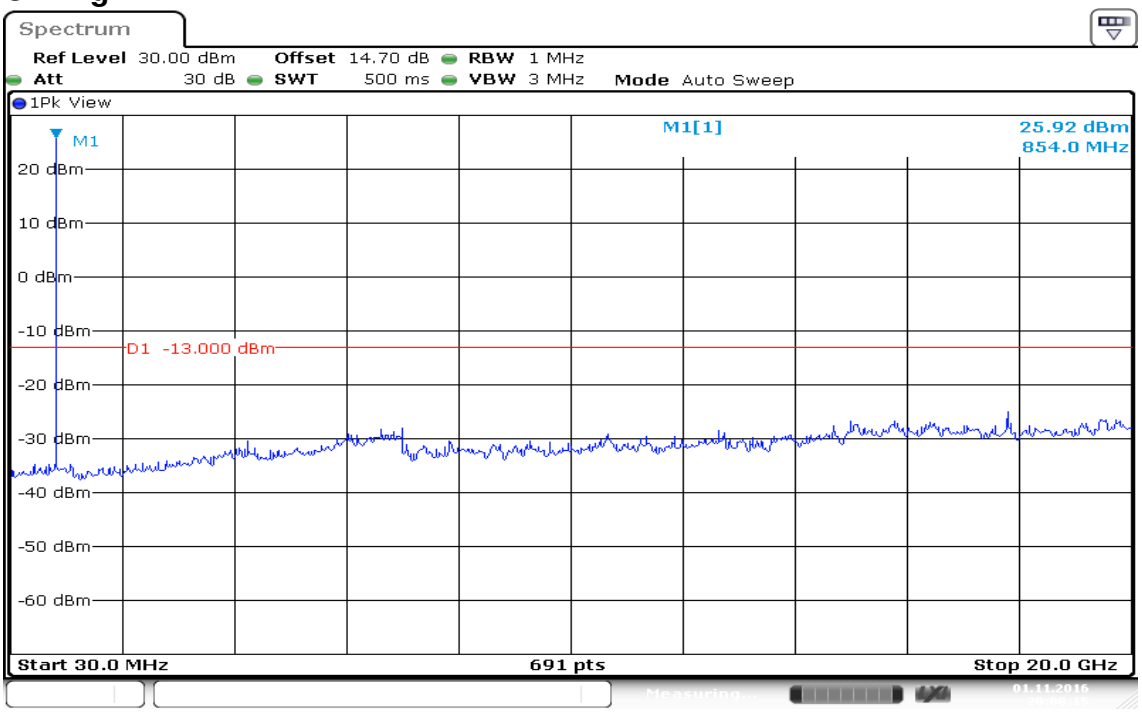
Date: 1.NOV.2016 19:55:45

CH Mid



Date: 1.NOV.2016 19:59:38

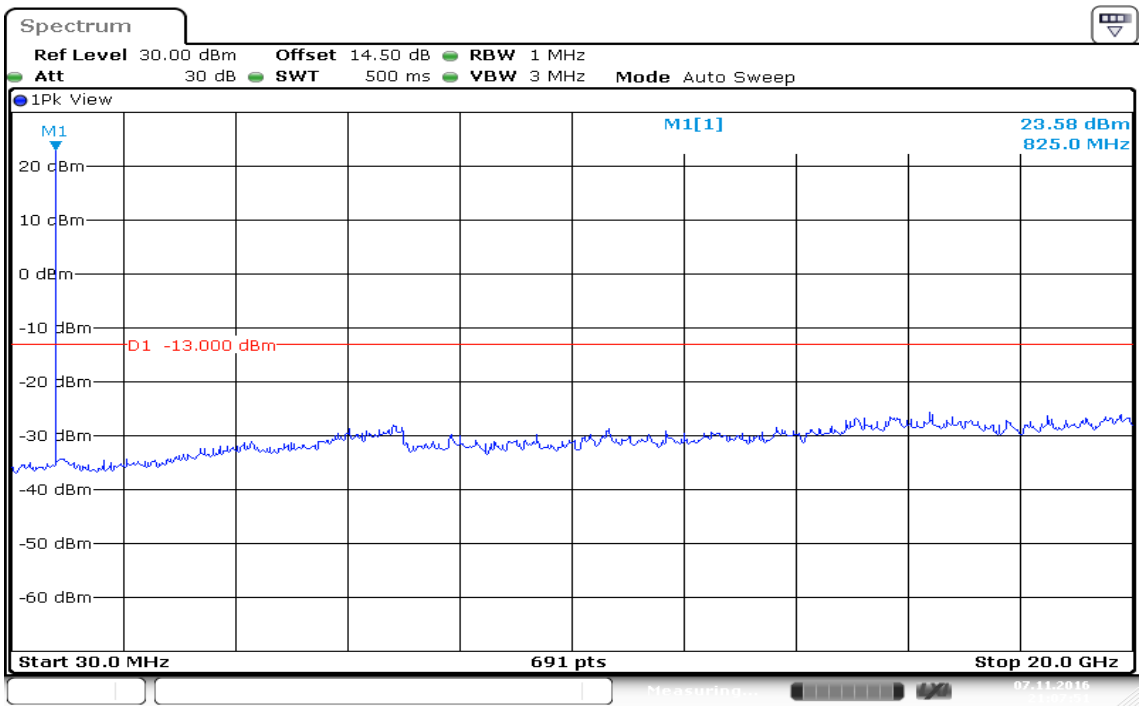
CH High



Date: 1.NOV.2016 20:00:16

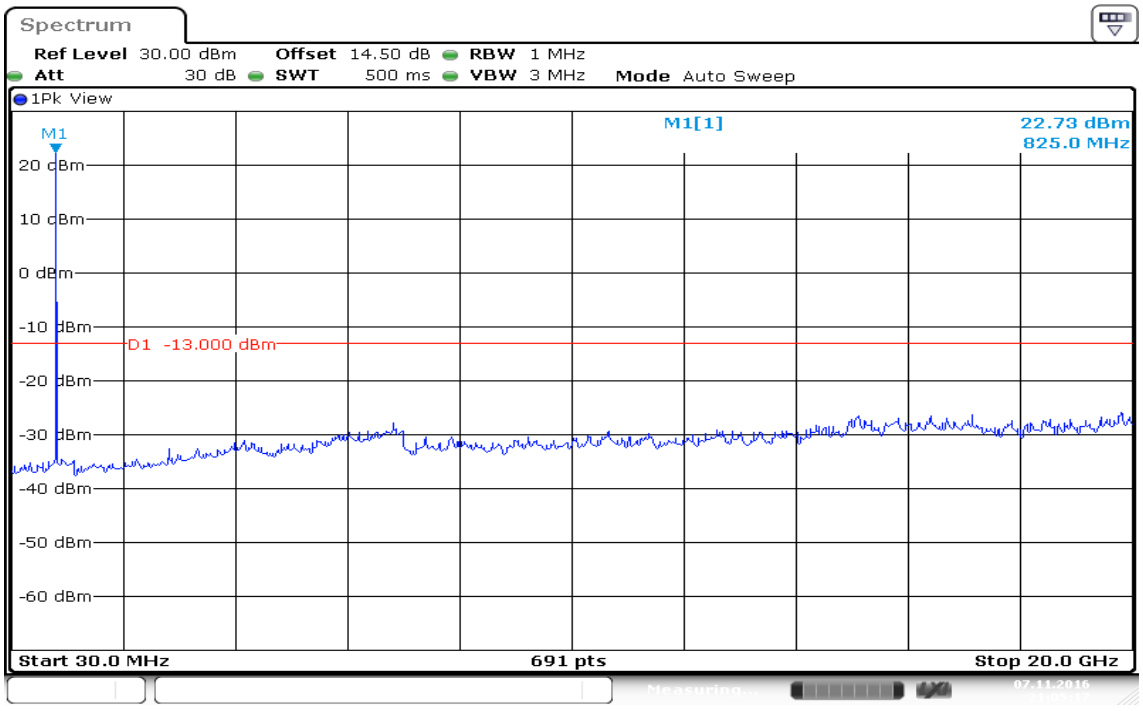
BW: 3MHz / 16QAM / RB =1, RB Offset = 0

CH Low



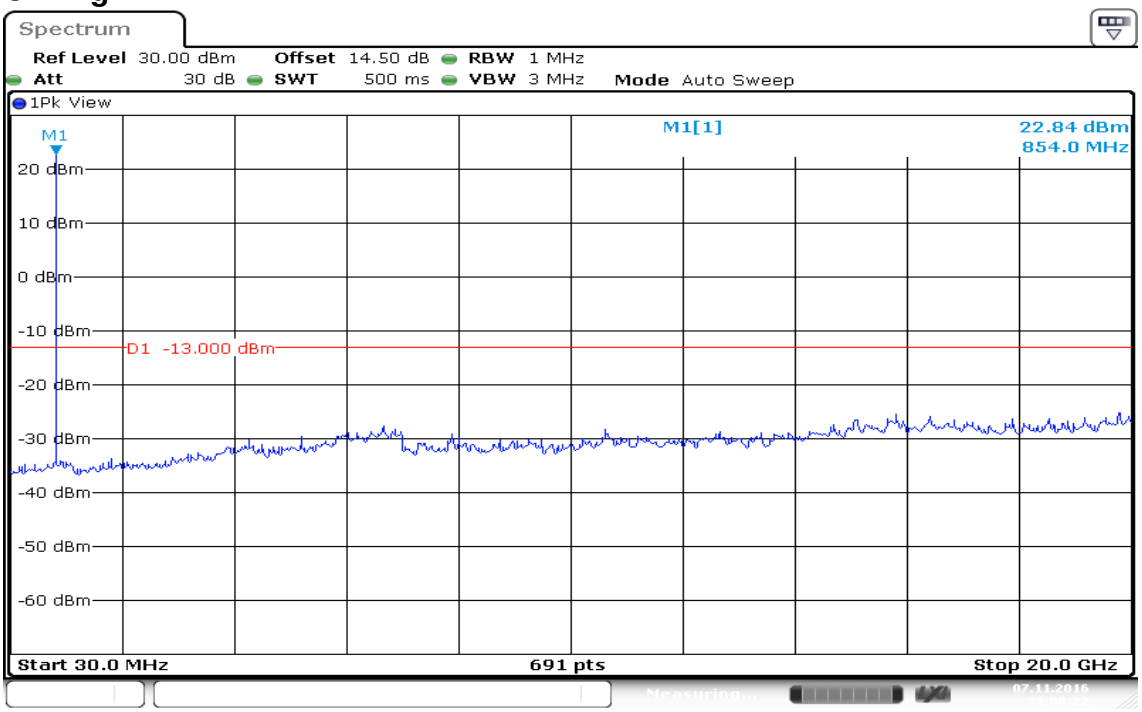
Date: 7.NOV.2016 21:07:51

CH Mid



Date: 7.NOV.2016 21:05:18

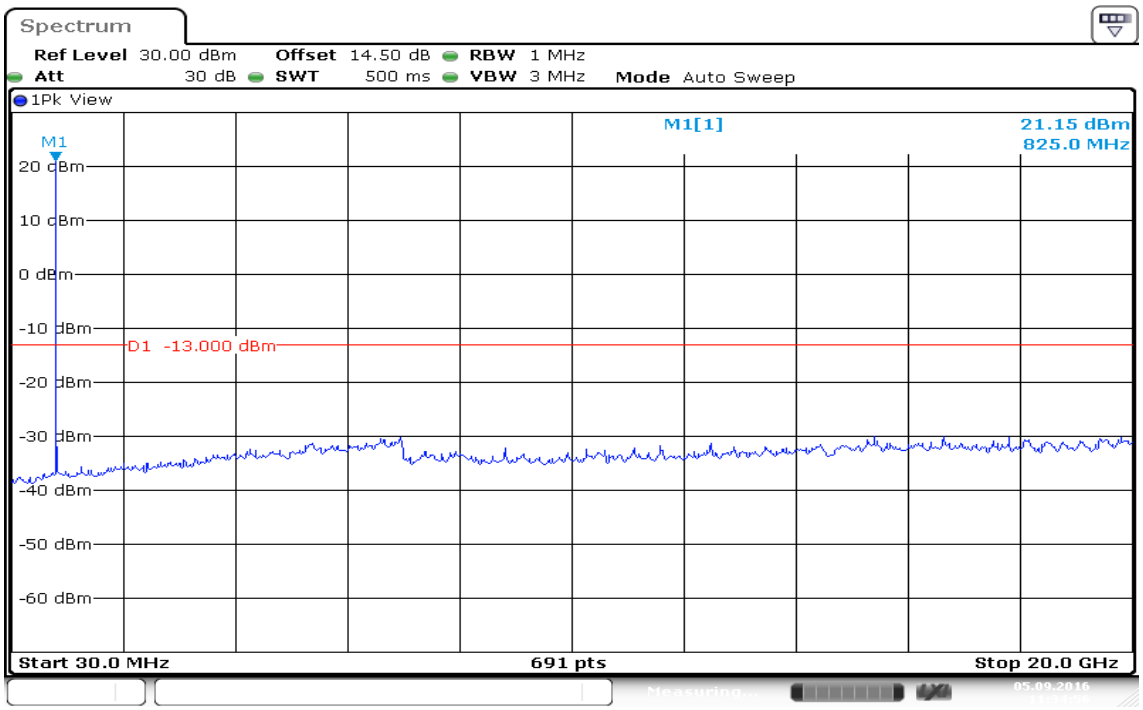
CH High



Date: 7.NOV.2016 21:08:22

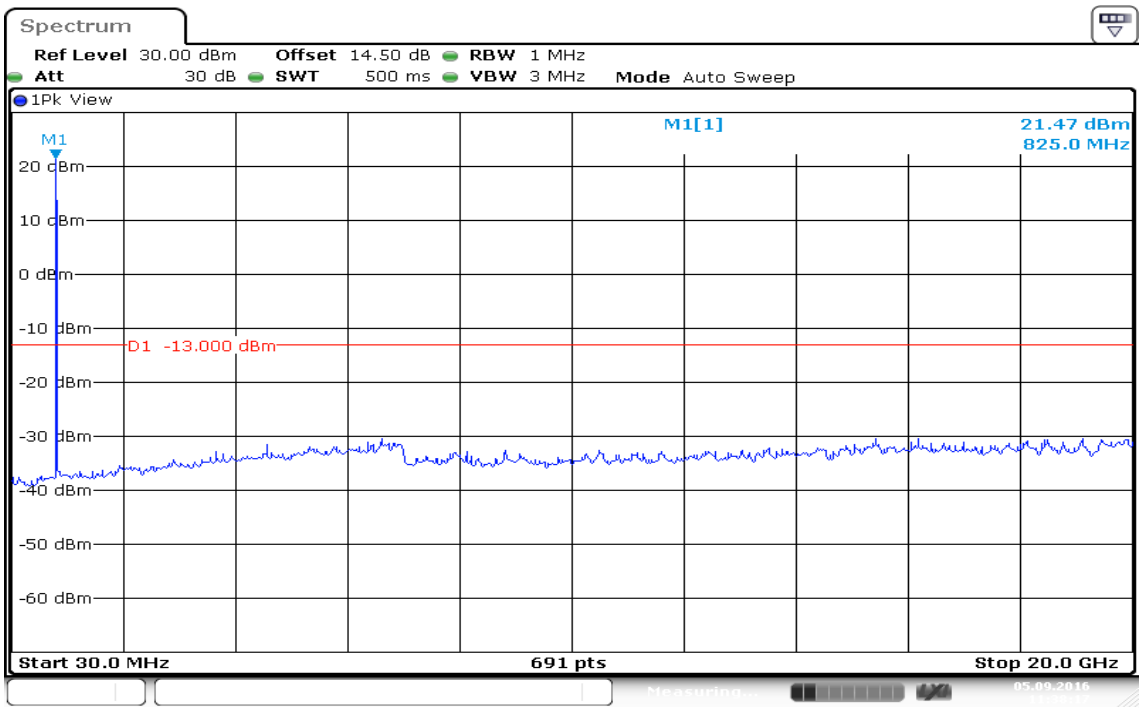
BW: 5MHz / QPSK / RB =1, RB Offset = 0

CH Low



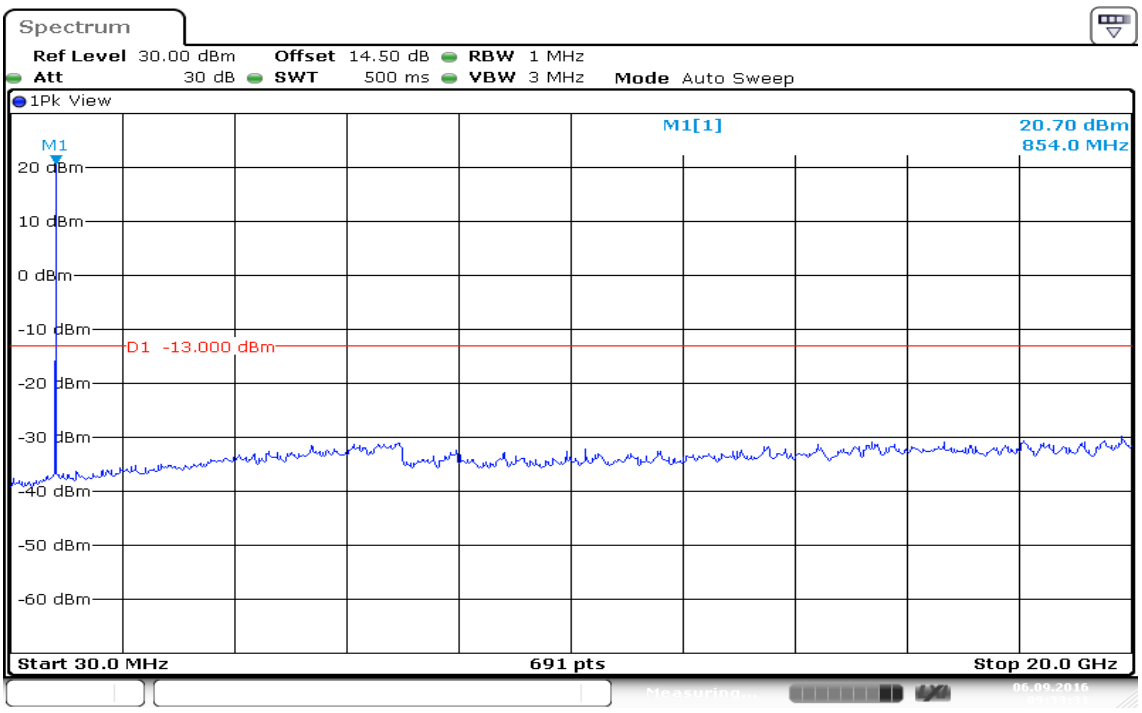
Date: 5.SEP.2016 11:34:57

CH Mid



Date: 5.SEP.2016 11:38:18

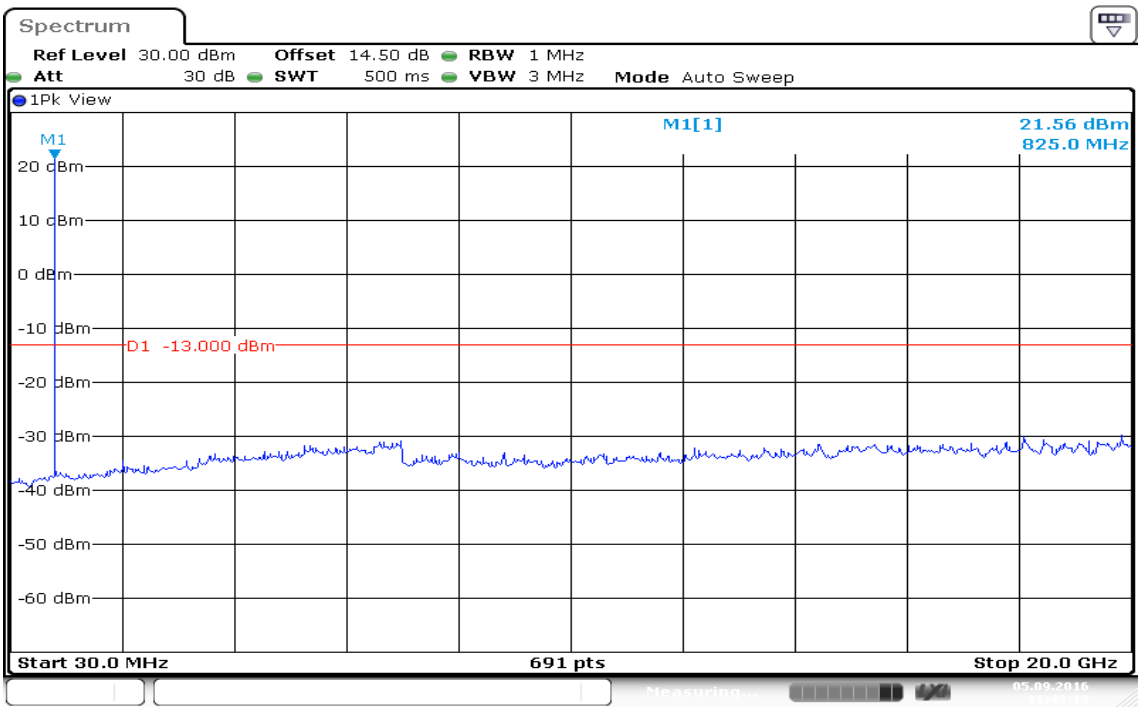
CH High



Date: 6.SEP.2016 09:33:31

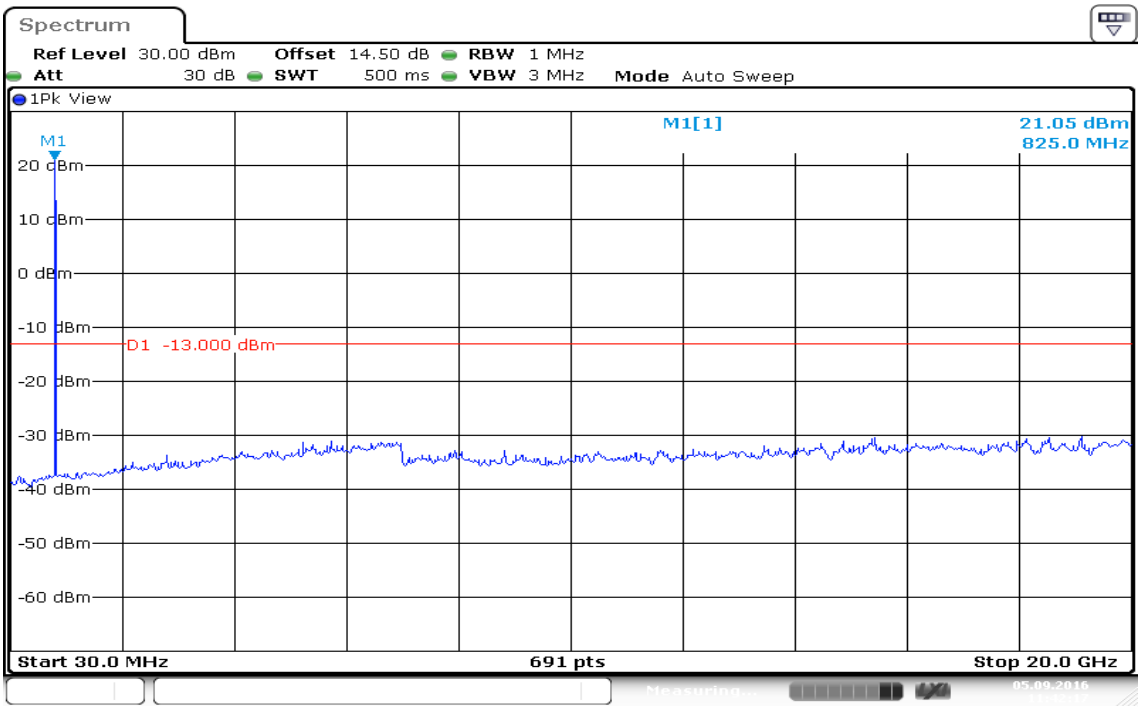
BW: 5MHz / 16QAM / RB =1, RB Offset = 0

CH Low



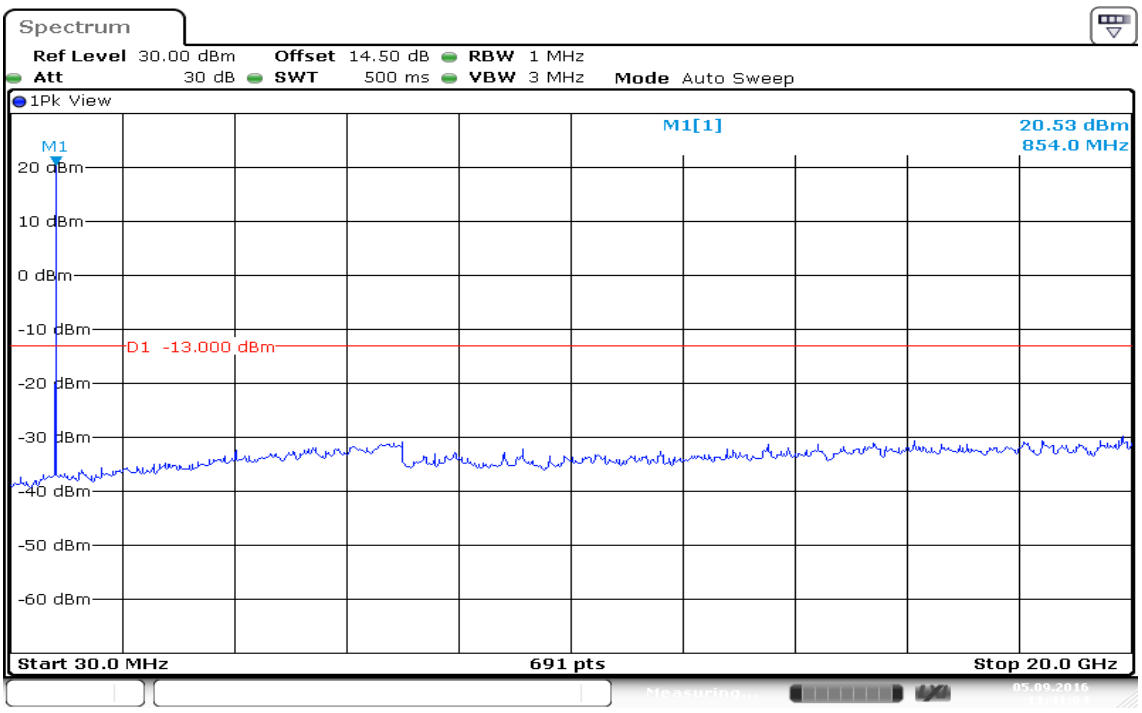
Date: 5.SEP.2016 11:43:14

CH Mid



Date: 5.SEP.2016 11:42:18

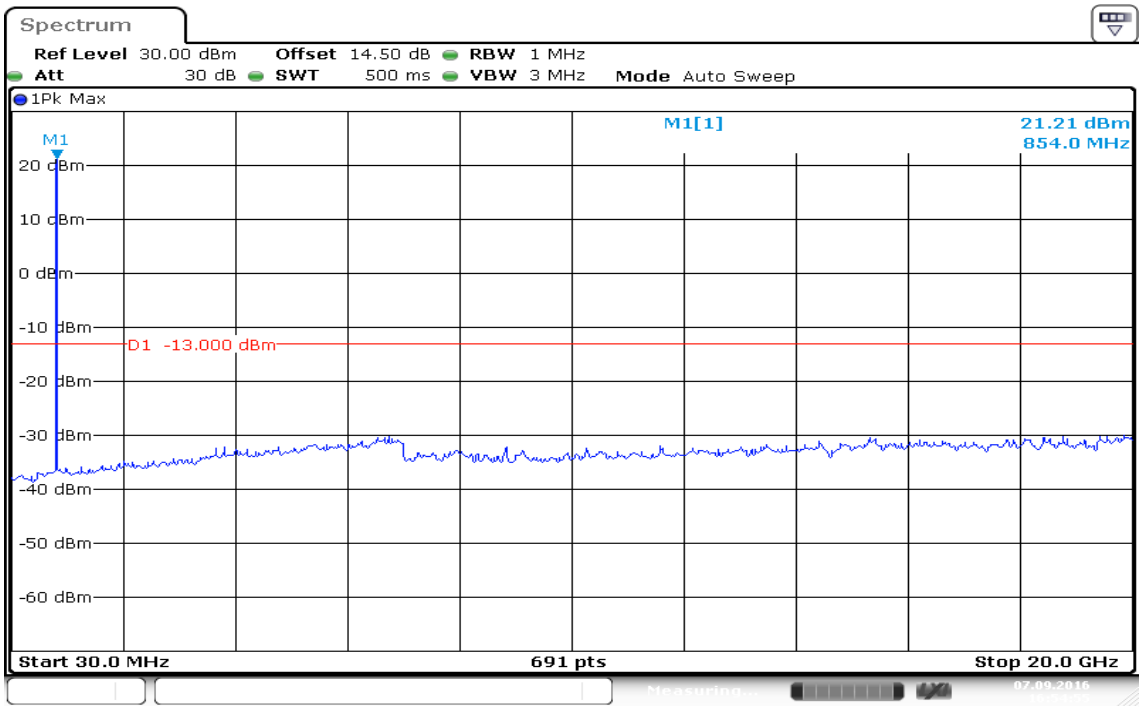
CH High



Date: 5.SEP.2016 11:41:05

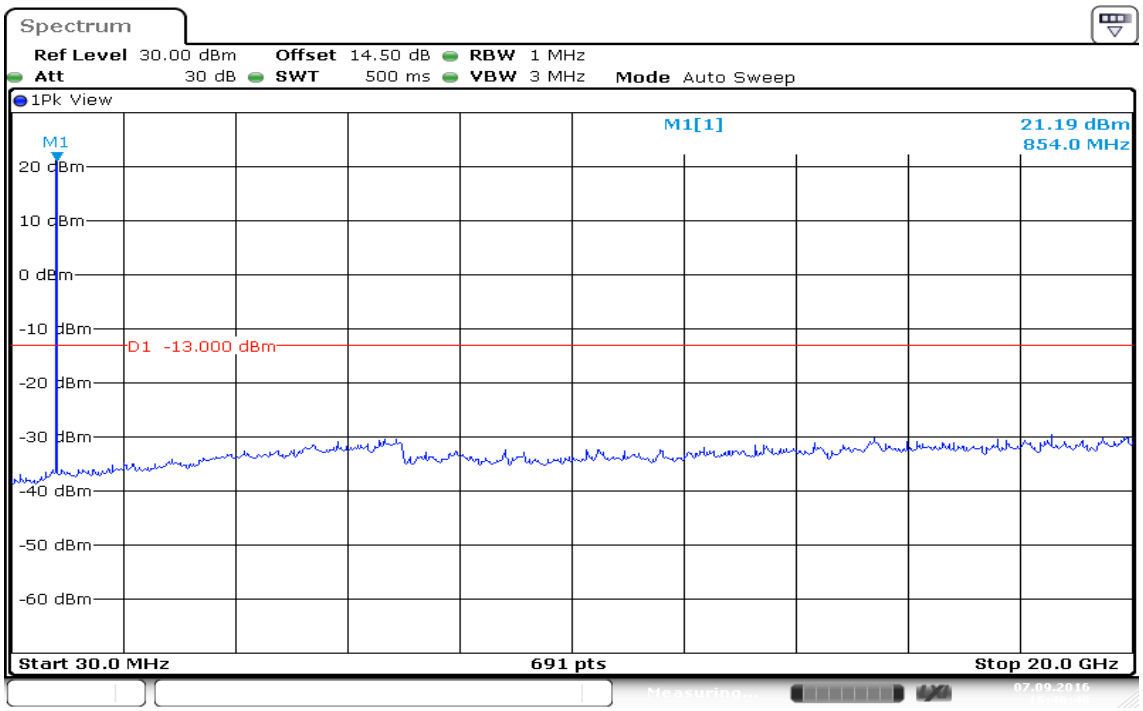
BW: 10MHz / QPSK / RB =1, RB Offset = 0

CH Low



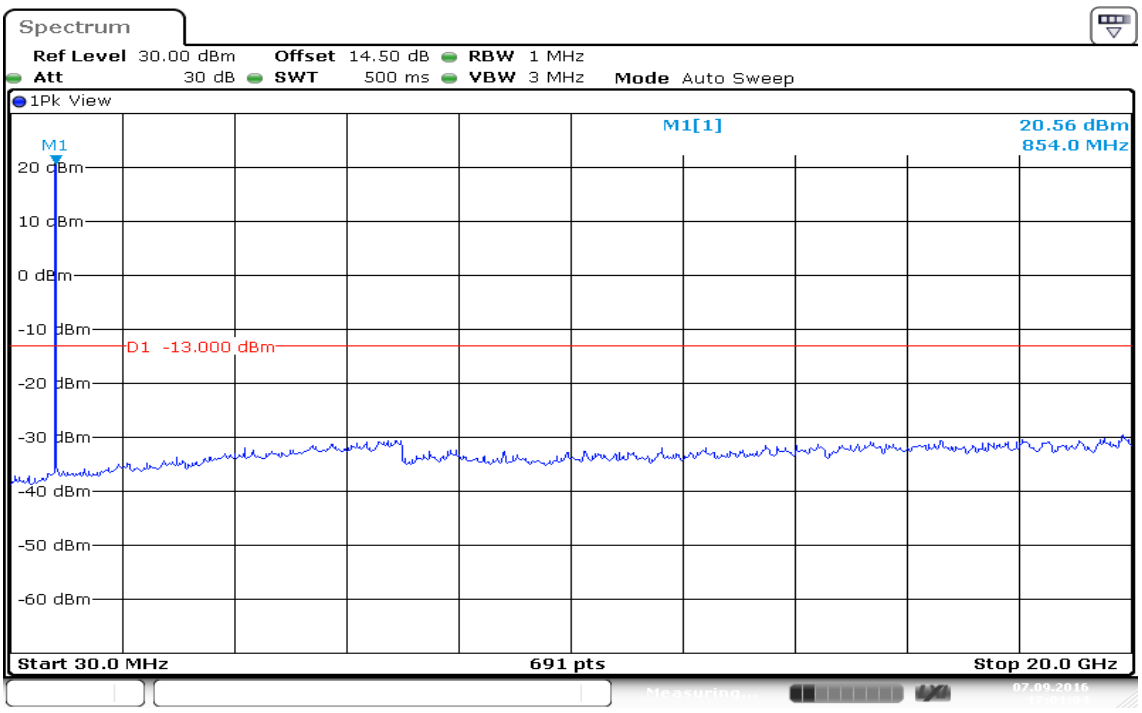
Date: 7.SEP.2016 16:54:55

CH Mid



Date: 7.SEP.2016 16:46:48

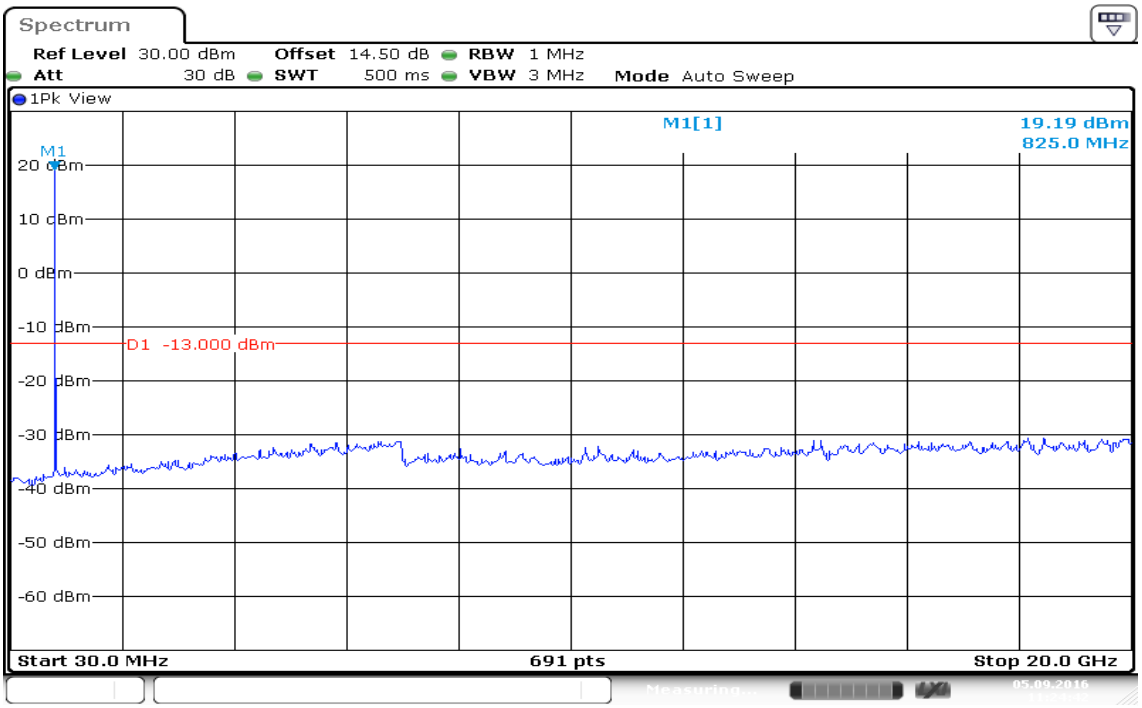
CH High



Date: 7.SEP.2016 17:01:04

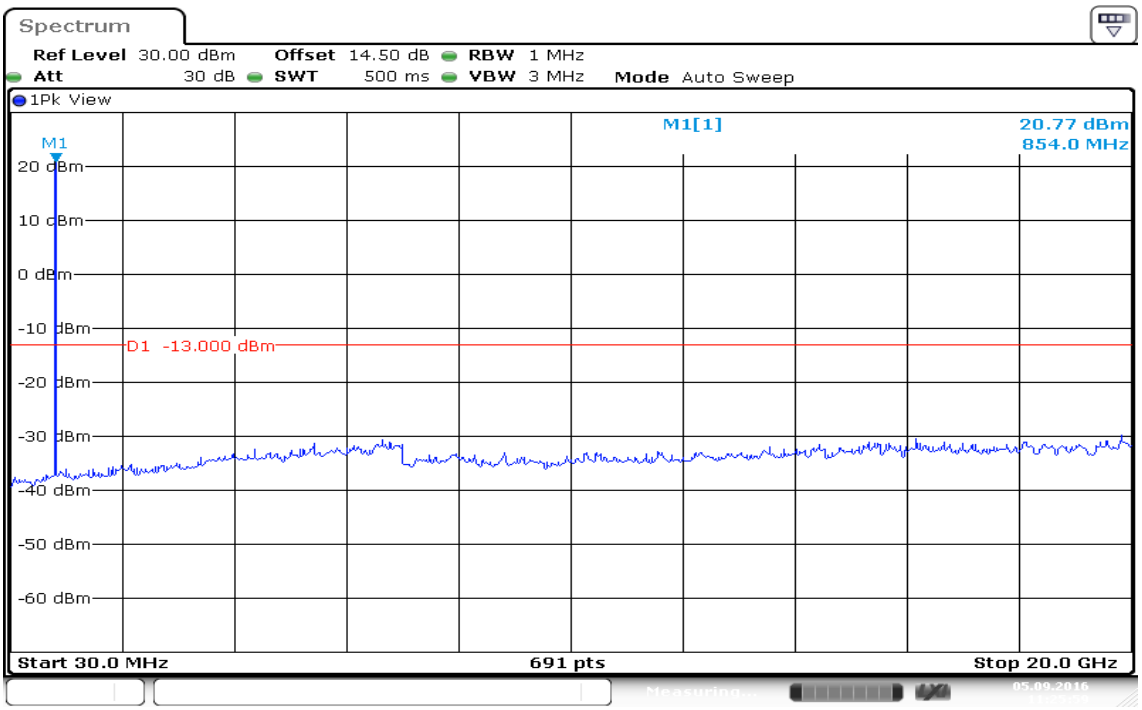
BW: 10MHz / 16QAM / RB =1, RB Offset = 0

CH Low



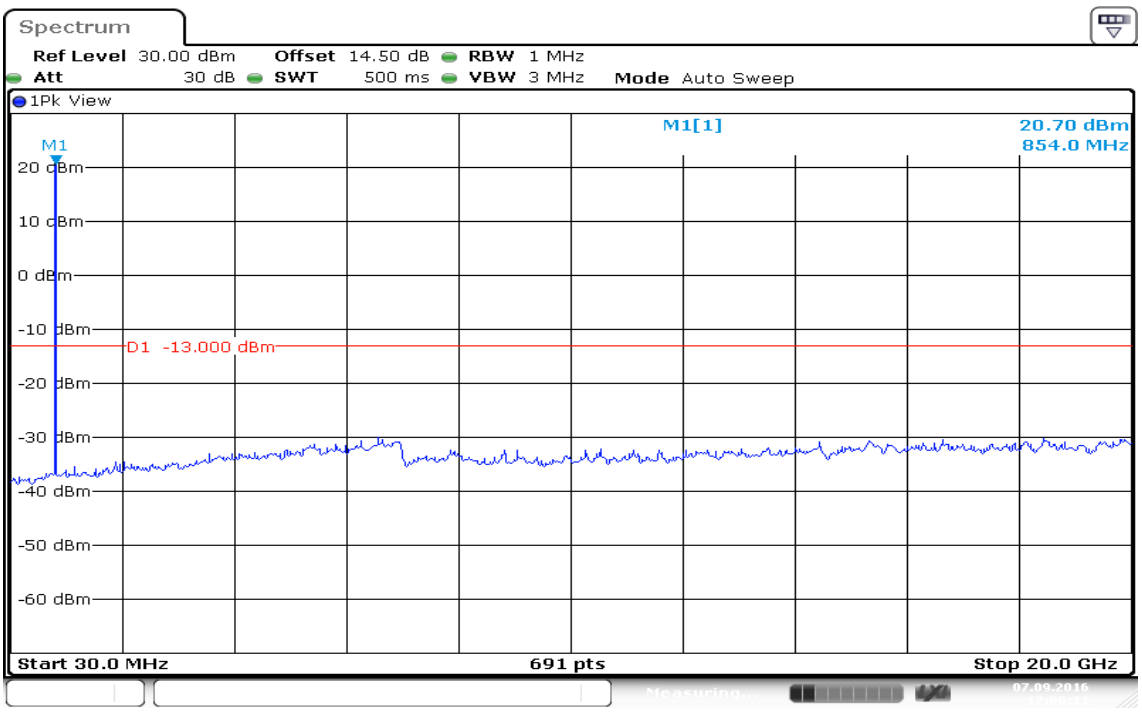
Date: 5.SEP.2016 11:24:42

CH Mid



Date: 5.SEP.2016 11:25:59

CH High



Date: 7.SEP.2016 17:06:11

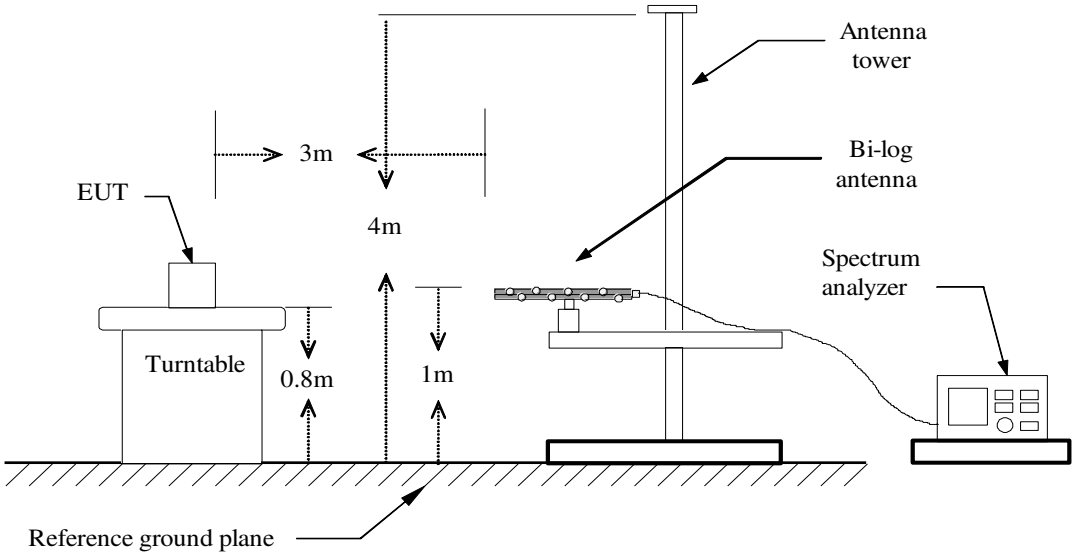
7.8 SPURIOUS RADIATION MEASUREMENT

LIMIT

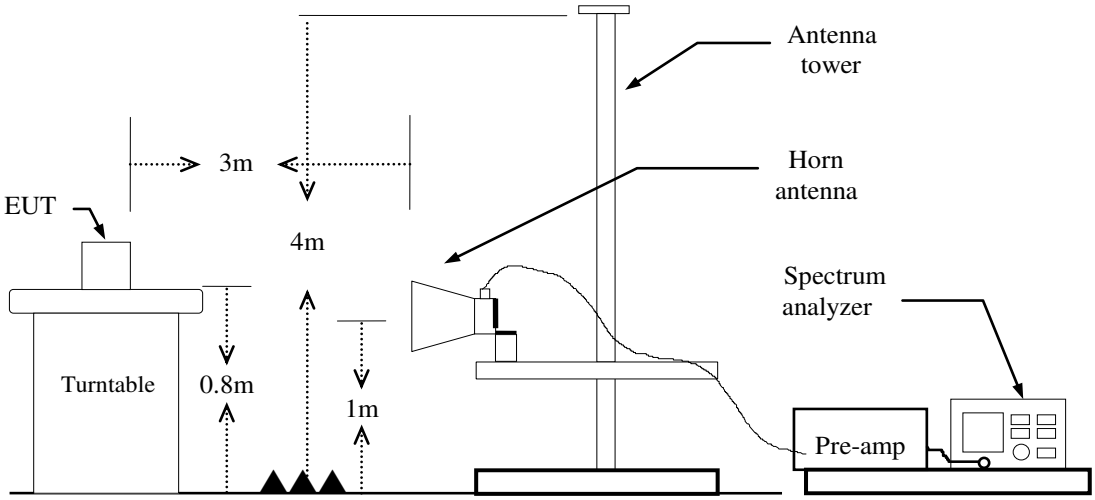
The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 +10 log10(P) dB. The limit of emission equal to –13dBm

Test Configuration

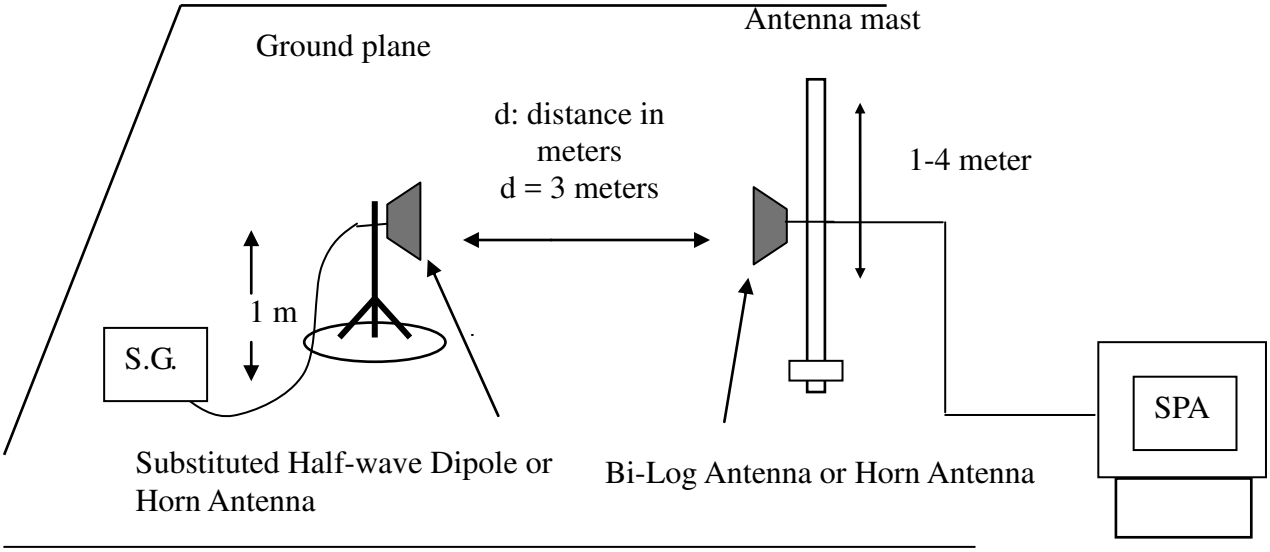
Below 1 GHz



Above 1 GHz



Substituted Method Test Set-up



TEST PROCEDURE

1. According to KDB 971168 D01. Section 5.8 and TIA-603-D:2010 Section 2.2.12.
2. The EUT was placed on a turntable
   (1) Below 1G : 0.8m
   (2) Above 1G : 0.8m
   (3) EUT set 3m from the receiving antenna
   (4) The table was rotated 360 degrees of the highest spurious emission to determine the position.
3. Set the spectrum analyzer , RBW=1MHz, VBW=3MHz.
4. A horn antenna was driven by a signal generator.
5. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission

ERP = S.G. output (dBm) + Antenna Gain (dBd) – Cable (dB)

EIRP = S.G. output (dBm) + Antenna Gain (dBi) – Cable (dB)

TEST RESULTS

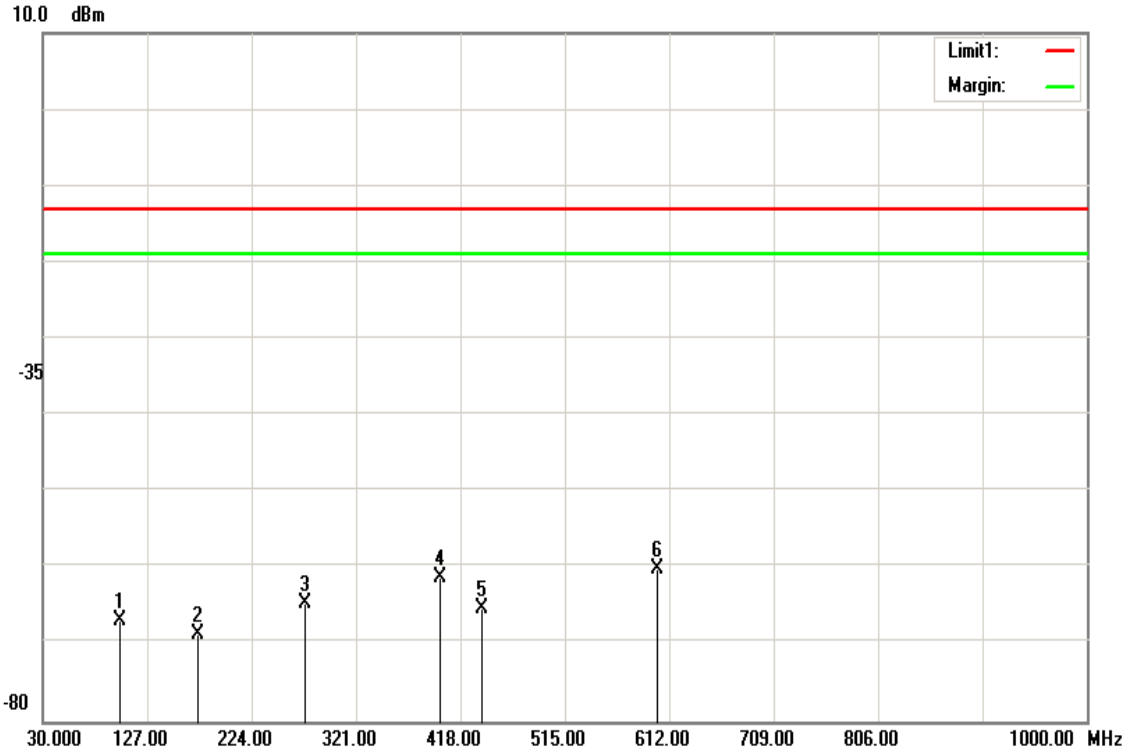
Refer to the attached tabular data sheets.

Test Results

Below 1GHz

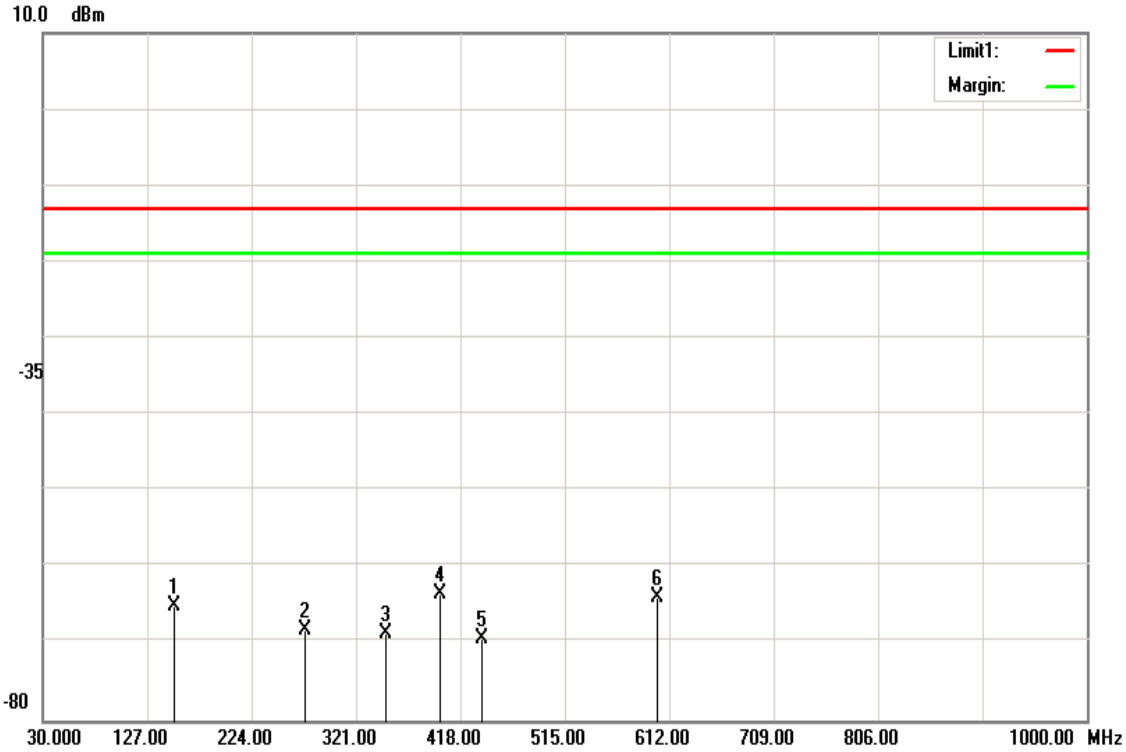
LTE Band 5 / BW: 10MHz / QPSK / RB =1, RB Offset = 0

Operation Mode:	Tx / Mid CH	**Test Date:**	September 23, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Ver.



Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
101.7800	-81.75	1.09	15.91	-66.93	-13.00	-53.93	V
174.5300	-84.33	1.41	17.02	-68.72	-13.00	-55.72	V
273.4700	-81.6	1.75	18.87	-64.48	-13.00	-51.48	V
399.5700	-80.29	2.11	21.29	-61.11	-13.00	-48.11	V
437.4000	-85.16	2.21	22.12	-65.25	-13.00	-52.25	V
600.3600	-81.88	2.59	24.41	-60.06	-13.00	-47.06	V

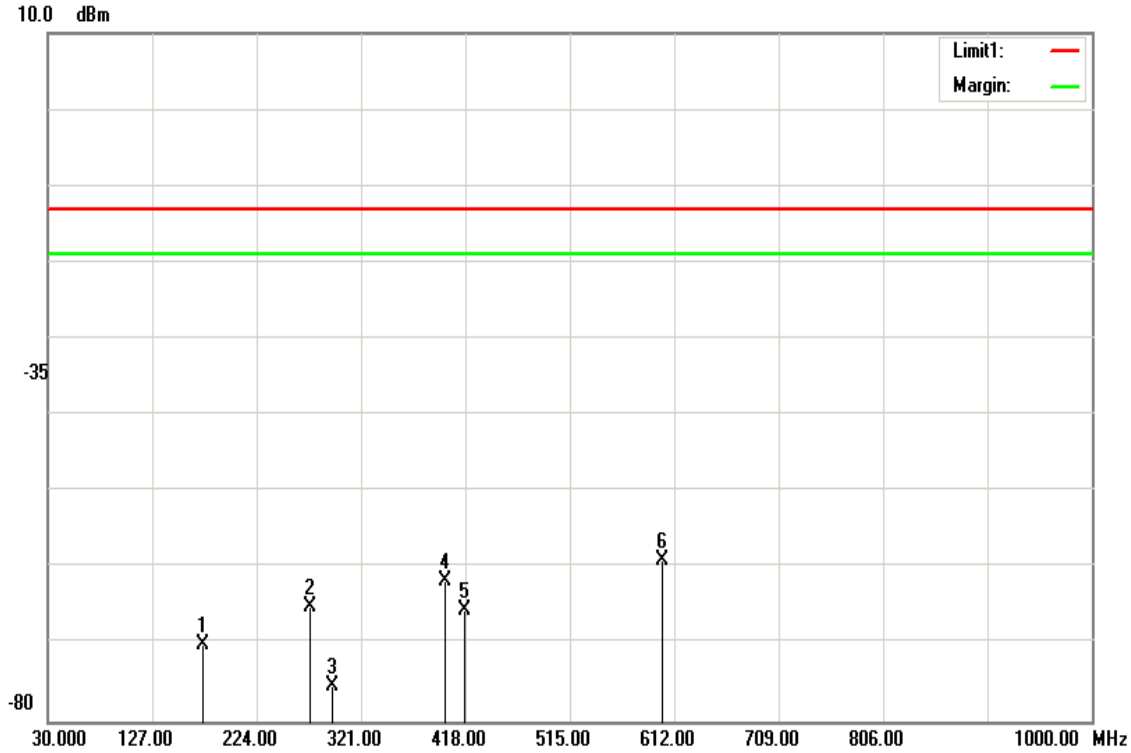
Operation Mode:	Tx / Mid CH	**Test Date:**	September 23, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Hor.



Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
152.2200	-81.7	1.32	17.98	-65.04	-13.00	-52.04	H
273.4700	-85.21	1.75	18.87	-68.09	-13.00	-55.09	H
348.1600	-86.85	1.97	20.26	-68.56	-13.00	-55.56	H
399.5700	-82.54	2.11	21.29	-63.36	-13.00	-50.36	H
437.4000	-89.11	2.21	22.12	-69.20	-13.00	-56.20	H
600.3600	-85.76	2.59	24.41	-63.94	-13.00	-50.94	H

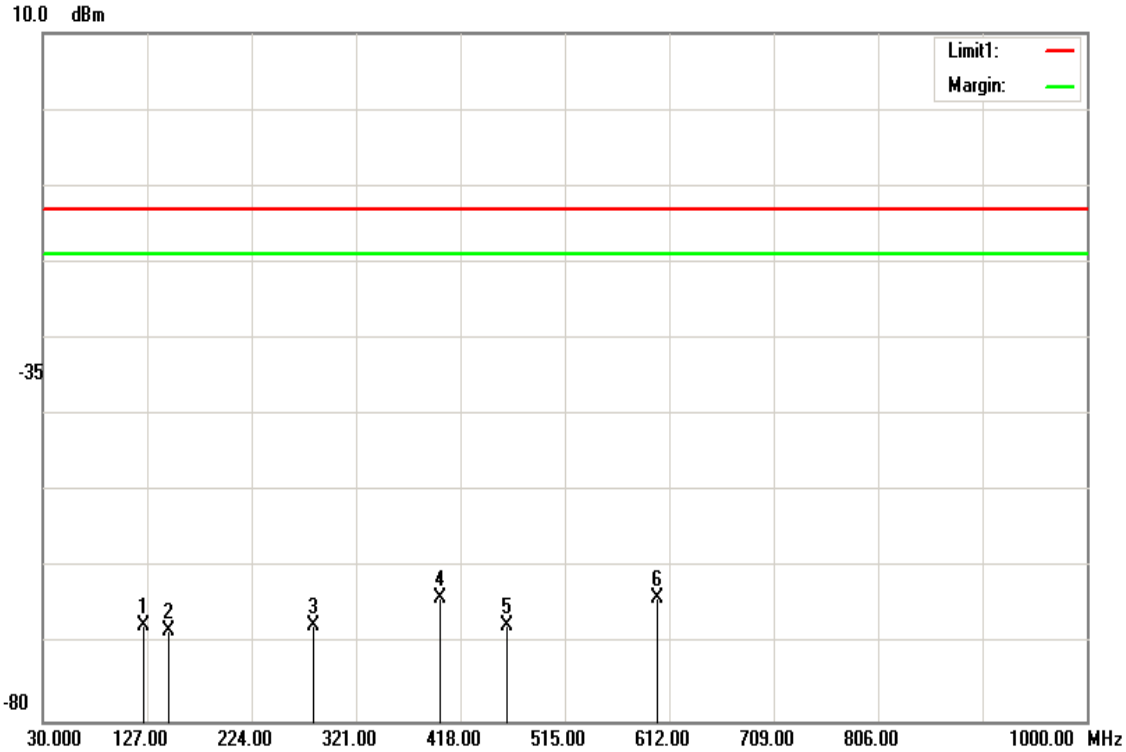
LTE Band 5 / BW: 10MHz / 16QAM / RB =1, RB Offset = 0

Operation Mode:	Tx / Mid CH	**Test Date:**	September 23, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Ver.



Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
174.5300	-85.61	1.41	17.02	-70.00	-13.00	-57.00	V
273.4700	-82.18	1.75	18.87	-65.06	-13.00	-52.06	V
293.8400	-92.47	1.81	18.98	-75.30	-13.00	-62.30	V
399.5700	-80.85	2.11	21.29	-61.67	-13.00	-48.67	V
417.0300	-85.04	2.15	21.67	-65.52	-13.00	-52.52	V
600.3600	-80.86	2.59	24.41	-59.04	-13.00	-46.04	V

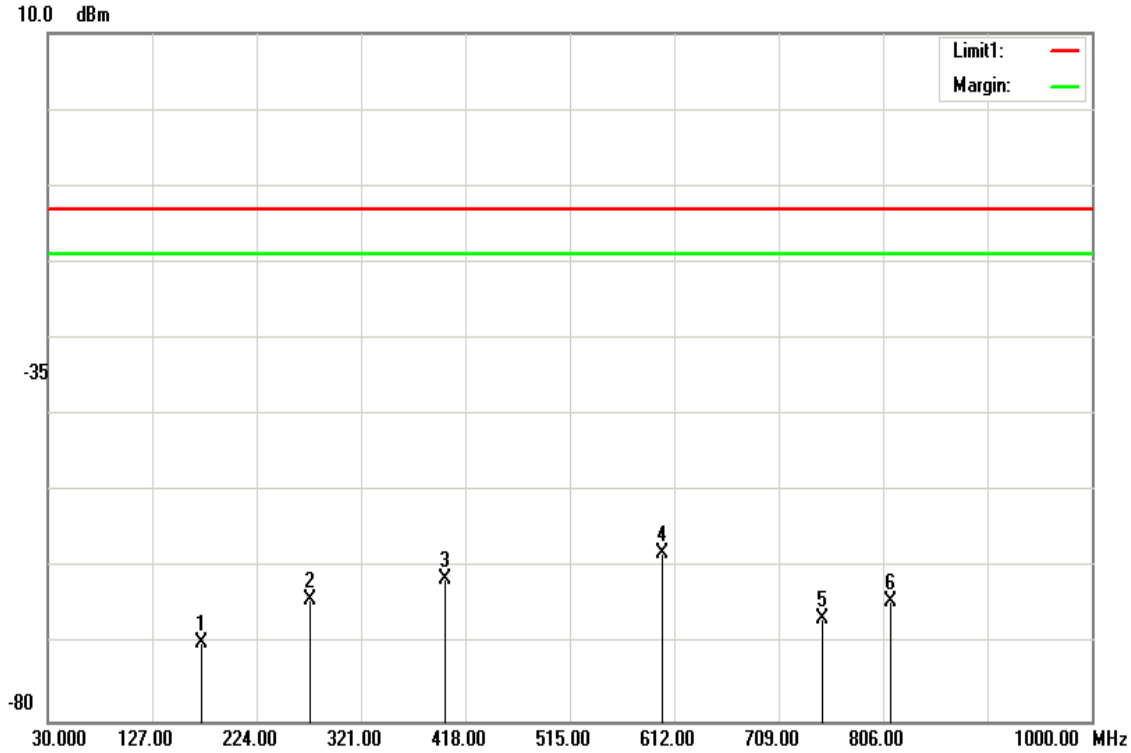
Operation Mode:	Tx / Mid CH I	**Test Date:**	September 23, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Hor.



Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
124.0900	-85.35	1.24	19.14	-67.45	-13.00	-54.45	H
147.3700	-85.12	1.3	18.13	-68.29	-13.00	-55.29	H
281.2300	-84.66	1.77	18.99	-67.44	-13.00	-54.44	H
399.5700	-83.2	2.11	21.29	-64.02	-13.00	-51.02	H
460.6800	-87.72	2.27	22.59	-67.40	-13.00	-54.40	H
600.3600	-85.8	2.59	24.41	-63.98	-13.00	-50.98	H

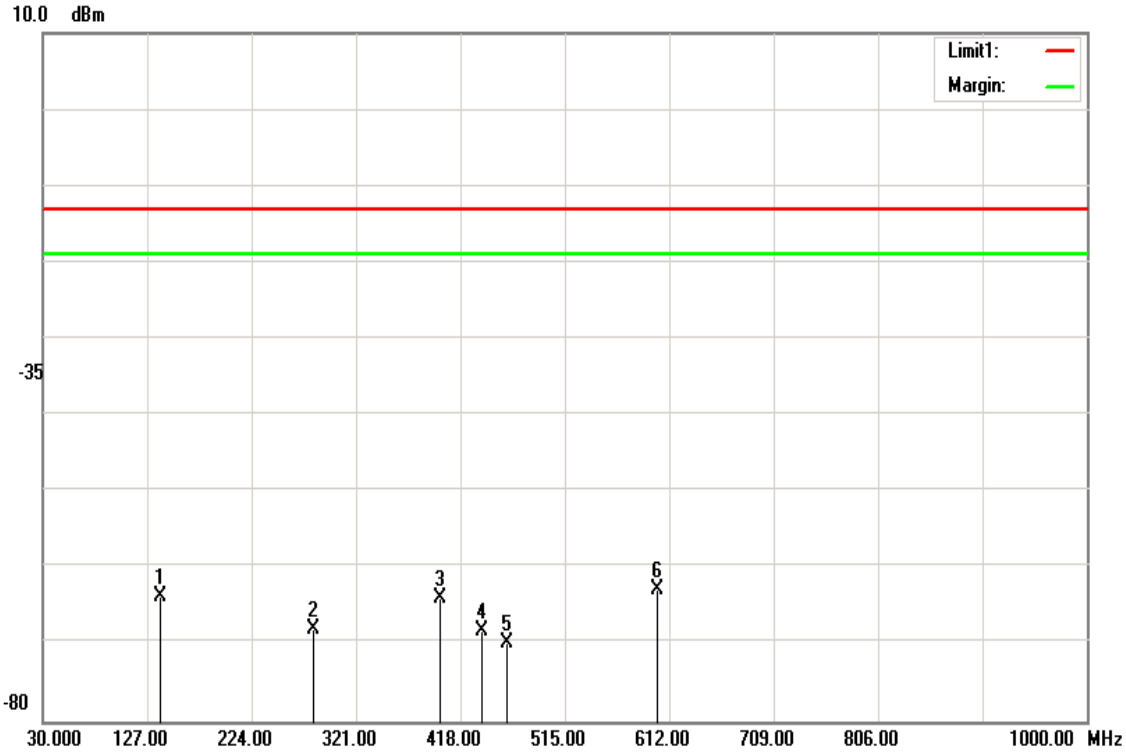
LTE Band 2 / BW: 20MHz / QPSK / RB =1, RB Offset = 0

Operation Mode:	Tx / Mid CH	**Test Date:**	September 23, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Ver.



Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
172.5900	-85.44	1.4	17.1	-69.74	-13.00	-56.74	V
273.4700	-81.17	1.75	18.87	-64.05	-13.00	-51.05	V
399.5700	-80.71	2.11	21.29	-61.53	-13.00	-48.53	V
600.3600	-79.93	2.59	24.41	-58.11	-13.00	-45.11	V
749.7400	-90.45	2.89	26.7	-66.64	-13.00	-53.64	V
812.7900	-88.75	3.01	27.33	-64.43	-13.00	-51.43	V

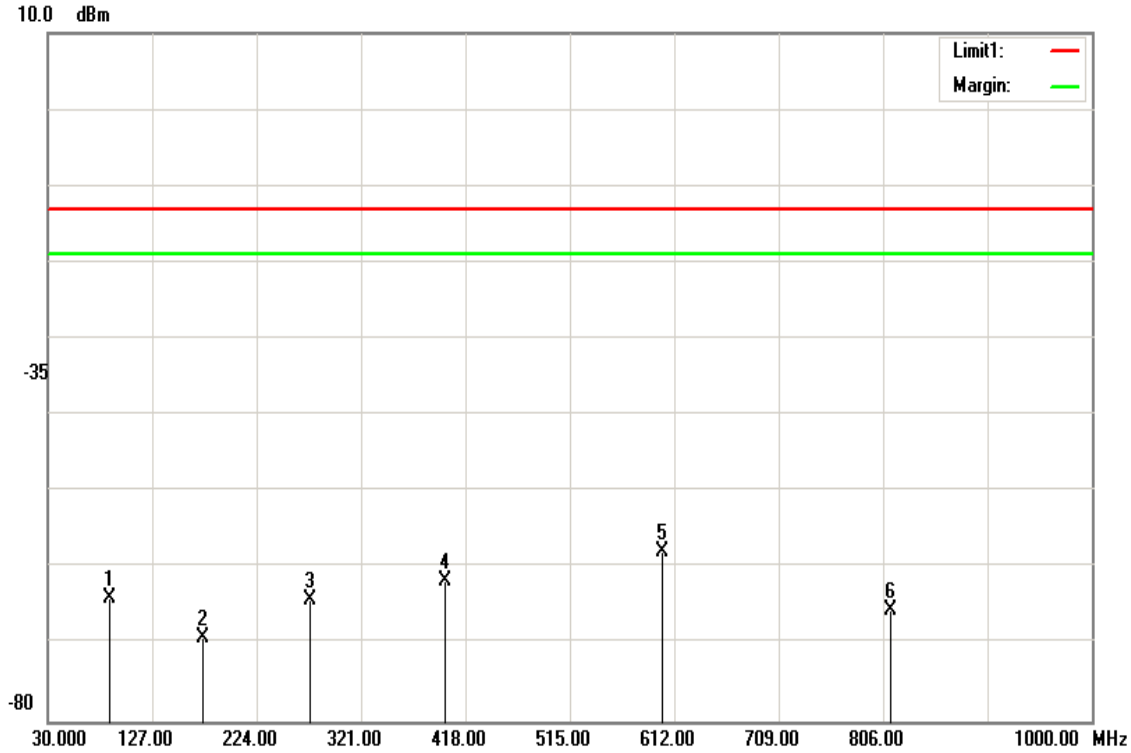
Operation Mode:	Tx / Mid CH	**Test Date:**	September 23, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Hor.



Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
138.6400	-81.1	1.26	18.6	-63.76	-13.00	-50.76	H
281.2300	-85.14	1.77	18.99	-67.92	-13.00	-54.92	H
399.5700	-83.05	2.11	21.29	-63.87	-13.00	-50.87	H
437.4000	-88.21	2.21	22.12	-68.30	-13.00	-55.30	H
460.6800	-90.06	2.27	22.59	-69.74	-13.00	-56.74	H
600.3600	-84.55	2.59	24.41	-62.73	-13.00	-49.73	H

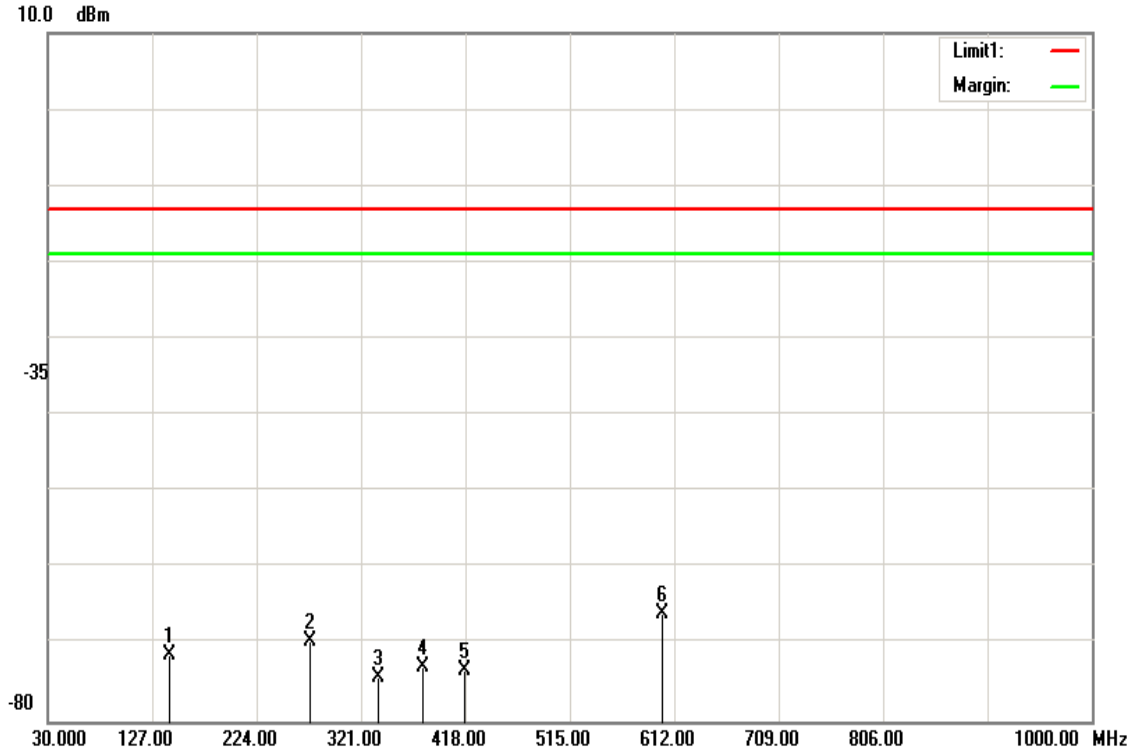
LTE Band 2 / BW: 20MHz / 16QAM / RB =1, RB Offset = 0

Operation Mode:	Tx / Mid CH	**Test Date:**	September 23, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Ver.



Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
87.2300	-75.79	1.01	12.94	-63.86	-13.00	-50.86	V
174.5300	-84.78	1.41	17.02	-69.17	-13.00	-56.17	V
273.4700	-81.31	1.75	18.87	-64.19	-13.00	-51.19	V
399.5700	-80.79	2.11	21.29	-61.61	-13.00	-48.61	V
600.3600	-79.55	2.59	24.41	-57.73	-13.00	-44.73	V
812.7900	-89.9	3.01	27.33	-65.58	-13.00	-52.58	V

Operation Mode:	Tx / Mid CH	**Test Date:**	September 23, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Hor.

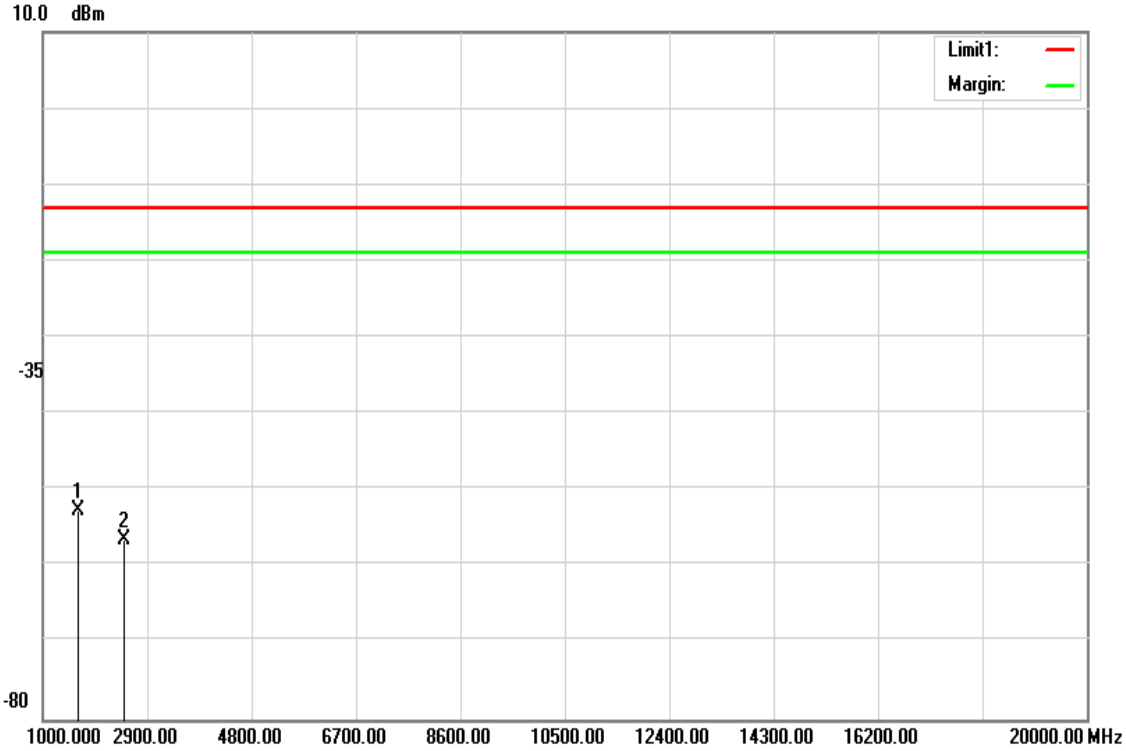


Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
143.4900	-88.41	1.28	18.33	-71.36	-13.00	-58.36	H
273.4700	-86.65	1.75	18.87	-69.53	-13.00	-56.53	H
337.4900	-92.35	1.94	20	-74.29	-13.00	-61.29	H
378.2300	-91.78	2.05	20.86	-72.97	-13.00	-59.97	H
417.0300	-92.82	2.15	21.67	-73.30	-13.00	-60.30	H
600.3600	-87.74	2.59	24.41	-65.92	-13.00	-52.92	H

Above 1GHz

LTE Band 5 / BW: 10 MHz / QPSK / RB =1, RB Offset = 0

Operation Mode:	**Tx / Low CH**	**Test Date:**	**September 23, 2016**
Temperature:	**22.6°C**	**Tested by:**	**Dennis Li**
Humidity:	**57.2% RH**	**Polarity:**	**Ver.**

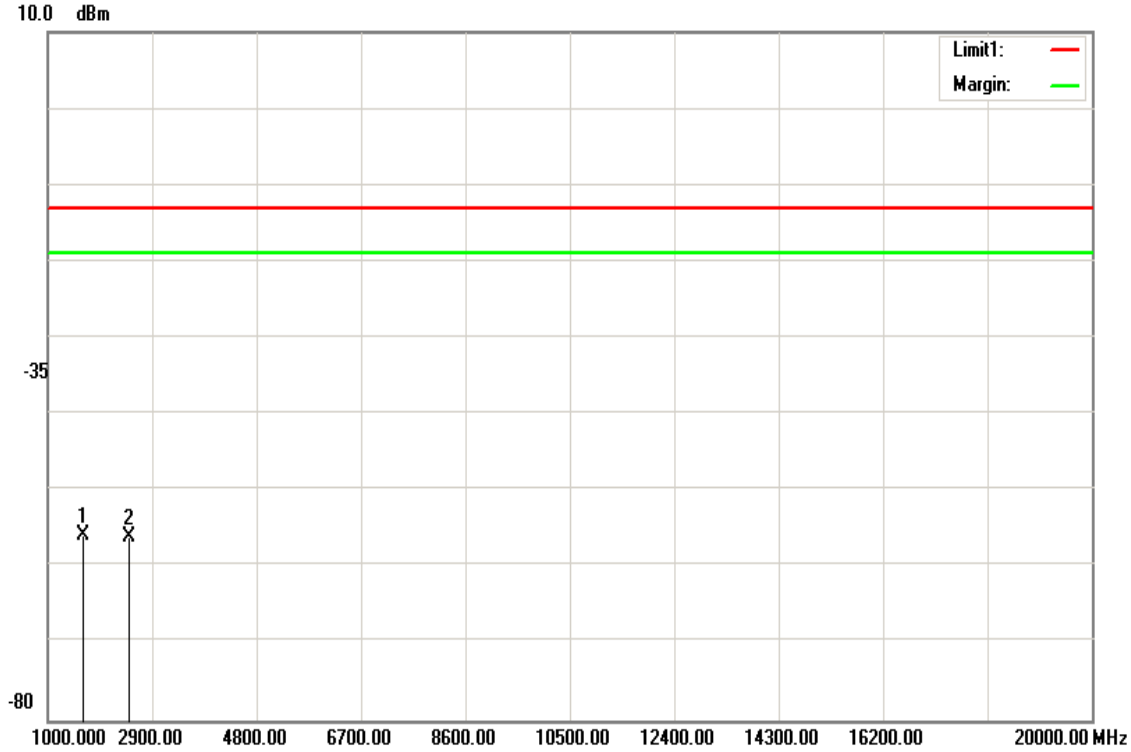


Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1658.000	-57.49	4.5	9.34	-52.65	-13.00	-39.65	V
2487.000	-61.64	5.57	10.69	-56.52	-13.00	-43.52	V
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*

Operation Mode:	Tx / Low CH	**Test Date:**	September 23, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Hor.

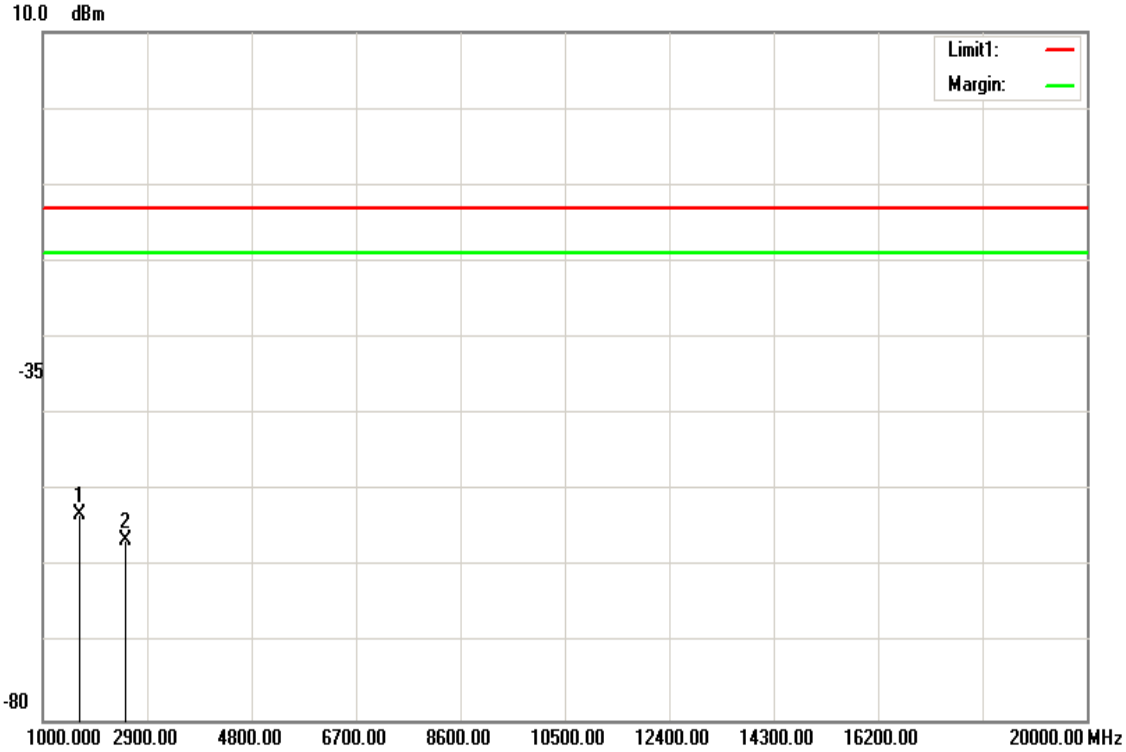


Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1658.000	-60.58	4.5	9.34	-55.74	-13.00	-42.74	H
2487.000	-61.26	5.57	10.69	-56.14	-13.00	-43.14	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*

Operation Mode:	Tx / Mid CH	**Test Date:**	September 23, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Ver.

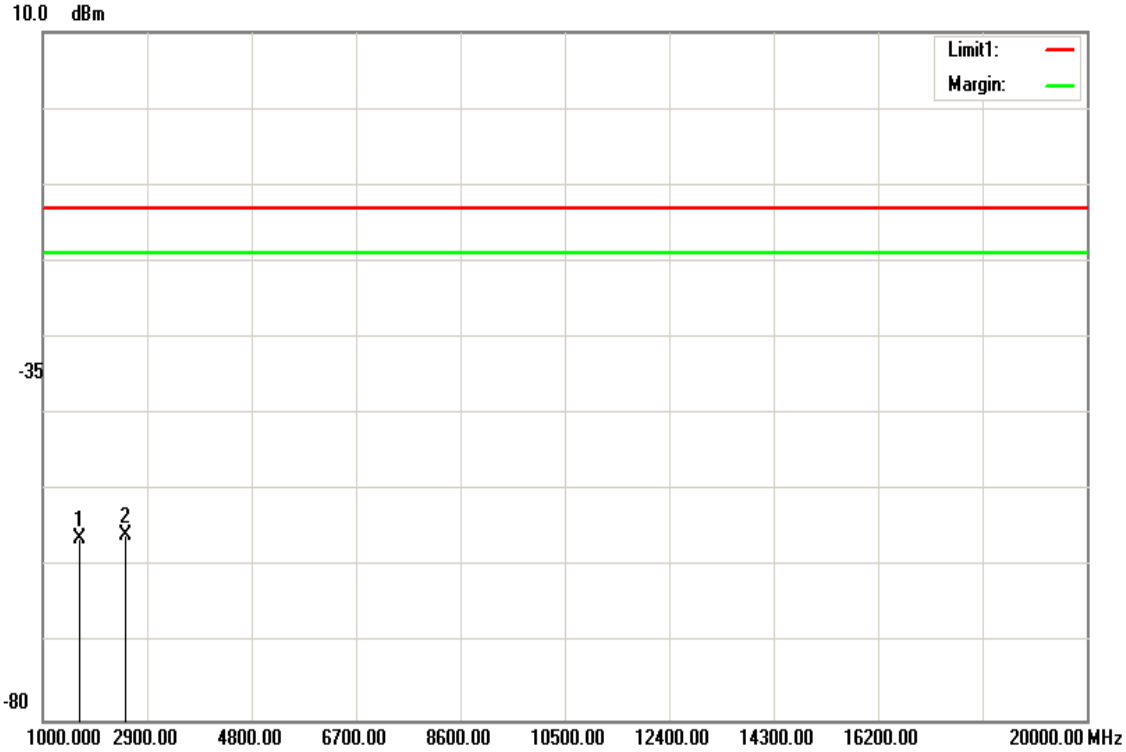


Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1673.000	-58.03	4.52	9.38	-53.17	-13.00	-40.17	V
2509.000	-61.64	5.6	10.71	-56.53	-13.00	-43.53	V
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*

Operation Mode:	Tx / Mid CH	**Test Date:**	September 23, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Hor.

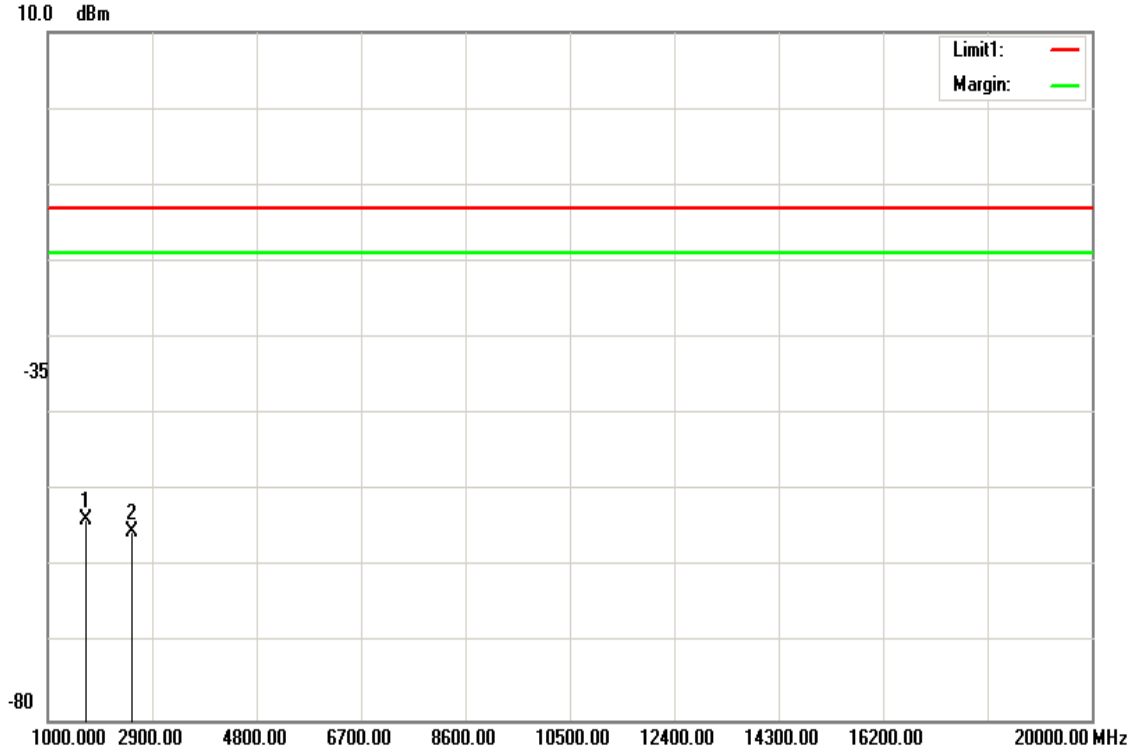


Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1673.000	-61.16	4.52	9.38	-56.30	-13.00	-43.30	H
2509.000	-60.93	5.6	10.71	-55.82	-13.00	-42.82	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*

Operation Mode:	Tx / High CH	**Test Date:**	September 23, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Ver.

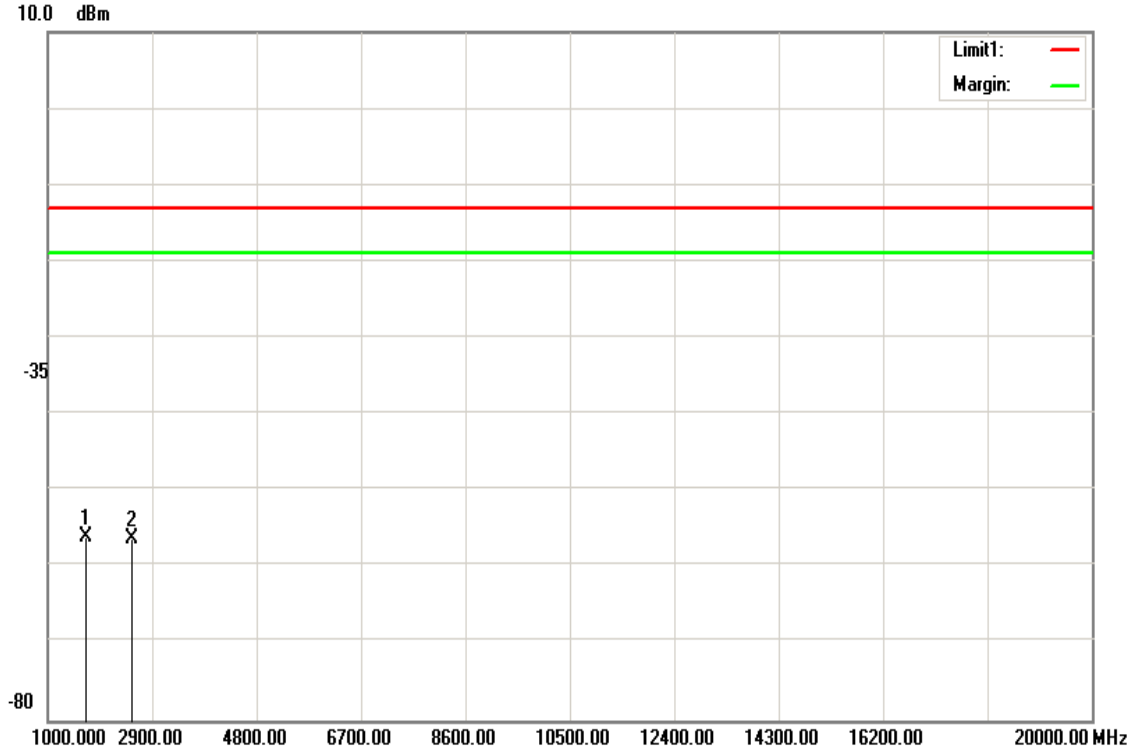


Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1688.000	-58.71	4.54	9.43	-53.82	-13.00	-40.82	V
2532.000	-60.35	5.63	10.73	-55.25	-13.00	-42.25	V
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*

Operation Mode:	Tx / High CH	**Test Date:**	September 23, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Hor.



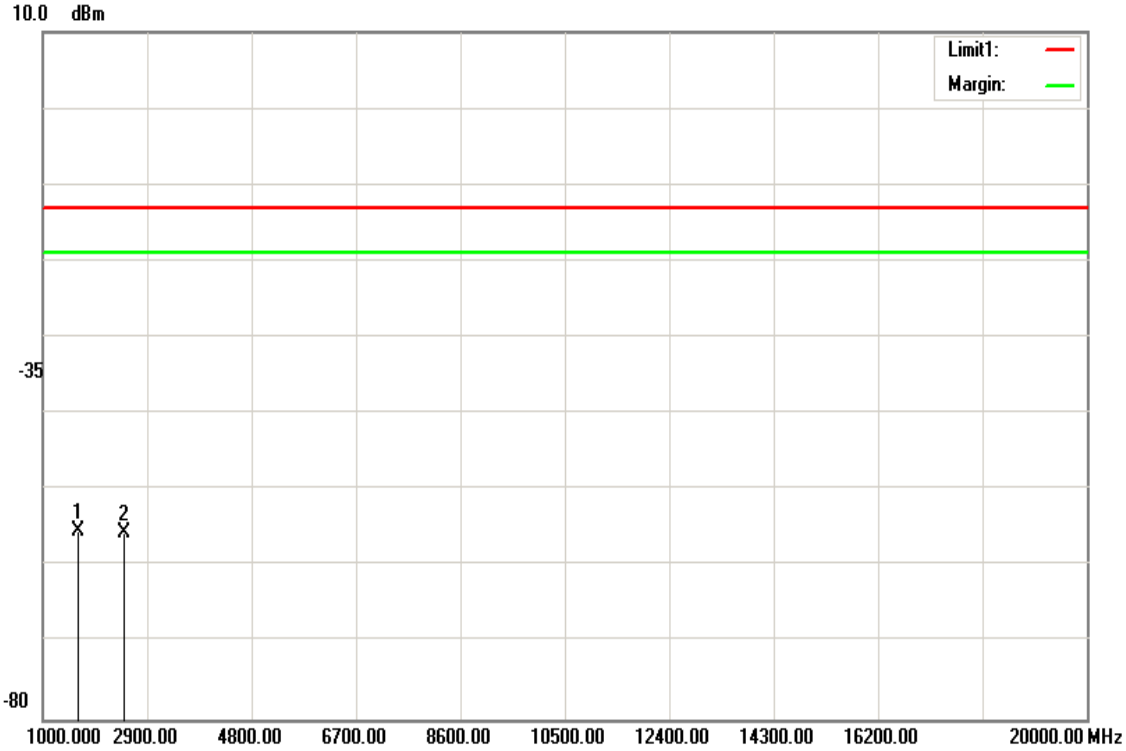
Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1688.000	-60.93	4.54	9.43	-56.04	-13.00	-43.04	H
2532.000	-61.36	5.63	10.73	-56.26	-13.00	-43.26	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*

LTE Band 5 / BW: 10MHz / 16QAM / RB =1, RB Offset = 0

Operation Mode:	Tx / Low CH	**Test Date:**	September 23, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Ver.

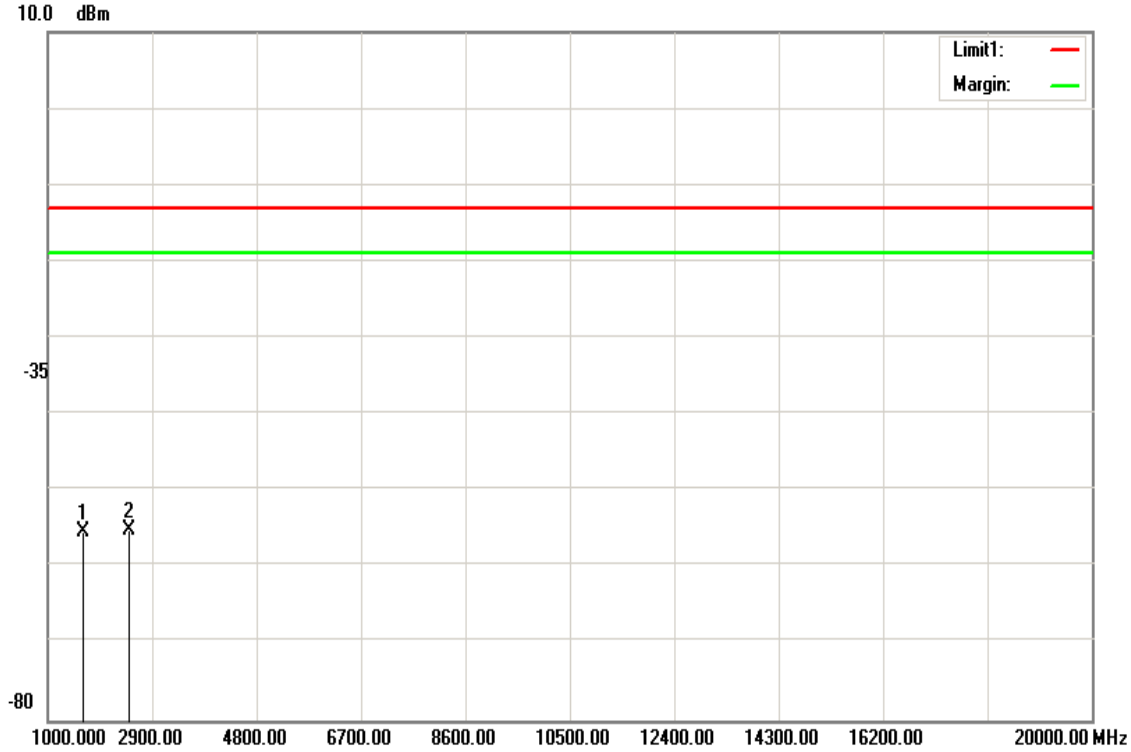


Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1658.000	-60.12	4.5	9.34	-55.28	-13.00	-42.28	V
2487.000	-60.62	5.57	10.69	-55.50	-13.00	-42.50	V
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*

Operation Mode:	Tx / Low CH	**Test Date:**	September 23, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Hor.

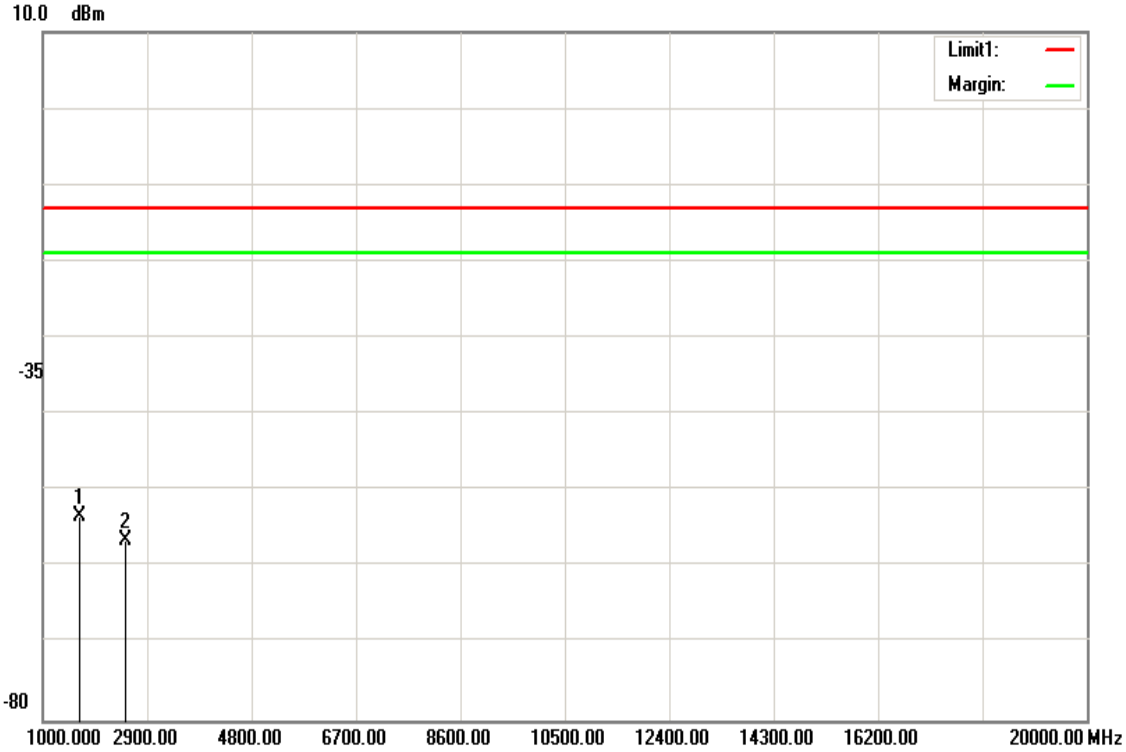


Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1658.000	-60.12	4.5	9.34	-55.28	-13.00	-42.28	H
2487.000	-60.27	5.57	10.69	-55.15	-13.00	-42.15	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*

Operation Mode:	Tx / Mid CH	**Test Date:**	September 23, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Ver.

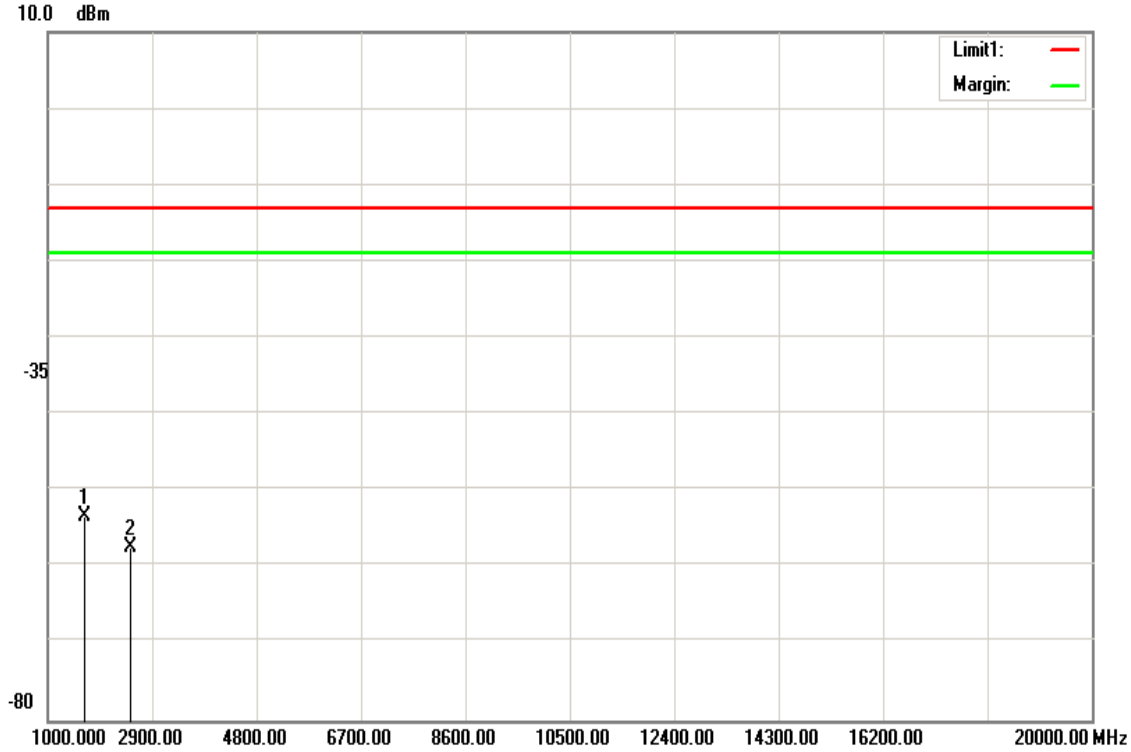


Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1673.000	-58.27	4.52	9.38	-53.41	-13.00	-40.41	V
2509.000	-61.67	5.6	10.71	-56.56	-13.00	-43.56	V
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*

Operation Mode:	Tx / Mid CH	**Test Date:**	September 23, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Hor.

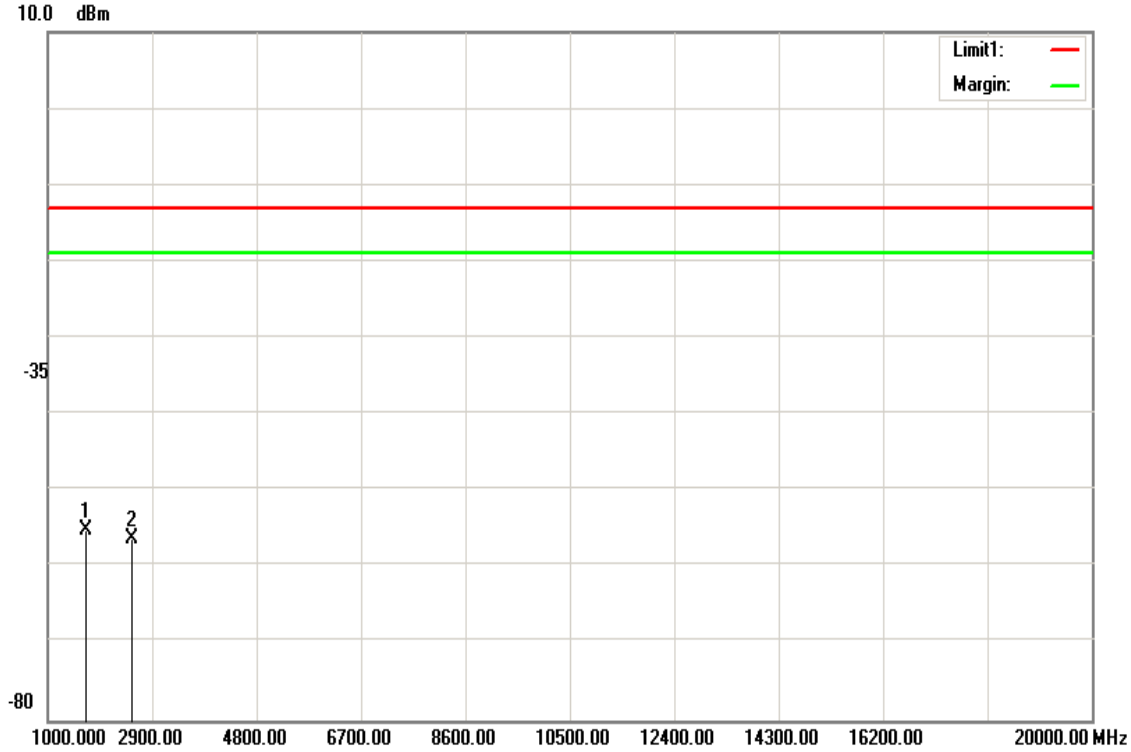


Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1673.000	-58.29	4.52	9.38	-53.43	-13.00	-40.43	H
2509.000	-62.43	5.6	10.71	-57.32	-13.00	-44.32	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*

Operation Mode:	Tx / High CH	**Test Date:**	September 23, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Ver.

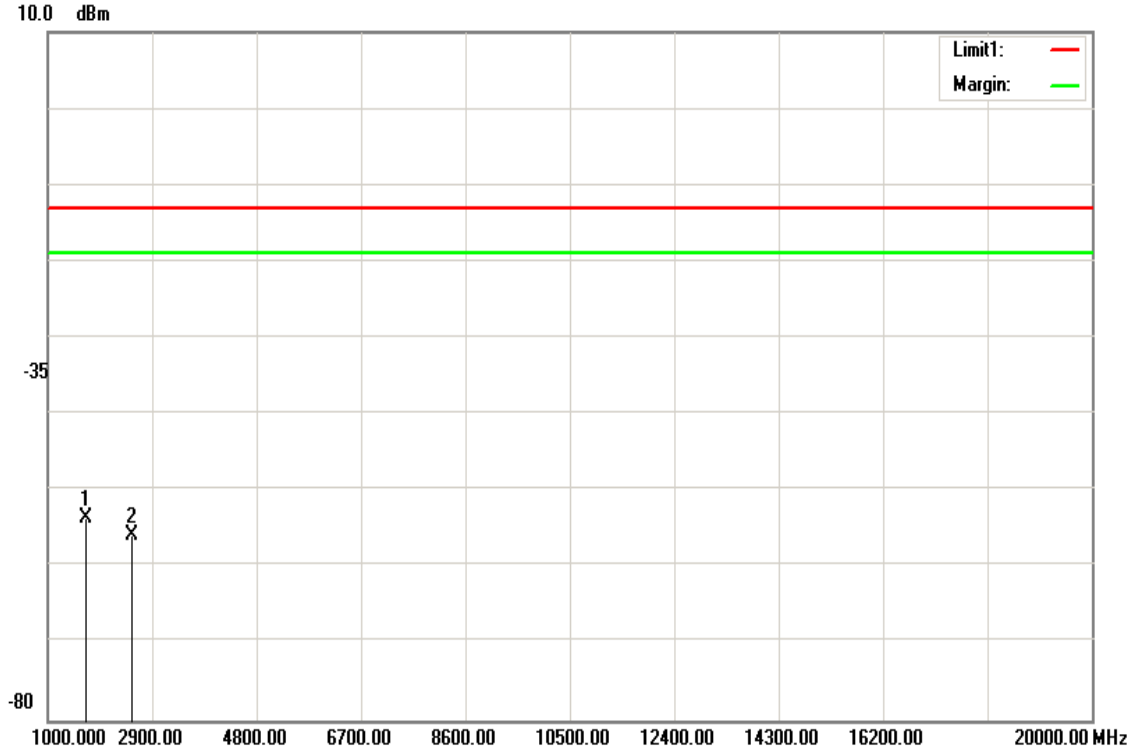


Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1688.000	-60.01	4.54	9.43	-55.12	-13.00	-42.12	V
2532.000	-61.38	5.63	10.73	-56.28	-13.00	-43.28	V
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*

Operation Mode:	Tx / High CH	**Test Date:**	September 23, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Hor.



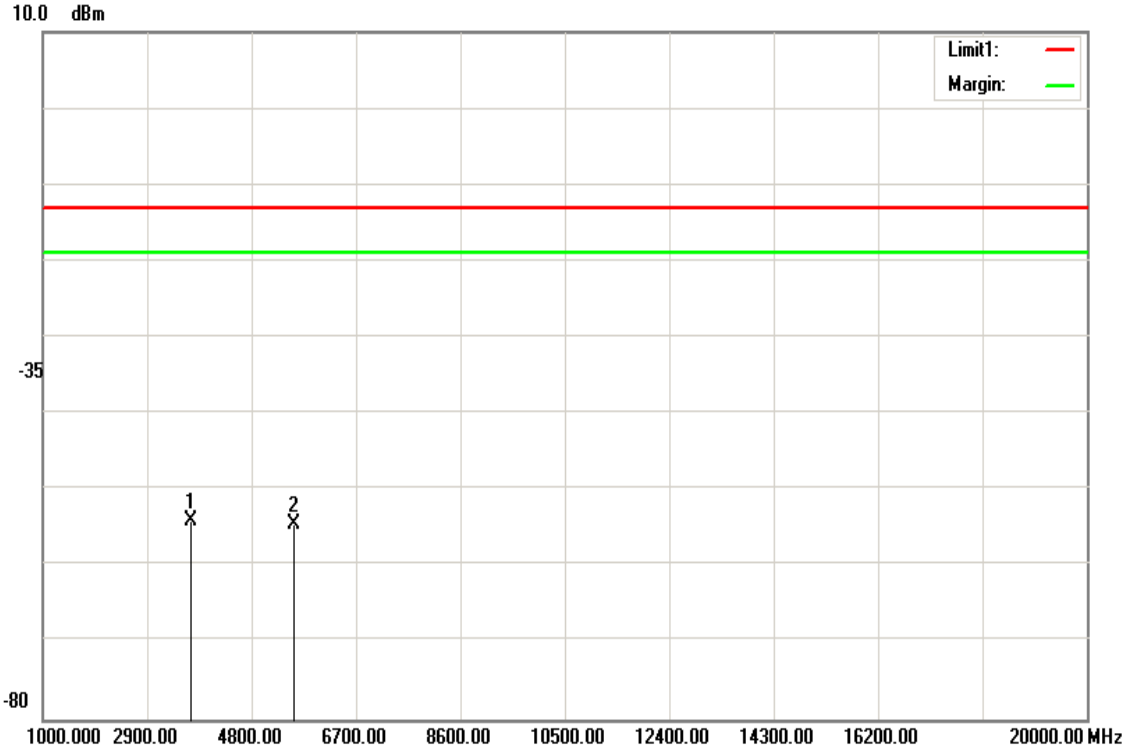
Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1693.000	-58.53	4.55	9.44	-53.64	-13.00	-40.64	H
2539.000	-60.99	5.63	10.74	-55.88	-13.00	-42.88	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*

LTE Band 2 / BW: 20MHz / QPSK RB =1, RB Offset = 0

Operation Mode:	Tx / Low CH	**Test Date:**	September 23, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Ver.

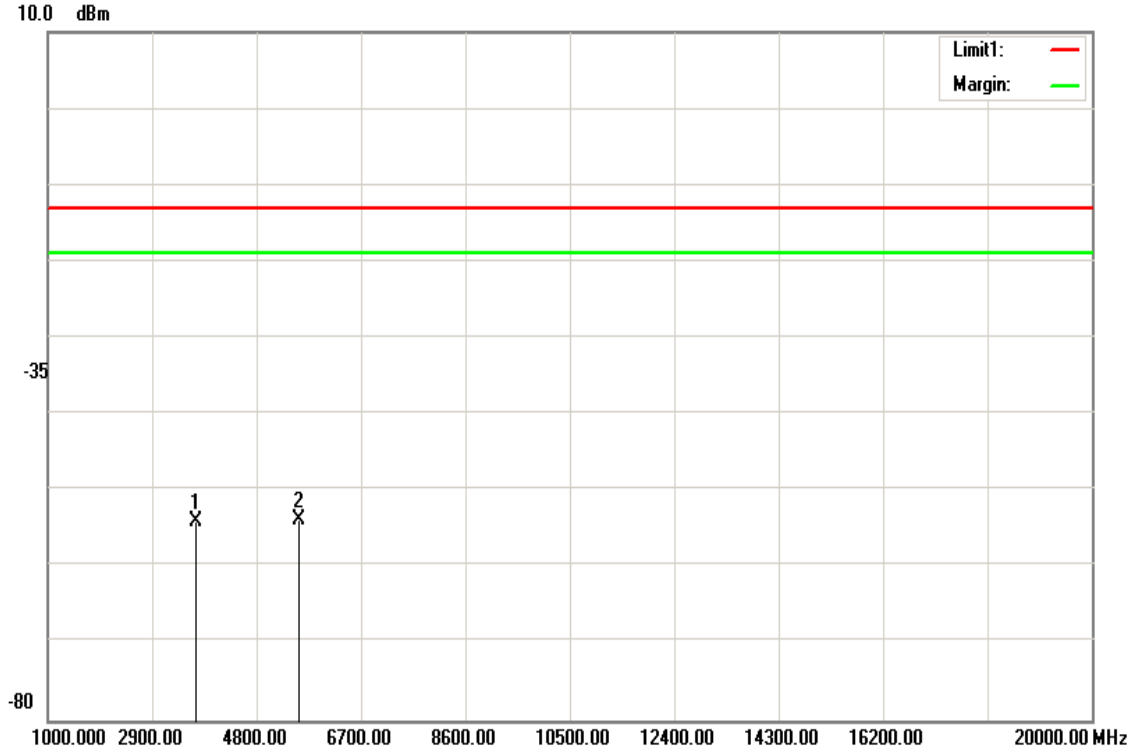


Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3710.000	-59.55	6.9	12.54	-53.91	-13.00	-40.91	V
5565.000	-58.8	8.63	12.87	-54.56	-13.00	-41.56	V
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*

Operation Mode:	Tx / Low CH	**Test Date:**	September 23, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Hor.

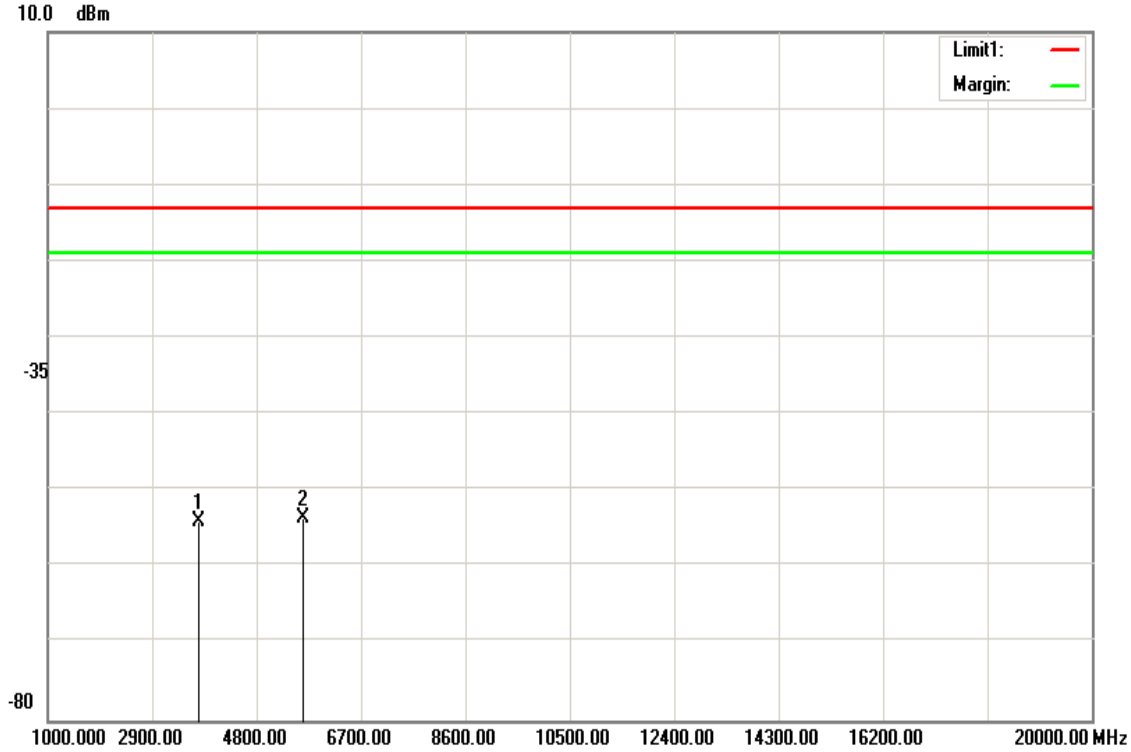


Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3710.000	-59.72	6.9	12.54	-54.08	-13.00	-41.08	H
5565.000	-57.96	8.63	12.87	-53.72	-13.00	-40.72	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*

Operation Mode:	Tx / Mid CH	**Test Date:**	September 23, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Ver.

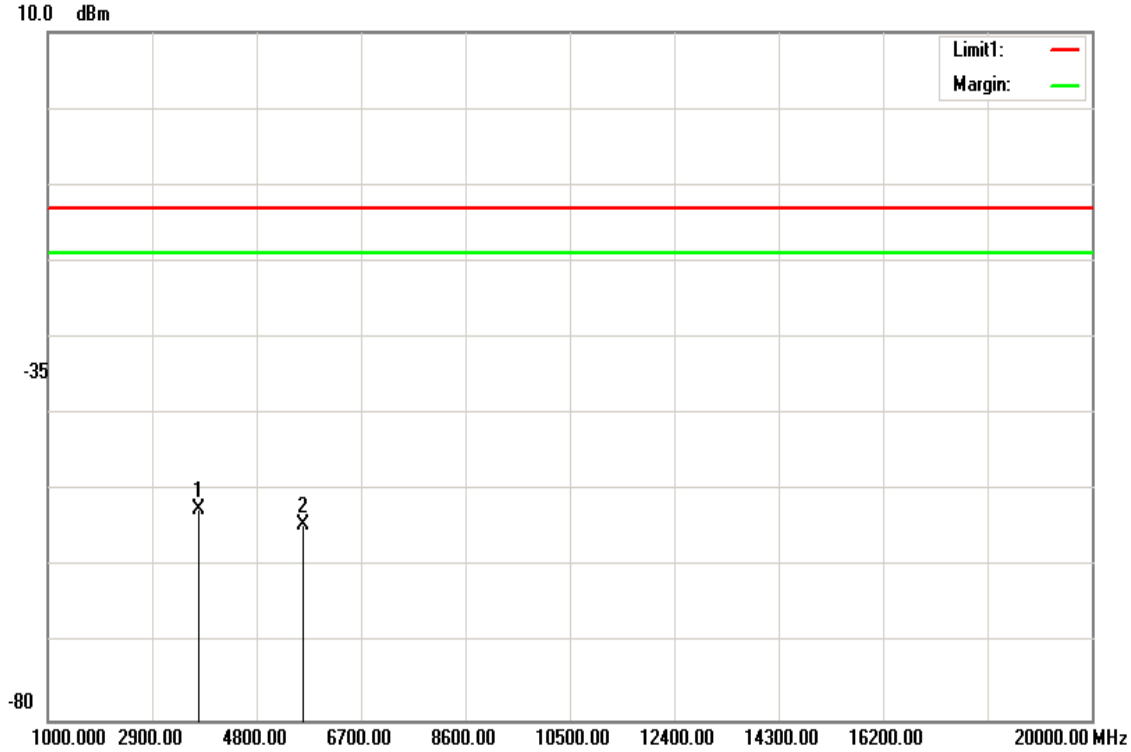


Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3760.000	-59.59	6.96	12.55	-54.00	-13.00	-41.00	V
5640.000	-57.67	8.69	12.84	-53.52	-13.00	-40.52	V
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*

Operation Mode:	Tx / Mid CH	**Test Date:**	September 23, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Hor.

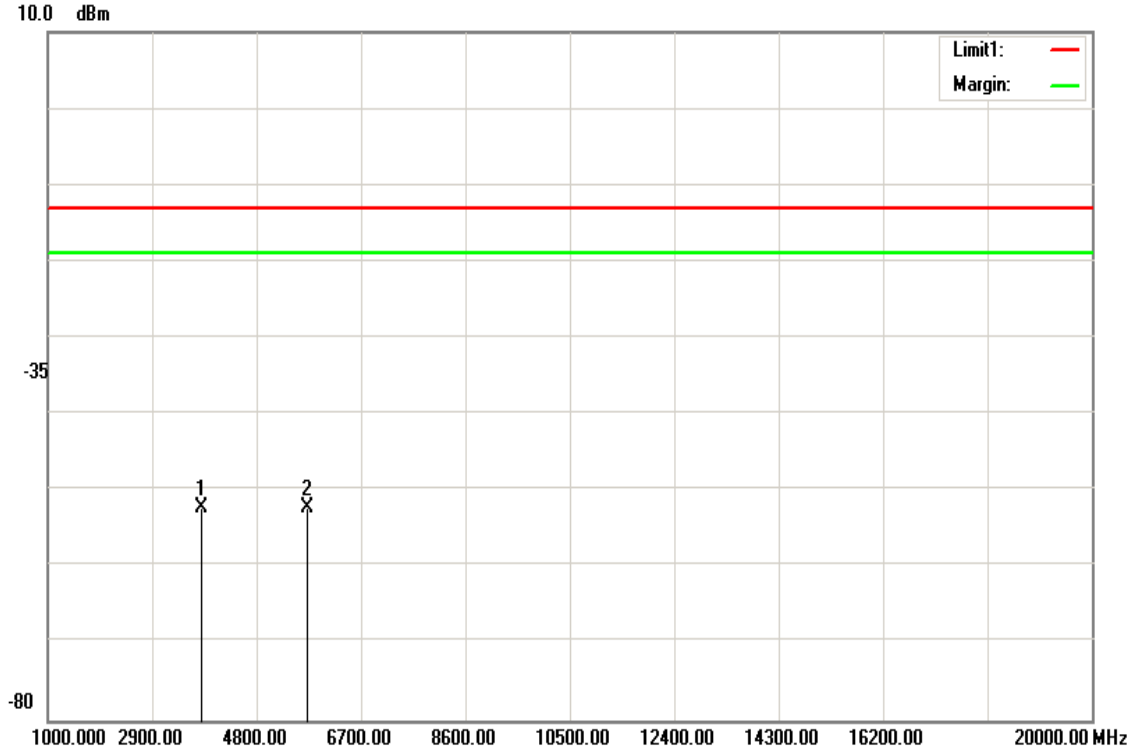


Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3760.000	-58.08	6.96	12.55	-52.49	-13.00	-39.49	H
5640.000	-58.54	8.69	12.84	-54.39	-13.00	-41.39	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*

Operation Mode:	Tx / High CH	**Test Date:**	September 23, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Ver.

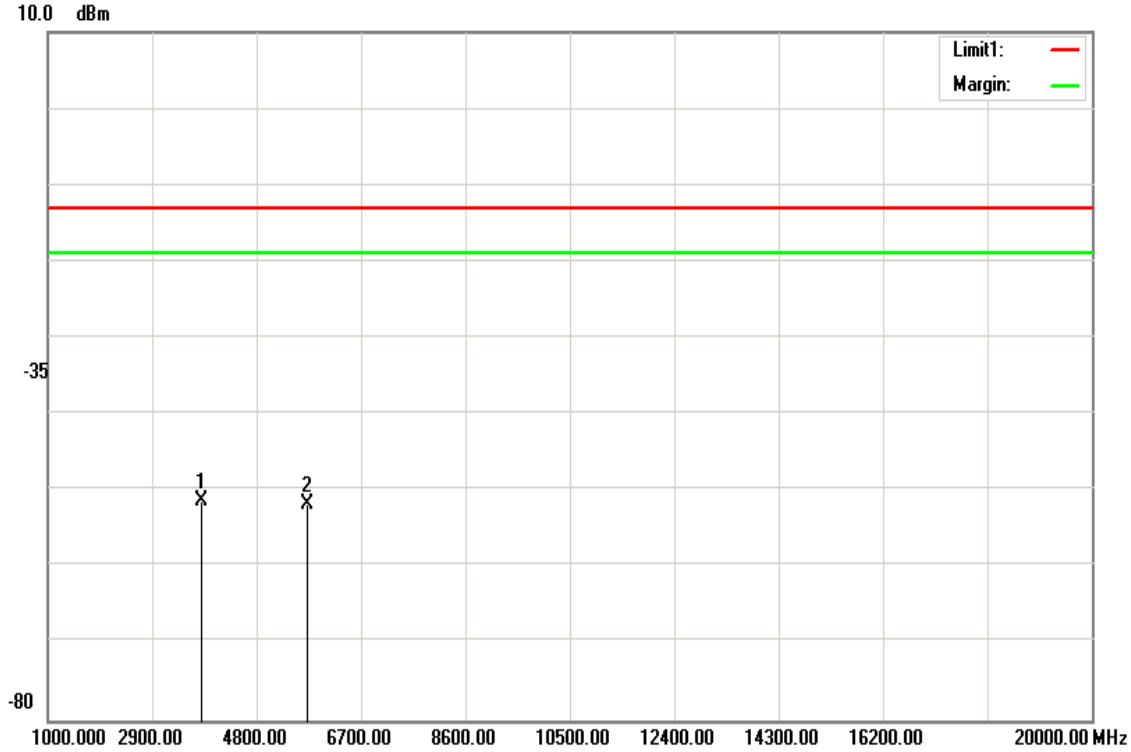


Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3810.000	-57.8	7.01	12.56	-52.25	-13.00	-39.25	V
5715.000	-56.31	8.75	12.81	-52.25	-13.00	-39.25	V
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*

Operation Mode:	Tx / High CH	**Test Date:**	September 23, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Hor.



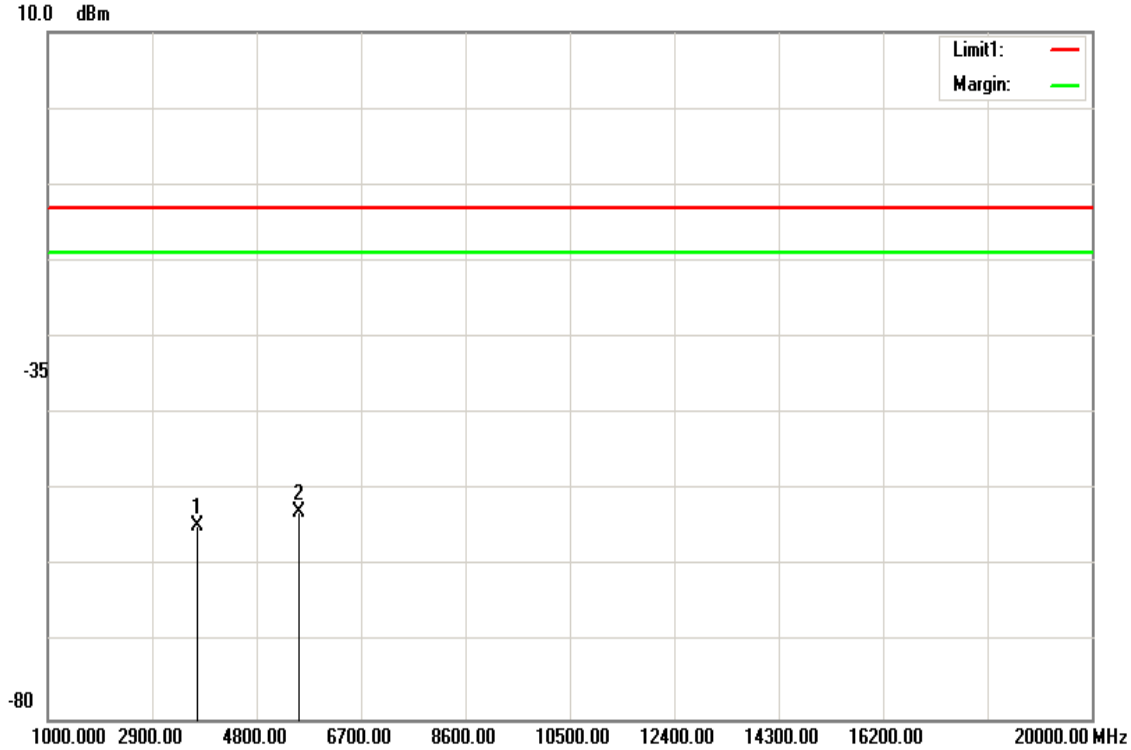
Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3810.000	-56.97	7.01	12.56	-51.42	-13.00	-38.42	H
5715.000	-55.78	8.75	12.81	-51.72	-13.00	-38.72	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*

LTE Band 2 / BW: 20MHz / 16QAM / RB =1, RB Offset = 0

Operation Mode:	Tx / Low CH	**Test Date:**	September 26, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Ver.

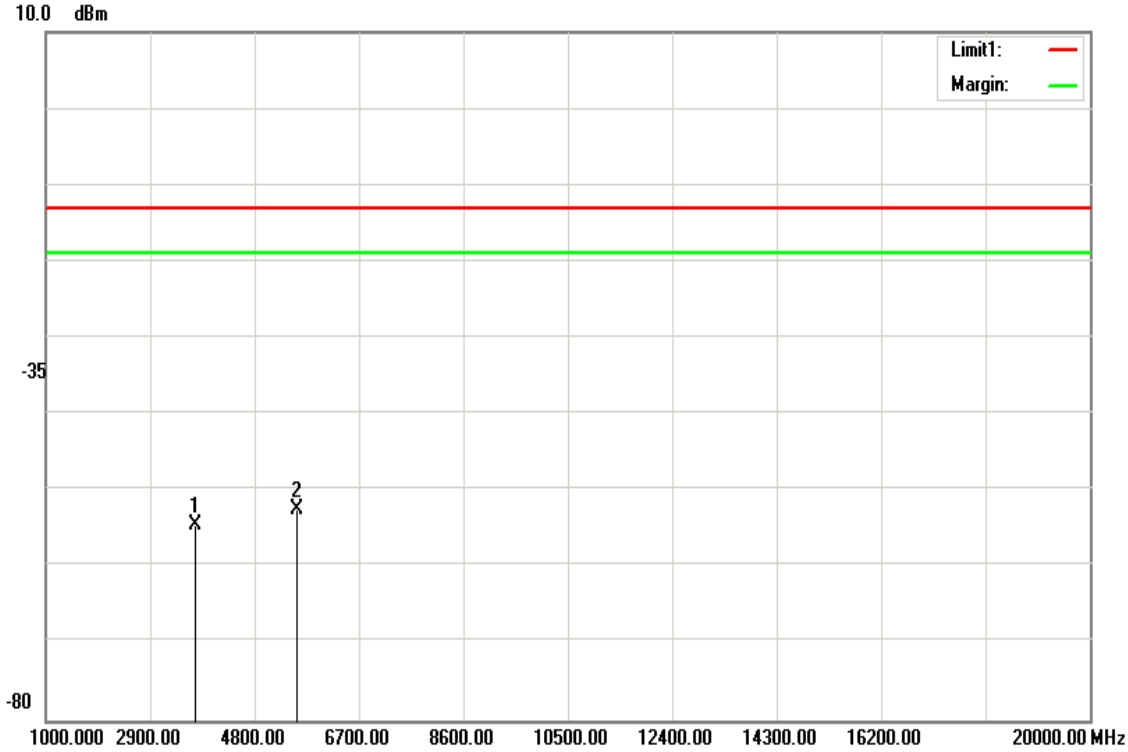


Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3720.000	-60.28	6.91	12.54	-54.65	-13.00	-41.65	V
5580.000	-57.19	8.64	12.87	-52.96	-13.00	-39.96	V
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*

Operation Mode:	Tx / Low CH	**Test Date:**	September 26, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Hor.

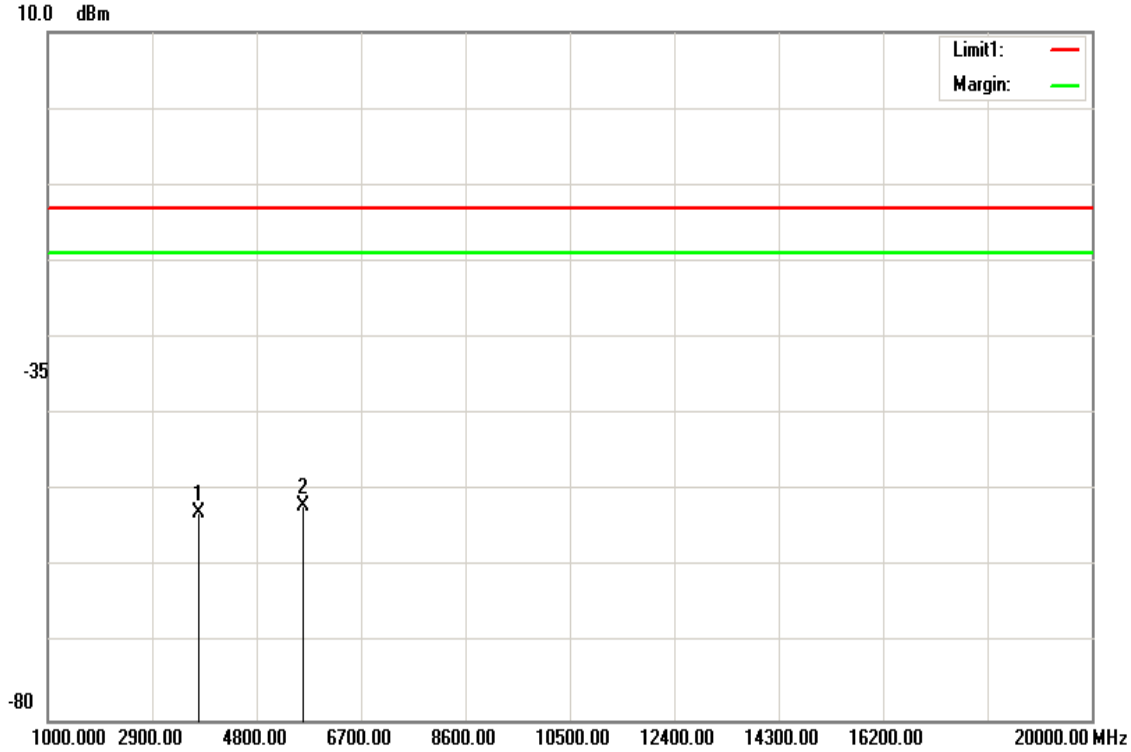


Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3720.000	-60	6.91	12.54	-54.37	-13.00	-41.37	H
5580.000	-56.71	8.64	12.87	-52.48	-13.00	-39.48	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*

Operation Mode:	Tx / Mid CH	**Test Date:**	September 26, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Ver.

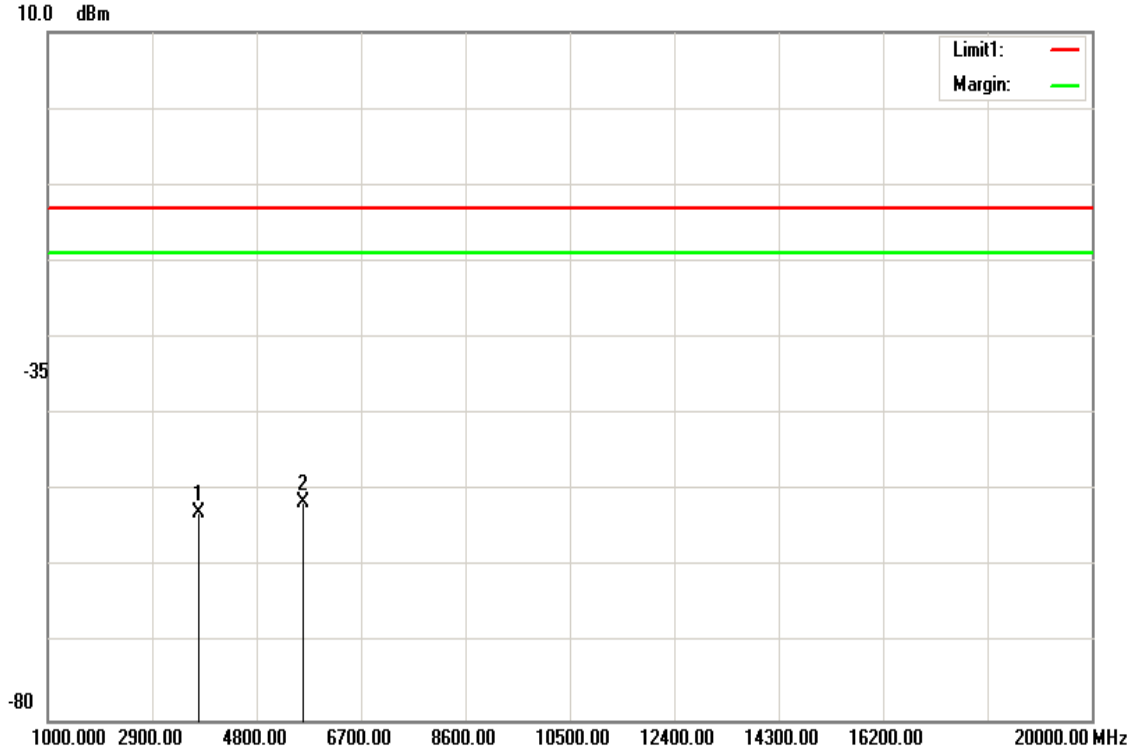


Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3760.000	-58.48	6.96	12.55	-52.89	-13.00	-39.89	V
5640.000	-56.04	8.69	12.84	-51.89	-13.00	-38.89	V
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*

Operation Mode:	Tx / Mid CH	**Test Date:**	September 26, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Hor.

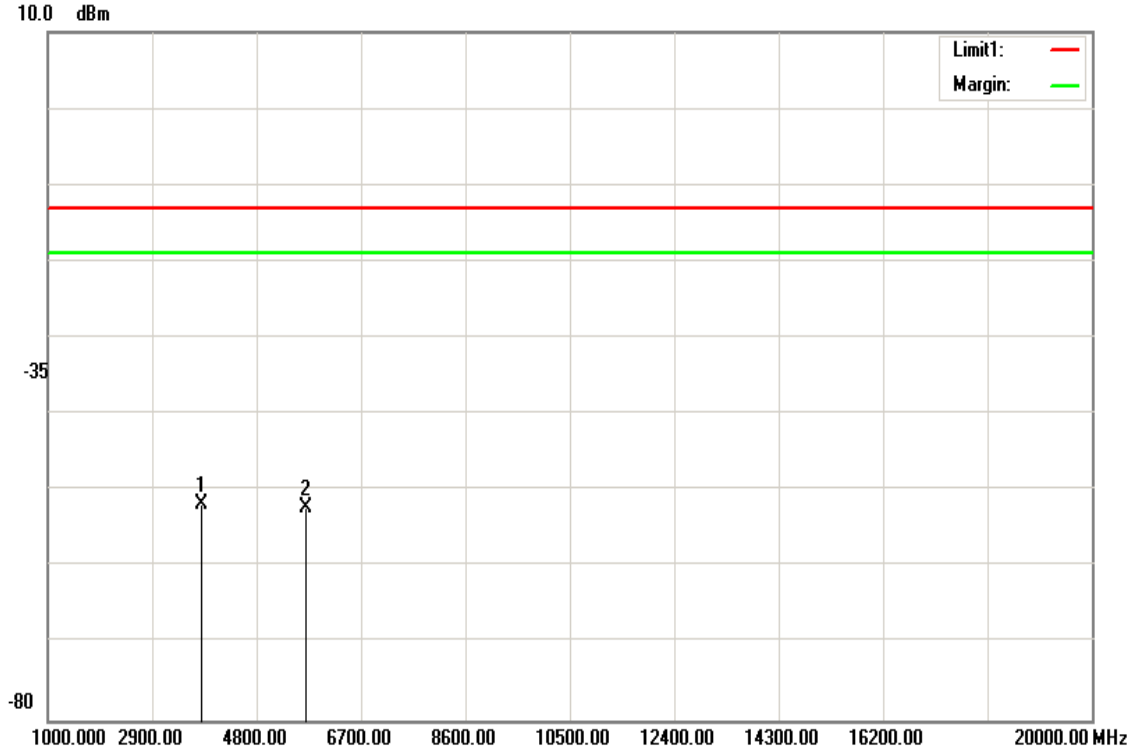


Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3760.000	-58.42	6.96	12.55	-52.83	-13.00	-39.83	H
5640.000	-55.66	8.69	12.84	-51.51	-13.00	-38.51	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*

Operation Mode:	Tx / High CH	**Test Date:**	September 26, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Ver.

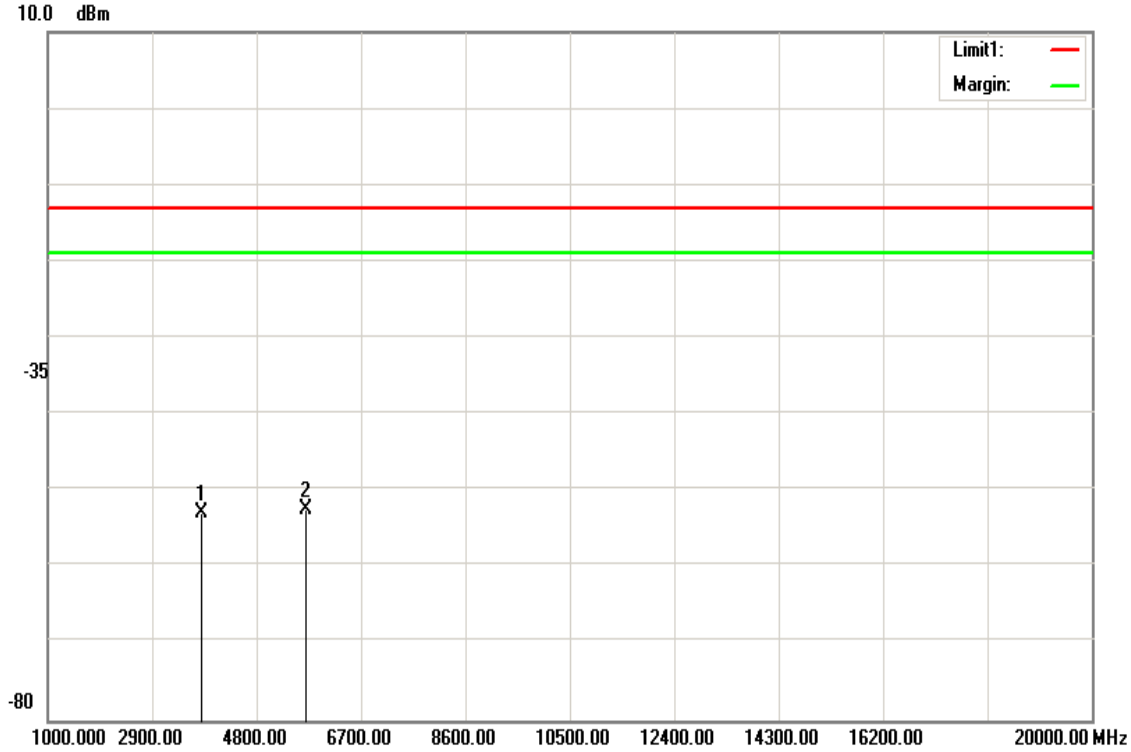


Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3800.000	-57.36	7	12.56	-51.80	-13.00	-38.80	V
5700.000	-56.22	8.74	12.82	-52.14	-13.00	-39.14	V
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*

Operation Mode:	Tx / High CH	**Test Date:**	September 26, 2016
Temperature:	22.6°C	**Tested by:**	Dennis Li
Humidity:	57.2% RH	**Polarity:**	Hor.



Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3800.000	-58.52	7.00	12.56	-52.96	-13.00	-39.96	H
5700.000	-56.5	8.74	12.82	-52.42	-13.00	-39.42	H
N/A							

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*