FCC PART 15.407

TEST REPORT

For

Huawei Technologies Co., Ltd.

Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, P.R.C

FCC ID: QISBTS3911B

Report Type:	Product Type:
Class II permissive change	Pico BTS

Test Engineer:	Allen Qiao *(signature: Allen Qiao)*
Report Number:	RDG150427001-00C
Report Date:	2016-02-04
Reviewed By:	Jerry Zhang EMC Manager *(signature: Jerry Zhang)*
Test Laboratory:	Bay Area Compliance Laboratories Corp. (Dongguan) No.69 Pulongcun, Puxinhu Industrial Zone, Tangxia, Dongguan, Guangdong, China Tel: +86-769-86858888 Fax: +86-769-86858891 www.baclcorp.com.cn

TABLE OF CONTENTS

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *Huawei Technologies Co., Ltd.*'s product, model number: *BTS3911B (FCC ID: QISBTS3911B) or* ("EUT") in this report is a *Pico BTS,* which was measured approximately: 20.0 cm (L) x 20.0 cm (W) x 5.0 cm (H), rated input voltage: DC 48V from POE adapter.

* All measurement and test data in this report was gathered from production sample serial number: 150427001 (Assigned by BACL, Dongguan). The EUT was received on 2015-05-04

Objective

This type approval report is prepared on behalf of *Huawei Technologies Co., Ltd.* in accordance with Part 2-Subpart J, Part 15-Subparts A, B and E of the Federal Communications Commission's rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart E, section 15.203, 15.205, 15.207, 15.209 and 15.407 rules.

This is the Class II Permissive Change application of the device. The difference between the original device and the current one is as follows:

1. Add the frequency band: 5250~5350 MHz, 5470~5725 MHz.

The change made to the device affected all the test results except conducted emissions, so we updated related test datas, The data for conducted emissions and EUT photos were copied from the report number RDG150427001-00B with FCC ID: QISBTS3911B.

Related Submittal(s)/Grant(s)

Original submission with FCC ID: QISBTS3911B which was granted on 2015-07-21.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2009, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

All emissions measurement was performed and Bay Area Compliance Laboratories Corp. (Dongguan).

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Dongguan) to collect test data is located on the No.69 Pulongcun, Puxinhu Industrial Zone, Tangxia, Dongguan, Guangdong, China

Test site at Bay Area Compliance Laboratories Corp. (Dongguan) has been fully described in reports submitted to the Federal Communications 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 February 06, 2015. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2009.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 273710. 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

Description of Test Configuration

The EUT was configured for testing in an engineering mode which was provided by the manufacturer.

For 5250~5350 MHz band, 7 channels are provided:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
52	5260	60	5300
54	5270	62	5310
56	5280	64	5320
58	5290	/	/

For 802.11a, 802.11n ht20, Channel 52, 56 and 64 were tested, for 802.11n ht40, Channel 54, 62 were tested. For 802.11ac 80, channel 58 was tested.

For 5470~5725 MHz band, 12 channels are provided:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
100	5500	120	5600
102	5510	122	5610
104	5520	124	5620
106	5530	126	5630
108	5540	128	5640
110	5550	132	5660
112	5560	134	5670
116	5580	136	5680
118	5590	140	5700

For 802.11a, 802.11n ht20, Channel 100, 116 and 140 were tested, for 802.11n ht40, Channel 102, 110 and 134 were tested, for 802.11ac 80, channel 106,122 were tested.

The device support MIMO for all modes, the worst-case data rates are determined to be as follows for each mode based upon investigations by measuring the average power and PSD across all data rates bandwidths, and modulations.

EUT Exercise Software

The CMD Command was used for testing, and the commands were provided by manufacturer. The worst condition (maximum power with 100% dutycycle) was setting by the software as following table:

Software and version				CMD Command			
UNII Band	Mode	Channel	Frequency (MHz)	Data Rate (Mbps)	Power Level		
					Chain 0	Chain 1	Chain 2
5250-5350MHz	802.11 a	Low	5260	54	10	10	10
		Middle	5280	54	10	10	10
		High	5320	54	10	10	10
	802.11 n20	Low	5260	t7	10	10	10
		Middle	5280	t7	10	10	10
		High	5320	t7	10	10	10
	802.11 n40	Low	5270	f7	12	12	12
		High	5310	f7	12	12	12
	802.11 ac80	Middle	5290	ve7	14	14	14
5470-5725MHz	802.11 a	Low	5500	54	9	9	9
		Middle	5580	54	9	9	9
		High	5700	54	9	9	9
	802.11 n20	Low	5500	t7	9	9	9
		Middle	5580	t7	9	9	9
		High	5700	t7	9	9	9
	802.11 n40	Low	5510	f7	12	12	12
		Middle	5550	f7	12	12	12
		High	5670	f7	12	12	12
	802.11 ac80	Low	5530	ve7	14	14	14
		High	5610	ve7	14	14	14

Equipment Modifications

No modification was made to the EUT.

Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Lenovo	Laptop	Thinkpad X230	/
Huawei	POE Adapter	POE85-56A	/

External I/O Cable

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
RJ45 Cable	No	No	1.5	RJ45 Port of POE	EUT
RJ45 Cable	No	No	10	RJ45 Port of Laptop	POE

Block Diagram of Test Setup
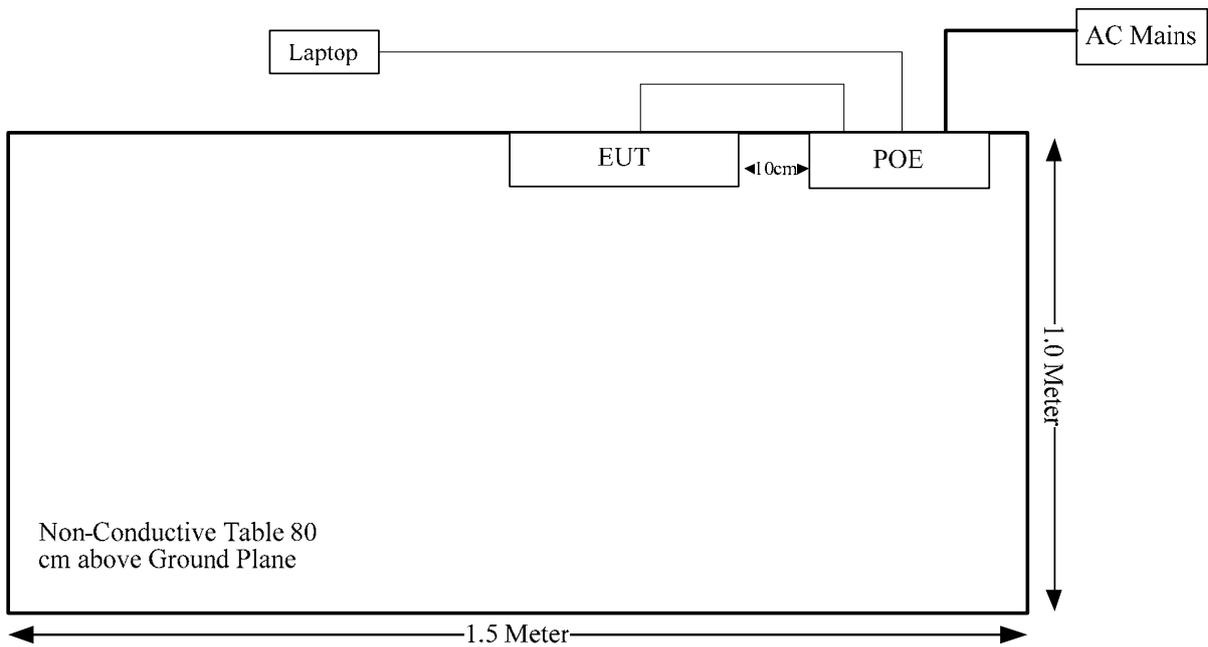
SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
FCC §15.407 (f) & §1.1310 & §2.1091	Maximum Permissible Exposure	Compliance*
§15.203	Antenna Requirement	Compliance
§15.407(b)(6)& §15.207(a)	Conducted Emissions	Compliance**
§15.205& §15.209 &§15.407(b) (1),(6),(7)	Undesirable Emission& Restricted Bands	Compliance
§15.407(b) (1),(2),(3),(4)	Out Of Band Emissions	Compliance
§15.407(a) (1)	26 dB Bandwidth	Compliance
§15.407(a)(1),	Conducted Transmitter Output Power	Compliance
§15.407 (a)(1),(5)	Power Spectral Density	Compliance
§15.407(H)	Dynamic Frequency Selection (DFS)	Compliance***

Compliance*: please refer to the EMF report, document No.: SYBH(R)01787709EB-3, which was provided by huawei EMC Lab.
Compliance** : The test result is compliance, please refer to the original grant test report No. RDG150427001-00B with FCC ID: QISBTS3911B, which was issued on 2015-06-04.
Compliance***: please refer to the DFS test report: RDG150427001-00D.

FCC §15.203 – ANTENNA REQUIREMENT

Applicable Standard

According to § 15.203, An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

And according to FCC 47 CFR section 15.407 (a)(1),if transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Antenna Connector Construction

The EUT have 3 internal antenna and all the antenna gain is 9 dBi at 5G bands. Fulfill the requirement of this section. Please refer to the EUT photos.

Result: Compliance.

FCC §15.209, §15.205 & §15.407(b) (1) (6) (7) −UNWANTED EMISSION

Applicable Standard

FCC §15.407; §15.209; §15.205;

(b) Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of −17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of −27 dBm/MHz.

(5) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.

(6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.

(7) The provisions of §15.205 apply to intentional radiators operating under this section.

Measurement Uncertainty

Compliance or non- compliance with a disturbance limit shall be determined in the following manner

If U_{lab} is less than or equal to U_{cispr} of Table 1, then:
− compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
− non - compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.
If U_{lab} is greater than U_{cispr} of Table 1, then:
− compliance is deemed to occur if no measured disturbance level, increased by ($U_{lab} − U_{cispr}$), exceeds the disturbance limit;
− non - compliance is deemed to occur if any measured disturbance level, increased by ($U_{lab} − U_{cispr}$), exceeds the disturbance limit.

Based on CISPR 16-4-2: 2011, measurement uncertainty of radiated emission at a distance of 3m at Bay Area Compliance Laboratories Corp. (Dongguan) is:
30M~200MHz: 5.0 dB
200M~1GHz: 6.2 dB
1G~6GHz: 4.45 dB
6G~18GHz: 5.23 dB

Table 1 – Values of U_{cispr}

Measurement	U_{cispr}
Radiated disturbance (electric field strength at an OATS or in a SAC) (30 MHz to 1000 MHz)	6.3 dB
Radiated disturbance (electric field strength in a FAR) (1 GHz to 6 GHz)	5.2 dB
Radiated disturbance (electric field strength in a FAR) (6 GHz to 18 GHz)	5.5 dB

EUT Setup

Below 1 GHz:
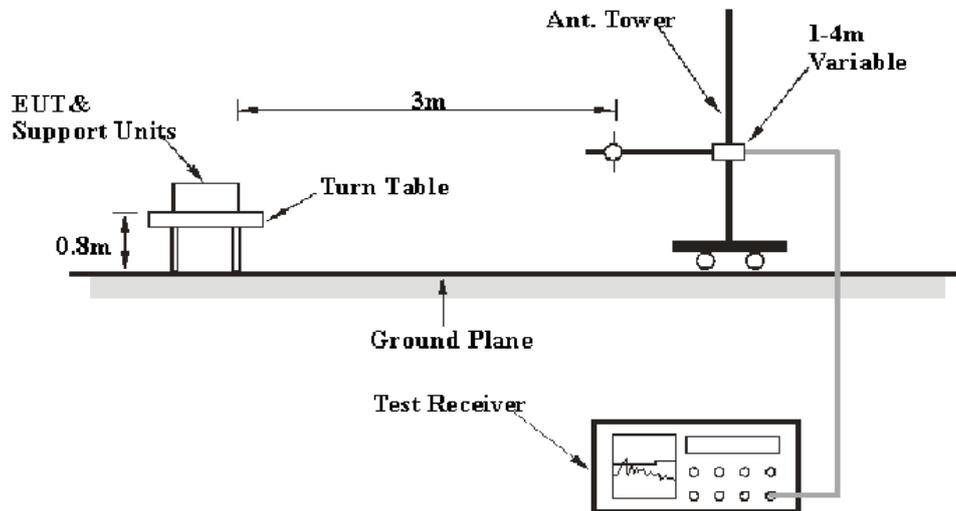
Above 1 GHz:
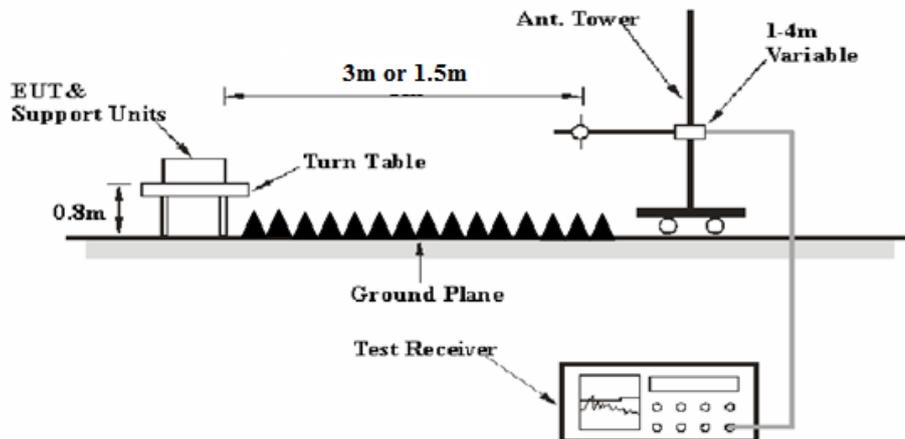
The radiated emission tests were performed in the 3 meters chamber, using the setup accordance with the ANSI C63.4-2009. The specification used was the FCC 15.209, and FCC 15.407 limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

The POE adapter connected to a 120 VAC/60 Hz power source,

EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 30 MHz to 40 GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Detector
30 MHz – 1000 MHz	120 kHz	300 kHz	120 kHz	QP
Above 1 GHz	1MHz	3 MHz	/	PK
	1MHz	10 Hz	/	Ave.

Test Procedure

During the radiated emission test, the POE was connected to the first AC floor outlet.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

Data was recorded in Quasi-peak detection mode for frequency range of 30 MHz-1GHz, peak and Average detection modes for frequencies above 1GHz.

According to KDB 789033 D02 General UNII Test Procedures New Rules v01, emission shall be computed as: E [dBμV/m] = EIRP[dBm] + 95.2, for d = 3 meters.

According to C63.4, the above 1G test result shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade from 3m to 1.5m
Distance extrapolation factor =20 log (specific distance [3m]/test distance [1.5m]) dB
Extrapolation result = Corrected Amplitude (dBμV/m) - distance extrapolation factor (6dB)

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Loss and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

Corrected Amplitude = Meter Reading + Antenna Loss + Cable Loss - Amplifier Gain

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

Margin = Limit –Extrapolation result

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	EMI Test Receiver	ESCI	100224	2015-05-09	2016-05-09
Sunol Sciences	Antenna	JB3	A060611-3	2014-11-06	2017-11-05
HP	Amplifier	8447E	2434A02181	2014-09-01	2015-09-01
HP	Amplifier	8447E	2434A02181	2015-09-01	2016-09-01
Agilent	Spectrum Analyzer	E4440A	SG43360054	2014-12-04	2015-12-04
Agilent	Spectrum Analyzer	E4440A	SG43360054	2015-12-04	2016-12-04
ETS-Lindgren	Horn Antenna	3115	000 527 35	2012-09-06	2015-09-06
ETS-Lindgren	Horn Antenna	3115	000 527 35	2015-09-06	2018-09-06
Mini-Circuit	Amplifier	ZVA-213-S+	054201245	2015-02-19	2016-02-19
R&S	Spectrum Analyzer	FSP 38	100478	2015-05-09	2016-05-09
Ducommun Technolagies	Horn Antenna	ARH-4223-02	1007726-01 1304	2014-06-16	2017-06-15
Ducommun Technolagies	Horn Antenna	ARH-2823-02	1007726-01 1302	2014-06-16	2017-06-15
Quinstar	Amplifier	QLW-18405536-JO	15964001001	2014-09-06	2015-09-06

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

Test Results Summary

According to the recorded data in following table, the EUT complied with the <u>FCC Title 47, Part 15, Subpart C, Section 15.205, 15.209 and 15.407</u>, with the worst margin reading of:

0.43 dB at **5350 MHz** in the **Vertical** polarization for 802.11n ht40 mode

Test Data

Environmental Conditions

Temperature:	24.1 °C-23.4 °C
Relative Humidity:	53 %-57 %
ATM Pressure:	99.7 kPa-100.6 kPa

The testing was performed by Allen Qiao from 2015-05-18 to 2016-02-04.

Result: Compliance.

Note 1: For above 1GHz, the test distance is 1.5m.
Note 2: the emission compliance 15.209 general requirements,or compliance the outside band emission limits in the un-restricted bands.

Please refer to the following tables

Mode: Transmitting

5250MHz-5350MHz: 802.11a Mode:

Frequency	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Extrapolation result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
(MHz)	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)						
Low Channel:5260 MHz										
5260	82.81	PK	H	31.62	5.24	0.00	119.67	113.67	N/A	N/A
5260	72.01	AV	H	31.62	5.24	0.00	108.87	102.87	N/A	N/A
5260	84.64	PK	V	31.62	5.24	0.00	121.50	115.50	N/A	N/A
5260	73.74	AV	V	31.62	5.24	0.00	110.60	104.60	N/A	N/A
5150	37.32	PK	V	31.40	5.26	0.00	73.98	67.98	74.00	6.02
5150	16.38	AV	V	31.40	5.26	0.00	53.04	47.04	54.00	6.96
10520	33.92	PK	V	37.02	8.21	26.27	52.88	46.88	74.00	27.12
10520	20.86	AV	V	37.02	8.21	26.27	39.82	33.82	54.00	20.18
15780	31.99	PK	V	37.00	13.95	25.04	57.90	51.90	74.00	22.10
15780	19.52	AV	V	37.00	13.95	25.04	45.43	39.43	54.00	14.57
7017	48.14	PK	V	33.64	6.39	26.21	61.96	55.96	68.20	12.24
3280	34.24	PK	V	28.10	5.61	27.30	40.65	34.65	74.00	39.35
3280	21.00	AV	V	28.10	5.61	27.30	27.41	21.41	54.00	32.59
34.85	35.7	QP	V	18.46	0.79	21.42	33.53	33.53	40.00	6.47
Middle Channel:5280 MHz										
5280	82.96	PK	H	31.66	5.25	0.00	119.87	113.87	N/A	N/A
5280	72.01	AV	H	31.66	5.25	0.00	108.92	102.92	N/A	N/A
5280	84.67	PK	V	31.66	5.25	0.00	121.58	115.58	N/A	N/A
5280	73.87	AV	V	31.66	5.25	0.00	110.78	104.78	N/A	N/A
10560	34.17	PK	V	37.05	8.22	26.52	52.92	46.92	74.00	27.08
10560	21.14	AV	V	37.05	8.22	26.52	39.89	33.89	54.00	20.11
15840	32.06	PK	V	36.89	13.71	24.99	57.67	51.67	74.00	22.33
15840	19.61	AV	V	36.89	13.71	24.99	45.22	39.22	54.00	14.78
7038	48.34	PK	V	33.69	6.41	26.18	62.26	56.26	68.20	11.94
3280	34.31	PK	V	28.10	5.61	27.30	40.72	34.72	74.00	39.28
3280	21.04	AV	V	28.10	5.61	27.30	27.45	21.45	54.00	32.55
34.85	35.2	QP	V	18.46	0.79	21.42	33.03	33.03	40.00	6.97
96.93	39.10	QP	V	9.64	1.23	21.40	28.57	28.57	43.50	14.93
High Channel:5320 MHz										
5320	82.84	PK	H	31.74	5.40	0.00	119.98	113.98	N/A	N/A
5320	72.10	AV	H	31.74	5.40	0.00	109.24	103.24	N/A	N/A
5320	84.82	PK	V	31.74	5.40	0.00	121.96	115.96	N/A	N/A
5320	74.02	AV	V	31.74	5.40	0.00	111.16	105.16	N/A	N/A
5350	29.36	PK	V	31.80	5.61	0.00	66.77	60.77	74.00	13.23
5350	16.24	AV	V	31.80	5.61	0.00	53.65	47.65	54.00	6.35
10640	34.25	PK	V	37.11	8.24	26.78	52.82	46.82	74.00	27.18
10640	21.26	AV	V	37.11	8.24	26.78	39.83	33.83	54.00	20.17
15960	32.27	PK	V	36.67	13.21	24.70	57.45	51.45	74.00	22.55
15960	19.66	AV	V	36.67	13.21	24.70	44.84	38.84	54.00	15.16
7089	48.36	PK	V	33.81	6.48	26.09	62.56	56.56	68.20	11.64
3280	34.58	PK	V	28.10	5.61	27.30	40.99	34.99	74.00	39.01
3280	21.28	AV	V	28.10	5.61	27.30	27.69	21.69	54.00	32.31
34.85	35.5	QP	V	18.46	0.79	21.42	33.33	33.33	40.00	6.67

802.11n ht20 Mode:

Frequency	Receiver		Rx Antenna		Cable loss	Amplifier Gain	Corrected Amplitude	Extrapolation result	Limit	Margin
(MHz)	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dBμV/m)	(dB)
Low Channel:5260 MHz										
5260	80.77	PK	H	31.62	5.24	0.00	117.63	111.63	N/A	N/A
5260	70.69	AV	H	31.62	5.24	0.00	107.55	101.55	N/A	N/A
5260	82.51	PK	V	31.62	5.24	0.00	119.37	113.37	N/A	N/A
5260	72.56	AV	V	31.62	5.24	0.00	109.42	103.42	N/A	N/A
5150	34.26	PK	V	31.40	5.26	0.00	70.92	64.92	74.00	9.08
5150	16.28	AV	V	31.40	5.26	0.00	52.94	46.94	54.00	7.06
10520	33.57	PK	V	37.02	8.21	26.27	52.53	46.53	74.00	27.47
10520	20.44	AV	V	37.02	8.21	26.27	39.40	33.40	54.00	20.60
15780	31.58	PK	V	37.00	13.95	25.04	57.49	51.49	74.00	22.51
15780	19.38	AV	V	37.00	13.95	25.04	45.29	39.29	54.00	14.71
7017	45.77	PK	V	33.64	6.39	26.21	59.59	53.59	68.20	14.61
2786	33.96	PK	V	26.64	4.45	27.55	37.50	31.50	74.00	42.50
2786	20.75	AV	V	26.64	4.45	27.55	24.29	18.29	54.00	35.71
34.85	35.3	QP	V	18.46	0.79	21.42	33.13	33.13	40.00	6.87
Middle Channel:5280 MHz										
5280	81.26	PK	H	31.66	5.25	0.00	118.17	112.17	N/A	N/A
5280	71.80	AV	H	31.66	5.25	0.00	108.71	102.71	N/A	N/A
5280	83.02	PK	V	31.66	5.25	0.00	119.93	113.93	N/A	N/A
5280	73.67	AV	V	31.66	5.25	0.00	110.58	104.58	N/A	N/A
10560	34.03	PK	V	37.05	8.22	26.52	52.78	46.78	74.00	27.22
10560	20.98	AV	V	37.05	8.22	26.52	39.73	33.73	54.00	20.27
15840	31.66	PK	V	36.89	13.71	24.99	57.27	51.27	74.00	22.73
15840	19.26	AV	V	36.89	13.71	24.99	44.87	38.87	54.00	15.13
7038	46.09	PK	V	33.69	6.41	26.18	60.01	54.01	68.20	14.19
2786	33.92	PK	V	26.64	4.45	27.55	37.46	31.46	74.00	42.54
2786	20.71	AV	V	26.64	4.45	27.55	24.25	18.25	54.00	35.75
34.85	35.5	QP	V	18.46	0.79	21.42	33.33	33.33	40.00	6.67
96.93	39.80	QP	V	9.64	1.23	21.40	29.27	29.27	43.50	14.23
High Channel:5320 MHz										
5320	81.61	PK	H	31.74	5.40	0.00	118.75	112.75	N/A	N/A
5320	72.17	AV	H	31.74	5.40	0.00	109.31	103.31	N/A	N/A
5320	83.34	PK	V	31.74	5.40	0.00	120.48	114.48	N/A	N/A
5320	74.02	AV	V	31.74	5.40	0.00	111.16	105.16	N/A	N/A
5350	30.26	PK	V	31.80	5.61	0.00	67.67	61.67	74.00	12.33
5350	19.47	AV	V	31.80	5.61	0.00	56.88	50.88	54.00	3.12
10640	34.01	PK	V	37.11	8.24	26.78	52.58	46.58	74.00	27.42
10640	21.12	AV	V	37.11	8.24	26.78	39.69	33.69	54.00	20.31
15960	31.97	PK	V	36.67	13.21	24.70	57.15	51.15	74.00	22.85
15960	19.47	AV	V	36.67	13.21	24.70	44.65	38.65	54.00	15.35
7089	46.40	PK	V	33.81	6.48	26.09	60.60	54.60	68.20	13.60
2786	34.39	PK	V	26.64	4.45	27.55	37.93	31.93	74.00	42.07
2786	21.05	AV	V	26.64	4.45	27.55	24.59	18.59	54.00	35.41
34.85	35.6	QP	V	18.46	0.79	21.42	33.43	33.43	40.00	6.57

802.11n ht40 Mode:

Frequency	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBµV/m)	Extrapolation result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
(MHz)	Reading (dBµV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)						
Low Channel:5270 MHz										
5270	76.33	PK	H	31.64	5.24	0.00	113.21	107.21	N/A	N/A
5270	67.40	AV	H	31.64	5.24	0.00	104.28	98.28	N/A	N/A
5270	78.32	PK	V	31.64	5.24	0.00	115.20	109.20	N/A	N/A
5270	69.31	AV	V	31.64	5.24	0.00	106.19	100.19	N/A	N/A
5150	37.26	PK	V	31.40	5.26	0.00	73.92	67.92	74.00	6.08
5150	17.21	AV	V	31.40	5.26	0.00	53.87	47.87	54.00	6.13
10540	33.43	PK	V	37.03	8.22	26.40	52.28	46.28	74.00	27.72
10540	20.28	AV	V	37.03	8.22	26.40	39.13	33.13	54.00	20.87
15810	31.32	PK	V	36.94	13.83	25.06	57.03	51.03	74.00	22.97
15810	19.14	AV	V	36.94	13.83	25.06	44.85	38.85	54.00	15.15
7028	45.35	PK	V	33.67	6.40	26.19	59.23	53.23	68.20	14.97
2786	33.78	PK	V	26.64	4.45	27.55	37.32	31.32	74.00	42.68
2786	20.58	AV	V	26.64	4.45	27.55	24.12	18.12	54.00	35.88
34.85	35.4	QP	V	18.46	0.79	21.42	33.23	33.23	40.00	6.77
High Channel:5310 MHz										
5310	78.50	PK	H	31.72	5.33	0.00	115.55	109.55	N/A	N/A
5310	68.51	AV	H	31.72	5.33	0.00	105.56	99.56	N/A	N/A
5310	80.35	PK	V	31.72	5.33	0.00	117.40	111.40	N/A	N/A
5310	70.23	AV	V	31.72	5.33	0.00	107.28	101.28	N/A	N/A
5350	40.77	PK	V	31.80	5.61	0.00	78.18	72.18	74.00	1.82
5350	22.16	AV	V	31.80	5.61	0.00	59.57	53.57	54.00	0.43
10620	33.77	PK	V	37.10	8.24	26.78	52.33	46.33	74.00	27.67
10620	20.58	AV	V	37.10	8.24	26.78	39.14	33.14	54.00	20.86
15930	31.52	PK	V	36.73	13.34	24.77	56.82	50.82	74.00	23.18
15930	19.53	AV	V	36.73	13.34	24.77	44.83	38.83	54.00	15.17
7080	45.94	PK	V	33.79	6.46	26.11	60.08	54.08	68.20	14.12
2786	33.90	PK	V	26.64	4.45	27.55	37.44	31.44	74.00	42.56
2786	20.73	AV	V	26.64	4.45	27.55	24.27	18.27	54.00	35.73
34.85	35.6	QP	V	18.46	0.79	21.42	33.43	33.43	40.00	6.57

802.11n ac80 Mode:

Frequency	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBµV/m)	Extrapolation result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
(MHz)	Reading (dBµV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)						
Channel:5290 MHz										
5290	75.39	PK	H	31.68	5.25	0.00	112.32	106.32	N/A	N/A
5290	65.37	AV	H	31.68	5.25	0.00	102.30	96.30	N/A	N/A
5290	77.36	PK	V	31.68	5.25	0.00	114.29	108.29	N/A	N/A
5290	67.34	AV	V	31.68	5.25	0.00	104.27	98.27	N/A	N/A
5150	36.65	PK	V	31.40	5.26	0.00	73.31	67.31	74.00	6.69
5150	17.53	AV	V	31.40	5.26	0.00	54.19	48.19	54.00	5.81
5350	38.68	PK	V	31.80	5.61	0.00	76.09	70.09	74.00	3.91
5350	21.42	AV	V	31.80	5.61	0.00	58.83	52.83	54.00	1.17
10580	32.25	PK	V	37.06	8.23	26.65	50.89	44.89	74.00	29.11
10580	19.36	AV	V	37.06	8.23	26.65	38.00	32.00	54.00	22.00
15870	30.45	PK	V	36.83	13.58	24.92	55.94	49.94	74.00	24.06
15870	17.68	AV	V	36.83	13.58	24.92	43.17	37.17	54.00	16.83
7050	45.17	PK	V	33.72	6.43	26.16	59.16	53.16	68.20	15.04
34.85	35.1	QP	V	18.46	0.79	21.42	32.93	32.93	40.00	7.07

5470MHz-5725MHz:

802.11a Mode:

Frequency	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Extrapolation result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
(MHz)	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)						
Low Channel:5500 MHz										
5500	82.73	PK	H	32.10	5.48	0.00	120.31	114.31	N/A	N/A
5500	71.68	AV	H	32.10	5.48	0.00	109.26	103.26	N/A	N/A
5500	84.39	PK	V	32.10	5.48	0.00	121.97	115.97	N/A	N/A
5500	73.87	AV	V	32.10	5.48	0.00	111.45	105.45	N/A	N/A
5470	33.91	PK	V	32.04	5.50	0.00	71.45	65.45	74.00	8.55
5470	19.66	AV	V	32.04	5.50	0.00	57.20	51.20	54.00	2.80
11000	33.36	PK	V	37.40	8.32	26.42	52.66	46.66	74.00	27.34
11000	20.58	AV	V	37.40	8.32	26.42	39.88	33.88	54.00	20.12
16500	31.28	PK	V	37.40	13.42	23.97	58.13	52.13	74.00	21.87
16500	18.72	AV	V	37.40	13.42	23.97	45.57	39.57	54.00	14.43
4917	36.34	PK	V	30.88	5.33	27.43	45.12	39.12	74.00	34.88
4917	22.28	AV	V	30.88	5.33	27.43	31.06	25.06	54.00	28.94
6194	35.49	PK	V	32.24	5.97	26.77	46.93	40.93	74.00	33.07
6194	22.04	AV	V	32.24	5.97	26.77	33.48	27.48	54.00	26.52
34.85	35.5	QP	V	18.46	0.79	21.42	33.33	33.33	40.00	6.67
Middle Channel:5580 MHz										
5580	82.69	PK	H	32.12	5.58	0.00	120.39	114.39	N/A	N/A
5580	71.38	AV	H	32.12	5.58	0.00	109.08	103.08	N/A	N/A
5580	84.26	PK	V	32.12	5.58	0.00	121.96	115.96	N/A	N/A
5580	73.76	AV	V	32.12	5.58	0.00	111.46	105.46	N/A	N/A
11160	33.25	PK	V	37.56	8.52	26.37	52.96	46.96	74.00	27.04
11160	20.43	AV	V	37.56	8.52	26.37	40.14	34.14	54.00	19.86
16740	31.14	PK	V	38.41	14.20	23.91	59.84	53.84	74.00	20.16
16740	18.61	AV	V	38.41	14.20	23.91	47.31	41.31	54.00	12.69
4917	36.21	PK	V	30.88	5.33	27.43	44.99	38.99	74.00	35.01
4917	22.16	AV	V	30.88	5.33	27.43	30.94	24.94	54.00	29.06
6194	35.34	PK	V	32.24	5.97	26.77	46.78	40.78	74.00	33.22
6194	21.84	AV	V	32.24	5.97	26.77	33.28	27.28	54.00	26.72
34.85	35.2	QP	V	18.46	0.79	21.42	33.03	33.03	40.00	6.97
96.93	39.80	QP	V	9.64	1.23	21.40	29.27	29.27	43.50	14.23
High Channel:5700 MHz										
5700	82.42	PK	H	32.14	5.68	0.00	120.24	114.24	N/A	N/A
5700	71.32	AV	H	32.14	5.68	0.00	109.14	103.14	N/A	N/A
5700	83.65	PK	V	32.14	5.68	0.00	121.47	115.47	N/A	N/A
5700	72.68	AV	V	32.14	5.68	0.00	110.50	104.50	N/A	N/A
5725	34.58	PK	V	32.15	5.60	0.00	72.33	66.33	74.00	7.67
5725	18.37	AV	V	32.15	5.60	0.00	56.12	50.12	54.00	3.88
11400	33.08	PK	V	37.80	8.82	26.21	53.49	47.49	74.00	26.51
11400	20.27	AV	V	37.80	8.82	26.21	40.68	34.68	54.00	19.32
17100	30.93	PK	V	40.10	14.47	25.36	60.14	54.14	74.00	19.86
17100	18.31	AV	V	40.10	14.47	25.36	47.52	41.52	54.00	12.48
4917	35.97	PK	V	30.88	5.33	27.43	44.75	38.75	74.00	35.25
4917	21.93	AV	V	30.88	5.33	27.43	30.71	24.71	54.00	29.29
6194	35.05	PK	V	32.24	5.97	26.77	46.49	40.49	74.00	33.51
6194	21.59	AV	V	32.24	5.97	26.77	33.03	27.03	54.00	26.97
34.85	35.1	QP	V	18.46	0.79	21.42	32.93	32.93	40.00	7.07

802.11n ht20 Mode:

Frequency	Receiver		Rx Antenna		Cable loss	Amplifier Gain	Corrected Amplitude	Extrapolation result	Limit	Margin
(MHz)	Reading (dBµV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dBµV/m)	(dB)
Low Channel:5500 MHz										
5500	81.96	PK	H	32.10	5.48	0.00	119.54	113.54	N/A	N/A
5500	72.25	AV	H	32.10	5.48	0.00	109.83	103.83	N/A	N/A
5500	84.23	PK	V	32.10	5.48	0.00	121.81	115.81	N/A	N/A
5500	74.26	AV	V	32.10	5.48	0.00	111.84	105.84	N/A	N/A
5470	33.36	PK	V	32.04	5.50	0.00	70.90	64.90	74.00	9.10
5470	20.28	AV	V	32.04	5.50	0.00	57.82	51.82	54.00	2.18
11000	33.20	PK	V	37.40	8.32	26.42	52.50	46.50	74.00	27.50
11000	20.39	AV	V	37.40	8.32	26.42	39.69	33.69	54.00	20.31
16500	31.09	PK	V	37.40	13.42	23.97	57.94	51.94	74.00	22.06
16500	18.61	AV	V	37.40	13.42	23.97	45.46	39.46	54.00	14.54
4917	36.06	PK	V	30.88	5.33	27.43	44.84	38.84	74.00	35.16
4917	22.04	AV	V	30.88	5.33	27.43	30.82	24.82	54.00	29.18
6194	35.37	PK	V	32.24	5.97	26.77	46.81	40.81	74.00	33.19
6194	21.85	AV	V	32.24	5.97	26.77	33.29	27.29	54.00	26.71
34.85	34.8	QP	V	18.46	0.79	21.42	32.63	32.63	40.00	7.37
Middle Channel:5580 MHz										
5580	81.74	PK	H	32.12	5.58	0.00	119.44	113.44	N/A	N/A
5580	71.37	AV	H	32.12	5.58	0.00	109.07	103.07	N/A	N/A
5580	83.93	PK	V	32.12	5.58	0.00	121.63	115.63	N/A	N/A
5580	74.06	AV	V	32.12	5.58	0.00	111.76	105.76	N/A	N/A
11160	33.09	PK	V	37.56	8.52	26.37	52.80	46.80	74.00	27.20
11160	20.23	AV	V	37.56	8.52	26.37	39.94	33.94	54.00	20.06
16740	30.97	PK	V	38.41	14.20	23.91	59.67	53.67	74.00	20.33
16740	18.51	AV	V	38.41	14.20	23.91	47.21	41.21	54.00	12.79
4917	35.94	PK	V	30.88	5.33	27.43	44.72	38.72	74.00	35.28
4917	22.02	AV	V	30.88	5.33	27.43	30.80	24.80	54.00	29.20
6194	35.09	PK	V	32.24	5.97	26.77	46.53	40.53	74.00	33.47
6194	21.62	AV	V	32.24	5.97	26.77	33.06	27.06	54.00	26.94
34.85	35.3	QP	V	18.46	0.79	21.42	33.13	33.13	40.00	6.87
96.93	39.50	QP	V	9.64	1.23	21.40	28.97	28.97	43.50	14.53
High Channel:5700 MHz										
5700	81.64	PK	H	32.14	5.68	0.00	119.46	113.46	N/A	N/A
5700	71.18	AV	H	32.14	5.68	0.00	109.00	103.00	N/A	N/A
5700	83.35	PK	V	32.14	5.68	0.00	121.17	115.17	N/A	N/A
5700	73.23	AV	V	32.14	5.68	0.00	111.05	105.05	N/A	N/A
5725	32.25	PK	V	32.15	5.60	0.00	70.00	64.00	74.00	10.00
5725	18.54	AV	V	32.15	5.60	0.00	56.29	50.29	54.00	3.71
11400	32.93	PK	V	37.80	8.82	26.21	53.34	47.34	74.00	26.66
11400	20.09	AV	V	37.80	8.82	26.21	40.50	34.50	54.00	19.50
17100	30.66	PK	V	40.10	14.47	25.36	59.87	53.87	74.00	20.13
17100	18.19	AV	V	40.10	14.47	25.36	47.40	41.40	54.00	12.60
4917	35.84	PK	V	30.88	5.33	27.43	44.62	38.62	74.00	35.38
4917	21.83	AV	V	30.88	5.33	27.43	30.61	24.61	54.00	29.39
6194	34.91	PK	V	32.24	5.97	26.77	46.35	40.35	74.00	33.65
6194	21.43	AV	V	32.24	5.97	26.77	32.87	26.87	54.00	27.13
34.85	35.5	QP	V	18.46	0.79	21.42	33.33	33.33	40.00	6.67

802.11n ht40 Mode:

| Frequency | Receiver | | Rx Antenna | | Cable loss | Amplifier Gain | Corrected Amplitude | Extrapolation result | Limit | Margin |
(MHz)	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dBμV/m)	(dB)
Low Channel:5510 MHz										
5510	79.67	PK	H	32.10	5.45	0.00	117.22	111.22	N/A	N/A
5510	68.69	AV	H	32.10	5.45	0.00	106.24	100.24	N/A	N/A
5510	81.47	PK	V	32.10	5.45	0.00	119.02	113.02	N/A	N/A
5510	70.65	AV	V	32.10	5.45	0.00	108.20	102.20	N/A	N/A
5470	37.72	PK	V	32.04	5.50	0.00	75.26	69.26	74.00	4.74
5470	20.33	AV	V	32.04	5.50	0.00	57.87	51.87	54.00	2.13
11020	32.97	PK	V	37.42	8.35	26.41	52.33	46.33	74.00	27.67
11020	20.15	AV	V	37.42	8.35	26.41	39.51	33.51	54.00	20.49
16530	30.83	PK	V	37.53	13.52	23.89	57.99	51.99	74.00	22.01
16530	18.32	AV	V	37.53	13.52	23.89	45.48	39.48	54.00	14.52
4917	35.81	PK	V	30.88	5.33	27.43	44.59	38.59	74.00	35.41
4917	21.91	AV	V	30.88	5.33	27.43	30.69	24.69	54.00	29.31
6194	35.08	PK	V	32.24	5.97	26.77	46.52	40.52	74.00	33.48
6194	21.60	AV	V	32.24	5.97	26.77	33.04	27.04	54.00	26.96
34.85	35.7	QP	V	18.46	0.79	21.42	33.53	33.53	40.00	6.47
Middle Channel:5550 MHz										
5550	79.30	PK	H	32.11	5.35	0.00	116.76	110.76	N/A	N/A
5550	68.31	AV	H	32.11	5.35	0.00	105.77	99.77	N/A	N/A
5550	81.26	PK	V	32.11	5.35	0.00	118.72	112.72	N/A	N/A
5550	70.40	AV	V	32.11	5.35	0.00	107.86	101.86	N/A	N/A
11100	32.95	PK	V	37.50	8.45	26.39	52.51	46.51	74.00	27.49
11100	19.94	AV	V	37.50	8.45	26.39	39.50	33.50	54.00	20.50
16650	30.82	PK	V	38.03	13.91	23.78	58.98	52.98	74.00	21.02
16650	18.31	AV	V	38.03	13.91	23.78	46.47	40.47	54.00	13.53
4917	35.78	PK	V	30.88	5.33	27.43	44.56	38.56	74.00	35.44
4917	21.79	AV	V	30.88	5.33	27.43	30.57	24.57	54.00	29.43
6194	34.83	PK	V	32.24	5.97	26.77	46.27	40.27	74.00	33.73
6194	21.34	AV	V	32.24	5.97	26.77	32.78	26.78	54.00	27.22
34.85	35.5	QP	V	18.46	0.79	21.42	33.33	33.33	40.00	6.67
96.93	39.90	QP	V	9.64	1.23	21.40	29.37	29.37	43.50	14.13
High Channel:5670 MHz										
5670	77.93	PK	H	32.13	5.44	0.00	115.50	109.50	N/A	N/A
5670	67.11	AV	H	32.13	5.44	0.00	104.68	98.68	N/A	N/A
5670	79.36	PK	V	32.13	5.44	0.00	116.93	110.93	N/A	N/A
5670	68.82	AV	V	32.13	5.44	0.00	106.39	100.39	N/A	N/A
5725	40.36	PK	V	32.15	5.60	0.00	78.11	72.11	74.00	1.89
5725	19.33	AV	V	32.15	5.60	0.00	57.08	51.08	54.00	2.92
11340	32.69	PK	V	37.74	8.75	26.26	52.92	46.92	74.00	27.08
11340	19.99	AV	V	37.74	8.75	26.26	40.22	34.22	54.00	19.78
17010	30.50	PK	V	39.56	14.99	25.11	59.94	53.94	74.00	20.06
17010	17.93	AV	V	39.56	14.99	25.11	47.37	41.37	54.00	12.63
4917	35.71	PK	V	30.88	5.33	27.43	44.49	38.49	74.00	35.51
4917	21.62	AV	V	30.88	5.33	27.43	30.40	24.40	54.00	29.60
6194	34.67	PK	V	32.24	5.97	26.77	46.11	40.11	74.00	33.89
6194	21.31	AV	V	32.24	5.97	26.77	32.75	26.75	54.00	27.25
34.85	35.1	QP	V	18.46	0.79	21.42	32.93	32.93	40.00	7.07

802.11n ac80 Mode:

Frequency	Receiver		Rx Antenna		Cable loss	Amplifier Gain	Corrected Amplitude	Extrapolation result	Limit	Margin
(MHz)	Reading (dBµV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dBµV/m)	(dB)
Channel:5530 MHz										
5530	74.70	PK	H	32.11	5.40	0.00	112.21	106.21	N/A	N/A
5530	64.36	AV	H	32.11	5.40	0.00	101.87	95.87	N/A	N/A
5530	76.65	PK	V	32.11	5.40	0.00	114.16	108.16	N/A	N/A
5530	66.33	AV	V	32.11	5.40	0.00	103.84	97.84	N/A	N/A
5470	33.82	PK	V	32.04	5.50	0.00	71.36	65.36	74.00	8.64
5470	20.61	AV	V	32.04	5.50	0.00	58.15	52.15	54.00	1.85
5725	28.27	PK	V	32.15	5.60	0.00	66.02	60.02	74.00	13.98
5725	15.68	AV	V	32.15	5.60	0.00	53.43	47.43	54.00	6.57
11060	33.36	PK	V	37.46	8.40	26.40	52.82	46.82	74.00	27.18
11060	22.73	AV	V	37.46	8.40	26.40	42.19	36.19	54.00	17.81
16590	31.58	PK	V	37.78	13.71	23.74	59.33	53.33	74.00	20.67
16590	19.56	AV	V	37.78	13.71	23.74	47.31	41.31	54.00	12.69
2786	35.65	PK	V	26.64	4.45	27.55	39.19	33.19	74.00	40.81
2786	23.26	AV	V	26.64	4.45	27.55	26.80	20.80	54.00	33.20
34.85	35.5	QP	V	18.46	0.79	21.42	33.33	33.33	40.00	6.67
Channel:5610 MHz										
5610	73.68	PK	H	32.12	5.64	0.00	111.44	105.44	N/A	N/A
5610	64.01	AV	H	32.12	5.64	0.00	101.77	95.77	N/A	N/A
5610	76.35	PK	V	32.12	5.64	0.00	114.11	108.11	N/A	N/A
5610	66.12	AV	V	32.12	5.64	0.00	103.88	97.88	N/A	N/A
5470	33.68	PK	V	32.04	5.50	0.00	71.22	65.22	74.00	8.78
5470	20.13	AV	V	32.04	5.50	0.00	57.67	51.67	54.00	2.33
5725	28.16	PK	V	32.15	5.60	0.00	65.91	59.91	74.00	14.09
5725	15.73	AV	V	32.15	5.60	0.00	53.48	47.48	54.00	6.52
11220	33.05	PK	V	37.62	8.60	26.35	52.92	46.92	74.00	27.08
11220	22.53	AV	V	37.62	8.60	26.35	42.40	36.40	54.00	17.60
16830	31.35	PK	V	38.79	14.50	24.16	60.48	54.48	74.00	19.52
16830	19.36	AV	V	38.79	14.50	24.16	48.49	42.49	54.00	11.51
2786	35.25	PK	V	26.64	4.45	27.55	38.79	32.79	74.00	41.21
2786	23.15	AV	V	26.64	4.45	27.55	26.69	20.69	54.00	33.31
34.85	35.1	QP	V	18.46	0.79	21.42	32.93	32.93	40.00	7.07

FCC§15.407(b) –CONDUCTED SPURIOUS EMISSION AT ANTENNA PORT

Applicable Standard

FCC §15.407;

(b) Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of −17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of −27 dBm/MHz.

(5) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.

(6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.

(7) The provisions of §15.205 apply to intentional radiators operating under this section.

Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. The Resolution bandwidth is set to 1MHz, The Video bandwidth is set to ≥ 1MHz, report the peak value out of the oprating band. Offset the antenna gain and cable loss.
3. Repeat above procedures until all frequencies measured were complete.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSP 38	100478	2015-05-09	2016-05-09

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

Test Data

Environmental Conditions

Temperature:	24.5 °C-25.7 °C
Relative Humidity:	51 %-59 %
ATM Pressure:	99.7 kPa-100.2 kPa

The testing was performed by Allen Qiao from 2015-05-19 to 2016-02-04.

Result: Compliance.

Please refer to the following table and plots.

UNII Band	Mode	Channel	Frequency (MHz)	Conducted Spurious (dBm)			Cable Loss dB	Total (dBm)	Limit (dBm)
				Chain 0	Chain 1	Chain 2			
5250-5350MHz	802.11 a	Low	5260	-40.74	-40.19	-37.72	0.5	-34.07	-27
		Middle	5280	-40.29	-39.41	-39.54	0.5	-34.46	-27
		High	5320	-40.51	-40.04	-40.13	0.5	-34.95	-27
	802.11 n20	Low	5260	-40.46	-39.99	-37.9	0.5	-34.03	-27
		Middle	5280	-40.04	-40.92	-39.81	0.5	-34.96	-27
		High	5320	-39.05	-39.67	-40.24	0.5	-34.35	-27
	802.11 n40	Low	5270	-39.54	-39.57	-38.22	0.5	-33.79	-27
		High	5310	-39.79	-40.03	-39.4	0.5	-34.46	-27
	802.11 ac80	Middle	5290	-40.65	-40.09	-35.07	0.5	-32.55	-27
5470-5725MHz	802.11 a	Low	5500	-40.63	-40.4	-40.7	0.5	-35.3	-27
		Middle	5580	-40.56	-40.74	-40.04	0.5	-35.17	-27
		High	5700	-40.26	-39.77	-40.53	0.5	-34.9	-27
	802.11 n20	Low	5500	-39.98	-39.95	-40.13	0.5	-34.75	-27
		Middle	5580	-38.35	-40.66	-40.2	0.5	-34.35	-27
		High	5700	-39.65	-38.98	-39.98	0.5	-34.25	-27
	802.11 n40	Low	5510	-39.65	-38.55	-40.37	0.5	-34.19	-27
		Middle	5550	-39.27	-40.54	-40.37	0.5	-34.75	-27
		High	5670	-40.45	-40.00	-39.81	0.5	-34.81	-27
	802.11 ac80	Low	5530	-40.92	-40.08	-39.03	0.5	-34.67	-27
		High	5610	-32.03	-33.3	-33.41	0.5	-27.6	-27

Note: Offset= Antenna Gain(dBi)

5250MHz-5350MHz:

Chain 0:802.11a Low Channel 30MHz-1GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz           -45.89 dBm
      Ref  19 dBm        *Att  20 dB   SWT 100 ms      37.760000000 MHz
         Offset  9 dB
```
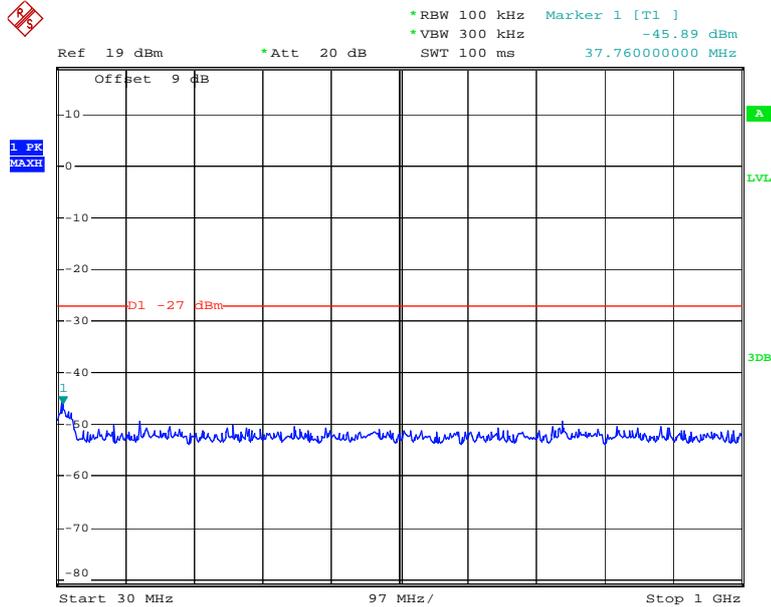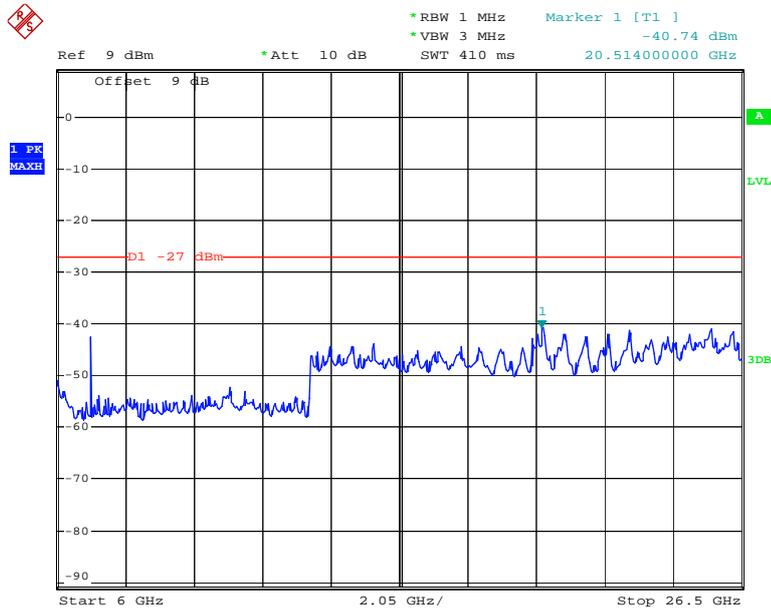
Date: 19.MAY.2015 15:26:05

Chain 0:802.11a Low Channel 1GHz-6GHz

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz             -44.76 dBm
      Ref  19 dBm        *Att  20 dB   SWT 100 ms      3.190000000 GHz
         Offset  9 dB
```
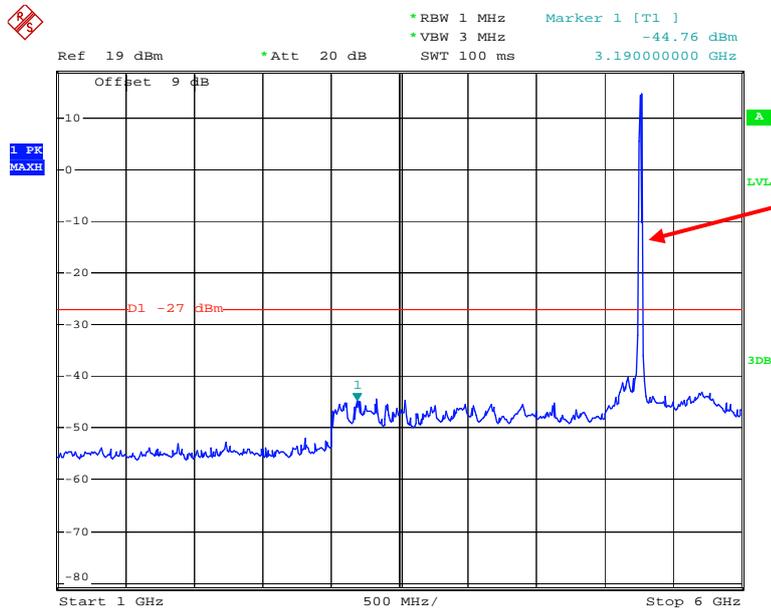
Fundamental

Date: 19.MAY.2015 15:25:47

Chain 0:802.11a Low Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz              -40.74 dBm
         Ref  9 dBm      *Att 10 dB  SWT 410 ms    20.514000000 GHz
            Offset  9 dB
          0                                                          A

 1 PK    -10                                                        LVL
 MAXH
         -20

        D1 -27 dBm                                                  3DB
         -30

         -40
                                                    1

         -50

         -60

         -70

         -80

         -90
         Start 6 GHz           2.05 GHz/            Stop 26.5 GHz
```

Date: 19.MAY.2015 15:25:30

Chain 0:802.11a Low Channel 26.5GHz-40GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz              -42.31 dBm
         Ref -1 dBm      *Att  0 dB  SWT 270 ms    39.433000000 GHz
            Offset  9 dB
         -10                                                         A

 1 PK    -20                                                        LVL
 MAXH
        D1 -27 dBm
         -30

         -40                                                  1

         -50
                                                                   3DB
         -60

         -70

         -80

         -90

        -100
         Start 26.5 GHz        1.35 GHz/            Stop 40 GHz
```
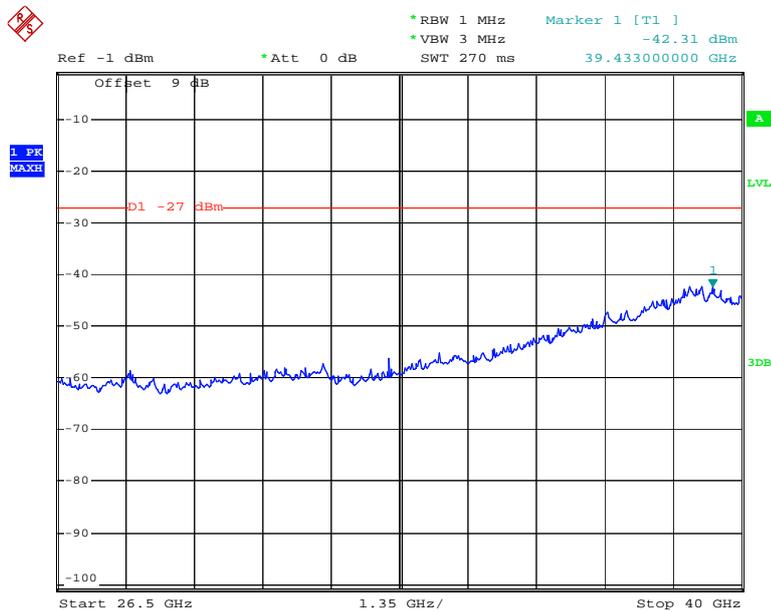
Date: 22.MAY.2015 12:43:26

Chain 0:802.11a Middle Channel 30MHz -1GHz

```
                              *RBW 100 kHz    Marker 1 [T1 ]
                              *VBW 300 kHz           -45.51 dBm
 Ref  19 dBm      *Att  20 dB  SWT 100 ms     35.820000000 MHz
     Offset  9 dB
                                                              A
-10

1 PK                                                          LVL
MAXH  0

-10

-20

        D1 -27 dBm
-30
                                                              3DB
-40

-50

-60

-70

-80
 Start 30 MHz           97 MHz/            Stop 1 GHz
```
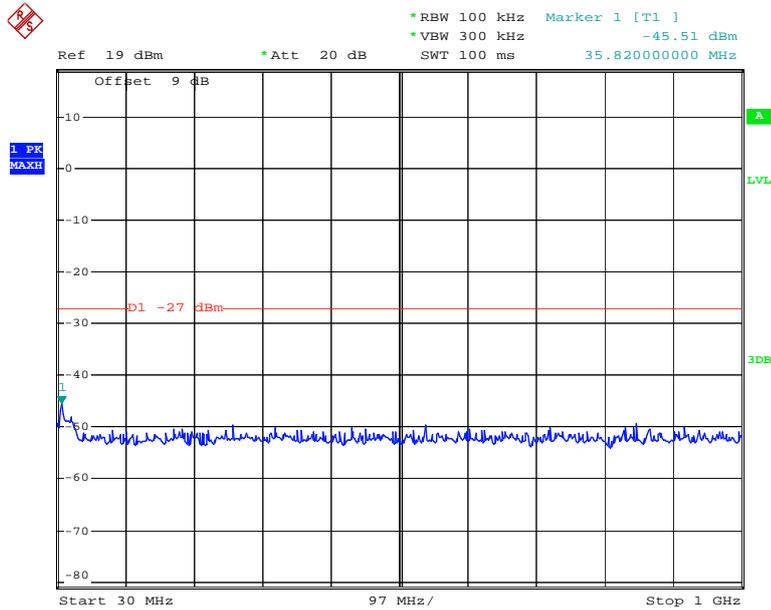
Date: 19.MAY.2015 15:24:13

Chain 0:802.11a Middle Channel 1GHz-6GHz

```
                              *RBW 1 MHz     Marker 1 [T1 ]
                              *VBW 3 MHz            -46.09 dBm
 Ref  19 dBm      *Att  20 dB  SWT 100 ms     3.100000000 GHz
     Offset  9 dB
                                                              A
-10

1 PK                                                          LVL
MAXH  0

-10

-20

        D1 -27 dBm
-30
                                                              3DB
-40

-50

-60

-70

-80
 Start 1 GHz            500 MHz/            Stop 6 GHz
```

Fundamental
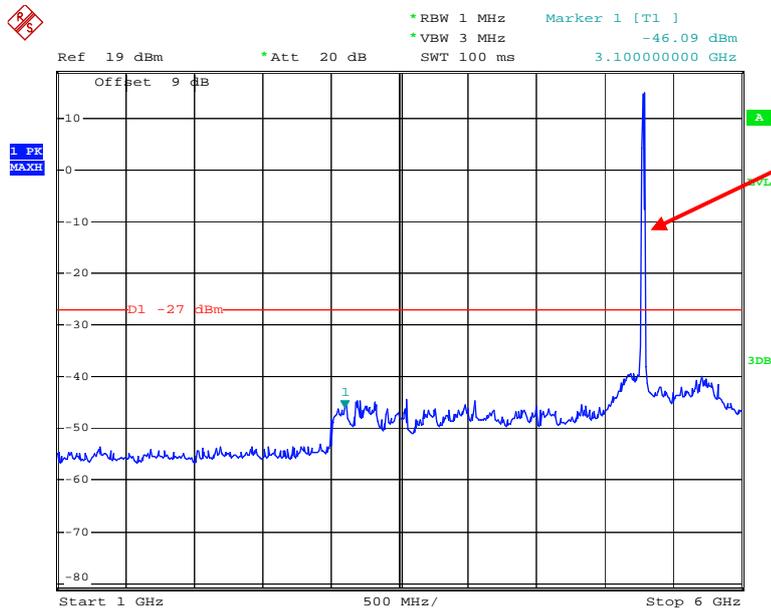
Date: 19.MAY.2015 15:24:40

Chain 0:802.11a Middle Channel 6GHz-26.5GHz

```
                                        *RBW 1 MHz    Marker 1 [T1 ]
                                        *VBW 3 MHz            -40.29 dBm
     Ref  9 dBm          *Att  10 dB    SWT 410 ms     20.555000000 GHz
       Offset  9 dB
```
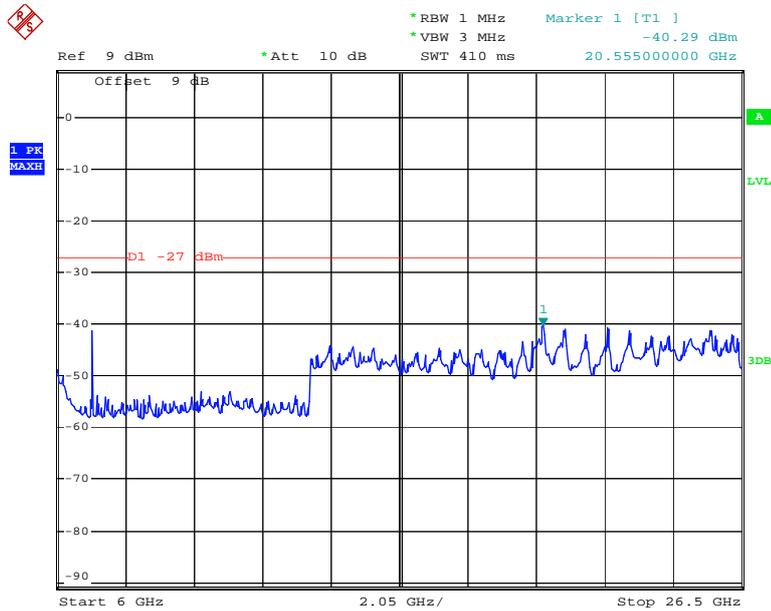
Date: 19.MAY.2015 15:25:09

Chain 0:802.11a Middle Channel 26.5GHz-40GHz

```
                                        *RBW 1 MHz    Marker 1 [T1 ]
                                        *VBW 3 MHz            -41.91 dBm
     Ref -1 dBm          *Att  0 dB     SWT 270 ms     38.974000000 GHz
       Offset  9 dB
```
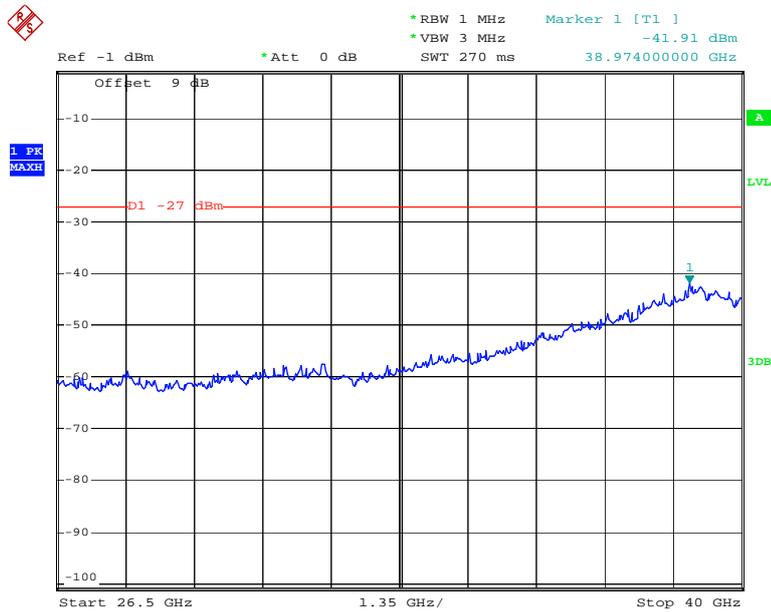
Date: 22.MAY.2015 12:43:32

Chain 0:802.11a High Channel 30MHz-1GHz
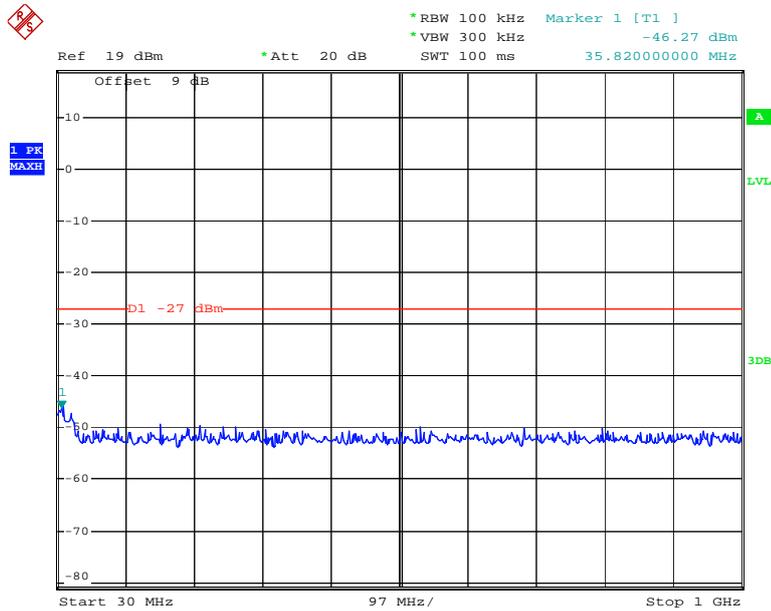
Date: 19.MAY.2015 15:23:46

Chain 0:802.11a High Channel 1GHz-6GHz

Fundamental
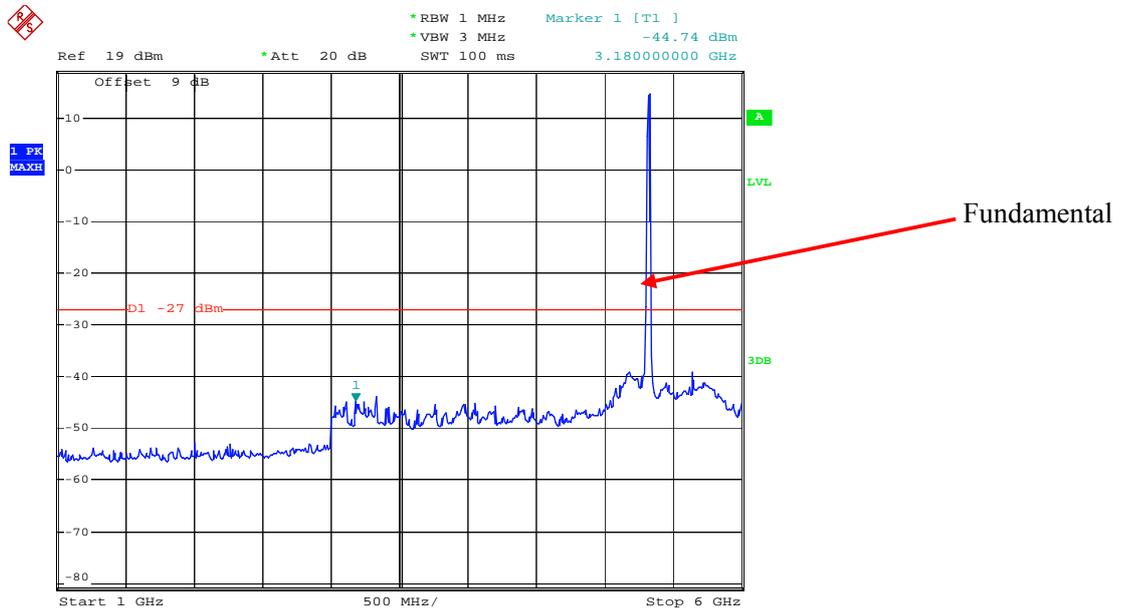
Date: 19.MAY.2015 15:23:29

Chain 0:802.11a High Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz      Marker 1 [T1 ]
                                    *VBW 3 MHz              -40.51 dBm
        Ref  9 dBm       *Att  10 dB    SWT 410 ms     20.555000000 GHz
          Offset  9 dB
```



```
Start 6 GHz              2.05 GHz/              Stop 26.5 GHz
```
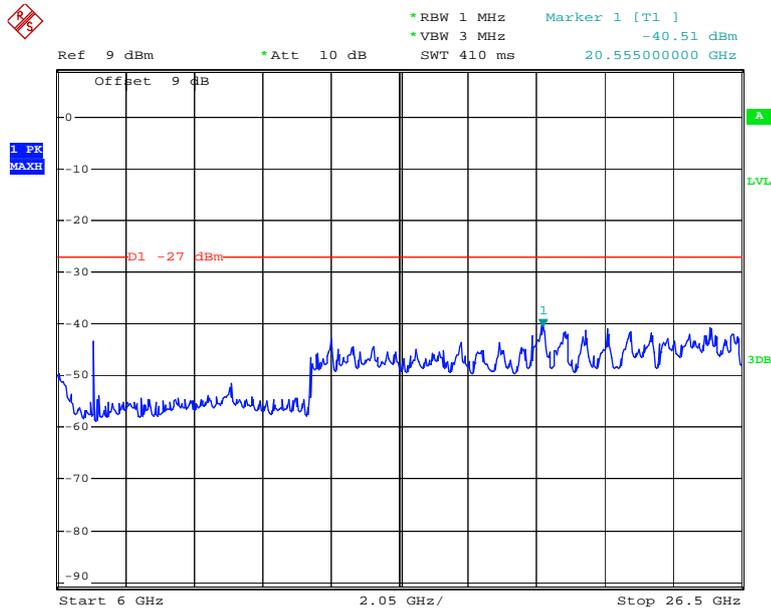
Date: 19.MAY.2015 15:23:04

Chain 0:802.11a High Channel 26.5GHz-40GHz

```
                                    *RBW 1 MHz      Marker 1 [T1 ]
                                    *VBW 3 MHz              -41.94 dBm
        Ref -1 dBm       *Att  0 dB     SWT 270 ms     39.244000000 GHz
          Offset  9 dB
```



```
Start 26.5 GHz          1.35 GHz/              Stop 40 GHz
```
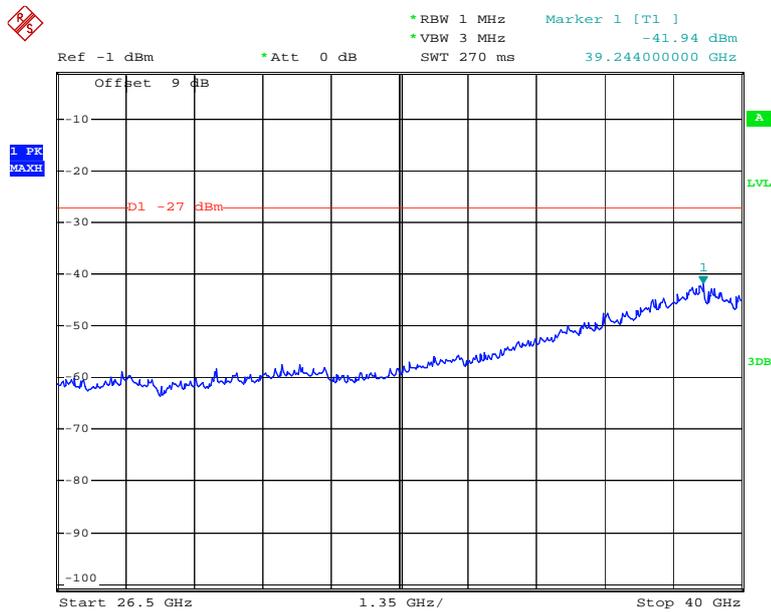
Date: 22.MAY.2015 12:43:19

Chain 0:802.11n ht20 Low Channel 30MHz-1GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz            -47.54 dBm
        Ref  19 dBm      *Att  20 dB   SWT 100 ms   39.700000000 MHz
           Offset  9 dB                                              A

 1 PK
 MAXH

                                                                    LVL

               D1 -27 dBm

                                                                    3DB

       1
```
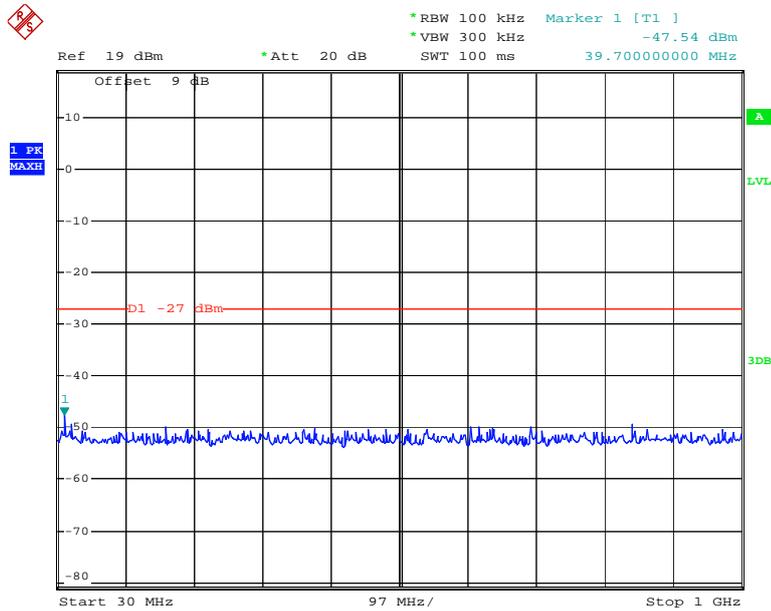
Date: 19.MAY.2015 15:08:22

Chain 0:802.11n ht20 Low Channel 1GHz-6GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz             -44.52 dBm
        Ref  19 dBm      *Att  20 dB   SWT 100 ms   3.190000000 GHz
           Offset  9 dB                                              A

 1 PK
 MAXH                                                     Fundamental

                                                                    LVL

               D1 -27 dBm

                                                                    3DB

                      1
```
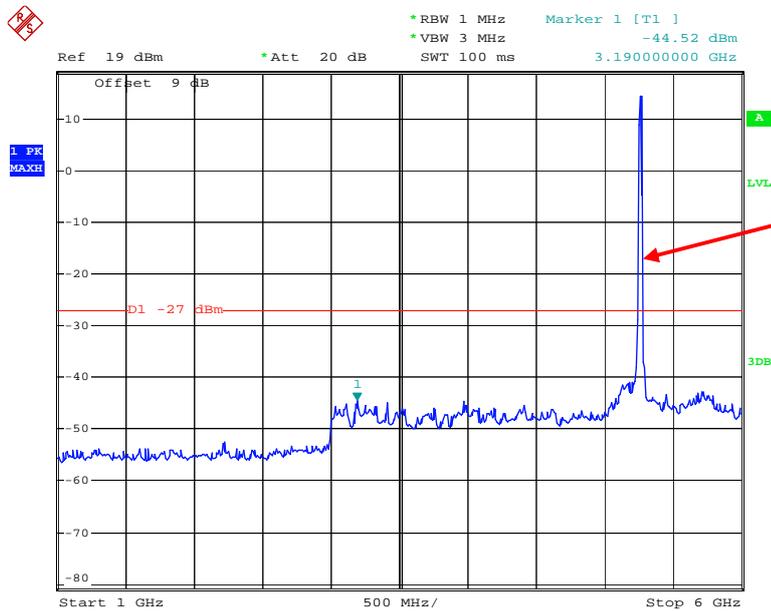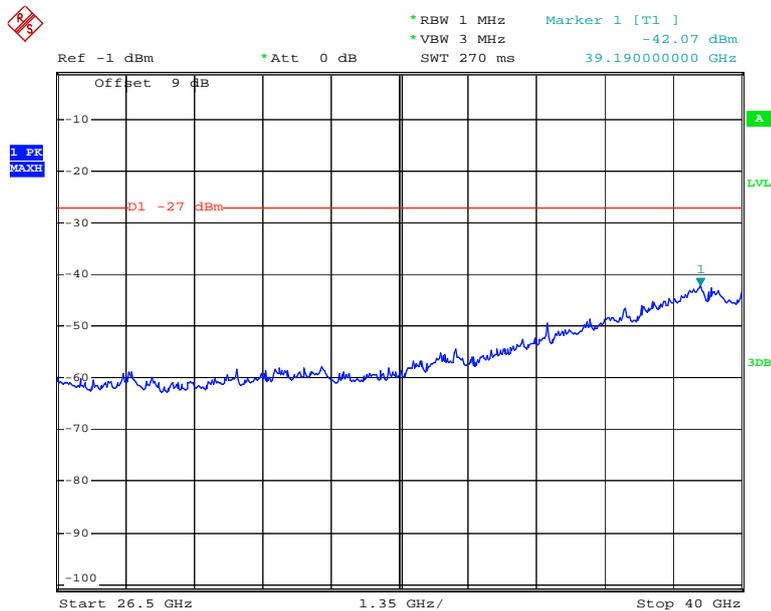
Date: 19.MAY.2015 15:08:41

Chain 0:802.11n ht20 Low Channel 6GHz-26.5GHz
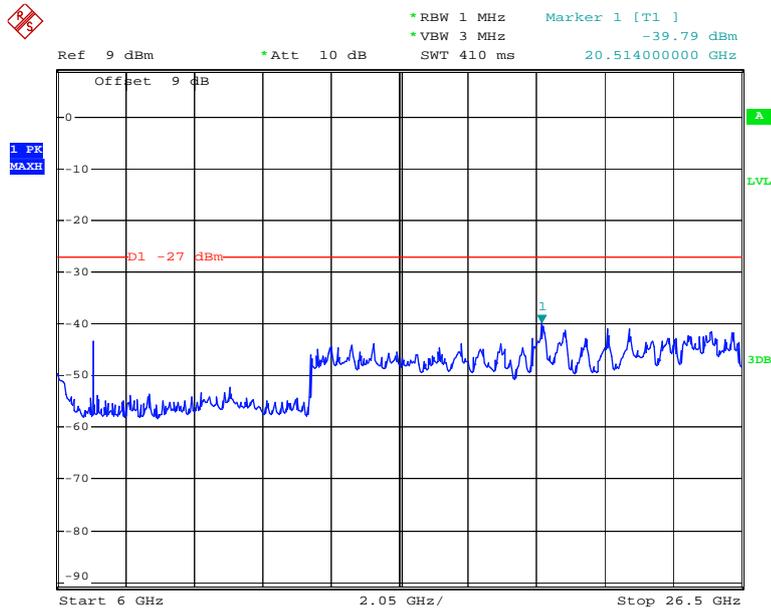
```
                                      *RBW 1 MHz    Marker 1 [T1 ]
                                      *VBW 3 MHz              -40.46 dBm
        Ref  9 dBm          *Att  10 dB   SWT 410 ms    20.514000000 GHz
           Offset  9 dB
```
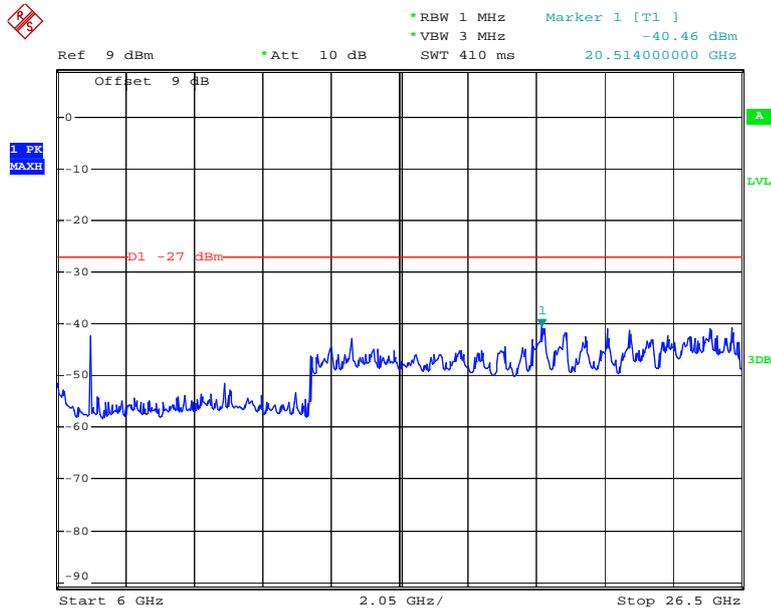
Date: 19.MAY.2015 15:08:58

Chain 0:802.11n ht20 Low Channel 26.5GHz-40GHz

```
                                      *RBW 1 MHz    Marker 1 [T1 ]
                                      *VBW 3 MHz              -41.94 dBm
        Ref -1 dBm          *Att  0 dB    SWT 270 ms    39.163000000 GHz
           Offset  9 dB
```
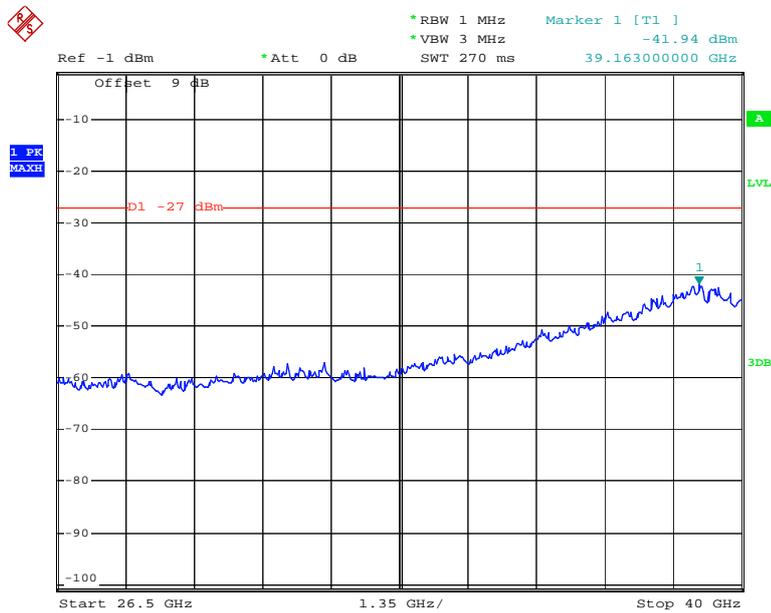
Date: 22.MAY.2015 12:43:56

Chain 0:802.11n ht20 Middle Channel 30MHz -1GHz

```
                                        *RBW 100 kHz   Marker 1 [T1 ]
                                        *VBW 300 kHz            -47.20 dBm
        Ref  19 dBm        *Att  20 dB   SWT 100 ms      35.820000000 MHz
          Offset  9 dB                                              A
  -10

   0                                                               LVL

  -10

  -20

       D1 -27 dBm                                                  3DB
  -30

  -40

   1
  -50

  -60

  -70

  -80
  Start 30 MHz                    97 MHz/              Stop 1 GHz
```
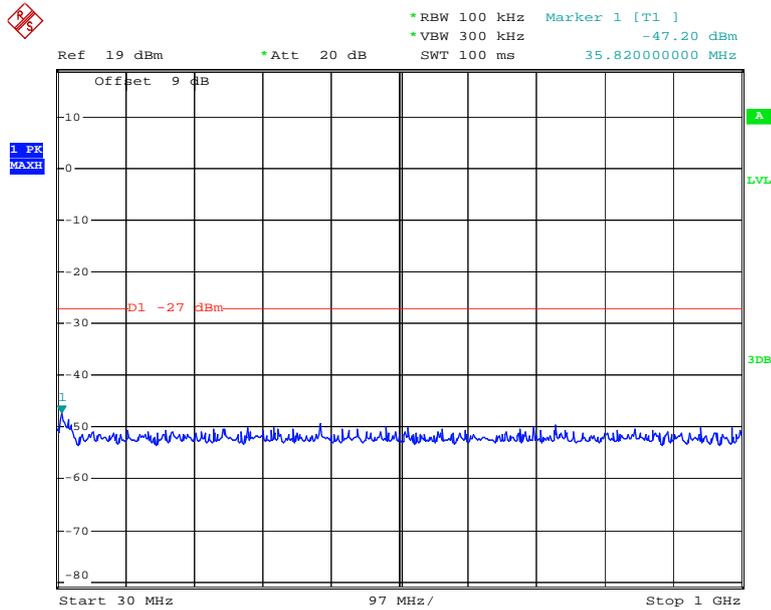
Date: 19.MAY.2015 15:12:47

Chain 0:802.11n ht20 Middle Channel 1GHz-6GHz

```
                                        *RBW 1 MHz    Marker 1 [T1 ]
                                        *VBW 3 MHz             -44.05 dBm
        Ref  19 dBm        *Att  20 dB   SWT 100 ms      3.980000000 GHz
          Offset  9 dB                                              A
  -10
                                                                          Fundamental
   0                                                               LVL

  -10

  -20

       D1 -27 dBm                                                  3DB
  -30

  -40

  -50

  -60

  -70

  -80
  Start 1 GHz                    500 MHz/              Stop 6 GHz
```
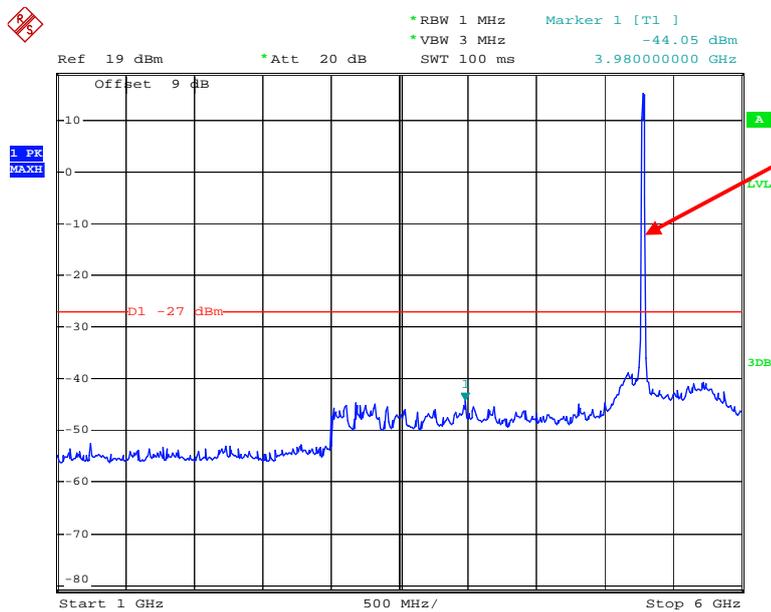
Date: 19.MAY.2015 15:12:31

Chain 0:802.11n ht20 Middle Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz              -40.04 dBm
     Ref  9 dBm          *Att  10 dB    SWT 410 ms      20.596000000 GHz
       Offset  9 dB
```
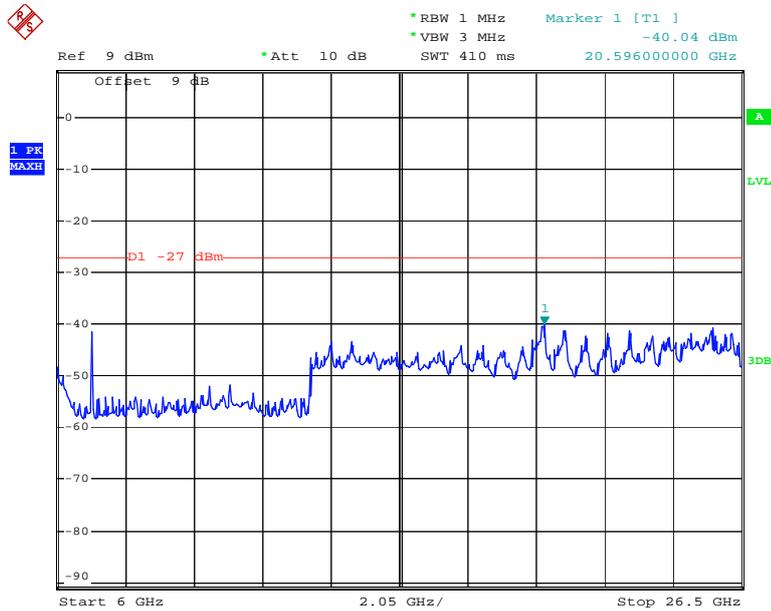
Date: 19.MAY.2015 15:12:14

Chain 0:802.11n ht20 Middle Channel 26.5GHz-40GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz              -41.60 dBm
     Ref -1 dBm          *Att  0 dB     SWT 270 ms      39.190000000 GHz
       Offset  9 dB
```
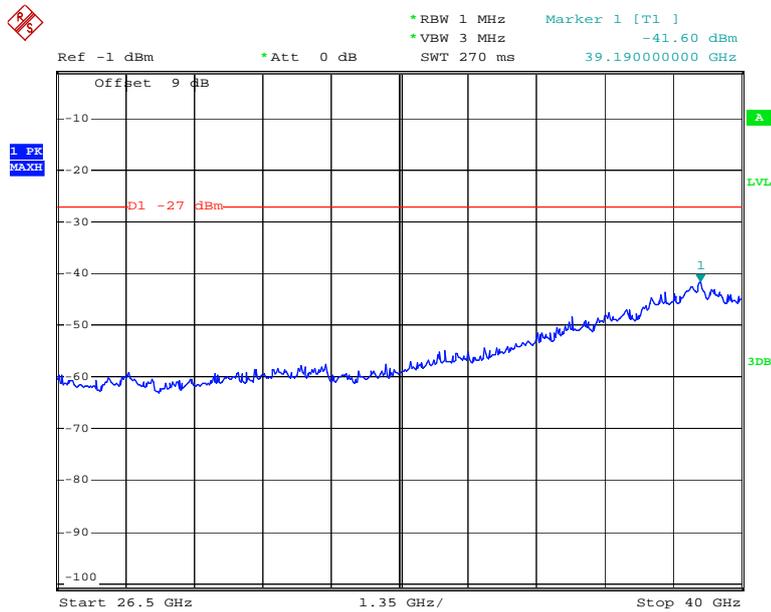
Date: 22.MAY.2015 12:44:04

Chain 0:802.11n ht20 High Channel 30MHz-1GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz              -47.43 dBm
        Ref  19 dBm        *Att  20 dB    SWT 100 ms      45.520000000 MHz
           Offset  9 dB                                                    A
  1 PK
  MAXH                                                                     LVL
                    D1 -27 dBm

                                                                          3DB
```

```
Start 30 MHz                    97 MHz/                   Stop 1 GHz
```

Date: 19.MAY.2015 15:13:12

Chain 0:802.11n ht20 High Channel 1GHz-6GHz

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz                -44.89 dBm
        Ref  19 dBm        *Att  20 dB    SWT 100 ms      3.180000000 GHz
           Offset  9 dB                                                    A
  1 PK
  MAXH                                                                     LVL
                    D1 -27 dBm

                                                                          3DB
```

Fundamental

```
Start 1 GHz                    500 MHz/                   Stop 6 GHz
```

Date: 19.MAY.2015 15:13:30

Chain 0:802.11n ht20 High Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz           -39.05 dBm
          Ref  9 dBm    *Att  10 dB  SWT 410 ms    20.514000000 GHz
            Offset  9 dB
```

Date: 19.MAY.2015 15:13:53

Chain 0:802.11n ht20 High Channel 26.5GHz-40GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz           -41.94 dBm
          Ref -1 dBm    *Att   0 dB  SWT 270 ms    39.190000000 GHz
            Offset  9 dB
```
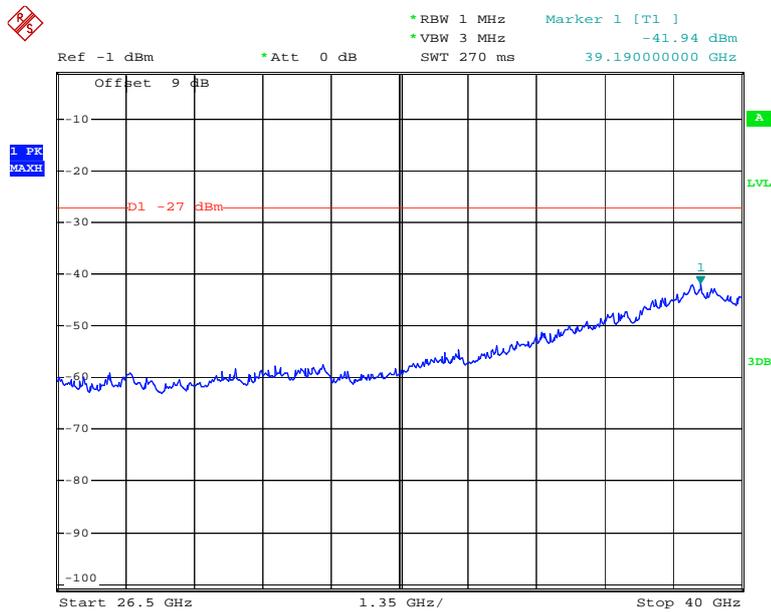
Date: 22.MAY.2015 12:43:47

Chain 0:802.11n ht40 Low Channel 30MHz-1GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz              -49.59 dBm
         Ref  19 dBm      *Att  20 dB    SWT 100 ms       41.640000000 MHz
```

```
        Offset  9 dB
  -10

1 PK  -0
MAXH

  -10

  -20

        D1 -27 dBm
  -30

  -40

  1
  -50

  -60

  -70

  -80
  Start 30 MHz              97 MHz/              Stop 1 GHz
```
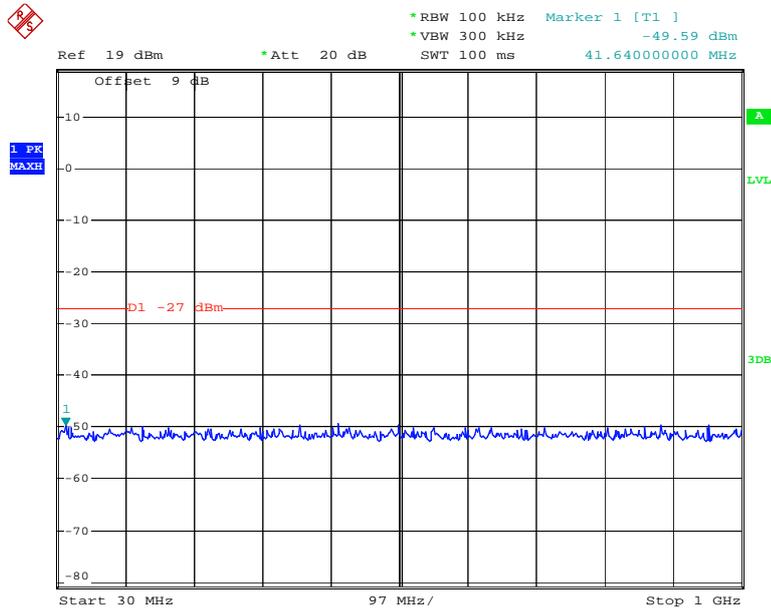
Date: 19.MAY.2015 15:06:19

Chain 0:802.11n ht40 Low Channel 1GHz-6GHz

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz               -44.06 dBm
         Ref  19 dBm      *Att  20 dB    SWT 100 ms       3.110000000 GHz
```

```
        Offset  9 dB
  -10

1 PK  -0
MAXH

  -10

  -20

        D1 -27 dBm
  -30

  -40

  1
  -50

  -60

  -70

  -80
  Start 1 GHz               500 MHz/             Stop 6 GHz
```

Fundamental
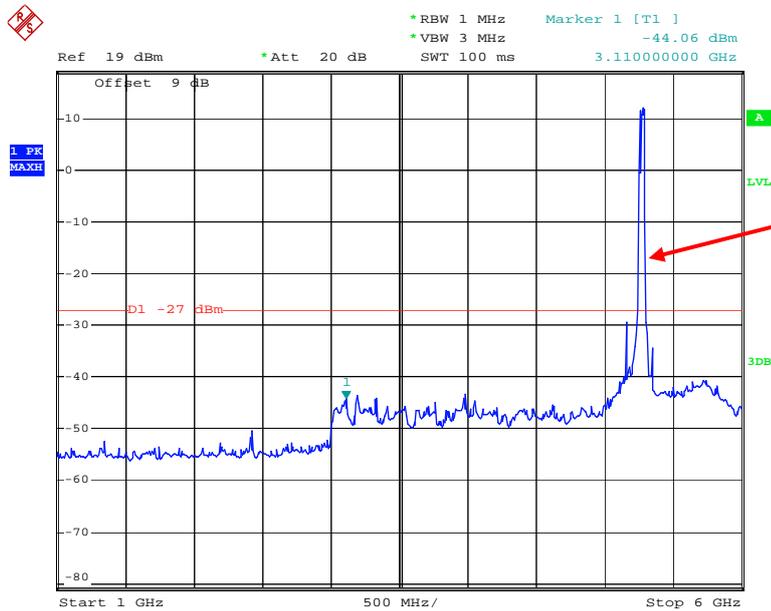
Date: 19.MAY.2015 15:06:39

Chain 0:802.11n ht40 Low Channel 6GHz-26.5GHz

```
                                      *RBW 1 MHz      Marker 1 [T1 ]
                                      *VBW 3 MHz              -39.54 dBm
        Ref  9 dBm          *Att 10 dB   SWT 410 ms     7.025000000 GHz
           Offset  9 dB
```
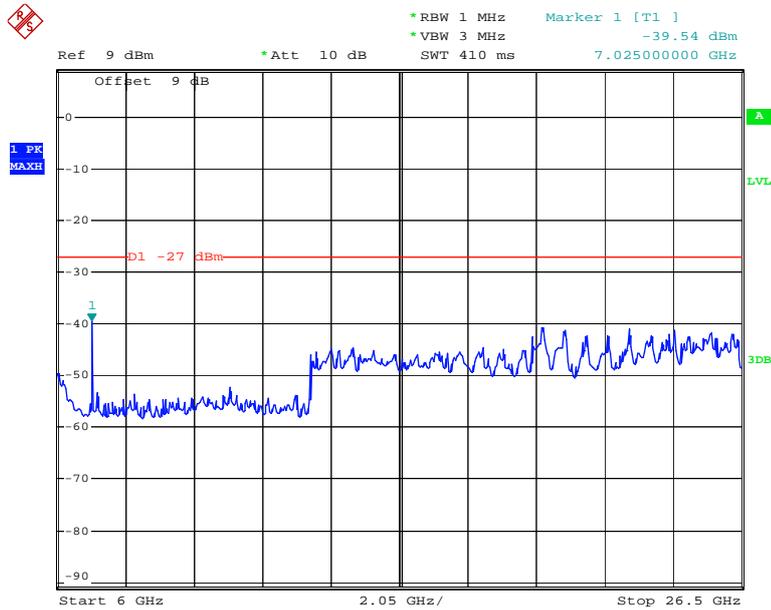
Date: 19.MAY.2015 15:07:00

Chain 0:802.11n ht40 Low Channel 26.5GHz-40GHz

```
                                      *RBW 1 MHz      Marker 1 [T1 ]
                                      *VBW 3 MHz              -42.07 dBm
        Ref -1 dBm          *Att  0 dB   SWT 270 ms    39.190000000 GHz
           Offset  9 dB
```

Date: 22.MAY.2015 12:44:19

Chain 0:802.11n ht40 High Channel 30MHz-1GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz           -48.40 dBm
     Ref  19 dBm        *Att  20 dB  SWT 100 ms     39.700000000 MHz
        Offset  9 dB
```

Date: 19.MAY.2015 15:07:55

Chain 0:802.11n ht40 High Channel 1GHz-6GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz            -42.73 dBm
     Ref  19 dBm        *Att  20 dB  SWT 100 ms     3.190000000 GHz
        Offset  9 dB
```

Fundamental

Date: 19.MAY.2015 15:07:42

Chain 0:802.11n ht40 High Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz      Marker 1 [T1 ]
                                    *VBW 3 MHz              -39.79 dBm
        Ref  9 dBm       *Att  10 dB   SWT 410 ms     20.514000000 GHz
          Offset  9 dB                                                    A

 1 PK
 MAXH                                                                     LVL


                D1 -27 dBm

                                                    1
                                                                         3DB




        Start 6 GHz              2.05 GHz/              Stop 26.5 GHz
```

Date: 19.MAY.2015 15:07:25

Chain 0:802.11n ht40 High Channel 26.5GHz-40GHz

```
                                    *RBW 1 MHz      Marker 1 [T1 ]
                                    *VBW 3 MHz              -41.68 dBm
        Ref -1 dBm       *Att  0 dB    SWT 270 ms     39.001000000 GHz
          Offset  9 dB                                                    A

 1 PK
 MAXH                                                                     LVL

                D1 -27 dBm


                                                            1
                                                                         3DB




        Start 26.5 GHz           1.35 GHz/              Stop 40 GHz
```
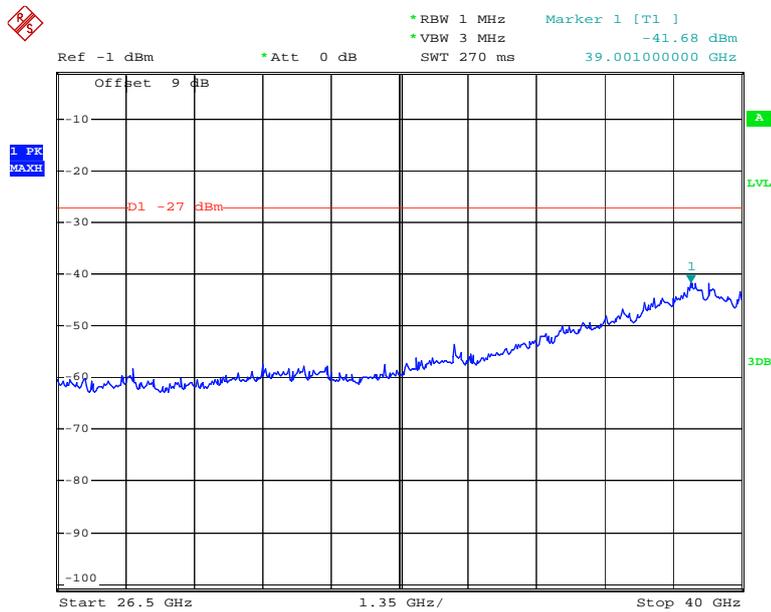
Date: 22.MAY.2015 12:44:11

Chain 0:802.11n ac80 Middle Channel 30MHz-1GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz           -50.08 dBm
     Ref  19 dBm        *Att  20 dB  SWT 100 ms    286.080000000 MHz
        Offset  9 dB                                                   A
  -10

  1 PK
  MAXH  -0                                                             LVL

  -10

  -20
         D1 -27 dBm                                                    3DB
  -30

  -40

  -50         1

  -60

  -70

  -80
     Start 30 MHz           97 MHz/              Stop 1 GHz
```
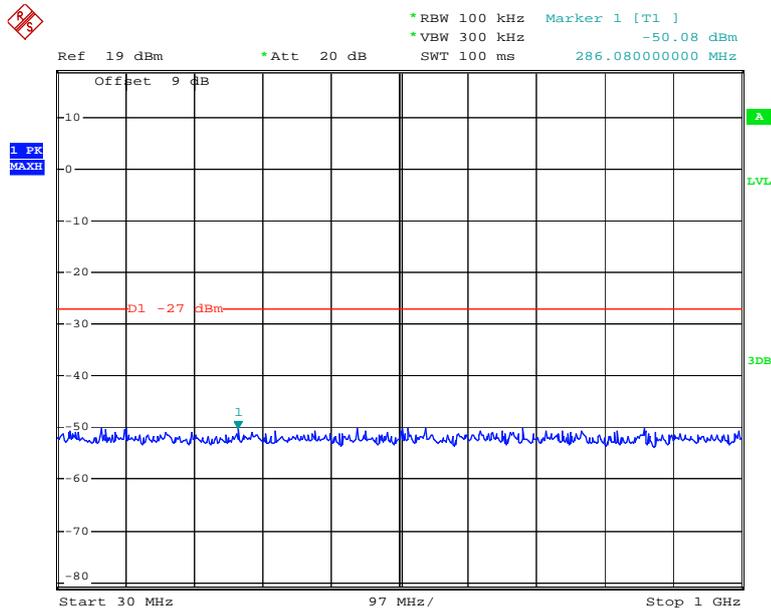
Date: 19.MAY.2015 15:05:38

Chain 0:802.11n ac80 Middle Channel 1GHz-6GHz

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz             -43.14 dBm
     Ref  19 dBm        *Att  20 dB  SWT 100 ms    3.190000000 GHz
        Offset  9 dB                                                   A
  -10                                                                      Fundamental

  1 PK
  MAXH  -0                                                             LVL

  -10

  -20
         D1 -27 dBm                                                    3DB
  -30

  -40        1

  -50

  -60

  -70

  -80
     Start 1 GHz           500 MHz/              Stop 6 GHz
```
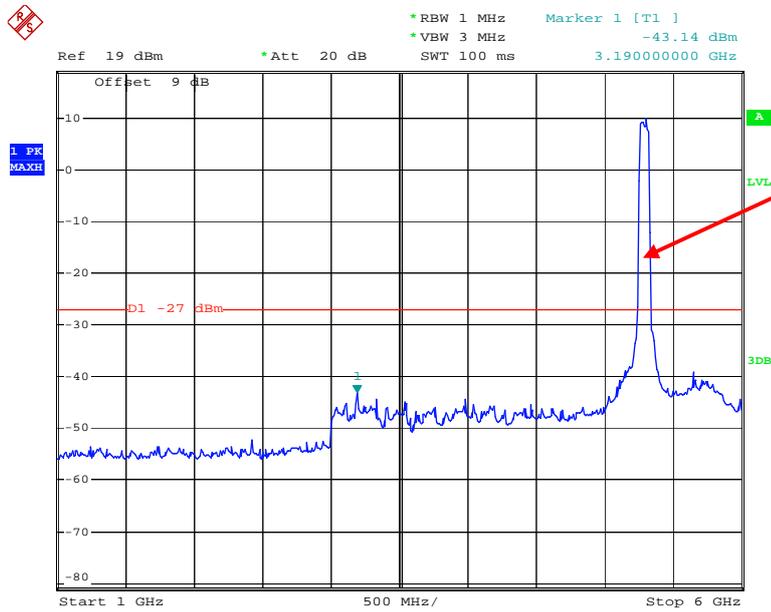
Date: 19.MAY.2015 15:05:25

Chain 0:802.11n ac80 Middle Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz      Marker 1 [T1 ]
                                    *VBW 3 MHz             -40.65 dBm
         Ref  9 dBm      *Att  10 dB   SWT 410 ms    20.514000000 GHz
            Offset  9 dB
```
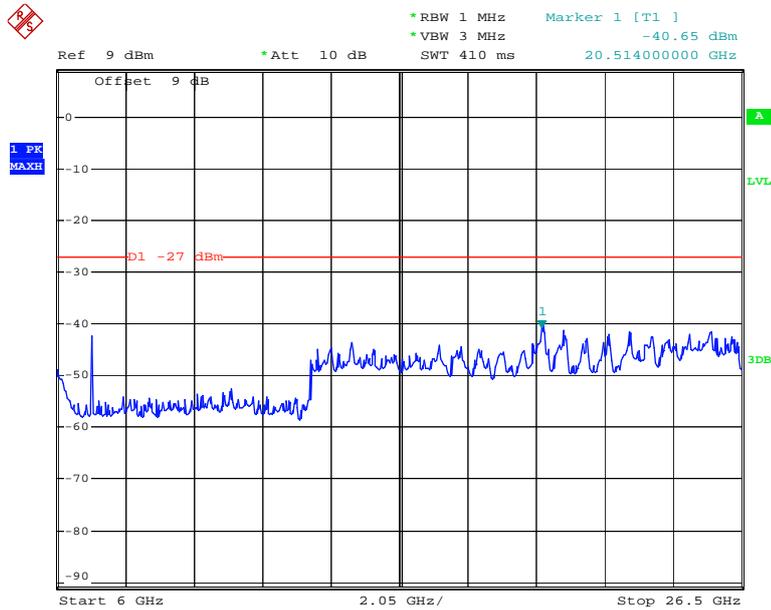
Date: 19.MAY.2015 15:05:07

Chain 0:802.11n ac80 Middle Channel 26.5GHz-40GHz

```
                                    *RBW 1 MHz      Marker 1 [T1 ]
                                    *VBW 3 MHz             -41.88 dBm
         Ref -1 dBm      *Att  0 dB    SWT 270 ms    38.974000000 GHz
            Offset  9 dB
```
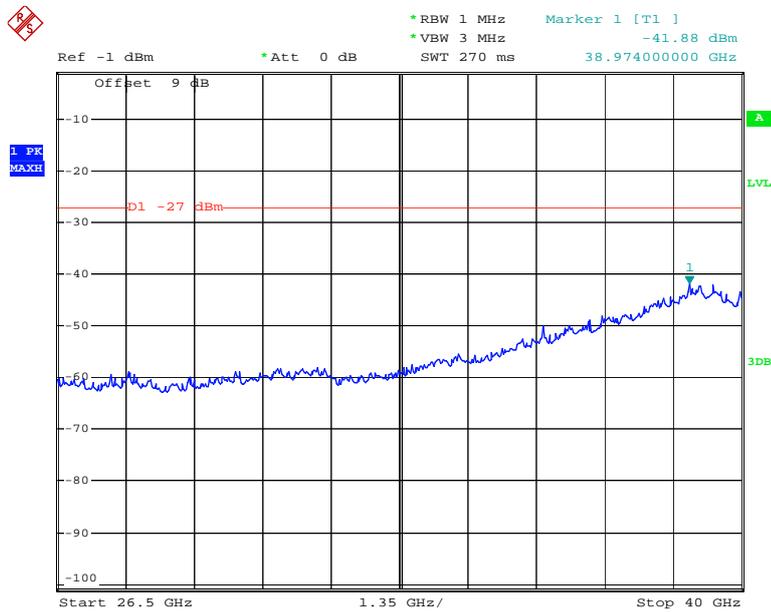
Date: 22.MAY.2015 12:43:38

Chain 1:802.11a Low Channel 30MHz-1GHz

Date: 19.MAY.2015 14:53:54

Chain 1:802.11a Low Channel 1GHz-6GHz

Fundamental

Date: 19.MAY.2015 14:54:41

Chain 1:802.11a Low Channel 6GHz-26.5GHz

```
                                        *RBW 1 MHz     Marker 1 [T1 ]
                                        *VBW 3 MHz            -40.19 dBm
            Ref  9 dBm        *Att 10 dB  SWT 410 ms    20.514000000 GHz
              Offset  9 dB
```
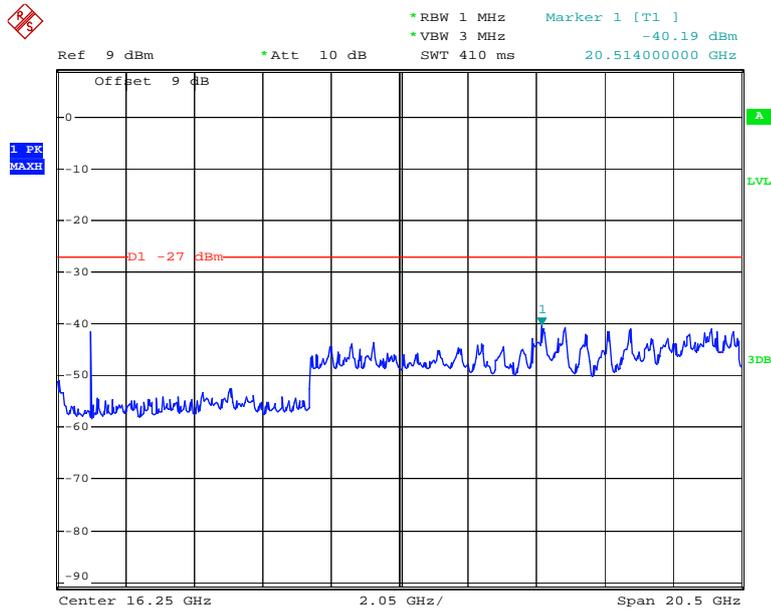
Date: 19.MAY.2015 14:55:12

Chain 1:802.11a Low Channel 26.5GHz-40GHz

```
                                        *RBW 1 MHz     Marker 1 [T1 ]
                                        *VBW 3 MHz            -42.03 dBm
            Ref -1 dBm        *Att  0 dB  SWT 270 ms    39.028000000 GHz
              Offset  9 dB
```
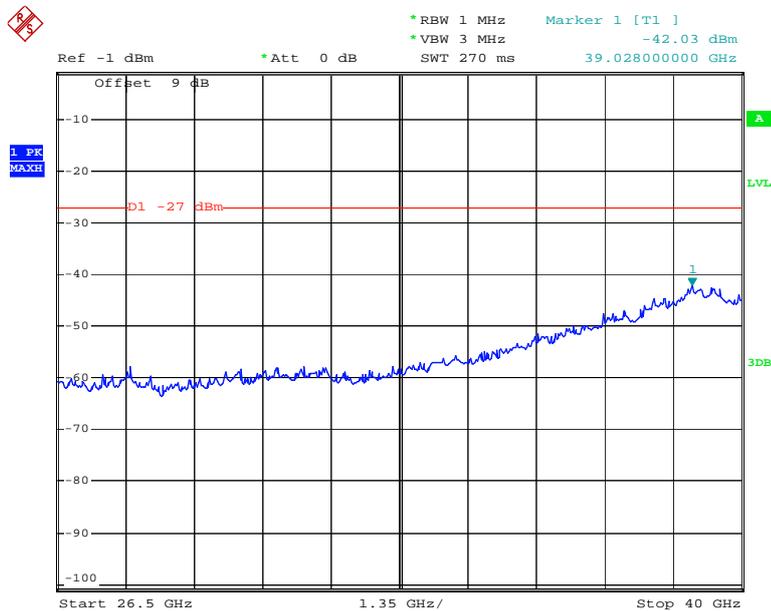
Date: 22.MAY.2015 12:44:33

Chain 1:802.11a Middle Channel 30MHz -1GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz             -47.42 dBm
        Ref  19 dBm      *Att  20 dB   SWT 100 ms      35.820000000 MHz
```
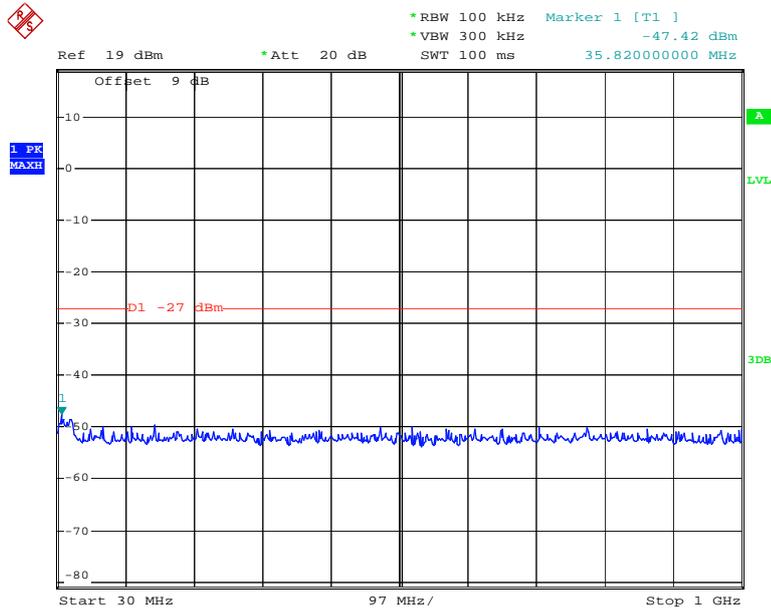
Date: 19.MAY.2015 14:56:43

Chain 1:802.11a Middle Channel 1GHz-6GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz              -45.03 dBm
        Ref  19 dBm      *Att  20 dB   SWT 100 ms       3.180000000 GHz
```

Fundamental
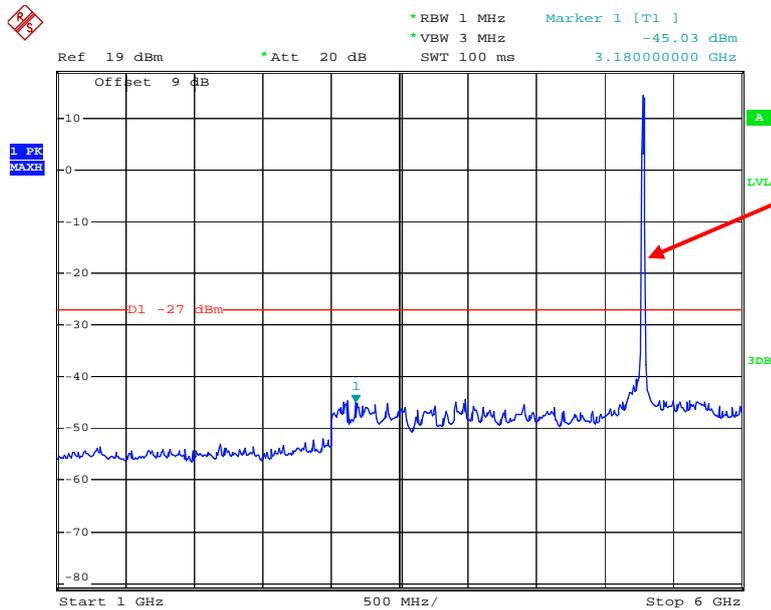
Date: 19.MAY.2015 14:56:22

Chain 1:802.11a Middle Channel 6GHz-26.5GHz
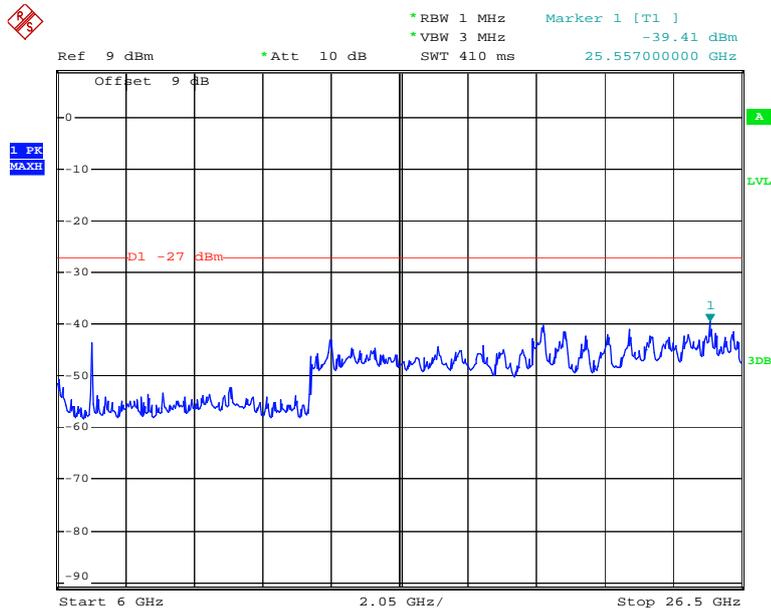
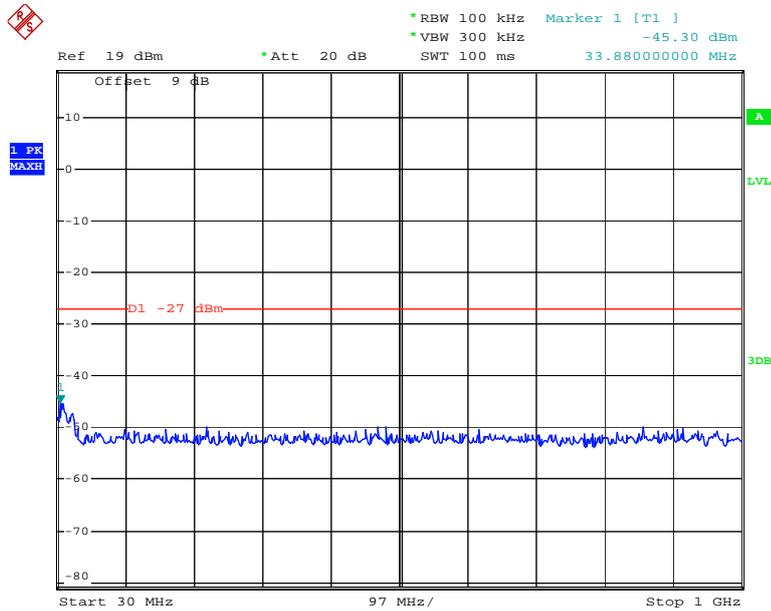Date: 19.MAY.2015 14:55:47
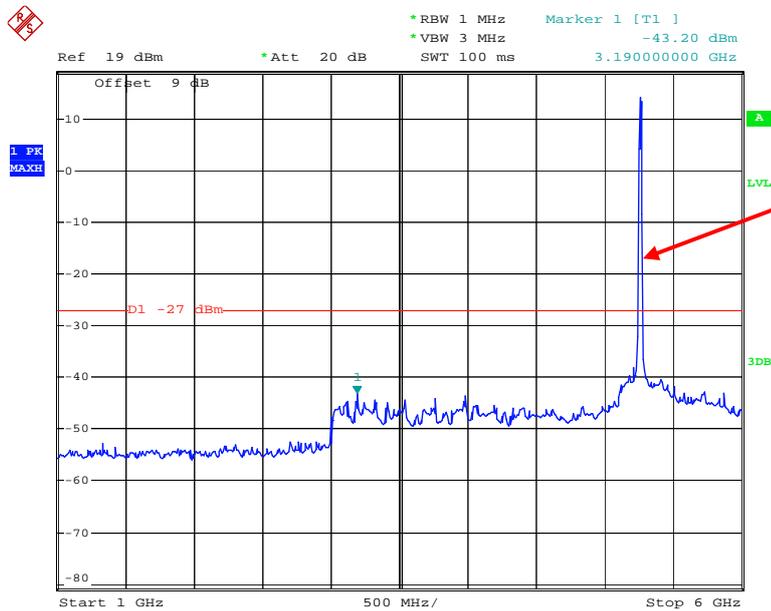
Chain 1:802.11a Middle Channel 26.5GHz-40GHz
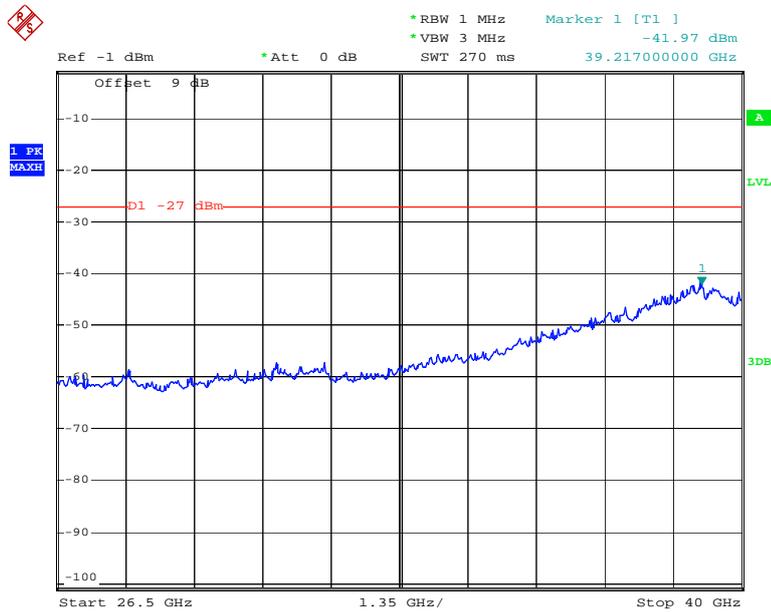
Date: 22.MAY.2015 12:45:06
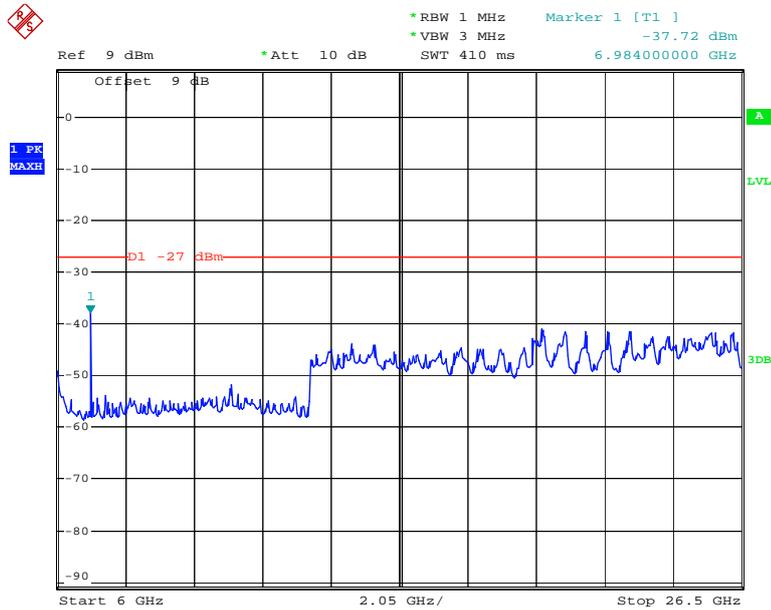
Chain 1:802.11a High Channel 30MHz-1GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz            -47.16 dBm
     Ref  19 dBm        *Att  20 dB  SWT 100 ms      35.820000000 MHz
```
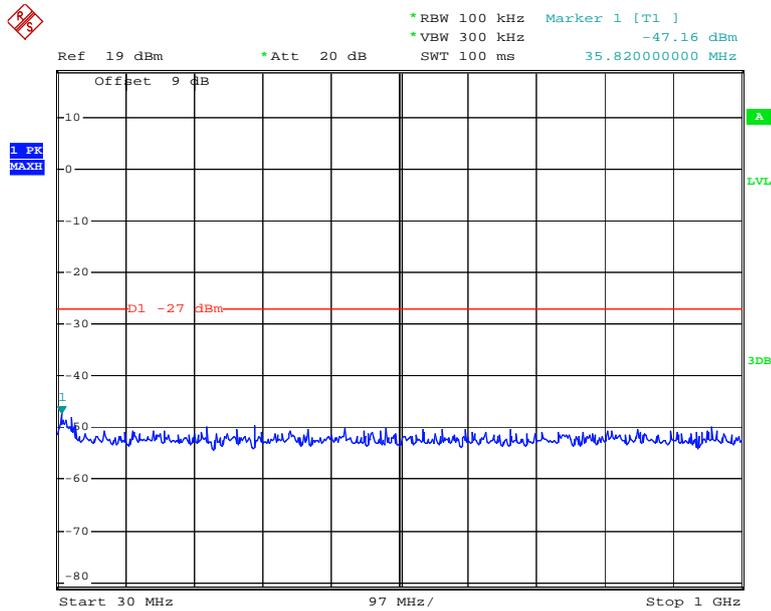
Date: 19.MAY.2015 14:57:04

Chain 1:802.11a High Channel 1GHz-6GHz

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz              -44.13 dBm
     Ref  19 dBm        *Att  20 dB  SWT 100 ms       3.100000000 GHz
```

Fundamental
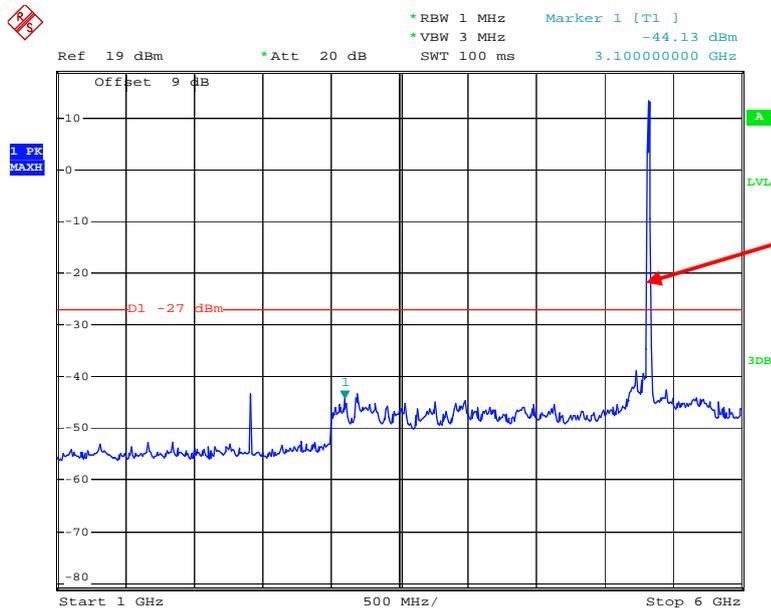
Date: 19.MAY.2015 14:57:21

Chain 1:802.11a High Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz              -40.01 dBm
        Ref  9 dBm        *Att  10 dB   SWT 410 ms    20.514000000 GHz
          Offset  9 dB
```
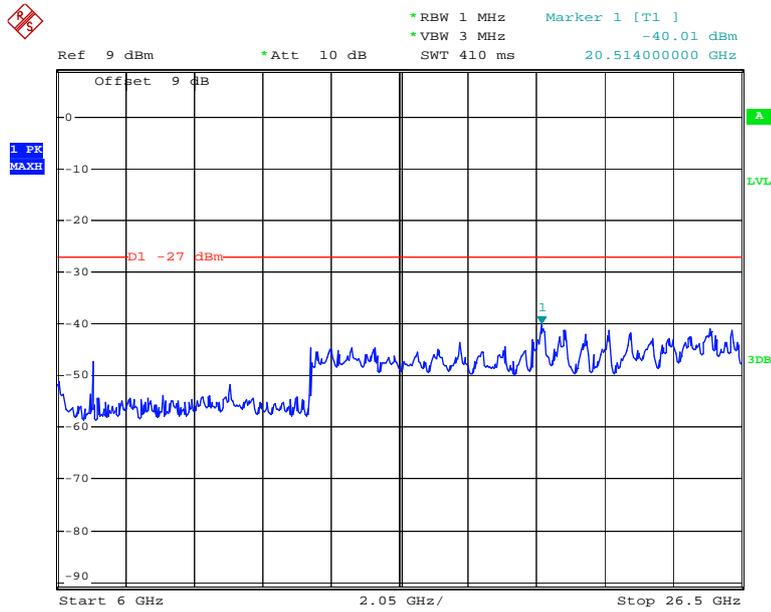
Date: 19.MAY.2015 14:57:40

Chain 1:802.11a High Channel 26.5GHz-40GHz

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz              -42.32 dBm
        Ref -1 dBm        *Att  0 dB    SWT 270 ms    39.217000000 GHz
          Offset  9 dB
```
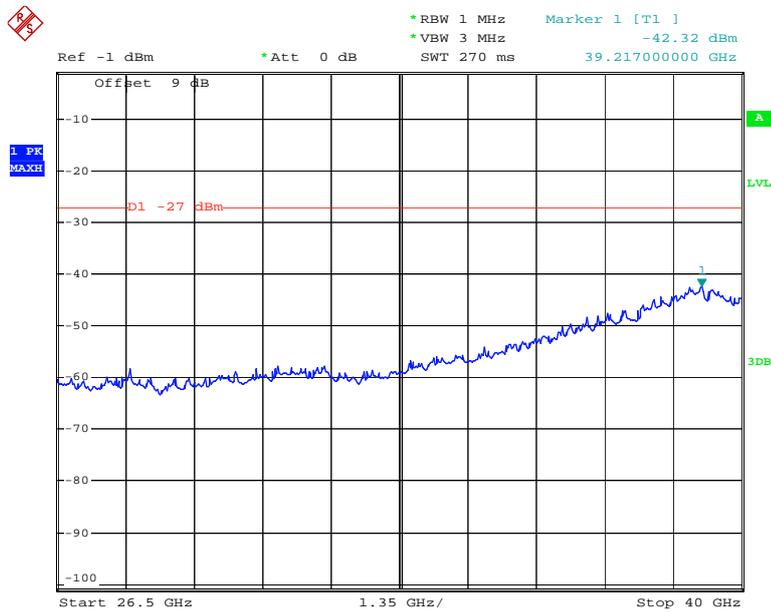
Date: 22.MAY.2015 12:44:27

Chain 1:802.11n ht20 Low Channel 30MHz-1GHz

```
                              *RBW 100 kHz   Marker 1 [T1 ]
                              *VBW 300 kHz            -47.27 dBm
        Ref  19 dBm   *Att  20 dB   SWT 100 ms    45.520000000 MHz
```
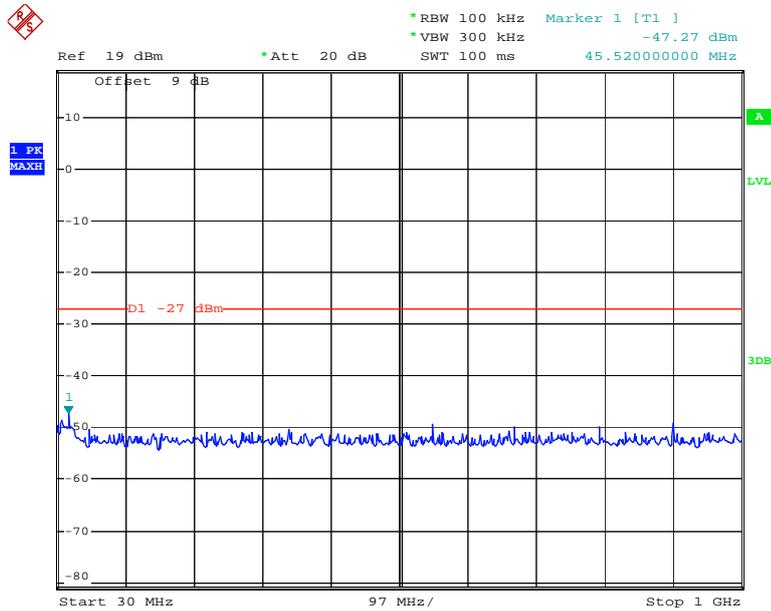
Date: 19.MAY.2015 15:01:09

Chain 1:802.11n ht20 Low Channel 1GHz-6GHz

```
                              *RBW 1 MHz     Marker 1 [T1 ]
                              *VBW 3 MHz             -45.47 dBm
        Ref  19 dBm   *Att  20 dB   SWT 100 ms    3.760000000 GHz
```

Fundamental
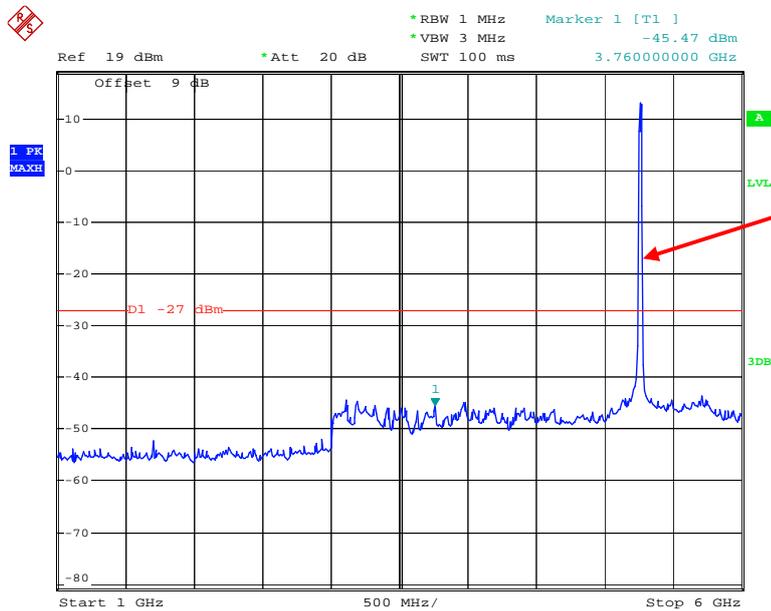
Date: 19.MAY.2015 15:00:48

Chain 1:802.11n ht20 Low Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz              -39.99 dBm
         Ref  9 dBm      *Att  10 dB   SWT 410 ms     21.211000000 GHz
```
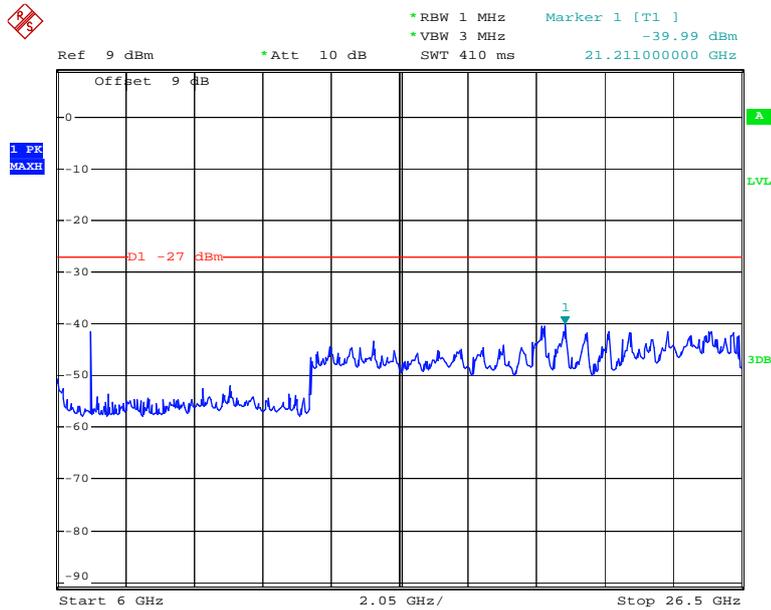
Date: 19.MAY.2015 15:00:25

Chain 1:802.11n ht20 Low Channel 26.5GHz-40GHz

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz              -41.79 dBm
         Ref -1 dBm      *Att   0 dB   SWT 270 ms     39.433000000 GHz
```
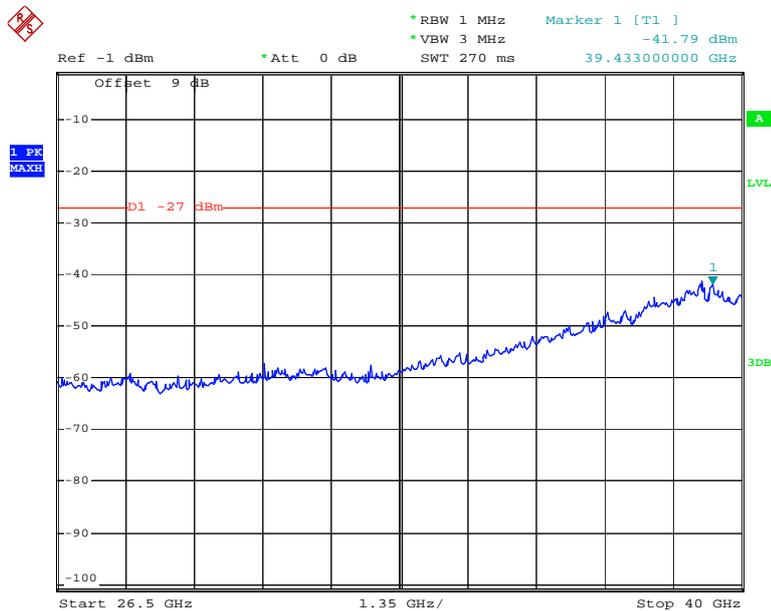
Date: 22.MAY.2015 12:45:28

Chain 1:802.11n ht20 Middle Channel 30MHz -1GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz          -49.16 dBm
      Ref  19 dBm        *Att  20 dB   SWT 100 ms     41.640000000 MHz
         Offset  9 dB
```
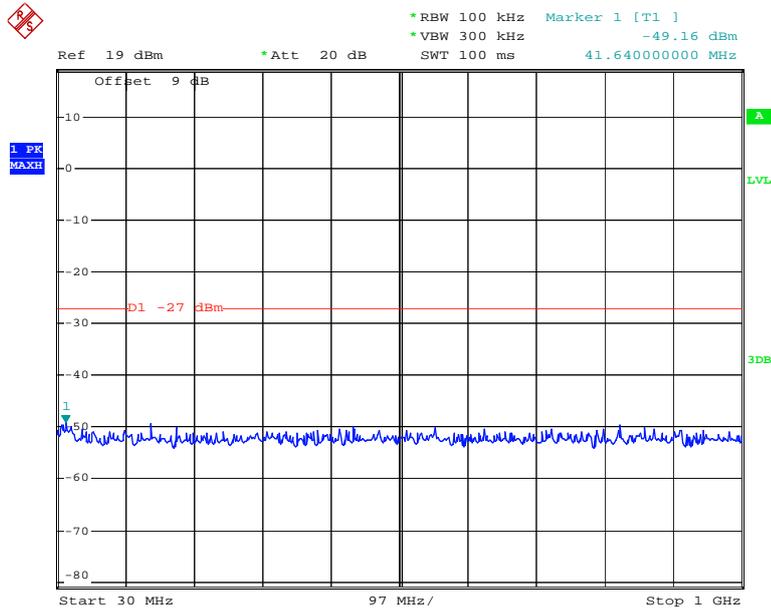
Date: 19.MAY.2015 14:59:11

Chain 1:802.11n ht20 Middle Channel 1GHz-6GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz           -44.66 dBm
      Ref  19 dBm        *Att  20 dB   SWT 100 ms    3.180000000 GHz
         Offset  9 dB
```

Fundamental
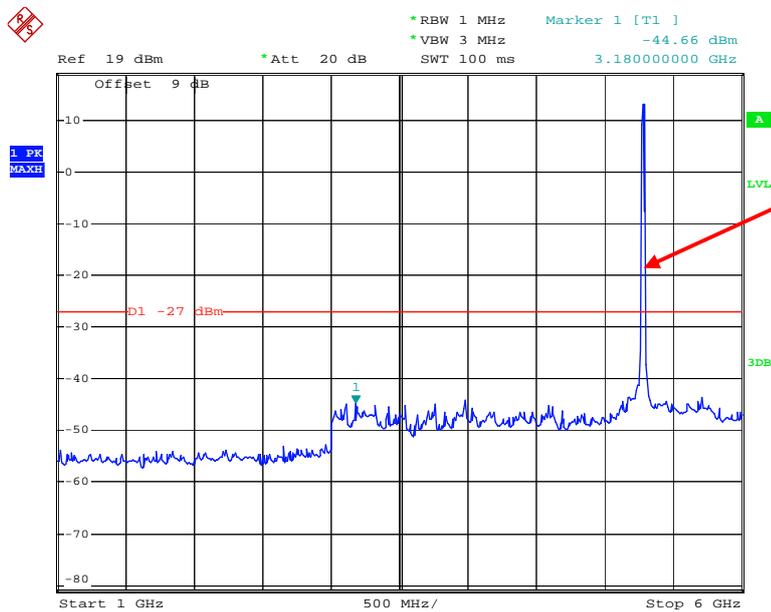
Date: 19.MAY.2015 14:59:35

Chain 1:802.11n ht20 Middle Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz              -40.92 dBm
    Ref  9 dBm          *Att  10 dB   SWT 410 ms    20.514000000 GHz
       Offset  9 dB
```
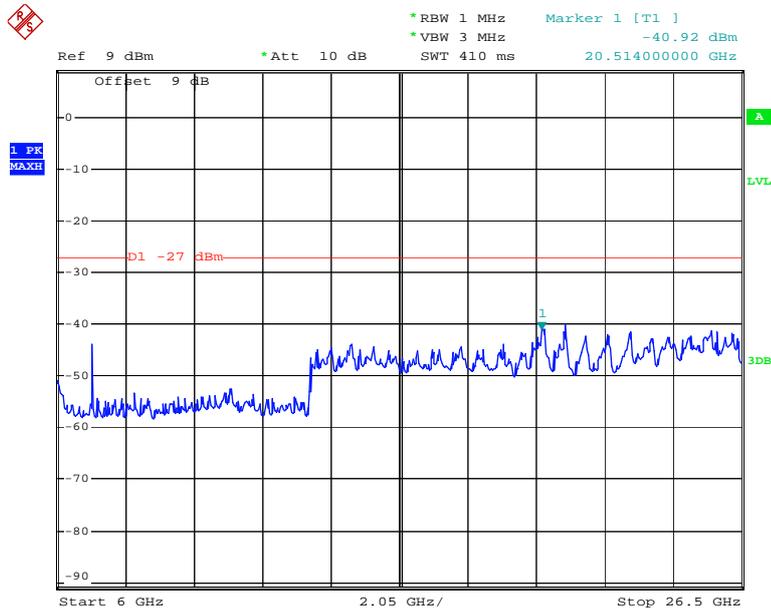
Date: 19.MAY.2015 14:59:55

Chain 1:802.11n ht20 Middle Channel 26.5GHz-40GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz              -41.48 dBm
    Ref -1 dBm          *Att  0 dB    SWT 270 ms    39.190000000 GHz
       Offset  9 dB
```
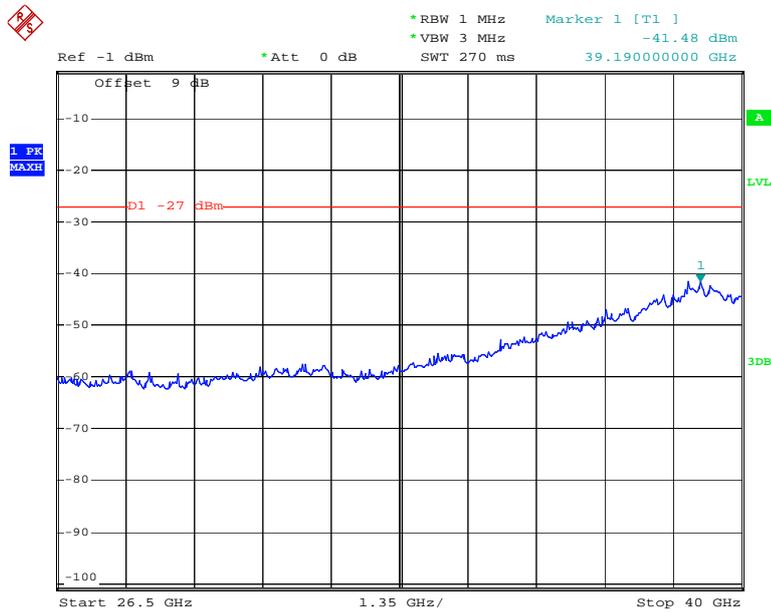
Date: 22.MAY.2015 12:45:41

Chain 1:802.11n ht20 High Channel 30MHz-1GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz              -47.19 dBm
    Ref  19 dBm         *Att  20 dB  SWT 100 ms      39.700000000 MHz
       Offset  9 dB                                                    A
  -10
1 PK
MAXH  -0                                                               LVL

  --10

  --20
        D1 -27 dBm
  --30                                                                 3DB

  --40

  1
  --50

  --60

  --70

  --80
    Start 30 MHz              97 MHz/              Stop 1 GHz
```
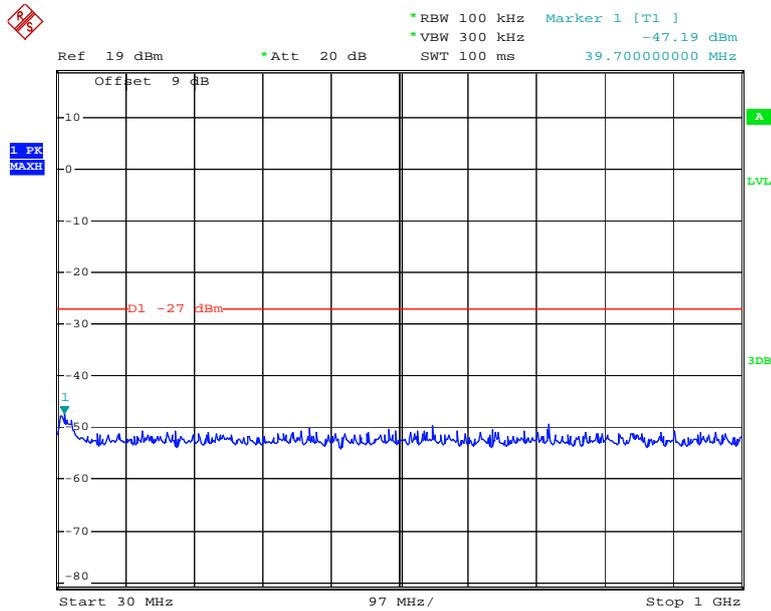
Date: 19.MAY.2015 14:58:38

Chain 1:802.11n ht20 High Channel 1GHz-6GHz

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz              -44.69 dBm
    Ref  19 dBm         *Att  20 dB  SWT 100 ms      3.320000000 GHz
       Offset  9 dB                                                    A
  -10
1 PK
MAXH  -0                                                               LVL
                                                                        Fundamental
  --10

  --20
        D1 -27 dBm
  --30                                                                 3DB

  --40
                          1
  --50

  --60

  --70

  --80
    Start 1 GHz              500 MHz/             Stop 6 GHz
```
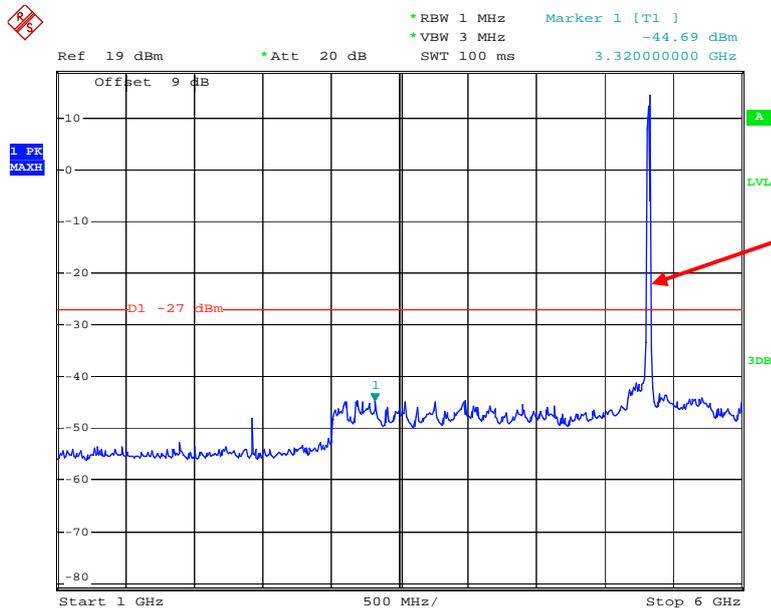
Date: 19.MAY.2015 14:58:23

Chain 1:802.11n ht20 High Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz      Marker 1 [T1 ]
                                    *VBW 3 MHz              -39.67 dBm
        Ref  9 dBm        *Att  10 dB    SWT 410 ms    20.514000000 GHz
          Offset  9 dB
     0
                                                                        A

  1 PK
  MAXH -10
                                                                        LVL

     -20

     D1 -27 dBm                                                          
     -30

     -40                                          1
                                                  ▼
     -50

     -60                                                                 3DB

     -70

     -80

     -90
     Start 6 GHz              2.05 GHz/              Stop 26.5 GHz
```
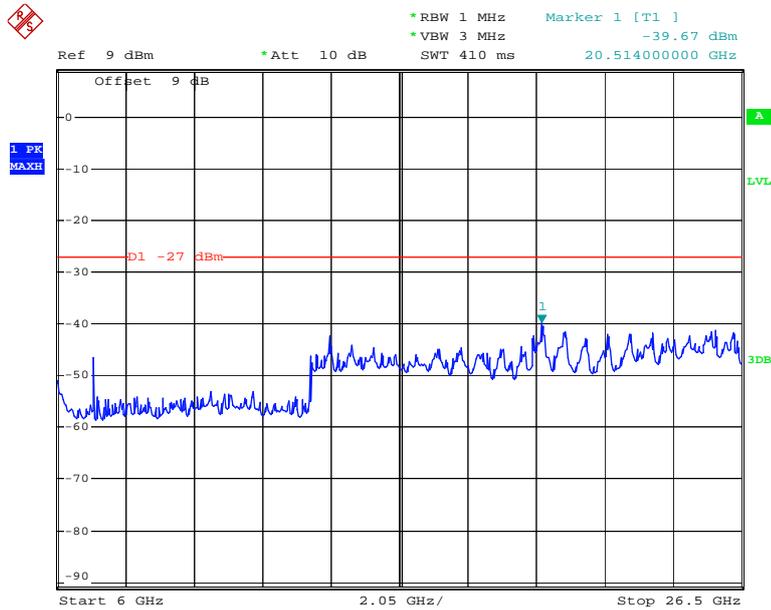
Date: 19.MAY.2015 14:58:04

Chain 1:802.11n ht20 High Channel 26.5GHz-40GHz

```
                                    *RBW 1 MHz      Marker 1 [T1 ]
                                    *VBW 3 MHz              -42.15 dBm
        Ref -1 dBm        *Att  0 dB     SWT 270 ms    39.163000000 GHz
          Offset  9 dB
    -10
                                                                        A

  1 PK
  MAXH -20
                                                                        LVL

     D1 -27 dBm
    -30

    -40                                                  1
                                                         ▼
    -50

    -60                                                                 3DB

    -70

    -80

    -90

   -100
     Start 26.5 GHz           1.35 GHz/              Stop 40 GHz
```
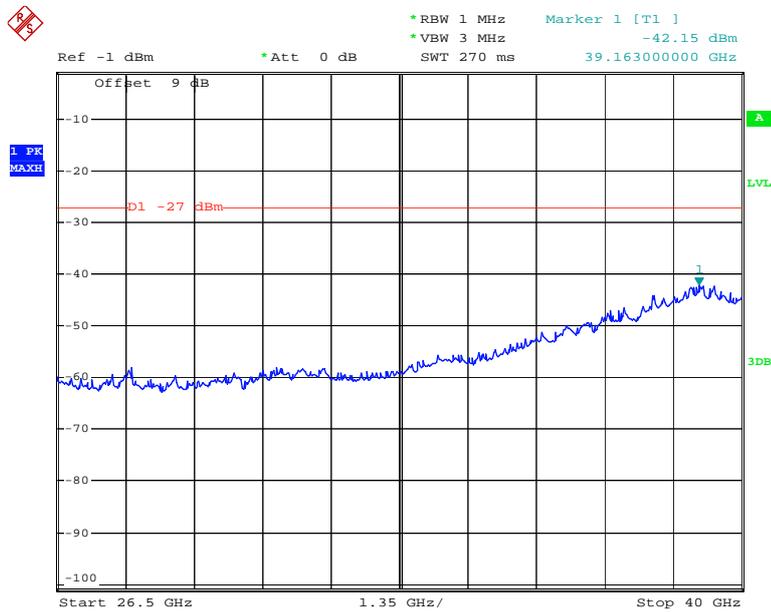
Date: 22.MAY.2015 12:45:21

Chain 1:802.11n ht40 Low Channel 30MHz-1GHz

```
                                      *RBW 100 kHz   Marker 1 [T1 ]
                                      *VBW 300 kHz              -48.29 dBm
        Ref  19 dBm          *Att  20 dB    SWT 100 ms      37.760000000 MHz
           Offset  9 dB
```
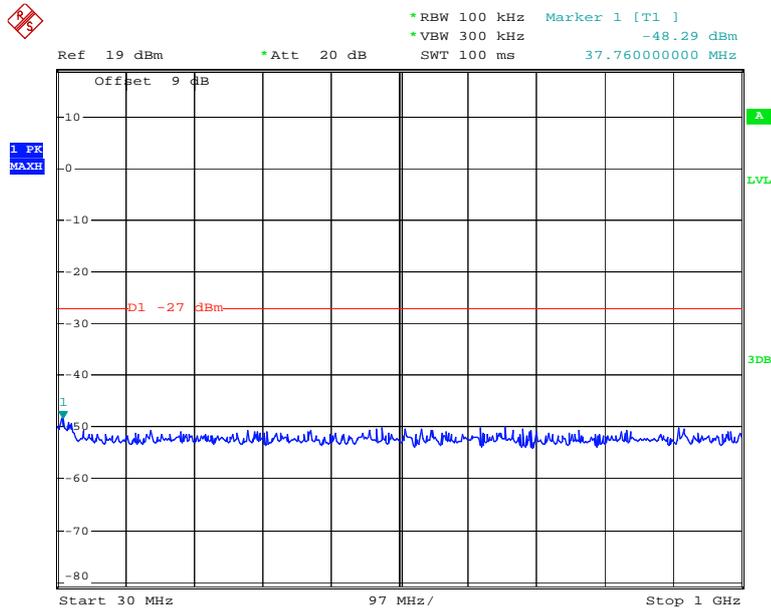
Date: 19.MAY.2015 15:01:36

Chain 1:802.11n ht40 Low Channel 1GHz-6GHz

```
                                      *RBW 1 MHz    Marker 1 [T1 ]
                                      *VBW 3 MHz               -44.38 dBm
        Ref  19 dBm          *Att  20 dB    SWT 100 ms      3.110000000 GHz
           Offset  9 dB
```

Fundamental
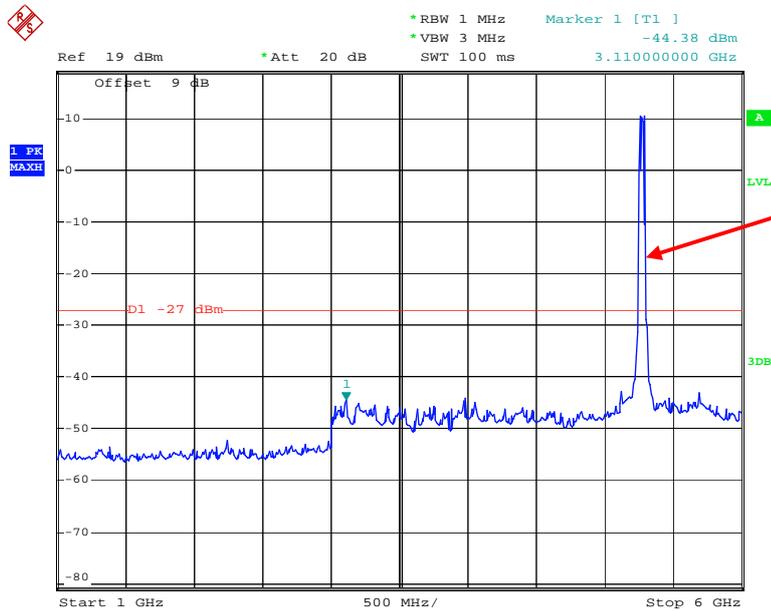
Date: 19.MAY.2015 15:01:55

Chain 1:802.11n ht40 Low Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz              -39.57 dBm
        Ref  9 dBm         *Att  10 dB   SWT 410 ms    20.555000000 GHz
          Offset  9 dB                                              [A]
    1 PK
    MAXH                                                            LVL

                 D1 -27 dBm                                         3DB
```
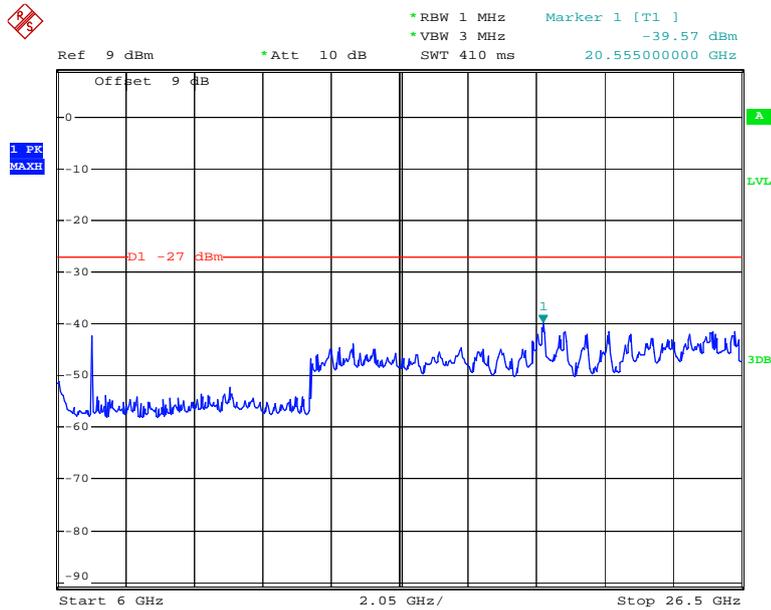
Date: 19.MAY.2015 15:02:13

Chain 1:802.11n ht40 Low Channel 26.5GHz-40GHz

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz              -41.84 dBm
        Ref -1 dBm         *Att  0 dB    SWT 270 ms    39.244000000 GHz
          Offset  9 dB                                              [A]
    1 PK
    MAXH                                                            LVL

                 D1 -27 dBm                                         3DB
```
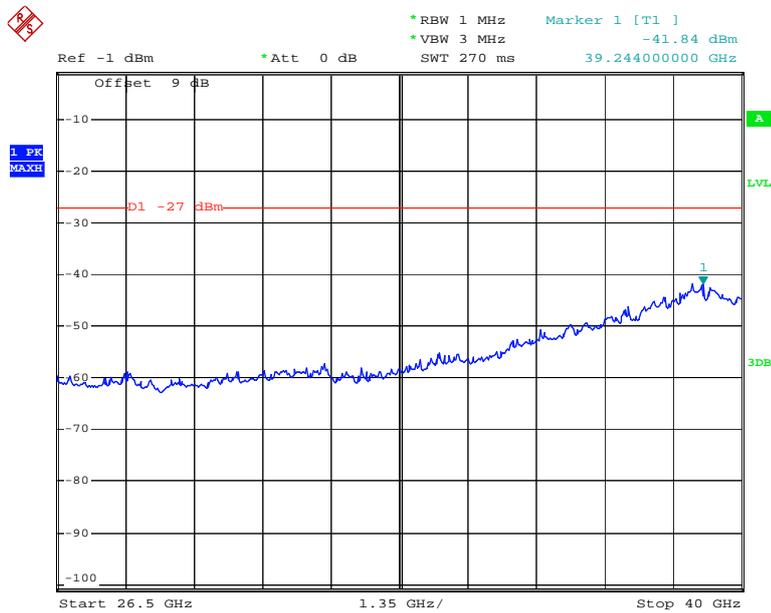
Date: 22.MAY.2015 12:45:58

Chain 1:802.11n ht40 High Channel 30MHz-1GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz            -48.26 dBm
        Ref  19 dBm      *Att  20 dB   SWT 100 ms     37.760000000 MHz
          Offset  9 dB                                            A
  1 PK
  MAXH                                                            LVL

         D1 -27 dBm                                               3DB


Start 30 MHz              97 MHz/                    Stop 1 GHz
```
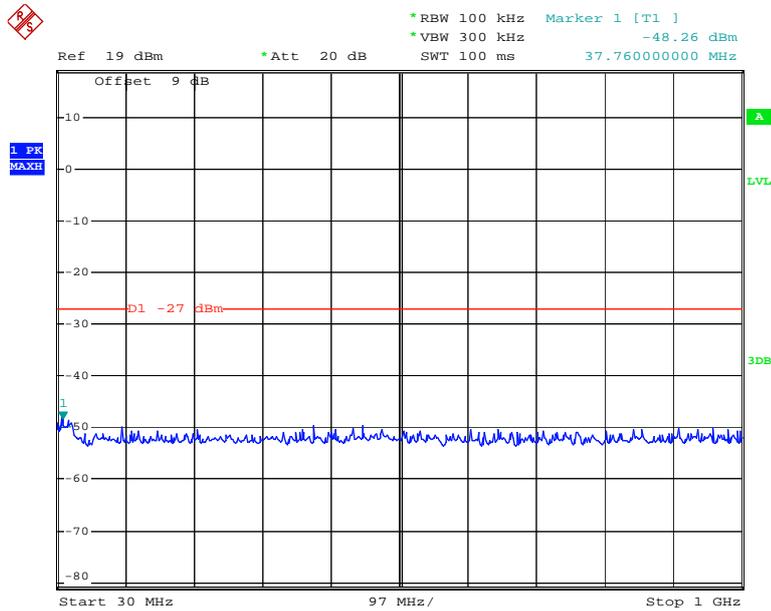
Date: 19.MAY.2015 15:03:22

Chain 1:802.11n ht40 High Channel 1GHz-6GHz

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz            -44.43 dBm
        Ref  19 dBm      *Att  20 dB   SWT 100 ms     3.100000000 GHz
          Offset  9 dB                                            A
  1 PK
  MAXH                                                            LVL

         D1 -27 dBm                                               3DB


Start 1 GHz              500 MHz/                    Stop 6 GHz
```

Fundamental
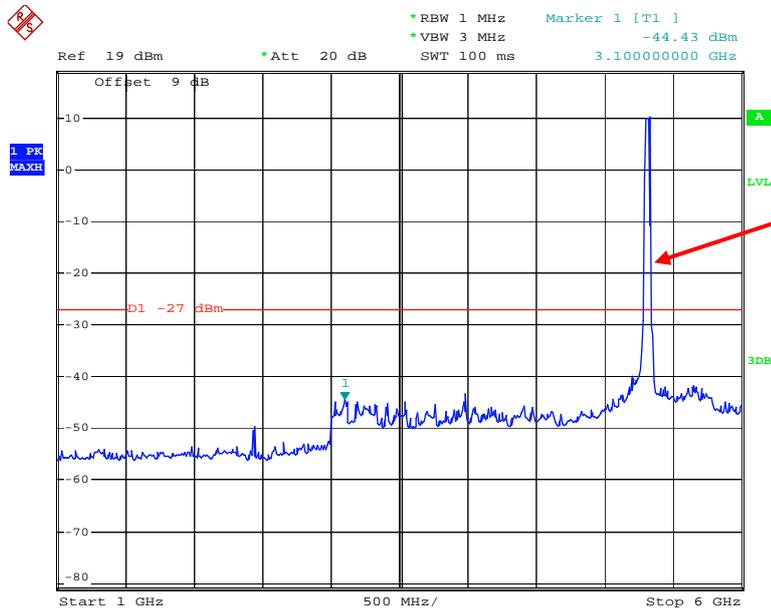
Date: 19.MAY.2015 15:03:07

Chain 1:802.11n ht40 High Channel 6GHz-26.5GHz

```
                              *RBW 1 MHz    Marker 1 [T1 ]
                              *VBW 3 MHz            -40.03 dBm
Ref  9 dBm        *Att  10 dB  SWT 410 ms    20.514000000 GHz
    Offset  9 dB                                                    A

1 PK
MAXH                                                               LVL

                 D1 -27 dBm

                                                                  3DB

Start 6 GHz              2.05 GHz/              Stop 26.5 GHz
```
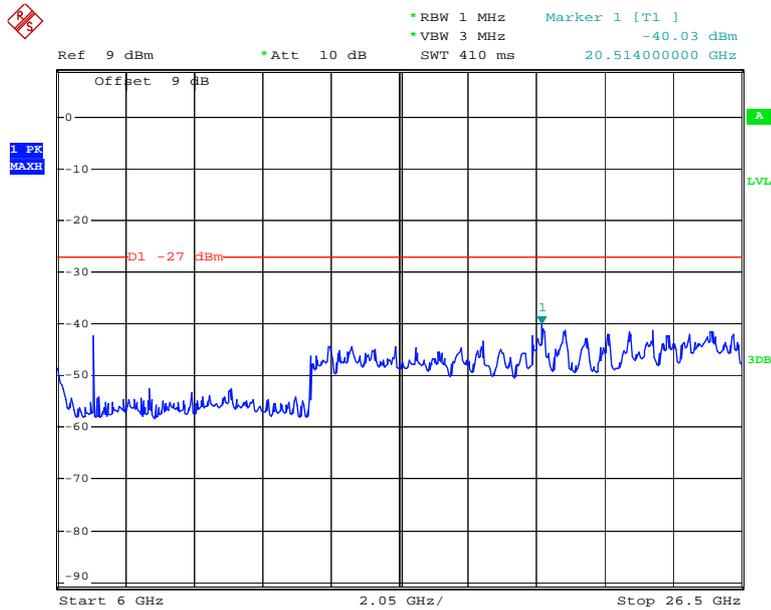
Date: 19.MAY.2015 15:02:46

Chain 1:802.11n ht40 High Channel 26.5GHz-40GHz

```
                              *RBW 1 MHz    Marker 1 [T1 ]
                              *VBW 3 MHz            -41.54 dBm
Ref -1 dBm        *Att  0 dB   SWT 270 ms    39.217000000 GHz
    Offset  9 dB                                                    A

1 PK
MAXH                                                               LVL

                 D1 -27 dBm

                                                                  3DB

Start 26.5 GHz           1.35 GHz/              Stop 40 GHz
```
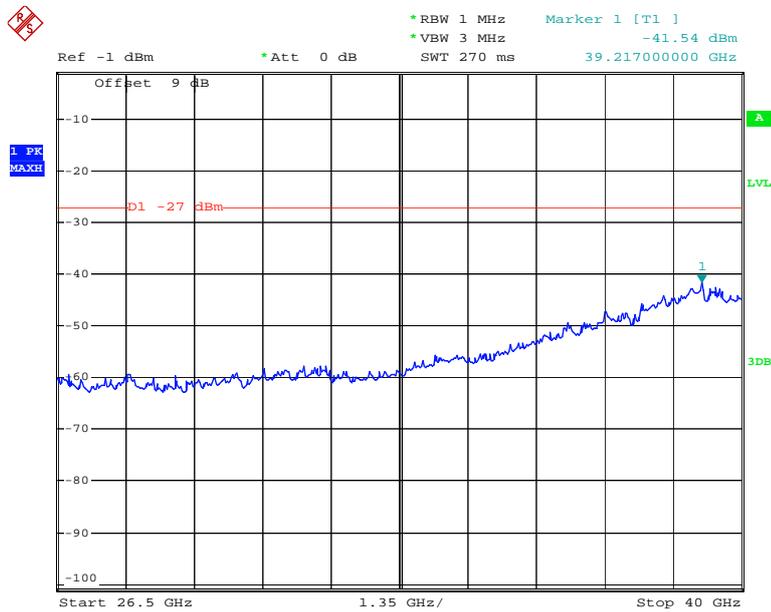
Date: 22.MAY.2015 12:45:49

Chain 1:802.11n ac80 Middle Channel 30MHz-1GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz            -45.84 dBm
     Ref  19 dBm        *Att  20 dB  SWT 100 ms     35.820000000 MHz
       Offset  9 dB
                                                                    A
 -10

1 PK  -0                                                          LVL
MAXH

 --10


 --20

      D1 -27 dBm
 -30                                                              3DB

 --40

 1
 -50

 --60

 --70

 --80
     Start 30 MHz              97 MHz/              Stop 1 GHz
```
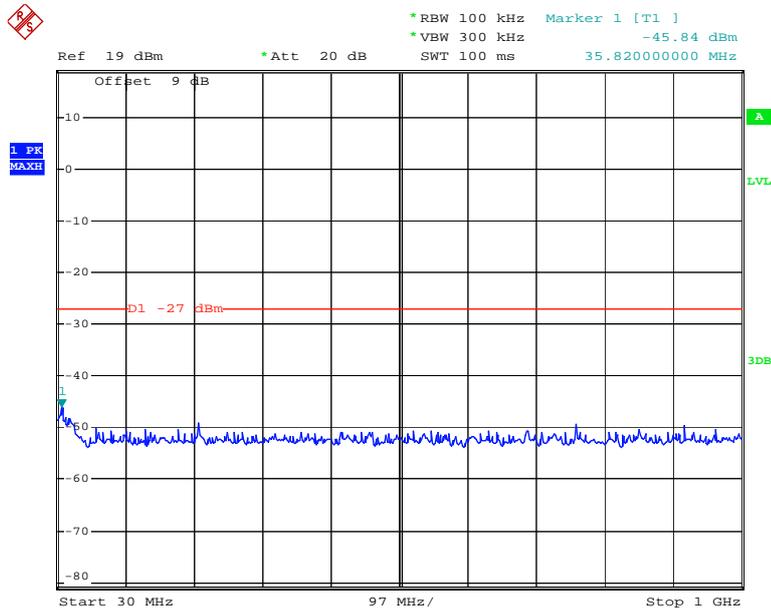
Date: 19.MAY.2015 15:03:49

Chain 1:802.11n ac80 Middle Channel 1GHz-6GHz

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz              -44.32 dBm
     Ref  19 dBm        *Att  20 dB  SWT 100 ms      3.190000000 GHz
       Offset  9 dB                                           Fundamental
 -10
                                                                    A

1 PK  -0                                                          LVL
MAXH

 --10


 --20

      D1 -27 dBm
 -30                                                              3DB

 --40
            1
 -50

 --60

 --70

 --80
     Start 1 GHz               500 MHz/             Stop 6 GHz
```
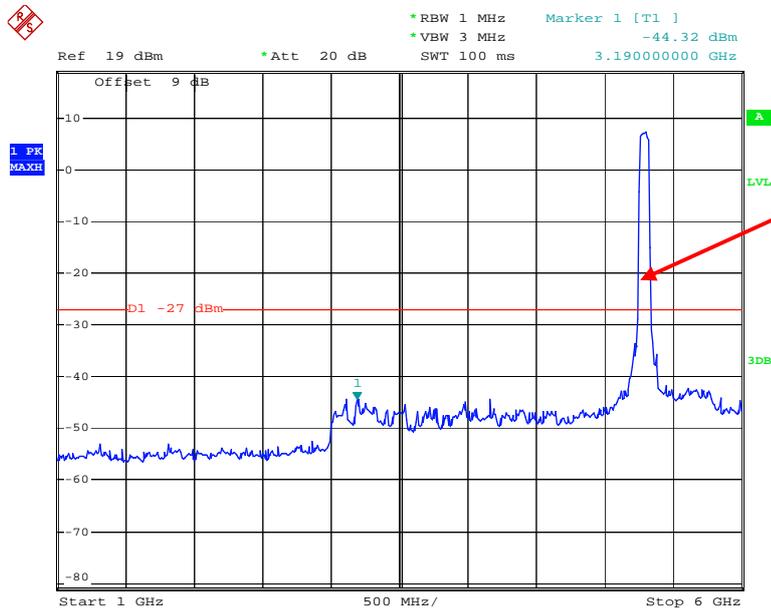
Date: 19.MAY.2015 15:04:14

Chain 1:802.11n ac80 Middle Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz          -40.09 dBm
        Ref  9 dBm        *Att  10 dB   SWT 410 ms     26.254000000 GHz
```
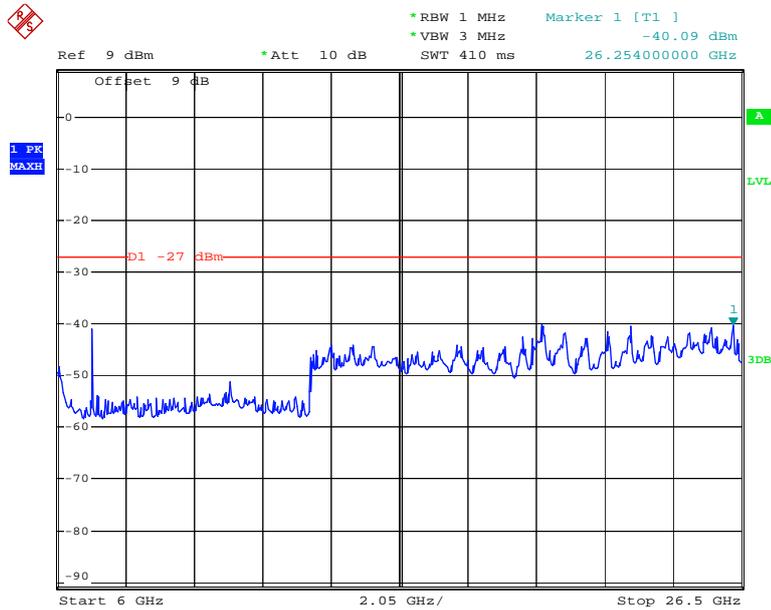
Date: 19.MAY.2015 15:04:33

Chain 1:802.11n ac80 Middle Channel 26.5GHz-40GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz          -41.79 dBm
        Ref -1 dBm        *Att  0 dB    SWT 270 ms     39.163000000 GHz
```
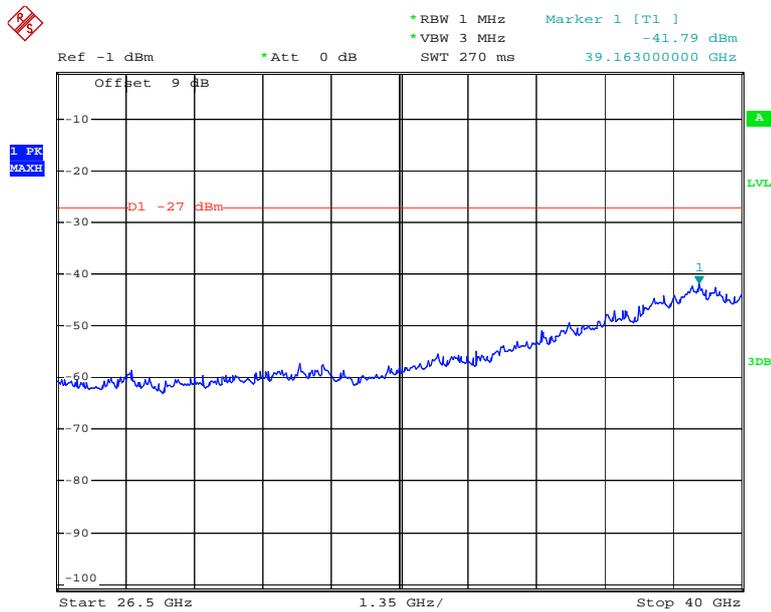
Date: 22.MAY.2015 12:45:14

Chain 2:802.11a Low Channel 30MHz-1GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz            -45.30 dBm
    Ref  19 dBm        *Att  20 dB   SWT 100 ms      33.880000000 MHz
      Offset  9 dB                                                        A
  -10
  -0                                                                      LVL
  -10
  -20
        D1 -27 dBm
  -30                                                                     3DB
  -40
  -50
  -60
  -70
  -80
  Start 30 MHz              97 MHz/                  Stop 1 GHz
```

Date: 19.MAY.2015 14:53:24

Chain 2:802.11a Low Channel 1GHz-6GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz            -43.20 dBm
    Ref  19 dBm        *Att  20 dB   SWT 100 ms      3.190000000 GHz
      Offset  9 dB                                                        A
  -10                                                          ↙─── Fundamental
  -0                                                                      LVL
  -10
  -20
        D1 -27 dBm
  -30                                                                     3DB
  -40
  -50
  -60
  -70
  -80
  Start 1 GHz               500 MHz/                 Stop 6 GHz
```

Date: 19.MAY.2015 14:52:59

Chain 2:802.11a Low Channel 6GHz-26.5GHz

```
                                      *RBW 1 MHz      Marker 1 [T1 ]
                                      *VBW 3 MHz              -37.72 dBm
      Ref  9 dBm          *Att  10 dB  SWT 410 ms     6.984000000 GHz
         Offset  9 dB
```

Date: 19.MAY.2015 14:52:36

Chain 2:802.11a Low Channel 26.5GHz-40GHz

```
                                      *RBW 1 MHz      Marker 1 [T1 ]
                                      *VBW 3 MHz              -42.40 dBm
      Ref -1 dBm          *Att   0 dB  SWT 270 ms    39.406000000 GHz
         Offset  9 dB
```
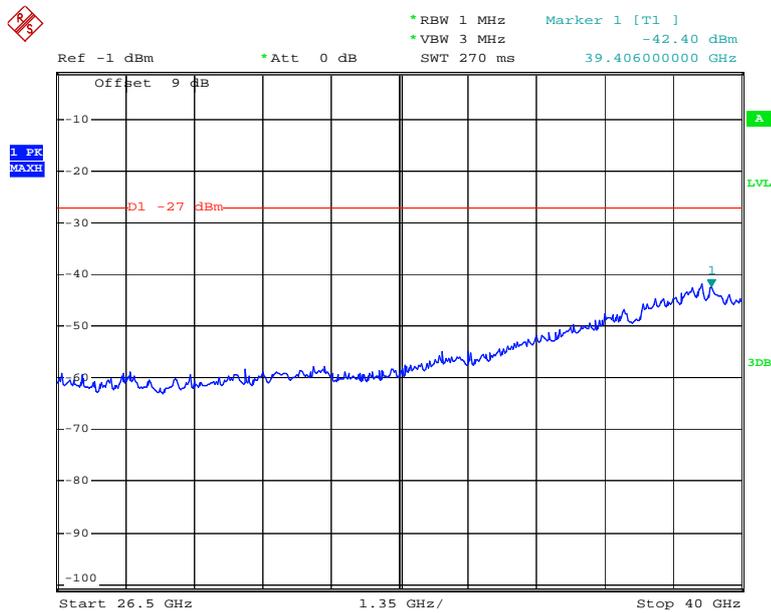
Date: 22.MAY.2015 13:47:15

Chain 2:802.11a Middle Channel 30MHz -1GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz            -45.99 dBm
      Ref  19 dBm        *Att  20 dB   SWT 100 ms      35.820000000 MHz
        Offset  9 dB                                                    A
  -10
1 PK
MAXH    0                                                               LVL

  -10

  -20

        D1 -27 dBm                                                      3DB
  -30

  -40

  -50

  -60

  -70

  -80
    Start 30 MHz              97 MHz/              Stop 1 GHz
```
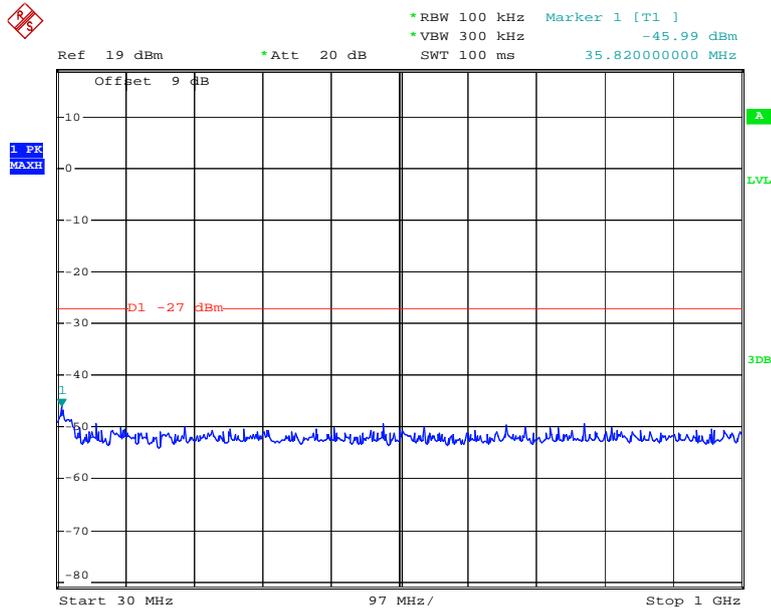
Date: 19.MAY.2015 14:51:38

Chain 2:802.11a Middle Channel 1GHz-6GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz             -43.76 dBm
      Ref  19 dBm        *Att  20 dB   SWT 100 ms      3.180000000 GHz
        Offset  9 dB                                                    A
  -10
1 PK
MAXH    0                                                               LVL

  -10

  -20

        D1 -27 dBm                                                      3DB
  -30

  -40

  -50

  -60

  -70

  -80
    Start 1 GHz               500 MHz/             Stop 6 GHz
```

Fundamental
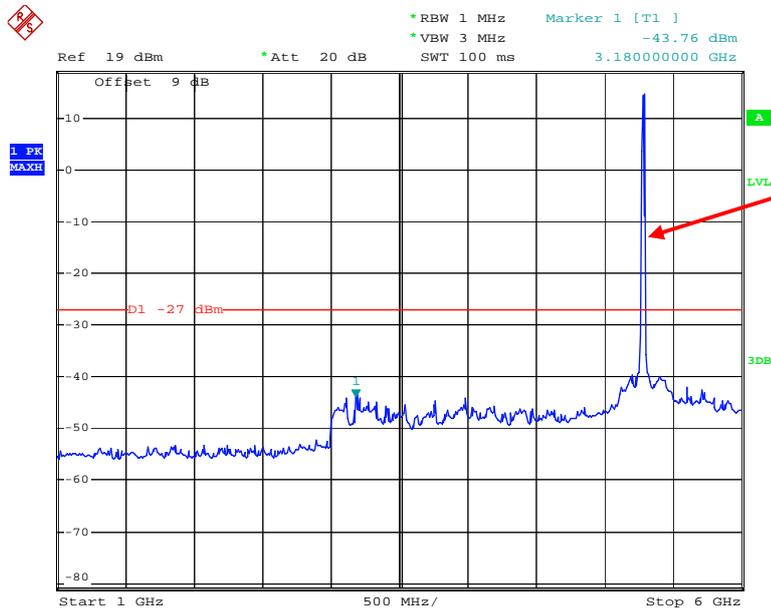
Date: 19.MAY.2015 14:51:55

Chain 2:802.11a Middle Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz              -39.54 dBm
      Ref  9 dBm        *Att  10 dB  SWT 410 ms      7.025000000 GHz
         Offset  9 dB                                              A
1 PK
MAXH                                                              LVL

                  D1 -27 dBm

                                                                 3DB
```
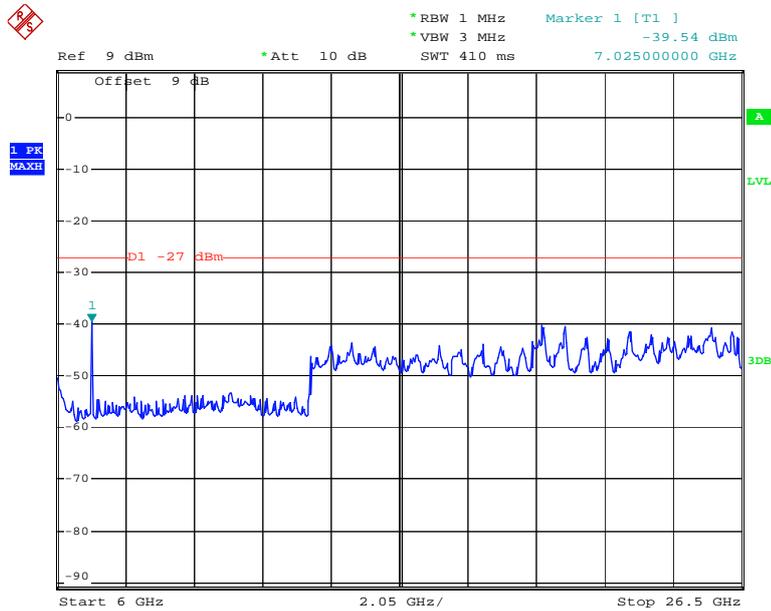
Date: 19.MAY.2015 14:52:12

Chain 2:802.11a Middle Channel 26.5GHz-40GHz

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz              -41.44 dBm
      Ref -1 dBm        *Att  0 dB   SWT 270 ms     39.163000000 GHz
         Offset  9 dB                                              A
1 PK
MAXH                                                              LVL

                  D1 -27 dBm

                                                                 3DB
```
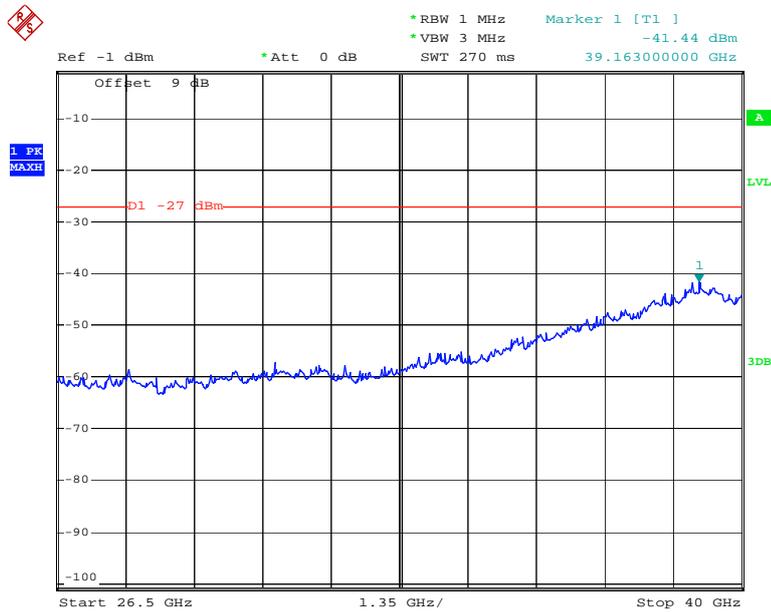
Date: 22.MAY.2015 13:47:28

Chain 2:802.11a High Channel 30MHz-1GHz
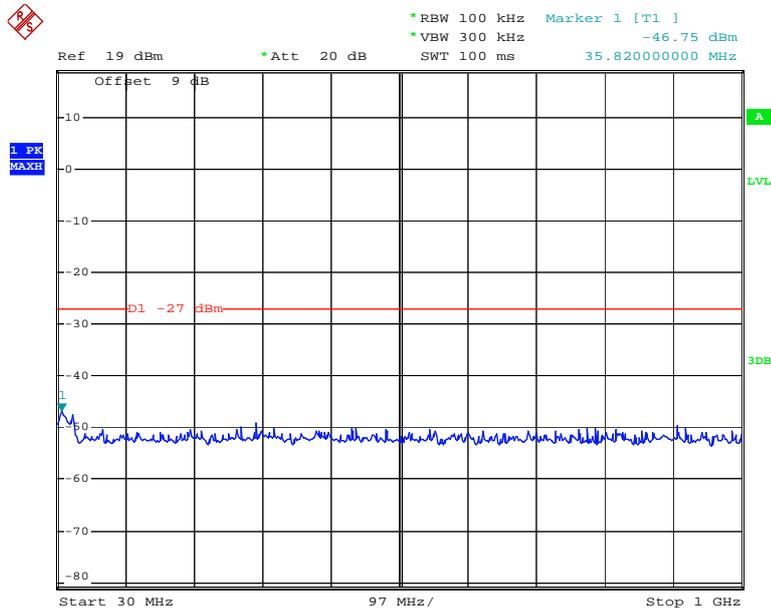
Date: 19.MAY.2015 14:51:00

Chain 2:802.11a High Channel 1GHz-6GHz
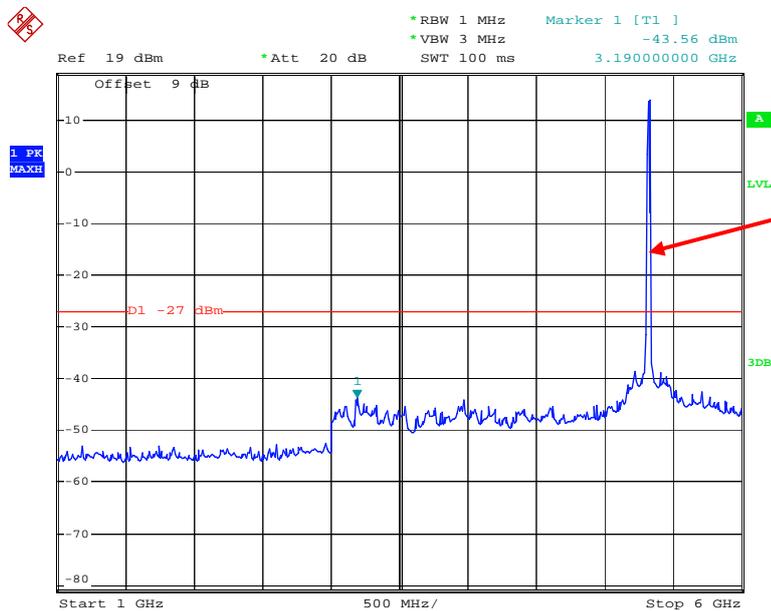
Date: 19.MAY.2015 14:48:54
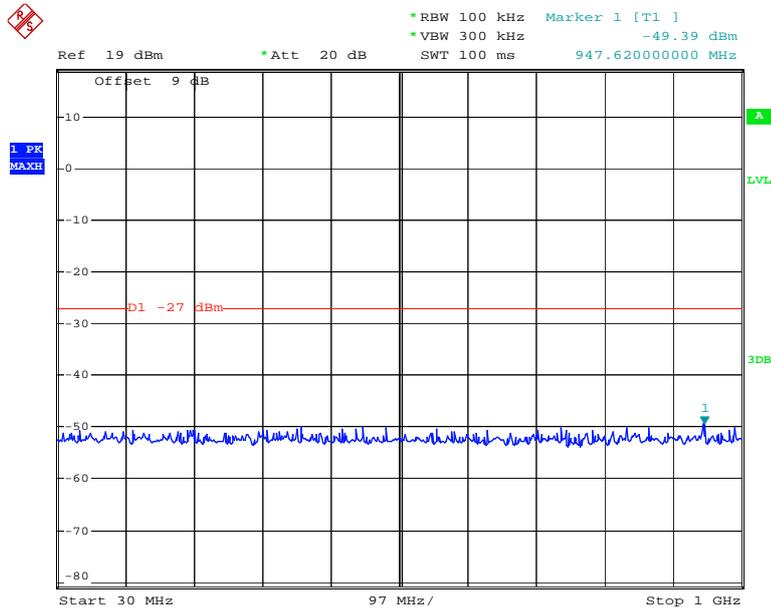
Chain 2:802.11a High Channel 6GHz-26.5GHz
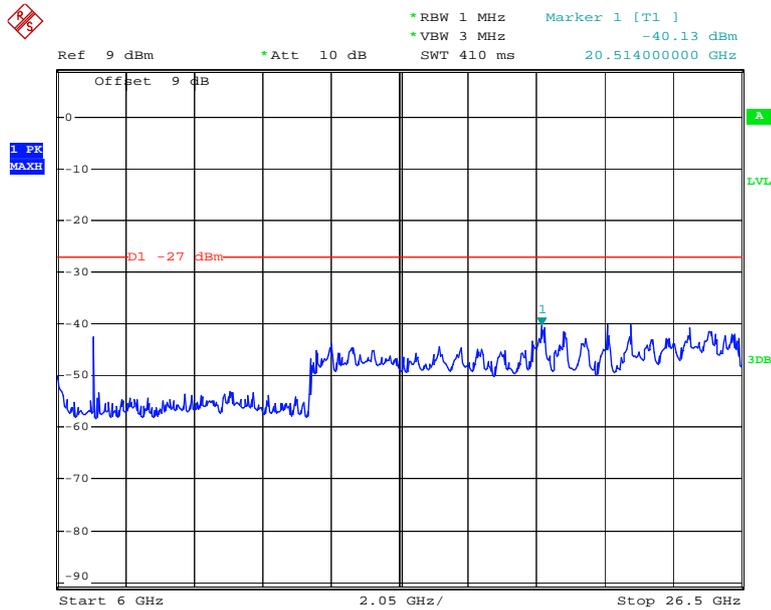
Date: 19.MAY.2015 14:48:33

Chain 2:802.11a High Channel 26.5GHz-40GHz
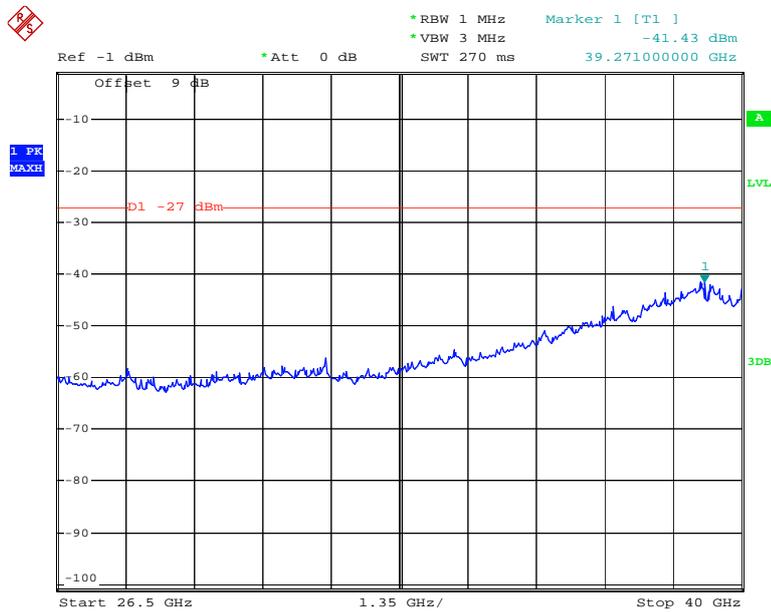
Date: 22.MAY.2015 13:47:09
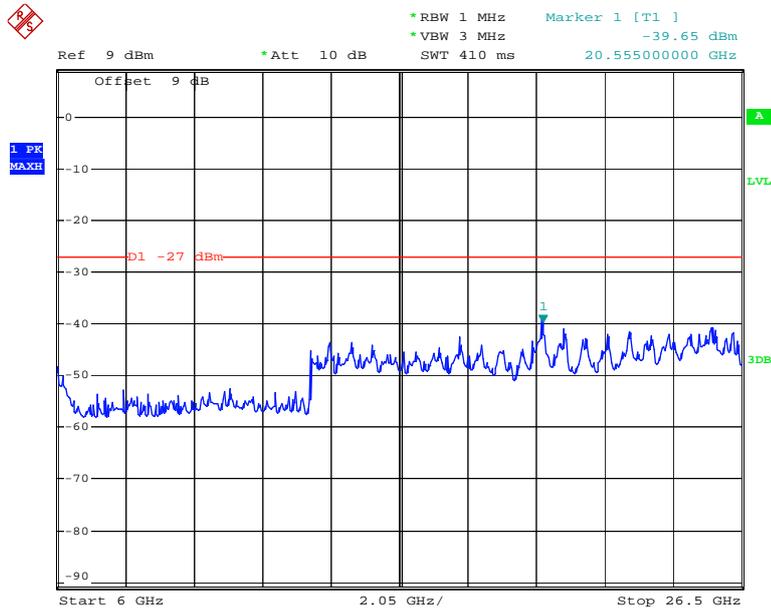
Chain 2:802.11n ht20 Low Channel 30MHz-1GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz             -48.28 dBm
        Ref  19 dBm      *Att  20 dB    SWT 100 ms    35.820000000 MHz
```
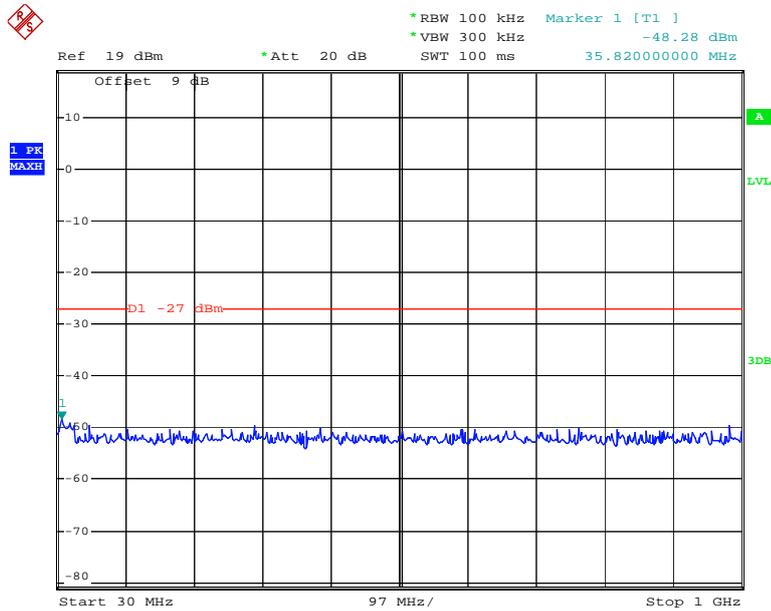
Date: 19.MAY.2015 14:45:04

Chain 2:802.11n ht20 Low Channel 1GHz-6GHz

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz               -43.52 dBm
        Ref  19 dBm      *Att  20 dB    SWT 100 ms     3.320000000 GHz
```

Fundamental
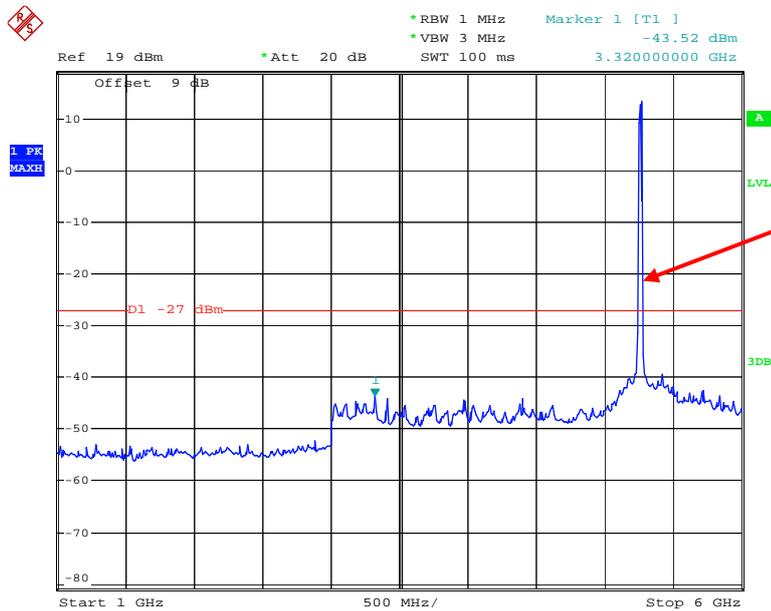
Date: 19.MAY.2015 14:45:21

Chain 2:802.11n ht20 Low Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz      Marker 1 [T1 ]
                                    *VBW 3 MHz              -37.90 dBm
         Ref  9 dBm       *Att  10 dB    SWT 410 ms      6.984000000 GHz
           Offset  9 dB                                                    A

  1 PK
  MAXH                                                                     LVL

        D1 -27 dBm

                                                                          3DB
```
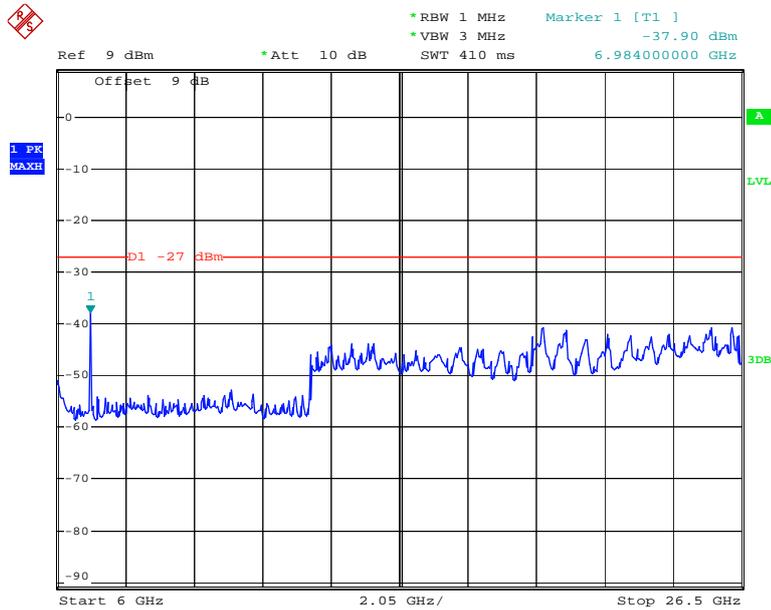
Date: 19.MAY.2015 14:45:36

Chain 2:802.11n ht20 Low Channel 26.5GHz-40GHz

```
                                    *RBW 1 MHz      Marker 1 [T1 ]
                                    *VBW 3 MHz              -42.08 dBm
         Ref -1 dBm       *Att  0 dB     SWT 270 ms      39.217000000 GHz
           Offset  9 dB                                                    A

  1 PK
  MAXH                                                                     LVL

        D1 -27 dBm

                                                                          3DB
```
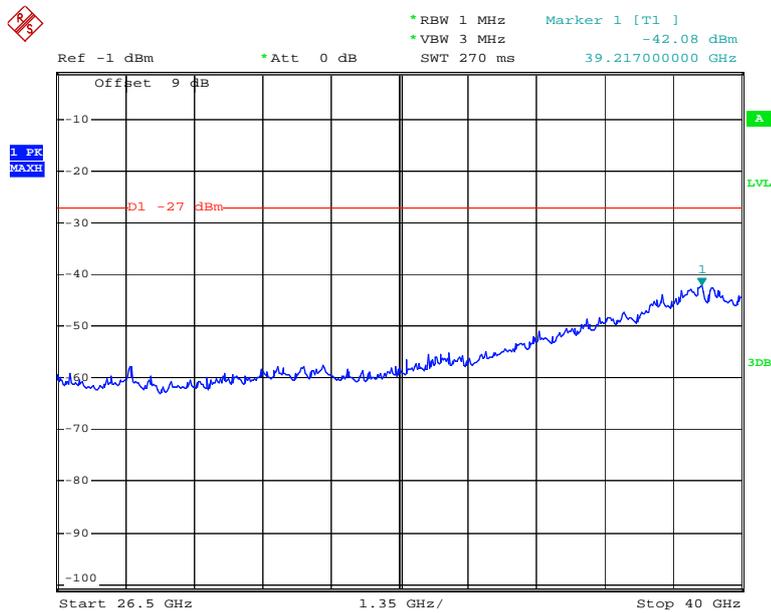
Date: 22.MAY.2015 13:47:48

Chain 2:802.11n ht20 Middle Channel 30MHz -1GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz            -45.80 dBm
        Ref  19 dBm      *Att  20 dB   SWT 100 ms     37.760000000 MHz
```
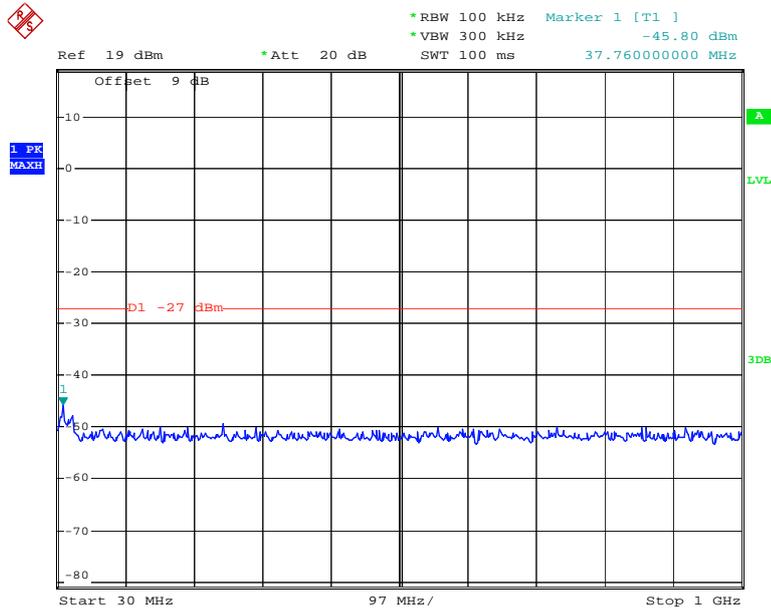
Date: 19.MAY.2015 14:46:53

Chain 2:802.11n ht20 Middle Channel 1GHz-6GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz             -44.36 dBm
        Ref  19 dBm      *Att  20 dB   SWT 100 ms    3.980000000 GHz
```

Fundamental
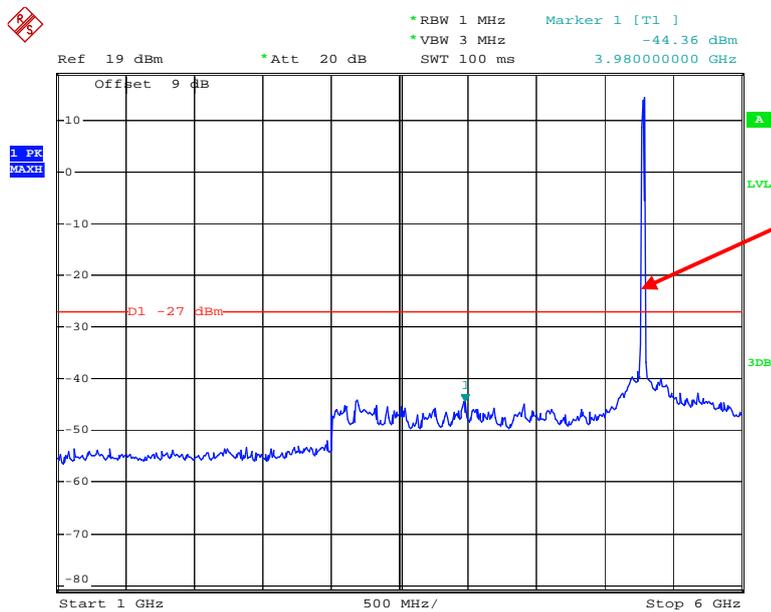
Date: 19.MAY.2015 14:46:31

Chain 2:802.11n ht20 Middle Channel 6GHz-26.5GHz
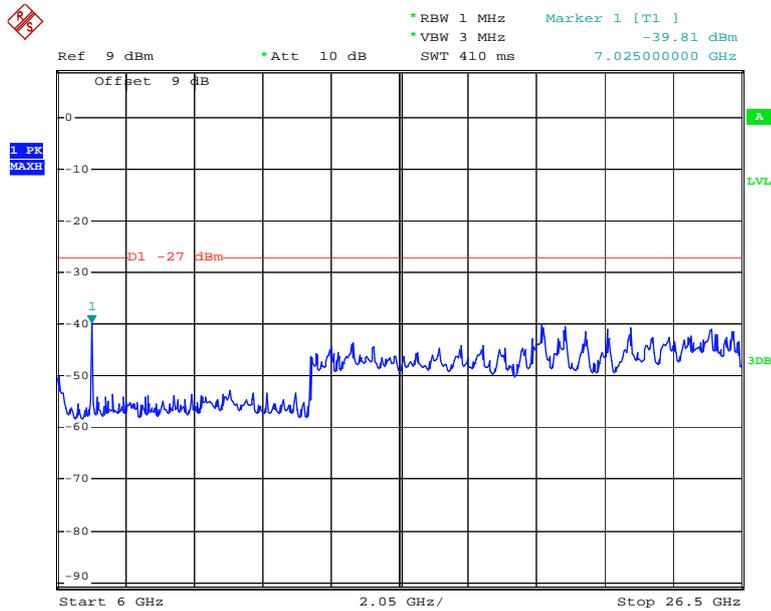
Date: 19.MAY.2015 14:46:10
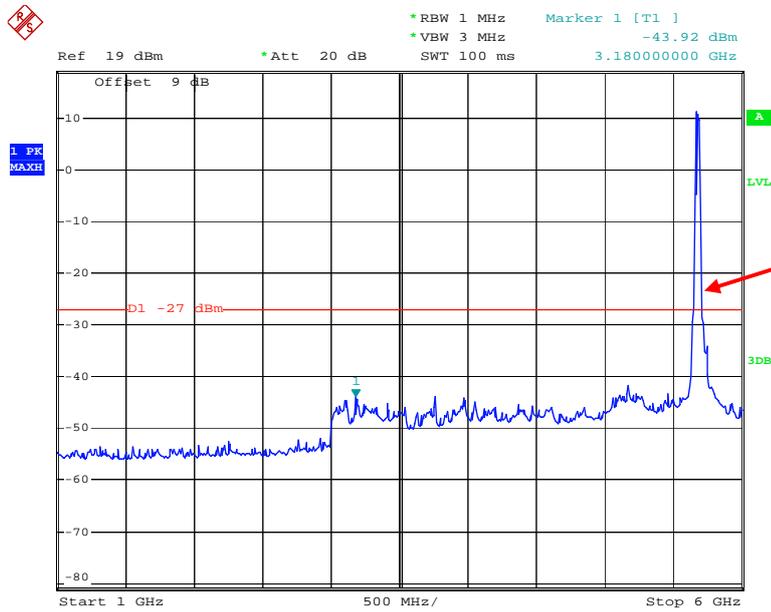
Chain 2:802.11n ht20 Middle Channel 26.5GHz-40GHz
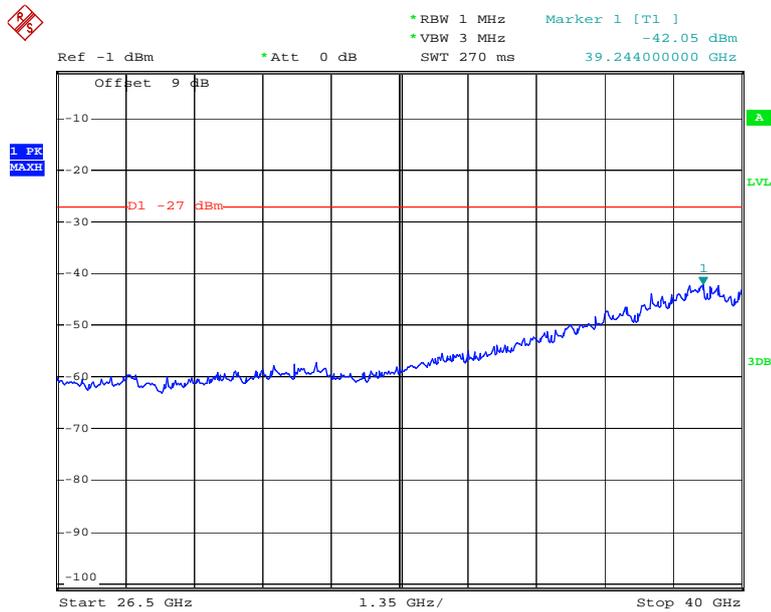
Date: 22.MAY.2015 13:47:55
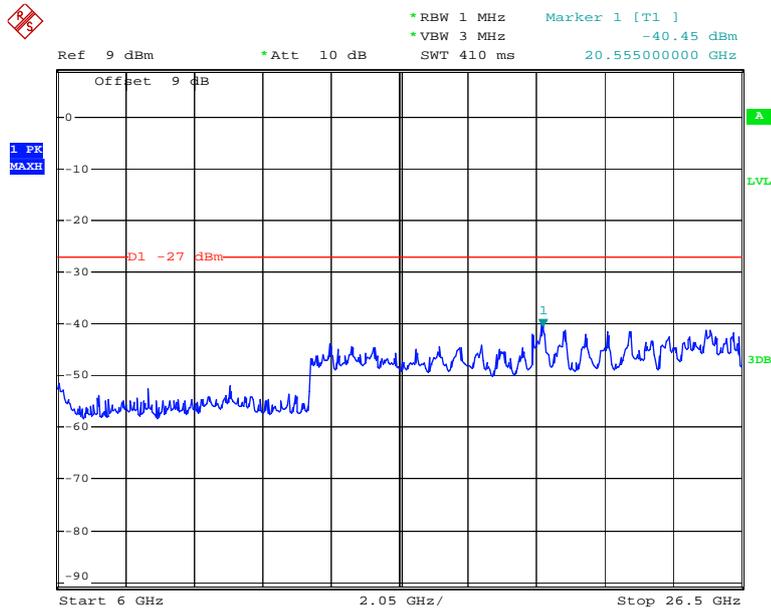
Chain 2:802.11n ht20 High Channel 30MHz-1GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz          -47.70 dBm
         Ref  19 dBm      *Att  20 dB    SWT 100 ms    39.700000000 MHz
```
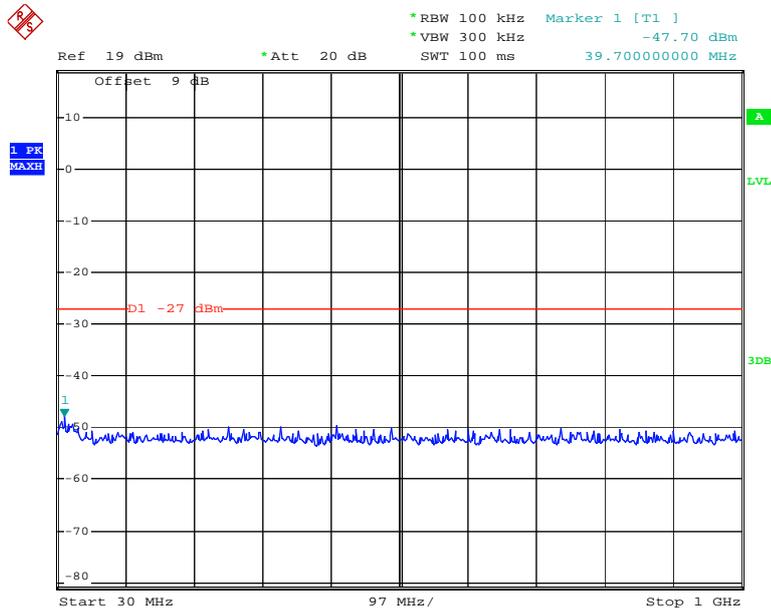
Date: 19.MAY.2015 14:47:34

Chain 2:802.11n ht20 High Channel 1GHz-6GHz

```
                                    *RBW 1 MHz   Marker 1 [T1 ]
                                    *VBW 3 MHz          -44.41 dBm
         Ref  19 dBm      *Att  20 dB    SWT 100 ms    3.760000000 GHz
```

Fundamental
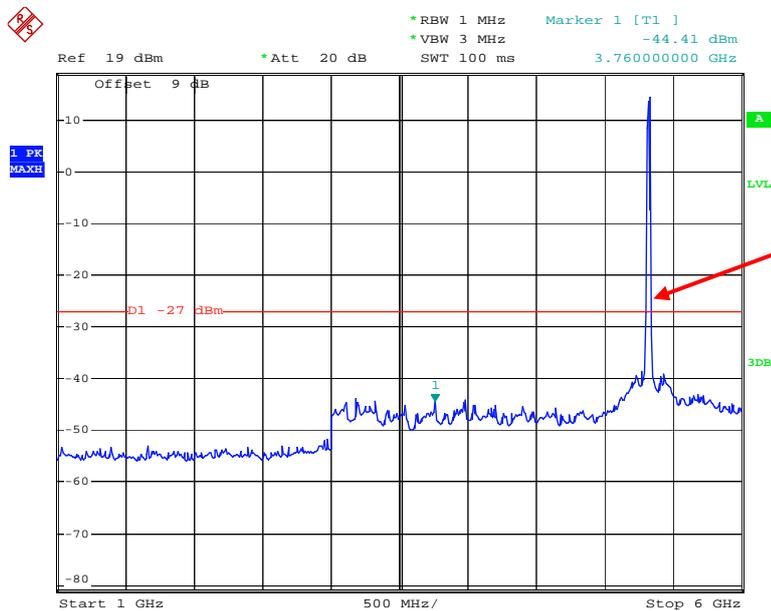
Date: 19.MAY.2015 14:47:53

Chain 2:802.11n ht20 High Channel 6GHz-26.5GHz

```
                              *RBW 1 MHz     Marker 1 [T1 ]
                              *VBW 3 MHz              -40.24 dBm
     Ref  9 dBm      *Att  10 dB    SWT 410 ms    20.514000000 GHz
       Offset  9 dB
```
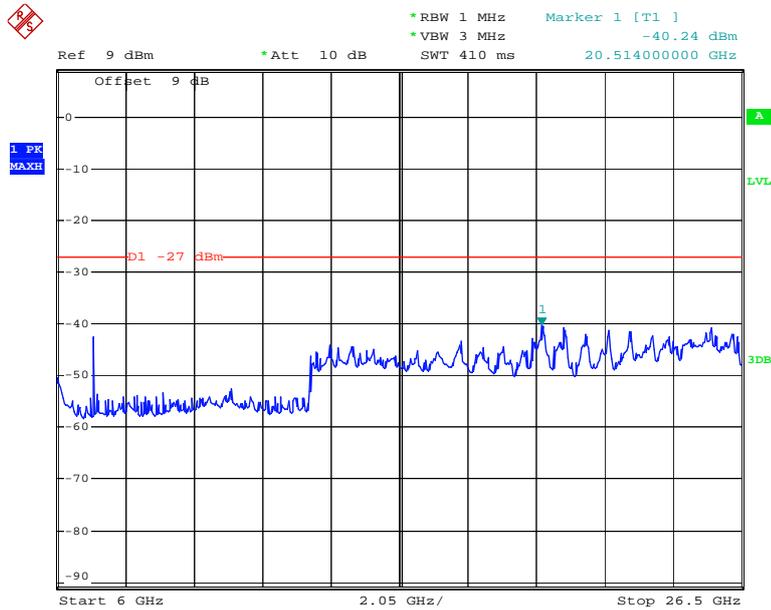
Date: 19.MAY.2015 14:48:12

Chain 2:802.11n ht20 High Channel 26.5GHz-40GHz

```
                              *RBW 1 MHz     Marker 1 [T1 ]
                              *VBW 3 MHz              -42.05 dBm
     Ref -1 dBm      *Att  0 dB     SWT 270 ms    39.028000000 GHz
       Offset  9 dB
```
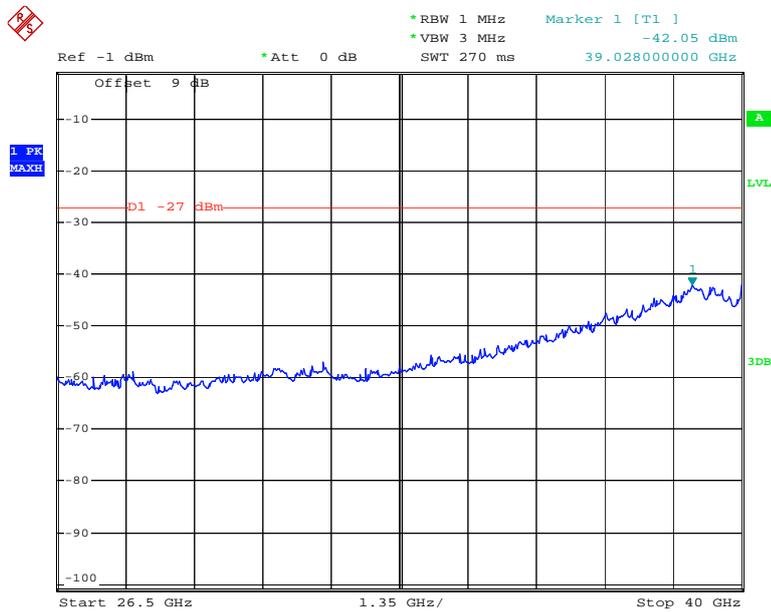
Date: 22.MAY.2015 13:47:41

Chain 2:802.11n ht40 Low Channel 30MHz-1GHz
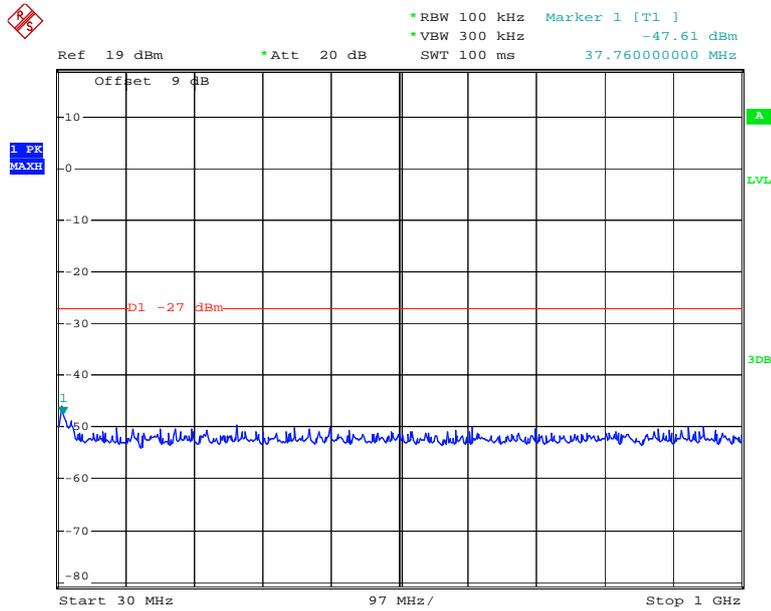
Date: 19.MAY.2015   14:41:48

Chain 2:802.11n ht40 Low Channel 1GHz-6GHz
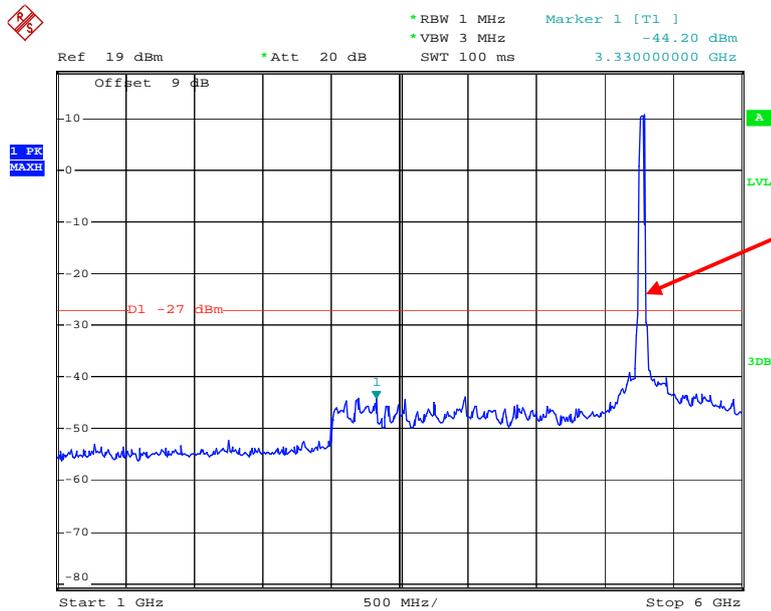
Date: 19.MAY.2015   14:42:04

Chain 2:802.11n ht40 Low Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz            -38.22 dBm
        Ref  9 dBm      *Att 10 dB   SWT 410 ms     7.025000000 GHz
           Offset  9 dB
```
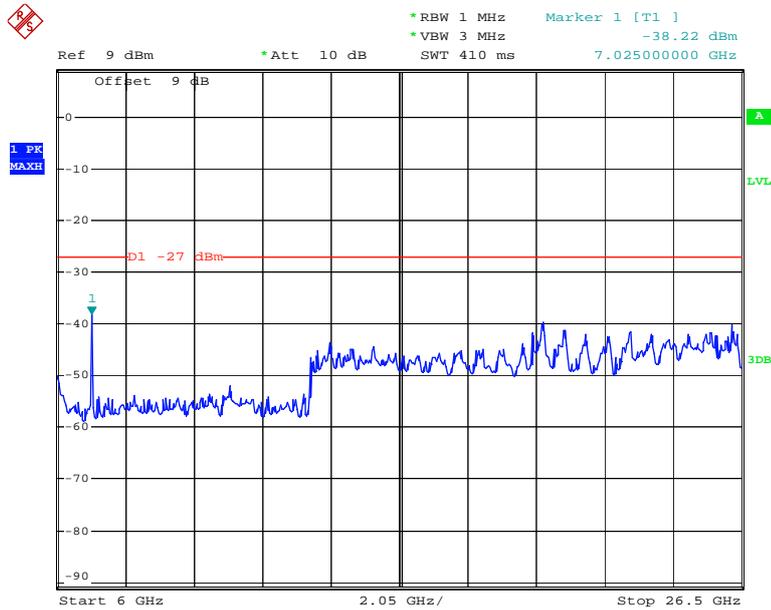
Date: 19.MAY.2015 14:42:21

Chain 2:802.11n ht40 Low Channel 26.5GHz-40GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz            -42.29 dBm
        Ref -1 dBm      *Att  0 dB   SWT 270 ms    38.947000000 GHz
           Offset  9 dB
```
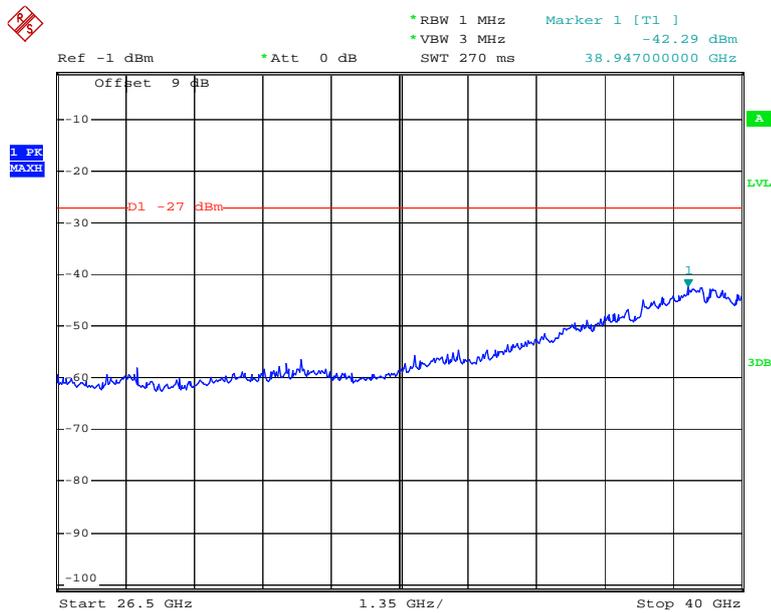
Date: 22.MAY.2015 13:48:10

Chain 2:802.11n ht40 High Channel 30MHz-1GHz
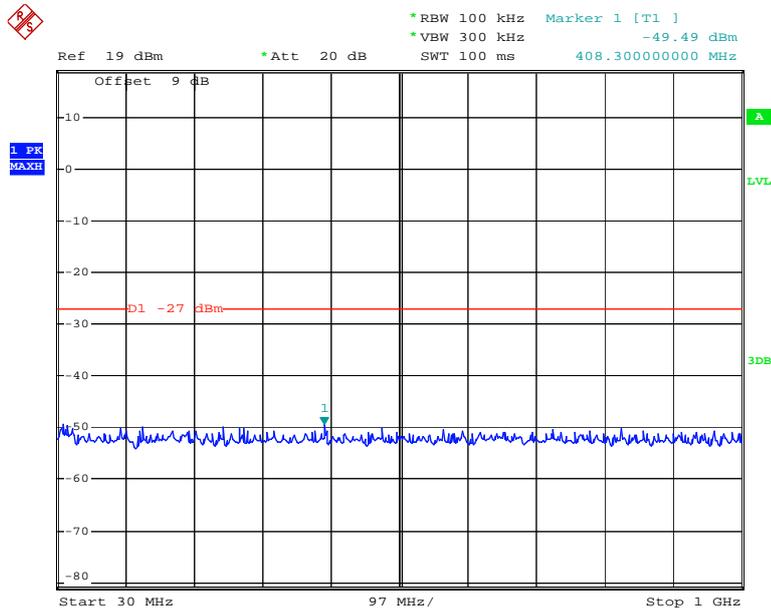
Date: 19.MAY.2015 14:44:21

Chain 2:802.11n ht40 High Channel 1GHz-6GHz
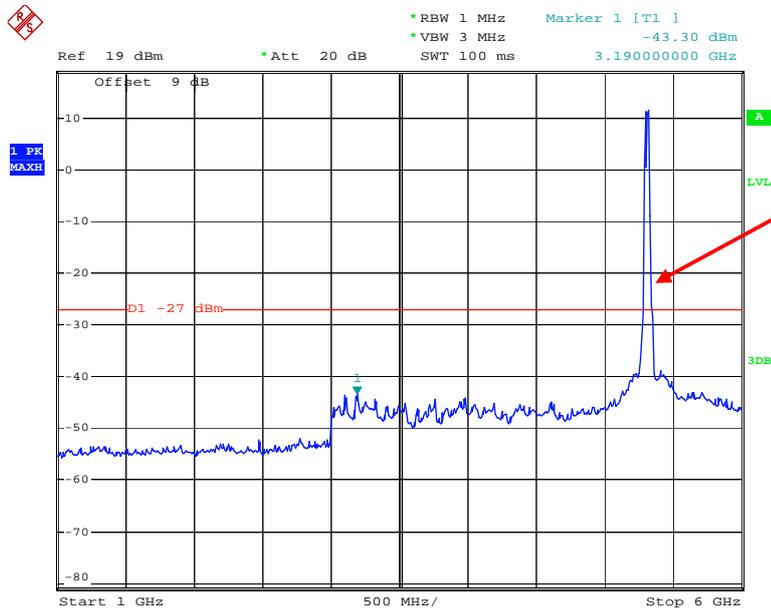
Date: 19.MAY.2015 14:44:05

Chain 2:802.11n ht40 High Channel 6GHz-26.5GHz

		*RBW 1 MHz	Marker 1 [T1]
		*VBW 3 MHz	-39.40 dBm
Ref 9 dBm	*Att 10 dB	SWT 410 ms	20.555000000 GHz

Offset 9 dB

A

1 PK
MAXH

LVL

D1 -27 dBm

3DB

Start 6 GHz   2.05 GHz/   Stop 26.5 GHz
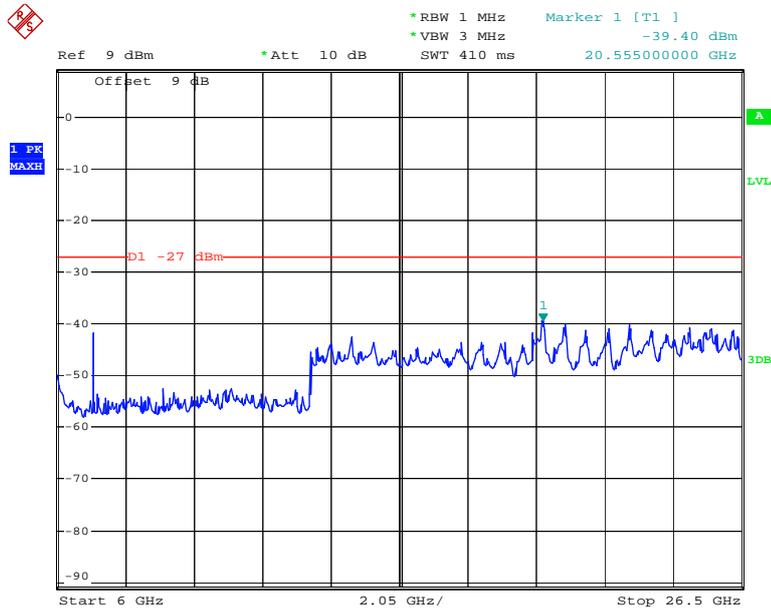
Date: 19.MAY.2015 14:43:23

Chain 2:802.11n ht40 High Channel 26.5GHz-40GHz

		*RBW 1 MHz	Marker 1 [T1]
		*VBW 3 MHz	-41.71 dBm
Ref -1 dBm	*Att 0 dB	SWT 270 ms	39.217000000 GHz

Offset 9 dB

A

1 PK
MAXH

LVL

D1 -27 dBm

3DB

Start 26.5 GHz   1.35 GHz/   Stop 40 GHz
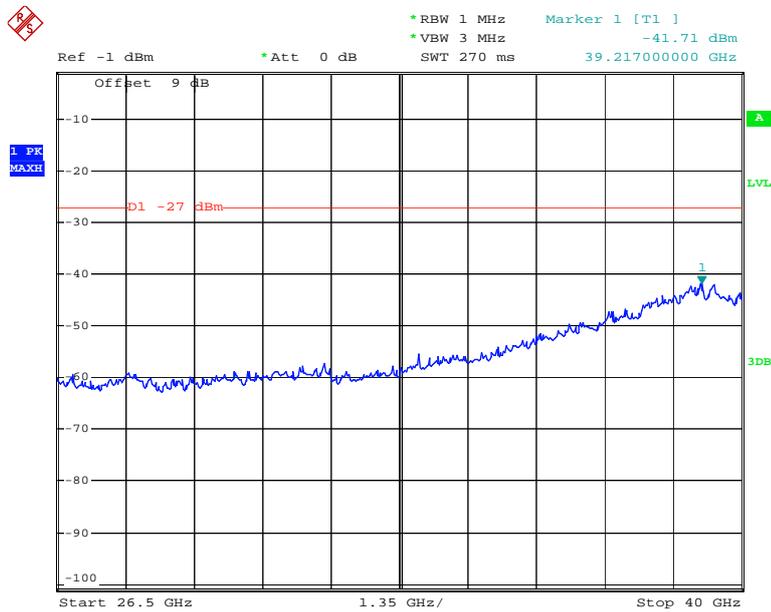
Date: 22.MAY.2015 13:48:02

Chain 2:802.11n ac80 Middle Channel 30MHz-1GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz              -49.17 dBm
        Ref  19 dBm      *Att  20 dB   SWT 100 ms     895.240000000 MHz
           Offset  9 dB
```
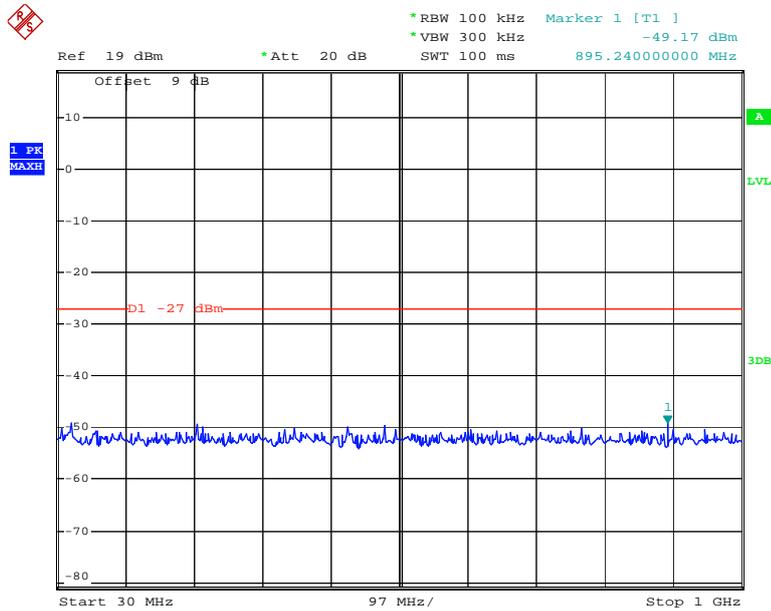
Date: 19.MAY.2015 14:38:44

Chain 2:802.11n ac80 Middle Channel 1GHz-6GHz

```
                                    *RBW 1 MHz   Marker 1 [T1 ]
                                    *VBW 3 MHz              -43.56 dBm
        Ref  19 dBm      *Att  20 dB   SWT 100 ms     3.190000000 GHz
           Offset  9 dB
```

Fundamental
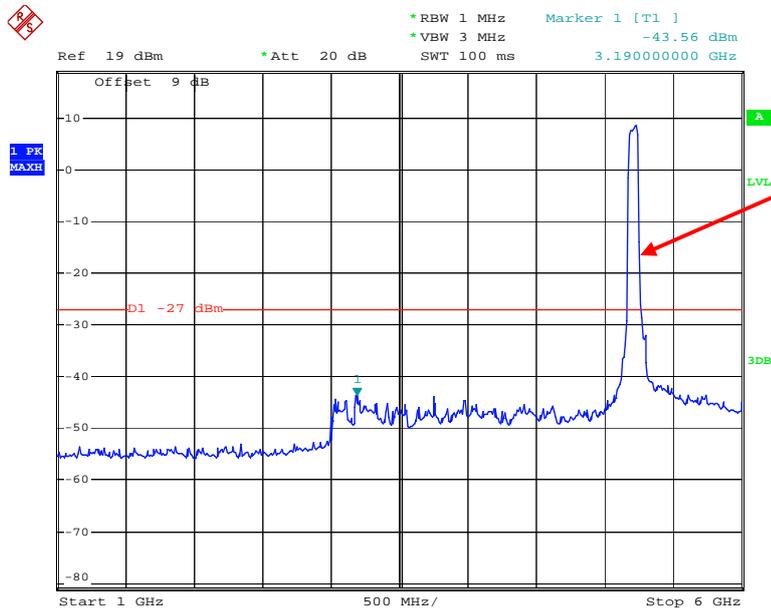
Date: 19.MAY.2015 14:39:05

Chain 2:802.11n ac80 Middle Channel 6GHz-26.5GHz

```
                                          *RBW 1 MHz      Marker 1 [T1 ]
                                          *VBW 3 MHz              -35.07 dBm
        Ref  9 dBm          *Att  10 dB   SWT 410 ms     6.943000000 GHz
```
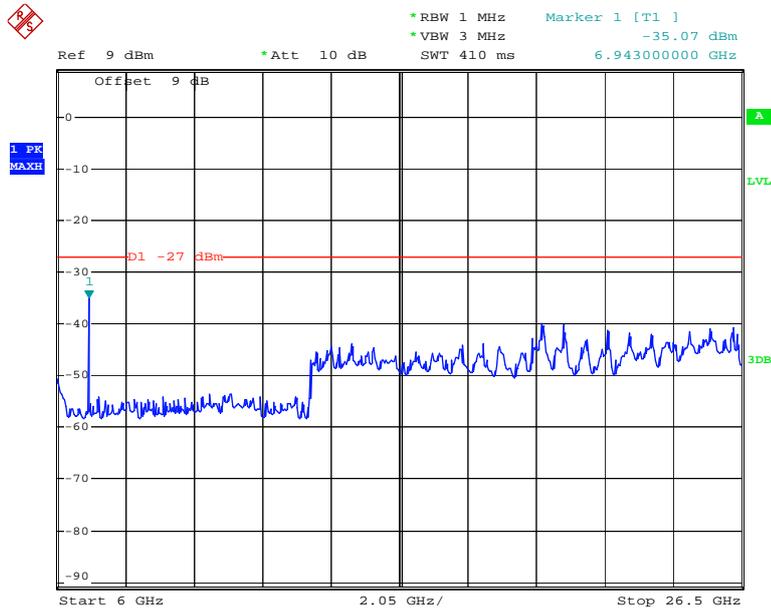
Date: 19.MAY.2015 14:39:20

Chain 2:802.11n ac80 Middle Channel 26.5GHz-40GHz

```
                                          *RBW 1 MHz      Marker 1 [T1 ]
                                          *VBW 3 MHz              -41.32 dBm
        Ref -1 dBm          *Att  0 dB    SWT 270 ms    39.190000000 GHz
```
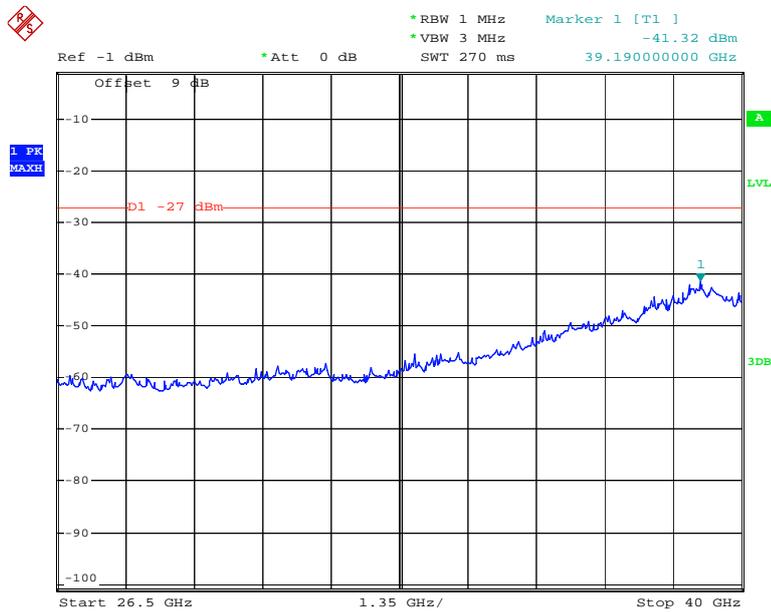
Date: 22.MAY.2015 13:47:34

5470MHz-5725MHz:

Chain 0:802.11a Low Channel 30MHz-1GHz
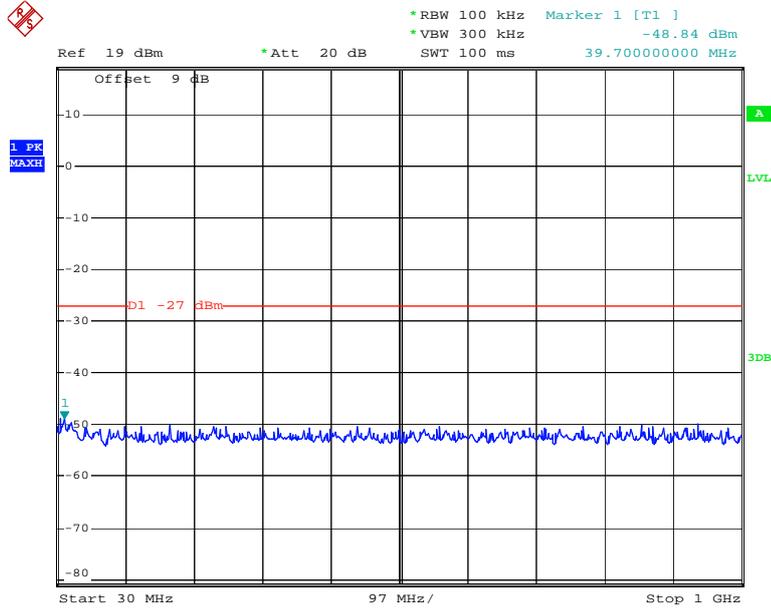
Date: 19.MAY.2015 15:26:39

Chain 0:802.11a Low Channel 1GHz-6GHz
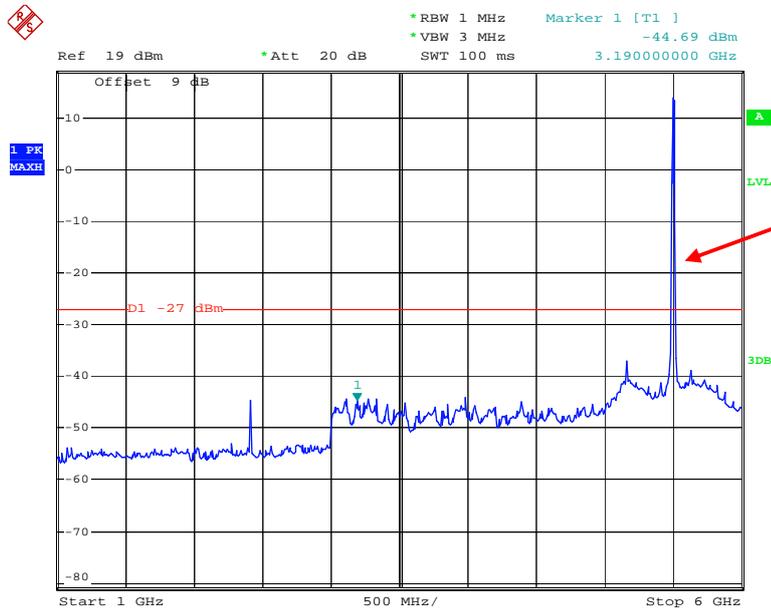
Date: 19.MAY.2015 15:27:07
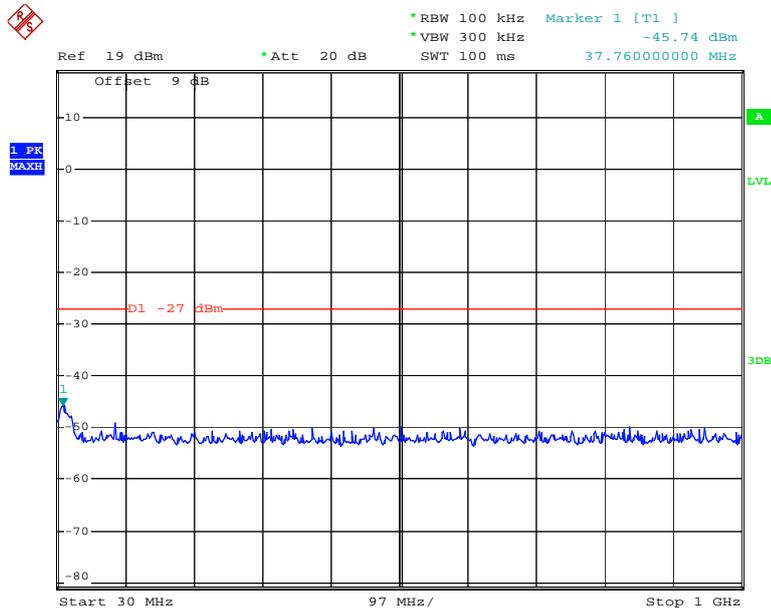
Chain 0:802.11a Low Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz              -40.63 dBm
      Ref  9 dBm        *Att  10 dB  SWT 410 ms     20.555000000 GHz
```
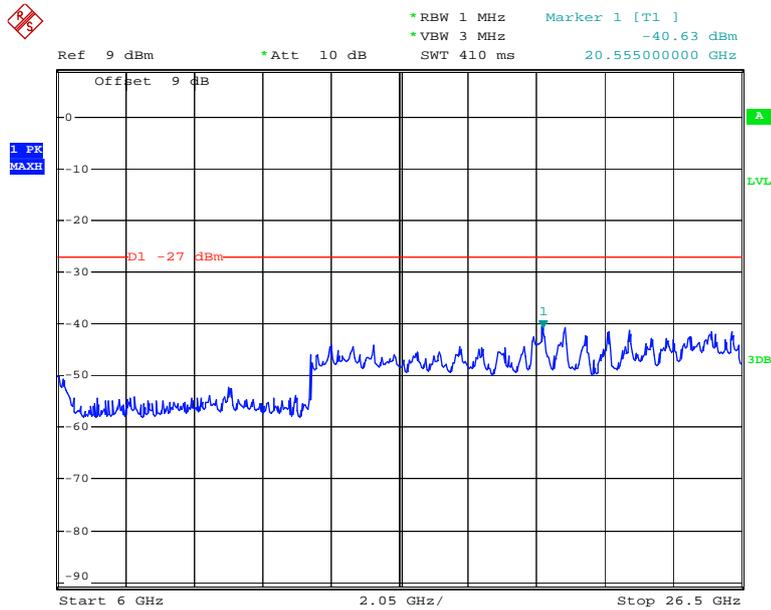
Date: 19.MAY.2015 15:27:25

Chain 0:802.11a Low Channel 26.5GHz-40GHz

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz              -42.35 dBm
      Ref -1 dBm        *Att  0 dB   SWT 270 ms     39.028000000 GHz
```
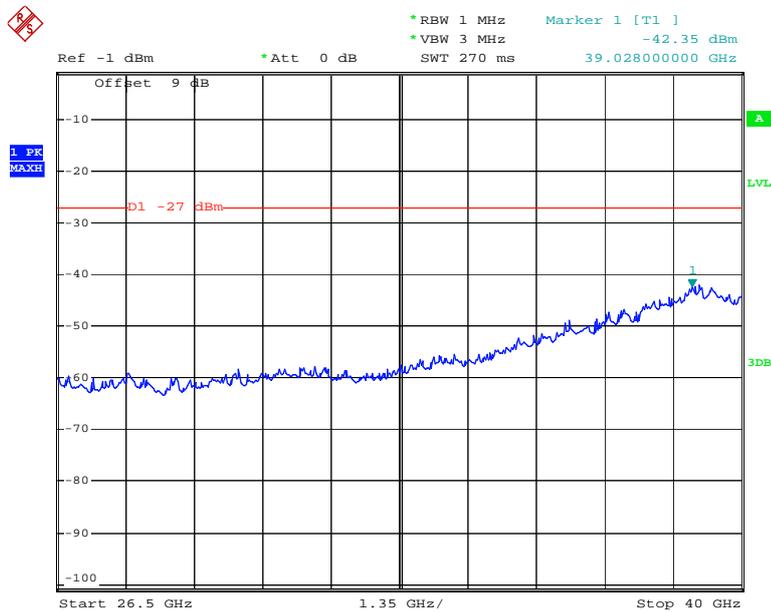
Date: 22.MAY.2015 13:48:22

Chain 0:802.11a Middle Channel 30MHz -1GHz

```
                                          *RBW 100 kHz    Marker 1 [T1 ]
                                          *VBW 300 kHz           -46.80 dBm
        Ref  19 dBm         *Att  20 dB    SWT 100 ms      37.760000000 MHz
           Offset  9 dB
```
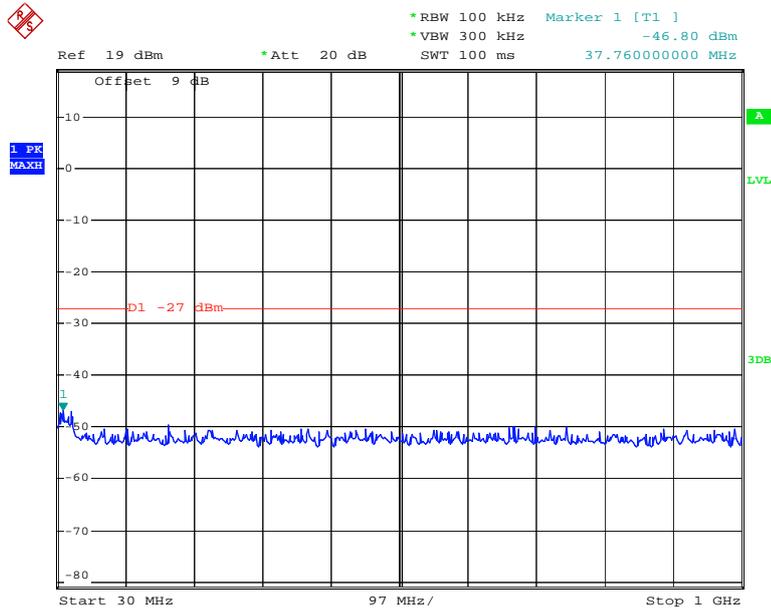
Date: 19.MAY.2015 15:28:25

Chain 0:802.11a Middle Channel 1GHz-6GHz

```
                                          *RBW 1 MHz      Marker 1 [T1 ]
                                          *VBW 3 MHz             -44.03 dBm
        Ref  19 dBm         *Att  20 dB    SWT 100 ms       3.190000000 GHz
           Offset  9 dB
```

Fundamental
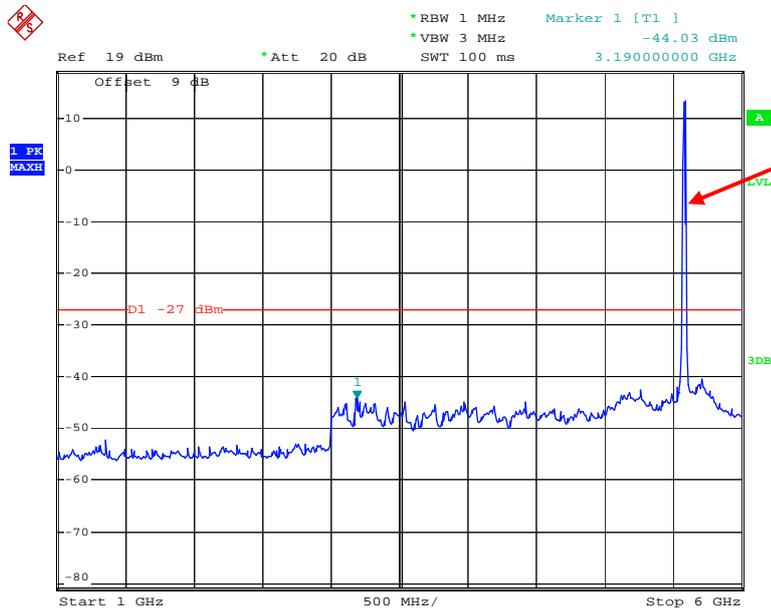
Date: 19.MAY.2015 15:28:12

Chain 0:802.11a Middle Channel 6GHz-26.5GHz

```
                                          *RBW 1 MHz    Marker 1 [T1 ]
                                          *VBW 3 MHz          -40.56 dBm
         Ref  9 dBm          *Att  10 dB   SWT 410 ms    23.179000000 GHz
             Offset  9 dB                                               A
  1 PK
  MAXH                                                                  LVL

                   D1 -27 dBm

                                                        1              3DB

         Start 6 GHz              2.05 GHz/           Stop 26.5 GHz
```
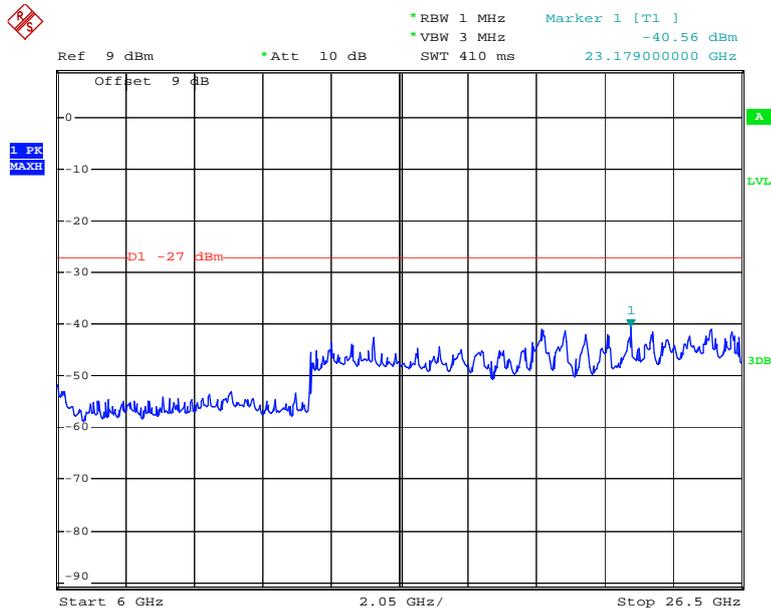
Date: 19.MAY.2015 15:27:47

Chain 0:802.11a Middle Channel 26.5GHz-40GHz

```
                                          *RBW 1 MHz    Marker 1 [T1 ]
                                          *VBW 3 MHz          -41.73 dBm
         Ref -1 dBm          *Att  0 dB    SWT 270 ms    39.163000000 GHz
             Offset  9 dB                                               A
  1 PK
  MAXH                                                                  LVL

                   D1 -27 dBm

                                                        1              3DB

         Start 26.5 GHz             1.35 GHz/           Stop 40 GHz
```
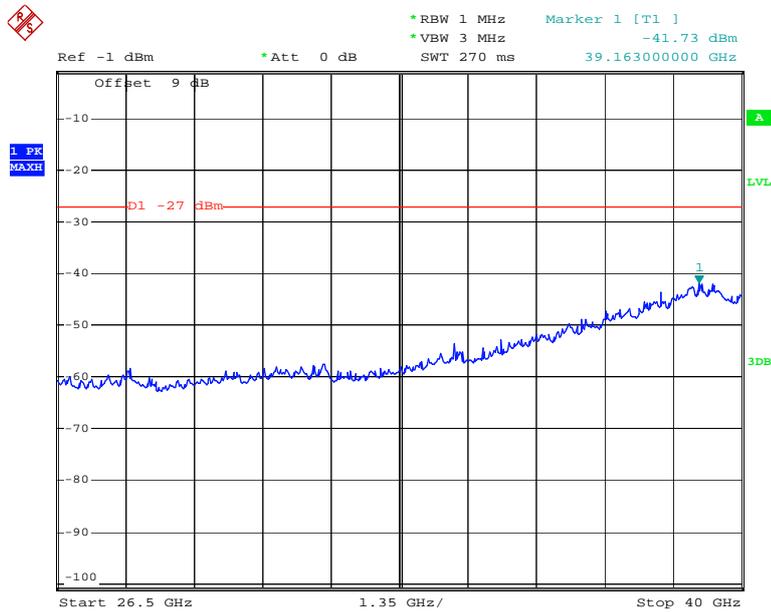
Date: 22.MAY.2015 13:52:07

Chain 0:802.11a High Channel 30MHz-1GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz            -47.68 dBm
      Ref  19 dBm       *Att  20 dB  SWT 100 ms     39.700000000 MHz
        Offset  9 dB
```
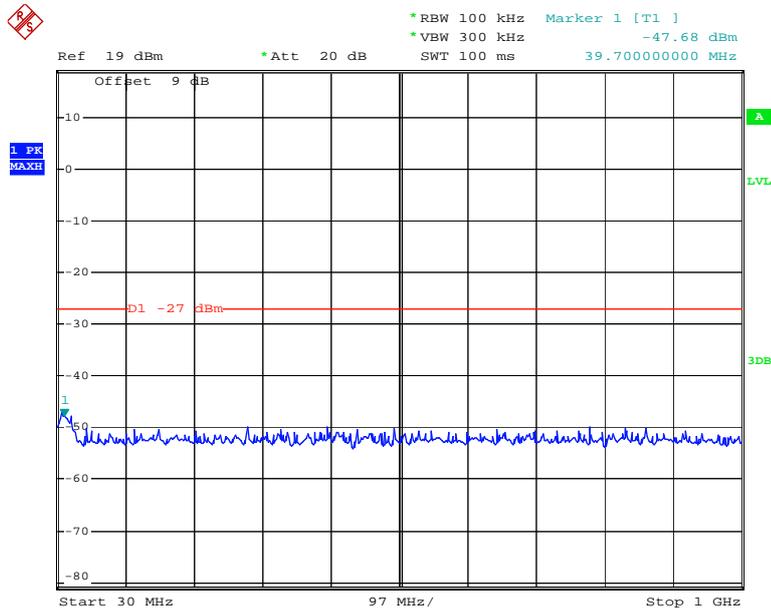
Date: 19.MAY.2015 15:28:55

Chain 0:802.11a High Channel 1GHz-6GHz

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz              -44.30 dBm
      Ref  19 dBm       *Att  20 dB  SWT 100 ms      3.190000000 GHz
        Offset  9 dB
```

Fundamental
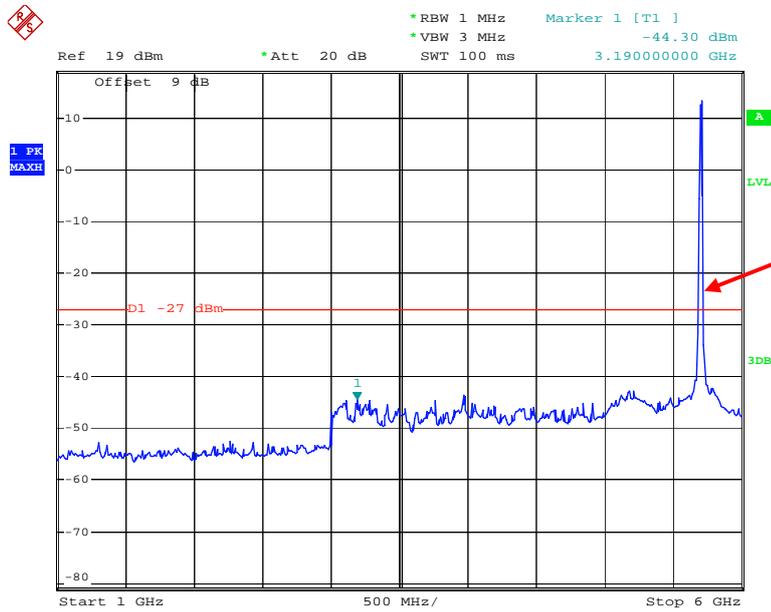
Date: 19.MAY.2015 15:29:08

Chain 0:802.11a High Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz            -40.26 dBm
        Ref  9 dBm        *Att  10 dB    SWT 410 ms    20.514000000 GHz
          Offset  9 dB
```
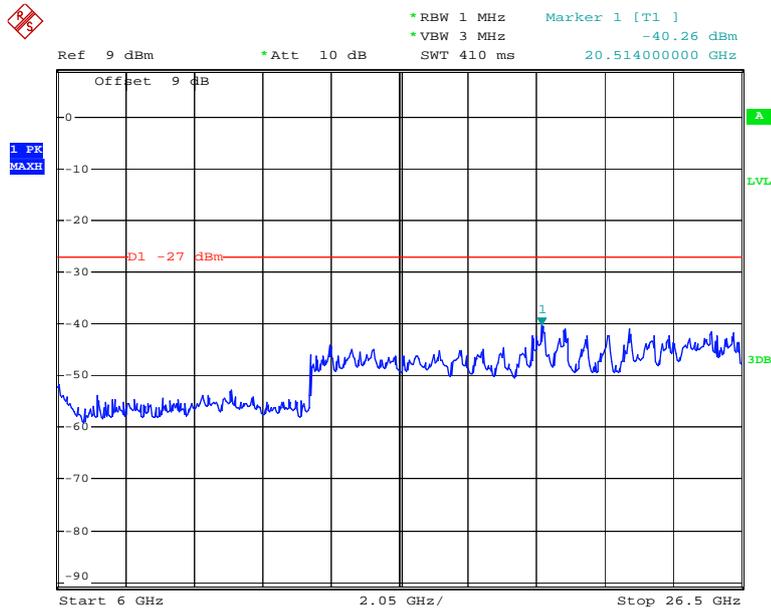
Date: 19.MAY.2015 15:29:24

Chain 0:802.11a High Channel 26.5GHz-40GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz            -42.22 dBm
        Ref -1 dBm        *Att  0 dB     SWT 270 ms    39.190000000 GHz
          Offset  9 dB
```
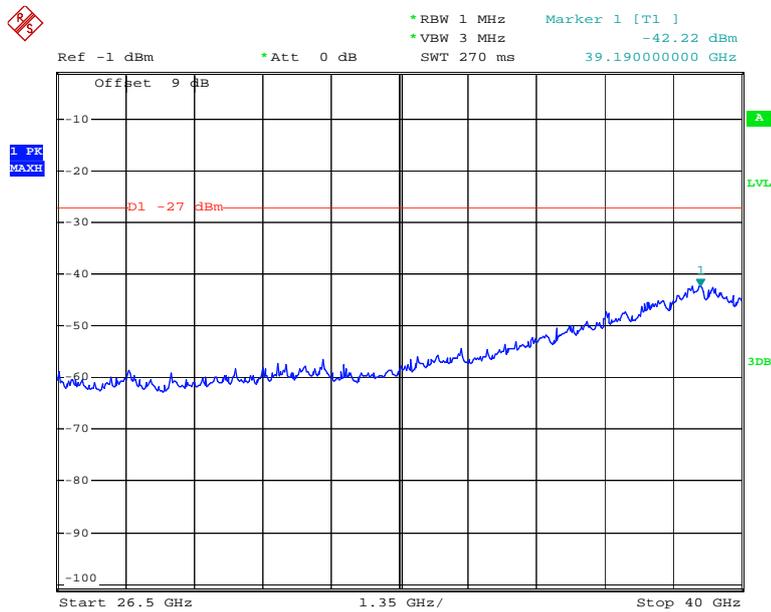
Date: 22.MAY.2015 13:48:17

Chain 0:802.11n ht20 Low Channel 30MHz-1GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz              -49.54 dBm
         Ref  19 dBm        *Att  20 dB    SWT 100 ms    284.140000000 MHz
            Offset  9 dB                                                    A
 1 PK
 MAXH                                                                       LVL


                     D1 -27 dBm

                                                                           3DB

                           1


```
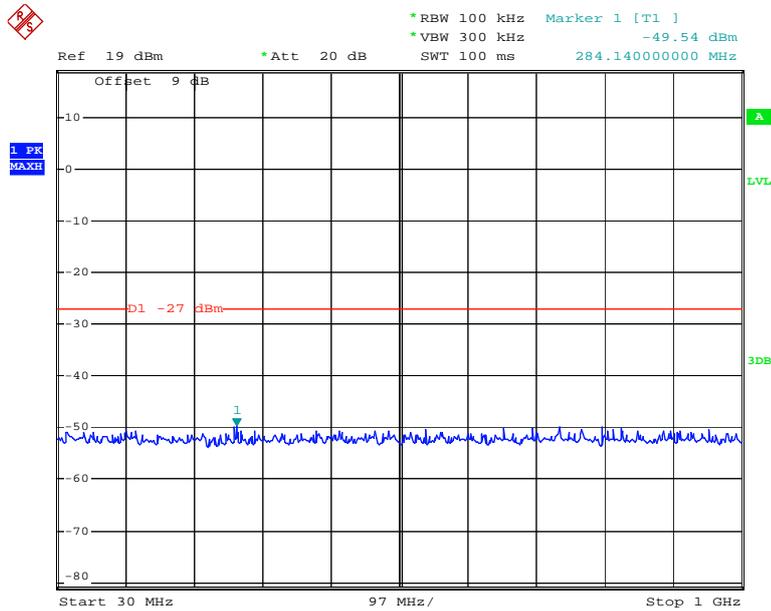
Date: 19.MAY.2015 15:40:57

Chain 0:802.11n ht20 Low Channel 1GHz-6GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz               -43.61 dBm
         Ref  19 dBm        *Att  20 dB    SWT 100 ms    3.100000000 GHz
            Offset  9 dB                                                    A
 1 PK
 MAXH                                                                       LVL


                                                                              Fundamental

                     D1 -27 dBm

                                                                           3DB

                           1


       Start 1 GHz            500 MHz/              Stop 6 GHz
```
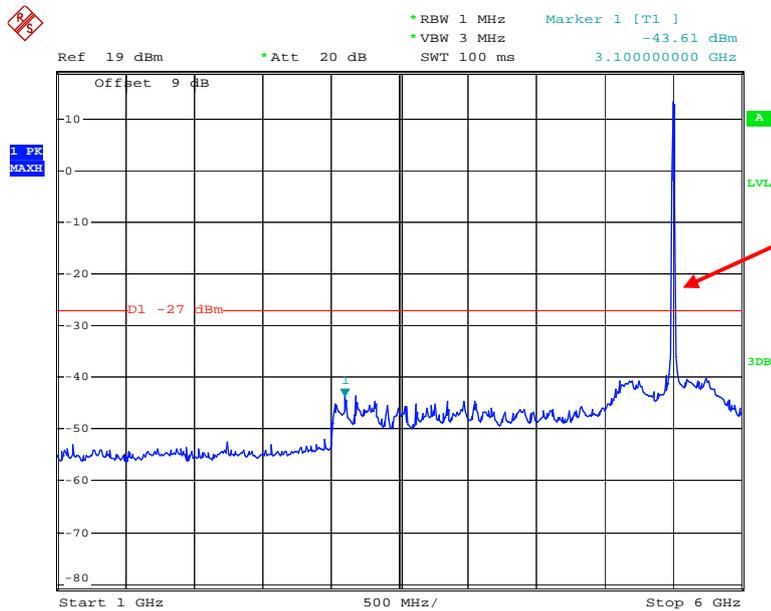
Date: 19.MAY.2015 15:40:44

Chain 0:802.11n ht20 Low Channel 6GHz-26.5GHz

```
                                        *RBW 1 MHz     Marker 1 [T1 ]
                                        *VBW 3 MHz              -39.98 dBm
          Ref  9 dBm         *Att  10 dB   SWT 410 ms      20.514000000 GHz
             Offset  9 dB
```
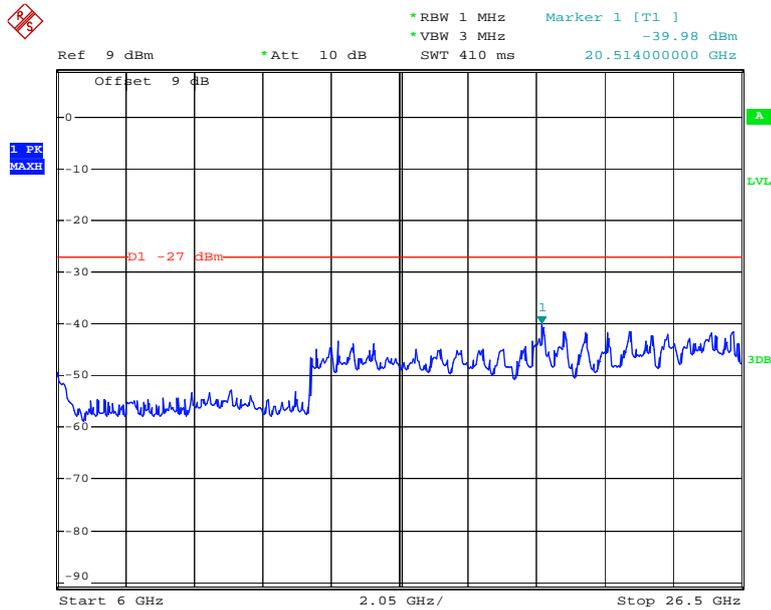
Date: 19.MAY.2015 15:40:26

Chain 0:802.11n ht20 Low Channel 26.5GHz-40GHz

```
                                        *RBW 1 MHz     Marker 1 [T1 ]
                                        *VBW 3 MHz              -41.72 dBm
          Ref -1 dBm         *Att  0 dB    SWT 270 ms      39.001000000 GHz
             Offset  9 dB
```
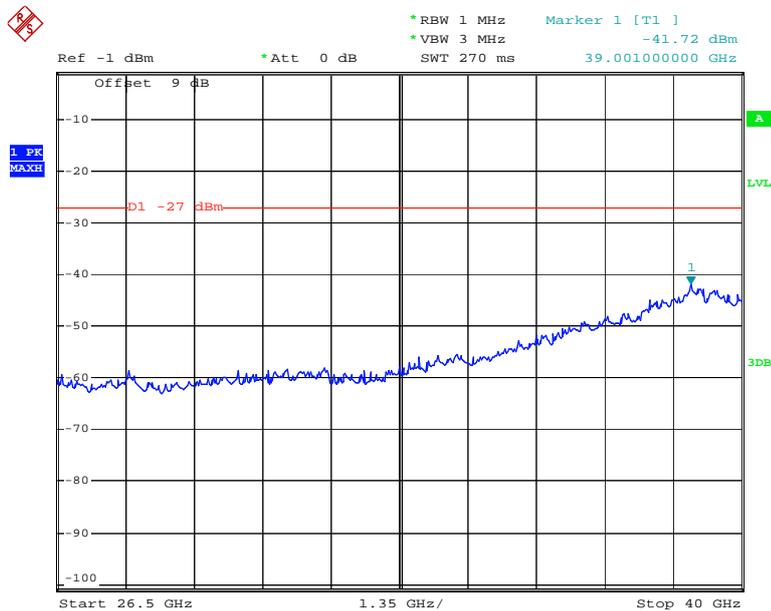
Date: 22.MAY.2015 13:52:31

Chain 0:802.11n ht20 Middle Channel 30MHz -1GHz

```
                              *RBW 100 kHz   Marker 1 [T1 ]
                              *VBW 300 kHz            -49.15 dBm
Ref  19 dBm      *Att  20 dB   SWT 100 ms    563.500000000 MHz
    Offset  9 dB                                              A

1 PK
MAXH                                                         LVL

            D1 -27 dBm                                       3DB

                              1

Start 30 MHz              97 MHz/              Stop 1 GHz
```
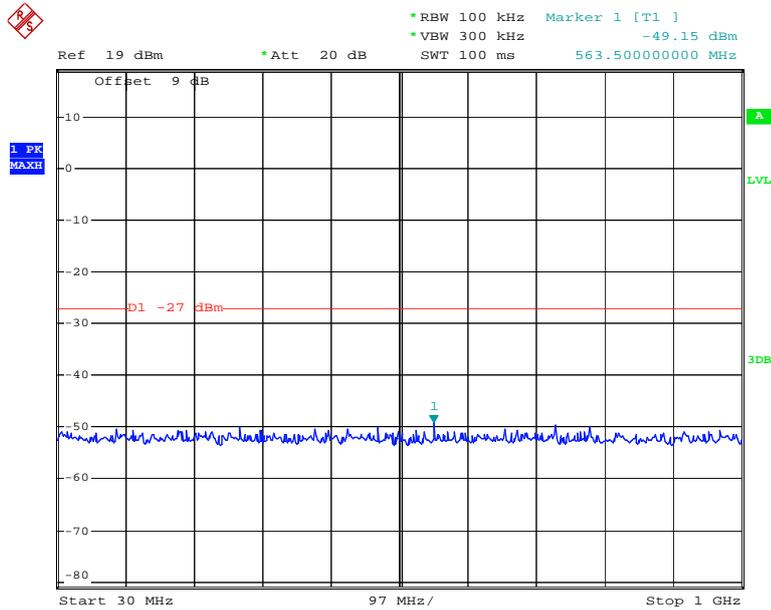
Date: 19.MAY.2015 15:39:17

Chain 0:802.11n ht20 Middle Channel 1GHz-6GHz

```
                              *RBW 1 MHz     Marker 1 [T1 ]
                              *VBW 3 MHz             -44.18 dBm
Ref  19 dBm      *Att  20 dB   SWT 100 ms    3.190000000 GHz
    Offset  9 dB                                              A
                                                          Fundamental
1 PK
MAXH                                                         LVL

            D1 -27 dBm                                       3DB

            1

Start 1 GHz              500 MHz/             Stop 6 GHz
```
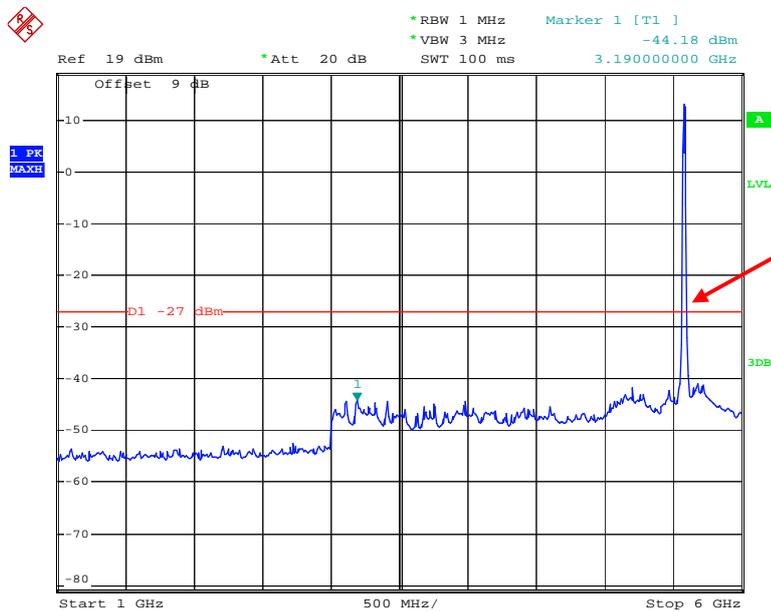
Date: 19.MAY.2015 15:39:33

Chain 0:802.11n ht20 Middle Channel 6GHz-26.5GHz


```
                                      *RBW 1 MHz     Marker 1 [T1 ]
                                      *VBW 3 MHz              -38.35 dBm
Ref  9 dBm           *Att  10 dB      SWT 410 ms     20.514000000 GHz
    Offset  9 dB
```
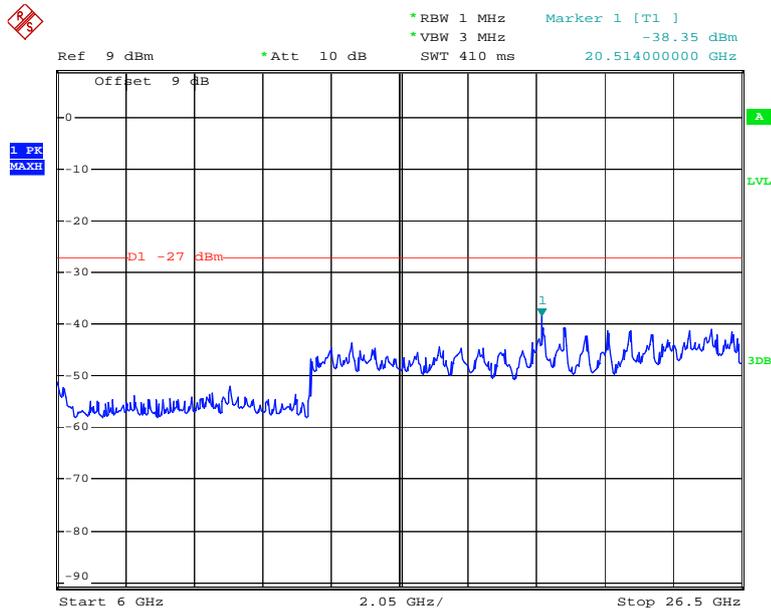
Date: 19.MAY.2015 15:39:53

Chain 0:802.11n ht20 Middle Channel 26.5GHz-40GHz


```
                                      *RBW 1 MHz     Marker 1 [T1 ]
                                      *VBW 3 MHz              -42.48 dBm
Ref -1 dBm           *Att  0 dB       SWT 270 ms     39.163000000 GHz
    Offset  9 dB
```
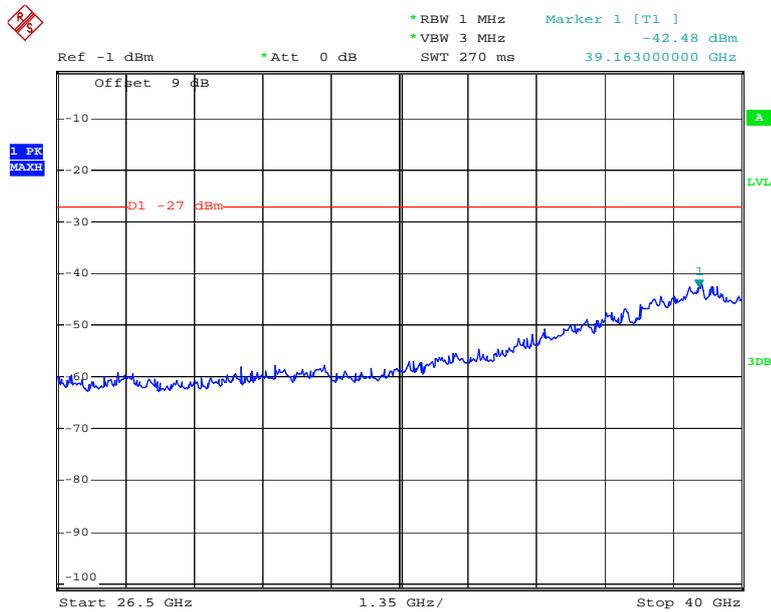
Date: 22.MAY.2015 13:53:01

Chain 0:802.11n ht20 High Channel 30MHz-1GHz

```
                                    *RBW  100 kHz    Marker 1 [T1 ]
                                    *VBW  300 kHz            -49.34 dBm
     Ref  19 dBm        *Att  20 dB  SWT 100 ms    363.680000000 MHz
       Offset  9 dB
```

Spectrum plot: Start 30 MHz, 97 MHz/, Stop 1 GHz. D1 -27 dBm limit line. Marker 1.

```
Date: 19.MAY.2015  15:38:42
```

Chain 0:802.11n ht20 High Channel 1GHz-6GHz

```
                                    *RBW  1 MHz     Marker 1 [T1 ]
                                    *VBW  3 MHz             -44.20 dBm
     Ref  19 dBm        *Att  20 dB  SWT 100 ms    3.190000000 GHz
       Offset  9 dB
```

Spectrum plot: Start 1 GHz, 500 MHz/, Stop 6 GHz. D1 -27 dBm limit line. Marker 1. Fundamental peak indicated.

Fundamental

```
Date: 19.MAY.2015  15:30:12
```

Chain 0:802.11n ht20 High Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz              -39.65 dBm
     Ref  9 dBm         *Att  10 dB   SWT 410 ms    20.555000000 GHz
        Offset  9 dB
```

Date: 19.MAY.2015 15:29:48

Chain 0:802.11n ht20 High Channel 26.5GHz-40GHz

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz              -41.87 dBm
     Ref -1 dBm         *Att  0 dB    SWT 270 ms    39.001000000 GHz
        Offset  9 dB
```
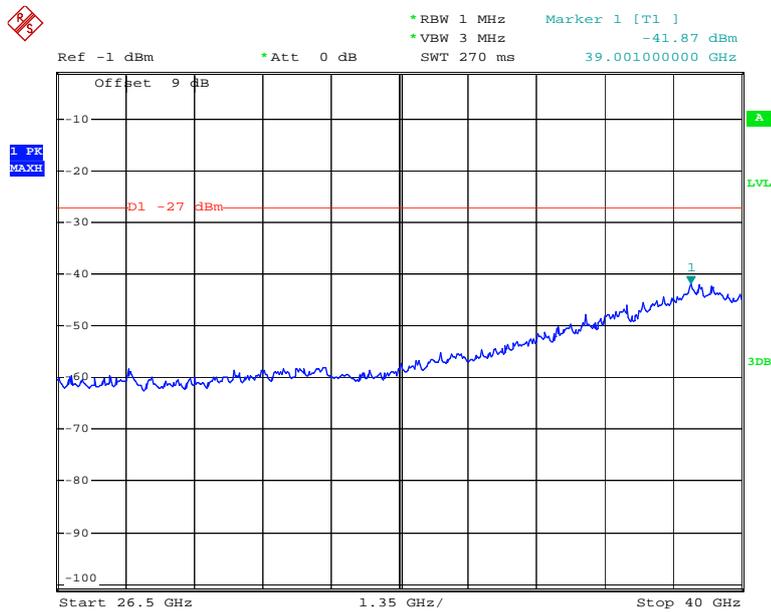
Date: 22.MAY.2015 13:52:26

Chain 0:802.11n ht40 Low Channel 30MHz-1GHz

```
                                        *RBW 100 kHz    Marker 1 [T1 ]
                                        *VBW 300 kHz             -49.39 dBm
        Ref  19 dBm        *Att  20 dB   SWT 100 ms     947.620000000 MHz
            Offset  9 dB
```



```
Start 30 MHz                97 MHz/                    Stop 1 GHz
```

Date: 19.MAY.2015 15:41:32

Chain 0:802.11n ht40 Low Channel 1GHz-6GHz

```
                                        *RBW 1 MHz     Marker 1 [T1 ]
                                        *VBW 3 MHz              -44.17 dBm
        Ref  19 dBm        *Att  20 dB   SWT 100 ms      3.110000000 GHz
            Offset  9 dB
```

Fundamental


```
Start 1 GHz                500 MHz/                    Stop 6 GHz
```
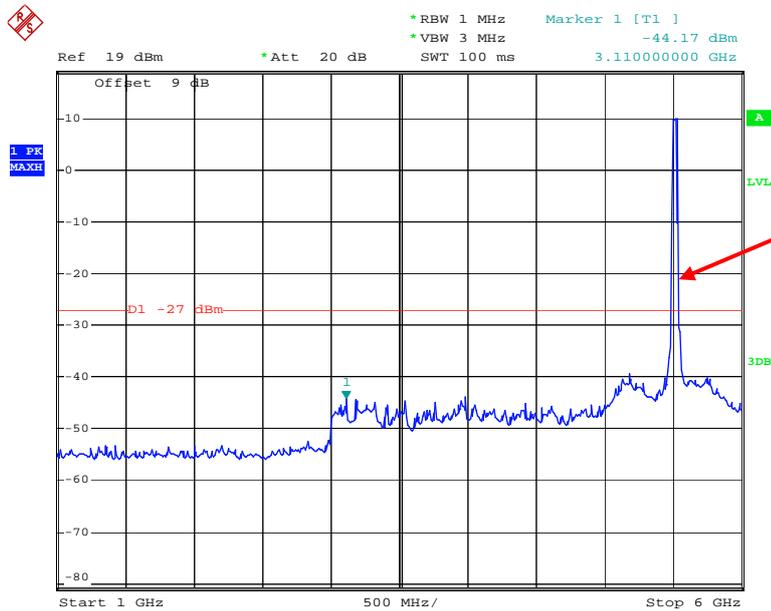
Date: 19.MAY.2015 15:41:48

Chain 0:802.11n ht40 Low Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz      Marker 1 [T1 ]
                                    *VBW 3 MHz              -39.65 dBm
        Ref  9 dBm        *Att  10 dB    SWT 410 ms     20.555000000 GHz
           Offset  9 dB
```


Date: 19.MAY.2015 15:42:04

Chain 0:802.11n ht40 Low Channel 26.5GHz-40GHz

```
                                    *RBW 1 MHz      Marker 1 [T1 ]
                                    *VBW 3 MHz              -42.28 dBm
        Ref -1 dBm        *Att  0 dB     SWT 270 ms     39.028000000 GHz
           Offset  9 dB
```
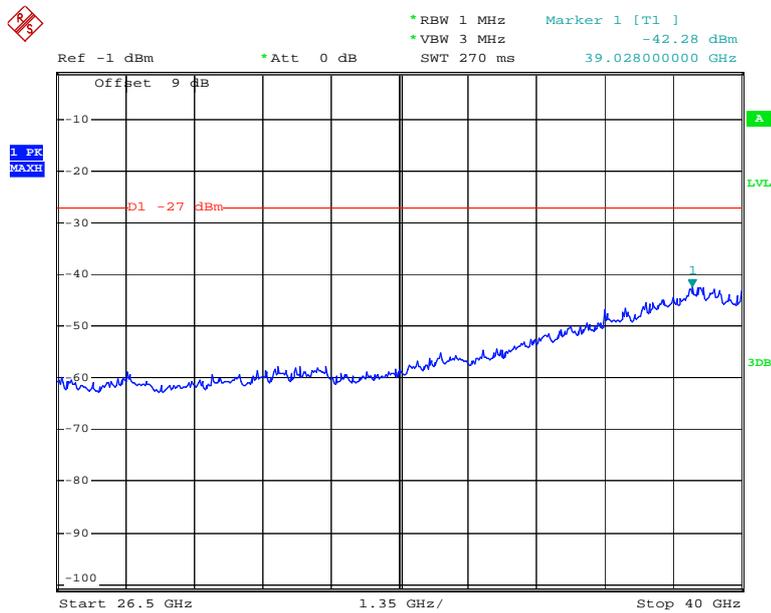

Date: 22.MAY.2015 13:53:12

Chain 0:802.11n ht40 Middle Channel 30MHz-1GHz

```
                                    *RBW 100 kHz    Marker 1 [T1 ]
                                    *VBW 300 kHz             -49.08 dBm
       Ref  19 dBm      *Att  20 dB    SWT 100 ms    299.660000000 MHz
         Offset  9 dB                                                    A
  -10
                                                                        LVL
1 PK  -0
MAXH
  --10
  --20
          D1 -27 dBm                                                    3DB
  -30
  --40
                   1
  --50
  --60
  --70
  --80
       Start 30 MHz              97 MHz/                 Stop 1 GHz
```
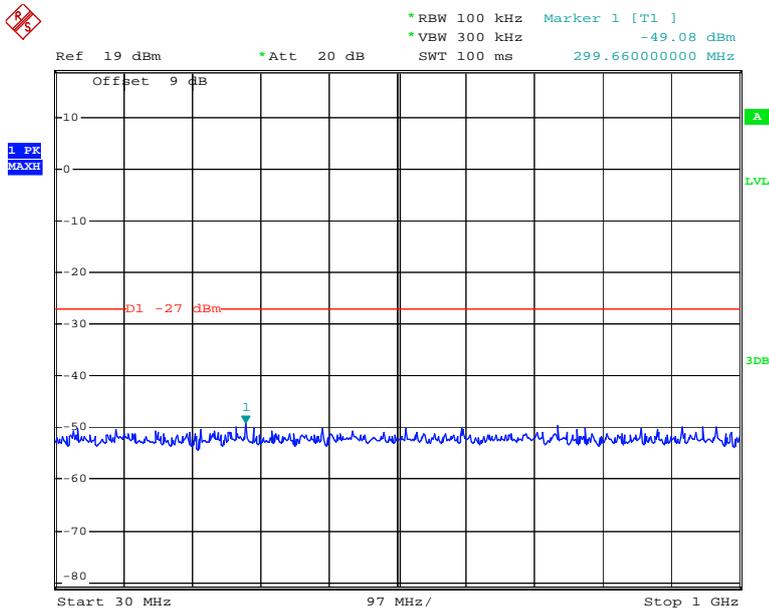
Date: 19.MAY.2015 15:42:58

Chain 0:802.11n ht40 Middle Channel 1GHz-6GHz

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz               -44.23 dBm
       Ref  19 dBm      *Att  20 dB    SWT 100 ms    3.200000000 GHz
         Offset  9 dB                                                    A
  -10
                                                                        LVL
1 PK  -0
MAXH
  --10
  --20                                                        Fundamental
          D1 -27 dBm                                                    3DB
  -30
  --40
                   1
  --50
  --60
  --70
  --80
       Start 1 GHz               500 MHz/                Stop 6 GHz
```
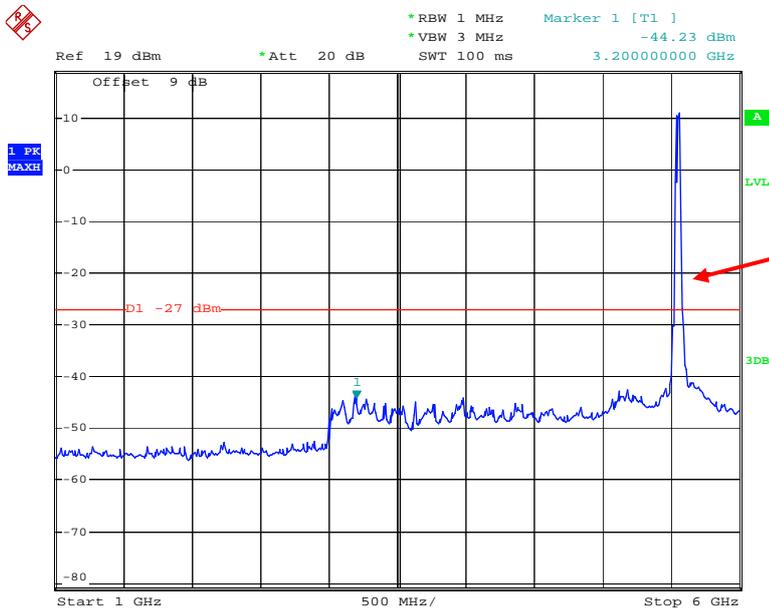
Date: 19.MAY.2015 15:42:43

Chain 0:802.11n ht40 Middle Channel 6GHz-26.5GHz

```
                                      *RBW 1 MHz      Marker 1 [T1 ]
                                      *VBW 3 MHz            -39.27 dBm
        Ref  9 dBm         *Att  10 dB   SWT 410 ms     20.555000000 GHz
           Offset  9 dB
```



```
Start 6 GHz              2.05 GHz/              Stop 26.5 GHz
```
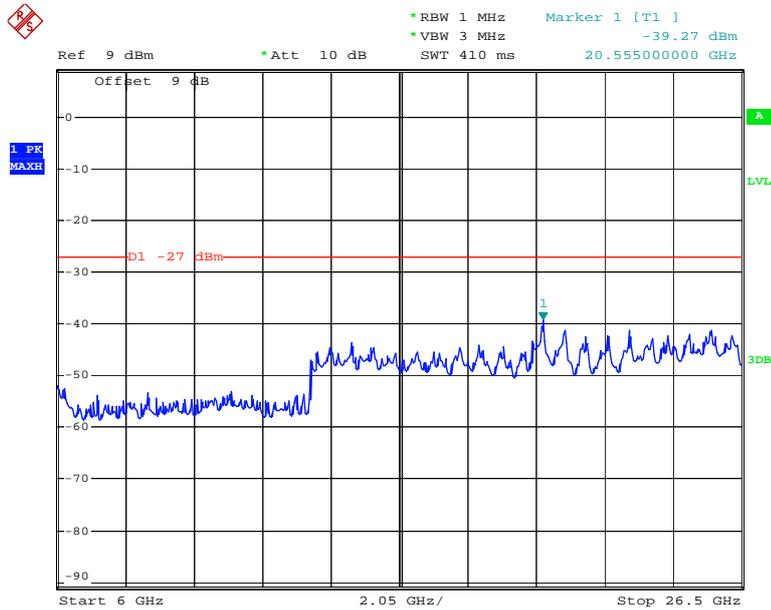
Date: 19.MAY.2015 15:42:24

Chain 0:802.11n ht40 Middle Channel 26.5GHz-40GHz

```
                                      *RBW 1 MHz      Marker 1 [T1 ]
                                      *VBW 3 MHz            -41.87 dBm
        Ref -1 dBm         *Att  0 dB    SWT 270 ms     39.055000000 GHz
           Offset  9 dB
```



```
Start 26.5 GHz           1.35 GHz/              Stop 40 GHz
```
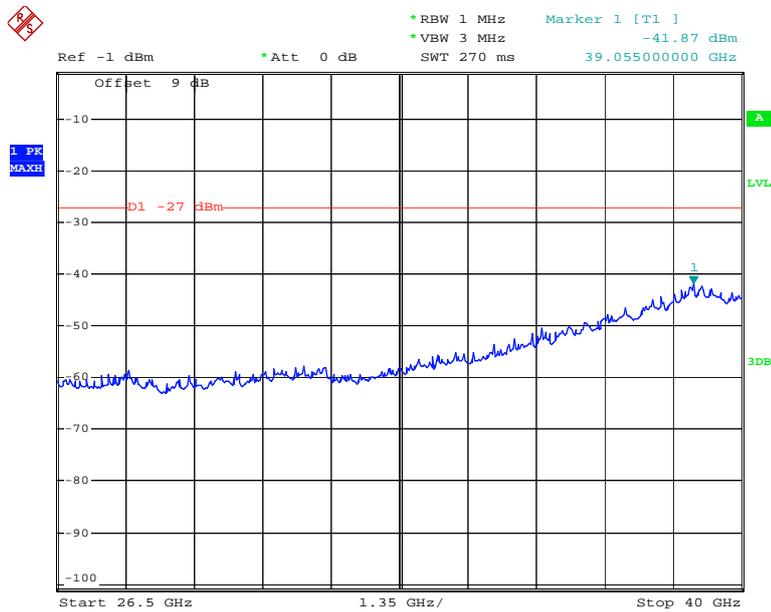
Date: 22.MAY.2015 13:53:17

Chain 0:802.11n ht40 High Channel 30MHz-1GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz              -49.80 dBm
         Ref  19 dBm      *Att  20 dB    SWT 100 ms     738.100000000 MHz
            Offset  9 dB                                              [A]
   -10
                                                                     LVL
1 PK  -0
MAXH
   -10
   -20
      D1 -27 dBm                                                     3DB
   -30
   -40
              1
   -50
   -60
   -70
   -80
   Start 30 MHz            97 MHz/            Stop 1 GHz
```
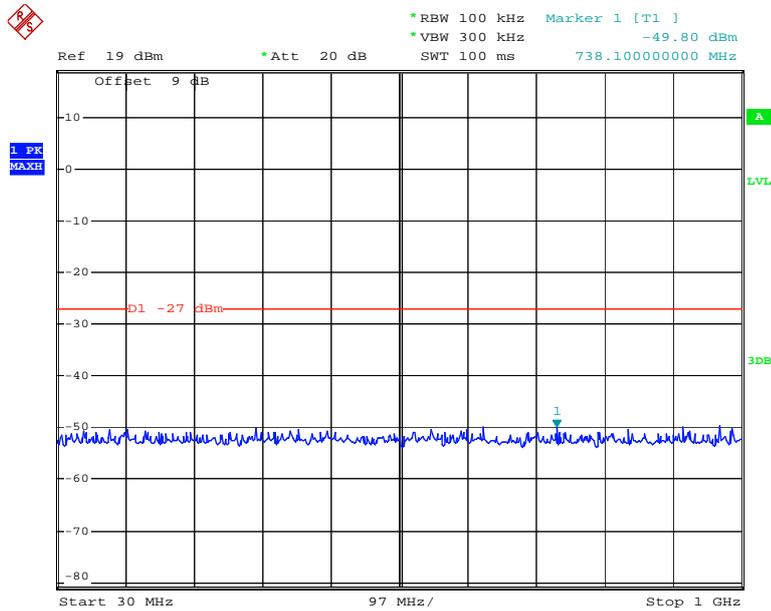
Date: 19.MAY.2015 15:43:24

Chain 0:802.11n ht40 High Channel 1GHz-6GHz

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz               -43.92 dBm
         Ref  19 dBm      *Att  20 dB    SWT 100 ms      3.180000000 GHz
            Offset  9 dB                                              [A]
   -10
                                                                     LVL
1 PK  -0
MAXH
   -10
   -20
      D1 -27 dBm                                                     3DB
   -30
   -40              1
   -50
   -60
   -70
   -80
   Start 1 GHz             500 MHz/            Stop 6 GHz
```

Fundamental

Date: 19.MAY.2015 15:43:41

Chain 0:802.11n ht40 High Channel 6GHz-26.5GHz

```
                                        *RBW 1 MHz      Marker 1 [T1 ]
                                        *VBW 3 MHz              -40.45 dBm
          Ref  9 dBm          *Att  10 dB    SWT 410 ms    20.555000000 GHz
             Offset  9 dB
   0

 1 PK
 MAXH    -10

         -20

         -30   D1 -27 dBm

         -40                                        1

         -50

         -60

         -70

         -80

         -90
         Start 6 GHz            2.05 GHz/            Stop 26.5 GHz
```

Date: 19.MAY.2015 15:45:03

Chain 0:802.11n ht40 High Channel 26.5GHz-40GHz

```
                                        *RBW 1 MHz      Marker 1 [T1 ]
                                        *VBW 3 MHz              -41.92 dBm
          Ref -1 dBm          *Att  0 dB     SWT 270 ms    39.001000000 GHz
             Offset  9 dB
  -10

 1 PK
 MAXH    -20

         -30   D1 -27 dBm

         -40                                              1

         -50

         -60

         -70

         -80

         -90

        -100
         Start 26.5 GHz          1.35 GHz/           Stop 40 GHz
```
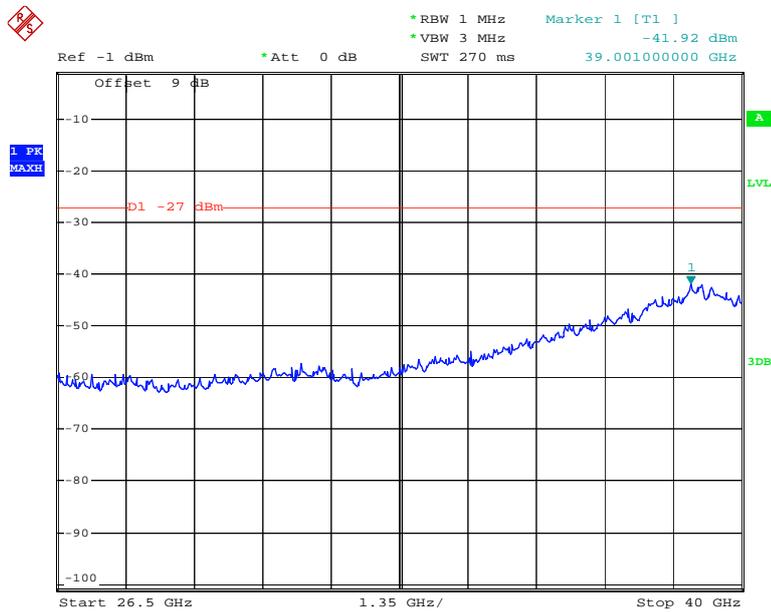
Date: 22.MAY.2015 13:53:07

Chain 0:802.11n ac80 Low Channel 30MHz-1GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz              -49.75 dBm
     Ref  19 dBm        *Att  20 dB  SWT 100 ms     344.280000000 MHz
        Offset  9 dB
```
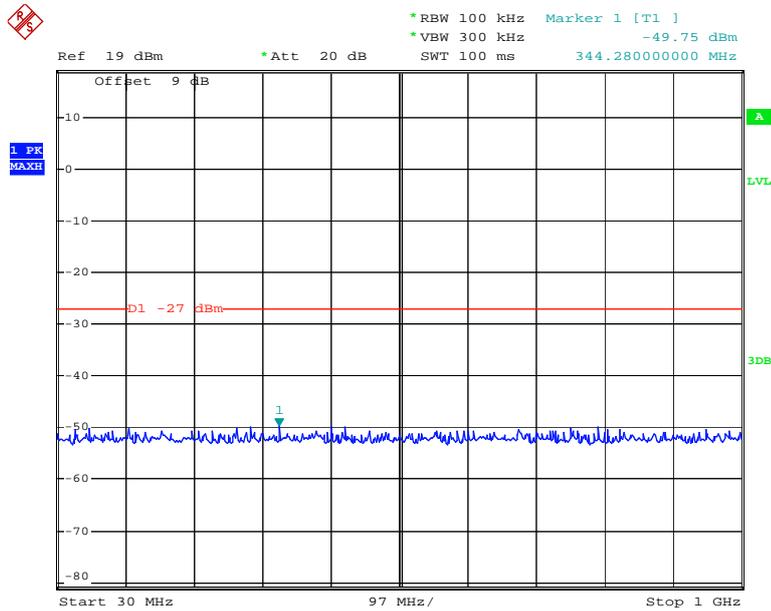
Date: 28.MAY.2015 15:43:41

Chain 0:802.11n ac80 Low Channel 1GHz-6GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz               -43.09 dBm
     Ref  19 dBm        *Att  20 dB  SWT 100 ms      3.760000000 GHz
        Offset  9 dB
```

Fundamental
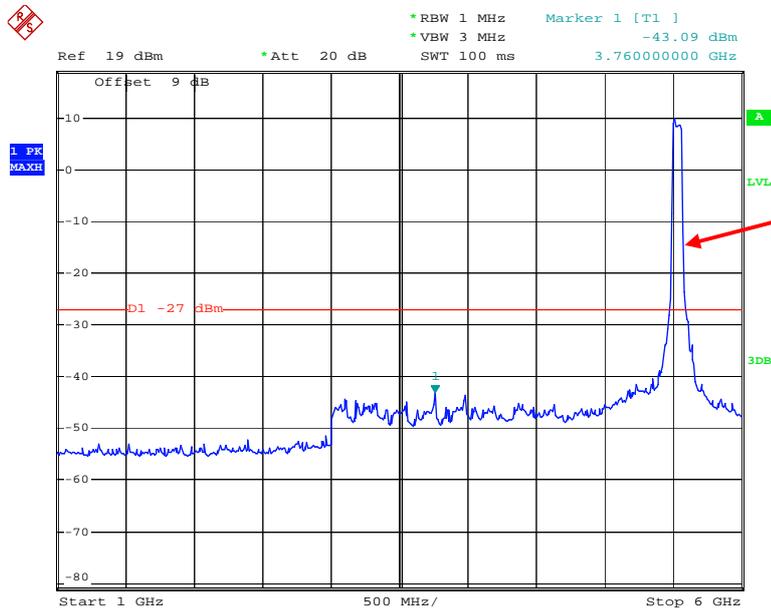
Date: 28.MAY.2015 15:43:26

Chain 0:802.11n ac80 Low Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz              -40.92 dBm
        Ref  9 dBm      *Att  10 dB  SWT 410 ms     20.555000000 GHz
```
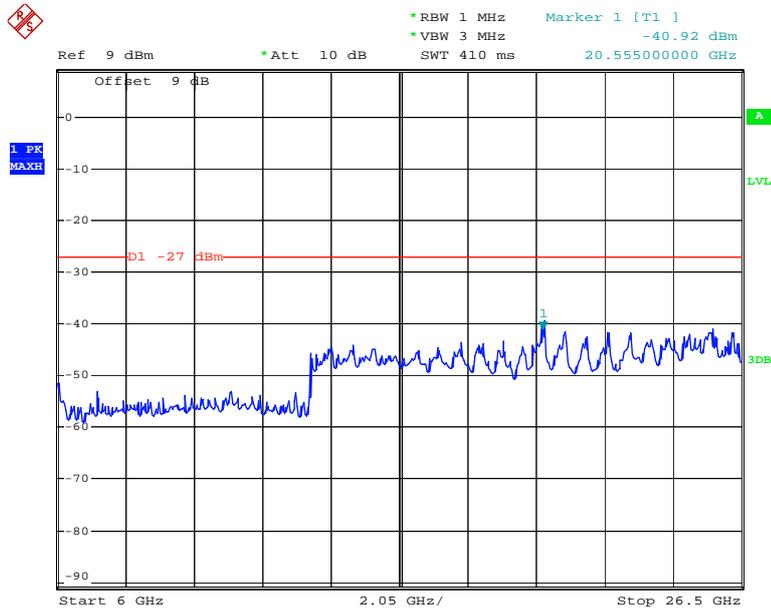
Date: 28.MAY.2015 15:42:46

Chain 0:802.11n ac80 Low Channel 26.5GHz-40GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz            -41.46 dBm
        Ref -1 dBm      *Att  10 dB  SWT 1.35 s     39.190000000 GHz
```
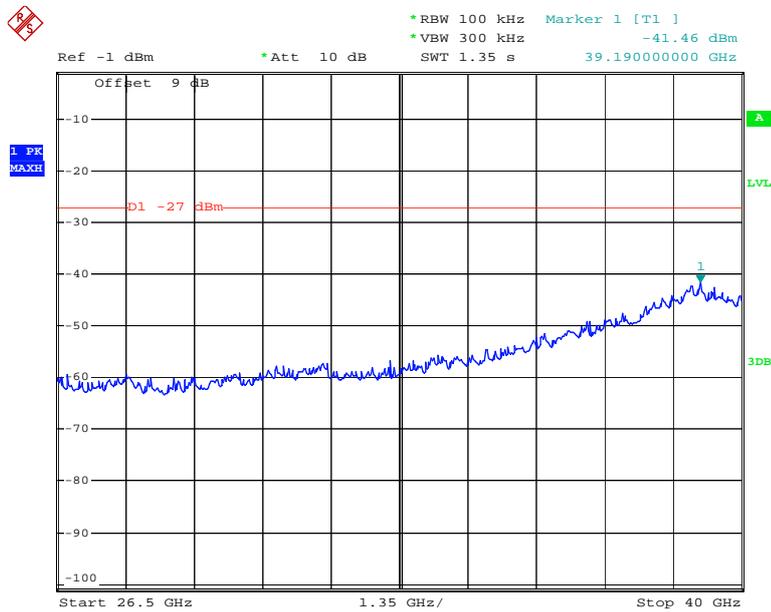
Date: 28.MAY.2015 15:44:44

Chain 0:802.11n ac80 High Channel 30MHz-1GHz
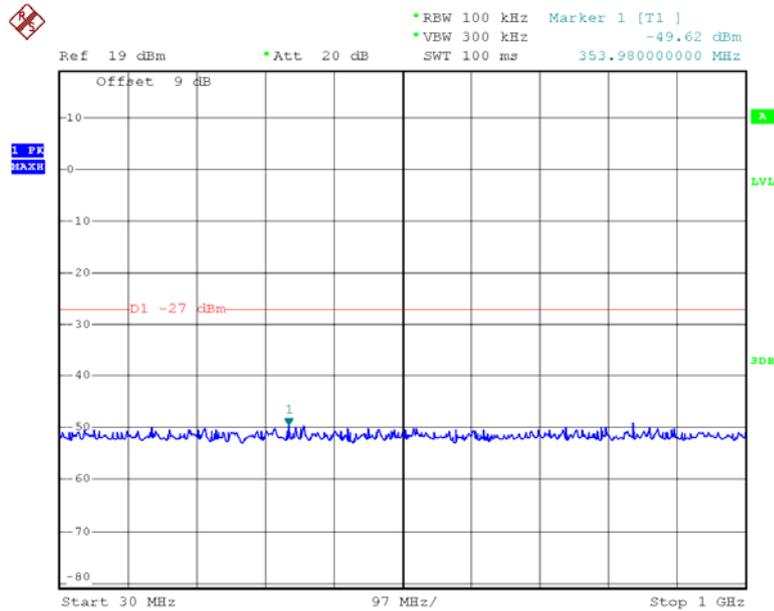
Date: 4.FEB.2016 14:25:32

Chain 0:802.11n ac80 High Channel 1GHz-6GHz
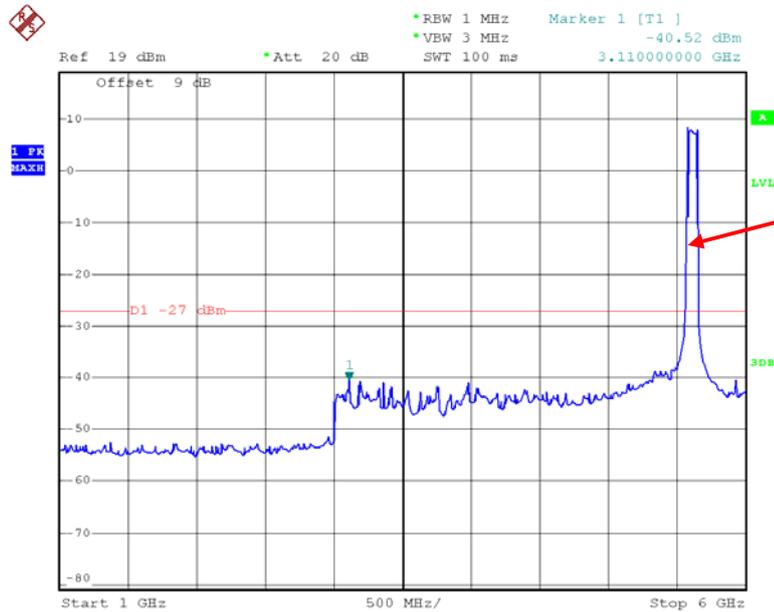
Date: 4.FEB.2016 14:26:21

Chain 0:802.11n ac80 High Channel 6GHz-26.5GHz
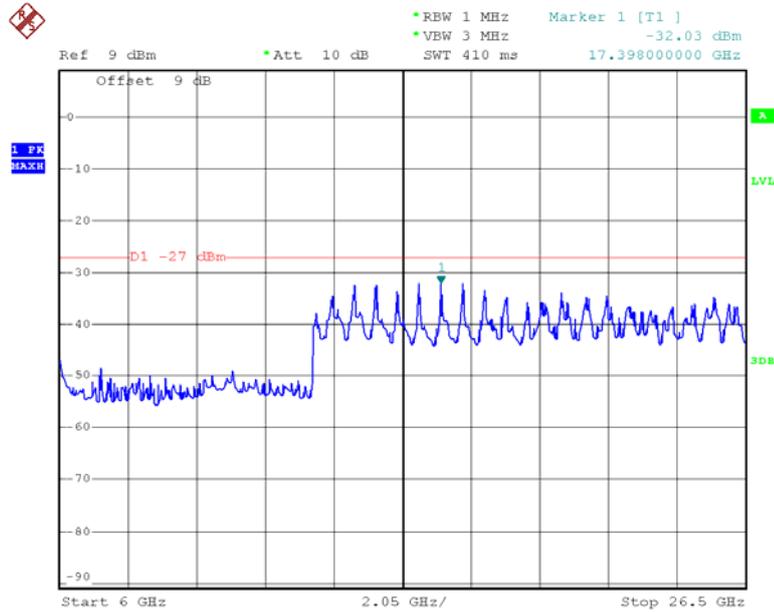
Date: 4.FEB.2016 14:27:36

Chain 0:802.11n ac80 High Channel 26.5GHz-40GHz
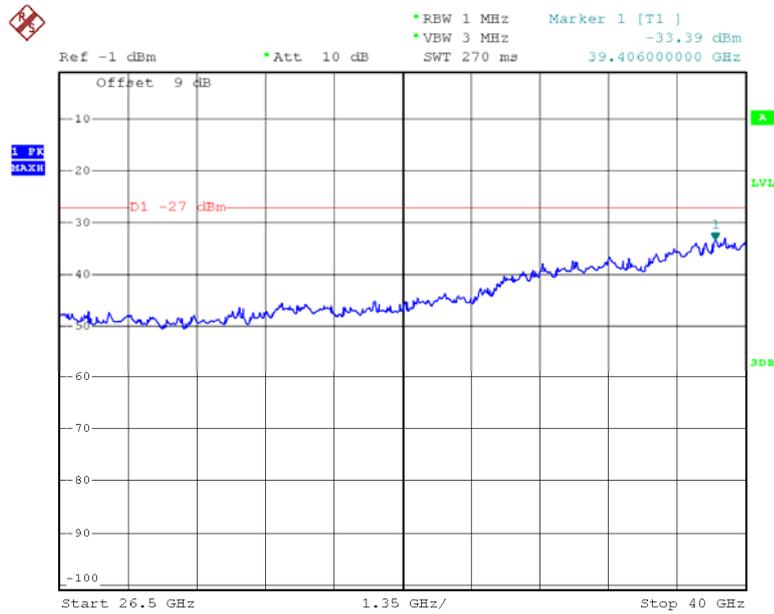
Date: 4.FEB.2016 14:30:00

Chain 1:802.11a Low Channel 30MHz-1GHz

```
                                      *RBW 100 kHz   Marker 1 [T1 ]
                                      *VBW 300 kHz            -49.19 dBm
        Ref  19 dBm      *Att  20 dB   SWT 100 ms      33.880000000 MHz
          Offset  9 dB
```

Date: 19.MAY.2015 15:59:38

Chain 1:802.11a Low Channel 1GHz-6GHz

```
                                      *RBW 1 MHz    Marker 1 [T1 ]
                                      *VBW 3 MHz             -44.03 dBm
        Ref  19 dBm      *Att  20 dB   SWT 100 ms       3.760000000 GHz
          Offset  9 dB
```

Fundamental

Date: 19.MAY.2015 15:59:25

Chain 1:802.11a Low Channel 6GHz-26.5GHz

```
                                      *RBW 1 MHz    Marker 1 [T1 ]
                                      *VBW 3 MHz            -40.40 dBm
    Ref  9 dBm        *Att  10 dB     SWT 410 ms    20.555000000 GHz
        Offset  9 dB
```

Date: 19.MAY.2015 15:59:05

Chain 1:802.11a Low Channel 26.5GHz-40GHz

```
                                      *RBW 1 MHz    Marker 1 [T1 ]
                                      *VBW 3 MHz            -41.06 dBm
    Ref -1 dBm        *Att  0 dB      SWT 270 ms    39.136000000 GHz
        Offset  9 dB
```
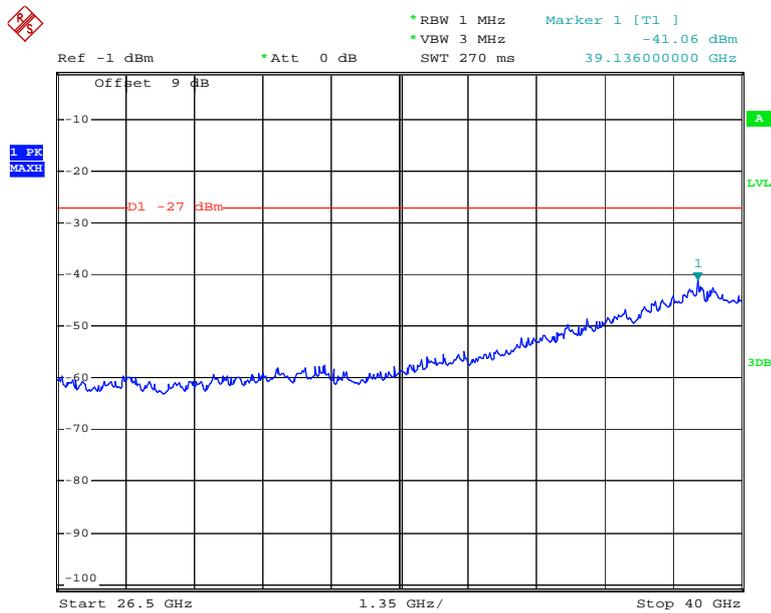
Date: 22.MAY.2015 13:53:54

Chain 1:802.11a Middle Channel 30MHz -1GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz          -46.31 dBm
        Ref  19 dBm      *Att  20 dB   SWT 100 ms    35.820000000 MHz
          Offset  9 dB
```
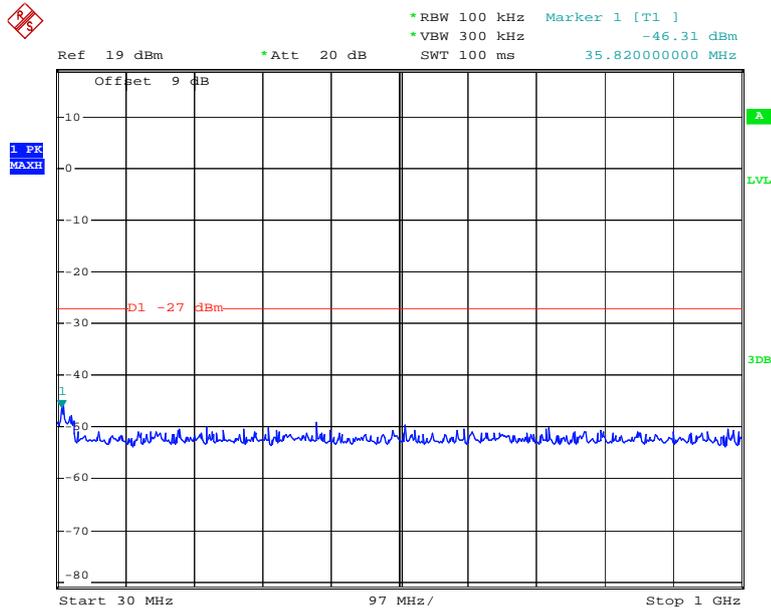
Date: 19.MAY.2015 15:57:51

Chain 1:802.11a Middle Channel 1GHz-6GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz           -44.44 dBm
        Ref  19 dBm      *Att  20 dB   SWT 100 ms    3.190000000 GHz
          Offset  9 dB
```

Fundamental
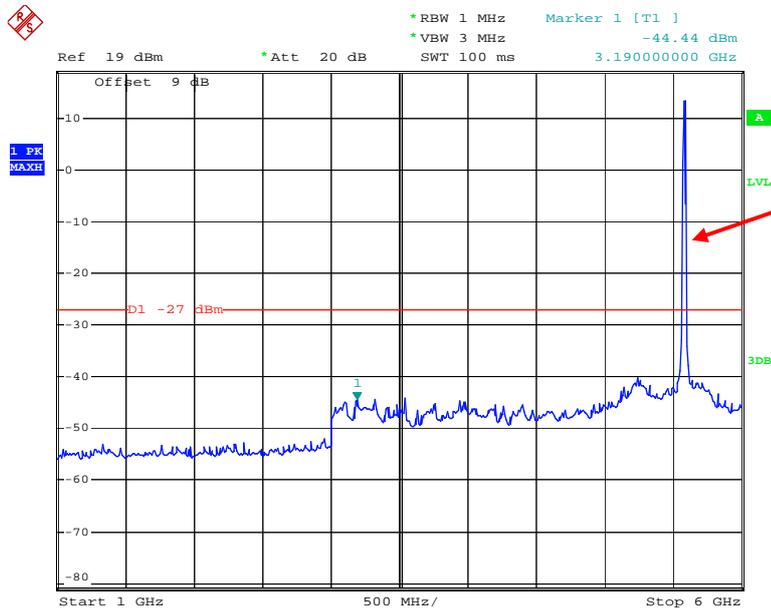
Date: 19.MAY.2015 15:58:19

Chain 1:802.11a Middle Channel 6GHz-26.5GHz

```
                                        *RBW 1 MHz     Marker 1 [T1 ]
                                        *VBW 3 MHz              -40.74 dBm
    Ref  9 dBm            *Att  10 dB   SWT 410 ms     20.514000000 GHz
      Offset  9 dB
```
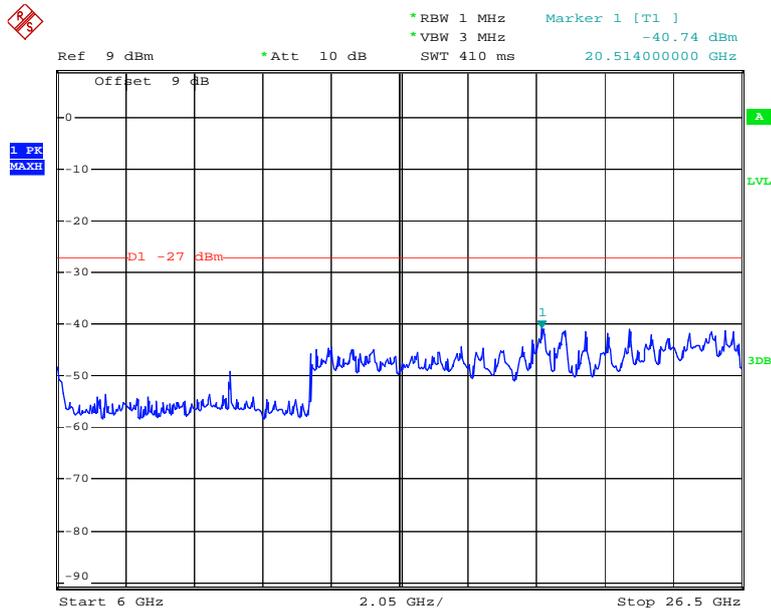
Date: 19.MAY.2015 15:58:36

Chain 1:802.11a Middle Channel 26.5GHz-40GHz

```
                                        *RBW 1 MHz     Marker 1 [T1 ]
                                        *VBW 3 MHz              -42.36 dBm
    Ref -1 dBm            *Att  0 dB    SWT 270 ms     39.190000000 GHz
      Offset  9 dB
```
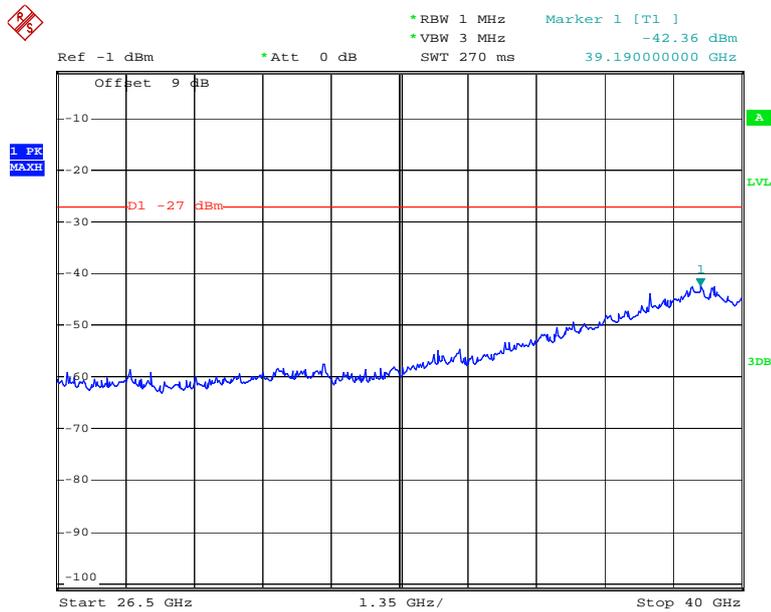
Date: 22.MAY.2015 13:54:00

Chain 1:802.11a High Channel 30MHz-1GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz          -45.74 dBm
      Ref  19 dBm       *Att  20 dB   SWT 100 ms     37.760000000 MHz
         Offset  9 dB
```

Date: 19.MAY.2015 15:57:33

Chain 1:802.11a High Channel 1GHz-6GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz           -39.90 dBm
      Ref  19 dBm       *Att  20 dB   SWT 100 ms     5.230000000 GHz
         Offset  9 dB
```

Fundamental
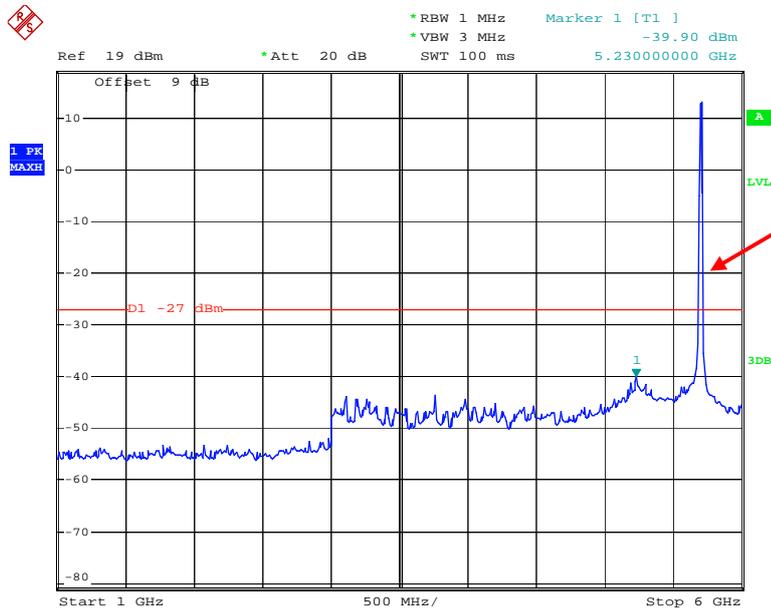
Date: 19.MAY.2015 15:57:19

Chain 1:802.11a High Channel 6GHz-26.5GHz
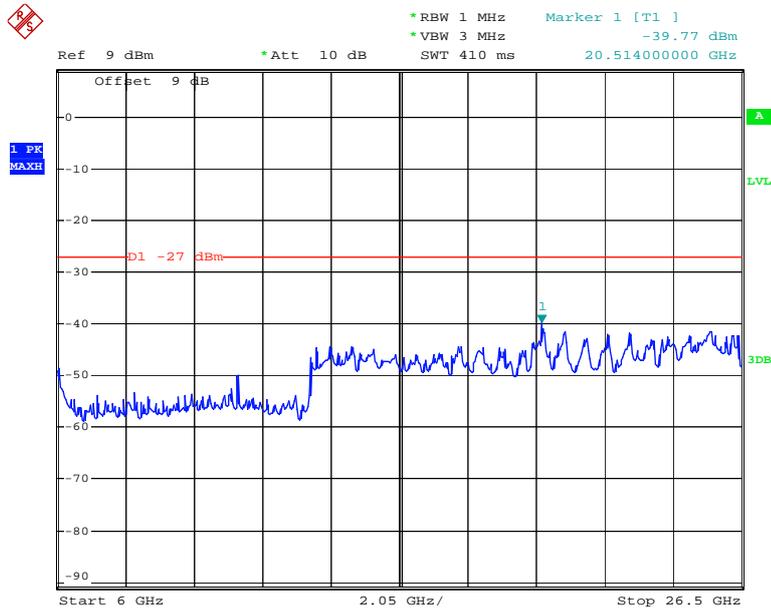
Date: 19.MAY.2015 15:57:01

Chain 1:802.11a High Channel 26.5GHz-40GHz
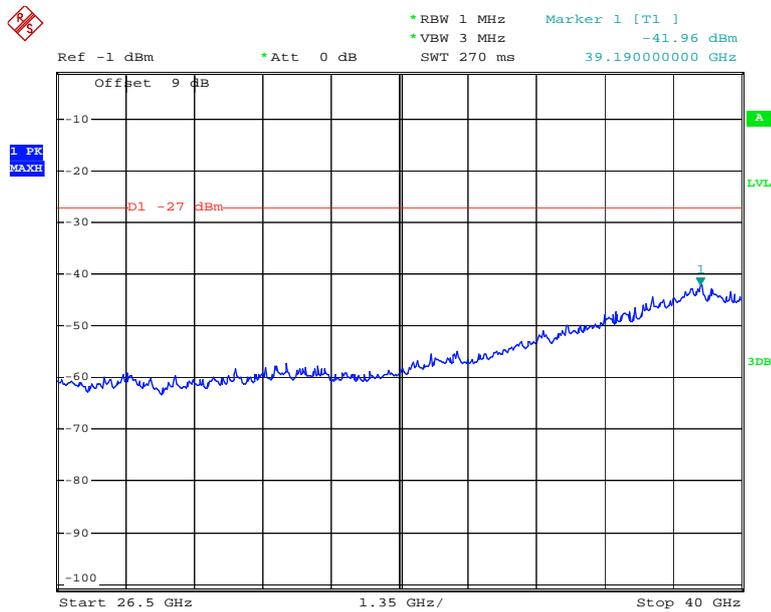
Date: 22.MAY.2015 13:53:49
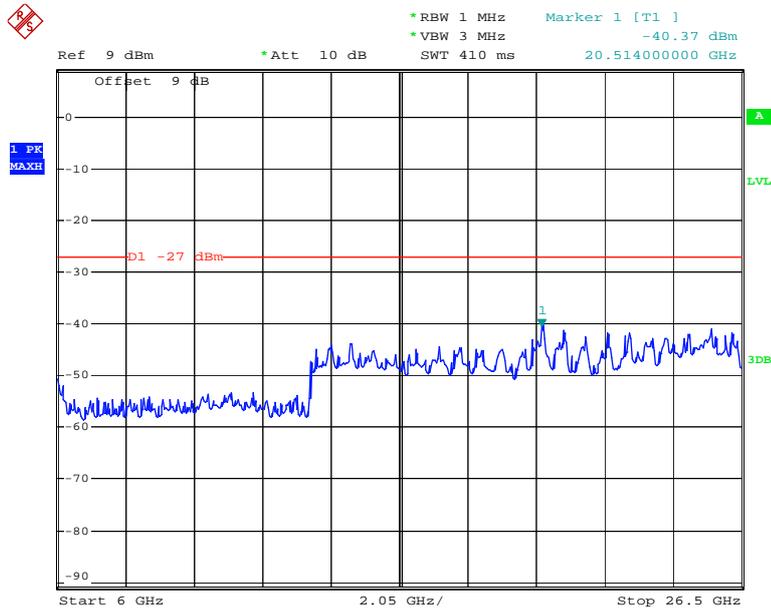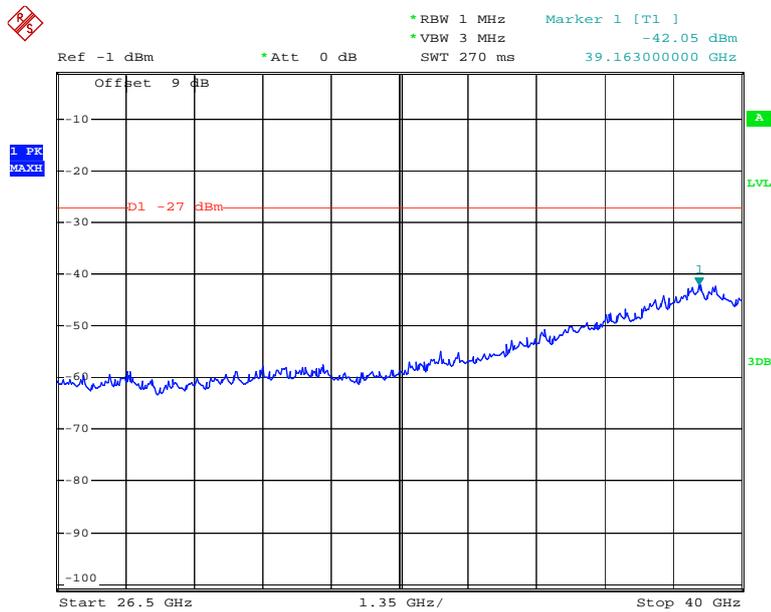
Chain 1:802.11n ht20 Low Channel 30MHz-1GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz              -50.02 dBm
        Ref  19 dBm      *Att  20 dB   SWT 100 ms    216.240000000 MHz
          Offset  9 dB                                                    A
   -10
1 PK                                                                     LVL
MAXH -0
   -10
   -20
         D1 -27 dBm                                                      3DB
   -30
   -40
   -50
1
   -60
   -70
   -80
   Start 30 MHz              97 MHz/              Stop 1 GHz
```
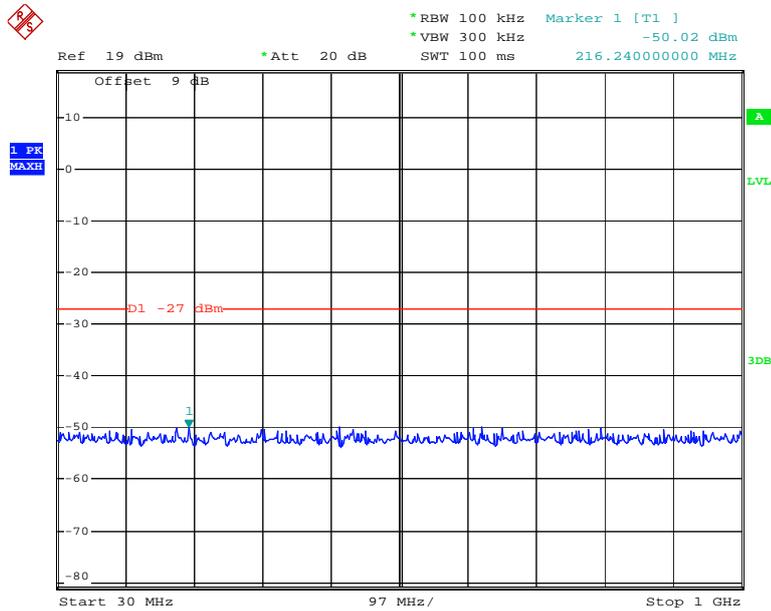
Date: 19.MAY.2015 15:54:18

Chain 1:802.11n ht20 Low Channel 1GHz-6GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz               -44.40 dBm
        Ref  19 dBm      *Att  20 dB   SWT 100 ms    3.190000000 GHz
          Offset  9 dB                                                    A
   -10
1 PK                                                                     LVL
MAXH -0
   -10
   -20
         D1 -27 dBm                                                      3DB
   -30
   -40
1
   -50
   -60
   -70
   -80
   Start 1 GHz               500 MHz/              Stop 6 GHz
```

Fundamental
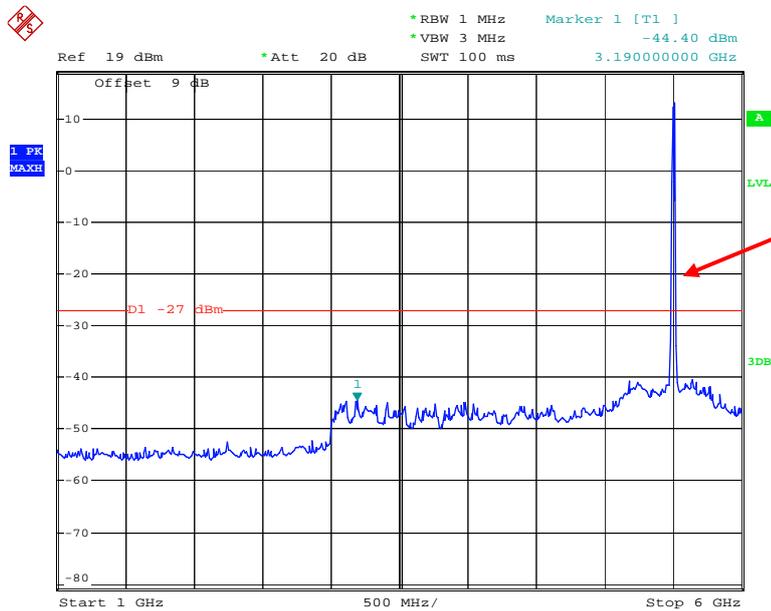
Date: 19.MAY.2015 15:54:34

Chain 1:802.11n ht20 Low Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz           -39.95 dBm
Ref  9 dBm          *Att  10 dB    SWT 410 ms     20.555000000 GHz
   Offset  9 dB
```
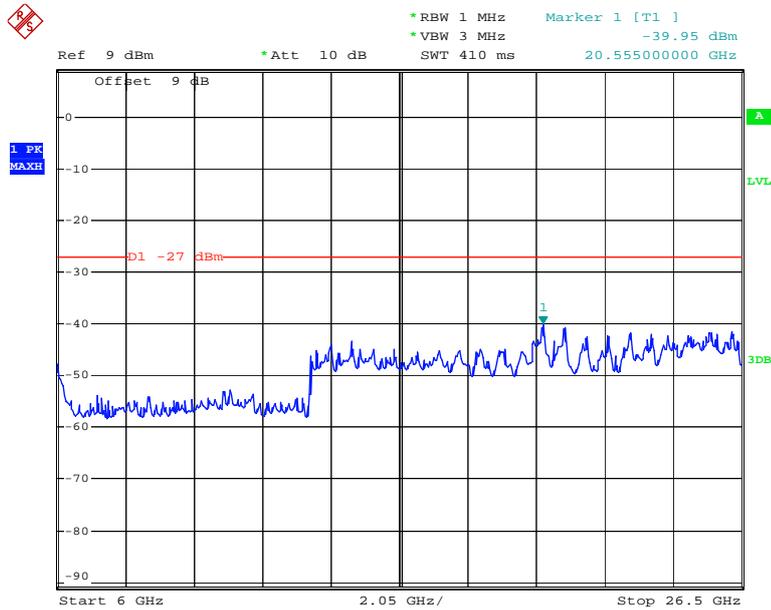
Date: 19.MAY.2015 15:54:46

Chain 1:802.11n ht20 Low Channel 26.5GHz-40GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz           -42.22 dBm
Ref -1 dBm          *Att  0 dB     SWT 270 ms     38.974000000 GHz
   Offset  9 dB
```
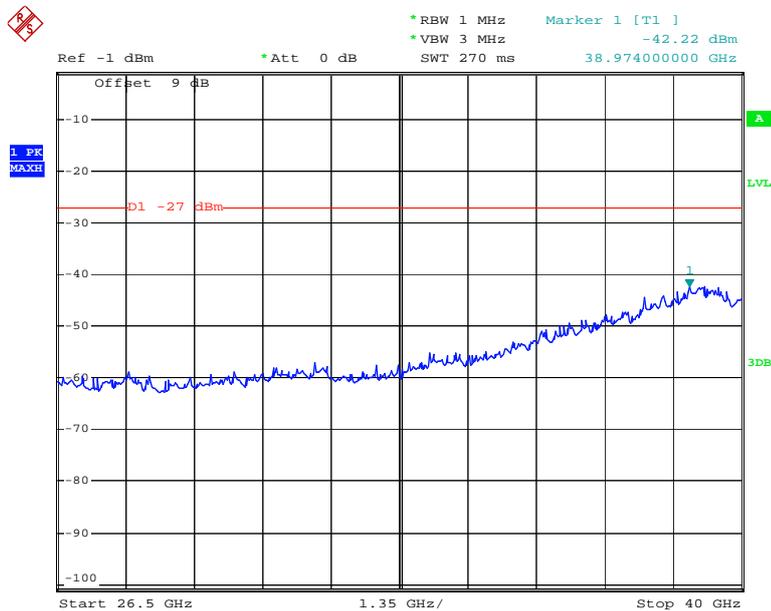
Date: 22.MAY.2015 13:54:35

Chain 1:802.11n ht20 Middle Channel 30MHz -1GHz

```
                                    *RBW 100 kHz    Marker 1 [T1 ]
                                    *VBW 300 kHz            -49.42 dBm
         Ref  19 dBm    *Att  20 dB  SWT 100 ms     375.320000000 MHz
            Offset  9 dB
```
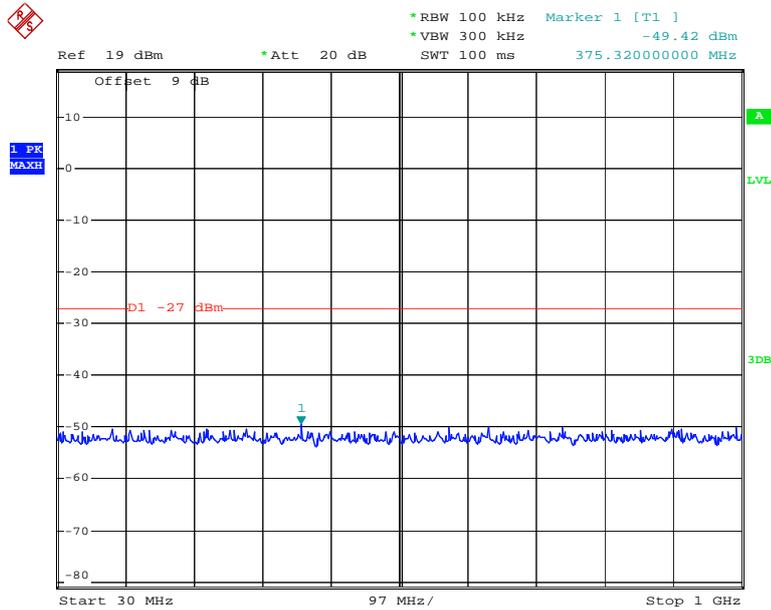
Date: 19.MAY.2015 15:55:44

Chain 1:802.11n ht20 Middle Channel 1GHz-6GHz

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz             -44.49 dBm
         Ref  19 dBm    *Att  20 dB  SWT 100 ms      3.230000000 GHz
            Offset  9 dB
```

Fundamental
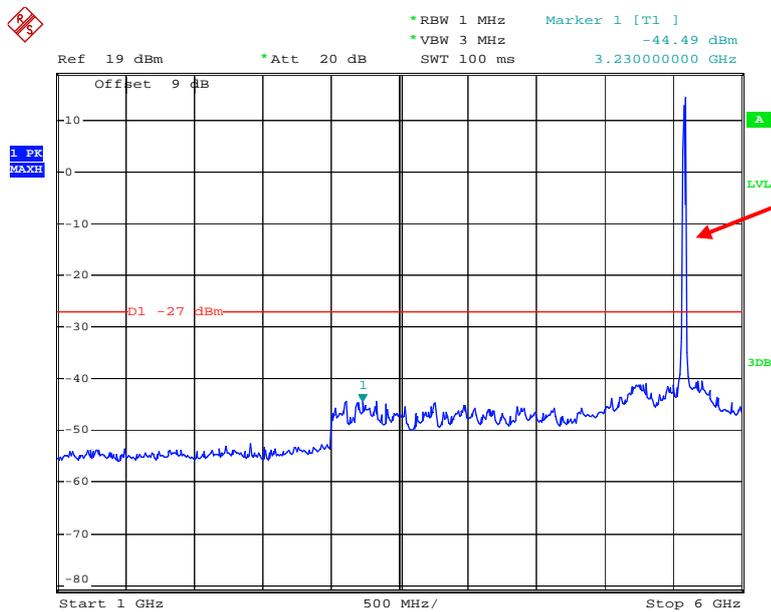
Date: 19.MAY.2015 15:55:31

Chain 1:802.11n ht20 Middle Channel 6GHz-26.5GHz

```
                                        *RBW 1 MHz     Marker 1 [T1 ]
                                        *VBW 3 MHz              -40.66 dBm
         Ref  9 dBm        *Att  10 dB   SWT 410 ms      23.138000000 GHz
```



```
Start 6 GHz              2.05 GHz/              Stop 26.5 GHz
```
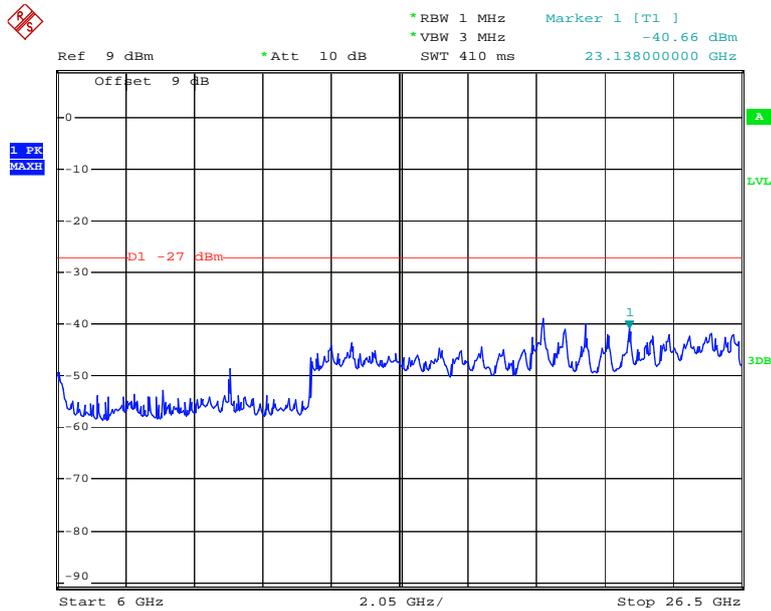
Date: 19.MAY.2015 15:55:11

Chain 1:802.11n ht20 Middle Channel 26.5GHz-40GHz

```
                                        *RBW 1 MHz     Marker 1 [T1 ]
                                        *VBW 3 MHz              -42.09 dBm
         Ref -1 dBm        *Att  0 dB    SWT 270 ms      39.190000000 GHz
```



```
Start 26.5 GHz            1.35 GHz/              Stop 40 GHz
```
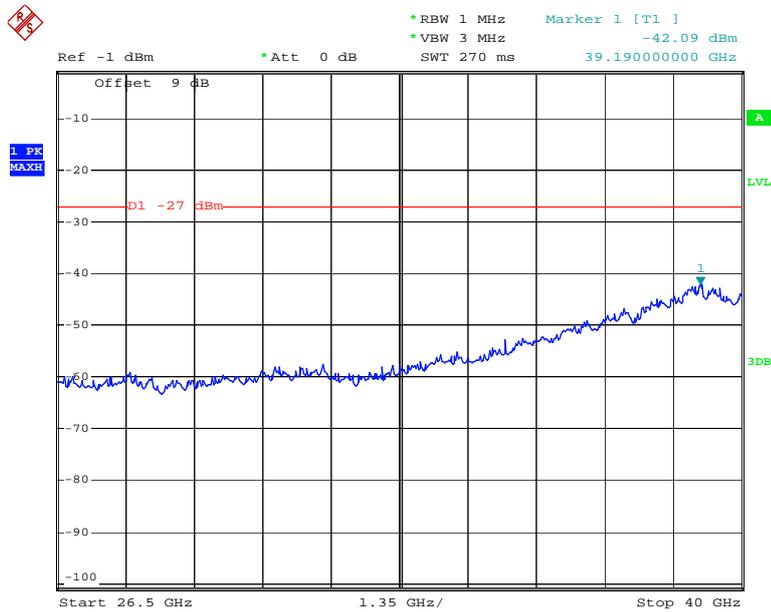
Date: 22.MAY.2015 13:54:41

Chain 1:802.11n ht20 High Channel 30MHz-1GHz

```
                                    *RBW 100 kHz    Marker 1 [T1 ]
                                    *VBW 300 kHz            -49.14 dBm
        Ref  19 dBm      *Att  20 dB    SWT 100 ms    49.400000000 MHz
          Offset  9 dB
```
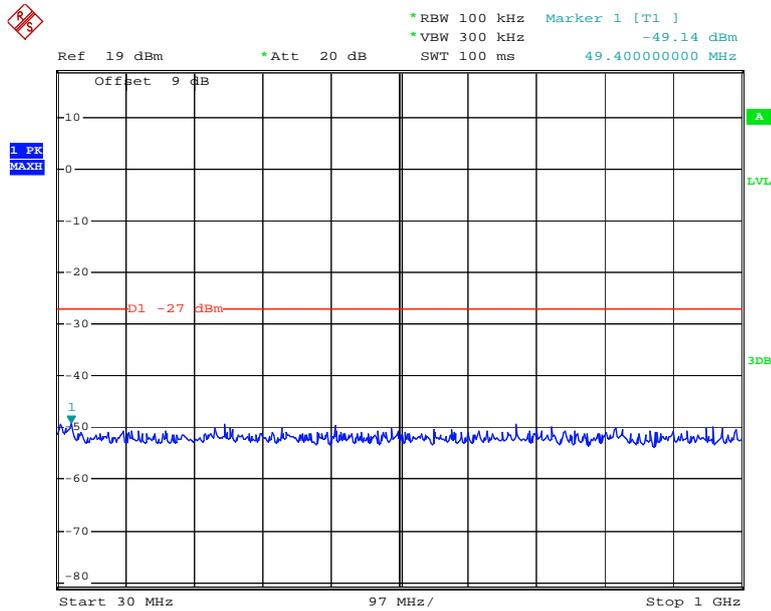
Date: 19.MAY.2015 15:56:09

Chain 1:802.11n ht20 High Channel 1GHz-6GHz

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz            -43.56 dBm
        Ref  19 dBm      *Att  20 dB    SWT 100 ms    3.110000000 GHz
          Offset  9 dB
```

Fundamental
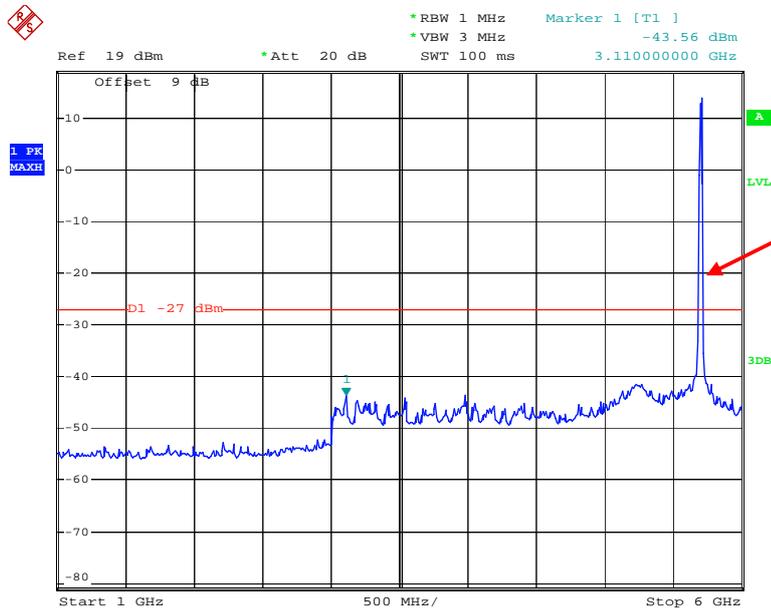
Date: 19.MAY.2015 15:56:26

Chain 1:802.11n ht20 High Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz      Marker 1 [T1 ]
                                    *VBW 3 MHz             -38.98 dBm
        Ref  9 dBm        *Att  10 dB    SWT 410 ms    20.514000000 GHz
           Offset  9 dB
```
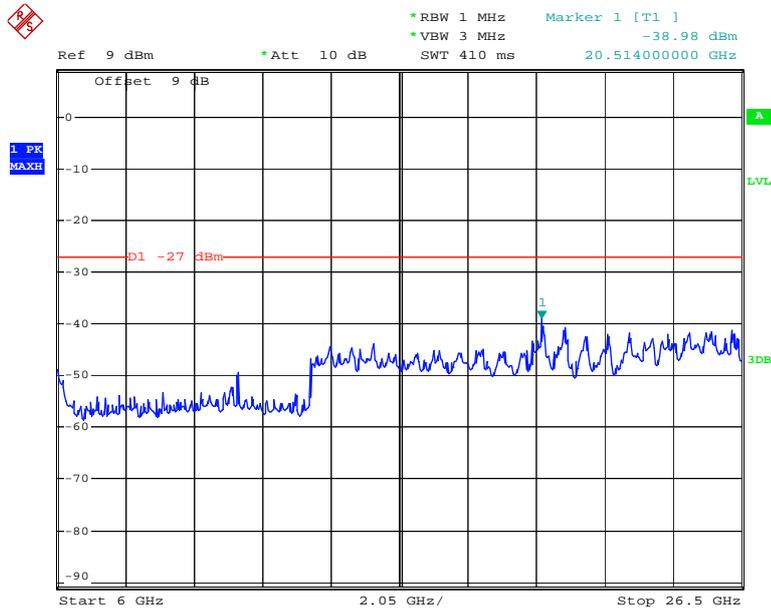
Date: 19.MAY.2015 15:56:42

Chain 1:802.11n ht20 High Channel 26.5GHz-40GHz

```
                                    *RBW 1 MHz      Marker 1 [T1 ]
                                    *VBW 3 MHz             -41.80 dBm
        Ref -1 dBm        *Att  0 dB     SWT 270 ms    39.001000000 GHz
           Offset  9 dB
```
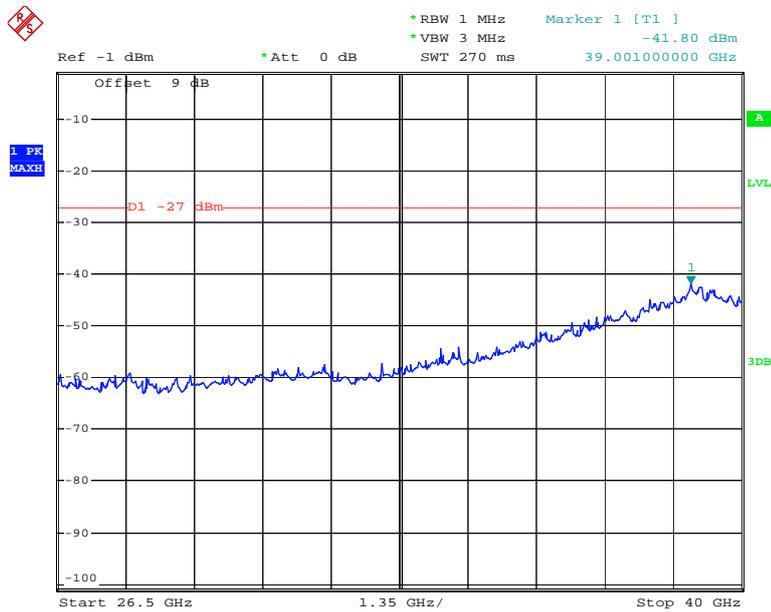
Date: 22.MAY.2015 13:54:10

Chain 1:802.11n ht40 Low Channel 30MHz-1GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz            -49.13 dBm
    Ref  19 dBm        *Att  20 dB   SWT 100 ms    538.280000000 MHz
      Offset  9 dB
```
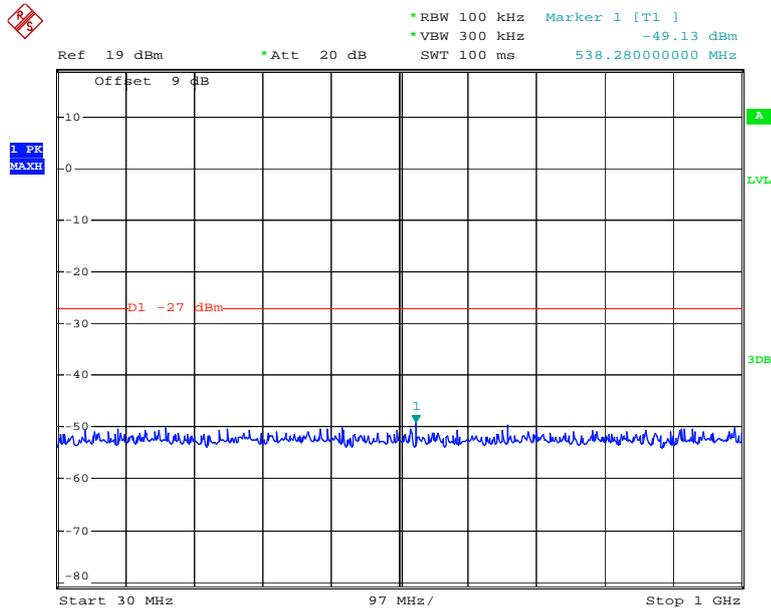
Date: 19.MAY.2015 15:51:58

Chain 1:802.11n ht40 Low Channel 1GHz-6GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz             -43.03 dBm
    Ref  19 dBm        *Att  20 dB   SWT 100 ms    3.180000000 GHz
      Offset  9 dB
```

Fundamental
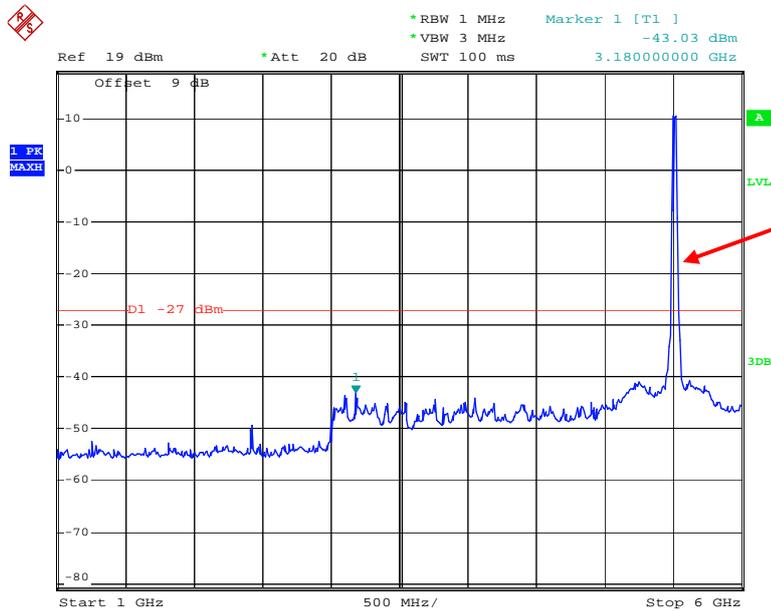
Date: 19.MAY.2015 15:51:43

Chain 1:802.11n ht40 Low Channel 6GHz-26.5GHz

```
                              *RBW 1 MHz    Marker 1 [T1 ]
                              *VBW 3 MHz            -38.55 dBm
Ref  9 dBm        *Att  10 dB  SWT 410 ms    23.179000000 GHz
   Offset  9 dB
```
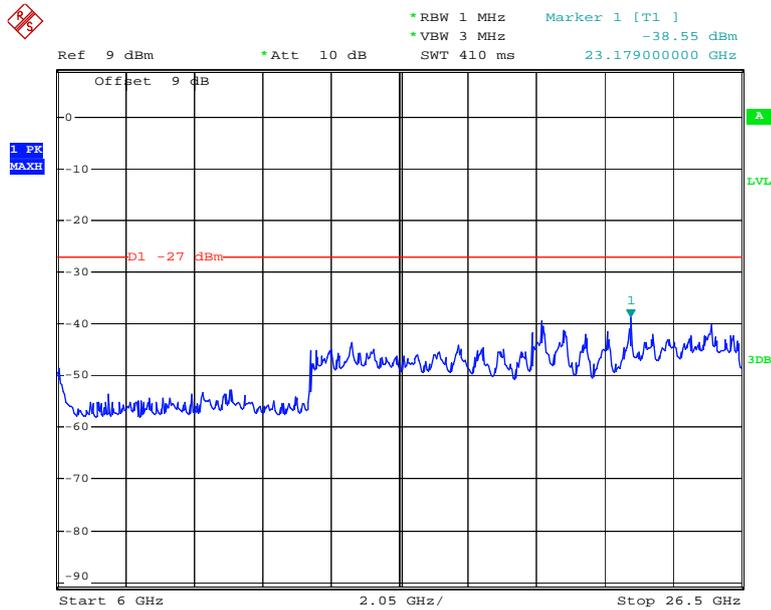
Date: 19.MAY.2015 15:51:22

Chain 1:802.11n ht40 Low Channel 26.5GHz-40GHz

```
                              *RBW 1 MHz    Marker 1 [T1 ]
                              *VBW 3 MHz            -41.73 dBm
Ref -1 dBm        *Att  0 dB   SWT 270 ms    39.190000000 GHz
   Offset  9 dB
```
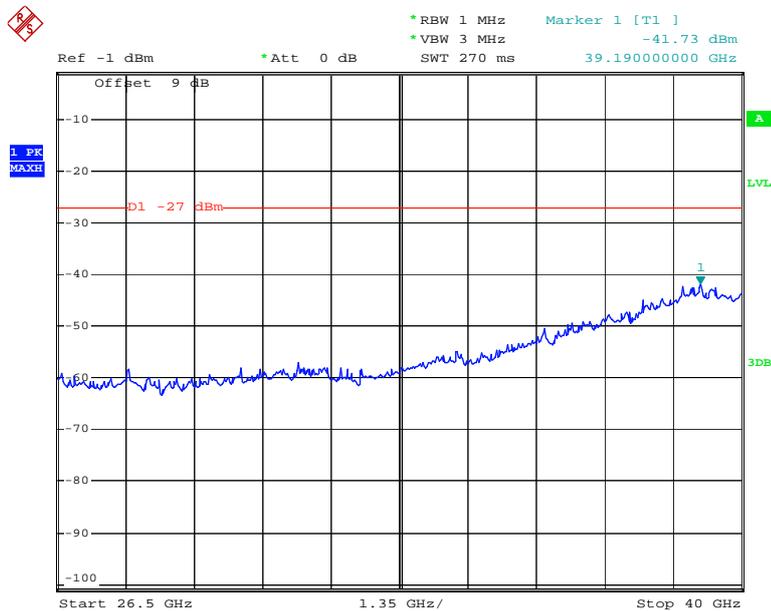
Date: 22.MAY.2015 13:54:53

Chain 1:802.11n ht40 Middle Channel 30MHz-1GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz              -48.99 dBm
         Ref  19 dBm       *Att 20 dB    SWT 100 ms      761.380000000 MHz
            Offset  9 dB                                                      A
   1 PK
   MAXH                                                                      LVL

                  D1 -27 dBm

                                                                            3DB


                                               1
```
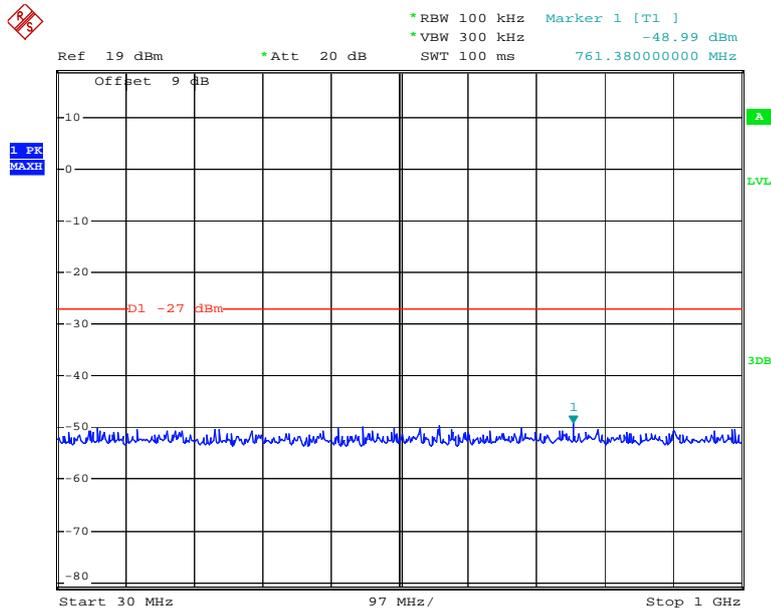
Date: 19.MAY.2015 15:52:21

Chain 1:802.11n ht40 Middle Channel 1GHz-6GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz               -43.26 dBm
         Ref  19 dBm       *Att 20 dB    SWT 100 ms      3.190000000 GHz
            Offset  9 dB                                                      A
   1 PK
   MAXH                                                          Fundamental
                                                                            LVL


                  D1 -27 dBm

                                                                            3DB


                                 1
```
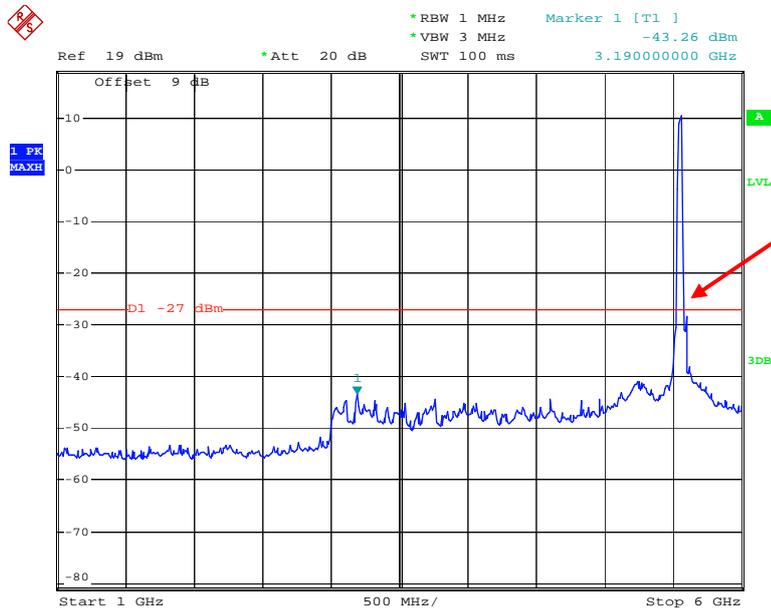
Date: 19.MAY.2015 15:52:38

Chain 1:802.11n ht40 Middle Channel 6GHz-26.5GHz

		*RBW 1 MHz	Marker 1 [T1]
		*VBW 3 MHz	-40.54 dBm
Ref 9 dBm	*Att 10 dB	SWT 410 ms	20.514000000 GHz

Offset 9 dB

1 PK
MAXH

D1 -27 dBm

Start 6 GHz　　　2.05 GHz/　　　Stop 26.5 GHz
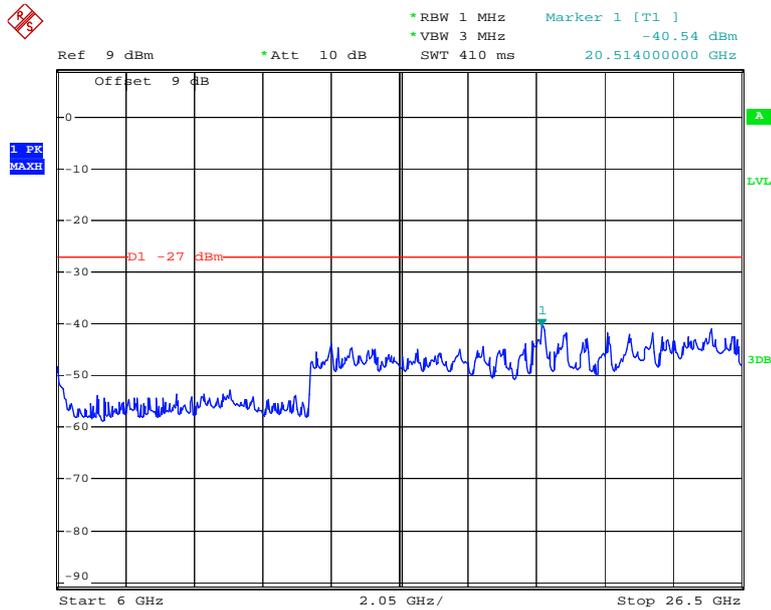
Date: 19.MAY.2015 15:52:54

Chain 1:802.11n ht40 Middle Channel 26.5GHz-40GHz

		*RBW 1 MHz	Marker 1 [T1]
		*VBW 3 MHz	-41.98 dBm
Ref -1 dBm	*Att 0 dB	SWT 270 ms	39.082000000 GHz

Offset 9 dB

1 PK
MAXH

D1 -27 dBm

Start 26.5 GHz　　　1.35 GHz/　　　Stop 40 GHz
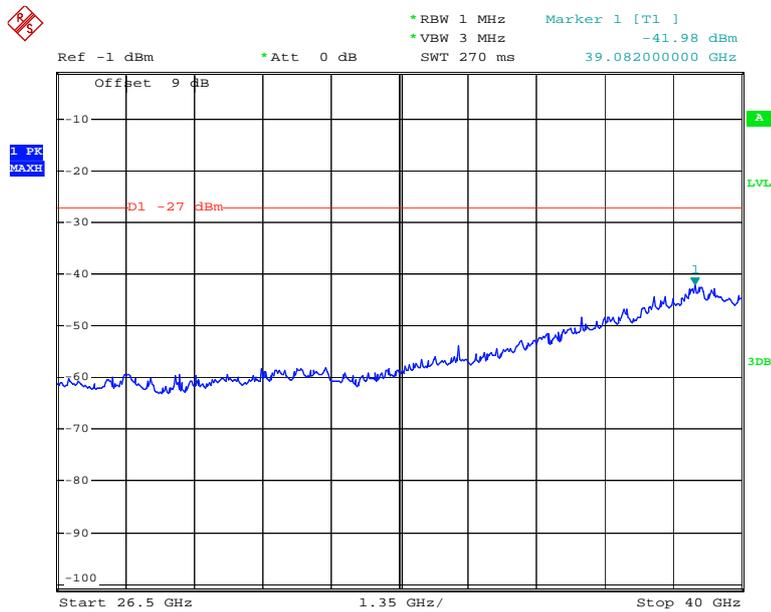
Date: 22.MAY.2015 13:54:58

Chain 1:802.11n ht40 High Channel 30MHz-1GHz
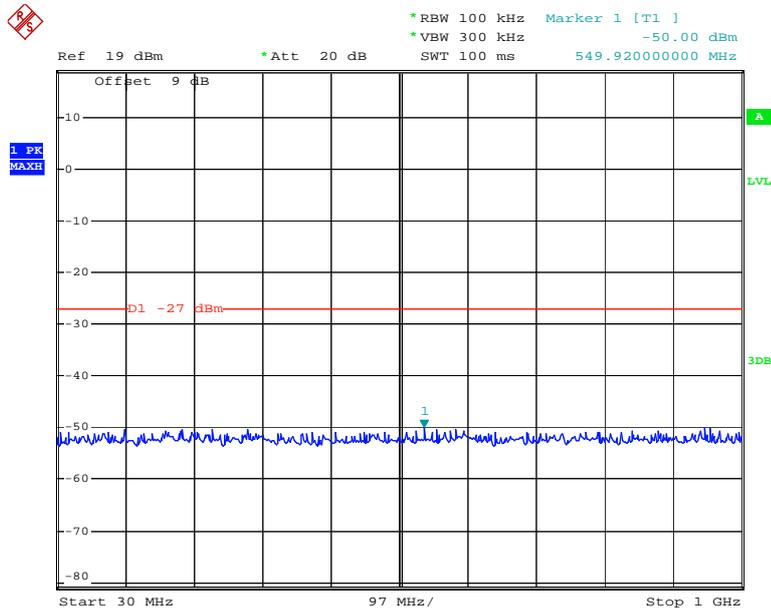
Date: 19.MAY.2015 15:53:47

Chain 1:802.11n ht40 High Channel 1GHz-6GHz
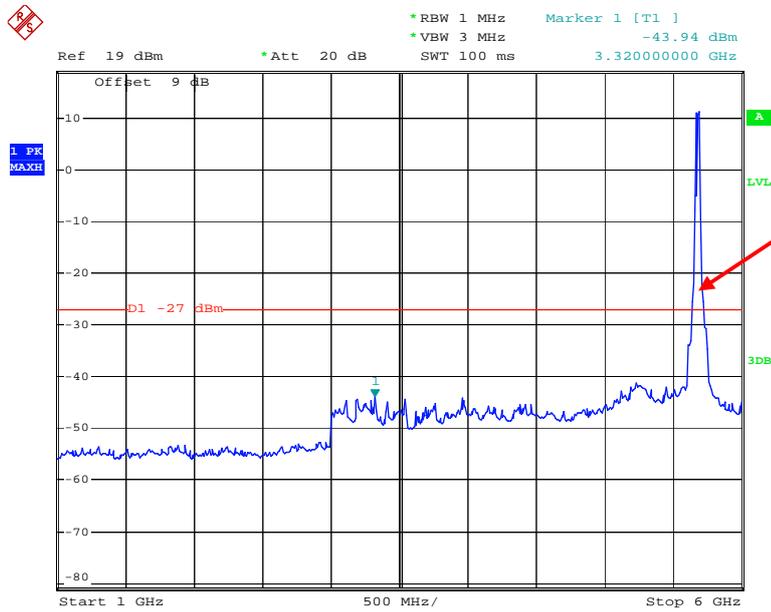
Date: 19.MAY.2015 15:53:34

Chain 1:802.11n ht40 High Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz              -40.00 dBm
            Ref  9 dBm      *Att  10 dB    SWT 410 ms    20.514000000 GHz
              Offset  9 dB
```
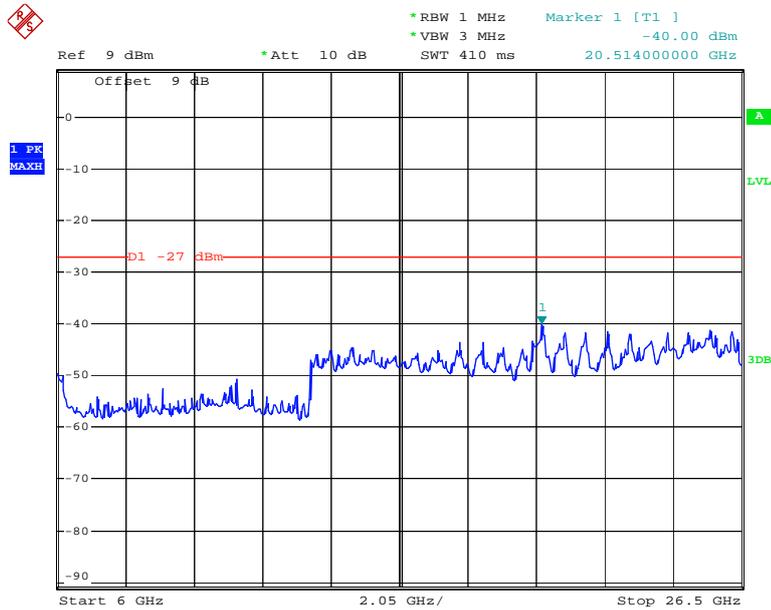
Date: 19.MAY.2015 15:53:15

Chain 1:802.11n ht40 High Channel 26.5GHz-40GHz

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz              -42.32 dBm
            Ref -1 dBm      *Att  0 dB     SWT 270 ms    39.406000000 GHz
              Offset  9 dB
```
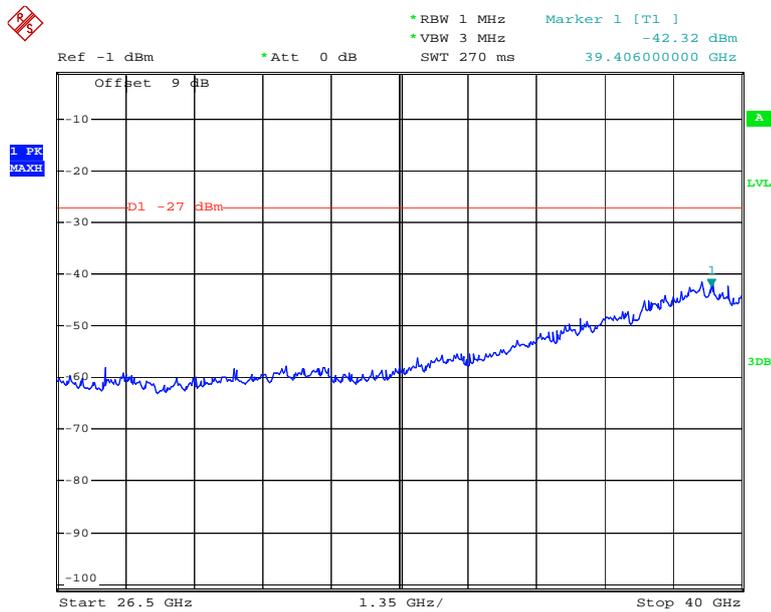
Date: 22.MAY.2015 13:54:47

Chain 1:802.11n ac80 Low Channel 30MHz-1GHz
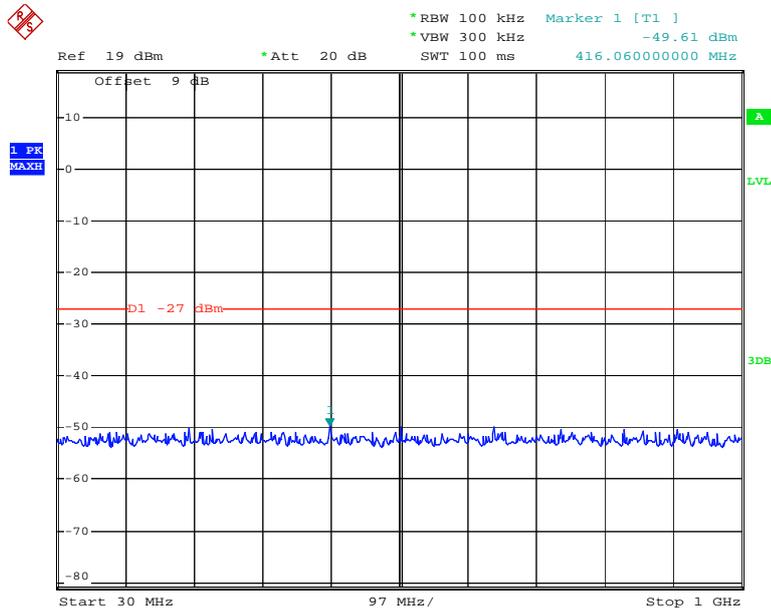
Date: 19.MAY.2015 15:50:16

Chain 1:802.11n ac80 Low Channel 1GHz-6GHz
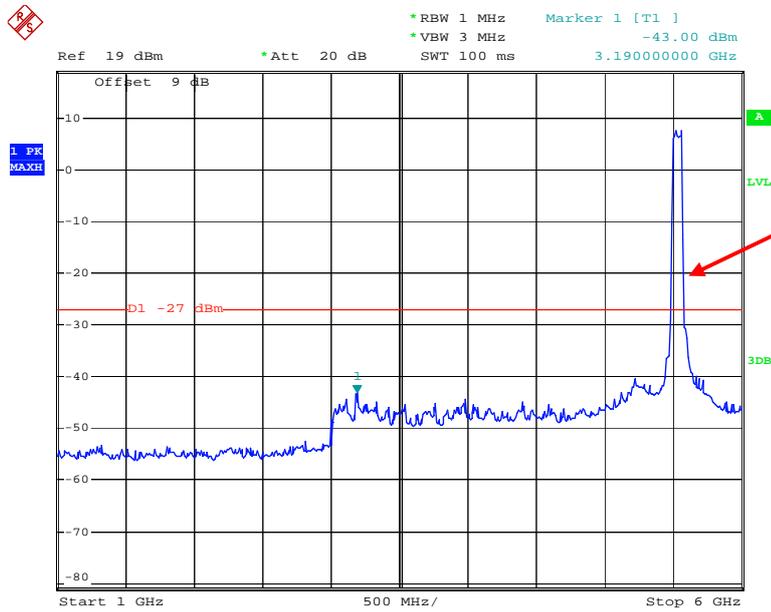
Date: 19.MAY.2015 15:50:29

Chain 1:802.11n ac80 Low Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz      Marker 1 [T1 ]
                                    *VBW 3 MHz              -40.08 dBm
       Ref  9 dBm        *Att  10 dB    SWT 410 ms     20.555000000 GHz
```
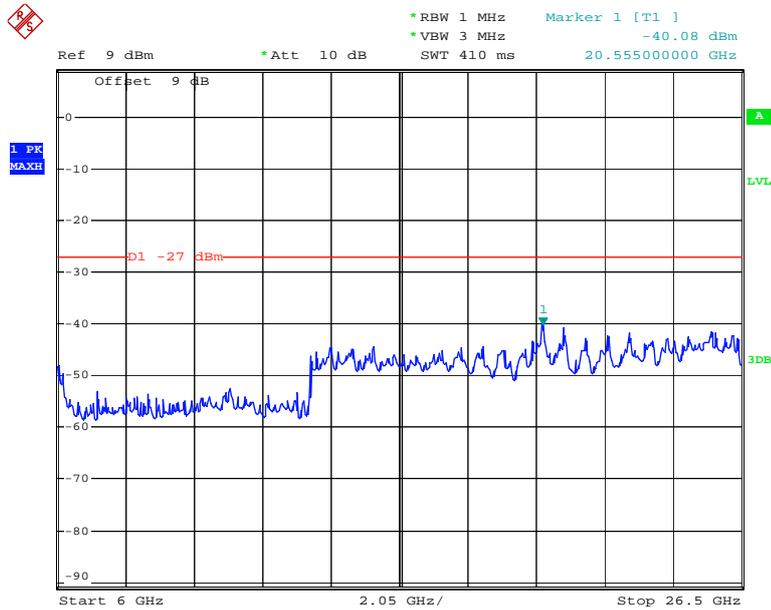
Date: 19.MAY.2015 15:50:44

Chain 1:802.11n ac80 Low Channel 26.5GHz-40GHz

```
                                    *RBW 1 MHz      Marker 1 [T1 ]
                                    *VBW 3 MHz              -41.90 dBm
       Ref -1 dBm        *Att   0 dB    SWT 270 ms     39.001000000 GHz
```
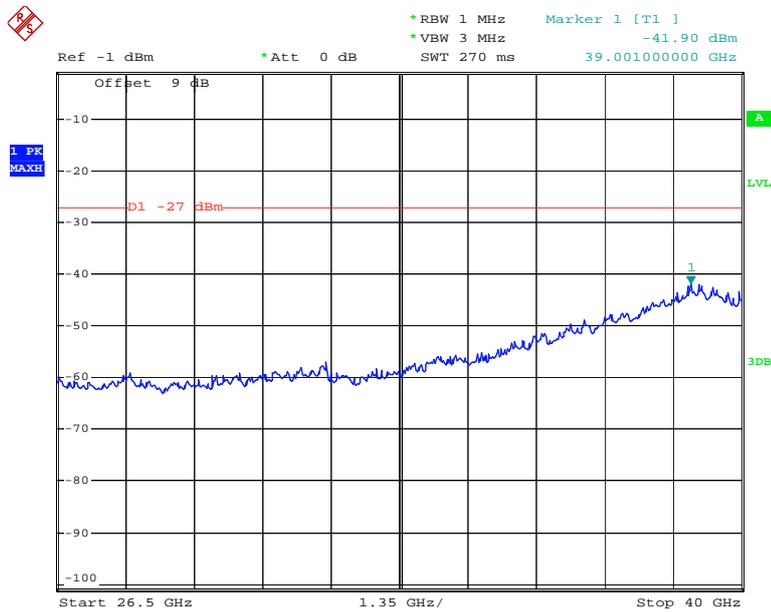
Date: 22.MAY.2015 13:54:05

Chain 1:802.11n ac80 High Channel 30MHz-1GHz
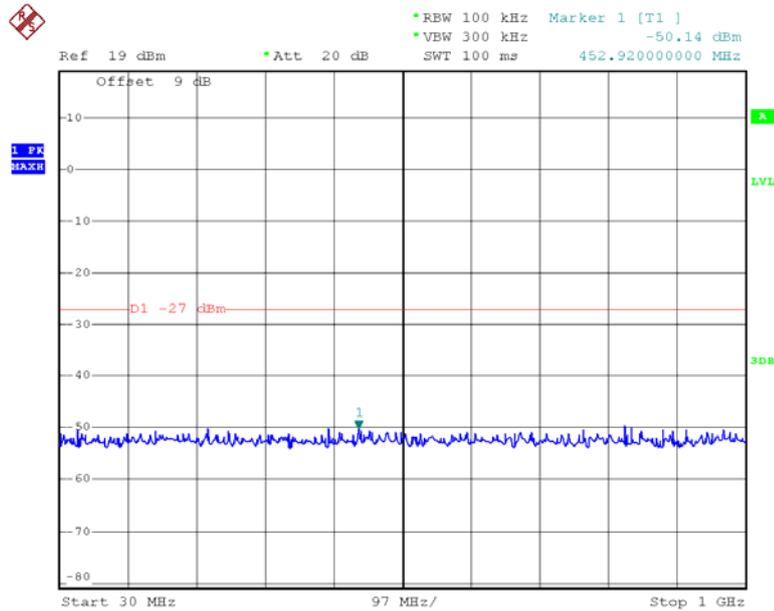
Date: 4.FEB.2016 14:25:40

Chain 1:802.11n ac80 High Channel 1GHz-6GHz

Fundamental
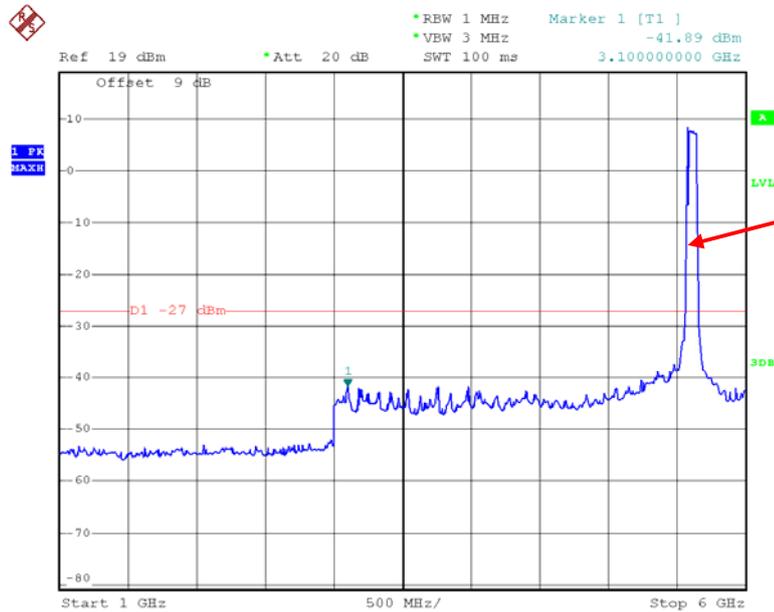
Date: 4.FEB.2016 14:26:31

Chain 1:802.11n ac80 High Channel 6GHz-26.5GHz
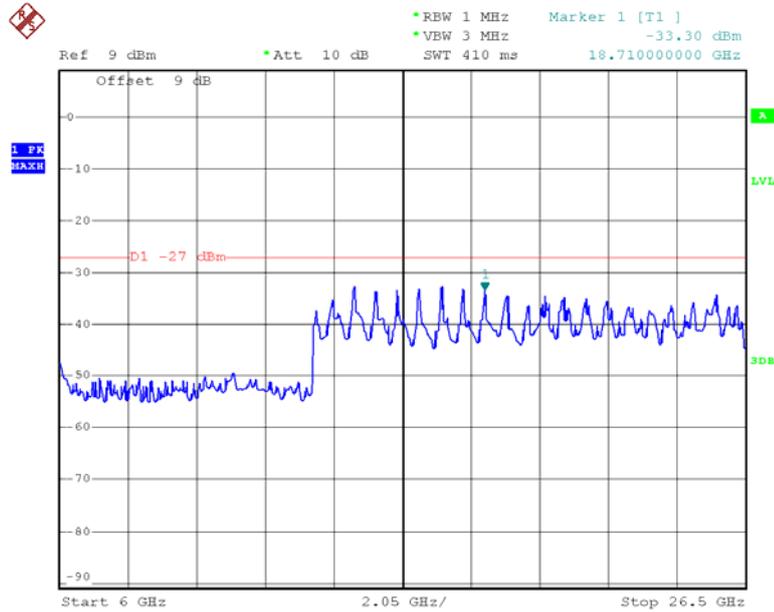
Date: 4.FEB.2016 14:28:00

Chain 1:802.11n ac80 High Channel 26.5GHz-40GHz
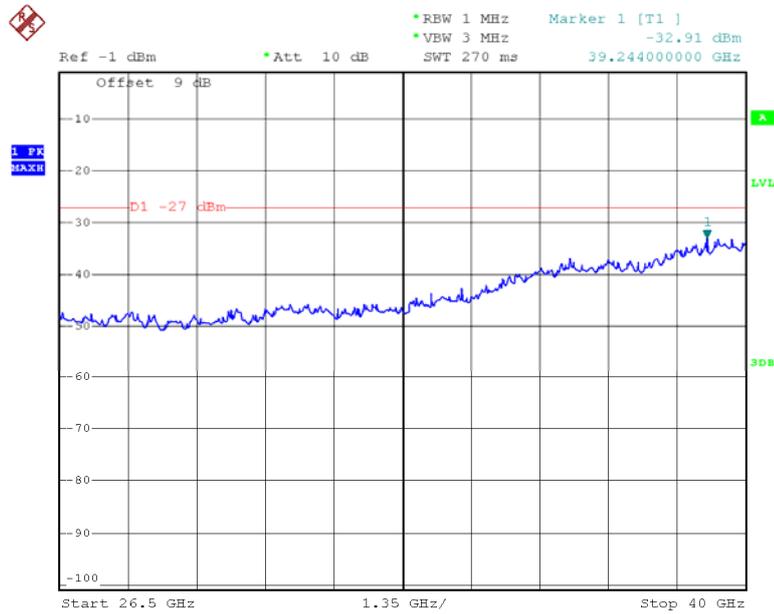
Date: 4.FEB.2016 14:30:11

Chain 2:802.11a Low Channel 30MHz-1GHz

Date: 19.MAY.2015 16:06:11

Chain 2:802.11a Low Channel 1GHz-6GHz

Fundamental

Date: 19.MAY.2015 16:06:33

Chain 2:802.11a Low Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz      Marker 1 [T1 ]
                                    *VBW 3 MHz              -40.70 dBm
         Ref  9 dBm       *Att  10 dB    SWT 410 ms    20.555000000 GHz
```
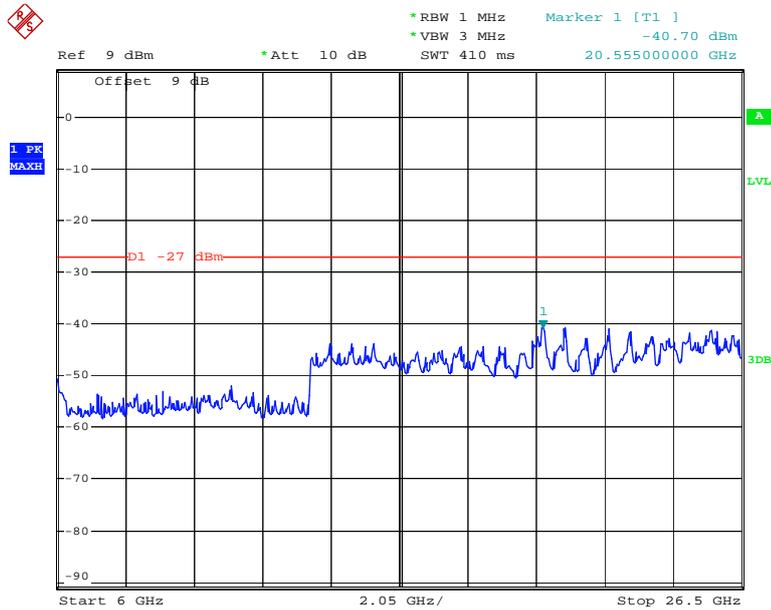
Date: 19.MAY.2015 16:06:52

Chain 2:802.11a Low Channel 26.5GHz-40GHz

```
                                    *RBW 1 MHz      Marker 1 [T1 ]
                                    *VBW 3 MHz              -42.17 dBm
         Ref -1 dBm       *Att  0 dB     SWT 270 ms    39.190000000 GHz
```
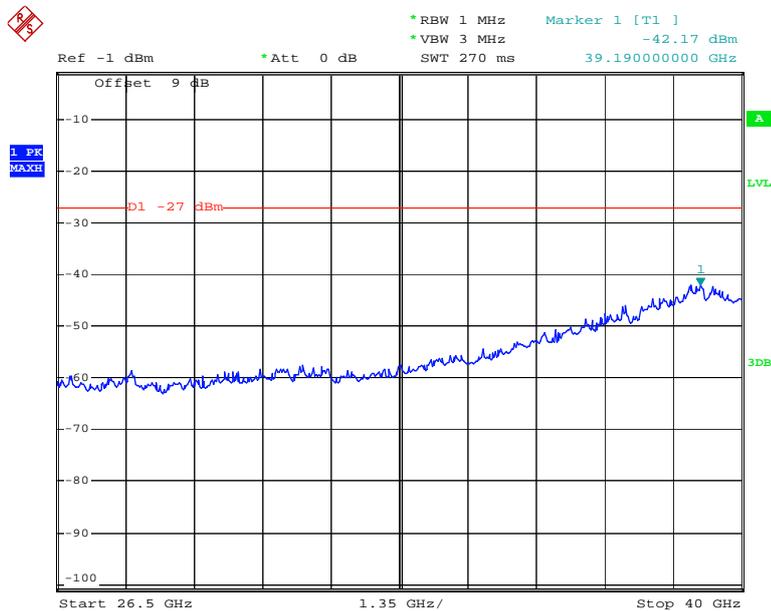
Date: 22.MAY.2015 13:55:12

Chain 2:802.11a Middle Channel 30MHz -1GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz           -46.64 dBm
        Ref  19 dBm      *Att  20 dB    SWT 100 ms     30.000000000 MHz
          Offset  9 dB
```
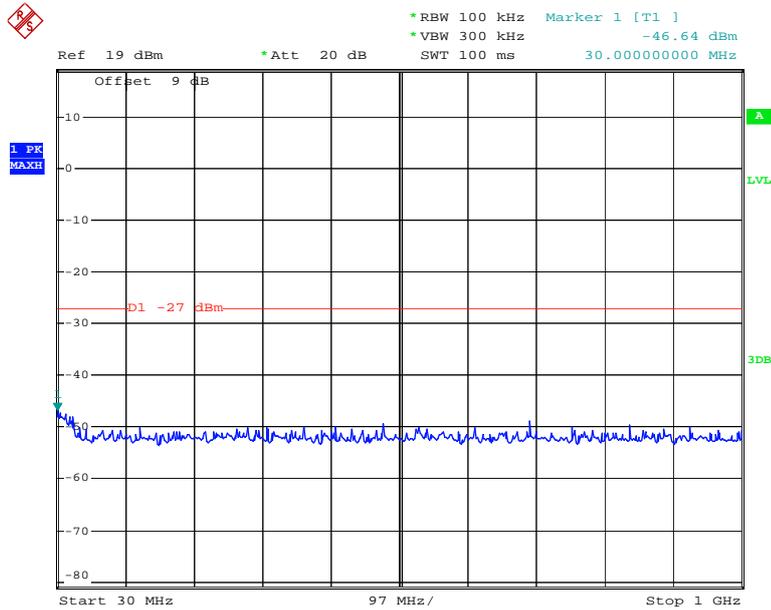
Date: 19.MAY.2015 16:08:23

Chain 2:802.11a Middle Channel 1GHz-6GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz            -43.82 dBm
        Ref  19 dBm      *Att  20 dB    SWT 100 ms      3.190000000 GHz
          Offset  9 dB
```

Fundamental
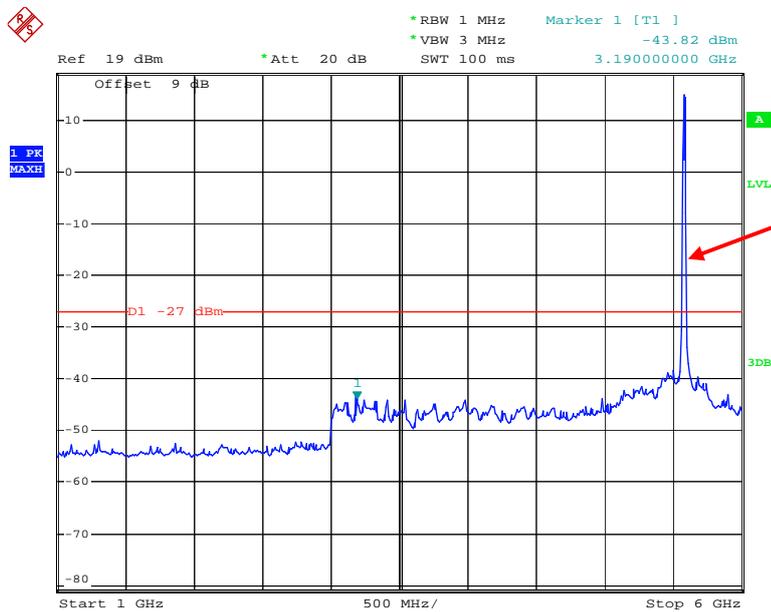
Date: 19.MAY.2015 16:08:01

Chain 2:802.11a Middle Channel 6GHz-26.5GHz

```
                                          *RBW 1 MHz    Marker 1 [T1 ]
                                          *VBW 3 MHz              -40.04 dBm
              Ref  9 dBm        *Att 10 dB   SWT 410 ms    25.598000000 GHz
                 Offset  9 dB
```
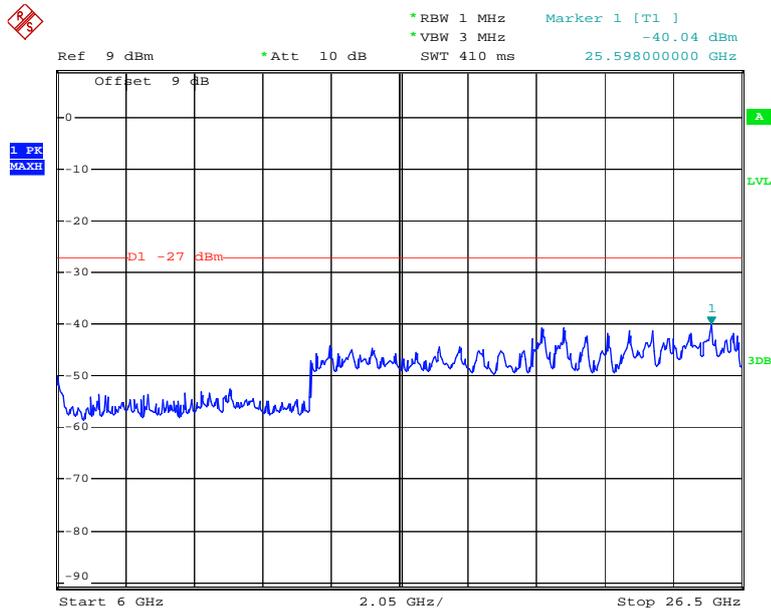
Date: 19.MAY.2015 16:07:15

Chain 2:802.11a Middle Channel 26.5GHz-40GHz

```
                                          *RBW 1 MHz    Marker 1 [T1 ]
                                          *VBW 3 MHz              -42.70 dBm
              Ref -1 dBm        *Att  0 dB   SWT 270 ms    39.217000000 GHz
                 Offset  9 dB
```
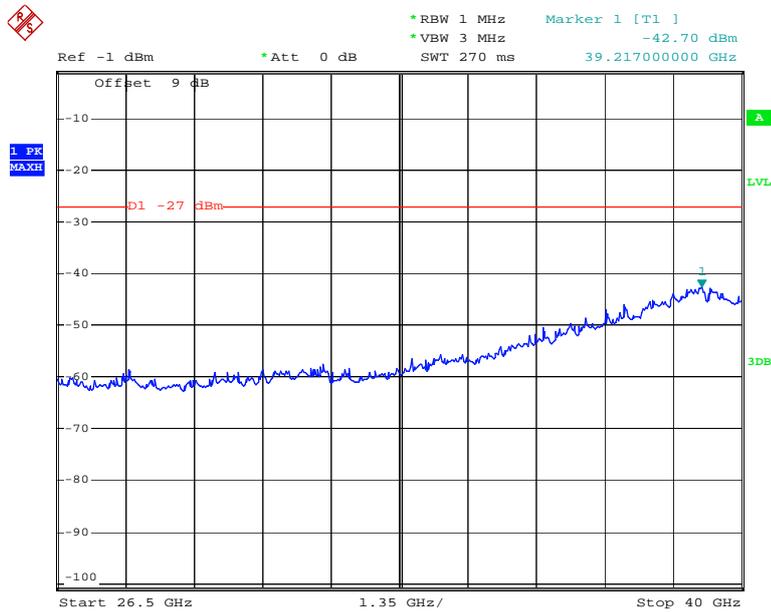
Date: 22.MAY.2015 13:55:19

Chain 2:802.11a High Channel 30MHz-1GHz

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz        -47.91 dBm
       Ref  19 dBm      *Att  20 dB  SWT 100 ms   35.820000000 MHz
         Offset  9 dB
```
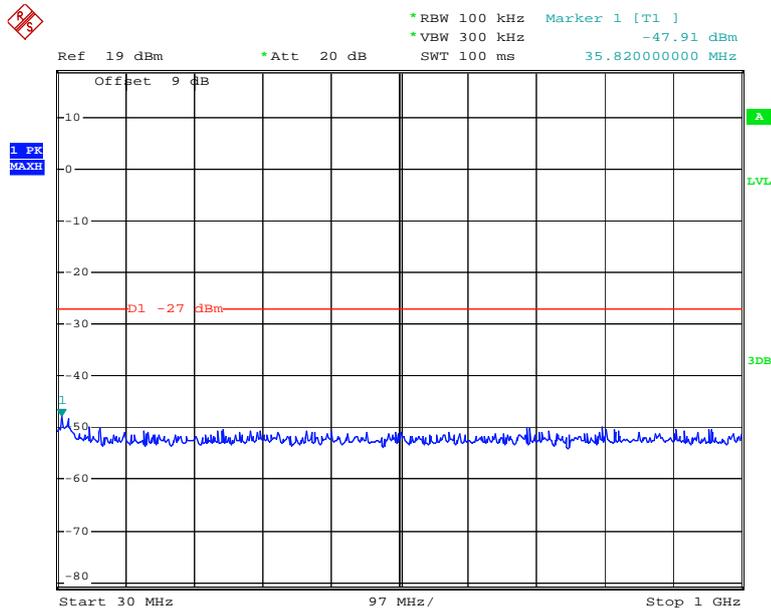
Date: 19.MAY.2015 16:09:11

Chain 2:802.11a High Channel 1GHz-6GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz         -43.80 dBm
       Ref  19 dBm      *Att  20 dB  SWT 100 ms    3.110000000 GHz
         Offset  9 dB
```

Fundamental
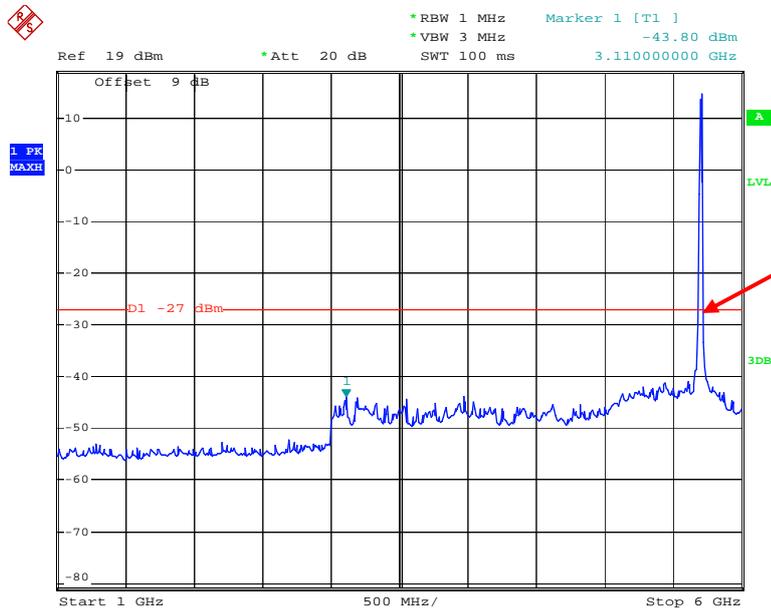
Date: 19.MAY.2015 16:09:25

Chain 2:802.11a High Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz      Marker 1 [T1 ]
                                    *VBW 3 MHz              -40.53 dBm
        Ref  9 dBm        *Att  10 dB    SWT 410 ms     20.514000000 GHz
          Offset  9 dB
```



```
Start 6 GHz              2.05 GHz/              Stop 26.5 GHz
```
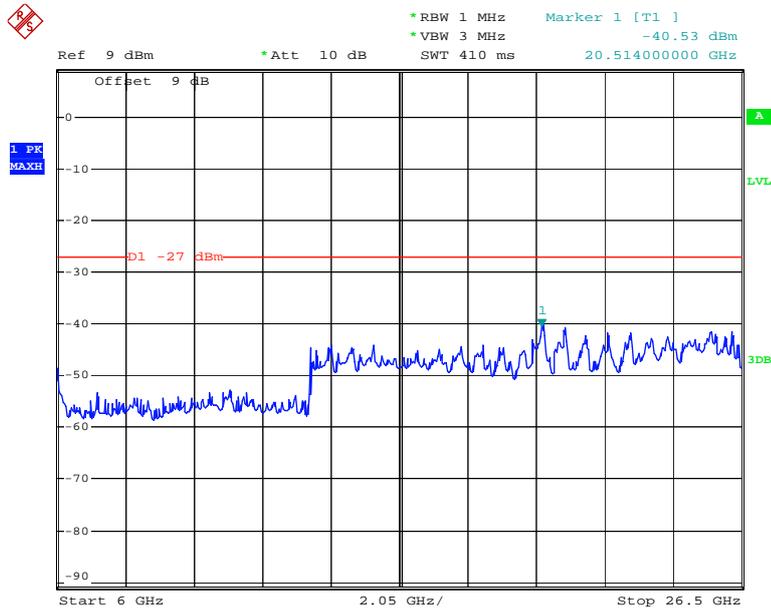
Date: 19.MAY.2015 16:09:40

Chain 2:802.11a High Channel 26.5GHz-40GHz

```
                                    *RBW 1 MHz      Marker 1 [T1 ]
                                    *VBW 3 MHz              -42.08 dBm
        Ref -1 dBm        *Att  0 dB    SWT 270 ms     39.163000000 GHz
          Offset  9 dB
```



```
Start 26.5 GHz            1.35 GHz/              Stop 40 GHz
```
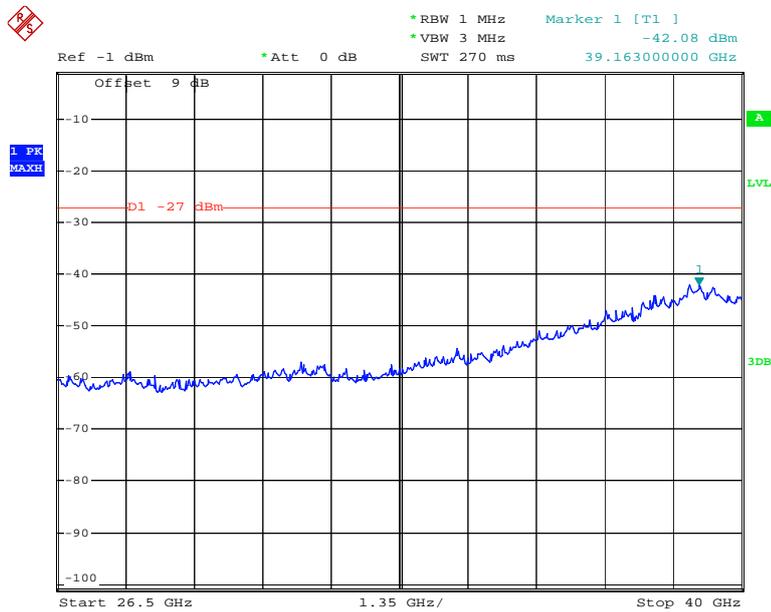
Date: 22.MAY.2015 13:55:05

Chain 2:802.11n ht20 Low Channel 30MHz-1GHz

```
                              *RBW 100 kHz   Marker 1 [T1 ]
                              *VBW 300 kHz           -46.00 dBm
   Ref  19 dBm      *Att  20 dB   SWT 100 ms    35.820000000 MHz
      Offset  9 dB
```
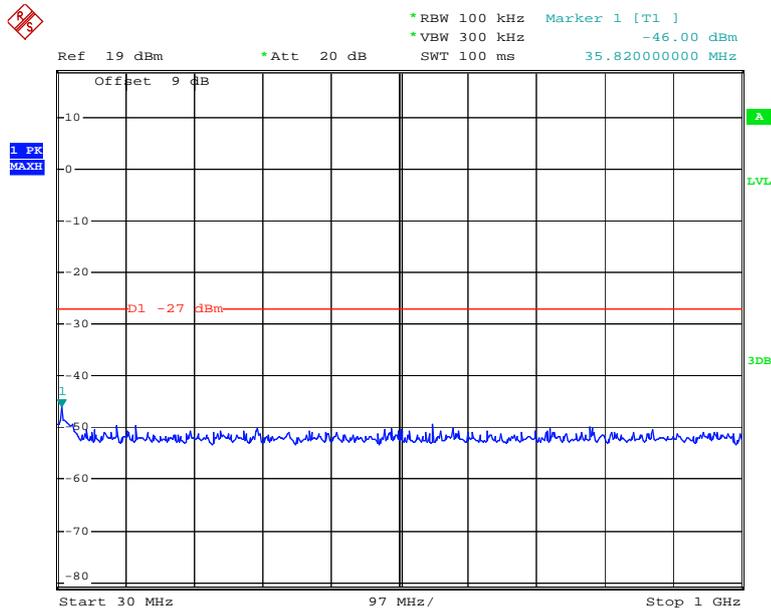
Date: 19.MAY.2015 16:13:26

Chain 2:802.11n ht20 Low Channel 1GHz-6GHz

```
                              *RBW 1 MHz    Marker 1 [T1 ]
                              *VBW 3 MHz            -44.24 dBm
   Ref  19 dBm      *Att  20 dB   SWT 100 ms     3.180000000 GHz
      Offset  9 dB
```

Fundamental
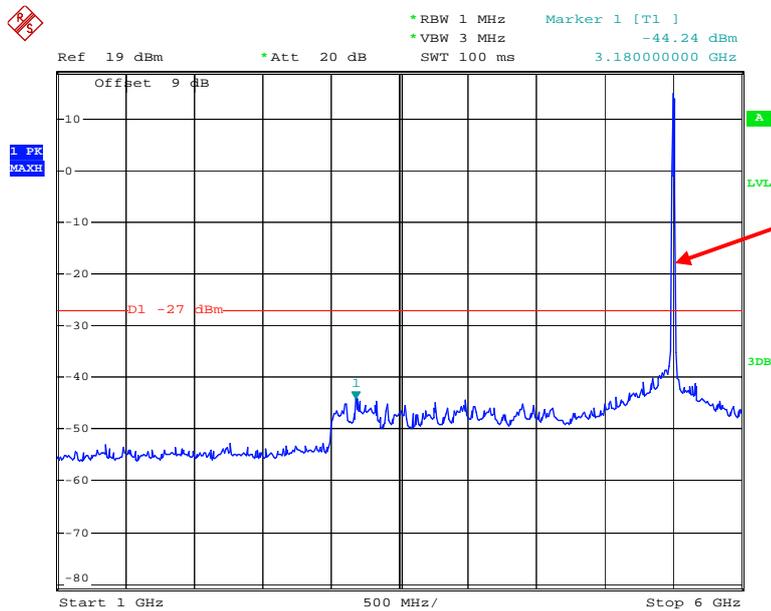
Date: 19.MAY.2015 16:13:09

Chain 2:802.11n ht20 Low Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz      Marker 1 [T1 ]
                                    *VBW 3 MHz             -40.13 dBm
  Ref  9 dBm            *Att  10 dB  SWT 410 ms     20.555000000 GHz
      Offset  9 dB                                                    A
  0
1 PK
MAXH  -10                                                            LVL

  -20
      D1 -27 dBm
  -30

  -40                              1                                 3DB
  -50
  -60

  -70

  -80

  -90
  Start 6 GHz            2.05 GHz/              Stop 26.5 GHz
```
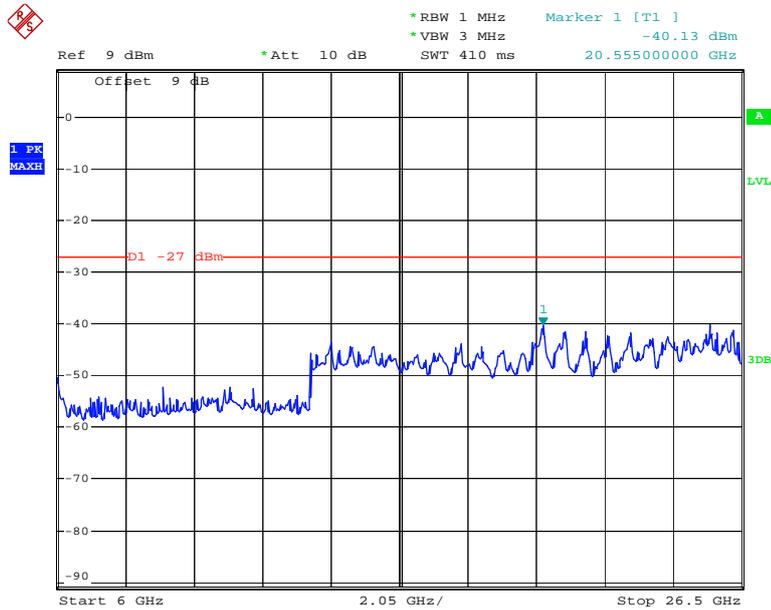
Date: 19.MAY.2015 16:12:49

Chain 2:802.11n ht20 Low Channel 26.5GHz-40GHz

```
                                    *RBW 1 MHz      Marker 1 [T1 ]
                                    *VBW 3 MHz             -40.36 dBm
  Ref -1 dBm            *Att  0 dB   SWT 270 ms     39.433000000 GHz
      Offset  9 dB                                                    A
  -10
1 PK
MAXH  -20                                                            LVL

      D1 -27 dBm
  -30

  -40                                           1
  -50                                                                3DB
  -60

  -70

  -80

  -90

  -100
  Start 26.5 GHz          1.35 GHz/              Stop 40 GHz
```
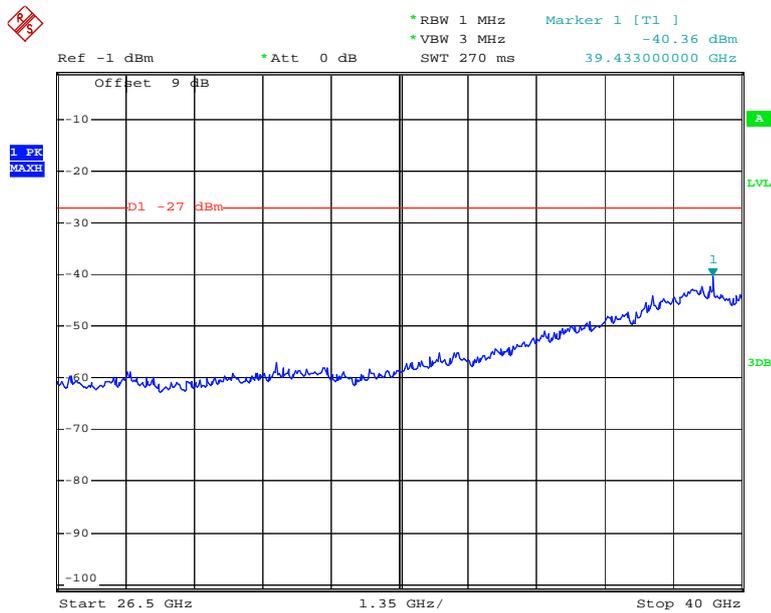
Date: 22.MAY.2015 13:55:37

Chain 2:802.11n ht20 Middle Channel 30MHz -1GHz

```
                              *RBW 100 kHz   Marker 1 [T1 ]
                              *VBW 300 kHz            -44.35 dBm
     Ref  19 dBm      *Att  20 dB   SWT 100 ms    35.820000000 MHz
        Offset   9 dB

     -10

1 PK
MAXH   -0

     -10

     -20

     D1 -27 dBm
     -30

     -40
1

     -50

     -60

     -70

     -80
     Start 30 MHz           97 MHz/            Stop 1 GHz
```
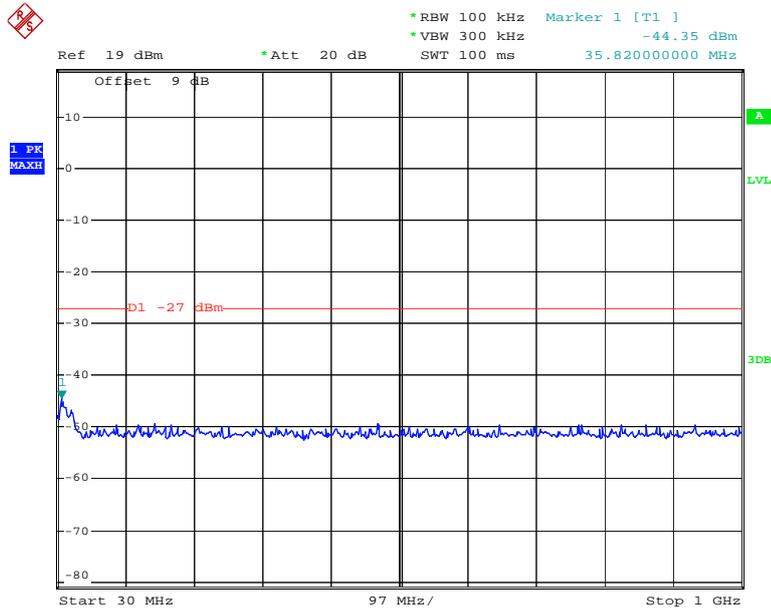
Date: 19.MAY.2015 16:11:39

Chain 2:802.11n ht20 Middle Channel 1GHz-6GHz

```
                              *RBW 1 MHz    Marker 1 [T1 ]
                              *VBW 3 MHz             -44.38 dBm
     Ref  19 dBm      *Att  20 dB   SWT 100 ms    3.190000000 GHz
        Offset   9 dB

     -10

1 PK
MAXH   -0

     -10

     -20                                              Fundamental

     D1 -27 dBm
     -30

     -40
         1
     -50

     -60

     -70

     -80
     Start 1 GHz            500 MHz/           Stop 6 GHz
```
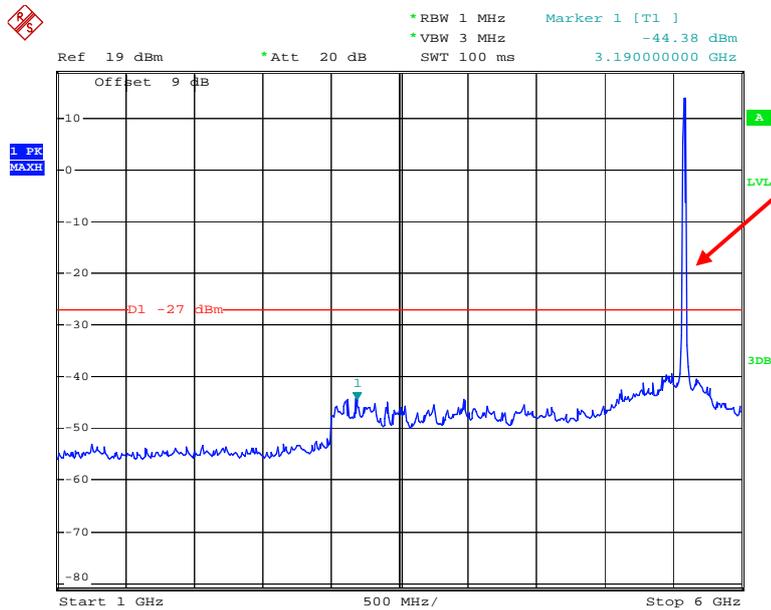
Date: 19.MAY.2015 16:11:55

Chain 2:802.11n ht20 Middle Channel 6GHz-26.5GHz

```
                                          *RBW 1 MHz     Marker 1 [T1 ]
                                          *VBW 3 MHz            -40.20 dBm
        Ref  9 dBm          *Att  10 dB   SWT 410 ms      20.555000000 GHz
          Offset  9 dB
```
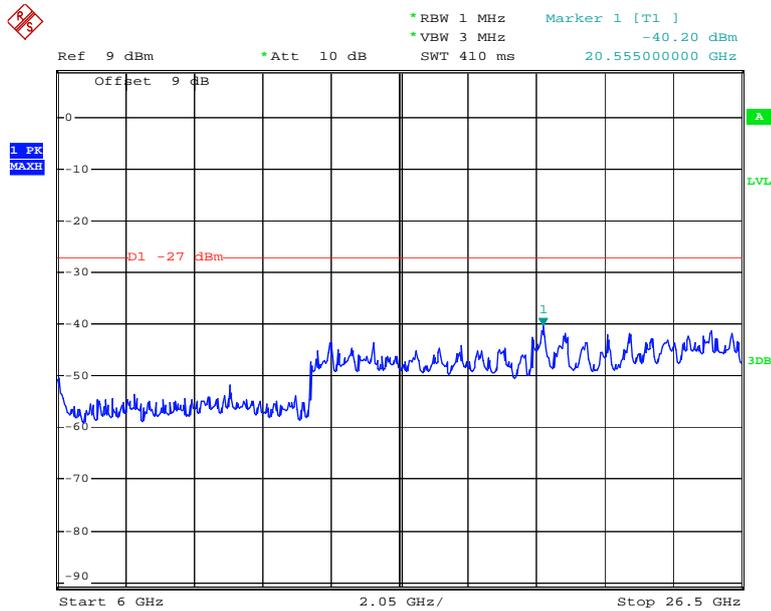
Date: 19.MAY.2015 16:12:11

Chain 2:802.11n ht20 Middle Channel 26.5GHz-40GHz

```
                                          *RBW 1 MHz     Marker 1 [T1 ]
                                          *VBW 3 MHz            -41.04 dBm
        Ref -1 dBm          *Att  0 dB    SWT 270 ms      39.028000000 GHz
          Offset  9 dB
```
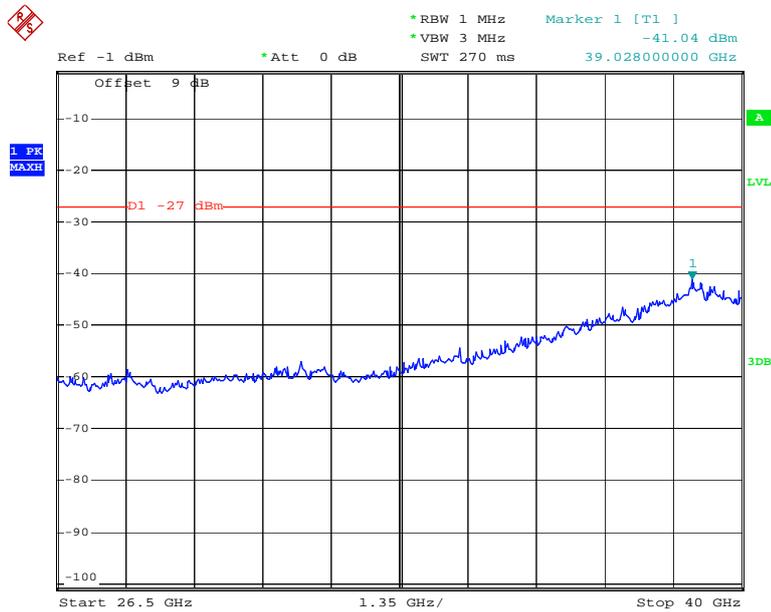
Date: 22.MAY.2015 13:55:43

Chain 2:802.11n ht20 High Channel 30MHz-1GHz
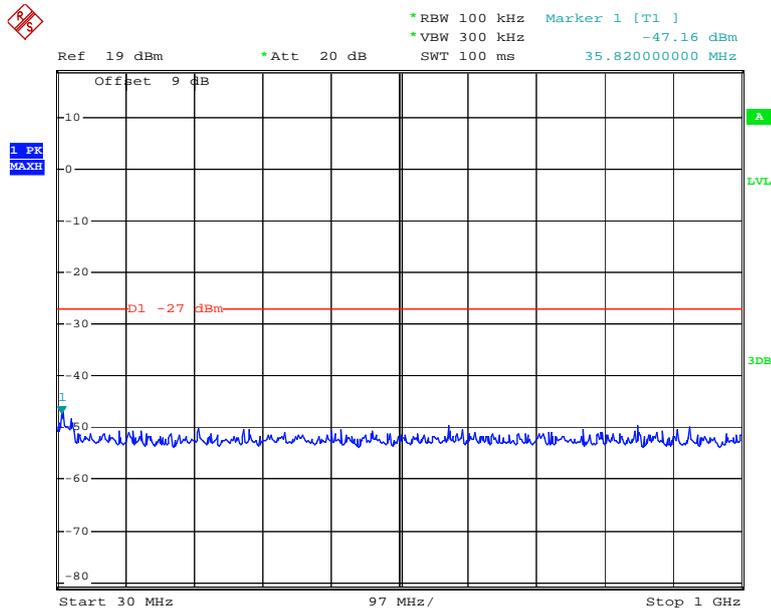
Date: 19.MAY.2015 16:10:49

Chain 2:802.11n ht20 High Channel 1GHz-6GHz
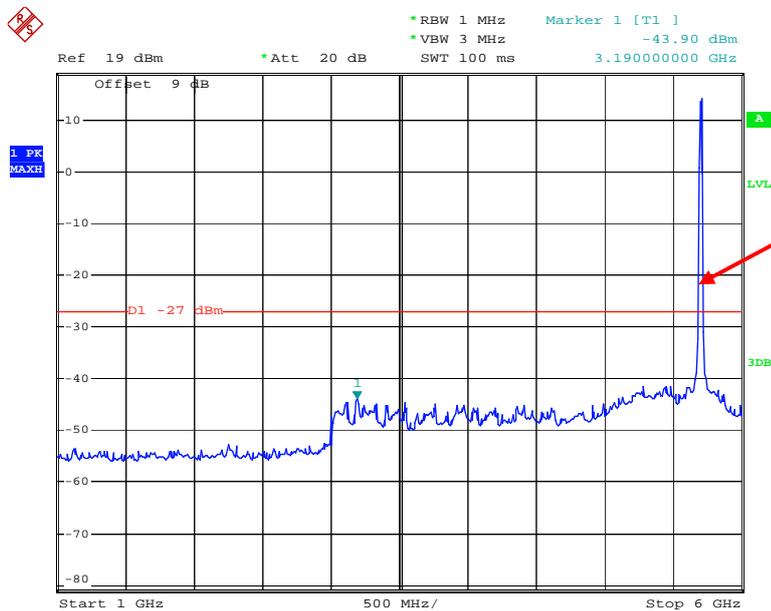
Date: 19.MAY.2015 16:10:36

Chain 2:802.11n ht20 High Channel 6GHz-26.5GHz
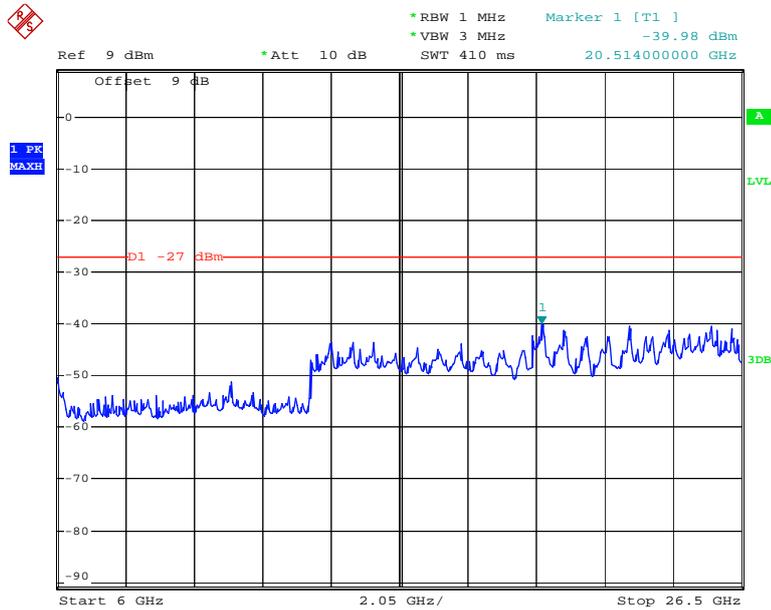
Date: 19.MAY.2015 16:10:16

Chain 2:802.11n ht20 High Channel 26.5GHz-40GHz
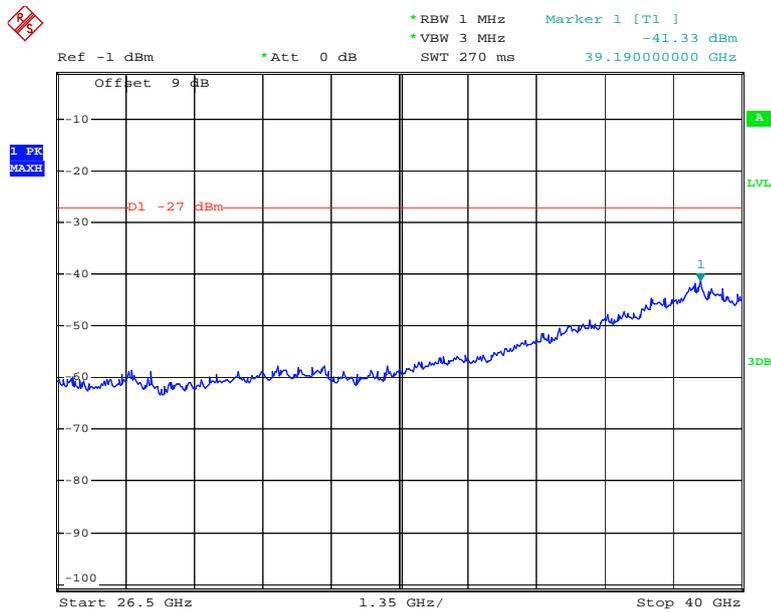
Date: 22.MAY.2015 13:55:31

Chain 2:802.11n ht40 Low Channel 30MHz-1GHz

```
                                    *RBW 100 kHz    Marker 1 [T1 ]
                                    *VBW 300 kHz              -48.36 dBm
        Ref  19 dBm      *Att  20 dB   SWT 100 ms      33.880000000 MHz
```
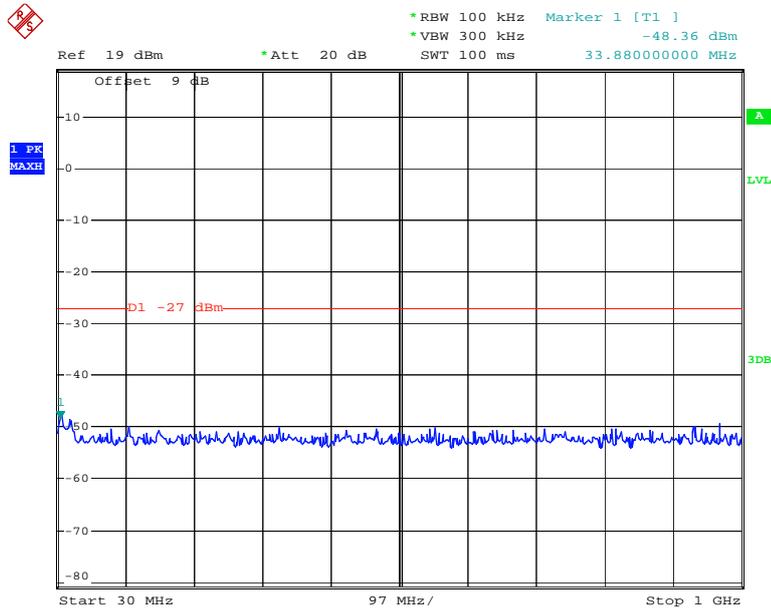
Date: 19.MAY.2015 16:13:51

Chain 2:802.11n ht40 Low Channel 1GHz-6GHz

```
                                    *RBW 1 MHz      Marker 1 [T1 ]
                                    *VBW 3 MHz               -44.35 dBm
        Ref  19 dBm      *Att  20 dB   SWT 100 ms       3.190000000 GHz
```

Fundamental
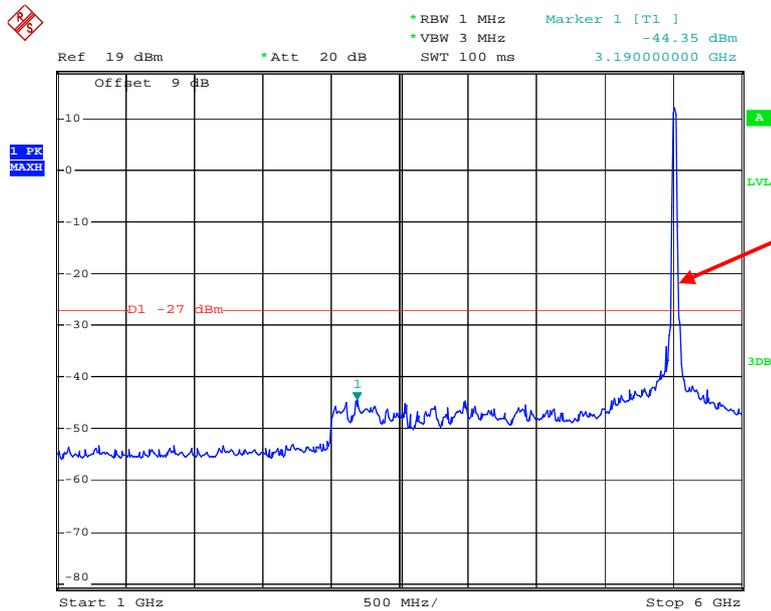
Date: 19.MAY.2015 16:14:06

Chain 2:802.11n ht40 Low Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz           -40.37 dBm
       Ref  9 dBm       *Att 10 dB  SWT 410 ms     20.514000000 GHz
         Offset  9 dB
```
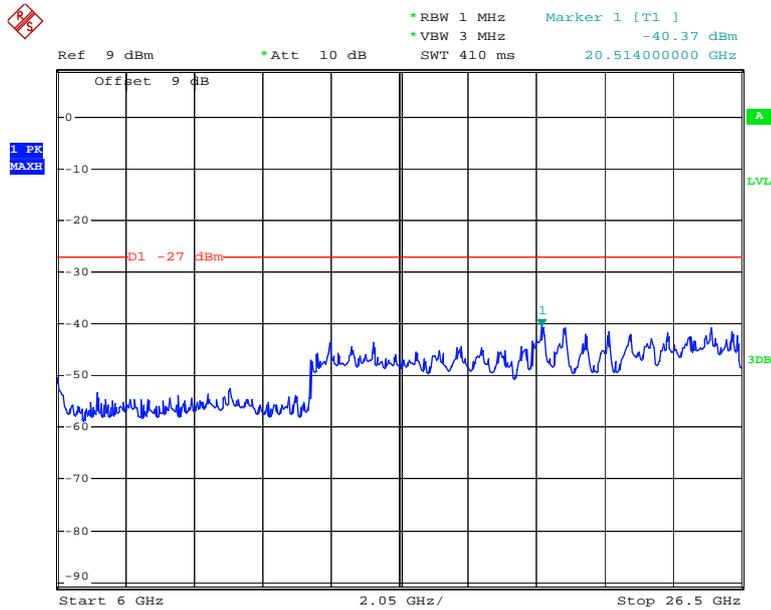
Date: 19.MAY.2015 16:14:19

Chain 2:802.11n ht40 Low Channel 26.5GHz-40GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz           -42.57 dBm
       Ref -1 dBm       *Att  0 dB  SWT 270 ms     39.163000000 GHz
         Offset  9 dB
```
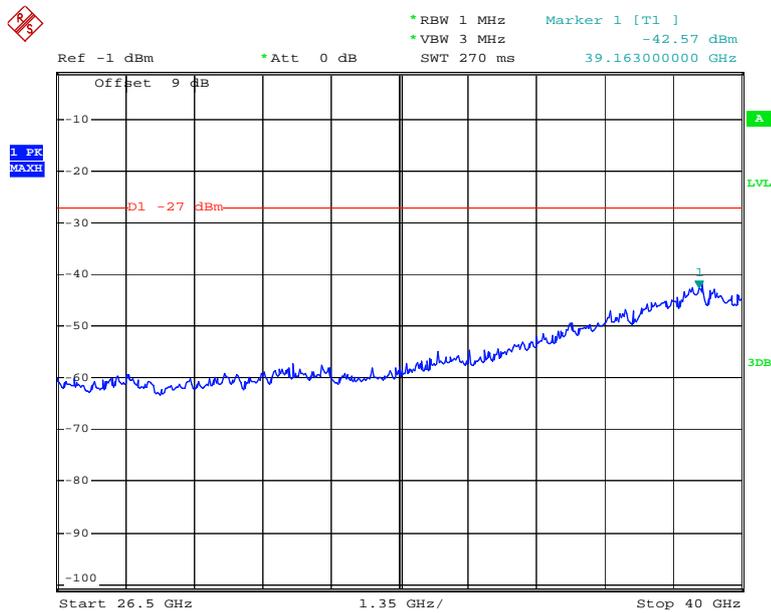
Date: 22.MAY.2015 13:55:54

Chain 2:802.11n ht40 Middle Channel 30MHz-1GHz

```
                              *RBW 100 kHz   Marker 1 [T1 ]
                              *VBW 300 kHz          -46.71 dBm
   Ref  19 dBm      *Att  20 dB   SWT 100 ms    37.760000000 MHz
```
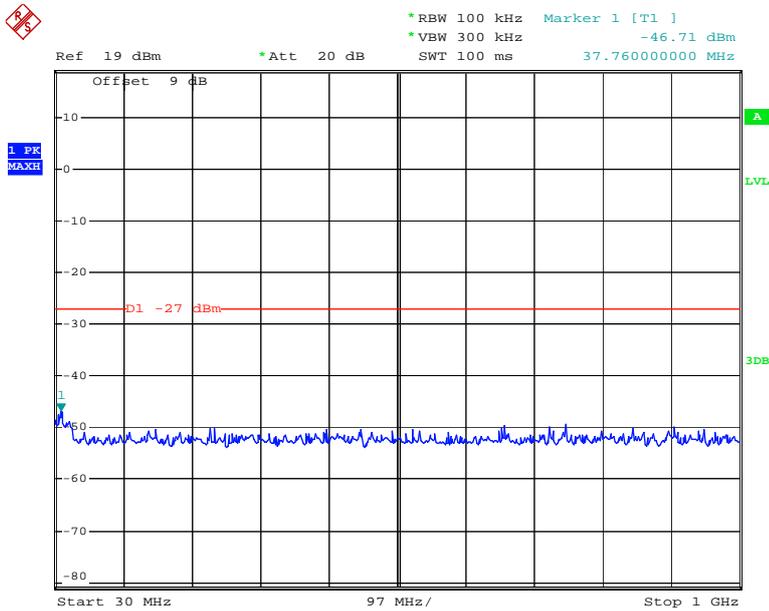
Date: 19.MAY.2015 16:15:15

Chain 2:802.11n ht40 Middle Channel 1GHz-6GHz

```
                              *RBW 1 MHz    Marker 1 [T1 ]
                              *VBW 3 MHz           -43.96 dBm
   Ref  19 dBm      *Att  20 dB   SWT 100 ms    3.190000000 GHz
```

Fundamental
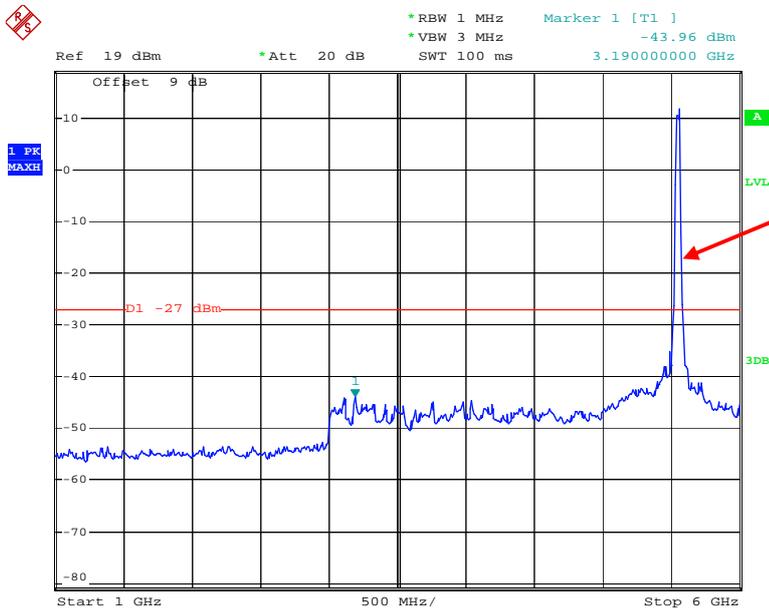
Date: 19.MAY.2015 16:15:03

Chain 2:802.11n ht40 Middle Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz      Marker 1 [T1 ]
                                    *VBW 3 MHz              -40.37 dBm
        Ref  9 dBm        *Att 10 dB  SWT 410 ms    20.514000000 GHz
          Offset  9 dB
```

Date: 19.MAY.2015 16:14:47

Chain 2:802.11n ht40 Middle Channel 26.5GHz-40GHz

```
                                    *RBW 1 MHz      Marker 1 [T1 ]
                                    *VBW 3 MHz              -41.67 dBm
        Ref -1 dBm        *Att  0 dB  SWT 270 ms    39.190000000 GHz
          Offset  9 dB
```
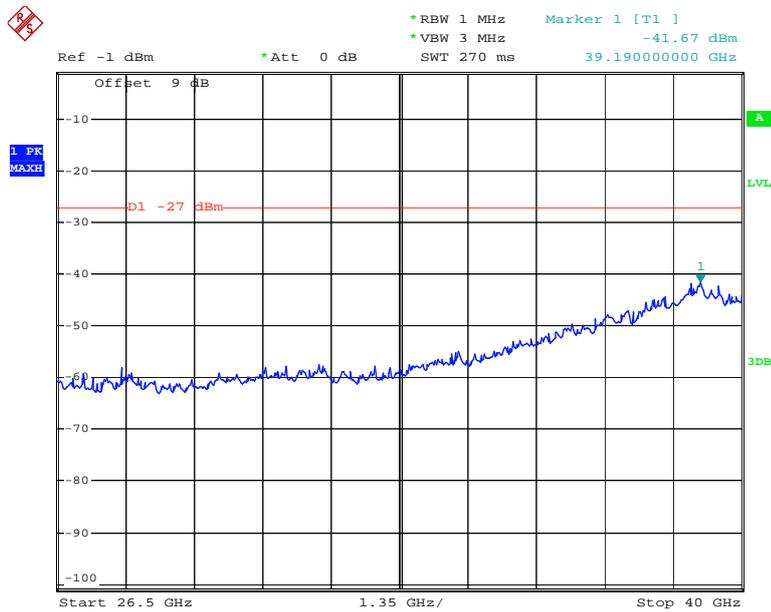
Date: 22.MAY.2015 13:55:59

Chain 2:802.11n ht40 High Channel 30MHz-1GHz
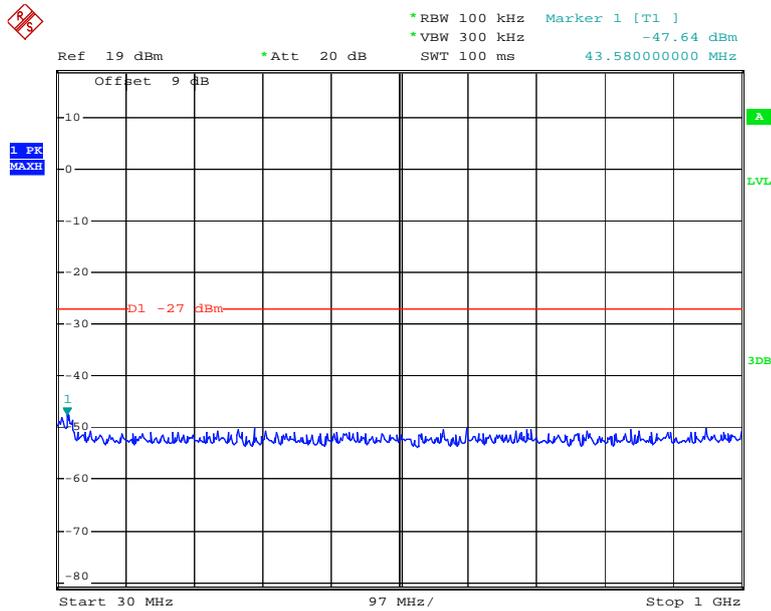
Date: 19.MAY.2015 16:15:37

Chain 2:802.11n ht40 High Channel 1GHz-6GHz
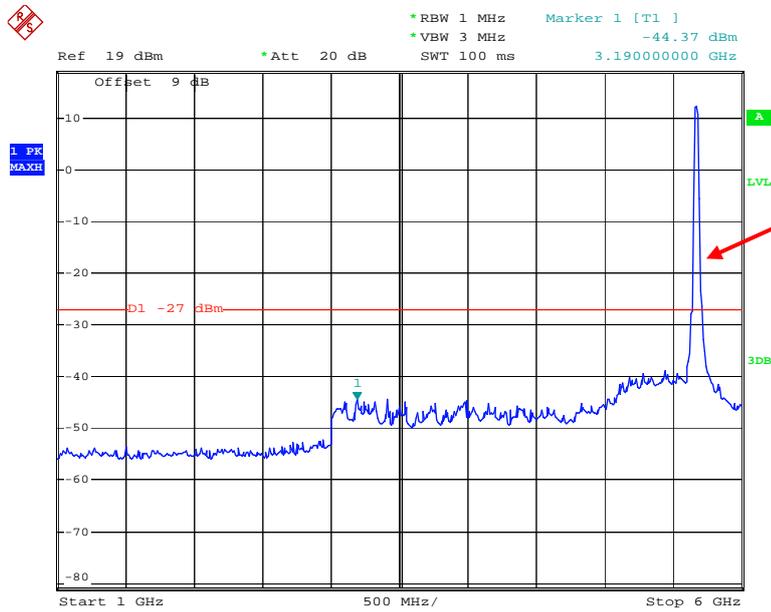
Date: 19.MAY.2015 16:15:51

Chain 2:802.11n ht40 High Channel 6GHz-26.5GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz           -39.81 dBm
          Ref  9 dBm      *Att  10 dB   SWT 410 ms    20.514000000 GHz
            Offset  9 dB
```



```
Start 6 GHz              2.05 GHz/              Stop 26.5 GHz
```
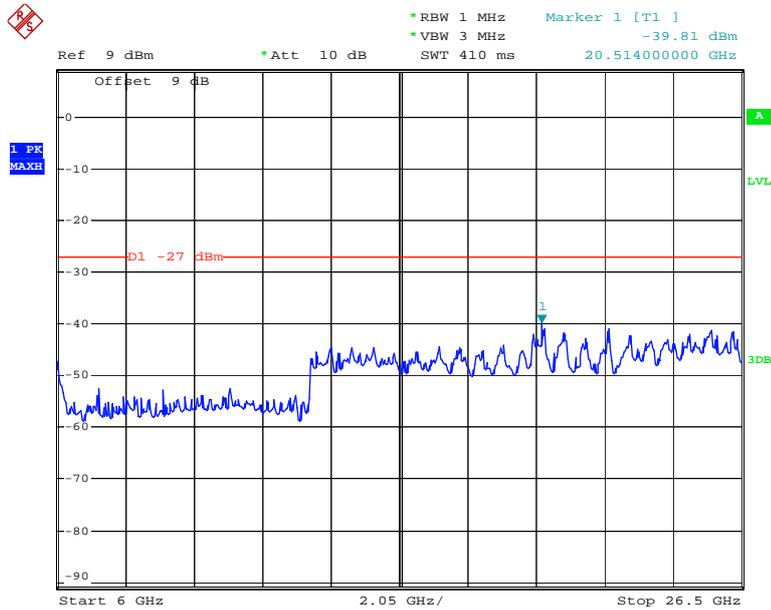
Date: 19.MAY.2015 16:16:06

Chain 2:802.11n ht40 High Channel 26.5GHz-40GHz

```
                                    *RBW 1 MHz    Marker 1 [T1 ]
                                    *VBW 3 MHz           -42.05 dBm
          Ref -1 dBm      *Att  0 dB    SWT 270 ms    39.163000000 GHz
            Offset  9 dB
```



```
Start 26.5 GHz          1.35 GHz/              Stop 40 GHz
```

Date: 22.MAY.2015 13:55:49

Chain 2:802.11n ac80 Low Channel 30MHz-1GHz

Date: 19.MAY.2015 16:17:04

Chain 2:802.11n ac80 Low Channel 1GHz-6GHz

Fundamental

Date: 19.MAY.2015 16:16:51

Chain 2:802.11n ac80 Low Channel 6GHz-26.5GHz
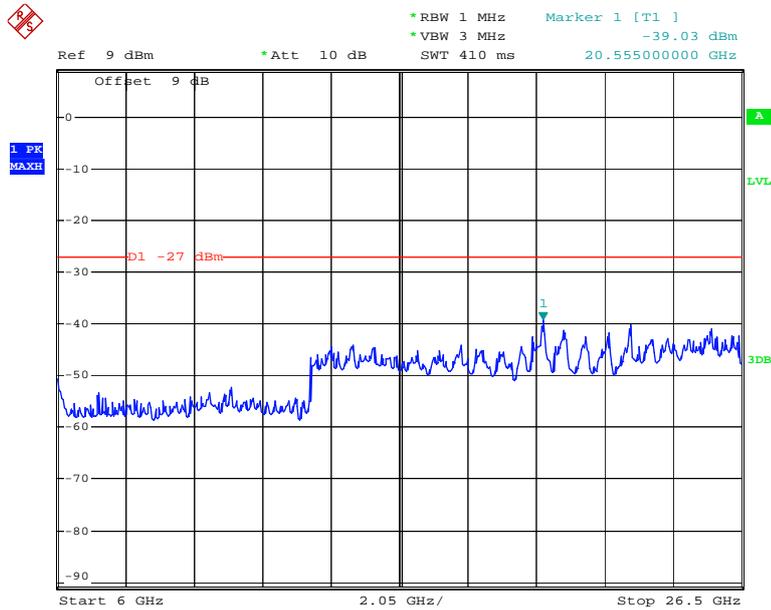
Date: 19.MAY.2015 16:16:34

Chain 2:802.11n ac80 Low Channel 26.5GHz-40GHz
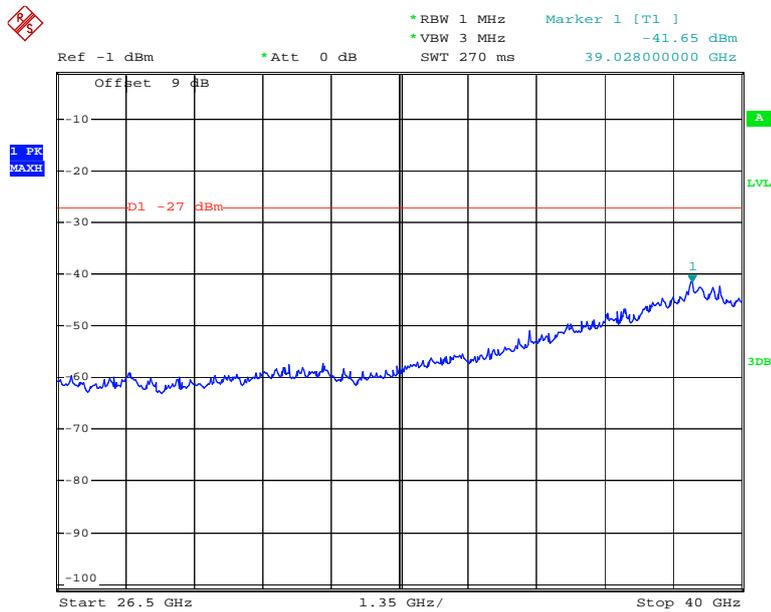
Date: 22.MAY.2015 13:55:25

Chain 2:802.11n ac80 High Channel 30MHz-1GHz
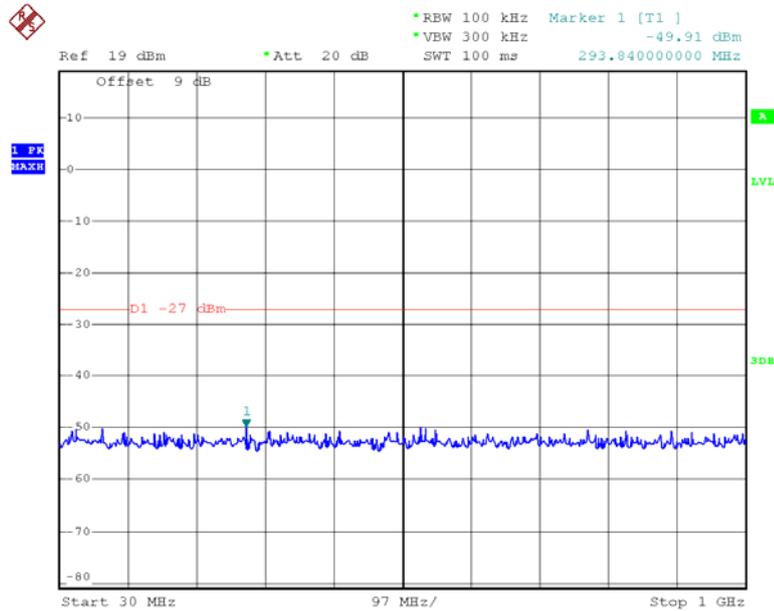
Date: 4.FEB.2016 14:25:47

Chain 2:802.11n ac80 High Channel 1GHz-6GHz

Fundamental
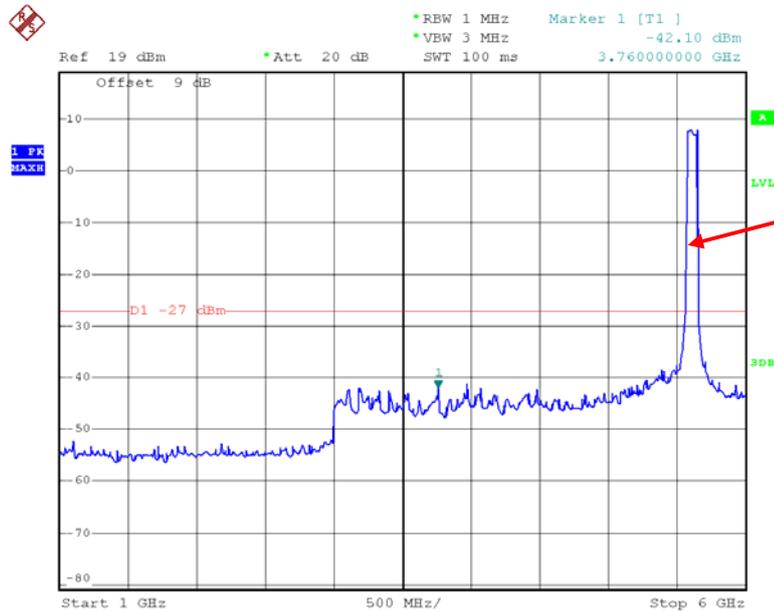
Date: 4.FEB.2016 14:26:40

Chain 2:802.11n ac80 High Channel 6GHz-26.5GHz
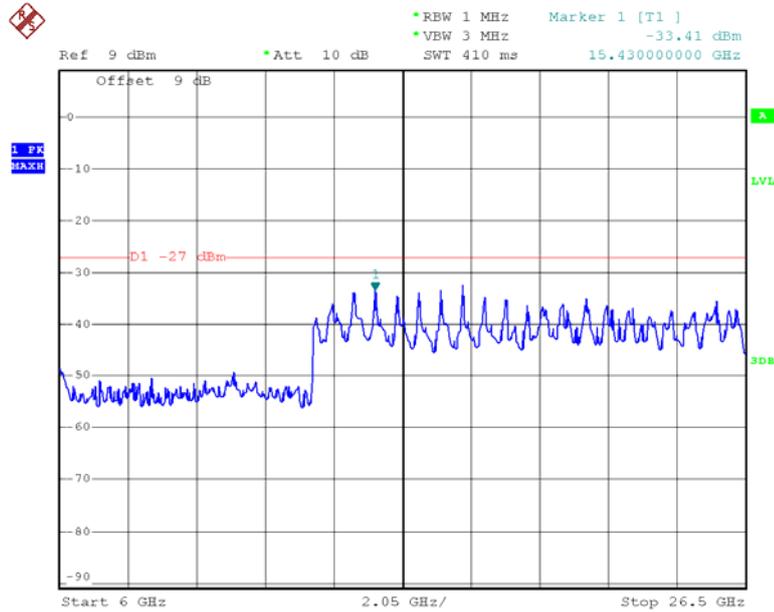
Date: 4.FEB.2016 14:28:08

Chain 2:802.11n ac80 High Channel 26.5GHz-40GHz
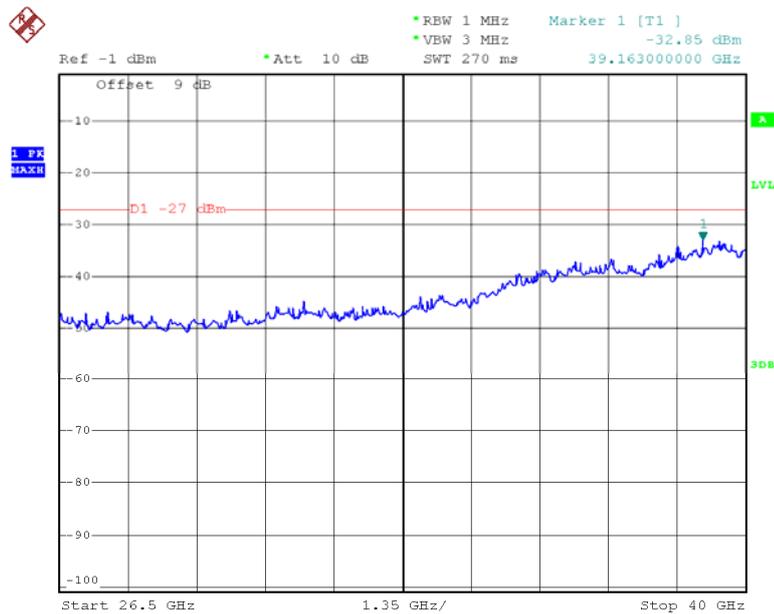
Date: 4.FEB.2016 14:30:19

FCC §15.407(a) –EMISSION BANDWIDTH

Applicable Standard

15.407(a)

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSP 38	100478	2015-05-09	2016-05-09

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

Test Procedure

1. According to KDB 789033 D02 General UNII Test Procedures New Rules v01

Test Data

Environmental Conditions

Temperature:	20.1°C -25.1°C
Relative Humidity:	40%-54%
ATM Pressure:	99.9 kPa -101.3 kPa

The testing was performed by Allen Qiao on 2015-05-18 & 2016-02-04.

Test Result: Pass.

Please refer to the following tables and plots.

Test mode: Transmitting

UNII Band	Mode	Channel	Frequency (MHz)	26dB Emission Bandwidth (MHz)		
				Chain 0	Chain 1	Chain 2
5250-5350MHz	802.11 a	Low	5260	22.08	22.4	22.88
		Middle	5280	22.4	23.12	23.84
		High	5320	22.56	22.72	22.88
	802.11 n20	Low	5260	23.6	23.36	23.76
		Middle	5280	23.6	23.36	23.84
		High	5320	23.28	23.2	23.44
	802.11 n40	Low	5270	43.2	42.88	43.36
		High	5310	43.04	42.88	43.04
	802.11 ac80	Middle	5290	85.12	84.16	83.84
5470-5725MHz	802.11 a	Low	5500	22.8	22.72	22.32
		Middle	5580	22.4	22.88	22.72
		High	5700	22.8	22.56	22.88
	802.11 n20	Low	5500	23.68	24.24	23.6
		Middle	5580	23.76	23.68	23.36
		High	5700	23.6	23.6	23.84
	802.11 n40	Low	5510	42.72	43.36	43.36
		Middle	5550	43.68	43.36	43.2
		High	5670	43.2	43.04	43.68
	802.11 ac80	Low	5530	83.2	83.2	84.8
		High	5610	81.28	81.28	81.28

5250Hz-5350MHz:

Chain 0:802.11a Low Channel
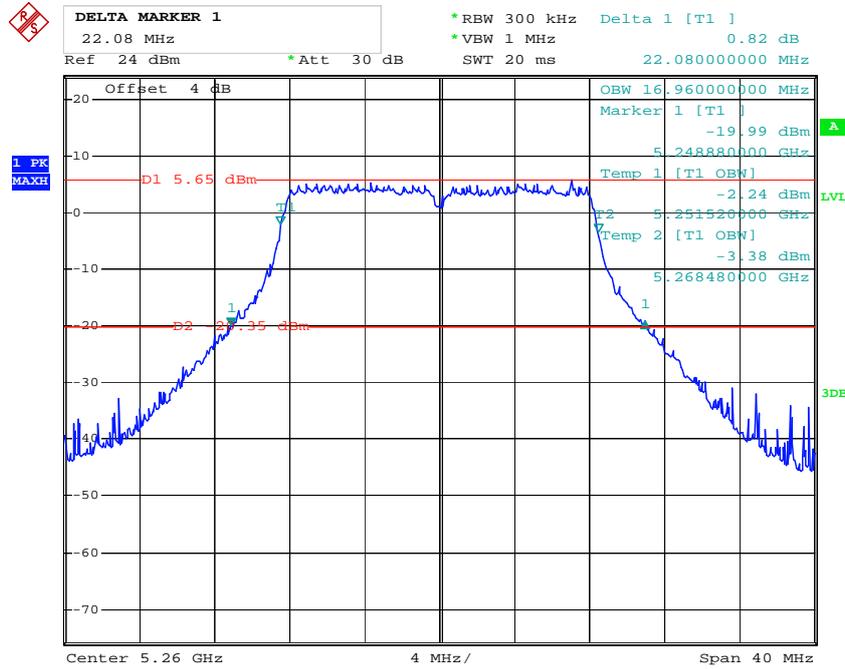
Date: 18.MAY.2015 15:43:21

Chain 0:802.11a Middle Channel
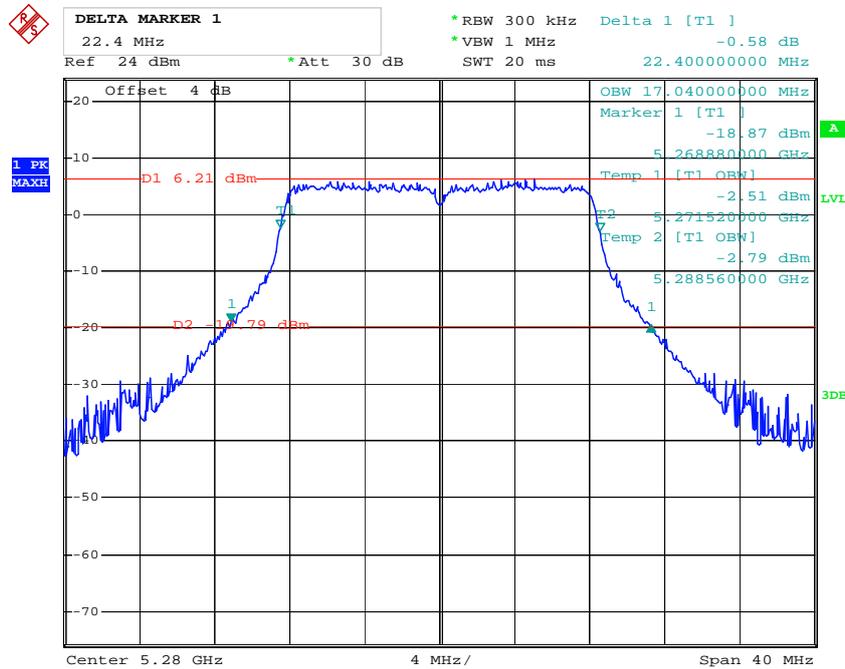
Date: 18.MAY.2015 15:44:33

Chain 0:802.11a High Channel

DELTA MARKER 1				
22.56 MHz		*RBW 300 kHz	Delta 1 [T1]	
		*VBW 1 MHz		−0.64 dB
Ref 24 dBm	*Att 30 dB	SWT 20 ms	22.560000000 MHz	

Offset 4 dB

OBW 16.960000000 MHz
Marker 1 [T1]
−19.72 dBm
5.308640000 GHz
Temp 1 [T1 OBW]
−1.82 dBm
5.311520000 GHz
Temp 2 [T1 OBW]
−2.33 dBm
5.328480000 GHz

1 PK MAXH

D1 6.28 dBm

D2 −19.72 dBm

Center 5.32 GHz   4 MHz/   Span 40 MHz
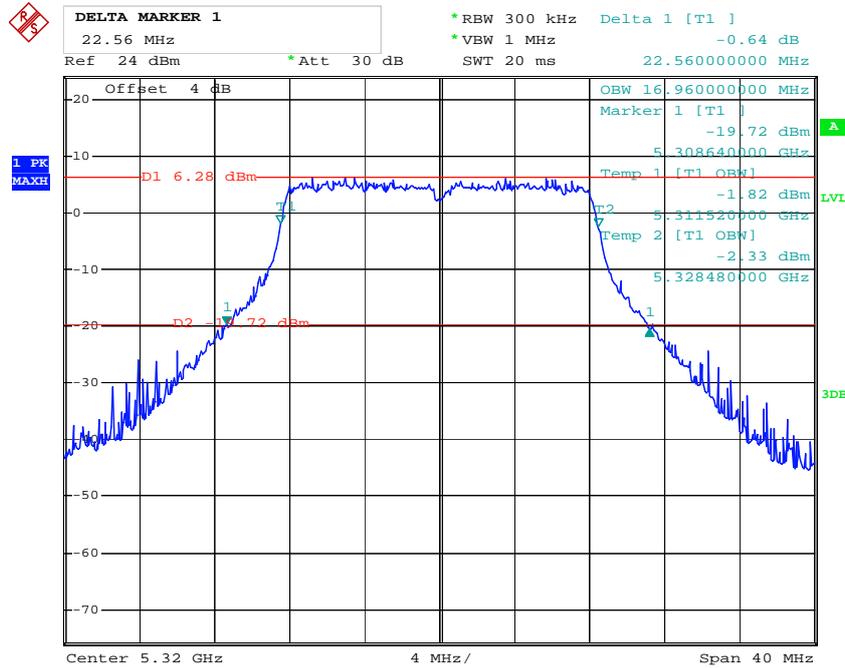
Date: 18.MAY.2015 15:45:22

Chain 0:802.11n ht20 Low Channel

DELTA MARKER 1				
23.6 MHz		*RBW 300 kHz	Delta 1 [T1]	
		*VBW 1 MHz		−0.21 dB
Ref 24 dBm	*Att 30 dB	SWT 20 ms	23.600000000 MHz	

Offset 4 dB

OBW 18.080000000 MHz
Marker 1 [T1]
−20.32 dBm
5.248240000 GHz
Temp 1 [T1 OBW]
−2.14 dBm
5.250960000 GHz
Temp 2 [T1 OBW]
−2.30 dBm
5.269040000 GHz

1 PK MAXH

D1 5.03 dBm

D2 −20.97 dBm

Center 5.26 GHz   4 MHz/   Span 40 MHz
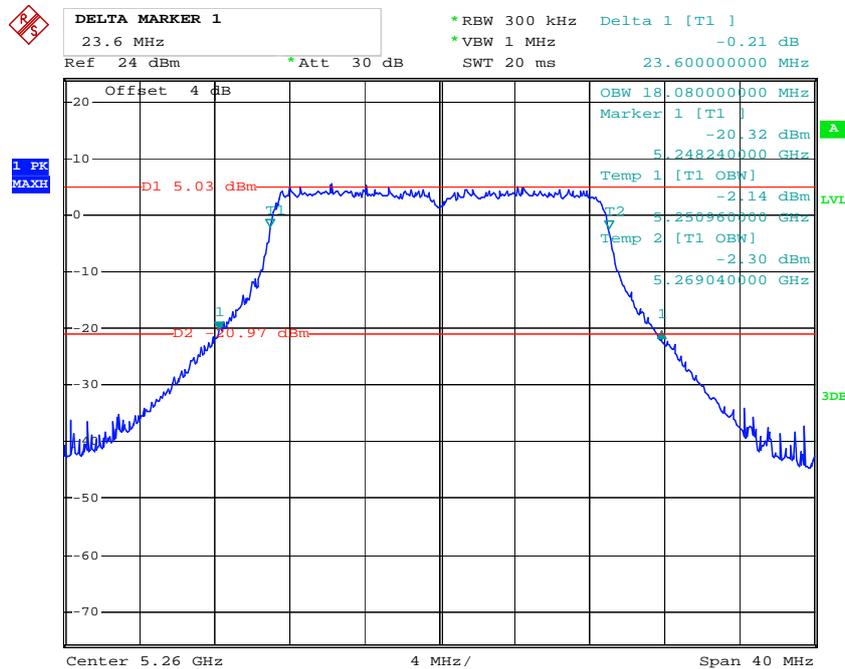
Date: 18.MAY.2015 15:48:05

Chain 0:802.11n ht20 Middle Channel
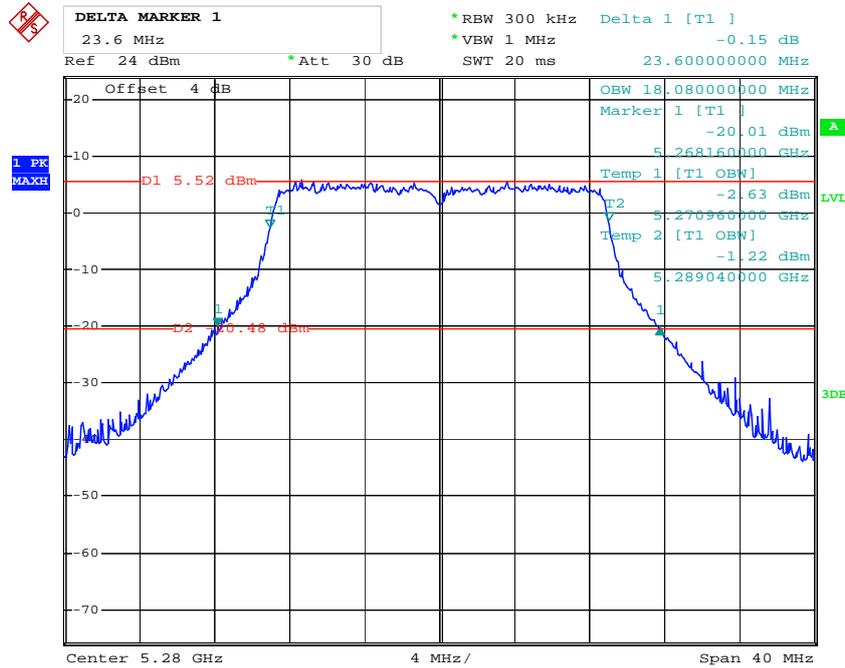
Date: 18.MAY.2015 15:46:55

Chain 0:802.11n ht20 High Channel
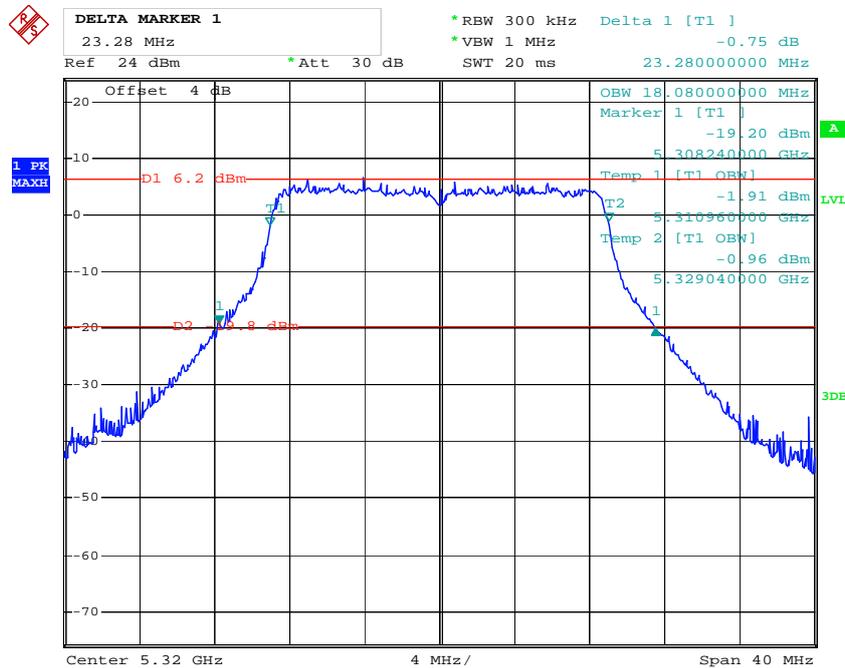
Date: 18.MAY.2015 15:46:06

Chain 0:802.11n ht40 Low Channel
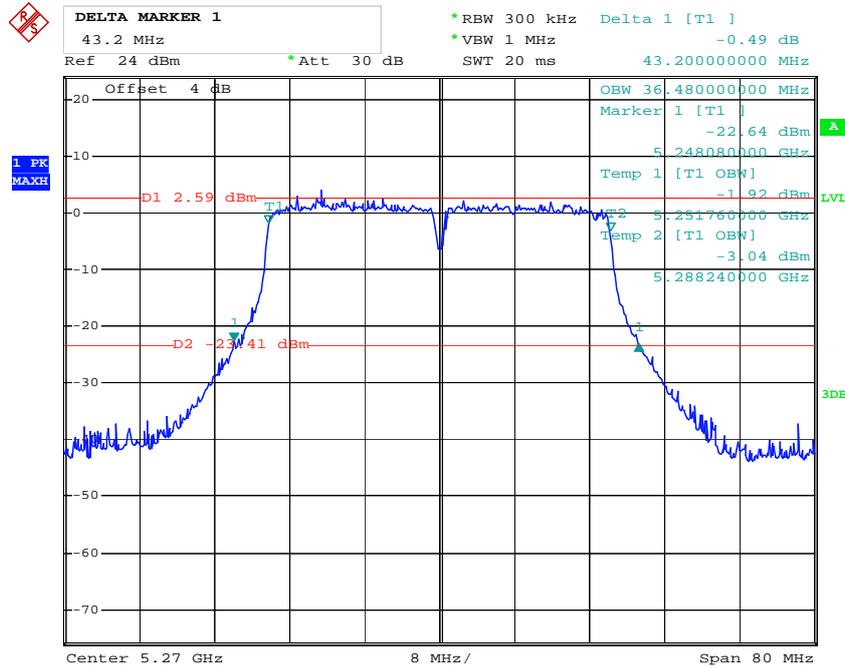
Date: 18.MAY.2015 15:49:21

Chain 0:802.11n ht40 High Channel
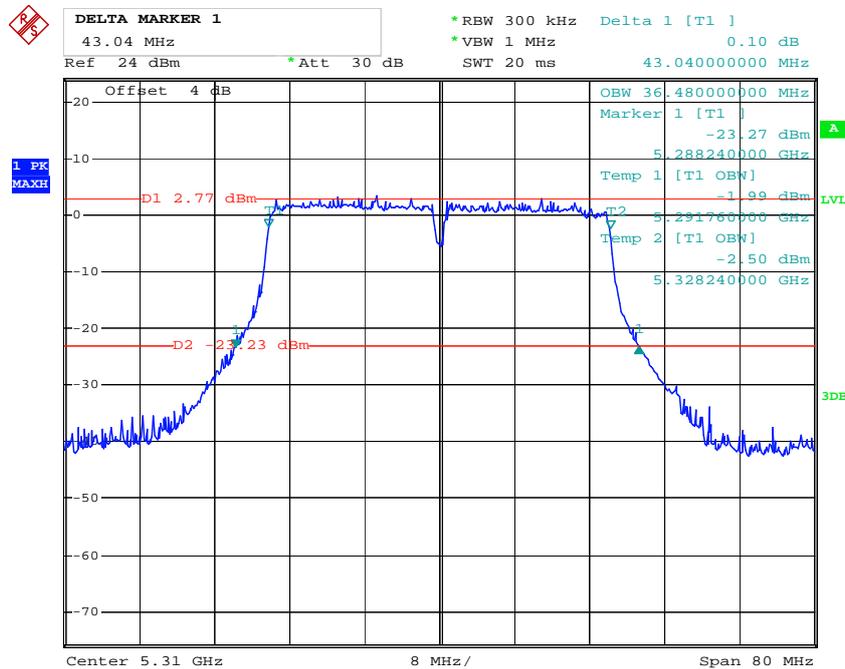
Date: 18.MAY.2015 15:50:15

Chain 0:802.11n ac80 Middle Channel
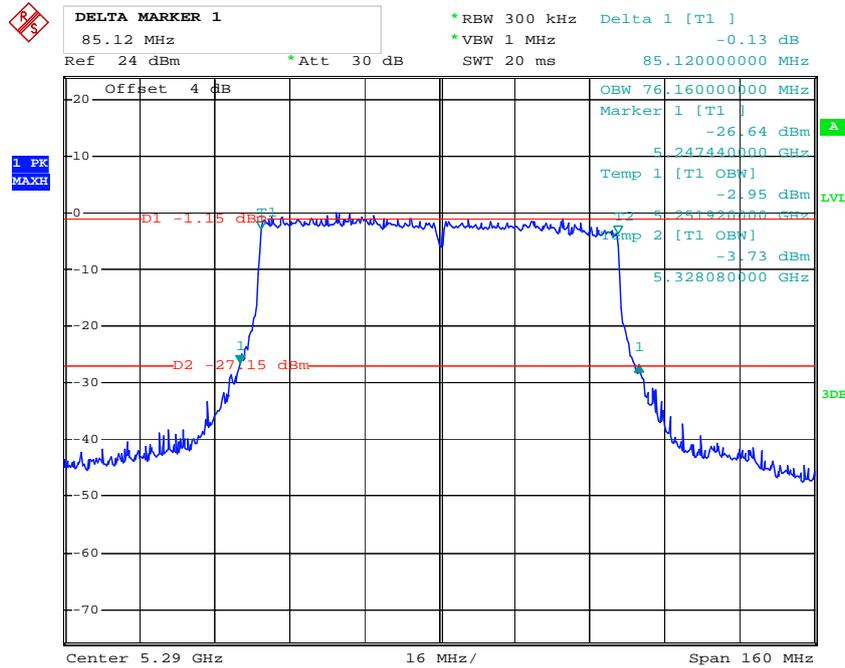
Date: 18.MAY.2015 15:58:26

Chain 1:802.11a Low Channel
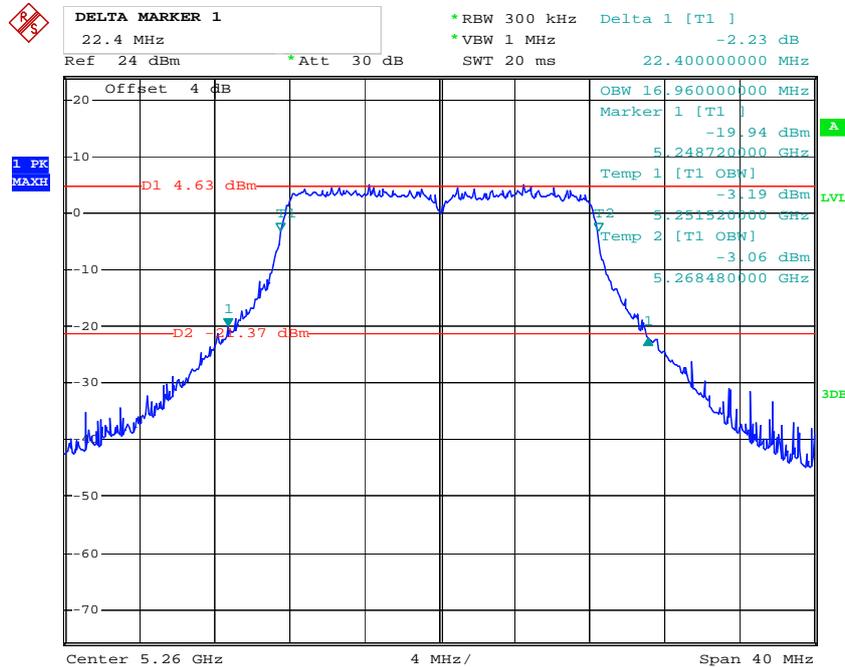
Date: 18.MAY.2015 15:42:19

Chain 1:802.11a Middle Channel

DELTA MARKER 1		
23.12 MHz		
Ref 24 dBm	*Att 30 dB	

*RBW 300 kHz　Delta 1 [T1]
*VBW 1 MHz　　　　　　-0.56 dB
SWT 20 ms　　　23.120000000 MHz

Offset 4 dB
OBW 16.960000000 MHz
Marker 1 [T1]
　　　　　　-20.84 dBm
　　　　5.268320000 GHz
Temp 1 [T1 OBW]
　　　　　　-3.70 dBm
　T2　5.271520000 GHz
Temp 2 [T1 OBW]
　　　　　　-3.46 dBm
　　　　5.288480000 GHz

D1 4.67 dBm

D2 -21.33 dBm

1 PK
MAXH

Center 5.28 GHz　　　4 MHz/　　　Span 40 MHz
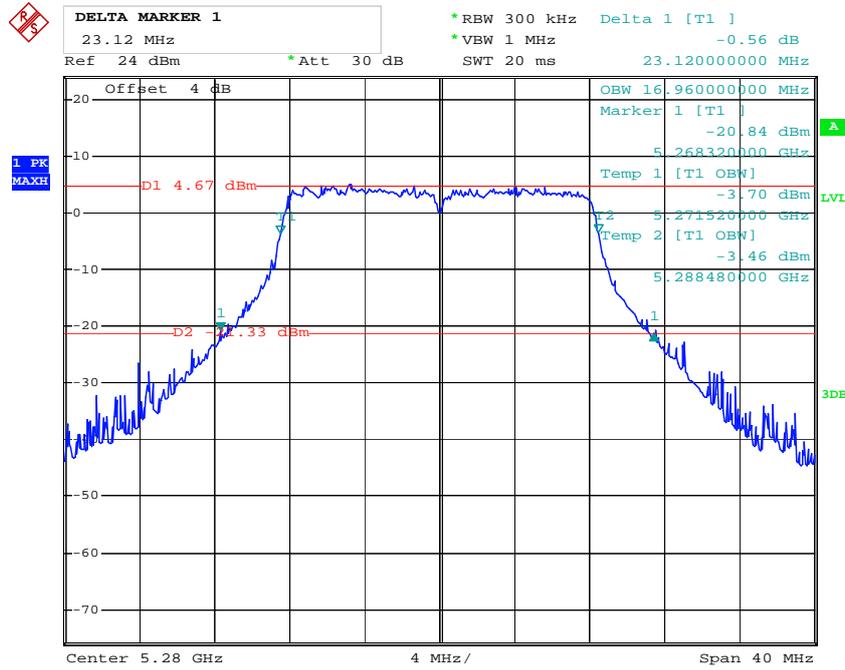
Date:　　18.MAY.2015 15:41:34

Chain 1:802.11a High Channel

DELTA MARKER 1		
22.72 MHz		
Ref 24 dBm	*Att 30 dB	

*RBW 300 kHz　Delta 1 [T1]
*VBW 1 MHz　　　　　　-1.26 dB
SWT 20 ms　　　22.720000000 MHz

Offset 4 dB
OBW 16.960000000 MHz
Marker 1 [T1]
　　　　　　-20.64 dBm
　　　　5.308640000 GHz
Temp 1 [T1 OBW]
　　　　　　-4.45 dBm
　T2　5.311520000 GHz
Temp 2 [T1 OBW]
　　　　　　-2.53 dBm
　　　　5.328480000 GHz

D1 4.36 dBm

D2 -20.64 dBm

1 PK
MAXH

Center 5.32 GHz　　　4 MHz/　　　Span 40 MHz
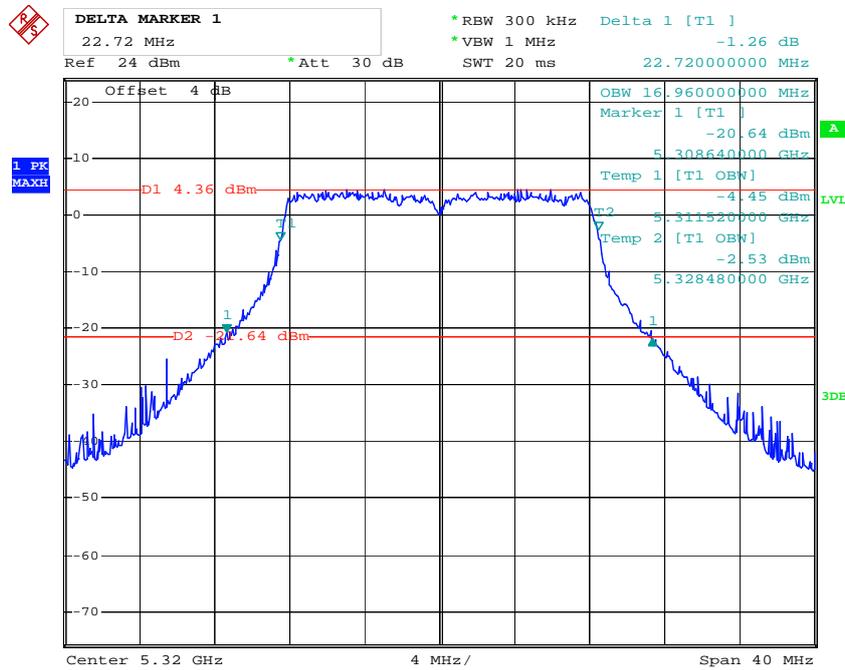
Date:　　18.MAY.2015 15:40:47

Chain 1:802.11n ht20 Low Channel

DELTA MARKER 1	*RBW 300 kHz Delta 1 [T1]
23.36 MHz	*VBW 1 MHz -0.61 dB
Ref 24 dBm *Att 30 dB	SWT 20 ms 23.360000000 MHz
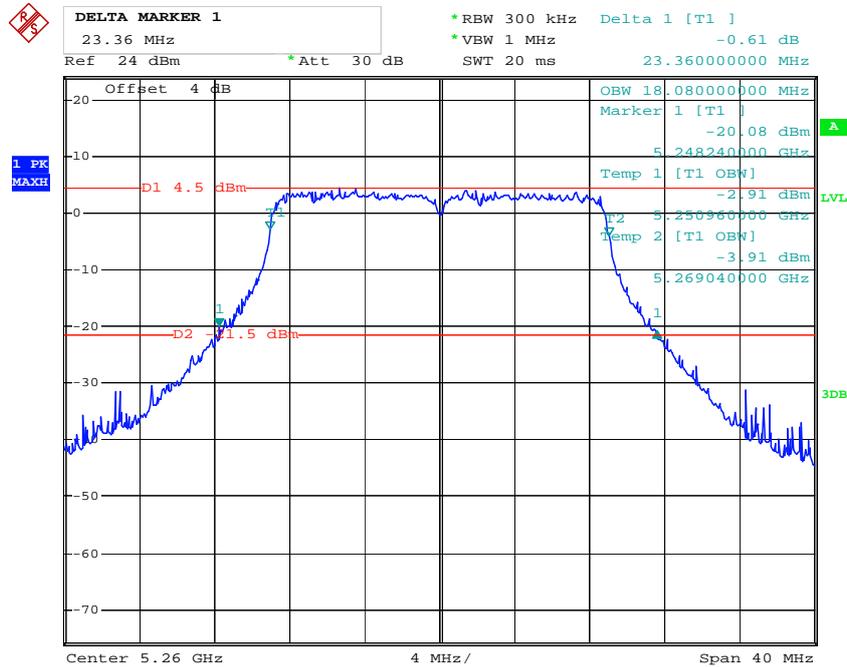
Date: 18.MAY.2015 15:38:20

Chain 1:802.11n ht20 Middle Channel

DELTA MARKER 1	*RBW 300 kHz Delta 1 [T1]
23.36 MHz	*VBW 1 MHz -2.00 dB
Ref 24 dBm *Att 30 dB	SWT 20 ms 23.360000000 MHz
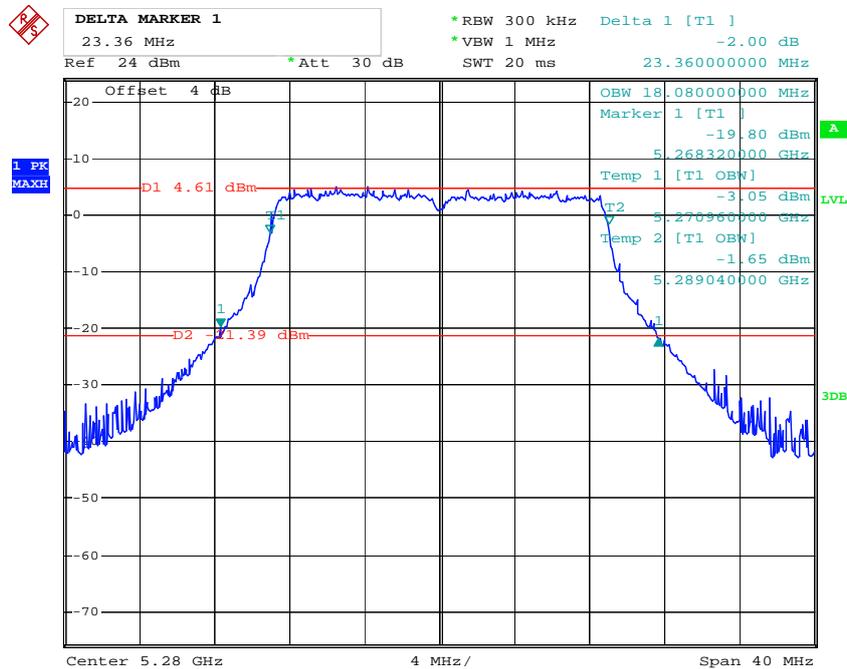
Date: 18.MAY.2015 15:39:11

Chain 1:802.11n ht20 High Channel
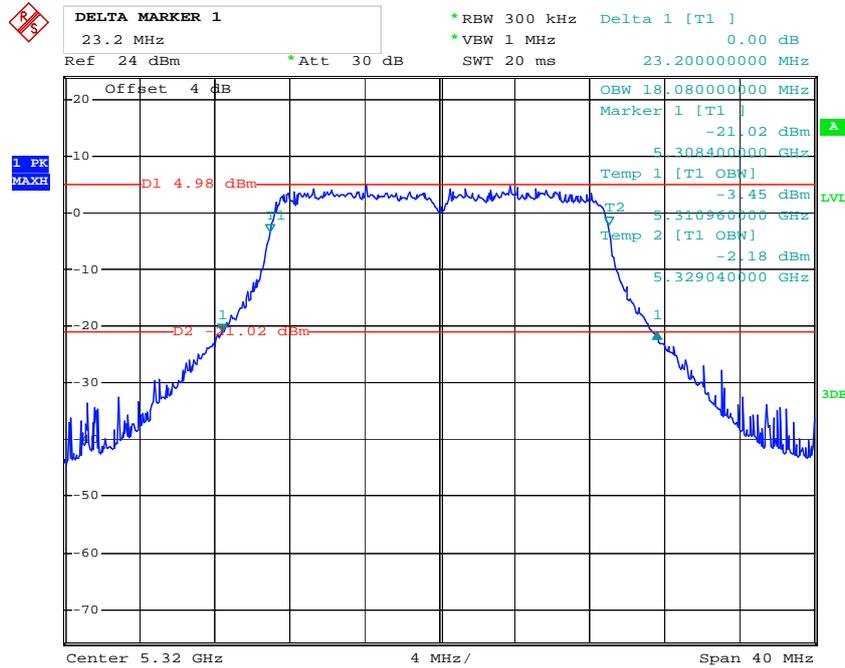
Date: 18.MAY.2015 15:40:06

Chain 1:802.11n ht40 Low Channel
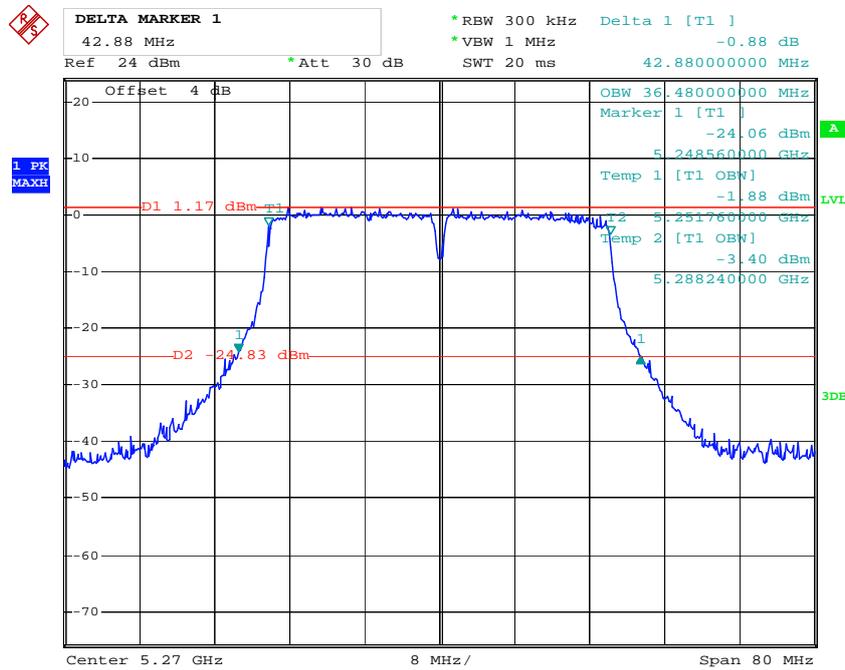
Date: 18.MAY.2015 15:36:33

Chain 1:802.11n ht40 High Channel

DELTA MARKER 1	*RBW 300 kHz Delta 1 [T1] −0.64 dB
42.88 MHz	*VBW 1 MHz 42.880000000 MHz
Ref 24 dBm *Att 30 dB	SWT 20 ms

Offset 4 dB

OBW 36.480000000 MHz
Marker 1 [T1]
−23.86 dBm
5.288400000 GHz
Temp 1 [T1 OBW]
−2.46 dBm
5.291760000 GHz
Temp 2 [T1 OBW]
−4.20 dBm
5.328240000 GHz

D1 1.72 dBm

D2 −24.28 dBm

1 PK MAXH

A
LVL
3DB

Center 5.31 GHz　　　　8 MHz/　　　　Span 80 MHz
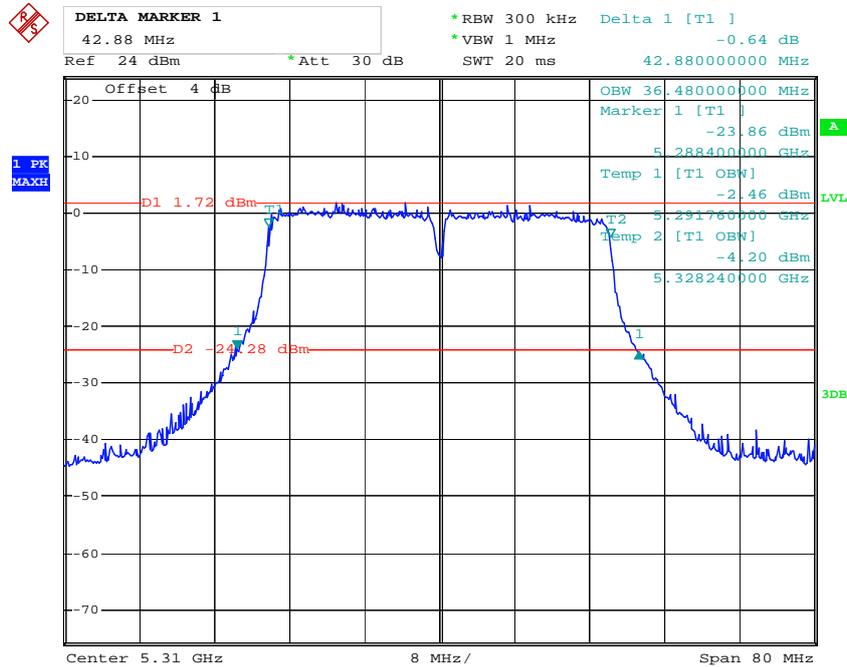
Date:　　18.MAY.2015 15:37:15

Chain 1:802.11n ac80 Middle Channel

DELTA MARKER 1	*RBW 300 kHz Delta 1 [T1] −1.06 dB
84.16 MHz	*VBW 1 MHz 84.160000000 MHz
Ref 24 dBm *Att 30 dB	SWT 20 ms

Offset 4 dB

OBW 76.160000000 MHz
Marker 1 [T1]
−27.04 dBm
5.247440000 GHz
Temp 1 [T1 OBW]
−4.91 dBm
5.251920000 GHz
Temp 2 [T1 OBW]
−5.31 dBm
5.328080000 GHz

D1 −1.73 dBm

D2 −27.73 dBm

1 PK MAXH

A
LVL
3DB

Center 5.29 GHz　　　　16 MHz/　　　　Span 160 MHz
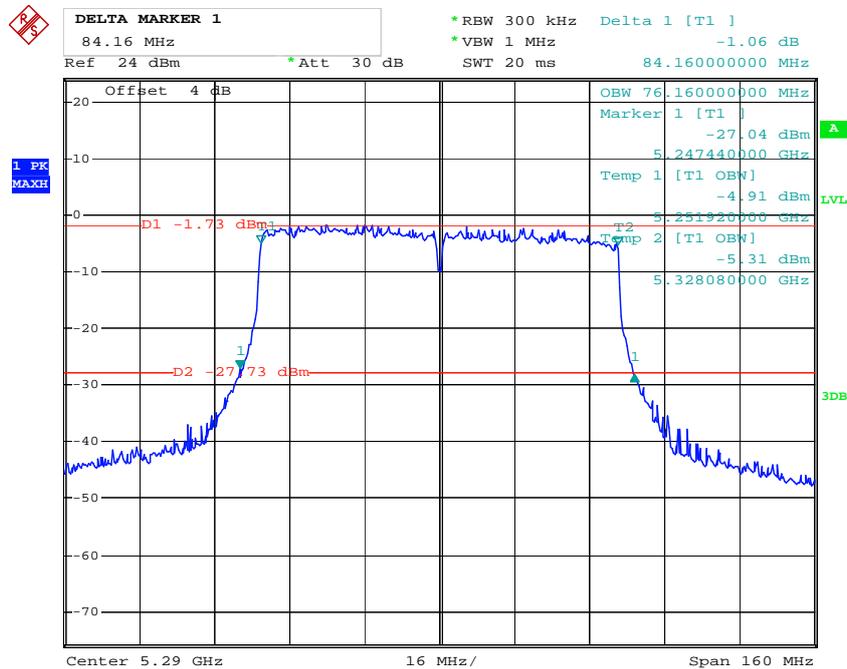
Date:　　18.MAY.2015 15:35:22

Chain 2:802.11a Low Channel
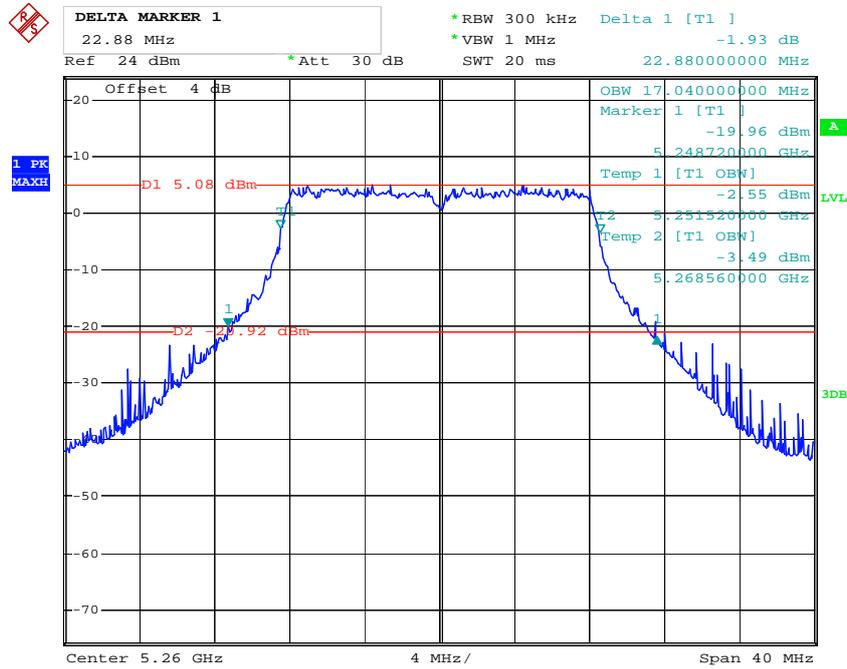
Date: 18.MAY.2015 15:26:38

Chain 2:802.11a Middle Channel
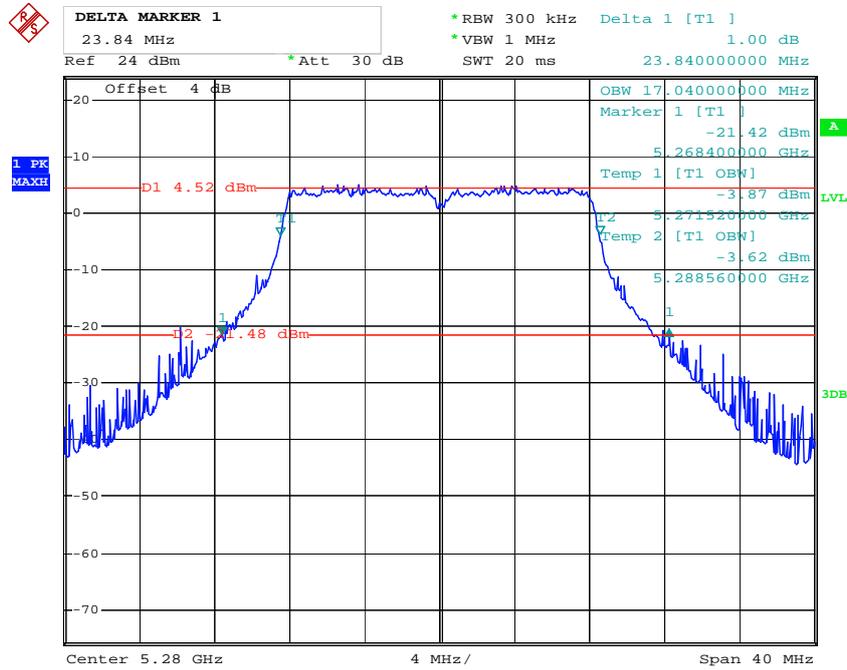
Date: 18.MAY.2015 15:27:48

Chain 2:802.11a High Channel
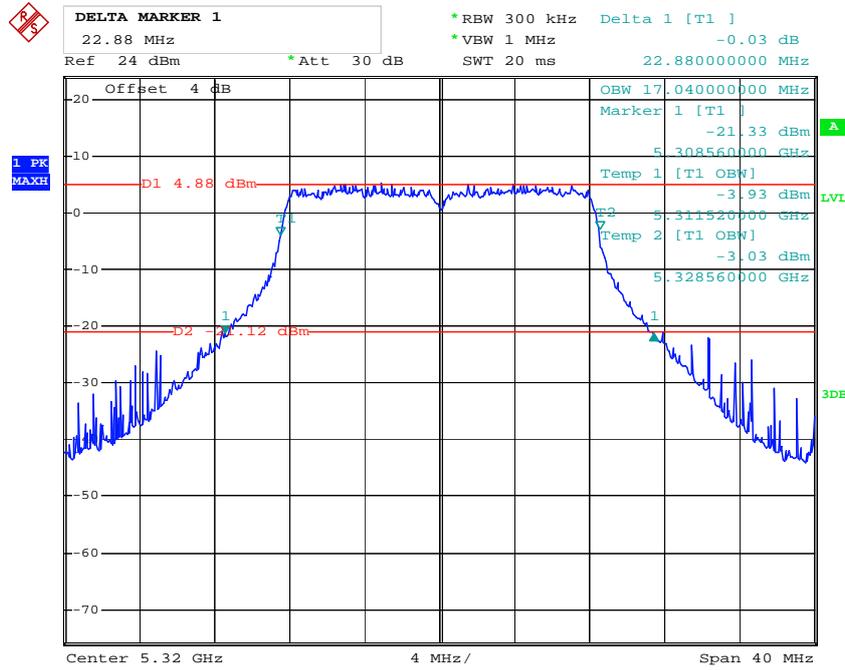
Date: 18.MAY.2015 15:28:40

Chain 2:802.11n ht20 Low Channel
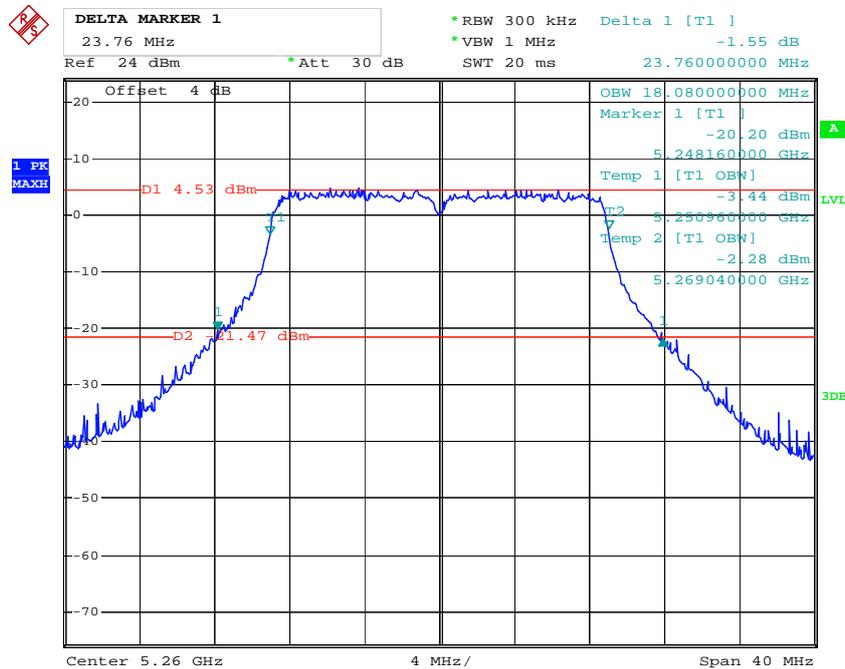
Date: 18.MAY.2015 15:30:59

Chain 2:802.11n ht20 Middle Channel
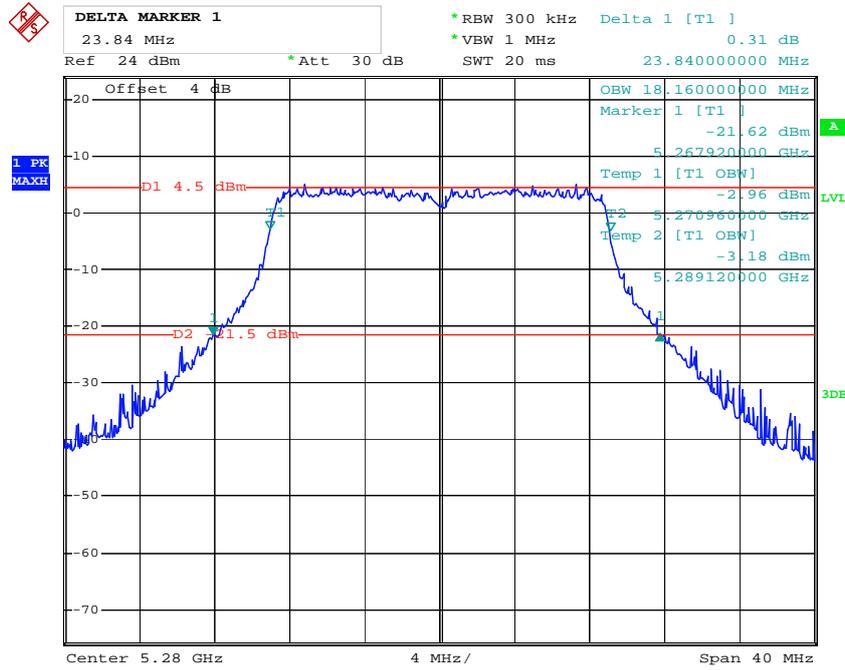
Date: 18.MAY.2015 15:30:11

Chain 2:802.11n ht20 High Channel
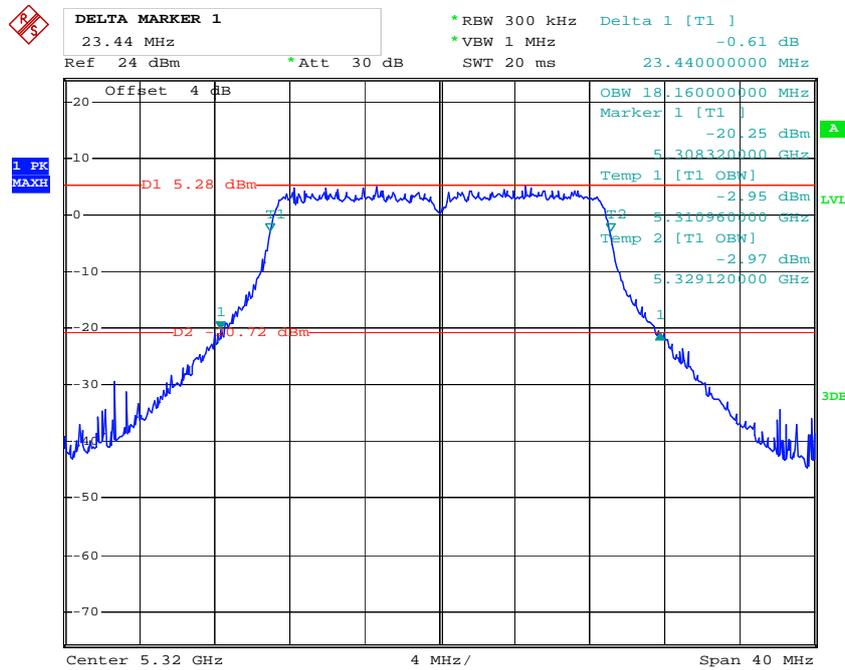
Date: 18.MAY.2015 15:29:29

Chain 2:802.11n ht40 Low Channel

Date: 18.MAY.2015 15:32:34

Chain 2:802.11n ht40 High Channel

Date: 18.MAY.2015 15:33:26

Chain 2:802.11n ac80 Middle Channel
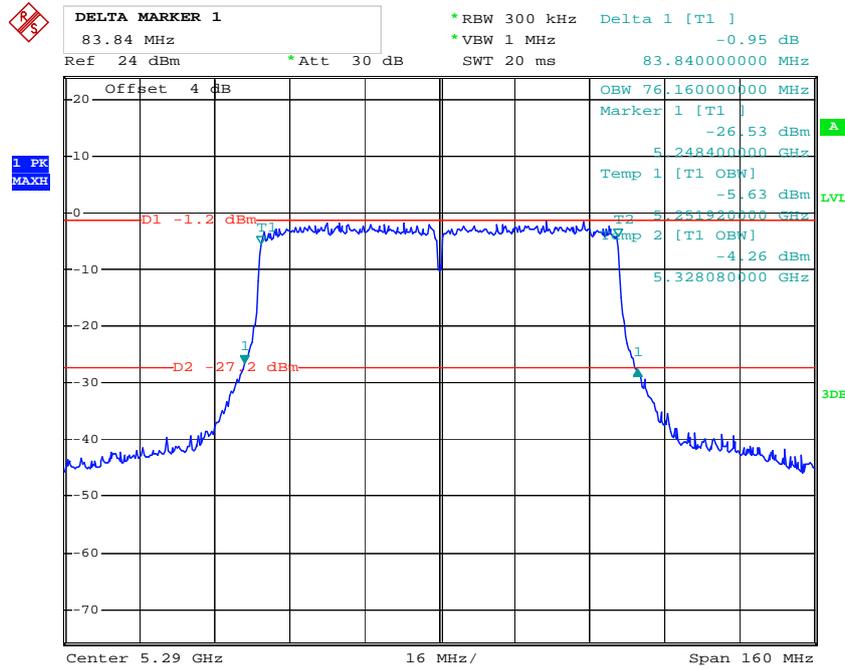
Date: 18.MAY.2015 15:34:30

5470MHz-5725MHz:

Chain 0:802.11a Low Channel
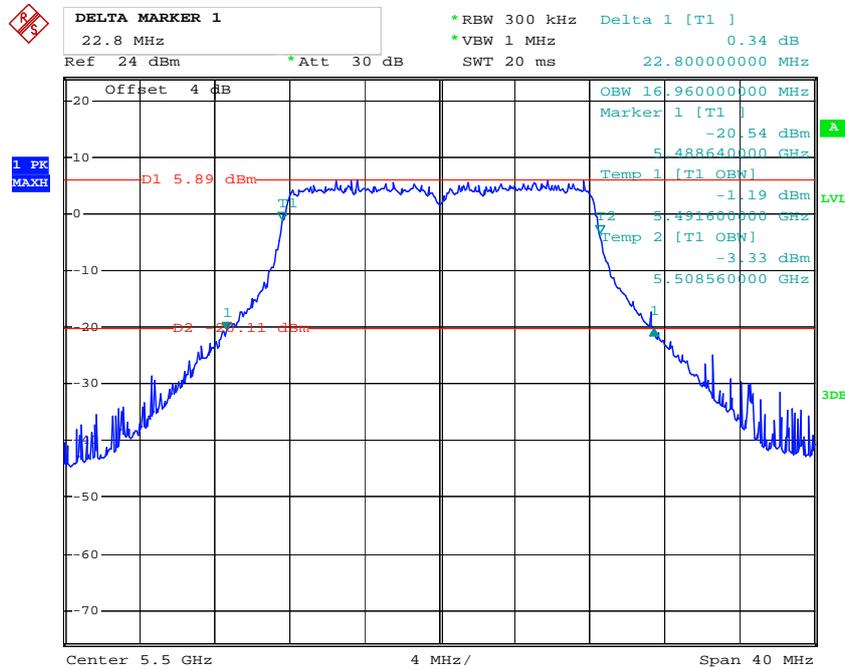
Date: 18.MAY.2015 16:55:02

Chain 0:802.11a Middle Channel
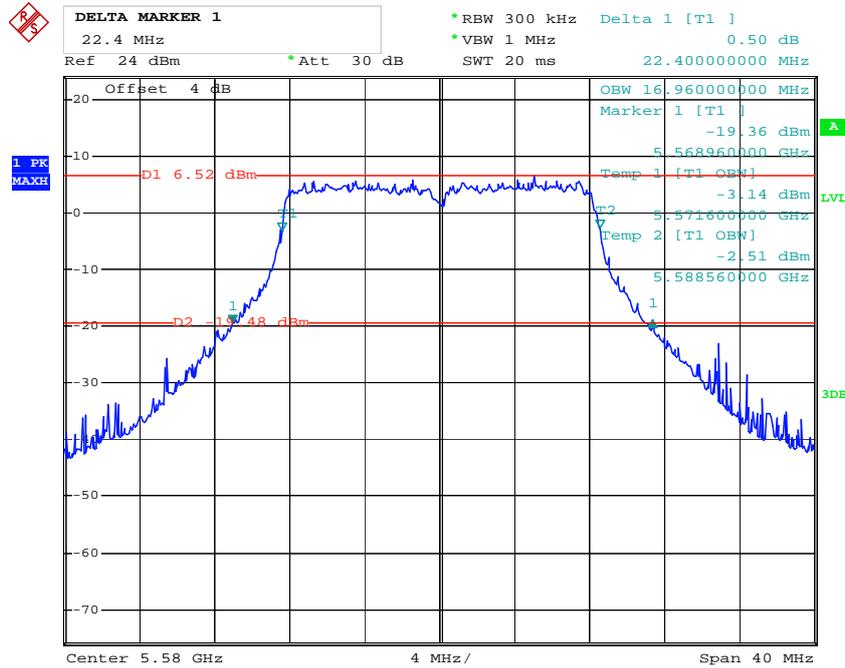
Date: 18.MAY.2015 16:54:04

Chain 0:802.11a High Channel
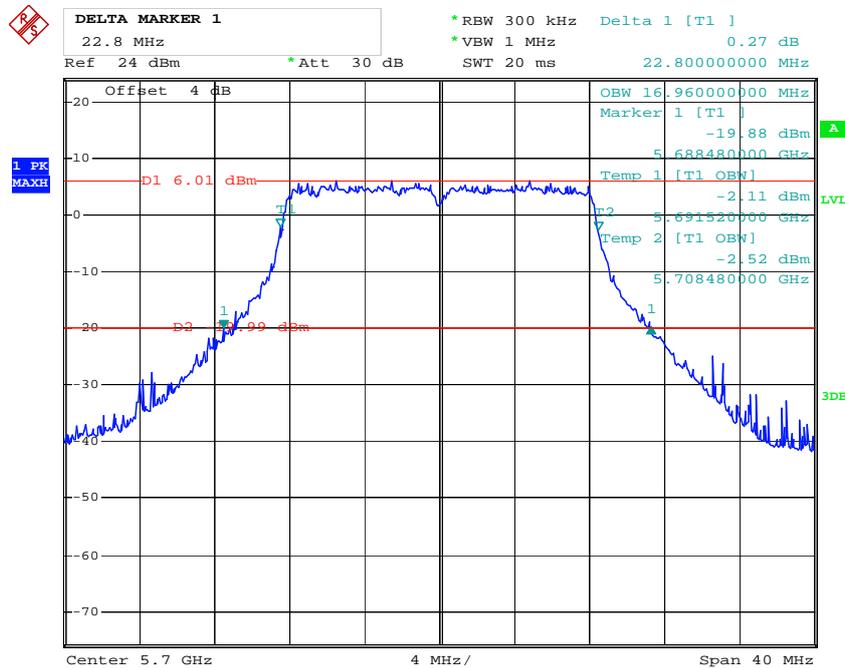
Date: 18.MAY.2015 16:53:21

Chain 0:802.11n ht20 Low Channel
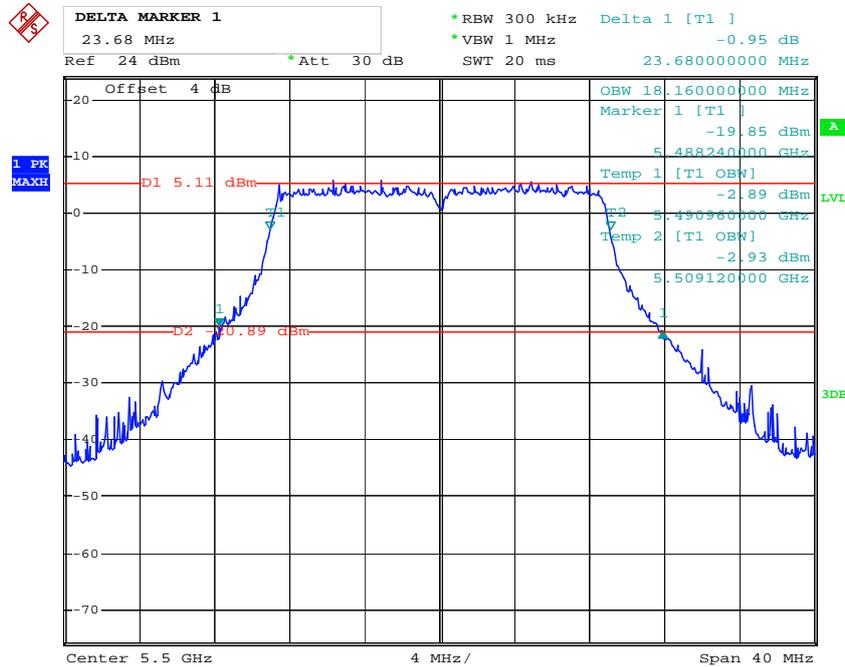
Date: 18.MAY.2015 16:51:12

Chain 0:802.11n ht20 Middle Channel
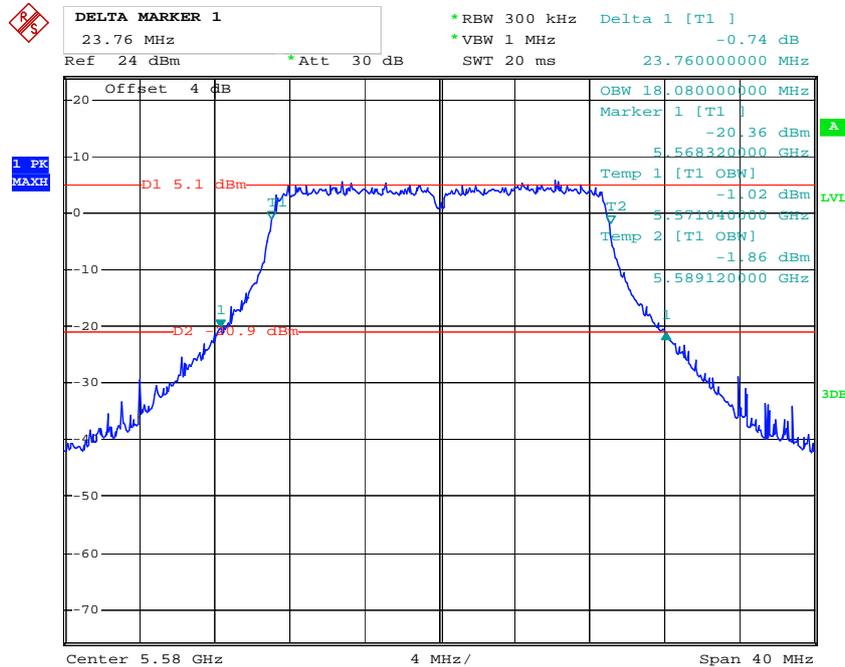
Date: 18.MAY.2015 16:51:56

Chain 0:802.11n ht20 High Channel
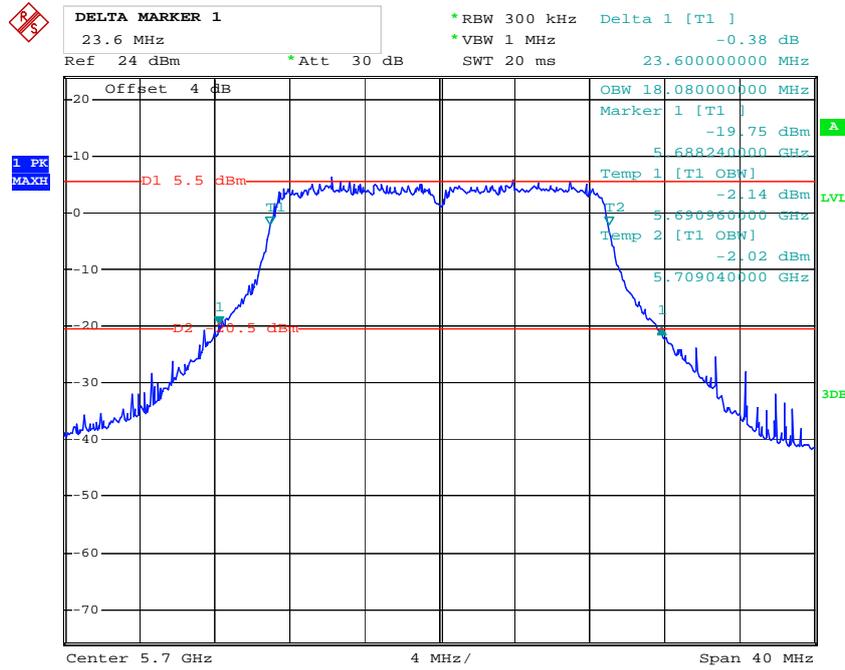
Date: 18.MAY.2015 16:52:37

Chain 0:802.11n ht40 Low Channel
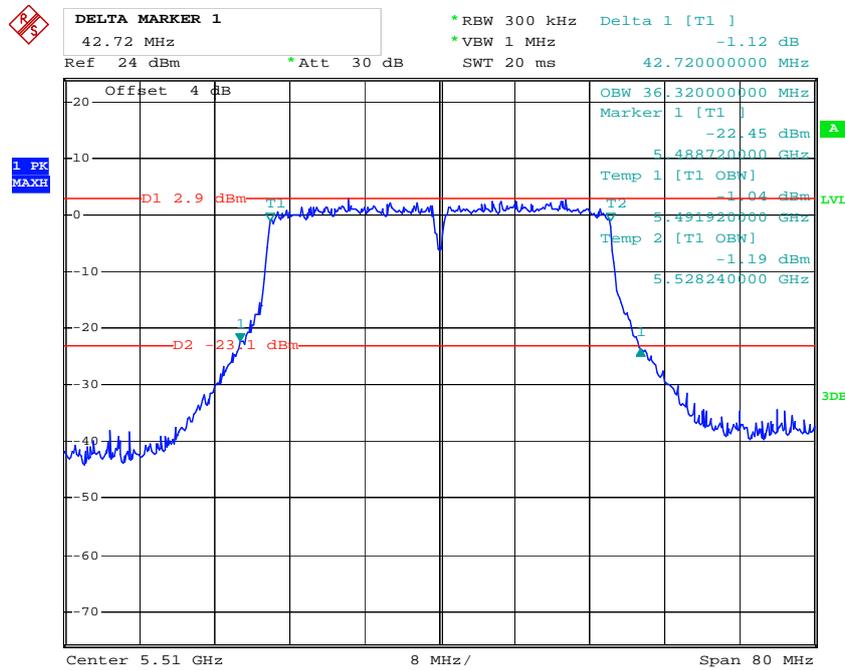
Date: 18.MAY.2015 16:50:10

Chain 0:802.11n ht40 Middle Channel
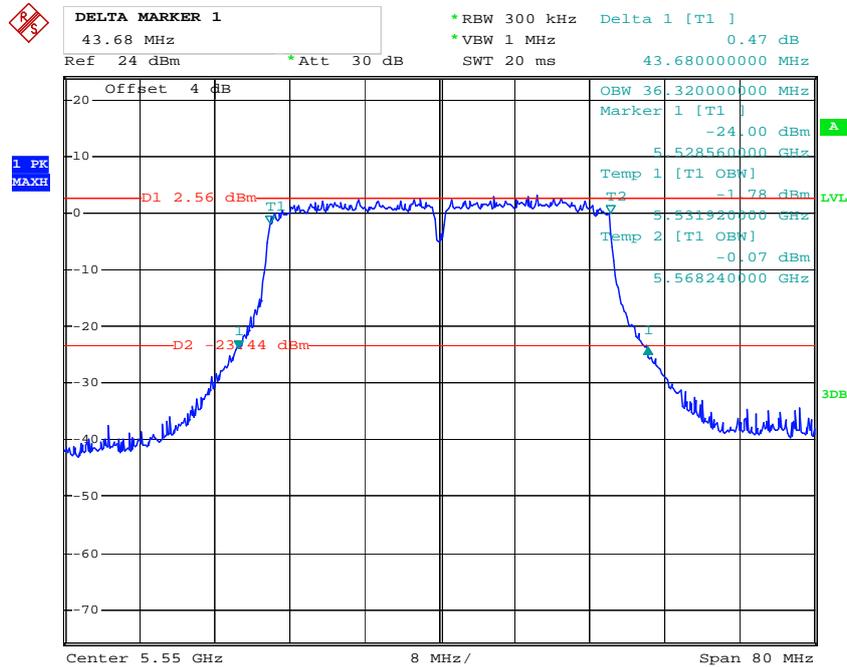
Date: 18.MAY.2015 16:49:24

Chain 0:802.11n ht40 High Channel
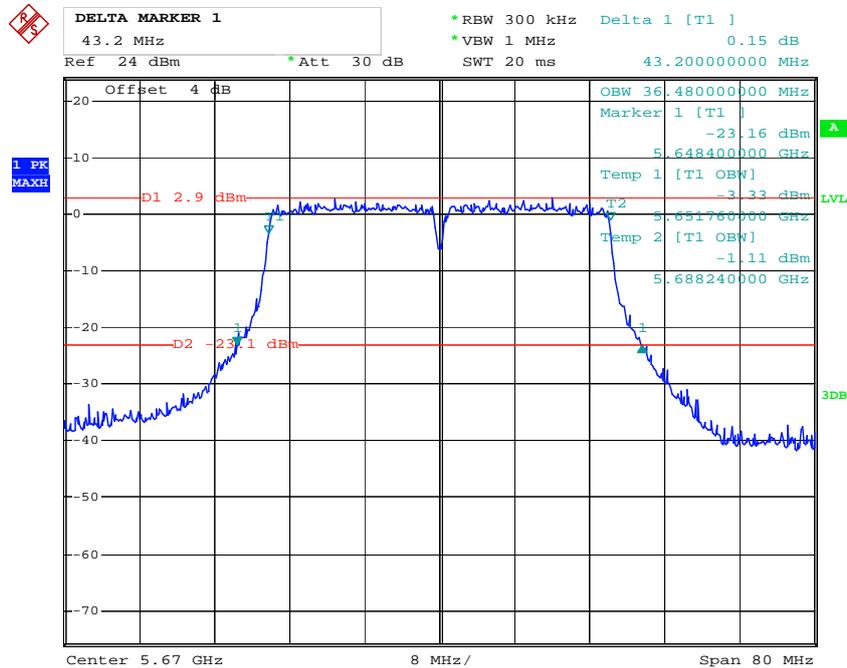
Date: 18.MAY.2015 16:48:32

Chain 0:802.11n ac80 Low Channel
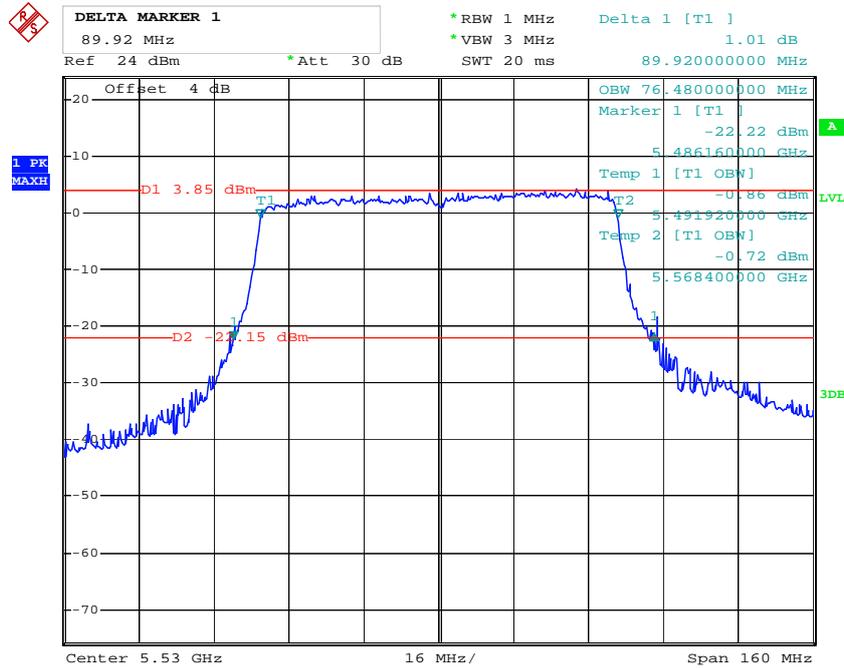
Date: 10.JUN.2015 14:12:44

Chain 0:802.11n ac80 High Channel
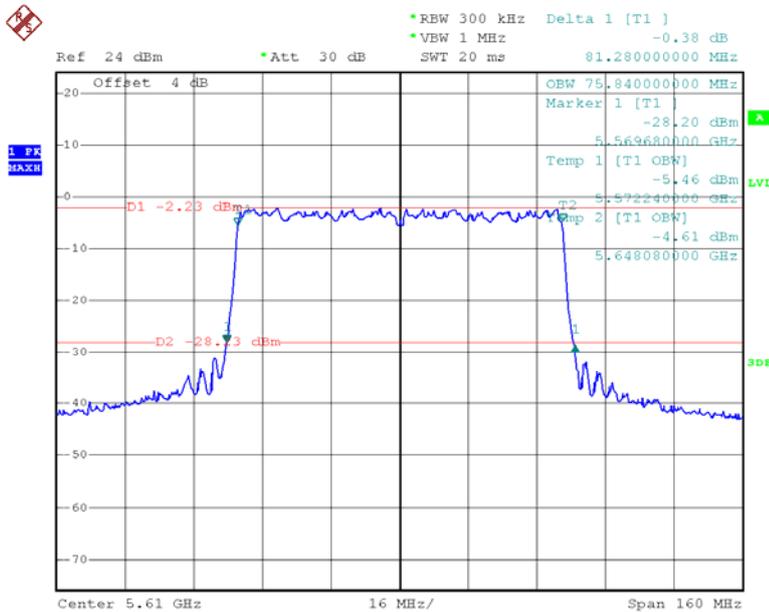
Date: 4.FEB.2016 13:45:54

Chain 1:802.11a Low Channel
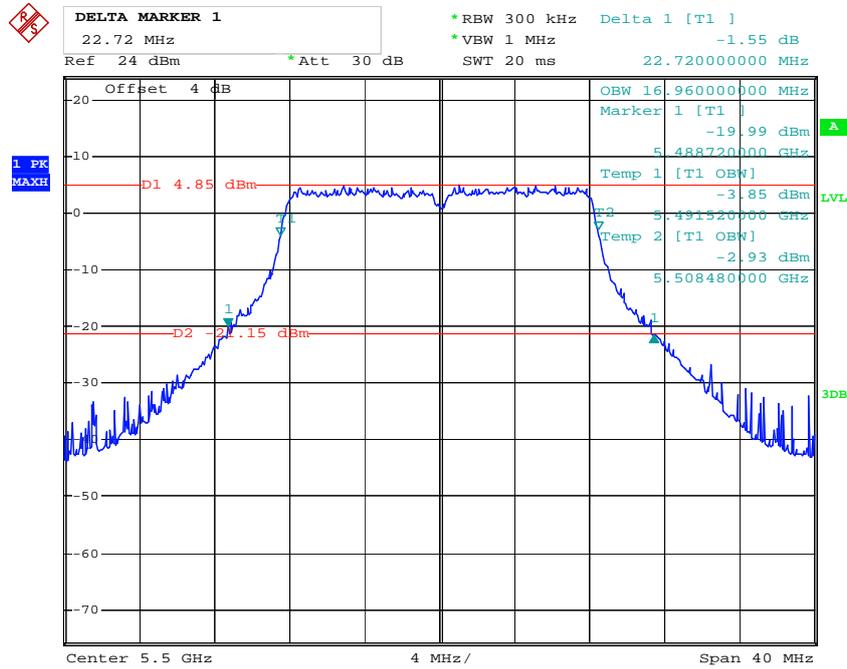
Date: 18.MAY.2015 16:56:48

Chain 1:802.11a Middle Channel
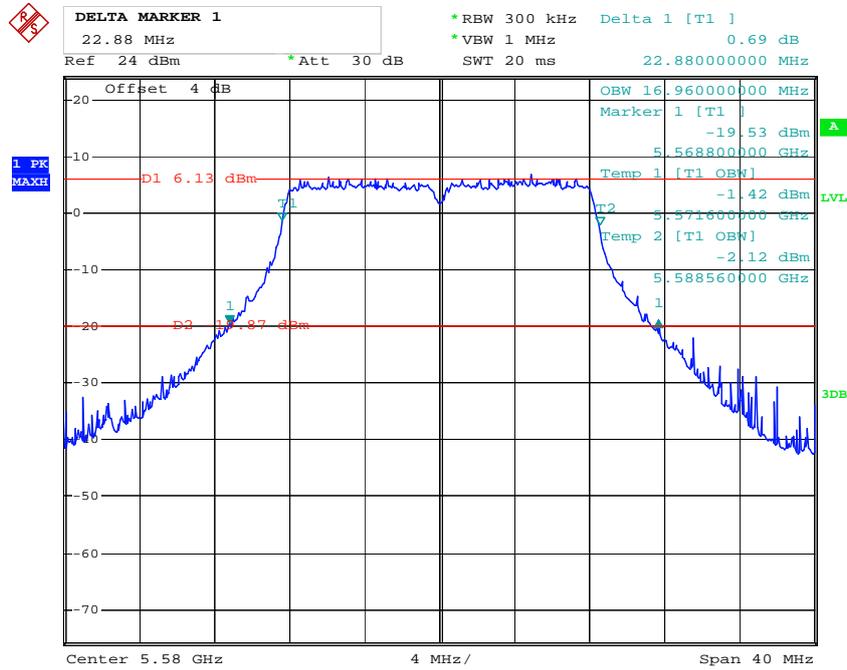
Date: 18.MAY.2015 16:57:32

Chain 1:802.11a High Channel
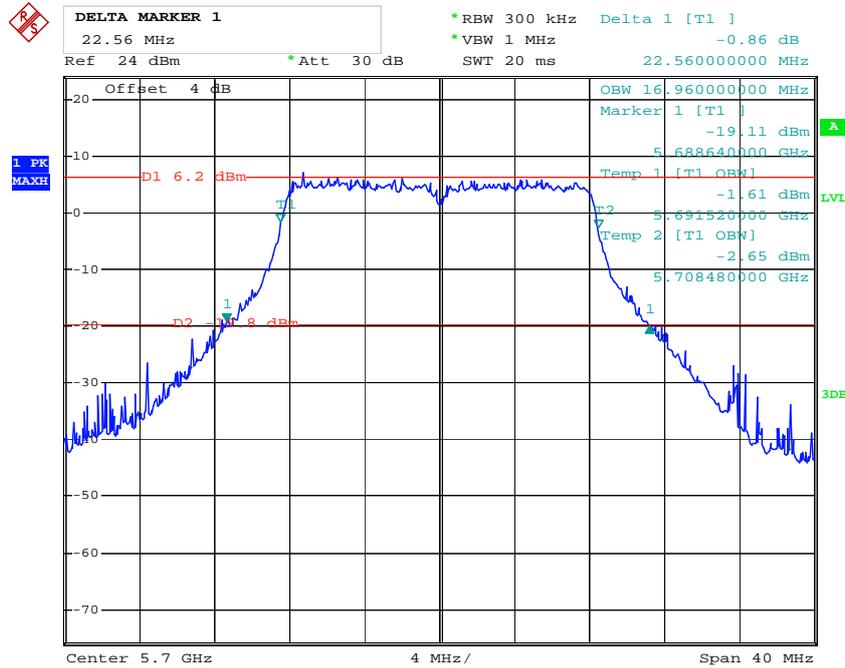
Date:　　18.MAY.2015　16:58:14

Chain 1:802.11n ht20 Low Channel
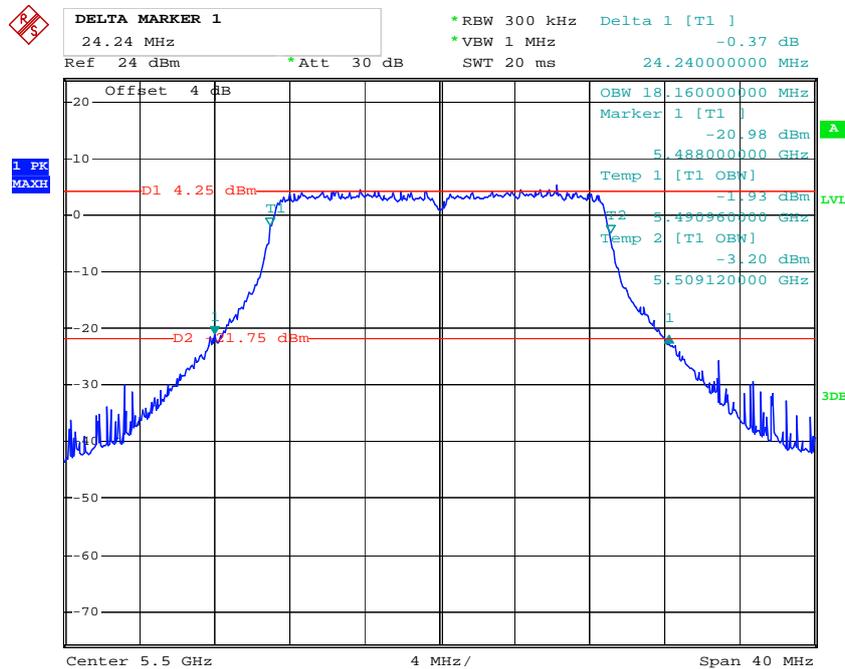
Date:　　18.MAY.2015　17:00:40

Chain 1:802.11n ht20 Middle Channel

DELTA MARKER 1		*RBW 300 kHz	Delta 1 [T1]
23.68 MHz		*VBW 1 MHz	-1.01 dB
Ref 24 dBm	*Att 30 dB	SWT 20 ms	23.680000000 MHz

Offset 4 dB

OBW 18.160000000 MHz
Marker 1 [T1]
-19.78 dBm
5.568240000 GHz
Temp 1 [T1 OBW]
-2.06 dBm
5.570960000 GHz
Temp 2 [T1 OBW]
-0.80 dBm
5.589120000 GHz

1 PK MAXH

D1 5.69 dBm

D2 -20.31 dBm

A

LVL

3DB

Center 5.58 GHz　　　　4 MHz/　　　　Span 40 MHz
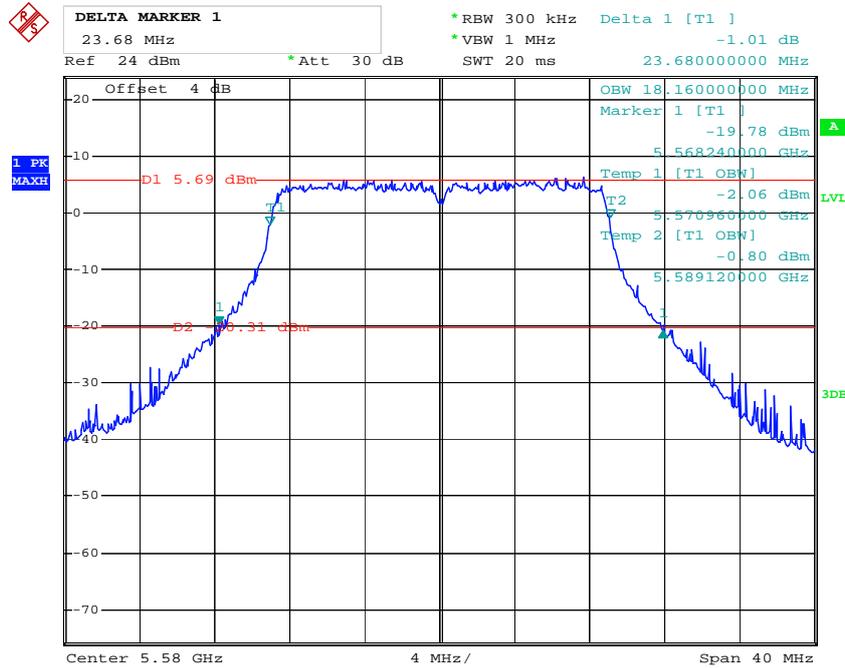
Date:　　18.MAY.2015　16:59:40

Chain 1:802.11n ht20 High Channel

DELTA MARKER 1		*RBW 300 kHz	Delta 1 [T1]
23.6 MHz		*VBW 1 MHz	-1.52 dB
Ref 24 dBm	*Att 30 dB	SWT 20 ms	23.600000000 MHz

Offset 4 dB

OBW 18.080000000 MHz
Marker 1 [T1]
-19.43 dBm
5.688240000 GHz
Temp 1 [T1 OBW]
-1.99 dBm
5.690960000 GHz
Temp 2 [T1 OBW]
0.05 dBm
5.709040000 GHz

1 PK MAXH

D1 5.58 dBm

D2 -20.42 dBm

A

LVL

3DB

Center 5.7 GHz　　　　4 MHz/　　　　Span 40 MHz
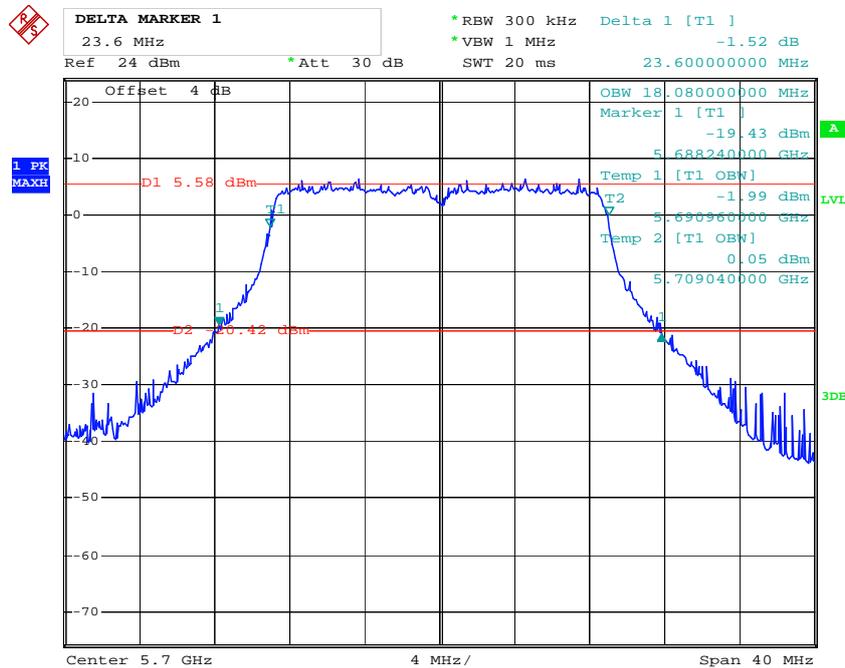
Date:　　18.MAY.2015　16:58:59

Chain 1:802.11n ht40 Low Channel

Date: 18.MAY.2015 17:01:49

Chain 1:802.11n ht40 Middle Channel

Date: 18.MAY.2015 17:02:43

Chain 1:802.11n ht40 High Channel

DELTA MARKER 1			
43.04 MHz		*RBW 300 kHz	Delta 1 [T1]
Ref 24 dBm	*Att 30 dB	*VBW 1 MHz	−1.23 dB
		SWT 20 ms	43.040000000 MHz

Offset 4 dB

OBW 36.480000000 MHz
Marker 1 [T1]
−22.00 dBm
5.648400000 GHz
Temp 1 [T1 OBW]
−1.81 dBm
5.651760000 GHz
Temp 2 [T1 OBW]
−1.78 dBm
5.688240000 GHz

1 PK MAXH

D1 3.3 dBm

D2 −22.7 dBm

Center 5.67 GHz   8 MHz/   Span 80 MHz
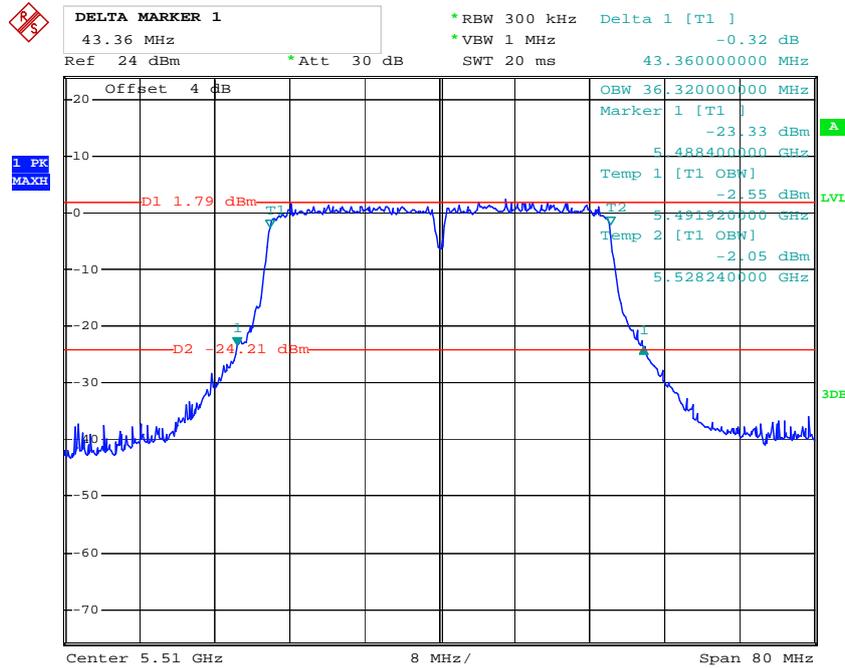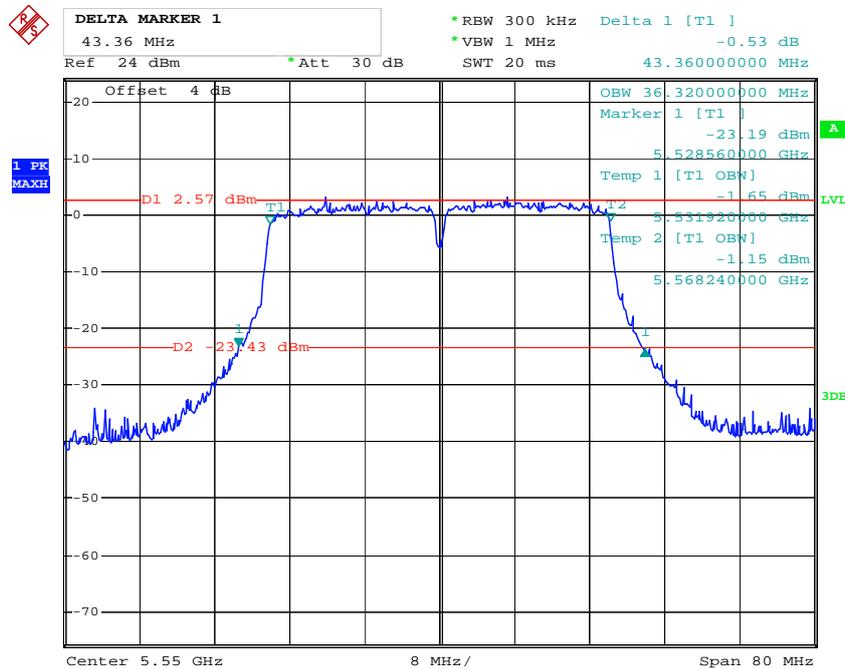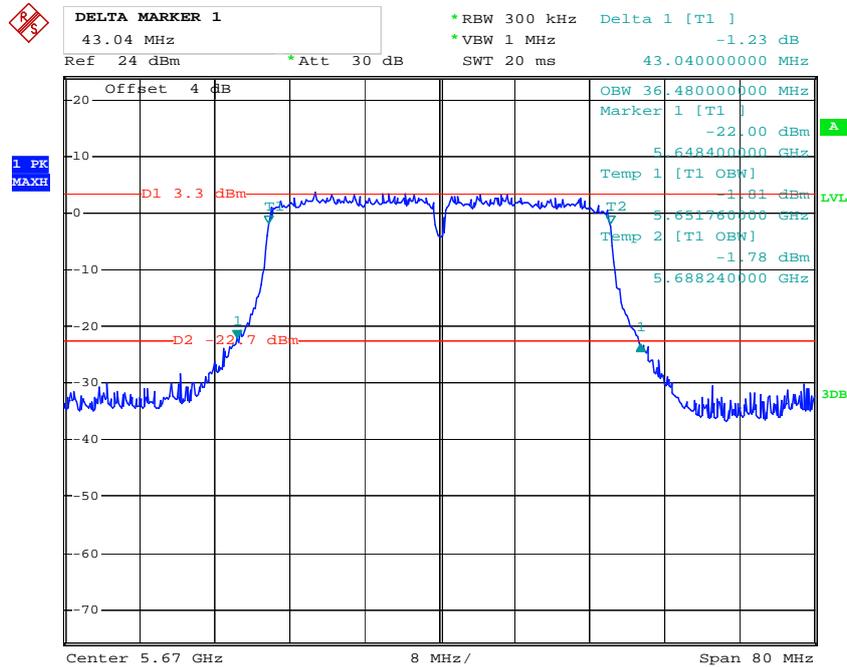
Date: 18.MAY.2015 17:03:53

Chain 1:802.11n ac80 Low Channel

DELTA MARKER 1			
83.2 MHz		*RBW 300 kHz	Delta 1 [T1]
Ref 24 dBm	*Att 30 dB	*VBW 1 MHz	−1.43 dB
		SWT 20 ms	83.200000000 MHz

Offset 4 dB

OBW 75.840000000 MHz
Marker 1 [T1]
−25.04 dBm
5.489040000 GHz
Temp 1 [T1 OBW]
−5.38 dBm
5.493240000 GHz
Temp 2 [T1 OBW]
−3.74 dBm
5.568080000 GHz

1 PK MAXH

D1 −0.6 dBm

D2 −26.6 dBm

Center 5.53 GHz   16 MHz/   Span 160 MHz
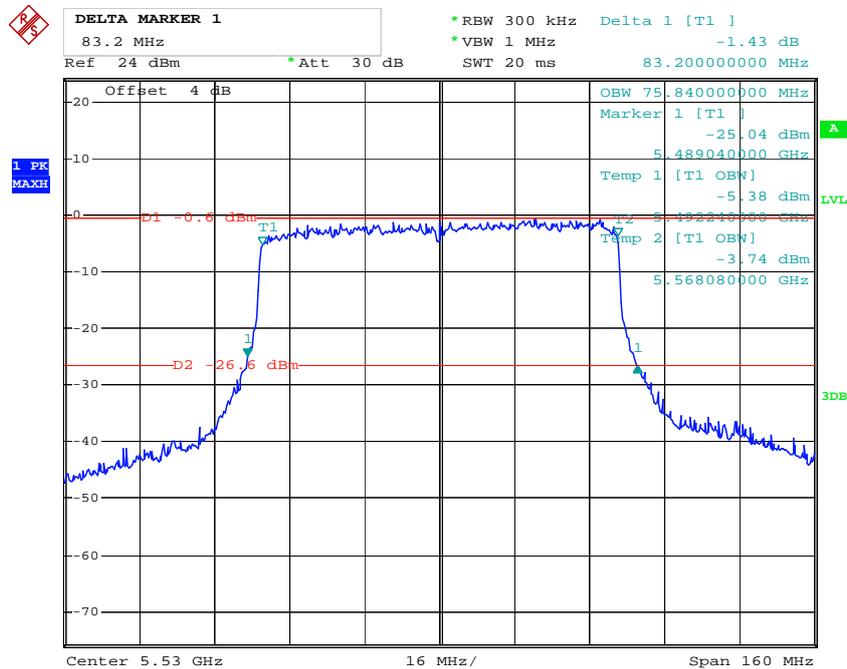
Date: 18.MAY.2015 17:04:42

Chain 1:802.11n ac80 High Channel
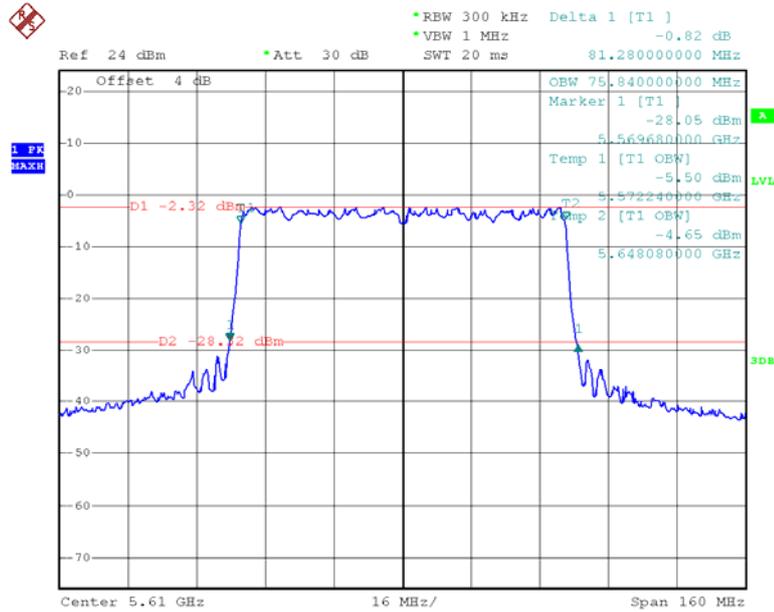
Date: 4.FEB.2016 13:46:52

Chain 2:802.11a Low Channel
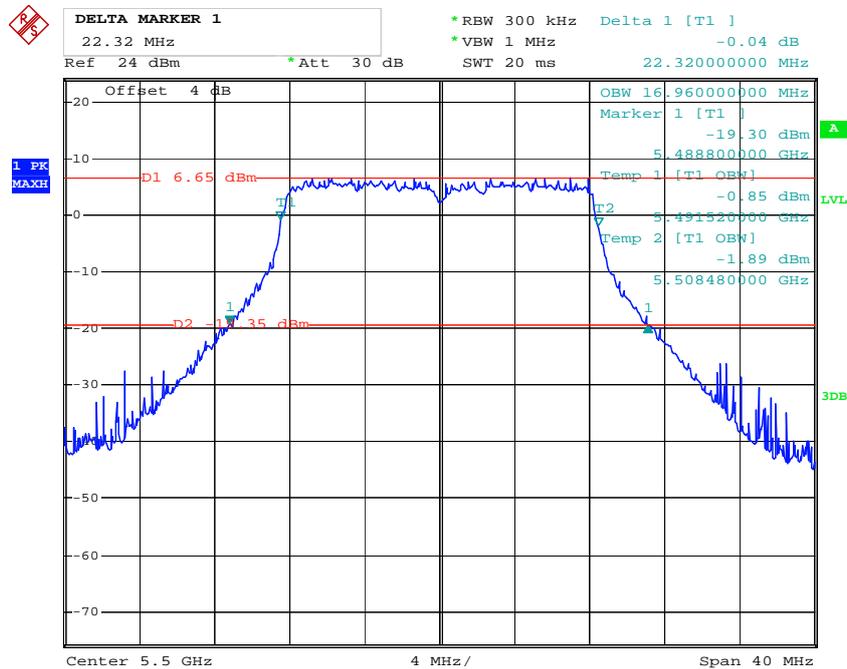
Date: 18.MAY.2015 17:17:47

Chain 2:802.11a Middle Channel

DELTA MARKER 1		*RBW 300 kHz	Delta 1 [T1]	
22.72 MHz		*VBW 1 MHz		-0.15 dB
Ref 24 dBm	*Att 30 dB	SWT 20 ms		22.720000000 MHz

Offset 4 dB

OBW 17.040000000 MHz
Marker 1 [T1]
-19.36 dBm
5.568720000 GHz
Temp 1 [T1 OBW]
-1.49 dBm
5.571520000 GHz
Temp 2 [T1 OBW]
-1.27 dBm
5.588560000 GHz

1 PK
MAXH

D1 6.52 dBm

D2 -19.48 dBm

A

LVL

3DB

Center 5.58 GHz   4 MHz/   Span 40 MHz
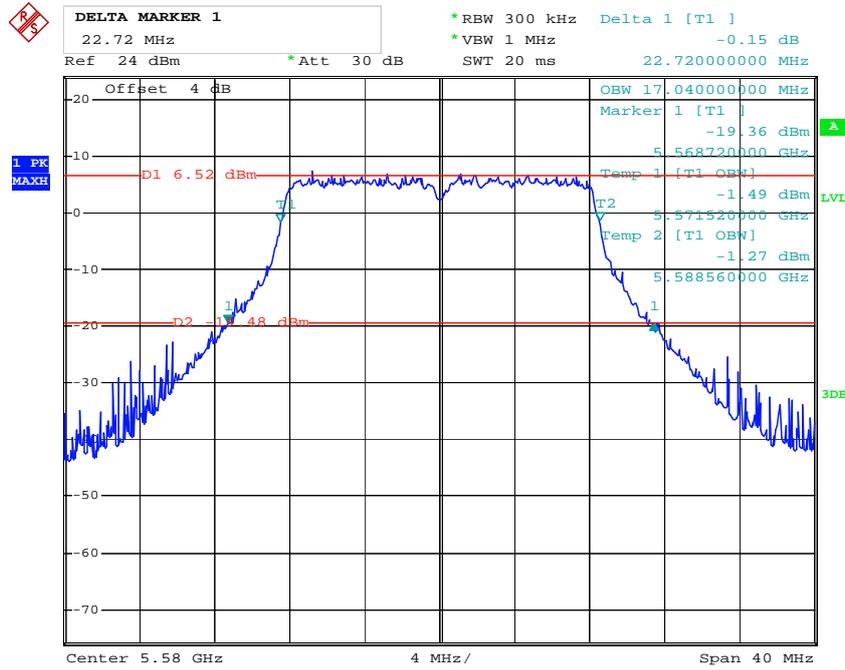
Date: 18.MAY.2015 17:17:01

Chain 2:802.11a High Channel

DELTA MARKER 1		*RBW 300 kHz	Delta 1 [T1]	
22.88 MHz		*VBW 1 MHz		-0.02 dB
Ref 24 dBm	*Att 30 dB	SWT 20 ms		22.880000000 MHz

Offset 4 dB

OBW 16.960000000 MHz
Marker 1 [T1]
-19.89 dBm
5.688560000 GHz
Temp 1 [T1 OBW]
-1.62 dBm
5.691520000 GHz
Temp 2 [T1 OBW]
-1.59 dBm
5.708480000 GHz

1 PK
MAXH

D1 6.32 dBm

D2 -19.68 dBm

A

LVL

3DB

Center 5.7 GHz   4 MHz/   Span 40 MHz
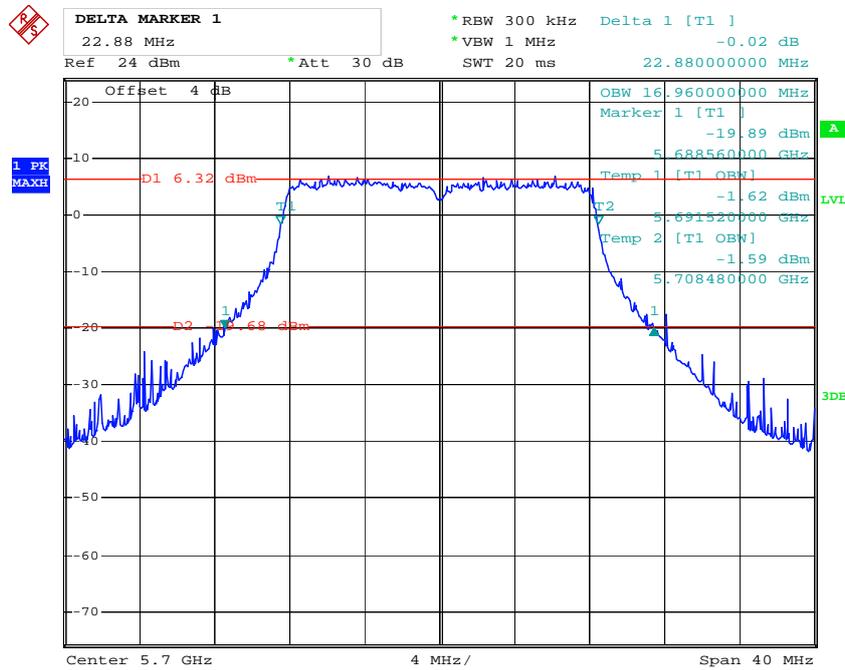
Date: 18.MAY.2015 17:16:16

Chain 2:802.11n ht20 Low Channel

DELTA MARKER 1	*RBW 300 kHz Delta 1 [T1]
23.6 MHz	*VBW 1 MHz -0.42 dB
Ref 24 dBm *Att 30 dB	SWT 20 ms 23.600000000 MHz

Offset 4 dB

OBW 18.080000000 MHz
Marker 1 [T1]
                -19.40 dBm
                5.488240000 GHz
D1 6.31 dBm
Temp 1 [T1 OBW]
                -0.32 dBm
                5.490960000 GHz
Temp 2 [T1 OBW]
                -0.83 dBm
                5.509040000 GHz
D2 -9.69 dBm

Center 5.5 GHz   4 MHz/   Span 40 MHz
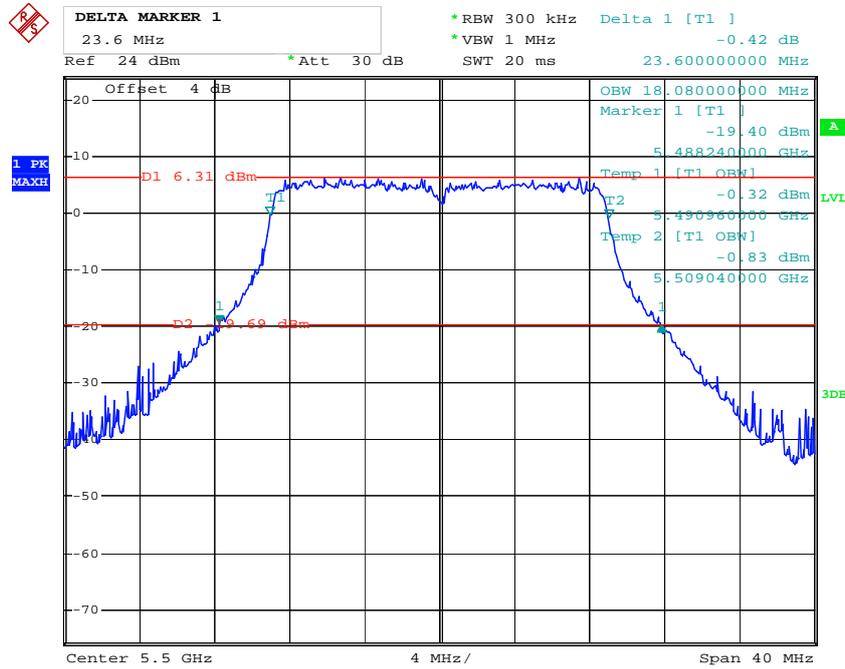
Date: 18.MAY.2015 17:14:08

Chain 2:802.11n ht20 Middle Channel

DELTA MARKER 1	*RBW 300 kHz Delta 1 [T1]
23.36 MHz	*VBW 1 MHz -0.60 dB
Ref 24 dBm *Att 30 dB	SWT 20 ms 23.360000000 MHz

Offset 4 dB

OBW 18.080000000 MHz
Marker 1 [T1]
                -18.78 dBm
                5.568400000 GHz
D1 6.48 dBm
Temp 1 [T1 OBW]
                -1.34 dBm
                5.570960000 GHz
Temp 2 [T1 OBW]
                0.20 dBm
                5.589040000 GHz
D2 -9.52 dBm

Center 5.58 GHz   4 MHz/   Span 40 MHz
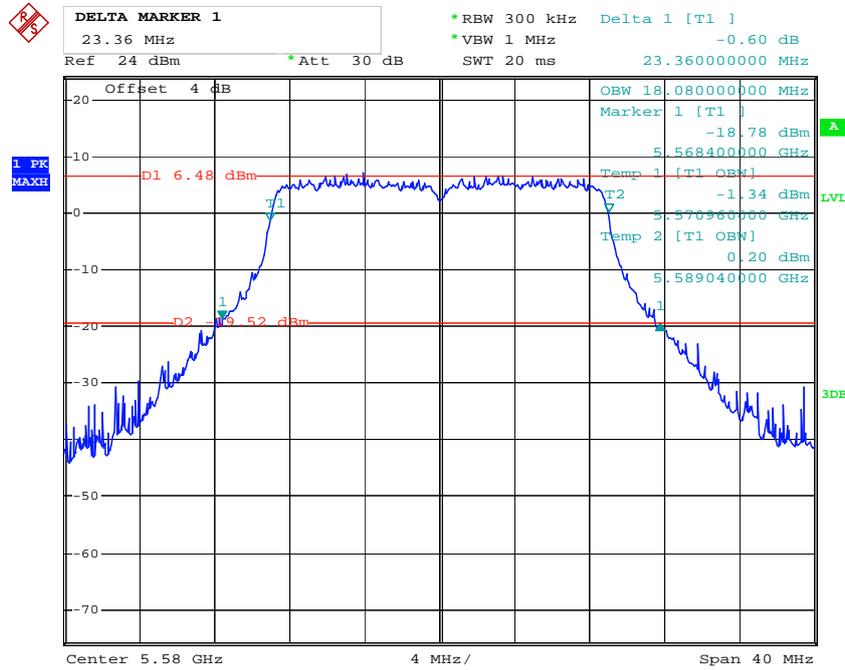
Date: 18.MAY.2015 17:14:48

Chain 2:802.11n ht20 High Channel
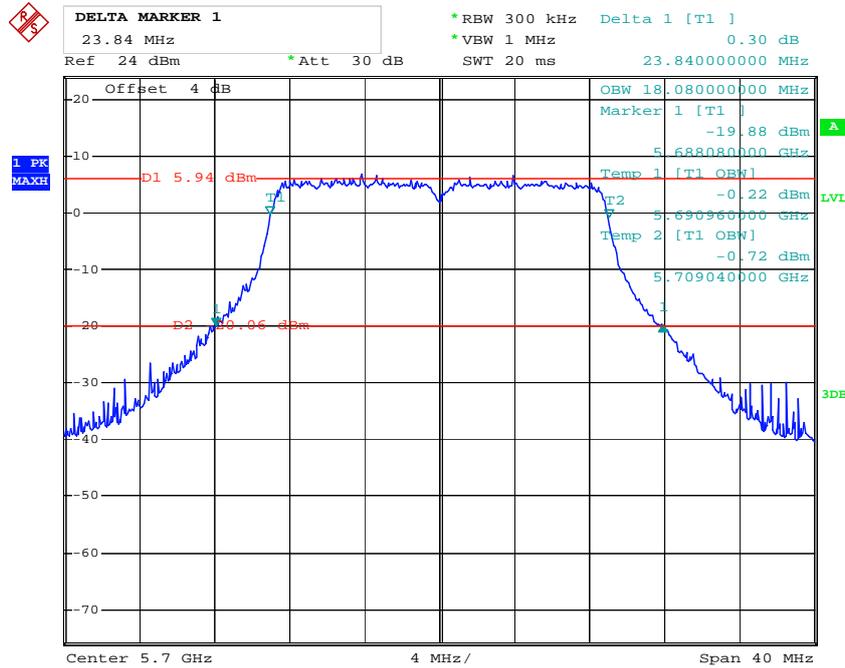
Date:　　　18.MAY.2015　17:15:36

Chain 2:802.11n ht40 Low Channel
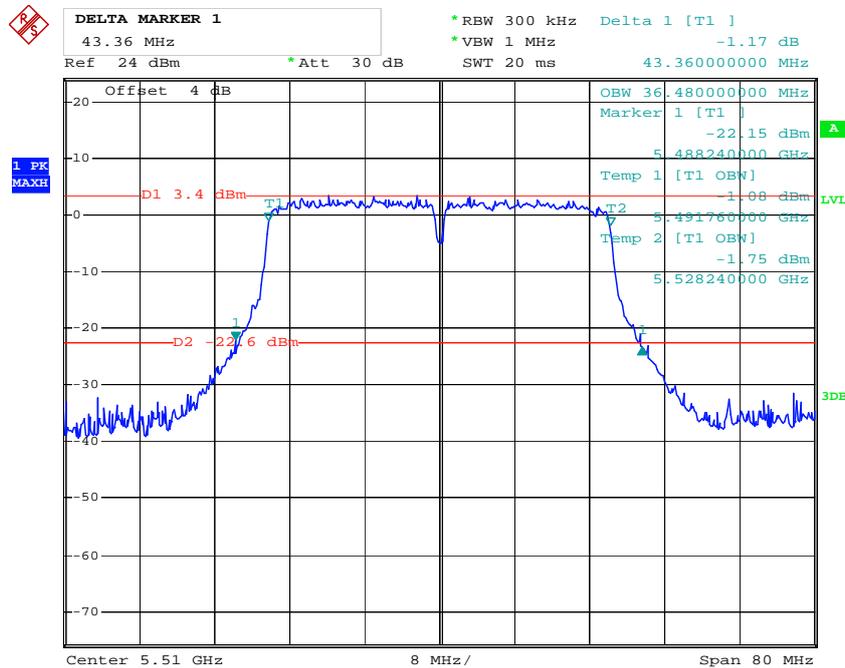
Date:　　　18.MAY.2015　17:13:17

Chain 2:802.11n ht40 Middle Channel
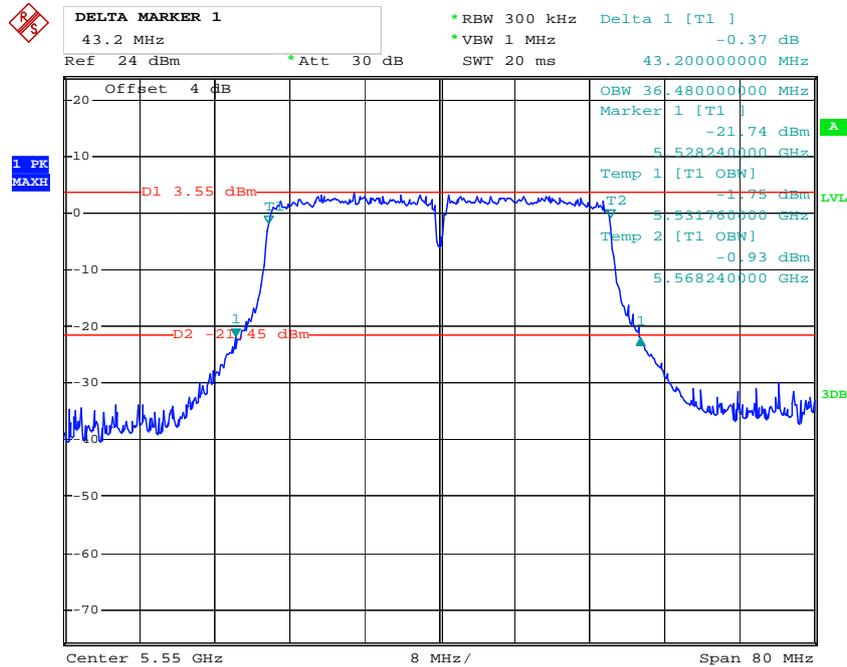
Date: 18.MAY.2015 17:12:27

Chain 2:802.11n ht40 High Channel
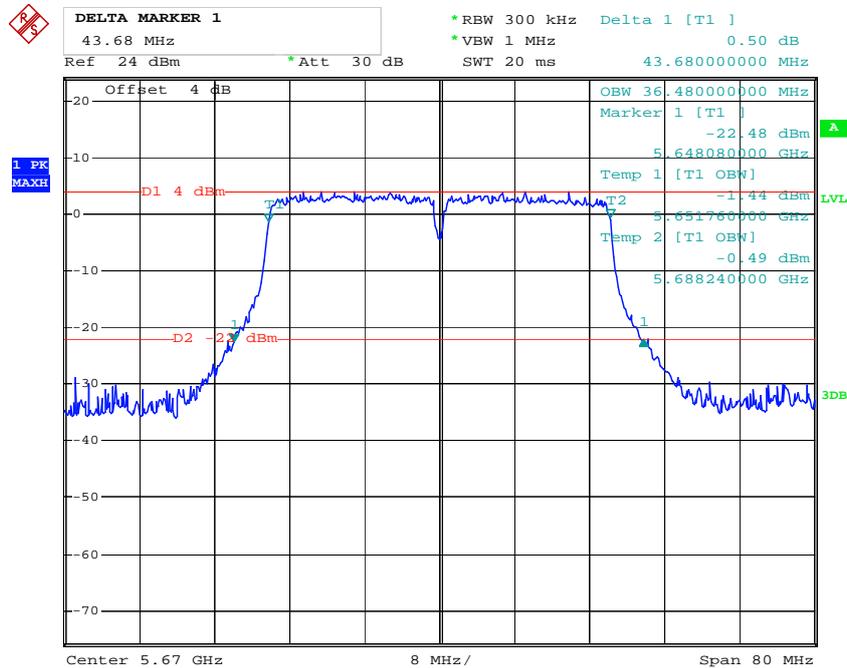
Date: 18.MAY.2015 17:06:33

Chain 2:802.11n ac80 Low Channel
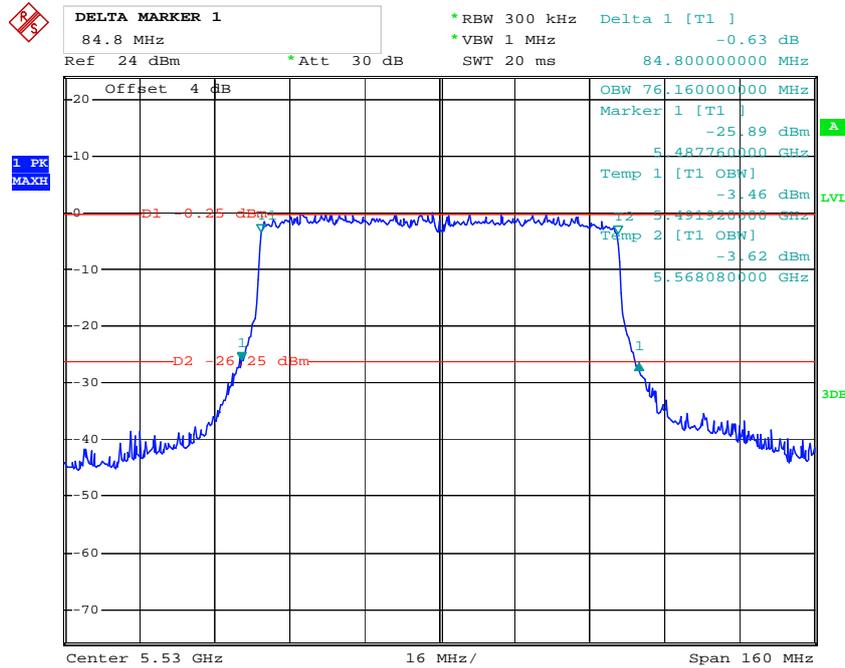
Date:　　　18.MAY.2015　17:05:29

Chain 2:802.11n ac80 High Channel
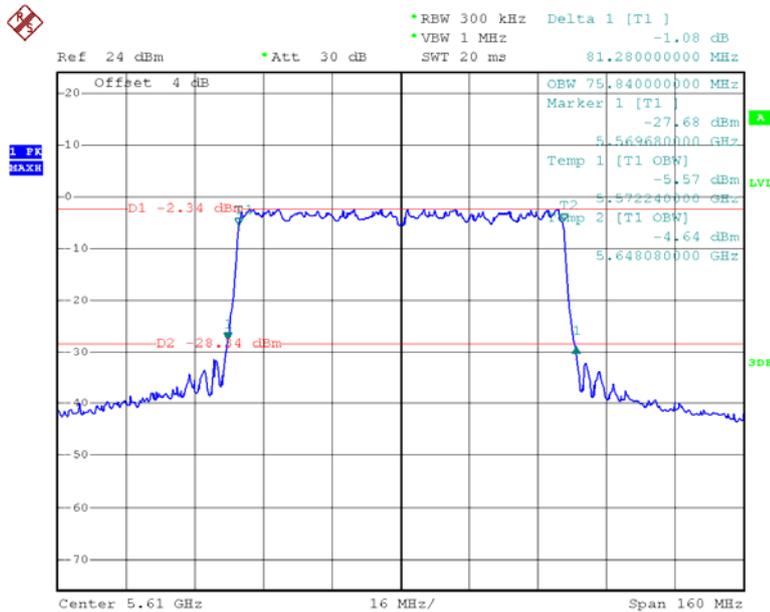
Date: 4.FEB.2016　13:48:27

FCC §15.407(a) (1) (ii) (4) –MAXIMUM CONDUCTED OUTPUT POWER

Applicable Standard

(a) Power limits:

(1) For the band 5.15-5.25 GHz.

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(3) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(4) The maximum conducted output power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	Wideband Power Sensor	N1921A	MY54210016	2014-11-03	2015-11-03
Agilent	Wideband Power Sensor	N1921A	MY54210016	2015-11-03	2016-11-03
Agilent	Wideband Power Sensor	N1921A	MY54170013	2014-11-03	2015-11-03
Agilent	Wideband Power Sensor	N1921A	MY54170013	2015-11-03	2016-11-03
Agilent	P-Series Power Meter	N1912A	MY5000448	2014-11-03	2015-11-03
Agilent	P-Series Power Meter	N1912A	MY5000448	2015-11-03	2016-11-03

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

Test Procedure

According to KDB 789033 D02 General UNII Test Procedures New Rules v01.

Test Data

Environmental Conditions

Temperature:	20.1°C -25.1 °C
Relative Humidity:	40%-54 %
ATM Pressure:	99.9 kPa-101.3 kPa

The testing was performed by Allen Qiao on 2015-07-27 & 2016-02-04.

Test Mode: Transmitting

UNII Band	Mode	Channel	Frequency(MHz)	RMS Power(dBm)			Total (dBm)	Limit (dBm)
				Chain 0	Chain 1	Chain 2		
5250-5350MHz	802.11 a	Low	5260	9.72	9.84	8.67	14.21	21
		Middle	5280	10.03	10.11	9.35	14.61	21
		High	5320	10.29	10.18	9.24	14.7	21
	802.11 n20	Low	5260	9.49	9.61	8.91	14.12	21
		Middle	5280	9.92	9.87	9.03	14.4	21
		High	5320	10.04	10.16	9.84	14.79	21
	802.11 n40	Low	5270	12.39	12.13	11.62	16.83	21
		High	5310	12.63	12.35	11.84	17.06	21
	802.11 ac80	Middle	5290	14.03	13.14	13.61	18.38	21
5470-5725MHz	802.11 a	Low	5500	8.64	8.48	7.92	13.13	21
		Middle	5580	9.2	9.06	8.67	13.75	21
		High	5700	9.35	9.51	8.75	13.99	21
	802.11 n20	Low	5500	8.16	8.52	7.84	12.95	21
		Middle	5580	8.54	8.74	7.95	13.19	21
		High	5700	8.92	8.61	7.81	13.24	21
	802.11 n40	Low	5510	12.06	12.14	11.62	16.72	21
		Middle	5550	12.14	12.03	11.47	16.66	21
		High	5670	11.95	12.08	11.61	16.66	21
	802.11 ac80	Low	5530	13.15	13.17	14.01	18.23	21
		High	5610	12.48	12.42	12.41	17.21	21

Note: The device is only for indoor use, employed 3 pcs 9.0dBi internal antenna, and employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power measurements on IEEE 802.11 devices:

Array Gain = 0 dB (i.e., no array gain) for NANT ≤ 4;

So:

Directional gain = GANT + Array Gain = 9dBi

The power limit should be reduced by 3dB.

FCC §15.407(a) - POWER SPECTRAL DENSITY

Applicable Standard

(a) Power limits:

(1) For the band 5.15-5.25 GHz.

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(3) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

Test Procedure

According to KDB 789033 D02 General UNII Test Procedures New Rules v01

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSP 38	100478	2015-05-09	2016-05-09

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

Test Data

Environmental Conditions

Temperature:	20.1°C -25.1 °C
Relative Humidity:	40%-54 %
ATM Pressure:	99.9 kPa-101.3 kPa

The testing was performed by Allen Qiao on 2015-07-27 & 2016-02-04.

Test Mode: Transmitting

Test Result:Compliance.Please refer to the following table and plot.

UNII Band	Mode	Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)				
				Chain 0	Chain 1	Chain 2	Total	Limit
5250-5350MHz	802.11 a	Low	5260	-1.83	-1.76	-2.3	2.81	3.23
		Middle	5280	-1.63	-1.85	-2.34	2.84	3.23
		High	5320	-1.74	-1.81	-2.3	2.83	3.23
	802.11 n20	Low	5260	-1.89	-1.54	-2.02	2.96	3.23
		Middle	5280	-1.57	-1.64	-1.96	3.05	3.23
		High	5320	-1.78	-1.64	-2.22	2.9	3.23
	802.11 n40	Low	5270	-1.87	-1.95	-2.46	2.69	3.23
		High	5310	-2.01	-2.12	-2.34	2.62	3.23
	802.11 ac80	Middle	5290	-3.18	-4.24	-3.4	1.19	3.23
5470-5725MHz	802.11 a	Low	5500	-1.63	-1.7	-2.36	2.89	3.23
		Middle	5580	-1.76	-1.92	-2.24	2.8	3.23
		High	5700	-1.65	-1.81	-2.37	2.84	3.23
	802.11 n20	Low	5500	-1.52	-1.64	-2.16	3.01	3.23
		Middle	5580	-1.75	-1.79	-2.51	2.77	3.23
		High	5700	-1.42	-1.72	-2.15	3.02	3.23
	802.11 n40	Low	5510	-1.57	-2.01	-2.42	2.79	3.23
		Middle	5550	-1.87	-1.97	-2.38	2.7	3.23
		High	5670	-1.85	-1.78	-2.17	2.84	3.23
	802.11 ac80	Low	5530	-3.68	-3.59	-4.26	0.94	3.23
		High	5610	-4.58	-4.63	-4.64	0.15	3.23

Note : The device employed 3 pcs 9dBi internal antenna for 5G bands, and employed Cyclic Delay Diversity(CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power spectral density (PSD) measurements on the devices :

   Array Gain = $10 \log(N_{ANT}/NSS)$ dB.

So:

   Directional gain = GANT + Array Gain = $9+10*\log(3)=9+4.77=13.77$ dBi

The Power density Limits was reduce 8dB (13.77-6=7.77dB)

Please refer to the following plots

5250MHz-5350MHz:

Chain 0: Power Spectral Density, 802.11a Low Channel
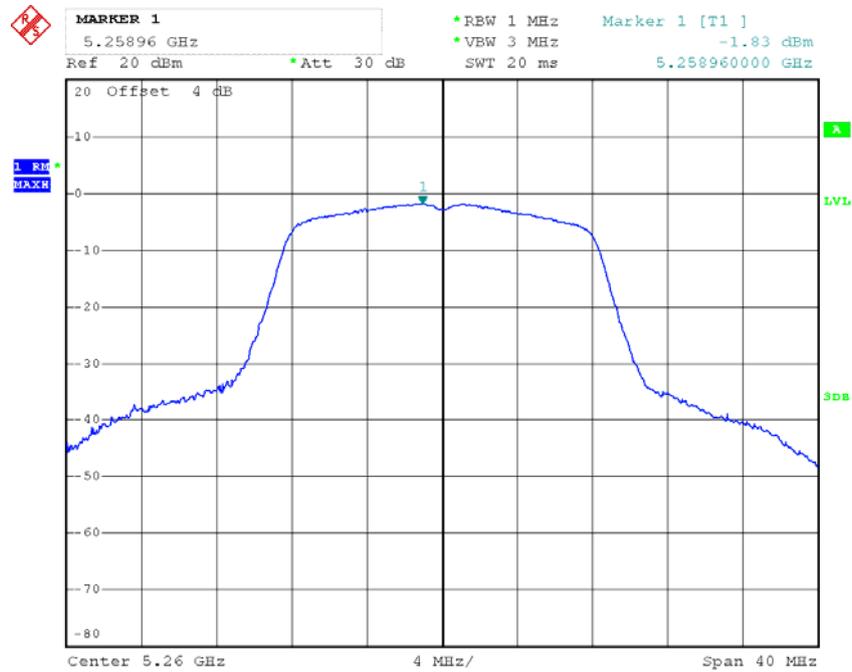
Date: 27.JUL.2015   17:54:31

Chain 0: Power Spectral Density, 802.11a Middle Channel
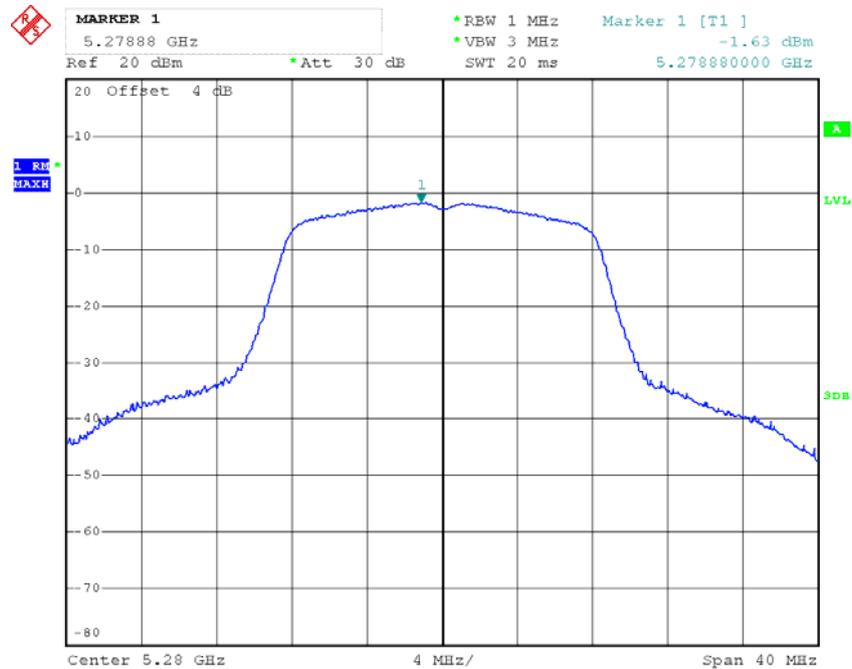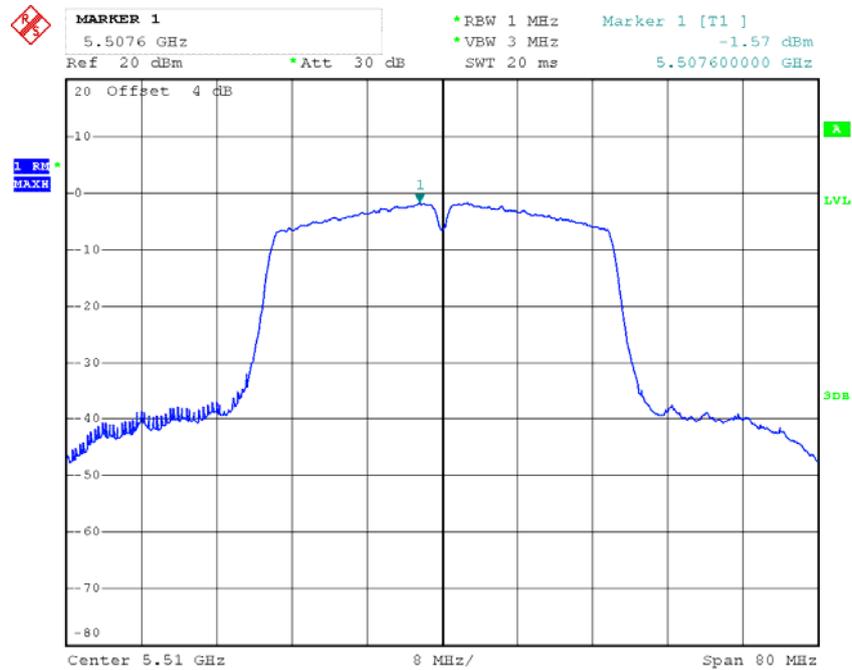

Date: 27.JUL.2015   17:57:10
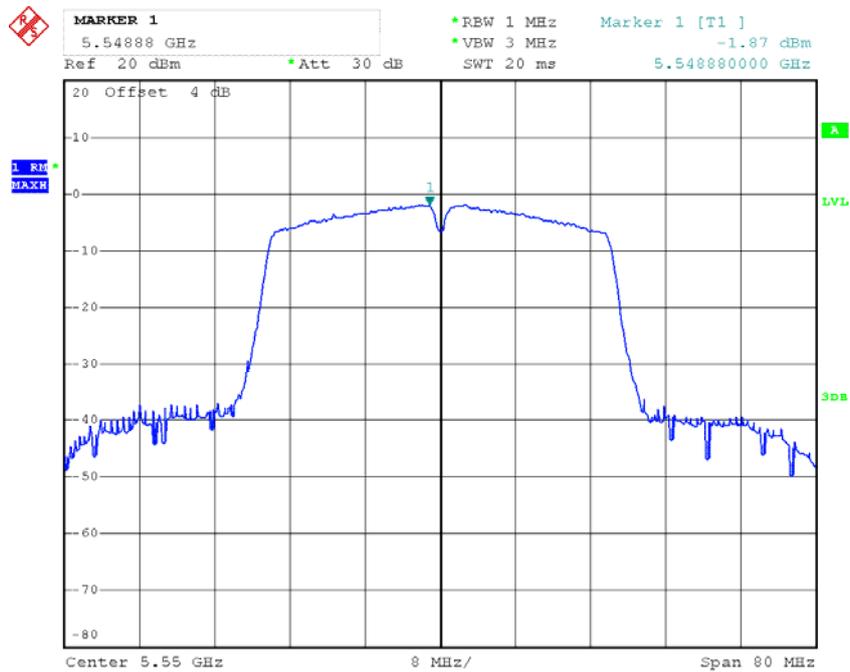
Chain 0: Power Spectral Density, 802.11a High Channel
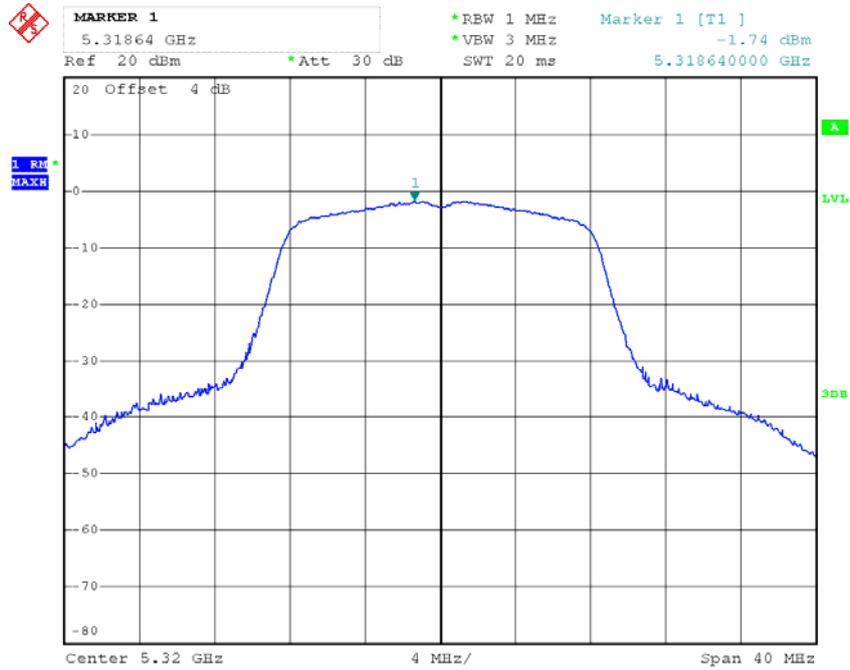
Date:　　27.JUL.2015　17:58:40

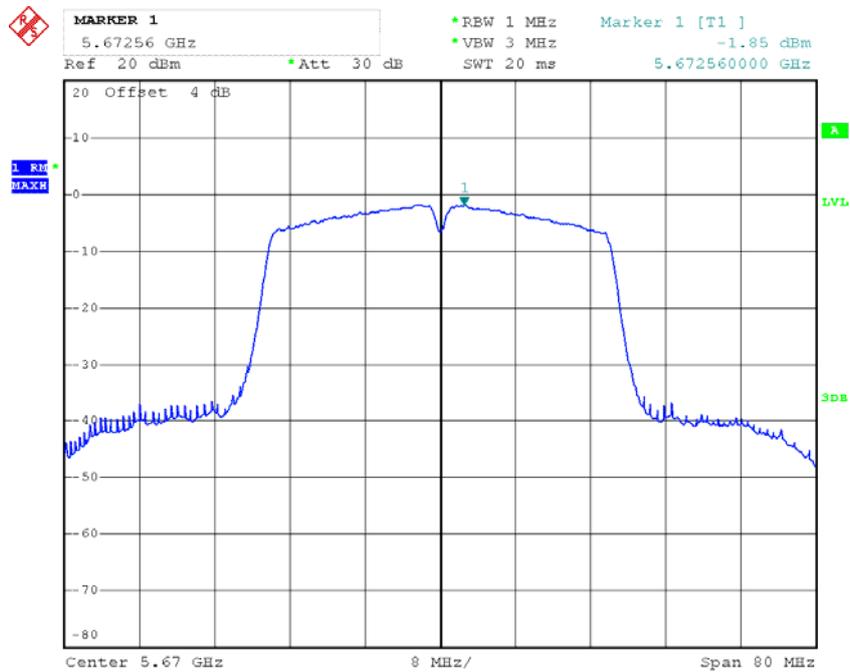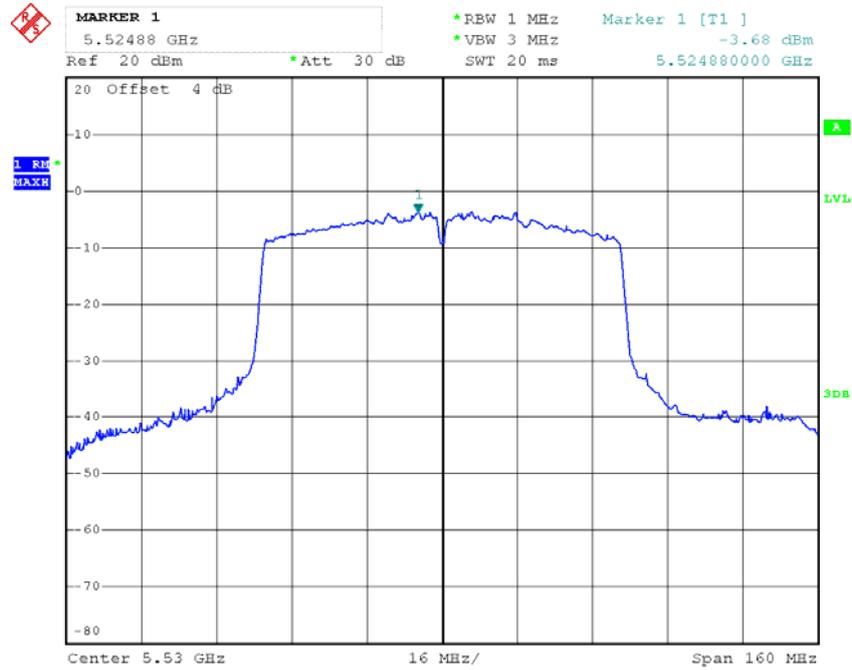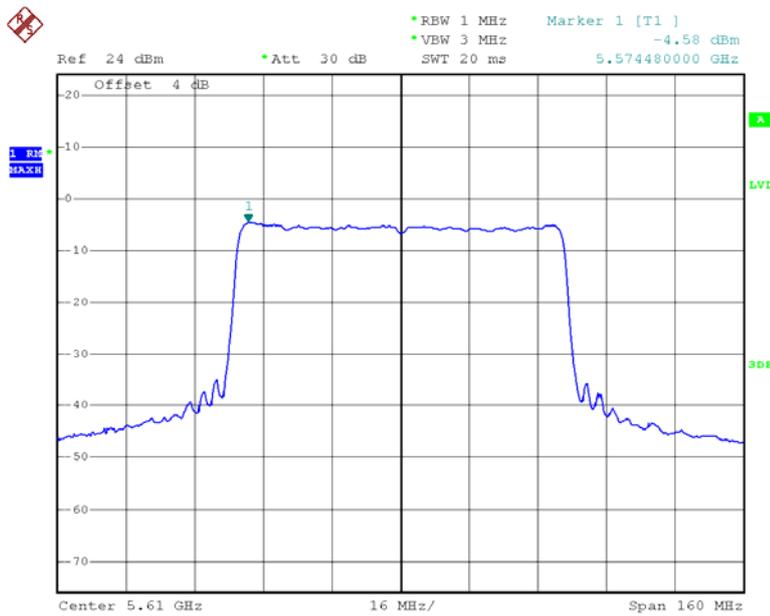**Chain 0: Power Spectral Density, 802.11n ht20 Low Channel**
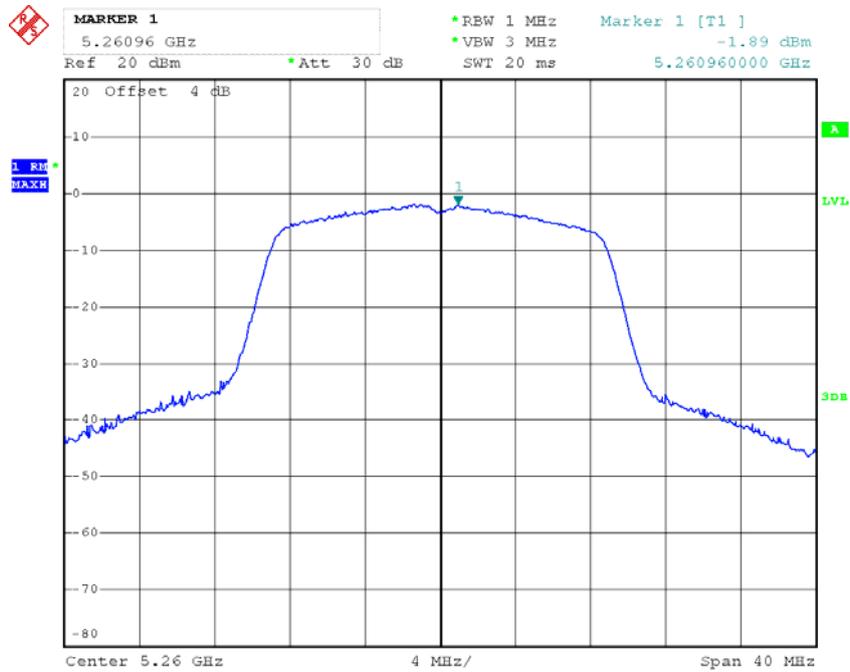
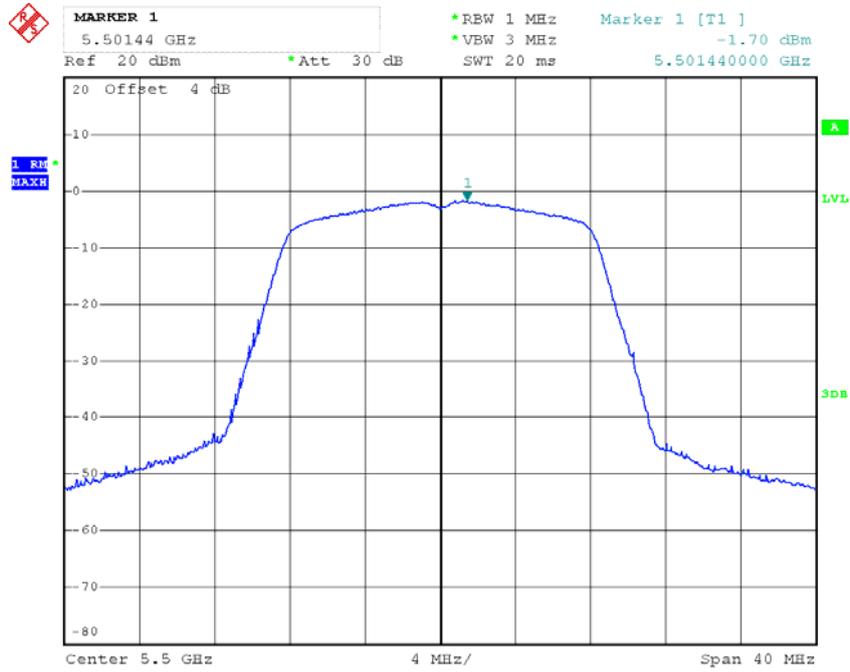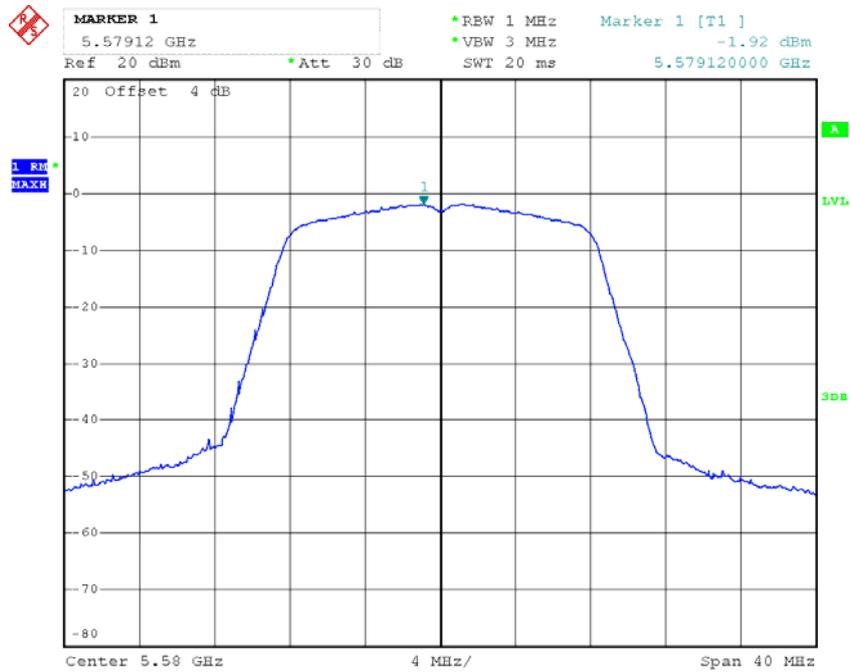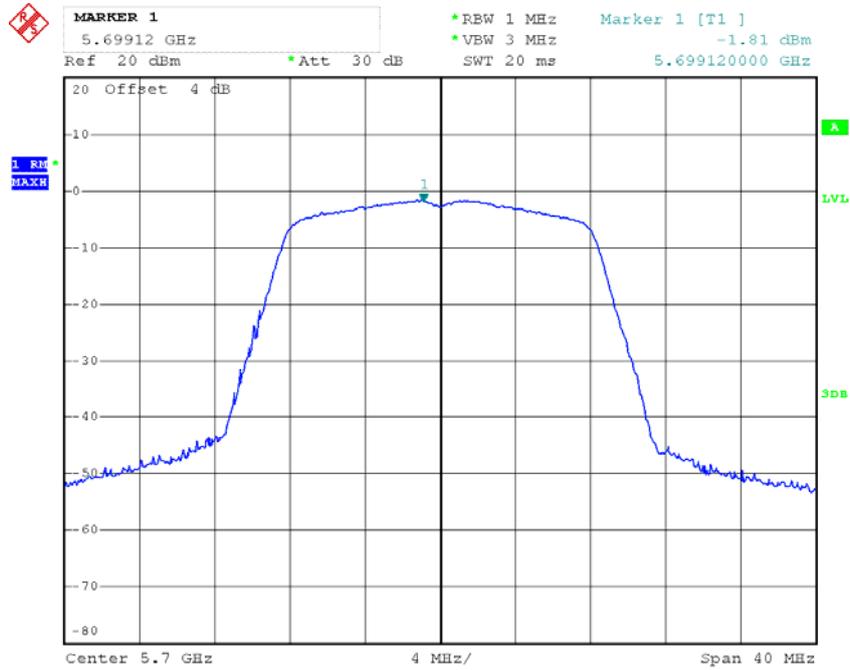

Date:　　27.JUL.2015　18:02:10

Chain 0: Power Spectral Density, 802.11n ht20 Middle Channel
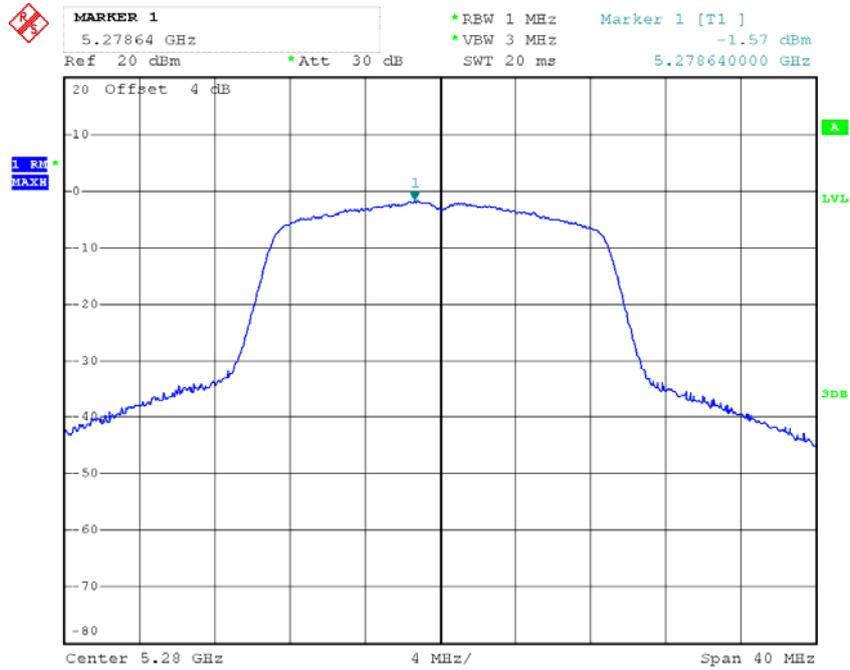
Date: 27.JUL.2015 18:01:14

Chain 0: Power Spectral Density, 802.11n ht20 High Channel
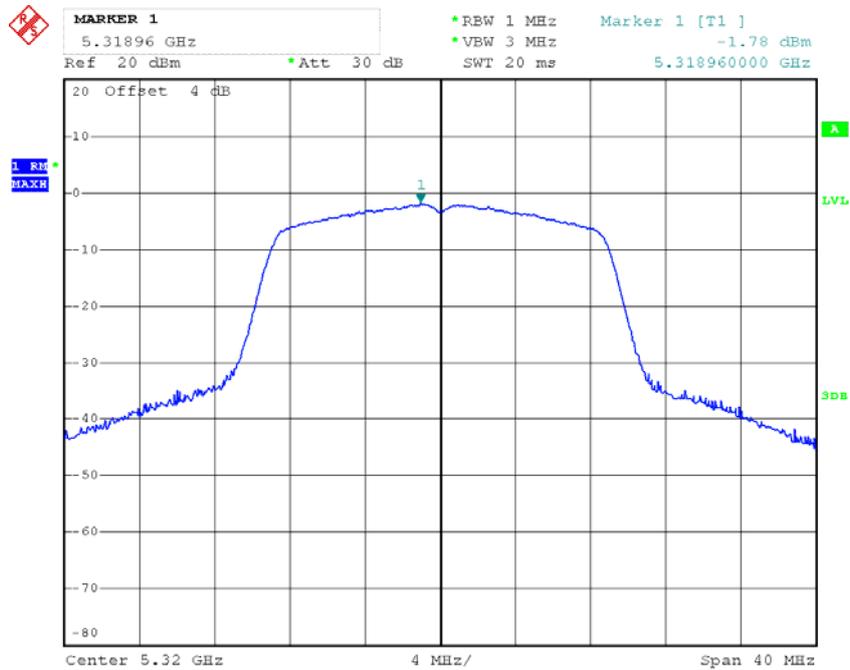
Date: 27.JUL.2015 17:59:58

Chain 0: Power Spectral Density, 802.11n ht40 Low Channel
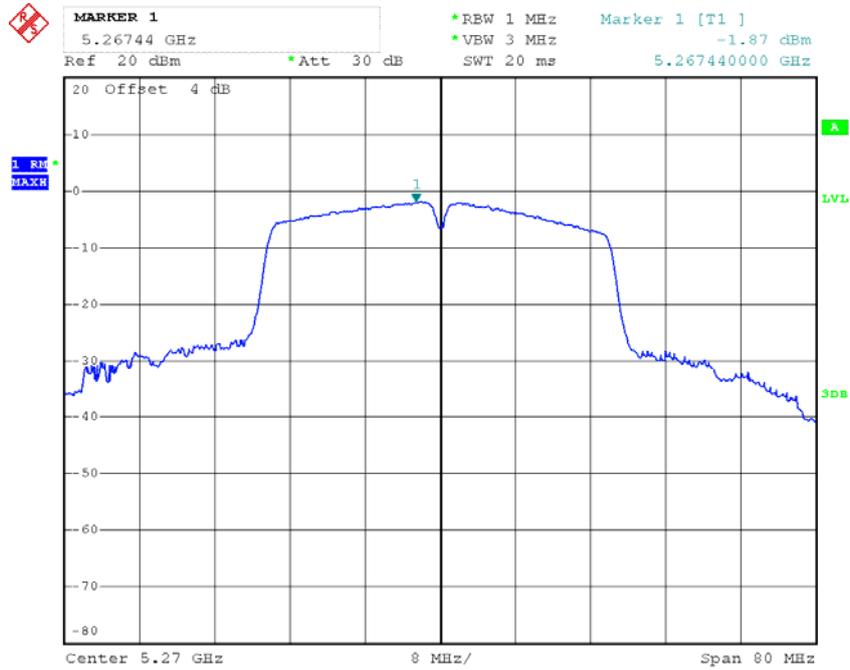
Date: 27.JUL.2015 18:03:43

Chain 0: Power Spectral Density, 802.11n ht40 High Channel
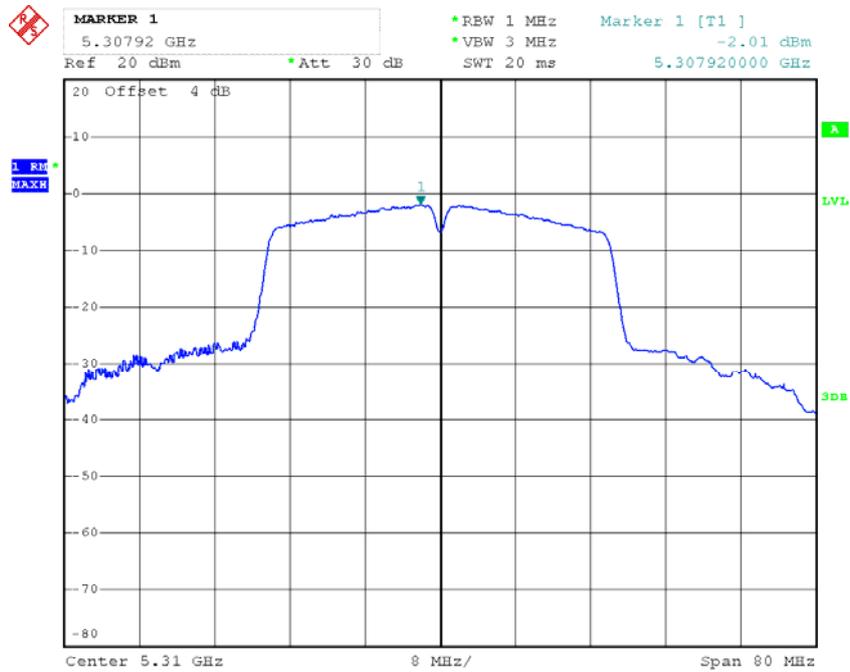
Date: 27.JUL.2015 18:06:26

Chain 0: Power Spectral Density, 802.11n ac80 Middle Channel
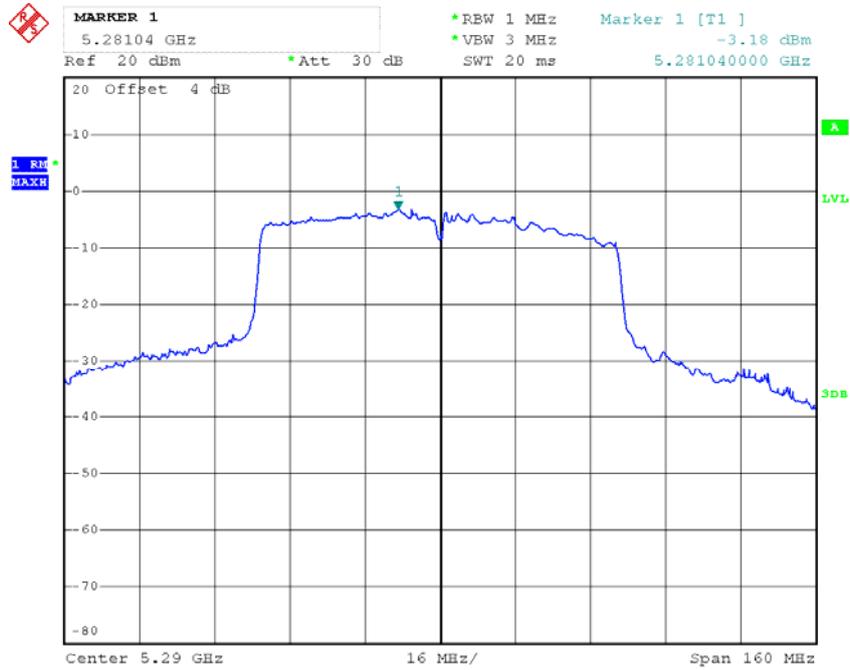
Date: 27.JUL.2015 18:08:34

Chain 1: Power Spectral Density, 802.11a Low Channel
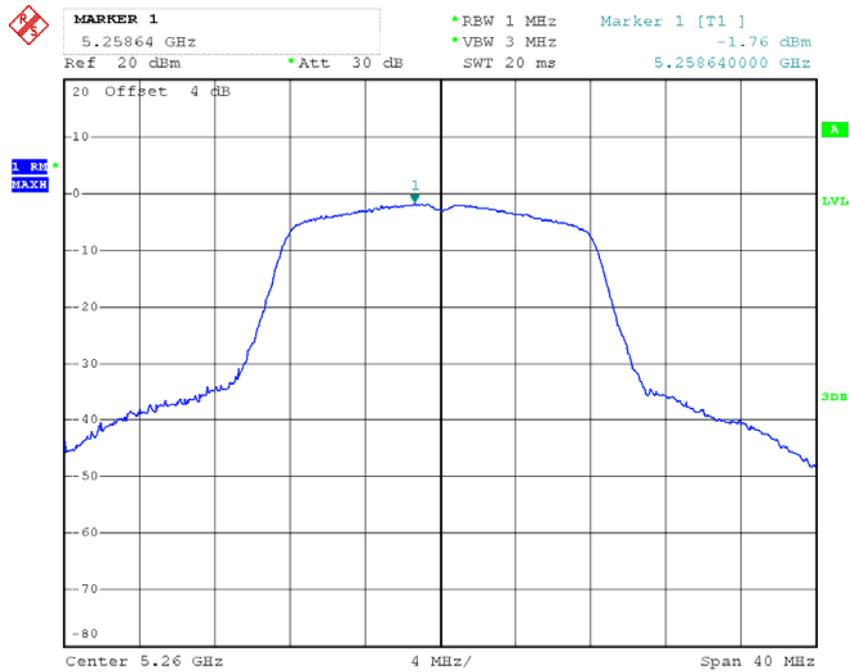
Date: 27.JUL.2015 17:54:38

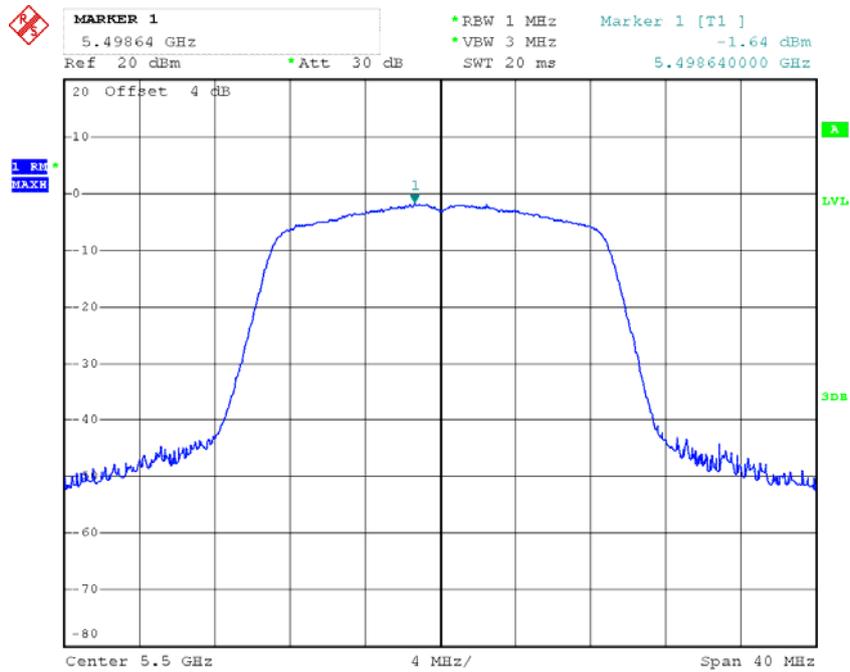### Chain 1: Power Spectral Density, 802.11a Middle Channel
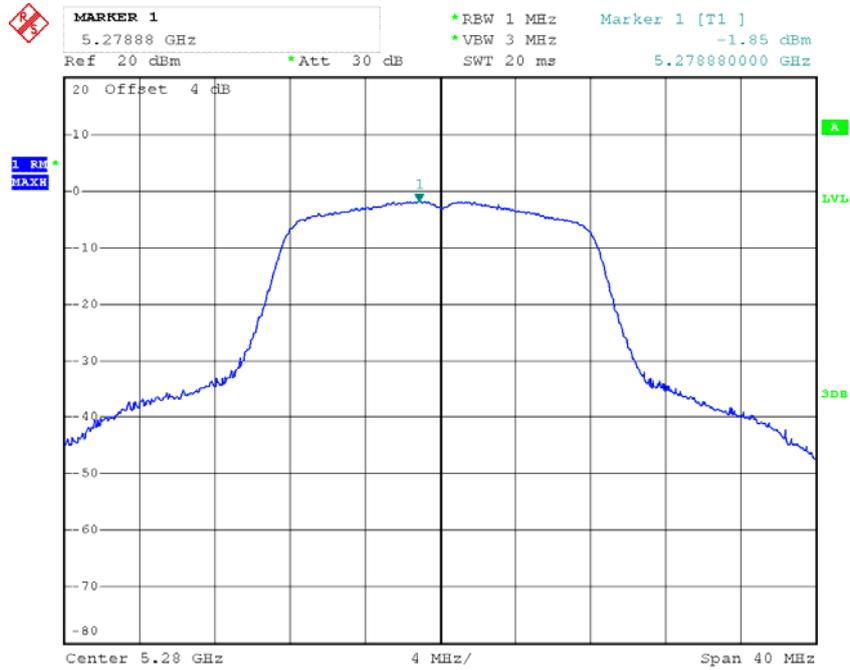
Date: 27.JUL.2015 17:57:18
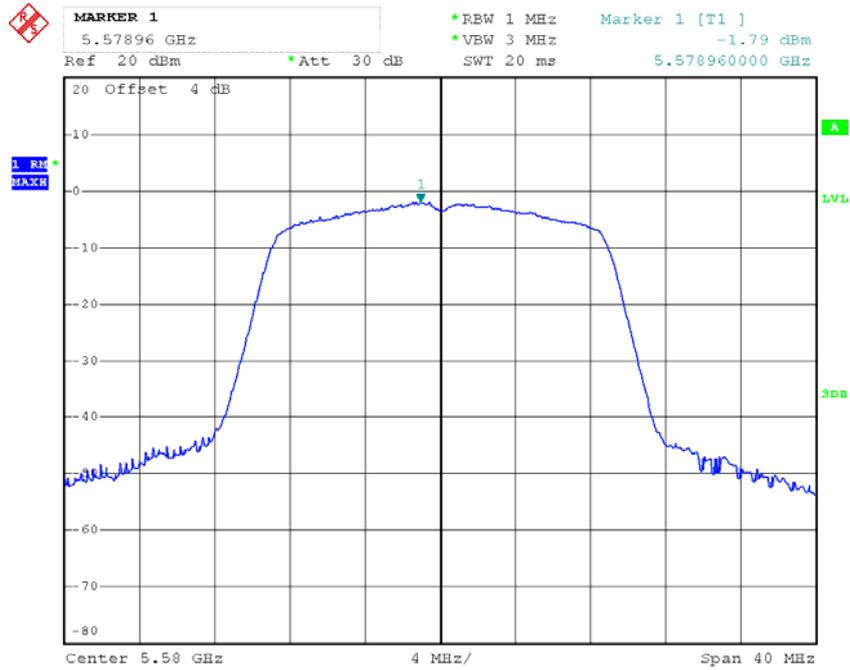
Chain 1: Power Spectral Density, 802.11a High Channel
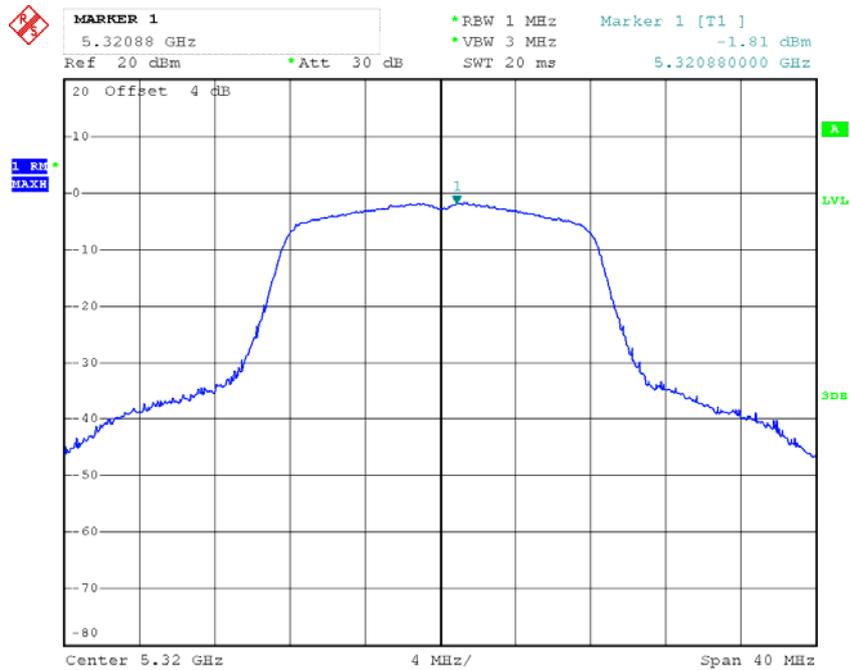
Date: 27.JUL.2015 17:58:45

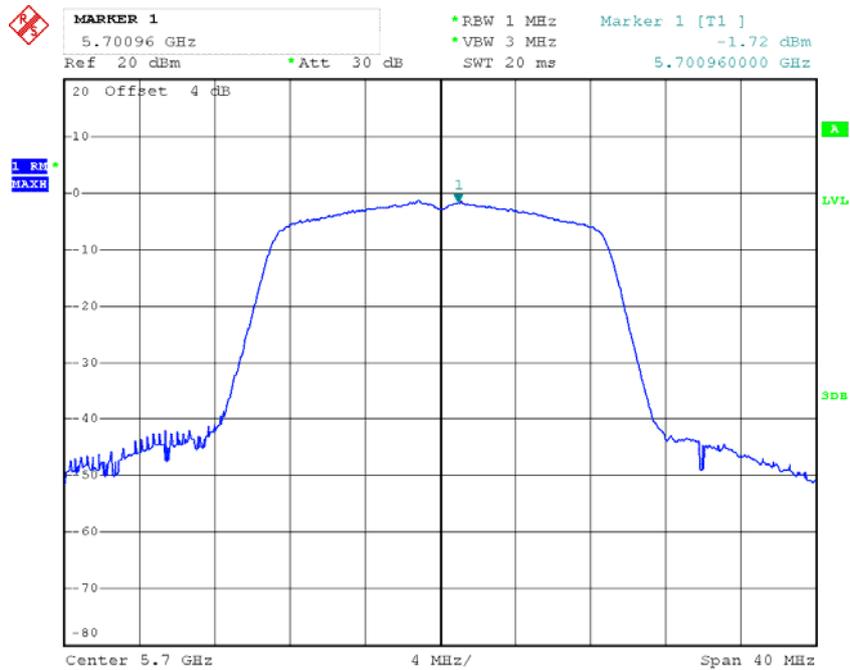## Chain 1: Power Spectral Density, 802.11n ht20 Low Channel
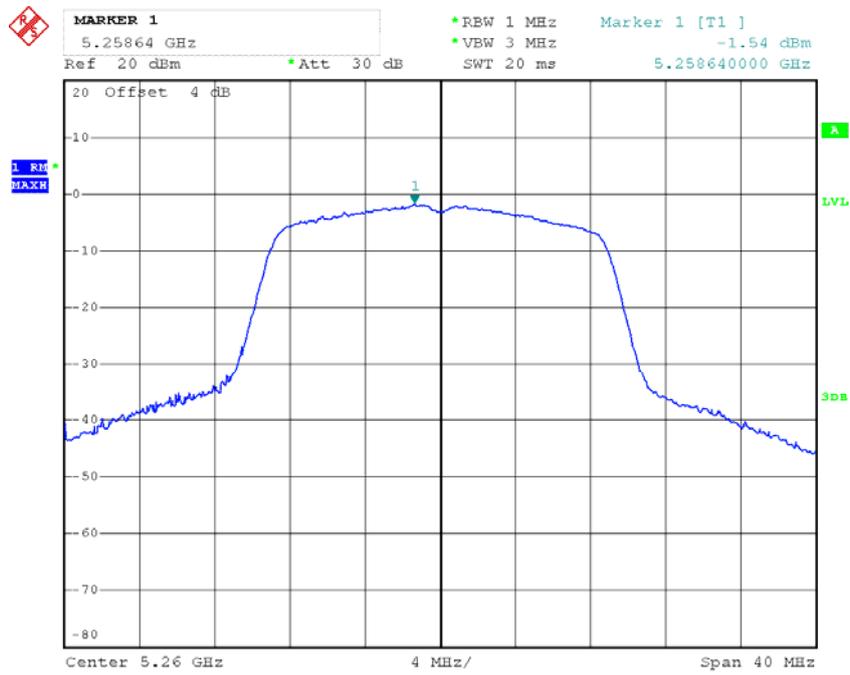
Date:　　27.JUL.2015　18:02:19

Chain 1: Power Spectral Density, 802.11n ht20 Middle Channel
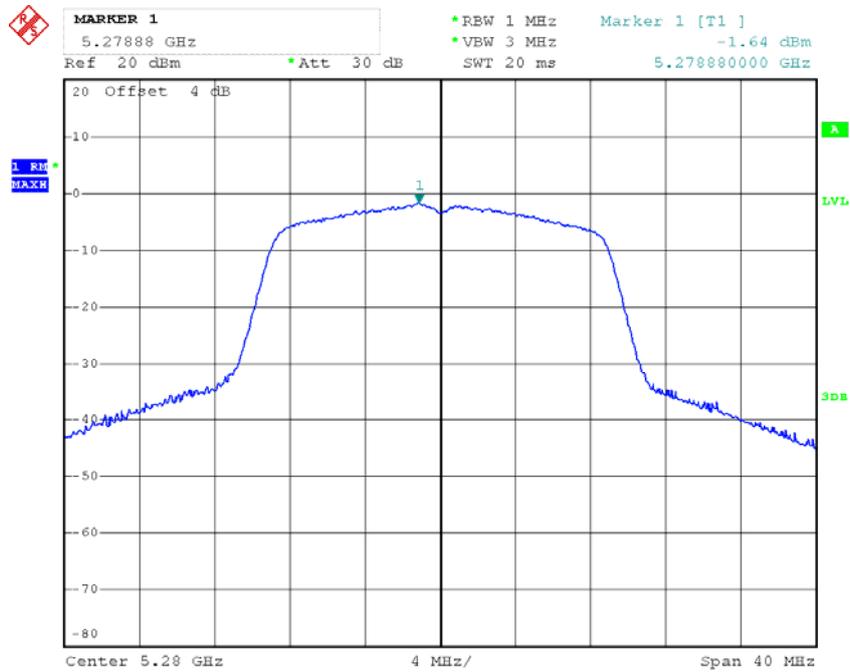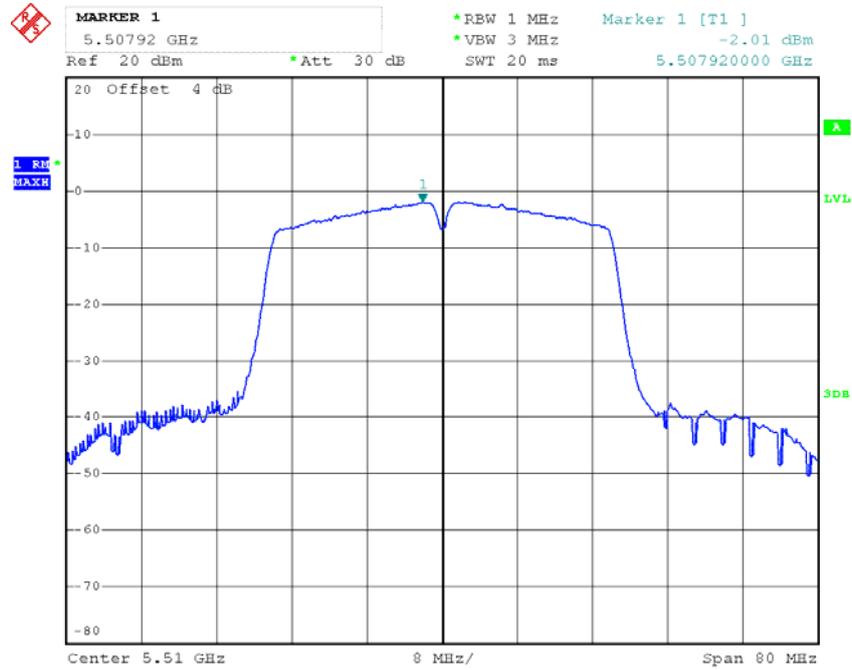

Date:　　27.JUL.2015　18:01:26

Chain 1: Power Spectral Density, 802.11n ht20 High Channel
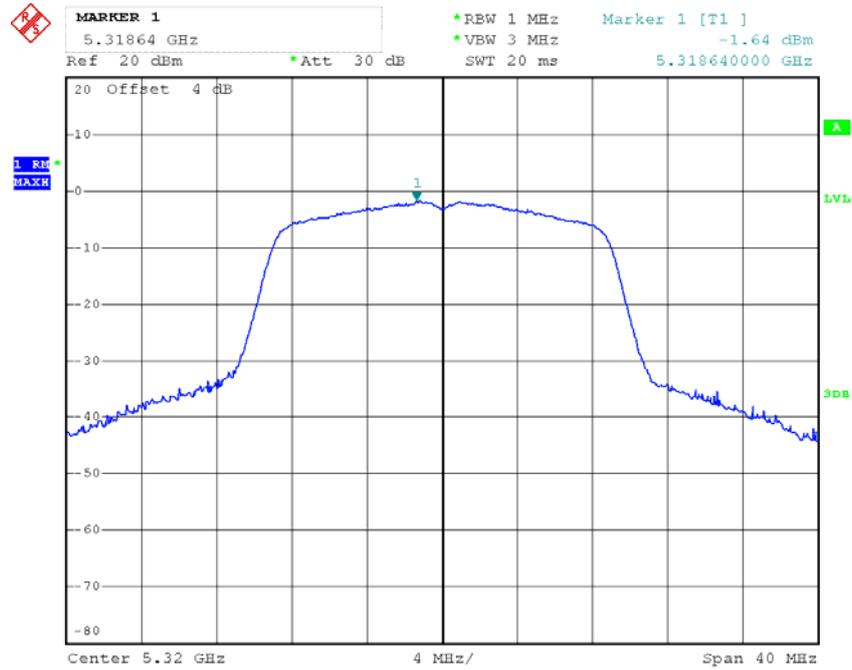
Date: 27.JUL.2015 18:00:07

Chain 1: Power Spectral Density, 802.11n ht40 Low Channel
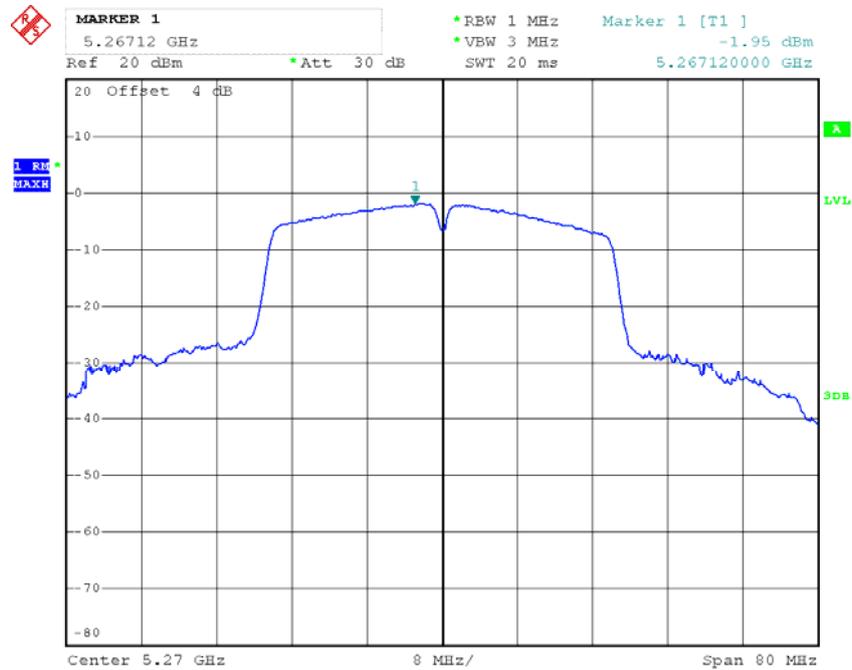
Date: 27.JUL.2015 18:04:14

Chain 1: Power Spectral Density, 802.11n ht40 High Channel
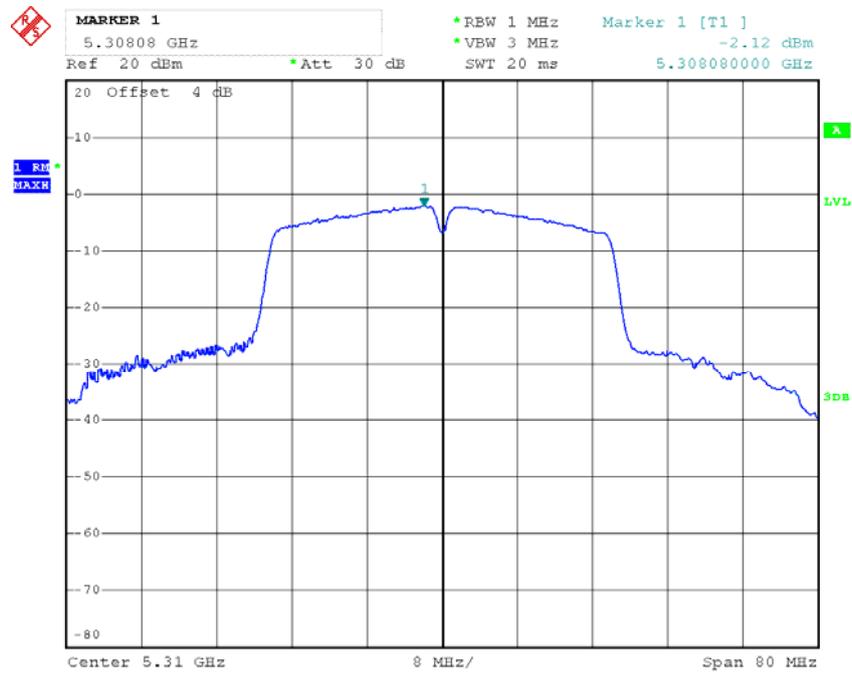
Date: 27.JUL.2015 18:06:38

Chain 1: Power Spectral Density, 802.11n ac80 Middle Channel
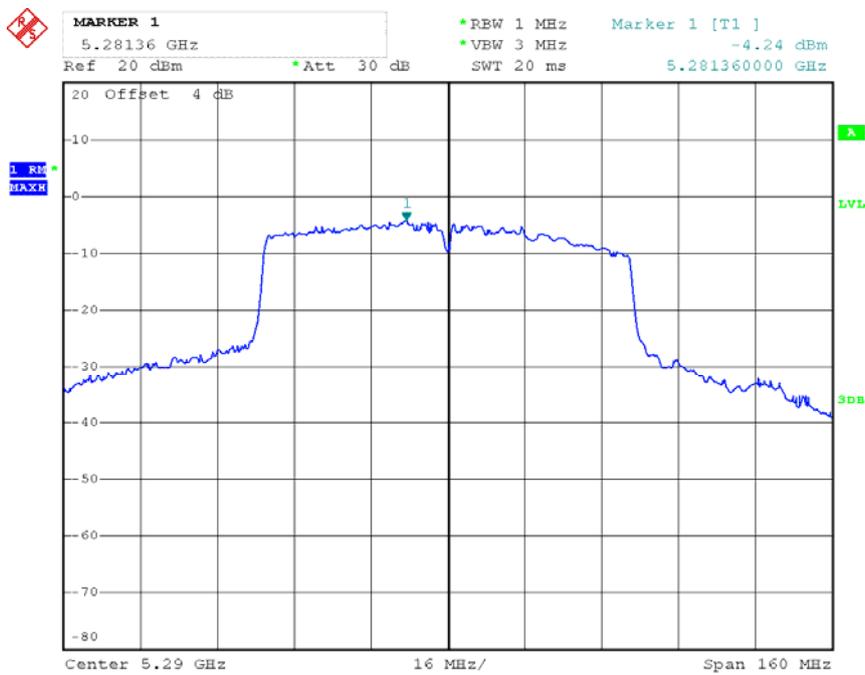
Date: 27.JUL.2015 18:08:44

Chain 2: Power Spectral Density, 802.11a Low Channel
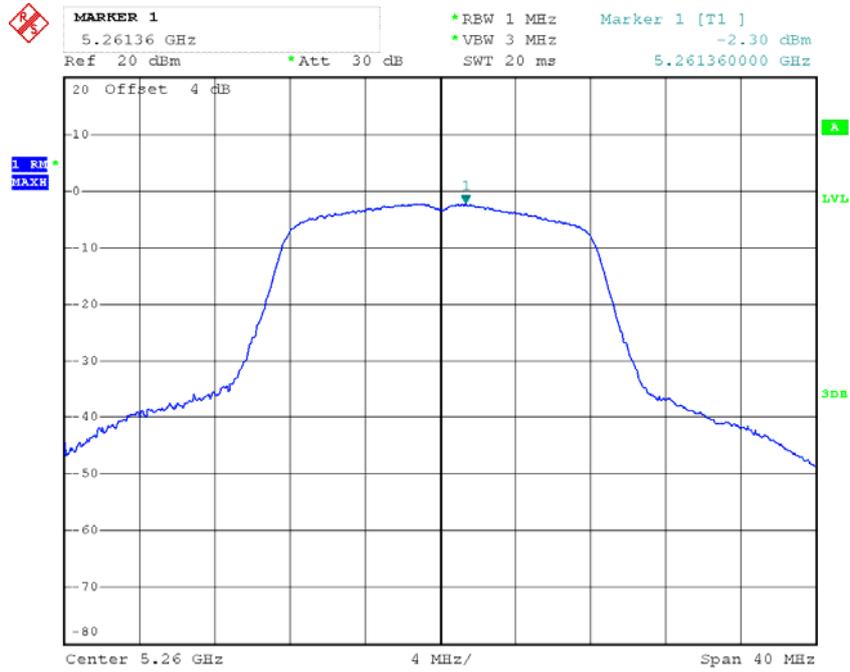
Date: 27.JUL.2015 17:55:10

Chain 2: Power Spectral Density, 802.11a Middle Channel
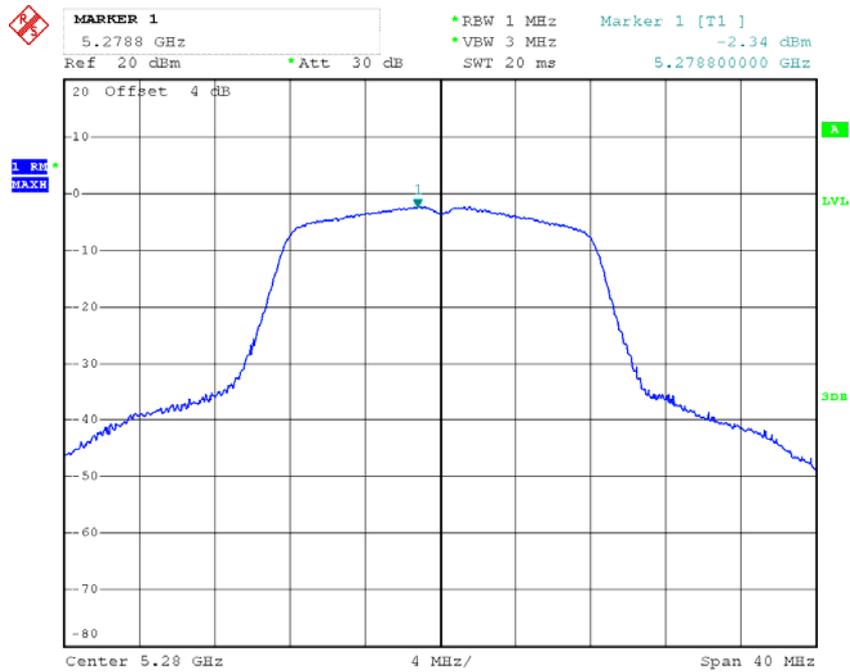
Date: 27.JUL.2015 17:57:32

Chain 2: Power Spectral Density, 802.11a High Channel
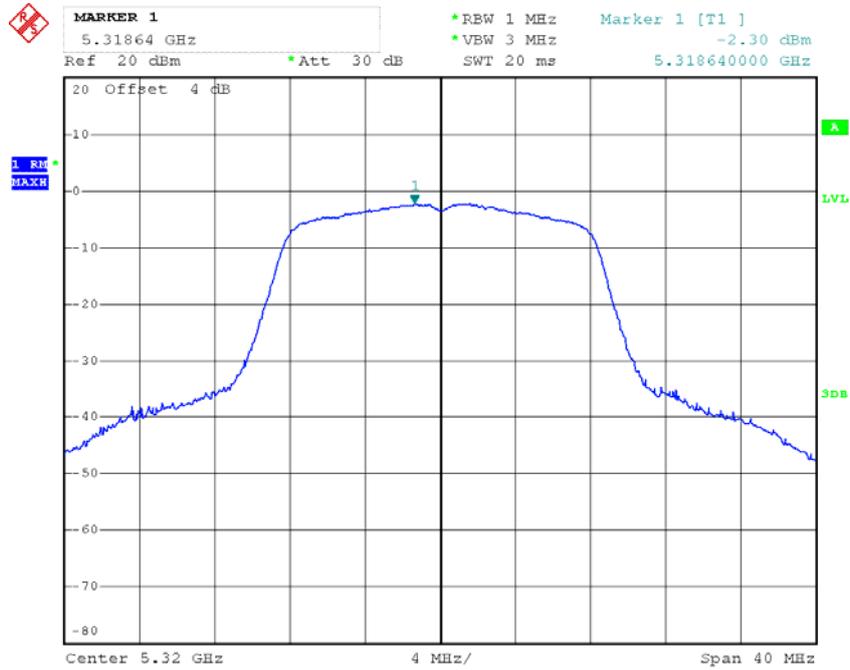
Date: 27.JUL.2015 17:59:04

Chain 2: Power Spectral Density, 802.11n ht20 Low Channel
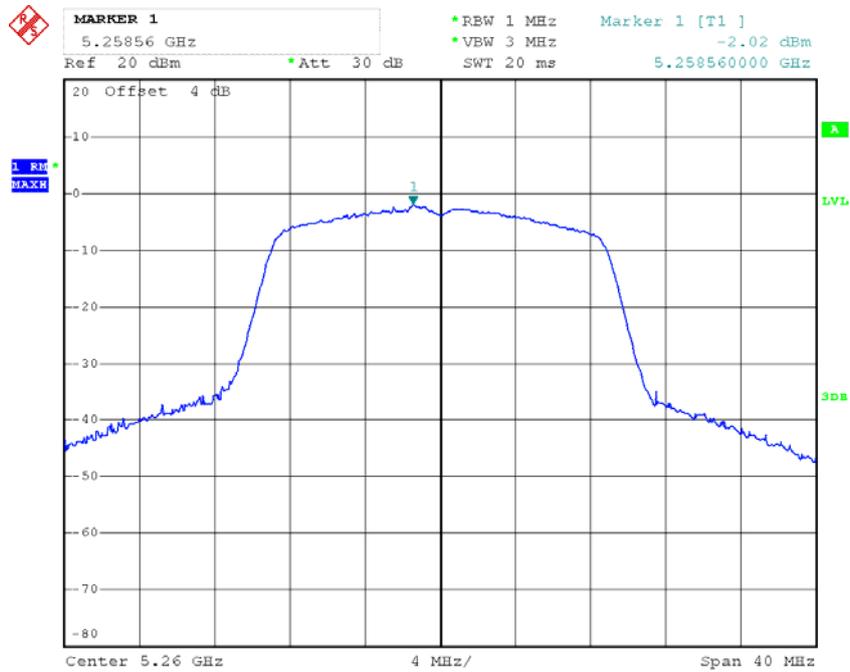
Date: 27.JUL.2015 18:02:35

Chain 2: Power Spectral Density, 802.11n ht20 Middle Channel
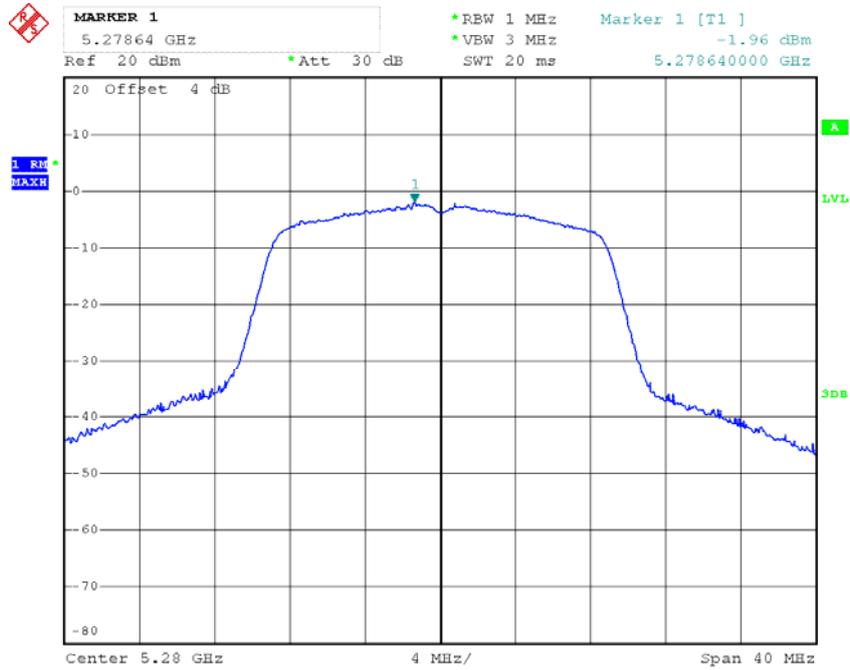
Date: 27.JUL.2015 18:01:40

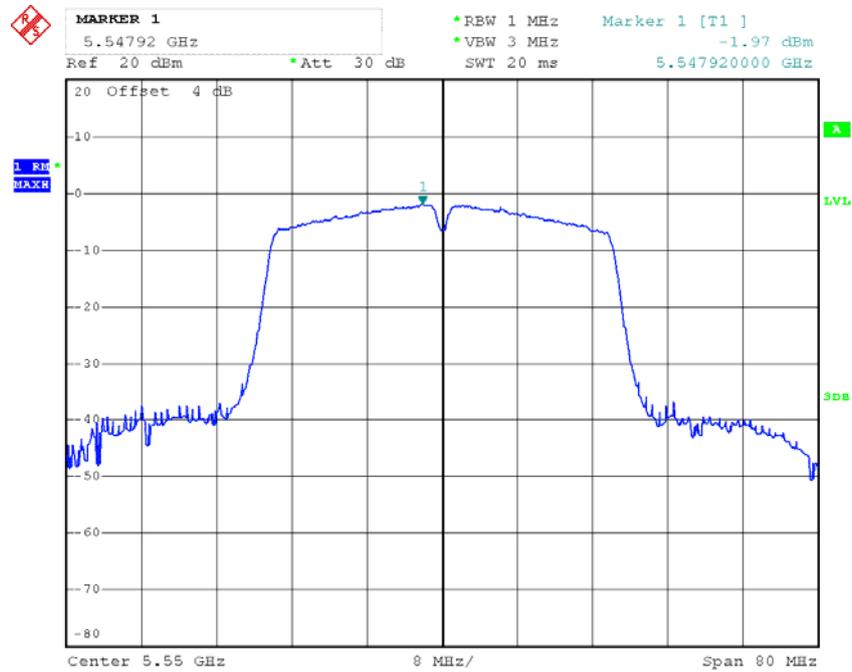### Chain 2: Power Spectral Density, 802.11n ht20 High Channel
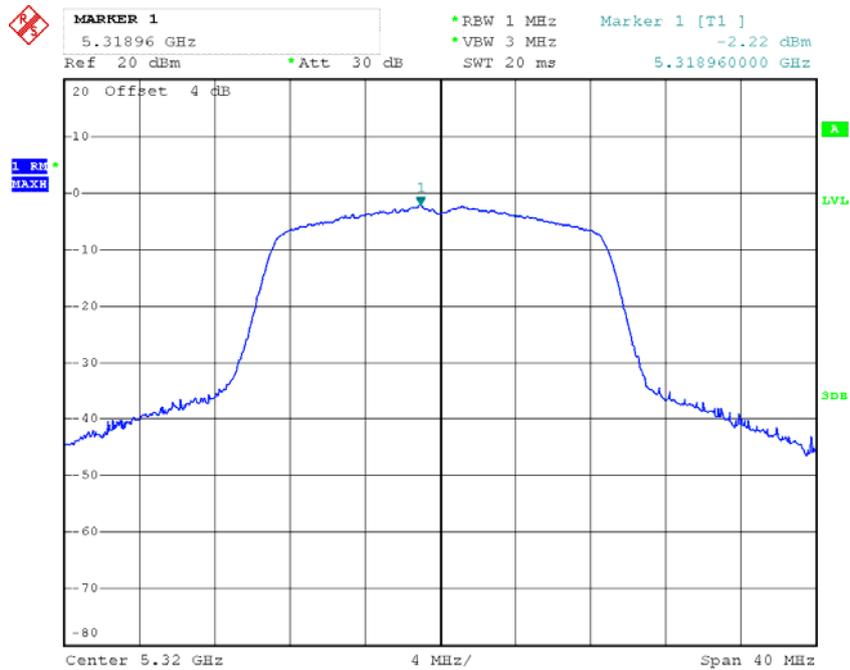
Date: 27.JUL.2015 18:00:26

Chain 2: Power Spectral Density, 802.11n ht40 Low Channel

MARKER 1			*RBW 1 MHz	Marker 1 [T1]	
5.26808 GHz			*VBW 3 MHz		-2.46 dBm
Ref 20 dBm		*Att 30 dB	SWT 20 ms	5.268080000 GHz	

20 Offset 4 dB

Center 5.27 GHz　　　　　　8 MHz/　　　　　　Span 80 MHz
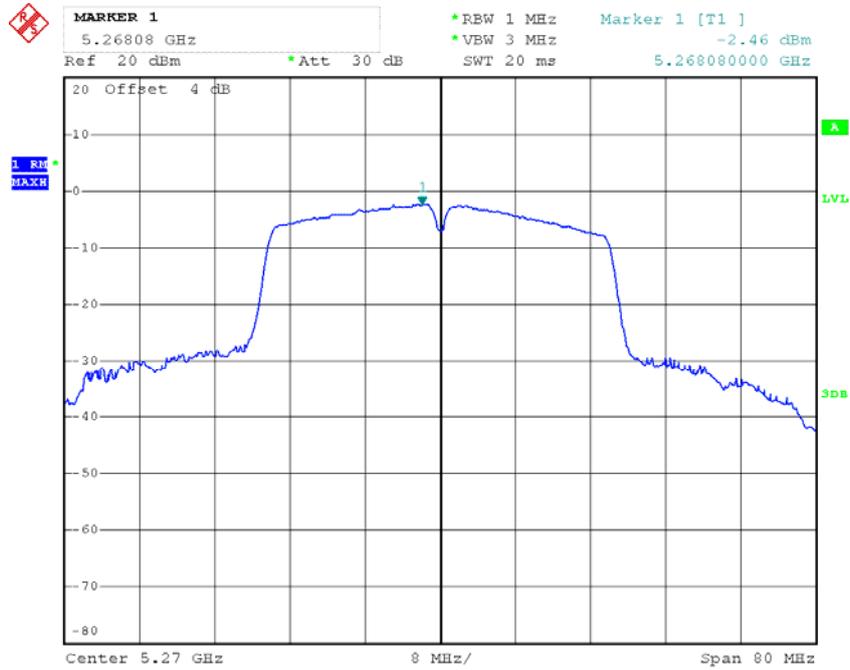
Date:　　　27.JUL.2015　18:04:46

Chain 2: Power Spectral Density, 802.11n ht40 High Channel

MARKER 1			*RBW 1 MHz	Marker 1 [T1]	
5.30792 GHz			*VBW 3 MHz		-2.34 dBm
Ref 20 dBm		*Att 30 dB	SWT 20 ms	5.307920000 GHz	

20 Offset 4 dB

Center 5.31 GHz　　　　　　8 MHz/　　　　　　Span 80 MHz
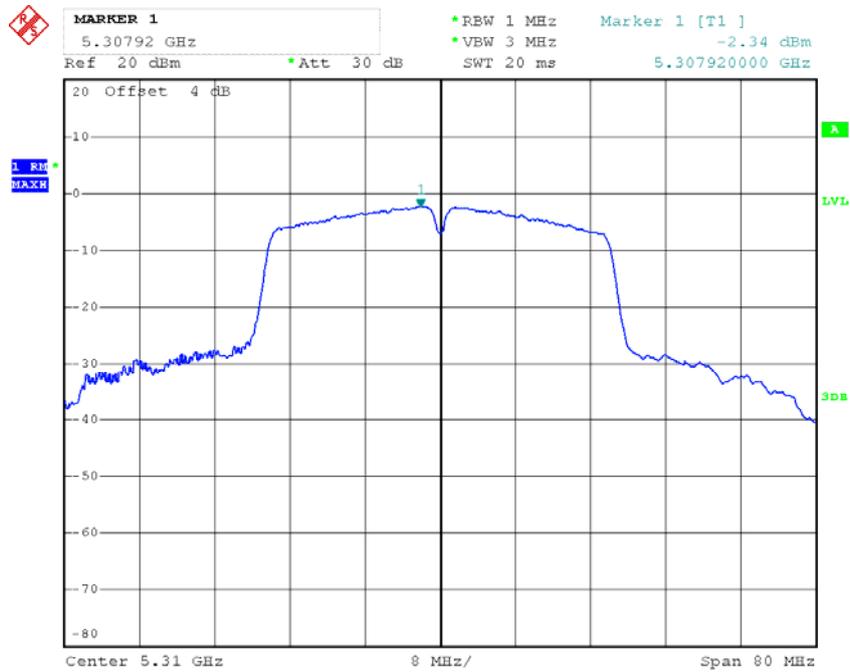
Date:　　　27.JUL.2015　18:07:10

Chain 2: Power Spectral Density, 802.11n ac80 Middle Channel
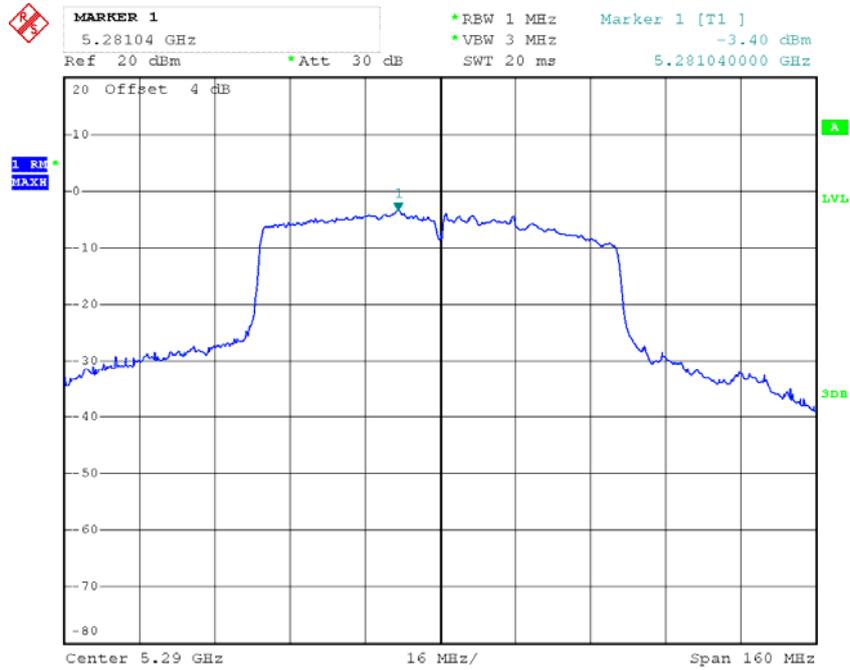
Date:　　　27.JUL.2015　18:08:56

5470MHz-5725MHz:

Chain 0: Power Spectral Density, 802.11a Low Channel
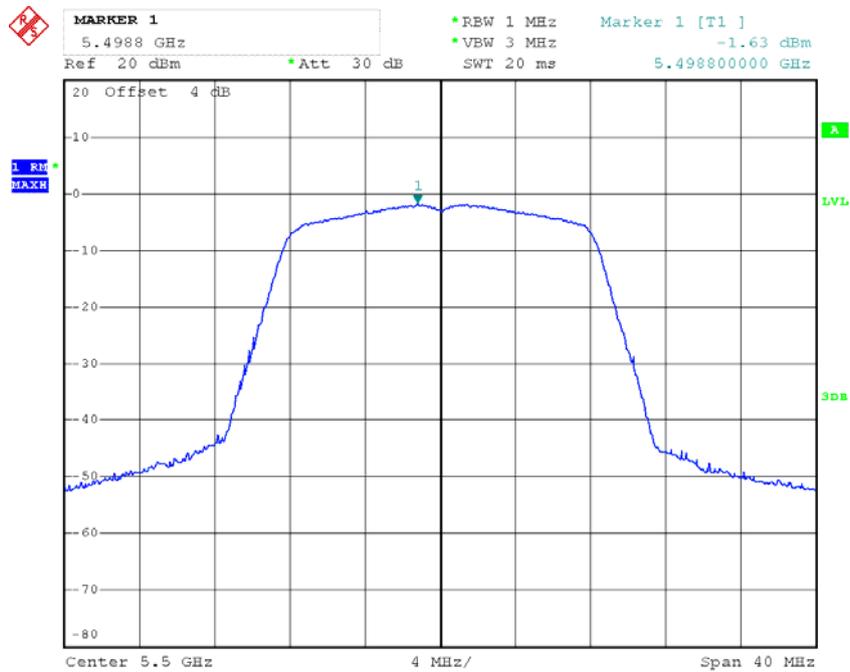
Date:　　　27.JUL.2015　18:14:22

Chain 0: Power Spectral Density, 802.11a Middle Channel

MARKER 1	*RBW 1 MHz	Marker 1 [T1]
5.58112 GHz	*VBW 3 MHz	-1.76 dBm
Ref 20 dBm *Att 30 dB	SWT 20 ms	5.581120000 GHz

20 Offset 4 dB

Center 5.58 GHz   4 MHz/   Span 40 MHz
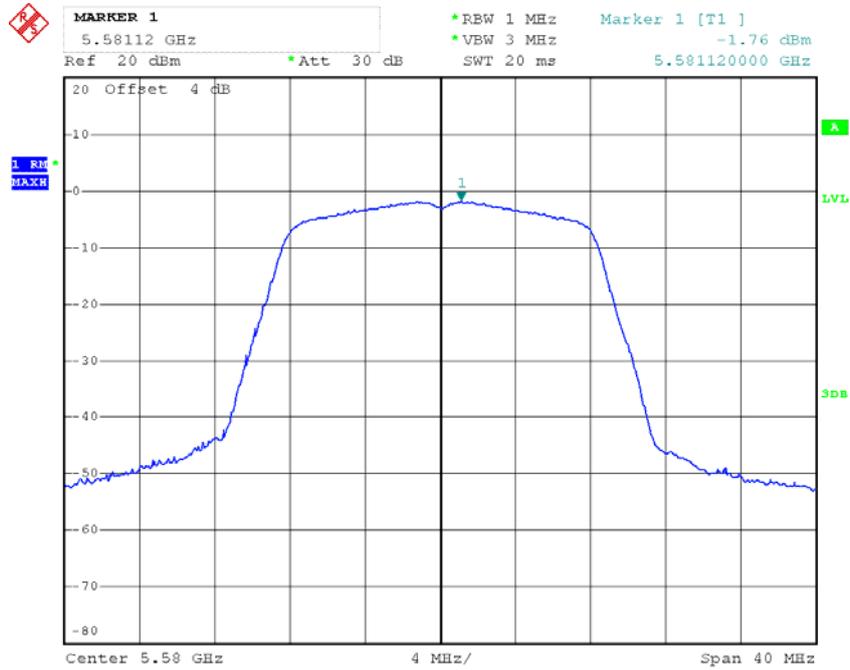
Date: 27.JUL.2015 18:17:38

Chain 0: Power Spectral Density, 802.11a High Channel

MARKER 1	*RBW 1 MHz	Marker 1 [T1]
5.69856 GHz	*VBW 3 MHz	-1.65 dBm
Ref 20 dBm *Att 30 dB	SWT 20 ms	5.698560000 GHz

20 Offset 4 dB

Center 5.7 GHz   4 MHz/   Span 40 MHz
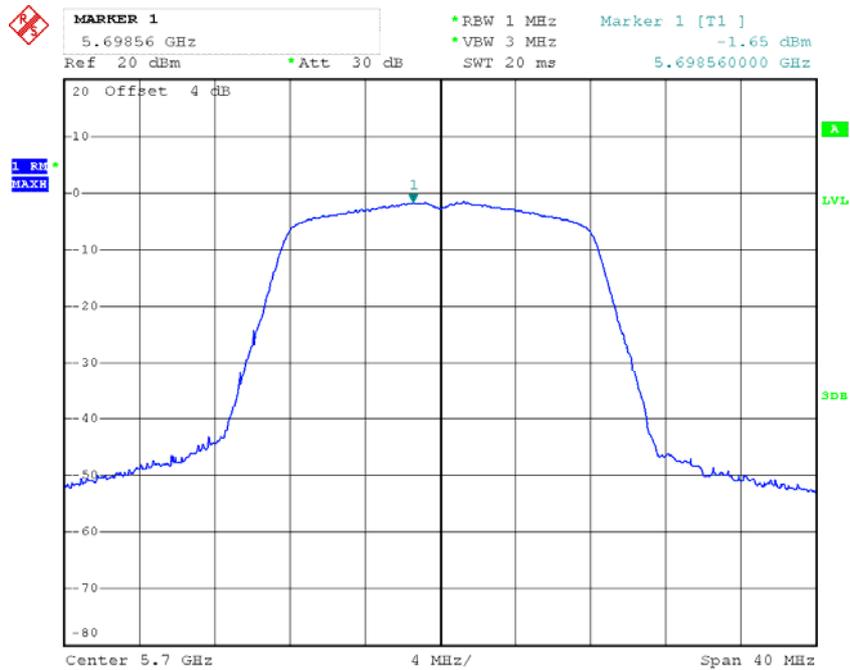
Date: 27.JUL.2015 18:21:53

Chain 0: Power Spectral Density, 802.11n ht20 Low Channel
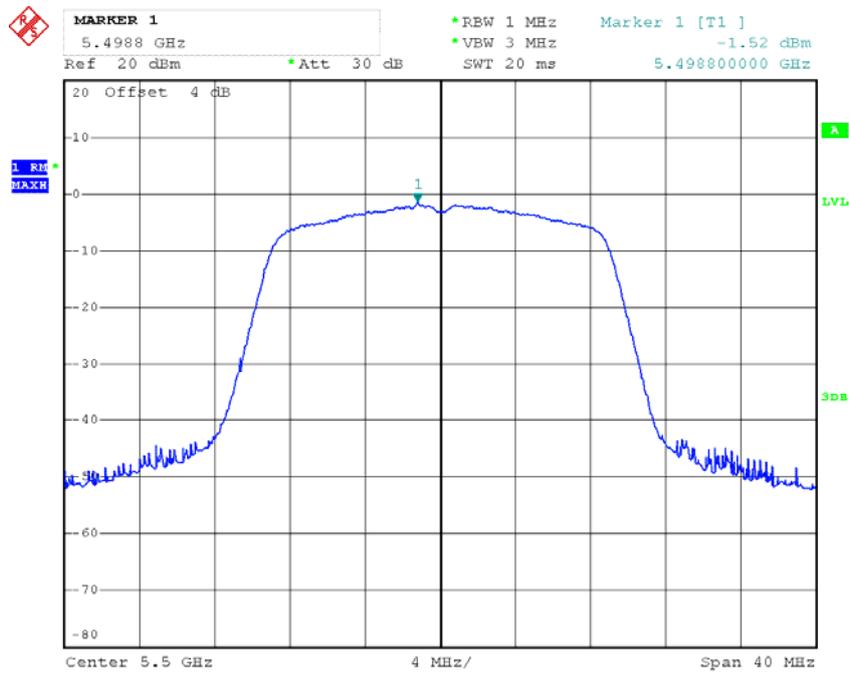
Date: 27.JUL.2015 18:29:05

Chain 0: Power Spectral Density, 802.11n ht20 Middle Channel
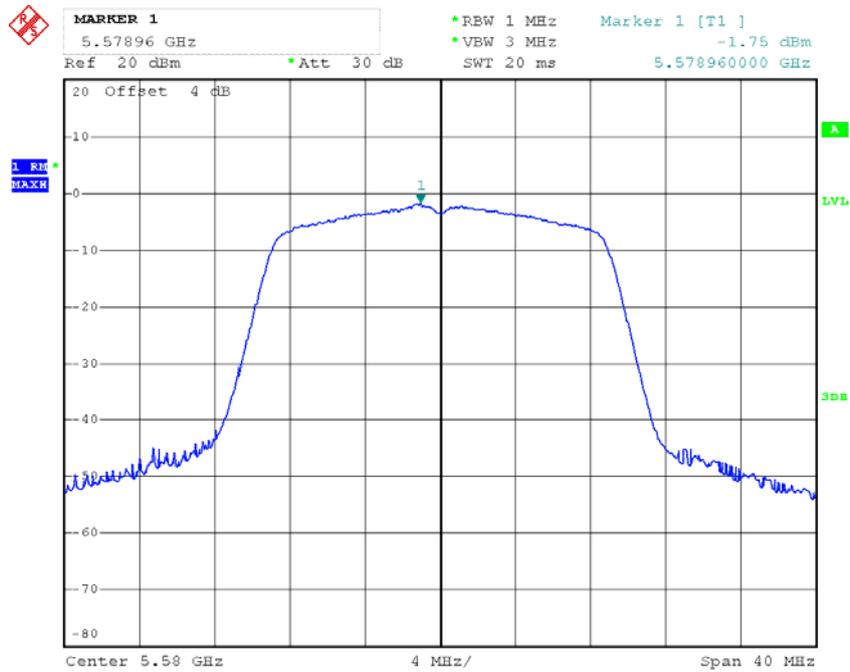
Date: 27.JUL.2015 18:27:27

Chain 0: Power Spectral Density, 802.11n ht20 High Channel
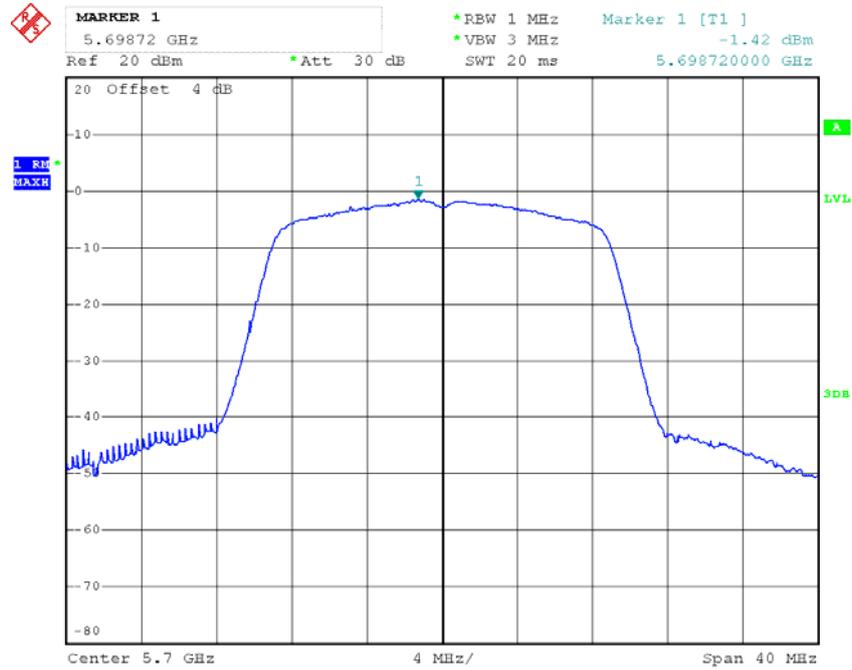
Date:　　27.JUL.2015　18:23:42

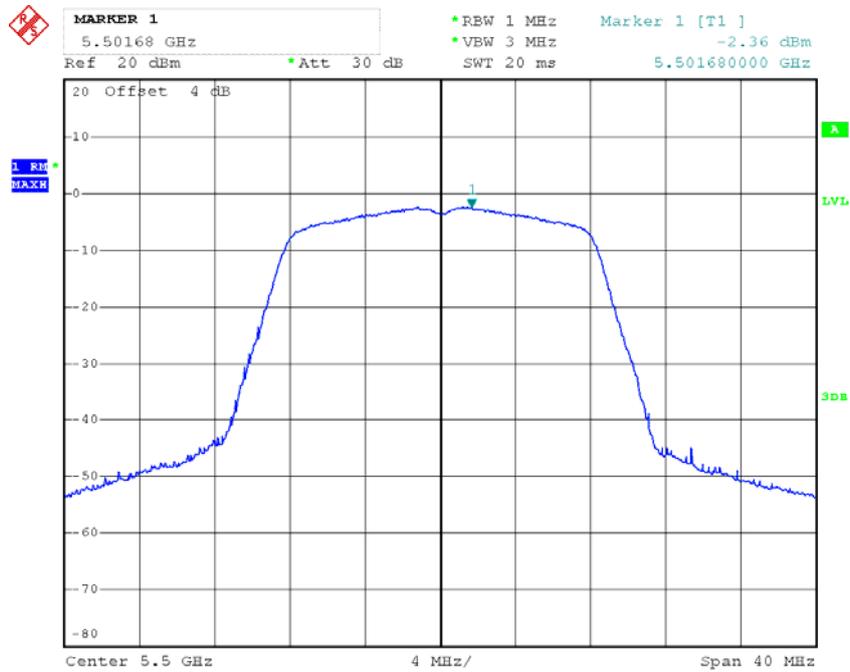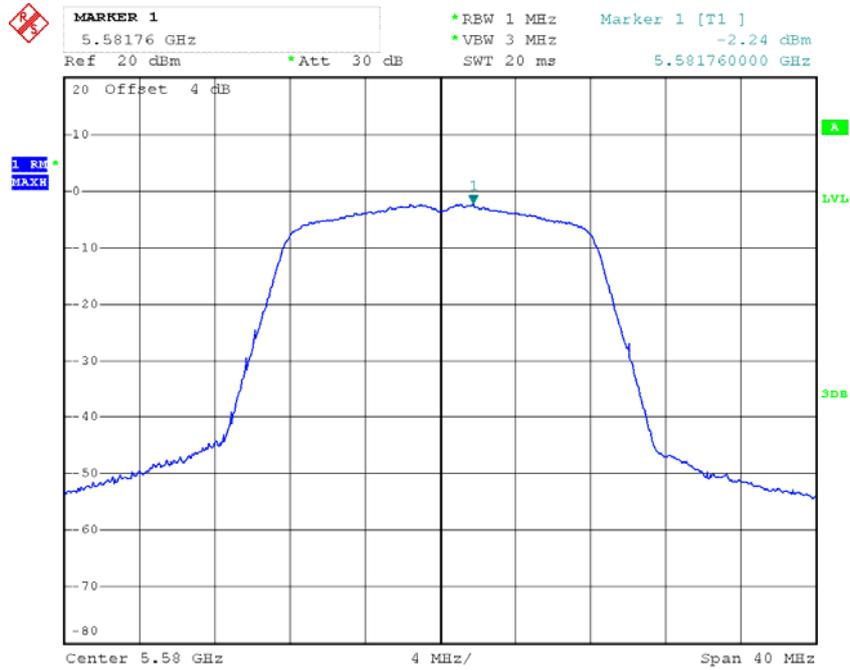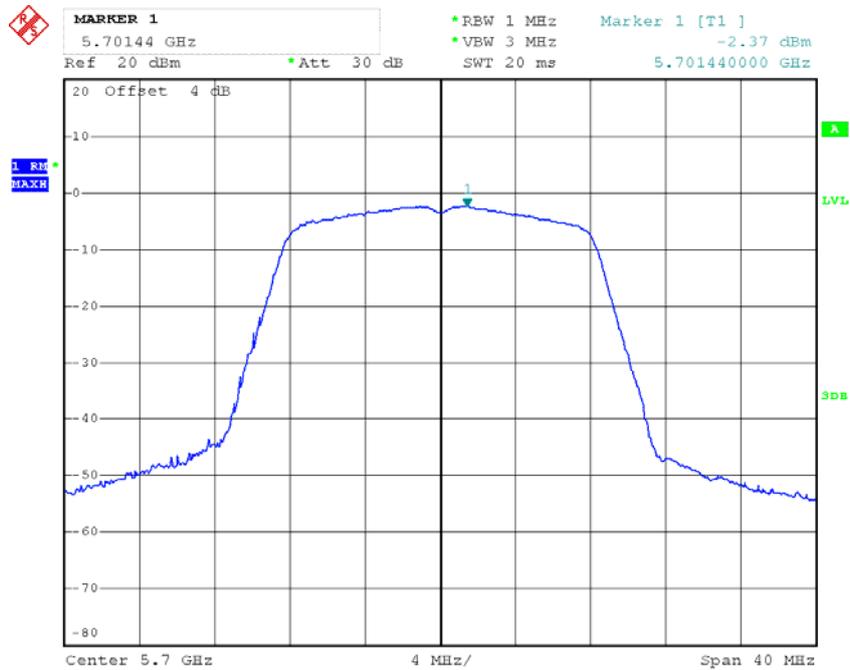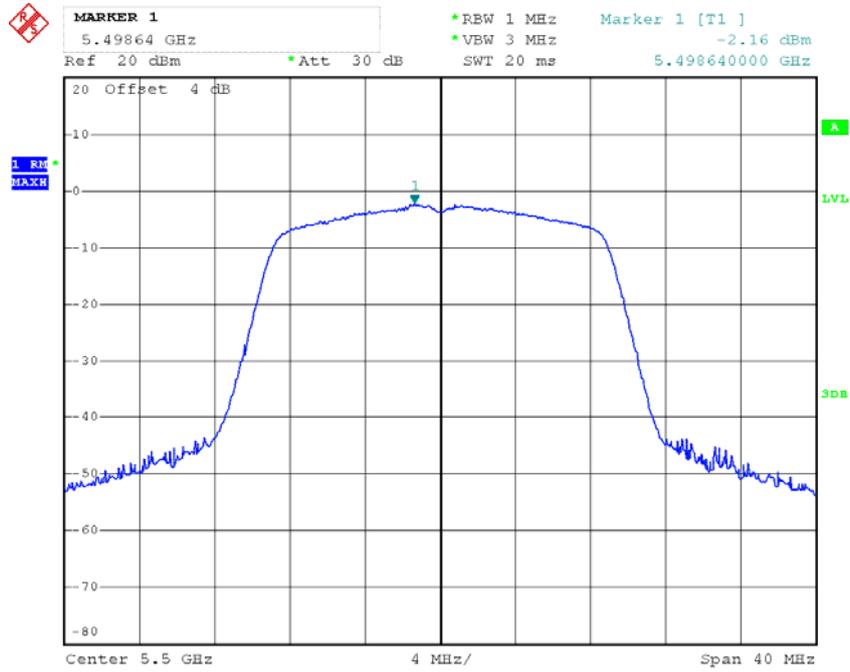**Chain 0: Power Spectral Density, 802.11n ht40 Low Channel**

Date:　　27.JUL.2015　18:31:32

Chain 0: Power Spectral Density, 802.11n ht40 Middle Channel

Date: 27.JUL.2015 18:33:22

Chain 0: Power Spectral Density, 802.11n ht40 High Channel

Date: 27.JUL.2015 18:35:10

Chain 0: Power Spectral Density, 802.11n ac80 Low Channel

Date: 27.JUL.2015   18:38:05

Chain 0: Power Spectral Density, 802.11n ac80 High Channel

Date: 4.FEB.2016   14:15:33

Chain 1: Power Spectral Density, 802.11a Low Channel

Date: 27.JUL.2015 18:14:35

Chain 1: Power Spectral Density, 802.11a Middle Channel

Date: 27.JUL.2015 18:17:45
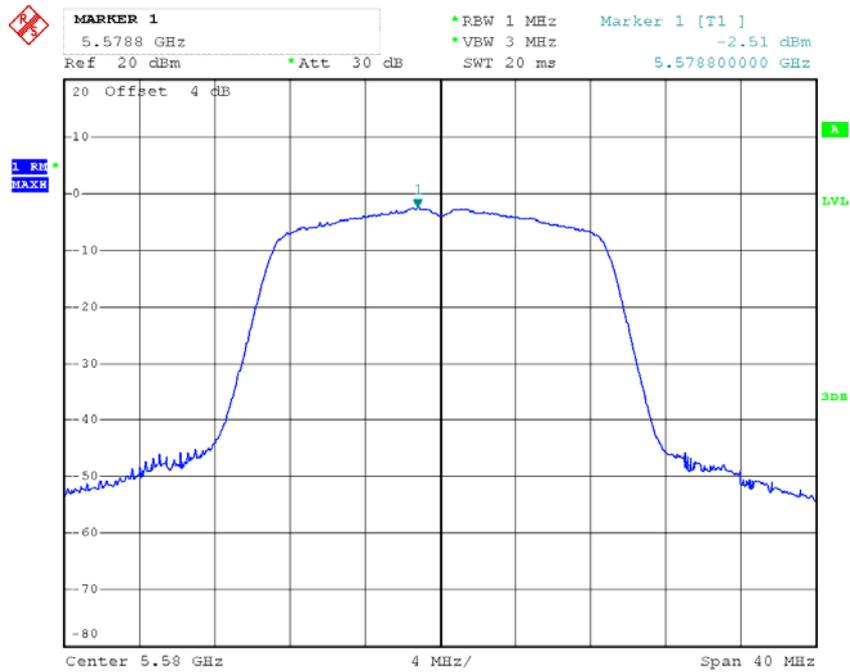
Chain 1: Power Spectral Density, 802.11a High Channel

Date:　　27.JUL.2015　18:22:00

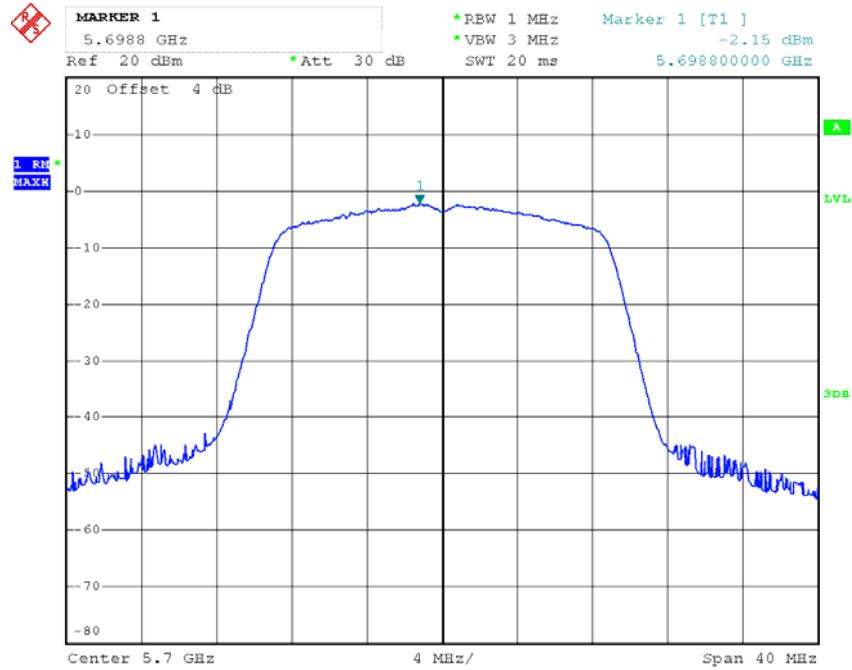**Chain 1: Power Spectral Density, 802.11n ht20 Low Channel**

Date:　　27.JUL.2015　18:29:18

Chain 1: Power Spectral Density, 802.11n ht20 Middle Channel

Date: 27.JUL.2015 18:27:38

Chain 1: Power Spectral Density, 802.11n ht20 High Channel

Date: 27.JUL.2015 18:23:57

Chain 1: Power Spectral Density, 802.11n ht40 Low Channel

Date:　　27.JUL.2015　18:31:44

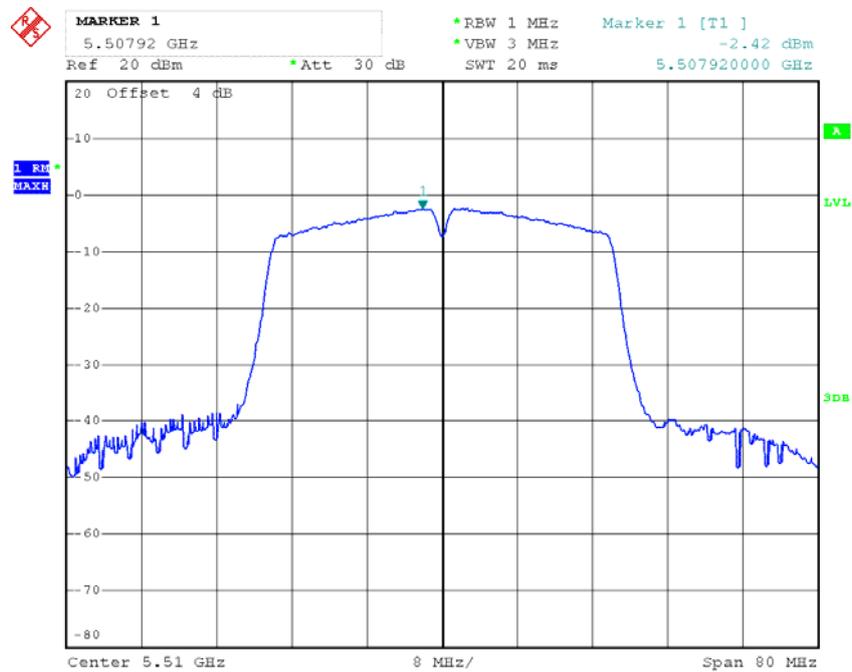## Chain 1: Power Spectral Density, 802.11n ht40 Middle Channel

Date:　　27.JUL.2015　18:33:43

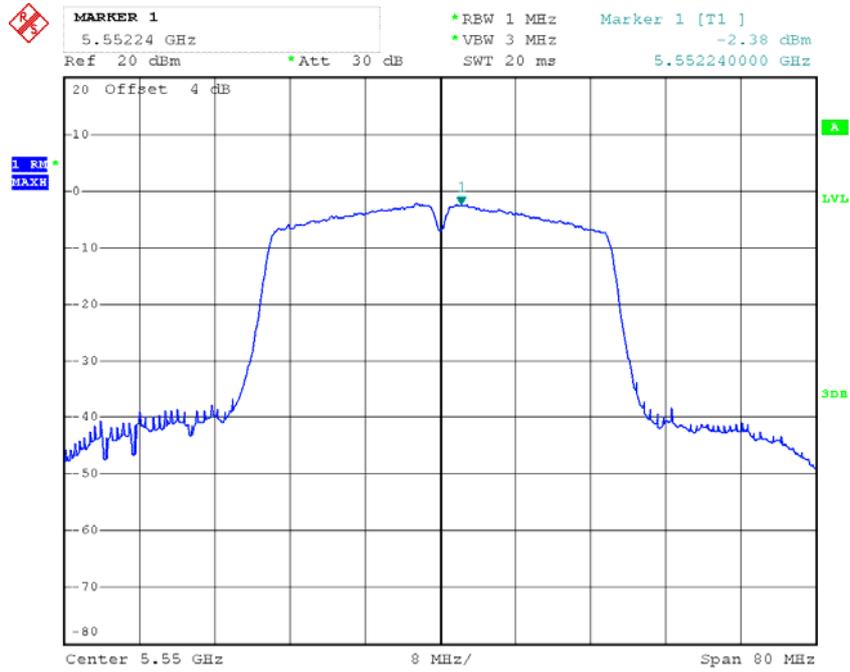### Chain 1: Power Spectral Density, 802.11n ht40 High Channel
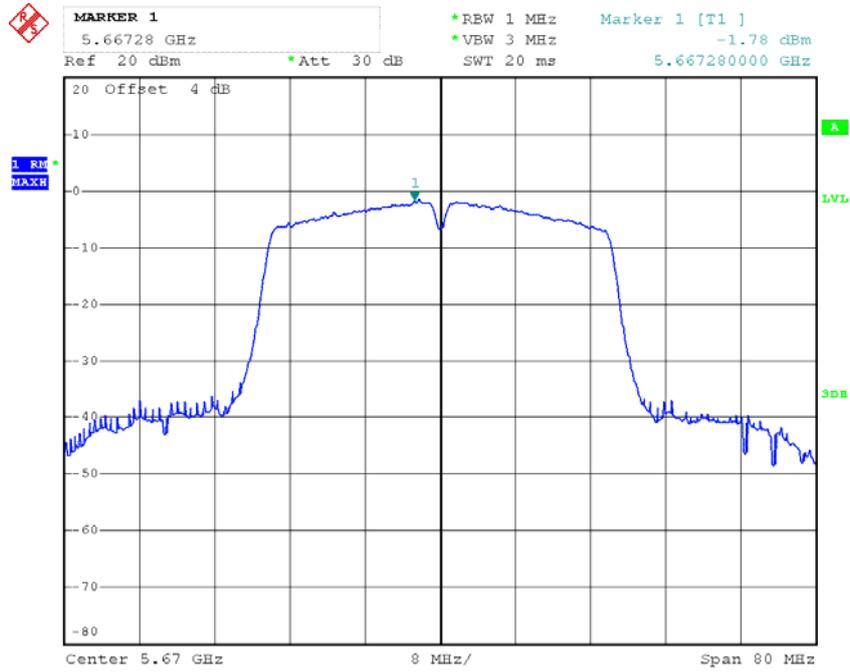
Date: 27.JUL.2015 18:35:22

Chain 1: Power Spectral Density, 802.11n ac80 Low Channel
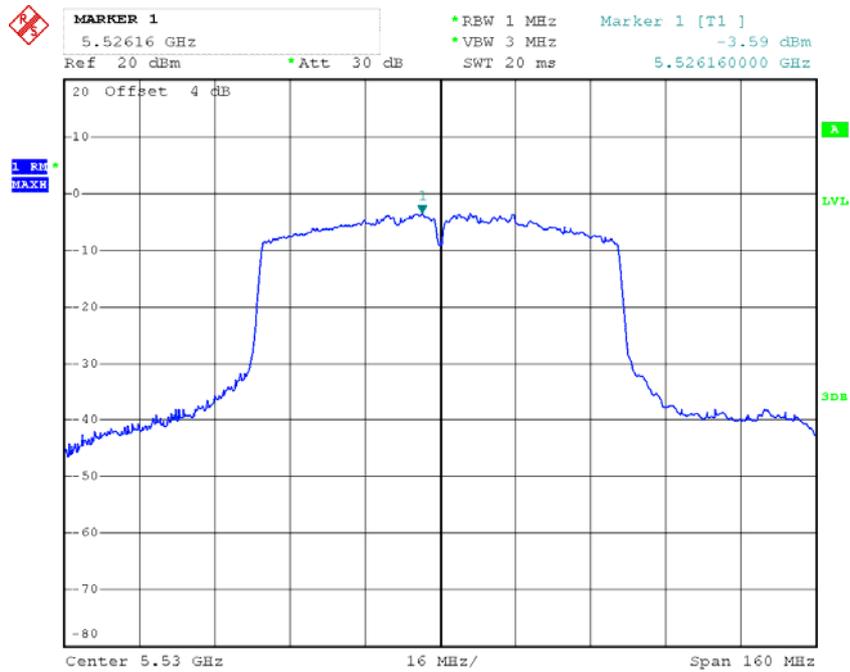
Date: 27.JUL.2015 18:38:13

Chain 1: Power Spectral Density, 802.11n ac80 High Channel
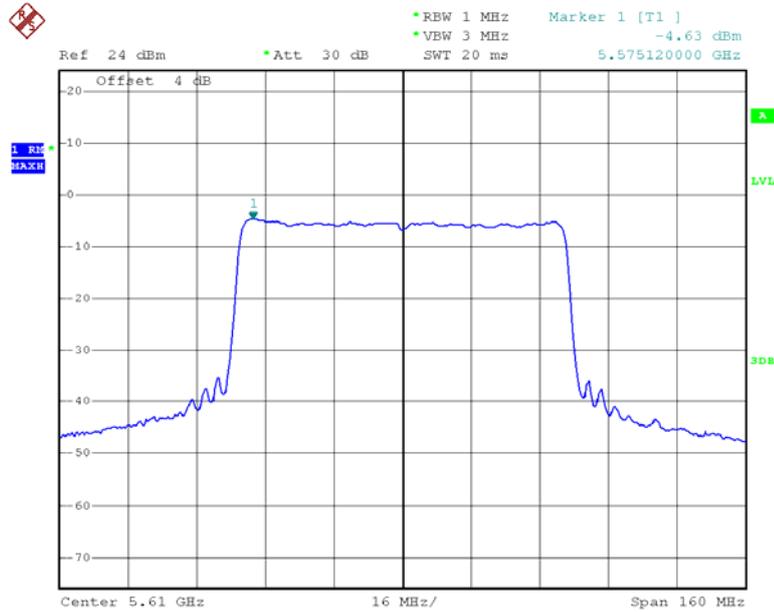
Date: 4.FEB.2016 14:15:43

Chain 2: Power Spectral Density, 802.11a Low Channel

Date: 27.JUL.2015 18:15:00

Chain 2: Power Spectral Density, 802.11a Middle Channel

Date: 27.JUL.2015 18:17:59

Chain 2: Power Spectral Density, 802.11a High Channel

Date: 27.JUL.2015 18:22:11

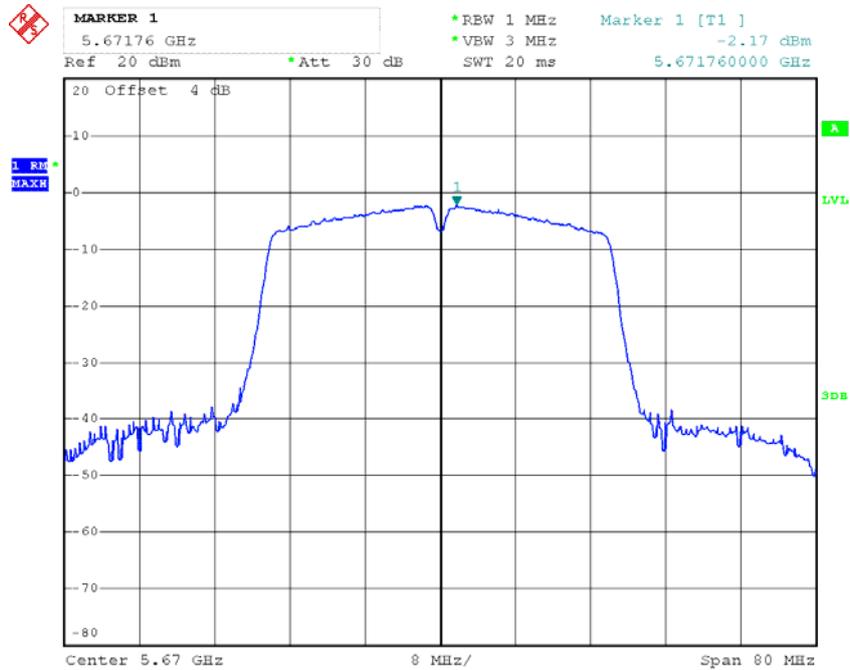**Chain 2: Power Spectral Density, 802.11n ht20 Low Channel**

Date: 27.JUL.2015 18:29:33

Chain 2: Power Spectral Density, 802.11n ht20 Middle Channel

Date: 27.JUL.2015 18:27:52

Chain 2: Power Spectral Density, 802.11n ht20 High Channel

Date:　　27.JUL.2015　18:24:10

Chain 2: Power Spectral Density, 802.11n ht40 Low Channel

Date:　　27.JUL.2015　18:31:59

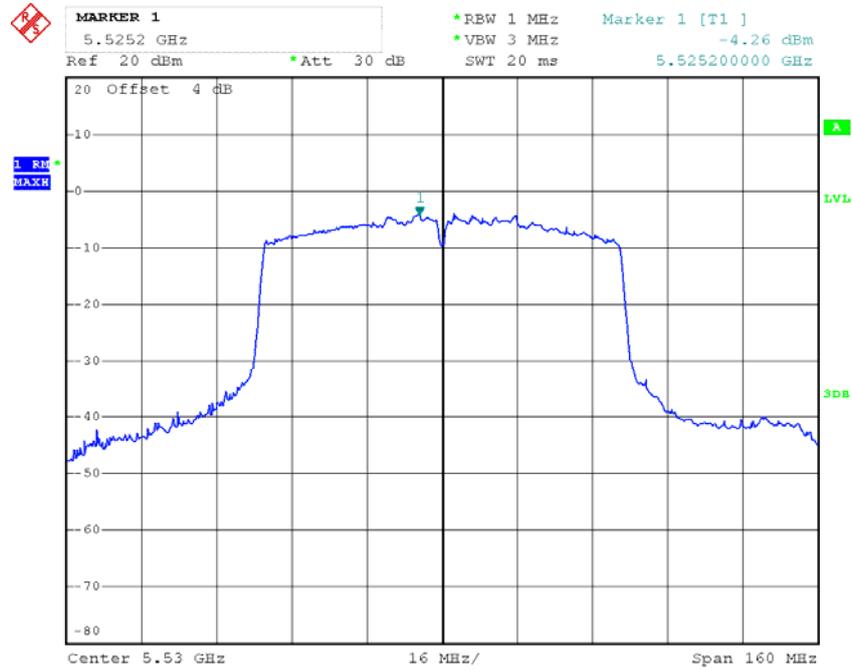**Chain 2: Power Spectral Density, 802.11n ht40 Middle Channel**

Date: 27.JUL.2015   18:34:04

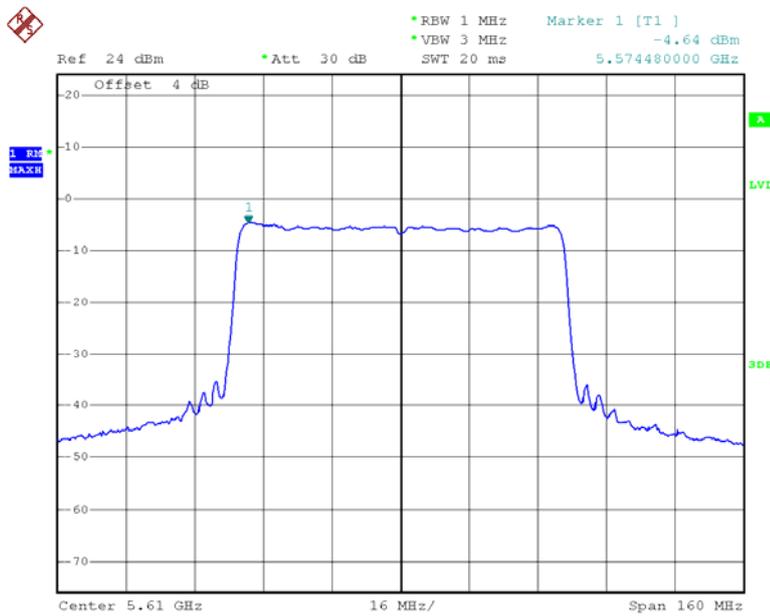**Chain 2: Power Spectral Density, 802.11n ht40 High Channel**

Date: 27.JUL.2015   18:35:38

Chain 2: Power Spectral Density, 802.11n ac80 Low Channel

Date: 27.JUL.2015   18:38:27

Chain 2: Power Spectral Density, 802.11n ac80 High Channel

Date: 4.FEB.2016   14:15:54

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