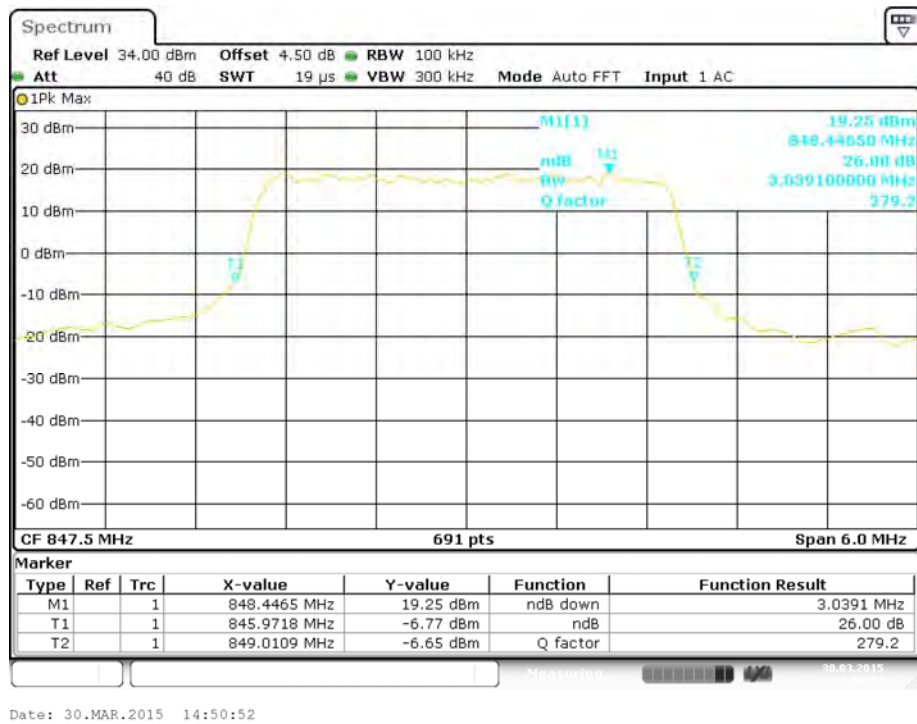
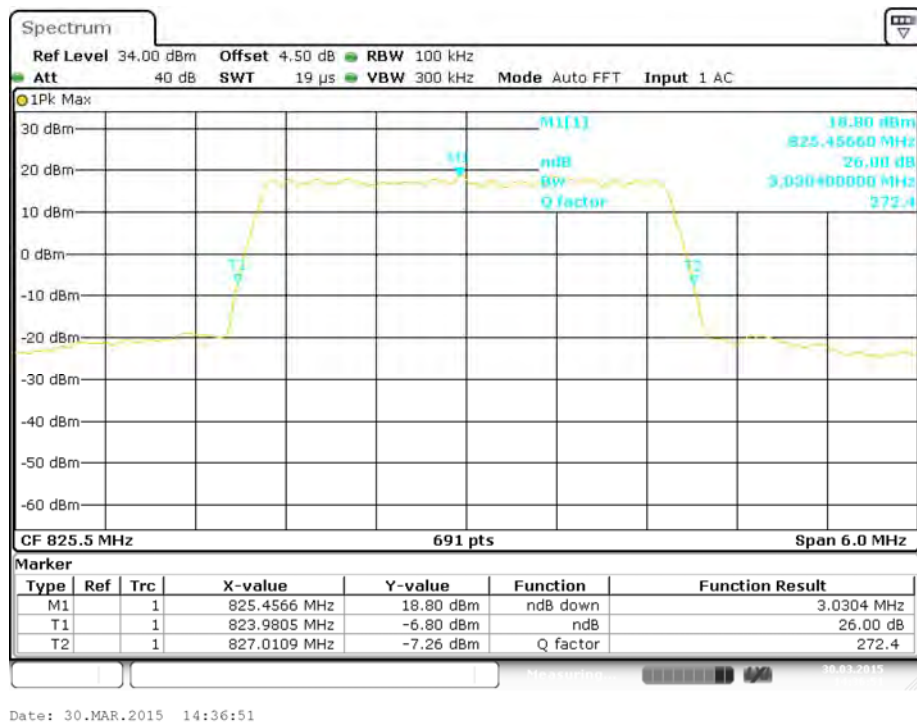


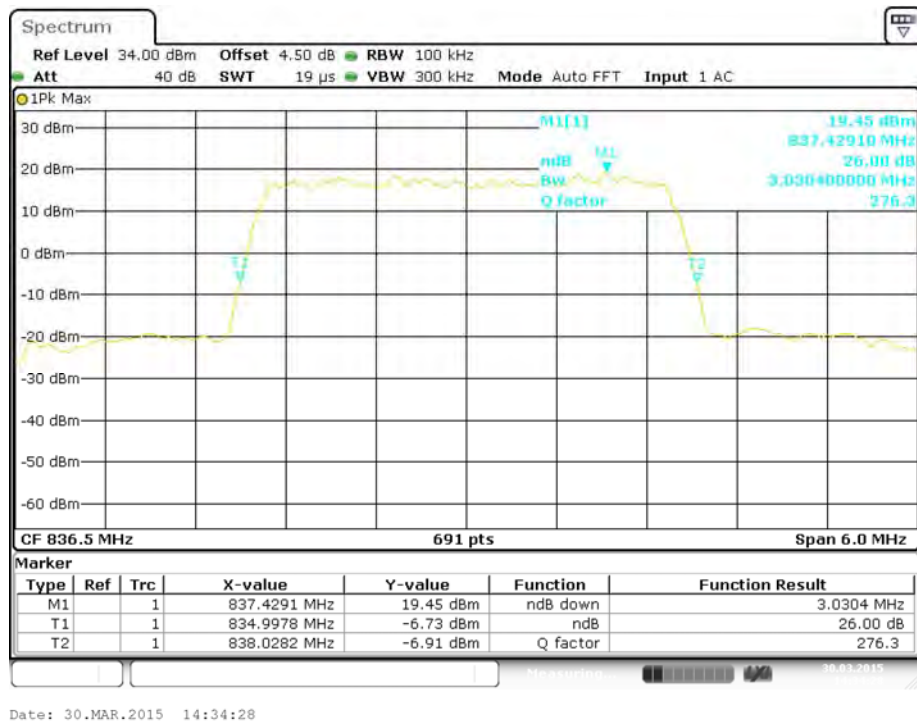
QPSK (3.0 MHz) - 26 dB Bandwidth, High channel



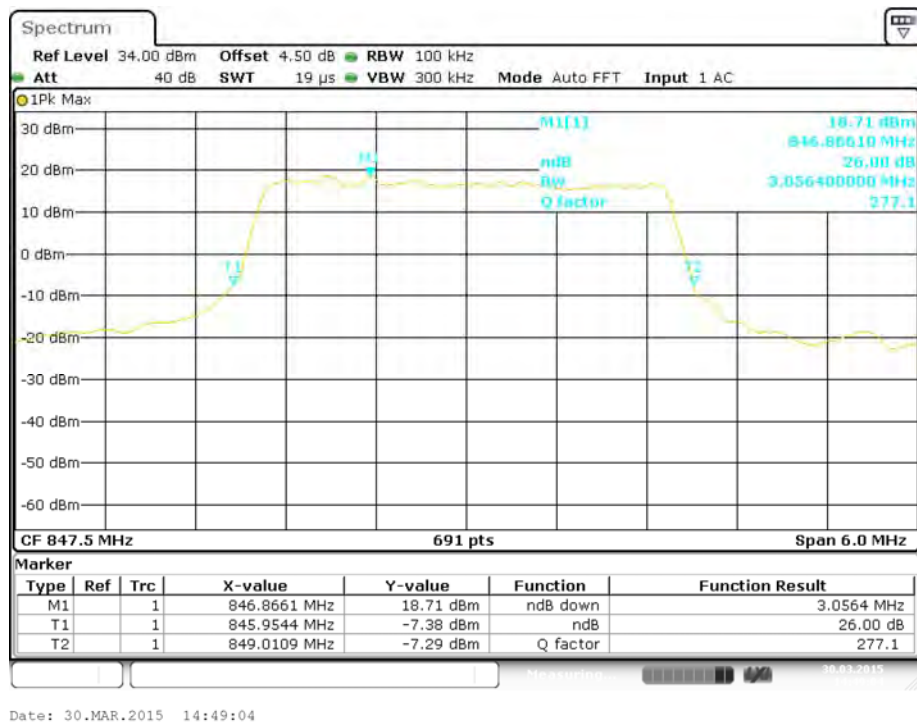
16-QAM (3.0 MHz) - 26 dB Bandwidth, Low channel



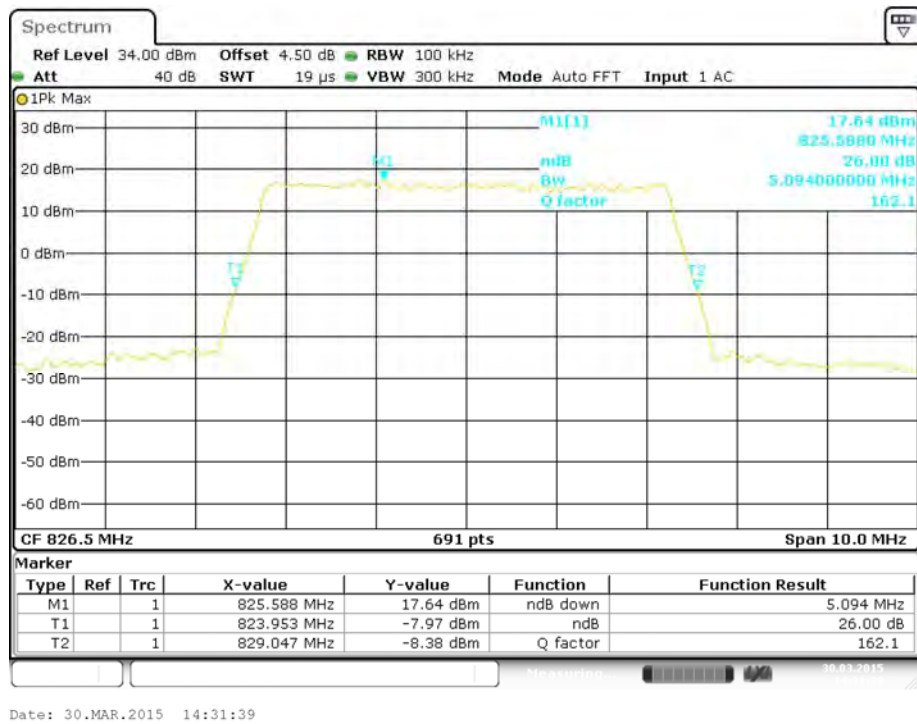
16-QAM (3.0 MHz) - 26 dB Bandwidth, Middle channel



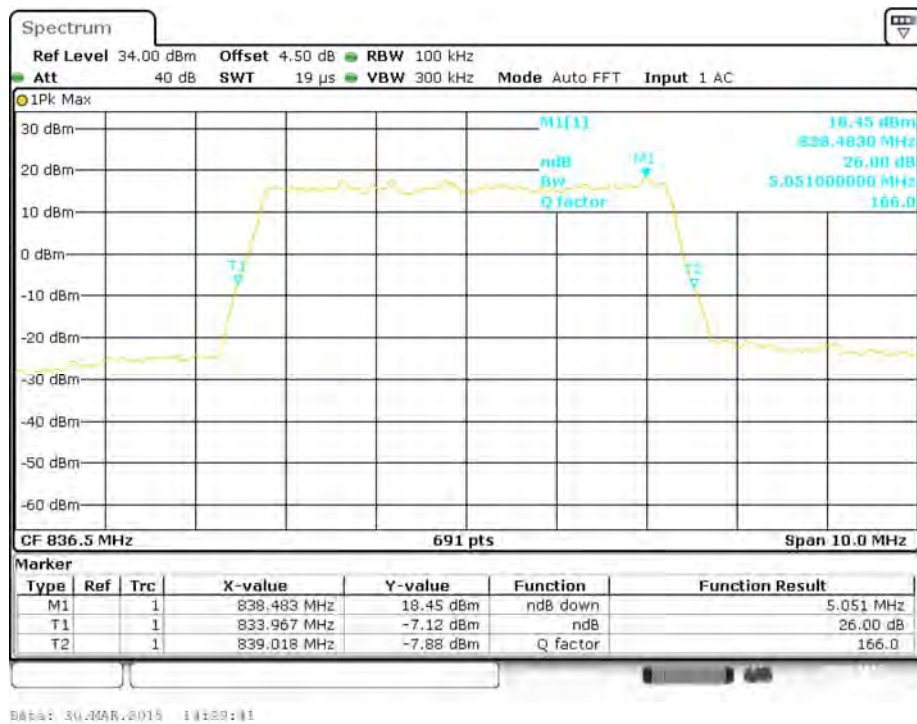
16-QAM (3.0 MHz) - 26 dB Bandwidth, High channel



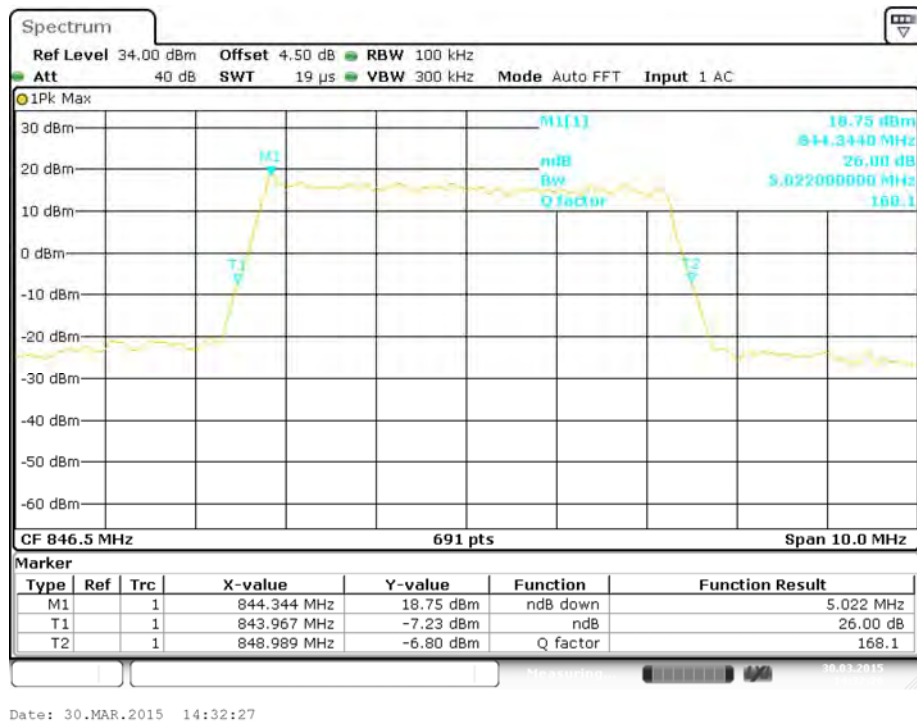
QPSK (5.0 MHz) - 26 dB Bandwidth, Low channel



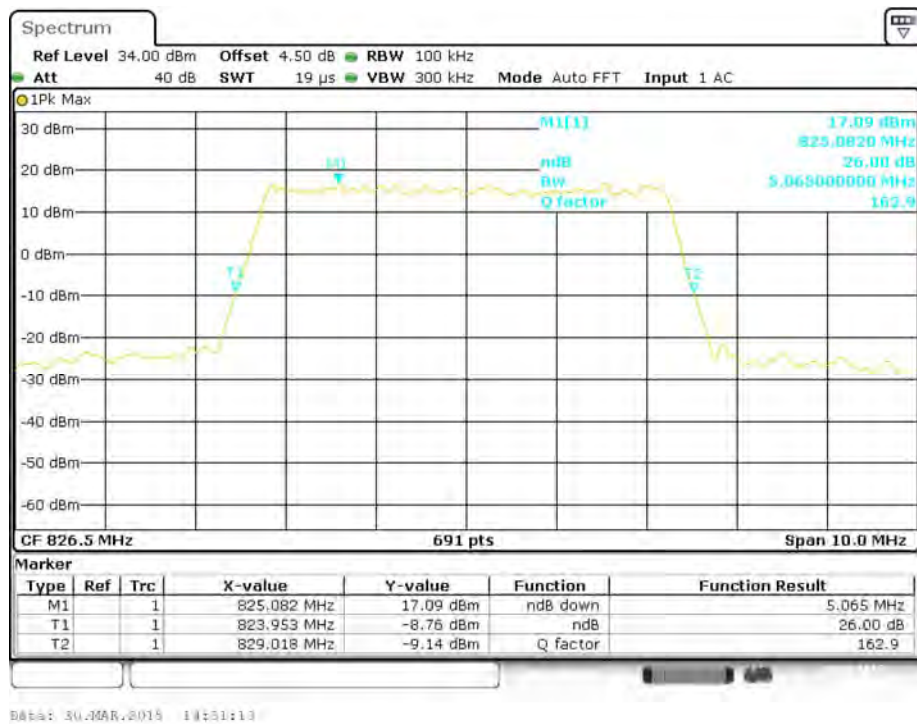
QPSK (5.0 MHz) - 26 dB Bandwidth, Middle channel



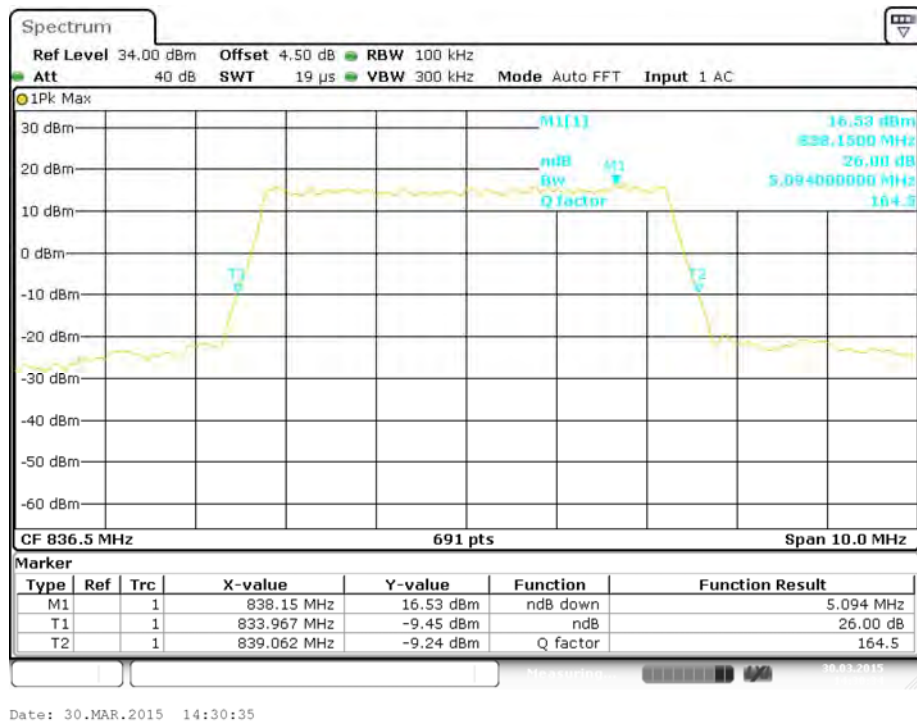
QPSK (5.0 MHz) - 26 dB Bandwidth, High channel



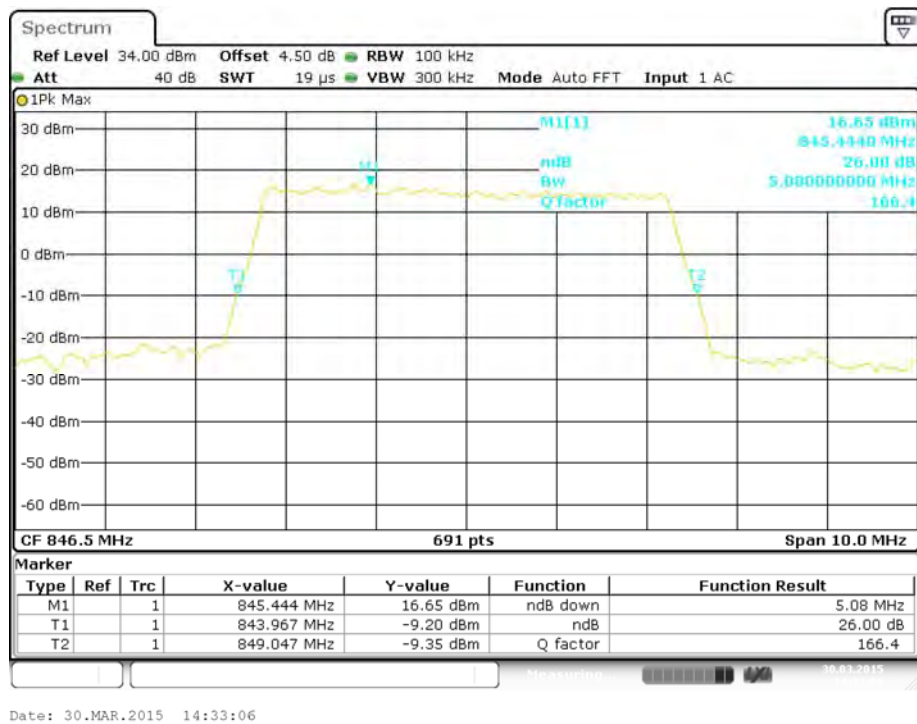
16-QAM (5.0 MHz) - 26 dB Bandwidth, Low channel



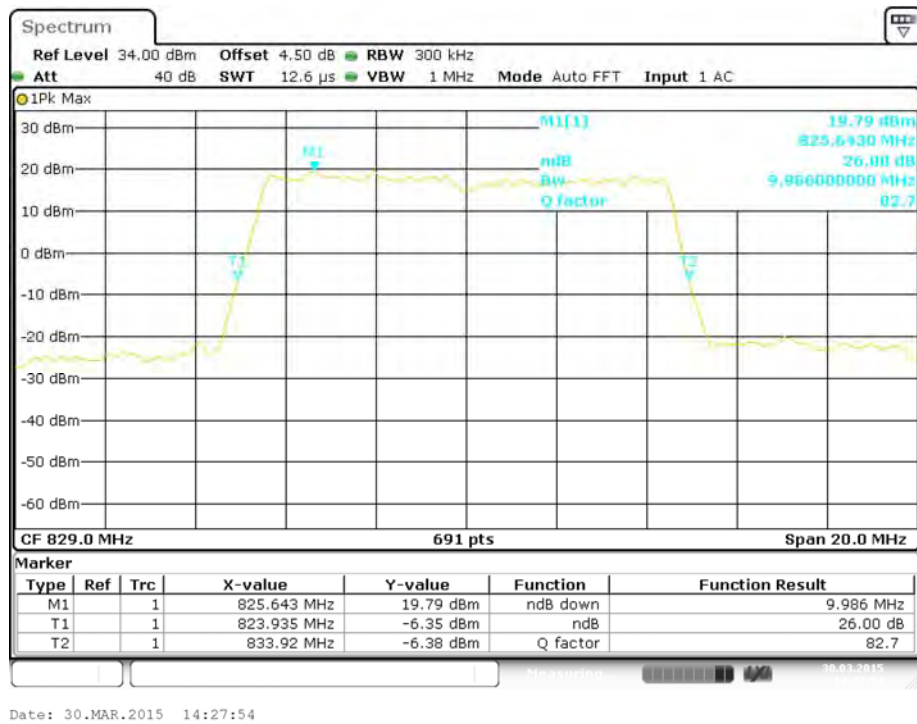
16-QAM (5.0 MHz) - 26 dB Bandwidth, Middle channel



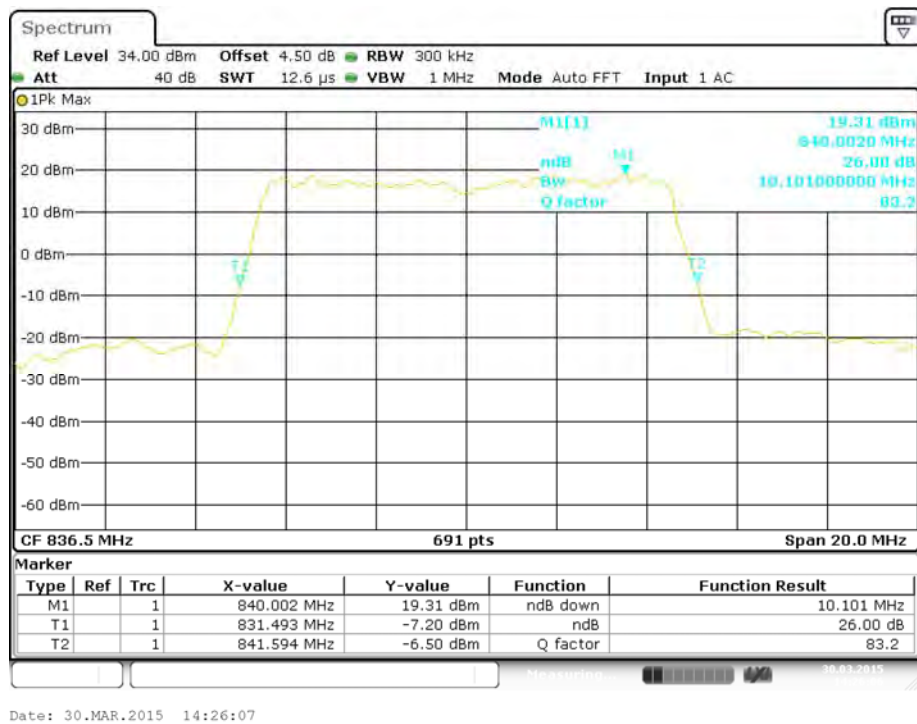
16-QAM (5.0 MHz) - 26 dB Bandwidth, High channel



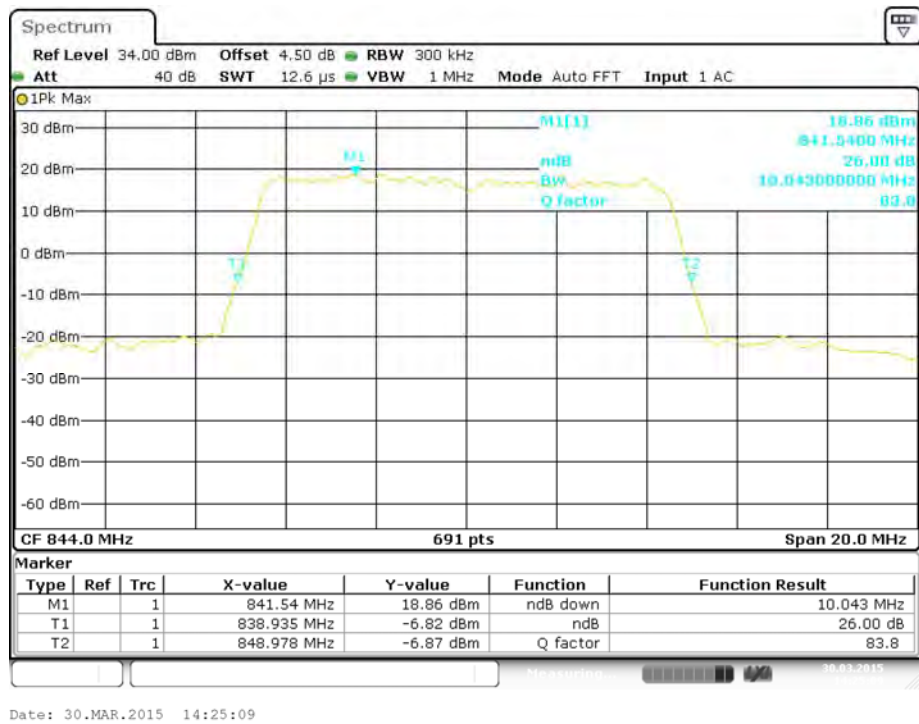
QPSK (10.0 MHz) - 26 dB Bandwidth, Low channel



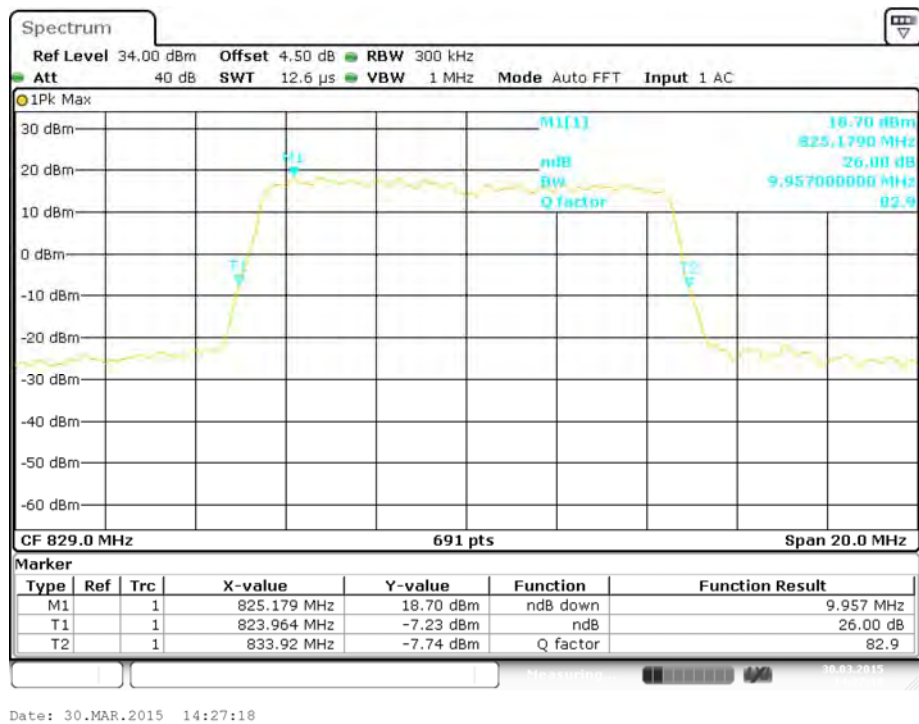
QPSK (10.0 MHz) - 26 dB Bandwidth, Middle channel



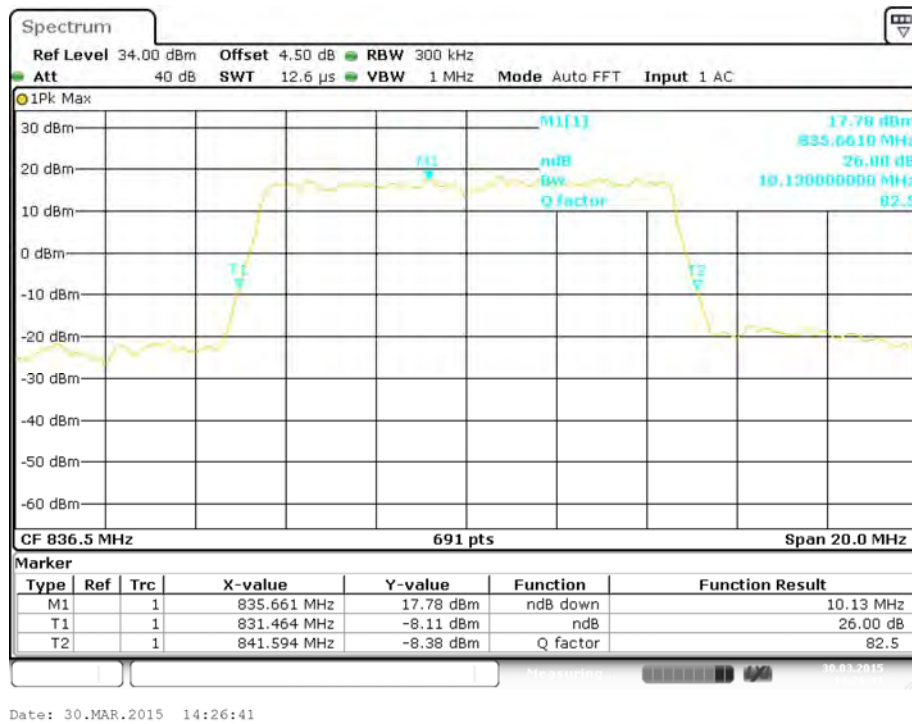
QPSK (10.0 MHz) - 26 dB Bandwidth, High channel



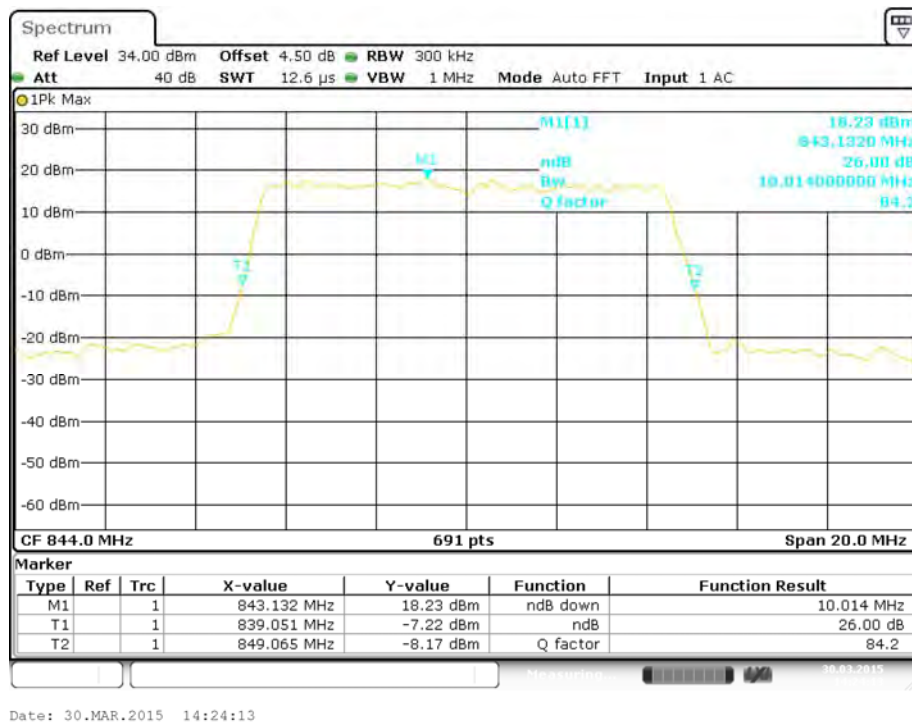
16-QAM (10.0 MHz) - 26 dB Bandwidth, Low channel



16-QAM (10.0 MHz) - 26 dB Bandwidth, Middle channel



16-QAM (10.0 MHz) - 26 dB Bandwidth, High channel



Band 7:

99% Occupied Bandwidth		Low channel (MHz)	Middle channel (MHz)	High channel (MHz)
5.0 MHz	QPSK	4.99	4.85	5.70
	16QAM	5.14	4.85	5.90
10.0 MHz	QPSK	9.41	9.55	10.97
	16QAM	10.07	9.52	9.55
15.0 MHz	QPSK	13.79	18.15	14.04
	16QAM	13.85	17.96	14.04
20.0 MHz	QPSK	19.08	19.64	19.16
	16QAM	18.90	19.16	19.16

26 dB Emission Bandwidth		Low channel (MHz)	Middle channel (MHz)	High channel (MHz)
5.0 MHz	QPSK	5.70	5.17	5.08
	16QAM	5.67	5.17	5.11
10.0 MHz	QPSK	11.35	10.56	15.60
	16QAM	11.03	10.13	11.38
15.0 MHz	QPSK	15.80	16.02	14.89
	16QAM	16.80	15.07	15.37
20.0 MHz	QPSK	20.48	20.24	20.54
	16QAM	20.61	20.18	20.73

Spectrum

Ref Level 34.00 dBm Offset 4.50 dB RBW 100 kHz

Att 40 dB SWT 1 ms VBW 300 kHz Mode Auto FFT Input 1 AC

1Pk Max

M1[1] 16.46 dBm

2.5803440 GHz

Occ BW -4.992764110 MHz

CF 2.5025 GHz 691 pts Span 10.0 MHz

Spectrum

Ref Level 34.00 dBm Offset 4.50 dB RBW 100 kHz
 Att 40 dB SWT 1 ms VBW 300 kHz Mode Auto FFT Input 1 AC

● IPk Max

30 dBm
 20 dBm
 10 dBm
 0 dBm
 -10 dBm
 -20 dBm
 -30 dBm
 -40 dBm
 -50 dBm
 -60 dBm

M1[1]
 14.58 dBm
 2.5369540 GHz
 4.0+00+6310 MHz

Occ BW

CF 2.535 GHz 691 pts Span 10.0 GHz

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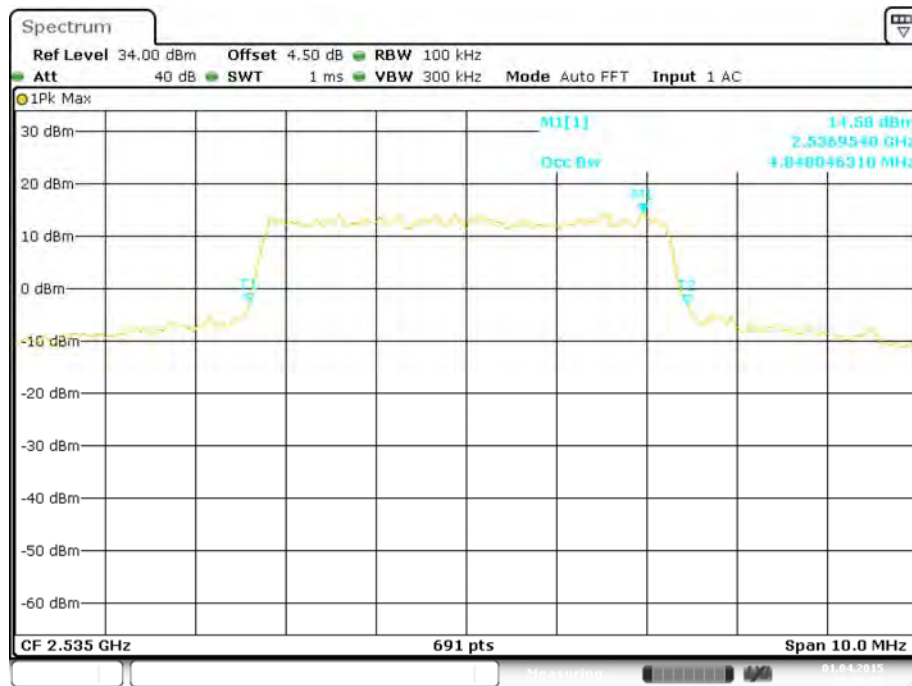
QPSK (5.0 MHz) - 99% Occupied Bandwidth, High channel

Date: 1.APR.2015 15:36:57

16-QAM (5.0 MHz) - 99% Occupied Bandwidth, Low channel

Date: 1.APR.2015 15:32:35

16-QAM (5.0 MHz) - 99% Occupied Bandwidth, Middle channel



Date: 1.APR.2015 15:30:05

16-QAM (5.0 MHz) - 99% Occupied Bandwidth, High channel



Date: 1.APR.2015 15:36:22

QPSK (10.0 MHz) - 99% Occupied Bandwidth, Low channel



Date: 1.APR.2015 15:42:27

QPSK (10.0 MHz) - 99% Occupied Bandwidth, Middle channel



Date: 1.APR.2015 15:40:51

Spectrum

Ref Level 34.00 dBm Offset 4.50 dB RBW 300 kHz

Att 40 dB SWT 1 ms VBW 1 MHz Mode Auto FFT Input 1 AC

1Pk Max

30 dBm

20 dBm

10 dBm

0 dBm

-10 dBm

-20 dBm

-30 dBm

-40 dBm

-50 dBm

-60 dBm

M1[1] 17.40 dBm

2.5661290 GHz

10.969609262 MHz

CF 2.565 GHz

691 pts

Span 20.0 MHz

Spectrum

Ref Level 34.00 dBm Offset 4.50 dB RBW 300 kHz

Att 40 dB SWT 1 ms VBW 1 MHz Mode Auto FFT Input 1 AC

1Pk Max

30 dBm

20 dBm

10 dBm

0 dBm

-10 dBm

-20 dBm

-30 dBm

-40 dBm

-50 dBm

-60 dBm

M1[1]

Occ 8w

16.42 dBm

2.5086210 GHz

10.072350900 GHz

CF 2.505 GHz

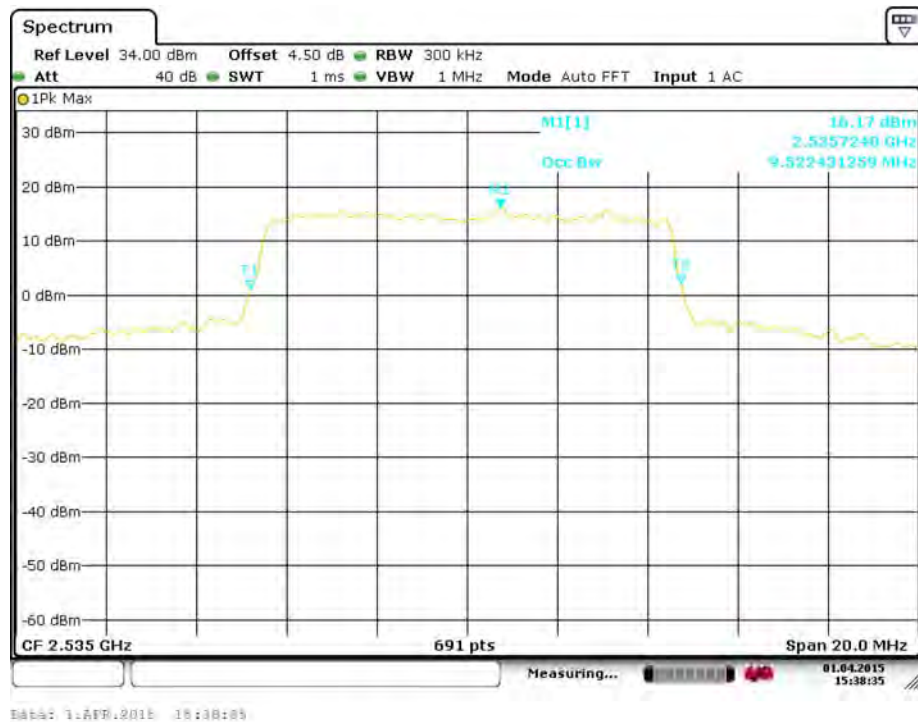
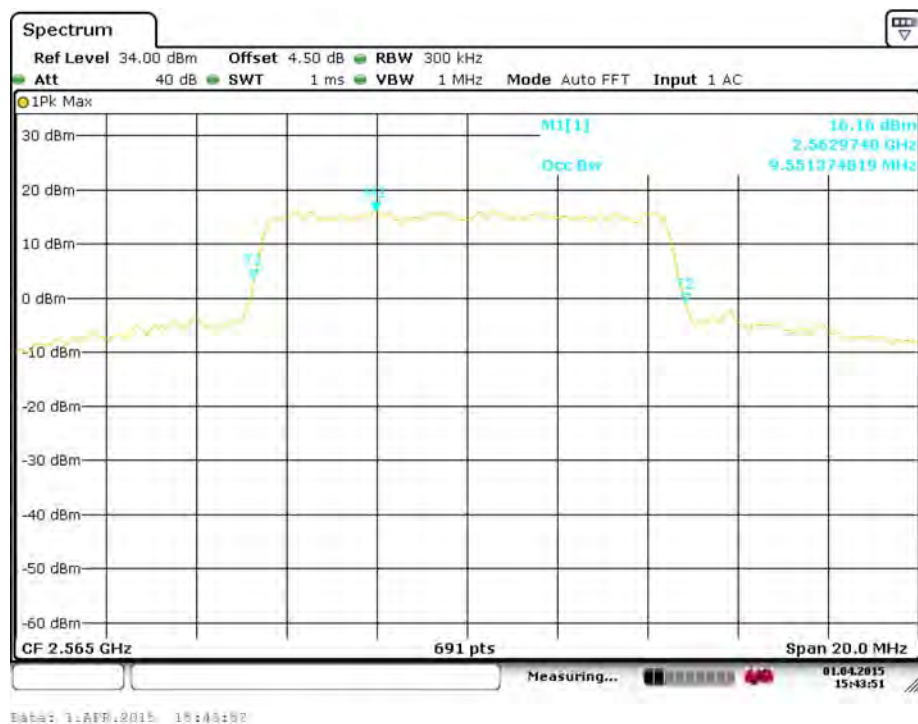
691 pts

Span 20.0 GHz

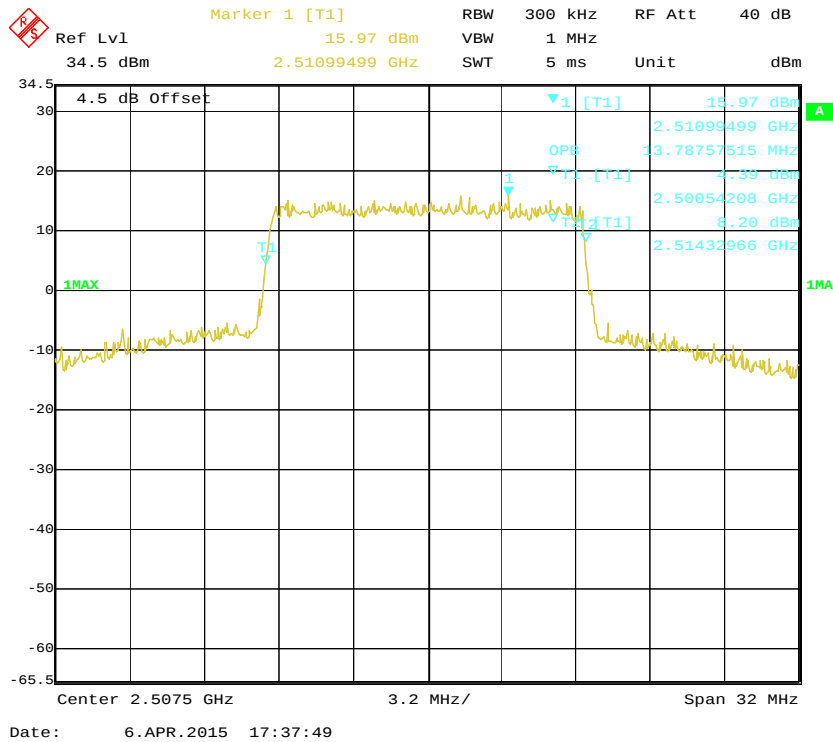
Measuring

01/04/2015

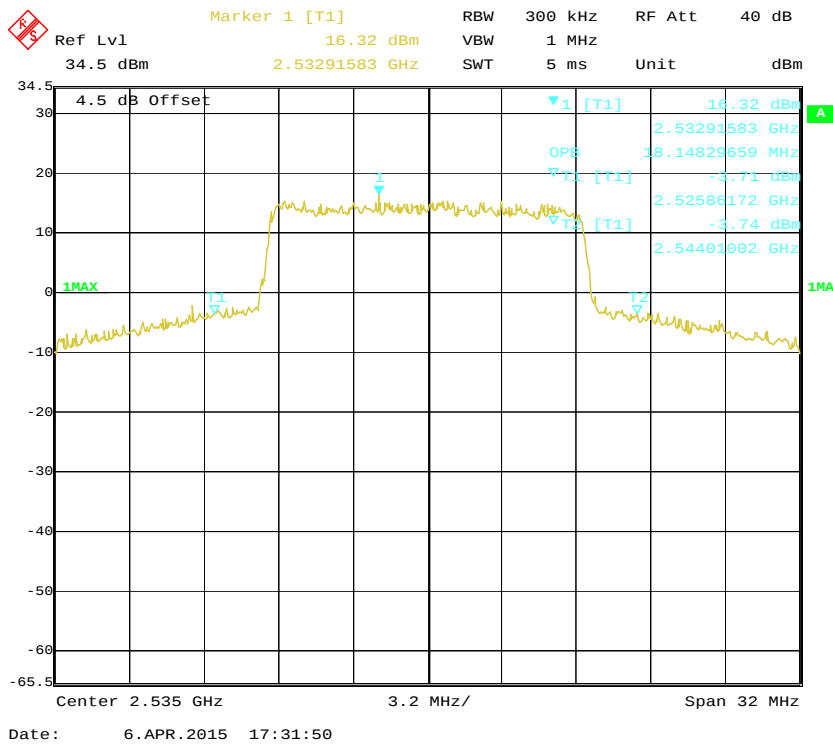
Page 158 of 291

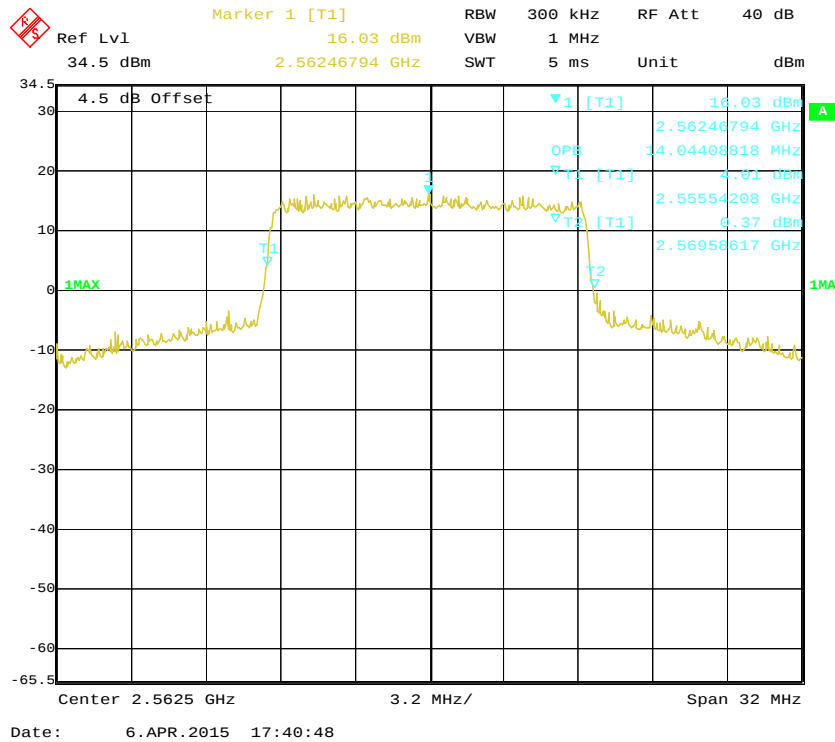
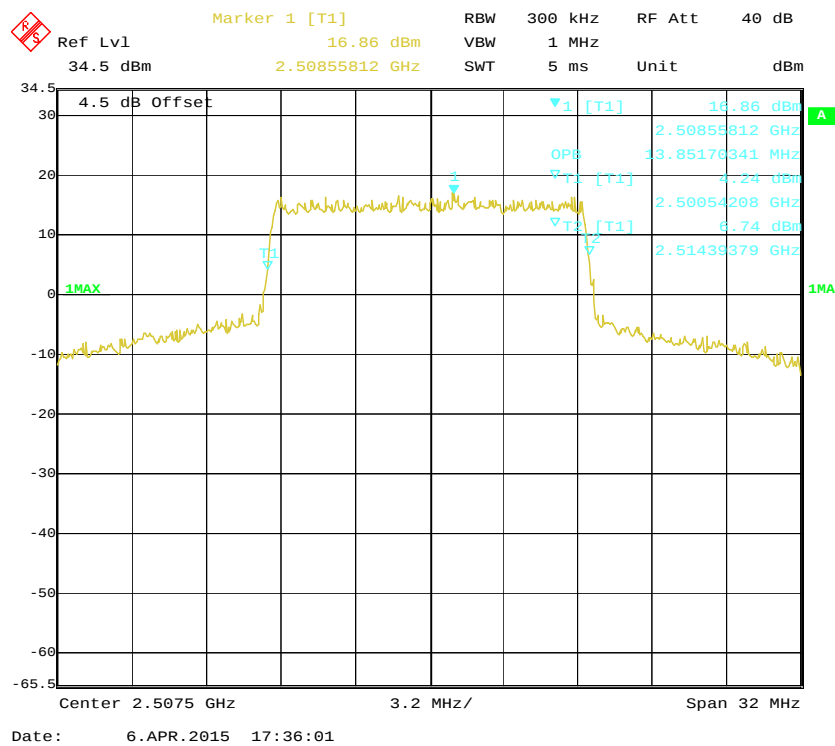
16-QAM (10.0 MHz) - 99% Occupied Bandwidth, Middle channel**16-QAM (10.0 MHz) - 99% Occupied Bandwidth, High channel**

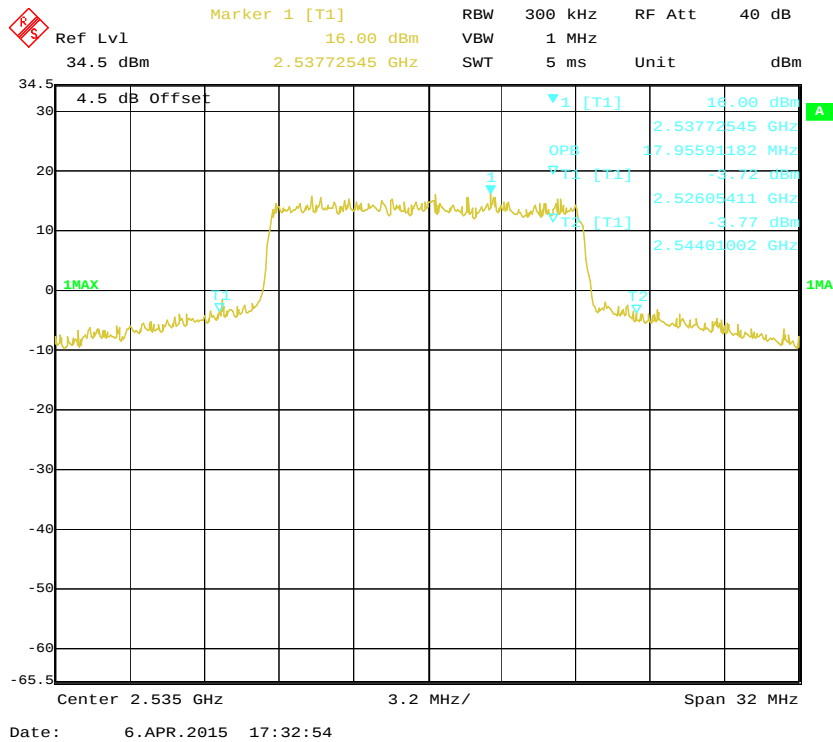
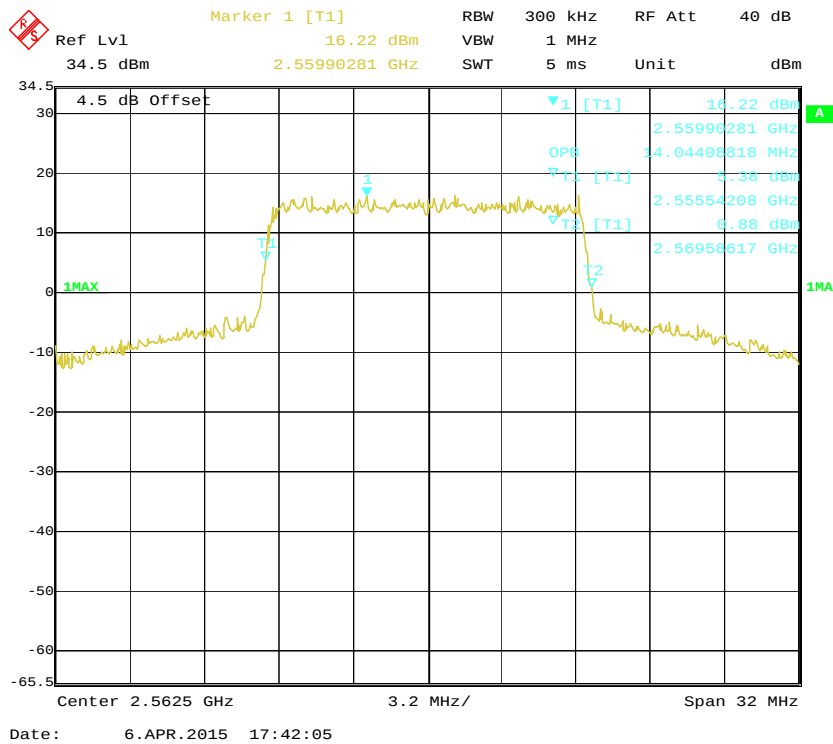
QPSK (15.0 MHz) - 99% Occupied Bandwidth, Low channel



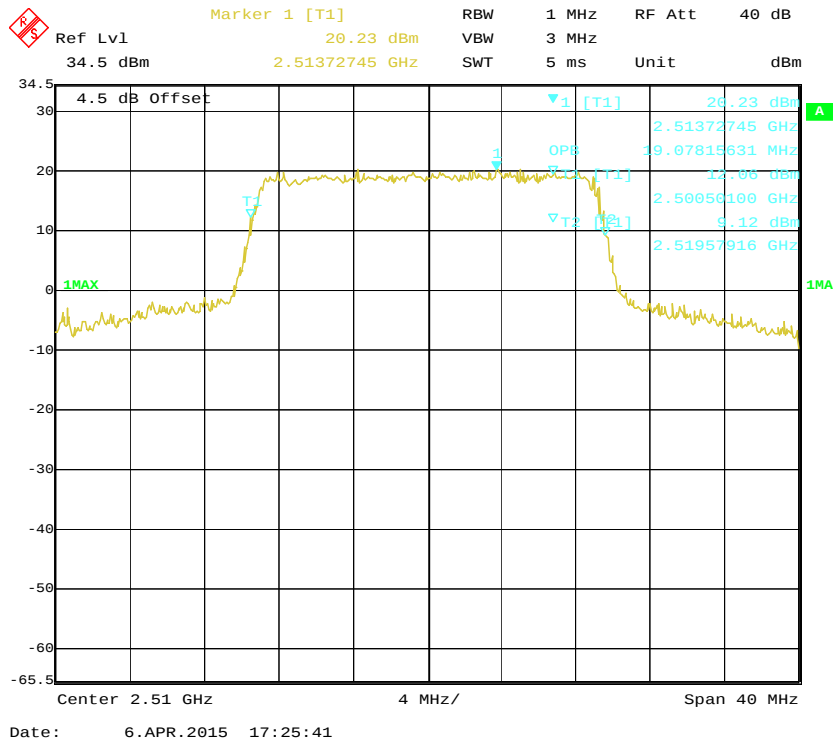
QPSK (15.0 MHz) - 99% Occupied Bandwidth, Middle channel



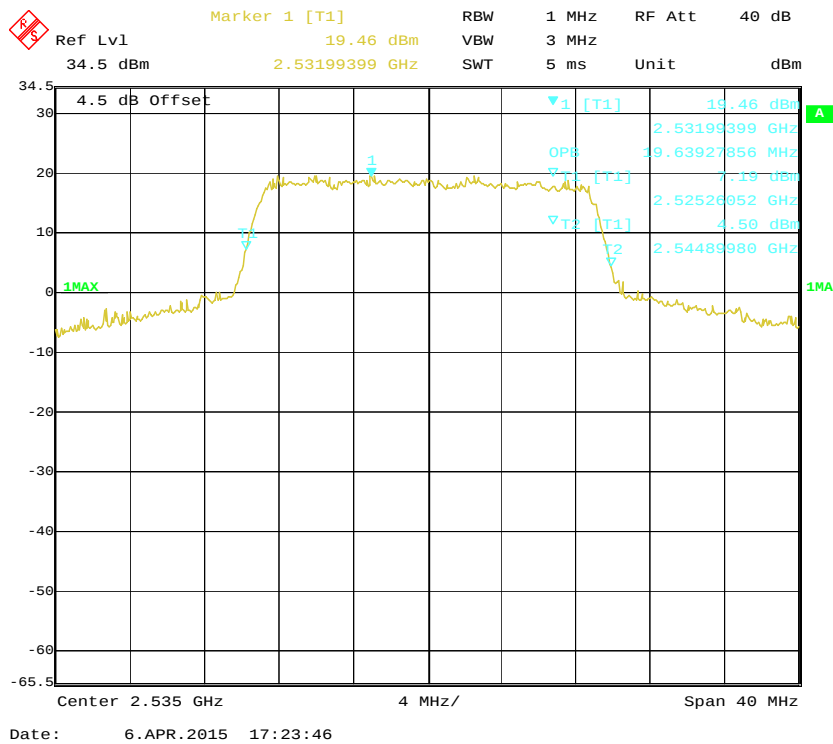
QPSK (15.0 MHz) - 99% Occupied Bandwidth, High channel**16-QAM (15.0 MHz) - 99% Occupied Bandwidth, Low channel**

16-QAM (15.0 MHz) - 99% Occupied Bandwidth, Middle channel**16-QAM (15.0 MHz) - 99% Occupied Bandwidth, High channel**

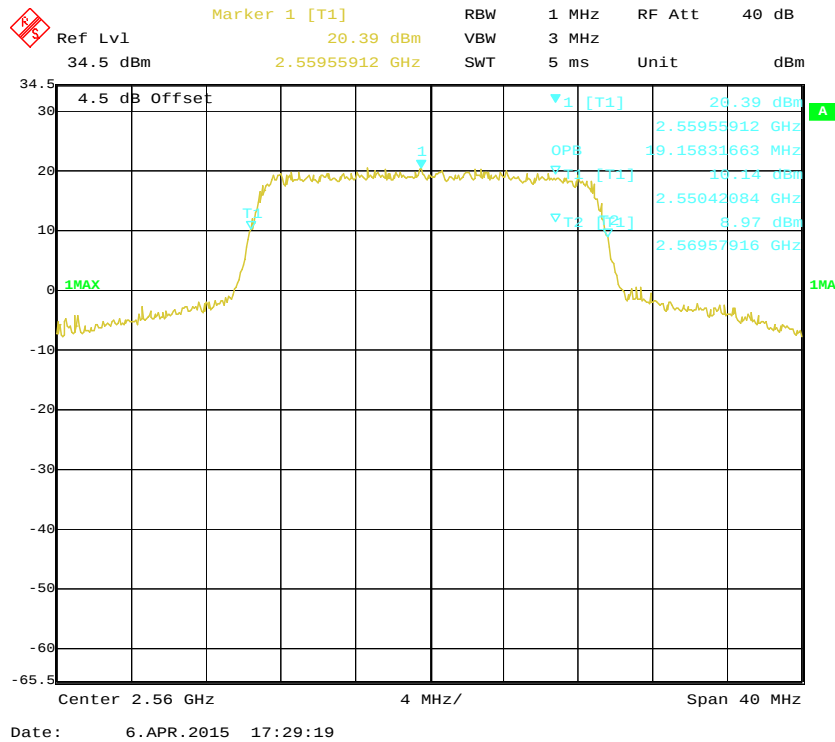
QPSK (20.0 MHz) - 99% Occupied Bandwidth, Low channel



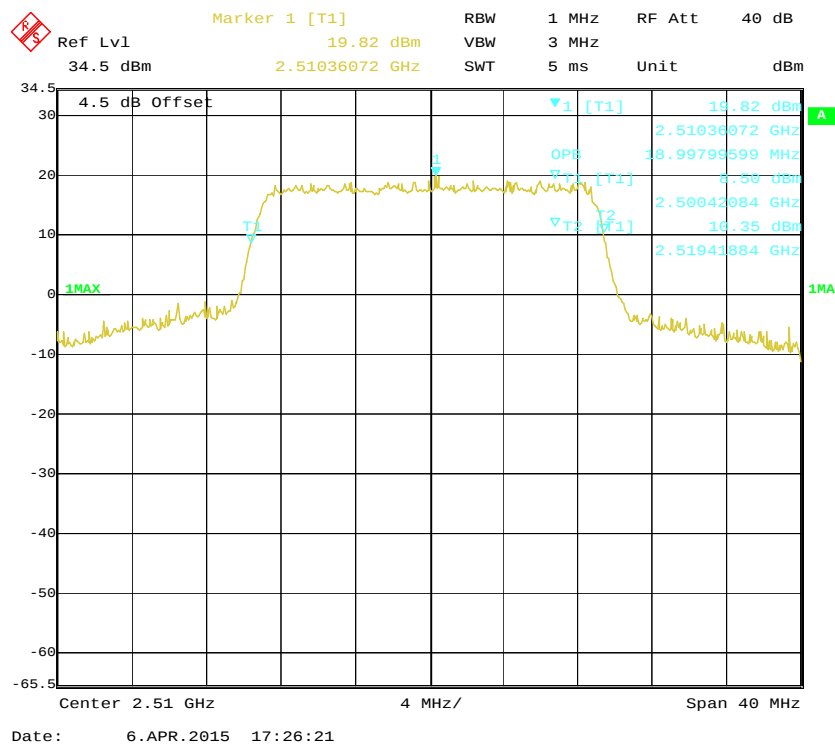
QPSK (20.0 MHz) - 99% Occupied Bandwidth, Middle channel

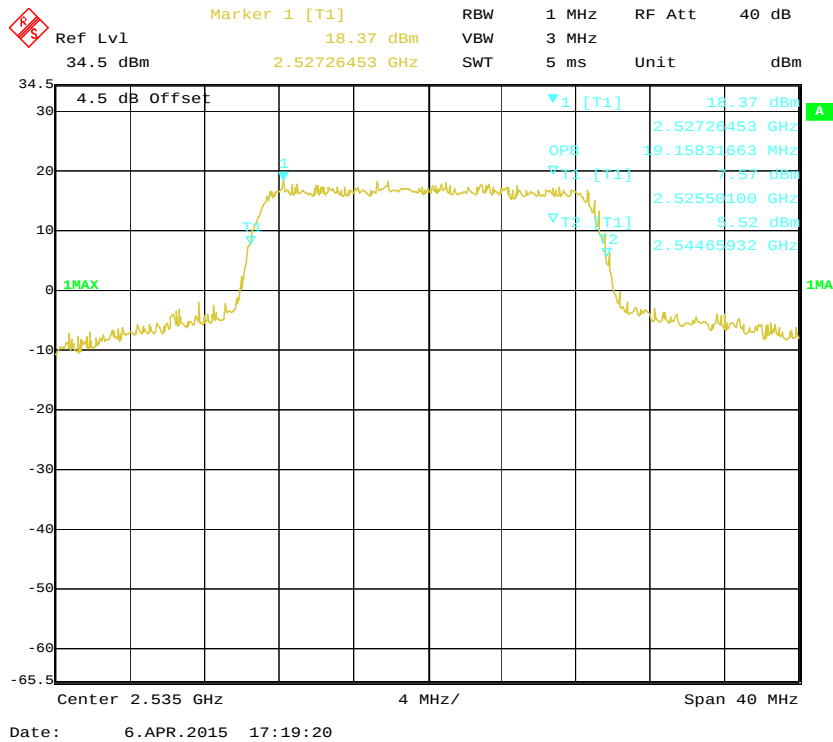
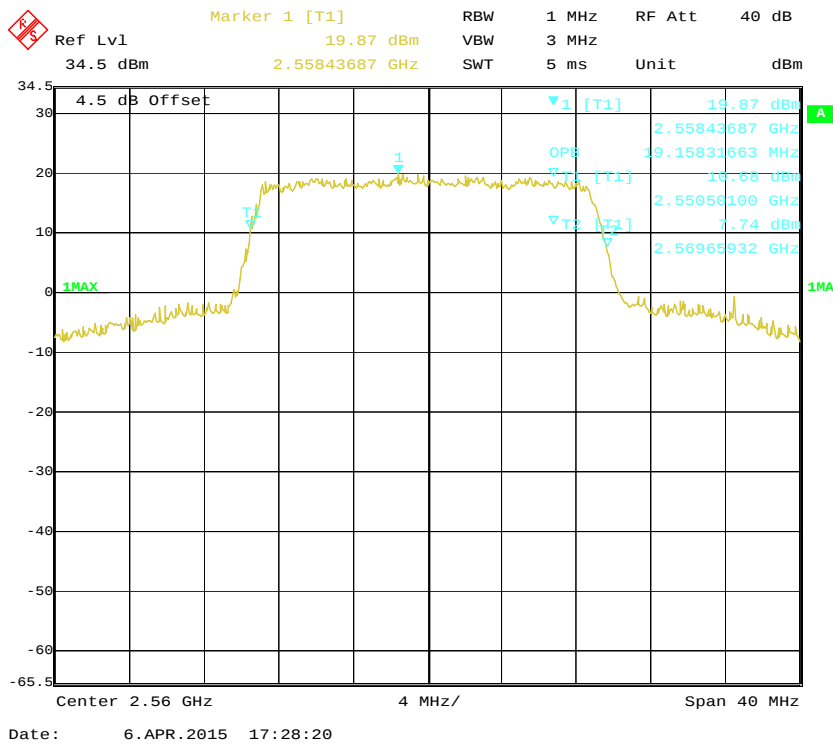


QPSK (20.0 MHz) - 99% Occupied Bandwidth, High channel

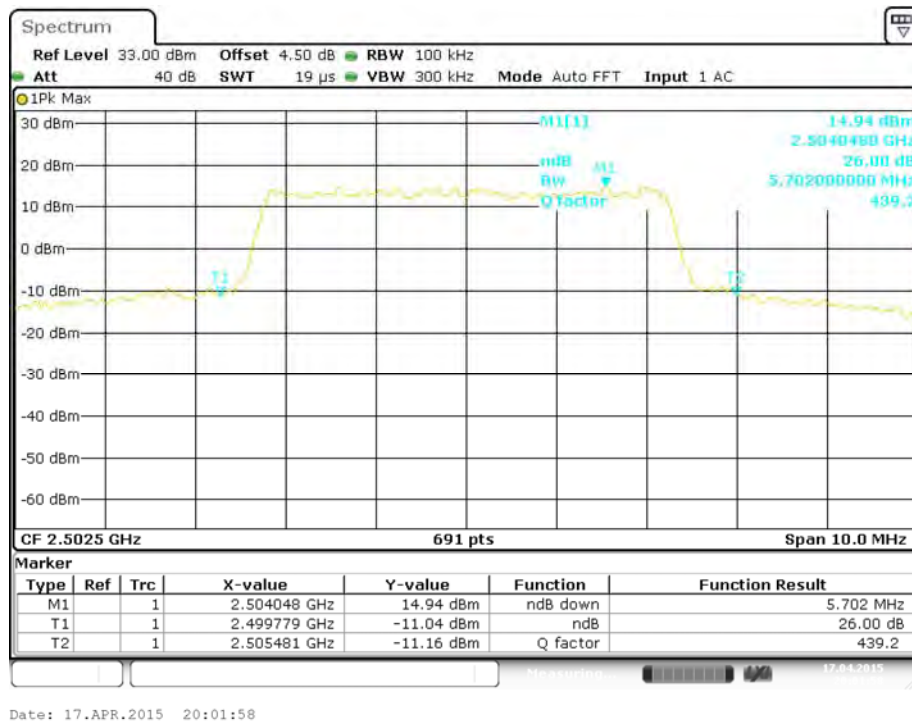


16-QAM (20.0 MHz) - 99% Occupied Bandwidth, Low channel

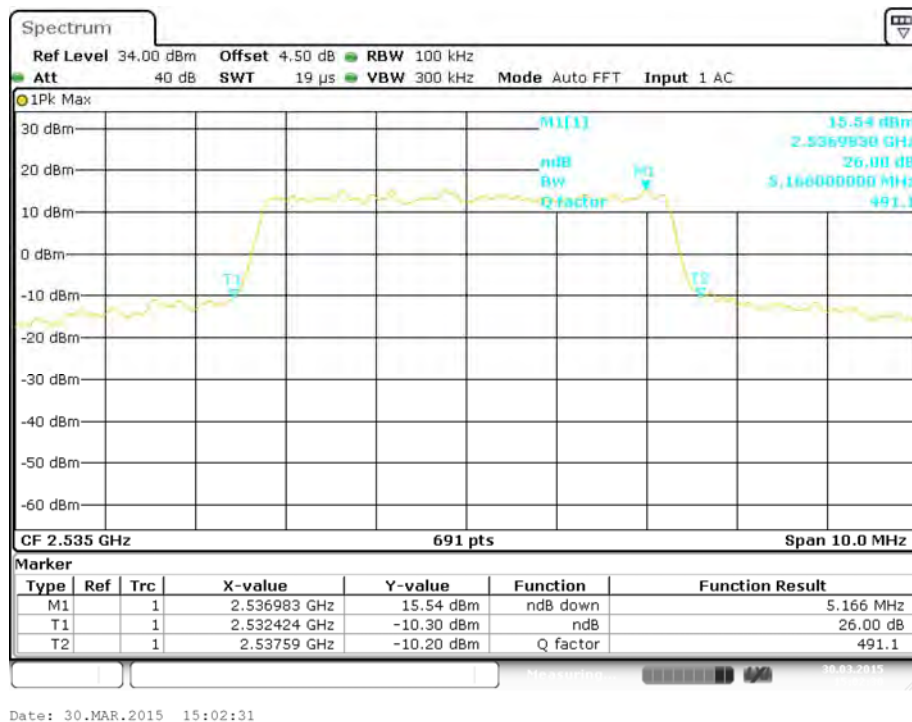


16-QAM (20.0 MHz) - 99% Occupied Bandwidth, Middle channel**16-QAM (20.0 MHz) - 99% Occupied Bandwidth, High channel**

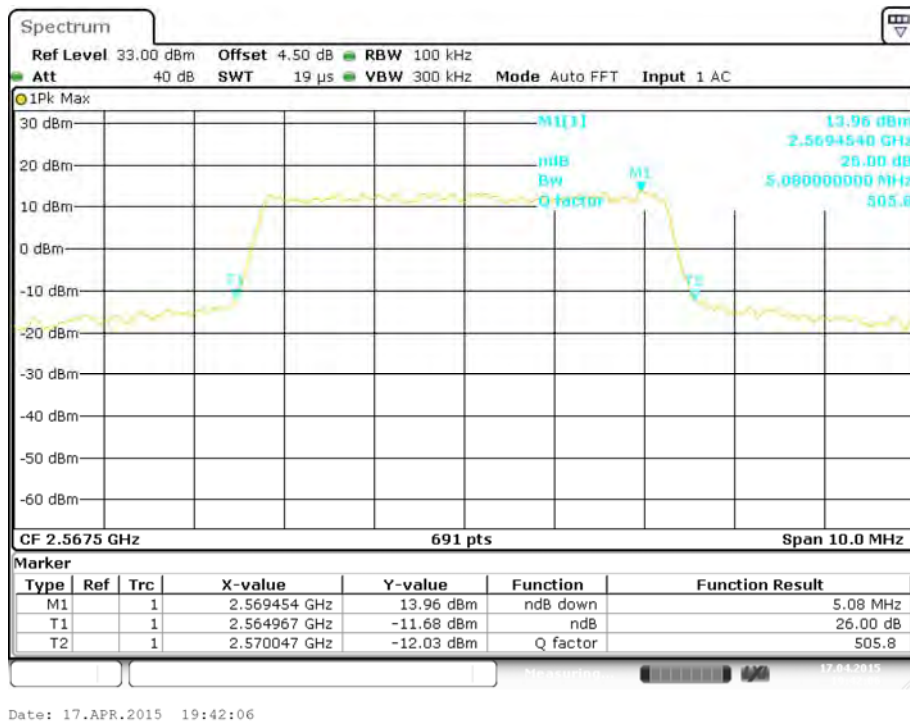
QPSK (5.0 MHz) - 26 dB Bandwidth, Low channel



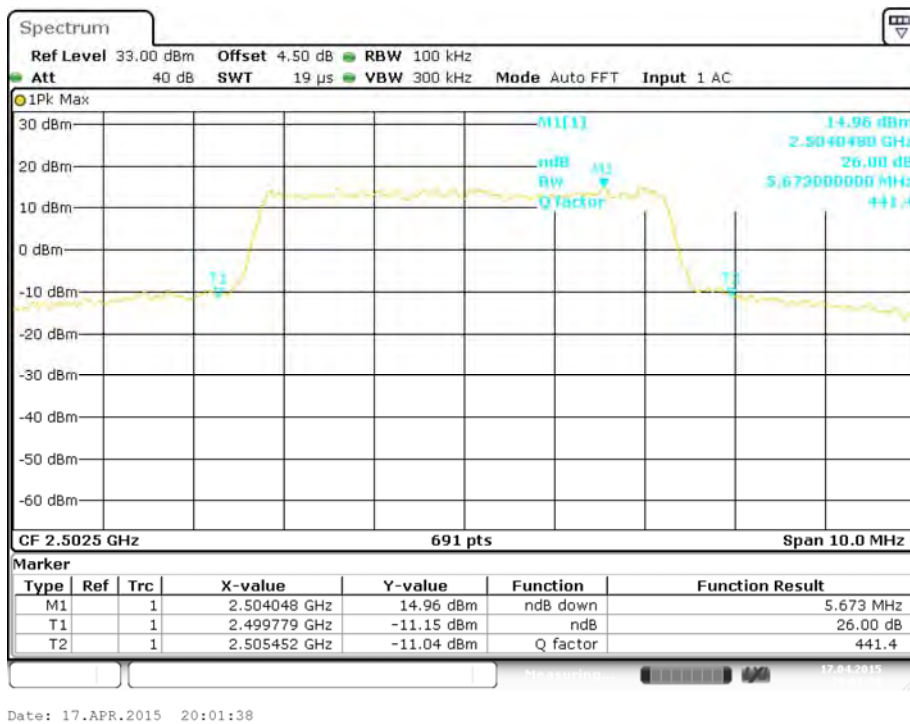
QPSK (5.0 MHz) - 26 dB Bandwidth, Middle channel



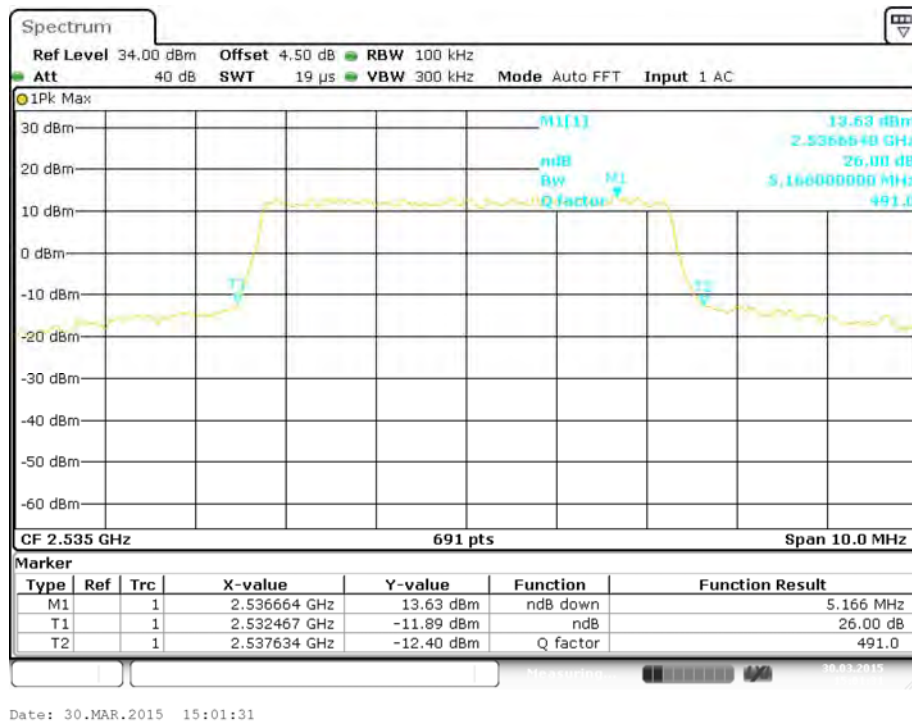
QPSK (5.0 MHz) - 26 dB Bandwidth, High channel



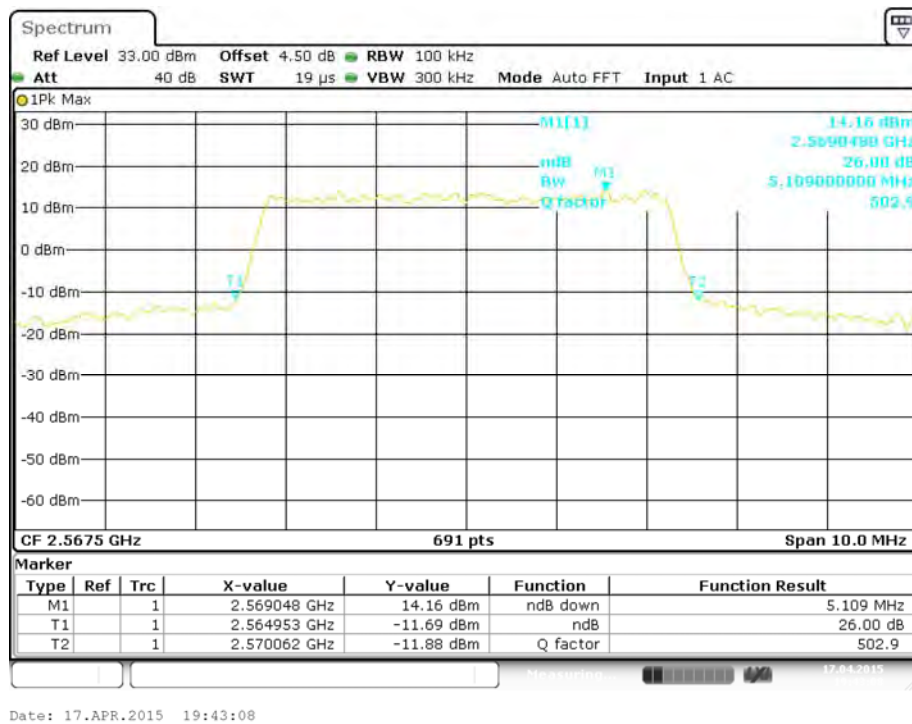
16-QAM (5.0 MHz) - 26 dB Bandwidth, Low channel



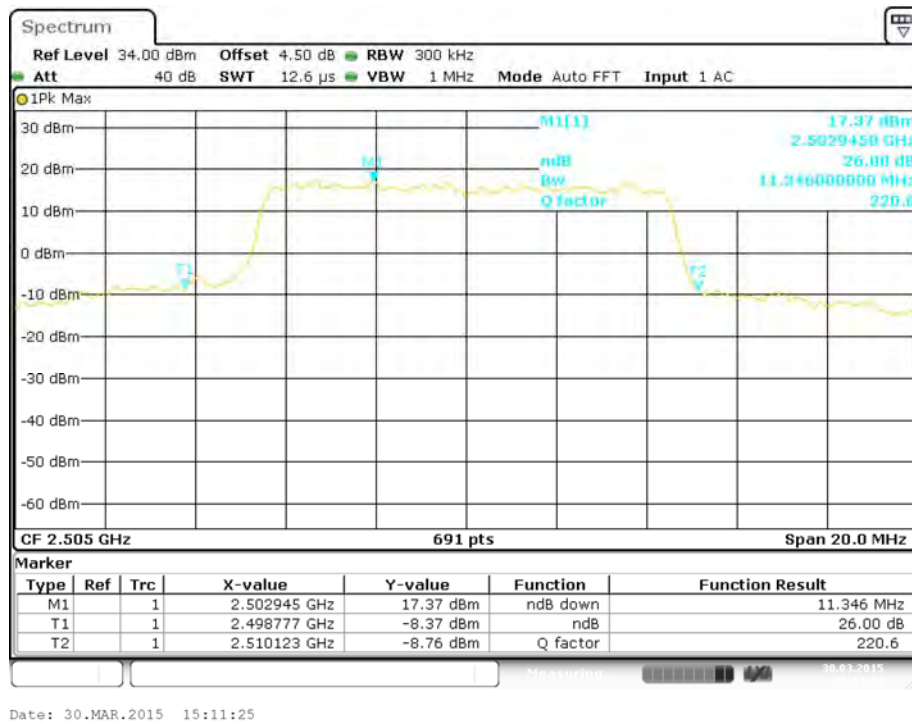
16-QAM (5.0 MHz) - 26 dB Bandwidth, Middle channel



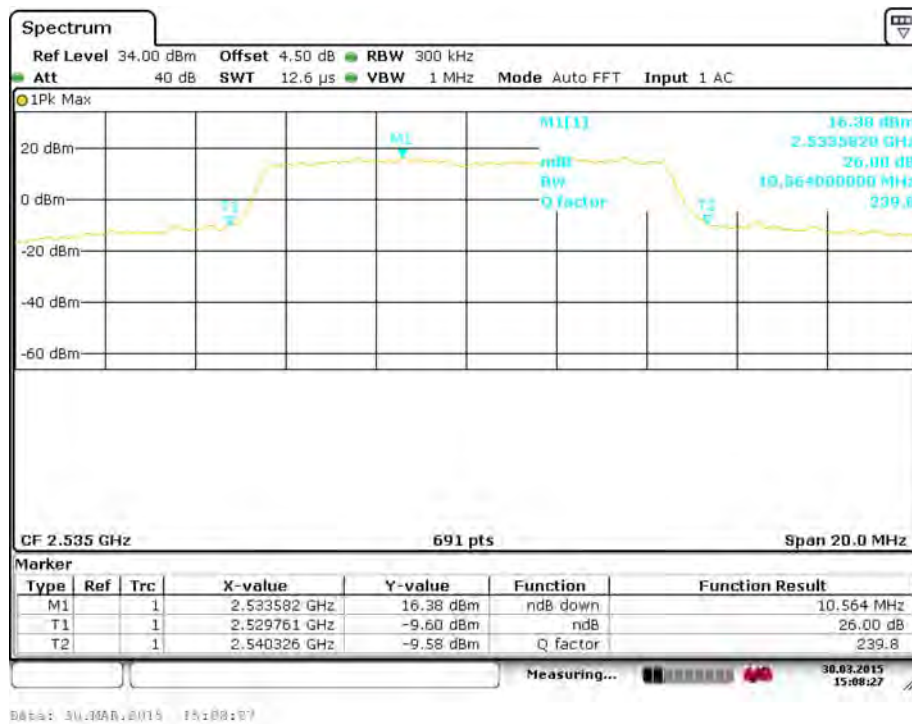
16-QAM (5.0 MHz) - 26 dB Bandwidth, High channel



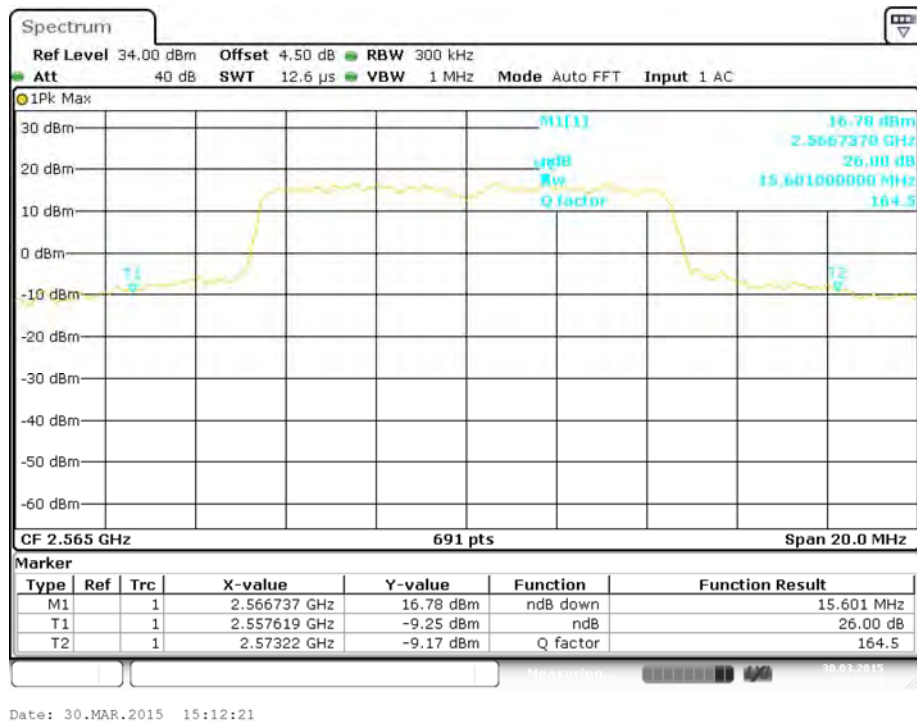
QPSK (10.0 MHz) - 26 dB Bandwidth, Low channel



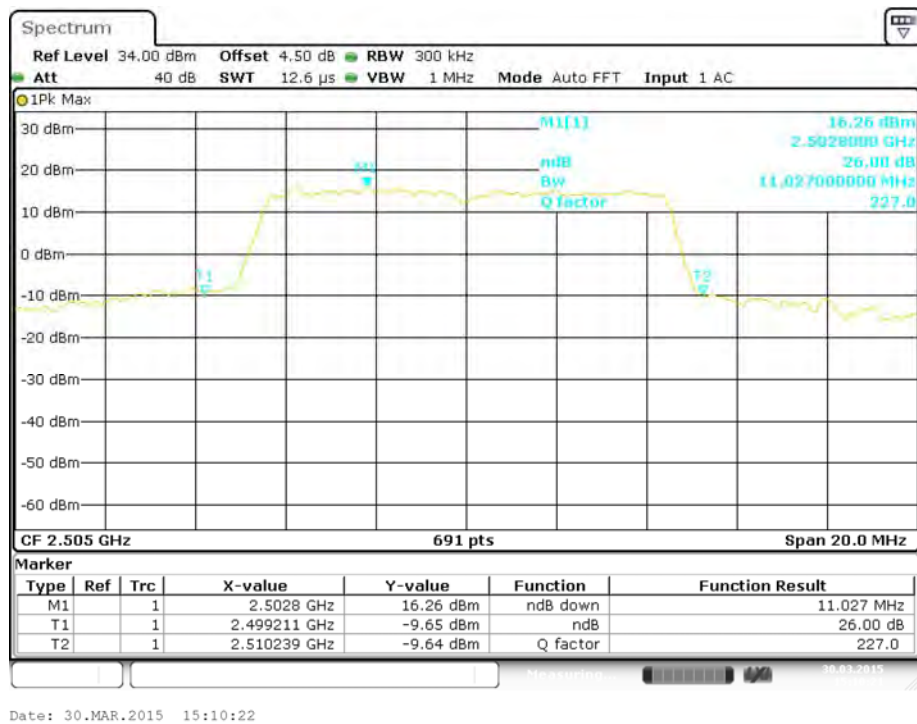
QPSK (10.0 MHz) - 26 dB Bandwidth, Middle channel



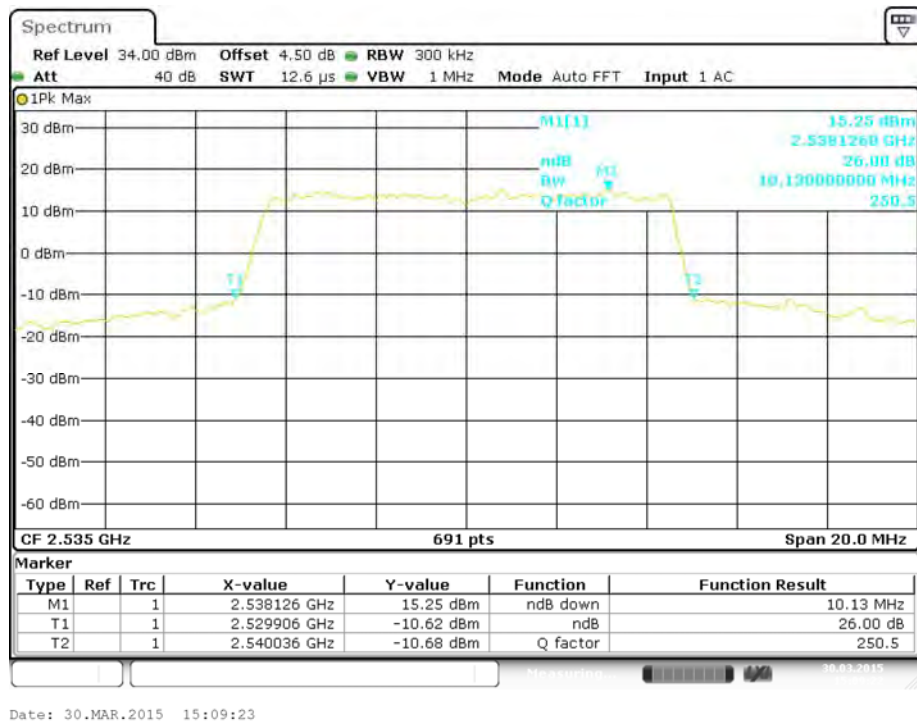
QPSK (10.0 MHz) - 26 dB Bandwidth, High channel



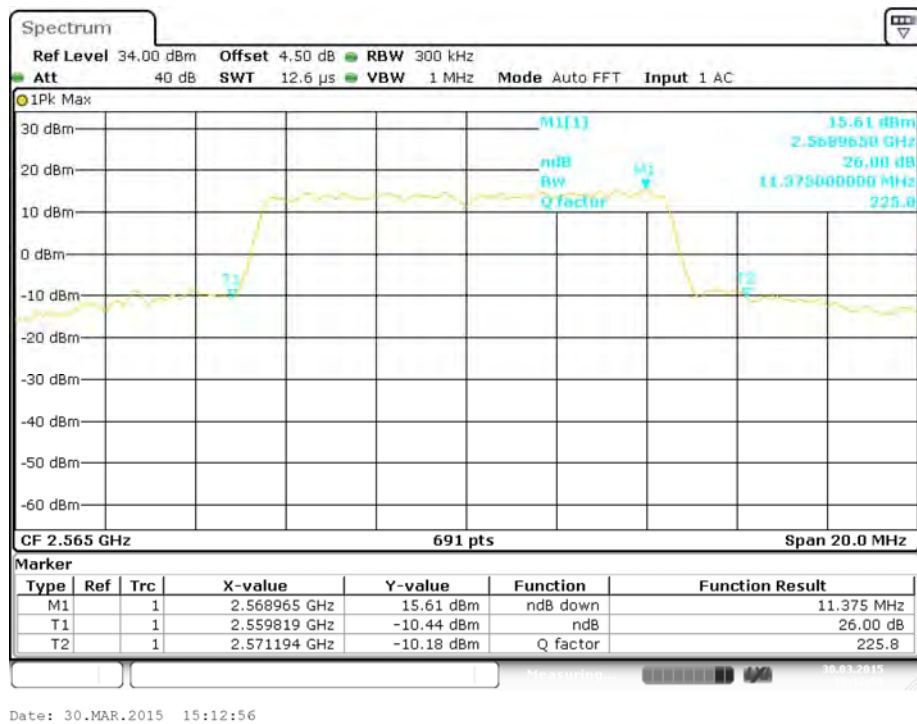
16-QAM (10.0 MHz) - 26 dB Bandwidth, Low channel



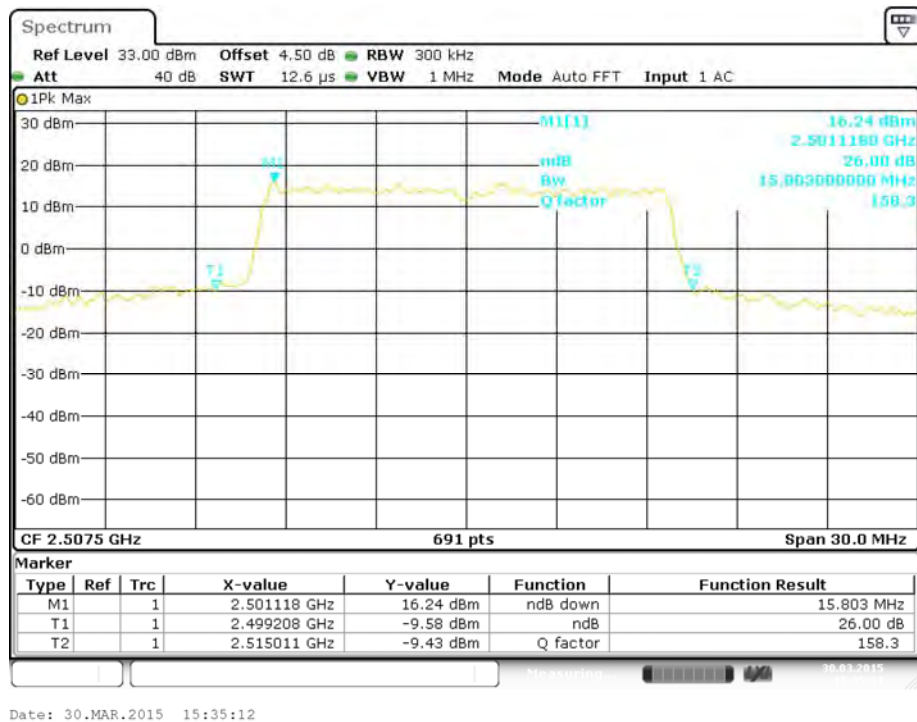
16-QAM (10.0 MHz) - 26 dB Bandwidth, Middle channel



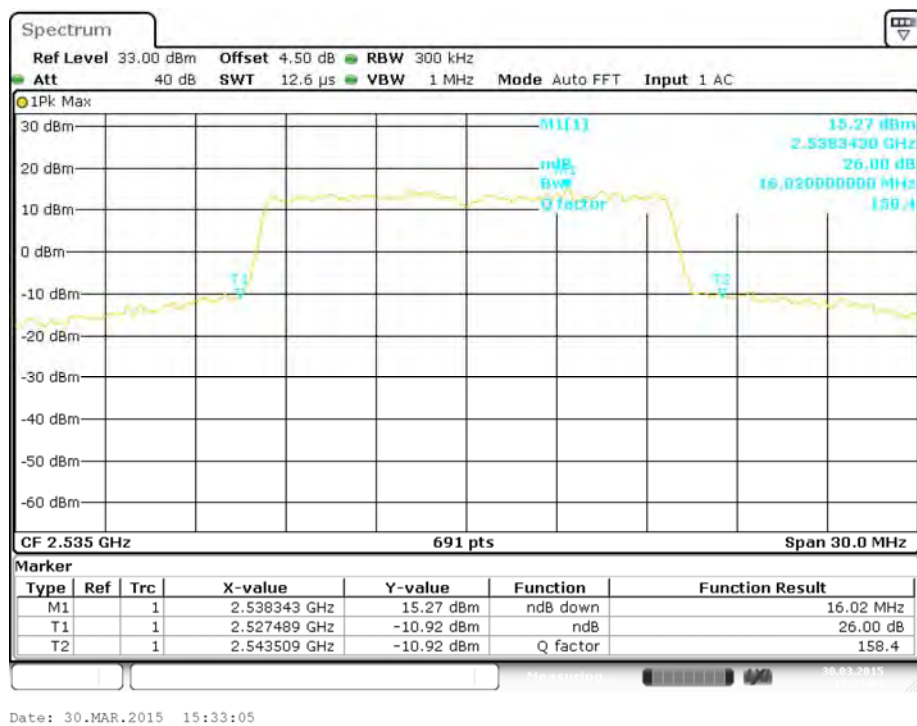
16-QAM (10.0 MHz) - 26 dB Bandwidth, High channel



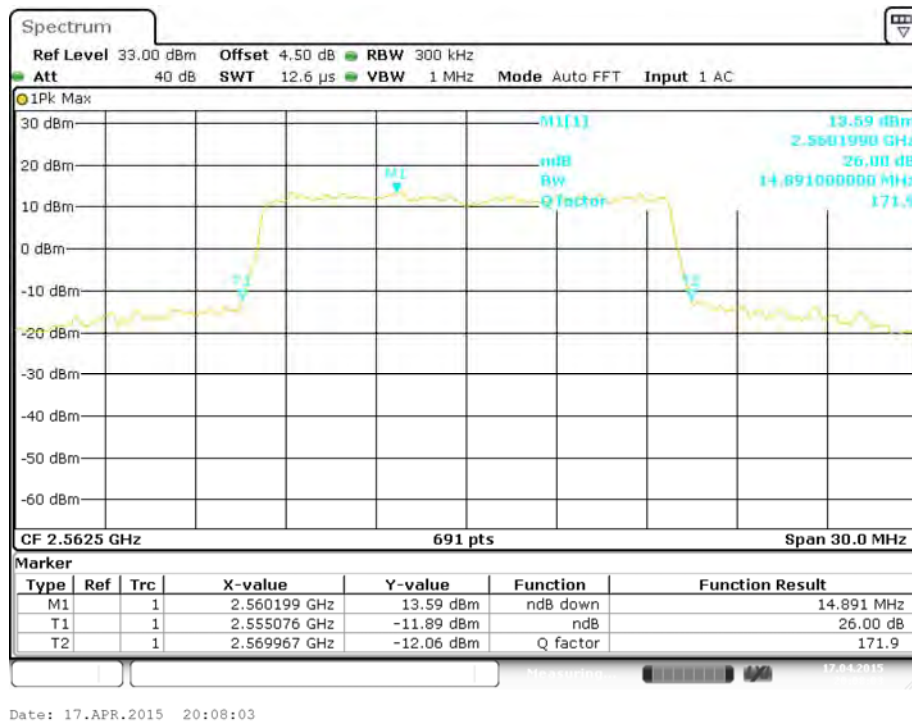
QPSK (15.0 MHz) - 26 dB Bandwidth, Low channel



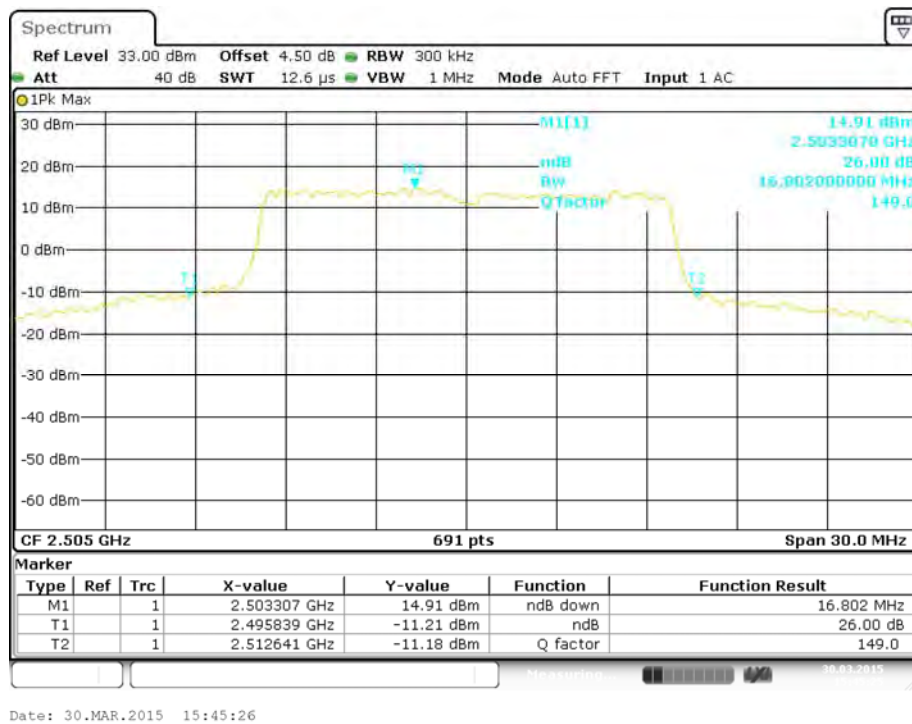
QPSK (15.0 MHz) - 26 dB Bandwidth, Middle channel



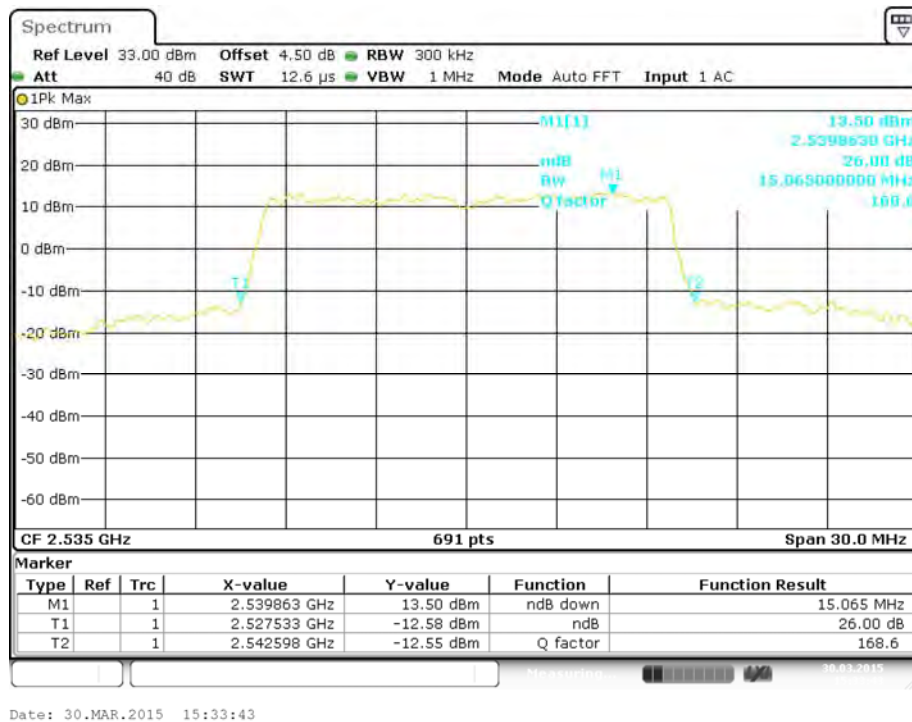
QPSK (15.0 MHz) - 26 dB Bandwidth, High channel



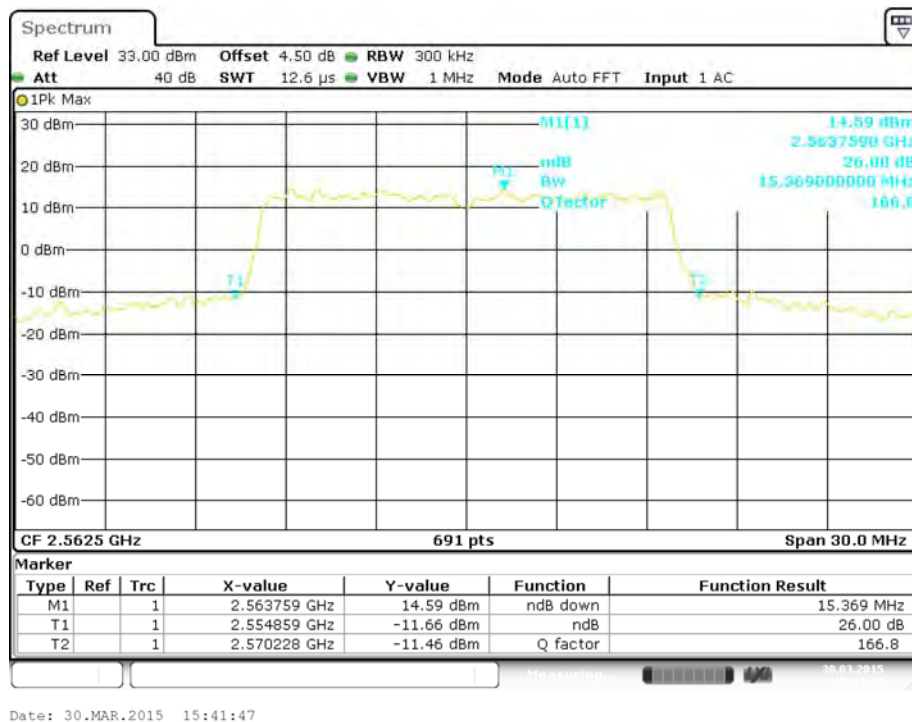
16-QAM (15.0 MHz) - 26 dB Bandwidth, Low channel



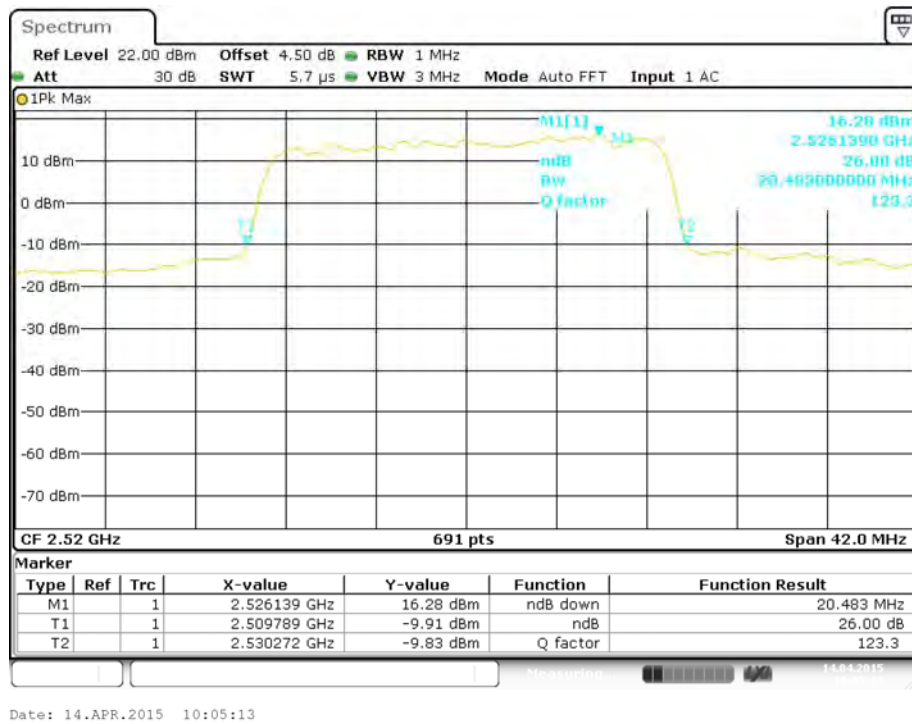
16-QAM (15.0 MHz) - 26 dB Bandwidth, Middle channel



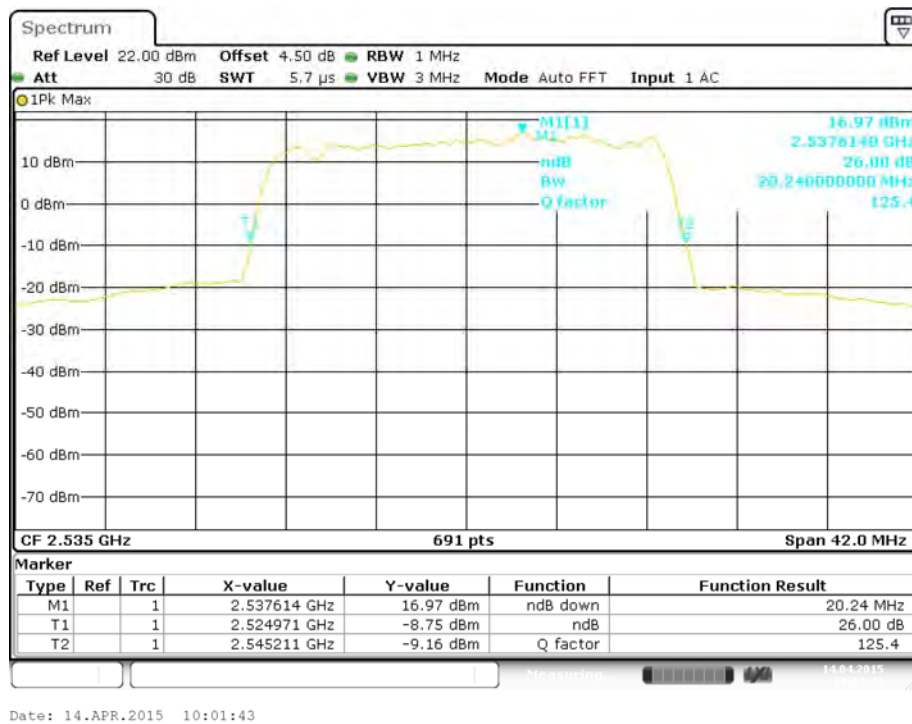
16-QAM (15.0 MHz) - 26 dB Bandwidth, High channel



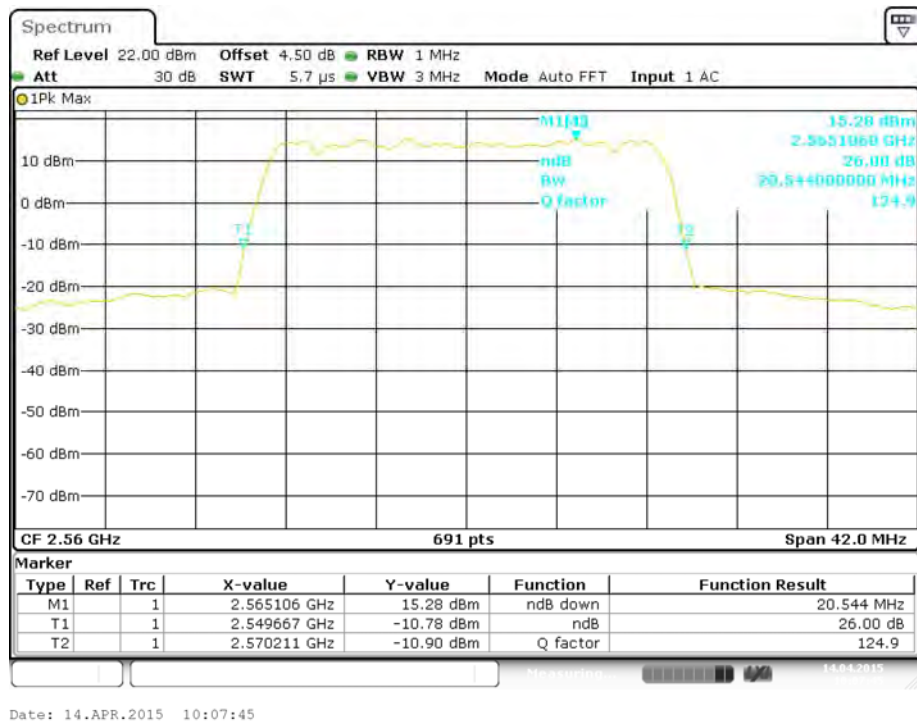
QPSK (20.0 MHz) - 26 dB Bandwidth, Low channel



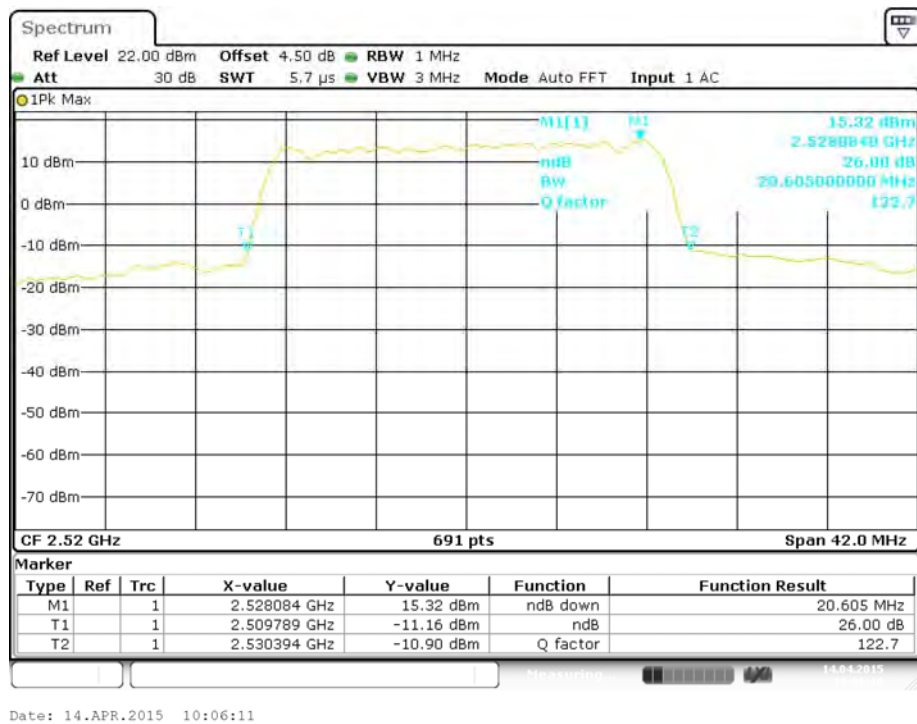
QPSK (20.0 MHz) - 26 dB Bandwidth, Middle channel



QPSK (20.0 MHz) - 26 dB Bandwidth, High channel



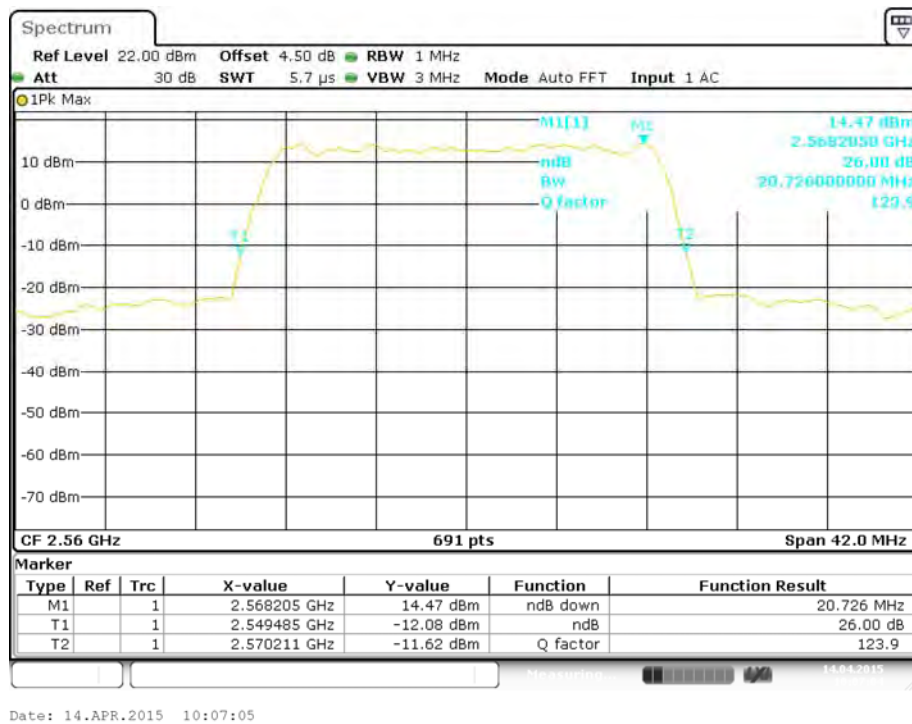
16-QAM (20.0 MHz) - 26 dB Bandwidth, Low channel



16-QAM (20.0 MHz) - 26 dB Bandwidth, Middle channel



16-QAM (20.0 MHz) - 26 dB Bandwidth, High channel

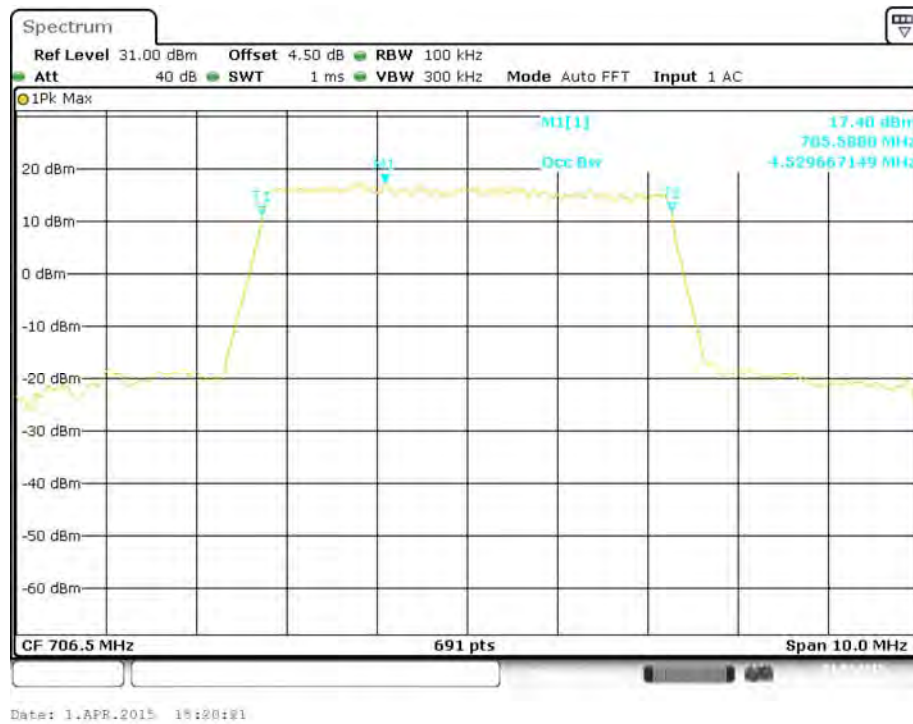


Band 17:

99% Occupied Bandwidth		Low channel (MHz)	Middle channel (MHz)	High channel (MHz)
5.0 MHz	QPSK	4.53	4.54	4.53
	16QAM	4.50	4.52	4.53
10.0 MHz	QPSK	9.00	9.12	9.12
	16QAM	9.06	9.12	9.06

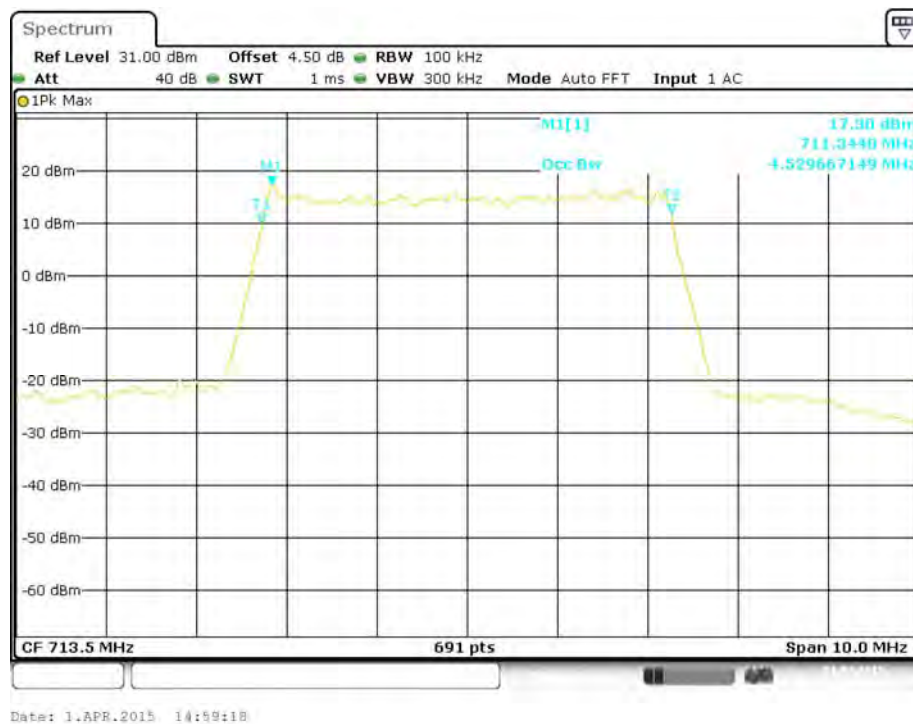
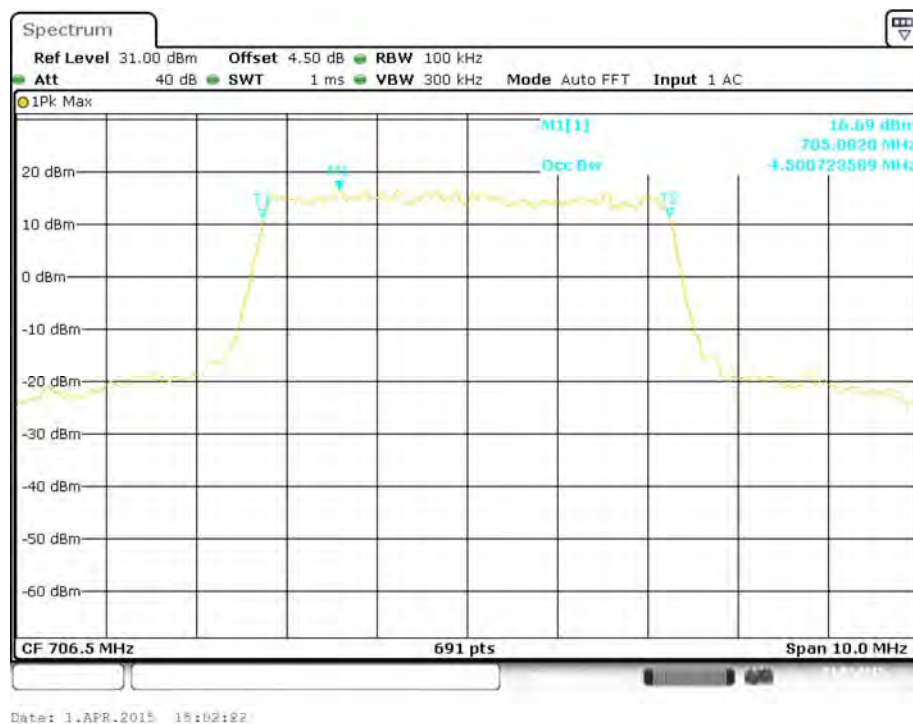
26 dB Emission Bandwidth		Low channel (MHz)	Middle channel (MHz)	High channel (MHz)
5.0 MHz	QPSK	5.06	5.05	5.05
	16QAM	5.04	5.06	5.08
10.0 MHz	QPSK	10.04	10.19	10.19
	16QAM	10.07	10.16	9.09

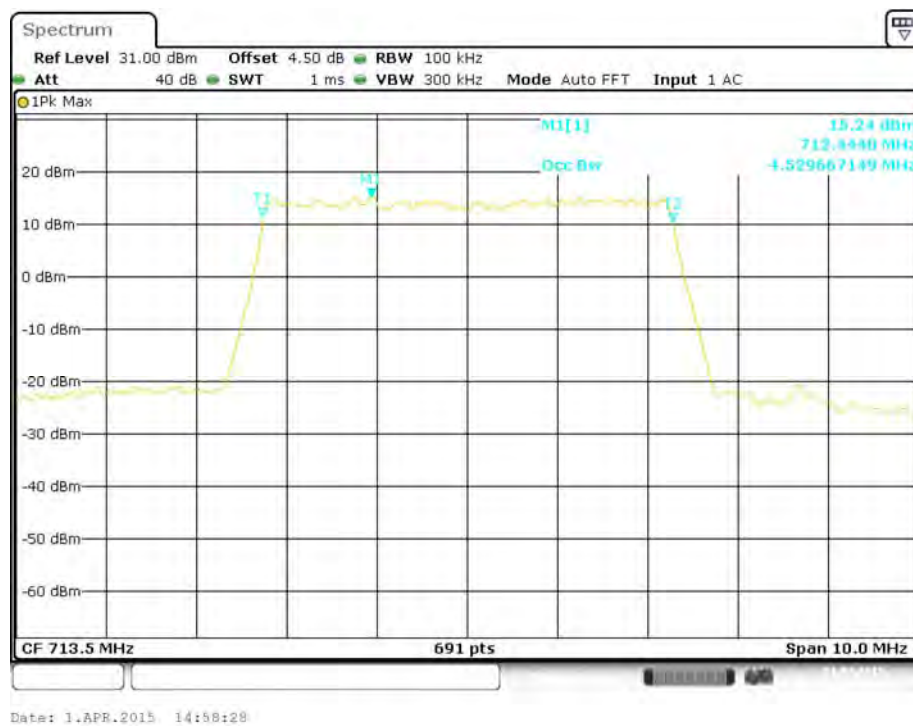
QPSK (5.0 MHz) - 99% Occupied Bandwidth, Low channel



QPSK (5.0 MHz) - 99% Occupied Bandwidth, Middle channel



QPSK (5.0 MHz) - 99% Occupied Bandwidth, High channel**16-QAM (5.0 MHz) - 99% Occupied Bandwidth, Low channel**

16-QAM (5.0 MHz) - 99% Occupied Bandwidth, Middle channel**16-QAM (5.0 MHz) - 99% Occupied Bandwidth, High channel**

QPSK (10.0 MHz) - 99% Occupied Bandwidth, Low channel



QPSK (10.0 MHz) - 99% Occupied Bandwidth, Middle channel



The screenshot shows a Spectrum Analyzer interface with the following settings and data:

- Title:** Spectrum
- Ref Level:** 31.00 dBm
- Offset:** 4.50 dB
- RBW:** 300 kHz
- Att:** 40 dB
- SWT:** 1 ms
- VBW:** 1 MHz
- Mode:** Auto FFT
- Input:** 1 AC
- Scale:** 1Pk Max

The plot shows a signal with a peak at 10.73 dBm. The frequency span is 20.0 MHz, centered at 711.0 MHz. The peak is labeled with a value of 10.73 dBm and a frequency of 706.8900 MHz. The peak is also labeled with a value of 9.117221e10.

Spectrum

Ref Level 31.00 dBm Offset 4.50 dB RBW 300 kHz

Att 40 dB SWT 1 ms VBW 1 MHz Mode Auto FFT Input 1 AC

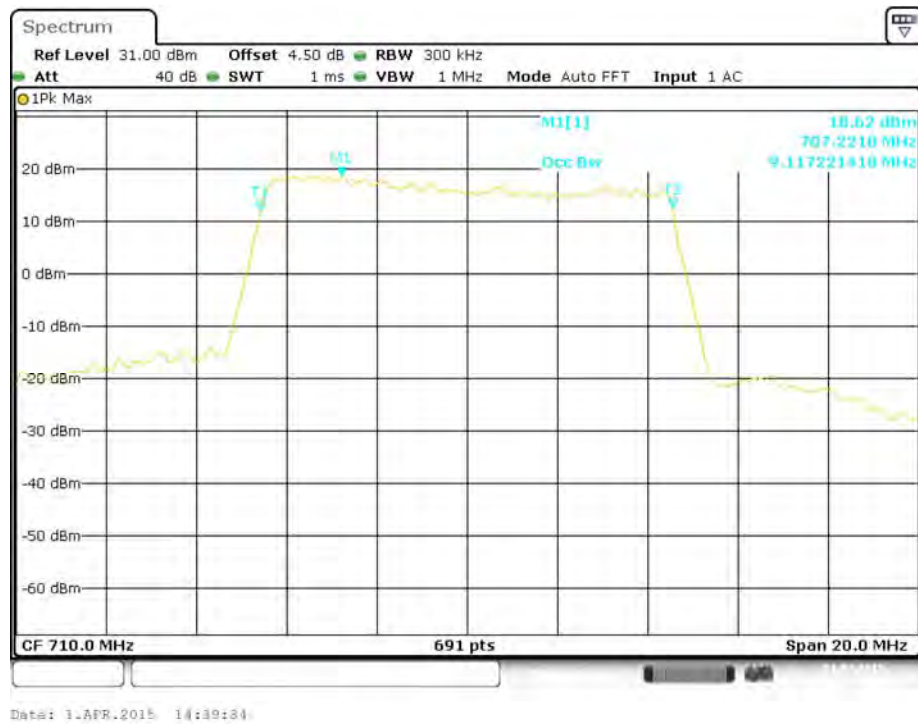
1Pk Max

M1[1] 19.10 dBm
705.1790 MHz
9.059334290 MHz

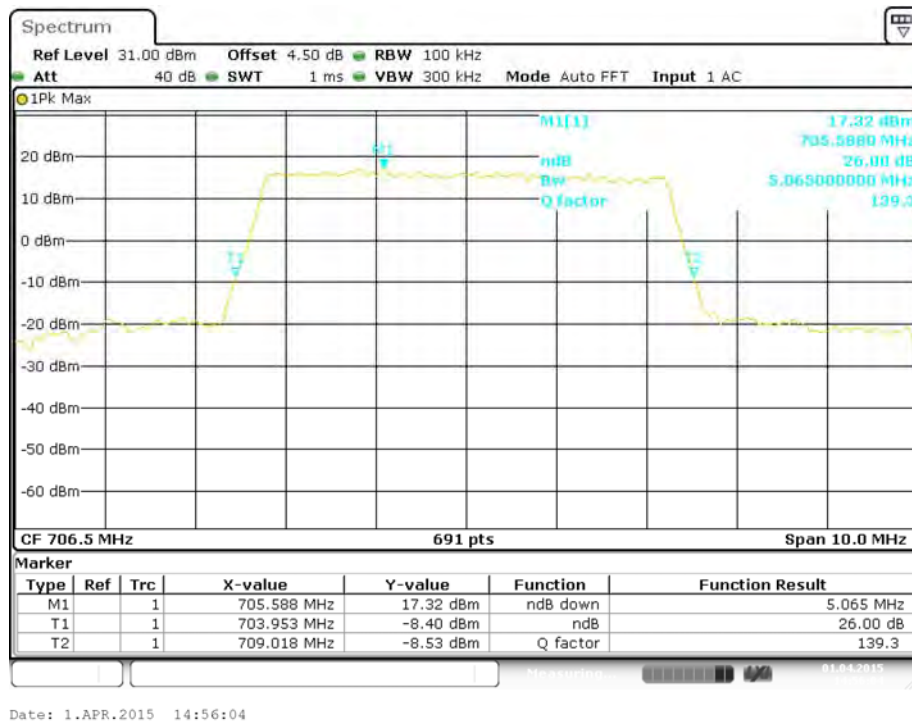
Dec BW

CF 709.0 MHz 691 pts Span 20.0 MHz

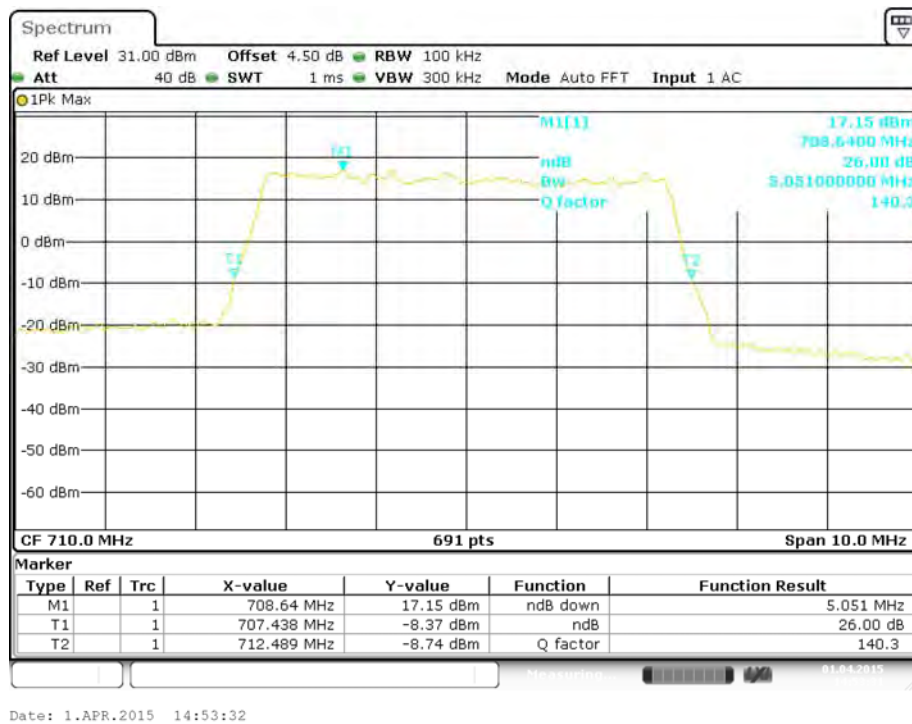
Date: 1.APR.2015 15:07:11

16-QAM (10.0 MHz) - 99% Occupied Bandwidth, Middle channel**16-QAM (10.0 MHz) - 99% Occupied Bandwidth, High channel**

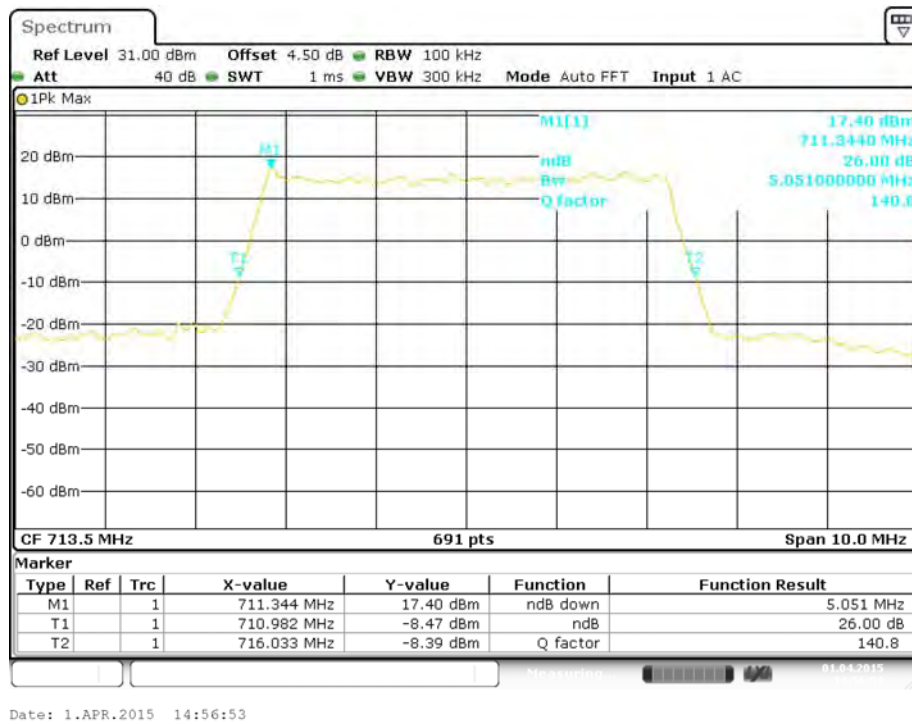
QPSK (5.0 MHz) - 26 dB Bandwidth, Low channel



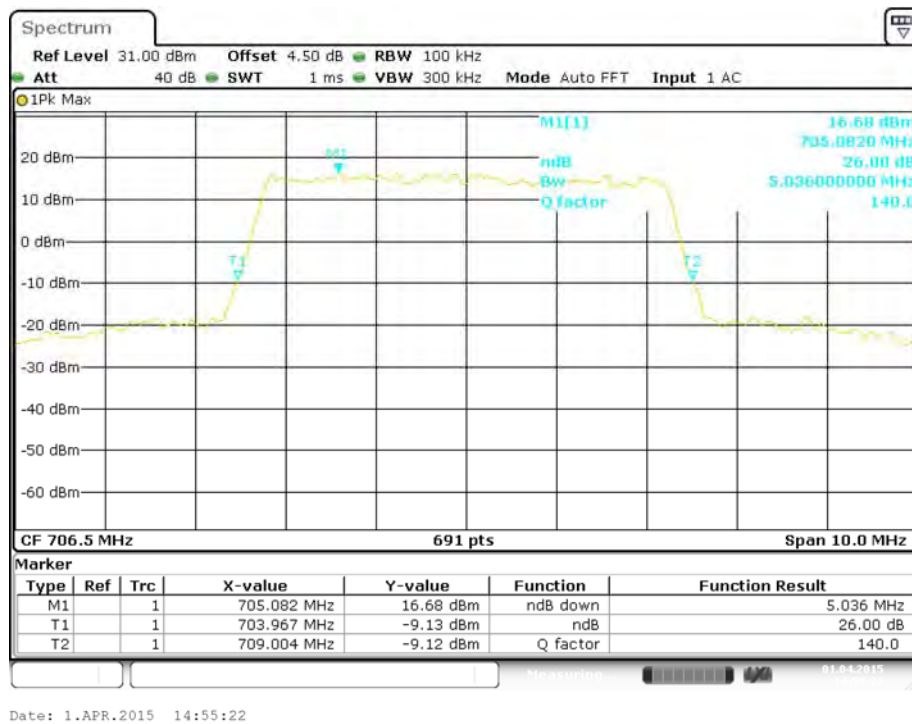
QPSK (5.0 MHz) - 26 dB Bandwidth, Middle channel



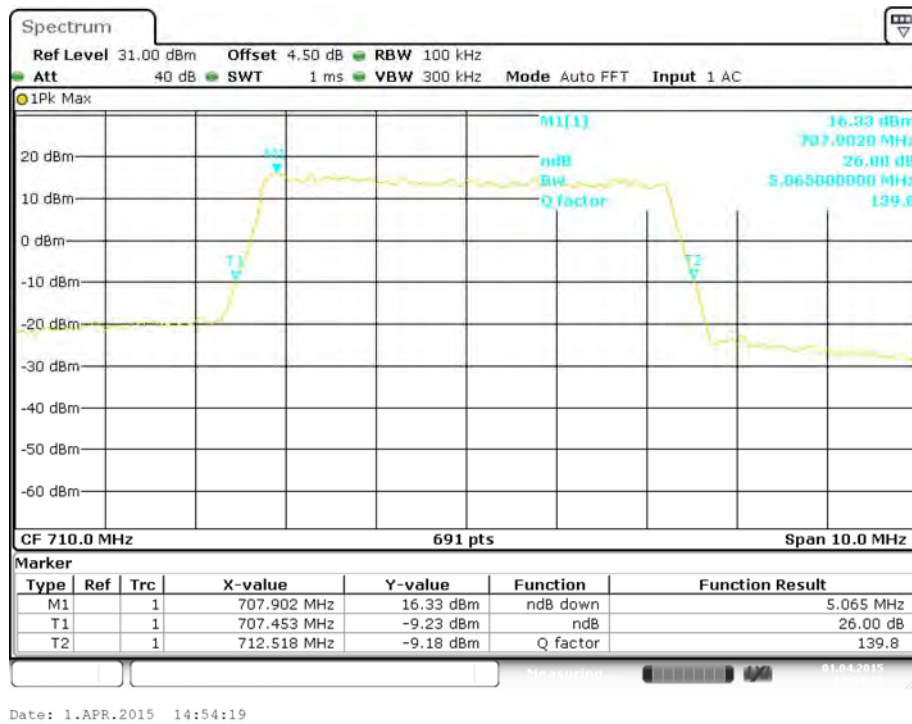
QPSK (5.0 MHz) - 26 dB Bandwidth, High channel



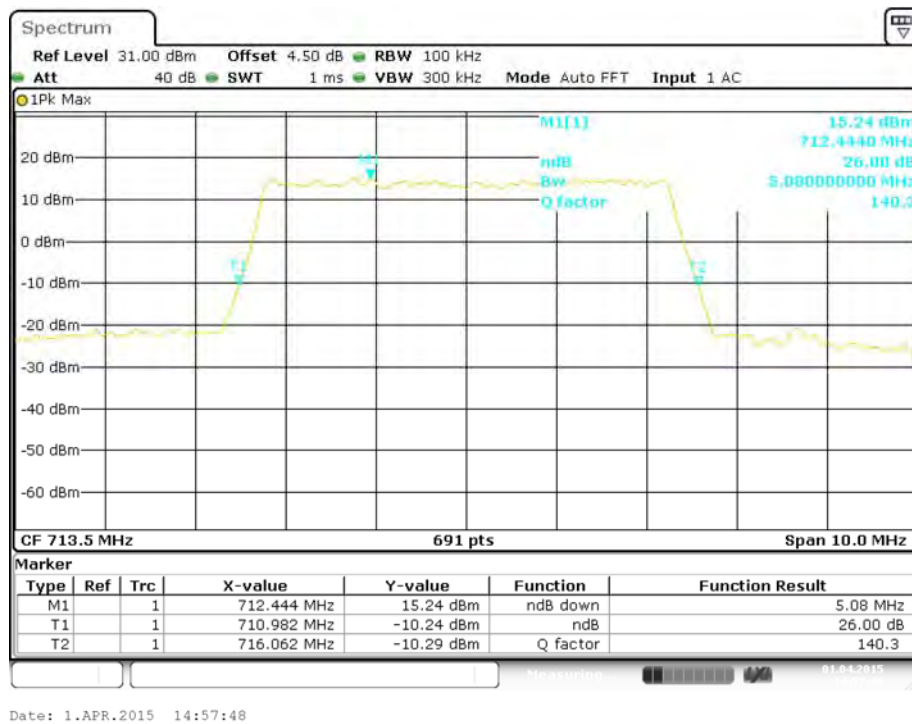
16-QAM (5.0 MHz) - 26 dB Bandwidth, Low channel



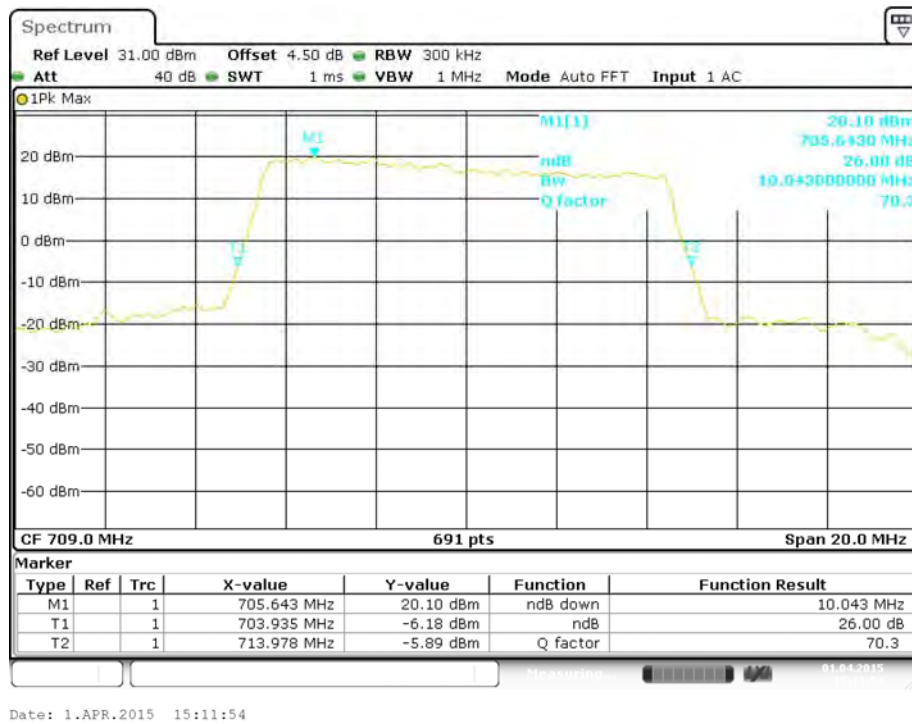
16-QAM (5.0 MHz) - 26 dB Bandwidth, Middle channel



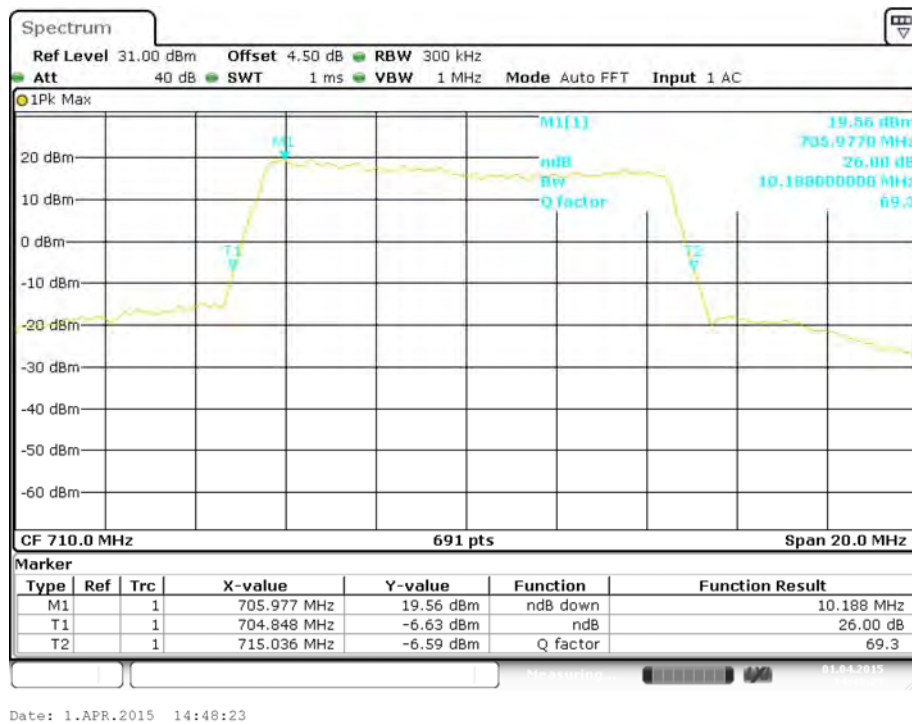
16-QAM (5.0 MHz) - 26 dB Bandwidth, High channel



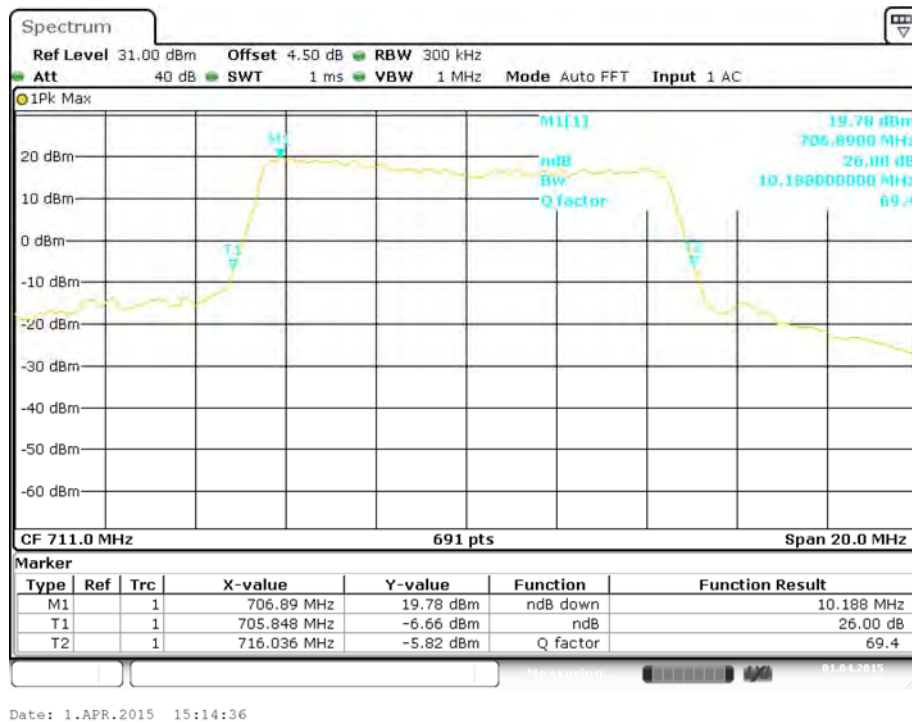
QPSK (10.0 MHz) - 26 dB Bandwidth, Low channel



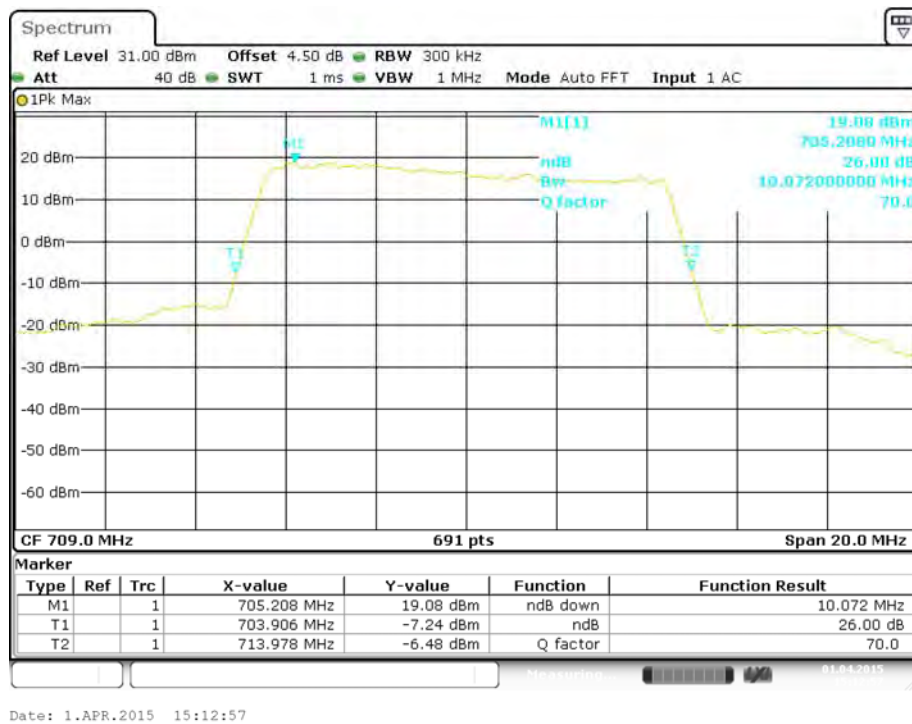
QPSK (10.0 MHz) - 26 dB Bandwidth, Middle channel



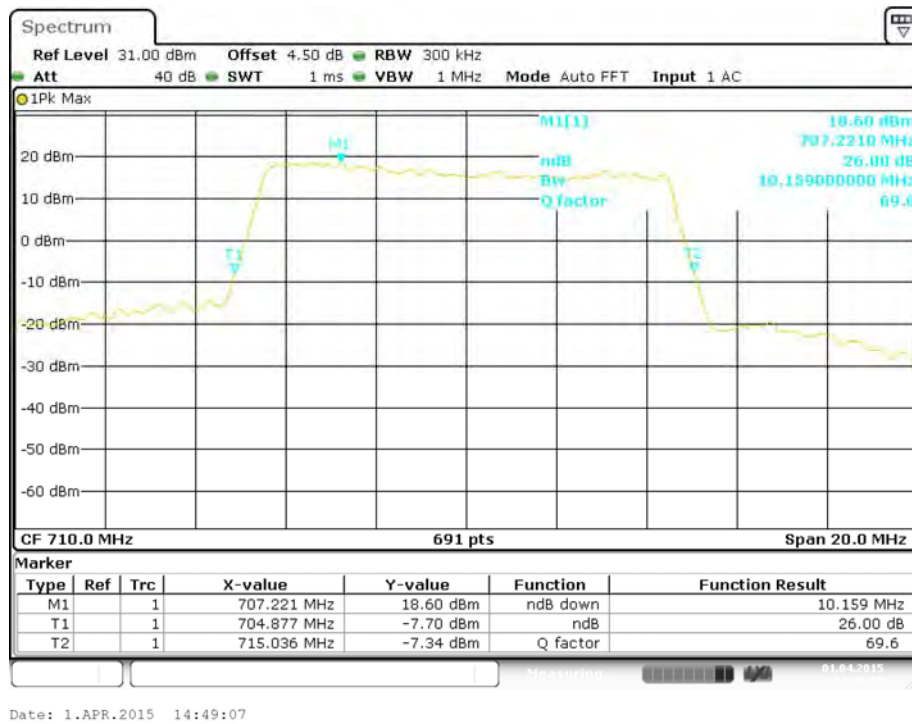
QPSK (10.0 MHz) - 26 dB Bandwidth, High channel



16-QAM (10.0 MHz) - 26 dB Bandwidth, Low channel



16-QAM (10.0 MHz) - 26 dB Bandwidth, Middle channel



16-QAM (10.0 MHz) - 26 dB Bandwidth, High channel



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

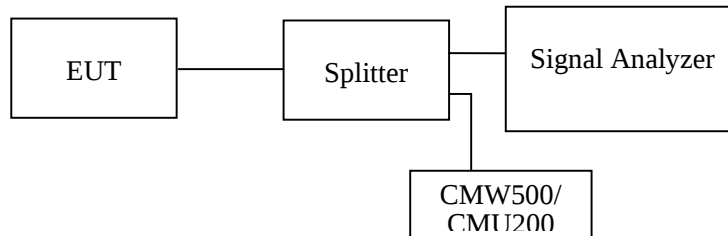
Applicable Standards

FCC §2.1051, §22.917(a) and §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. The resolution bandwidth of the spectrum analyzer was set at 1MHz. 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
Rohde & Schwarz	Signal Analyzer	FSIQ26	837405/023	2014-08-22	2015-08-22
Rohde & Schwarz	Universal Radio Communication Tester	CMU200	106891	2014-11-23	2015-11-23

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

Test Data

Environmental Conditions

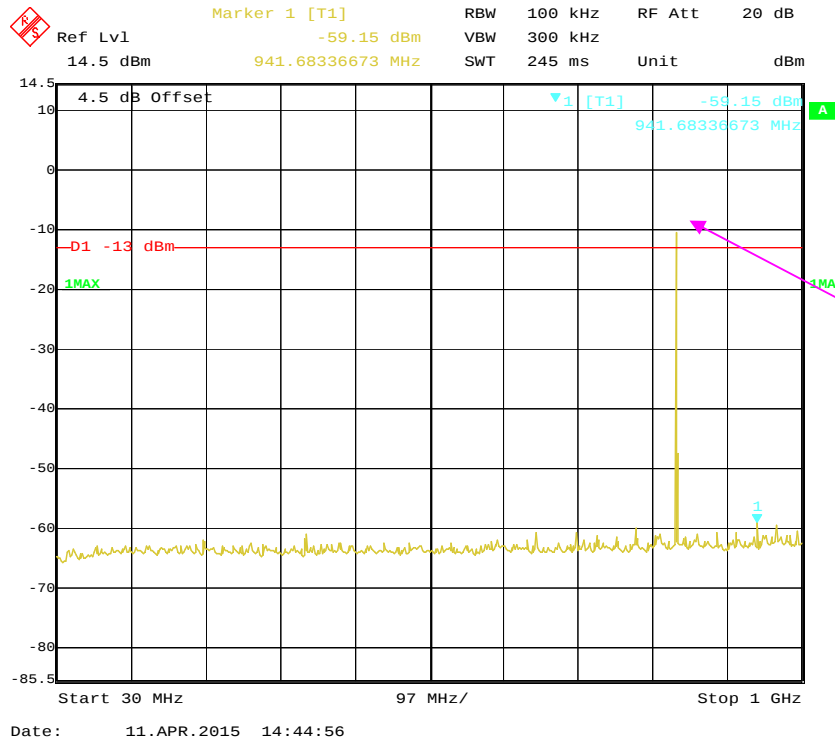
Temperature:	20~26 °C
Relative Humidity:	51~55 %
ATM Pressure:	100.0~100.5 kPa

The testing was performed by Simon Wang from 2015-03-26 to 2015-04-11.

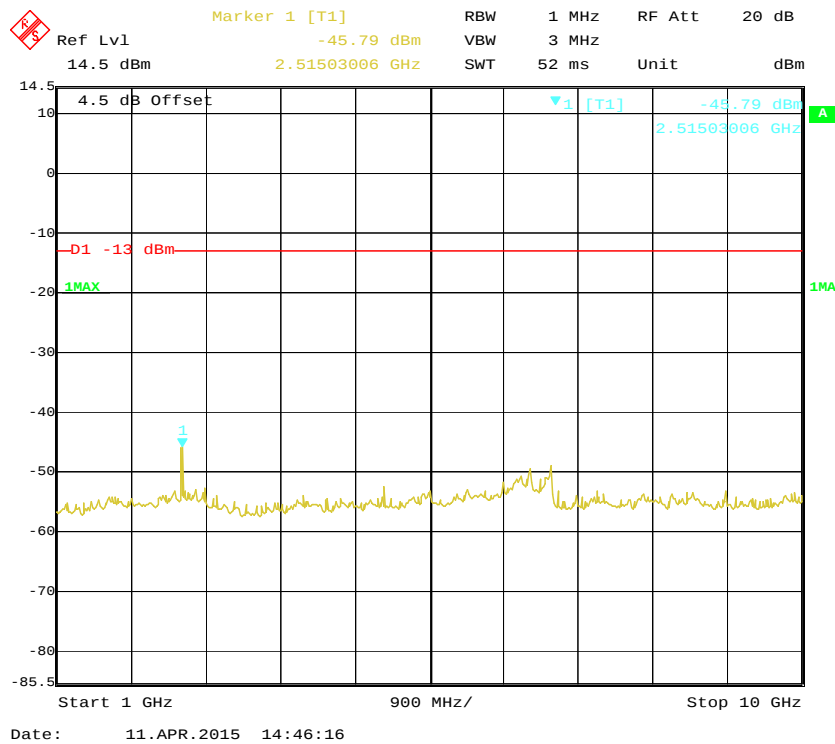
Please refer to the following plots.

Cellular Band (Part 22H)

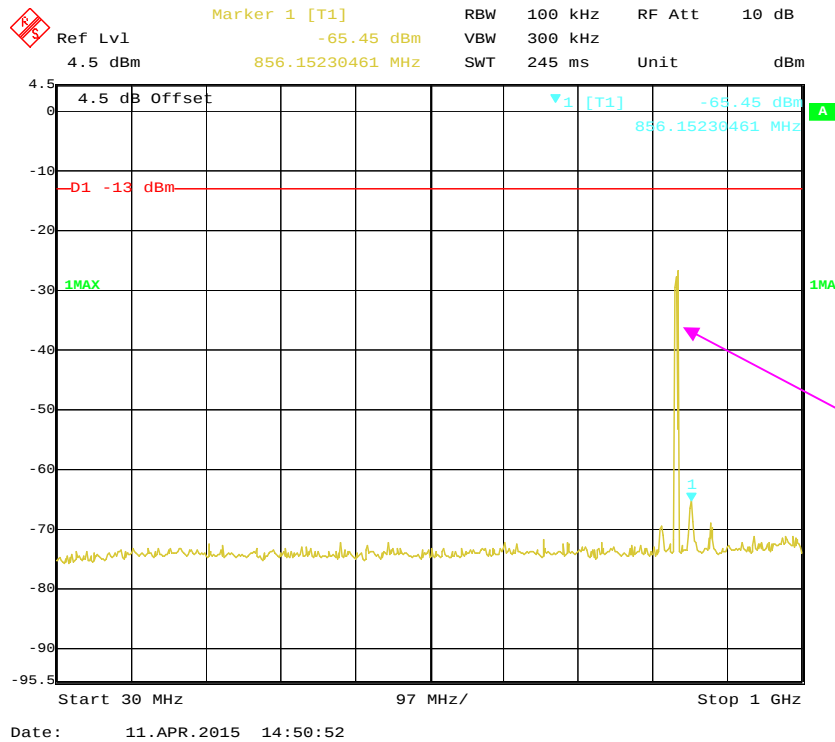
30 MHz – 1 GHz (GSM Mode)



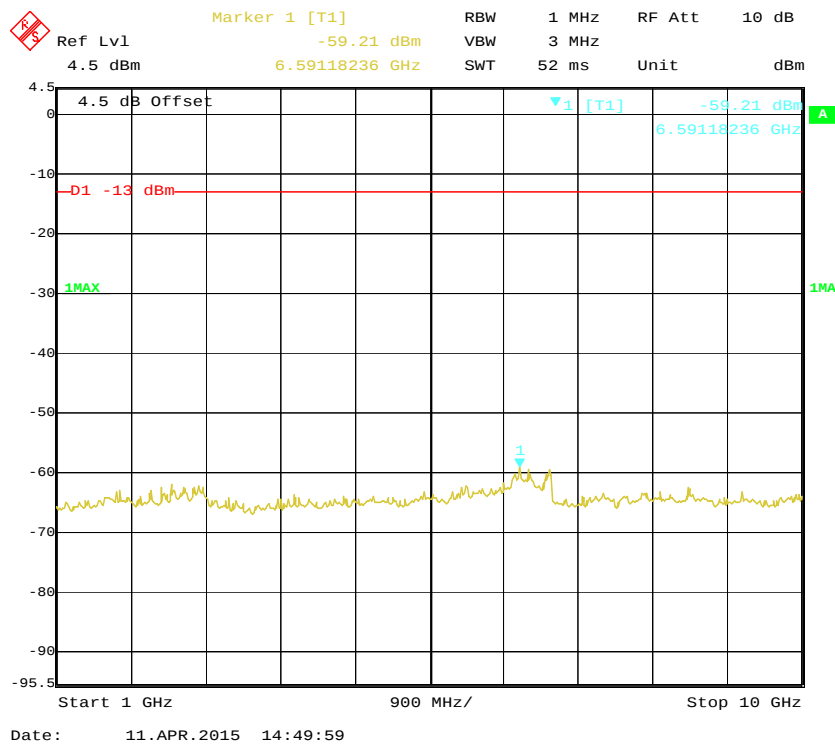
1 GHz – 10 GHz (GSM Mode)



30 MHz – 1 GHz (WCDMA Mode)

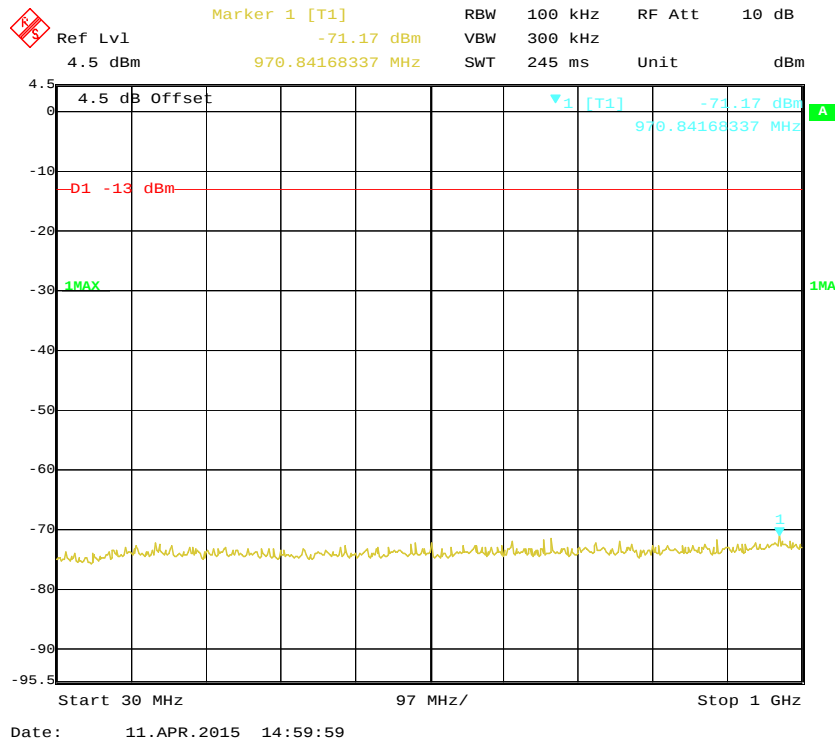


1 GHz – 10 GHz (WCDMA Mode)

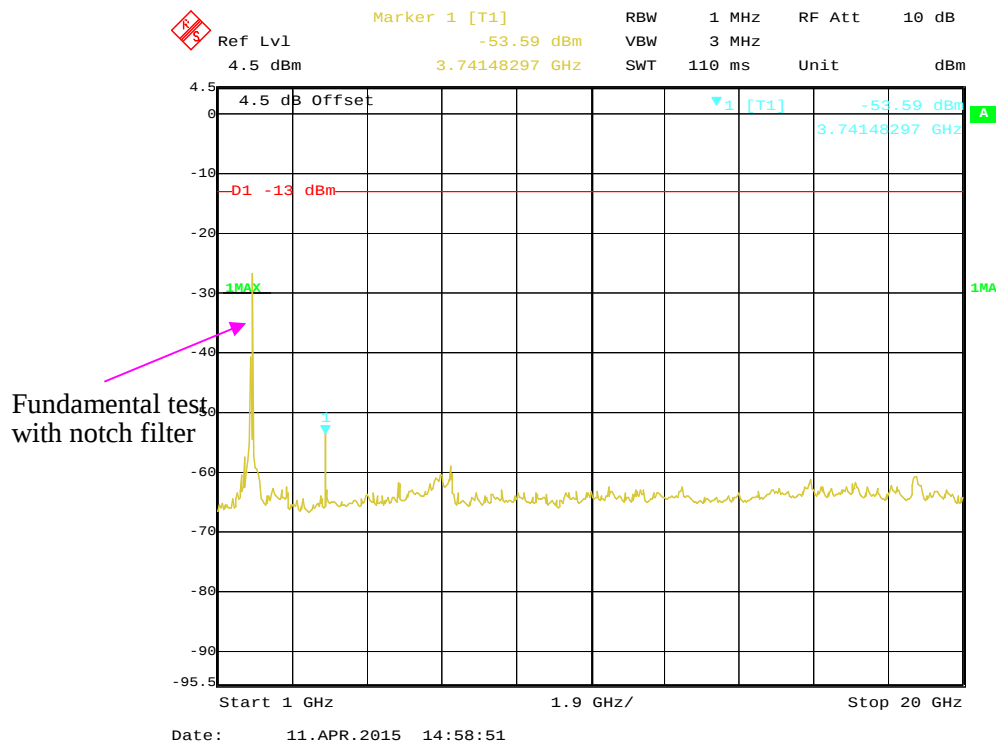


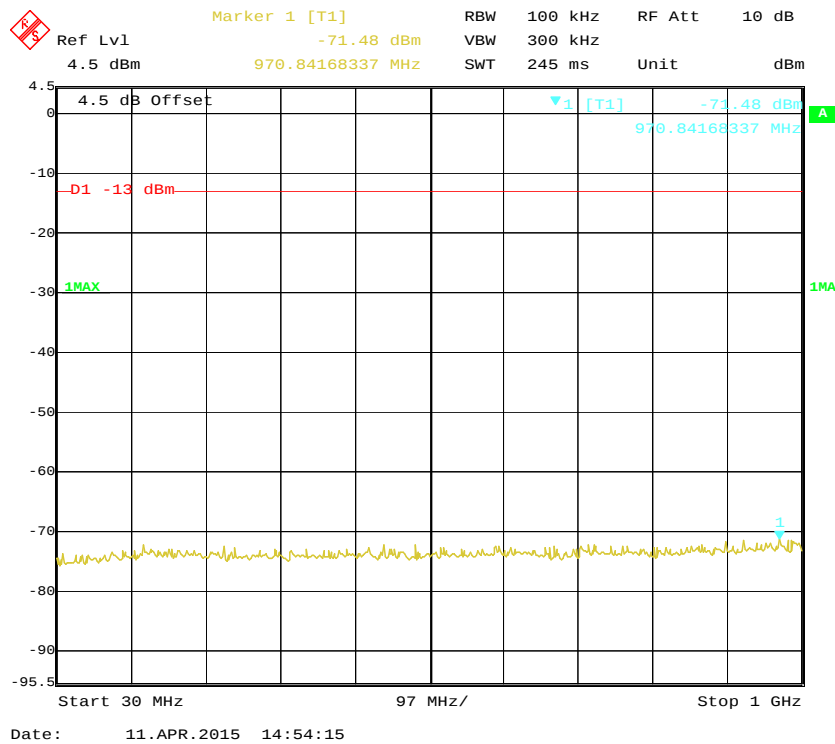
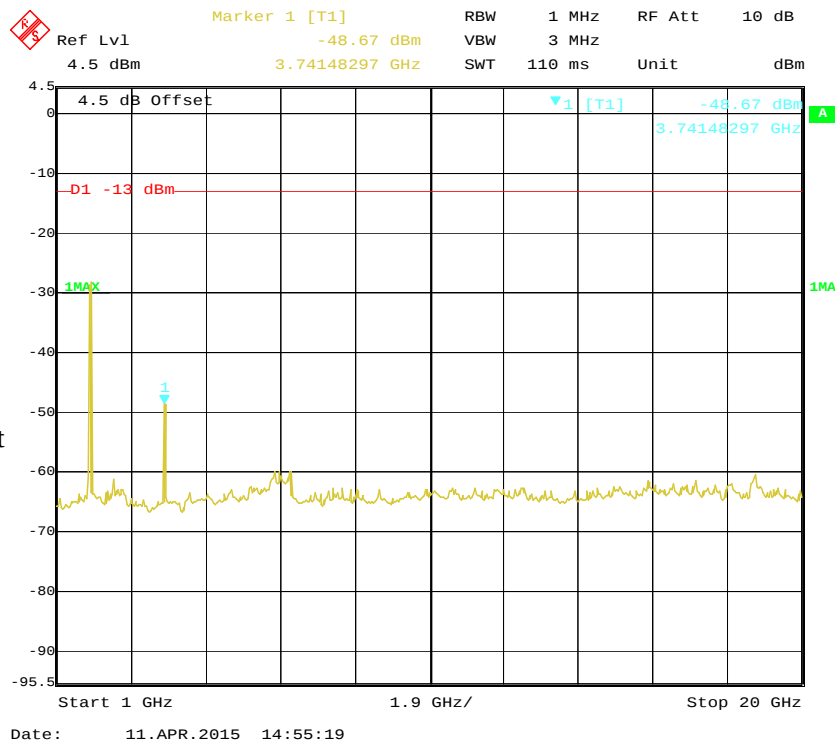
PCS Band (Part 24E)

30 MHz – 1 GHz (GSM Mode)



1 GHz – 20 GHz (GSM Mode)

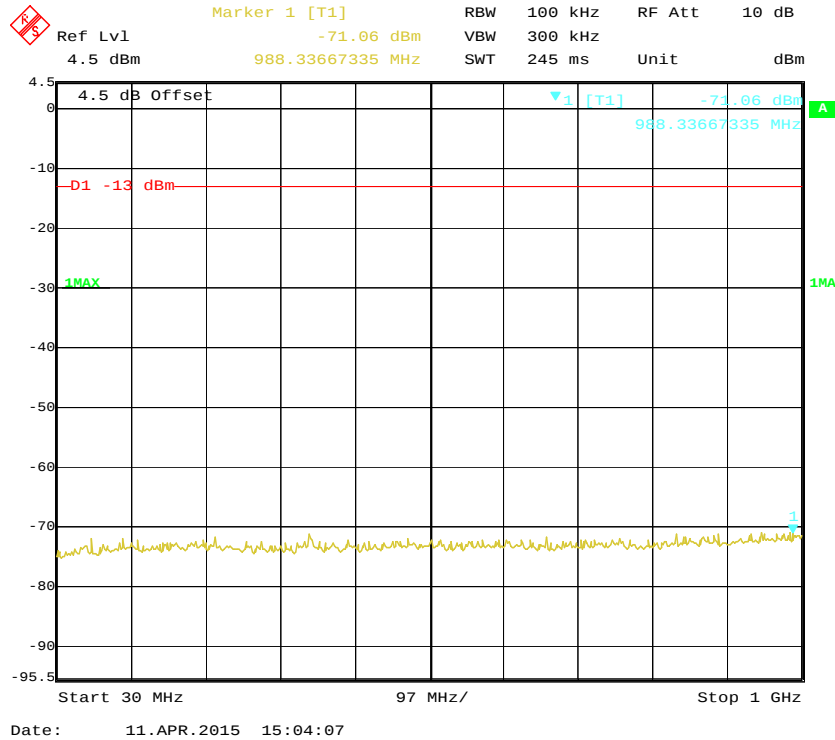


30 MHz – 1 GHz (WCDMA Mode)**1 GHz – 20 GHz (WCDMA Mode)**

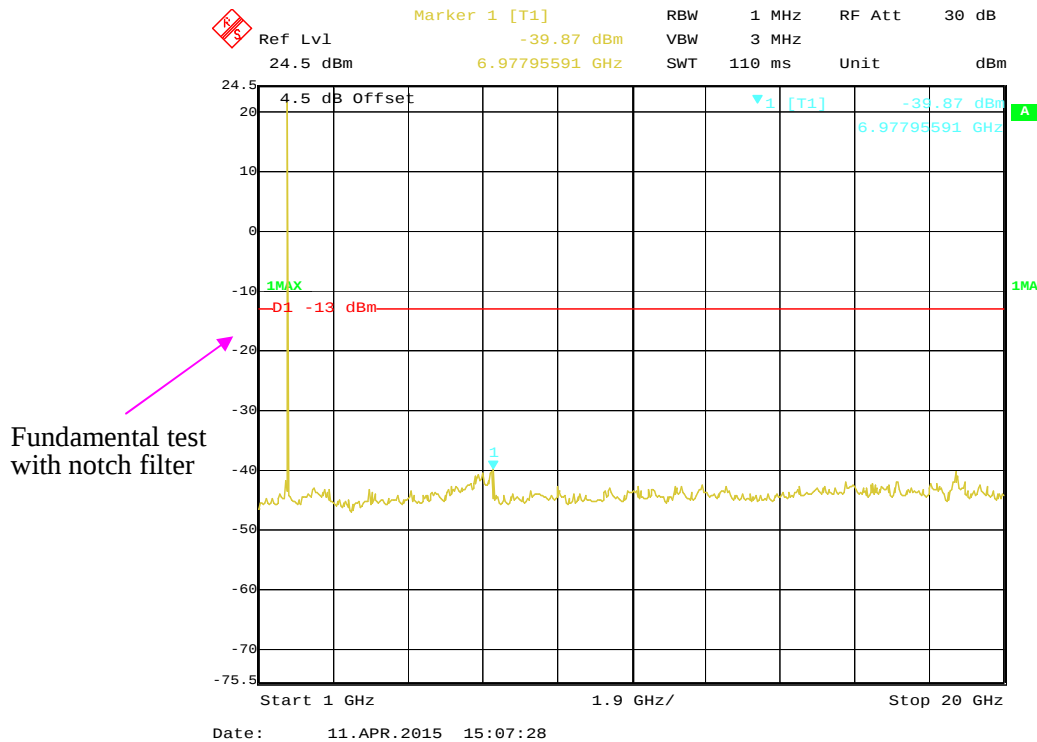
Fundamental test
with notch filter

AWS Band

30 MHz – 1 GHz (WCDMA Mode)

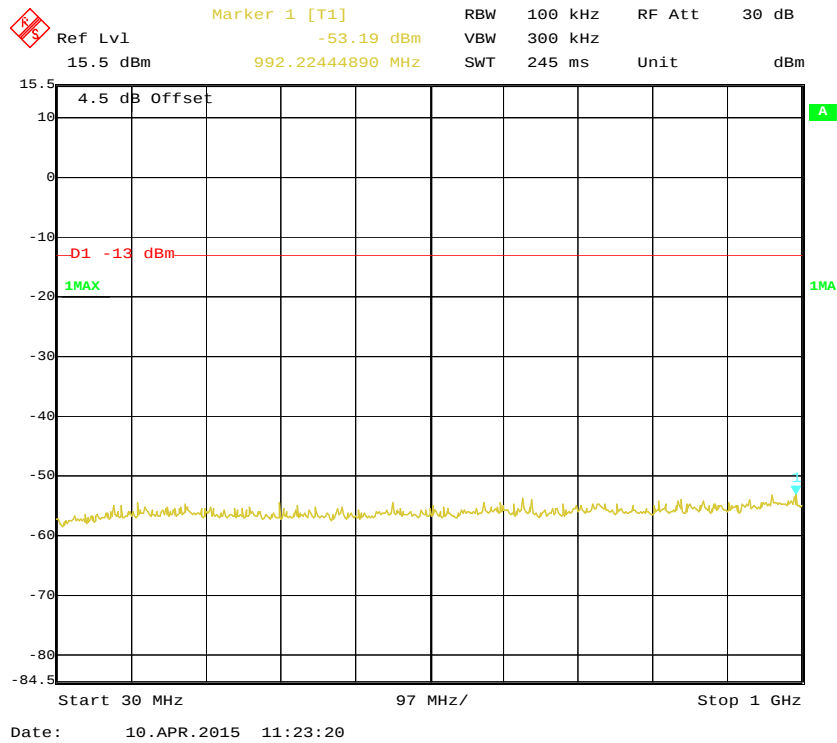


1 GHz – 20 GHz (WCDMA Mode)

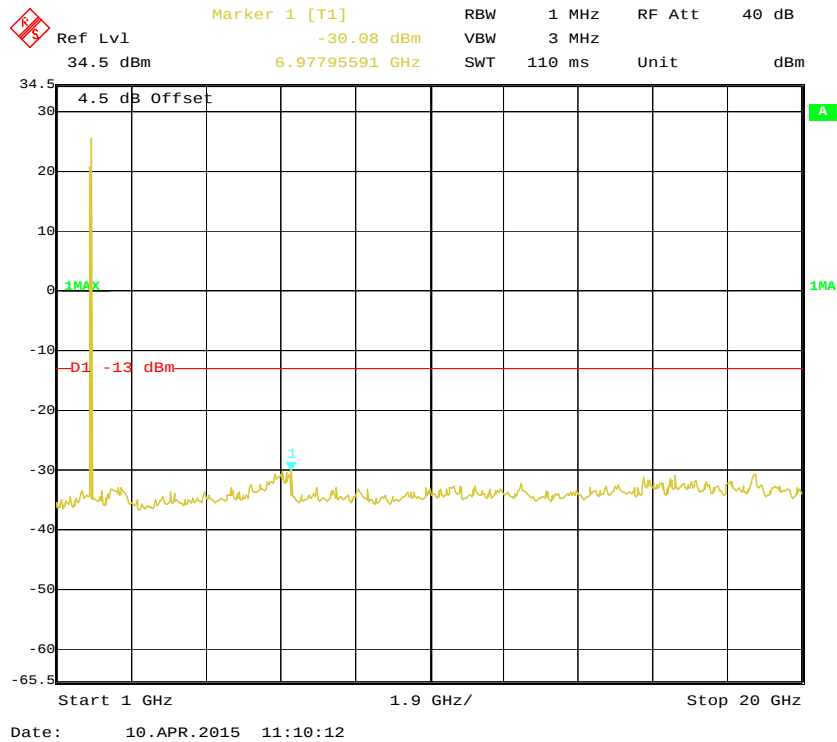


Band 2:

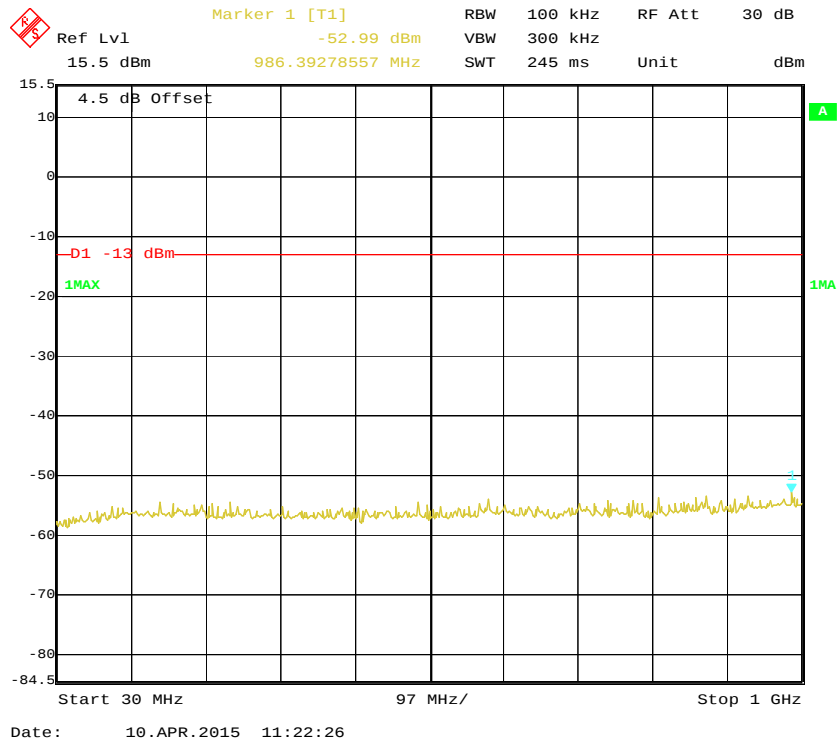
30 MHz - 1 GHz (1.4 MHz, Middle Channel)



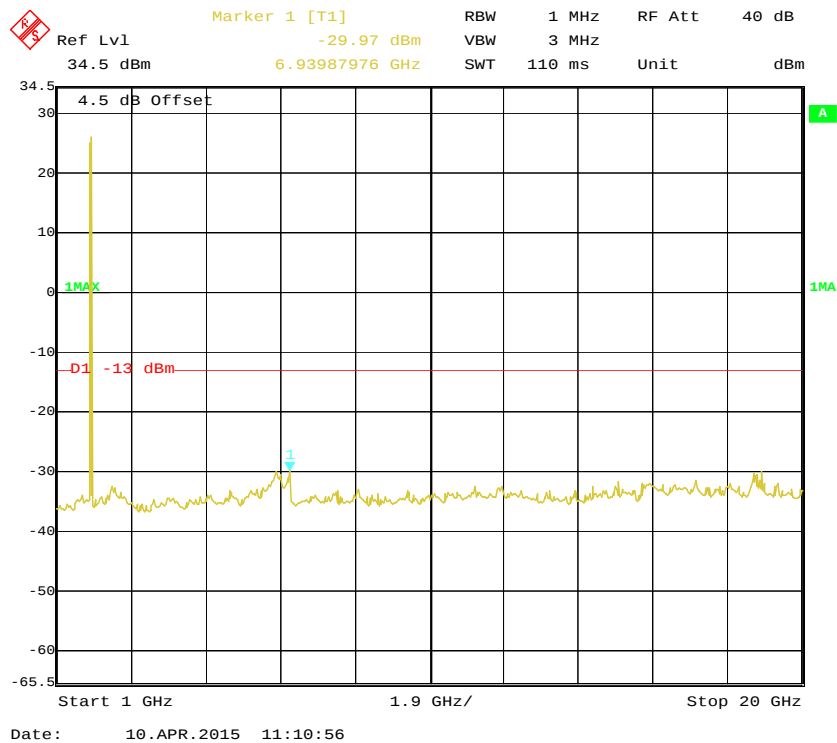
1 GHz - 20 GHz (1.4 MHz, Middle Channel)



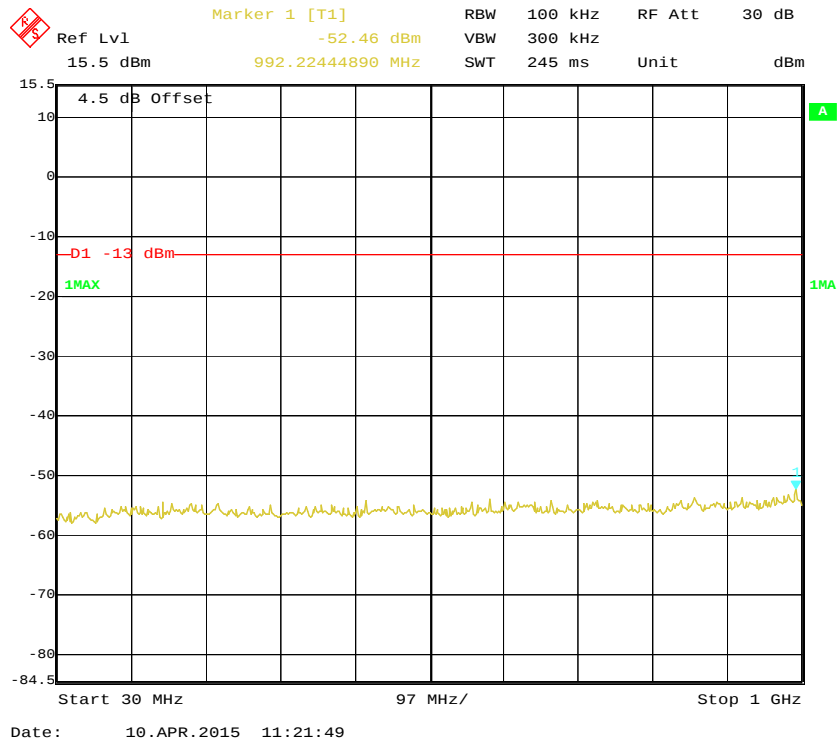
30 MHz - 1 GHz (3.0 MHz, Middle Channel)



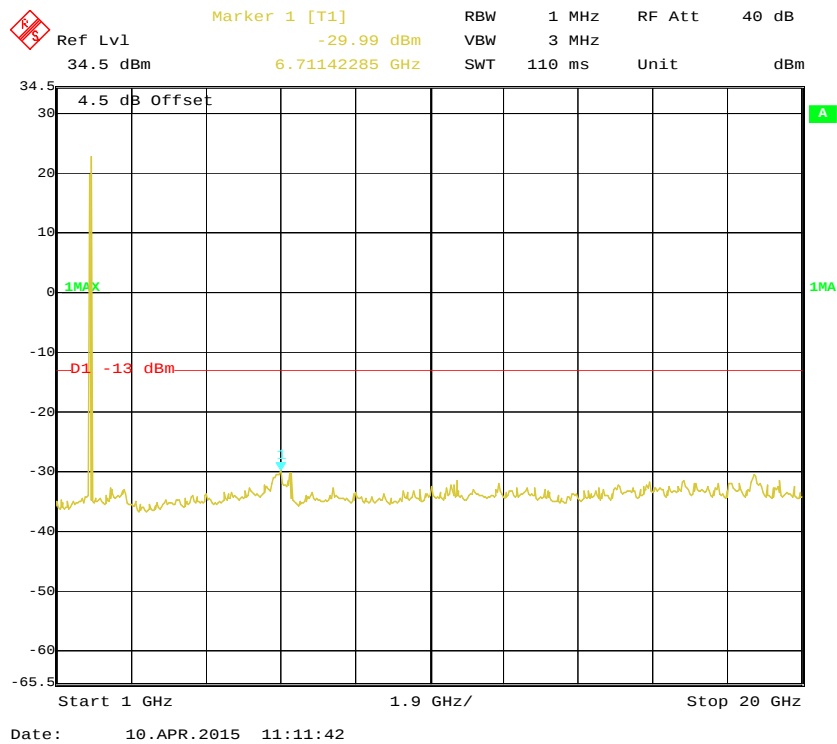
1 GHz – 20 GHz (3.0 MHz, Middle Channel)



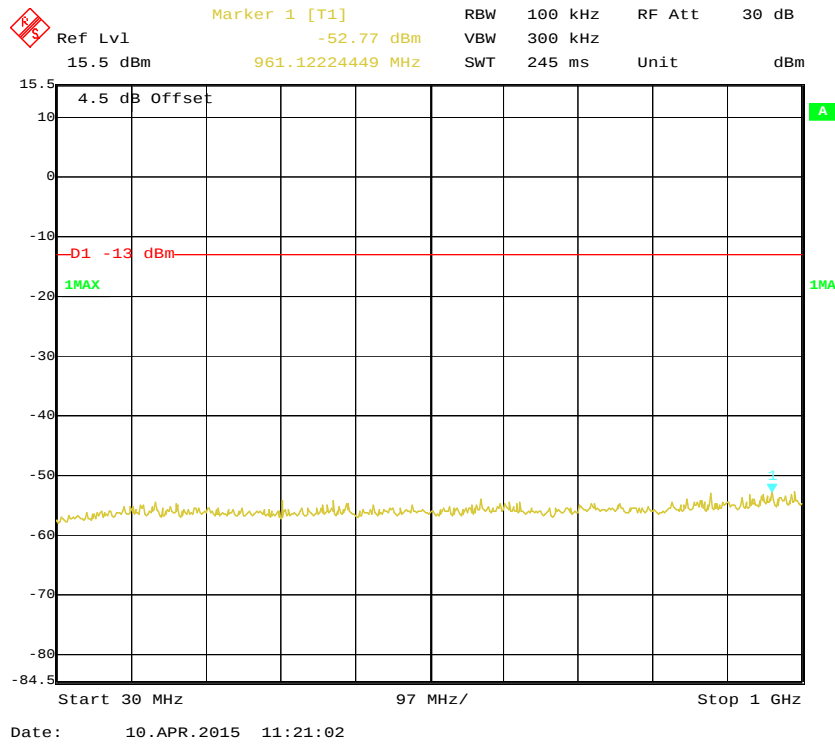
30 MHz - 1 GHz (5.0 MHz, Middle Channel)



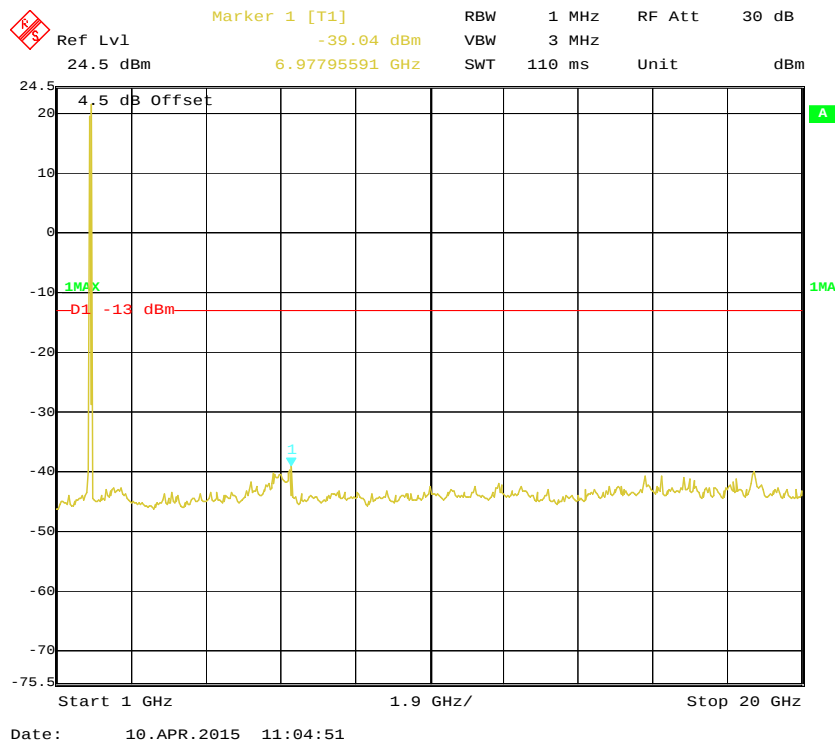
1 GHz – 20 GHz (5.0 MHz, Middle Channel)



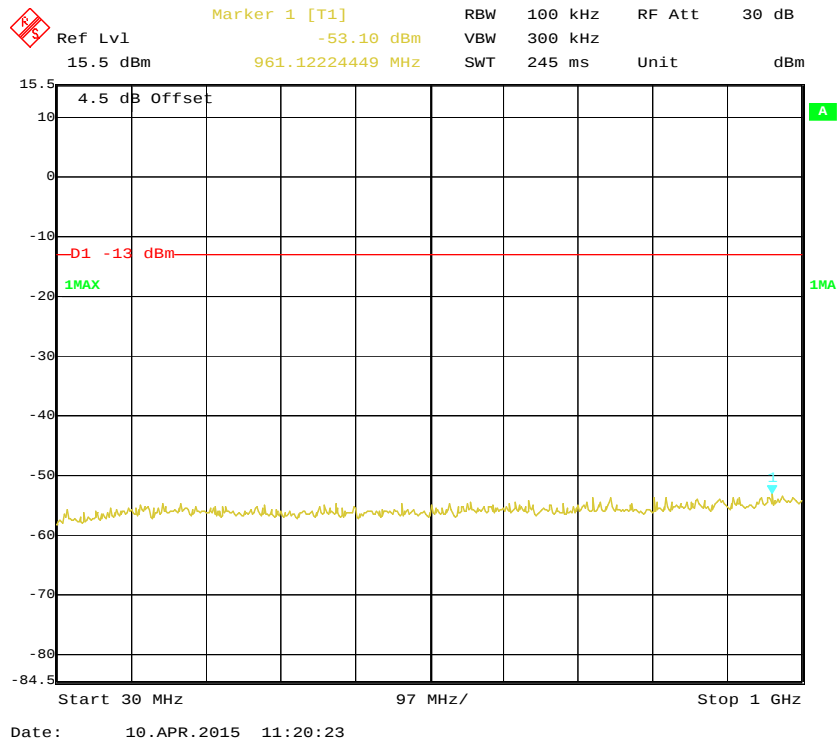
30 MHz - 1 GHz (10.0 MHz, Middle Channel)



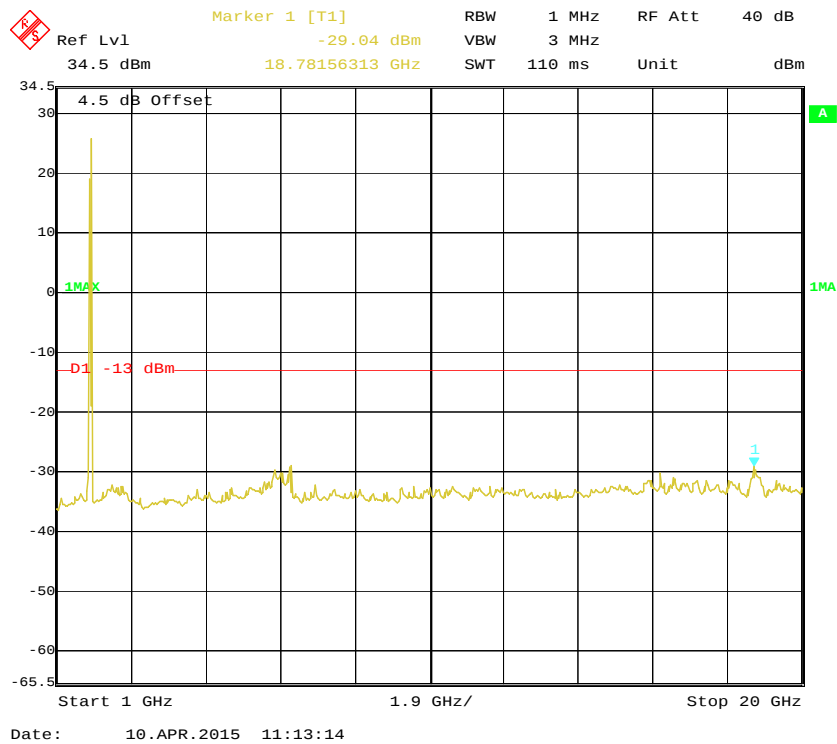
1 GHz - 20 GHz (10.0 MHz, Middle Channel)



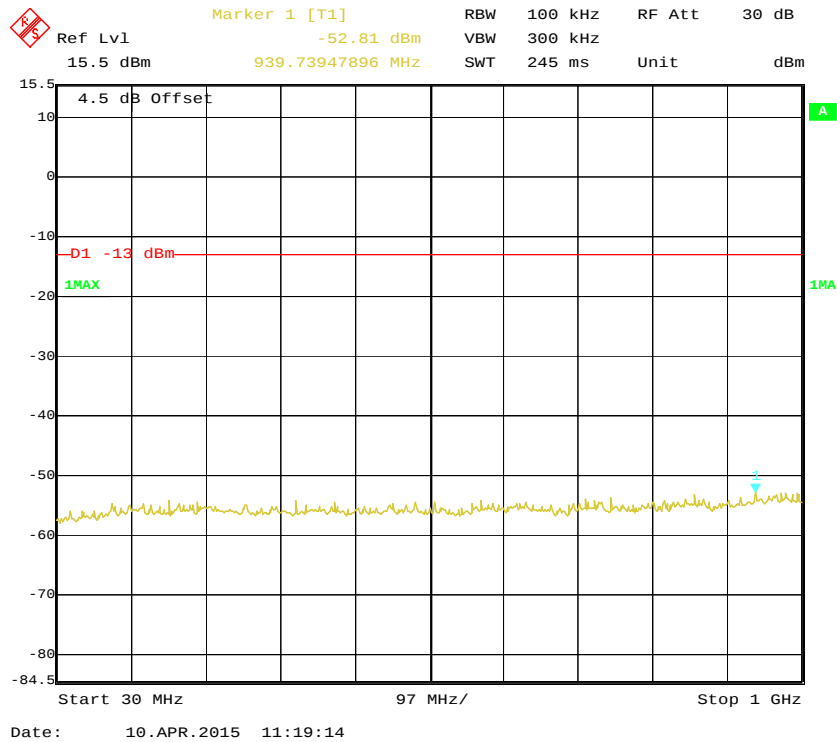
30 MHz - 1 GHz (15.0 MHz, Middle Channel)



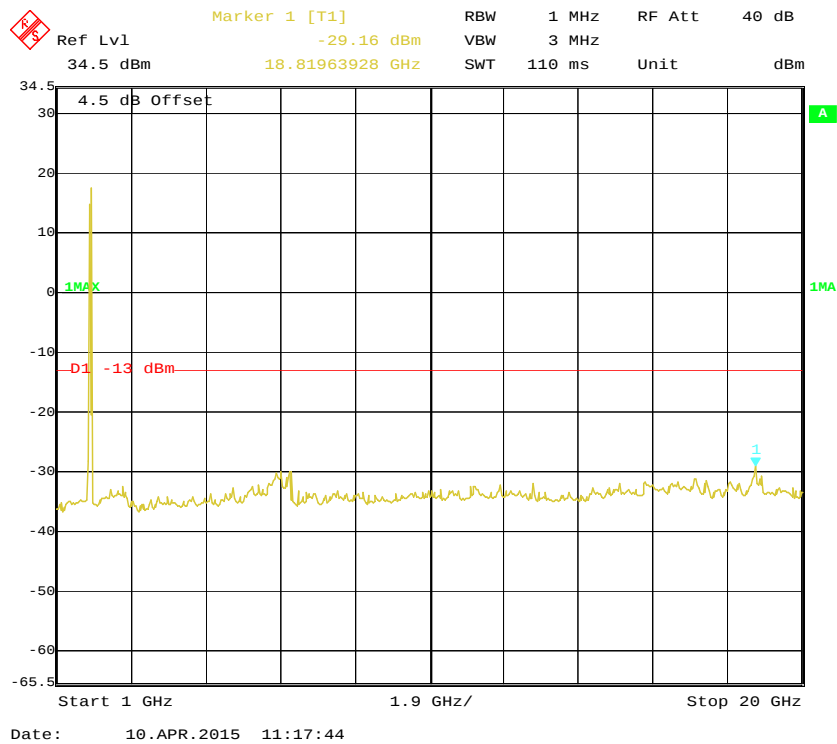
1 GHz - 20 GHz (15.0 MHz, Middle Channel)

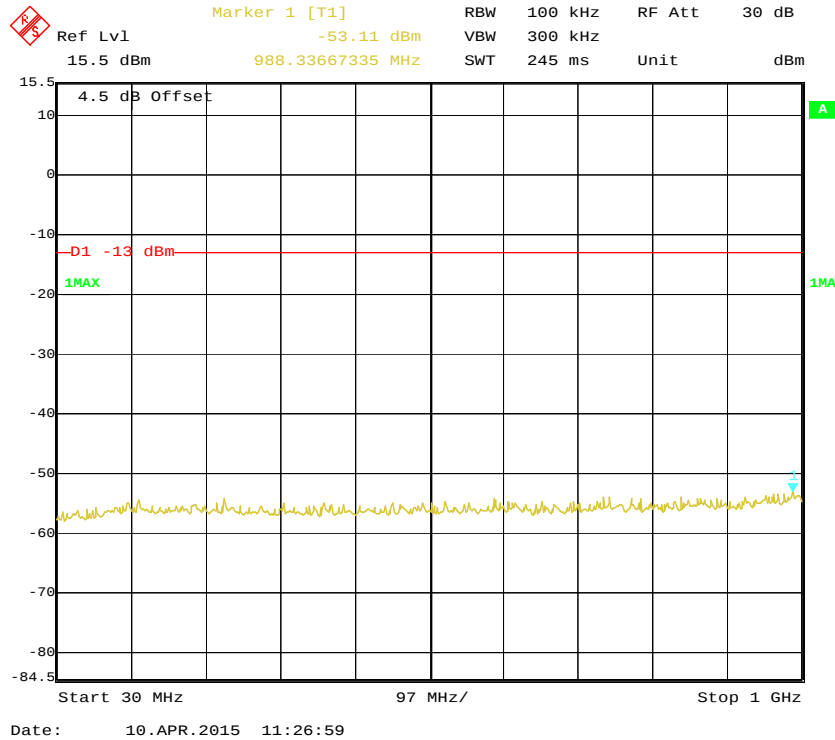
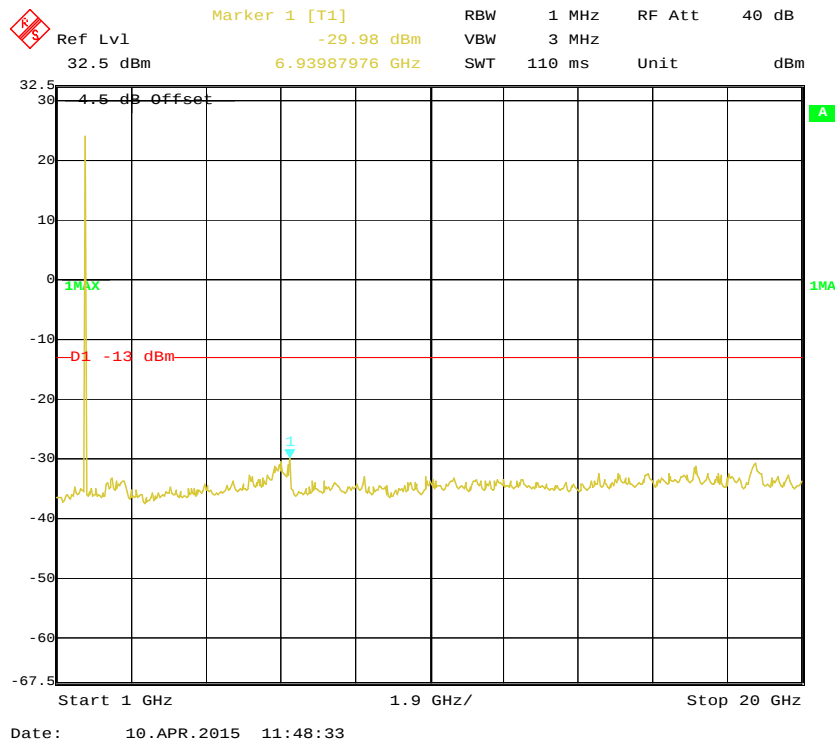


30 MHz - 1 GHz (20.0 MHz, Middle Channel)

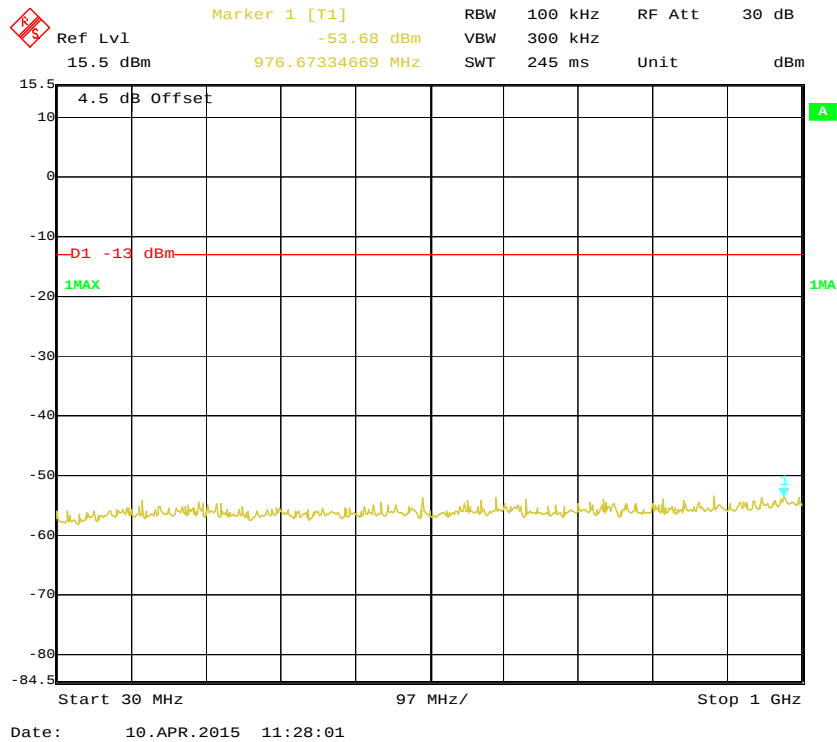


1 GHz - 20 GHz (20.0 MHz, Middle Channel)

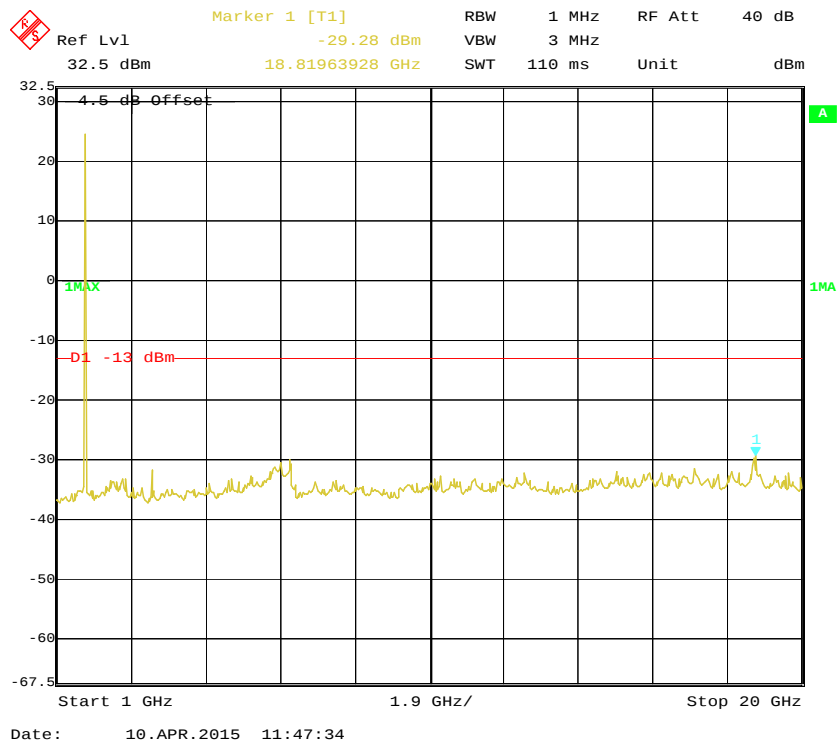


Band 4:**30 MHz - 1 GHz (1.4 MHz, Middle Channel)****1 GHz – 20 GHz (1.4 MHz, Middle Channel)**

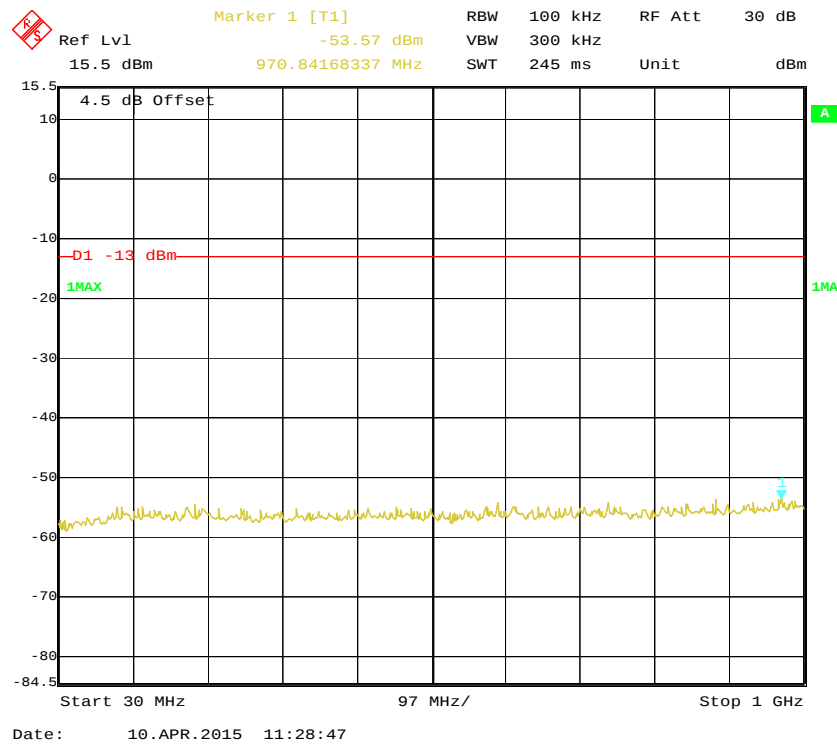
30 MHz - 1 GHz (3.0 MHz, Middle Channel)



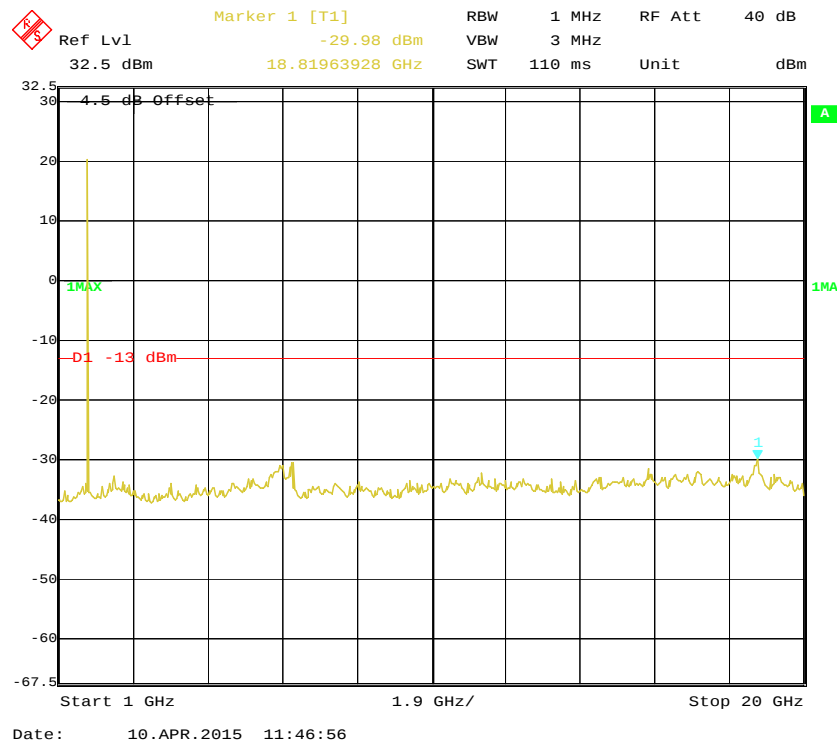
1 GHz – 20 GHz (3.0 MHz, Middle Channel)



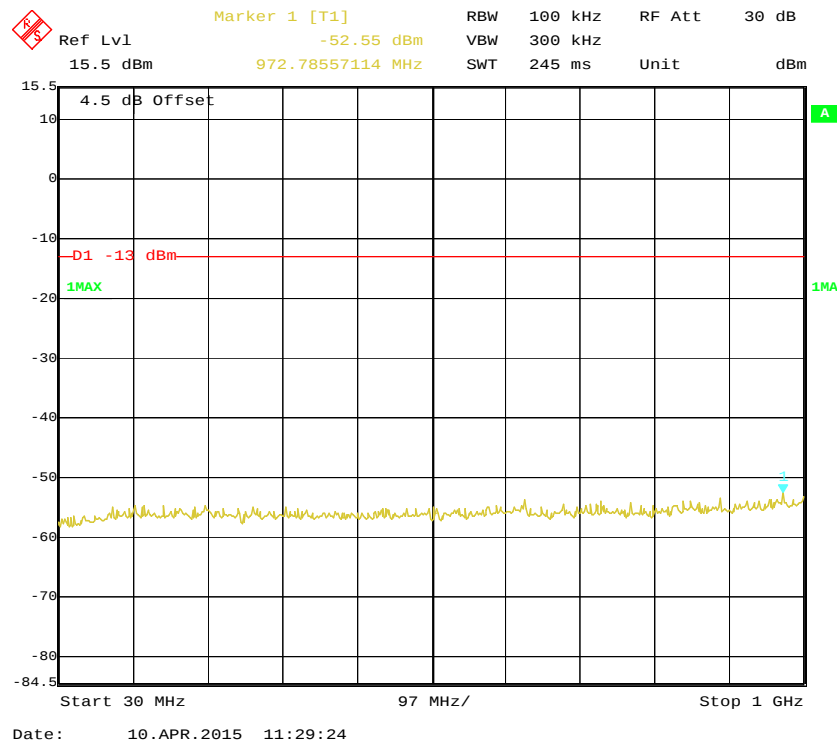
30 MHz - 1 GHz (5.0 MHz, Middle Channel)



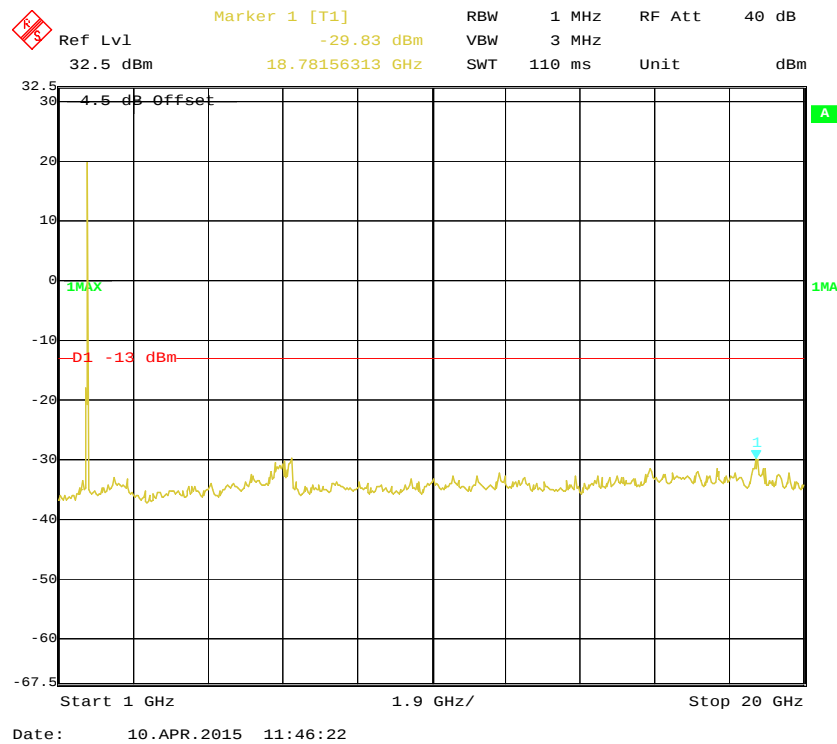
1 GHz - 20 GHz (5.0 MHz, Middle Channel)



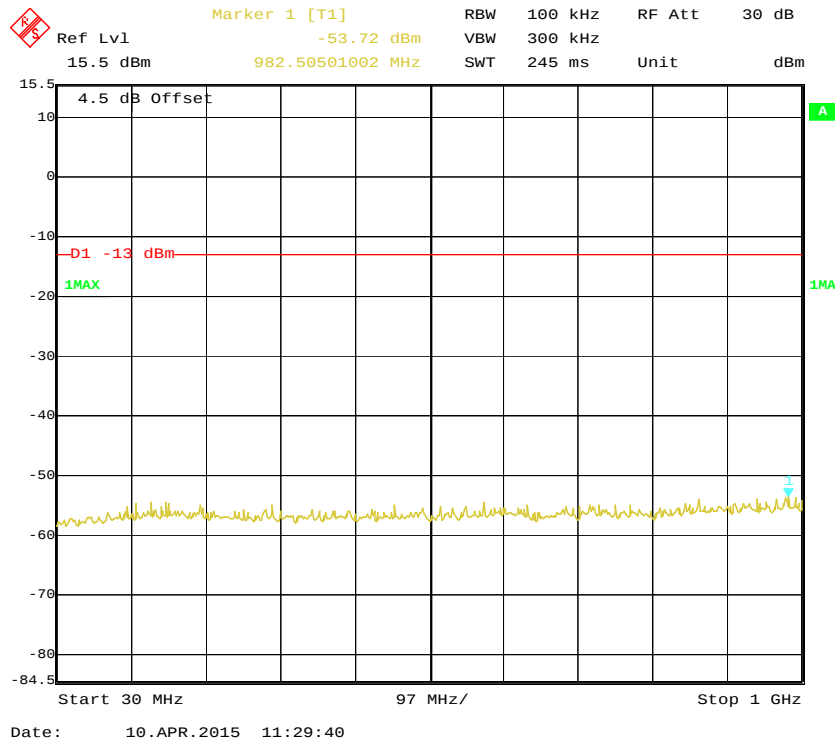
30 MHz - 1 GHz (10.0 MHz, Middle Channel)



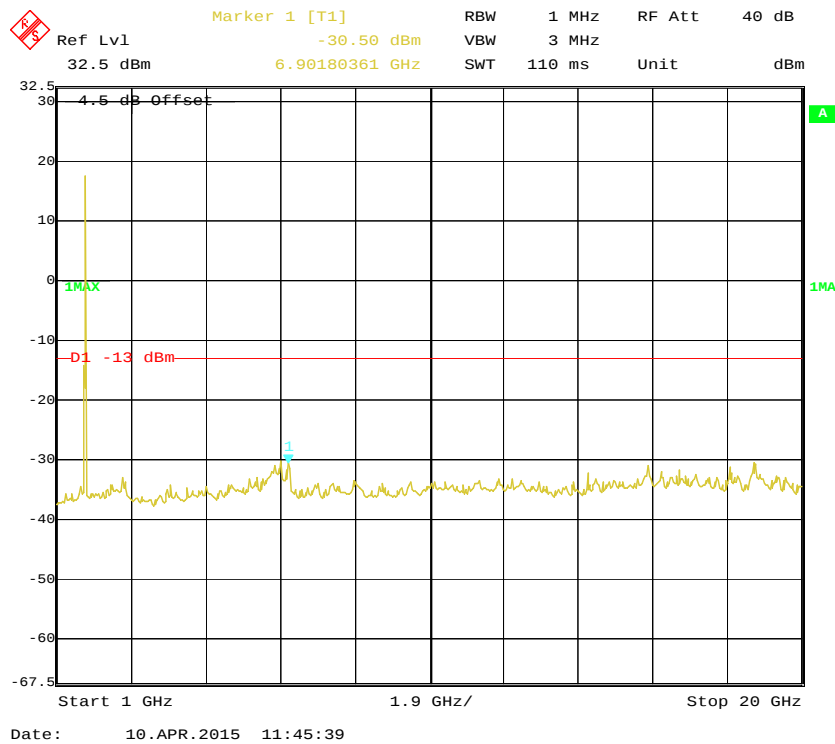
1 GHz - 20 GHz (10.0 MHz, Middle Channel)



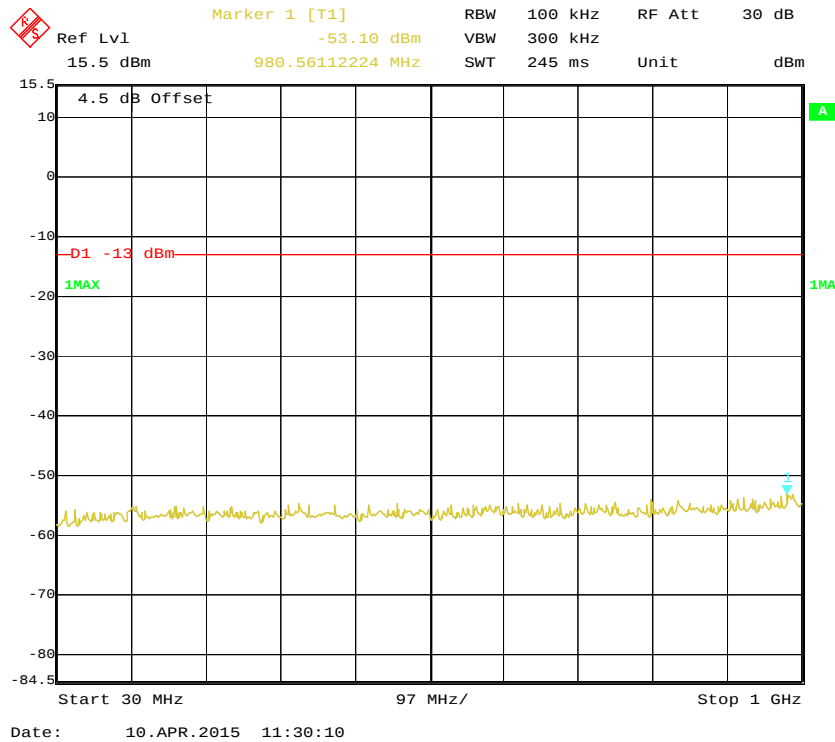
30 MHz - 1 GHz (15.0 MHz, Middle Channel)



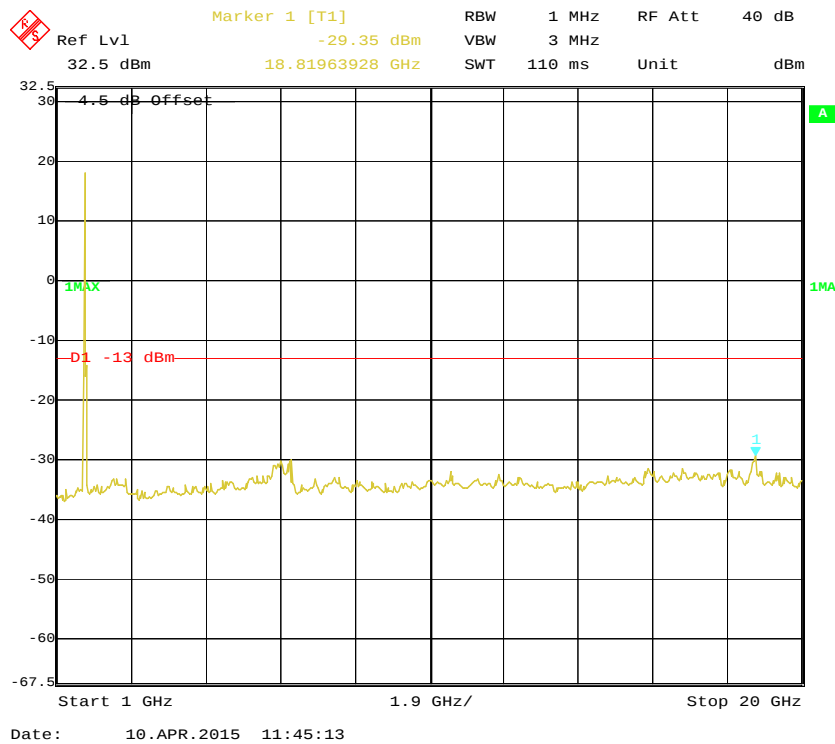
1 GHz - 20 GHz (15.0 MHz, Middle Channel)



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

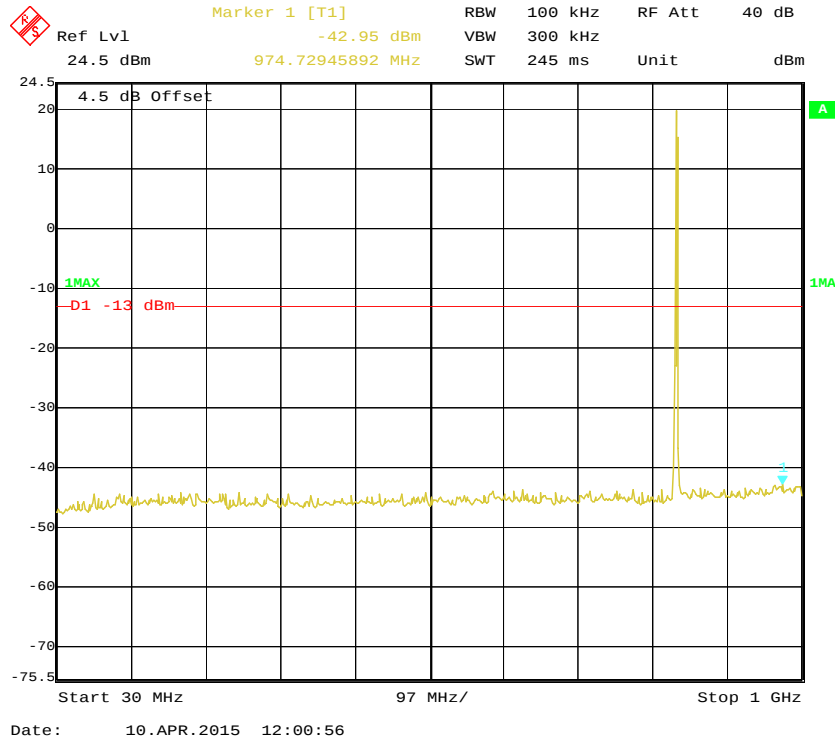


1 GHz - 20 GHz (20.0 MHz, Middle Channel)

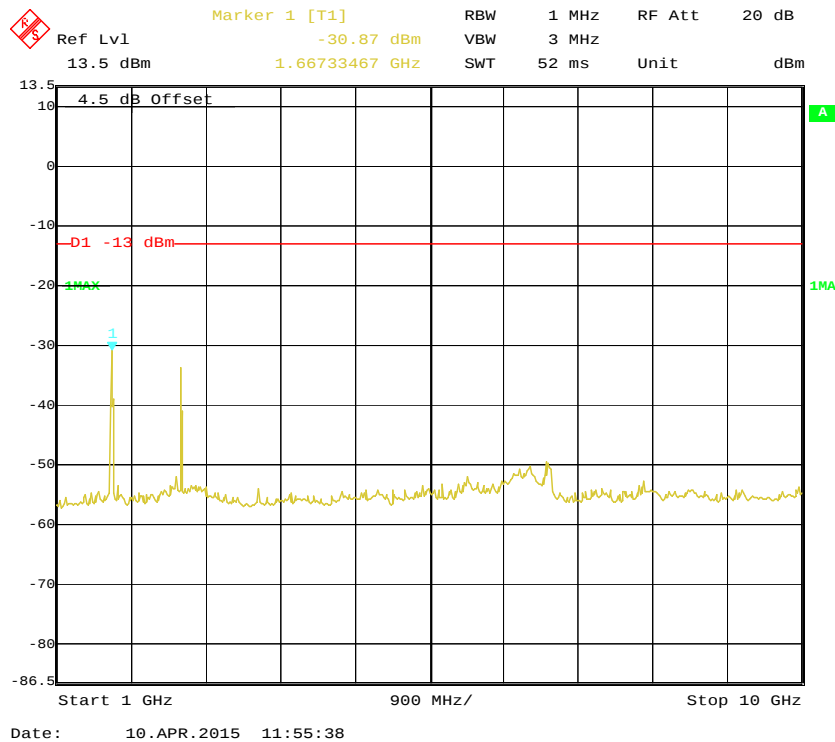


Band 5:

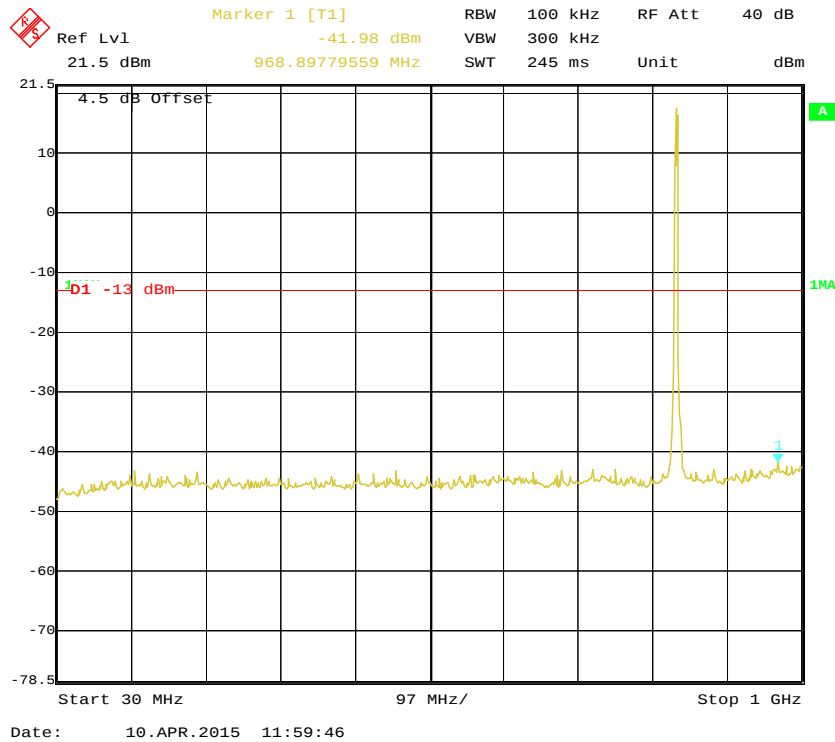
30 MHz - 1 GHz (1.4 MHz, Middle Channel)



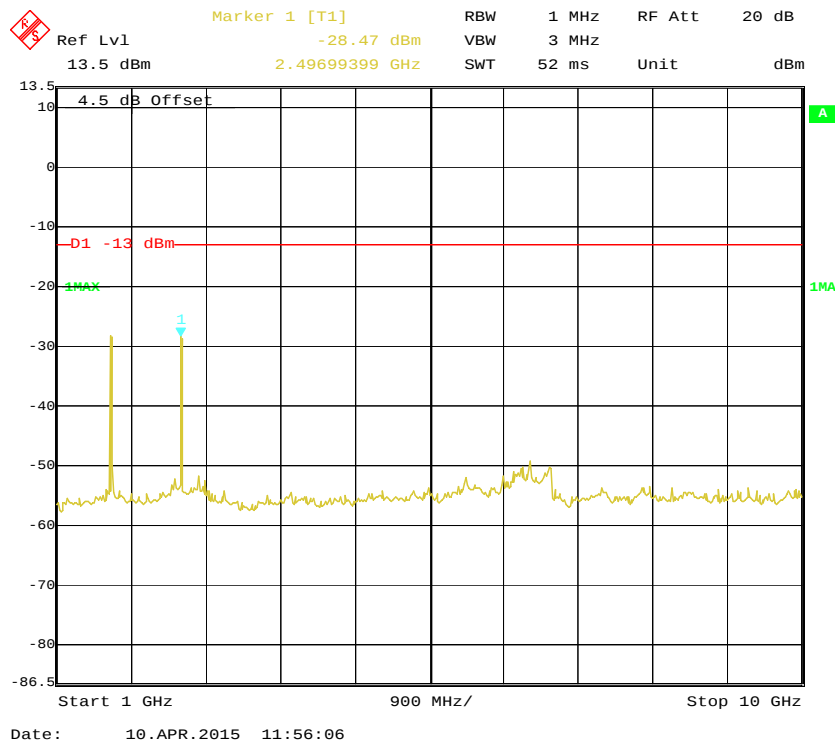
1 GHz – 20 GHz (1.4 MHz, Middle Channel)



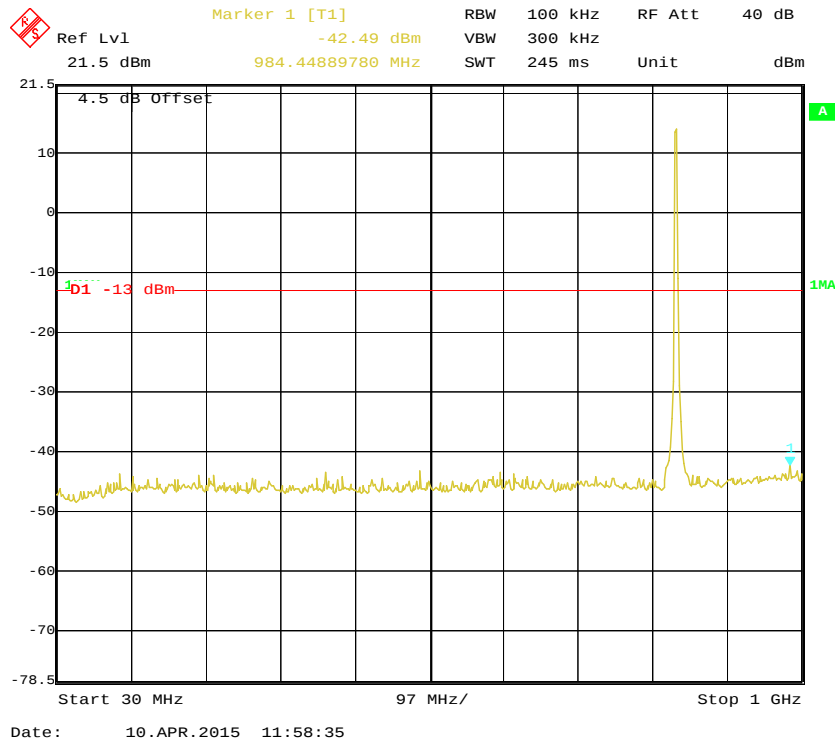
30 MHz - 1 GHz (3.0 MHz, Middle Channel)



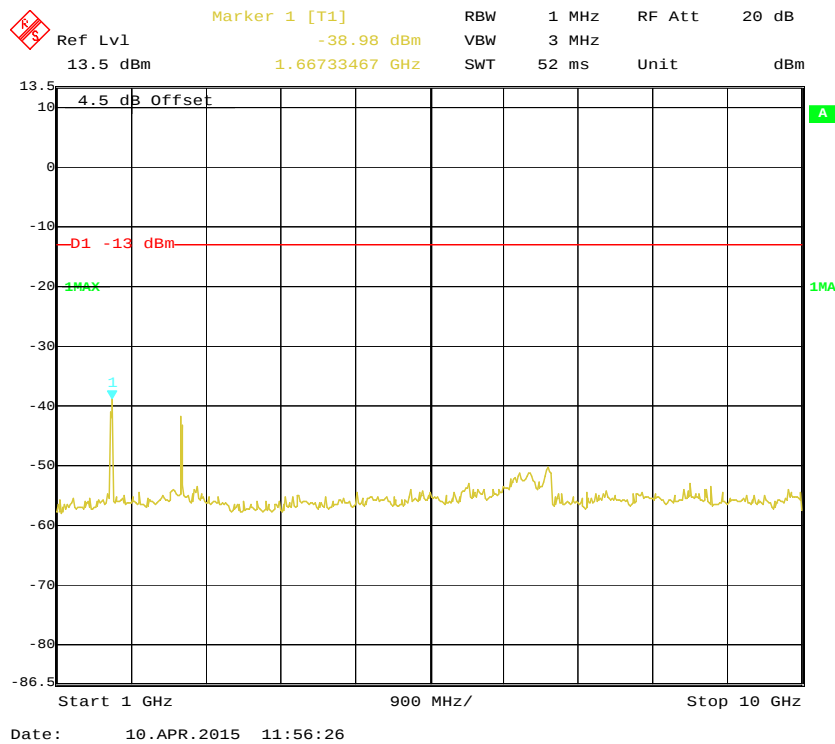
1 GHz – 20 GHz (3.0 MHz, Middle Channel)

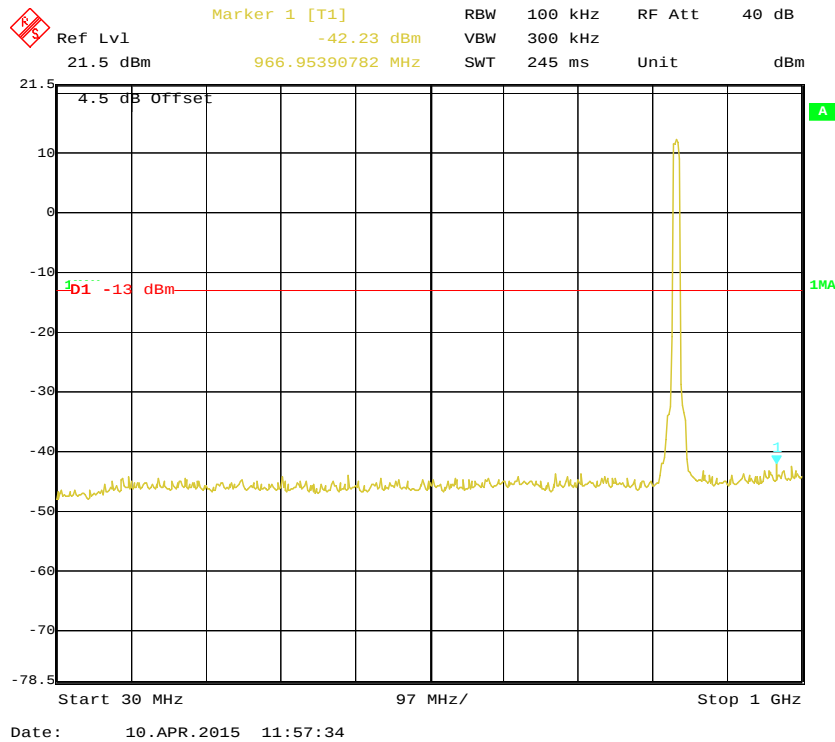
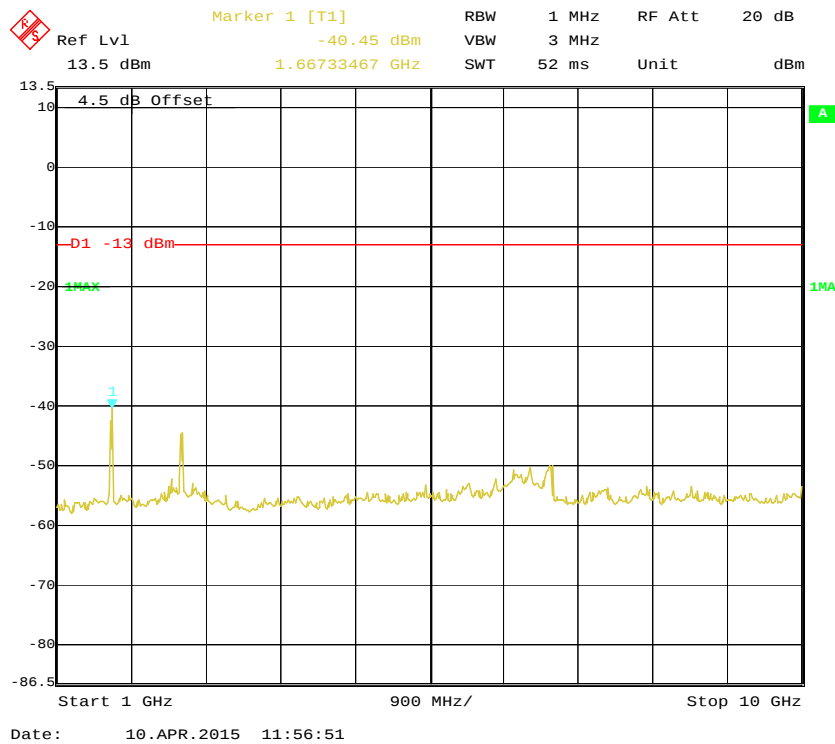


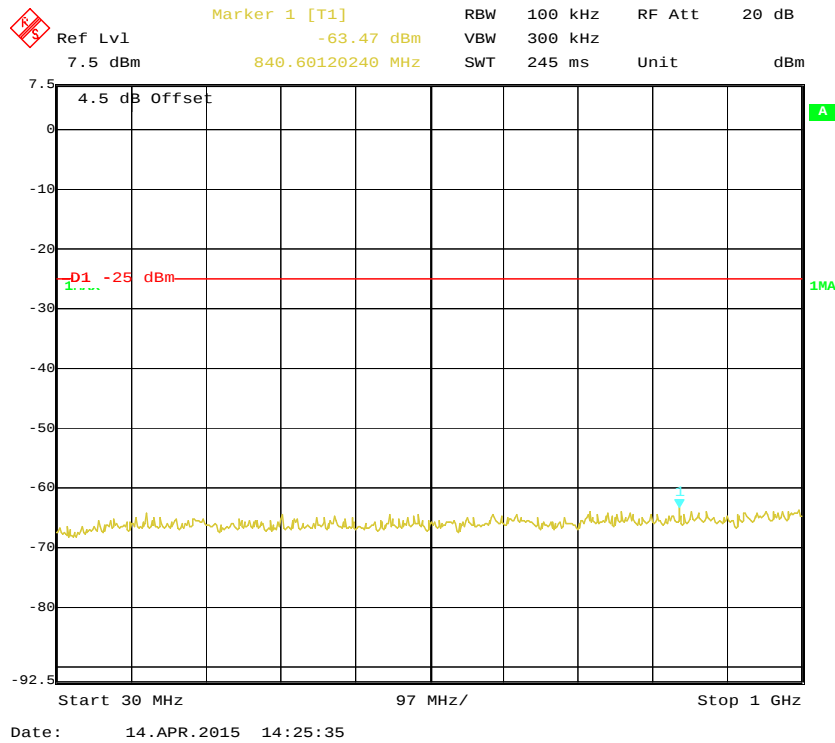
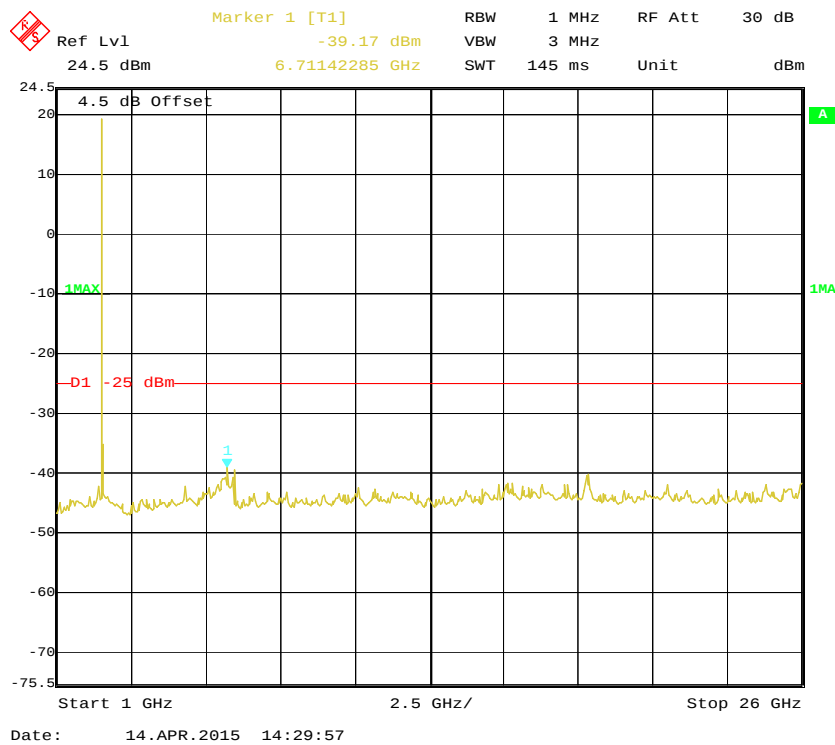
30 MHz - 1 GHz (5.0 MHz, Middle Channel)

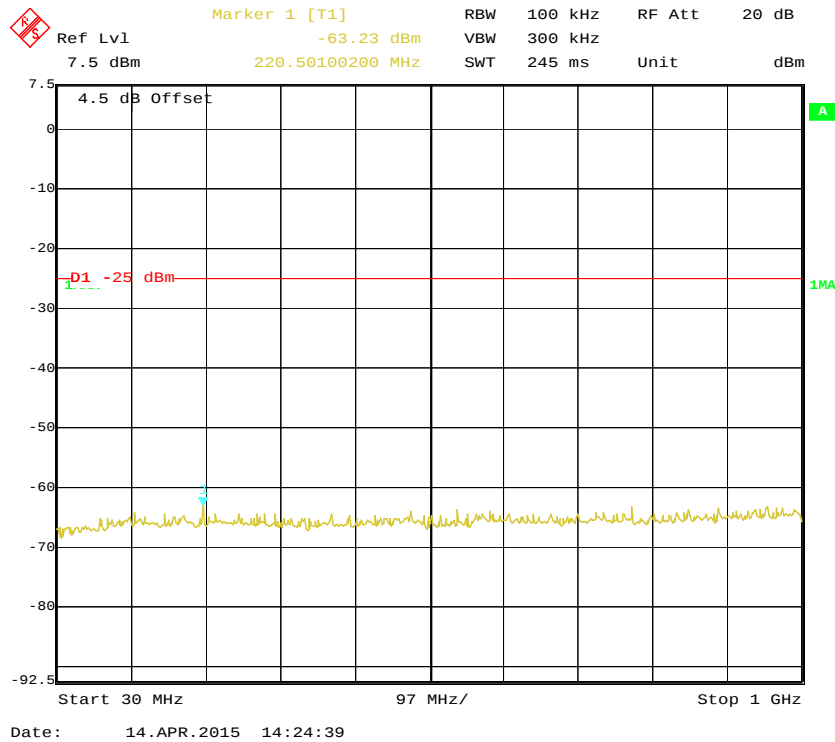
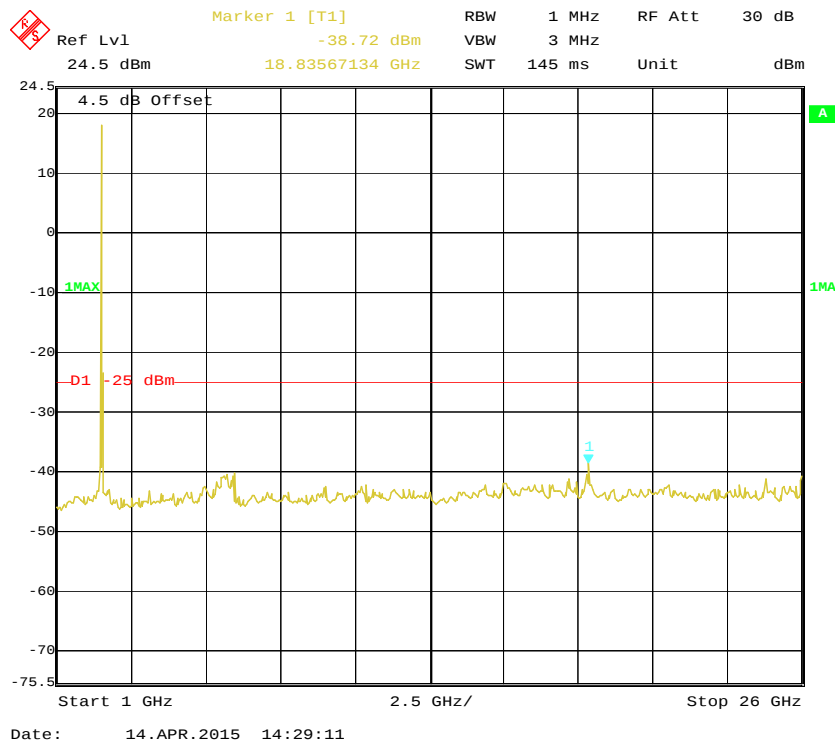


1 GHz – 20 GHz (5.0 MHz, Middle Channel)

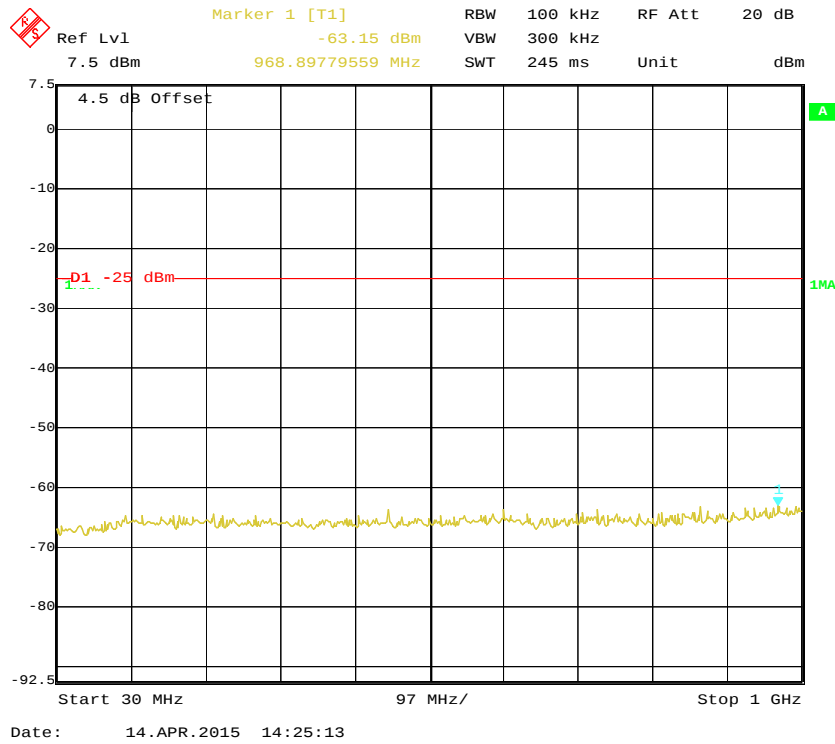


30 MHz - 1 GHz (10.0 MHz, Middle Channel)**1 GHz - 20 GHz (10.0 MHz, Middle Channel)**

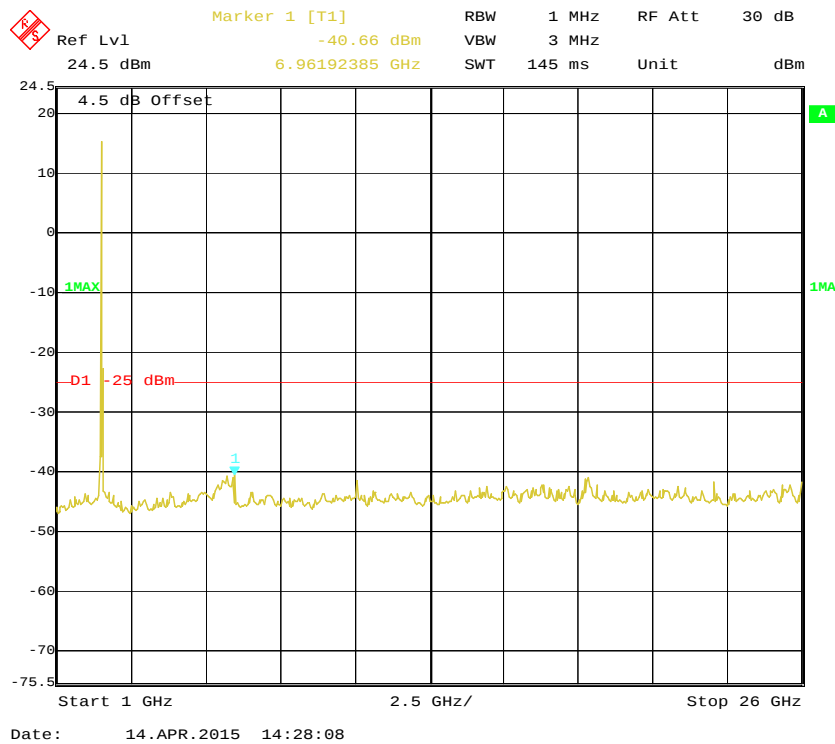
Band 7:**30 MHz - 1 GHz (5.0 MHz, Middle Channel)****1 GHz - 26 GHz (5.0 MHz, Middle Channel)**

30 MHz - 1 GHz (10.0 MHz, Middle Channel)**1 GHz - 26 GHz (10.0 MHz, Middle Channel)**

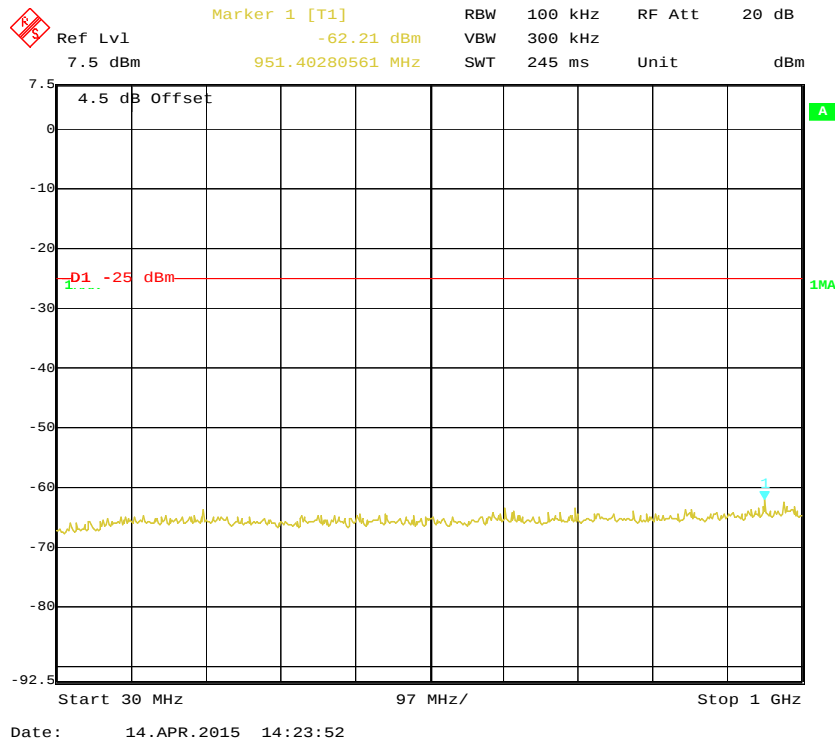
30 MHz - 1 GHz (15.0 MHz, Middle Channel)



1 GHz - 26 GHz (15.0 MHz, Middle Channel)



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



1 GHz - 20 GHz (20.0 MHz, Middle Channel)

