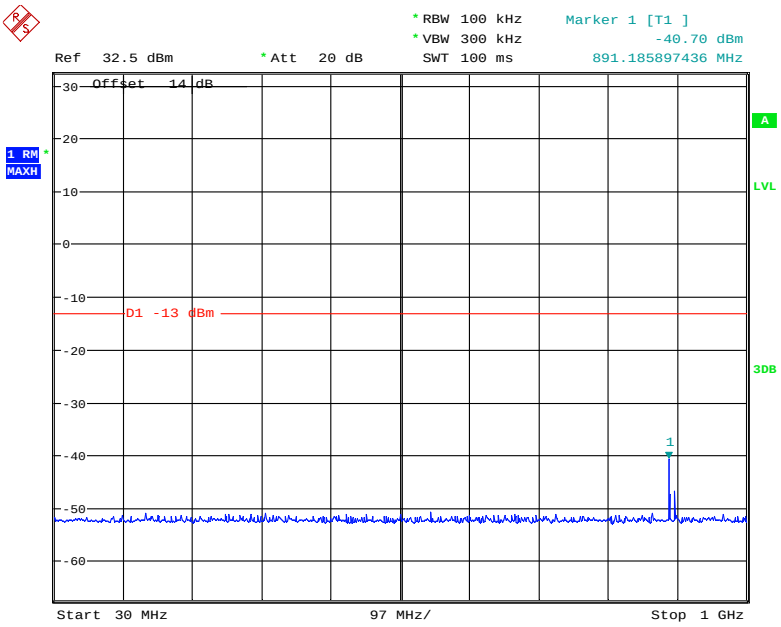
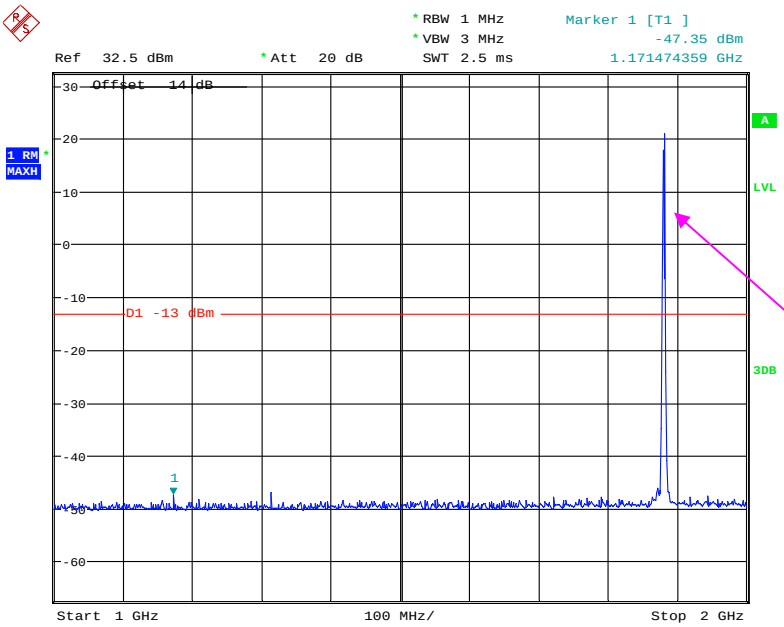
LTE Band 2:

30 MHz - 1 GHz (1.4 MHz, Middle Channel)



Date: 16.NOV.2017 09:57:27

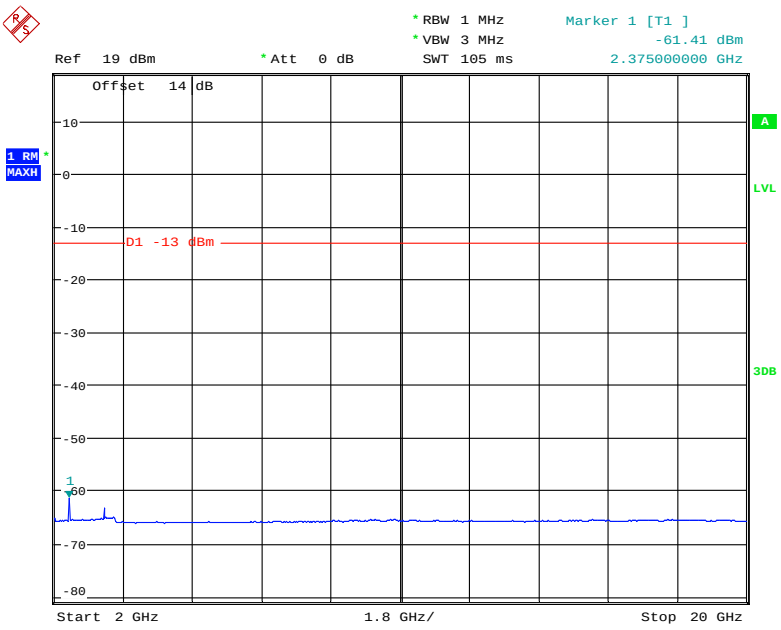
1 GHz – 2 GHz (1.4 MHz, Middle Channel)



Fundamental test

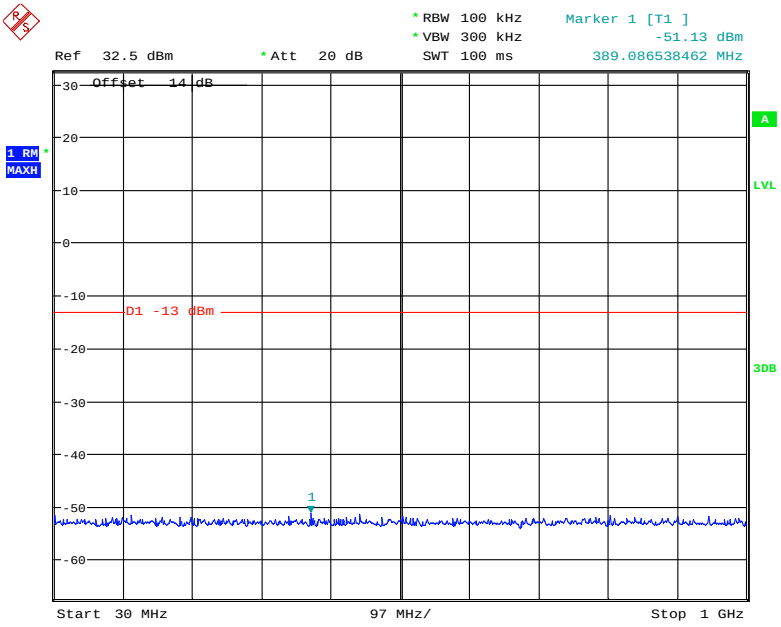
Date: 16.NOV.2017 10:01:11

2 GHz – 20 GHz (1.4 MHz, Middle Channel)



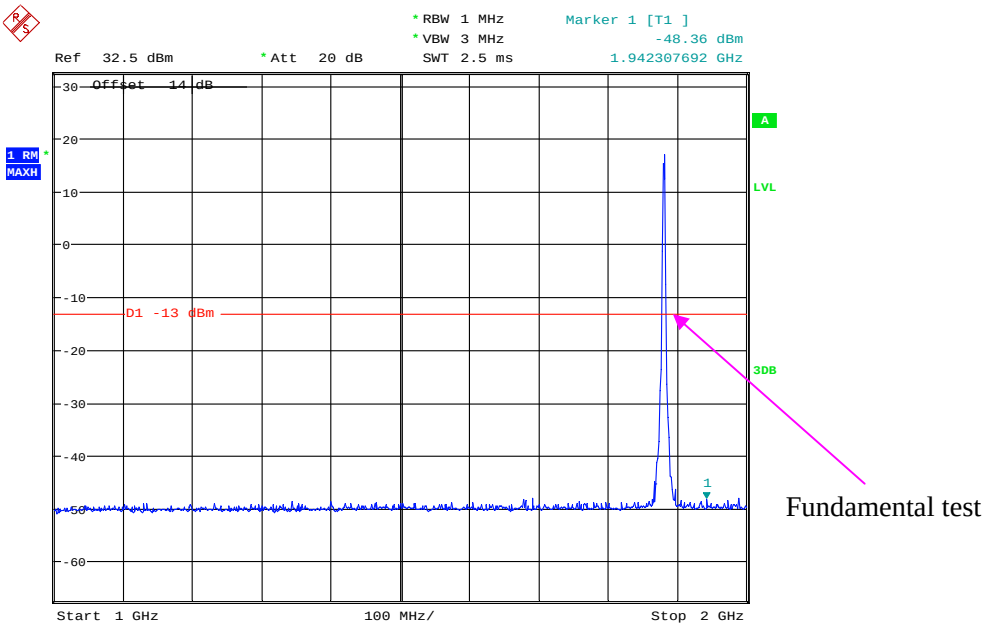
Date: 16.NOV.2017 10:04:04

30 MHz - 1 GHz (3.0 MHz, Middle Channel)



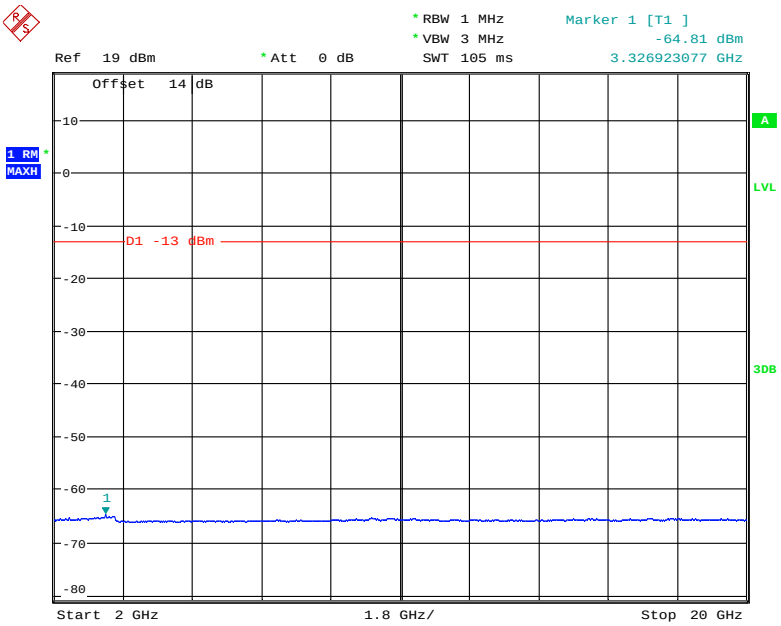
Date: 16.NOV.2017 09:58:12

1 GHz – 2 GHz (3.0 MHz, Middle Channel)



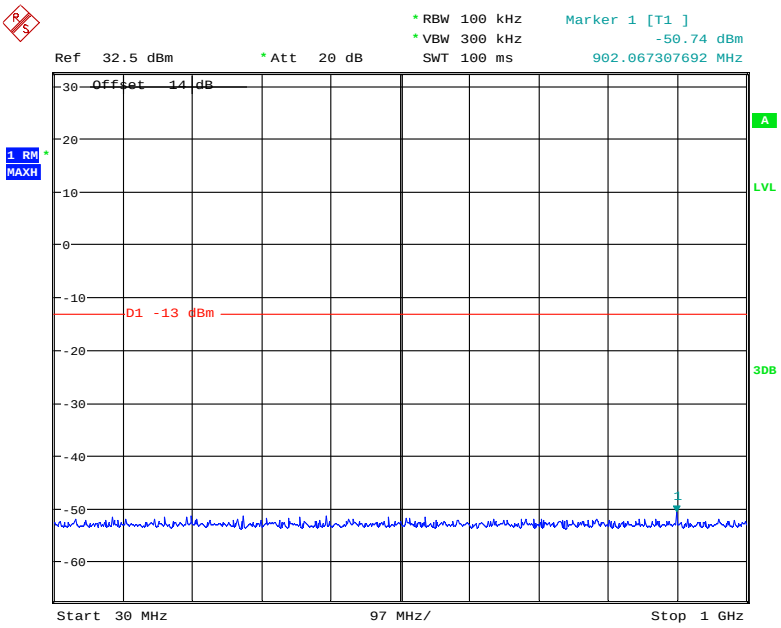
Date: 16.NOV.2017 10:01:41

2 GHz – 20 GHz (3.0 MHz, Middle Channel)



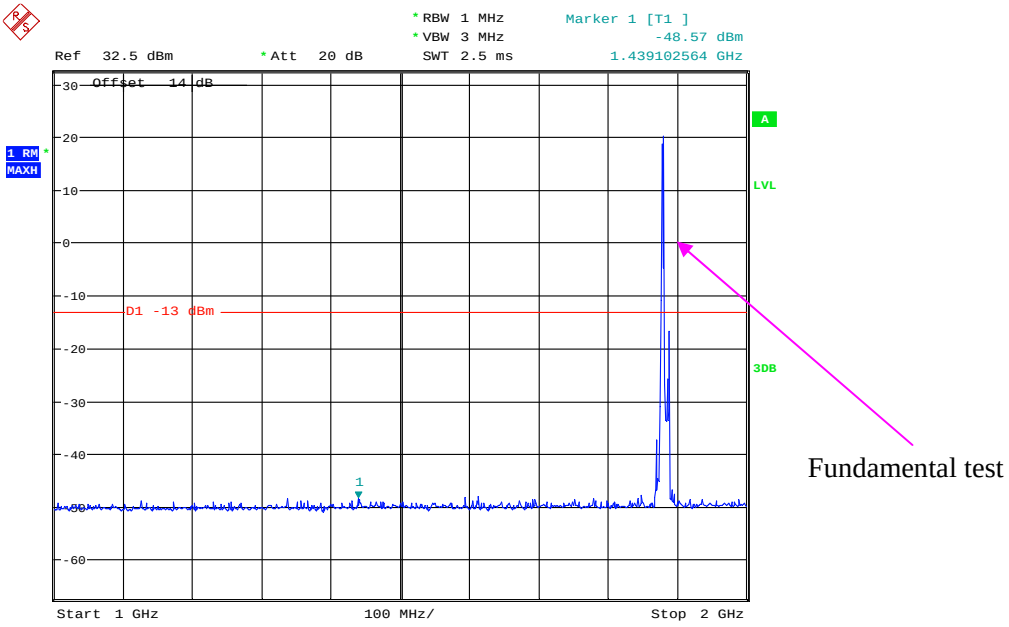
Date: 16.NOV.2017 10:04:26

30 MHz - 1 GHz (5.0 MHz, Middle Channel)



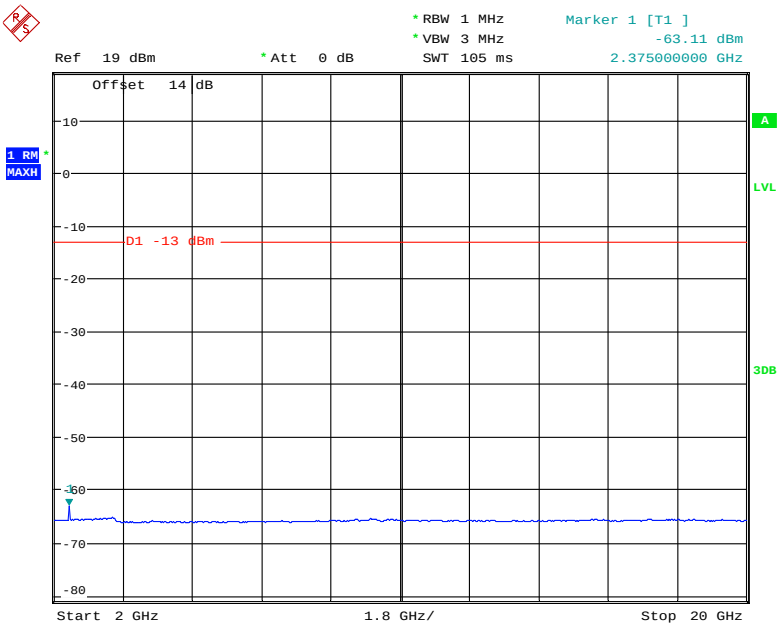
Date: 16.NOV.2017 09:58:32

1 GHz – 2 GHz (5.0 MHz, Middle Channel)



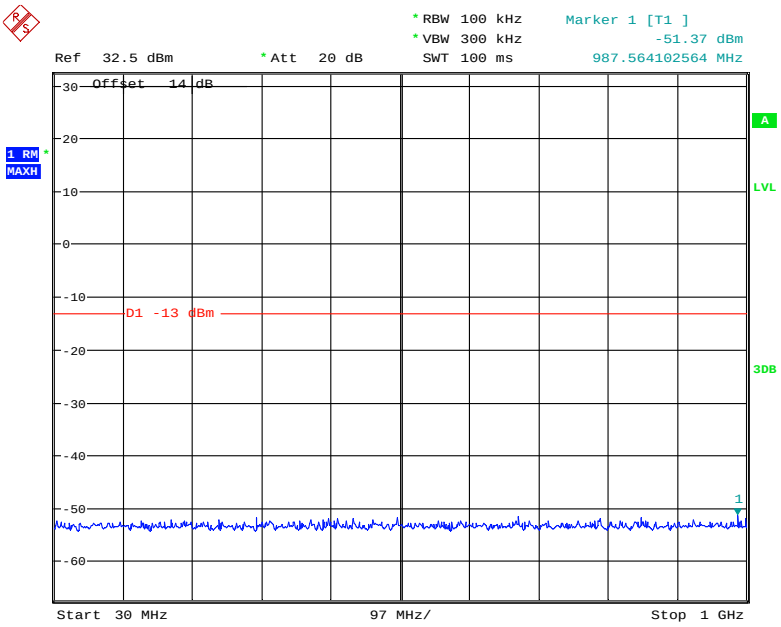
Date: 16.NOV.2017 10:02:02

2 GHz – 20 GHz (5.0 MHz, Middle Channel)



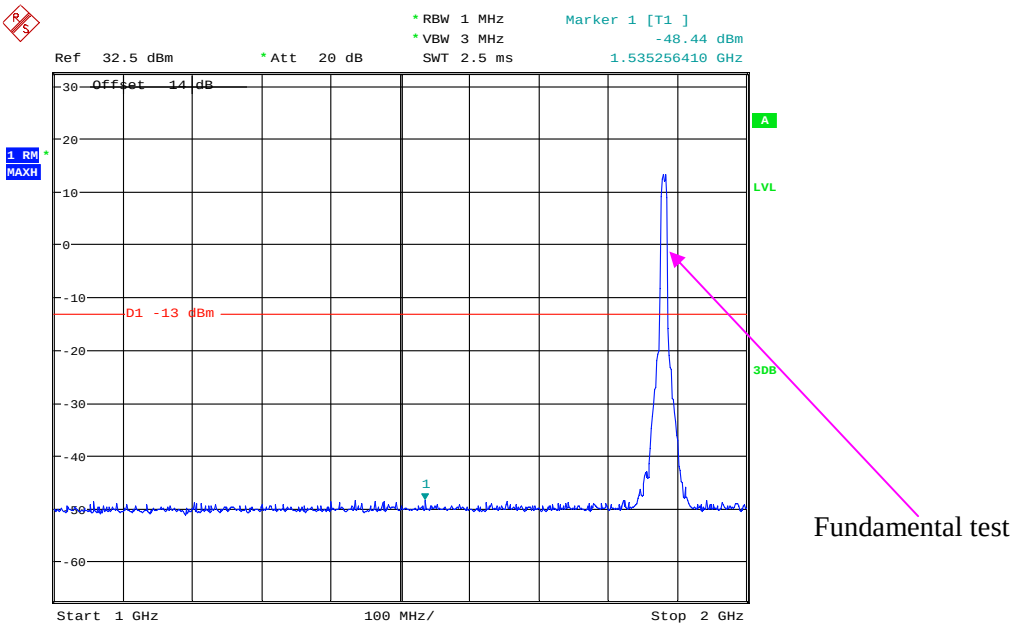
Date: 16.NOV.2017 10:04:40

30 MHz - 1 GHz (10.0 MHz, Middle Channel)



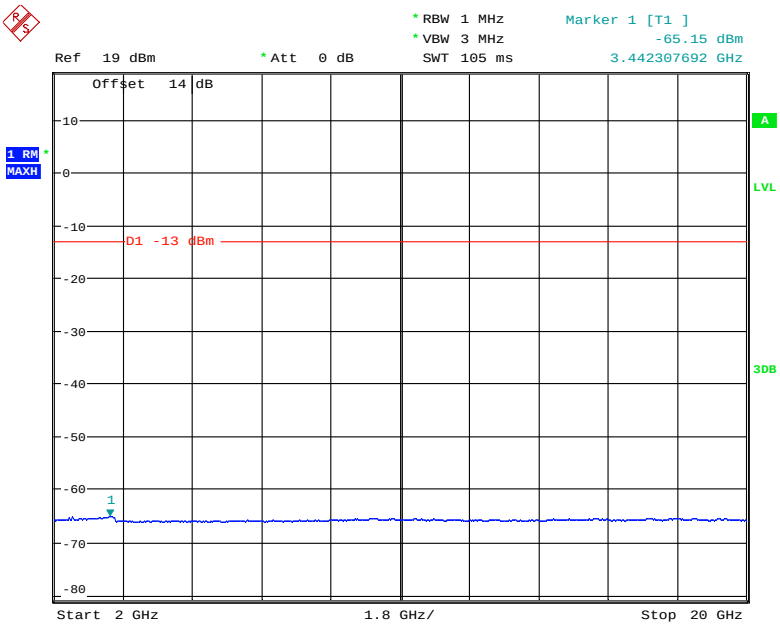
Date: 16.NOV.2017 09:58:47

1 GHz – 2 GHz (10.0 MHz, Middle Channel)



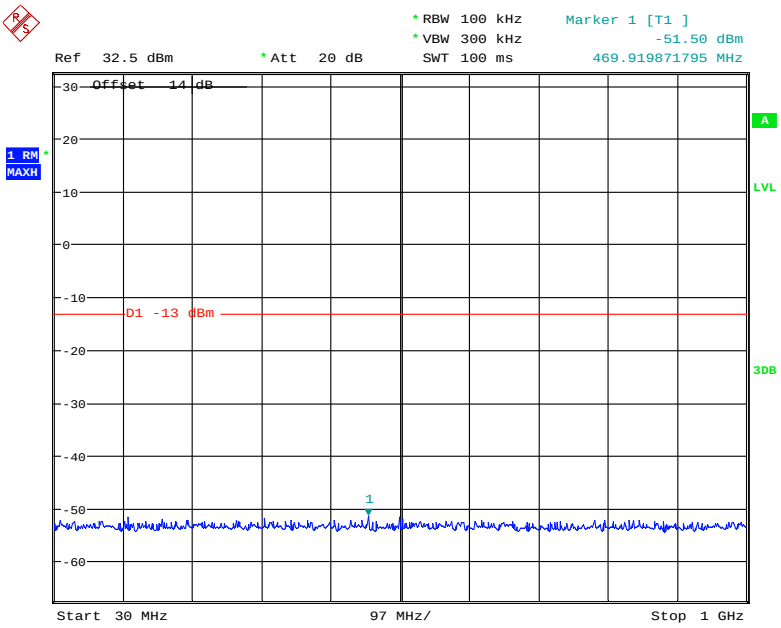
Date: 16.NOV.2017 10:02:20

2 GHz – 20 GHz (10.0 MHz, Middle Channel)



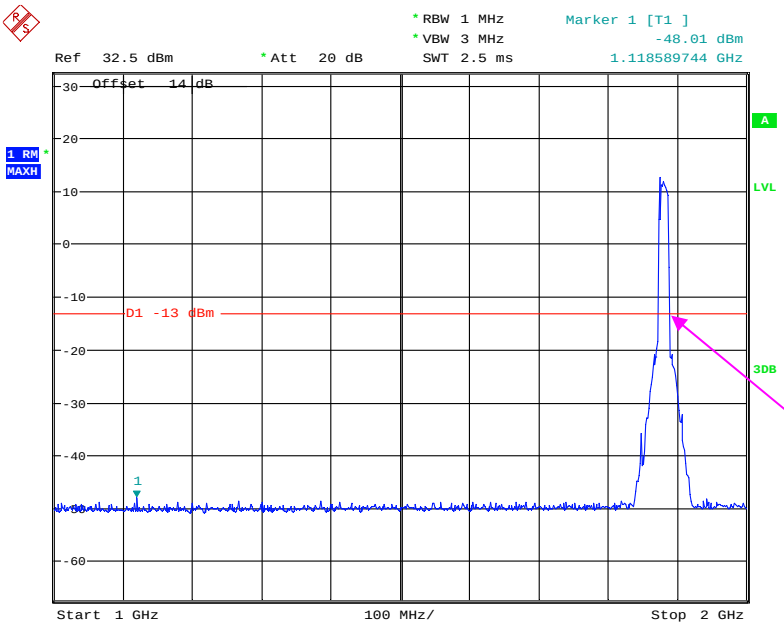
Date: 16.NOV.2017 10:04:54

30 MHz - 1 GHz (15.0 MHz, Middle Channel)



Date: 16.NOV.2017 09:59:00

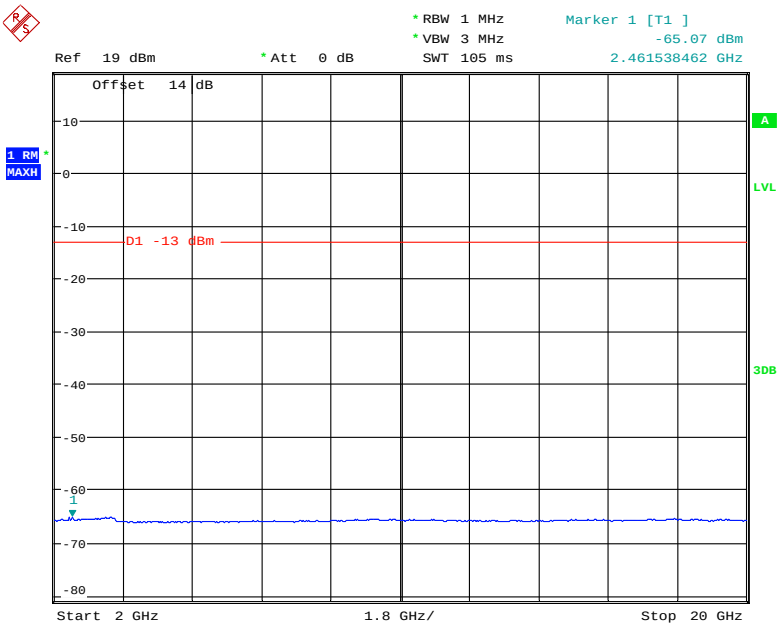
1 GHz – 2 GHz (15.0 MHz, Middle Channel)



Fundamental test

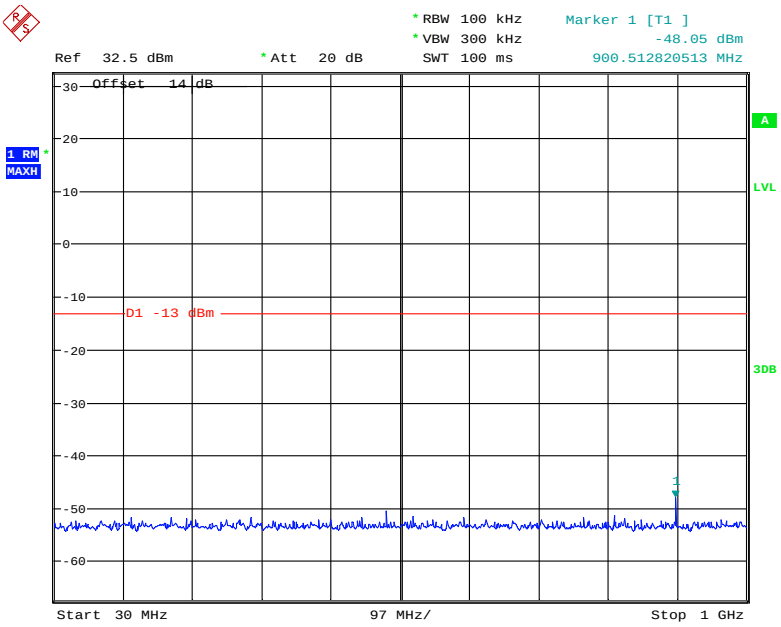
Date: 16.NOV.2017 10:02:42

2 GHz – 20 GHz (15.0 MHz, Middle Channel)



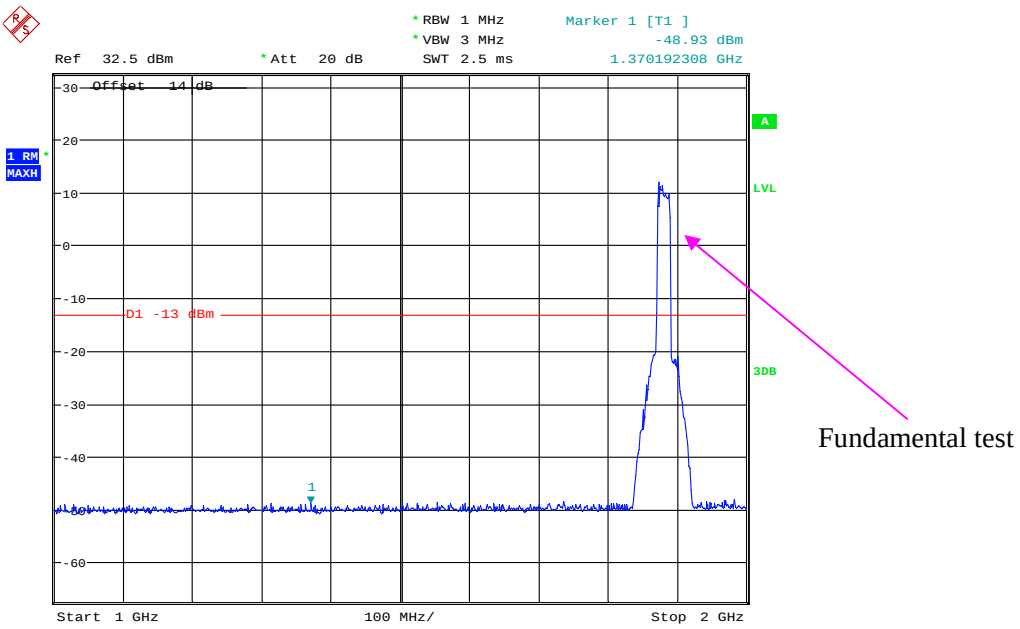
Date: 16.NOV.2017 10:05:11

30 MHz - 1 GHz (20.0 MHz, Middle Channel)



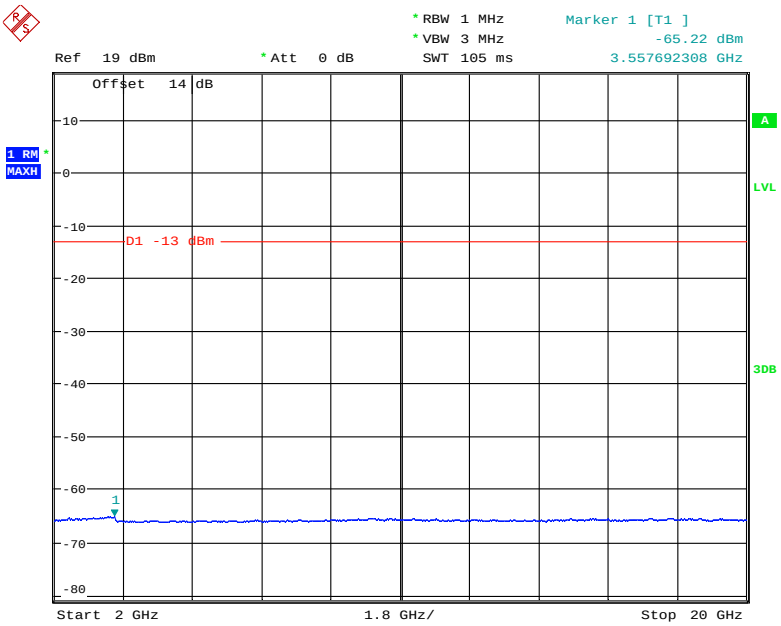
Date: 16.NOV.2017 09:59:16

1 GHz – 2 GHz (20.0 MHz, Middle Channel)



Date: 16.NOV.2017 10:03:06

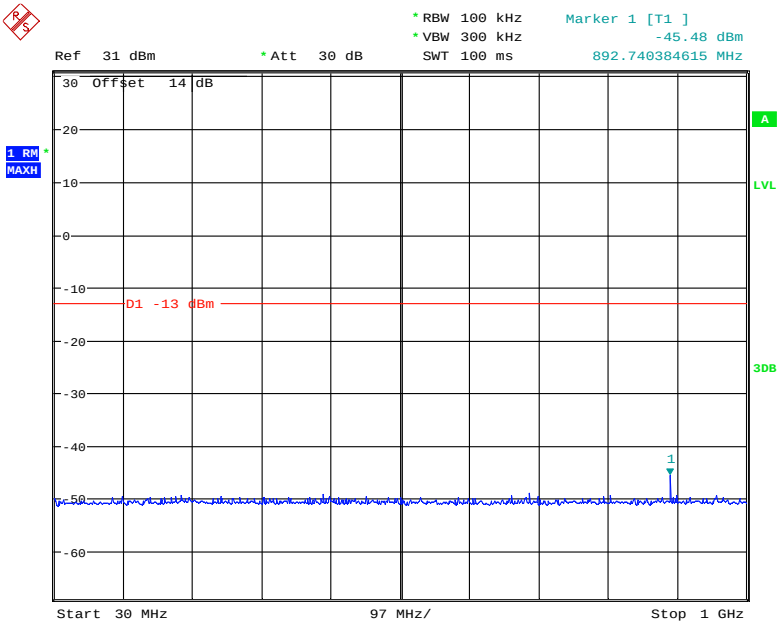
2 GHz –20 GHz (20.0 MHz, Middle Channel)



Date: 16.NOV.2017 10:05:24

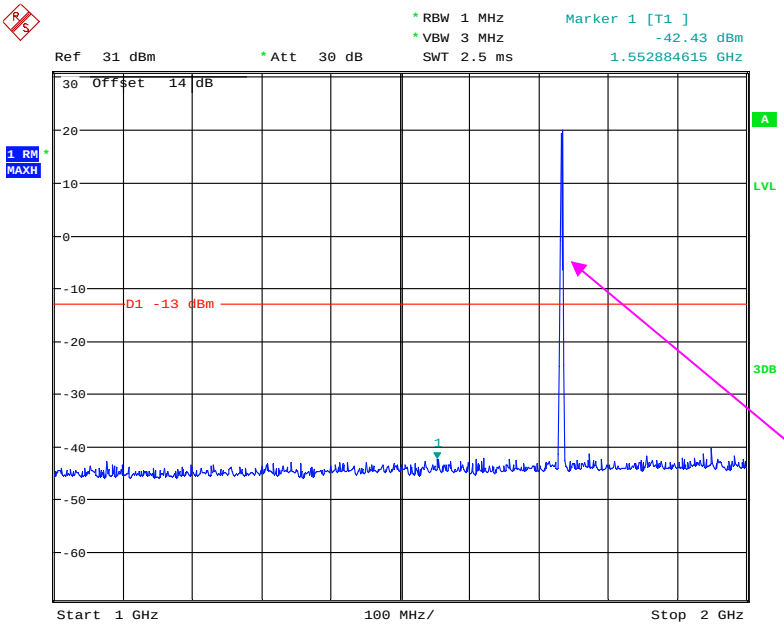
LTE Band 4:

30 MHz - 1 GHz (1.4 MHz, Middle Channel)



Date: 16.NOV.2017 10:11:51

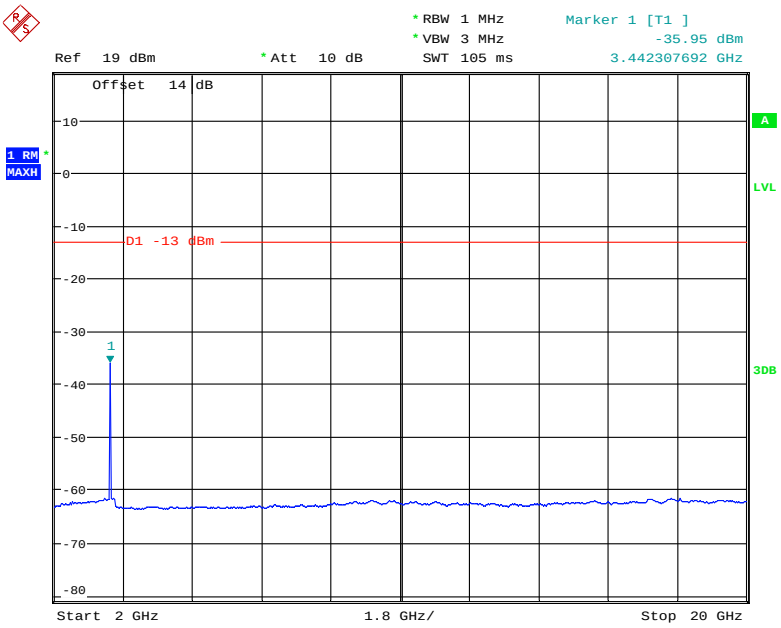
1 GHz – 2 GHz (1.4 MHz, Middle Channel)



Fundamental test

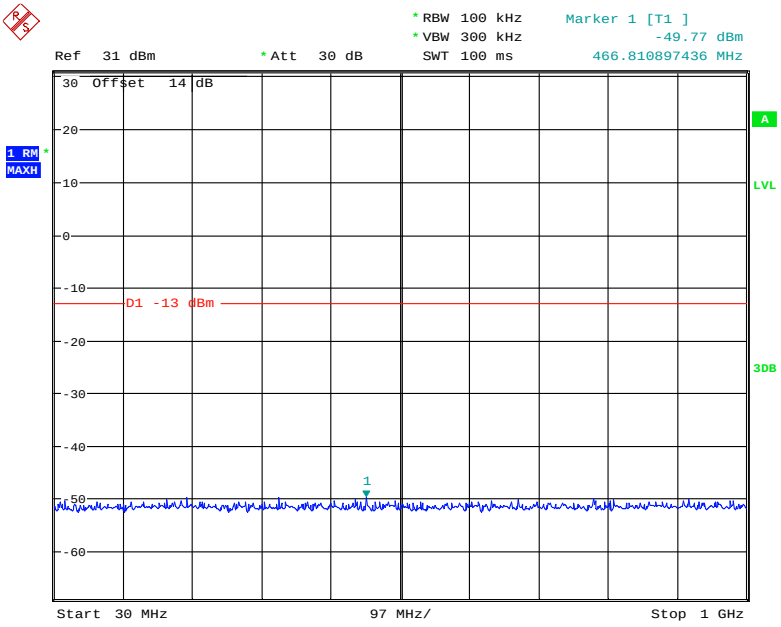
Date: 16.NOV.2017 10:08:40

2 GHz – 20 GHz (1.4 MHz, Middle Channel)



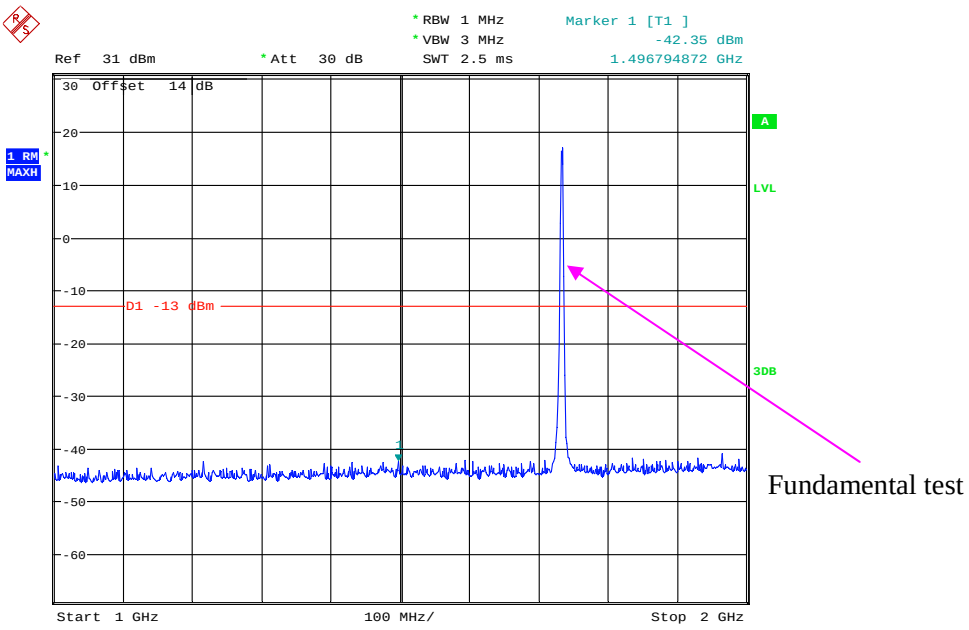
Date: 16.NOV.2017 10:06:52

30 MHz - 1 GHz (3.0 MHz, Middle Channel)



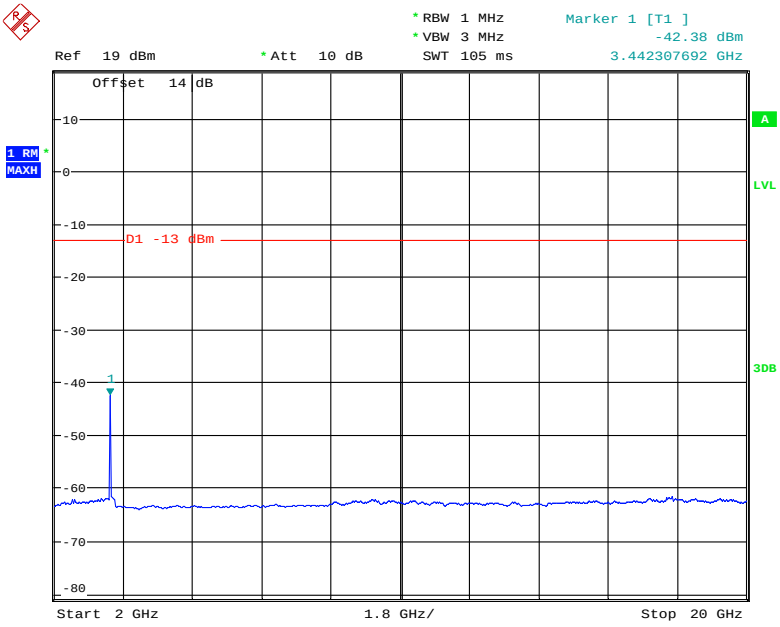
Date: 16.NOV.2017 10:12:17

1 GHz – 2 GHz (3.0 MHz, Middle Channel)



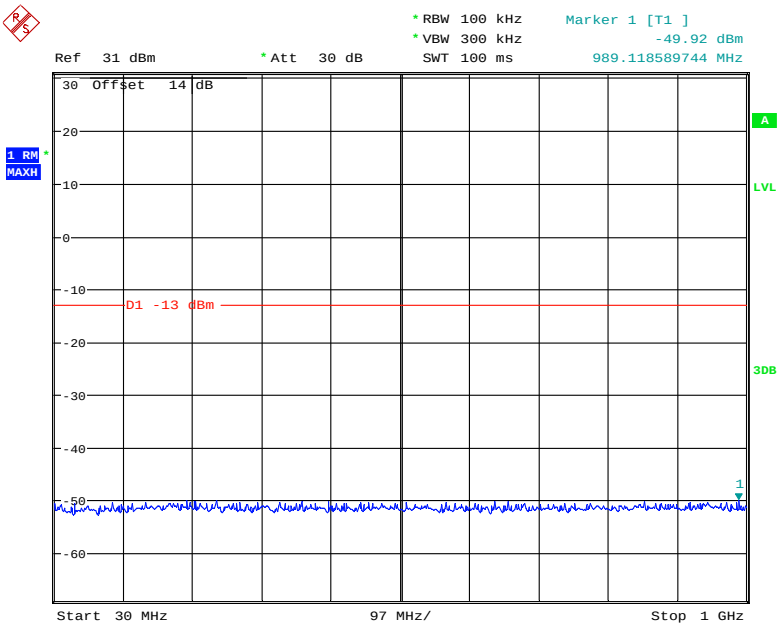
Date: 16.NOV.2017 10:09:04

2 GHz – 20 GHz (3.0 MHz, Middle Channel)



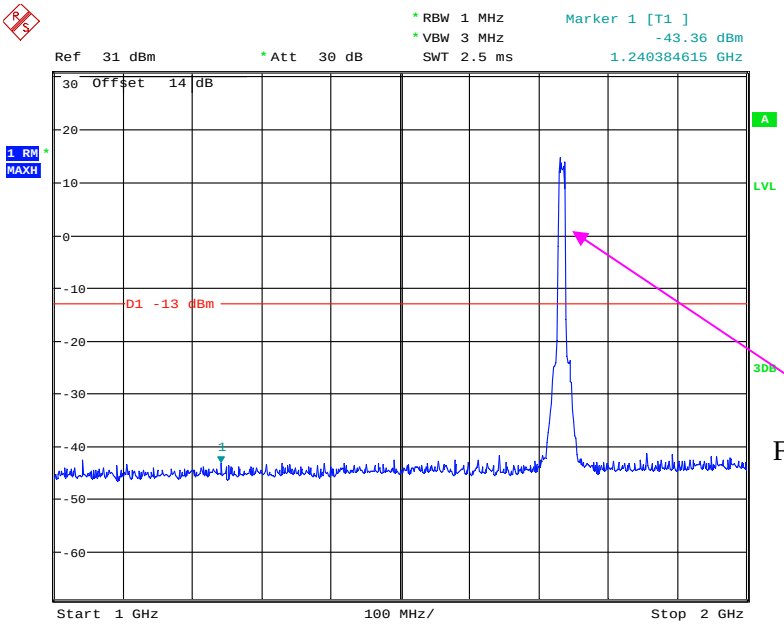
Date: 16.NOV.2017 10:07:12

30 MHz - 1 GHz (5.0 MHz, Middle Channel)



Date: 16.NOV.2017 10:12:31

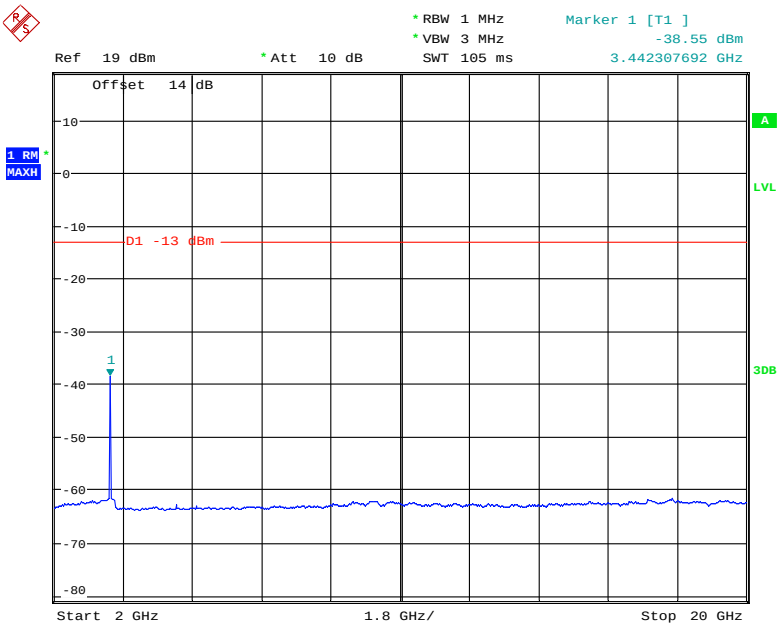
1 GHz – 2 GHz (5.0 MHz, Middle Channel)



Fundamental test

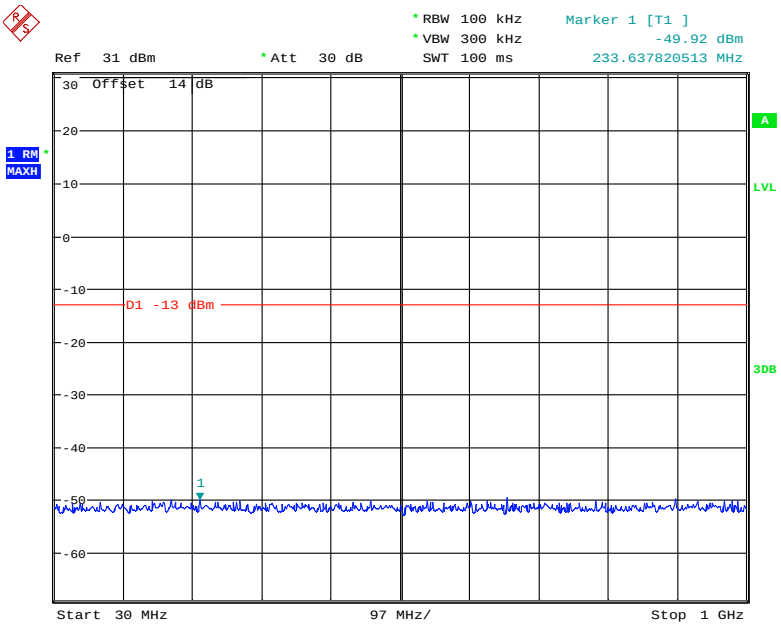
Date: 16.NOV.2017 10:09:42

2 GHz – 20 GHz (5.0 MHz, Middle Channel)



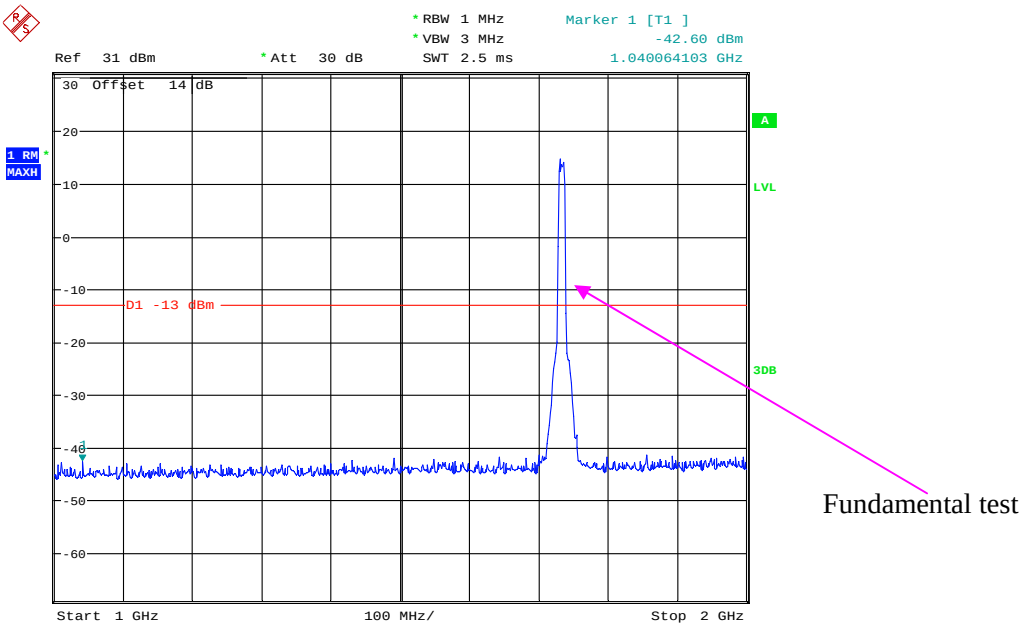
Date: 16.NOV.2017 10:07:29

30 MHz - 1 GHz (10.0 MHz, Middle Channel)



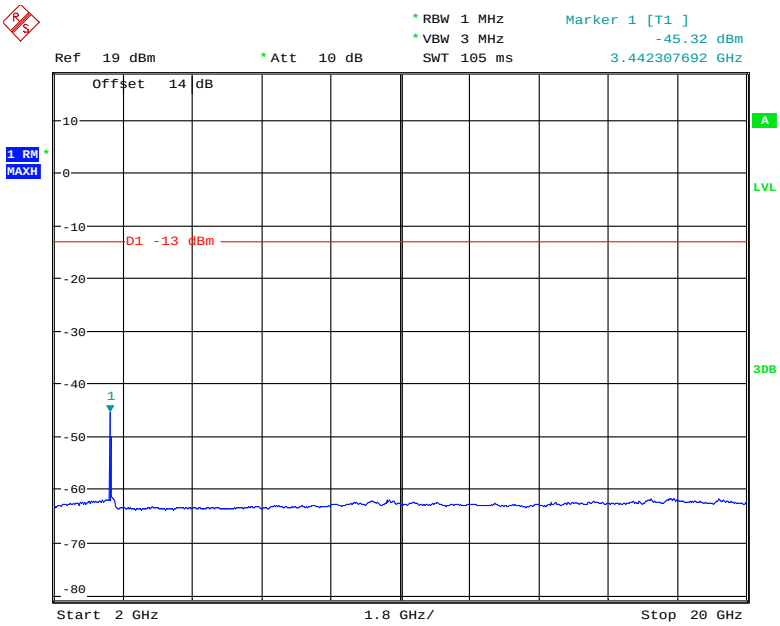
Date: 16.NOV.2017 10:12:43

1 GHz – 2 GHz (10.0 MHz, Middle Channel)



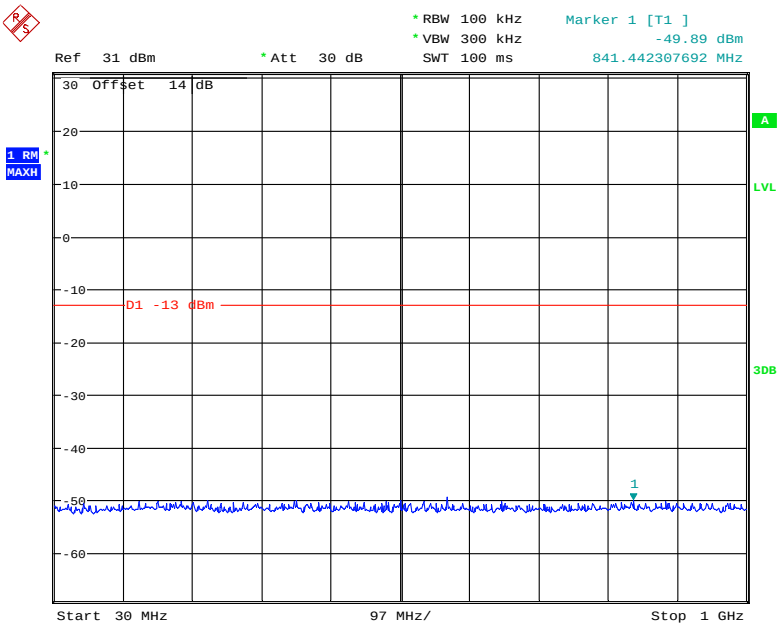
Date: 16.NOV.2017 10:09:53

2 GHz – 20 GHz (10.0 MHz, Middle Channel)



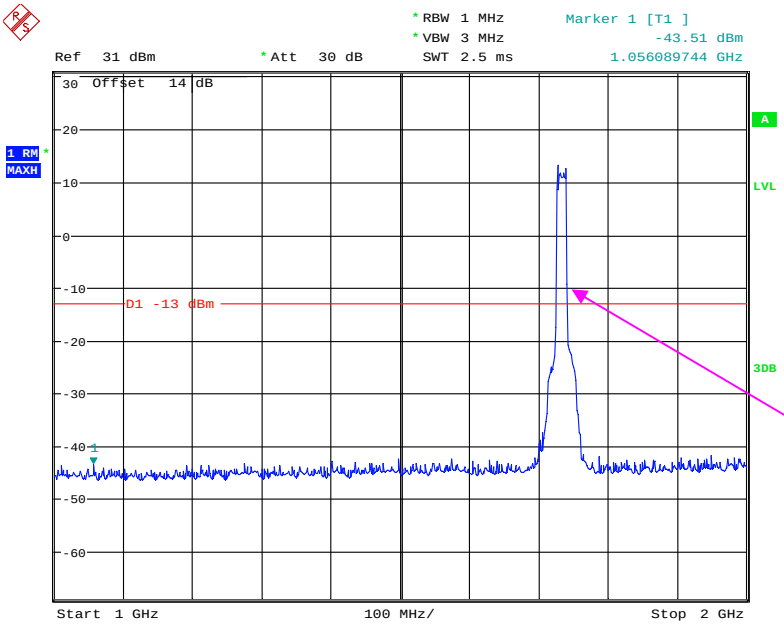
Date: 16.NOV.2017 10:07:46

30 MHz - 1 GHz (15.0 MHz, Middle Channel)



Date: 16.NOV.2017 10:12:56

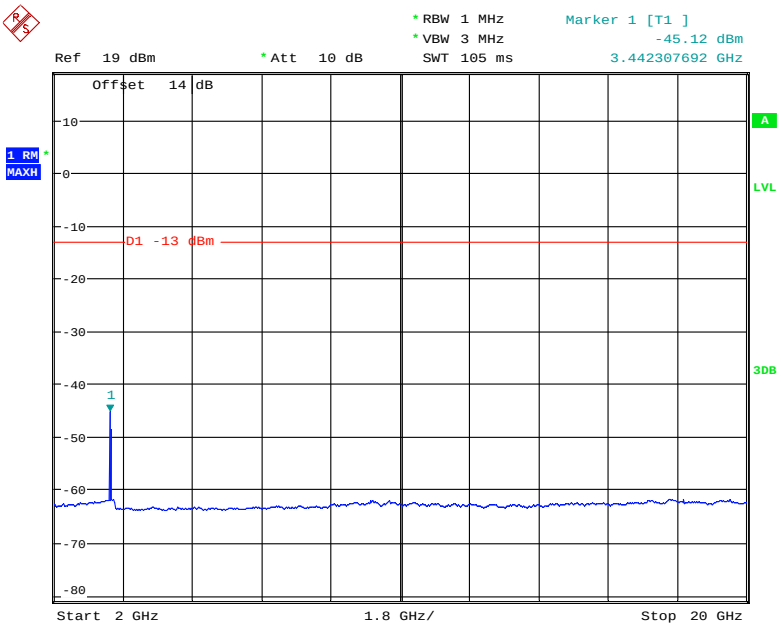
1 GHz – 2 GHz (15.0 MHz, Middle Channel)



Fundamental test

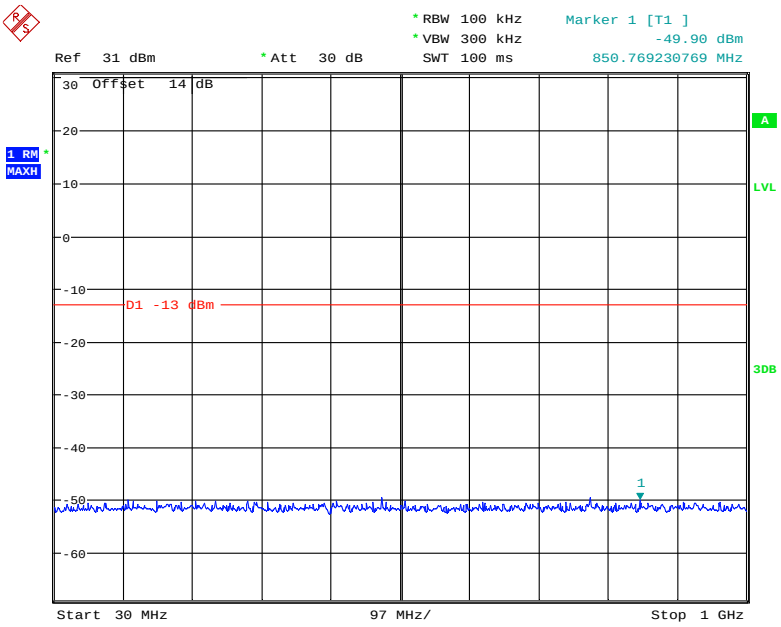
Date: 16.NOV.2017 10:10:09

2 GHz – 20 GHz (15.0 MHz, Middle Channel)



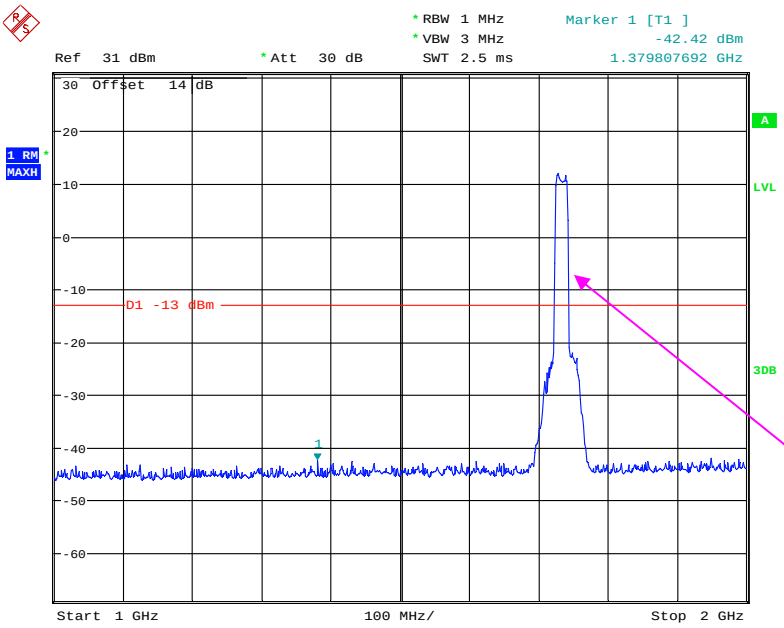
Date: 16.NOV.2017 10:07:59

30 MHz - 1 GHz (20.0 MHz, Middle Channel)



Date: 16.NOV.2017 10:13:09

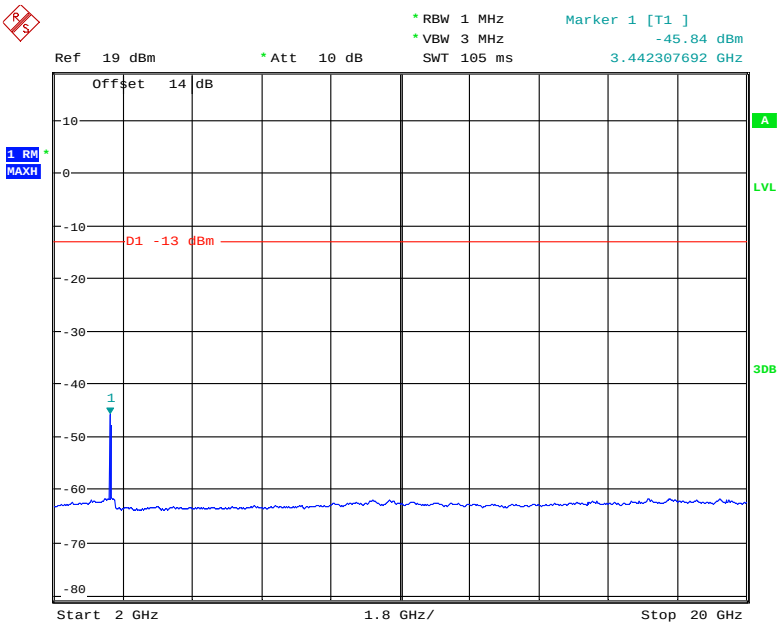
1 GHz – 2 GHz (20.0 MHz, Middle Channel)



Fundamental test

Date: 16.NOV.2017 10:10:27

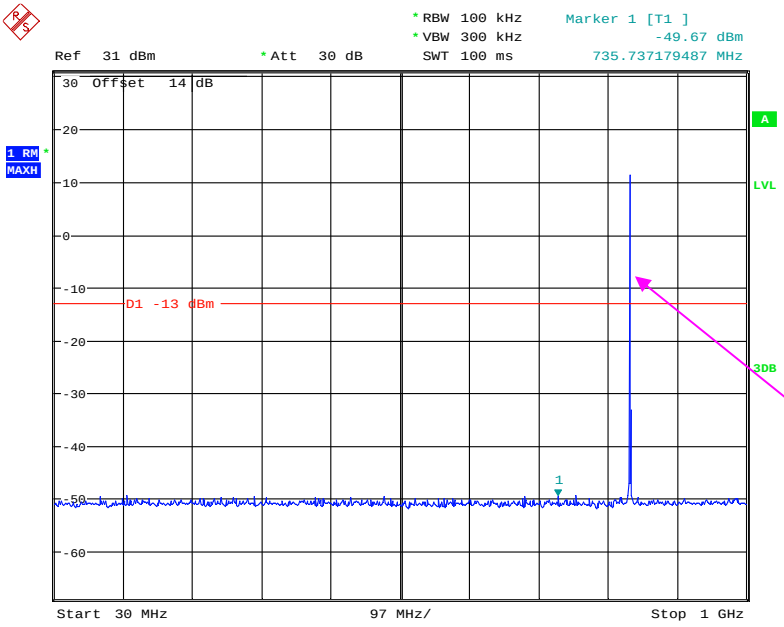
2 GHz – 20 GHz (20.0 MHz, Middle Channel)



Date: 16.NOV.2017 10:08:10

LTE Band 5:

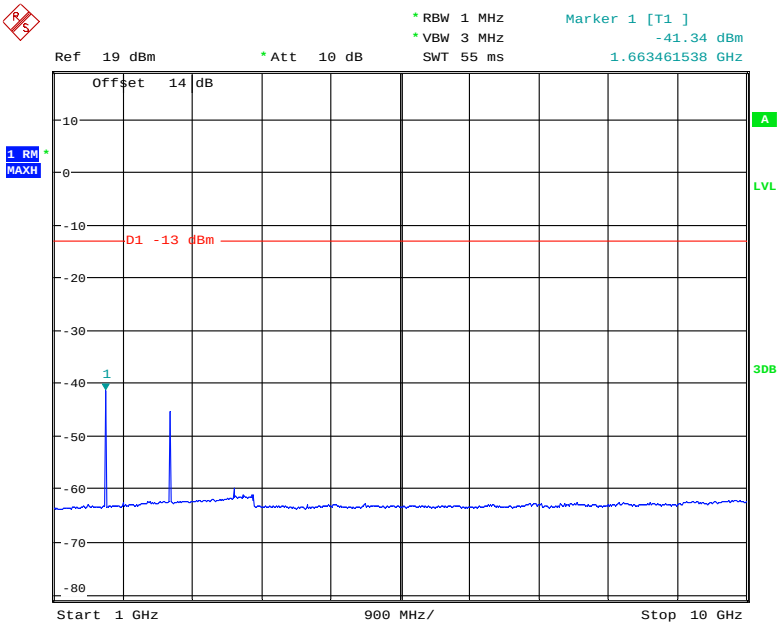
30 MHz - 1 GHz (1.4 MHz, Middle Channel)



Fundamental test

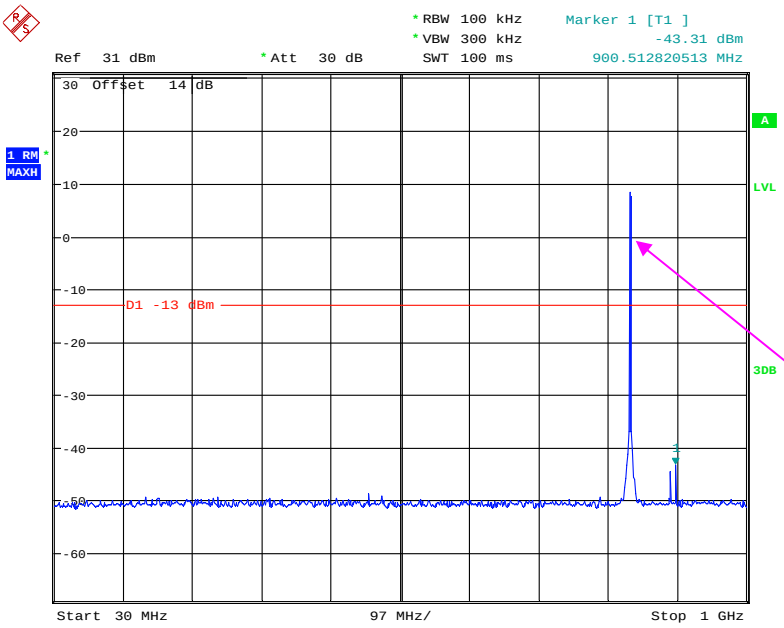
Date: 16.NOV.2017 10:16:06

1 GHz – 10 GHz (1.4 MHz, Middle Channel)



Date: 16.NOV.2017 10:18:59

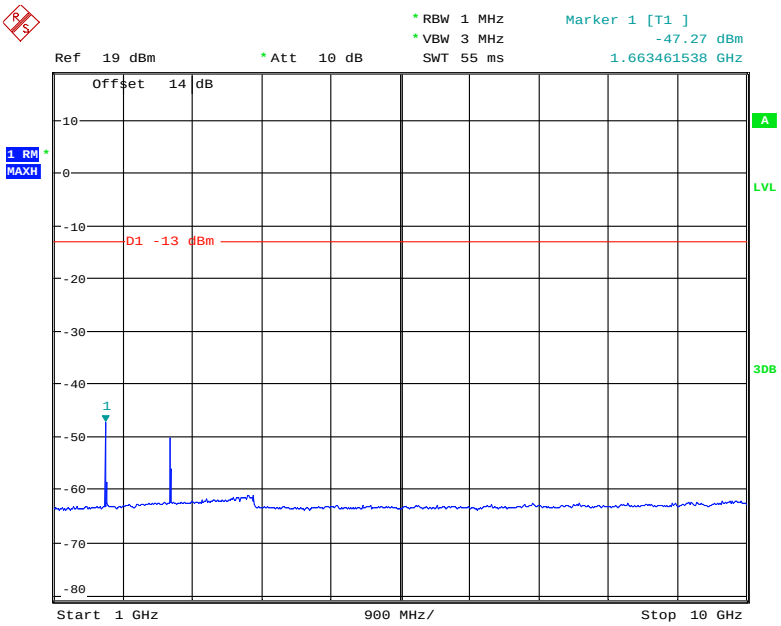
30 MHz - 1 GHz (3.0 MHz, Middle Channel)



Fundamental test

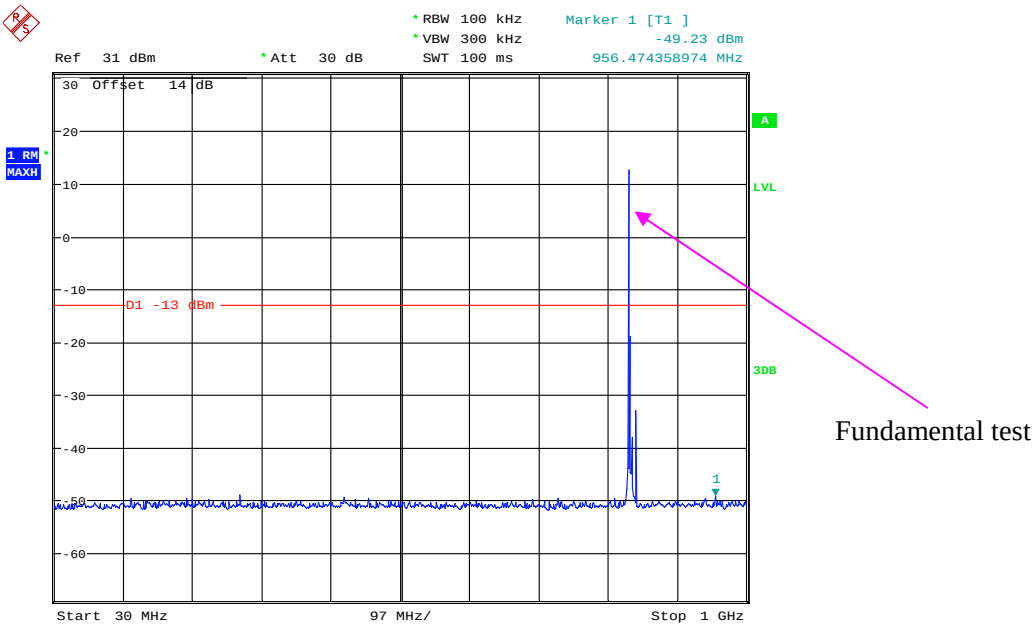
Date: 16.NOV.2017 10:17:09

1 GHz – 10 GHz (3.0 MHz, Middle Channel)



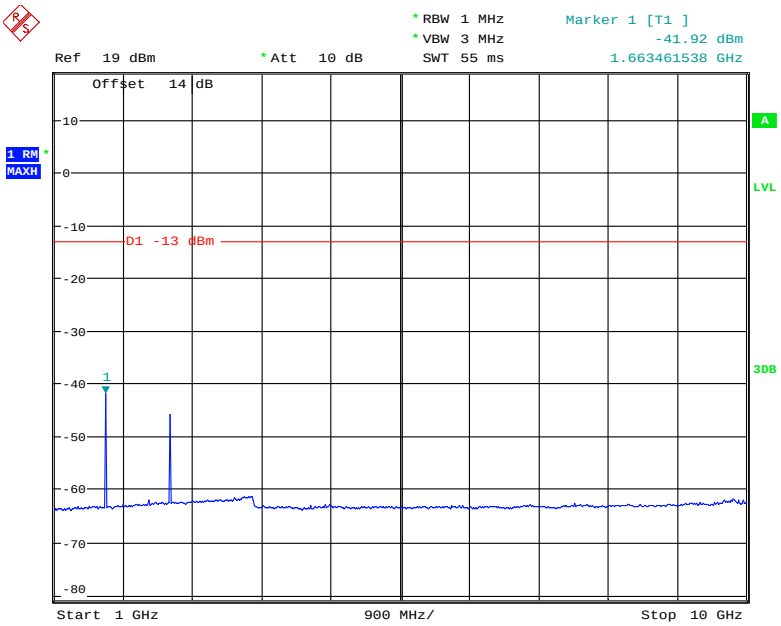
Date: 16.NOV.2017 10:19:22

30 MHz - 1 GHz (5.0 MHz, Middle Channel)



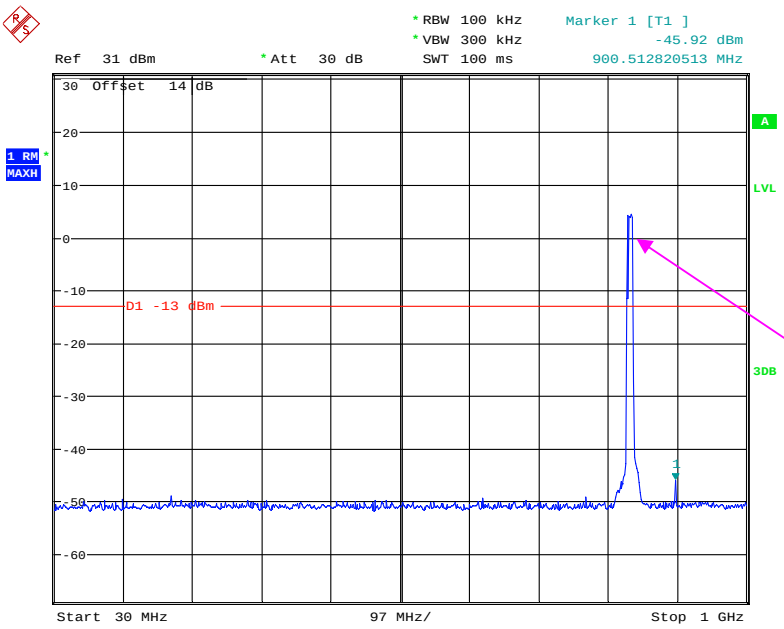
Date: 16.NOV.2017 10:17:35

1 GHz – 10 GHz (5.0 MHz, Middle Channel)



Date: 16.NOV.2017 10:19:36

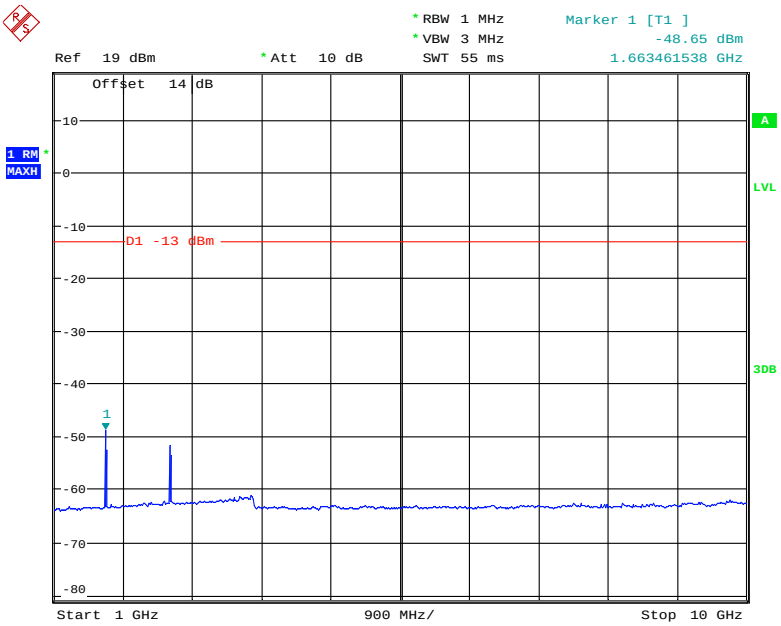
30 MHz - 1 GHz (10.0 MHz, Middle Channel)



Fundamental test

Date: 16.NOV.2017 10:18:09

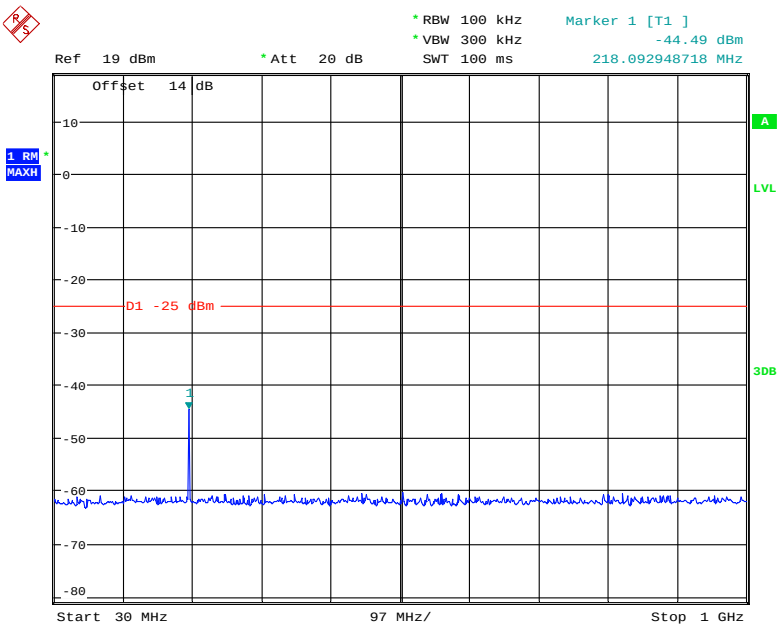
1 GHz – 10 GHz (10.0 MHz, Middle Channel)



Date: 16.NOV.2017 10:19:47

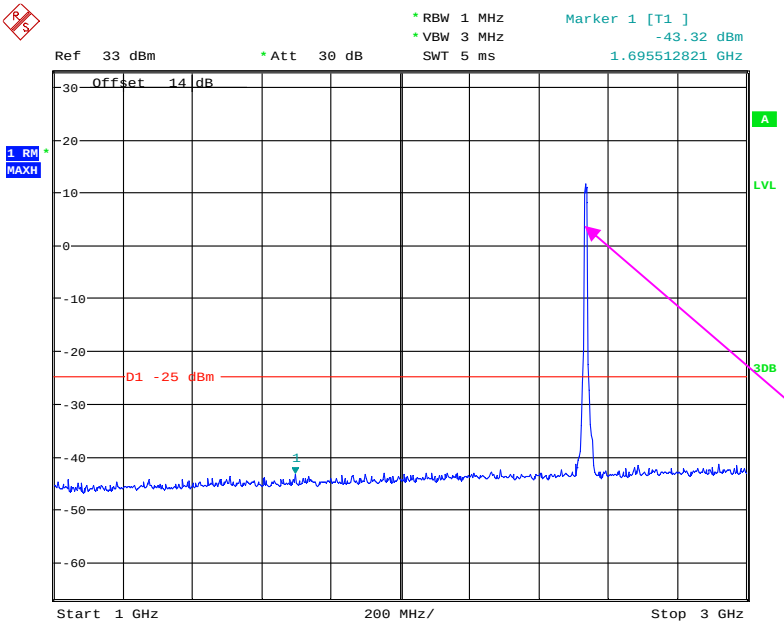
LTE Band 7:

30 MHz – 1 GHz (5.0 MHz, Middle Channel)



Date: 16.NOV.2017 10:26:57

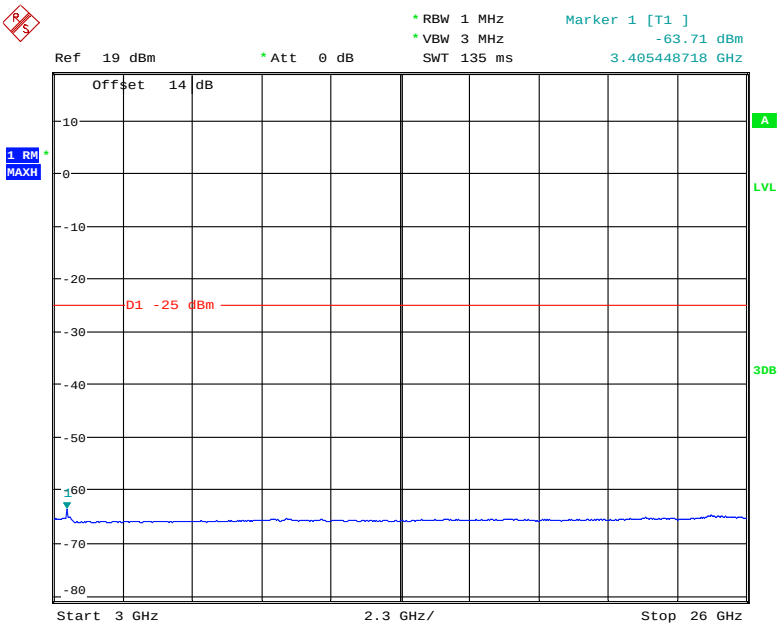
1 GHz – 3.0 GHz (5.0 MHz, Middle Channel)



Fundamental test

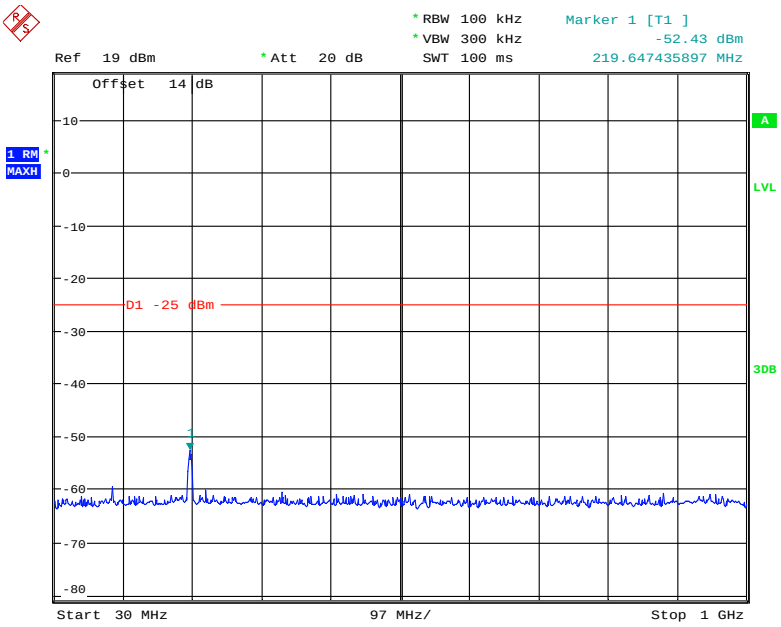
Date: 16.NOV.2017 10:22:49

3.0 GHz – 26 GHz (5.0 MHz, Middle Channel)



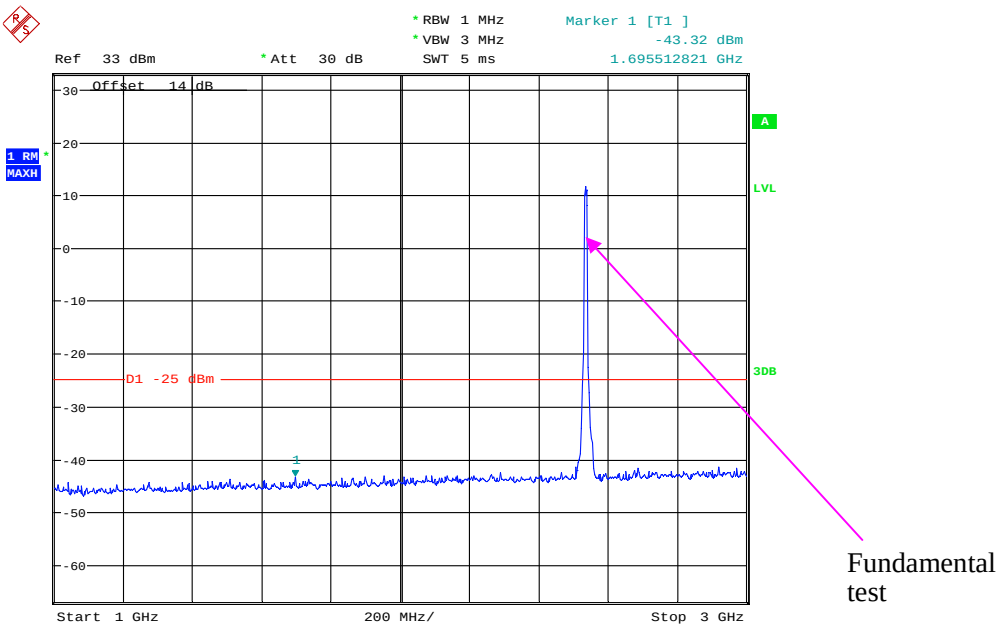
Date: 16.NOV.2017 10:24:00

30 MHz – 1.0 GHz (10.0 MHz, Middle Channel)



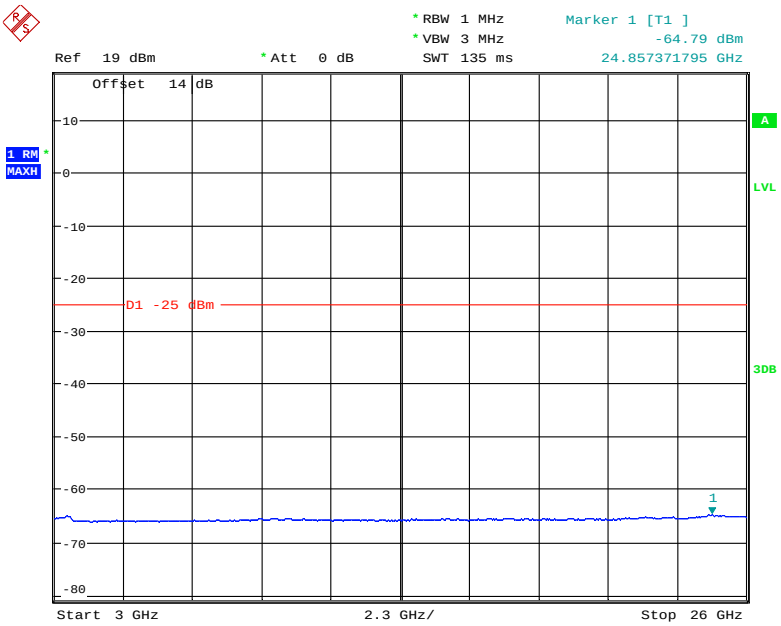
Date: 16.NOV.2017 10:27:25

1 GHz – 3 GHz (10.0 MHz, Middle Channel)



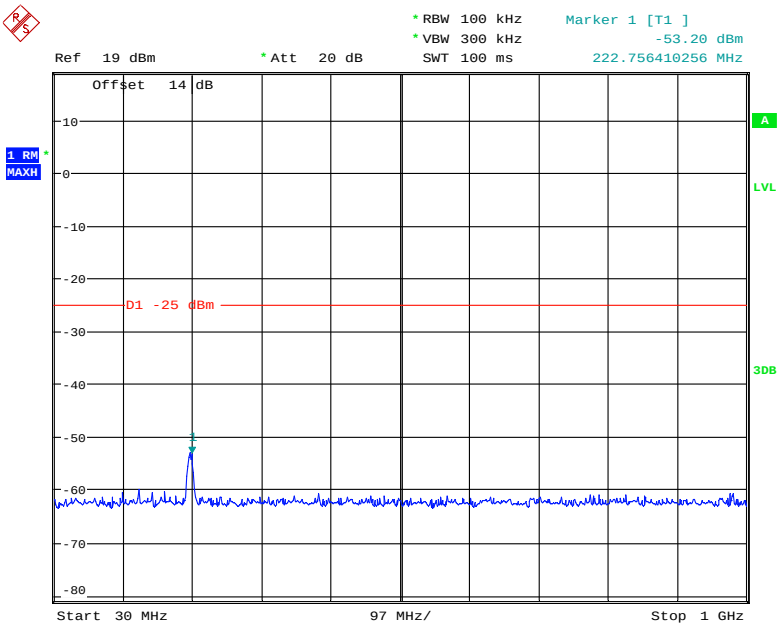
Date: 16.NOV.2017 10:22:49

3 GHz – 26 GHz (10.0 MHz, Middle Channel)



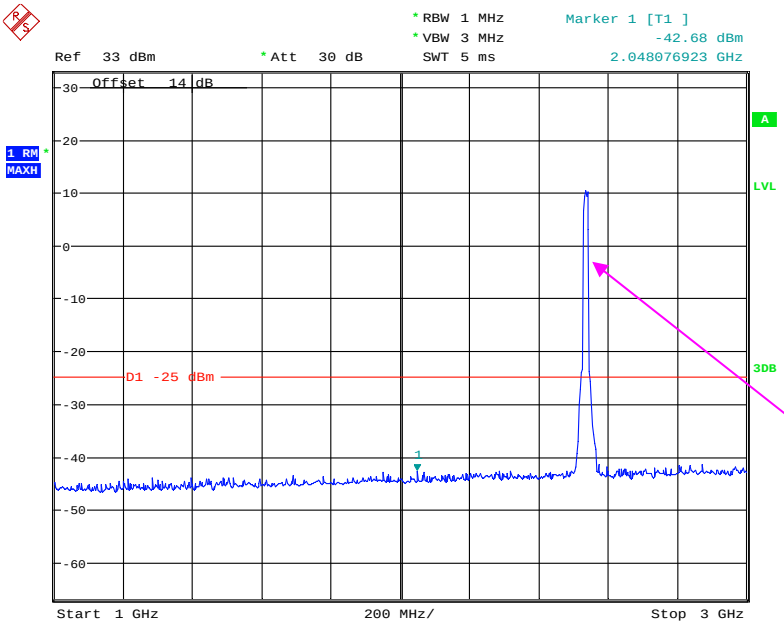
Date: 16.NOV.2017 10:24:24

30 MHz – 1 GHz (15.0 MHz, Middle Channel)



Date: 16.NOV.2017 10:27:39

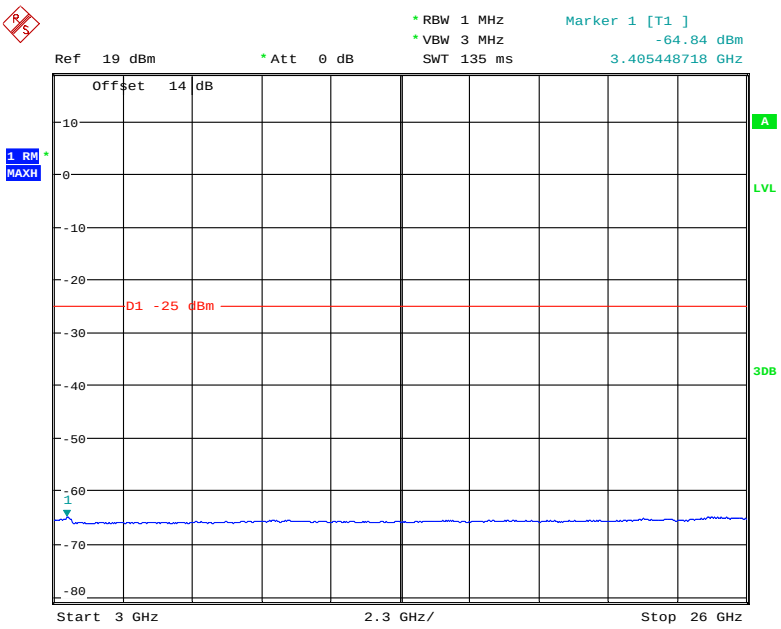
1 GHz – 3 GHz (15.0 MHz, Middle Channel)



Fundamental test

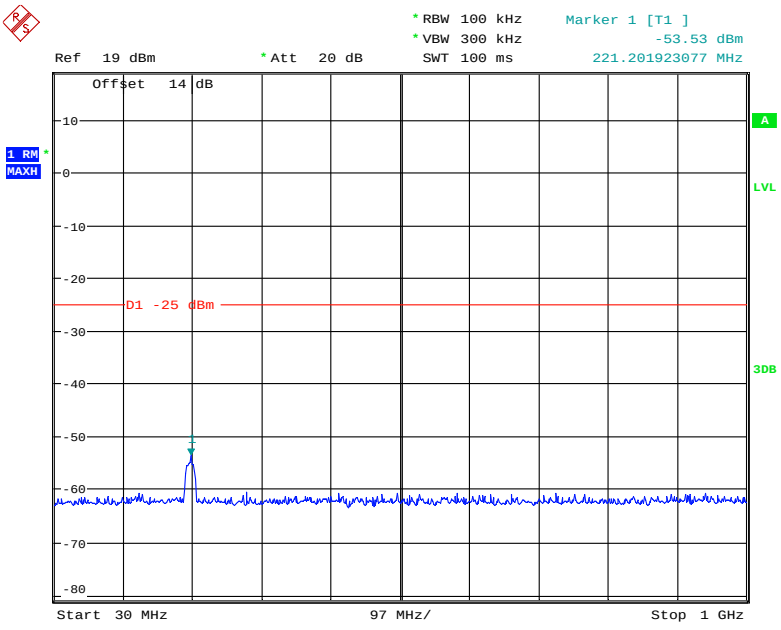
Date: 16.NOV.2017 10:23:14

3 GHz – 26 GHz (15.0 MHz, Middle Channel)



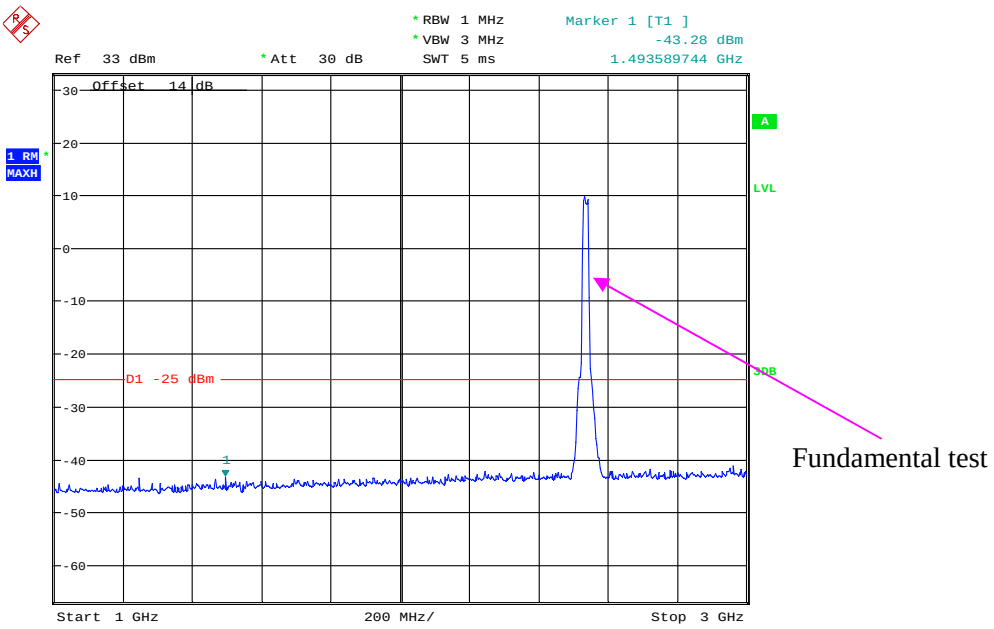
Date: 16.NOV.2017 10:24:39

30 MHz – 1 GHz (20.0 MHz, Middle Channel)



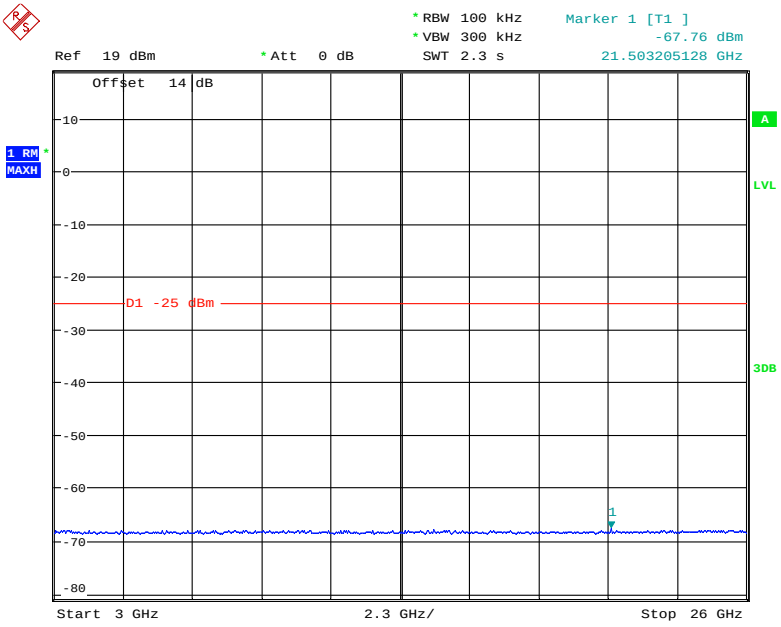
Date: 16.NOV.2017 10:27:55

1 GHz – 3 GHz (20.0 MHz, Middle Channel)



Date: 16.NOV.2017 10:23:33

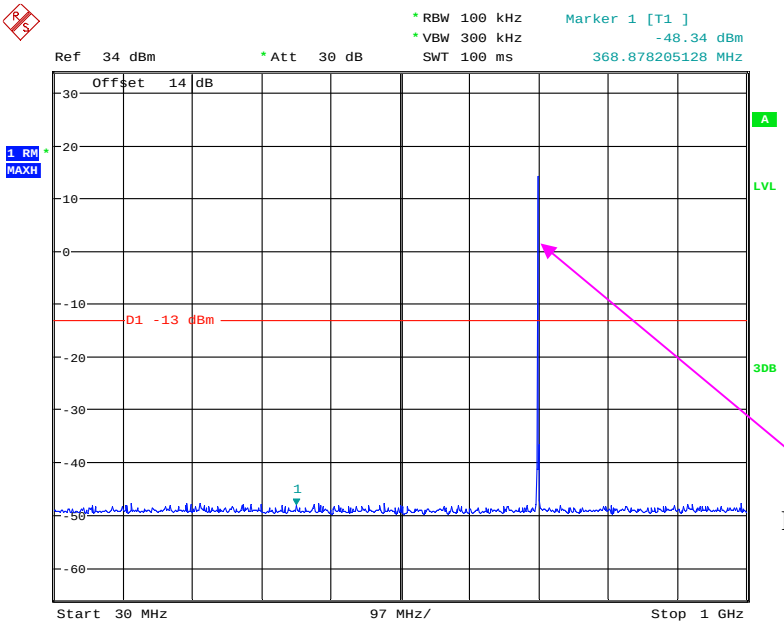
3 GHz – 26 GHz (20.0 MHz, Middle Channel)



Date: 16.NOV.2017 10:26:16

LTE Band 12:

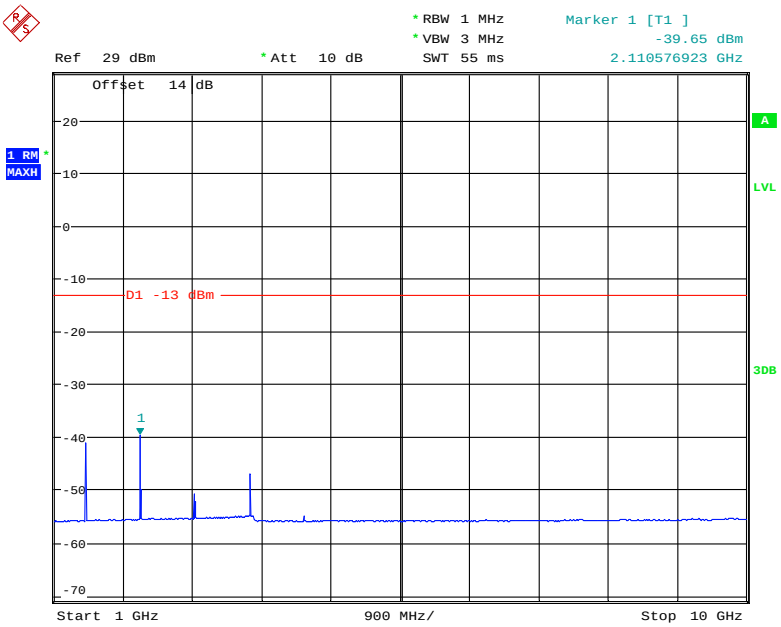
30 MHz - 1 GHz (1.4 MHz, Middle Channel)



Fundamental test

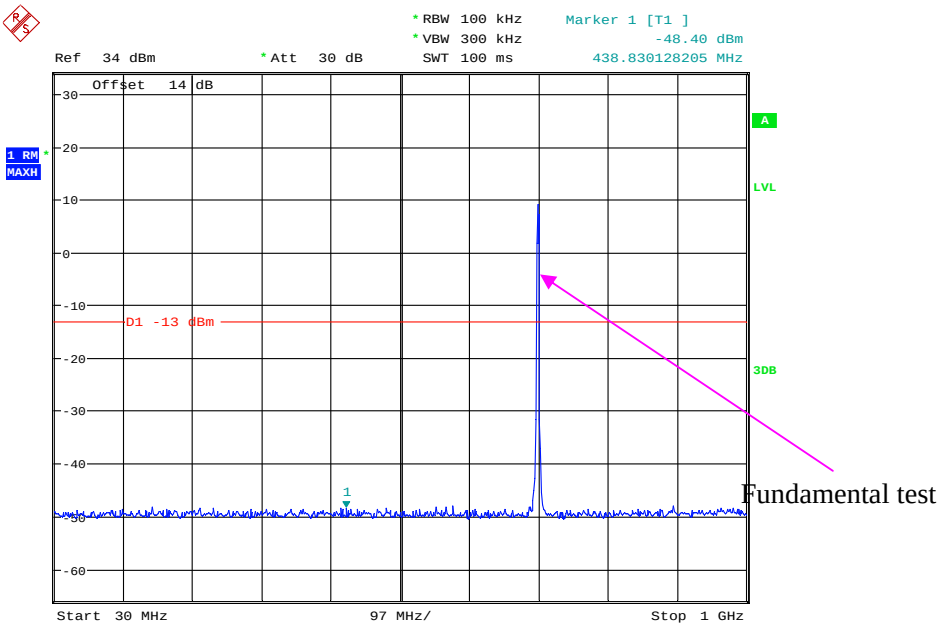
Date: 16.NOV.2017 10:31:05

1 GHz – 10 GHz (1.4 MHz, Middle Channel)



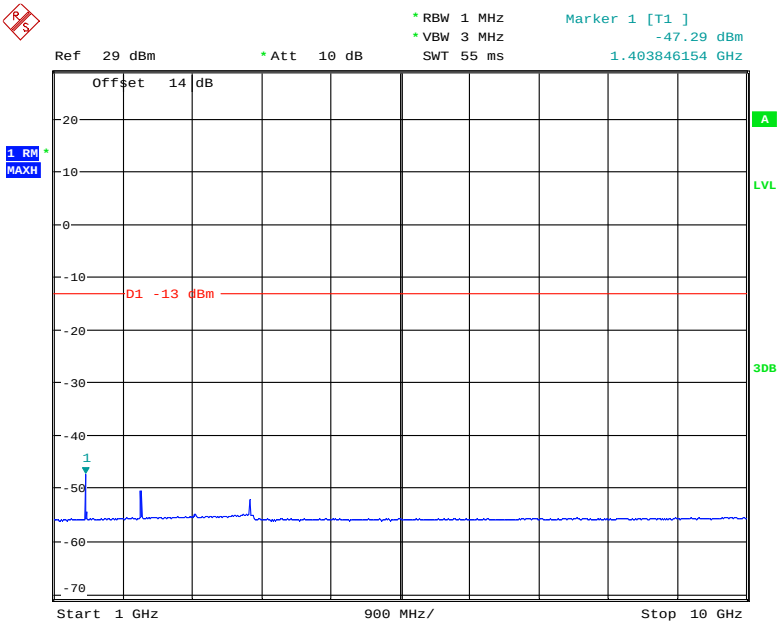
Date: 16.NOV.2017 10:33:57

30 MHz - 1 GHz (3.0 MHz, Middle Channel)



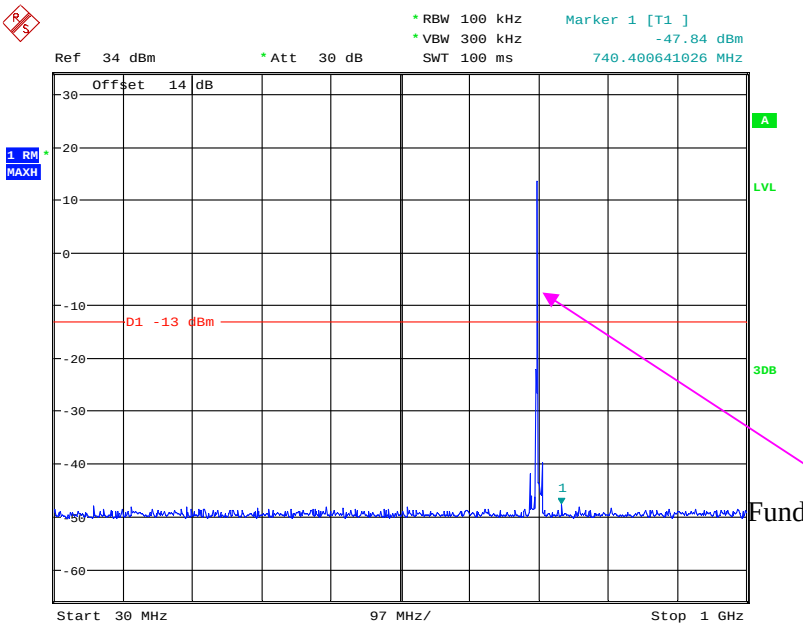
Date: 16.NOV.2017 10:31:59

1 GHz – 10 GHz (3.0 MHz, Middle Channel)



Date: 16.NOV.2017 10:34:18

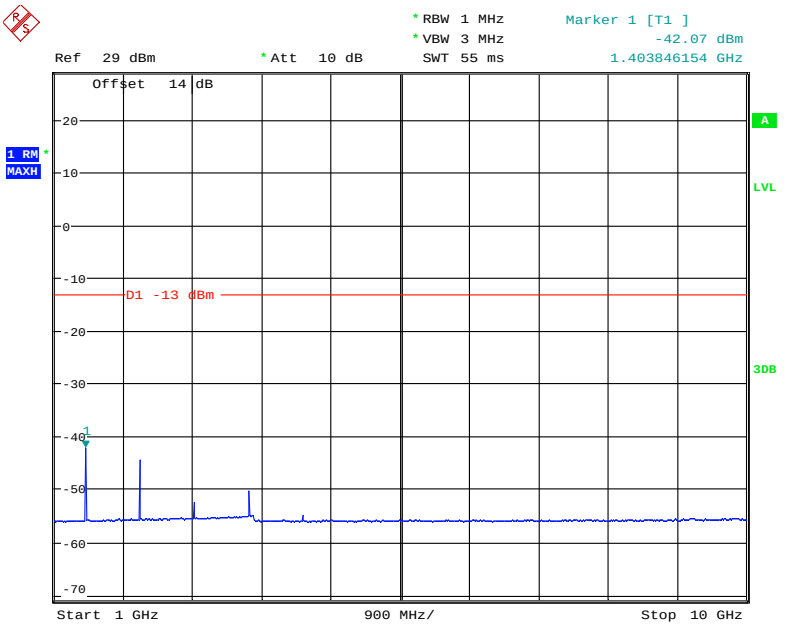
30 MHz - 1 GHz (5.0 MHz, Middle Channel)



Fundamental test

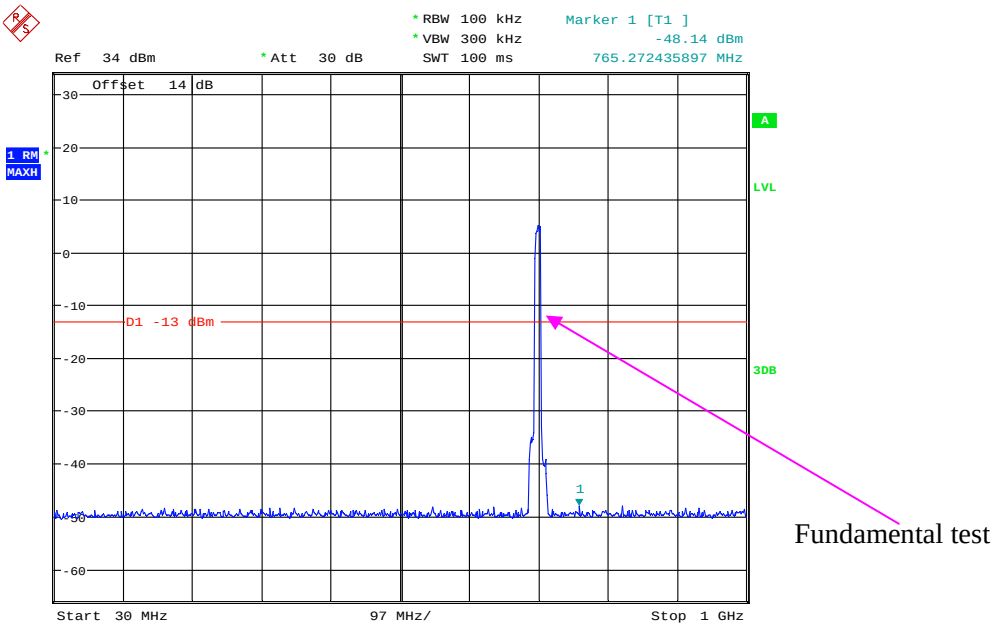
Date: 16.NOV.2017 10:32:18

1 GHz – 10 GHz (5.0 MHz, Middle Channel)



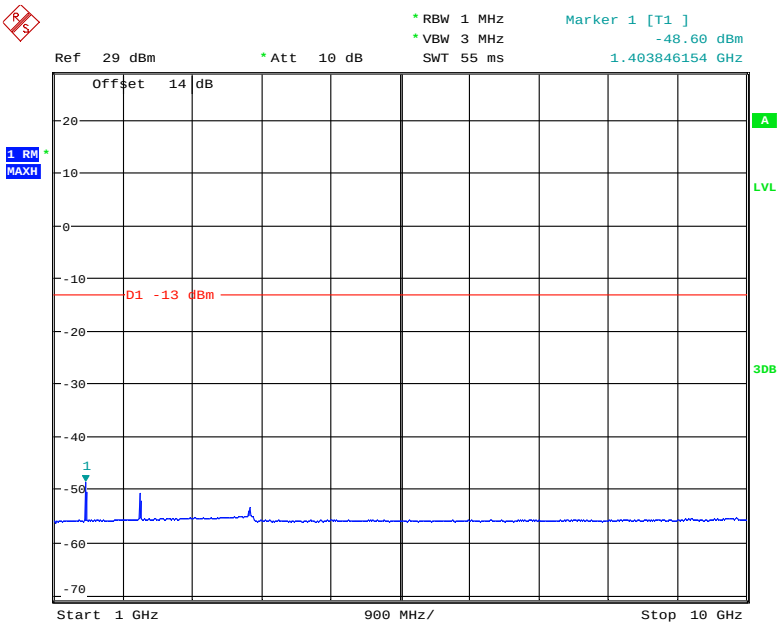
Date: 16.NOV.2017 10:34:32

30 MHz - 1 GHz (10.0 MHz, Middle Channel)



Date: 16.NOV.2017 10:32:36

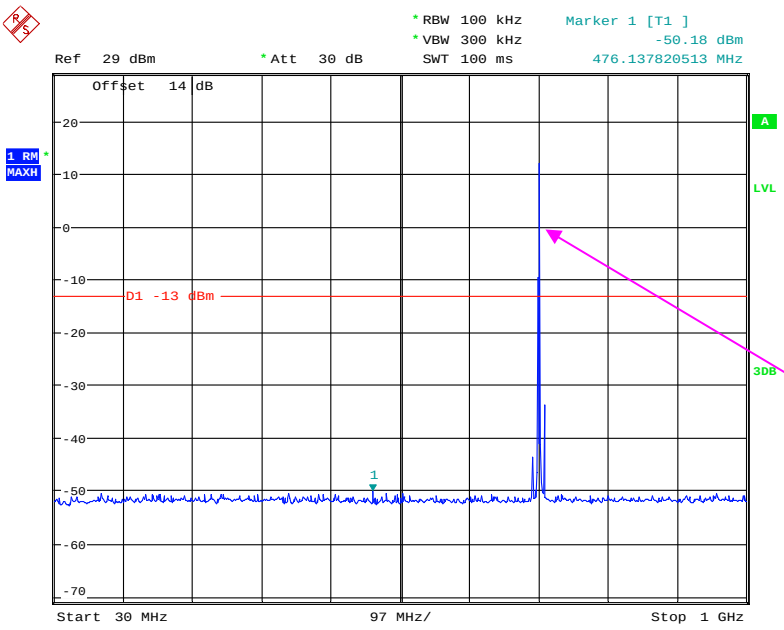
1 GHz – 10 GHz (10.0 MHz, Middle Channel)



Date: 16.NOV.2017 10:34:45

LTE Band 17:

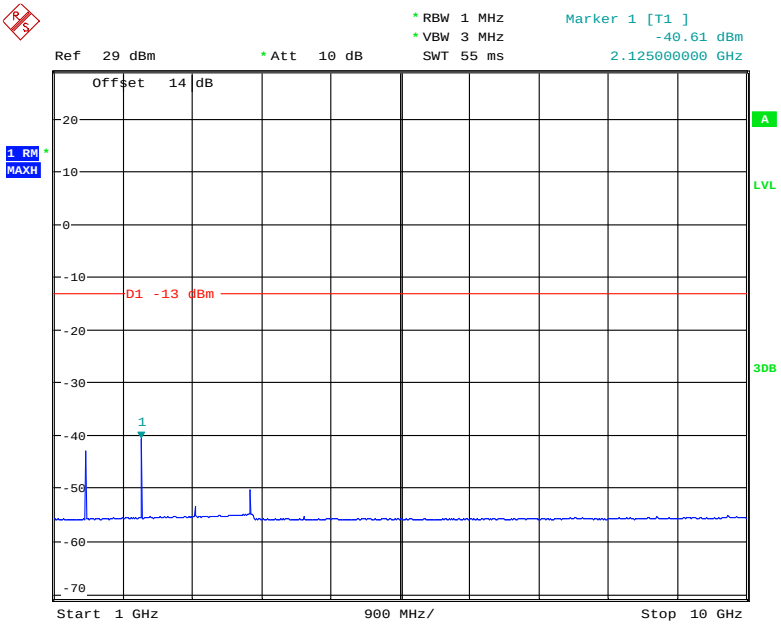
30 MHz - 1 GHz (5.0 MHz, Middle Channel)



Fundamental test

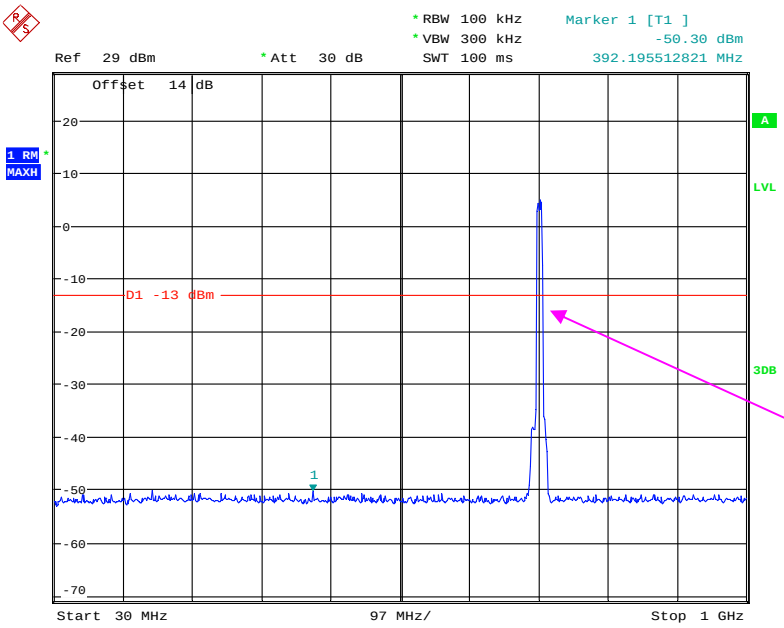
Date: 16.NOV.2017 10:36:36

1 GHz – 10 GHz (5.0 MHz, Middle Channel)



Date: 16.NOV.2017 10:35:46

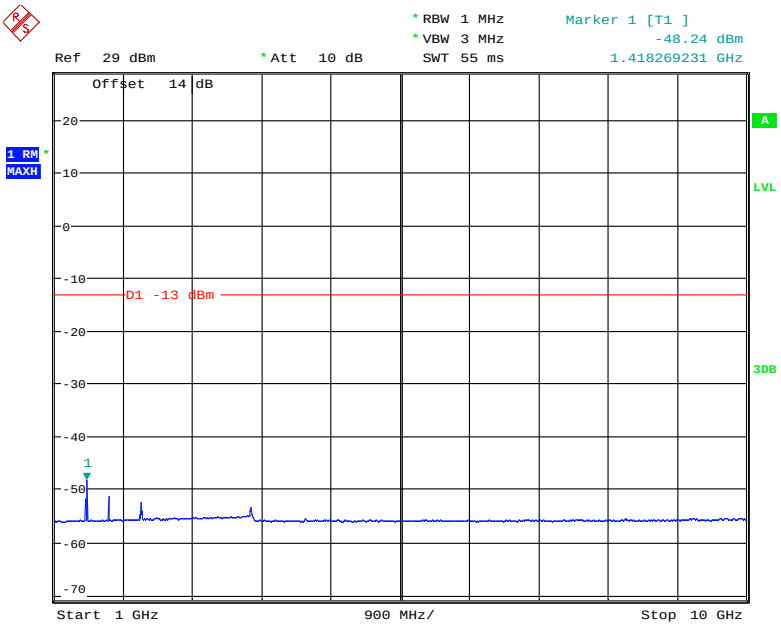
30 MHz - 1 GHz (10.0 MHz, Middle Channel)



Fundamental test

Date: 16.NOV.2017 10:37:01

1 GHz – 10 GHz (10.0 MHz, Middle Channel)



Date: 16.NOV.2017 10:36:05

FCC § 2.1053; § 22.917 (a);§ 24.238 (a); §27.53 (h)(m) SPURIOUS RADIATED EMISSIONS

Applicable Standard

FCC § 2.1053, §22.917(a) and § 24.238(a) and § 27.53(h)(m)

Test Procedure

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the receiving antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.

The frequency range up to tenth harmonic of the fundamental frequency was investigated.

Test Data

Environmental Conditions

Temperature:	22 ℃
Relative Humidity:	48 %
ATM Pressure:	101.0 kPa

The testing was performed by Hill He on 2017-11-15.

EUT operation mode: Transmitting

Pre-scan with Low, Middle and High channel, the worst case as below:

30 MHz ~ 10 GHz:

Cellular Band (Part 22H)

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	FCC Part 22H	
			Height (m)	Polar (H/V)	Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)		Limit (dBm)	Margin (dB)
GSM Mode, Middle channel										
268.79	34.07	27	2.5	H	-62.9	0.32	0	-63.22	-13	50.22
268.79	33.22	254	1.6	V	-63.8	0.32	0	-64.12	-13	51.12
1673.20	48.66	359	1.4	H	-58.4	1.30	9.10	-50.60	-13	37.60
1673.20	47.10	354	1.9	V	-59.4	1.30	9.10	-51.60	-13	38.60
2509.80	51.65	334	1.2	H	-51.9	2.60	9.30	-45.20	-13	32.20
2509.80	50.12	258	2.1	V	-52.8	2.60	9.30	-46.10	-13	33.10
3346.40	42.6	301	1.7	H	-57.7	1.50	9.60	-49.60	-13	36.60
3346.40	44.83	297	2.1	V	-55.5	1.50	9.60	-47.40	-13	34.40
WCDMA Mode, Middle channel										
207.56	33.20	153	1.4	H	-63.8	0.30	0	-64.10	-13	51.10
207.56	34.90	205	1.4	V	-62.1	0.30	0	-62.40	-13	49.40
1673.20	43.86	8	1.5	H	-63.2	1.30	9.10	-55.40	-13	42.40
1673.20	44.82	267	1.3	V	-61.7	1.30	9.10	-53.90	-13	40.90
2509.80	47.32	250	1.6	H	-56.2	2.60	9.30	-49.50	-13	36.50
2509.80	47.4	59	1.9	V	-55.5	2.60	9.30	-48.80	-13	35.80

30 MHz ~ 20 GHz:

PCS Band (Part 24E)

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	FCC Part 24E	
			Height (m)	Polar (H/V)	Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)		Limit (dBm)	Margin (dB)
GSM Mode, Middle channel										
268.79	34.64	352	2.2	H	-62.4	0.32	0	-62.72	-13	49.72
268.79	33.92	50	2.5	V	-63.1	0.32	0	-63.42	-13	50.42
3760.00	45.75	348	2.2	H	-55.5	1.50	9.70	-47.30	-13	34.30
3760.00	45.37	194	1.0	V	-55.4	1.50	9.70	-47.20	-13	34.20
WCDMA Mode Band II, Middle channel										
207.56	34.95	308	1.9	H	-62.1	0.30	0	-62.40	-13	49.40
207.56	34.04	331	1.9	V	-63.0	0.30	0	-63.30	-13	50.30
3760.00	43.15	343	1.5	H	-58.1	1.50	9.70	-49.90	-13	36.90
3760.00	44.21	226	1.5	V	-56.5	1.50	9.70	-48.30	-13	35.30

30 MHz ~ 20 GHz:

AWS Band (Part 27)

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	FCC Part 27	
			Height (m)	Polar (H/V)	Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)		Limit (dBm)	Margin (dB)
WCDMA Mode Band IV, Middle channel										
207.56	34.79	290	1.4	H	-62.2	0.30	0	-62.50	-13	49.50
207.56	34.45	8	2.0	V	-62.5	0.30	0	-62.80	-13	49.80
3465.20	46.74	49	1.3	H	-53.6	1.50	9.70	-45.40	-13	32.40
3465.20	45.41	301	2.5	V	-55.7	1.50	9.70	-47.50	-13	34.50

LTE Band: *(Pre-scan with all the bandwidth, and worse case as below)*

Frequency	Receiver	Turntable	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
(MHz)	Reading (dBμV)	Angle Degree	Height (m)	Polar (H/V)	Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)			
Band 2, Middle channel										
Test frequency range:30 MHz ~ 20 GHz										
221.17	34.60	337	1.3	H	-62.4	0.30	0	-62.70	-13	49.70
221.17	34.67	320	1.6	V	-62.3	0.30	0	-62.60	-13	49.60
3760.00	43.49	117	2.1	H	-57.7	1.50	9.70	-49.50	-13	36.50
3760.00	44.29	53	1.2	V	-56.5	1.50	9.70	-48.30	-13	35.30
5640.00	52.48	276	2.4	H	-45.1	1.70	11.20	-35.60	-13	22.60
5640.00	48.03	231	2.4	V	-49.2	1.70	11.20	-39.70	-13	26.70
Band 4, Middle channel										
Test frequency range:30 MHz ~ 18 GHz										
221.17	34.39	87	2.4	H	-62.6	0.30	0	-62.90	-13	49.90
221.17	33.75	122	1.7	V	-63.2	0.30	0	-63.50	-13	50.50
3465.00	43.49	153	1.3	H	-56.9	1.50	9.70	-48.70	-13	35.70
3465.00	44.27	215	2.4	V	-56.9	1.50	9.70	-48.70	-13	35.70
5197.50	43.63	154	1.7	H	-55.0	1.60	11.20	-45.40	-13	32.40
5197.50	43.58	44	1.3	V	-54.6	1.60	11.20	-45.00	-13	32.00
Band 5, Middle channel										
Test frequency range:30 MHz ~ 10 GHz										
221.17	33.75	332	1.3	H	-63.3	0.30	0	-63.60	-13	50.60
221.17	33.49	298	1.8	V	-63.5	0.30	0	-63.80	-13	50.80
1673.00	42.82	330	1.4	H	-64.3	1.30	9.10	-56.50	-13	43.50
1673.00	42.91	152	2.3	V	-63.6	1.30	9.10	-55.80	-13	42.80
2509.50	43.15	120	1.2	H	-60.4	2.60	9.30	-53.70	-13	40.70
2509.50	44.05	181	1.9	V	-58.9	2.60	9.30	-52.20	-13	39.20
Band 7, Middle channel										
Test frequency range:30 MHz ~ 26 GHz										
221.17	34.64	84	2.0	H	-62.4	0.30	0	-62.70	-25	37.70
221.17	34.05	270	2.1	V	-62.9	0.30	0	-63.20	-25	38.20
5070.00	48.61	220	1.7	H	-49.3	1.60	11.20	-39.70	-25	14.70
5070.00	45.19	248	1.1	V	-52.7	1.60	11.20	-43.10	-25	18.10
7605.00	48.53	147	1.6	H	-46.7	2.10	11.60	-37.20	-25	12.20
7605.00	47.24	51	1.6	V	-47.7	2.10	11.60	-38.20	-25	13.20
Band 12, Middle channel										
Test frequency range: 30 MHz ~ 10 GHz										
221.17	33.49	247	2.4	H	-63.5	0.30	0	-63.80	-13	50.80
221.17	33.72	26	1.4	V	-63.3	0.30	0	-63.60	-13	50.60
1415.00	42.86	292	2.4	H	-65.0	1.60	8.30	-58.30	-13	45.30
1415.00	43.05	289	1.9	V	-65.0	1.60	8.30	-58.30	-13	45.30
2122.50	44.04	69	1.5	H	-58.0	1.30	8.80	-50.50	-13	37.50
2122.50	45.52	10	1.5	V	-57.4	1.30	8.80	-49.90	-13	36.90

Frequency	Receiver	Turntable	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
(MHz)	Reading (dBμV)	Angle Degree	Height (m)	Polar (H/V)	Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)			
Band 17, Middle channel										
Test frequency range: 30 MHz ~ 10GHz										
221.17	34.37	251	2.1	H	-62.6	0.30	0	-62.90	-13	49.90
221.17	33.41	48	1.0	V	-63.6	0.30	0	-63.90	-13	50.90
1420.00	42.85	226	1.6	H	-65.0	1.60	8.30	-58.30	-13	45.30
1420.00	42.57	165	2.4	V	-65.5	1.60	8.30	-58.80	-13	45.80
2130.00	43.12	76	1.4	H	-59.0	1.30	8.80	-51.50	-13	38.50
2130.00	44.34	178	2.2	V	-58.6	1.30	8.80	-51.10	-13	38.10

Note:
1) Absolute Level = Substituted Level - Cable loss + Antenna Gain
2) Margin = Limit- Absolute Level

FCC § 22.917 (a);§ 24.238 (a); §27.53 (h)(m) - 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.

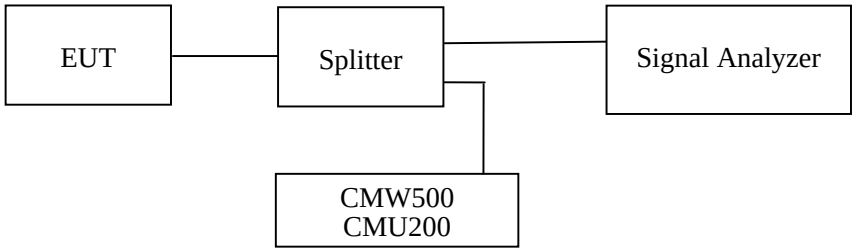
According to §24.238(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

According to FCC §27.53 (h)(m), 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 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 Data

Environmental Conditions

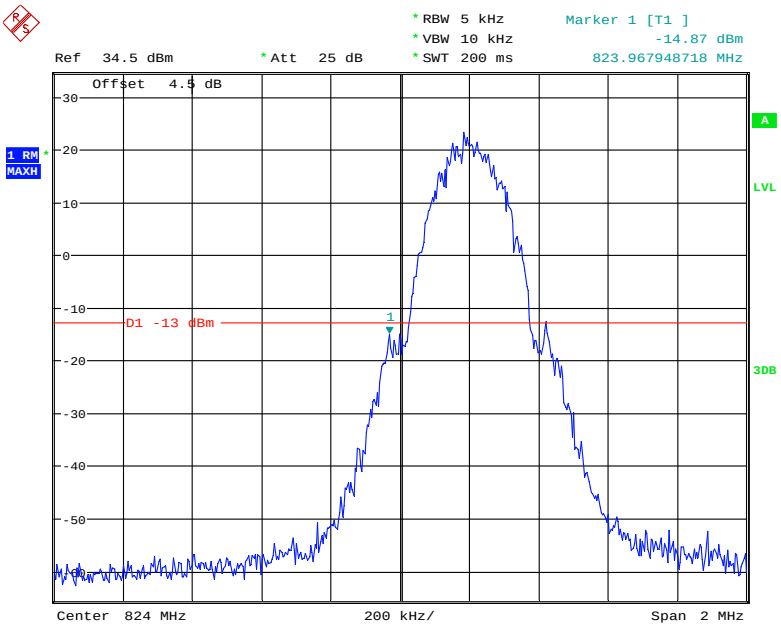
Temperature:	24~25℃
Relative Humidity:	47~50 %
ATM Pressure:	100.0~101.0 kPa

The testing was performed by Hill He from 2017-11-13 to 2017-11-29.

EUT operation mode: Transmitting

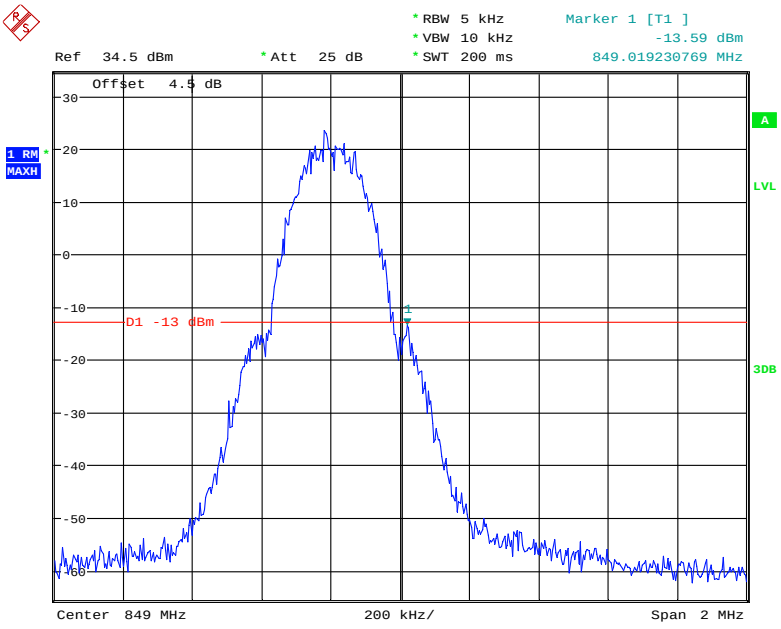
Test Result: Compliance. Please refer to the following plots.

Cellular Band, Left Band Edge for GSM (GMSK) Mode



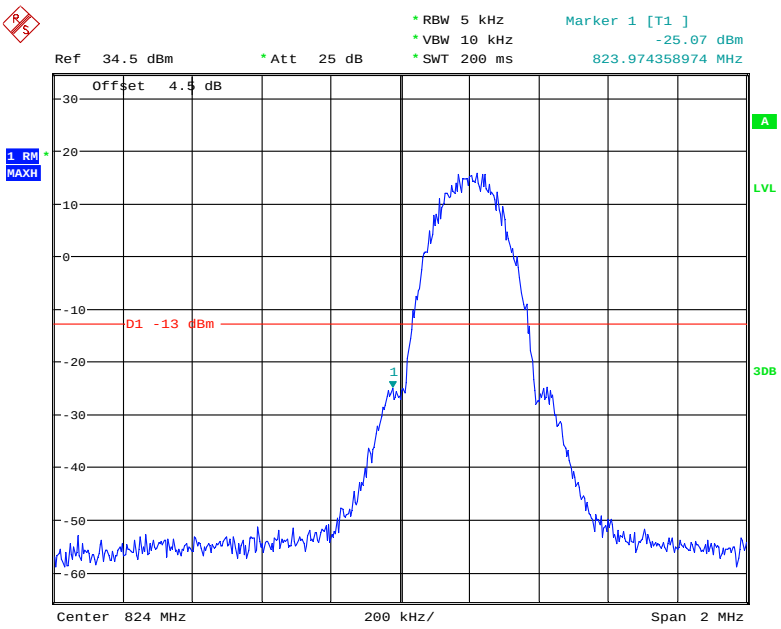
Date: 13.NOV.2017 15:14:30

Cellular Band, Right Band Edge for GSM (GMSK) Mode



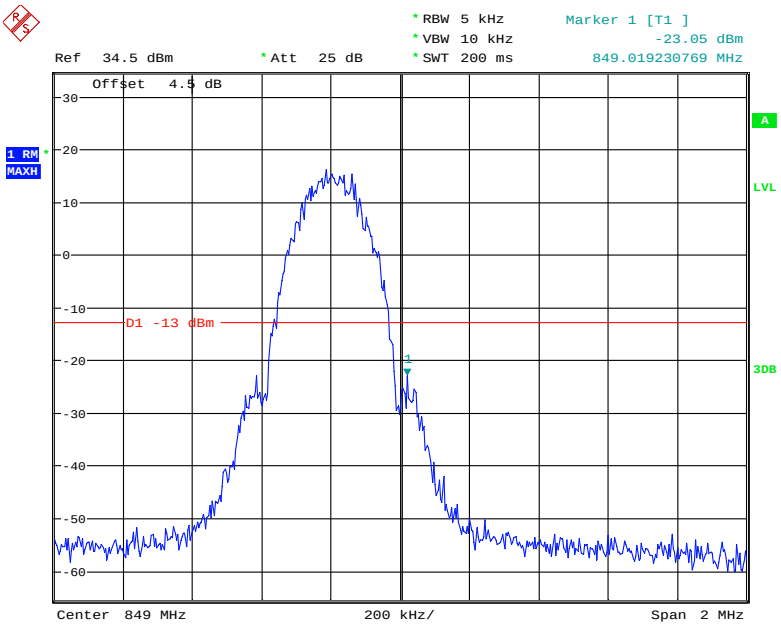
Date: 13.NOV.2017 15:13:42

Cellular Band, Left Band Edge for EDGE Mode



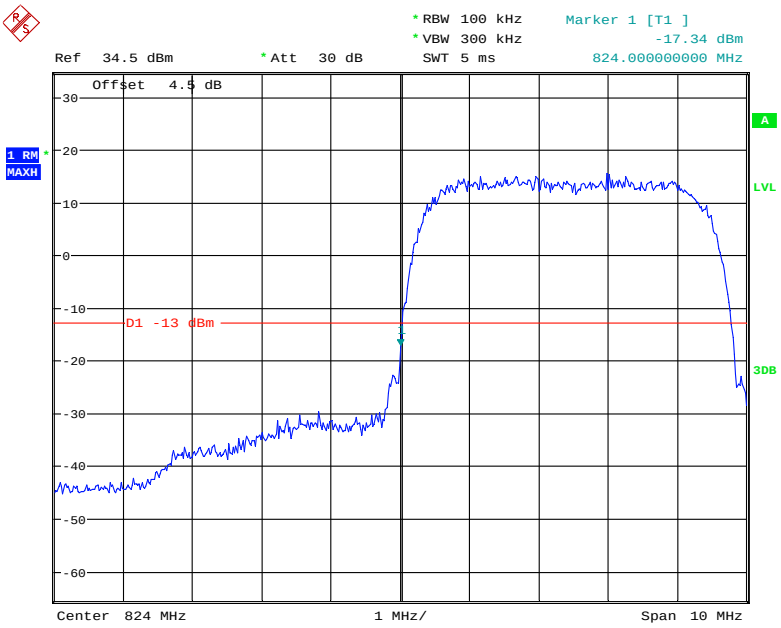
Date: 13.NOV.2017 15:16:23

Cellular Band, Right Band Edge for EDGE Mode



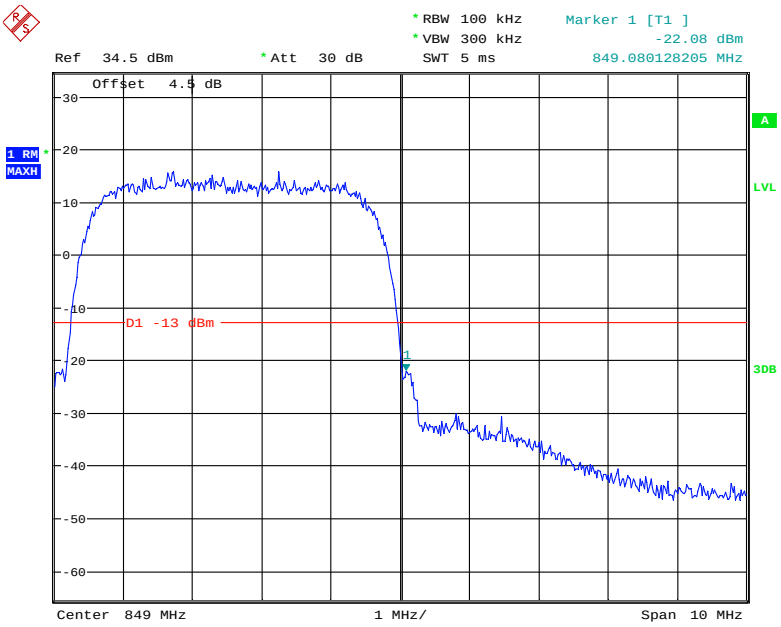
Date: 13.NOV.2017 15:17:11

Cellular Band, Left Band Edge for WCDMA (BPSK) Mode



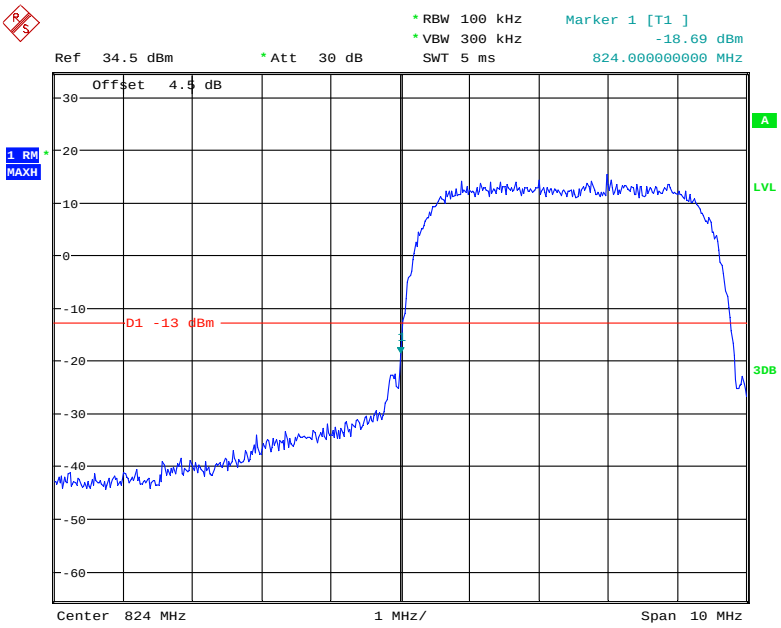
Date: 13.NOV.2017 17:01:53

Cellular Band, Right Band Edge for WCDMA (BPSK) Mode



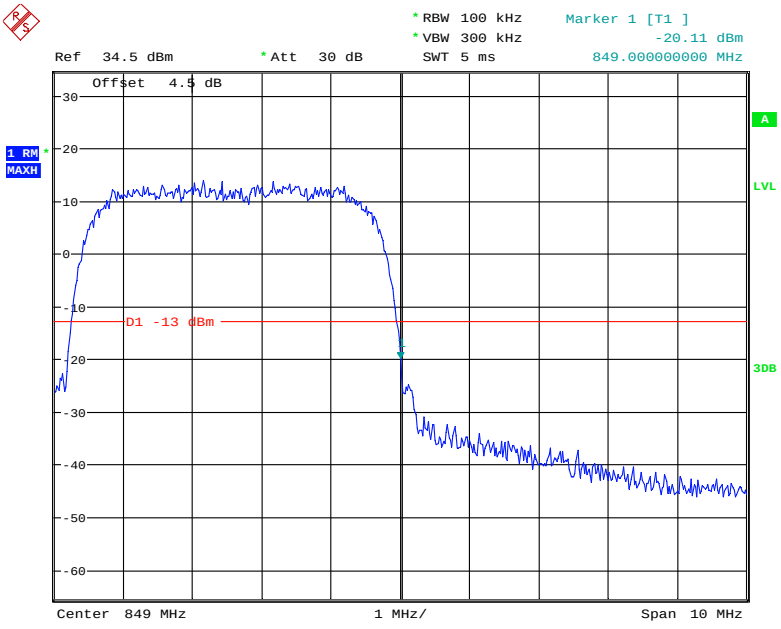
Date: 13.NOV.2017 17:00:15

Cellular Band, Left Band Edge for HSDPA (16QAM) Mode



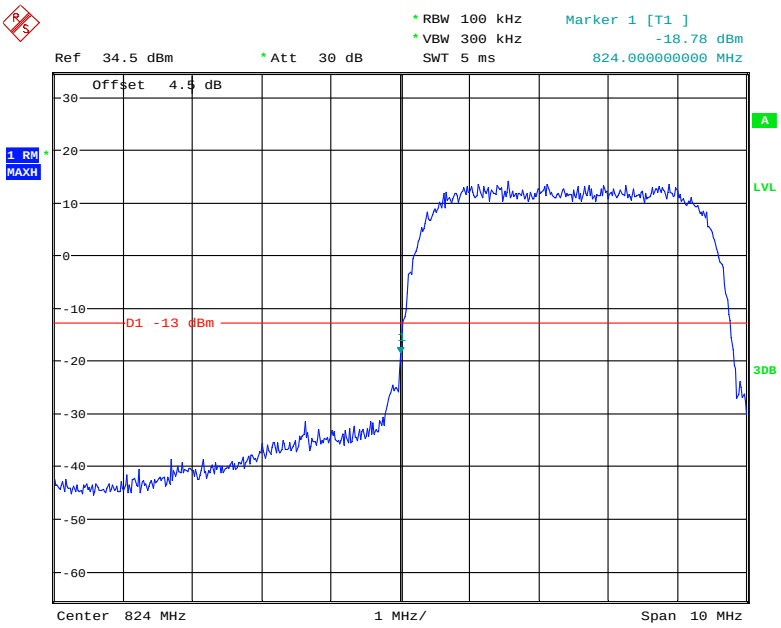
Date: 13.NOV.2017 16:53:41

Cellular Band, Right Band Edge for HSDPA (16QAM) Mode



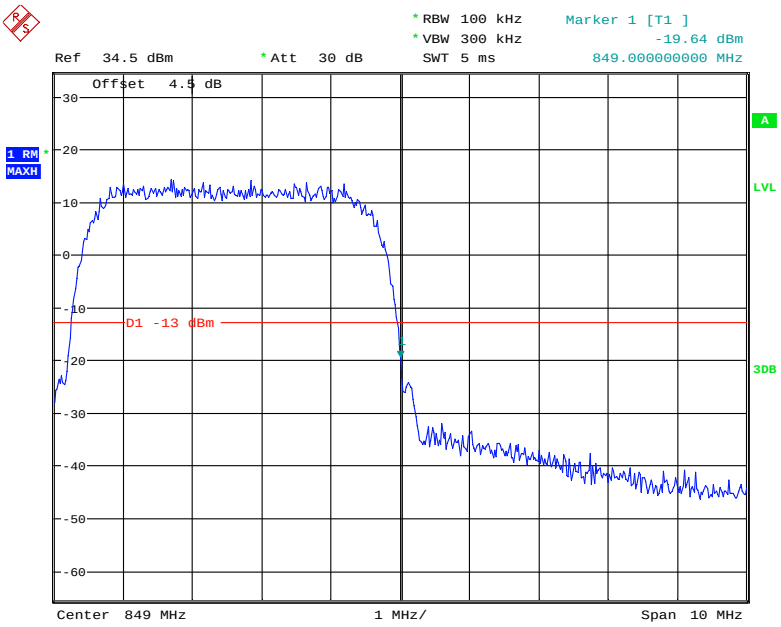
Date: 13.NOV.2017 16:55:17

Cellular Band, Left Band Edge for HSUPA (BPSK) Mode



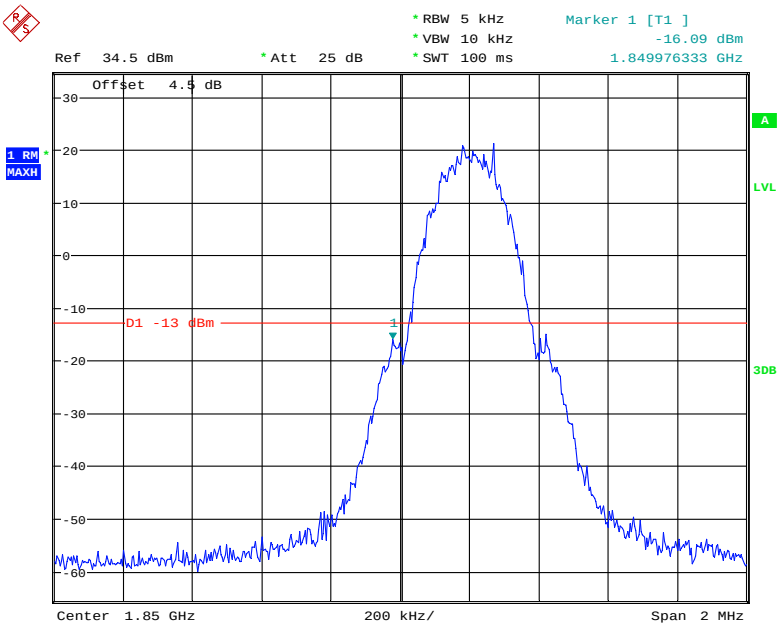
Date: 13.NOV.2017 17:04:20

Cellular Band, Right Band Edge for HSUPA (BPSK) Mode



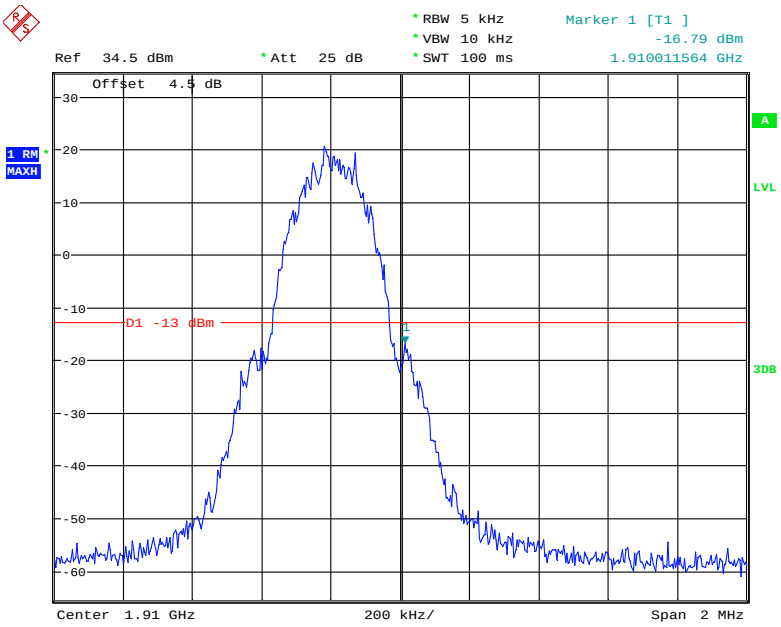
Date: 13.NOV.2017 17:04:52

PCS Band, Left Band Edge for GSM (GMSK) Mode



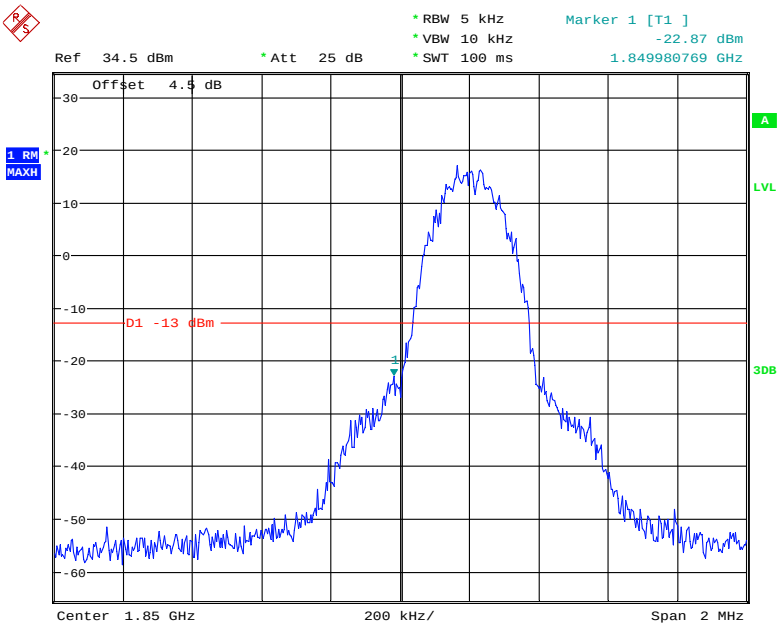
Date: 13.NOV.2017 15:05:18

PCS Band, Right Band Edge for GSM (GMSK) Mode



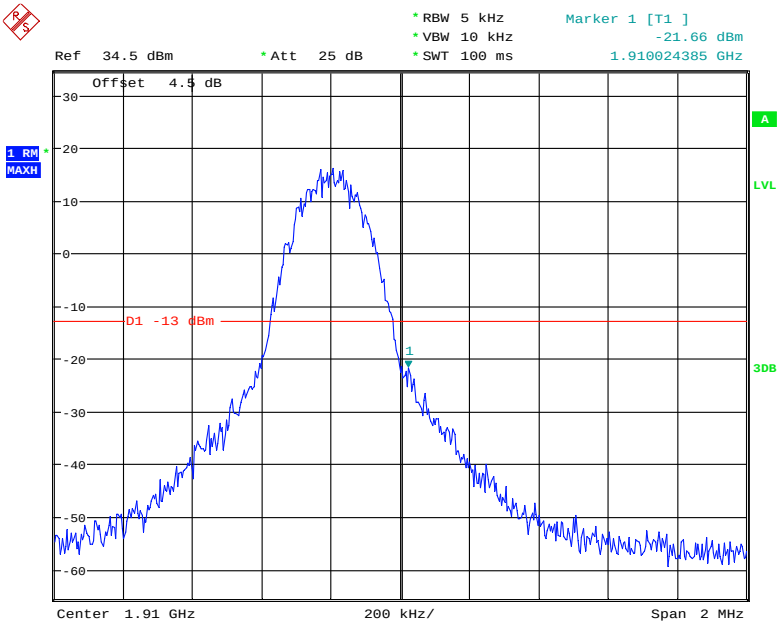
Date: 13.NOV.2017 15:06:52

PCS Band, Left Band Edge for EDGE Mode



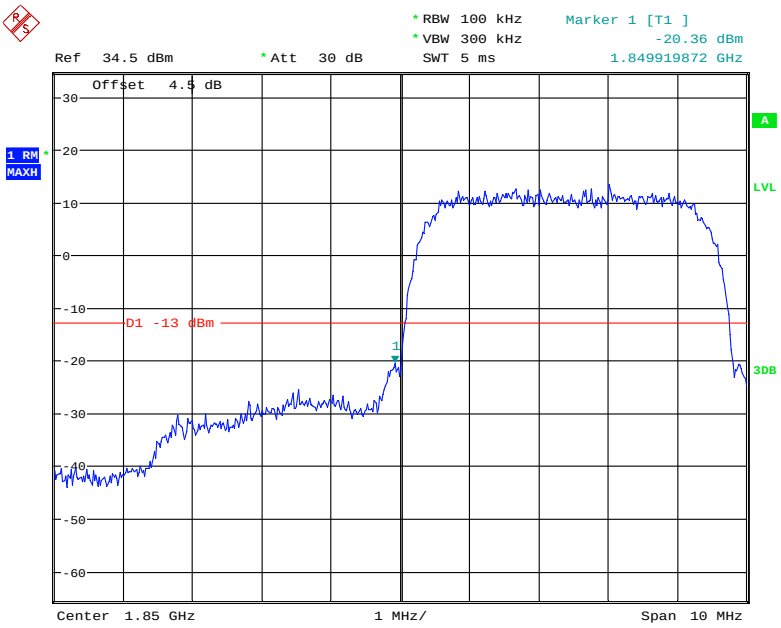
Date: 13.NOV.2017 15:09:44

PCS Band, Right Band Edge for EDGE Mode



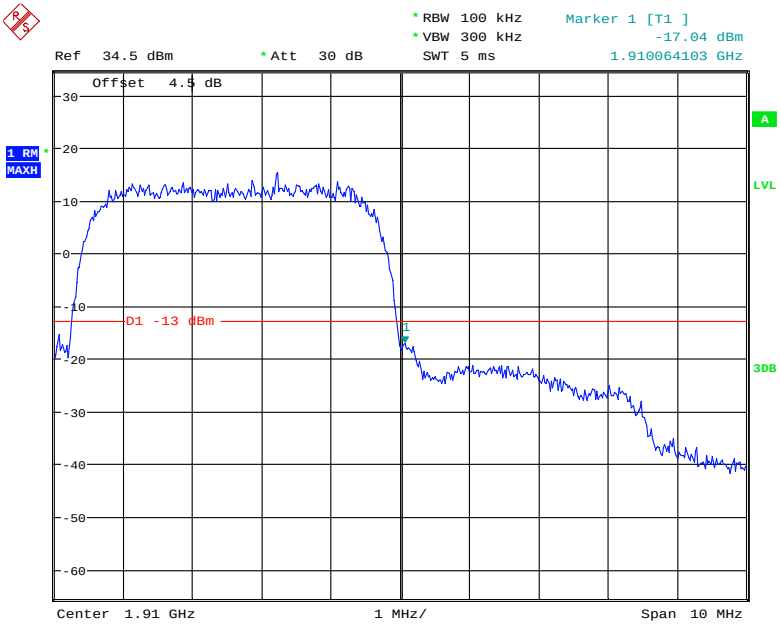
Date: 13.NOV.2017 15:09:00

PCS Band, Left Band Edge for WCDMA (BPSK) Mode



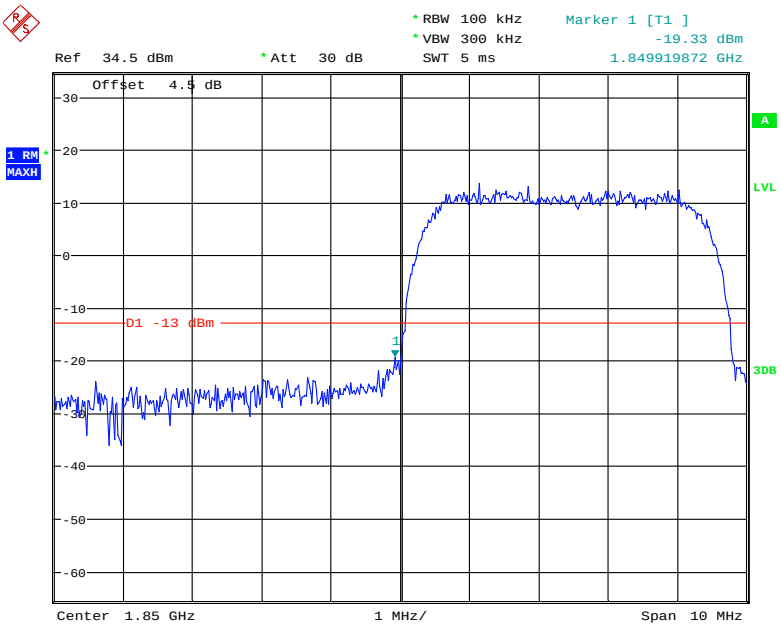
Date: 13.NOV.2017 16:59:26

PCS Band, Right Band Edge for WCDMA (BPSK) Mode



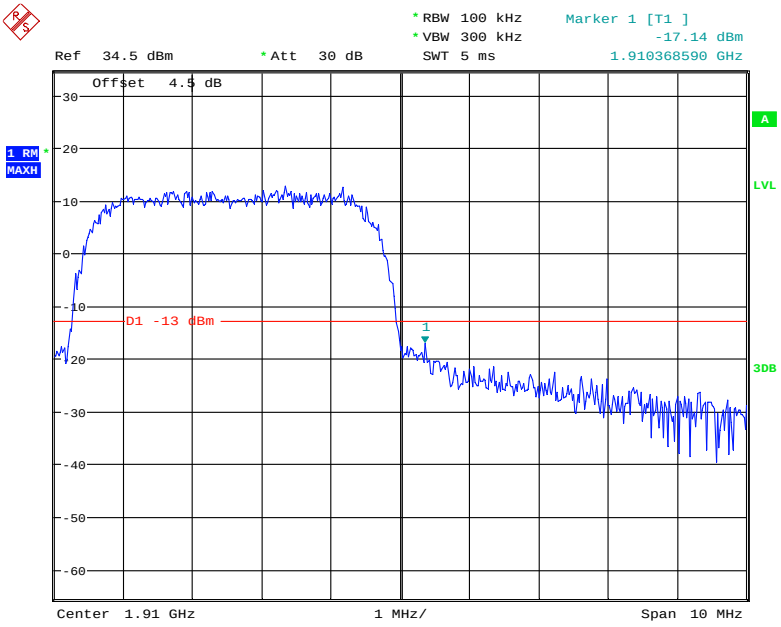
Date: 13.NOV.2017 16:58:42

PCS Band, Left Band Edge for HSDPA (16QAM) Mode



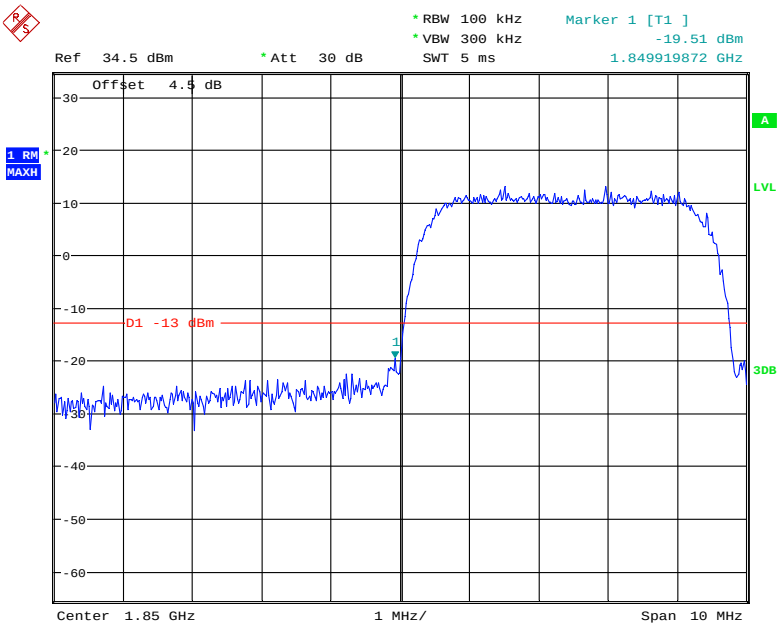
Date: 13.NOV.2017 16:56:19

PCS Band, Right Band Edge for HSDPA (16QAM) Mode



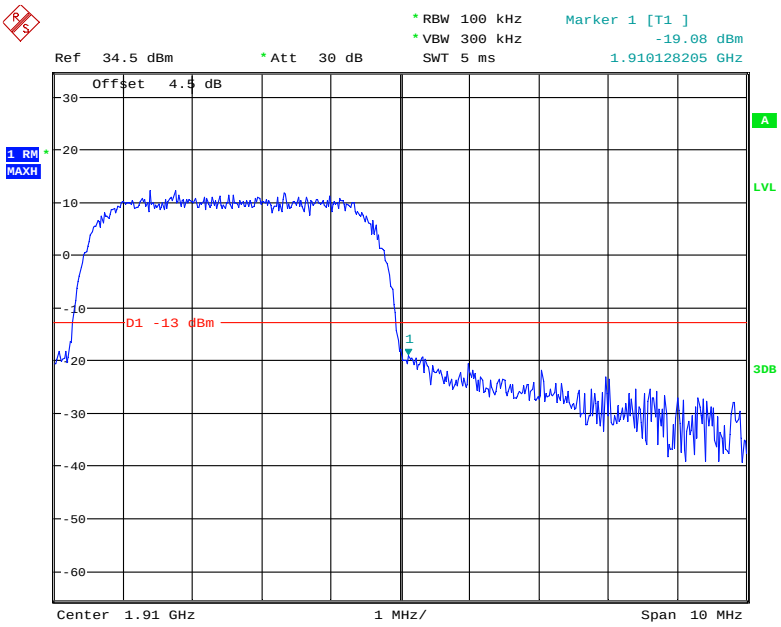
Date: 13.NOV.2017 16:57:16

PCS Band, Left Band Edge for HSUPA (BPSK) Mode



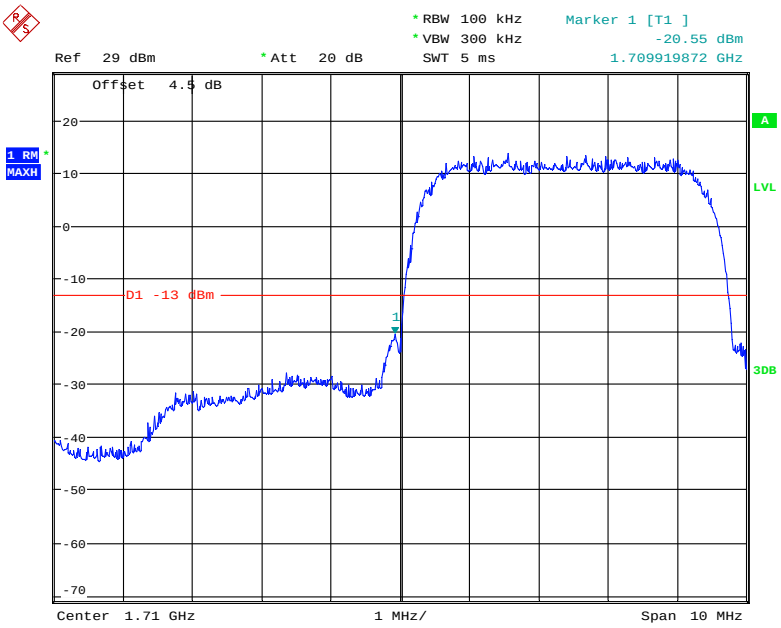
Date: 13.NOV.2017 17:05:44

PCS Band, Right Band Edge for HSUPA (BPSK) Mode



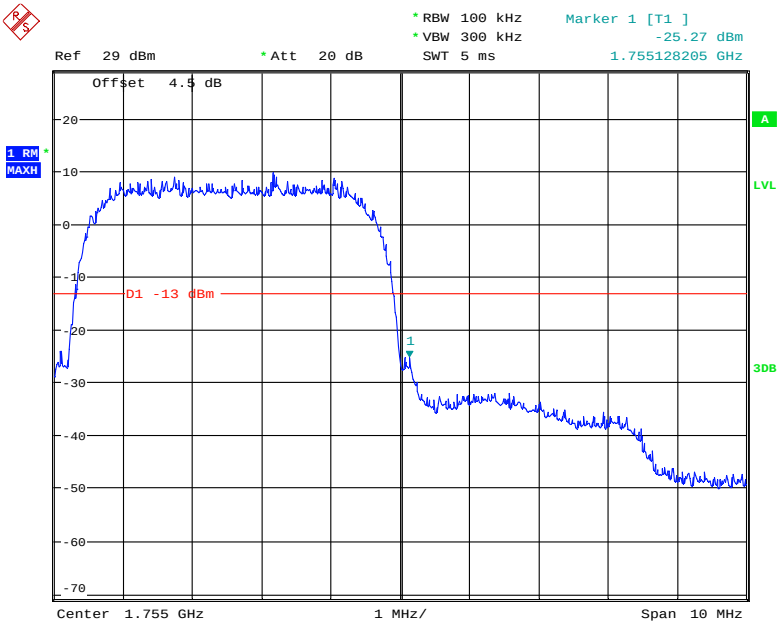
Date: 13.NOV.2017 17:06:21

AWS Band, Left Band Edge for WCDMA (BPSK) Mode



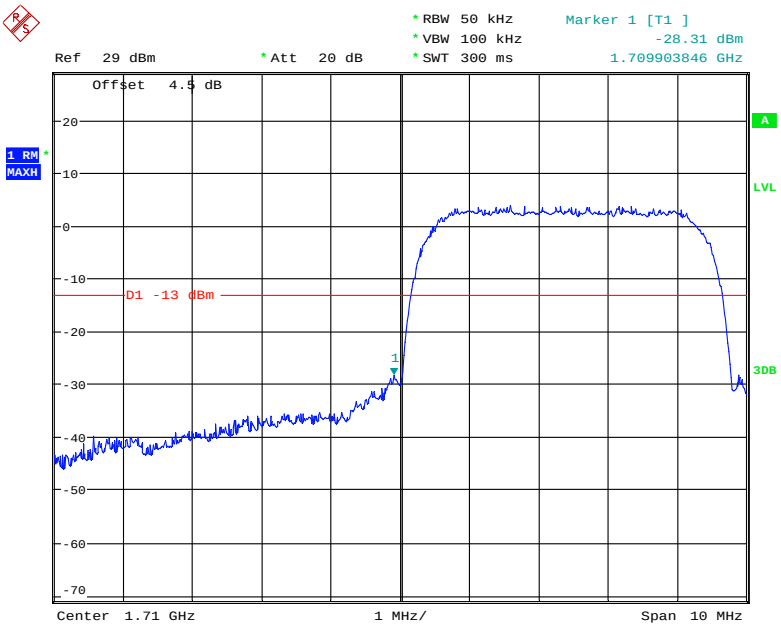
Date: 29.NOV.2017 16:09:59

AWS Band, Right Band Edge for WCDMA (BPSK) Mode



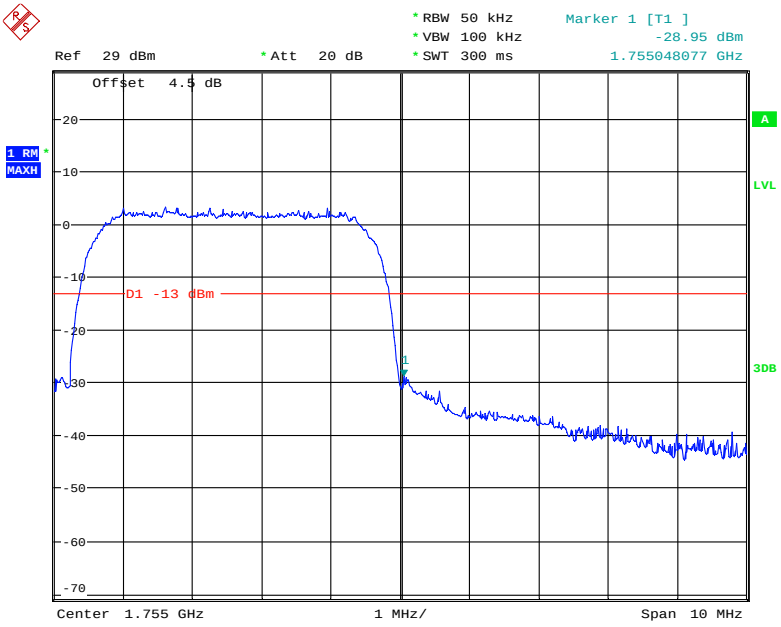
Date: 29.NOV.2017 16:11:12

AWS Band, Left Band Edge for HSDPA (16QAM) Mode



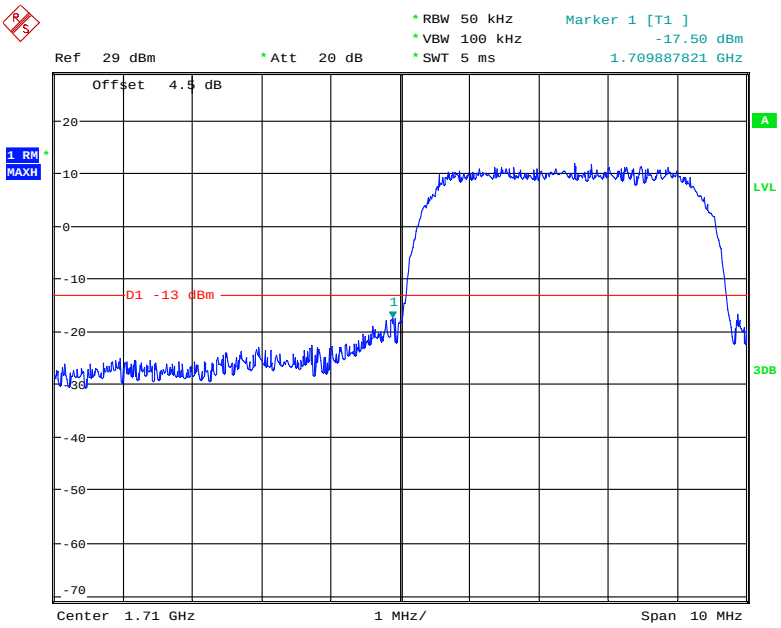
Date: 29.NOV.2017 16:48:39

AWS Band, Right Band Edge for HSDPA (16QAM) Mode



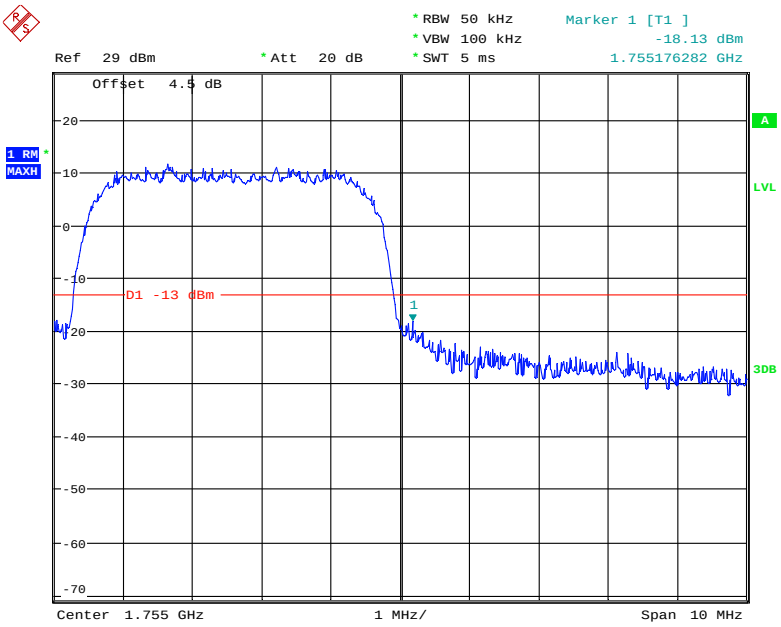
Date: 29.NOV.2017 16:47:32

AWS Band, Left Band Edge for HSUPA (BPSK) Mode



Date: 29.NOV.2017 17:00:30

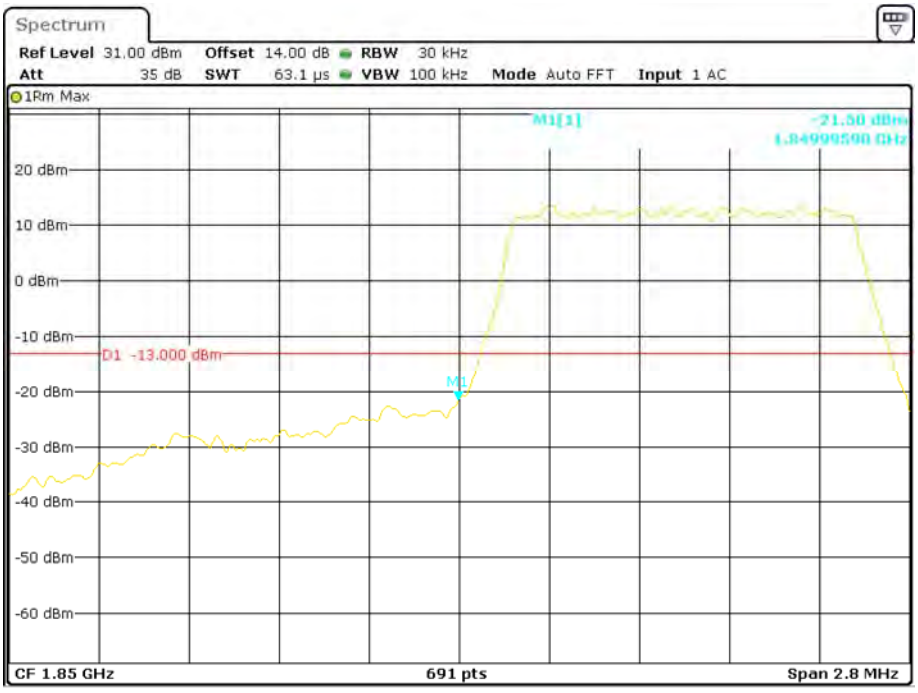
AWS Band, Right Band Edge for HSUPA (BPSK) Mode



Date: 29.NOV.2017 17:02:33

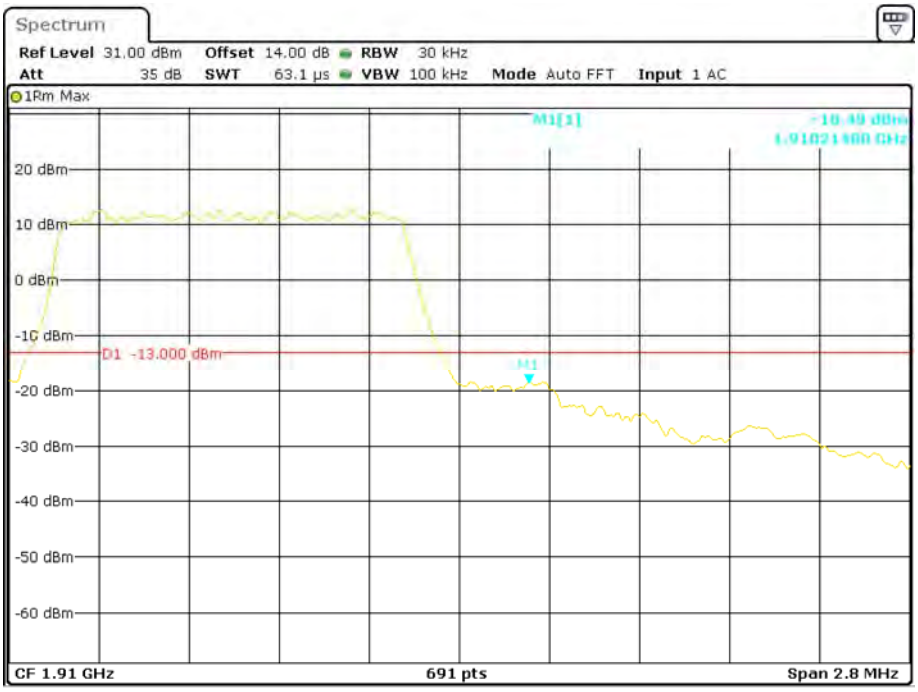
Band 2:

QPSK (1.4 MHz, FULL RB) - Left Band Edge



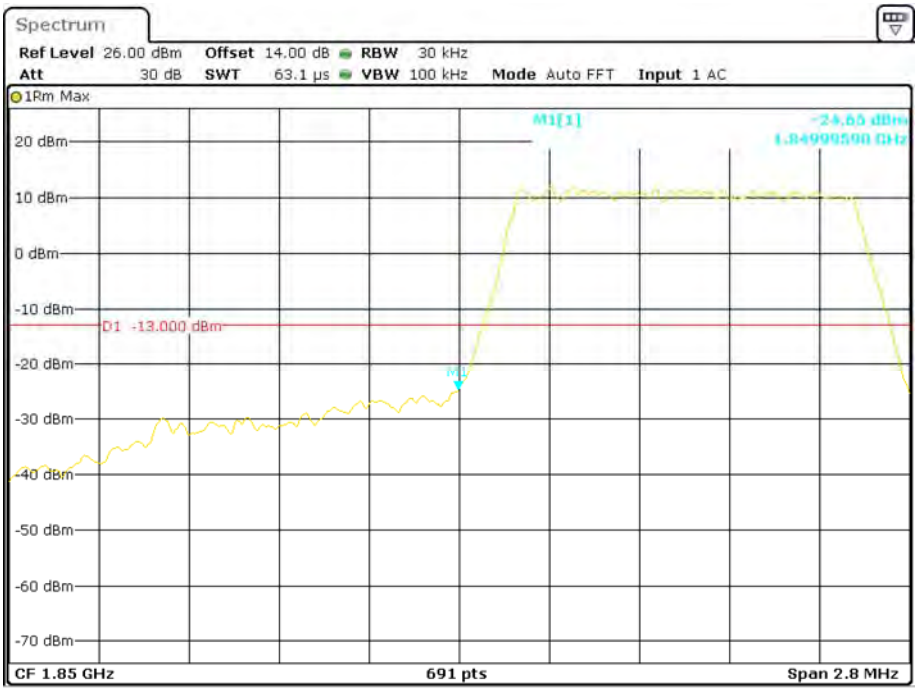
Date: 14.NOV.2017 12:25:43

QPSK (1.4 MHz, FULL RB) - Right Band Edge



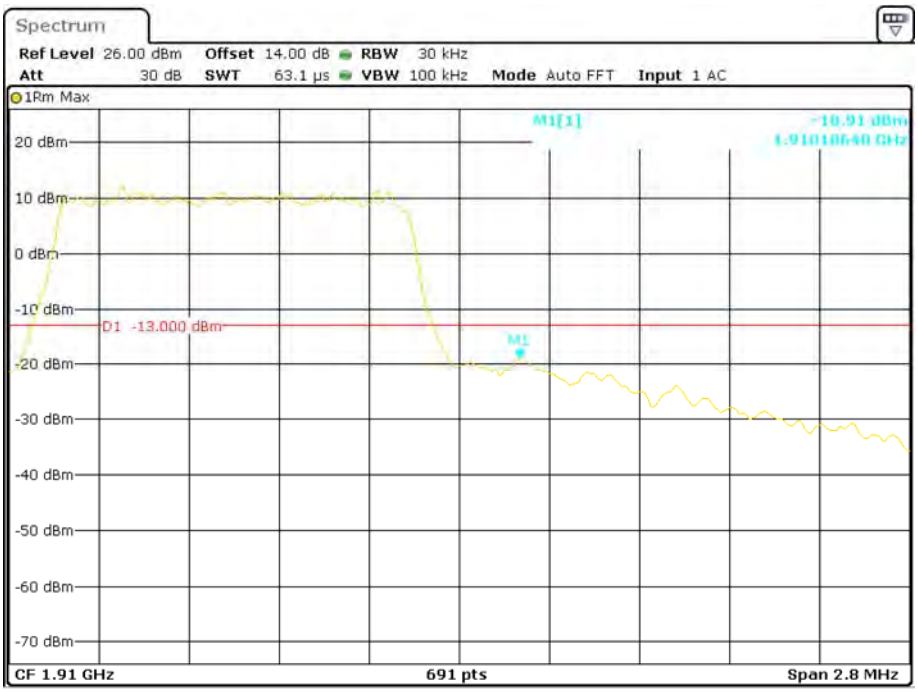
Date: 14.NOV.2017 12:28:48

16-QAM (1.4 MHz, FULL RB) - Left Band Edge



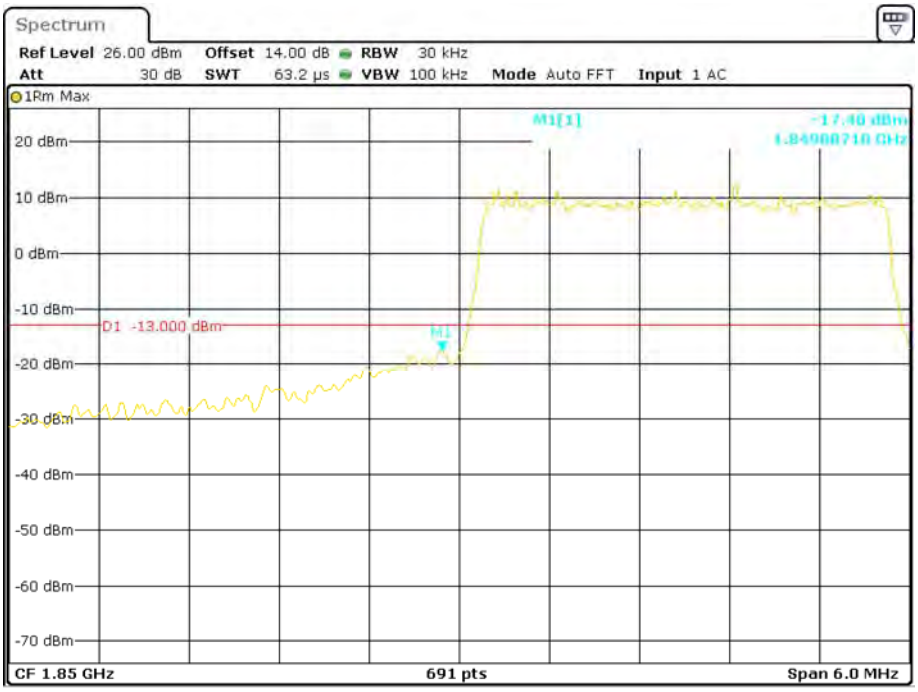
Date: 14.NOV.2017 14:40:56

16-QAM (1.4 MHz, FULL RB) - Right Band Edge

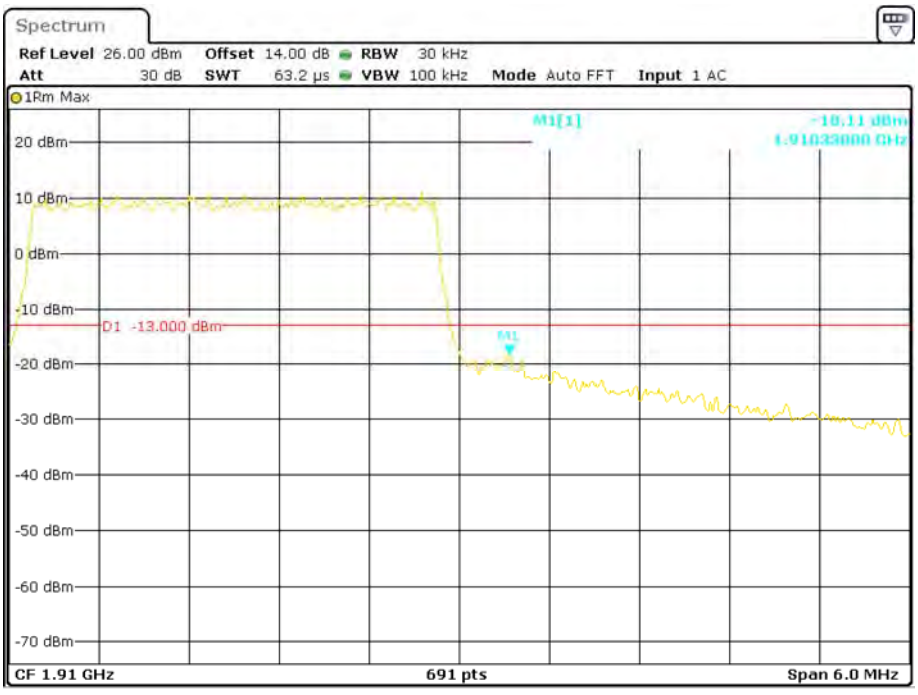


Date: 14.NOV.2017 14:42:09

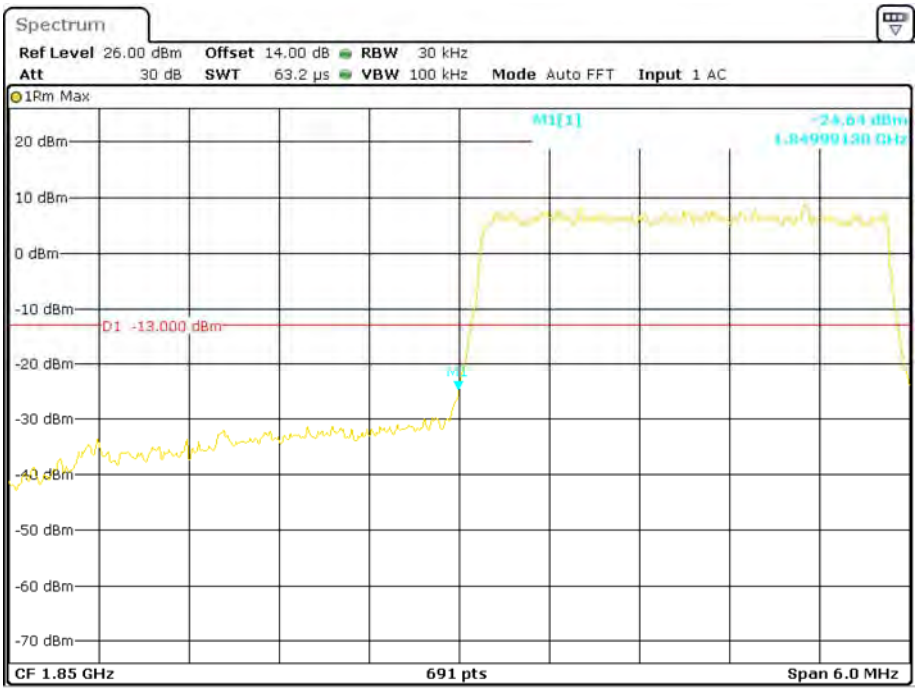
QPSK (3.0 MHz, FULL RB) - Left Band Edge



QPSK (3.0 MHz, FULL RB) - Right Band Edge

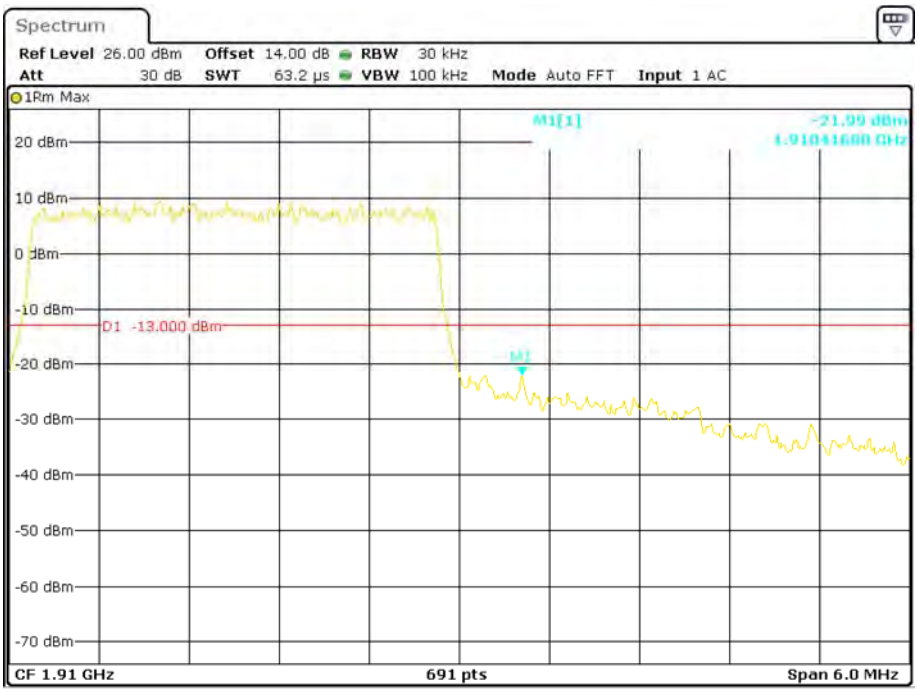


16-QAM (3.0 MHz, FULL RB) - Left Band Edge



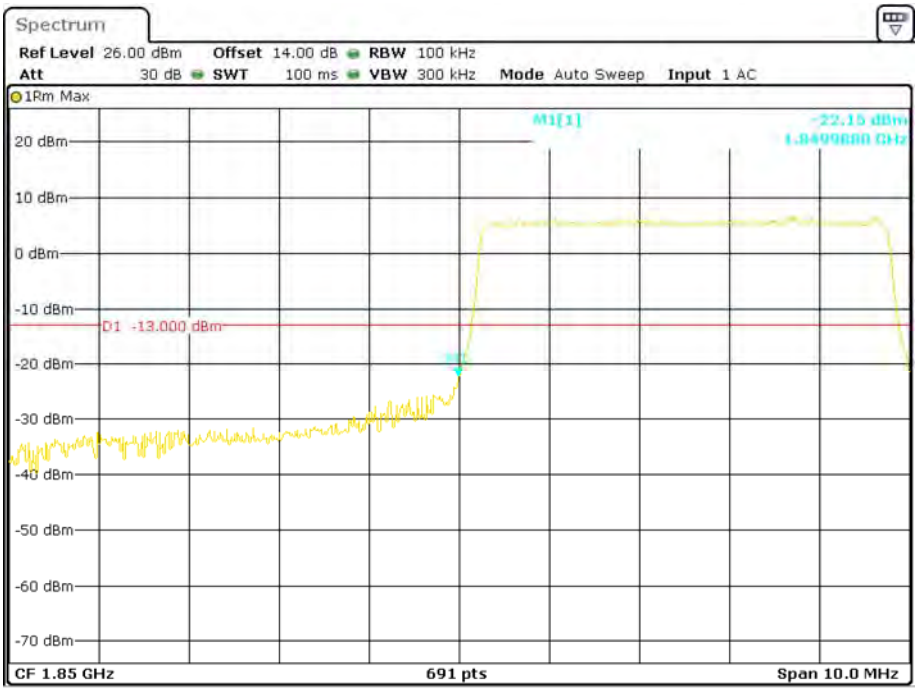
Date: 14.NOV.2017 14:46:35

16-QAM (3.0 MHz, FULL RB) - Right Band Edge



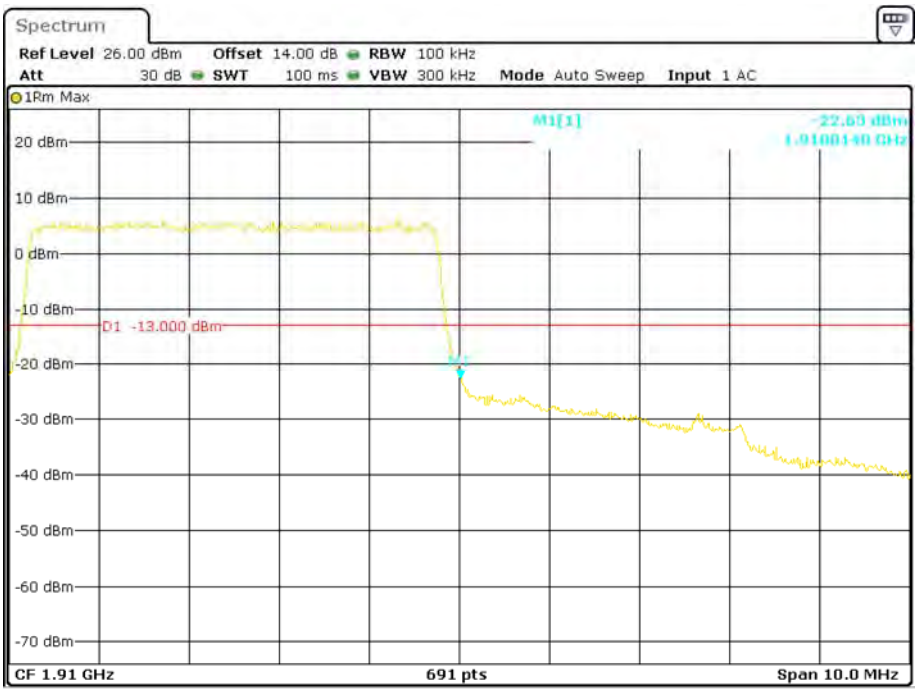
Date: 14.NOV.2017 14:49:28

QPSK (5.0 MHz, FULL RB) - Left Band Edge



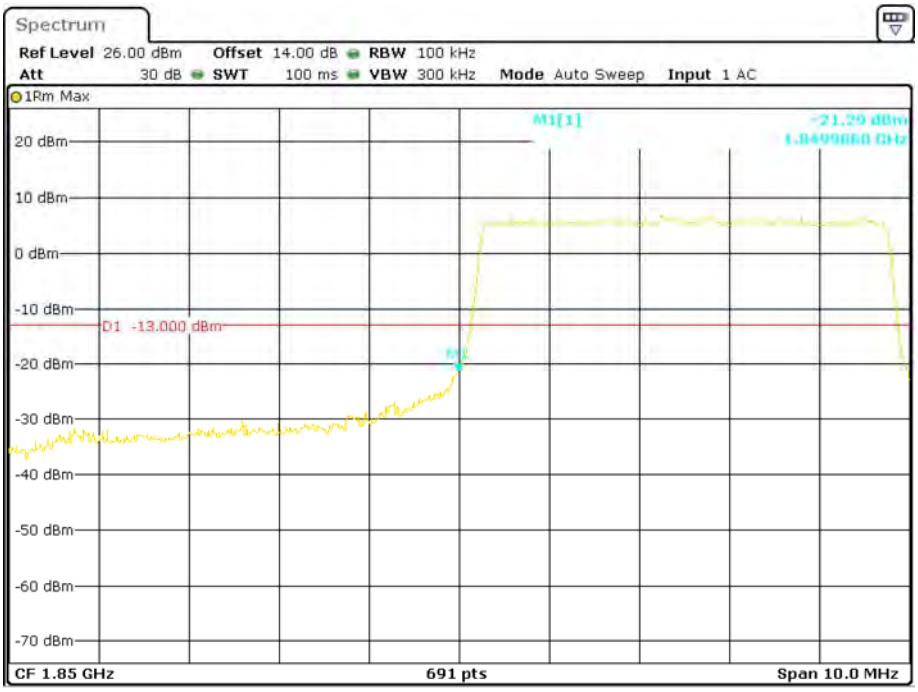
Date: 14.NOV.2017 15:03:54

QPSK (5.0 MHz, FULL RB) - Right Band Edge



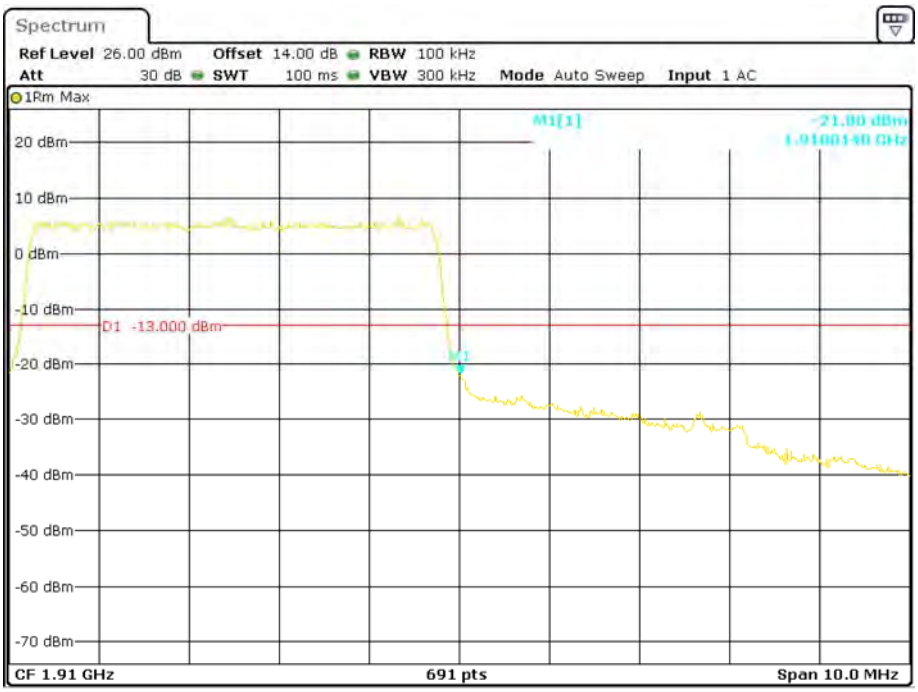
Date: 14.NOV.2017 15:05:26

16-QAM (5.0 MHz, FULL RB) - Left Band Edge



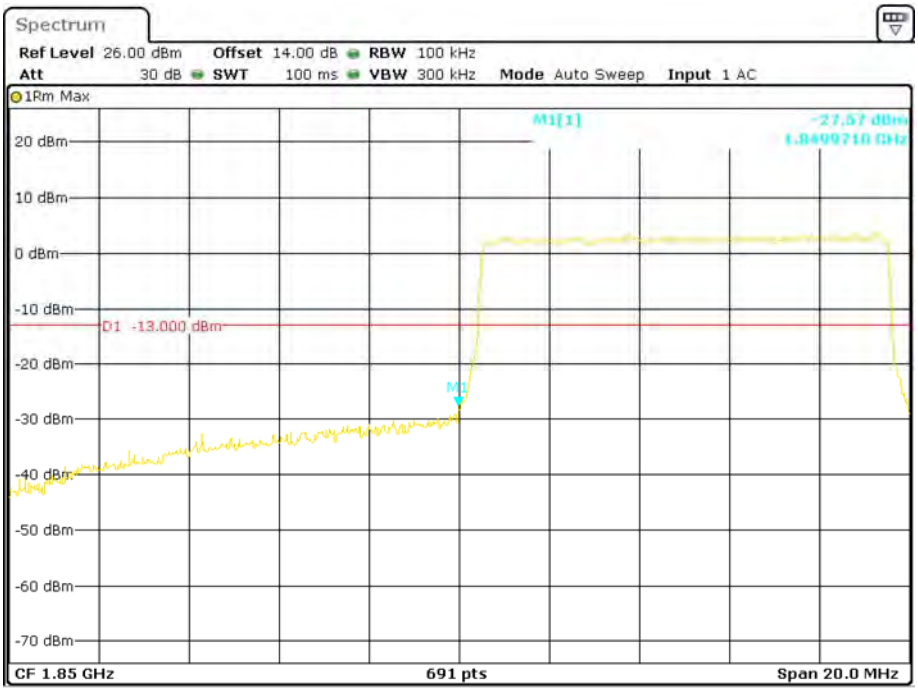
Date: 14.NOV.2017 15:07:38

16-QAM (5.0 MHz, FULL RB) - Right Band Edge



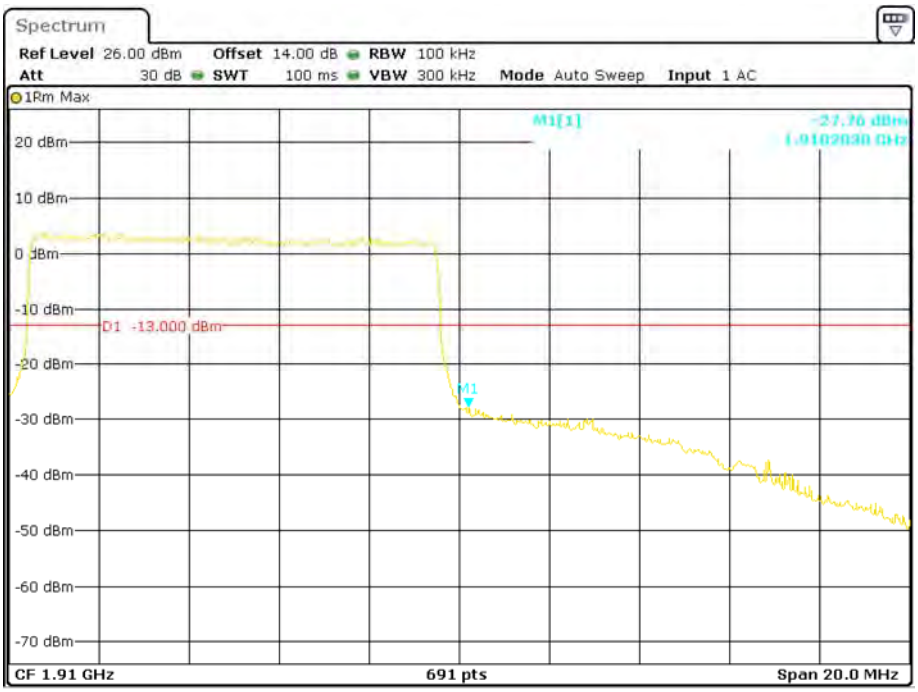
Date: 14.NOV.2017 15:06:03

QPSK (10.0 MHz, FULL RB) - Left Band Edge



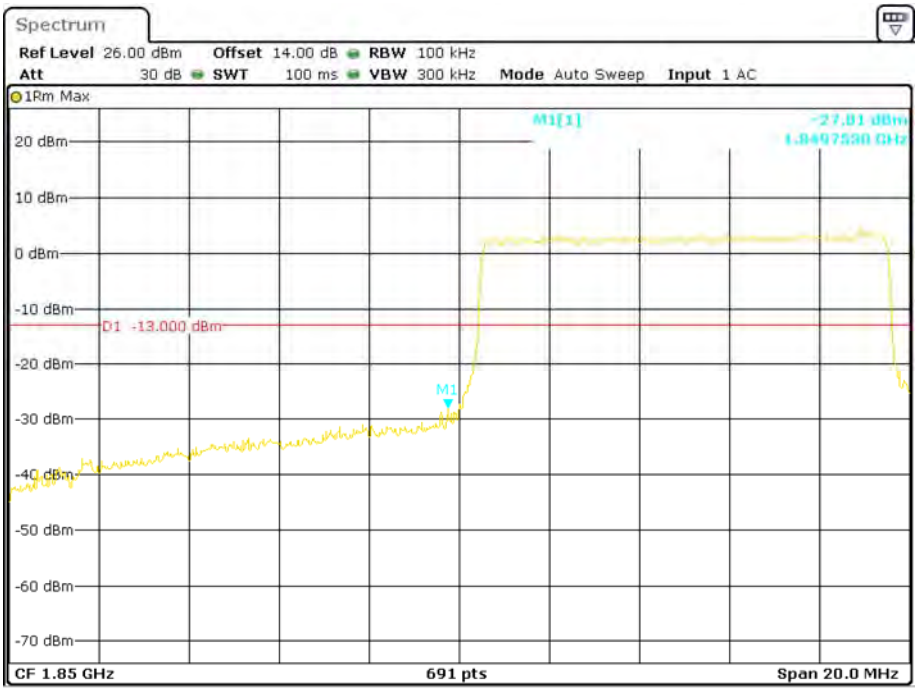
Date: 14.NOV.2017 15:13:12

QPSK (10.0 MHz, FULL RB) - Right Band Edge



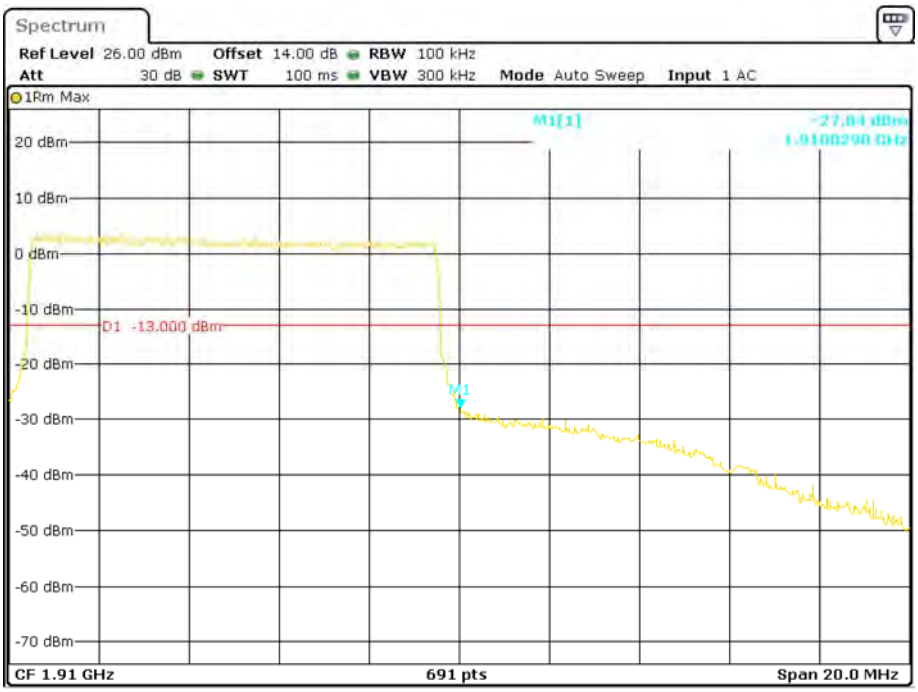
Date: 14.NOV.2017 15:11:58

16-QAM (10.0 MHz, FULL RB) - Left Band Edge



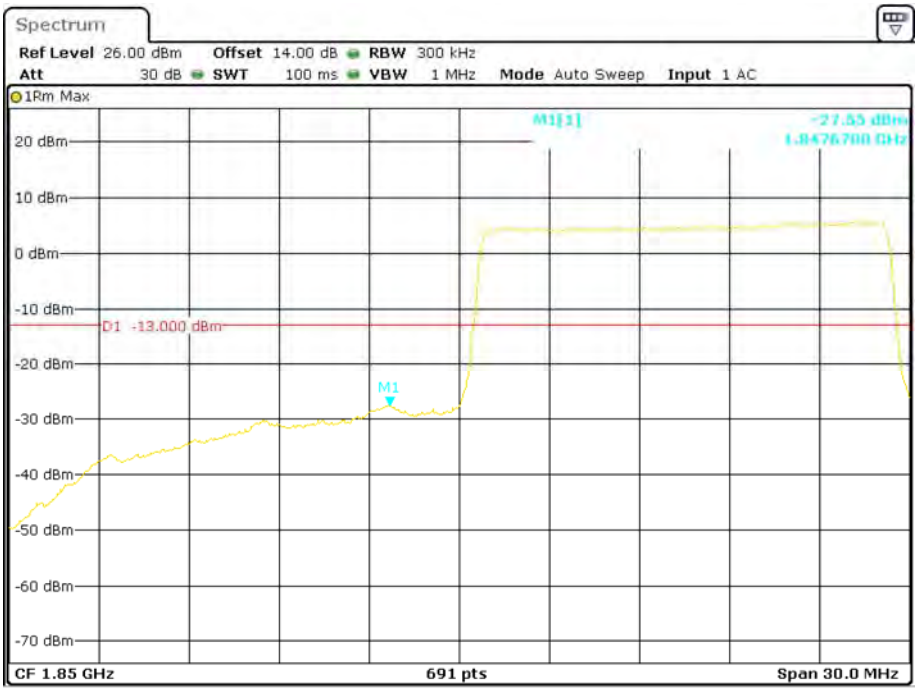
Date: 14.NOV.2017 15:09:29

16-QAM (10.0 MHz, FULL RB) - Right Band Edge



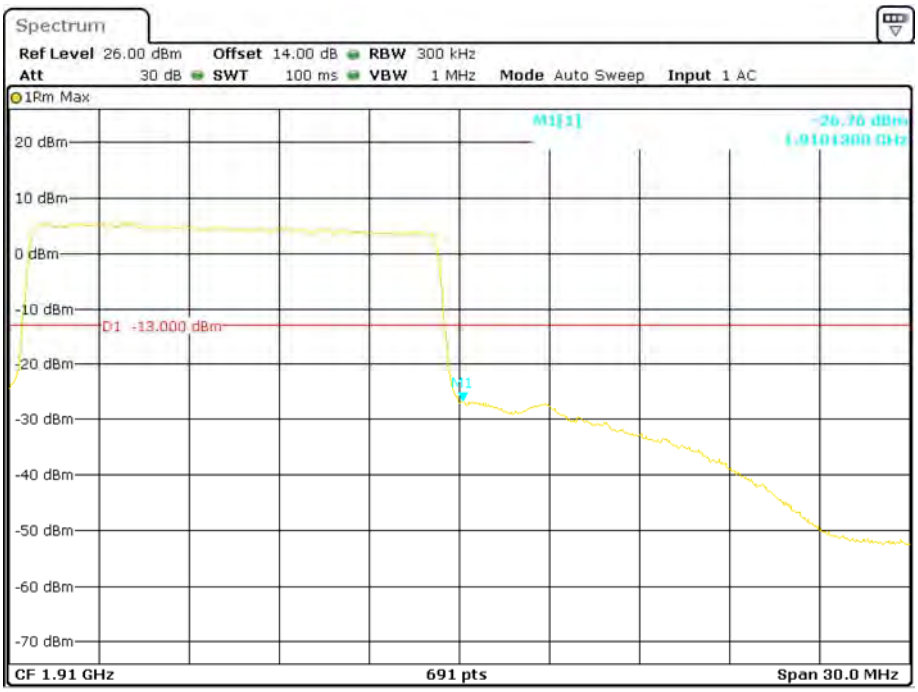
Date: 14.NOV.2017 15:10:50

QPSK (15.0 MHz, FULL RB) - Left Band Edge



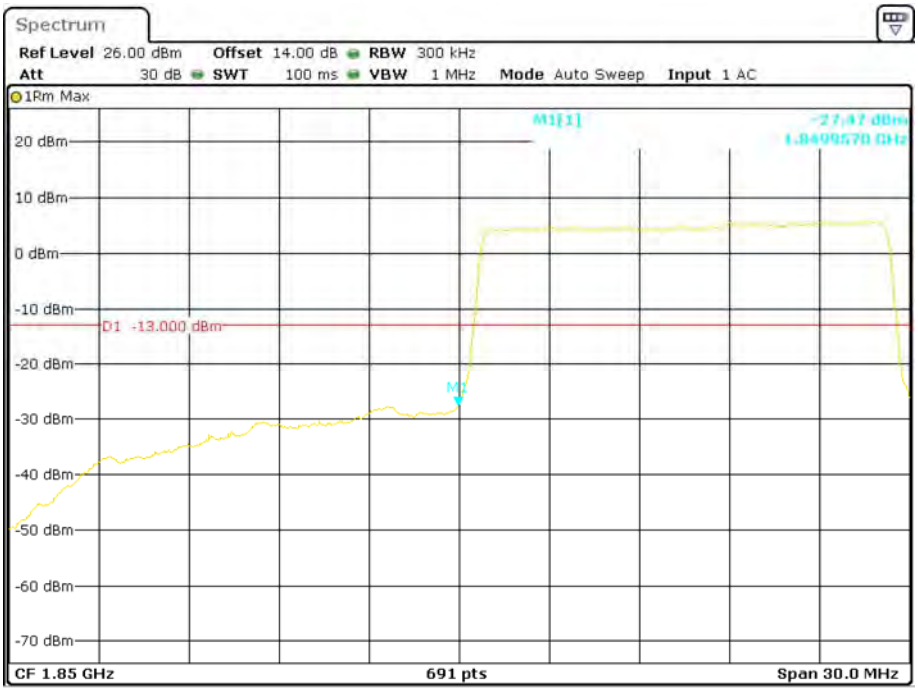
Date: 14.NOV.2017 15:25:05

QPSK (15.0 MHz, FULL RB) - Right Band Edge



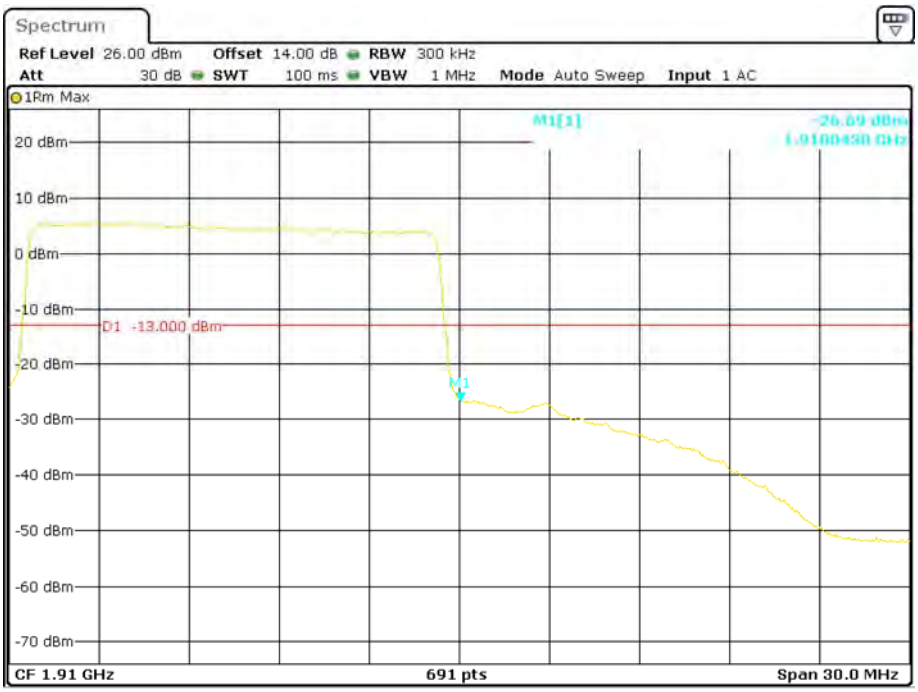
Date: 14.NOV.2017 15:27:54

16-QAM (15.0 MHz, FULL RB) - Left Band Edge



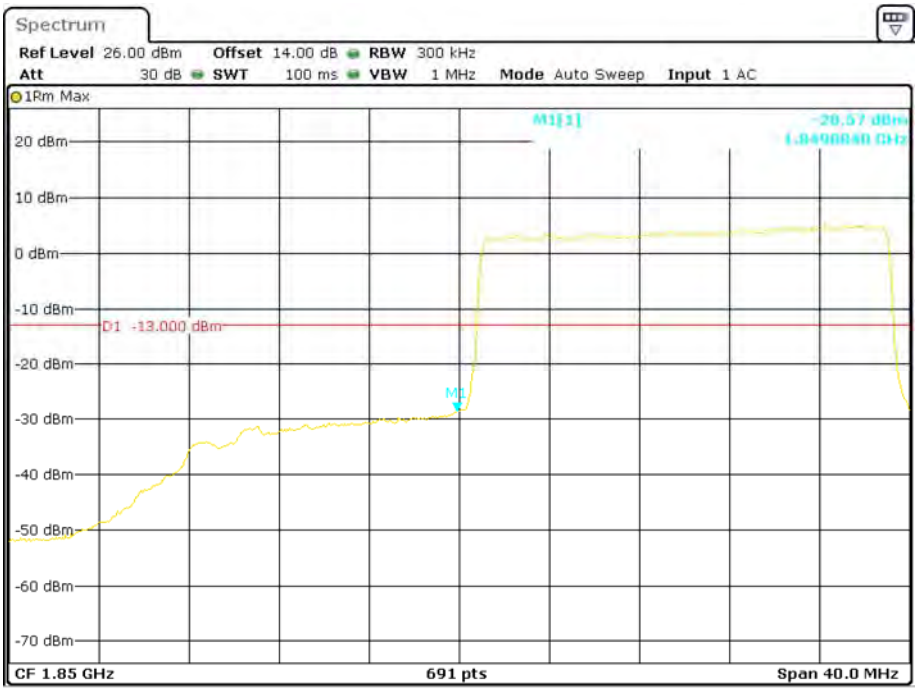
Date: 14.NOV.2017 15:30:47

16-QAM (15.0 MHz, FULL RB) - Right Band Edge



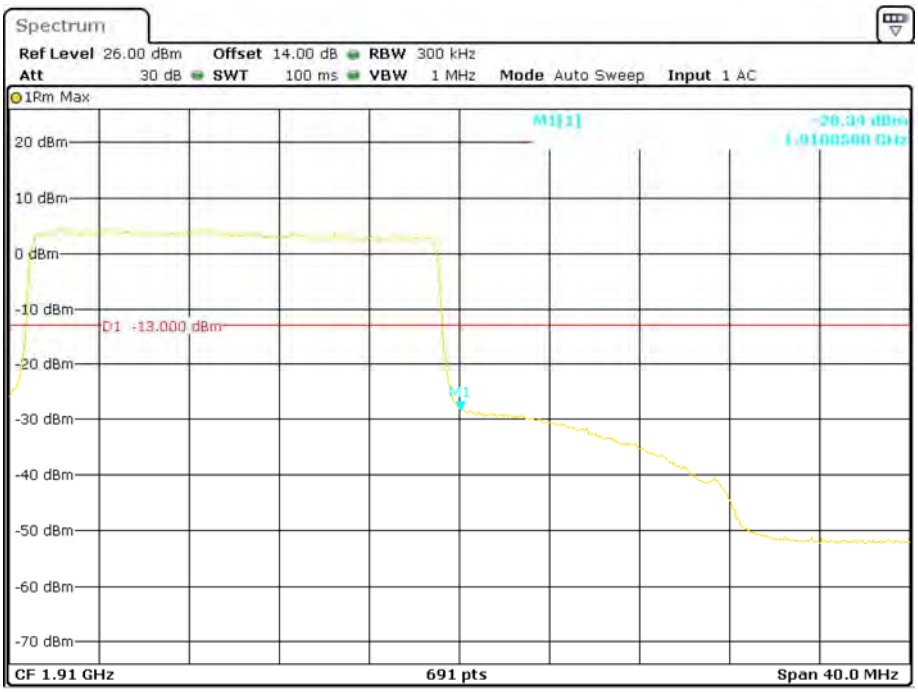
Date: 14.NOV.2017 15:29:18

QPSK (20.0 MHz, FULL RB) - Left Band Edge



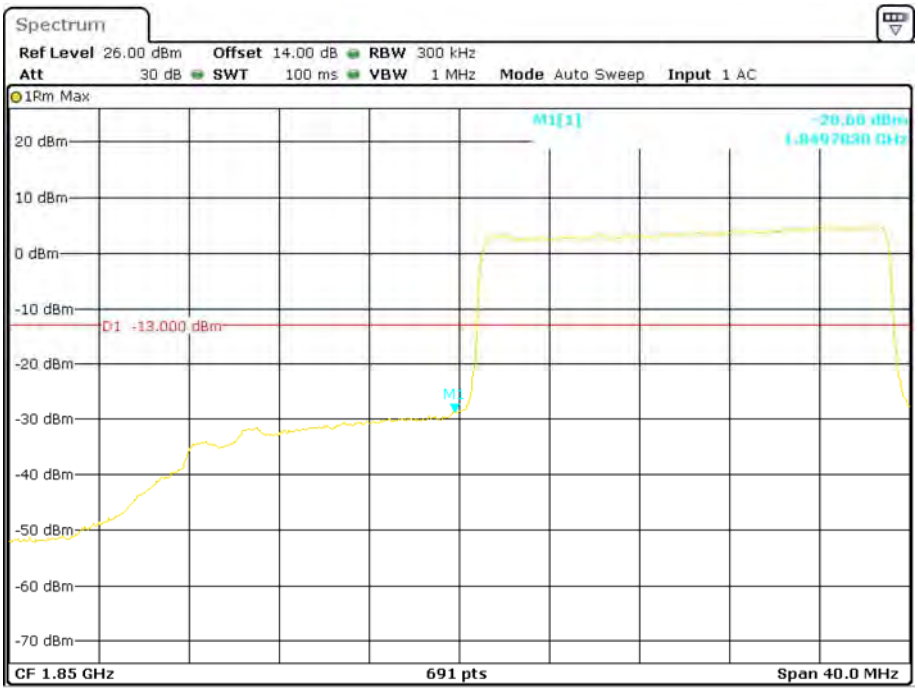
Date: 14.NOV.2017 15:36:02

QPSK (20.0 MHz, FULL RB) - Right Band Edge



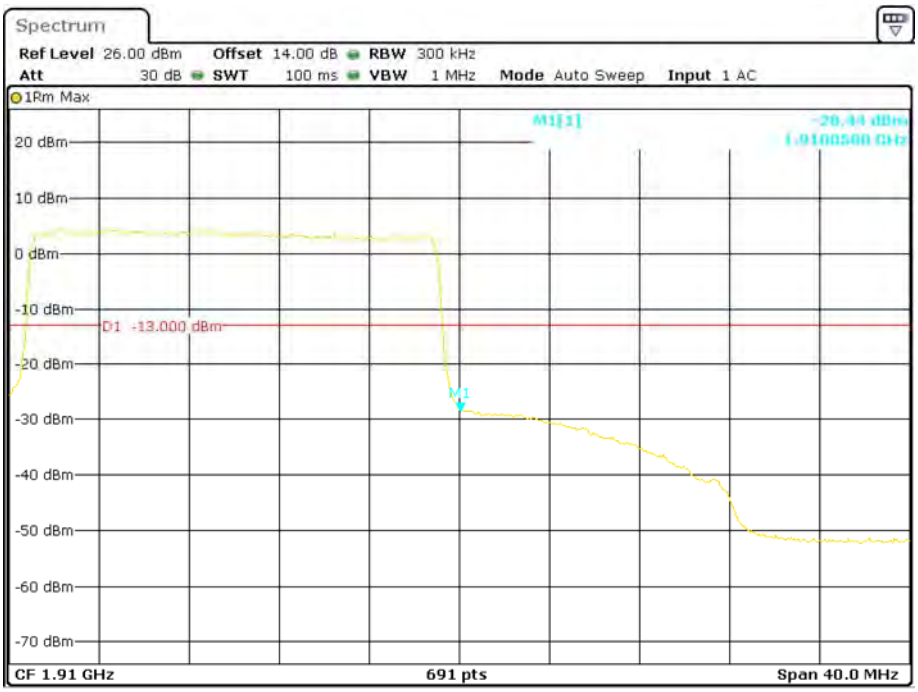
Date: 14.NOV.2017 15:34:27

16-QAM (20.0 MHz, FULL RB) - Left Band Edge



Date: 14.NOV.2017 15:31:54

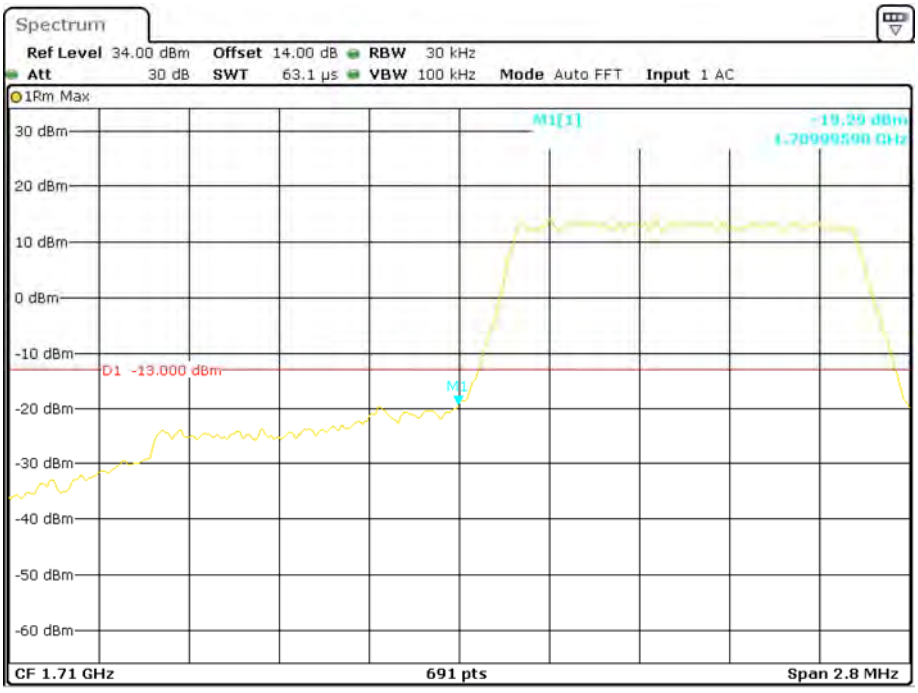
16-QAM (20.0 MHz, FULL RB) - Right Band Edge



Date: 14.NOV.2017 15:33:36

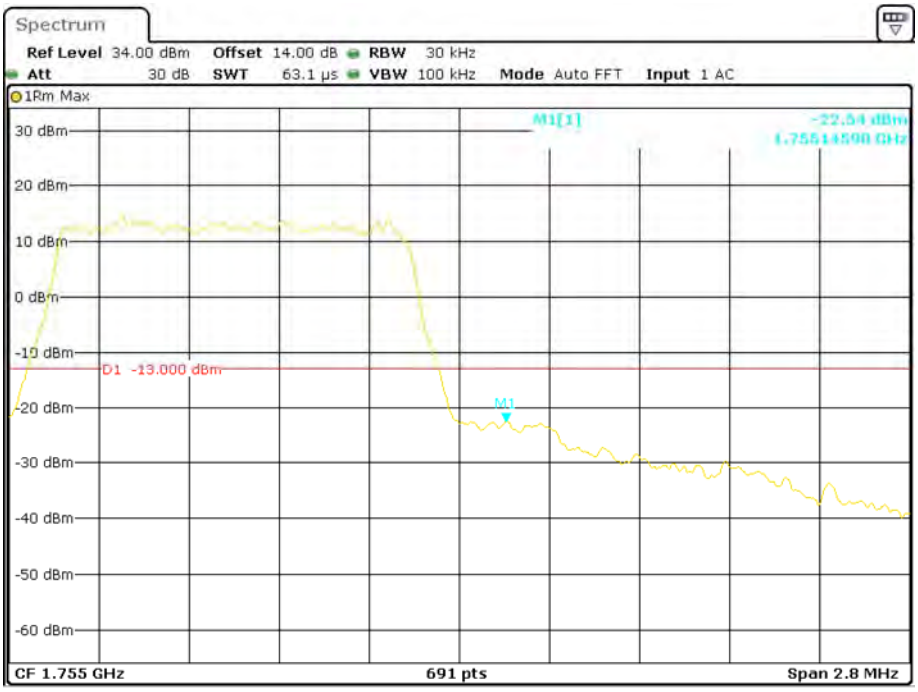
Band 4:

QPSK (1.4 MHz, FULL RB) - Left Band Edge



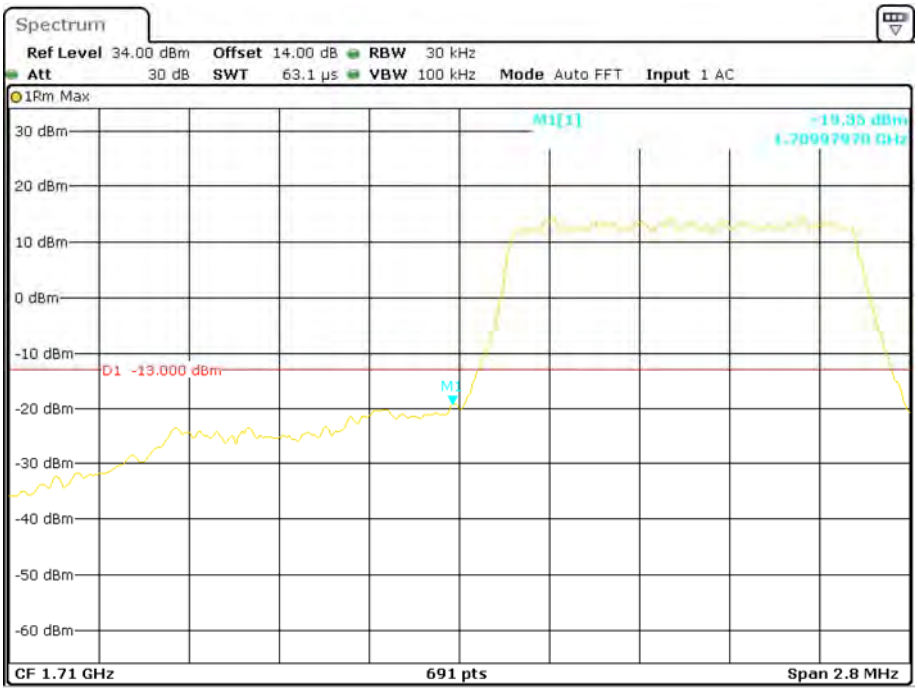
Date: 15.NOV.2017 08:55:09

QPSK (1.4 MHz, FULL RB) - Right Band Edge



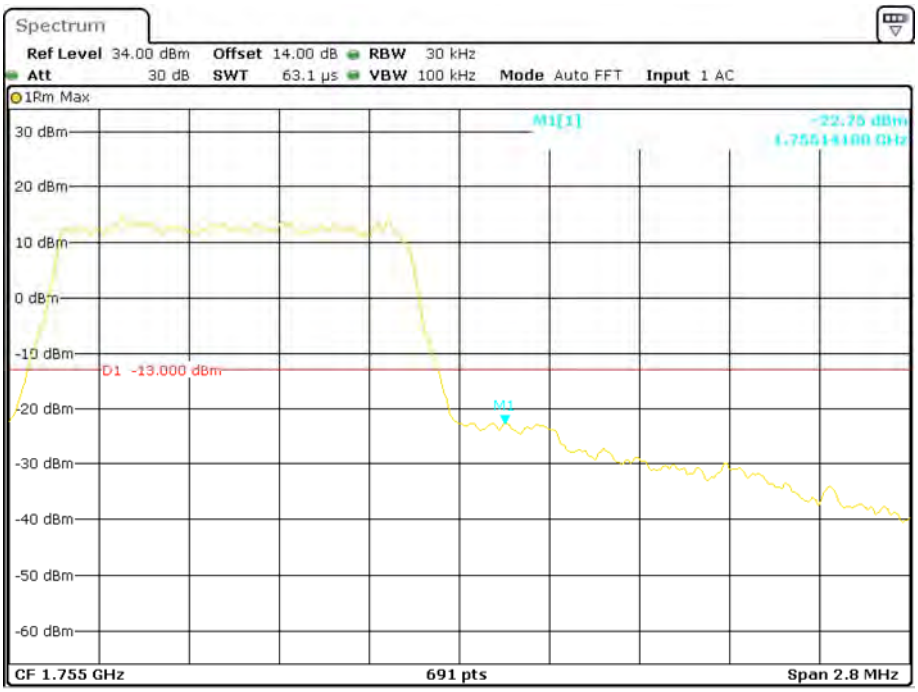
Date: 15.NOV.2017 08:57:03

16-QAM (1.4 MHz, FULL RB) - Left Band Edge



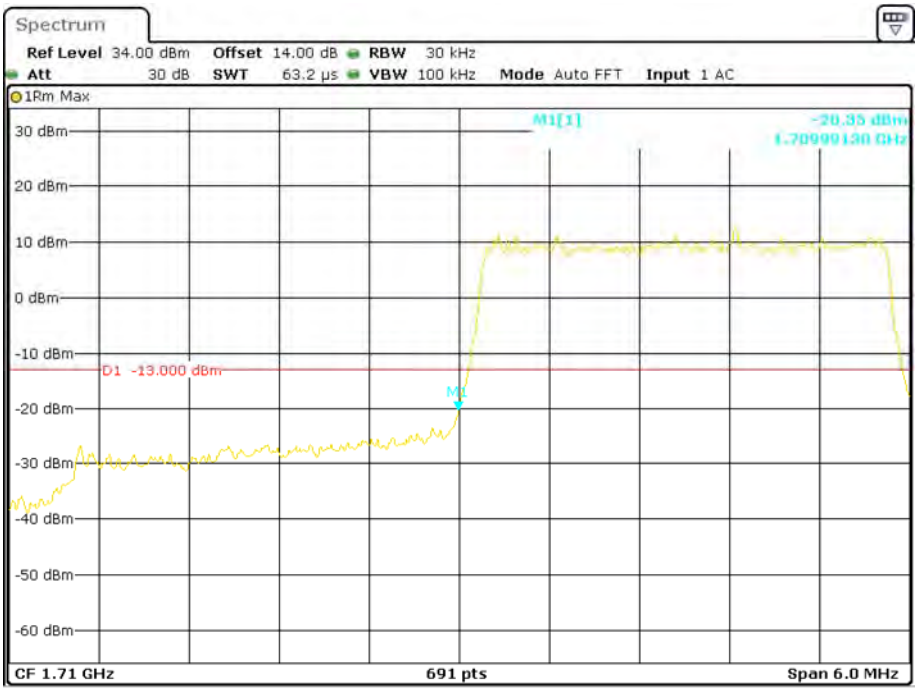
Date: 15.NOV.2017 09:01:40

16-QAM (1.4 MHz, FULL RB) - Right Band Edge



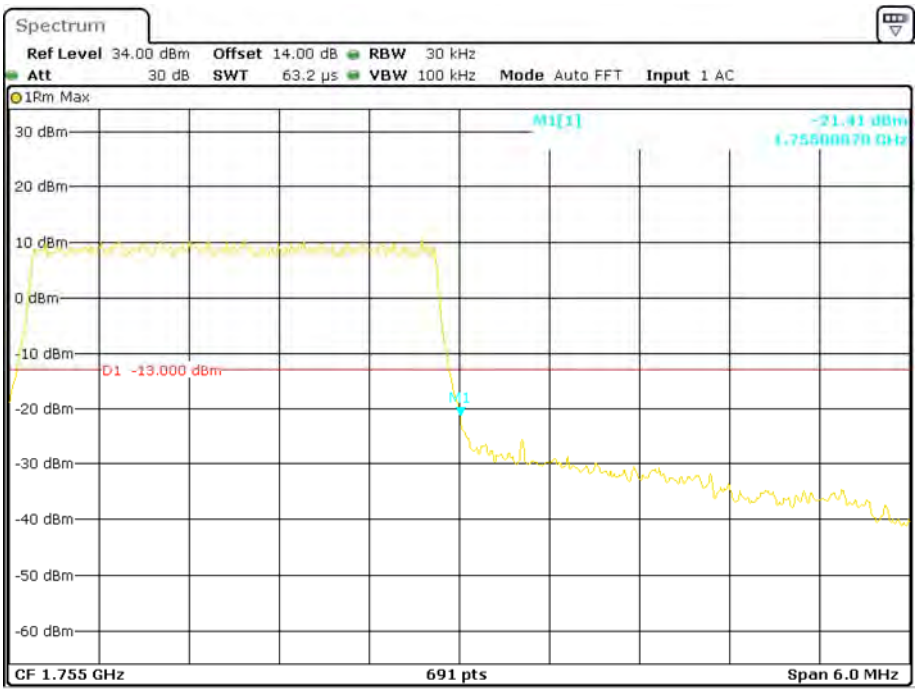
Date: 15.NOV.2017 09:00:50

QPSK (3.0 MHz, FULL RB) - Left Band Edge



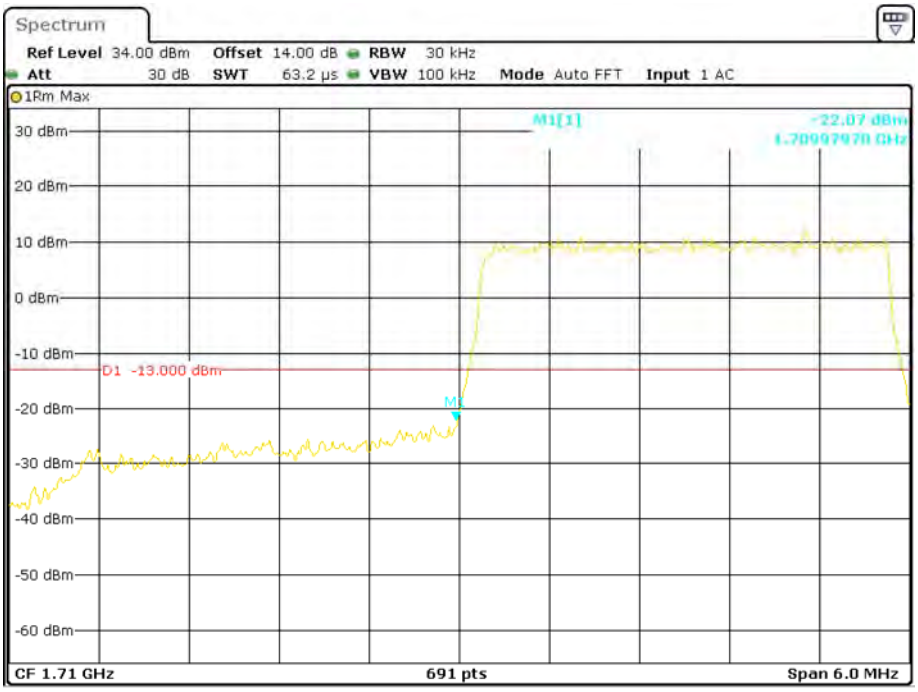
Date: 15.NOV.2017 09:05:05

QPSK (3.0 MHz, FULL RB) - Right Band Edge



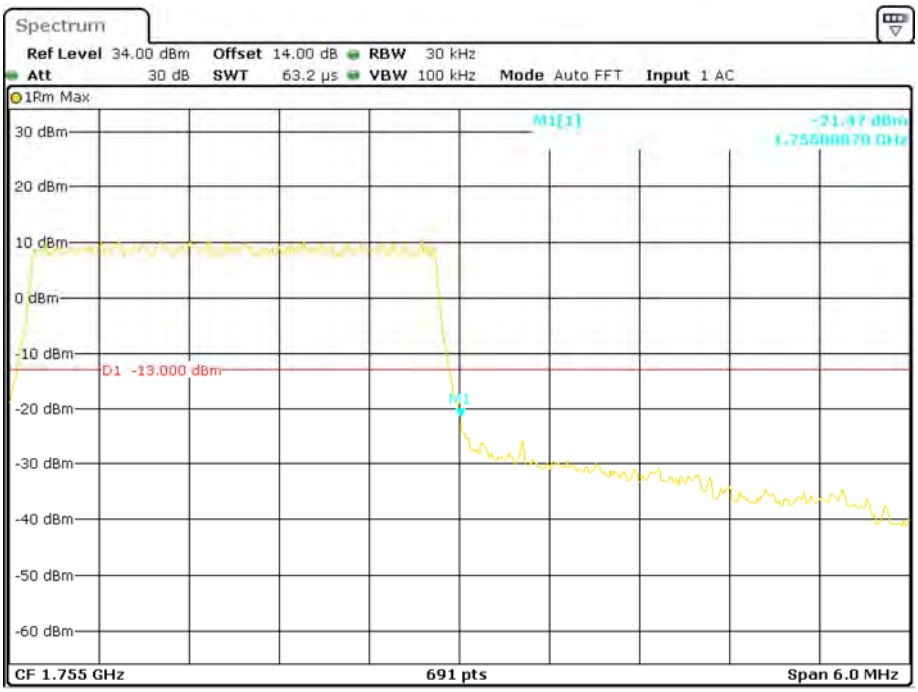
Date: 15.NOV.2017 09:04:11

16-QAM (3.0 MHz, FULL RB) - Left Band Edge



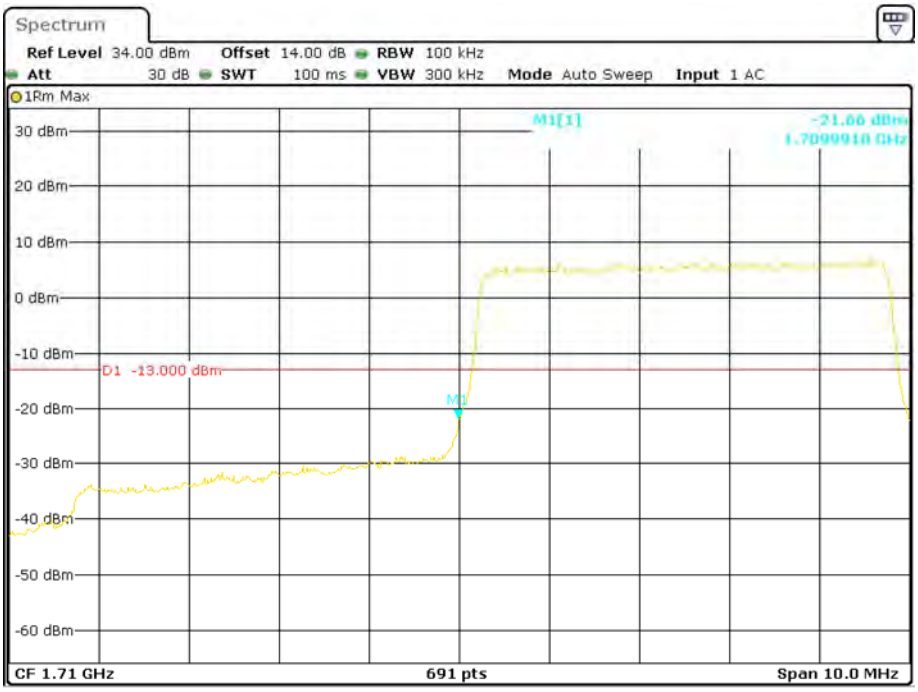
Date: 15.NOV.2017 09:02:47

16-QAM (3.0 MHz, FULL RB) - Right Band Edge



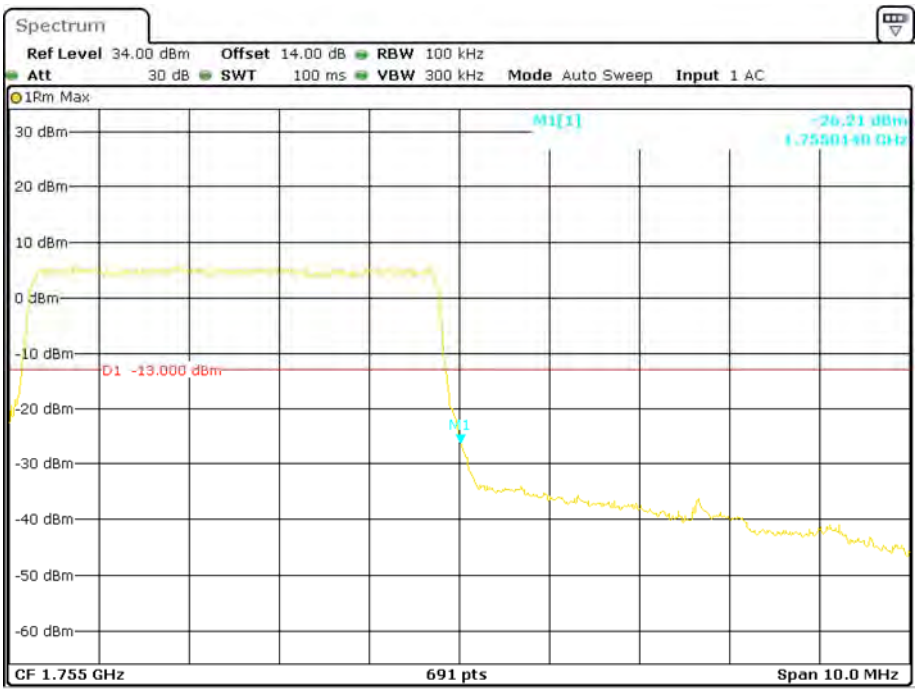
Date: 15.NOV.2017 09:03:42

QPSK (5.0 MHz, FULL RB) - Left Band Edge



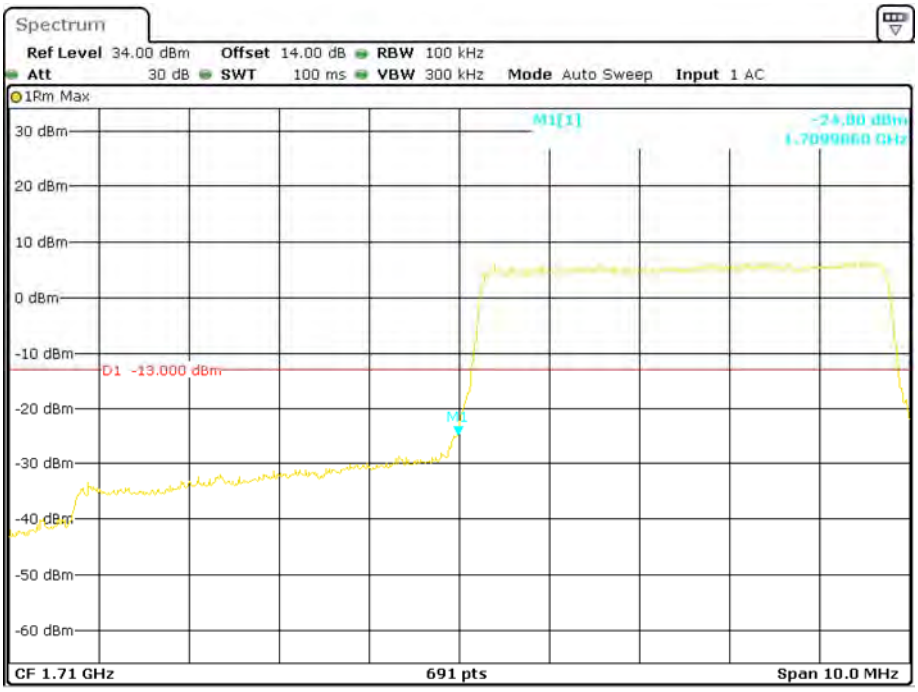
Date: 15.NOV.2017 09:11:38

QPSK (5.0 MHz, FULL RB) - Right Band Edge



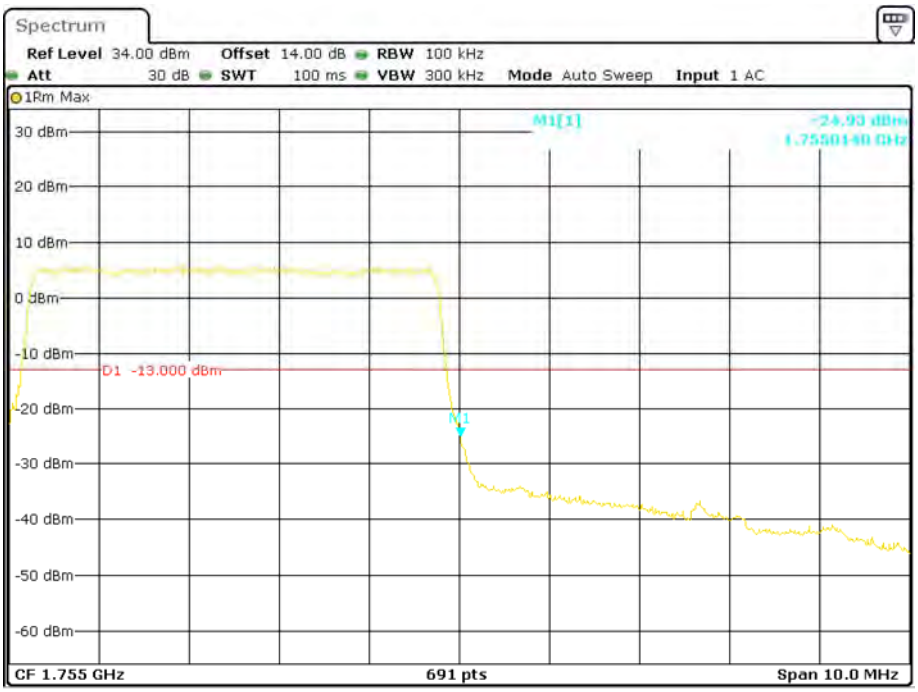
Date: 15.NOV.2017 09:12:30

16-QAM (5.0 MHz, FULL RB) - Left Band Edge



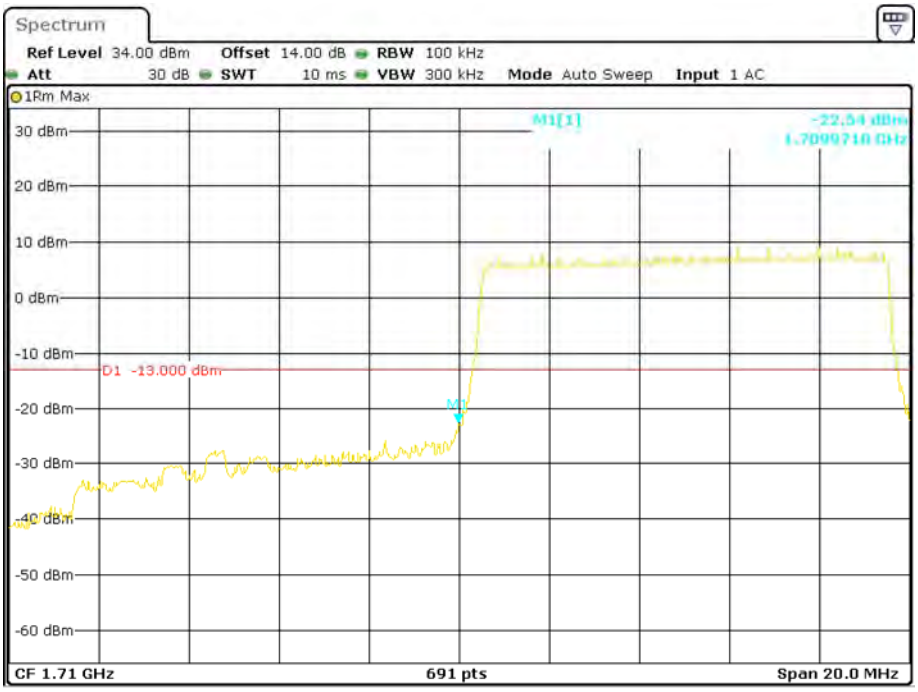
Date: 15.NOV.2017 09:13:59

16-QAM (5.0 MHz, FULL RB) - Right Band Edge



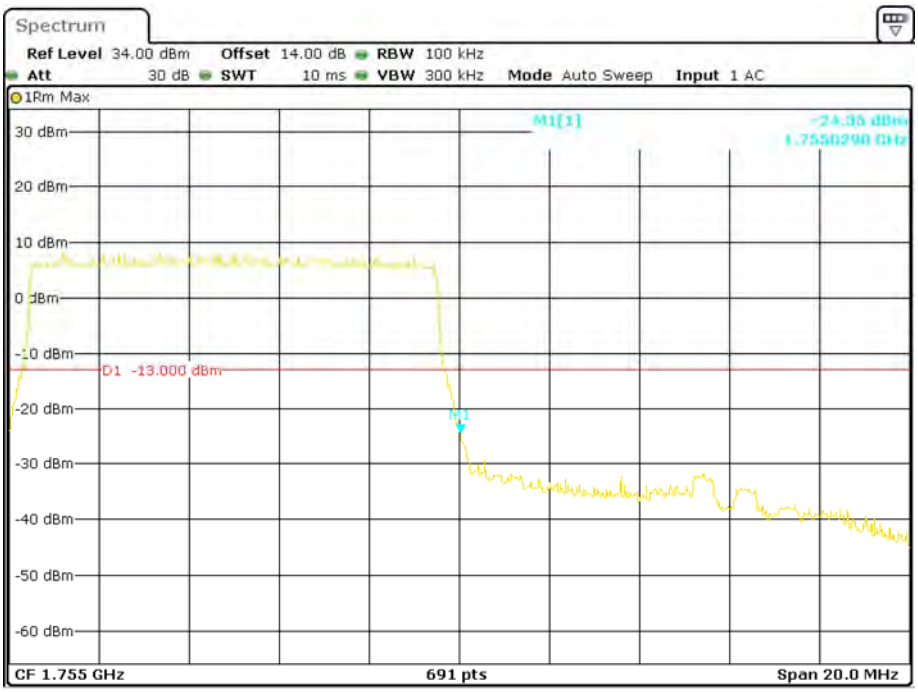
Date: 15.NOV.2017 09:13:05

QPSK (10.0 MHz, FULL RB) - Left Band Edge



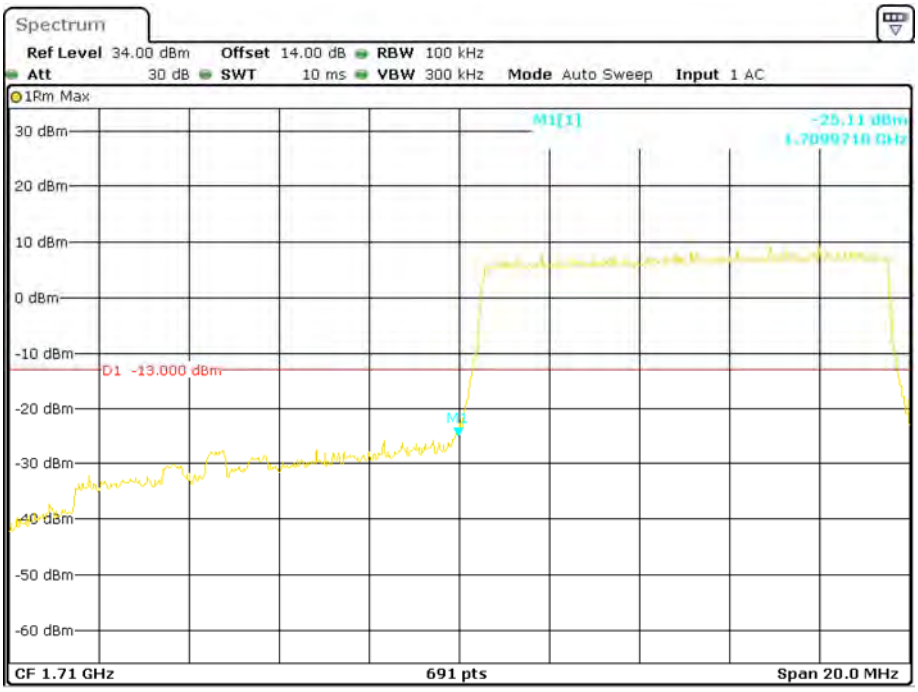
Date: 15.NOV.2017 09:17:57

QPSK (10.0 MHz, FULL RB) - Right Band Edge



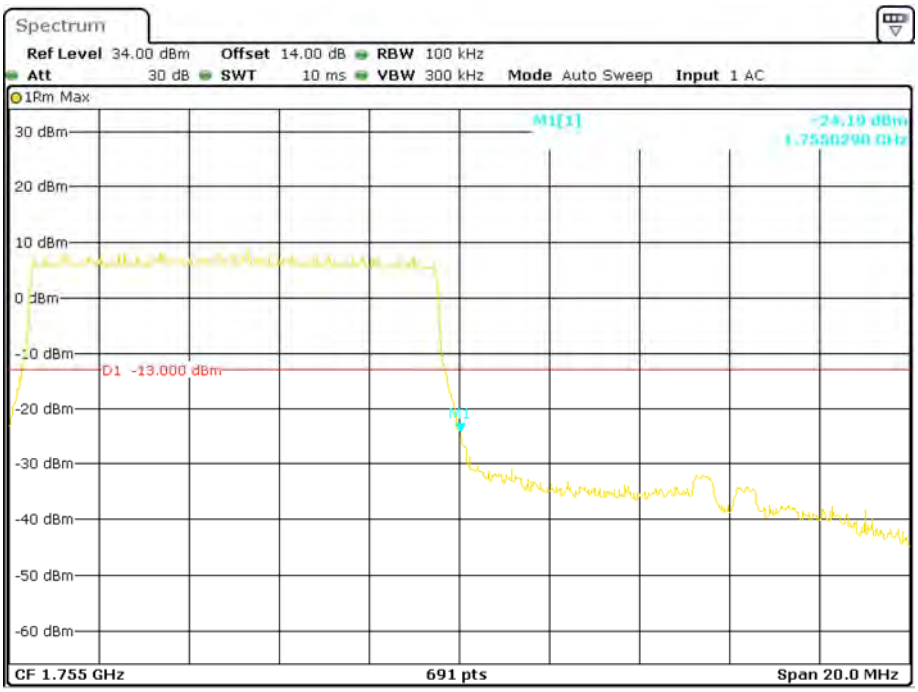
Date: 15.NOV.2017 09:17:07

16-QAM (10.0 MHz, FULL RB) - Left Band Edge



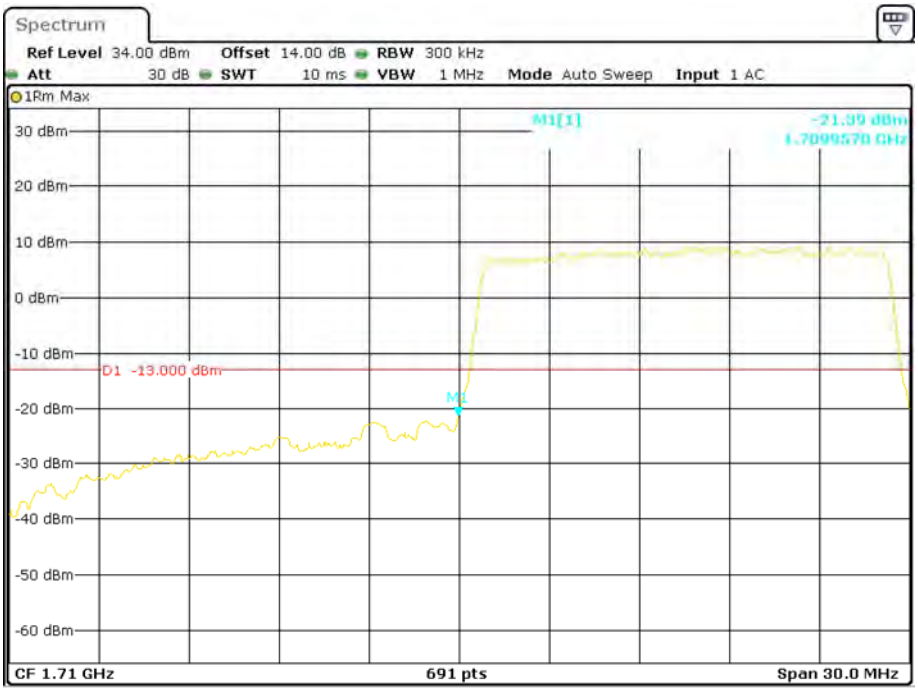
Date: 15.NOV.2017 09:18:36

16-QAM (10.0 MHz, FULL RB) - Right Band Edge



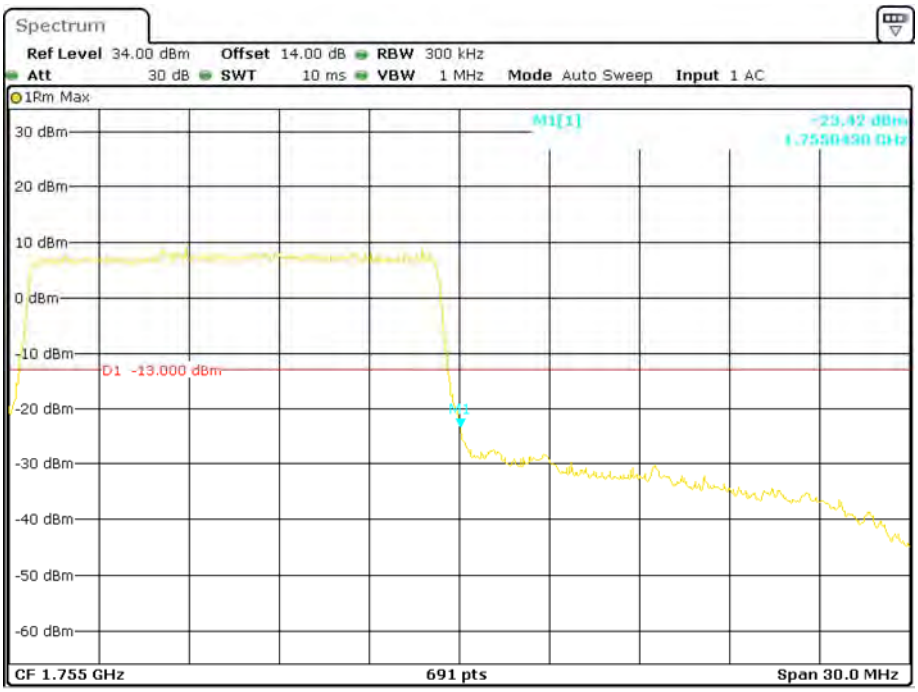
Date: 15.NOV.2017 09:16:26

QPSK (15.0 MHz, FULL RB) - Left Band Edge



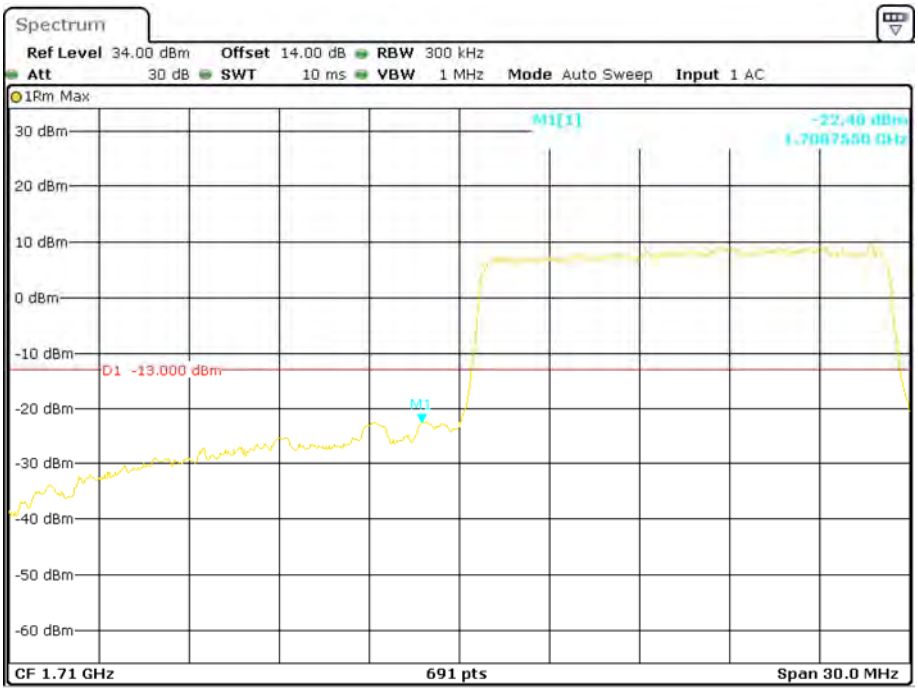
Date: 15.NOV.2017 09:33:11

QPSK (15.0 MHz, FULL RB) - Right Band Edge



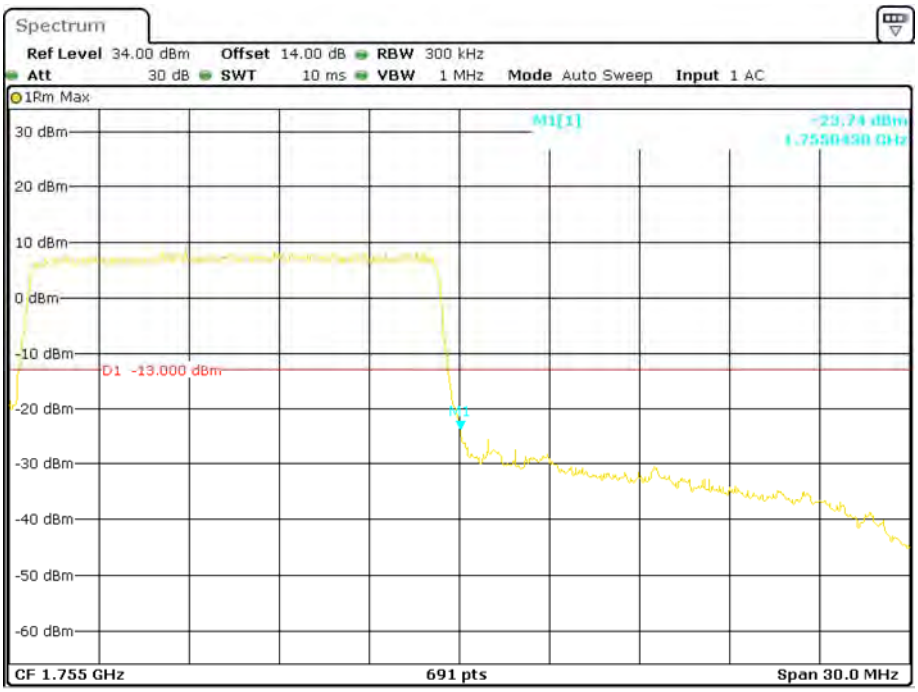
Date: 15.NOV.2017 09:31:52

16-QAM (15.0 MHz, FULL RB) - Left Band Edge



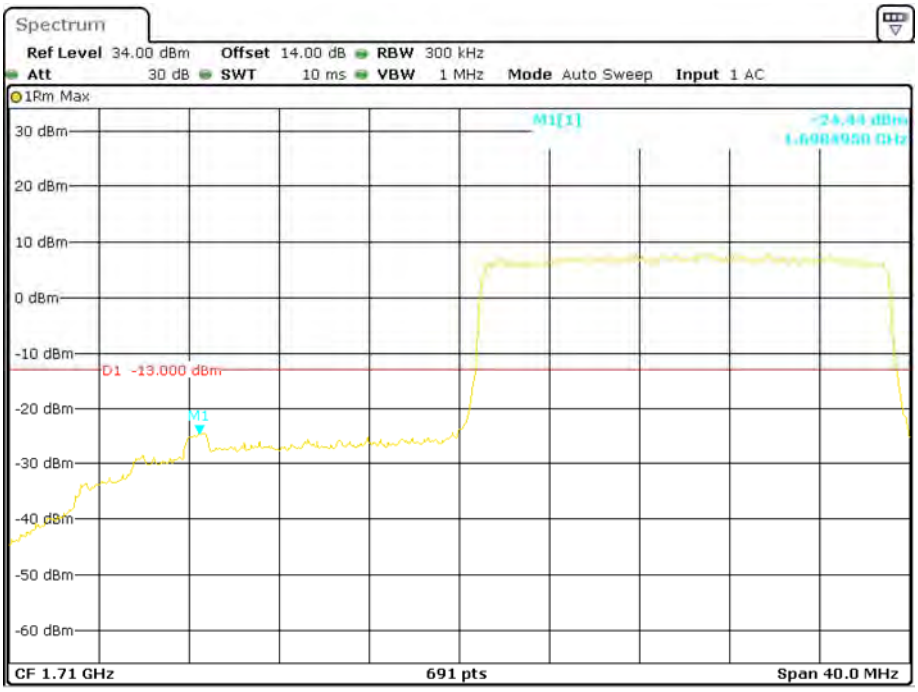
Date: 15.NOV.2017 09:30:11

16-QAM (15.0 MHz, FULL RB) - Right Band Edge



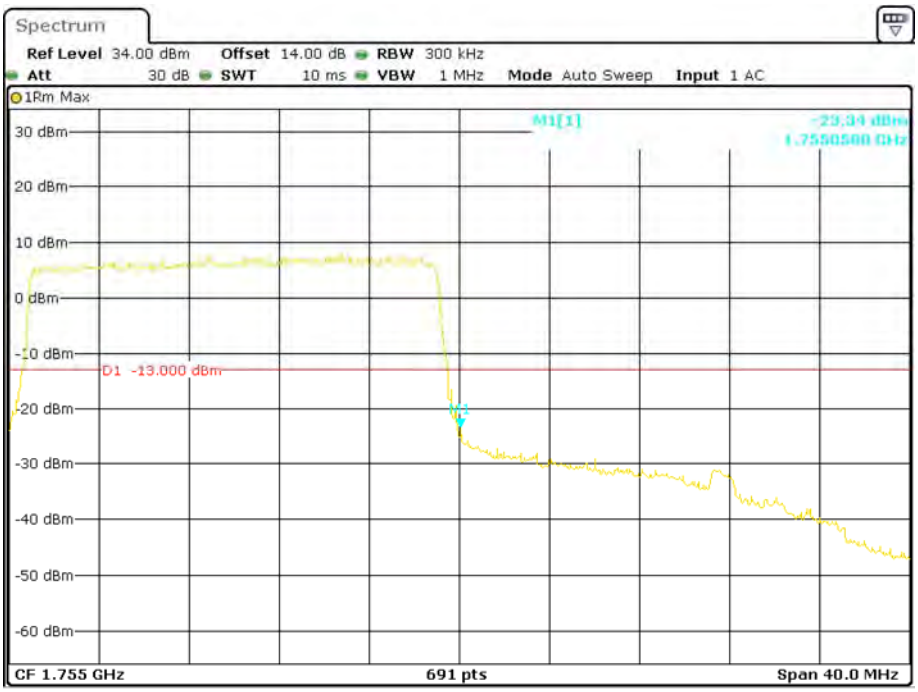
Date: 15.NOV.2017 09:31:11

QPSK (20.0 MHz, FULL RB) - Left Band Edge



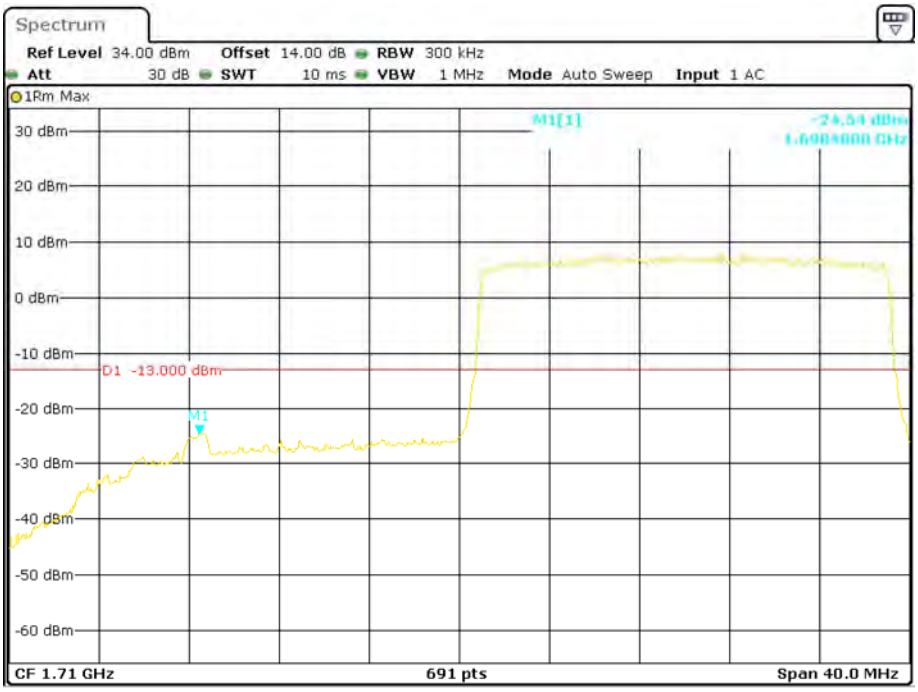
Date: 15.NOV.2017 09:34:41

QPSK (20.0 MHz, FULL RB) - Right Band Edge



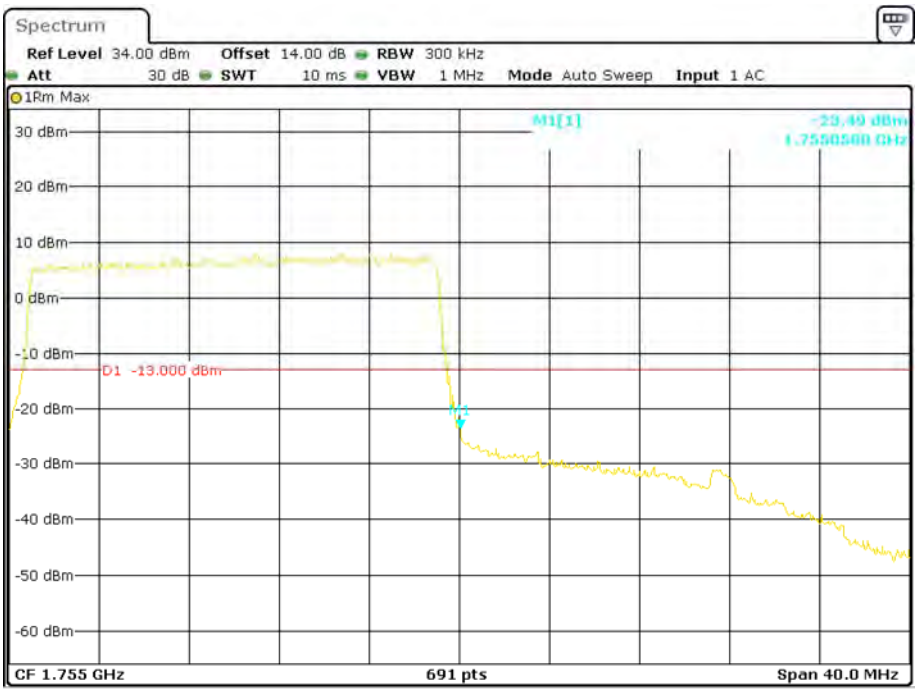
Date: 15.NOV.2017 09:35:15

16-QAM (20.0 MHz, FULL RB) - Left Band Edge



Date: 15.NOV.2017 09:36:49

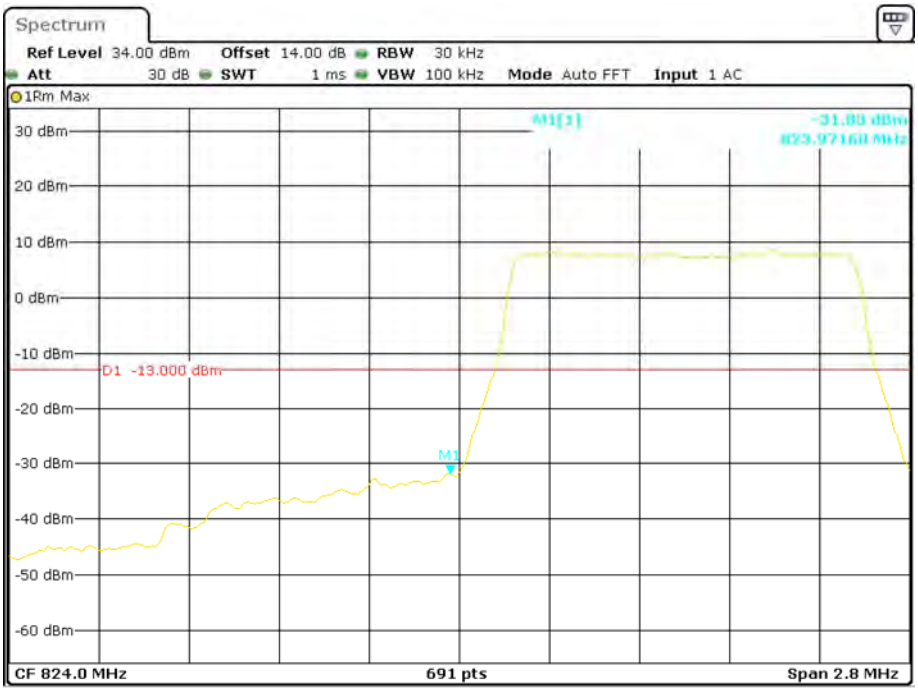
16-QAM (20.0 MHz, FULL RB) - Right Band Edge



Date: 15.NOV.2017 09:35:46

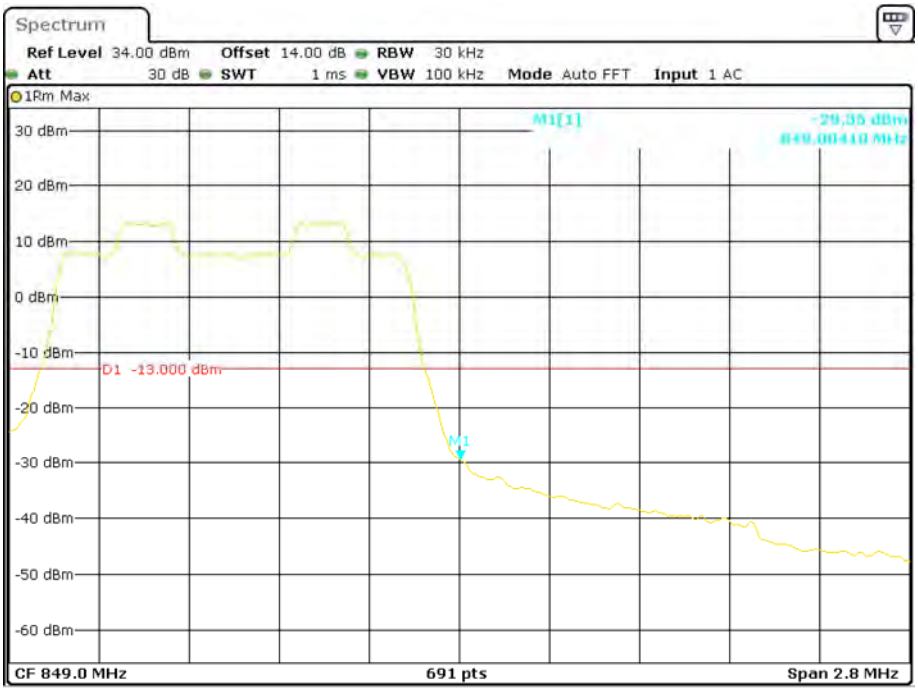
Band 5:

QPSK (1.4 MHz, FULL RB) - Left Band Edge



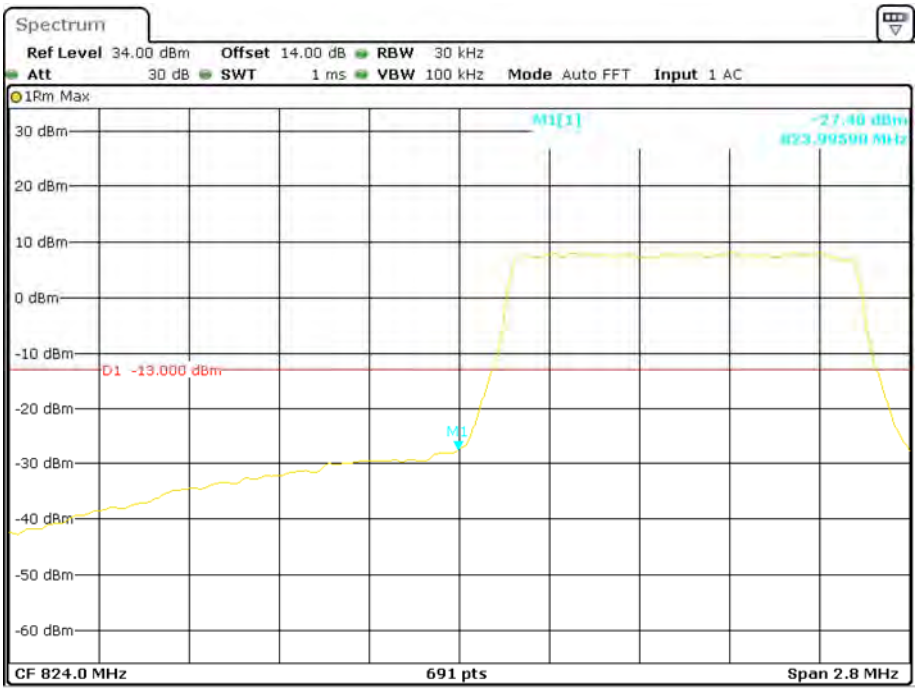
Date: 15.NOV.2017 09:43:48

QPSK (1.4 MHz, FULL RB) - Right Band Edge



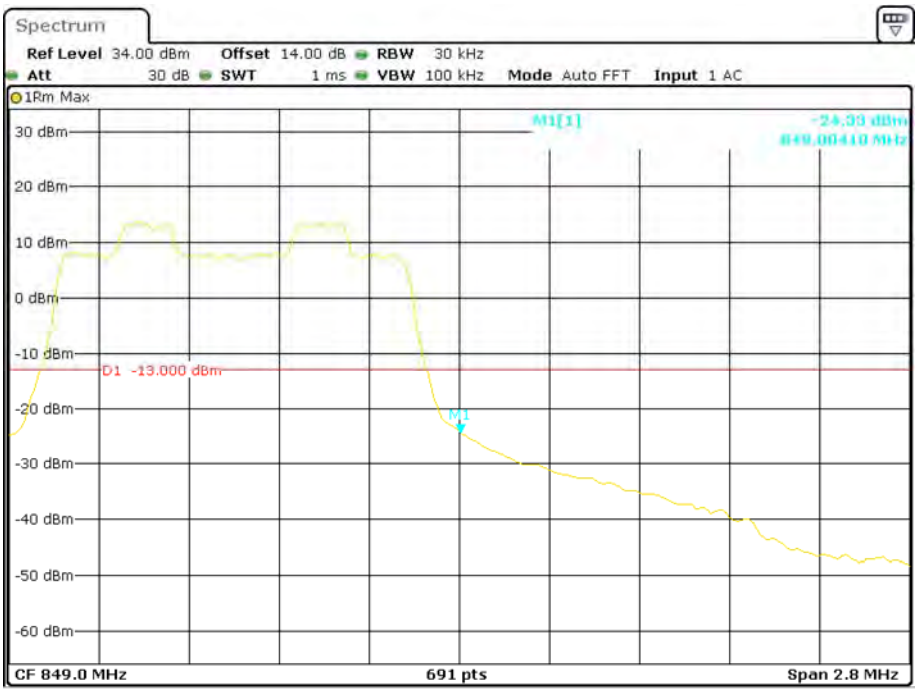
Date: 15.NOV.2017 09:42:45

16-QAM (1.4 MHz, FULL RB) - Left Band Edge



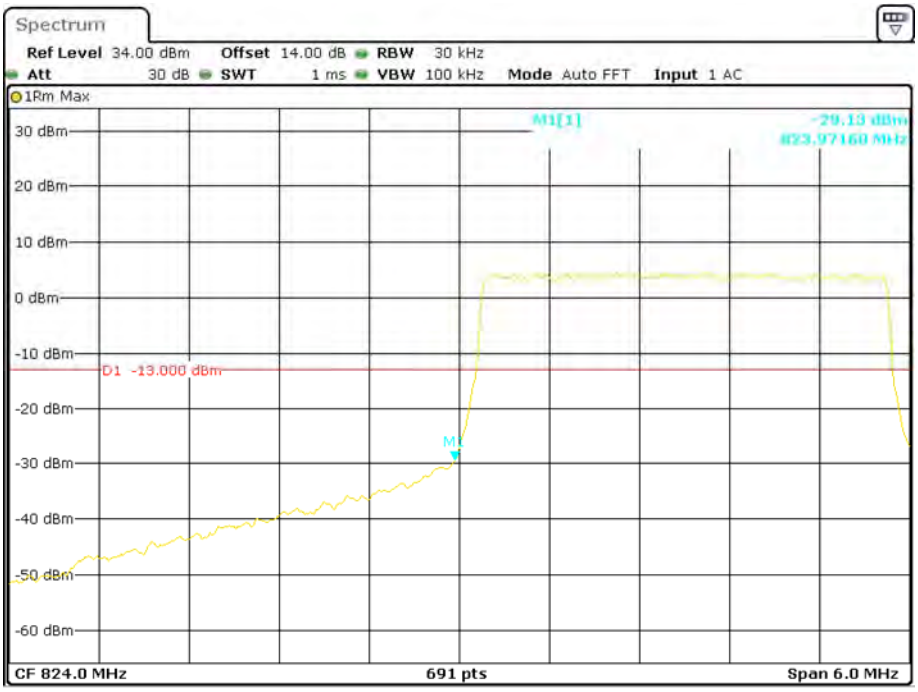
Date: 15.NOV.2017 09:38:46

16-QAM (1.4 MHz, FULL RB) - Right Band Edge



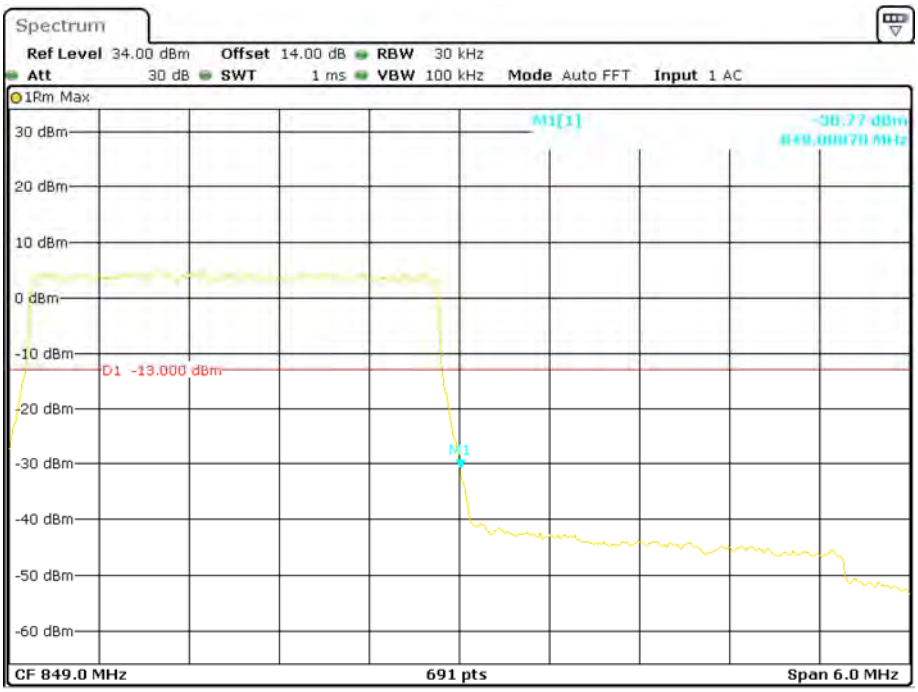
Date: 15.NOV.2017 09:42:00

QPSK (3.0 MHz, FULL RB) - Left Band Edge



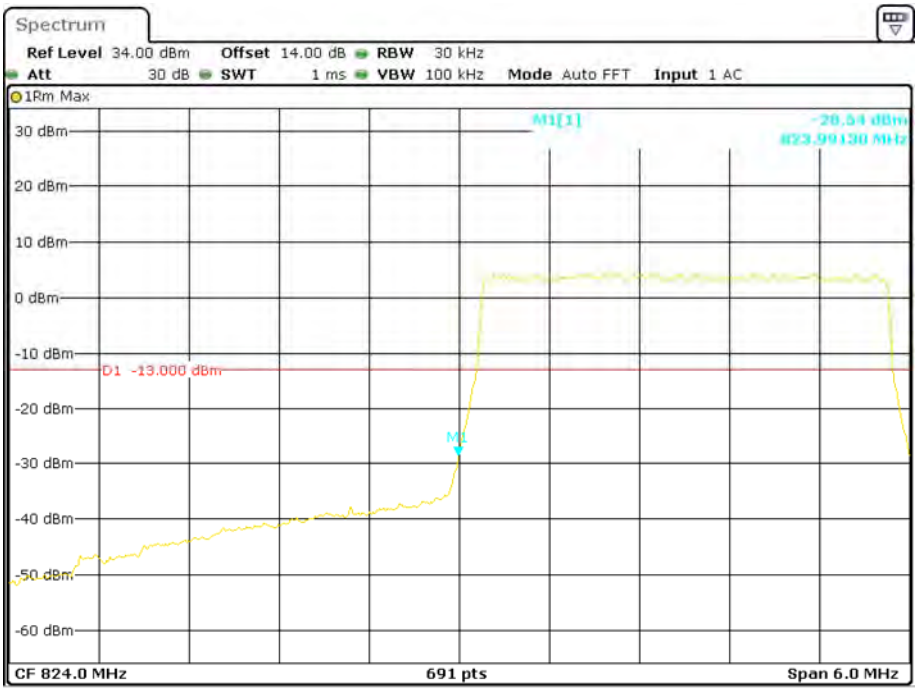
Date: 15.NOV.2017 09:44:47

QPSK (3.0 MHz, FULL RB) - Right Band Edge



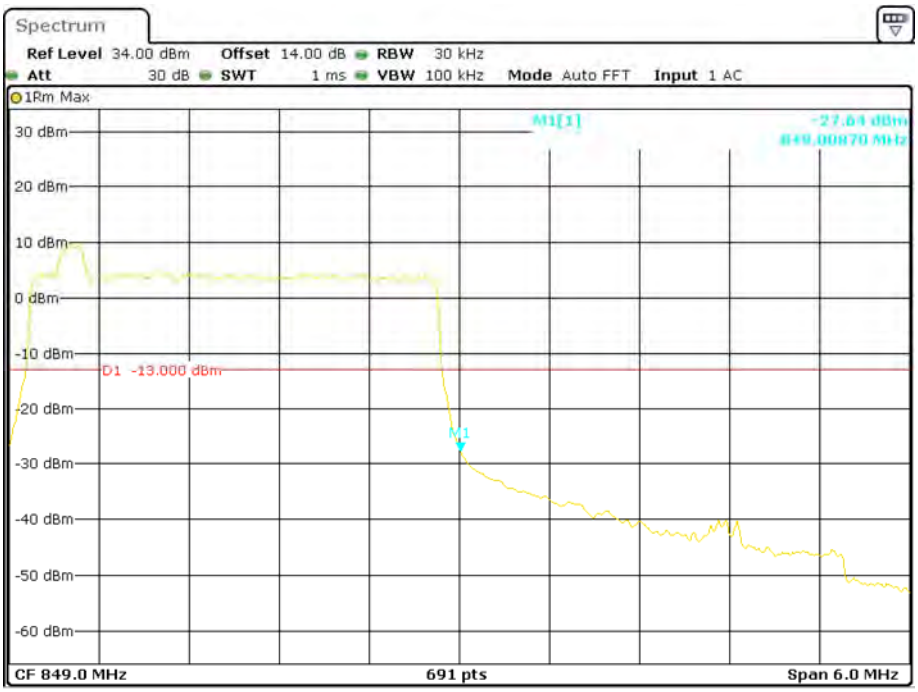
Date: 15.NOV.2017 09:45:28

16-QAM (3.0 MHz, FULL RB) - Left Band Edge



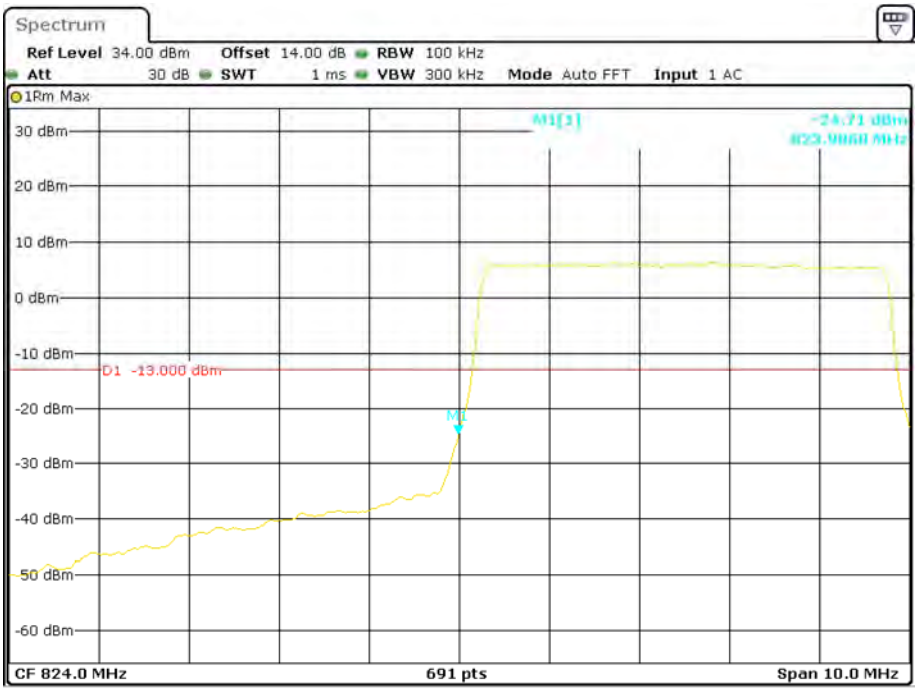
Date: 15.NOV.2017 09:47:19

16-QAM (3.0 MHz, FULL RB) - Right Band Edge



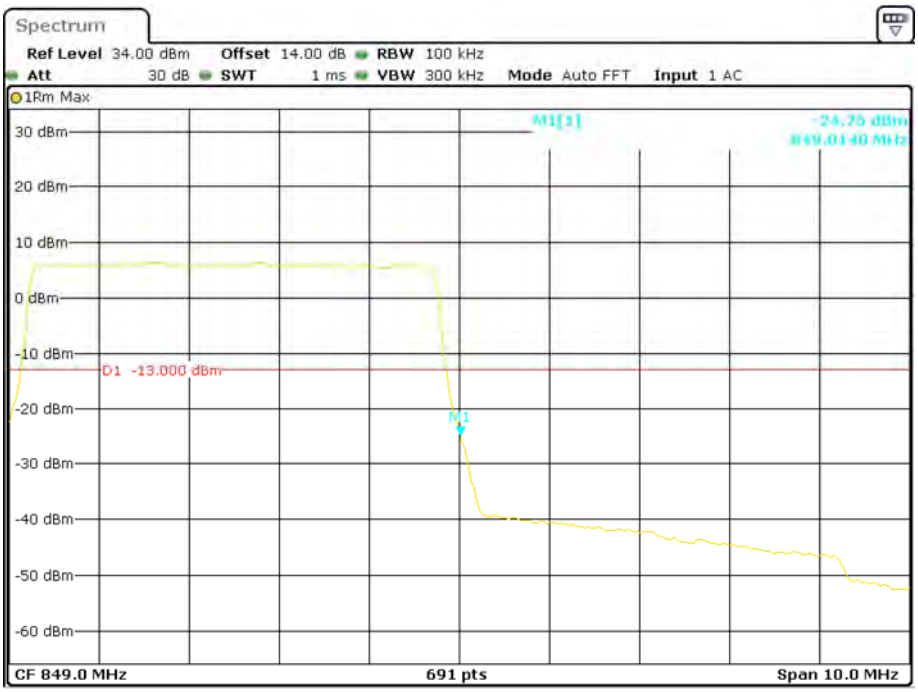
Date: 15.NOV.2017 09:45:58

QPSK (5.0 MHz, FULL RB) - Left Band Edge



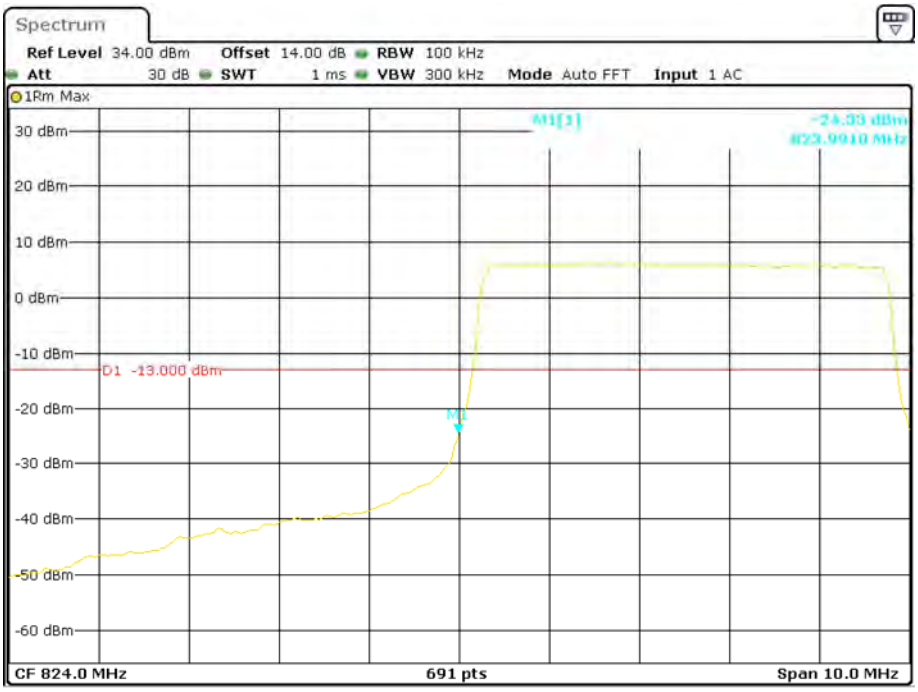
Date: 15.NOV.2017 09:57:10

QPSK (5.0 MHz, FULL RB) - Right Band Edge



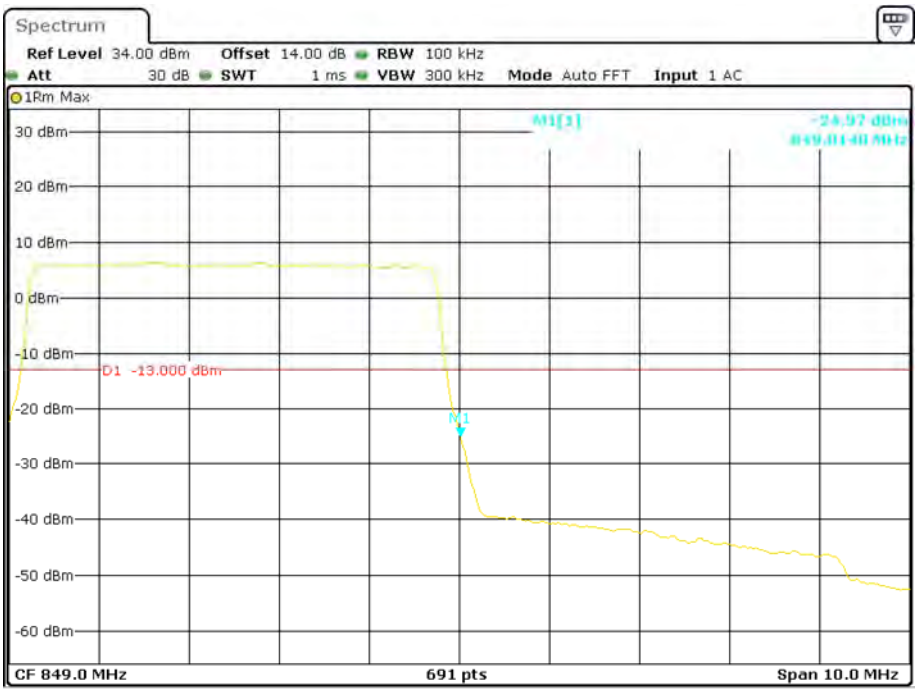
Date: 15.NOV.2017 09:56:34

16-QAM (5.0 MHz, FULL RB) - Left Band Edge



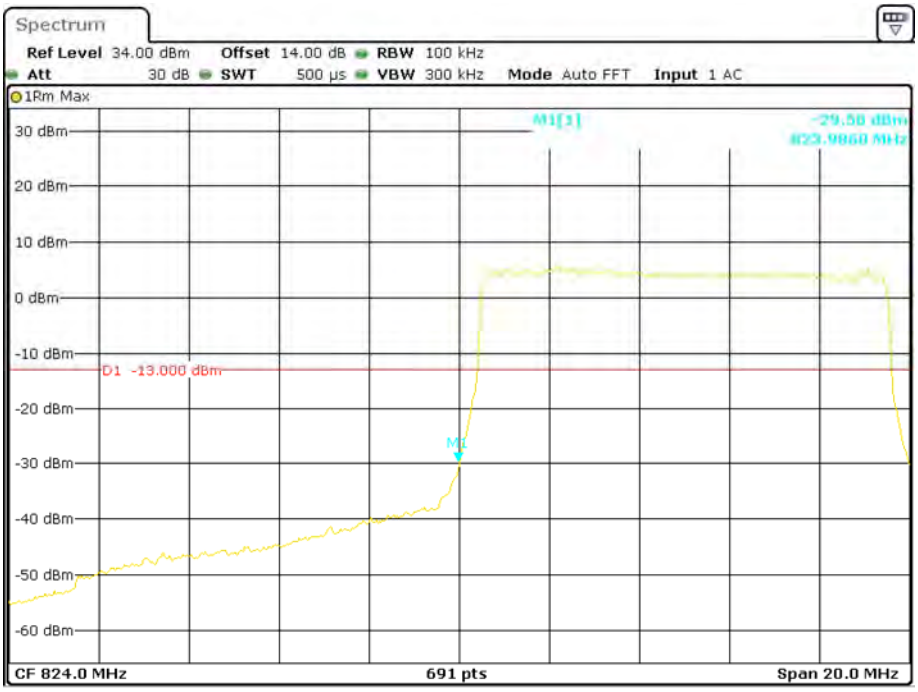
Date: 15.NOV.2017 09:55:27

16-QAM (5.0 MHz, FULL RB) - Right Band Edge



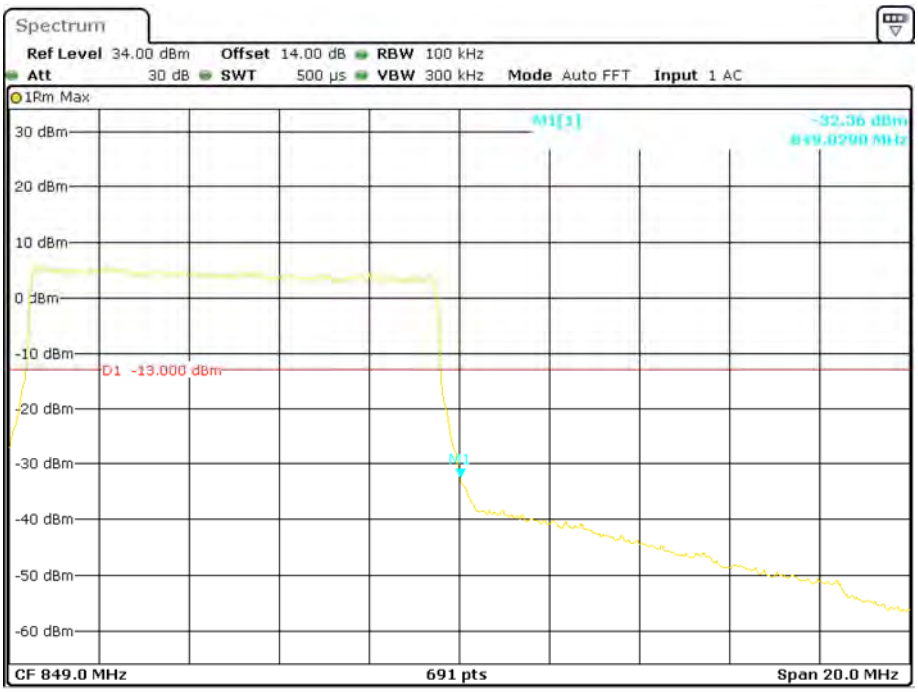
Date: 15.NOV.2017 09:56:10

QPSK (10.0 MHz, FULL RB) - Left Band Edge



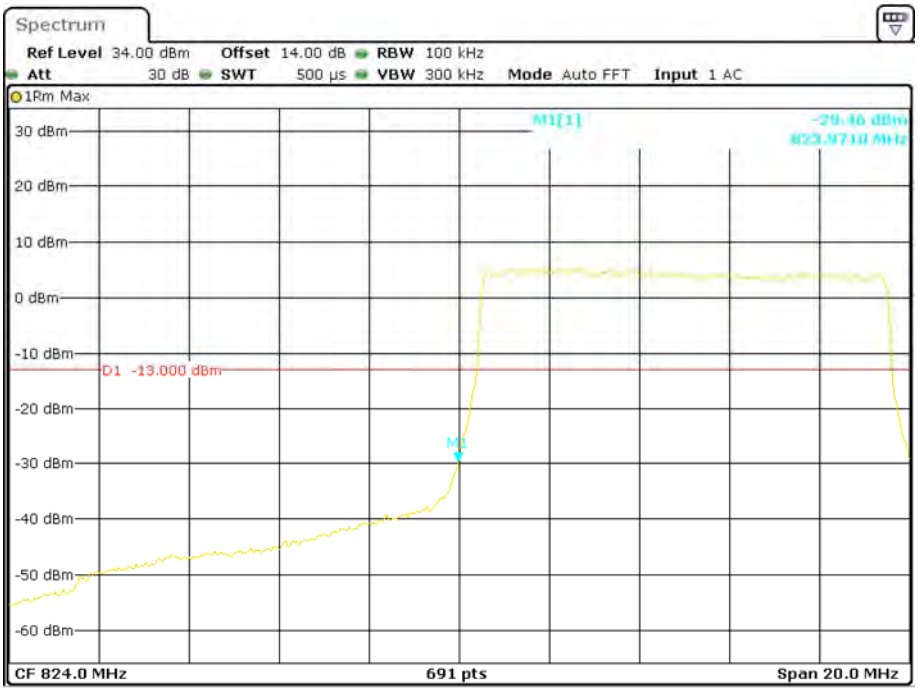
Date: 15.NOV.2017 09:58:38

QPSK (10.0 MHz, FULL RB) - Right Band Edge



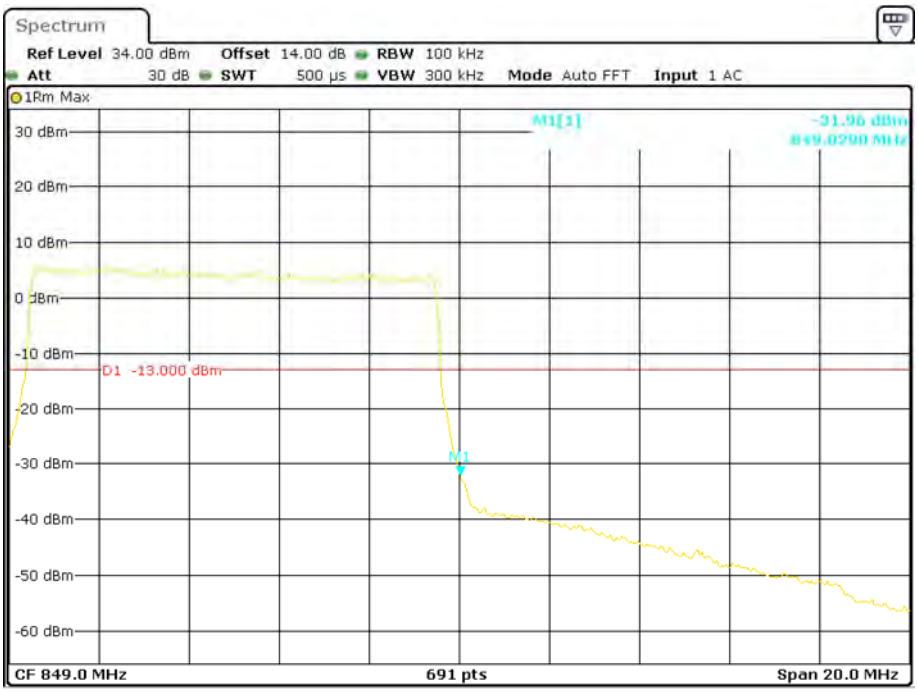
Date: 15.NOV.2017 09:59:18

16-QAM (10.0 MHz, FULL RB) - Left Band Edge



Date: 15.NOV.2017 10:00:19

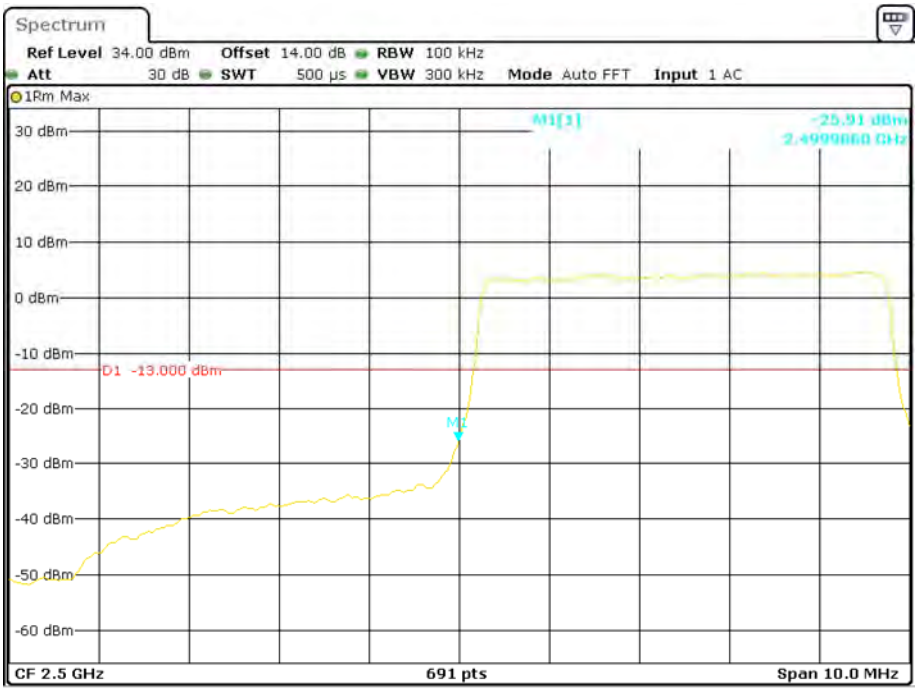
16-QAM (10.0 MHz, FULL RB) - Right Band Edge



Date: 15.NOV.2017 09:59:43

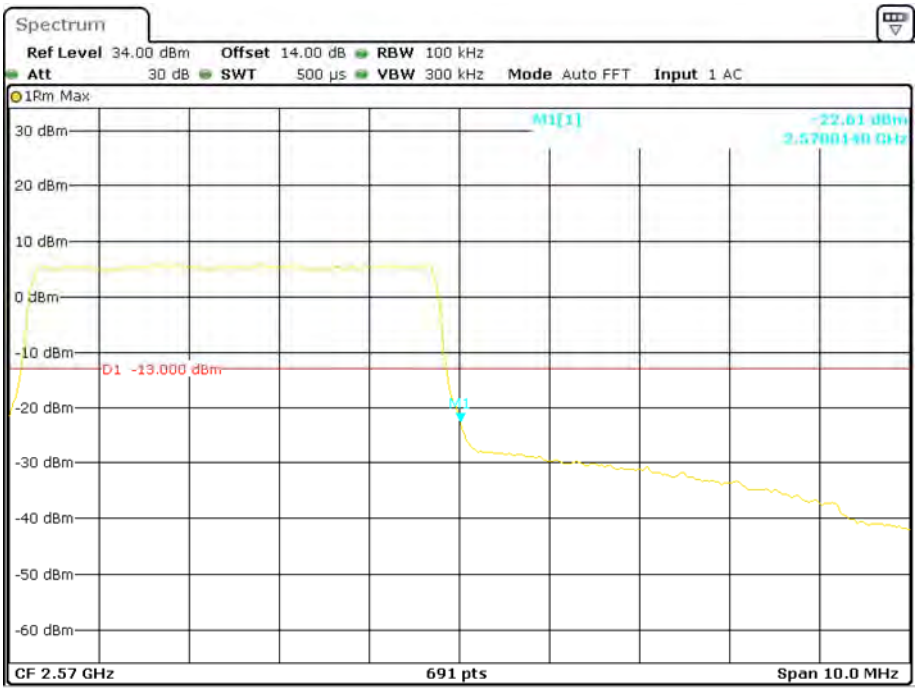
Band 7:

QPSK (5.0 MHz, FULL RB) - Left Band Edge



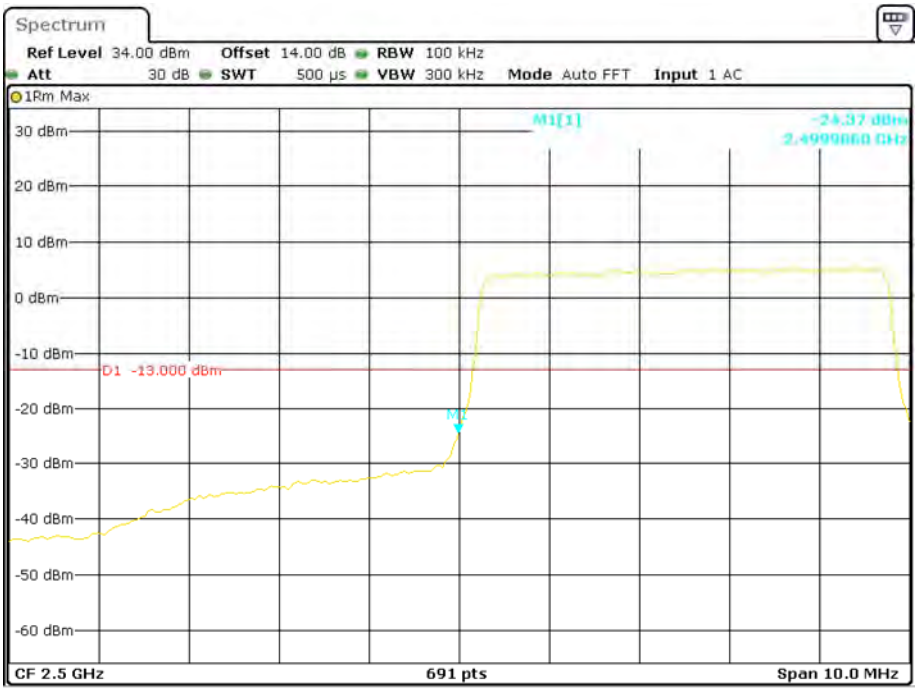
Date: 15.NOV.2017 10:12:54

QPSK (5.0 MHz, FULL RB) - Right Band Edge



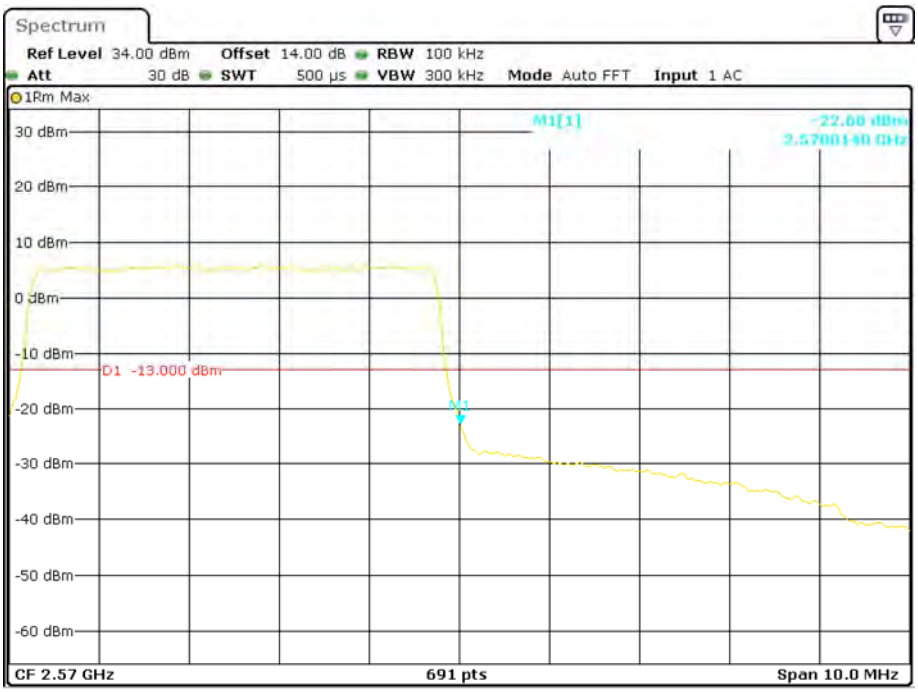
Date: 15.NOV.2017 10:12:13

16-QAM (5.0 MHz, FULL RB) - Left Band Edge



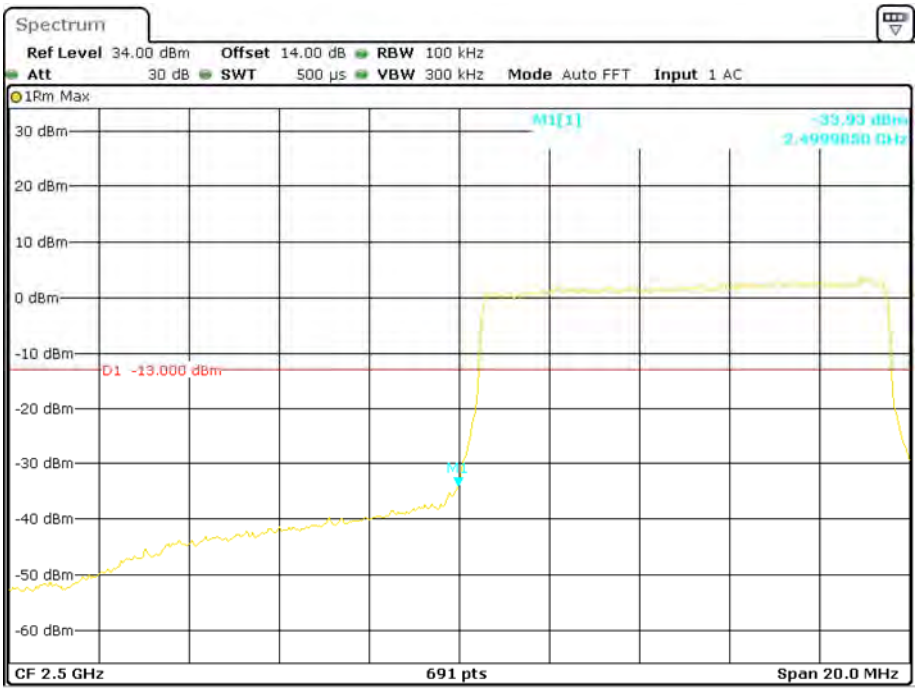
Date: 15.NOV.2017 10:02:42

16-QAM (5.0 MHz, FULL RB) - Right Band Edge



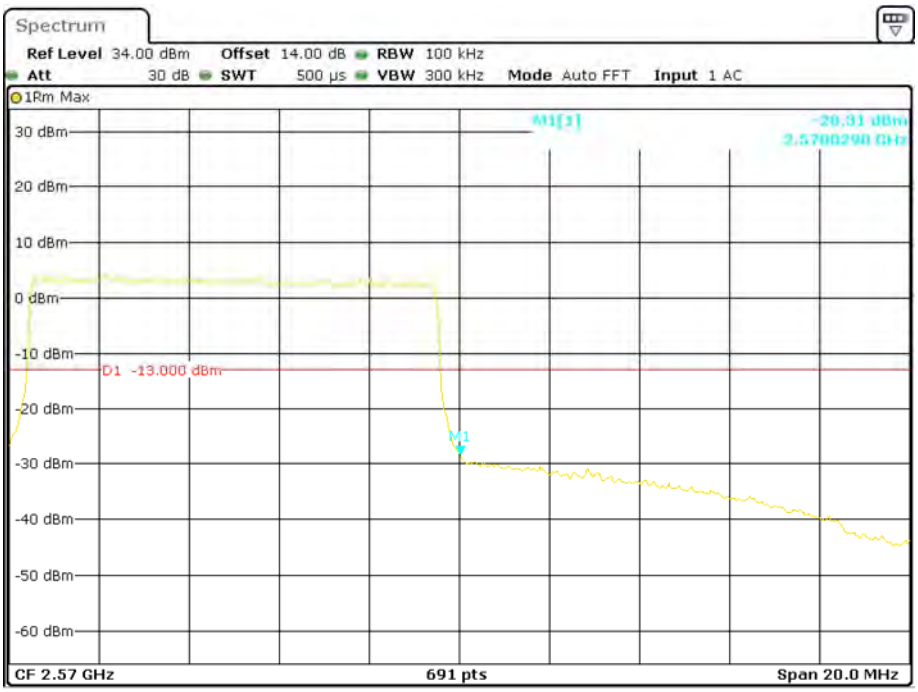
Date: 15.NOV.2017 10:11:33

QPSK (10.0 MHz, FULL RB) - Left Band Edge



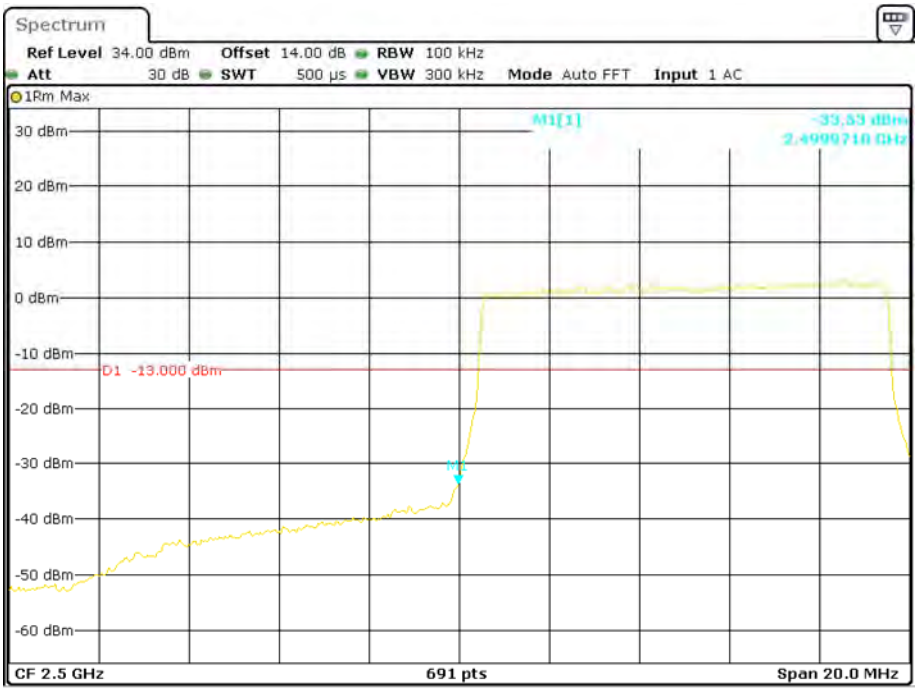
Date: 15.NOV.2017 10:13:55

QPSK (10.0 MHz, FULL RB) - Right Band Edge



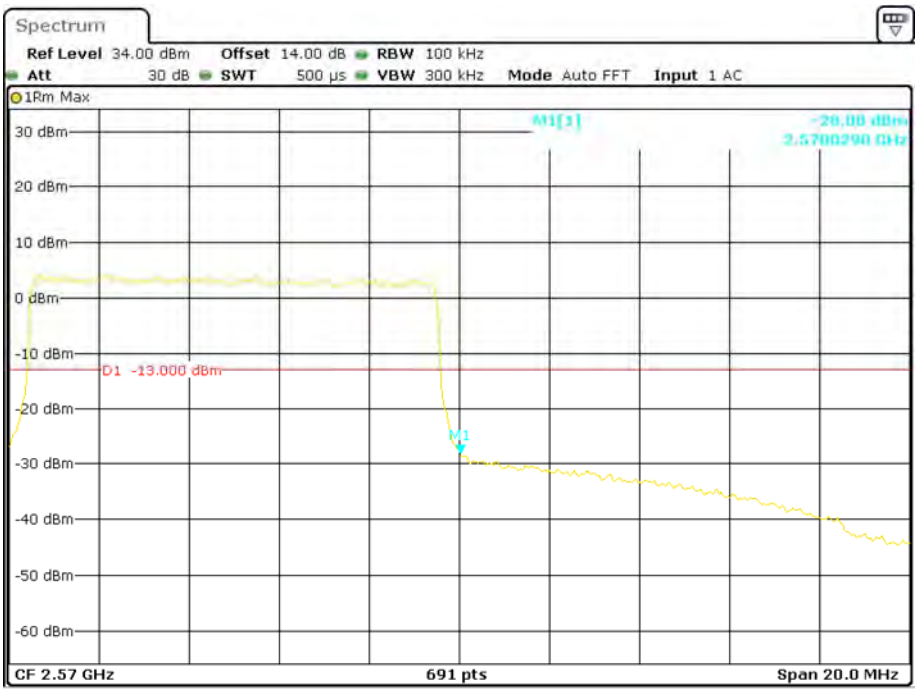
Date: 15.NOV.2017 10:14:36

16-QAM (10.0 MHz, FULL RB) - Left Band Edge



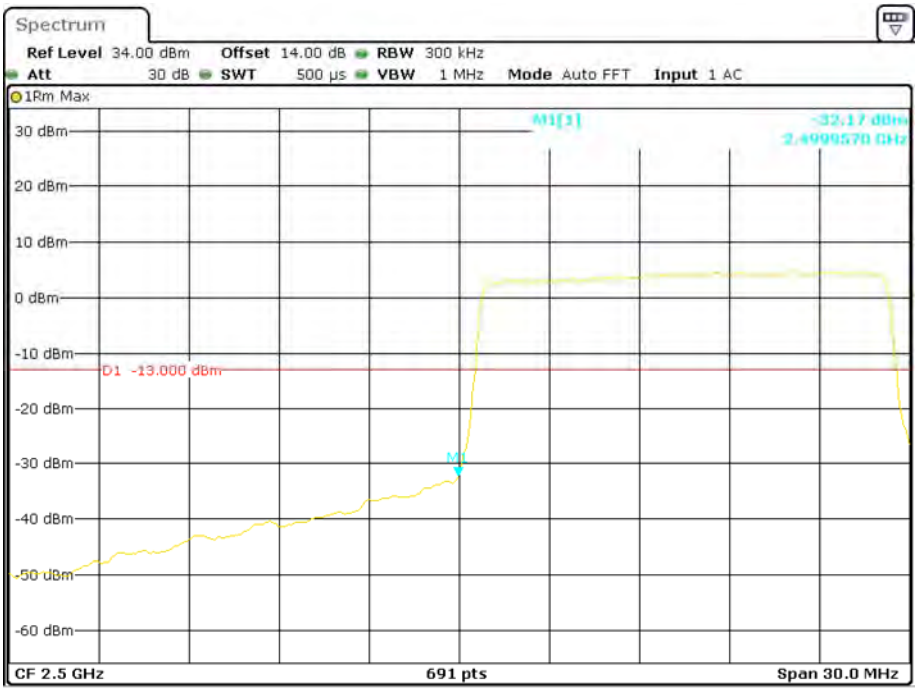
Date: 15.NOV.2017 10:15:53

16-QAM (10.0 MHz, FULL RB) - Right Band Edge



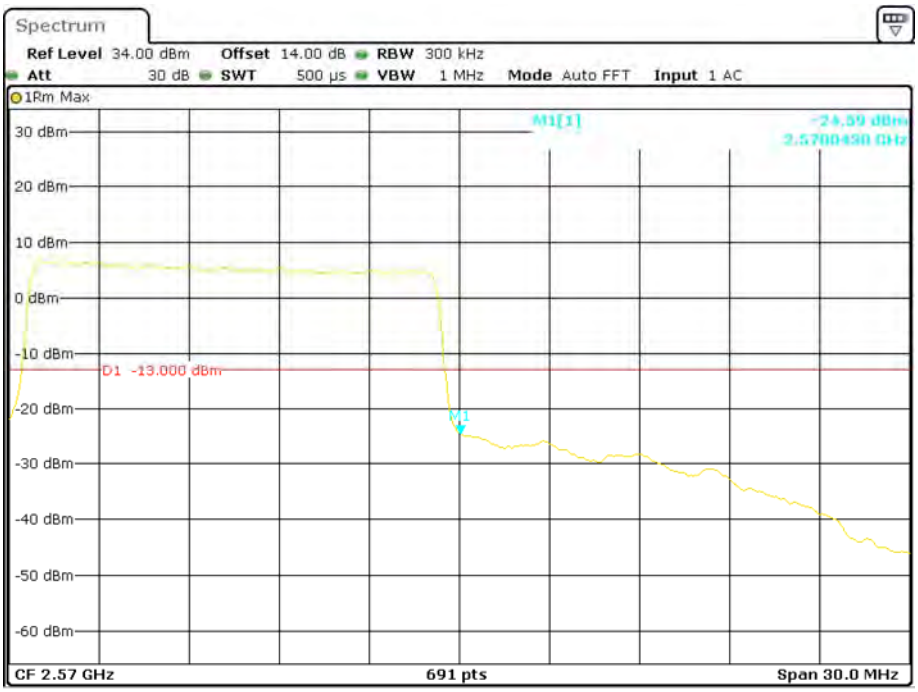
Date: 15.NOV.2017 10:15:08

QPSK (15 MHz, FULL RB) - Left Band Edge



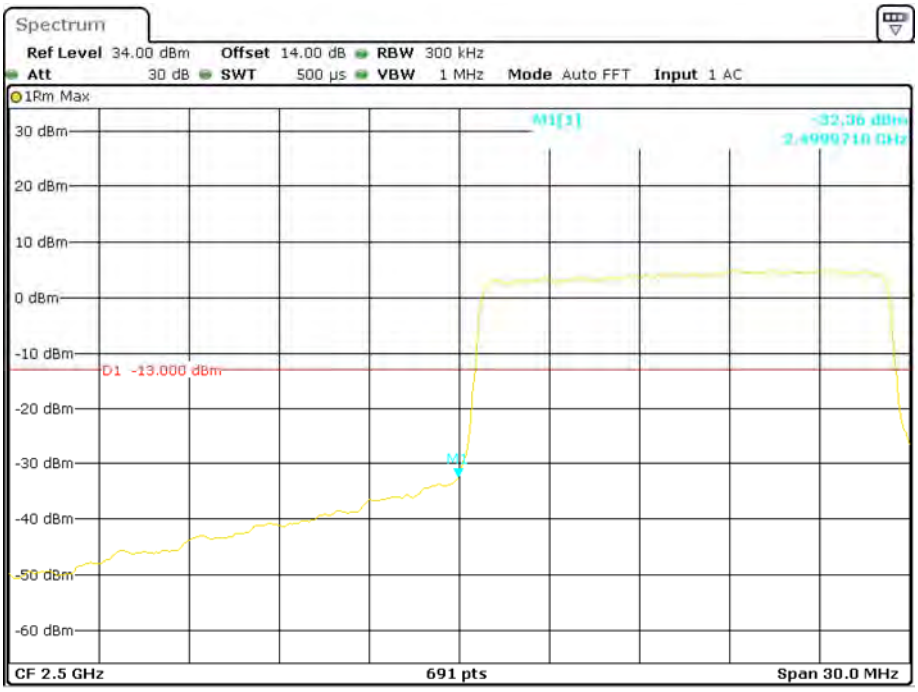
Date: 15.NOV.2017 10:21:39

QPSK (15 MHz, FULL RB) - Right Band Edge



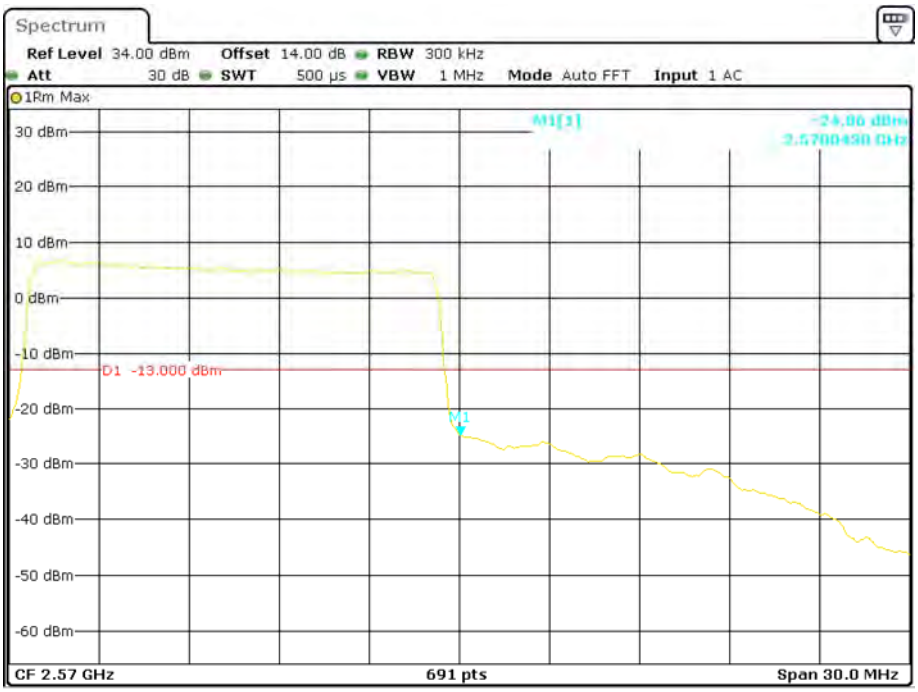
Date: 15.NOV.2017 10:20:55

16-QAM (15 MHz, FULL RB) - Left Band Edge



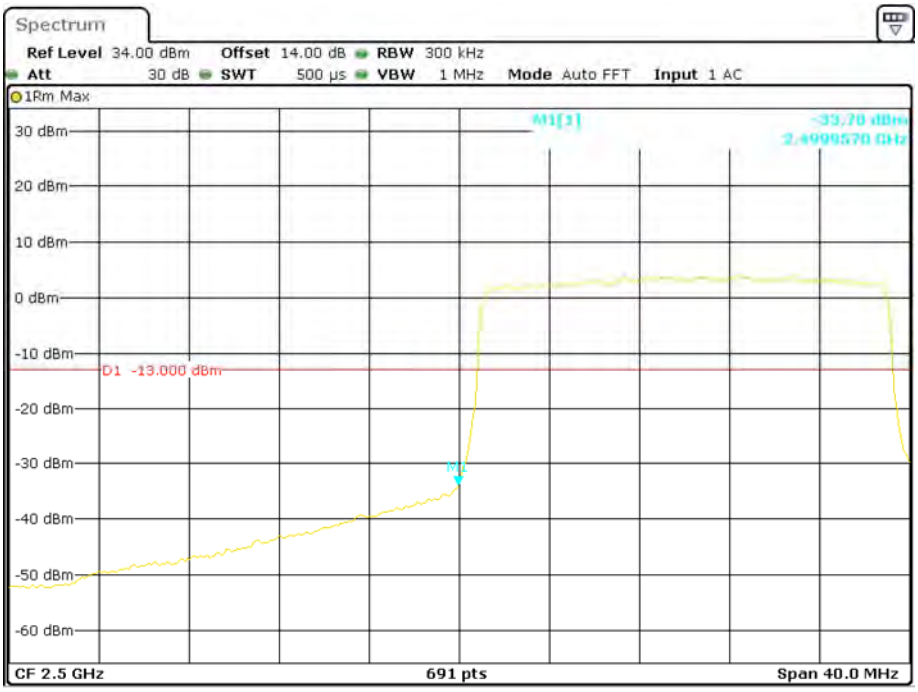
Date: 15.NOV.2017 10:19:35

16-QAM (15 MHz, FULL RB) - Right Band Edge



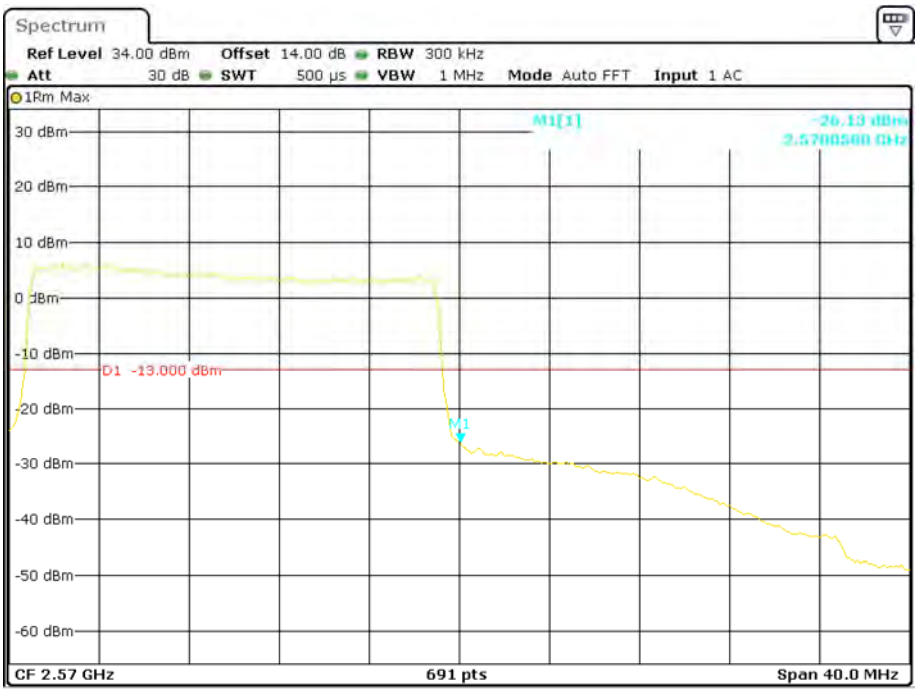
Date: 15.NOV.2017 10:20:27

QPSK (20 MHz, FULL RB) - Left Band Edge



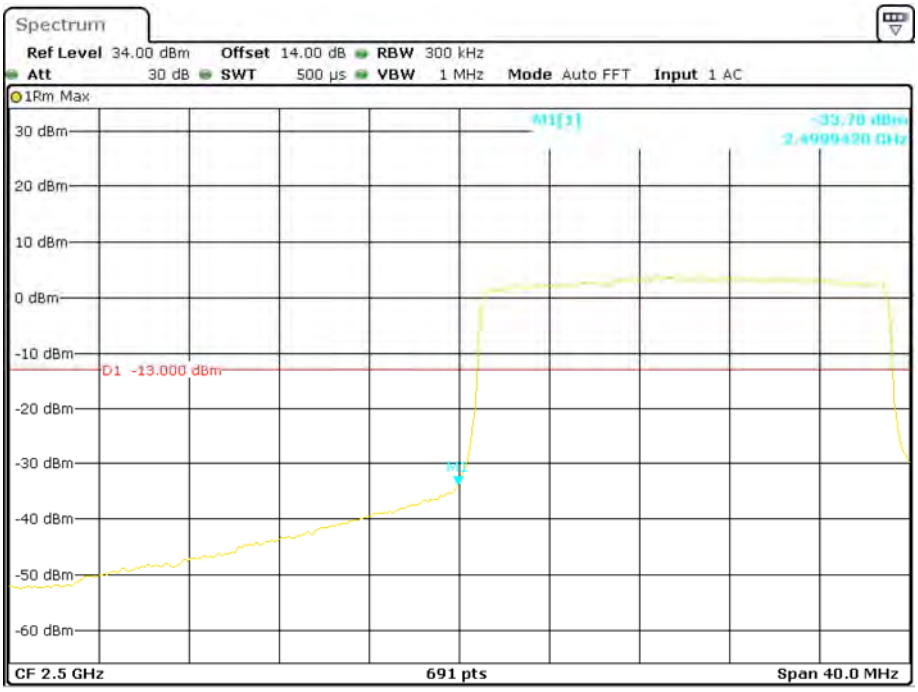
Date: 15.NOV.2017 10:22:16

QPSK (20 MHz, FULL RB) - Right Band Edge



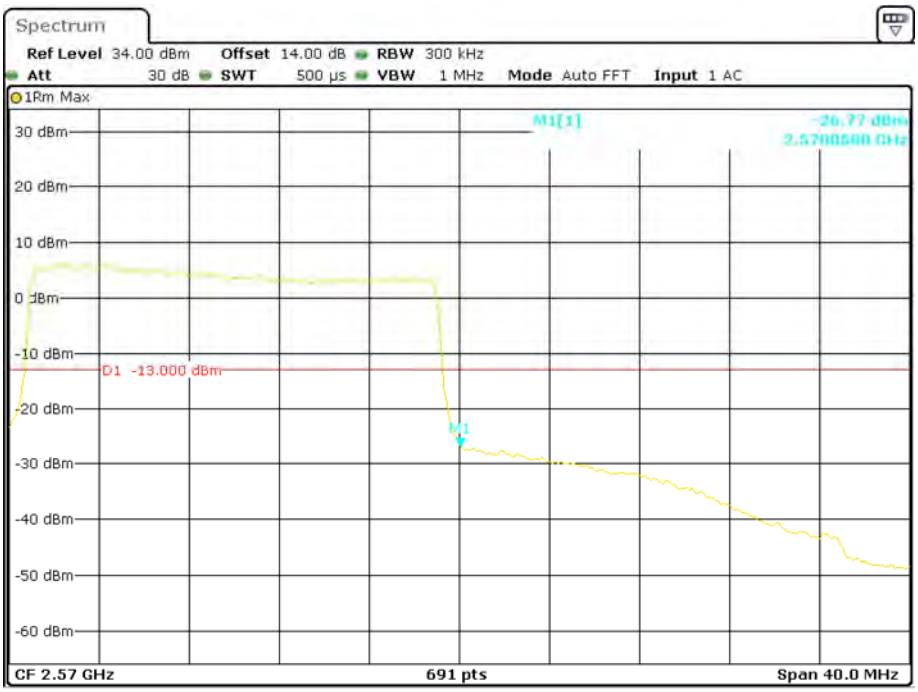
Date: 15.NOV.2017 10:22:54

16-QAM (20 MHz, FULL RB) - Left Band Edge



Date: 15.NOV.2017 10:24:10

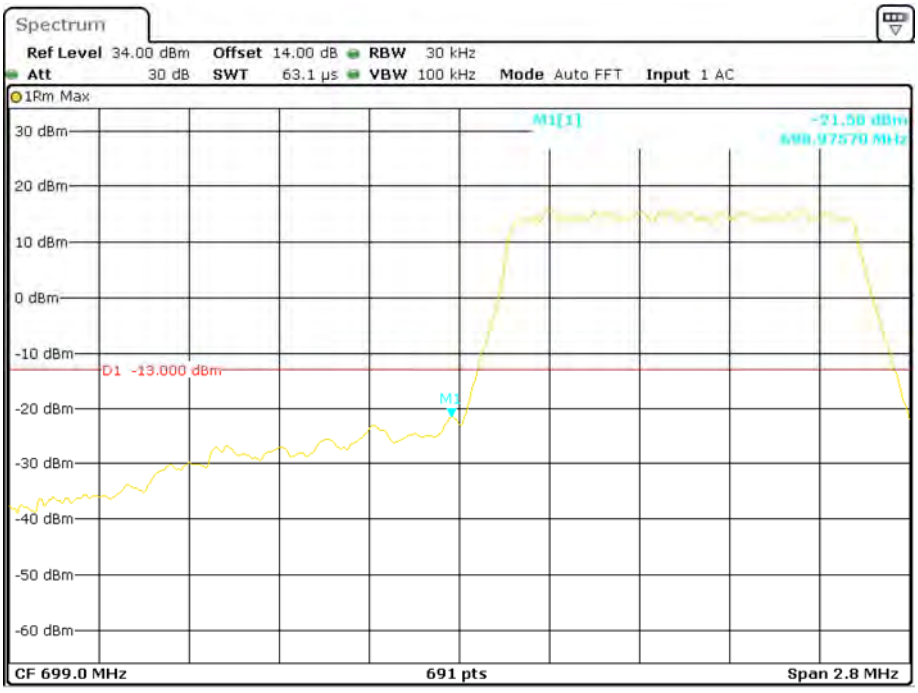
16-QAM (20 MHz, FULL RB) - Right Band Edge



Date: 15.NOV.2017 10:23:22

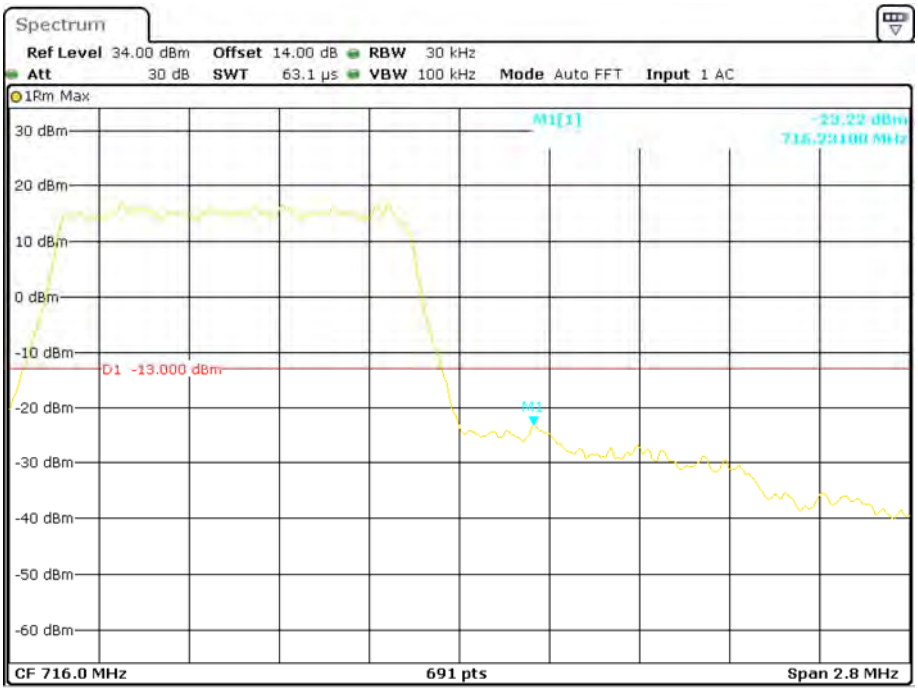
Band 12:

QPSK (1.4 MHz, FULL RB) - Left Band Edge



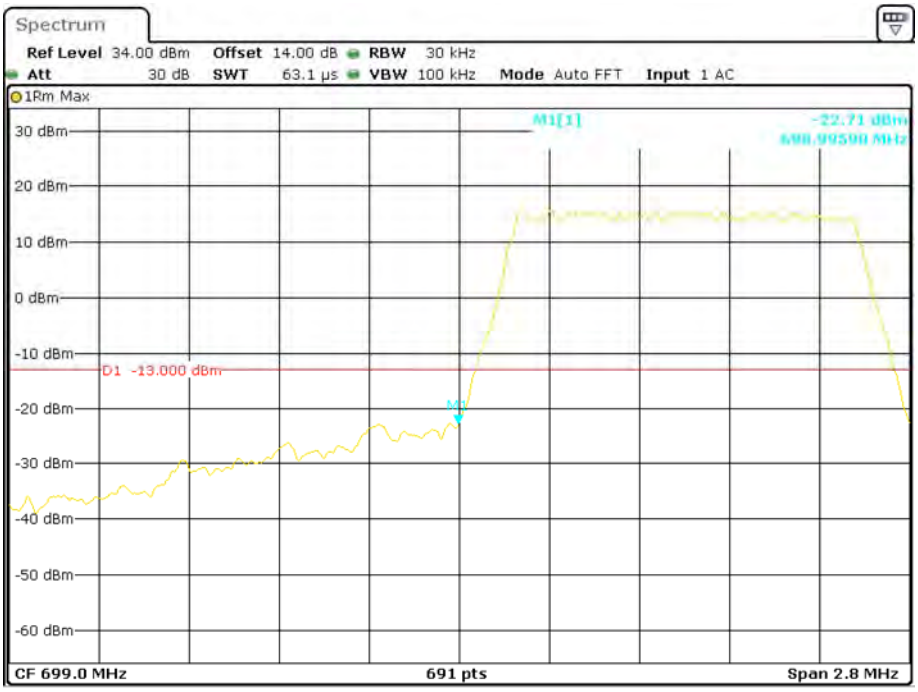
Date: 15.NOV.2017 10:37:06

QPSK (1.4 MHz, FULL RB) - Right Band Edge



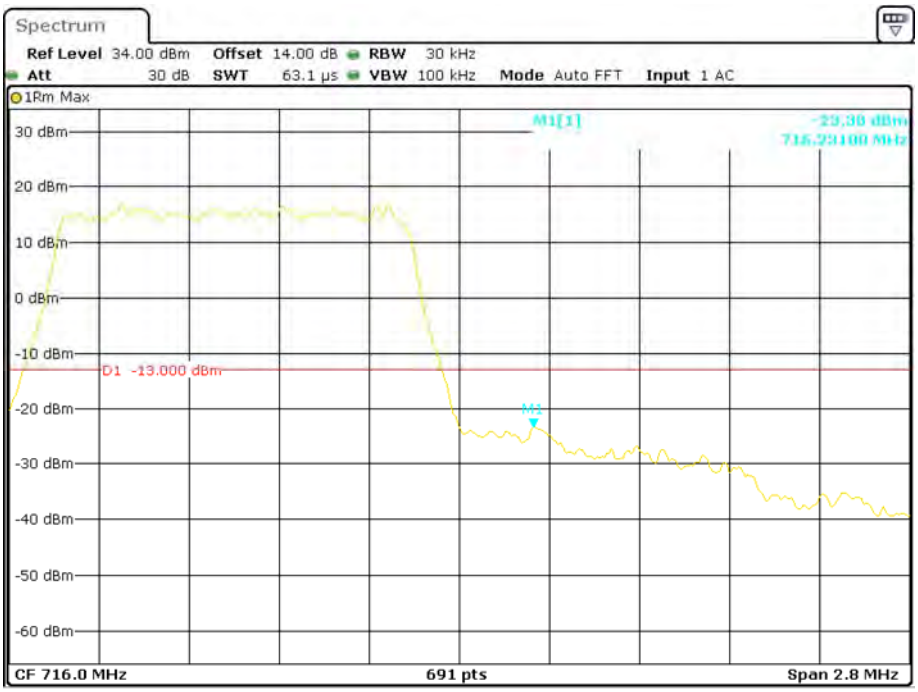
Date: 15.NOV.2017 10:36:18

16-QAM (1.4 MHz, FULL RB) - Left Band Edge



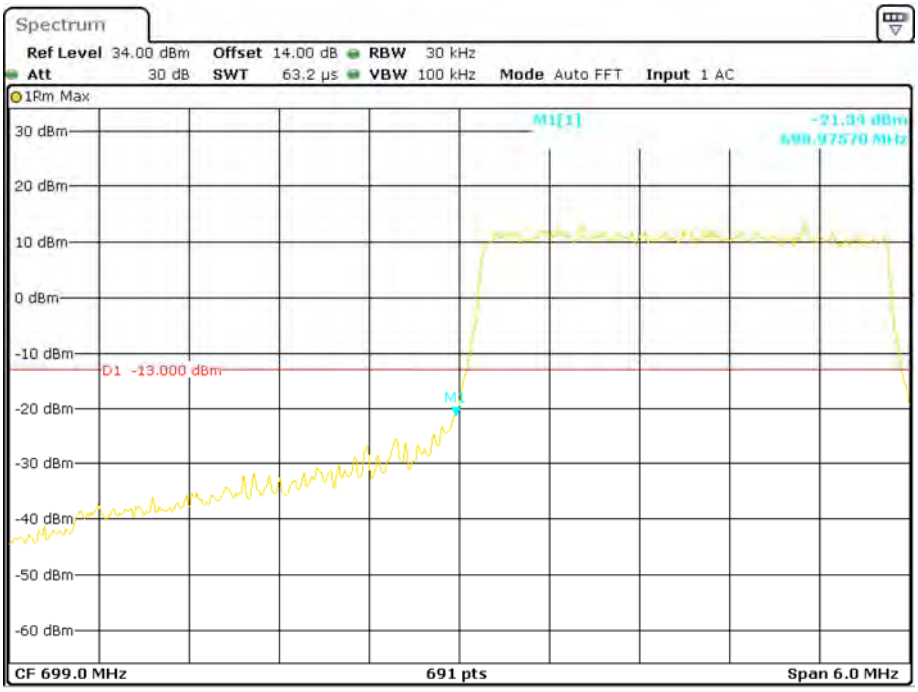
Date: 15.NOV.2017 10:33:09

16-QAM (1.4 MHz, FULL RB) - Right Band Edge



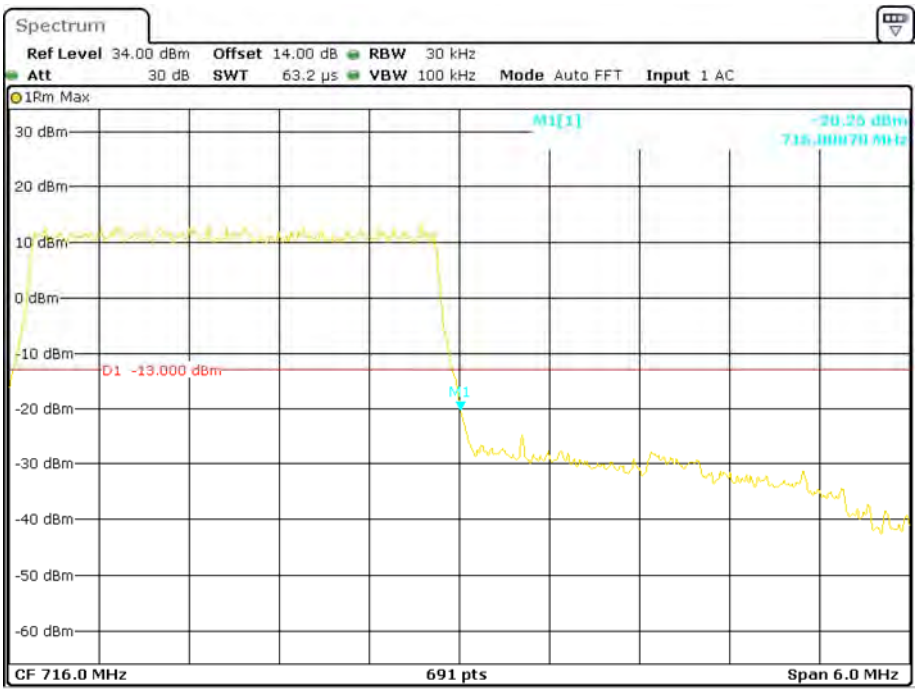
Date: 15.NOV.2017 10:35:34

QPSK (3.0 MHz, FULL RB) - Left Band Edge



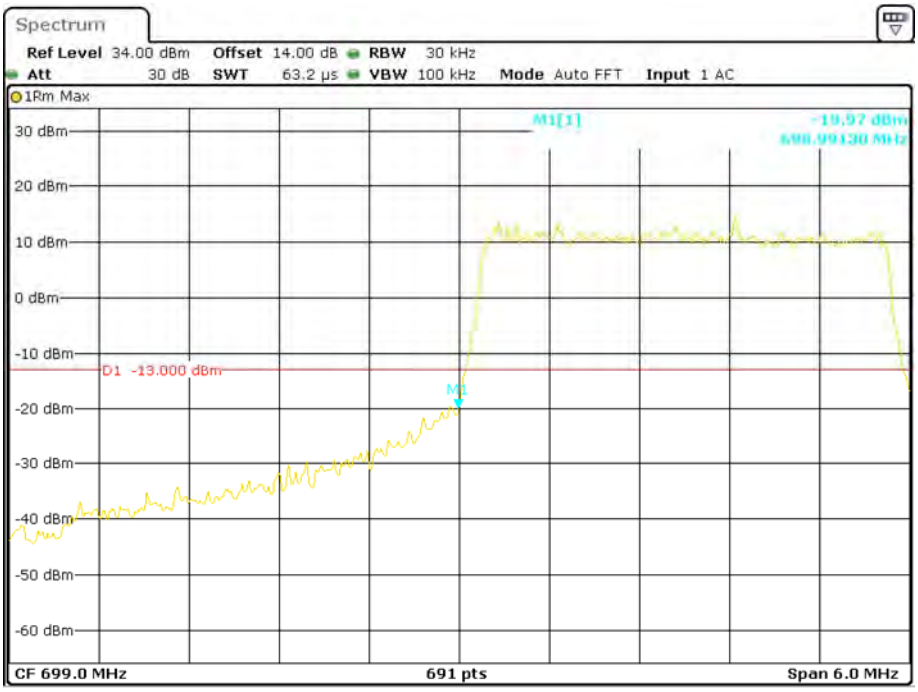
Date: 15.NOV.2017 10:40:03

QPSK (3.0 MHz, FULL RB) - Right Band Edge



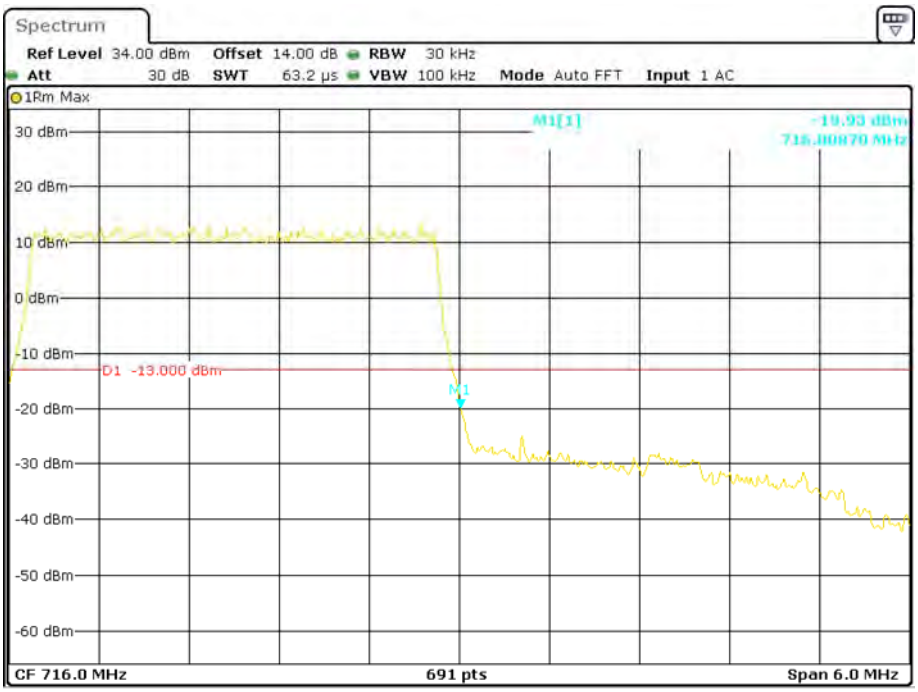
Date: 15.NOV.2017 10:40:46

16-QAM (3.0 MHz, FULL RB) - Left Band Edge



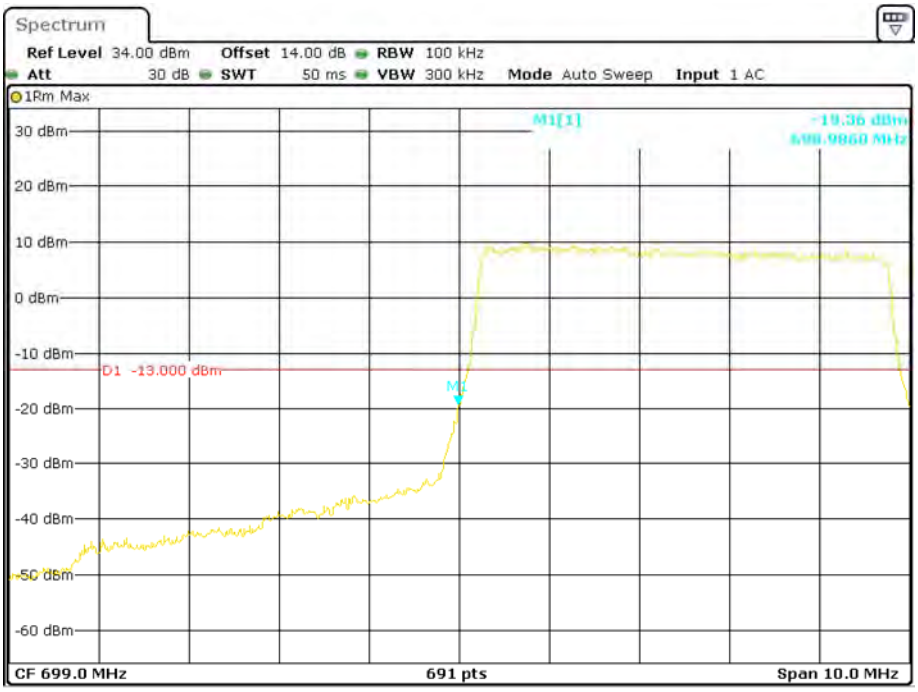
Date: 15.NOV.2017 10:42:02

16-QAM (3.0 MHz, FULL RB) - Right Band Edge



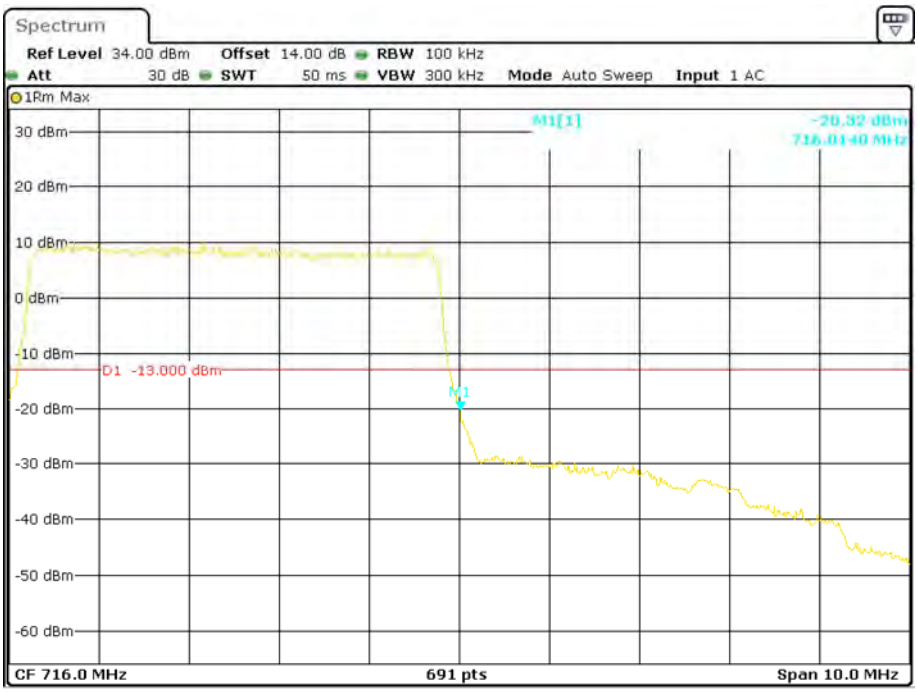
Date: 15.NOV.2017 10:41:17

QPSK (5.0 MHz, FULL RB) - Left Band Edge



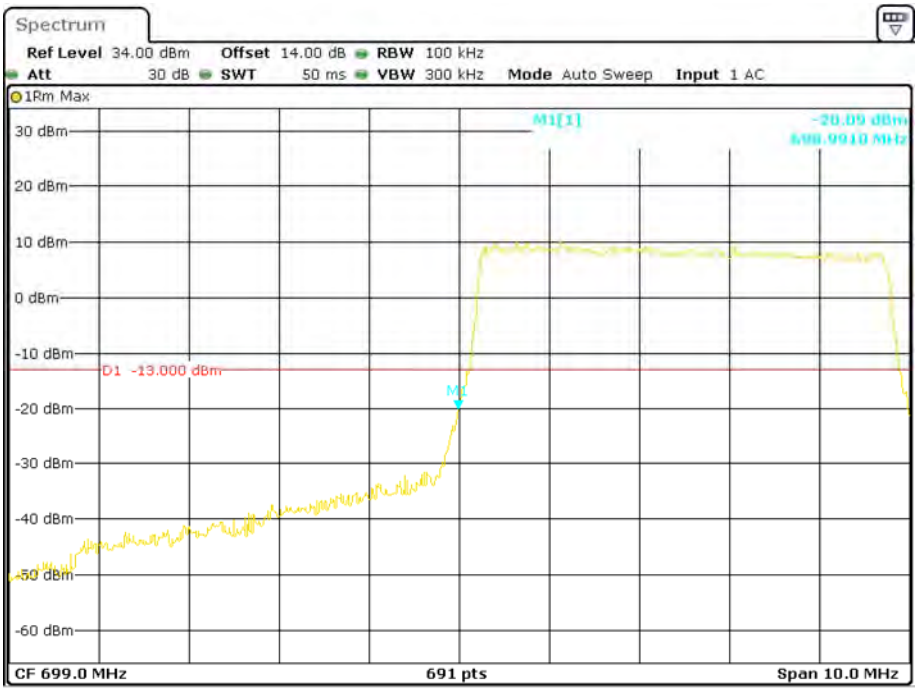
Date: 15.NOV.2017 10:46:17

QPSK (5.0 MHz, FULL RB) - Right Band Edge



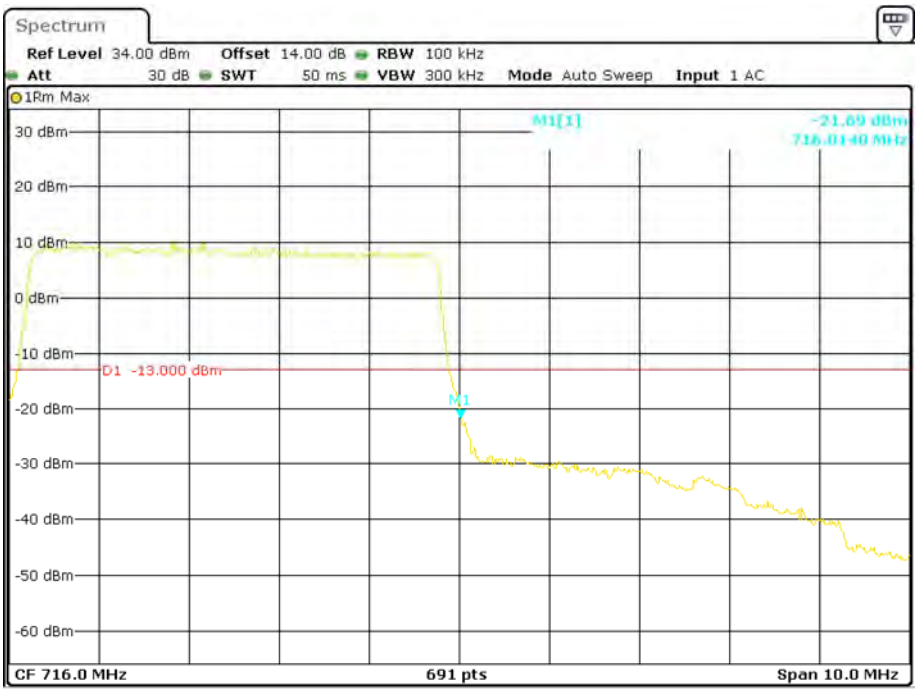
Date: 15.NOV.2017 10:45:12

16-QAM (5.0 MHz, FULL RB) - Left Band Edge



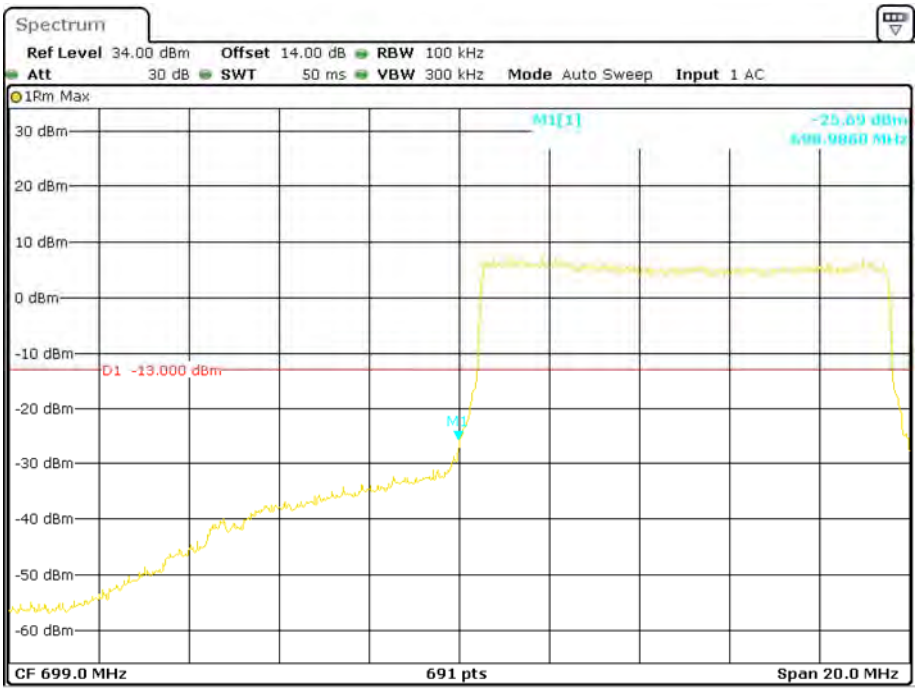
Date: 15.NOV.2017 10:43:52

16-QAM (5.0 MHz, FULL RB) - Right Band Edge



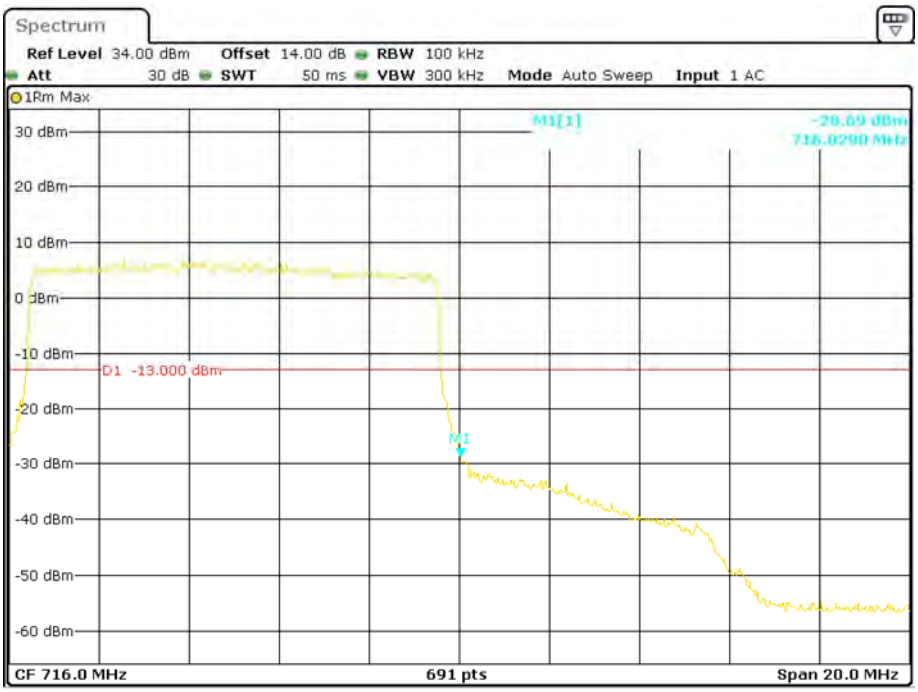
Date: 15.NOV.2017 10:44:44

QPSK (10.0 MHz, FULL RB) - Left Band Edge



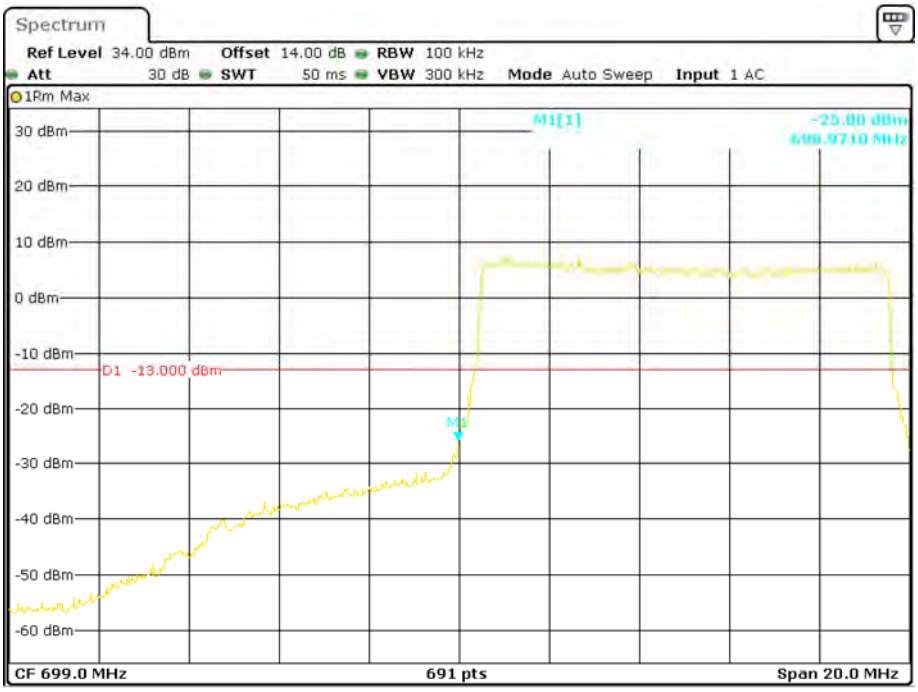
Date: 15.NOV.2017 10:49:21

QPSK (10.0 MHz, FULL RB) - Right Band Edge



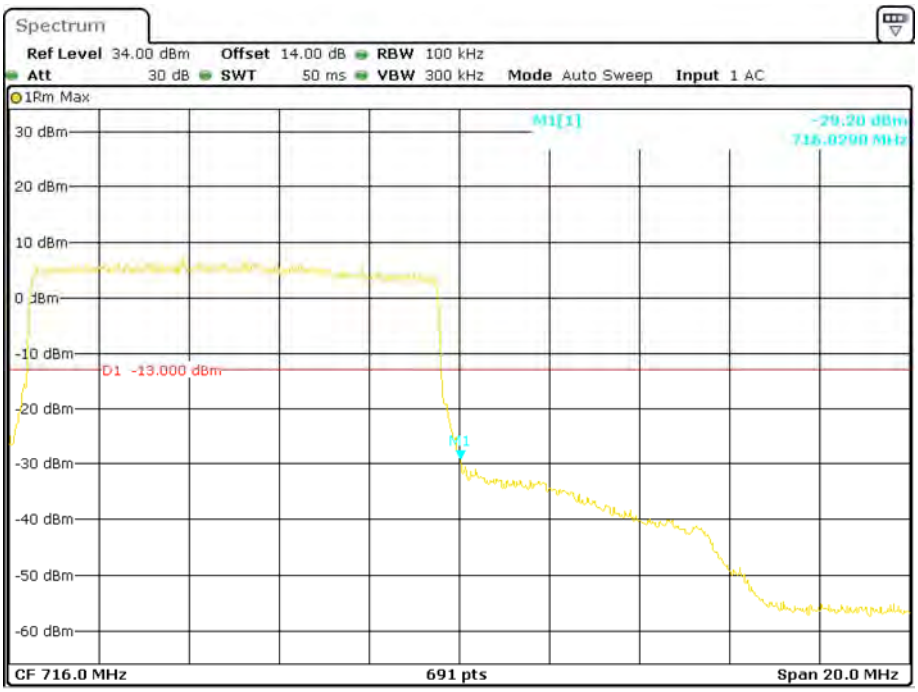
Date: 15.NOV.2017 10:50:14

16-QAM (10.0 MHz, FULL RB) - Left Band Edge



Date: 15.NOV.2017 10:51:29

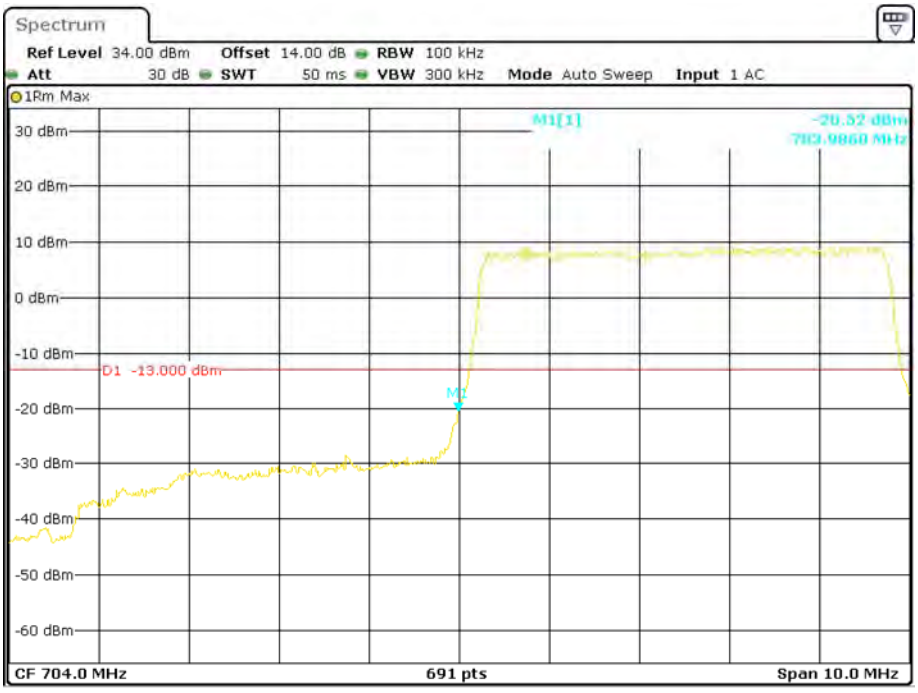
16-QAM (10.0 MHz, FULL RB) - Right Band Edge



Date: 15.NOV.2017 10:50:46

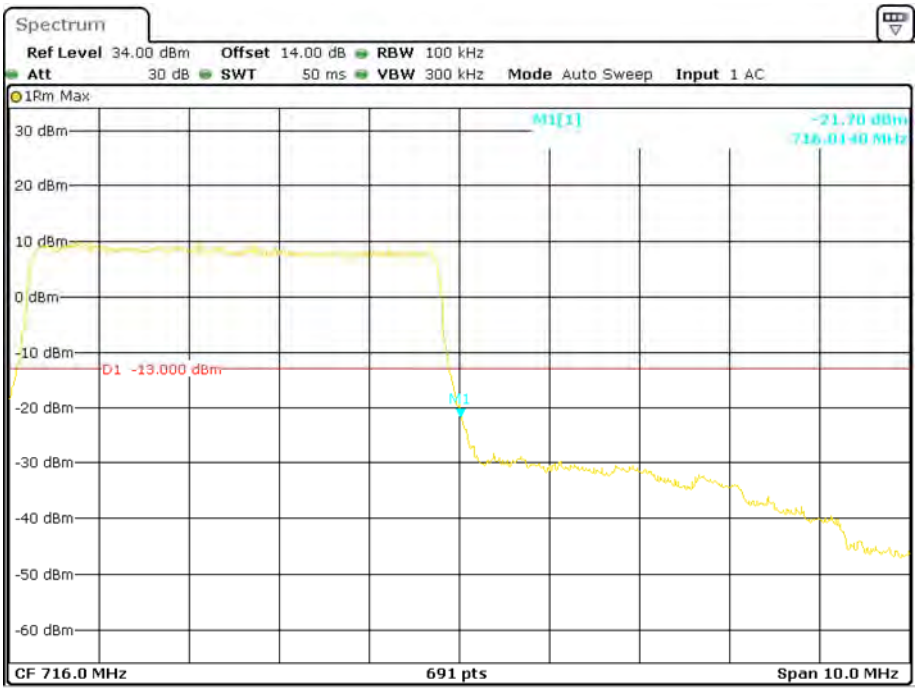
Band 17:

QPSK (5.0 MHz, FULL RB) - Left Band Edge



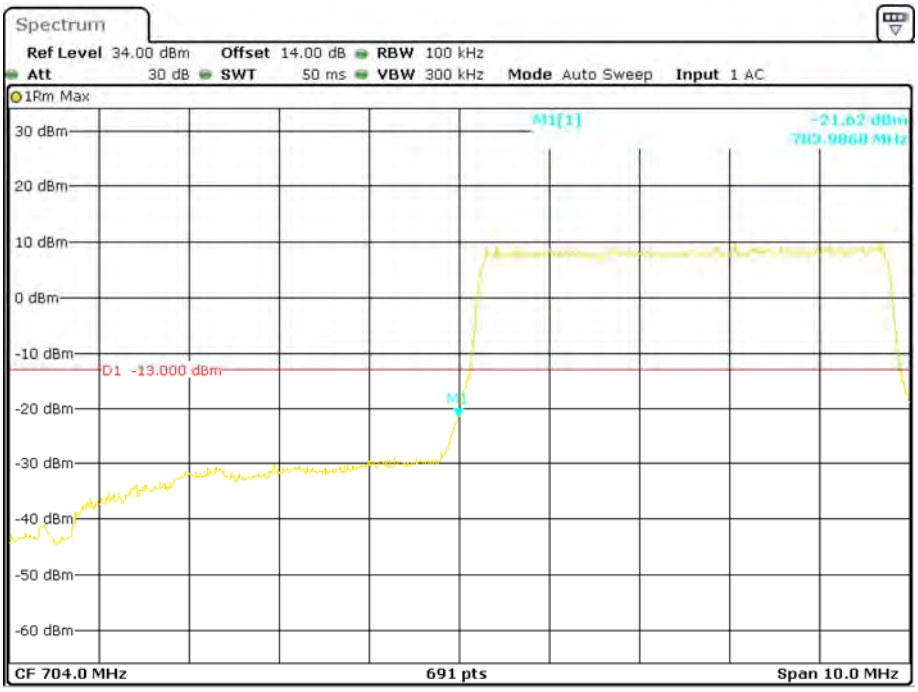
Date: 15.NOV.2017 12:25:40

QPSK (5.0 MHz, FULL RB) - Right Band Edge



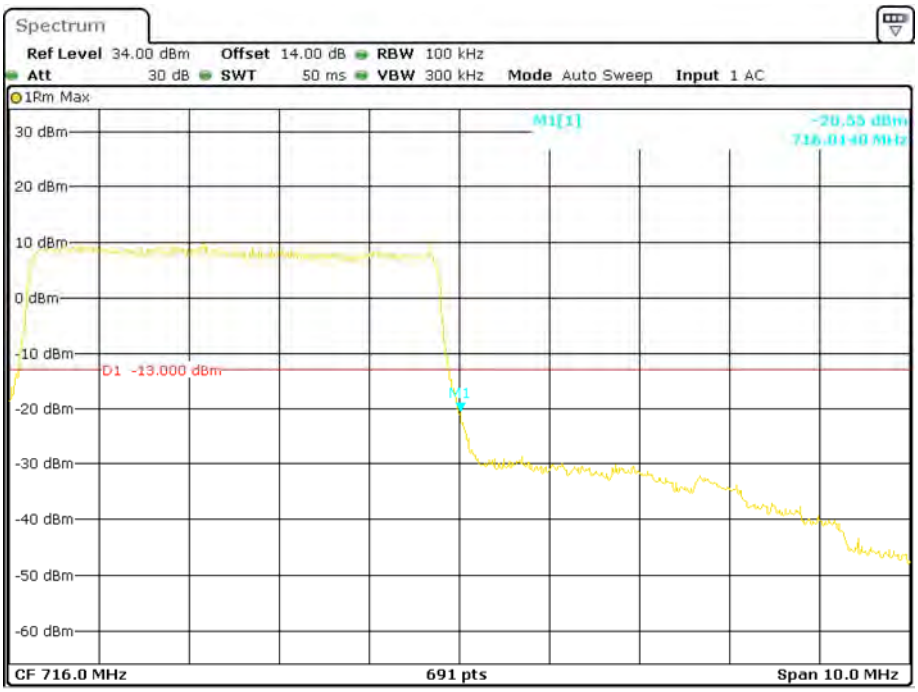
Date: 15.NOV.2017 12:24:51

16-QAM (5.0 MHz, FULL RB) - Left Band Edge



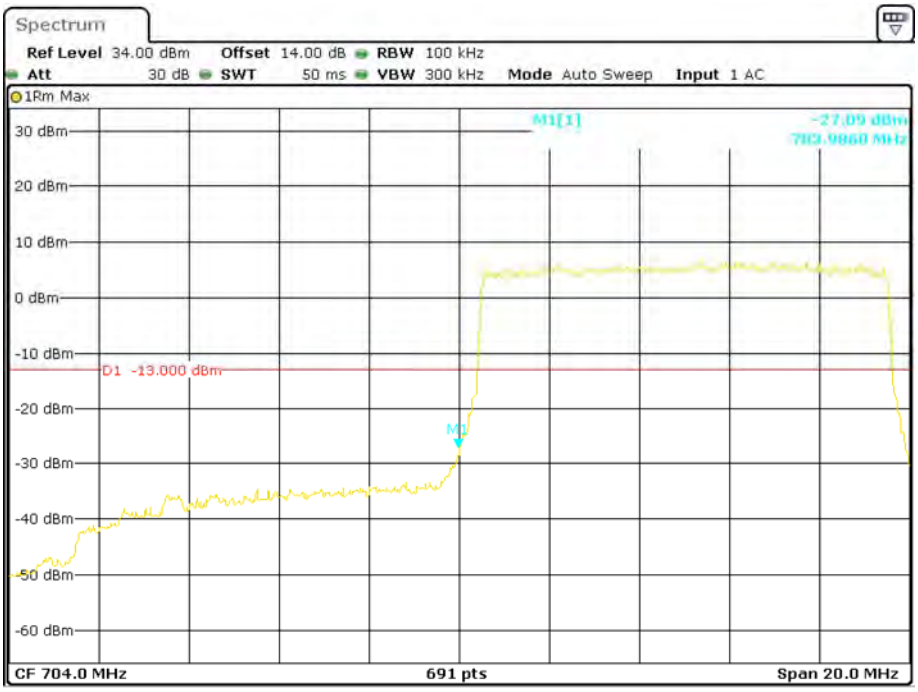
Date: 15.NOV.2017 12:23:12

16-QAM (5.0 MHz, FULL RB) - Right Band Edge



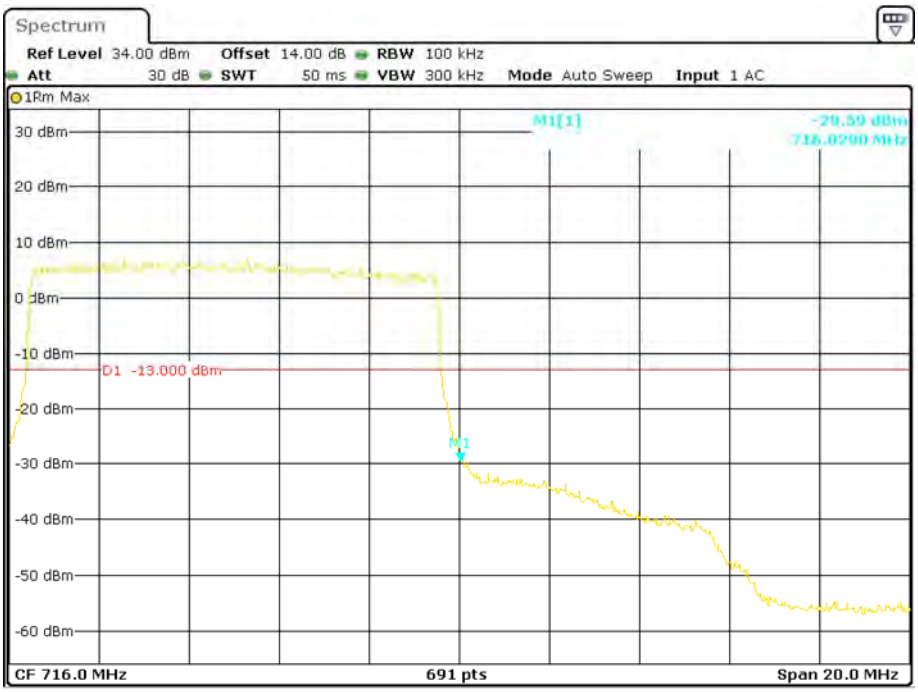
Date: 15.NOV.2017 12:24:13

QPSK (10.0 MHz, FULL RB) - Left Band Edge



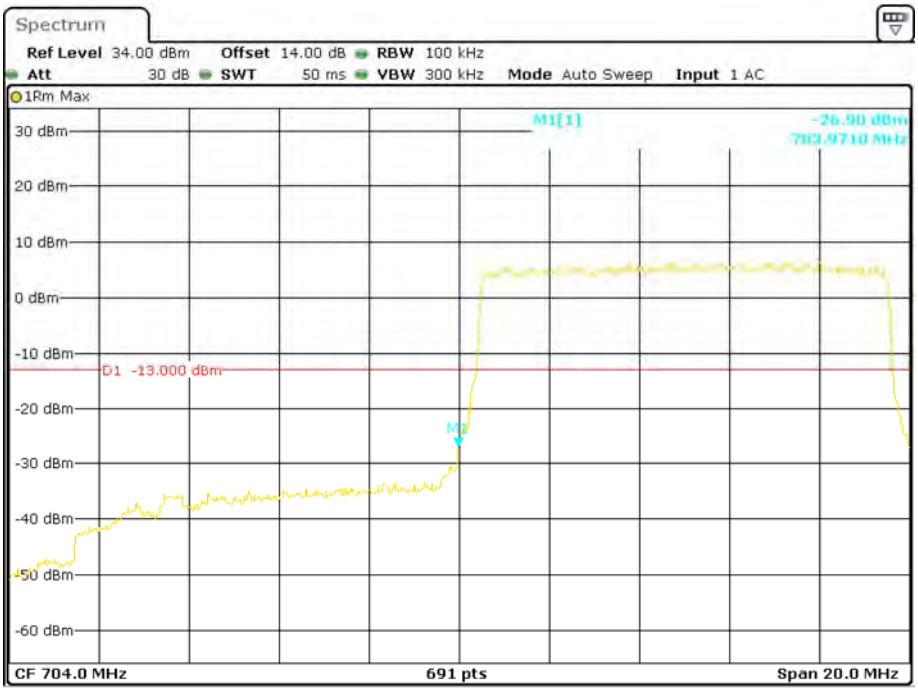
Date: 15.NOV.2017 12:26:24

QPSK (10.0 MHz, FULL RB) - Right Band Edge



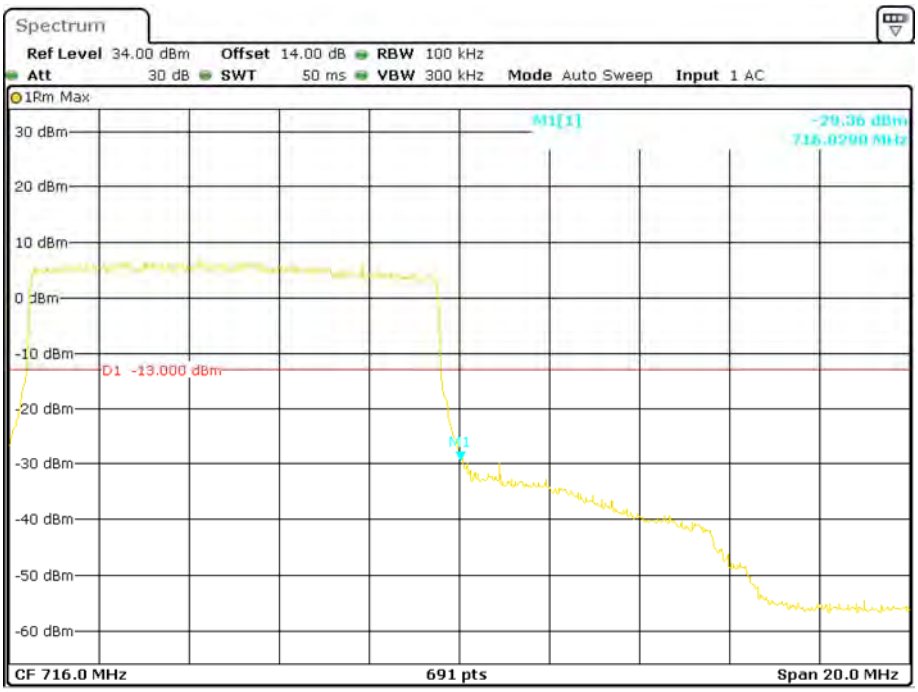
Date: 15.NOV.2017 12:27:06

16-QAM (10.0 MHz, FULL RB) - Left Band Edge



Date: 15.NOV.2017 12:28:40

16-QAM (10.0 MHz, FULL RB) - Right Band Edge



Date: 15.NOV.2017 12:27:41

FCC § 2.1055; § 22.355; § 24.235; §27.54; - FREQUENCY STABILITY

Applicable Standard

FCC § 2.1055, §22.355, §24.235 and & §27.54.

According to FCC §2.1055, the frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

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

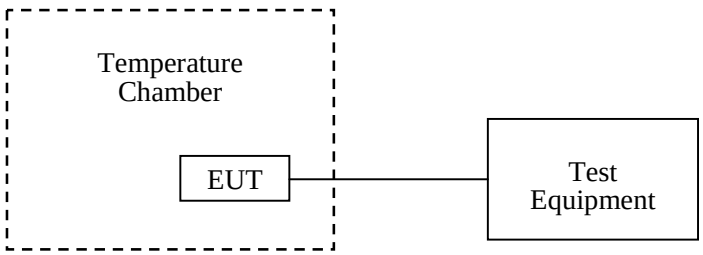
According to §24.235, the frequency stability shall be sufficient to ensure that the fundamental emissions stays within the authorized frequency block.

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: For hand carried, battery powered equipment; reduce primary supply voltage to the battery operating end point which shall be specified by the manufacturer.



Test Data

Environmental Conditions

Temperature:	22 ℃
Relative Humidity:	48 %
ATM Pressure:	101.0 kPa

The testing was performed by Hill He on 2017-11-13.

EUT operation mode: Transmitting

Test Result: Compliance. Please refer to the following tables.

Cellular Band (Part 22H)

GSM Mode

Middle Channel, f_o =836.6MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	3.85	5	0.0060	2.5
-20		9	0.0108	2.5
-10		7	0.0084	2.5
0		9	0.0108	2.5
10		8	0.0096	2.5
20		10	0.0120	2.5
30		3	0.0036	2.5
40		-2	-0.0024	2.5
50		-1	-0.0012	2.5
25	V min.= 3.6	4	0.0048	2.5
	V max.= 4.4	4	0.0048	2.5

EDGE Mode

Middle Channel, f_o =836.6MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	3.85	12	0.0143	2.5
-20		9	0.0108	2.5
-10		8	0.0096	2.5
0		9	0.0108	2.5
10		10	0.0120	2.5
20		14	0.0167	2.5
30		10	0.0120	2.5
40		8	0.0096	2.5
50		9	0.0108	2.5
25	V min.= 3.6	10	0.0120	2.5
	V max.= 4.4	5	0.0060	2.5

WCDMA Mode

Middle Channel, f_o =836.6MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	3.85	4	0.048	2.5
-20		1	0.0012	2.5
-10		-1	-0.0012	2.5
0		3	0.0036	2.5
10		-2	-0.0024	2.5
20		-2	-0.0024	2.5
30		-1	-0.0012	2.5
40		2	0.0024	2.5
50		1	0.0012	2.5
25	V min.= 3.6	4	0.0048	2.5
	V max.= 4.4	3	0.0036	2.5

PCS Band (Part 24E)

GSM Mode

Middle Channel, f_o =1880.0 MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	3.85	4	0.0021	pass
-20		7	0.0037	pass
-10		8	0.0043	pass
0		11	0.0059	pass
10		10	0.0053	pass
20		35	0.0186	pass
30		9	0.0048	pass
40		5	0.0027	pass
50		8	0.0043	pass
25	V min.= 3.6	7	0.0037	pass
	V max.= 4.4	4	0.0021	pass

EDGE Mode

Middle Channel, f_o =1880.0 MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	3.85	-13	-0.0069	pass
-20		-17	-0.0090	pass
-10		-9	-0.0048	pass
0		-12	-0.0064	pass
10		-11	-0.0059	pass
20		-8	-0.0043	pass
30		-4	-0.0021	pass
40		-8	-0.0043	pass
50		-4	-0.0021	pass
25	V min.= 3.6	-4	-0.0021	pass
	V max.= 4.4	-7	-0.0037	pass

WCDMA Mode

Middle Channel, f_o =1880.0 MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	3.85	7	0.0037	pass
-20		2	0.0011	pass
-10		-1	-0.0005	pass
0		5	0.0027	pass
10		6	0.0032	pass
20		-4	-0.0021	pass
30		2	0.0011	pass
40		3	0.0016	pass
50		2	0.0011	pass
25	V min.= 3.6	-1	-0.0005	pass
	V max.= 4.4	-2	-0.0011	pass

AWS Band (Part 27)

WCDMA Mode

Middle Channel, f_o =1732.6MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	3.85	-5	-0.0029	pass
-20		-8	-0.0046	pass
-10		-6	-0.0035	pass
0		-11	-0.0063	pass
10		-15	-0.0087	pass
20		-7	-0.0040	pass
30		-10	-0.0058	pass
40		1	0.0006	pass
50		-2	-0.0011	pass
25	V min.= 3.6	6	0.0035	pass
	V max.= 4.4	11	0.0063	pass

LTE:
QPSK:

Band 2:

10.0 MHz Middle Channel, f_o =1880MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	3.85	-4	-0.00213	pass
-20		-4	-0.00213	pass
-10		-2	-0.00106	pass
0		-2	-0.00106	pass
10		-2	-0.00106	pass
20		-1	-0.00053	pass
30		-2	-0.00106	pass
40		-4	-0.00213	pass
50		-8	-0.00426	pass
20	V min.= 3.6	-12	-0.00638	pass
	V max.= 4.4	-13	-0.00691	pass

Band 4:

10.0 MHz Middle Channel, f_o =1732.5 MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	3.85	-4	-0.00231	pass
-20		-4	-0.00231	pass
-10		-2	-0.00115	pass
0		-2	-0.00115	pass
10		-2	-0.00115	pass
20		-1	-0.00058	pass
30		-2	-0.00115	pass
40		-4	-0.00231	pass
50		-6	-0.00346	pass
20	V min.= 3.6	-10	-0.00577	pass
	V max.= 4.4	-7	-0.00404	pass

Band 5:

10.0 MHz Middle Channel, f_o =836.5 MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	3.85	-4	-0.00478	pass
-20		-4	-0.00478	pass
-10		-2	-0.00239	pass
0		-2	-0.00239	pass
10		-2	-0.00239	pass
20		-1	-0.00120	pass
30		-2	-0.00239	pass
40		-2	-0.00239	pass
50		-4	-0.00478	pass
20	V min.= 3.6	-6	-0.00717	pass
	V max.= 4.4	-7	-0.00837	pass

Band 7:

10.0 MHz Middle Channel, f_o =2535 MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	3.85	3	0.00118	pass
-20		3	0.00118	pass
-10		2	0.00079	pass
0		2	0.00079	pass
10		2	0.00079	pass
20		1	0.00039	pass
30		2	0.00079	pass
40		3	0.00118	pass
50		4	0.00158	pass
20	V min.= 3.6	9	0.00355	pass
	V max.= 4.4	10	0.00394	pass

Band 12:

10.0 MHz Middle Channel, f_o =707.5 MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	3.85	-4	-0.00565	pass
-20		-4	-0.00565	pass
-10		-3	-0.00424	pass
0		-3	-0.00424	pass
10		-3	-0.00424	pass
20		-2	-0.00283	pass
30		-3	-0.00424	pass
40		-4	-0.00565	pass
50		-5	-0.00707	pass
20	V min.= 3.6	-7	-0.00989	pass
	V max.= 4.4	-8	-0.01131	pass

Band 17:

10.0 MHz Middle Channel, f_o =710 MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	3.85	-5	-0.00704	pass
-20		-5	-0.00704	pass
-10		-4	-0.00563	pass
0		-4	-0.00563	pass
10		-4	-0.00563	pass
20		-3	-0.00423	pass
30		-4	-0.00563	pass
40		-4	-0.00563	pass
50		-5	-0.00704	pass
25	V min.= 3.6	-6	-0.00845	pass
	V max.= 4.4	-6	-0.00845	pass

16QAM:

Band 2:

10.0 MHz Middle Channel, f_o =1880MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	3.85	−4	-0.00213	pass
-20		-4	-0.00213	pass
-10		-2	-0.00106	pass
0		-2	-0.00106	pass
10		-2	-0.00106	pass
20		-1	-0.00053	pass
30		-2	-0.00106	pass
40		-4	-0.00213	pass
50		-6	-0.00319	pass
20	V min.= 3.6	-15	-0.00798	pass
	V max.= 4.4	-17	-0.00904	pass

Band 4:

10.0 MHz Middle Channel, f_o =1732.5 MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	3.85	4	0.00231	pass
-20		2	0.00115	pass
-10		2	0.00115	pass
0		2	0.00115	pass
10		2	0.00115	pass
20		1	0.00058	pass
30		2	0.00115	pass
40		2	0.00115	pass
50		4	0.00231	pass
20	V min.= 3.6	10	0.00577	pass
	V max.= 4.4	12	0.00693	pass

Band 5:

10.0 MHz Middle Channel, f_o =836.5 MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	3.85	-3	-0.00359	pass
-20		-3	-0.00359	pass
-10		-2	-0.00239	pass
0		-2	-0.00239	pass
10		-2	-0.00239	pass
20		-1	-0.00120	pass
30		-2	-0.00239	pass
40		-2	-0.00239	pass
50		-3	-0.00359	pass
20	V min.= 3.6	-5	-0.00598	pass
	V max.= 4.4	-6	-0.00717	pass

Band 7:

10.0 MHz Middle Channel, f_o =2535 MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	3.85	-4	-0.00158	pass
-20		-4	-0.00158	pass
-10		-2	-0.00079	pass
0		-2	-0.00079	pass
10		-2	-0.00079	pass
20		-1	-0.00039	pass
30		-2	-0.00079	pass
40		-2	-0.00079	pass
50		-5	-0.00197	pass
20	V min.= 3.6	-8	-0.00316	pass
	V max.= 4.4	-10	-0.00394	pass

Band 12:

10.0 MHz Middle Channel, f_o =707.5 MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	3.85	3	0.00424	pass
-20		3	0.00424	pass
-10		2	0.00283	pass
0		2	0.00283	pass
10		2	0.00283	pass
20		1	0.00141	pass
30		2	0.00283	pass
40		3	0.00424	pass
50		3	-0.00424	pass
20	V min.= 3.6	5	0.00707	pass
	V max.= 4.4	6	0.00848	pass

Band 17:

10.0 MHz Middle Channel, f_o =710 MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	3.85	-6	-0.00845	pass
-20		-6	-0.00845	pass
-10		-4	-0.00563	pass
0		-4	-0.00563	pass
10		-4	-0.00563	pass
20		-3	-0.00423	pass
30		-4	-0.00563	pass
40		-6	-0.00845	pass
50		-8	-0.01127	pass
25	V min.= 3.6	-14	-0.01972	pass
25	V max.= 4.4	-15	-0.02113	pass

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