FCC PART 15.407

TEST REPORT

For

Iconnect

No.9, Aly. 58, Ln. 112, Ruiguang Rd., Neihu Dist.,Taipei City,Taiwan

FCC ID: 2AB87572

Report Type: Original Report	**Product Type:** 802.11abgn Long-Range USB Adapter Dual-Band 2.4GHz/5GHz
Test Engineer: Dean Liu	
Report Number: RDG150512002-00B	
Report Date: 2015-05-29	
Reviewed By: Sula Huang RF Leader	
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
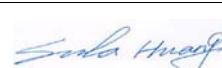
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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *Iconnect*'s product, model number: *AWUS052NH (FCC ID: 2AB87572) or* ("EUT") in this report is a *802.11abgn Long-Range USB Adapter Dual-Band 2.4GHz/5GHz,* which was measured approximately: 8.6 cm (L) x 6.3 cm (W) x2.1 cm (H), rated input voltage: DC5V from USB port.

Note: The series product, model AWUS052NH, AWUS051NH V2,AWUS052NH V2,AWUS052NHS,AWUS052NHS V2,AWUS053NH,AWUS053NH V2,AWUS053NHS,AWUS053NHS V2,AWUS054NH,AWUS054NH V2,AWUS054NHS,AWUS054NHS V2,AWUS036ACH,AWUS036ACH V2,NU52,NU52 V2,NU52S,NU52S V2,NU53,NU53 V2,NU53S,NU53S V2,NU52AC,NU52AC V2,NU52ACS,NU52ACS V2,UBDO-25,UBDO-25 V2,UBDO-25t,UBDO-25t V2,UBDO-25M,UBDO-25M V2,UBDO-25Mt,UBDO-25Mt V2,Tube-U52,Tube-U52 V2,UBDO-AC,UBDO-AC V2,Tube-AC,Tube-AC V2,UBDO-ACT,UBDO-ACT V2 are electrically identical, the difference between them is just the model name, we selected AWUS052NH for fully testing, the details was explained in the attached

* All measurement and test data in this report was gathered from production sample serial number: 14BN052NH0454 (Assigned by applicant). The EUT was received on 2015-05-13.

Objective

This type approval report is prepared on behalf of *Iconnect* 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.

Related Submittal(s)/Grant(s)

FCC Part 15C JBP submissions with FCC ID: 2AB87572.
FCC Part 15C DTS submissions with FCC ID: 2AB87572.

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 5150~5250 MHz band, channels are provided to test as follows:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	44	5220
38	5190	46	5230
40	5200	48	5240
42	5210	/	/

For 802.11a, 802.11n ht20, Channel 36, 40 and 48 were tested, for 802.11n ht40, Channel 38, 46 were tested.

For 5725~5850 MHz band, channels are provided to test as follows:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	159	5795
151	5755	161	5805
153	5765	163	5815
155	5775	165	5825
157	5785	/	/

For 802.11a, 802.11n ht20, Channel 149, 157 and 165 were tested, for 802.11n ht40, Channel 151, 159 were tested.

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 software "Ralink QA Test Program" was used for testing, which was provided by manufacturer. The worst condition (maximum power with 100% duty cycle) was setting by the software as following table:

Test Mode	Test Software Version	Ralink QA Test Program		
802.11a	Test Frequency	5180/5745MHz	5200/5785MHz	5240/5825MHz
	Data Rate	6Mbps	6Mbps	6Mbps
	Power Level Setting Chain0	0D	0D	0D
	Power Level Setting Chain1			
802.11n ht20	Test Frequency	5180/5745MHz	5200/5785MHz	5240/5825MHz
	Data Rate	MCS8	MCS8	MCS8
	Power Level Setting Chain0	0D	0D	0D
	Power Level Setting Chain1			
802.11n ht40	Test Frequency	5190/5755MHz	5230/5795MHz	/
	Data Rate	MCS8	MCS8	/
	Power Level Setting Chain0	05	05	/
	Power Level Setting Chain1			

Equipment Modifications

No modification was made to the EUT.

Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
DELL	Laptop	PP11L	QDS-BRCM1017
HP	Printer	C3941A	JPTVOB2337
DELL	Keyboard	L100	CNORH656658907BL05DC
SAST	Modem	AEM-2100	0293

Support Cable List and Details

Cable Description	Shielding Type	Ferrite Core	Length (m)	From	To
Serial Cable	Yes	No	1.2	Serial Port of Laptop	Modem
Parallel Cable	Yes	No	1.2	Parallel Port of Laptop	Printer
Keyboard Cable	Yes	Yes	1.8	USB Port of Laptop	Keyboard
USB Cable	Yes	No	1.5	USB Port of Laptop	EUT

Configuration of Test Setup

LISN2								LISN1

Modem	◄10cm►	Printer	◄10cm►	Laptop	◄10cm►	EUT	◄10cm►	Adapter

Non-Conductive Table 80 cm above Ground Plane

Keyboard

1.0 Meter

◄————————————— 1.5 Meter —————————————►
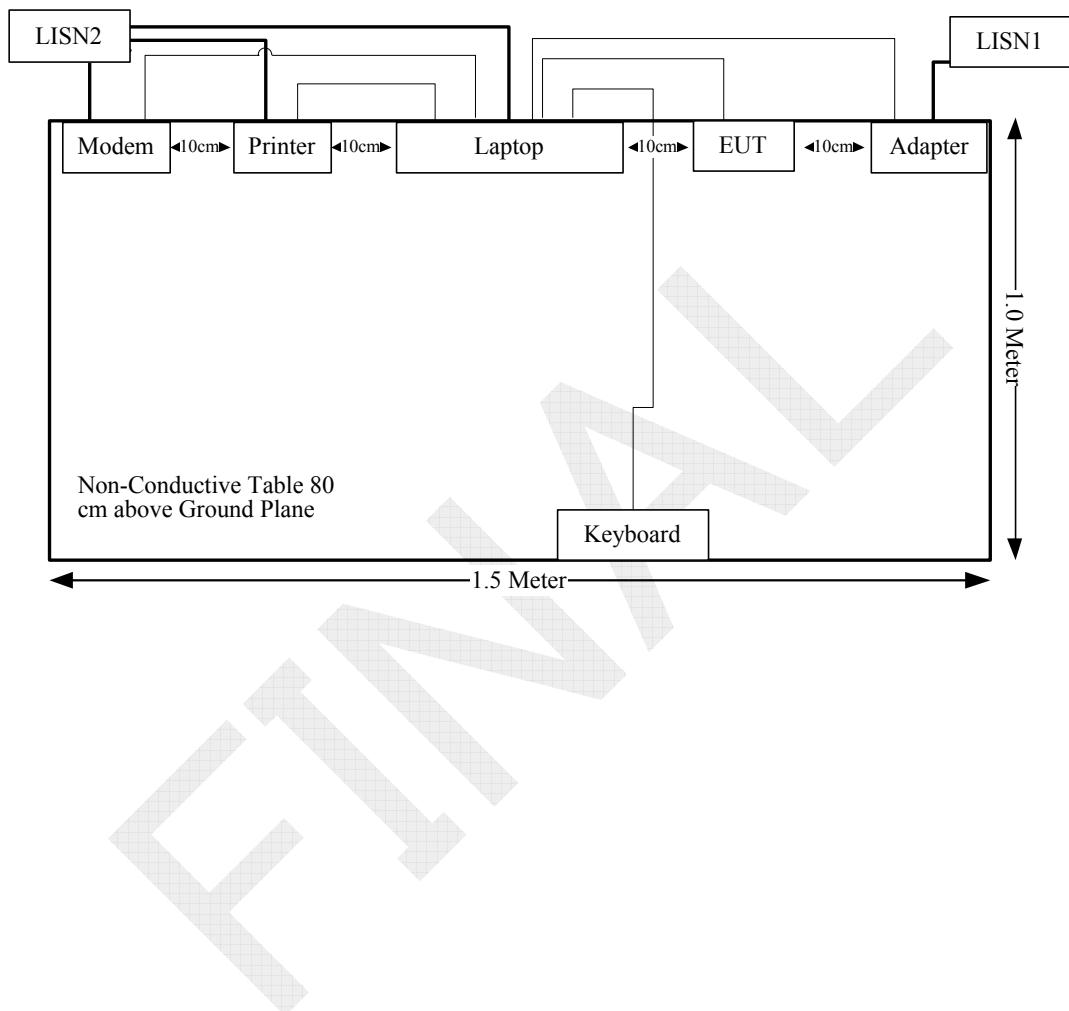
SUMMARY OF TEST RESULTS

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

FCC §15.407(f) & §1.1310 & §2.1091- MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Applicable Standard

According to subpart 15.407(f)and subpart §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm²)	Averaging Time (minutes)
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f²)	30
30–300	27.5	0.073	0.2	30
300–1500	/	/	f/1500	30
1500–100,000	/	/	1.0	30

f = frequency in MHz; * = Plane-wave equivalent power density;

According to §1.1310 and §2.1091 RF exposure is calculated.

Calculated Formulary:

Predication of MPE limit at a given distance
S = PG/4πR² = power density (in appropriate units, e.g. mW/cm²);
P = power input to the antenna (in appropriate units, e.g., mW);
G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain;
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm);

For simultaneously transmit system, the calculated power density should comply with:

$$\sum_i \frac{S_i}{S_{Limit,i}} \le 1$$

Calculated Data:
MPE evaluation for single transmission:

Frequency Range (MHz)	Mode	Frequency (MHz)	Antenna Gain		Conducted Power		Evaluation Distance (cm)	Power Density (mW/cm^2)	MPE Limit (mW/cm^2)
			(dBi)	(numeric)	(dBm)	(mW)			
2412-2462	2.4G-802.11b	2437	2.0	1.58	14.90	30.90	20	0.010	1.0
	2.4G-802.11g	2437	2.0	1.58	16.89	48.87	20	0.015	1.0
	2.4G-802.11n HT20	2412	2.0	1.58	19.61	91.41	20	0.029	1.0
	2.4G-802.11n HT40	2452	2.0	1.58	21.56	143.22	20	0.045	1.0
5150-5250	5G-802.11a	5240	2.0	1.58	18.14	65.16	20	0.020	1.0
	5G-802.11n HT20	5240	2.0	1.58	18.30	67.61	20	0.021	1.0
	5G-802.11n HT40	5230	2.0	1.58	15.56	35.97	20	0.011	1.0
5725-5850	802.11a	5745	2.0	1.58	17.53	56.62	20	0.018	1.0
	5G-802.11n HT20	5785	2.0	1.58	17.60	57.54	20	0.018	1.0
	5G-802.11n HT40	5755	2.0	1.58	12.54	17.95	20	0.006	1.0

MPE evaluation for simultaneous transmission:

　2.4 G and 5G can transmit at the same time, MPE evaluation is as below formula:

PD1/Limit1+PD2/Limit2+……＜1, PD (Power Density)

MPE evaluation= Max MPE of 2.4G + Max MPE of 5G = 0.045/1+0.021/1=0.066＜1.0

Result: MPE evaluation of single and simultaneous transmission meet the requirement of standard.

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

This product used two external detachable dual band antennas and with RP-SMA female connector, the maximum gain is 2 dBi, which fulfill the requirement of this section, and please refer to the EUT photos.

Result: Compliance.

FCC §15.407 (b) (6) §15.207 (a) – CONDUCTED EMISSIONS

Applicable Standard

FCC §15.207, §15.407(b) (6)

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 conducted disturbance at mains port using AMN at Bay Area Compliance Laboratories Corp. (Dongguan) is 3.46 dB (150 kHz to 30 MHz).

Table 1 – Values of U_{cispr}

Measurement	U_{cispr}
Conducted disturbance at mains port using AMN (150 kHz to 30 MHz)	3.4 dB

EUT Setup
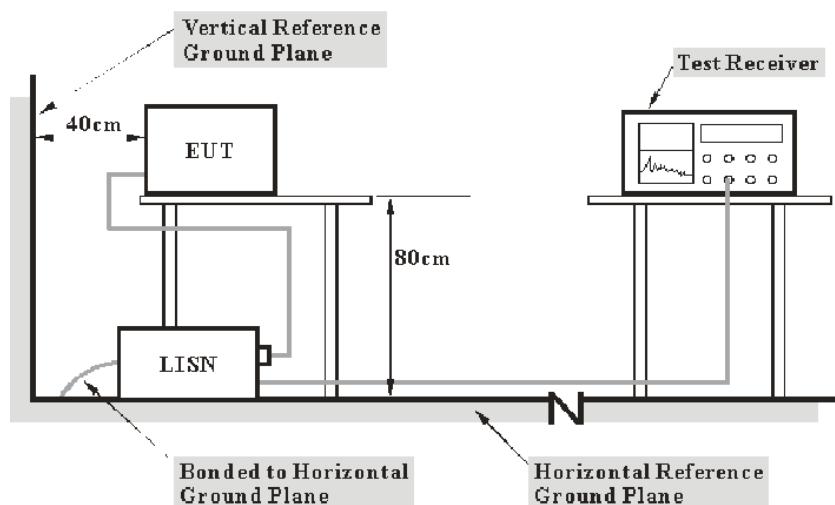
Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.4-2009 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

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

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

Corrected Amplitude & Margin Calculation

The basic equation is as follows:

$V_C = V_R + A_C + VDF$
$C_f = A_C + VDF$

Herein,
V_C (cord. Reading): corrected voltage amplitude
V_R: reading voltage amplitude
A_c: attenuation caused by cable loss
VDF: voltage division factor of AMN
C_f: Correction Factor

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

Margin = Limit – Corrected Amplitude

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	EMI Test Receiver	ESCS 30	830245/006	2014-10-20	2015-10-20
R&S	L.I.S.N	ESH2-Z5	892107/021	2014-06-09	2015-06-09
R&S	Two-line V-network	ENV 216	3560.6550.12	2014-12-11	2015-12-11
R&S	Test Software	EMC32	Version8.53.0	N/A	N/A

* 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

During the conducted emission test, the adapter was connected to thefirst LISN and the other support equipments were connected to the outlet of the second LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and average detection mode.

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Part 15.207, with the worst margin reading of:

3.3 dB at **0.150000 MHz** in the **Line** conducted mode

Test Data

Environmental Conditions

Temperature:	27.9 °C
Relative Humidity:	66 %
ATM Pressure:	100 kPa

The testing was performed by Dean Liu on 2015-05-20.

Test Mode: Transmitting

AC120 V, 60 Hz, Line:
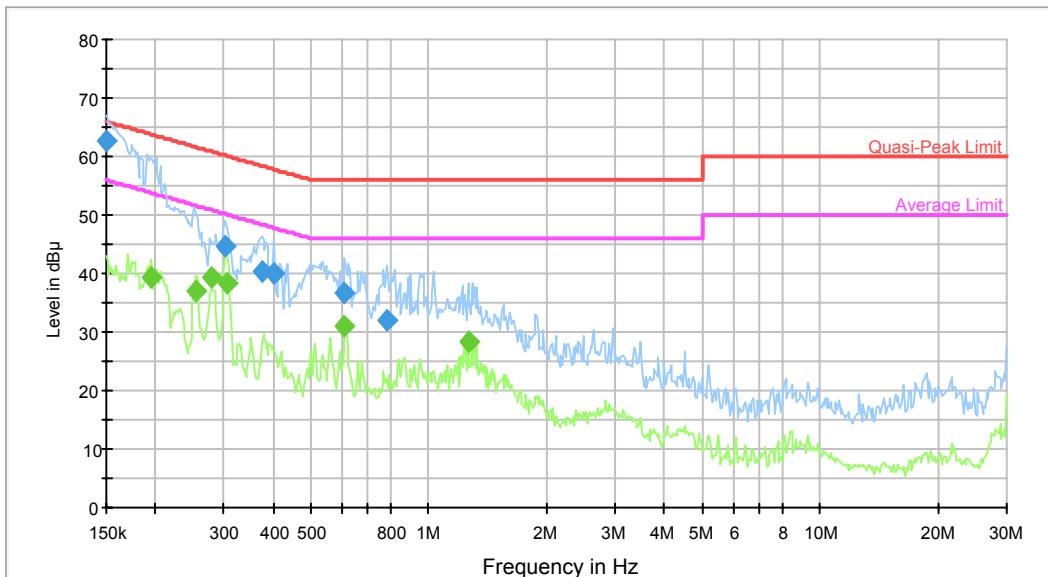
Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.150000	62.7	9.000	L1	10.2	3.3	66.0	Compliance
0.302425	44.7	9.000	L1	10.3	15.5	60.2	Compliance
0.375019	40.3	9.000	L1	10.3	18.1	58.4	Compliance
0.402900	40.0	9.000	L1	10.2	17.8	57.8	Compliance
0.609741	36.6	9.000	L1	10.3	19.4	56.0	Compliance
0.780588	32.0	9.000	L1	10.4	24.0	56.0	Compliance

Frequency (MHz)	Average (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.195114	39.3	9.000	L1	10.2	14.5	53.8	Compliance
0.253797	36.8	9.000	L1	10.2	14.8	51.6	Compliance
0.279263	39.2	9.000	L1	10.3	11.6	50.8	Compliance
0.304845	38.2	9.000	L1	10.3	11.9	50.1	Compliance
0.609741	30.9	9.000	L1	10.3	15.1	46.0	Compliance
1.259081	28.3	9.000	L1	10.4	17.7	46.0	Compliance

*Within measurement uncertainty!

AC120 V, 60 Hz, Neutral:
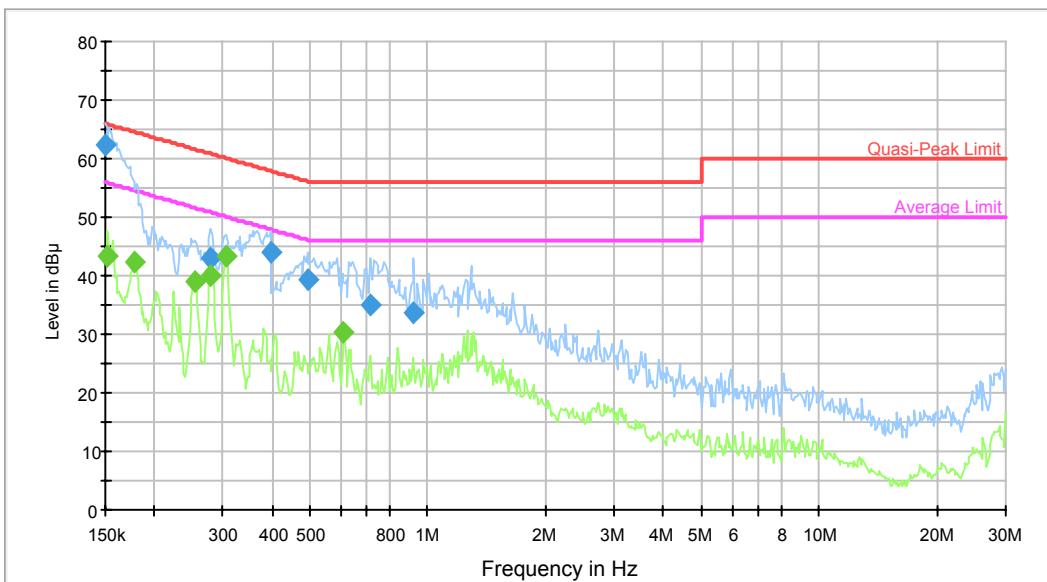
requency (MHz)	QuasiPeak (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.150000	62.4	9.000	N	10.2	3.6	66.0	Compliance
0.279263	42.9	9.000	N	10.3	17.9	60.8	Compliance
0.396530	44.1	9.000	N	10.2	13.8	57.9	Compliance
0.491712	39.3	9.000	N	10.1	16.8	56.1	Compliance
0.715082	34.9	9.000	N	10.4	21.1	56.0	Compliance
0.922769	33.8	9.000	N	10.4	22.2	56.0	Compliance

Frequency (MHz)	Average (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.152410	43.2	9.000	N	10.2	12.7	55.9	Compliance
0.178741	42.2	9.000	N	10.2	12.3	54.5	Compliance
0.253797	38.8	9.000	N	10.2	12.8	51.6	Compliance
0.279263	40.0	9.000	N	10.3	10.8	50.8	Compliance
0.304845	43.2	9.000	N	10.3	6.9	50.1	Compliance
0.609741	30.2	9.000	N	10.3	15.8	46.0	Compliance

Within measurement uncertainty!

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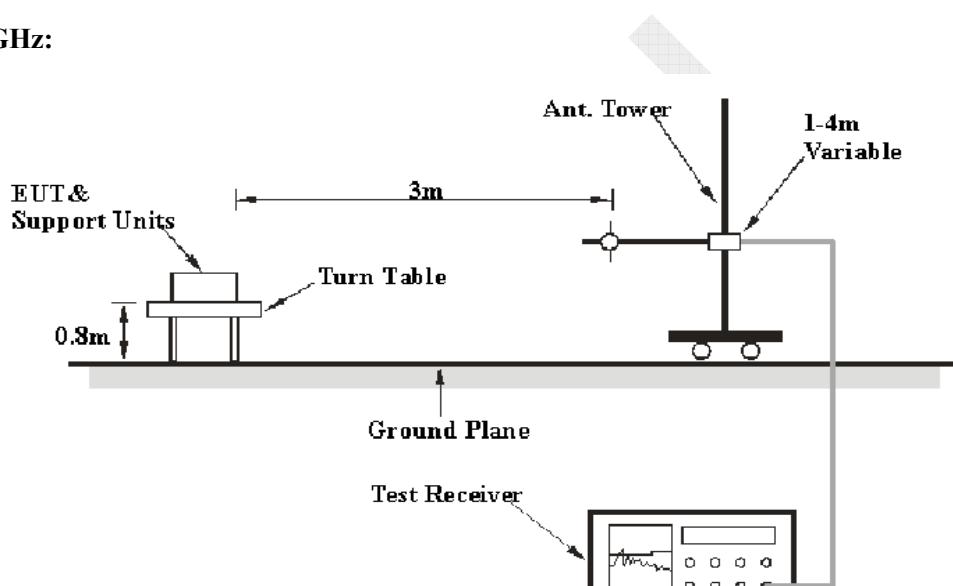
Above 1 GHz:
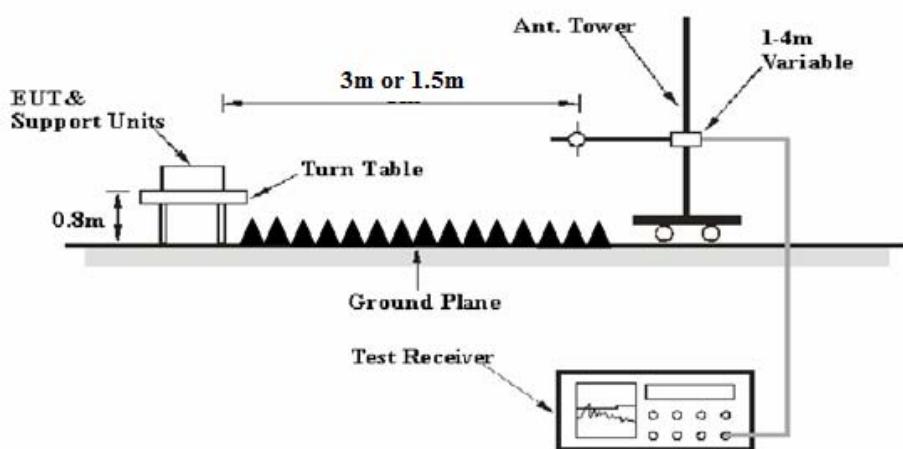
The radiated emission tests were performed in the 3 meters chamber, using the setup accordance with the ANSI C63.4-2009. The specification used was the FCC 15.209, and FCC 15.407 limits.

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 adapter was 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 adapter was connected to the first AC floor outlet and the other support equipments were connected to the second 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
Agilent	Spectrum Analyzer	E4440A	SG43360054	2014-12-04	2015-12-04
ETS-Lindgren	Horn Antenna	3115	000 527 35	2012-09-06	2015-09-06
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
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 FCC Title 47, Part 15, Subpart C, Section 15.205, 15.209 and 15.407, with the worst margin reading of:

0.63 dB at **5150 MHz** in the **Horizontal** polarization for 802.11n ht40 mode

Test Data

Environmental Conditions

Temperature:	25.3 °C
Relative Humidity:	53 %
ATM Pressure:	100 kPa

The testing was performed by Dean Liu on 2015-05-26.

Test Mode: Transmitting

Note: For above 1GHz, the test distance is 1.5m.

5150MHz-5250MHz: 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:5180 MHz										
5180	80.32	PK	H	31.46	5.40	0.00	117.18	111.18	N/A	N/A
5180	69.37	AV	H	31.46	5.40	0.00	106.23	100.23	N/A	N/A
5180	87.32	PK	V	31.46	5.40	0.00	124.18	118.18	N/A	N/A
5180	76.52	AV	V	31.46	5.40	0.00	113.38	107.38	N/A	N/A
5150	35.83	PK	H	31.40	5.26	0.00	72.49	66.49	74.00	7.51
5150	21.66	AV	H	31.40	5.26	0.00	58.32	52.32	54.00	1.68*
10360	35.44	PK	H	36.97	8.36	25.52	55.25	49.25	74.00	24.75
10360	20.04	AV	H	36.97	8.36	25.52	39.85	33.85	54.00	20.15
15540	32.47	PK	H	37.43	14.94	24.98	59.86	53.86	74.00	20.14
15540	17.28	AV	H	37.43	14.94	24.98	44.67	38.67	54.00	15.33
4885	39.53	PK	H	30.80	5.21	27.42	48.12	42.12	74.00	31.88
4885	26.53	AV	H	30.80	5.21	27.42	35.12	29.12	54.00	24.88
2118	38.86	PK	H	24.91	3.23	27.37	39.63	33.63	74.00	40.37
2118	22.10	AV	H	24.91	3.23	27.37	22.87	16.87	54.00	37.13
227.88	33.70	QP	H	11.78	1.82	21.48	25.82	25.82	46.00	20.18
Middle Channel:5200 MHz										
5200	80.66	PK	H	31.50	5.49	0.00	117.65	111.65	N/A	N/A
5200	69.67	AV	H	31.50	5.49	0.00	106.66	100.66	N/A	N/A
5200	87.61	PK	V	31.50	5.49	0.00	124.60	118.60	N/A	N/A
5200	76.86	AV	V	31.50	5.49	0.00	113.85	107.85	N/A	N/A
10400	35.84	PK	H	36.98	8.32	25.50	55.64	49.64	74.00	24.36
10400	20.61	AV	H	36.98	8.32	25.50	40.41	34.41	54.00	19.59
15600	33.03	PK	H	37.32	14.69	24.69	60.35	54.35	74.00	19.65
15600	17.78	AV	H	37.32	14.69	24.69	45.10	39.10	54.00	14.90
4898	39.85	PK	H	30.83	5.30	27.42	48.56	42.56	74.00	31.44
4898	26.94	AV	H	30.83	5.30	27.42	35.65	29.65	54.00	24.35
2187	39.21	PK	H	25.09	3.28	27.30	40.28	34.28	74.00	39.72
2187	22.69	AV	H	25.09	3.28	27.30	23.76	17.76	54.00	36.24
227.88	33.60	QP	H	11.78	1.82	21.48	25.72	25.72	46.00	20.28
297.9	30.60	QP	H	13.99	2.06	21.52	25.13	25.13	46.00	20.87
High Channel:5240 MHz										
5240	81.13	PK	H	31.58	5.28	0.00	117.99	111.99	N/A	N/A
5240	70.07	AV	H	31.58	5.28	0.00	106.93	100.93	N/A	N/A
5240	87.96	PK	V	31.58	5.28	0.00	124.82	118.82	N/A	N/A
5240	77.20	AV	V	31.58	5.28	0.00	114.06	108.06	N/A	N/A
5350	27.63	PK	H	31.80	5.61	0.00	65.04	59.04	74.00	14.96
5350	16.12	AV	H	31.80	5.61	0.00	53.53	47.53	54.00	6.47
10480	36.34	PK	H	37.00	8.23	26.01	55.56	49.56	74.00	24.44
10480	21.03	AV	H	37.00	8.23	26.01	40.25	34.25	54.00	19.75
15720	33.36	PK	H	37.10	14.20	24.92	59.74	53.74	74.00	20.26
15720	18.34	AV	H	37.10	14.20	24.92	44.72	38.72	54.00	15.28
4912	40.23	PK	H	30.87	5.32	27.43	48.99	42.99	74.00	31.01
4912	27.36	AV	H	30.87	5.32	27.43	36.12	30.12	54.00	23.88
2903	39.64	PK	H	26.95	5.95	27.54	45.00	39.00	74.00	35.00
2903	23.28	AV	H	26.95	5.95	27.54	28.64	22.64	54.00	31.36
227.88	33.40	QP	H	11.78	1.82	21.48	25.52	25.52	46.00	20.48

*Within measurement uncertainty!

802.11n ht20 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: 5180 MHz										
5180	80.15	PK	H	31.46	5.40	0.00	117.01	111.01	N/A	N/A
5180	68.24	AV	H	31.46	5.40	0.00	105.10	99.10	N/A	N/A
5180	87.65	PK	V	31.46	5.40	0.00	124.51	118.51	N/A	N/A
5180	75.33	AV	V	31.46	5.40	0.00	112.19	106.19	N/A	N/A
5150	34.26	PK	V	31.40	5.26	0.00	70.92	64.92	74.00	9.08
5150	21.78	AV	V	31.40	5.26	0.00	58.44	52.44	54.00	1.56*
10360	34.98	PK	V	36.97	8.36	25.52	54.79	48.79	74.00	25.21
10360	19.78	AV	V	36.97	8.36	25.52	39.59	33.59	54.00	20.41
15540	32.15	PK	V	37.43	14.94	24.98	59.54	53.54	74.00	20.46
15540	16.81	AV	V	37.43	14.94	24.98	44.20	38.20	54.00	15.80
7513	39.29	PK	V	34.81	6.95	26.17	54.88	48.88	74.00	25.12
7513	26.11	AV	V	34.81	6.95	26.17	41.70	35.70	54.00	18.30
2786	38.50	PK	V	26.64	4.45	27.55	42.04	36.04	74.00	37.96
2786	21.63	AV	V	26.64	4.45	27.55	25.17	19.17	54.00	34.83
227.88	33.40	QP	V	11.78	1.82	21.48	25.52	25.52	46.00	20.48
Middle Channel: 5200 MHz										
5200	80.59	PK	H	31.50	5.49	0.00	117.58	111.58	N/A	N/A
5200	68.58	AV	H	31.50	5.49	0.00	105.57	99.57	N/A	N/A
5200	87.99	PK	V	31.50	5.49	0.00	124.98	118.98	N/A	N/A
5200	75.91	AV	V	31.50	5.49	0.00	112.90	106.90	N/A	N/A
10400	35.43	PK	H	36.98	8.32	25.50	55.23	49.23	74.00	24.77
10400	20.16	AV	H	36.98	8.32	25.50	39.96	33.96	54.00	20.04
15600	32.77	PK	H	37.32	14.69	24.69	60.09	54.09	74.00	19.91
15600	17.45	AV	H	37.32	14.69	24.69	44.77	38.77	54.00	15.23
7513	39.47	PK	H	34.81	6.95	26.17	55.06	49.06	74.00	24.94
7513	26.71	AV	H	34.81	6.95	26.17	42.30	36.30	54.00	17.70
2786	38.72	PK	H	26.64	4.45	27.55	42.26	36.26	74.00	37.74
2786	22.31	AV	H	26.64	4.45	27.55	25.85	19.85	54.00	34.15
227.88	33.10	QP	H	11.78	1.82	21.48	25.22	25.22	46.00	20.78
297.9	30.80	QP	H	13.99	2.06	21.52	25.33	25.33	46.00	20.67
High Channel: 5240 MHz										
5240	80.93	PK	H	31.58	5.28	0.00	117.79	111.79	N/A	N/A
5240	68.95	AV	H	31.58	5.28	0.00	105.81	99.81	N/A	N/A
5240	88.35	PK	V	31.58	5.28	0.00	125.21	119.21	N/A	N/A
5240	76.32	AV	V	31.58	5.28	0.00	113.18	107.18	N/A	N/A
5350	27.17	PK	H	31.80	5.61	0.00	64.58	58.58	74.00	15.42
5350	15.86	AV	H	31.80	5.61	0.00	53.27	47.27	54.00	6.73
10480	36.02	PK	H	37.00	8.23	26.01	55.24	49.24	74.00	24.76
10480	20.76	AV	H	37.00	8.23	26.01	39.98	33.98	54.00	20.02
15720	33.16	PK	H	37.10	14.20	24.92	59.54	53.54	74.00	20.46
15720	18.02	AV	H	37.10	14.20	24.92	44.40	38.40	54.00	15.60
7513	39.90	PK	H	34.81	6.95	26.17	55.49	49.49	74.00	24.51
7513	26.99	AV	H	34.81	6.95	26.17	42.58	36.58	54.00	17.42
2786	39.20	PK	H	26.64	4.45	27.55	42.74	36.74	74.00	37.26
2786	22.84	AV	H	26.64	4.45	27.55	26.38	20.38	54.00	33.62
227.88	33.10	QP	H	11.78	1.82	21.48	25.22	25.22	46.00	20.78

*Within measurement uncertainty!

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:5190 MHz										
5190	72.13	PK	H	31.48	5.44	0.00	109.05	103.05	N/A	N/A
5190	58.34	AV	H	31.48	5.44	0.00	95.26	89.26	N/A	N/A
5190	78.84	PK	V	31.48	5.44	0.00	115.76	109.76	N/A	N/A
5190	64.48	AV	V	31.48	5.44	0.00	101.40	95.40	N/A	N/A
5150	42.71	PK	H	31.40	5.26	0.00	79.37	73.37	74.00	0.63*
5150	21.91	AV	H	31.40	5.26	0.00	58.57	52.57	54.00	1.43*
10380	34.69	PK	H	36.98	8.34	25.51	54.50	48.50	74.00	25.50
10380	19.31	AV	H	36.98	8.34	25.51	39.12	33.12	54.00	20.88
15570	31.71	PK	H	37.37	14.81	24.83	59.06	53.06	74.00	20.94
15570	16.37	AV	H	37.37	14.81	24.83	43.72	37.72	54.00	16.28
7513	38.88	PK	H	34.81	6.95	26.17	54.47	48.47	74.00	25.53
7513	25.77	AV	H	34.81	6.95	26.17	41.36	35.36	54.00	18.64
2786	38.13	PK	H	26.64	4.45	27.55	41.67	35.67	74.00	38.33
2786	21.34	AV	H	26.64	4.45	27.55	24.88	18.88	54.00	35.12
227.88	33.10	QP	H	11.78	1.82	21.48	25.22	25.22	46.00	20.78
High Channel:5230 MHz										
5230	73.14	PK	H	31.56	5.33	0.00	110.03	104.03	N/A	N/A
5230	59.59	AV	H	31.56	5.33	0.00	96.48	90.48	N/A	N/A
5230	80.32	PK	V	31.56	5.33	0.00	117.21	111.21	N/A	N/A
5230	66.25	AV	V	31.56	5.33	0.00	103.14	97.14	N/A	N/A
5350	26.91	PK	V	31.80	5.61	0.00	64.32	58.32	74.00	15.68
5350	15.61	AV	V	31.80	5.61	0.00	53.02	47.02	54.00	6.98
10460	35.75	PK	V	36.99	8.25	25.88	55.11	49.11	74.00	24.89
10460	20.53	AV	V	36.99	8.25	25.88	39.89	33.89	54.00	20.11
15690	32.68	PK	V	37.16	14.32	24.87	59.29	53.29	74.00	20.71
15690	17.76	AV	V	37.16	14.32	24.87	44.37	38.37	54.00	15.63
7513	39.64	PK	V	34.81	6.95	26.17	55.23	49.23	74.00	24.77
7513	26.77	AV	V	34.81	6.95	26.17	42.36	36.36	54.00	17.64
2786	38.87	PK	V	26.64	4.45	27.55	42.41	36.41	74.00	37.59
2786	22.44	AV	V	26.64	4.45	27.55	25.98	19.98	54.00	34.02
227.88	33.20	QP	V	11.78	1.82	21.48	25.32	25.32	46.00	20.68

*Within measurement uncertainty!

5725MHz-5850MHz:
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:5745 MHz										
5745	74.25	PK	H	32.15	5.53	0.00	111.93	105.93	N/A	N/A
5745	59.67	AV	H	32.15	5.53	0.00	97.35	91.35	N/A	N/A
5745	80.81	PK	V	32.15	5.53	0.00	118.49	112.49	N/A	N/A
5745	65.28	AV	V	32.15	5.53	0.00	102.96	96.96	N/A	N/A
5725	41.39	PK	V	32.15	5.60	0.00	79.14	73.14	74.00	0.86*
5725	21.24	AV	V	32.15	5.60	0.00	58.99	52.99	54.00	1.01*
11490	38.45	PK	V	37.89	8.94	26.14	59.14	53.14	74.00	20.86
11490	31.42	AV	V	37.89	8.94	26.14	52.11	46.11	54.00	7.89
17235	32.63	PK	V	40.91	13.69	25.63	61.60	55.60	74.00	18.40
17235	19.38	AV	V	40.91	13.69	25.63	48.35	42.35	54.00	11.65
4933	44.31	PK	V	30.93	5.35	27.43	53.16	47.16	74.00	26.84
4933	29.71	AV	V	30.93	5.35	27.43	38.56	32.56	54.00	21.44
1442	44.45	PK	V	23.45	2.96	27.17	43.69	37.69	74.00	36.31
1442	29.48	AV	V	23.45	2.96	27.17	28.72	22.72	54.00	31.28
227.88	33.10	QP	V	11.78	1.82	21.48	25.22	25.22	46.00	20.78
Middle Channel:5785 MHz										
5785	74.79	PK	H	32.16	5.47	0.00	112.42	106.42	N/A	N/A
5785	60.07	AV	H	32.16	5.47	0.00	97.70	91.70	N/A	N/A
5785	81.22	PK	V	32.16	5.47	0.00	118.85	112.85	N/A	N/A
5785	65.64	AV	V	32.16	5.47	0.00	103.27	97.27	N/A	N/A
11570	39.01	PK	V	37.90	8.92	26.07	59.76	53.76	74.00	20.24
11570	32.02	AV	V	37.90	8.92	26.07	52.77	46.77	54.00	7.23
17355	33.06	PK	V	41.63	12.99	25.63	62.05	56.05	74.00	17.95
17355	19.80	AV	V	41.63	12.99	25.63	48.79	42.79	54.00	11.21
4946	44.75	PK	V	30.96	5.37	27.43	53.65	47.65	74.00	26.35
4946	30.28	AV	V	30.96	5.37	27.43	39.18	33.18	54.00	20.82
1442	44.79	PK	V	23.45	2.96	27.17	44.03	38.03	74.00	35.97
1442	29.93	AV	V	23.45	2.96	27.17	29.17	23.17	54.00	30.83
227.88	33.30	QP	V	11.78	1.82	21.48	25.42	25.42	46.00	20.58
297.9	30.10	QP	V	13.99	2.06	21.52	24.63	24.63	46.00	21.37
High Channel:5825 MHz										
5825	75.36	PK	H	32.17	5.75	0.00	113.28	107.28	N/A	N/A
5825	60.66	AV	H	32.17	5.75	0.00	98.58	92.58	N/A	N/A
5825	81.71	PK	V	32.17	5.75	0.00	119.63	113.63	N/A	N/A
5825	66.11	AV	V	32.17	5.75	0.00	104.03	98.03	N/A	N/A
5850	31.57	PK	V	32.17	6.05	0.00	69.79	63.79	74.00	10.21
5850	17.08	AV	V	32.17	6.05	0.00	55.30	49.30	54.00	4.70
11650	39.46	PK	V	37.90	8.90	25.75	60.51	54.51	74.00	19.49
11650	32.36	AV	V	37.90	8.90	25.75	53.41	47.41	54.00	6.59
17475	33.36	PK	V	42.35	12.30	25.39	62.62	56.62	74.00	17.38
17475	20.15	AV	V	42.35	12.30	25.39	49.41	43.41	54.00	10.59
4959	45.32	PK	V	30.99	5.34	27.43	54.22	48.22	74.00	25.78
4959	30.84	AV	V	30.99	5.34	27.43	39.74	33.74	54.00	20.26
1442	45.36	PK	V	23.45	2.96	27.17	44.60	38.60	74.00	35.40
1442	30.47	AV	V	23.45	2.96	27.17	29.71	23.71	54.00	30.29
227.88	33.10	QP	V	11.78	1.82	21.48	25.22	25.22	46.00	20.78

802.11n ht20 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:5745 MHz										
5745	74.36	PK	H	32.15	5.53	0.00	112.04	106.04	N/A	N/A
5745	60.48	AV	H	32.15	5.53	0.00	98.16	92.16	N/A	N/A
5745	80.02	PK	V	32.15	5.53	0.00	117.70	111.70	N/A	N/A
5745	65.84	AV	V	32.15	5.53	0.00	103.52	97.52	N/A	N/A
5725	41.01	PK	V	32.15	5.60	0.00	78.76	72.76	74.00	1.24*
5725	21.21	AV	V	32.15	5.60	0.00	58.96	52.96	54.00	1.04*
11490	38.69	PK	V	37.89	8.94	26.14	59.38	53.38	74.00	20.62
11490	31.47	AV	V	37.89	8.94	26.14	52.16	46.16	54.00	7.84
17235	32.36	PK	V	40.91	13.69	25.63	61.33	55.33	74.00	18.67
17235	19.37	AV	V	40.91	13.69	25.63	48.34	42.34	54.00	11.66
4933	44.61	PK	V	30.93	5.35	27.43	53.46	47.46	74.00	26.54
4933	29.88	AV	V	30.93	5.35	27.43	38.73	32.73	54.00	21.27
1442	44.44	PK	V	23.45	2.96	27.17	43.68	37.68	74.00	36.32
1442	29.52	AV	V	23.45	2.96	27.17	28.76	22.76	54.00	31.24
227.88	33.20	QP	V	11.78	1.82	21.48	25.32	25.32	46.00	20.68
Middle Channel:5785 MHz										
5785	74.76	PK	H	32.16	5.47	0.00	112.39	106.39	N/A	N/A
5785	60.81	AV	H	32.16	5.47	0.00	98.44	92.44	N/A	N/A
5785	80.24	PK	V	32.16	5.47	0.00	117.87	111.87	N/A	N/A
5785	66.24	AV	V	32.16	5.47	0.00	103.87	97.87	N/A	N/A
11570	38.92	PK	V	37.90	8.92	26.07	59.67	53.67	74.00	20.33
11570	31.84	AV	V	37.90	8.92	26.07	52.59	46.59	54.00	7.41
17355	32.85	PK	V	41.63	12.99	25.63	61.84	55.84	74.00	18.16
17355	19.71	AV	V	41.63	12.99	25.63	48.70	42.70	54.00	11.30
4946	44.82	PK	V	30.96	5.37	27.43	53.72	47.72	74.00	26.28
4946	30.23	AV	V	30.96	5.37	27.43	39.13	33.13	54.00	20.87
1442	44.66	PK	V	23.45	2.96	27.17	43.90	37.90	74.00	36.10
1442	29.98	AV	V	23.45	2.96	27.17	29.22	23.22	54.00	30.78
227.88	33.60	QP	V	11.78	1.82	21.48	25.72	25.72	46.00	20.28
297.9	30.20	QP	V	13.99	2.06	21.52	24.73	24.73	46.00	21.27
High Channel:5825 MHz										
5825	75.14	PK	H	32.17	5.75	0.00	113.06	107.06	N/A	N/A
5825	61.08	AV	H	32.17	5.75	0.00	99.00	93.00	N/A	N/A
5825	80.56	PK	V	32.17	5.75	0.00	118.48	112.48	N/A	N/A
5825	66.61	AV	V	32.17	5.75	0.00	104.53	98.53	N/A	N/A
5850	32.47	PK	V	32.17	6.05	0.00	70.69	64.69	74.00	9.31
5850	17.35	AV	V	32.17	6.05	0.00	55.57	49.57	54.00	4.43*
11650	39.25	PK	V	37.90	8.90	25.75	60.30	54.30	74.00	19.70
11650	32.26	AV	V	37.90	8.90	25.75	53.31	47.31	54.00	6.69
17475	33.18	PK	V	42.35	12.30	25.39	62.44	56.44	74.00	17.56
17475	19.95	AV	V	42.35	12.30	25.39	49.21	43.21	54.00	10.79
4959	45.20	PK	V	30.99	5.34	27.43	54.10	48.10	74.00	25.90
4959	30.45	AV	V	30.99	5.34	27.43	39.35	33.35	54.00	20.65
1442	45.03	PK	V	23.45	2.96	27.17	44.27	38.27	74.00	35.73
1442	30.34	AV	V	23.45	2.96	27.17	29.58	23.58	54.00	30.42
227.88	33.60	QP	V	11.78	1.82	21.48	25.72	25.72	46.00	20.28

Within measurement uncertainty!

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:5755 MHz										
5755	70.55	PK	H	32.15	5.50	0.00	108.20	102.20	N/A	N/A
5755	55.40	AV	H	32.15	5.50	0.00	93.05	87.05	N/A	N/A
5755	76.36	PK	V	32.15	5.50	0.00	114.01	108.01	N/A	N/A
5755	62.38	AV	V	32.15	5.50	0.00	100.03	94.03	N/A	N/A
5725	41.27	PK	V	32.15	5.60	0.00	79.02	73.02	74.00	0.98*
5725	21.55	AV	V	32.15	5.60	0.00	59.30	53.30	54.00	0.70*
11510	38.23	PK	V	37.90	8.95	26.12	58.96	52.96	74.00	21.04
11510	30.84	AV	V	37.90	8.95	26.12	51.57	45.57	54.00	8.43
17265	31.87	PK	V	41.09	13.51	25.63	60.84	54.84	74.00	19.16
17265	18.73	AV	V	41.09	13.51	25.63	47.70	41.70	54.00	12.30
4950	44.06	PK	V	30.97	5.37	27.43	52.97	46.97	74.00	27.03
4950	29.32	AV	V	30.97	5.37	27.43	38.23	32.23	54.00	21.77
1451	43.78	PK	V	23.47	2.93	27.21	42.97	36.97	74.00	37.03
1451	29.08	AV	V	23.47	2.93	27.21	28.27	22.27	54.00	31.73
227.88	33.10	QP	V	11.78	1.82	21.48	25.22	25.22	46.00	20.78
High Channel:5795 MHz										
5795	70.82	PK	H	32.16	5.46	0.00	108.44	102.44	N/A	N/A
5795	55.68	AV	H	32.16	5.46	0.00	93.30	87.30	N/A	N/A
5795	76.96	PK	V	32.16	5.46	0.00	114.58	108.58	N/A	N/A
5795	61.66	AV	V	32.16	5.46	0.00	99.28	93.28	N/A	N/A
5850	35.36	PK	V	32.17	6.05	0.00	73.58	67.58	74.00	6.42
5850	16.67	AV	V	32.17	6.05	0.00	54.89	48.89	54.00	5.11
11590	38.78	PK	V	37.90	8.92	26.06	59.54	53.54	74.00	20.46
11590	31.78	AV	V	37.90	8.92	26.06	52.54	46.54	54.00	7.46
17385	32.51	PK	V	41.81	12.82	25.63	61.51	55.51	74.00	18.49
17385	19.29	AV	V	41.81	12.82	25.63	48.29	42.29	54.00	11.71
4955	44.68	PK	V	30.98	5.35	27.43	53.58	47.58	74.00	26.42
4955	29.96	AV	V	30.98	5.35	27.43	38.86	32.86	54.00	21.14
1423	44.60	PK	V	23.40	2.99	27.09	43.90	37.90	74.00	36.10
1423	29.89	AV	V	23.40	2.99	27.09	29.19	23.19	54.00	30.81
227.88	32.80	QP	V	11.78	1.82	21.48	24.92	24.92	46.00	21.08

Within measurement uncertainty!

Co-location Radiated Emission (The test distance is 3m.)

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)					
1630	56.19	PK	H	23.86	2.76	27.77	55.04	74.00	18.96
1630	36.94	AV	H	23.86	2.76	27.77	35.79	54.00	18.21
1962.5	49.36	PK	H	24.53	3.01	27.49	49.41	74.00	24.59
1962.5	30.68	AV	H	24.53	3.01	27.49	30.73	54.00	23.27
2212.5	49.13	PK	H	25.15	3.35	27.29	50.34	74.00	23.66
2212.5	20.36	AV	H	25.15	3.35	27.29	21.57	54.00	32.43
1627.5	53.11	PK	V	23.86	2.74	27.77	51.94	74.00	22.06
1627.5	32.87	AV	V	23.86	2.74	27.77	31.70	54.00	22.30
2360	50.68	PK	V	25.54	3.57	27.31	52.48	74.00	21.52
2360	28.74	AV	V	25.54	3.57	27.31	30.54	54.00	23.46
2452.5	51.67	PK	V	25.78	3.78	27.35	53.88	74.00	20.12
2452.5	21.53	AV	V	25.78	3.78	27.35	23.74	54.00	30.26
227.88	32.90	QP	V	11.78	1.82	21.48	25.02	46.00	20.98

Conducted Spurious Emission at Antenna Port

5150-5250 MHz band

Mode	Channel	Frequency	Conducted Spurious Emissions (dBm)				Result
		MHz	Chain 0	Chain 1	Total	Limits	
802.11a	Low	5180	-31.46	-33.63	-29.4	-27	PASS
	Middle	5200	-32.64	-32.63	-29.62	-27	PASS
	High	5240	-32.38	-33.21	-29.76	-27	PASS
802.11n20	Low	5180	-32.40	-33.1	-29.73	-27	PASS
	Middle	5200	-32.57	-32.02	-29.28	-27	PASS
	High	5240	-33.14	-33.21	-30.16	-27	PASS
802.11n40	Low	5190	-33.16	-33.33	-30.23	-27	PASS
	High	5230	-31.95	-33.5	-29.65	-27	PASS

5725-5850 MHz band

Mode	Channel	Frequency	Conducted Spurious Emissions (dBm)				Result
		MHz	Chain 0	Chain 1	Total	Limits	
802.11a	Low	5745	-32.34	-32.20	-29.26	-27	PASS
	Middle	5785	-32.52	-33.81	-30.11	-27	PASS
	High	5825	-32.82	-33.49	-30.13	-27	PASS
802.11n20	Low	5745	-32.66	-33.79	-30.18	-27	PASS
	Middle	5785	-33.12	-33.69	-30.39	-27	PASS
	High	5825	-31.97	-33.41	-29.62	-27	PASS
802.11n40	Low	5755	-33.63	-32.85	-30.21	-27	PASS
	High	5795	-31.47	-33.88	-29.50	-27	PASS

Note: 1.Offset=Cable loss + Directional Antenna Gain (dBi)

    2. Directional gain = G_{ANT} + 10 log (N_{ANT}) dBi

Please refer to the following plots:
5150MHz-5250MHz:

802.11a Low Channel 30MHz-1GHz – Chain0
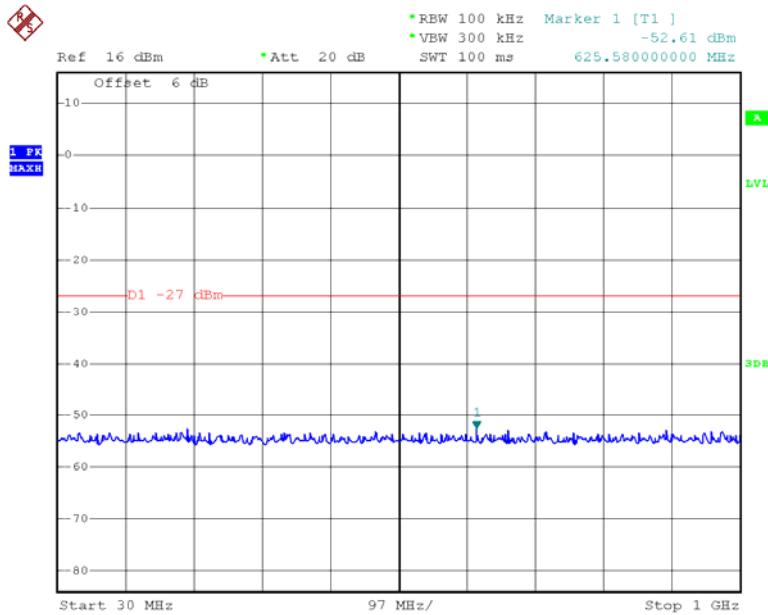
Date: 26.MAY.2015   12:10:29

802.11a Low Channel 1GHz-26.5GHz – Chain0

Fundamental
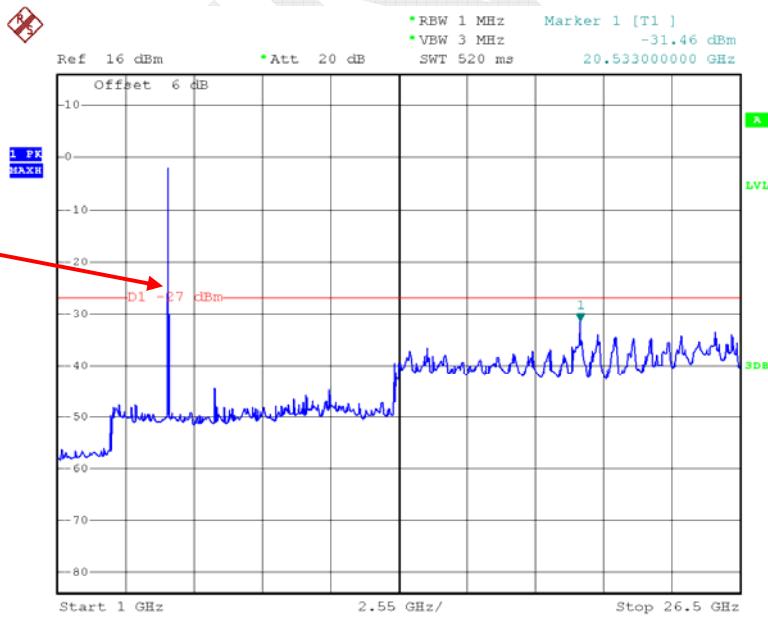
Date: 26.MAY.2015   12:11:57

802.11a Low Channel 26.5GHz-40GHz – Chain0
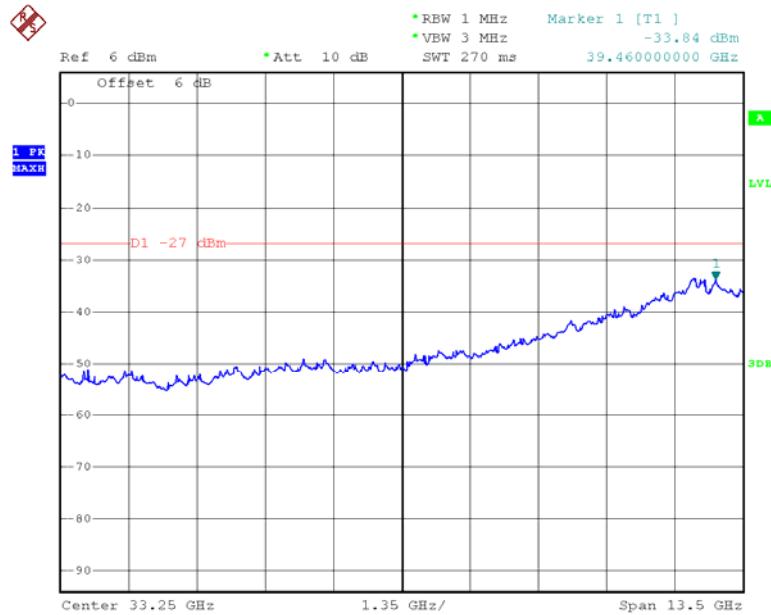
Date: 26.MAY.2015 12:18:47

802.11a Middle Channel 30MHz-1GHz – Chain0
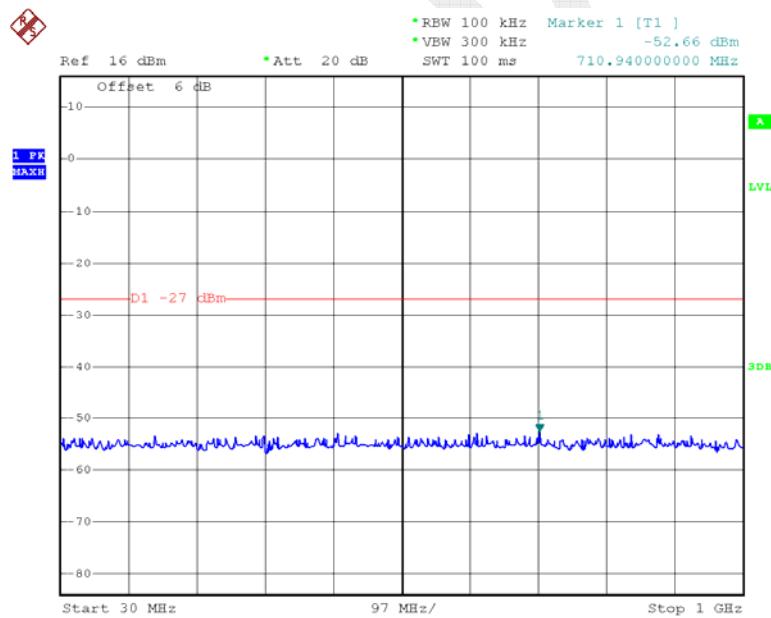
Date: 26.MAY.2015 12:10:39

## 802.11a Middle Channel 1GHz -26.5GHz – Chain0

Fundamental
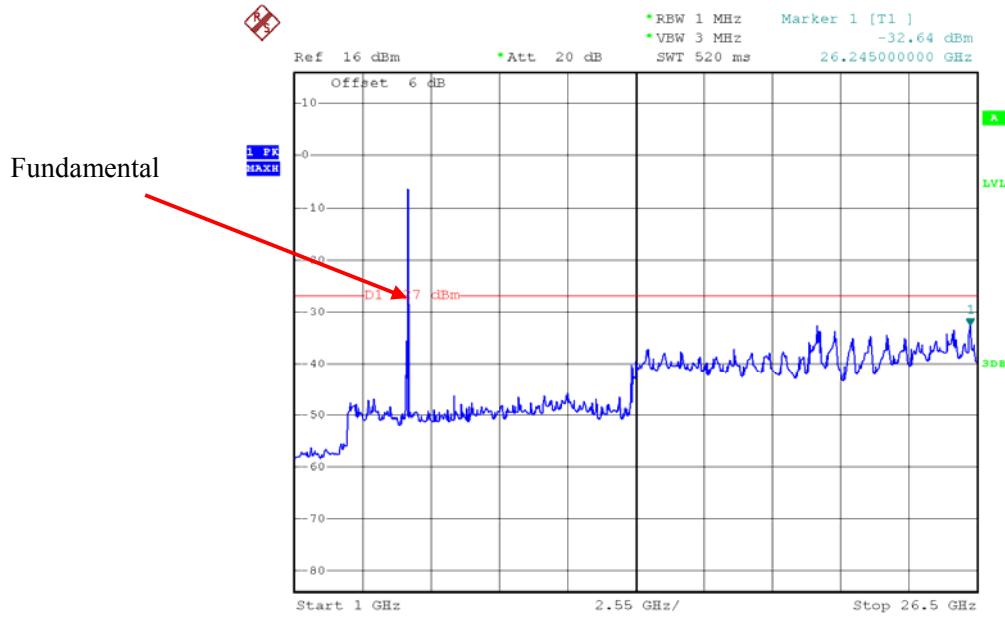
Date: 26.MAY.2015　12:27:11

## 802.11a Middle Channel 26.5GHz-40GHz – Chain0
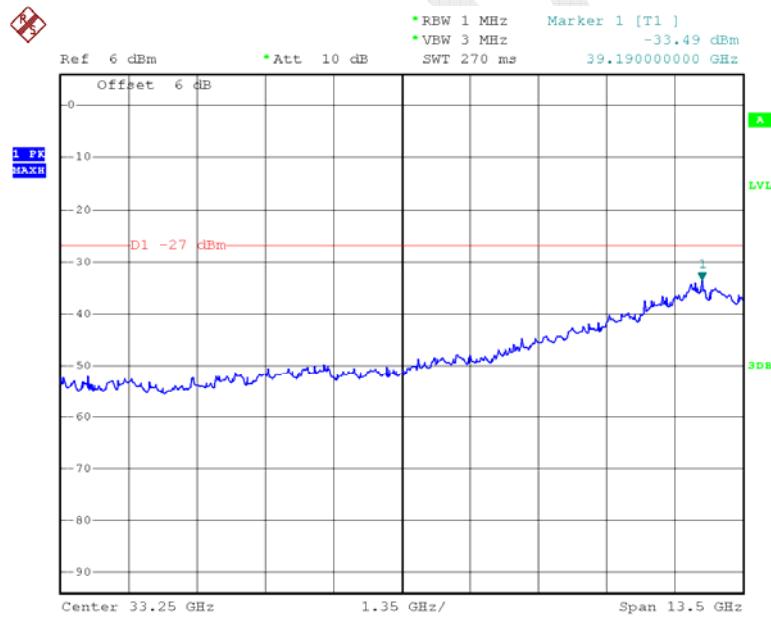
Date: 26.MAY.2015　12:18:58

## 802.11a High Channel 30MHz-1GHz – Chain0
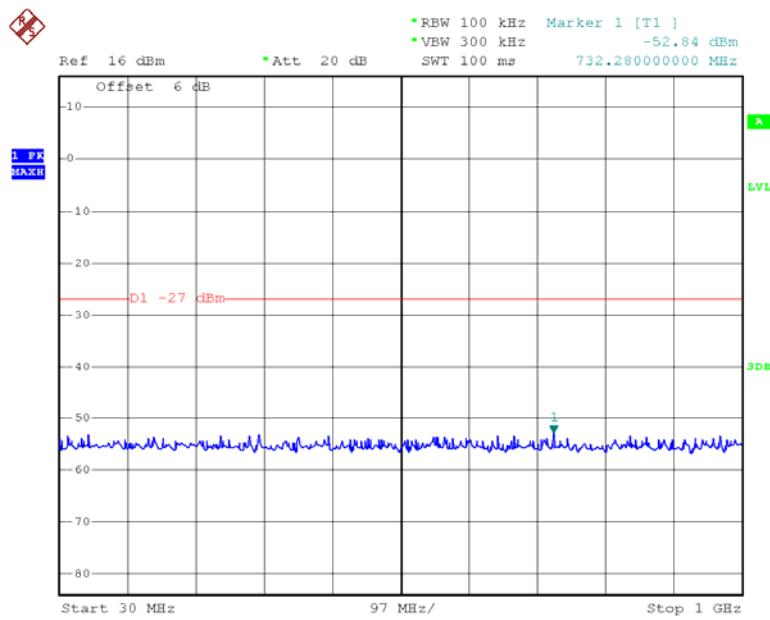
Date: 26.MAY.2015 13:54:36

802.11a High Channel 1GHz-26.5GHz – Chain0

Fundamental
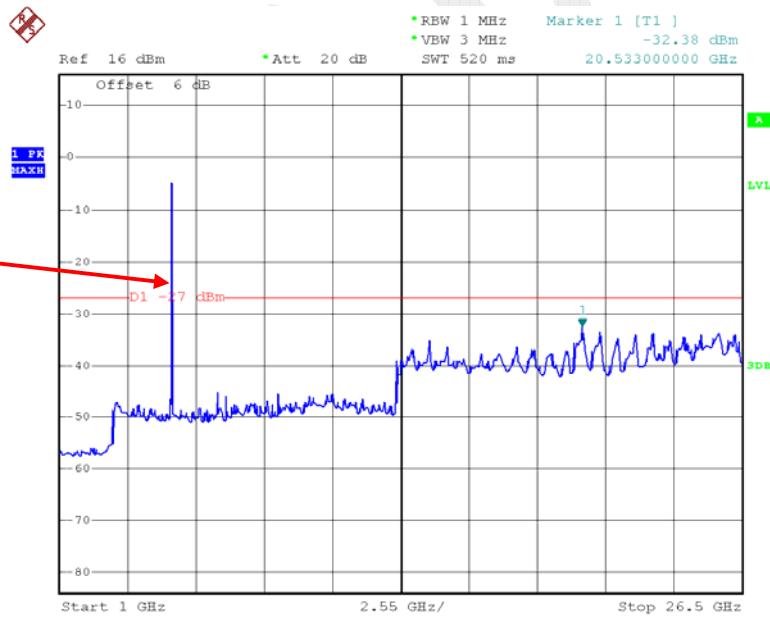
Date: 26.MAY.2015 12:22:17

802.11a High Channel 26.5GHz-40GHz – Chain0

```
                              *RBW 1 MHz    Marker 1 [T1 ]
                              *VBW 3 MHz              -33.42 dBm
   Ref  6 dBm      *Att  10 dB  SWT 270 ms    39.055000000 GHz
      Offset  6 dB
   -0
1 PK
MAXH
   -10
   -20
      D1 -27 dBm
   -30                                                    1
   -40
   -50
   -60
   -70
   -80
   -90
   Start 26.5 GHz          1.35 GHz/          Stop 40 GHz
```
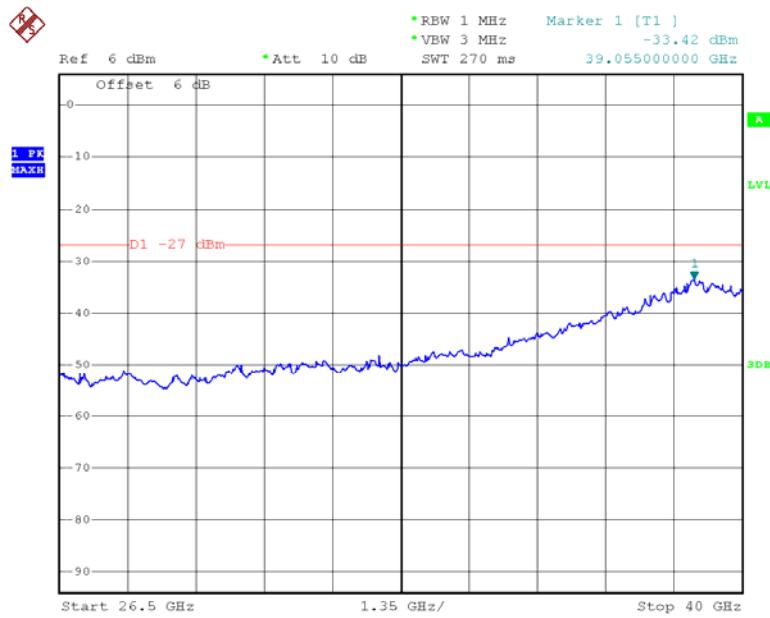
Date: 26.MAY.2015 14:05:56

802.11n ht20 Low Channel 30MHz-1GHz – Chain0

```
                              *RBW 100 kHz   Marker 1 [T1 ]
                              *VBW 300 kHz             -52.46 dBm
   Ref  16 dBm     *Att  20 dB  SWT 100 ms    385.020000000 MHz
      Offset  6 dB
   -10
1 PK
MAXH
   -0
   -10
   -20
      D1 -27 dBm
   -30
   -40
   -50        1
   -60
   -70
   -80
   Start 30 MHz           97 MHz/            Stop 1 GHz
```
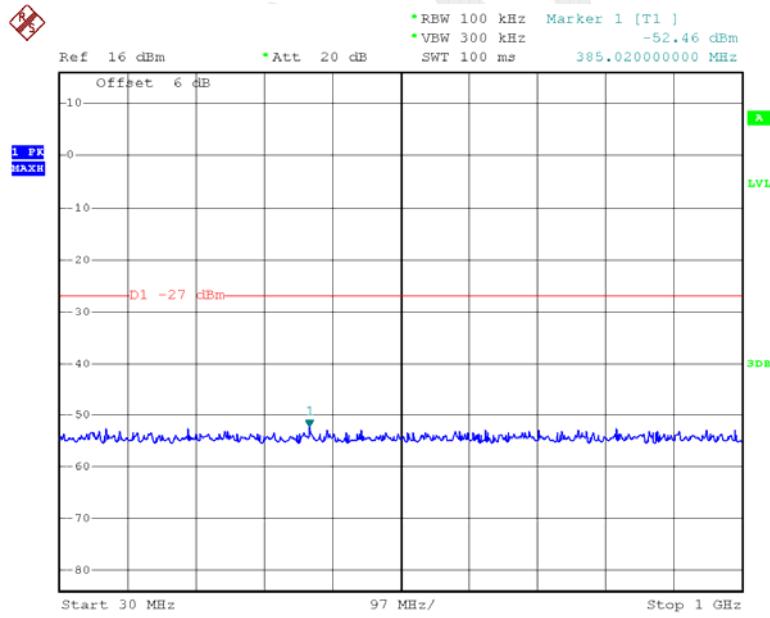
Date: 26.MAY.2015 13:55:00

802.11n ht20 Low Channel 1GHz-26.5GHz – Chain0

Fundamental
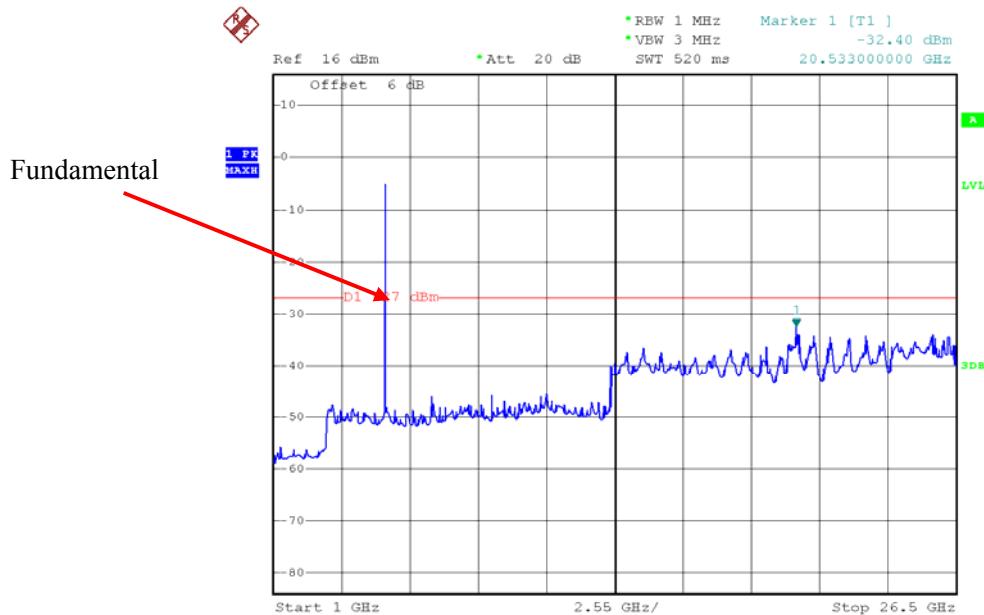
Date: 26.MAY.2015 12:26:16

802.11n ht20 Low Channel 26.5GHz-40GHz – Chain0
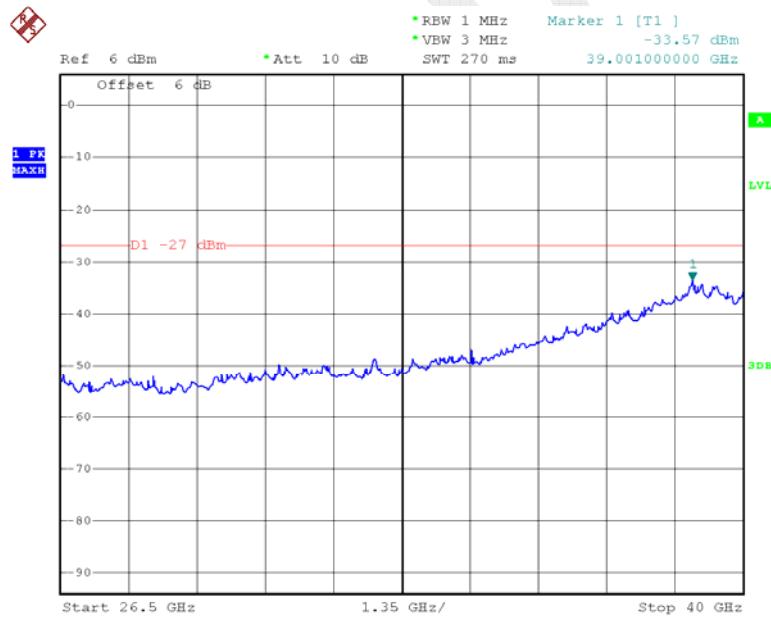
Date: 26.MAY.2015 14:06:09

**802.11n ht20 Middle Channel 30MHz-1GHz – Chain0**
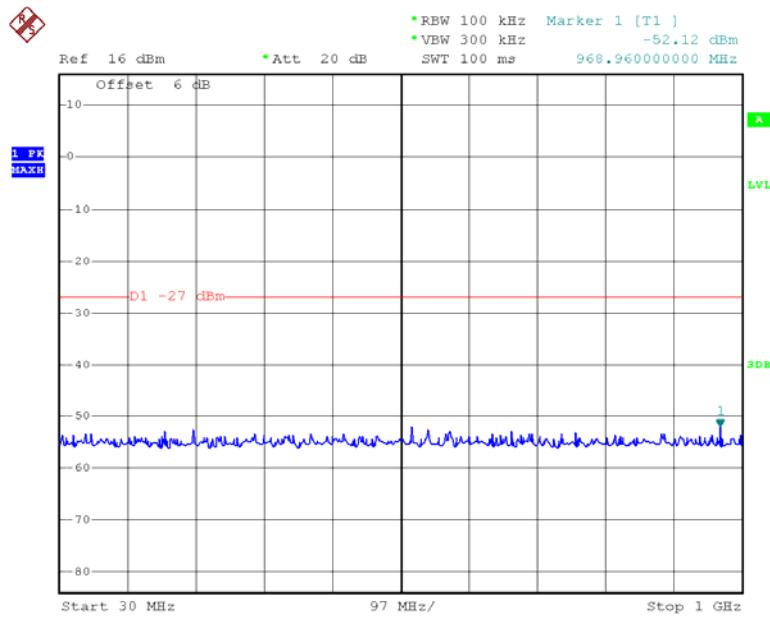
Date: 26.MAY.2015 13:55:15

**802.11n ht20 Middle Channel 1GHz -26.5GHz – Chain0**
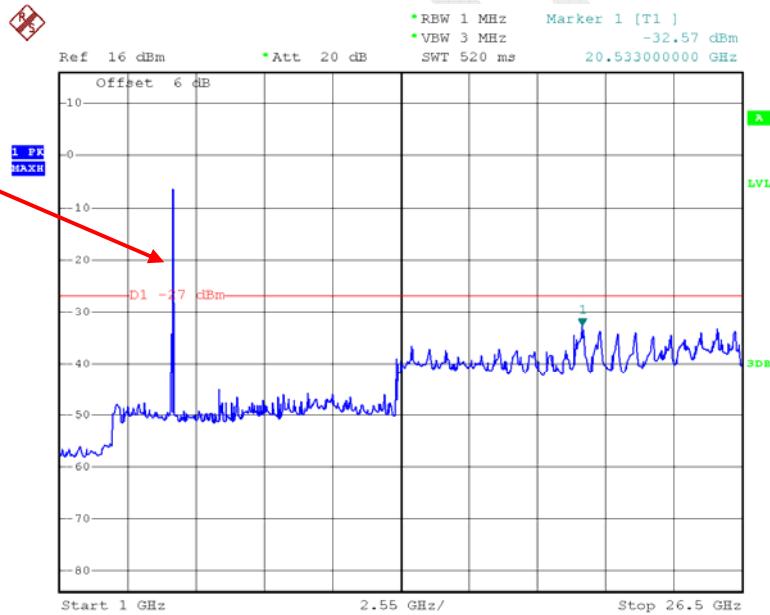
Date: 26.MAY.2015 12:23:52

802.11n ht20 Middle Channel 26.5GHz-40GHz – Chain0
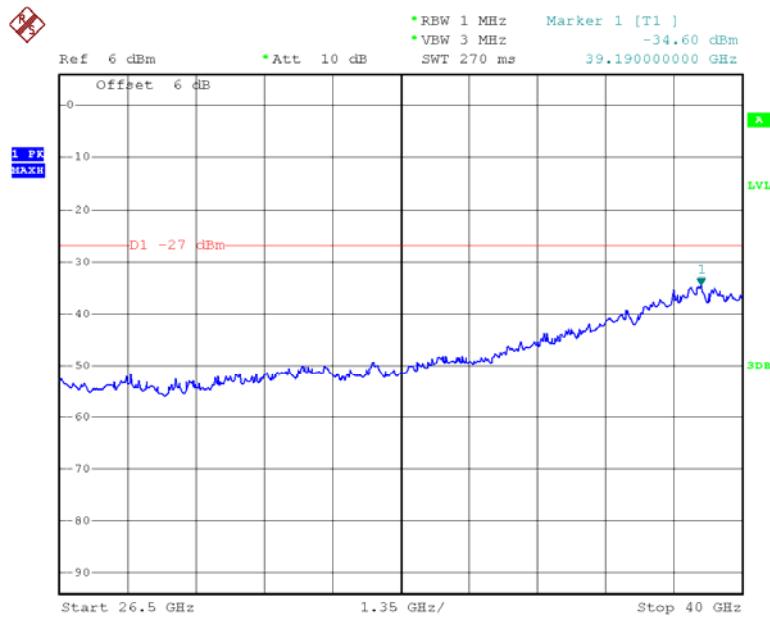
Date: 26.MAY.2015 14:06:30

802.11n ht20 High Channel 30MHz-1GHz – Chain0
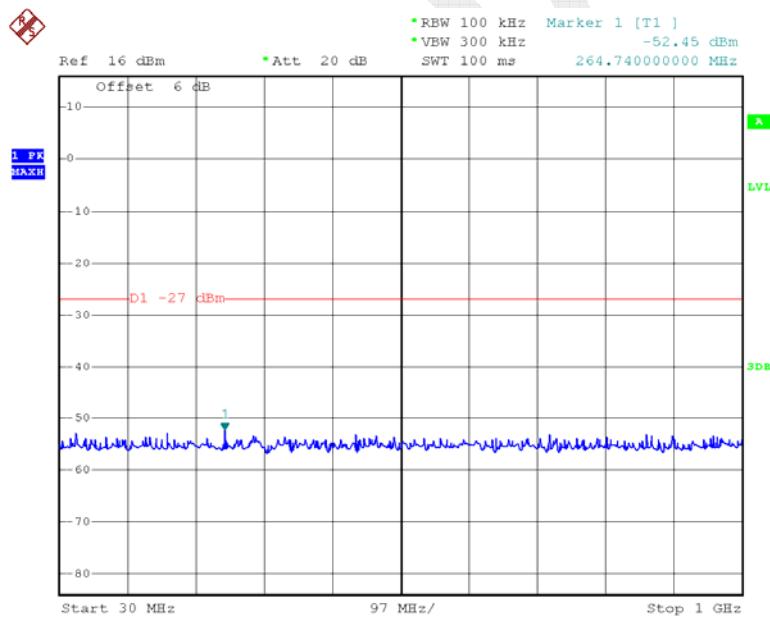
Date: 26.MAY.2015 13:55:23

802.11n ht20 High Channel 1GHz-26.5GHz – Chain0
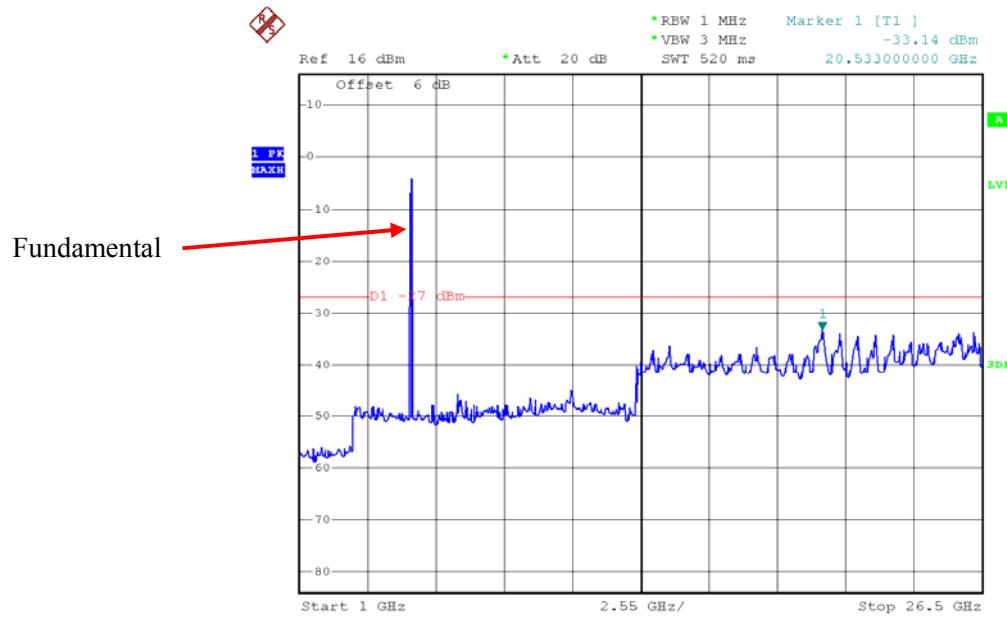
Date: 26.MAY.2015 12:25:03

802.11n ht20 High Channel 26.5GHz-40GHz – Chain0
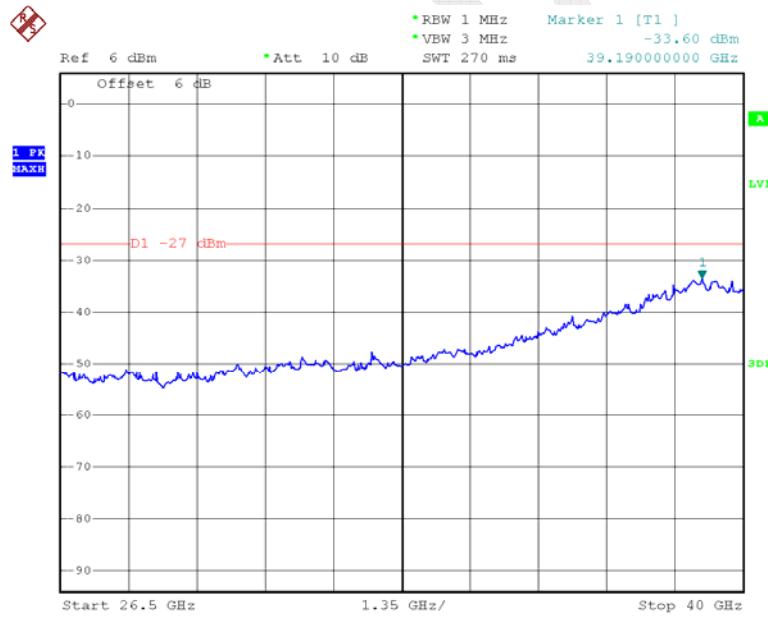
Date: 26.MAY.2015 14:09:05

802.11n ht40 Low Channel 30MHz-1GHz – Chain0
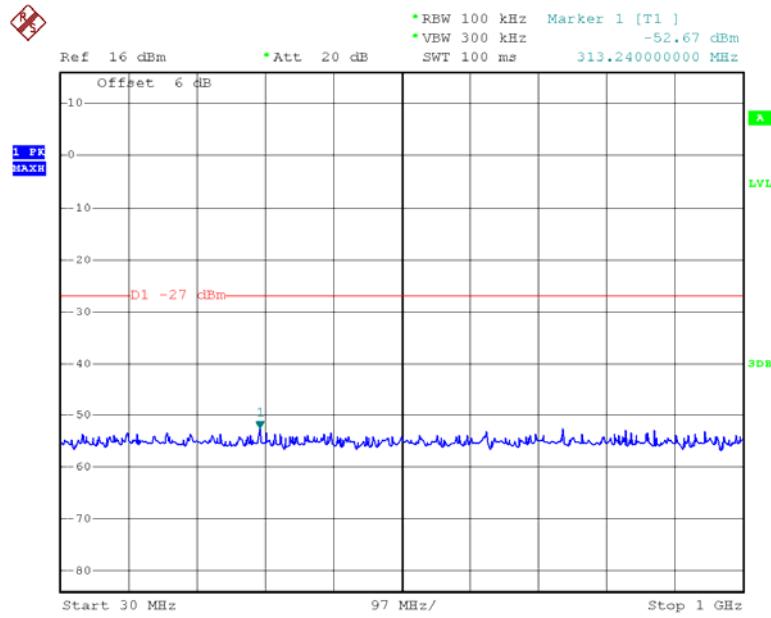
Date: 26.MAY.2015 13:55:32

802.11n ht40 Low Channel 1GHz-26.5GHz – Chain0
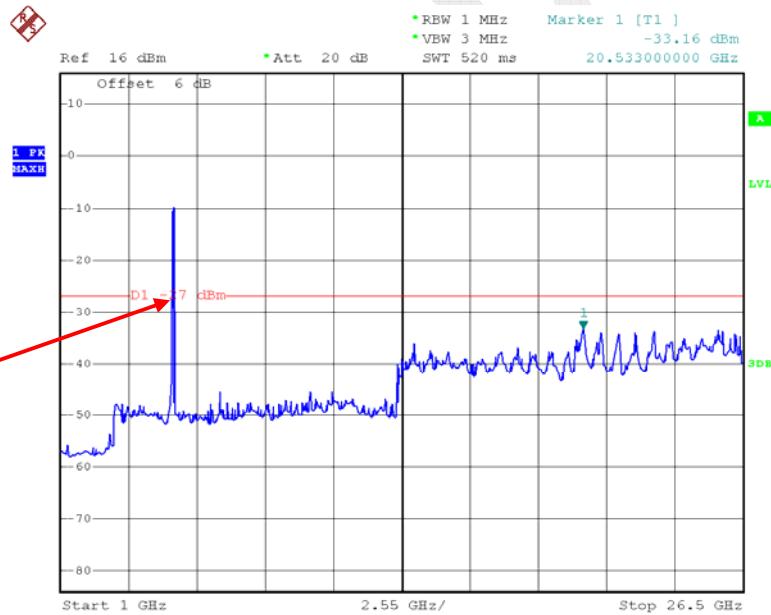
Fundamental

Date: 26.MAY.2015 12:31:54

## 802.11n ht40 Low Channel 26.5GHz-40GHz – Chain0
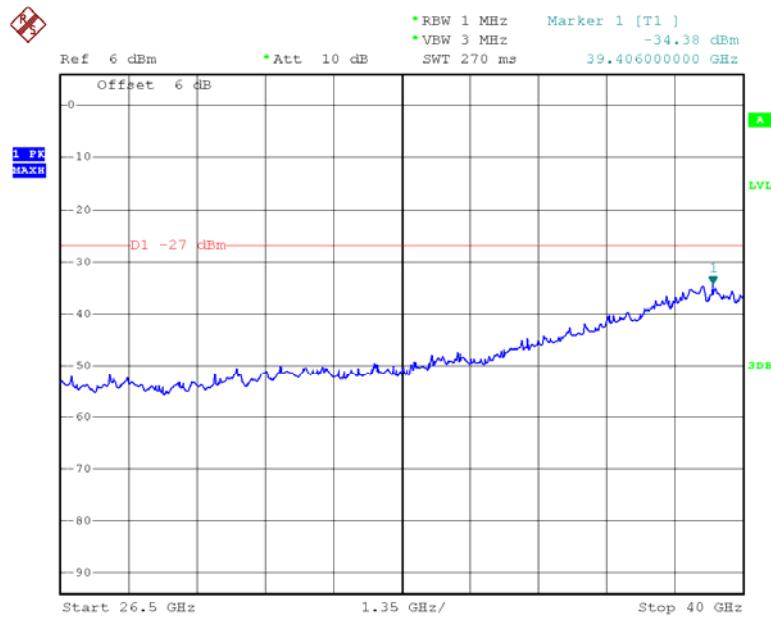
Date: 26.MAY.2015 14:09:15

802.11n ht40 High Channel 30MHz-1GHz – Chain0
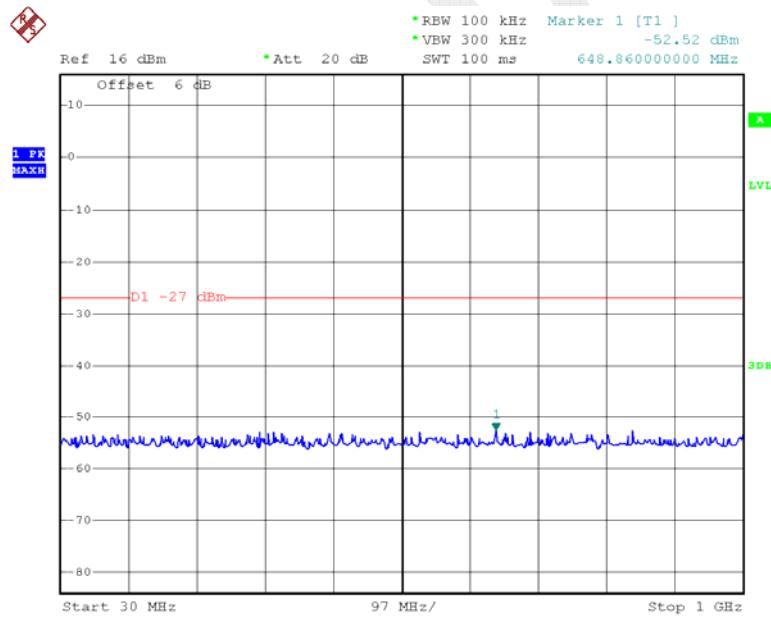
Date: 26.MAY.2015 13:55:52

802.11n ht40 High Channel 1GHz-26.5GHz – Chain0

Fundamental
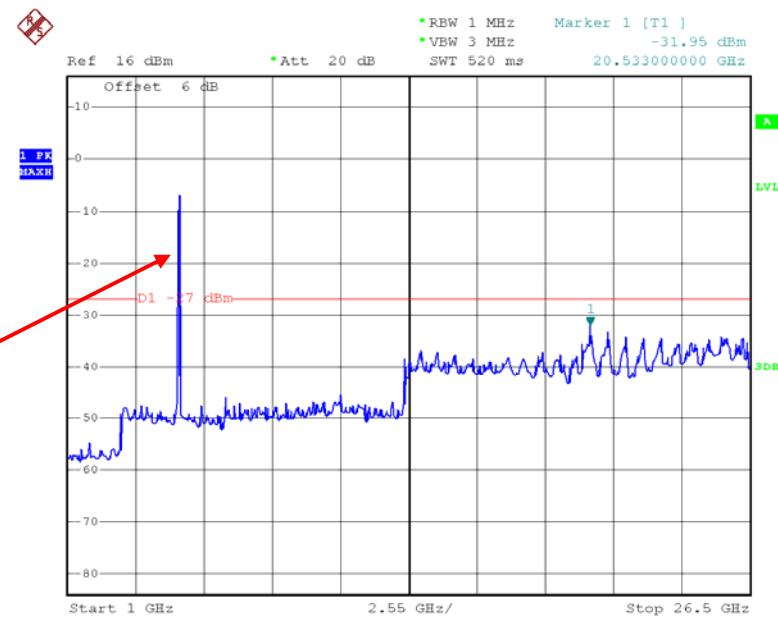
Date: 26.MAY.2015 12:30:00

802.11n ht40 High Channel 26.5GHz-40GHz – Chain0
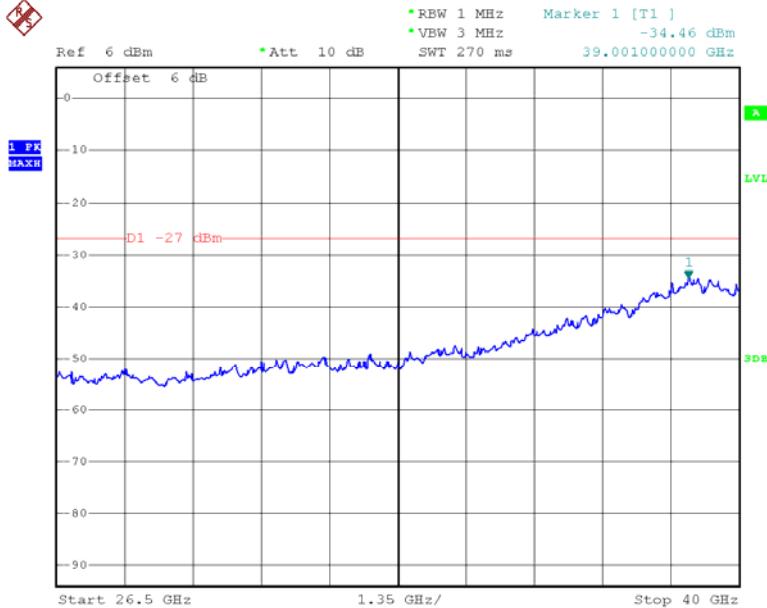
Date: 26.MAY.2015 14:09:27

802.11a Low Channel 30MHz-1GHz – Chain1
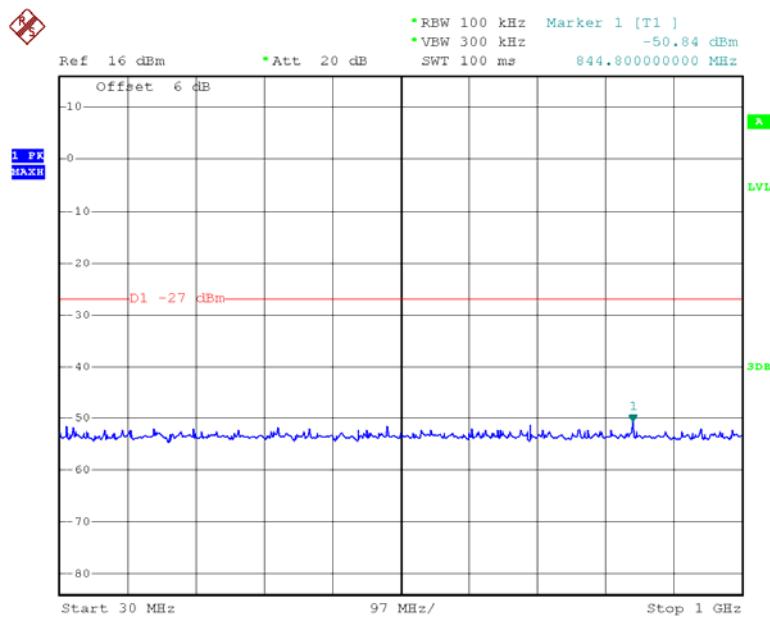
Date: 26.MAY.2015 13:58:36

802.11a Low Channel 1GHz-26.5GHz – Chain1

Fundamental
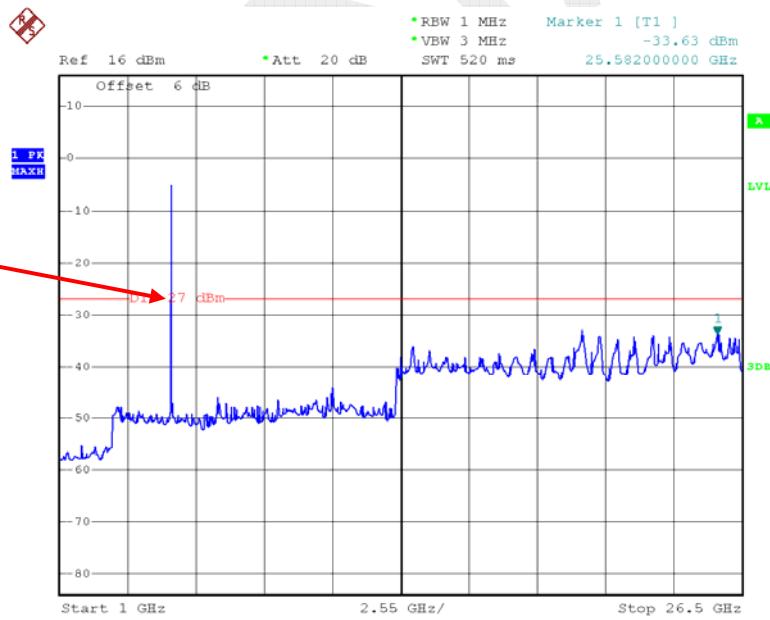
Date: 26.MAY.2015 12:26:29

802.11a Low Channel 26.5GHz-40GHz – Chain1
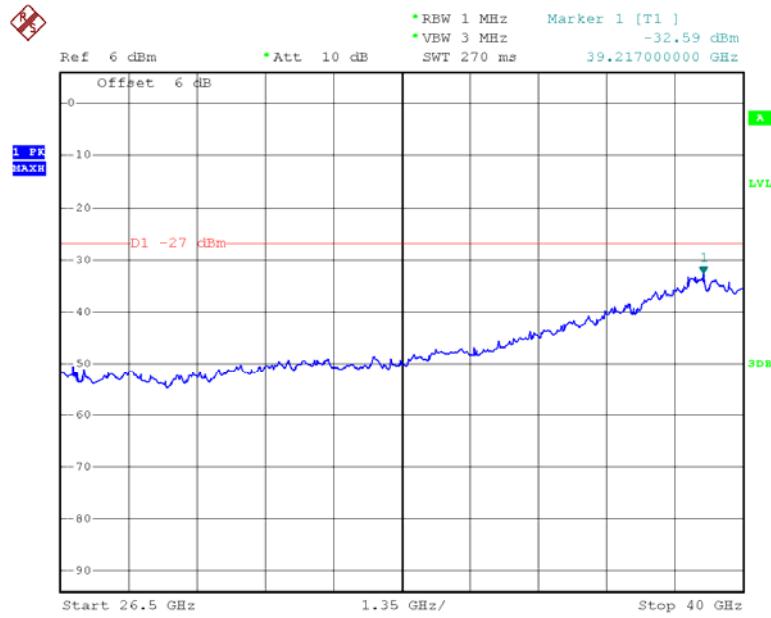
Date: 26.MAY.2015   14:13:04

802.11a Middle Channel 30MHz-1GHz – Chain1
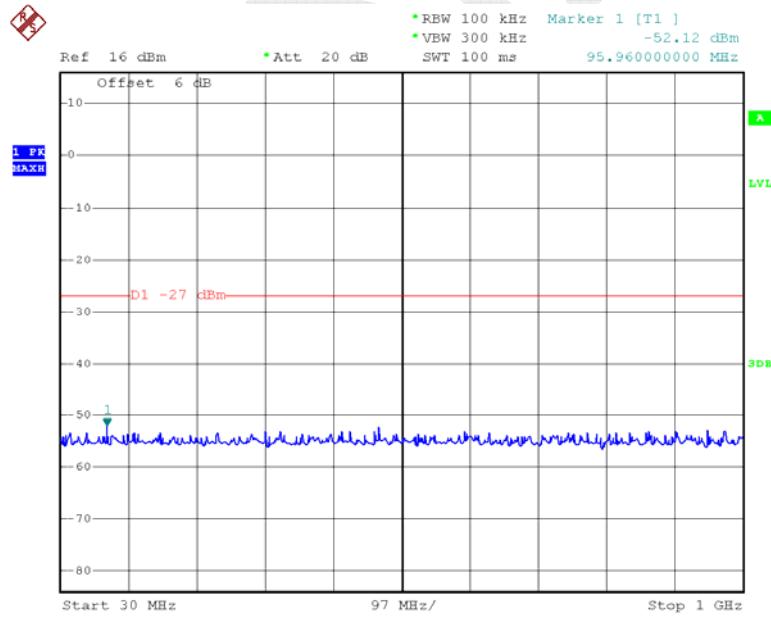
Date: 26.MAY.2015   13:58:50

802.11a Middle Channel 1GHz -26.5GHz – Chain1

Fundamental
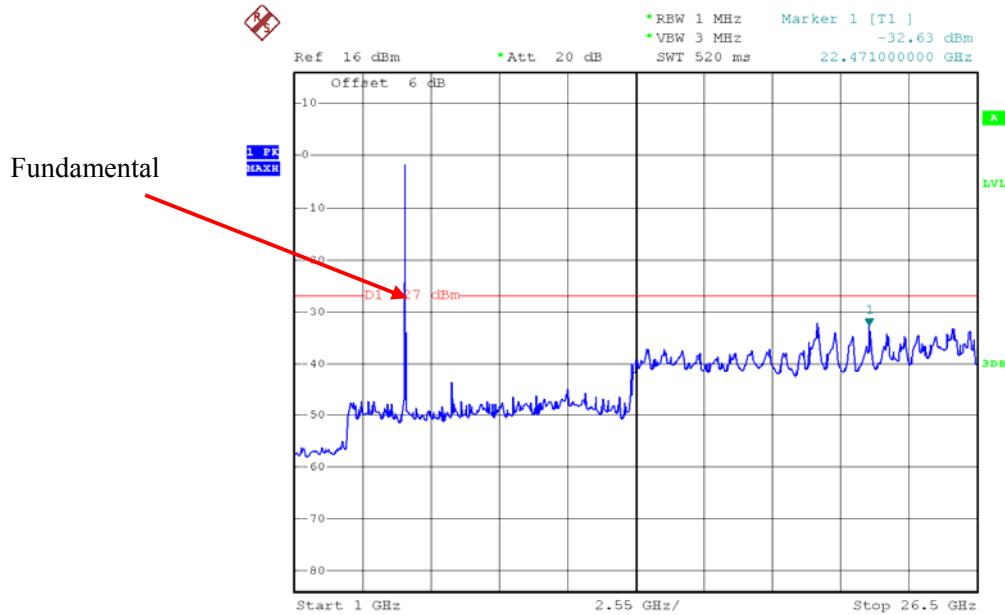
Date: 26.MAY.2015 12:13:47

802.11a Middle Channel 26.5GHz-40GHz – Chain1
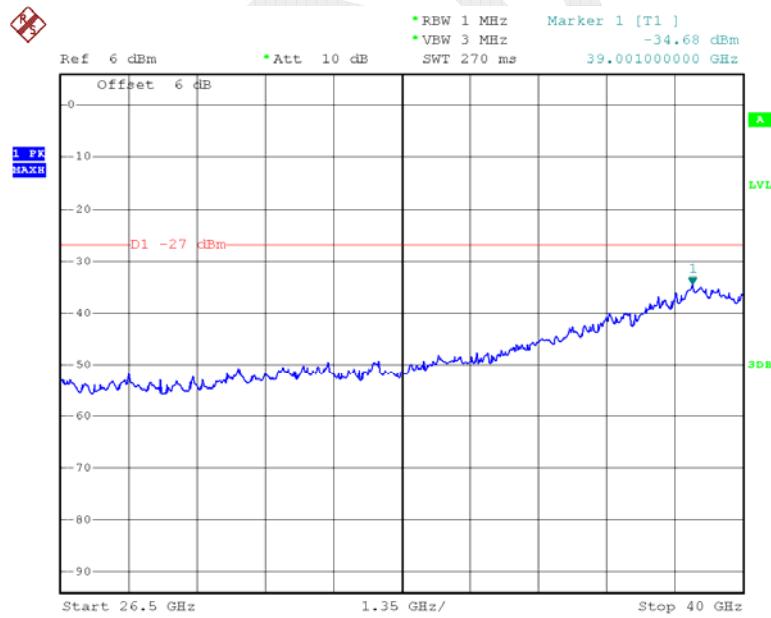
Date: 26.MAY.2015 14:13:13

802.11a High Channel 30MHz-1GHz – Chain1
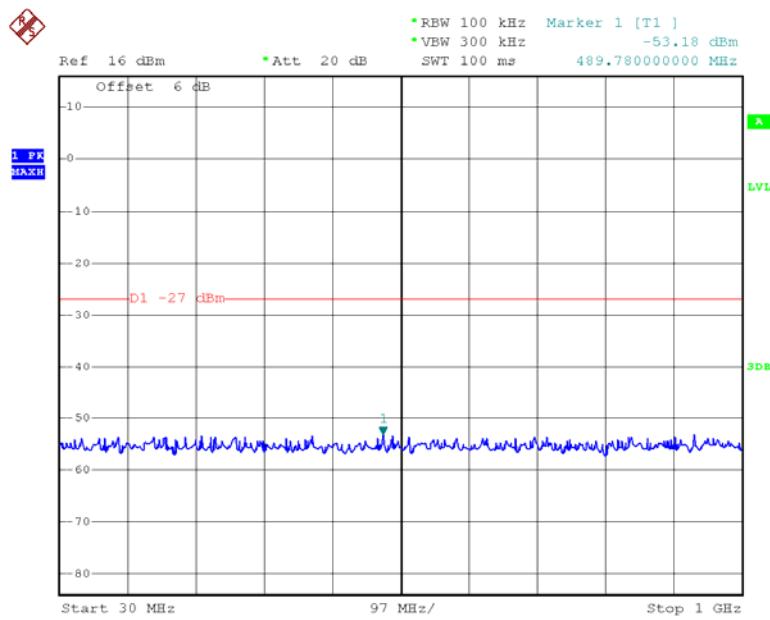
Date: 26.MAY.2015 13:58:57

802.11a High Channel 1GHz-26.5GHz – Chain1

Fundamental
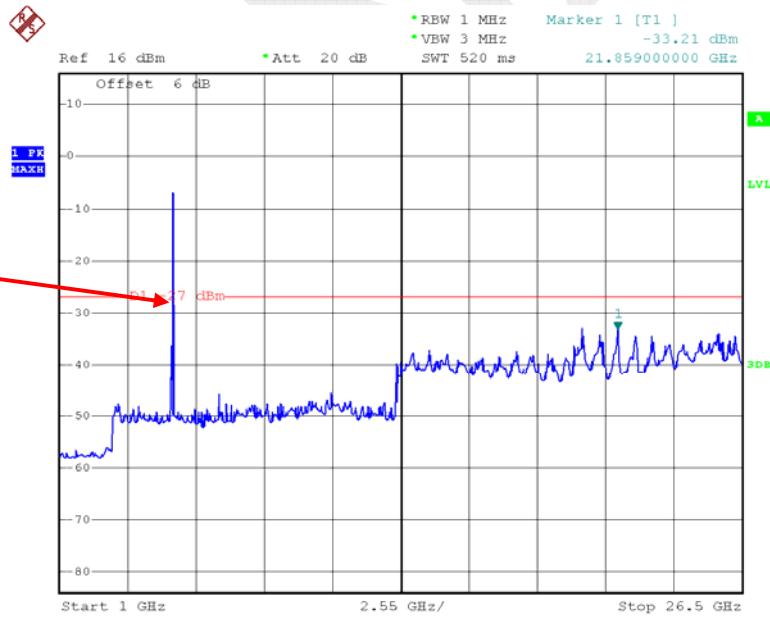
Date: 26.MAY.2015 12:24:08

802.11a High Channel 26.5GHz-40GHz – Chain1
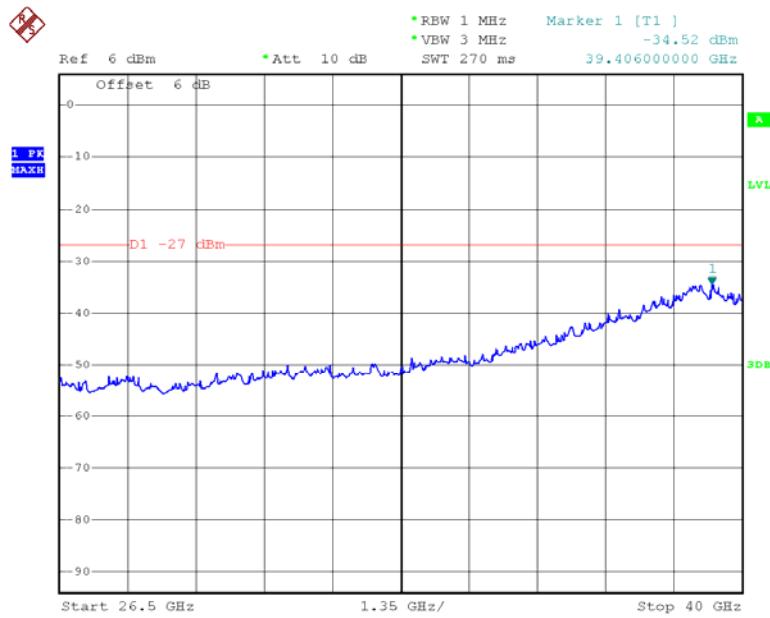
Date: 26.MAY.2015 14:13:20

802.11n ht20 Low Channel 30MHz-1GHz – Chain1
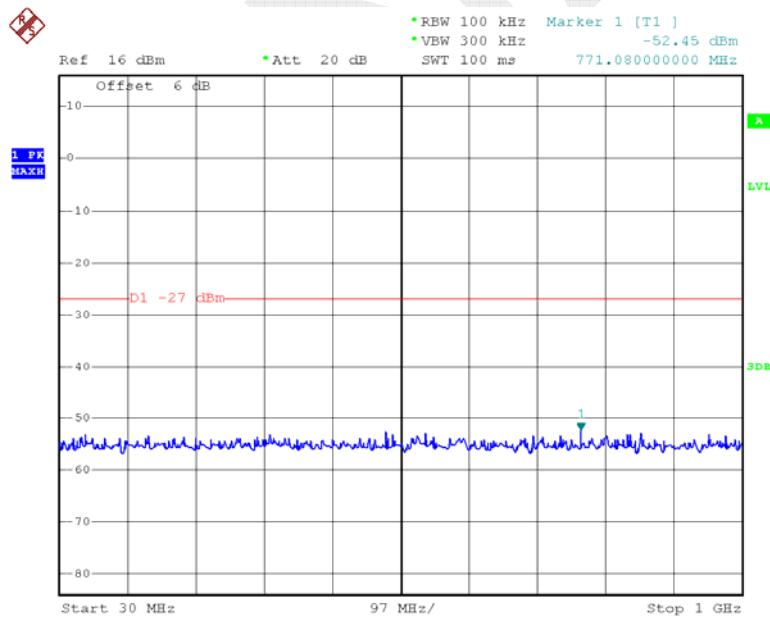
Date: 26.MAY.2015 13:59:05

802.11n ht20 Low Channel 1GHz-26.5GHz – Chain1

Fundamental
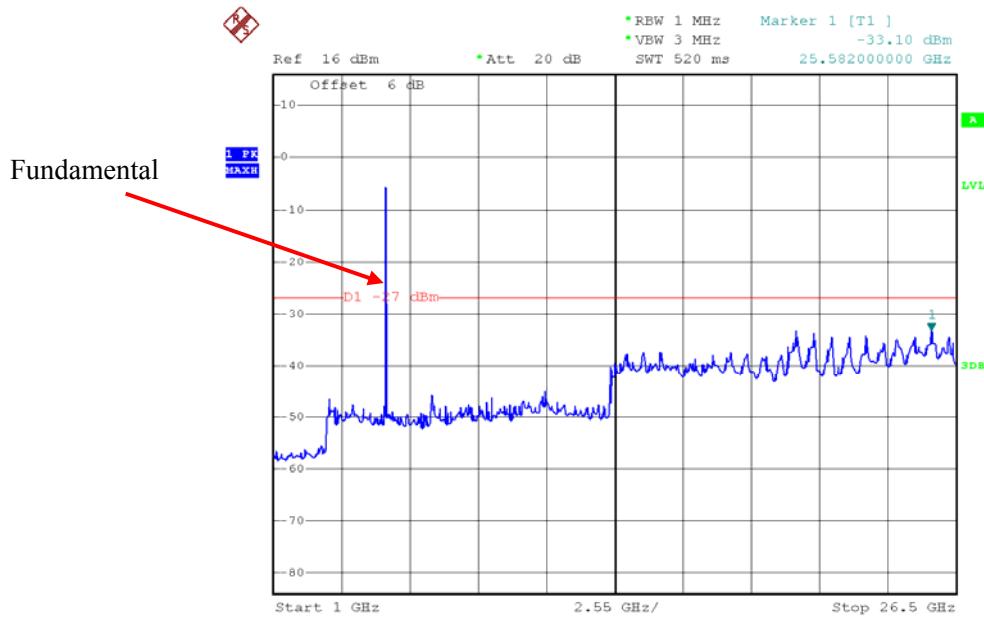
Date: 26.MAY.2015 12:22:59

802.11n ht20 Low Channel 26.5GHz-40GHz – Chain1
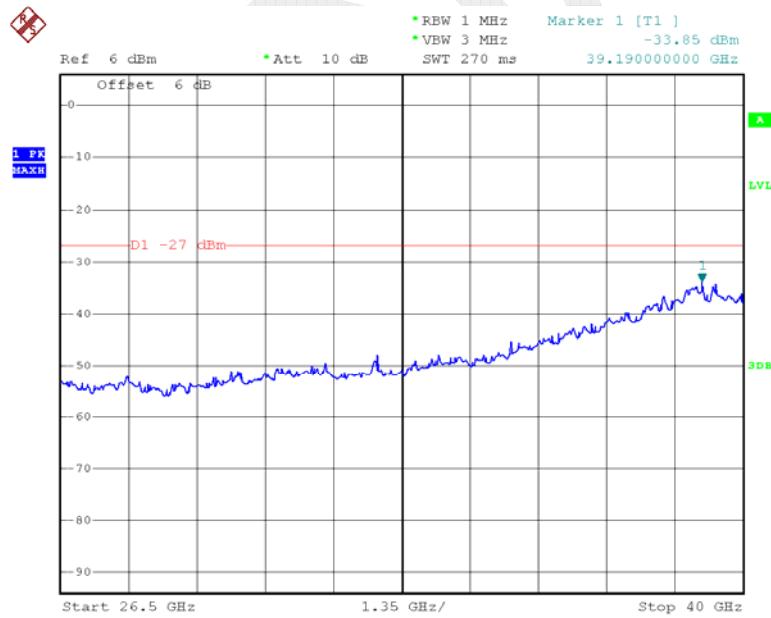
Date: 26.MAY.2015 14:13:28

802.11n ht20 Middle Channel 30MHz-1GHz – Chain1
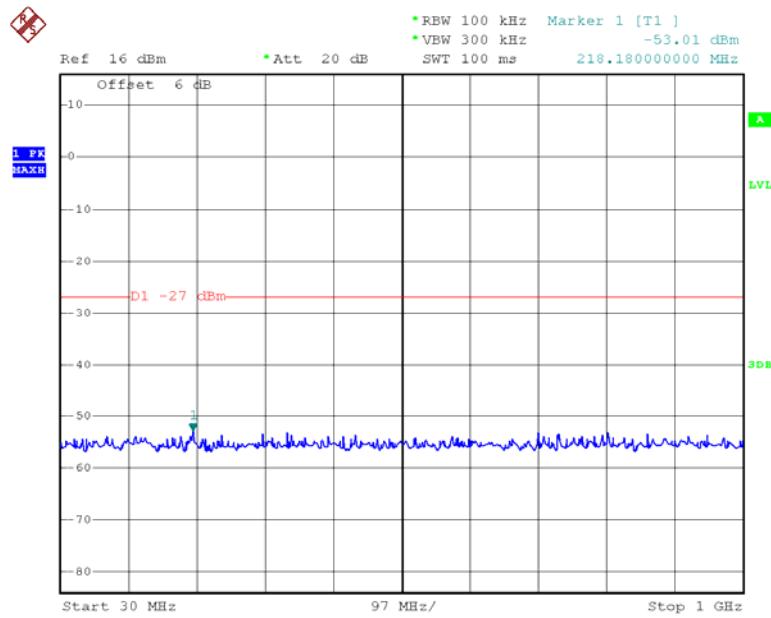
Date: 26.MAY.2015 13:59:12

802.11n ht20 Middle Channel 1GHz -26.5GHz – Chain1
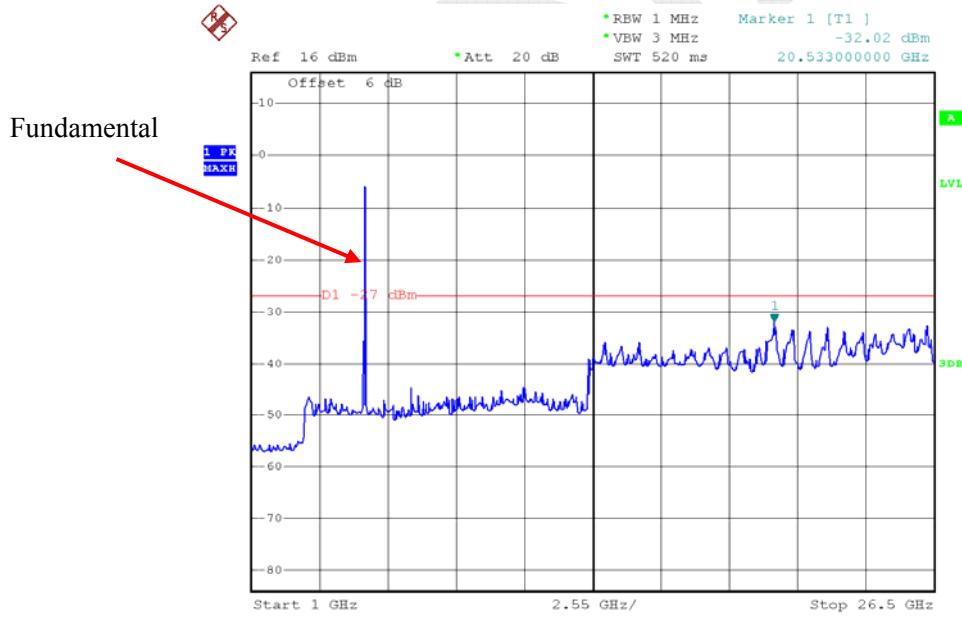
Date: 26.MAY.2015 12:28:52

802.11n ht20 Middle Channel 26.5GHz-40GHz – Chain1
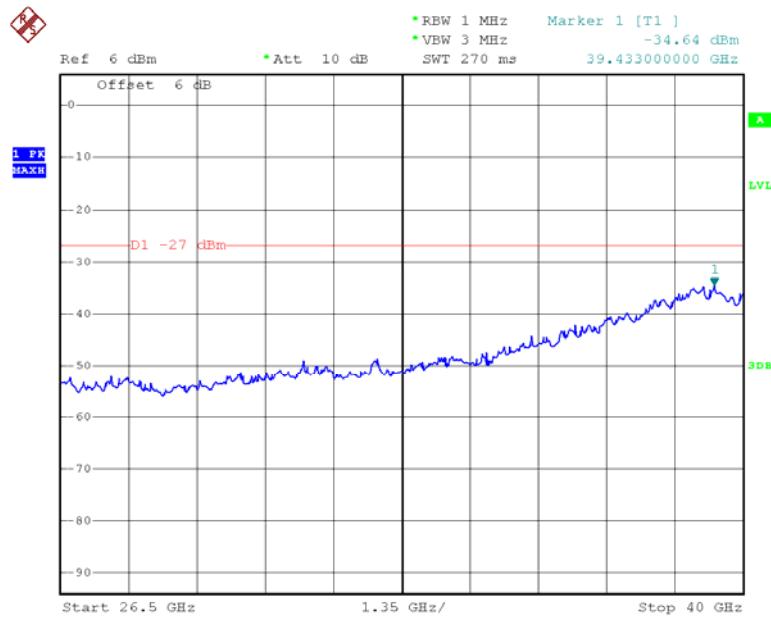
Date: 26.MAY.2015 14:13:37

## 802.11n ht20 High Channel 30MHz-1GHz – Chain1
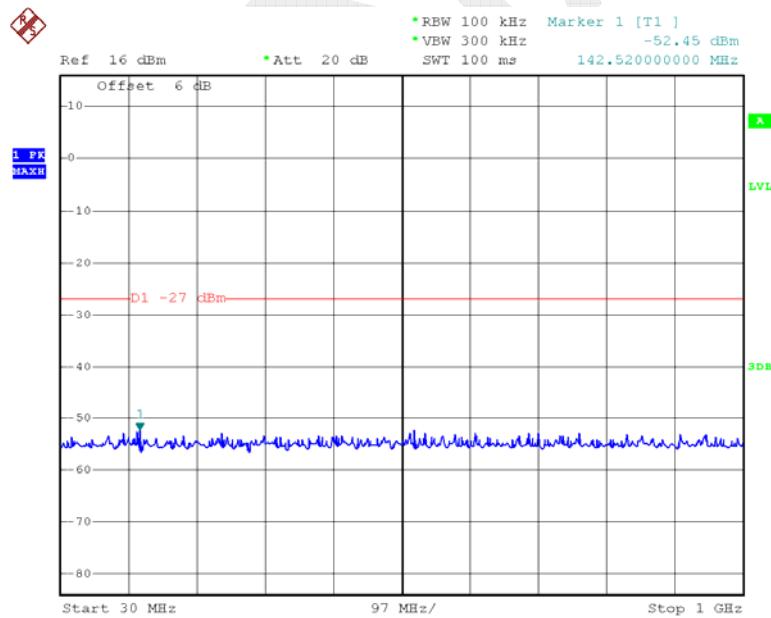
Date: 26.MAY.2015 13:59:24

**802.11n ht20 High Channel 1GHz-26.5GHz – Chain1**
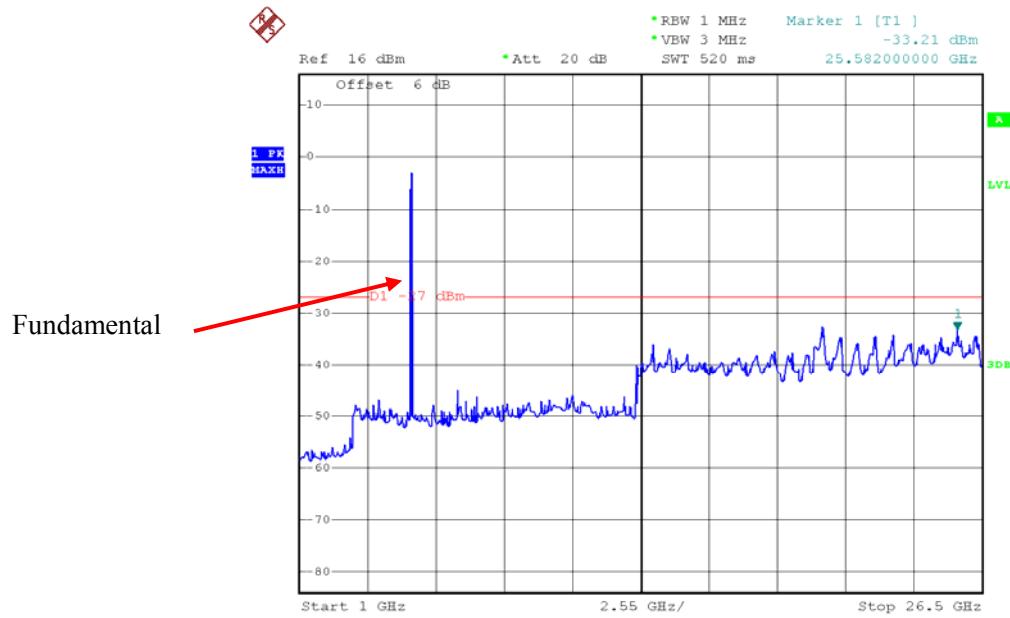
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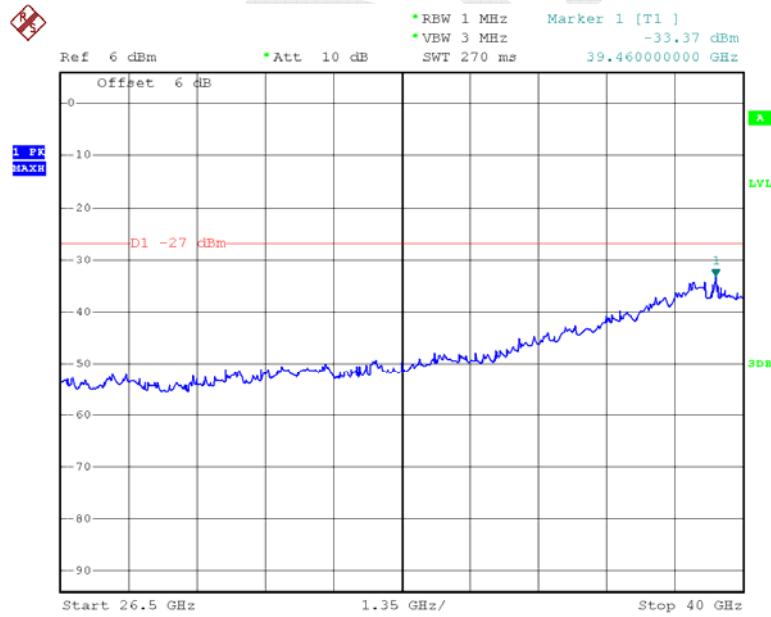
Date: 26.MAY.2015 14:13:47

802.11n ht40 Low Channel 30MHz-1GHz – Chain1
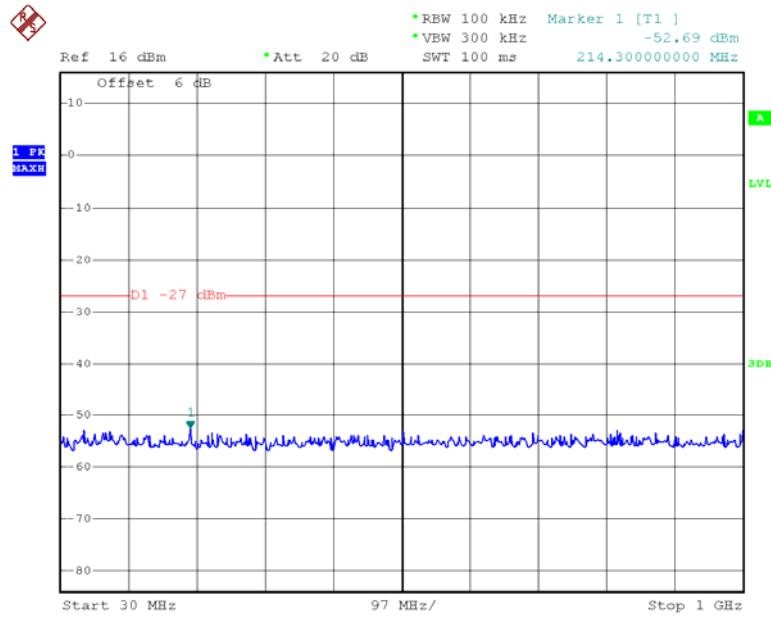
Date: 26.MAY.2015   13:59:32

802.11n ht40 Low Channel 1GHz-26.5GHz – Chain1
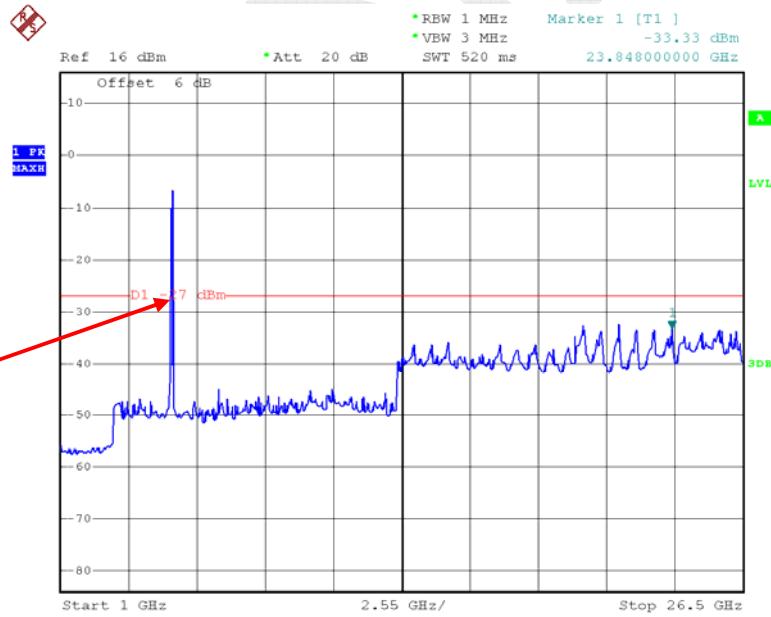
Date: 26.MAY.2015   12:31:10

## 802.11n ht40 Low Channel 26.5GHz-40GHz – Chain1
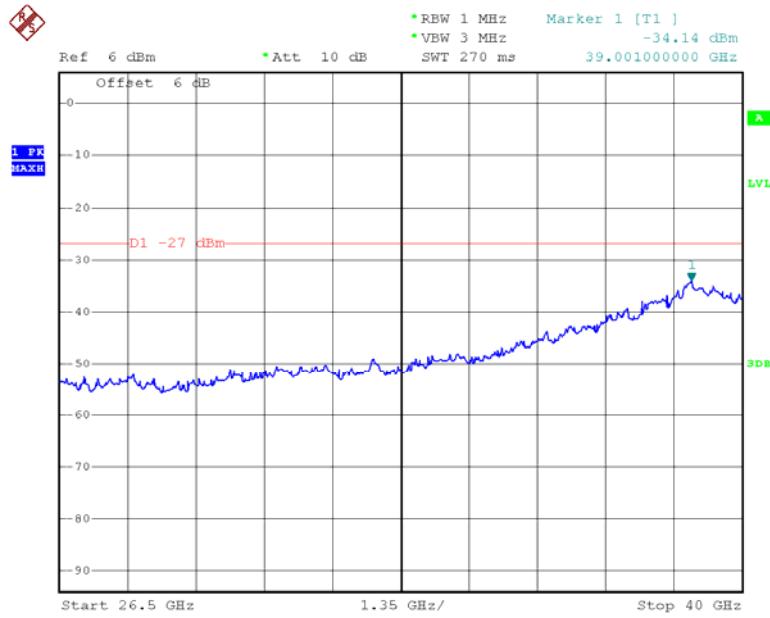
Date: 26.MAY.2015　14:14:10

802.11n ht40　High Channel 30MHz-1GHz – Chain1
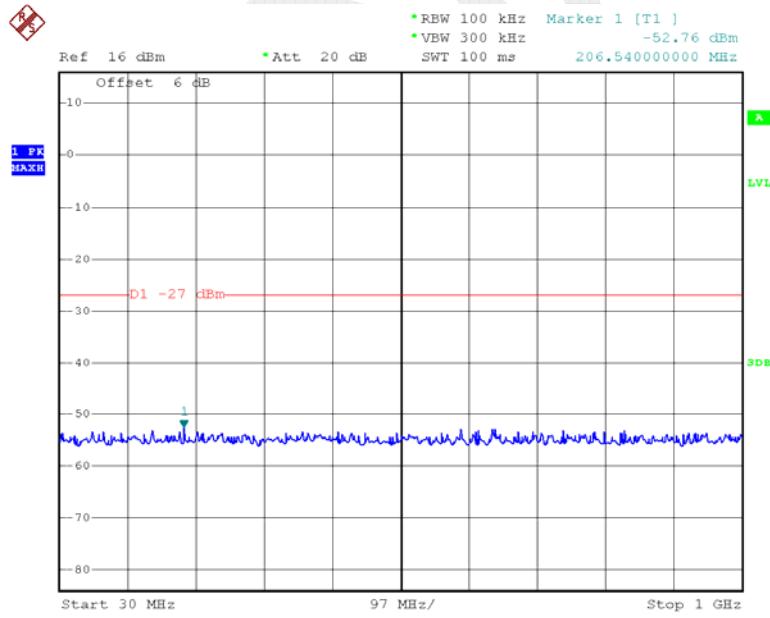
Date: 26.MAY.2015　13:59:43

802.11n ht40 High Channel 1GHz-26.5GHz – Chain1

Fundamental
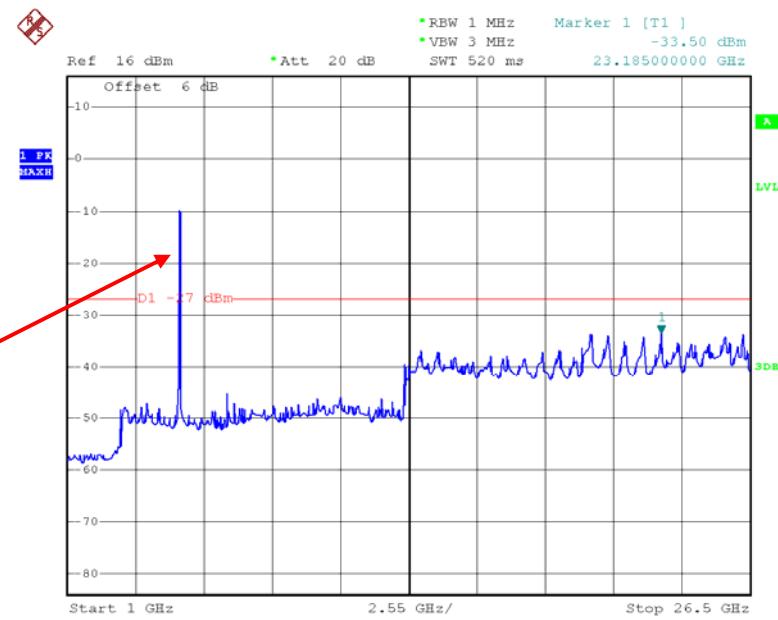
Date: 26.MAY.2015 12:32:03

802.11n ht40 High Channel 26.5GHz-40GHz – Chain1
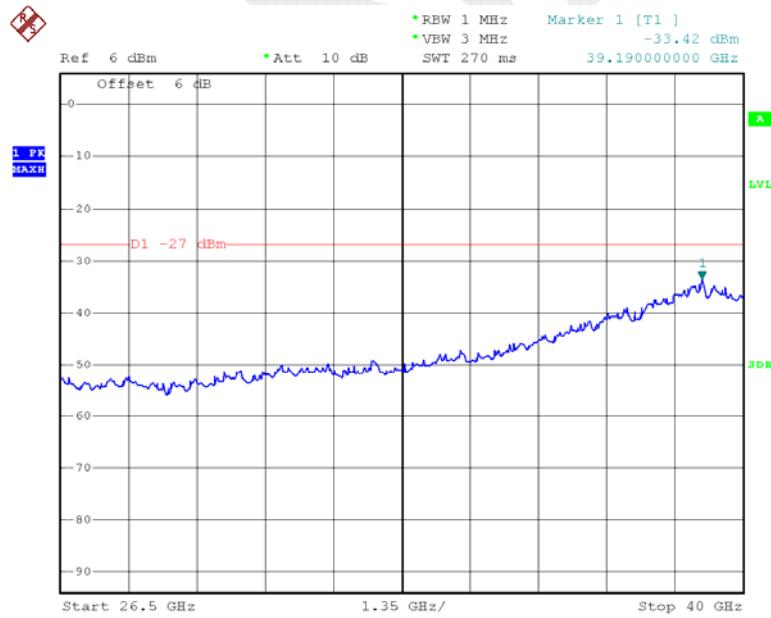
Date: 26.MAY.2015 14:14:01

5725MHz-5850MHz:

802.11a Low Channel 30MHz-1GHz – Chain0
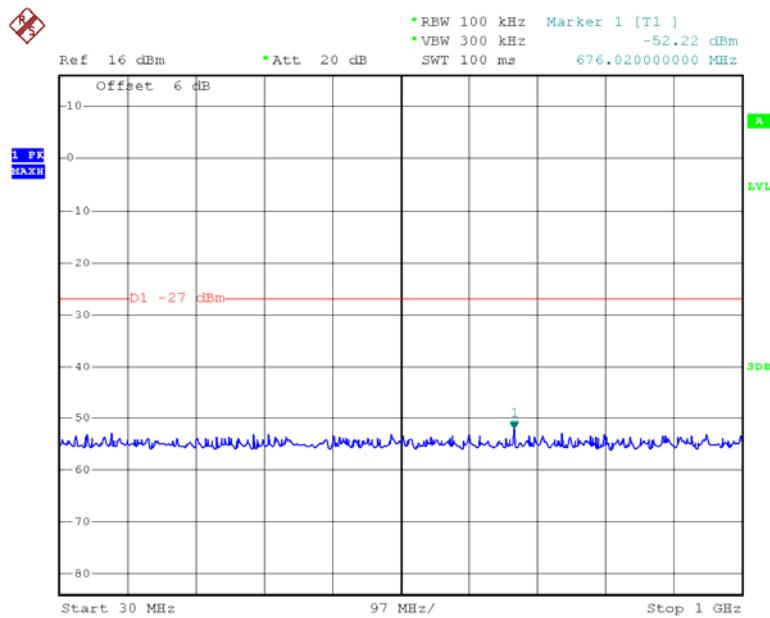
Date: 26.MAY.2015 14:01:04

802.11a Low Channel 1GHz-26.5GHz – Chain0


Fundamental
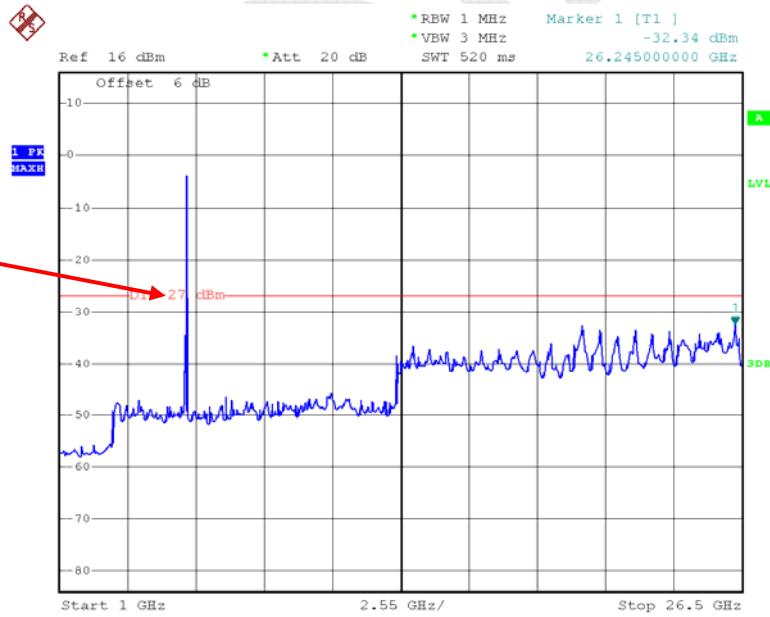
Date: 26.MAY.2015 12:34:02

802.11a Low Channel 26.5GHz-40GHz – Chain0
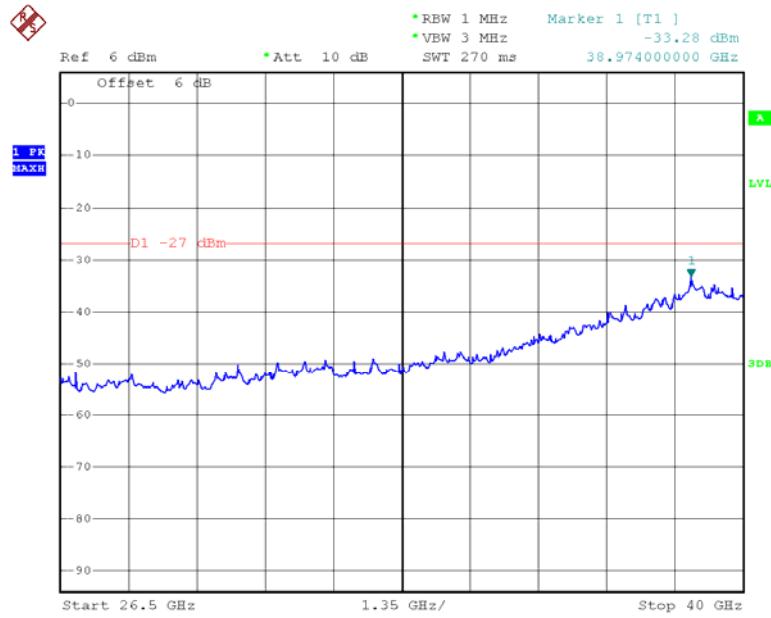
Date: 26.MAY.2015 14:14:19

802.11a Middle Channel 30MHz-1GHz – Chain0
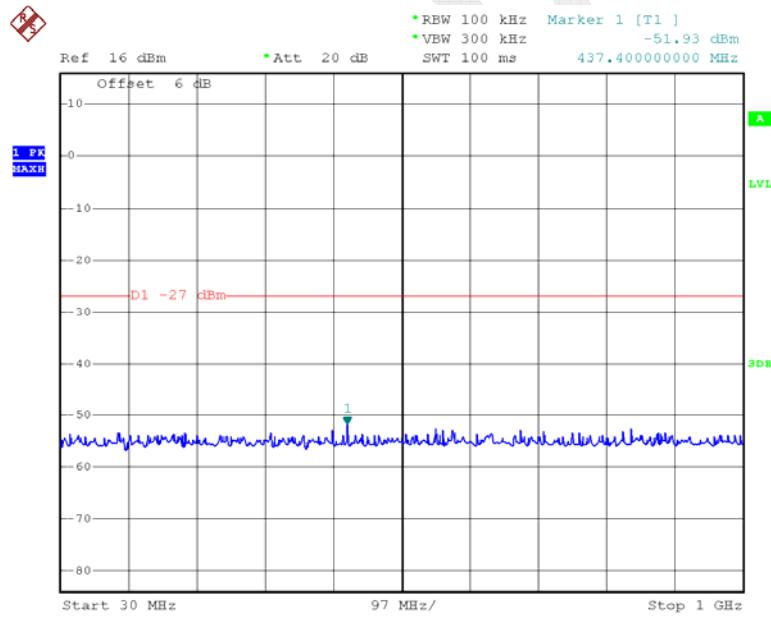
Date: 26.MAY.2015 14:01:34

802.11a Middle Channel 1GHz -26.5GHz – Chain0

Fundamental
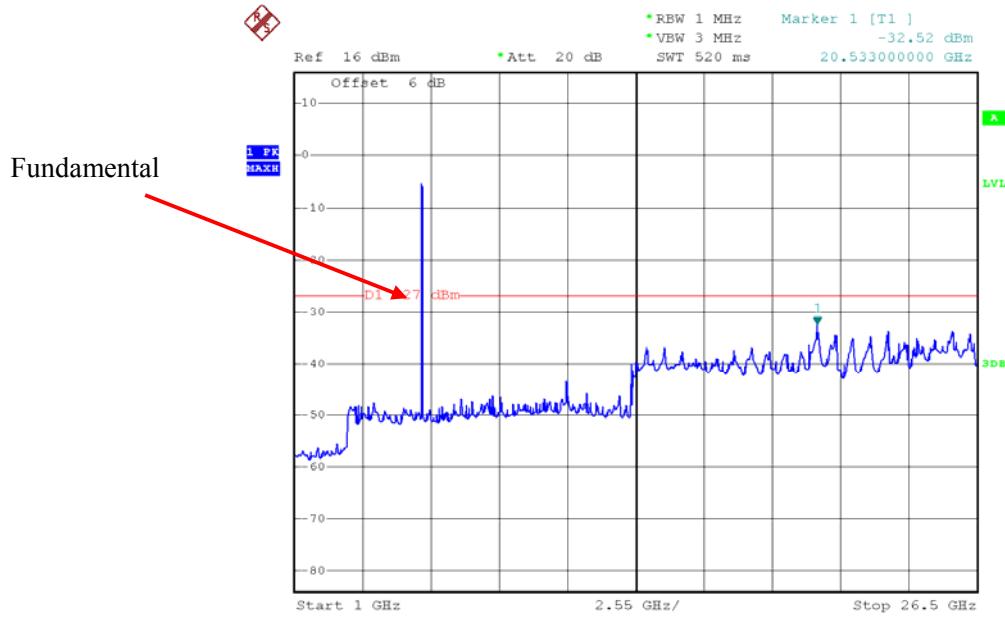
Date: 26.MAY.2015 12:35:55

802.11a Middle Channel 26.5GHz-40GHz – Chain0
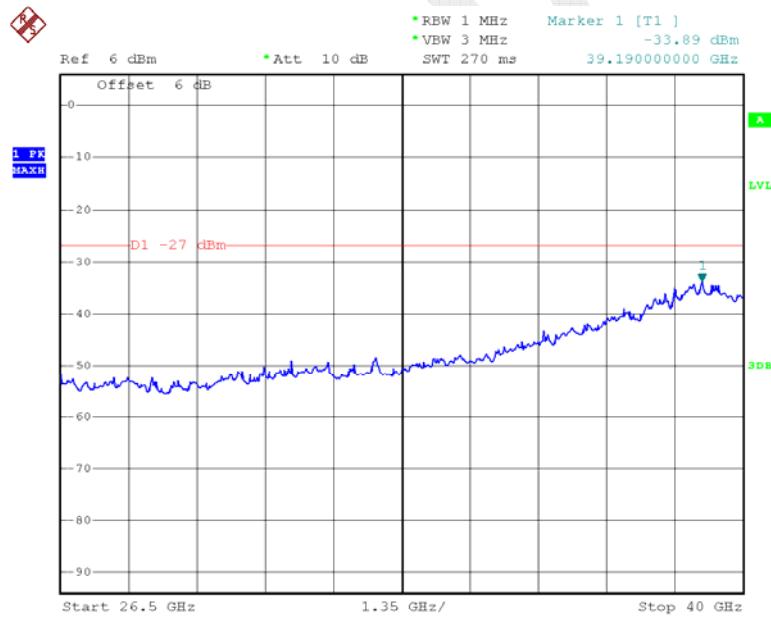
Date: 26.MAY.2015 14:14:33

## 802.11a High Channel 30MHz-1GHz – Chain0
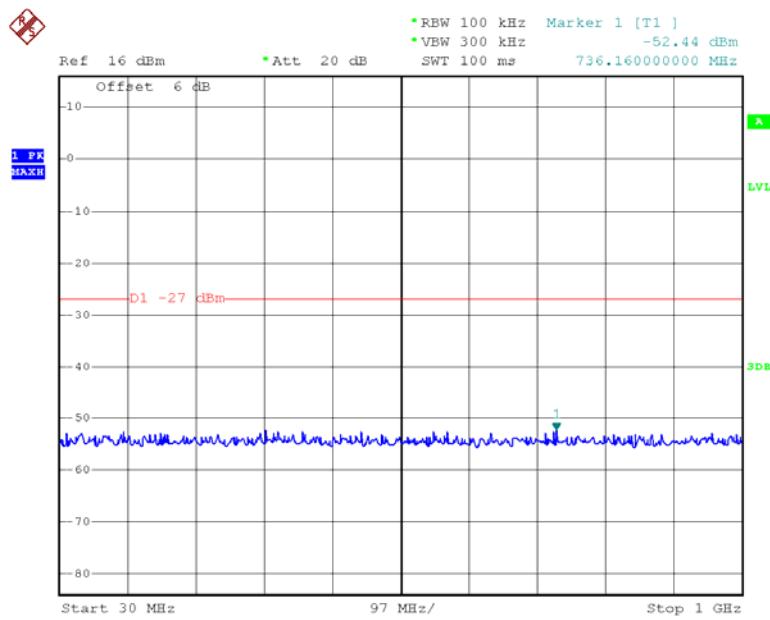
Date: 26.MAY.2015   14:00:05

802.11a High Channel 1GHz-26.5GHz – Chain0

Fundamental
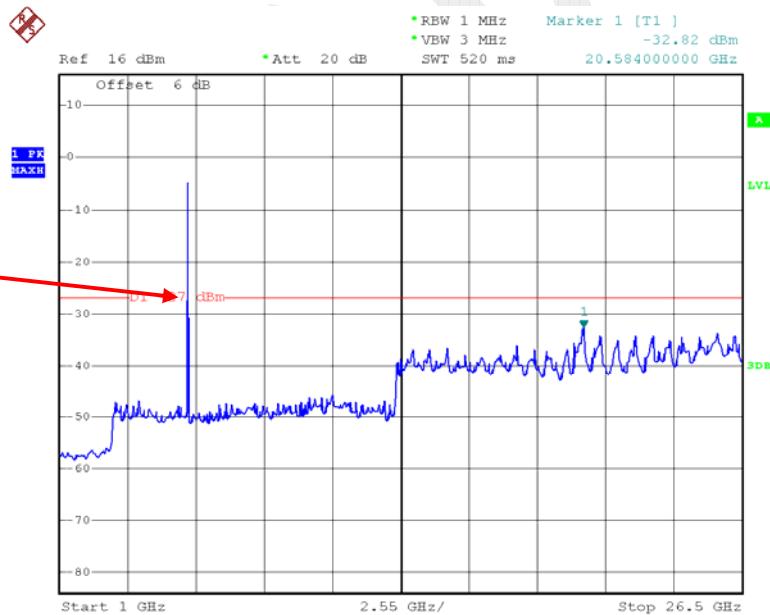
Date: 26.MAY.2015   12:36:56

802.11a High Channel 26.5GHz-40GHz – Chain0
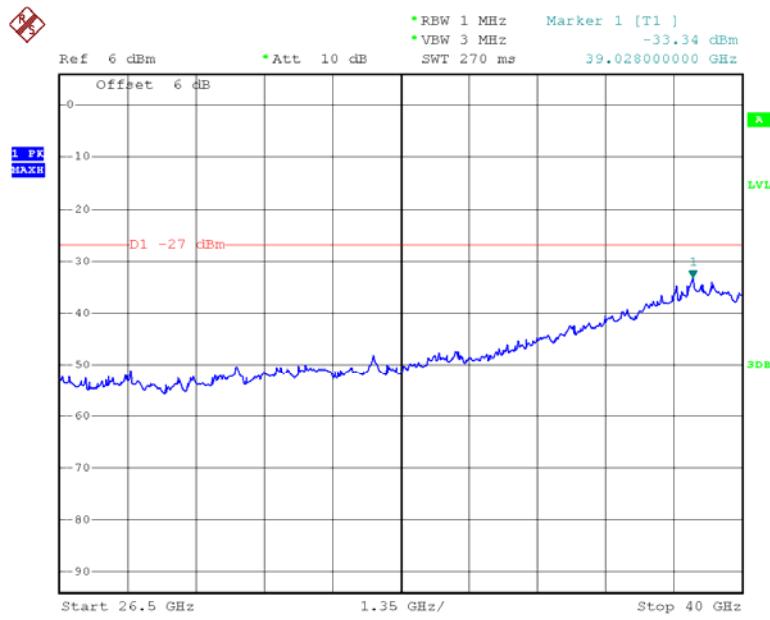
Date: 26.MAY.2015 14:14:49

802.11n ht20 Low Channel 30MHz-1GHz – Chain0
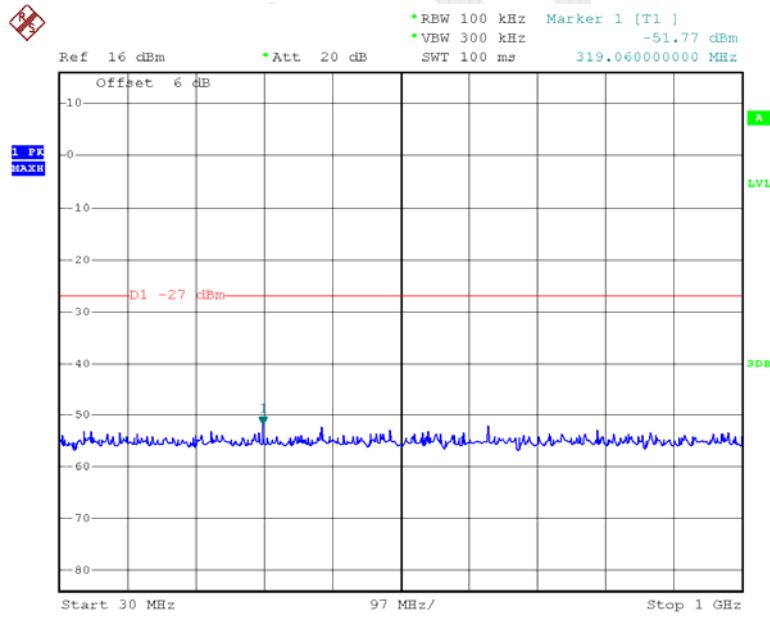
Date: 26.MAY.2015 14:00:15

802.11n ht20 Low Channel 1GHz-26.5GHz – Chain0

Fundamental
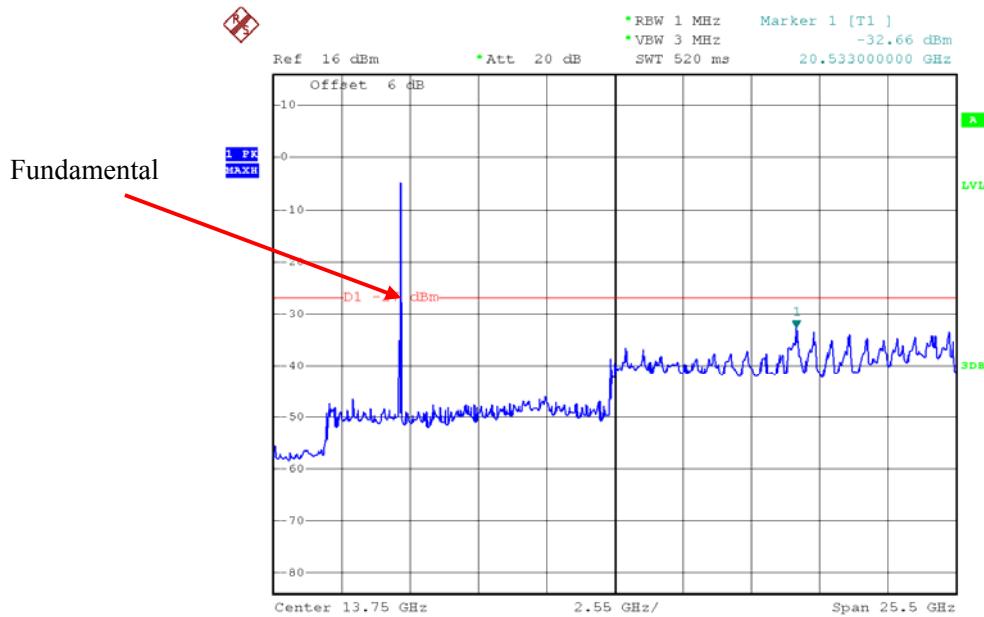
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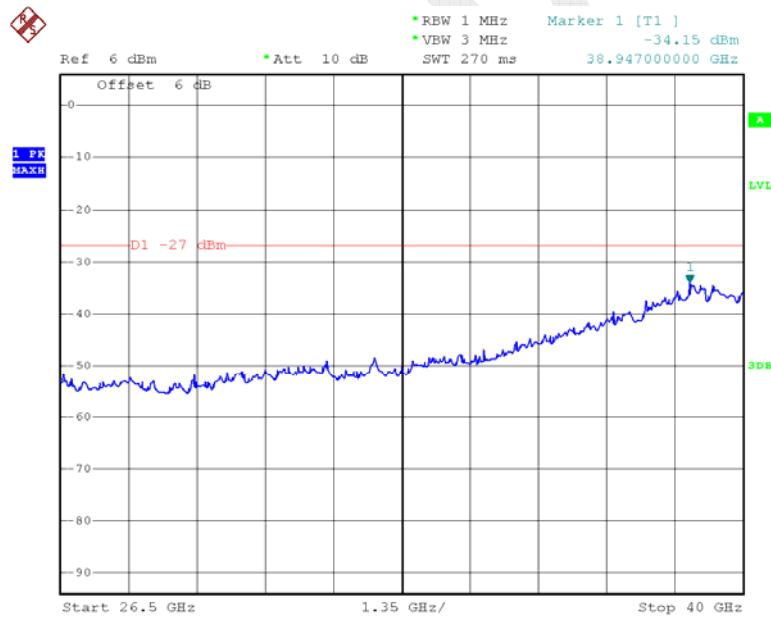
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802.11n ht20 Middle Channel 30MHz-1GHz – Chain0
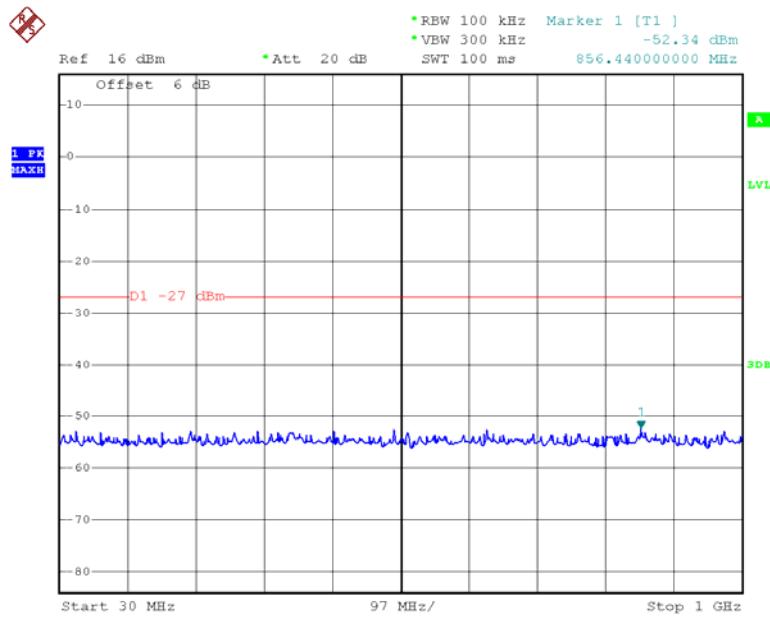
Date: 26.MAY.2015 14:00:31

802.11n ht20 Middle Channel 1GHz -26.5GHz – Chain0

Fundamental
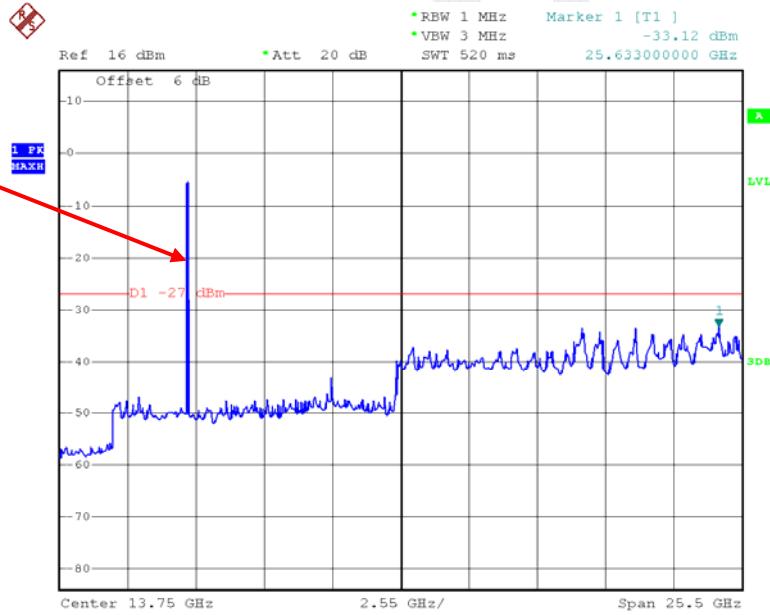
Date: 26.MAY.2015 12:40:04

802.11n ht20 Middle Channel 26.5GHz-40GHz – Chain0
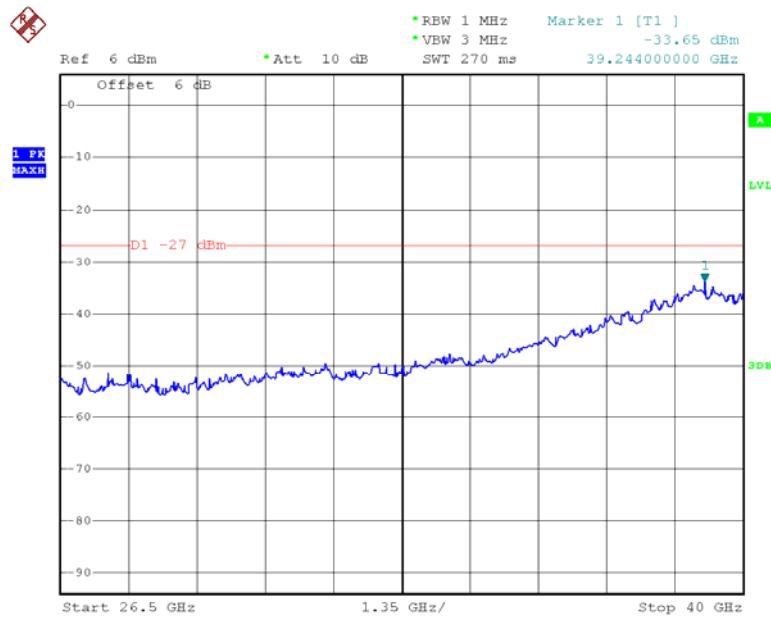
Date: 26.MAY.2015 14:15:47

802.11n ht20 High Channel 30MHz-1GHz – Chain0
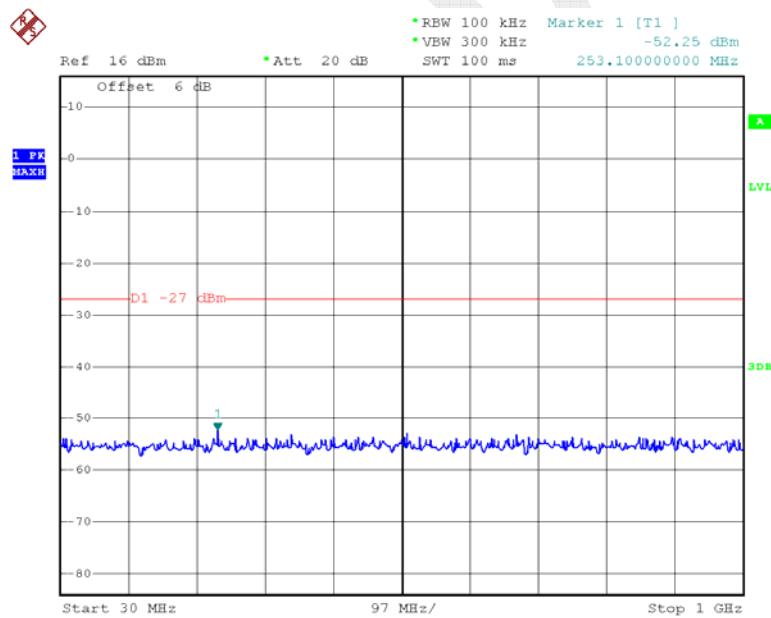
Date: 26.MAY.2015 14:00:41

802.11n ht20 High Channel 1GHz-26.5GHz – Chain0
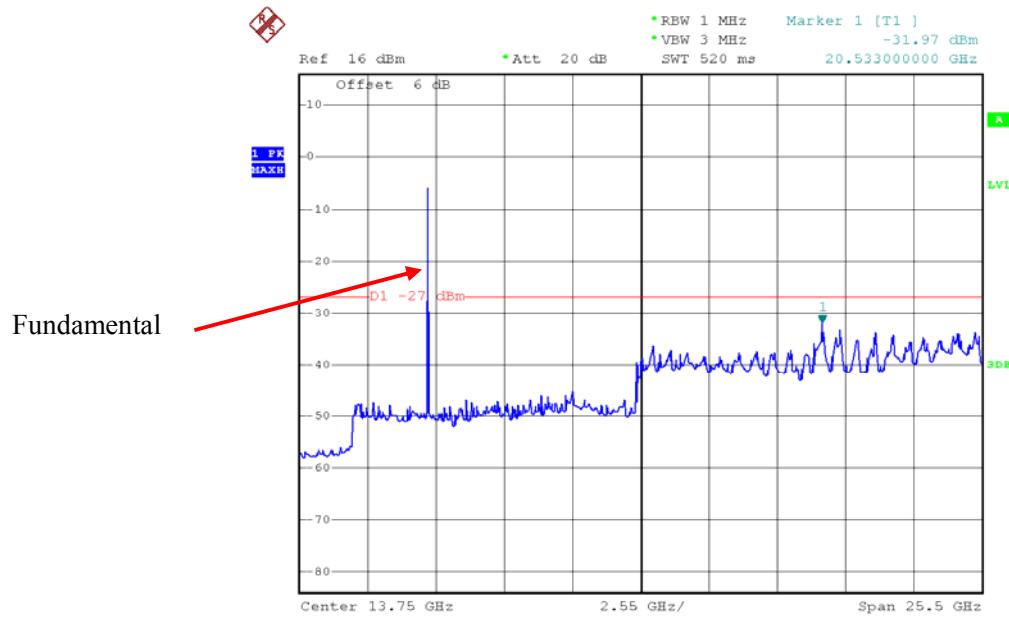

Date: 26.MAY.2015 12:40:52

## 802.11n ht20 High Channel 26.5GHz-40GHz – Chain0
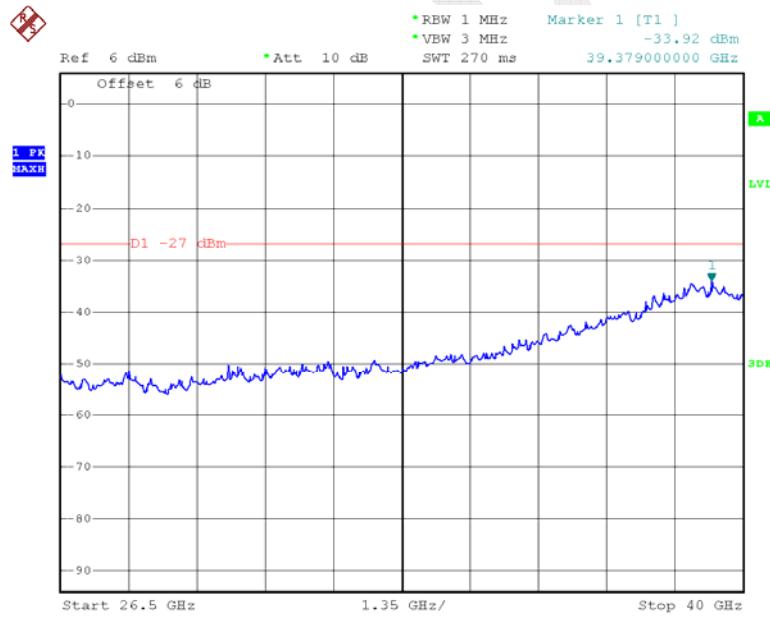
Date: 26.MAY.2015 14:15:59

802.11n ht40 Low Channel 30MHz-1GHz – Chain0
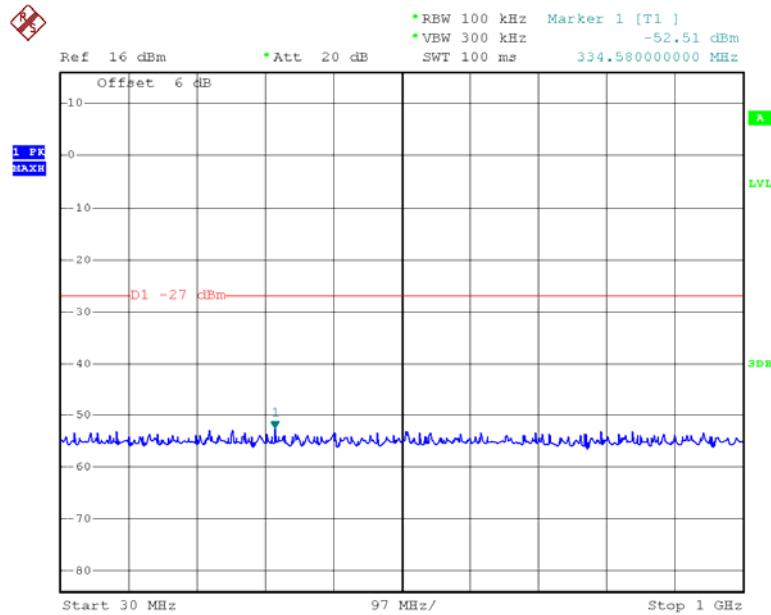
Date: 26.MAY.2015 14:00:52

**802.11n ht40 Low Channel 1GHz-26.5GHz – Chain0**
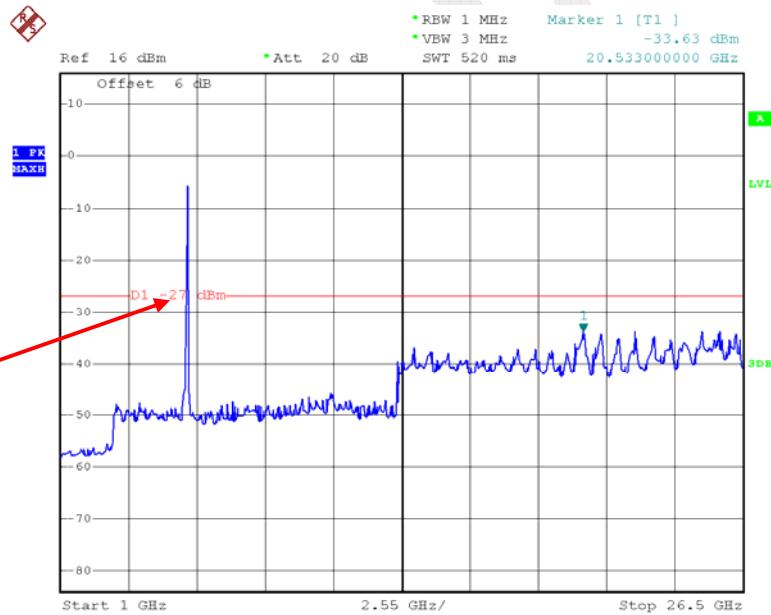
Fundamental

Date: 26.MAY.2015 13:50:49

802.11n ht40 Low Channel 26.5GHz-40GHz – Chain0
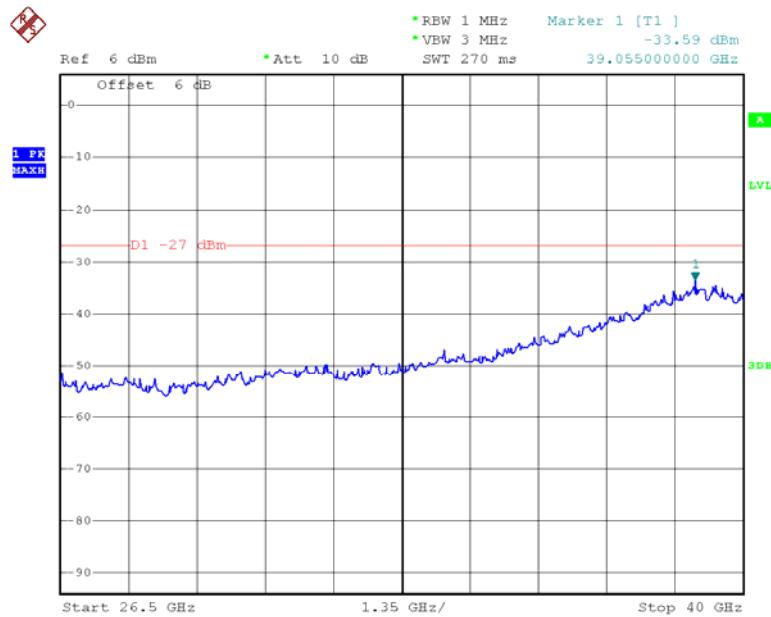
Date: 26.MAY.2015 14:16:11

802.11n ht40 High Channel 30MHz-1GHz – Chain0
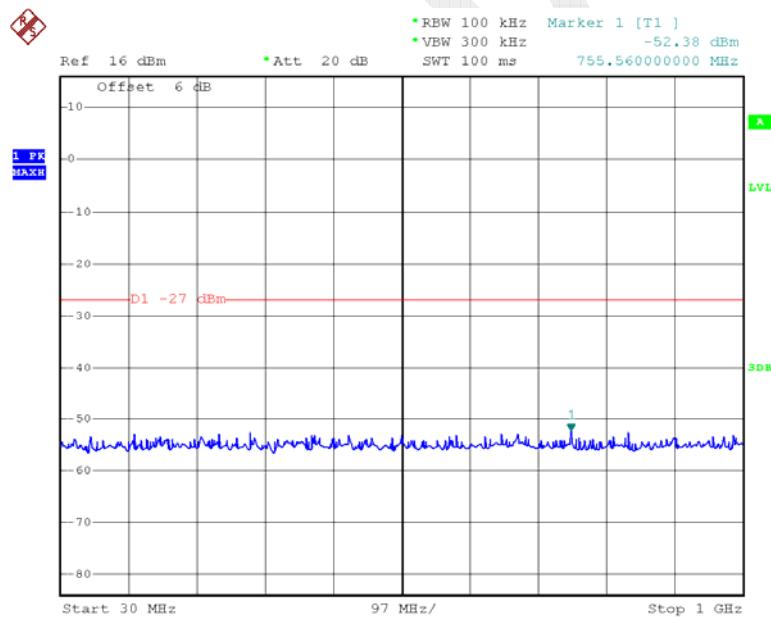
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802.11n ht40 High Channel 1GHz-26.5GHz – Chain0

Fundamental
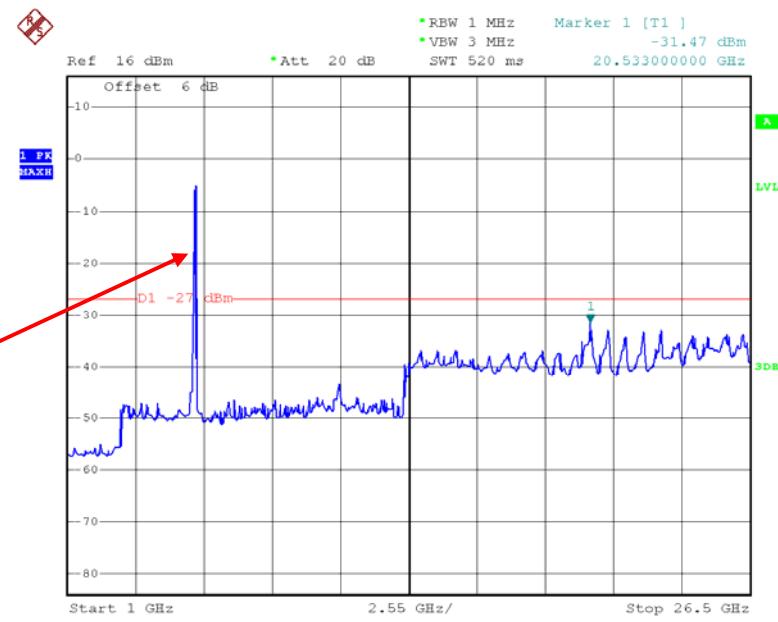
Date: 26.MAY.2015 13:52:20

802.11n ht40 High Channel 26.5GHz-40GHz – Chain0
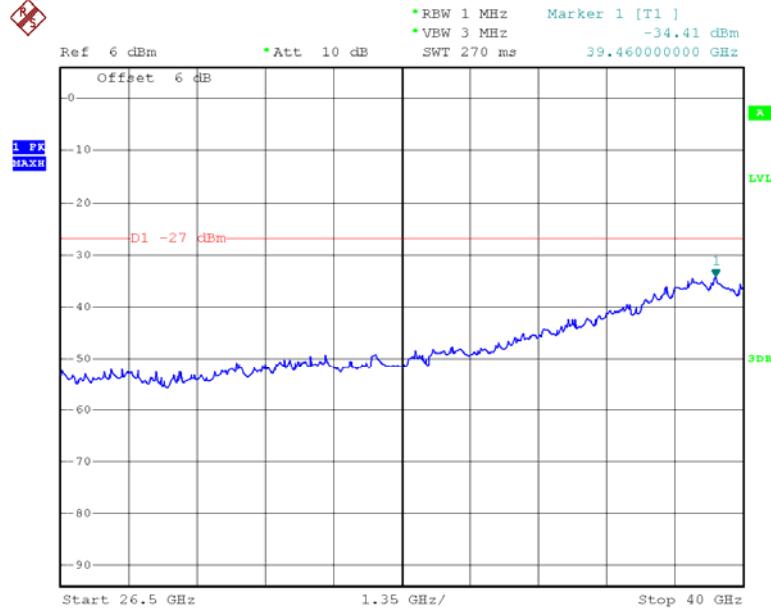
Date: 26.MAY.2015 14:16:38

802.11a Low Channel 30MHz-1GHz – Chain1
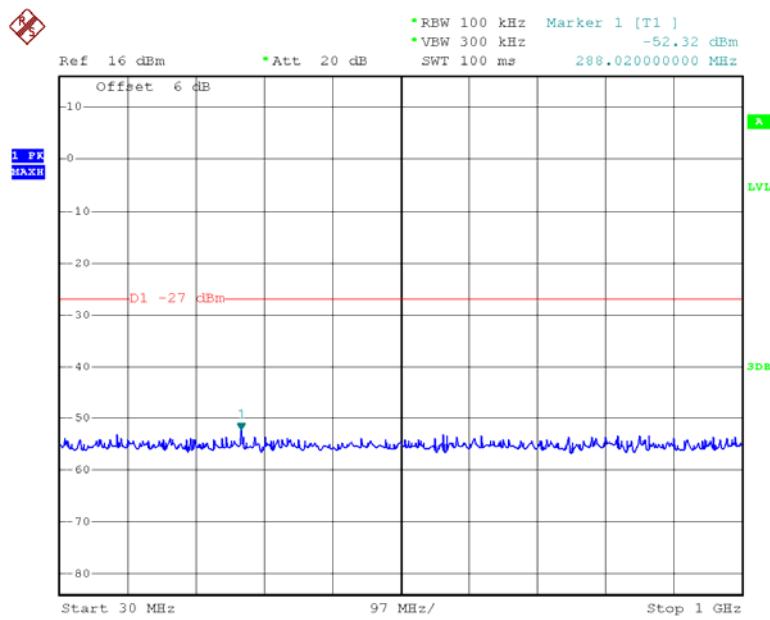
Date: 26.MAY.2015 14:01:41

802.11a Low Channel 1GHz-26.5GHz – Chain1
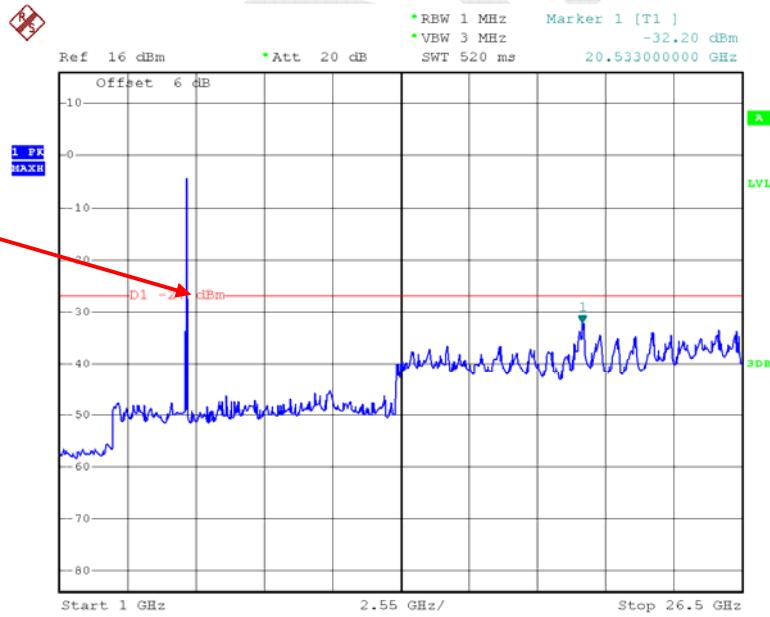
Date: 26.MAY.2015 12:35:25

802.11a Low Channel 26.5GHz-40GHz – Chain1
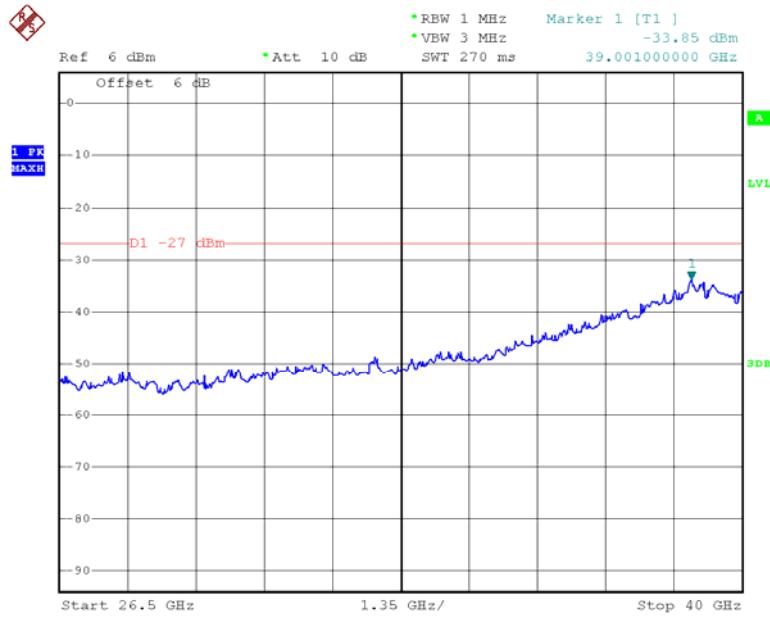


Date: 26.MAY.2015 14:16:51

802.11a Middle Channel 30MHz-1GHz – Chain1
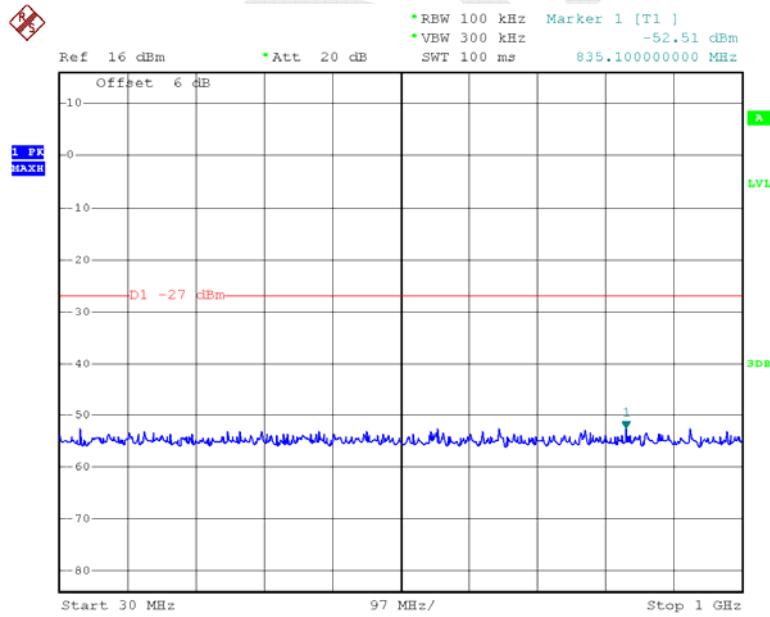
Date: 26.MAY.2015 14:01:53

802.11a Middle Channel 1GHz -26.5GHz – Chain1
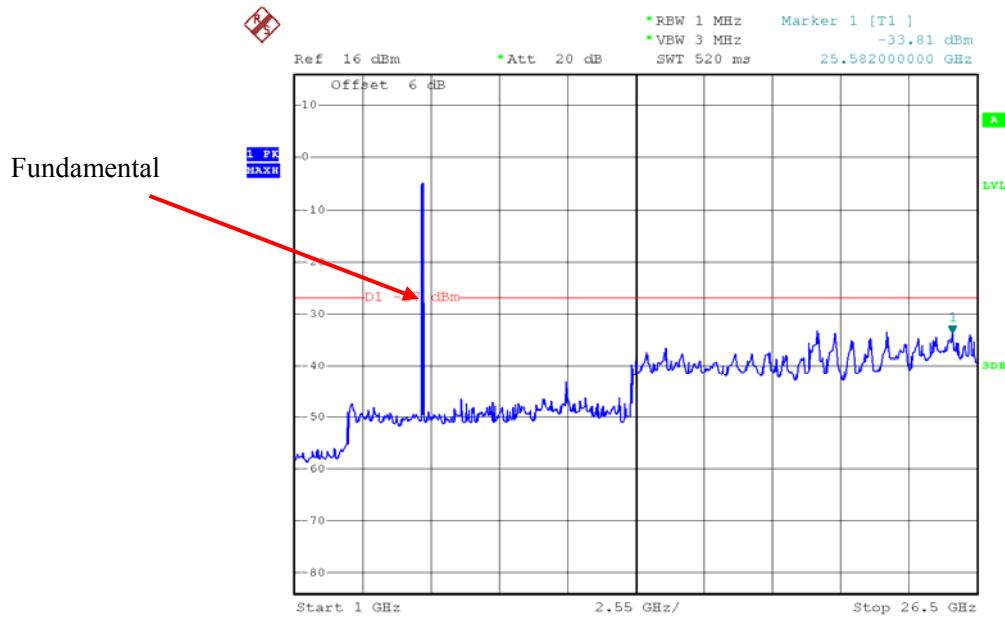
Date: 26.MAY.2015 12:36:07

802.11a Middle Channel 26.5GHz-40GHz – Chain1
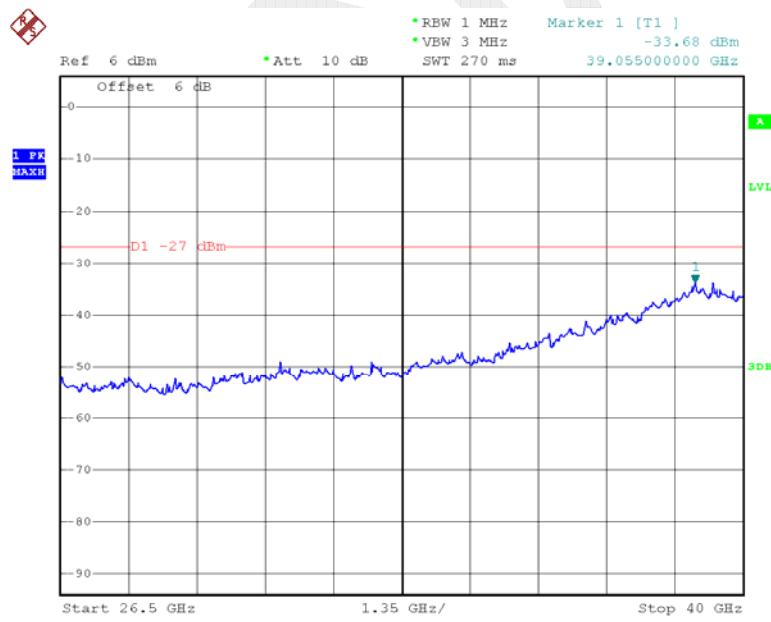
Date: 26.MAY.2015 14:17:05

802.11a High Channel 30MHz-1GHz – Chain1
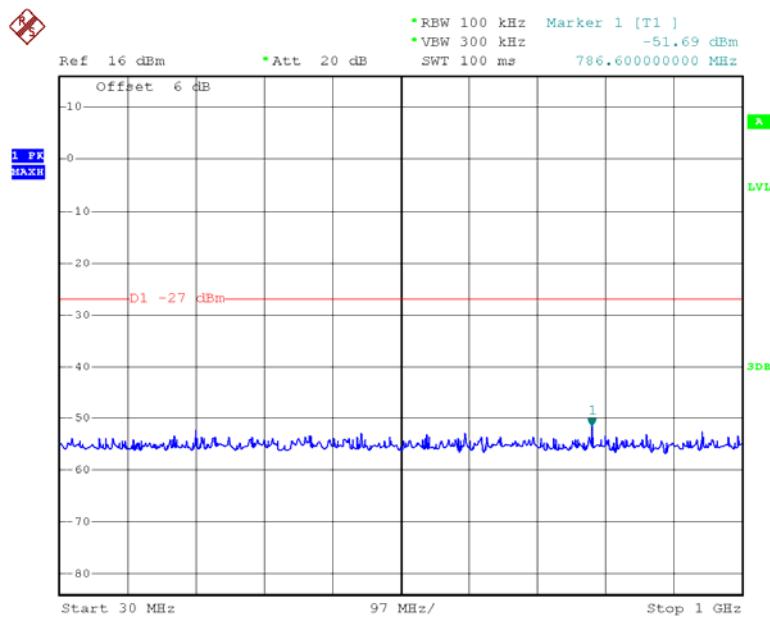
Date: 26.MAY.2015 14:02:01

802.11a High Channel 1GHz-26.5GHz – Chain1

Fundamental
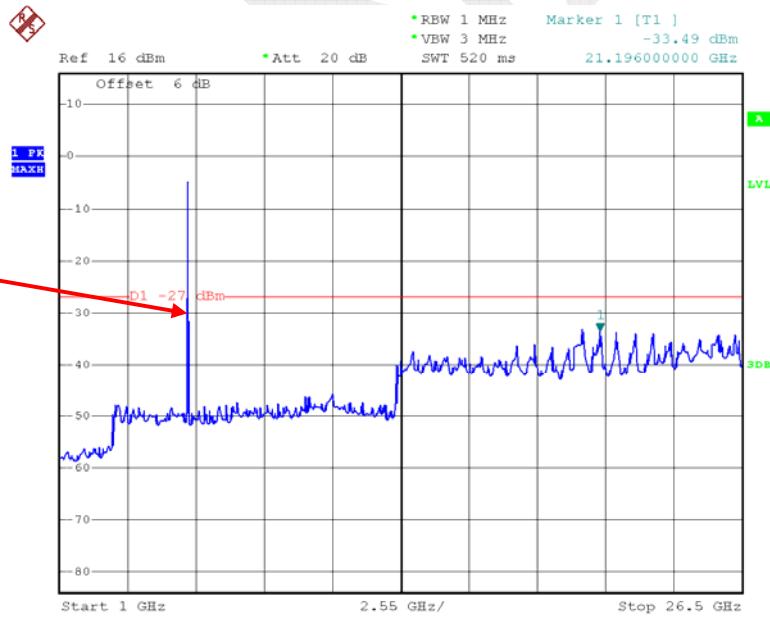
Date: 26.MAY.2015 12:37:26

802.11a High Channel 26.5GHz-40GHz – Chain1
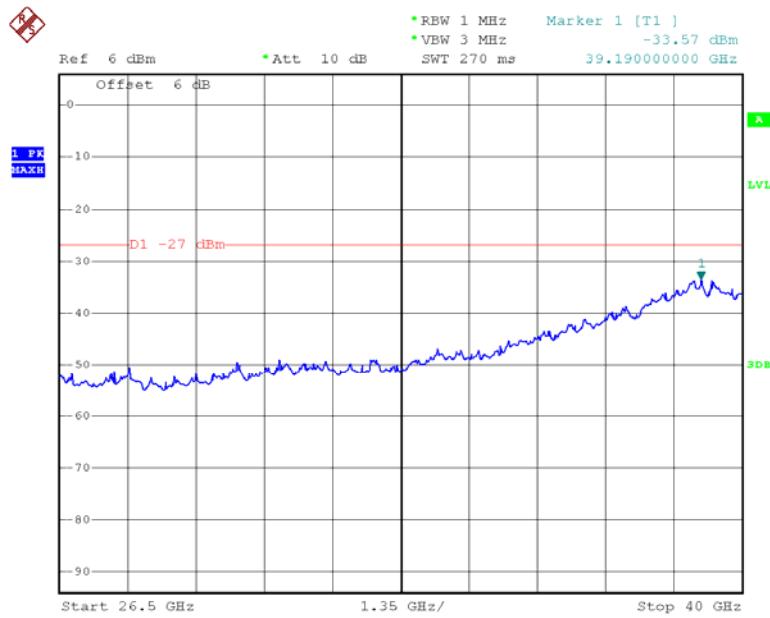
Date: 26.MAY.2015 14:17:29

802.11n ht20 Low Channel 30MHz-1GHz – Chain1
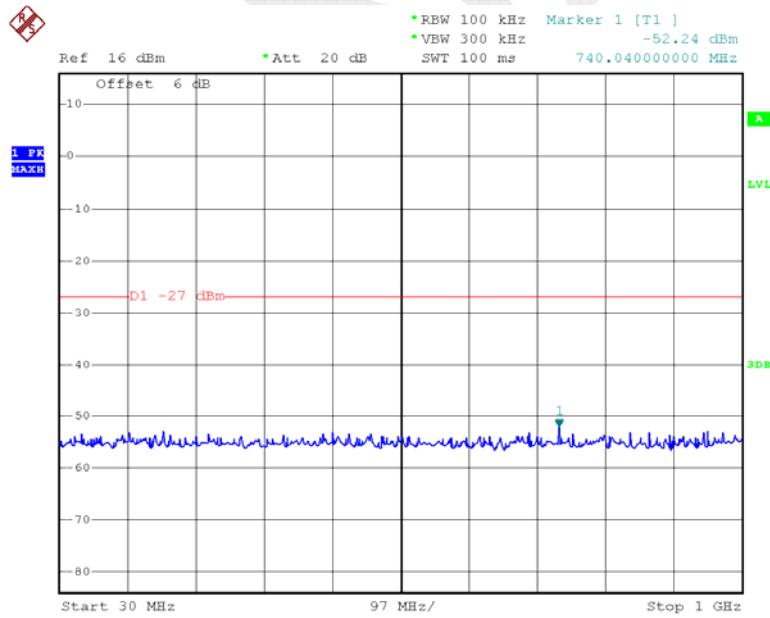
Date: 26.MAY.2015 14:02:10

802.11n ht20 Low Channel 1GHz-26.5GHz – Chain1

Fundamental
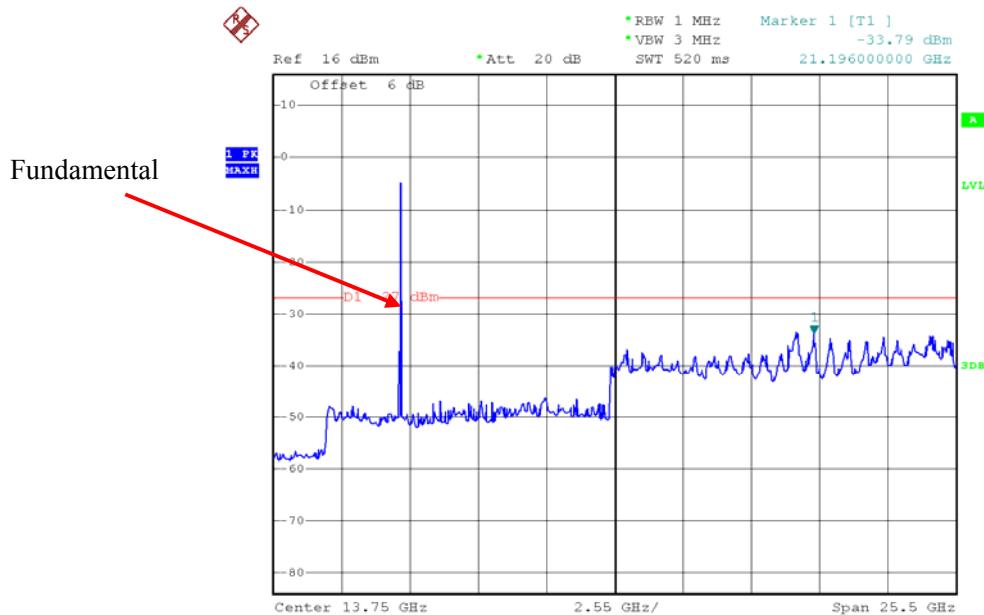
Date: 26.MAY.2015 12:39:18

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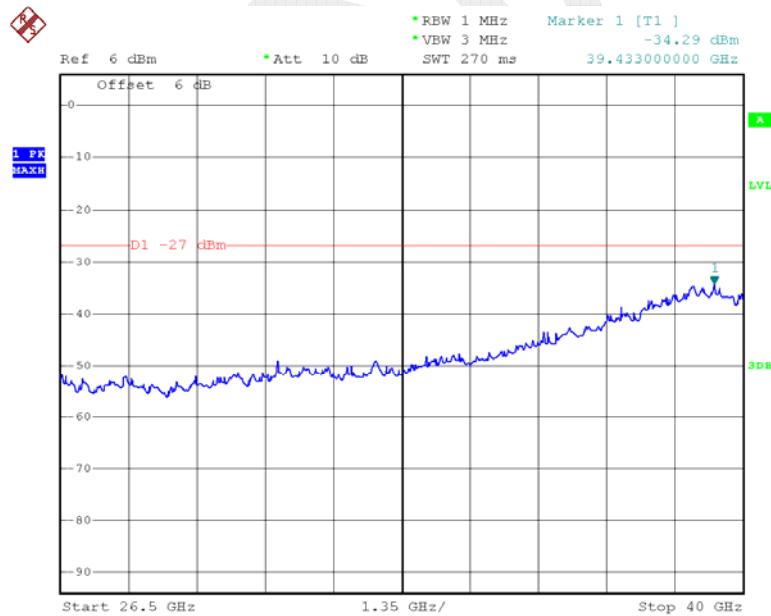
Date: 26.MAY.2015 14:17:39

802.11n ht20 Middle Channel 30MHz-1GHz – Chain1
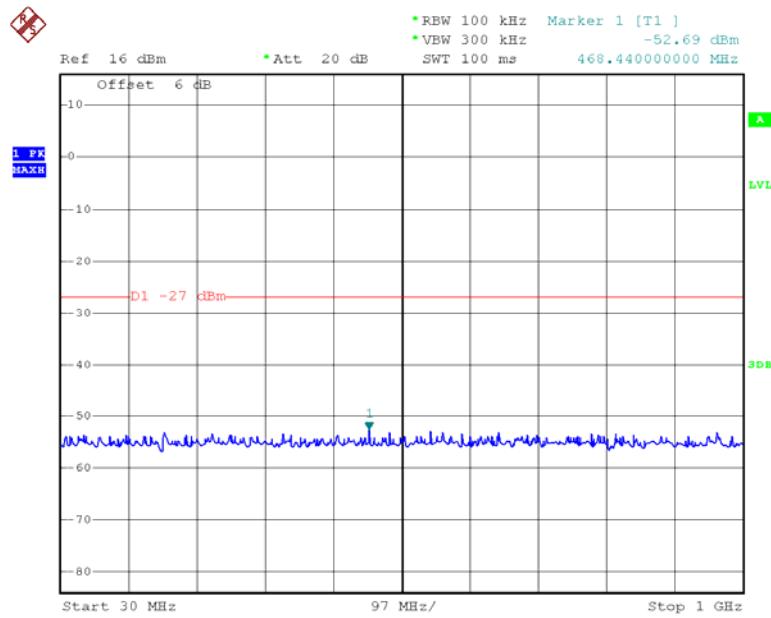
Date: 26.MAY.2015 14:02:20

802.11n ht20 Middle Channel 1GHz -26.5GHz – Chain1
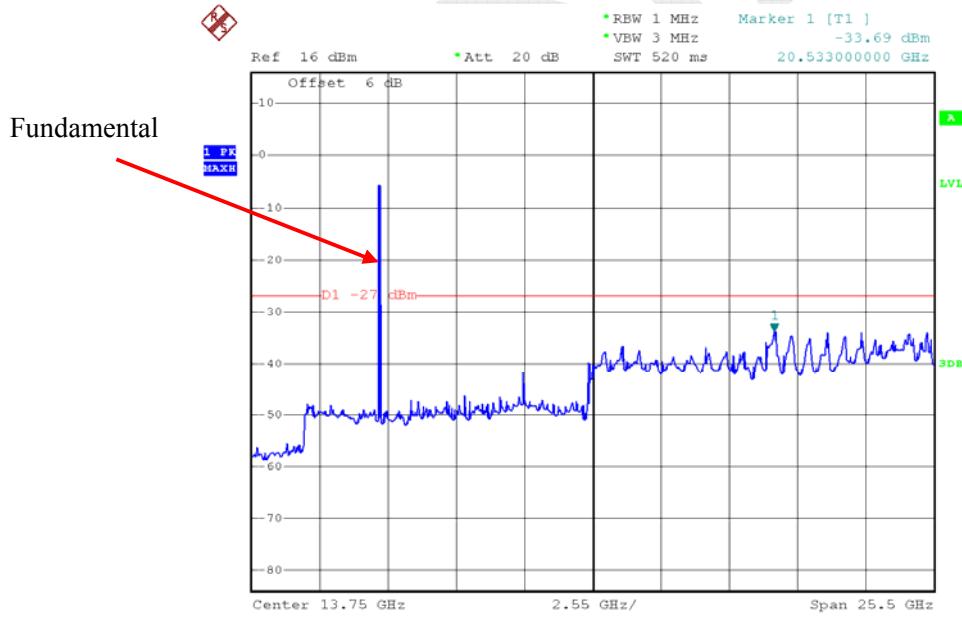
Date: 26.MAY.2015 12:40:16

## 802.11n ht20 Middle Channel 26.5GHz-40GHz – Chain1
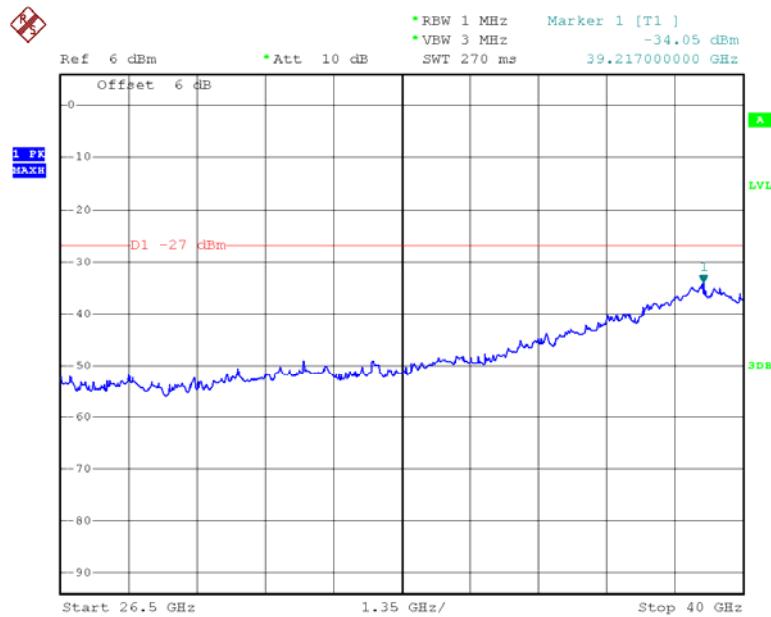
Date: 26.MAY.2015 14:17:49

## 802.11n ht20 High Channel 30MHz-1GHz – Chain1
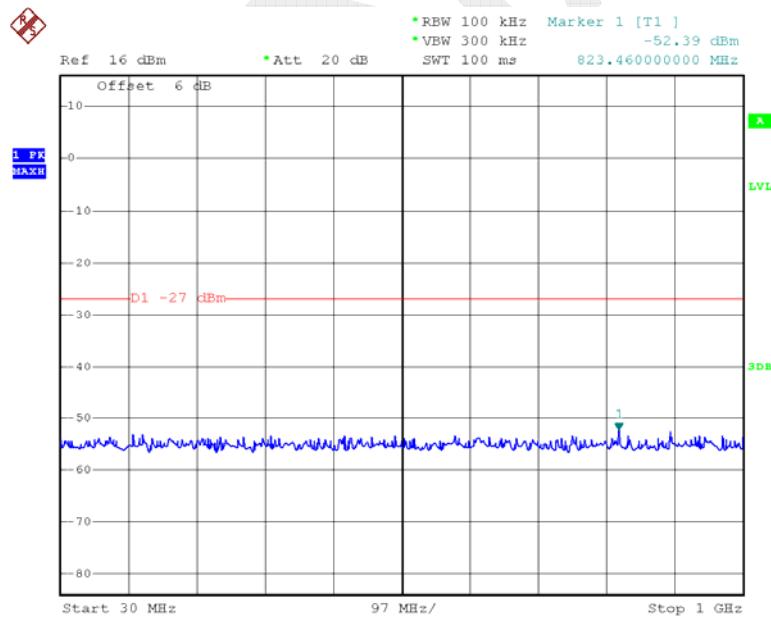
Date: 26.MAY.2015 14:02:30

## 802.11n ht20 High Channel 1GHz-26.5GHz – Chain1

Fundamental
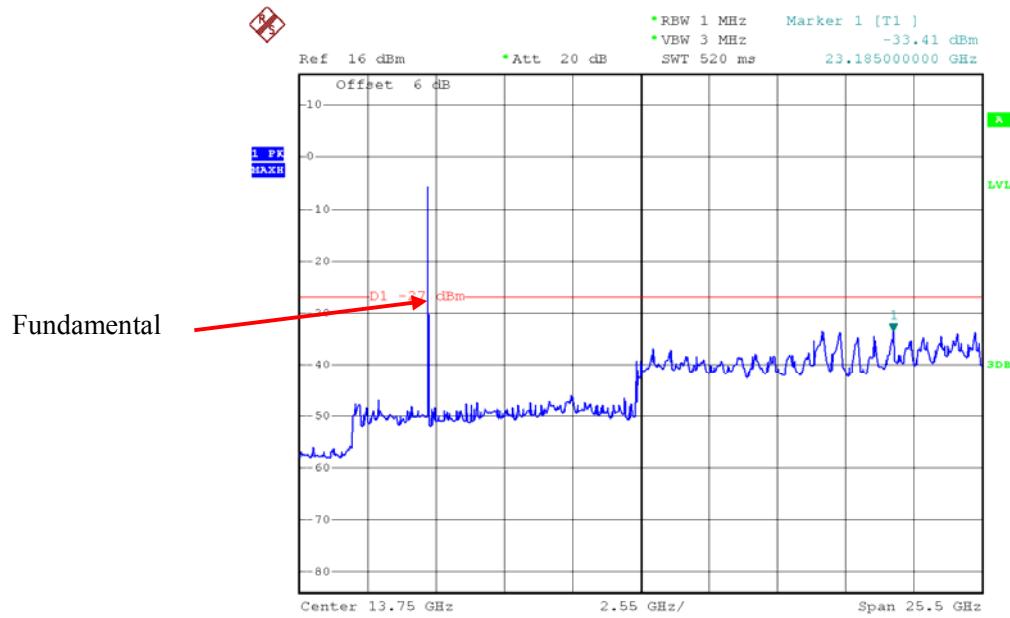
Date: 26.MAY.2015　12:41:20

802.11n ht20 High Channel 26.5GHz-40GHz – Chain1
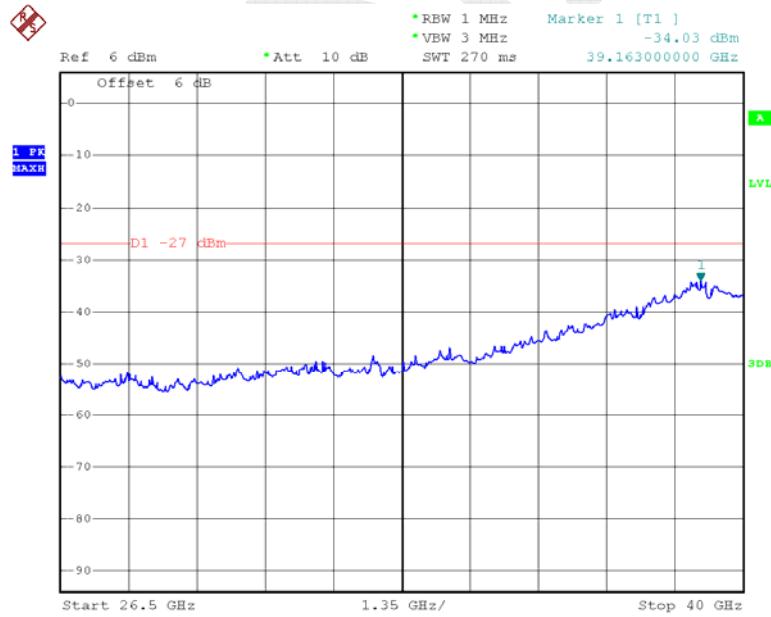
Date: 26.MAY.2015　14:18:03

802.11n ht40 Low Channel 30MHz-1GHz – Chain1

```
                                    *RBW 100 kHz   Marker 1 [T1 ]
                                    *VBW 300 kHz              -52.17 dBm
    Ref  16 dBm          *Att  20 dB  SWT 100 ms    419.940000000 MHz
       Offset   6 dB
  -10
1 PK  -0
MAXH
  -10
  -20
      D1 -27 dBm
  -30
  -40
  -50
  -60
  -70
  -80
  Start 30 MHz              97 MHz/              Stop 1 GHz
```
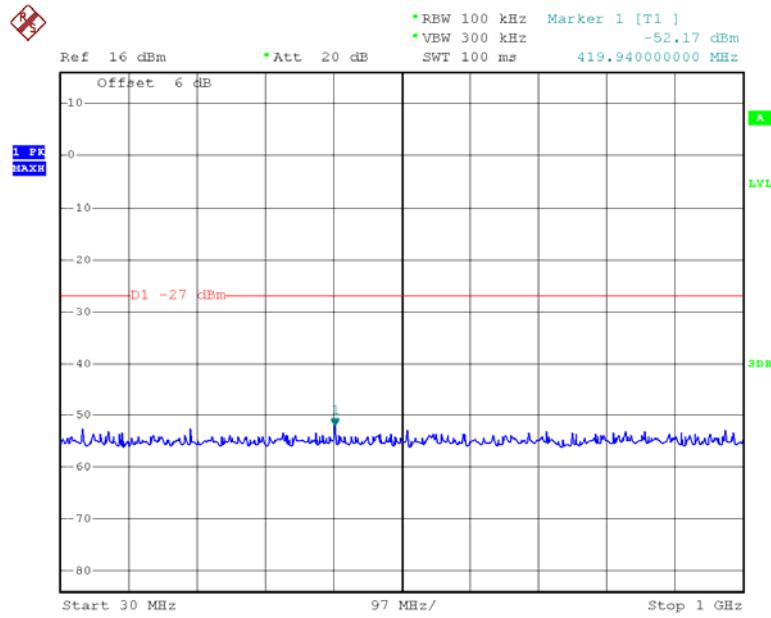
Date: 26.MAY.2015 14:02:42

802.11n ht40 Low Channel 1GHz-26.5GHz – Chain1

```
                                    *RBW 1 MHz     Marker 1 [T1 ]
                                    *VBW 3 MHz               -32.85 dBm
    Ref  16 dBm          *Att  20 dB  SWT 520 ms    21.196000000 GHz
       Offset   6 dB
  -10
1 PK  -0
MAXH
  -10
  -20
      D1 -27 dBm
  -30
  -40
  -50
  -60
  -70
  -80
  Start 1 GHz              2.55 GHz/             Stop 26.5 GHz
```

Fundamental
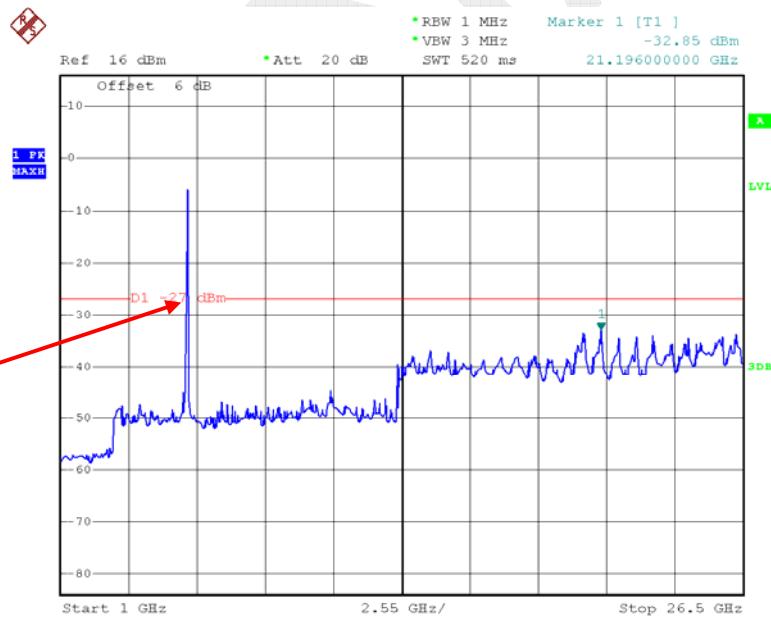
Date: 26.MAY.2015 13:51:29

## 802.11n ht40 Low Channel 26.5GHz-40GHz – Chain1
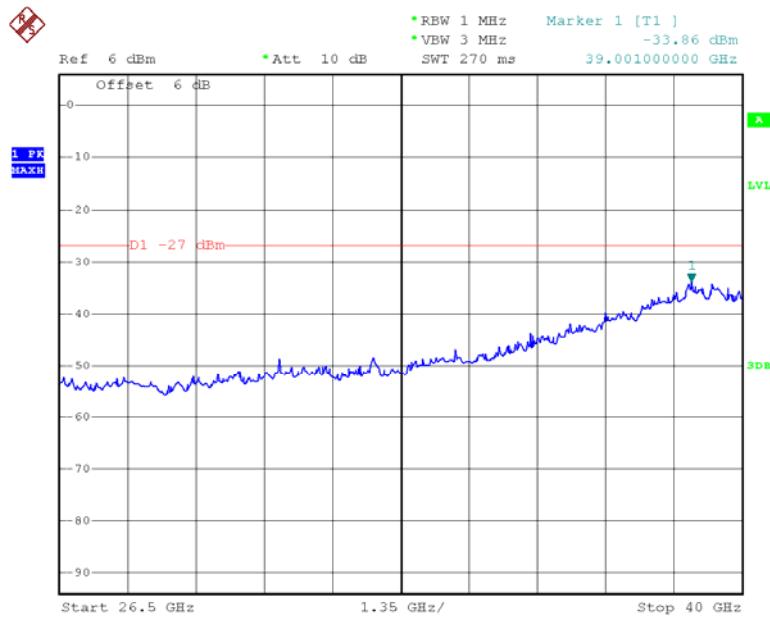
Date: 26.MAY.2015 14:18:15

802.11n ht40 High Channel 30MHz-1GHz – Chain1
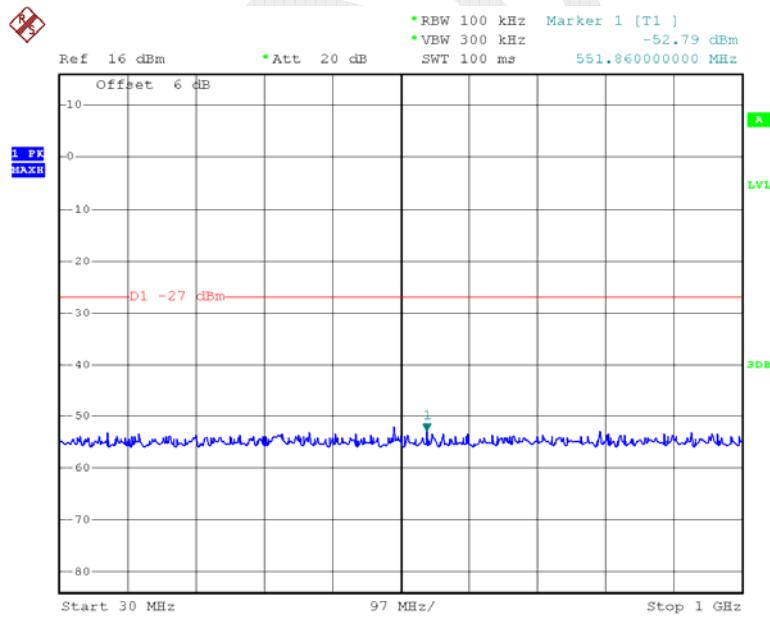
Date: 26.MAY.2015 14:02:55

802.11n ht40 High Channel 1GHz-26.5GHz – Chain1

Fundamental
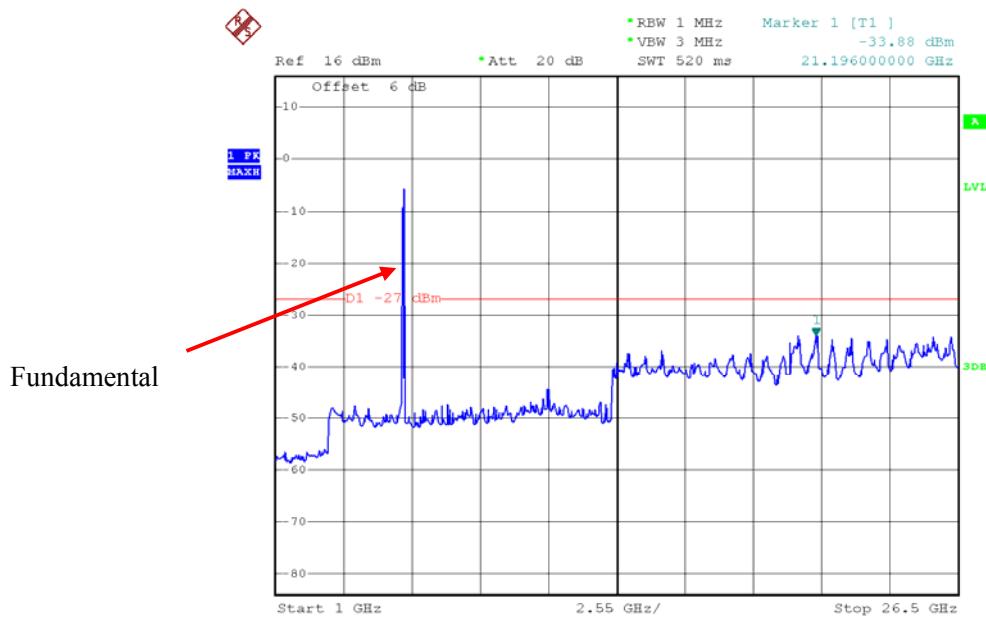
Date: 26.MAY.2015 13:53:02

802.11n ht40 High Channel 26.5GHz-40GHz – Chain1
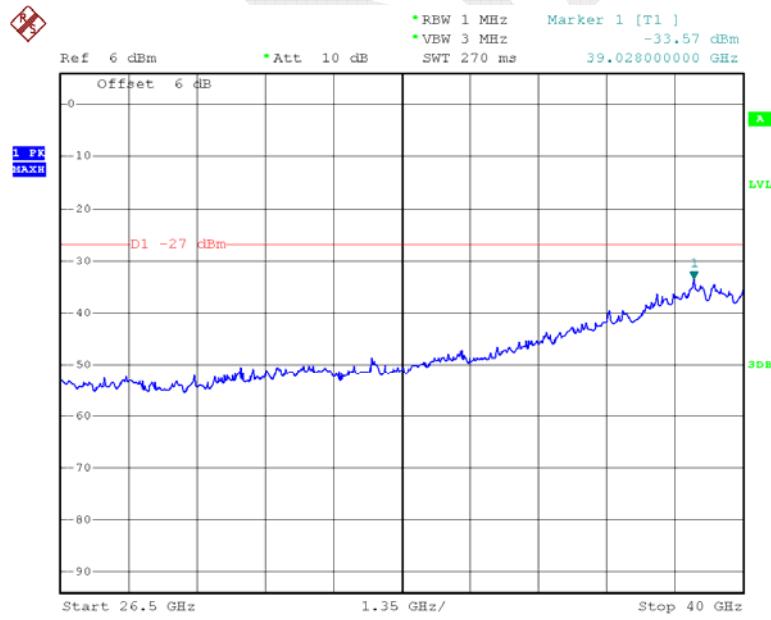
Date: 26.MAY.2015 14:18:26

FCC §15.407(b) (1) −BAND EDGE

Applicable Standard

FCC §15.407 (b) (1), (2), (3), (4);

(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.

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:	25.3 °C
Relative Humidity:	56 %
ATM Pressure:	100.1 kPa

The testing was performed by Dean Liu on 2015-05-25.

Please refer to the following table and plots:

5150-5250 MHz band

Mode	Channel	Frequency	Band edge Emissions (dBm)				Result
		MHz	Chain 0	Chain 1	Total	Limits	
802.11a	Low	5180	-31.44	-33.98	-29.52	-27	PASS
	High	5240	-32.76	-37.44	-31.49	-27	PASS
802.11n20	Low	5180	-31.49	-33.58	-29.40	-27	PASS
	High	5240	-31.84	-37.58	-30.81	-27	PASS
802.11n40	Low	5190	-30.03	-30.44	-27.22	-27	PASS
	High	5230	-32.83	-38.45	-31.78	-27	PASS

5725-5850 MHz band

Mode	Channel	Frequency	Band edge Emissions (dBm)				Result
		MHz	Chain 0	Chain 1	Total	Limits	
802.11a	Low	5745	-23.92	-24.28	-21.09	-17	PASS
			-32.06	-34.17	-29.98	-27	PASS
	High	5825	-31.85	-35.68	-30.35	-17	PASS
			-31.23	-37.70	-30.35	-27	PASS
802.11n20	Low	5745	-25.42	-21.99	-20.36	-17	PASS
			-32.18	-34.38	-30.13	-27	PASS
	High	5825	-31.45	-34.61	-29.74	-17	PASS
			-30.99	-37.61	-30.13	-27	PASS
802.11n40	Low	5755	-26.50	-26.64	-23.56	-17	PASS
			-29.98	-30.15	-27.05	-27	PASS
	High	5795	-30.45	-37.51	-29.67	-17	PASS
			-32.04	-38.75	-31.2	-27	PASS

Note: 1.Offset=Cable loss + Directional Antenna Gain (dBi)

  2. Directional gain = G_{ANT} + 10 log (N_{ANT}) dBi

5150MHz-5250MHz:

802.11a Band Edge, Left Side – Chain0
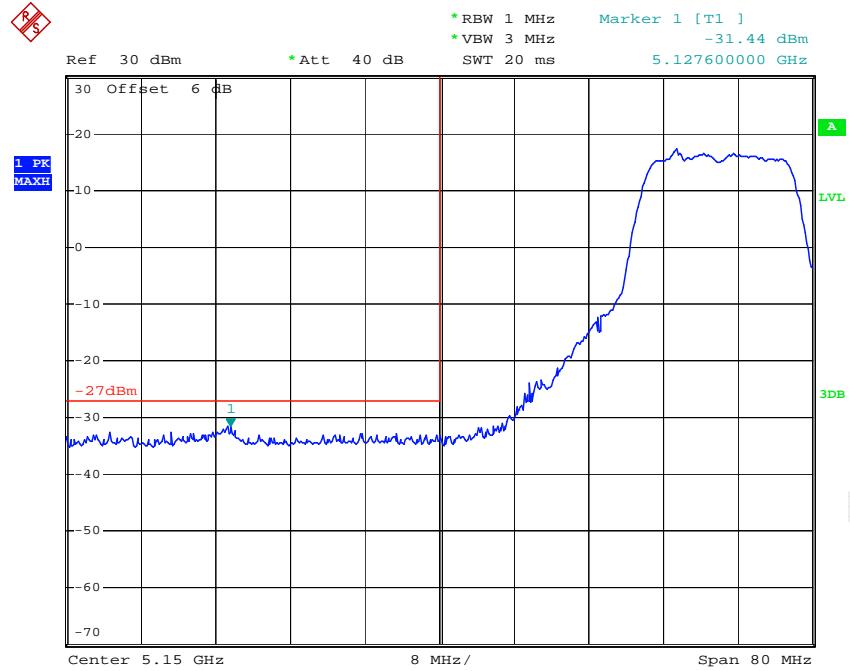
Date: 25.MAY.2015 14:45:29

### 802.11a Band Edge, Right Side – Chain0
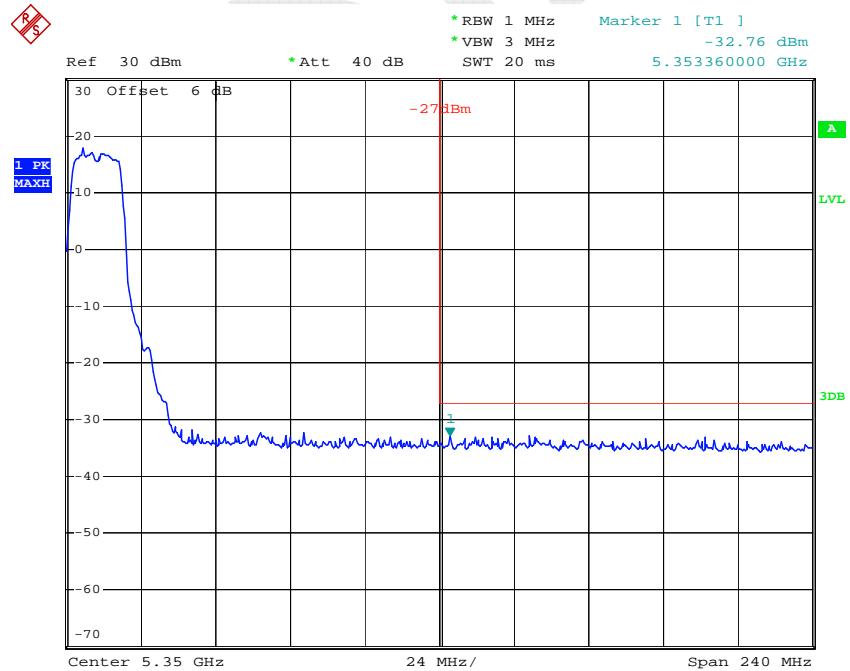
Date: 25.MAY.2015 14:52:46

802.11n ht20 Band Edge, Left Side – Chain0

*RBW 1 MHz	Marker 1 [T1]
*VBW 3 MHz	-31.49 dBm
Ref 30 dBm *Att 40 dB SWT 20 ms	5.141360000 GHz

30 Offset   6 dB

1 PK MAXH

-27dBm

Center 5.15 GHz   8 MHz/   Span 80 MHz
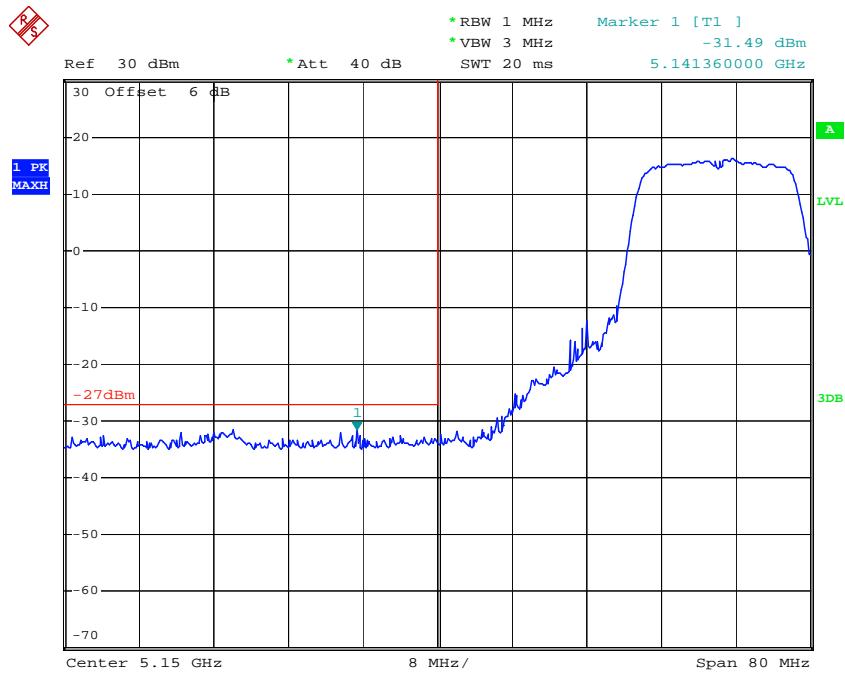
Date: 25.MAY.2015 15:02:23

802.11n ht20 Band Edge, Right Side – Chain0

*RBW 1 MHz	Marker 1 [T1]
*VBW 3 MHz	-31.84 dBm
Ref 30 dBm *Att 40 dB SWT 20 ms	5.376880000 GHz

30 Offset   6 dB

1 PK MAXH

-27dBm

Center 5.35 GHz   24 MHz/   Span 240 MHz
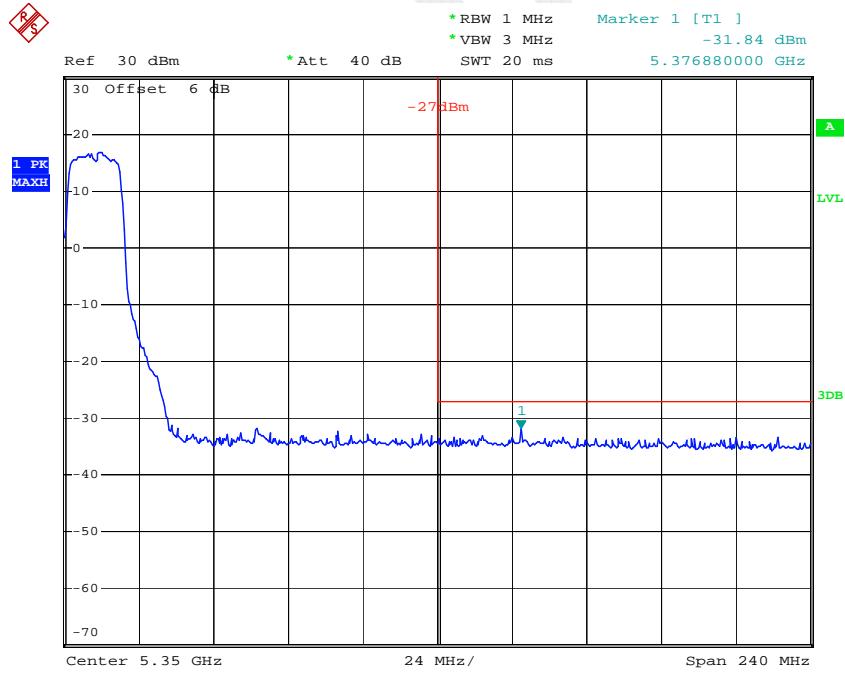
Date: 25.MAY.2015 14:58:24

802.11n ht40 Band Edge, Left Side – Chain0
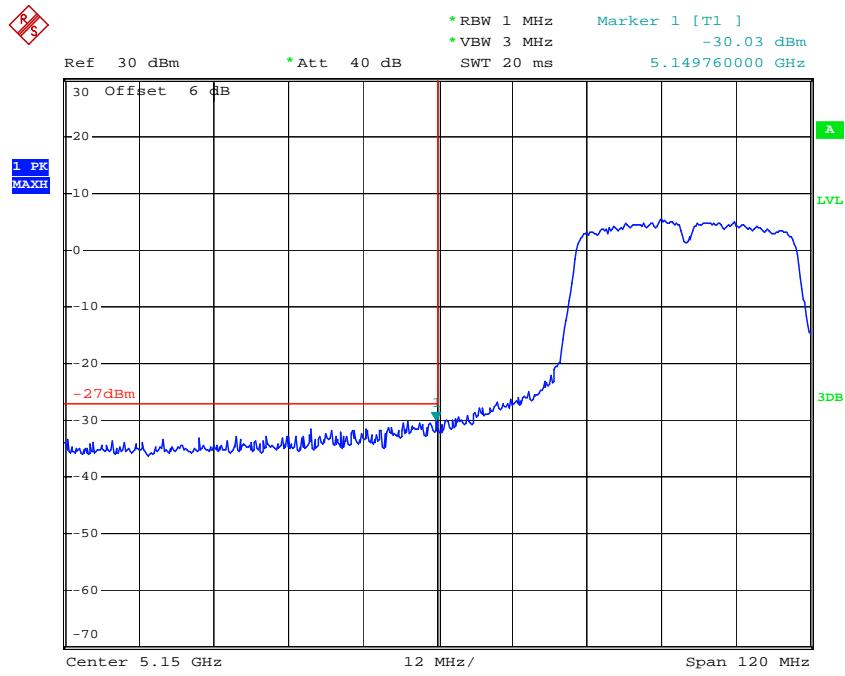
Date: 25.MAY.2015 15:04:52

## 802.11n ht40 Band Edge, Right Side – Chain0
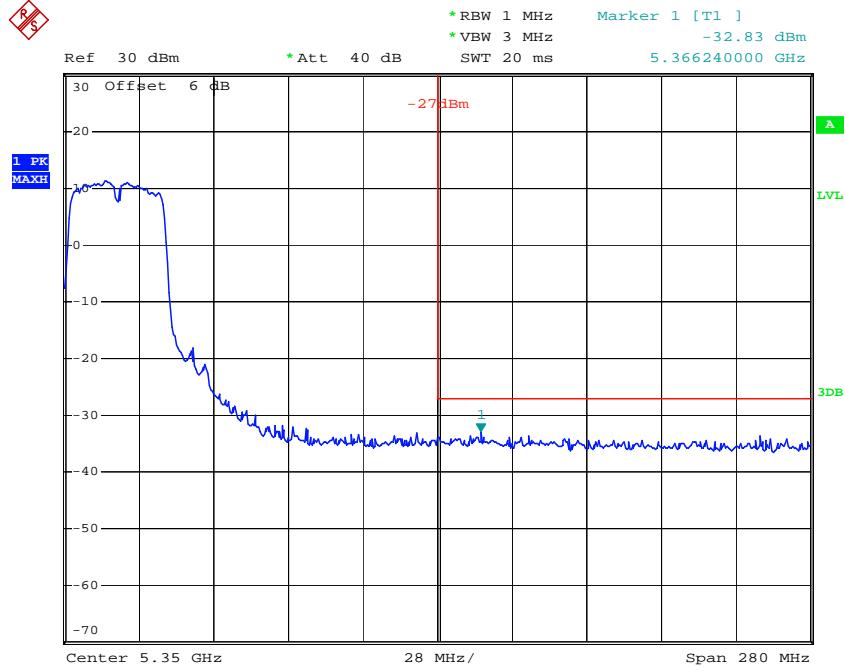
Date: 25.MAY.2015 15:20:56

802.11a Band Edge, Left Side – Chain1
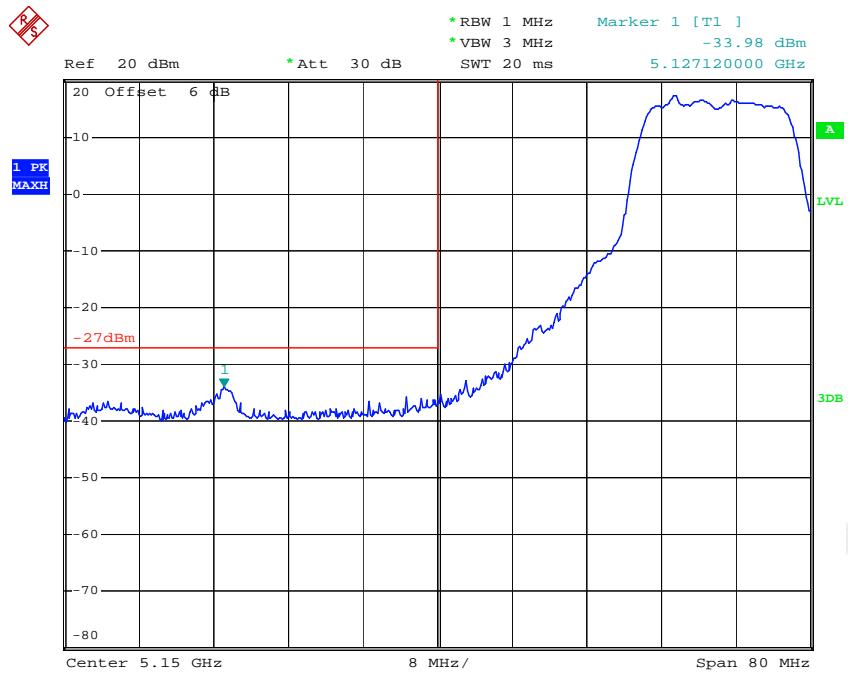
Date: 25.MAY.2015 11:12:55

802.11a Band Edge, Right Side – Chain1
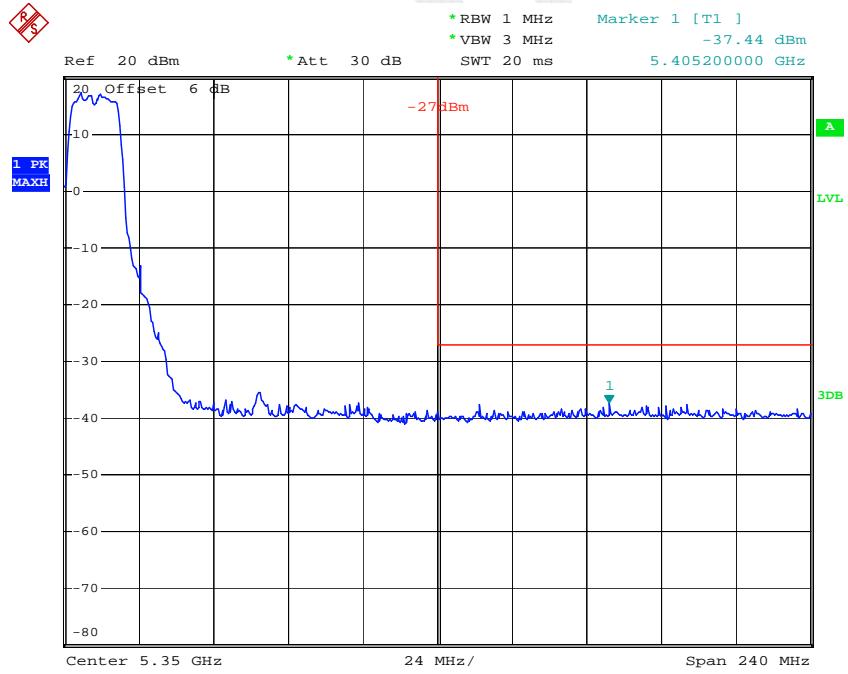
Date: 25.MAY.2015 11:17:15

## 802.11n ht20 Band Edge, Left Side – Chain1
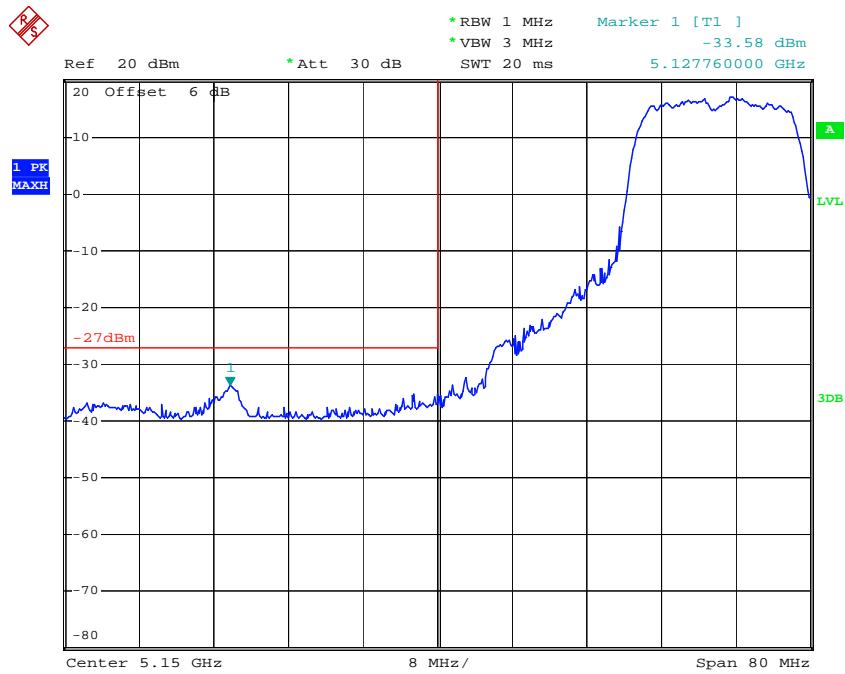
Date: 25.MAY.2015 11:24:03

## 802.11n ht20 Band Edge, Right Side – Chain1
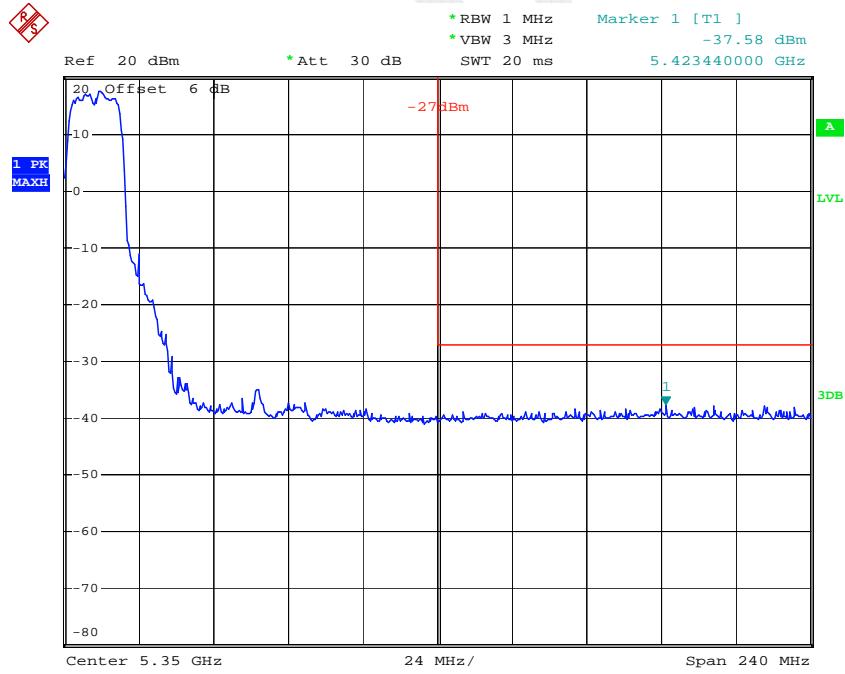
Date: 25.MAY.2015 11:19:54

## 802.11n ht40 Band Edge, Left Side – Chain1
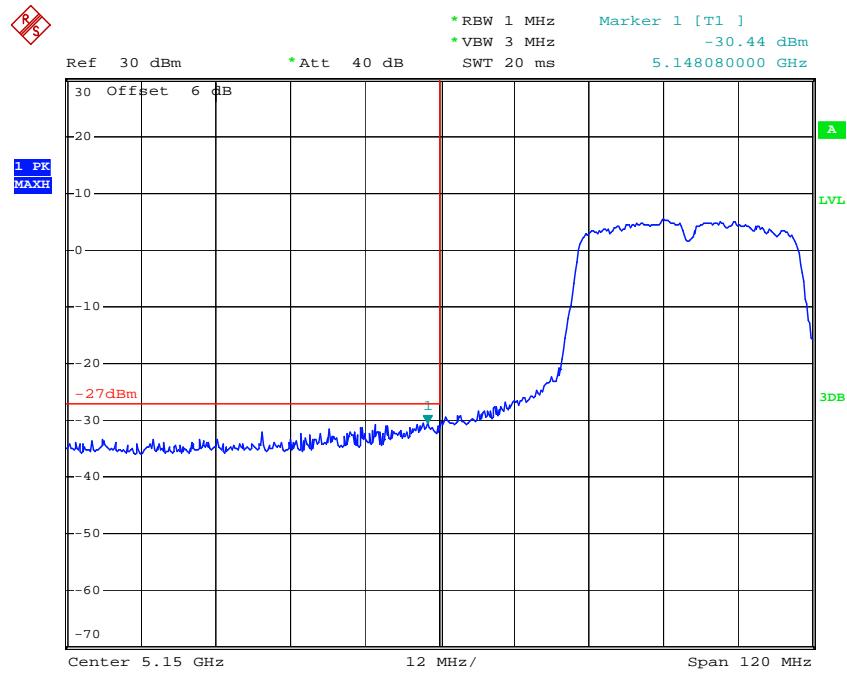
Date: 25.MAY.2015 15:09:16

## 802.11n ht40 Band Edge, Right Side – Chain1
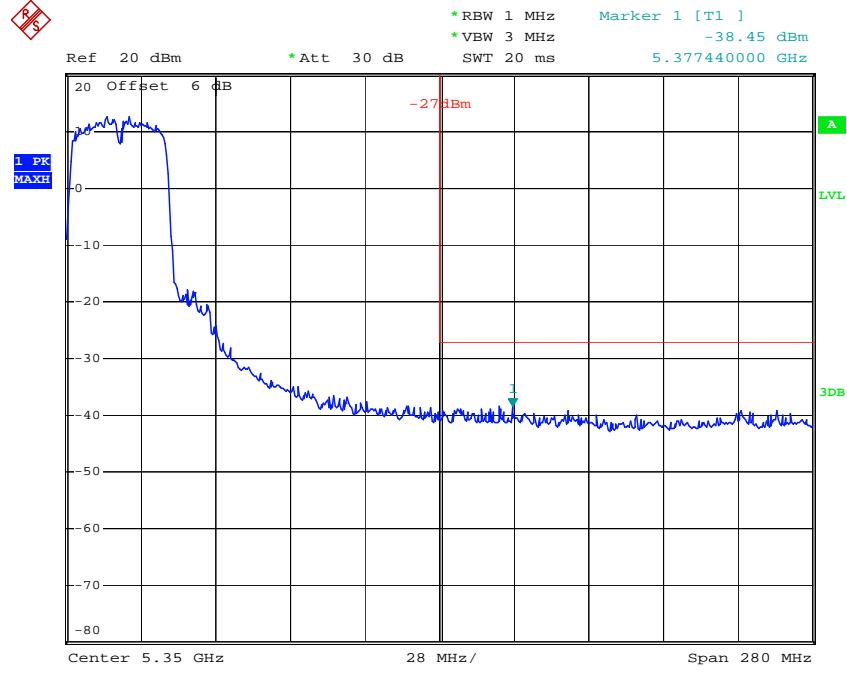
Date: 25.MAY.2015 11:09:02

5725MHz-5850MHz:

802.11a Band Edge, Left Side – Chain0
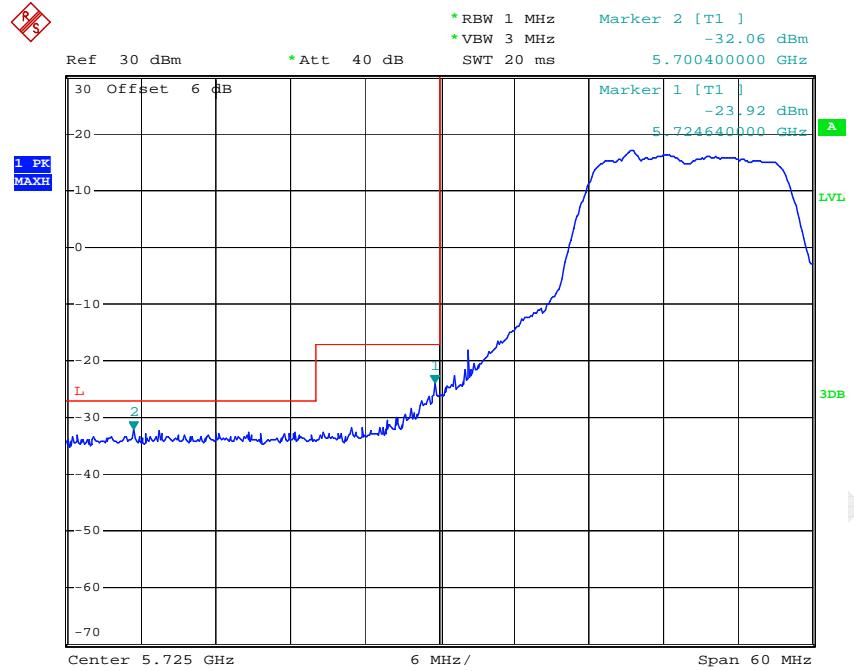
Date: 25.MAY.2015 15:27:18

802.11a Band Edge, Right Side– Chain0
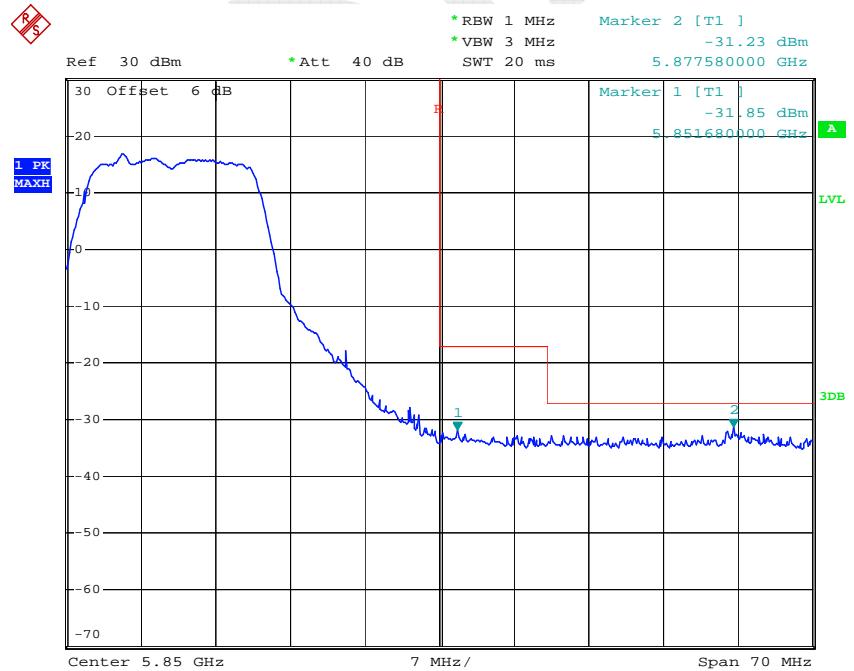
Date: 25.MAY.2015 15:36:19

802.11n ht20 Band Edge, Left Side– Chain0

```
                                        *RBW 1 MHz     Marker 2 [T1 ]
                                        *VBW 3 MHz             -32.18 dBm
   Ref  30 dBm          *Att  40 dB     SWT 20 ms        5.713600000 GHz

   30 Offset   6 dB                            Marker 1 [T1 ]
                                                      -25.42 dBm
 -20                                         5.725000000 GHz      A
1 PK
MAXH -10                                                          LVL

   0

 -10

 -20                                                             3DB
 L
 -30      2

 -40

 -50

 -60

 -70
   Center 5.725 GHz           6 MHz/            Span 60 MHz
```
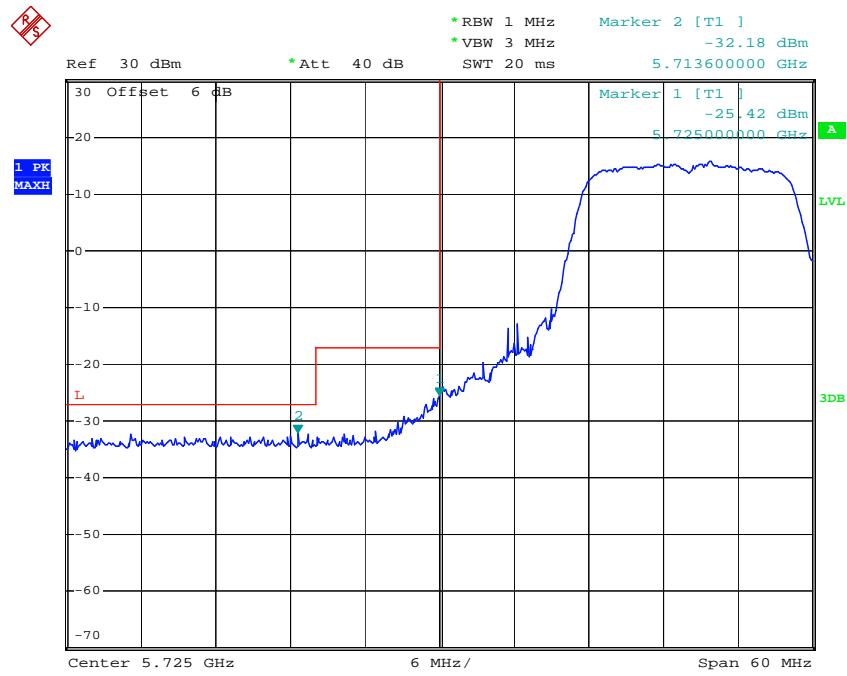
Date: 25.MAY.2015 15:43:10

802.11n ht20 Band Edge, Right Side– Chain0

```
                                        *RBW 1 MHz     Marker 2 [T1 ]
                                        *VBW 3 MHz             -30.99 dBm
   Ref  30 dBm          *Att  40 dB     SWT 20 ms        5.876740000 GHz

   30 Offset   6 dB                            Marker 1 [T1 ]
                                                      -31.45 dBm
 -20                                         5.854060000 GHz      A
1 PK
MAXH -10                                                          LVL

   0

 -10

 -20                                                             3DB

 -30      1                            2

 -40

 -50

 -60

 -70
   Center 5.85 GHz            7 MHz/            Span 70 MHz
```
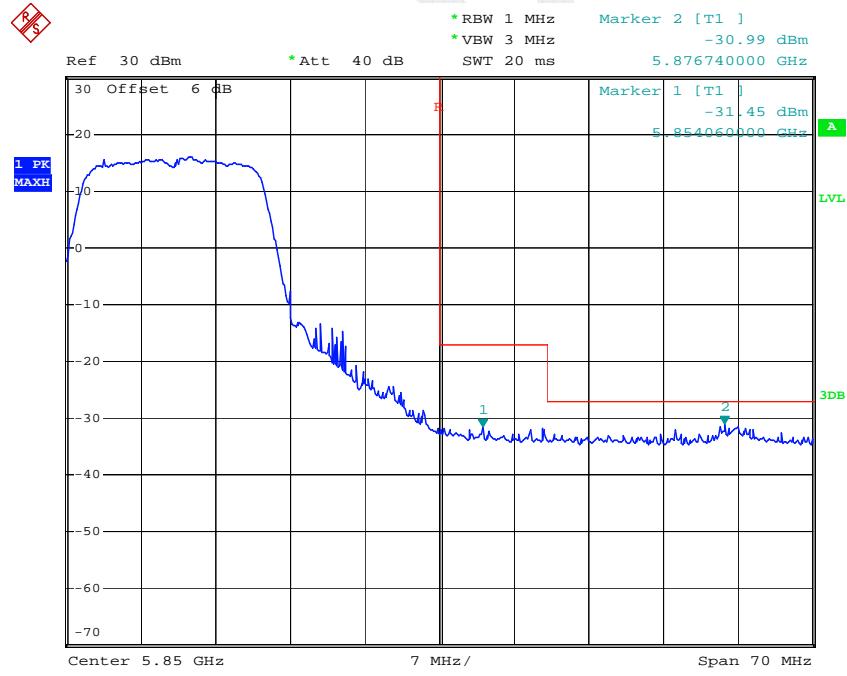
Date: 25.MAY.2015 15:48:15

## 802.11n ht40 Band Edge, Left Side– Chain0
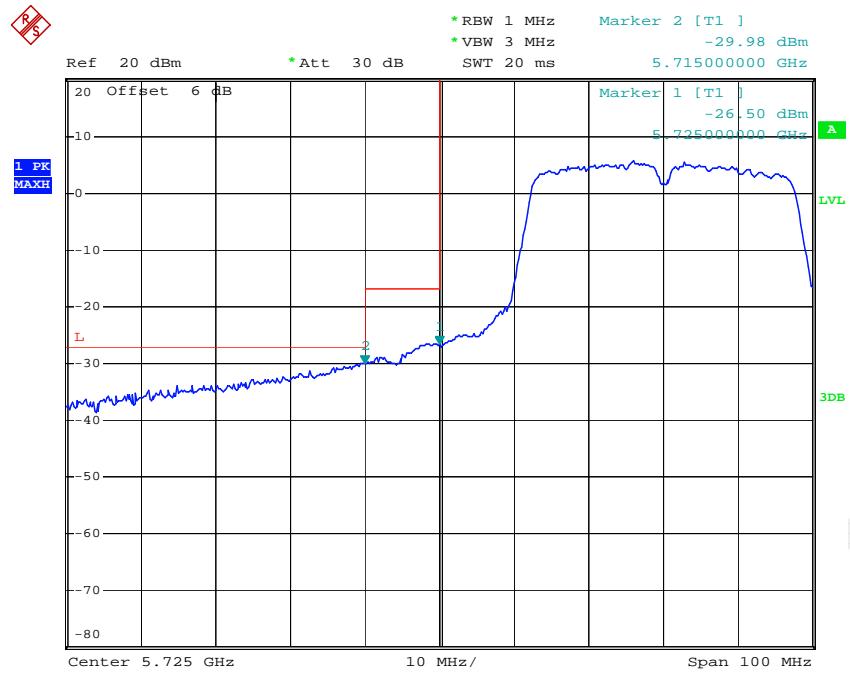
Date: 25.MAY.2015 14:32:23

## 802.11n ht40 Band Edge, Right Side– Chain0
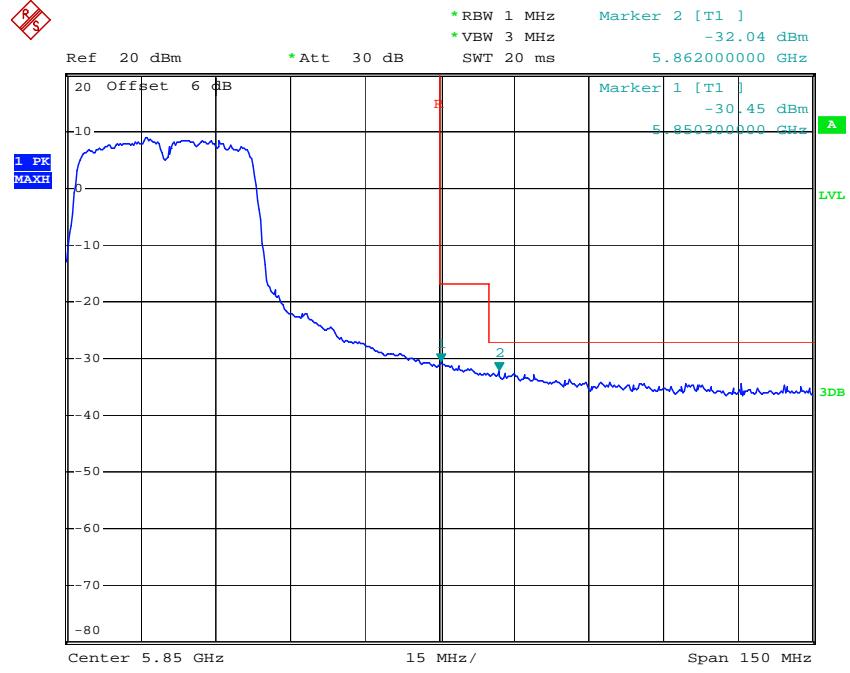
Date: 25.MAY.2015 14:25:40

## 802.11a Band Edge, Left Side – Chain1
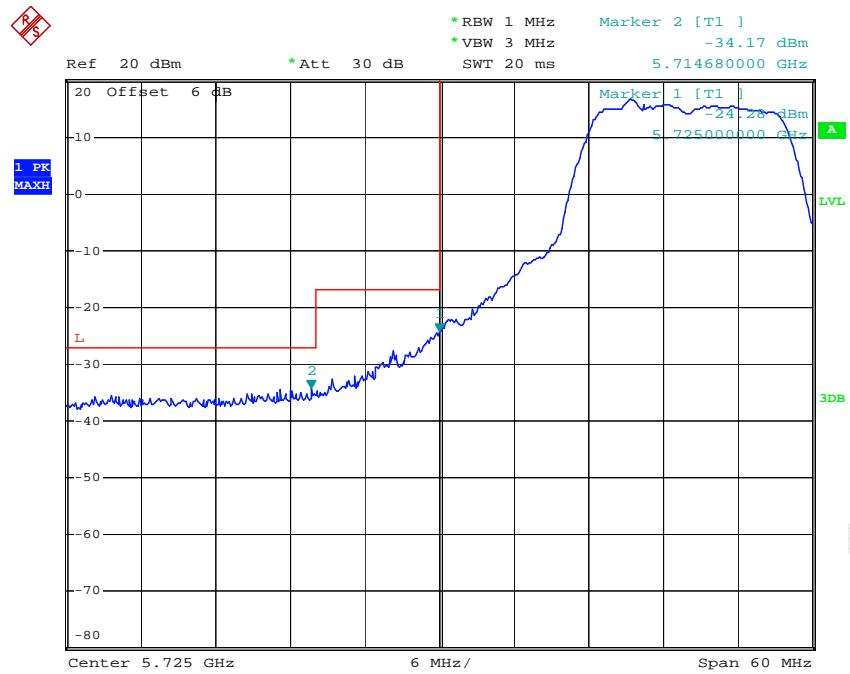
Date: 25.MAY.2015 11:28:02

## 802.11a Band Edge, Right Side– Chain1
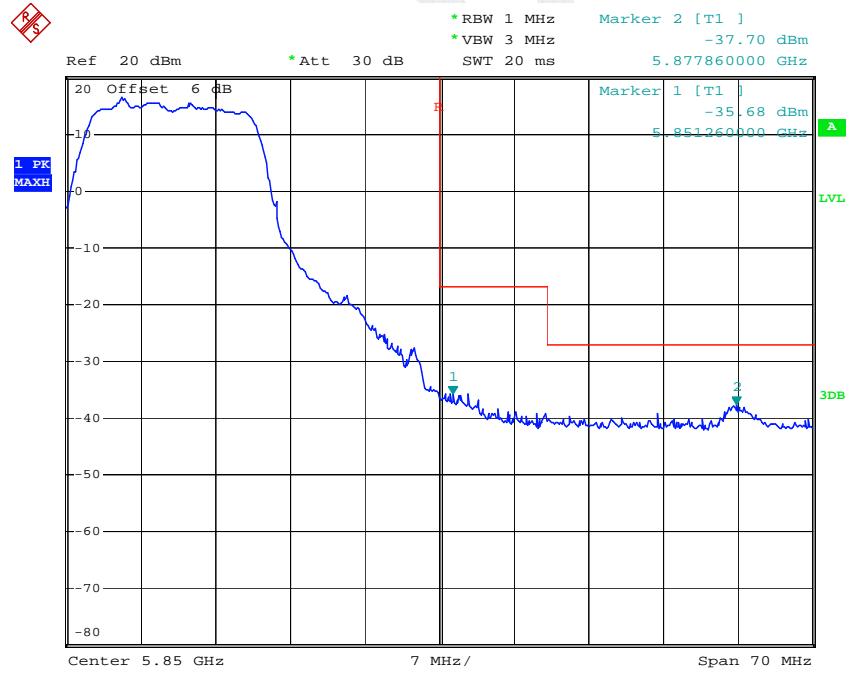
Date: 25.MAY.2015 11:38:37

802.11n ht20 Band Edge, Left Side– Chain1
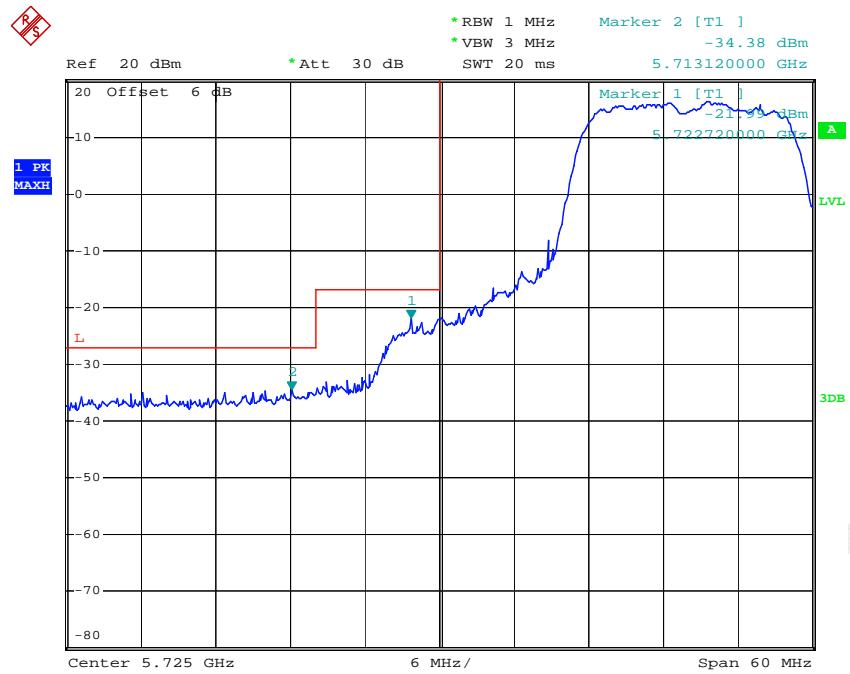
Date: 25.MAY.2015   11:43:32

802.11n ht20 Band Edge, Right Side– Chain1

Date: 25.MAY.2015   11:55:57