FCC PART 27

MEASUREMENT AND TEST REPORT

For

DDM Brands LLC

1616 NW, 84TH Ave. Miami, Florida, U.S.A

FCC ID:A4JANDY5QL

Report Type:	Product Type:
Original Report	LTE mobile phone

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Report Number:	RSZ141126002-00E
Report Date:	2014-12-04
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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *DDM Brands LLC*'s product, model number: *ANDY 5Q (FCC ID:A4JANDY5QL*) or the "EUT" as referred to in this report is a *LTE mobile phone*, which measures approximately: 143 mm (L) x 73 mm (W) x 8 mm (H), rated input voltage: DC 3.8 V battery or DC 5.0V from adapter.

Adapter Information:
Model: YW1000US
Input: AC100-240V, 50/60Hz, 0.2A
Output: DC 5.0V, 1A

Note: the product, series model Andy 5Q, Andy 5QL, AM5QL133, Andy C5Q, Andy C5QL and AC5QL133 are identical schematics as model ANDY 5Q, which was selected for fully testing. The only difference between them is the model number. The detailed information can be referred to the attached declaration which was stated and guaranteed by the applicant.

**All measurement and test data in this report was gathered from production sample serial number: 1411216 (Assigned by BACL, Shenzhen). The EUT supplied by the applicant was received on 2014-11-26*

Objective

This type approval report is prepared on behalf of *DDM Brands LLC* in accordance with Part 2, Part 27 of the Federal Communication Commissions rules.

The objective is to determine the compliance of EUT with FCC rules for output power, modulation characteristic, occupied bandwidth, and spurious emission at antenna terminal, spurious radiated emission, frequency stability, and band edge.

Related Submittal(s)/Grant(s)

FCC Part 15B JBP, FCC Part 22H&24E PCE, Part 15.247 DSS&DTS submissions with FCC ID: A4JANDY5QL.

Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2, Sub-part J as well as the following parts:

Part 27 – Miscellaneous wireless communications services

Applicable Standards: TIA-1037, TIA/EIA 603-D.

All radiated and conducted emissions measurements were performed at Bay Area Compliance Laboratories Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp.(Shenzhen) to collect test data is located in the 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China.

Test site at Bay Area Compliance Laboratories Corp. (Shenzhen) has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on December 06, 2010. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2003.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 382179. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

SYSTEM TEST CONFIGURATION

Justification

The EUT was configured for testing according to TIA/EIA-603-D.

The final qualification test was performed with the EUT operating at normal mode.

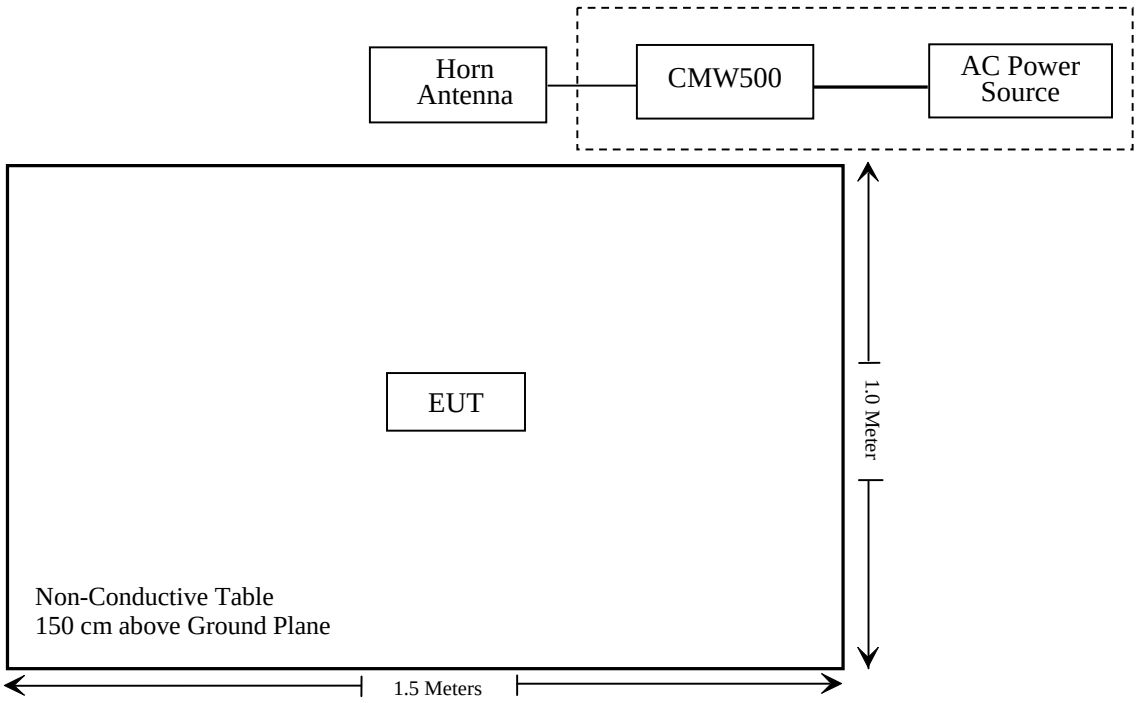
Equipment Modifications

No modifications were made to the EUT.

Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	1201.0002K50

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1307 (b)(1), §2.1093, §27.52	RF Exposure Information	Compliance*
§2.1046; §27.50 (d) (i)	RF Output Power	Compliance
§ 2.1047	Modulation Characteristics	Not Applicable
§ 2.1049; §27.53 (c)	Occupied Bandwidth	Compliance
§ 2.1051; §27.53(c) (g)	Spurious Emissions at Antenna Terminal	Compliance
§ 2.1053; §27.53 (c) (g)	Spurious Radiated Emissions	Compliance
§27.53 (c) (g)	Band Edge	Compliance
§ 2.1055; §27.54	Frequency stability	Compliance

Note: * Please refer to SAR report released by BACL, report number: RSZ141126002-20.

FCC §1.1307(b) & §27.52 & §2.1093 - RF EXPOSURE INFORMATION

Applicable Standard

FCC§1.1307 and §2.1093.

Test Result

Compliance, please refer to the SAR report: RSZ141126002-20.

FCC §2.1047 - MODULATION CHARACTERISTIC

According to FCC § 2.1047(d), Part 27 there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

FCC § 2.1046 & § 27.50 - RF OUTPUT POWER

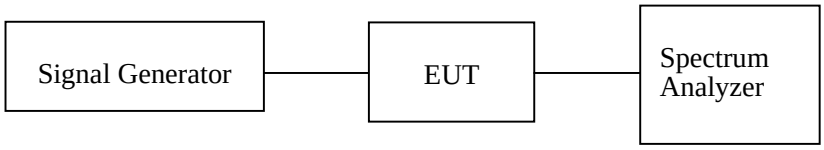
Applicable Standards

According to §27.50, the maximum EIRP must not exceed 1Watts (30 dBm).

Test Procedure

Conducted method:

The RF output of the transmitter was connected to the Signal Generator and the spectrum analyzer through sufficient attenuation.



Radiated method:

TIA603-D section 2.2.17

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCI	101122	2014-09-25	2015-09-25
Sunol Sciences	Broadband Antenna	JB3	A111513	2014-6-18	2017-6-17
HP	Synthesized Sweeper	8341B	2624A00116	2014-06-03	2015-06-03
COM POWER	Dipole Antenna	AD-100	041000	NCR	NCR
A.H. System	Horn Antenna	SAS-200/571	135	2012-02-11	2015-02-10
Rohde & Schwarz	Signal Analyzer	FSIQ26	837405/023	2014-08-22	2015-08-22
Sunol Sciences	Horn Antenna	DRH-118	A052304	2014-12-01	2015-11-30

*** 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:	20~25 ℃
Relative Humidity:	50~58 %
ATM Pressure:	100.0~101.0 kPa

The testing was performed by William Li on 2014-11-30 to 2014-12-03.

Conducted Power

Band 4:

Maximum Output Power

Bandwidth (MHz)	Modulation	RB size/RB Offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4	QPSK	RB Size=1, RB Offset=0	23.11	23.25	23.14
		RB Size=1, RB Offset=2	22.37	23.16	22.23
		RB Size=1, RB Offset=5	22.14	22.77	22.74
		RB Size=3, RB Offset=0	22.56	23.22	22.40
		RB Size=3, RB Offset=1	22.19	22.81	21.88
		RB Size=3, RB Offset=2	21.63	22.85	21.84
		RB Size=6, RB Offset=0	22.13	22.40	21.47
	16QAM	RB Size=1, RB Offset=0	22.13	22.24	22.17
		RB Size=1, RB Offset=2	21.92	22.21	21.91
		RB Size=1, RB Offset=5	21.30	22.18	21.43
		RB Size=3, RB Offset=0	21.41	22.05	22.06
		RB Size=3, RB Offset=1	21.02	21.51	21.78
		RB Size=3, RB Offset=2	21.03	22.01	21.59
		RB Size=6, RB Offset=0	21.73	21.66	21.49
3.0	QPSK	RB Size=1, RB Offset=0	23.12	23.24	23.16
		RB Size=1, RB Offset=7	22.36	22.56	22.78
		RB Size=1, RB Offset=14	22.37	22.88	22.71
		RB Size=8, RB Offset=0	22.74	22.60	22.48
		RB Size=8, RB Offset=4	22.08	21.75	22.23
		RB Size=8, RB Offset=7	21.78	22.13	22.13
		RB Size=15, RB Offset=0	22.11	22.37	22.72
	16QAM	RB Size=1, RB Offset=0	22.12	22.22	22.15
		RB Size=1, RB Offset=7	22.01	21.48	21.90
		RB Size=1, RB Offset=14	21.27	21.82	21.88
		RB Size=8, RB Offset=0	21.77	21.79	21.16
		RB Size=8, RB Offset=4	21.48	20.76	21.33
		RB Size=8, RB Offset=7	21.70	20.56	21.14
		RB Size=15, RB Offset=0	21.53	21.18	21.59

Bandwidth (MHz)	Modulation	RB size/RB Offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5.0	QPSK	RB Size=1, RB Offset=0	23.24	23.33	23.22
		RB Size=1, RB Offset=12	22.35	22.35	22.32
		RB Size=1, RB Offset=24	22.32	22.43	22.30
		RB Size=12, RB Offset=0	22.92	23.05	22.37
		RB Size=12, RB Offset=6	21.92	21.65	21.71
		RB Size=12, RB Offset=11	22.16	21.46	21.61
		RB Size=25, RB Offset=0	22.31	21.80	21.39
	16QAM	RB Size=1, RB Offset=0	22.19	22.28	22.21
		RB Size=1, RB Offset=12	21.65	21.92	21.47
		RB Size=1, RB Offset=24	21.88	21.57	21.90
		RB Size=12, RB Offset=0	22.13	22.14	21.66
		RB Size=12, RB Offset=6	21.50	21.06	21.10
		RB Size=12, RB Offset=11	21.38	21.62	21.03
		RB Size=25, RB Offset=0	20.80	21.23	21.42
10.0	QPSK	RB Size=1, RB Offset=0	23.26	23.36	23.29
		RB Size=1, RB Offset=24	22.29	23.27	22.52
		RB Size=1, RB Offset=49	22.41	22.89	23.03
		RB Size=25, RB Offset=0	22.61	23.10	22.38
		RB Size=25, RB Offset=12	21.75	22.77	22.24
		RB Size=25, RB Offset=24	22.08	22.40	21.83
		RB Size=50, RB Offset=0	22.28	23.13	22.05
	16QAM	RB Size=1, RB Offset=0	22.64	22.75	22.67
		RB Size=1, RB Offset=24	22.14	22.31	22.13
		RB Size=1, RB Offset=49	22.35	21.91	22.25
		RB Size=25, RB Offset=0	21.68	22.03	22.31
		RB Size=25, RB Offset=12	21.22	21.70	22.06
		RB Size=25, RB Offset=24	21.34	21.65	21.66
		RB Size=50, RB Offset=0	21.33	22.03	21.35

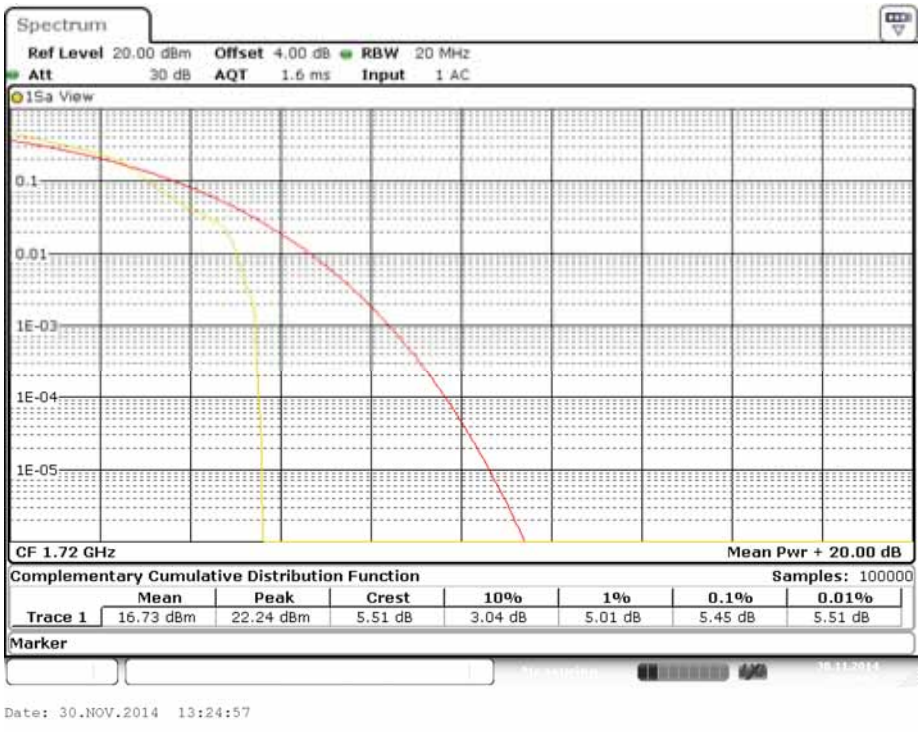
Bandwidth (MHz)	Modulation	RB size/RB Offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
15.0	QPSK	RB Size=1, RB Offset=0	23.30	23.41	23.33
		RB Size=1, RB Offset=37	23.03	23.12	23.11
		RB Size=1, RB Offset=74	23.02	22.78	23.18
		RB Size=36, RB Offset=0	22.73	22.67	22.77
		RB Size=36, RB Offset=18	22.95	22.64	23.10
		RB Size=36, RB Offset=37	22.59	22.69	23.06
		RB Size=75, RB Offset=0	22.60	22.47	23.02
	16QAM	RB Size=1, RB Offset=0	22.77	22.82	22.72
		RB Size=1, RB Offset=37	22.13	22.04	21.80
		RB Size=1, RB Offset=74	21.93	22.20	22.39
		RB Size=36, RB Offset=0	22.28	21.91	22.19
		RB Size=36, RB Offset=18	21.77	21.09	21.35
		RB Size=36, RB Offset=37	22.06	21.90	21.01
		RB Size=75, RB Offset=0	21.98	21.67	21.76
20.0	QPSK	RB Size=1, RB Offset=0	23.31	23.43	23.35
		RB Size=1, RB Offset=49	23.16	22.60	22.37
		RB Size=1, RB Offset=99	23.25	22.86	22.56
		RB Size=50, RB Offset=0	23.20	22.77	22.96
		RB Size=50, RB Offset=24	23.11	22.54	21.93
		RB Size=50, RB Offset=49	22.86	21.76	21.49
		RB Size=100, RB Offset=0	22.74	21.89	22.12
	16QAM	RB Size=1, RB Offset=0	22.48	22.66	22.51
		RB Size=1, RB Offset=49	21.94	21.82	22.35
		RB Size=1, RB Offset=99	22.46	22.40	22.11
		RB Size=50, RB Offset=0	21.65	22.43	21.61
		RB Size=50, RB Offset=24	21.66	21.73	21.46
		RB Size=50, RB Offset=49	21.07	21.08	21.48
		RB Size=100, RB Offset=0	21.17	21.49	21.73

Radiated Power:

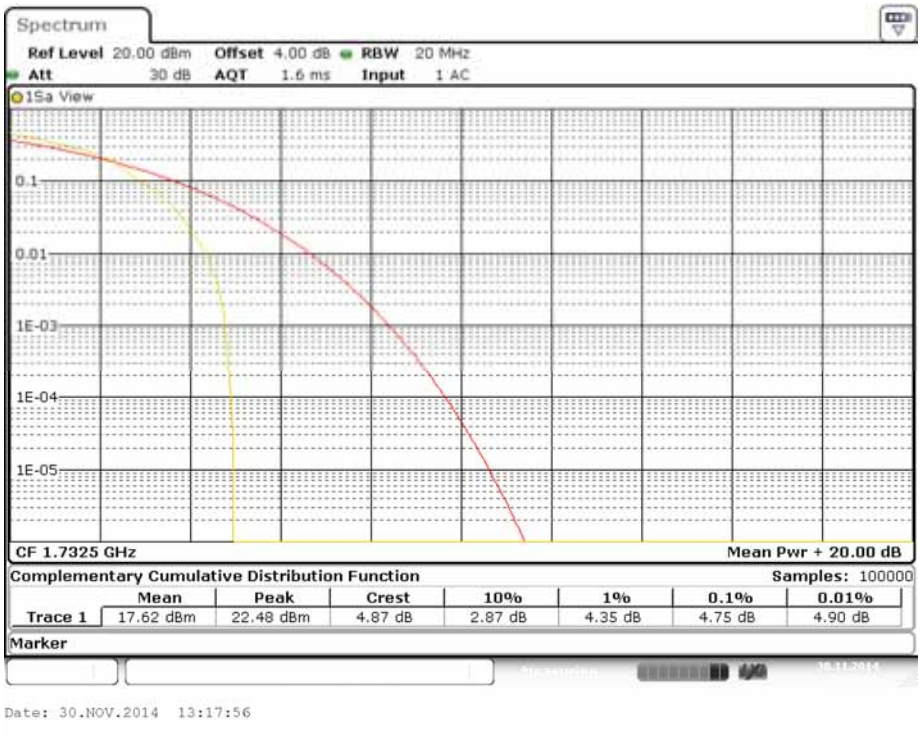
Frequency (MHz)	Receiver Reading (dBμV)	Turn table Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	FCC Part 27
			Height (m)	Polar (H/V)	SG Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)		Limit (dBm)
Middle Channel									
1732.5	86.6	17	2.0	H	15.5	0.97	9.40	23.93	30
1732.5	85.2	93	2.1	V	14.3	0.97	9.40	22.73	30

Modulation	Low Channel (dB)	Middle Channel (dB)	High Channel (dB)	Limit (dB)	Result
16QAM (1RB Size)	5.45	4.75	3.91	≦ 13	PASS
16QAM (100RB Size)	5.91	5.42	5.71	≦ 13	PASS

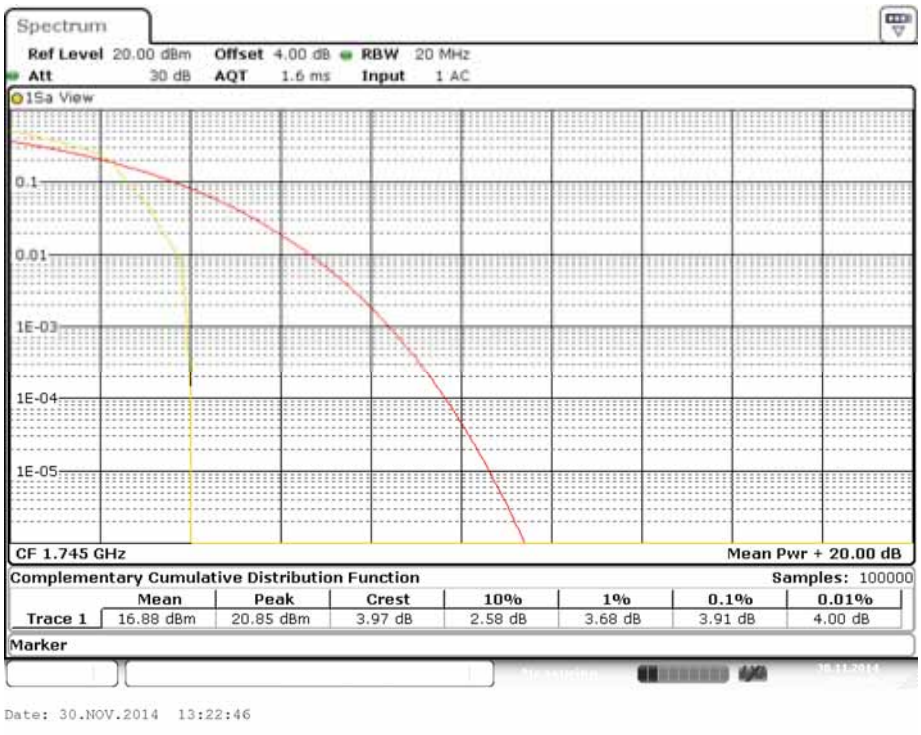
20.0 MHz PAR– Low Channel (16QAM, 1RB Size)



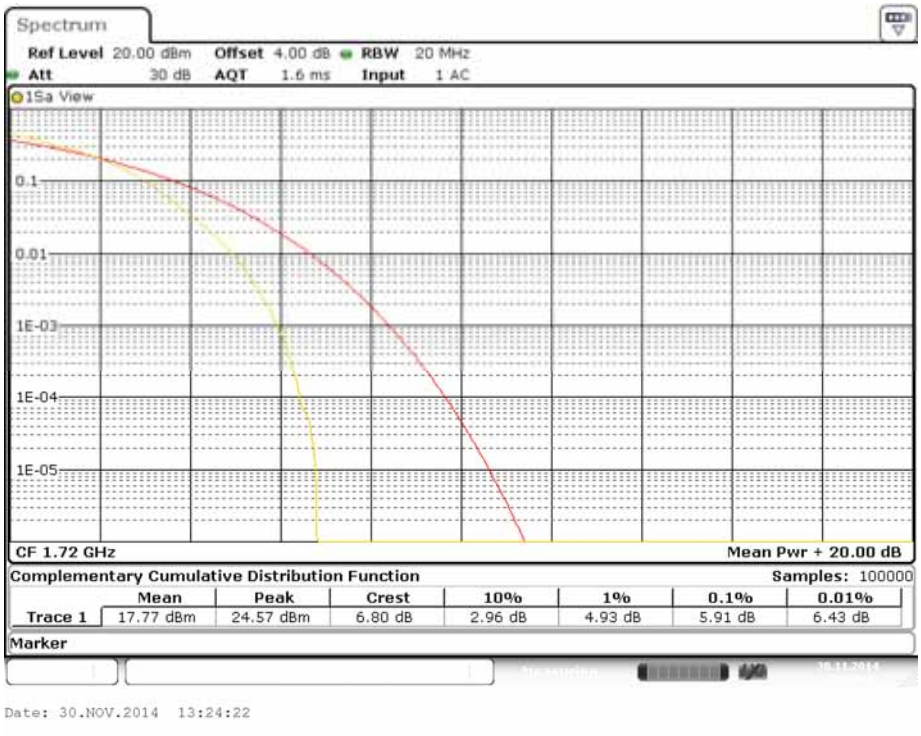
20.0 MHz PAR– Middle Channel (16QAM, 1RB Size)



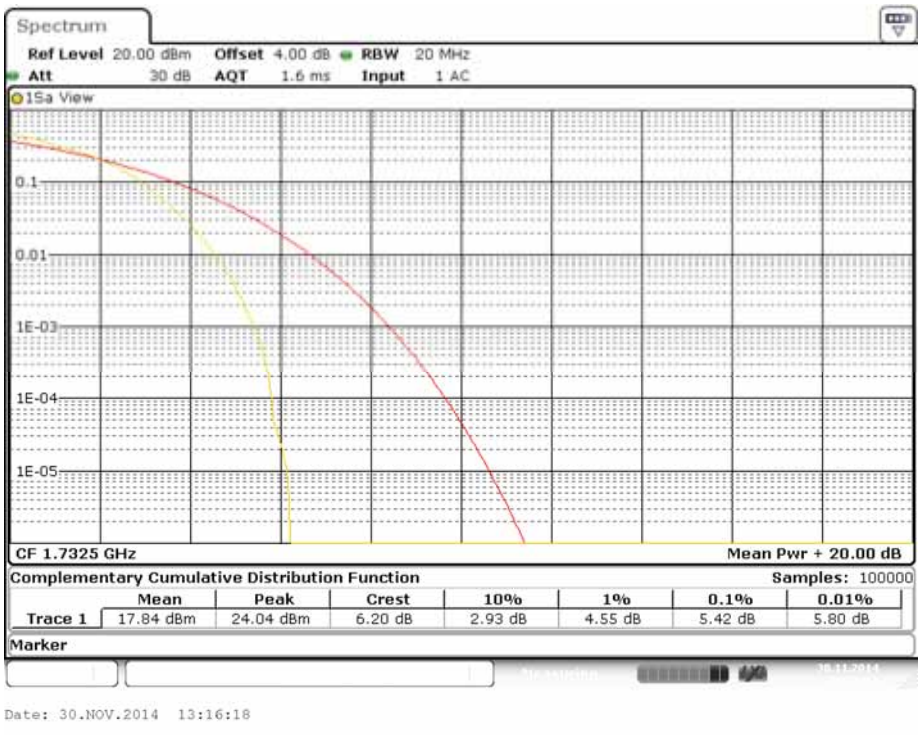
20.0 MHz PAR– High Channel (16QAM, 100RB Size)



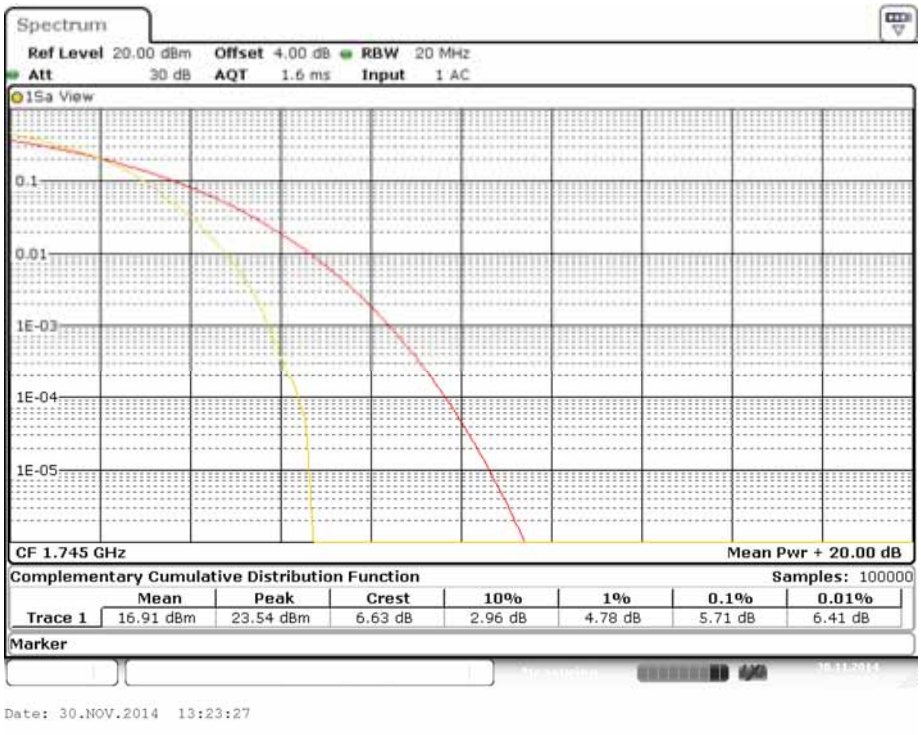
20.0 MHz PAR– Low Channel (16QAM, 100RB Size)



20.0 MHz PAR– Middle Channel (16QAM, 100RB Size)



20.0 MHz PAR– High Channel (16QAM, 100RB Size)



Band 7:

Maximum Output Power

Bandwidth (MHz)	Modulation	RB size/RB Offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5.0M	QPSK	RB Size=1, RB Offset=0	22.92	23.07	22.95
		RB Size=1, RB Offset=12	22.49	22.32	22.73
		RB Size=1, RB Offset=24	22.11	22.22	22.85
		RB Size=12, RB Offset=0	22.81	22.12	22.54
		RB Size=12, RB Offset=6	22.31	22.15	21.96
		RB Size=12, RB Offset=11	22.40	22.21	22.30
		RB Size=25, RB Offset=0	21.65	22.05	22.41
	16QAM	RB Size=1, RB Offset=0	21.76	21.97	21.82
		RB Size=1, RB Offset=12	21.50	21.52	21.26
		RB Size=1, RB Offset=24	21.40	21.39	21.51
		RB Size=12, RB Offset=0	21.32	21.43	20.83
		RB Size=12, RB Offset=6	20.64	20.62	20.94
		RB Size=12, RB Offset=11	21.01	20.53	20.82
		RB Size=25, RB Offset=0	20.83	20.84	20.96
10.0M	QPSK	RB Size=1, RB Offset=0	22.93	23.11	22.89
		RB Size=1, RB Offset=24	22.72	23.06	21.91
		RB Size=1, RB Offset=49	22.18	22.39	22.31
		RB Size=25, RB Offset=0	22.64	22.20	22.58
		RB Size=25, RB Offset=12	22.50	23.05	21.70
		RB Size=25, RB Offset=24	22.66	22.68	21.33
		RB Size=50, RB Offset=0	22.30	22.36	21.00
	16QAM	RB Size=1, RB Offset=0	22.20	22.41	22.33
		RB Size=1, RB Offset=24	21.53	22.13	21.95
		RB Size=1, RB Offset=49	22.14	22.35	21.67
		RB Size=25, RB Offset=0	21.77	21.58	21.67
		RB Size=25, RB Offset=12	21.27	21.36	21.26
		RB Size=25, RB Offset=24	21.35	21.89	21.83
		RB Size=50, RB Offset=0	20.75	21.23	21.28

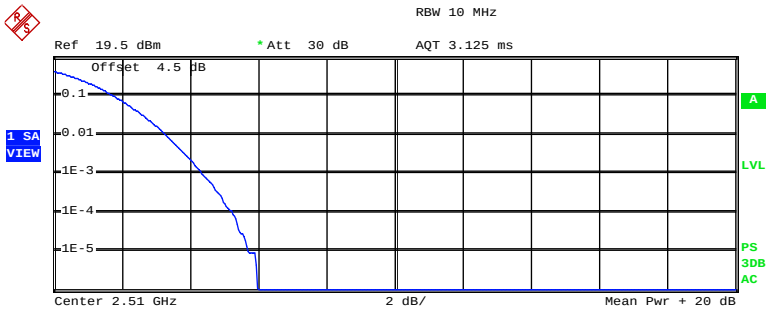
Bandwidth (MHz)	Modulation	RB size/RB Offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
15.0M	QPSK	RB Size=1, RB Offset=0	22.98	23.15	23.06
		RB Size=1, RB Offset=37	22.48	22.85	22.50
		RB Size=1, RB Offset=74	22.58	22.19	22.95
		RB Size=36, RB Offset=0	22.34	22.32	22.18
		RB Size=36, RB Offset=18	22.11	22.71	21.61
		RB Size=36, RB Offset=37	22.02	22.54	22.02
		RB Size=75, RB Offset=0	22.18	22.54	21.81
	16QAM	RB Size=1, RB Offset=0	22.33	22.43	22.36
		RB Size=1, RB Offset=37	21.83	21.48	21.90
		RB Size=1, RB Offset=74	21.83	22.31	22.20
		RB Size=36, RB Offset=0	22.10	22.13	22.14
		RB Size=36, RB Offset=18	21.36	20.85	21.22
		RB Size=36, RB Offset=37	21.61	21.44	21.17
		RB Size=75, RB Offset=0	21.32	20.58	21.28
20.0M	QPSK	RB Size=1, RB Offset=0	23.07	23.17	23.11
		RB Size=1, RB Offset=49	23.01	22.71	22.44
		RB Size=1, RB Offset=99	22.87	22.40	22.83
		RB Size=50, RB Offset=0	22.76	22.74	22.31
		RB Size=50, RB Offset=24	22.91	22.69	21.74
		RB Size=50, RB Offset=49	22.29	22.04	21.62
		RB Size=100, RB Offset=0	22.68	21.89	21.60
	16QAM	RB Size=1, RB Offset=0	22.26	22.33	22.24
		RB Size=1, RB Offset=49	22.05	22.09	21.26
		RB Size=1, RB Offset=99	21.66	21.43	21.27
		RB Size=50, RB Offset=0	21.99	21.98	21.61
		RB Size=50, RB Offset=24	21.36	22.05	20.39
		RB Size=50, RB Offset=49	21.32	22.04	20.45
		RB Size=100, RB Offset=0	21.24	22.05	20.68

Radiated Power:

Frequency (MHz)	Receiver Reading (dBμV)	Turn table Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	FCC Part 27
			Height (m)	Polar (H/V)	SG Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)		Limit (dBm)
Middle Channel									
2535.00	86.51	17	2.0	H	14.5	1.46	10.70	23.74	33
2535.00	85.39	93	2.1	V	14.2	1.46	10.70	23.44	33

Modulation	Low Channel (dB)	Middle Channel (dB)	High Channel (dB)	Limit (dB)	Result
16QAM (1RB Size)	4.36	4.44	4.64	≦ 13	PASS
16QAM (100RB Size)	7.04	7.04	7.08	≦ 13	PASS

20.0 MHZ PAR– Low Channel (16QAM, 1RB Size)

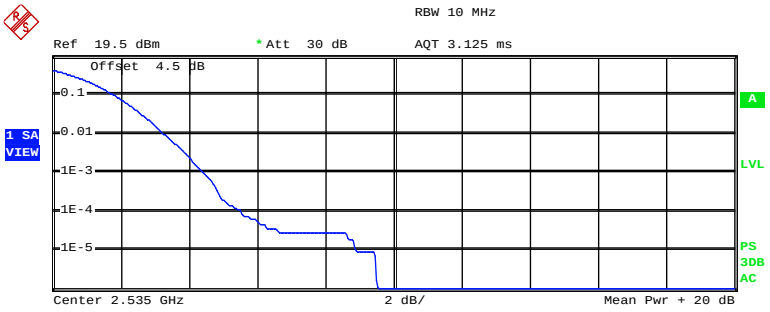


Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	-25.98 dBm
Peak	-20.00 dBm
Crest	5.98 dB
10 %	1.80 dB
1 %	3.32 dB
.1 %	4.36 dB
.01 %	5.28 dB

Date: 3.DEC.2014 08:58:41

20.0 MHz PAR– Middle Channel (16QAM, 1RB Size)

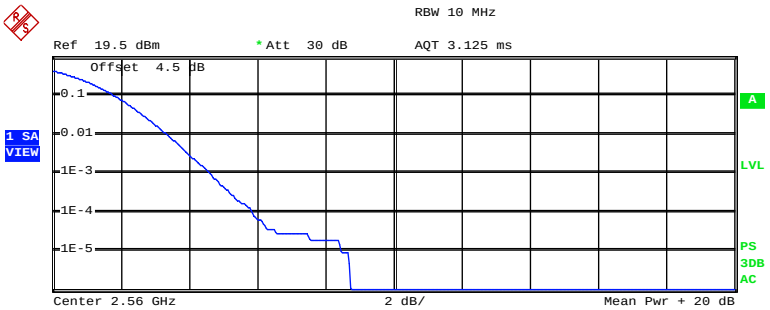


Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	-25.42 dBm
Peak	-15.91 dBm
Crest	9.51 dB
10 %	1.84 dB
1 %	3.28 dB
.1 %	4.44 dB
.01 %	5.52 dB

Date: 3.DEC.2014 08:59:14

20.0 MHz PAR– High Channel (16QAM, 100RB Size)

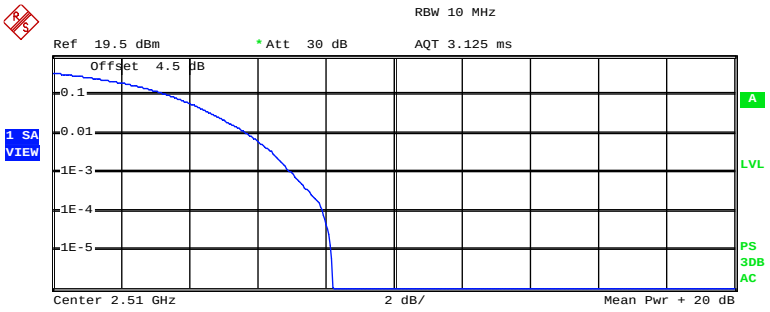


Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	-26.06 dBm
Peak	-17.32 dBm
Crest	8.74 dB
10 %	1.84 dB
1 %	3.36 dB
.1 %	4.64 dB
.01 %	5.88 dB

Date: 3.DEC.2014 08:57:45

20.0 MHz PAR– Low Channel (16QAM, 100RB Size)

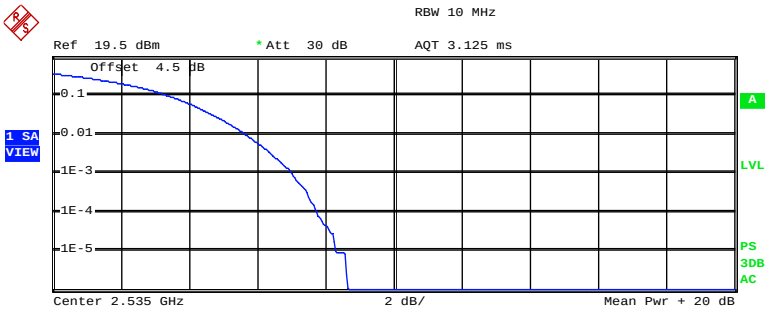


Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	12.34 dBm
Peak	20.57 dBm
Crest	8.23 dB
10 %	3.48 dB
1 %	5.76 dB
.1 %	7.04 dB
.01 %	7.92 dB

Date: 3.DEC.2014 08:56:07

20.0 MHz PAR– Middle Channel (16QAM, 100RB Size)

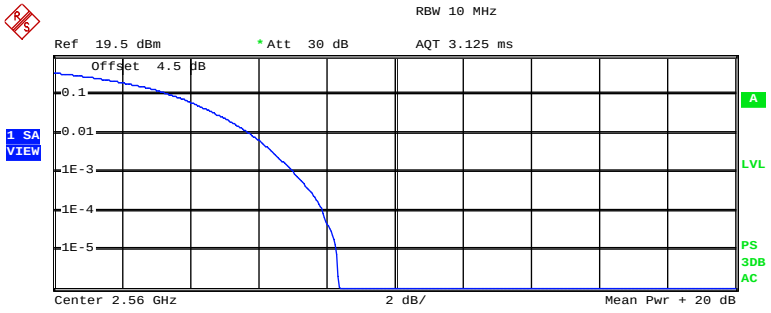


Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	13.83 dBm
Peak	22.47 dBm
Crest	8.64 dB
10 %	3.48 dB
1 %	5.68 dB
.1 %	7.04 dB
.01 %	7.76 dB

Date: 3.DEC.2014 08:53:40

20.0 MHz PAR – High Channel (16QAM, 100RB Size)



Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	12.63 dBm
Peak	20.99 dBm
Crest	8.36 dB
10 %	3.52 dB
1 %	5.76 dB
.1 %	7.08 dB
.01 %	7.92 dB

Date: 3.DEC.2014 08:57:03

Band 17:

Maximum Output Power

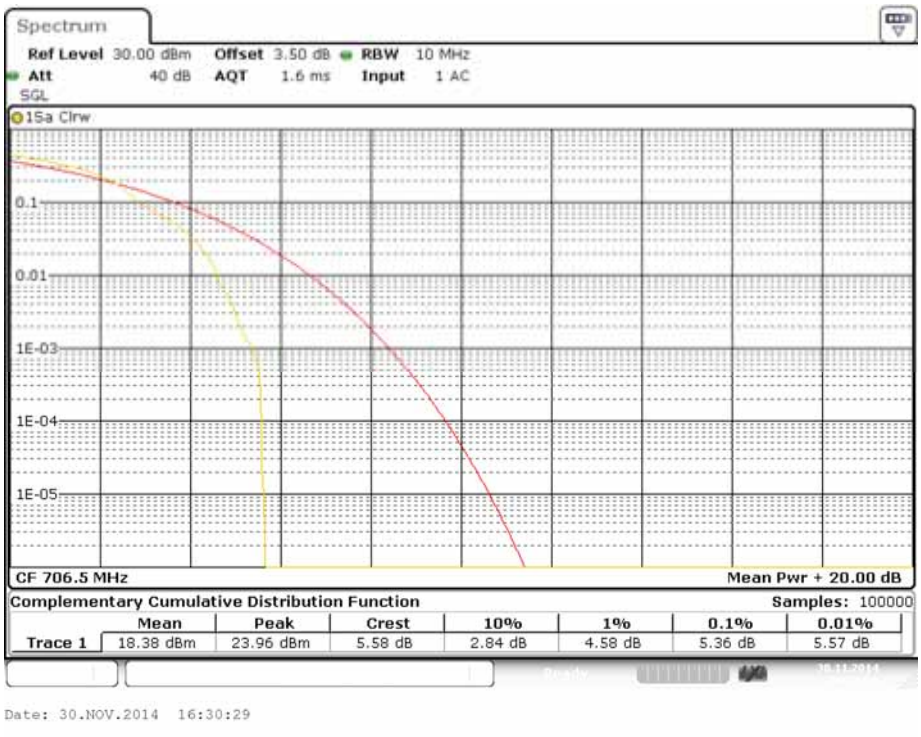
Bandwidth (MHz)	Modulation	RB size/RB Offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5.0M	QPSK	RB Size=1, RB Offset=0	23.31	23.46	23.41
		RB Size=1, RB Offset=12	23.08	22.53	22.60
		RB Size=1, RB Offset=24	22.94	22.48	22.67
		RB Size=12, RB Offset=0	22.74	23.41	22.79
		RB Size=12, RB Offset=6	22.85	21.85	21.78
		RB Size=12, RB Offset=11	22.33	22.39	21.96
		RB Size=25, RB Offset=0	22.92	22.48	22.07
	16QAM	RB Size=1, RB Offset=0	22.56	22.64	22.54
		RB Size=1, RB Offset=12	22.40	22.01	21.58
		RB Size=1, RB Offset=24	22.07	22.23	21.88
		RB Size=12, RB Offset=0	22.34	22.28	22.06
		RB Size=12, RB Offset=6	21.45	21.45	21.15
		RB Size=12, RB Offset=11	21.47	21.84	21.44
		RB Size=25, RB Offset=0	21.72	21.97	20.85
10.0M	QPSK	RB Size=1, RB Offset=0	23.48	23.56	23.42
		RB Size=1, RB Offset=24	22.72	23.18	22.75
		RB Size=1, RB Offset=49	22.93	22.83	23.25
		RB Size=25, RB Offset=0	23.11	22.96	22.49
		RB Size=25, RB Offset=12	22.36	22.58	22.16
		RB Size=25, RB Offset=24	21.98	22.69	22.27
		RB Size=50, RB Offset=0	22.22	22.44	21.80
	16QAM	RB Size=1, RB Offset=0	22.53	22.64	22.57
		RB Size=1, RB Offset=24	21.99	21.88	22.52
		RB Size=1, RB Offset=49	21.64	21.78	21.88
		RB Size=25, RB Offset=0	21.96	21.65	22.35
		RB Size=25, RB Offset=12	21.62	21.27	21.70
		RB Size=25, RB Offset=24	21.82	21.41	22.24
		RB Size=50, RB Offset=0	21.16	21.32	21.58

Radiated Power:

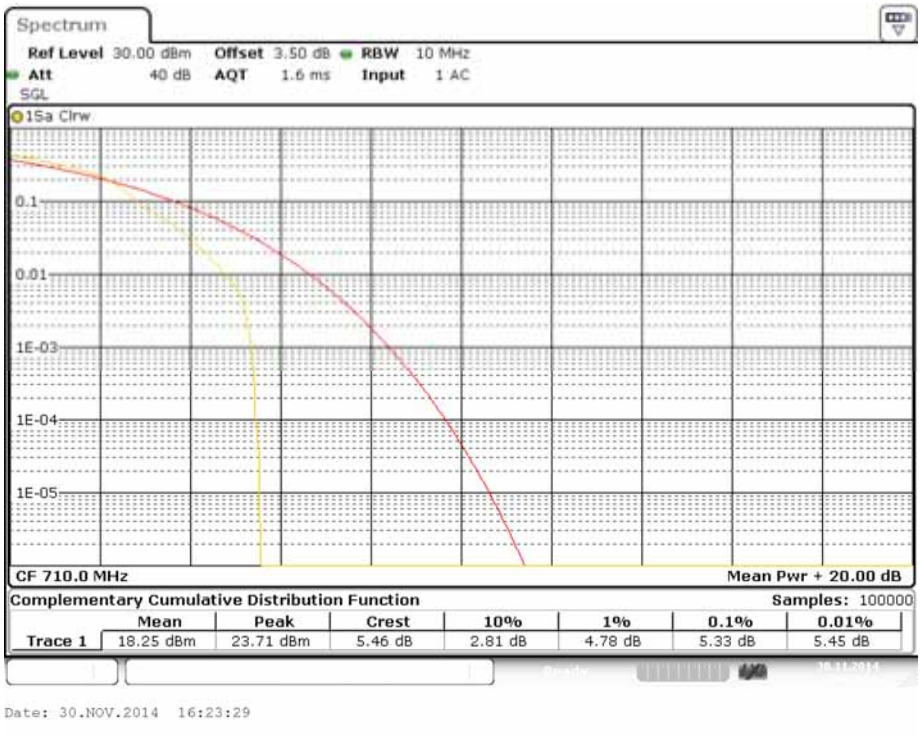
Frequency (MHz)	Receiver Reading (dBμV)	Turn table Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	FCC Part 27
			Height (m)	Polar (H/V)	SG Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)		Limit (dBm)
Middle Channel									
710.00	91.25	110	1.4	H	20.84	0.62	0.0	20.22	38.45
710.00	90.78	205	1.2	V	20.27	0.62	0.0	19.65	38.45

Modulation	Low Channel (dB)	Middle Channel (dB)	High Channel (dB)	Limit (dB)	Result
16QAM (1RB Size)	5.36	5.33	6.49	≦ 13	PASS
16QAM (50RB Size)	6.43	6.46	6.46	≦ 13	PASS

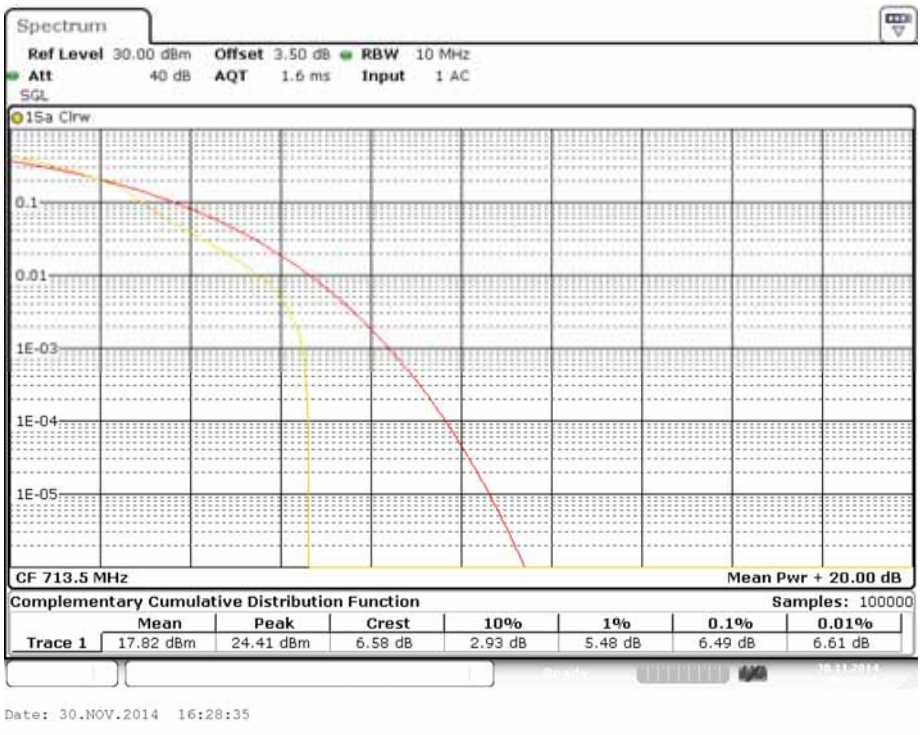
20.0 MHz PAR– Low Channel (16QAM, 1RB Size)



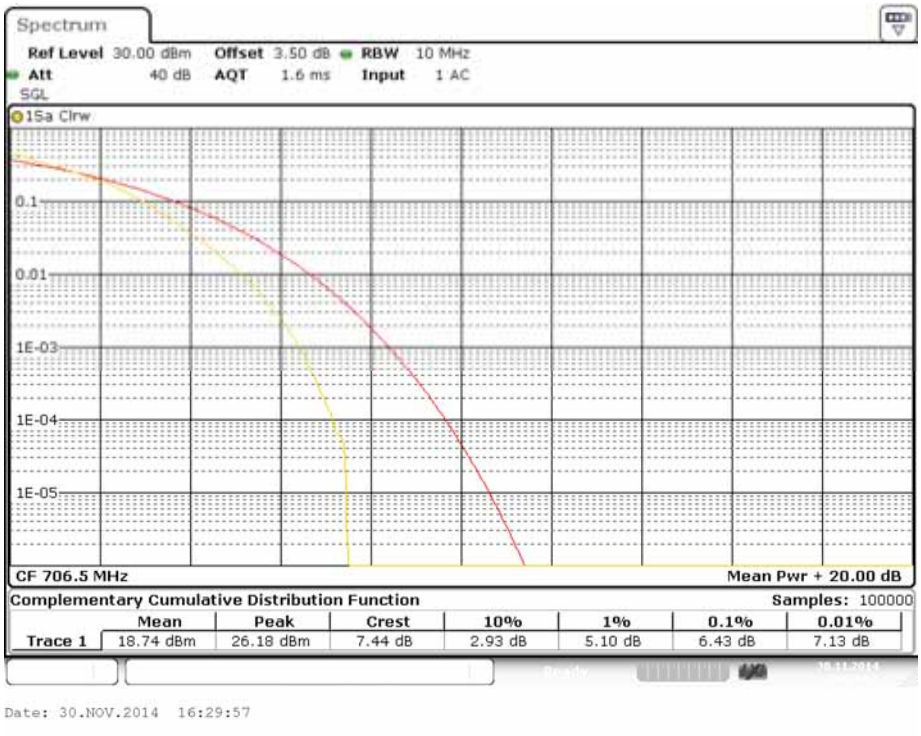
20.0 MHz PAR– Middle Channel (16QAM, 1RB Size)



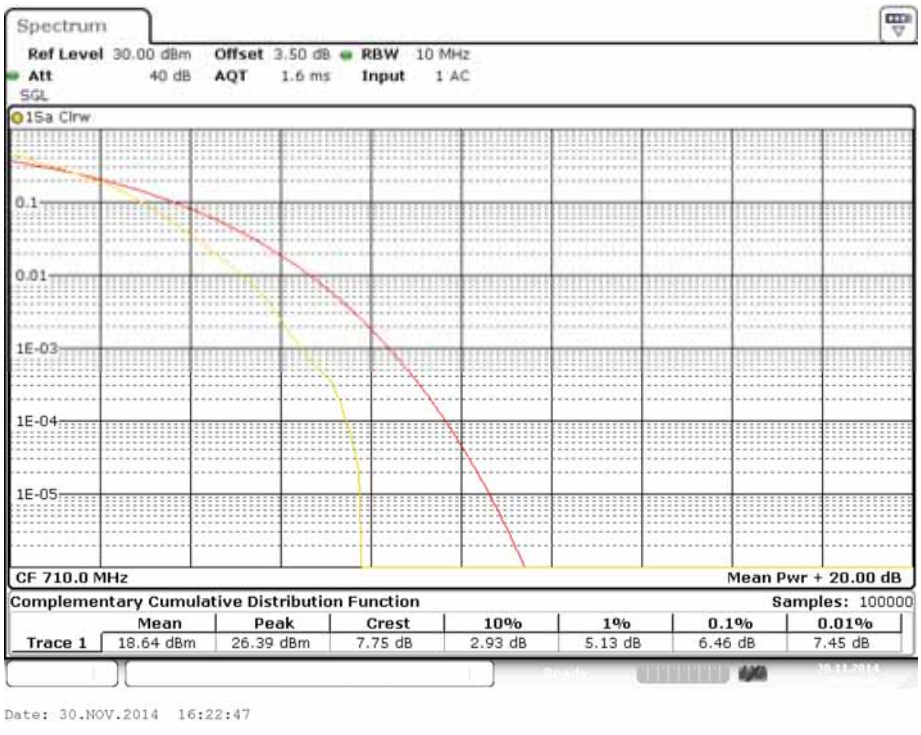
20.0 MHz PAR– High Channel (16QAM, 1RB Size)



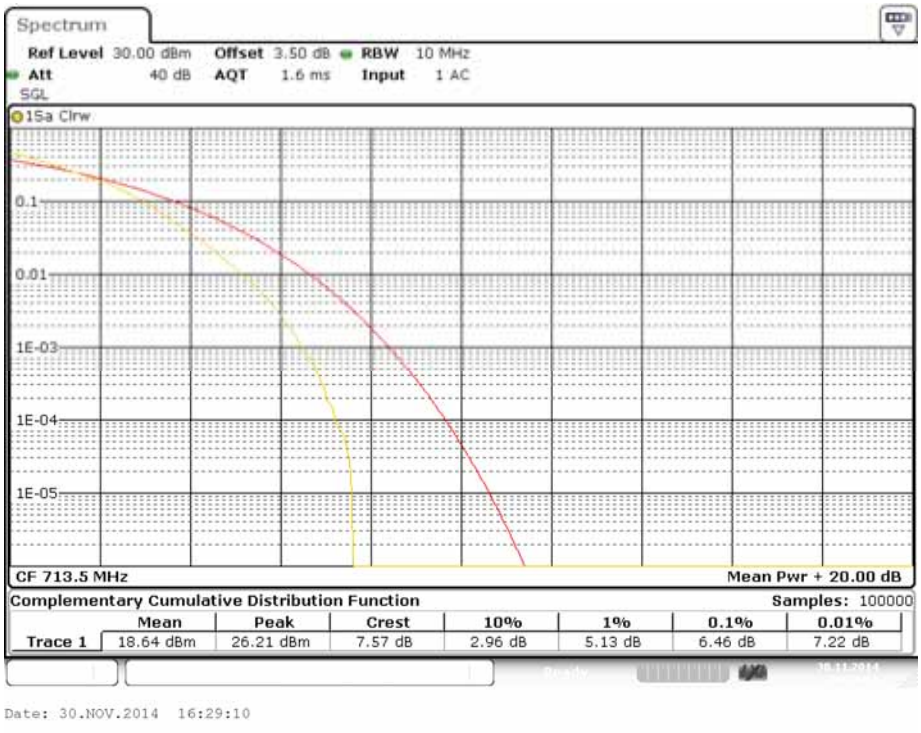
20.0 MHz PAR– Low Channel (16QAM, 50RB Size)



20.0 MHz PAR– Middle Channel (16QAM, 50RB Size)



20.0 MHz PAR– High Channel (16QAM, 50RB Size)



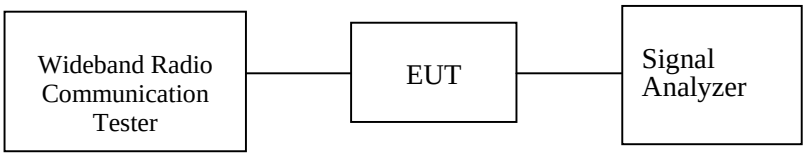
FCC §2.1049 & §27.53 - OCCUPIED BANDWIDTH

Applicable Standards

FCC 47 §2.1049 and §27.53.

Test Procedure

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



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	EMI Test Receiver	ESCI	101120	2014-11-03	2015-11-03
Rohde & Schwarz	EMI Test Receiver	ESR	1316.3003K03-101746-zn	2014-06-13	2015-06-13

*** 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:	20~25 ℃
Relative Humidity:	50~56 %
ATM Pressure:	100.0~101.0 kPa

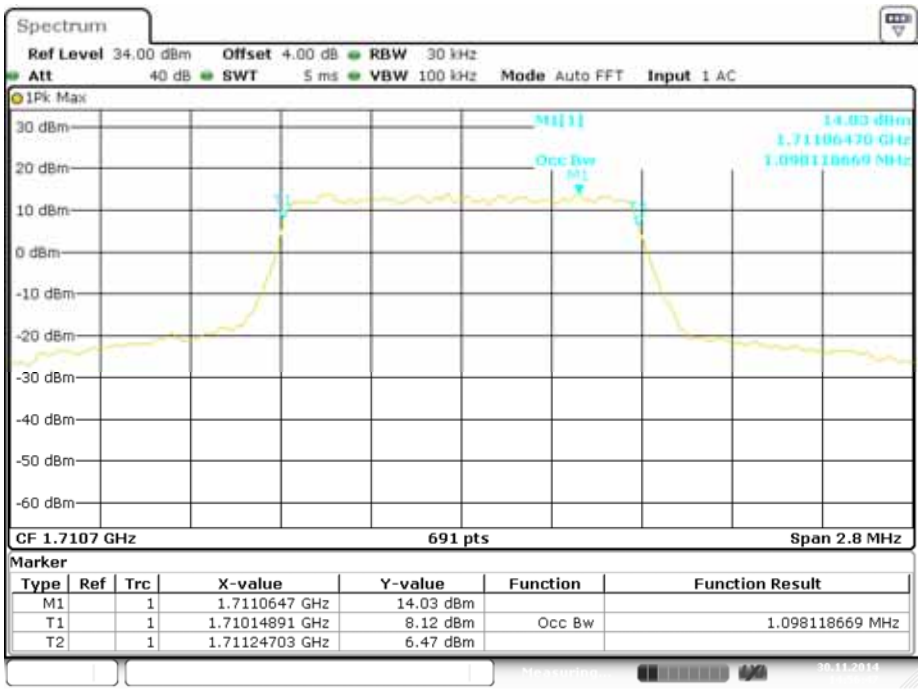
The testing was performed by William Li on 2014-11-30 to 2014-12-03.

Band 4:

99% Occupied Bandwidth		Low channel (MHz)	Middle channel (MHz)	High channel (MHz)
1.4 MHz	QPSK	1.10	1.10	1.10
	16QAM	1.10	1.10	1.09
3.0 MHz	QPSK	2.74	2.74	2.74
	16QAM	2.73	2.75	2.75
5.0 MHz	QPSK	4.53	4.53	4.53
	16QAM	4.53	4.53	4.53
10.0 MHz	QPSK	9.03	9.09	9.06
	16QAM	9.06	9.06	9.06
15.0 MHz	QPSK	13.46	13.50	13.55
	16QAM	13.50	13.55	13.55
20.0 MHz	QPSK	18.52	18.47	18.58
	16QAM	18.52	18.52	18.47

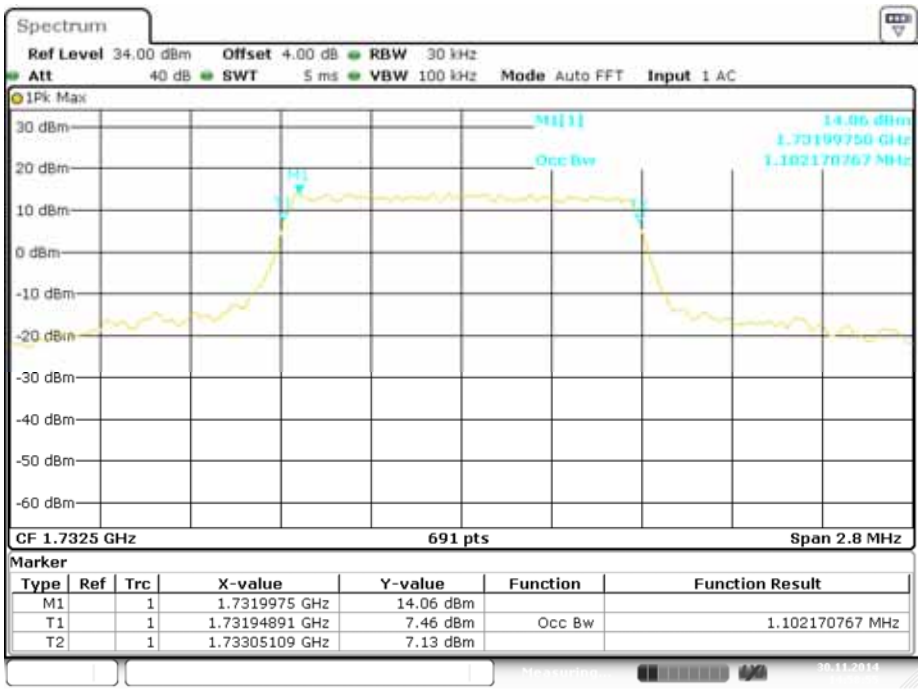
26 dB Emission Bandwidth		Low channel (MHz)	Middle channel (MHz)	High channel (MHz)
1.4 MHz	QPSK	1.28	1.32	1.27
	16QAM	1.26	1.30	1.28
3.0 MHz	QPSK	3.04	3.05	3.03
	16QAM	3.04	3.05	3.04
5.0 MHz	QPSK	5.05	5.11	5.11
	16QAM	5.09	5.11	5.08
10.0 MHz	QPSK	10.13	10.16	10.16
	16QAM	10.16	10.16	10.13
15.0 MHz	QPSK	14.98	14.98	14.94
	16QAM	14.94	14.85	14.94
20.0 MHz	QPSK	21.01	20.72	20.61
	16QAM	20.84	20.72	20.84

QPSK (1.4 MHz) - 99% Occupied Bandwidth, Low channel



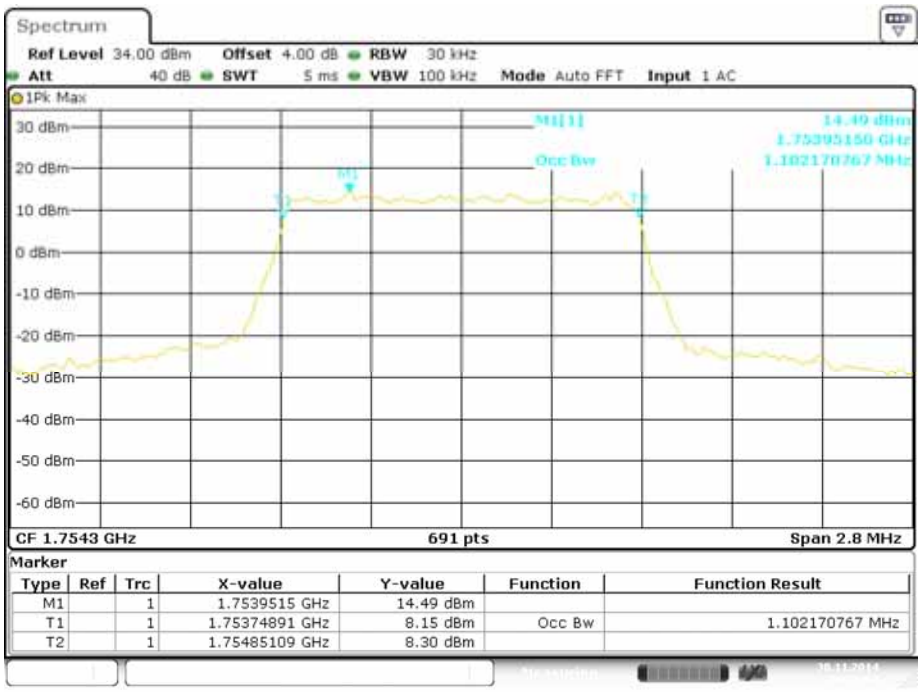
Date: 30.NOV.2014 14:56:47

QPSK (1.4 MHz) - 99% Occupied Bandwidth, Middle channel

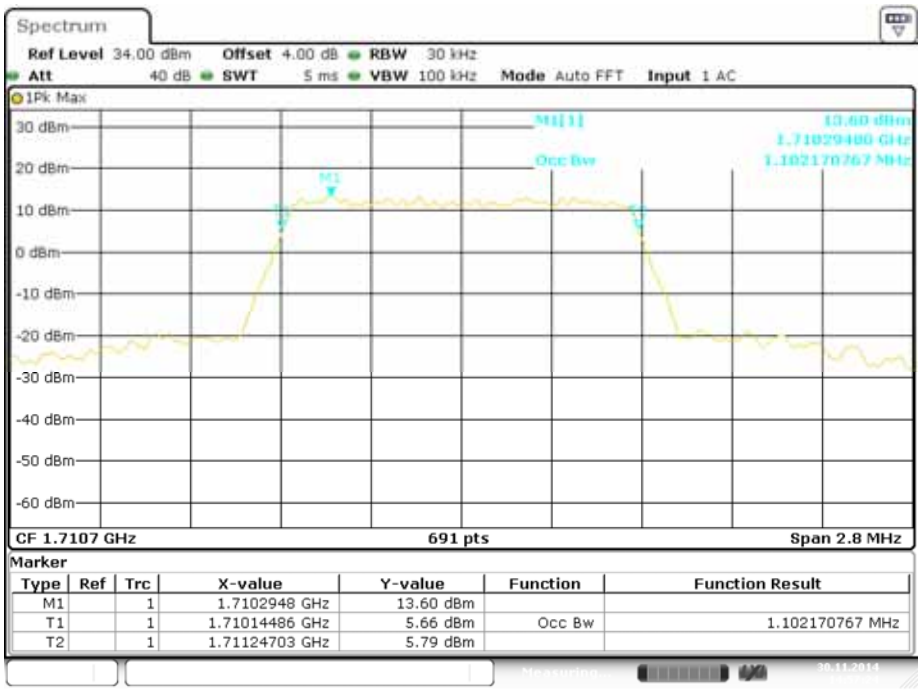


Date: 30.NOV.2014 14:58:55

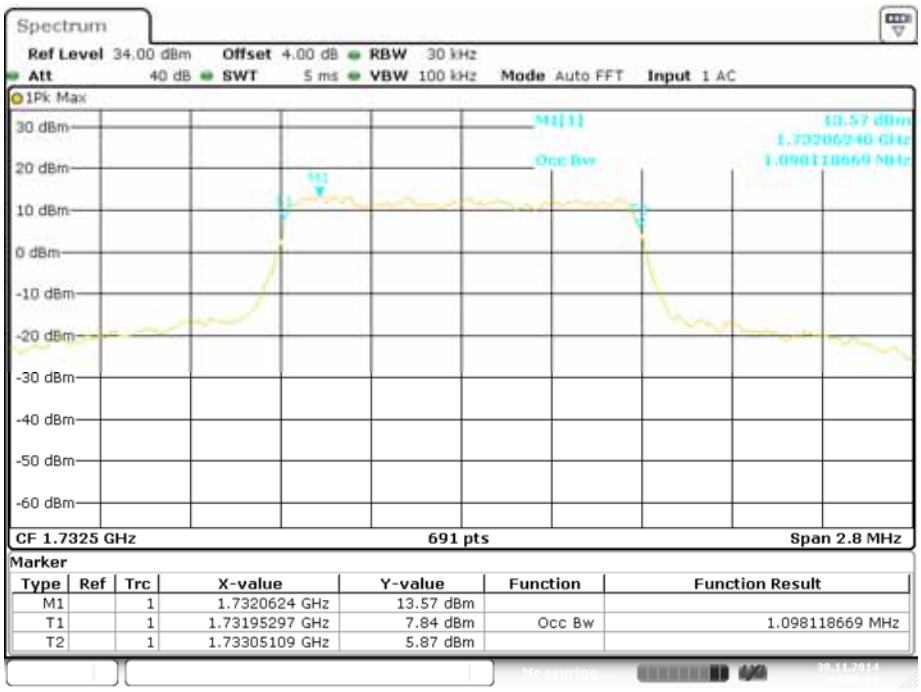
QPSK (1.4 MHz) - 99% Occupied Bandwidth, High channel



16-QAM (1.4 MHz) - 99% Occupied Bandwidth, Low channel

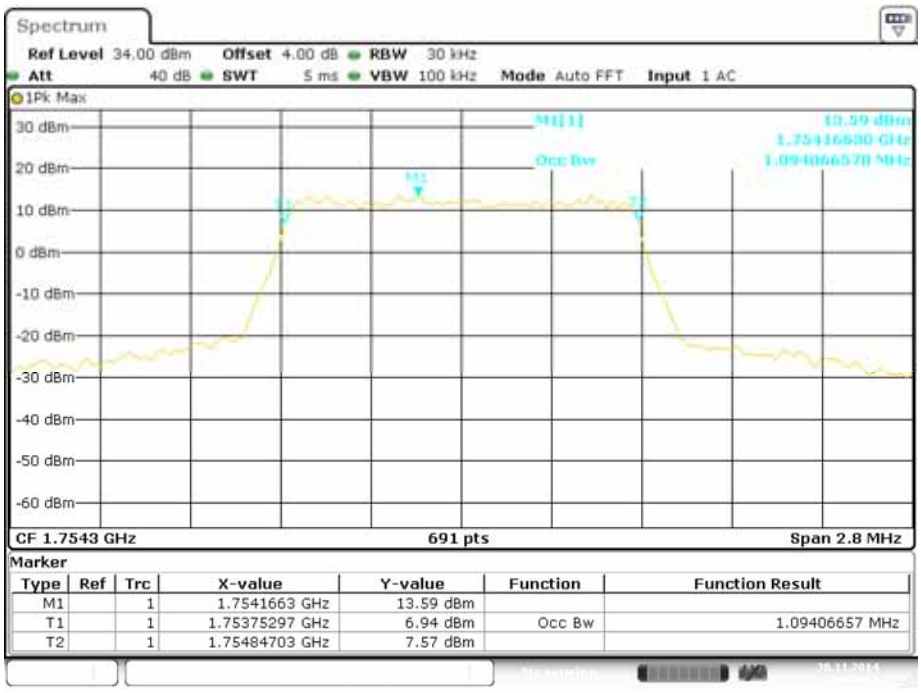


16-QAM (1.4 MHz) - 99% Occupied Bandwidth, Middle channel



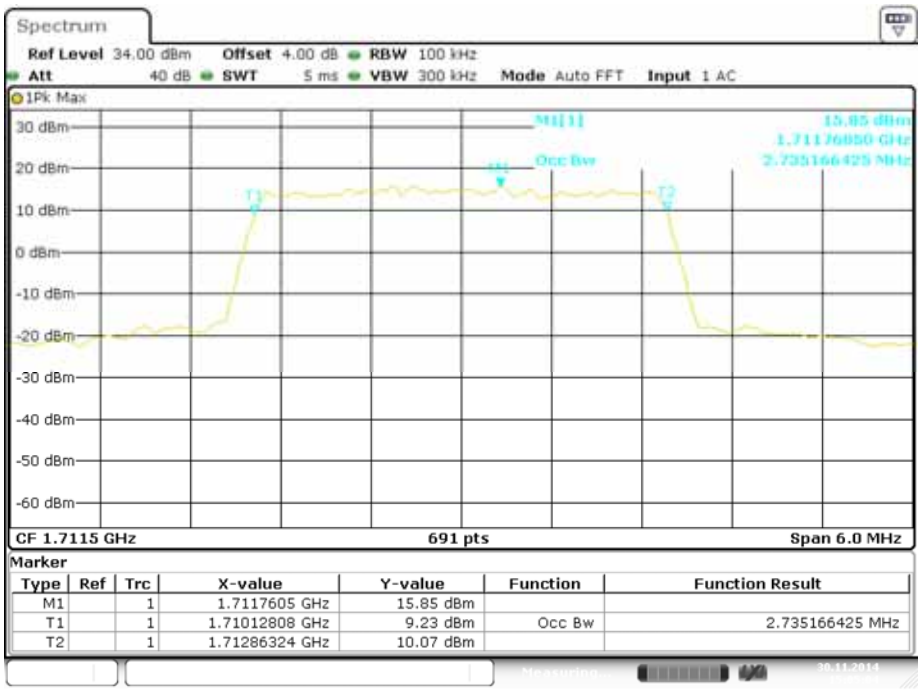
Date: 30.NOV.2014 14:58:13

16-QAM (1.4 MHz) - 99% Occupied Bandwidth, High channel



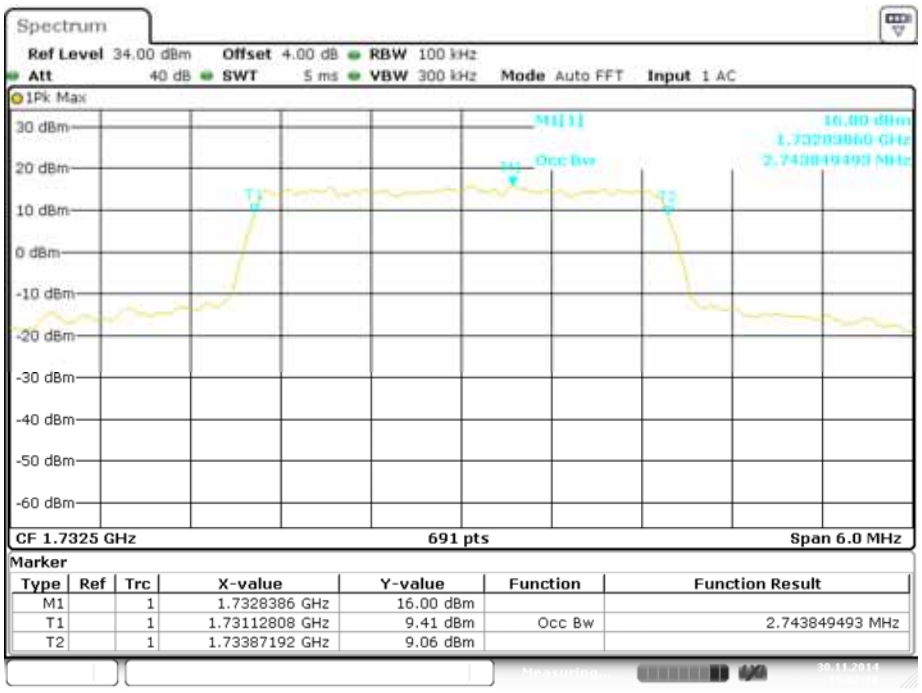
Date: 30.NOV.2014 14:49:18

QPSK (3.0 MHz) - 99% Occupied Bandwidth, Low channel



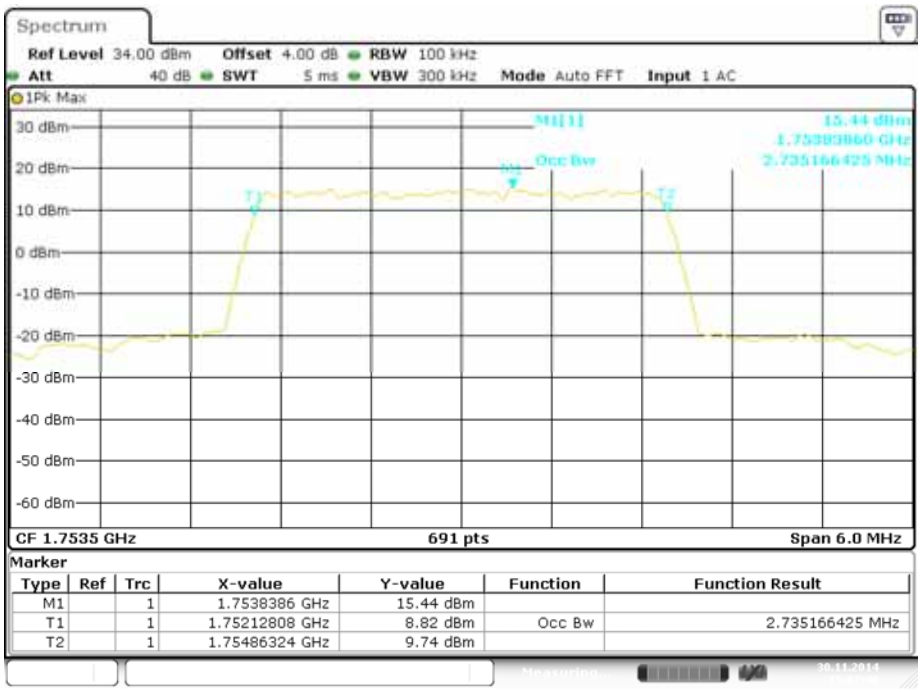
Date: 30.NOV.2014 15:05:04

QPSK (3.0 MHz) - 99% Occupied Bandwidth, Middle channel

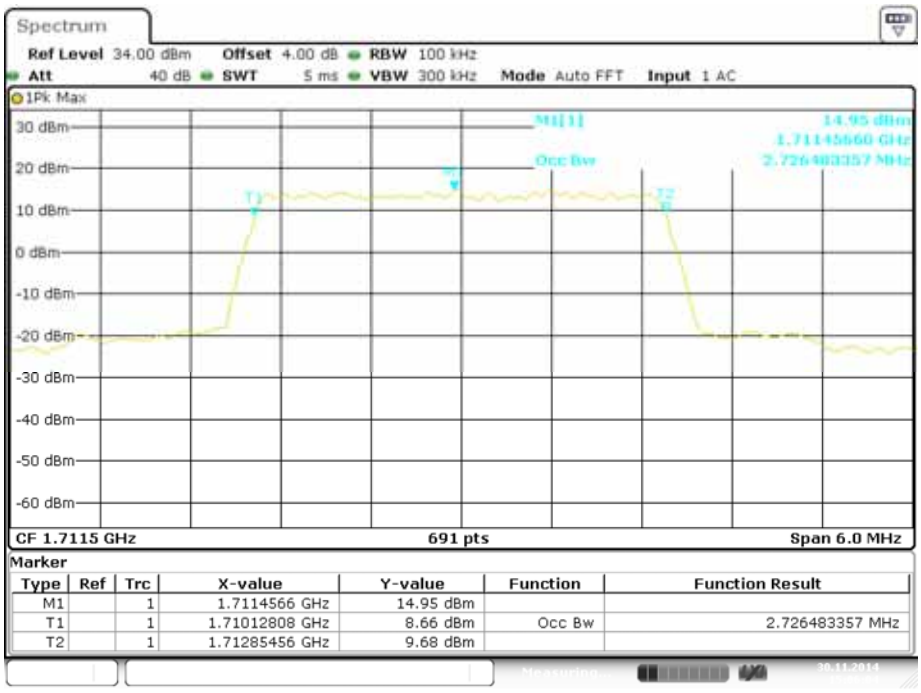


Date: 30.NOV.2014 15:02:16

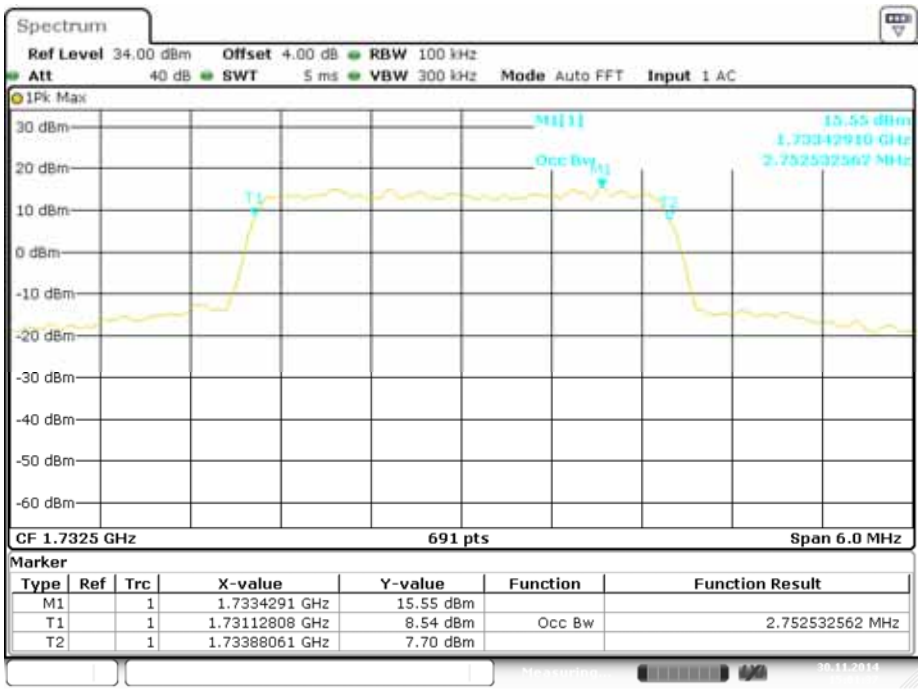
QPSK (3.0 MHz) - 99% Occupied Bandwidth, High channel



16-QAM (3.0 MHz) - 99% Occupied Bandwidth, Low channel

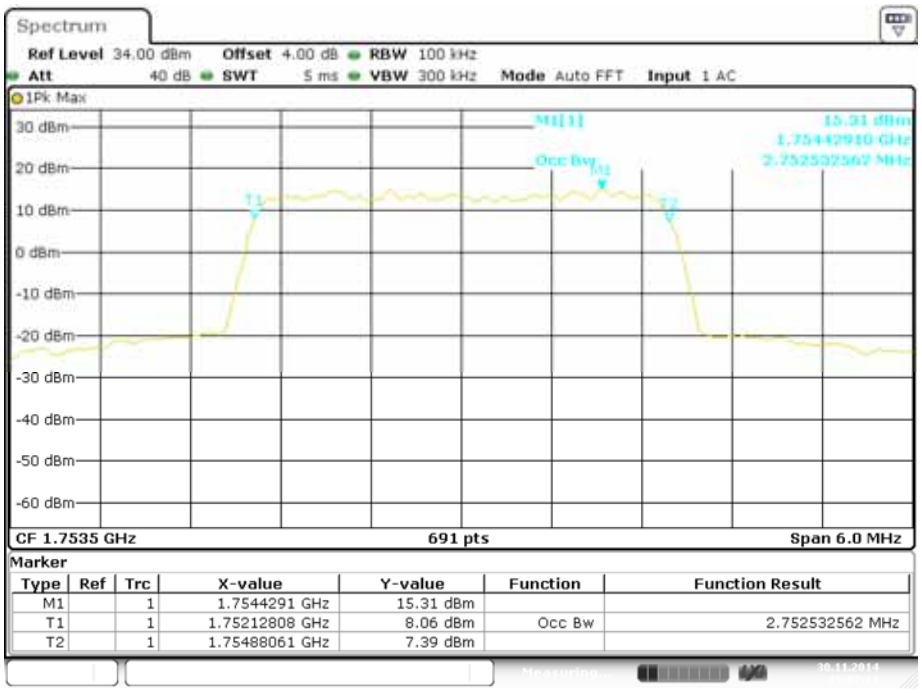


16-QAM (3.0 MHz) - 99% Occupied Bandwidth, Middle channel



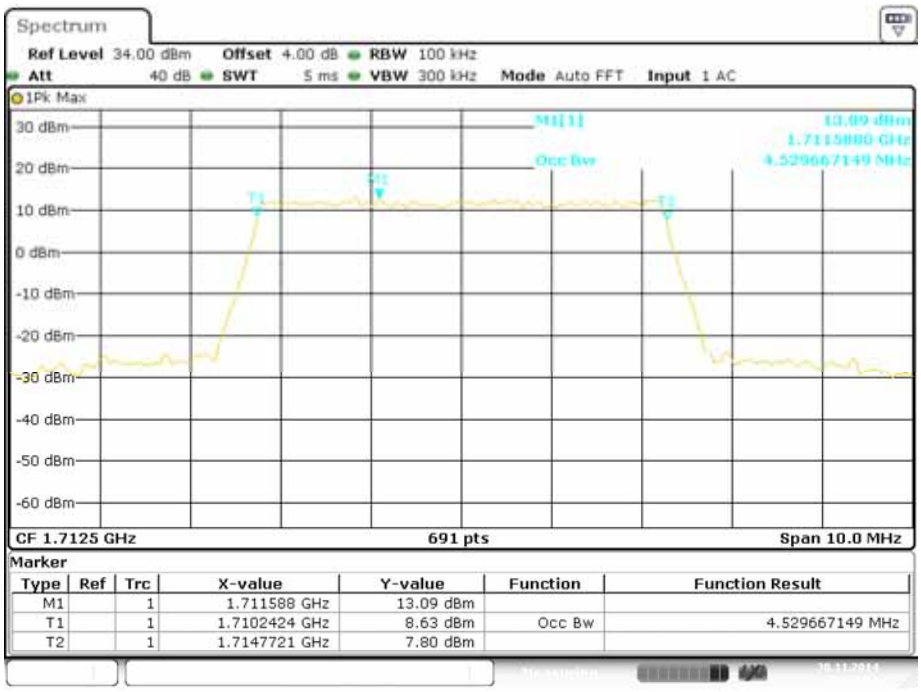
Date: 30.NOV.2014 15:01:37

16-QAM (3.0 MHz) - 99% Occupied Bandwidth, High channel

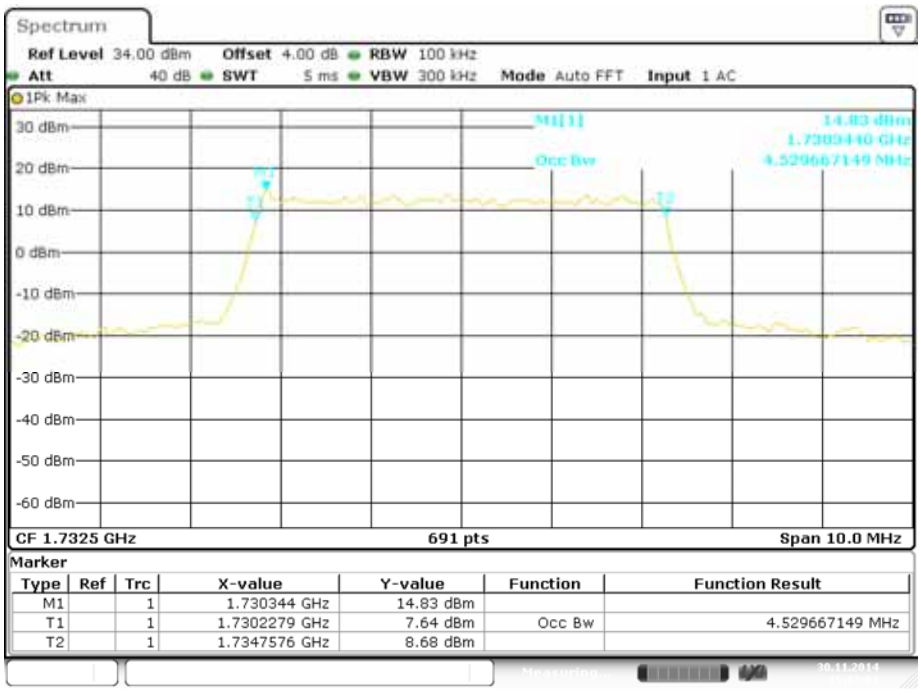


Date: 30.NOV.2014 15:07:11

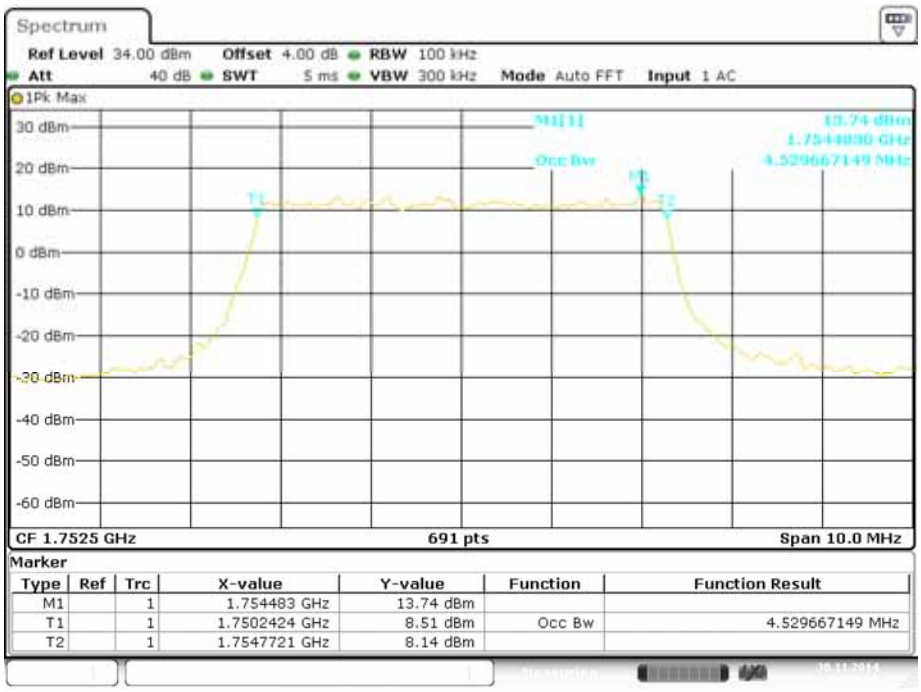
QPSK (5.0 MHz) - 99% Occupied Bandwidth, Low channel



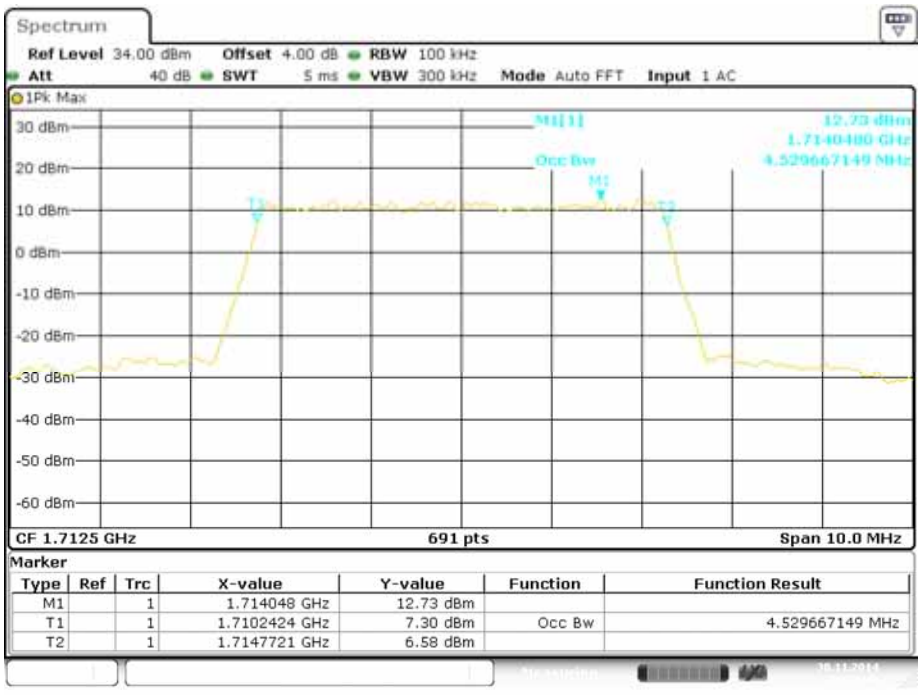
QPSK (5.0 MHz) - 99% Occupied Bandwidth, Middle channel



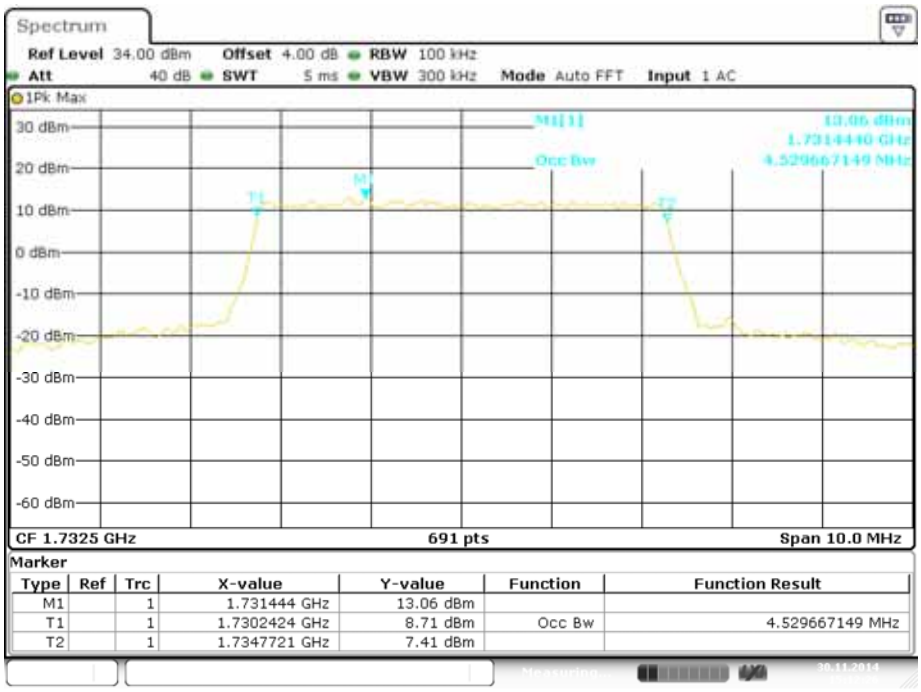
QPSK (5.0 MHz) - 99% Occupied Bandwidth, High channel



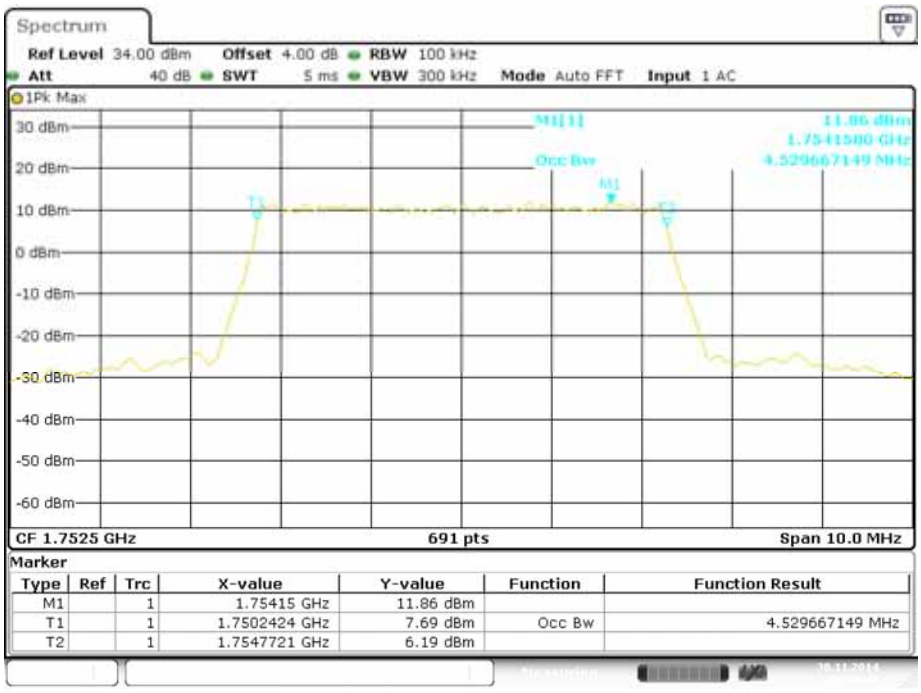
16-QAM (5.0 MHz) - 99% Occupied Bandwidth, Low channel



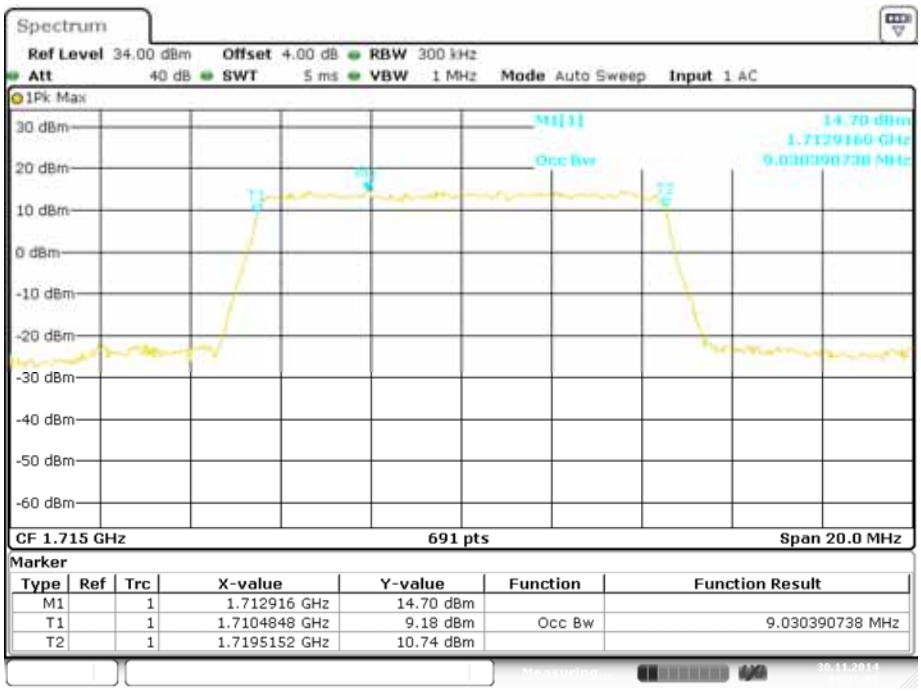
16-QAM (5.0 MHz) - 99% Occupied Bandwidth, Middle channel



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

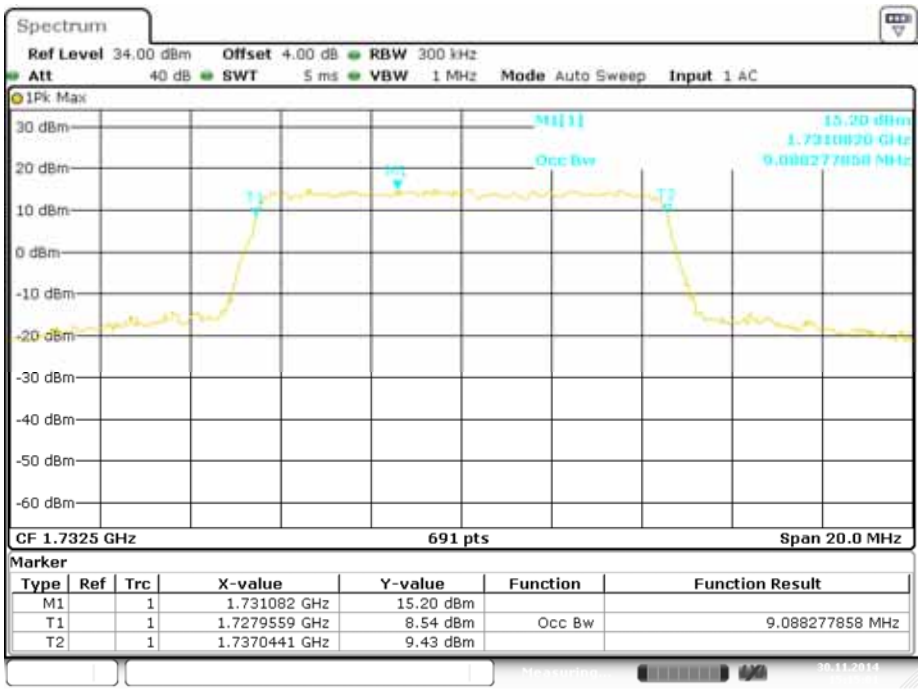


QPSK (10.0 MHz) - 99% Occupied Bandwidth, Low channel



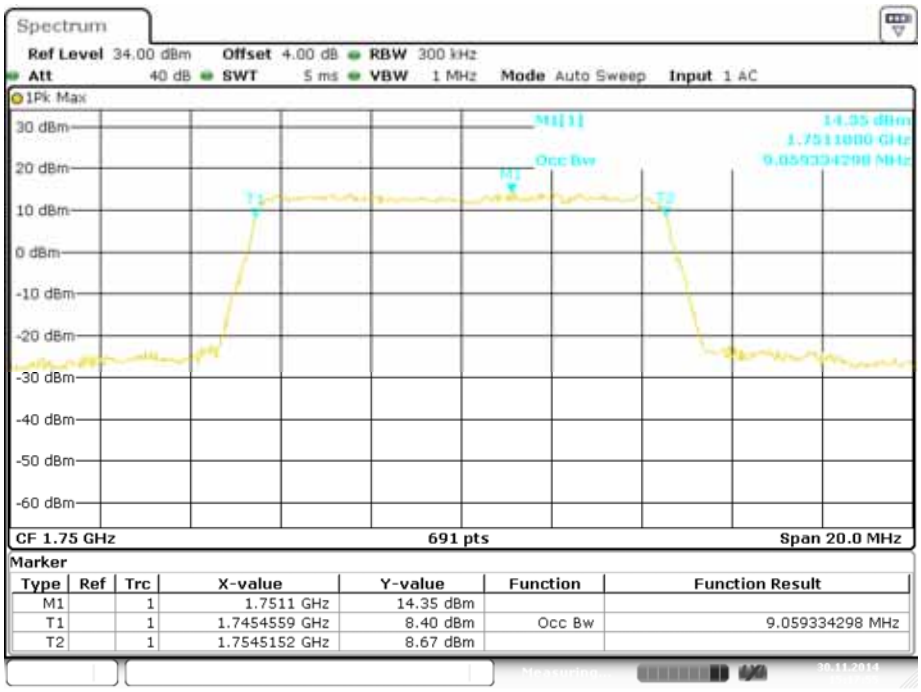
Date: 30.NOV.2014 15:15:55

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



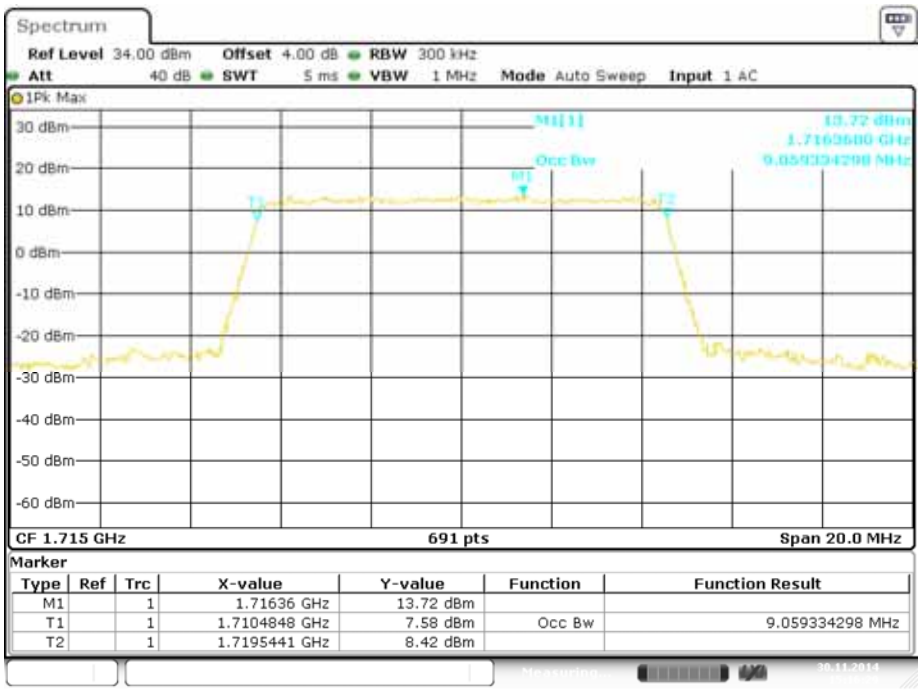
Date: 30.NOV.2014 15:15:01

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



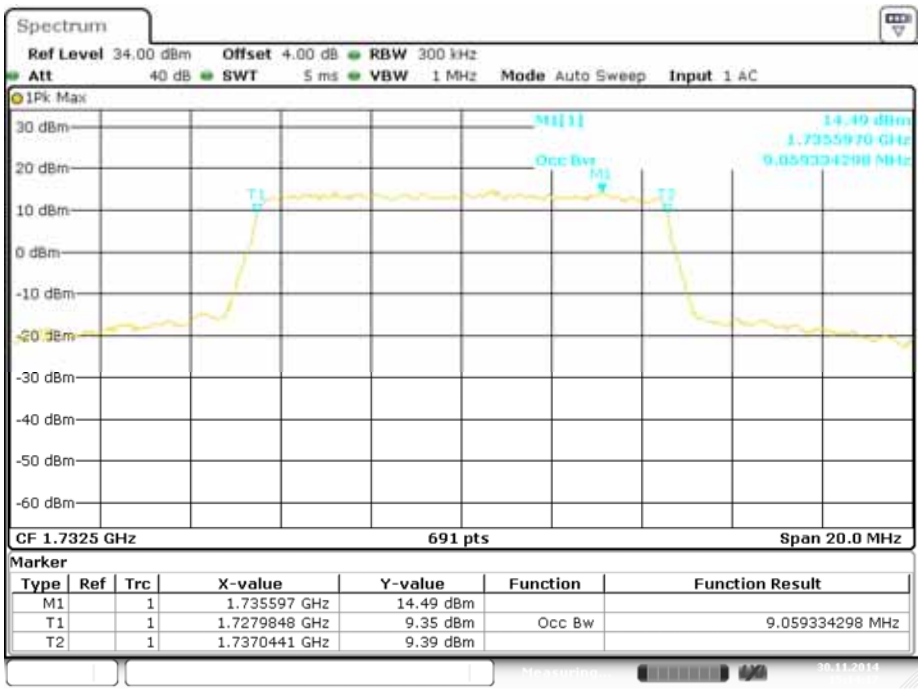
Date: 30.NOV.2014 15:17:55

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



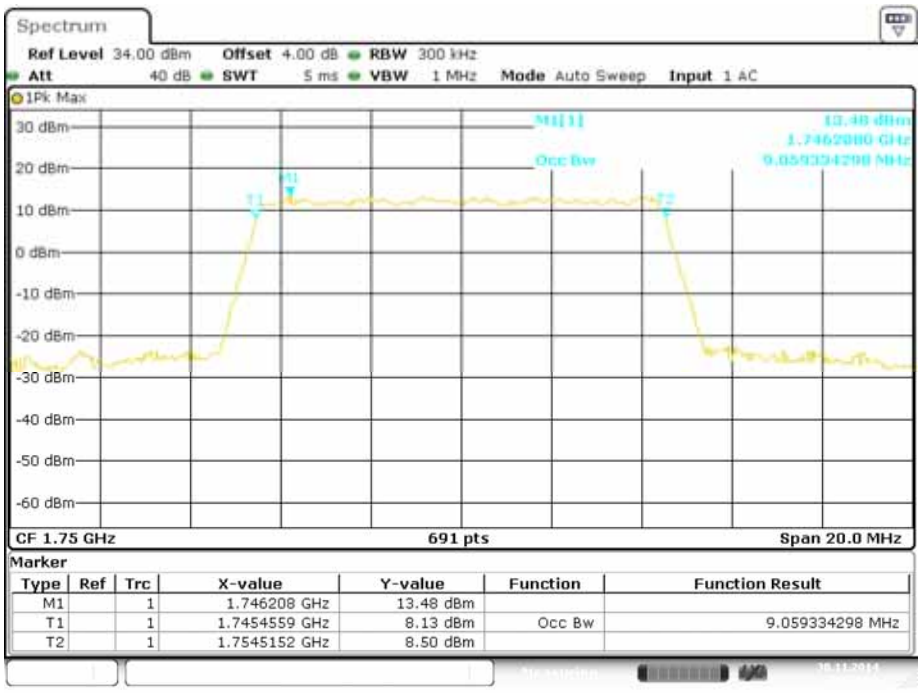
Date: 30.NOV.2014 15:16:29

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



Date: 30.NOV.2014 15:14:17

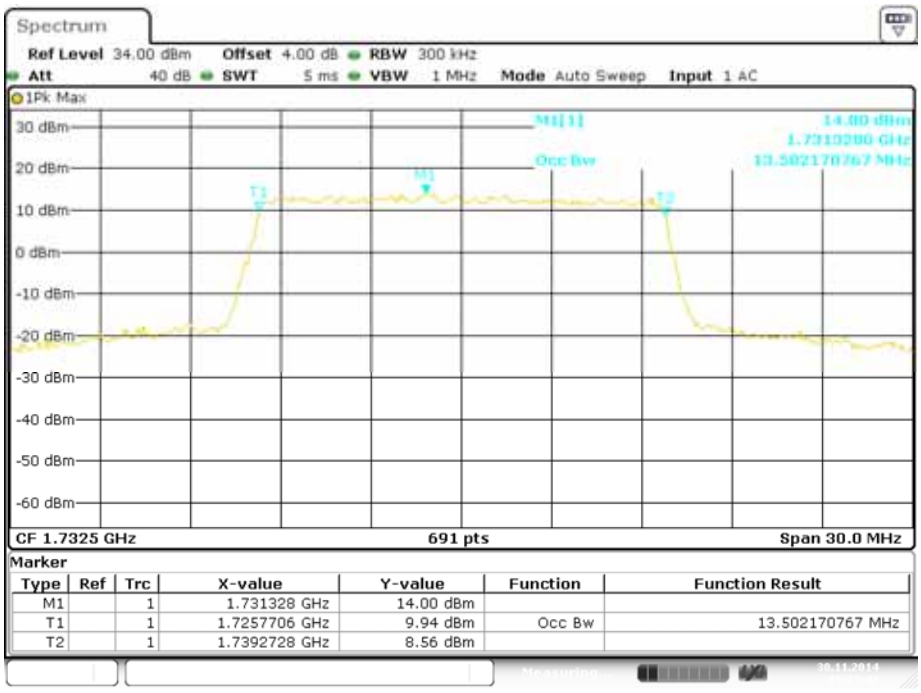
16-QAM (10.0 MHz) - 99% Occupied Bandwidth, High channel



Date: 30.NOV.2014 15:17:20

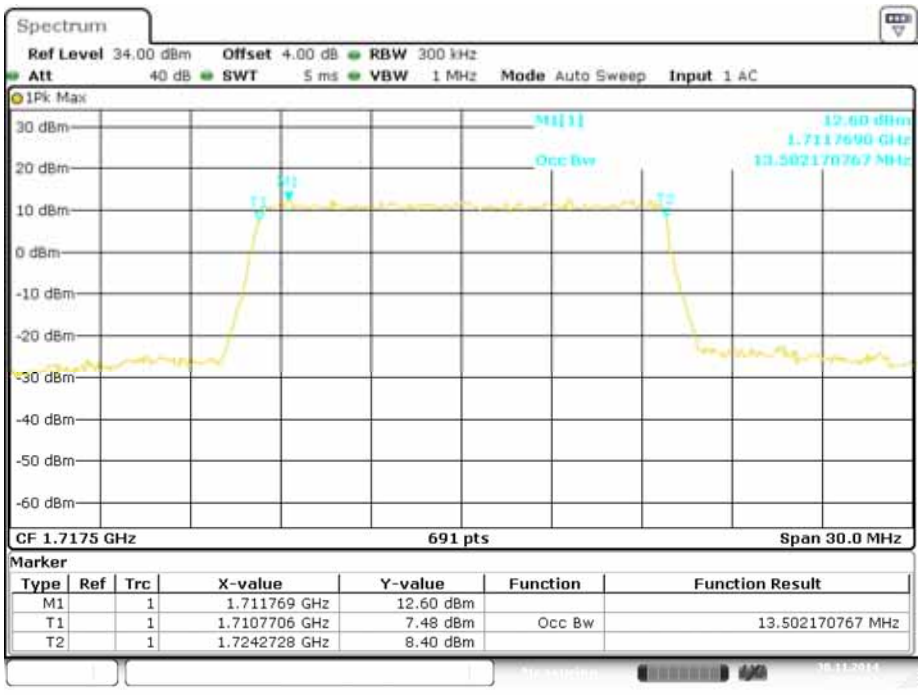
QPSK (15.0 MHz) - 99% Occupied Bandwidth, Low channel

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



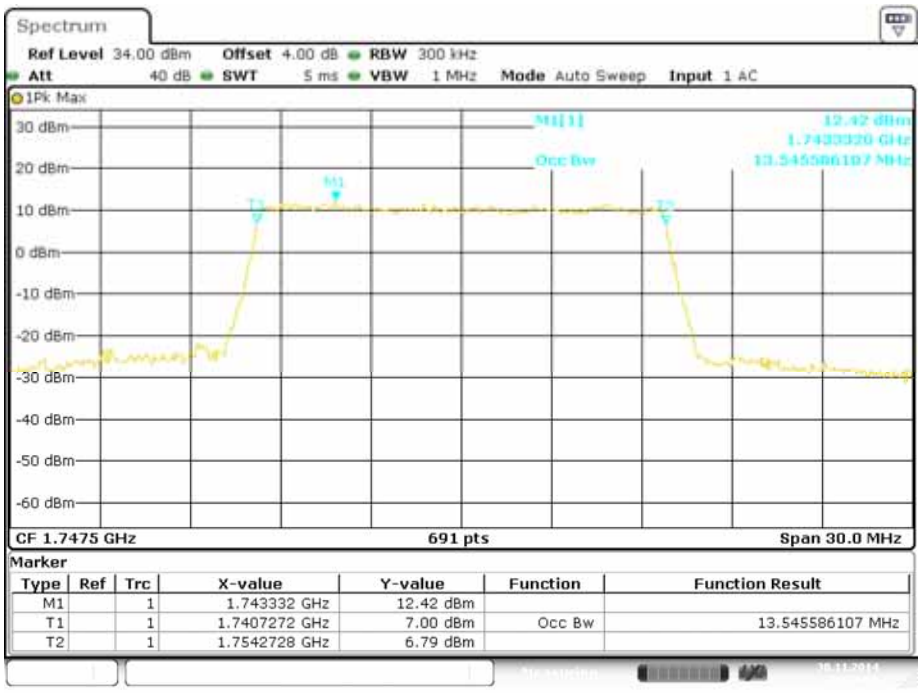
QPSK (15.0 MHz) - 99% Occupied Bandwidth, High channel

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

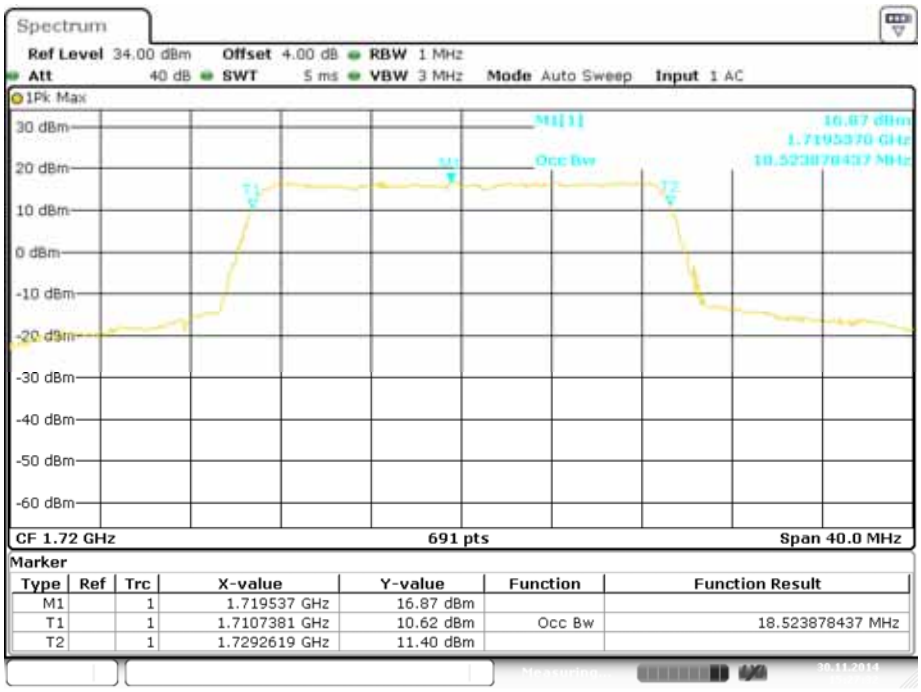


16-QAM (15.0 MHz) - 99% Occupied Bandwidth, Middle channel

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



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

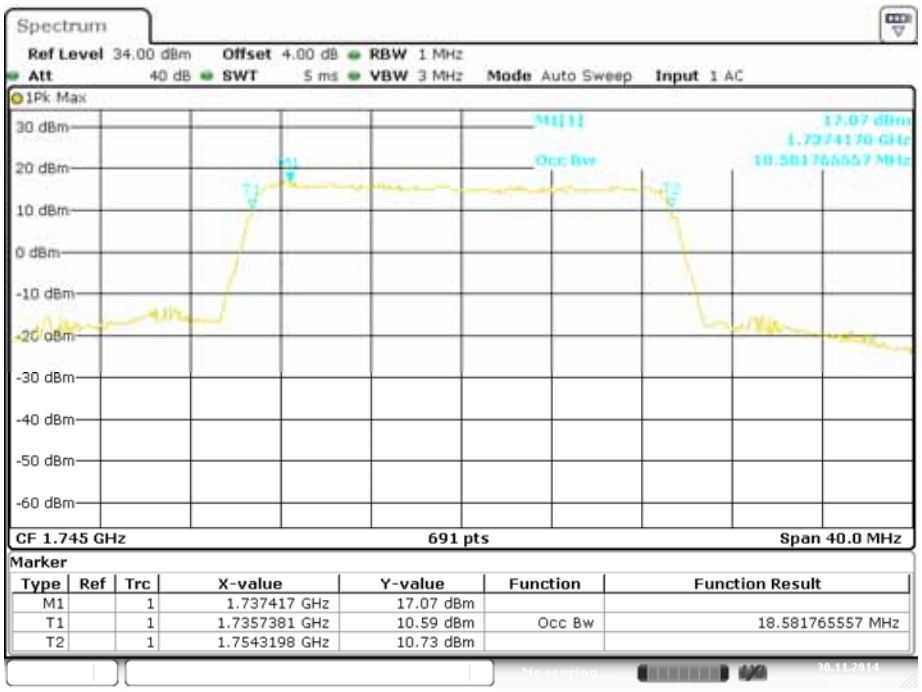


Date: 30.NOV.2014 15:27:32

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

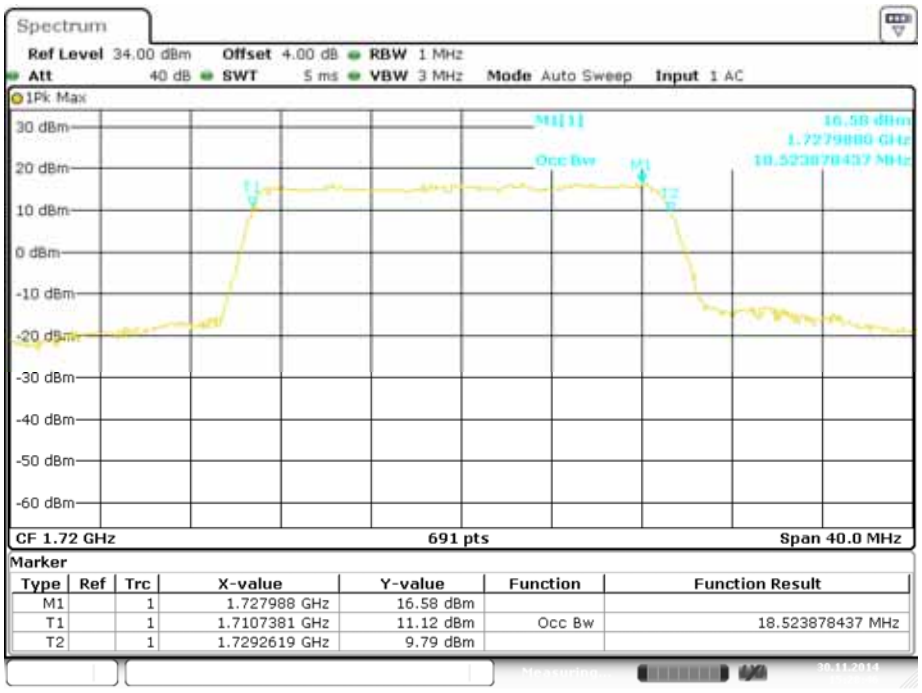
Date: 30.NOV.2014 15:28:46

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



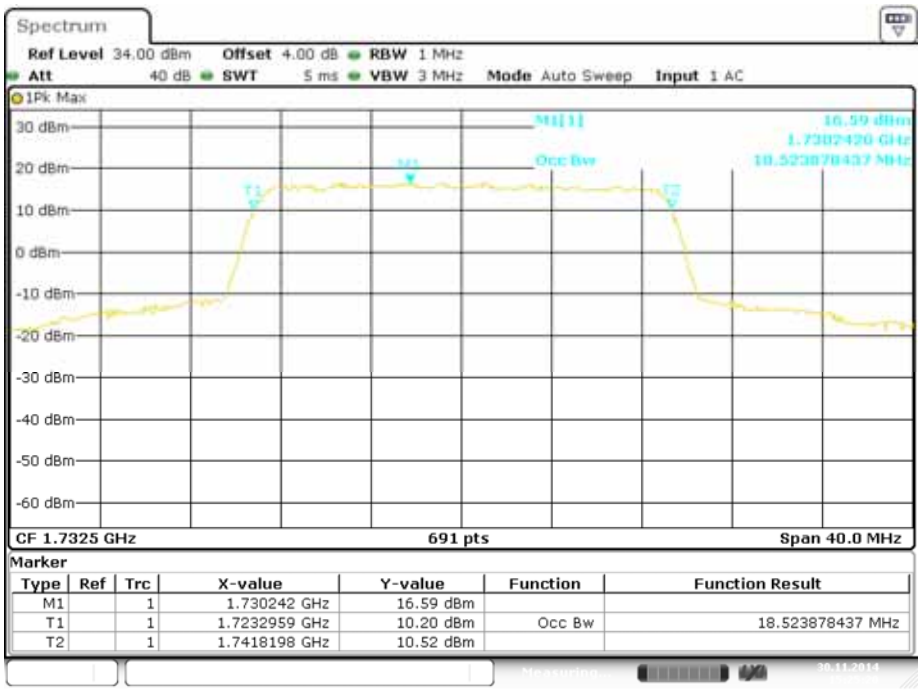
Date: 30.NOV.2014 15:26:48

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



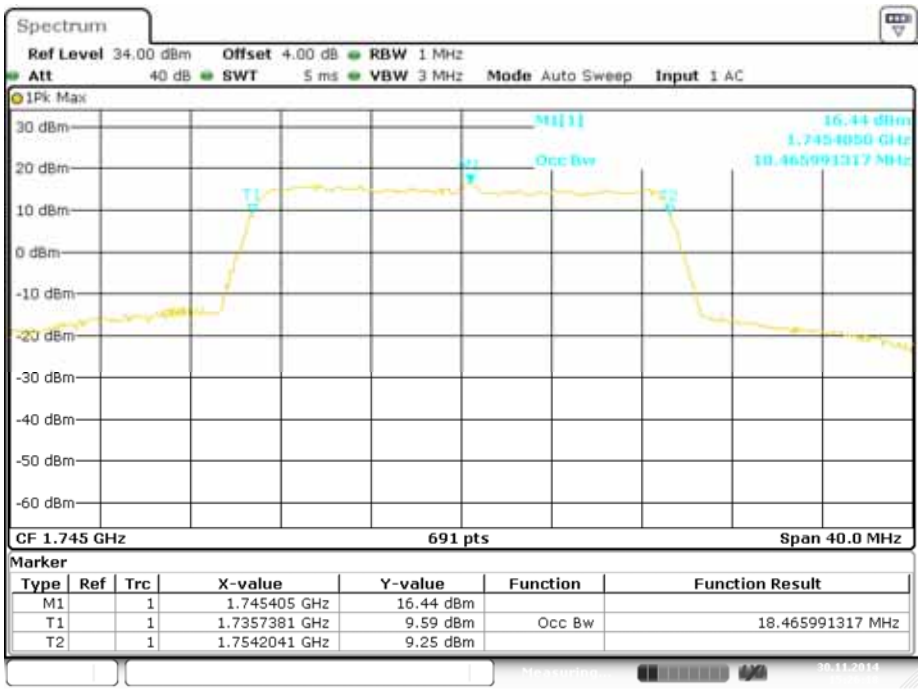
Date: 30.NOV.2014 15:28:46

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



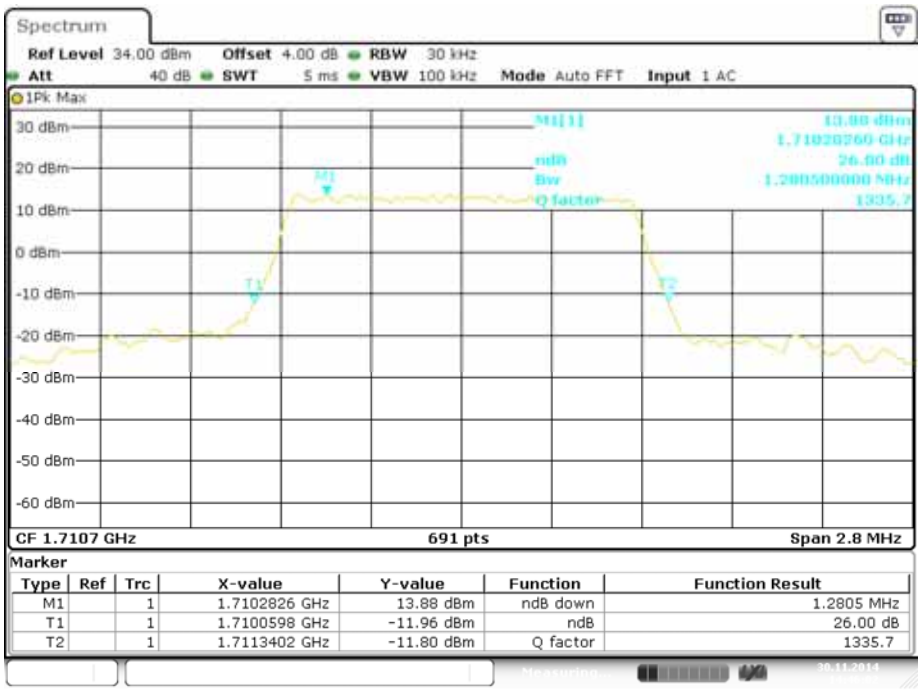
Date: 30.NOV.2014 15:25:20

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

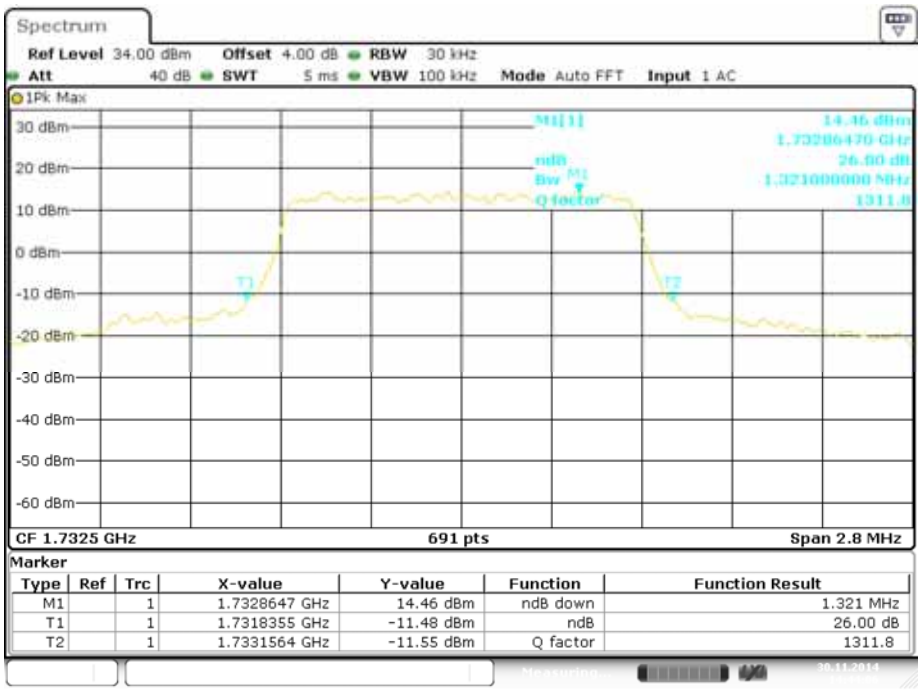


Date: 30.NOV.2014 15:26:18

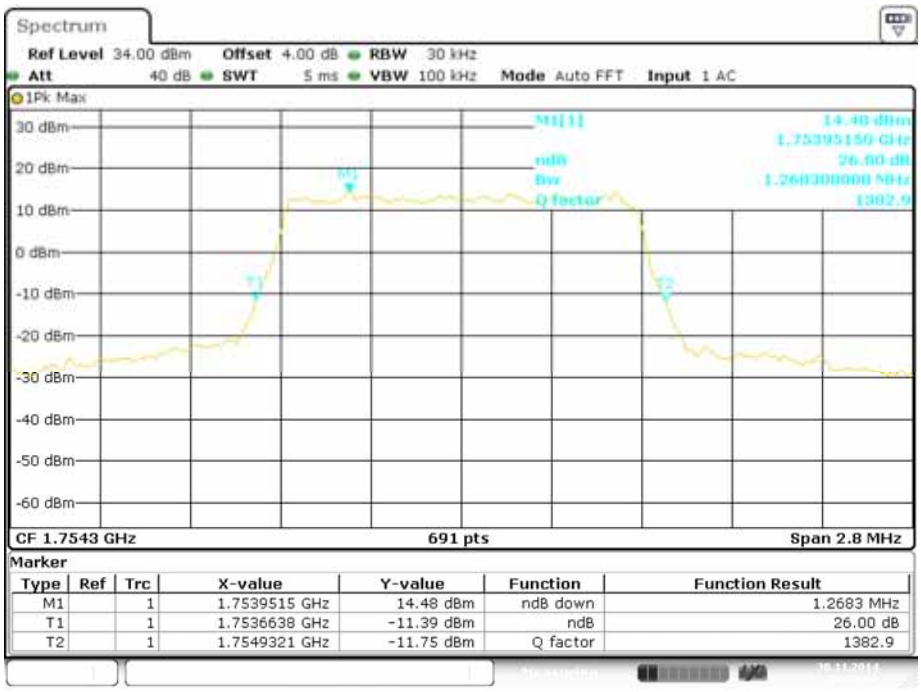
QPSK (1.4 MHz) - 26 dB Bandwidth, Low channel



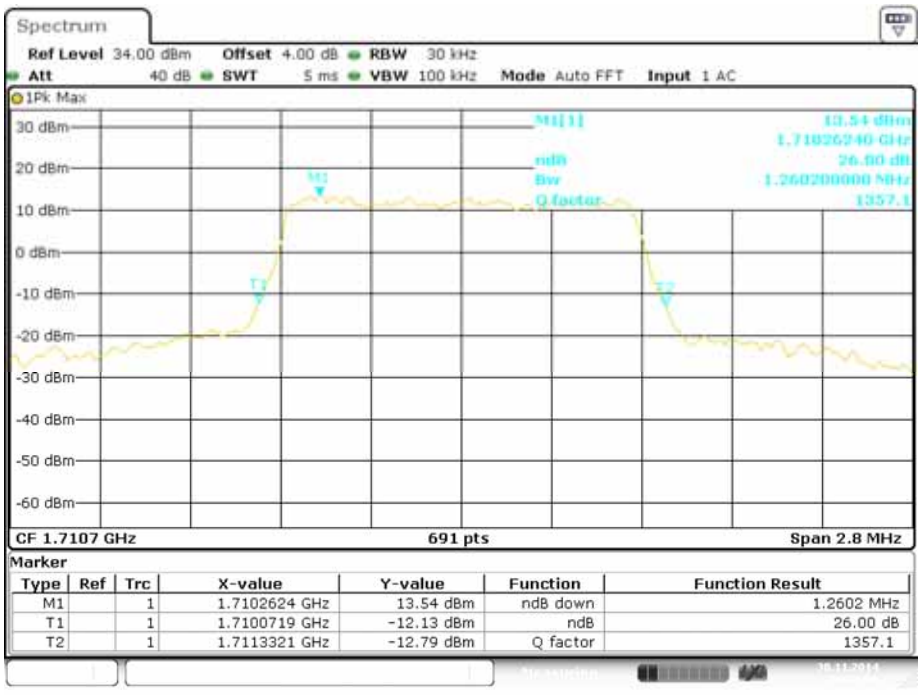
QPSK (1.4 MHz) - 26 dB Bandwidth, Middle channel



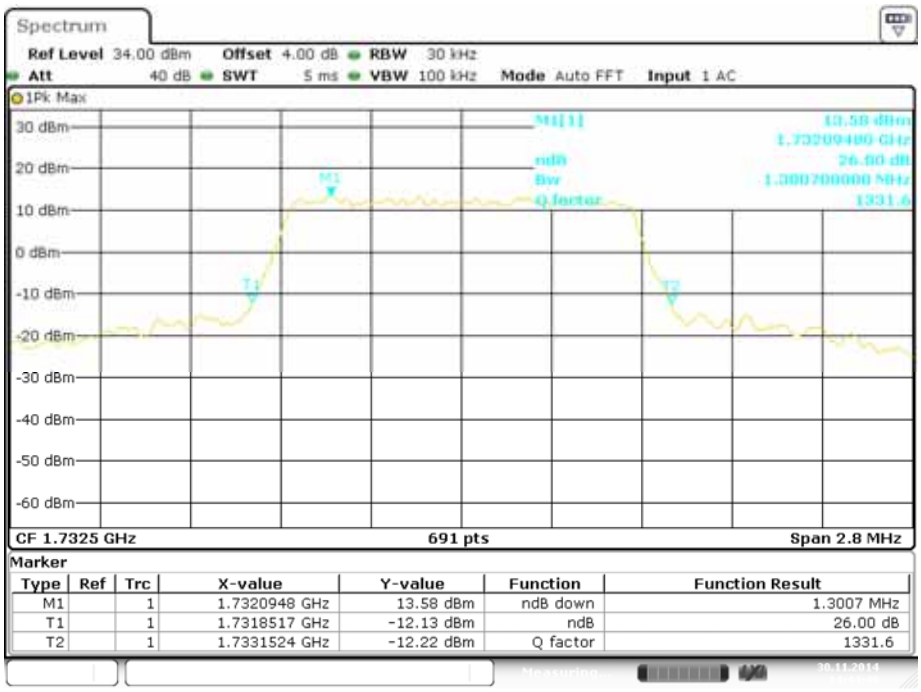
QPSK (1.4 MHz) - 26 dB Bandwidth, High channel



16-QAM (1.4 MHz) - 26 dB Bandwidth, Low channel

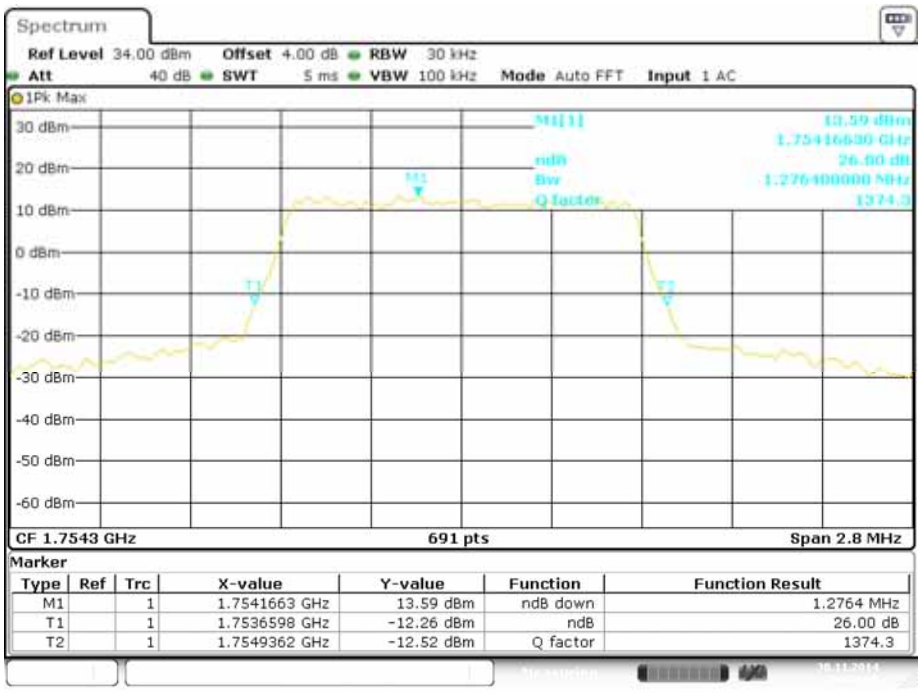


16-QAM (1.4 MHz) - 26 dB Bandwidth, Middle channel



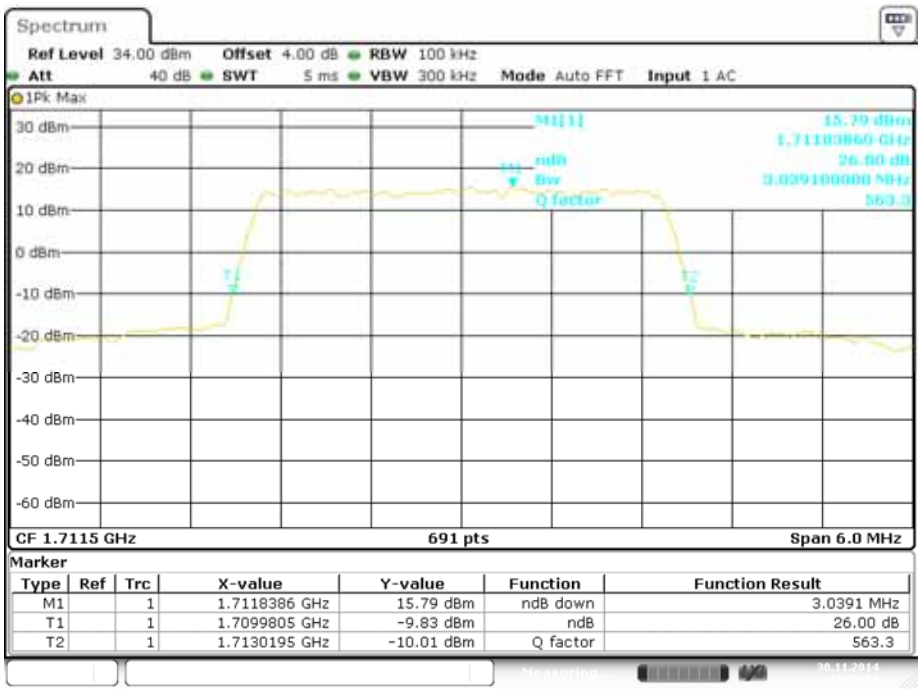
Date: 30.NOV.2014 14:44:49

16-QAM (1.4 MHz) - 26 dB Bandwidth, High channel



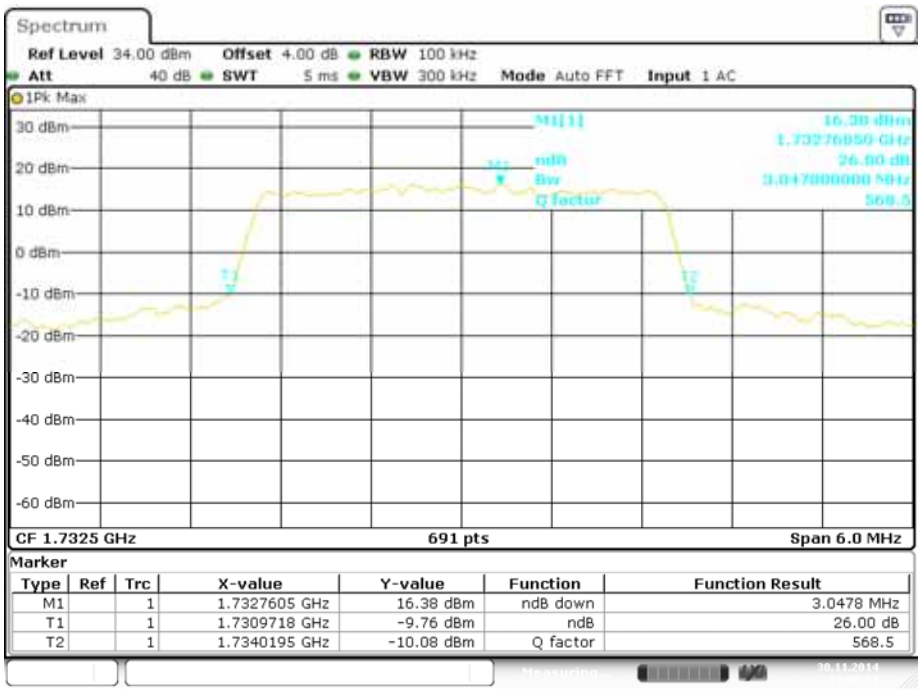
Date: 30.NOV.2014 14:47:35

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



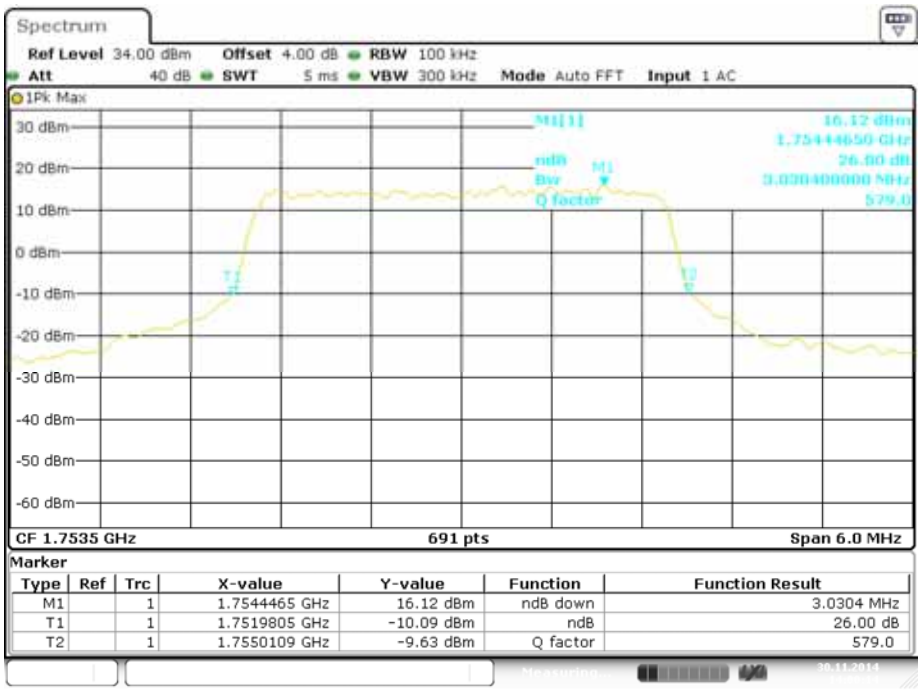
Date: 30.NOV.2014 13:58:01

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



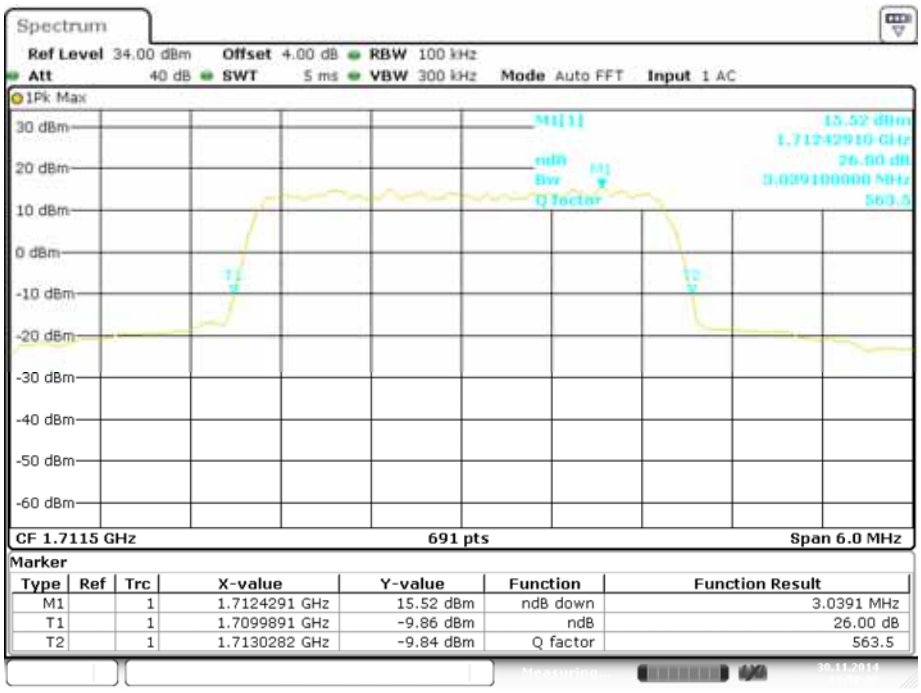
Date: 30.NOV.2014 14:00:54

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



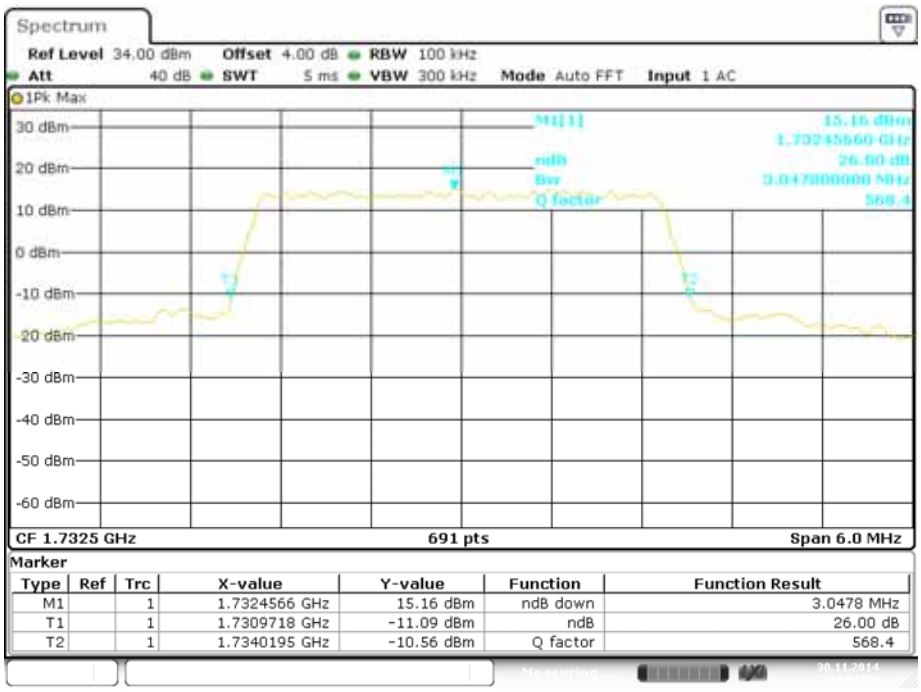
Date: 30.NOV.2014 14:00:14

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



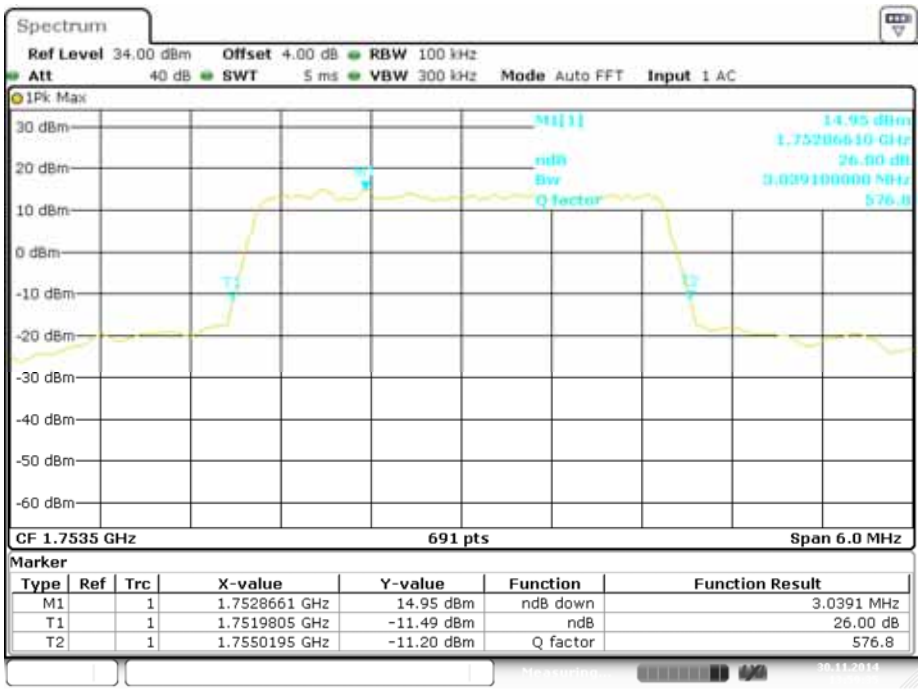
Date: 30.NOV.2014 13:58:37

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



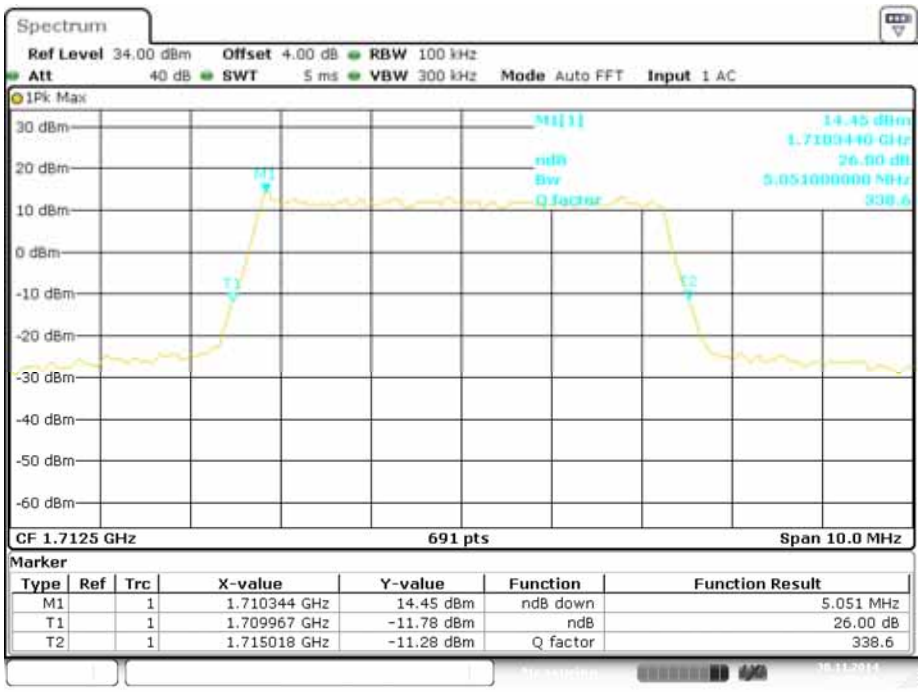
Date: 30.NOV.2014 14:01:22

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

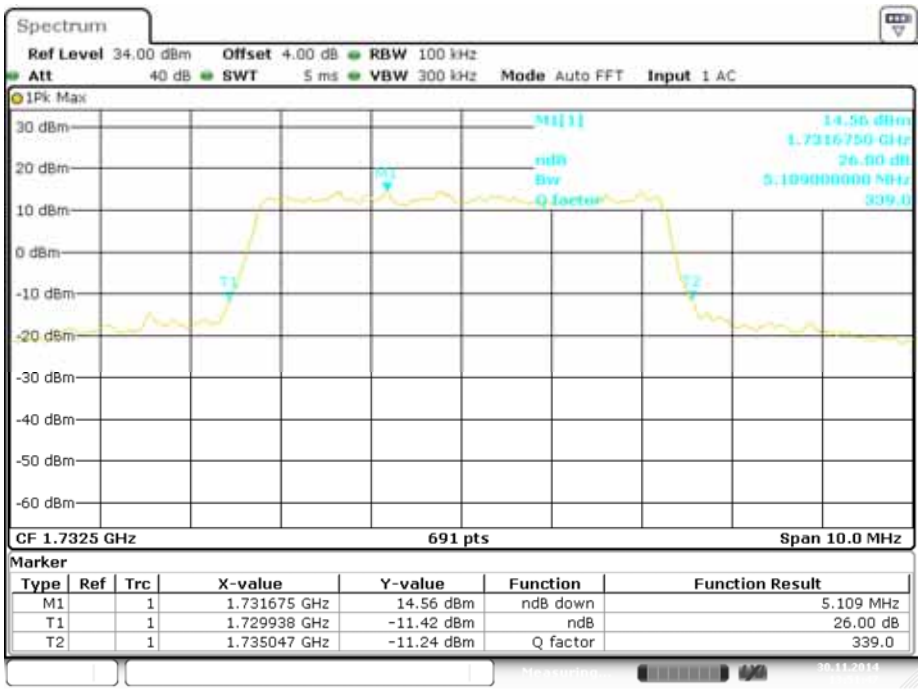


Date: 30.NOV.2014 13:59:35

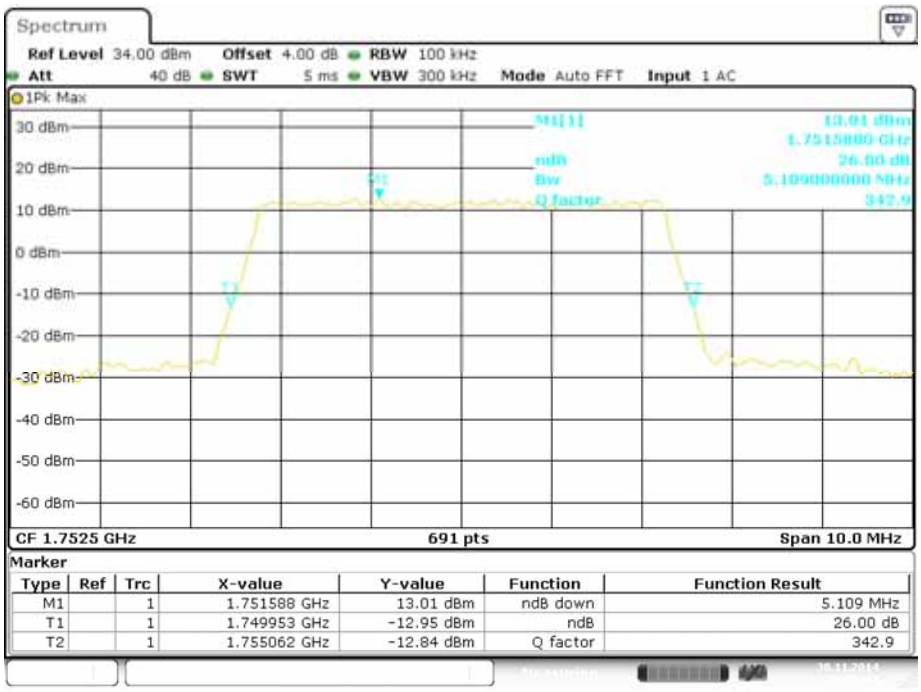
QPSK (5.0 MHz) - 26 dB Bandwidth, Low channel



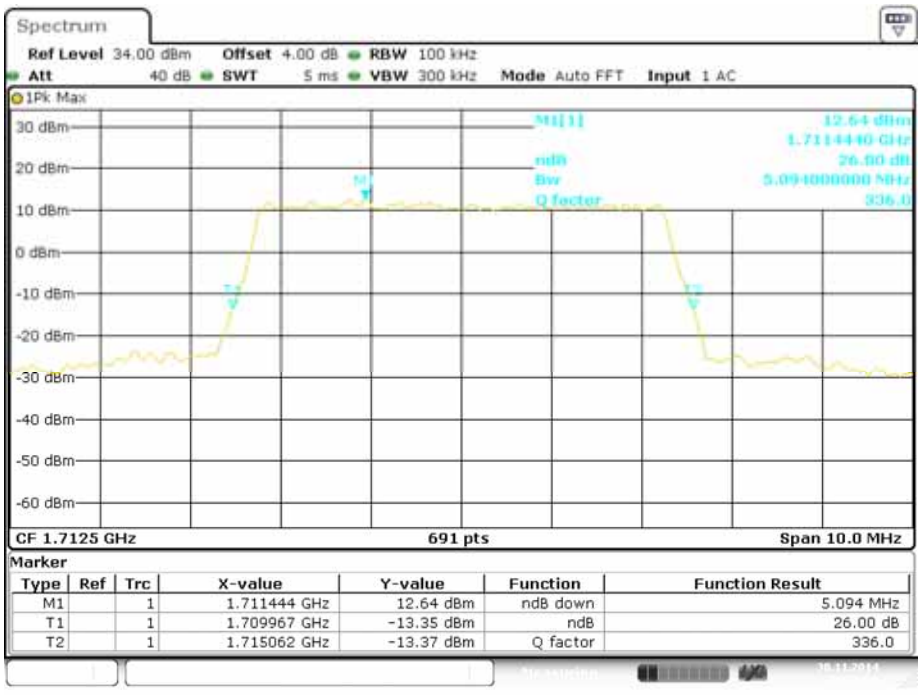
QPSK (5.0 MHz) - 26 dB Bandwidth, Middle channel



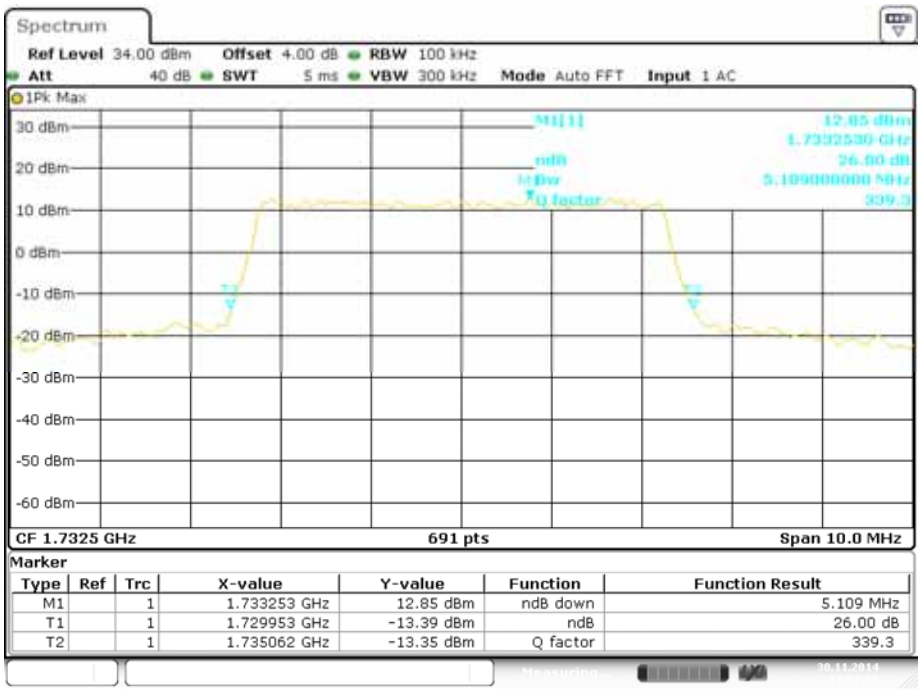
QPSK (5.0 MHz) - 26 dB Bandwidth, High channel



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

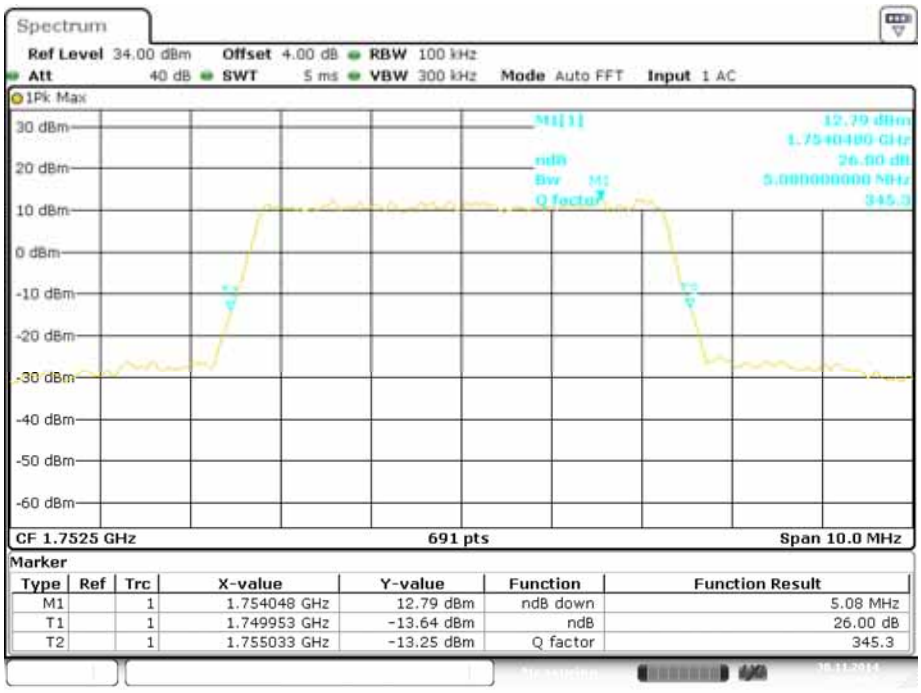


16-QAM (5.0 MHz) - 26 dB Bandwidth, Middle channel



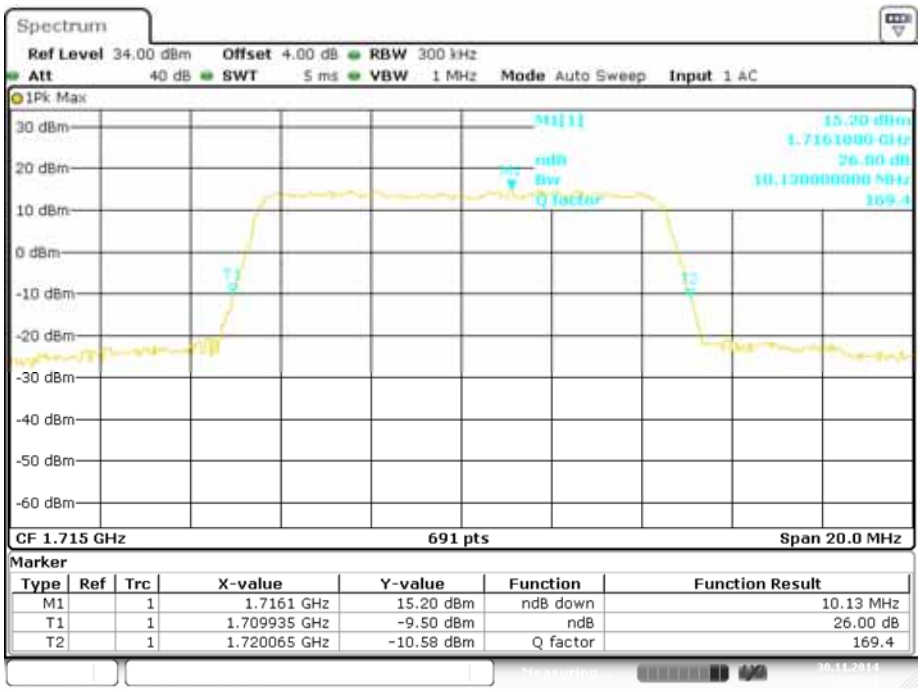
Date: 30.NOV.2014 13:52:36

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



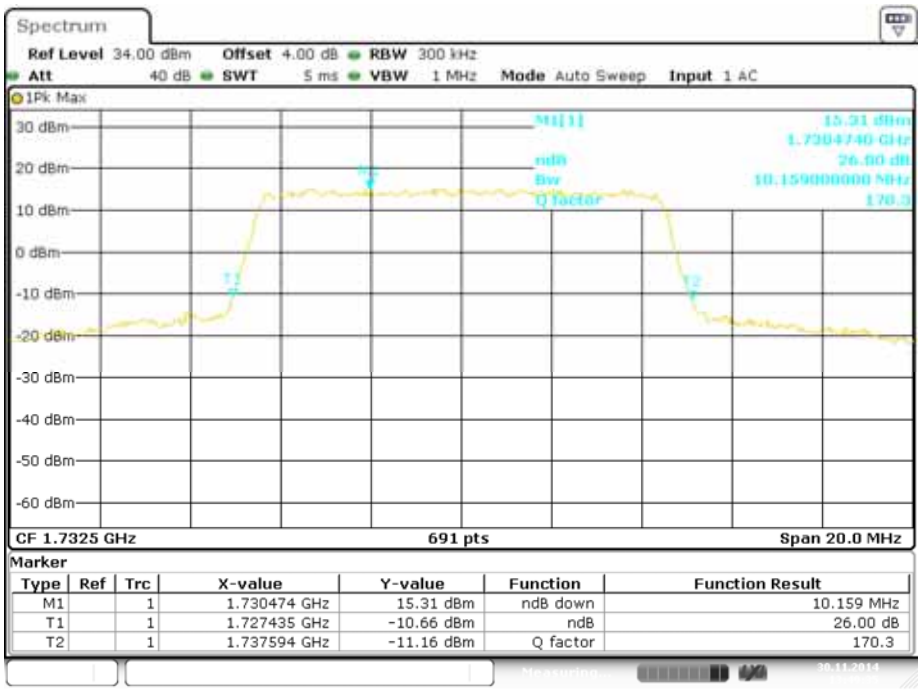
Date: 30.NOV.2014 13:54:37

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



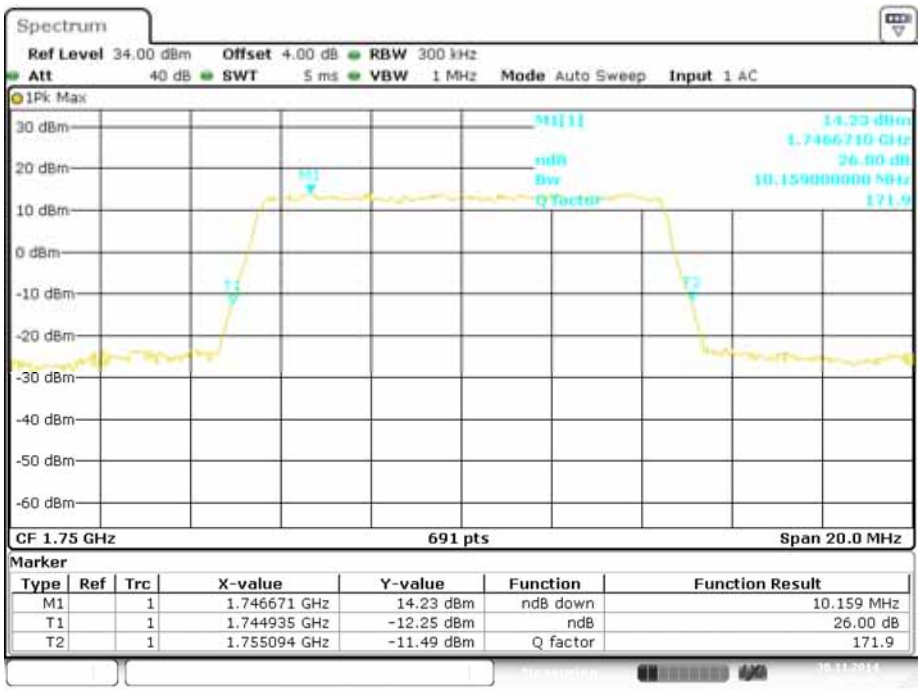
Date: 30.NOV.2014 13:48:41

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

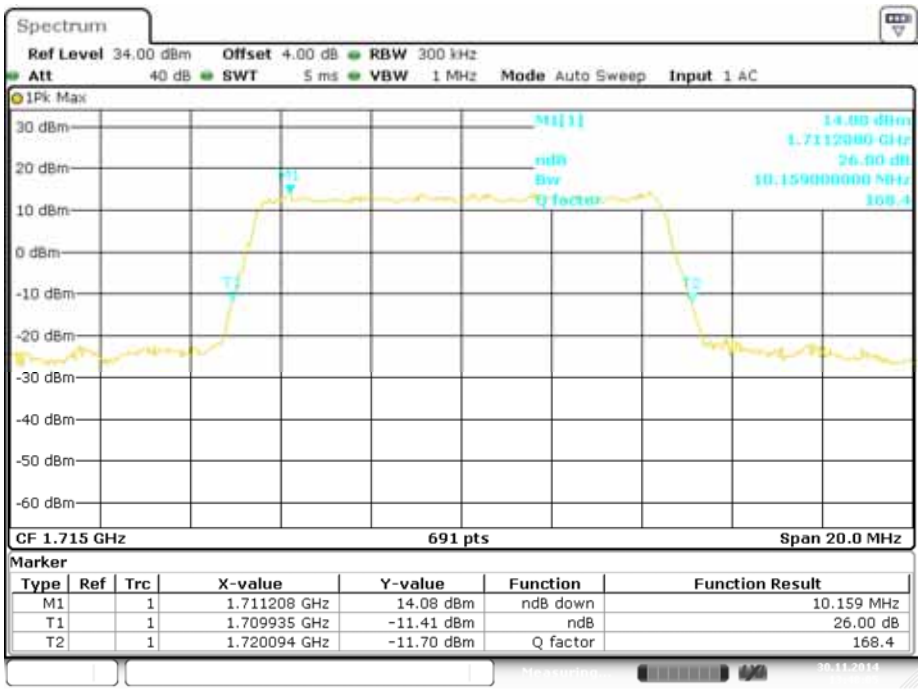


Date: 30.NOV.2014 13:49:35

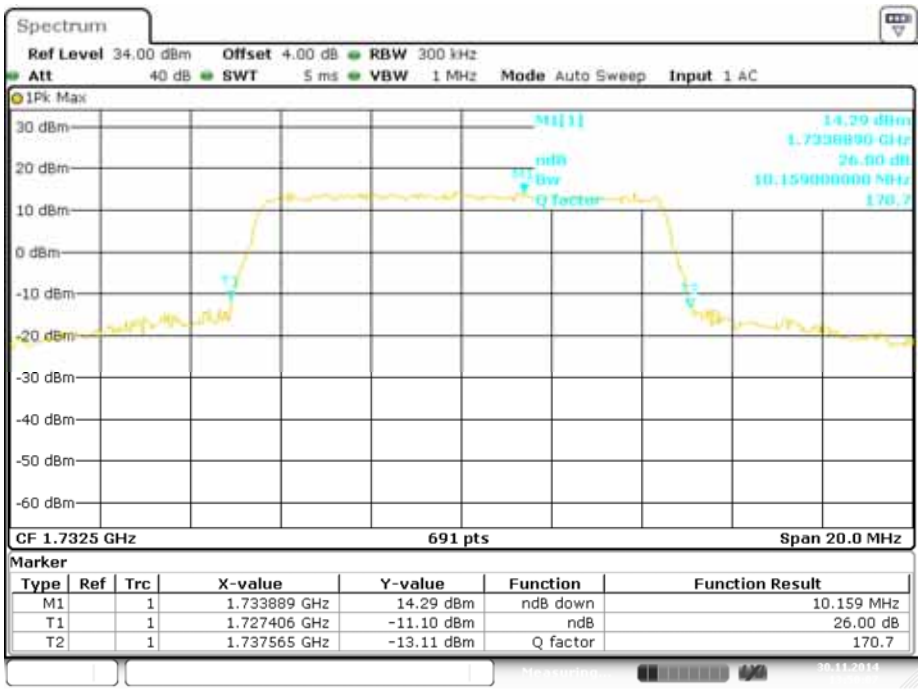
QPSK (10.0 MHz) - 26 dB Bandwidth, High channel



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

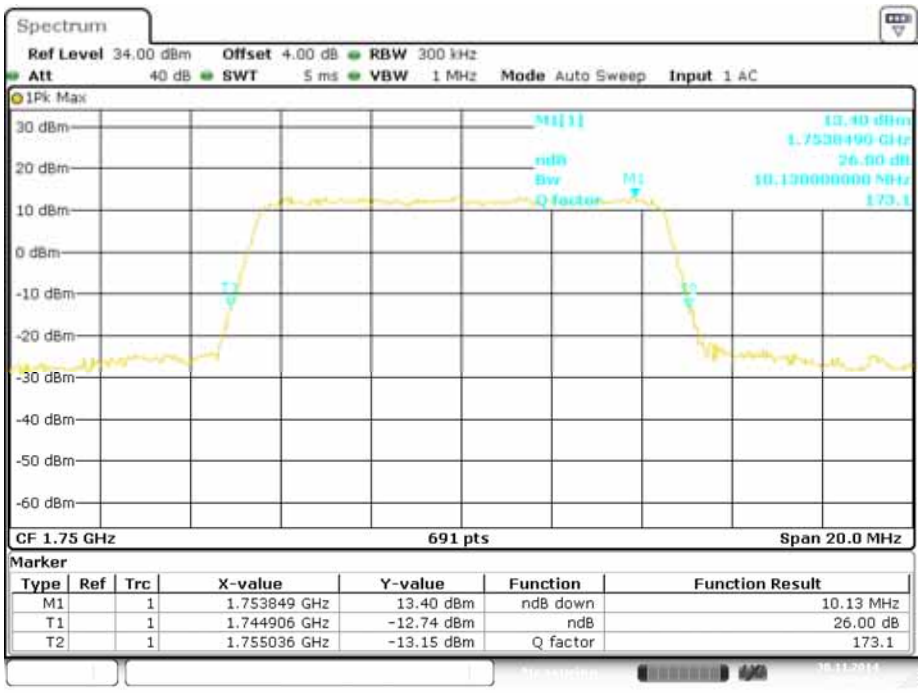


16-QAM (10.0 MHz) - 26 dB Bandwidth, Middle channel



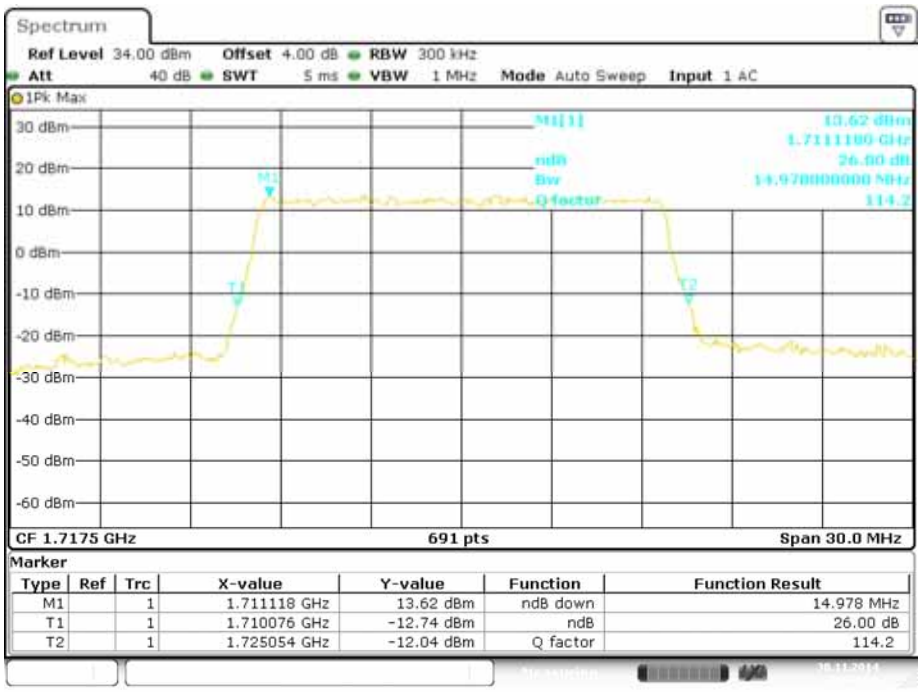
Date: 30.NOV.2014 13:50:07

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



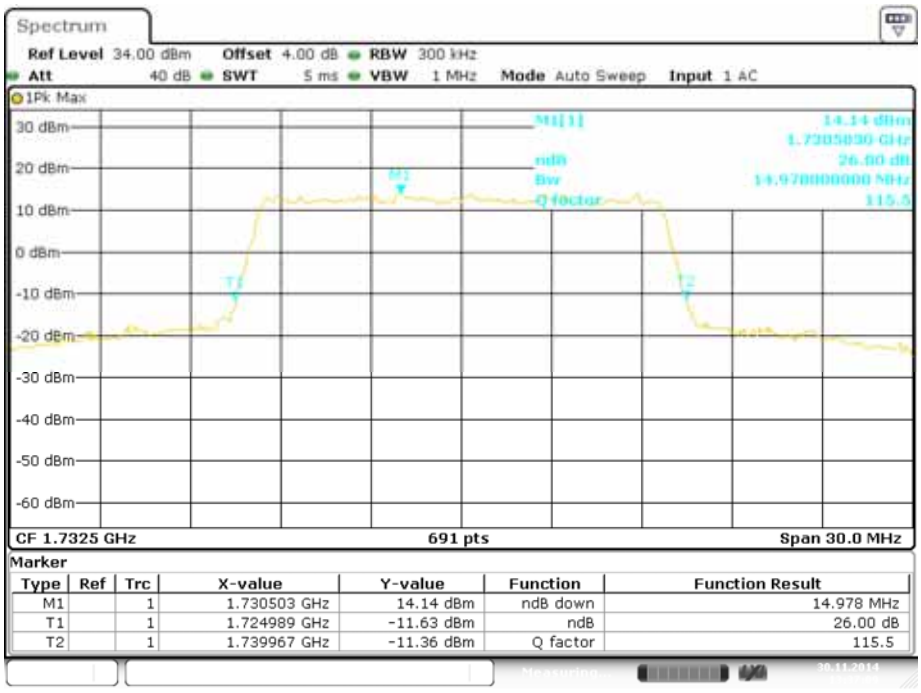
Date: 30.NOV.2014 13:46:53

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



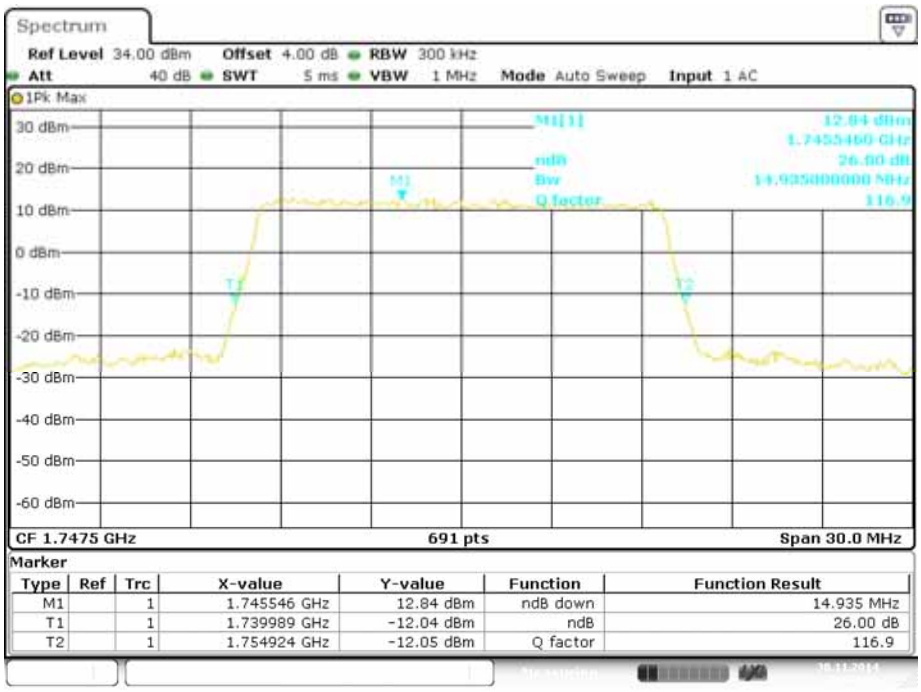
Date: 30.NOV.2014 13:42:29

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



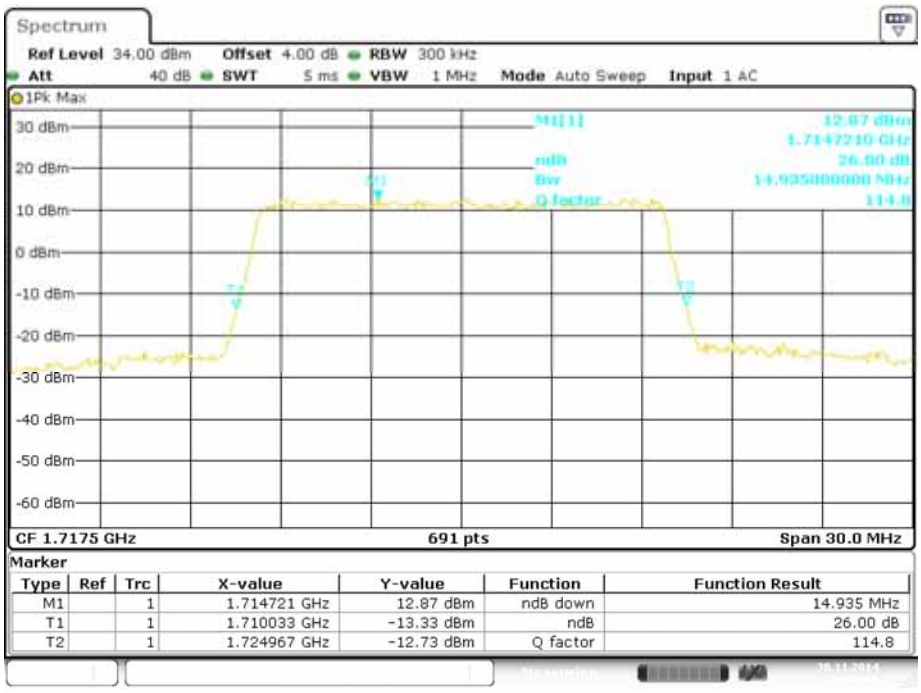
Date: 30.NOV.2014 13:37:09

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



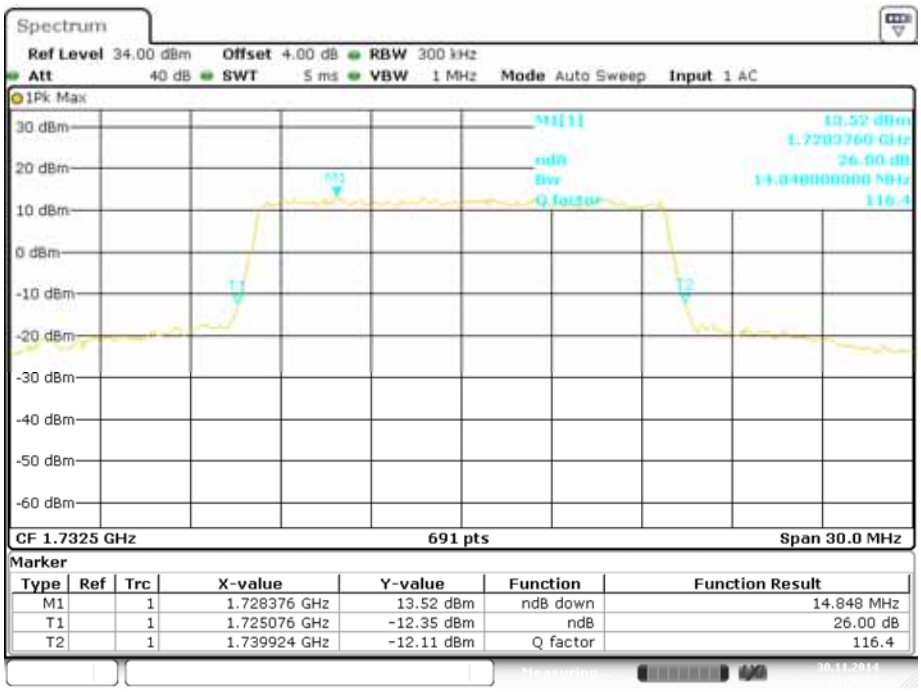
Date: 30.NOV.2014 13:43:33

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



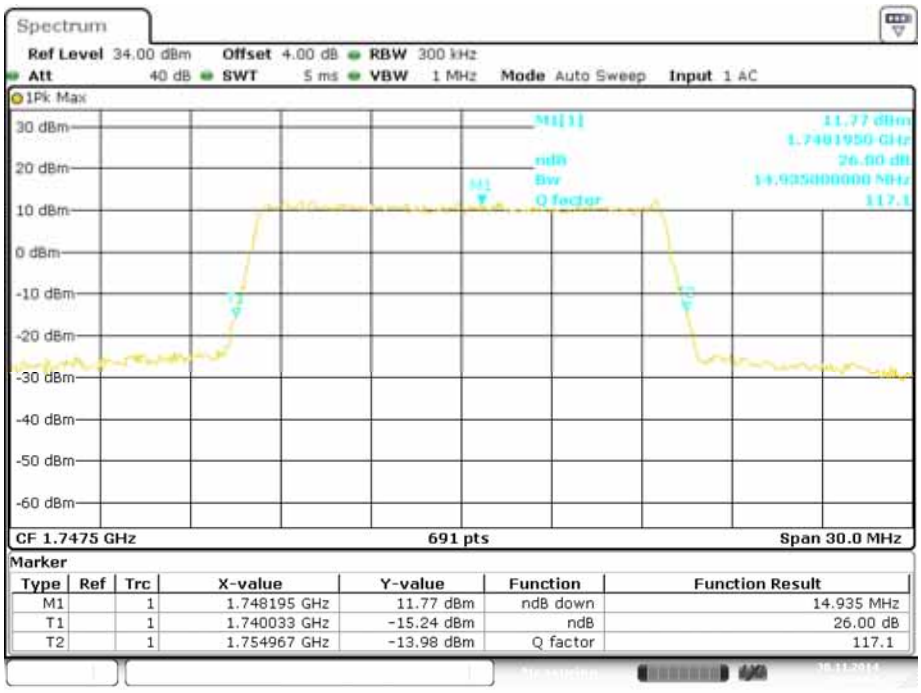
Date: 30.NOV.2014 13:42:00

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



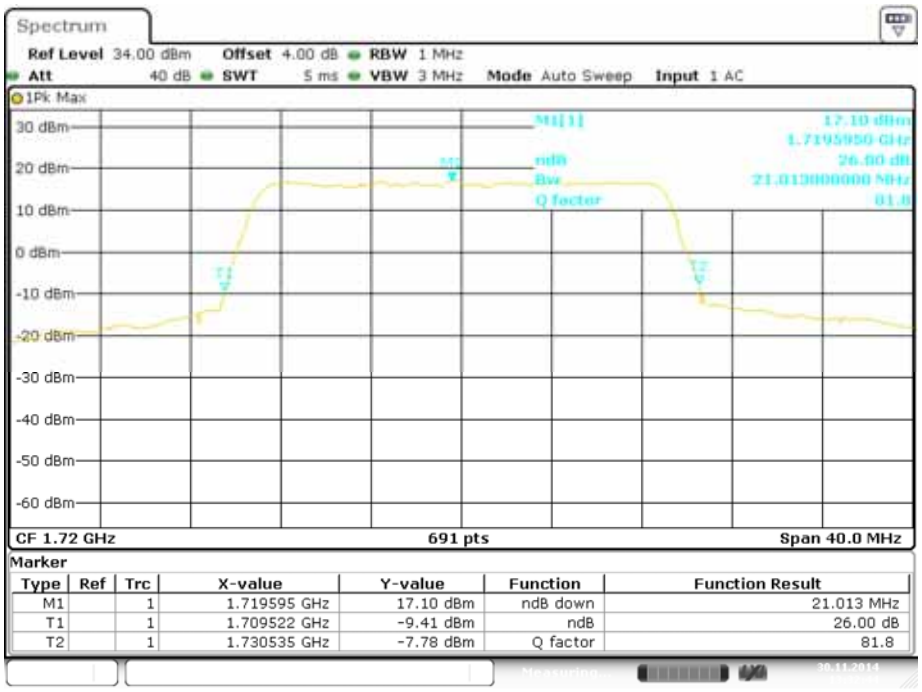
Date: 30.NOV.2014 13:40:57

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



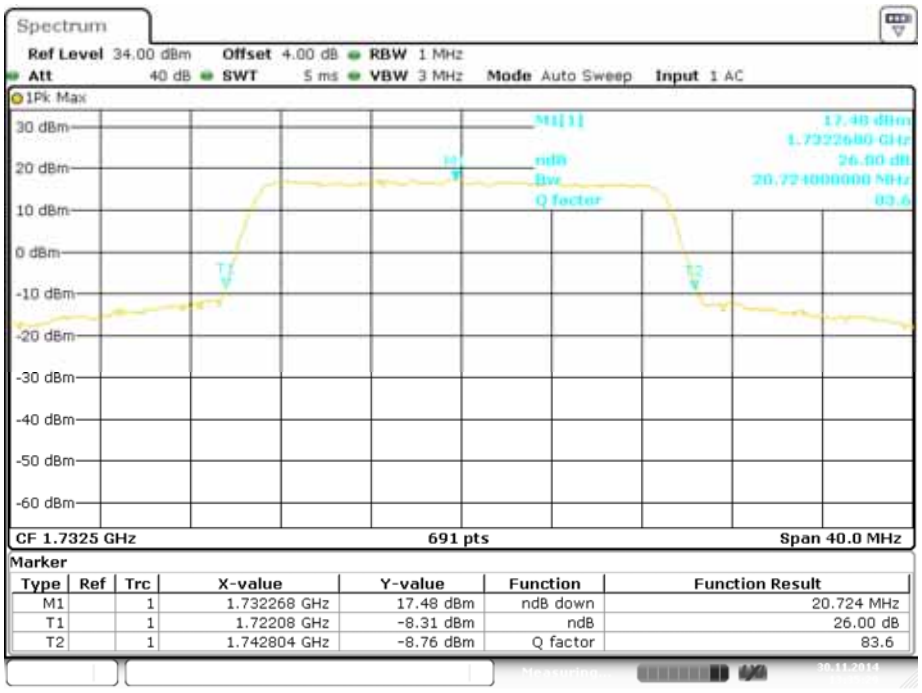
Date: 30.NOV.2014 13:44:04

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



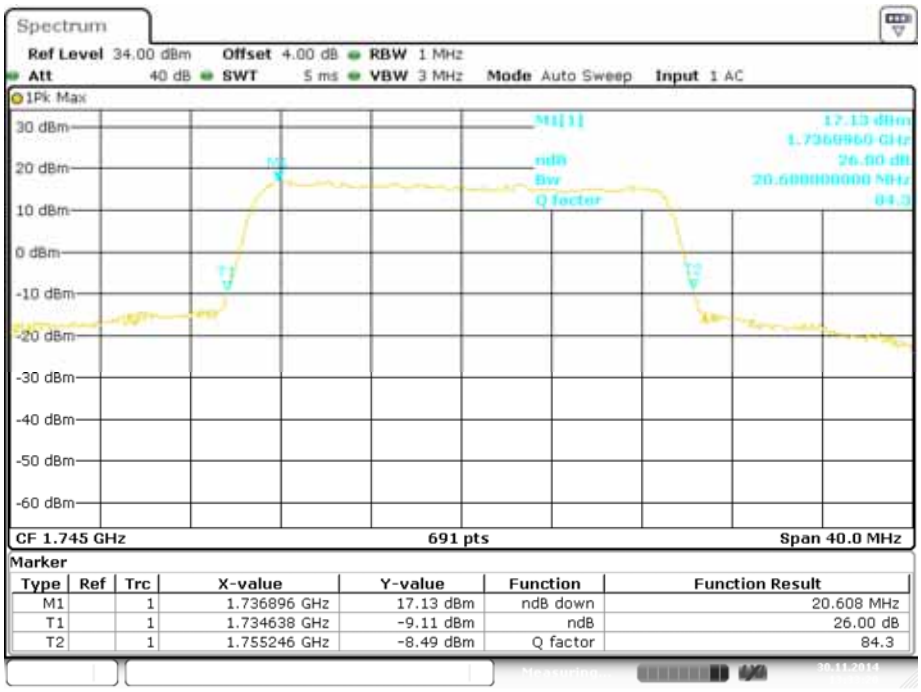
Date: 30.NOV.2014 13:32:44

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



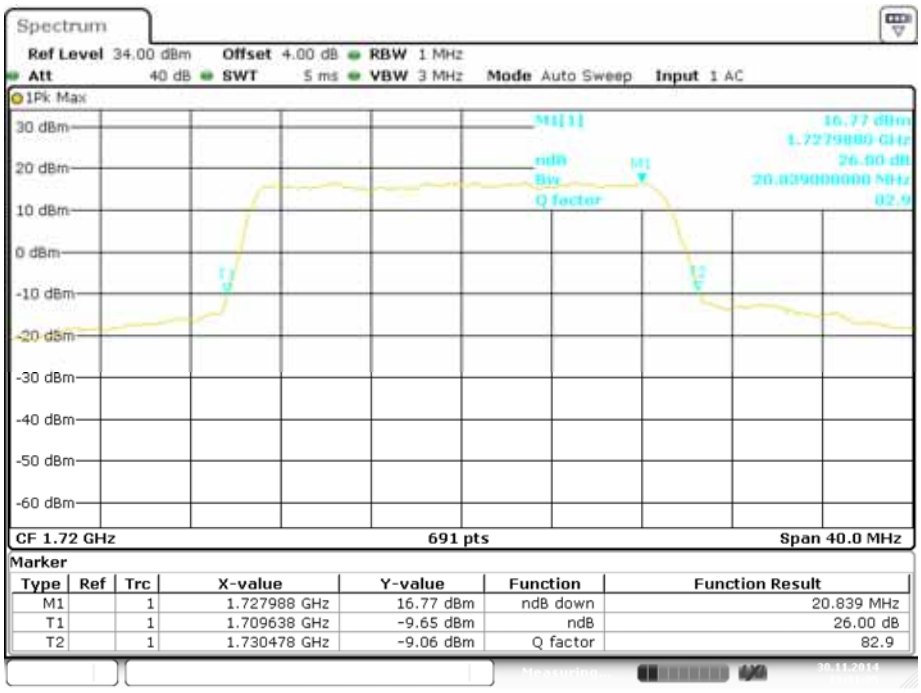
Date: 30.NOV.2014 13:35:29

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



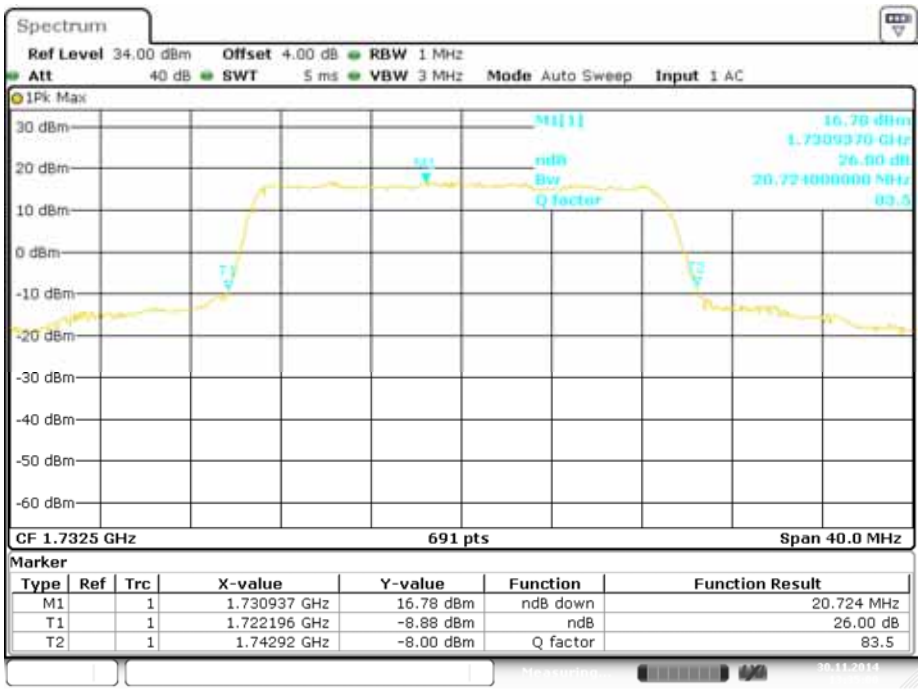
Date: 30.NOV.2014 13:33:20

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



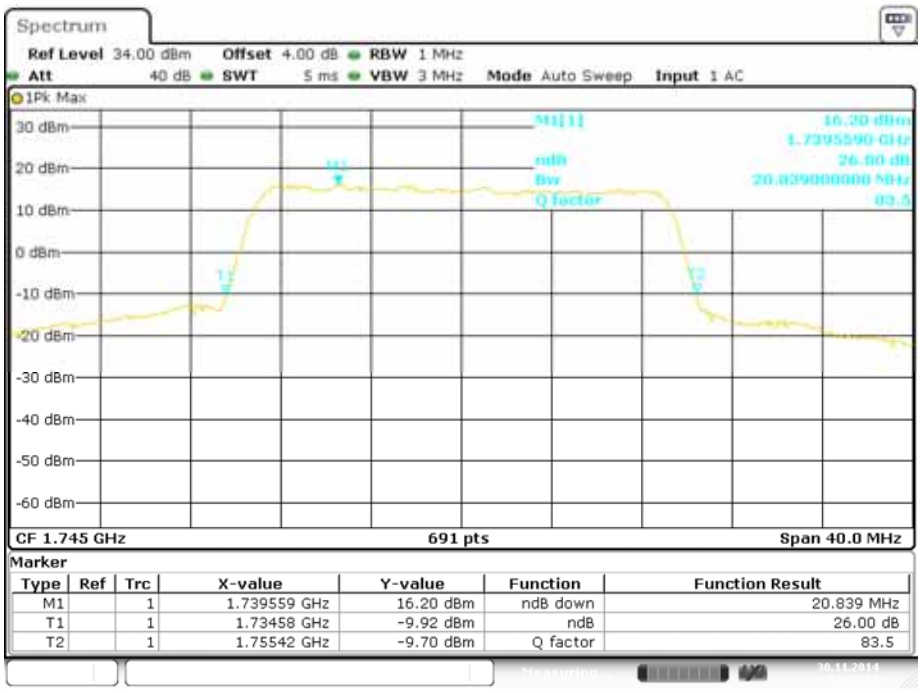
Date: 30.NOV.2014 13:31:35

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



Date: 30.NOV.2014 13:35:00

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



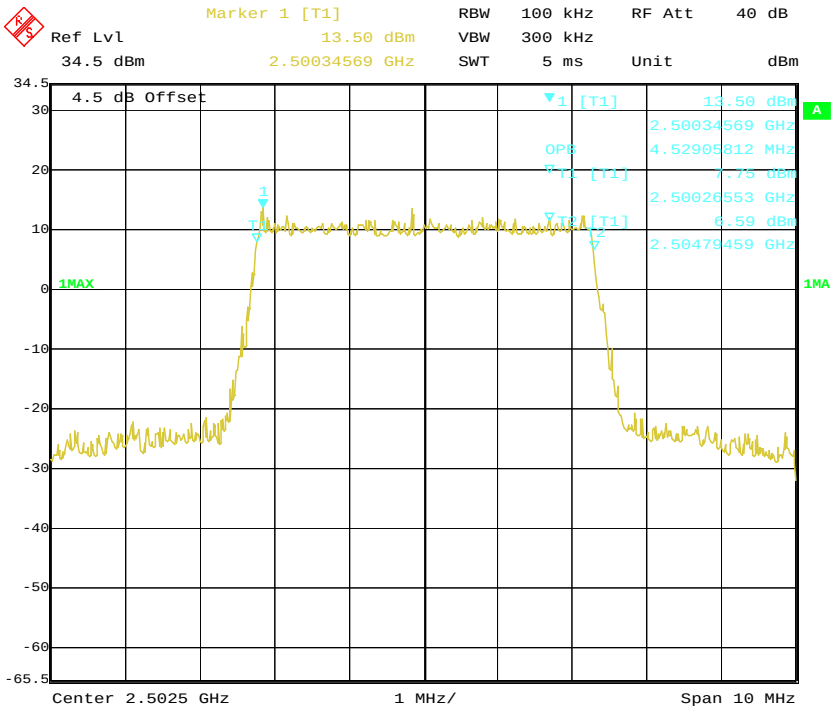
Date: 30.NOV.2014 13:33:52

Band 7:

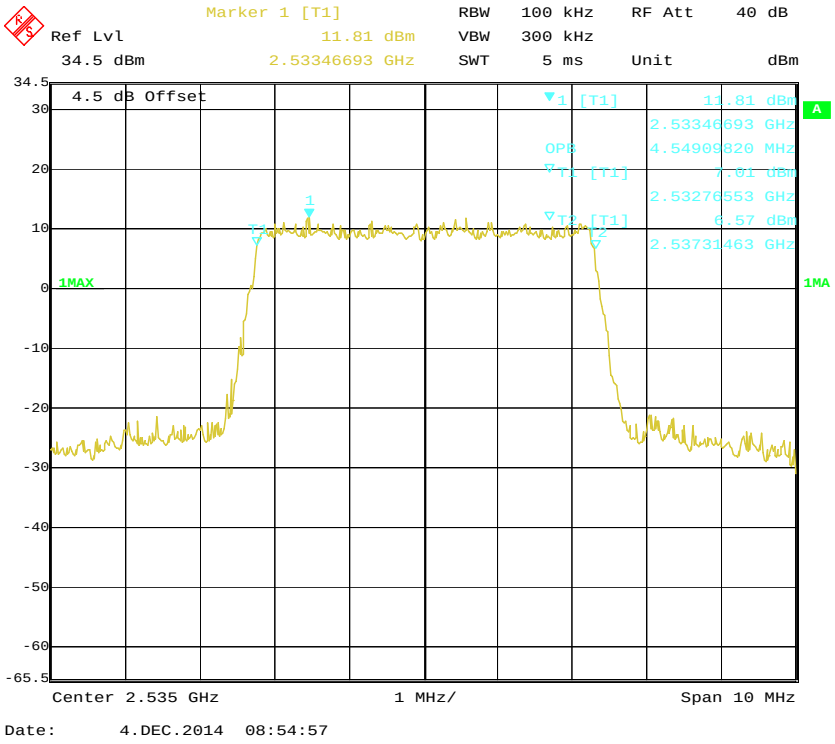
99% Occupied Bandwidth		Low channel (MHz)	Middle channel (MHz)	High channel (MHz)
5.0 MHz	QPSK	4.53	4.55	4.55
	16QAM	4.53	4.55	4.55
10.0 MHz	QPSK	8.96	8.96	8.96
	16QAM	8.96	8.96	8.96
15.0 MHz	QPSK	13.62	13.56	13.50
	16QAM	13.56	13.56	13.56
20.0 MHz	QPSK	18.00	18.08	17.92
	16QAM	18.00	18.00	18.00

26 dB Emission Bandwidth		Low channel (MHz)	Middle channel (MHz)	High channel (MHz)
5.0 MHz	QPSK	5.03	5.07	5.05
	16QAM	5.03	5.01	4.99
10.0 MHz	QPSK	9.76	9.68	9.68
	16QAM	9.72	9.64	9.72
15.0 MHz	QPSK	15.00	14.88	14.94
	16QAM	14.94	15.06	14.88
20.0 MHz	QPSK	19.52	19.36	19.60
	16QAM	19.44	19.76	19.60

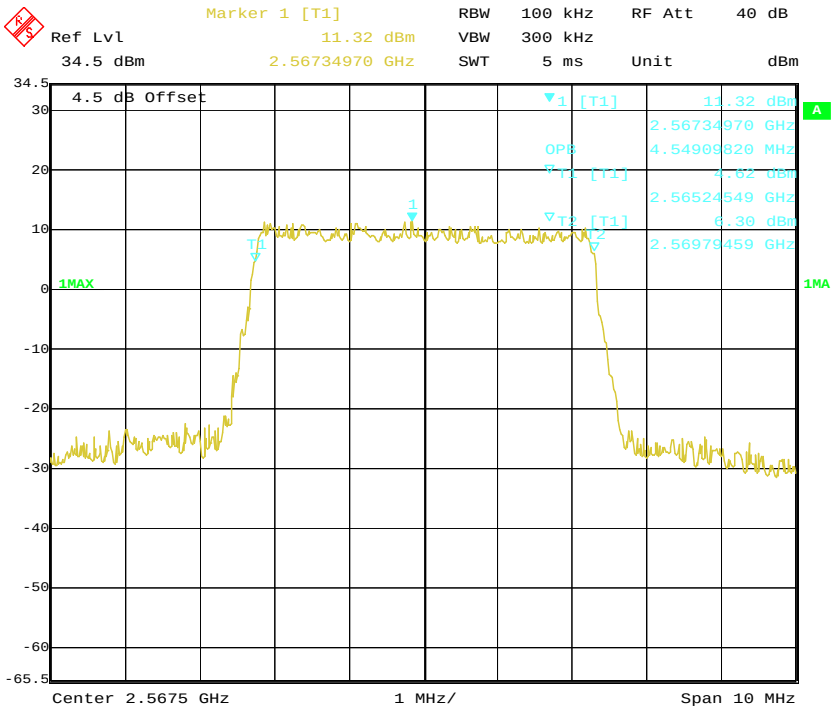
QPSK (5.0 MHz) - 99% Occupied Bandwidth, Low channel



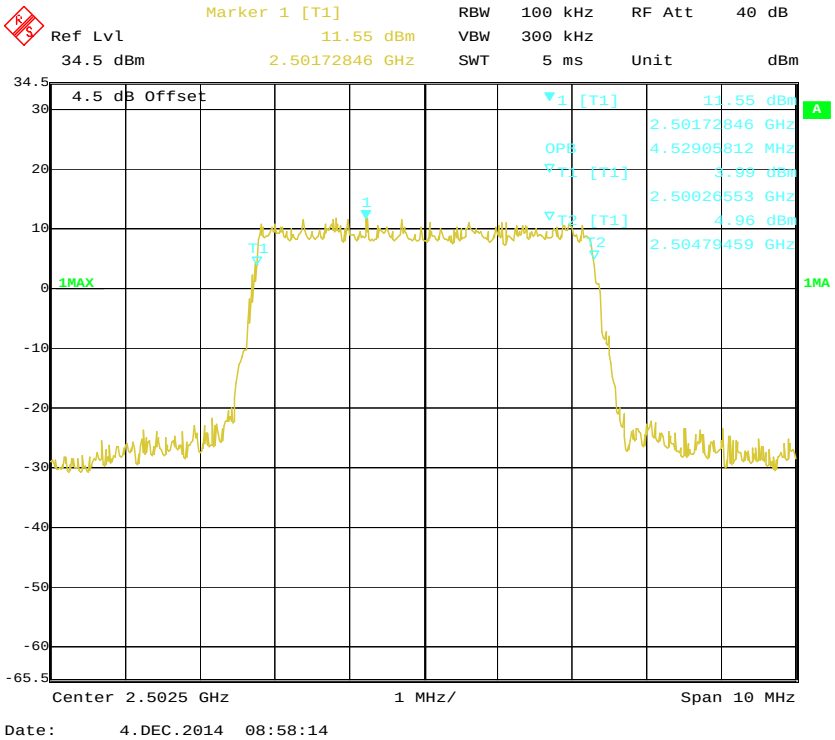
QPSK (5.0 MHz) - 99% Occupied Bandwidth, Middle channel



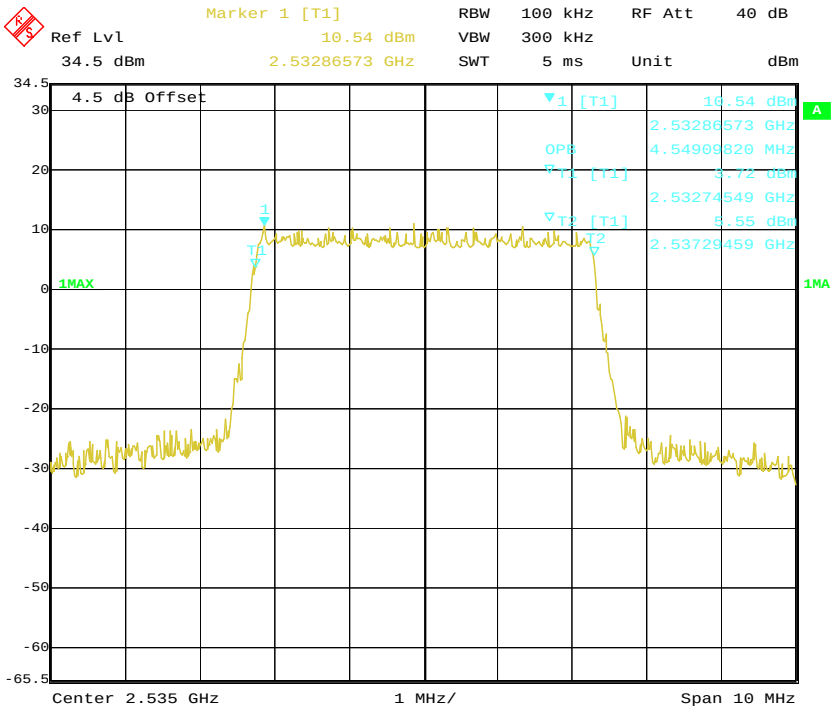
QPSK (5.0 MHz) - 99% Occupied Bandwidth, High channel



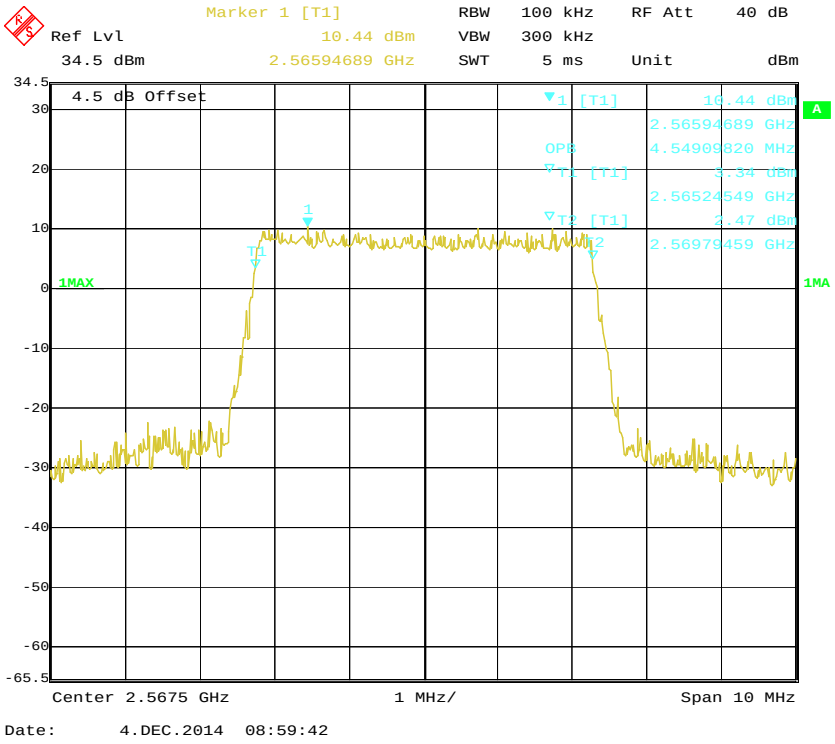
16-QAM (5.0 MHz) - 99% Occupied Bandwidth, Low channel



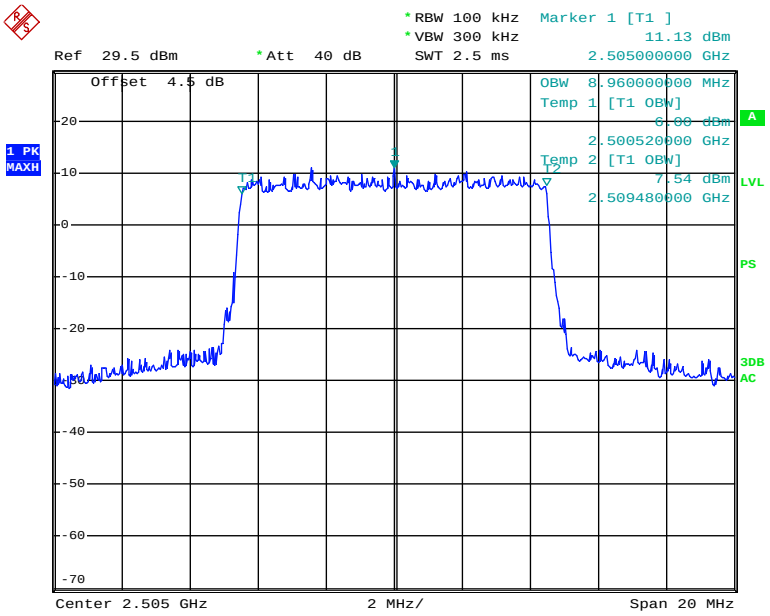
16-QAM (5.0 MHz) - 99% Occupied Bandwidth, Middle channel



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

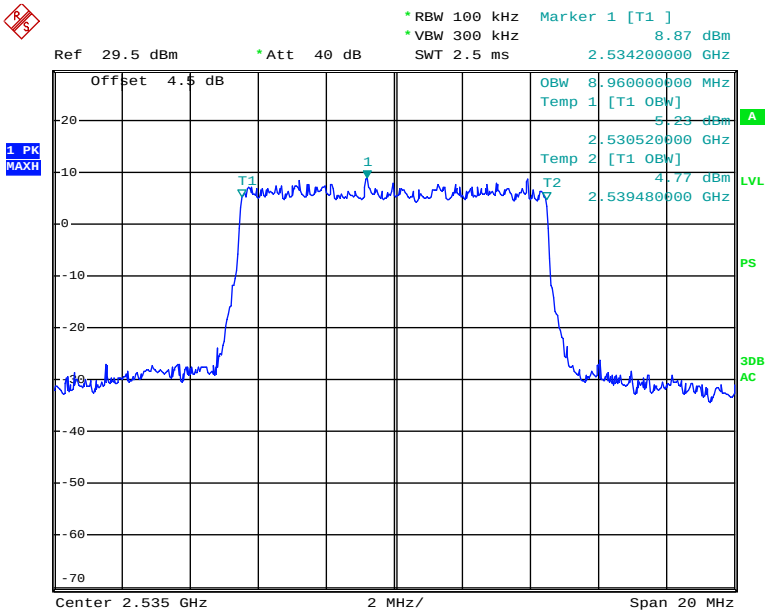


QPSK (10.0 MHz) - 99% Occupied Bandwidth, Low channel



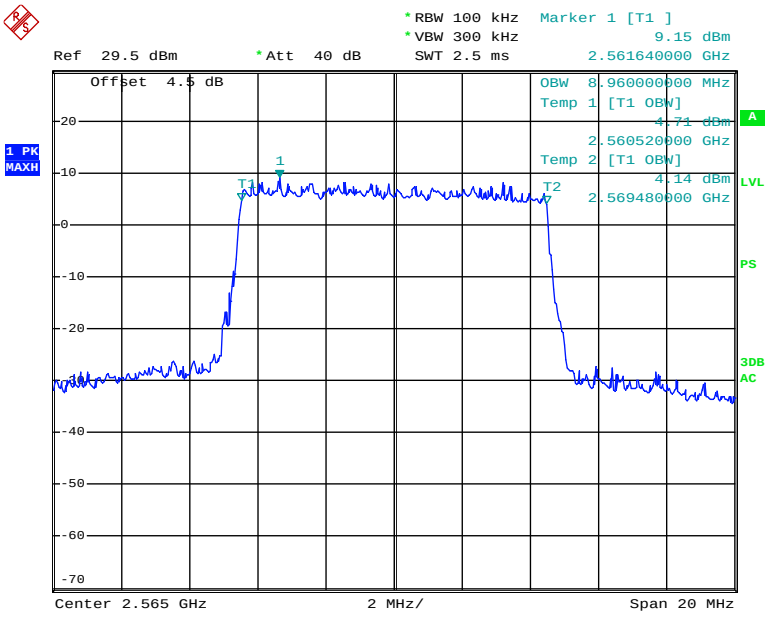
Date: 3.DEC.2014 09:31:29

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



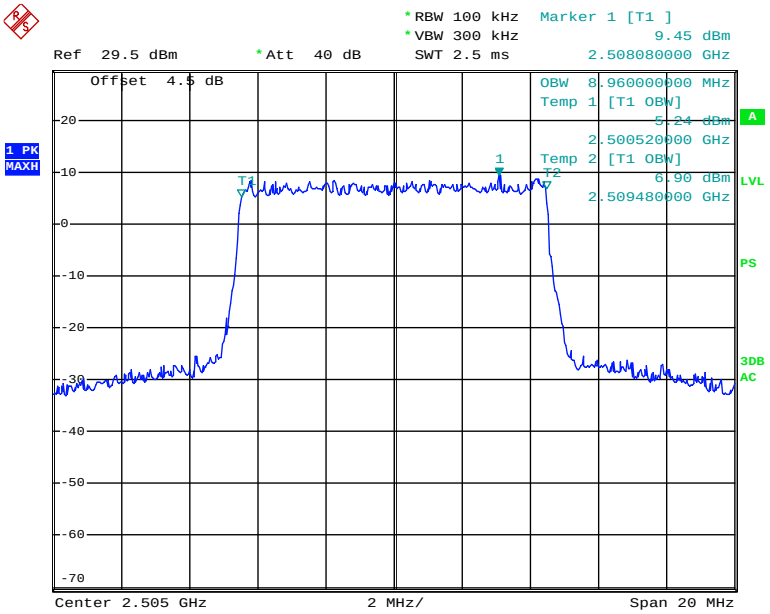
Date: 3.DEC.2014 09:36:14

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



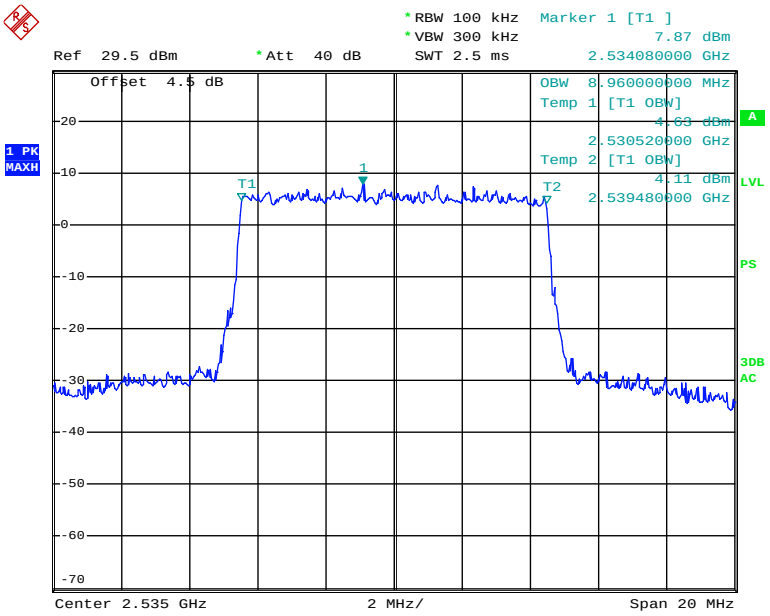
Date: 3.DEC.2014 09:32:06

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



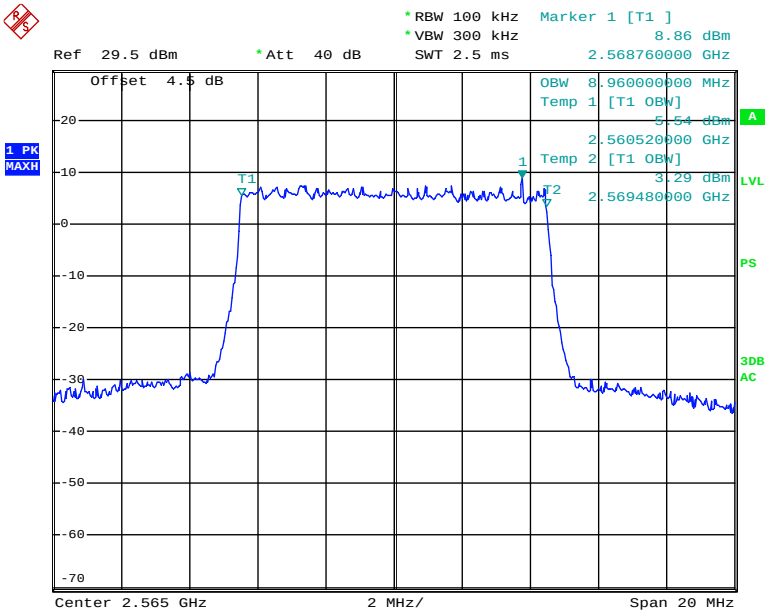
Date: 3.DEC.2014 09:30:57

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



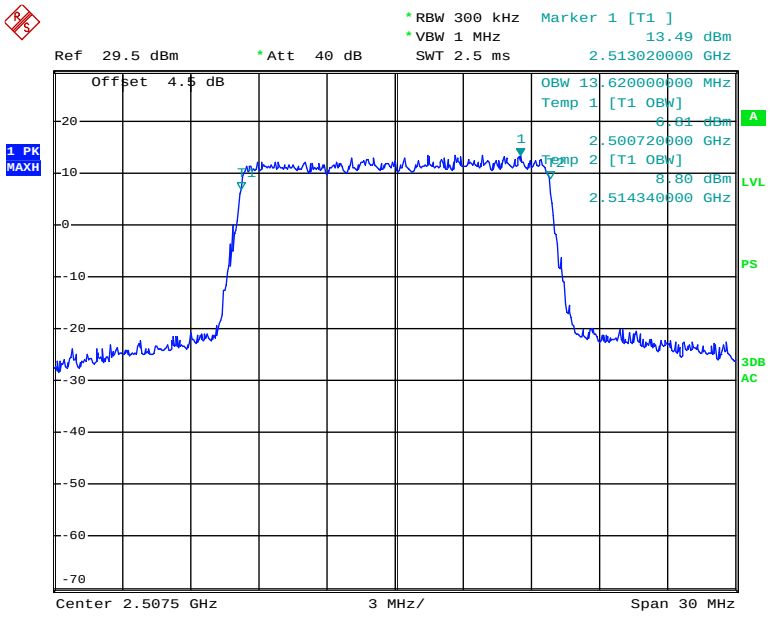
Date: 3.DEC.2014 09:35:52

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



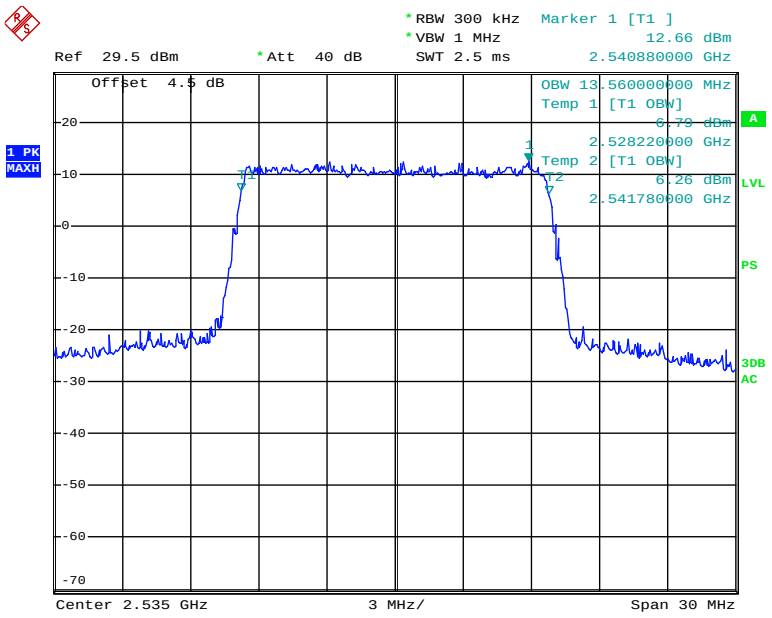
Date: 3.DEC.2014 09:35:13

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



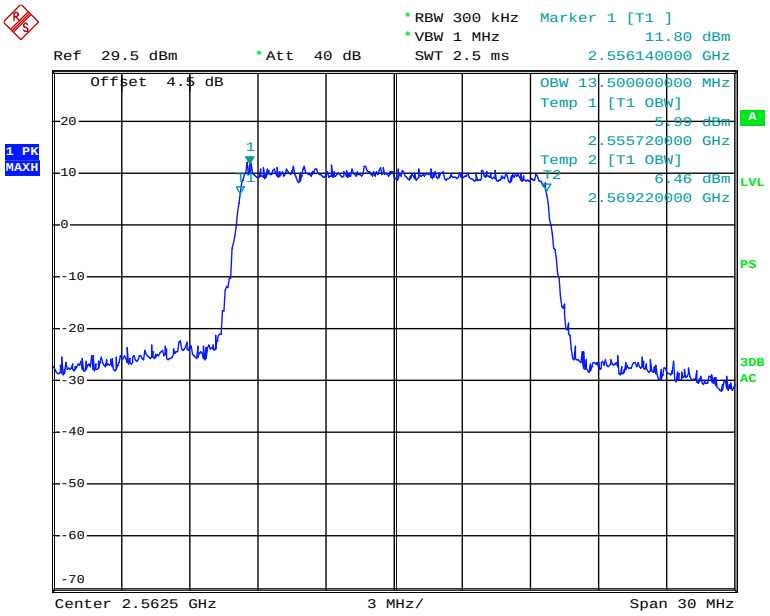
Date: 3.DEC.2014 09:22:46

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



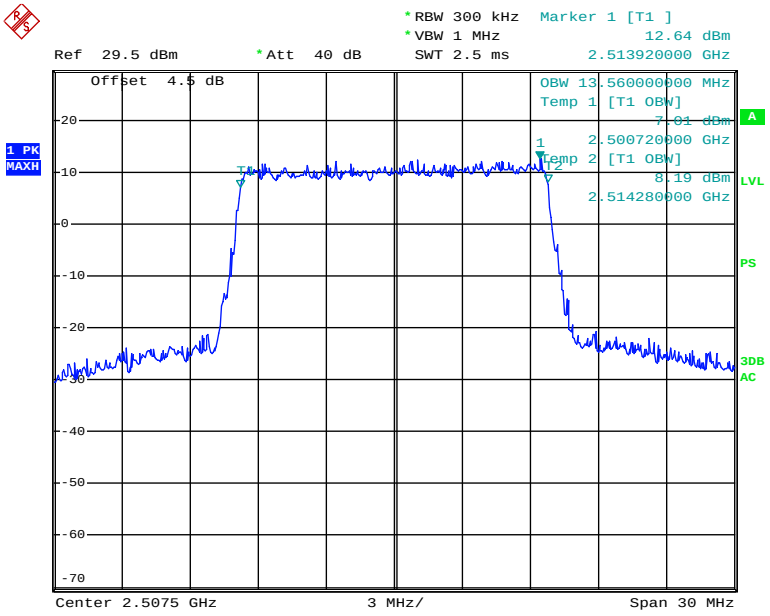
Date: 3.DEC.2014 09:18:56

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



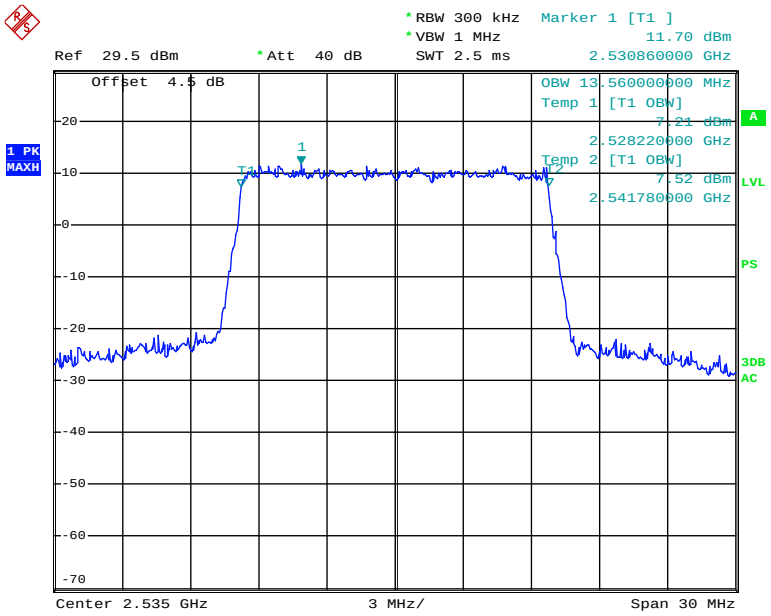
Date: 3.DEC.2014 09:22:09

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



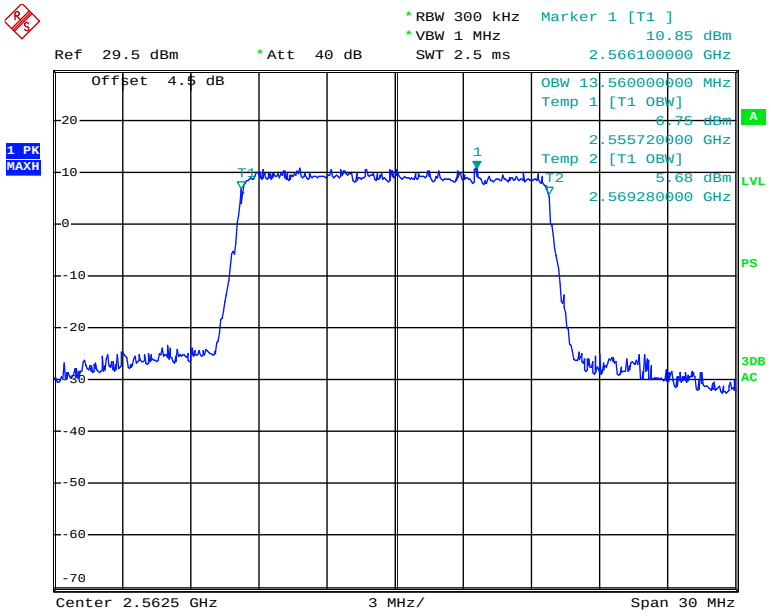
Date: 3.DEC.2014 09:23:05

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



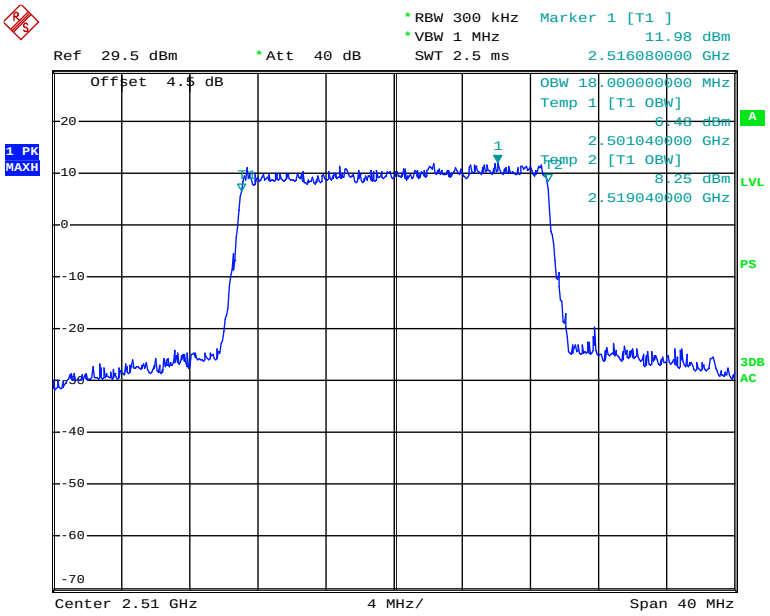
Date: 3.DEC.2014 09:19:55

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



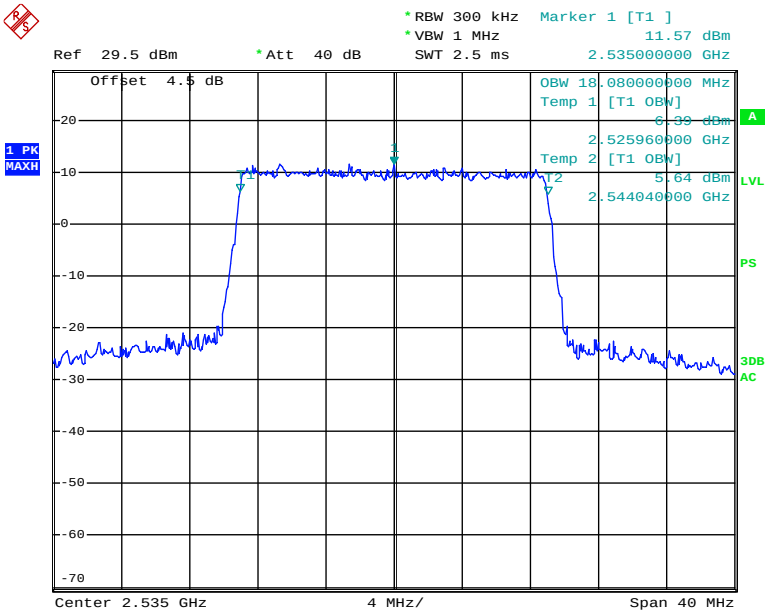
Date: 3.DEC.2014 09:21:37

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



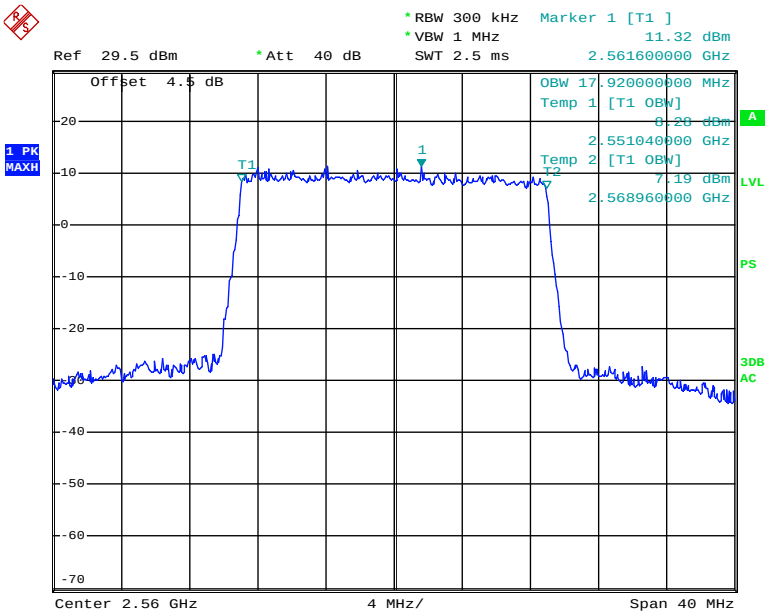
Date: 3.DEC.2014 09:16:20

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



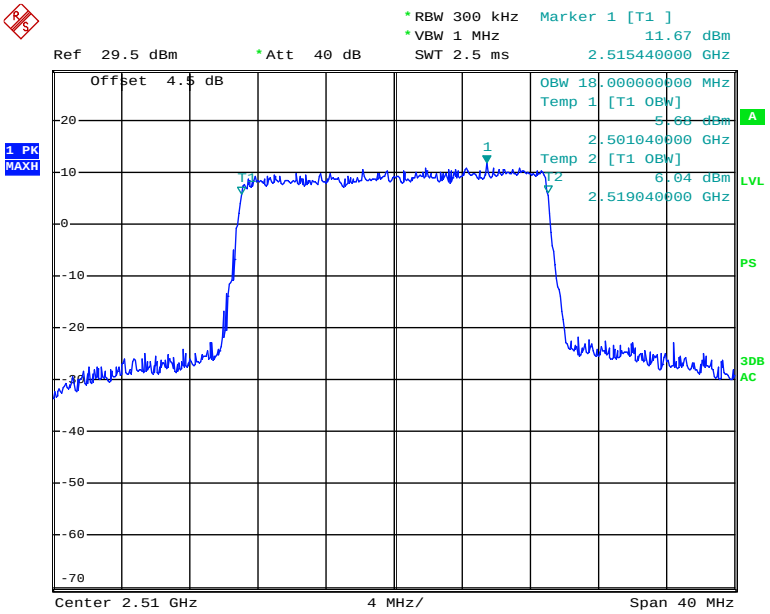
Date: 3.DEC.2014 09:17:02

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



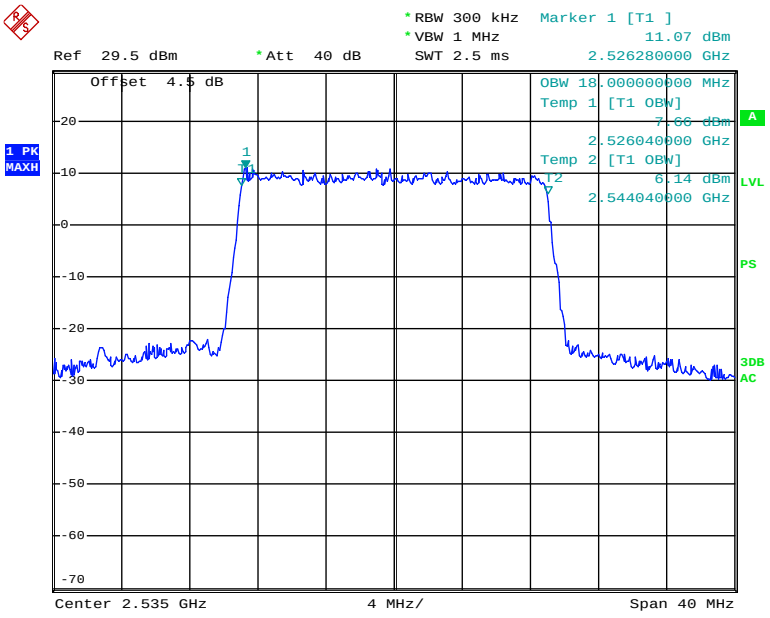
Date: 3.DEC.2014 09:14:37

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



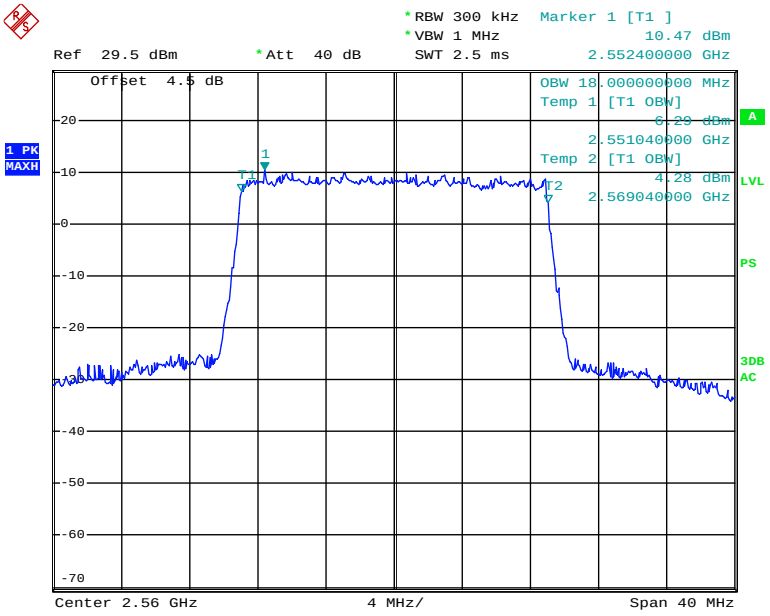
Date: 3.DEC.2014 09:15:45

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



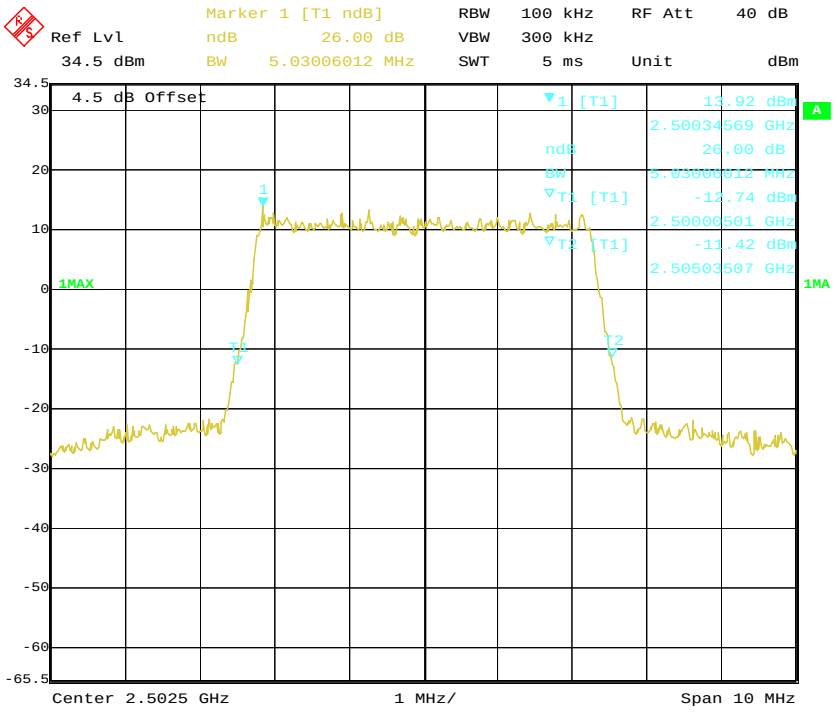
Date: 3.DEC.2014 09:18:21

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

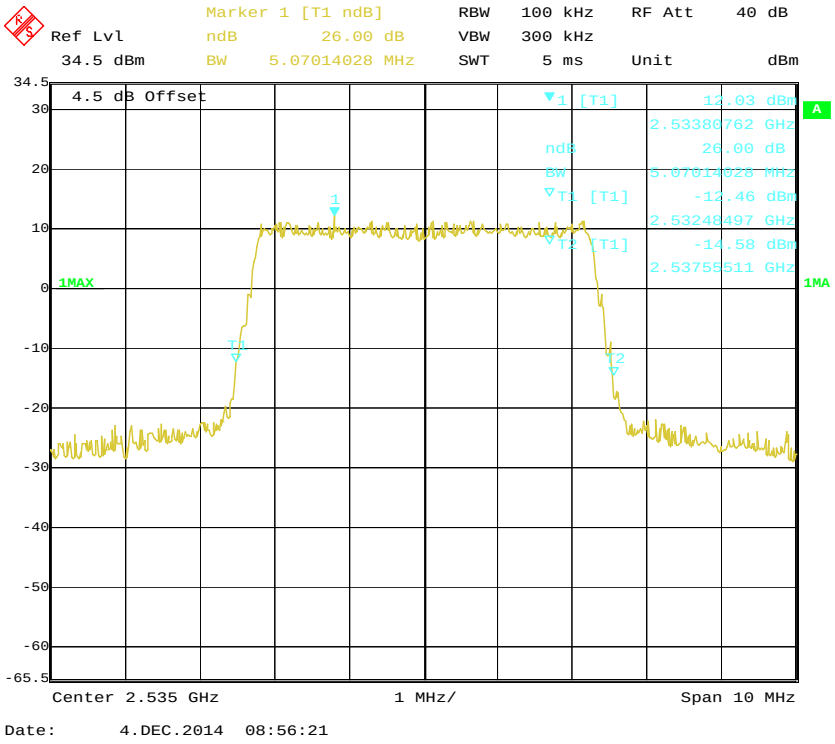


Date: 3.DEC.2014 09:15:05

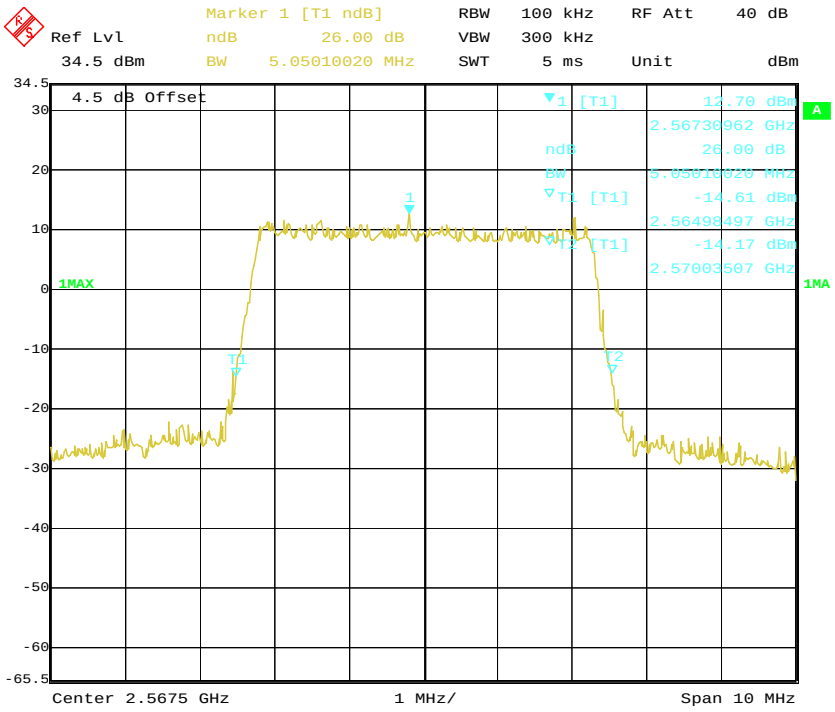
QPSK (5.0 MHz) - 26 dB Bandwidth, Low channel



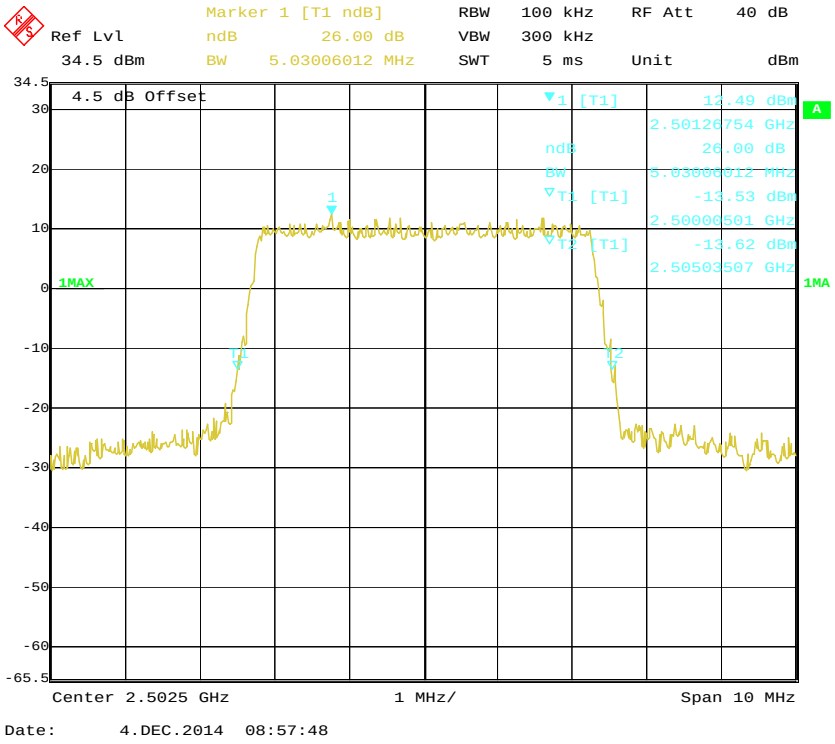
QPSK (5.0 MHz) - 26 dB Bandwidth, Middle channel



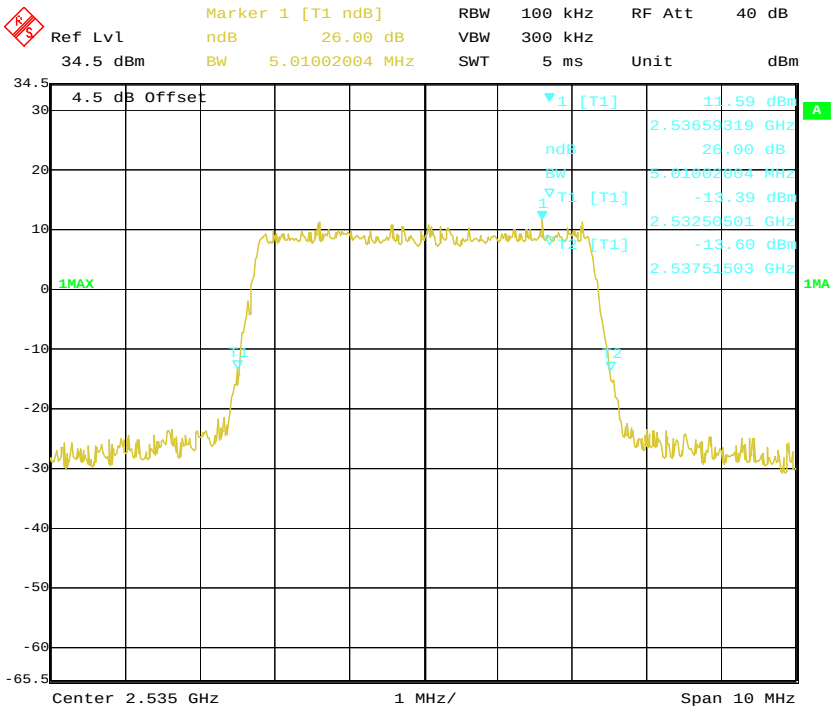
QPSK (5.0 MHz) - 26 dB Bandwidth, High channel



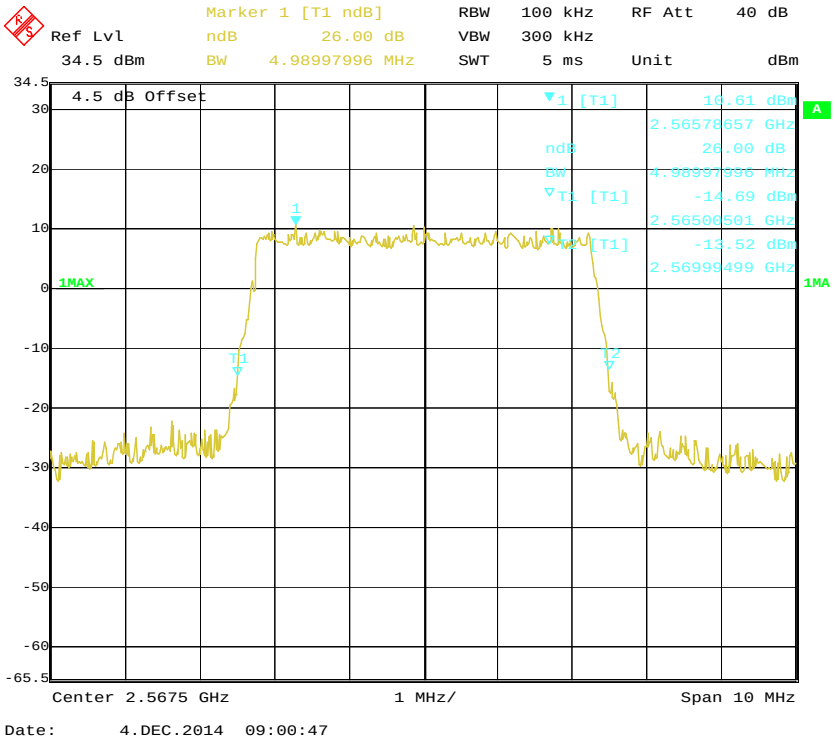
16-QAM (5.0 MHz) - 26 dB Bandwidth, Low channel



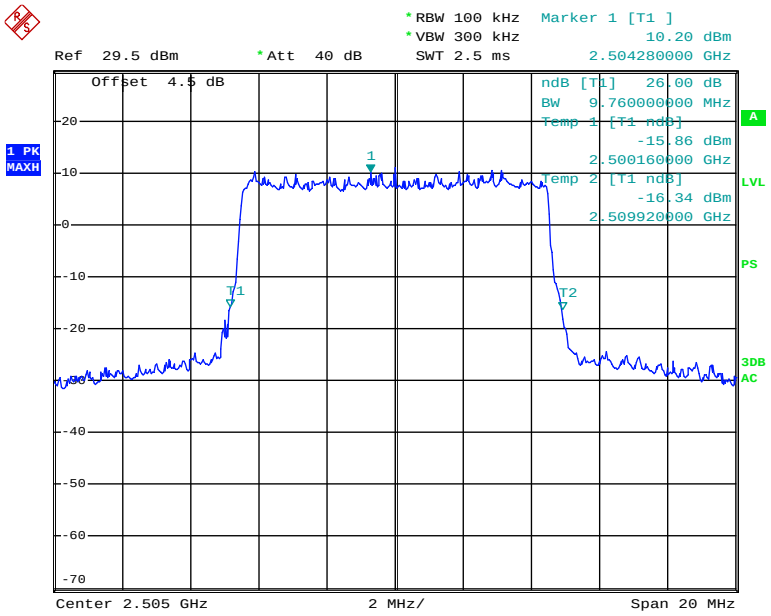
16-QAM (5.0 MHz) - 26 dB Bandwidth, Middle channel



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

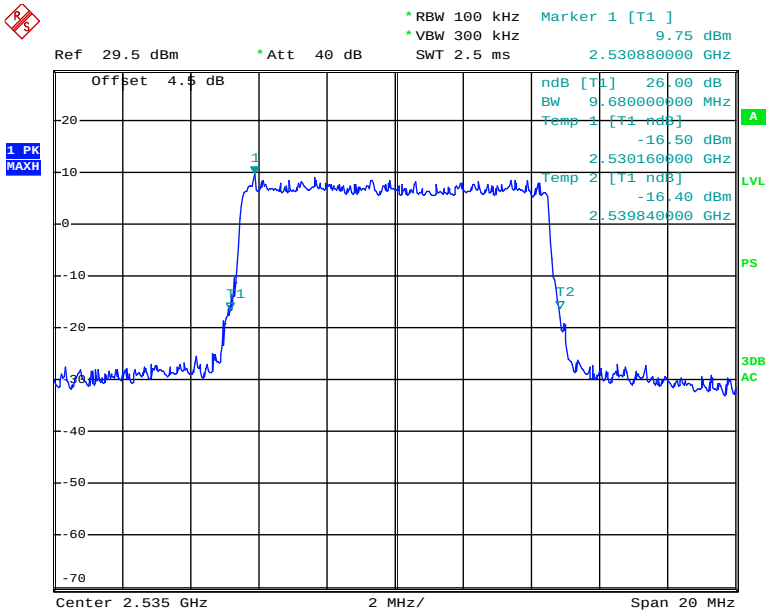


QPSK (10.0 MHz) - 26 dB Bandwidth, Low channel



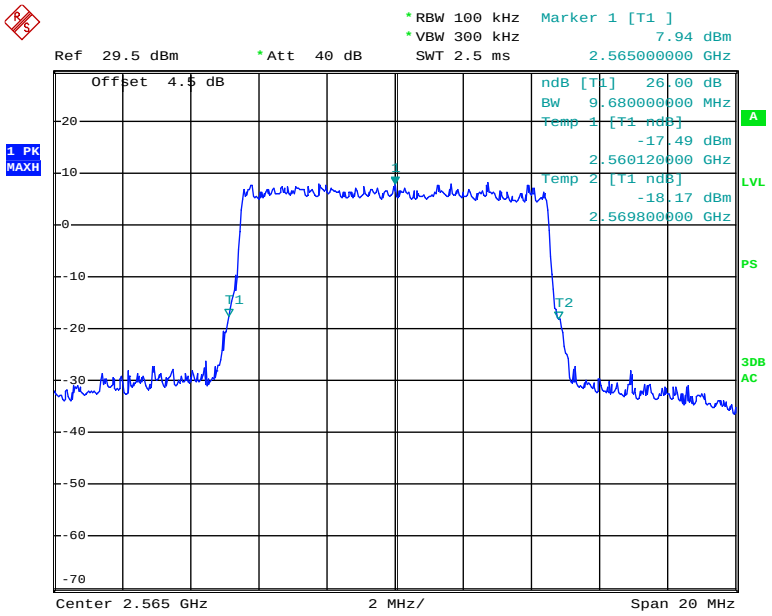
Date: 3.DEC.2014 09:30:19

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



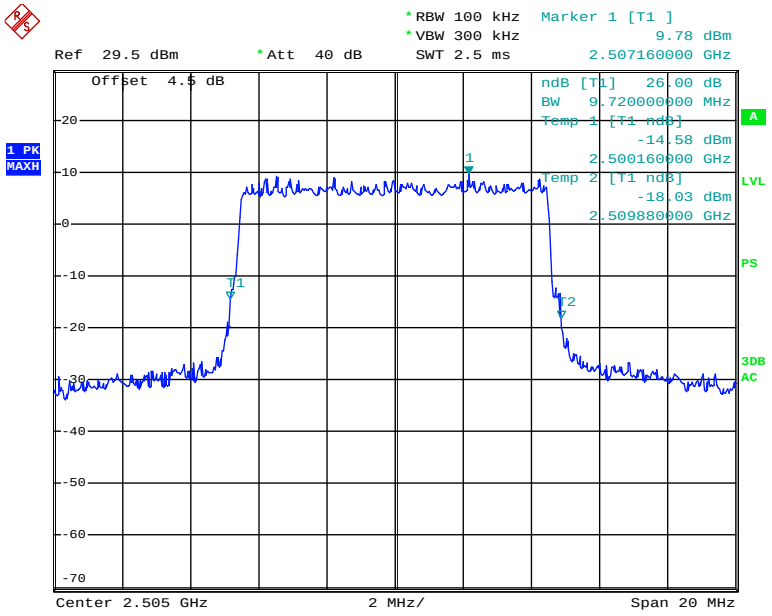
Date: 3.DEC.2014 09:27:45

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



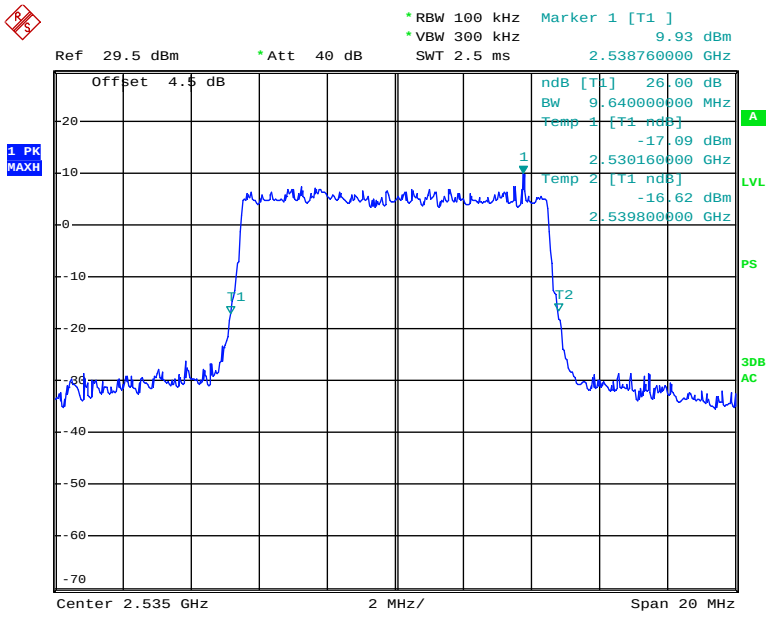
Date: 3.DEC.2014 09:29:39

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



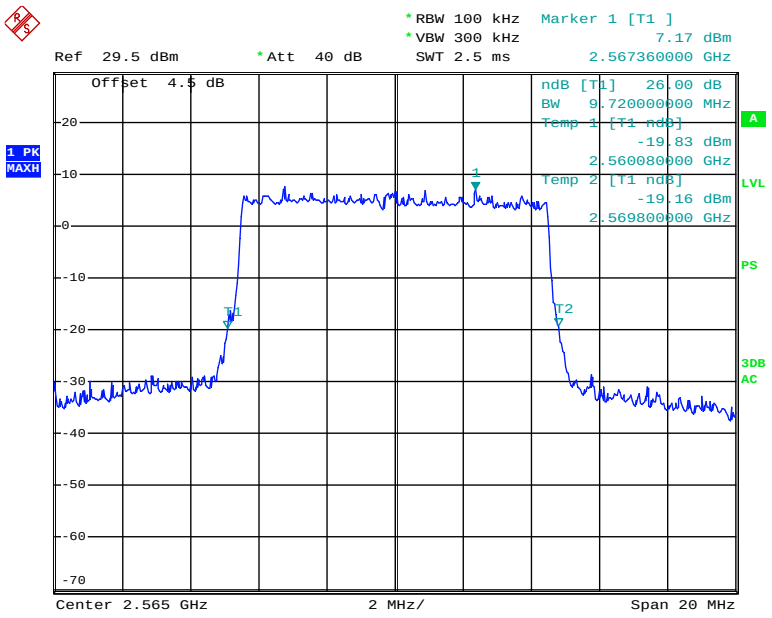
Date: 3.DEC.2014 09:30:38

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



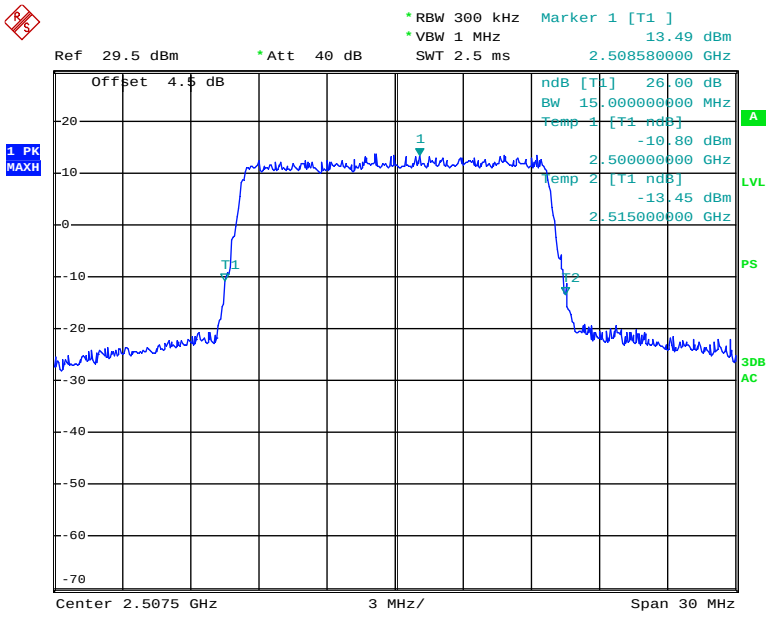
Date: 3.DEC.2014 09:28:25

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



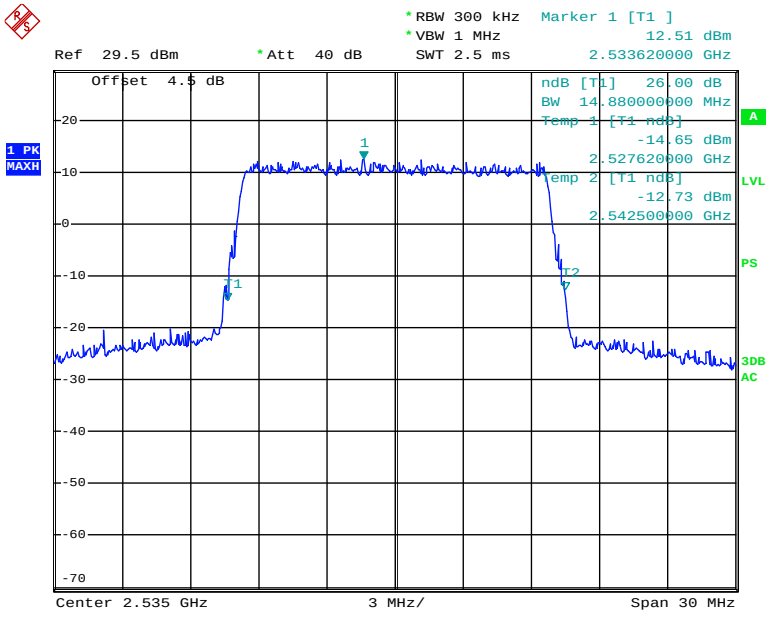
Date: 3.DEC.2014 09:29:13

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



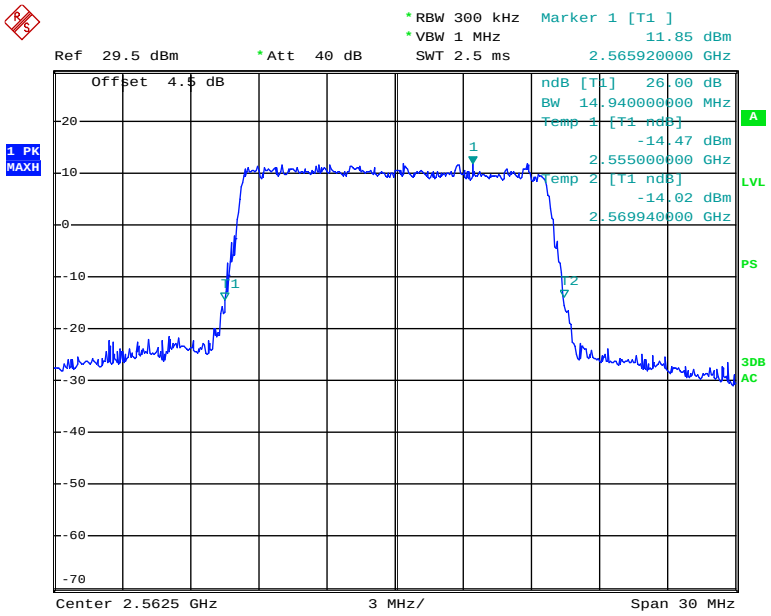
Date: 3.DEC.2014 09:24:35

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



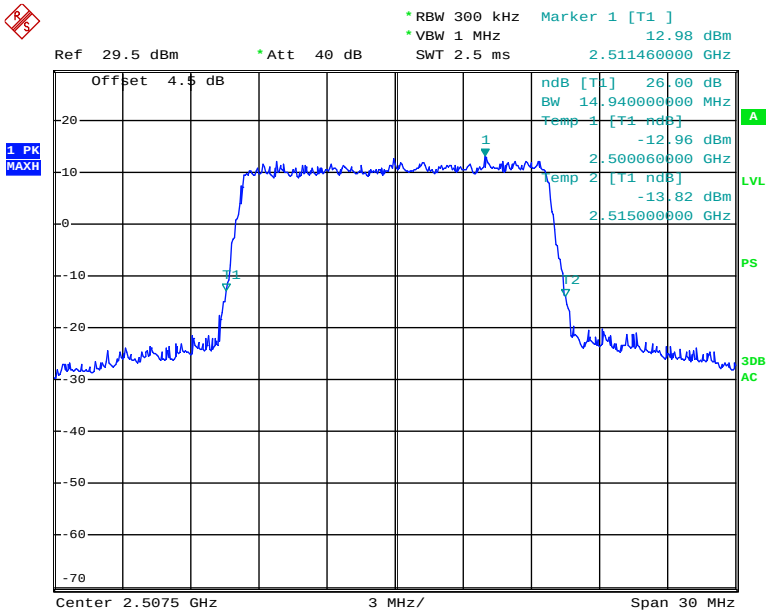
Date: 3.DEC.2014 09:26:36

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



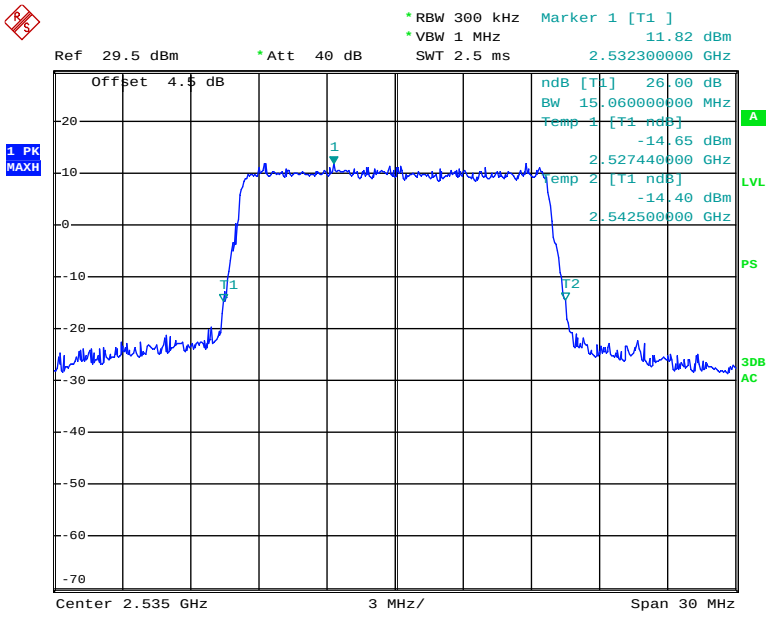
Date: 3.DEC.2014 09:25:25

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



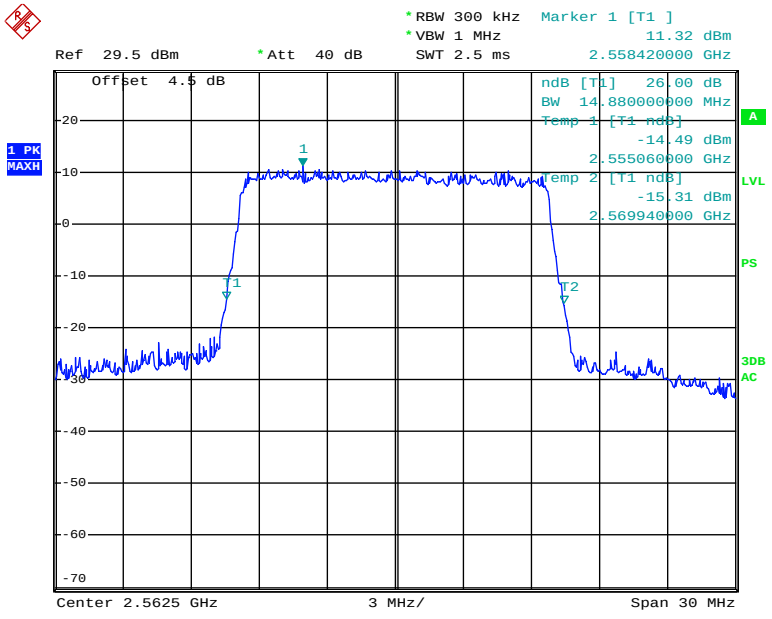
Date: 3.DEC.2014 09:23:43

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



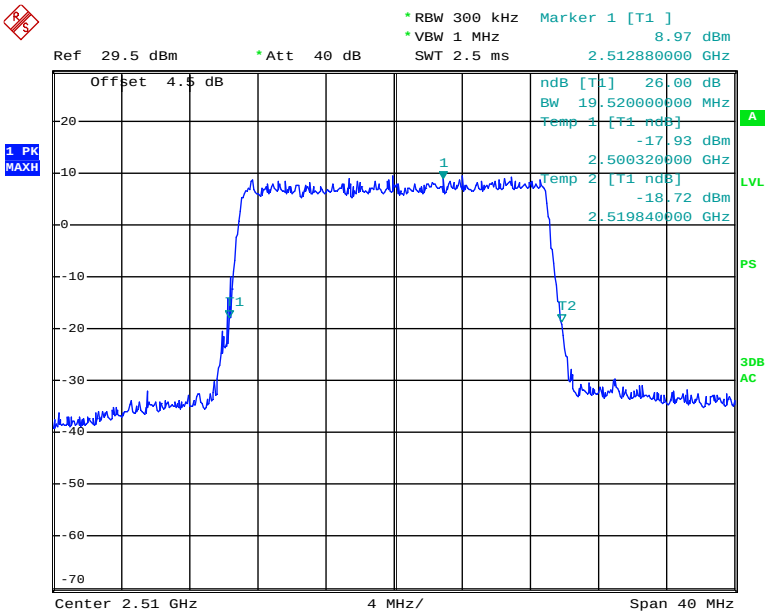
Date: 3.DEC.2014 09:26:17

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



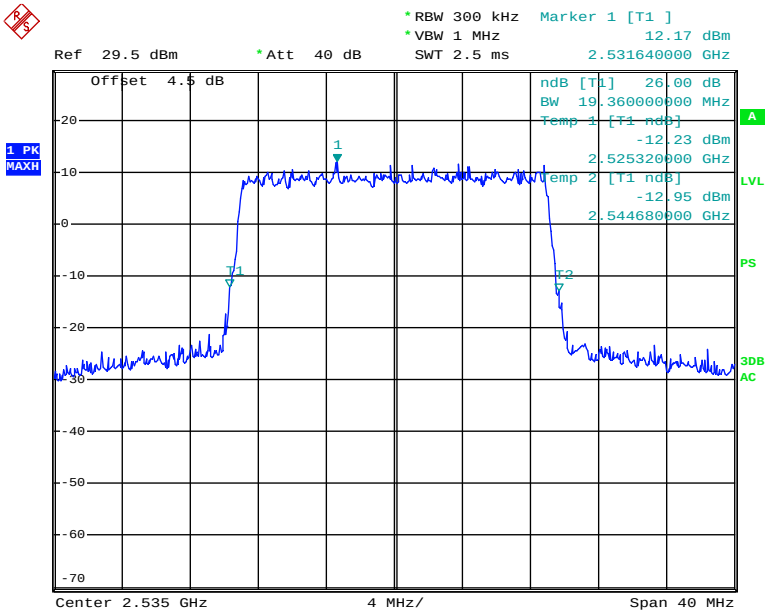
Date: 3.DEC.2014 09:25:45

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



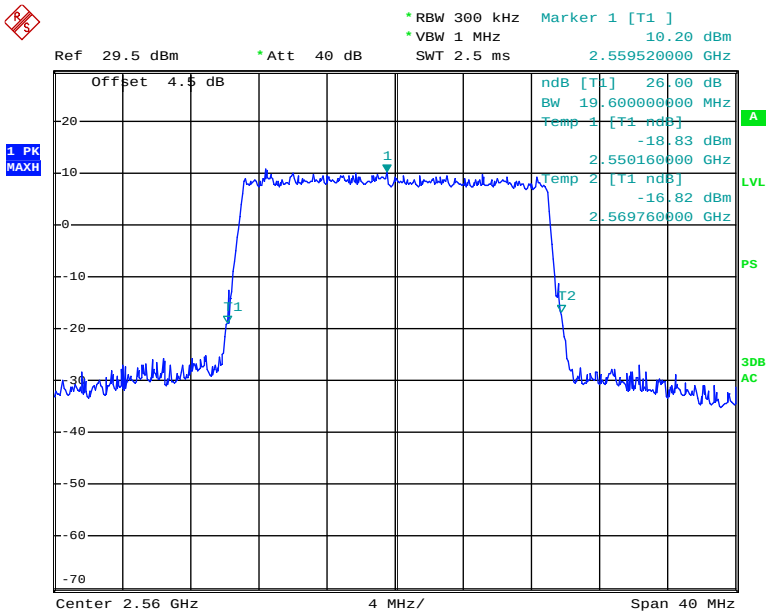
Date: 3.DEC.2014 09:06:30

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



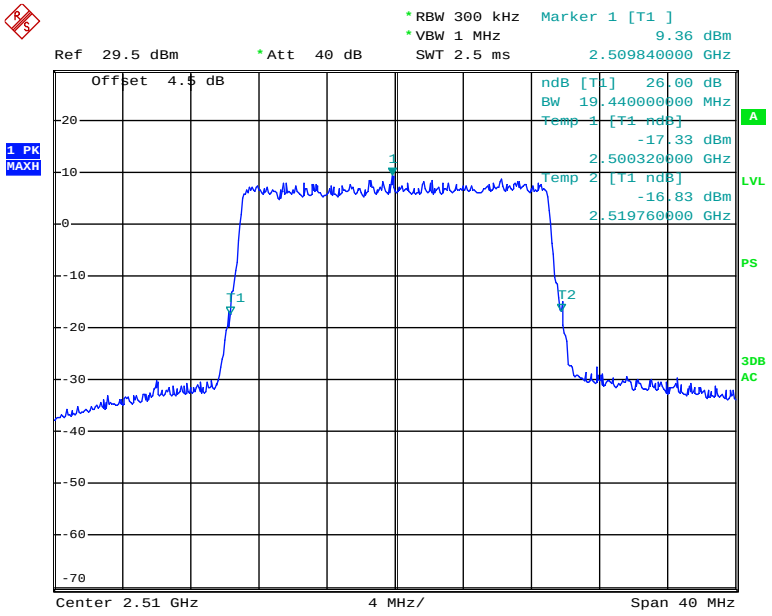
Date: 3.DEC.2014 09:06:12

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



Date: 3.DEC.2014 09:13:50

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



Date: 3.DEC.2014 09:06:48