

FCC §22.917(a) & §24.238(a) & §27.53(h)- BAND EDGES

Applicable Standard

According to § 22.917(a), the power of any emissions 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.

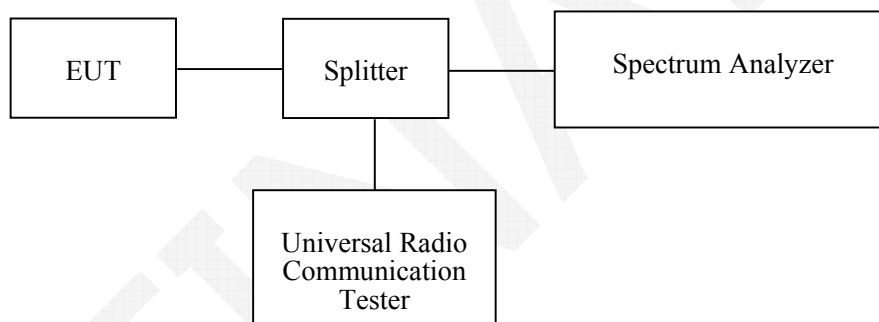
According to §24.238(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

According to §27.53 (h), AWS emission limits—(1) General protection levels. Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB.

Test Procedure

The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.

The center of the spectrum analyzer was set to block edge frequency.



Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSP 38	100478	2015-05-09	2016-05-09

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to National Primary Standards and International System of Units (SI).

Test Data**Environmental Conditions**

Temperature:	26.6-27 °C
Relative Humidity:	49-52%
ATM Pressure:	100-101kPa

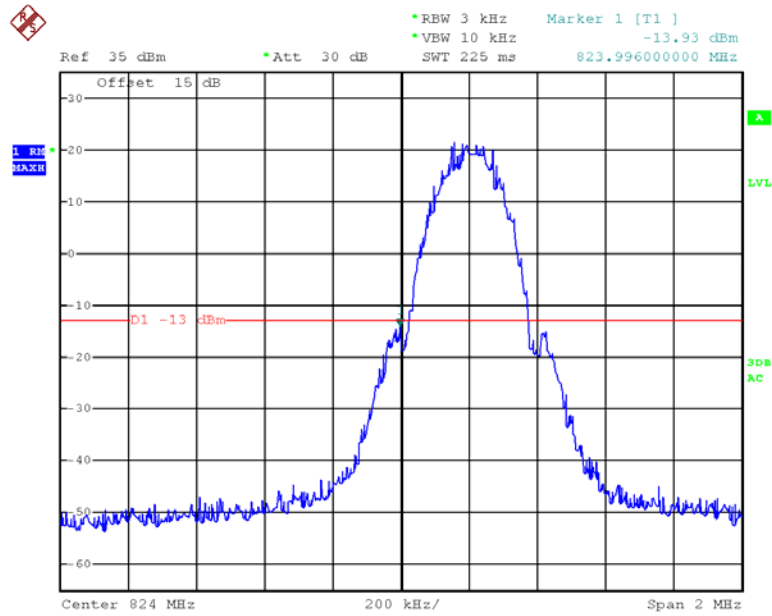
The testing was performed by Lion Xiao on 2015-08-30&2015-08-31&2015-09-06.

Test Mode: Transmitting

Test Result: Compliant. Please refer to the following plots.

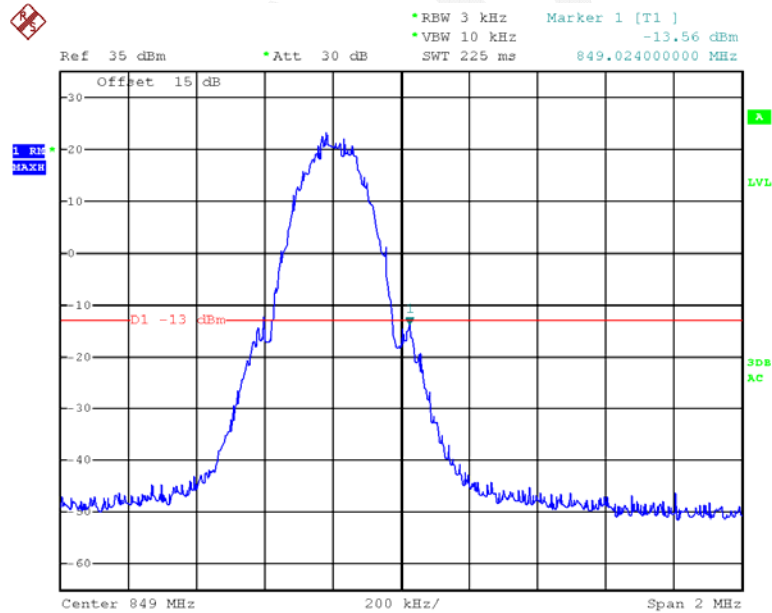
ENV

GSM 850, Left Band Edge



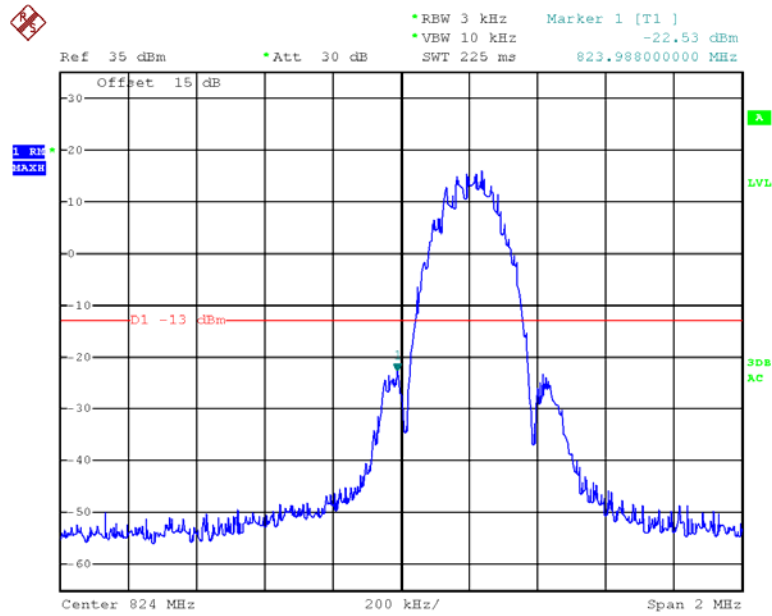
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GSM 850, Right Band Edge



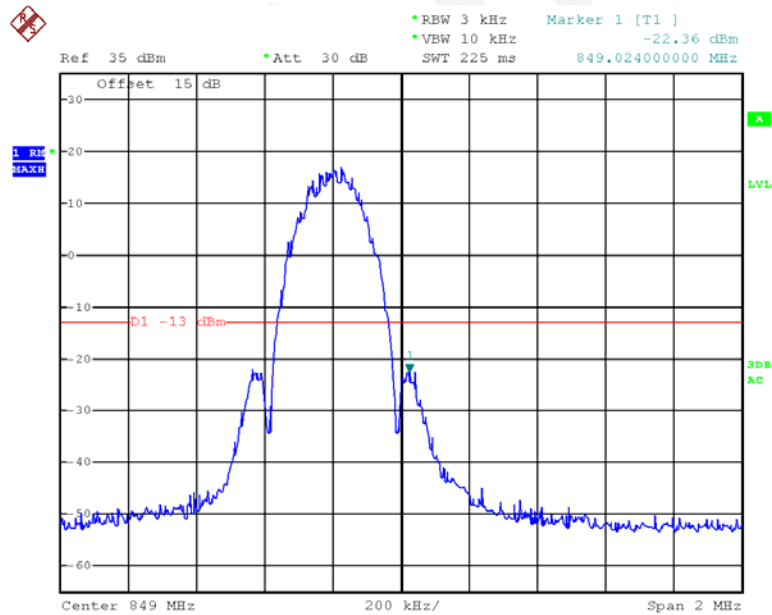
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EDGE 850, Left Band Edge



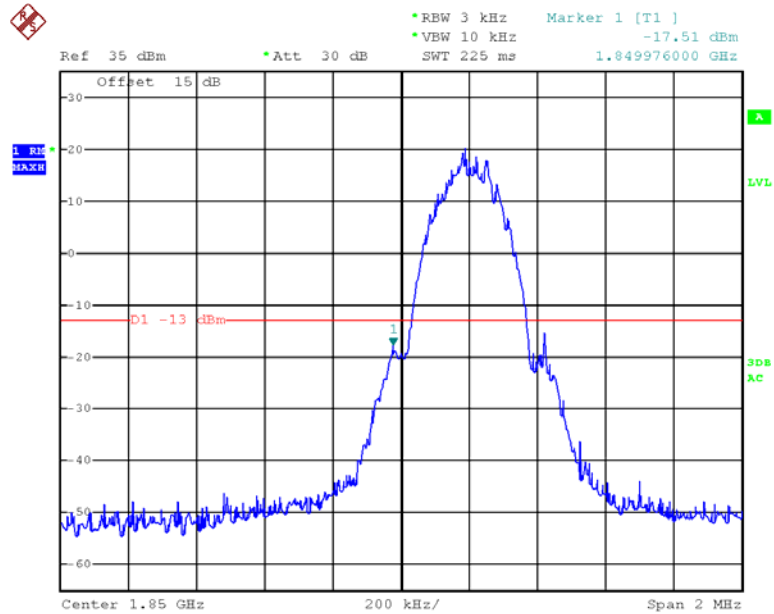
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EDGE 850, Right Band Edge



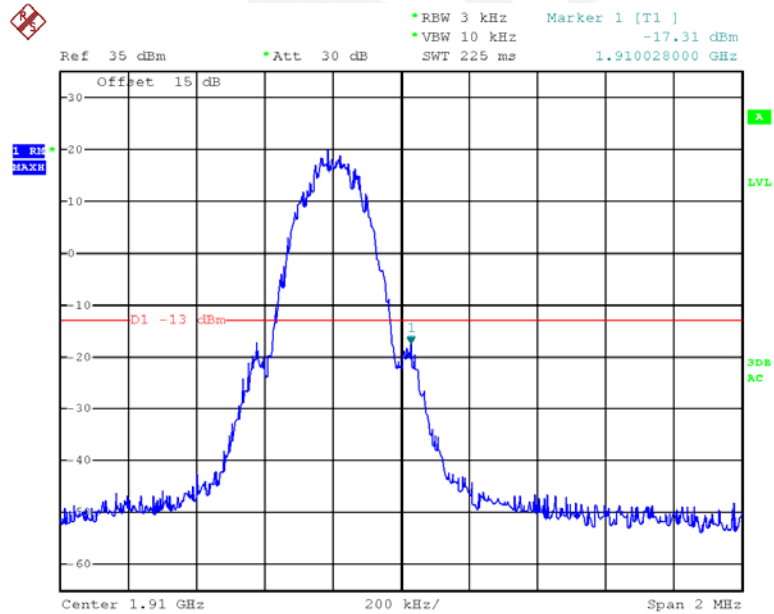
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GSM 1900, Left Band Edge



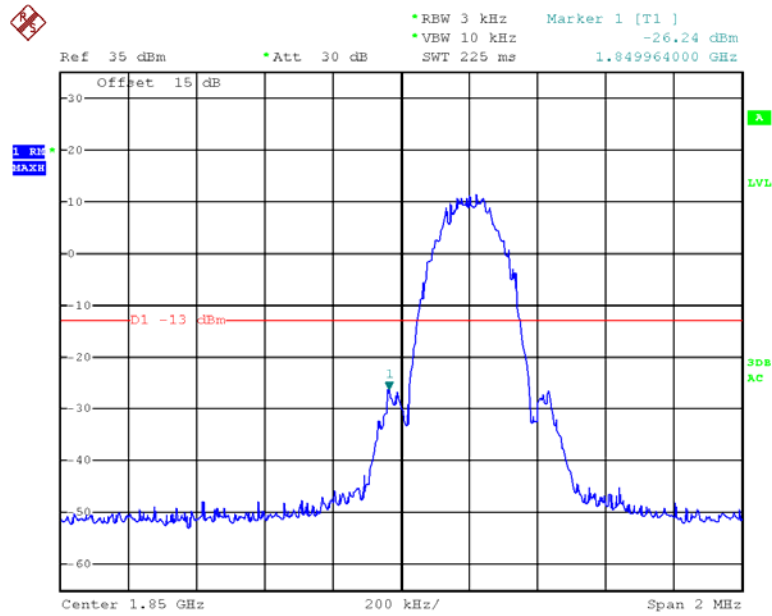
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GSM 1900, Right Band Edge



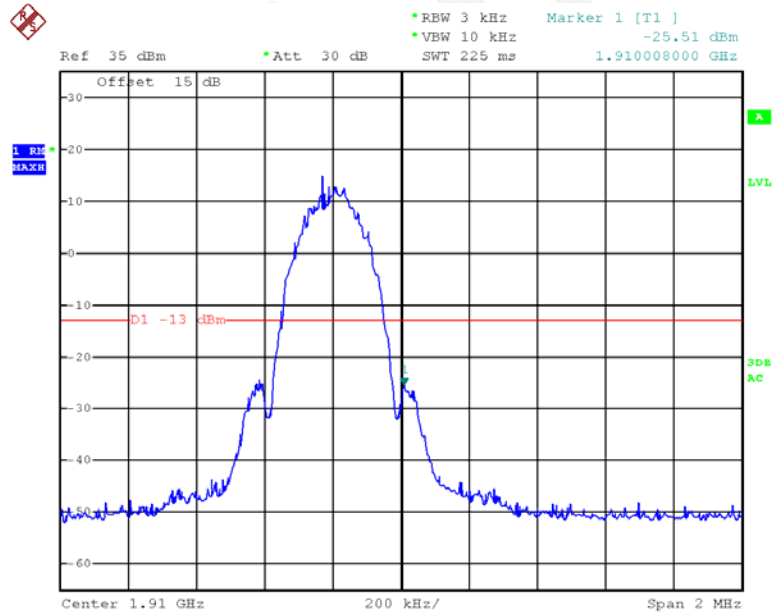
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EDGE 1900, Left Band Edge



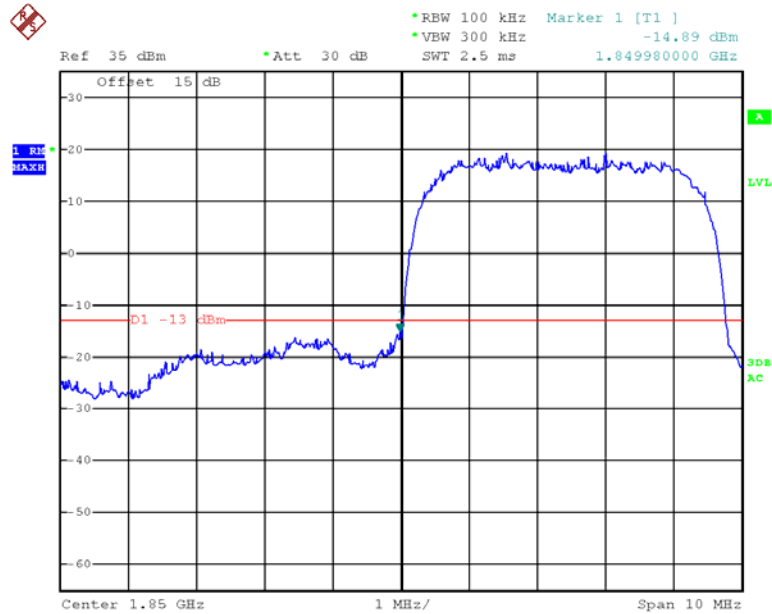
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EDGE 1900, Right Band Edge



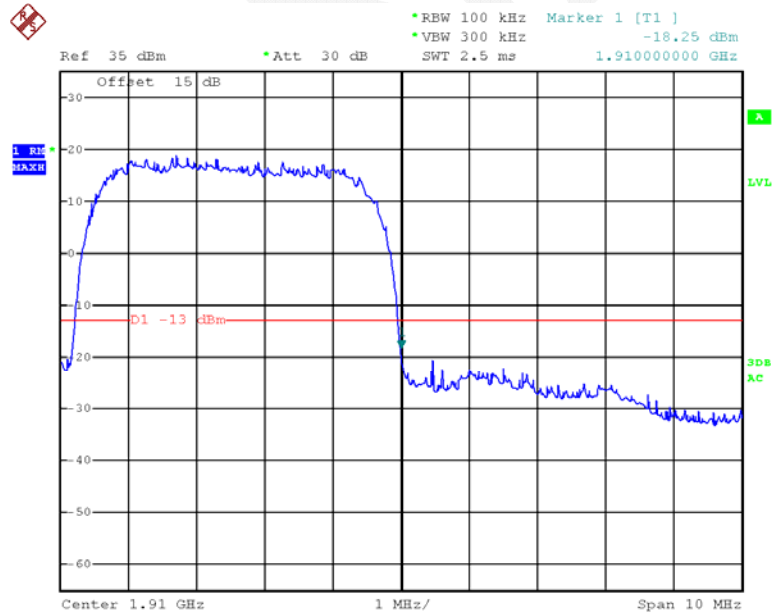
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REL99 Band II, Left Band Edge



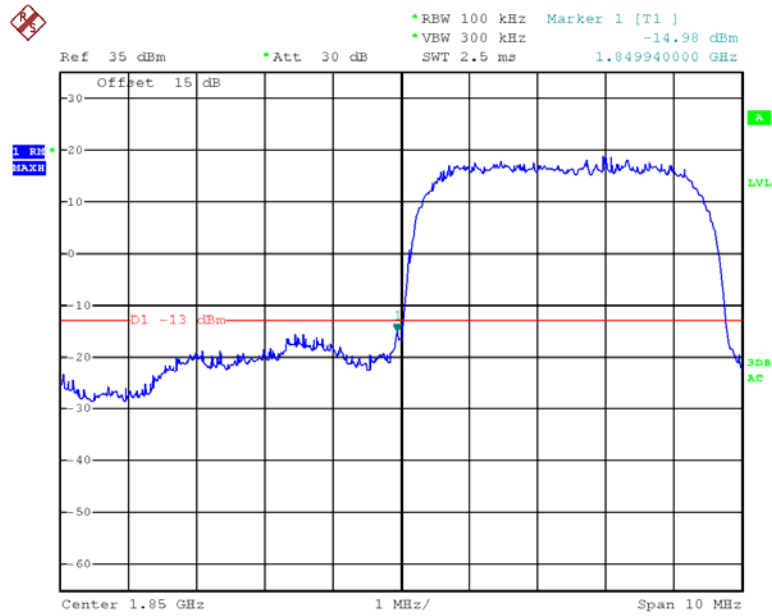
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REL99 Band II, Right Band Edge



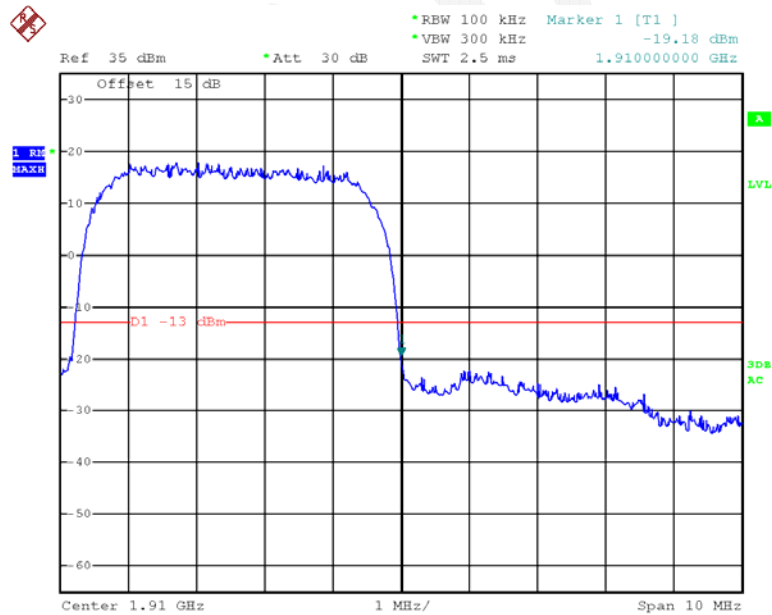
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HSDPA Band II, Left Band Edge



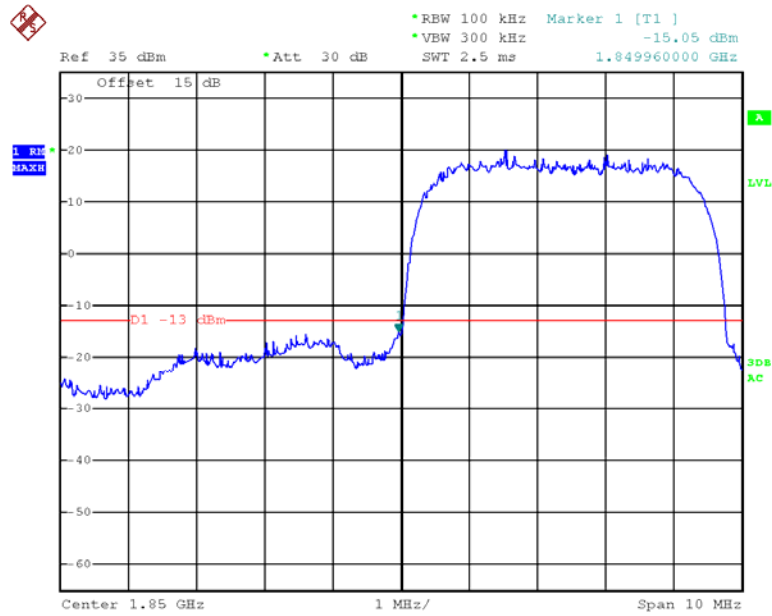
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HSDPA Band II, Right Band Edge



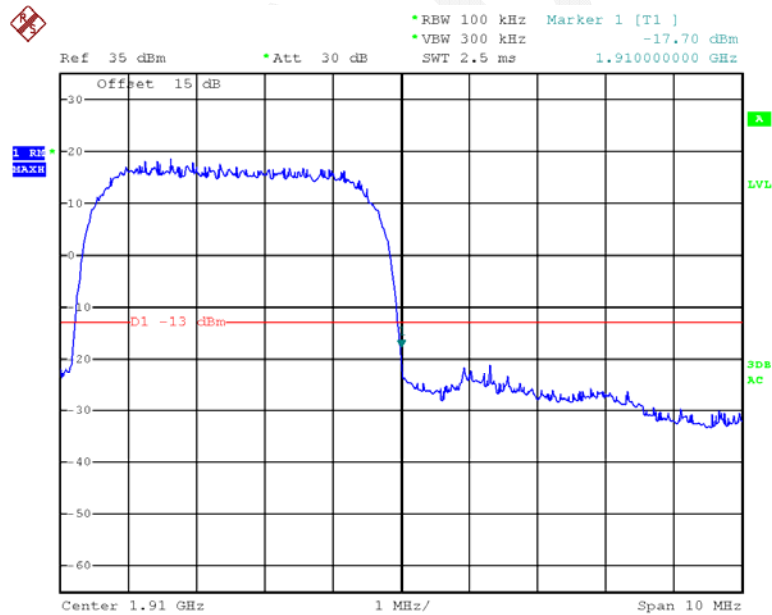
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HSUPA Band II, Left Band Edge



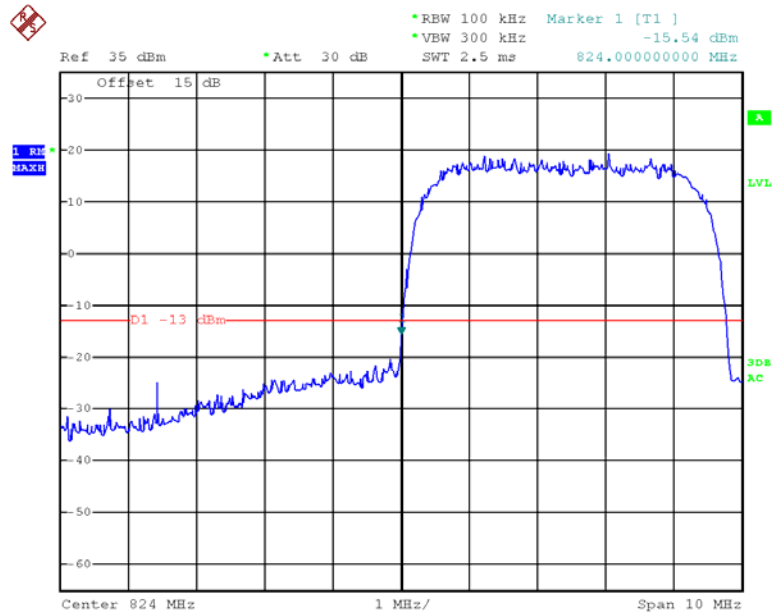
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HSUPA Band II, Right Band Edge



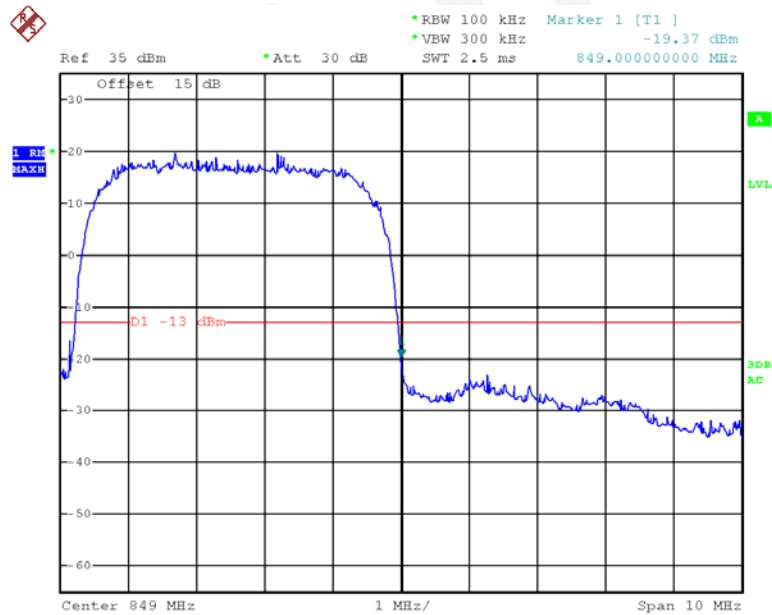
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REL99 Band V, Left Band Edge



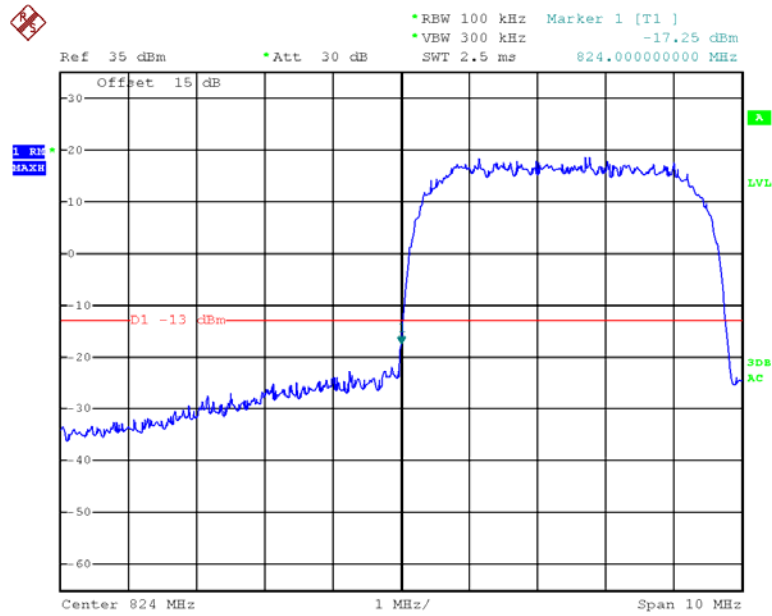
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REL99 Band V Right Band Edge



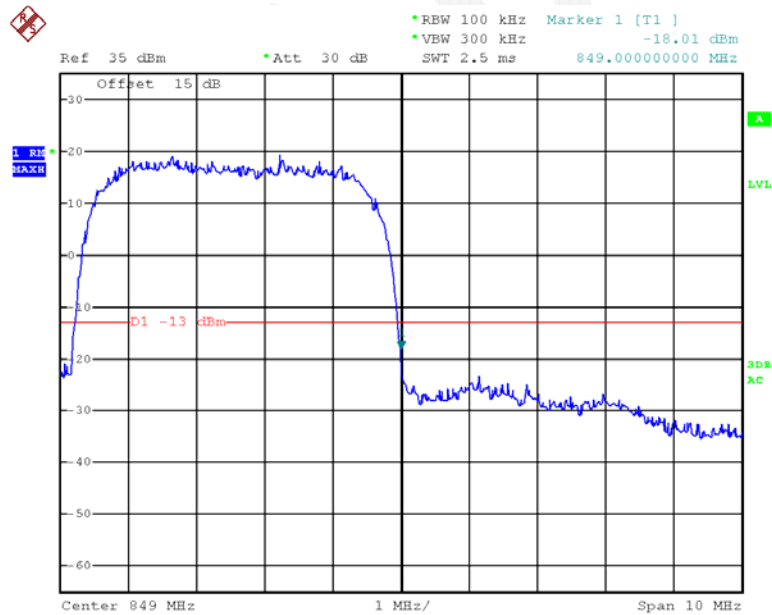
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HSDPA Band V, Left Band Edge



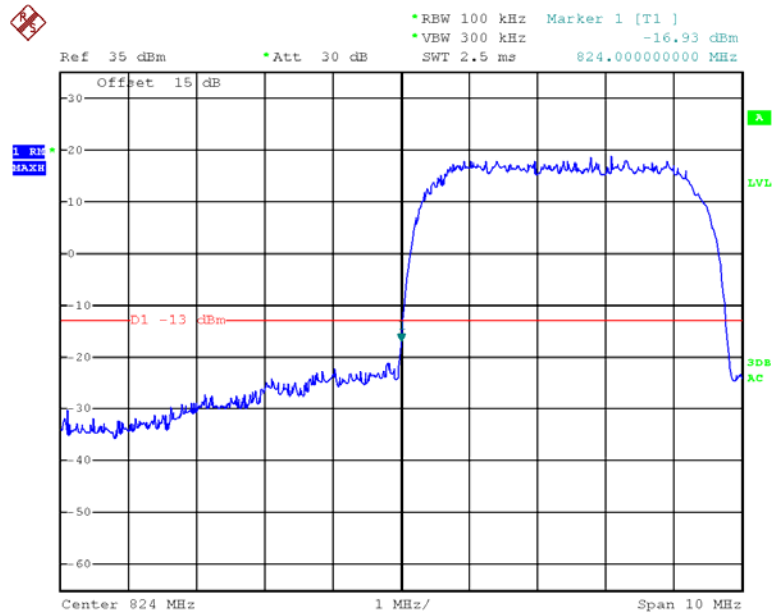
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HSDPA Band V, Right Band Edge



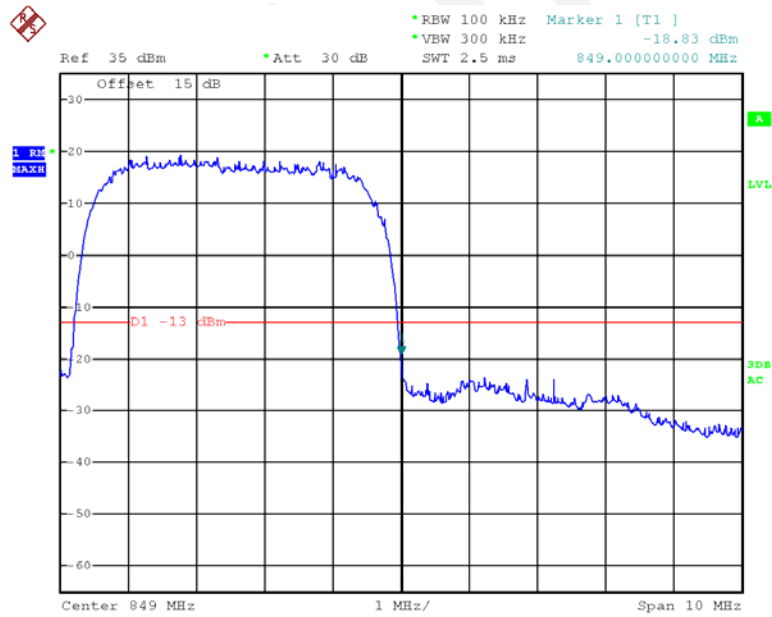
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HSUPA Band V, Left Band Edge



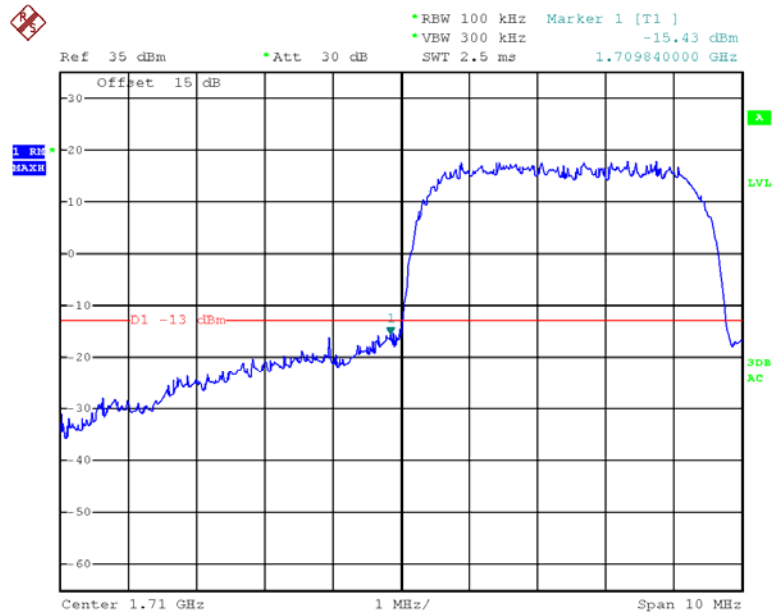
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HSUPA Band V, Right Band Edge



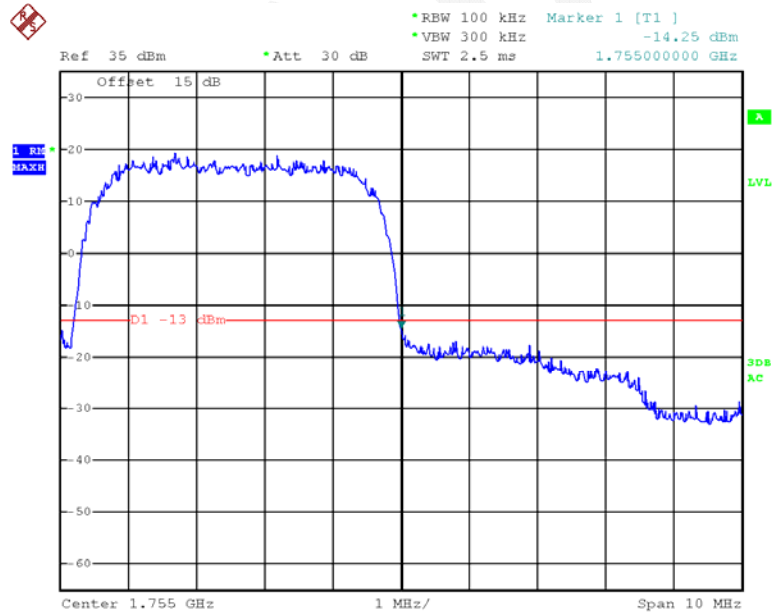
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REL99 Band IV, Left Band Edge



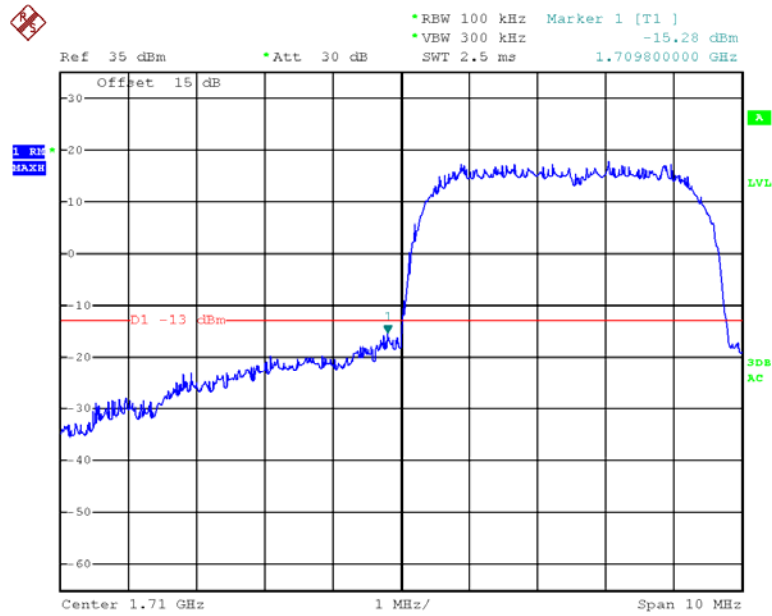
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REL99 Band IV Right Band Edge



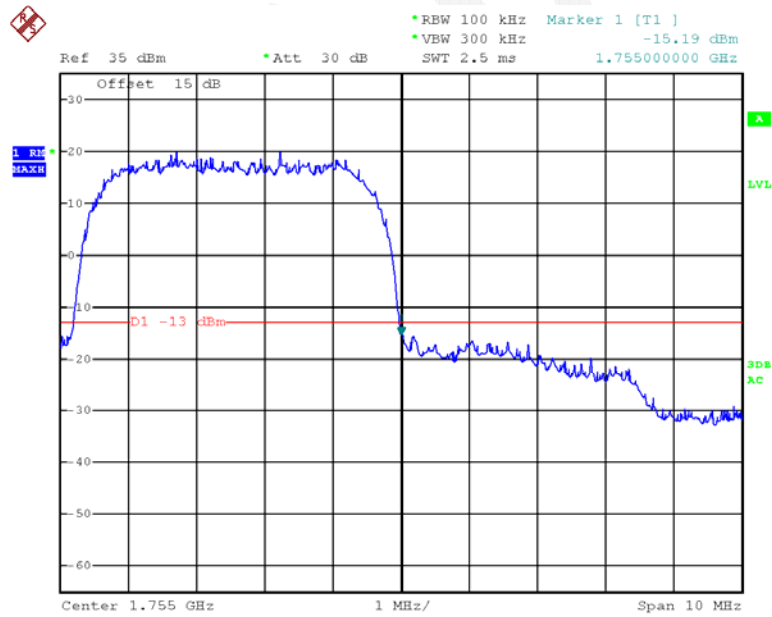
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HSDPA Band IV, Left Band Edge



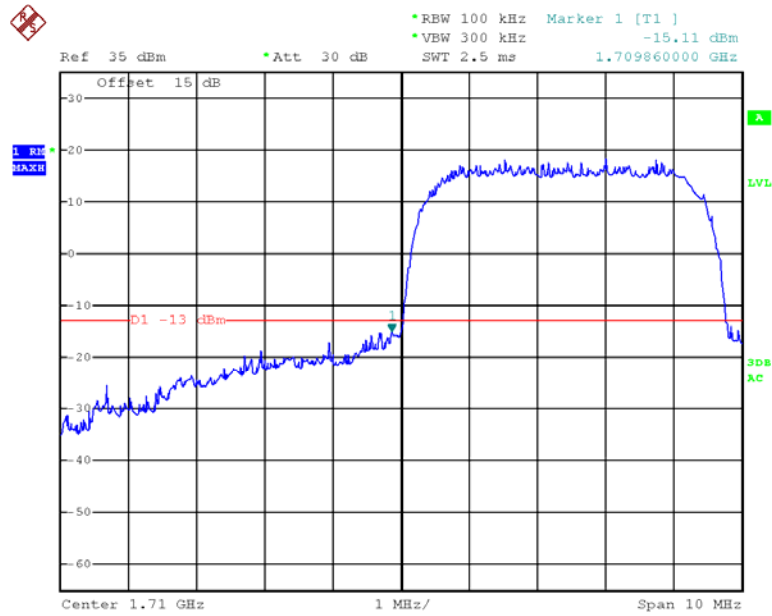
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HSDPA Band IV, Right Band Edge



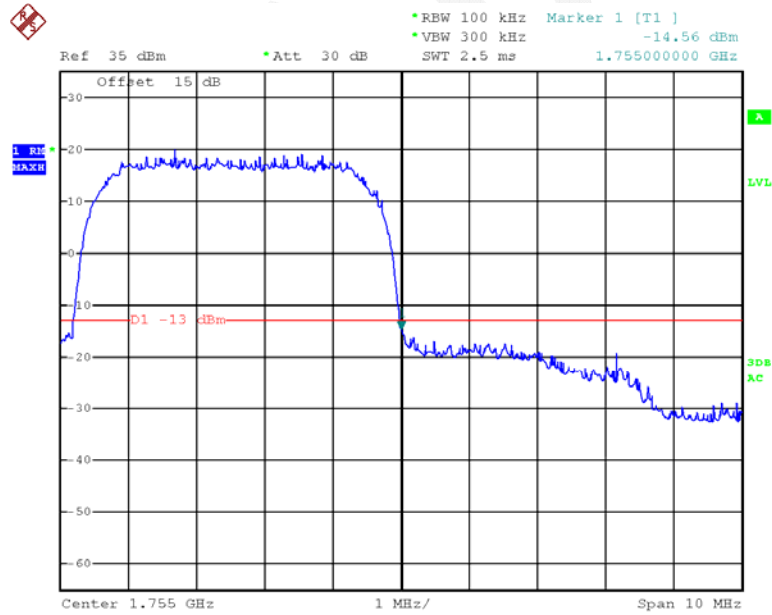
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HSUPA Band IV, Left Band Edge



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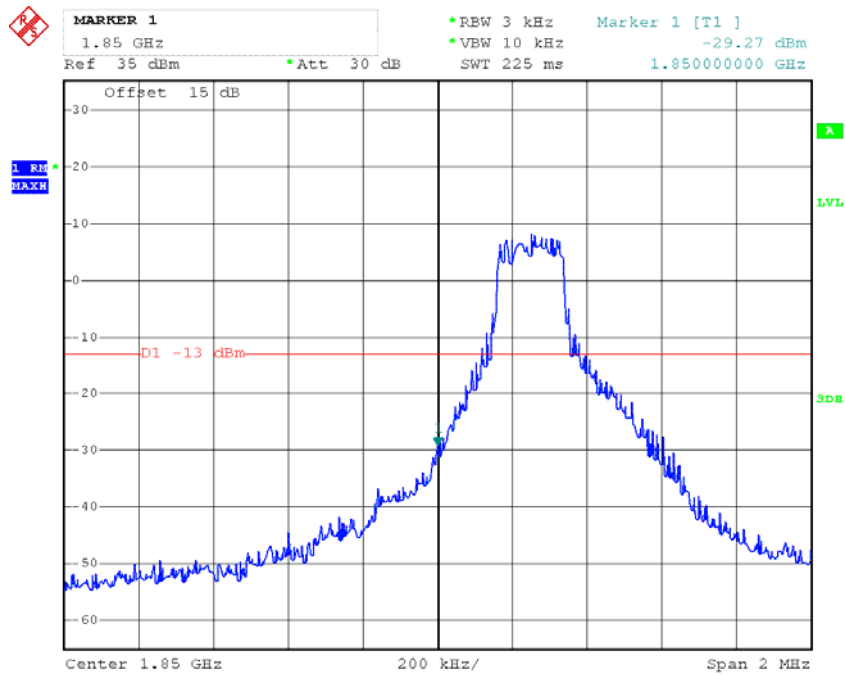
HSUPA Band IV, Right Band Edge



Date: 6.SEP.2015 17:22:06

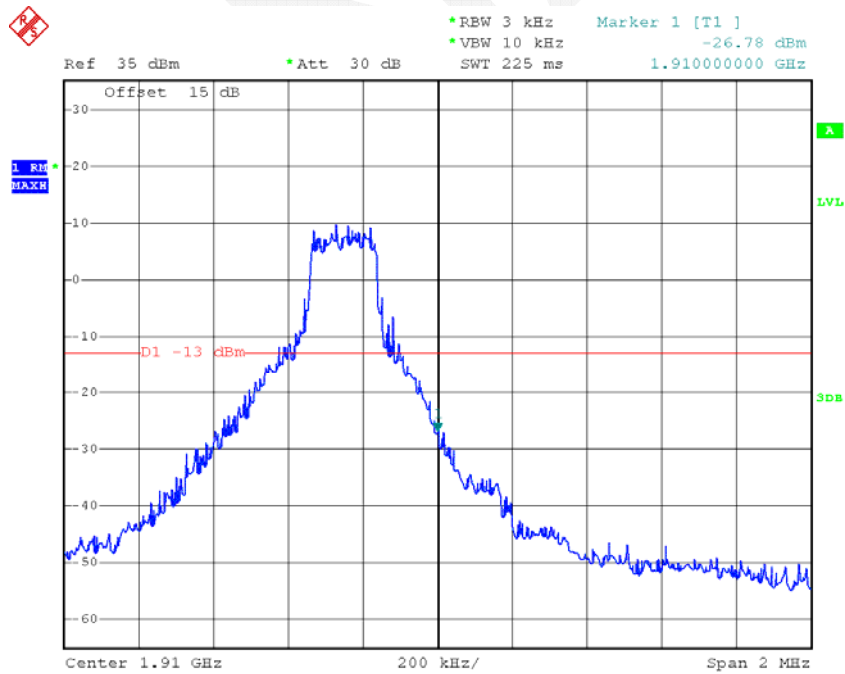
LTE Band II:

1.4 MHz_1RB_QPSK, Left Band Edge



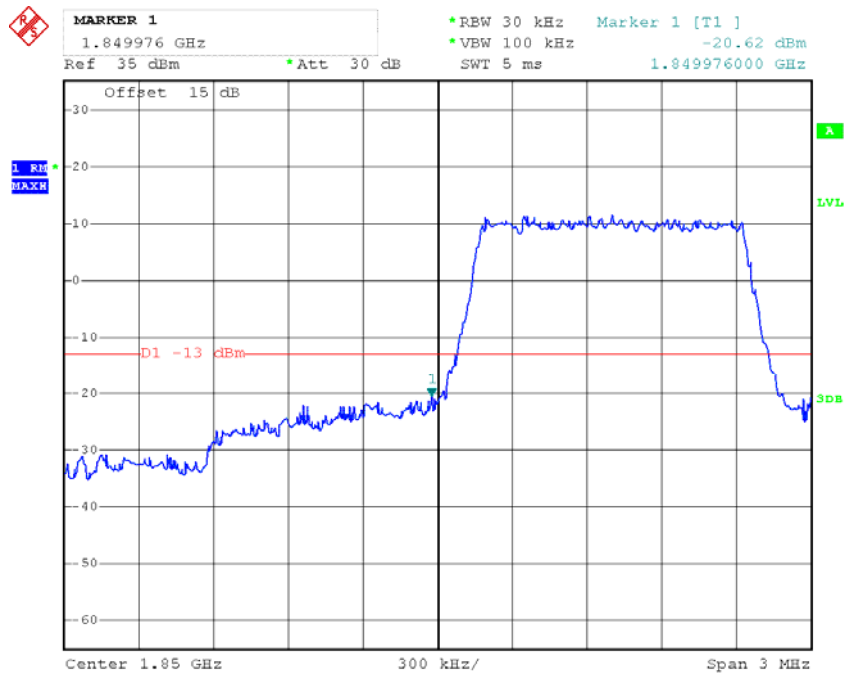
Date: 31.AUG.2015 10:32:30

1.4 MHz_1RB_QPSK, Right Band Edge



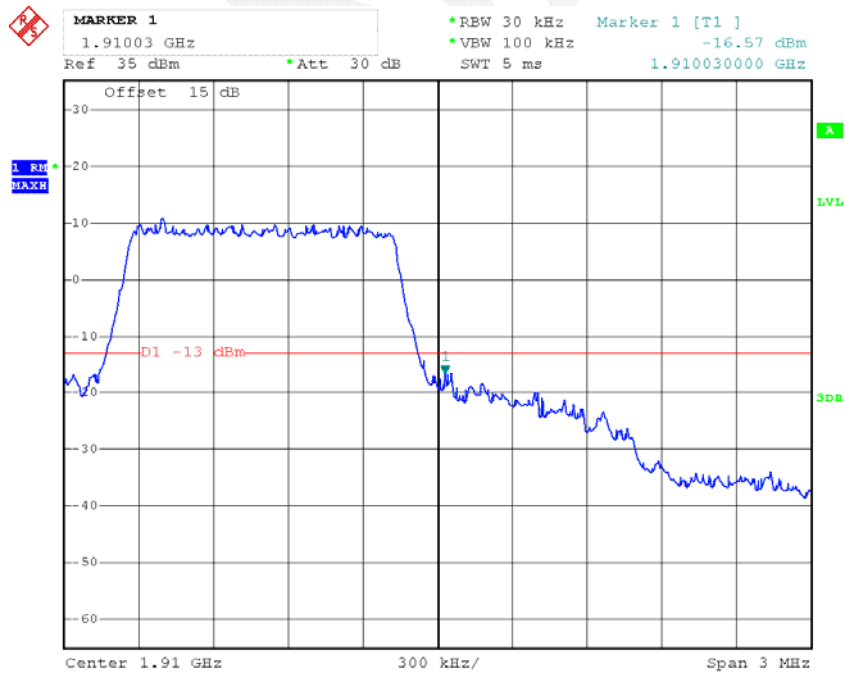
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1.4 MHz _Full RB _QPSK, Left Band Edge



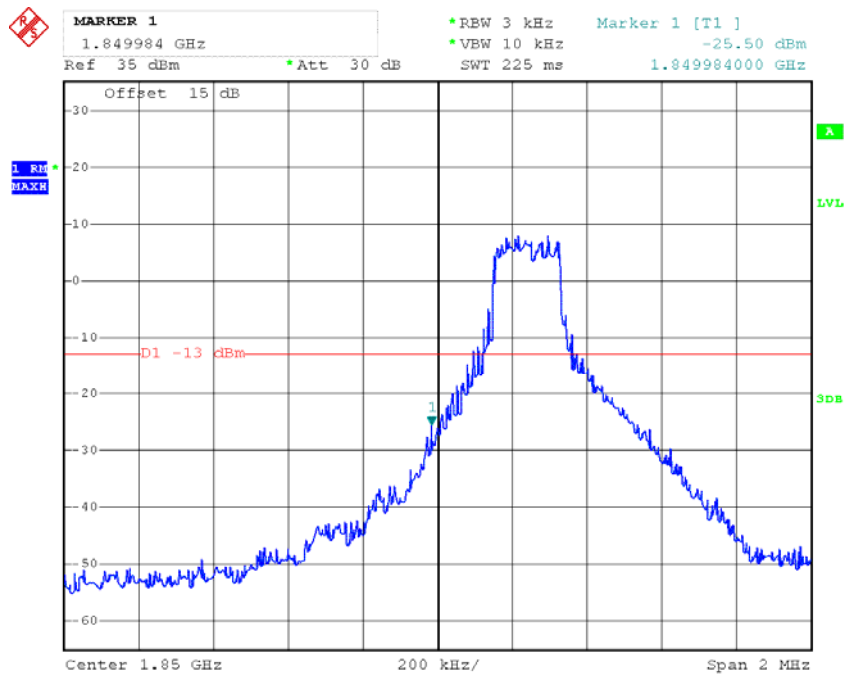
Date: 30.AUG.2015 21:36:25

1.4 MHz _Full RB _QPSK, Right Band Edge



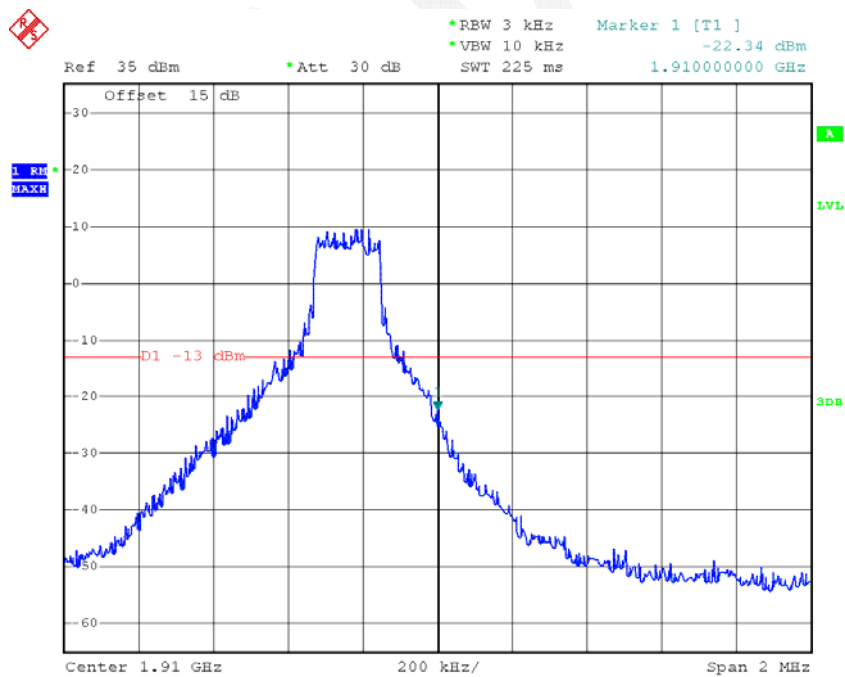
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3 MHz_1RB_QPSK, Left Band Edge



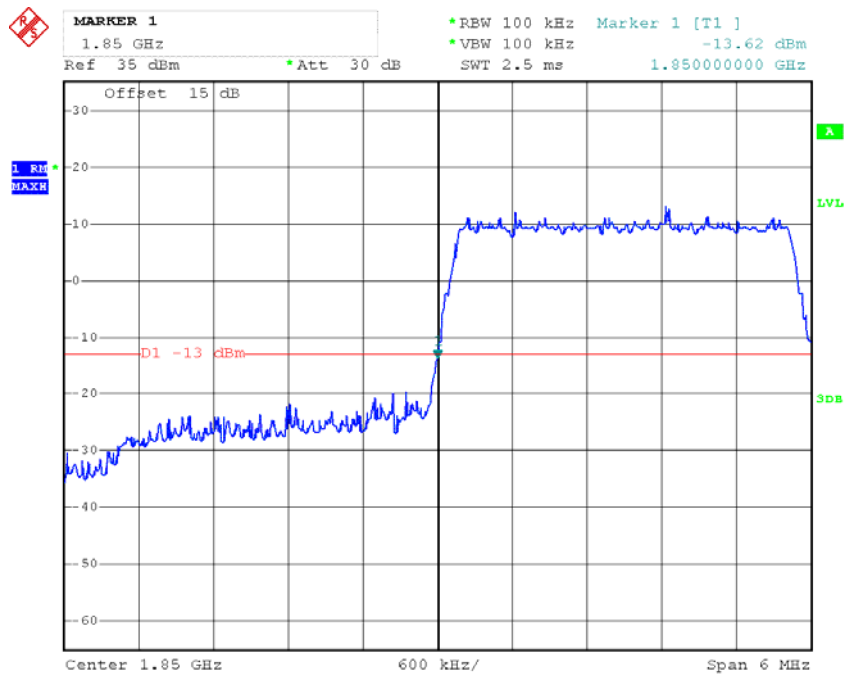
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3 MHz_1RB_QPSK, Right Band Edge



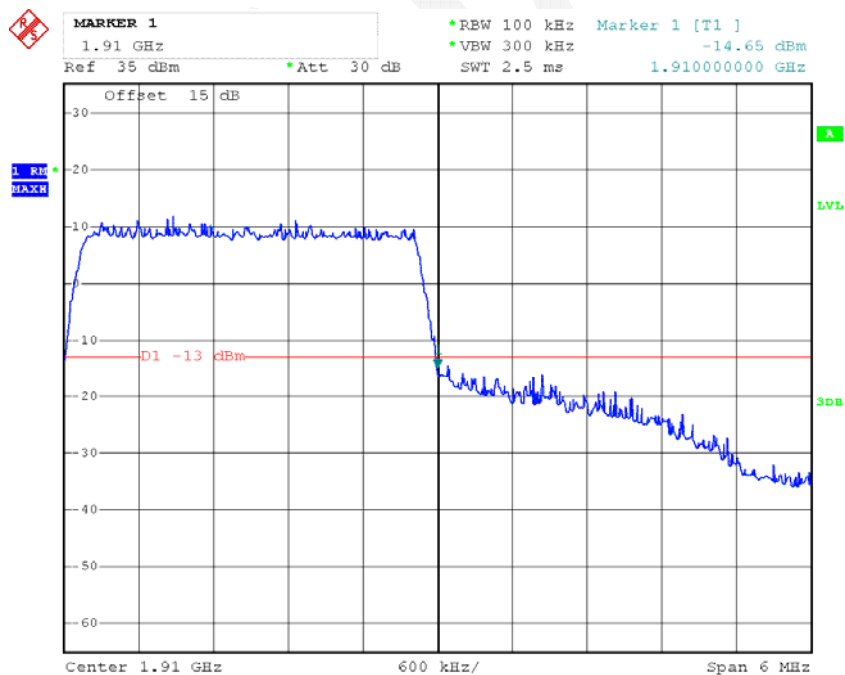
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3 MHz _Full RB_QPSK, Left Band Edge



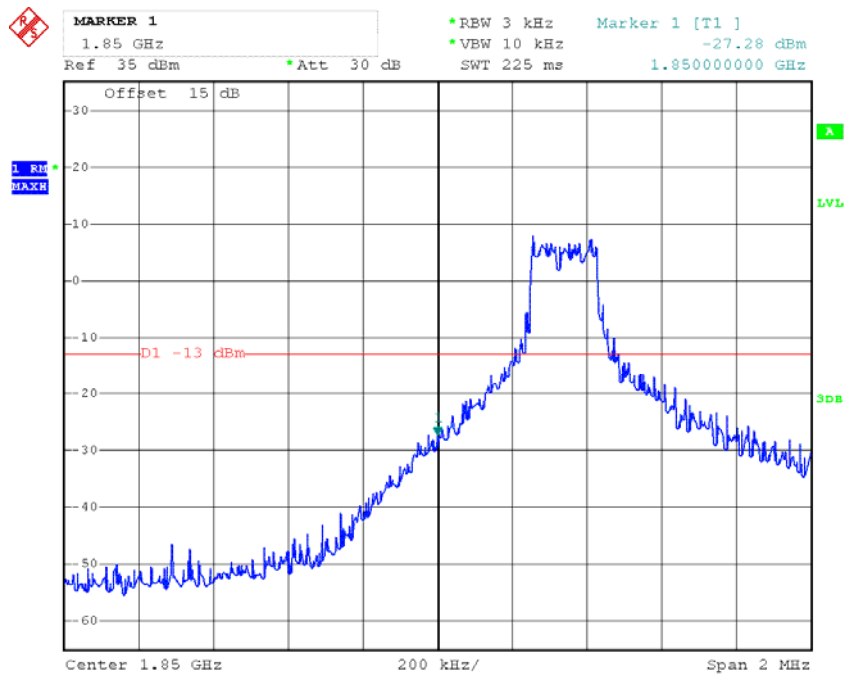
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3 MHz _Full RB_QPSK, Right Band Edge



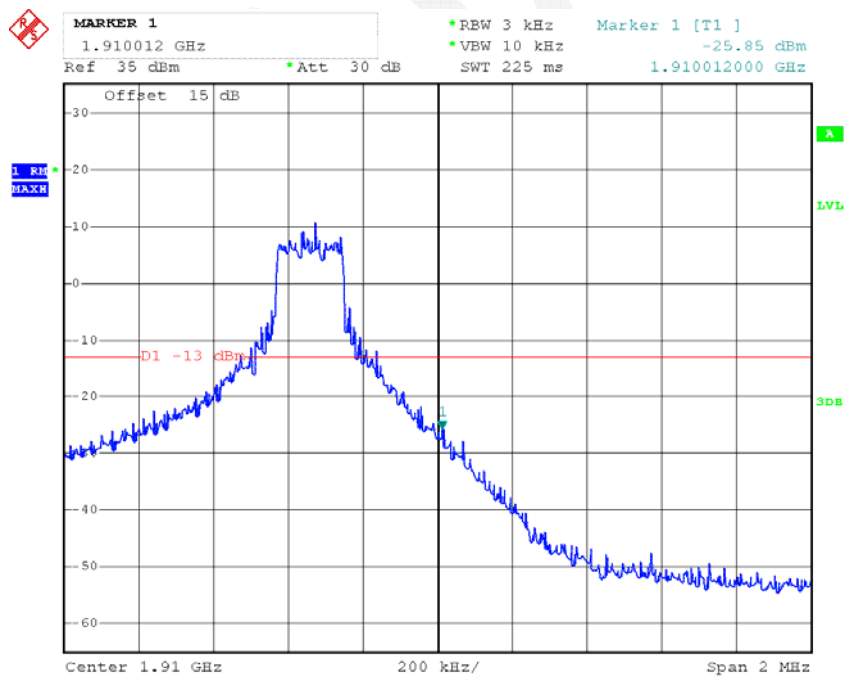
Date: 30.AUG.2015 21:56:29

5 MHz_1RB_QPSK, Left Band Edge



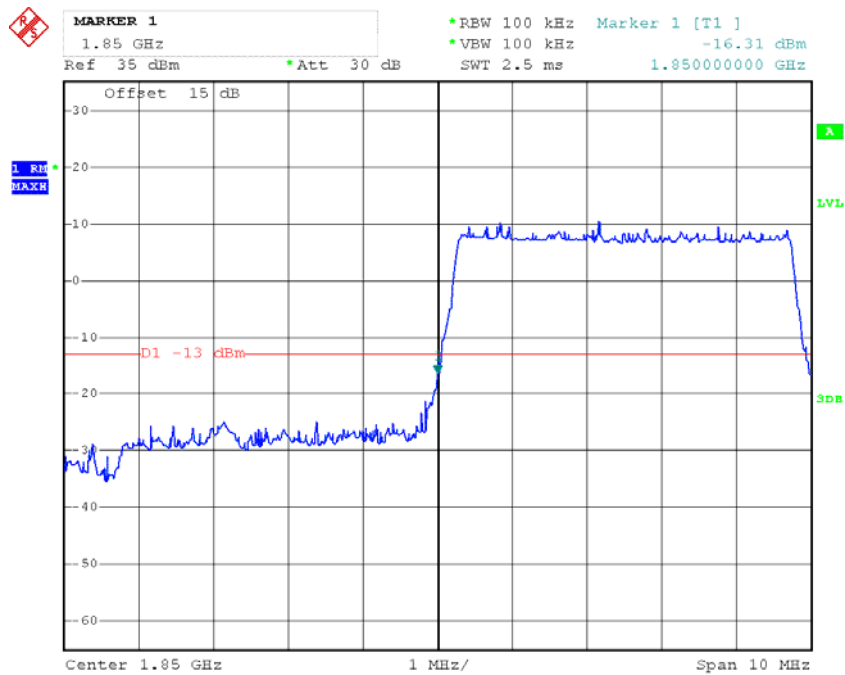
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5 MHz_1RB_QPSK, Right Band Edge



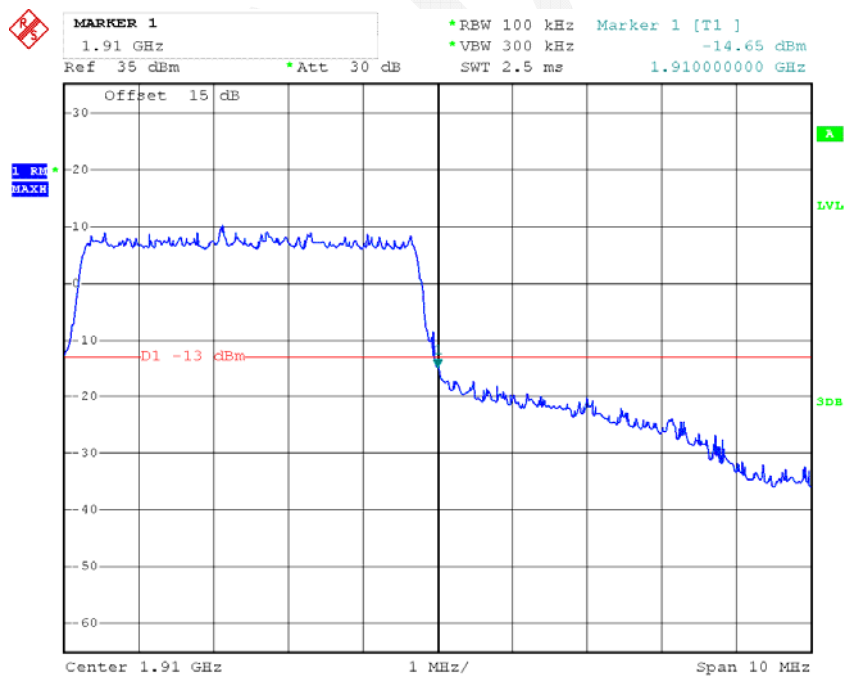
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5 MHz _Full RB _QPSK, Left Band Edge

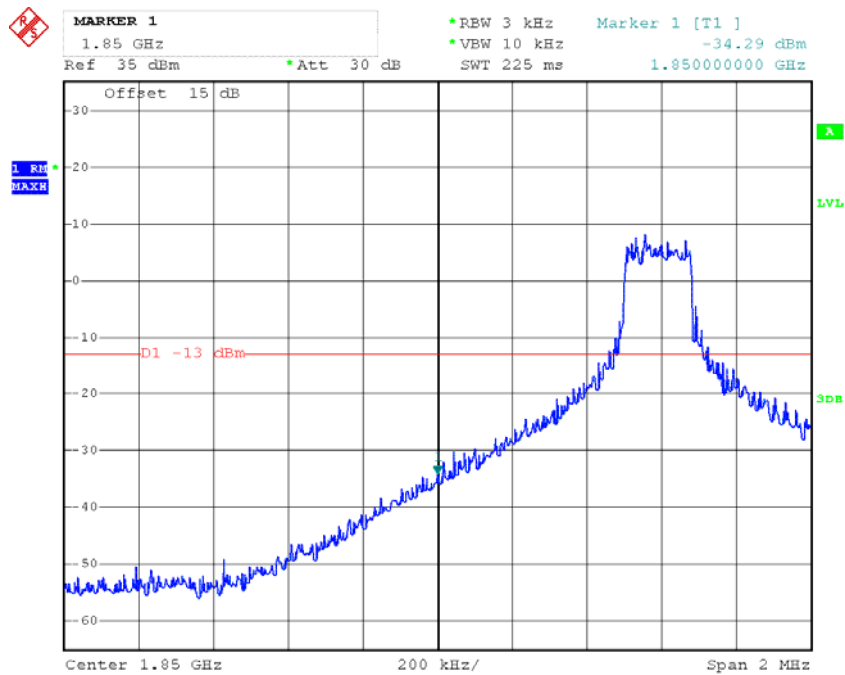


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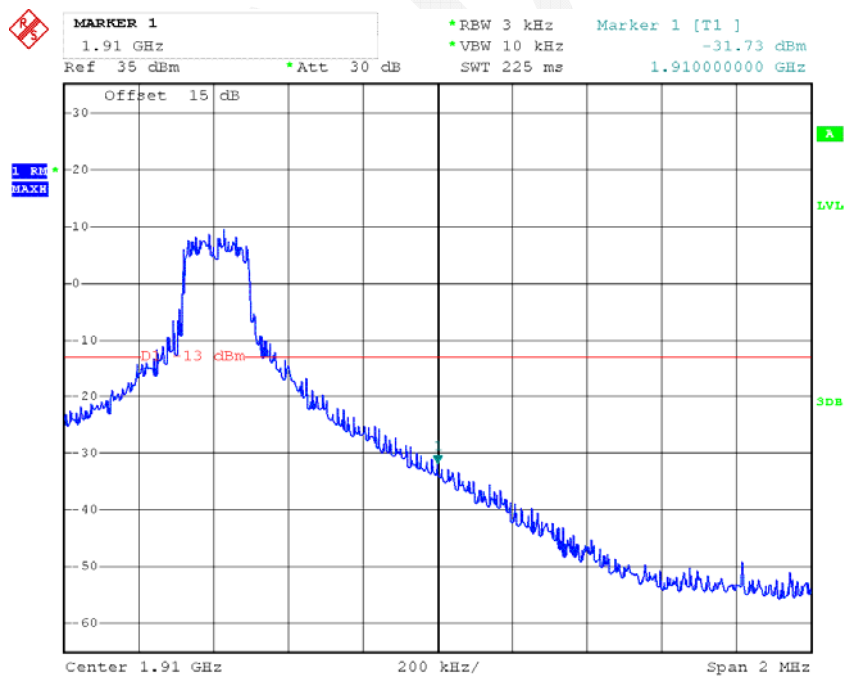
5 MHz _Full RB _QPSK, Right Band Edge



Date: 30.AUG.2015 21:55:40

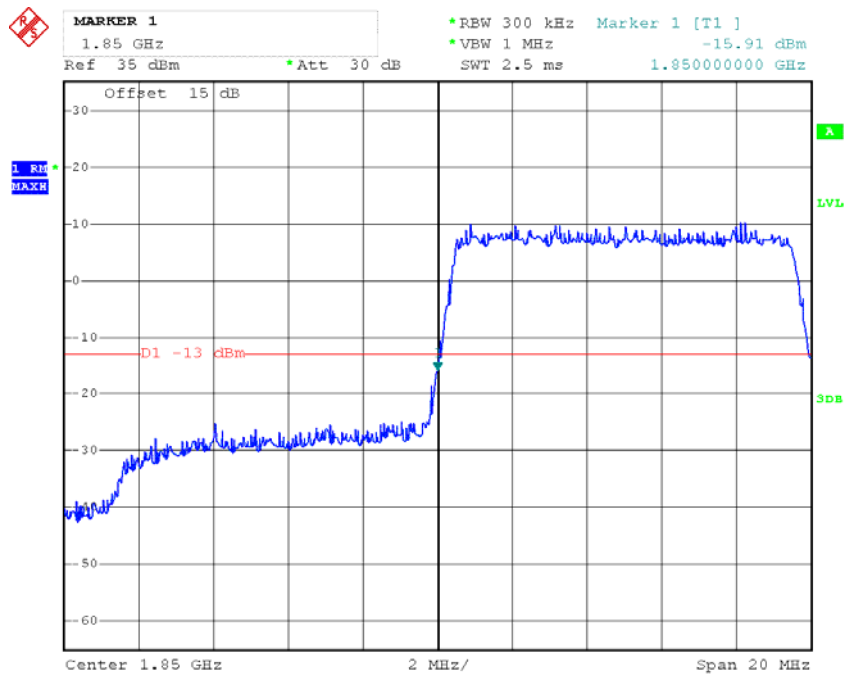
10 MHz_1RB_QPSK, Left Band Edge

Date: 31.AUG.2015 10:35:10

10 MHz_1RB_QPSK, Right Band Edge

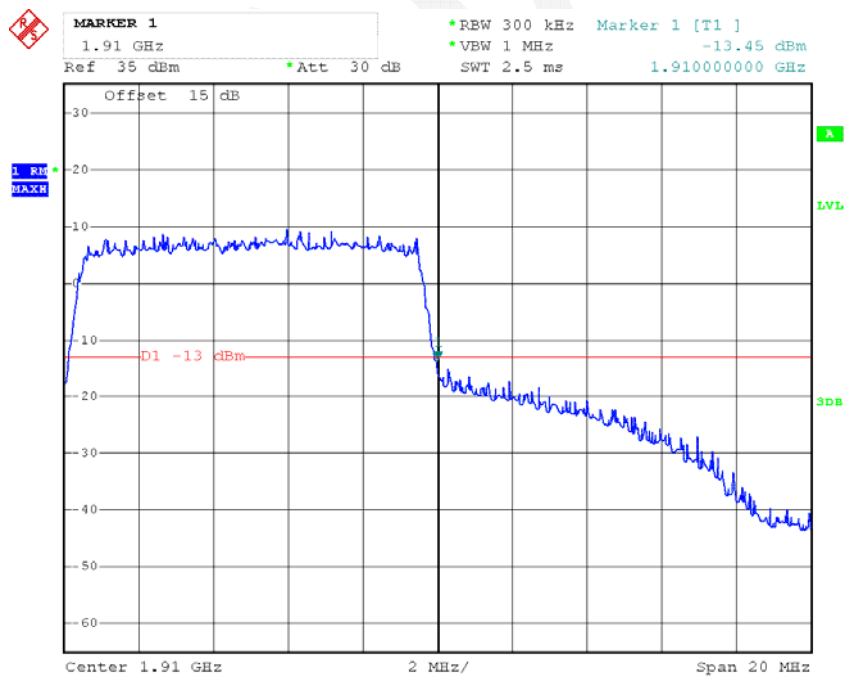
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10 MHz_Full RB_QPSK, Left Band Edge



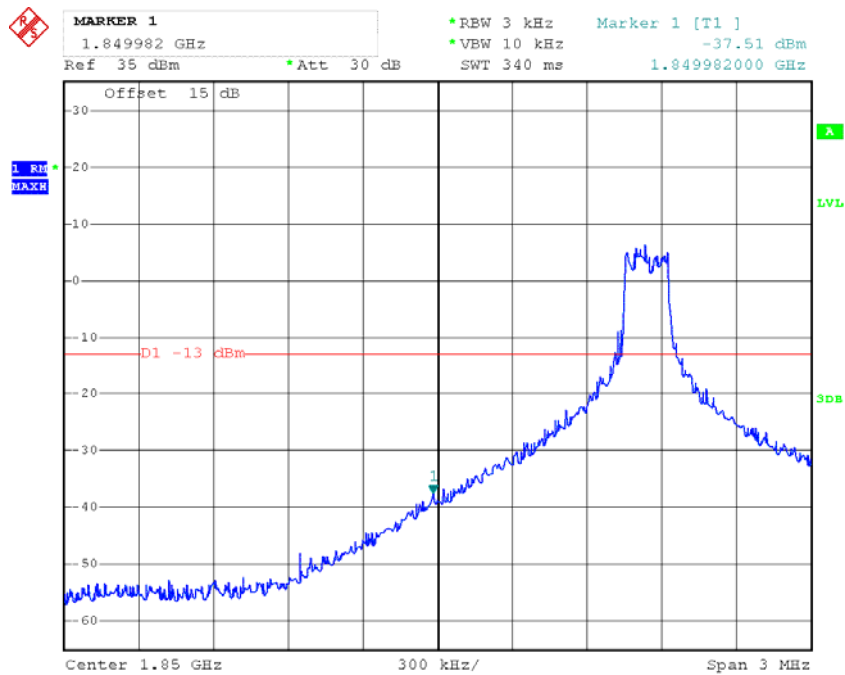
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10 MHz_Full RB_QPSK, Right Band Edge



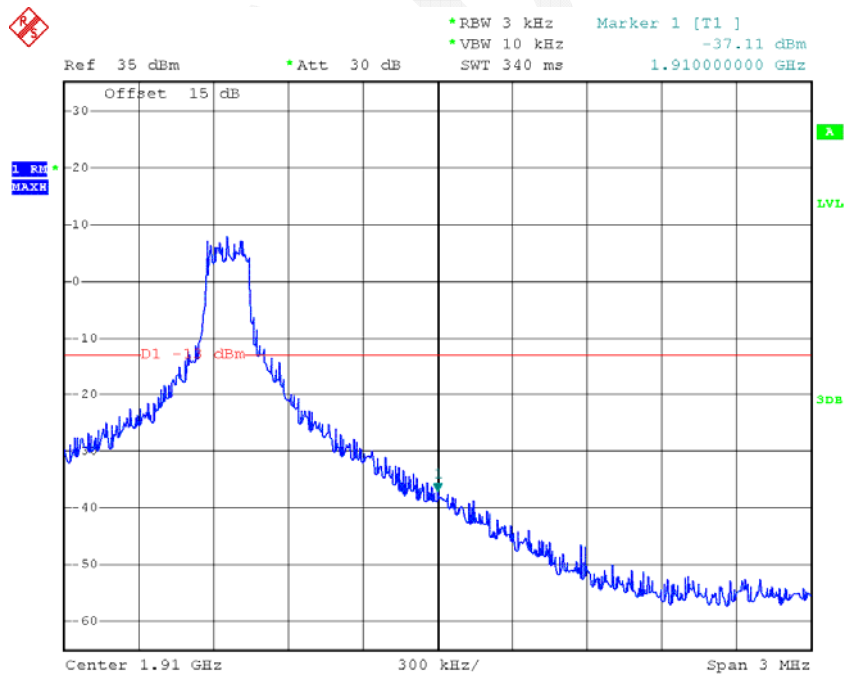
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15 MHz_1RB_QPSK, Left Band Edge



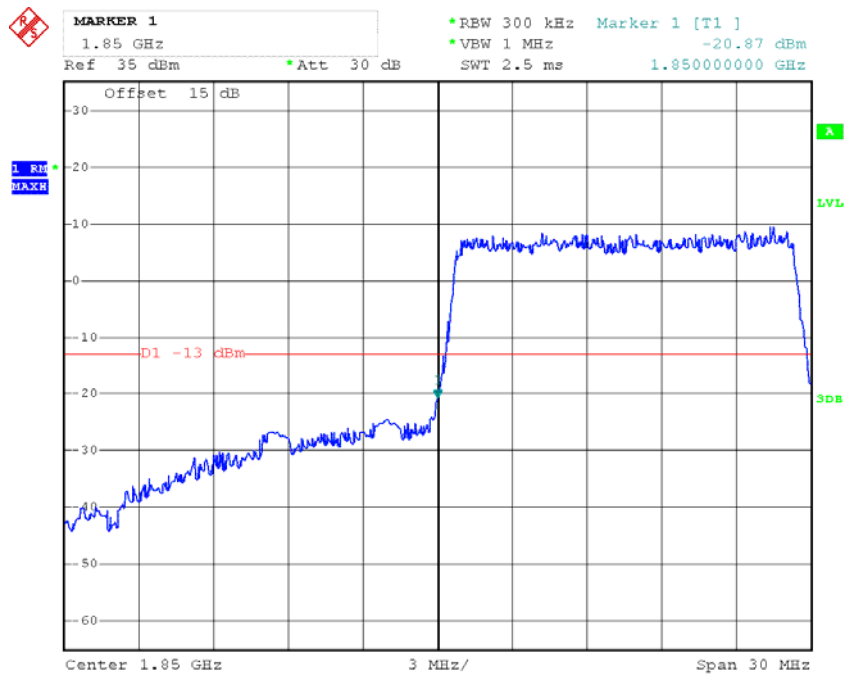
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15 MHz_1RB_QPSK, Right Band Edge



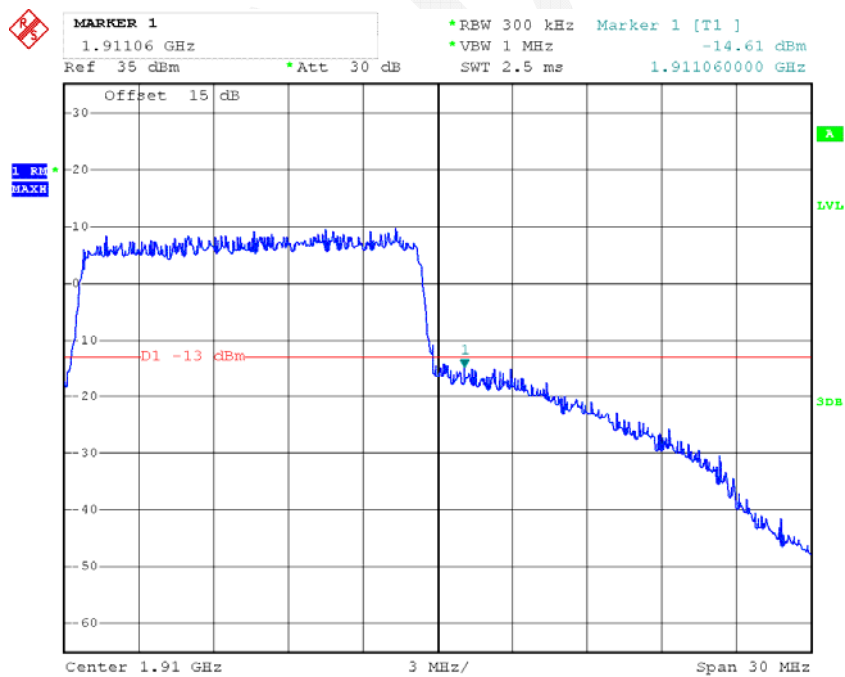
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15 MHz_Full RB_QPSK, Left Band Edge



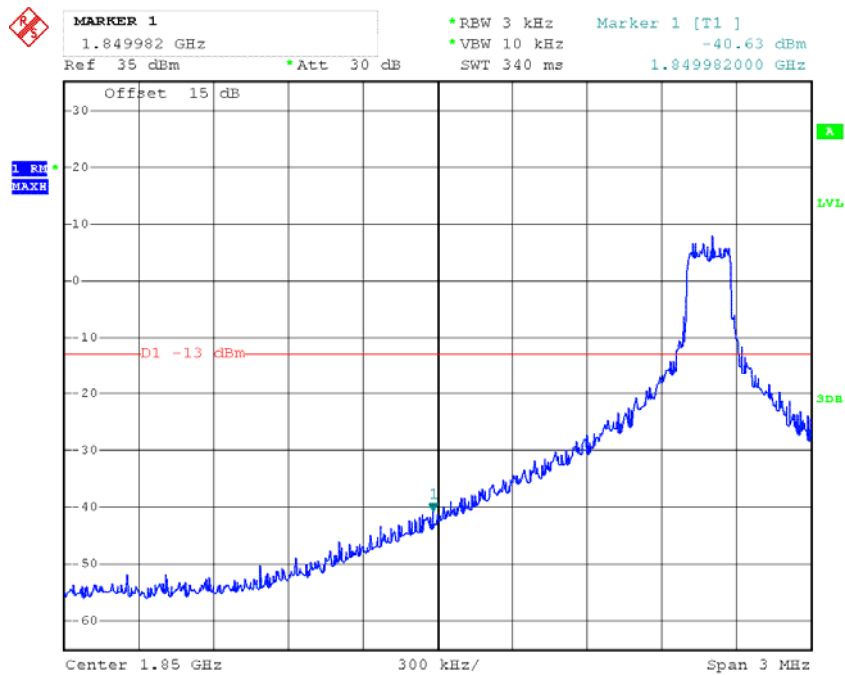
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15 MHz_Full RB_QPSK, Right Band Edge



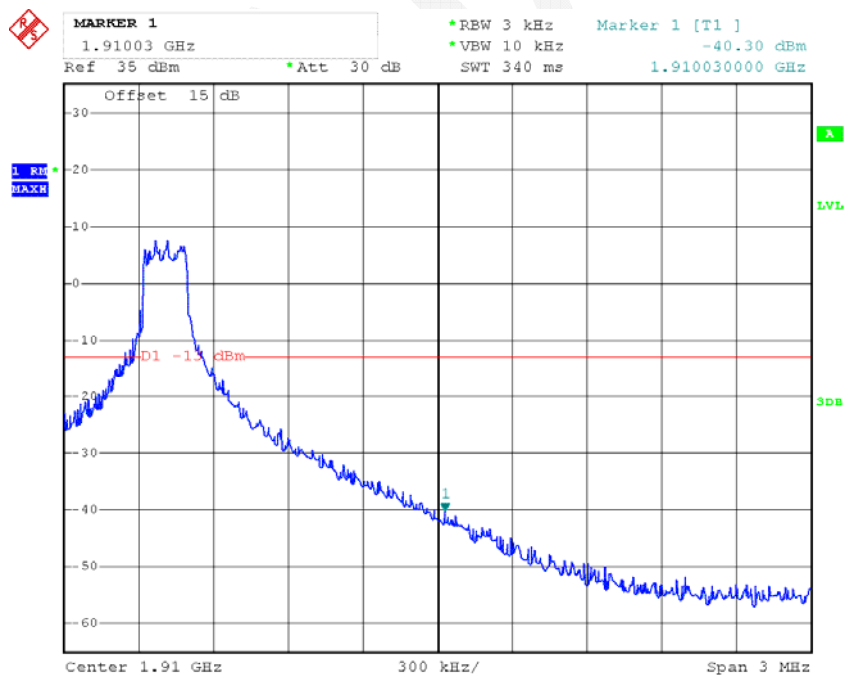
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20 MHz_1RB_QPSK, Left Band Edge



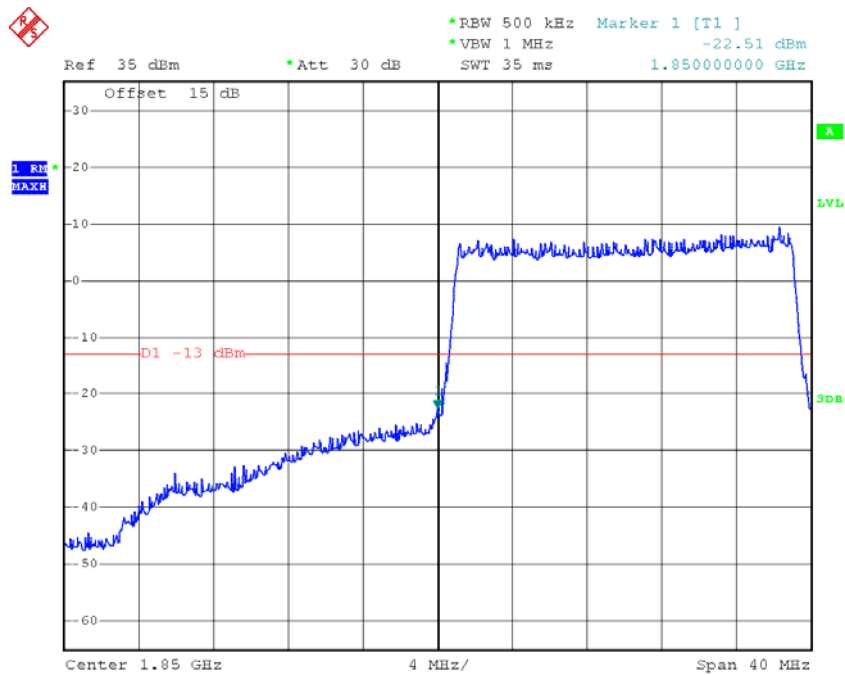
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20 MHz_1RB_QPSK, Right Band Edge



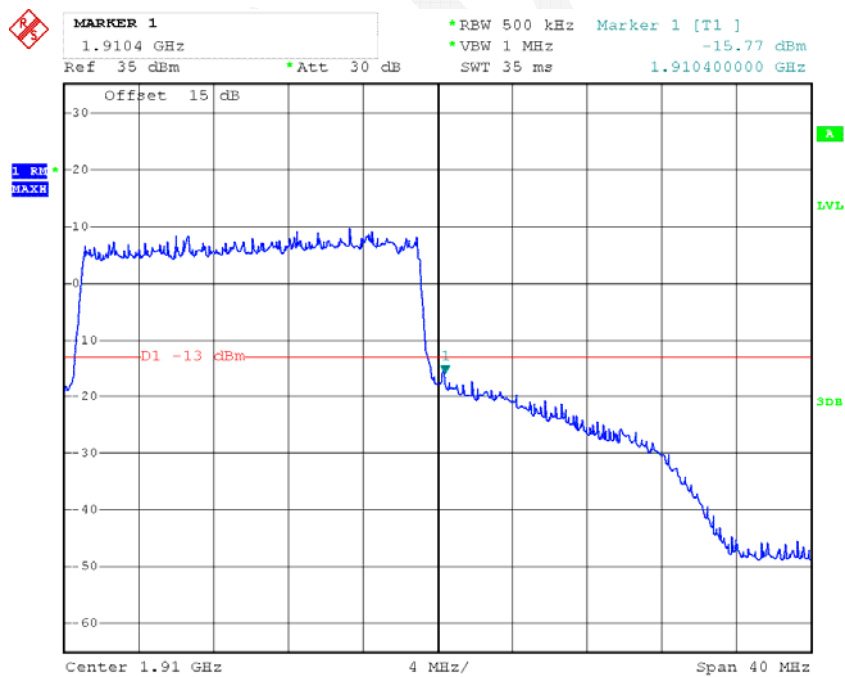
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20 MHz_Full RB_QPSK, Left Band Edge



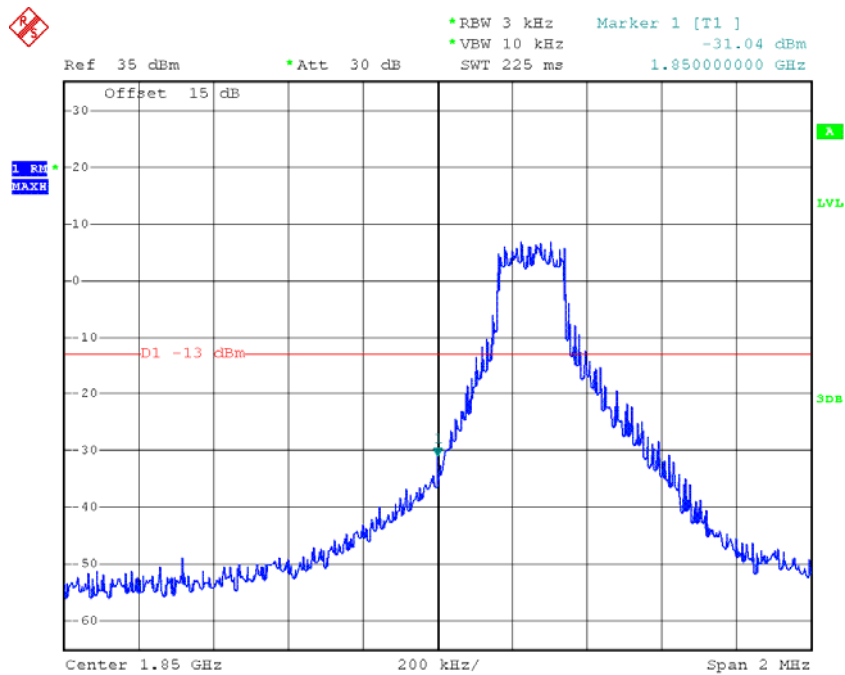
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20 MHz_Full RB_QPSK, Right Band Edge



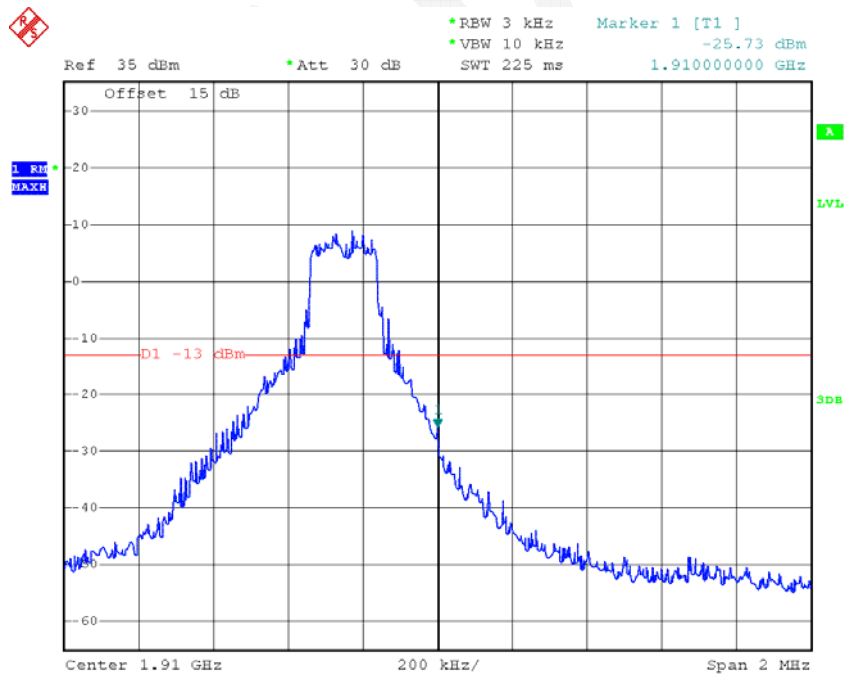
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1.4 MHz_1RB_16QAM, Left Band Edge



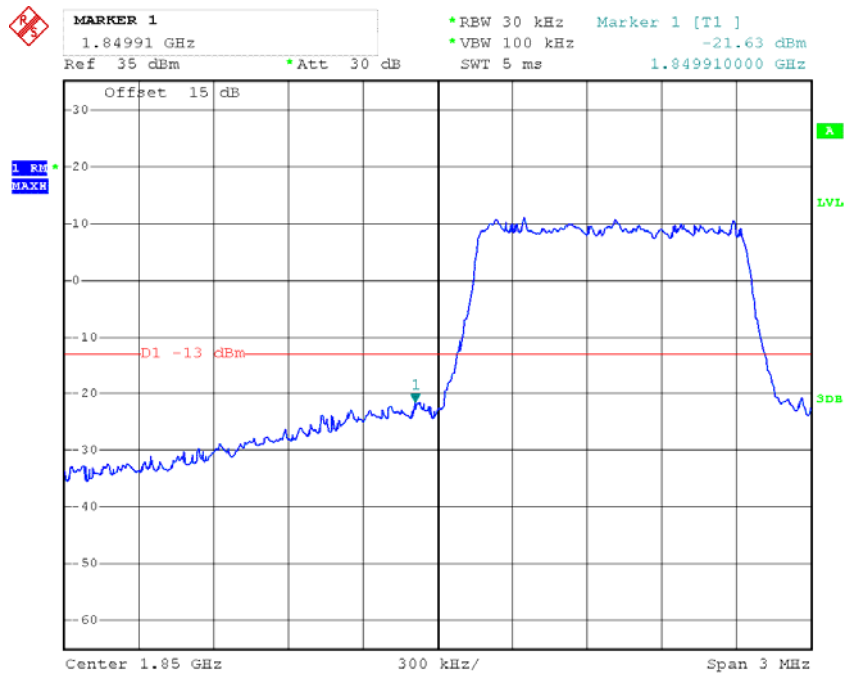
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1.4 MHz_1RB_16QAM, Right Band Edge



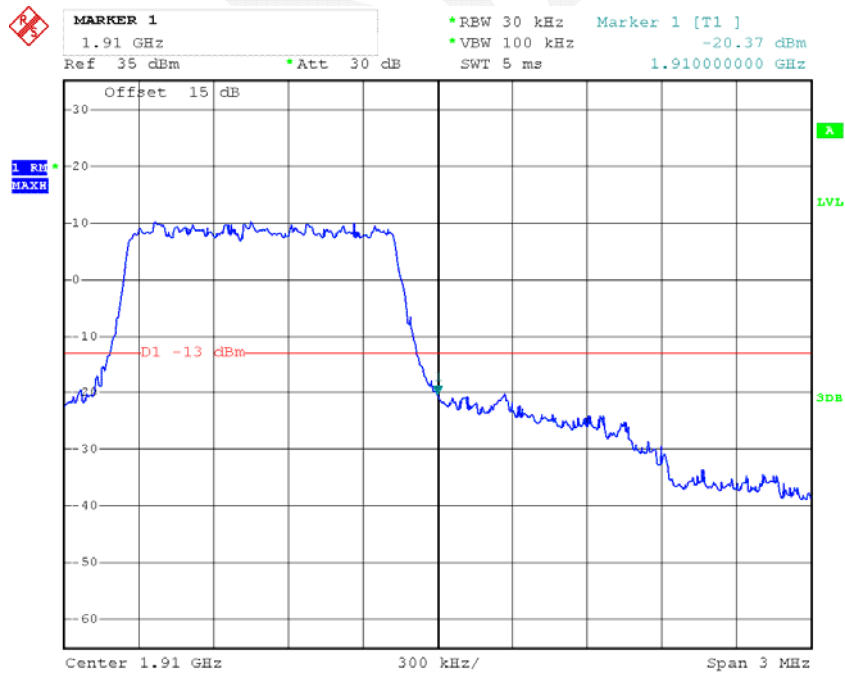
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1.4 MHz_Full RB_16QAM, Left Band Edge

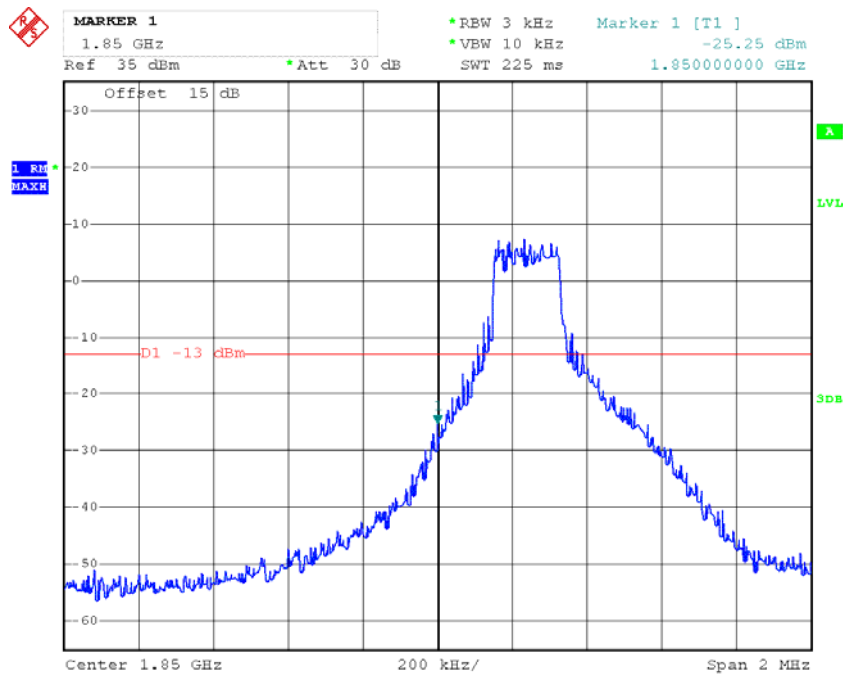


Date: 30.AUG.2015 21:36:02

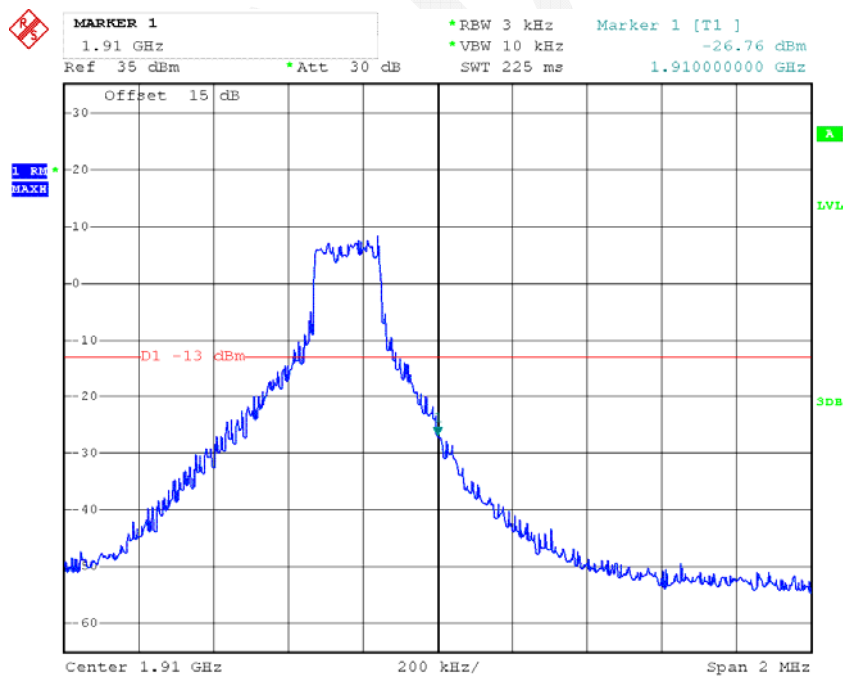
1.4 MHz_Full RB_16QAM, Right Band Edge



Date: 30.AUG.2015 21:57:15

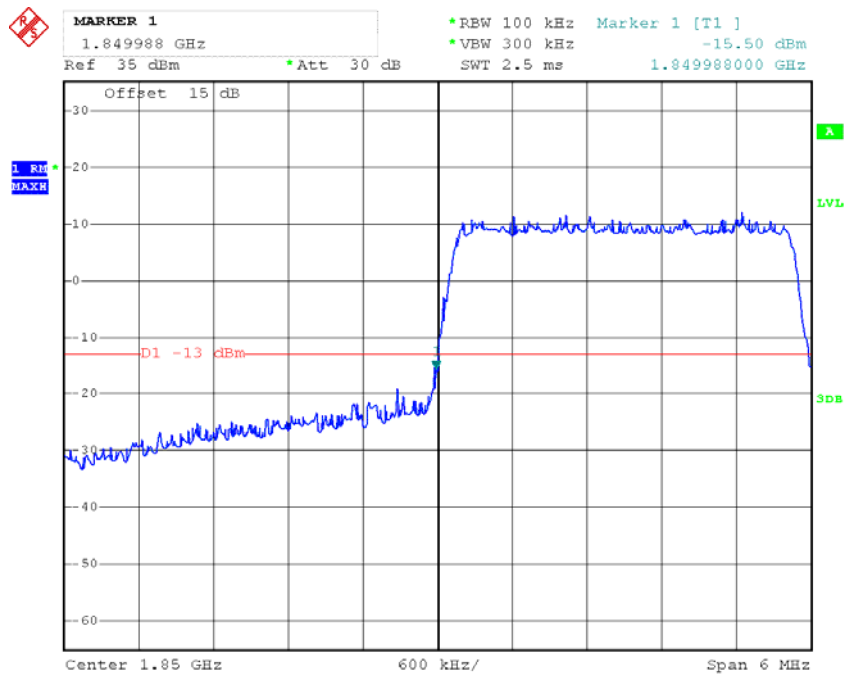
3 MHz_1RB_16QAM, Left Band Edge

Date: 31.AUG.2015 10:33:46

3 MHz_1RB_16QAM, Right Band Edge

Date: 31.AUG.2015 10:43:29

3 MHz_Full RB_16QAM, Left Band Edge



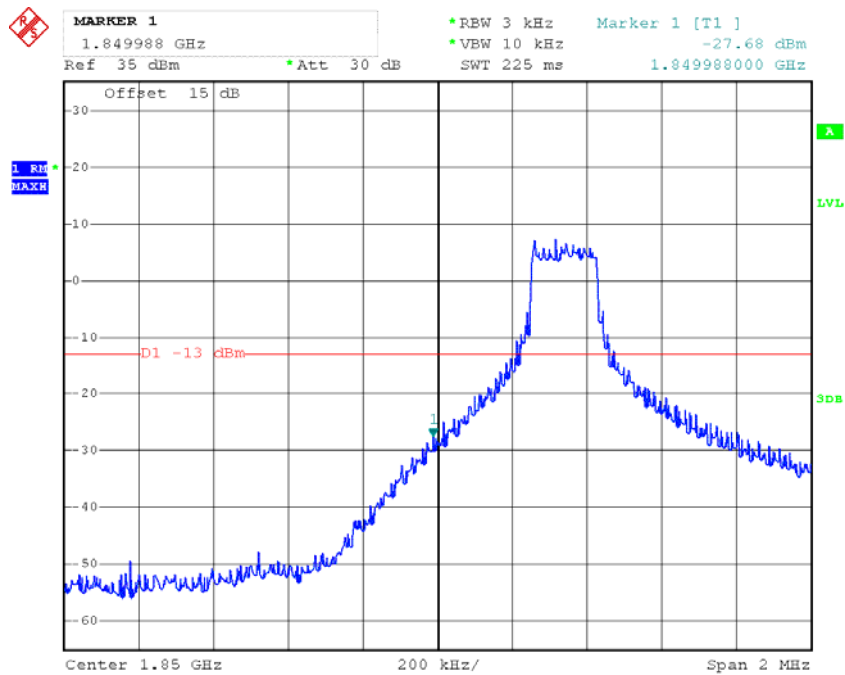
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3 MHz_Full RB_16QAM, Right Band Edge



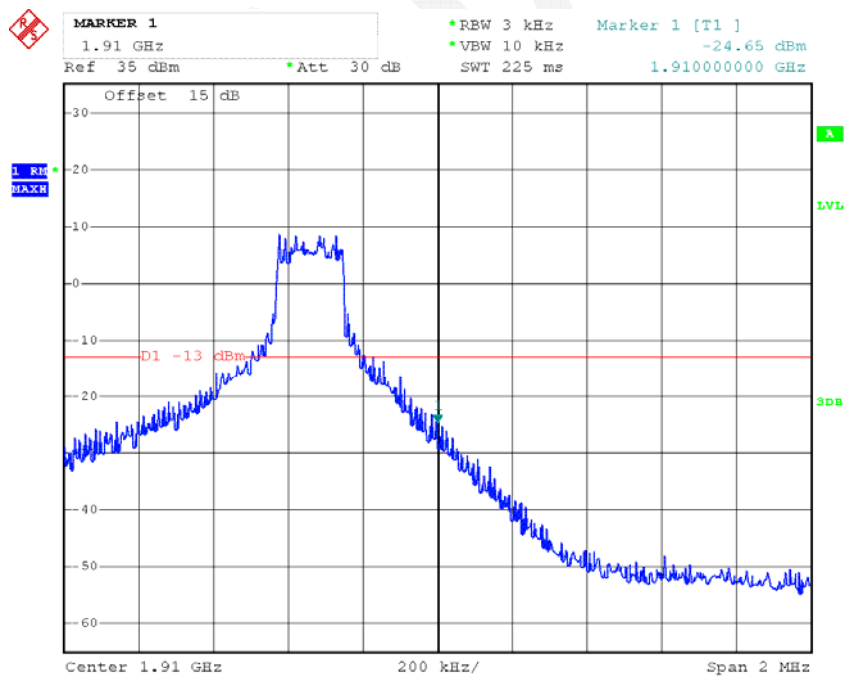
Date: 30.AUG.2015 21:56:13

5 MHz_1RB_16QAM, Left Band Edge



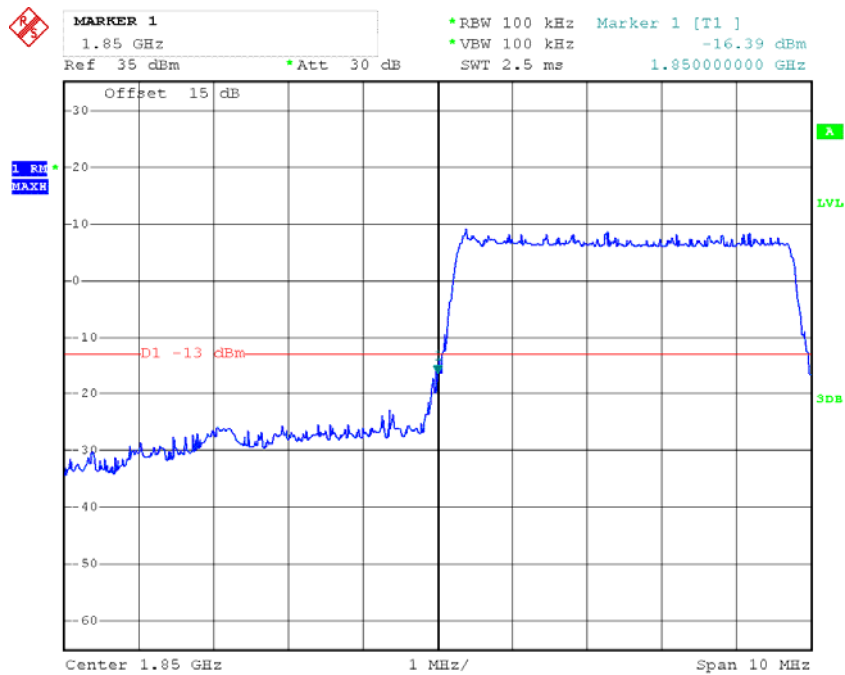
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5 MHz_1RB_16QAM, Right Band Edge



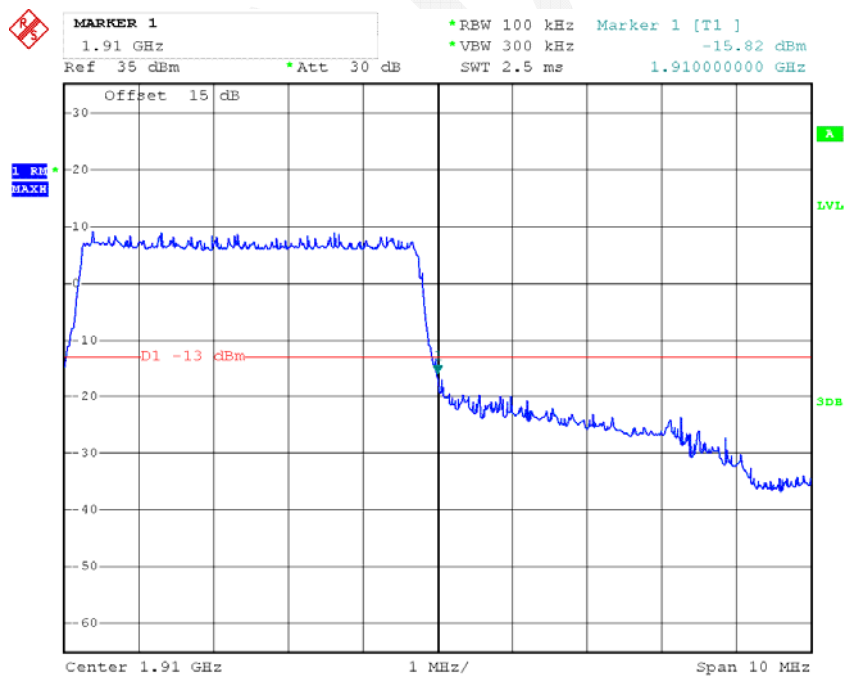
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5 MHz_Full RB_16QAM, Left Band Edge



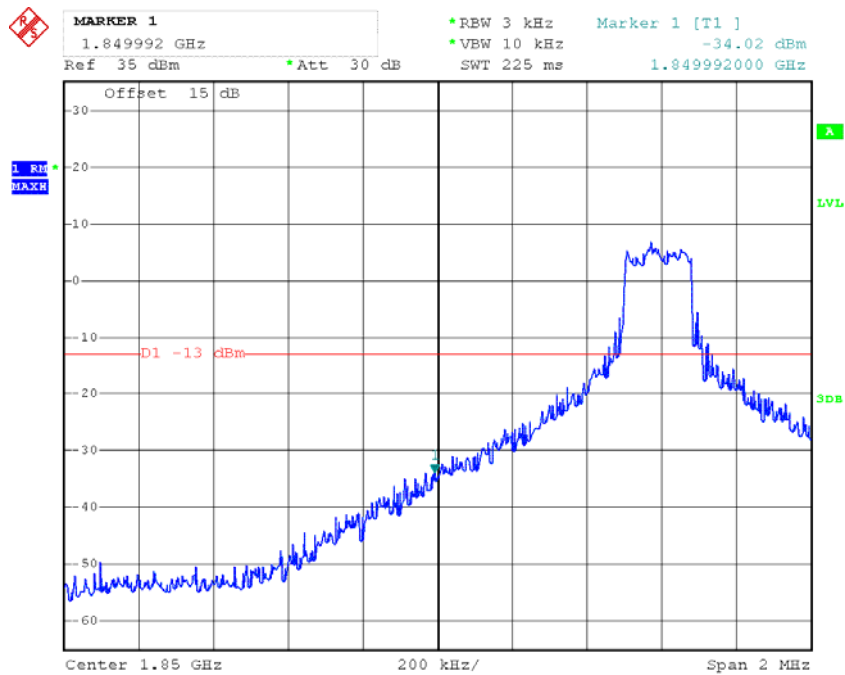
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5 MHz_Full RB_16QAM, Right Band Edge



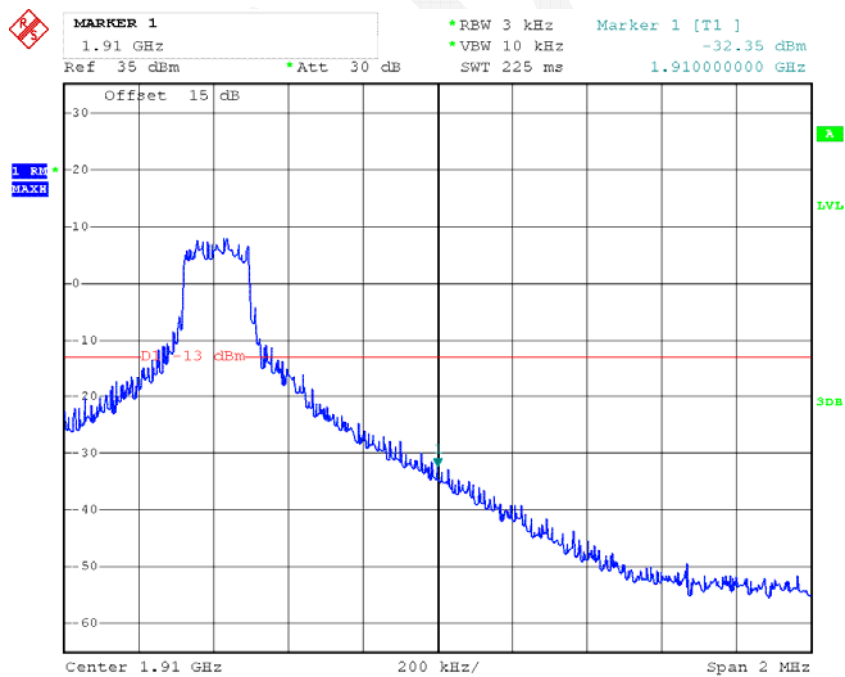
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10 MHz_1RB_16QAM, Left Band Edge

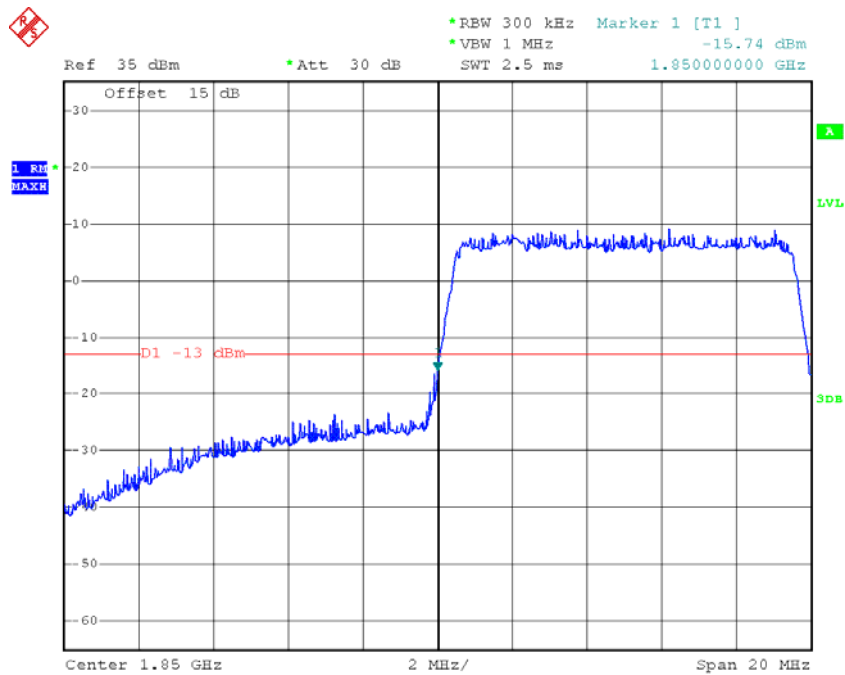


Date: 31.AUG.2015 10:35:27

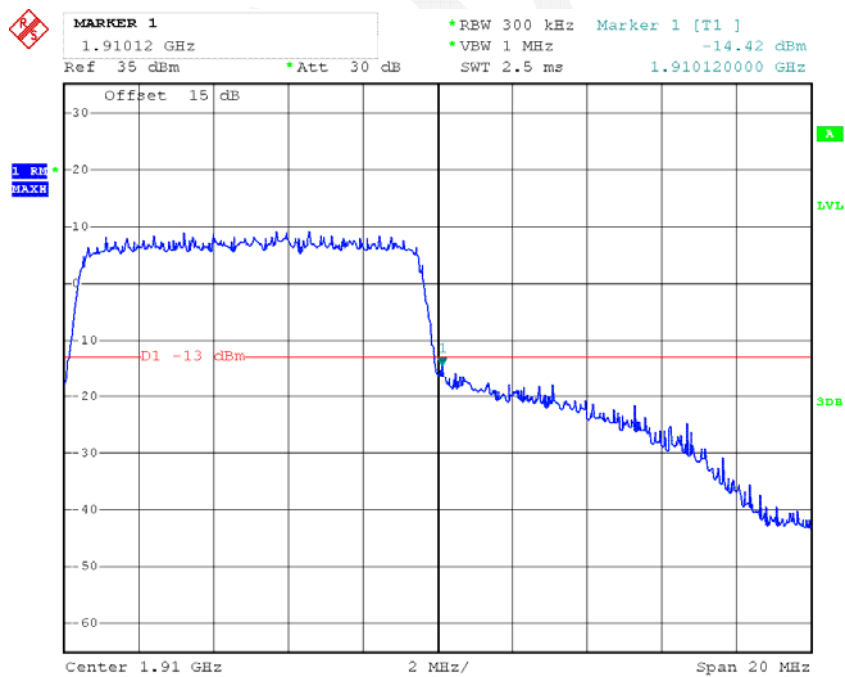
10 MHz_1RB_16QAM, Right Band Edge



Date: 31.AUG.2015 10:41:03

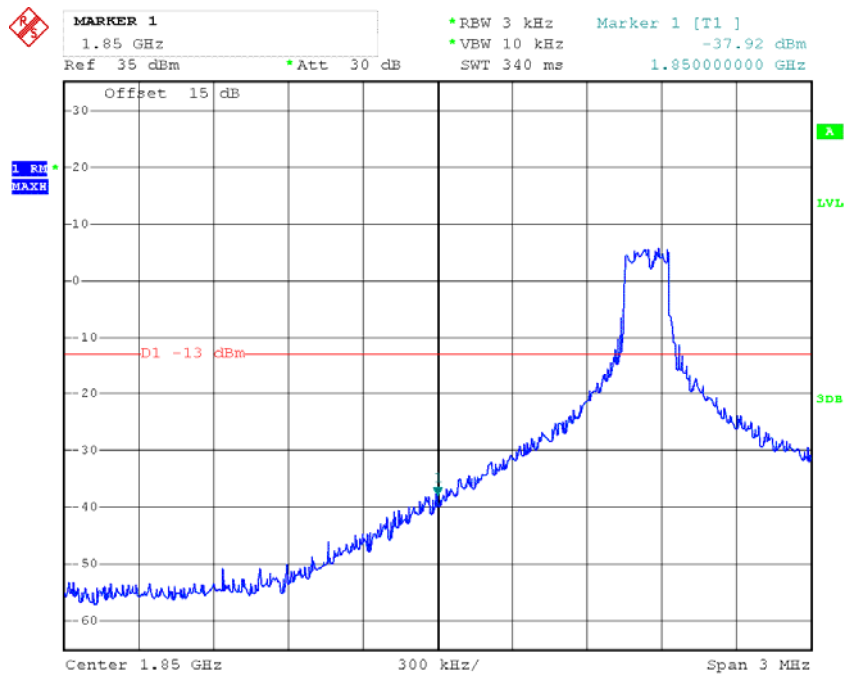
10 MHz_Full RB_16QAM, Left Band Edge

Date: 30.AUG.2015 21:40:41

10 MHz_Full RB_16QAM, Right Band Edge

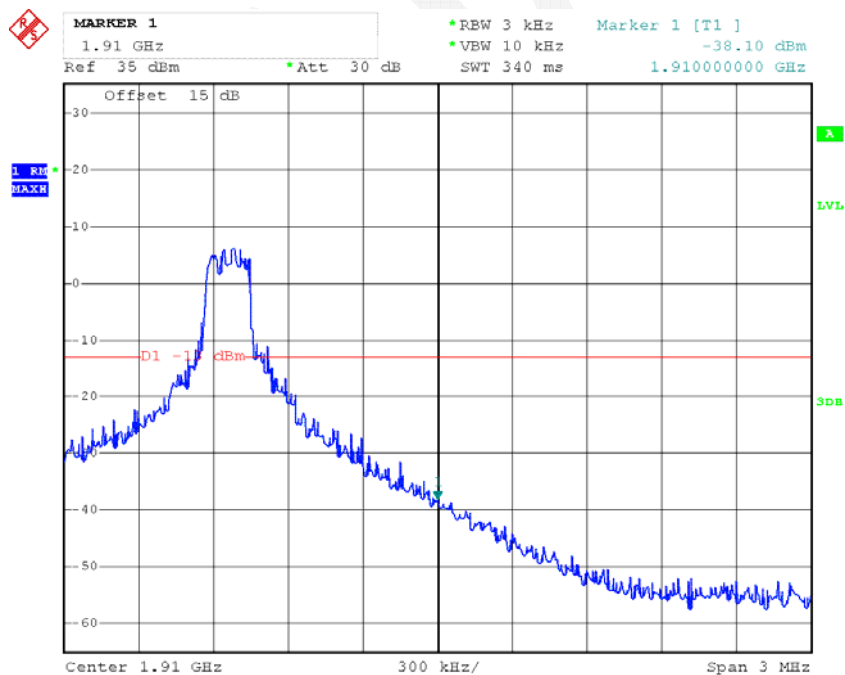
Date: 30.AUG.2015 21:53:55

15 MHz_1RB_16QAM, Left Band Edge

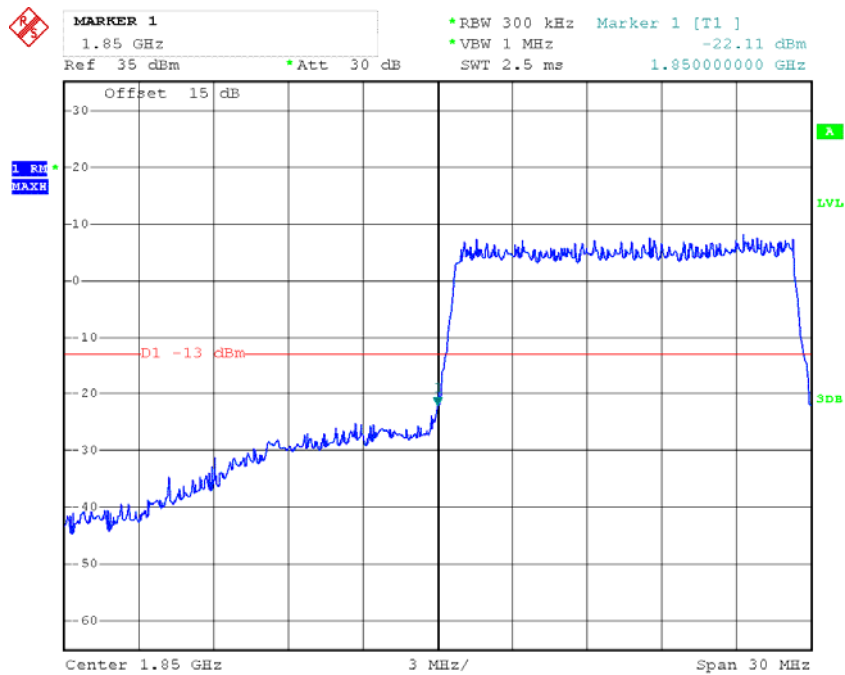


Date: 31.AUG.2015 10:36:01

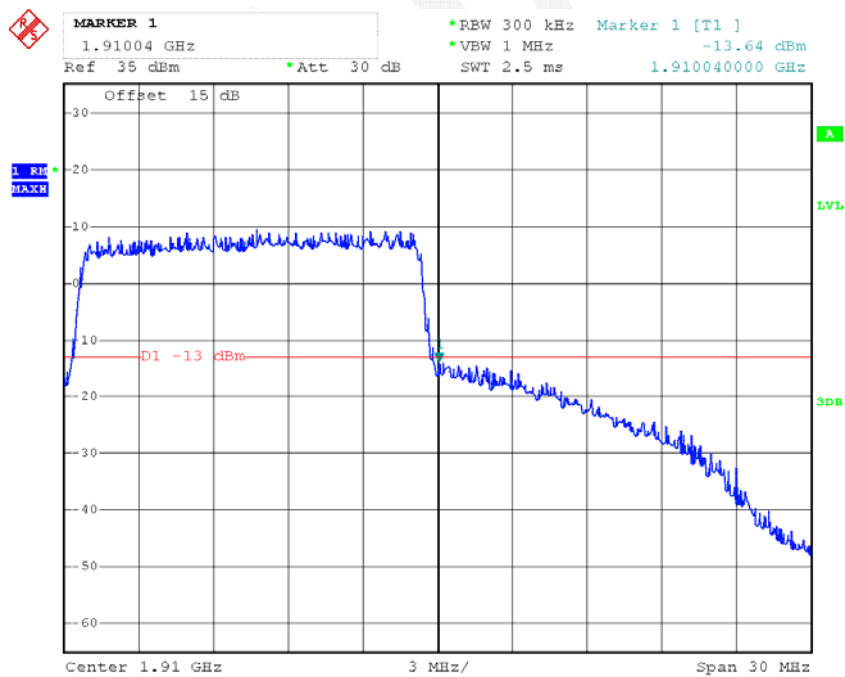
15 MHz_1RB_16QAM, Right Band Edge



Date: 31.AUG.2015 10:39:37

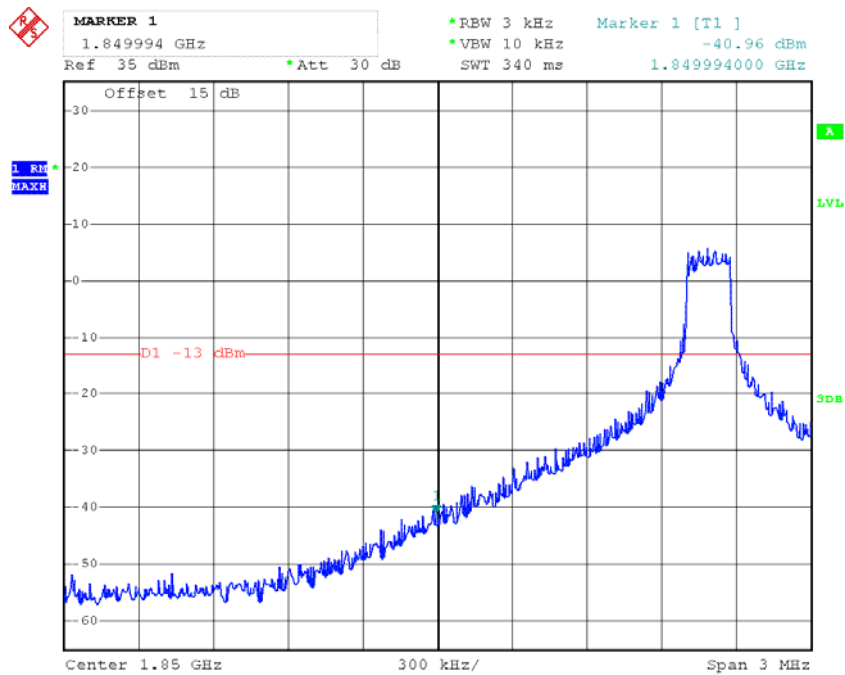
15 MHz_Full RB_16QAM, Left Band Edge

Date: 30.AUG.2015 21:46:03

15 MHz_Full RB_16QAM, Right Band Edge

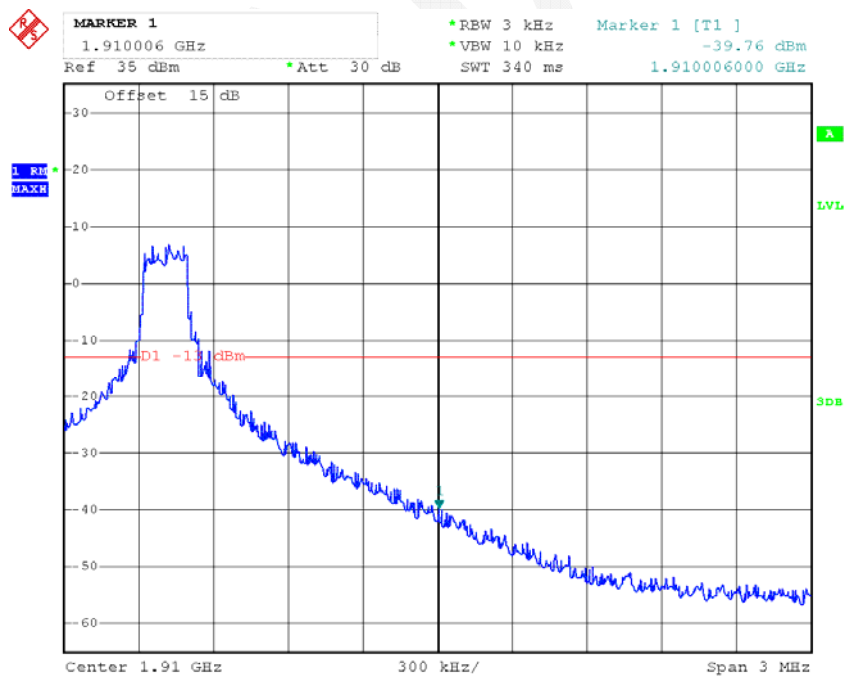
Date: 30.AUG.2015 21:51:53

20 MHz_1RB_16QAM, Left Band Edge



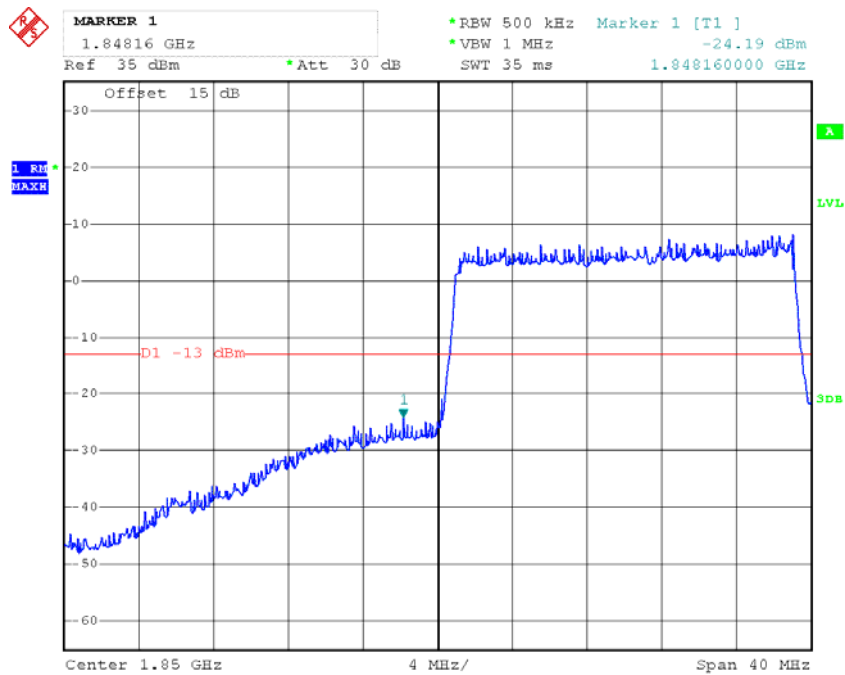
Date: 31.AUG.2015 10:37:35

20 MHz_1RB_16QAM, Right Band Edge



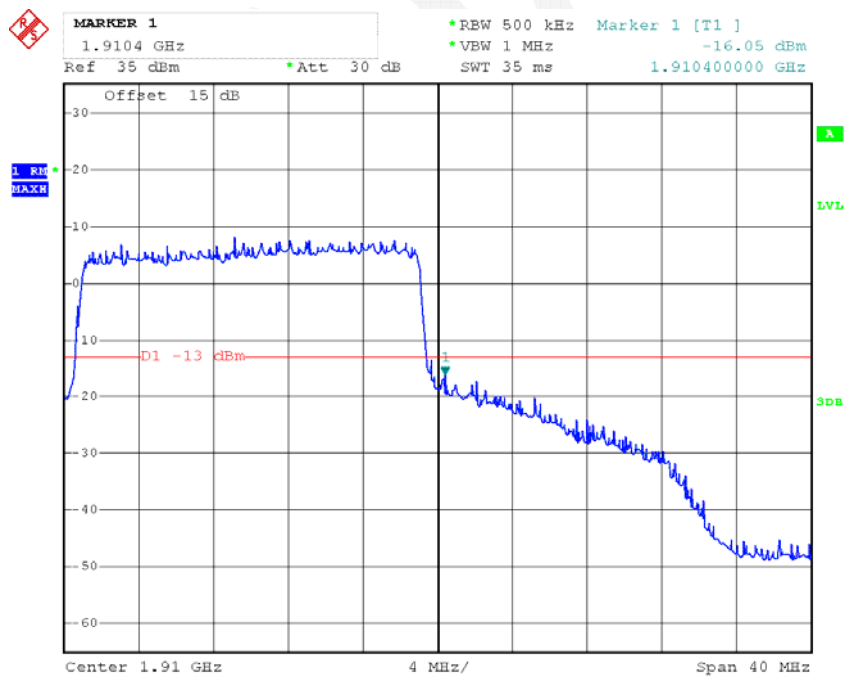
Date: 31.AUG.2015 10:38:30

20 MHz_Full RB_16QAM, Left Band Edge

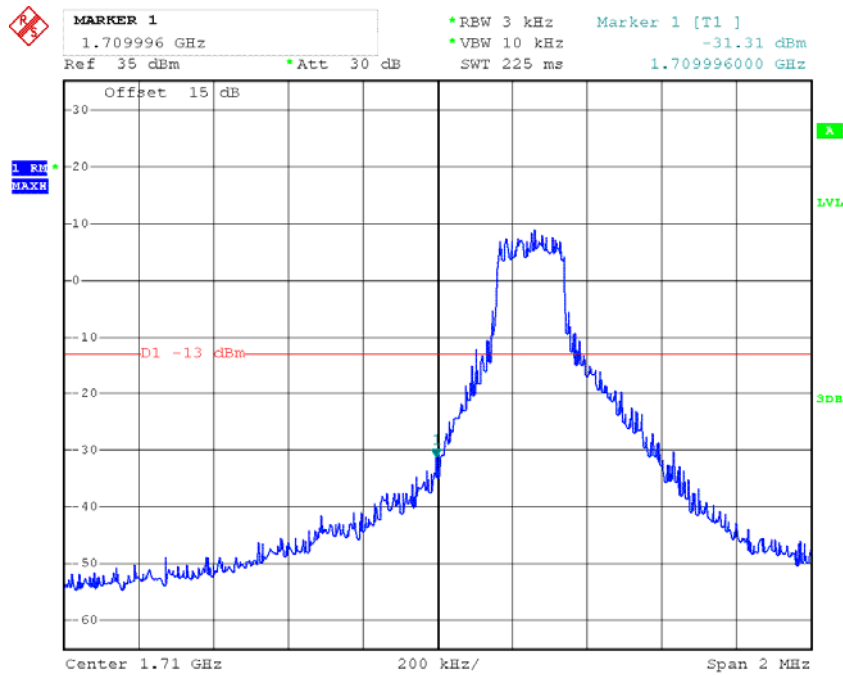


Date: 30.AUG.2015 21:48:30

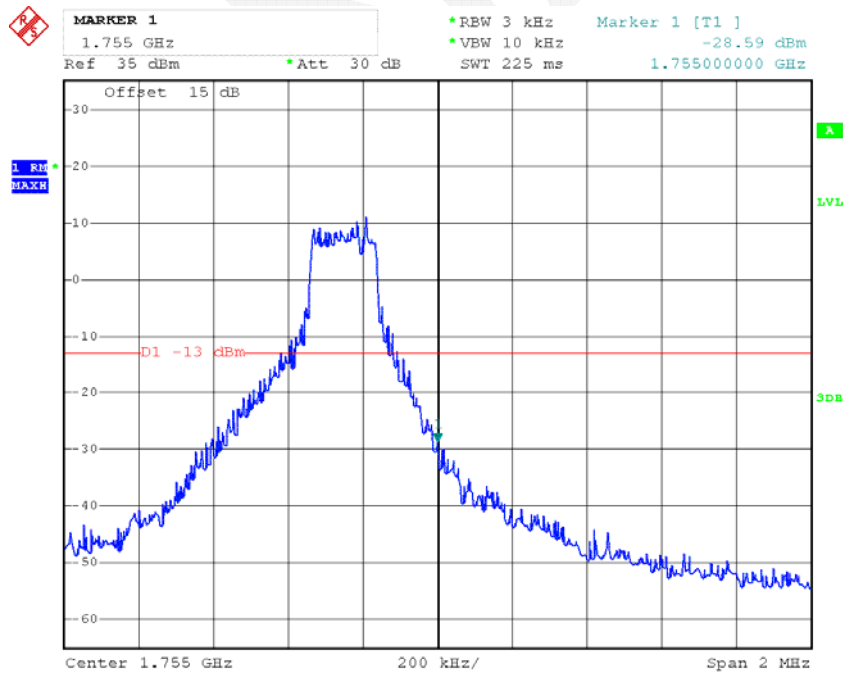
20 MHz_Full RB_16QAM, Right Band Edge



Date: 30.AUG.2015 21:49:34

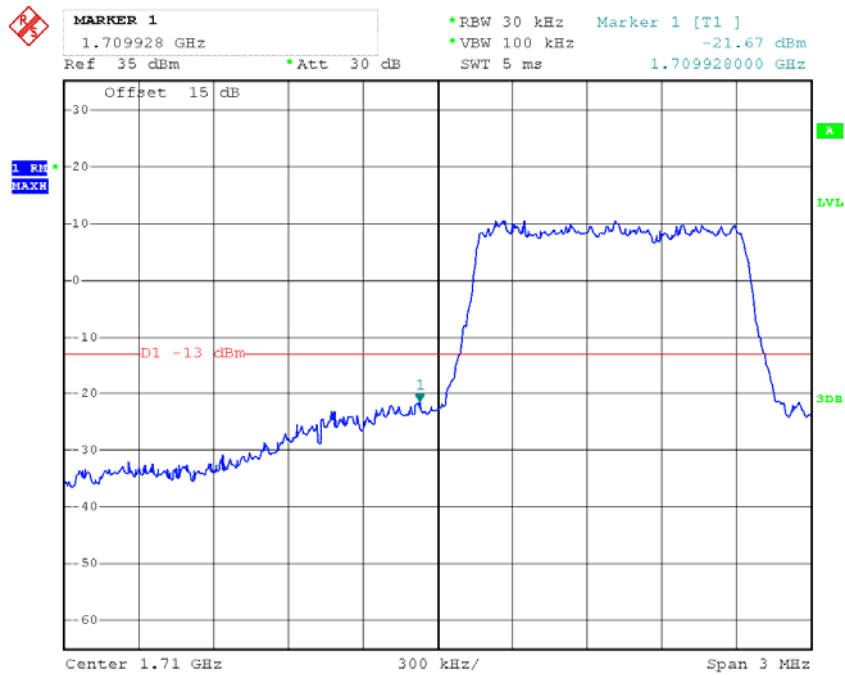
LTE Band IV:**1.4 MHz_1RB_QPSK, Left Band Edge**

Date: 30.AUG.2015 22:53:36

1.4 MHz_1RB_QPSK, Right Band Edge

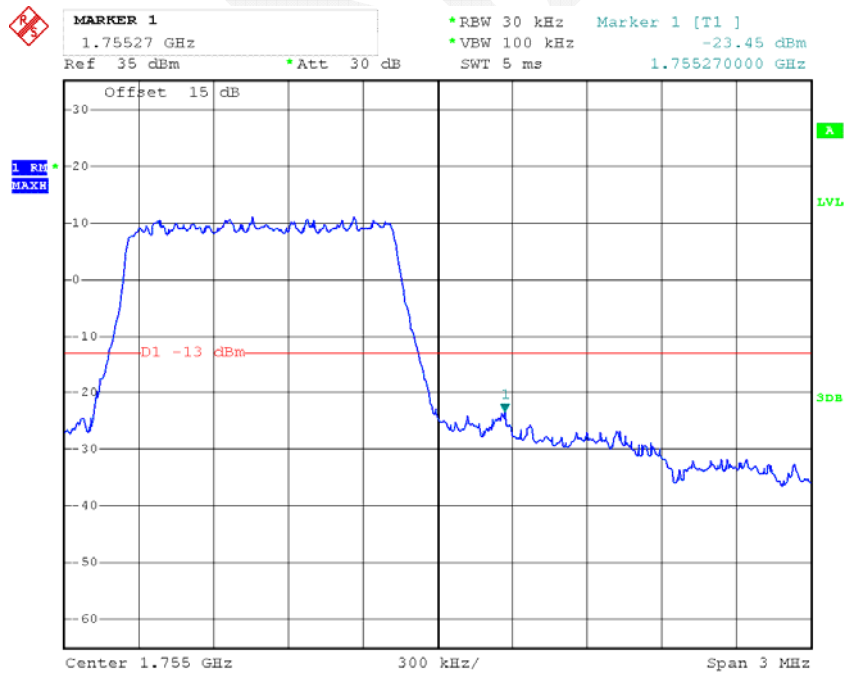
Date: 30.AUG.2015 22:34:11

1.4 MHz_Full RB_QPSK, Left Band Edge



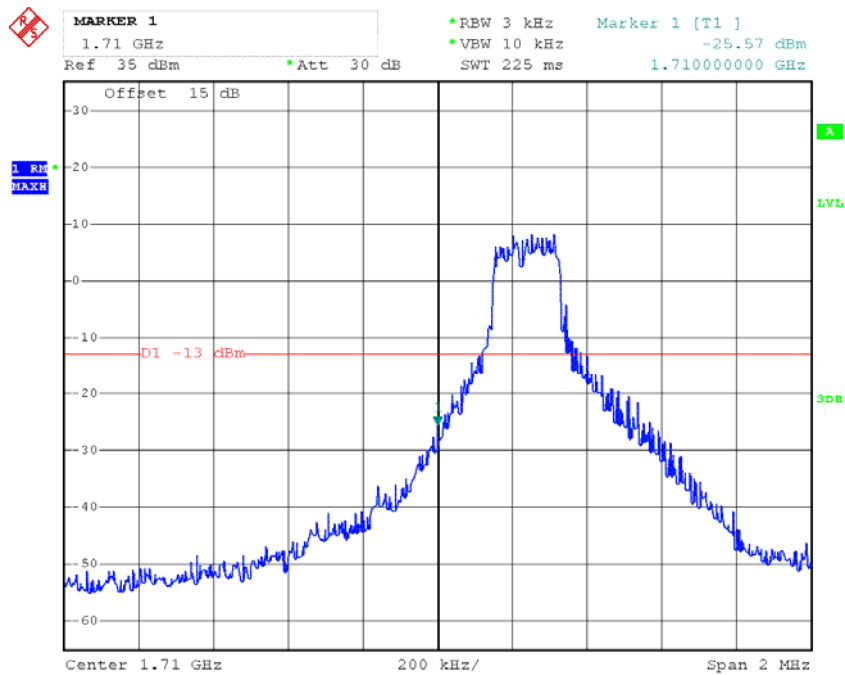
Date: 30.AUG.2015 22:03:00

1.4 MHz_Full RB_QPSK, Right Band Edge



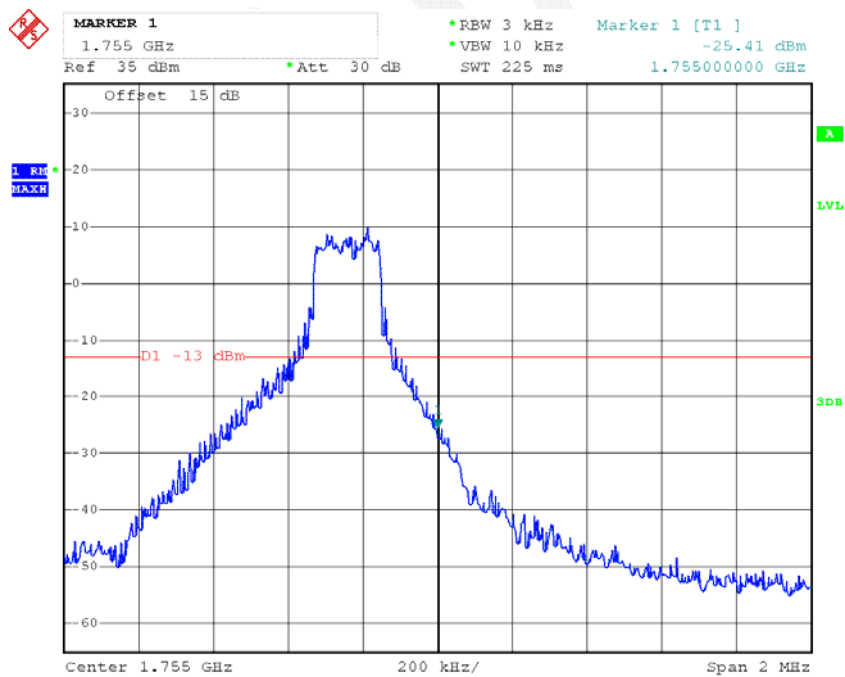
Date: 30.AUG.2015 22:29:20

3 MHz_1RB_QPSK, Left Band Edge



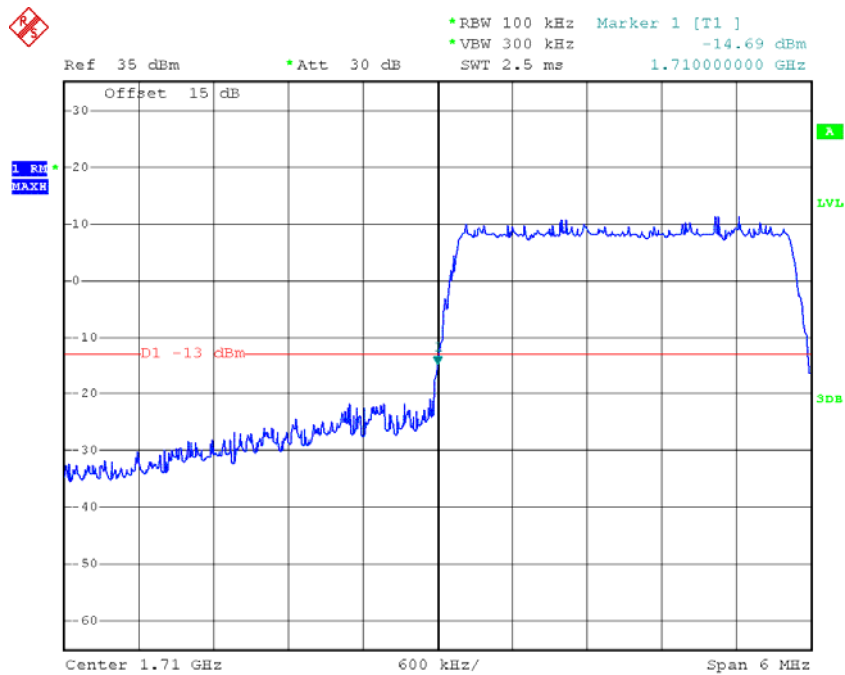
Date: 30.AUG.2015 22:52:26

3 MHz_1RB_QPSK, Right Band Edge



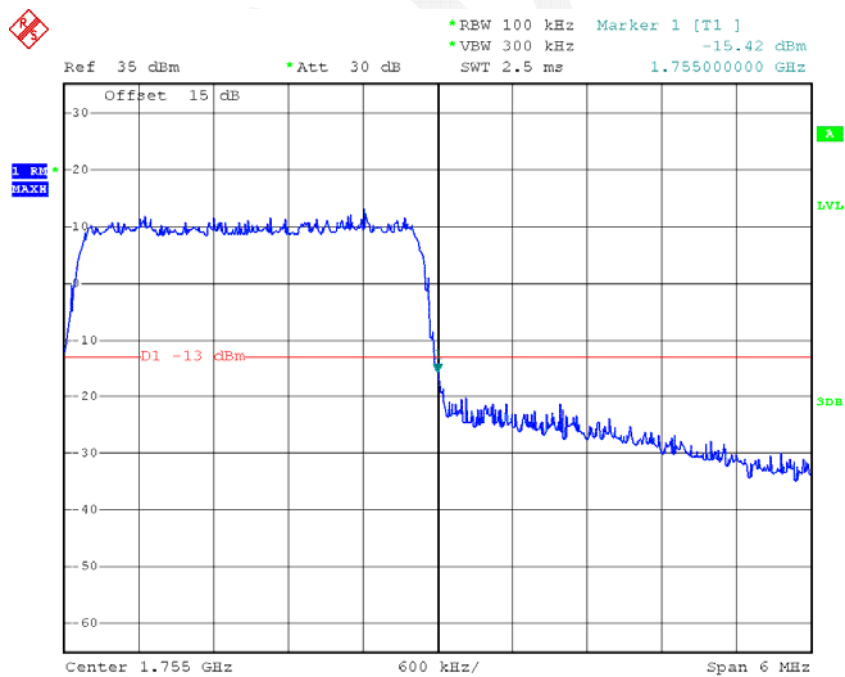
Date: 30.AUG.2015 22:36:24

3 MHz_Full RB_QPSK, Left Band Edge



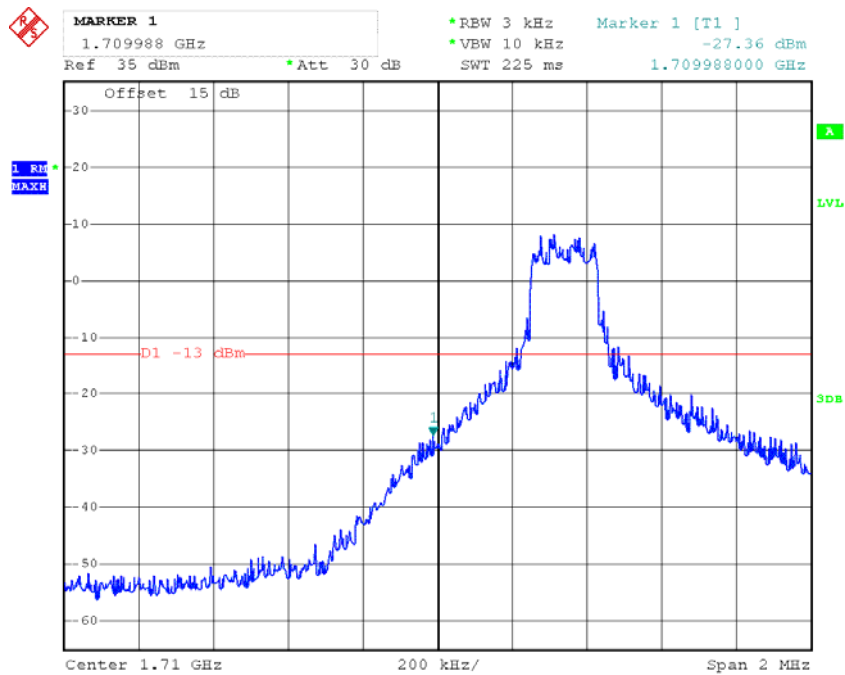
Date: 30.AUG.2015 22:05:04

3 MHz_Full RB_QPSK, Right Band Edge



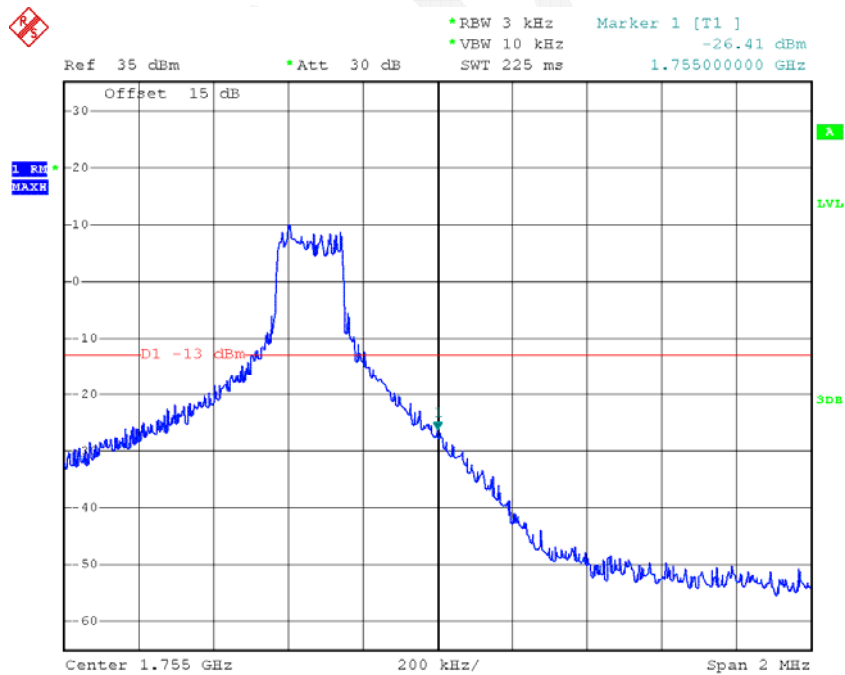
Date: 30.AUG.2015 22:28:06

5 MHz_1RB_QPSK, Left Band Edge



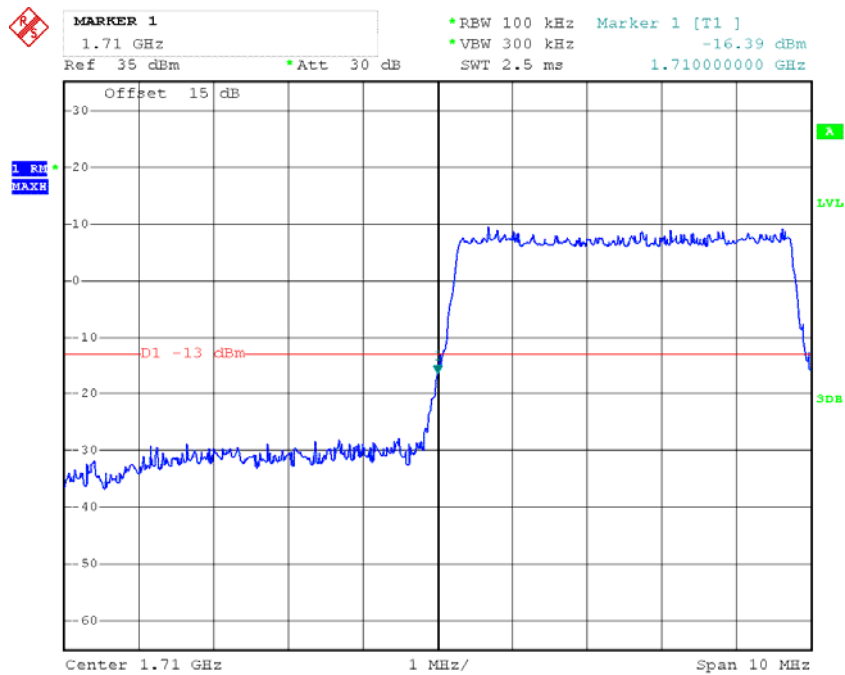
Date: 30.AUG.2015 22:51:47

5 MHz_1RB_QPSK, Right Band Edge



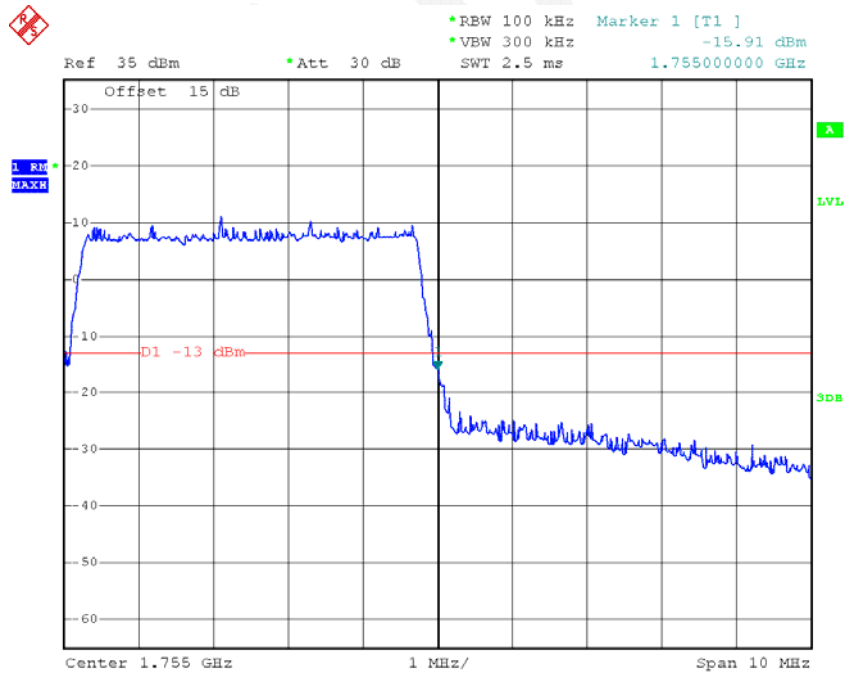
Date: 30.AUG.2015 22:37:11

5 MHz_Full RB_QPSK, Left Band Edge



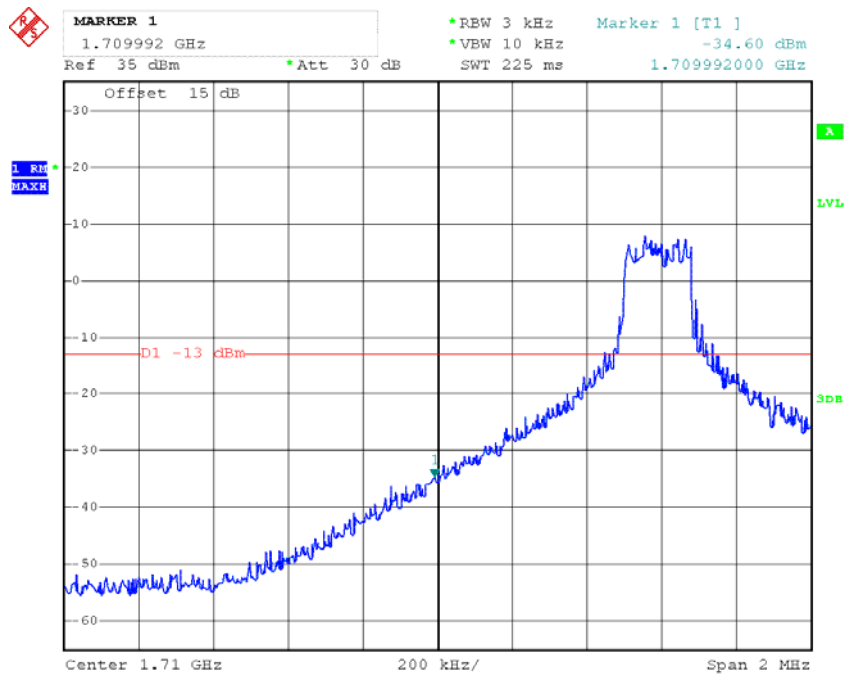
Date: 30.AUG.2015 22:06:11

5 MHz_Full RB_QPSK, Right Band Edge



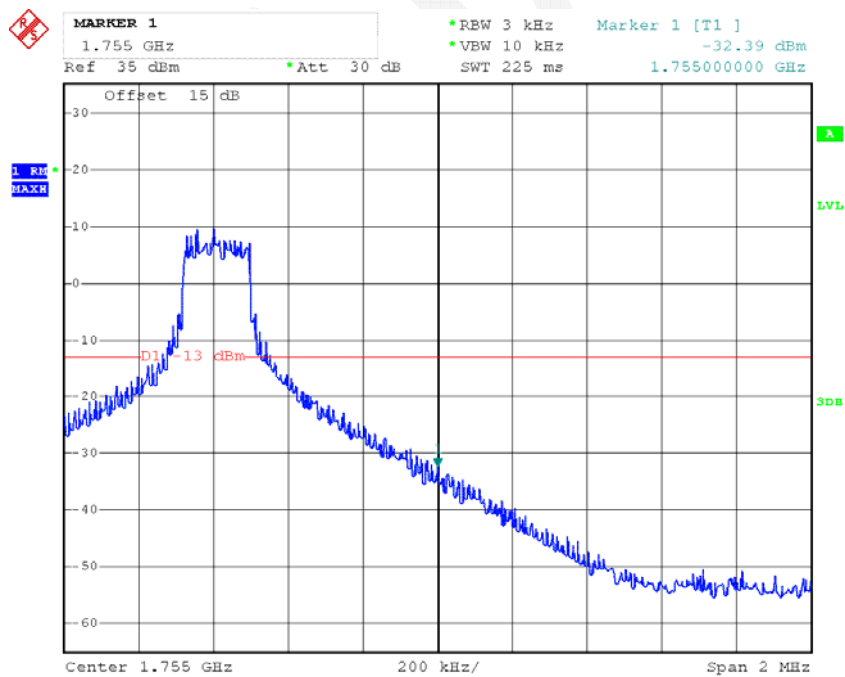
Date: 30.AUG.2015 22:27:23

10 MHz_1RB_QPSK, Left Band Edge



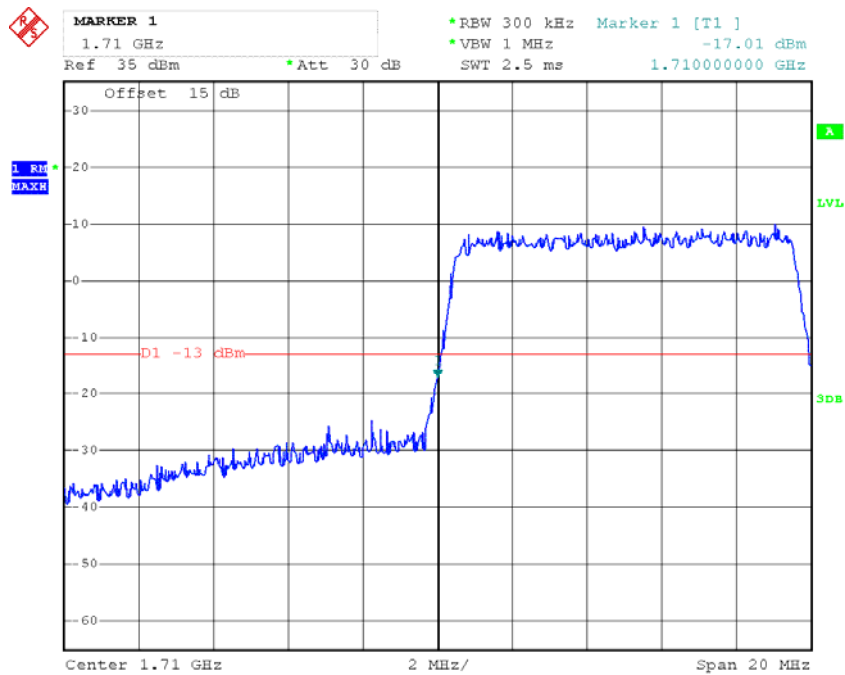
Date: 30.AUG.2015 22:50:28

10 MHz_1RB_QPSK, Right Band Edge



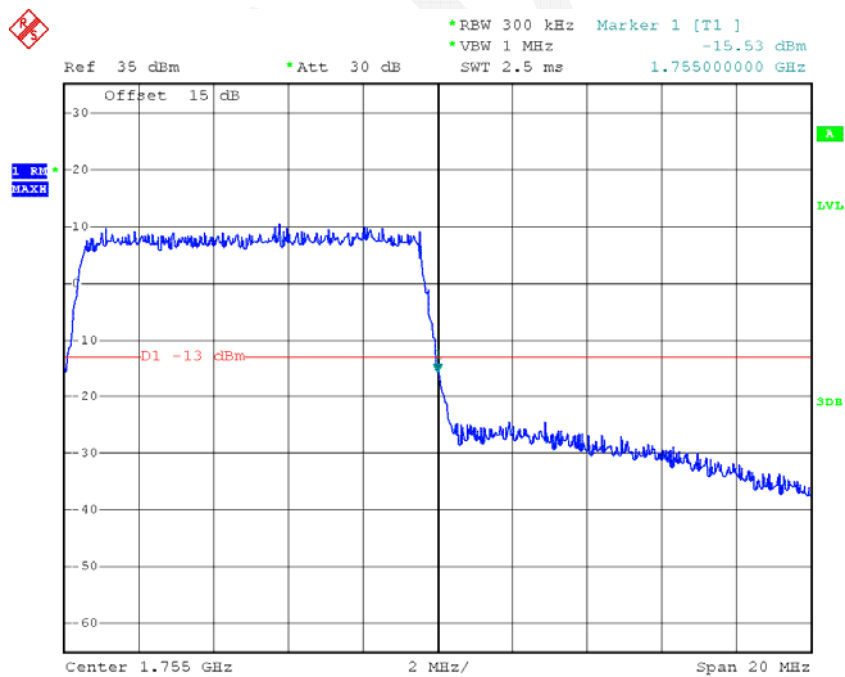
Date: 30.AUG.2015 22:38:09

10 MHz_Full RB_QPSK, Left Band Edge



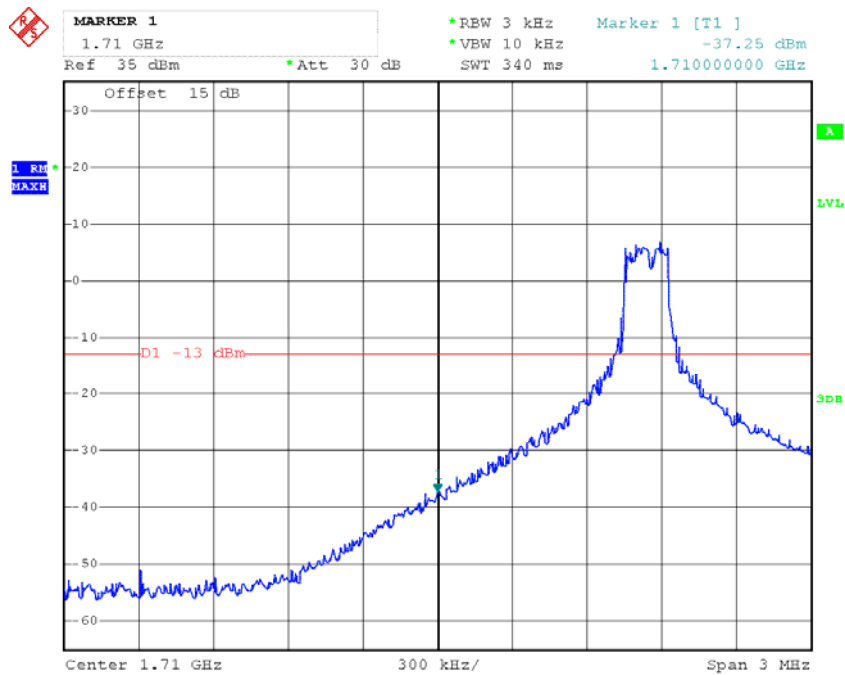
Date: 30.AUG.2015 22:06:40

10 MHz_Full RB_QPSK, Right Band Edge



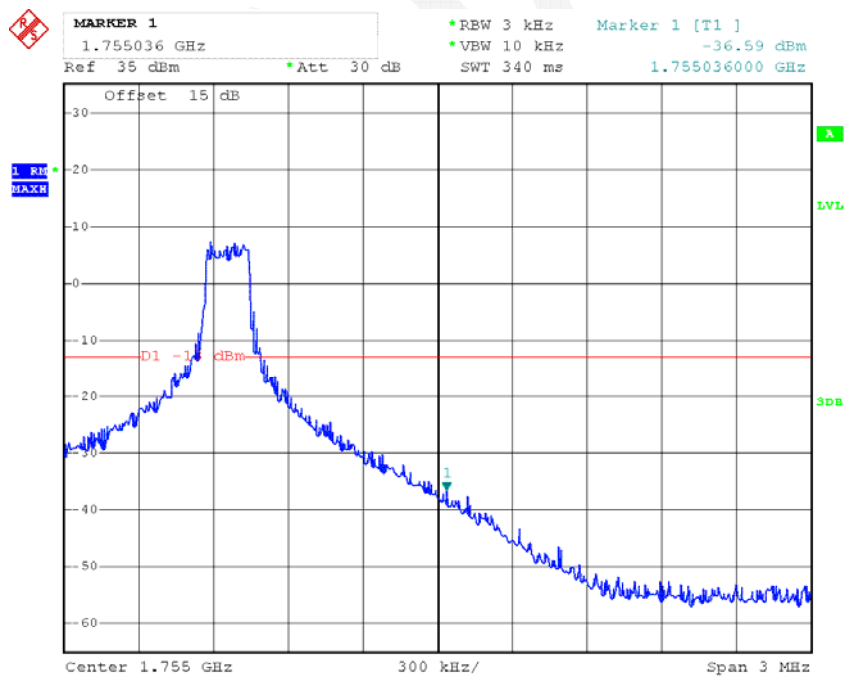
Date: 30.AUG.2015 22:26:17

15 MHz_1RB_QPSK, Left Band Edge



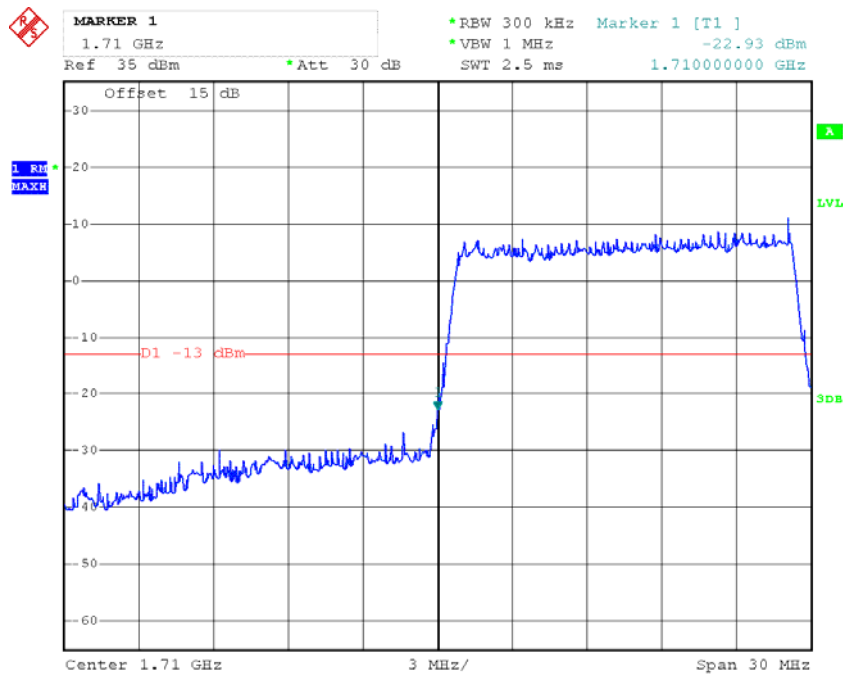
Date: 30.AUG.2015 22:45:46

15 MHz_1RB_QPSK, Right Band Edge



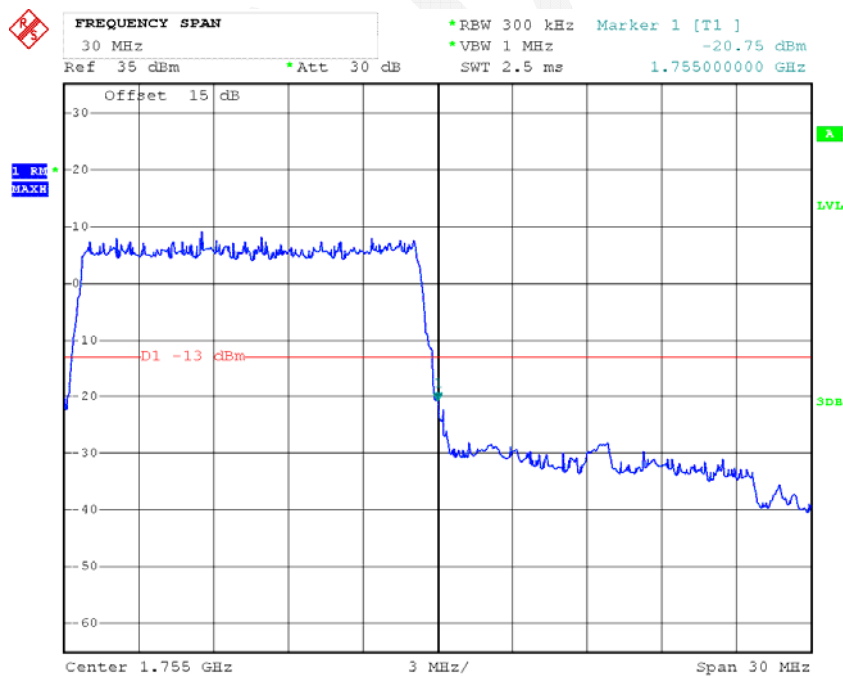
Date: 30.AUG.2015 22:39:18

15 MHz_Full RB_QPSK, Left Band Edge



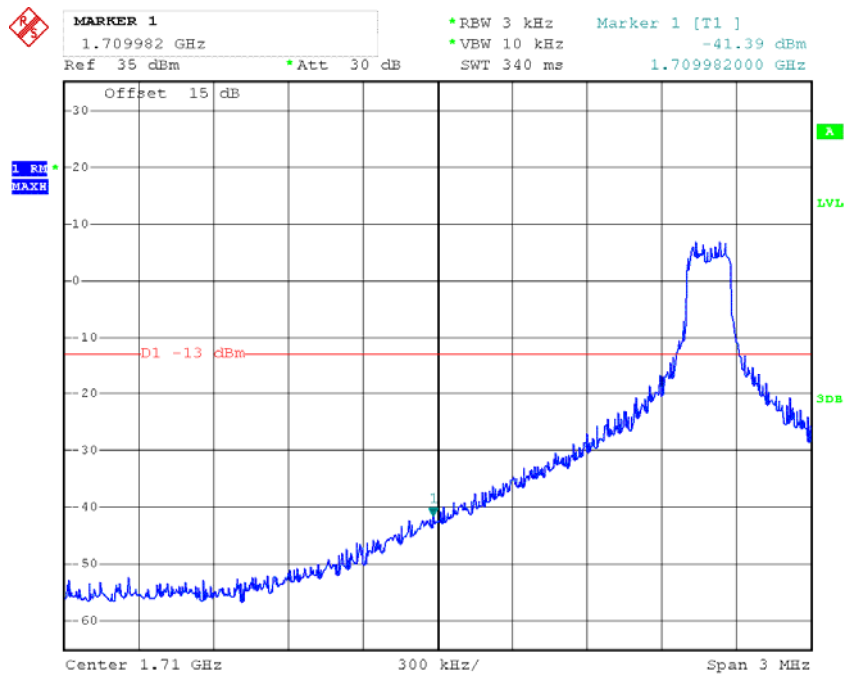
Date: 30.AUG.2015 22:07:29

15 MHz_Full RB_QPSK, Right Band Edge



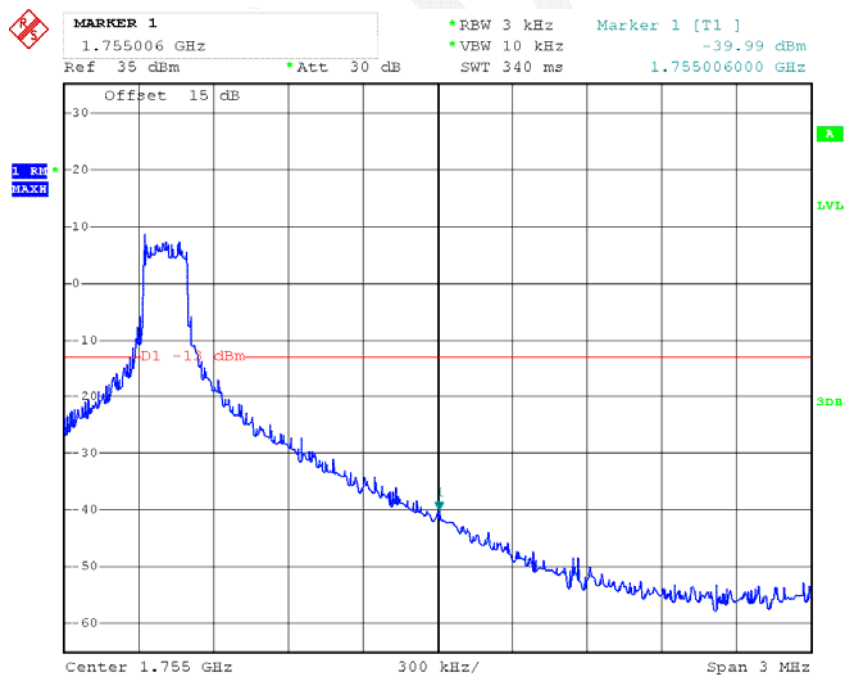
Date: 30.AUG.2015 22:24:22

20 MHz_1RB_QPSK, Left Band Edge



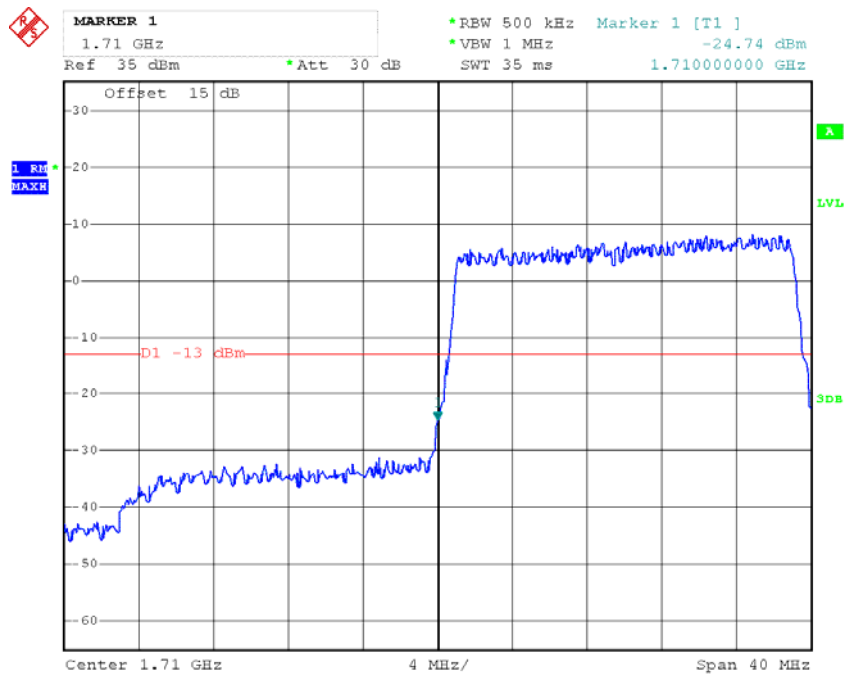
Date: 30.AUG.2015 22:44:56

20 MHz_1RB_QPSK, Right Band Edge



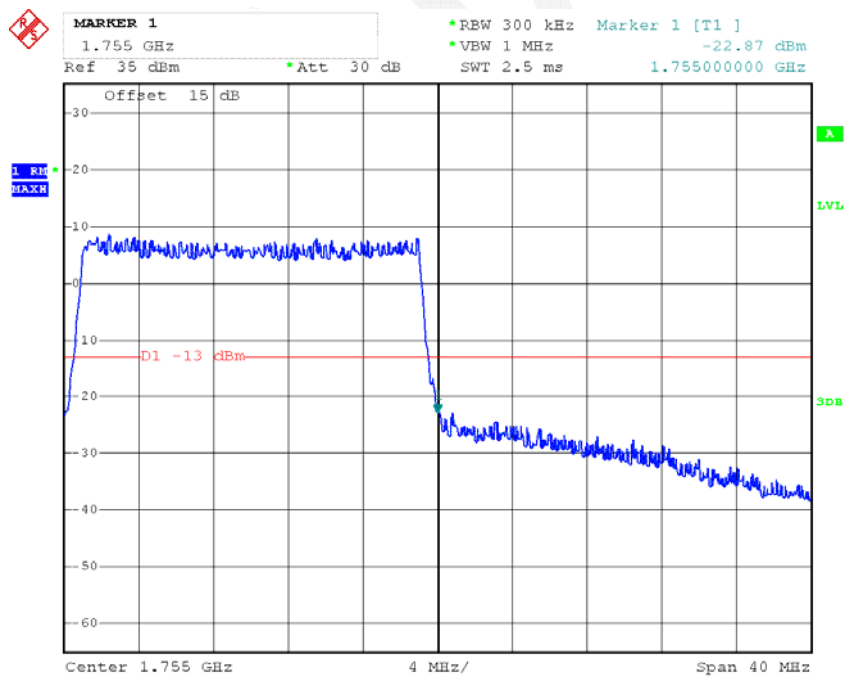
Date: 30.AUG.2015 22:39:57

20 MHz_Full RB_QPSK, Left Band Edge



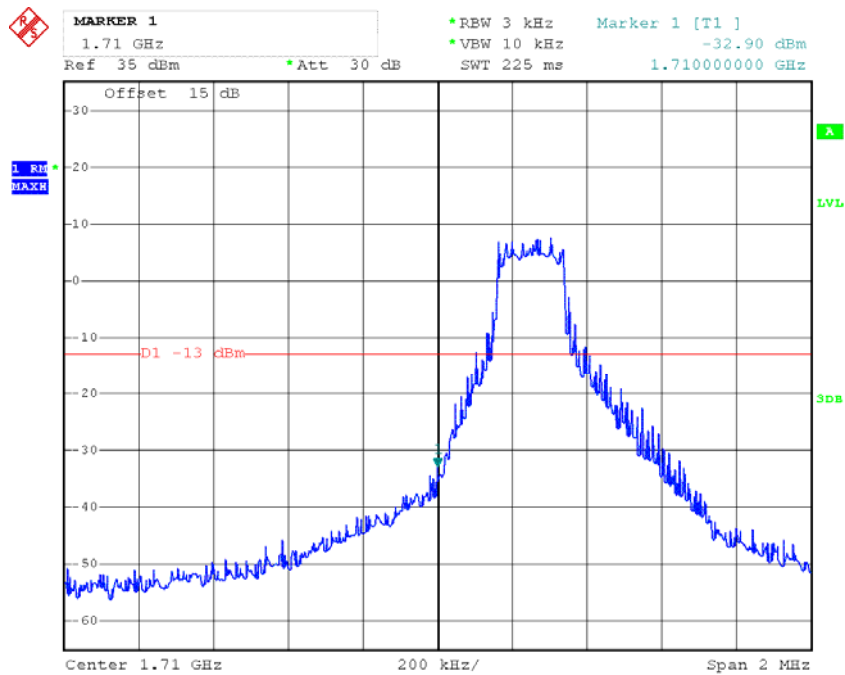
Date: 30.AUG.2015 22:09:50

20 MHz_Full RB_QPSK, Right Band Edge



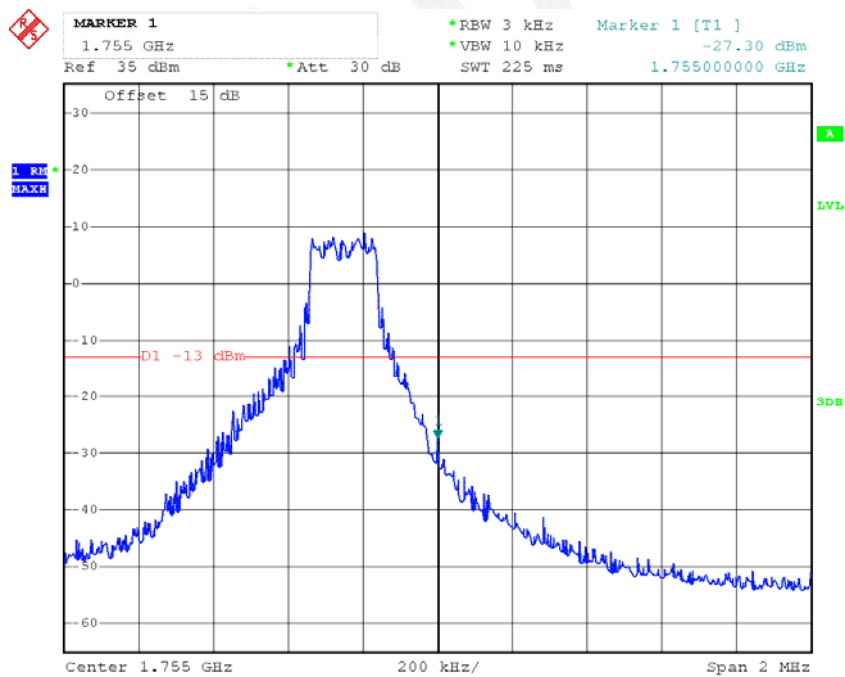
Date: 30.AUG.2015 22:23:22

1.4 MHz_1RB_16QAM, Left Band Edge



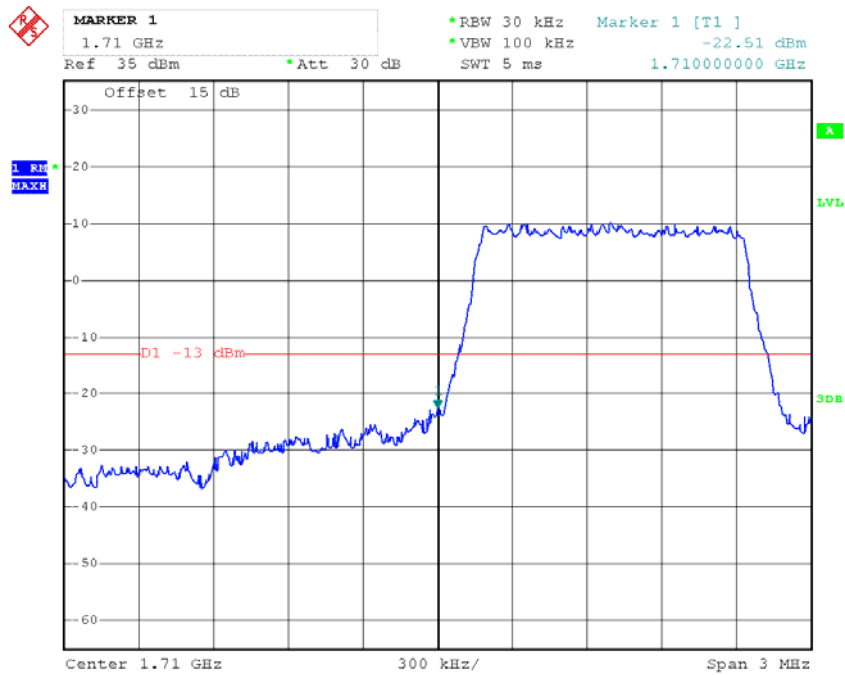
Date: 30.AUG.2015 22:53:53

1.4 MHz_1RB_16QAM, Right Band Edge



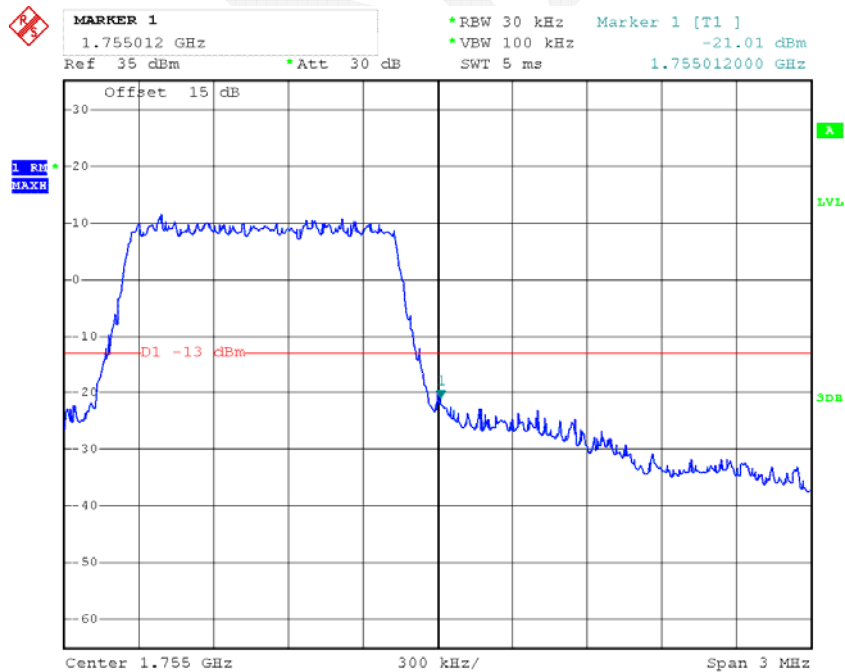
Date: 30.AUG.2015 22:33:45

1.4 MHz_Full RB_16QAM, Left Band Edge



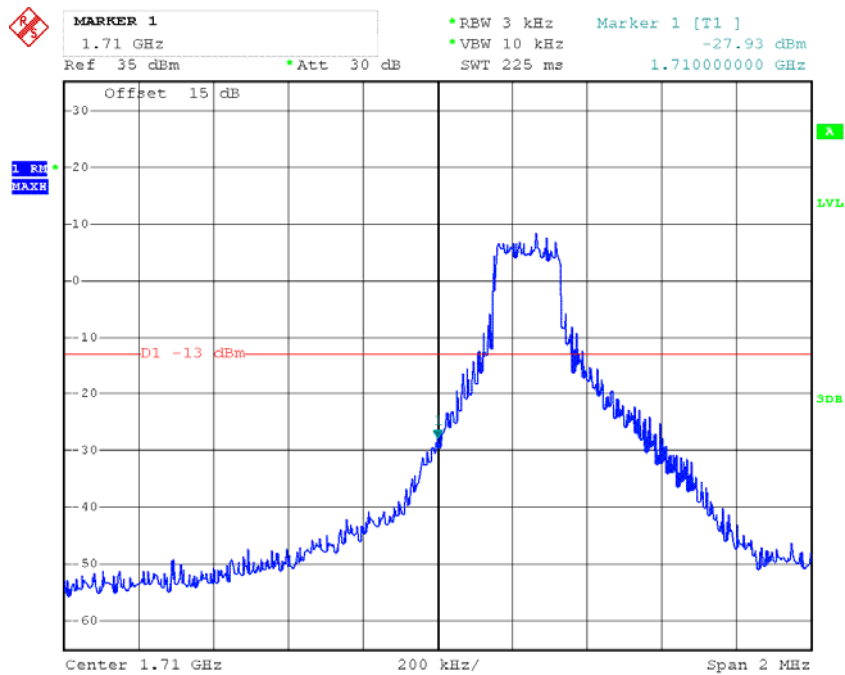
Date: 30.AUG.2015 22:03:38

1.4 MHz_Full RB_16QAM, Right Band Edge



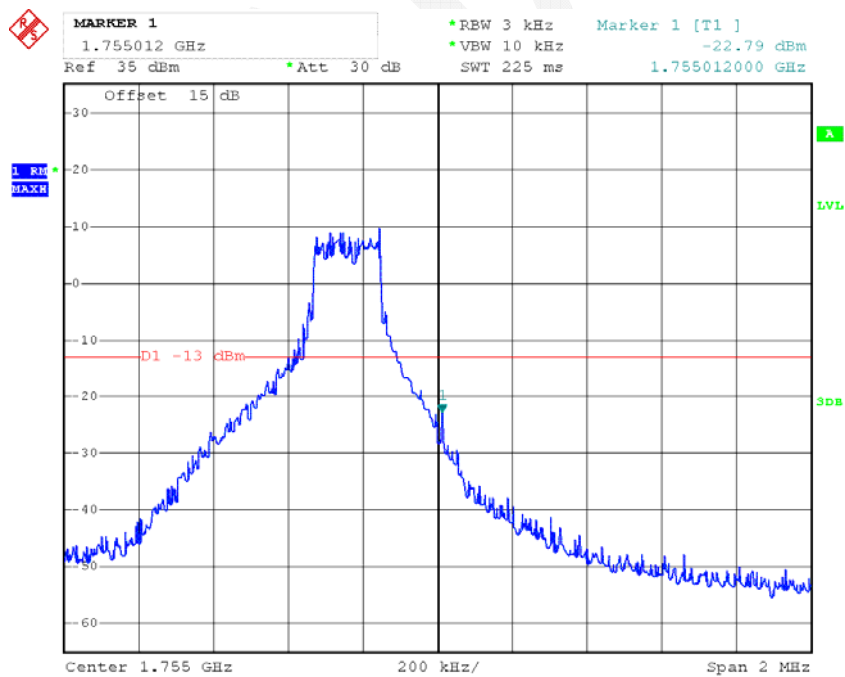
Date: 30.AUG.2015 22:29:38

3 MHz_1RB_16QAM, Left Band Edge



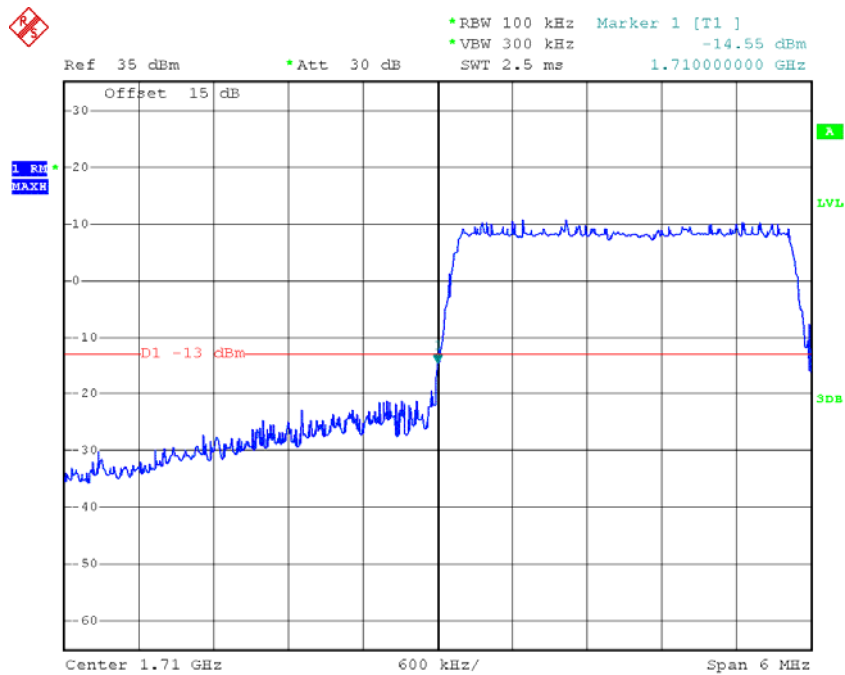
Date: 30.AUG.2015 22:52:59

3 MHz_1RB_16QAM, Right Band Edge



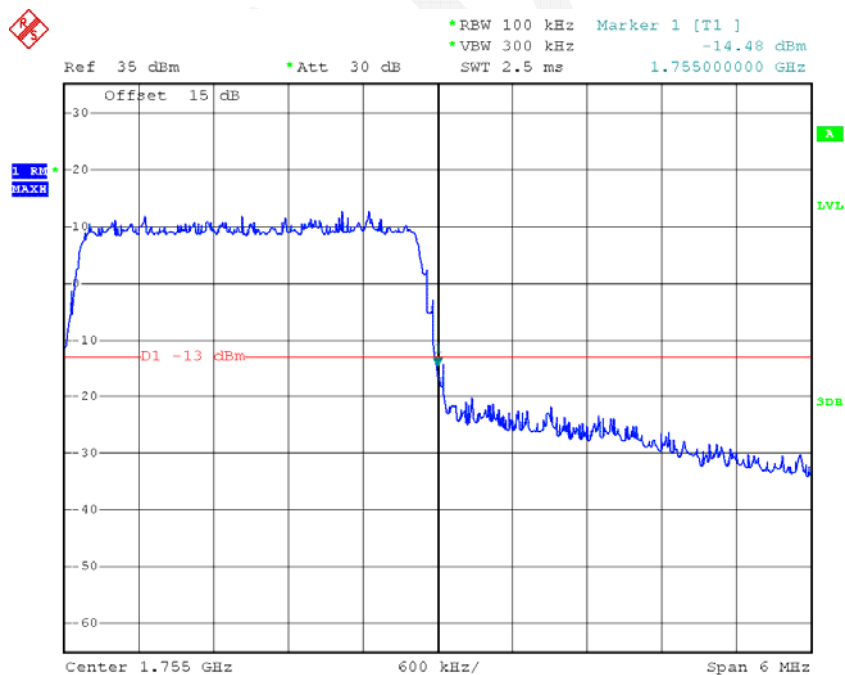
Date: 30.AUG.2015 22:36:05

3 MHz_Full RB_16QAM, Left Band Edge



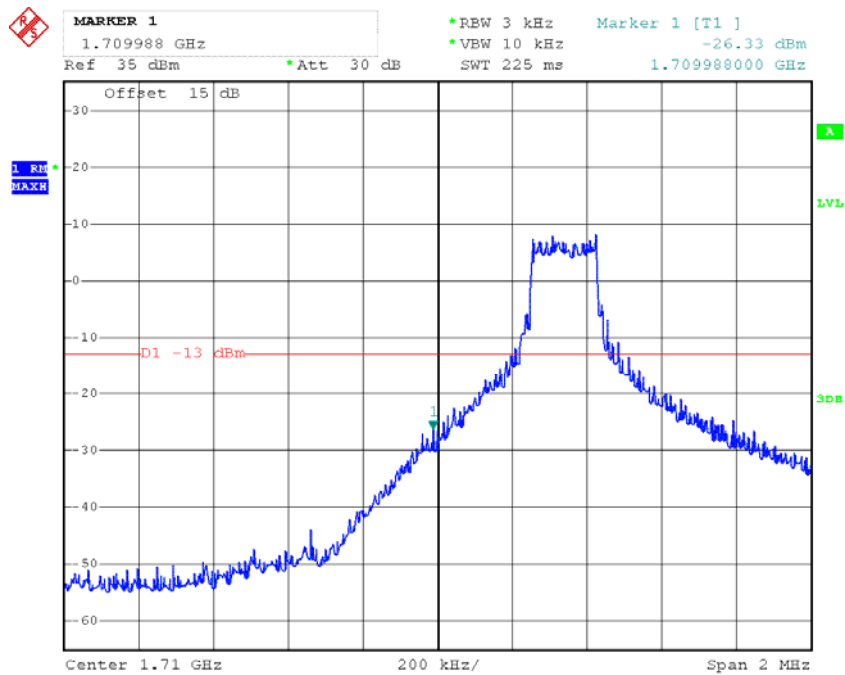
Date: 30.AUG.2015 22:05:16

3 MHz_Full RB_16QAM, Right Band Edge



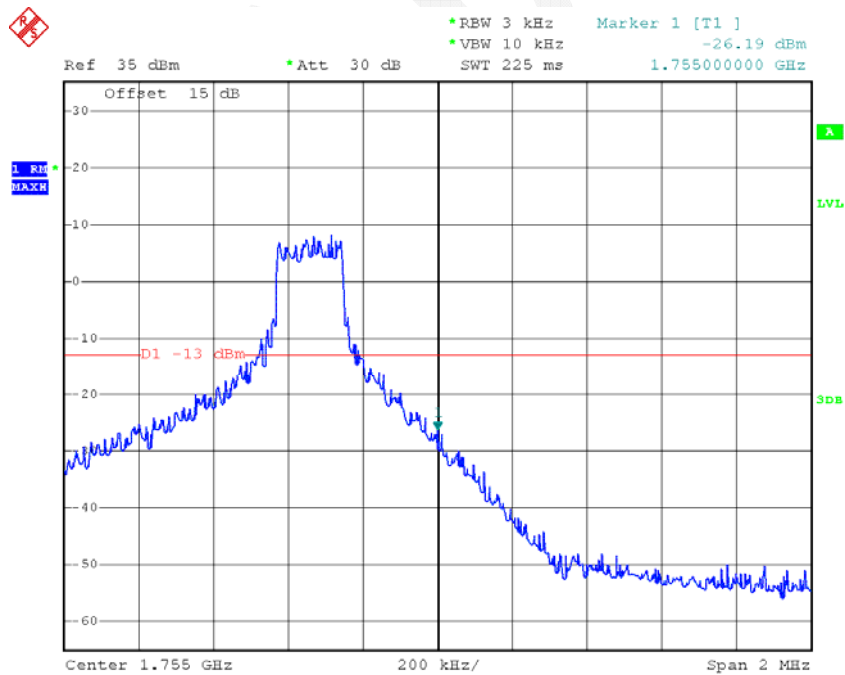
Date: 30.AUG.2015 22:28:31

5 MHz_1RB_16QAM, Left Band Edge



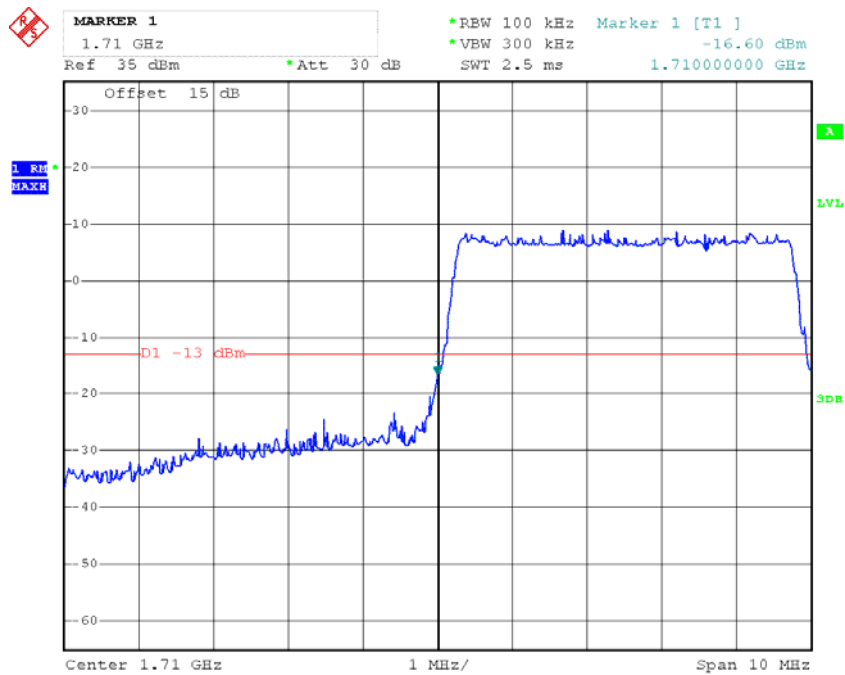
Date: 30.AUG.2015 22:51:28

5 MHz_1RB_16QAM, Right Band Edge



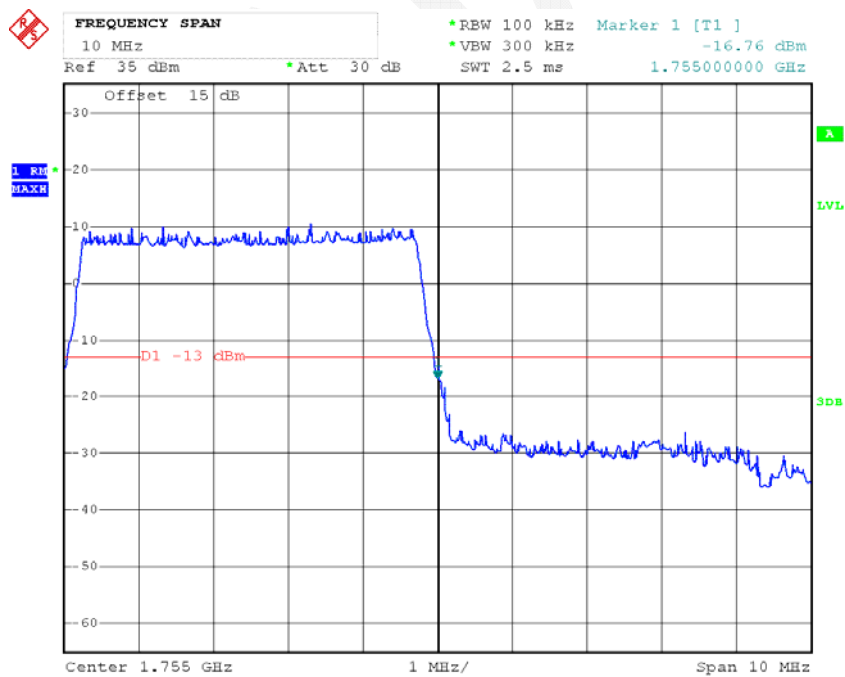
Date: 30.AUG.2015 22:36:53

5 MHz_Full RB_16QAM, Left Band Edge



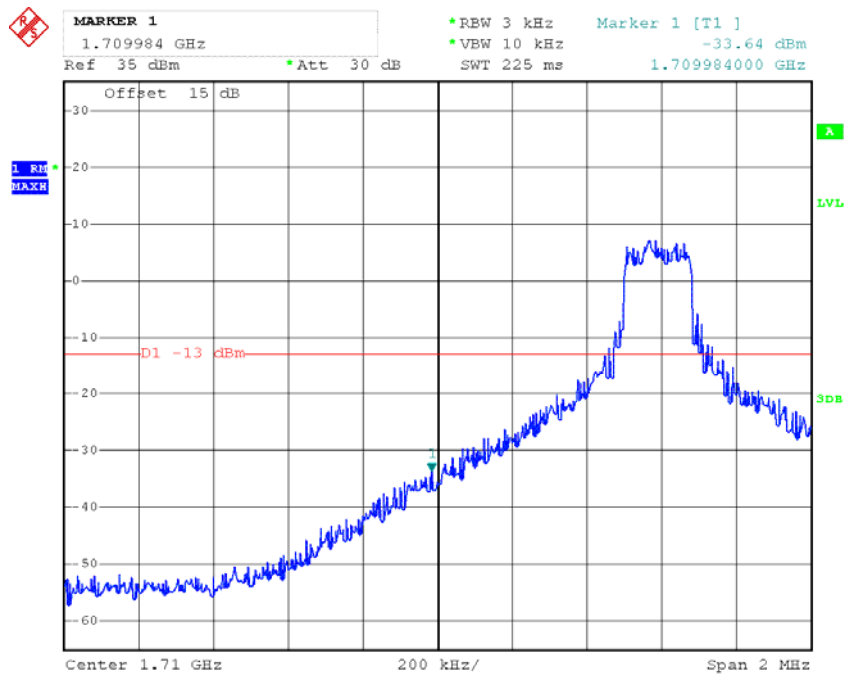
Date: 30.AUG.2015 22:05:44

5 MHz_Full RB_16QAM, Right Band Edge



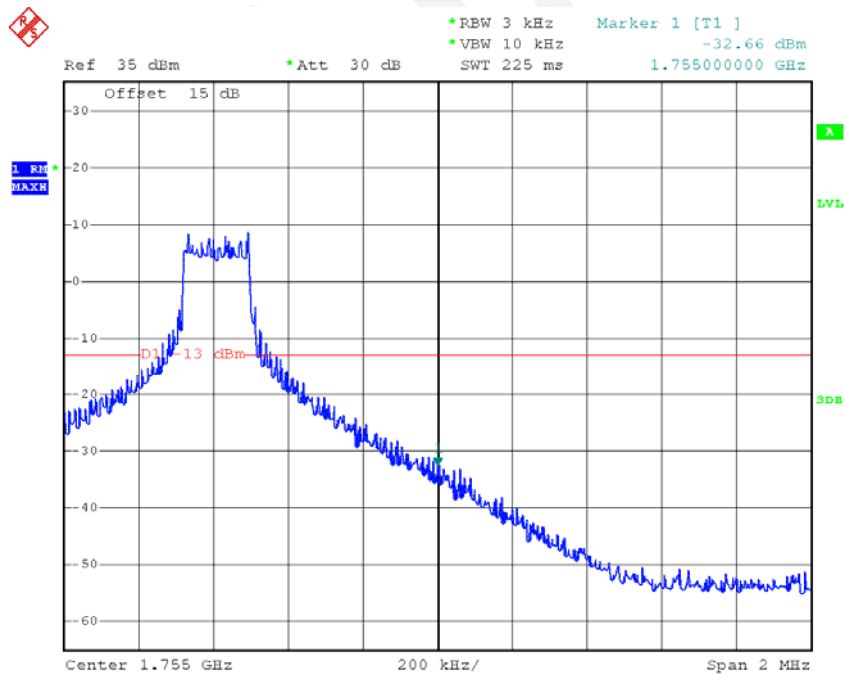
Date: 30.AUG.2015 22:27:06

10 MHz_1RB_16QAM, Left Band Edge



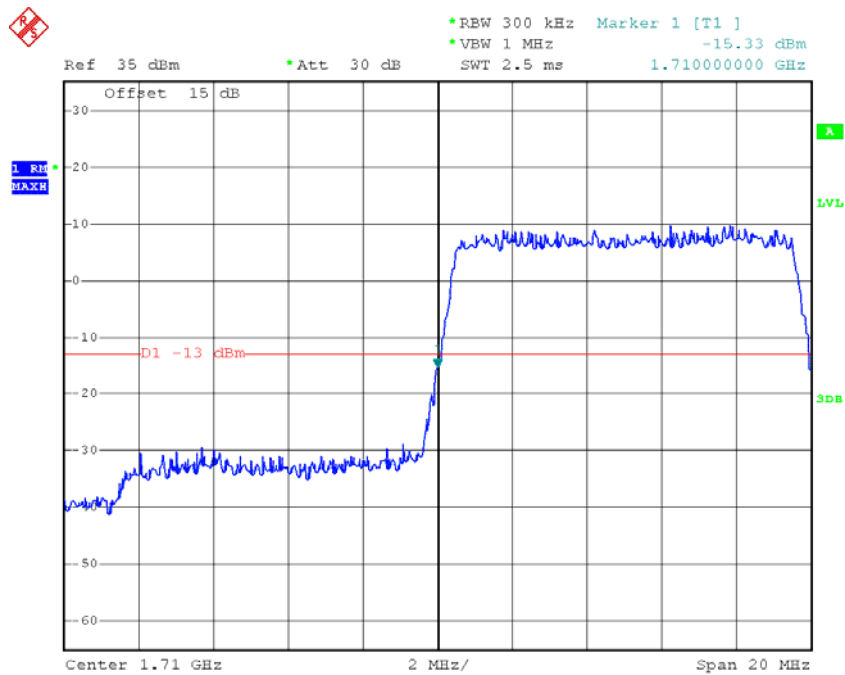
Date: 30.AUG.2015 22:50:46

10 MHz_1RB_16QAM, Right Band Edge



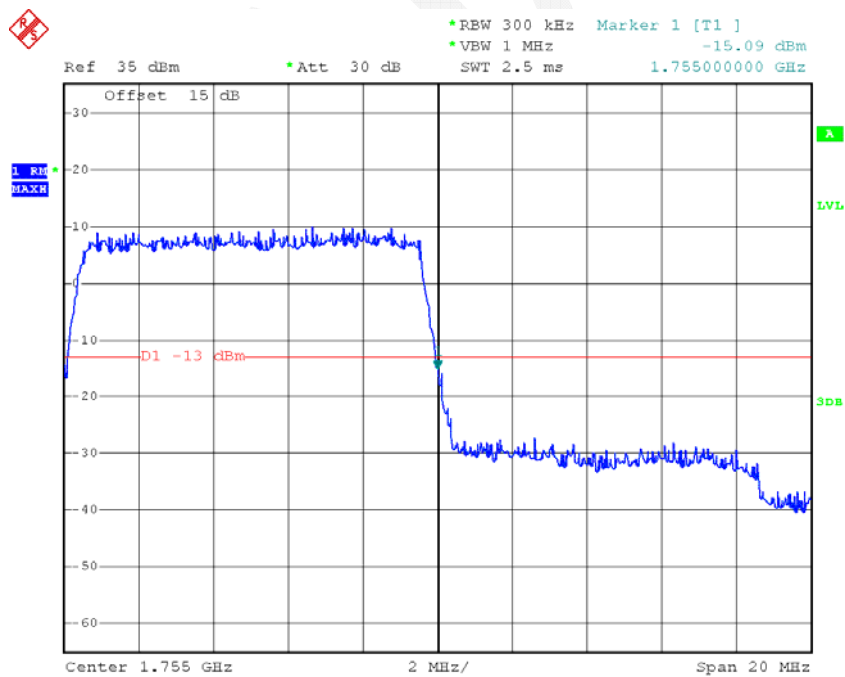
Date: 30.AUG.2015 22:37:49

10 MHz_Full RB_16QAM, Left Band Edge



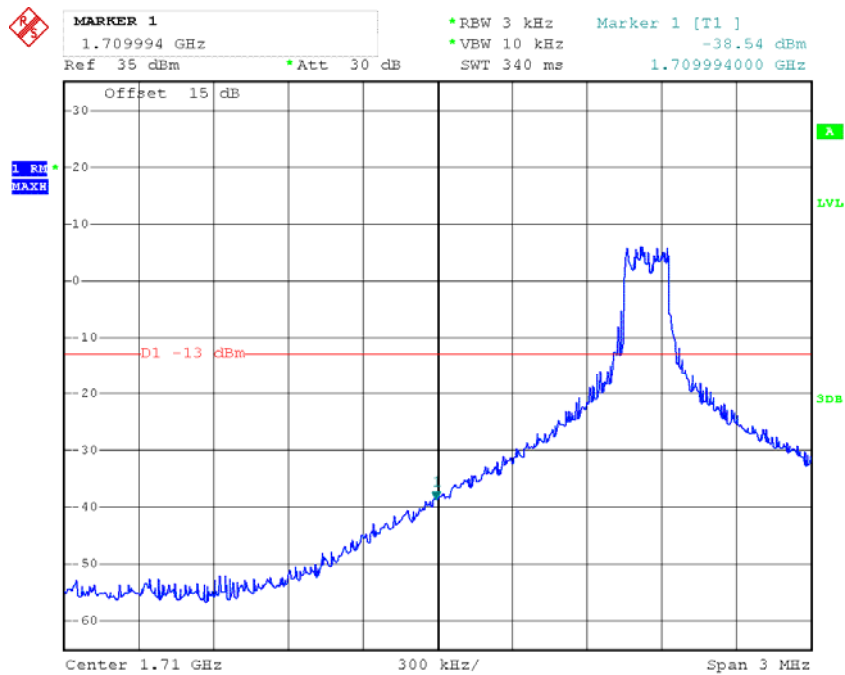
Date: 30.AUG.2015 22:06:59

10 MHz_Full RB_16QAM, Right Band Edge

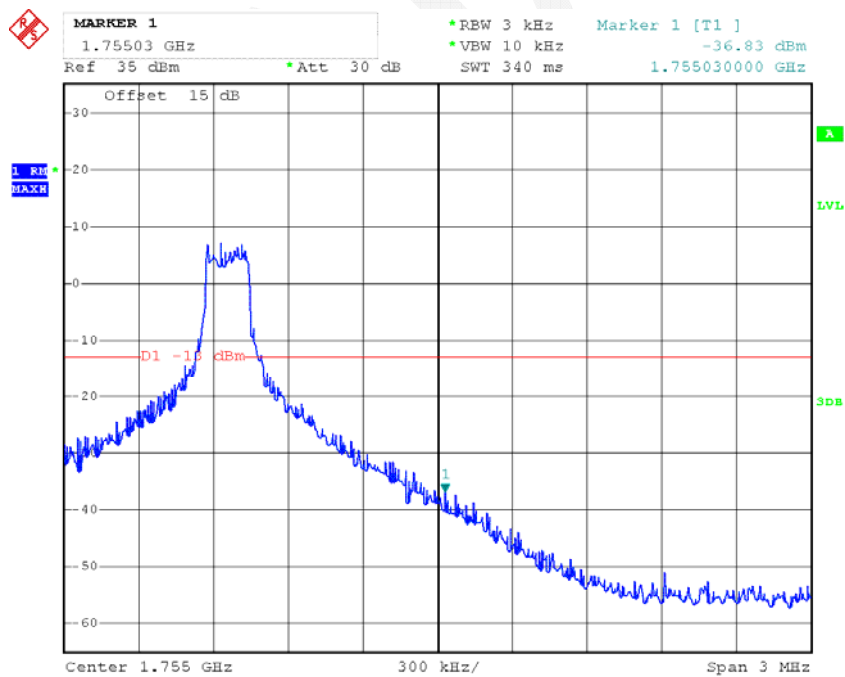


Date: 30.AUG.2015 22:25:55

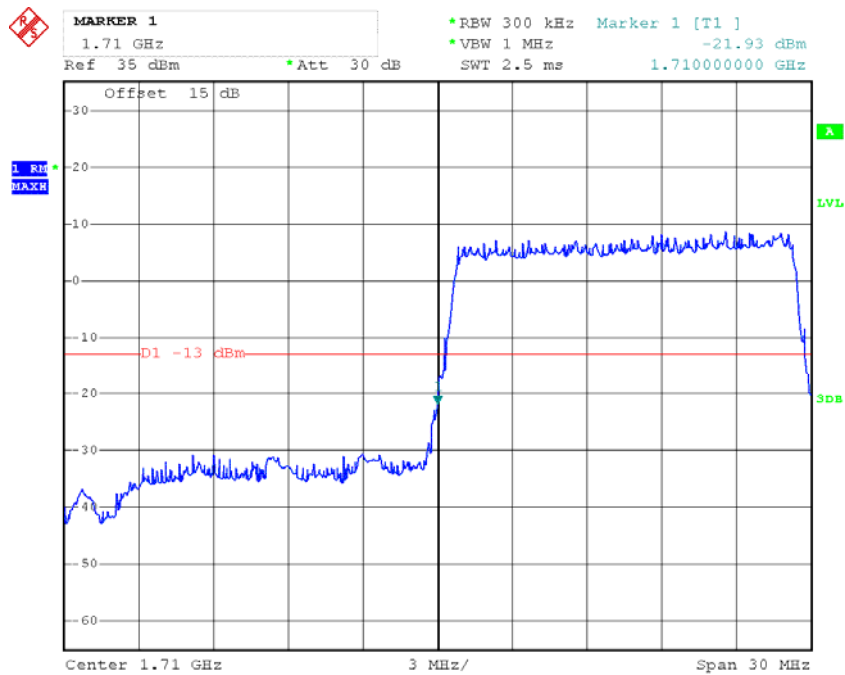
15 MHz_1RB_16QAM, Left Band Edge



15 MHz_1RB_16QAM, Right Band Edge

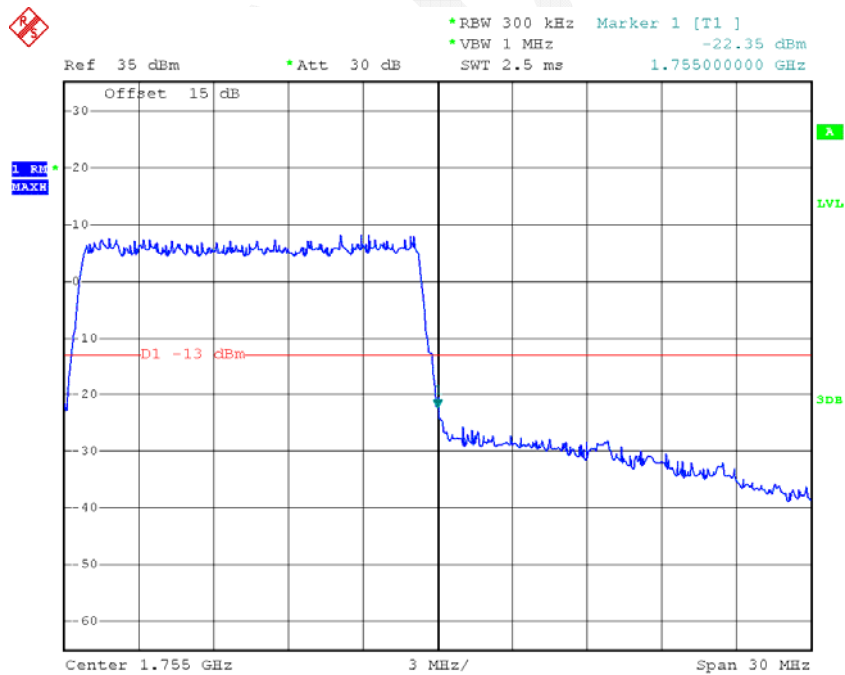


15 MHz_Full RB_16QAM, Left Band Edge



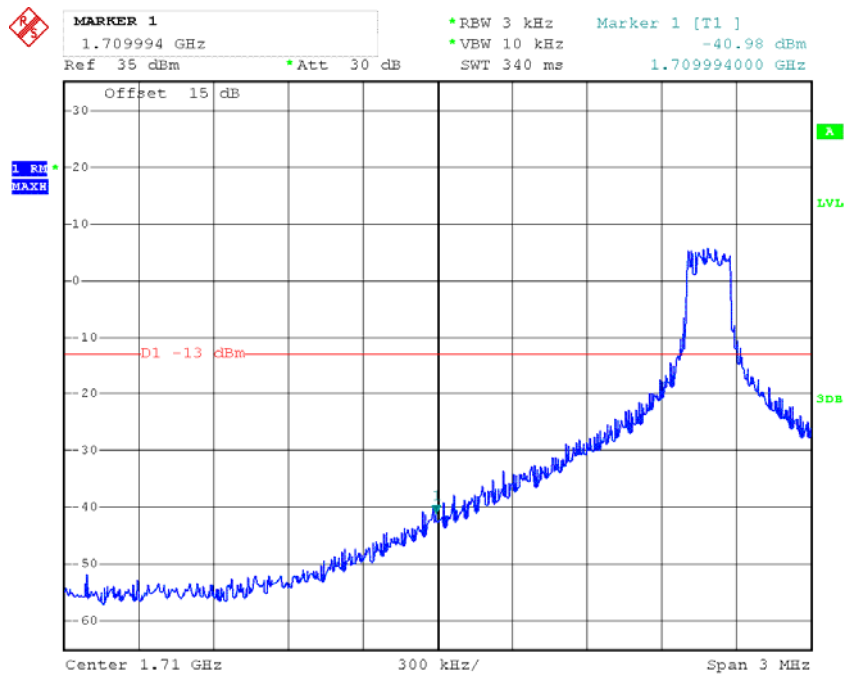
Date: 30.AUG.2015 22:07:50

15 MHz_Full RB_16QAM, Right Band Edge



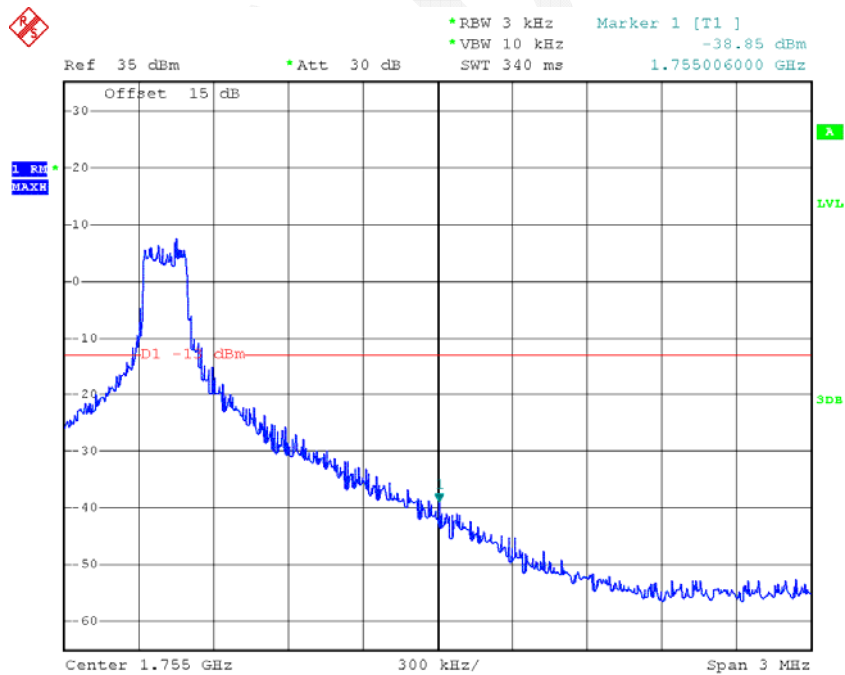
Date: 30.AUG.2015 22:24:38

20 MHz_1RB_16QAM, Left Band Edge



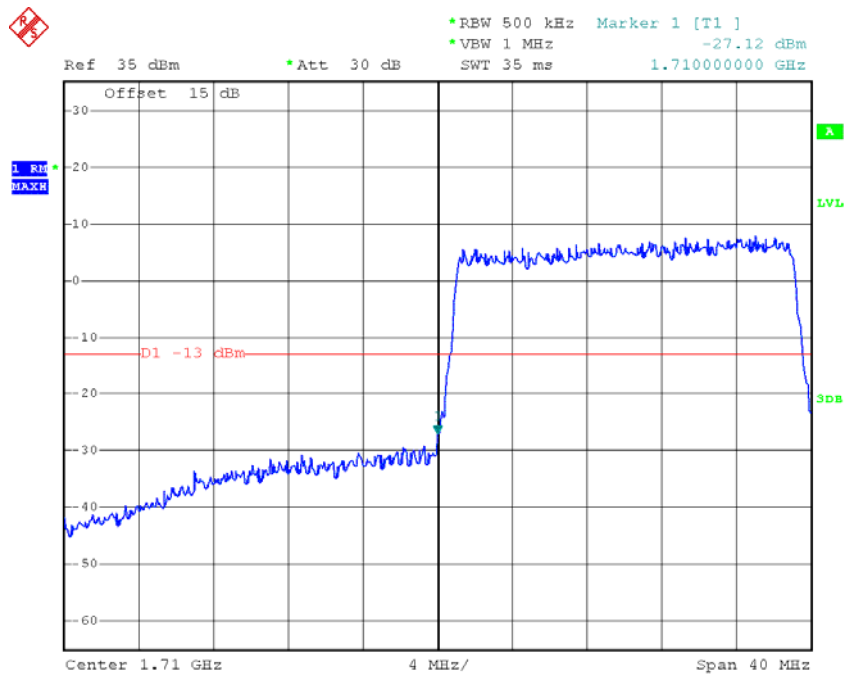
Date: 30.AUG.2015 22:44:35

20 MHz_1RB_16QAM, Right Band Edge



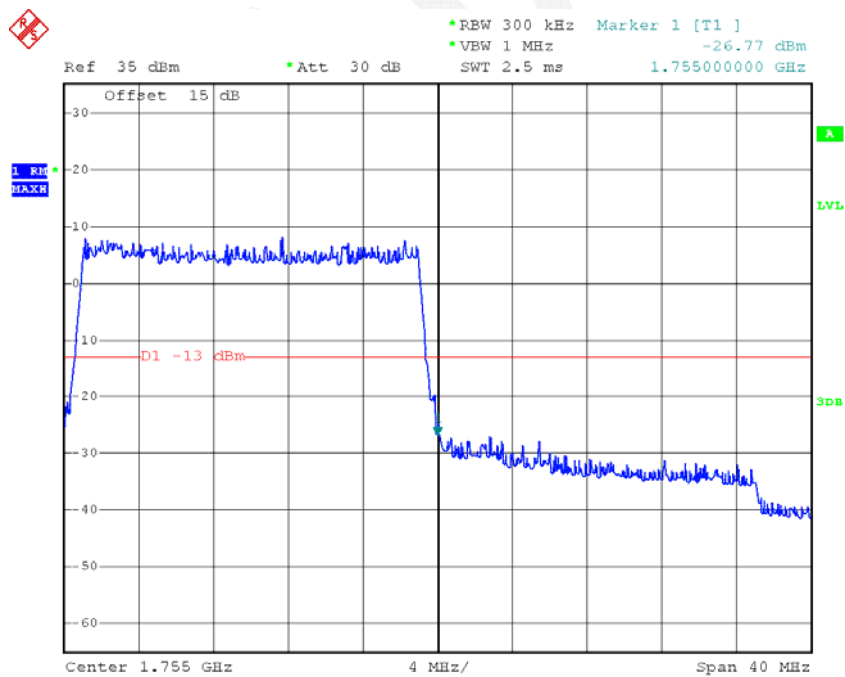
Date: 30.AUG.2015 22:40:29

20 MHz_Full RB_16QAM, Left Band Edge



Date: 30.AUG.2015 22:10:34

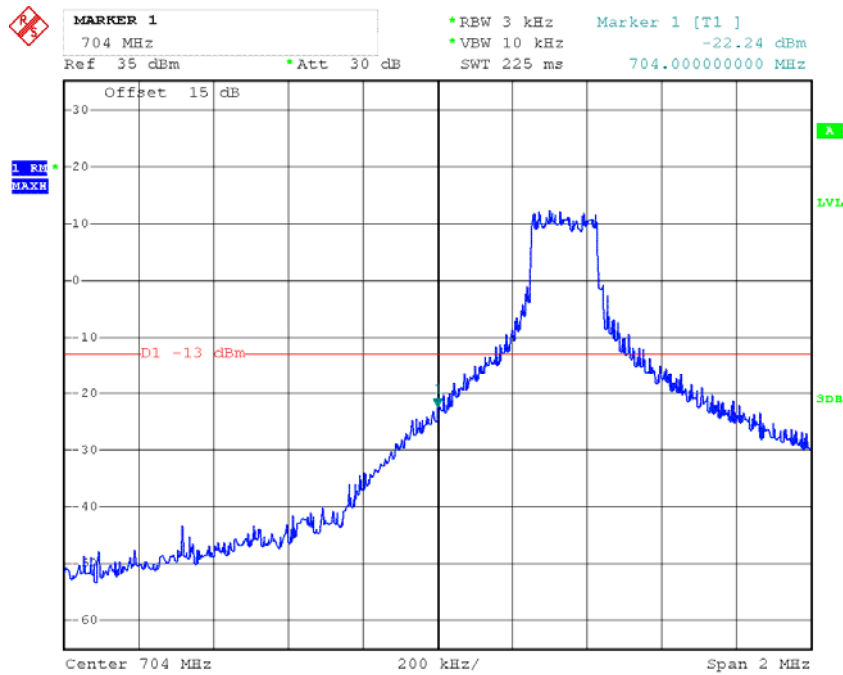
20 MHz_Full RB_16QAM, Right Band Edge



Date: 30.AUG.2015 22:23:48

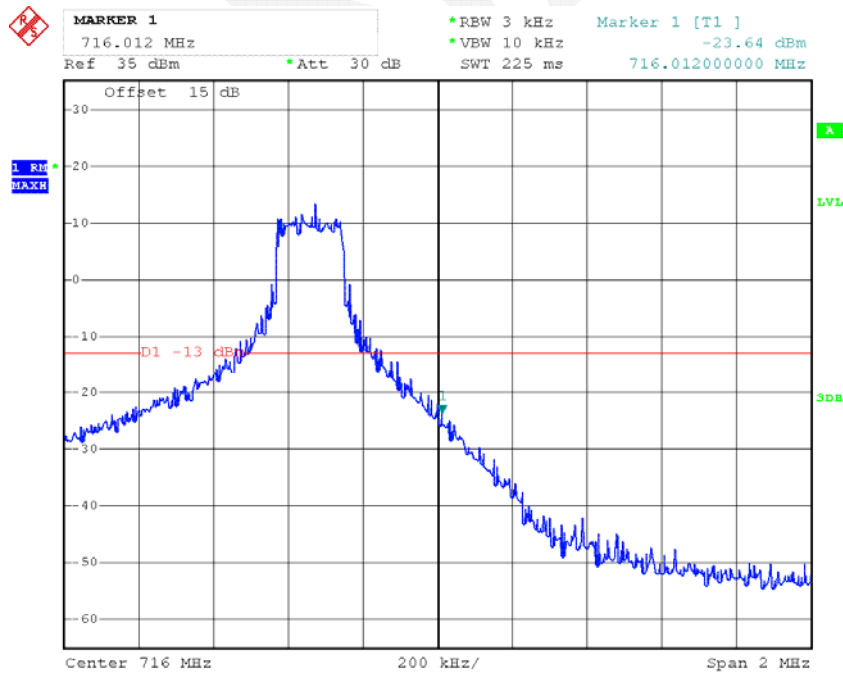
LTE Band 17:

5 MHz_1RB_QPSK, Left Band Edge



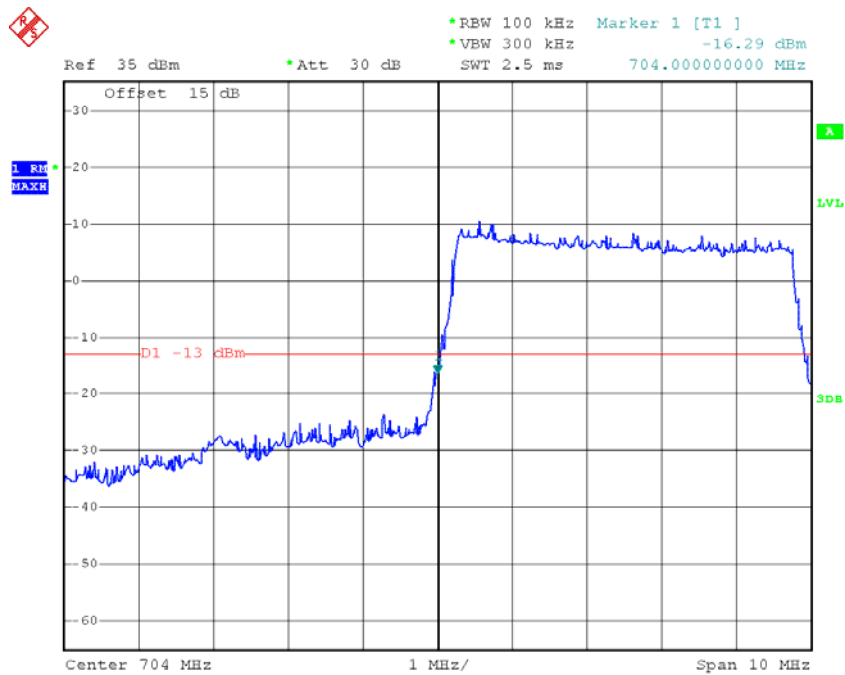
Date: 31.AUG.2015 10:51:25

5 MHz_1RB_QPSK, Right Band Edge



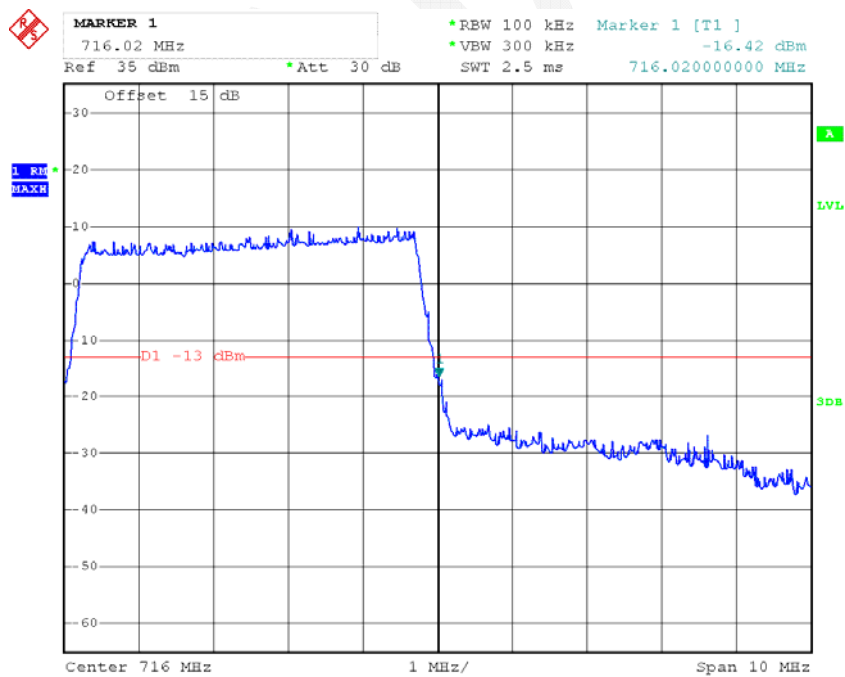
Date: 31.AUG.2015 10:55:00

5 MHz_Full RB_QPSK, Left Band Edge



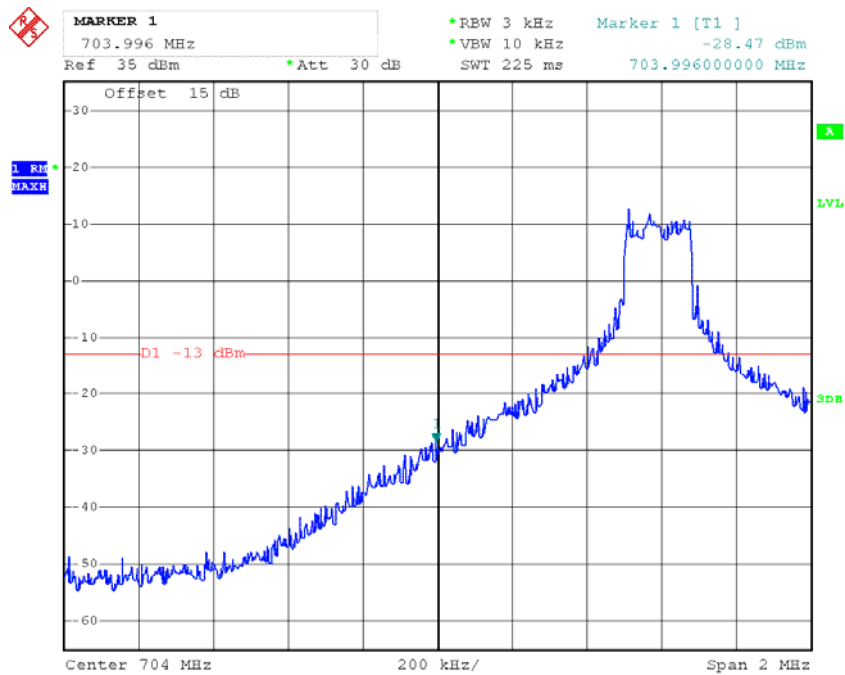
Date: 31.AUG.2015 11:03:30

5 MHz_Full RB_QPSK, Right Band Edge



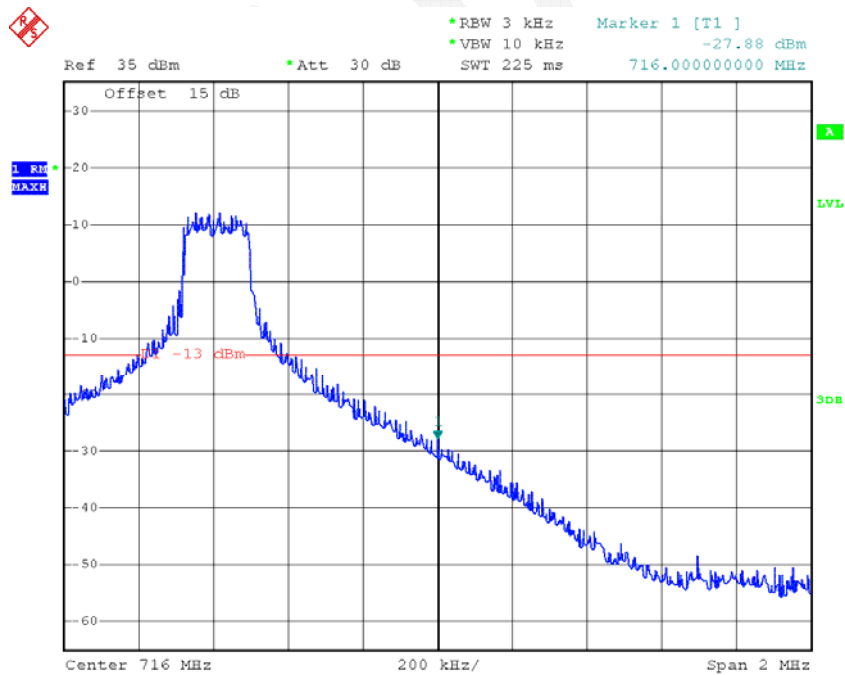
Date: 31.AUG.2015 10:58:45

10 MHz_1RB_QPSK, Left Band Edge



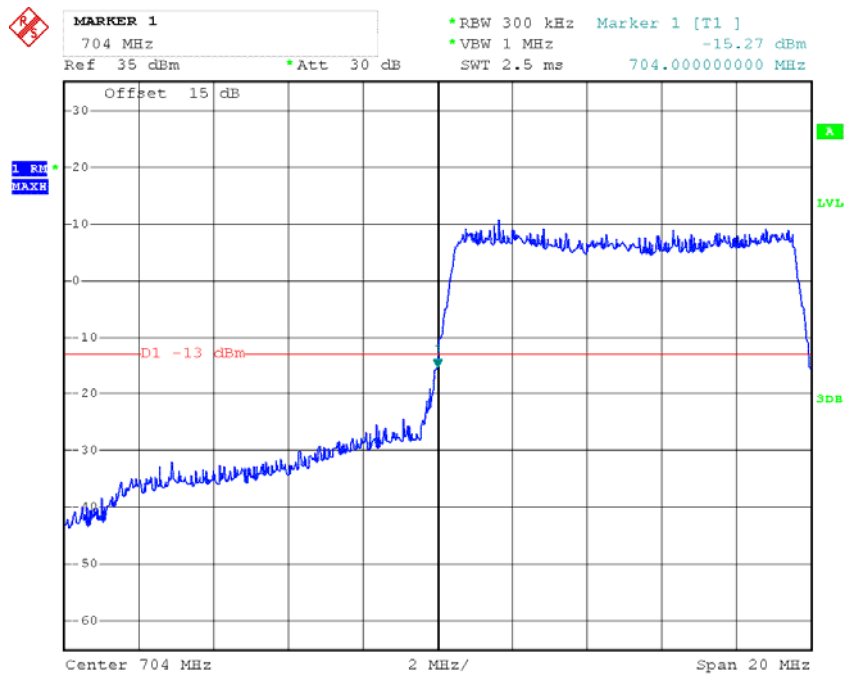
Date: 31.AUG.2015 10:52:50

10 MHz_1RB_QPSK, Right Band Edge



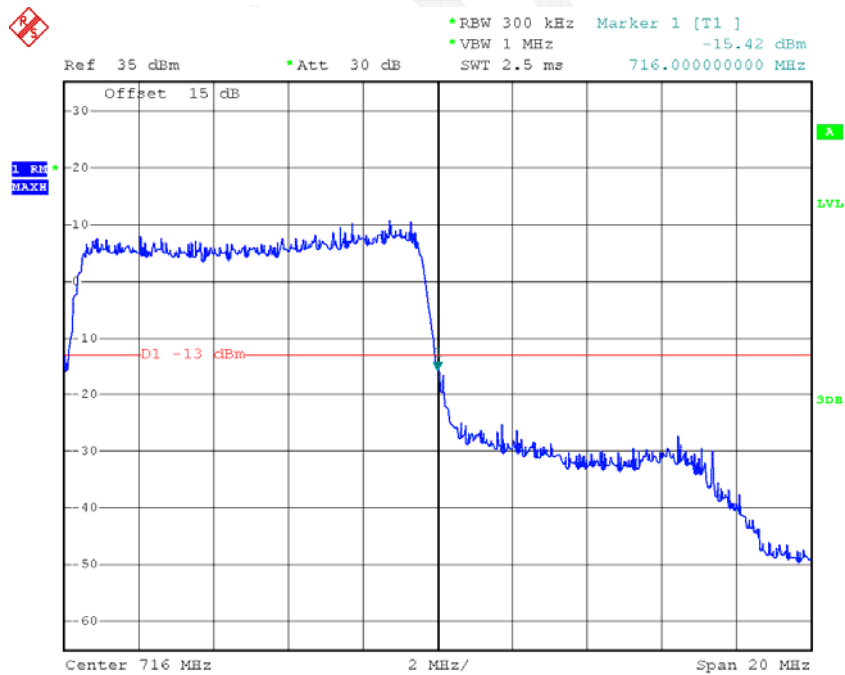
Date: 31.AUG.2015 10:53:49

10 MHz_Full RB_QPSK, Left Band Edge



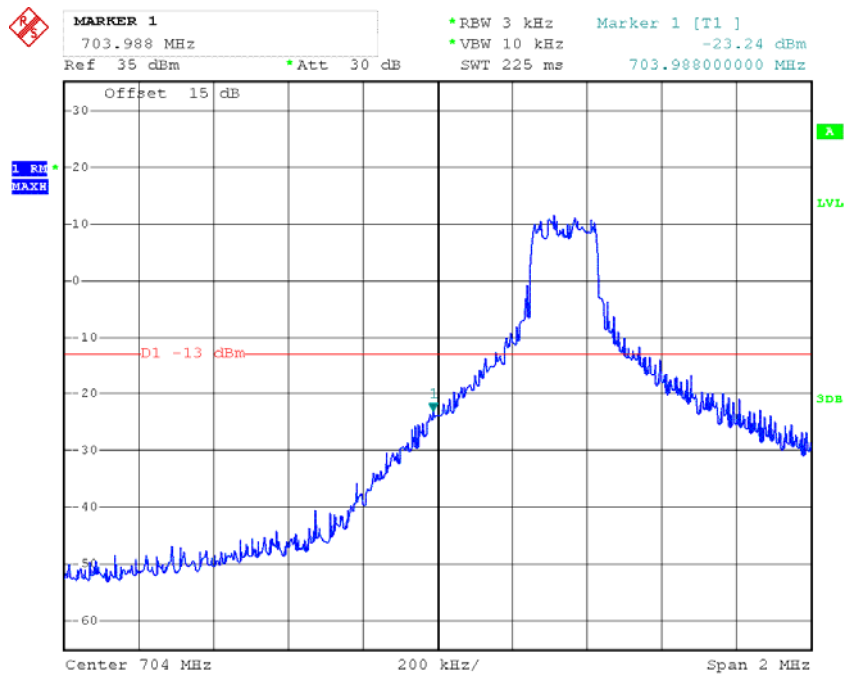
Date: 31.AUG.2015 11:02:44

10 MHz_Full RB_QPSK, Right Band Edge



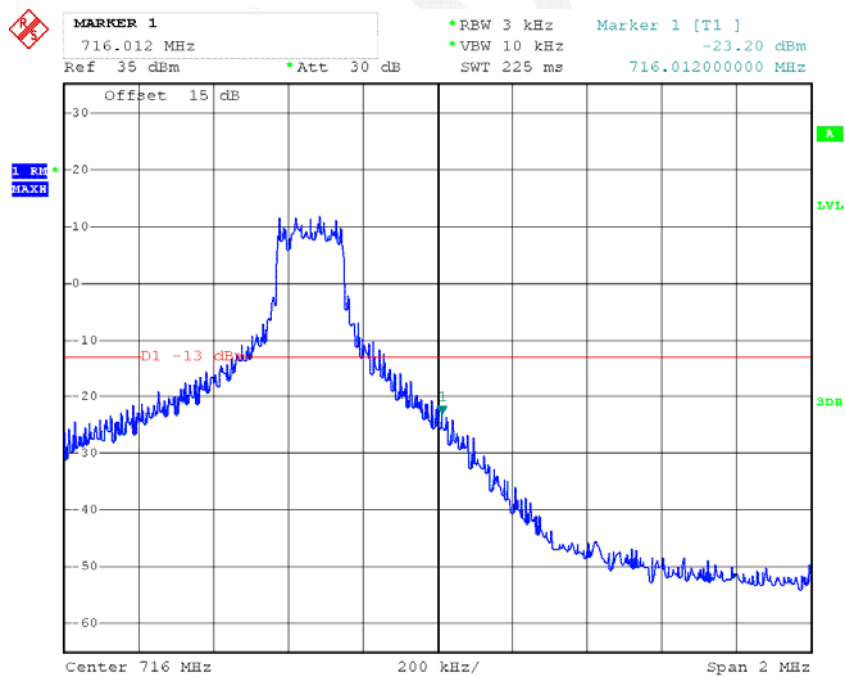
Date: 31.AUG.2015 11:00:19

5 MHz_1RB_16QAM, Left Band Edge



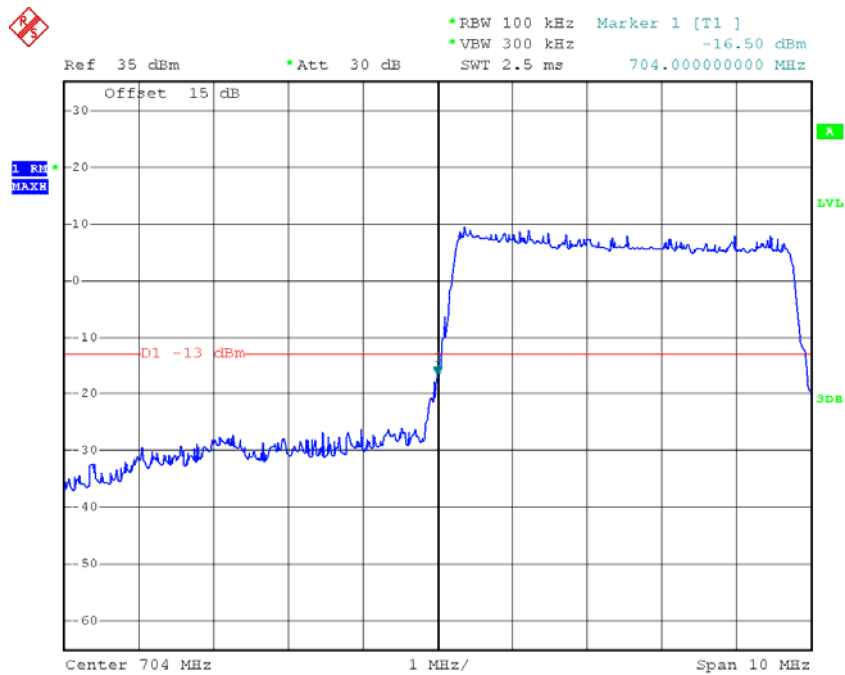
Date: 31.AUG.2015 10:51:44

5 MHz_1RB_16QAM, Right Band Edge



Date: 31.AUG.2015 10:54:43

5 MHz_Full RB_16QAM, Left Band Edge

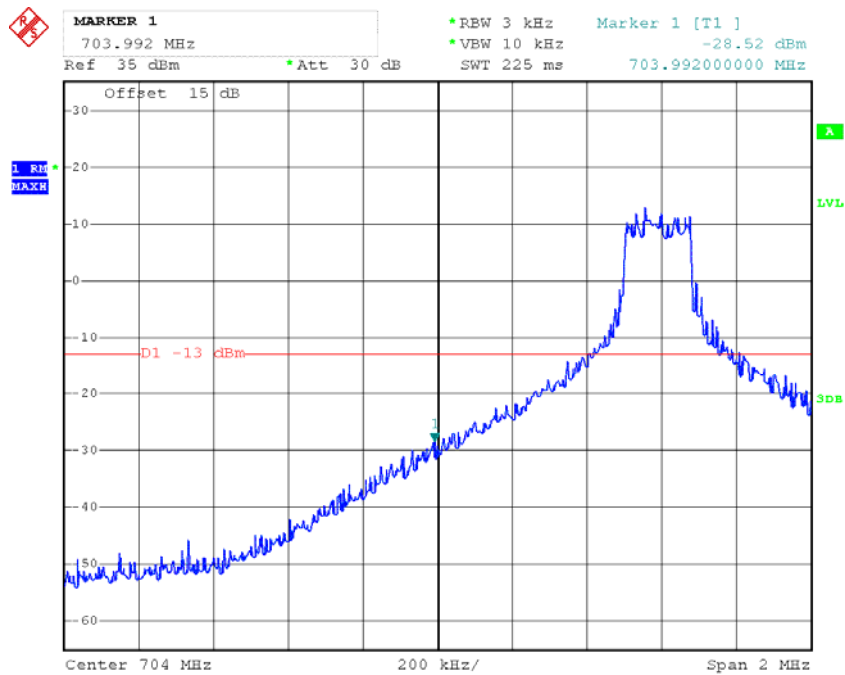


Date: 31.AUG.2015 11:03:45

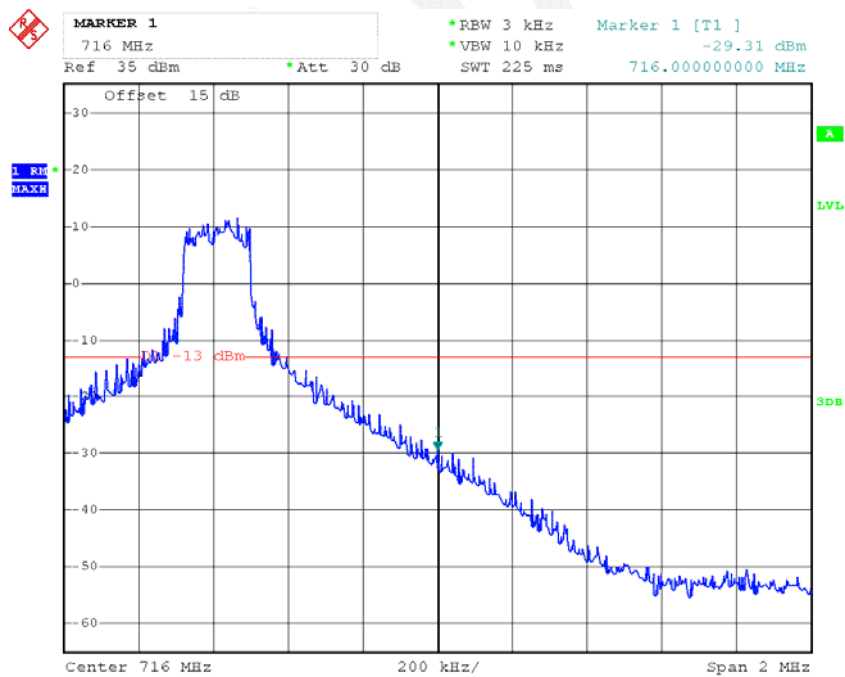
5 MHz_Full RB_16QAM, Right Band Edge



Date: 31.AUG.2015 10:58:59

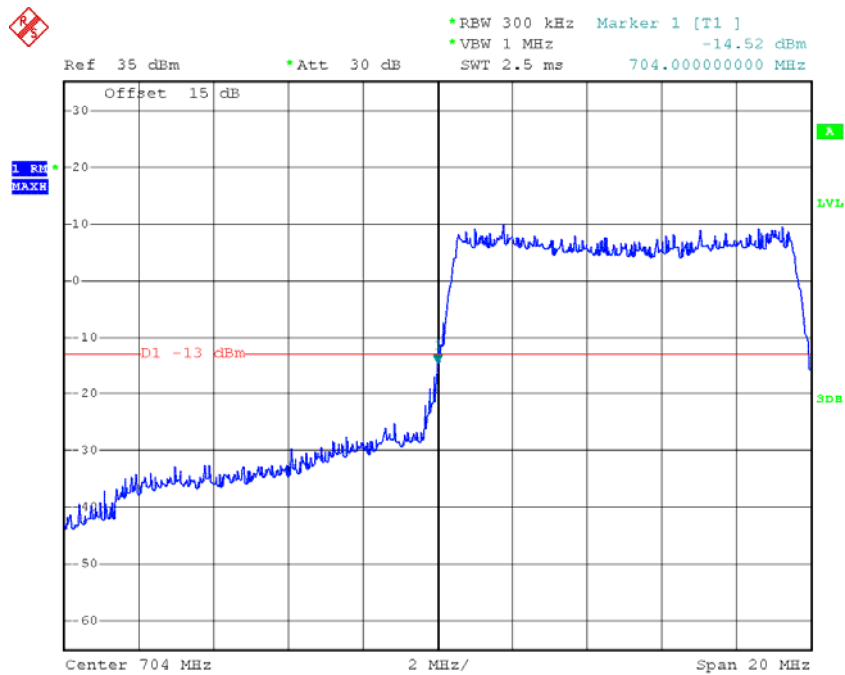
10 MHz_1RB_16QAM, Left Band Edge

Date: 31.AUG.2015 10:52:27

10 MHz_1RB_16QAM, Right Band Edge

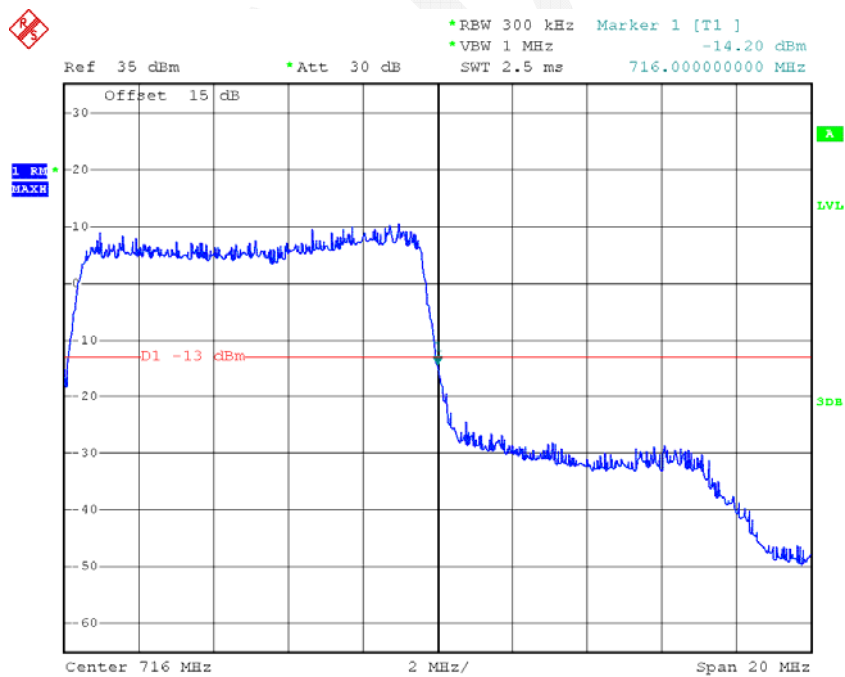
Date: 31.AUG.2015 10:53:31

10 MHz_Full RB_16QAM, Left Band Edge



Date: 31.AUG.2015 11:02:54

10 MHz_Full RB_16QAM, Right Band Edge



Date: 31.AUG.2015 11:02:03

FCC §2.1055, §22.355 & §24.235 & §27.54 - FREQUENCY STABILITY**Applicable Standard**

FCC § 2.1055 (a), § 2.1055 (d), §22.355, §24.235 , §27.54

According to §22.355, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table below:

Frequency Tolerance for Transmitters in the Public Mobile Services

Frequency Range (MHz)	Base, fixed (ppm)	Mobile ≤ 3 watts (ppm)	Mobile ≤ 3 watts (ppm)
25 to 50	20.0	20.0	50.0
50 to 450	5.0	5.0	50.0
450 to 512	2.5	5.0	5.0
821 to 896	1.5	2.5	2.5
928 to 929.	5.0	N/A	N/A
929 to 960.	1.5	N/A	N/A
2110 to 2220	10.0	N/A	N/A

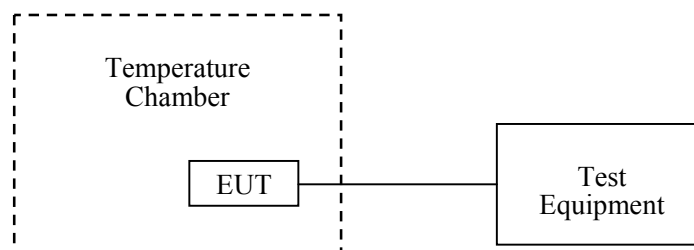
According to §24.235, the frequency stability shall be sufficient to ensure that the fundamental emissions stays within the authorized frequency block.

Test Procedure

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and the RF output was connected to communication test set via feed-through attenuators. The EUT was placed inside the temperature chamber. The DC leads and RF output cable exited the chamber through an opening made for the purpose.

After the temperature stabilized for approximately 20 minutes, the frequency output was recorded from the communication test set.

Frequency Stability vs. Voltage: An external variable DC power supply was connected to the battery terminals of the equipment under test. The voltage was set from 85% to 115% of the nominal value and was then decreased until the transmitter light no longer illuminated; i.e., the battery end point. The output frequency was recorded for each battery voltage.



Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Dongzhixu	High Temperature Test Chamber	DP1000	201105083-3	2015-08-01	2016-08-01
R&S	Universal Radio Communication Tester	CMU200	109 038	2015-05-09	2016-05-09
R&S	Wideband Radio Communication Tester	CMW500	106891	2014-11-23	2015-11-23

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data**Environmental Conditions**

Temperature:	27 °C
Relative Humidity:	52%
ATM Pressure:	101kPa

The testing was performed by Lion Xiao on 2015-09-06.

Cellular Band (Part 22H)

GMSK, Middle Channel, $f_c = 836.6$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Limit
	V _{DC}	Hz	ppm	ppm
-30	3.7	19	0.023	2.5
-20	3.7	13	0.016	2.5
-10	3.7	17	0.020	2.5
0	3.7	15	0.018	2.5
10	3.7	11	0.013	2.5
20	3.7	18	0.022	2.5
30	3.7	12	0.014	2.5
40	3.7	14	0.017	2.5
50	3.7	17	0.020	2.5
25	3.5	13	0.016	2.5
25	4.2	16	0.019	2.5

EDGE, Middle Channel, $f_c = 836.6$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Limit
	V _{DC}	Hz	ppm	ppm
-30	3.7	-30	-0.036	2.5
-20	3.7	-34	-0.041	2.5
-10	3.7	-29	-0.035	2.5
0	3.7	-31	-0.037	2.5
10	3.7	-24	-0.029	2.5
20	3.7	-29	-0.035	2.5
30	3.7	-37	-0.044	2.5
40	3.7	-23	-0.027	2.5
50	3.7	-26	-0.031	2.5
25	3.5	-30	-0.036	2.5
25	4.2	-25	-0.030	2.5

WCDMA Band V: Re199

Middle Channel, $f_c = 836.6$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Limit
	V _{DC}	Hz	ppm	ppm
-30	3.7	15	0.018	2.5
-20	3.7	12	0.014	2.5
-10	3.7	19	0.023	2.5
0	3.7	14	0.017	2.5
10	3.7	10	0.012	2.5
20	3.7	18	0.022	2.5
30	3.7	16	0.019	2.5
40	3.7	11	0.013	2.5
50	3.7	17	0.020	2.5
25	3.5	19	0.023	2.5
25	4.2	22	0.026	2.5

WCDMA Band V: HSDPA

Middle Channel, $f_c = 836.6$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Limit
	V_{DC}	Hz	ppm	ppm
-30	3.7	-13	-0.016	2.5
-20	3.7	-17	-0.020	2.5
-10	3.7	-19	-0.023	2.5
0	3.7	-11	-0.013	2.5
10	3.7	-15	-0.018	2.5
20	3.7	-10	-0.012	2.5
30	3.7	-12	-0.014	2.5
40	3.7	-9	-0.011	2.5
50	3.7	-18	-0.022	2.5
25	3.5	-14	-0.017	2.5
25	4.2	-16	-0.019	2.5

WCDMA Band V: HSUPA

Middle Channel, $f_c = 836.6$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Limit
	V_{DC}	Hz	ppm	ppm
-30	3.7	22	0.026	2.5
-20	3.7	26	0.031	2.5
-10	3.7	21	0.025	2.5
0	3.7	27	0.032	2.5
10	3.7	23	0.027	2.5
20	3.7	26	0.031	2.5
30	3.7	20	0.024	2.5
40	3.7	29	0.035	2.5
50	3.7	23	0.027	2.5
25	3.5	28	0.033	2.5
25	4.2	24	0.029	2.5

PCS Band (Part 24E)

GMSK, Middle Channel, $f_c = 1880.0$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Result
	V_{DC}	Hz	ppm	
-30	3.7	-18	-0.010	compliance
-20	3.7	-21	-0.011	compliance
-10	3.7	-13	-0.007	compliance
0	3.7	-19	-0.010	compliance
10	3.7	-12	-0.006	compliance
20	3.7	-14	-0.007	compliance
30	3.7	-18	-0.010	compliance
40	3.7	-10	-0.005	compliance
50	3.7	-16	-0.009	compliance
25	3.5	-20	-0.011	compliance
25	4.2	-23	-0.012	compliance

EDGE, Middle Channel, $f_c = 1880.0$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Result
	V_{DC}	Hz	ppm	
-30	3.7	-17	-0.009	compliance
-20	3.7	-15	-0.008	compliance
-10	3.7	-11	-0.006	compliance
0	3.7	-19	-0.010	compliance
10	3.7	-14	-0.007	compliance
20	3.7	-18	-0.010	compliance
30	3.7	-15	-0.008	compliance
40	3.7	-13	-0.007	compliance
50	3.7	-10	-0.005	compliance
25	3.5	-16	-0.009	compliance
25	4.2	-12	-0.006	compliance

WCDMA Band II: Re199

Middle Channel, $f_c = 1880.0$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Result
	V _{DC}	Hz	ppm	
-30	3.7	-26	-0.014	compliance
-20	3.7	-23	-0.012	compliance
-10	3.7	-21	-0.011	compliance
0	3.7	-29	-0.015	compliance
10	3.7	-27	-0.014	compliance
20	3.7	-22	-0.012	compliance
30	3.7	-26	-0.014	compliance
40	3.7	-28	-0.015	compliance
50	3.7	-20	-0.011	compliance
25	3.5	-25	-0.013	compliance
25	4.2	-30	-0.016	compliance

WCDMA Band II: HSDPA

Middle Channel, $f_c = 1880.0$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Result
	V _{DC}	Hz	ppm	
-30	3.7	-49	-0.026	compliance
-20	3.7	-55	-0.029	compliance
-10	3.7	-51	-0.027	compliance
0	3.7	-58	-0.031	compliance
10	3.7	-52	-0.028	compliance
20	3.7	-47	-0.025	compliance
30	3.7	-56	-0.030	compliance
40	3.7	-50	-0.027	compliance
50	3.7	-53	-0.028	compliance
25	3.5	-58	-0.031	compliance
25	4.2	-54	-0.029	compliance

WCDMA Band II: HSUPA

Middle Channel, $f_c = 1880.0$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Result
	V _{DC}	Hz	ppm	
-30	3.7	-38	-0.020	compliance
-20	3.7	-41	-0.022	compliance
-10	3.7	-33	-0.018	compliance
0	3.7	-35	-0.019	compliance
10	3.7	-30	-0.016	compliance
20	3.7	-35	-0.019	compliance
30	3.7	-39	-0.021	compliance
40	3.7	-32	-0.017	compliance
50	3.7	-37	-0.020	compliance
25	3.5	-34	-0.018	compliance
25	4.2	-36	-0.019	compliance

PART 27:**WCDMA Band IV: Re199**

Middle Channel, $f_c = 1732.6$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Result
	V_{DC}	Hz	ppm	
-30	3.7	21	0.012	compliance
-20	3.7	26	0.015	compliance
-10	3.7	29	0.017	compliance
0	3.7	21	0.012	compliance
10	3.7	23	0.013	compliance
20	3.7	27	0.016	compliance
30	3.7	22	0.013	compliance
40	3.7	26	0.015	compliance
50	3.7	20	0.012	compliance
25	3.5	24	0.014	compliance
25	4.2	25	0.014	compliance

WCDMA Band IV: HSDPA

Middle Channel, $f_c = 1732.6$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Result
	V_{DC}	Hz	ppm	
-30	3.7	34	0.020	compliance
-20	3.7	31	0.018	compliance
-10	3.7	39	0.023	compliance
0	3.7	37	0.021	compliance
10	3.7	32	0.018	compliance
20	3.7	36	0.021	compliance
30	3.7	33	0.019	compliance
40	3.7	30	0.017	compliance
50	3.7	38	0.022	compliance
25	3.5	41	0.024	compliance
25	4.2	35	0.020	compliance

WCDMA Band IV: HSUPA

Middle Channel, $f_c = 1732.6$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Result
	V _{DC}	Hz	ppm	
-30	3.7	41	0.024	compliance
-20	3.7	49	0.028	compliance
-10	3.7	45	0.026	compliance
0	3.7	40	0.023	compliance
10	3.7	47	0.027	compliance
20	3.7	43	0.025	compliance
30	3.7	42	0.024	compliance
40	3.7	48	0.028	compliance
50	3.7	52	0.030	compliance
25	3.5	44	0.025	compliance
25	4.2	50	0.029	compliance

LTE Band 2:

QPSK, Channel Bandwidth:10MHz Middle Channel, $f_c = 1880$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Result
	V _{DC}	Hz	ppm	
-30	3.7	10.64	0.0057	compliance
-20	3.7	9.43	0.0050	compliance
-10	3.7	10.49	0.0056	compliance
0	3.7	10.9	0.0058	compliance
10	3.7	10.45	0.0056	compliance
20	3.7	10.06	0.0054	compliance
30	3.7	9.81	0.0052	compliance
40	3.7	10.62	0.0056	compliance
50	3.7	10.25	0.0055	compliance
25	3.5	9.46	0.0050	compliance
25	4.2	9.63	0.0051	compliance

16QAM, Channel Bandwidth:10MHz Middle Channel, $f_c = 1880$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Result
	V _{DC}	Hz	ppm	
-30	3.7	22.2	0.0118	compliance
-20	3.7	20.67	0.0110	compliance
-10	3.7	22.2	0.0118	compliance
0	3.7	22.43	0.0119	compliance
10	3.7	22.16	0.0118	compliance
20	3.7	20.1	0.0107	compliance
30	3.7	21.69	0.0115	compliance
40	3.7	21.56	0.0115	compliance
50	3.7	20.22	0.0108	compliance
25	3.5	21.08	0.0112	compliance
25	4.2	20.94	0.0111	compliance

LTE Band 4:

QPSK, Channel Bandwidth:10MHz Middle Channel, $f_c = 1732.5$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Result
	V _{DC}	Hz	ppm	
-30	3.7	-18.58	-0.0107	compliance
-20	3.7	-17.44	-0.0101	compliance
-10	3.7	-19.33	-0.0112	compliance
0	3.7	-18.69	-0.0108	compliance
10	3.7	-16.19	-0.0093	compliance
20	3.7	-18.6	-0.0107	compliance
30	3.7	-16.65	-0.0096	compliance
40	3.7	-18.75	-0.0108	compliance
50	3.7	-17.82	-0.0103	compliance
25	3.5	-17.77	-0.0103	compliance
25	4.2	-18.04	-0.0104	compliance

16QAM, Channel Bandwidth:10MHz Middle Channel, $f_c = 1732.5$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Result
	V_{DC}	Hz	ppm	
-30	3.7	13.19	0.0076	compliance
-20	3.7	13.74	0.0079	compliance
-10	3.7	13.83	0.0080	compliance
0	3.7	13.24	0.0076	compliance
10	3.7	13.91	0.0080	compliance
20	3.7	13.44	0.0078	compliance
30	3.7	13.08	0.0075	compliance
40	3.7	13.52	0.0078	compliance
50	3.7	15.05	0.0087	compliance
25	3.5	12.96	0.0075	compliance
25	4.2	13.63	0.0079	compliance

LTE Band 17:

QPSK, Channel Bandwidth:10MHz Middle Channel, $f_c = 710$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Result
	V_{DC}	Hz	ppm	
-30	3.7	-12.14	-0.0171	compliance
-20	3.7	-13.51	-0.0190	compliance
-10	3.7	-12.84	-0.0181	compliance
0	3.7	-11.67	-0.0164	compliance
10	3.7	-12.21	-0.0172	compliance
20	3.7	-10.53	-0.0148	compliance
30	3.7	-10.2	-0.0144	compliance
40	3.7	-13.47	-0.0190	compliance
50	3.7	-10.36	-0.0146	compliance
25	3.5	-11.03	-0.0155	compliance
25	4.2	-12.55	-0.0177	compliance

16QAM, Channel Bandwidth:10MHz Middle Channel, $f_c = 710$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Result
	V _{DC}	Hz	ppm	
-30	3.7	-15.23	-0.0215	compliance
-20	3.7	-15.8	-0.0223	compliance
-10	3.7	-16.64	-0.0234	compliance
0	3.7	-15.84	-0.0223	compliance
10	3.7	-15.76	-0.0222	compliance
20	3.7	-16.53	-0.0233	compliance
30	3.7	-16.06	-0.0226	compliance
40	3.7	-17.48	-0.0246	compliance
50	3.7	-15.37	-0.0216	compliance
25	3.5	-15.51	-0.0218	compliance
25	4.2	-16.52	-0.0233	compliance

Note: The fundamental emissions stay within the authorized bands of operation based on the frequency deviation measured is small.

***** END OF REPORT *****