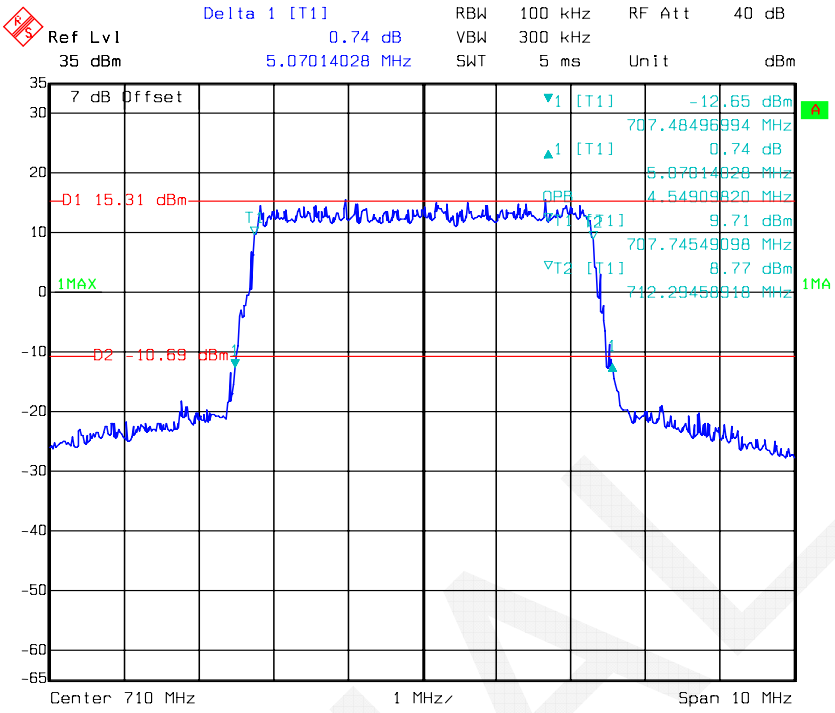
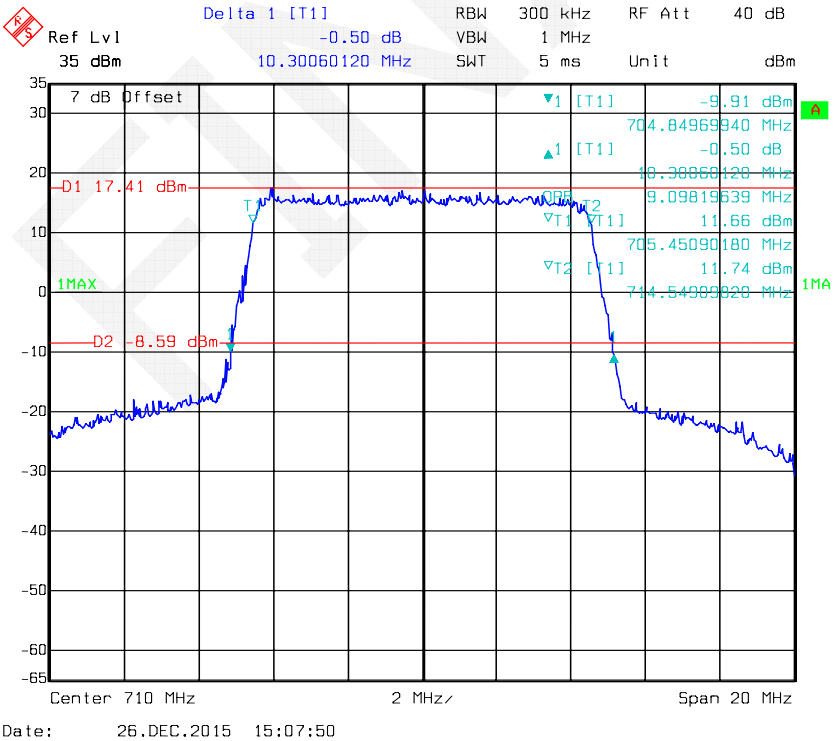
16-QAM, Band 17-5M



16-QAM, Band 17-10M



FCC §2.1051, §22.917(a) & §24.238(a) & §27.53- SPURIOUS EMISSIONS AT ANTENNA TERMINALS

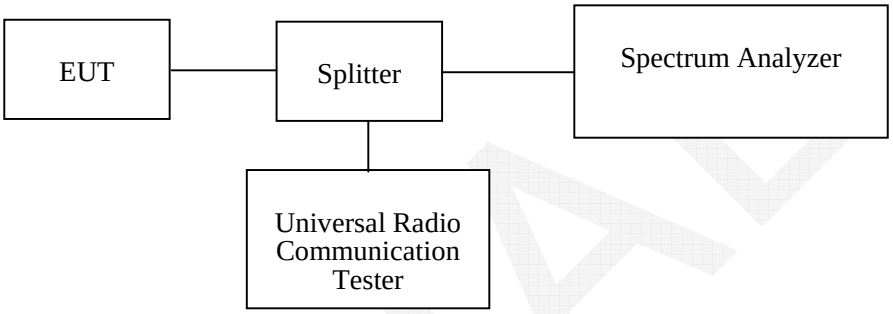
Applicable Standard

FCC §2.1051, §22.917(a) , §24.238(a) and §27.53.

The spectrum was to be investigated to the tenth harmonics of the highest fundamental frequency as specified in § 2.1051.

Test Procedure

The RF output of the transceiver was connected to a spectrum analyzer and simulator through appropriate attenuation. Sufficient scans were taken to show any out of band emissions up to 10th harmonic.



Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSP 38	100478	2015-11-23	2016-11-22
R&S	Universal Radio Communication Tester	CMU200	109038	2015-05-09	2016-05-09
R&S	Wideband Radio Communication Tester	CMW500	1201.002K50-146520-wh	2015-12-19	2016-12-19

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

Test Data

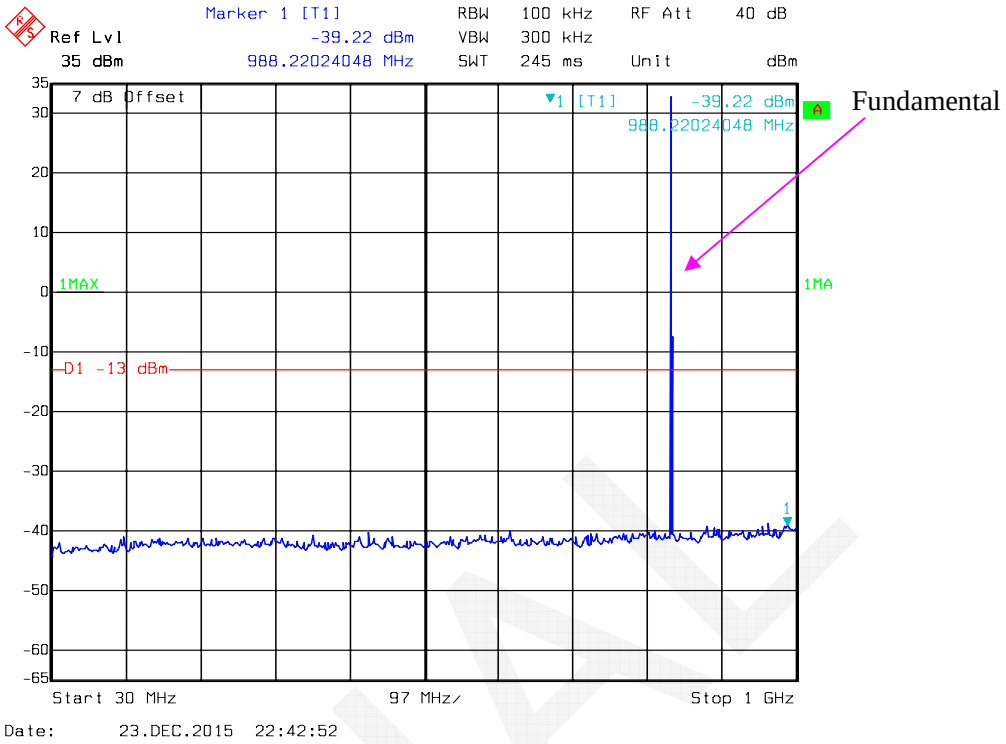
Environmental Conditions

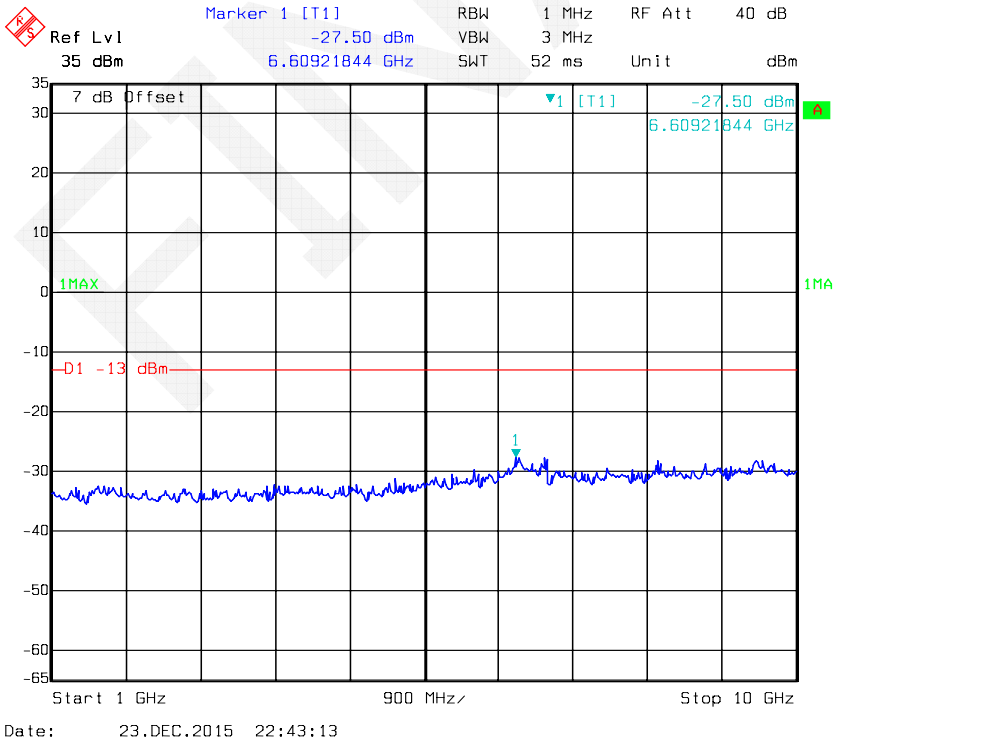
Temperature:	22.5~25.3℃
Relative Humidity:	46~52%
ATM Pressure:	101~101.7 kPa

The testing was performed by Dean Liu from 2015-12-23 to 2015-12-26

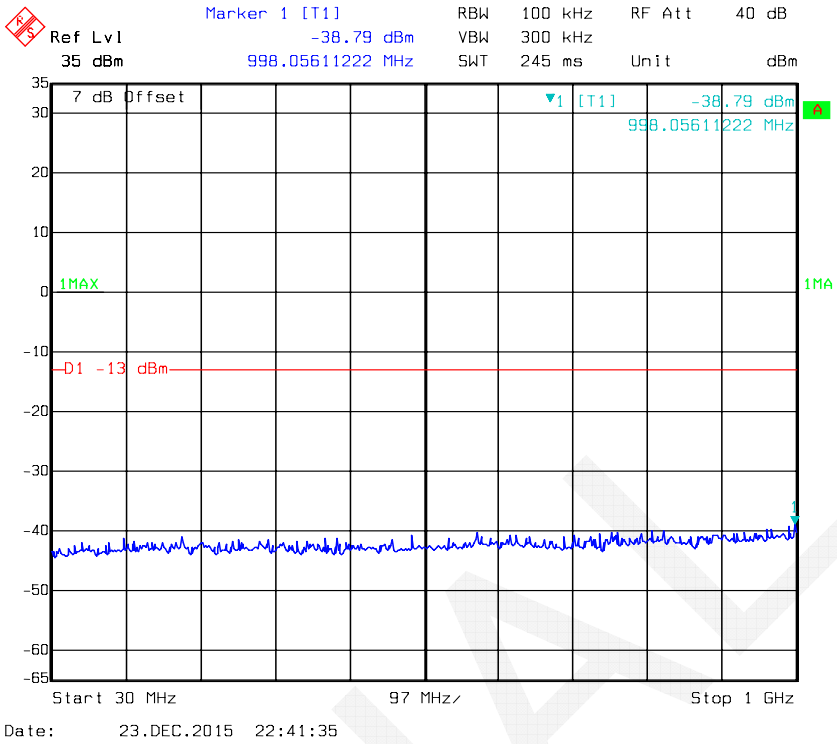
Please refer to the following plots.

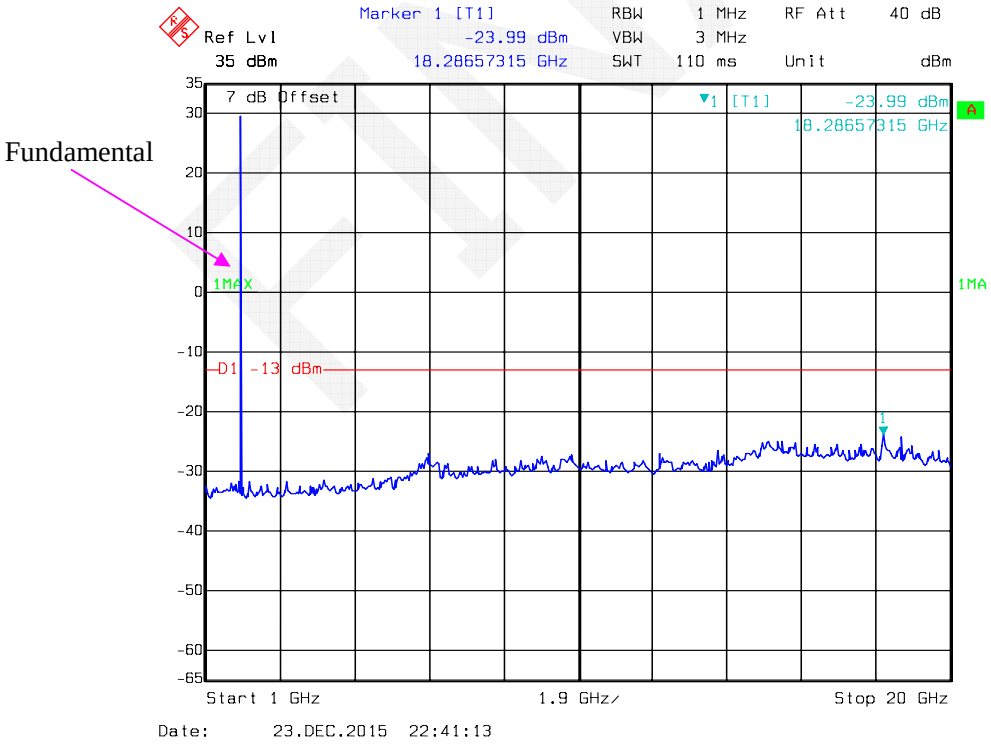
GSM850_Middle Channel



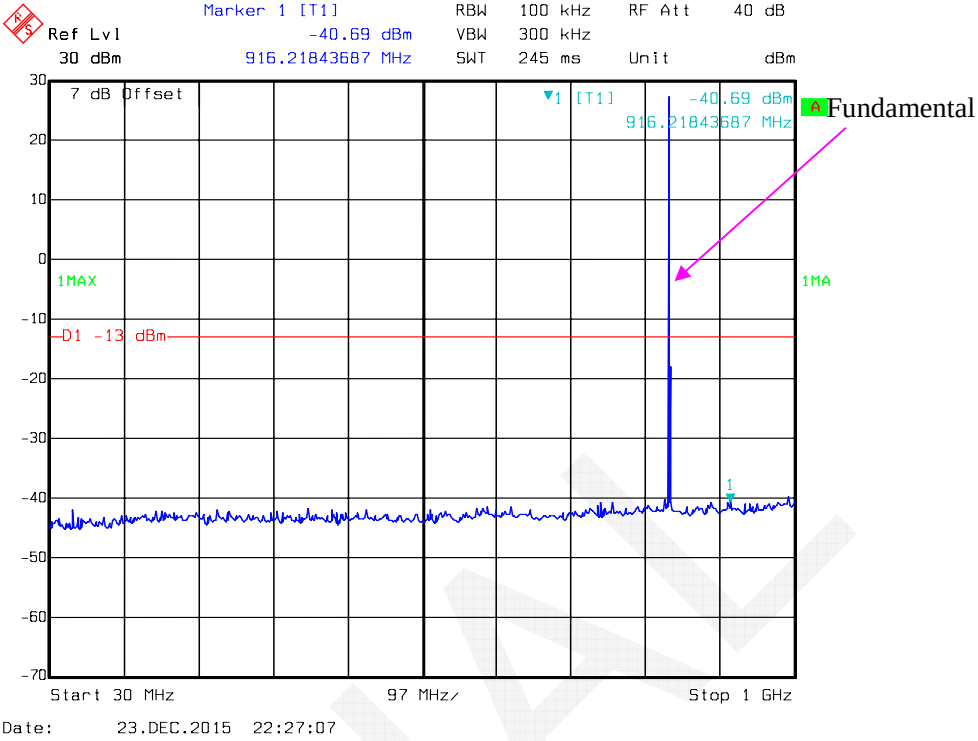


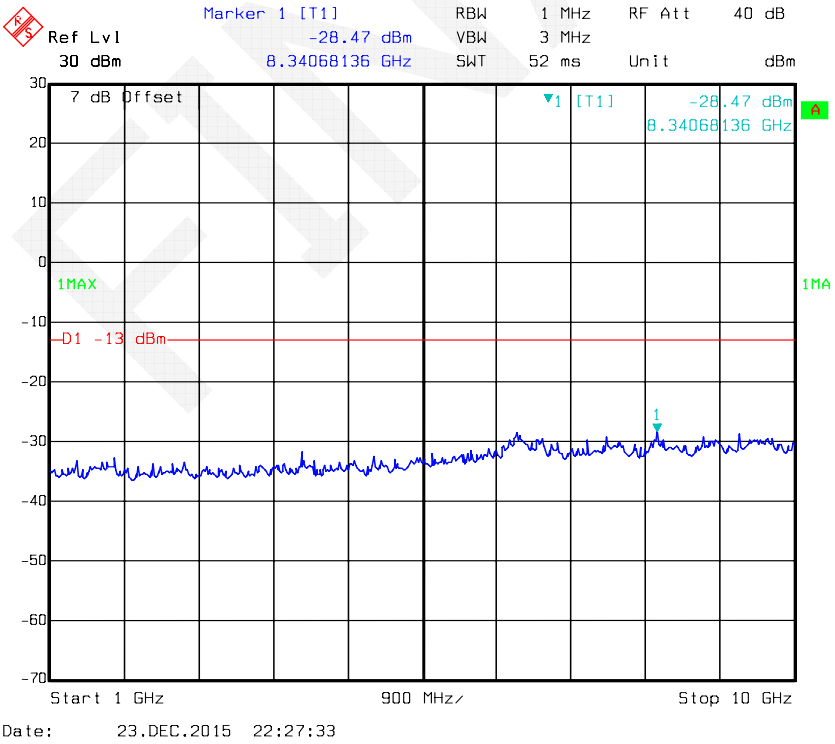
PCS 1900_ Middle Channel



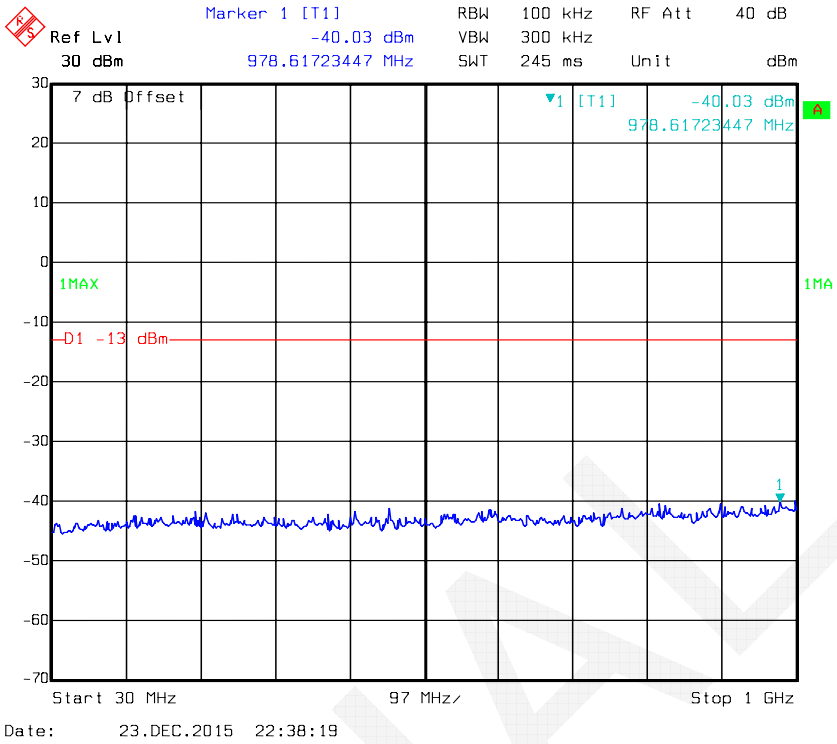


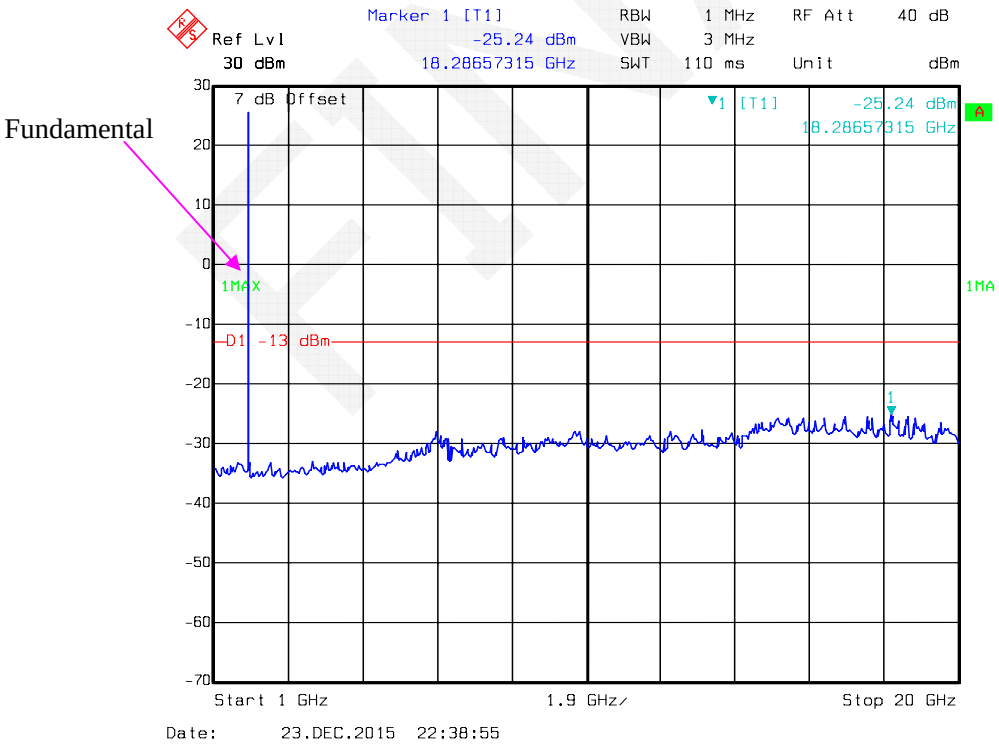
EDGE850_Middle Channel



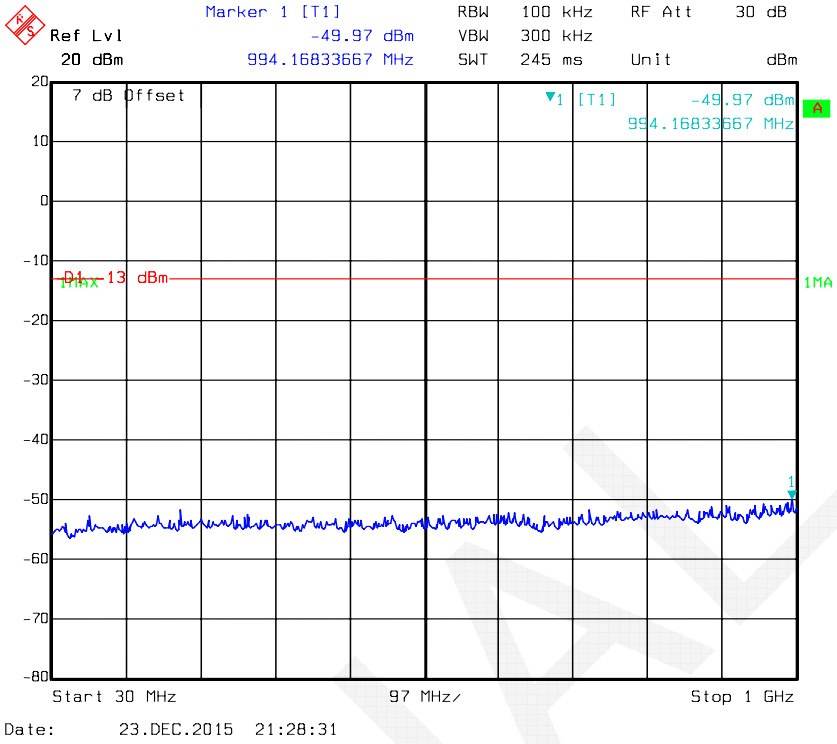


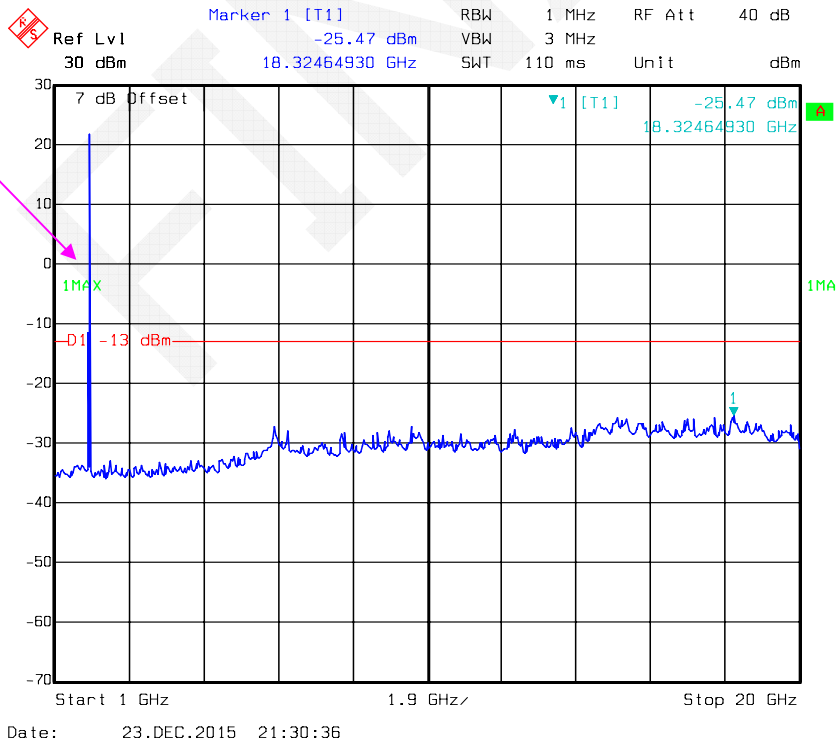
EDGE1900_ Middle Channel





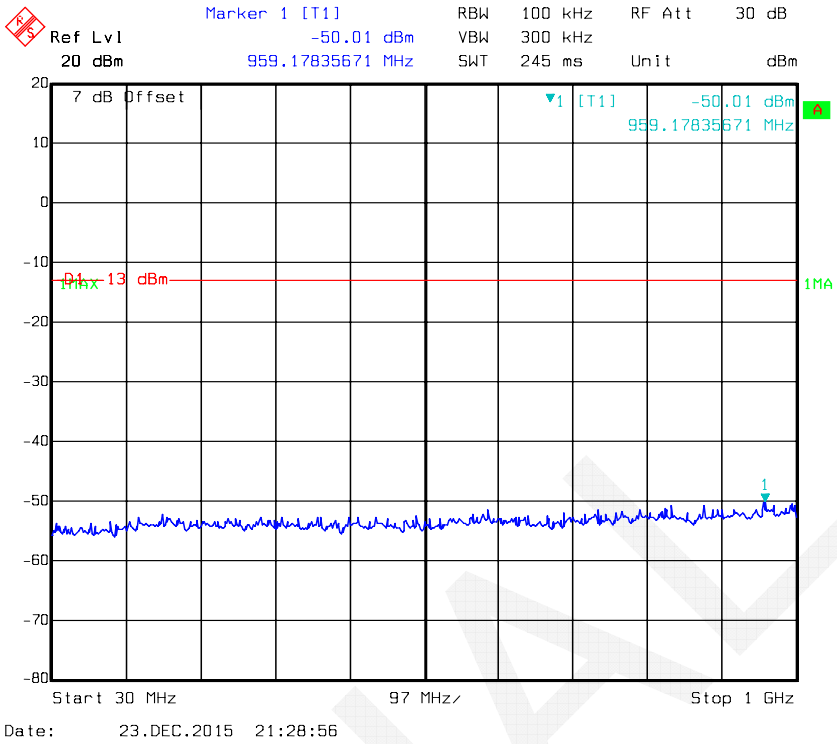
REL99 Band II_ Middle Channel

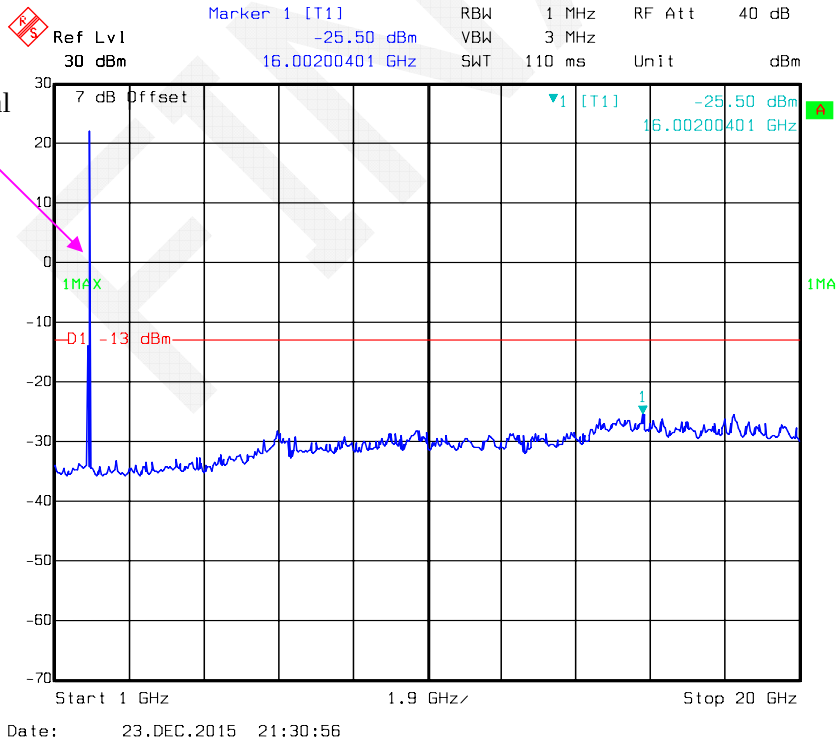




Fundamental

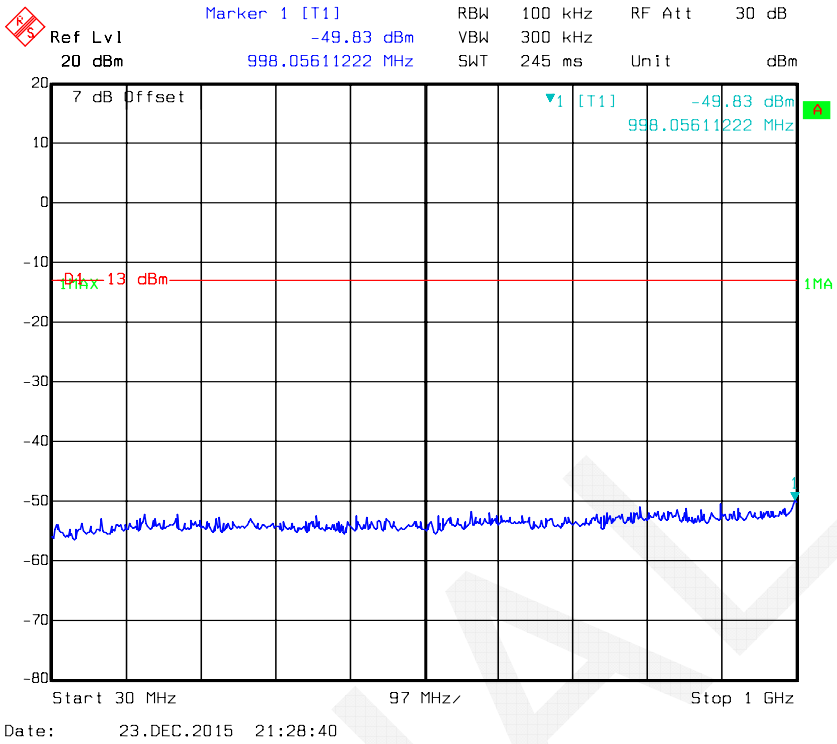
HSDPA Band II _Middle Channel

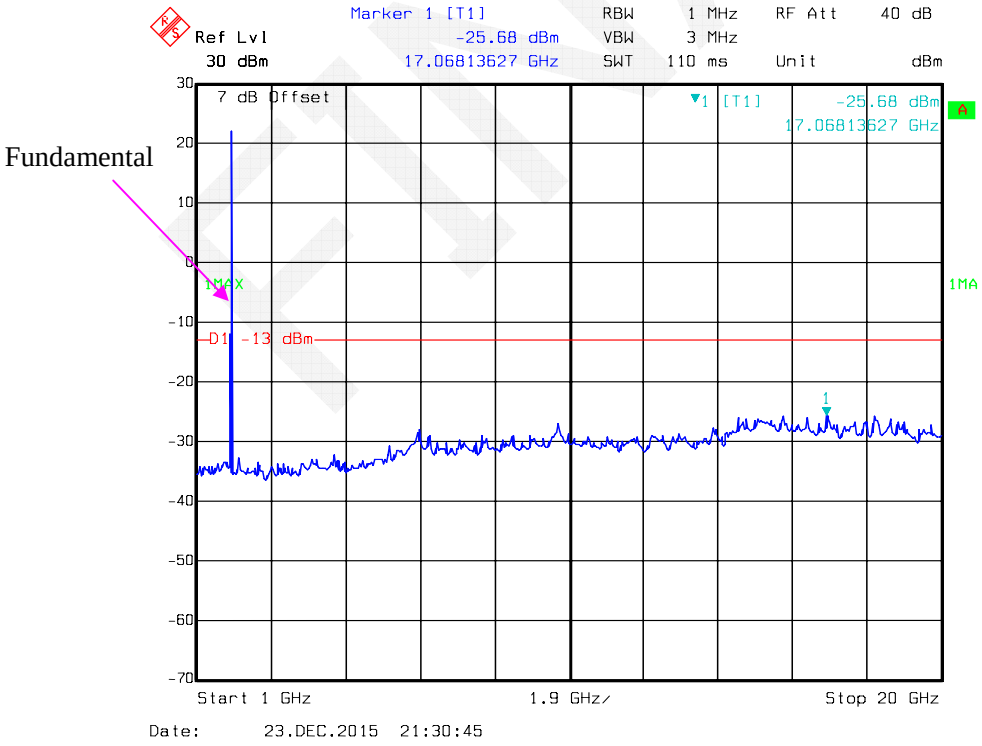




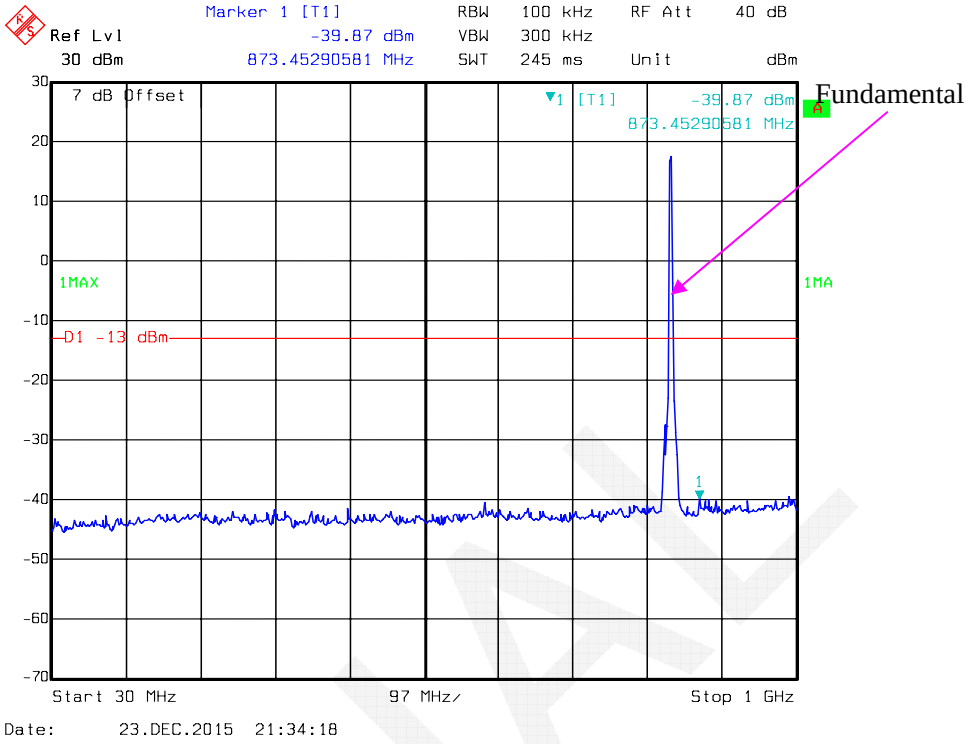
Fundamental

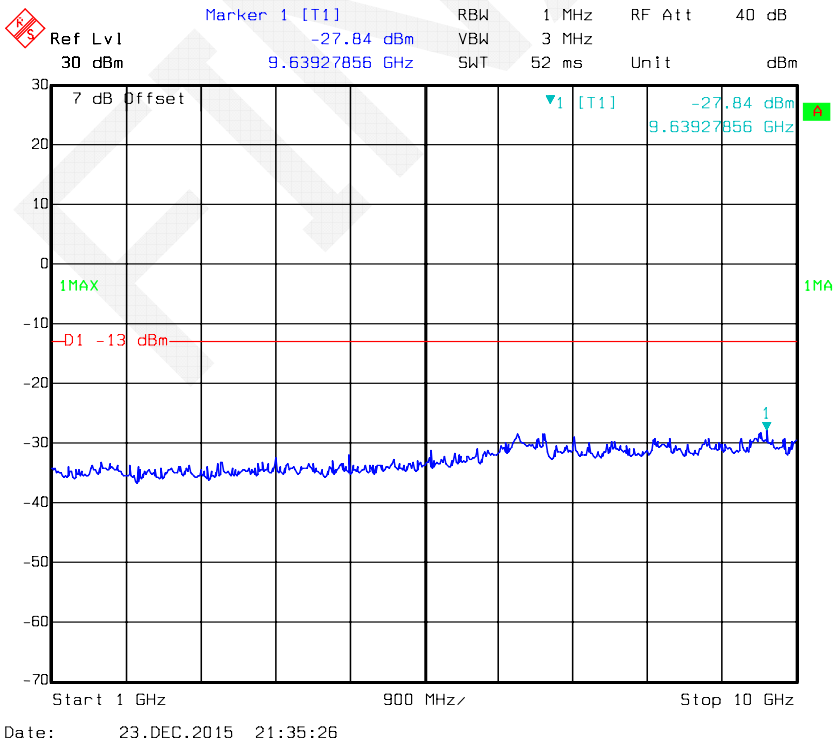
HSUPA Band II _ Middle Channel



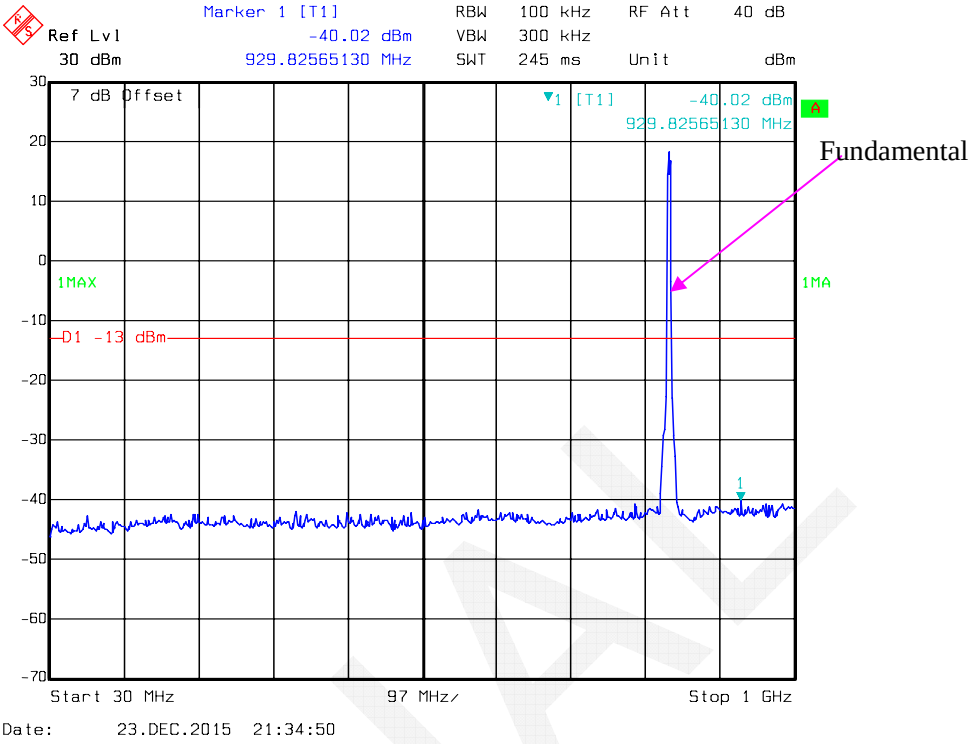


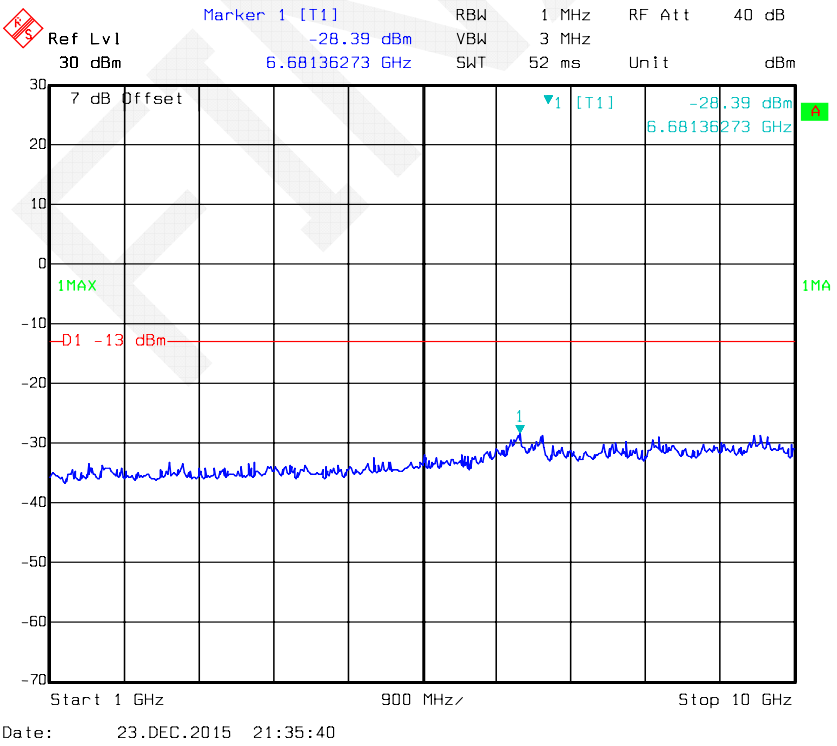
REL99 Band V_ Middle Channel



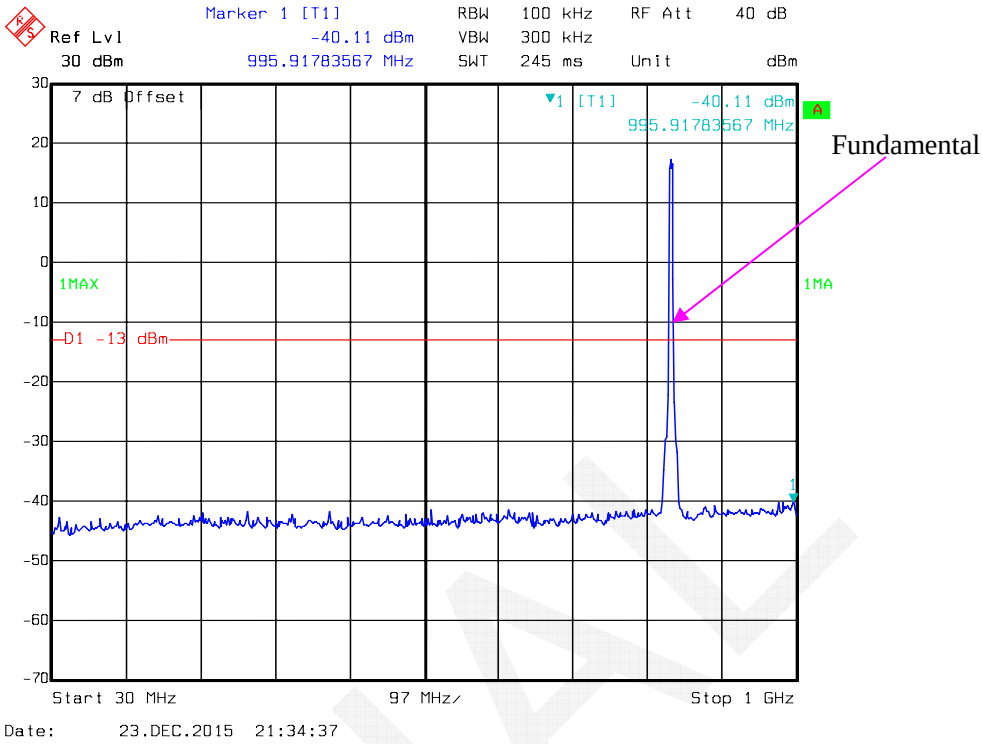


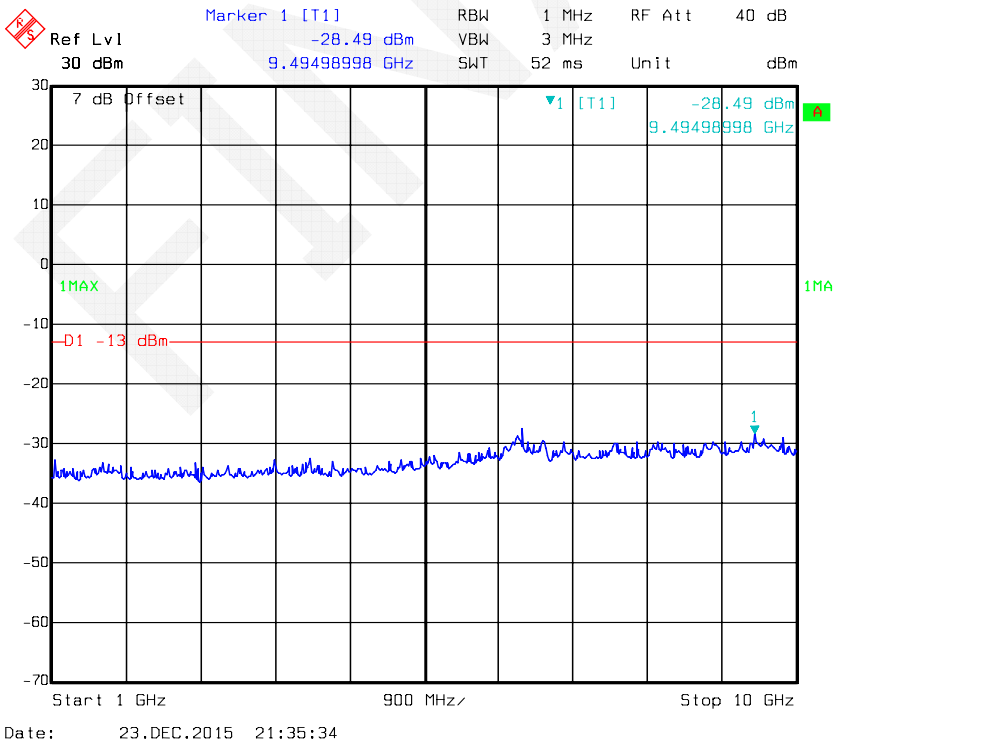
HSDPA Band V_ Middle Channel



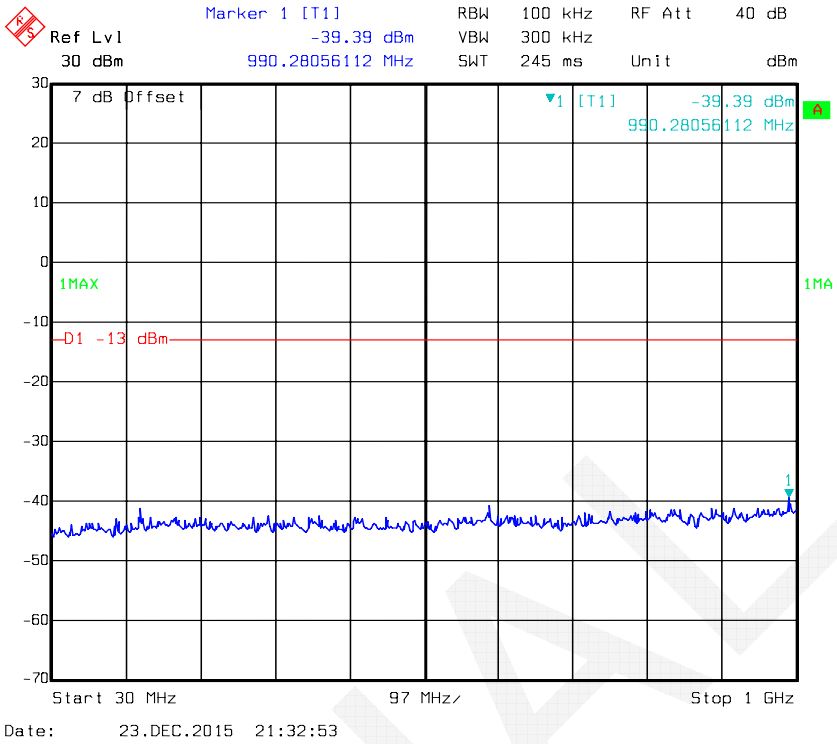


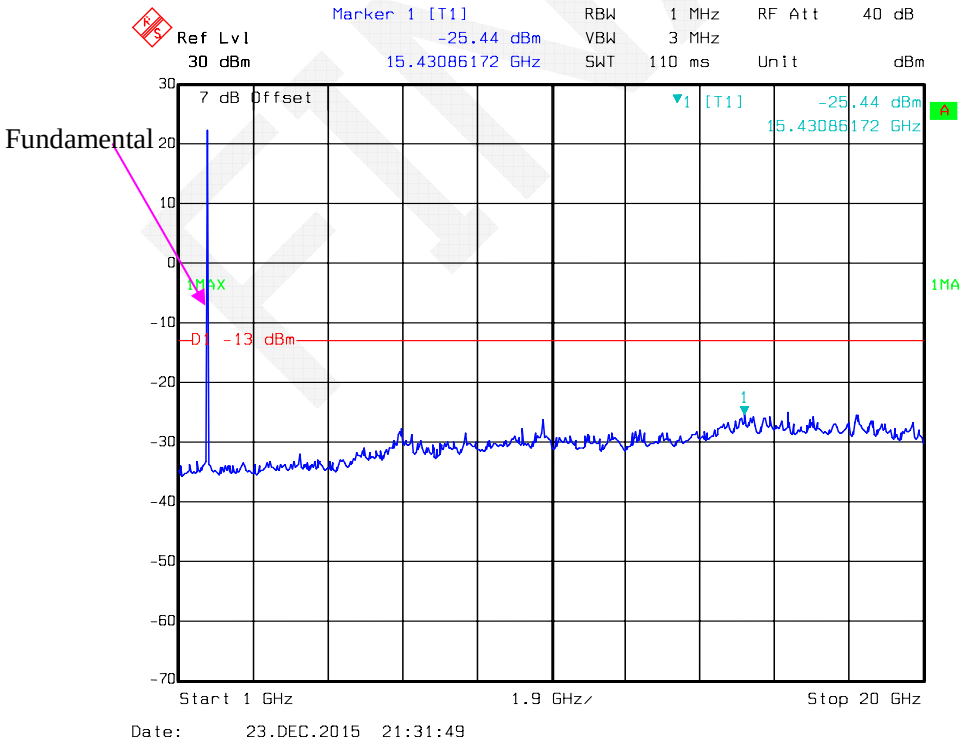
HSUPA Band V_ Middle Channel



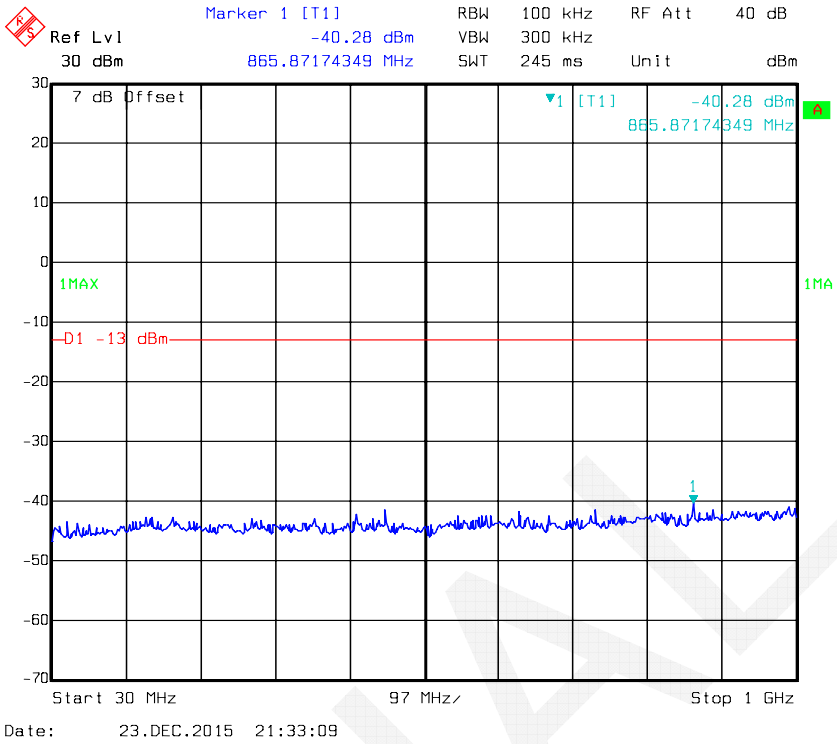


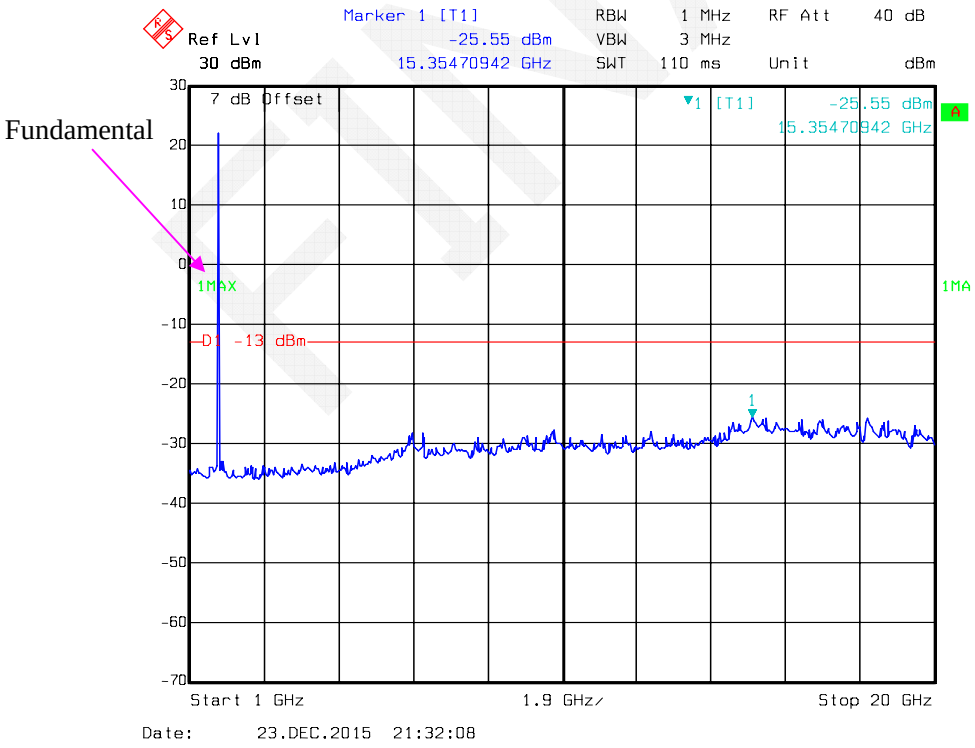
REL99 Band IV_ Middle Channel



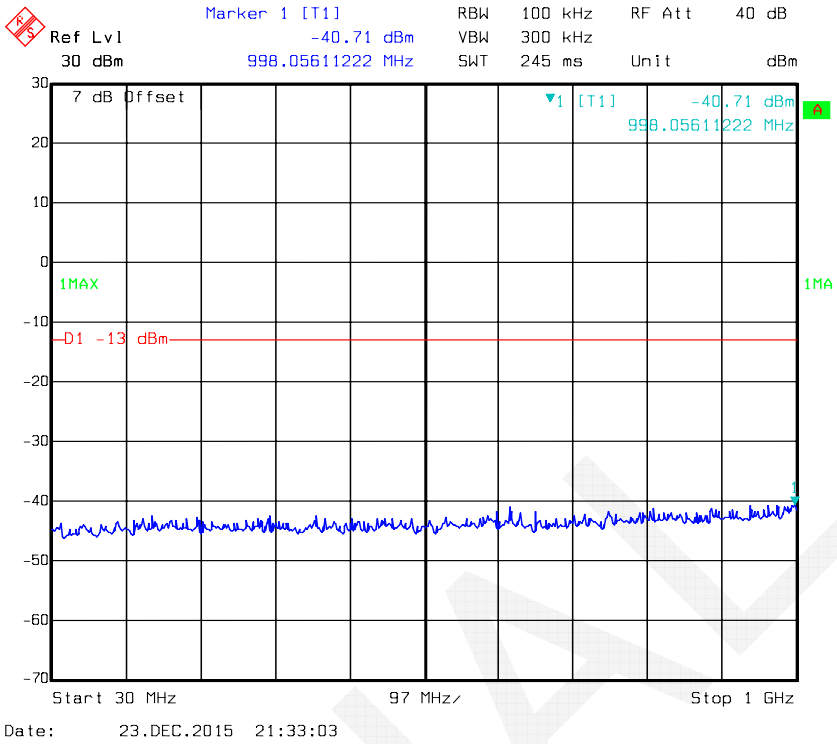


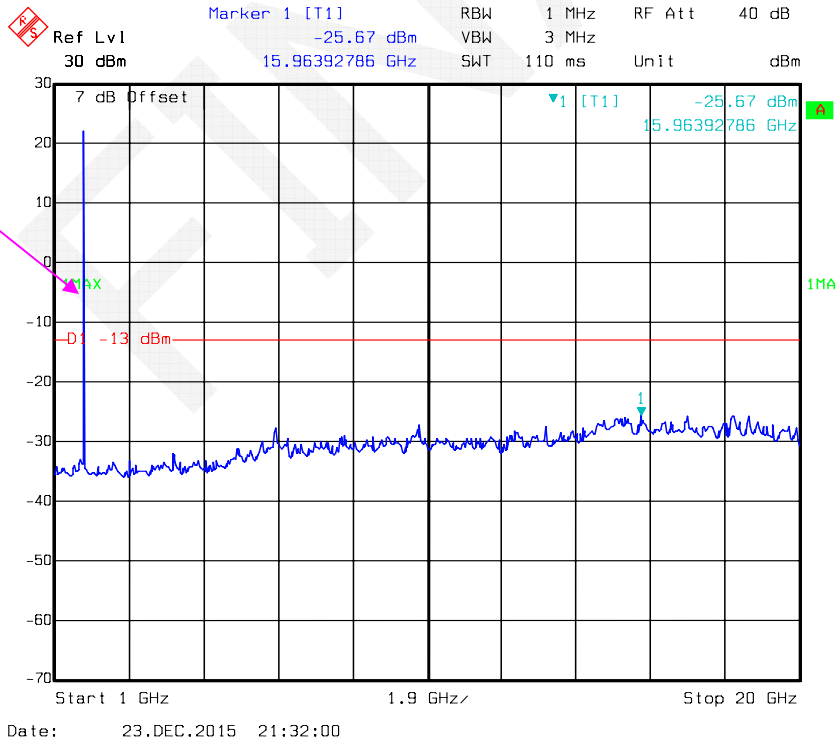
HSDPA Band IV_ Middle Channel





HSUPA Band IV_ Middle Channel

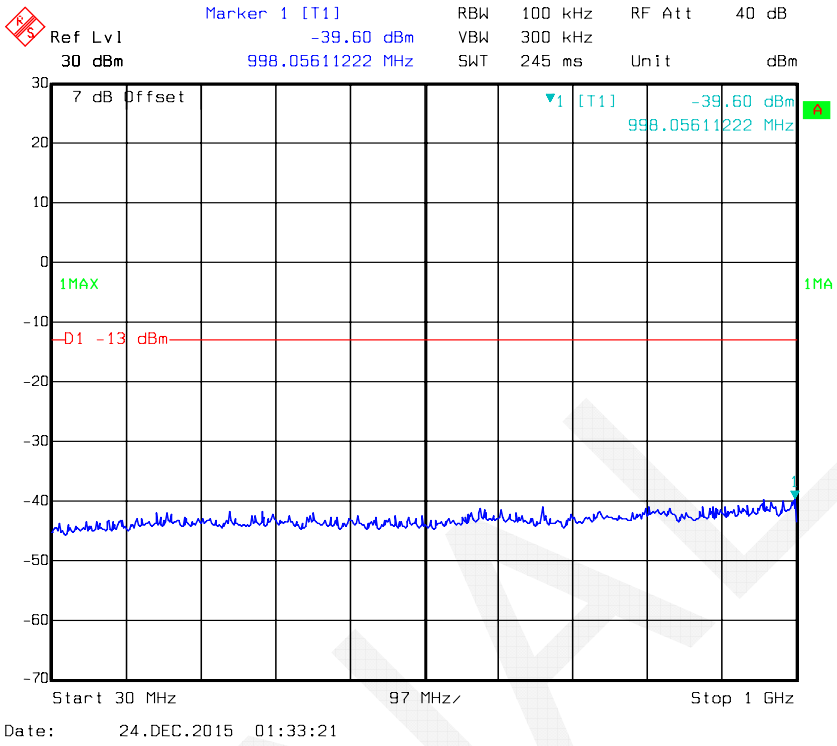


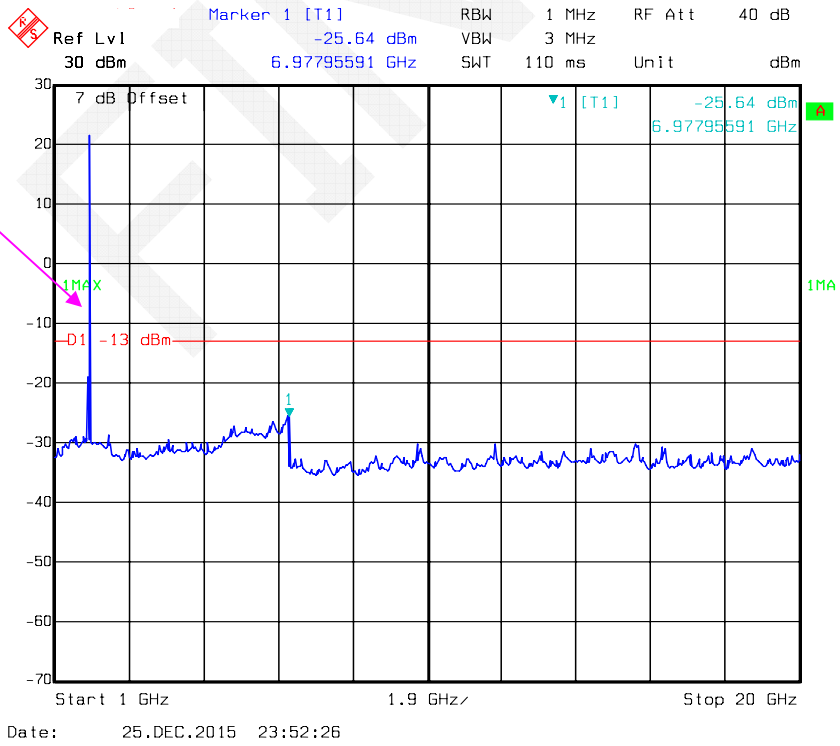


Fundamental

LTE Band:

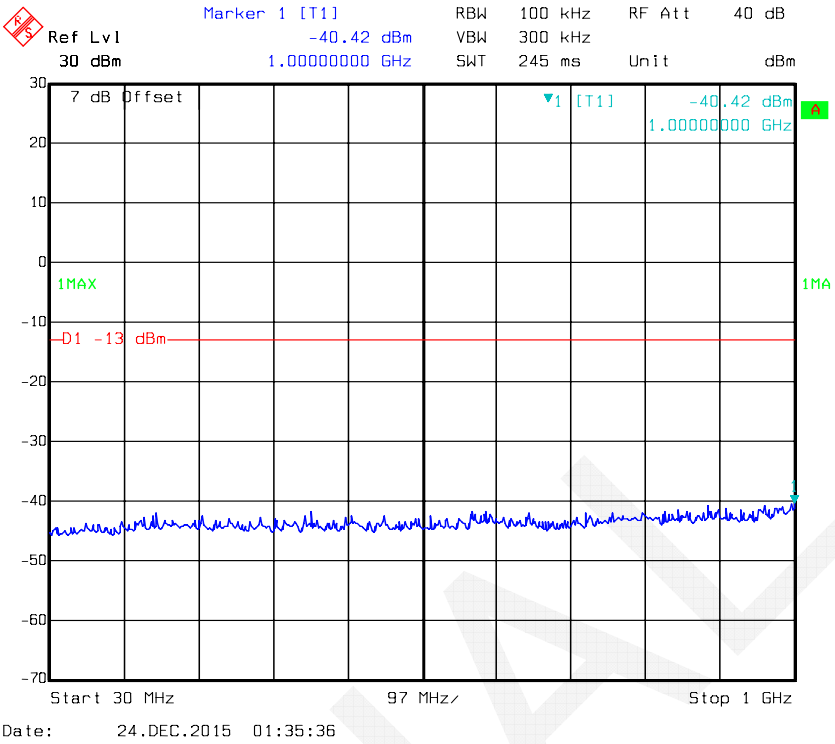
QPSK, Band 2-1.4M _ Middle Channel

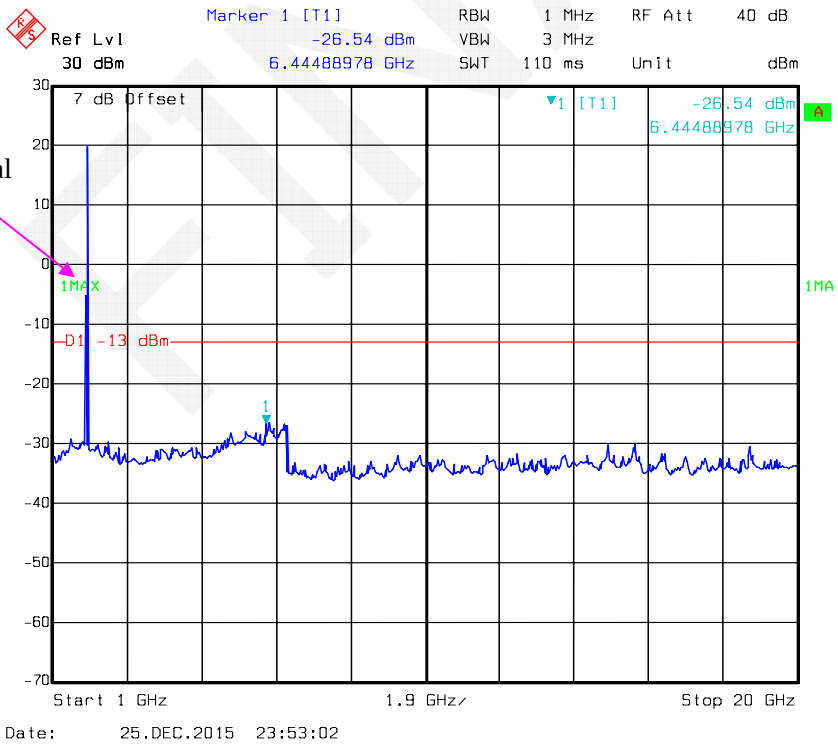




Fundamental

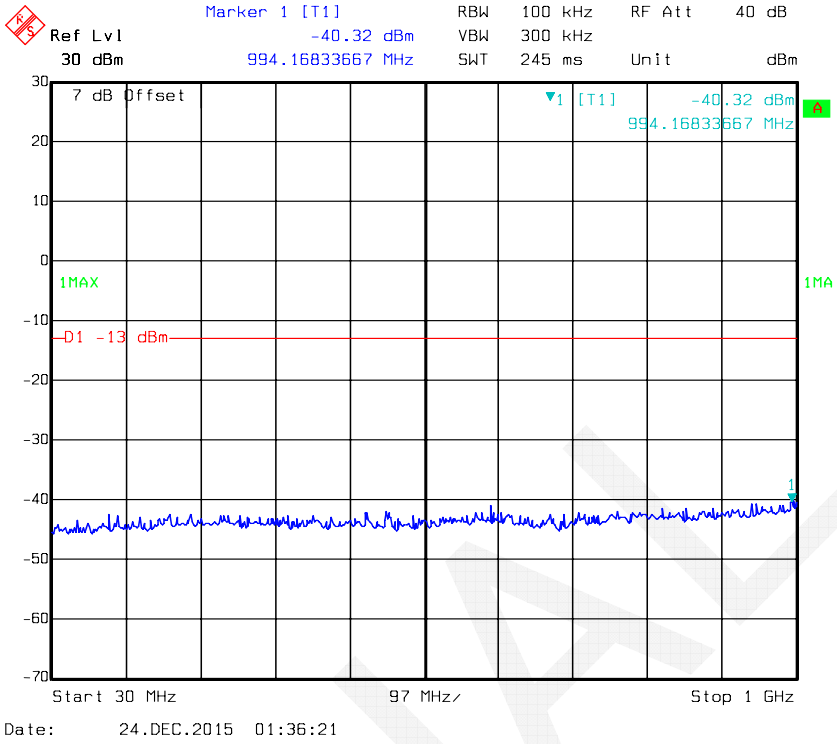
QPSK, Band 2-3M _ Middle Channel

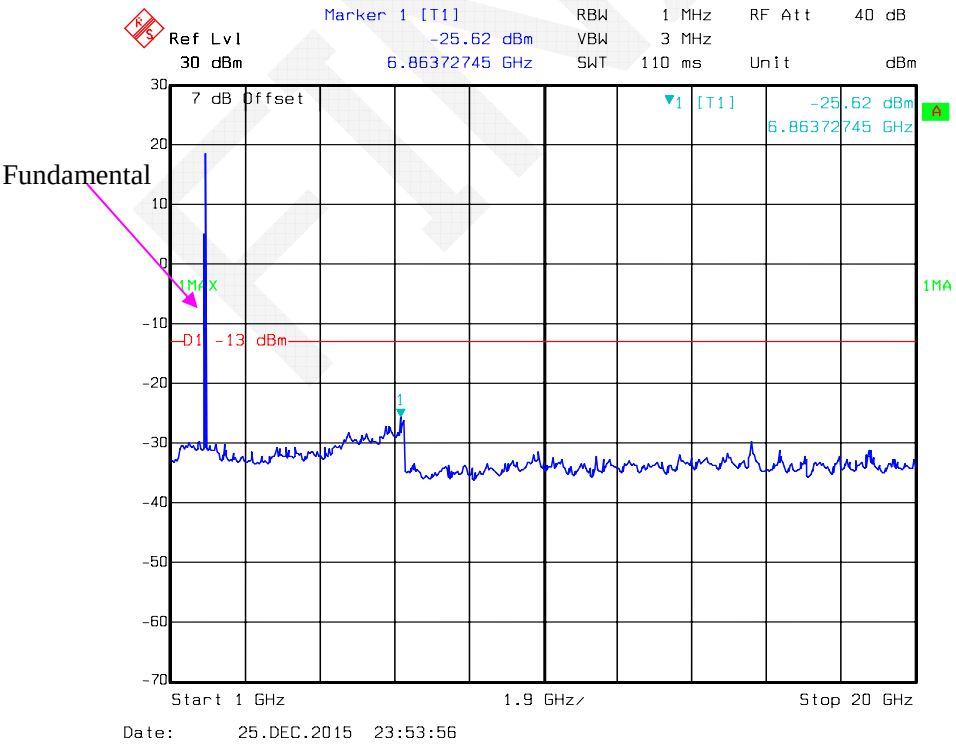




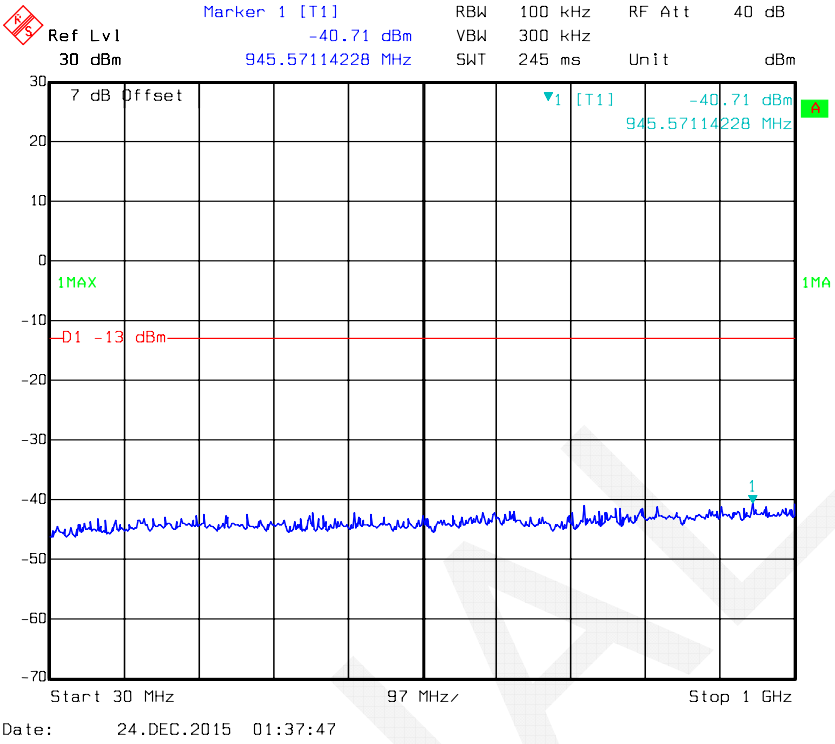
Fundamental

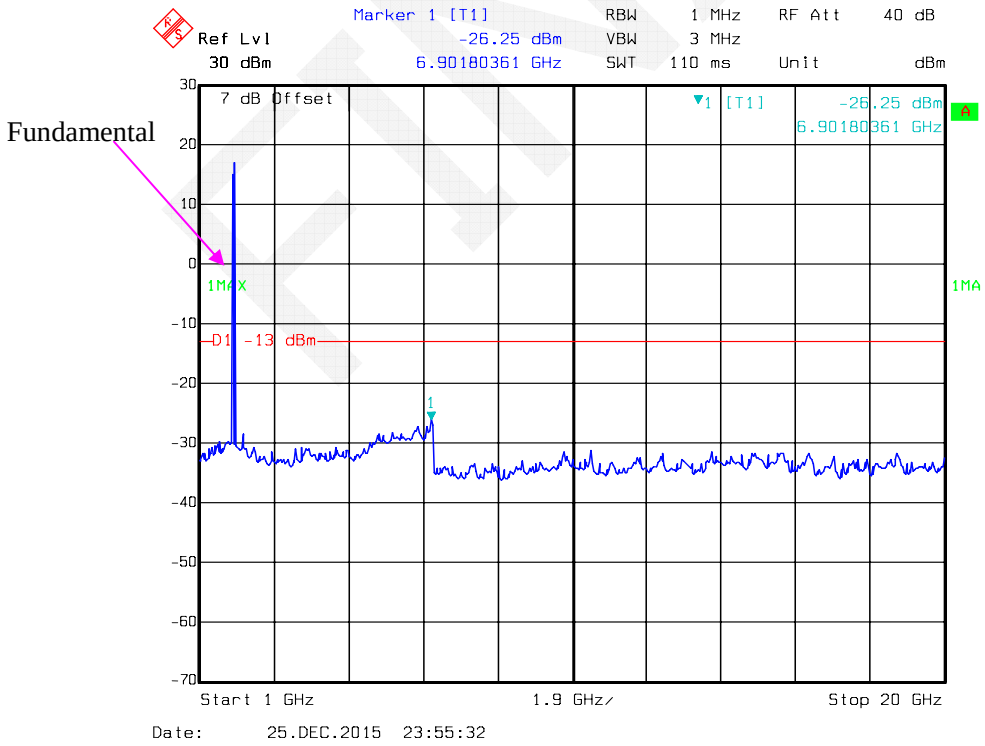
QPSK, Band 2-5M _ Middle Channel



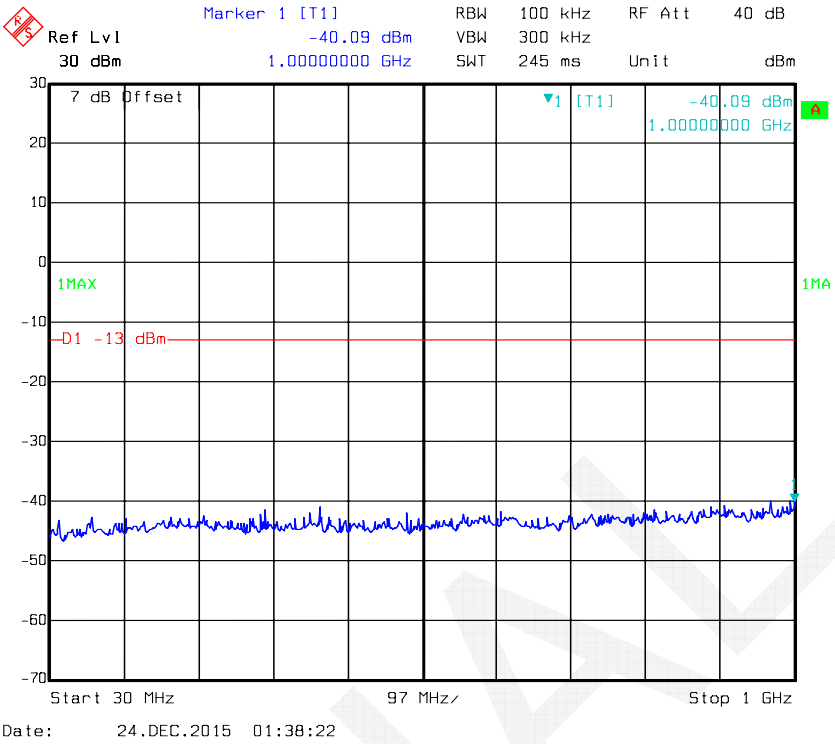


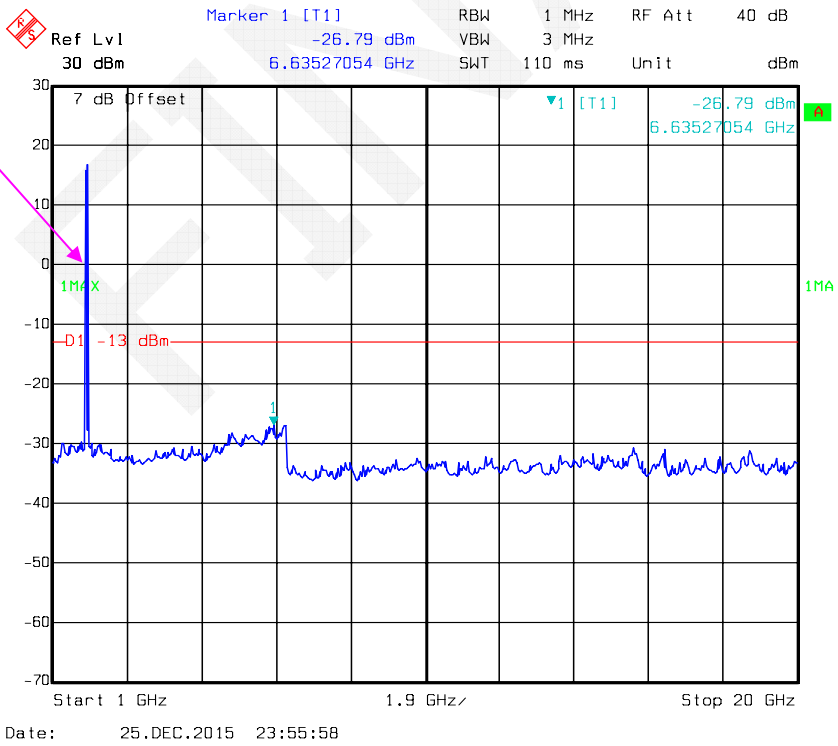
QPSK, Band 2-10M _ Middle Channel





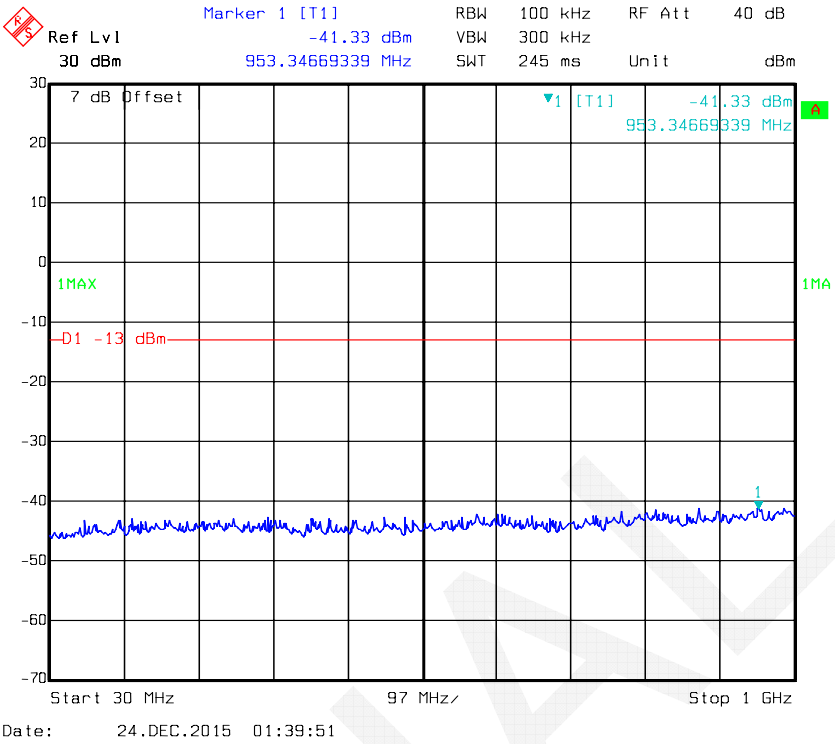
QPSK, Band 2-15M _ Middle Channel

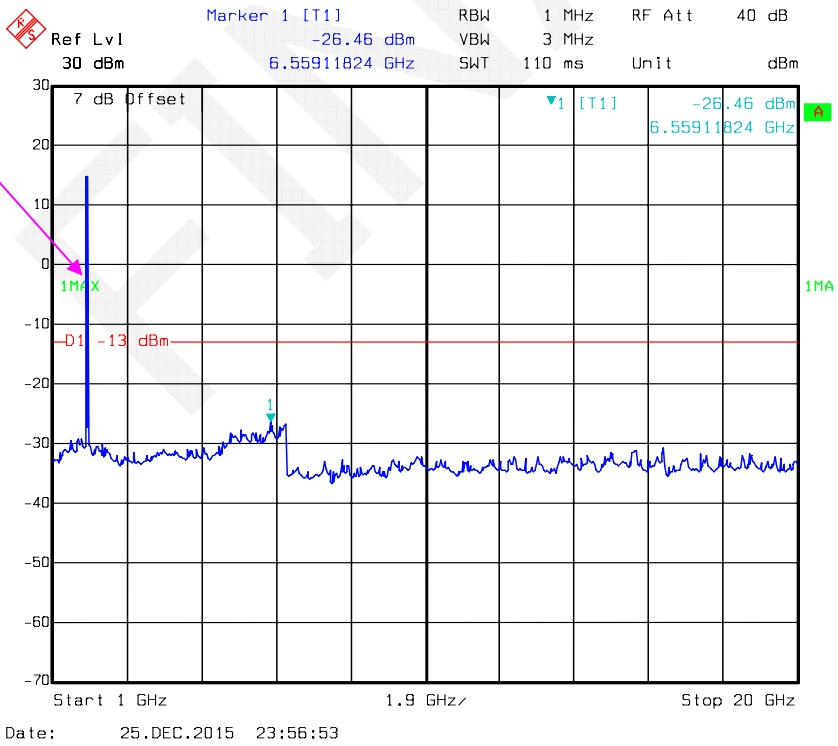




Fundamental

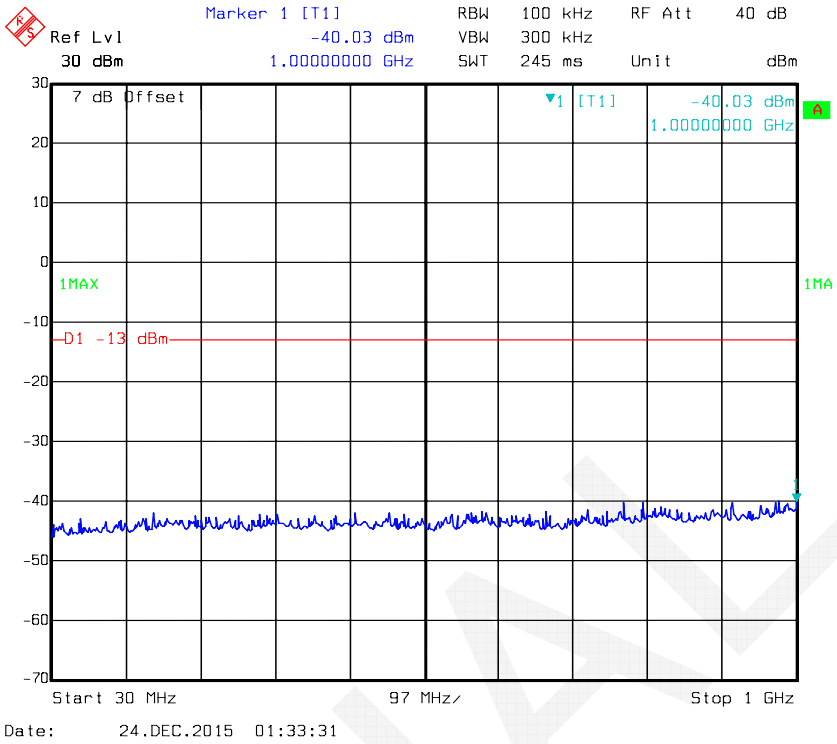
QPSK, Band 2-20M _ Middle Channel

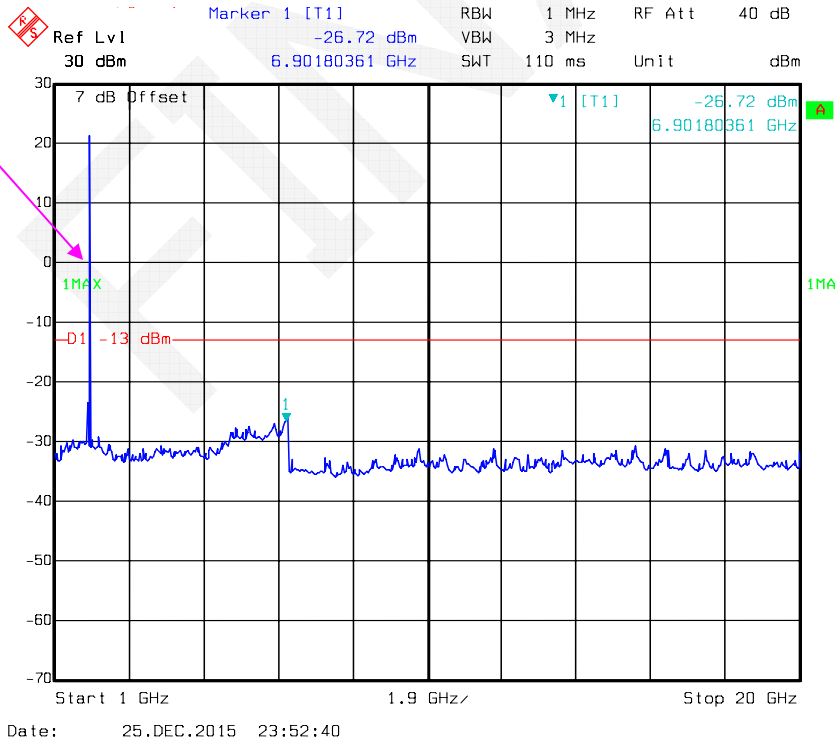




Fundamental

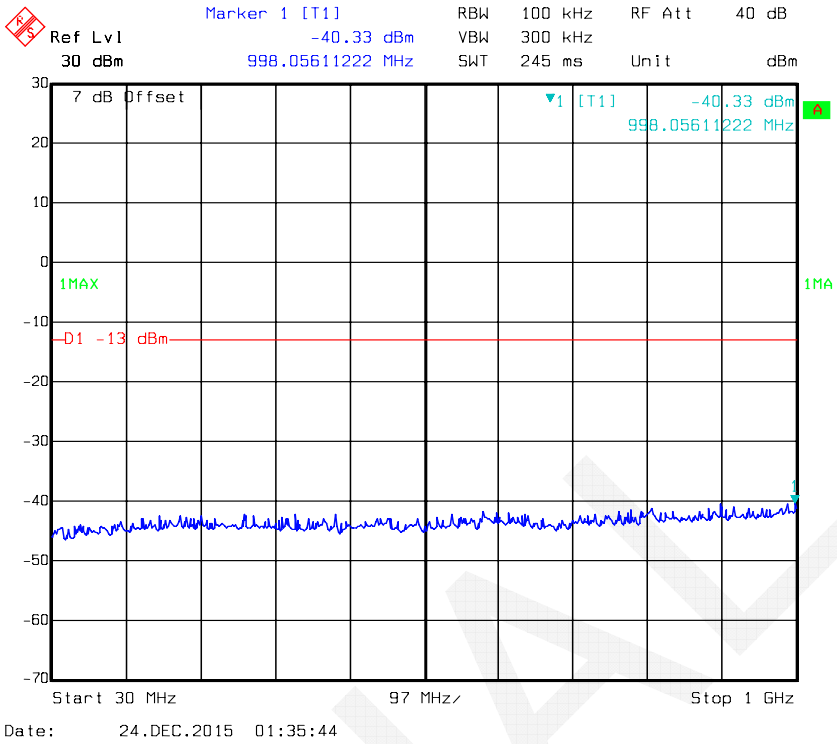
16-QAM, Band 2-1.4M _ Middle Channel



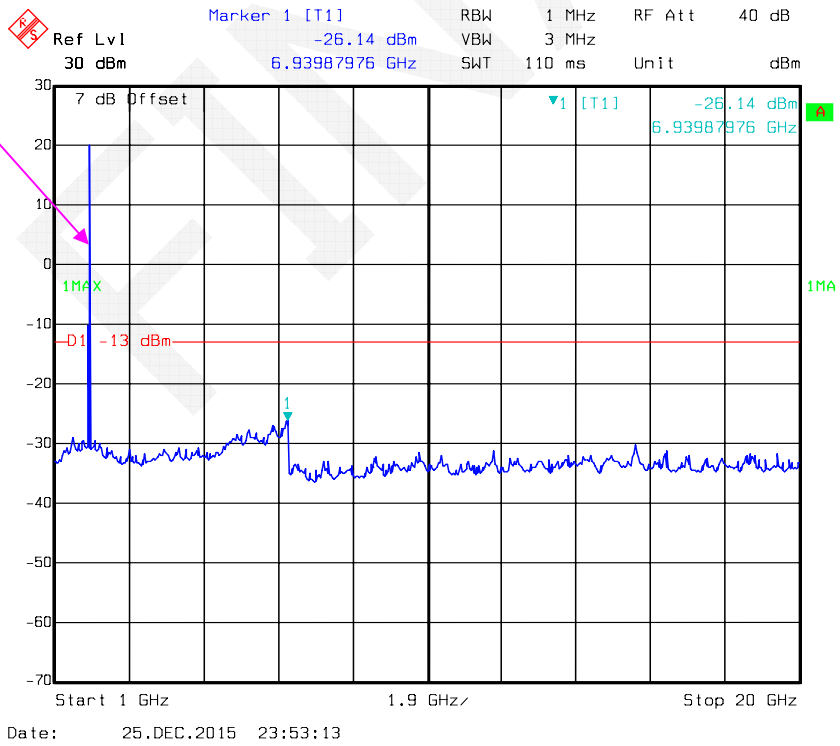


Fundamental

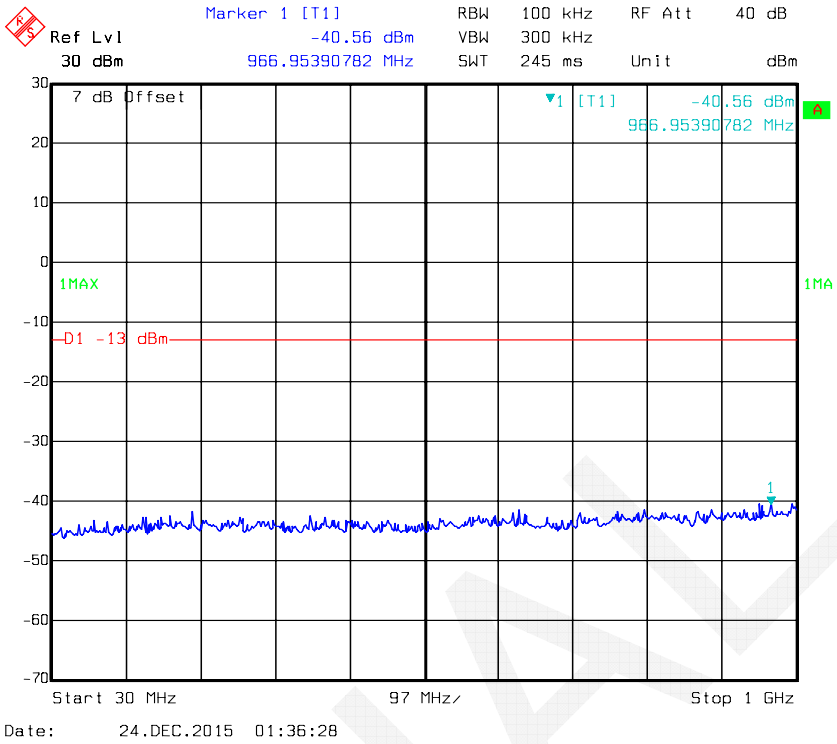
16-QAM, Band 2-3M _ Middle Channel

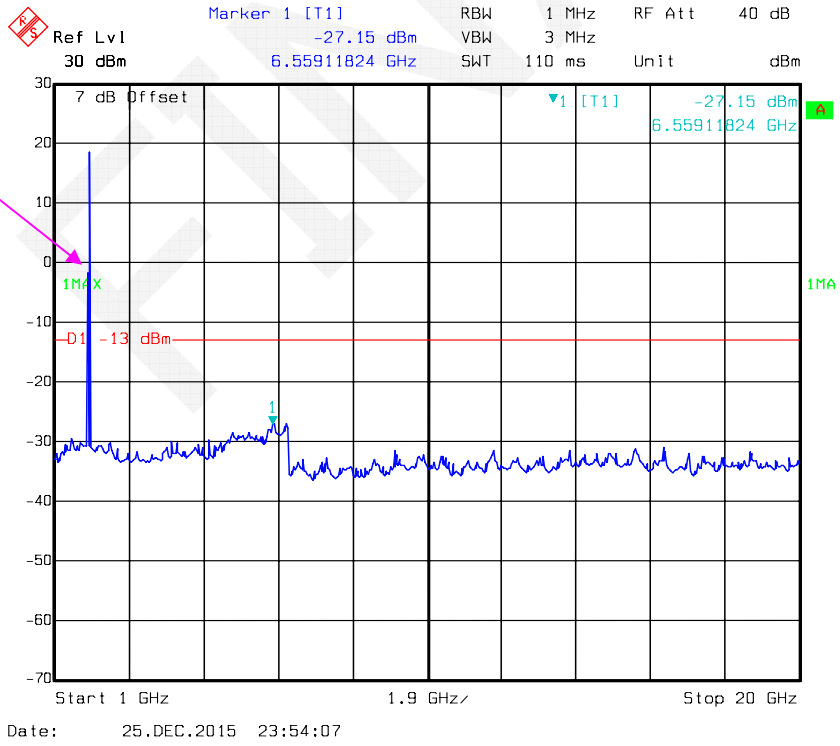


Fundamental



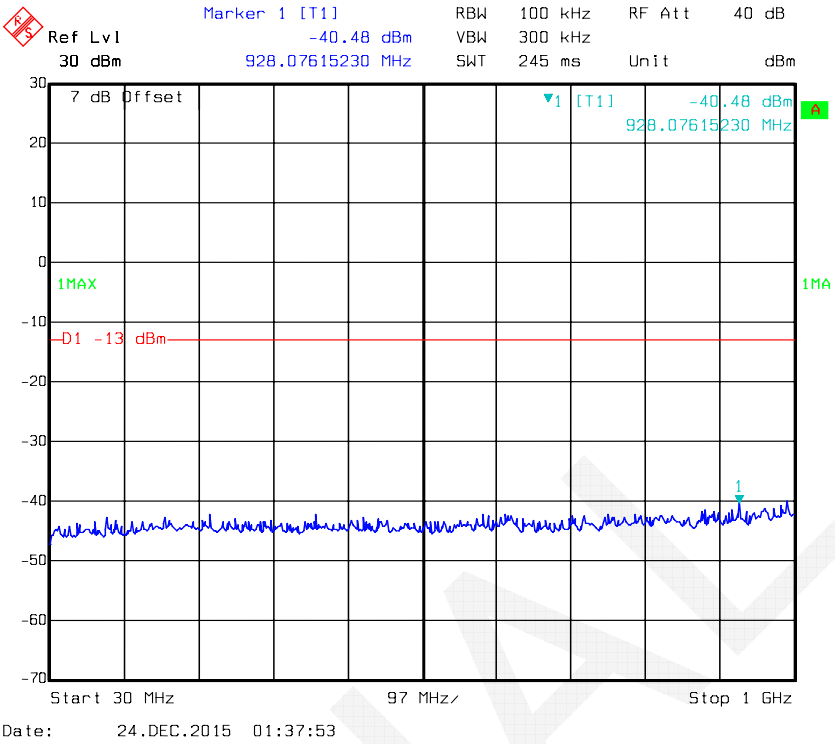
16-QAM, Band 2-5M _ Middle Channel

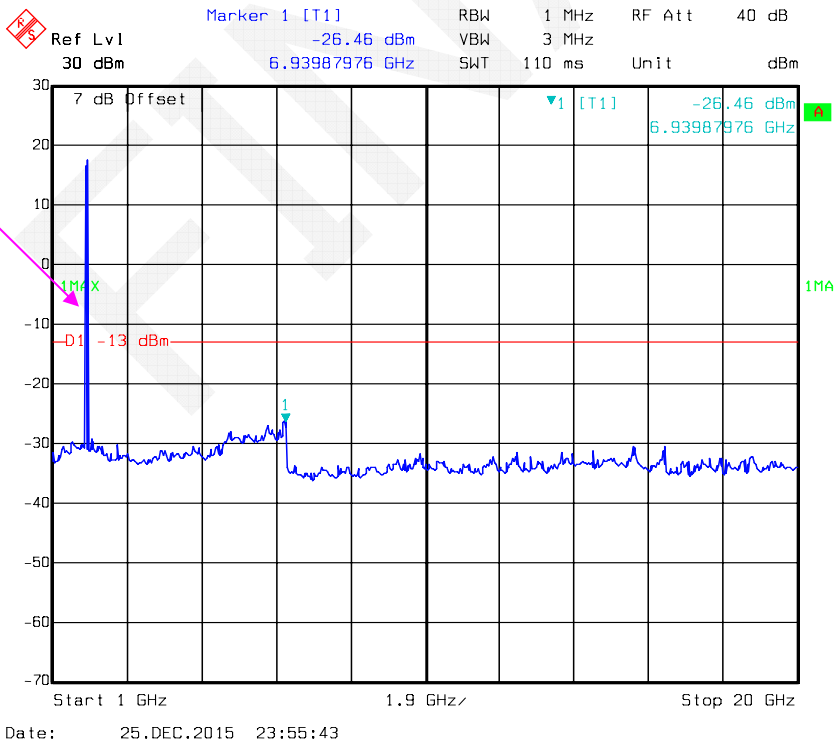




Fundamental

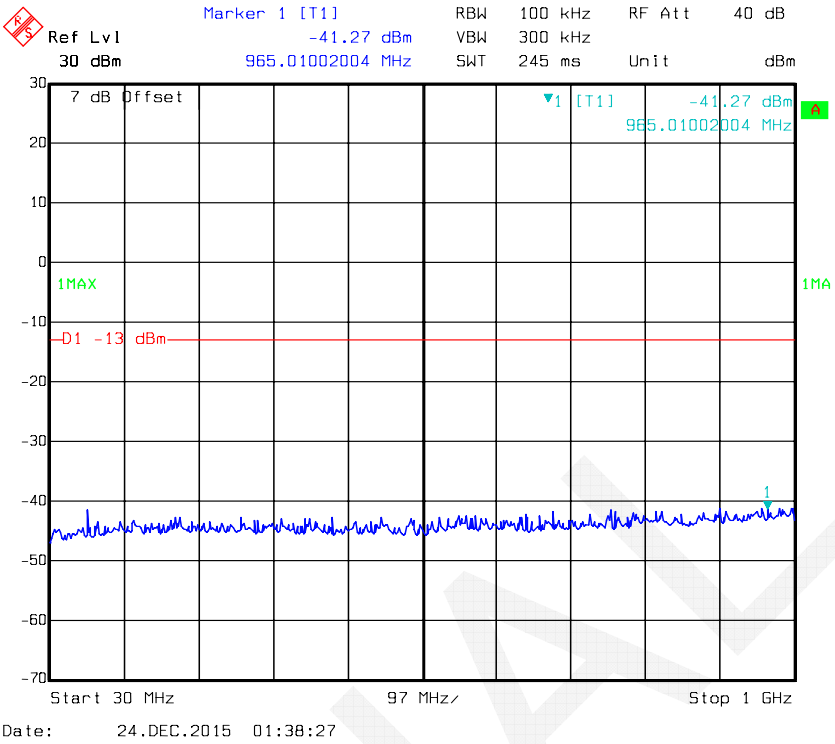
16-QAM, Band 2-10M _ Middle Channel

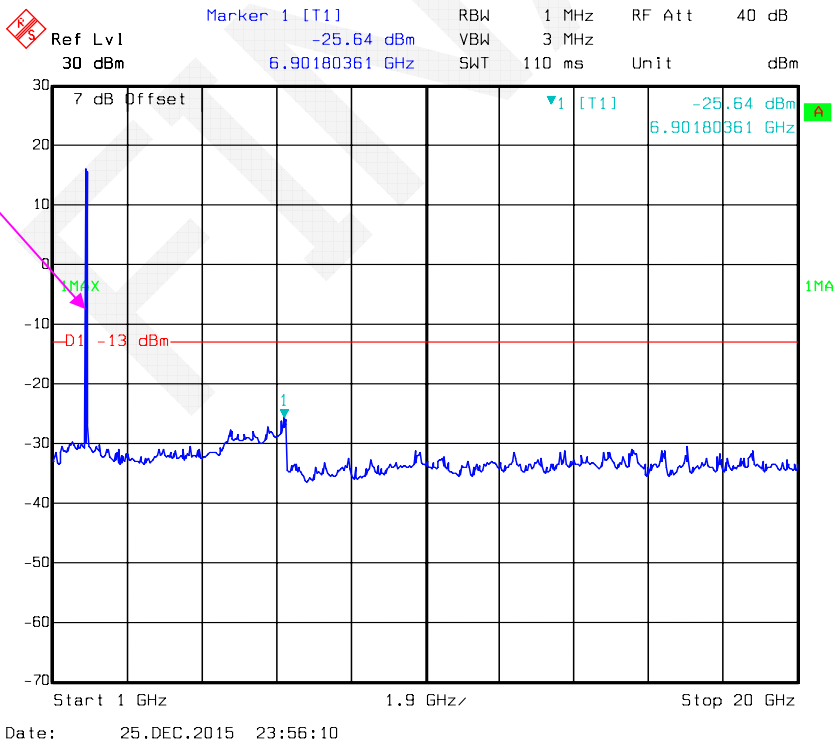




Fundamental

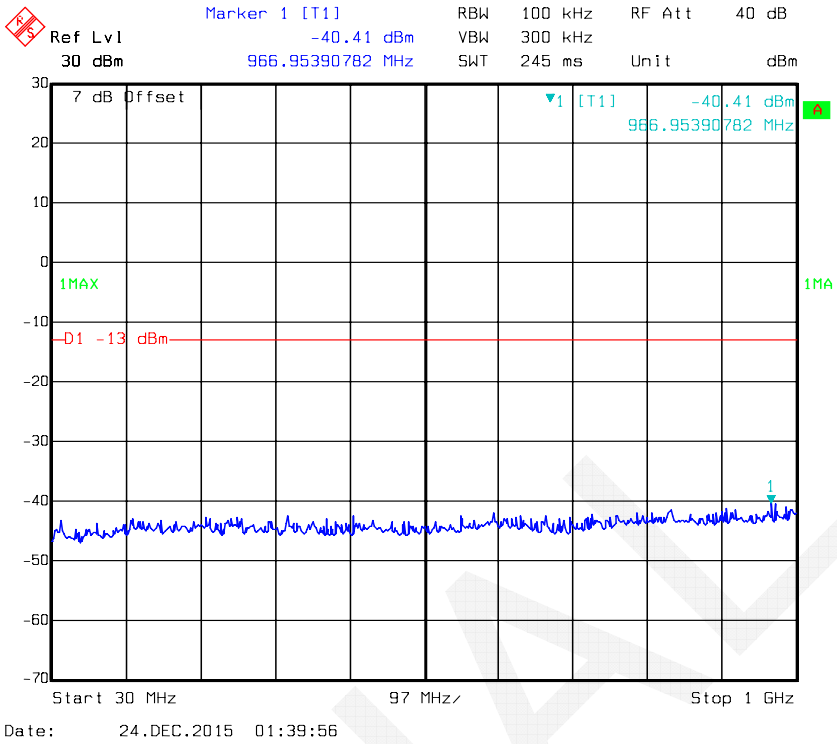
16-QAM, Band 2-15M _ Middle Channel

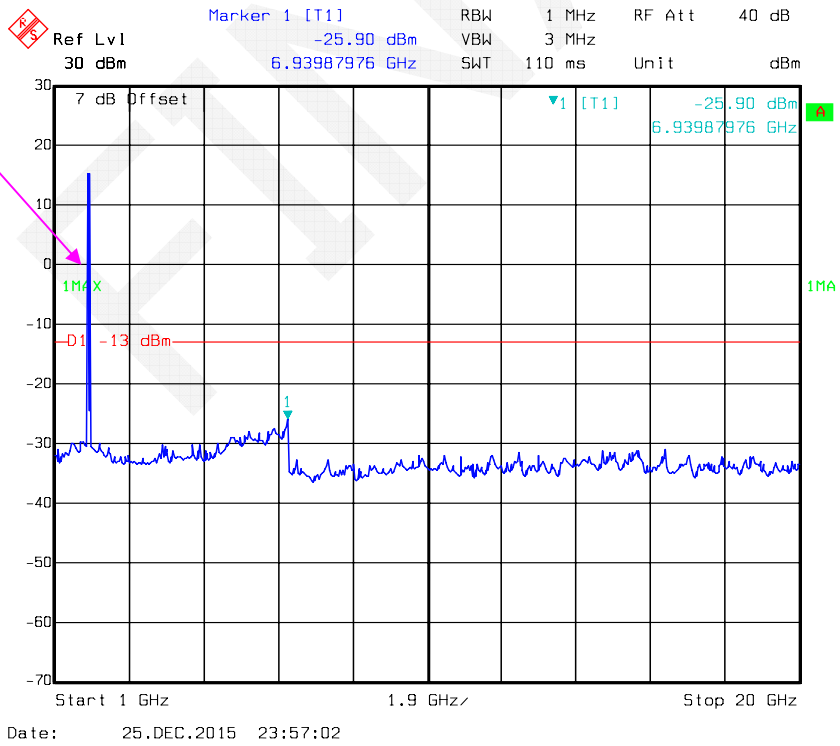




Fundamental

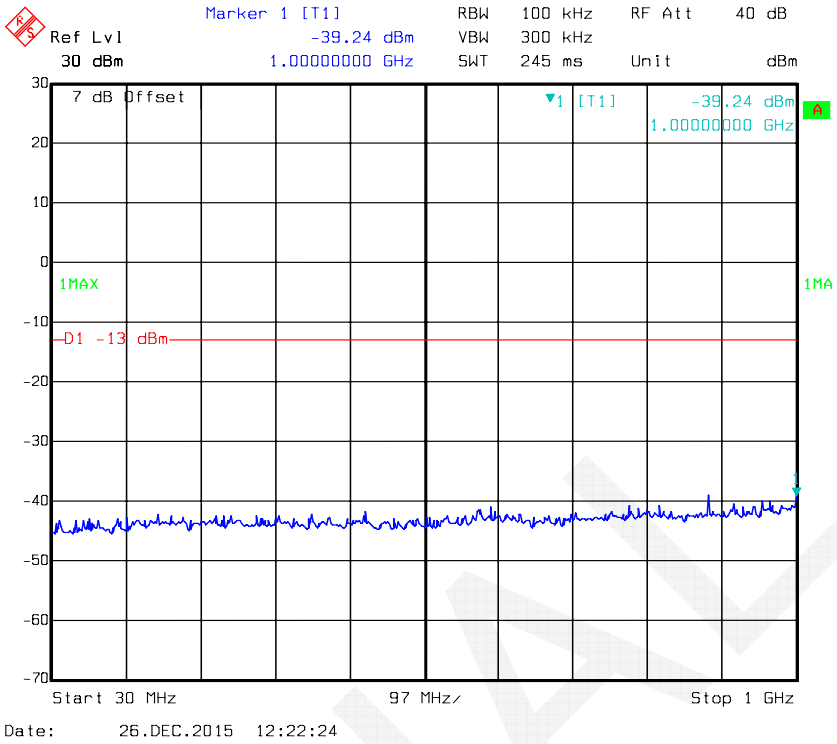
16-QAM, Band 2-20M _ Middle Channel

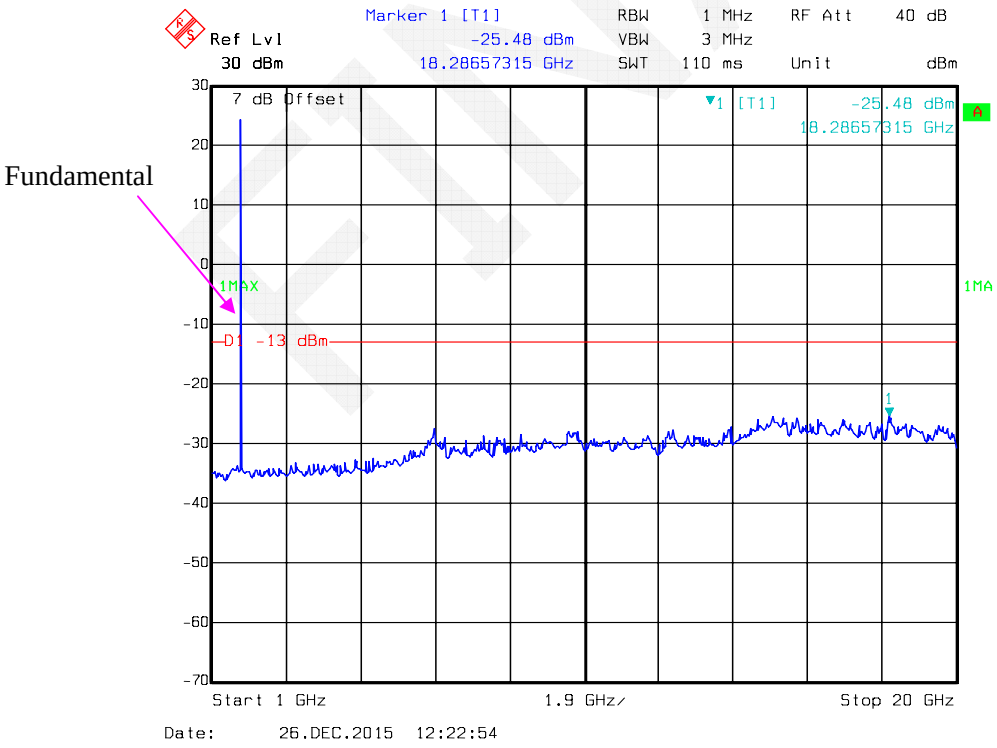




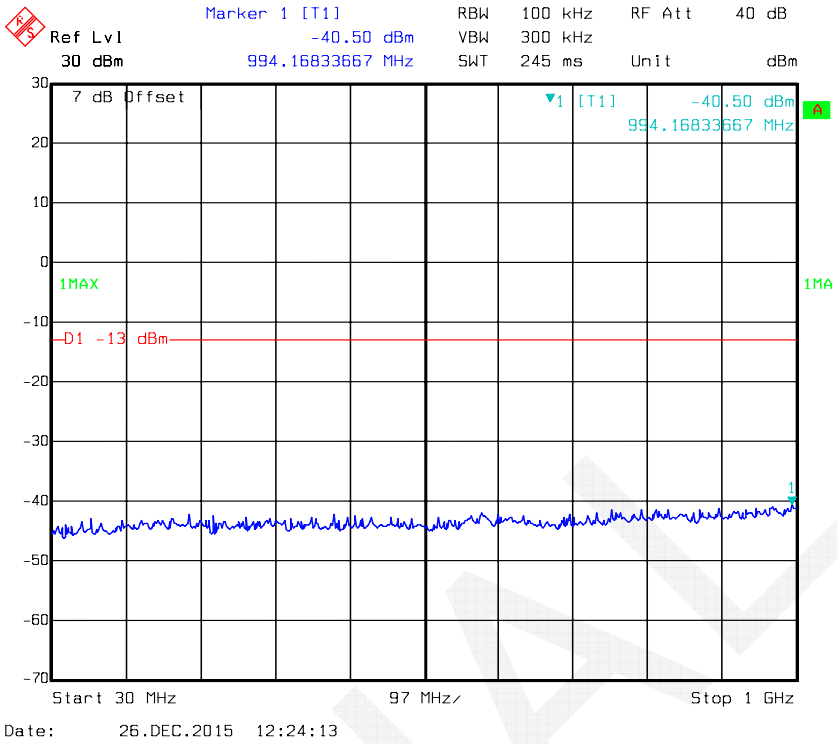
Fundamental

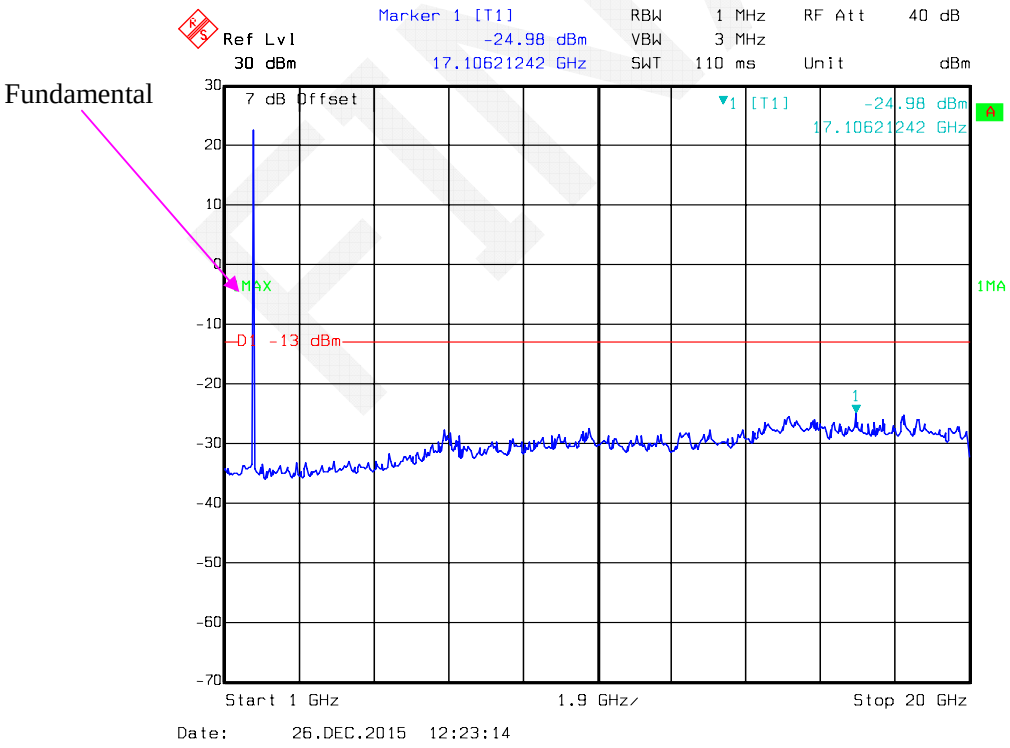
QPSK, Band 4-1.4M _ Middle Channel



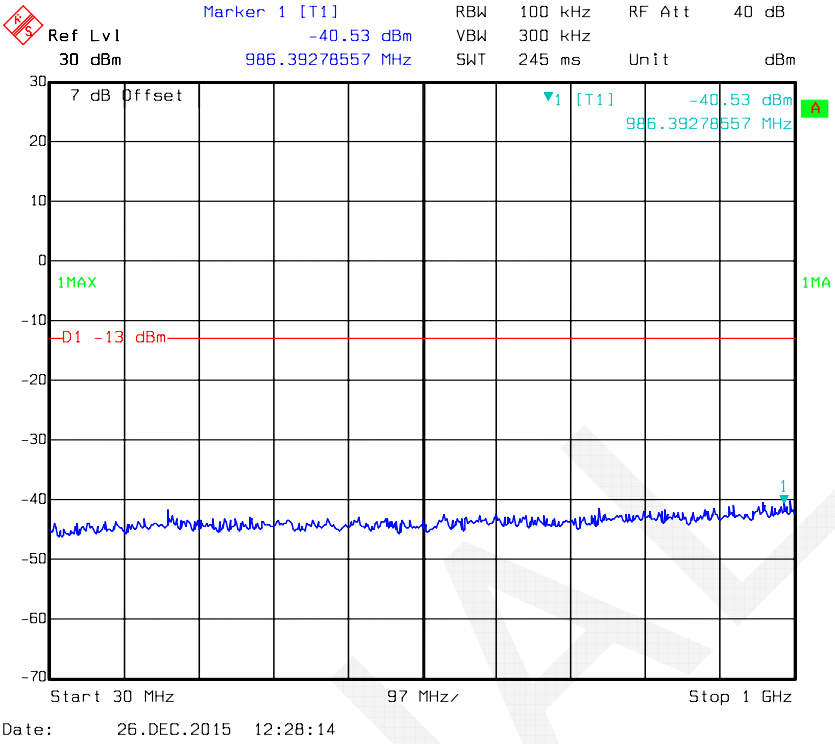


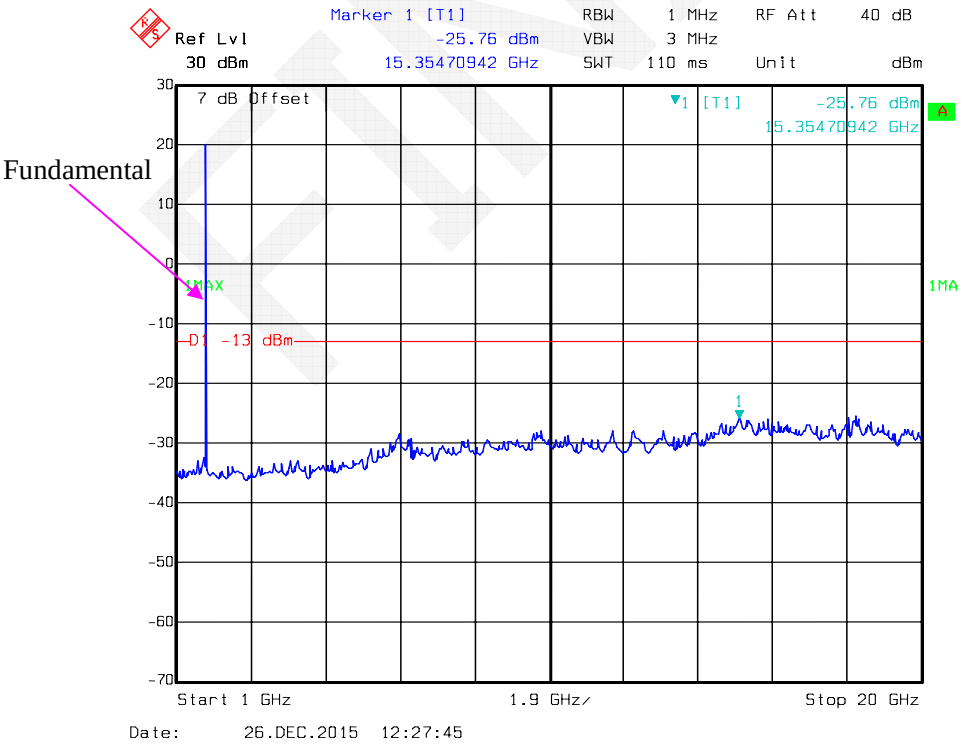
QPSK, Band 4-3M _ Middle Channel



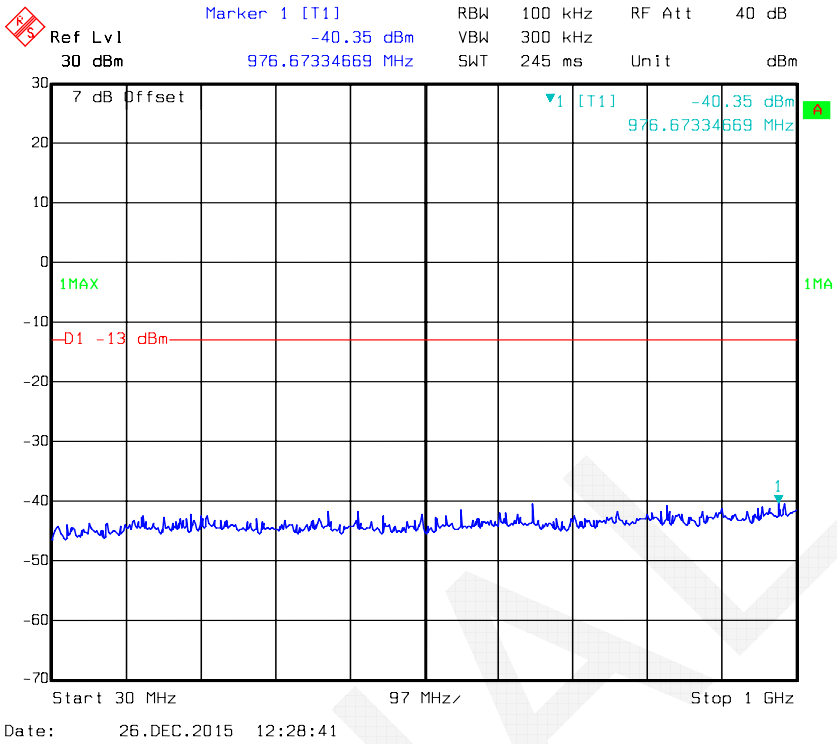


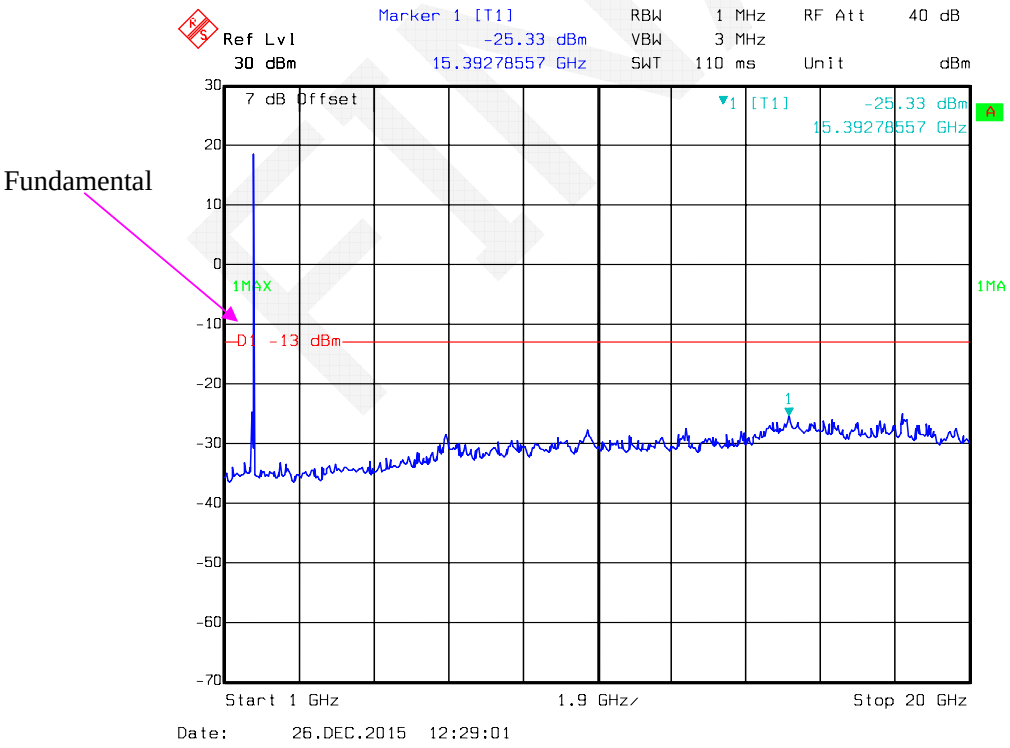
QPSK, Band 4-5M _ Middle Channel



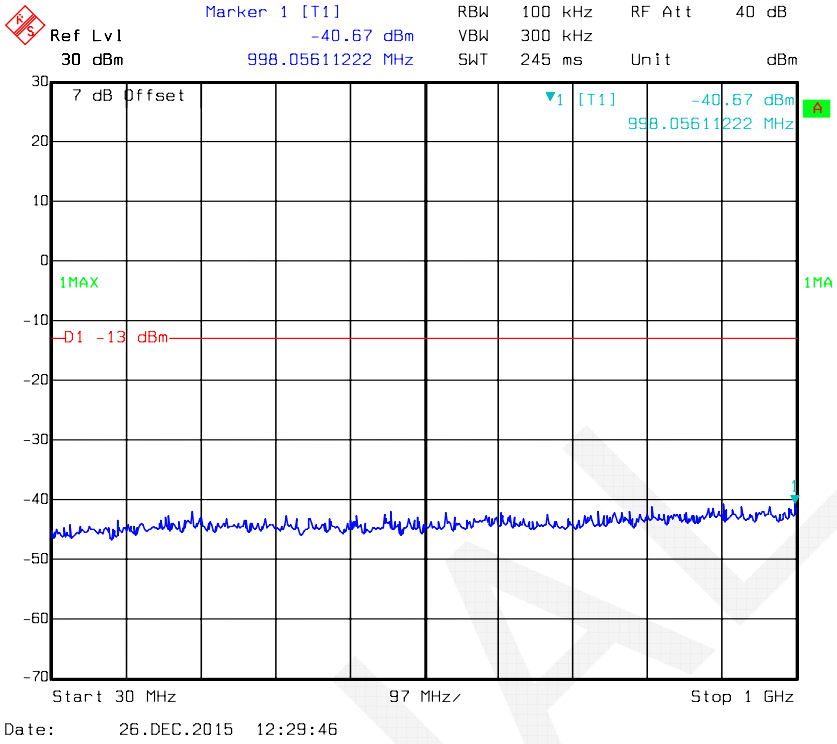


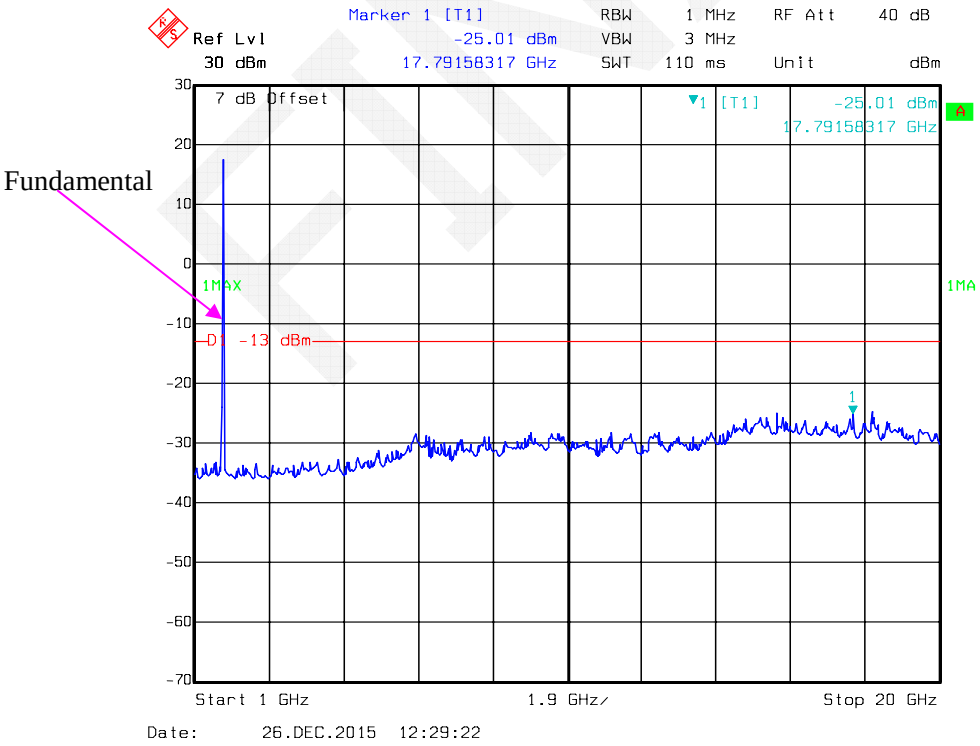
QPSK, Band 4-10M _ Middle Channel



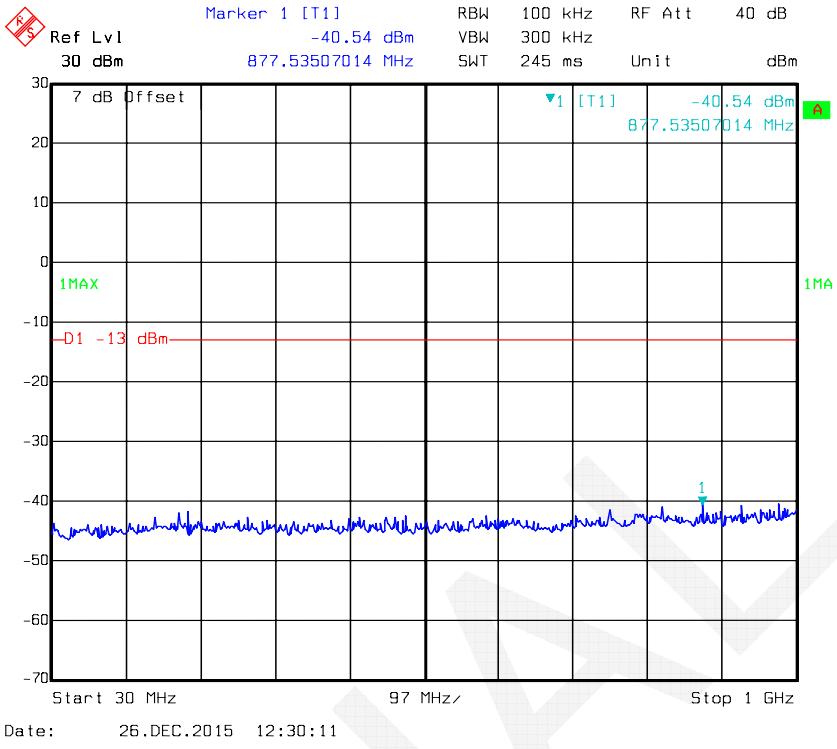


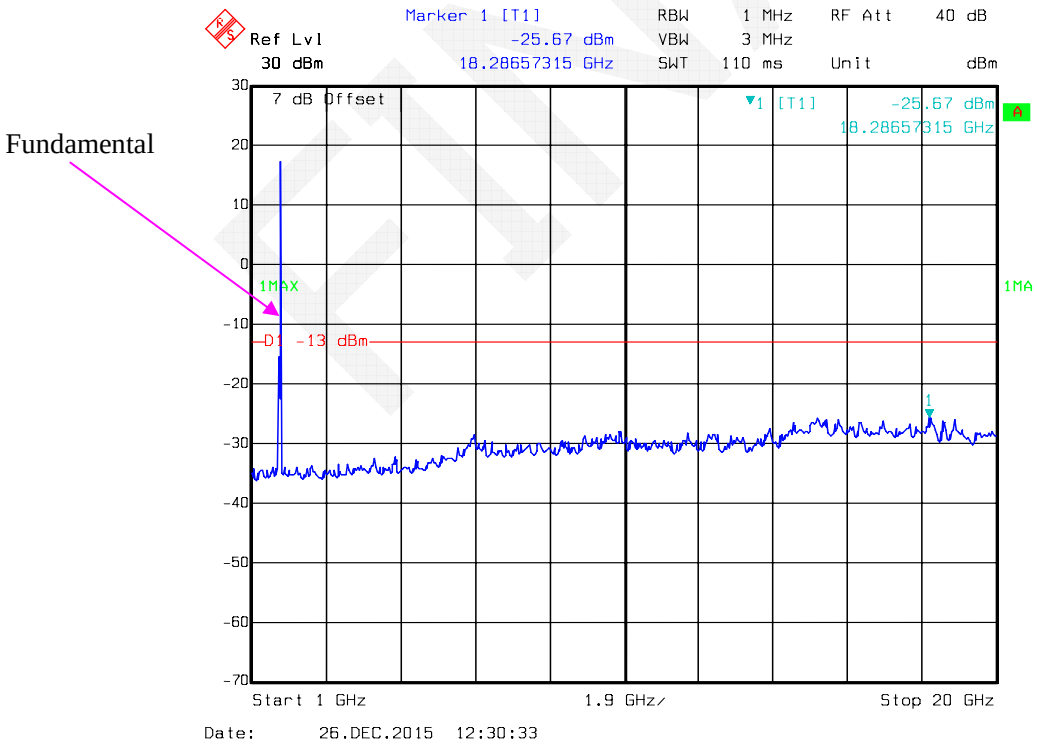
QPSK, Band 4-15M _ Middle Channel



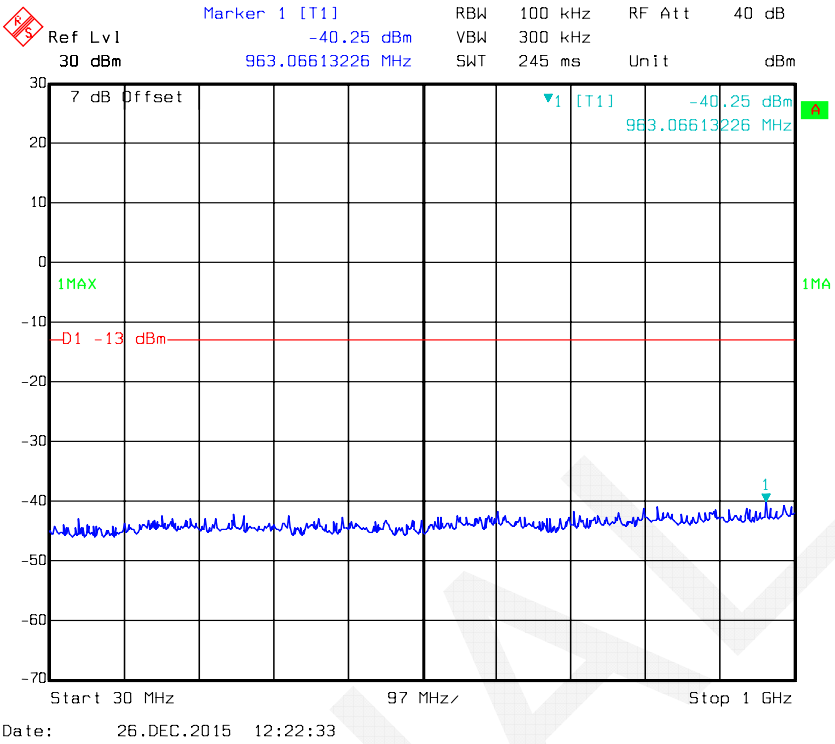


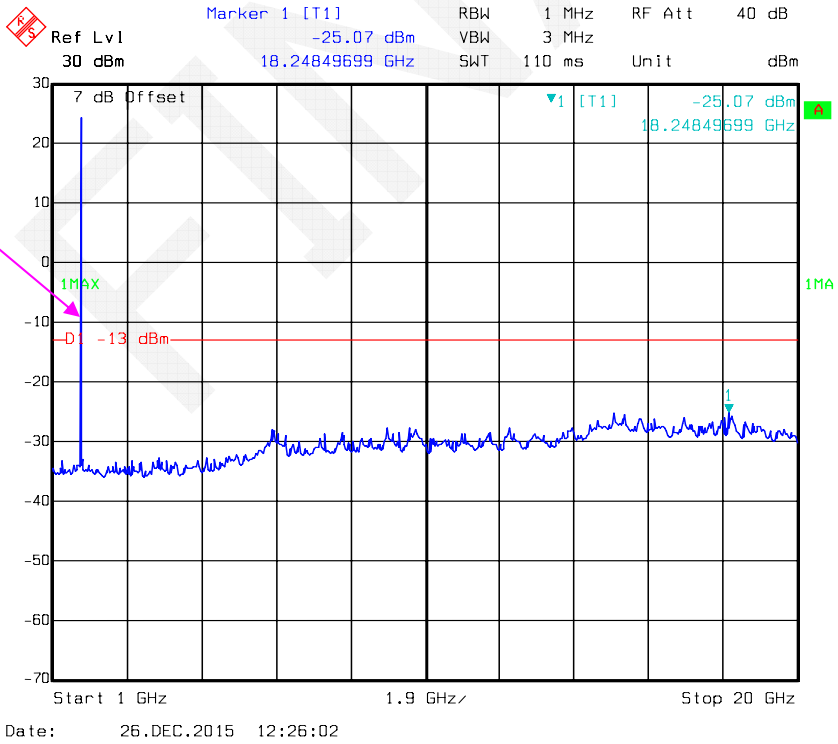
QPSK, Band 4-20M _ Middle Channel





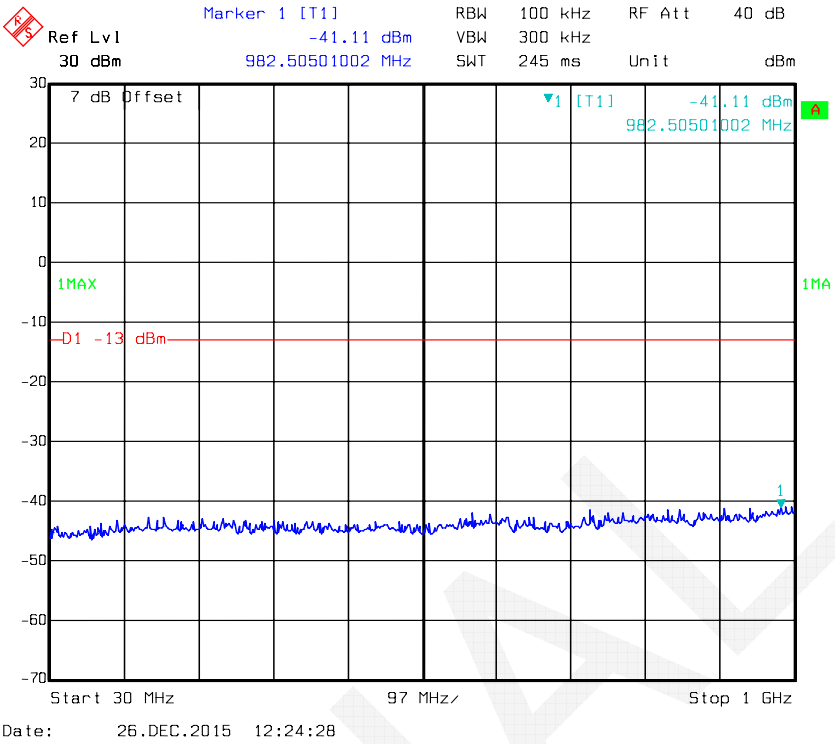
16-QAM, Band 4-1.4M _ Middle Channel



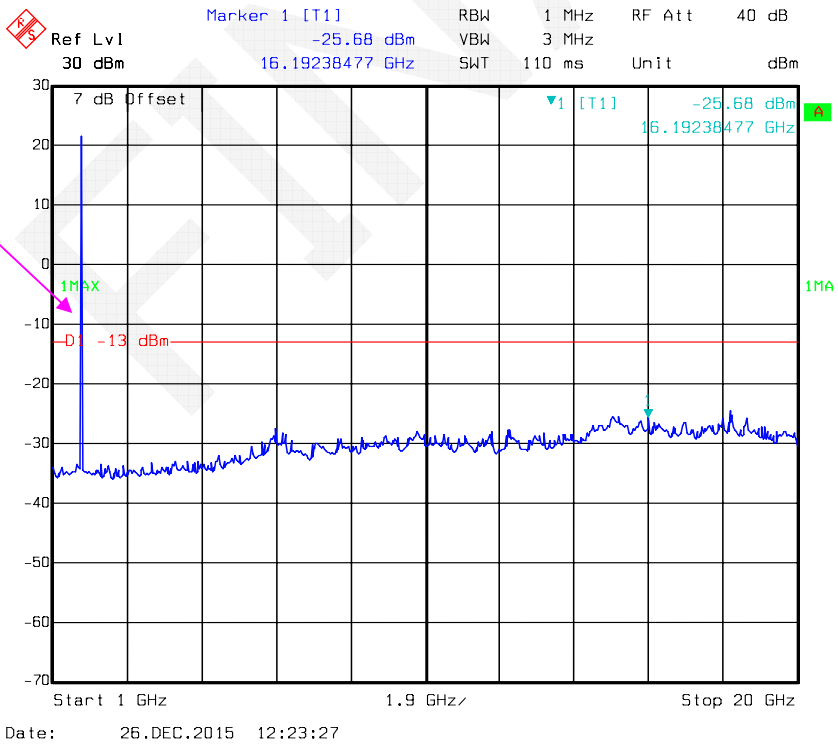


Fundamental

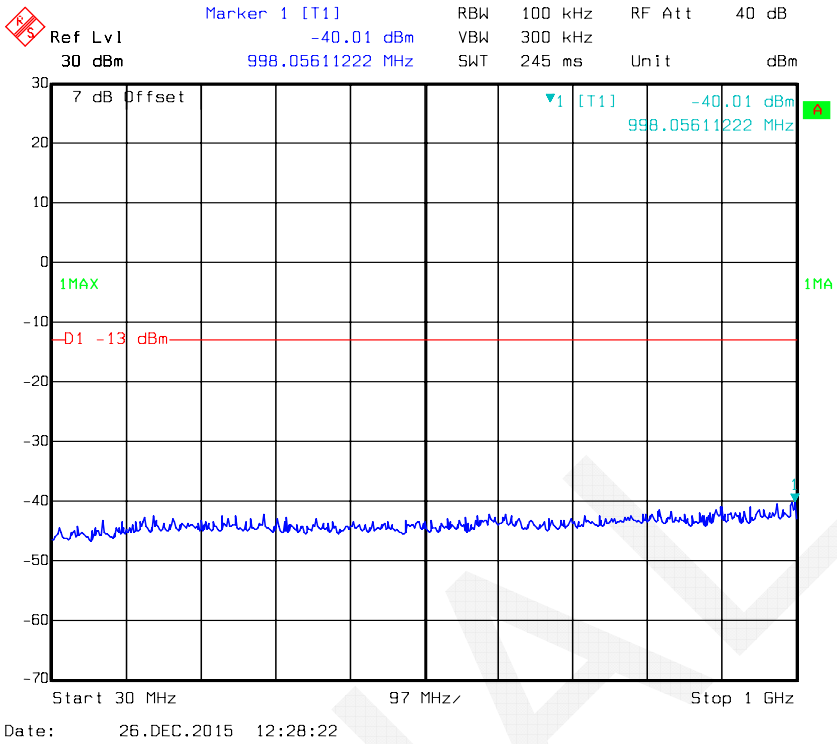
16-QAM, Band 4-3M _ Middle Channel

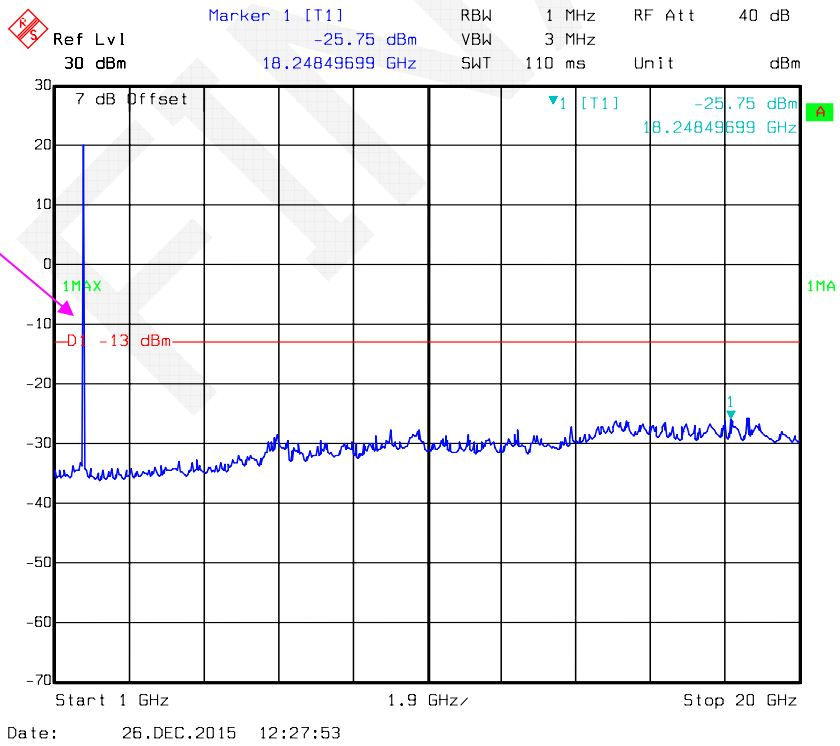


Fundamental



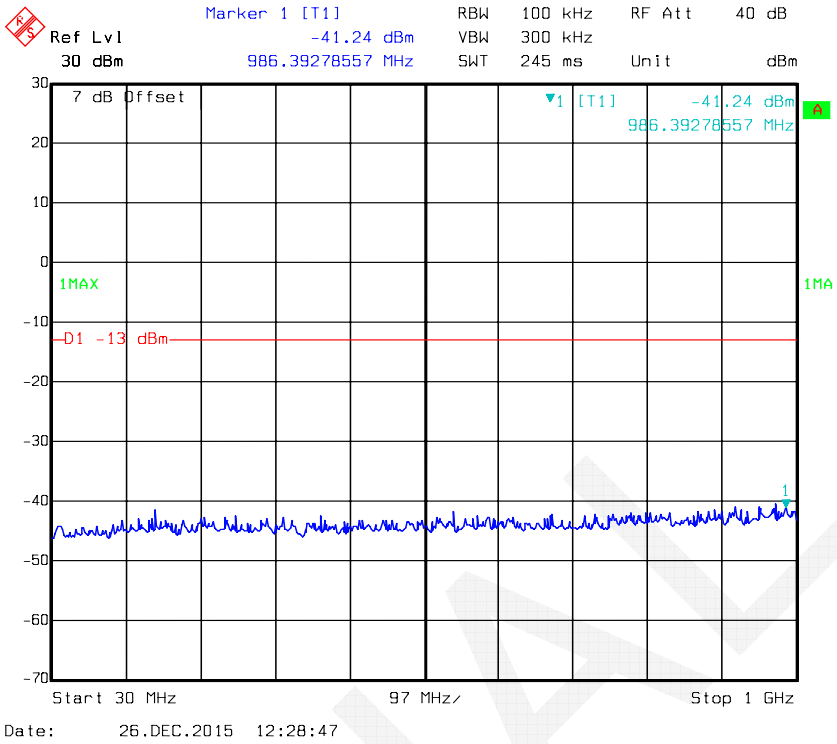
16-QAM, Band 4-5M _ Middle Channel

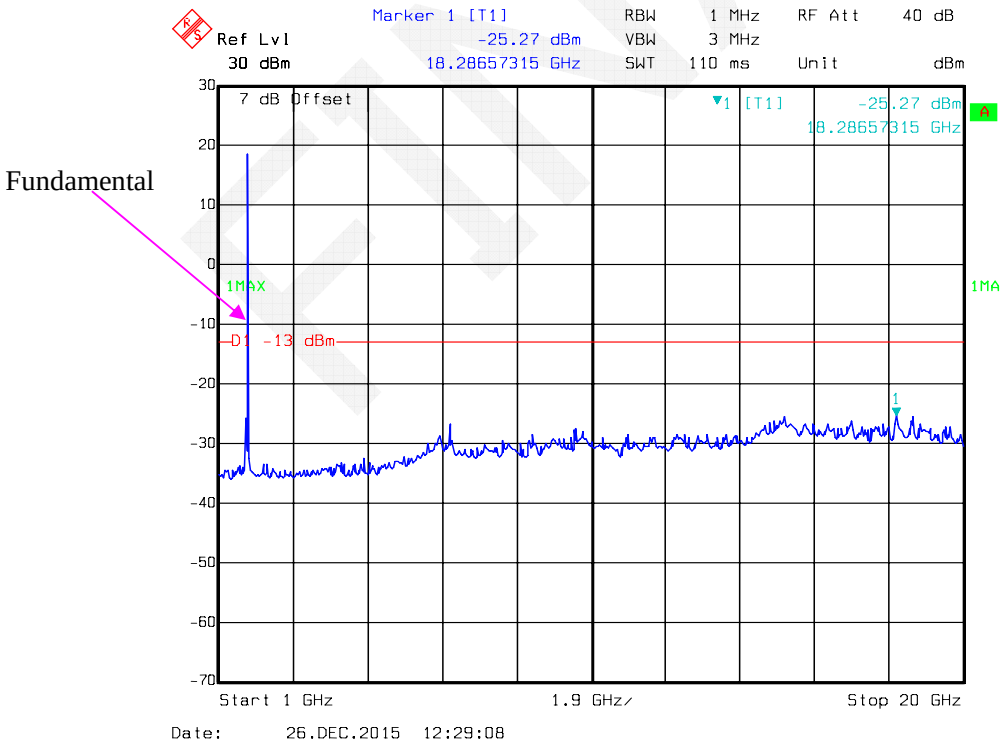




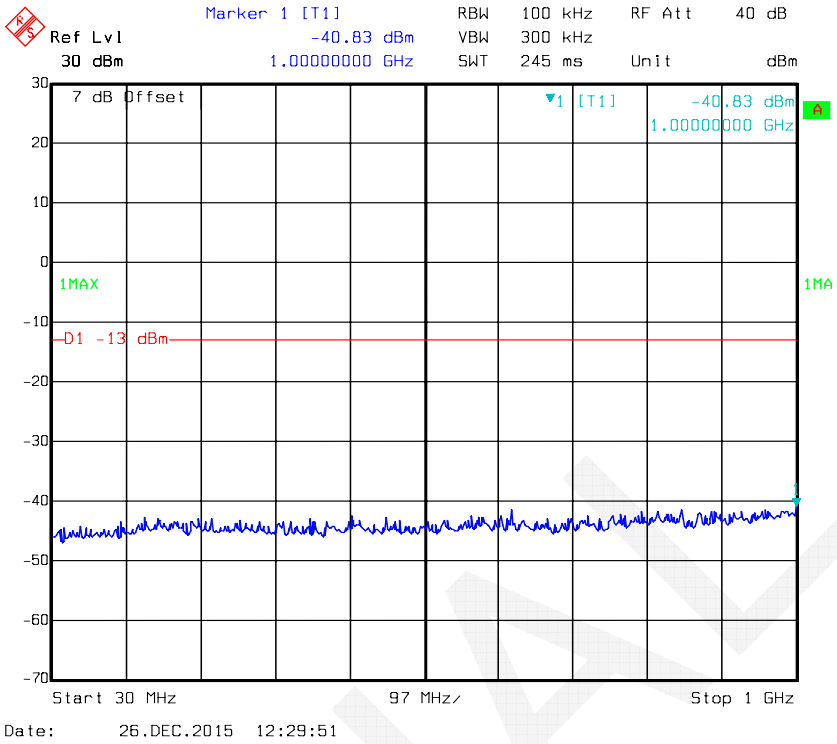
Fundamental

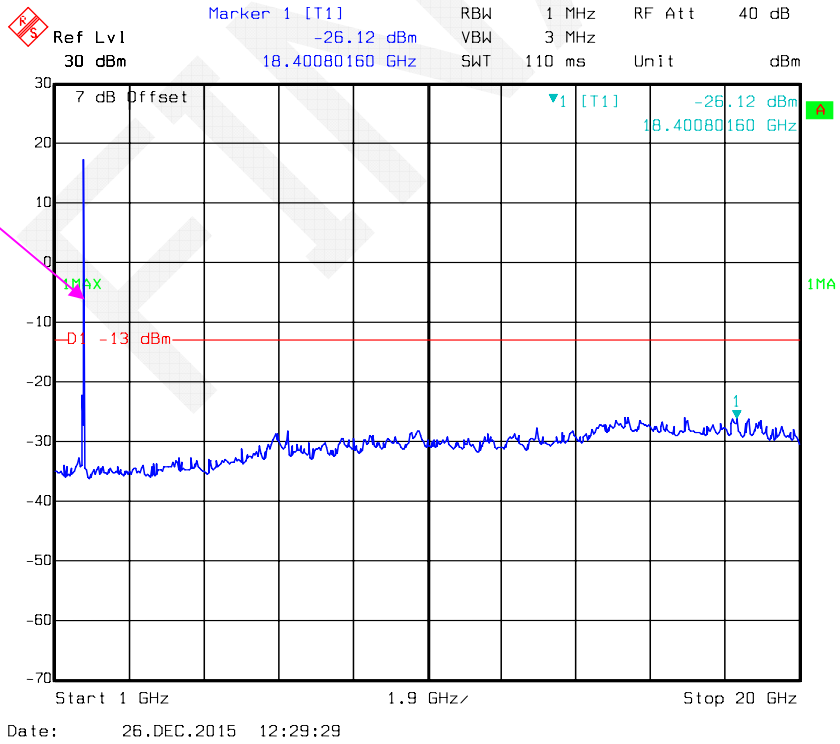
16-QAM, Band 4-10M _ Middle Channel





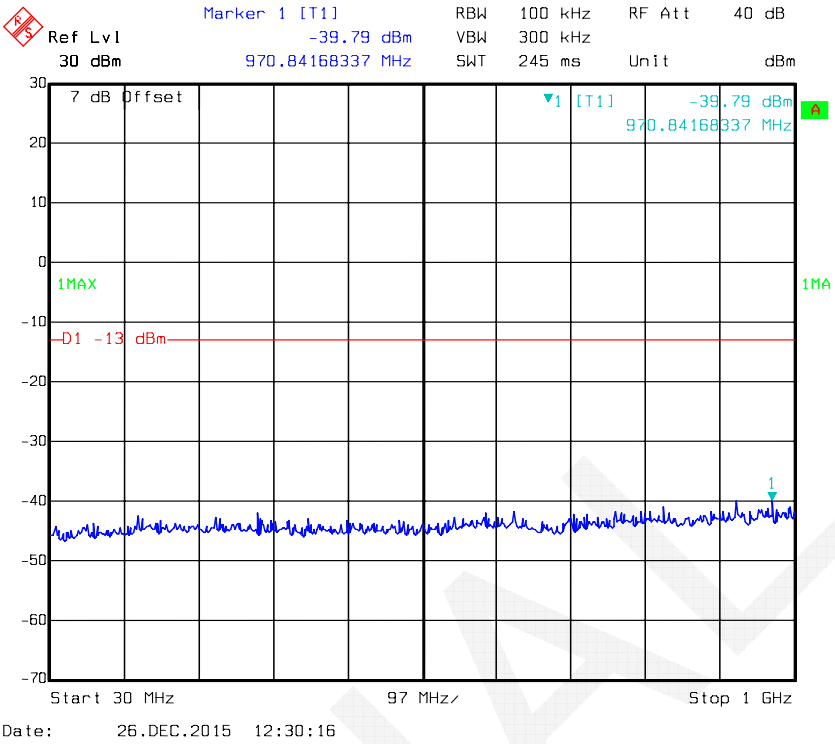
16-QAM, Band 4-15M _ Middle Channel

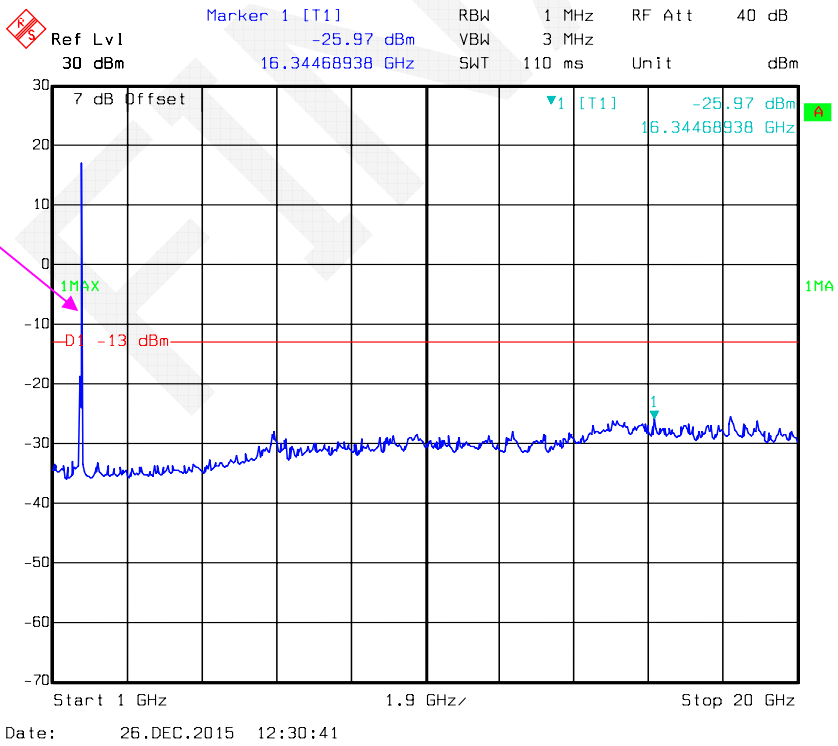




Fundamental

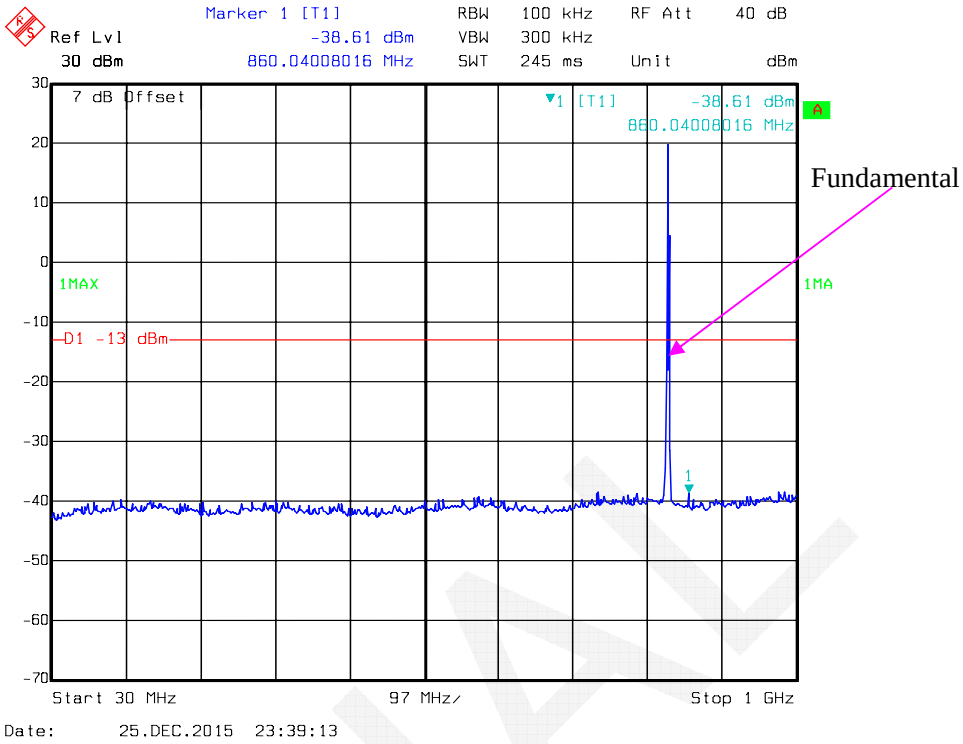
16-QAM, Band 4-20M _ Middle Channel

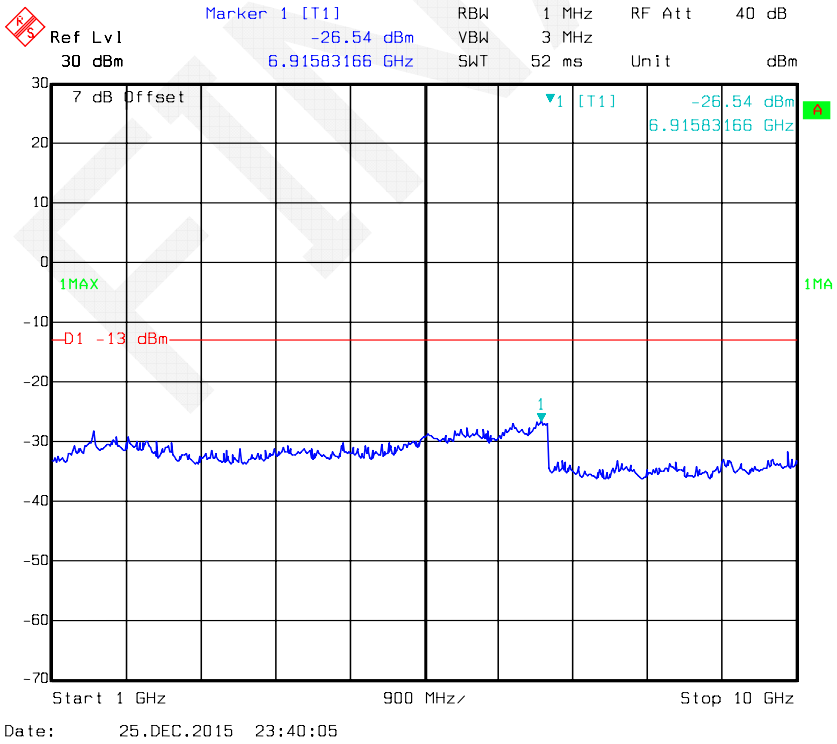




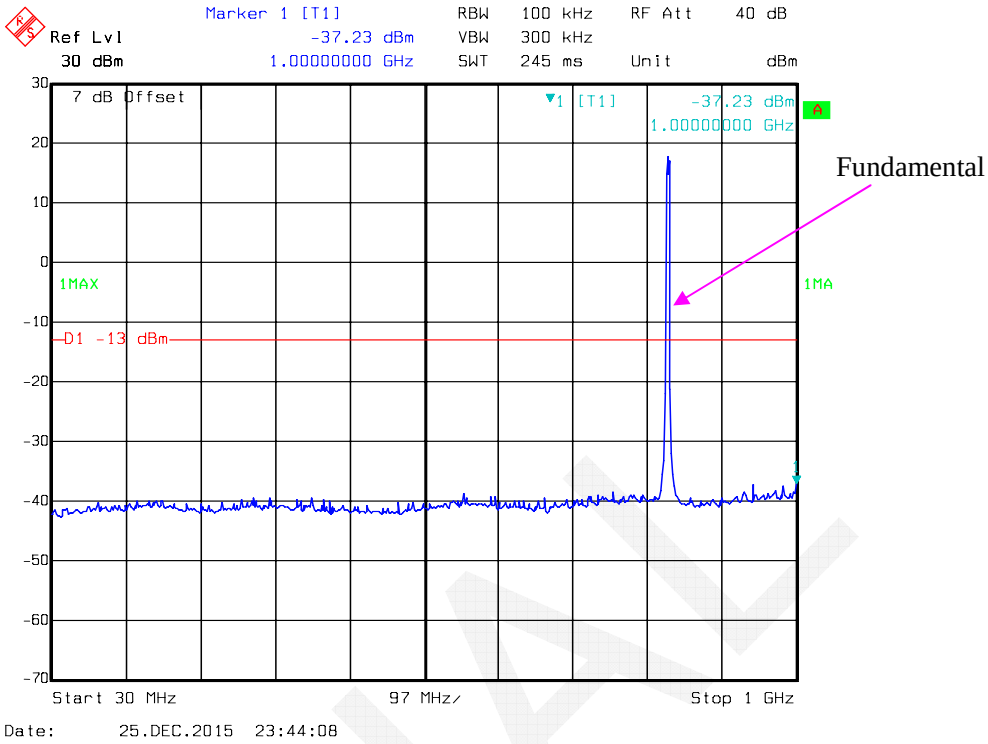
Fundamental

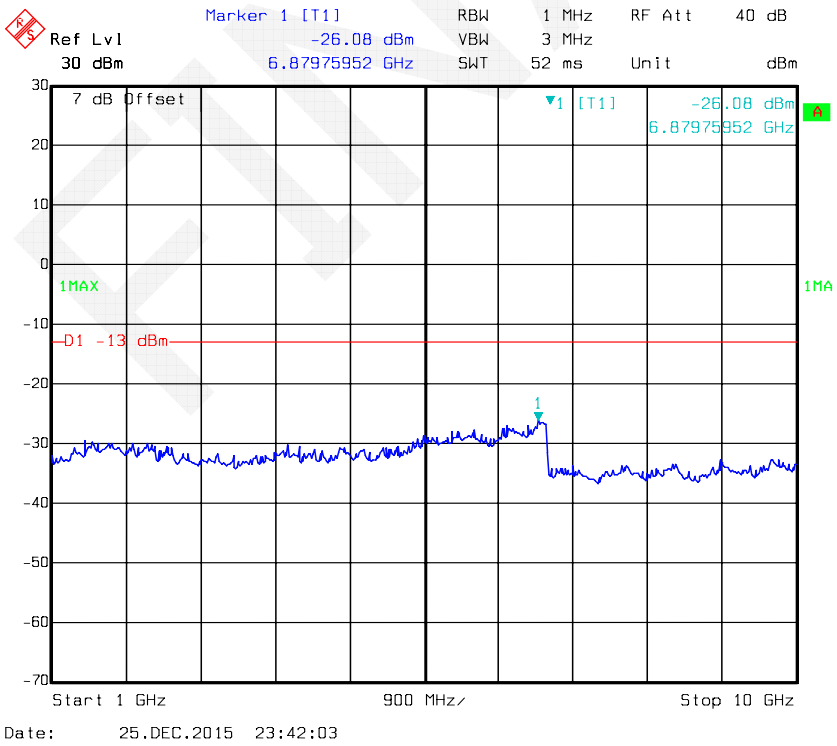
QPSK, Band 5-1.4M _ Middle Channel



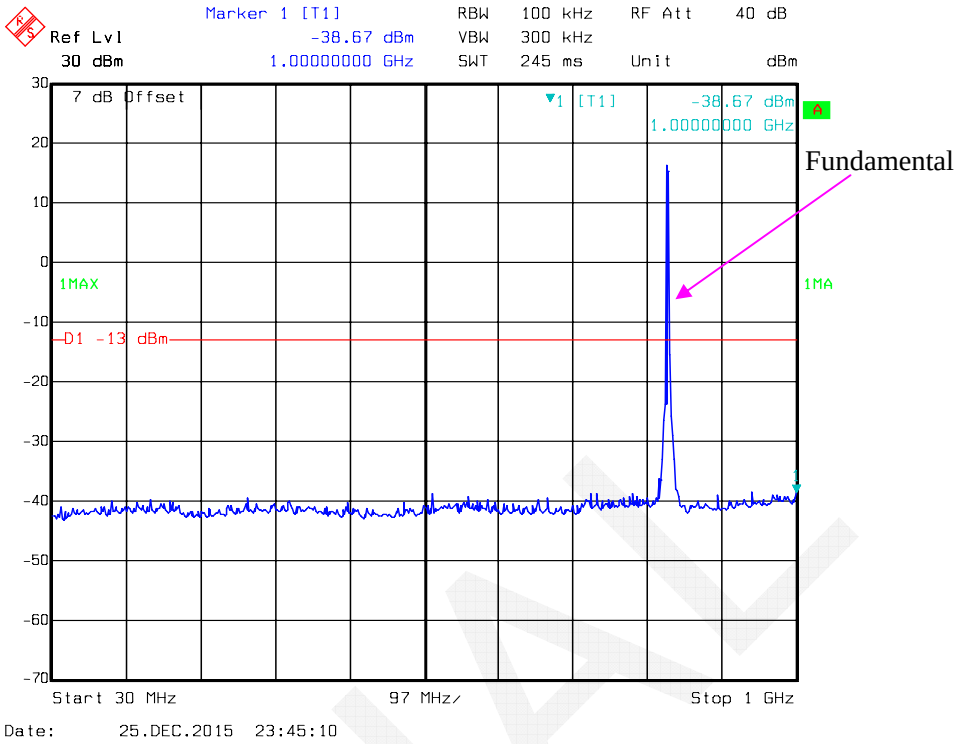


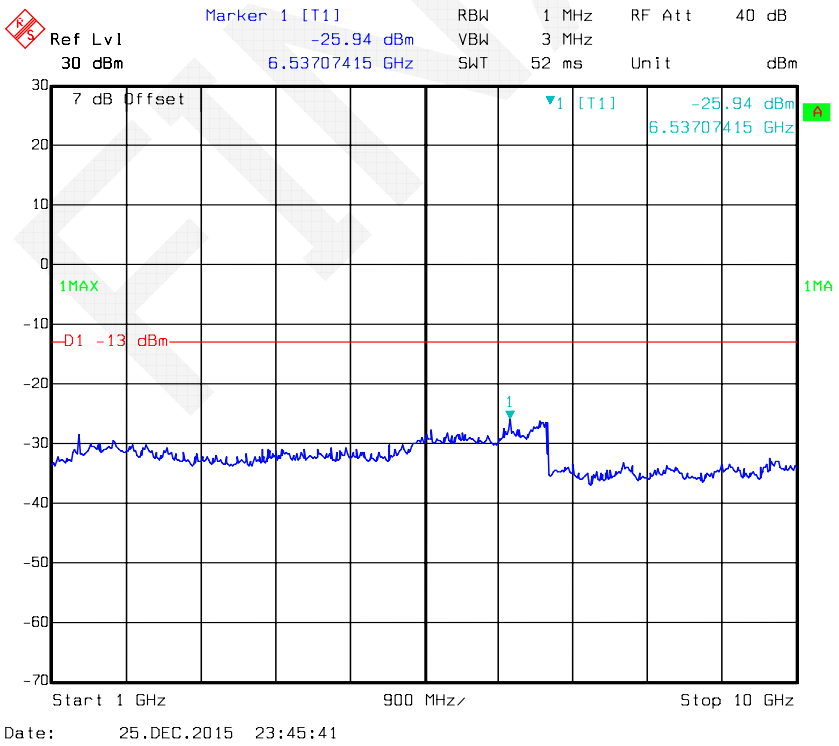
QPSK, Band 5-3M _ Middle Channel



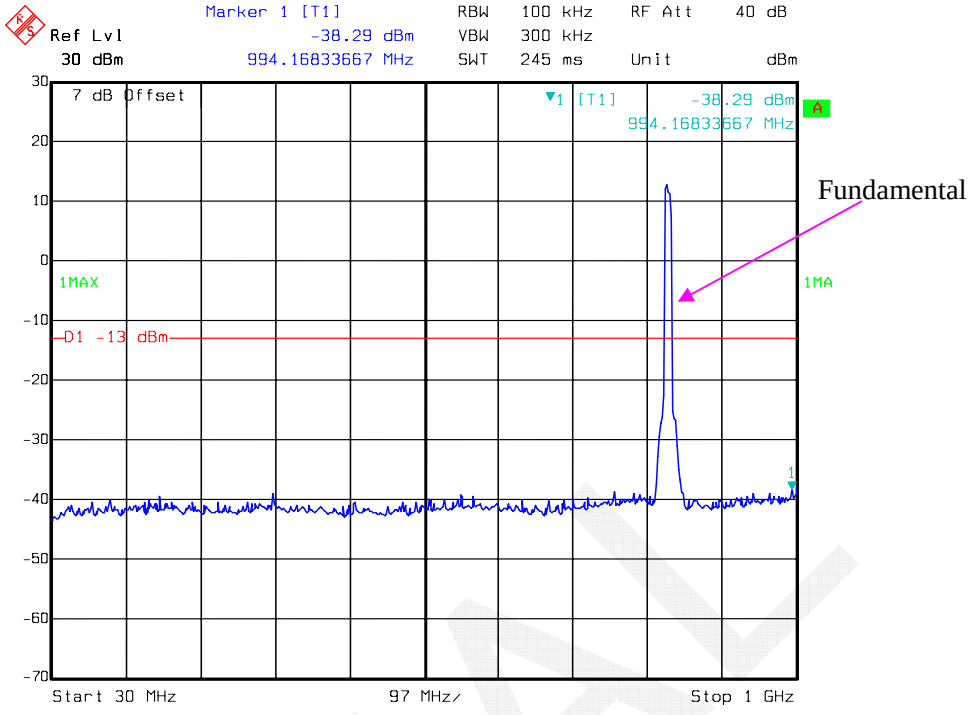


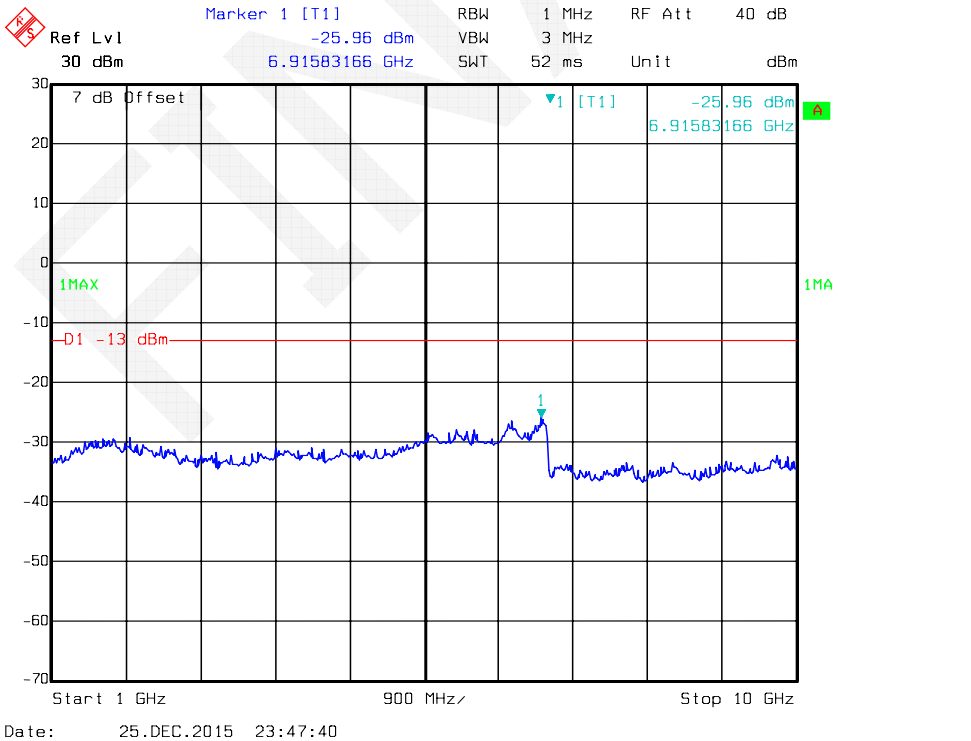
QPSK, Band 5-5M _ Middle Channel



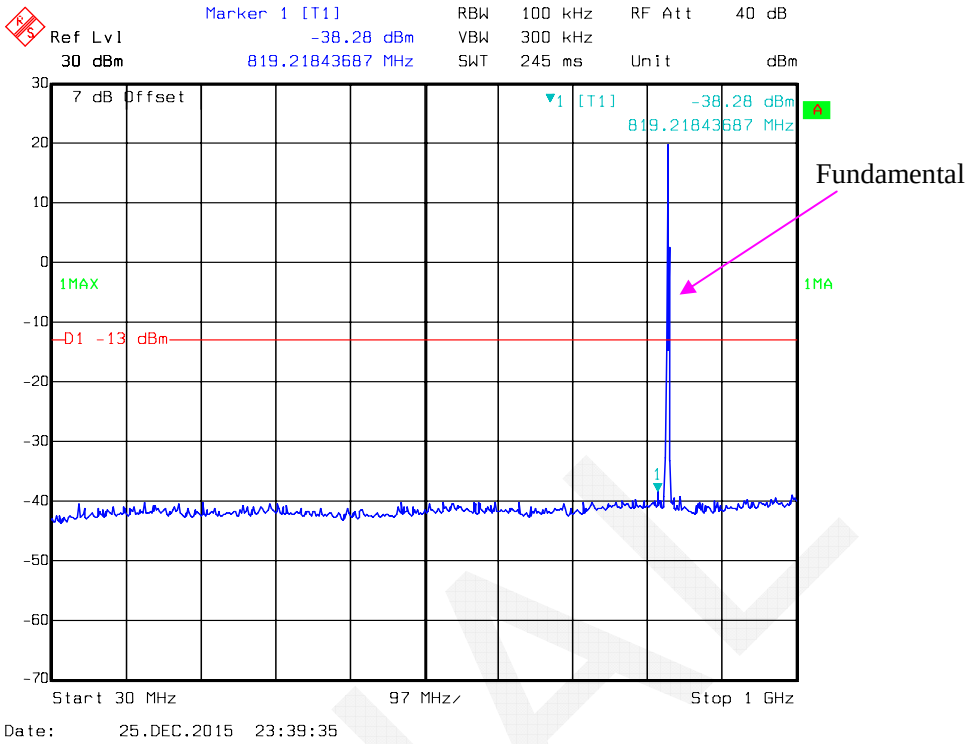


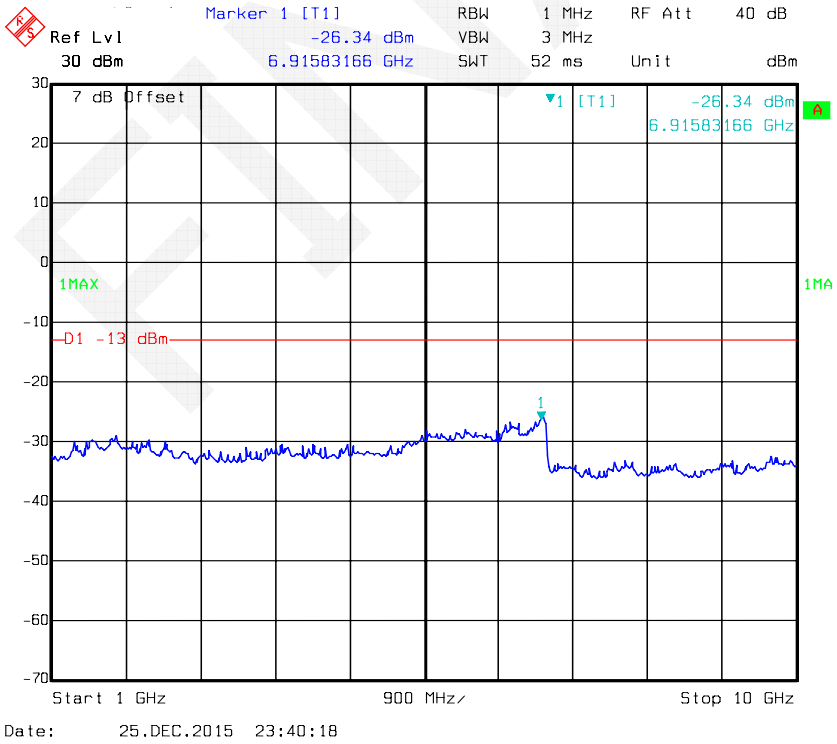
QPSK, Band 5-10M _ Middle Channel



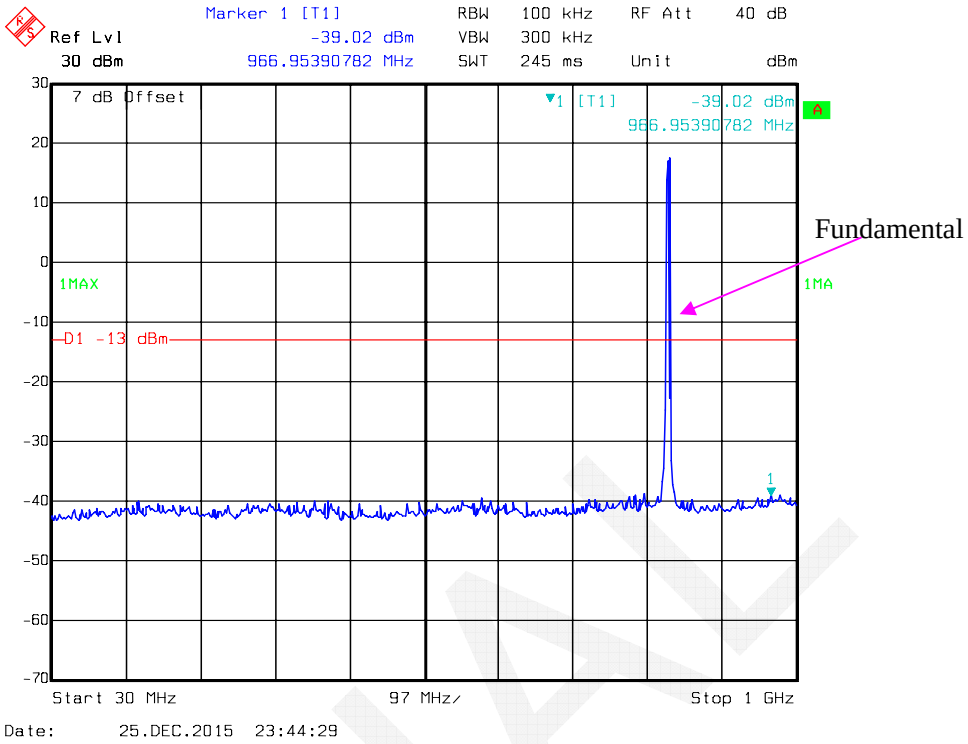


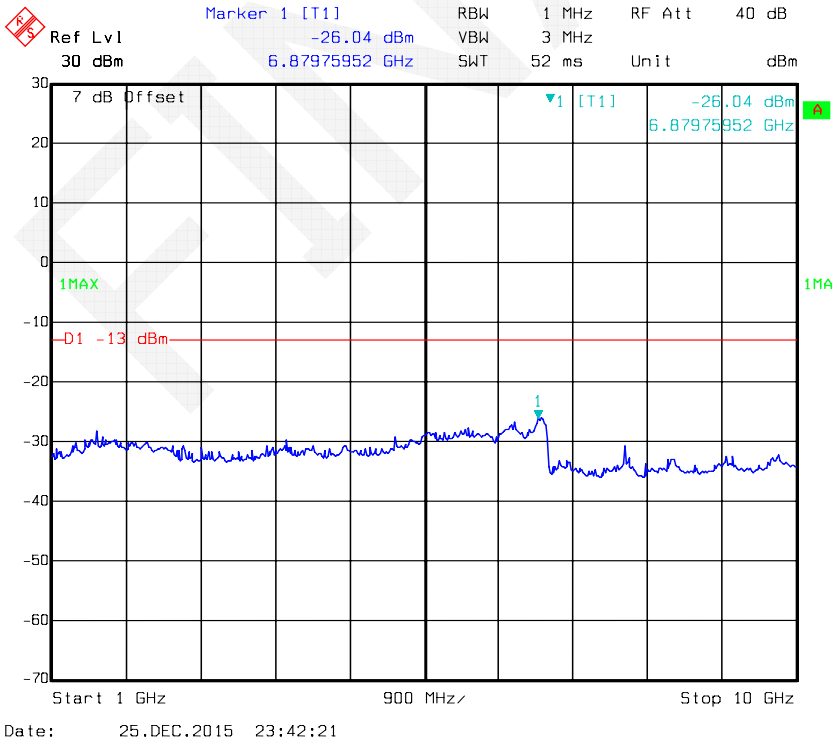
16-QAM, Band 5-1.4M _ Middle Channel



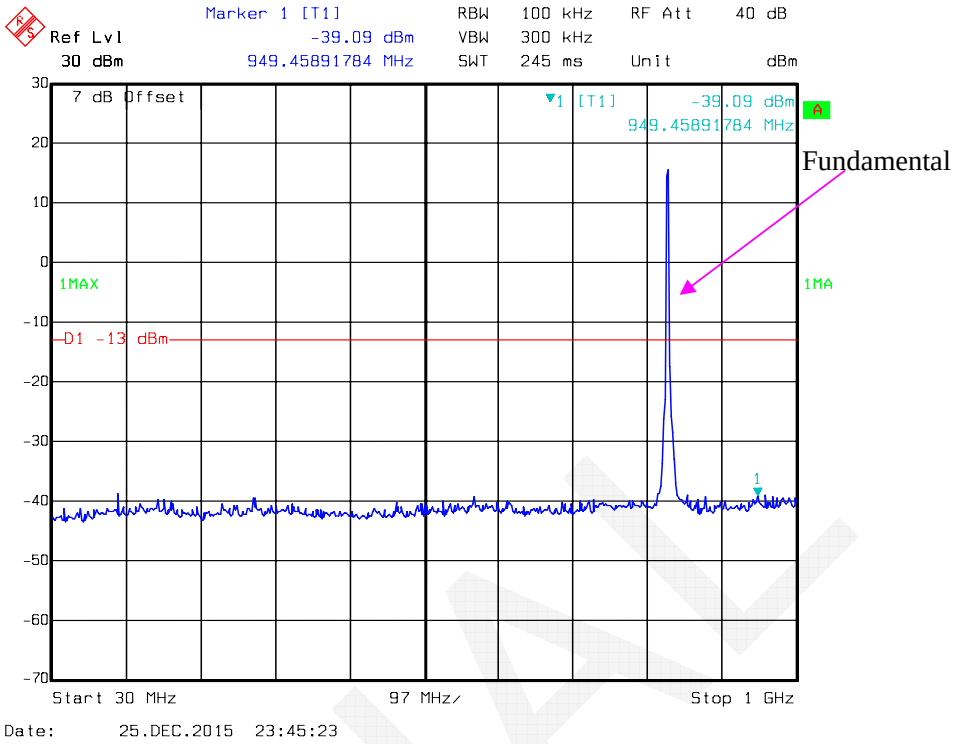


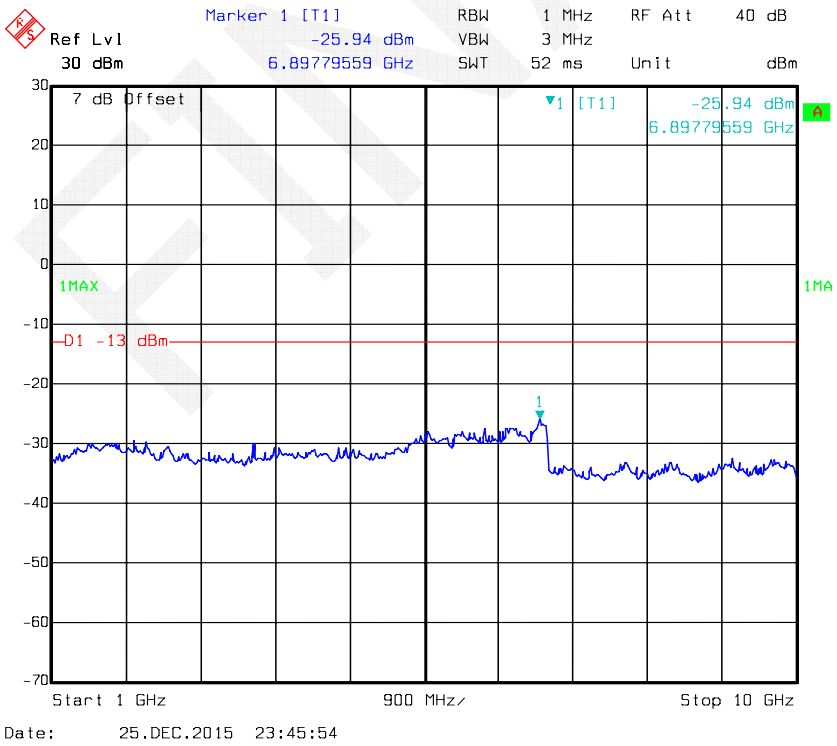
16-QAM, Band 5-3M _ Middle Channel



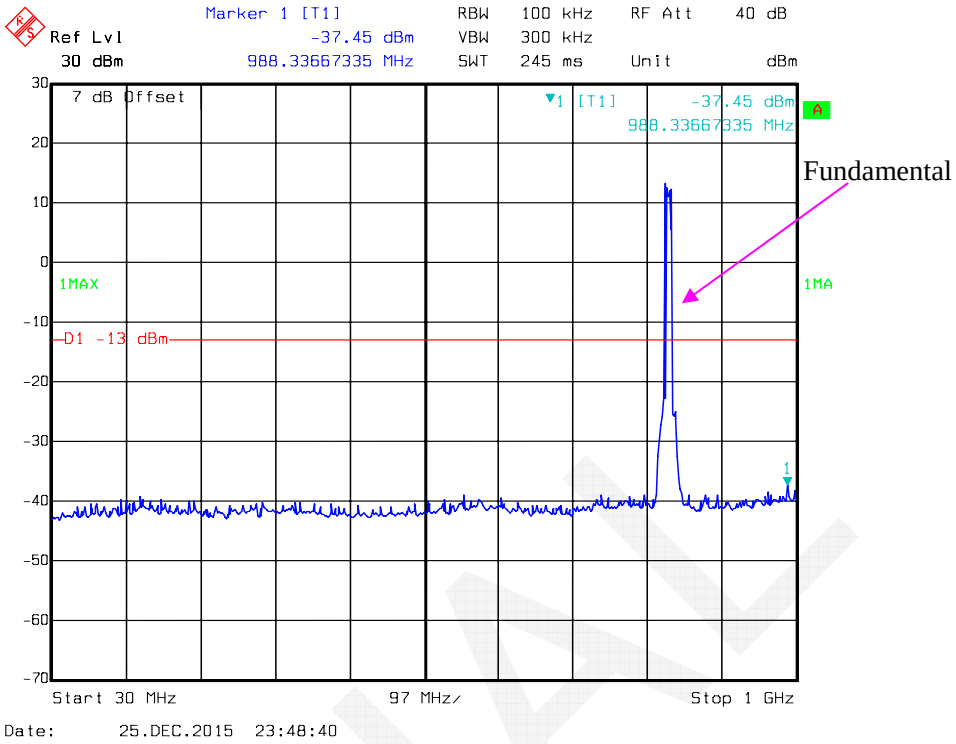


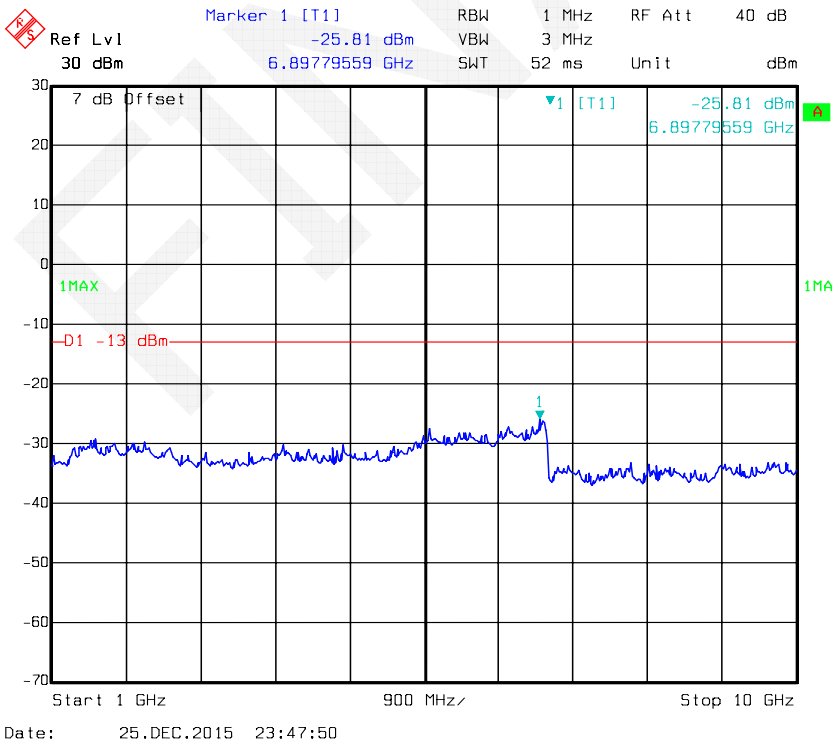
16-QAM, Band 5-5M _ Middle Channel



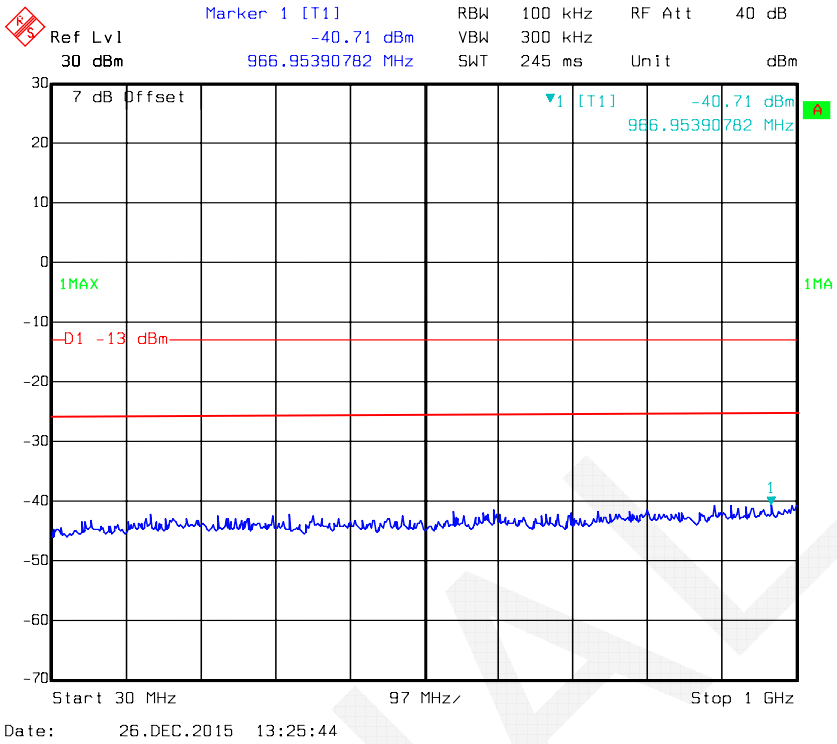


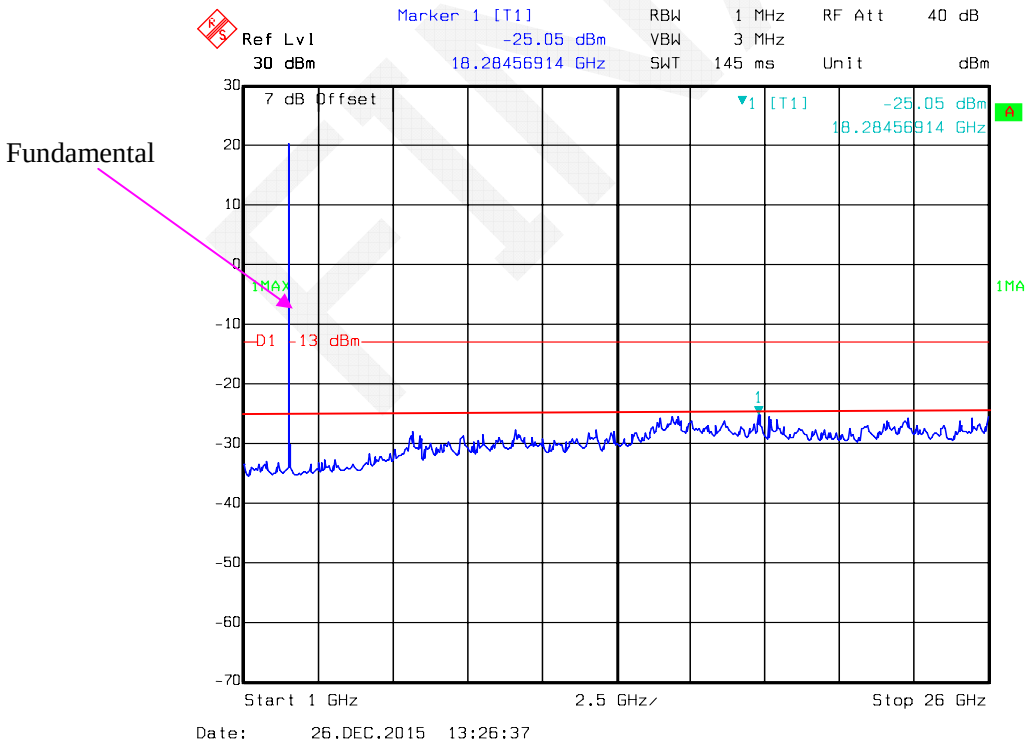
16-QAM, Band 5-10M _ Middle Channel



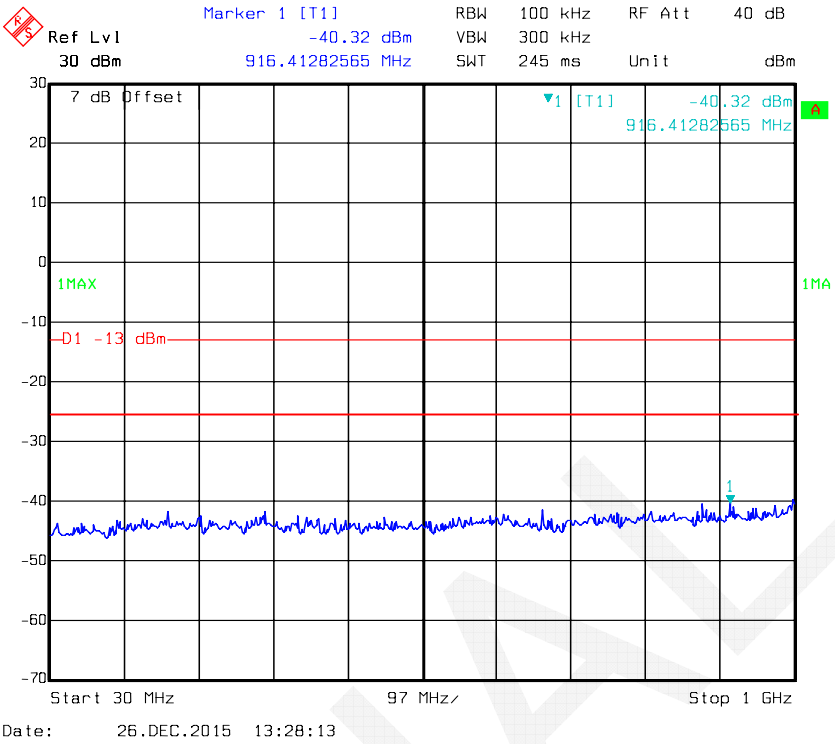


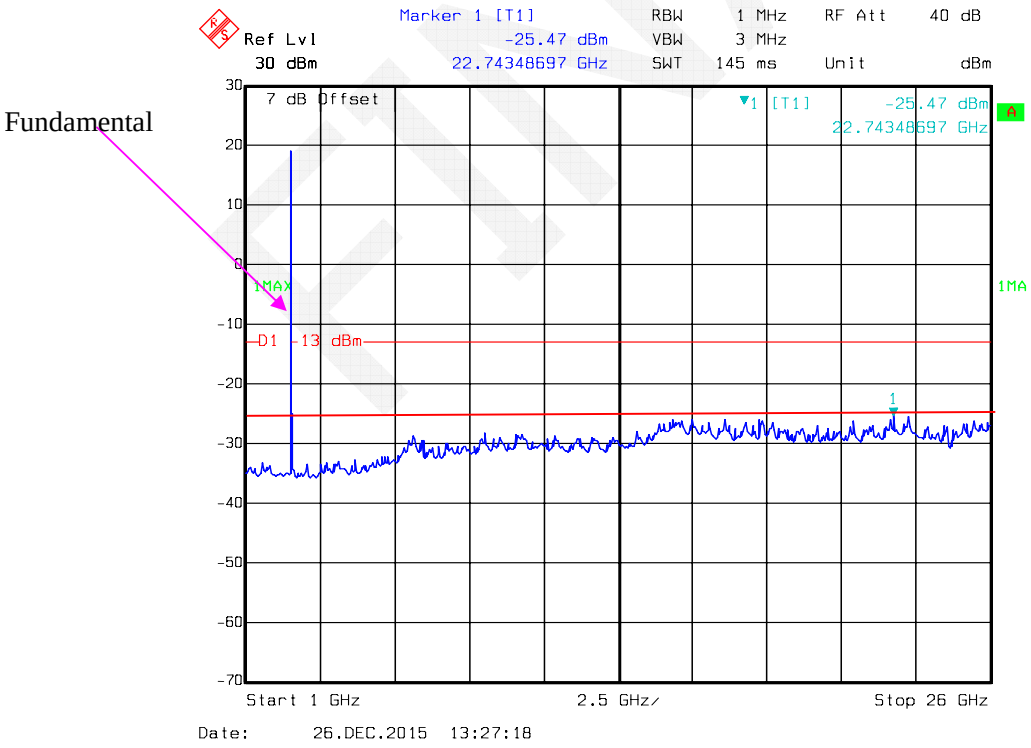
QPSK, Band 7-5M _ Middle Channel



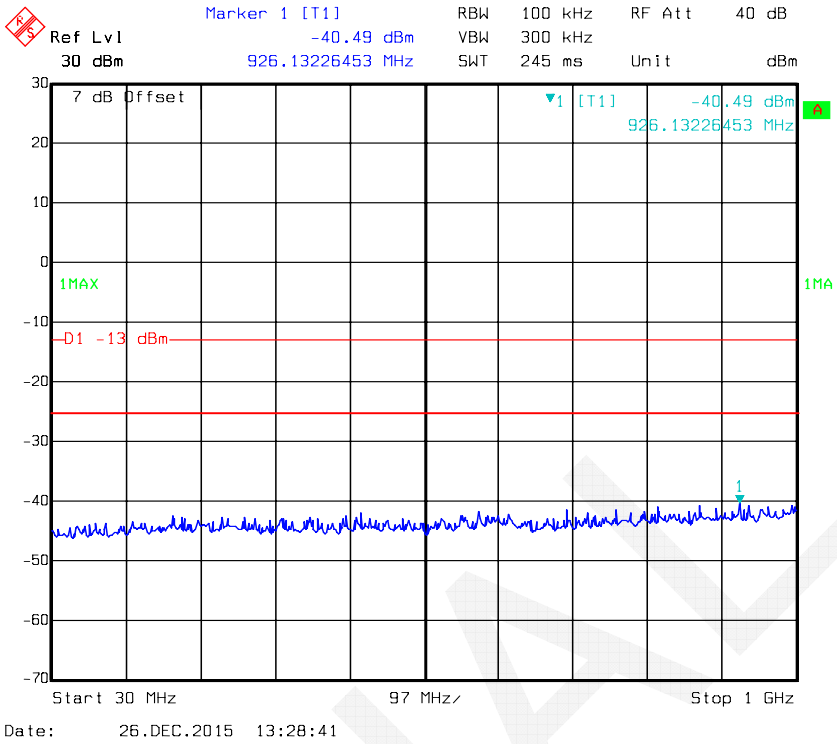


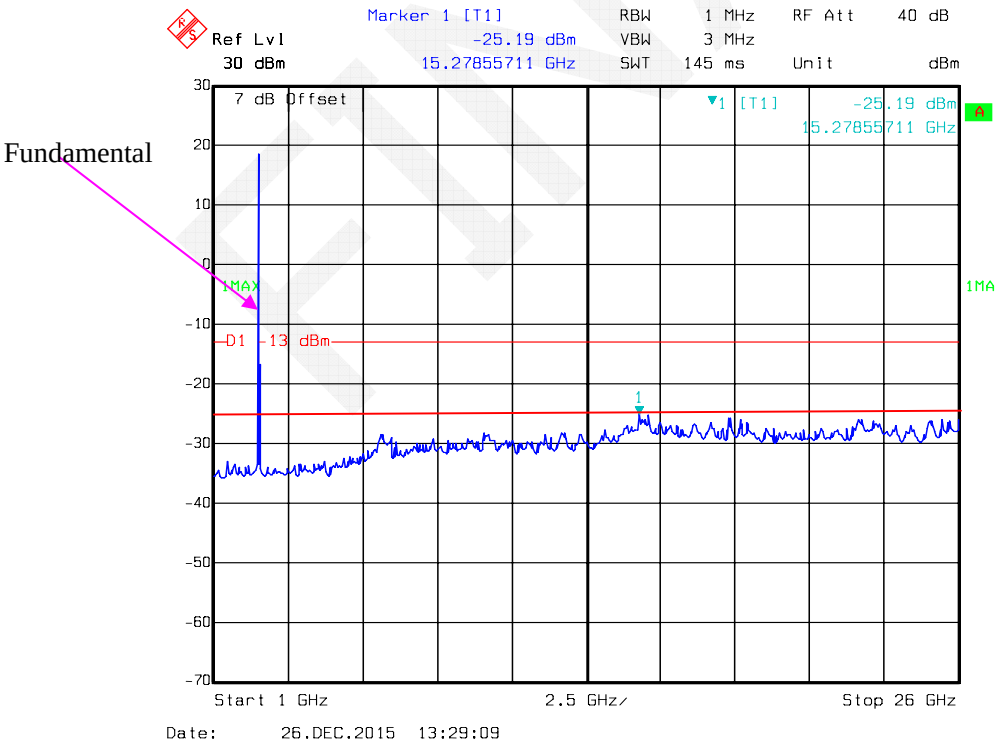
QPSK, Band 7-10M _ Middle Channel



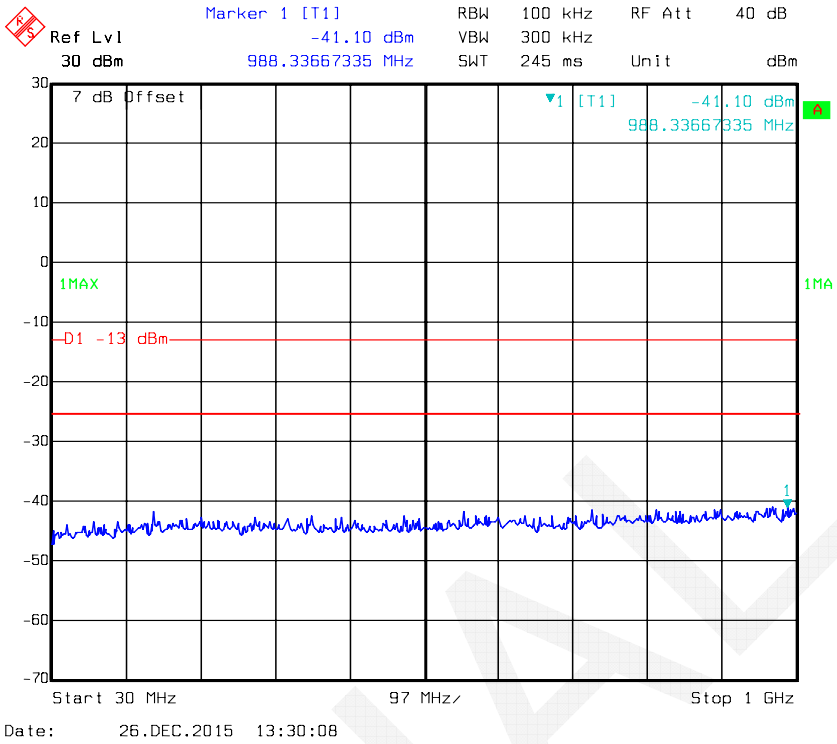


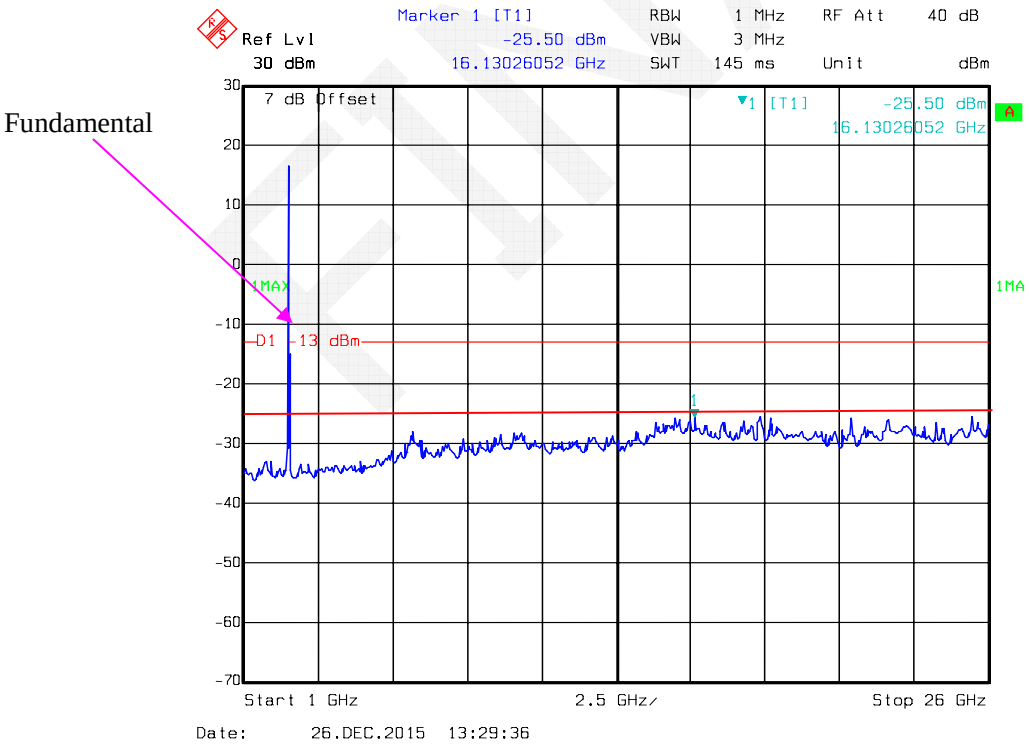
QPSK, Band 7-15M _ Middle Channel



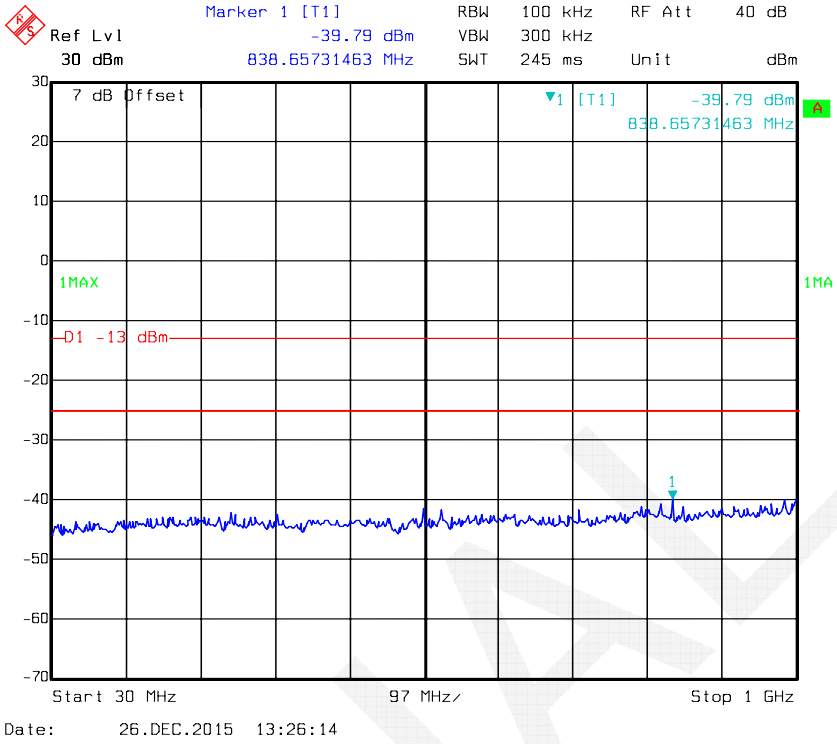


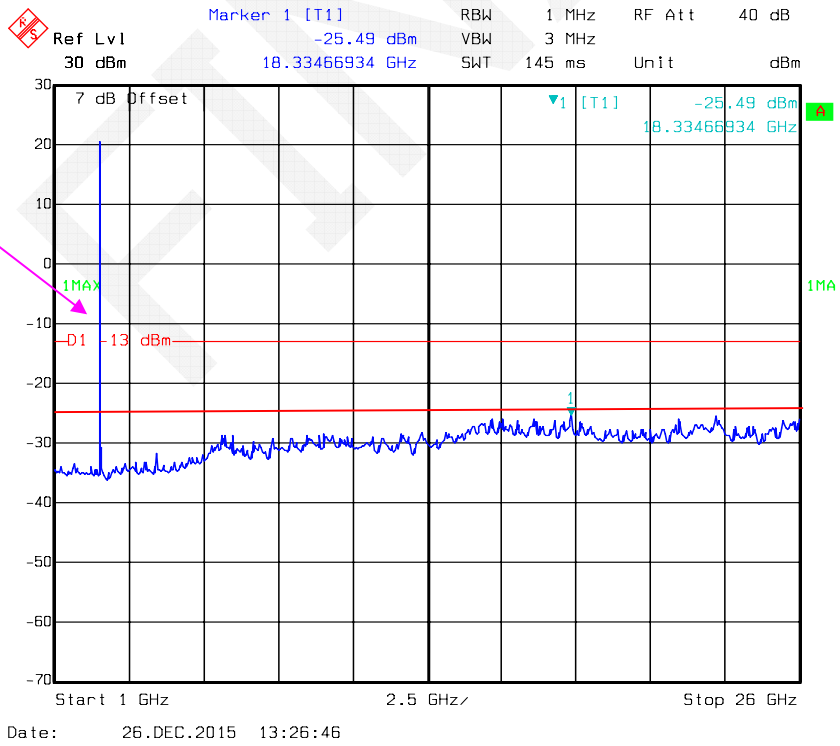
QPSK, Band 7-20M _ Middle Channel





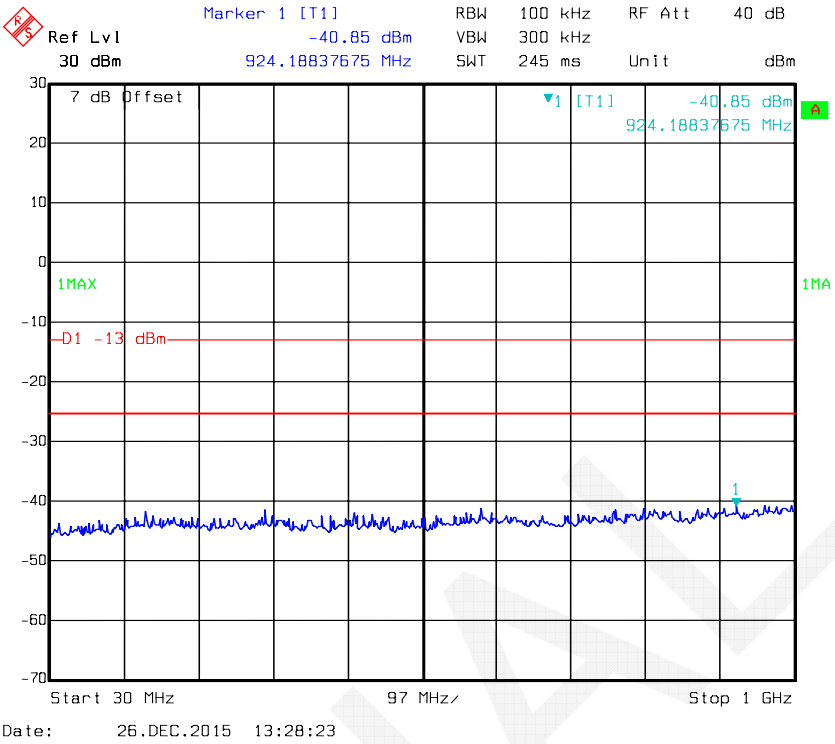
16-QAM, Band 7-5M _ Middle Channel

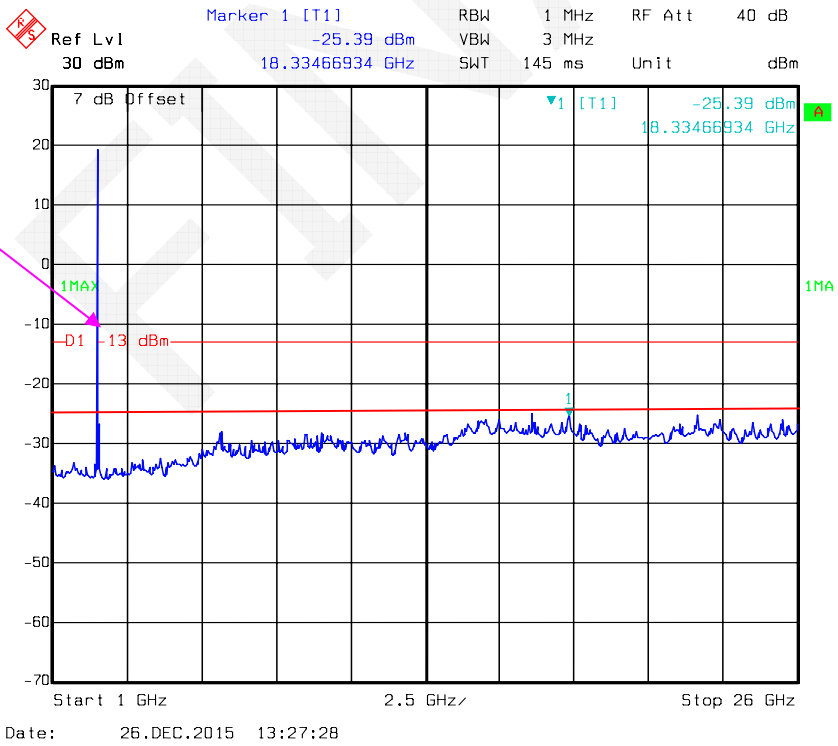




Fundamental

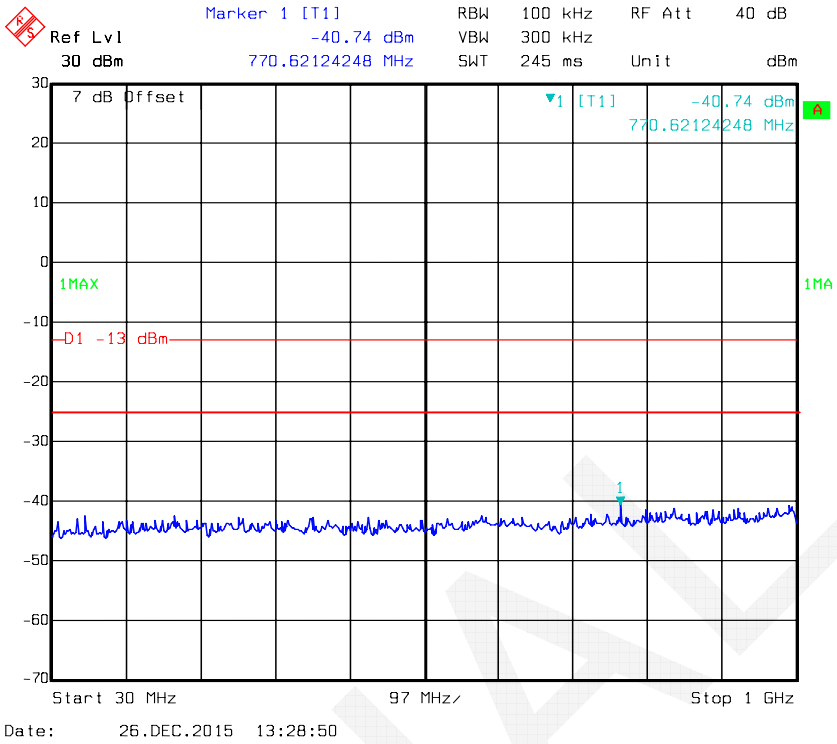
16-QAM, Band 7-10M _ Middle Channel

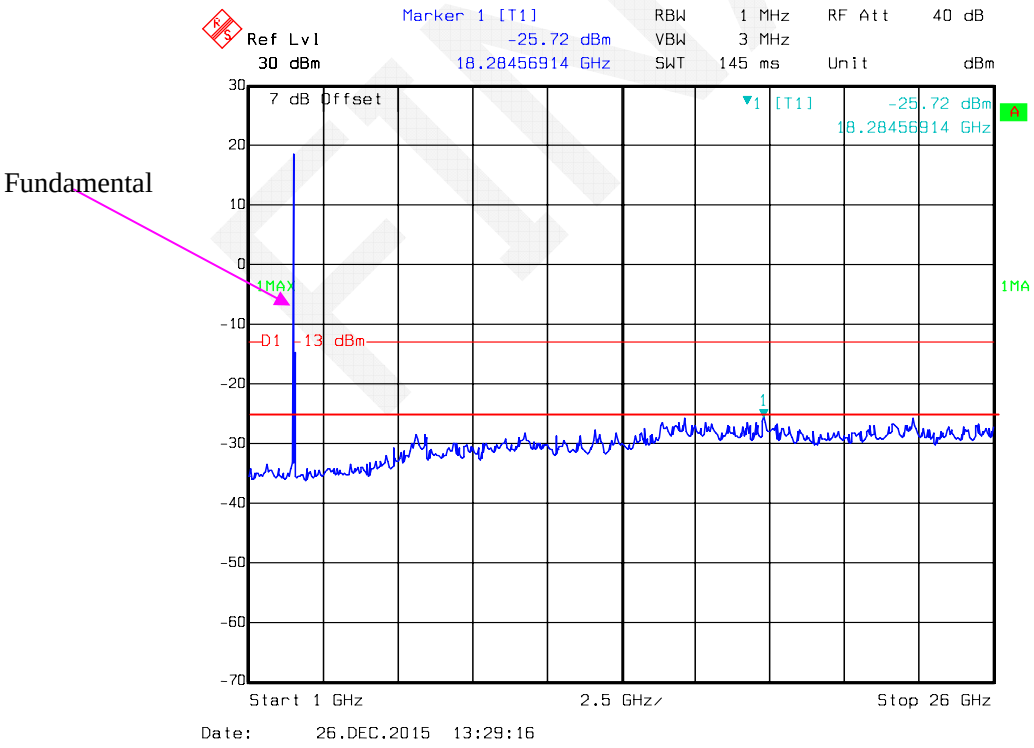




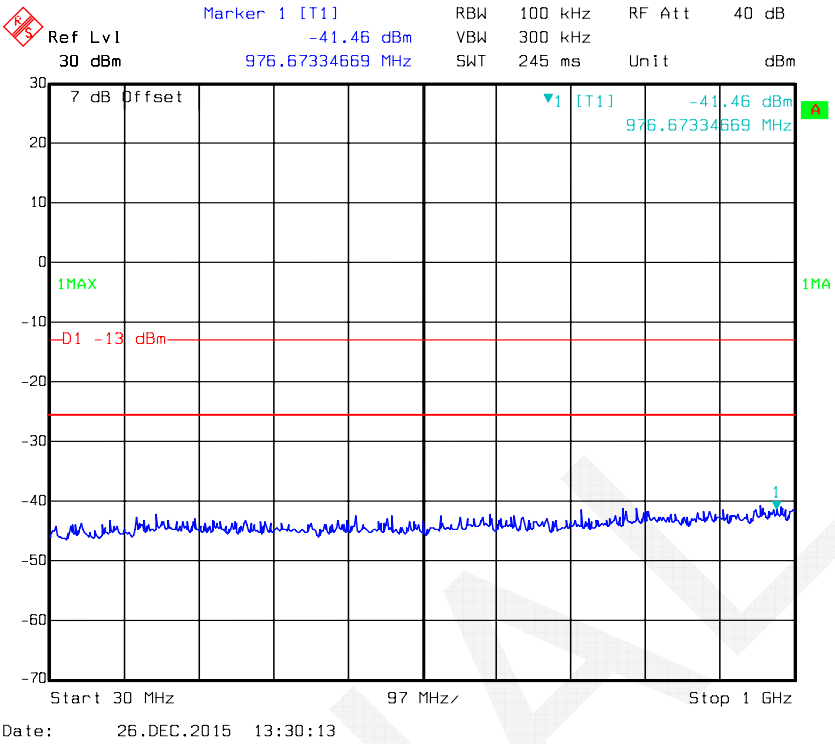
Fundamental

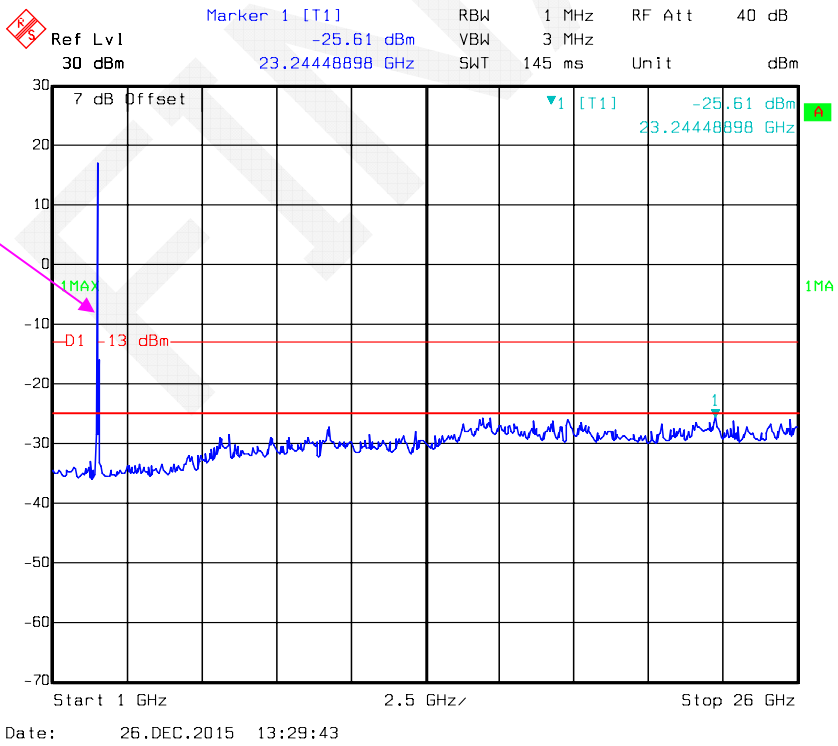
16-QAM, Band 7-15M _ Middle Channel





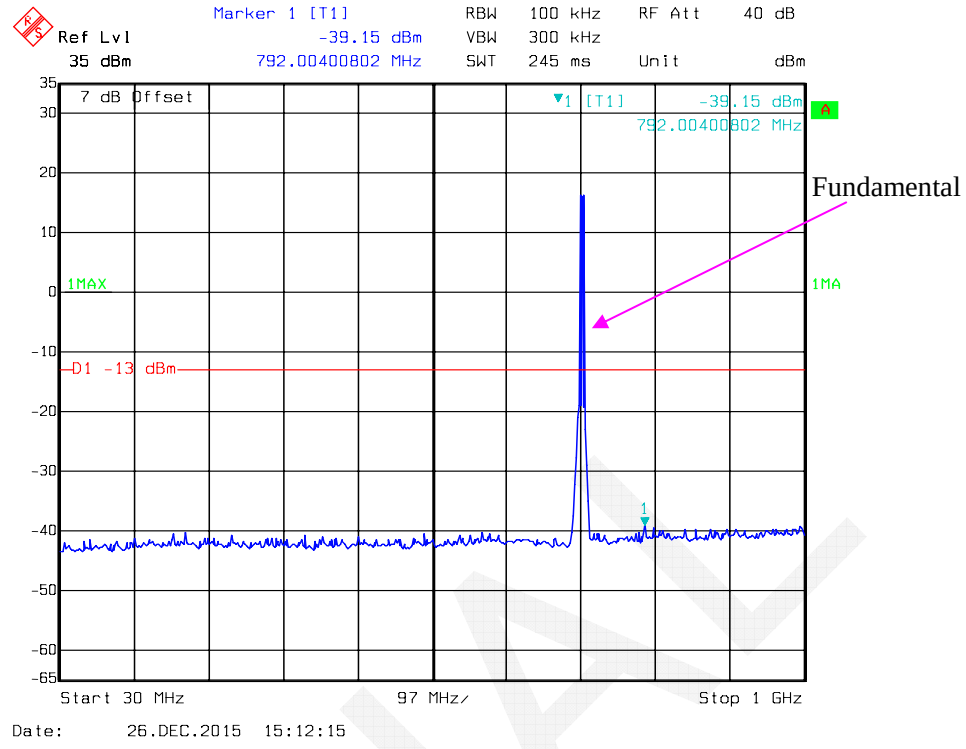
16-QAM, Band 7-20M _ Middle Channel

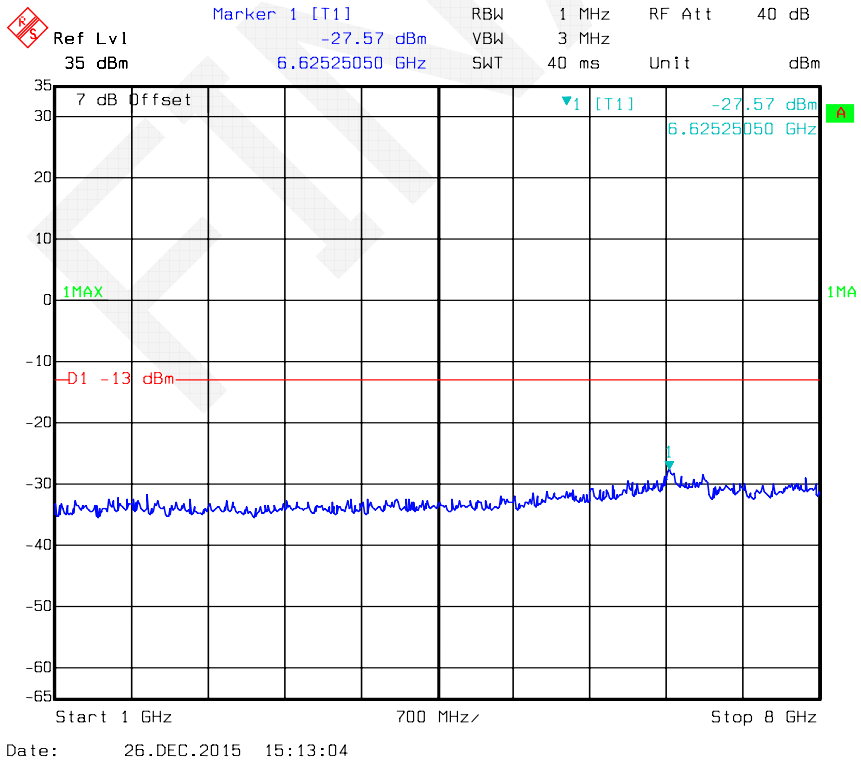




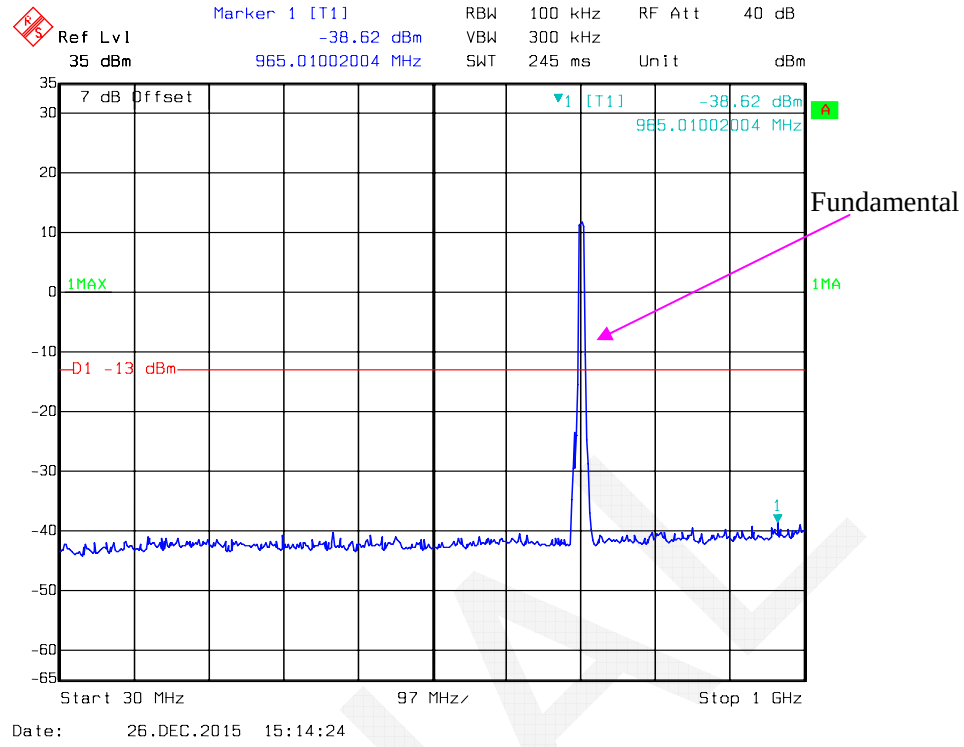
Fundamental

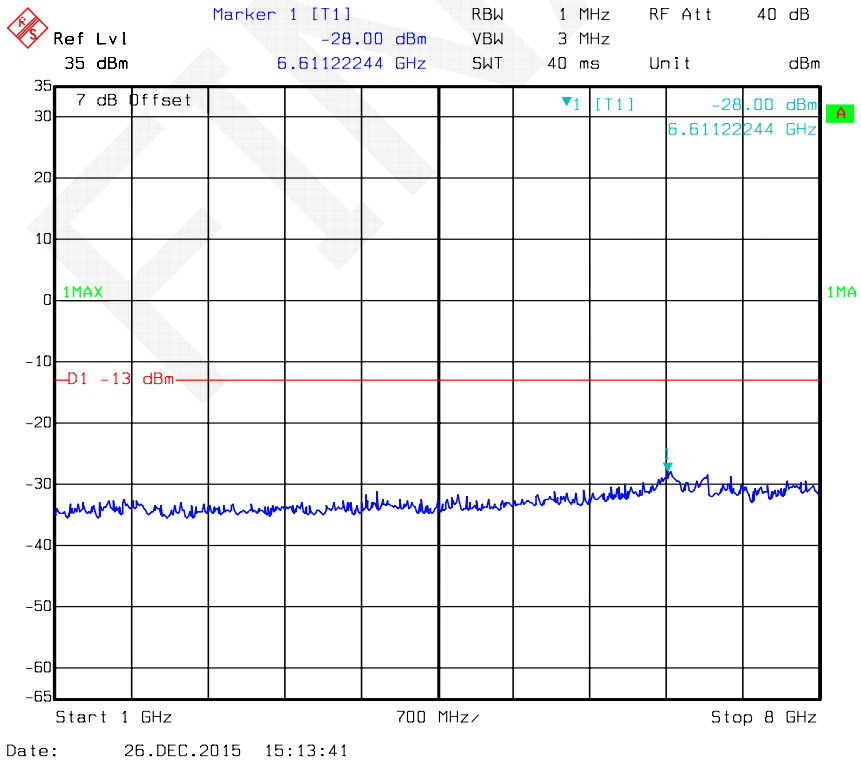
QPSK, Band 17-5M _ Middle Channel



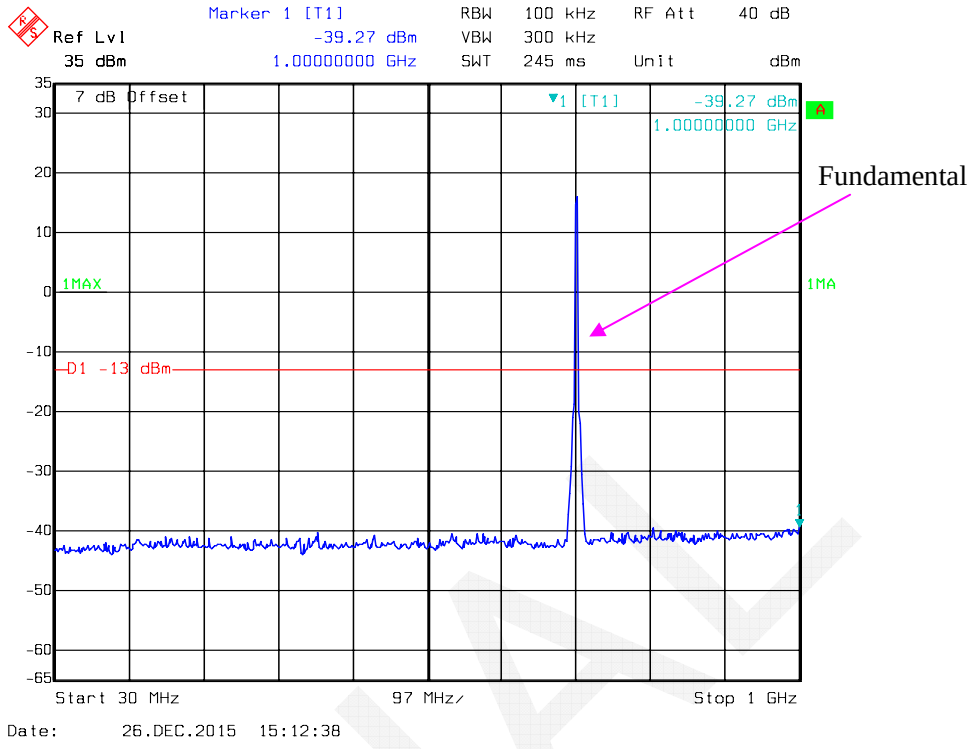


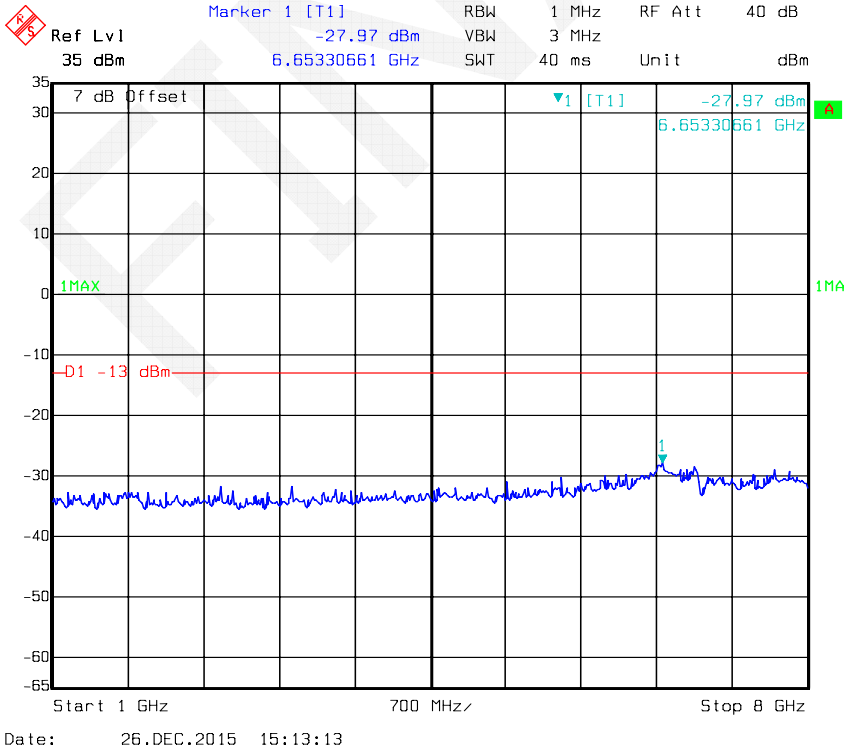
QPSK, Band 17-10M _ Middle Channel



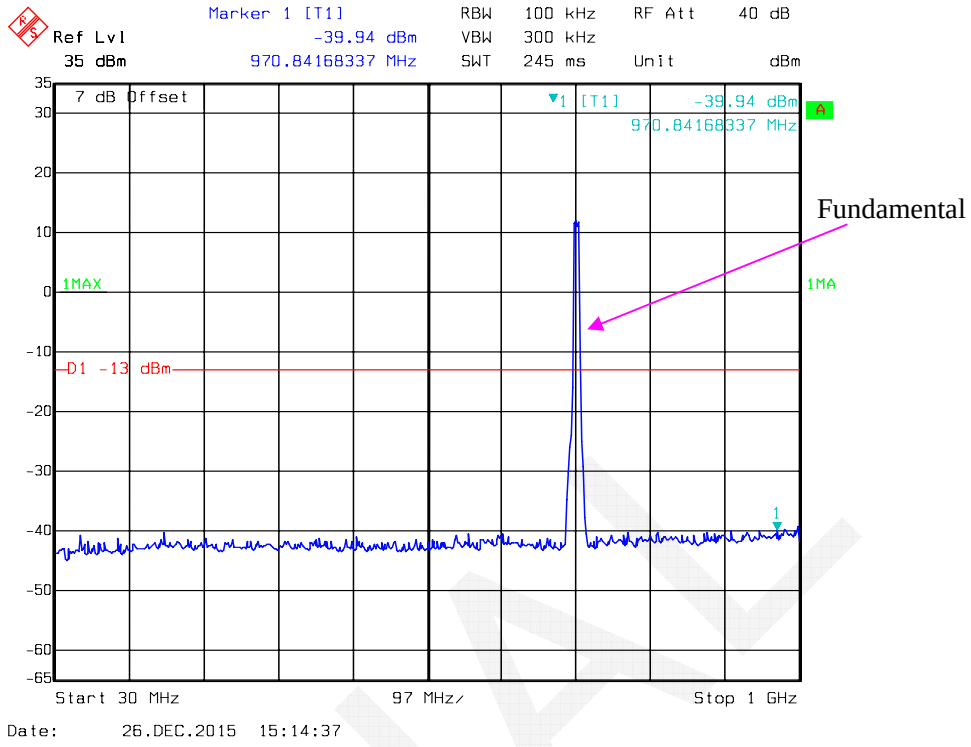


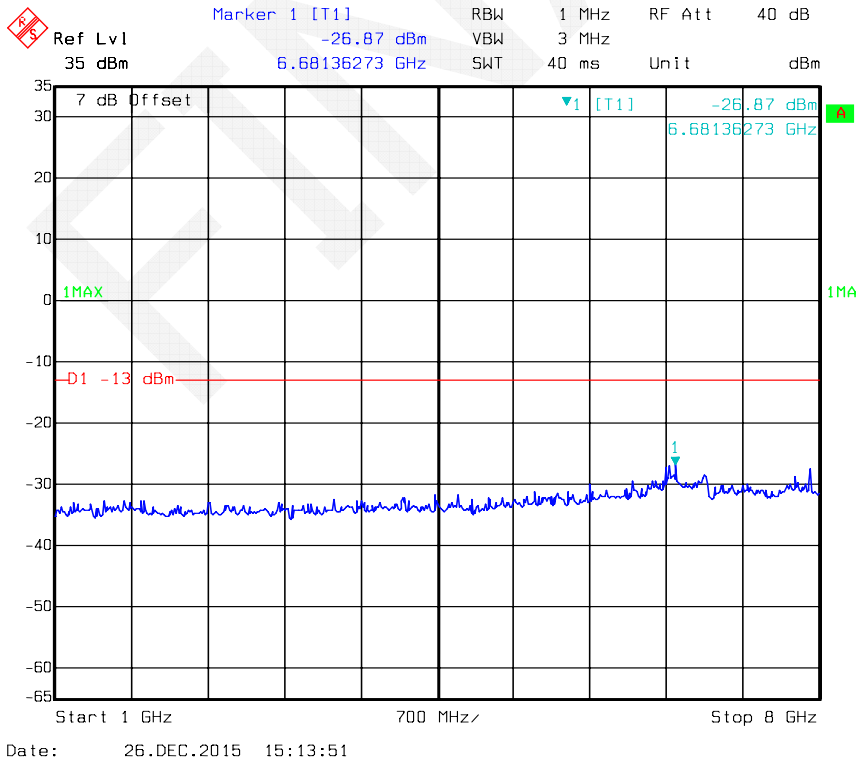
16-QAM, Band 17-5M _ Middle Channel





16-QAM, Band 17-10M _ Middle Channel





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

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 (TXpwr in Watts/0.001) – the absolute level

Spurious attenuation limit in dB = 43 + 10 Log_{10} (power out in Watts)

Spurious attenuation limit in dB = 55 + 10 Log_{10} (power out in Watts) for band 7

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	EMI Test Receiver	ESCI	100224	2015-08-03	2016-08-02
Sunol Sciences	Antenna	JB3	A060611-3	2014-11-06	2017-11-05
HP	Amplifier	8447E	2434A02181	2015-09-01	2016-09-01
Agilent	Spectrum Analyzer	E4440A	SG43360054	2015-11-23	2016-11-22
ETS-Lindgren	Horn Antenna	3115	9808-5557	2015-09-06	2018-09-06
Mini-Circuit	Amplifier	ZVA-213-S+	054201245	2015-02-19	2016-02-19
Giga	Signal Generator	1026	320408	2015-11-23	2016-11-22
EMCO	Adjustable Dipole Antenna	3121C	9109-753	N/A	N/A
TDK RF	Horn Antenna	HRN-0118	130 084	2015-09-06	2018-09-06

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

Test Data

Environmental Conditions

Temperature:	22.1 °C
Relative Humidity:	46 %
ATM Pressure:	101.5 kPa

The testing was performed by Dean Liu on 2015-12-26.

EUT Operation Mode: Transmitting

Cellular Band (PART 22H)

30 MHz-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: 836.6 MHz								
1673.200	H	45.49	-55.6	10.5	1.5	-46.6	-13.0	33.6
1673.200	V	42.53	-58.8	10.5	1.5	-49.8	-13.0	36.8
2509.800	H	40.88	-57.1	12.2	2.8	-47.7	-13.0	34.7
2509.800	V	38.26	-58.8	12.2	2.8	-49.4	-13.0	36.4

For below 1GHz, all spurious emissions are 20dB below the limit or are on the system noise floor level.

WCDMA Band V

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)			
Frequency: 836.6 MHz								
1673.200	H	37.63	-63.4	10.5	1.5	-54.4	-13.0	41.4
1673.200	V	35.12	-66.3	10.5	1.5	-57.3	-13.0	44.3
2509.800	H	35.12	-62.9	12.2	2.8	-53.5	-13.0	40.5
2509.800	V	33.49	-63.6	12.2	2.8	-54.2	-13.0	41.2

For below 1GHz, all spurious emissions are 20dB below the limit or are on the system noise floor level.

PCS Band (PART 24E)

30 MHz-20 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)			
PCS1900, Frequency:1880 MHz								
3760.000	H	36.36	-57.9	13.8	2.9	-47.0	-13.0	34.0
3760.000	V	36.53	-56.5	13.8	2.9	-45.6	-13.0	32.6

For below 1GHz, all spurious emissions are 20dB below the limit or are on the system noise floor level.

WCDMA Band II

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)			
Frequency:1880 MHz								
3760.000	H	36.78	-57.5	12.3	2.9	-48.1	-13.0	35.1
3760.000	V	34.04	-59	12.3	2.9	-49.6	-13.0	36.6

For below 1GHz, all spurious emissions are 20dB below the limit or are on the system noise floor level.

AWS Band (PART 27)

30 MHz-20 GHz:

WCDMA Band IV

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)			
Frequency:1732.6 MHz								
3465.200	H	35.63	-61.3	12.2	1.9	-51.0	-13.0	38.0
3465.200	V	33.32	-62.8	12.2	1.9	-52.5	-13.0	39.5

For below 1GHz, all spurious emissions are 20dB below the limit or are on the system noise floor level.

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

LTE Band 2

30 MHz-20 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)			
QPSK, Frequency:1880 MHz								
3760.000	H	35.26	-59	12.3	2.9	-49.6	-13.0	36.6
3760.000	V	36.71	-56.4	12.3	2.9	-47.0	-13.0	34.0
16- QAM, Frequency:1880 MHz								
3760.000	H	34.09	-60.2	12.3	2.9	-50.8	-13.0	37.8
3760.000	V	36.70	-56.4	12.3	2.9	-47.0	-13.0	34.0

For below 1GHz, all spurious emissions are 20dB below the limit or are on the system noise floor level.

LTE Band 4

30 MHz-20 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)			
QPSK, Frequency:1732.5 MHz								
3465.000	H	36.78	-60.2	12.2	1.9	-49.9	-13.0	36.9
3465.000	V	34.04	-62.1	12.2	1.9	-51.8	-13.0	38.8
16- QAM, Frequency:1732.5 MHz								
3465.000	H	36.89	-60.0	12.2	1.9	-49.7	-13.0	36.7
3465.000	V	34.23	-61.9	12.2	1.9	-51.6	-13.0	38.6

For below 1GHz, all spurious emissions are 20dB below the limit or are on the system noise floor level.

LTE Band 5

30 MHz-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)			
QPSK, Frequency:836.5 MHz								
1673.000	H	37.47	-63.6	10.5	1.5	-54.6	-13.0	41.6
1673.000	V	35.06	-66.3	10.5	1.5	-57.3	-13.0	44.3
2509.500	H	35.23	-62.8	12.2	2.8	-53.4	-13.0	40.4
2509.500	V	33.17	-63.9	12.2	2.8	-54.5	-13.0	41.5
16- QAM, Frequency:836.5 MHz								
1673.000	H	37.86	-63.2	10.5	1.5	-54.2	-13.0	41.2
1673.000	V	35.60	-65.8	10.5	1.5	-56.8	-13.0	43.8
2509.500	H	34.36	-63.7	12.2	2.8	-54.3	-13.0	41.3
2509.500	V	33.38	-63.7	12.2	2.8	-54.3	-13.0	41.3

For below 1GHz, all spurious emissions are 20dB below the limit or are on the system noise floor level.

LTE Band 7

30 MHz-26 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)			
QPSK, Frequency:2535 MHz								
5070.000	H	35.17	-56.2	13.0	2.4	-45.6	-25	20.6
5070.000	V	36.23	-55.9	13.0	2.4	-45.3	-25	20.3
16- QAM, Frequency:2535 MHz								
5070.000	H	35.47	-55.9	13.0	2.4	-45.3	-25	20.3
5070.000	V	36.51	-55.6	13.0	2.4	-45.0	-25	20.0

For below 1GHz, all spurious emissions are 20dB below the limit or are on the system noise floor level.

LTE Band 17

30 MHz-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)			
QPSK, Frequency:710.0 MHz								
1420.000	H	37.63	-63.2	9.7	1.3	-54.8	-13.0	41.8
1420.000	V	36.59	-64	9.7	1.3	-55.6	-13.0	42.6
2130.000	H	35.13	-60.8	11.7	1.4	-50.5	-13.0	37.5
2130.000	V	34.26	-60.5	11.7	1.4	-50.2	-13.0	37.2
16- QAM, Frequency:710.0 MHz								
1420.000	H	37.45	-63.4	9.7	1.3	-55.0	-13.0	42.0
1420.000	V	36.72	-63.9	9.7	1.3	-55.5	-13.0	42.5
2130.000	H	35.44	-60.5	11.7	1.4	-50.2	-13.0	37.2
2130.000	V	34.53	-60.3	11.7	1.4	-50.0	-13.0	37.0

For below 1GHz, all spurious emissions are 20dB below the limit or are on the system noise floor level.

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(g)§27.53(h) §27.53(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 §27.53 (g), For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

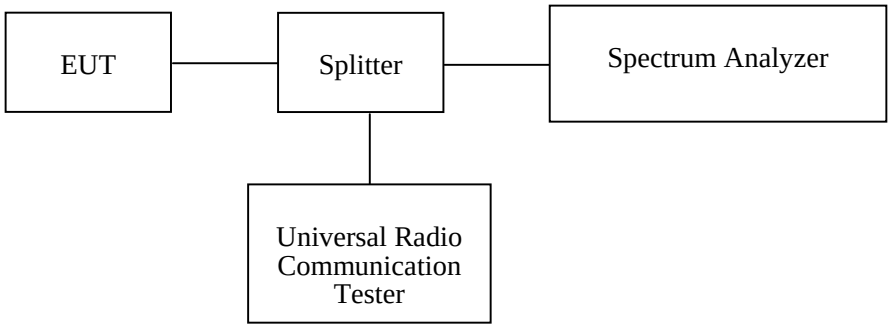
According to §27.53 (h), AWS emission limits—(1) General protection levels. Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log10 (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 that 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
R&S	Spectrum Analyzer	FSP 38	100478	2015-11-23	2016-11-22
R&S	Universal Radio Communication Tester	CMU200	109038	2015-05-09	2016-05-09
R&S	Wideband Radio Communication Tester	CMW500	1201.002K50-146520-wh	2015-12-19	2016-12-19

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

Test Data

Environmental Conditions

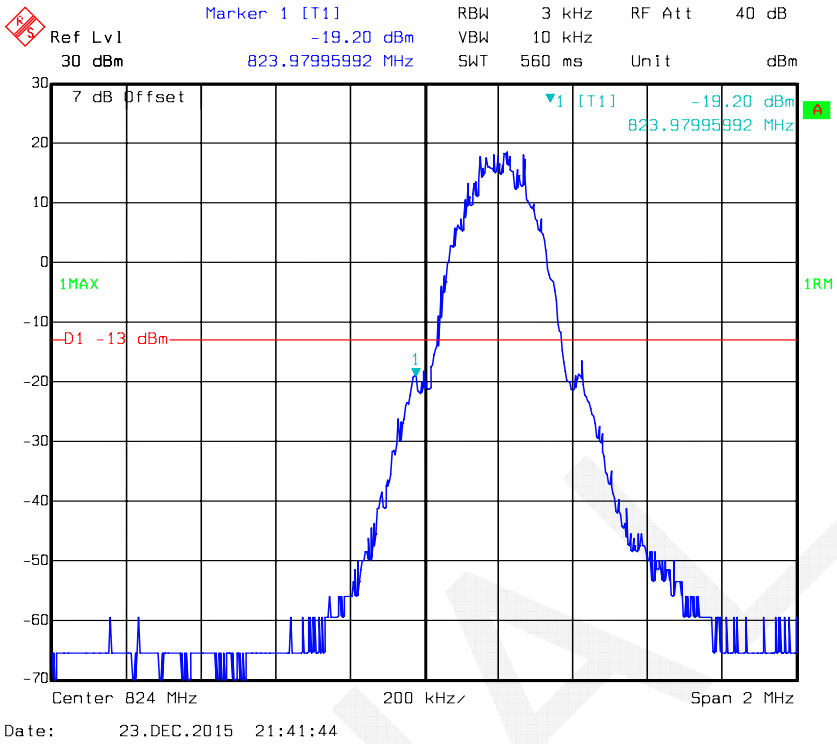
Temperature:	23.5~25.1 °C
Relative Humidity:	46~51 %
ATM Pressure:	101~101.7 kPa

The testing was performed by Dean Liu from 2015-12-23 to 2015-12-26.

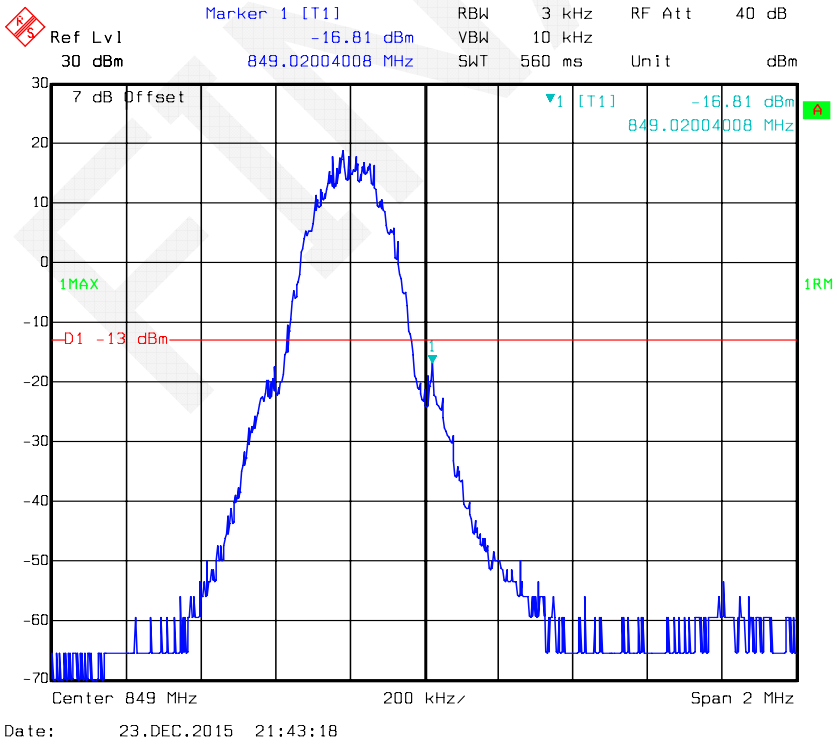
Test Mode: Transmitting

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

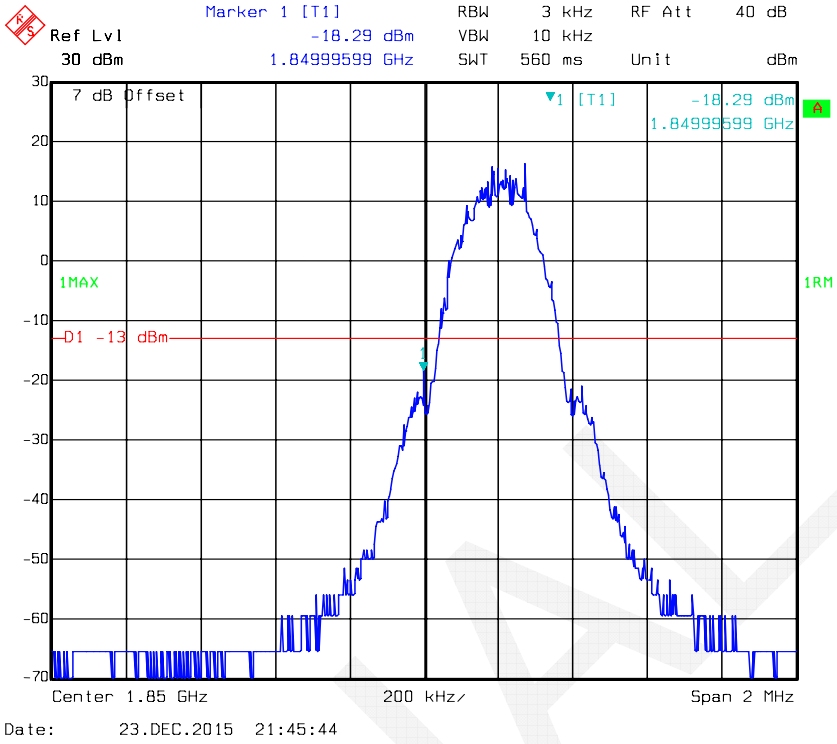
GSM 850, Left Band Edge



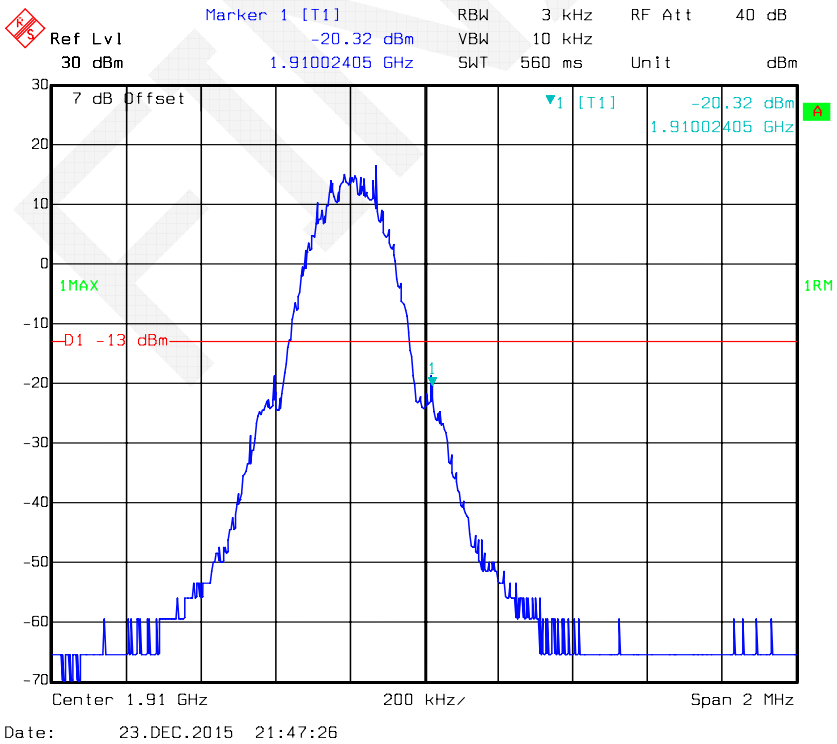
GSM 850, Right Band Edge



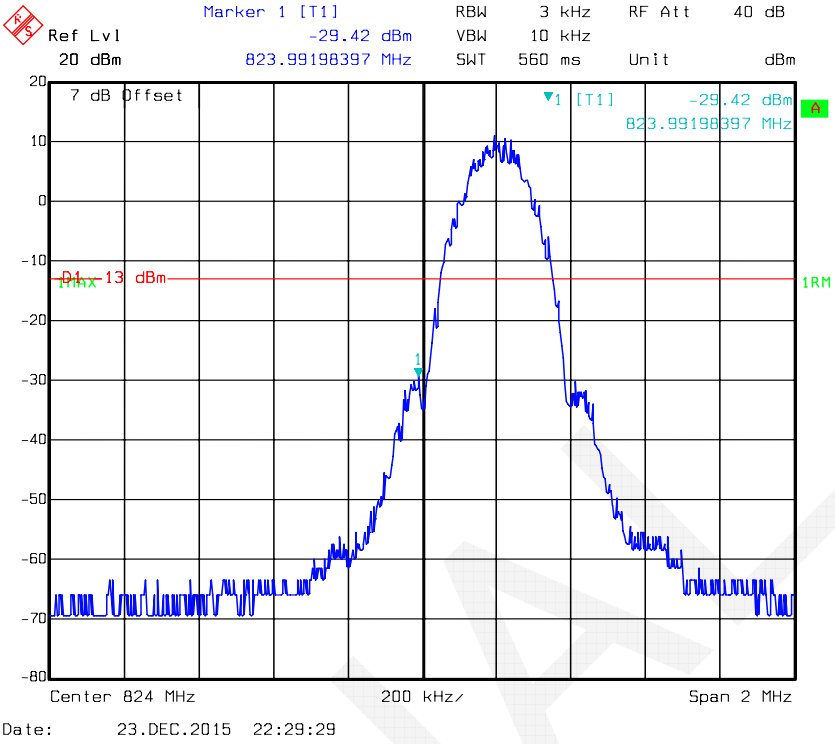
GSM 1900, Left Band Edge



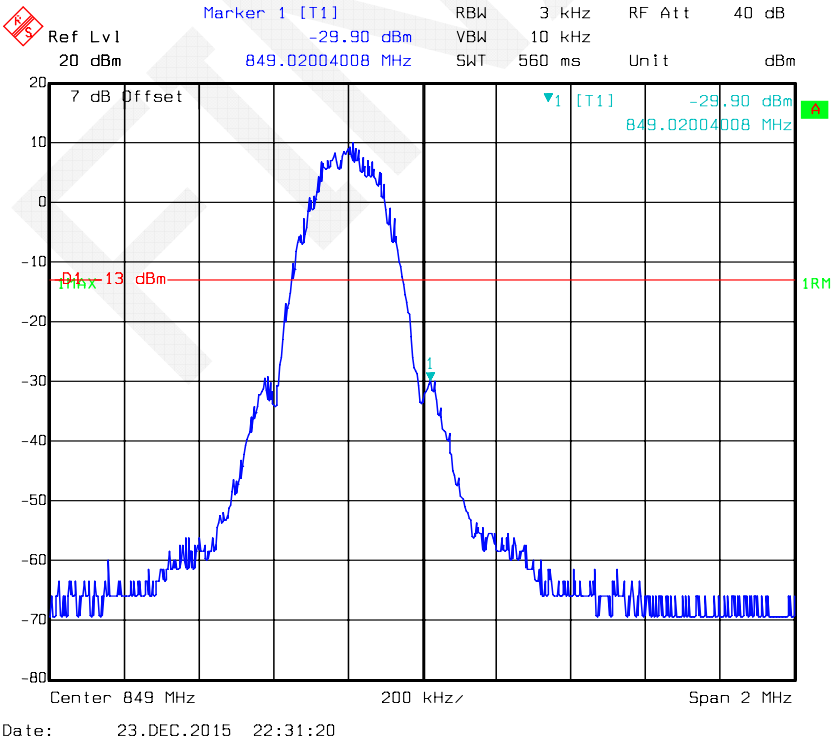
GSM 1900, Right Band Edge



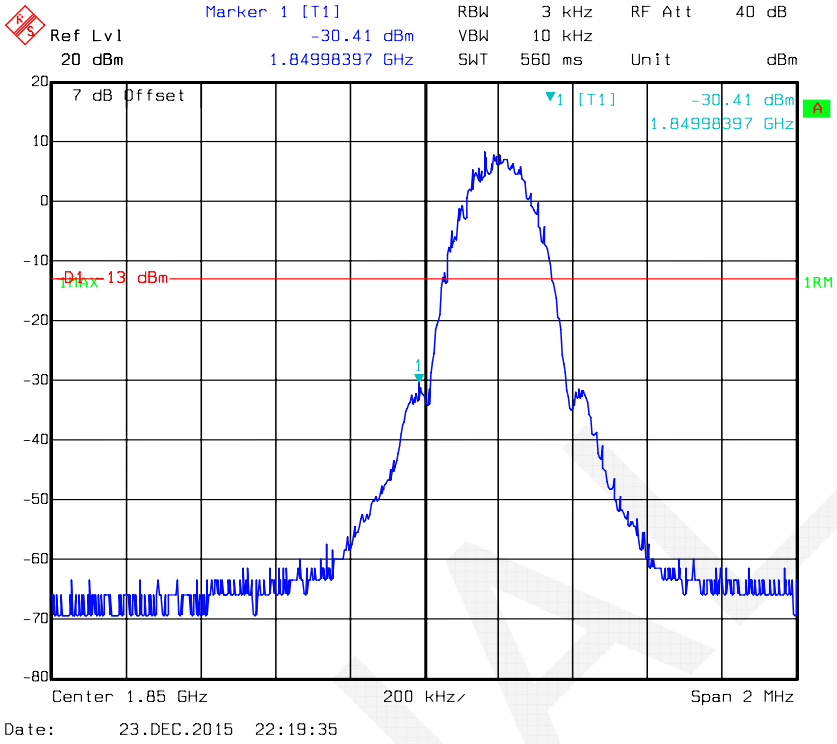
EDGE 850, Left Band Edge



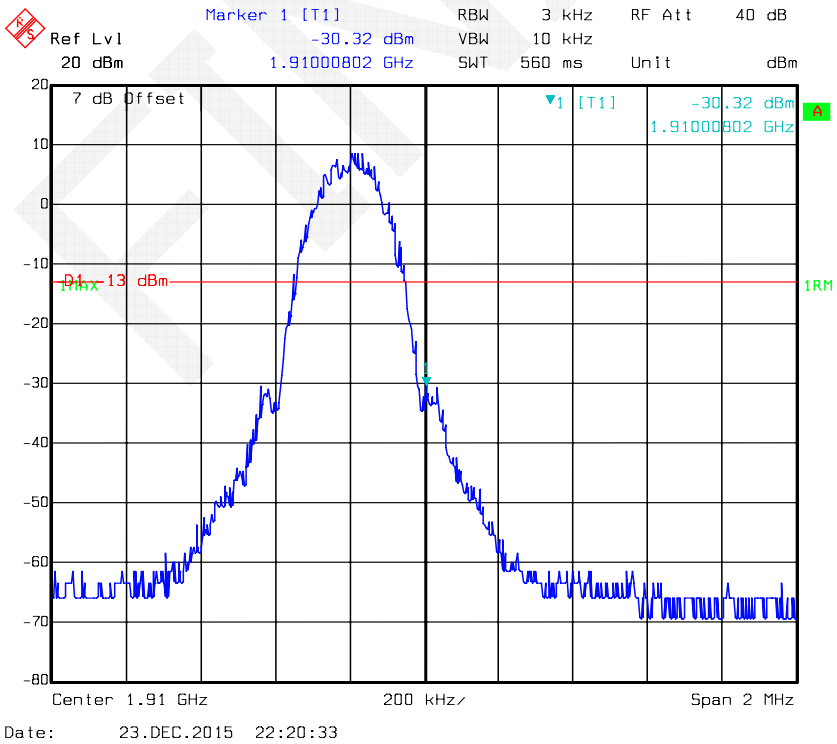
EDGE 850, Right Band Edge



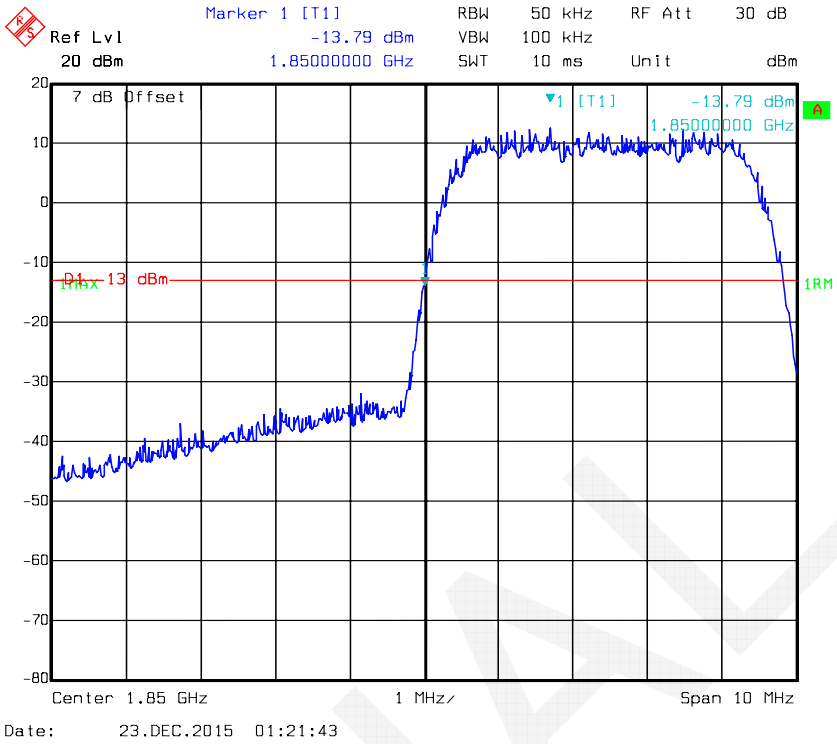
EDGE 1900, Left Band Edge



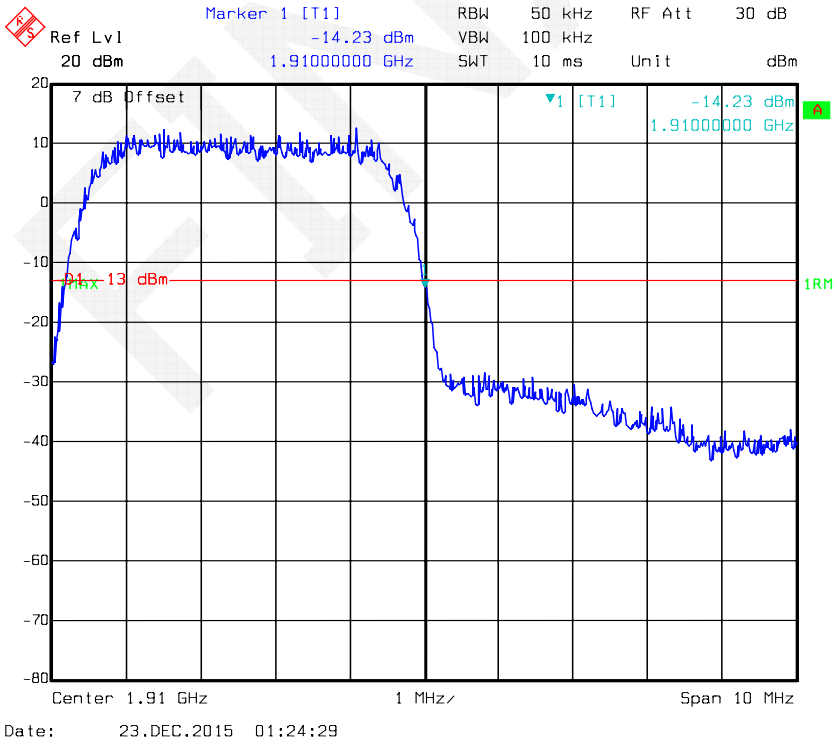
EDGE 1900, Right Band Edge



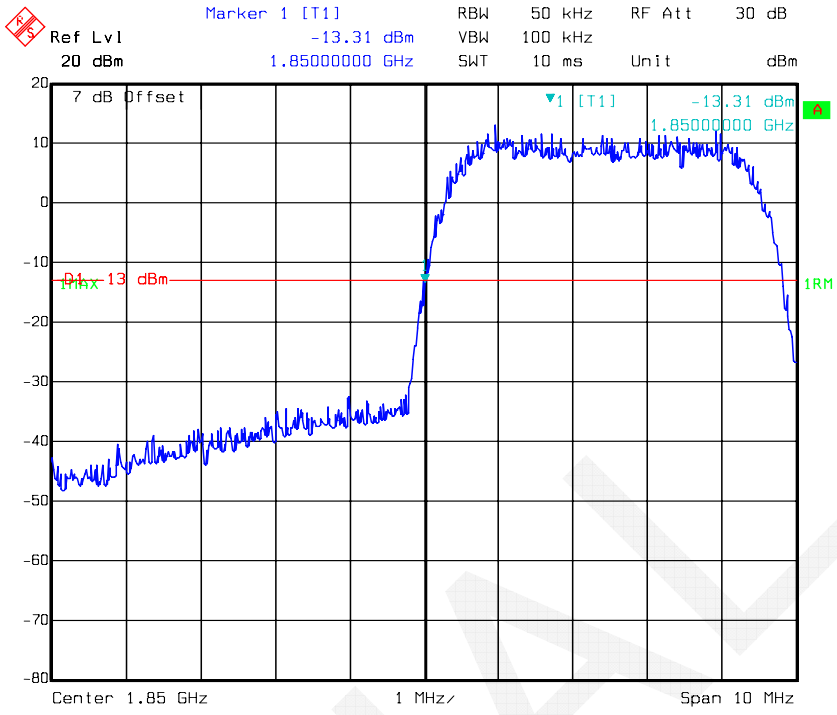
REL99 Band II, Left Band Edge



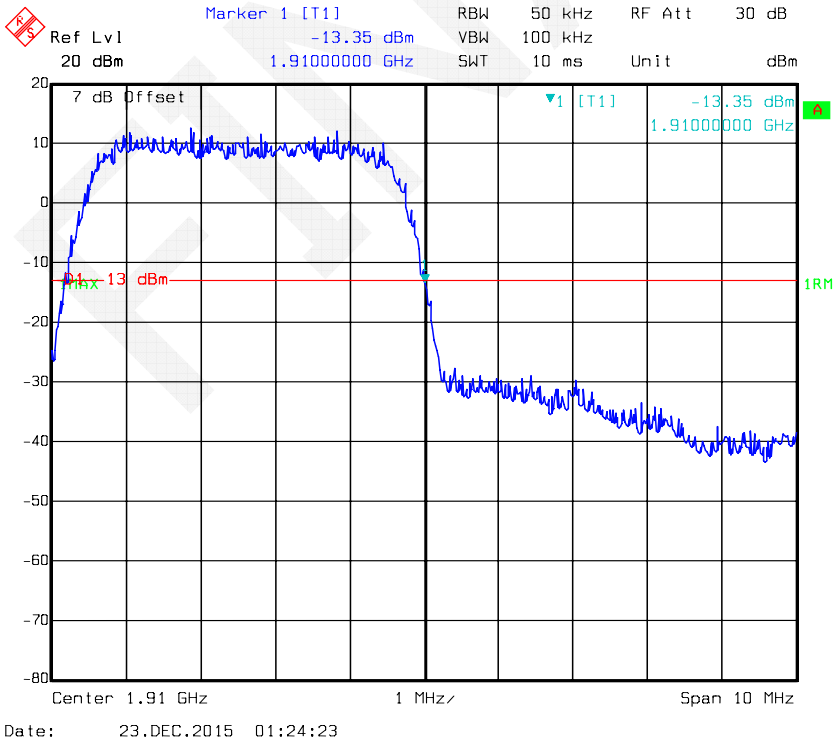
REL99 Band II, Right Band Edge



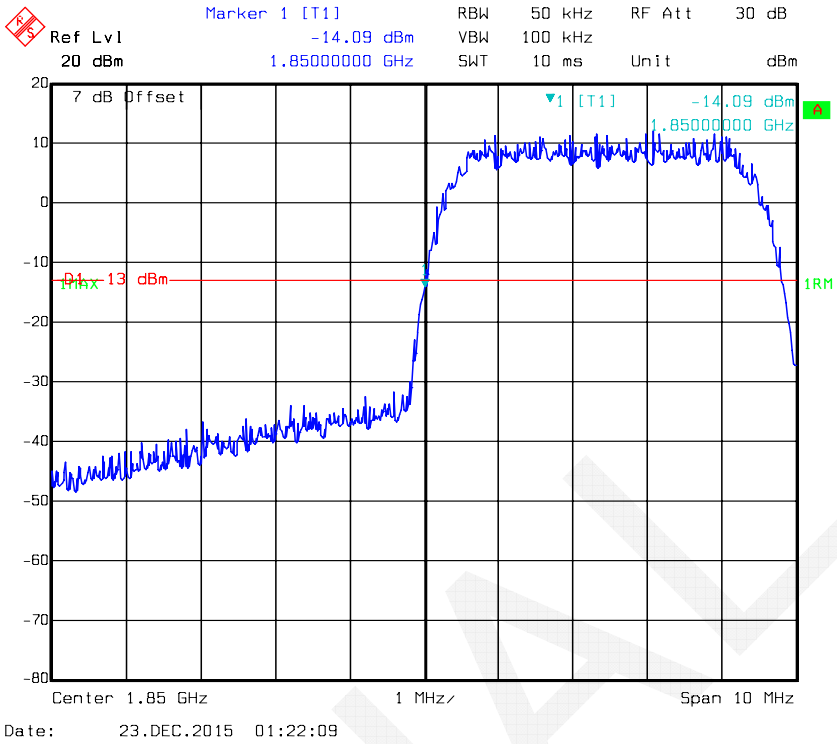
HSDPA Band II, Left Band Edge



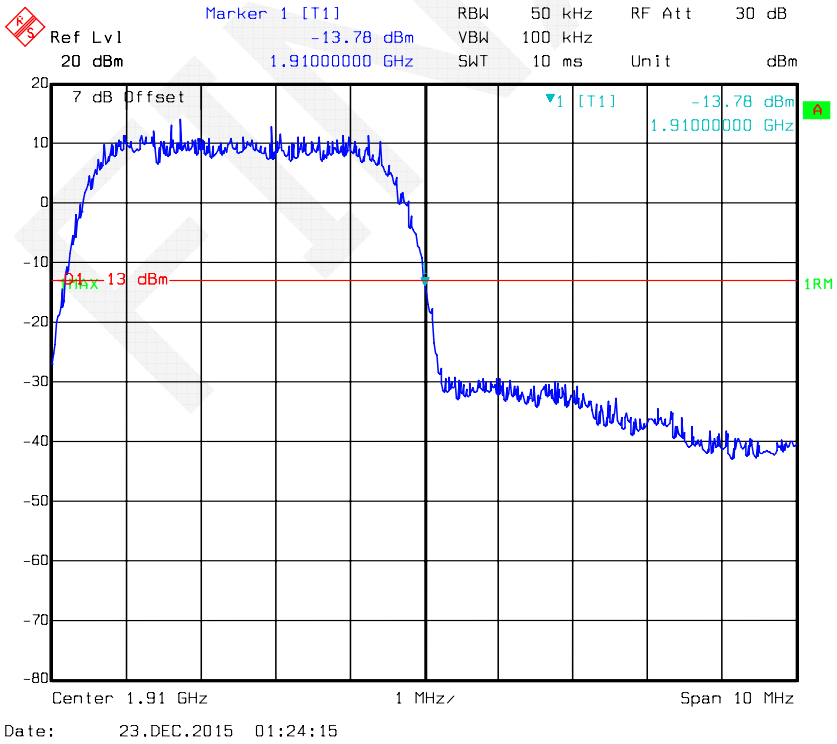
HSDPA Band II, Right Band Edge



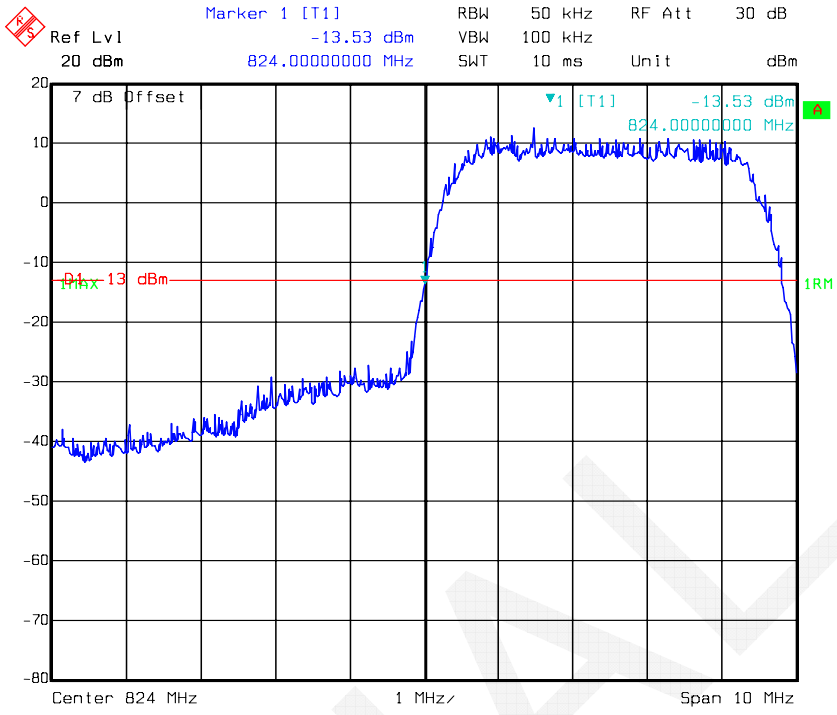
HSUPA Band II, Left Band Edge



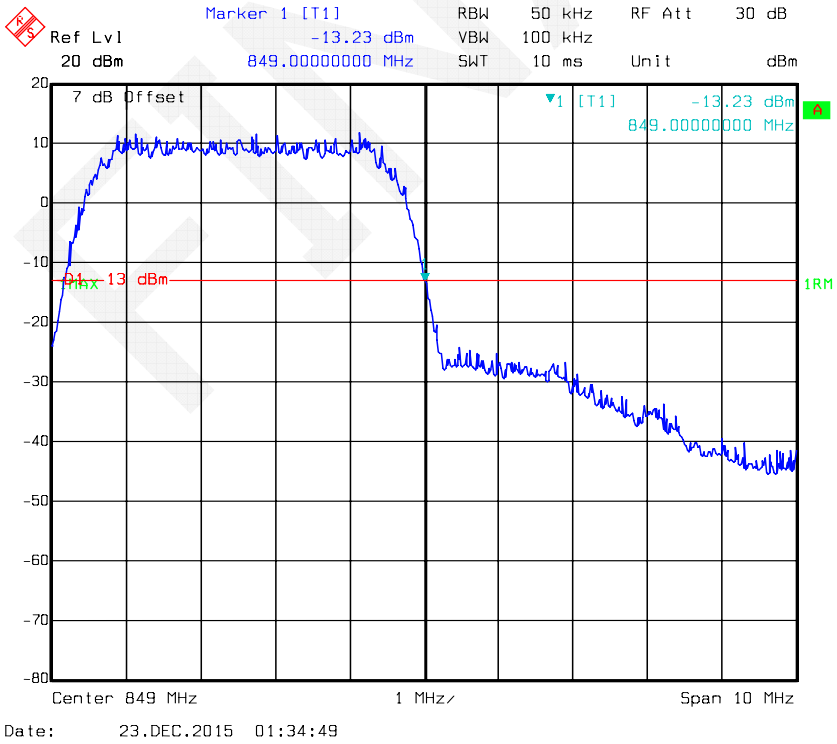
HSUPA Band II, Right Band Edge



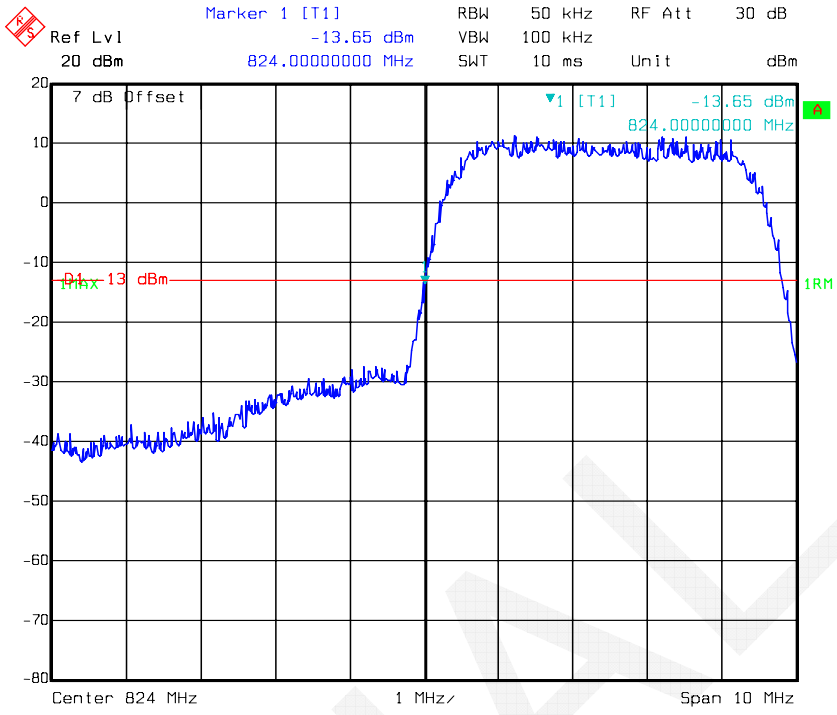
REL99 Band V, Left Band Edge



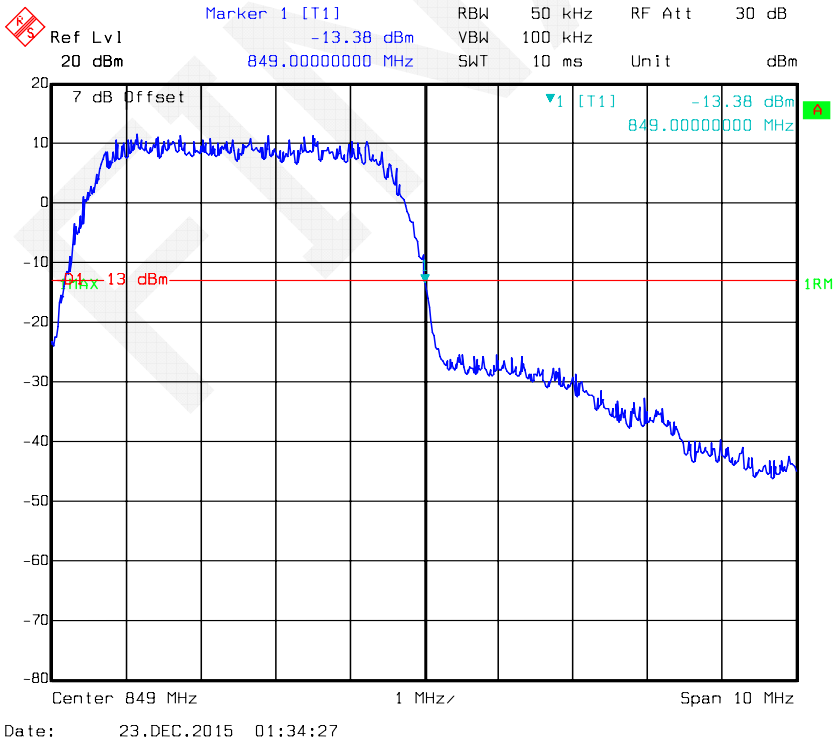
REL99 Band V Right Band Edge



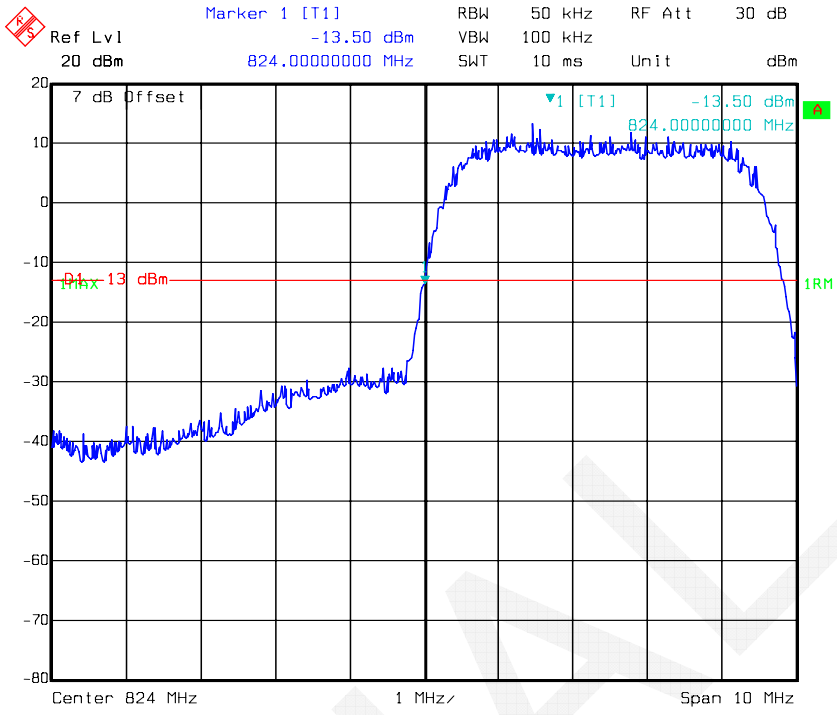
HSDPA Band V, Left Band Edge



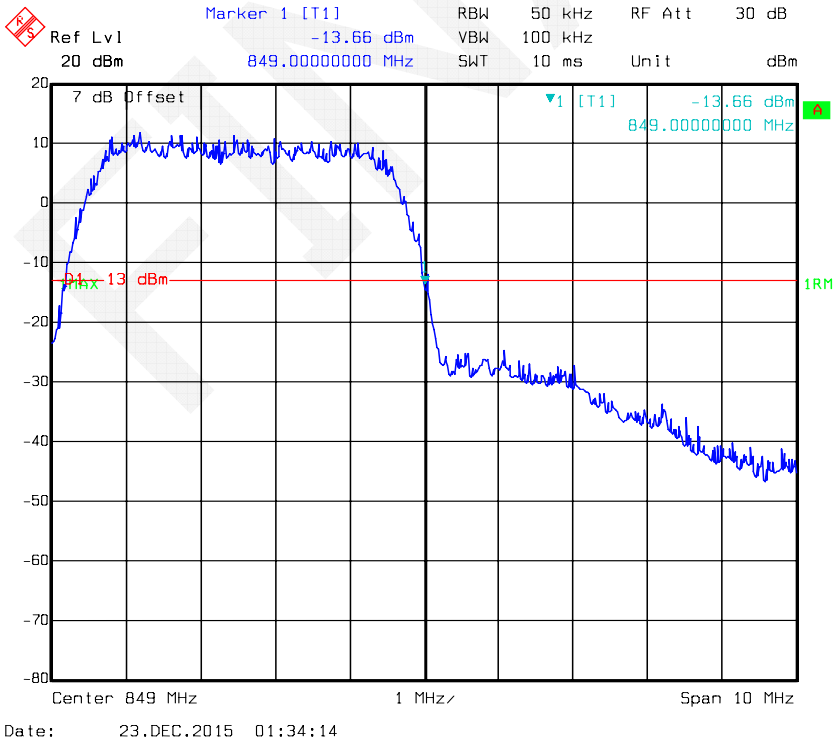
HSDPA Band V, Right Band Edge



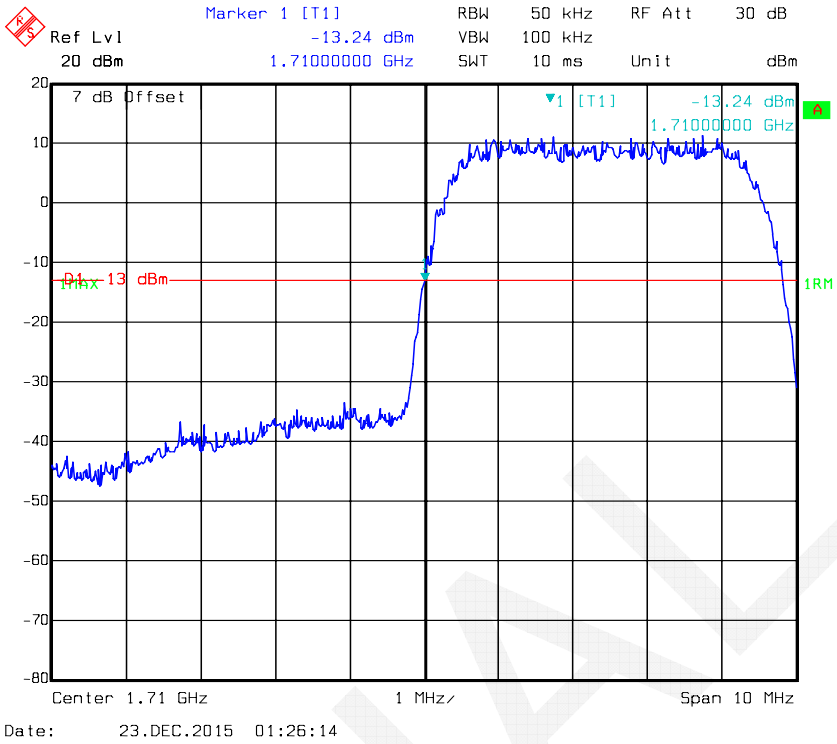
HSUPA Band V, Left Band Edge



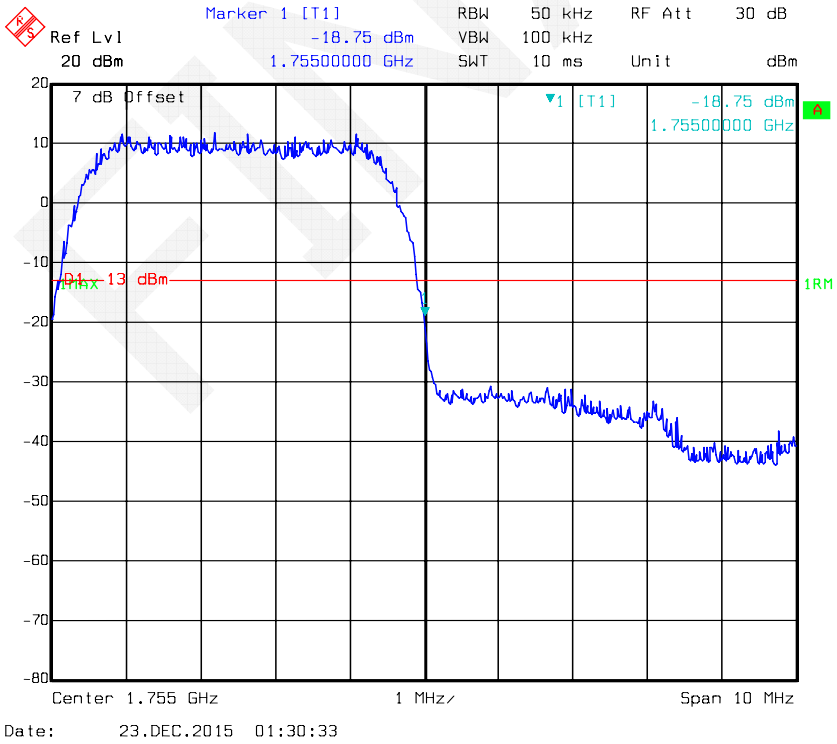
HSUPA Band V, Right Band Edge



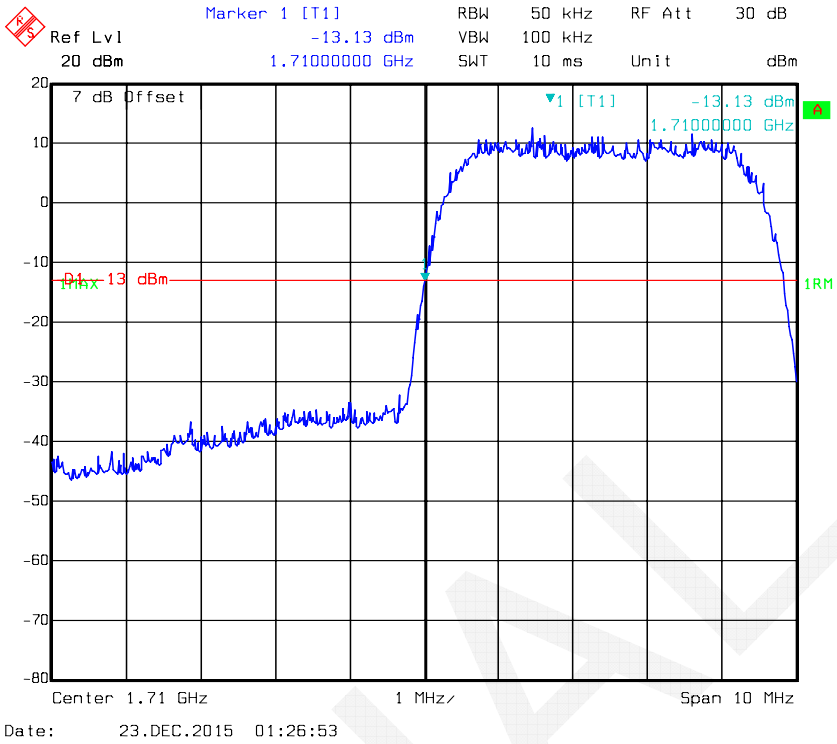
REL99 Band IV, Left Band Edge



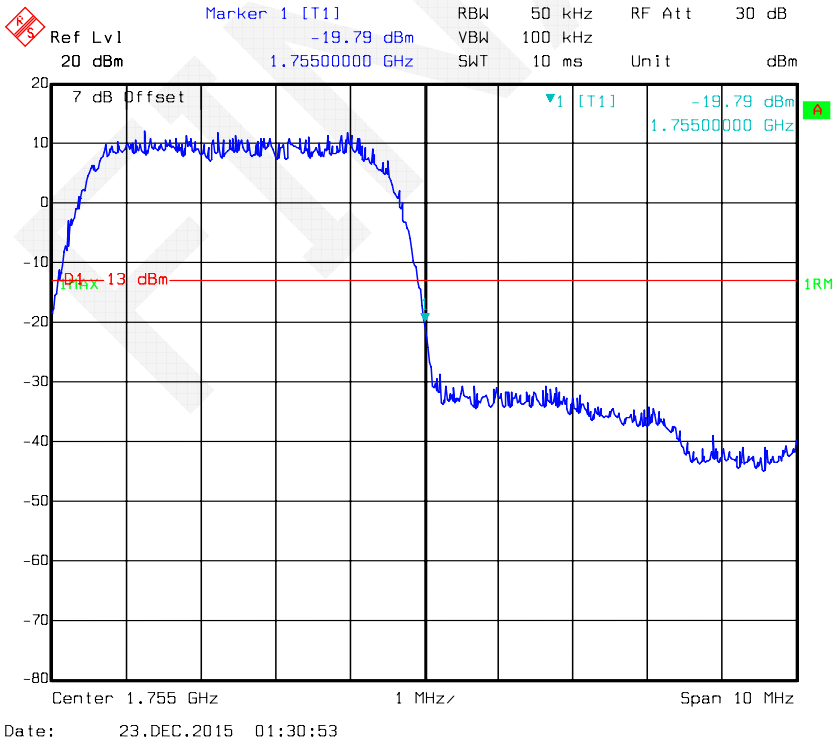
REL99 Band IV, Right Band Edge



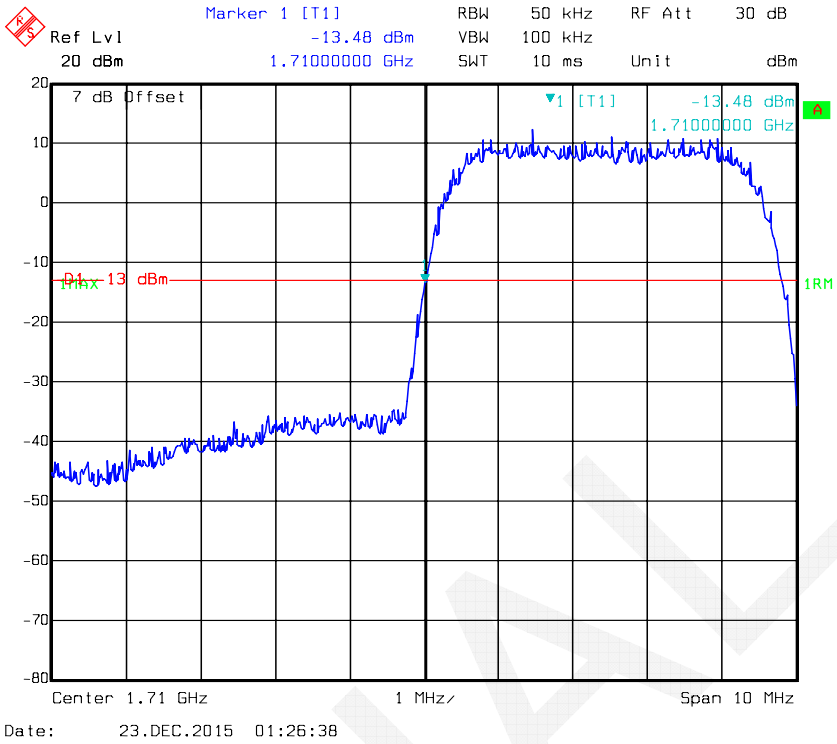
HSDPA Band IV, Left Band Edge



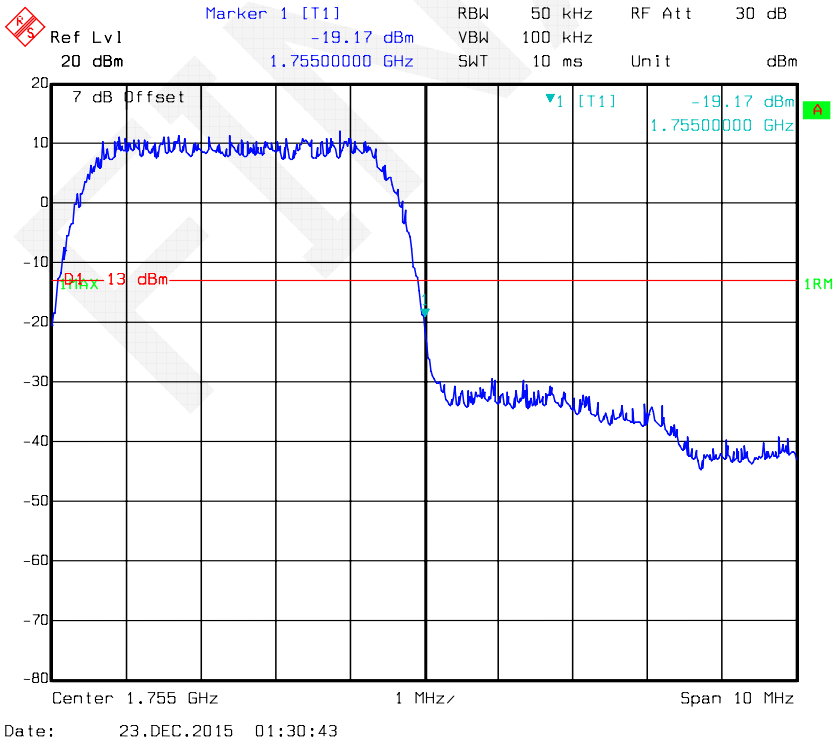
HSDPA Band IV, Right Band Edge



HSUPA Band IV, Left Band Edge

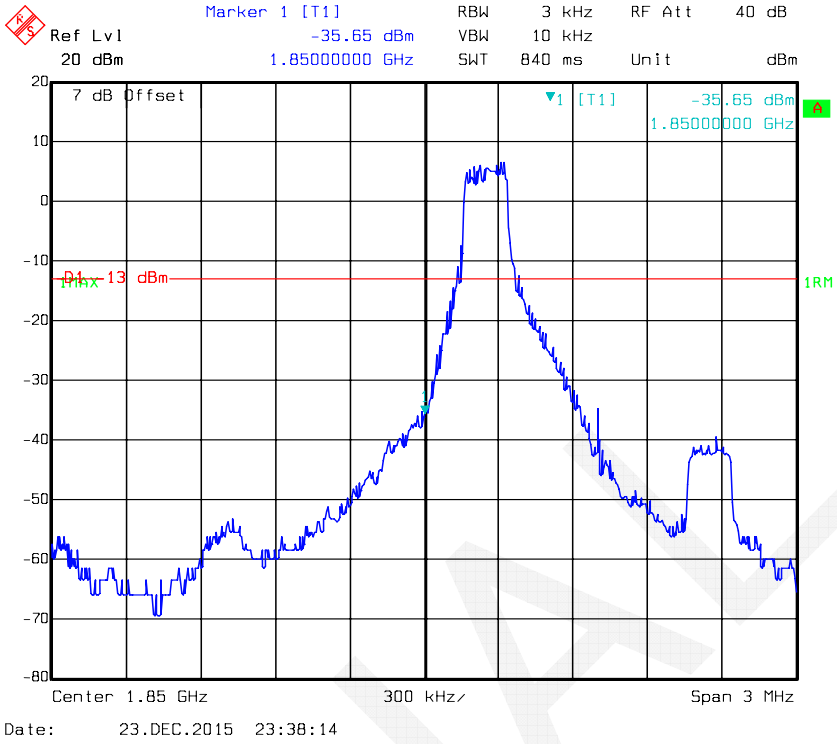


HSUPA Band IV, Right Band Edge

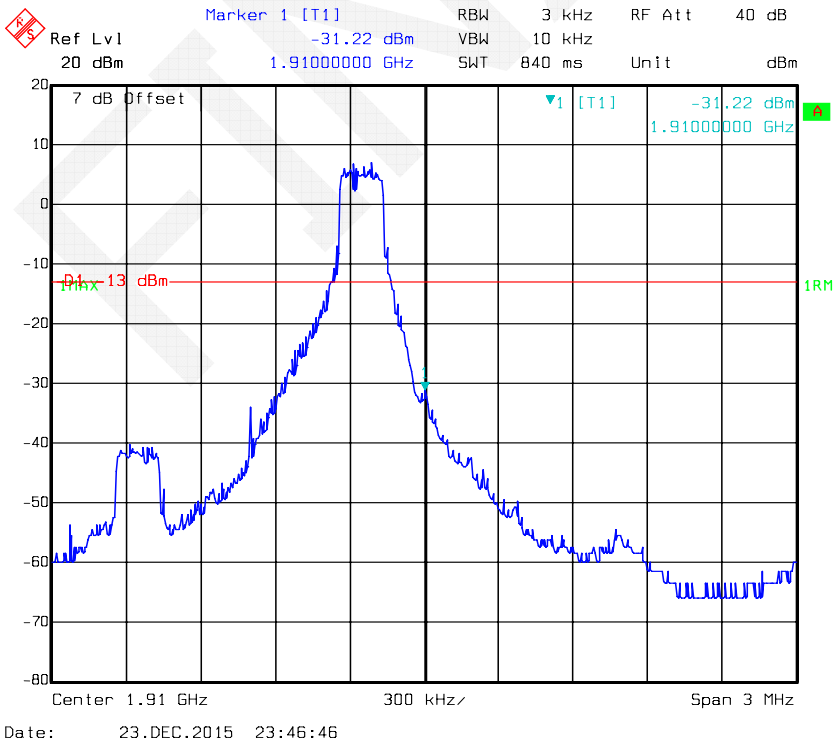


LTE Band 2

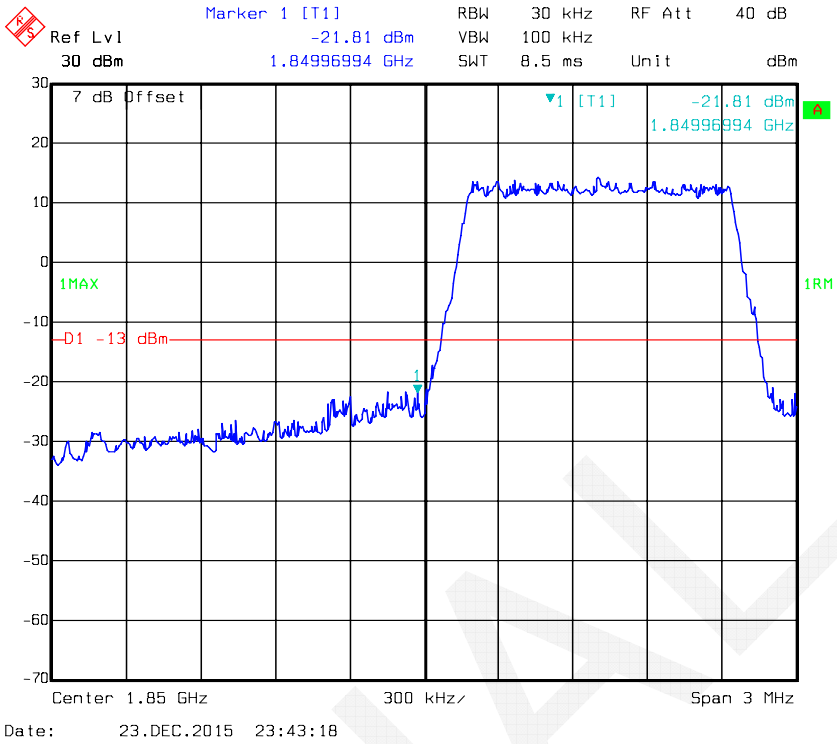
QPSK-1.4M 1RB, Left Band Edge



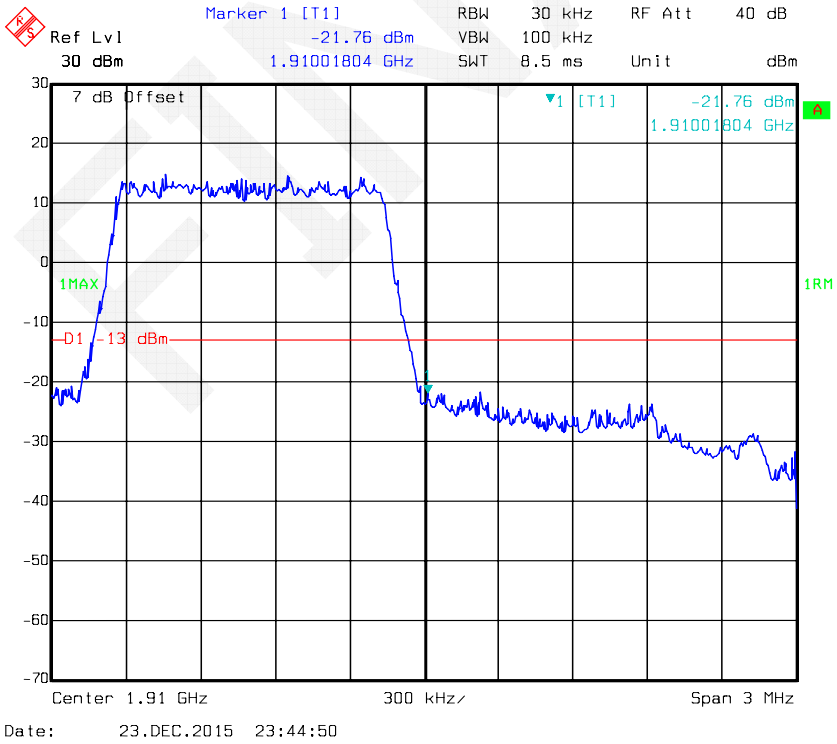
QPSK-1.4M 1RB, Right Band Edge



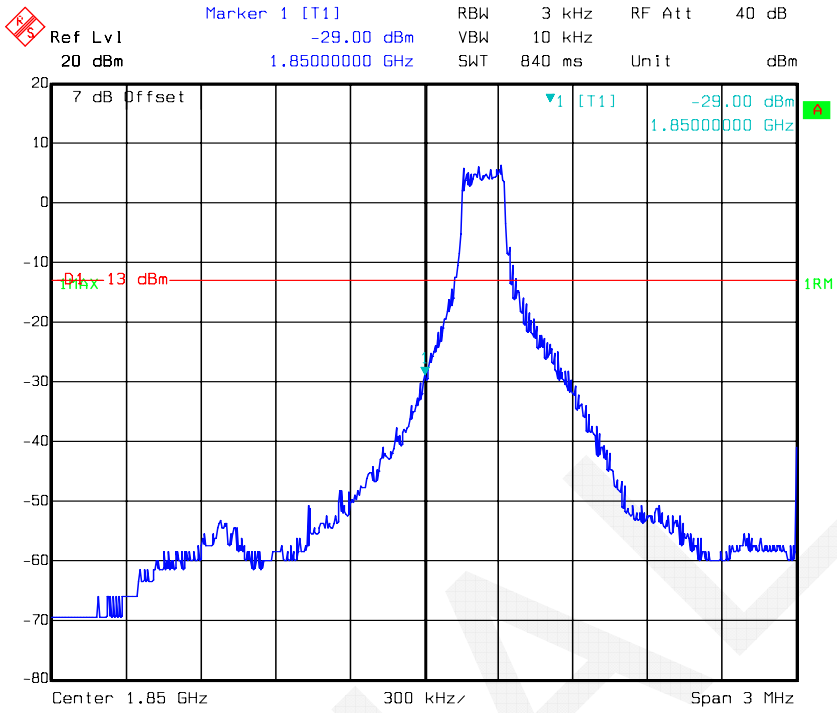
QPSK-1.4M Full RB, Left Band Edge



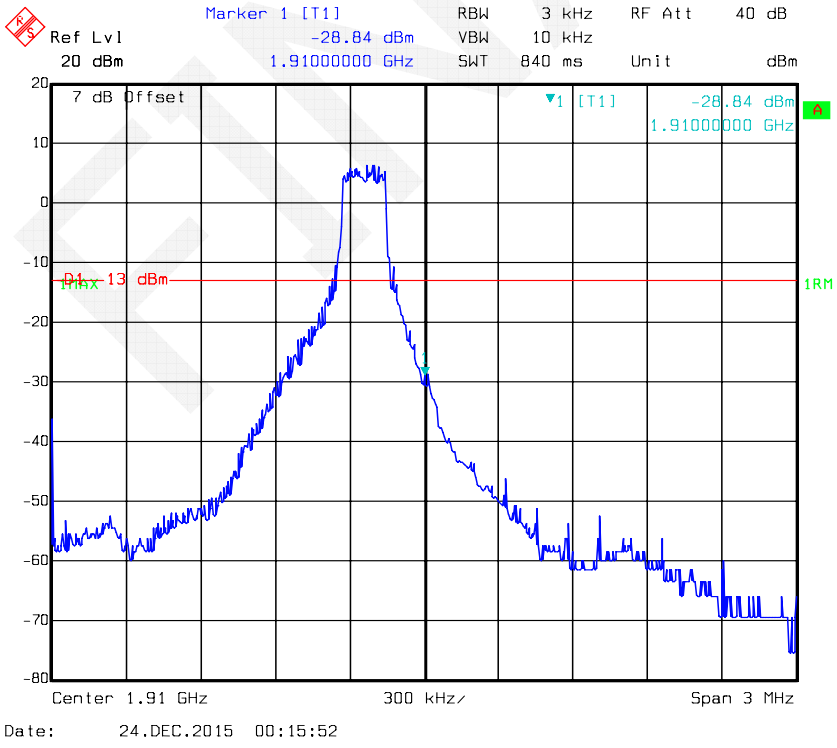
QPSK-1.4M Full RB, Right Band Edge



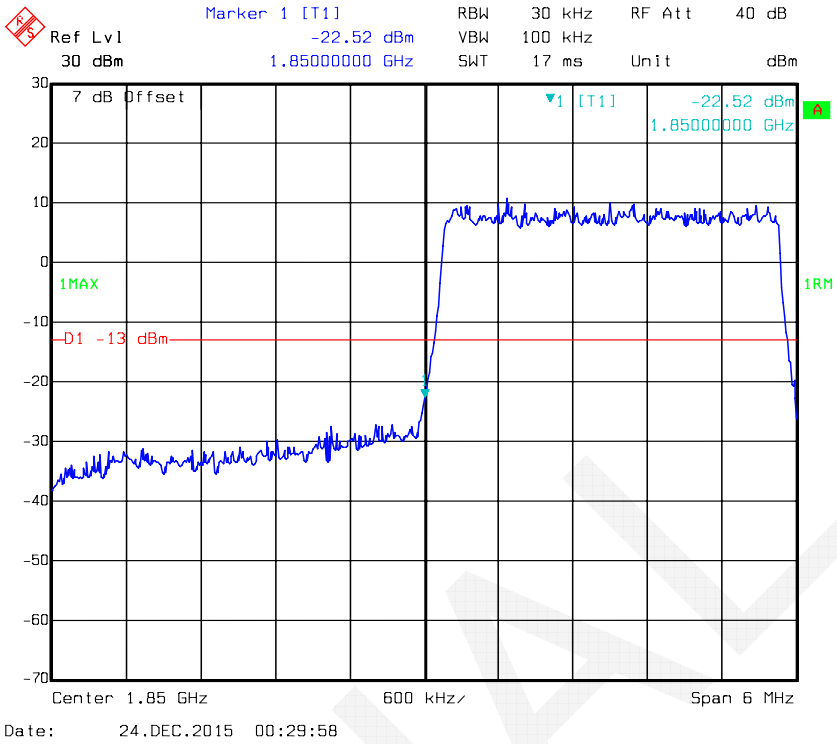
QPSK-3M 1RB, Left Band Edge



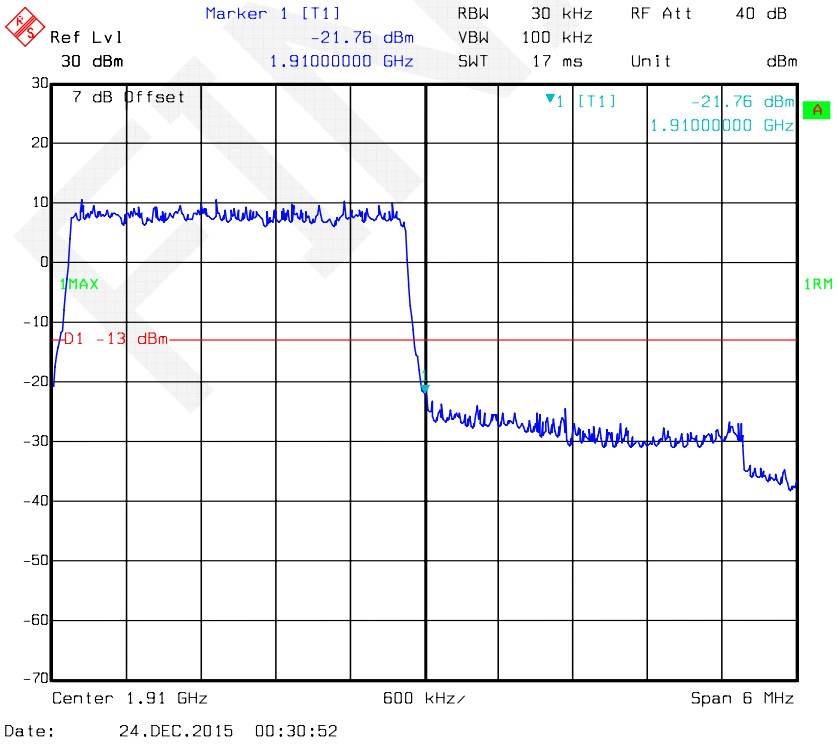
QPSK-3M 1RB, Right Band Edge



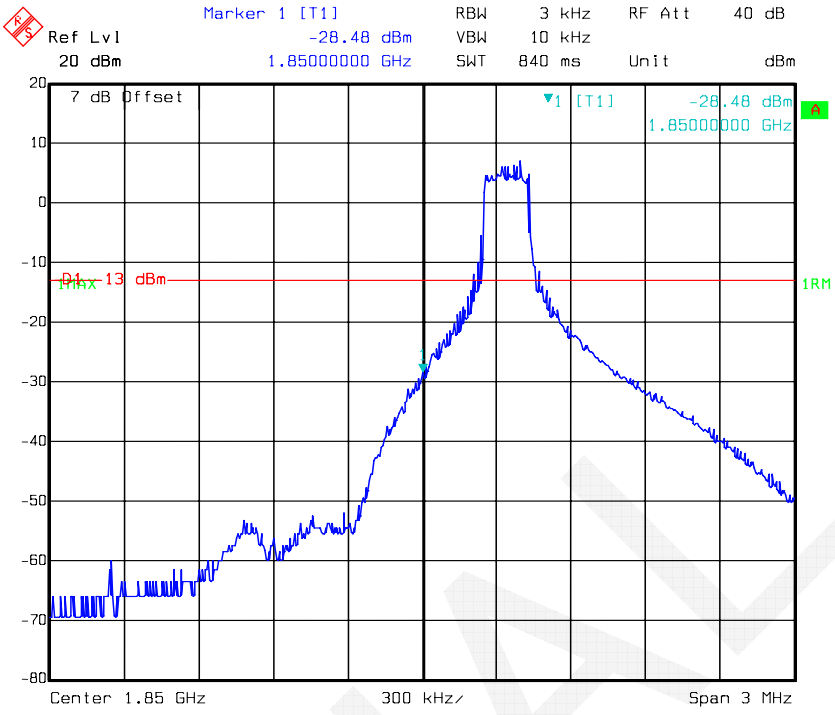
QPSK-3M Full RB, Left Band Edge



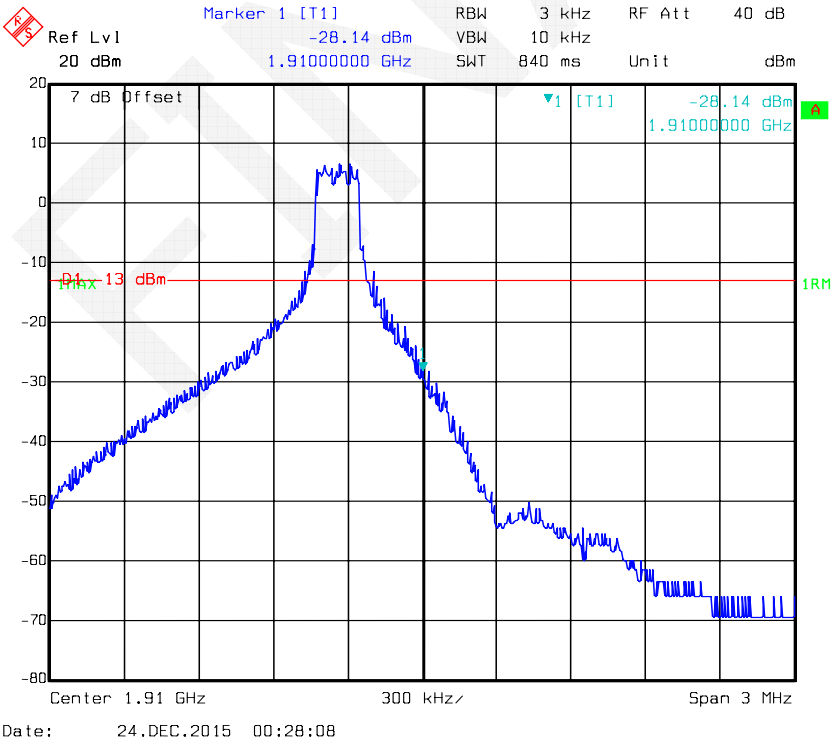
QPSK-3M Full RB, Right Band Edge



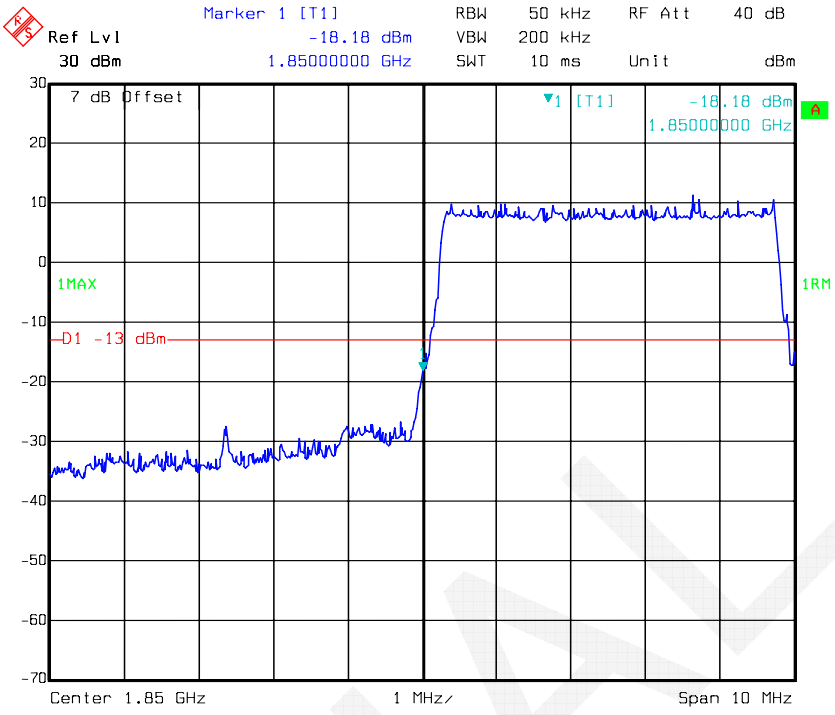
QPSK-5M 1RB, Left Band Edge



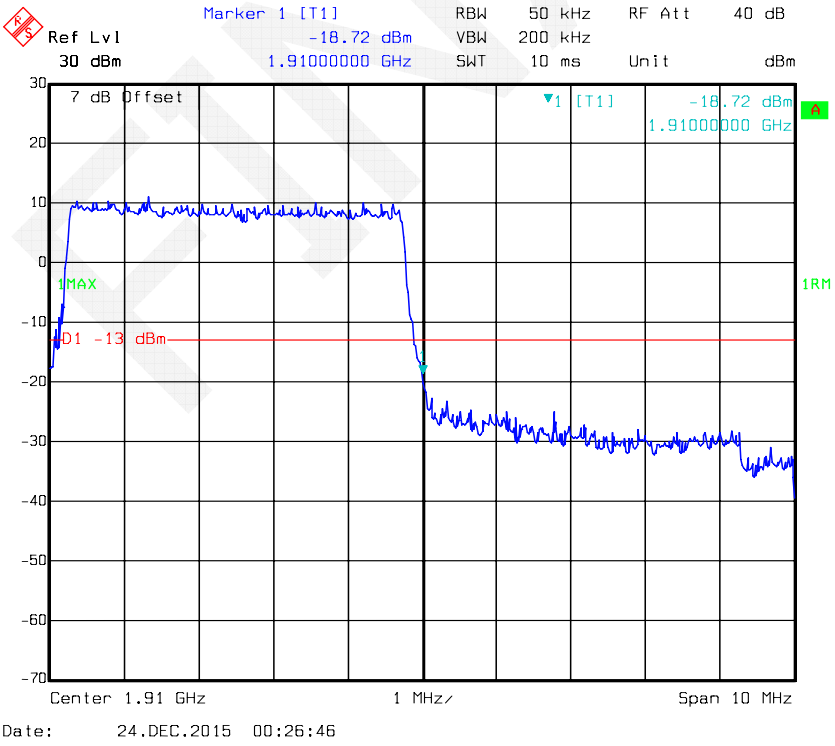
QPSK-5M 1RB, Right Band Edge



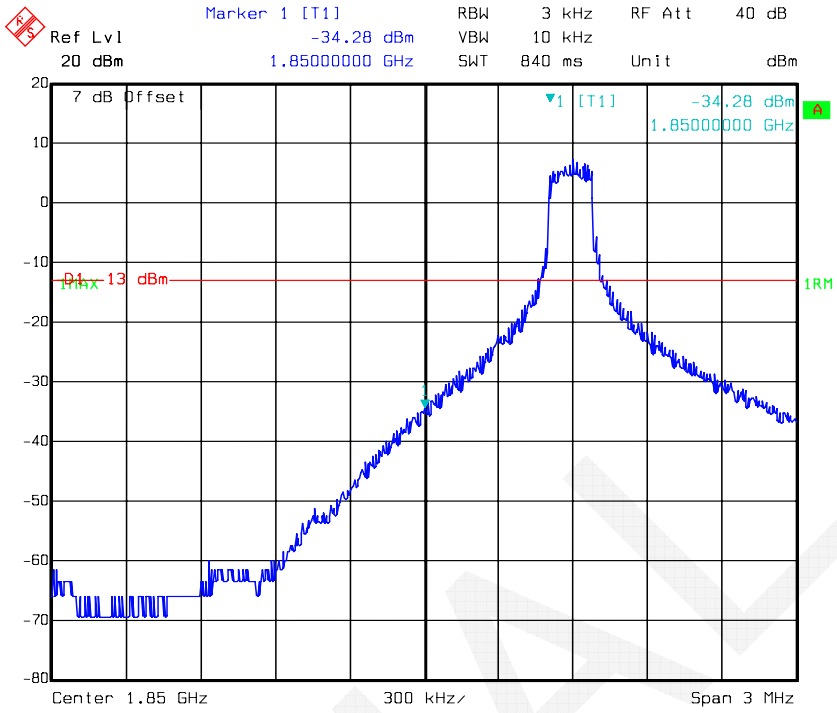
QPSK-5M Full RB, Left Band Edge



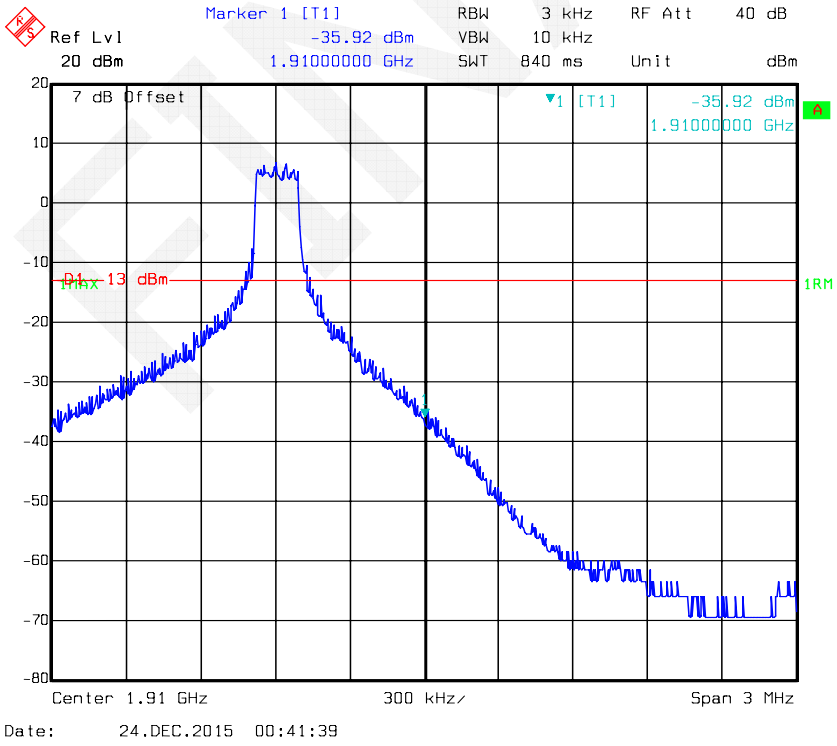
QPSK-5M Full RB, Right Band Edge



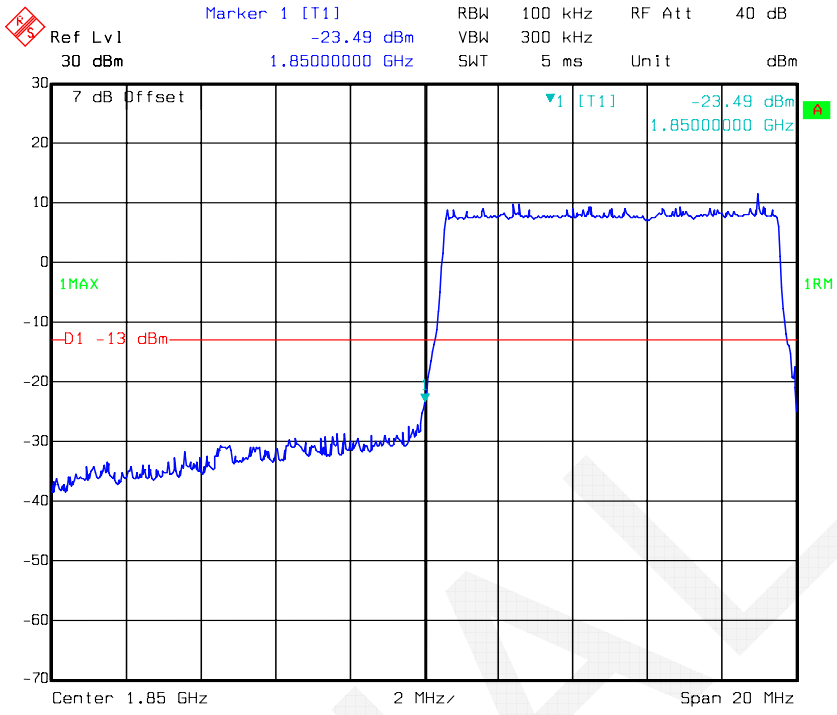
QPSK-10M 1RB, Left Band Edge



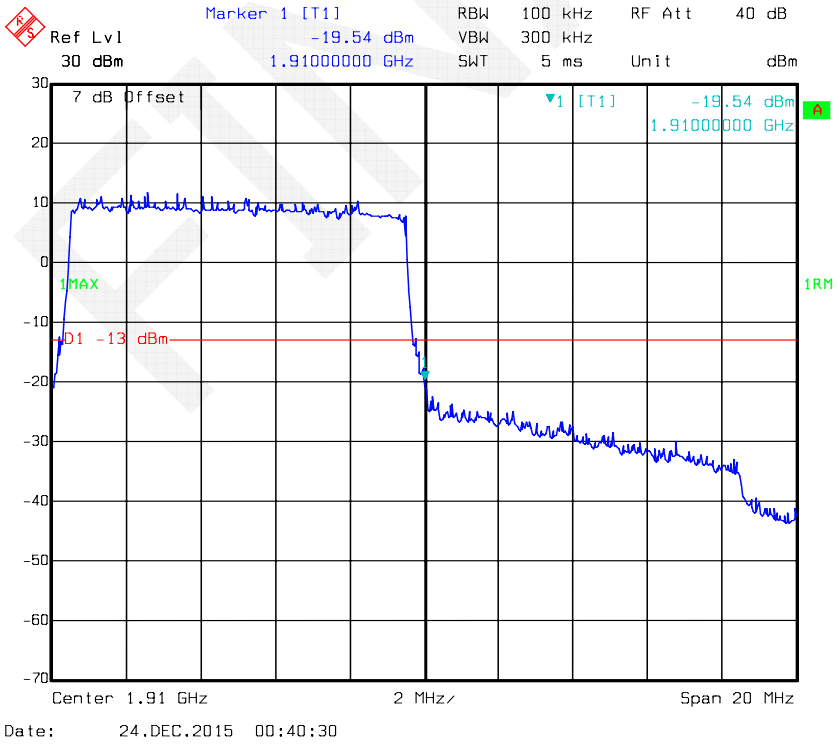
QPSK-10M 1RB, Right Band Edge



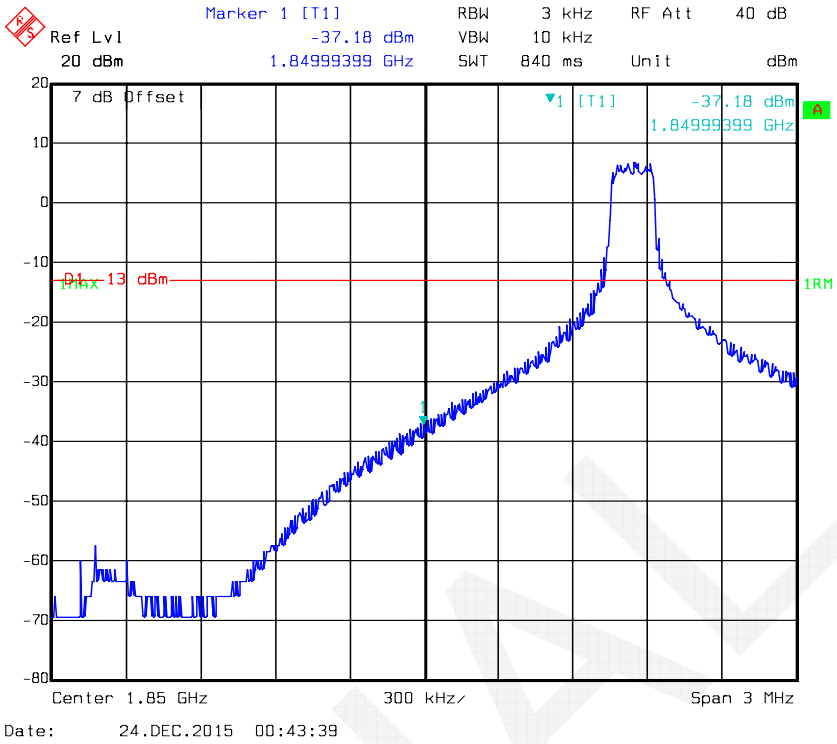
QPSK-10M Full RB, Left Band Edge



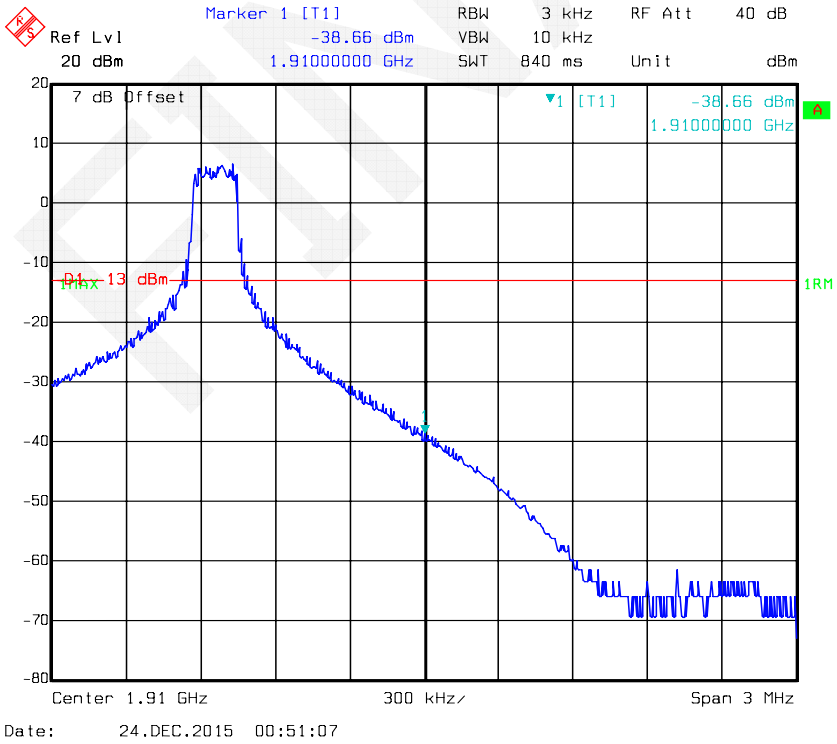
QPSK-10M Full RB, Right Band Edge



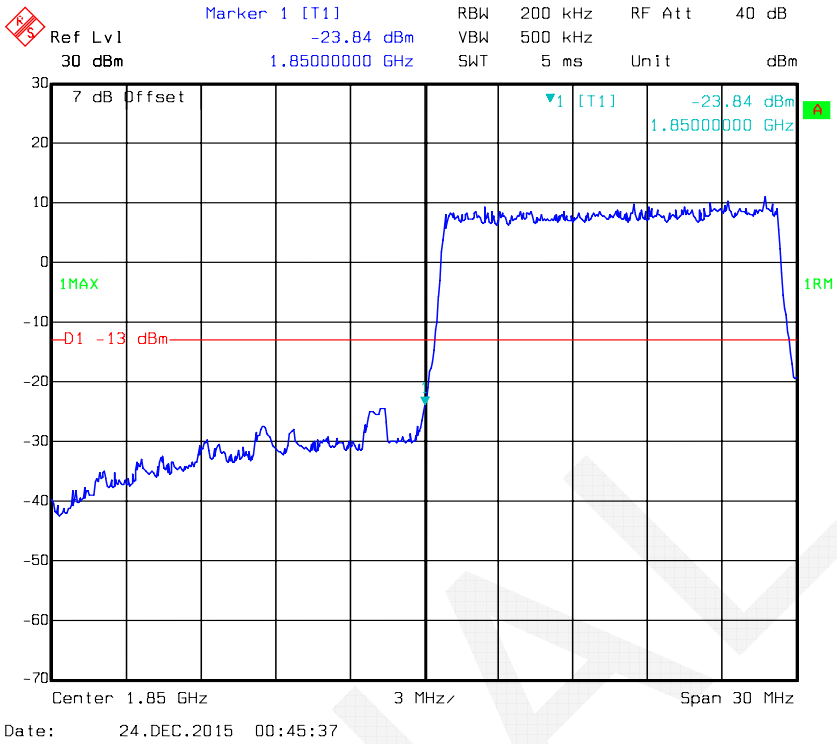
QPSK-15M 1RB, Left Band Edge



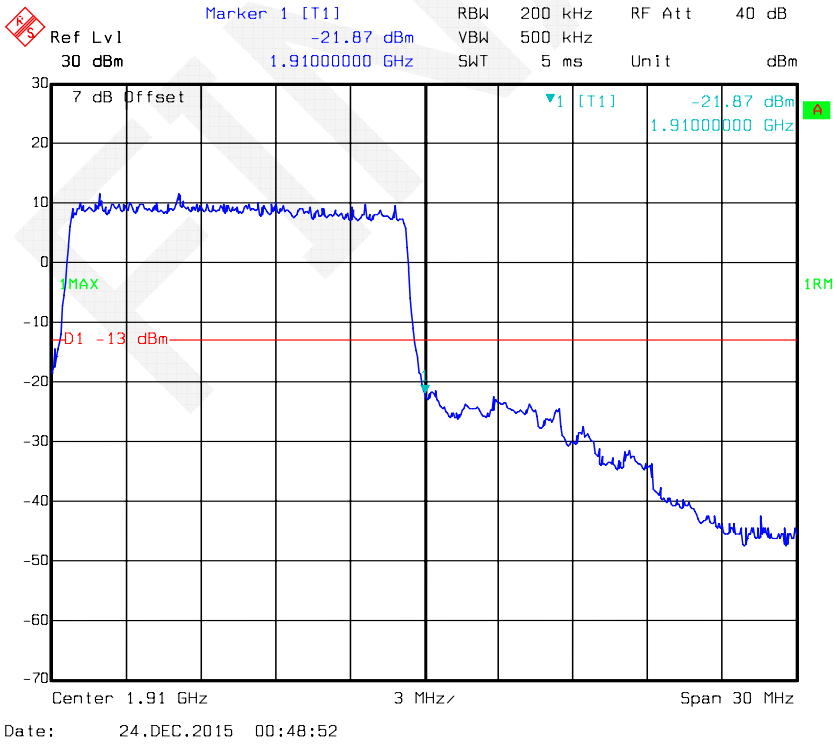
QPSK-15M 1RB, Right Band Edge



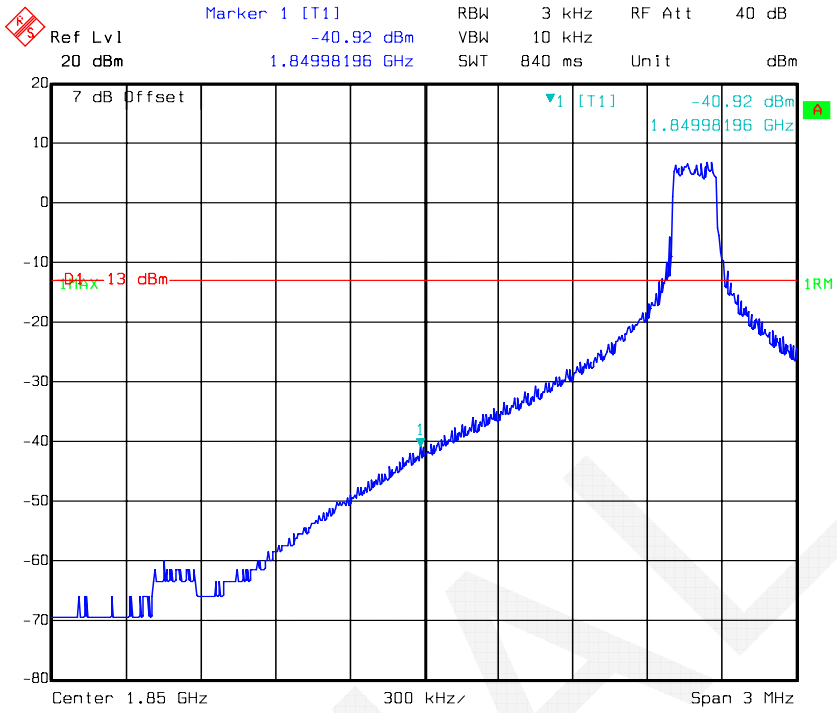
QPSK-15M Full RB, Left Band Edge



QPSK-15M Full RB, Right Band Edge



QPSK-20M 1RB, Left Band Edge



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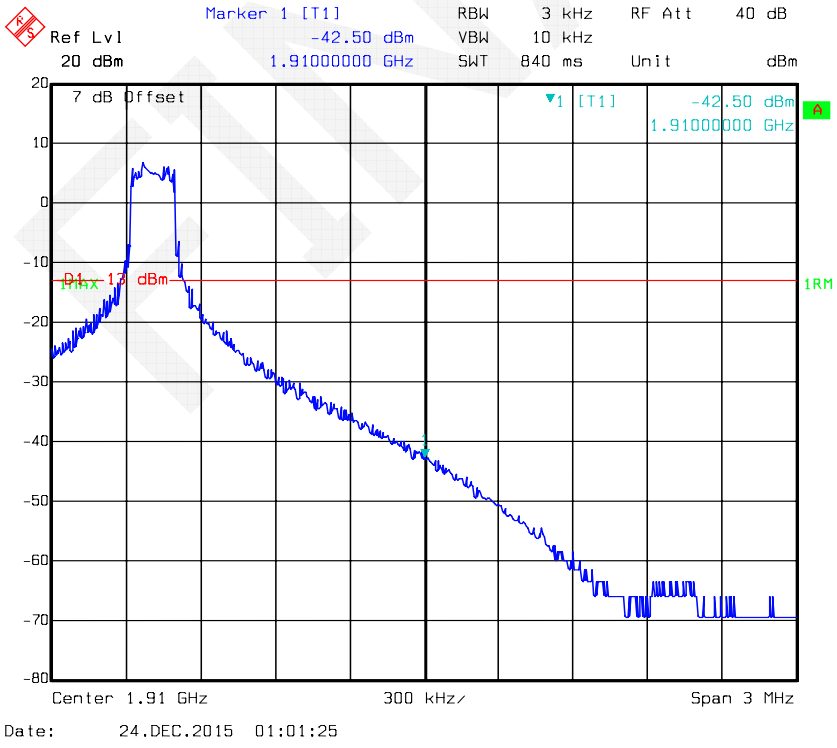
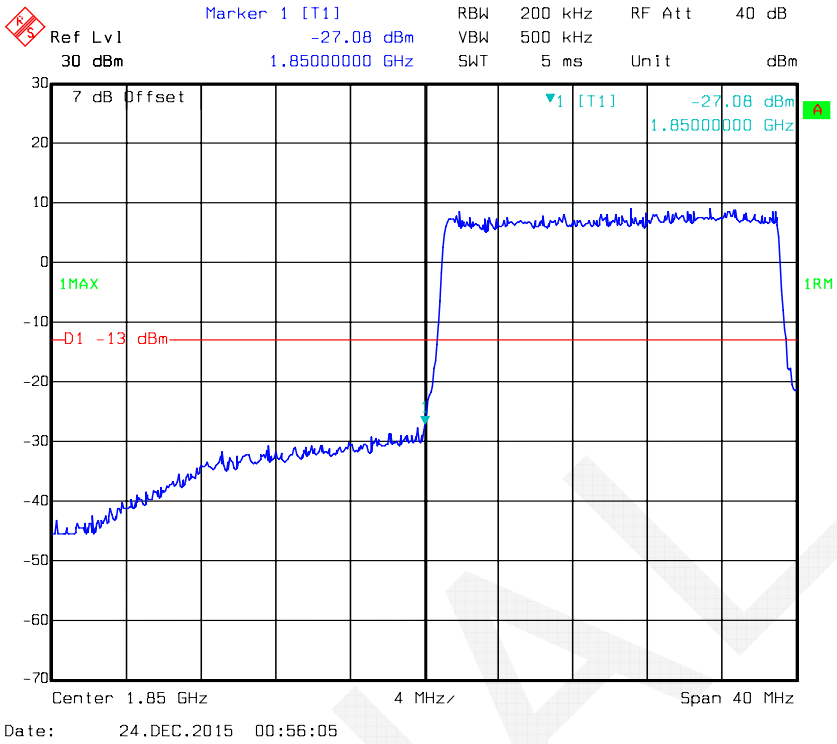
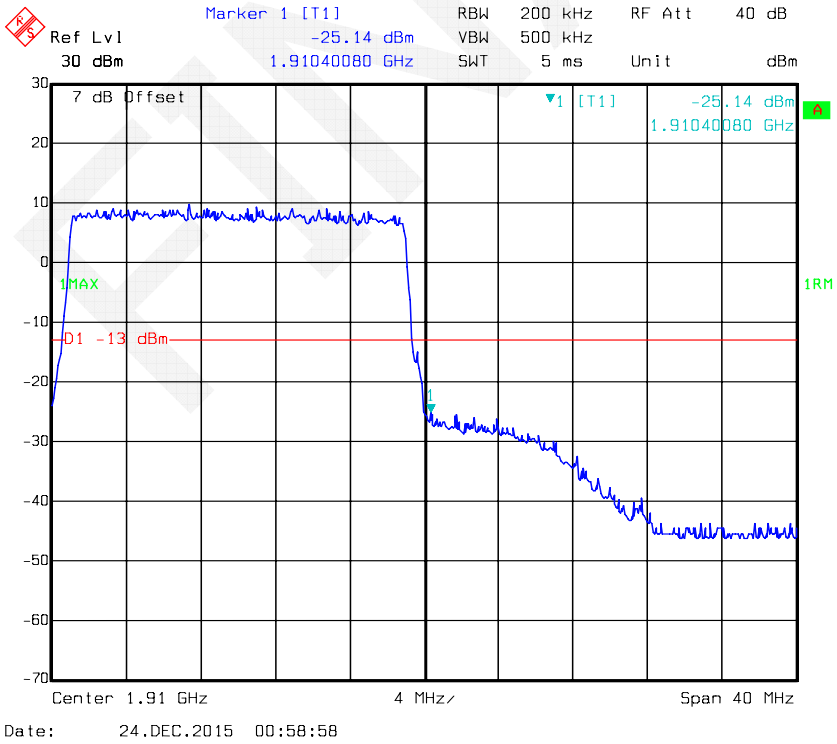


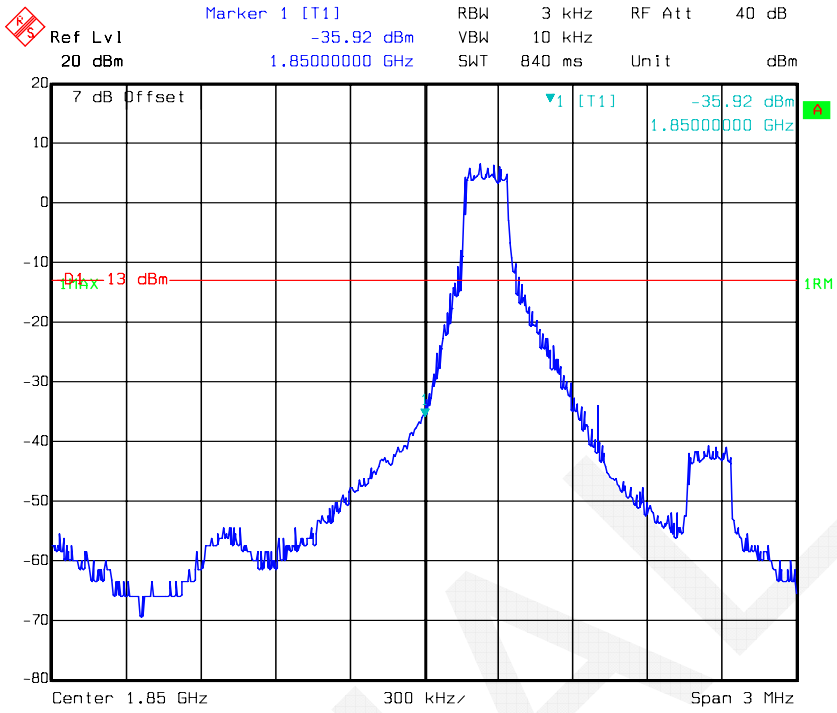
QPSK-20M Full RB, Left Band Edge



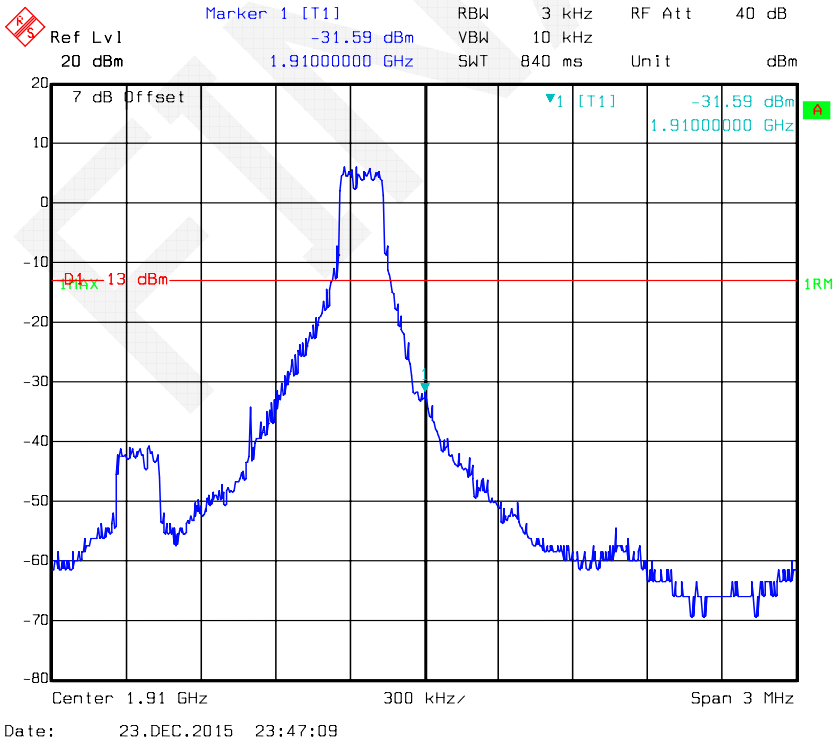
QPSK-20M Full RB, Right Band Edge



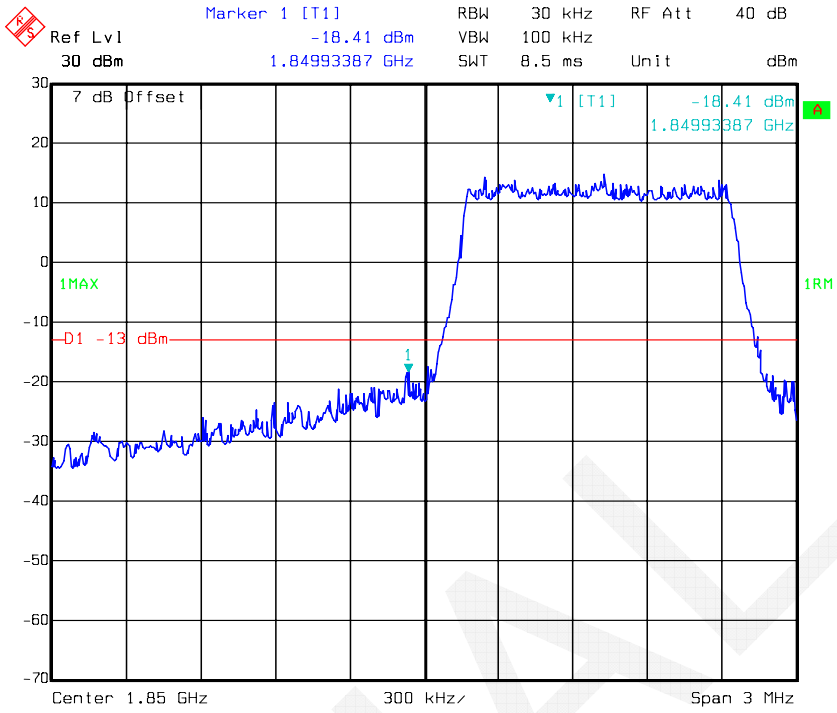
16QAM -1.4M 1RB, Left Band Edge



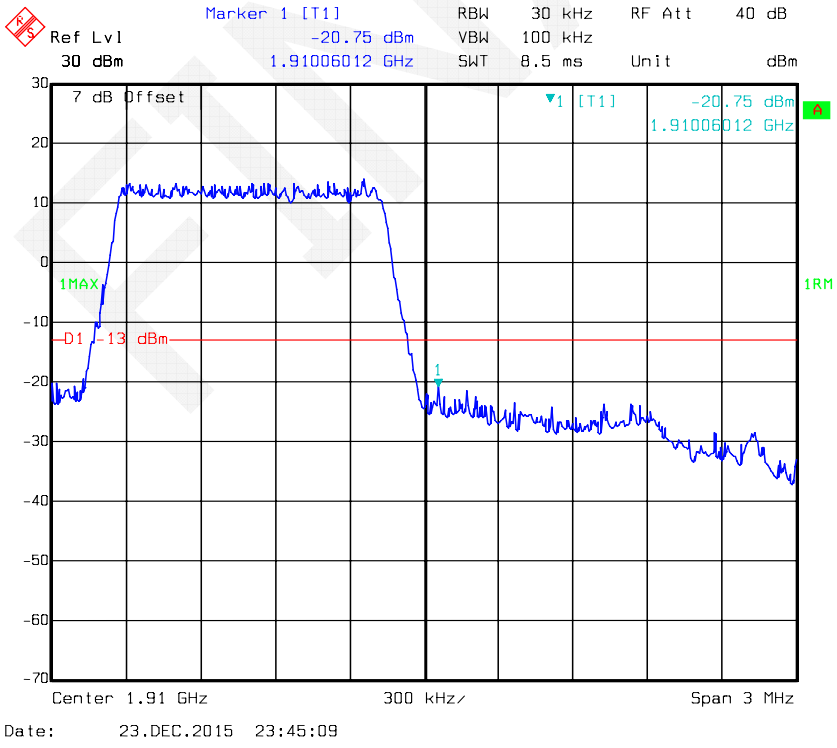
16QAM -1.4M 1RB, Right Band Edge



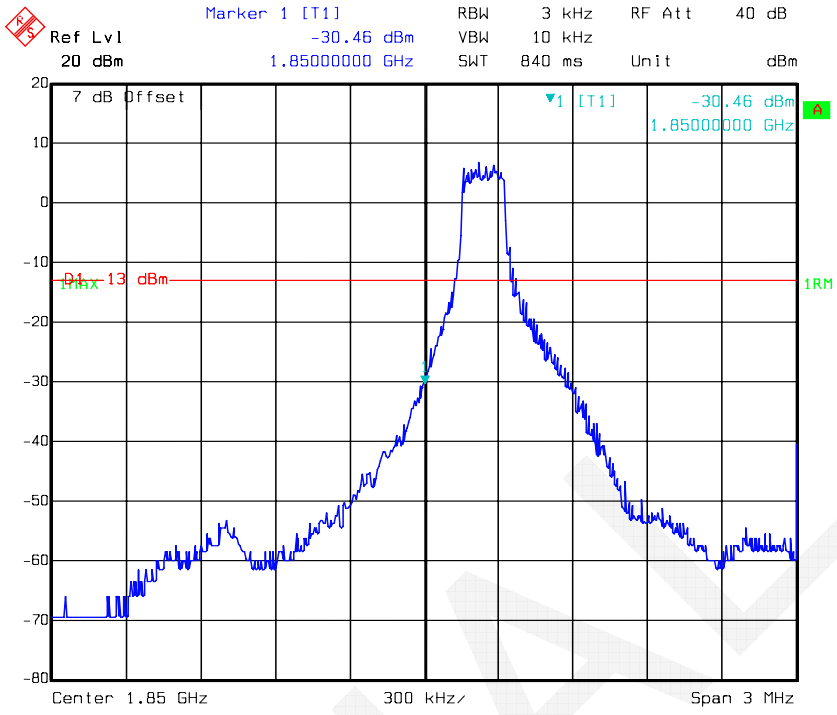
16QAM -1.4M Full RB, Left Band Edge



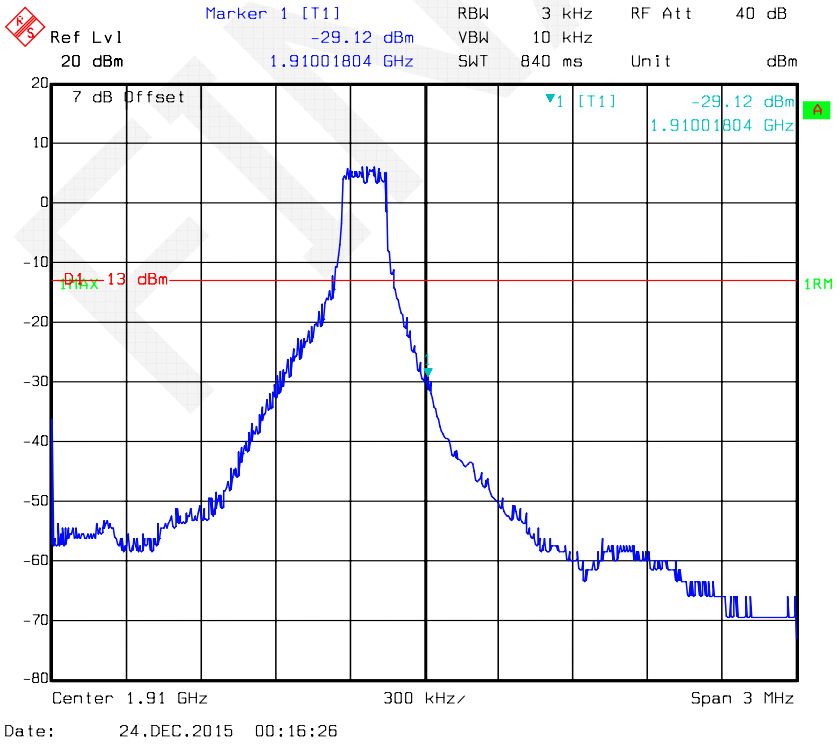
16QAM -1.4M Full RB, Right Band Edge



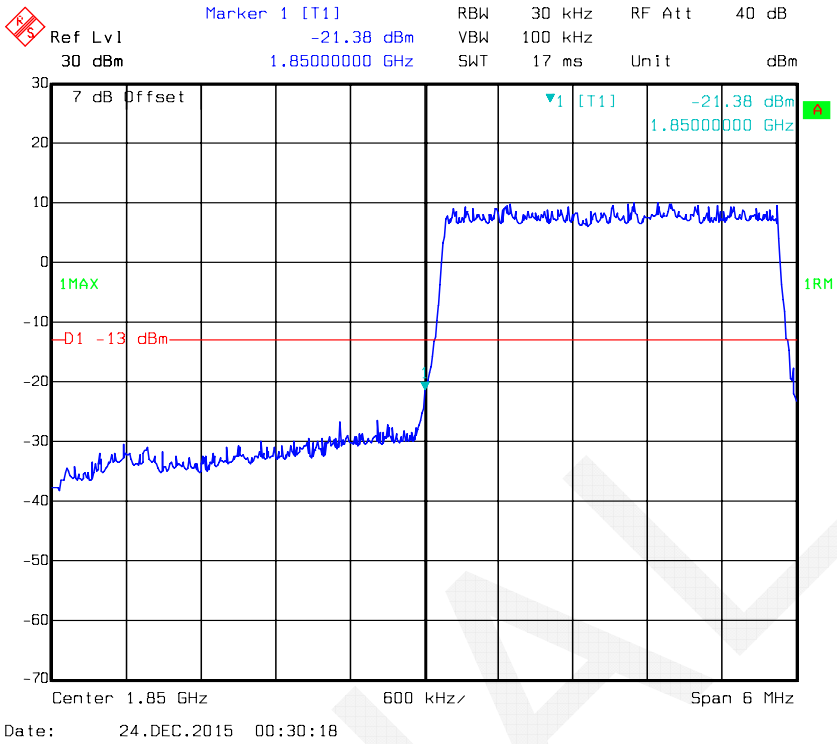
16QAM -3M 1RB, Left Band Edge



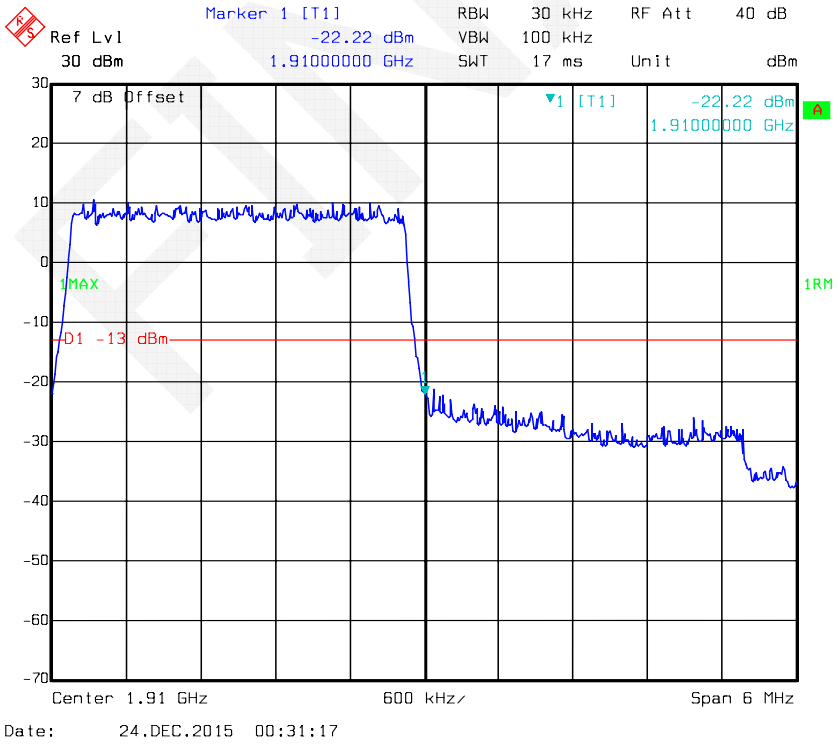
16QAM -3M 1RB, Right Band Edge



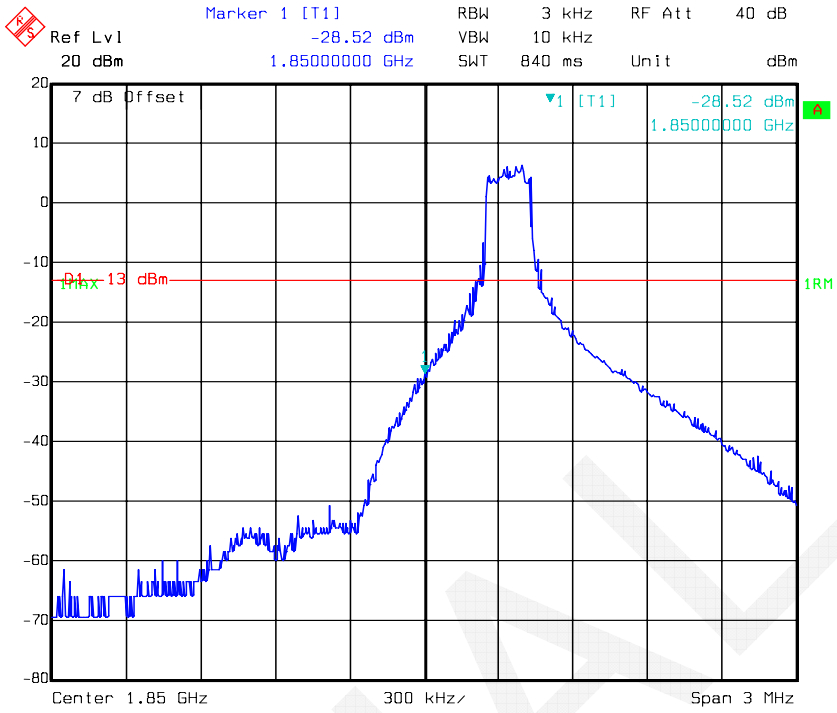
16QAM -3M Full RB, Left Band Edge



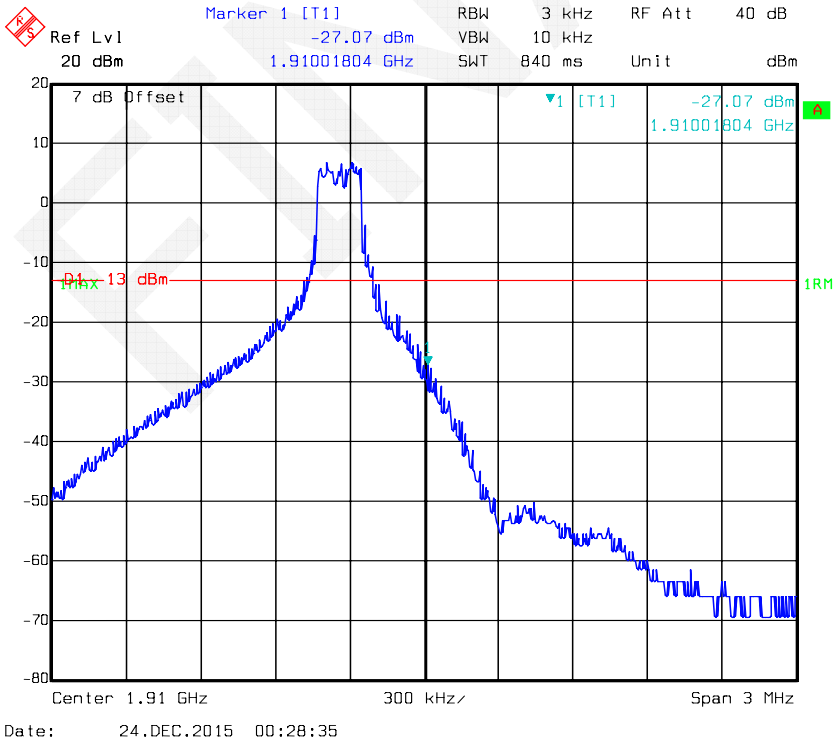
16QAM -3M Full RB, Right Band Edge



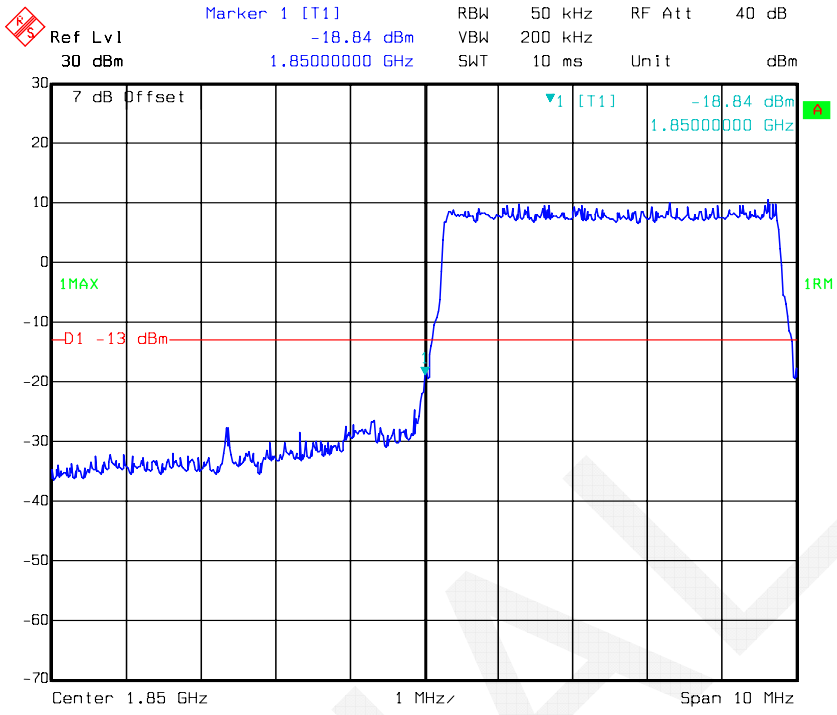
16QAM -5M 1RB, Left Band Edge



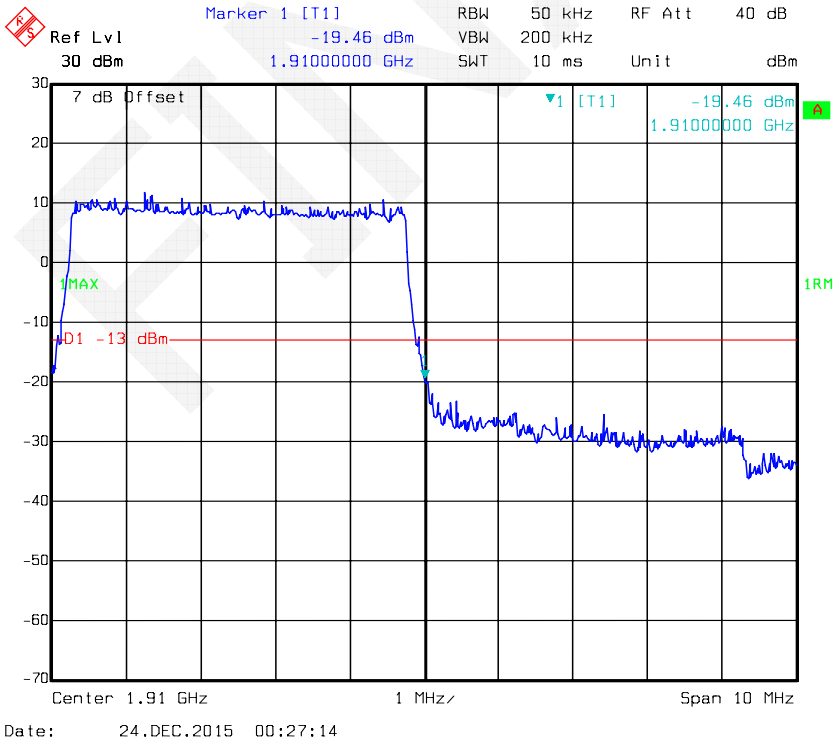
16QAM -5M 1RB, Right Band Edge



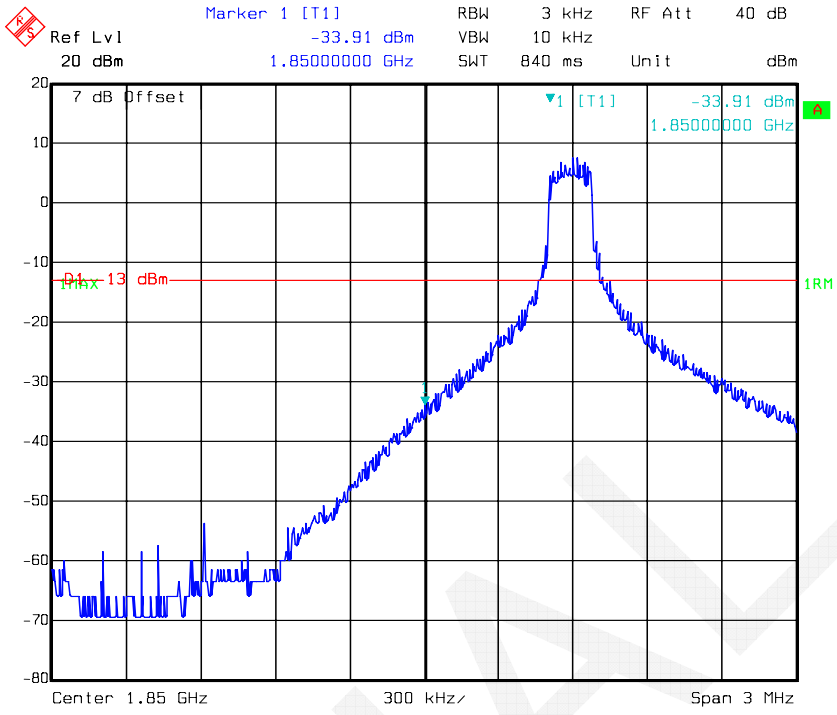
16QAM -5M Full RB, Left Band Edge



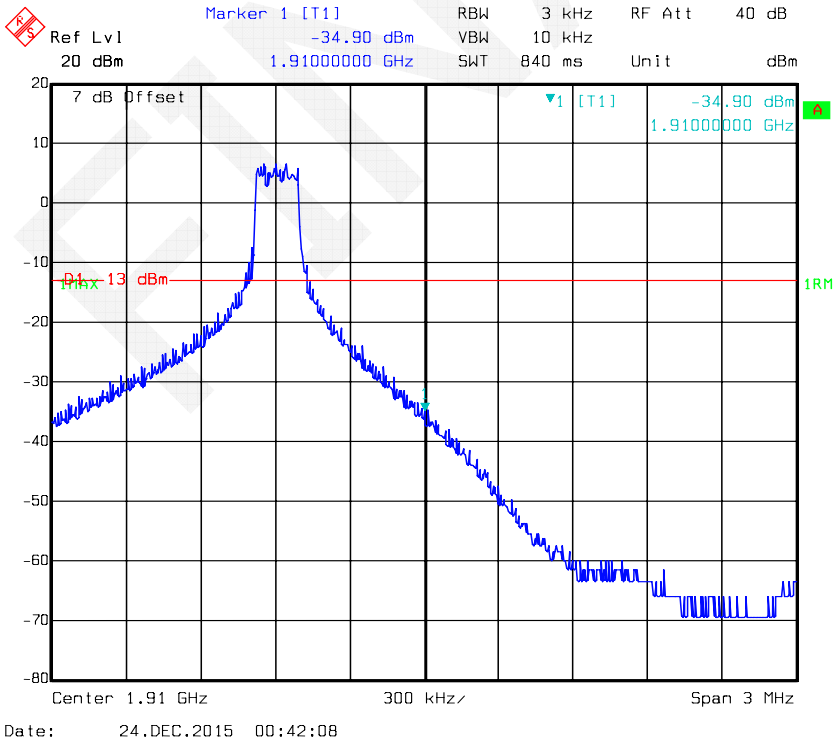
16QAM -5M Full RB, Right Band Edge



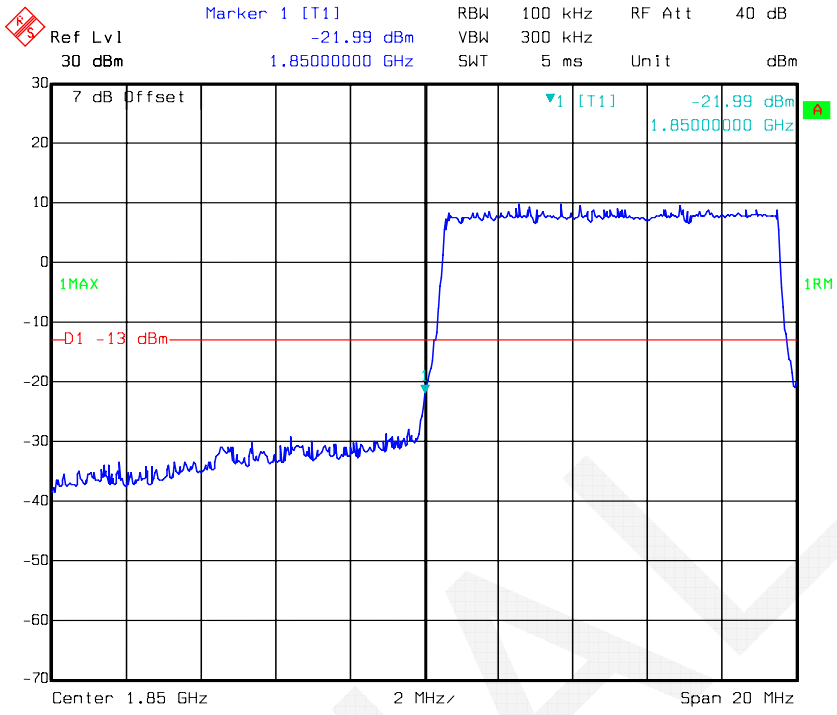
16QAM -10M 1RB, Left Band Edge



16QAM -10M 1RB, Right Band Edge



16QAM -10M Full RB, Left Band Edge



16QAM -10M Full RB, Right Band Edge