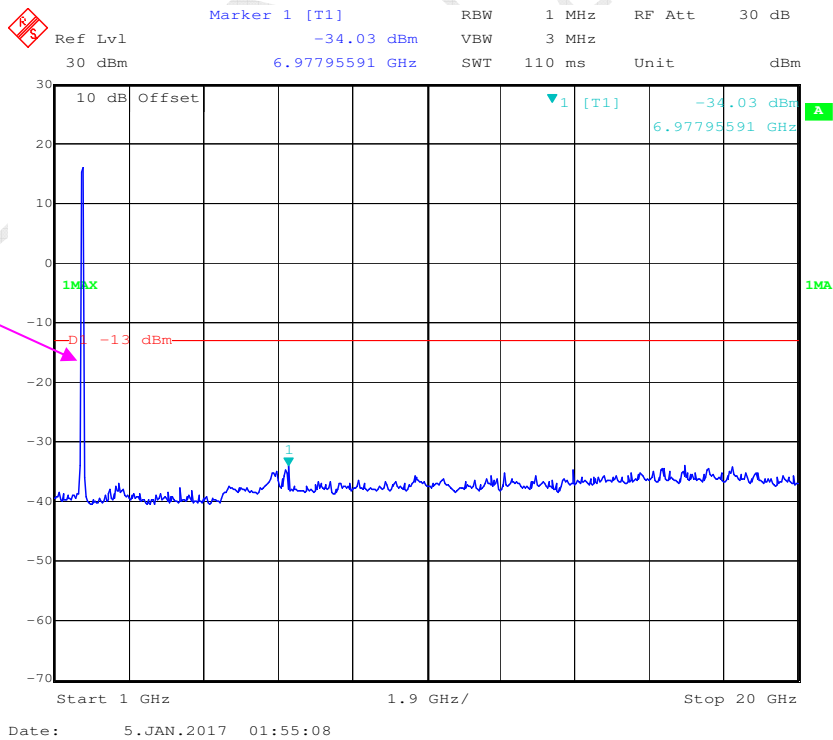
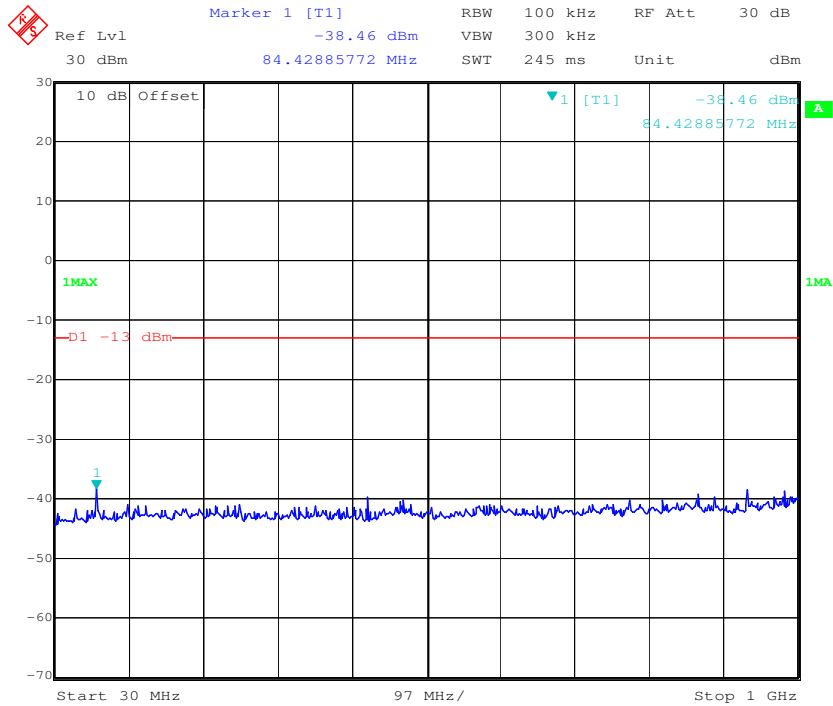


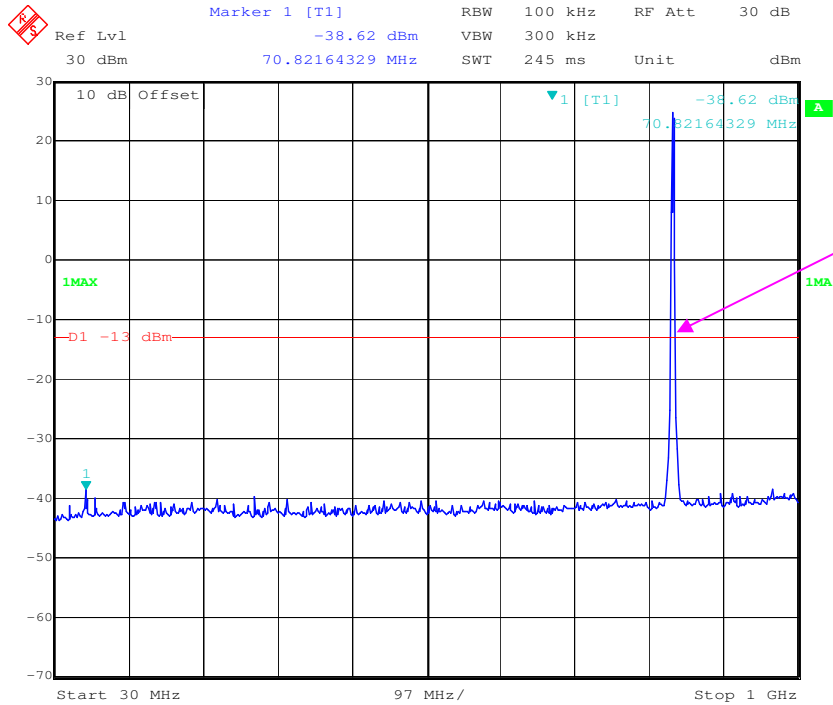
### QPSK\_20 MHz



Fundamental

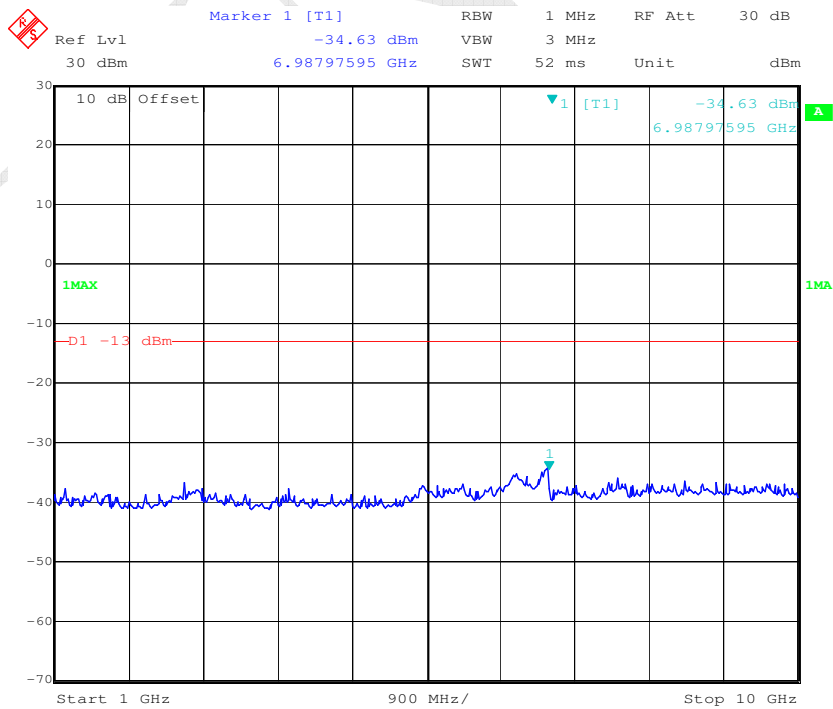
LTE Band V (Middle Channel)

QPSK\_1.4 MHz




Fundamental

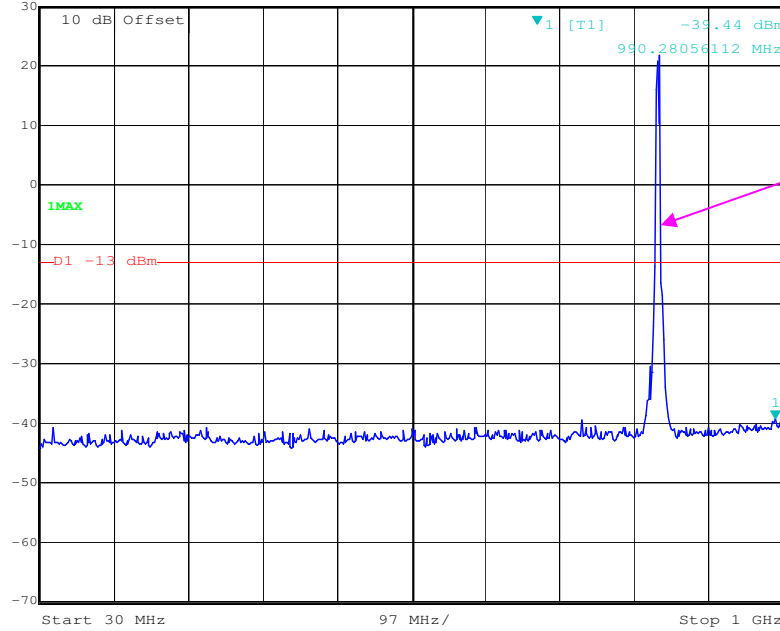
Date: 5.JAN.2017 01:36:05



Date: 5.JAN.2017 01:36:36


### QPSK\_3 MHz

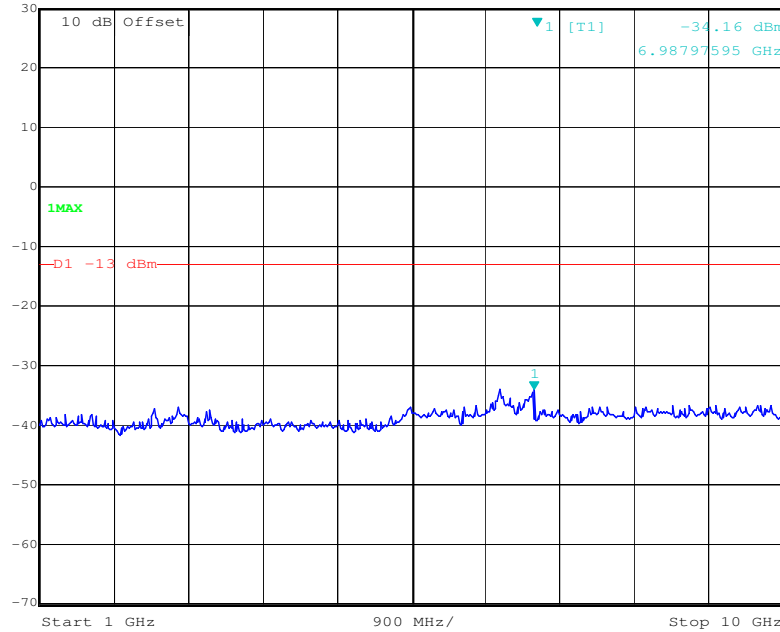
 Marker 1 [T1] RBW 100 kHz RF Att 30 dB  
Ref Lvl -39.44 dBm VBW 300 kHz  
30 dBm 990.28056112 MHz SWT 245 ms Unit dBm



Fundamental


Date: 5.JAN.2017 01:37:36

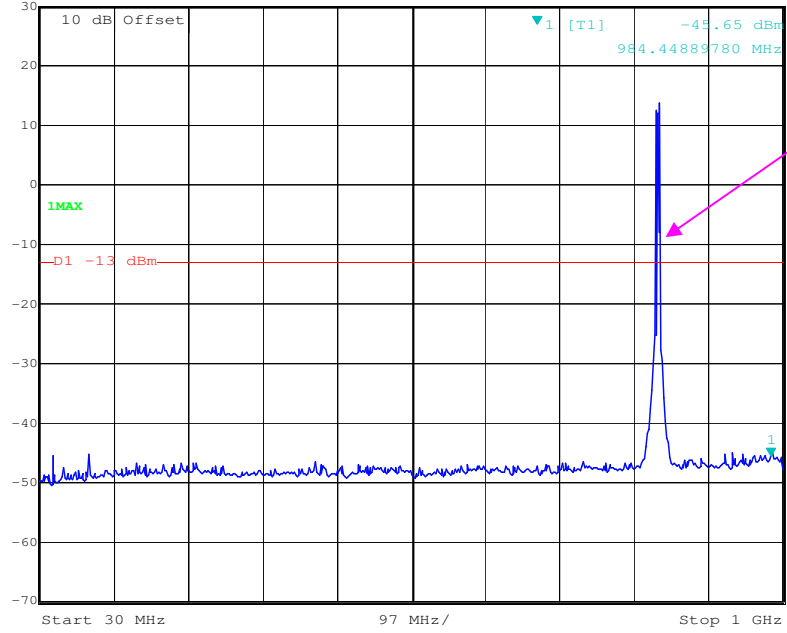
 Marker 1 [T1] RBW 1 MHz RF Att 30 dB  
Ref Lvl -34.16 dBm VBW 3 MHz  
30 dBm 6.98797595 GHz SWT 52 ms Unit dBm




Date: 5.JAN.2017 01:37:00

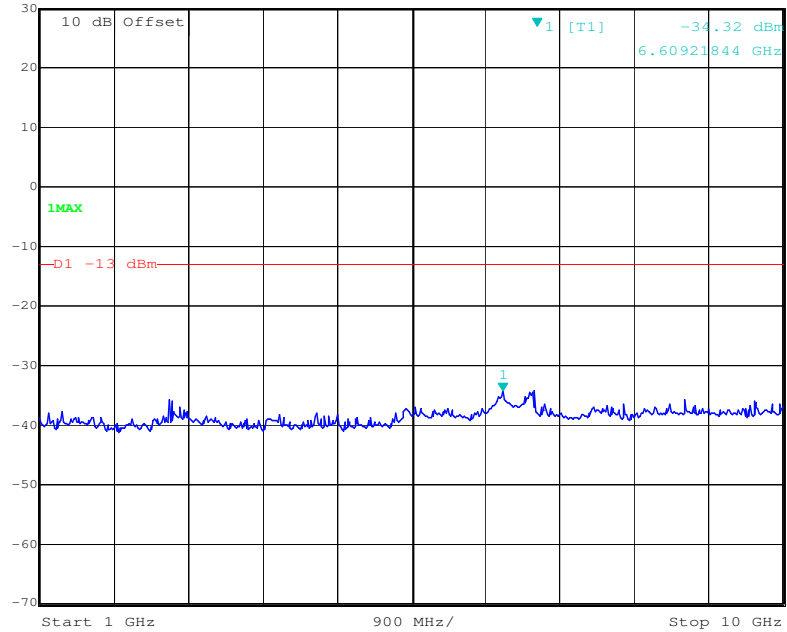
### QPSK\_5 MHz

 Marker 1 [T1] RBW 100 kHz RF Att 30 dB  
Ref Lvl -45.65 dBm VBW 300 kHz  
30 dBm 984.44889780 MHz SWT 245 ms Unit dBm




Date: 5.JAN.2017 01:38:16

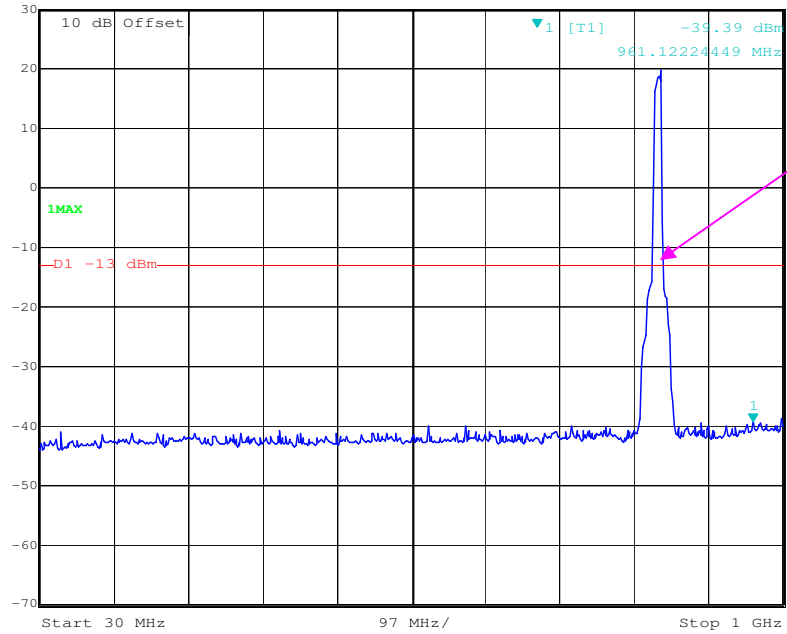
 Marker 1 [T1] RBW 1 MHz RF Att 30 dB  
Ref Lvl -34.32 dBm VBW 3 MHz  
30 dBm 6.60921844 GHz SWT 52 ms Unit dBm




Date: 5.JAN.2017 01:38:52

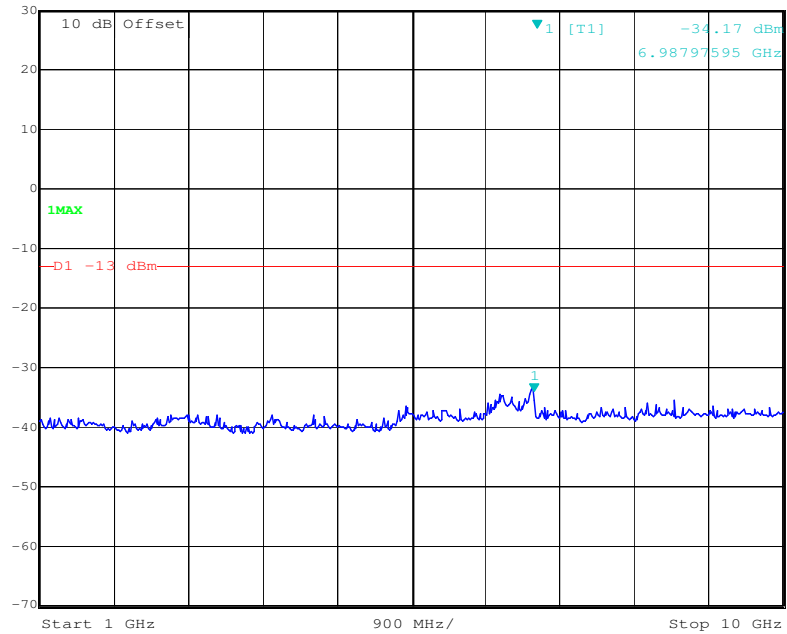
### QPSK\_10 MHz

 Marker 1 [T1] RBW 100 kHz RF Att 30 dB  
Ref Lvl -39.39 dBm VBW 300 kHz  
30 dBm 961.12224449 MHz SWT 245 ms Unit dBm



Date: 5.JAN.2017 01:40:15

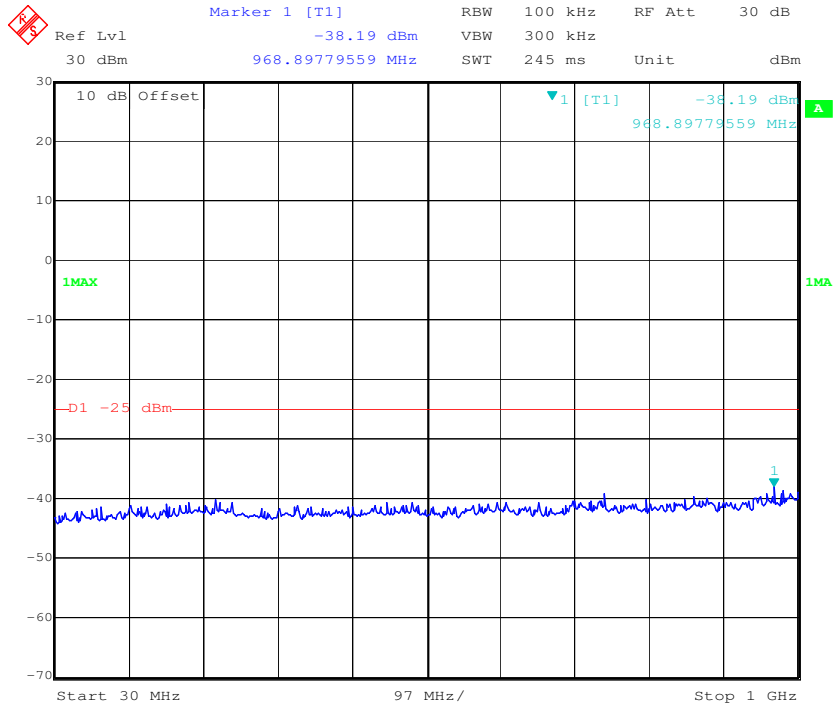
 Marker 1 [T1] RBW 1 MHz RF Att 30 dB  
Ref Lvl -34.17 dBm VBW 3 MHz  
30 dBm 6.98797595 GHz SWT 52 ms Unit dBm



Date: 5.JAN.2017 01:39:24

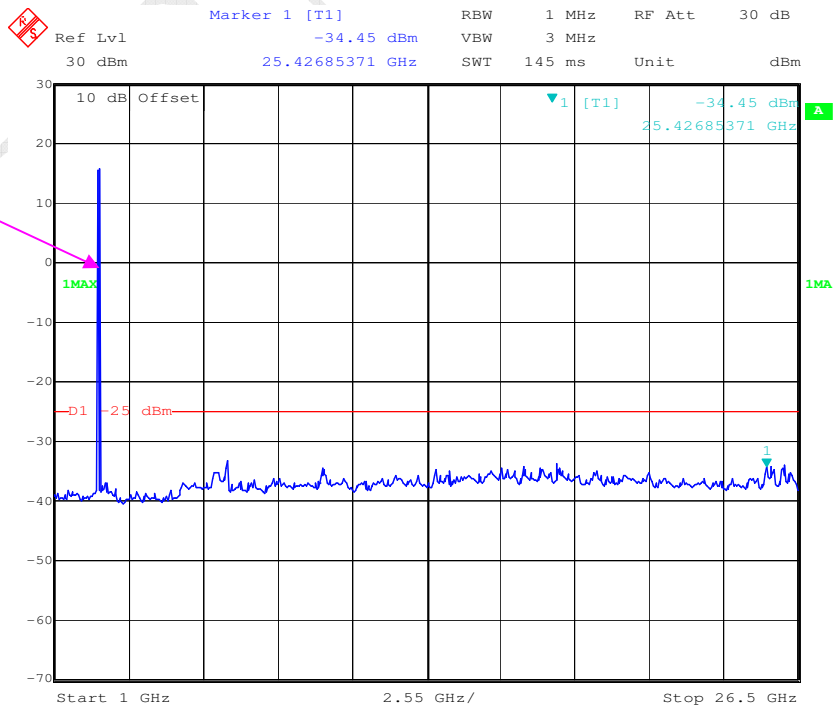
LTE Band VII

QPSK\_5 MHz



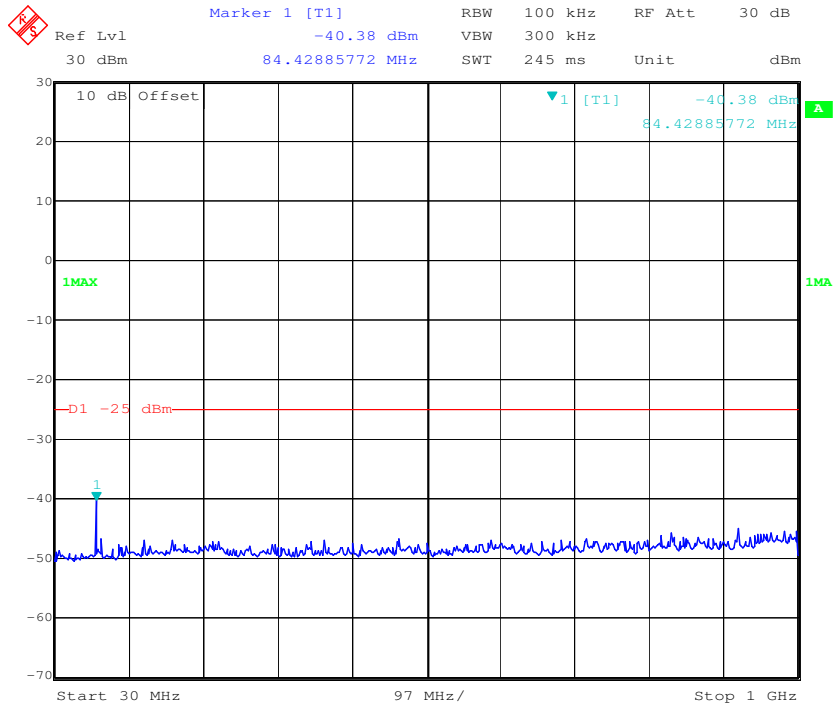
Date: 5.JAN.2017 01:30:57

Fundamental

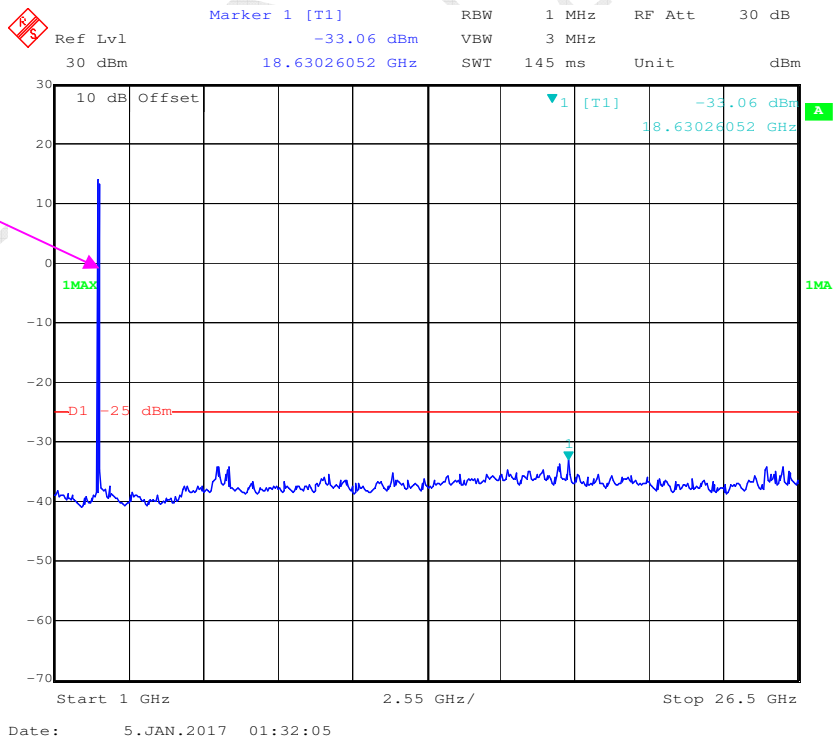


Date: 5.JAN.2017 01:30:22

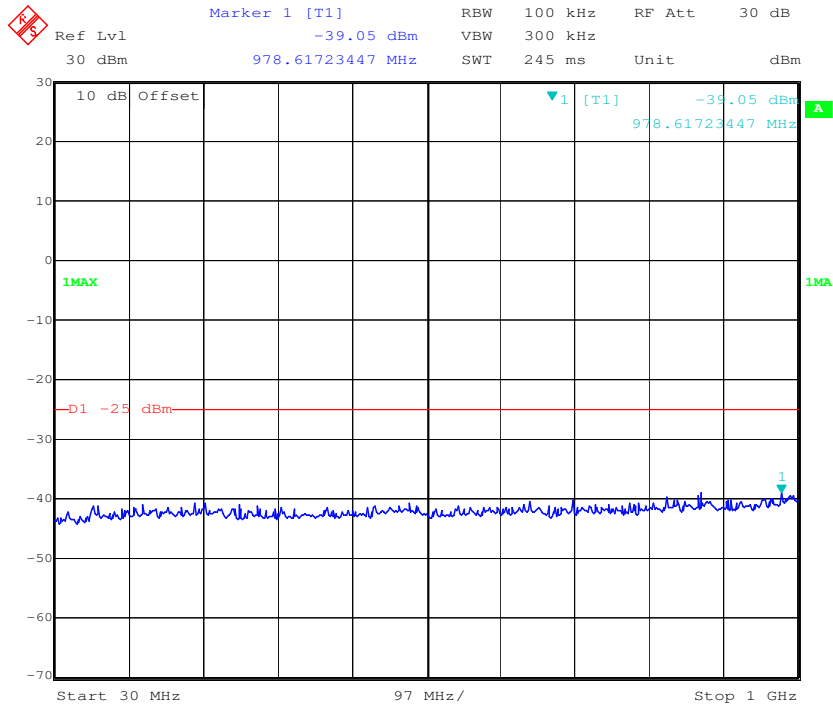
### QPSK\_10 MHz



Fundamental

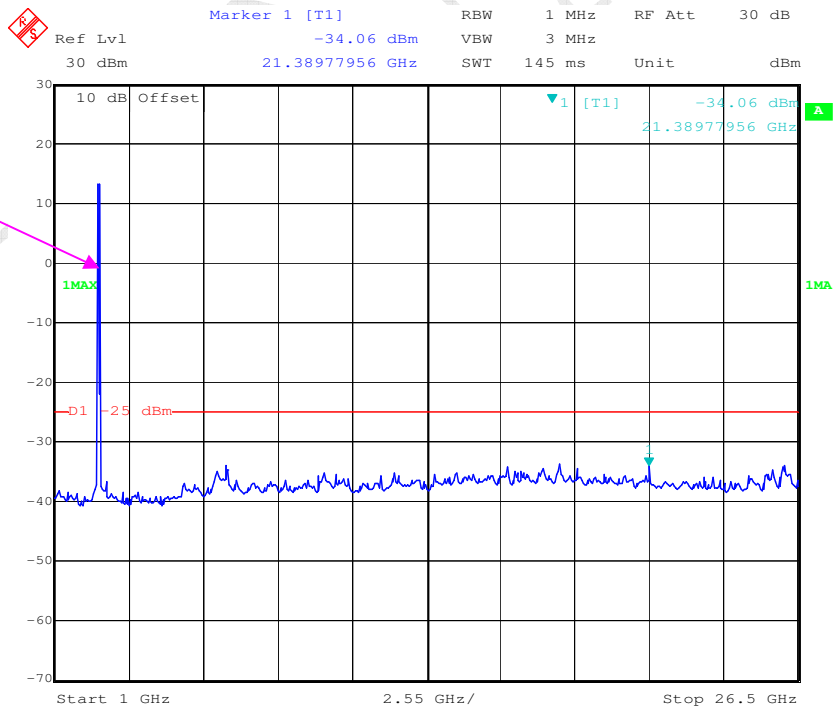


### QPSK\_15 MHz



Date: 5.JAN.2017 01:33:16

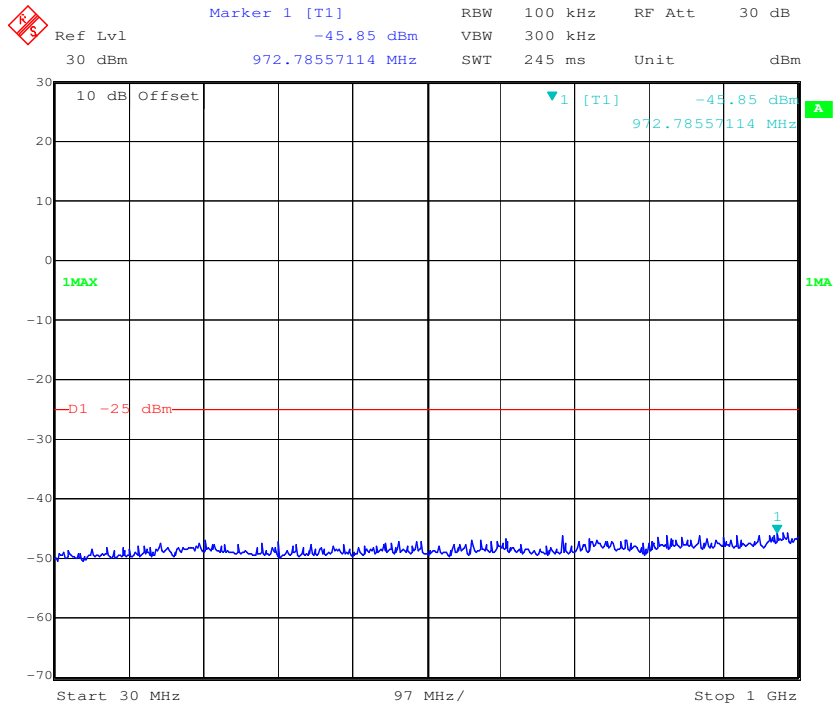
Fundamental



Date: 5.JAN.2017 01:32:47

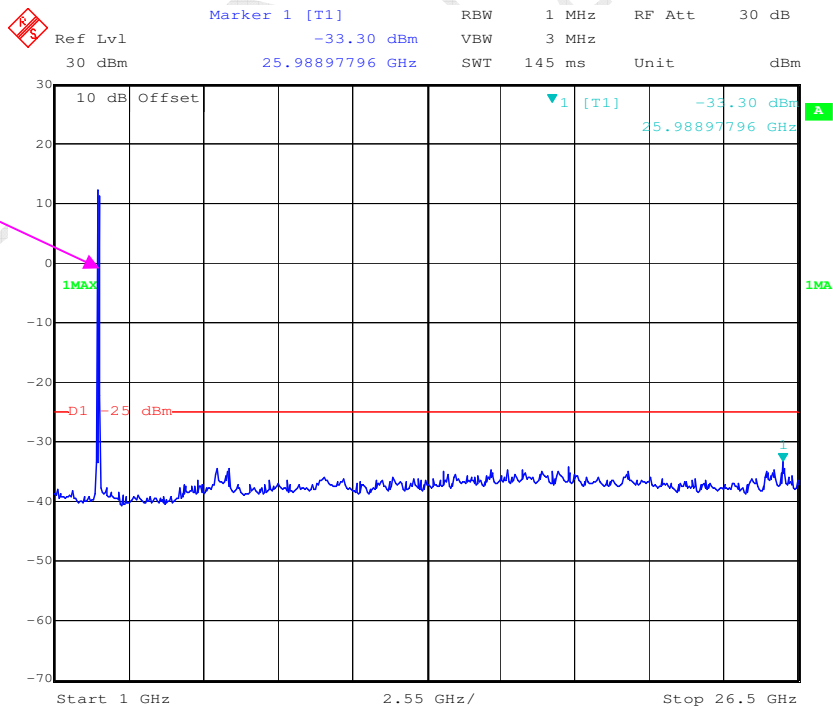


### QPSK\_20 MHz



Date: 5.JAN.2017 01:33:46

Fundamental

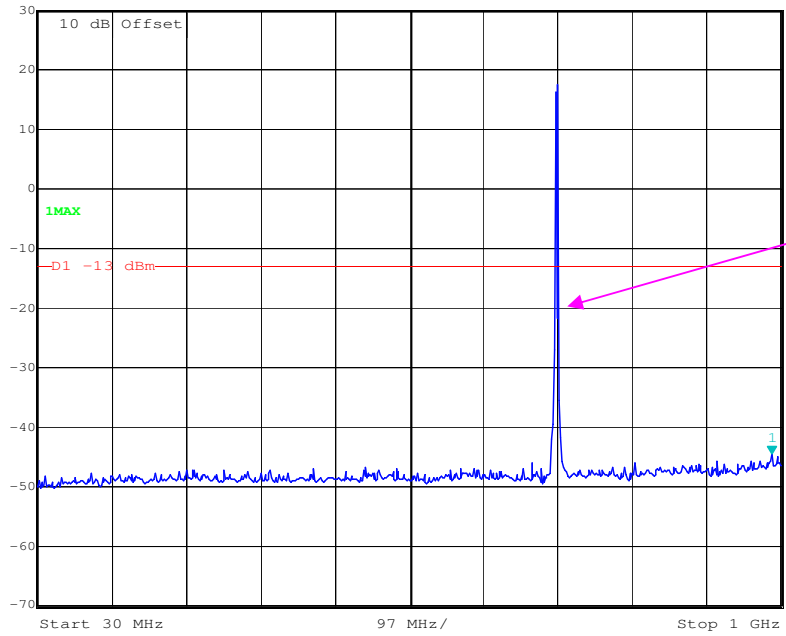


Date: 5.JAN.2017 01:34:19

LTE Band 12 (Middle Channel)

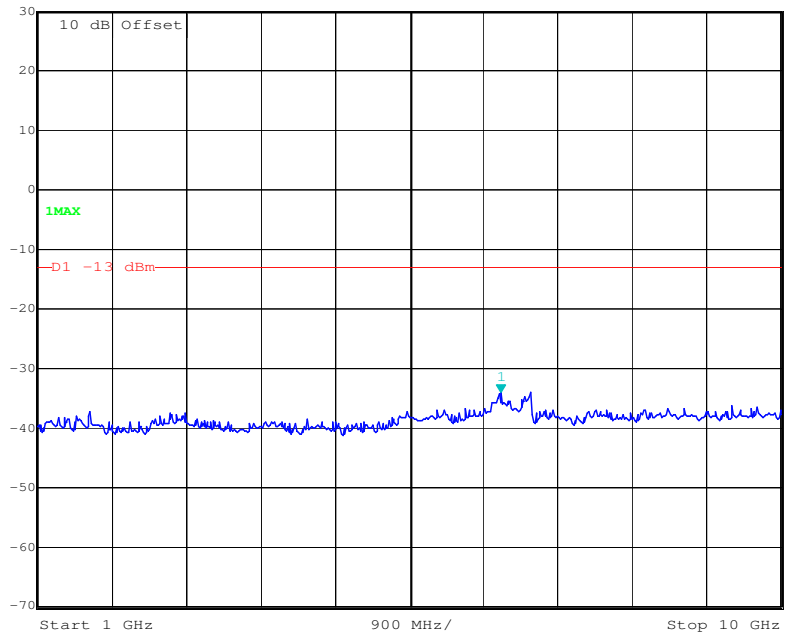
QPSK\_1.4 MHz

Marker 1 [T1] RBW 100 kHz RF Att 30 dB  
Ref Lvl -44.66 dBm VBW 300 kHz  
30 dBm 988.33667335 MHz SWT 245 ms Unit dBm




Date: 4.FEB.2017 22:41:40

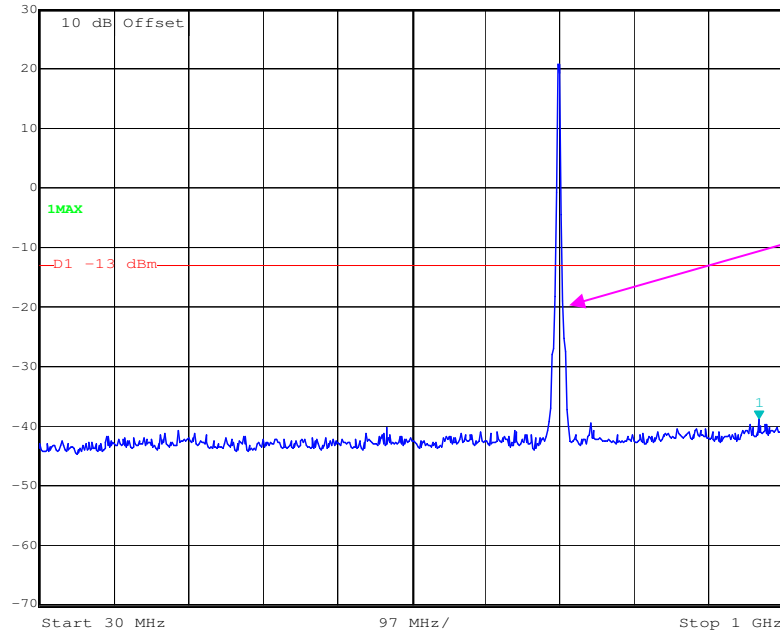
Marker 1 [T1] RBW 1 MHz RF Att 30 dB  
Ref Lvl -34.21 dBm VBW 3 MHz  
30 dBm 6.60921844 GHz SWT 52 ms Unit dBm




Date: 4.FEB.2017 22:42:06

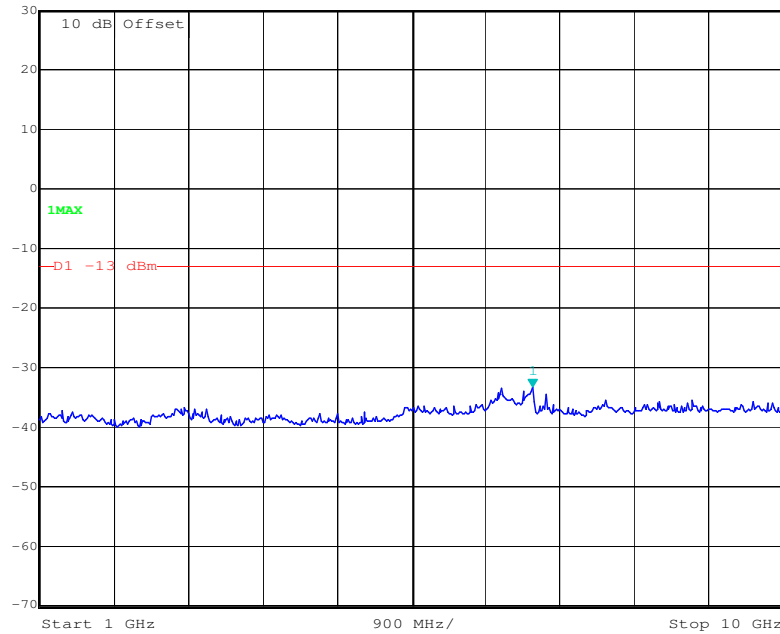
### QPSK\_3 MHz

 Marker 1 [T1] RBW 100 kHz RF Att 30 dB  
Ref Lvl -38.97 dBm VBW 300 kHz  
30 dBm 968.89779559 MHz SWT 245 ms Unit dBm




Date: 4.FEB.2017 22:40:13

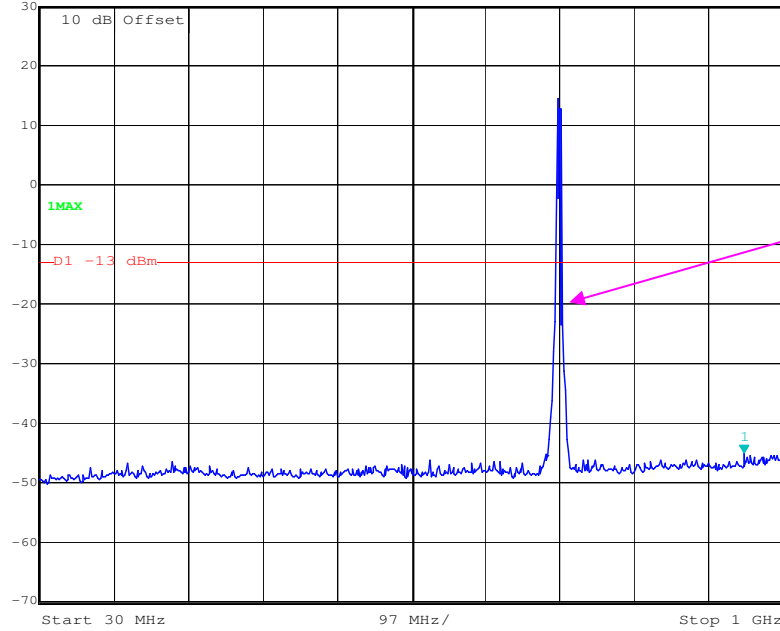
 Marker 1 [T1] RBW 1 MHz RF Att 30 dB  
Ref Lvl -33.45 dBm VBW 3 MHz  
30 dBm 6.96993988 GHz SWT 52 ms Unit dBm




Date: 4.FEB.2017 22:39:49

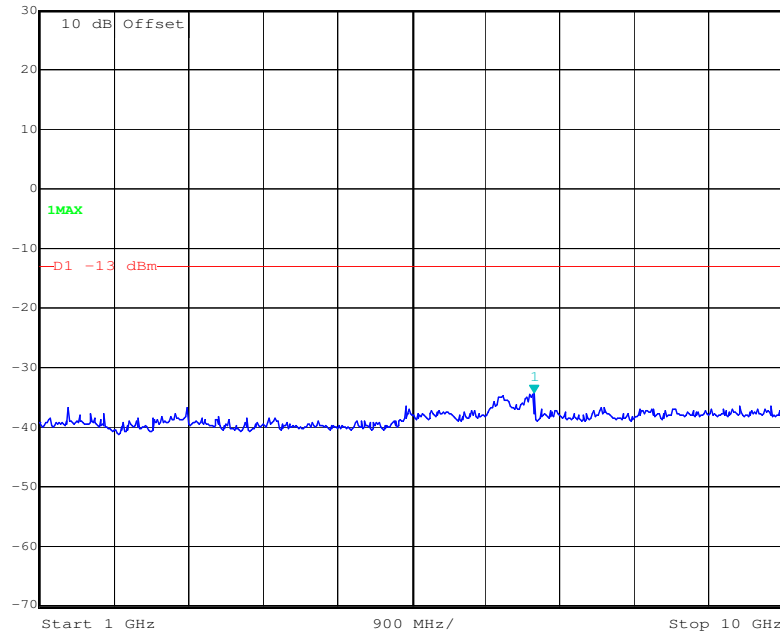
### QPSK\_5 MHz

 Marker 1 [T1] RBW 100 kHz RF Att 30 dB  
Ref Lvl -45.14 dBm VBW 300 kHz  
30 dBm 949.45891784 MHz SWT 245 ms Unit dBm




Date: 4.FEB.2017 22:35:39

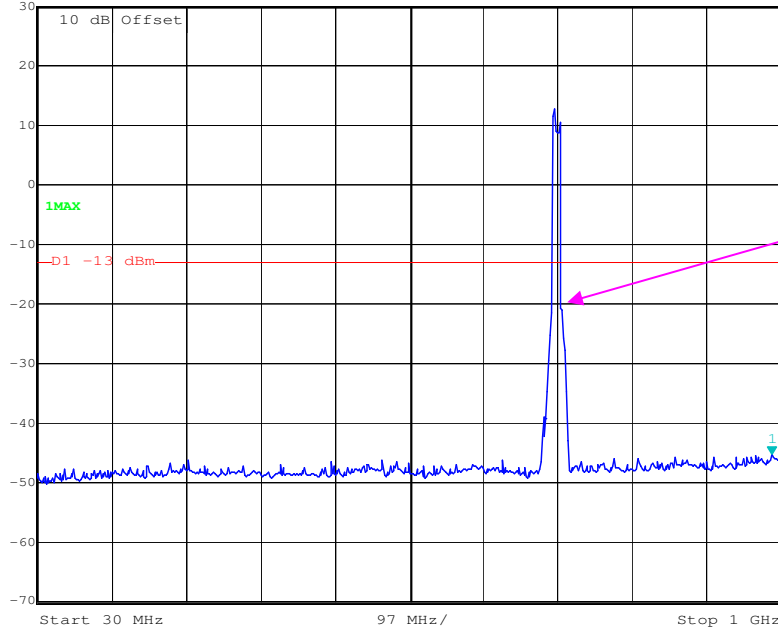
 Marker 1 [T1] RBW 1 MHz RF Att 30 dB  
Ref Lvl -34.36 dBm VBW 3 MHz  
30 dBm 6.98797595 GHz SWT 52 ms Unit dBm




Date: 4.FEB.2017 22:36:25

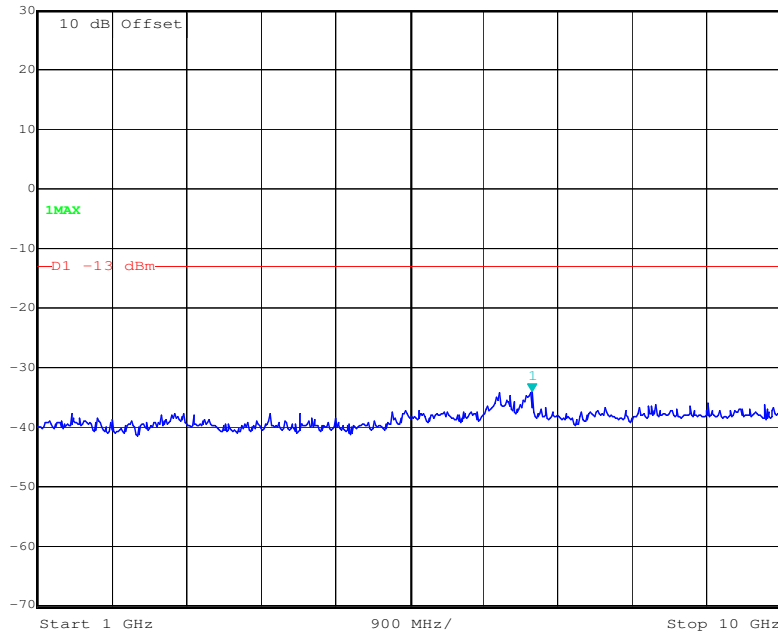
### QPSK\_10 MHz

 Marker 1 [T1] RBW 100 kHz RF Att 30 dB  
Ref Lvl -45.43 dBm VBW 300 kHz  
30 dBm 988.33667335 MHz SWT 245 ms Unit dBm



Date: 4.FEB.2017 22:31:56

 Marker 1 [T1] RBW 1 MHz RF Att 30 dB  
Ref Lvl -34.09 dBm VBW 3 MHz  
30 dBm 6.98797595 GHz SWT 52 ms Unit dBm

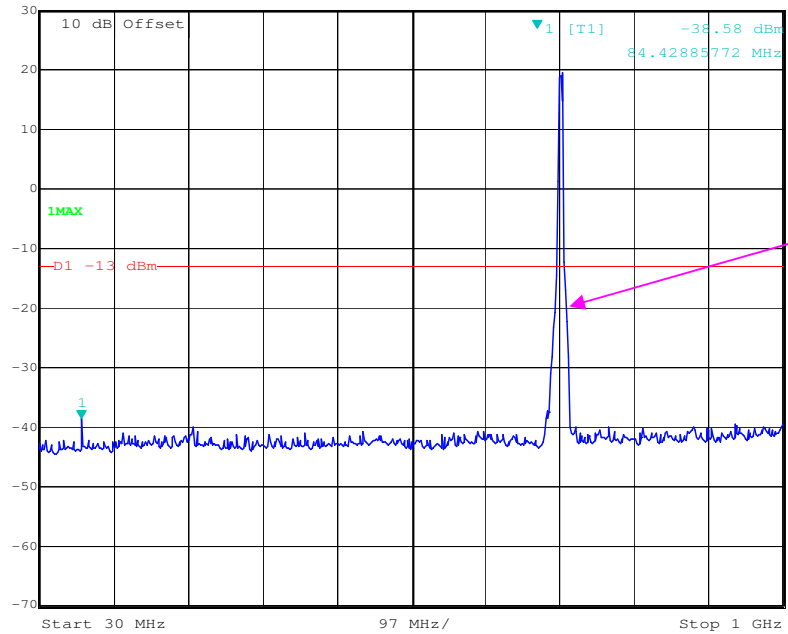


Date: 4.FEB.2017 22:32:42

LTE Band 17 (Middle Channel)

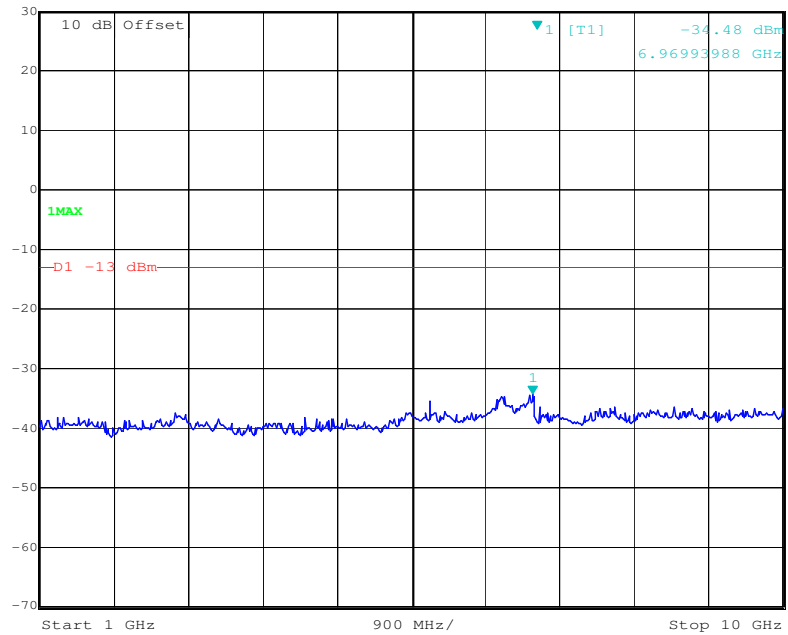
QPSK\_5 MHz

Marker 1 [T1] RBW 100 kHz RF Att 30 dB  
Ref Lvl -38.58 dBm VBW 300 kHz  
30 dBm 84.42885772 MHz SWT 245 ms Unit dBm




Date: 5.JAN.2017 01:27:10

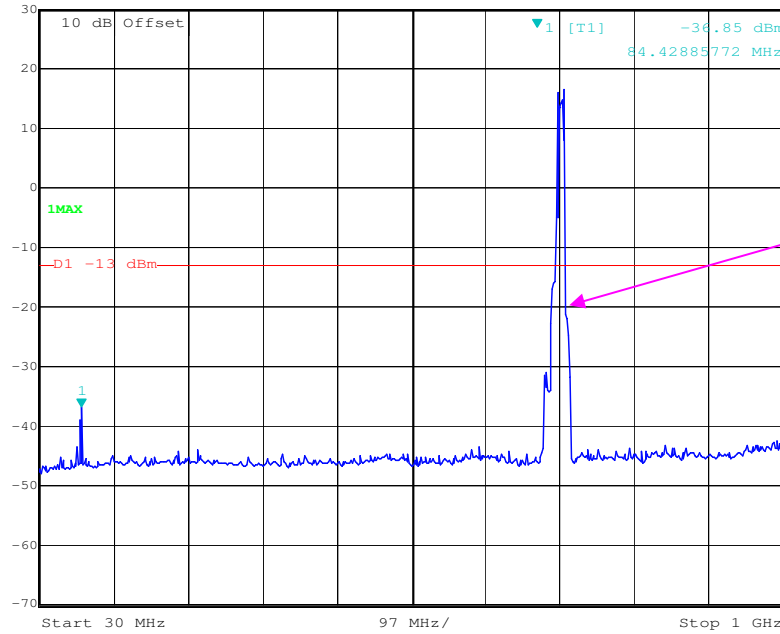
Marker 1 [T1] RBW 1 MHz RF Att 30 dB  
Ref Lvl -34.48 dBm VBW 3 MHz  
30 dBm 6.96993988 GHz SWT 52 ms Unit dBm




Date: 5.JAN.2017 01:26:23

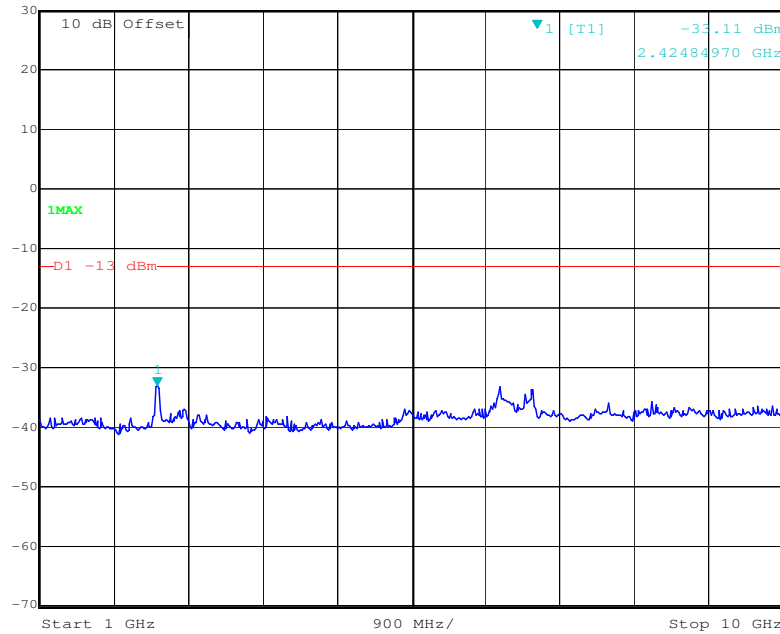
### QPSK\_10 MHz

 Marker 1 [T1] RBW 100 kHz RF Att 30 dB  
Ref Lvl -36.85 dBm VBW 300 kHz  
30 dBm 84.42885772 MHz SWT 245 ms Unit dBm



Date: 5.JAN.2017 01:24:15

 Marker 1 [T1] RBW 1 MHz RF Att 30 dB  
Ref Lvl -33.11 dBm VBW 3 MHz  
30 dBm 2.42484970 GHz SWT 52 ms Unit dBm



Date: 5.JAN.2017 01:25:50

## **FCC §2.1053, §22.917 & §24.238 & §27.53- SPURIOUS RADIATED EMISSIONS**

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### **Applicable Standard**

FCC § 2.1053, §22.917, § 24.238 and § 27.53.

### **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 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.

Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

Spurious emissions in dB =  $10 \lg(\text{TXpwr in Watts}/0.001)$  – the absolute level

Spurious attenuation limit in dB =  $43 + 10 \text{Log}_{10}(\text{power out in Watts})$



### Test Equipment List and Details

Manufacturer	Description	Model Number	Serial Number	Calibration Date	Calibration Due Date
Agilent	Amplifier	8447D	2944A10442	2016-12-02	2017-12-01
Rohde & Schwarz	EMI Test Receiver	ESCI	100028	2016-12-02	2017-12-01
Sunol Sciences	Broadband Antenna	JB3	A101808	2016-04-10	2019-04-09
Rohde & Schwarz	Spectrum Analyzer	FSEM30	100018	2016-12-02	2017-12-01
ETS	Horn Antenna	3115	003-6076	2016-12-02	2017-12-01
Ducommun Technologies	Horn Antenna	ARH-4223-02	1007726-0113024	2014-06-16	2017-06-15
EMCO	Adjustable Dipole Antenna	3121C	9109-258	N/A	N/A
HP	Signal Generator	8648C	3623A04150	2016-05-23	2017-05-22
WILTRON	SWEPT FREQUENCY SYNTHESIZER	6737	213001	2016-05-23	2017-05-22
Mini-circuits	Amplifier	ZVA-183-S+	771001215	2016-05-20	2017-05-19
HP	Amplifier	8449B	3008A00277	2016-12-02	2017-12-01
EMCT	Semi-Anechoic Chamber	966	N/A	2015-04-24	2018-04-23
N/A	RF Cable (below 1GHz)	NO.1	N/A	2016-11-10	2017-11-09
N/A	RF Cable (below 1GHz)	NO.4	N/A	2016-11-10	2017-11-09
N/A	RF Cable (above 1GHz)	NO.2	N/A	2016-11-10	2017-11-09
Ducommun Technologies	Horn Antenna	ARH-4223-02	1007726-011315	2016-08-18	2017-08-18
Ducommun Technologies	Horn Antenna	ARH-2823-02	1007726-011312	2016-08-18	2017-08-18

\* **Statement of Traceability:** BACL (Chengdu) attested that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

### Test Data

#### Environmental Conditions

<b>Temperature:</b>	26.1 °C
<b>Relative Humidity:</b>	50 %
<b>ATM Pressure:</b>	101.1 kPa

*The testing was performed by Tom Tang on 2017-01-05.*

*EUT Operation Mode: Transmitting*

**Cellular Band**

**30MHz-10 GHz:**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBµV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			S.G. Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
GSM850, Frequency:836.600 MHz								
112.450	H	43.350	-56.6	0.0	0.2	-56.8	-13.0	43.8
199.750	V	39.400	-57	0.0	0.2	-57.2	-13.0	44.2
1673.200	H	70.97	-42.4	10.5	4.5	-36.4	-13.0	23.4
1673.200	V	68.82	-44.8	10.5	4.5	-38.8	-13.0	25.8
2509.800	H	54.05	-57.2	12.2	5.4	-50.4	-13.0	37.4
2509.800	V	57.93	-53.3	12.2	5.4	-46.5	-13.0	33.5
1741.000	H	62.25	-50.9	10.7	4.6	-44.8	-13.0	31.8
1741.000	V	55.39	-58.1	10.7	4.6	-52.0	-13.0	39.0
WCDMA Band V R99, Frequency:836.600 MHz								
199.750	V	38.090	-58.4	0.0	0.2	-58.6	-13.0	45.6
199.750	H	37.070	-63.1	0.0	0.2	-63.3	-13.0	50.3
1673.200	H	47.37	-66	10.5	4.5	-60.0	-13.0	47.0
1673.200	V	46.28	-67.3	10.5	4.5	-61.3	-13.0	48.3
3277.000	H	45.64	-63.8	12.3	6.1	-57.6	-13.0	44.6
2852.000	V	46.76	-63.7	12.3	5.7	-57.1	-13.0	44.1

**PCS Band**

**30MHz-20GHz:**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBµV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			S.G. Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
GSM1900, Frequency:1880.000 MHz								
199.750	V	43.880	-52.6	0.0	0.2	-52.8	-13.0	39.8
199.750	H	41.210	-59	0.0	0.2	-59.2	-13.0	46.2
3760.000	H	48.73	-59.3	12.3	6.7	-53.7	-13.0	40.7
3760.000	V	55.22	-53.2	12.3	6.7	-47.6	-13.0	34.6
2843.000	H	42.16	-68.2	12.3	5.7	-61.6	-13.0	48.6
2843.000	V	41.86	-68.6	12.3	5.7	-62.0	-13.0	49.0
WCDMA Band II, R99, Frequency:1880.000 MHz								
199.750	H	35.030	-65.1	0.0	0.2	-65.3	-13.0	52.3
199.750	V	35.810	-60.6	0.0	0.2	-60.8	-13.0	47.8
3760.000	H	48.19	-59.8	12.3	6.7	-54.2	-13.0	41.2
3760.000	V	47.76	-60.7	12.3	6.7	-55.1	-13.0	42.1
2916.000	H	49.06	-61.1	12.4	5.8	-54.5	-13.0	41.5
3624.000	V	50.34	-58.5	12.2	6.5	-52.8	-13.0	39.8

**AWS Band**

**30MHz-20GHz:**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			S.G. Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
WCDMA Band IV, R99, Frequency:1732.6 MHz								
199.750	V	40.500	-55.9	0.0	0.2	-56.1	-13.0	43.1
199.750	H	34.570	-65.6	0.0	0.2	-65.8	-13.0	52.8
3465.200	H	52.95	-56.1	12.2	6.3	-50.2	-13.0	37.2
3465.200	V	51.51	-57.8	12.2	6.3	-51.9	-13.0	38.9
5197.800	H	56.74	-47.8	12.9	7.6	-42.5	-13.0	29.5
5197.800	V	52.61	-52.5	12.9	7.6	-47.2	-13.0	34.2

FINAL

**LTE Bands**

**LTE Band II (30MHz-20GHz):**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			S.G. Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 1880.00 MHz								
3760.000	H	33.64	-60.7	13.8	2.9	-49.8	-13.0	36.8
3760.000	V	31.61	-61.5	13.8	2.9	-50.6	-13.0	37.6
5640.000	H	36.58	-55.1	14.0	2.1	-43.2	-13.0	30.2
5640.000	V	33.15	-58.5	14.0	2.1	-46.6	-13.0	33.6
231.700	H	35.560	-64	0.0	0.2	-64.2	-13.0	51.2
299.400	V	36.280	-61	0.0	0.3	-61.3	-13.0	48.3

**LTE Band IV (30MHz-20GHz):**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			S.G. Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 1732.500 MHz								
3465.000	H	35.26	-61.7	13.9	1.9	-49.7	-13.0	36.7
3465.000	V	32.68	-63.5	13.9	1.9	-51.5	-13.0	38.5
5197.500	H	46.95	-44.1	14.0	2.3	-32.4	-13.0	19.4
5197.500	V	38.26	-54.3	14.0	2.3	-42.6	-13.0	29.6
266.400	H	36.21	-62.9	0.0	0.3	-63.2	-13.0	50.2
302.700	V	37.32	-59.9	0.0	0.3	-60.2	-13.0	47.2

**LTE Band V (30MHz-10GHz)**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			S.G. Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 836.500 MHz								
1673.000	H	37.56	-63.5	10.6	1.5	-54.4	-13.0	41.4
1673.000	V	34.28	-67.1	10.6	1.5	-58.0	-13.0	45.0
2509.500	H	42.63	-55.4	13.1	2.8	-45.1	-13.0	32.1
2509.500	V	38.59	-58.5	13.1	2.8	-48.2	-13.0	35.2
285.300	H	36.780	-62.2	0.0	0.3	-62.5	-13.0	49.5
255.800	V	37.560	-60.3	0.0	0.3	-60.6	-13.0	47.6

**LTE Band VII (30MHz-26GHz)**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			S.G. Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 2535.000 MHz								
5070.000	H	36.54	-54.8	13.9	2.4	-43.3	-25.0	18.3
5070.000	V	34.28	-57.9	13.9	2.4	-46.4	-25.0	21.4
7605.000	H	41.82	-45.7	13.2	3.1	-35.6	-25.0	10.6
7605.000	V	38.67	-48.8	13.2	3.1	-38.7	-25.0	13.7
250.900	H	35.98	-63.2	0.0	0.3	-63.5	-25.0	38.5
291.700	V	36.05	-61.3	0.0	0.3	-61.6	-25.0	36.6

**LTE Band 12 (30MHz-10GHz)**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			S.G. Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 707.500 MHz								
1415.000	H	35.74	-65.1	9.0	1.3	-57.4	-13.0	44.4
1415.000	V	33.15	-67.4	9.0	1.3	-59.7	-13.0	46.7
2122.500	H	36.48	-59.5	11.2	1.4	-49.7	-13.0	36.7
2122.500	V	34.82	-59.9	11.2	1.4	-50.1	-13.0	37.1
429.640	H	34.30	-62.4	0.0	0.4	-62.8	-13.0	49.8
41.640	V	40.14	-38.3	-24.2	0.1	-62.6	-13.0	49.6

**LTE Band 17 (30MHz-10GHz)**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			S.G. Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 710.000 MHz								
1420.000	H	38.36	-62.5	9.1	1.3	-54.7	-13.0	41.7
1420.000	V	36.72	-63.9	9.1	1.3	-56.1	-13.0	43.1
2130.000	H	43.82	-52.1	11.2	1.4	-42.3	-13.0	29.3
2130.000	V	39.27	-55.5	11.2	1.4	-45.7	-13.0	32.7
303.100	H	35.740	-63.1	0.0	0.3	-63.4	-13.0	50.4
271.900	V	36.560	-61.1	0.0	0.3	-61.4	-13.0	48.4

Note:

- 1) The unit of Antenna Gain is dBd for frequency below 1GHz, and the unit of Antenna Gain is dBi for frequency above 1GHz.
- 2) Absolute Level = SG Level - Cable loss + Antenna Gain
- 3) Margin = Limit - Absolute Level

## FCC §22.917(a) & §24.238(a) & §27.53- 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.

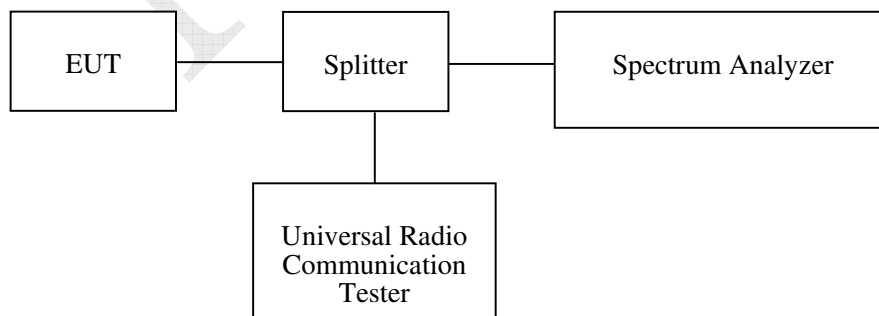
According to §27.53 (h), AWS emission limits—(1) General protection levels. Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission 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.

According to §27.53 (m), (4) For mobile digital stations, the attenuation factor shall be not less than  $40 + 10 \log(P)$  dB on all frequencies between the channel edge and 5 megahertz from the channel edge,  $43 + 10 \log(P)$  dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and  $55 + 10 \log(P)$  dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than  $43 + 10 \log(P)$  dB on all frequencies between 2490.5 MHz and 2496 MHz and  $55 + 10 \log(P)$  dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

### 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
Rohde & Schwarz	Signal Analyzer	FSIQ26	831929/005	2016-09-21	2017-09-20
N/A	RF Cable	N/A	N/A	Each Time	/
N/A	Two-way Splitter	N/A	OE0120121	Each Time	/

\* **Statement of Traceability:** BACL (Chengdu) attested that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

### Test Data

#### Environmental Conditions

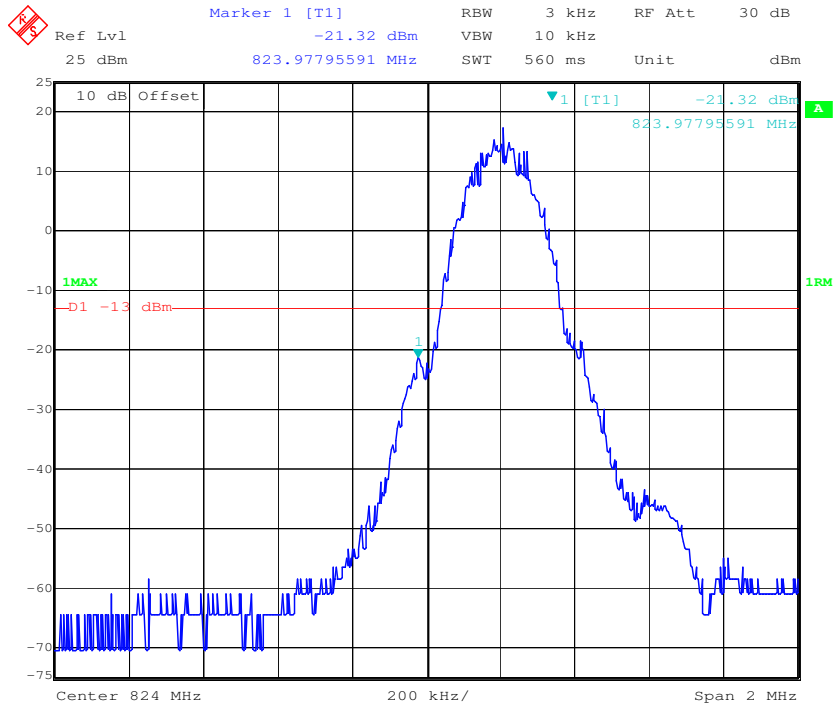
<b>Temperature:</b>	23.2 ~ 28.8 °C
<b>Relative Humidity:</b>	31~52 %
<b>ATM Pressure:</b>	100.7~102.3 kPa

*The testing was performed by Tom Tang from 2016-12-16 to 2017-02-04.*

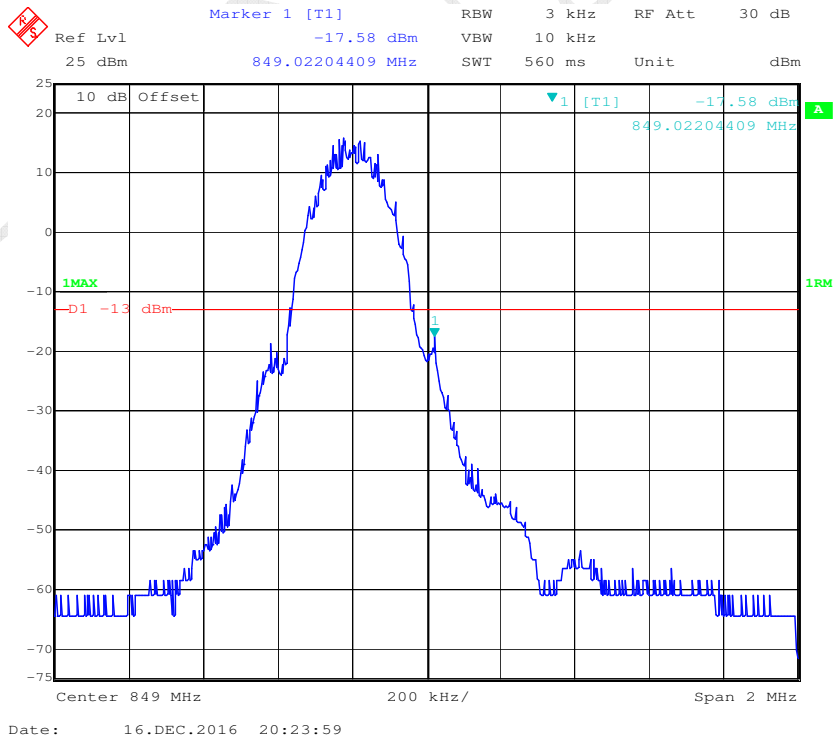
*Test Mode: Transmitting*

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

### GSM 850, Left Band Edge

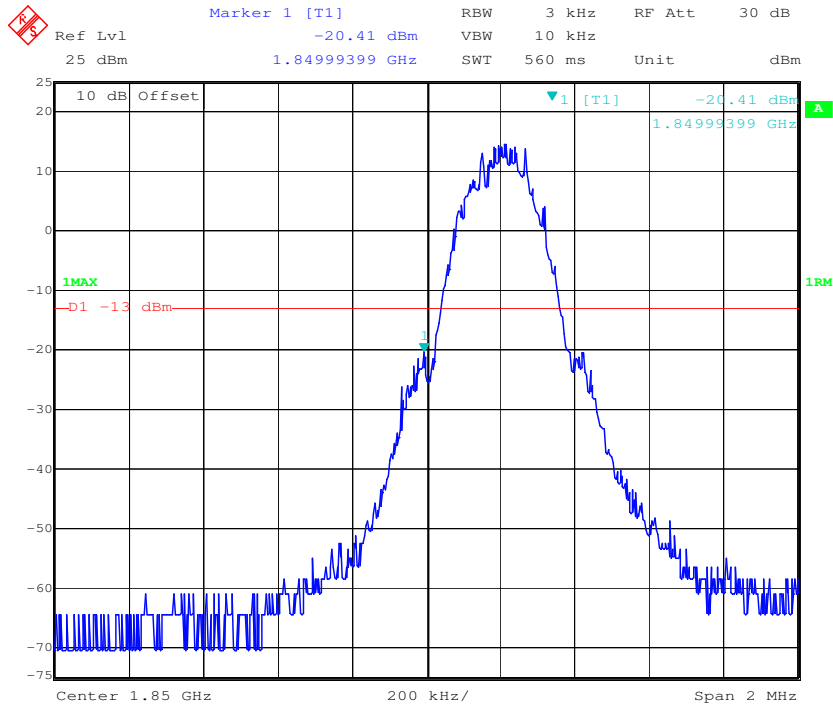


### GSM 850, Right Band Edge

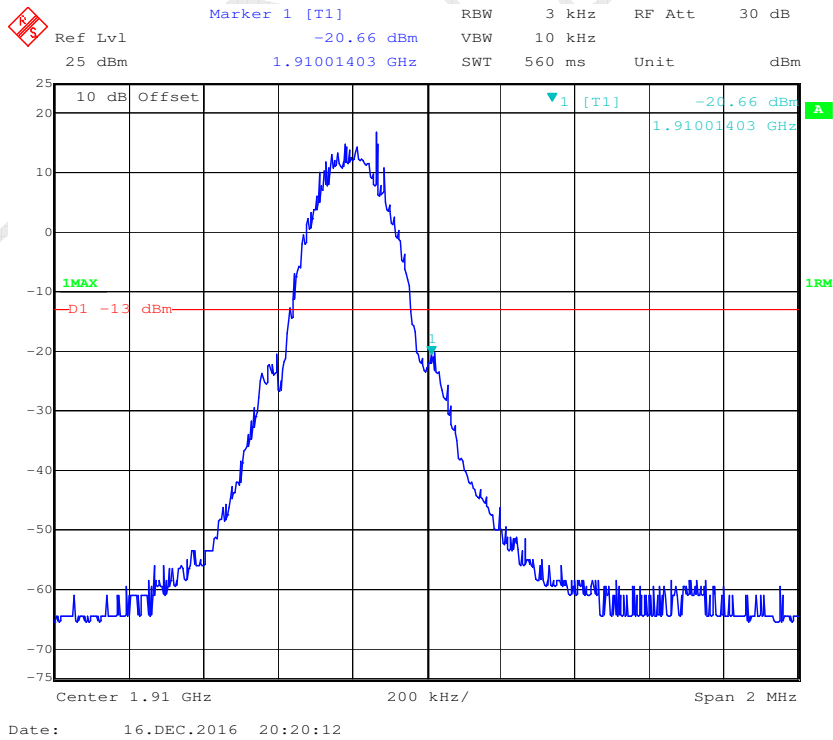




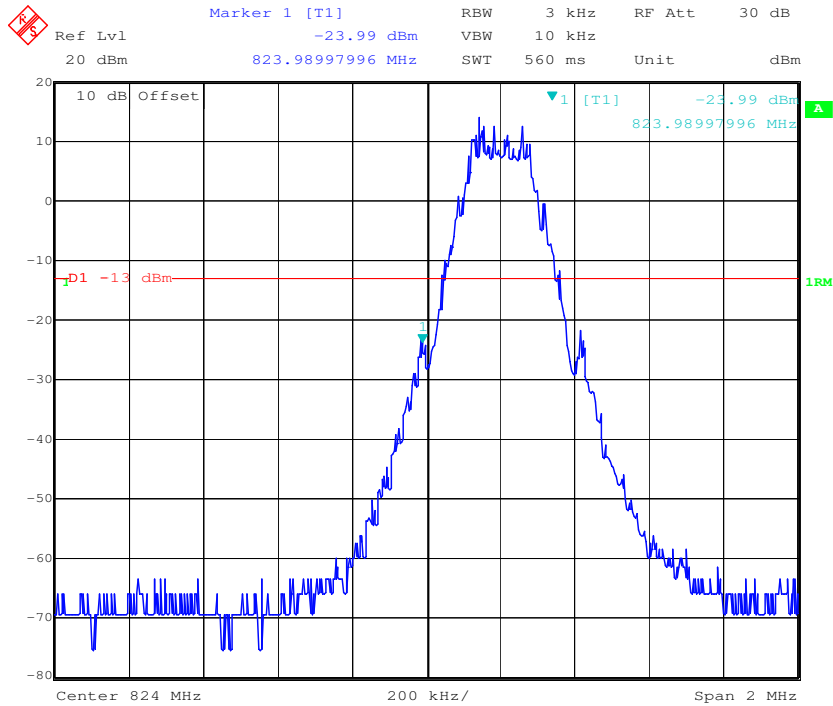
### GSM 1900, Left Band Edge



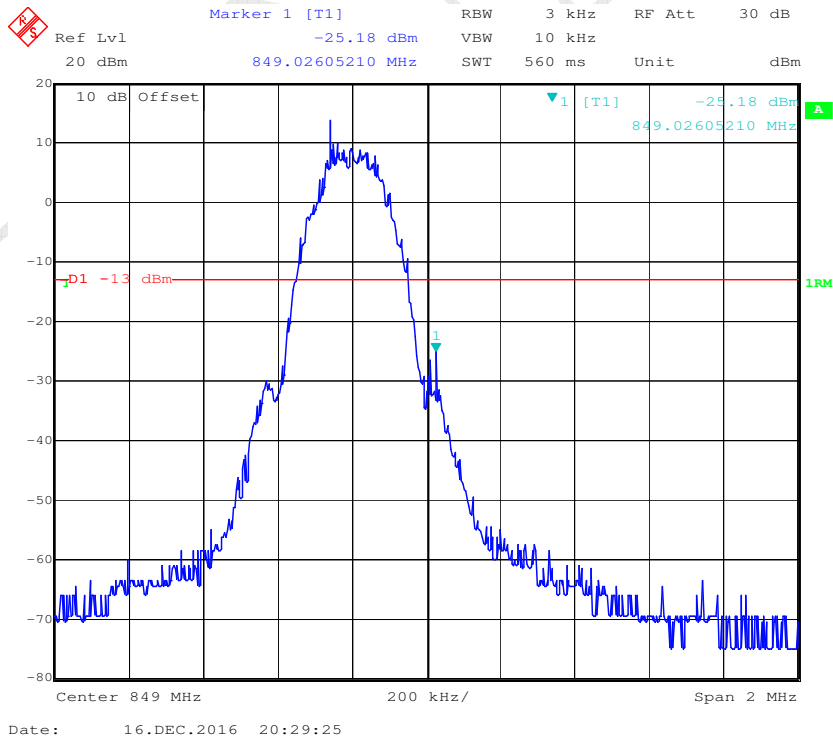
### GSM 1900, Right Band Edge



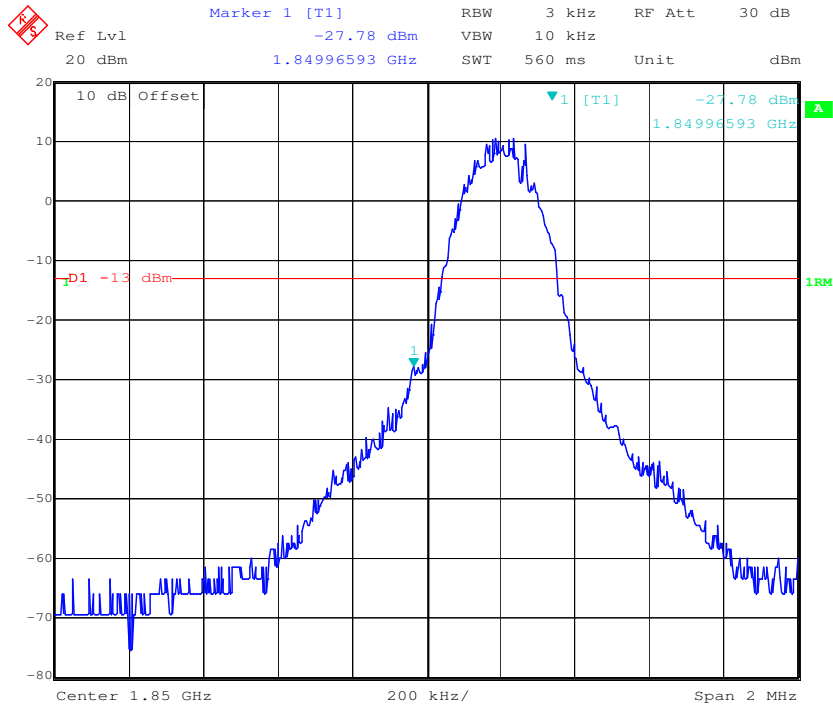
### EDGE 850, Left Band Edge



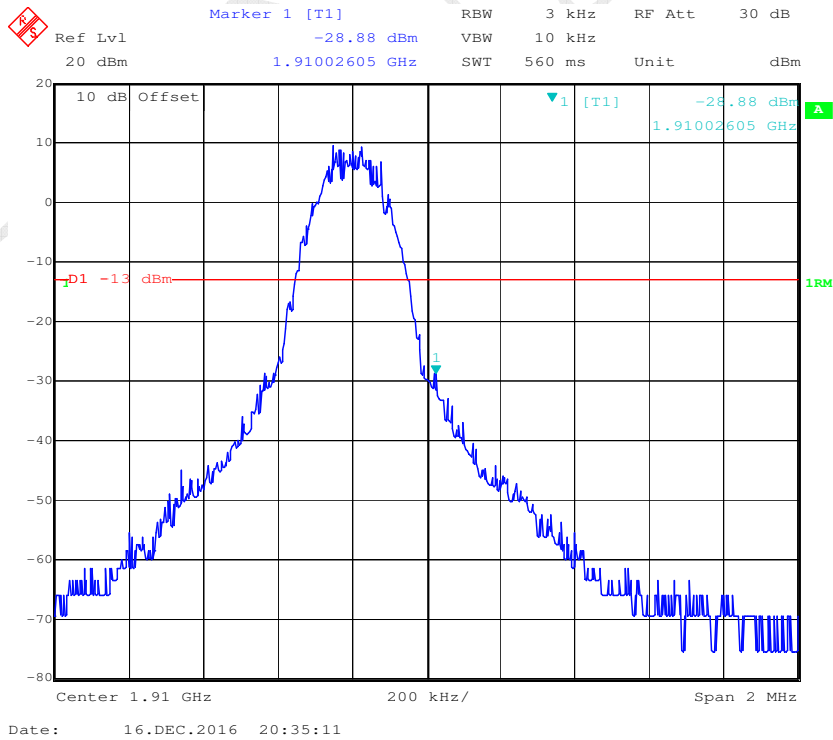
### EDGE 850, Right Band Edge



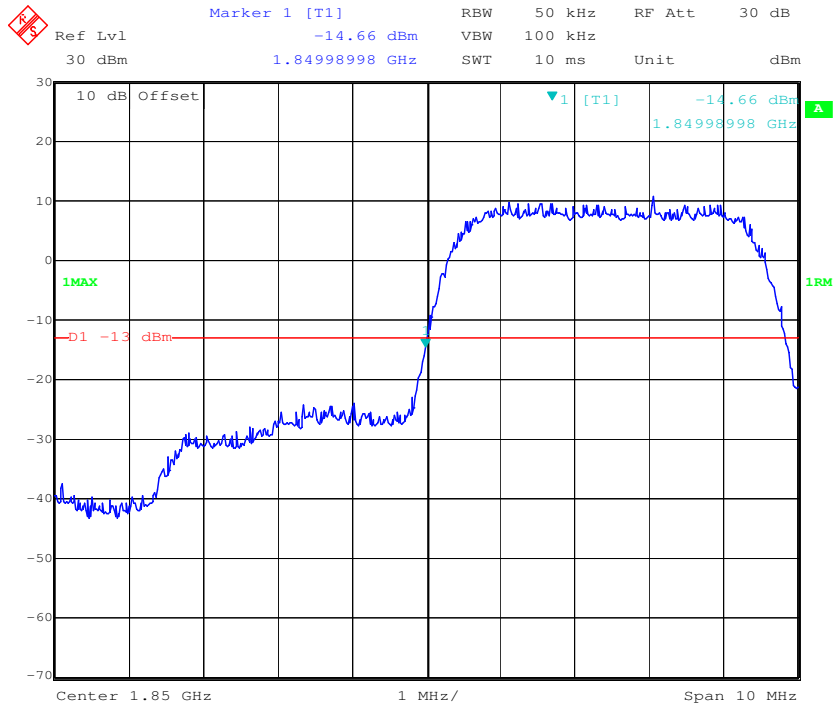
### EDGE 1900, Left Band Edge



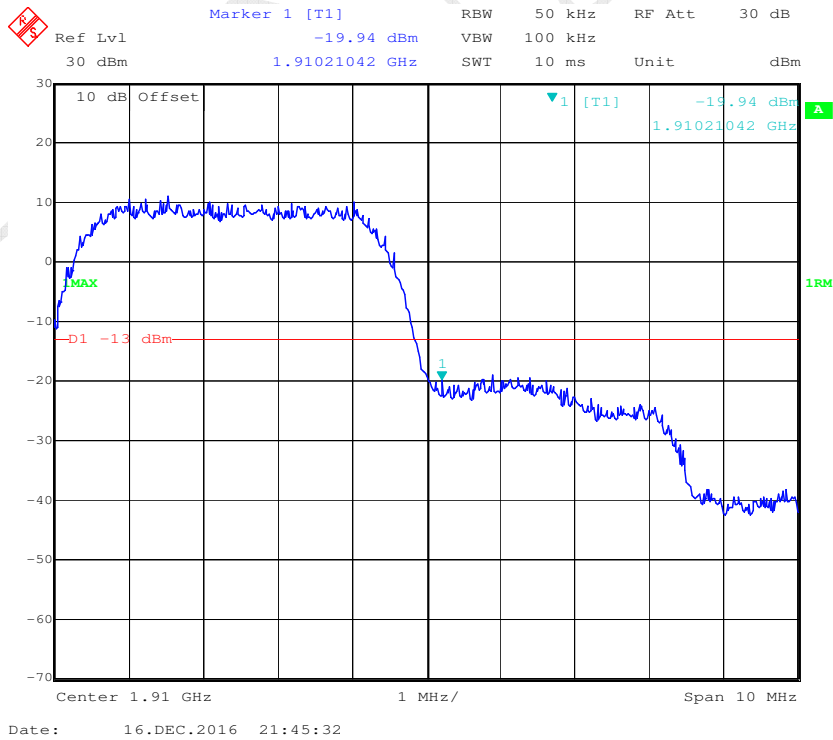
### EDGE 1900, Right Band Edge




### REL99 Band II, Left Band Edge

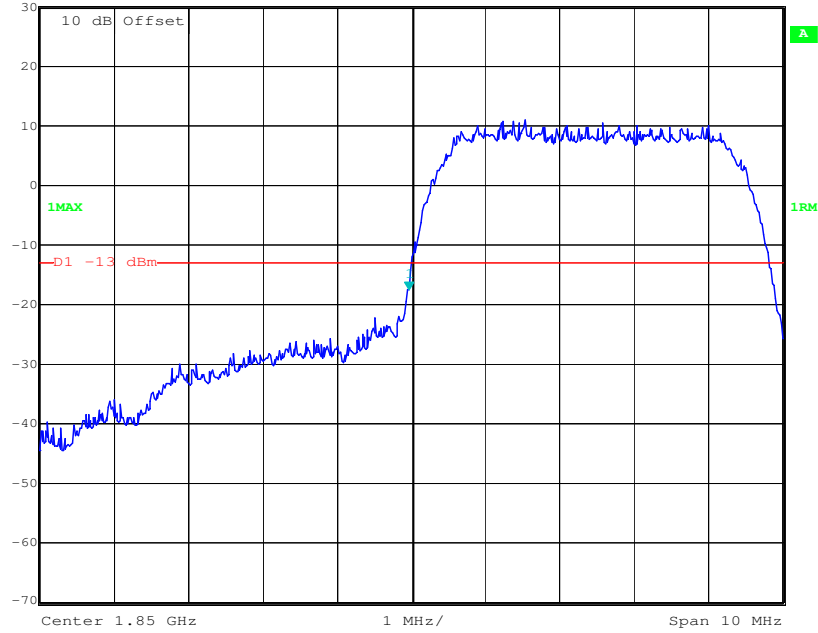


### REL99 Band II, Right Band Edge




### HSDPA Band II, Left Band Edge

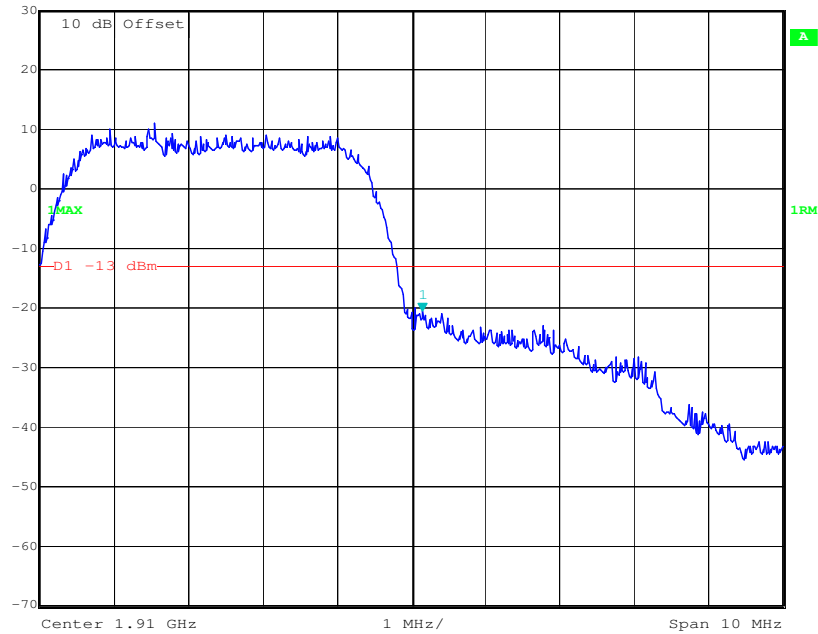
 Ref Lvl 30 dBm    Marker 1 [T1] 1.84996994 GHz    RBW 50 kHz    RF Att 30 dB  
-17.50 dBm    VBW 100 kHz    Unit dBm  
SWT 10 ms



Date: 16.DEC.2016 22:29:28

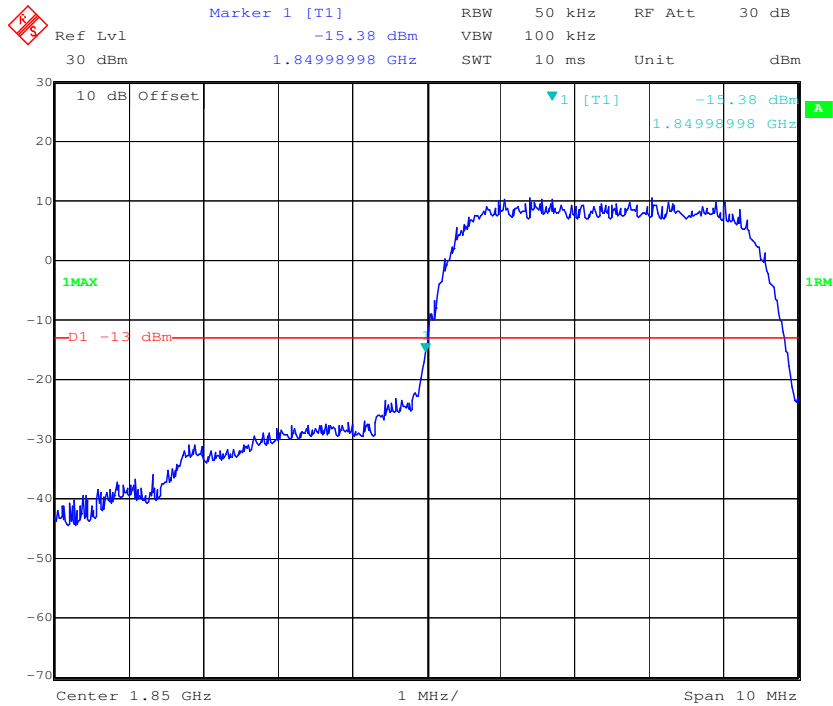
### HSDPA Band II, Right Band Edge

 Ref Lvl 30 dBm    Marker 1 [T1] 1.91015030 GHz    RBW 50 kHz    RF Att 30 dB  
-20.70 dBm    VBW 100 kHz    Unit dBm  
SWT 10 ms

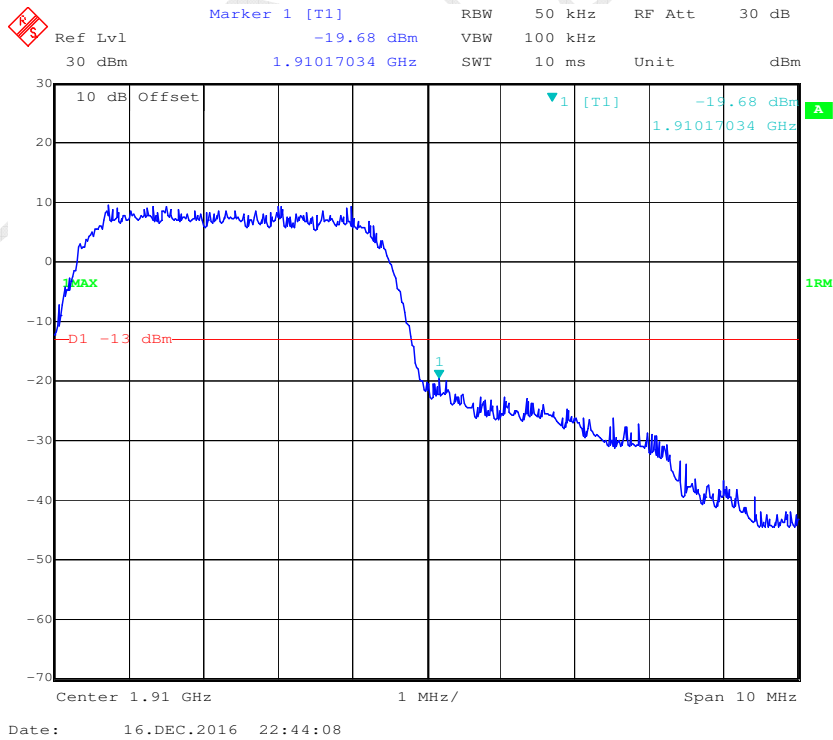


Date: 16.DEC.2016 22:30:10

### HSUPA Band II, Left Band Edge

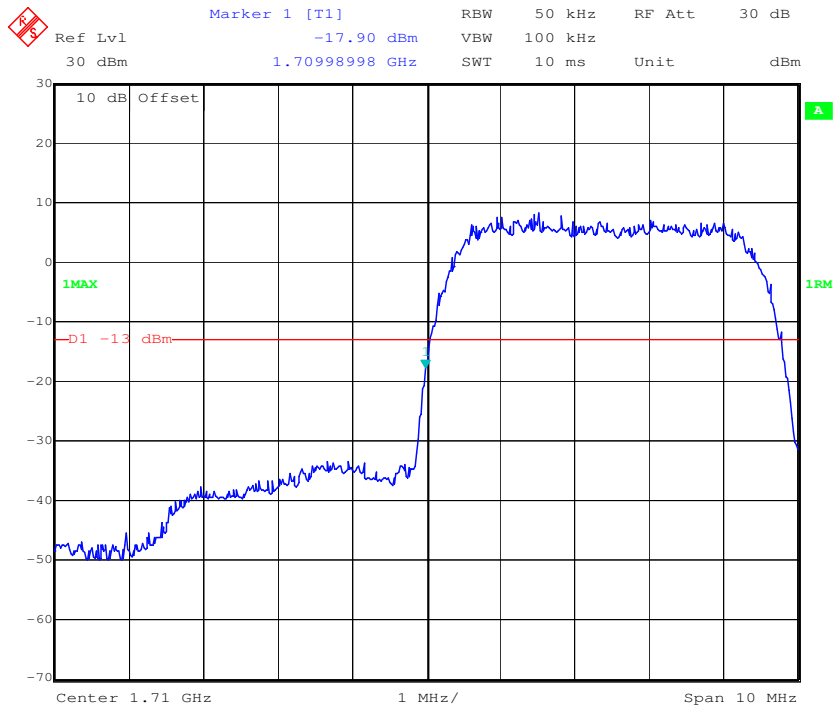


### HSUPA Band II, Right Band Edge



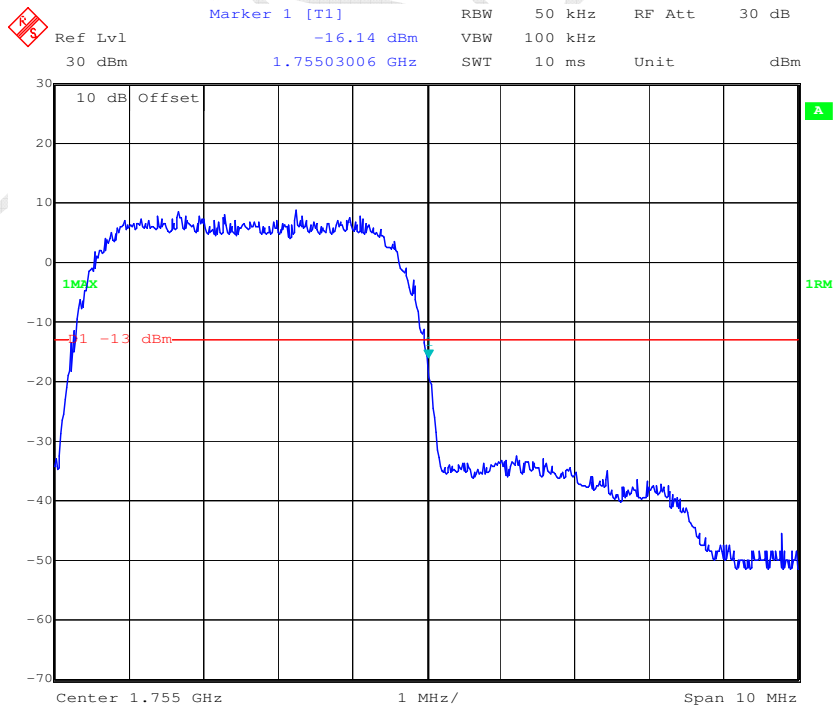
WCDMA Band IV

REL99 Band IV, Left Band Edge




Date: 5.JAN.2017 19:36:41

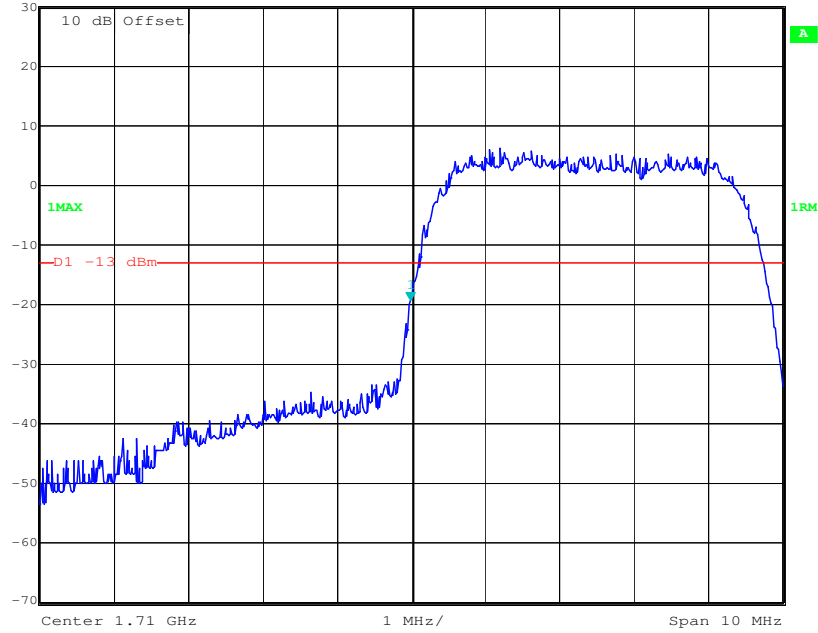
REL99 Band IV Right Band Edge



Date: 5.JAN.2017 19:42:49


### REL99 Band IV, Left Band Edge

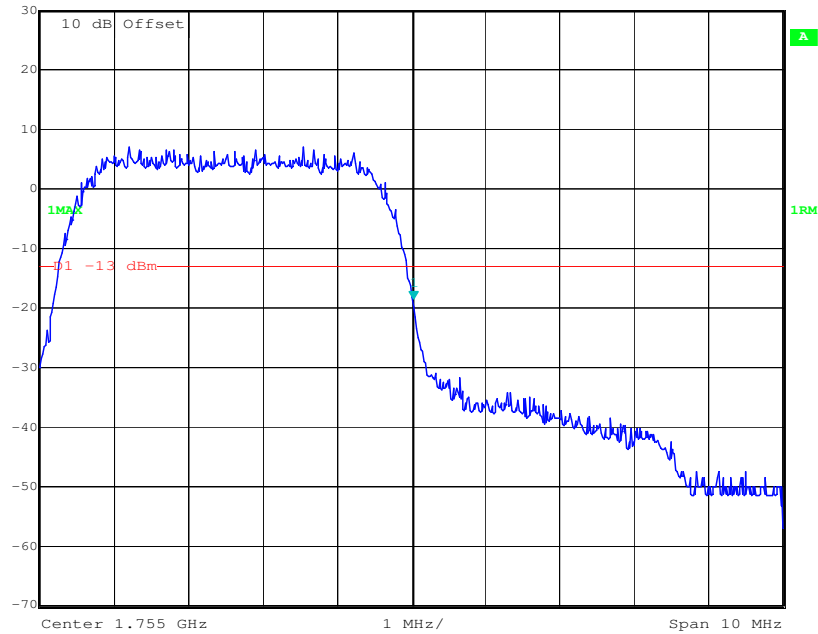
 Ref Lvl 30 dBm  
Marker 1 [T1] -19.46 dBm  
1.70998998 GHz  
RBW 50 kHz RF Att 30 dB  
VBW 100 kHz  
SWT 10 ms Unit dBm



Date: 5.JAN.2017 19:49:51

### REL99 Band IV, Right Band Edge


 Ref Lvl 30 dBm  
Marker 1 [T1] -18.68 dBm  
1.75503006 GHz  
RBW 50 kHz RF Att 30 dB  
VBW 100 kHz  
SWT 10 ms Unit dBm

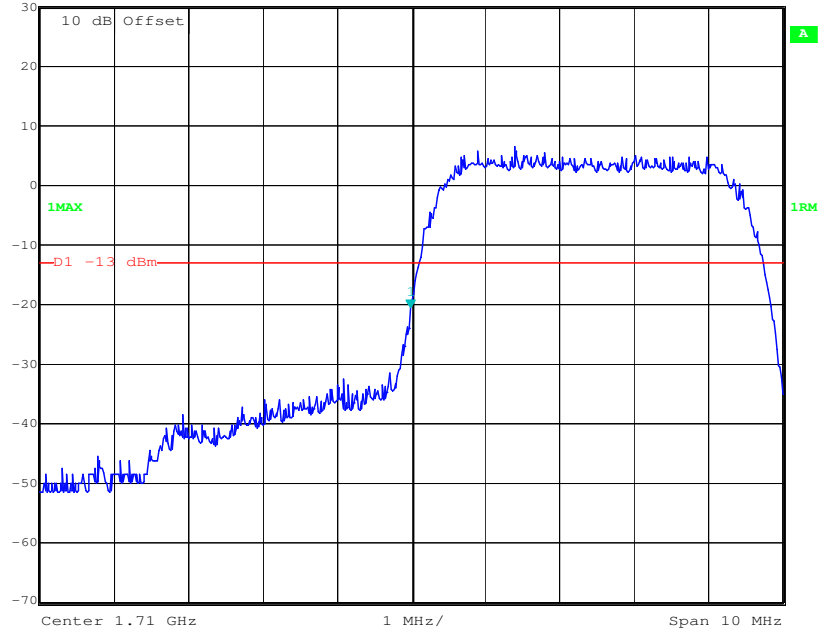


Date: 5.JAN.2017 19:50:25




### REL99 Band IV, Left Band Edge

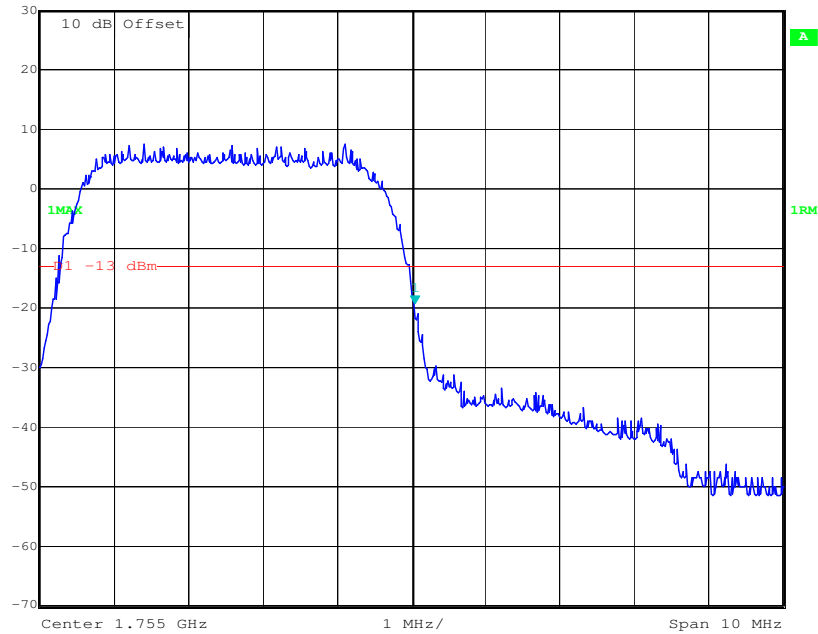
 Ref Lvl 30 dBm    Marker 1 [T1] 1.70998998 GHz    RBW 50 kHz    RF Att 30 dB  
-20.61 dBm    VBW 100 kHz    Unit dBm  
SWT 10 ms



Date: 5.JAN.2017 19:48:17

### REL99 Band IV, Right Band Edge

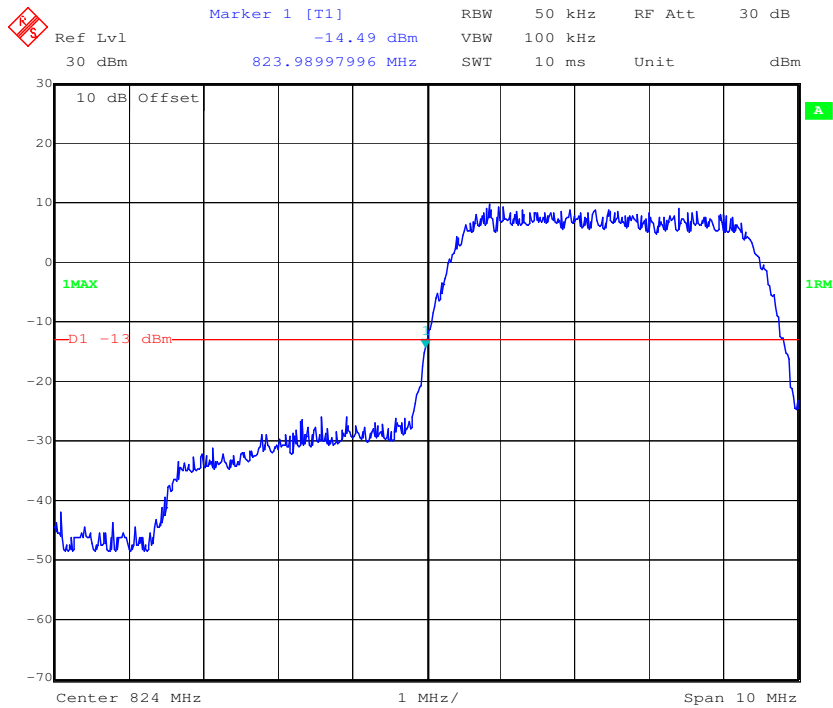
 Ref Lvl 30 dBm    Marker 1 [T1] 1.75505010 GHz    RBW 50 kHz    RF Att 30 dB  
-19.29 dBm    VBW 100 kHz    Unit dBm  
SWT 10 ms



Date: 5.JAN.2017 19:45:54

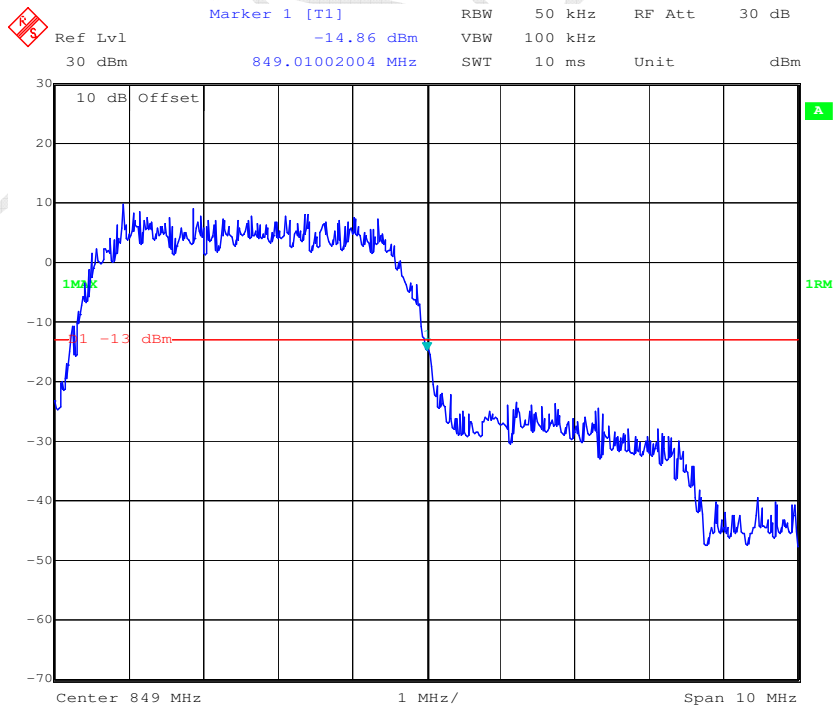
WCDMA Band V

REL99 Band V, Left Band Edge




Date: 5.JAN.2017 19:52:24

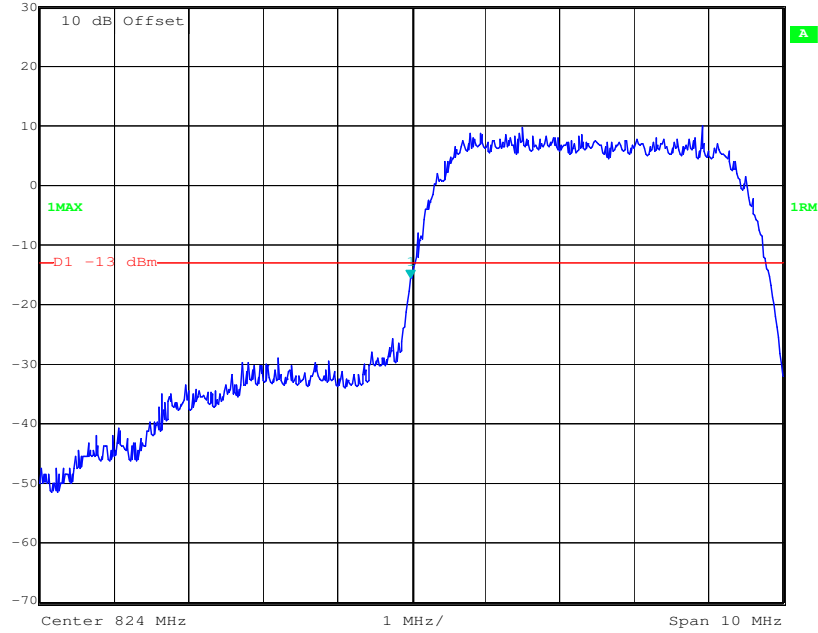
REL99 Band V Right Band Edge



Date: 5.JAN.2017 19:59:14


### HSDPA Band V, Left Band Edge

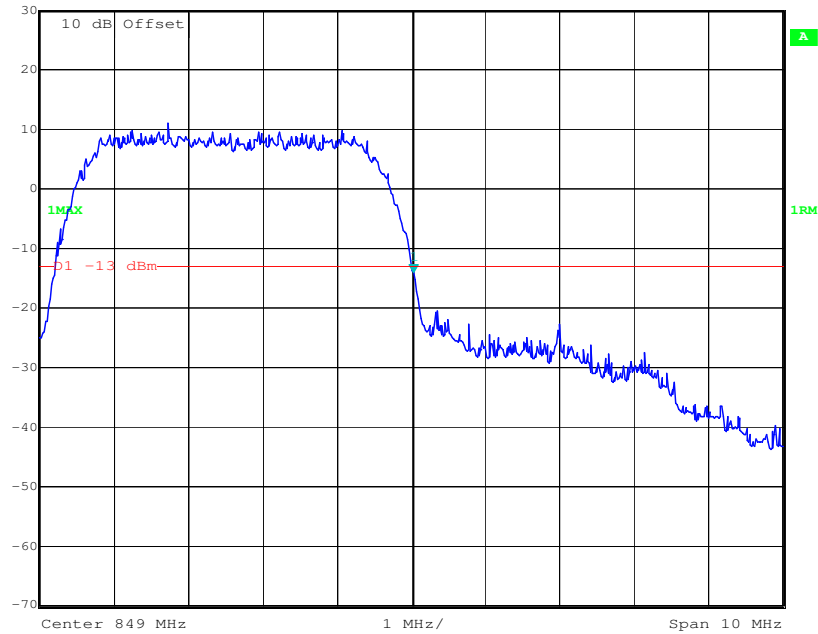
 Ref Lvl 30 dBm    Marker 1 [T1] 823.98997996 MHz    RBW 50 kHz    RF Att 30 dB  
-15.68 dBm    VBW 100 kHz  
SWT 10 ms    Unit dBm



Date: 5.JAN.2017 20:08:14


### HSDPA Band V, Right Band Edge

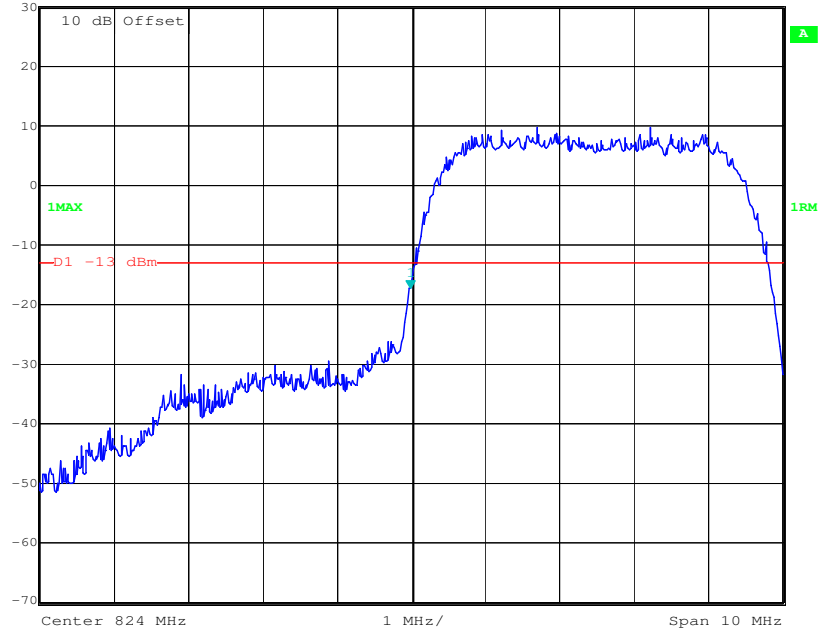
 Ref Lvl 30 dBm    Marker 1 [T1] 849.03006012 MHz    RBW 50 kHz    RF Att 30 dB  
-14.25 dBm    VBW 100 kHz  
SWT 10 ms    Unit dBm



Date: 5.JAN.2017 20:07:25


### HSUPA Band V, Left Band Edge

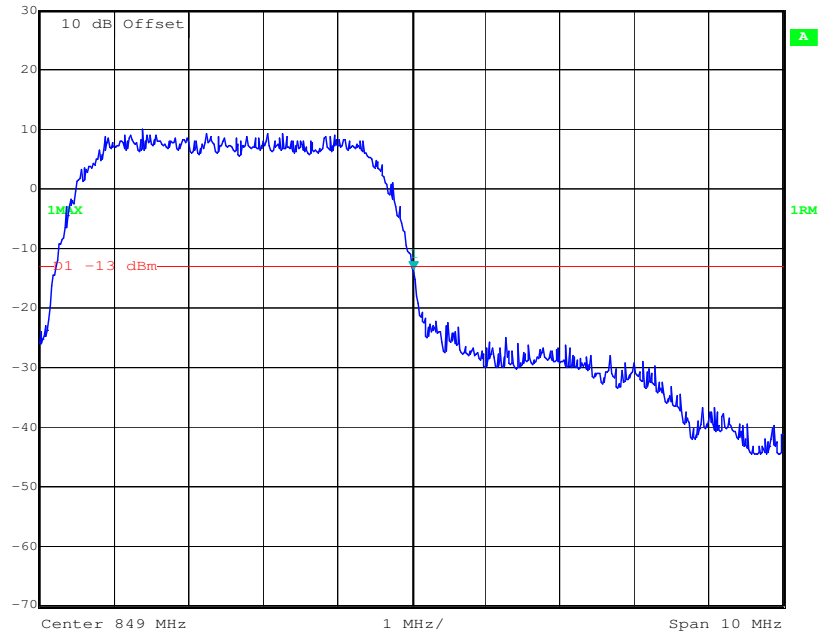
 Ref Lvl 30 dBm    Marker 1 [T1] -17.30 dBm    RBW 50 kHz    RF Att 30 dB  
30 dBm    823.98997996 MHz    VBW 100 kHz    Unit dBm  
SWT 10 ms



Date: 5.JAN.2017 20:11:04

### HSUPA Band V, Right Band Edge

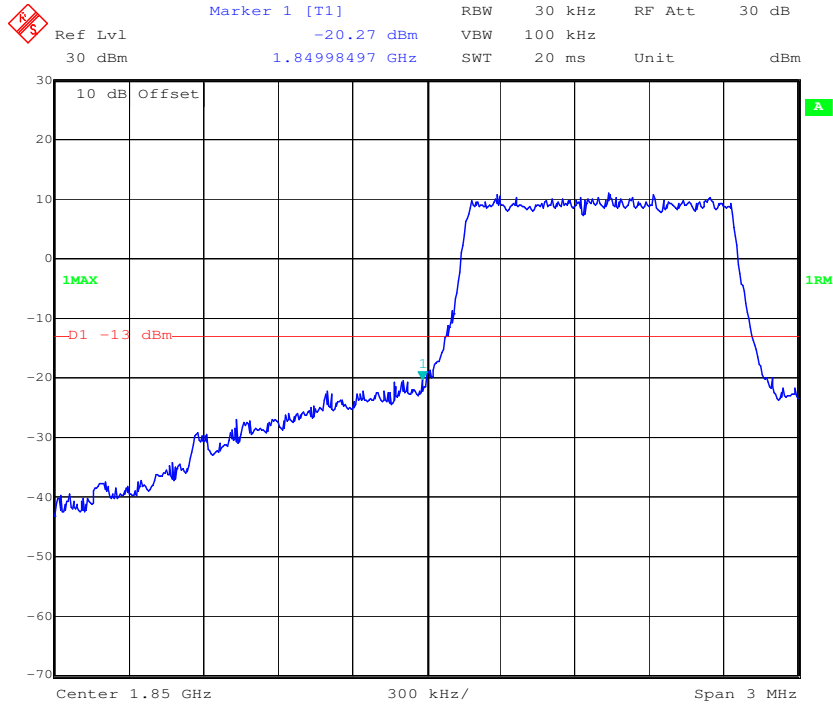
 Ref Lvl 30 dBm    Marker 1 [T1] -13.72 dBm    RBW 50 kHz    RF Att 30 dB  
30 dBm    849.03006012 MHz    VBW 100 kHz    Unit dBm  
SWT 10 ms



Date: 5.JAN.2017 20:11:41

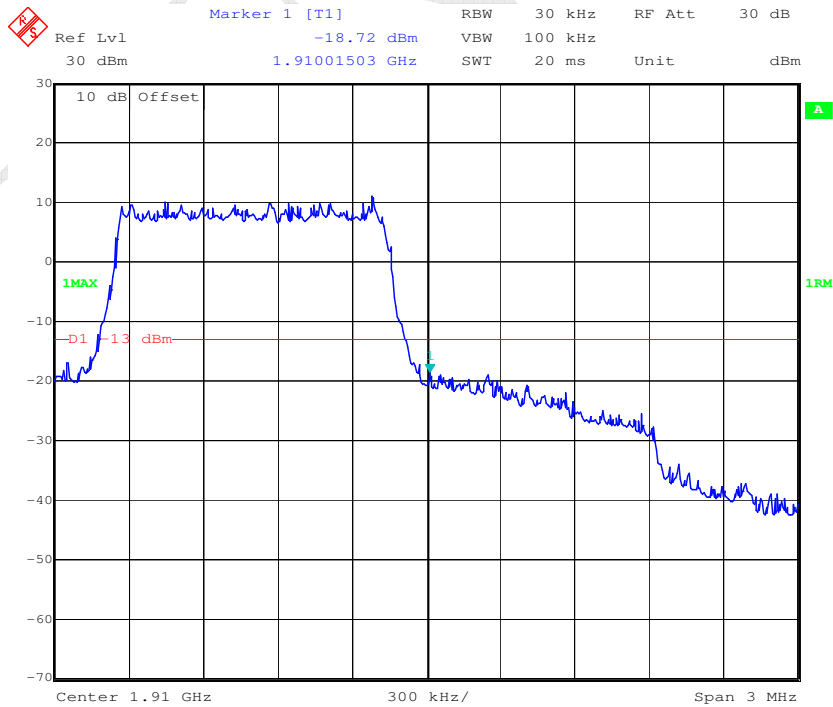
LTE Band II

QPSK\_1.4MHz\_FULL RB\_Left



Date: 4.JAN.2017 22:12:02

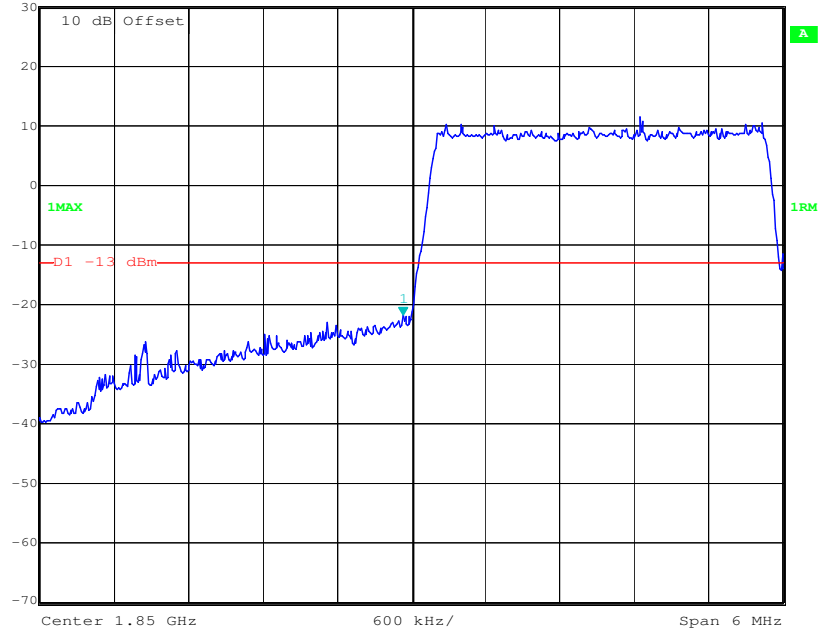
QPSK\_1.4MHz\_FULL RB\_Right



Date: 4.JAN.2017 22:12:41

QPSK\_3MHz\_FULL RB\_Left

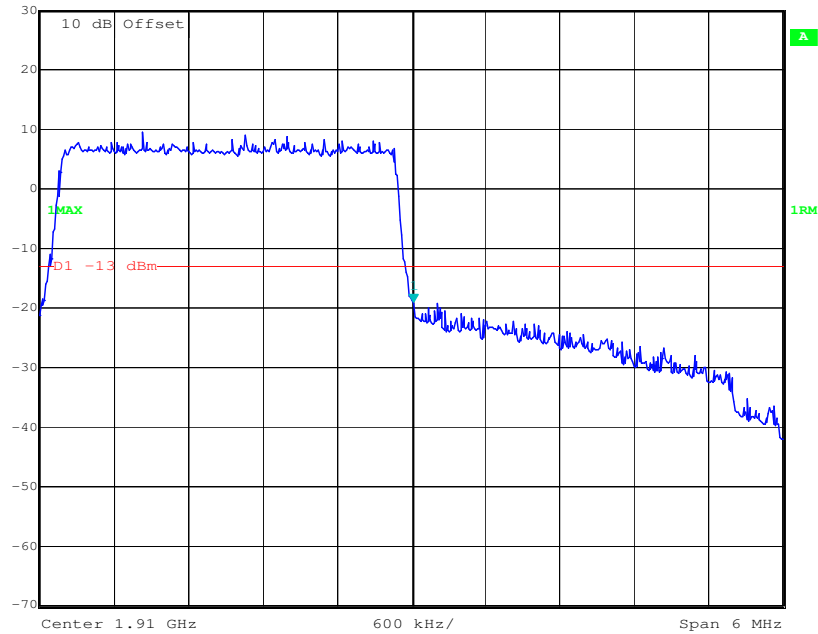
Marker 1 [T1] RBW 50 kHz RF Att 30 dB  
Ref Lvl -21.93 dBm VBW 100 kHz  
30 dBm 1.84993086 GHz SWT 10 ms Unit dBm



Date: 4.JAN.2017 22:18:51

QPSK\_3MHz\_FULL RB\_Right

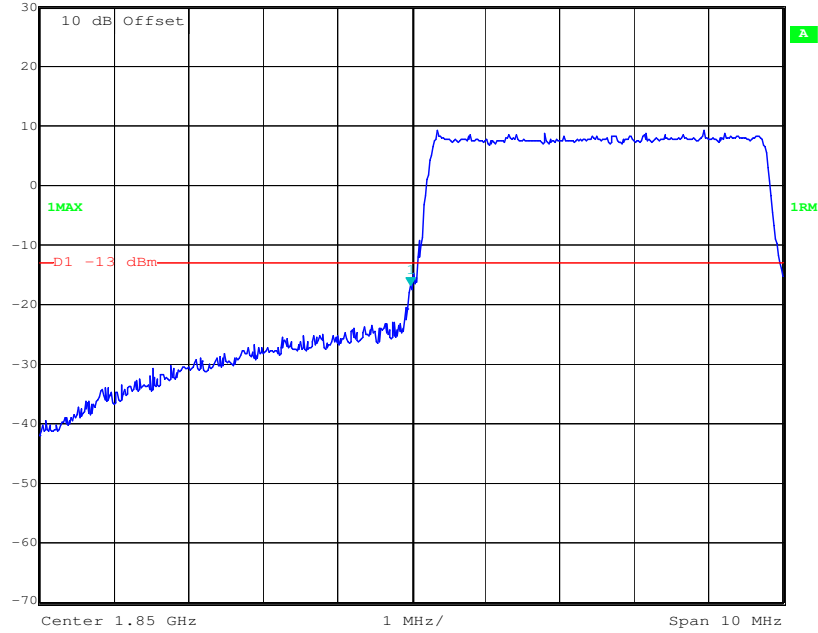
Marker 1 [T1] RBW 50 kHz RF Att 30 dB  
Ref Lvl -19.25 dBm VBW 100 kHz  
30 dBm 1.91001804 GHz SWT 10 ms Unit dBm



Date: 4.JAN.2017 22:19:34

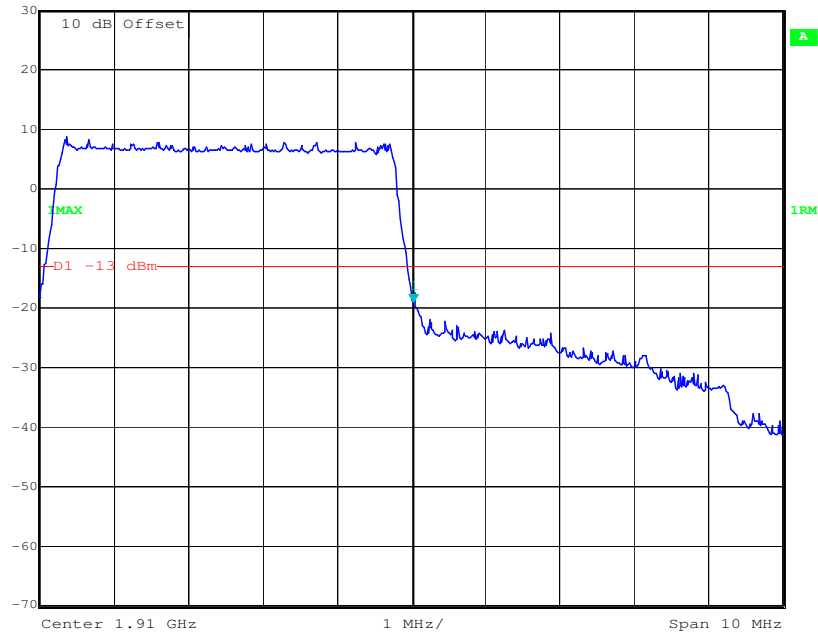
QPSK\_5MHz\_FULL RB\_Left

Marker 1 [T1] RBW 100 kHz RF Att 30 dB  
Ref Lvl -16.94 dBm VBW 300 kHz  
30 dBm 1.84998998 GHz SWT 10 ms Unit dBm



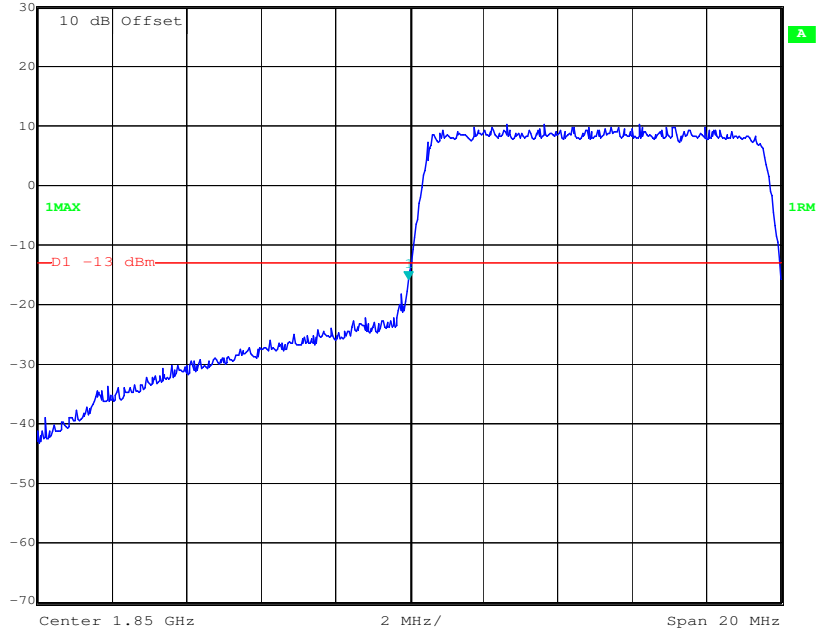
QPSK\_5MHz\_FULL RB\_Right

Marker 1 [T1] RBW 100 kHz RF Att 30 dB  
Ref Lvl -19.12 dBm VBW 300 kHz  
30 dBm 1.91003006 GHz SWT 10 ms Unit dBm



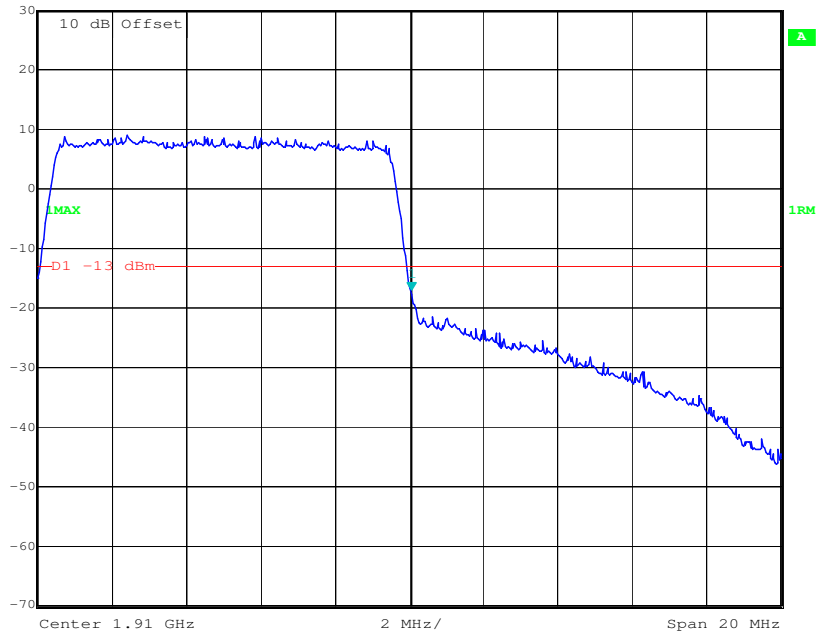
QPSK\_10MHz\_FULL RB\_Left

Marker 1 [T1] RBW 300 kHz RF Att 30 dB  
Ref Lvl -15.99 dBm VBW 1 MHz  
30 dBm 1.84997996 GHz SWT 5 ms Unit dBm



QPSK\_10MHz\_FULL RB\_Right

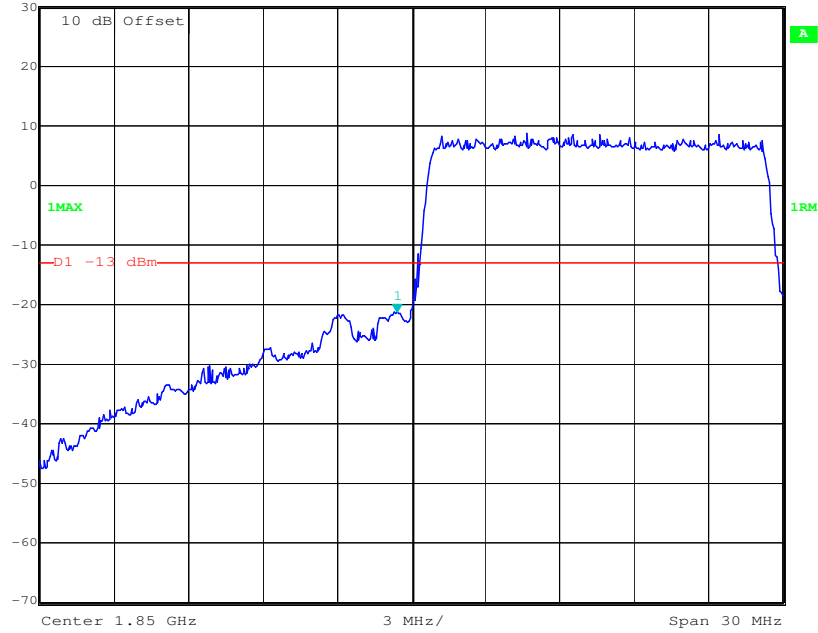
Marker 1 [T1] RBW 300 kHz RF Att 30 dB  
Ref Lvl -17.00 dBm VBW 1 MHz  
30 dBm 1.91006012 GHz SWT 5 ms Unit dBm





QPSK\_15MHz\_FULL RB\_Left

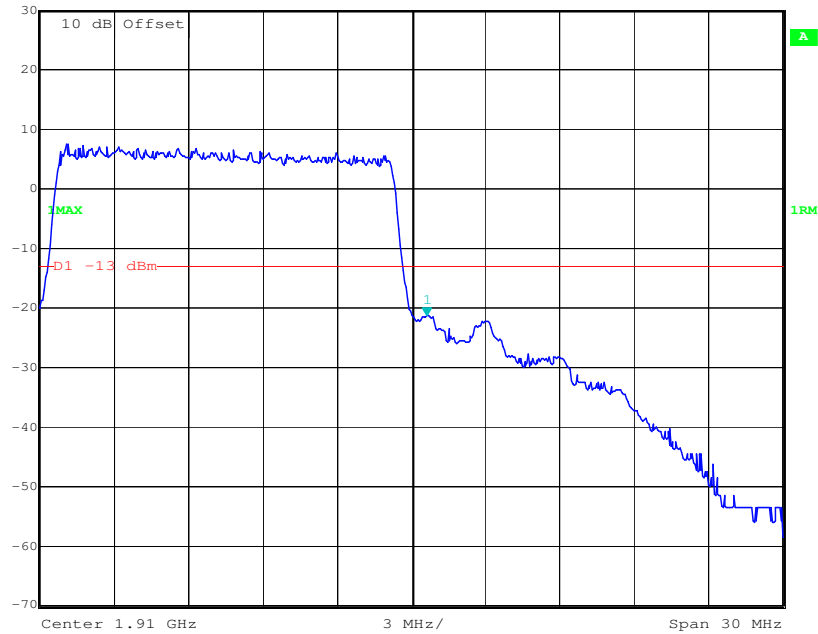
Marker 1 [T1] RBW 300 kHz RF Att 30 dB  
Ref Lvl -21.43 dBm VBW 1 MHz  
30 dBm 1.84943888 GHz SWT 5 ms Unit dBm



Date: 4.JAN.2017 22:32:52

QPSK\_15MHz\_FULL RB\_Right

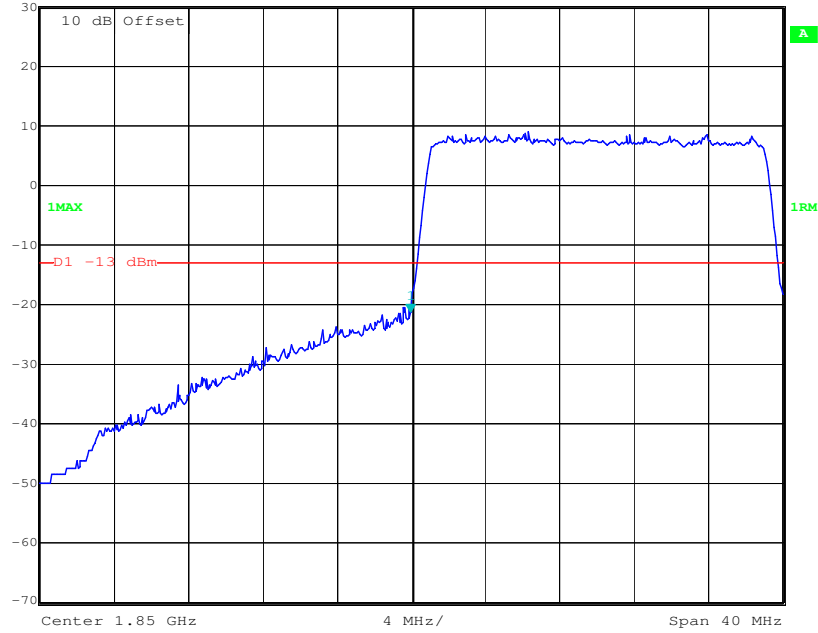
Marker 1 [T1] RBW 300 kHz RF Att 30 dB  
Ref Lvl -21.43 dBm VBW 1 MHz  
30 dBm 1.91063126 GHz SWT 5 ms Unit dBm



Date: 4.JAN.2017 22:33:43

QPSK\_20MHz\_FULL RB\_Left

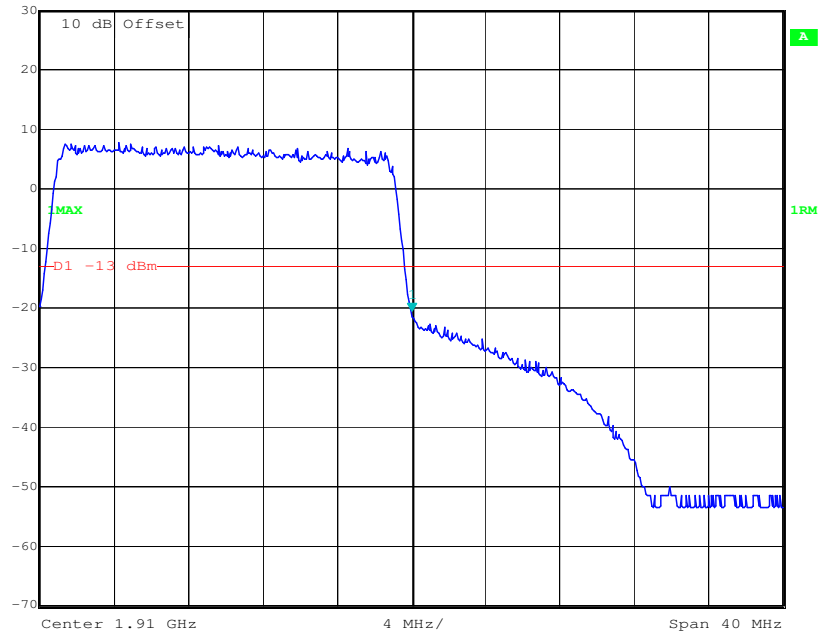
Marker 1 [T1] RBW 500 kHz RF Att 30 dB  
Ref Lvl -21.32 dBm VBW 1 MHz  
30 dBm 1.84995992 GHz SWT 5 ms Unit dBm



Date: 4.JAN.2017 22:38:43

QPSK\_20MHz\_FULL RB\_Right

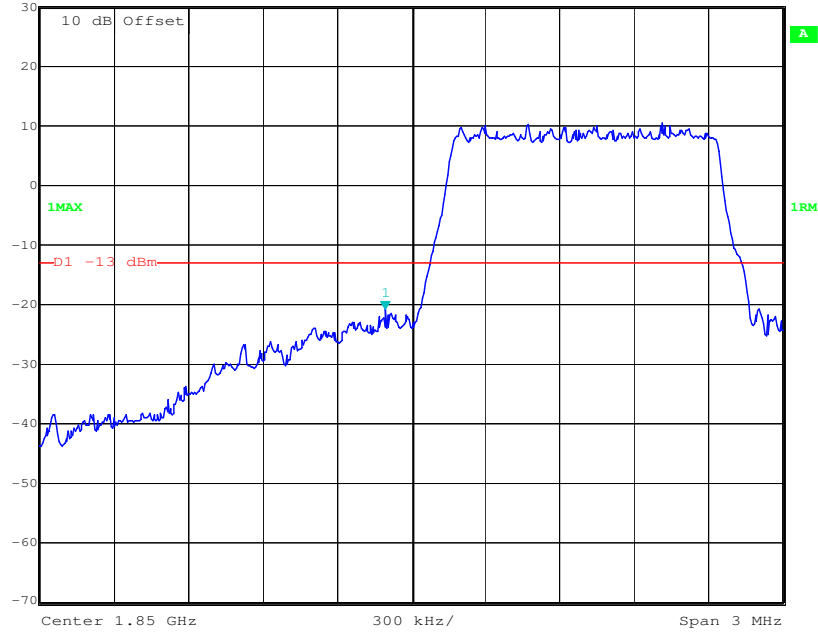
Marker 1 [T1] RBW 500 kHz RF Att 30 dB  
Ref Lvl -20.56 dBm VBW 1 MHz  
30 dBm 1.91004008 GHz SWT 5 ms Unit dBm



Date: 4.JAN.2017 22:39:33

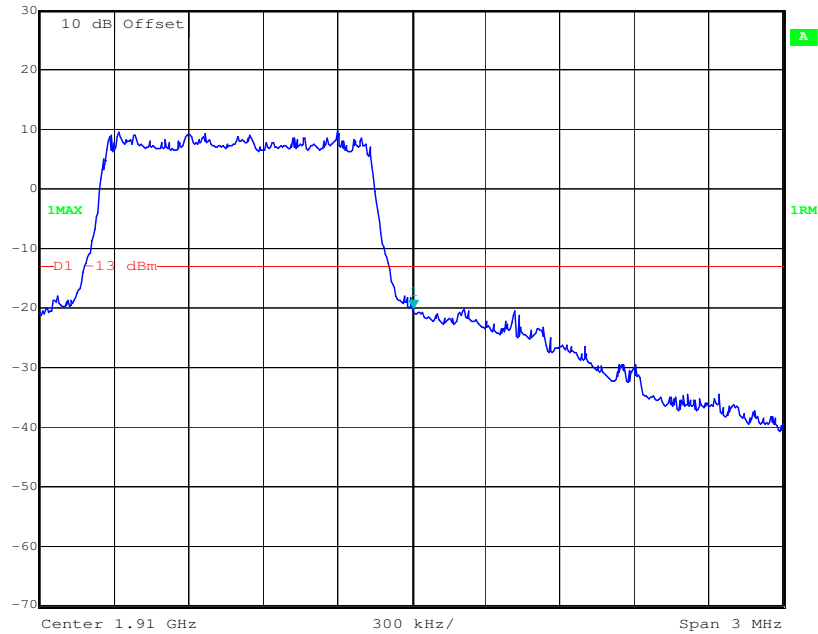
16QAM\_1.4MHz\_FULL RB\_ Left

Marker 1 [T1] RBW 30 kHz RF Att 30 dB  
Ref Lvl -20.80 dBm VBW 100 kHz  
30 dBm 1.84989479 GHz SWT 20 ms Unit dBm



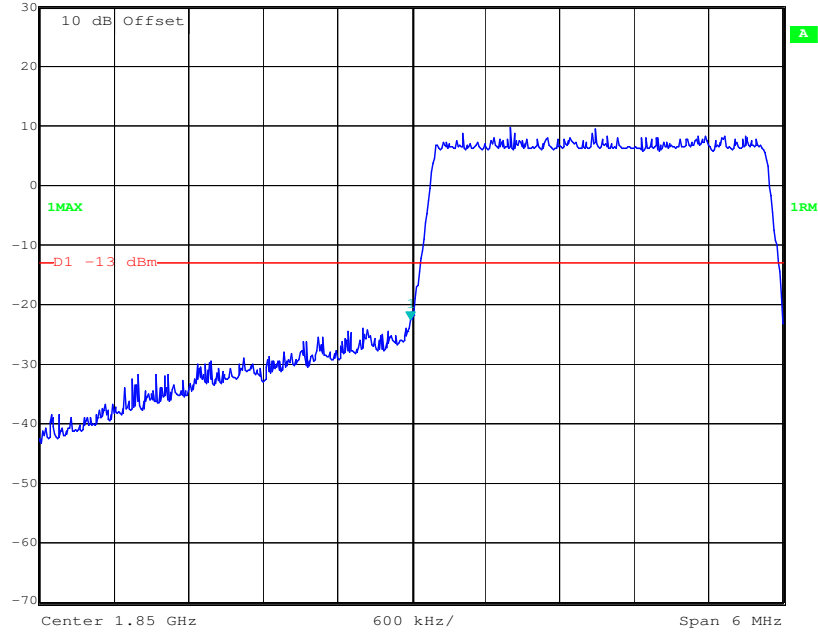
16QAM\_1.4MHz\_FULL RB\_ Right

Marker 1 [T1] RBW 30 kHz RF Att 30 dB  
Ref Lvl -20.13 dBm VBW 100 kHz  
30 dBm 1.91000902 GHz SWT 20 ms Unit dBm



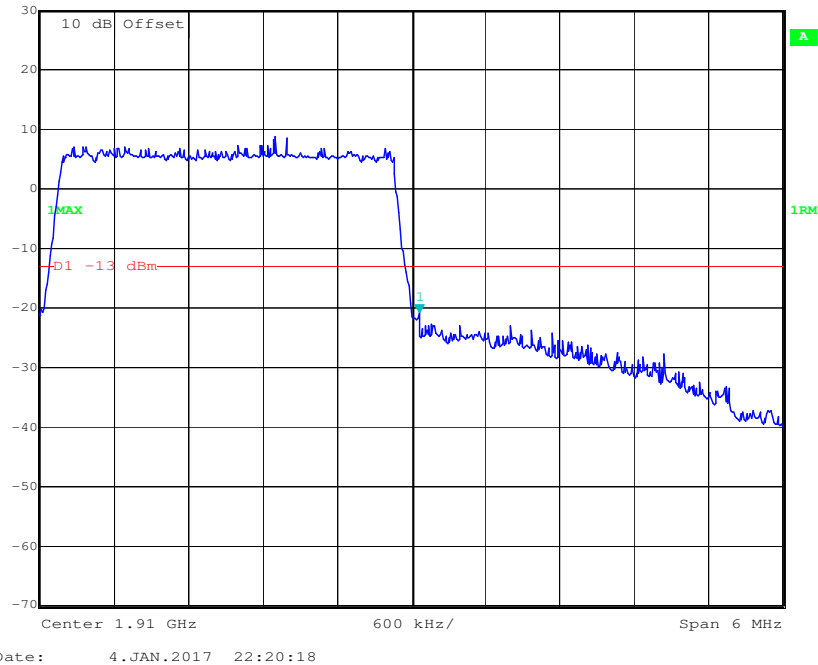
16QAM\_3MHz\_FULL RB\_Left

Marker 1 [T1] RBW 50 kHz RF Att 30 dB  
Ref Lvl -22.64 dBm VBW 100 kHz  
30 dBm 1.84999399 GHz SWT 10 ms Unit dBm



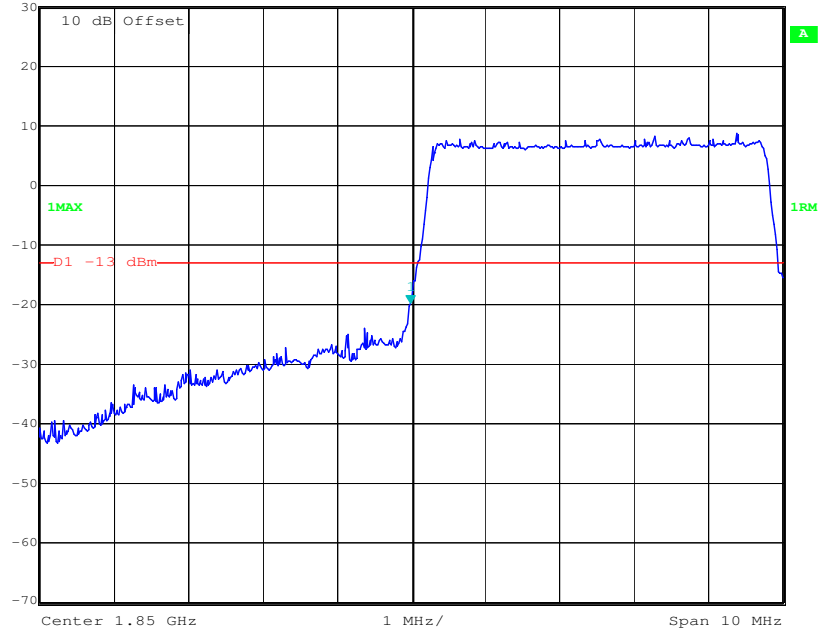
16QAM\_3MHz\_FULL RB\_Right

Marker 1 [T1] RBW 50 kHz RF Att 30 dB  
Ref Lvl -20.80 dBm VBW 100 kHz  
30 dBm 1.91006613 GHz SWT 10 ms Unit dBm



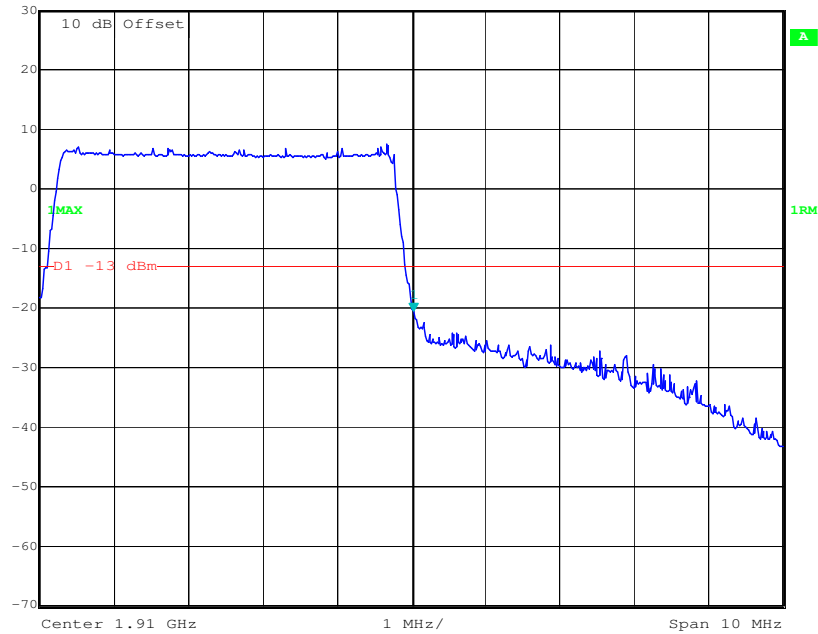
16QAM\_5MHz\_FULL RB\_Left

Marker 1 [T1] RBW 100 kHz RF Att 30 dB  
Ref Lvl -19.90 dBm VBW 300 kHz  
30 dBm 1.84998998 GHz SWT 10 ms Unit dBm



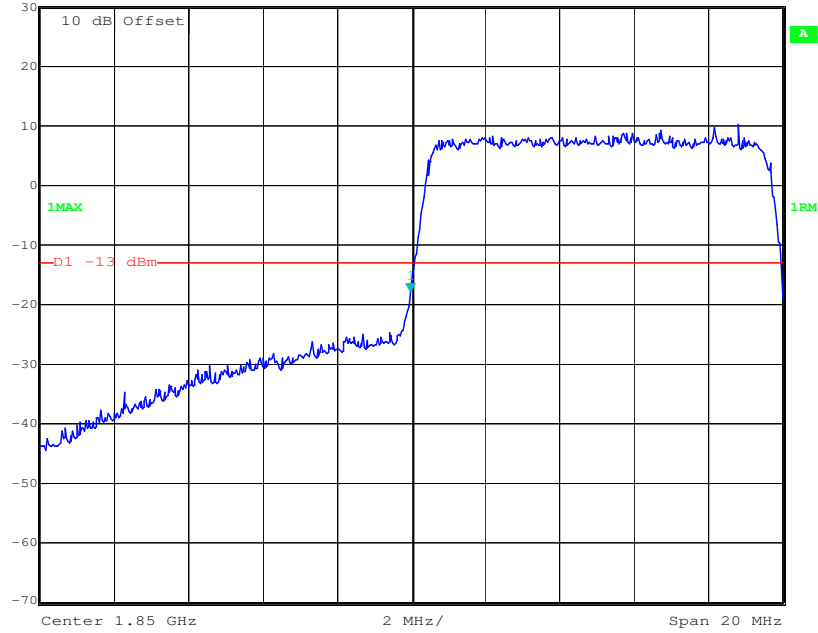
16QAM\_5MHz\_FULL RB\_Right

Marker 1 [T1] RBW 100 kHz RF Att 30 dB  
Ref Lvl -20.56 dBm VBW 300 kHz  
30 dBm 1.91003006 GHz SWT 10 ms Unit dBm



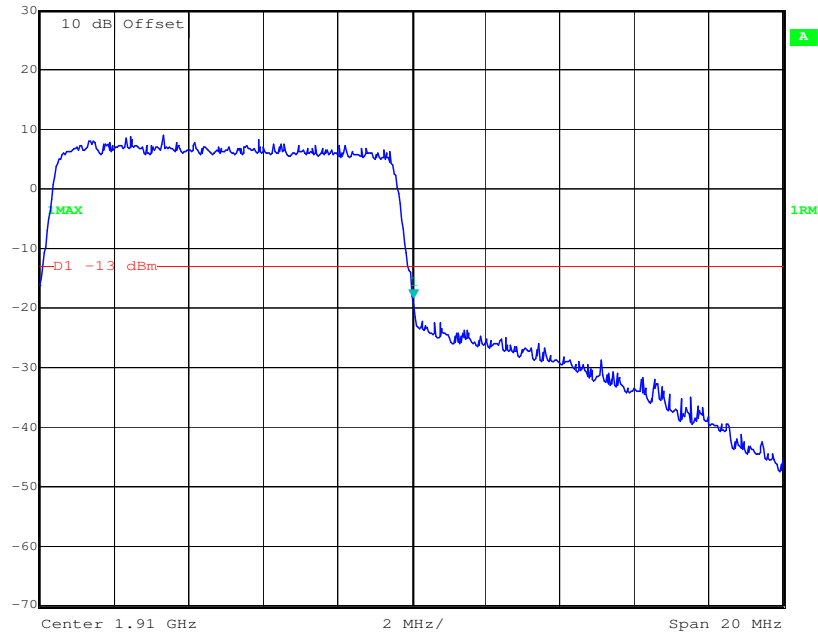
16QAM\_10MHz\_FULL RB\_Left

Marker 1 [T1] RBW 300 kHz RF Att 30 dB  
Ref Lvl -17.93 dBm VBW 1 MHz  
30 dBm 1.84997996 GHz SWT 5 ms Unit dBm




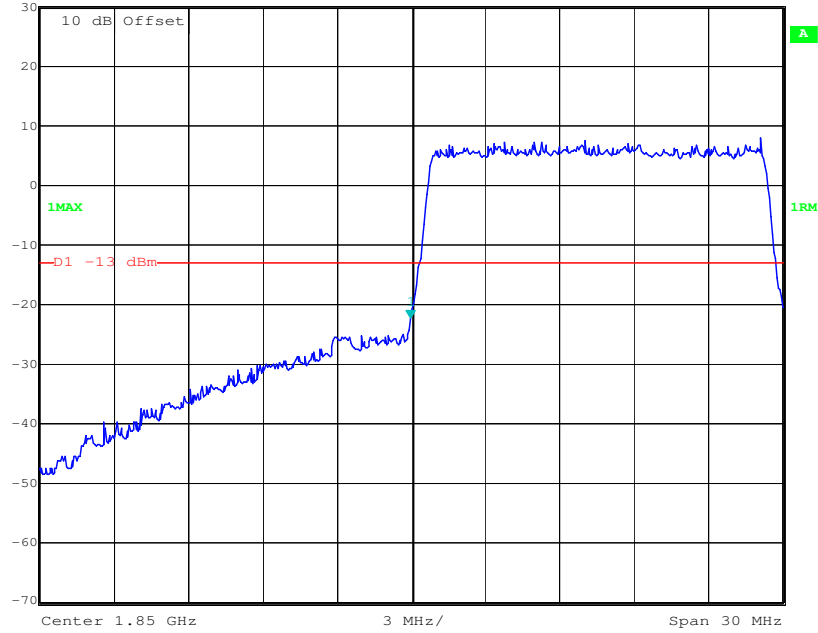
16QAM\_10MHz\_FULL RB\_Right

Marker 1 [T1] RBW 300 kHz RF Att 30 dB  
Ref Lvl -18.26 dBm VBW 1 MHz  
30 dBm 1.91006012 GHz SWT 5 ms Unit dBm




16QAM\_15MHz\_FULL RB\_Left

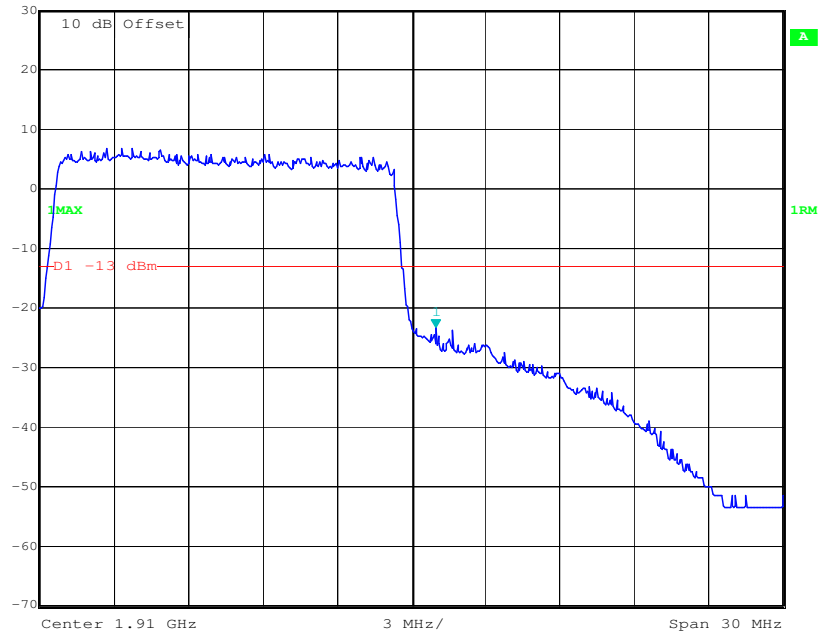
 Ref Lvl 30 dBm    Marker 1 [T1] 1.84996994 GHz    RBW 300 kHz    RF Att 30 dB  
-22.34 dBm    VBW 1 MHz  
Unit dBm    SWT 5 ms



Date: 4.JAN.2017 22:35:09

16QAM\_15MHz\_FULL RB\_Right

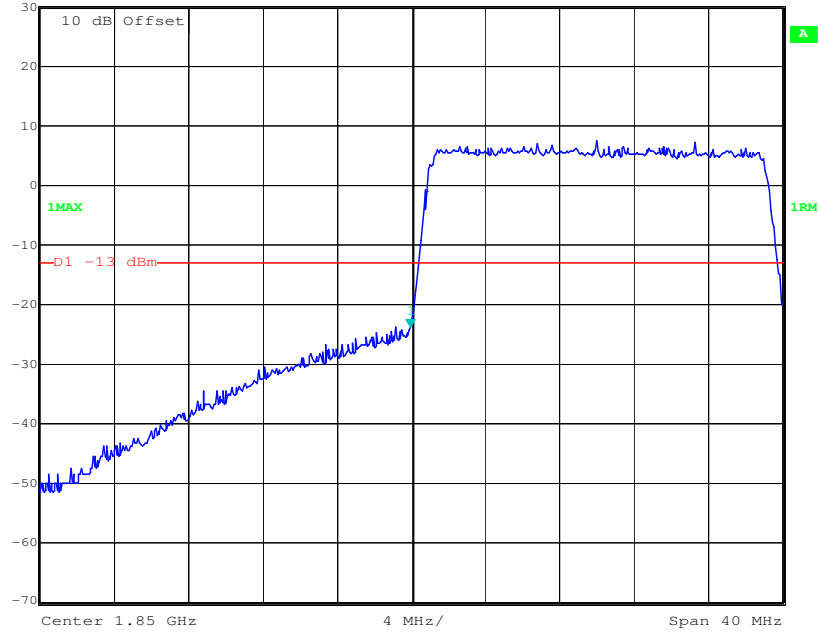
 Ref Lvl 30 dBm    Marker 1 [T1] 1.91099198 GHz    RBW 300 kHz    RF Att 30 dB  
-23.49 dBm    VBW 1 MHz  
Unit dBm    SWT 5 ms



Date: 4.JAN.2017 22:34:29

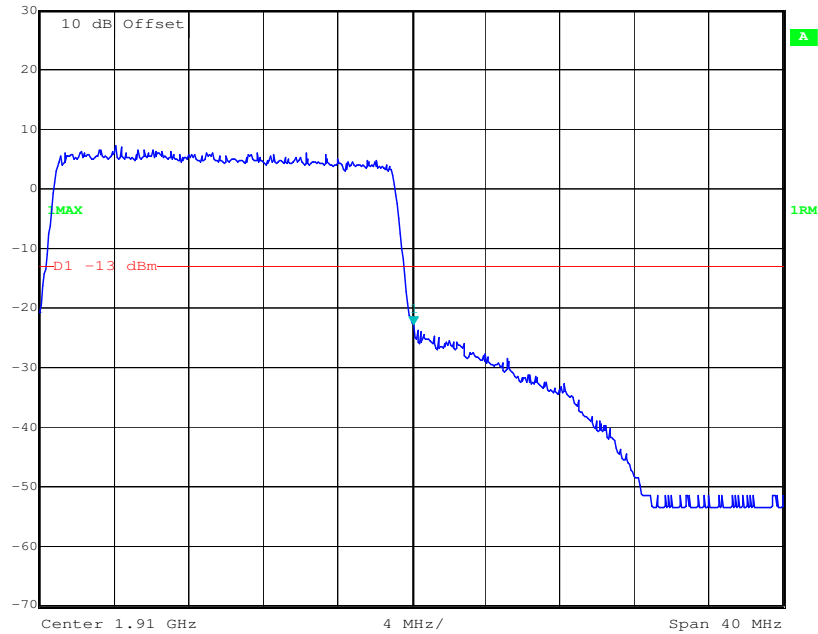
16QAM\_20MHz\_FULL RB\_Left

Marker 1 [T1] RBW 500 kHz RF Att 30 dB  
Ref Lvl -23.84 dBm VBW 1 MHz  
30 dBm 1.84995992 GHz SWT 5 ms Unit dBm



16QAM\_20MHz\_FULL RB\_Right

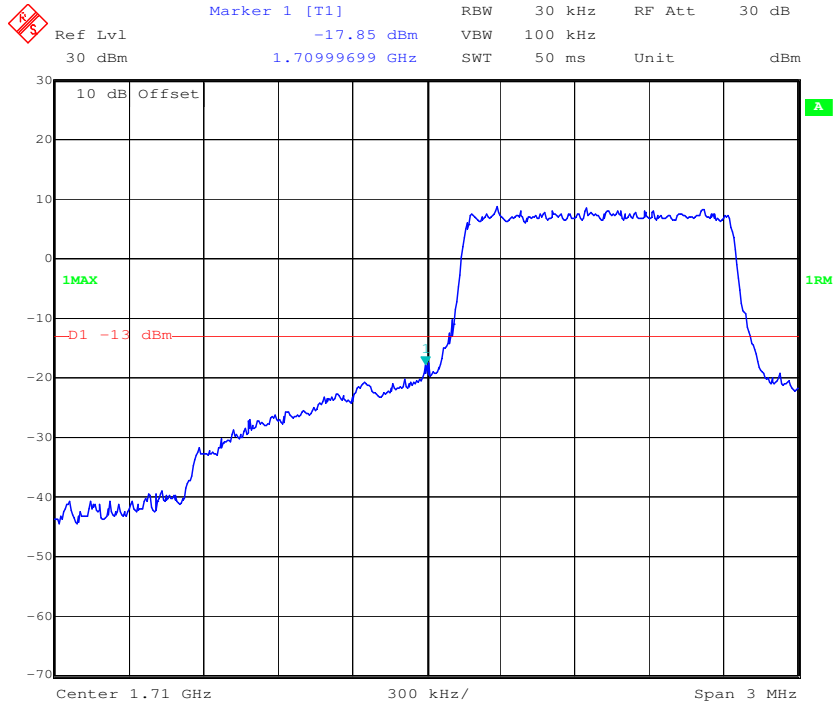
Marker 1 [T1] RBW 500 kHz RF Att 30 dB  
Ref Lvl -22.77 dBm VBW 1 MHz  
30 dBm 1.91012024 GHz SWT 5 ms Unit dBm





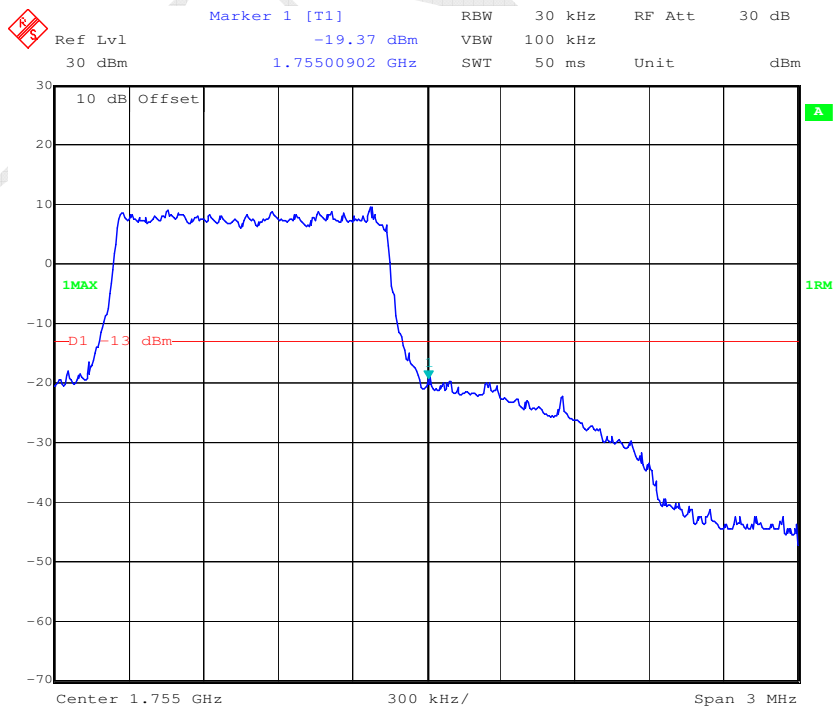
LTE Band IV

QPSK\_1.4MHz\_FULL RB\_Left




Date: 30.DEC.2016 23:07:18

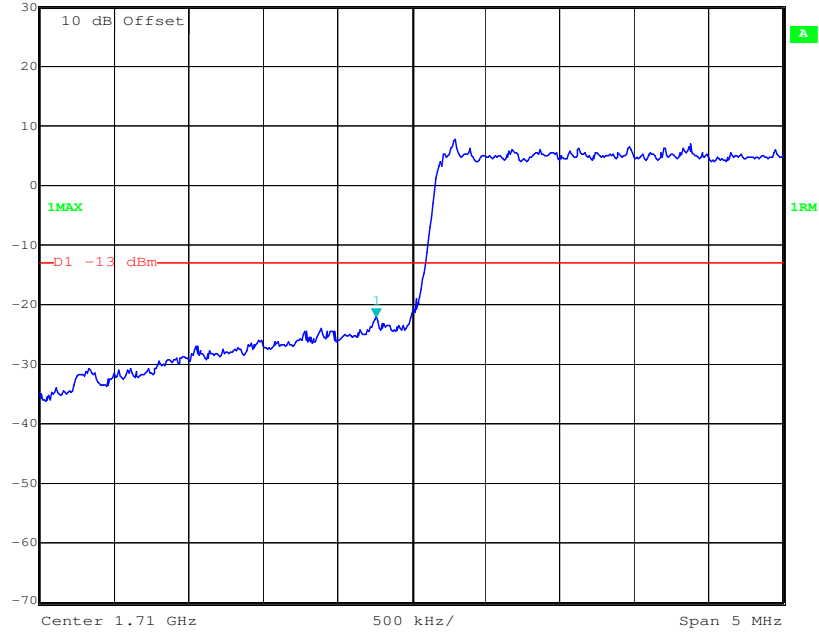
QPSK\_1.4MHz\_FULL RB\_Right



Date: 30.DEC.2016 23:08:00


QPSK\_3MHz\_FULL RB\_Left

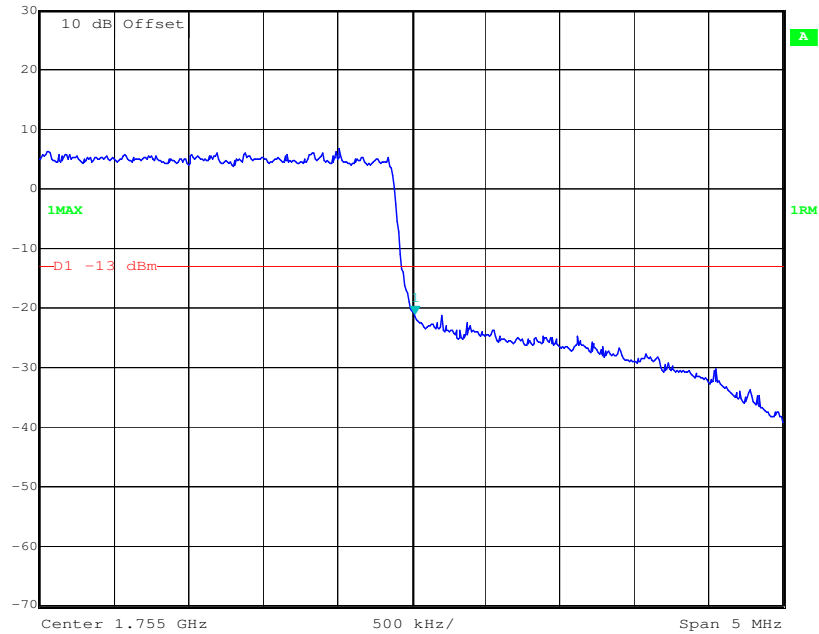
 Ref Lvl 30 dBm    Marker 1 [T1] 1.70976453 GHz    RBW 50 kHz    RF Att 30 dB  
-22.22 dBm    VBW 100 kHz    Unit dBm  
-13 dBm    SWI 50 ms



Date: 30.DEC.2016 23:01:57

QPSK\_3MHz\_FULL RB\_Right

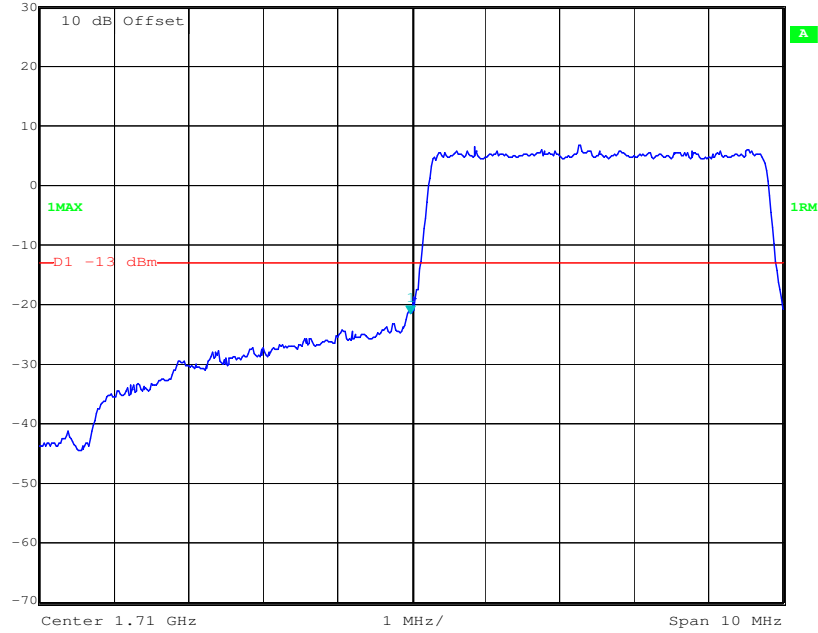
 Ref Lvl 30 dBm    Marker 1 [T1] 1.75502505 GHz    RBW 50 kHz    RF Att 30 dB  
-21.06 dBm    VBW 100 kHz    Unit dBm  
-13 dBm    SWI 50 ms



Date: 30.DEC.2016 23:02:33

QPSK\_5MHz\_FULL RB\_Left

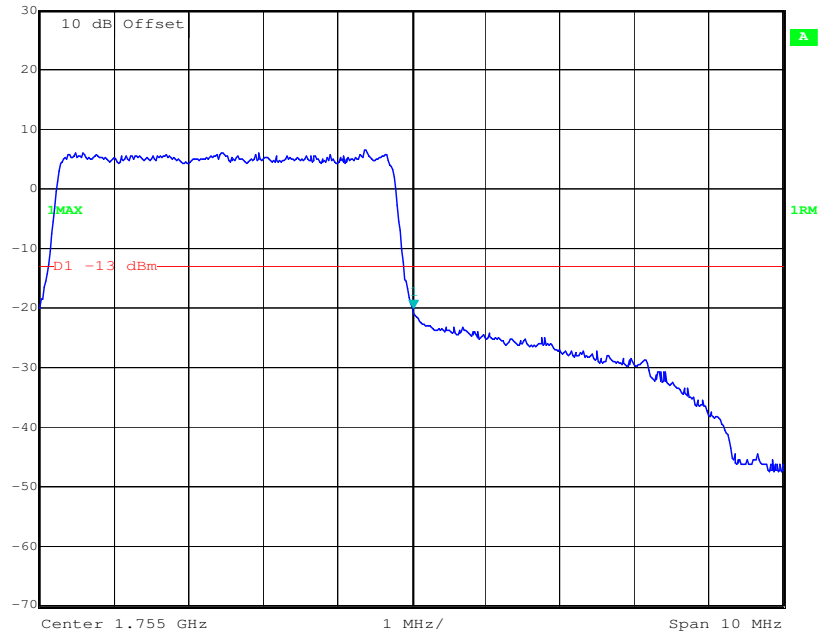
Ref Lvl 30 dBm  
Marker 1 [T1] -21.70 dBm  
1.70998998 GHz  
RBW 100 kHz  
RF Att 30 dB  
VBW 300 kHz  
SWT 50 ms  
Unit dBm



Date: 30.DEC.2016 22:41:24

QPSK\_5MHz\_FULL RB\_Right

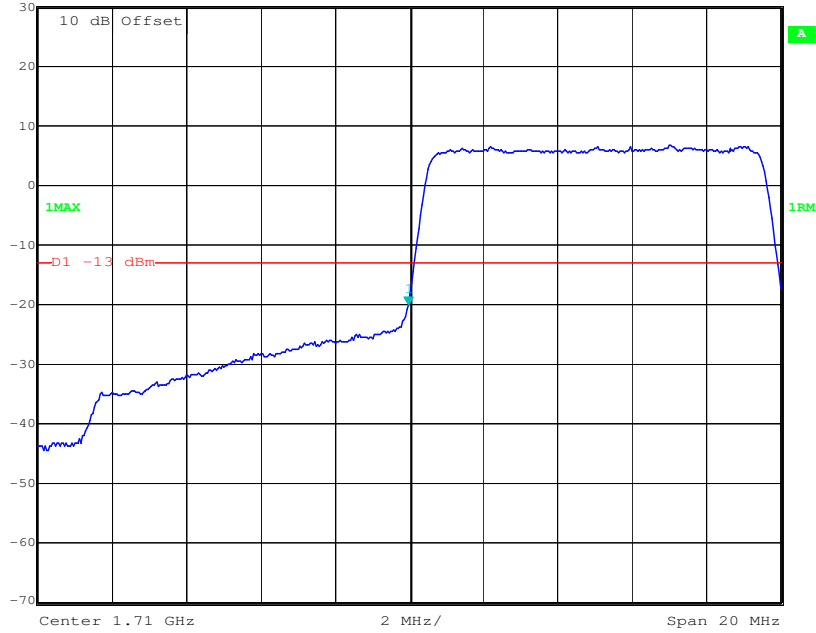
Ref Lvl 30 dBm  
Marker 1 [T1] -20.22 dBm  
1.75503006 GHz  
RBW 100 kHz  
RF Att 30 dB  
VBW 300 kHz  
SWT 50 ms  
Unit dBm



Date: 30.DEC.2016 22:40:57

QPSK\_10MHz\_FULL RB\_Left

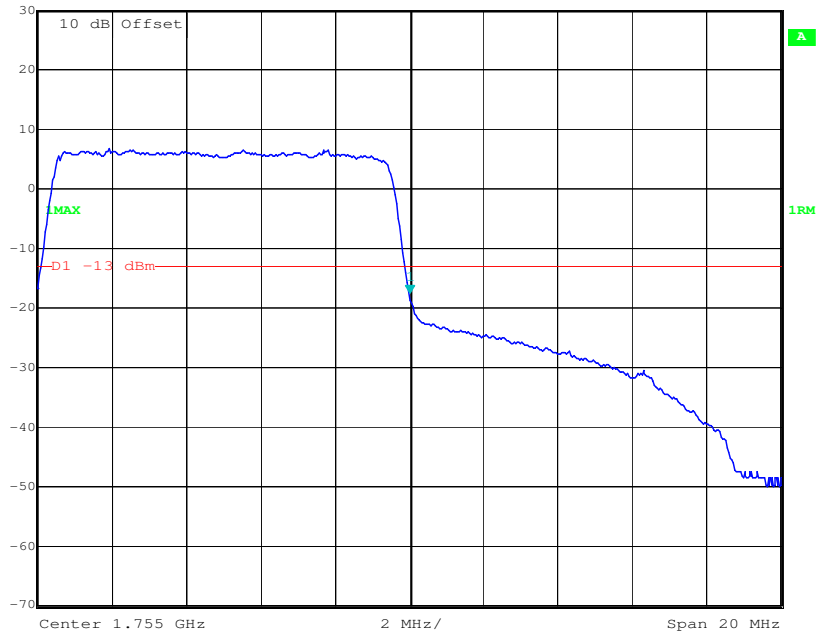
Marker 1 [T1] RBW 300 kHz RF Att 30 dB  
Ref Lvl -20.13 dBm VBW 1 MHz  
30 dBm 1.70997996 GHz SWT 50 ms Unit dBm



Date: 30.DEC.2016 22:34:28

QPSK\_10MHz\_FULL RB\_Right

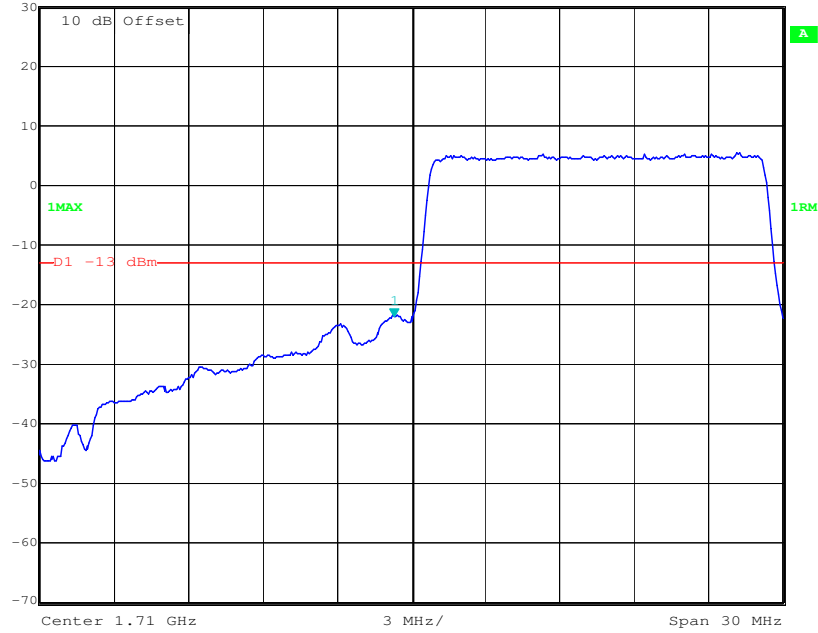
Marker 1 [T1] RBW 300 kHz RF Att 30 dB  
Ref Lvl -17.64 dBm VBW 1 MHz  
30 dBm 1.75502004 GHz SWT 50 ms Unit dBm



Date: 30.DEC.2016 22:35:00

QPSK\_15MHz\_FULL RB\_Left

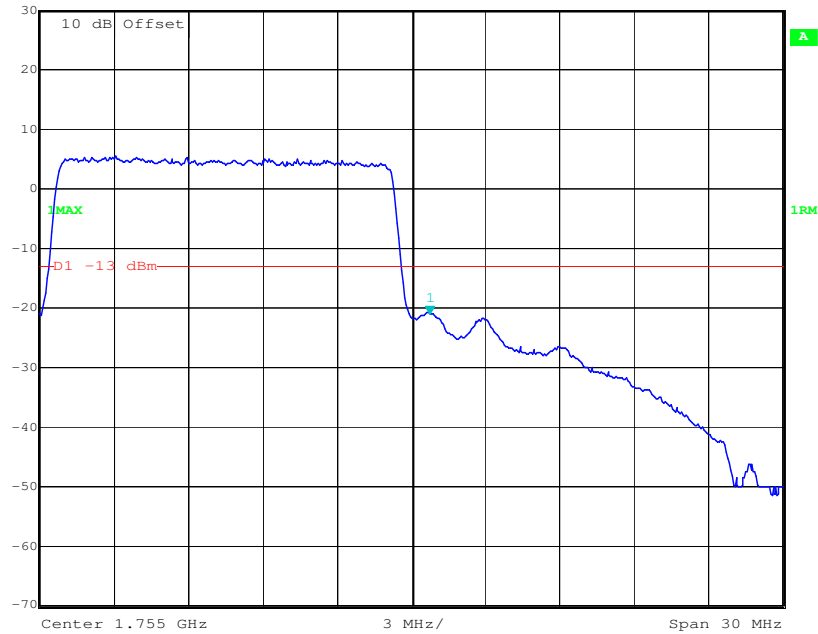
Marker 1 [T1] RBW 300 kHz RF Att 30 dB  
Ref Lvl -22.10 dBm VBW 1 MHz  
30 dBm 1.70930862 GHz SWT 50 ms Unit dBm



Date: 30.DEC.2016 22:31:55

QPSK\_15MHz\_FULL RB\_Right

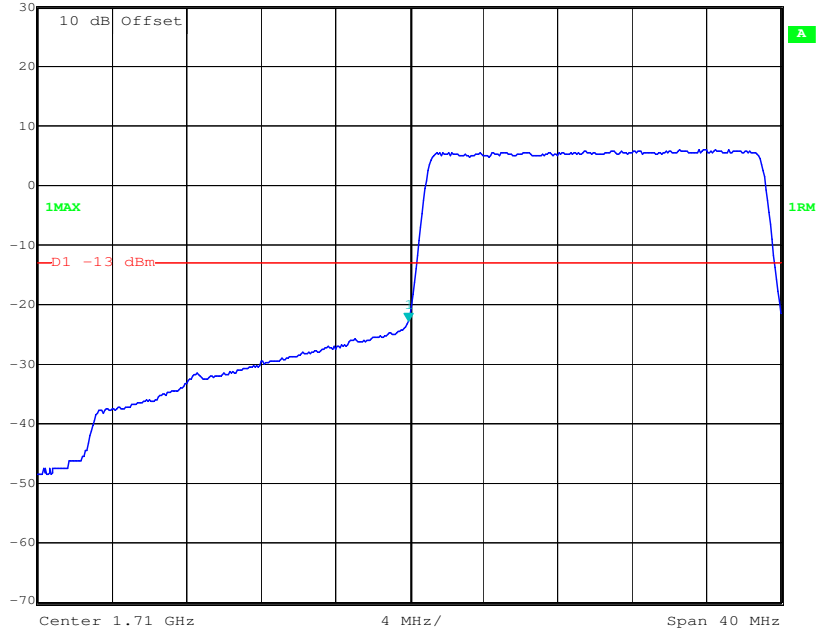
Marker 1 [T1] RBW 300 kHz RF Att 30 dB  
Ref Lvl -21.11 dBm VBW 1 MHz  
30 dBm 1.75575150 GHz SWT 50 ms Unit dBm



Date: 30.DEC.2016 22:32:34

QPSK\_20MHz\_FULL RB\_Left

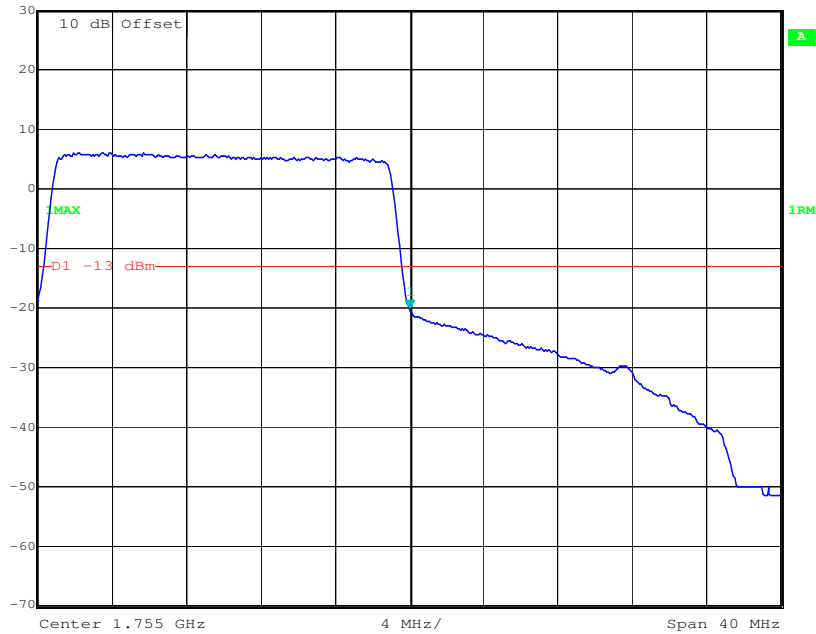
Marker 1 [T1] RBW 500 kHz RF Att 30 dB  
Ref Lvl -22.89 dBm VBW 1 MHz  
30 dBm 1.70995992 GHz SWT 50 ms Unit dBm



Date: 30.DEC.2016 22:24:41

QPSK\_20MHz\_FULL RB\_Right

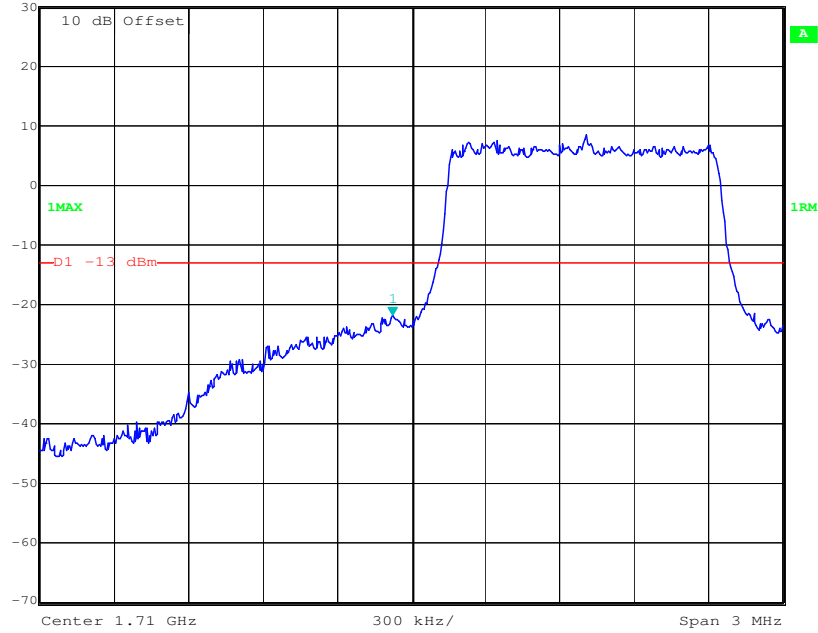
Marker 1 [T1] RBW 500 kHz RF Att 30 dB  
Ref Lvl -20.13 dBm VBW 1 MHz  
30 dBm 1.75504008 GHz SWT 50 ms Unit dBm



Date: 30.DEC.2016 22:23:17

16QAM\_1.4MHz\_FULL RB\_ Left

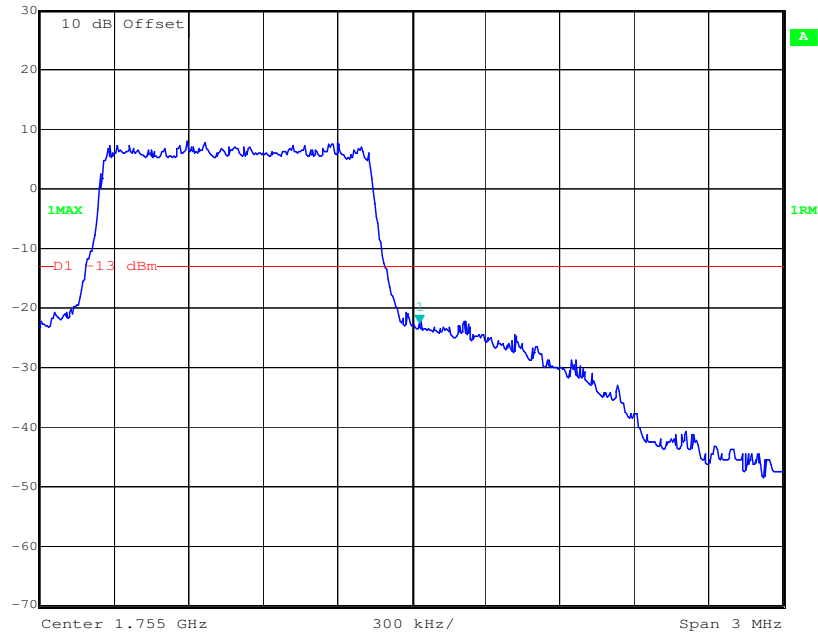
Marker 1 [T1] RBW 30 kHz RF Att 30 dB  
Ref Lvl -21.81 dBm VBW 100 kHz  
30 dBm 1.70992485 GHz SWT 50 ms Unit dBm



Date: 30.DEC.2016 23:12:18

16QAM\_1.4MHz\_FULL RB\_ Right

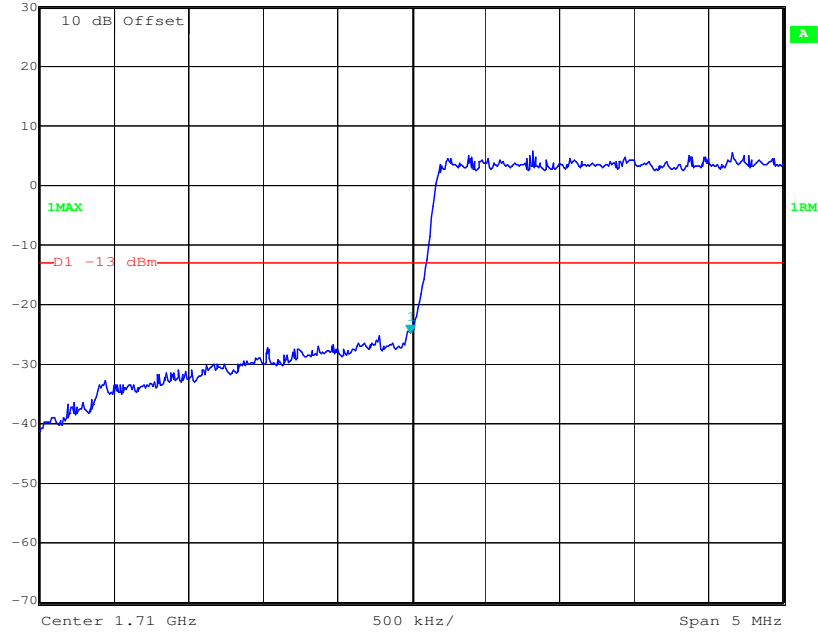
Marker 1 [T1] RBW 30 kHz RF Att 30 dB  
Ref Lvl -22.52 dBm VBW 100 kHz  
30 dBm 1.75503307 GHz SWT 50 ms Unit dBm



Date: 30.DEC.2016 23:11:29

16QAM\_3MHz\_FULL RB\_Left

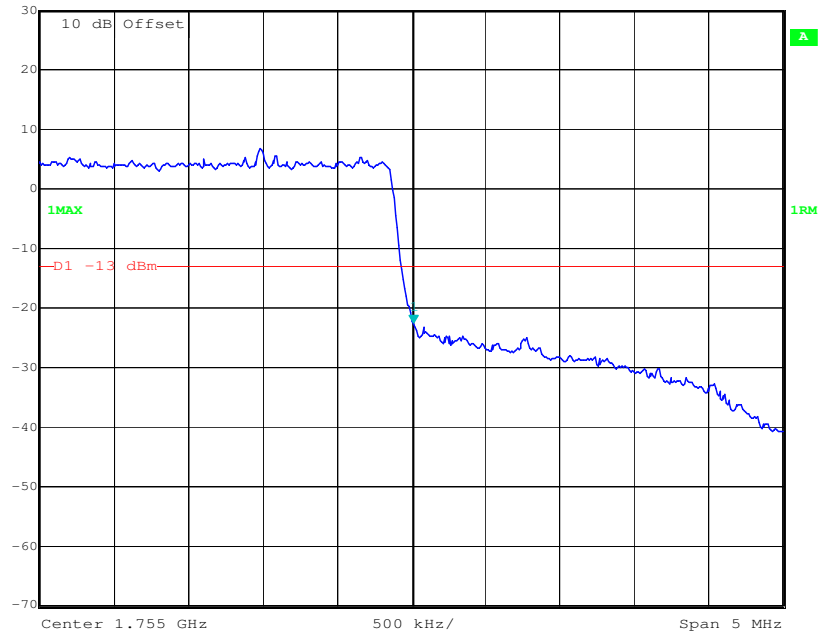
Marker 1 [T1] RBW 50 kHz RF Att 30 dB  
Ref Lvl -24.90 dBm VBW 100 kHz  
30 dBm 1.70999499 GHz SWT 50 ms Unit dBm



Date: 30.DEC.2016 23:04:40

16QAM\_3MHz\_FULL RB\_Right


Marker 1 [T1] RBW 50 kHz RF Att 30 dB  
Ref Lvl -22.71 dBm VBW 100 kHz  
30 dBm 1.75501503 GHz SWT 50 ms Unit dBm

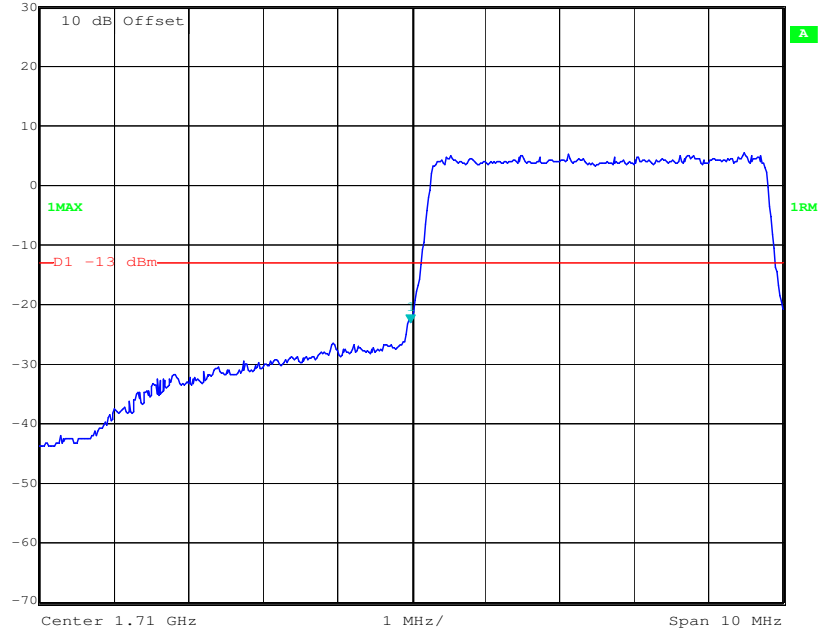


Date: 30.DEC.2016 23:04:14




16QAM\_5MHz\_FULL RB\_Left

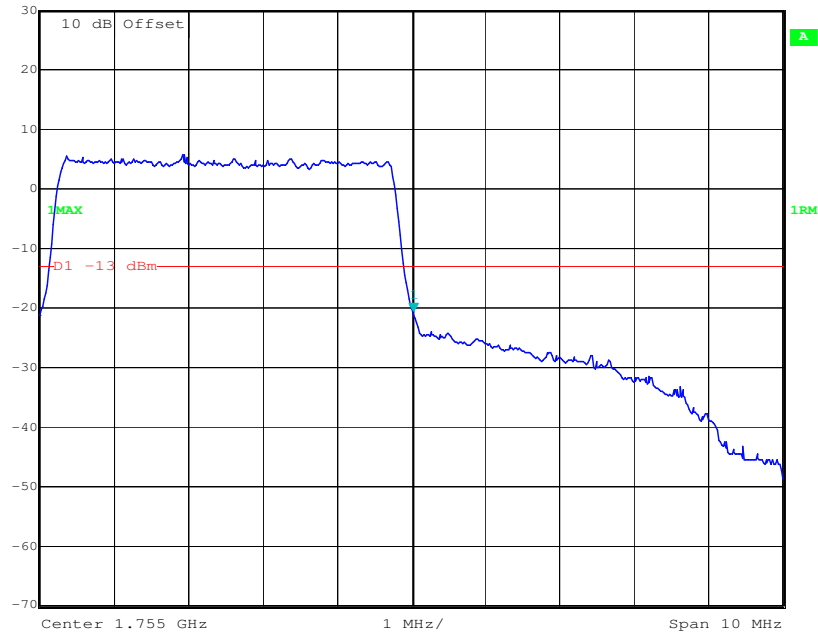
 Ref Lvl 30 dBm    Marker 1 [T1] 1.70999500 GHz    RBW 100 kHz    RF Att 30 dB  
-23.15 dBm    VBW 300 kHz  
SWT 50 ms    Unit dBm



Date: 30.DEC.2016 22:39:17

16QAM\_5MHz\_FULL RB\_Right

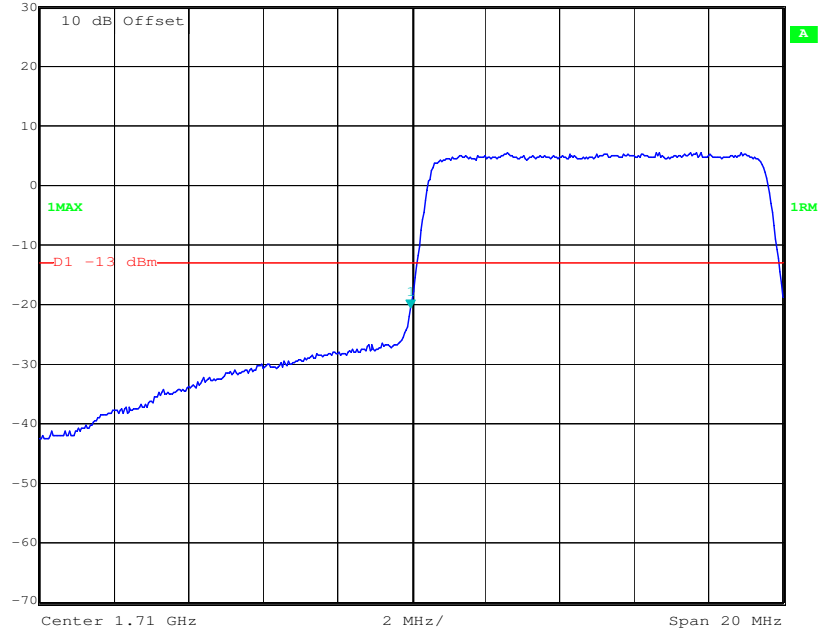
 Ref Lvl 30 dBm    Marker 1 [T1] 1.75503006 GHz    RBW 100 kHz    RF Att 30 dB  
-20.70 dBm    VBW 300 kHz  
SWT 50 ms    Unit dBm



Date: 30.DEC.2016 22:40:02

16QAM\_10MHz\_FULL RB\_Left

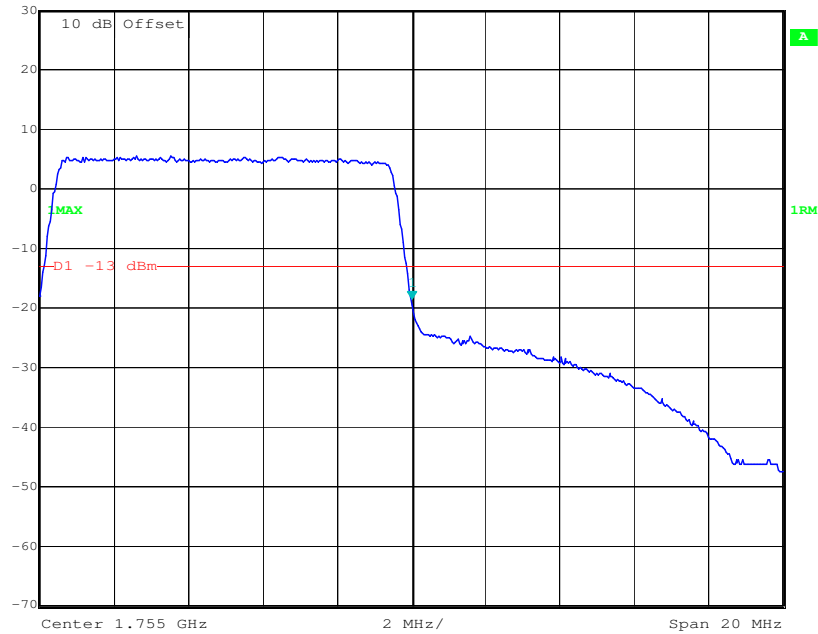
Marker 1 [T1] RBW 300 kHz RF Att 30 dB  
Ref Lvl -20.56 dBm VBW 1 MHz  
30 dBm 1.70997996 GHz SWT 50 ms Unit dBm



Date: 30.DEC.2016 22:36:53

16QAM\_10MHz\_FULL RB\_Right

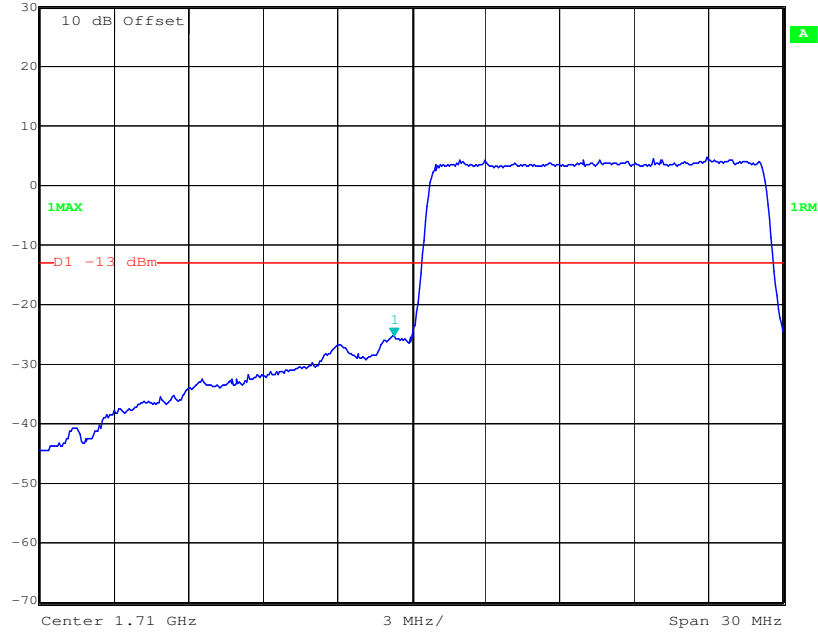
Marker 1 [T1] RBW 300 kHz RF Att 30 dB  
Ref Lvl -18.60 dBm VBW 1 MHz  
30 dBm 1.75502004 GHz SWT 50 ms Unit dBm



Date: 30.DEC.2016 22:36:01

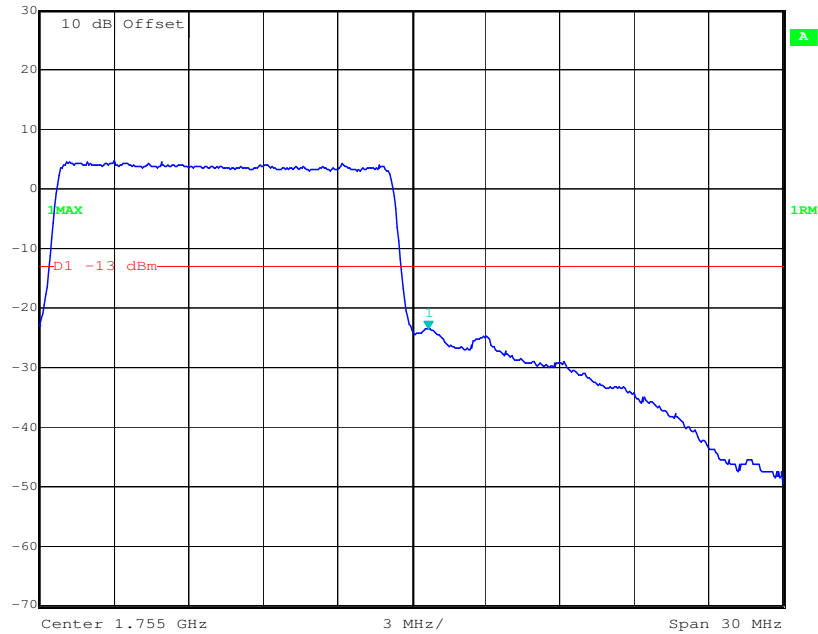
16QAM\_15MHz\_FULL RB\_Left

Marker 1 [T1] RBW 300 kHz RF Att 30 dB  
Ref Lvl -25.31 dBm VBW 1 MHz  
30 dBm 1.70930862 GHz SWT 50 ms Unit dBm



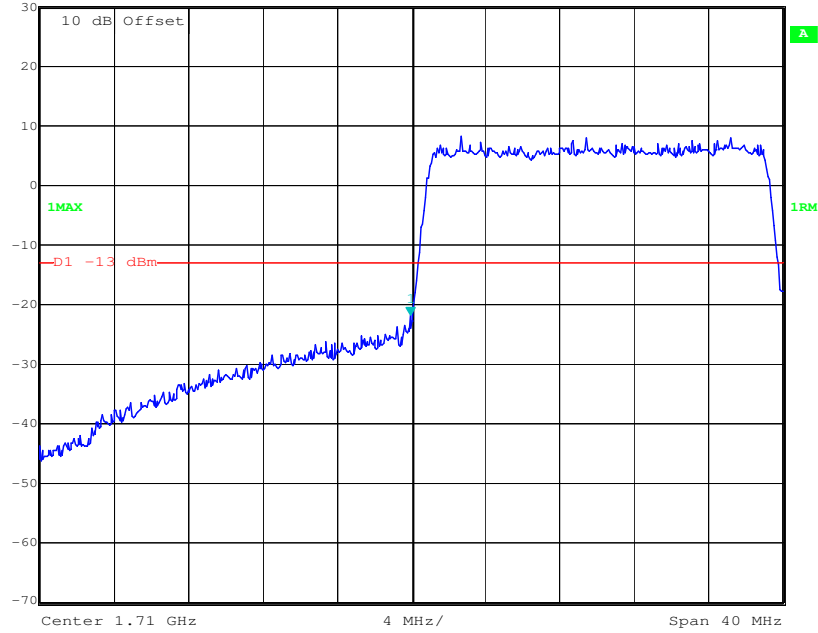
16QAM\_15MHz\_FULL RB\_Right

Marker 1 [T1] RBW 300 kHz RF Att 30 dB  
Ref Lvl -23.56 dBm VBW 1 MHz  
30 dBm 1.75569138 GHz SWT 50 ms Unit dBm



16QAM\_20MHz\_FULL RB\_Left

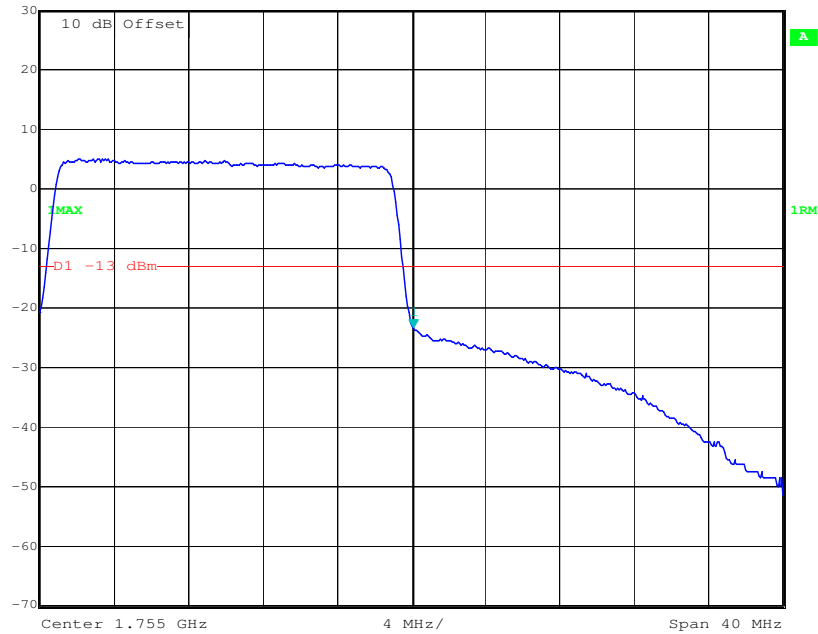
Marker 1 [T1] RBW 500 kHz RF Att 30 dB  
Ref Lvl -21.99 dBm VBW 1 MHz  
30 dBm 1.70995992 GHz SWT 50 ms Unit dBm



Date: 30.DEC.2016 22:21:35

16QAM\_20MHz\_FULL RB\_Right

Marker 1 [T1] RBW 500 kHz RF Att 30 dB  
Ref Lvl -23.42 dBm VBW 1 MHz  
30 dBm 1.75512024 GHz SWT 50 ms Unit dBm

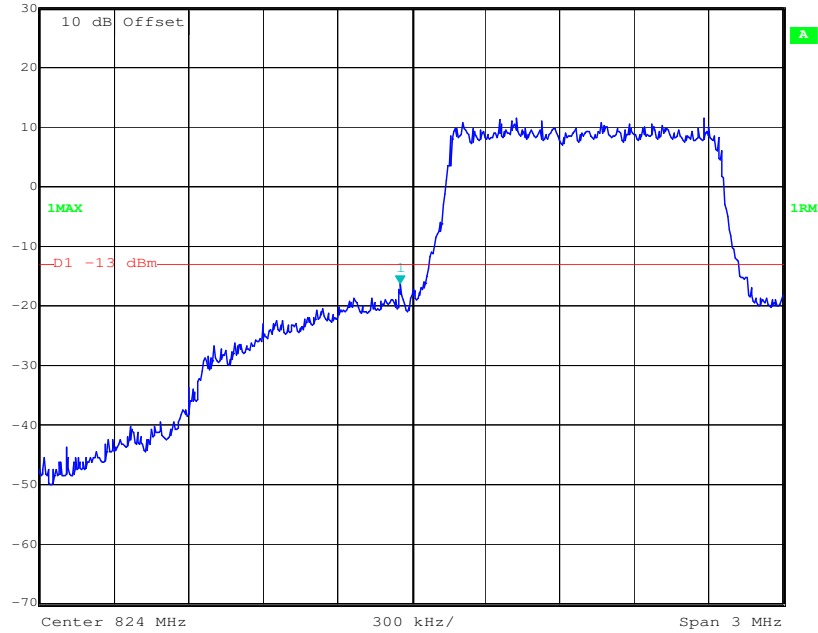


Date: 30.DEC.2016 22:22:27

LTE Band V

QPSK\_1.4MHz\_FULL RB\_Left

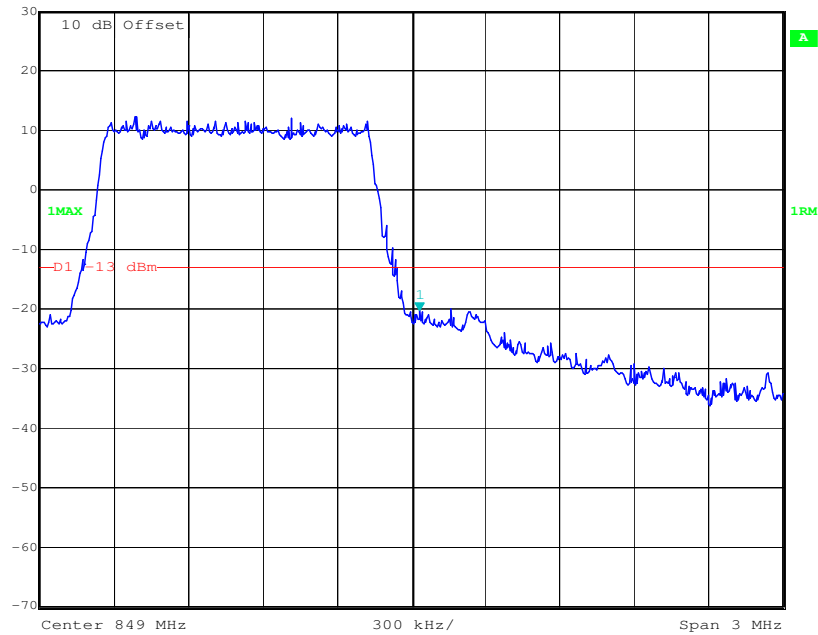
Marker 1 [T1] RBW 30 kHz RF Att 30 dB  
Ref Lvl -16.41 dBm VBW 100 kHz  
30 dBm 823.95490982 MHz SWT 20 ms Unit dBm



Date: 30.DEC.2016 23:23:58

QPSK\_1.4MHz\_FULL RB\_Right

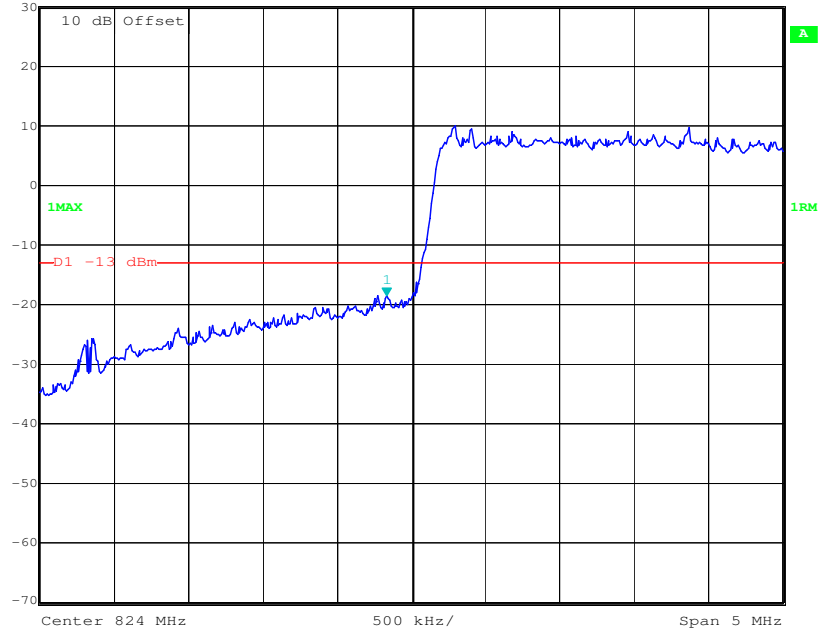
Marker 1 [T1] RBW 30 kHz RF Att 30 dB  
Ref Lvl -20.41 dBm VBW 100 kHz  
30 dBm 849.03306613 MHz SWT 20 ms Unit dBm



Date: 30.DEC.2016 23:23:18

QPSK\_3MHz\_FULL RB\_Left

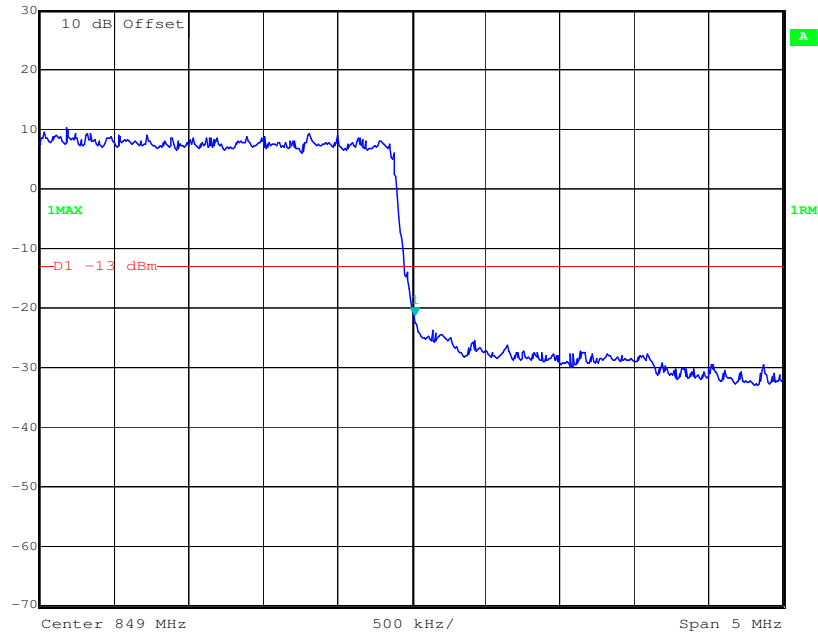
Marker 1 [T1] RBW 50 kHz RF Att 30 dB  
Ref Lvl -18.60 dBm VBW 100 kHz  
30 dBm 823.83466934 MHz SWT 20 ms Unit dBm



Date: 30.DEC.2016 23:33:34


QPSK\_3MHz\_FULL RB\_Right

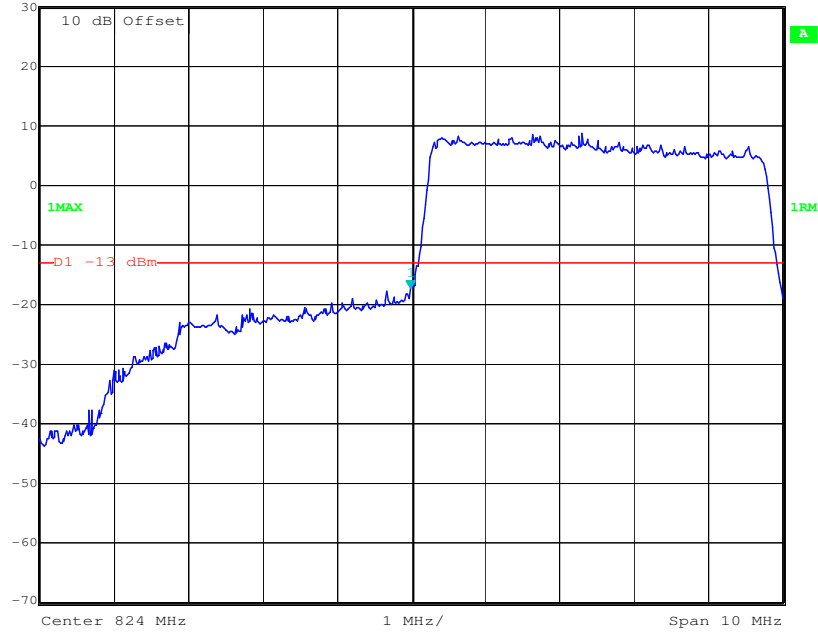
Marker 1 [T1] RBW 50 kHz RF Att 30 dB  
Ref Lvl -21.32 dBm VBW 100 kHz  
30 dBm 849.02505010 MHz SWT 20 ms Unit dBm



Date: 30.DEC.2016 23:31:33


QPSK\_5MHz\_FULL RB\_Left

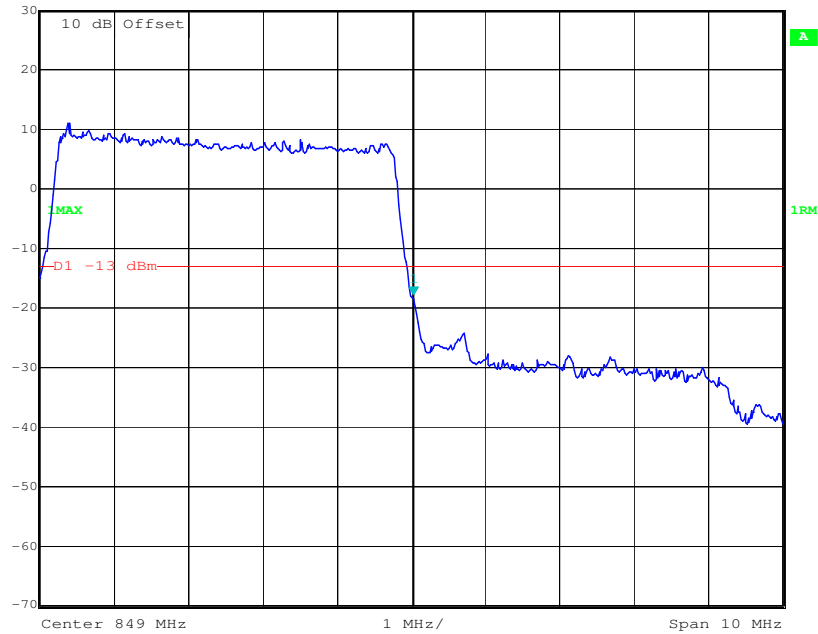
 Ref Lvl 30 dBm    Marker 1 [T1] 823.98997996 MHz    RBW 100 kHz    RF Att 30 dB  
-17.47 dBm    VBW 300 kHz    Unit dBm  
SWT 20 ms



Date: 30.DEC.2016 23:38:23

QPSK\_5MHz\_FULL RB\_Right

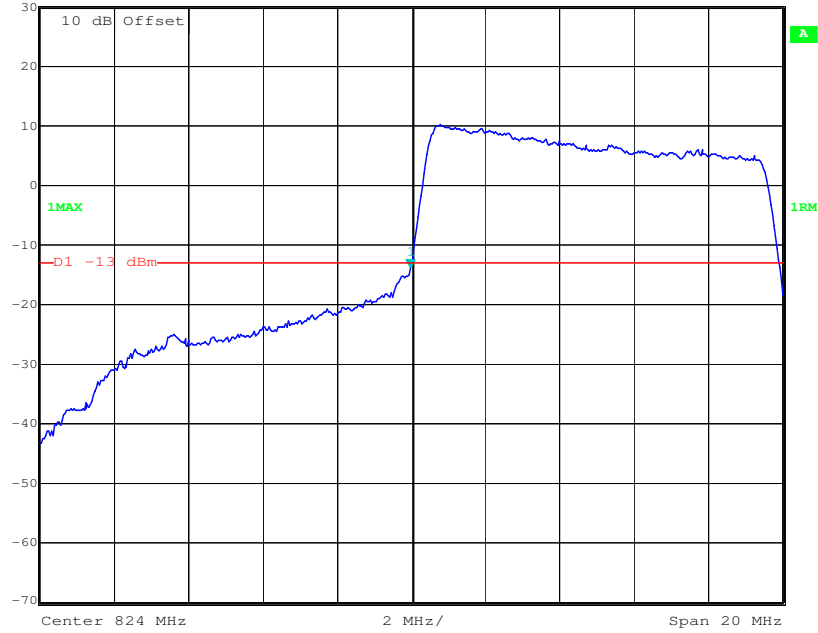
 Ref Lvl 30 dBm    Marker 1 [T1] 849.03006012 MHz    RBW 100 kHz    RF Att 30 dB  
-17.78 dBm    VBW 300 kHz    Unit dBm  
SWT 20 ms



Date: 30.DEC.2016 23:39:01

QPSK\_10MHz\_FULL RB\_Left

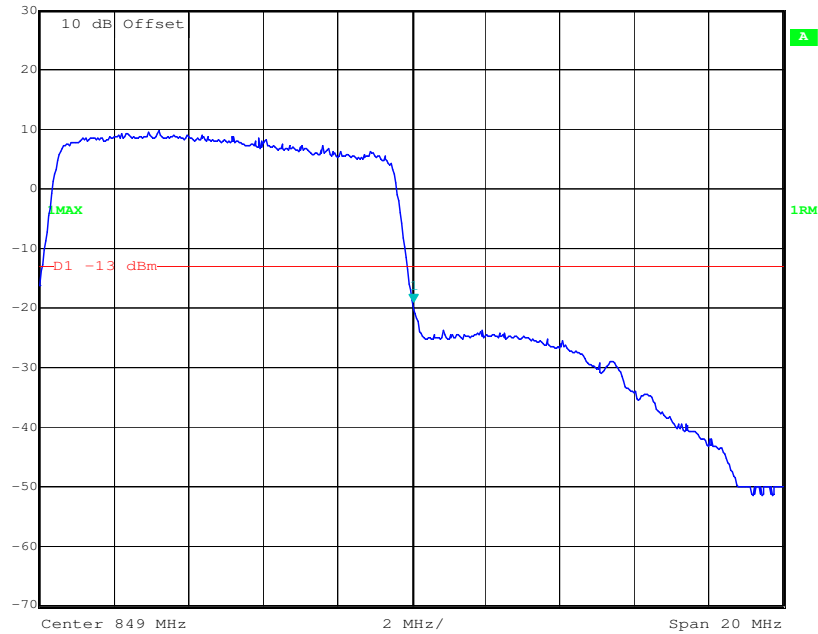
Marker 1 [T1] RBW 300 kHz RF Att 30 dB  
Ref Lvl -13.90 dBm VBW 1 MHz  
30 dBm 823.97995992 MHz SWT 20 ms Unit dBm



Date: 30.DEC.2016 23:44:56

QPSK\_10MHz\_FULL RB\_Right


Marker 1 [T1] RBW 300 kHz RF Att 30 dB  
Ref Lvl -19.12 dBm VBW 1 MHz  
30 dBm 849.06012024 MHz SWT 20 ms Unit dBm

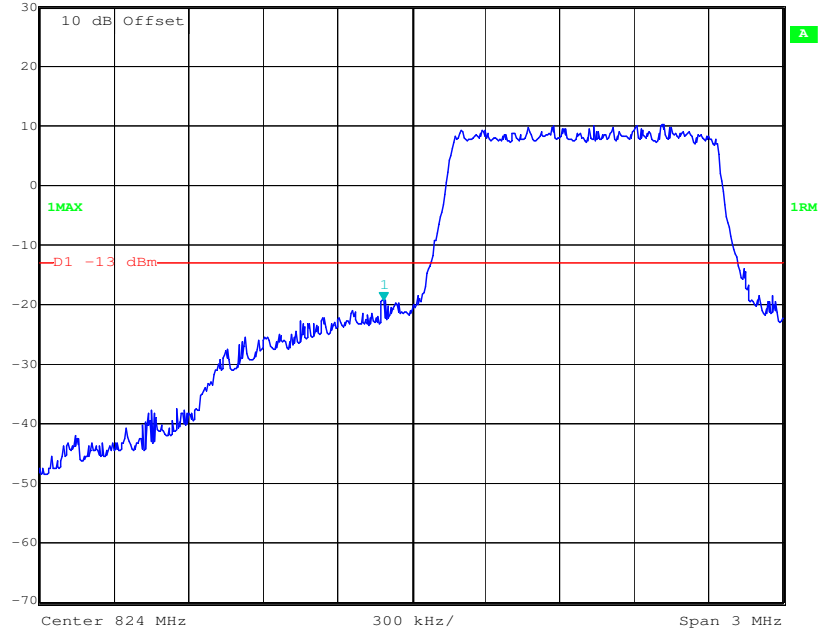


Date: 30.DEC.2016 23:43:51




16QAM\_1.4MHz\_FULL RB\_ Left

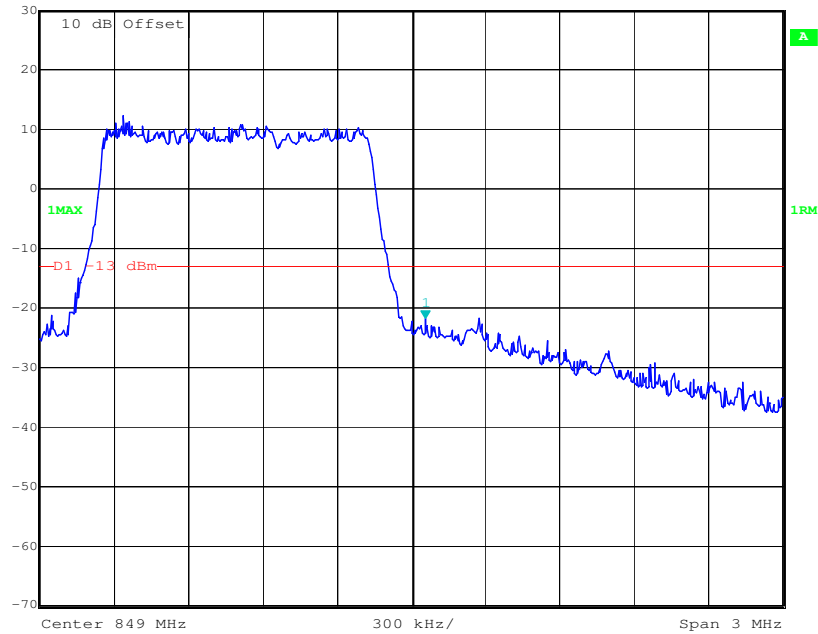
 Ref Lvl 30 dBm    Marker 1 [T1] 823.88877756 MHz    RBW 30 kHz    RF Att 30 dB  
-19.29 dBm    VBW 100 kHz  
SWT 20 ms    Unit dBm



Date: 30.DEC.2016 23:21:37

16QAM\_1.4MHz\_FULL RB\_ Right

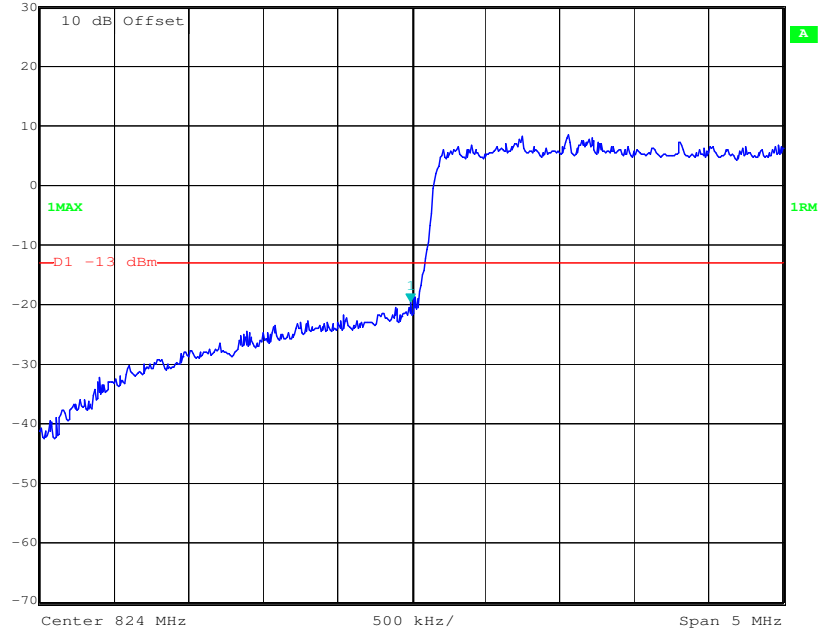
 Ref Lvl 30 dBm    Marker 1 [T1] 849.05711423 MHz    RBW 30 kHz    RF Att 30 dB  
-21.93 dBm    VBW 100 kHz  
SWT 20 ms    Unit dBm



Date: 30.DEC.2016 23:22:26

16QAM\_3MHz\_FULL RB\_Left

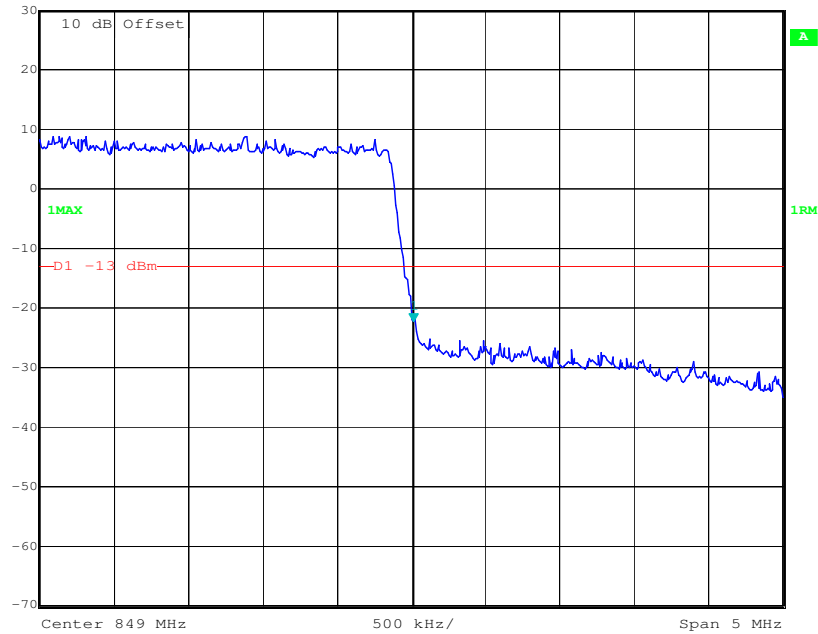
Marker 1 [T1] RBW 50 kHz RF Att 30 dB  
Ref Lvl -19.63 dBm VBW 100 kHz  
30 dBm 823.99498998 MHz SWT 20 ms Unit dBm



Date: 30.DEC.2016 23:27:41


16QAM\_3MHz\_FULL RB\_Right

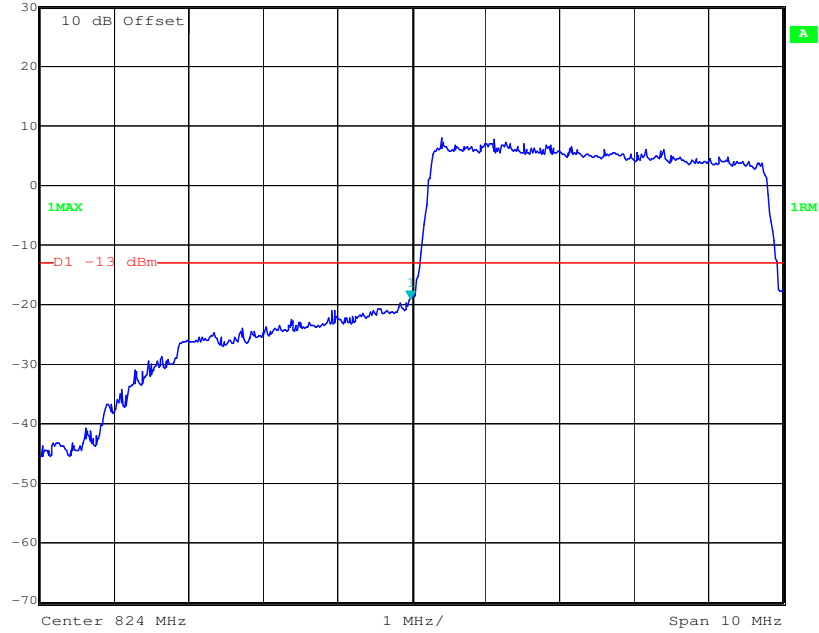
Marker 1 [T1] RBW 50 kHz RF Att 30 dB  
Ref Lvl -22.46 dBm VBW 100 kHz  
30 dBm 849.01503006 MHz SWT 20 ms Unit dBm



Date: 30.DEC.2016 23:30:30


16QAM\_5MHz\_FULL RB\_Left

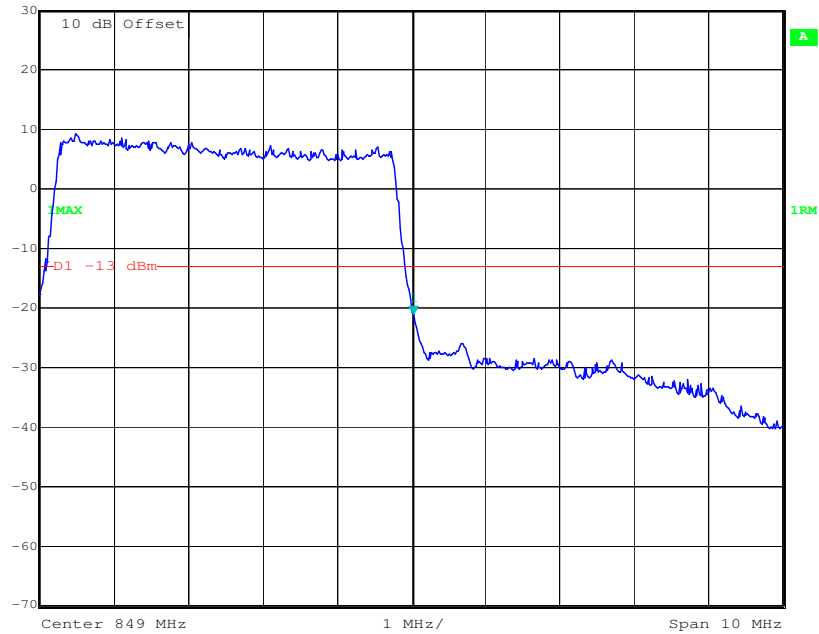
 Ref Lvl 30 dBm    Marker 1 [T1] 823.98997996 MHz    RBW 100 kHz    RF Att 30 dB  
-19.16 dBm    VBW 300 kHz    Unit dBm  
SWT 20 ms



Date: 30.DEC.2016 23:40:17


16QAM\_5MHz\_FULL RB\_Right

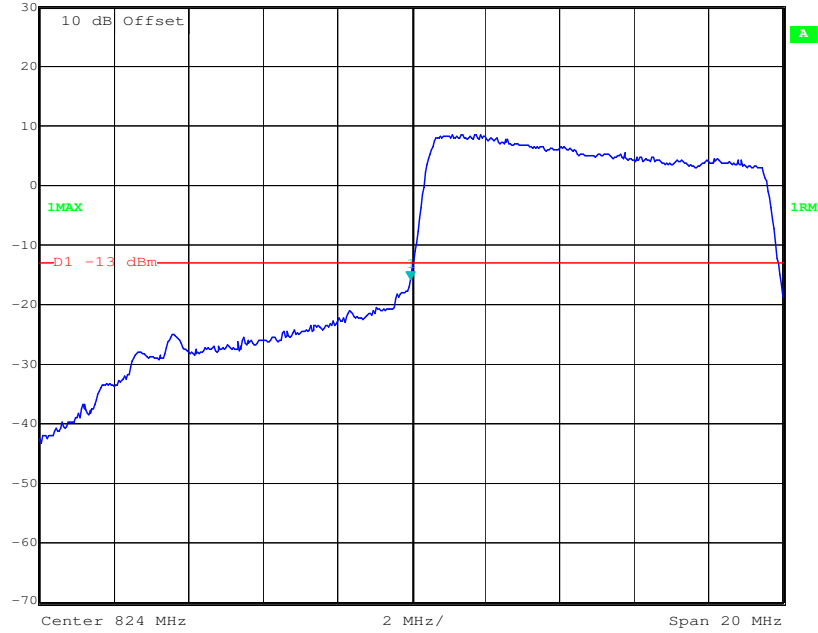
 Ref Lvl 30 dBm    Marker 1 [T1] 849.03006012 MHz    RBW 100 kHz    RF Att 30 dB  
-21.01 dBm    VBW 300 kHz    Unit dBm  
SWT 20 ms



Date: 30.DEC.2016 23:39:50


16QAM\_10MHz\_FULL RB\_Left

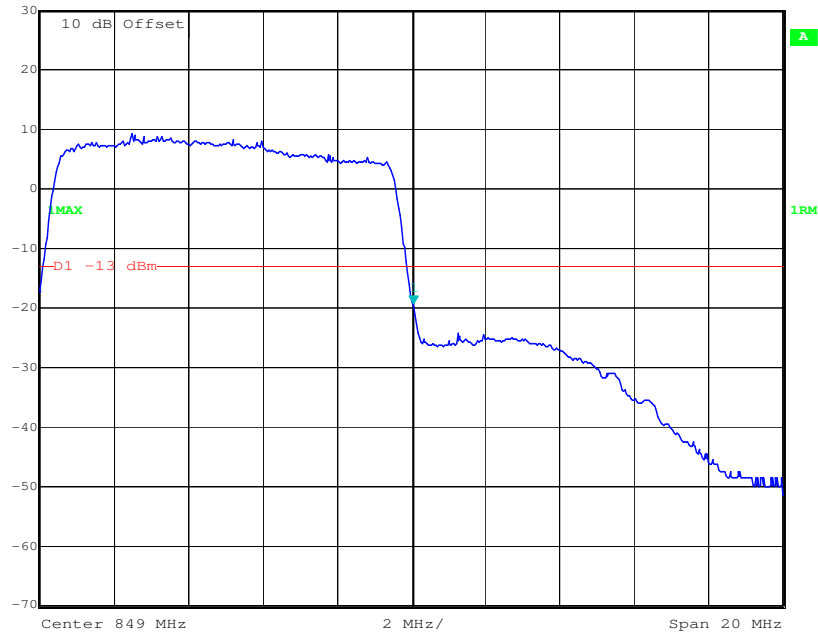
 Ref Lvl 30 dBm    Marker 1 [T1] 823.98997996 MHz    RBW 300 kHz    RF Att 30 dB  
-15.97 dBm    VBW 1 MHz  
SWT 20 ms    Unit dBm



Date: 30.DEC.2016 23:42:31

16QAM\_10MHz\_FULL RB\_Right

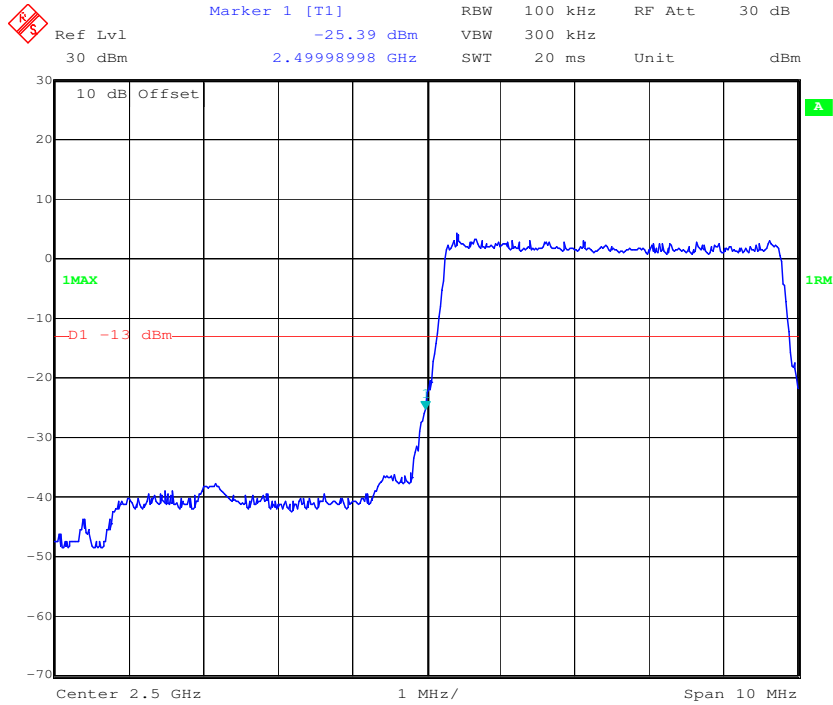
 Ref Lvl 30 dBm    Marker 1 [T1] 849.06012024 MHz    RBW 300 kHz    RF Att 30 dB  
-19.29 dBm    VBW 1 MHz  
SWT 20 ms    Unit dBm



Date: 30.DEC.2016 23:43:03

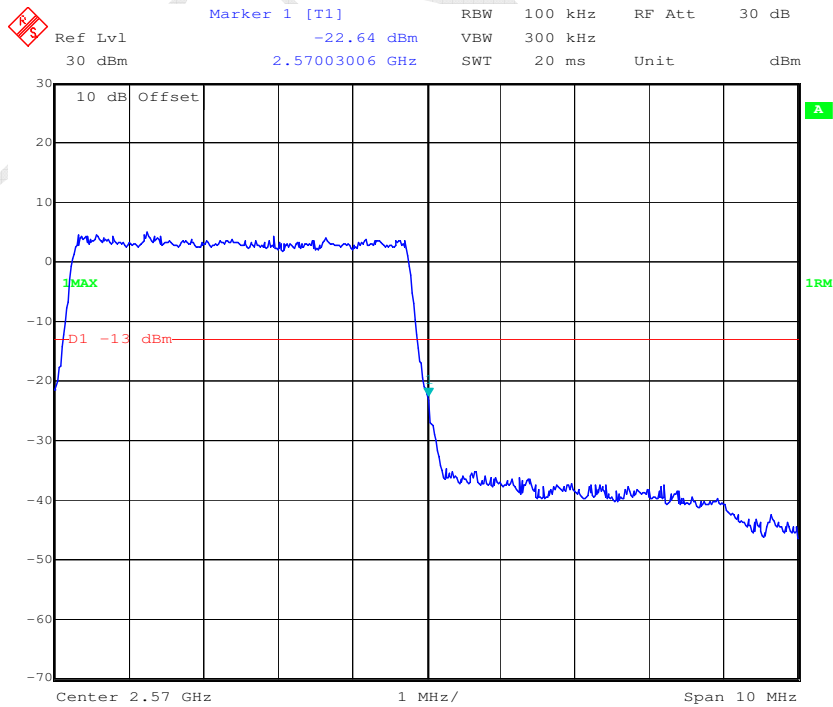
LTE Band VII

QPSK\_5MHz\_FULL RB\_Left



Date: 4.JAN.2017 21:37:24

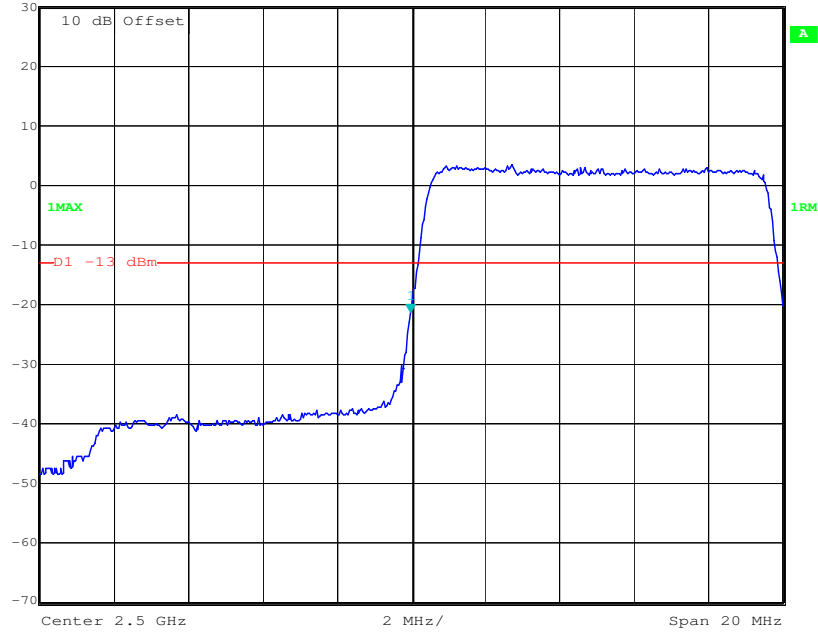
QPSK\_5MHz\_FULL RB\_Right



Date: 4.JAN.2017 21:36:38

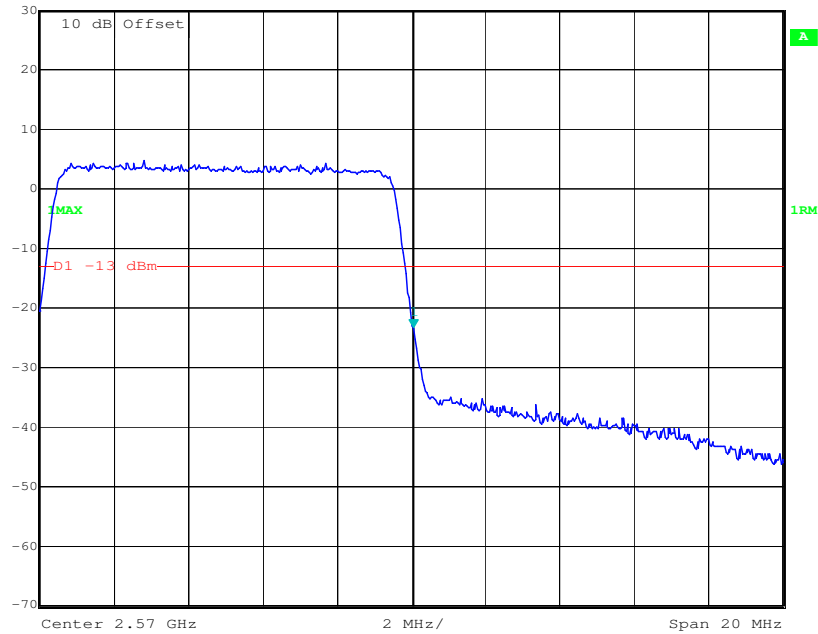
QPSK\_10MHz\_FULL RB\_Left

Marker 1 [T1] RBW 300 kHz RF Att 30 dB  
Ref Lvl -21.32 dBm VBW 1 MHz  
30 dBm 2.49996994 GHz SWT 20 ms Unit dBm



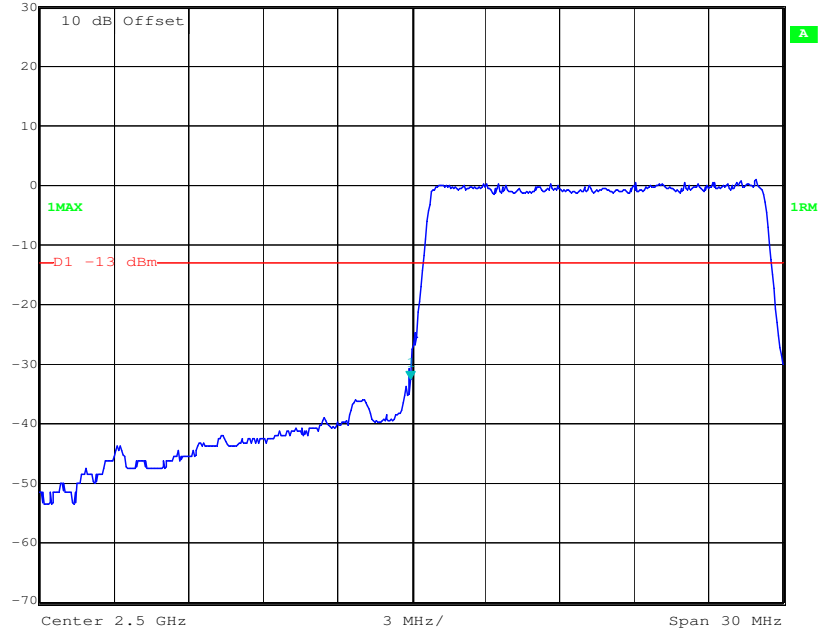
QPSK\_10MHz\_FULL RB\_Right

Marker 1 [T1] RBW 300 kHz RF Att 30 dB  
Ref Lvl -23.49 dBm VBW 1 MHz  
30 dBm 2.57006012 GHz SWT 20 ms Unit dBm



QPSK\_15MHz\_FULL RB\_Left

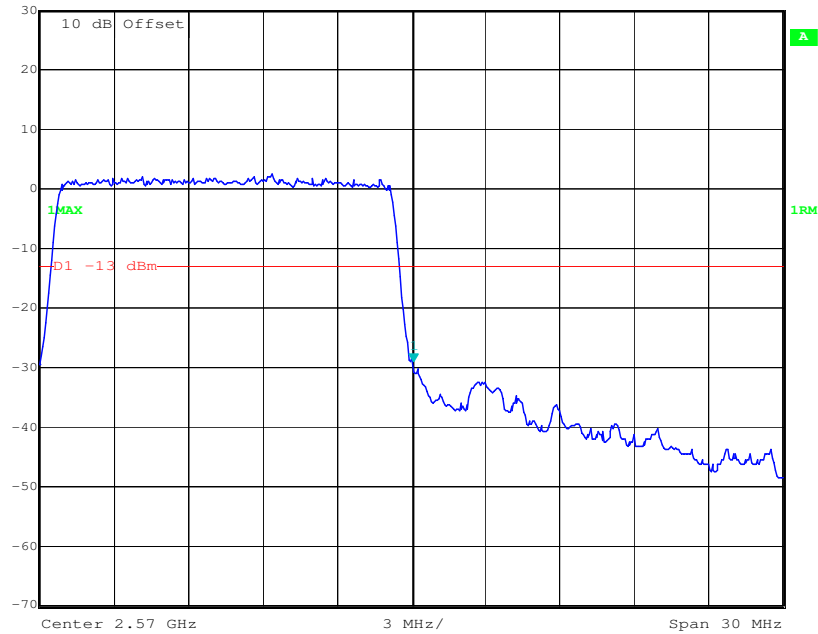
Marker 1 [T1] RBW 300 kHz RF Att 30 dB  
Ref Lvl -32.50 dBm VBW 1 MHz  
30 dBm 2.49996994 GHz SWT 20 ms Unit dBm



Date: 4.JAN.2017 21:48:09

QPSK\_15MHz\_FULL RB\_Right

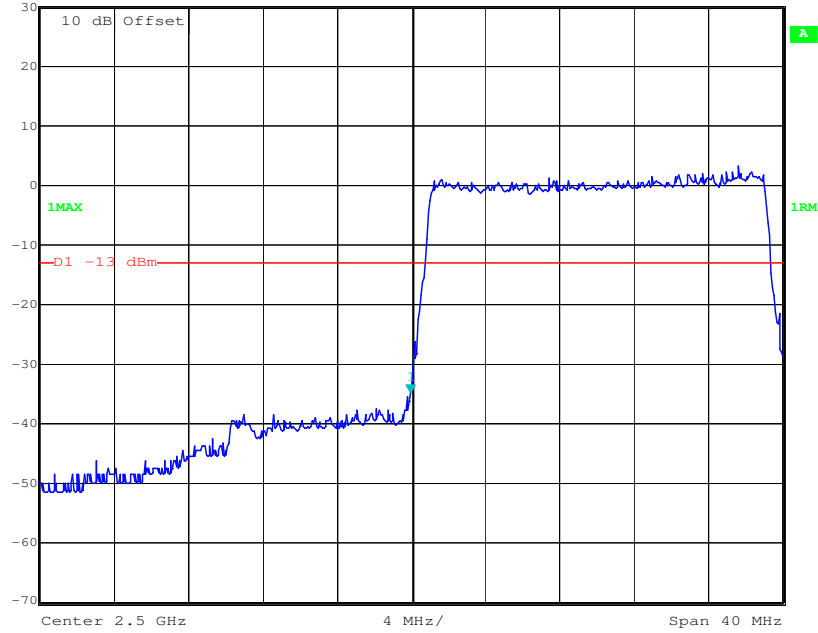
Marker 1 [T1] RBW 300 kHz RF Att 30 dB  
Ref Lvl -29.17 dBm VBW 1 MHz  
30 dBm 2.57009018 GHz SWT 20 ms Unit dBm



Date: 4.JAN.2017 21:47:21

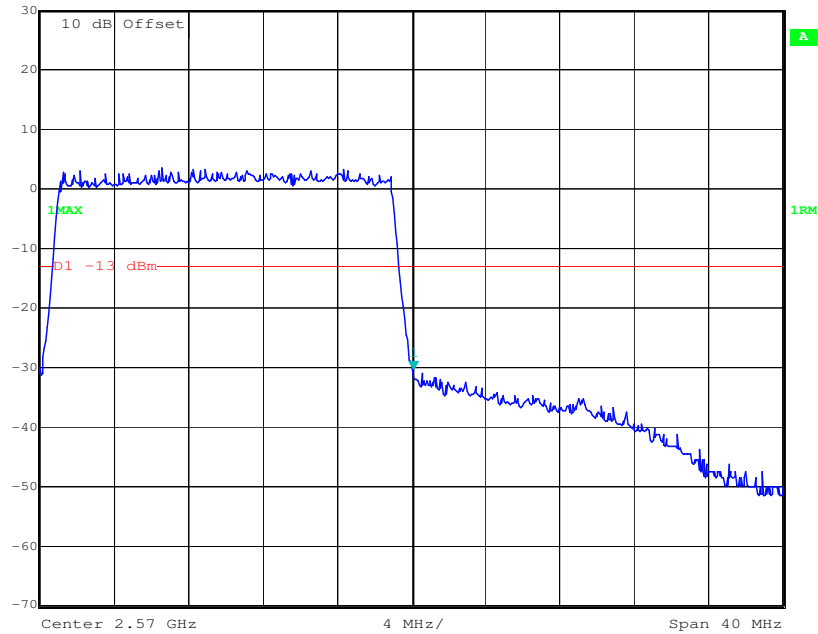
QPSK\_20MHz\_FULL RB\_Left

Marker 1 [T1] RBW 300 kHz RF Att 30 dB  
Ref Lvl -34.94 dBm VBW 1 MHz  
30 dBm 2.49995992 GHz SWT 5 ms Unit dBm




QPSK\_20MHz\_FULL RB\_Right

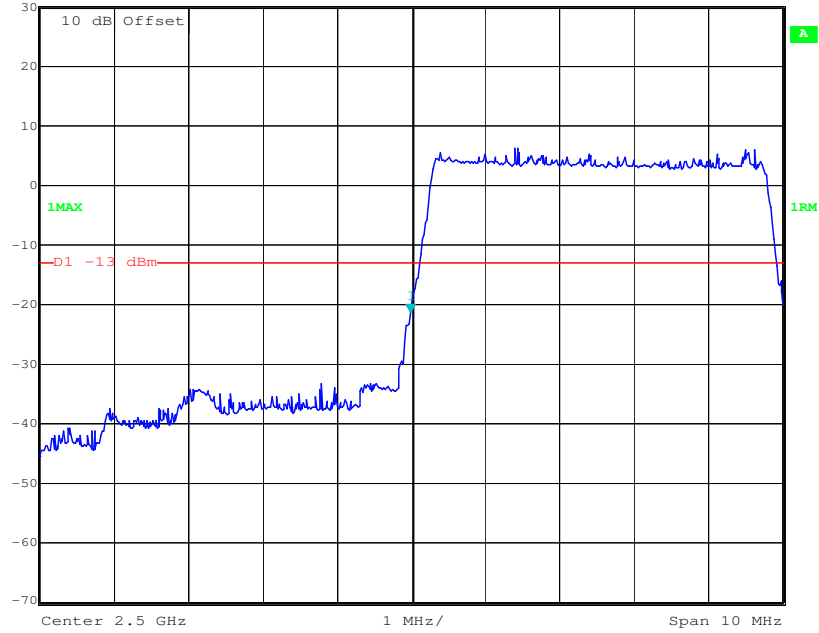
Marker 1 [T1] RBW 300 kHz RF Att 30 dB  
Ref Lvl -30.45 dBm VBW 1 MHz  
30 dBm 2.57012024 GHz SWT 5 ms Unit dBm






16QAM\_5MHz\_FULL RB\_Left

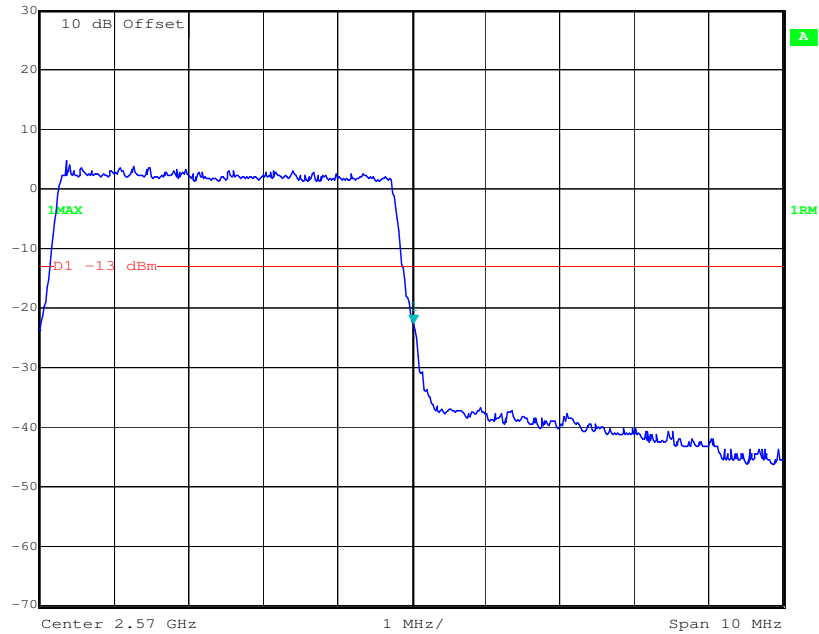
 Ref Lvl 30 dBm    Marker 1 [T1] 2.49998998 GHz    RBW 100 kHz    RF Att 30 dB  
-21.38 dBm    VBW 300 kHz    Unit dBm  
SWT 20 ms



Date: 4.JAN.2017 21:34:26

16QAM\_5MHz\_FULL RB\_Right

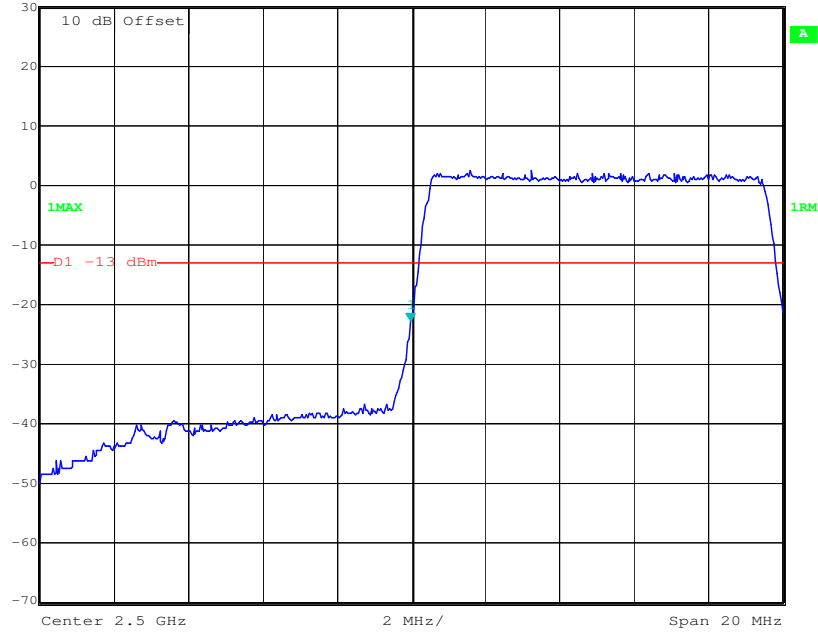
 Ref Lvl 30 dBm    Marker 1 [T1] 2.57003006 GHz    RBW 100 kHz    RF Att 30 dB  
-22.58 dBm    VBW 300 kHz    Unit dBm  
SWT 20 ms



Date: 4.JAN.2017 21:35:31

16QAM\_10MHz\_FULL RB\_Left

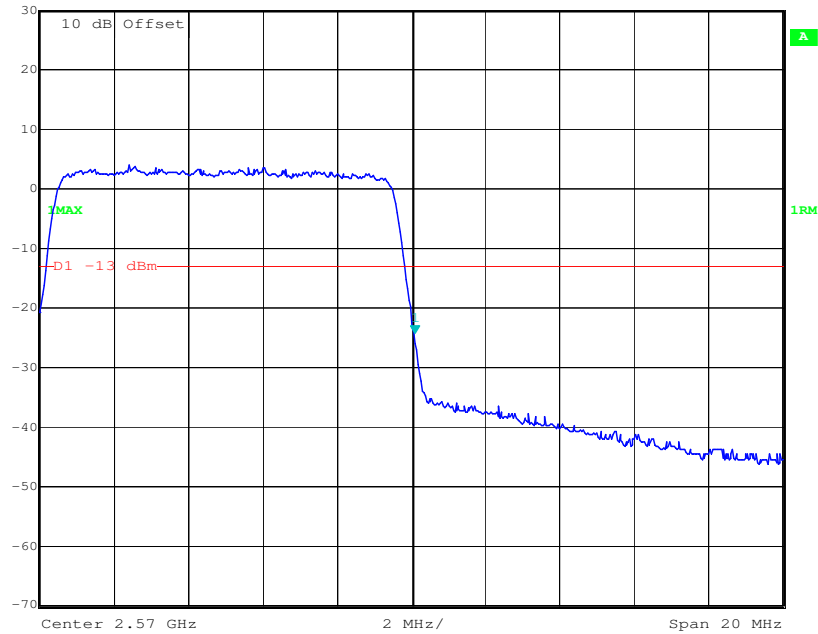
Marker 1 [T1] RBW 300 kHz RF Att 30 dB  
Ref Lvl -22.96 dBm VBW 1 MHz  
30 dBm 2.49997996 GHz SWT 20 ms Unit dBm



Date: 4.JAN.2017 21:44:00

16QAM\_10MHz\_FULL RB\_Right

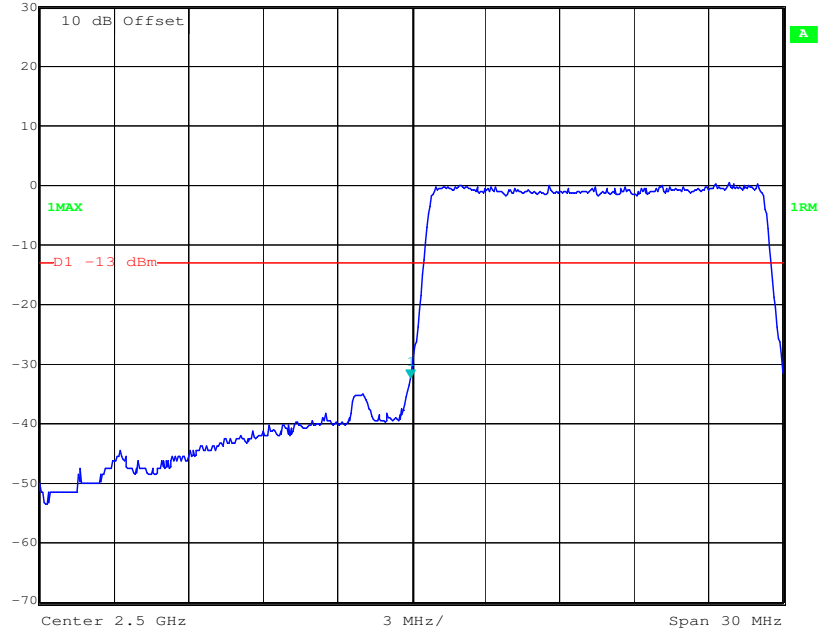
Marker 1 [T1] RBW 300 kHz RF Att 30 dB  
Ref Lvl -24.28 dBm VBW 1 MHz  
30 dBm 2.57010020 GHz SWT 20 ms Unit dBm



Date: 4.JAN.2017 21:43:27

16QAM\_15MHz\_FULL RB\_ Left

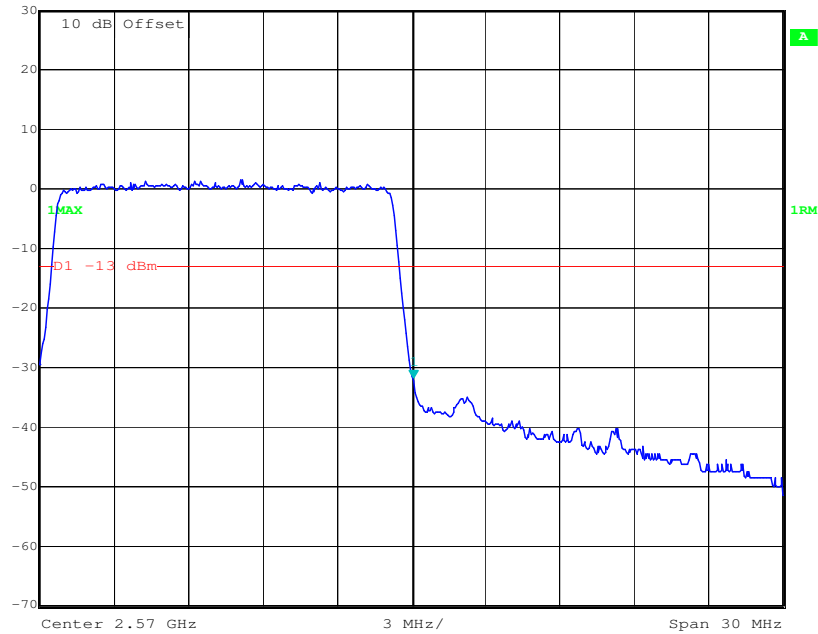
Marker 1 [T1] RBW 300 kHz RF Att 30 dB  
Ref Lvl -32.31 dBm VBW 1 MHz  
30 dBm 2.49997996 GHz SWT 20 ms Unit dBm



Date: 4.JAN.2017 21:45:43

16QAM\_15MHz\_FULL RB\_ Right

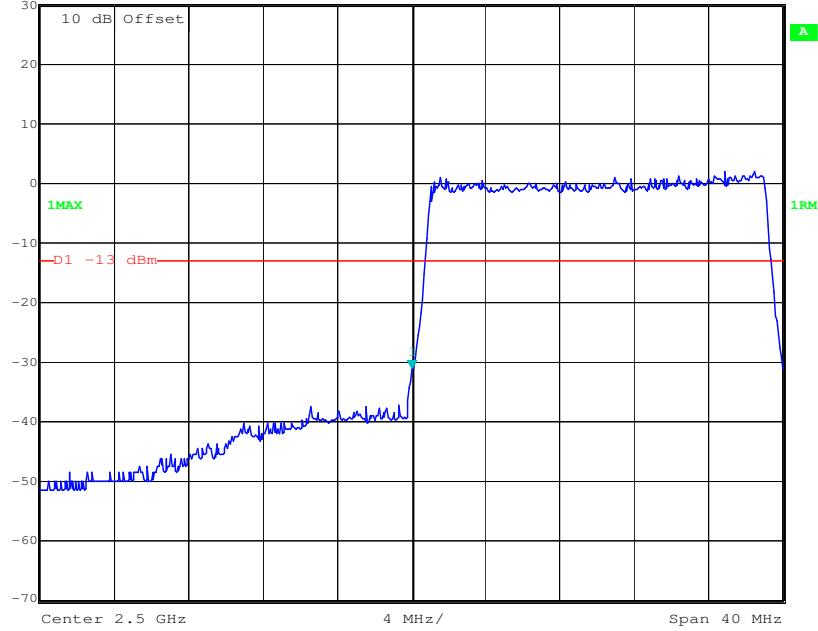
Marker 1 [T1] RBW 300 kHz RF Att 30 dB  
Ref Lvl -31.94 dBm VBW 1 MHz  
30 dBm 2.57009018 GHz SWT 20 ms Unit dBm



Date: 4.JAN.2017 21:46:31

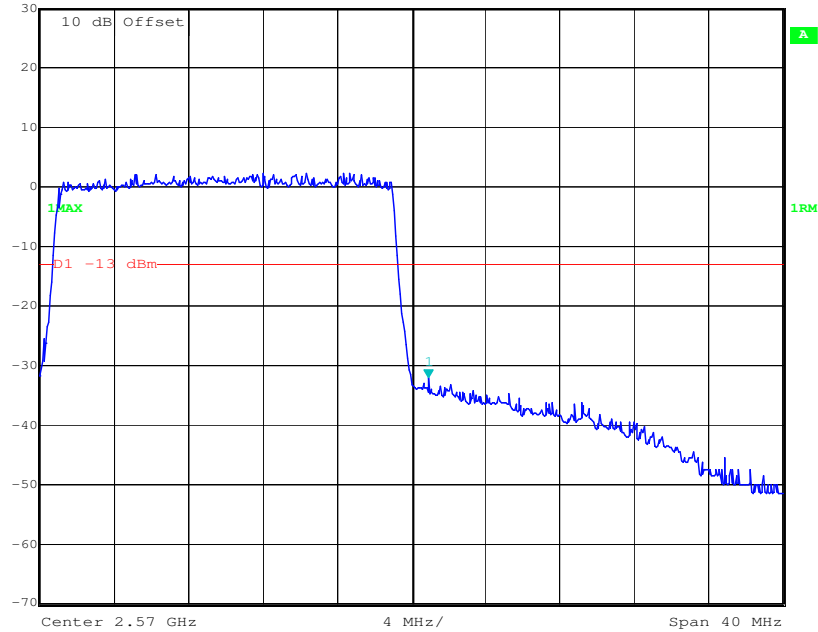
16QAM\_20MHz\_FULL RB\_Left

Ref Lvl 30 dBm  
Marker 1 [T1] -31.25 dBm  
2.50004008 GHz  
RBW 300 kHz  
RF Att 30 dB  
VBW 1 MHz  
SWT 5 ms  
Unit dBm



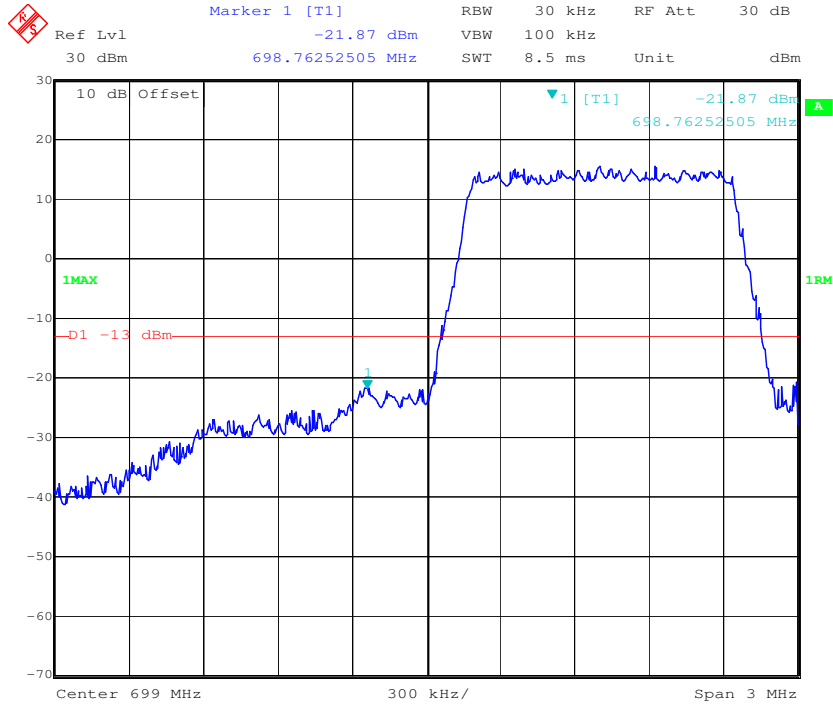
16QAM\_20MHz\_FULL RB\_Right

Ref Lvl 30 dBm  
Marker 1 [T1] -32.12 dBm  
2.57092184 GHz  
RBW 300 kHz  
RF Att 30 dB  
VBW 1 MHz  
SWT 5 ms  
Unit dBm

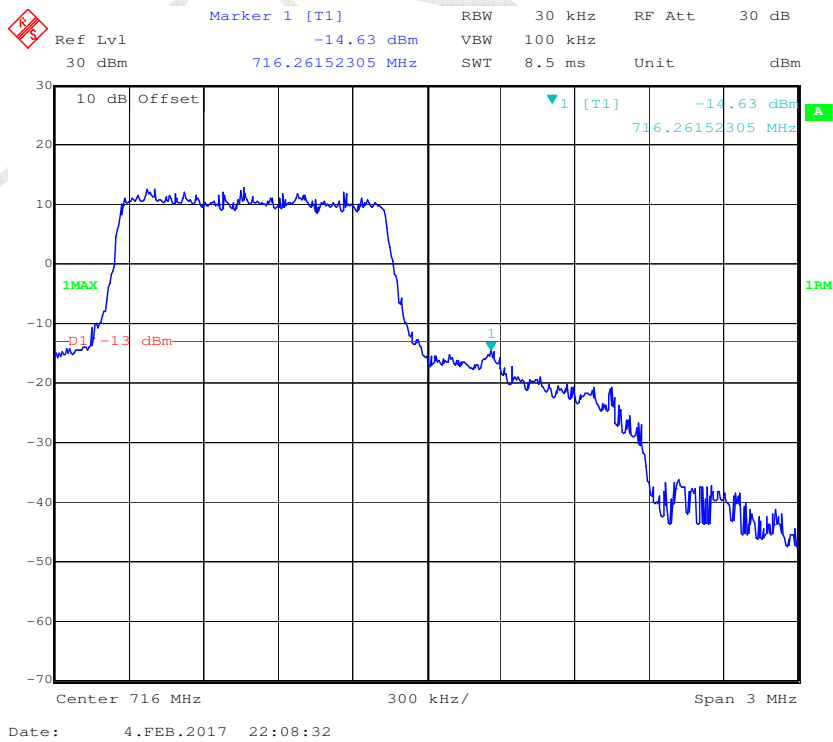


LTE Band 12

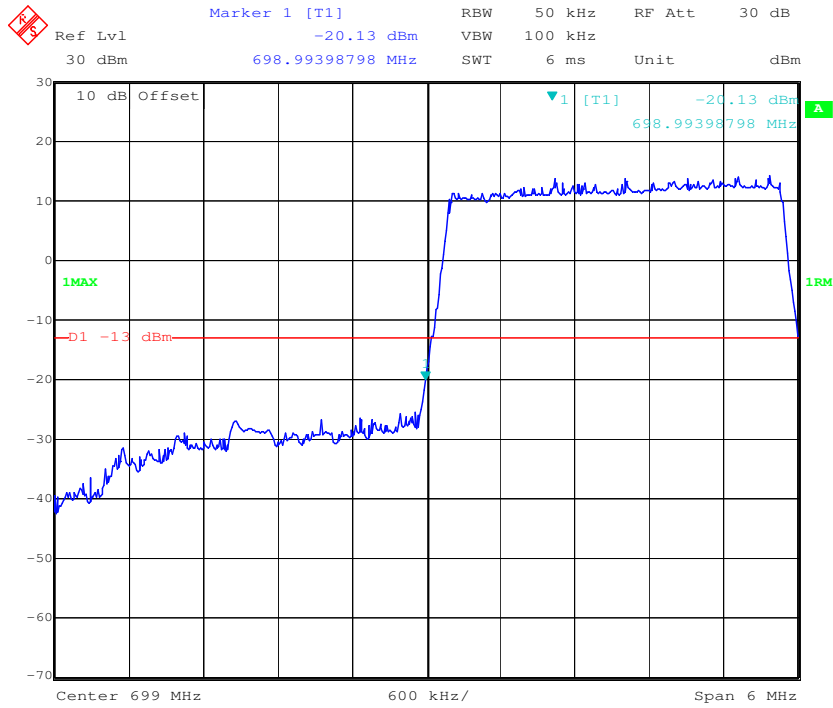
QPSK\_1.4MHz\_FULL RB\_Left



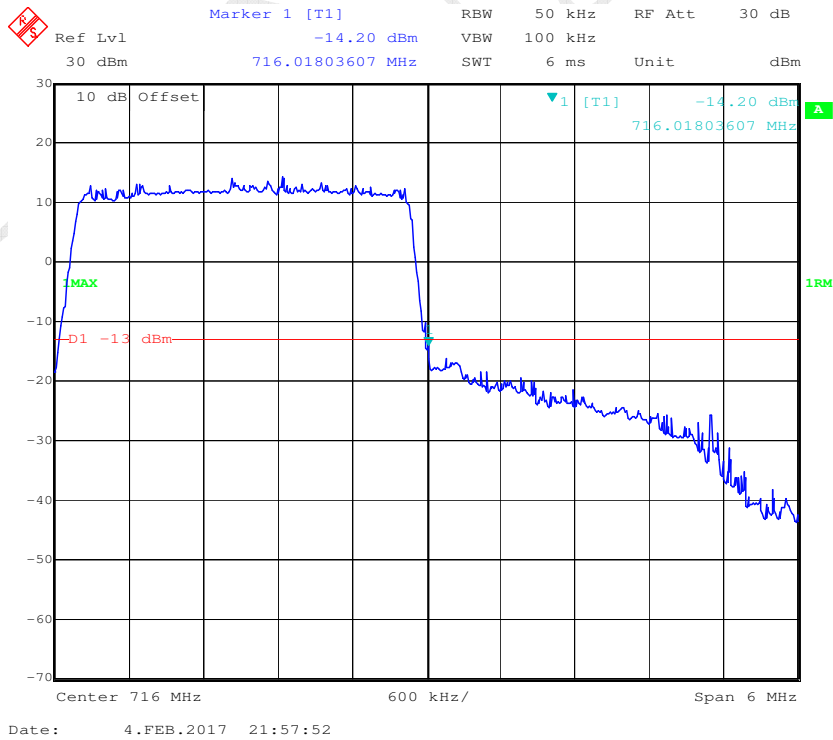
QPSK\_1.4MHz\_FULL RB\_Right



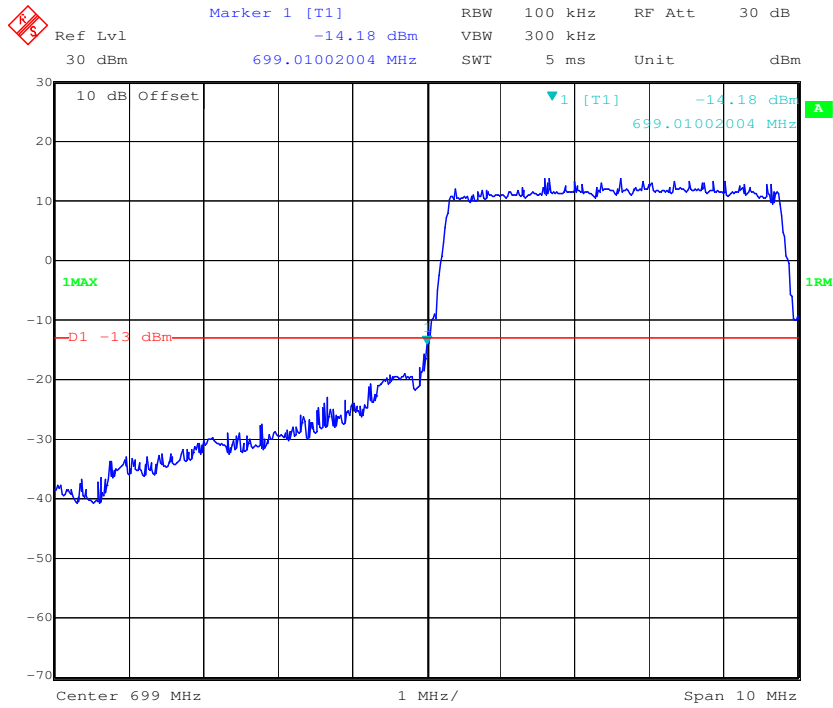
QPSK\_3MHz\_FULL RB\_Left



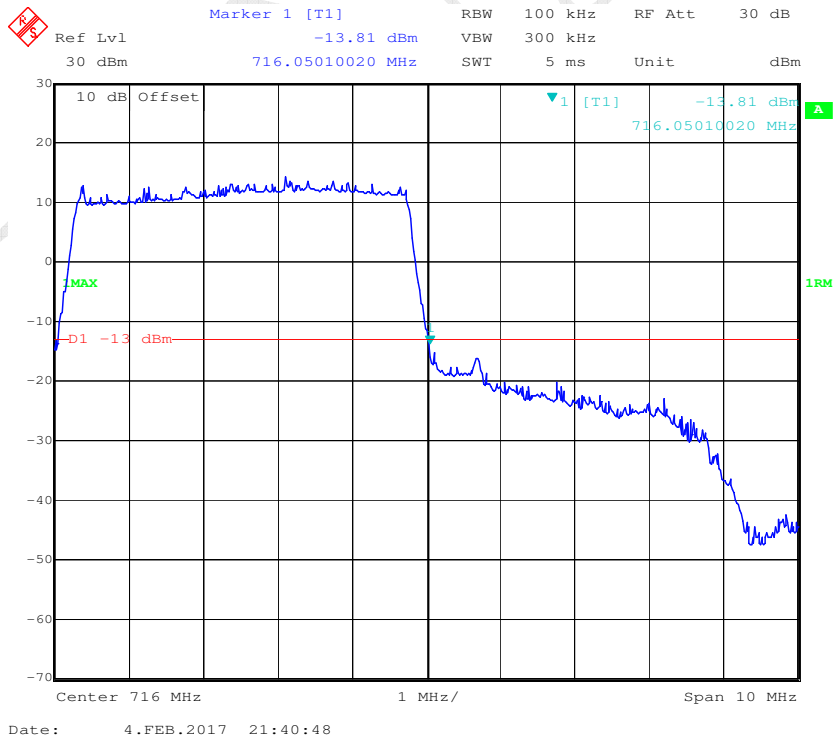
QPSK\_3MHz\_FULL RB\_Right



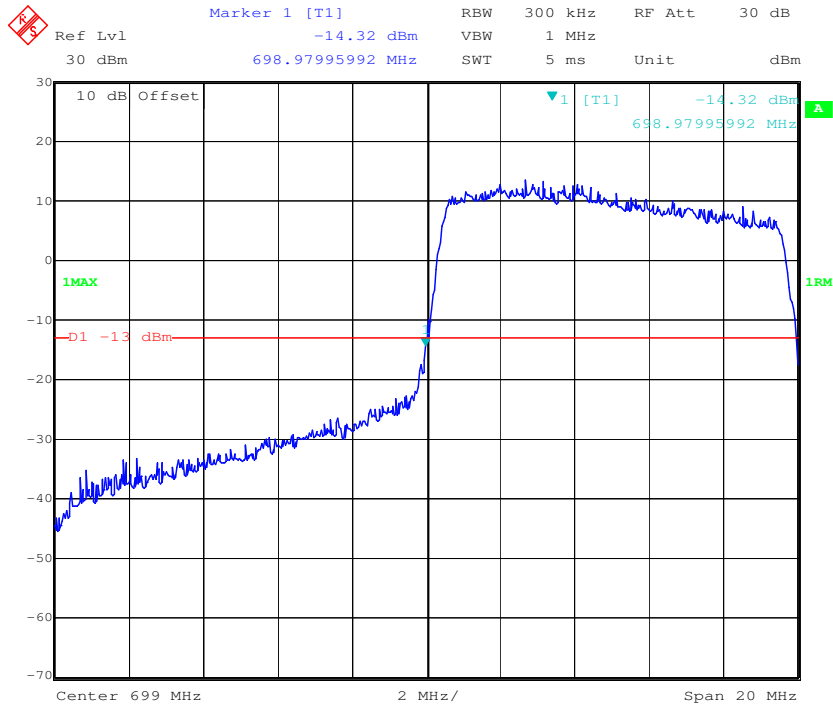
QPSK\_5MHz\_FULL RB\_Left



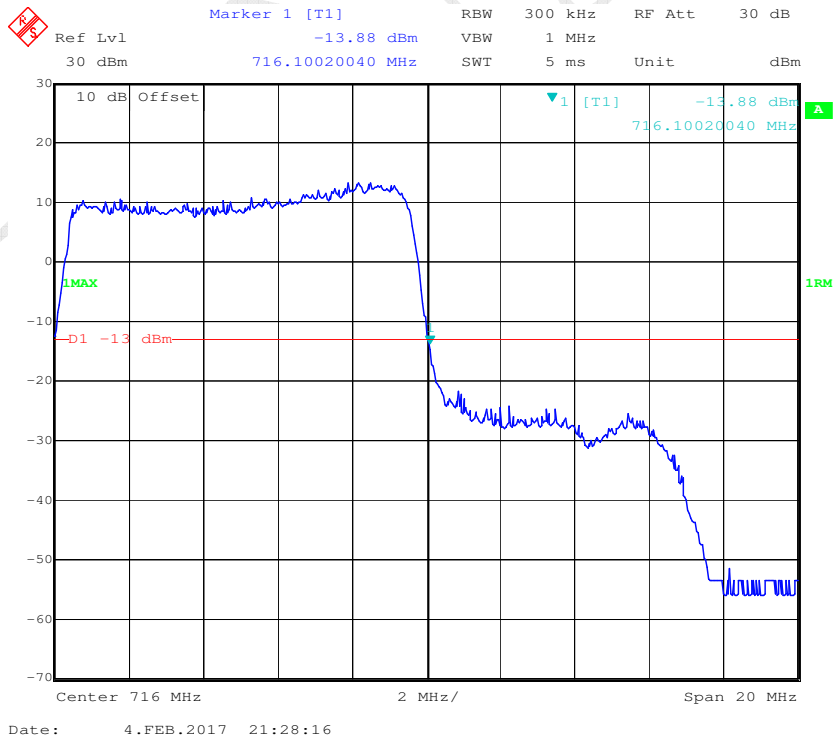
QPSK\_5MHz\_FULL RB\_Right



QPSK\_10MHz\_FULL RB\_Left

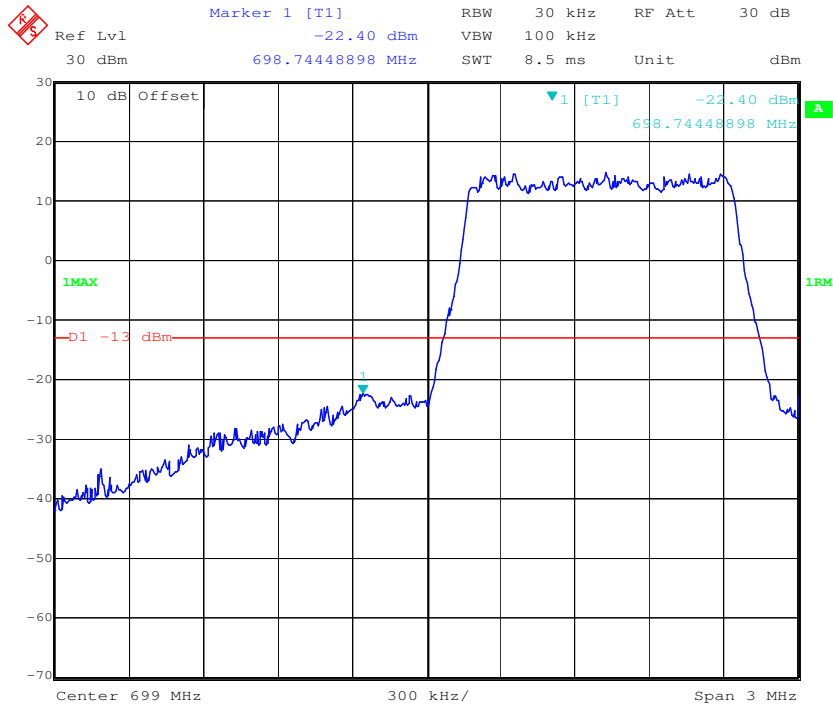


QPSK\_10MHz\_FULL RB\_Right

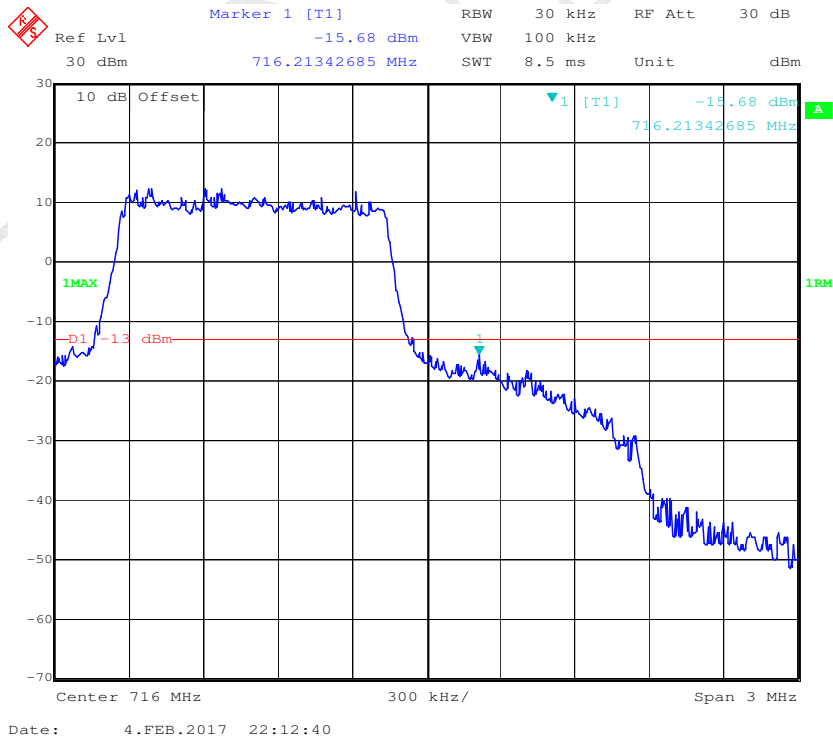




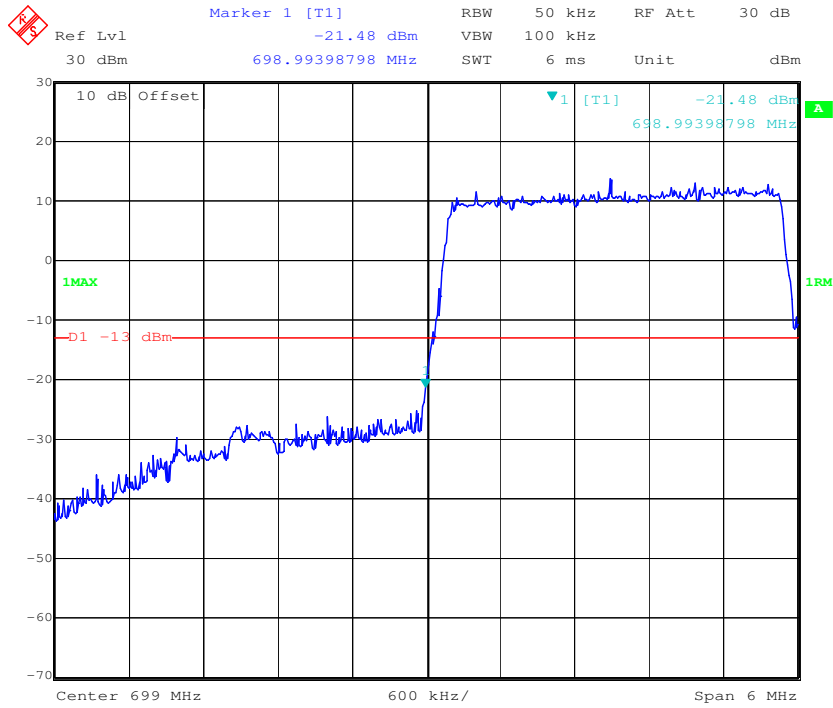
16QAM\_1.4MHz\_FULL RB\_Left



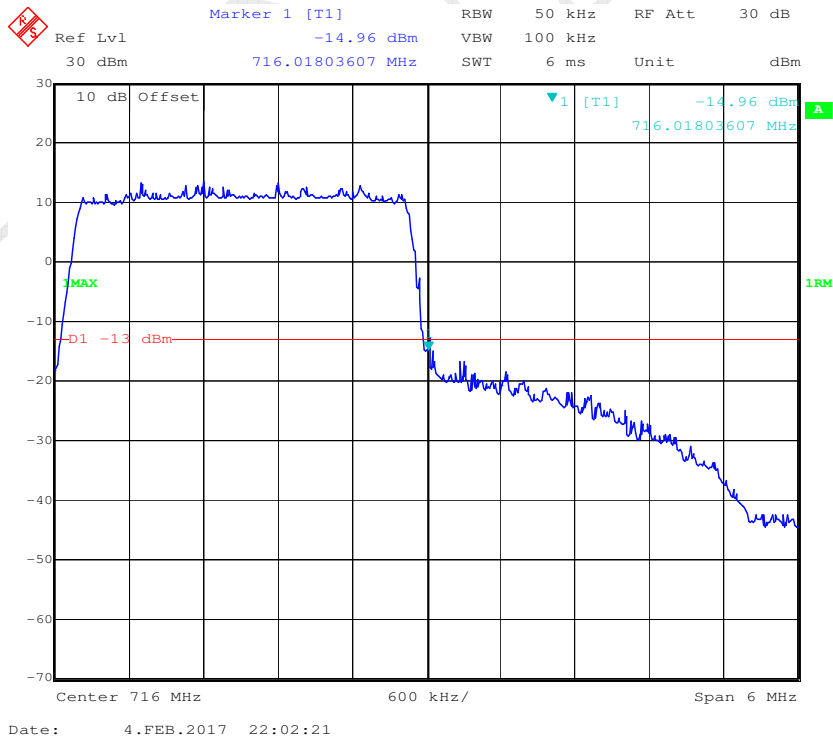
16QAM\_1.4MHz\_FULL RB\_Right



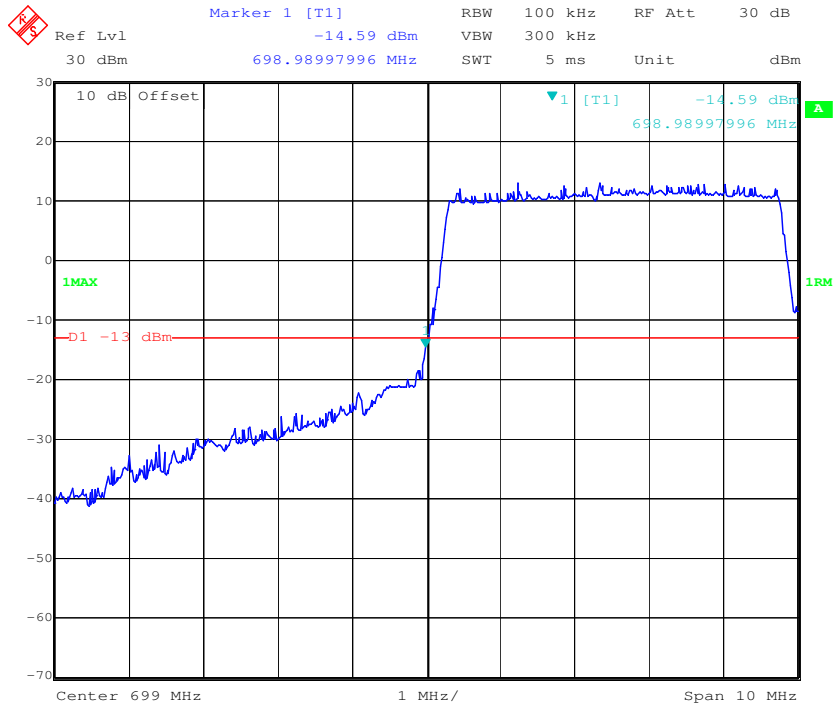
16QAM\_3MHz\_FULL RB\_Left



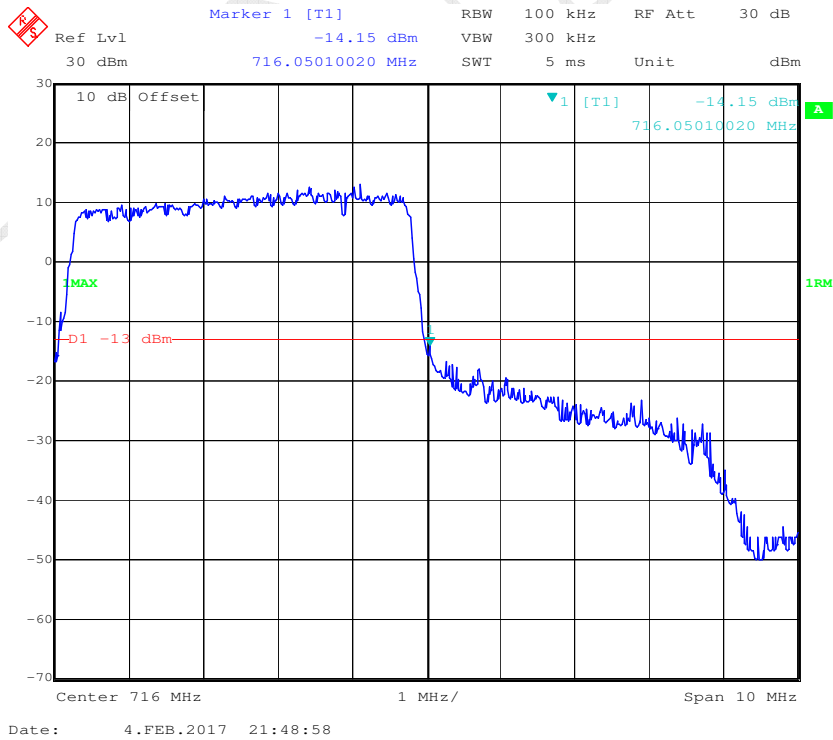
16QAM\_3MHz\_FULL RB\_Right



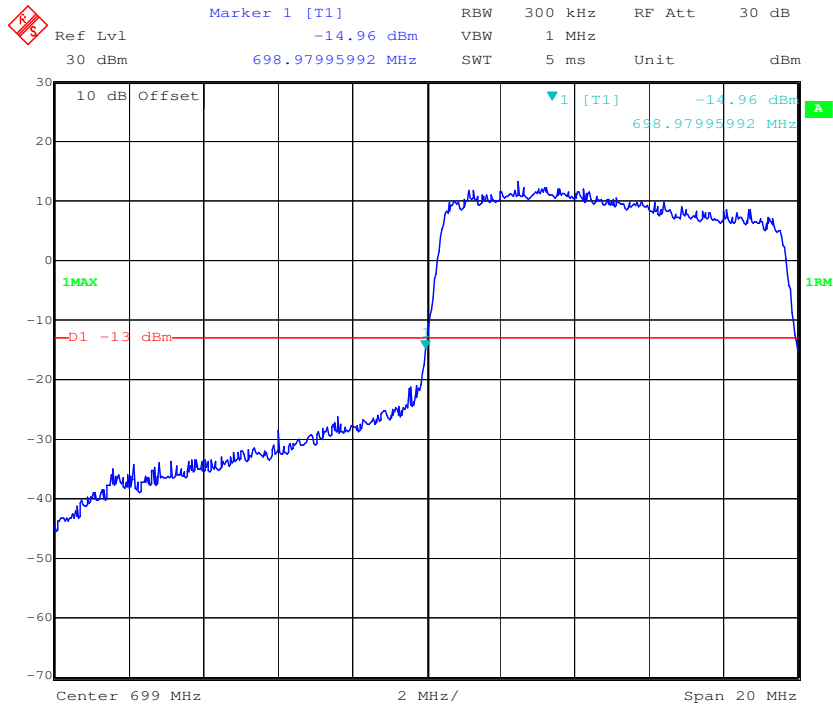
16QAM\_5MHz\_FULL RB\_Left



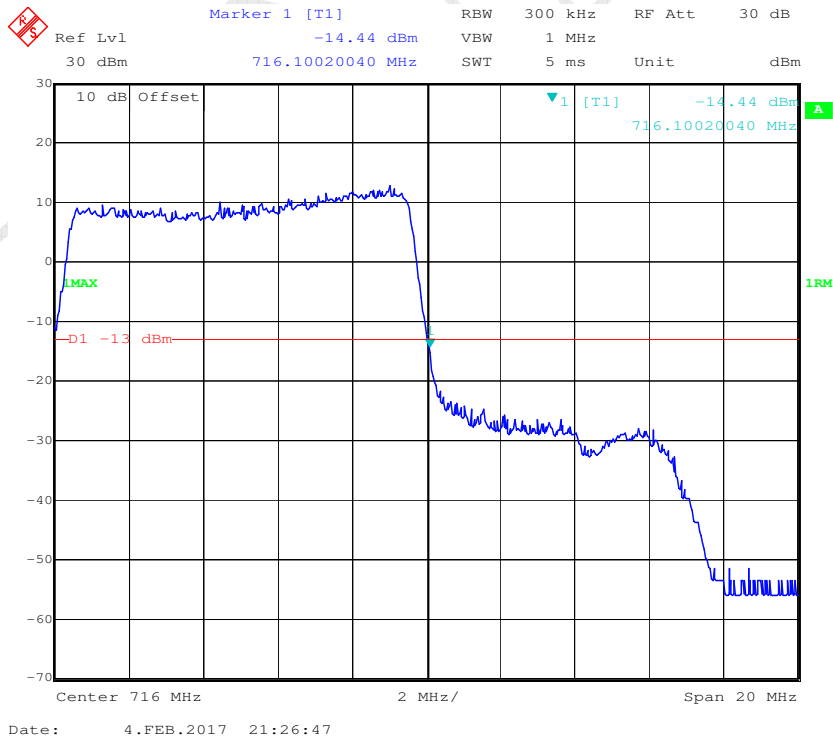
16QAM\_5MHz\_FULL RB\_Right



16QAM\_10MHz\_FULL RB\_Left

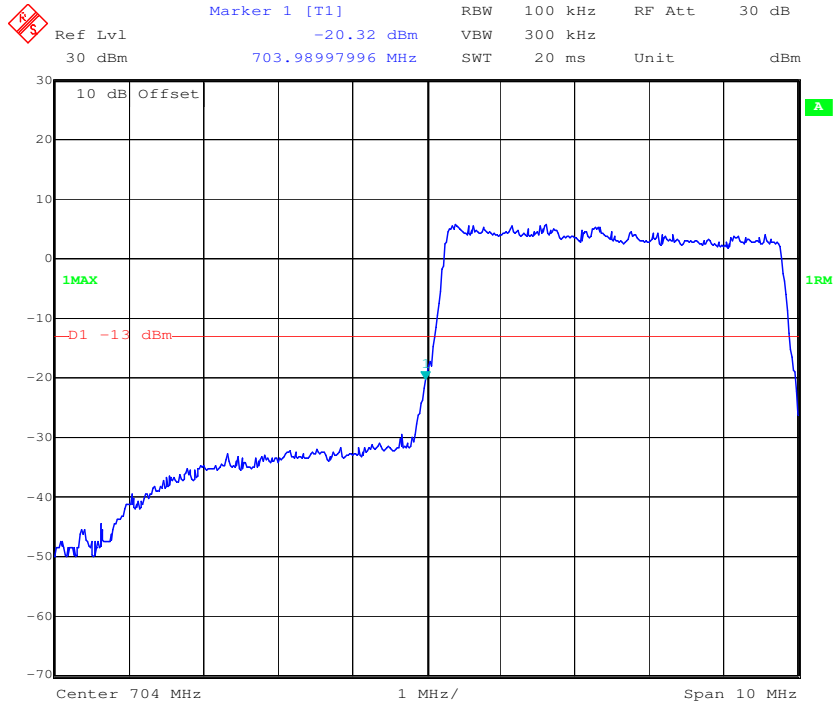


16QAM\_10MHz\_FULL RB\_Right



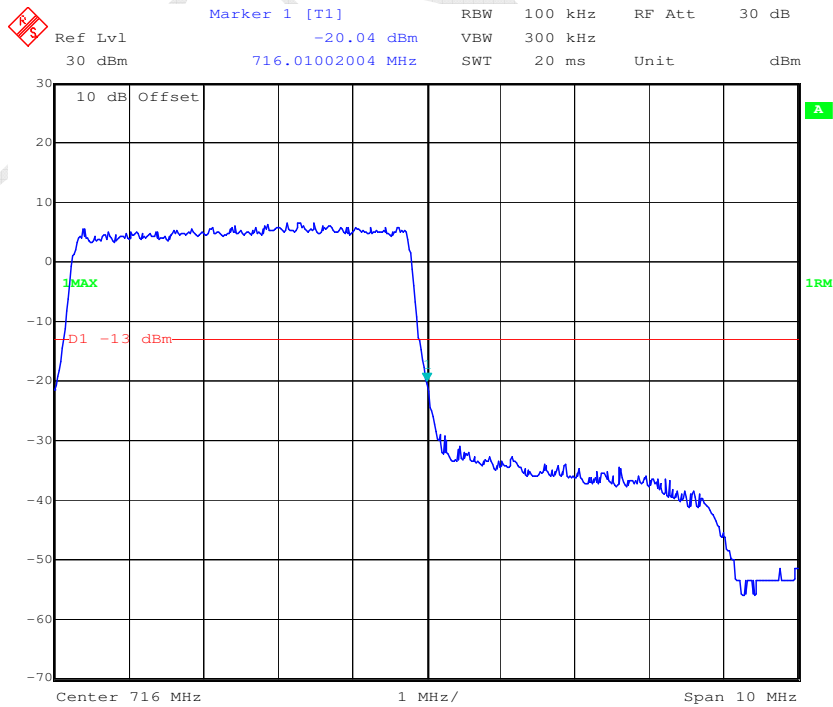
LTE Band 17:

QPSK\_5MHz\_FULL RB\_Left



Date: 4.JAN.2017 21:59:15

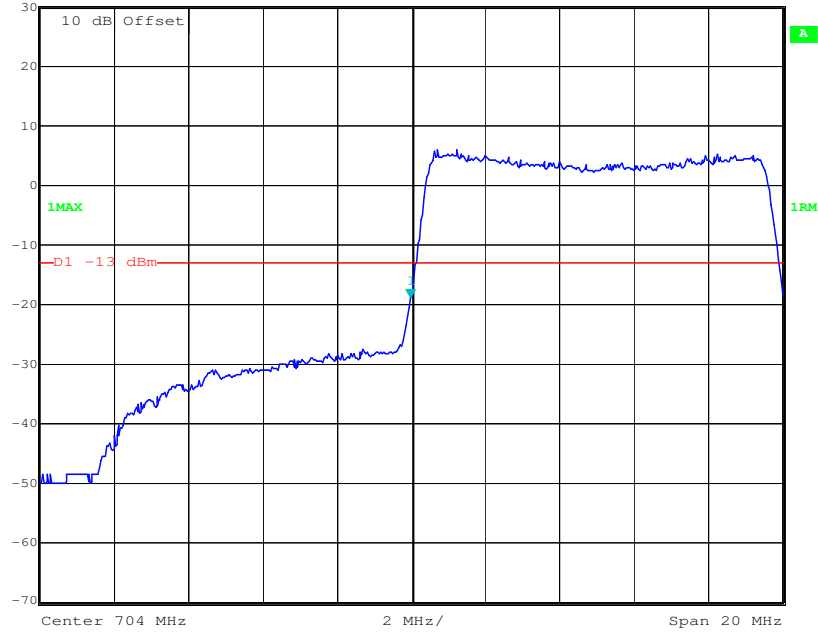
QPSK\_5MHz\_FULL RB\_Right



Date: 4.JAN.2017 22:01:30

QPSK\_10MHz\_FULL RB\_Left

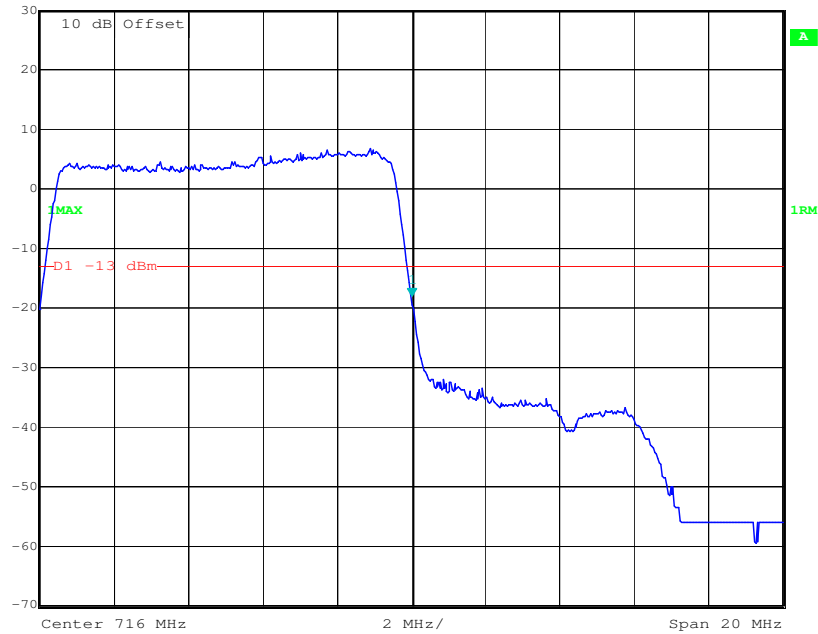
Marker 1 [T1] RBW 300 kHz RF Att 30 dB  
Ref Lvl -19.00 dBm VBW 1 MHz  
30 dBm 703.97995992 MHz SWT 20 ms Unit dBm



Date: 4.JAN.2017 22:08:30

QPSK\_10MHz\_FULL RB\_Right

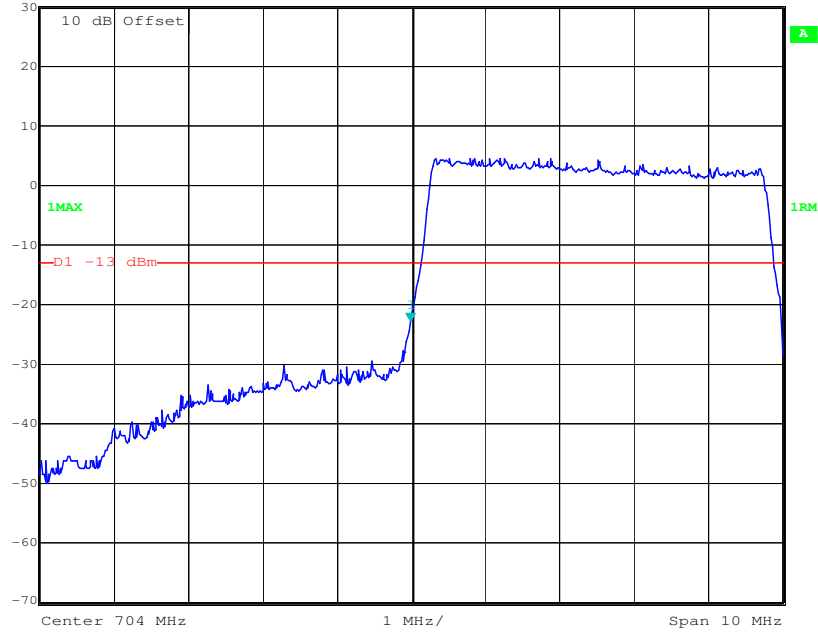
Marker 1 [T1] RBW 300 kHz RF Att 30 dB  
Ref Lvl -18.22 dBm VBW 1 MHz  
30 dBm 716.02004008 MHz SWT 20 ms Unit dBm



Date: 4.JAN.2017 22:07:59

16QAM\_5MHz\_FULL RB\_Left

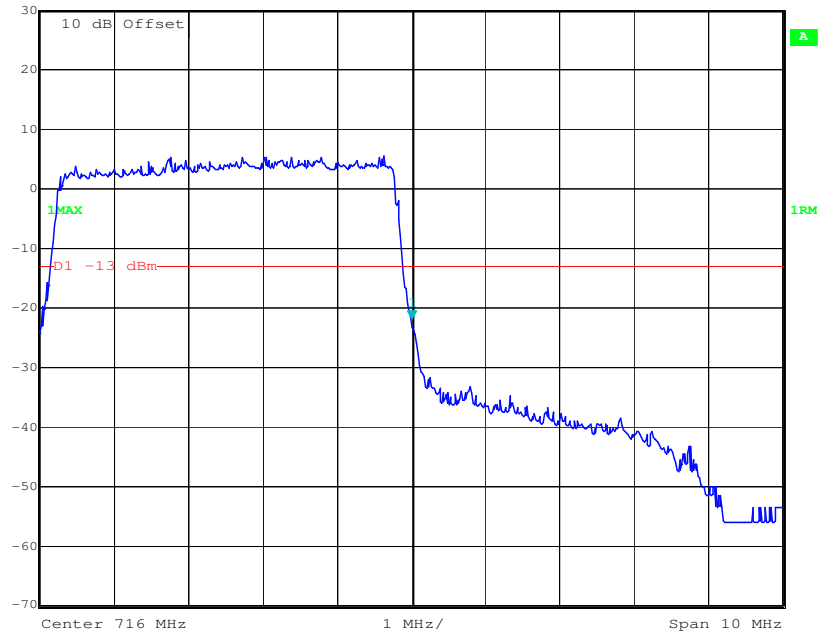
Marker 1 [T1] RBW 100 kHz RF Att 30 dB  
Ref Lvl -22.89 dBm VBW 300 kHz  
30 dBm 703.98997996 MHz SWT 20 ms Unit dBm



Date: 4.JAN.2017 22:02:46


16QAM\_5MHz\_FULL RB\_Right

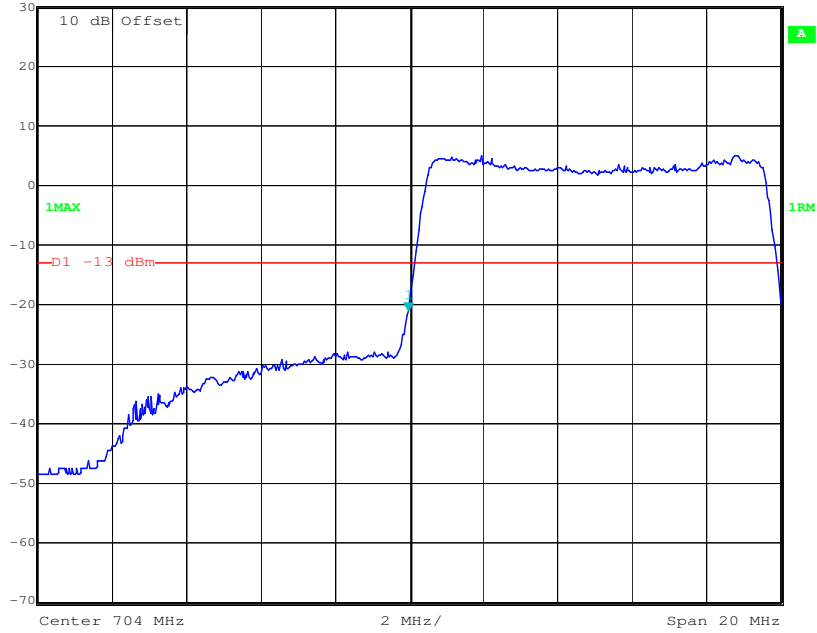
Marker 1 [T1] RBW 100 kHz RF Att 30 dB  
Ref Lvl -21.93 dBm VBW 300 kHz  
30 dBm 716.01002004 MHz SWT 20 ms Unit dBm



Date: 4.JAN.2017 22:02:03


16QAM\_10MHz\_FULL RB\_Left

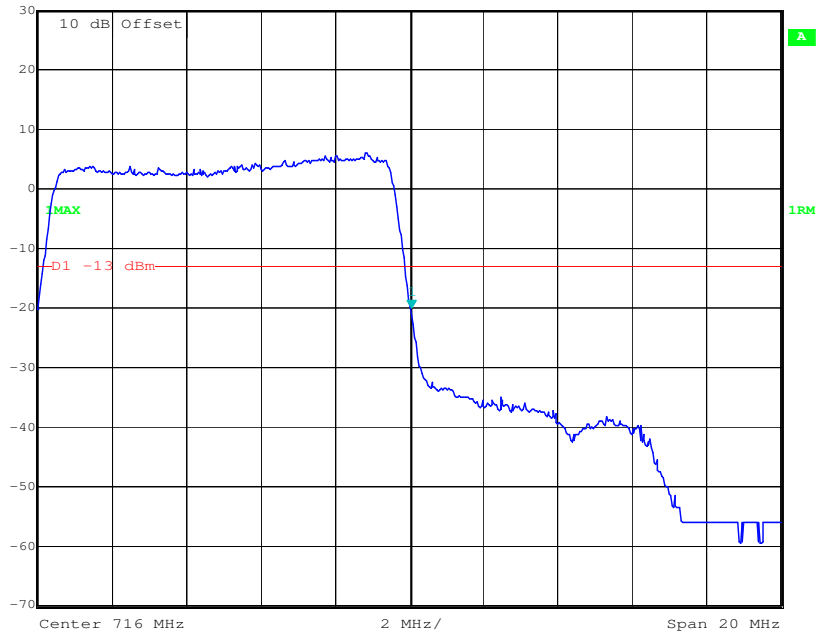
 Ref Lvl 30 dBm    Marker 1 [T1] -21.22 dBm    RBW 300 kHz    RF Att 30 dB  
30 dBm    703.97995992 MHz    VBW 1 MHz    Unit dBm  
SWT 20 ms



Date: 4.JAN.2017 22:06:47

16QAM\_10MHz\_FULL RB\_Right

 Ref Lvl 30 dBm    Marker 1 [T1] -20.22 dBm    RBW 300 kHz    RF Att 30 dB  
30 dBm    716.06012024 MHz    VBW 1 MHz    Unit dBm  
SWT 20 ms



Date: 4.JAN.2017 22:07:23



## **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

<b>Frequency Range (MHz)</b>	<b>Base, fixed (ppm)</b>	<b>Mobile &gt; 3 watts (ppm)</b>	<b>Mobile ≤ 3 watts (ppm)</b>
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.

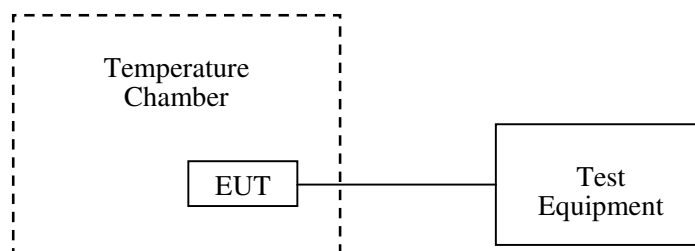
According to §27.54, the frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

### **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
BACL	High Temperature Test Chamber	BTH-150	30024	2016-12-02	2017-12-01
FLUKE	Multimeter	1587	27870099	2016-12-30	2017-12-29
R&S	Universal Radio Communication Tester	CMU200	11-9435686-111	2016-07-28	2017-07-27
R&S	Wideband Radio Communication Tester	CMW500	106891	2016-11-23	2017-11-23
N/A	RF Cable	N/A	N/A	Each Time	/

\* **Statement of Traceability:** BACL (Chengdu) attested that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

### Test Data

#### Environmental Conditions

<b>Temperature:</b>	26.1 °C
<b>Relative Humidity:</b>	50 %
<b>ATM Pressure:</b>	101.1 kPa

*The testing was performed by Tom Tang on 2017-01-05.*

**Cellular Band (Part 22H)**

<b>GMSK, Middle Channel, <math>f_c = 836.6</math> MHz</b>				
<b>Temperature</b>	<b>Voltage</b>	<b>Frequency Error</b>	<b>Frequency Error</b>	<b>Limit</b>
<b>°C</b>	<b>V<sub>DC</sub></b>	<b>Hz</b>	<b>ppm</b>	<b>ppm</b>
-30	3.8	13	0.016	2.5
-20	3.8	15	0.018	2.5
-10	3.8	11	0.013	2.5
0	3.8	15	0.018	2.5
10	3.8	10	0.012	2.5
20	3.8	20	0.024	2.5
30	3.8	16	0.019	2.5
40	3.8	13	0.016	2.5
50	3.8	21	0.025	2.5
25	3.6	20	0.024	2.5
25	4.35	15	0.018	2.5

**Cellular Band (Part 22H)**

<b>EDGE, Middle Channel, <math>f_c = 836.6</math> MHz</b>				
<b>Temperature</b>	<b>Voltage</b>	<b>Frequency Error</b>	<b>Frequency Error</b>	<b>Limit</b>
<b>°C</b>	<b>V<sub>DC</sub></b>	<b>Hz</b>	<b>ppm</b>	<b>ppm</b>
-30	3.8	18	0.010	2.5
-20	3.8	22	0.012	2.5
-10	3.8	21	0.011	2.5
0	3.8	25	0.013	2.5
10	3.8	22	0.012	2.5
20	3.8	18	0.010	2.5
30	3.8	15	0.008	2.5
40	3.8	19	0.010	2.5
50	3.8	12	0.006	2.5
25	3.6	16	0.009	2.5
25	4.35	13	0.007	2.5

**PCS Band (Part 24E)**

GMSK, Middle Channel, $f_c = 1880.0$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Result
°C	$V_{DC}$	Hz	ppm	
-30	3.8	18	0.010	Pass
-20	3.8	22	0.012	Pass
-10	3.8	21	0.011	Pass
0	3.8	25	0.013	Pass
10	3.8	22	0.012	Pass
20	3.8	18	0.010	Pass
30	3.8	15	0.008	Pass
40	3.8	19	0.010	Pass
50	3.8	12	0.006	Pass
25	3.6	16	0.009	Pass
25	4.35	13	0.007	Pass

**PCS Band (Part 24E)**

EDGE, Middle Channel, $f_c = 1880.0$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Result
°C	$V_{DC}$	Hz	ppm	
-30	3.8	5	-0.001	Pass
-20	3.8	6	0.001	Pass
-10	3.8	5	-0.003	Pass
0	3.8	7	-0.001	Pass
10	3.8	8	-0.003	Pass
20	3.8	7	-0.001	Pass
30	3.8	6	-0.001	Pass
40	3.8	4	0.001	Pass
50	3.8	2	-0.002	Pass
20	3.5	-2	-0.003	Pass
20	4.2	5	-0.001	Pass

**WCDMA Band V :**

Middle Channel, $f_c = 836.6$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Limit
°C	V <sub>DC</sub>	Hz	ppm	ppm
-30	3.8	-8	-0.010	2.5
-20	3.8	-2	-0.002	2.5
-10	3.8	1	0.001	2.5
0	3.8	3	0.004	2.5
10	3.8	-6	-0.007	2.5
20	3.8	5	0.006	2.5
30	3.8	-4	-0.005	2.5
40	3.8	2	0.002	2.5
50	3.8	0	0.000	2.5
25	3.6	2	0.002	2.5
25	4.35	-1	-0.001	2.5

**WCDMA Band IV :**

Middle Channel, $f_c = 836.6$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Limit
°C	V <sub>DC</sub>	Hz	ppm	ppm
-30	3.8	-6	-0.003	2.5
-20	3.8	-4	-0.002	2.5
-10	3.8	-1	-0.001	2.5
0	3.8	3	0.002	2.5
10	3.8	-4	-0.002	2.5
20	3.8	-3	-0.002	2.5
30	3.8	1	0.001	2.5
40	3.8	-5	-0.003	2.5
50	3.8	-1	-0.001	2.5
25	3.6	1	0.001	2.5
25	4.35	0	0.000	2.5

**WCDMA Band II :**

Middle Channel, $f_c = 1880.0$ MHz				
Temperature	Voltage	Frequency Error	Frequency Error	Result
°C	V <sub>DC</sub>	Hz	ppm	
-30	3.8	-3	-0.002	Pass
-20	3.8	6	0.003	Pass
-10	3.8	4	0.002	Pass
0	3.8	-1	-0.001	Pass
10	3.8	5	0.003	Pass
20	3.8	0	0.000	Pass
30	3.8	2	0.001	Pass
40	3.8	3	0.002	Pass
50	3.8	4	0.002	Pass
25	3.6	0	0.000	Pass
25	4.35	3	0.002	Pass

**LTE Band II:**

<b>QPSK, Channel Bandwidth:10MHz Middle Channel, <math>f_c = 1880</math> MHz</b>				
<b>Temperature</b>	<b>Voltage</b>	<b>Frequency Error</b>	<b>Frequency Error</b>	<b>Result</b>
<b>°C</b>	<b>V<sub>DC</sub></b>	<b>Hz</b>	<b>ppm</b>	
-30	3.8	16.27	0.0087	Pass
-20	3.8	15.64	0.0083	Pass
-10	3.8	15.11	0.0080	Pass
0	3.8	18.12	0.0096	Pass
10	3.8	16.87	0.0090	Pass
20	3.8	17.50	0.0093	Pass
30	3.8	15.19	0.0081	Pass
40	3.8	17.82	0.0095	Pass
50	3.8	17.71	0.0094	Pass
25	3.5	17.65	0.0094	Pass
25	4.2	16.32	0.0087	Pass

<b>16QAM, Channel Bandwidth:10MHz Middle Channel, <math>f_c = 1880</math> MHz</b>				
<b>Temperature</b>	<b>Voltage</b>	<b>Frequency Error</b>	<b>Frequency Error</b>	<b>Result</b>
<b>°C</b>	<b>V<sub>DC</sub></b>	<b>Hz</b>	<b>ppm</b>	
-30	3.8	17.70	0.0094	Pass
-20	3.8	17.98	0.0096	Pass
-10	3.8	17.53	0.0093	Pass
0	3.8	16.75	0.0089	Pass
10	3.8	17.15	0.0091	Pass
20	3.8	16.53	0.0088	Pass
30	3.8	18.19	0.0097	Pass
40	3.8	17.66	0.0094	Pass
50	3.8	16.66	0.0089	Pass
25	3.5	18.29	0.0097	Pass
25	4.2	16.98	0.0090	Pass

**LTE Band IV:**

<b>QPSK, Channel Bandwidth:10MHz Middle Channel, <math>f_c = 1732.5</math> MHz</b>				
<b>Temperature</b>	<b>Voltage</b>	<b>Frequency Error</b>	<b>Frequency Error</b>	<b>Limit</b>
<b>°C</b>	<b>V<sub>DC</sub></b>	<b>Hz</b>	<b>ppm</b>	<b>ppm</b>
-30	3.8	-18.09	-0.0104	2.5
-20	3.8	-16.79	-0.0097	2.5
-10	3.8	-17.32	-0.0100	2.5
0	3.8	-17.98	-0.0104	2.5
10	3.8	-18.16	-0.0105	2.5
20	3.8	-17.62	-0.0102	2.5
30	3.8	-18.30	-0.0106	2.5
40	3.8	-18.39	-0.0106	2.5
50	3.8	-17.25	-0.0100	2.5
25	3.5	-16.77	-0.0097	2.5
25	4.2	-17.60	-0.0102	2.5

<b>16QAM, Channel Bandwidth:10MHz Middle Channel, <math>f_c = 1732.5</math> MHz</b>				
<b>Temperature</b>	<b>Voltage</b>	<b>Frequency Error</b>	<b>Frequency Error</b>	<b>Limit</b>
<b>°C</b>	<b>V<sub>DC</sub></b>	<b>Hz</b>	<b>ppm</b>	<b>ppm</b>
-30	3.8	15.87	0.0092	2.5
-20	3.8	16.71	0.0096	2.5
-10	3.8	16.45	0.0095	2.5
0	3.8	16.05	0.0093	2.5
10	3.8	15.86	0.0092	2.5
20	3.8	15.89	0.0092	2.5
30	3.8	16.97	0.0098	2.5
40	3.8	16.80	0.0097	2.5
50	3.8	15.37	0.0089	2.5
25	3.5	17.54	0.0101	2.5
25	4.2	16.55	0.0096	2.5



**LTE Band V:**

<b>QPSK, Channel Bandwidth:10MHz Middle Channel, <math>f_c = 836.5</math> MHz</b>				
<b>Temperature</b>	<b>Voltage</b>	<b>Frequency Error</b>	<b>Frequency Error</b>	<b>Result</b>
<b>°C</b>	<b>V<sub>DC</sub></b>	<b>Hz</b>	<b>ppm</b>	
-30	3.8	20.66	0.0247	Pass
-20	3.8	20.53	0.0245	Pass
-10	3.8	20.29	0.0243	Pass
0	3.8	19.91	0.0238	Pass
10	3.8	20.50	0.0245	Pass
20	3.8	20.69	0.0247	Pass
30	3.8	19.89	0.0238	Pass
40	3.8	20.18	0.0241	Pass
50	3.8	19.45	0.0233	Pass
25	3.5	19.11	0.0228	Pass
25	4.2	20.33	0.0243	Pass

<b>16QAM, Channel Bandwidth:10MHz Middle Channel, <math>f_c = 836.5</math> MHz</b>				
<b>Temperature</b>	<b>Voltage</b>	<b>Frequency Error</b>	<b>Frequency Error</b>	<b>Result</b>
<b>°C</b>	<b>V<sub>DC</sub></b>	<b>Hz</b>	<b>ppm</b>	
-30	3.8	17.29	0.0207	Pass
-20	3.8	18.29	0.0219	Pass
-10	3.8	17.96	0.0215	Pass
0	3.8	18.86	0.0225	Pass
10	3.8	17.34	0.0207	Pass
20	3.8	17.63	0.0211	Pass
30	3.8	17.64	0.0211	Pass
40	3.8	17.99	0.0215	Pass
50	3.8	18.15	0.0217	Pass
25	3.5	17.28	0.0207	Pass
25	4.2	17.68	0.0211	Pass

**LTE Band VII:**

<b>QPSK, Channel Bandwidth:10MHz Middle Channel, <math>f_c = 2535</math> MHz</b>				
<b>Temperature</b>	<b>Voltage</b>	<b>Frequency Error</b>	<b>Frequency Error</b>	<b>Result</b>
<b>°C</b>	<b>V<sub>DC</sub></b>	<b>Hz</b>	<b>ppm</b>	
-30	3.8	25.52	0.0101	Pass
-20	3.8	25.45	0.0100	Pass
-10	3.8	26.36	0.0104	Pass
0	3.8	25.49	0.0101	Pass
10	3.8	24.89	0.0098	Pass
20	3.8	26.76	0.0106	Pass
30	3.8	25.01	0.0099	Pass
40	3.8	26.17	0.0103	Pass
50	3.8	24.40	0.0096	Pass
25	3.5	25.92	0.0102	Pass
25	4.2	26.93	0.0106	Pass

<b>16QAM, Channel Bandwidth:10MHz Middle Channel, <math>f_c = 2535</math> MHz</b>				
<b>Temperature</b>	<b>Voltage</b>	<b>Frequency Error</b>	<b>Frequency Error</b>	<b>Result</b>
<b>°C</b>	<b>V<sub>DC</sub></b>	<b>Hz</b>	<b>ppm</b>	
-30	3.8	23.15	0.0091	Pass
-20	3.8	23.02	0.0091	Pass
-10	3.8	22.85	0.0090	Pass
0	3.8	22.79	0.0090	Pass
10	3.8	24.20	0.0095	Pass
20	3.8	24.87	0.0098	Pass
30	3.8	24.16	0.0095	Pass
40	3.8	23.80	0.0094	Pass
50	3.8	24.21	0.0096	Pass
25	3.5	22.98	0.0091	Pass
25	4.2	23.40	0.0092	Pass

**LTE Band 12:**

<b>QPSK, Channel Bandwidth:10MHz Middle Channel, <math>f_c = 707.5</math> MHz</b>				
<b>Temperature</b>	<b>Voltage</b>	<b>Frequency Error</b>	<b>Frequency Error</b>	<b>Result</b>
<b>°C</b>	<b>V<sub>DC</sub></b>	<b>Hz</b>	<b>ppm</b>	
-30	3.8	3.45	0.0014	Pass
-20	3.8	3.52	0.0014	Pass
-10	3.8	3.62	0.0014	Pass
0	3.8	3.65	0.0014	Pass
10	3.8	3.59	0.0014	Pass
20	3.8	3.39	0.0013	Pass
30	3.8	3.56	0.0014	Pass
40	3.8	3.44	0.0014	Pass
50	3.8	3.66	0.0014	Pass
25	3.5	3.48	0.0014	Pass
25	4.2	3.61	0.0014	Pass

<b>16QAM, Channel Bandwidth:10MHz Middle Channel, <math>f_c = 707.5</math> MHz</b>				
<b>Temperature</b>	<b>Voltage</b>	<b>Frequency Error</b>	<b>Frequency Error</b>	<b>Result</b>
<b>°C</b>	<b>V<sub>DC</sub></b>	<b>Hz</b>	<b>ppm</b>	
-30	3.8	3.04	0.0012	Pass
-20	3.8	3.18	0.0013	Pass
-10	3.8	3.14	0.0012	Pass
0	3.8	3.07	0.0012	Pass
10	3.8	3.16	0.0012	Pass
20	3.8	3.25	0.0013	Pass
30	3.8	3.30	0.0013	Pass
40	3.8	3.21	0.0013	Pass
50	3.8	3.14	0.0012	Pass
25	3.5	3.12	0.0012	Pass
25	4.2	3.26	0.0013	Pass

**LTE Band 17:**

<b>QPSK, Channel Bandwidth:10MHz Middle Channel, <math>f_c = 710</math> MHz</b>				
<b>Temperature</b>	<b>Voltage</b>	<b>Frequency Error</b>	<b>Frequency Error</b>	<b>Result</b>
<b>°C</b>	<b>V<sub>DC</sub></b>	<b>Hz</b>	<b>ppm</b>	
-30	3.8	-21.10	-0.0297	Pass
-20	3.8	-21.78	-0.0307	Pass
-10	3.8	-22.12	-0.0312	Pass
0	3.8	-21.92	-0.0309	Pass
10	3.8	-21.97	-0.0309	Pass
20	3.8	-21.40	-0.0301	Pass
30	3.8	-22.01	-0.0310	Pass
40	3.8	-21.70	-0.0306	Pass
50	3.8	-21.81	-0.0307	Pass
25	3.5	-21.91	-0.0309	Pass
25	4.2	-22.03	-0.0310	Pass

<b>16QAM, Channel Bandwidth:10MHz Middle Channel, <math>f_c = 710</math> MHz</b>				
<b>Temperature</b>	<b>Voltage</b>	<b>Frequency Error</b>	<b>Frequency Error</b>	<b>Result</b>
<b>°C</b>	<b>V<sub>DC</sub></b>	<b>Hz</b>	<b>ppm</b>	
-30	3.8	-19.98	-0.0281	Pass
-20	3.8	-19.59	-0.0276	Pass
-10	3.8	-18.70	-0.0263	Pass
0	3.8	-19.60	-0.0276	Pass
10	3.8	-19.80	-0.0279	Pass
20	3.8	-19.25	-0.0271	Pass
30	3.8	-19.19	-0.0270	Pass
40	3.8	-19.59	-0.0276	Pass
50	3.8	-19.28	-0.0272	Pass
25	3.5	-19.23	-0.0271	Pass
25	4.2	-19.98	-0.0281	Pass

Note: The fundamental emissions stay within the authorized bands of operation based on the frequency deviation measured is small, the extreme voltage was declared by applicant.

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