FCC PART 15.407

TEST REPORT

For

Iconnect

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

FCC ID: 2AB878814

Report Type:	**Product Name:**
Original Report	802.11ac Long-Range USB Adapter Dual-Band 2.4GHz/5GHz

Test Engineer:	*Tom Tang*
Report Number:	RDG170103003B
Report Date:	2017-03-31
Reviewed By:	Henry Ding EMC Leader
Test Laboratory:	Bay Area Compliance Laboratories Corp. (Chengdu) No.5040, Huilongwan Plaza, No.1, Shawan Road, Jinniu District, Chengdu, Sichuan, China Tel: 028-65523123, Fax: 028-65525125 www.baclcorp.com

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The ***Iconnect***'s product, model number: ***AWUS1900 (FCC ID: 2AB878814)*** (the "EUT") in this report was a ***802.11ac Long-Range USB Adapter Dual-Band 2.4GHz/5GHz***, which was measured approximately: 8.5 cm (L) × 6.2 cm (W) × 2 cm (H), rated input voltage: DC 5V from USB port.

Note: The series product, model AWUS1900, AC1900U, AC1900UH, AWUS1900H, NU1900, UBDo-1900, AWUS036AC-1900, Tube-UAC, ID-1900AC, ID-1900ACH, AWUS036ACM, AWUS036ACHM are electrically identical, the difference between them is the model name, we selected AWUS1900 for fully testing, the details was explained in the attached declaration letter.

**All measurement and test data in this report was gathered from final production sample, serial number: 170103003 (assigned by the BACL, Chengdu). It may have deviation from any other sample. The EUT supplied by the applicant was received on 2017-01-04, and EUT conformed to test requirement.*

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 DTS submissions with FCC ID: 2AB878814.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

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

The uncertainty of any RF tests which use conducted method measurement is ±3.17 dB, the uncertainty of any radiation on emissions measurement is:

30M~200MHz: ±4.7 dB;
200M~1GHz: ±6.0 dB;
1G~6GHz: ±5.13dB;
6G~25GHz: ±5.47dB;

And the uncertainty will not be taken into consideration for all test data recorded in the report.

Test Facility

The test site used by BACL to collect test data is located in the No.5040, Huilongwan Plaza, No.1, Shawan Road, Jinniu District, Chengdu, Sichuan, China

Test site at BACL has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on April 24, 2015. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2014.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 560332. 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.

The system support 802.11a/n ht20/n ht40/ac vht80, the vh20/vht40 were reduced since the identical parameters with 802.11n ht20 and ht40.

For 5150~5250 MHz band, 7 channels are provided to testing:

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

For 5725~5850MHz band, 8 channels are provided to testing:

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

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.Preliminary tests were perfrmed in difference data rate and all the possible configurations, the worst cases as below table and shown in the report.

Configurations	Test Mode	Data Rate	Channel	Antenna Chain
SISO	802.11a	6Mbps	36,40,48,149, 157, 165	0, 1, 2
	802.11n ht20	MCS0	36,40,48,149, 157, 165	0, 1, 2
	802.11n ht40	MCS0	38,46,151, 159	0, 1, 2
	802.11ac 80	Nss1-MCS0	42, 155	0, 1, 2
2*2 MIMO	802.11n ht20	MCS8	36,40,48,149, 157, 165	0+1
	802.11n ht40	MCS8	38,46,151, 159	0+1
	802.11ac 80	Nss2-MCS8	42, 155	0+1
3*3 MIMO	802.11n ht20	MCS16	36,40,48,149, 157, 165	0+1+2
	802.11n ht40	MCS16	38,46,151, 159	0+1+2
	802.11ac 80	Nss3-MCS16	42, 155	0+1+2

EUT Exercise Software

The software "MP_Kit_RTL11ac_8814AU_USB_v2.24_20151117(BETA)" was used for testing, and the commands were provided by manufacturer. The maximum power and duty cycle was set by commands as following table:

SISO:

UNII Band	Mode	Channel	Frequency (MHz)	Data Rate (Mbps)	Power Level		
					Chain 0	Chain 1	Chain 2
5150-5250MHz	802.11 a	Low	5180	6	41	46	45
		Middle	5200	6	41	48	47
		High	5240	6	41	50	47
	802.11n ht20	Low	5180	MCS0	40	43	42
		Middle	5200	MCS0	40	48	46
		High	5240	MCS0	40	51	48
	802.11n ht40	Low	5190	MCS0	39	43	42
		High	5230	MCS0	39	46	43
	802.11 ac80	Middle	5210	Nss1MCS0	38	41	41
5725-5850MHz	802.11 a	Low	5745	6	52	53	45
		Middle	5785	6	52	53	45
		High	5825	6	52	53	45
	802.11n ht20	Low	5745	MCS0	52	53	45
		Middle	5785	MCS0	52	53	45
		High	5825	MCS0	52	53	45
	802.11n ht40	Low	5755	MCS0	52	53	45
		High	5795	MCS0	52	53	45
	802.11 ac80	Middle	5775	Nss1MCS0	52	53	45

MIMO 2TX:

UNII Band	Mode	Channel	Frequency (MHz)	Data Rate (Mbps)	Power Level
					Chain 0&Chain 1
5150-5250MHz	802.11n ht20	Low	5180	MCS8	43
		Middle	5200	MCS8	43
		High	5240	MCS8	43
	802.11n ht40	Low	5190	MCS8	43
		High	5230	MCS8	43
	802.11 ac80	Middle	5210	Nss2MCS0	41
5725-5850MHz	802.11n ht20	Low	5745	MCS8	56
		Middle	5785	MCS8	56
		High	5825	MCS8	56
	802.11n ht40	Low	5755	MCS8	54
		High	5795	MCS8	54
	802.11 ac80	Middle	5775	Nss2MCS0	54

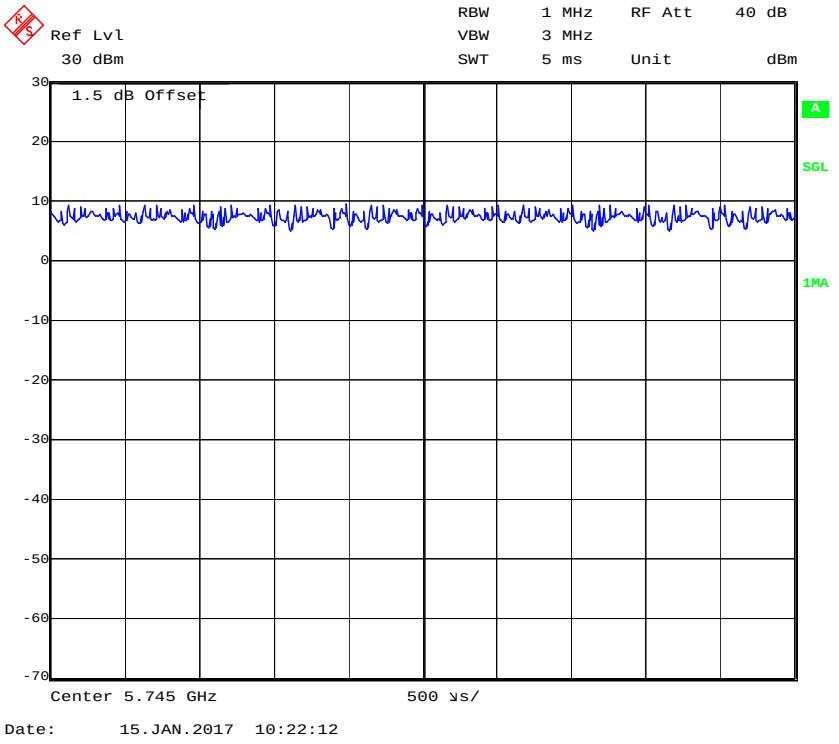
MIMO 3TX:

Software and version			MP_Kit_RTL11ac_8814AU_USB_v2.24_20151117(BETA)		
UNII Band	Mode	Channel	Frequency (MHz)	Data Rate (Mbps)	Power Level
					Chain 0&Chain 1&Chain 2
5150-5250MHz	802.11n ht20	Low	5180	MCS16	38
		Middle	5200	MCS16	38
		High	5240	MCS16	38
	802.11n ht40	Low	5190	MCS16	38
		High	5230	MCS16	38
	802.11 ac80	Middle	5210	Nss3MCS0	38
5725-5850MHz	802.11n ht20	Low	5745	MCS16	60
		Middle	5785	MCS16	60
		High	5825	MCS16	60
	802.11n ht40	Low	5755	MCS16	62
		High	5795	MCS16	62
	802.11 ac80	Middle	5775	Nss3MCS0	62

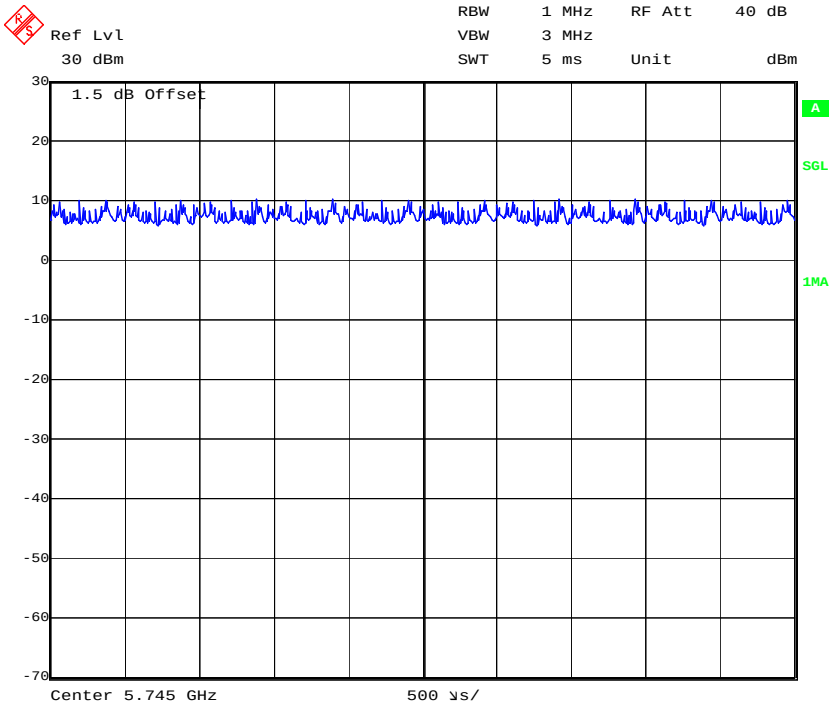
The duty cycle as below:

Mode	T_{on} (ms)	T_{on+off} (ms)	Duty Cycle (%)	Minimum Transmission Duration (T) (ms)
802.11 a	5	5	100	/
802.11n ht20	5	5	100	/
802.11n ht40	5	5	100	/
802.11 ac80	5	5	100	/
802.11n ht20_MCS8	5	5	100	/
802.11n ht40_MCS8	5	5	100	/
802.11 ac80_Nss2 MCS0	5	5	100	/
802.11n ht20_MCS16	5	5	100	/
802.11n ht40_MCS16	5	5	100	/
802.11 ac80_Nss3 MCS0	5	5	100	/

802.11a



802.11 n20



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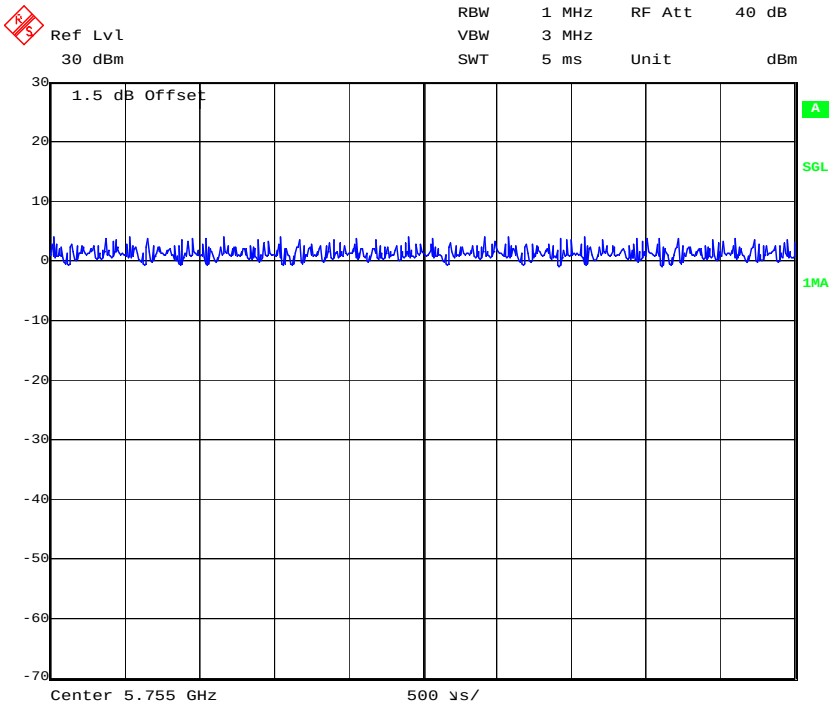
802.11 n40



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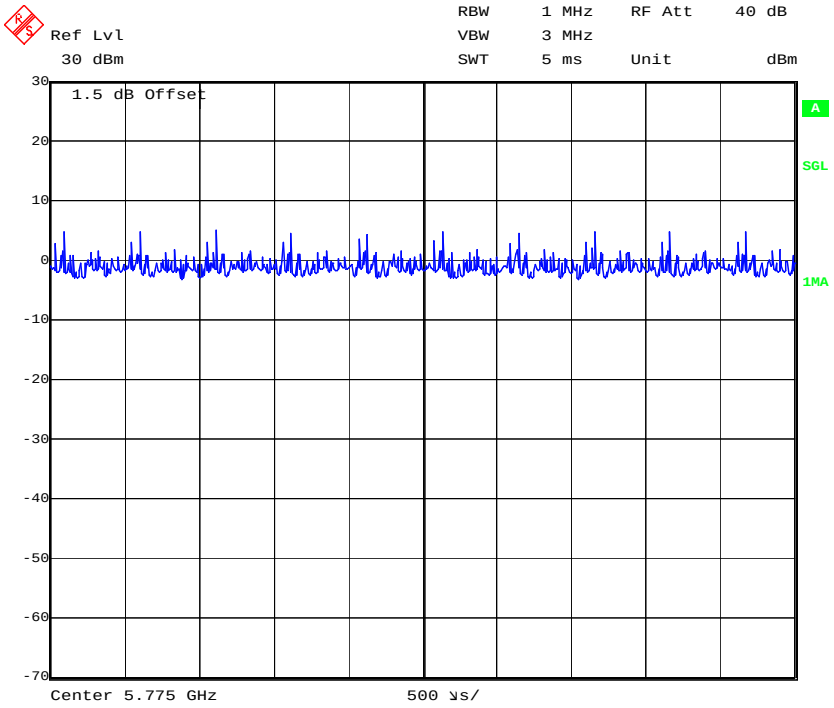
802.11 ac80



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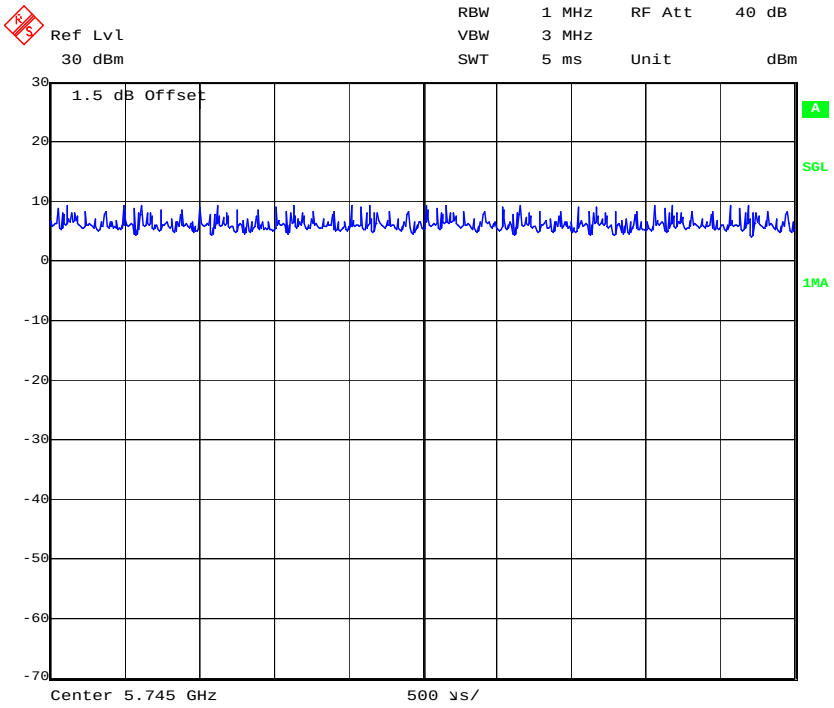

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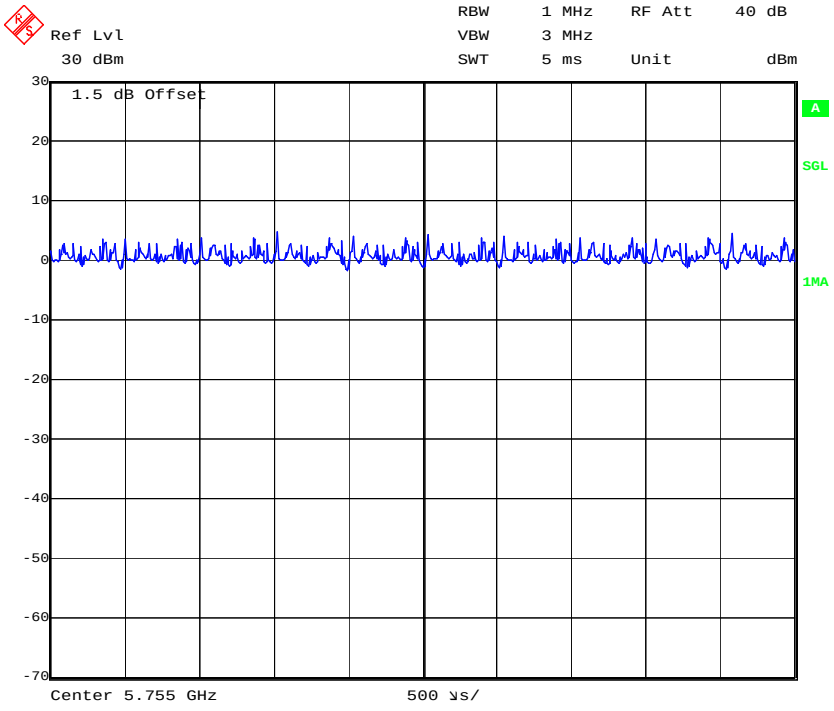
802.11 n40_MCS8



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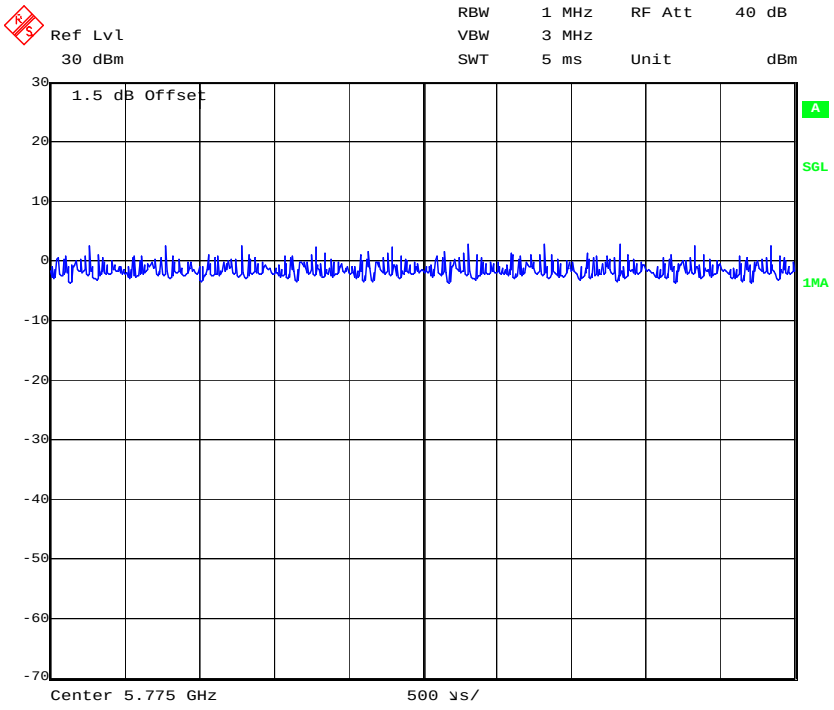
802.11 ac80_Nss2 MCS0



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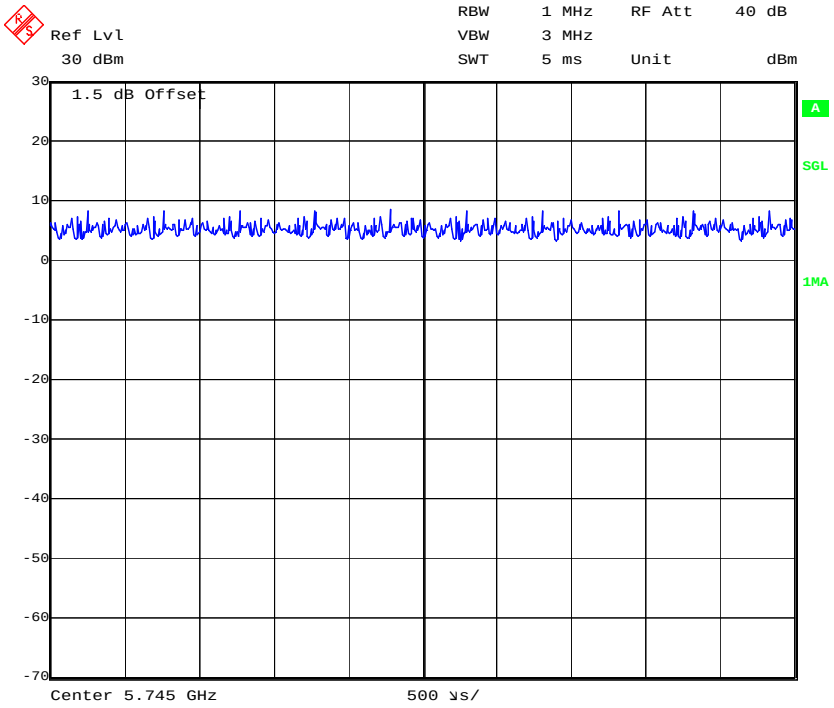
802.11 n20_MCS16



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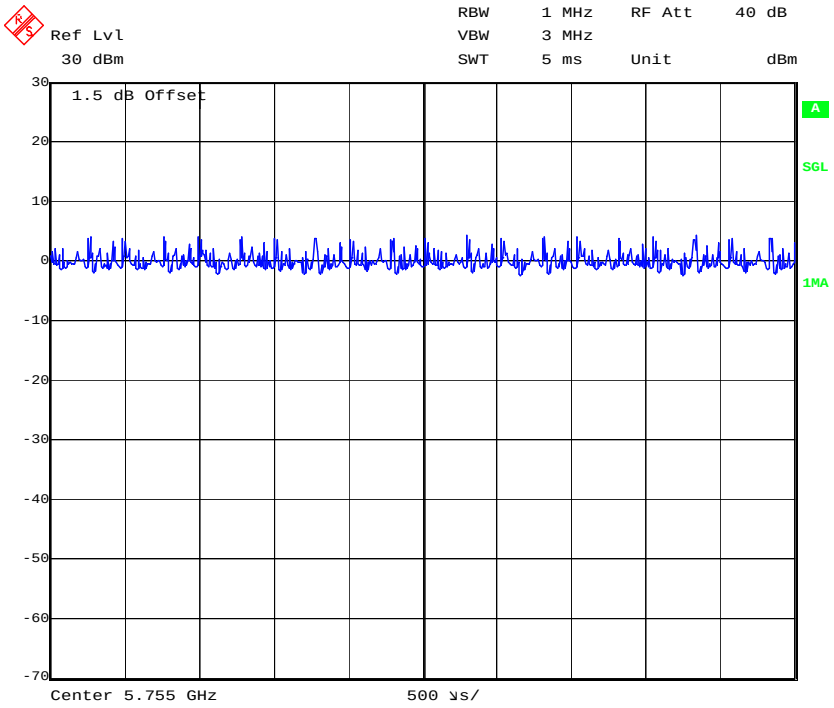
802.11 n40_MCS16



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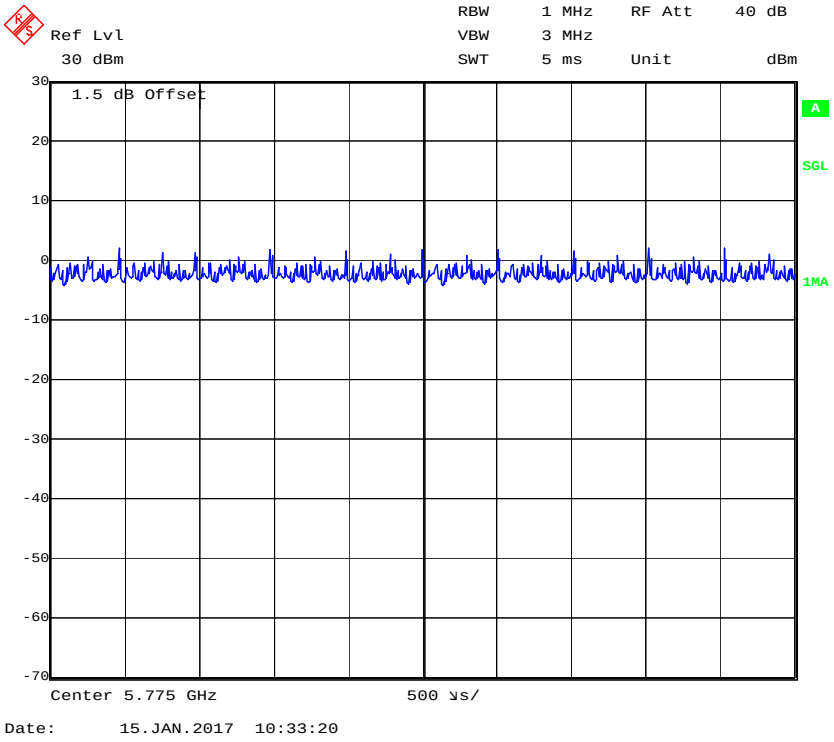
802.11 ac80_Nss3 MCS0



Equipment Modifications

No modification was made to the EUT.

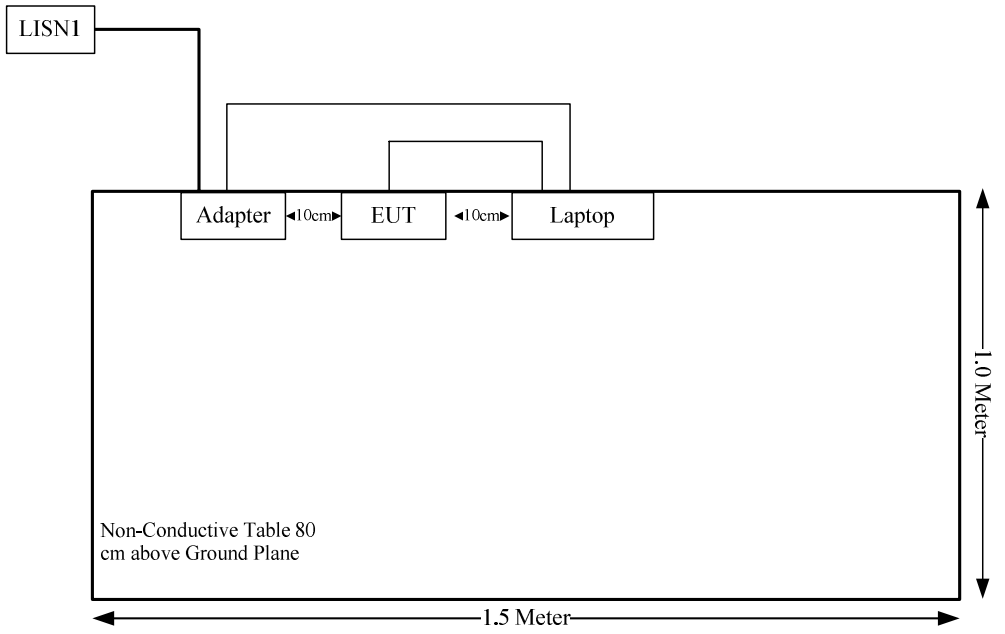
Local Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
DELL	Laptop	Inspiron	DD6SX23112221

Support Cable List and Details

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
DC Cable	yes	No	1.3	Adapter	Laptop
USB Cable	yes	No	1.0	USB Port of PC	EUT

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
FCC §15.407 (f) & §1.1310 & §2.1091	Maximum Permissable Exposure (MPE)	Compliance
§15.203	Antenna Requirement	Compliance
§15.407(b)(6)& §15.207(a)	Conducted Emissions	Compliance
§15.205& §15.209 &§15.407(b)	Undesirable Emission& Restricted Bands	Compliance
§15.407(b)	Out Of Band Emissions	Compliance
§15.407(a) (1)	6 dB Emission Bandwidth	Compliance
§15.407(g)	Frequency Stability	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/cm^2)**	**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
$S = PG/4\pi R^2$ = power density (in appropriate units, e.g. mW/cm^2);
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:

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

Calculated Data:

Frequency (MHz)	Antenna Gain		Tune-up Power		Evaluation Distance (cm)	Power Density (mW/cm^2)	MPE Limit (mW/cm^2)
	(dBi)	(numeric)	(dBm)	(mW)			
2400-2483.5	3	2.00	27	501.19	20.00	0.20	1.0
5150-5850	4	2.51	22	158.49	20.00	0.08	1.0

The 2.4GHz and 5GHz band can transmit simultaneously:

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

$=S_{2.4}/S_{limit-2.4} + S_5/S_{limit-5}$

=0.20/1+0.08/1

=0.28

< 1.0

Result: The device meet FCC MPE at 20 cm distance

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 4 dipole antennas with RP-SMA connector, all the antenna gains are 3.0 dBi in 2.4G band, 4dBi in 5GHz bands, fulfill the requirement of this section. Please refer to the EUT photos.

Result: Compliance.

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

Applicable Standard

FCC §15.207(a), §15.407(b) (6).

Measurement Uncertainty

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

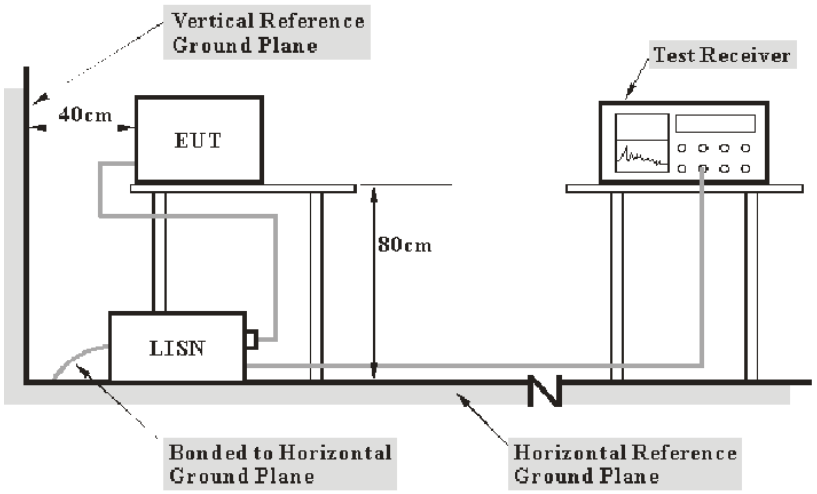
If U_{lab} is less than or equal to U_{cispr} of Table 1, then:
–compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
–non - compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.
If U_{lab} is greater than U_{cispr} of 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. (Chengdu) is ±3.17 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 C63.10-2013 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 V/60 Hz AC 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
Rohde & Schwarz	EMI Test Receiver	ESCS 30	836858/0016	2016-12-02	2017-12-01
Rohde & Schwarz	L.I.S.N.	ENV216	3560.6550.06	2016-12-02	2017-12-01
Rohde & Schwarz	PULSE LIMITER	ESH3Z2	357.8810.52	2016-10-31	2017-10-30
N/A	Conducted Cable	NO.5	N/A	2016-11-10	2017-11-09
R&S	Test Software	EMC32	Version8.53.0	N/A	N/A

*** Statement of Traceability:** BACL (Chengdu) attested 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 the first 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.

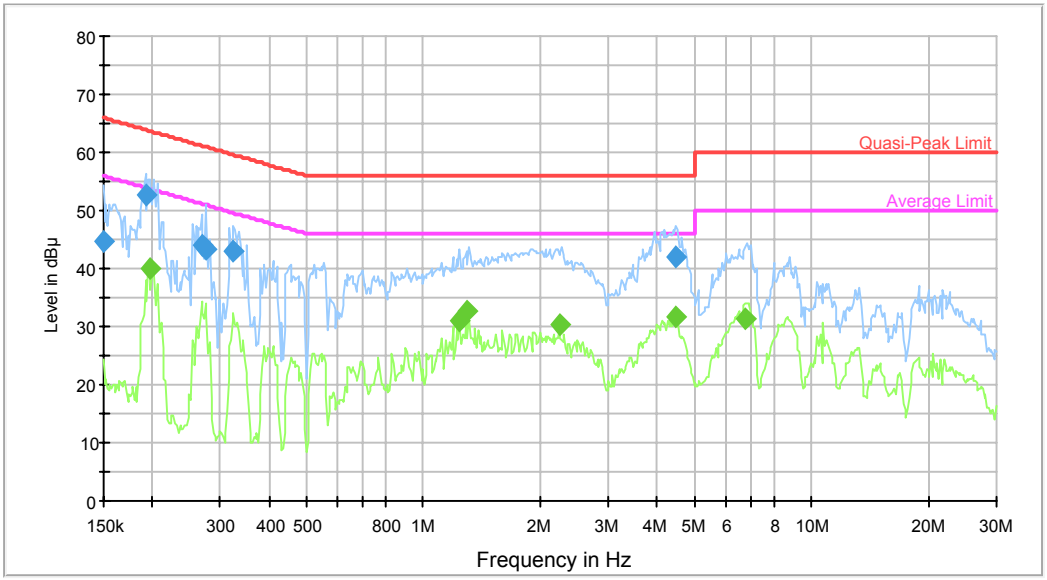
Test Data

Environmental Conditions

Temperature:	23 °C
Relative Humidity:	41 %
ATM Pressure:	95.6 kPa

The testing was performed by Tom Tang on 2017-01-14.

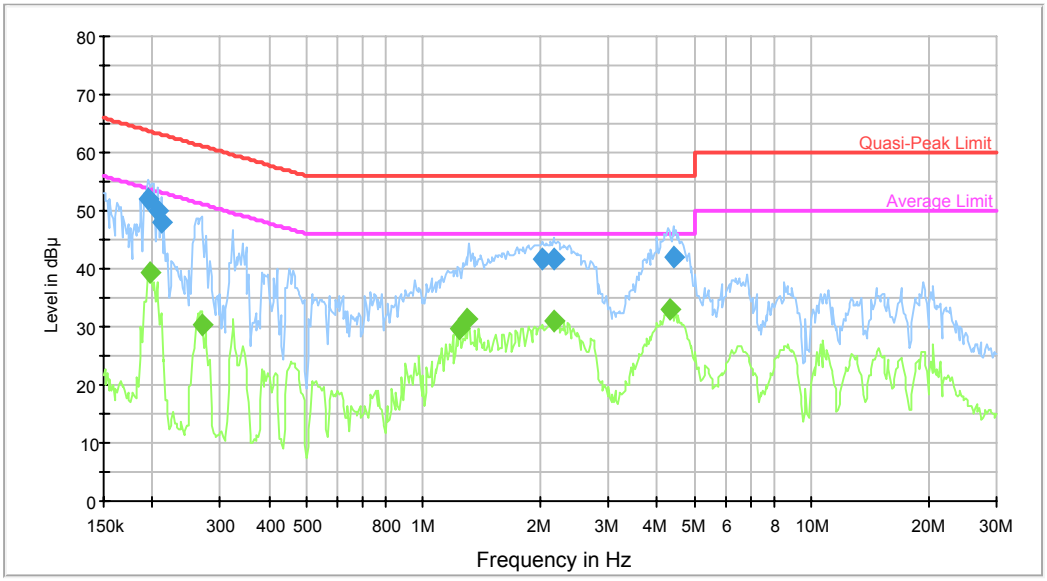
AC120 V, 60 Hz, Line:



Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.150000	44.7	9.000	L1	19.7	21.3	66.0	Compliance
0.192030	52.7	9.000	L1	19.7	11.2	63.9	Compliance
0.268355	43.9	9.000	L1	19.7	17.3	61.2	Compliance
0.274848	43.4	9.000	L1	19.7	17.6	61.0	Compliance
0.324910	42.9	9.000	L1	19.7	16.7	59.6	Compliance
4.469698	42.1	9.000	L1	19.7	13.9	56.0	Compliance

Frequency (MHz)	Average (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.196675	39.9	9.000	L1	19.7	13.8	53.7	Compliance
1.239175	31.2	9.000	L1	19.7	14.8	46.0	Compliance
1.289541	32.5	9.000	L1	19.7	13.5	46.0	Compliance
2.234662	30.2	9.000	L1	19.7	15.8	46.0	Compliance
4.469698	31.6	9.000	L1	19.7	14.4	46.0	Compliance
6.764347	31.2	9.000	L1	19.8	18.8	50.0	Compliance

AC120 V, 60 Hz, Neutral:



requency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.195114	52.0	9.000	N	19.6	11.8	63.8	Compliance
0.207957	50.0	9.000	N	19.6	13.3	63.3	Compliance
0.211298	48.2	9.000	N	19.6	15.0	63.2	Compliance
2.030886	41.7	9.000	N	19.7	14.3	56.0	Compliance
2.164561	41.7	9.000	N	19.7	14.3	56.0	Compliance
4.399032	42.0	9.000	N	19.7	14.0	56.0	Compliance

Frequency (MHz)	Average (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.198249	39.2	9.000	N	19.6	14.5	53.7	Compliance
0.268355	30.3	9.000	N	19.6	20.9	51.2	Compliance
1.239175	29.6	9.000	N	19.6	16.4	46.0	Compliance
1.289541	31.3	9.000	N	19.6	14.7	46.0	Compliance
2.164561	31.0	9.000	N	19.7	15.0	46.0	Compliance
4.329484	32.9	9.000	N	19.7	13.1	46.0	Compliance

FCC §15.209, §15.205 & §15.407(b) –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 2, 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 2, 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.

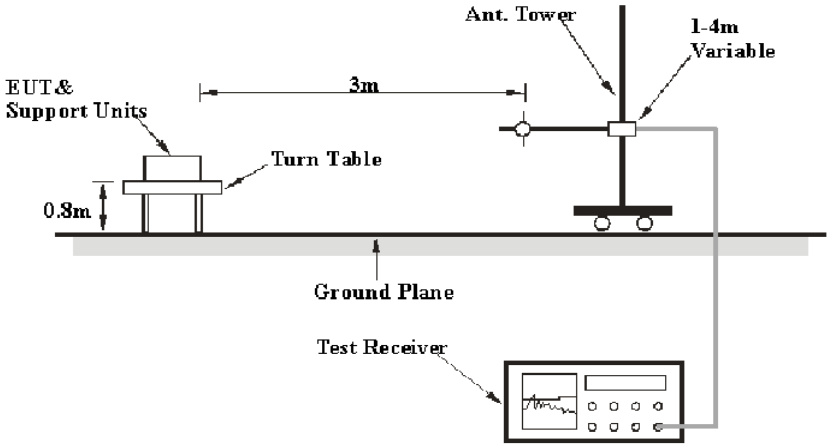
Based on CISPR 16-4-2-2011, measurement uncertainty of radiated emission at a distance of 3m at Bay Area Compliance Laboratories Corp. (Chengdu) is:
30M~200MHz: ±4.7 dB;
200M~1GHz: ±6.0 dB;
1G~6GHz: ±5.13dB;
6G~25GHz: ±5.47 dB;

Table 2 – Values of U_{cispr}

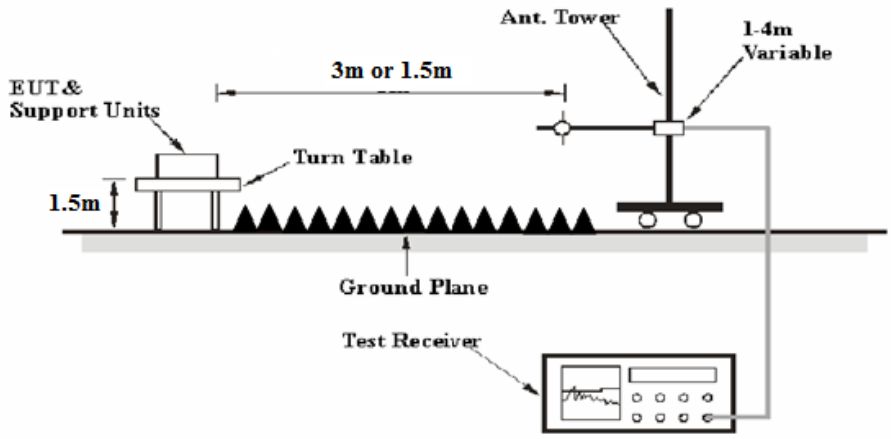
Measurement	U_{cispr}
Radiated disturbance (electric field strength at an OATS or in a SAC) (30 MHz to 1000 MHz)	6.3 dB
Radiated disturbance (electric field strength in a FAR) (1 GHz to 6 GHz)	5.2 dB
Radiated disturbance (electric field strength in a FAR) (6 GHz to 18 GHz)	5.5 dB

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 C63.10-2013. 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.

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:

30-1000MHz:

Frequency Range	RBW	Video B/W	IF B/W	Detector
30 MHz – 1000 MHz	120 kHz	300 kHz	120 kHz	QP

1GHz- 40GHz:

Detector	Duty cycle	RBW	Video B/W
PK	Any	1MHz	3 MHz
Ave.	>98%	1MHz	10 Hz
	<98%	1MHz	1/T

Test Procedure

During the radiated emission test, the laptop 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 v01r03, emission shall be computed as: E [dBμV/m] = EIRP[dBm] + 95.2, for d = 3 meters.

According to C63.10, 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 = Extrapolation result -Limit

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	Amplifier	8447D	2944A10442	2016-12-02	2017-12-01
Rohde & Schwarz	EMI Test Receiver	ESCI	100028	2016-12-02	2017-12-01
Sunol Sciences	Broadband Antenna	JB3	A101808	2016-04-10	2019-04-09
Rohde & Schwarz	Spectrum Analyzer	FSEM30	100018	2016-12-02	2017-12-01
ETS	Horn Antenna	3115	003-6076	2016-12-02	2017-12-01
Ducommun Technologies	Horn Antenna	ARH-4223-02	1007726-0113024	2014-06-16	2017-06-15
Mini-circuits	Amplifier	ZVA-183-S+	771001215	2016-05-20	2017-05-19
EMCT	Semi-Anechoic Chamber	966	N/A	2015-04-24	2018-04-23
N/A	RF Cable (below 1GHz)	NO.1	N/A	2016-11-10	2017-11-09
N/A	RF Cable (below 1GHz)	NO.4	N/A	2016-11-10	2017-11-09
N/A	RF Cable (above 1GHz)	NO.2	N/A	2016-11-10	2017-11-09
Ducommun Technolagies	Horn Antenna	ARH-2823-02	1007726-01 1312	2016-08-18	2017-08-18
Quinstar	Amplifier	QLW-18405536-JO	15964001032	2016-08-18	2017-08-18
Agilent	Spectrum Analyzer	8564E	5943A01752	2016-08-18	2017-08-18

*** Statement of Traceability:** BACL (Chengdu) attested that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data

Environmental Conditions

Temperature:	20.9~22.3 °C
Relative Humidity:	47~49 %
ATM Pressure:	94.8~95.2 kPa

** The testing was performed by Tom Tang from 2017-01-15 to 2017-02-23.*

Test Mode: Transmitting(Above 1GHz test performed at distance 1.5m from EUT to Antenna)

SISO mode:

5150-5250MHz:
802.11a mode(Chain 0 was the worst)

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Extrapolation Result dBμV/m	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)						
Low Channel:5180 MHz										
5180	67.31	PK	H	31.72	5.21	0.00	104.24	98.24	N/A	N/A
5180	58.46	AV	H	31.72	5.21	0.00	95.39	89.39	N/A	N/A
5180	77.03	PK	V	31.72	5.21	0.00	113.96	107.96	N/A	N/A
5180	68.24	AV	V	31.72	5.21	0.00	105.17	99.17	N/A	N/A
5150	31.80	PK	V	31.67	5.18	0.00	68.65	62.65	74	11.35
5150	17.33	AV	V	31.67	5.18	0.00	54.18	48.18	54	5.82
10360	34.76	PK	V	37.37	7.76	26.37	53.52	47.52	74	26.48
10360	22.10	AV	V	37.37	7.76	26.37	40.86	34.86	54	19.14
15540	36.95	PK	V	39.41	10.22	25.32	61.26	55.26	74	18.74
15540	23.80	AV	V	39.41	10.22	25.32	48.11	42.11	54	11.89
1692	29.00	PK	V	24.41	2.82	26.52	29.71	23.71	74	50.29
1692	17.65	AV	V	24.41	2.82	26.52	18.36	12.36	54	41.64
3621	33.54	PK	V	27.48	4.36	26.58	38.8	32.8	74	41.2
3621	20.32	AV	V	27.48	4.36	26.58	25.58	19.58	54	34.42
298.69	52.33	QP	H	14.09	1.04	27.54	39.92	39.92	46.00	6.08
506.27	45.23	QP	H	18.16	1.63	28.82	36.20	36.20	46.00	9.80
Middle Channel:5200 MHz										
5200	67.15	PK	H	31.76	5.23	0.00	104.14	98.14	N/A	N/A
5200	58.43	AV	H	31.76	5.23	0.00	95.42	89.42	N/A	N/A
5200	77.82	PK	V	31.76	5.23	0.00	114.81	108.81	N/A	N/A
5200	68.24	AV	V	31.76	5.23	0.00	105.23	99.23	N/A	N/A
10400	34.54	PK	V	37.38	7.79	26.36	53.35	47.35	74	26.65
10400	22.03	AV	V	37.38	7.79	26.36	40.84	34.84	54	19.16
15600	36.76	PK	V	39.42	10.22	25.31	61.09	55.09	74	18.91
15600	23.79	AV	V	39.42	10.22	25.31	48.12	42.12	54	11.88
2009	30.38	PK	V	24.87	3.05	26.82	31.48	25.48	74	48.52
2009	18.17	AV	V	24.87	3.05	26.82	19.27	13.27	54	40.73
3147	36.95	PK	V	25.02	3.65	26.46	39.16	33.16	74	40.84
3147	24.47	AV	V	25.02	3.65	26.46	26.68	20.68	54	33.32
298.69	51.86	QP	H	14.09	1.04	27.54	39.45	39.45	46.00	6.55
506.27	45.67	QP	H	18.16	1.63	28.82	36.64	36.64	46.00	9.36
High Channel:5240 MHz										
5240	67.30	PK	H	31.83	5.27	0.00	104.4	98.4	N/A	N/A
5240	58.09	AV	H	31.83	5.27	0.00	95.19	89.19	N/A	N/A
5240	77.78	PK	V	31.83	5.27	0.00	114.88	108.88	N/A	N/A
5240	69.15	AV	V	31.83	5.27	0.00	106.25	100.25	N/A	N/A
5350	27.64	PK	V	32.03	5.37	0.00	65.04	59.04	74	14.96
5350	14.90	AV	V	32.03	5.37	0.00	52.3	46.3	54	7.7
10480	33.87	PK	V	37.40	7.84	26.35	52.76	46.76	74	27.24
10480	21.85	AV	V	37.40	7.84	26.35	40.74	34.74	54	19.26
15720	35.87	PK	V	39.44	10.24	25.30	60.25	54.25	74	19.75
15720	23.26	AV	V	39.44	10.24	25.30	47.64	41.64	54	12.36
1810	29.58	PK	V	24.60	2.91	26.63	30.46	24.46	74	49.54
1810	17.87	AV	V	24.60	2.91	26.63	18.75	12.75	54	41.25
3264	35.59	PK	V	25.68	3.83	26.51	38.59	32.59	74	41.41
3264	23.07	AV	V	25.68	3.83	26.51	26.07	20.07	54	33.93
298.69	51.39	QP	H	14.09	1.04	27.54	38.98	38.98	46.00	7.02
506.27	46.11	QP	H	18.16	1.63	28.82	37.08	37.08	46.00	8.92

802.11n ht20 mode(Chain 0 was the worst)

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Extrapolation Result dBμV/m	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)						
Low Channel:5180 MHz										
5180	65.96	PK	H	31.72	5.21	0.00	102.89	96.89	N/A	N/A
5180	57.20	AV	H	31.72	5.21	0.00	94.13	88.13	N/A	N/A
5180	76.21	PK	V	31.72	5.21	0.00	113.14	107.14	N/A	N/A
5180	67.79	AV	V	31.72	5.21	0.00	104.72	98.72	N/A	N/A
5150	31.56	PK	V	31.67	5.18	0.00	68.41	62.41	74	11.59
5150	17.50	AV	V	31.67	5.18	0.00	54.35	48.35	54	5.65
10360	34.94	PK	V	37.37	7.76	26.37	53.7	47.7	74	26.3
10360	22.00	AV	V	37.37	7.76	26.37	40.76	34.76	54	19.24
15540	36.61	PK	V	39.41	10.22	25.32	60.92	54.92	74	19.08
15540	24.64	AV	V	39.41	10.22	25.32	48.95	42.95	54	11.05
2113	30.92	PK	V	24.52	3.04	26.84	31.64	25.64	74	48.36
2113	19.20	AV	V	24.52	3.04	26.84	19.92	13.92	54	40.08
2936	37.41	PK	V	24.07	3.37	26.47	38.38	32.38	74	41.62
2936	24.41	AV	V	24.07	3.37	26.47	25.38	19.38	54	34.62
298.69	51.61	QP	H	14.09	1.04	27.54	39.20	39.20	46.00	6.80
506.27	44.29	QP	H	18.16	1.63	28.82	35.26	35.26	46.00	10.74
Middle Channel:5200 MHz										
5200	67.22	PK	H	31.76	5.23	0.00	104.21	98.21	N/A	N/A
5200	58.41	AV	H	31.76	5.23	0.00	95.4	89.4	N/A	N/A
5200	78.13	PK	V	31.76	5.23	0.00	115.12	109.12	N/A	N/A
5200	59.86	AV	V	31.76	5.23	0.00	96.85	90.85	N/A	N/A
10400	35.23	PK	V	37.38	7.79	26.36	54.04	48.04	74	19.96
10400	22.14	AV	V	37.38	7.79	26.36	40.95	34.95	54	13.05
15600	36.39	PK	V	39.42	10.22	25.31	60.72	54.72	74	13.28
15600	24.59	AV	V	39.42	10.22	25.31	48.92	42.92	54	5.08
1670	29.31	PK	V	24.37	2.80	26.50	29.98	23.98	74	44.02
1670	17.79	AV	V	24.37	2.80	26.50	18.46	12.46	54	35.54
2897	36.25	PK	V	23.99	3.34	26.51	37.07	31.07	74	36.93
2897	23.24	AV	V	23.99	3.34	26.51	24.06	18.06	54	29.94
298.69	51.88	QP	H	14.09	1.04	27.54	39.47	39.47	46.00	6.53
506.27	44.43	QP	H	18.16	1.63	28.82	35.40	35.40	46.00	10.60
High Channel:5240 MHz										
5240	67.61	PK	H	31.83	5.27	0.00	104.71	98.71	N/A	N/A
5240	58.02	AV	H	31.83	5.27	0.00	95.12	89.12	N/A	N/A
5240	78.30	PK	V	31.83	5.27	0.00	115.4	109.4	N/A	N/A
5240	69.73	AV	V	31.83	5.27	0.00	106.83	100.83	N/A	N/A
5350	27.74	PK	V	32.03	5.37	0.00	65.14	59.14	74	14.86
5350	15.19	AV	V	32.03	5.37	0.00	52.59	46.59	54	7.41
10480	33.61	PK	V	37.40	7.84	26.35	52.5	46.5	74	27.5
10480	21.72	AV	V	37.40	7.84	26.35	40.61	34.61	54	19.39
15720	36.21	PK	V	39.44	10.24	25.30	60.59	54.59	74	19.41
15720	22.85	AV	V	39.44	10.24	25.30	47.23	41.23	54	12.77
1625	29.23	PK	V	24.30	2.77	26.45	29.85	23.85	74	50.15
1625	16.73	AV	V	24.30	2.77	26.45	17.35	11.35	54	42.65
3452	34.16	PK	V	26.73	4.11	26.57	38.43	32.43	74	41.57
3452	21.18	AV	V	26.73	4.11	26.57	25.45	19.45	54	34.55
298.69	52.72	QP	H	14.09	1.04	27.54	40.31	40.31	46.00	5.69
506.27	44.85	QP	H	18.16	1.63	28.82	35.82	35.82	46.00	10.18

802.11n ht40 mode(Chain 0 was the worst)

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Extrapolation Result dBμV/m	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)						
Low Channel:5190 MHz										
5190	62.07	PK	H	31.74	5.22	0.00	99.03	93.03	N/A	N/A
5190	53.43	AV	H	31.74	5.22	0.00	90.39	84.39	N/A	N/A
5190	72.00	PK	V	31.74	5.22	0.00	108.96	102.96	N/A	N/A
5190	63.51	AV	V	31.74	5.22	0.00	100.47	94.47	N/A	N/A
5150	32.72	PK	V	31.67	5.18	0.00	69.57	63.57	74	10.43
5150	18.30	AV	V	31.67	5.18	0.00	55.15	49.15	54	4.85
10380	34.71	PK	V	37.38	7.78	26.37	53.5	47.5	74	26.5
10380	22.37	AV	V	37.38	7.78	26.37	41.16	35.16	54	18.84
15570	36.84	PK	V	39.41	10.22	25.31	61.16	55.16	74	18.84
15570	23.71	AV	V	39.41	10.22	25.31	48.03	42.03	54	11.97
2005	30.37	PK	V	24.88	3.05	26.82	31.48	25.48	74	48.52
2005	18.26	AV	V	24.88	3.05	26.82	19.37	13.37	54	40.63
3147	37.51	PK	V	25.02	3.65	26.46	39.72	33.72	74	40.28
3147	24.16	AV	V	25.02	3.65	26.46	26.37	20.37	54	33.63
298.69	52.25	QP	H	14.09	1.04	27.54	39.84	39.84	46.00	6.16
506.27	45.29	QP	H	18.16	1.63	28.82	36.26	36.26	46.00	9.74
High Channel:5230 MHz										
5230	61.68	PK	H	31.81	5.26	0.00	98.75	92.75	N/A	N/A
5230	52.73	AV	H	31.81	5.26	0.00	89.8	83.8	N/A	N/A
5230	72.63	PK	V	31.81	5.26	0.00	109.7	103.7	N/A	N/A
5230	63.96	AV	V	31.81	5.26	0.00	101.03	95.03	N/A	N/A
5350	27.99	PK	V	32.03	5.37	0.00	65.39	59.39	74	14.61
5350	15.24	AV	V	32.03	5.37	0.00	52.64	46.64	54	7.36
10460	34.72	PK	V	37.39	7.83	26.36	53.58	47.58	74	26.42
10460	21.45	AV	V	37.39	7.83	26.36	40.31	34.31	54	19.69
15690	36.22	PK	V	39.44	10.24	25.30	60.6	54.6	74	19.4
15690	23.37	AV	V	39.44	10.24	25.30	47.75	41.75	54	12.25
1342	30.36	PK	V	23.69	2.45	26.48	30.02	24.02	74	49.98
1342	18.45	AV	V	23.69	2.45	26.48	18.11	12.11	54	41.89
2693	35.69	PK	V	23.59	3.16	26.70	35.74	29.74	74	44.26
2693	22.76	AV	V	23.59	3.16	26.70	22.81	16.81	54	37.19
298.69	51.78	QP	H	14.09	1.04	27.54	39.37	39.37	46.00	6.63
506.27	45.73	QP	H	18.16	1.63	28.82	36.70	36.70	46.00	9.30

802.11n ac80 mode(chain 0 was the worst):

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Extrapolation Result dBμV/m	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)						
Middle Channel:5210 MHz										
5210	57.97	PK	H	31.78	5.24	0.00	94.99	88.99	N/A	N/A
5210	49.48	AV	H	31.78	5.24	0.00	86.5	80.5	N/A	N/A
5210	68.97	PK	V	31.78	5.24	0.00	105.99	99.99	N/A	N/A
5210	60.45	AV	V	31.78	5.24	0.00	97.47	91.47	N/A	N/A
5150	31.13	PK	V	31.67	5.18	0.00	67.98	61.98	74	12.02
5150	18.33	AV	V	31.67	5.18	0.00	55.18	49.18	54	4.82
5350	28.42	PK	V	32.03	5.37	0.00	65.82	59.82	74	14.18
5350	15.40	AV	V	32.03	5.37	0.00	52.8	46.8	54	7.2
10420	35.08	PK	V	37.38	7.80	26.36	53.9	47.9	74	26.1
10420	22.51	AV	V	37.38	7.80	26.36	41.33	35.33	54	18.67
15630	34.03	PK	V	39.43	10.23	25.31	58.38	52.38	74	21.62
15630	22.12	AV	V	39.43	10.23	25.31	46.47	40.47	54	13.53
3720	33.41	PK	V	27.88	4.51	26.57	39.23	33.23	74	40.77
3720	20.46	AV	V	27.88	4.51	26.57	26.28	20.28	54	33.72
298.69	52.72	QP	H	14.09	1.04	27.54	40.31	40.31	46.00	5.69
506.27	44.85	QP	H	18.16	1.63	28.82	35.82	35.82	46.00	10.18

5725-5850MHz:
802.11a mode(chain 0 was the worst):

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Extrapolation Result dBμV/m	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)						
Low Channel:5745 MHz										
5745	67.46	PK	H	32.59	5.74	0.00	105.79	99.79	N/A	N/A
5745	59.72	AV	H	32.59	5.74	0.00	98.05	92.05	N/A	N/A
5745	74.67	PK	V	32.59	5.74	0.00	113	107	N/A	N/A
5745	66.53	AV	V	32.59	5.74	0.00	104.86	98.86	N/A	N/A
5725	43.83	PK	V	32.57	5.72	0.00	82.12	76.12	122.2	46.08
5720	37.03	PK	V	32.56	5.71	0.00	75.3	69.3	110.8	41.5
5700	26.34	PK	V	32.54	5.70	0.00	64.58	58.58	105.2	46.62
5650	25.47	PK	V	32.48	5.65	0.00	63.6	57.6	68.2	10.6
11490	33.12	PK	V	37.99	8.22	26.02	53.31	47.31	74	26.69
11490	21.37	AV	V	37.99	8.22	26.02	41.56	35.56	54	18.44
17235	32.61	PK	V	42.98	10.82	25.99	60.42	54.42	74	19.58
17235	21.52	AV	V	42.98	10.82	25.99	49.33	43.33	54	10.67
4123	33.35	PK	V	29.20	5.01	26.62	40.94	34.94	74	39.06
4123	21.64	AV	V	29.20	5.01	26.62	29.23	23.23	54	30.77
298.69	51.27	QP	H	14.09	1.04	27.54	38.86	38.86	46.00	7.14
506.27	42.64	QP	H	18.16	1.63	28.82	33.61	33.61	46.00	12.39
Middle Channel:5785 MHz										
5785	67.80	PK	H	32.64	5.77	0.00	106.21	100.21	N/A	N/A
5785	60.11	AV	H	32.64	5.77	0.00	98.52	92.52	N/A	N/A
5785	74.33	PK	V	32.64	5.77	0.00	112.74	106.74	N/A	N/A
5785	66.97	AV	V	32.64	5.77	0.00	105.38	99.38	N/A	N/A
11570	32.16	PK	V	38.03	8.21	26.00	52.4	46.4	74	27.6
11570	21.47	AV	V	38.03	8.21	26.00	41.71	35.71	54	18.29
17355	31.99	PK	V	43.53	11.03	26.16	60.39	54.39	74	19.61
17355	20.80	AV	V	43.53	11.03	26.16	49.2	43.2	54	10.8
4176	32.72	PK	V	29.28	5.04	26.66	40.38	34.38	74	39.62
4176	21.97	AV	V	29.28	5.04	26.66	29.63	23.63	54	30.37
298.69	51.54	QP	H	14.09	1.04	27.54	39.13	39.13	46.00	6.87
506.27	42.78	QP	H	18.16	1.63	28.82	33.75	33.75	46.00	12.25
High Channel:5825 MHz										
5825	67.57	PK	H	32.69	5.81	0.00	106.07	100.07	N/A	N/A
5825	59.32	AV	H	32.69	5.81	0.00	97.82	91.82	N/A	N/A
5825	74.91	PK	V	32.69	5.81	0.00	113.41	107.41	N/A	N/A
5825	66.65	AV	V	32.69	5.81	0.00	105.15	99.15	N/A	N/A
5850	37.99	PK	V	32.72	5.83	0.00	76.54	70.54	122.2	51.66
5855	35.12	PK	V	32.73	5.83	0.00	73.68	67.68	110.8	43.12
5875	25.84	PK	V	32.75	5.85	0.00	64.44	58.44	105.2	46.76
5925	26.06	PK	V	32.81	5.89	0.00	64.76	58.76	68.2	9.44
11650	32.30	PK	V	38.06	8.20	25.98	52.58	46.58	74	27.42
11650	22.71	AV	V	38.06	8.20	25.98	42.99	36.99	54	17.01
17475	32.35	PK	V	44.09	11.23	26.33	61.34	55.34	74	18.66
17475	20.86	AV	V	44.09	11.23	26.33	49.85	43.85	54	10.15
4258	32.75	PK	V	29.41	5.10	26.70	40.56	34.56	74	39.44
4258	21.47	AV	V	29.41	5.10	26.70	29.28	23.28	54	30.72
298.69	52.38	QP	H	14.09	1.04	27.54	39.97	39.97	46.00	6.03
506.27	43.2	QP	H	18.16	1.63	28.82	34.17	34.17	46.00	11.83

802.11n ht20 mode(chain 0 was the worst):

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Extrapolation Result dBμV/m	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)						
Low Channel:5745 MHz										
5745	63.06	PK	H	32.59	5.74	0.00	101.39	95.39	N/A	N/A
5745	54.33	AV	H	32.59	5.74	0.00	92.66	86.66	N/A	N/A
5745	74.00	PK	V	32.59	5.74	0.00	112.33	106.33	N/A	N/A
5745	65.02	AV	V	32.59	5.74	0.00	103.35	97.35	N/A	N/A
5725	33.38	PK	V	32.57	5.72	0.00	71.67	65.67	122.2	56.53
5720	31.04	PK	V	32.56	5.71	0.00	69.31	63.31	110.8	47.49
5700	26.73	PK	V	32.54	5.70	0.00	64.97	58.97	105.2	46.23
5650	25.81	PK	V	32.48	5.65	0.00	63.94	57.94	68.2	10.26
11490	33.12	PK	V	37.99	8.22	26.02	53.31	47.31	74	26.69
11490	22.37	AV	V	37.99	8.22	26.02	42.56	36.56	54	17.44
17235	32.41	PK	V	42.98	10.82	25.99	60.22	54.22	74	19.78
17235	21.29	AV	V	42.98	10.82	25.99	49.1	43.1	54	10.9
4055	33.26	PK	V	29.09	4.96	26.58	40.73	34.73	74	39.27
4055	21.33	AV	V	29.09	4.96	26.58	28.8	22.8	54	31.2
298.69	51.91	QP	H	14.09	1.04	27.54	39.50	39.50	46.00	6.50
506.27	43.64	QP	H	18.16	1.63	28.82	34.61	34.61	46.00	11.39
Middle Channel:5785 MHz										
5785	67.86	PK	H	32.64	5.77	0.00	106.27	100.27	N/A	N/A
5785	60.13	AV	H	32.64	5.77	0.00	98.54	92.54	N/A	N/A
5785	75.45	PK	V	32.64	5.77	0.00	113.86	107.86	N/A	N/A
5785	67.03	AV	V	32.64	5.77	0.00	105.44	99.44	N/A	N/A
11570	33.04	PK	V	38.03	8.21	26.00	53.28	47.28	74	26.72
11570	21.93	AV	V	38.03	8.21	26.00	42.17	36.17	54	17.83
17355	32.47	PK	V	43.53	11.03	26.16	60.87	54.87	74	19.13
17355	20.91	AV	V	43.53	11.03	26.16	49.31	43.31	54	10.69
4106	32.75	PK	V	29.17	4.99	26.61	40.3	34.3	74	39.7
4106	21.44	AV	V	29.17	4.99	26.61	28.99	22.99	54	31.01
298.69	51.44	QP	H	14.09	1.04	27.54	39.03	39.03	46.00	6.97
506.27	44.08	QP	H	18.16	1.63	28.82	35.05	35.05	46.00	10.95
High Channel:5825 MHz										
5825	60.79	PK	H	32.69	5.81	0.00	99.29	93.29	N/A	N/A
5825	51.91	AV	H	32.69	5.81	0.00	90.41	84.41	N/A	N/A
5825	74.34	PK	V	32.69	5.81	0.00	112.84	106.84	N/A	N/A
5825	65.51	AV	V	32.69	5.81	0.00	104.01	98.01	N/A	N/A
5850	32.68	PK	V	32.72	5.83	0.00	71.23	65.23	122.2	56.97
5855	30.52	PK	V	32.73	5.83	0.00	69.08	63.08	110.8	47.72
5875	26.84	PK	V	32.75	5.85	0.00	65.44	59.44	105.2	45.76
5925	27.37	PK	V	32.81	5.89	0.00	66.07	60.07	68.2	8.13
11650	32.80	PK	V	38.06	8.20	25.98	53.08	47.08	74	26.92
11650	21.67	AV	V	38.06	8.20	25.98	41.95	35.95	54	18.05
17475	31.37	PK	V	44.09	11.23	26.33	60.36	54.36	74	19.64
17475	20.78	AV	V	44.09	11.23	26.33	49.77	43.77	54	10.23
4156	32.63	PK	V	29.25	5.03	26.64	40.27	34.27	74	39.73
4156	22.00	AV	V	29.25	5.03	26.64	29.64	23.64	54	30.36
298.69	52.01	QP	H	14.09	1.04	27.54	39.60	39.60	46.00	6.40
506.27	43.09	QP	H	18.16	1.63	28.82	34.06	34.06	46.00	11.94

802.11n ht40 mode(chain 0 was the worst):

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Extrapolation Result dBμV/m	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)						
Low Channel:5755 MHz										
5755	59.41	PK	H	32.61	5.74	0.00	97.76	91.76	N/A	N/A
5755	50.90	AV	H	32.61	5.74	0.00	89.25	83.25	N/A	N/A
5755	70.43	PK	V	32.61	5.74	0.00	108.78	102.78	N/A	N/A
5755	62.00	AV	V	32.61	5.74	0.00	100.35	94.35	N/A	N/A
5725	31.41	PK	V	32.57	5.72	0.00	69.7	63.7	122.2	58.5
5720	30.43	PK	V	32.56	5.71	0.00	68.7	62.7	110.8	48.1
5700	27.25	PK	V	32.54	5.70	0.00	65.49	59.49	105.2	45.71
5650	26.65	PK	V	32.48	5.65	0.00	64.78	58.78	68.2	9.42
11510	32.81	PK	V	38.00	8.22	26.02	53.01	47.01	74	26.99
11510	21.75	AV	V	38.00	8.22	26.02	41.95	35.95	54	18.05
17265	32.85	PK	V	43.12	10.88	26.04	60.81	54.81	74	19.19
17265	21.60	AV	V	43.12	10.88	26.04	49.56	43.56	54	10.44
4155	33.12	PK	V	29.25	5.03	26.64	40.76	34.76	74	39.24
4155	21.95	AV	V	29.25	5.03	26.64	29.59	23.59	54	30.41
298.69	52.28	QP	H	14.09	1.04	27.54	39.87	39.87	46.00	6.13
506.27	43.23	QP	H	18.16	1.63	28.82	34.20	34.20	46.00	11.80
High Channel:5795 MHz										
5795	60.27	PK	H	32.65	5.78	0.00	98.7	92.7	N/A	N/A
5795	51.54	AV	H	32.65	5.78	0.00	89.97	83.97	N/A	N/A
5795	70.55	PK	V	32.65	5.78	0.00	108.98	102.98	N/A	N/A
5795	61.86	AV	V	32.65	5.78	0.00	100.29	94.29	N/A	N/A
5850	28.00	PK	V	32.72	5.83	0.00	66.55	60.55	122.2	61.65
5855	27.21	PK	V	32.73	5.83	0.00	65.77	59.77	110.8	51.03
5875	27.16	PK	V	32.75	5.85	0.00	65.76	59.76	105.2	45.44
5925	26.96	PK	V	32.81	5.89	0.00	65.66	59.66	68.2	8.54
11590	32.64	PK	V	38.04	8.21	25.99	52.9	46.9	74	27.1
11590	21.77	AV	V	38.04	8.21	25.99	42.03	36.03	54	17.97
17385	31.92	PK	V	43.67	11.08	26.21	60.46	54.46	74	19.54
17385	21.01	AV	V	43.67	11.08	26.21	49.55	43.55	54	10.45
4156	33.59	PK	V	29.25	5.03	26.64	41.23	35.23	74	38.77
4156	21.85	AV	V	29.25	5.03	26.64	29.49	23.49	54	30.51
298.69	53.12	QP	H	14.09	1.04	27.54	40.71	40.71	46.00	5.29
506.27	43.65	QP	H	18.16	1.63	28.82	34.62	34.62	46.00	11.38

802.11n ac80 mode(chain 0 was the worst):

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Extrapolation Result dBμV/m	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)						
Middle Channel:5775 MHz										
5775	68.55	PK	H	32.63	5.76	0.00	106.94	100.94	N/A	N/A
5775	59.58	AV	H	32.63	5.76	0.00	97.97	91.97	N/A	N/A
5775	68.77	PK	V	32.63	5.76	0.00	107.16	101.16	N/A	N/A
5775	59.80	AV	V	32.63	5.76	0.00	98.19	92.19	N/A	N/A
5725	32.57	PK	V	32.57	5.72	0.00	70.86	64.86	122.2	57.34
5720	30.84	PK	V	32.56	5.71	0.00	69.11	63.11	110.8	47.69
5700	30.50	PK	V	32.54	5.70	0.00	68.74	62.74	105.2	42.46
5650	27.05	PK	V	32.48	5.65	0.00	65.18	59.18	68.2	9.02
5850	31.67	PK	V	32.72	5.83	0.00	70.22	64.22	122.2	57.98
5855	30.52	PK	V	32.73	5.83	0.00	69.08	63.08	110.8	47.72
5875	28.30	PK	V	32.75	5.85	0.00	66.9	60.9	105.2	44.3
5925	26.78	PK	V	32.81	5.89	0.00	65.48	59.48	68.2	8.72
11550	32.53	PK	V	38.02	8.21	26.01	52.75	46.75	74	27.25
11550	21.78	AV	V	38.02	8.21	26.01	42	36	54	18
17325	33.18	PK	V	43.40	10.98	26.12	61.44	55.44	74	18.56
17325	22.07	AV	V	43.40	10.98	26.12	50.33	44.33	54	9.67
2243	34.53	PK	V	24.07	3.02	26.85	34.77	28.77	74	45.23
2243	23.79	AV	V	24.07	3.02	26.85	24.03	18.03	54	35.97
298.69	52.65	QP	H	14.09	1.04	27.54	40.24	40.24	46.00	5.76
506.27	44.09	QP	H	18.16	1.63	28.82	35.06	35.06	46.00	10.94

MIMO mode (Chain 0 & Chain 1):

5150-5250MHz
802.11n ht20 mode

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Extrapolation Result dBμV/m	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)						
Low Channel:5180 MHz										
5180	64.79	PK	H	31.72	5.21	0.00	101.72	95.72	N/A	N/A
5180	54.76	AV	H	31.72	5.21	0.00	91.69	85.69	N/A	N/A
5180	76.90	PK	V	31.72	5.21	0.00	113.83	107.83	N/A	N/A
5180	66.16	AV	V	31.72	5.21	0.00	103.09	97.09	N/A	N/A
5150	30.13	PK	V	31.67	5.18	0.00	66.98	60.98	74	13.02
5150	16.87	AV	V	31.67	5.18	0.00	53.72	47.72	54	6.28
10360	34.94	PK	V	37.37	7.76	26.37	53.7	47.7	74	26.3
10360	22.40	AV	V	37.37	7.76	26.37	41.16	35.16	54	18.84
15540	36.96	PK	V	39.41	10.22	25.32	61.27	55.27	74	18.73
15540	24.26	AV	V	39.41	10.22	25.32	48.57	42.57	54	11.43
1627	29.32	PK	V	24.30	2.77	26.45	29.94	23.94	74	50.06
1627	16.64	AV	V	24.30	2.77	26.45	17.26	11.26	54	42.74
3119	36.99	PK	V	24.87	3.61	26.45	39.02	33.02	74	40.98
3119	24.17	AV	V	24.87	3.61	26.45	26.2	20.2	54	33.8
298.69	52.28	QP	H	14.09	1.04	27.54	39.87	39.87	46.00	6.13
506.27	44.73	QP	H	18.16	1.63	28.82	35.70	35.70	46.00	10.30
Middle Channel:5200 MHz										
5200	65.99	PK	H	31.76	5.23	0.00	102.98	96.98	N/A	N/A
5200	55.71	AV	H	31.76	5.23	0.00	92.7	86.7	N/A	N/A
5200	76.58	PK	V	31.76	5.23	0.00	113.57	107.57	N/A	N/A
5200	66.23	AV	V	31.76	5.23	0.00	103.22	97.22	N/A	N/A
10400	34.93	PK	V	37.38	7.79	26.36	53.74	47.74	74	20.26
10400	22.51	AV	V	37.38	7.79	26.36	41.32	35.32	54	12.68
15600	36.36	PK	V	39.42	10.22	25.31	60.69	54.69	74	13.31
15600	24.53	AV	V	39.42	10.22	25.31	48.86	42.86	54	5.14
1406	30.12	PK	V	23.86	2.54	26.42	30.1	24.1	74	43.9
1406	18.72	AV	V	23.86	2.54	26.42	18.7	12.7	54	35.3
3389	34.31	PK	V	26.38	4.01	26.55	38.15	32.15	74	35.85
3389	21.33	AV	V	26.38	4.01	26.55	25.17	19.17	54	28.83
298.69	53.12	QP	H	14.09	1.04	27.54	40.71	40.71	46.00	5.29
506.27	45.15	QP	H	18.16	1.63	28.82	36.12	36.12	46.00	9.88
High Channel:5240 MHz										
5240	64.14	PK	H	31.83	5.27	0.00	101.24	95.24	N/A	N/A
5240	54.05	AV	H	31.83	5.27	0.00	91.15	85.15	N/A	N/A
5240	76.31	PK	V	31.83	5.27	0.00	113.41	107.41	N/A	N/A
5240	66.73	AV	V	31.83	5.27	0.00	103.83	97.83	N/A	N/A
5350	27.37	PK	V	32.03	5.37	0.00	64.77	58.77	74	15.23
5350	15.49	AV	V	32.03	5.37	0.00	52.89	46.89	54	7.11
10480	33.95	PK	V	37.40	7.84	26.35	52.84	46.84	74	27.16
10480	21.86	AV	V	37.40	7.84	26.35	40.75	34.75	54	19.25
15720	35.44	PK	V	39.44	10.24	25.30	59.82	53.82	74	20.18
15720	23.64	AV	V	39.44	10.24	25.30	48.02	42.02	54	11.98
1657	28.82	PK	V	24.35	2.79	26.48	29.48	23.48	74	50.52
1657	17.33	AV	V	24.35	2.79	26.48	17.99	11.99	54	42.01
3149	36.73	PK	V	25.03	3.65	26.46	38.95	32.95	74	41.05
3149	24.33	AV	V	25.03	3.65	26.46	26.55	20.55	54	33.45
298.69	52.65	QP	H	14.09	1.04	27.54	40.24	40.24	46.00	5.76
506.27	45.59	QP	H	18.16	1.63	28.82	36.56	36.56	46.00	9.44

802.11n ht40 mode

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Extrapolation Result dBμV/m	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)						
Low Channel:5190 MHz										
5190	60.47	PK	H	31.74	5.22	0.00	97.43	91.43	N/A	N/A
5190	50.83	AV	H	31.74	5.22	0.00	87.79	81.79	N/A	N/A
5190	71.80	PK	V	31.74	5.22	0.00	108.76	102.76	N/A	N/A
5190	62.36	AV	V	31.74	5.22	0.00	99.32	93.32	N/A	N/A
5150	30.14	PK	V	31.67	5.18	0.00	66.99	60.99	74	13.01
5150	17.09	AV	V	31.67	5.18	0.00	53.94	47.94	54	6.06
10380	46.69	PK	V	37.38	7.78	26.37	65.48	59.48	74	14.52
10380	33.55	AV	V	37.38	7.78	26.37	52.34	46.34	54	7.66
15570	37.02	PK	V	39.41	10.22	25.31	61.34	55.34	74	18.66
15570	23.31	AV	V	39.41	10.22	25.31	47.63	41.63	54	12.37
1385	31.92	PK	V	23.80	2.51	26.44	31.79	25.79	74	48.21
1385	18.15	AV	V	23.80	2.51	26.44	18.02	12.02	54	41.98
2864	37.76	PK	V	23.93	3.31	26.54	38.46	32.46	74	41.54
2864	24.88	AV	V	23.93	3.31	26.54	25.58	19.58	54	34.42
298.69	52.18	QP	H	14.09	1.04	27.54	39.77	39.77	46.00	6.23
506.27	46.03	QP	H	18.16	1.63	28.82	37.00	37.00	46.00	9.00
High Channel:5230 MHz										
5230	60.24	PK	H	31.81	5.26	0.00	97.31	91.31	N/A	N/A
5230	50.19	AV	H	31.81	5.26	0.00	87.26	81.26	N/A	N/A
5230	72.21	PK	V	31.81	5.26	0.00	109.28	103.28	N/A	N/A
5230	62.12	AV	V	31.81	5.26	0.00	99.19	93.19	N/A	N/A
5350	27.96	PK	V	32.03	5.37	0.00	65.36	59.36	74	14.64
5350	15.18	AV	V	32.03	5.37	0.00	52.58	46.58	54	7.42
10460	33.91	PK	V	37.39	7.83	26.36	52.77	46.77	74	27.23
10460	21.24	AV	V	37.39	7.83	26.36	40.1	34.1	54	19.9
15690	36.03	PK	V	39.44	10.24	25.30	60.41	54.41	74	19.59
15690	23.53	AV	V	39.44	10.24	25.30	47.91	41.91	54	12.09
1995	30.25	PK	V	24.89	3.05	26.82	31.37	25.37	74	48.63
1995	17.50	AV	V	24.89	3.05	26.82	18.62	12.62	54	41.38
3614	33.37	PK	V	27.46	4.35	26.58	38.6	32.6	74	41.4
3614	19.90	AV	V	27.46	4.35	26.58	25.13	19.13	54	34.87
298.69	51.22	QP	H	14.09	1.04	27.54	38.81	38.81	46.00	7.19
506.27	44.67	QP	H	18.16	1.63	28.82	35.64	35.64	46.00	10.36

802.11n ac80 mode:

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Extrapolation Result dBμV/m	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)						
Middle Channel:5210 MHz										
5210	56.55	PK	H	31.78	5.24	0.00	93.57	87.57	N/A	N/A
5210	45.50	AV	H	31.78	5.24	0.00	82.52	76.52	N/A	N/A
5210	68.47	PK	V	31.78	5.24	0.00	105.49	99.49	N/A	N/A
5210	57.33	AV	V	31.78	5.24	0.00	94.35	88.35	N/A	N/A
5150	29.19	PK	V	31.67	5.18	0.00	66.04	60.04	74	13.96
5150	16.75	AV	V	31.67	5.18	0.00	53.6	47.6	54	6.4
5350	28.06	PK	V	32.03	5.37	0.00	65.46	59.46	74	14.54
5350	14.74	AV	V	32.03	5.37	0.00	52.14	46.14	54	7.86
10420	34.57	PK	V	37.38	7.80	26.36	53.39	47.39	74	26.61
10420	21.80	AV	V	37.38	7.80	26.36	40.62	34.62	54	19.38
15630	33.89	PK	V	39.43	10.23	25.31	58.24	52.24	74	21.76
15630	21.50	AV	V	39.43	10.23	25.31	45.85	39.85	54	14.15
3190	36.40	PK	V	25.26	3.72	26.48	38.9	32.9	74	41.1
3190	23.83	AV	V	25.26	3.72	26.48	26.33	20.33	54	33.67
298.69	51.49	QP	H	14.09	1.04	27.54	39.08	39.08	46.00	6.92
506.27	44.81	QP	H	18.16	1.63	28.82	35.78	35.78	46.00	10.22

5725-5850MHz
802.11n ht20 mode:

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Extrapolation Result dBμV/m	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)						
Low Channel:5745 MHz										
5745	66.81	PK	H	32.59	5.74	0.00	105.14	99.14	N/A	N/A
5745	56.92	AV	H	32.59	5.74	0.00	95.25	89.25	N/A	N/A
5745	78.65	PK	V	32.59	5.74	0.00	116.98	110.98	N/A	N/A
5745	68.99	AV	V	32.59	5.74	0.00	107.32	101.32	N/A	N/A
5725	41.74	PK	V	32.57	5.72	0.00	80.03	74.03	122.2	48.17
5720	36.35	PK	V	32.56	5.71	0.00	74.62	68.62	110.8	42.18
5700	26.83	PK	V	32.54	5.70	0.00	65.07	59.07	105.2	46.13
5650	26.20	PK	V	32.48	5.65	0.00	64.33	58.33	68.2	9.87
11490	32.82	PK	V	37.99	8.22	26.02	53.01	47.01	74	26.99
11490	21.81	AV	V	37.99	8.22	26.02	42	36	54	18
17235	32.45	PK	V	42.98	10.82	25.99	60.26	54.26	74	19.74
17235	21.23	AV	V	42.98	10.82	25.99	49.04	43.04	54	10.96
3025	37.66	PK	V	24.34	3.47	26.42	39.05	33.05	74	40.95
3025	26.93	AV	V	24.34	3.47	26.42	28.32	22.32	54	31.68
298.69	52.18	QP	H	14.09	1.04	27.54	39.77	39.77	46.00	6.23
506.27	44.53	QP	H	18.16	1.63	28.82	35.50	35.50	46.00	10.50
Middle Channel:5785 MHz										
5785	66.62	PK	H	32.64	5.77	0.00	105.03	99.03	N/A	N/A
5785	56.67	AV	H	32.64	5.77	0.00	95.08	89.08	N/A	N/A
5785	78.73	PK	V	32.64	5.77	0.00	117.14	111.14	N/A	N/A
5785	69.29	AV	V	32.64	5.77	0.00	107.7	101.7	N/A	N/A
11570	32.82	PK	V	38.03	8.21	26.00	53.06	47.06	74	26.94
11570	21.96	AV	V	38.03	8.21	26.00	42.2	36.2	54	17.8
17355	32.35	PK	V	43.53	11.03	26.16	60.75	54.75	74	19.25
17355	20.80	AV	V	43.53	11.03	26.16	49.2	43.2	54	10.8
3104	38.53	PK	V	24.78	3.59	26.45	40.45	34.45	74	39.55
3104	27.49	AV	V	24.78	3.59	26.45	29.41	23.41	54	30.59
298.69	52.17	QP	H	14.09	1.04	27.54	39.76	39.76	46.00	6.24
506.27	43.26	QP	H	18.16	1.63	28.82	34.23	34.23	46.00	11.77
High Channel:5825 MHz										
5825	66.71	PK	H	32.69	5.81	0.00	105.21	99.21	N/A	N/A
5825	57.24	AV	H	32.69	5.81	0.00	95.74	89.74	N/A	N/A
5825	78.32	PK	V	32.69	5.81	0.00	116.82	110.82	N/A	N/A
5825	68.74	AV	V	32.69	5.81	0.00	107.24	101.24	N/A	N/A
5850	34.72	PK	V	32.72	5.83	0.00	73.27	67.27	122.2	54.93
5855	31.92	PK	V	32.73	5.83	0.00	70.48	64.48	110.8	46.32
5875	26.40	PK	V	32.75	5.85	0.00	65	59	105.2	46.2
5925	27.26	PK	V	32.81	5.89	0.00	65.96	59.96	68.2	8.24
11650	32.92	PK	V	38.06	8.20	25.98	53.2	47.2	74	26.8
11650	21.69	AV	V	38.06	8.20	25.98	41.97	35.97	54	18.03
17475	32.40	PK	V	44.09	11.23	26.33	61.39	55.39	74	18.61
17475	20.51	AV	V	44.09	11.23	26.33	49.5	43.5	54	10.5
3158	37.30	PK	V	25.08	3.67	26.47	39.58	33.58	74	40.42
3158	27.37	AV	V	25.08	3.67	26.47	29.65	23.65	54	30.35
298.69	52.44	QP	H	14.09	1.04	27.54	40.03	40.03	46.00	5.97
506.27	43.4	QP	H	18.16	1.63	28.82	34.37	34.37	46.00	11.63

802.11n ht40 mode:

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Extrapolation Result dBμV/m	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)						
Low Channel:5755 MHz										
5755	61.96	PK	H	32.61	5.74	0.00	100.31	94.31	N/A	N/A
5755	53.11	AV	H	32.61	5.74	0.00	91.46	85.46	N/A	N/A
5755	74.20	PK	V	32.61	5.74	0.00	112.55	106.55	N/A	N/A
5755	64.58	AV	V	32.61	5.74	0.00	102.93	96.93	N/A	N/A
5725	35.27	PK	V	32.57	5.72	0.00	73.56	67.56	122.2	54.64
5720	33.81	PK	V	32.56	5.71	0.00	72.08	66.08	110.8	44.72
5700	28.26	PK	V	32.54	5.70	0.00	66.5	60.5	105.2	44.7
5650	27.47	PK	V	32.48	5.65	0.00	65.6	59.6	68.2	8.6
11510	32.66	PK	V	38.00	8.22	26.02	52.86	46.86	74	27.14
11510	22.15	AV	V	38.00	8.22	26.02	42.35	36.35	54	17.65
17265	32.76	PK	V	43.12	10.88	26.04	60.72	54.72	74	19.28
17265	21.82	AV	V	43.12	10.88	26.04	49.78	43.78	54	10.22
1558	31.64	PK	V	24.19	2.71	26.39	32.15	26.15	74	47.85
1558	20.79	AV	V	24.19	2.71	26.39	21.3	15.3	54	38.7
3025	37.76	PK	V	24.34	3.47	26.42	39.15	33.15	74	40.85
3025	26.39	AV	V	24.34	3.47	26.42	27.78	21.78	54	32.22
298.69	53.28	QP	H	14.09	1.04	27.54	40.87	40.87	46.00	5.13
506.27	43.82	QP	H	18.16	1.63	28.82	34.79	34.79	46.00	11.21
High Channel:5795 MHz										
5795	62.38	PK	H	32.65	5.78	0.00	100.81	94.81	N/A	N/A
5795	53.27	AV	H	32.65	5.78	0.00	91.7	85.7	N/A	N/A
5795	74.12	PK	V	32.65	5.78	0.00	112.55	106.55	N/A	N/A
5795	64.71	AV	V	32.65	5.78	0.00	103.14	97.14	N/A	N/A
5850	27.86	PK	V	32.72	5.83	0.00	66.41	60.41	122.2	61.79
5855	27.00	PK	V	32.73	5.83	0.00	65.56	59.56	110.8	51.24
5875	26.52	PK	V	32.75	5.85	0.00	65.12	59.12	105.2	46.08
5925	26.06	PK	V	32.81	5.89	0.00	64.76	58.76	68.2	9.44
11590	32.95	PK	V	38.04	8.21	25.99	53.21	47.21	74	26.79
11590	22.33	AV	V	38.04	8.21	25.99	42.59	36.59	54	17.41
17385	32.23	PK	V	43.67	11.08	26.21	60.77	54.77	74	19.23
17385	20.98	AV	V	43.67	11.08	26.21	49.52	43.52	54	10.48
1605	31.49	PK	V	24.27	2.75	26.43	32.08	26.08	74	47.92
1605	20.16	AV	V	24.27	2.75	26.43	20.75	14.75	54	39.25
3158	37.88	PK	V	25.08	3.67	26.47	40.16	34.16	74	39.84
3158	27.70	AV	V	25.08	3.67	26.47	29.98	23.98	54	30.02
298.69	52.81	QP	H	14.09	1.04	27.54	40.40	40.40	46.00	5.60
506.27	44.26	QP	H	18.16	1.63	28.82	35.23	35.23	46.00	10.77

802.11n ac80 mode:

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Extrapolation Result dBμV/m	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)						
Middle Channel:5775 MHz										
5775	63.11	PK	H	32.63	5.76	0.00	101.5	95.5	N/A	N/A
5775	52.72	AV	H	32.63	5.76	0.00	91.11	85.11	N/A	N/A
5775	73.39	PK	V	32.63	5.76	0.00	111.78	105.78	N/A	N/A
5775	63.27	AV	V	32.63	5.76	0.00	101.66	95.66	N/A	N/A
5725	42.61	PK	V	32.57	5.72	0.00	80.9	74.9	122.2	47.3
5720	40.55	PK	V	32.56	5.71	0.00	78.82	72.82	110.8	37.98
5700	36.88	PK	V	32.54	5.70	0.00	75.12	69.12	105.2	36.08
5650	28.75	PK	V	32.48	5.65	0.00	66.88	60.88	68.2	7.32
5850	40.16	PK	V	32.72	5.83	0.00	78.71	72.71	122.2	49.49
5855	40.38	PK	V	32.73	5.83	0.00	78.94	72.94	110.8	37.86
5875	32.82	PK	V	32.75	5.85	0.00	71.42	65.42	105.2	39.78
5925	29.20	PK	V	32.81	5.89	0.00	67.9	61.9	68.2	6.3
11550	32.57	PK	V	38.02	8.21	26.01	52.79	46.79	74	27.21
11550	22.38	AV	V	38.02	8.21	26.01	42.6	36.6	54	17.4
17325	32.74	PK	V	43.40	10.98	26.12	61	55	74	19
17325	21.37	AV	V	43.40	10.98	26.12	49.63	43.63	54	10.37
1655	31.91	PK	V	24.35	2.79	26.48	32.57	26.57	74	47.43
1655	20.60	AV	V	24.35	2.79	26.48	21.26	15.26	54	38.74
298.69	52.34	QP	H	14.09	1.04	27.54	39.93	39.93	46.00	6.07
506.27	44.7	QP	H	18.16	1.63	28.82	35.67	35.67	46.00	10.33

MIMO mode (Chain 0 & Chain 1 & Chain 2):

5150-5250MHz
802.11n ht20 mode

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Extrapolation Result dBμV/m	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)						
Low Channel:5180 MHz										
5180	62.18	PK	H	31.72	5.21	0.00	99.11	93.11	N/A	N/A
5180	51.27	AV	H	31.72	5.21	0.00	88.2	82.2	N/A	N/A
5180	74.49	PK	V	31.72	5.21	0.00	111.42	105.42	N/A	N/A
5180	62.67	AV	V	31.72	5.21	0.00	99.6	93.6	N/A	N/A
5150	28.02	PK	V	31.67	5.18	0.00	64.87	58.87	74	15.13
5150	15.18	AV	V	31.67	5.18	0.00	52.03	46.03	54	7.97
10360	34.48	PK	V	37.37	7.76	26.37	53.24	47.24	74	26.76
10360	21.94	AV	V	37.37	7.76	26.37	40.7	34.7	54	19.3
15540	36.63	PK	V	39.41	10.22	25.32	60.94	54.94	74	19.06
15540	24.64	AV	V	39.41	10.22	25.32	48.95	42.95	54	11.05
1396	29.82	PK	V	23.83	2.53	26.43	29.75	23.75	74	50.25
1396	18.81	AV	V	23.83	2.53	26.43	18.74	12.74	54	41.26
2768	35.76	PK	V	23.74	3.23	26.63	36.1	30.1	74	43.9
2768	21.93	AV	V	23.74	3.23	26.63	22.27	16.27	54	37.73
298.69	52.34	QP	H	14.09	1.04	27.54	39.93	39.93	46.00	6.07
506.27	44.7	QP	H	18.16	1.63	28.82	35.67	35.67	46.00	10.33
Middle Channel:5200 MHz										
5200	62.38	PK	H	31.76	5.23	0.00	99.37	93.37	N/A	N/A
5200	51.49	AV	H	31.76	5.23	0.00	88.48	82.48	N/A	N/A
5200	74.27	PK	V	31.76	5.23	0.00	111.26	105.26	N/A	N/A
5200	63.11	AV	V	31.76	5.23	0.00	100.1	94.1	N/A	N/A
10400	34.30	PK	V	37.38	7.79	26.36	53.11	47.11	74	20.89
10400	22.56	AV	V	37.38	7.79	26.36	41.37	35.37	54	12.63
15600	36.72	PK	V	39.42	10.22	25.31	61.05	55.05	74	12.95
15600	24.30	AV	V	39.42	10.22	25.31	48.63	42.63	54	5.37
1422	29.56	PK	V	23.90	2.56	26.40	29.62	23.62	74	44.38
1422	18.28	AV	V	23.90	2.56	26.40	18.34	12.34	54	35.66
3190	36.60	PK	V	25.26	3.72	26.48	39.1	33.1	74	34.9
3190	23.66	AV	V	25.26	3.72	26.48	26.16	20.16	54	27.84
298.69	52.61	QP	H	14.09	1.04	27.54	40.20	40.20	46.00	5.80
506.27	44.84	QP	H	18.16	1.63	28.82	35.81	35.81	46.00	10.19
High Channel:5240 MHz										
5240	61.90	PK	H	31.83	5.27	0.00	99	93	N/A	N/A
5240	51.08	AV	H	31.83	5.27	0.00	88.18	82.18	N/A	N/A
5240	73.82	PK	V	31.83	5.27	0.00	110.92	104.92	N/A	N/A
5240	62.22	AV	V	31.83	5.27	0.00	99.32	93.32	N/A	N/A
5350	27.49	PK	V	32.03	5.37	0.00	64.89	58.89	74	15.11
5350	14.84	AV	V	32.03	5.37	0.00	52.24	46.24	54	7.76
10480	34.41	PK	V	37.40	7.84	26.35	53.3	47.3	74	26.7
10480	21.18	AV	V	37.40	7.84	26.35	40.07	34.07	54	19.93
15720	36.16	PK	V	39.44	10.24	25.30	60.54	54.54	74	19.46
15720	23.22	AV	V	39.44	10.24	25.30	47.6	41.6	54	12.4
2005	29.49	PK	V	24.88	3.05	26.82	30.6	24.6	74	49.4
2005	17.79	AV	V	24.88	3.05	26.82	18.9	12.9	54	41.1
3527	33.14	PK	V	27.11	4.22	26.59	37.88	31.88	74	42.12
3527	20.44	AV	V	27.11	4.22	26.59	25.18	19.18	54	34.82
298.69	53.45	QP	H	14.09	1.04	27.54	41.04	41.04	46.00	4.96
506.27	45.26	QP	H	18.16	1.63	28.82	36.23	36.23	46.00	9.77

802.11n ht40 mode

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Extrapolation Result dBμV/m	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)						
Low Channel:5190 MHz										
5190	57.79	PK	H	31.74	5.22	0.00	94.75	88.75	N/A	N/A
5190	47.18	AV	H	31.74	5.22	0.00	84.14	78.14	N/A	N/A
5190	70.05	PK	V	31.74	5.22	0.00	107.01	101.01	N/A	N/A
5190	59.58	AV	V	31.74	5.22	0.00	96.54	90.54	N/A	N/A
5150	27.92	PK	V	31.67	5.18	0.00	64.77	58.77	74	15.23
5150	15.52	AV	V	31.67	5.18	0.00	52.37	46.37	54	7.63
10380	48.58	PK	V	37.38	7.78	26.37	67.37	61.37	74	12.63
10380	35.21	AV	V	37.38	7.78	26.37	54	48	54	6
15570	36.53	PK	V	39.41	10.22	25.31	60.85	54.85	74	19.15
15570	23.74	AV	V	39.41	10.22	25.31	48.06	42.06	54	11.94
1756	29.53	PK	V	24.51	2.86	26.58	30.32	24.32	74	49.68
1756	17.30	AV	V	24.51	2.86	26.58	18.09	12.09	54	41.91
3005	37.69	PK	V	24.23	3.44	26.41	38.95	32.95	74	41.05
3005	24.88	AV	V	24.23	3.44	26.41	26.14	20.14	54	33.86
298.69	52.98	QP	H	14.09	1.04	27.54	40.57	40.57	46.00	5.43
506.27	45.7	QP	H	18.16	1.63	28.82	36.67	36.67	46.00	9.33
High Channel:5230 MHz										
5230	57.69	PK	H	31.81	5.26	0.00	94.76	88.76	N/A	N/A
5230	47.37	AV	H	31.81	5.26	0.00	84.44	78.44	N/A	N/A
5230	69.48	PK	V	31.81	5.26	0.00	106.55	100.55	N/A	N/A
5230	59.61	AV	V	31.81	5.26	0.00	96.68	90.68	N/A	N/A
5350	27.64	PK	V	32.03	5.37	0.00	65.04	59.04	74	14.96
5350	14.78	AV	V	32.03	5.37	0.00	52.18	46.18	54	7.82
10460	46.64	PK	V	37.39	7.83	26.36	65.5	59.5	74	14.5
10460	34.08	AV	V	37.39	7.83	26.36	52.94	46.94	54	7.06
15690	35.62	PK	V	39.44	10.24	25.30	60	54	74	20
15690	23.70	AV	V	39.44	10.24	25.30	48.08	42.08	54	11.92
2689	34.06	PK	V	23.58	3.16	26.71	34.09	28.09	74	45.91
2689	22.09	AV	V	23.58	3.16	26.71	22.12	16.12	54	37.88
3326	35.04	PK	V	26.03	3.92	26.53	38.46	32.46	74	41.54
3326	21.86	AV	V	26.03	3.92	26.53	25.28	19.28	54	34.72
298.69	52.51	QP	H	14.09	1.04	27.54	40.10	40.10	46.00	5.90
506.27	46.14	QP	H	18.16	1.63	28.82	37.11	37.11	46.00	8.89

802.11n ac80 mode

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Extrapolation Result dBμV/m	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)						
Middle Channel:5210 MHz										
5210	57.30	PK	H	31.78	5.24	0.00	94.32	88.32	N/A	N/A
5210	45.49	AV	H	31.78	5.24	0.00	82.51	76.51	N/A	N/A
5210	67.82	PK	V	31.78	5.24	0.00	104.84	98.84	N/A	N/A
5210	56.31	AV	V	31.78	5.24	0.00	93.33	87.33	N/A	N/A
5150	28.15	PK	V	31.67	5.18	0.00	65	59	74	15
5150	16.53	AV	V	31.67	5.18	0.00	53.38	47.38	54	6.62
5350	27.30	PK	V	32.03	5.37	0.00	64.7	58.7	74	15.3
5350	15.25	AV	V	32.03	5.37	0.00	52.65	46.65	54	7.35
10420	45.22	PK	V	37.38	7.80	26.36	64.04	58.04	74	15.96
10420	33.26	AV	V	37.38	7.80	26.36	52.08	46.08	54	7.92
15630	37.22	PK	V	39.43	10.23	25.31	61.57	55.57	74	18.43
15630	24.32	AV	V	39.43	10.23	25.31	48.67	42.67	54	11.33
3648	35.72	PK	V	27.59	4.40	26.58	41.13	35.13	74	38.87
3648	23.14	AV	V	27.59	4.40	26.58	28.55	22.55	54	31.45
298.69	52.01	QP	H	14.09	1.04	27.54	39.60	39.60	46.00	6.40
506.27	44.59	QP	H	18.16	1.63	28.82	35.56	35.56	46.00	10.44

5725-5850MHz
802.11n ht20 mode:

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Extrapolation Result dBμV/m	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)						
Low Channel:5745 MHz										
5745	70.67	PK	H	32.59	5.74	0.00	109	103	N/A	N/A
5745	60.89	AV	H	32.59	5.74	0.00	99.22	93.22	N/A	N/A
5745	80.05	PK	V	32.59	5.74	0.00	118.38	112.38	N/A	N/A
5745	69.33	AV	V	32.59	5.74	0.00	107.66	101.66	N/A	N/A
5725	44.93	PK	V	32.57	5.72	0.00	83.22	77.22	122.2	44.98
5720	38.93	PK	V	32.56	5.71	0.00	77.2	71.2	110.8	39.6
5700	28.05	PK	V	32.54	5.70	0.00	66.29	60.29	105.2	44.91
5650	27.77	PK	V	32.48	5.65	0.00	65.9	59.9	68.2	8.3
11490	32.59	PK	V	37.99	8.22	26.02	52.78	46.78	74	27.22
11490	21.84	AV	V	37.99	8.22	26.02	42.03	36.03	54	17.97
17235	32.45	PK	V	42.98	10.82	25.99	60.26	54.26	74	19.74
17235	21.62	AV	V	42.98	10.82	25.99	49.43	43.43	54	10.57
3215	38.25	PK	V	25.40	3.75	26.49	40.91	34.91	74	39.09
3215	26.80	AV	V	25.40	3.75	26.49	29.46	23.46	54	30.54
298.69	52.26	QP	H	14.09	1.04	27.54	39.85	39.85	46.00	6.15
506.27	43.07	QP	H	18.16	1.63	28.82	34.04	34.04	46.00	11.96
Middle Channel:5785 MHz										
5785	70.79	PK	H	32.64	5.77	0.00	109.2	103.2	N/A	N/A
5785	61.04	AV	H	32.64	5.77	0.00	99.45	93.45	N/A	N/A
5785	80.35	PK	V	32.64	5.77	0.00	118.76	112.76	N/A	N/A
5785	68.77	AV	V	32.64	5.77	0.00	107.18	101.18	N/A	N/A
11570	32.21	PK	V	38.03	8.21	26.00	52.45	46.45	74	27.55
11570	21.73	AV	V	38.03	8.21	26.00	41.97	35.97	54	18.03
17355	32.45	PK	V	43.53	11.03	26.16	60.85	54.85	74	19.15
17355	20.96	AV	V	43.53	11.03	26.16	49.36	43.36	54	10.64
3284	37.12	PK	V	25.79	3.86	26.51	40.26	34.26	74	39.74
3284	26.74	AV	V	25.79	3.86	26.51	29.88	23.88	54	30.12
298.69	52.53	QP	H	14.09	1.04	27.54	40.12	40.12	46.00	5.88
506.27	43.21	QP	H	18.16	1.63	28.82	34.18	34.18	46.00	11.82
High Channel:5825 MHz										
5825	69.61	PK	H	32.69	5.81	0.00	108.11	102.11	N/A	N/A
5825	58.96	AV	H	32.69	5.81	0.00	97.46	91.46	N/A	N/A
5825	80.84	PK	V	32.69	5.81	0.00	119.34	113.34	N/A	N/A
5825	69.91	AV	V	32.69	5.81	0.00	108.41	102.41	N/A	N/A
5850	38.98	PK	V	32.72	5.83	0.00	77.53	71.53	122.2	50.67
5855	34.21	PK	V	32.73	5.83	0.00	72.77	66.77	110.8	44.03
5875	28.62	PK	V	32.75	5.85	0.00	67.22	61.22	105.2	43.98
5925	27.11	PK	V	32.81	5.89	0.00	65.81	59.81	68.2	8.39
11650	32.99	PK	V	38.06	8.20	25.98	53.27	47.27	74	26.73
11650	22.15	AV	V	38.06	8.20	25.98	42.43	36.43	54	17.57
17475	31.41	PK	V	44.09	11.23	26.33	60.4	54.4	74	19.6
17475	20.58	AV	V	44.09	11.23	26.33	49.57	43.57	54	10.43
3358	36.92	PK	V	26.20	3.97	26.54	40.55	34.55	74	39.45
3358	24.67	AV	V	26.20	3.97	26.54	28.3	22.3	54	31.7
298.69	53.37	QP	H	14.09	1.04	27.54	40.96	40.96	46.00	5.04
506.27	43.63	QP	H	18.16	1.63	28.82	34.60	34.60	46.00	11.40

802.11n ht40 mode:

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Extrapolation Result dBμV/m	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)						
Low Channel:5755 MHz										
5755	64.60	PK	H	32.61	5.74	0.00	102.95	96.95	N/A	N/A
5755	54.52	AV	H	32.61	5.74	0.00	92.87	86.87	N/A	N/A
5755	76.92	PK	V	32.61	5.74	0.00	115.27	109.27	N/A	N/A
5755	67.37	AV	V	32.61	5.74	0.00	105.72	99.72	N/A	N/A
5725	46.01	PK	V	32.57	5.72	0.00	84.3	78.3	122.2	43.9
5720	42.70	PK	V	32.56	5.71	0.00	80.97	74.97	110.8	35.83
5700	31.59	PK	V	32.54	5.70	0.00	69.83	63.83	105.2	41.37
5650	28.01	PK	V	32.48	5.65	0.00	66.14	60.14	68.2	8.06
11510	32.25	PK	V	38.00	8.22	26.02	52.45	46.45	74	27.55
11510	22.00	AV	V	38.00	8.22	26.02	42.2	36.2	54	17.8
17265	32.20	PK	V	43.12	10.88	26.04	60.16	54.16	74	19.84
17265	21.41	AV	V	43.12	10.88	26.04	49.37	43.37	54	10.63
3215	38.59	PK	V	25.40	3.75	26.49	41.25	35.25	74	38.75
3215	26.64	AV	V	25.40	3.75	26.49	29.3	23.3	54	30.7
1667	32.17	PK	V	24.37	2.80	26.49	32.85	26.85	74	47.15
1667	20.28	AV	V	24.37	2.80	26.49	20.96	14.96	54	39.04
298.69	52.9	QP	H	14.09	1.04	27.54	40.49	40.49	46.00	5.51
506.27	44.07	QP	H	18.16	1.63	28.82	35.04	35.04	46.00	10.96
High Channel:5795 MHz										
5795	66.22	PK	H	32.65	5.78	0.00	104.65	98.65	N/A	N/A
5795	56.31	AV	H	32.65	5.78	0.00	94.74	88.74	N/A	N/A
5795	77.26	PK	V	32.65	5.78	0.00	115.69	109.69	N/A	N/A
5795	67.43	AV	V	32.65	5.78	0.00	105.86	99.86	N/A	N/A
5850	32.60	PK	V	32.72	5.83	0.00	71.15	65.15	122.2	57.05
5855	30.78	PK	V	32.73	5.83	0.00	69.34	63.34	110.8	47.46
5875	28.24	PK	V	32.75	5.85	0.00	66.84	60.84	105.2	44.36
5925	27.18	PK	V	32.81	5.89	0.00	65.88	59.88	68.2	8.32
11590	32.94	PK	V	38.04	8.21	25.99	53.2	47.2	74	26.8
11590	21.75	AV	V	38.04	8.21	25.99	42.01	36.01	54	17.99
17385	32.37	PK	V	43.67	11.08	26.21	60.91	54.91	74	19.09
17385	21.03	AV	V	43.67	11.08	26.21	49.57	43.57	54	10.43
3358	36.14	PK	V	26.20	3.97	26.54	39.77	33.77	74	40.23
3358	25.06	AV	V	26.20	3.97	26.54	28.69	22.69	54	31.31
1689	32.00	PK	V	24.40	2.81	26.52	32.69	26.69	74	47.31
1689	20.76	AV	V	24.40	2.81	26.52	21.45	15.45	54	38.55
298.69	52.43	QP	H	14.09	1.04	27.54	40.02	40.02	46.00	5.98
506.27	44.51	QP	H	18.16	1.63	28.82	35.48	35.48	46.00	10.52

802.11n ac80 mode:

Frequency (MHz)	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Extrapolation Result dBμV/m	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)						
Middle Channel:5775 MHz										
5775	63.10	PK	H	32.63	5.76	0.00	101.49	95.49	N/A	N/A
5775	53.00	AV	H	32.63	5.76	0.00	91.39	85.39	N/A	N/A
5775	75.81	PK	V	32.63	5.76	0.00	114.2	108.2	N/A	N/A
5775	63.96	AV	V	32.63	5.76	0.00	102.35	96.35	N/A	N/A
5725	40.19	PK	V	32.57	5.72	0.00	78.48	72.48	122.2	49.72
5720	39.74	PK	V	32.56	5.71	0.00	78.01	72.01	110.8	38.79
5700	34.65	PK	V	32.54	5.70	0.00	72.89	66.89	105.2	38.31
5650	29.24	PK	V	32.48	5.65	0.00	67.37	61.37	68.2	6.83
5850	39.91	PK	V	32.72	5.83	0.00	78.46	72.46	122.2	49.74
5855	36.56	PK	V	32.73	5.83	0.00	75.12	69.12	110.8	41.68
5875	33.08	PK	V	32.75	5.85	0.00	71.68	65.68	105.2	39.52
5925	27.87	PK	V	32.81	5.89	0.00	66.57	60.57	68.2	7.63
11550	32.54	PK	V	38.02	8.21	26.01	52.76	46.76	74	27.24
11550	21.86	AV	V	38.02	8.21	26.01	42.08	36.08	54	17.92
17325	32.30	PK	V	43.40	10.98	26.12	60.56	54.56	74	19.44
17325	21.22	AV	V	43.40	10.98	26.12	49.48	43.48	54	10.52
3369	36.55	PK	V	26.27	3.98	26.54	40.26	34.26	74	39.74
3369	25.13	AV	V	26.27	3.98	26.54	28.84	22.84	54	31.16
298.69	52.22	QP	H	14.09	1.04	27.54	39.81	39.81	46.00	6.19
506.27	43.02	QP	H	18.16	1.63	28.82	33.99	33.99	46.00	12.01

2.4GHz band and 5 GHz band transmit simultaneously

(2.4GHz 3x3 N20 2437MHz + 5.8GHz 2x2 AC80 5775MHz was the worst, Test at 3m distance):

Frequency	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
(MHz)	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)					
11550	33.29	PK	H	38.02	8.21	26.01	53.51	74.00	20.49
11550	22.18	AV	H	38.02	8.21	26.01	42.40	54.00	11.60
17325	30.74	PK	H	43.40	10.98	26.12	59.00	74.00	15.00
17325	21.69	AV	H	43.40	10.98	26.12	49.95	54.00	4.05
4874	34.59	PK	V	31.00	5.09	26.87	43.81	74.00	30.19
4874	22.15	AV	V	31.00	5.09	26.87	31.37	54.00	22.63
7311	32.47	PK	V	34.92	6.21	26.40	47.20	74.00	26.80
7311	19.82	AV	V	34.92	6.21	26.40	34.55	54.00	19.45
3254	43.26	PK	H	25.62	3.81	26.50	46.19	74.00	27.81
3254	34.77	AV	H	25.62	3.81	26.50	37.70	54.00	16.30
506.27	46.69	QP	V	18.16	1.63	28.82	37.66	46.00	8.34

FCC §15.407(b)–OUT- OF-BAND EMISSIONS

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:

(i) All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

(ii) Devices certified before March 2, 2017 with antenna gain greater than 10 dBi may demonstrate compliance with the emission limits in §15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease by March 2, 2018. Devices certified before March 2, 2018 with antenna gain of 10 dBi or less may demonstrate compliance with the emission limits in §15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease before March 2, 2020.

(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 v01r03

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ26	831929/005	2016-09-21	2017-09-20
N/A	RF Cable	N/A	N/A	Each Time	/

*** Statement of Traceability:** BACL (Chengdu) attested that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data

Environmental Conditions

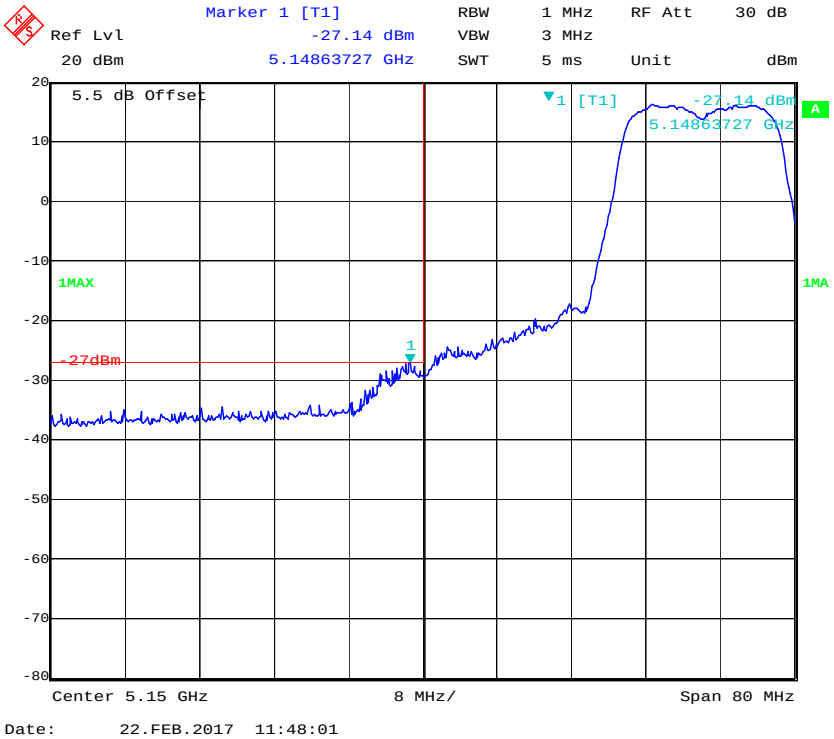
Temperature:	19~21 °C
Relative Humidity:	56~58 %
ATM Pressure:	95.2~96 kPa

The testing was performed by Tom Tang from 2017-02-22 to 2017-03-31.

Test Result: Pass.
Please refer to the following tables and plots.

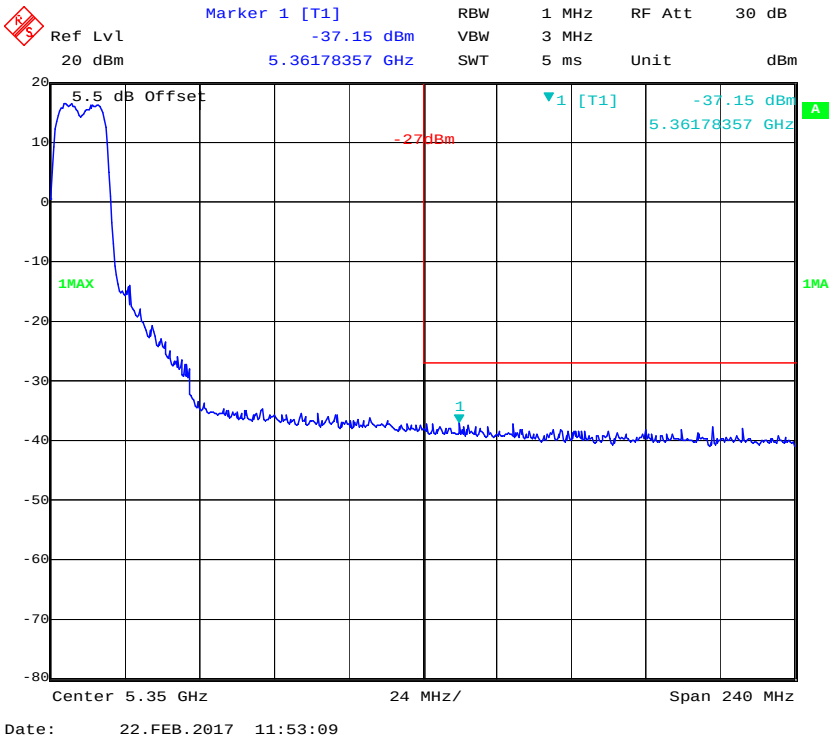
1TX
5150-5250MHz(the atenna gain was offset in the display)
Chain 0:

802.11a Low Channel



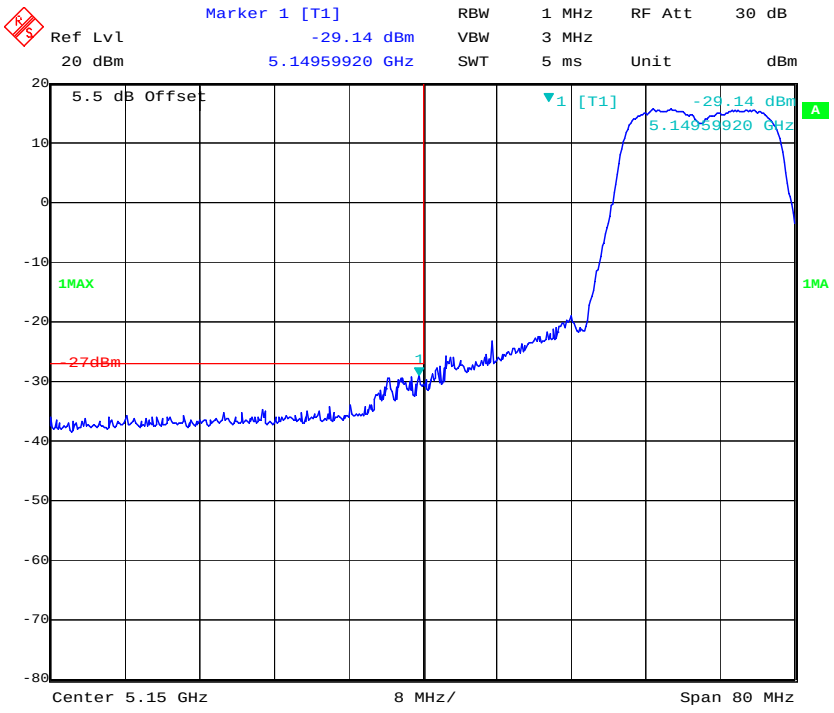
Date: 22.FEB.2017 11:48:01

802.11a High Channel



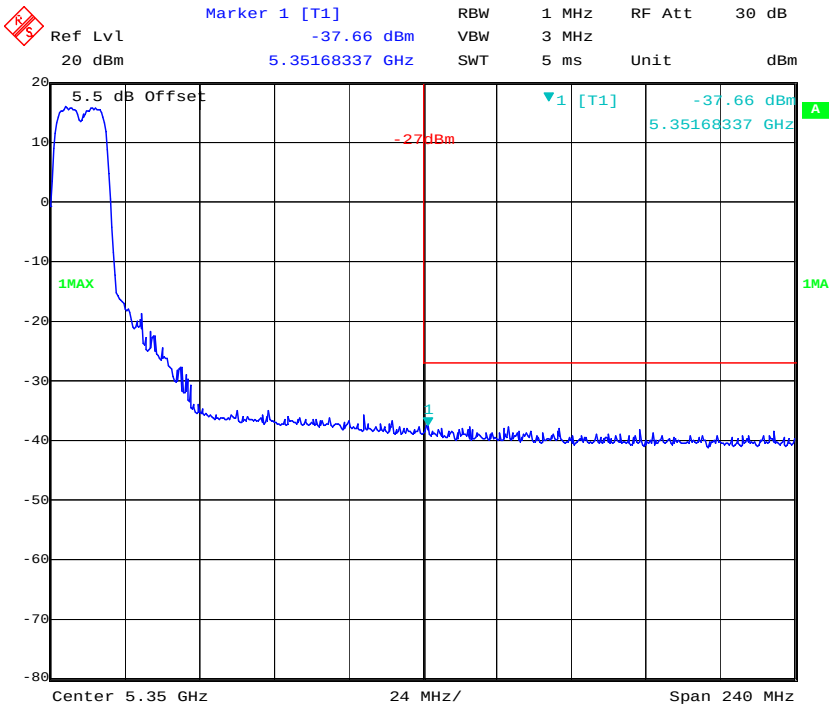
Date: 22.FEB.2017 11:53:09

802.11n ht20 Low Channel



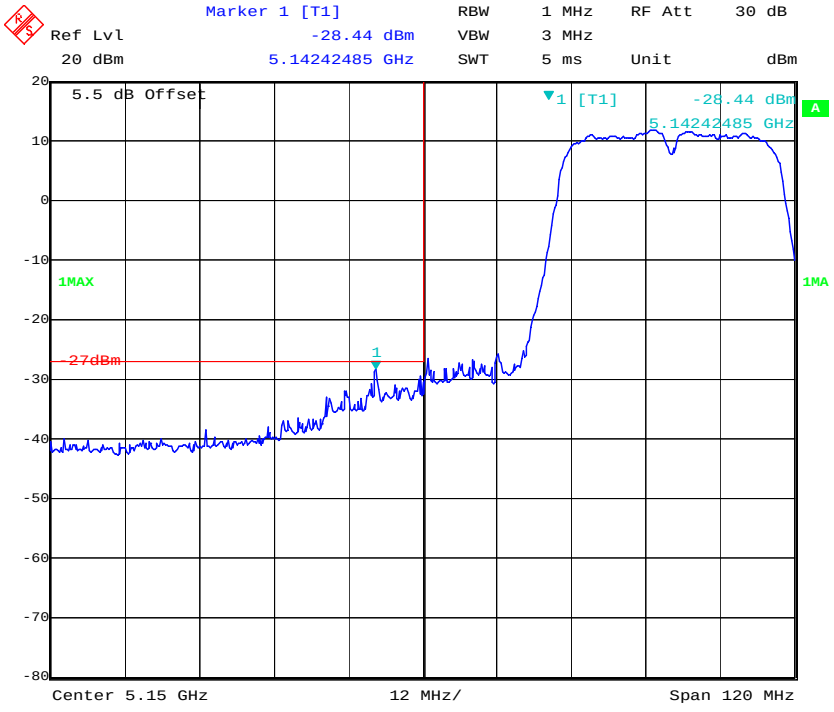
Date: 22.FEB.2017 11:35:52

802.11n ht20 High Channel



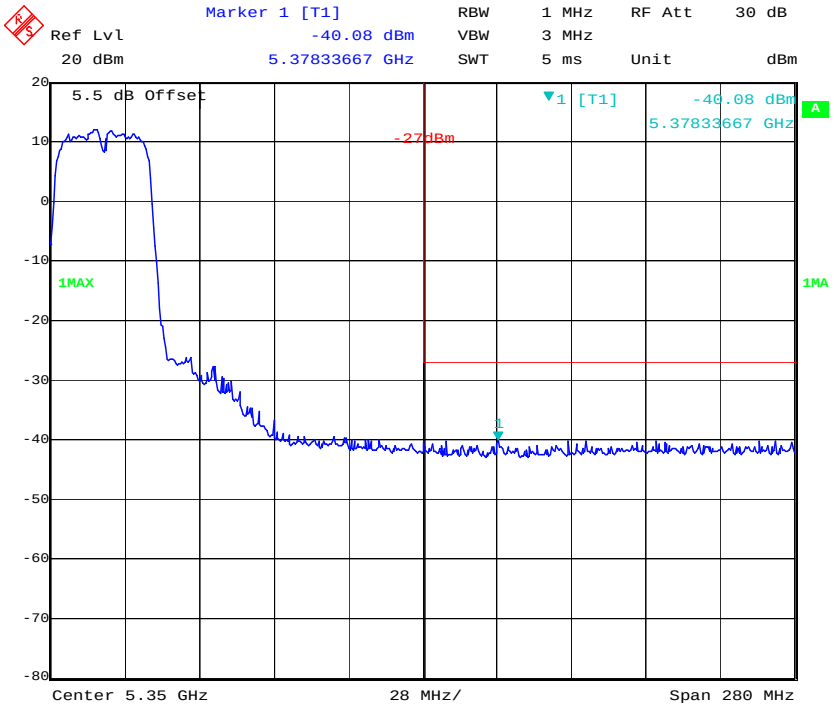
Date: 22.FEB.2017 11:42:14

802.11n ht40 Low Channel



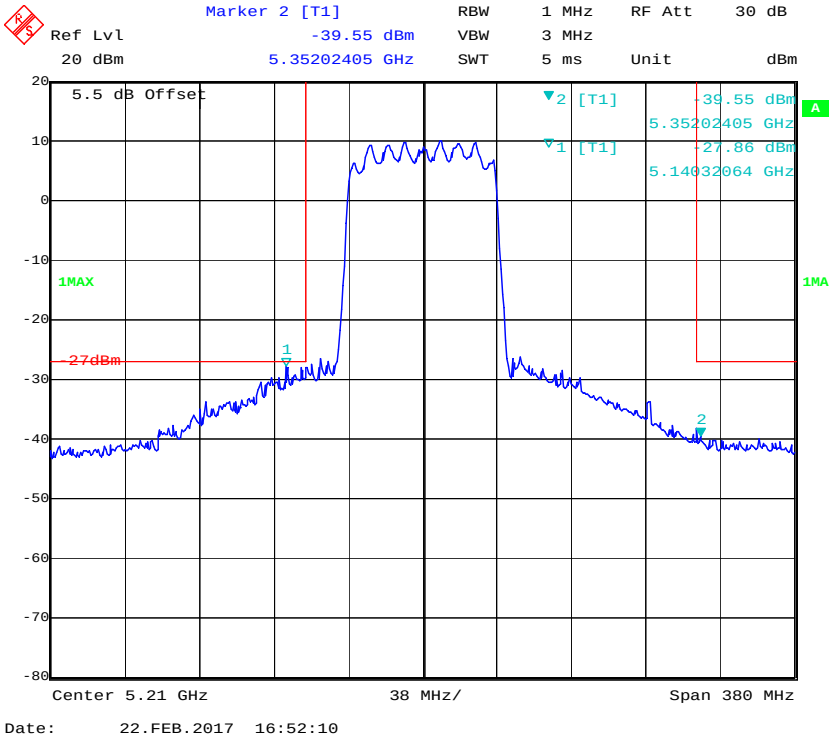
Date: 22.FEB.2017 11:25:38

8802.11n ht40 High Channel



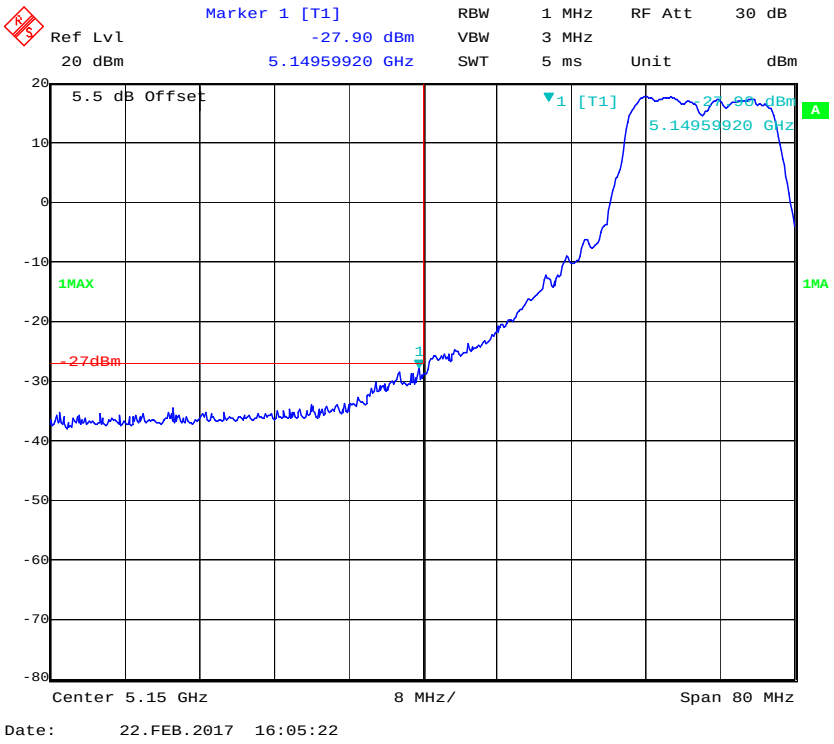
Date: 22.FEB.2017 11:30:19

802.11n ac80 Middle Channel



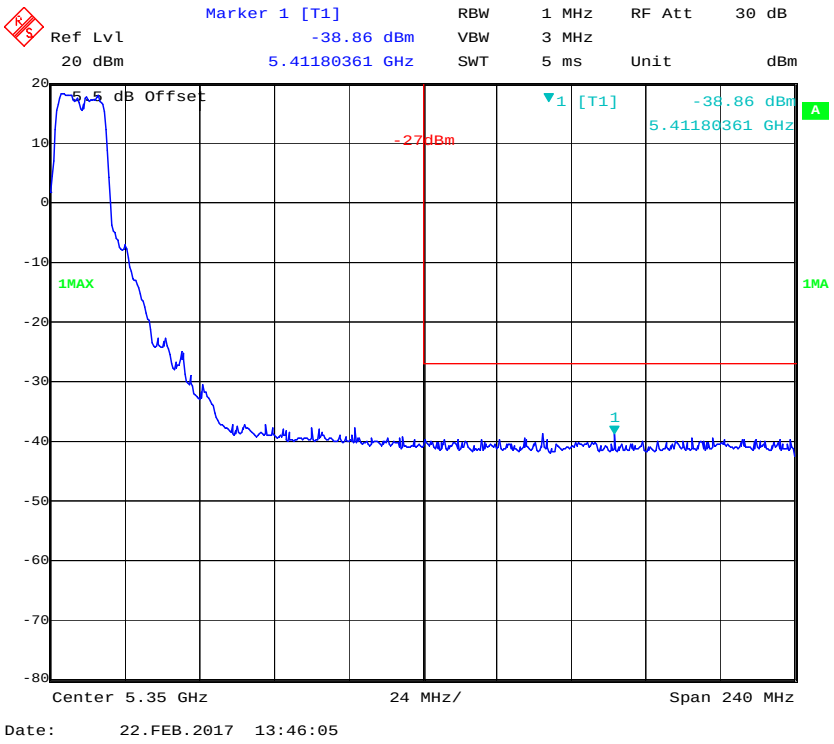
Chain 1:

802.11a Low Channel



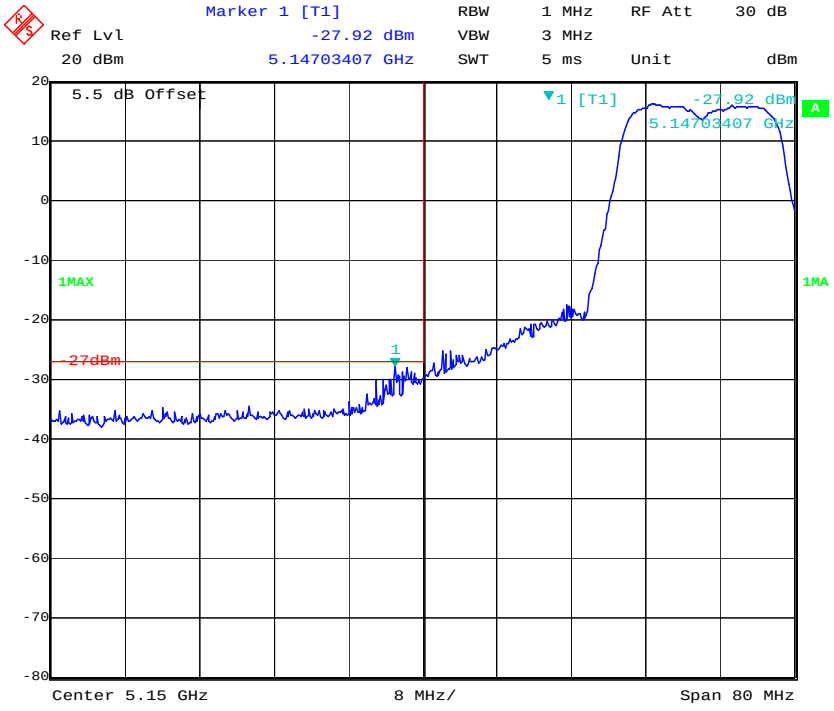
Date: 22.FEB.2017 16:05:22

802.11a High Channel



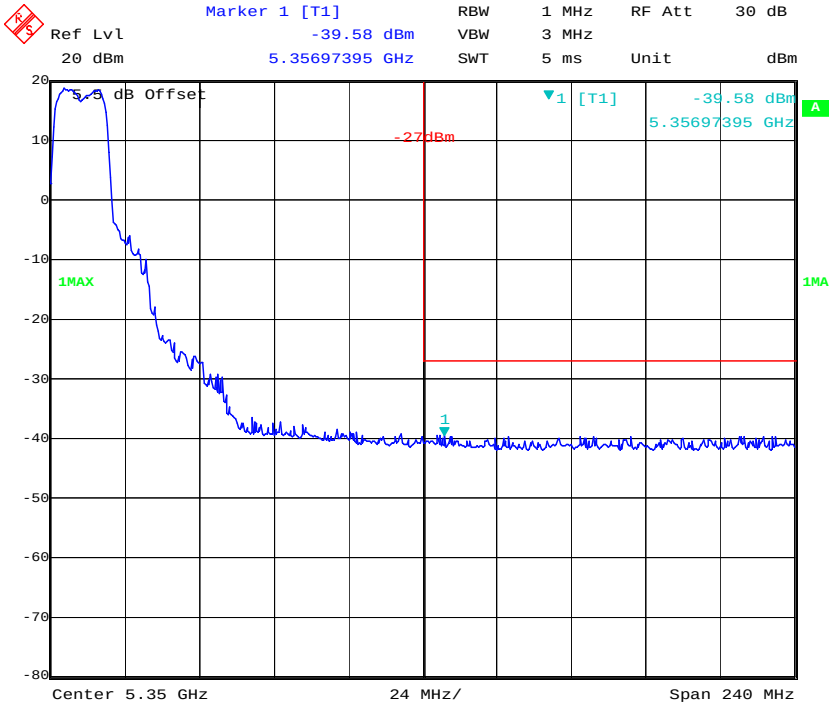
Date: 22.FEB.2017 13:46:05

802.11n ht20 Low Channel



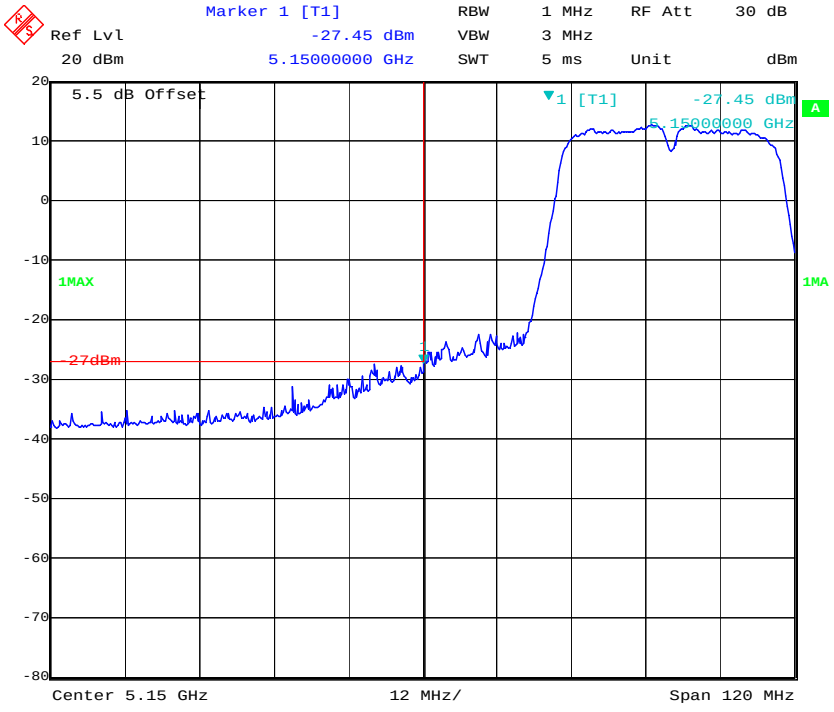
Date: 22.FEB.2017 14:00:53

802.11n ht20 High Channel



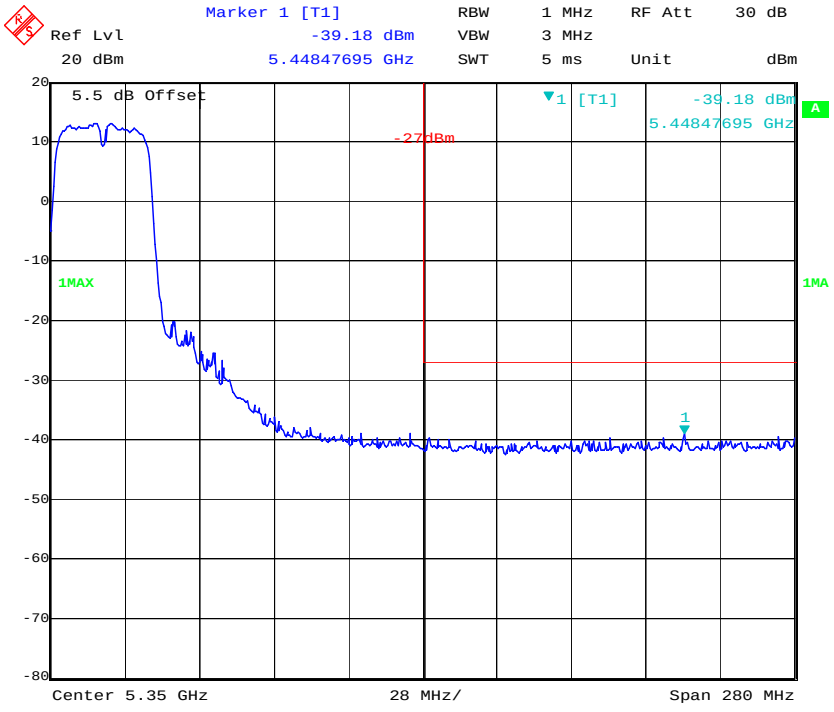
Date: 22.FEB.2017 14:09:23

802.11n ht40 Low Channel



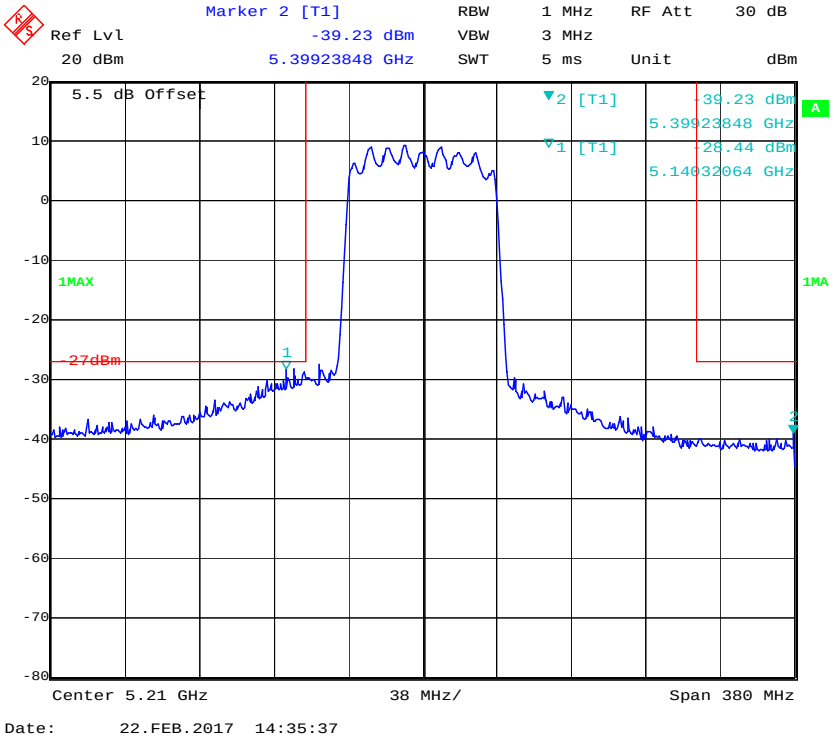
Date: 22.FEB.2017 14:19:57

8802.11n ht40 High Channel



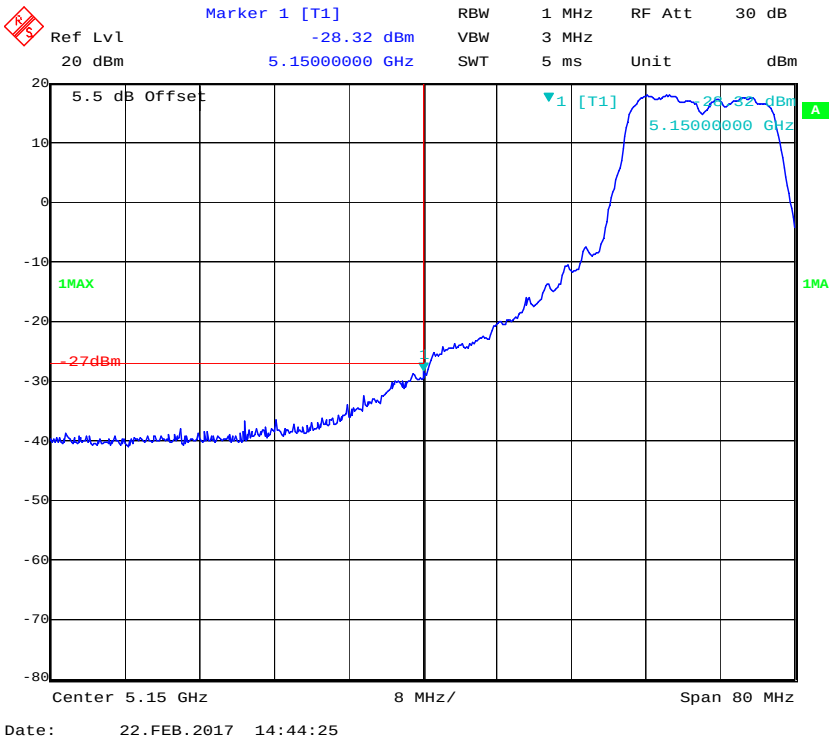
Date: 22.FEB.2017 14:24:40

802.11n ac80 Middle Channel



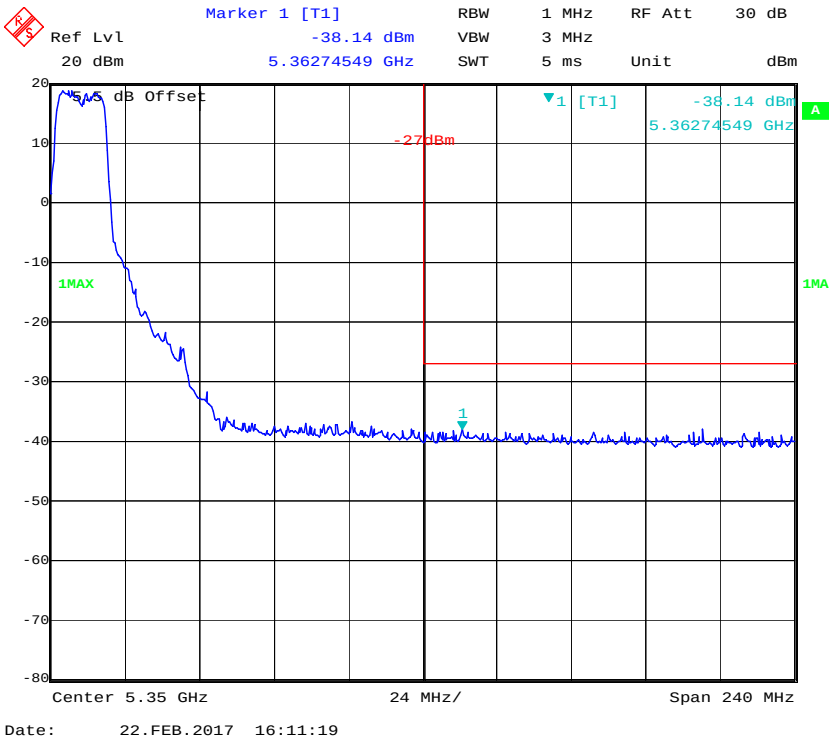
Chain 2:

802.11a Low Channel



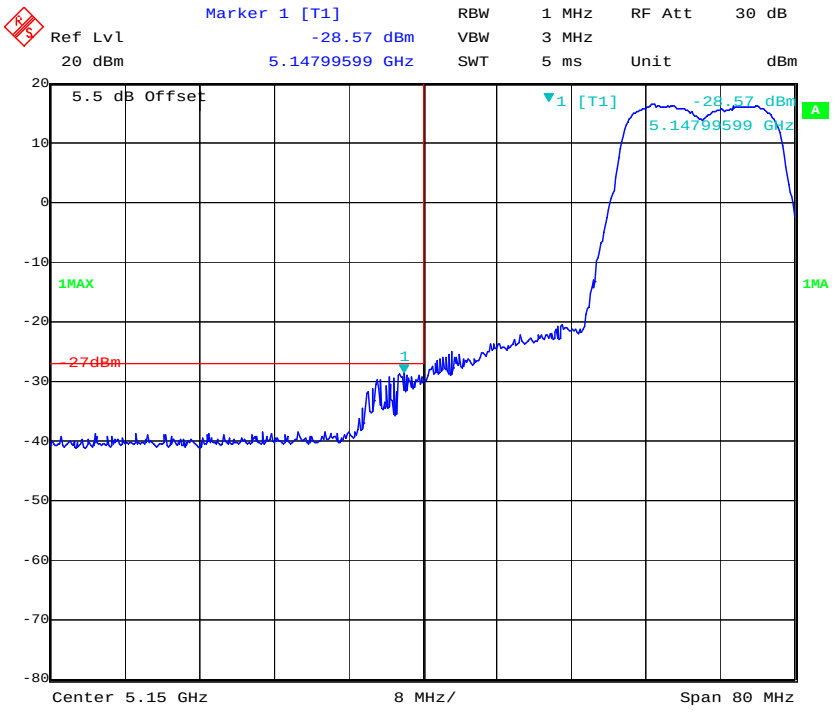
Date: 22.FEB.2017 14:44:25

802.11a High Channel



Date: 22.FEB.2017 16:11:19

802.11n ht20 Low Channel



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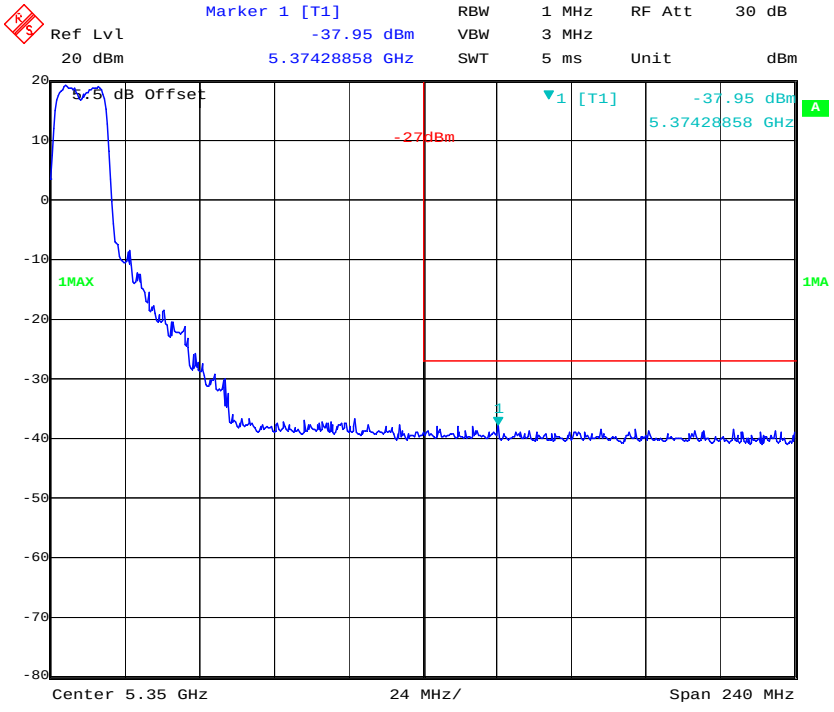
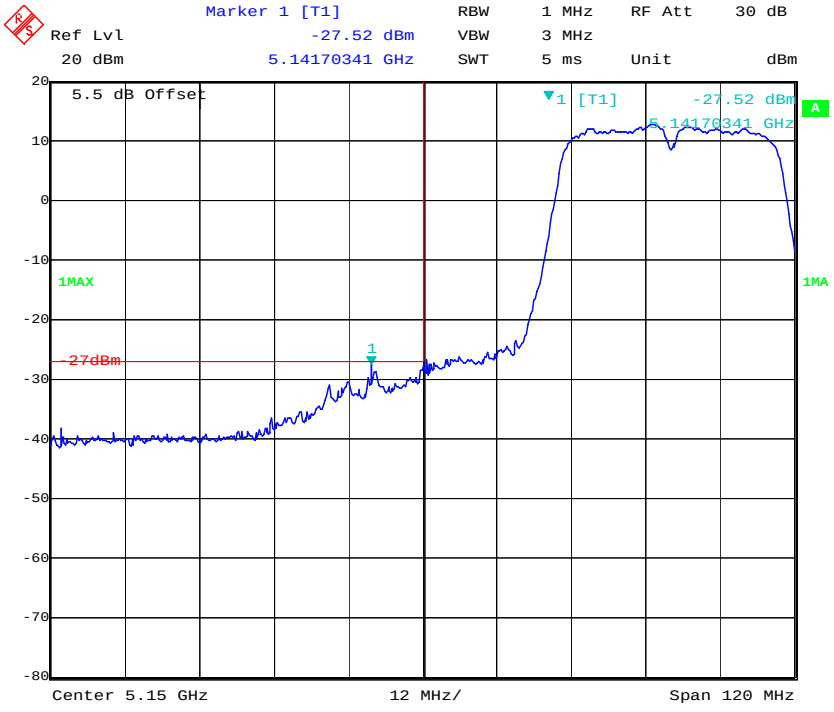
802.11n ht20 High Channel



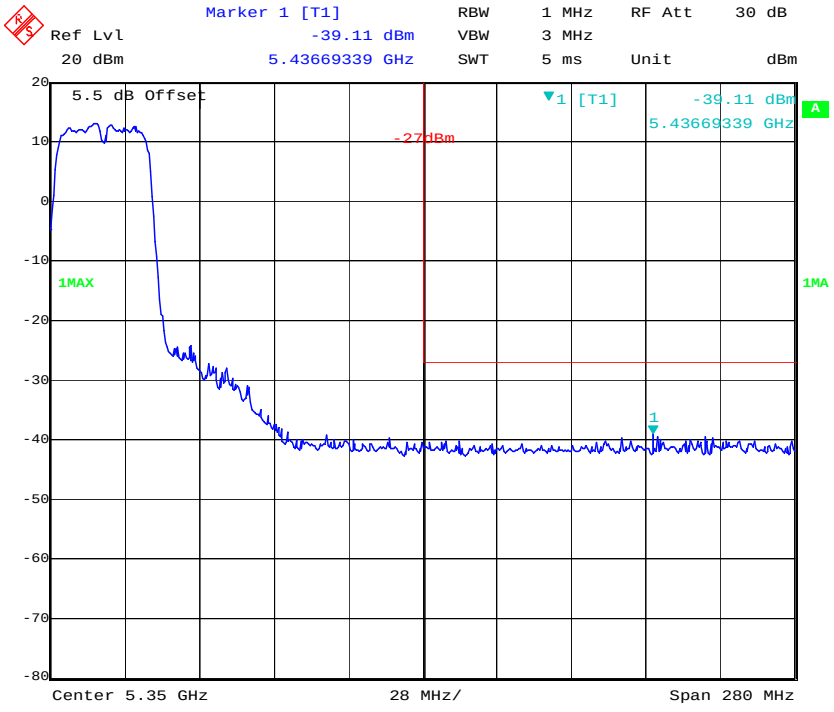
Date: 22.FEB.2017 16:24:18

802.11n ht40 Low Channel



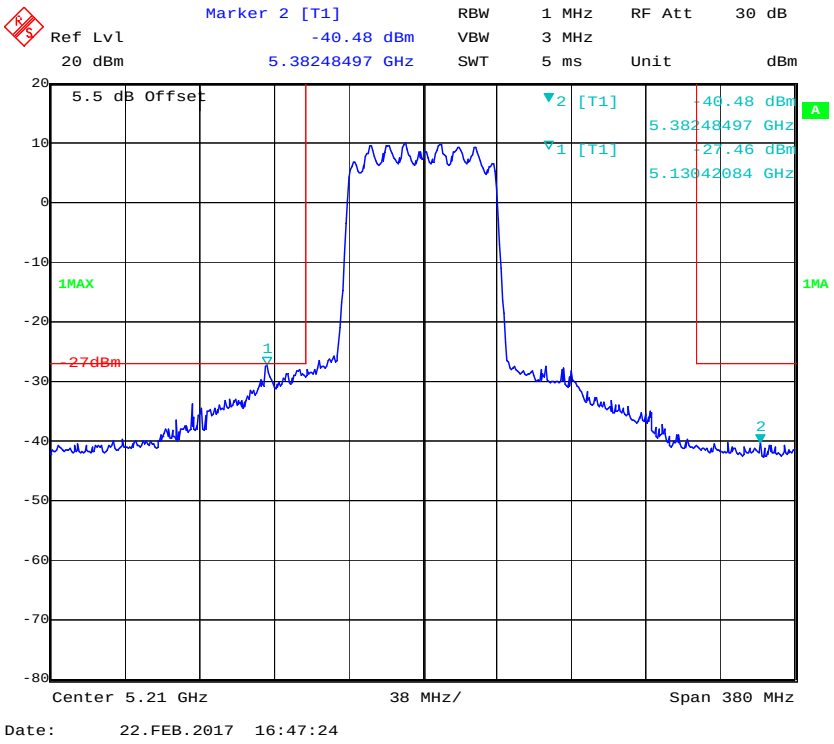
Date: 22.FEB.2017 16:33:58

8802.11n ht40 High Channel



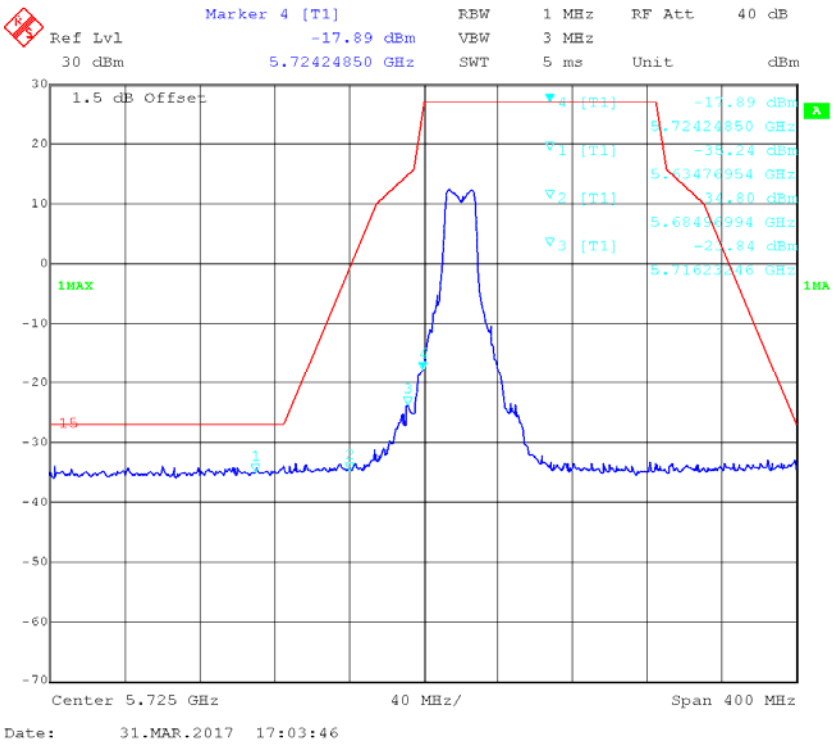
Date: 22.FEB.2017 16:38:54

802.11n ac80 Middle Channel

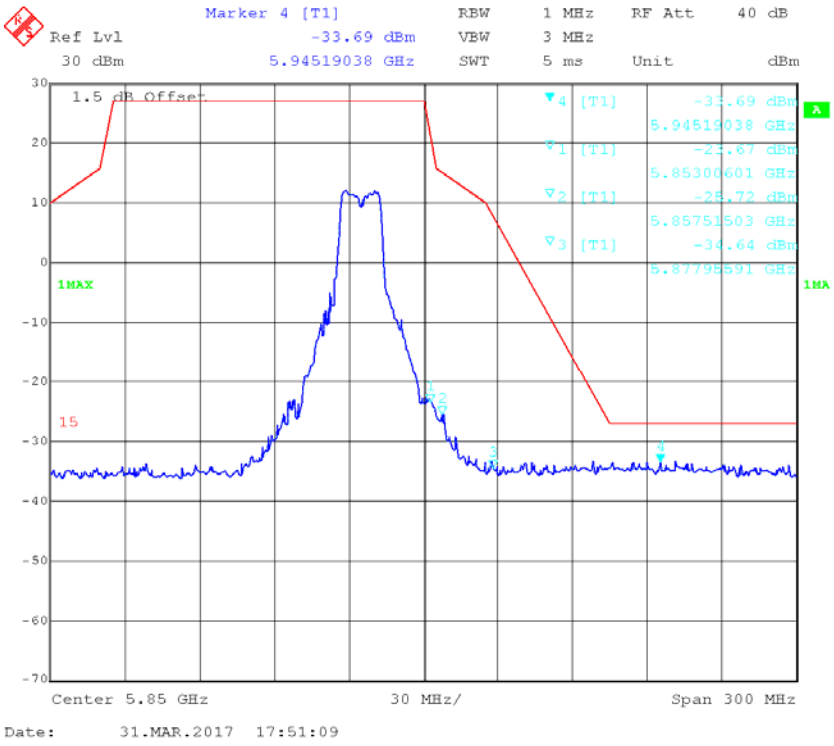


5725-5850MHz(all emissions under limit 4dB, so the EIRP meet the requirement)
Chain 0:

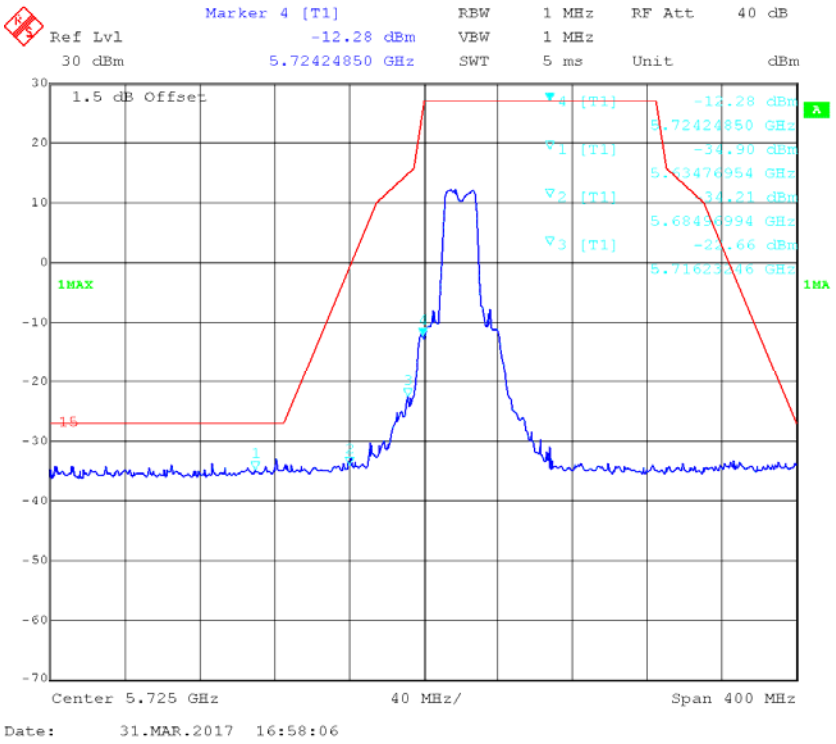
802.11a Low Channel



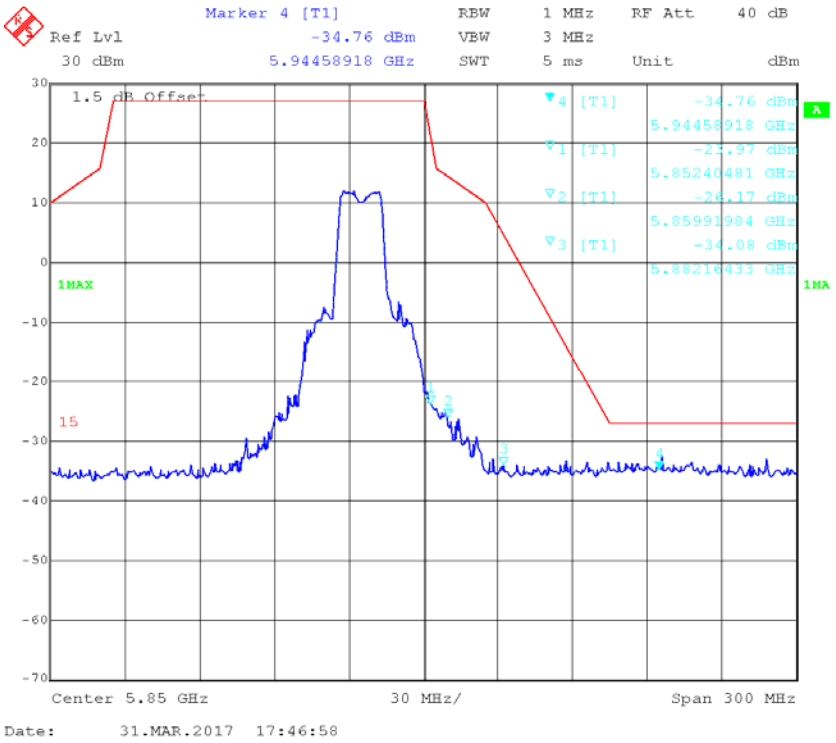
802.11a High Channel



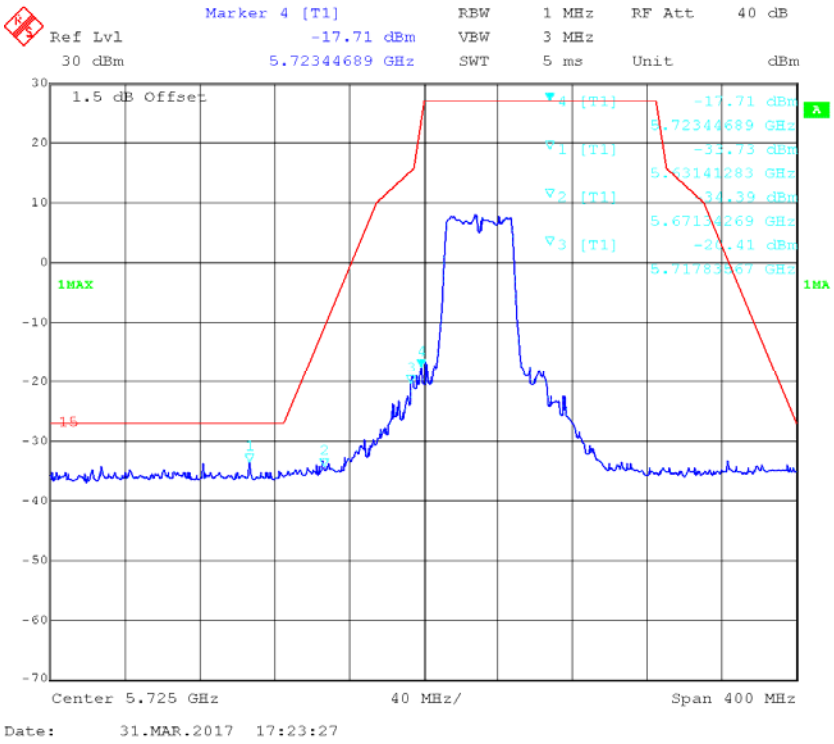
802.11n ht20 Low Channel



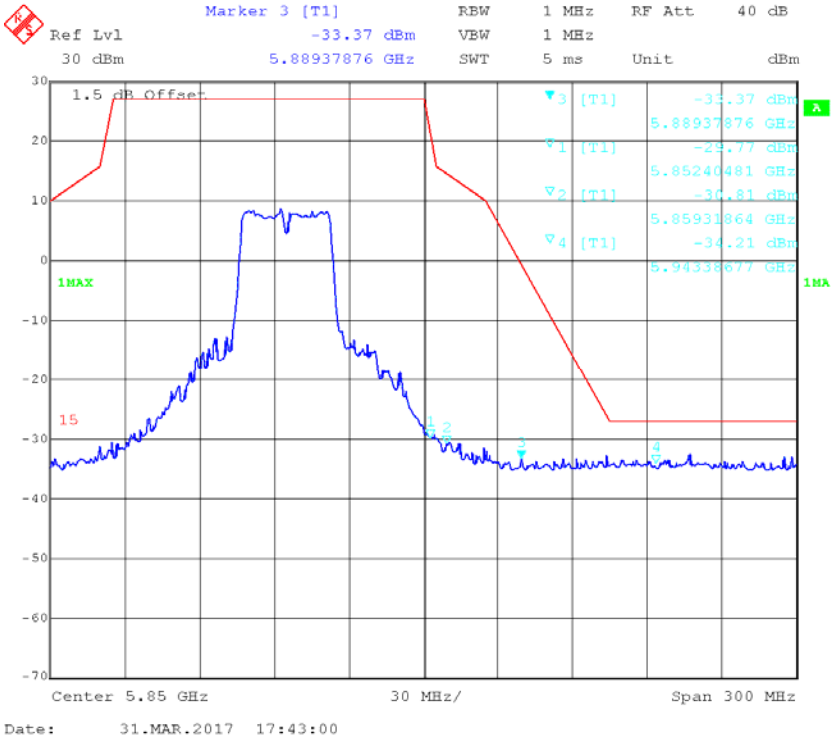
802.11n ht20 High Channel



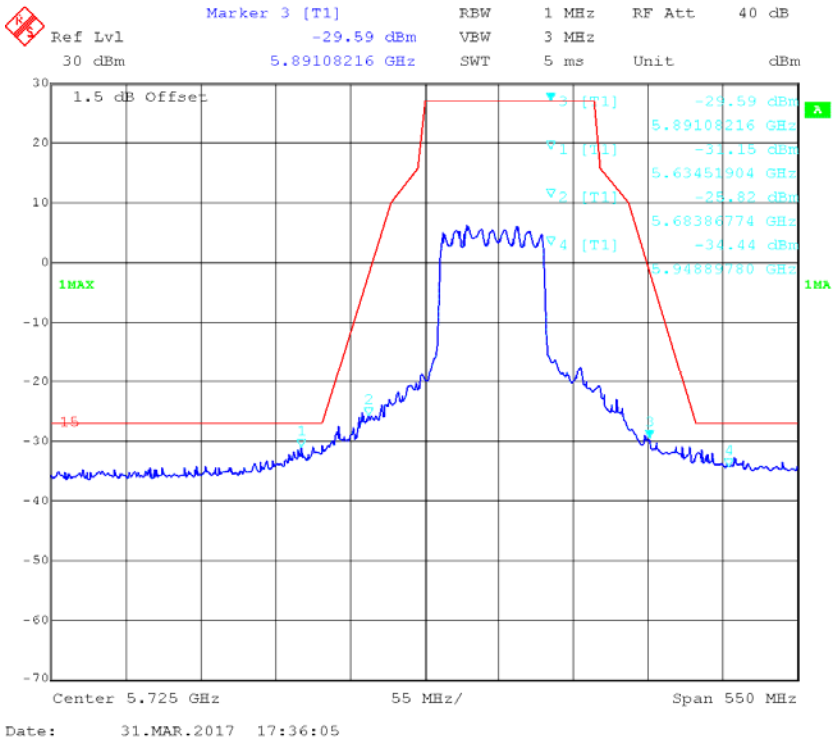
802.11n ht40 Low Channel



802.11n ht40 High Channel

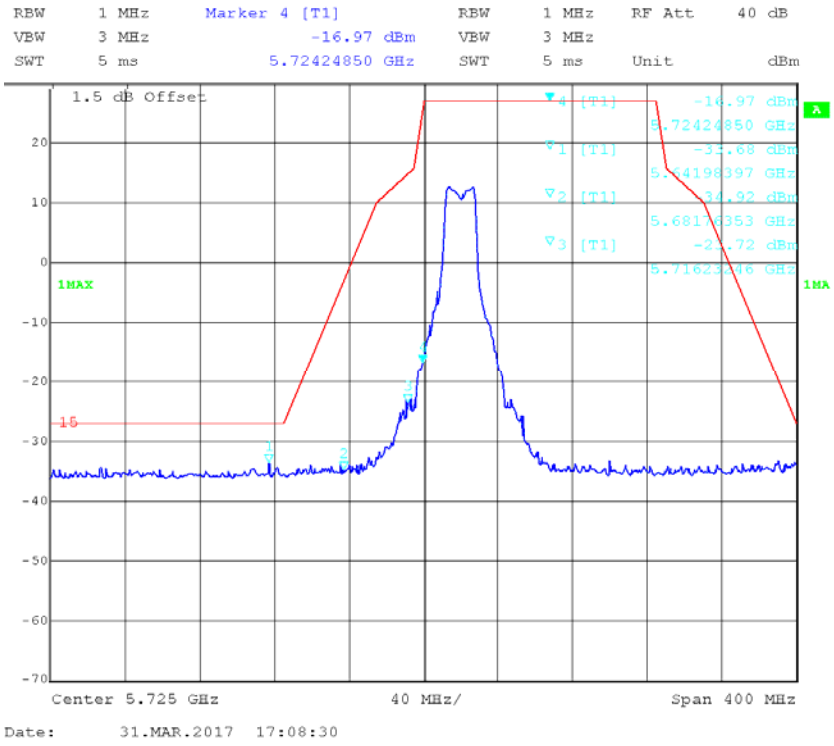


802.11 ac80 Low Channel

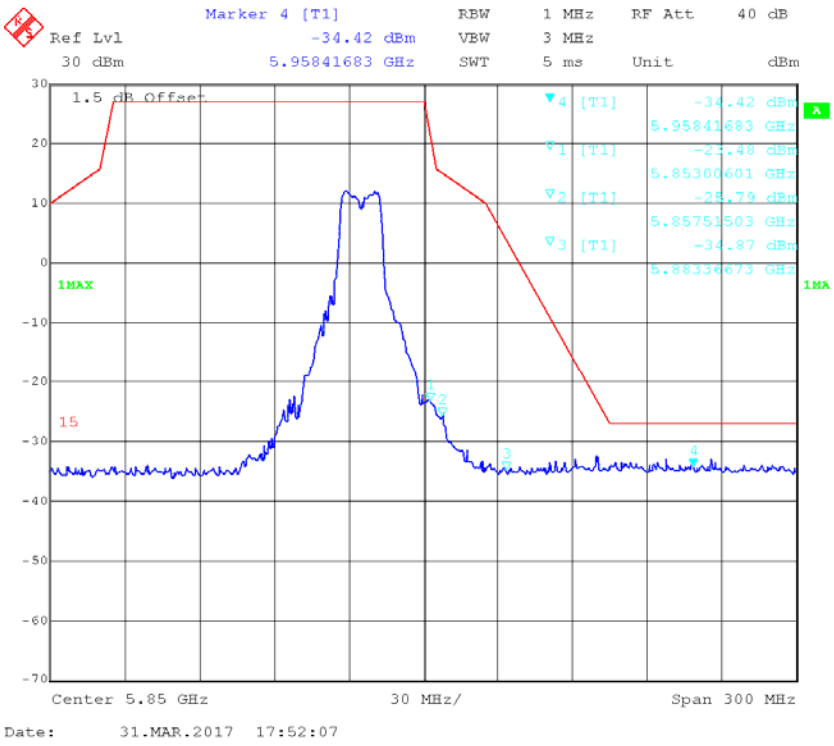


Chain 1:

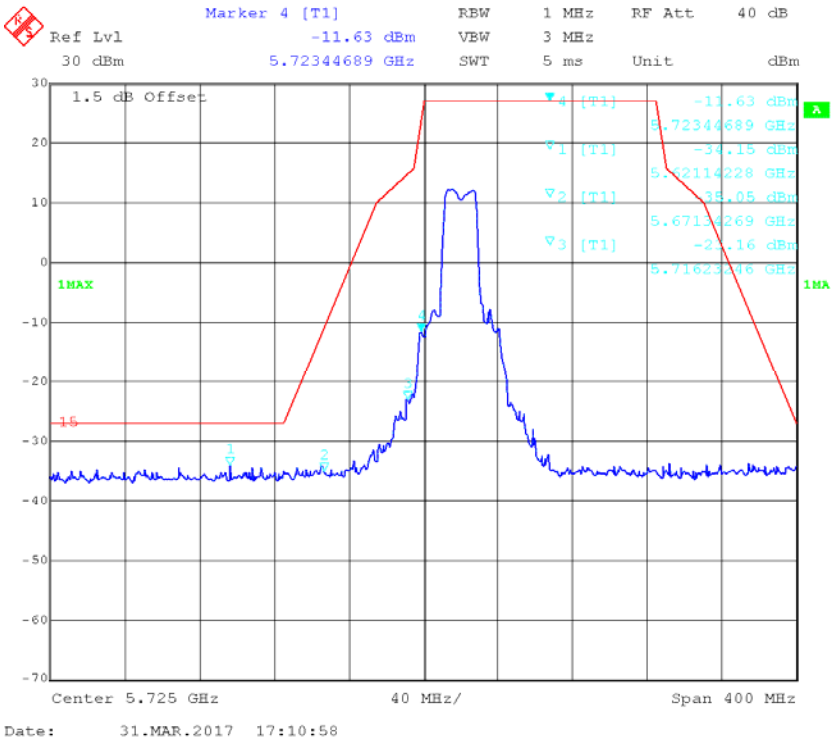
802.11a Low Channel



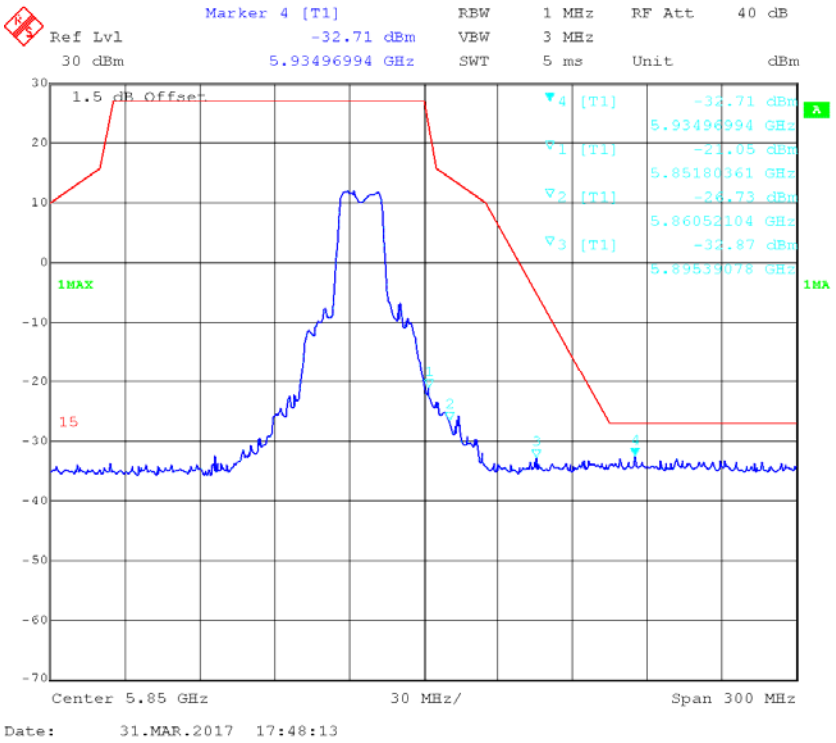
802.11a High Channel



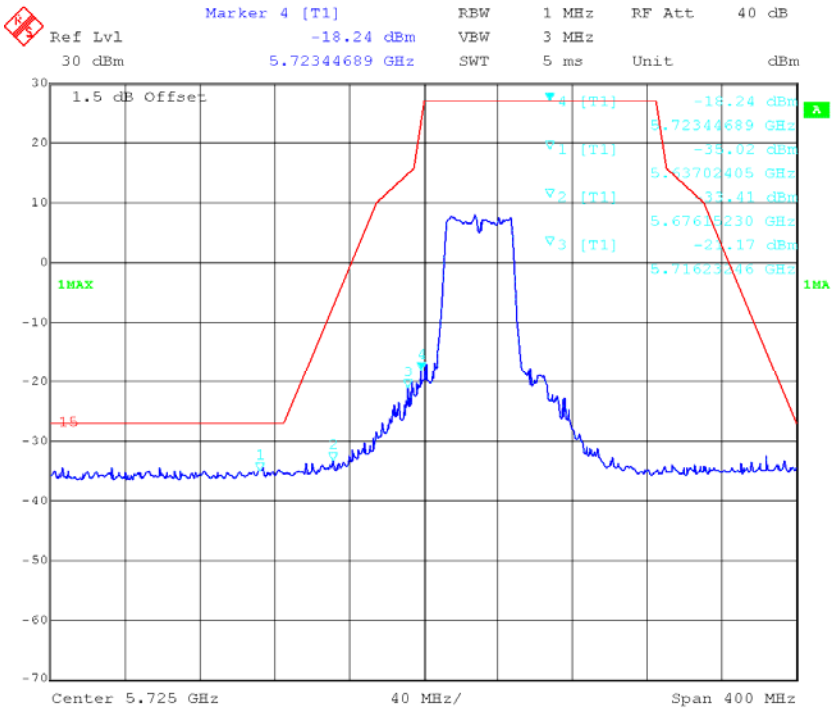
802.11n ht20 Low Channel



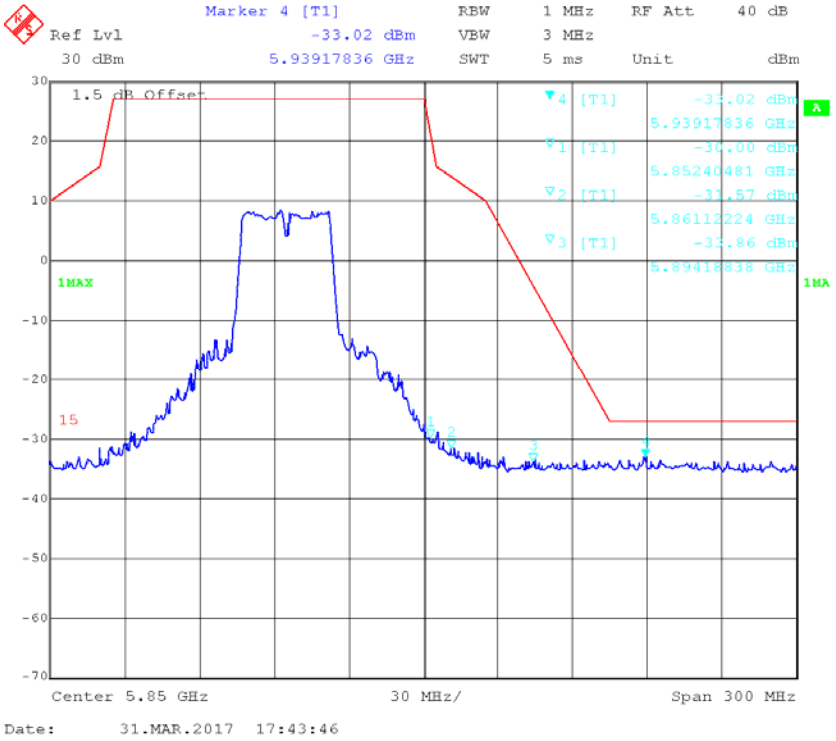
802.11n ht20 High Channel



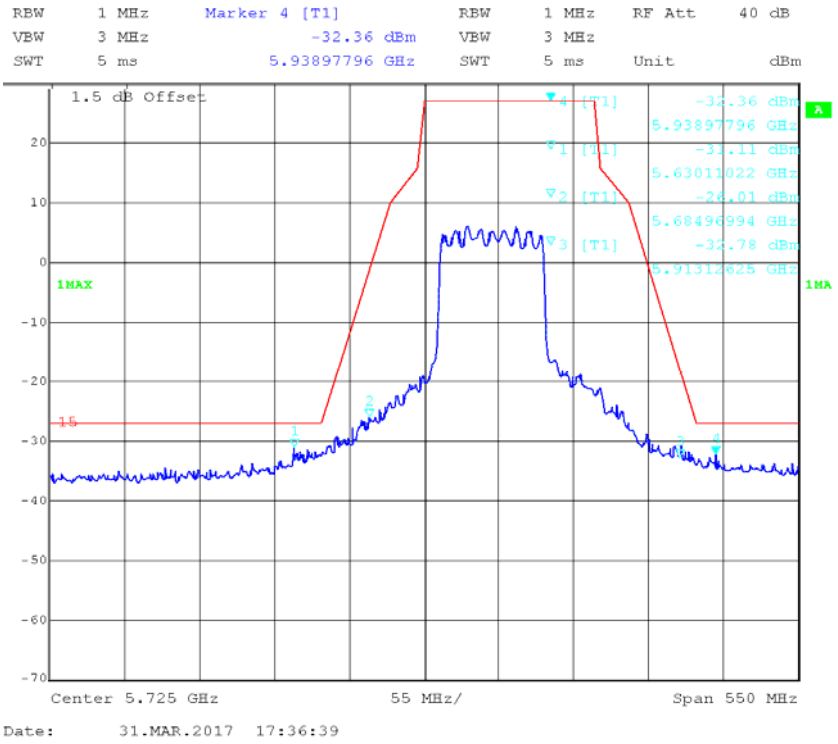
802.11n ht40 Low Channel



802.11n ht40 High Channel

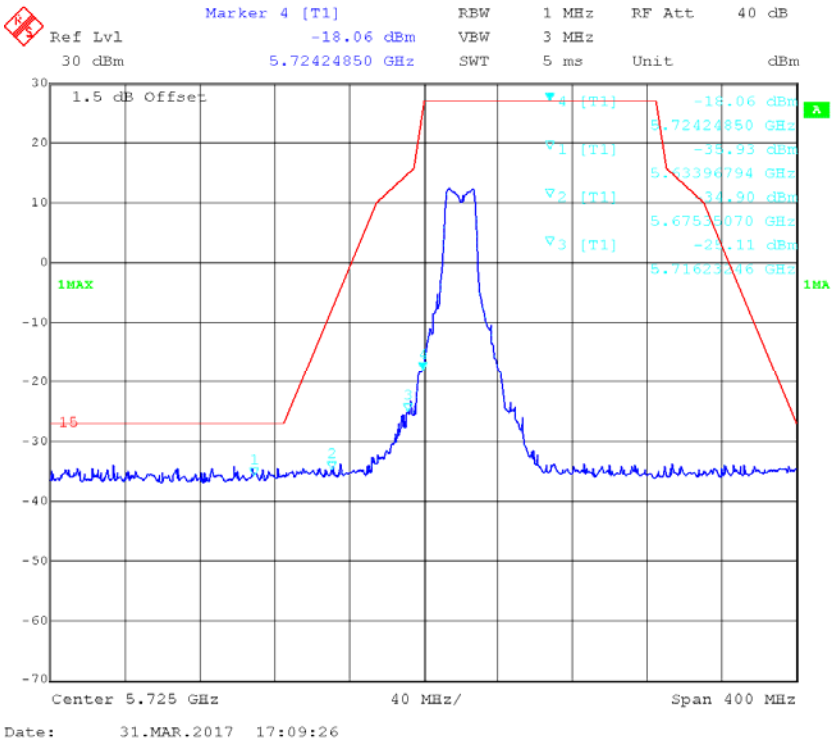


802.11 ac80 Low Channel

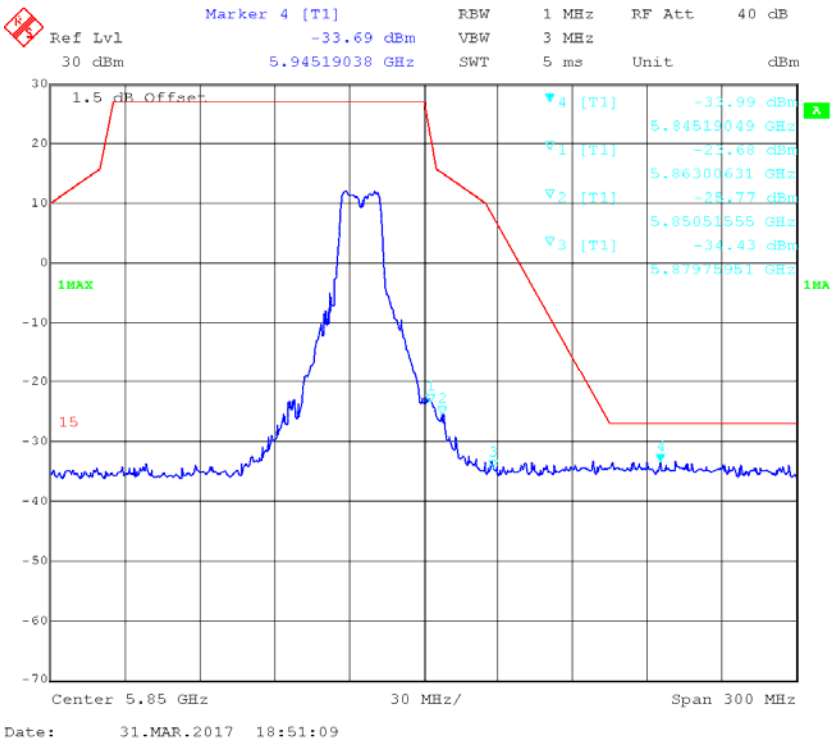


Chain 2:

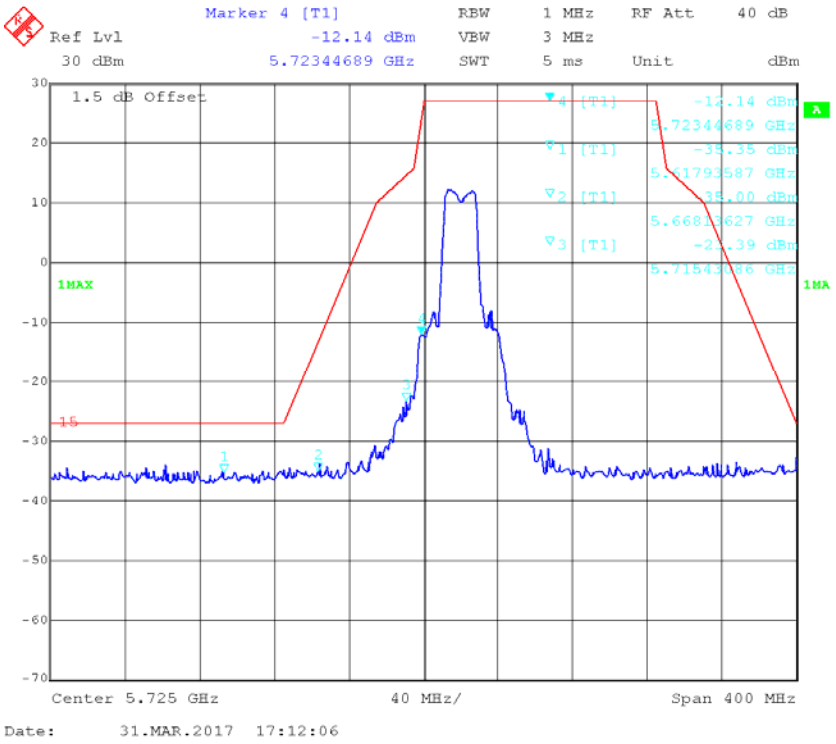
802.11a Low Channel



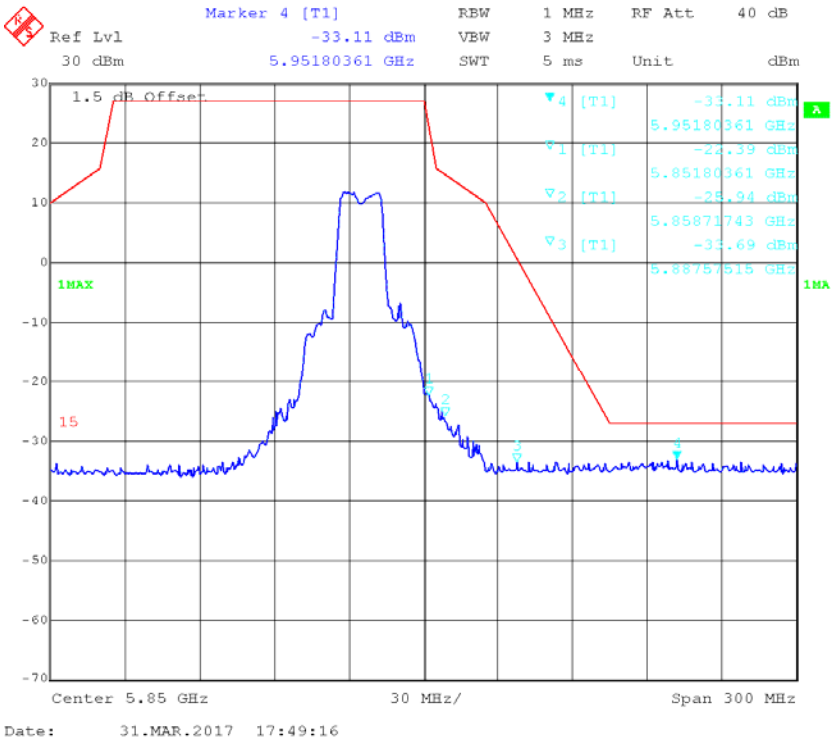
802.11a High Channel



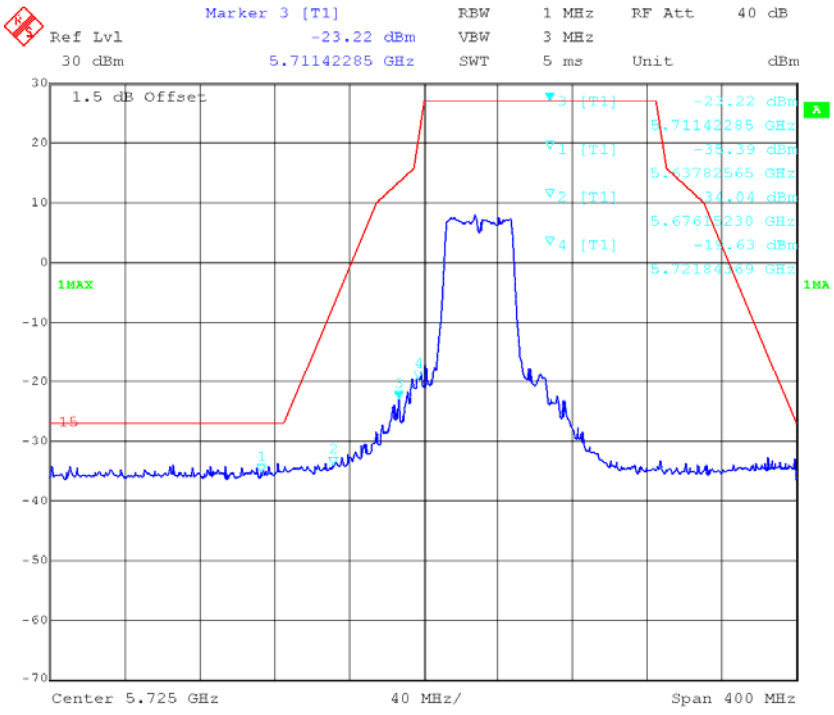
802.11n ht20 Low Channel



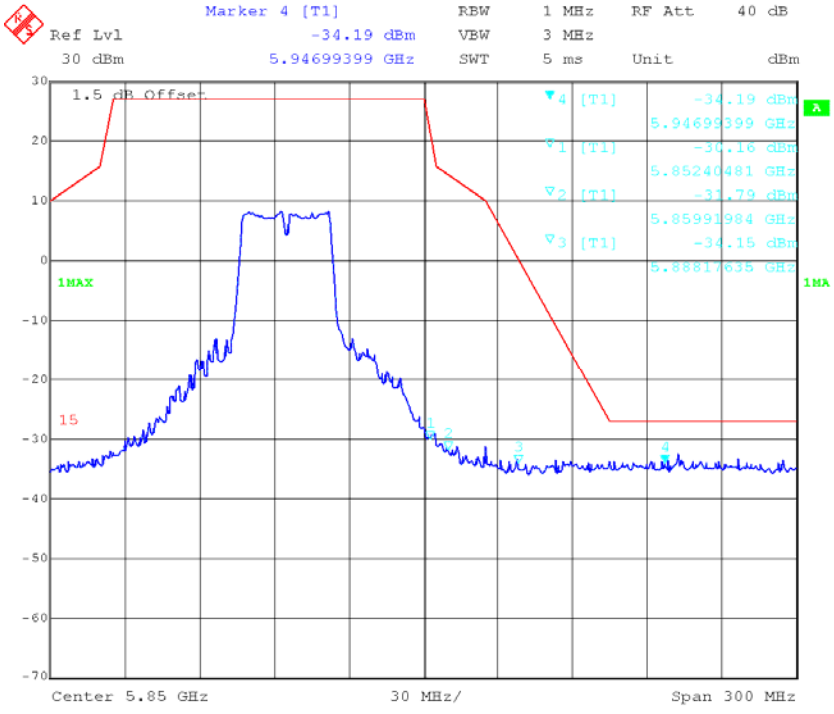
802.11n ht20 High Channel



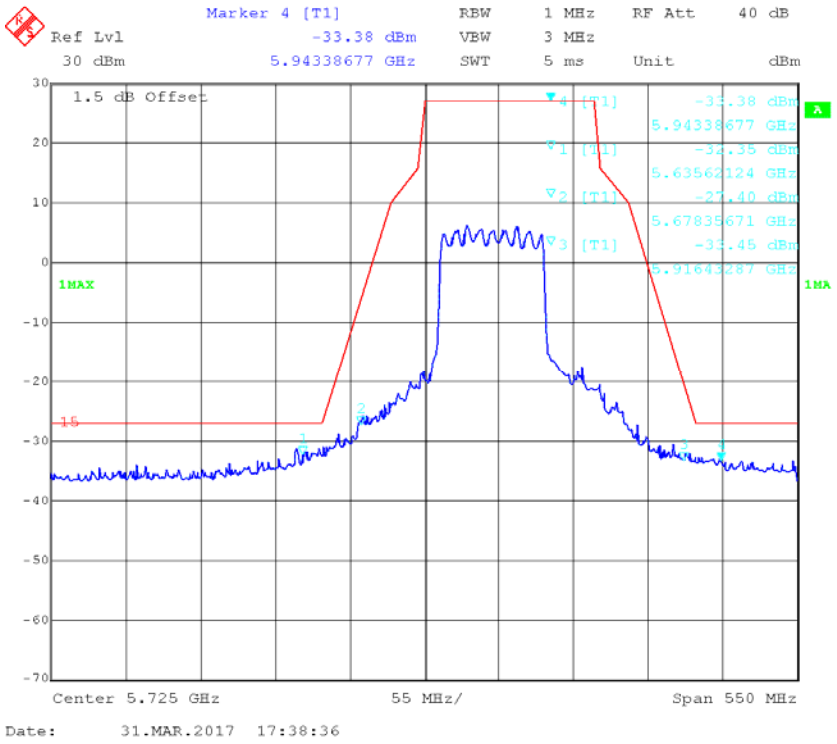
802.11n ht40 Low Channel



802.11n ht40 High Channel



802.11 ac80 Low Channel

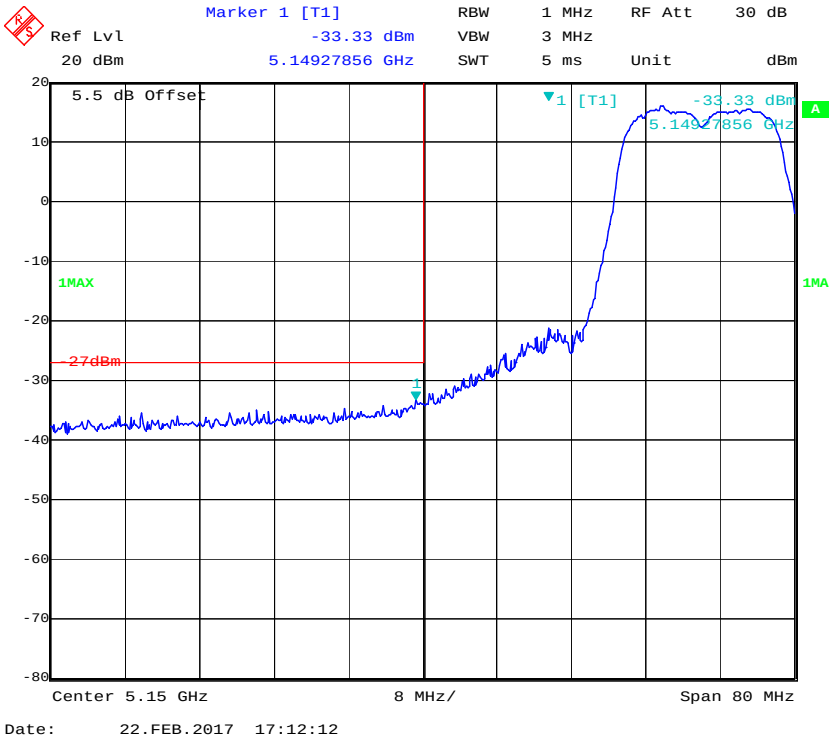


2TX

5150-5250MHz(the atenna gain was offset in the display, all emissions under limit 3dB, so combined results meet the requirement)

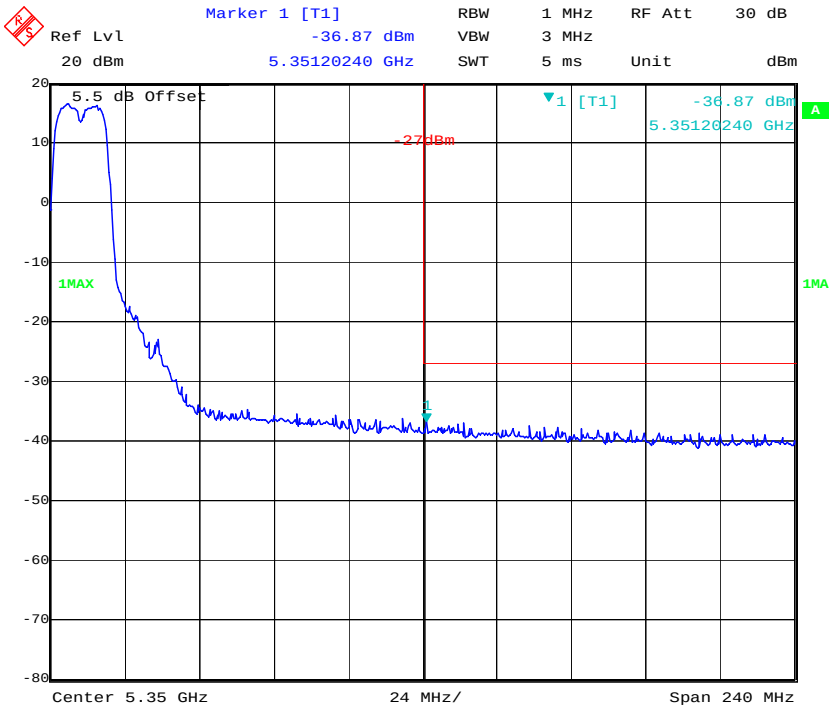
Chain 0:

802.11n ht20 Low Channel



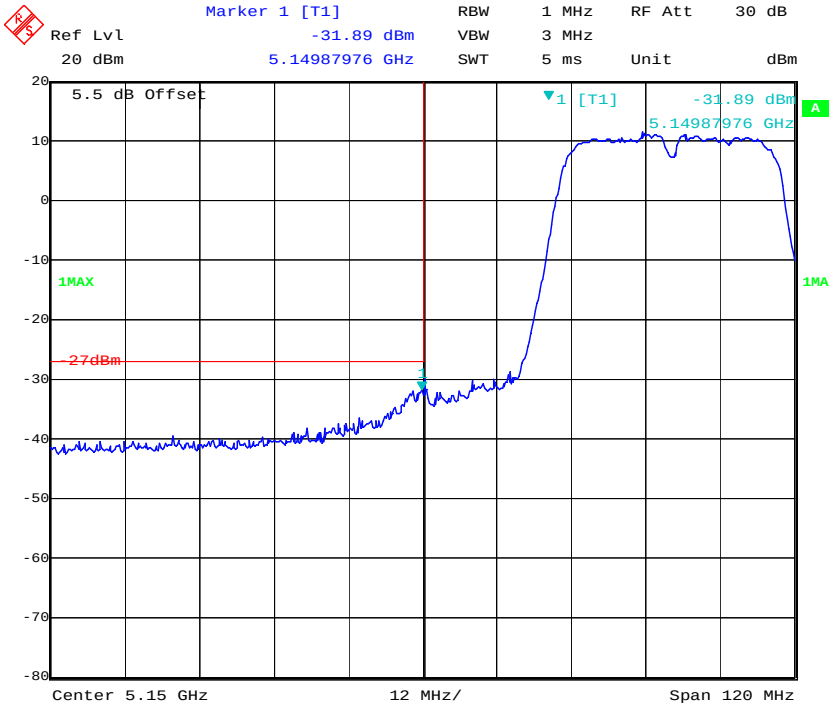
Date: 22.FEB.2017 17:12:12

802.11n ht20 High Channel



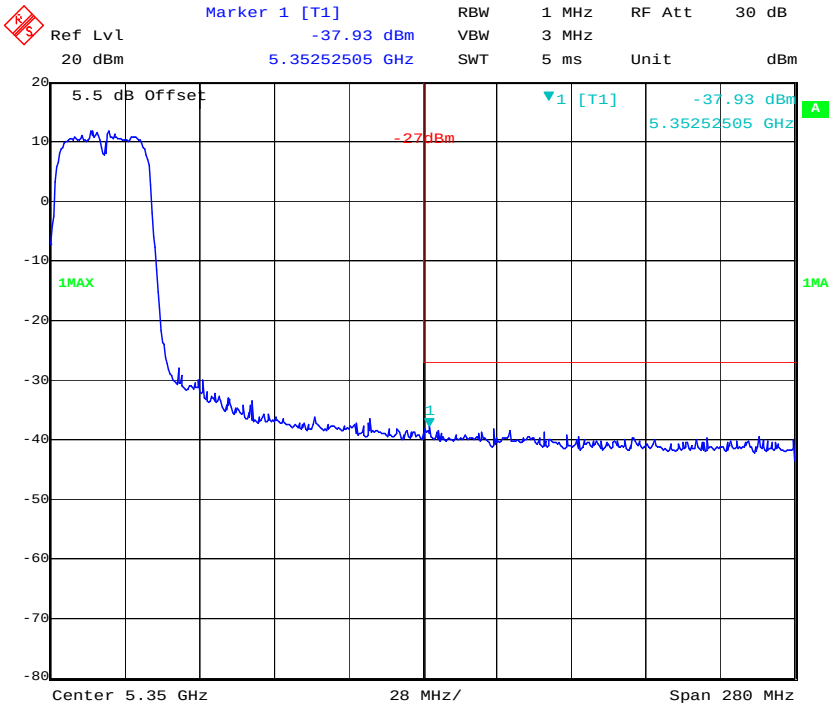
Date: 22.FEB.2017 17:20:27

802.11n ht40 Low Channel



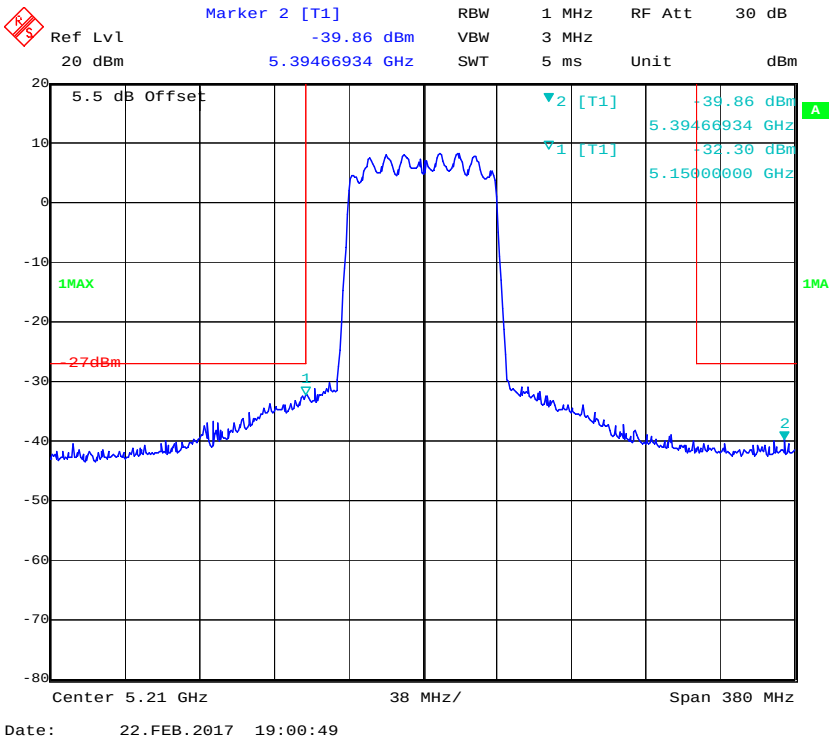
Date: 22.FEB.2017 18:56:50

8802.11n ht40 High Channel



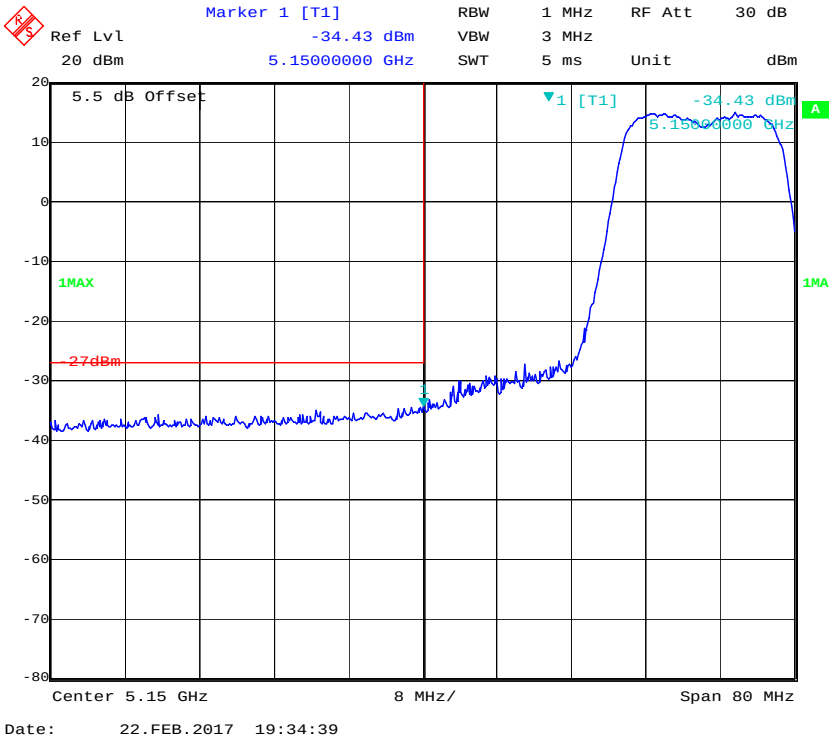
Date: 22.FEB.2017 18:08:12

802.11n ac80 Middle Channel



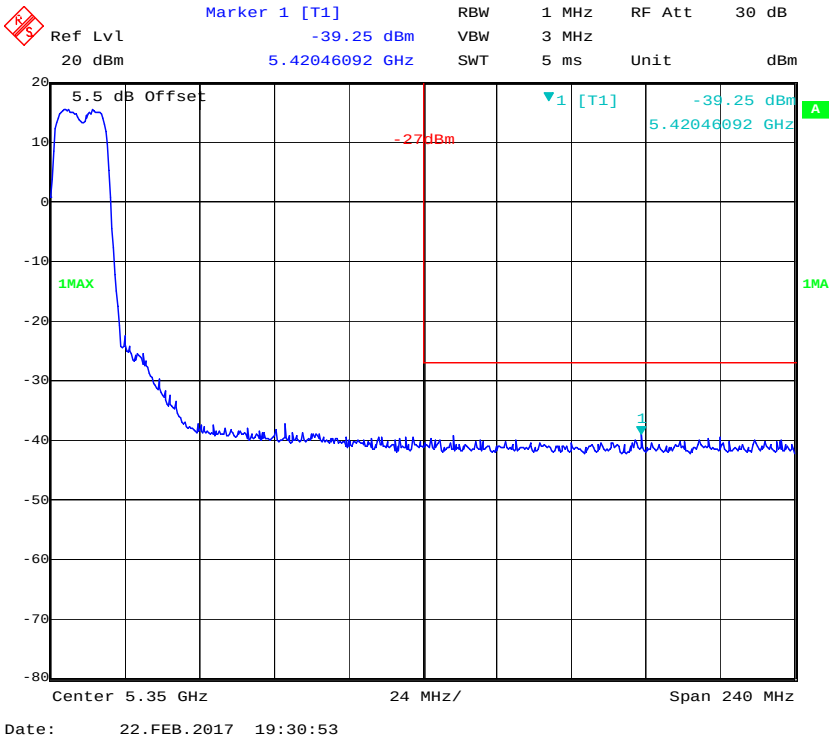
Chain 1:

802.11n ht20 Low Channel



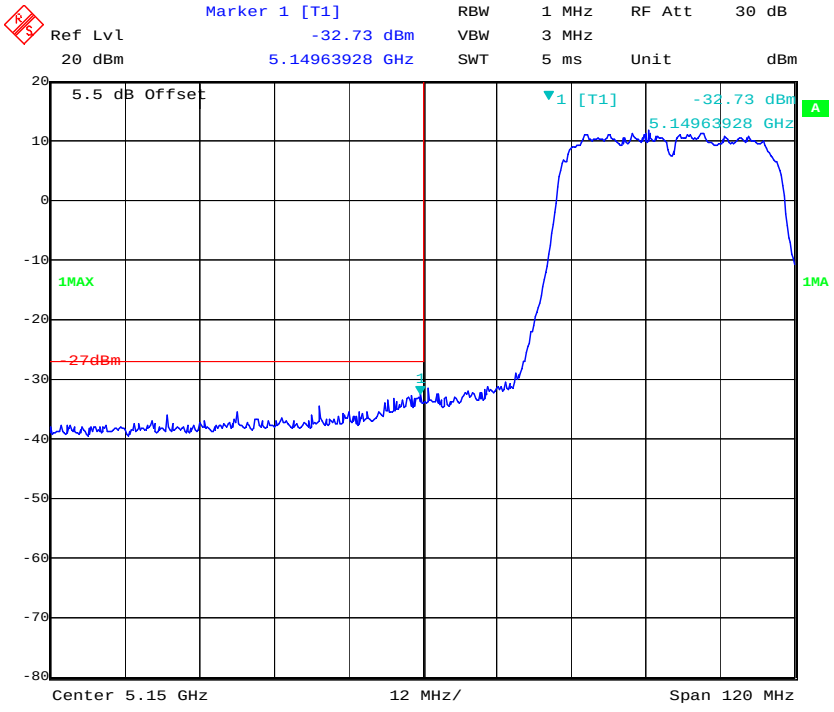
Date: 22.FEB.2017 19:34:39

802.11n ht20 High Channel



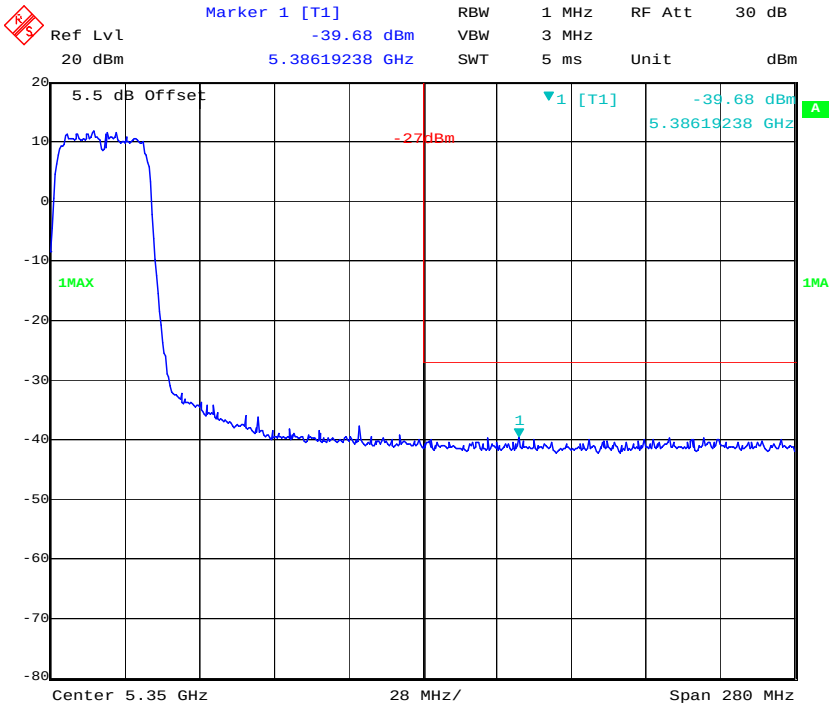
Date: 22.FEB.2017 19:30:53

802.11n ht40 Low Channel



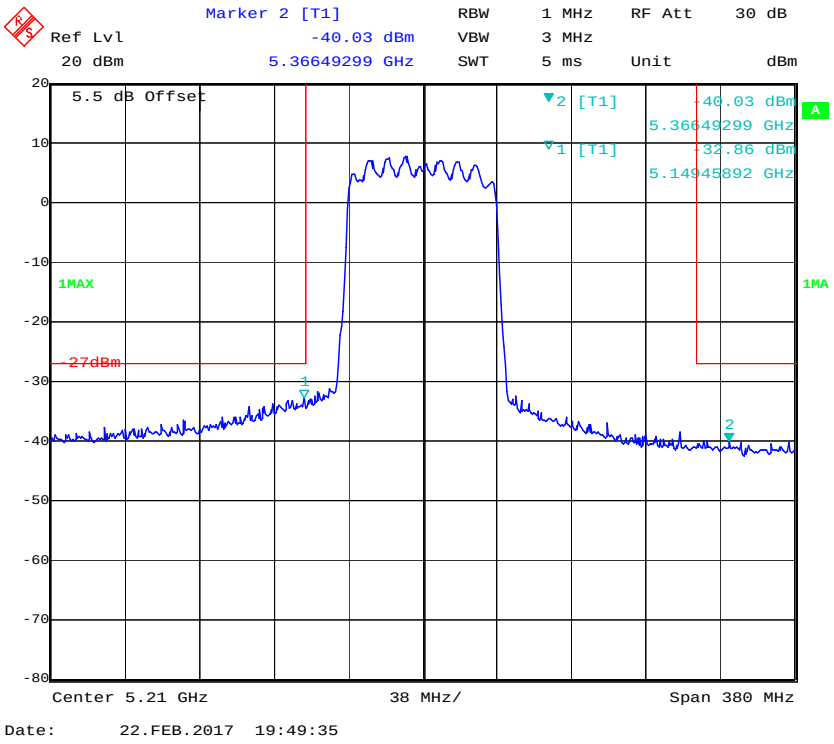
Date: 22.FEB.2017 19:41:05

8802.11n ht40 High Channel



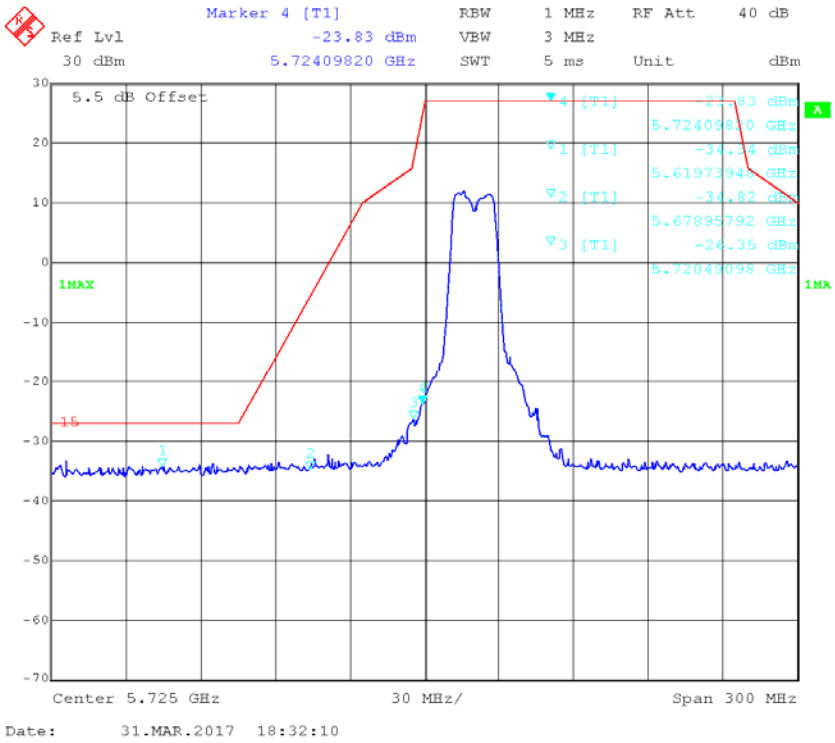
Date: 22.FEB.2017 19:45:51

802.11n ac80 Middle Channel

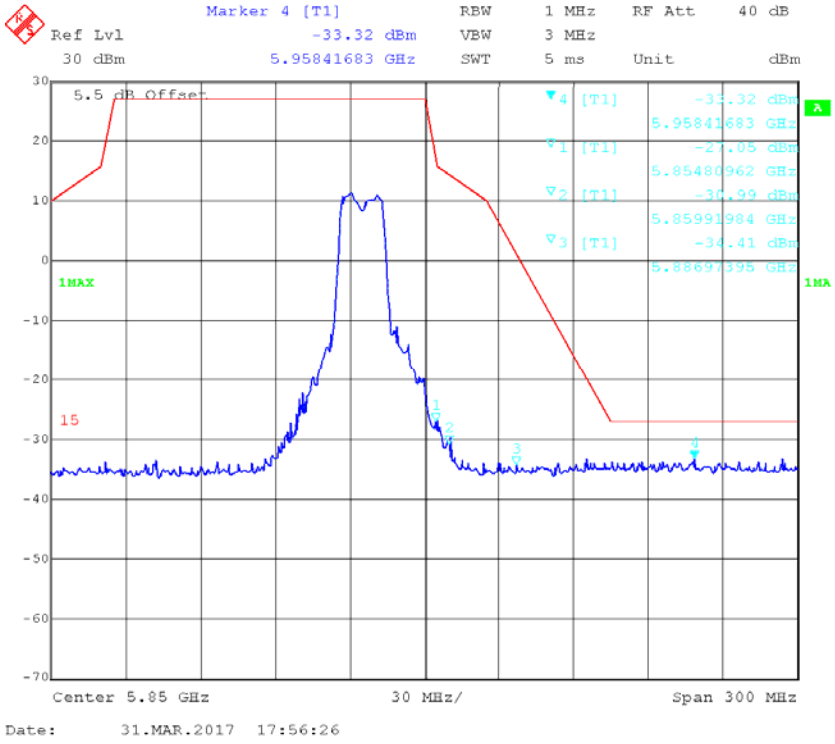


5725-5850MHz(the atenna gain was offset in the display, all emissions under limit 3dB, so combined results meet the requirement)
Chain 0:

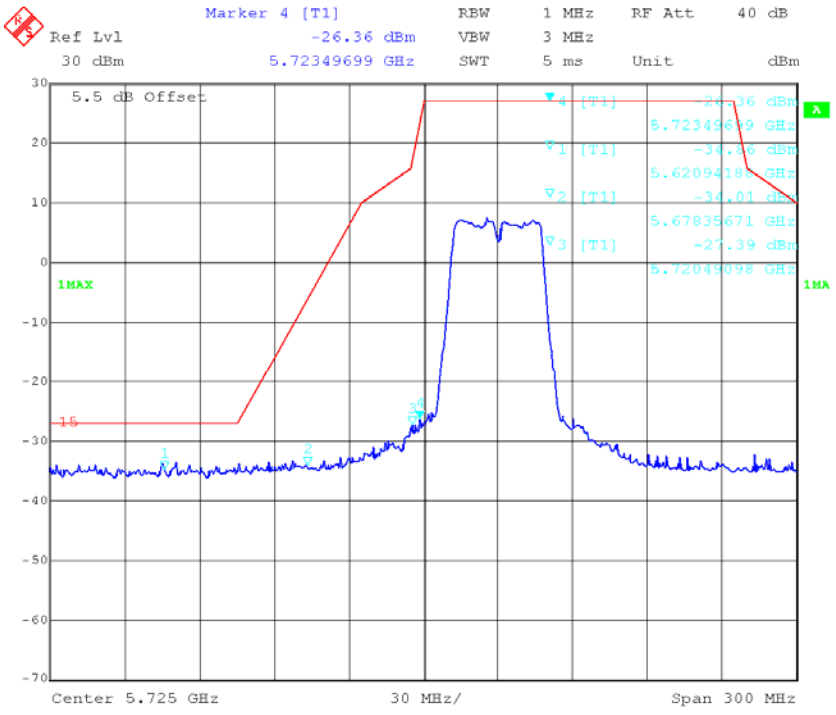
802.11n ht20 Low Channel



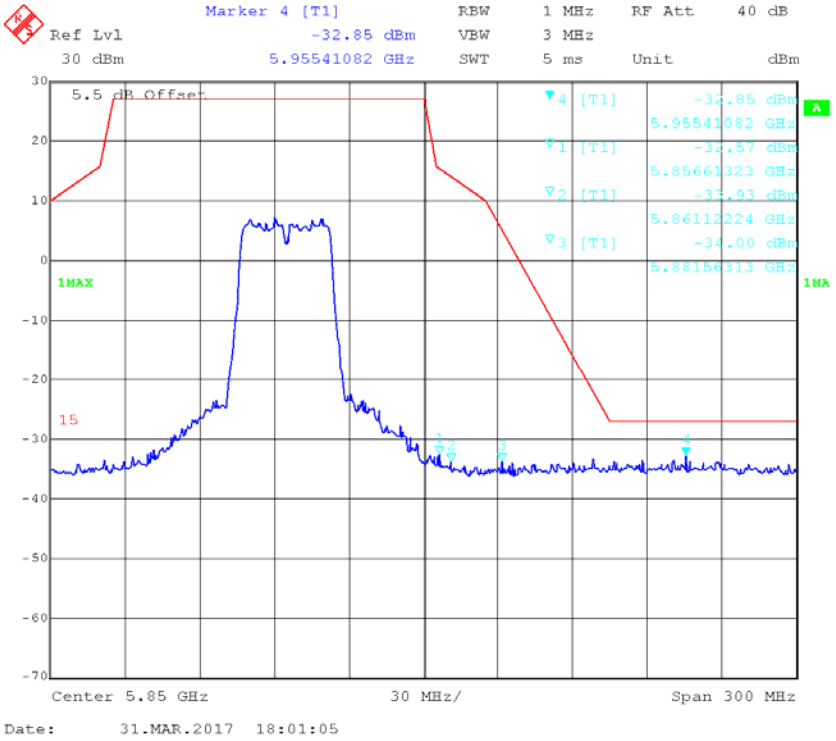
802.11n ht20 High Channel



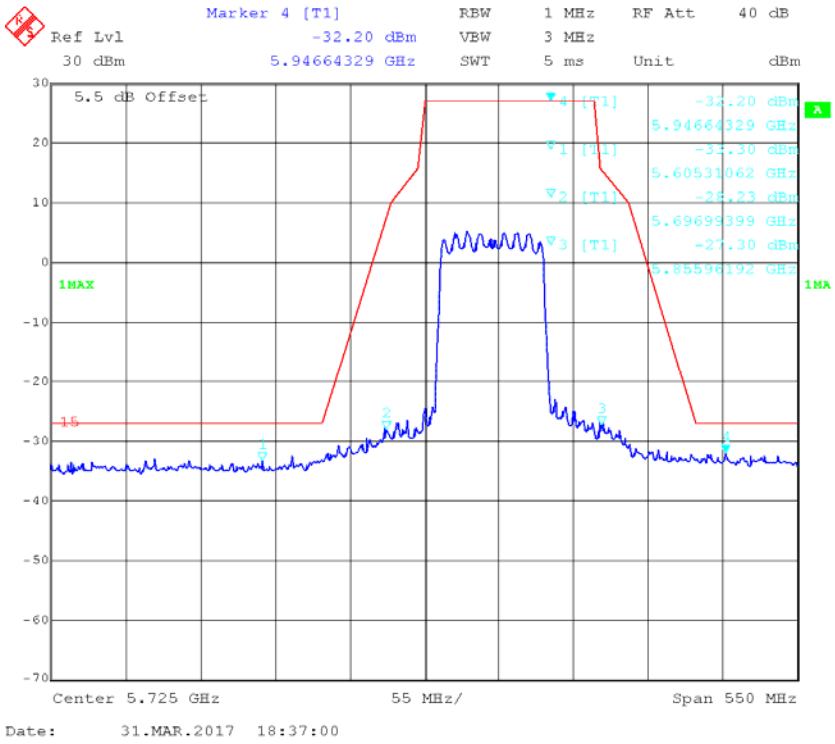
802.11n ht40 Low Channel



802.11n ht40 High Channel

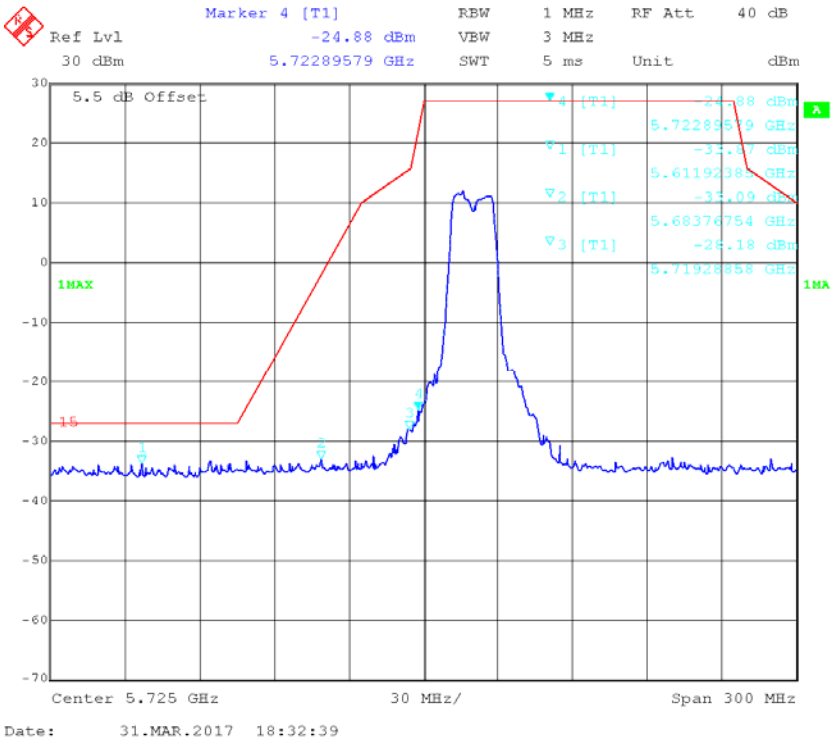


802.11 ac80 Low Channel

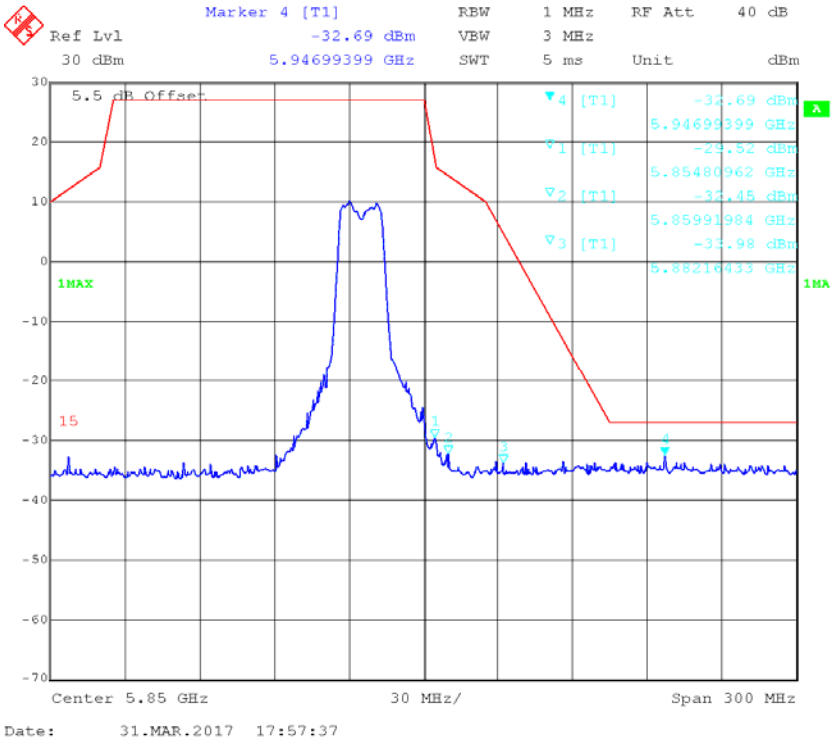


5725-5850MHz Chain 1:

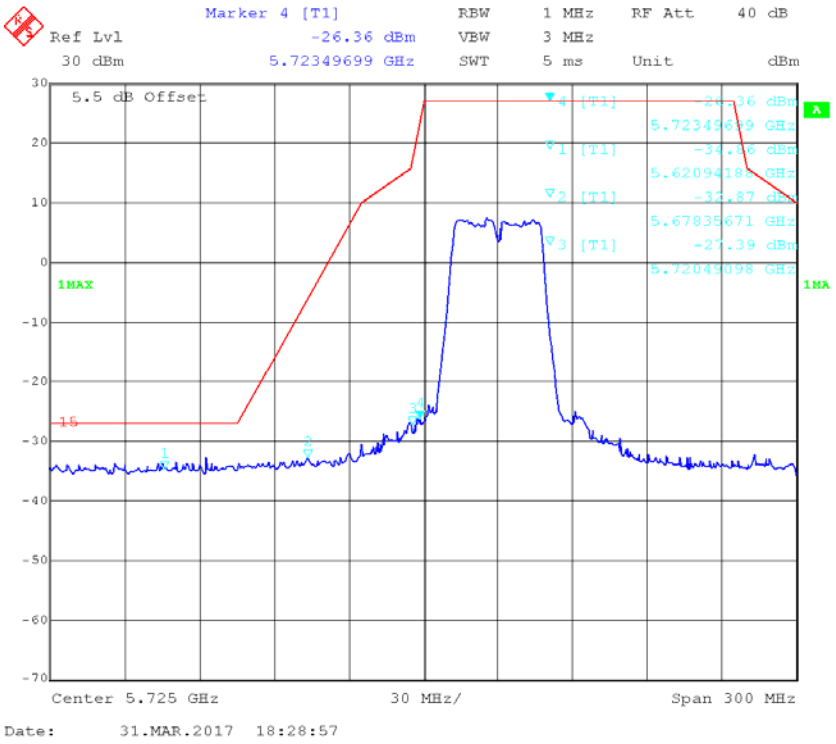
802.11n ht20 Low Channel



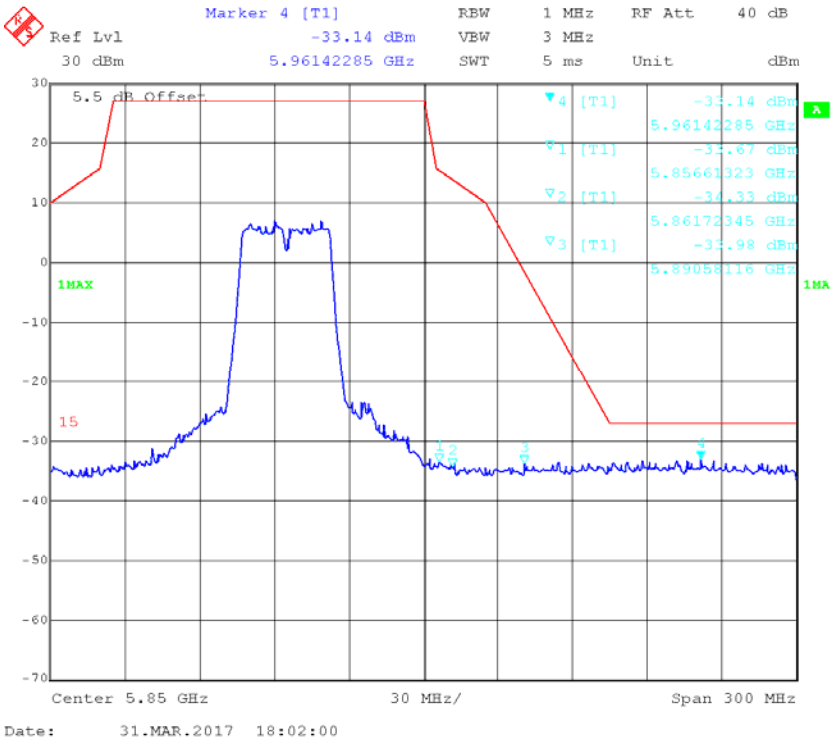
802.11n ht20 High Channel



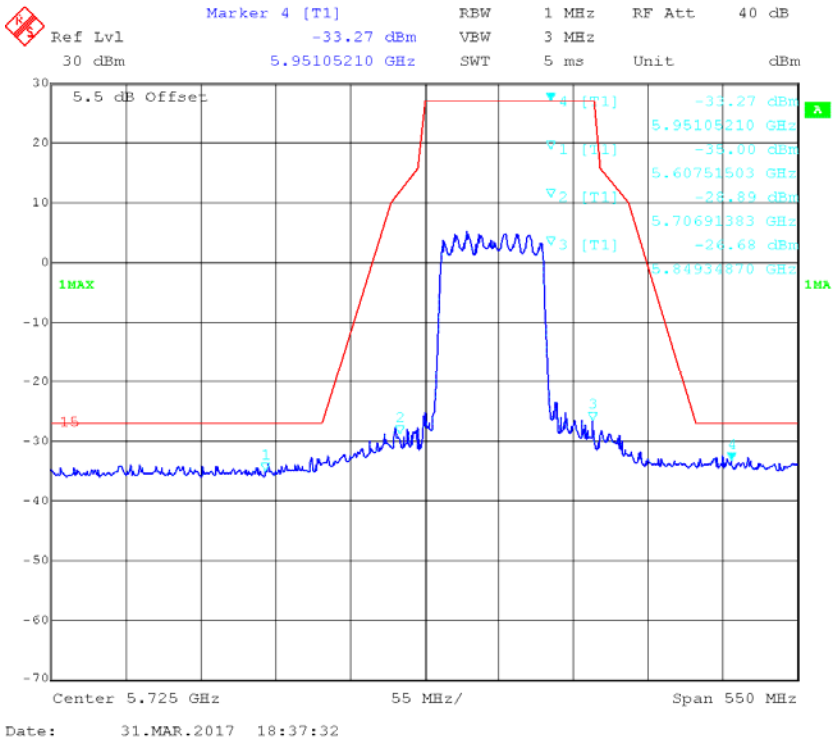
802.11n ht40 Low Channel



802.11n ht40 High Channel



802.11 ac80 Low Channel

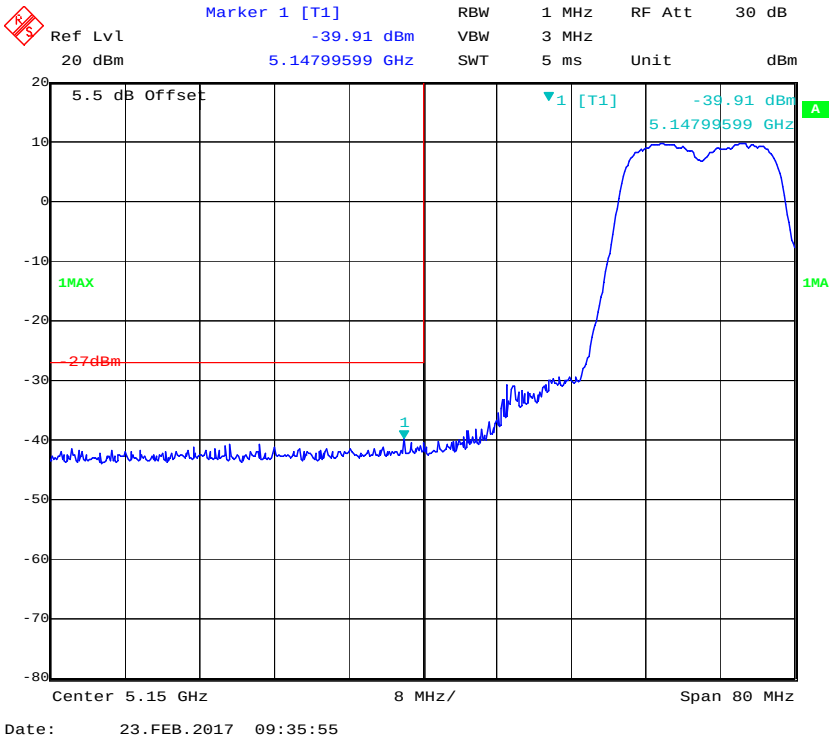


3TX

5150-5250MHz(the atenna gain was offset in the display, all emissions under limits 4.77dB, so combined results meet the EIRP results)

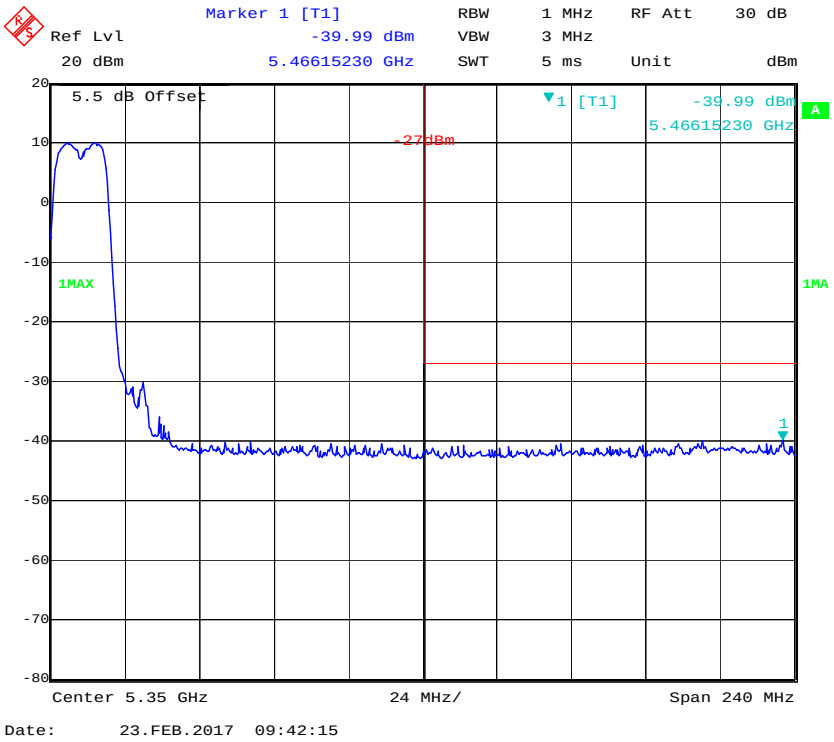
Chain 0:

802.11n ht20 Low Channel



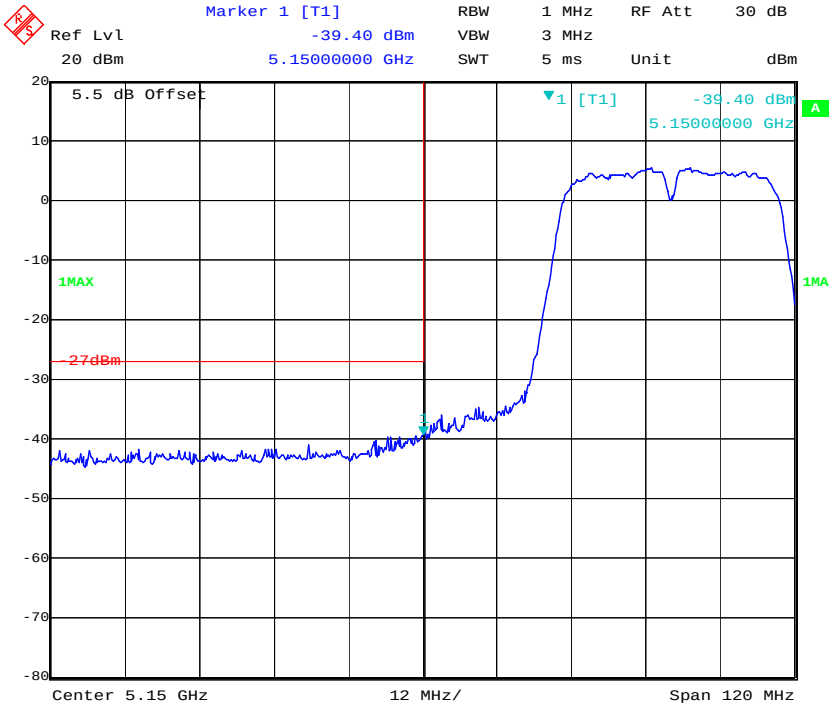
Date: 23.FEB.2017 09:35:55

802.11n ht20 High Channel



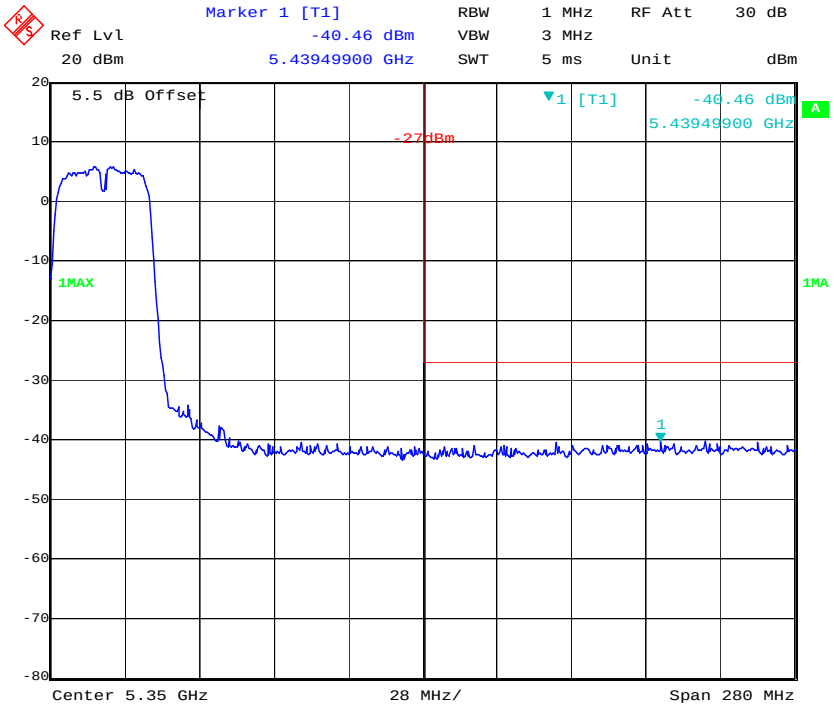
Date: 23.FEB.2017 09:42:15

802.11n ht40 Low Channel



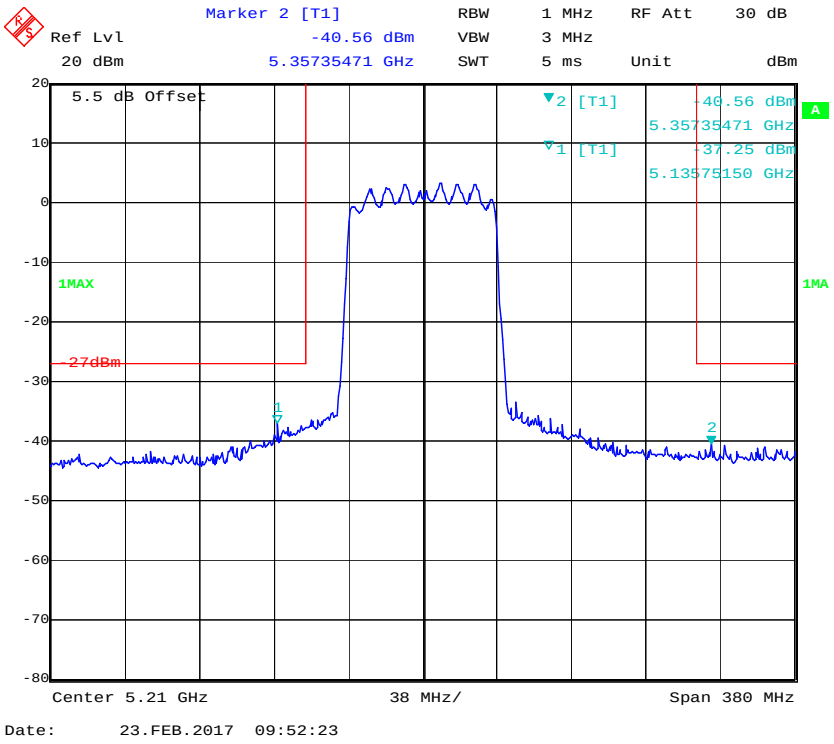
Date: 23.FEB.2017 09:46:15

8802.11n ht40 High Channel



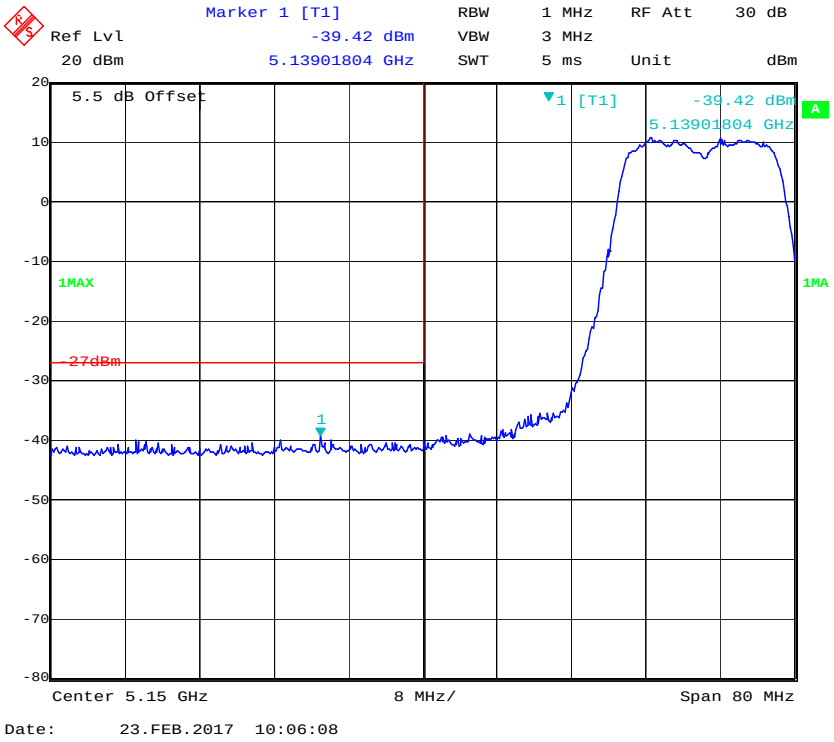
Date: 23.FEB.2017 09:49:11

802.11n ac80 Middle Channel



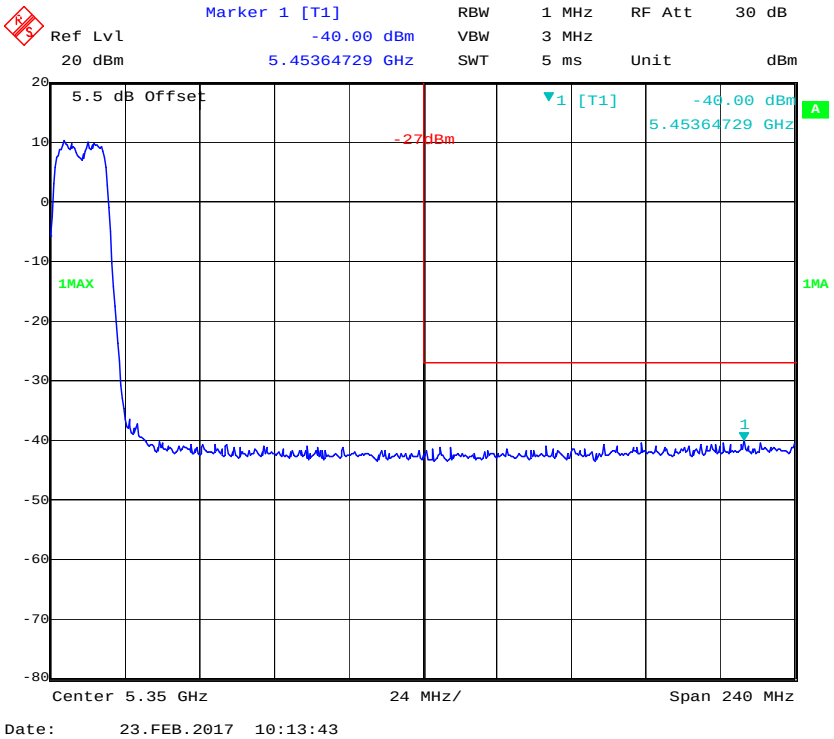
Chain 1:

802.11n ht20 Low Channel



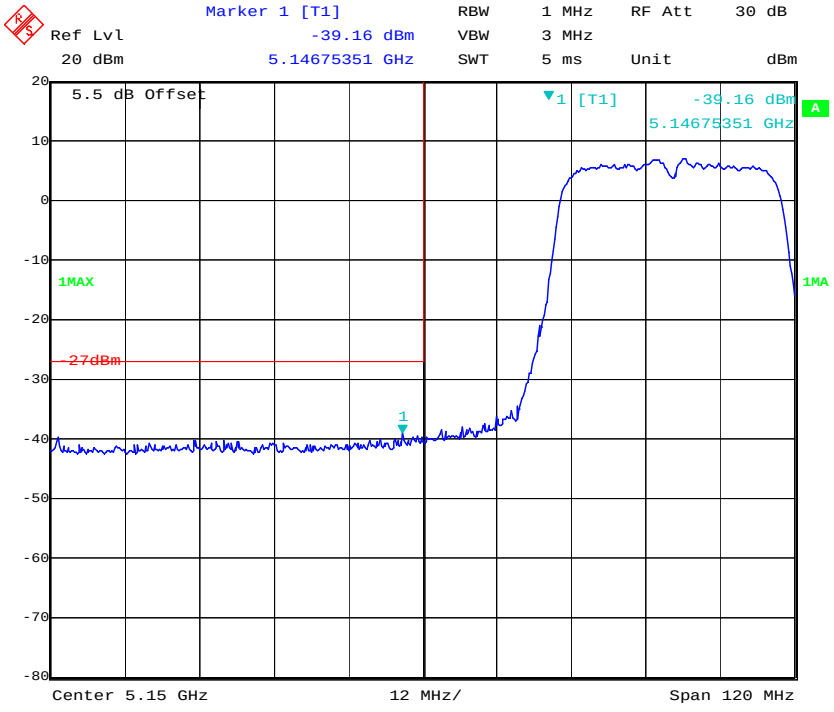
Date: 23.FEB.2017 10:06:08

802.11n ht20 High Channel



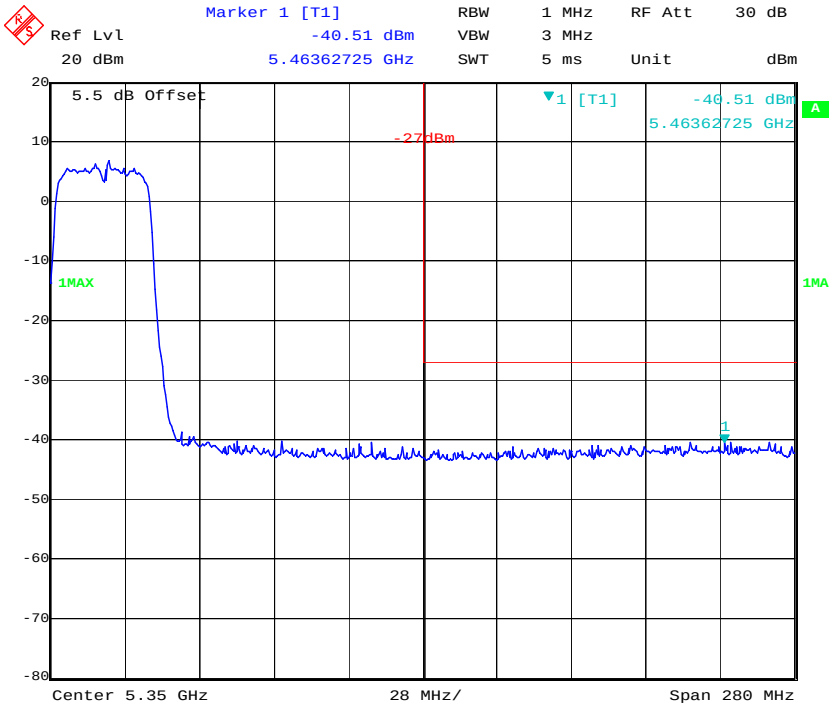
Date: 23.FEB.2017 10:13:43

802.11n ht40 Low Channel



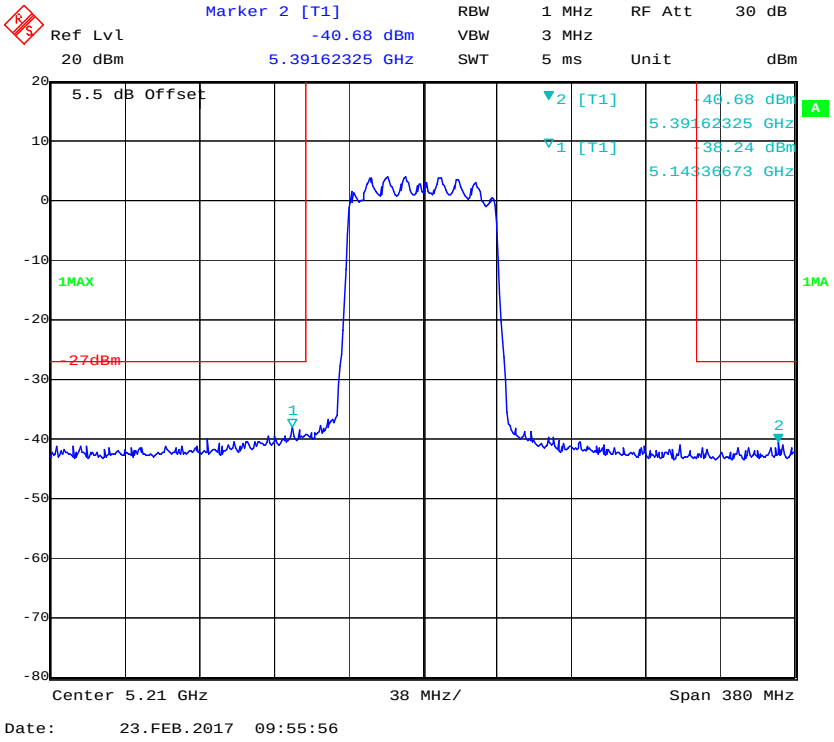
Date: 23.FEB.2017 09:59:07

802.11n ht40 High Channel



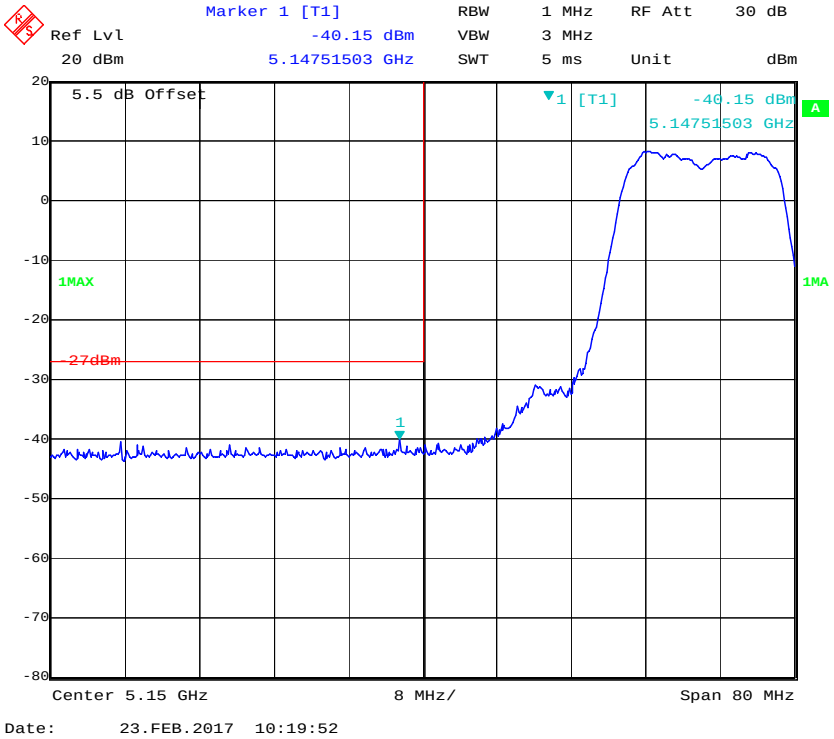
Date: 23.FEB.2017 10:01:51

802.11n ac80 Middle Channel



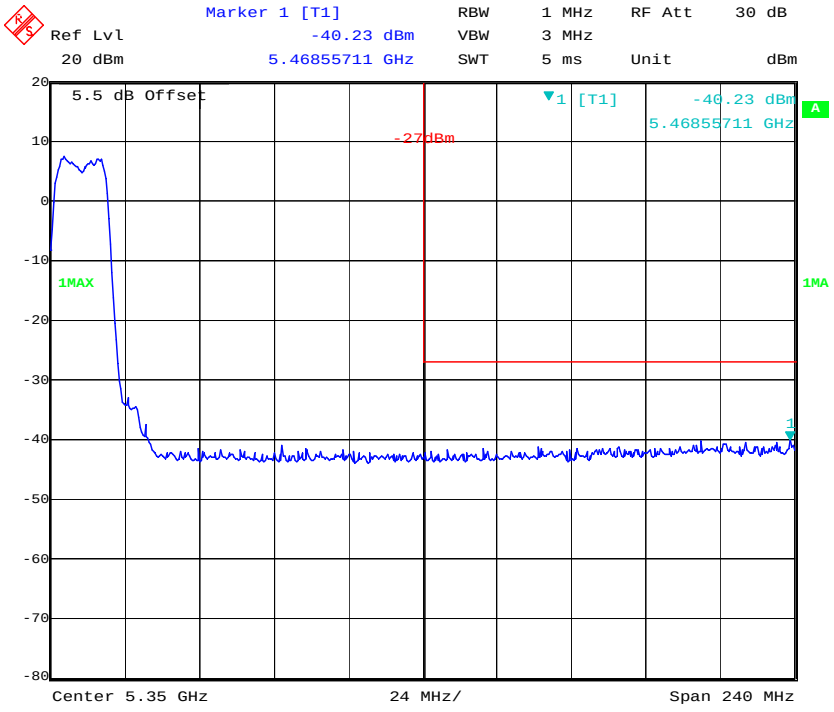
Chain 2:

802.11n ht20 Low Channel



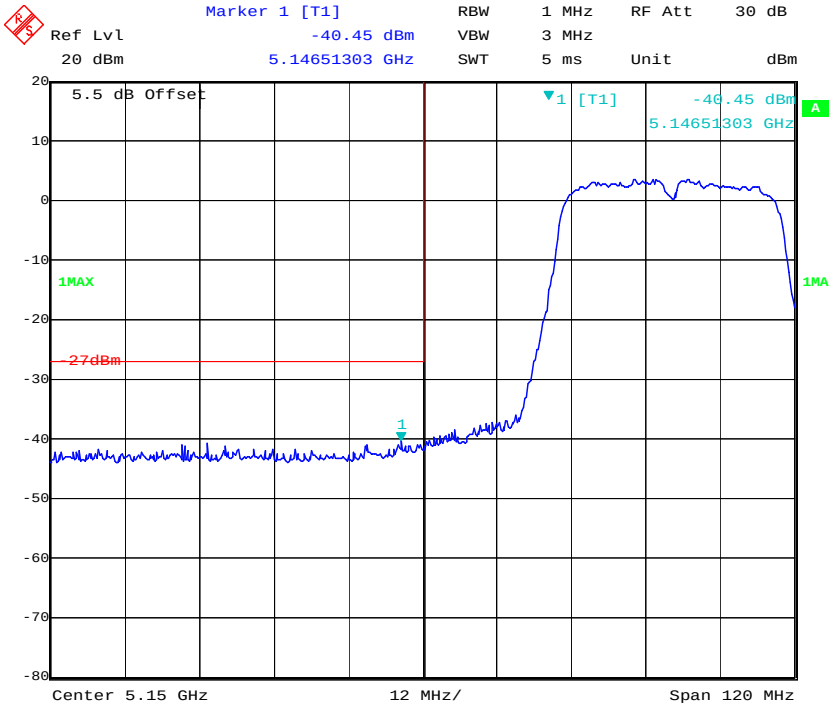
Date: 23.FEB.2017 10:19:52

802.11n ht20 High Channel



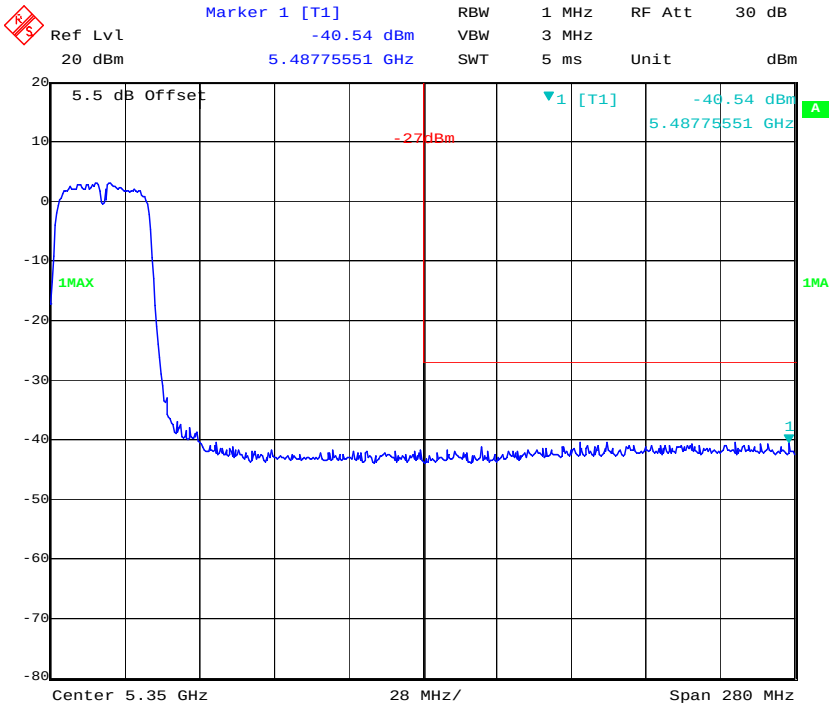
Date: 23.FEB.2017 10:25:20

802.11n ht40 Low Channel



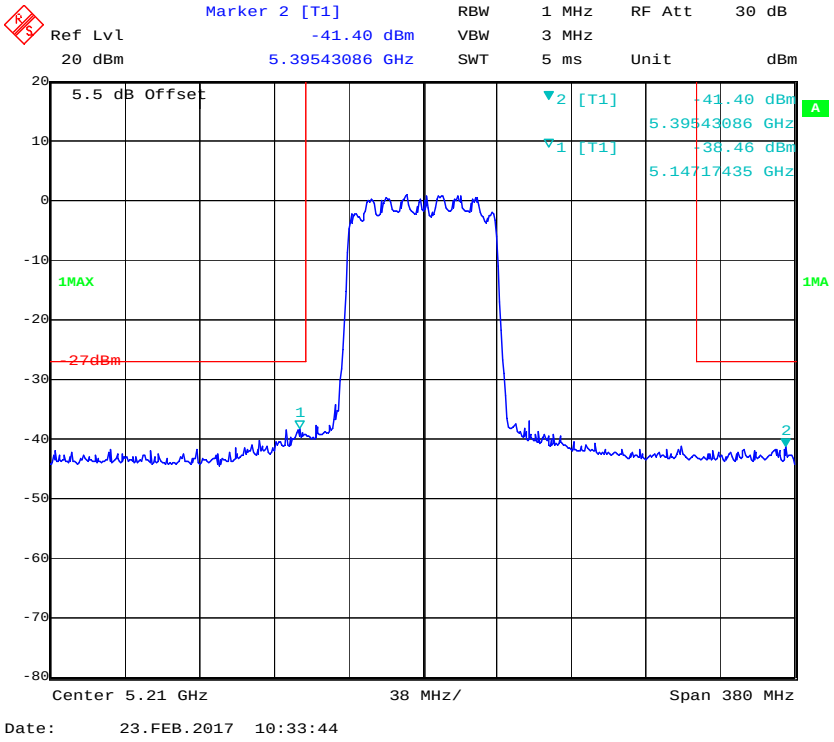
Date: 23.FEB.2017 10:28:11

8802.11n ht40 High Channel



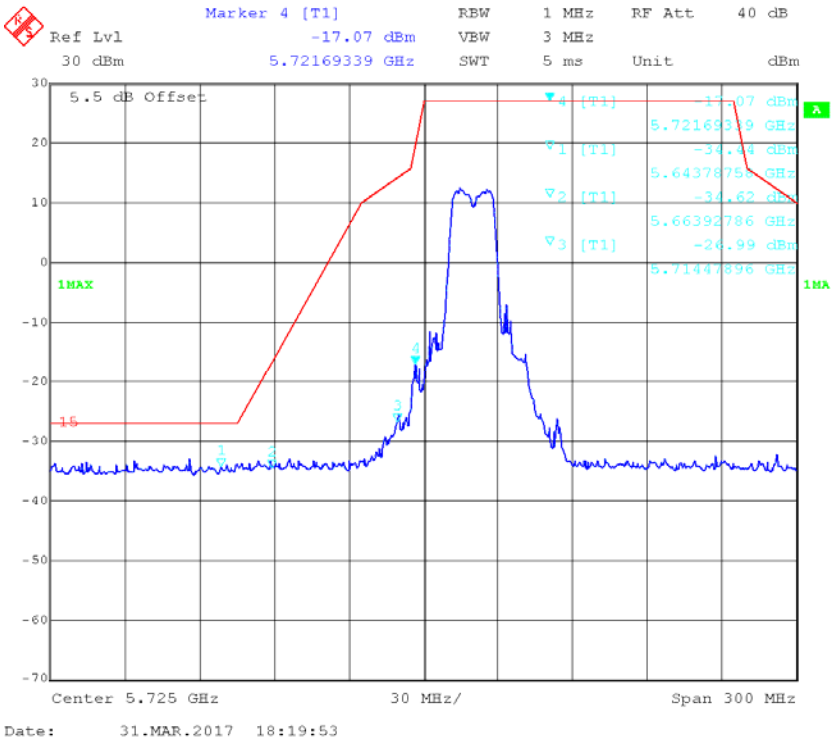
Date: 23.FEB.2017 10:30:51

802.11n ac80 Middle Channel

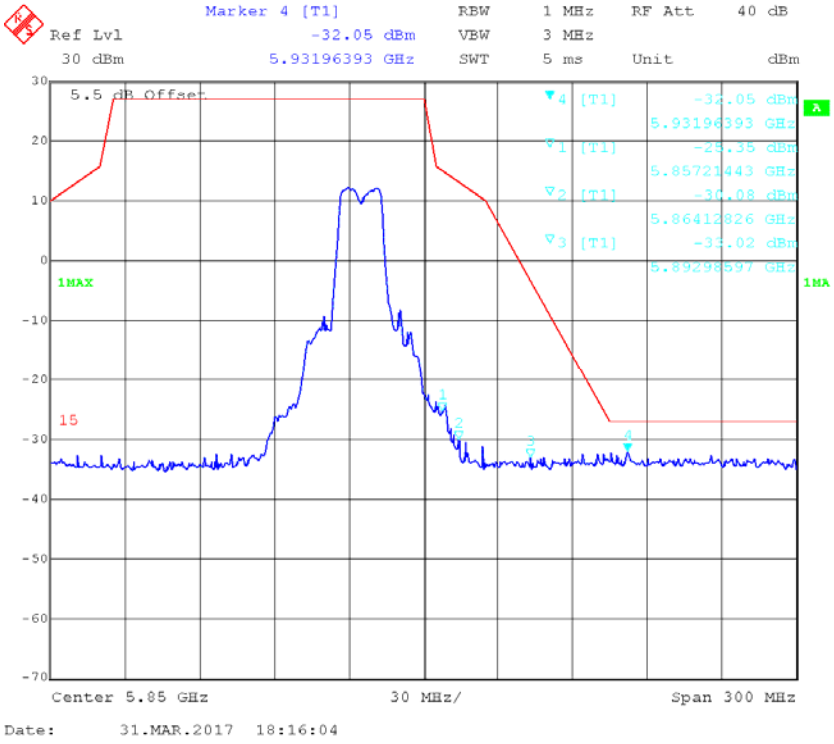


5725-5850MHz(the atenna gain was offset in the display, all emissions under limits 4.77dB, so combined results meet the EIRP results)
Chain 0:

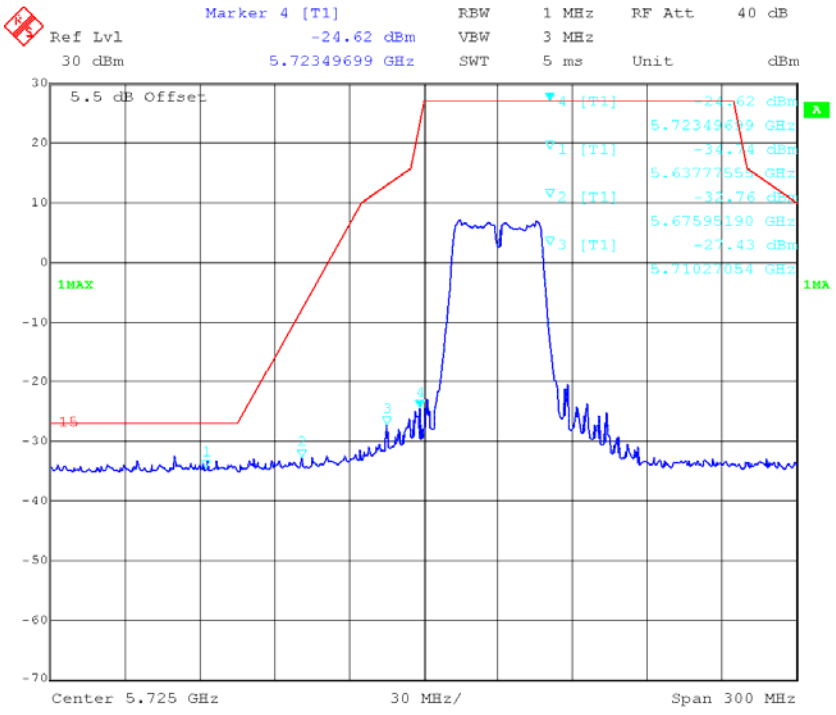
802.11n ht20 Low Channel



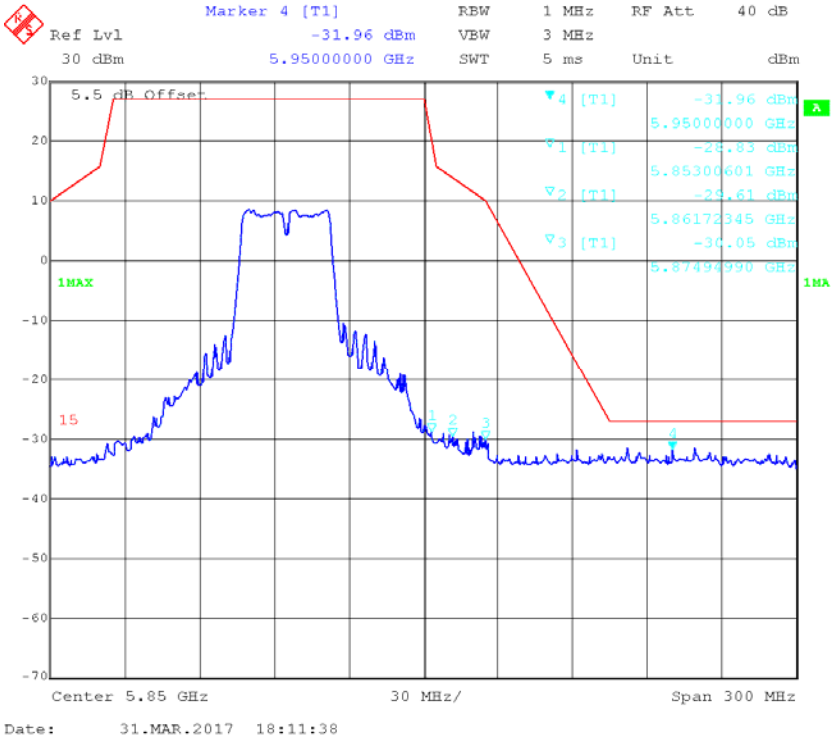
802.11n ht20 High Channel



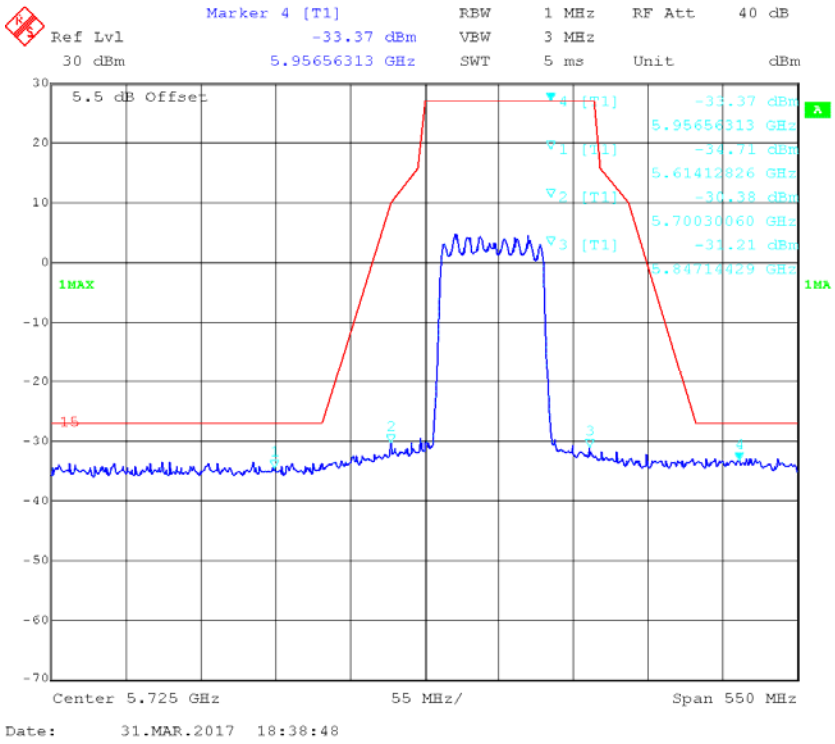
802.11n ht40 Low Channel



802.11n ht40 High Channel

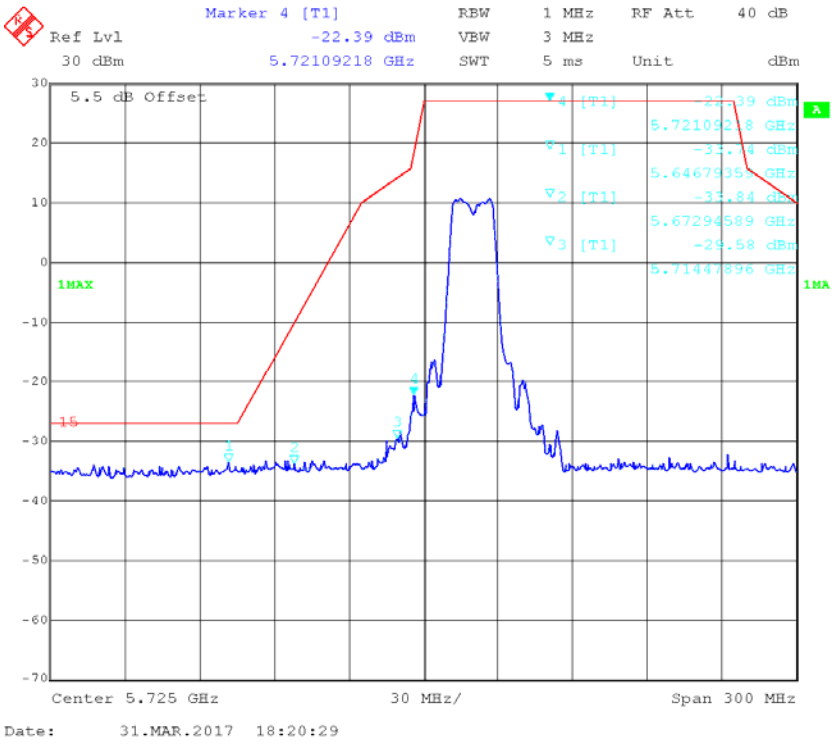


802.11 ac80 Low Channel

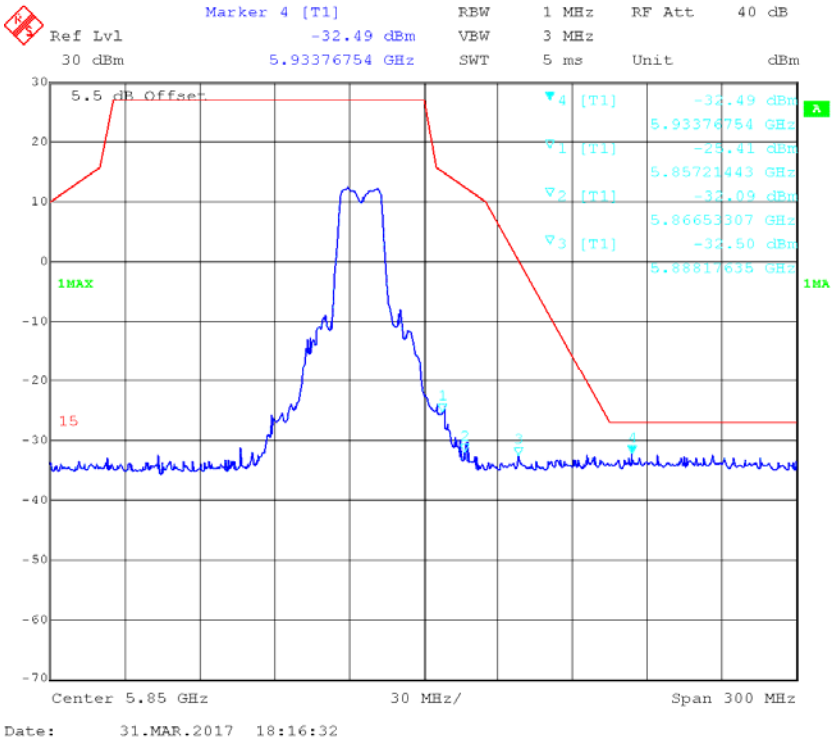


Chain 1:

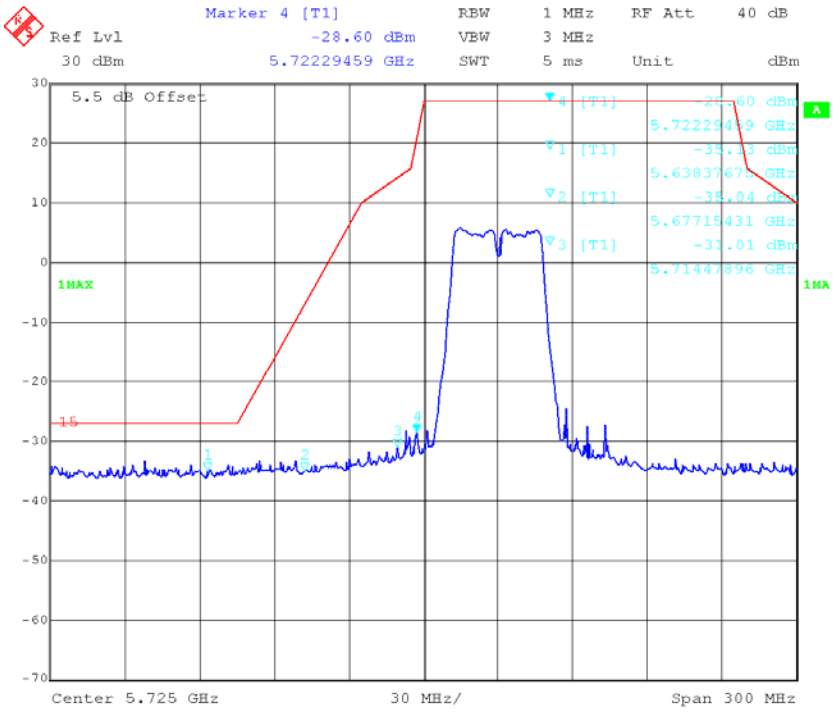
802.11n ht20 Low Channel



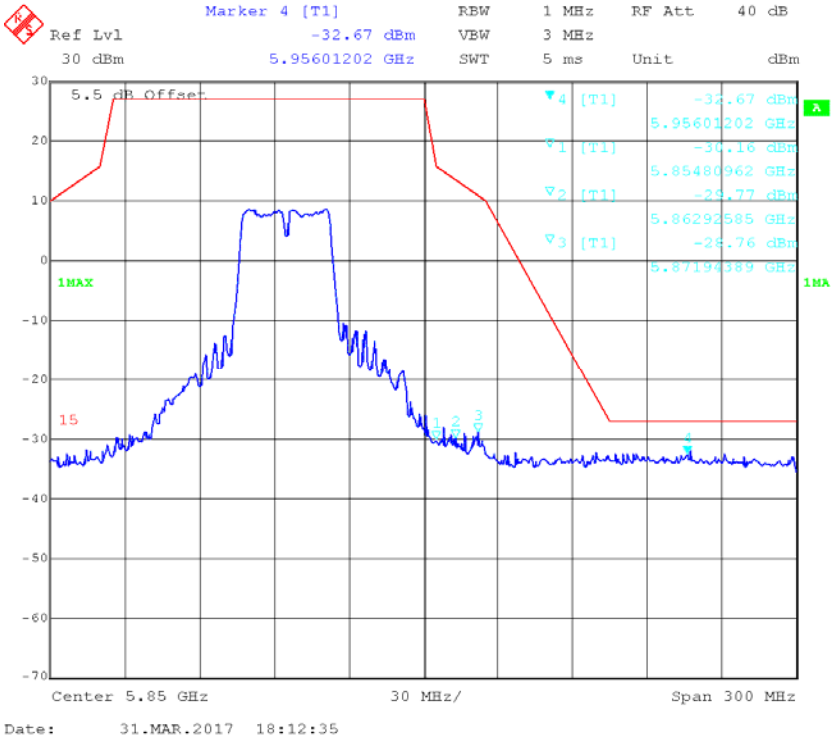
802.11n ht20 High Channel



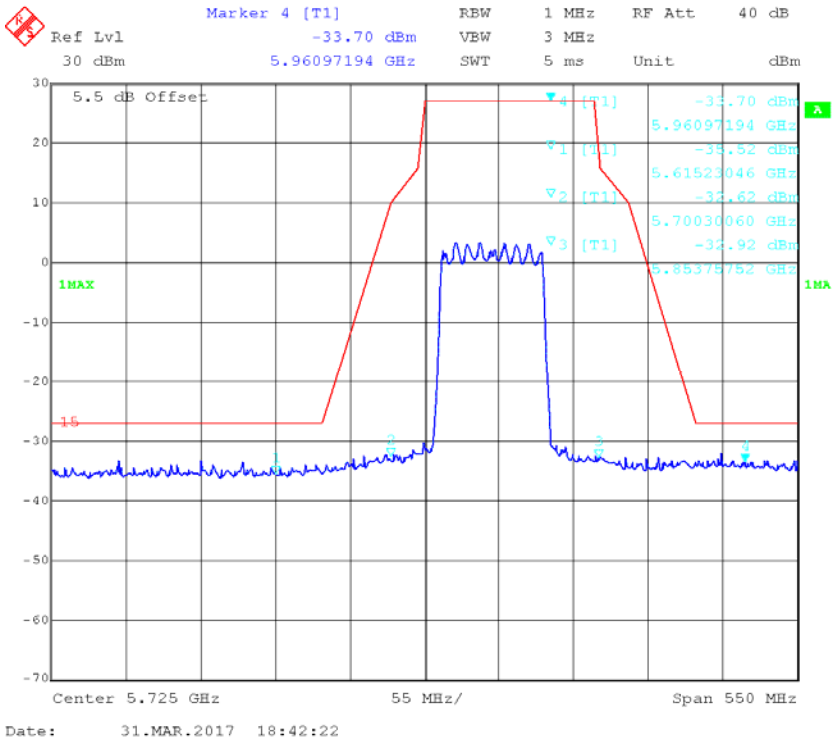
802.11n ht40 Low Channel



802.11n ht40 High Channel

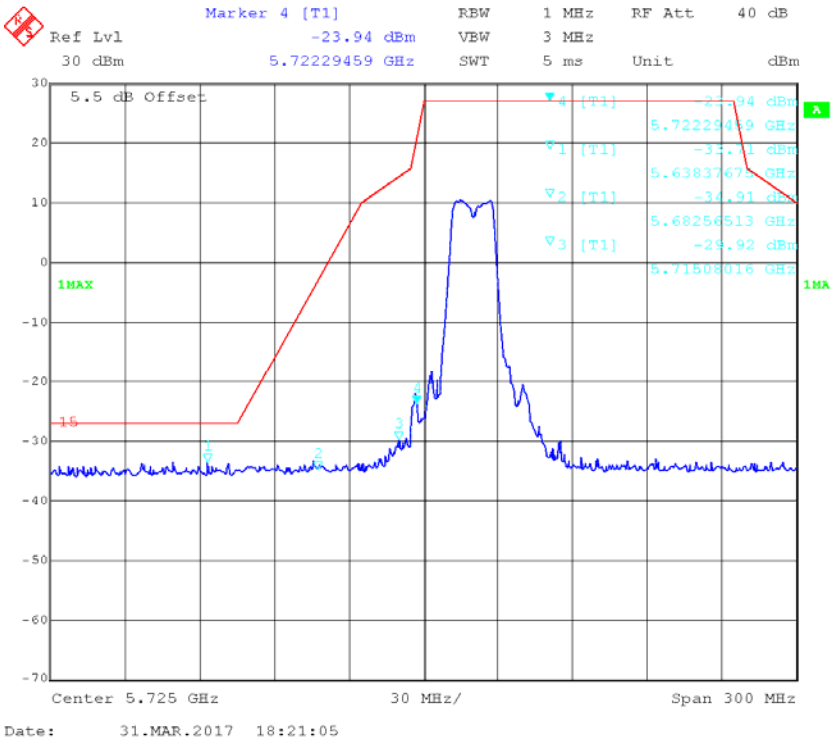


802.11 ac80 Low Channel

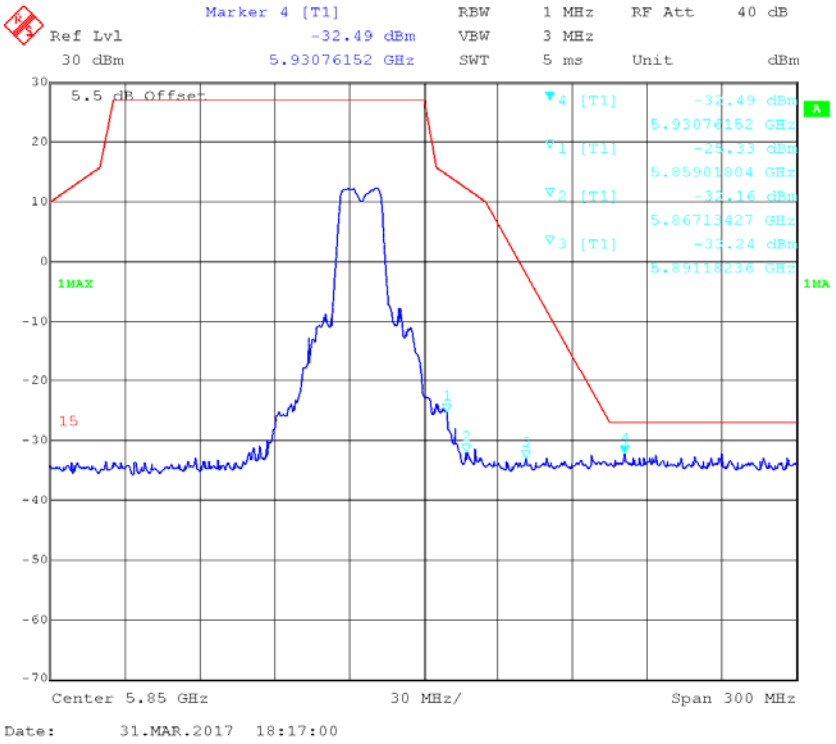


5725-5850MHz Chain 2:

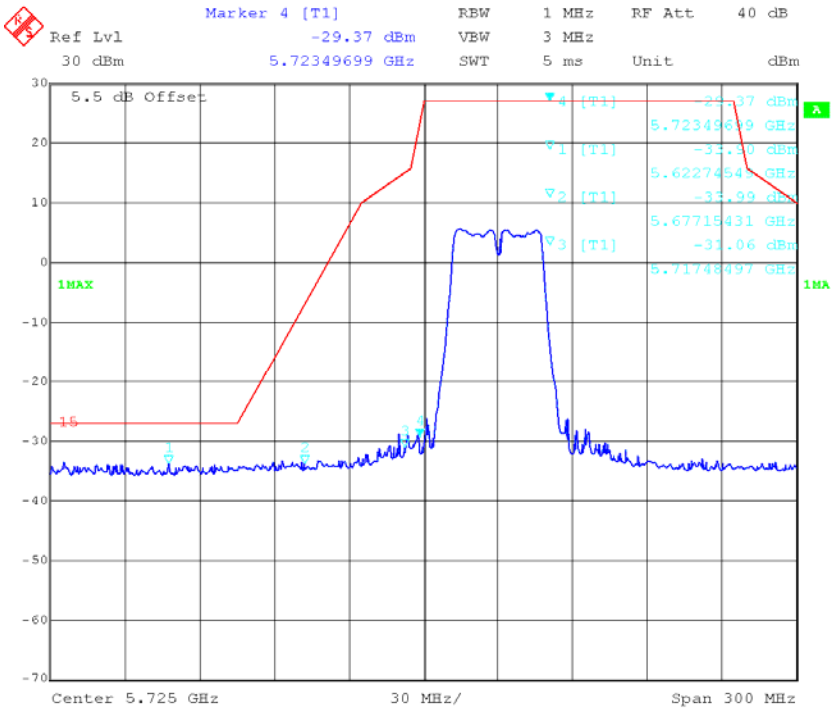
802.11n ht20 Low Channel



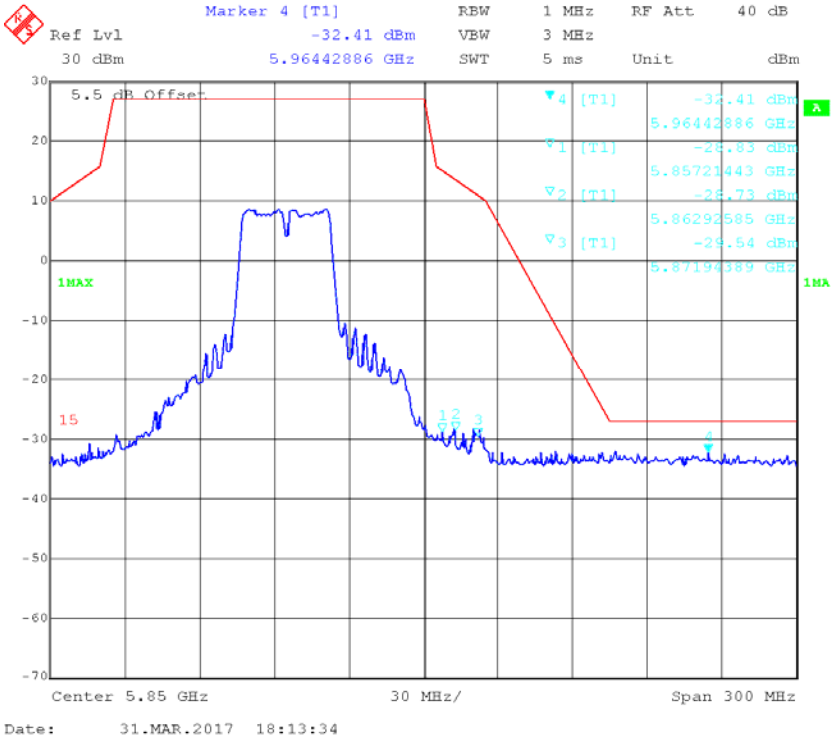
802.11n ht20 High Channel



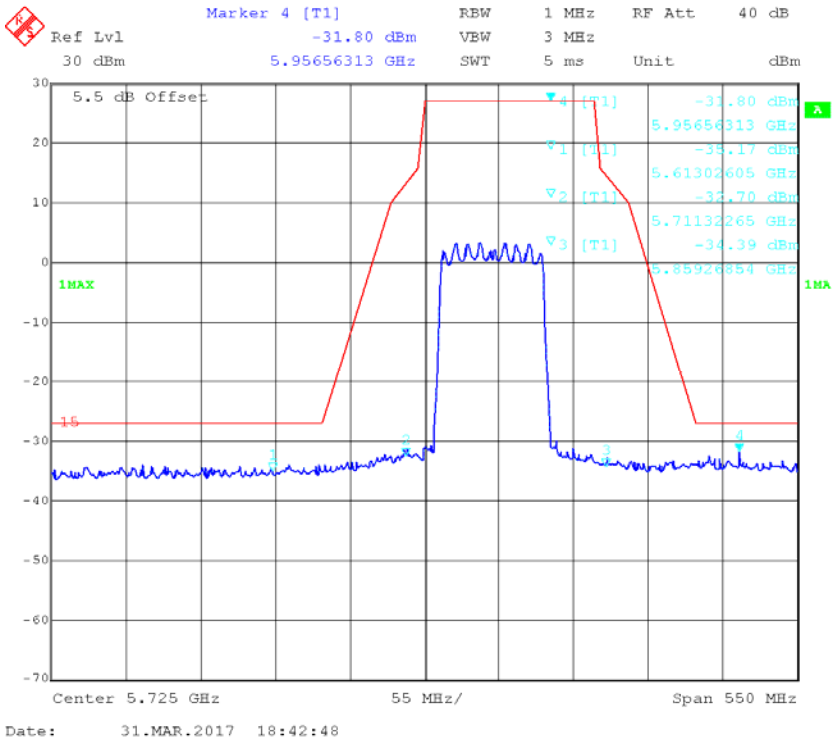
802.11n ht40 Low Channel



802.11n ht40 High Channel



802.11 ac80 Low Channel



FCC §15.407(a) –EMISSION BANDWIDTH AND OCCUPIED BANDWIDTH

Applicable Standard

15.407(a) (e)

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ26	831929/005	2016-09-21	2017-09-20
N/A	RF Cable	N/A	N/A	Each Time	/

*** Statement of Traceability:** BACL (Chengdu) attested 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 v01r03

Test Data

Environmental Conditions

Temperature:	22.5~25 °C
Relative Humidity:	35~41 %
ATM Pressure:	95.6~96.8 kPa

The testing was performed by Tom Tang from 2017-01-14 to 2017-02-22.

Test Result: Pass.

Please refer to the following tables and plots.

Test mode: Transmitting (Test performed at SISO mode Chain 0)

5150-5250MHz:

Mode	Channel	Frequency (MHz)	26 dB Emission Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11 a	Low	5180	20.28	17.39
	Middle	5200	20.36	17.39
	High	5240	20.36	17.39
802.11n ht20	Low	5180	20.28	17.39
	Middle	5200	20.2	17.39
	High	5240	20.28	17.39
802.11n ht40	Low	5190	39.92	35.75
	High	5230	39.76	35.75
802.11 ac80	Middle	5210	82.4	75.03

Note: the 99% Occupied Bandwidth have not fall into the band 5250-5350MHz and 5470-5725MHz, please refer to the test plots of 99% Occupied Bandwidth.

5725-5850MHz:

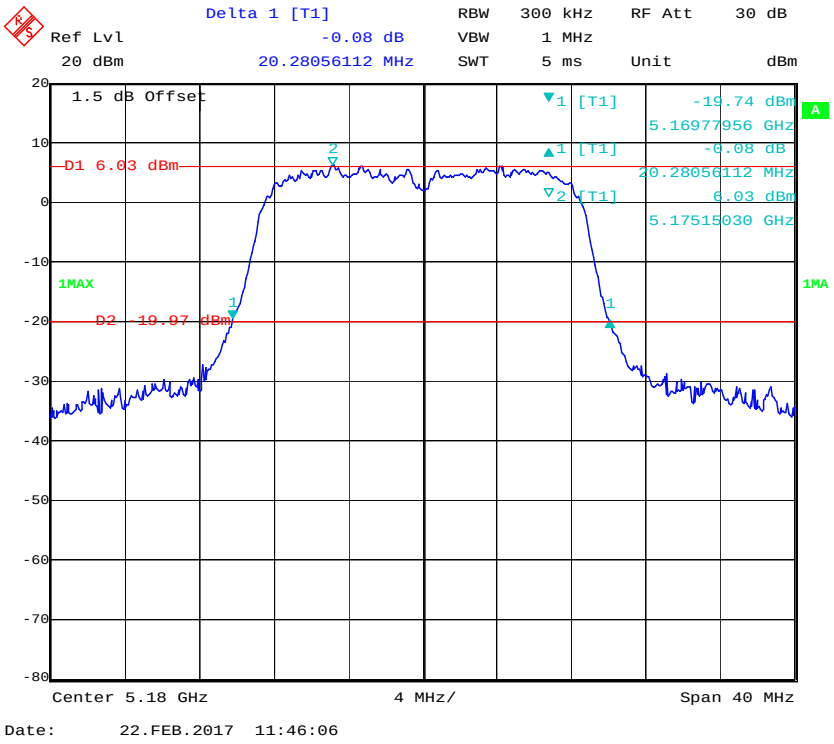
Mode	Channel	Frequency (MHz)	26 dB Emission Bandwidth (MHz)
802.11 a	Low	5745	28.94
	Middle	5785	31.34
	High	5825	31.34
802.11n ht20	Low	5745	27.66
	Middle	5785	28.3
	High	5825	29.9
802.11n ht40	Low	5755	48.9
	High	5795	42.16
802.11 ac80	Middle	5775	117.03

Note: For 5725-5850MHz band, 26dB bandwidth have not fall into the band 5470-5725MHz.

Mode	Channel	Frequency (MHz)	6 dB Emission Bandwidth (MHz)	Result
802.11 a	Low	5745	16.43	PASS
	Middle	5785	16.35	PASS
	High	5825	16.43	PASS
802.11n ht20	Low	5745	17.15	PASS
	Middle	5785	17.23	PASS
	High	5825	17.15	PASS
802.11n ht40	Low	5755	35.59	PASS
	High	5795	35.75	PASS
802.11 ac80	Middle	5775	76.31	PASS

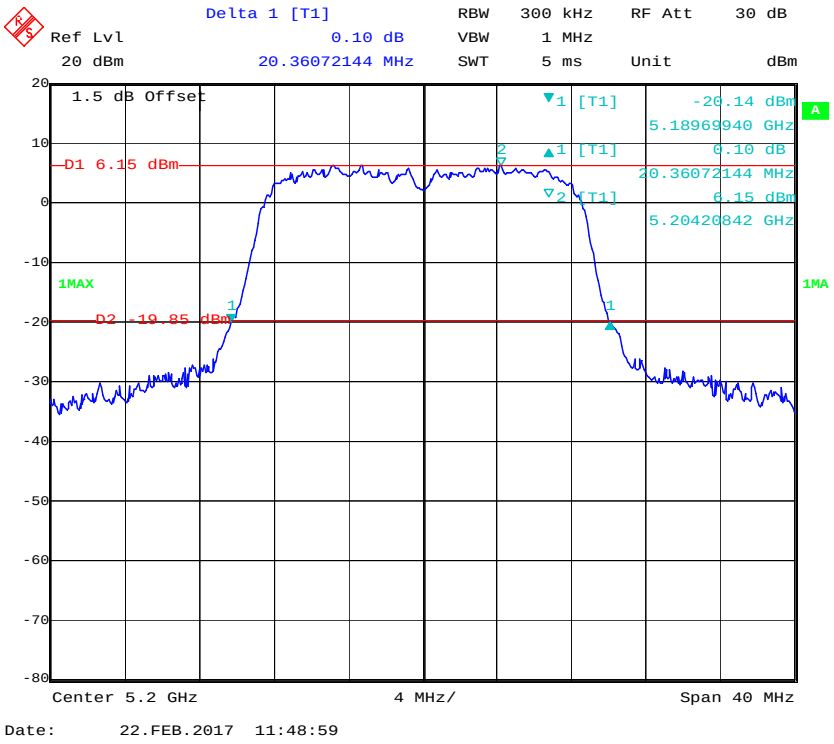
5150-5250MHz: 26dB Emission Bandwidth:

802.11a Low Channel



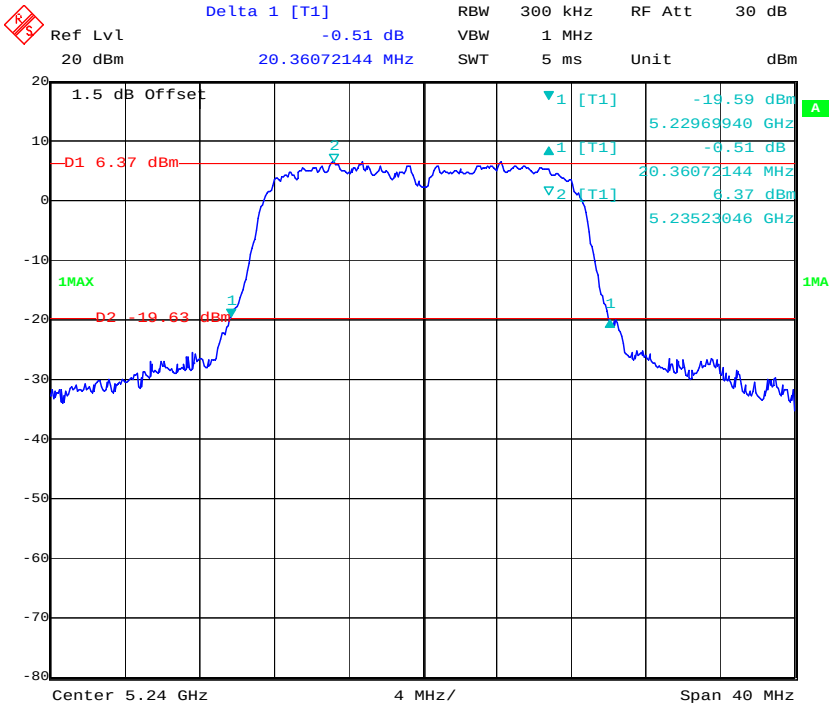
Date: 22.FEB.2017 11:46:06

802.11a Middle Channel



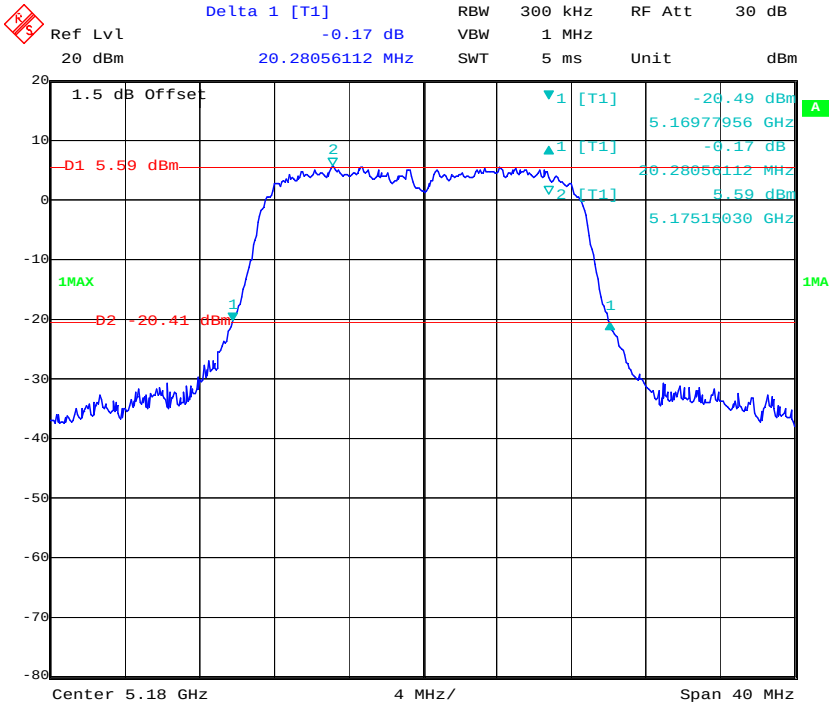
Date: 22.FEB.2017 11:48:59

802.11a High Channel



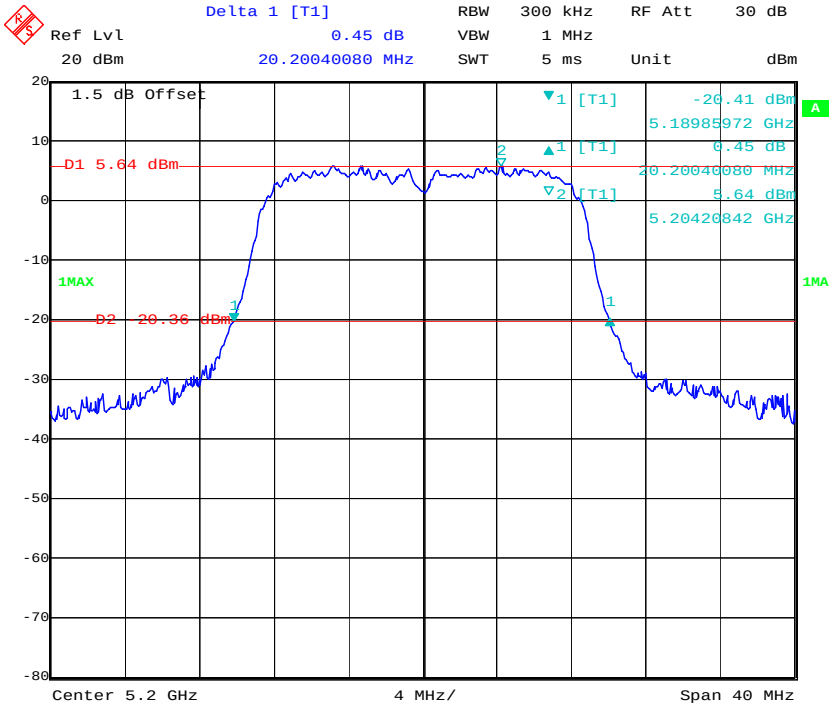
Date: 22.FEB.2017 11:51:15

802.11n ht20 Low Channel



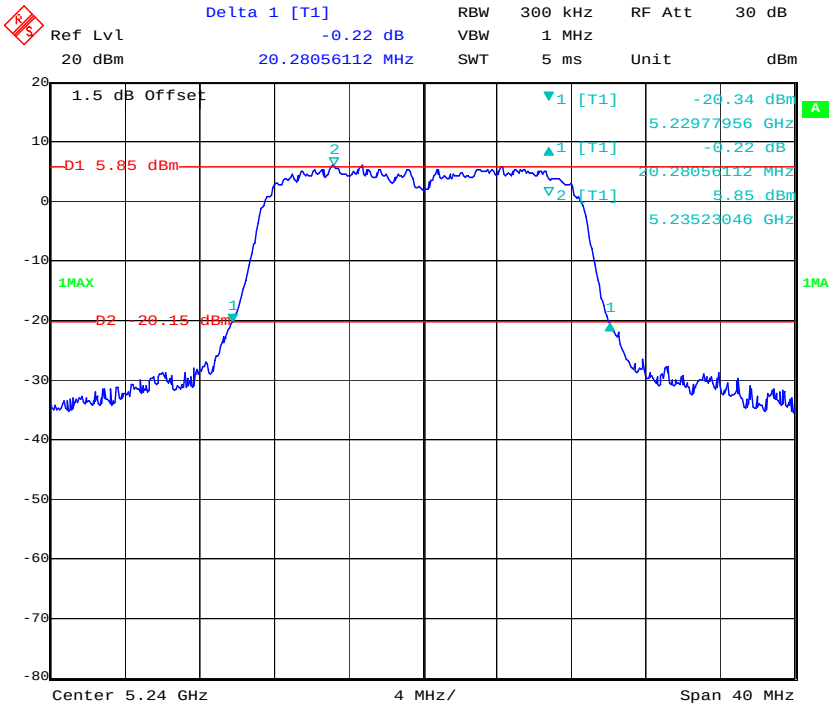
Date: 22.FEB.2017 11:34:03

802.11n ht20 Middle Channel



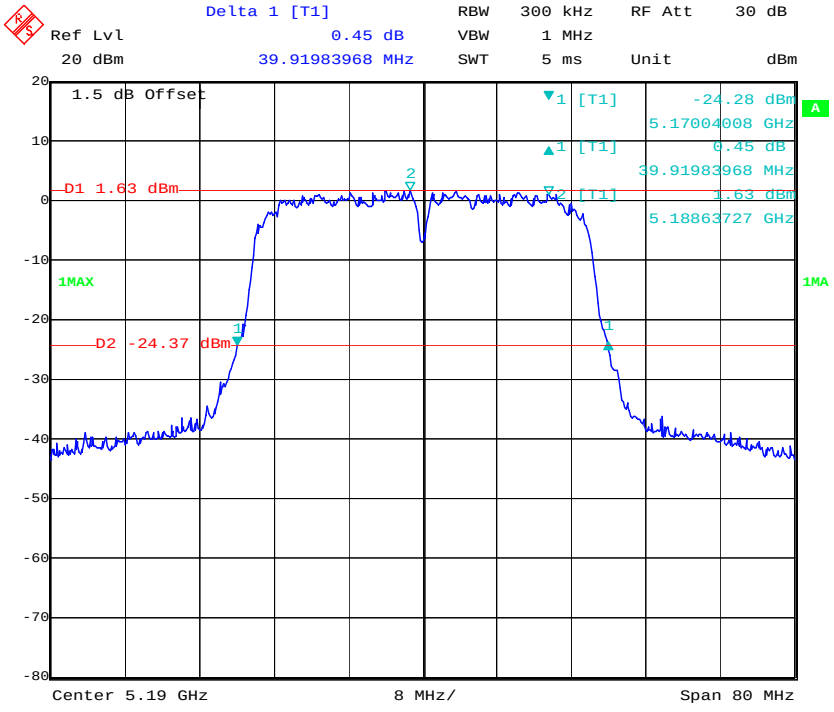
Date: 22.FEB.2017 11:37:39

802.11n ht20 High Channel



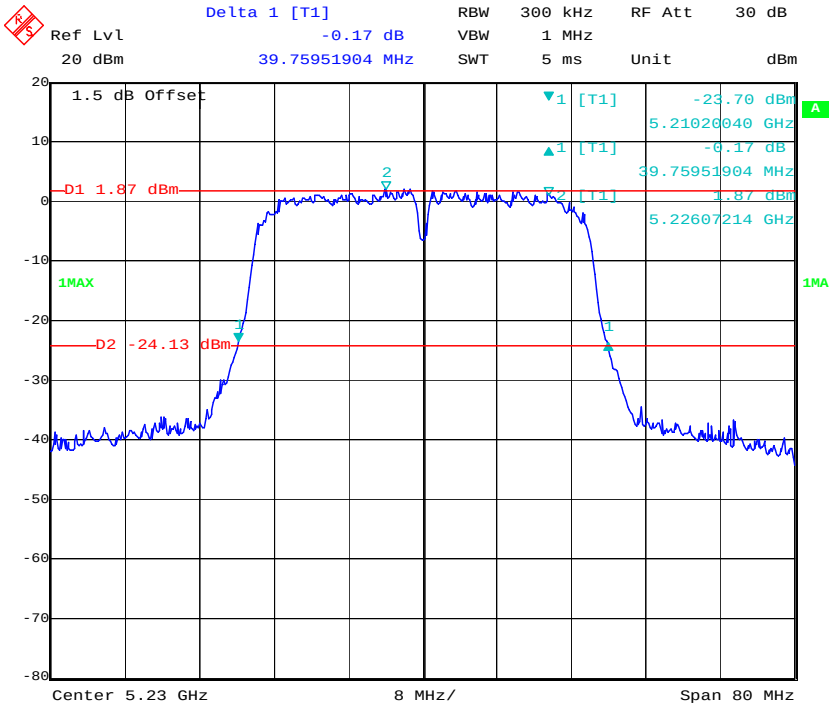
Date: 22.FEB.2017 11:40:33

802.11n ht40 Low Channel



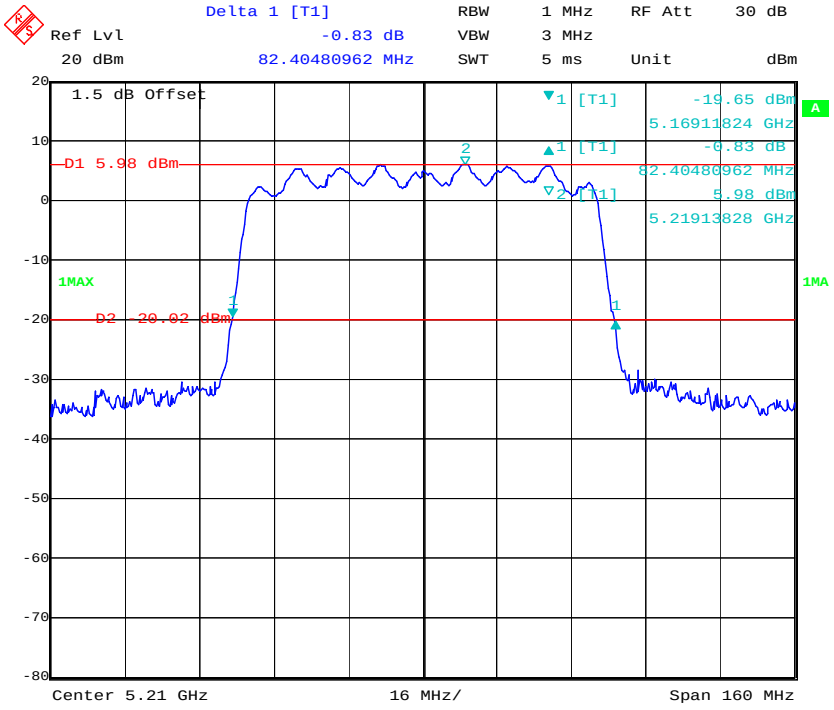
Date: 22.FEB.2017 11:23:56

802.11n ht40 High Channel



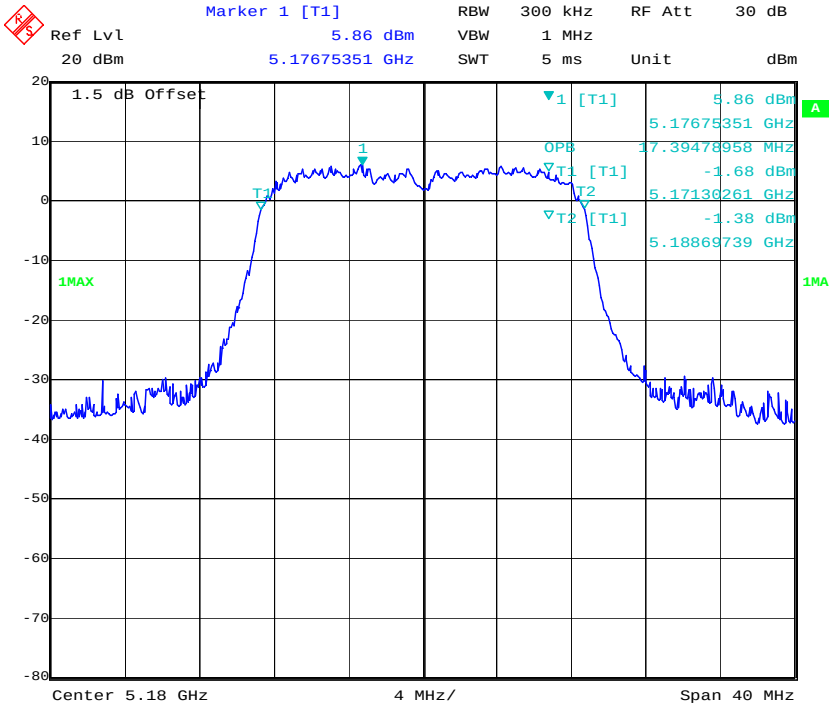
Date: 22.FEB.2017 11:28:34

802.11ac80 Middle Channel

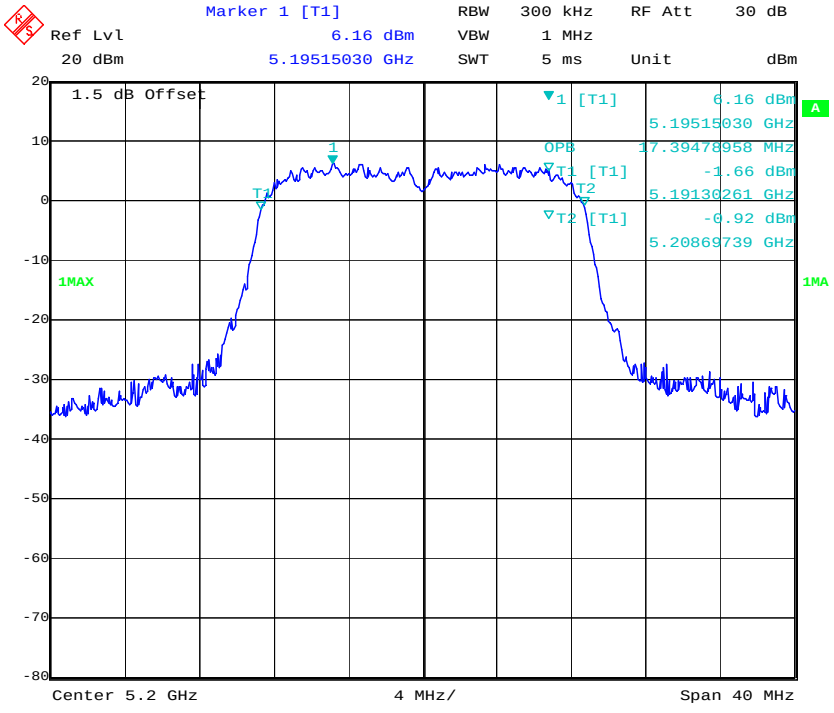


99% Occupied Bandwidth

802.11a Low Channel

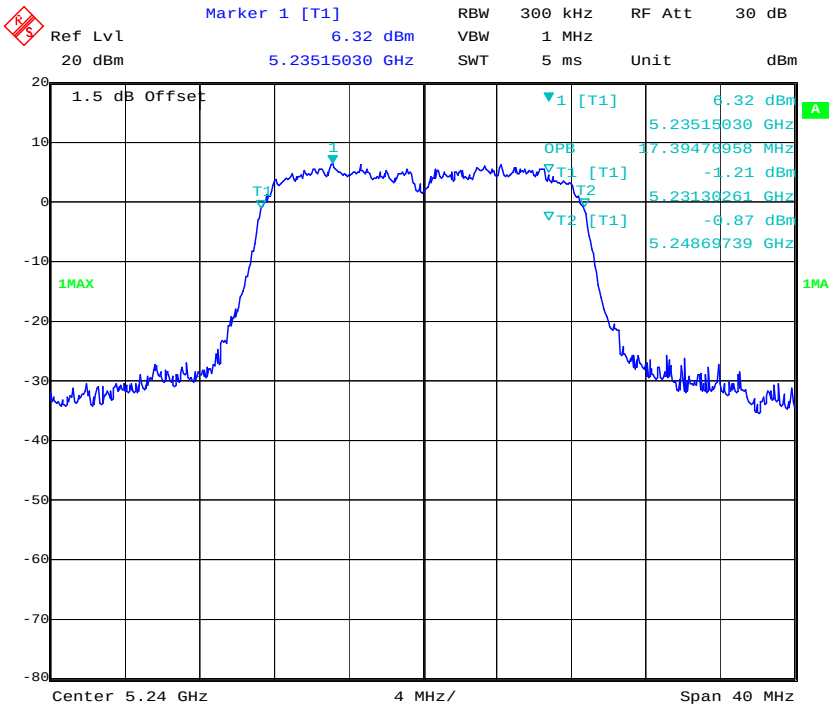


802.11a Middle Channel



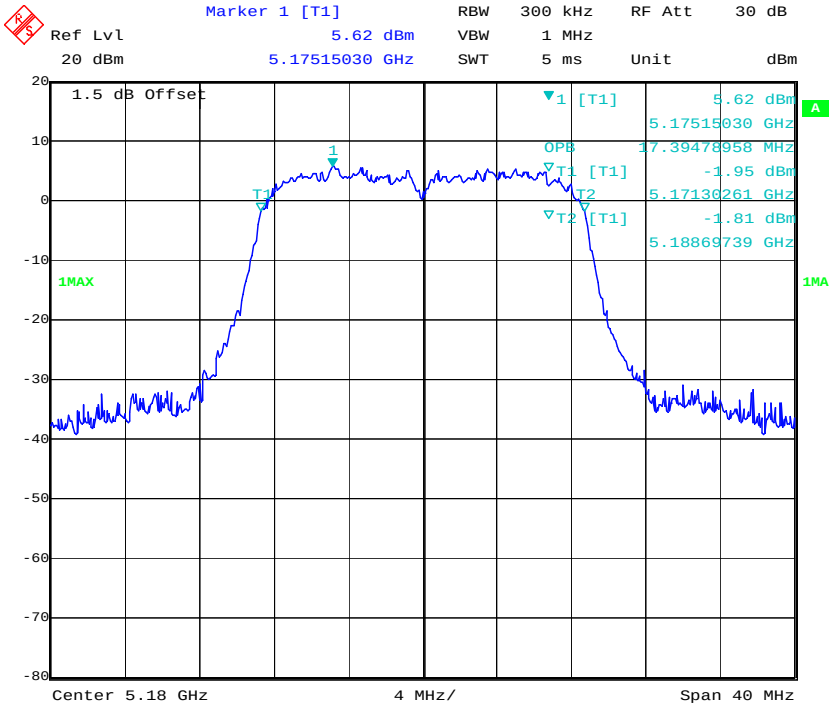
Date: 22.FEB.2017 11:49:15

802.11a High Channel



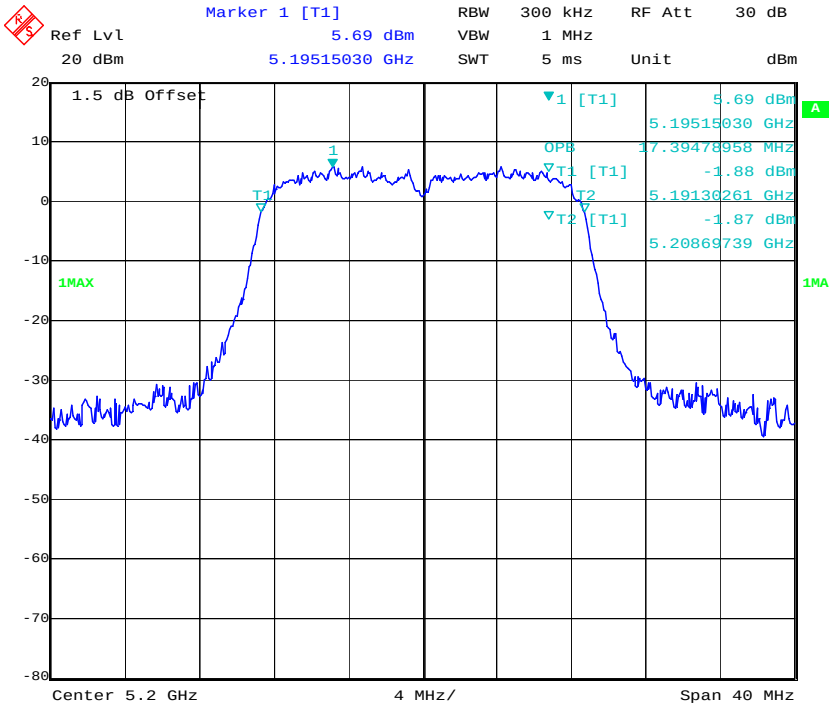
Date: 22.FEB.2017 11:51:30

802.11n ht20 Low Channel



Date: 22.FEB.2017 11:34:18

802.11n ht20 Middle Channel



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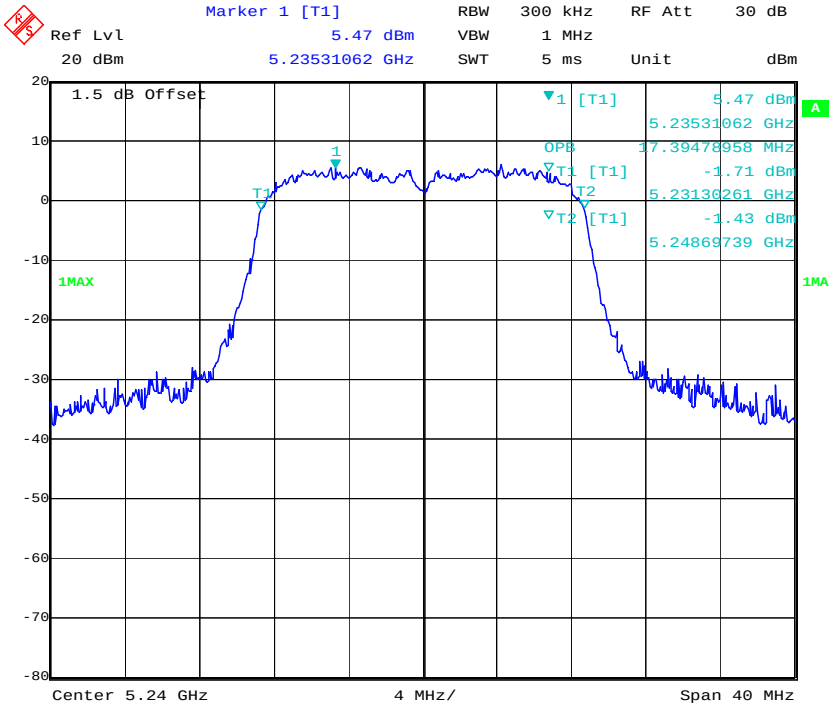
802.11n ht20 High Channel



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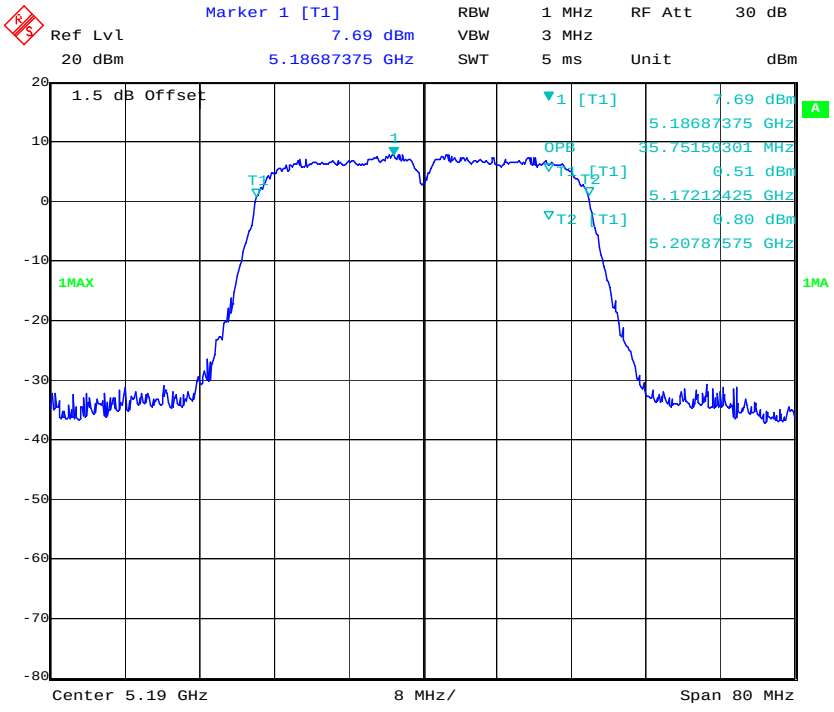
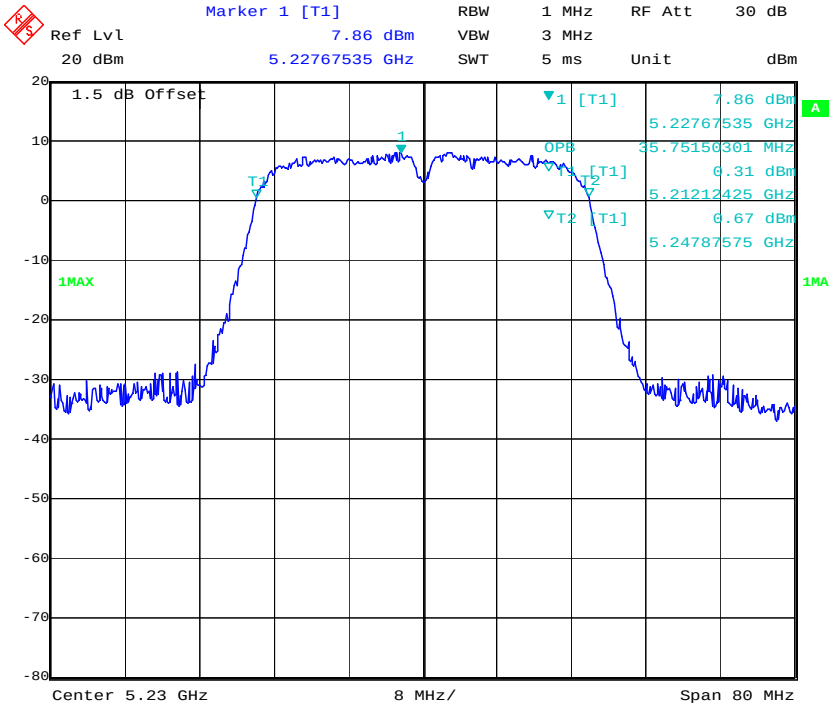
802.11n ht40 Low Channel



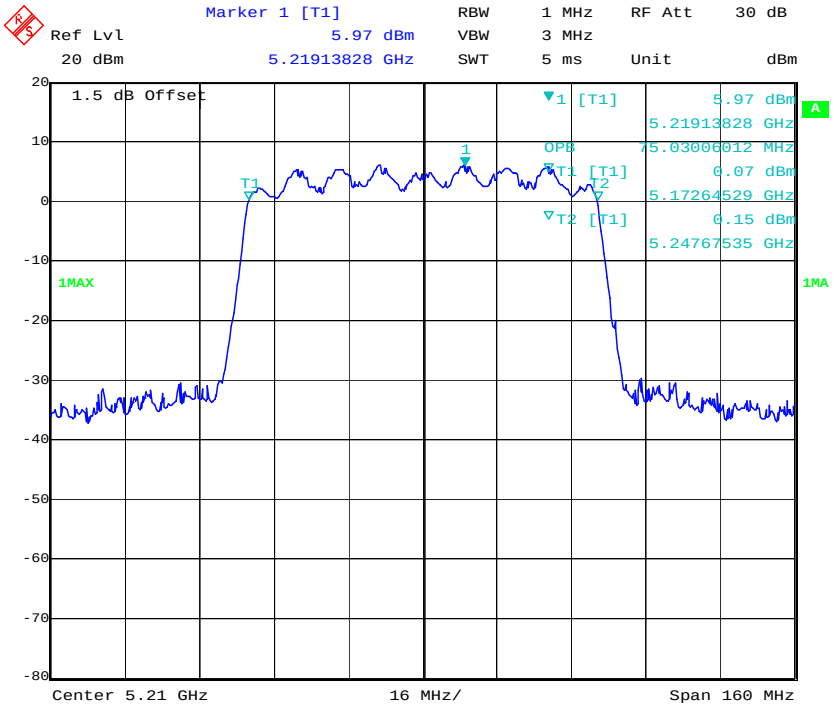
Date: 22.FEB.2017 11:24:12

802.11n ht40 High Channel



Date: 22.FEB.2017 11:28:50

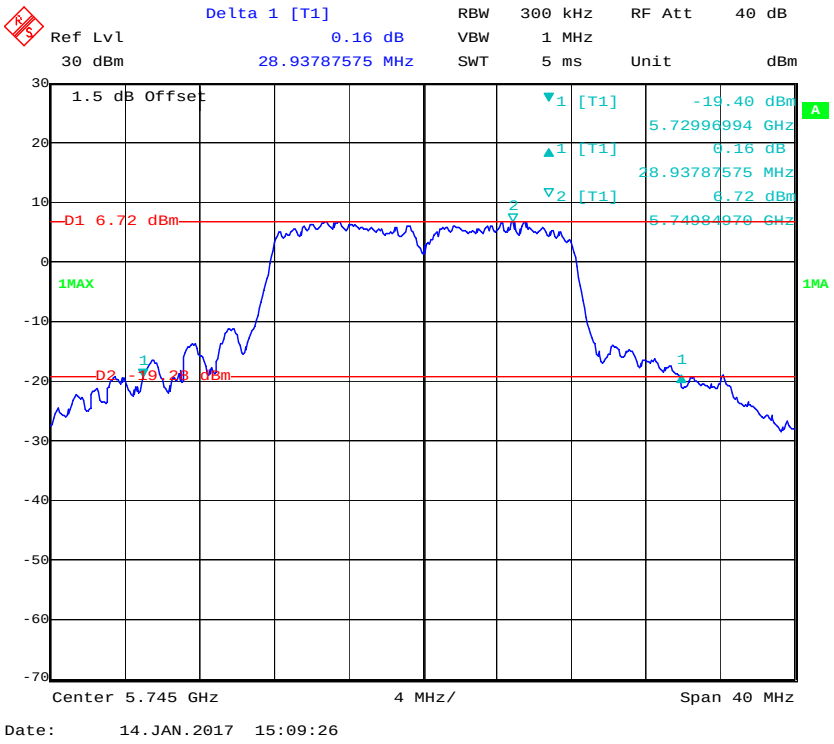
802.11ac80 Middle Channel



Date: 22.FEB.2017 16:53:08

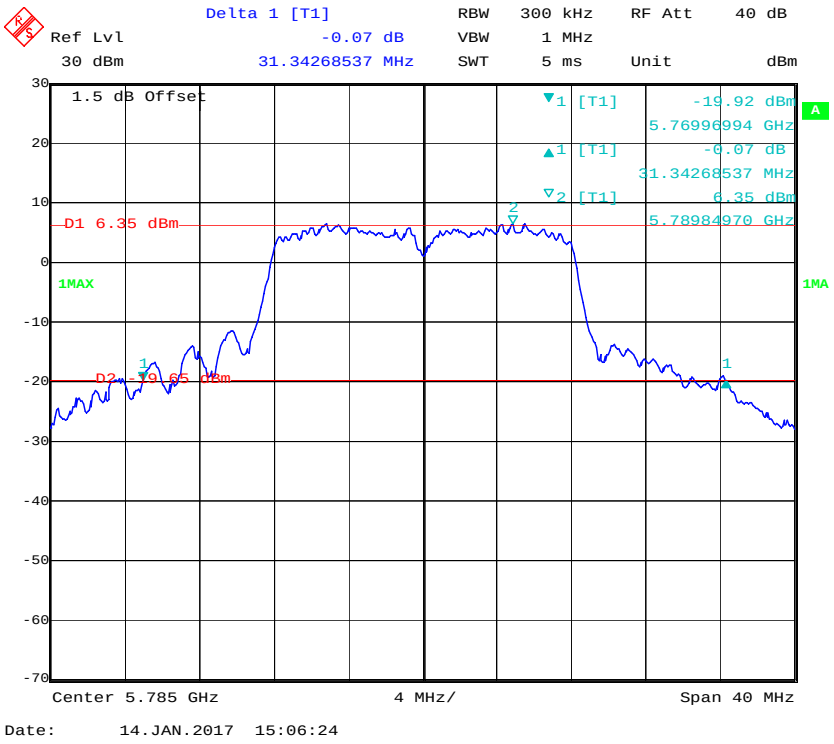
5725-5850MHz:26dB bandwidth

802.11a Low Channel



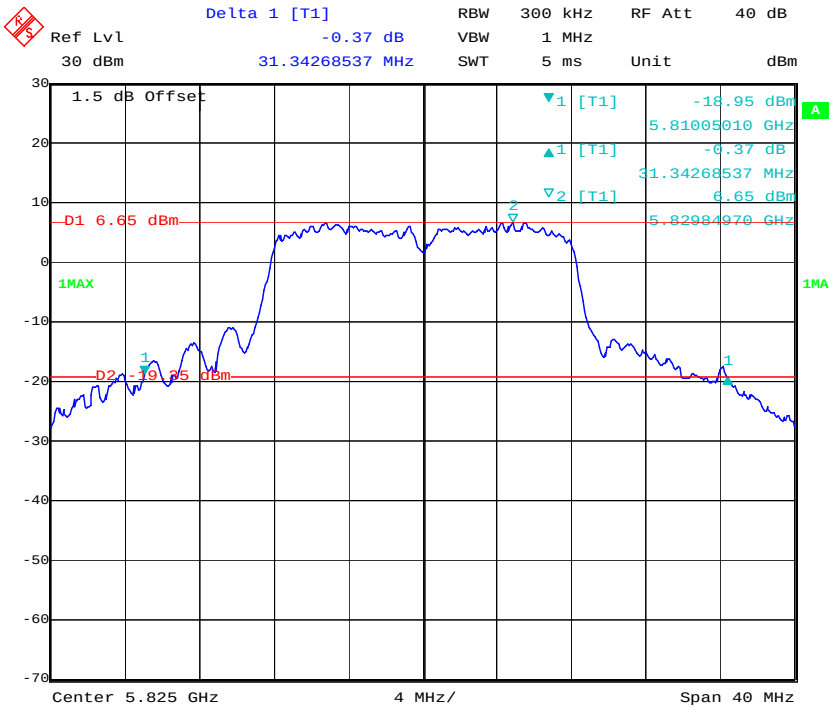
Date: 14.JAN.2017 15:09:26

802.11a Middle Channel

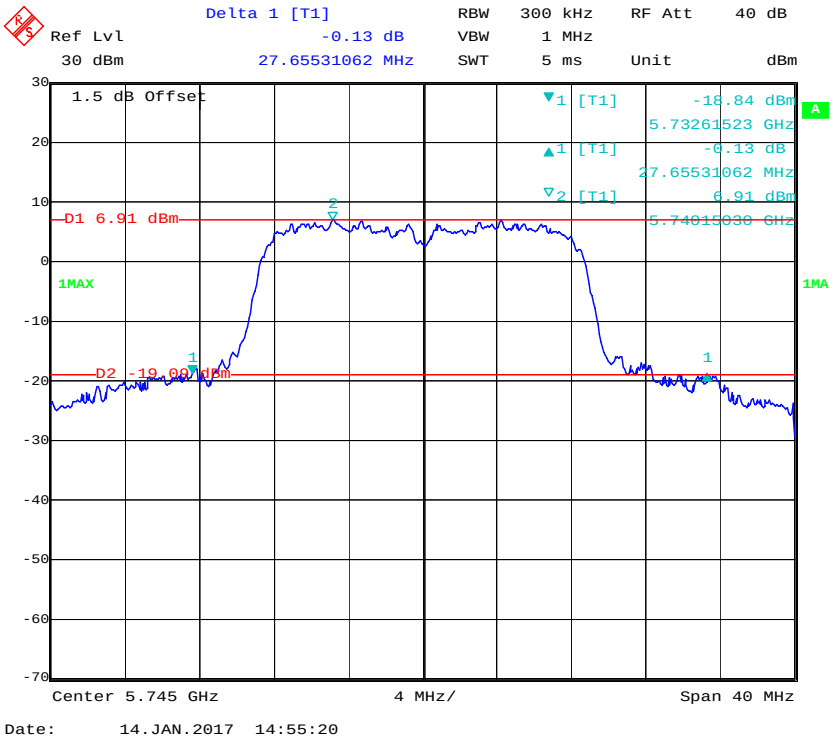


Date: 14.JAN.2017 15:06:24

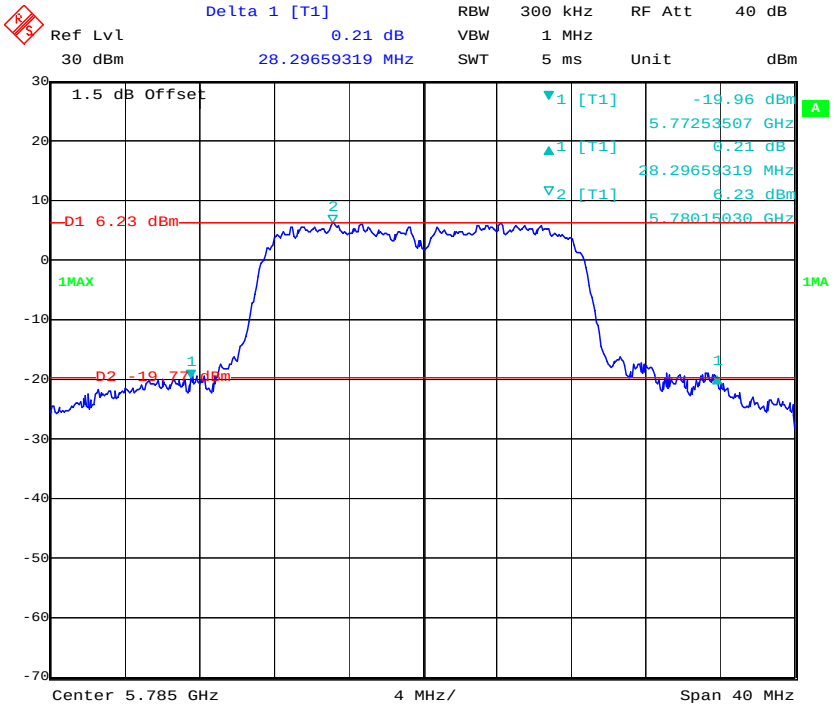
802.11a High Channel



802.11n ht20 Low Channel

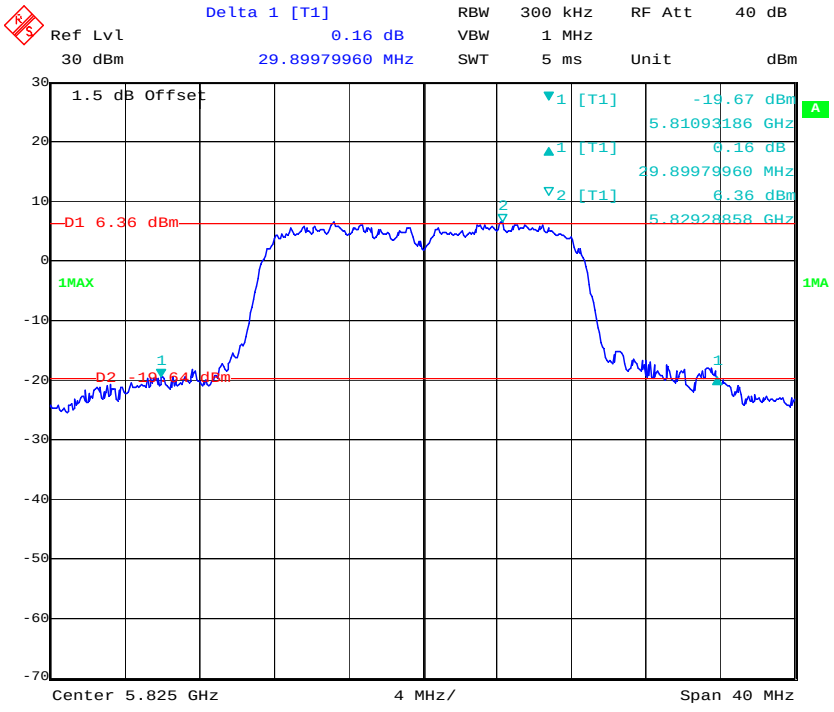


802.11n ht20 Middle Channel



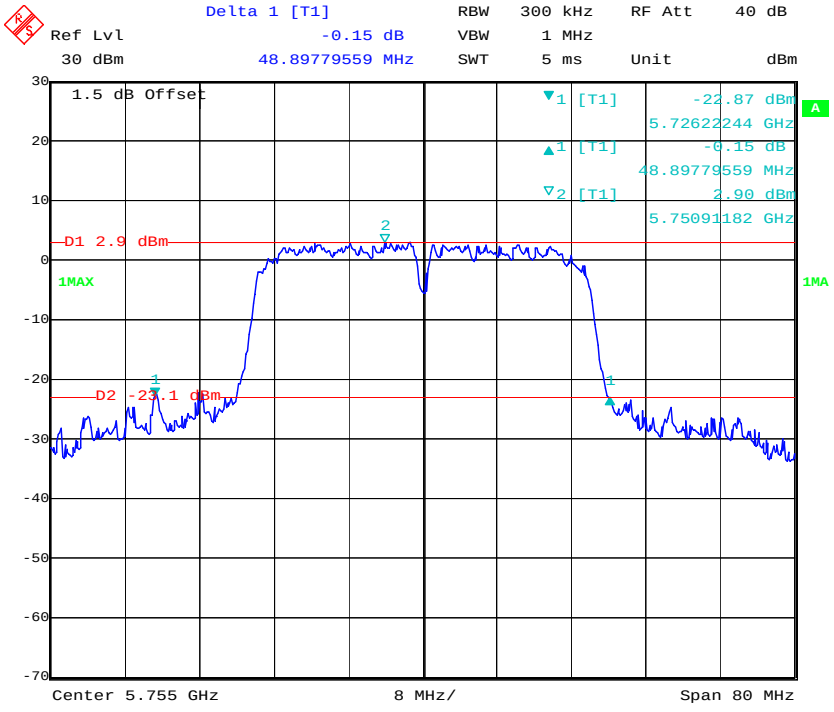
Date: 14.JAN.2017 14:57:55

802.11n ht20 High Channel



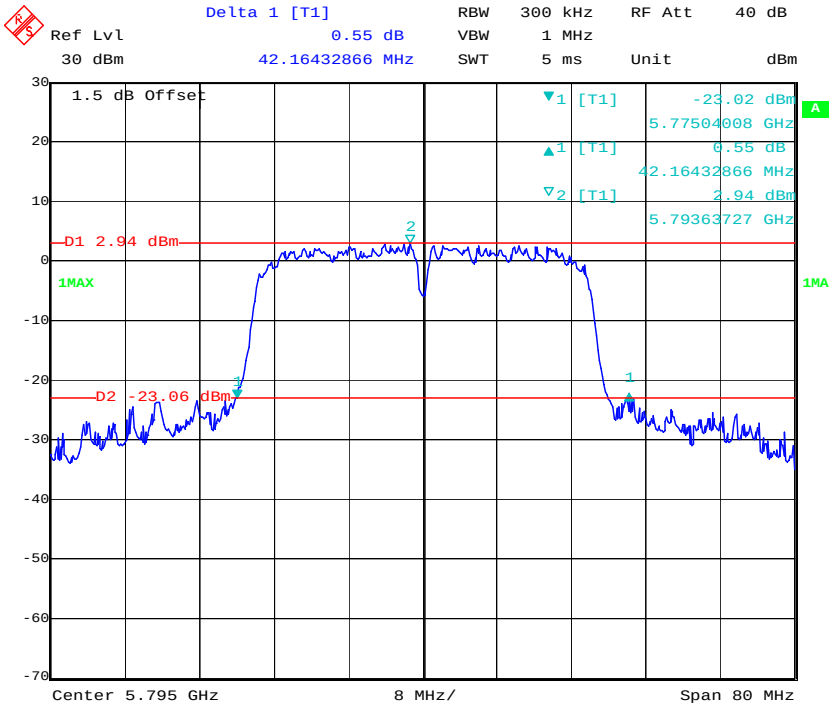
Date: 14.JAN.2017 15:00:29

802.11n ht40 Low Channel



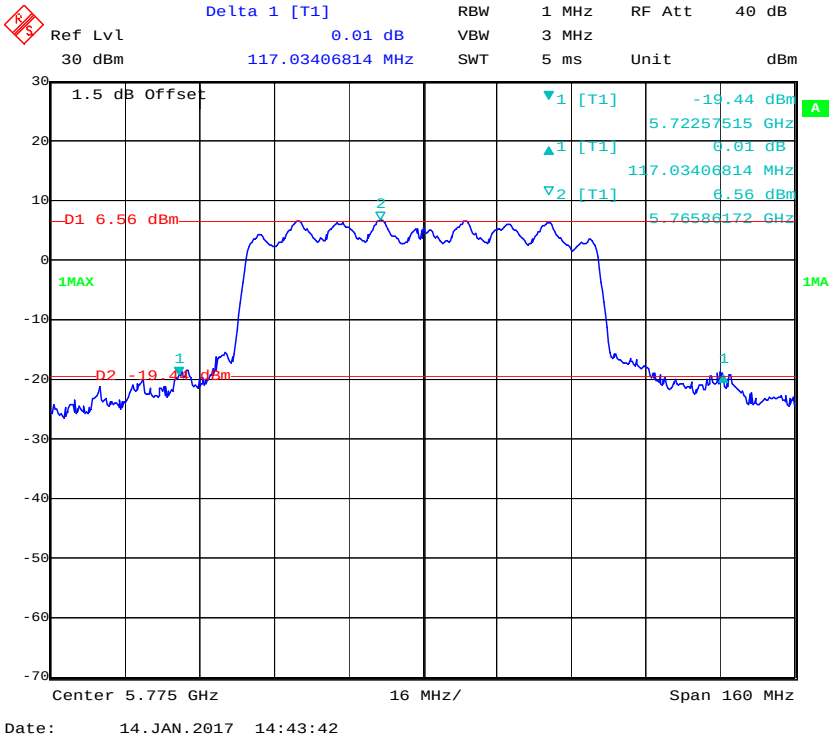
Date: 14.JAN.2017 14:52:51

802.11n ht40 High Channel



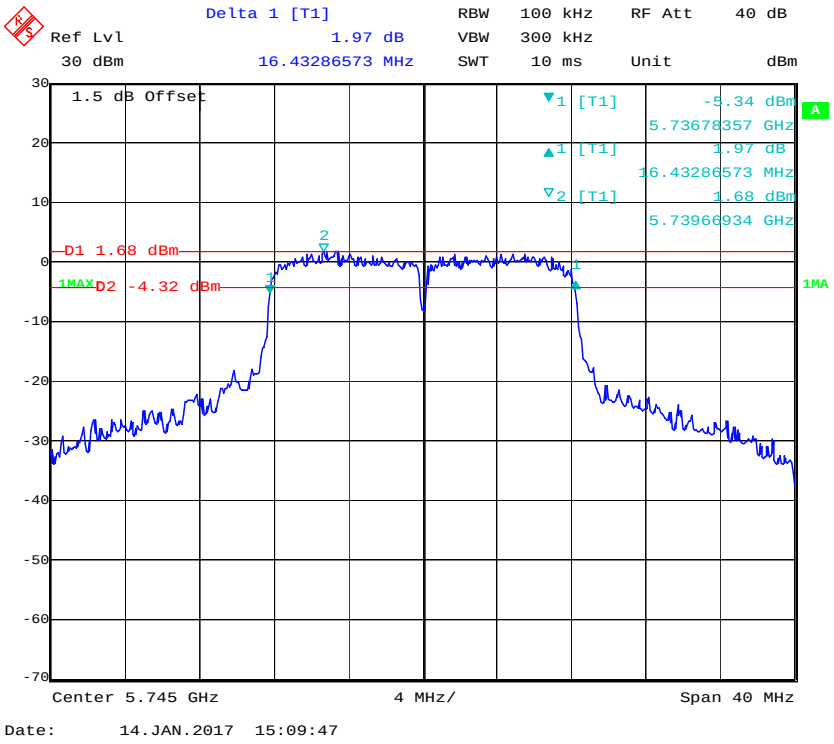
Date: 14.JAN.2017 14:50:45

802.11ac80 Middle Channel

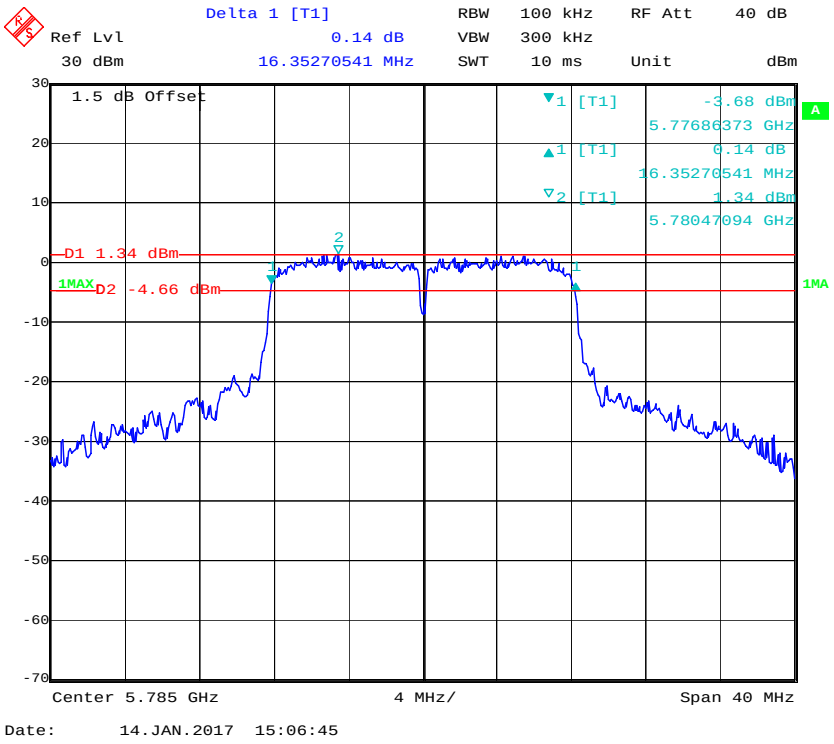


6dB Bandwidth:

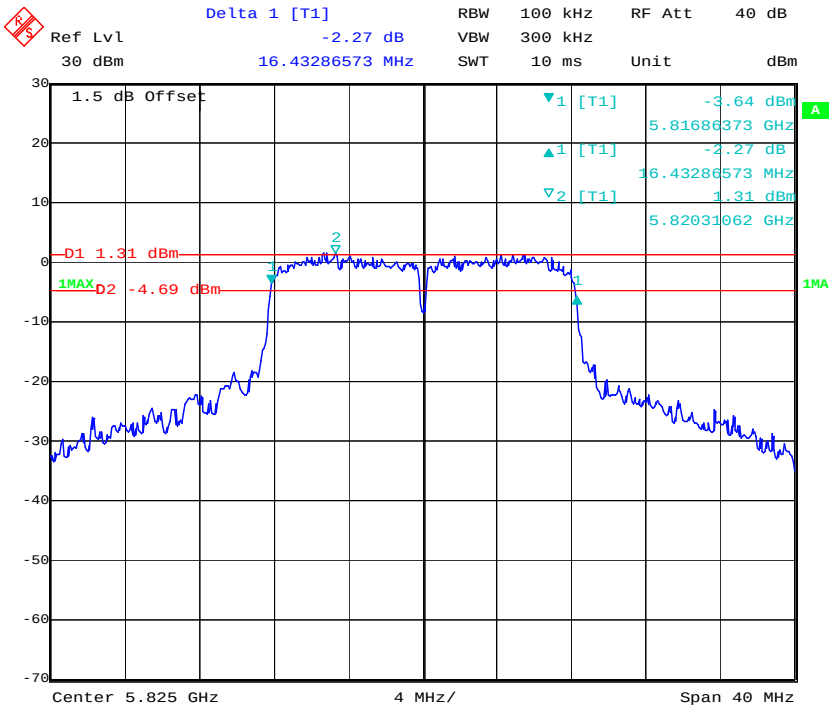
802.11a Low Channel



802.11a Middle Channel

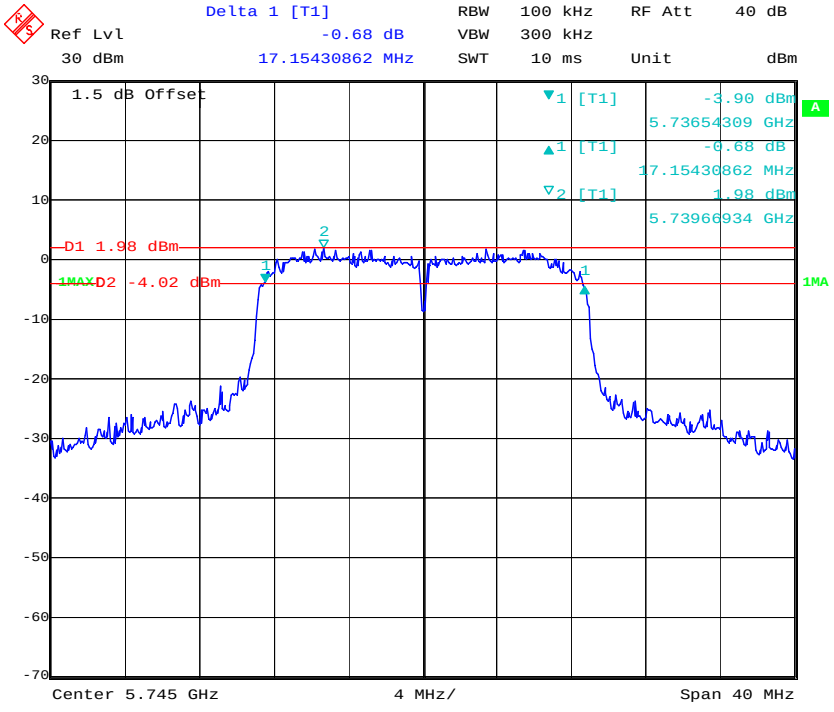


802.11a High Channel



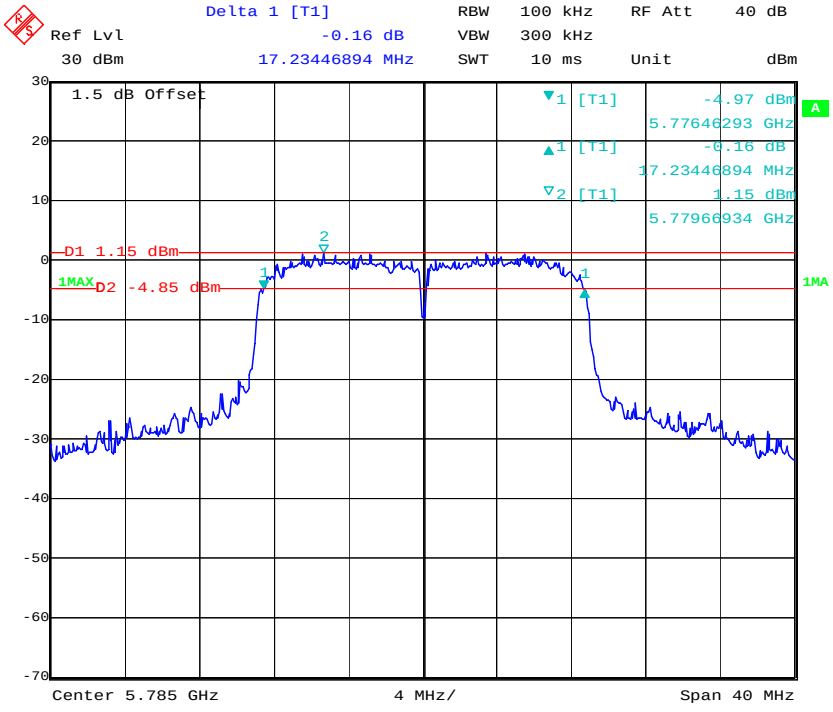
Date: 14.JAN.2017 15:03:42

802.11n ht20 Low Channel



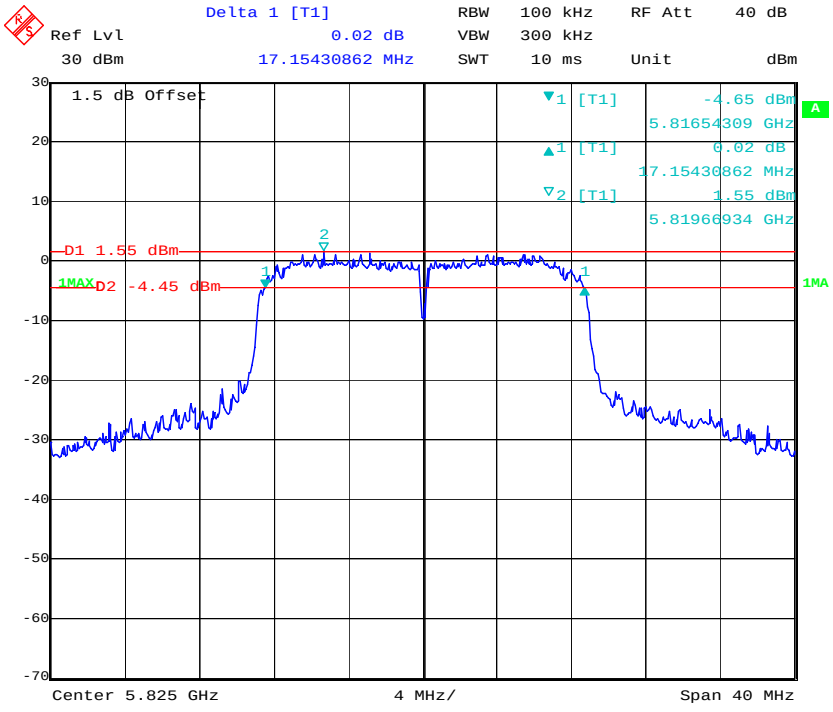
Date: 14.JAN.2017 14:55:40

802.11n ht20 Middle Channel



Date: 14.JAN.2017 14:58:18

802.11n ht20 High Channel



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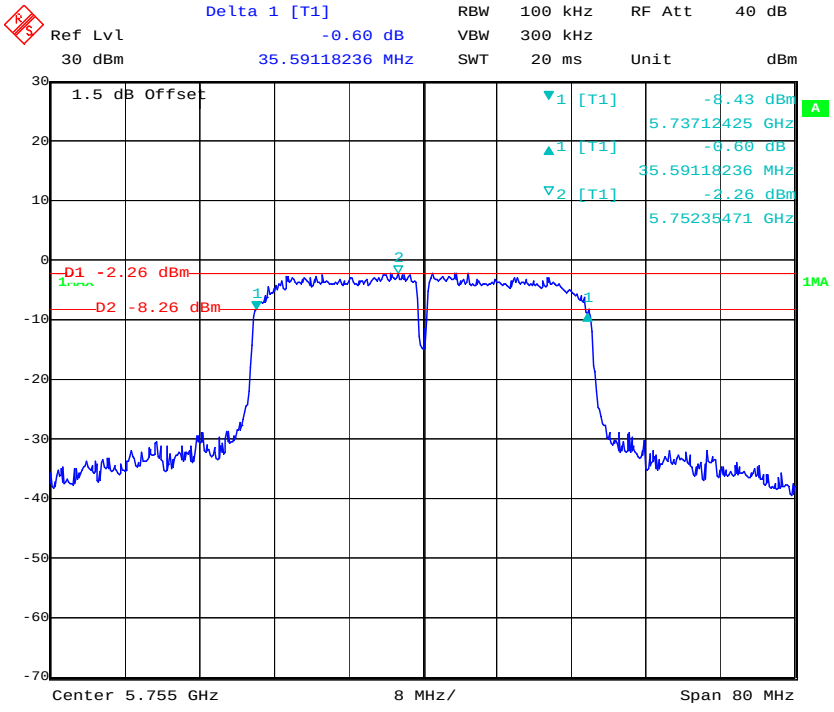
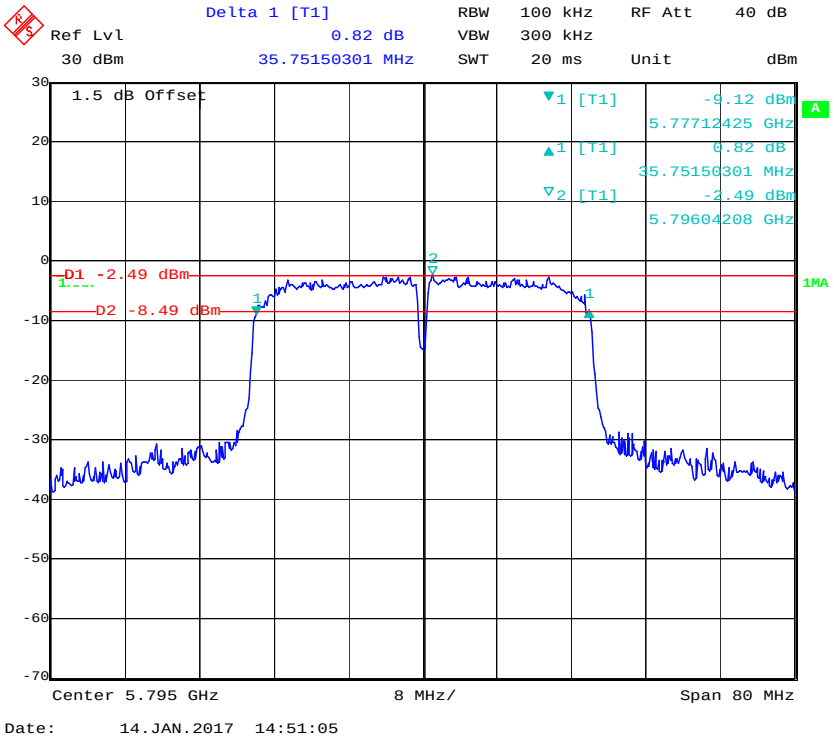
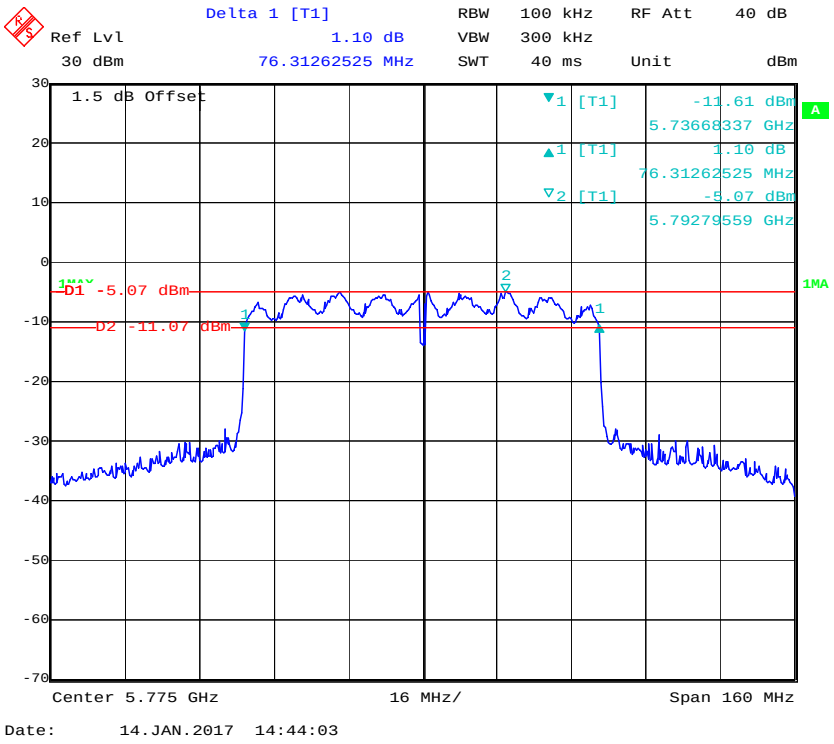
802.11n ht40 Low Channel



802.11n ht40 High Channel



802.11n ac80 Middle Channel



FCC §15.407(g)–FREQUENCY STABILITY

Applicable Standard

FCC §15.407(g)

(g) Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.

Test Procedure

According to KDB 789033 D02 General UNII Test Procedures New Rules v01r03

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ26	831929/005	2016-09-21	2017-09-20
N/A	RF Cable	N/A	N/A	Each Time	/
FLUKE	Multimeter	1587	27870099	2016-12-30	2017-12-29
BACL	High Temperature Test Chamber	BTH-150	30024	2016-12-02	2017-12-01

*** Statement of Traceability:** BACL (Chengdu) attested that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data

Environmental Conditions

Temperature:	26.3 °C
Relative Humidity:	39 %
ATM Pressure:	95.5 kPa

The testing was performed by Tom Tang from 2017-01-14 to 2017-02-23.

Test Result: Pass.

Un-modulation, channel 5180MHz			
Temperature	**Voltage**	**Measured Frequency**	**Result**
℃	**V_{DC}**	**MHz**	
-20	5	5180.001	Pass
-10		5180.006	
10		5180.004	
20		5180.002	
30		5180.002	
40		5180.004	

Un-modulation, channel 5745MHz			
Temperature	**Voltage**	**Measured Frequency**	**Result**
℃	**V_{DC}**	**MHz**	
-20	5	5745.002	Pass
-10		5745.006	
10		5745.010	
20		5745.002	
30		5745.002	
40		5745.012	

Note: the frequency stability range plus the operation bandwidth edge within the operation band.

FCC §15.407(a) –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	MY54170074	2017-01-03	2018-01-03
Agilent	P-Series Power Meter	N1912A	MY5000798	2017-01-03	2018-01-03
N/A	RF Cable	N/A	N/A	Each Time	/

*** Statement of Traceability:** BACL (Chengdu) attested 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 v01r03

Test Data

Environmental Conditions

Temperature:	24.6~25 °C
Relative Humidity:	32~35 %
ATM Pressure:	95.6~95.8 kPa

The testing was performed by Tom Tang from 2017-01-14 to 2017-02-23.

Test Mode: Transmitting

1TX:

UNII Band	Mode	Channel	Frequency (MHz)	RMS Channel Power (dBm)			Limit (dBm)	Result
				Chain 0	Chain 1	Chain 2		
5150-5250MHz	802.11 a	Low	5180	15.52	17.31	17.36	24	PASS
		Middle	5200	15.7	17.75	18.22	24	PASS
		High	5240	15.86	17.89	18.27	24	PASS
	802.11n ht20	Low	5180	15.09	15.62	15.74	24	PASS
		Middle	5200	15.18	17.73	17.71	24	PASS
		High	5240	15.34	18.25	18.61	24	PASS
	802.11n ht40	Low	5190	14.16	15	14.95	24	PASS
		High	5230	14.39	15.61	15.35	24	PASS
	802.11 ac80	Middle	5210	14.68	13.66	14.62	24	PASS
5725-5850MHz	802.11 a	Low	5745	16.09	15.28	16.34	30	PASS
		Middle	5785	15.65	15.22	16.3	30	PASS
		High	5825	15.84	15.68	16.72	30	PASS
	802.11n ht20	Low	5745	16.21	15.2	16.41	30	PASS
		Middle	5785	15.61	15.1	16.14	30	PASS
		High	5825	15.7	15.61	16.53	30	PASS
	802.11n ht40	Low	5755	15.4	14.49	15.56	30	PASS
		High	5795	15.06	14.63	15.97	30	PASS
	802.11 ac80	Middle	5775	14.98	14.53	16.01	30	PASS

2TX:

UNII Band	Mode	Channel	Frequency (MHz)	RMS Channel Power (dBm)		Total (dBm)	Limit (dBm)	Result
				Chain 0	Chain 1			
5150-5250MHz	802.11n ht20	Low	5180	14.97	14.64	17.82	24	PASS
		Middle	5200	15.44	15.73	18.6	24	PASS
		High	5240	15.7	15.44	18.58	24	PASS
	802.11n ht40	Low	5190	13.5	13.79	16.66	24	PASS
		High	5230	13.86	13.89	16.89	24	PASS
	802.11 ac80	Middle	5210	13.19	12.57	15.9	24	PASS
5725-5850MHz	802.11n ht20	Low	5745	18.16	17.24	20.73	30	PASS
		Middle	5785	17.3	17.48	20.4	30	PASS
		High	5825	17.07	18.17	20.67	30	PASS
	802.11n ht40	Low	5755	15.87	14.45	18.23	30	PASS
		High	5795	14.02	14.74	17.41	30	PASS
	802.11 ac80	Middle	5775	14.07	14.24	17.17	30	PASS

3TX:

UNII Band	Mode	Channel	Frequency (MHz)	RMS Channel Power (dBm)			Total (dBm)	Limit (dBm)	Result
				Chain 0	Chain 1	Chain 2			
5150-5250MHz	802.11n ht20	Low	5180	9.24	10.21	7.8	13.96	24	PASS
		Middle	5200	9.11	10.03	7.11	13.68	24	PASS
		High	5240	9.4	9.48	6.76	13.49	24	PASS
	802.11n ht40	Low	5190	8.07	9.55	6.36	12.96	24	PASS
		High	5230	8.42	8.88	5.79	12.66	24	PASS
	802.11 ac80	Middle	5210	8.14	9.41	6.34	12.91	24	PASS
5725-5850MHz	802.11n ht20	Low	5745	15.58	16.6	16.76	21.12	30	PASS
		Middle	5785	15.01	15.44	16.69	20.54	30	PASS
		High	5825	15.11	15.47	16.47	20.49	30	PASS
	802.11n ht40	Low	5755	14.86	14.56	16.17	20.03	30	PASS
		High	5795	14.53	14.42	16.33	19.96	30	PASS
	802.11 ac80	Middle	5775	14.93	14.37	16.41	20.1	30	PASS

Note: the 3 antenna maximum atenna gains are 4dBi, 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 = 4dBi < 6dBi

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 v01r03

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ26	831929/005	2016-09-21	2017-09-20
N/A	RF Cable	N/A	N/A	Each Time	/

*** Statement of Traceability:** BACL (Chengdu) attested that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data

Environmental Conditions

Temperature:	24.6~25 °C
Relative Humidity:	32~35 %
ATM Pressure:	95.6~95.8 kPa

The testing was performed by Tom Tang from 2017-01-14 to 2017-02-23.

Test Mode: Transmitting

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

5150-5250MHz

1Tx:

Mode	Frequency (MHz)	Power Spectral Density (dBm/MHz)			Limits (dBm/MHz)
		Chain 0	Chain 1	Chain 2	
802.11a	5180	4.68	6.65	6.79	11
	5200	5.06	7.04	7.38	11
	5240	5.13	7.29	7.52	11
802.11n ht20	5180	4.38	4.81	4.95	11
	5200	4.34	7.12	6.89	11
	5240	4.65	7.4	7.8	11
802.11n ht40	5190	0.47	1.14	1.21	11
	5230	0.64	1.82	1.67	11
802.11 ac80	5210	-1.12	0.07	-1.39	11

2Tx:

Mode	Frequency (MHz)	Power Spectral Density (dBm/MHz)		Total (dBm/MHz)	Limits (dBm/MHz)
		Chain 0	Chain 1		
802.11n ht20	5180	3.84	3.77	6.82	10
	5200	4.69	4.83	7.77	10
	5240	4.89	4.43	7.68	10
802.11n ht40	5190	-0.37	0.23	2.95	10
	5230	1.47	0.38	3.97	10
802.11 ac80	5210	-3.01	-3.52	-0.25	10

Note: the 2 antenna maximum atenna gain are 4dBi, 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(NANT/NSS) dB.

So:

Directional gain = GANT + Array Gain = 4+10*log(2) =7 dBi > 6dBi
Power density Limit = 11 – (7-6) = 10dBm

3Tx:

Mode	Frequency (MHz)	Power Spectral Density (dBm/MHz)			Total (dBm/MHz)	Limits (dBm/MHz)
		Chain 0	Chain 1	Chain 2		
802.11n ht20	5180	-2.23	-0.74	-2.98	2.89	8.23
	5200	-1.85	-0.72	-4.15	2.75	8.23
	5240	-1.66	-1.45	-4.13	2.52	8.23
802.11n ht40	5190	-6.09	-3.82	-7.65	-0.79	8.23
	5230	-5.6	-4.31	-7.85	-0.91	8.23
802.11 ac80	5210	-8.07	-7.03	-10.18	-3.47	8.23

Note 2:. the 3 antenna maximum atenna gain are 4dBi, 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:

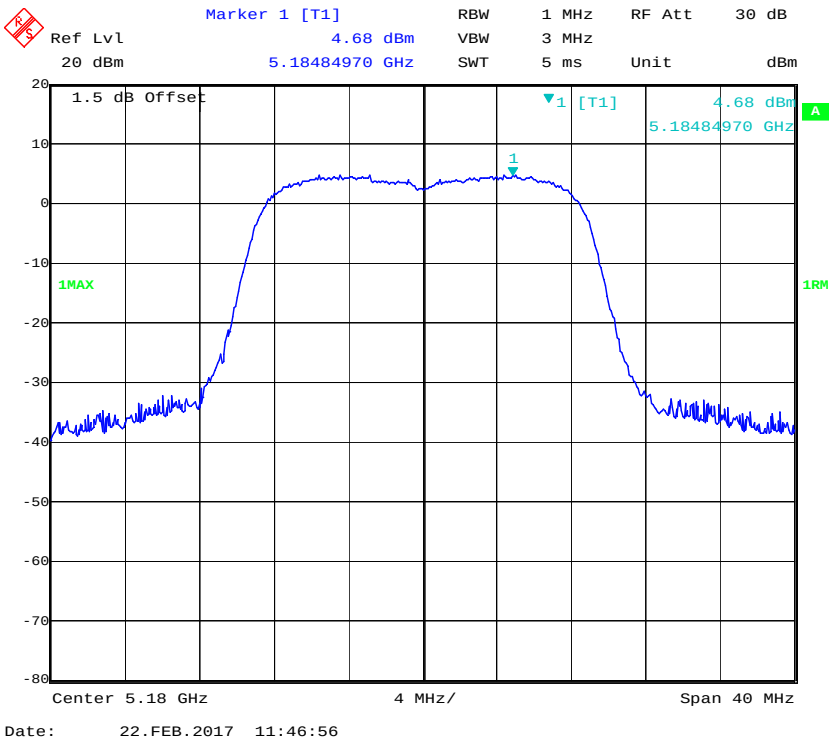
Array Gain = 10 log(NANT/NSS) dB.

So:

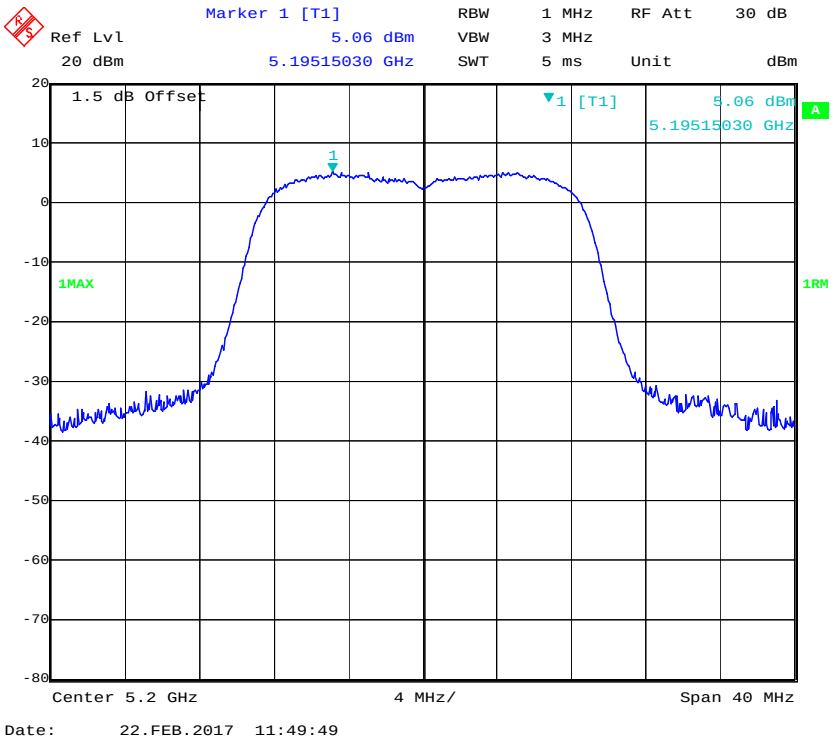
Directional gain = GANT + Array Gain = 4+10*log(3) =8.77 dBi > 6dBi
Power density Limit = 11– (8.77-6) = 8.23dBm

1TX:

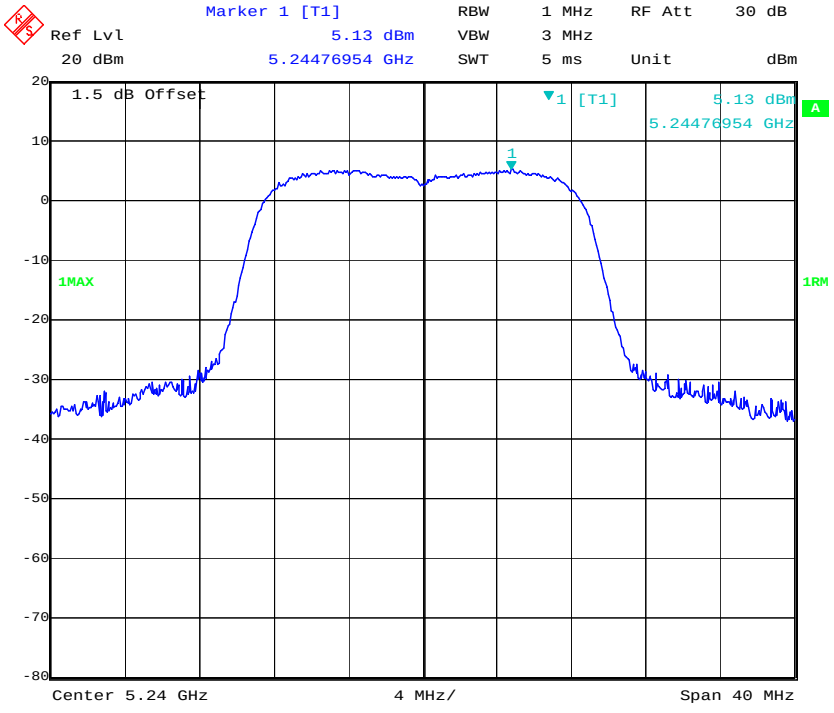
802.11a Low Channel – Chain0



802.11a Middle Channel – Chain0

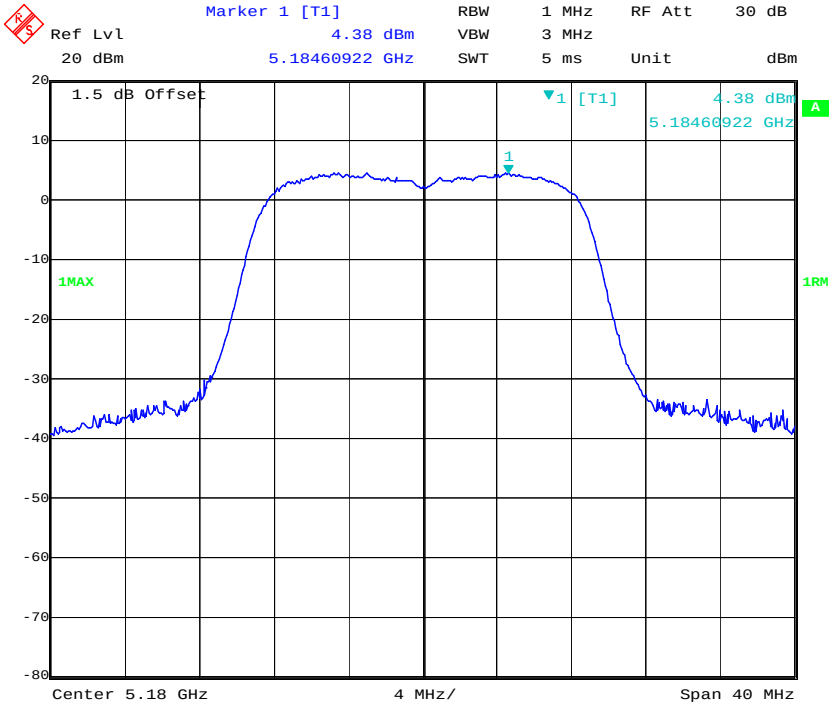


802.11a High Channel – Chain0



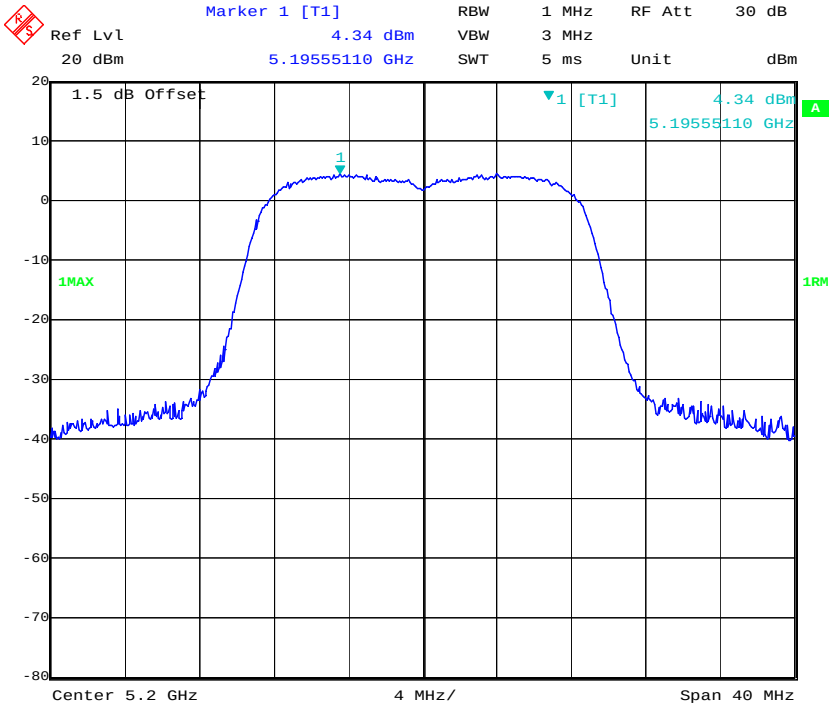
Date: 22.FEB.2017 11:52:06

802.11n ht20 Low Channel – Chain0



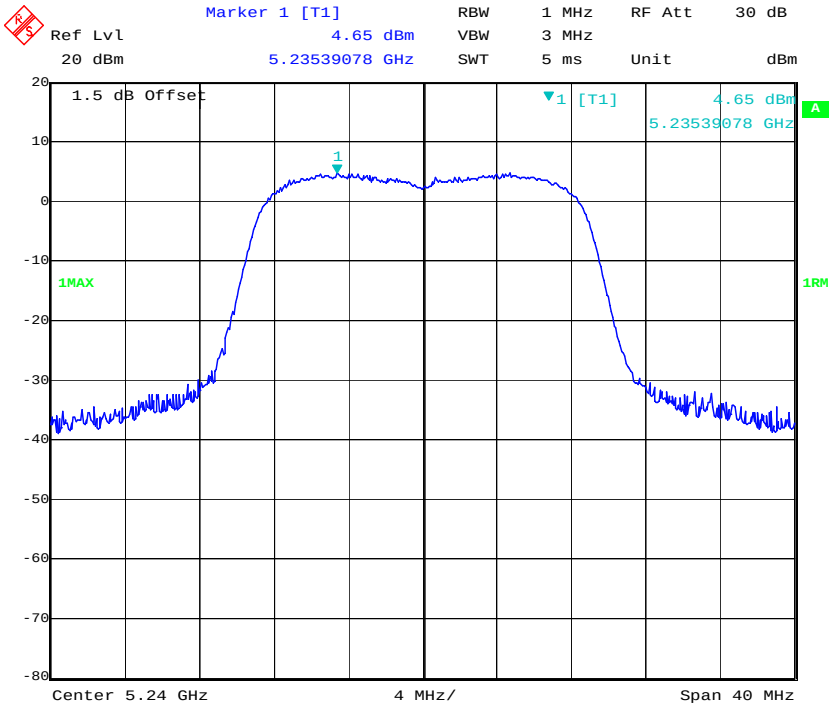
Date: 22.FEB.2017 11:35:00

802.11n ht20 Middle Channel – Chain0



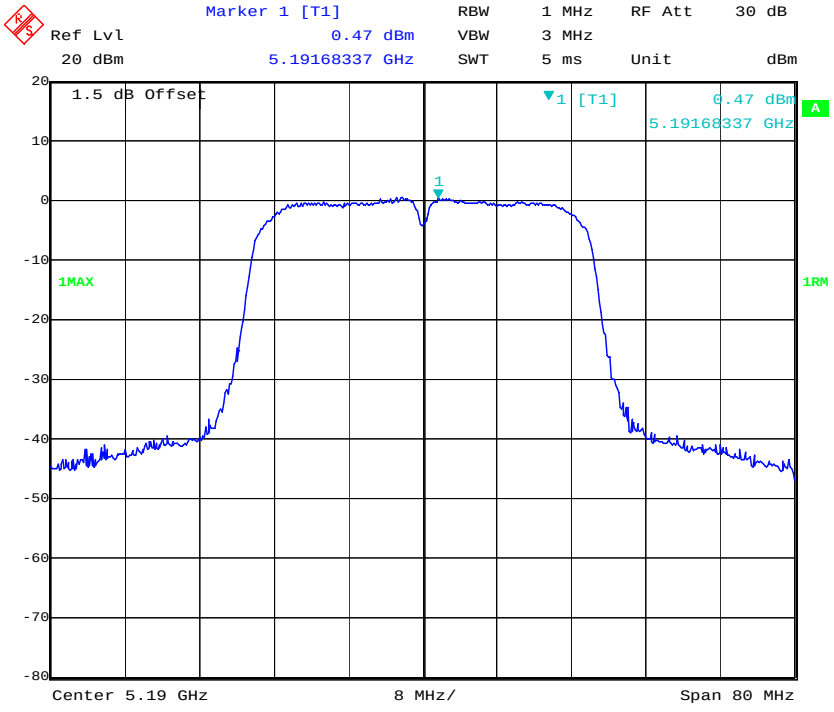
Date: 22.FEB.2017 11:38:31

802.11n ht20 High Channel – Chain0



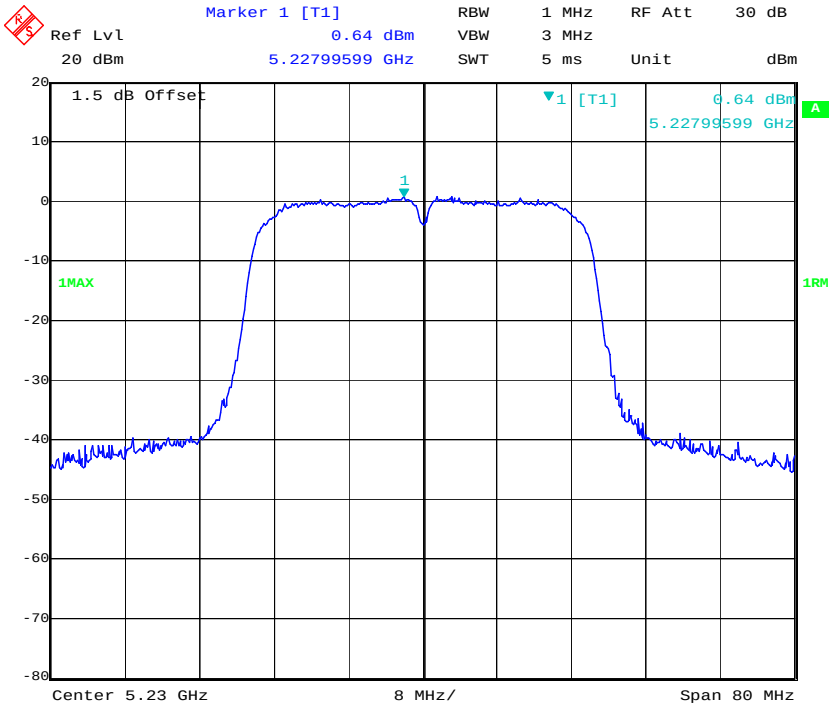
Date: 22.FEB.2017 11:41:23

802.11n ht40 Low Channel – Chain0



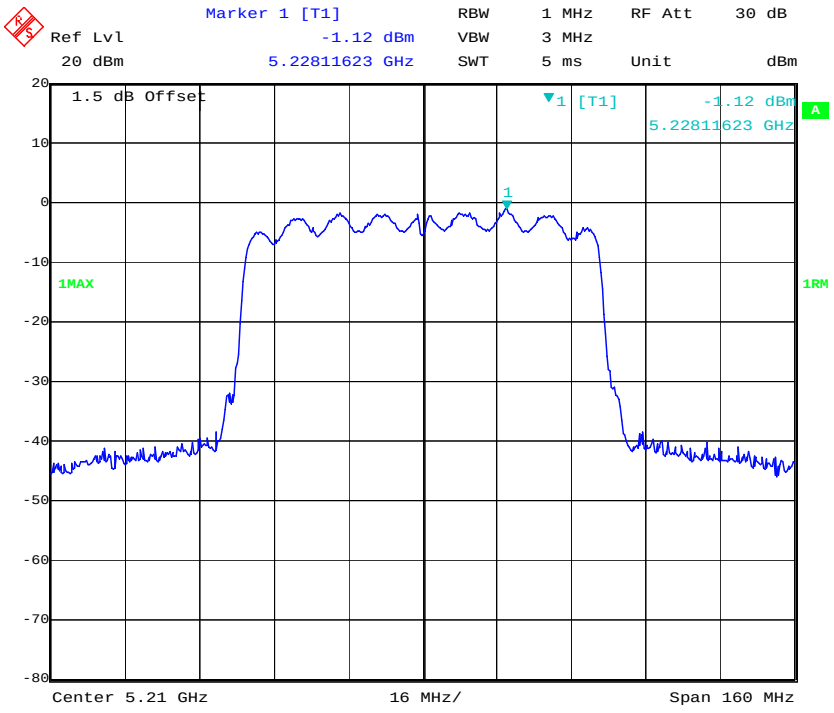
Date: 22.FEB.2017 11:24:46

802.11n ht40 High Channel – Chain0



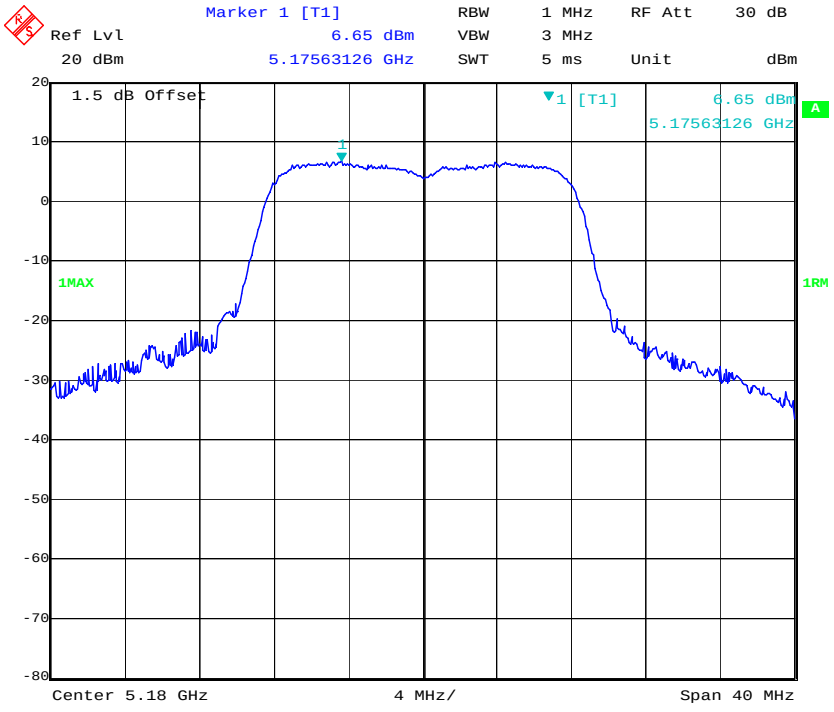
Date: 22.FEB.2017 11:29:24

802.11 ac80 Middle Channel – Chain0



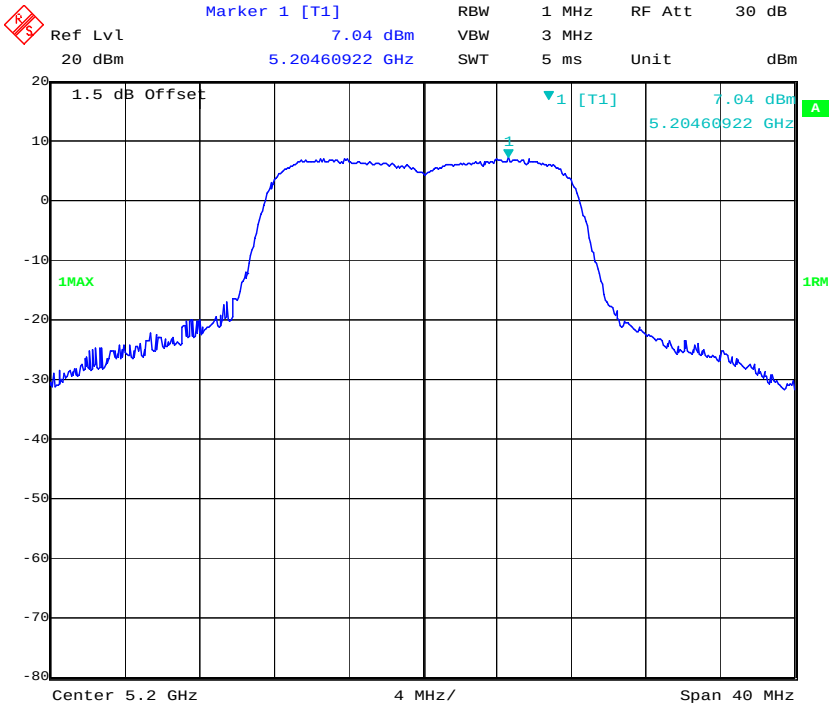
Date: 22.FEB.2017 16:53:42

802.11a Low Channel – Chain1



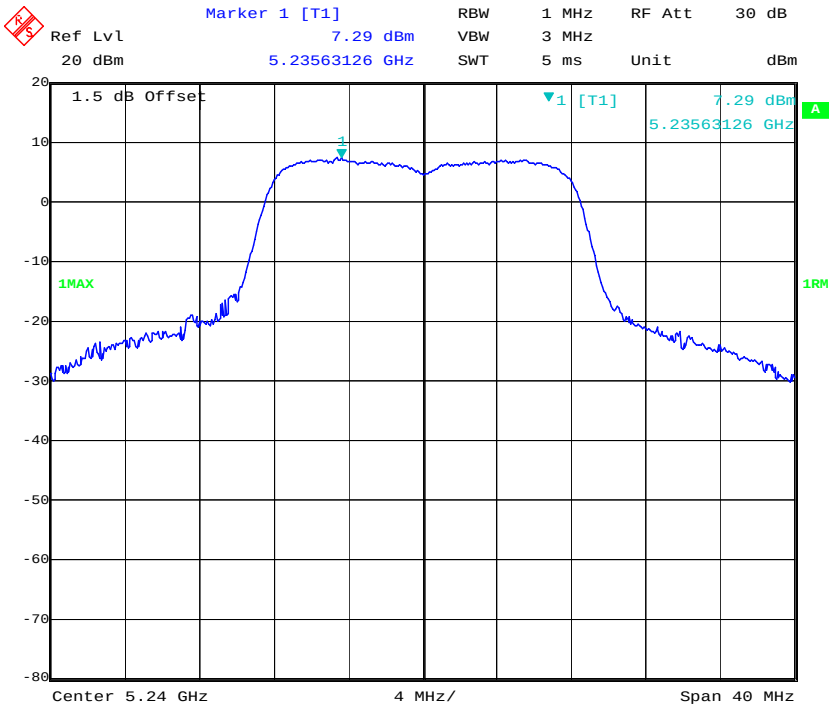
Date: 22.FEB.2017 16:06:01

802.11a Middle Channel – Chain1



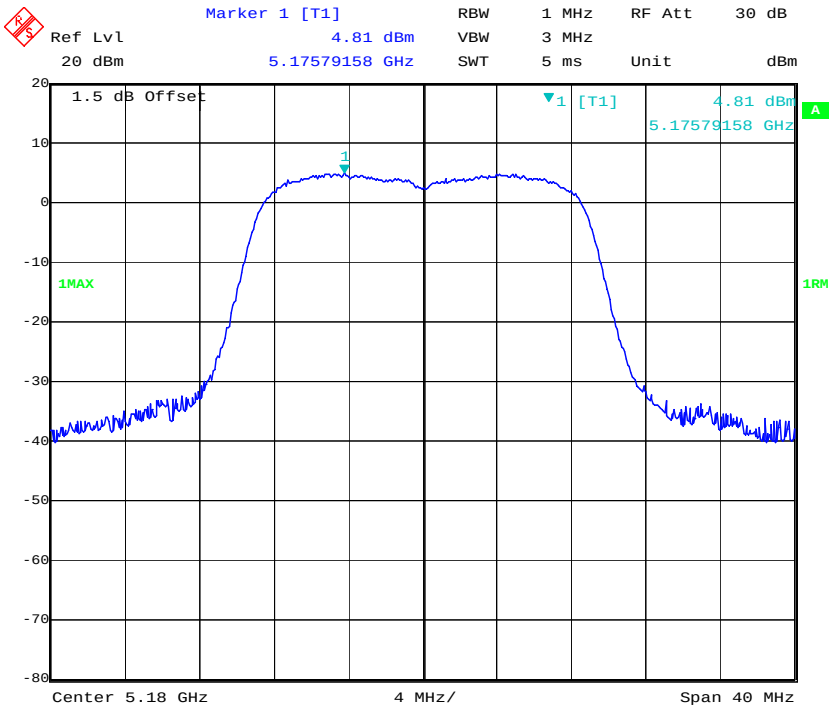
Date: 22.FEB.2017 13:50:58

802.11a High Channel – Chain1



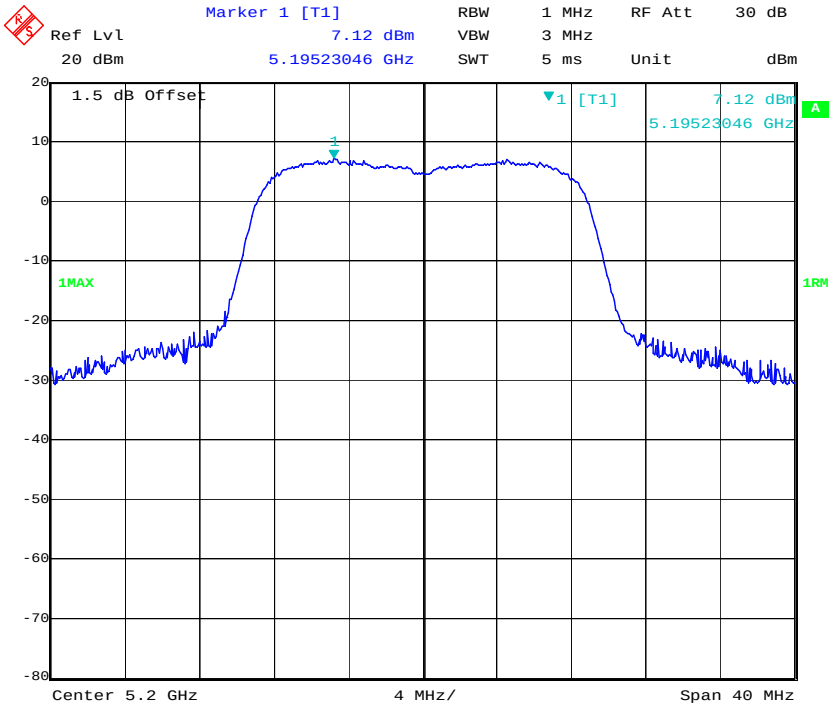
Date: 22.FEB.2017 13:46:47

802.11n ht20 Low Channel – Chain1



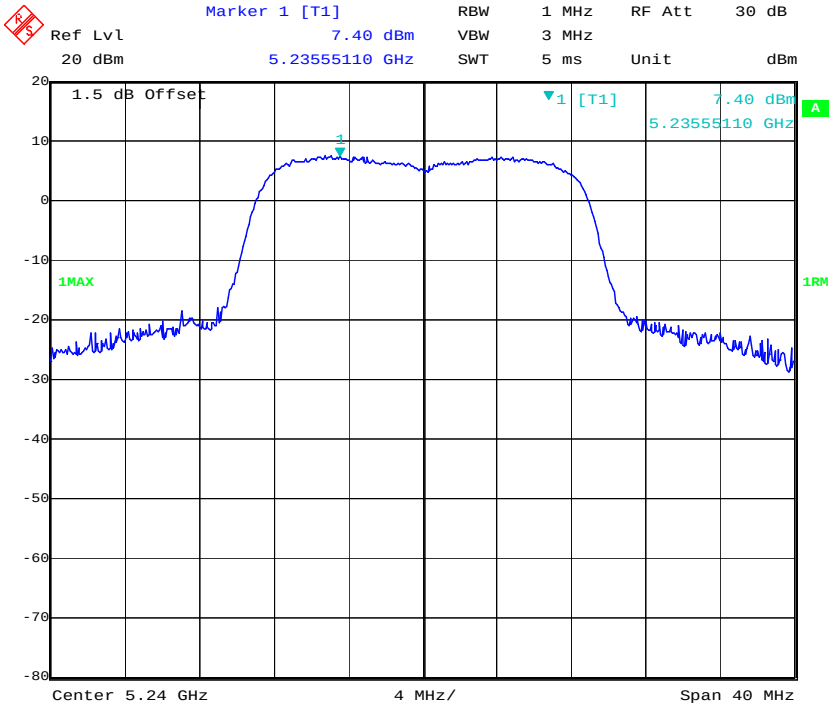
Date: 22.FEB.2017 14:01:44

802.11n ht20 Middle Channel – Chain1



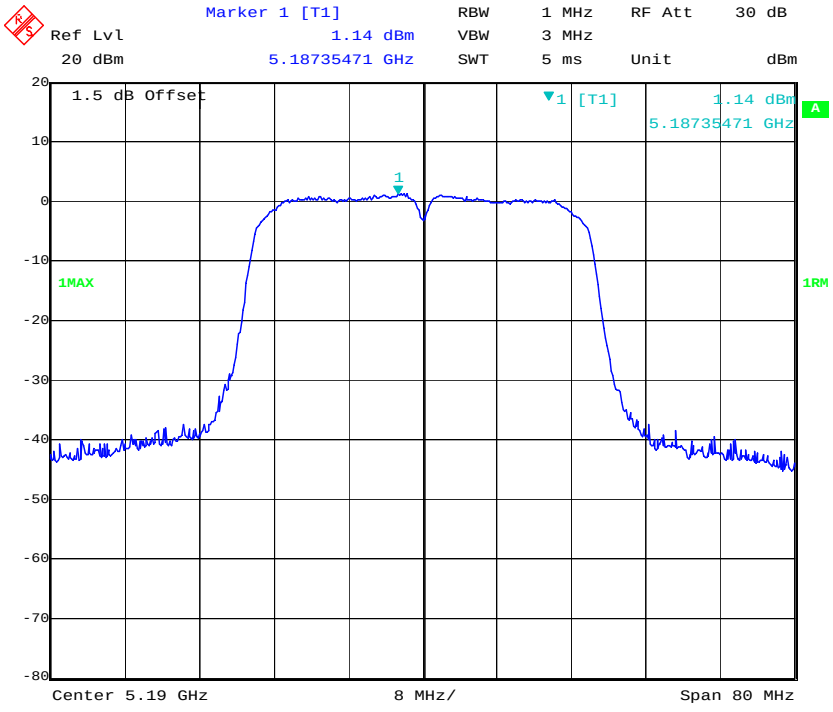
Date: 22.FEB.2017 14:04:56

802.11n ht20 High Channel – Chain1



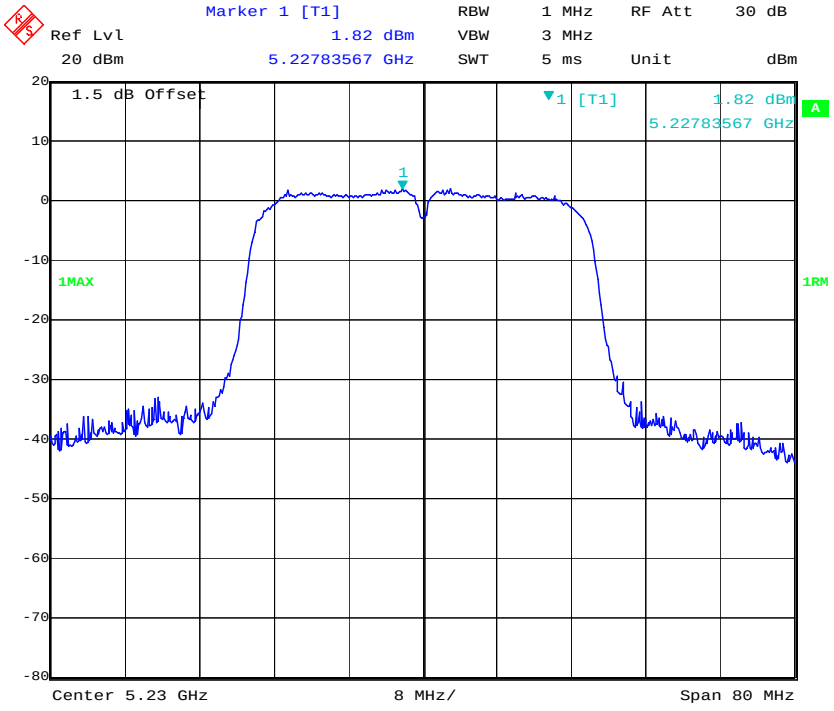
Date: 22.FEB.2017 14:10:07

802.11n ht40 Low Channel – Chain1



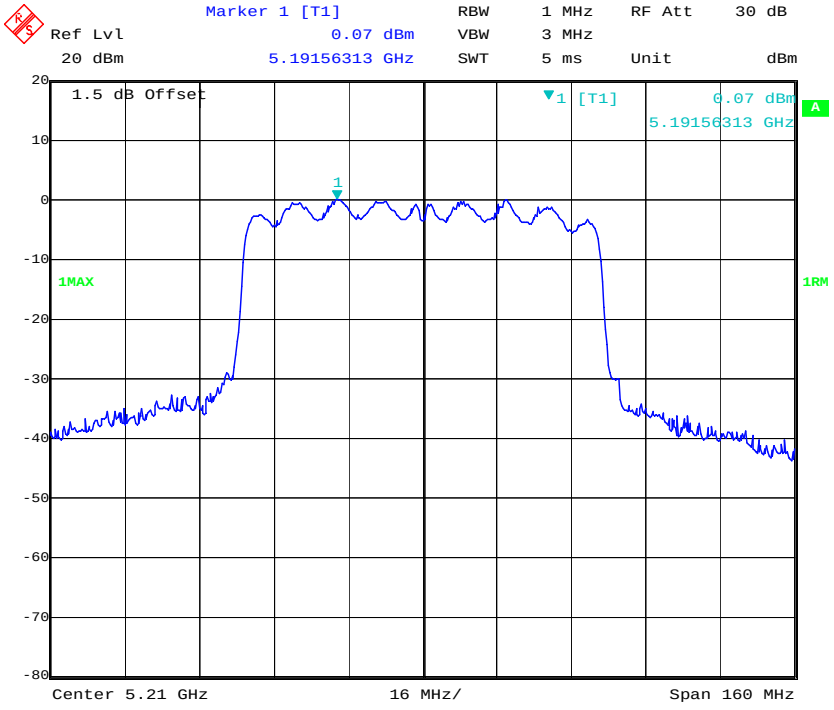
Date: 22.FEB.2017 14:20:41

802.11n ht40 High Channel – Chain1



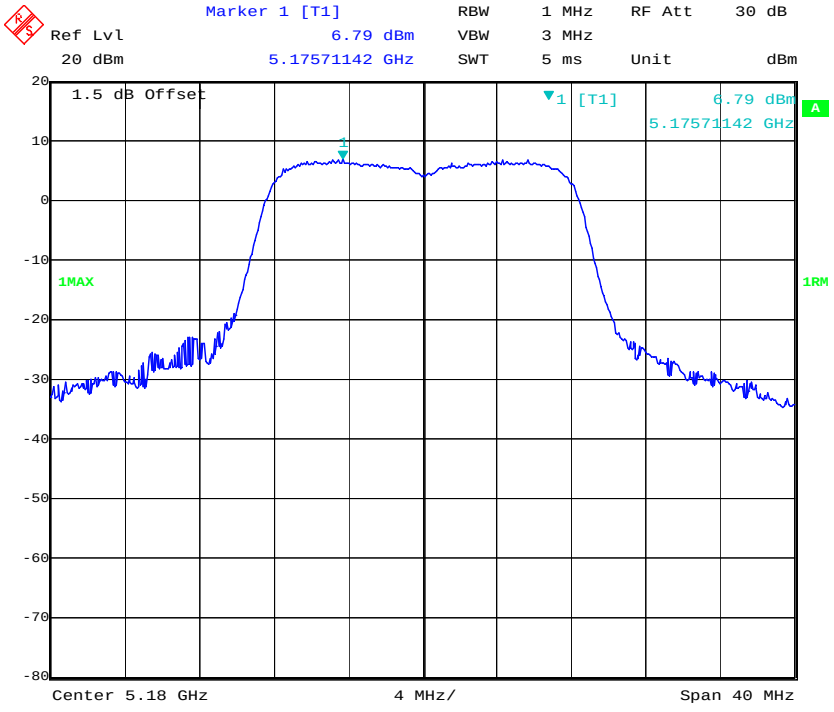
Date: 22.FEB.2017 14:25:31

802.11 ac80 Middle Channel – Chain1

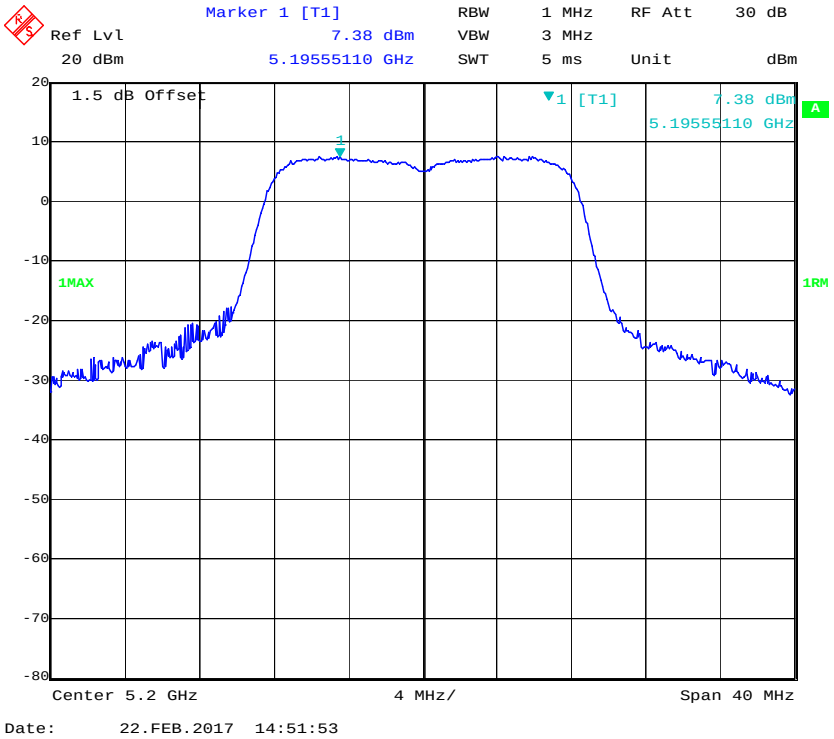


Date: 22.FEB.2017 14:30:38

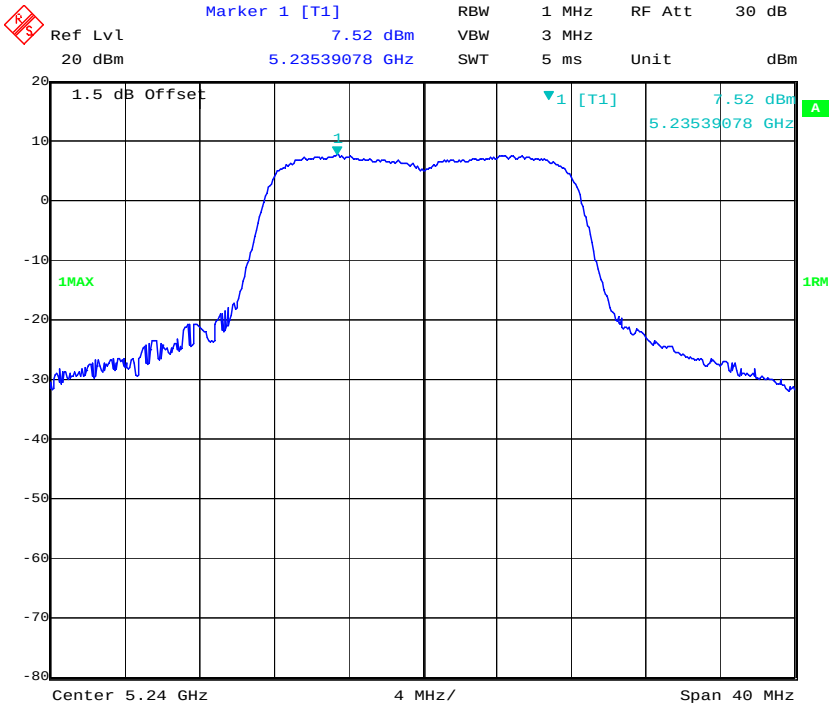
802.11a Low Channel – Chain2



802.11a Middle Channel – Chain2

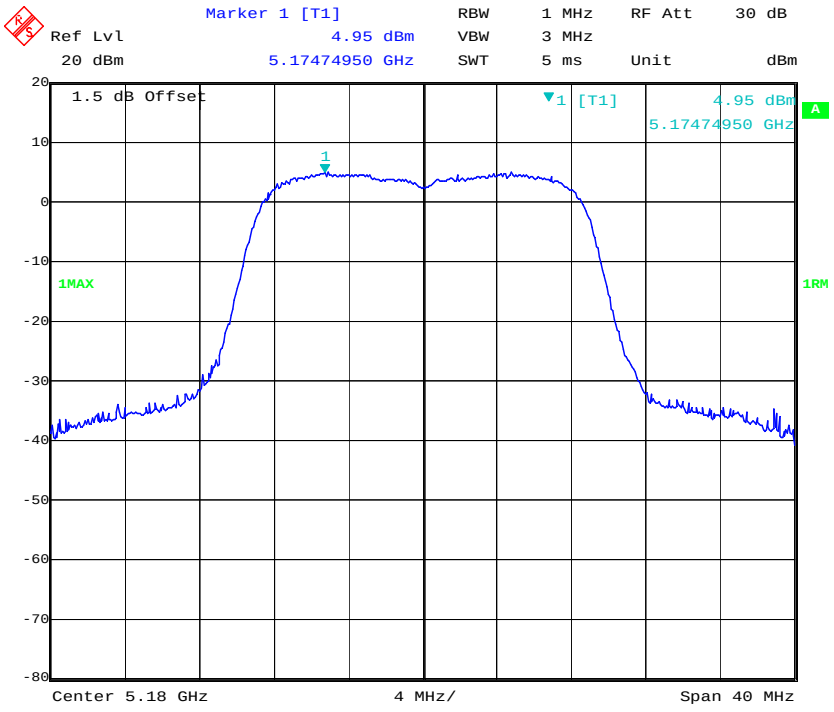


802.11a High Channel – Chain2



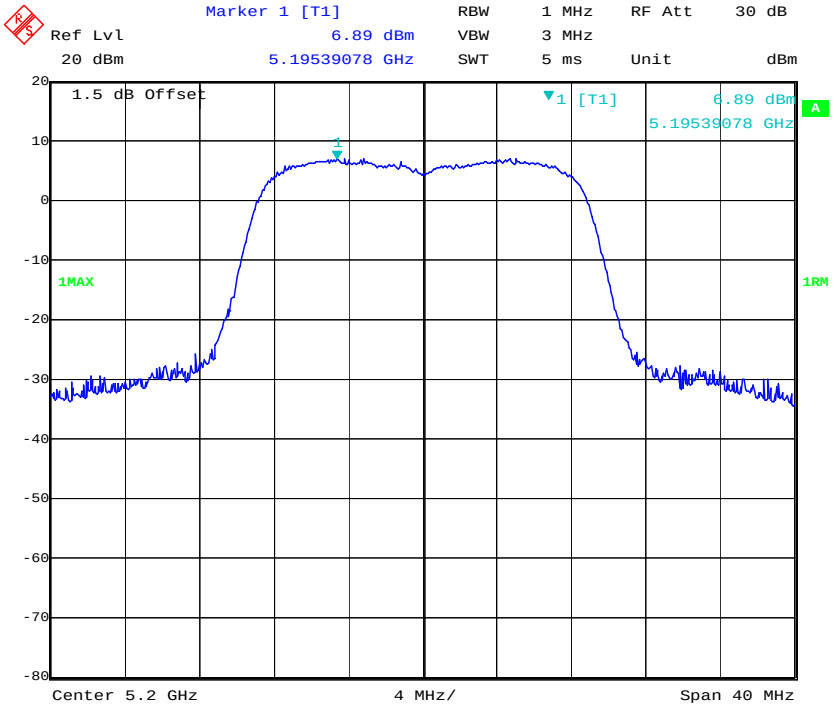
Date: 22.FEB.2017 16:12:02

802.11n ht20 Low Channel – Chain2



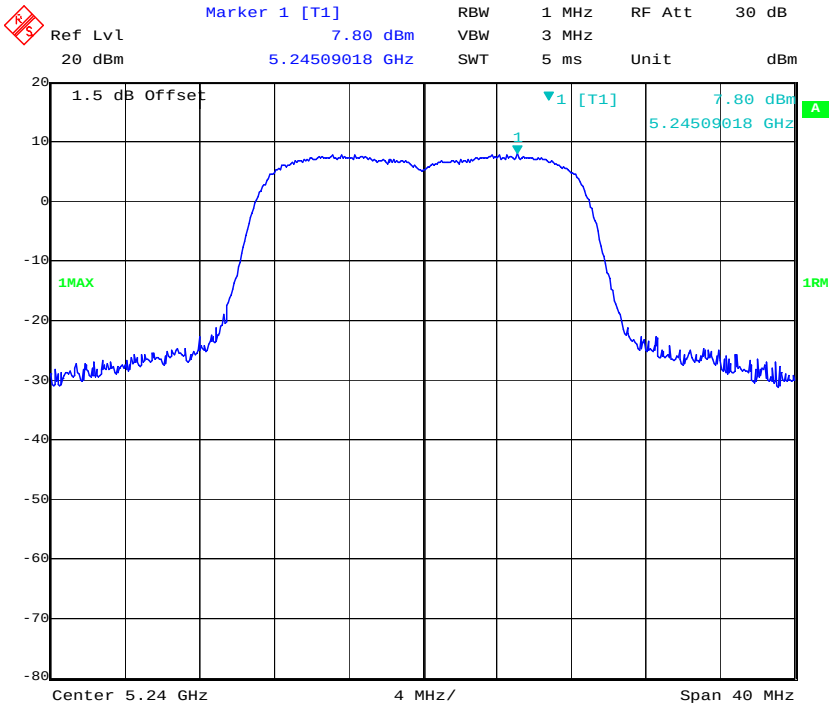
Date: 22.FEB.2017 16:20:15

802.11n ht20 Middle Channel – Chain2



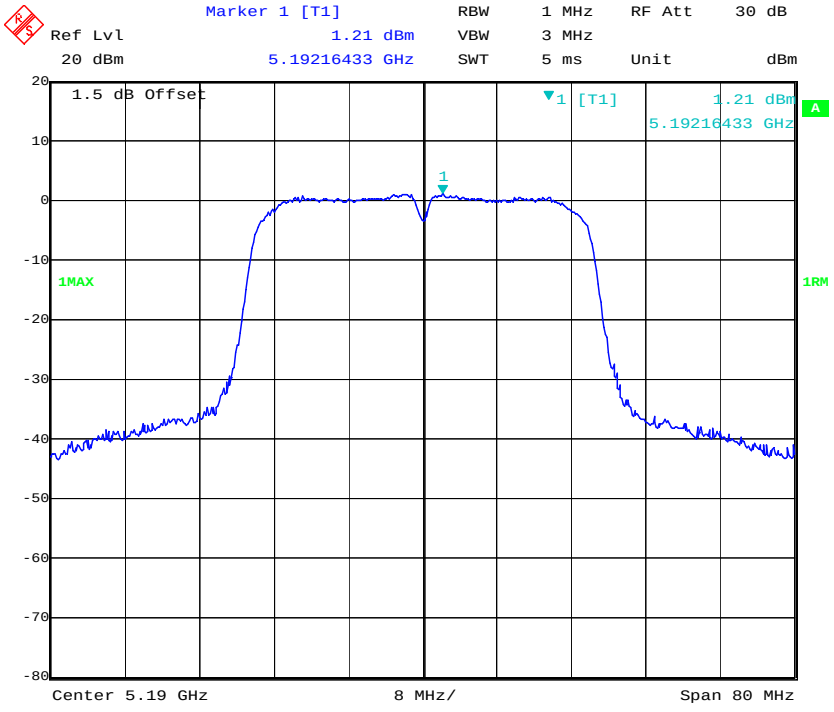
Date: 22.FEB.2017 16:29:17

802.11n ht20 High Channel – Chain2



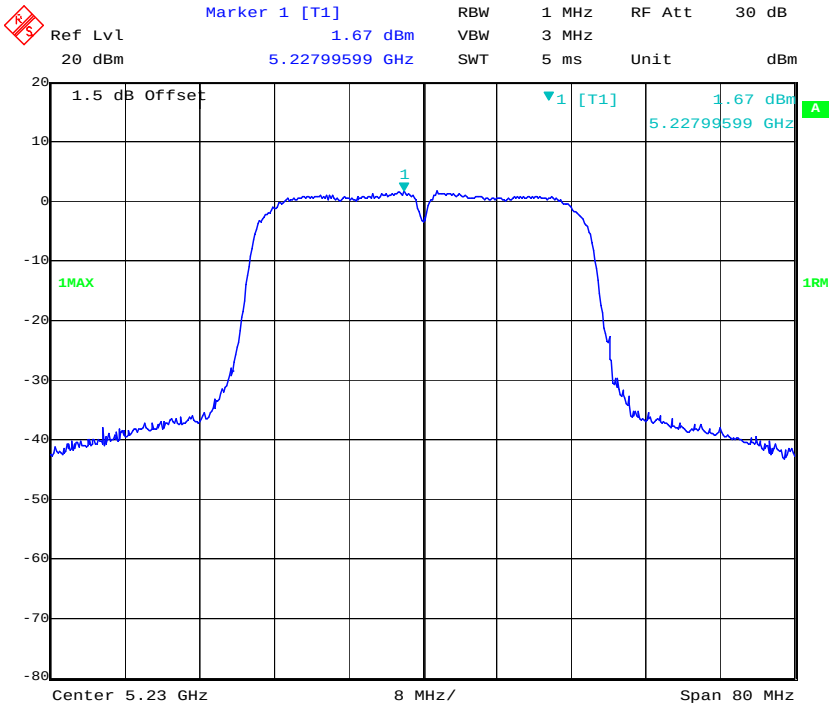
Date: 22.FEB.2017 16:26:09

802.11n ht40 Low Channel – Chain2



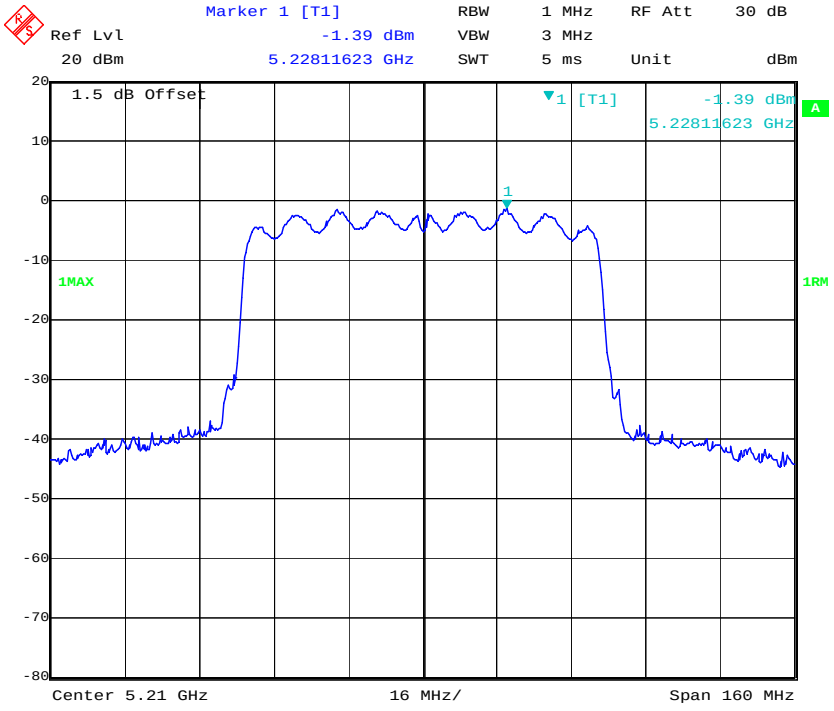
Date: 22.FEB.2017 16:34:39

802.11n ht40 High Channel – Chain2



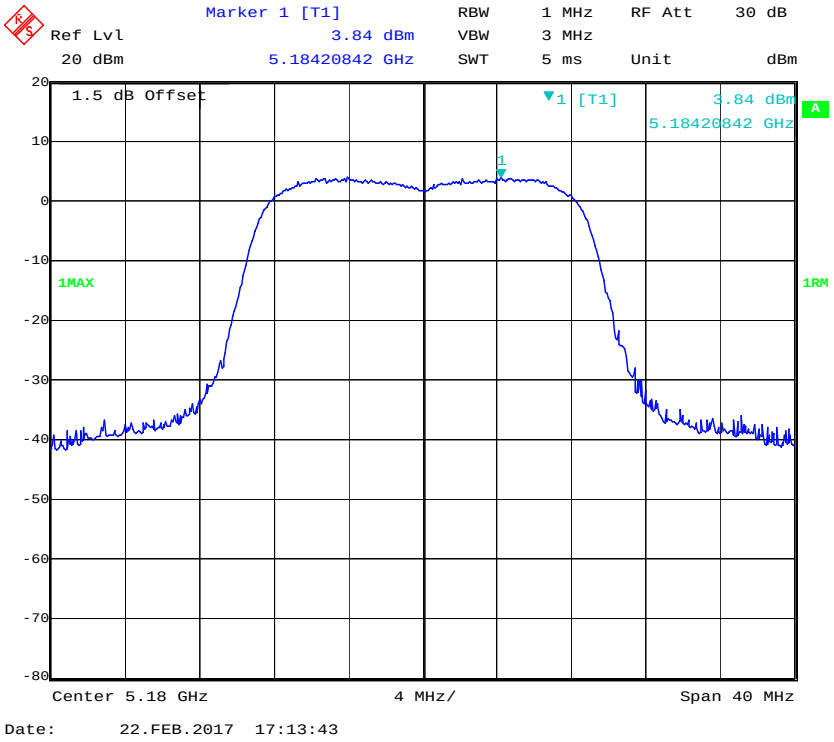
Date: 22.FEB.2017 16:39:33

802.11 ac80 Middle Channel – Chain2

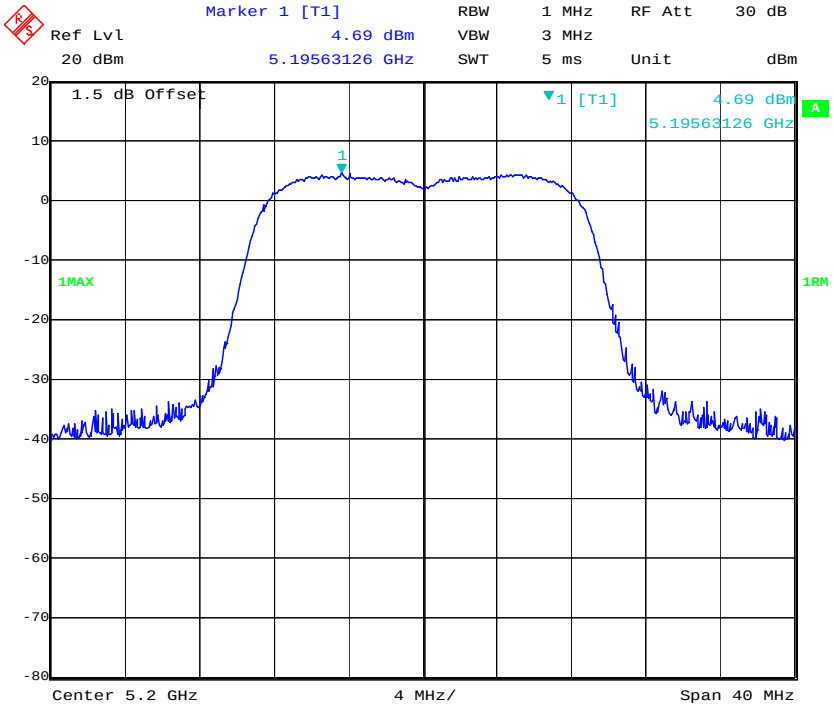


2TX:

802.11n ht20 Low Channel – Chain0

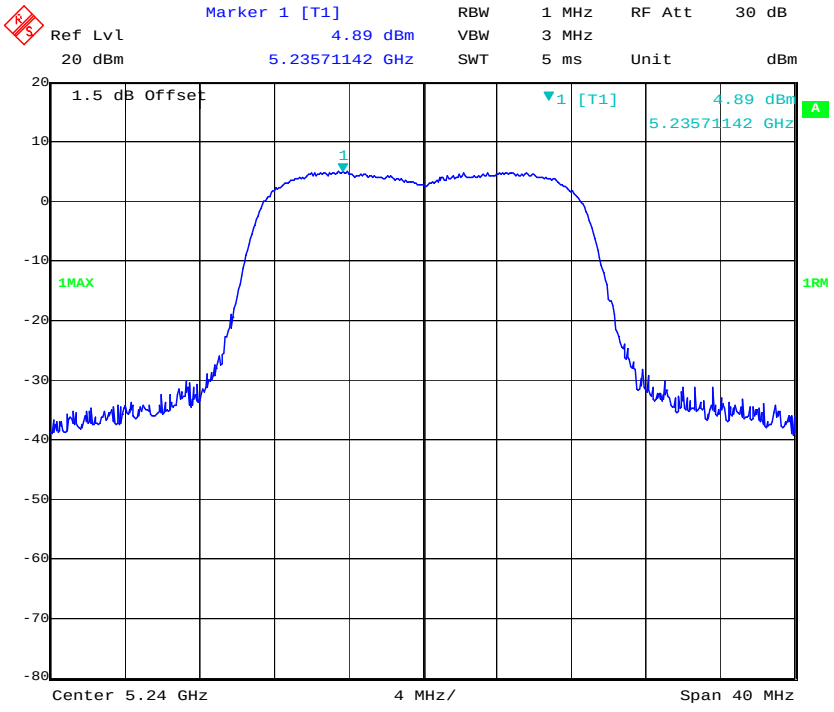


802.11n ht20 Middle Channel – Chain0



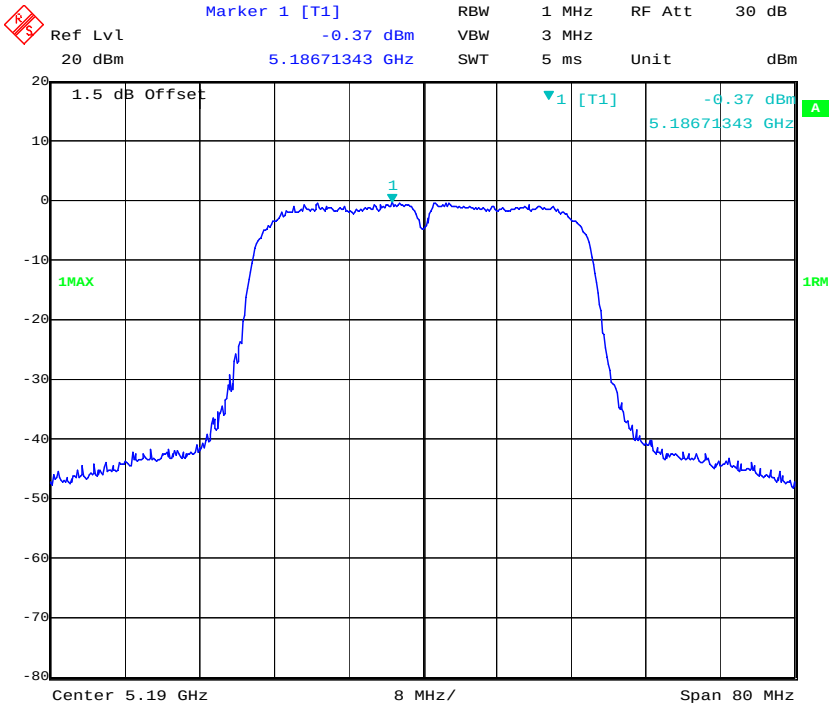
Date: 22.FEB.2017 17:23:36

802.11n ht20 High Channel – Chain0



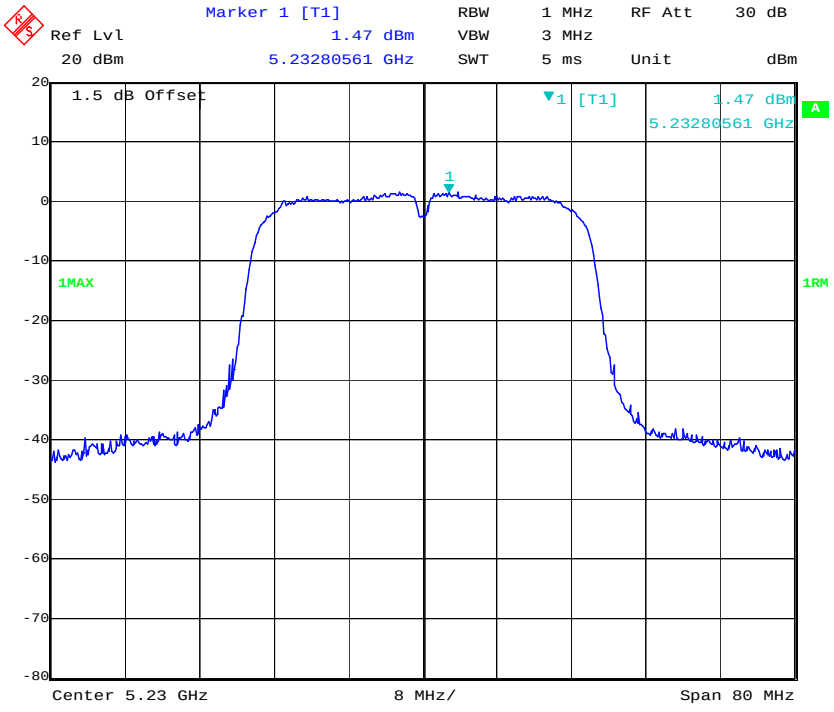
Date: 22.FEB.2017 19:03:17

802.11n ht40 Low Channel – Chain0



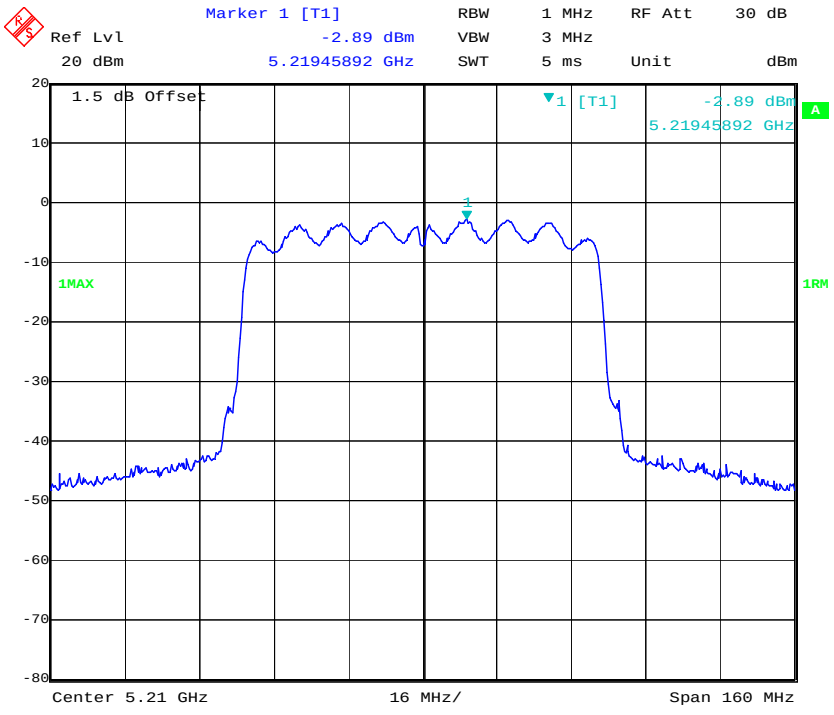
Date: 22.FEB.2017 18:55:51

802.11n ht40 High Channel – Chain0



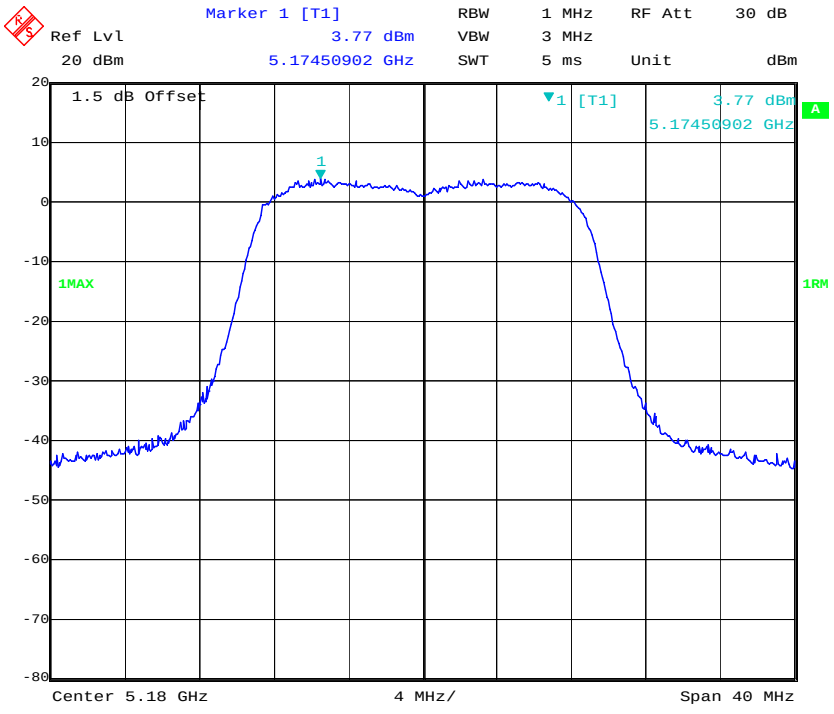
Date: 22.FEB.2017 18:52:32

802.11 ac80 Middle Channel – Chain0



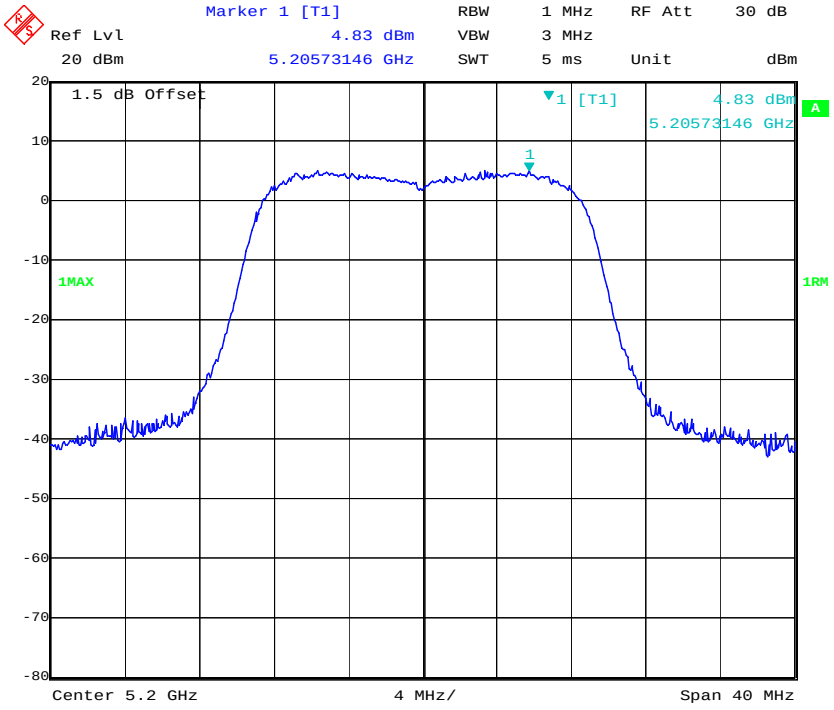
Date: 22.FEB.2017 19:01:20

802.11n ht20 Low Channel – Chain1



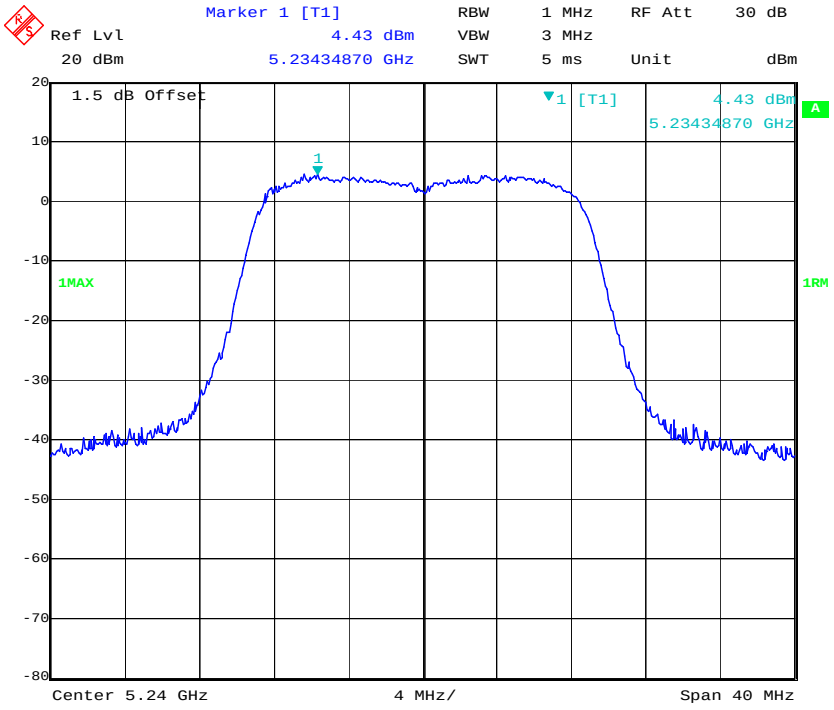
Date: 22.FEB.2017 19:35:17

802.11n ht20 Middle Channel – Chain1



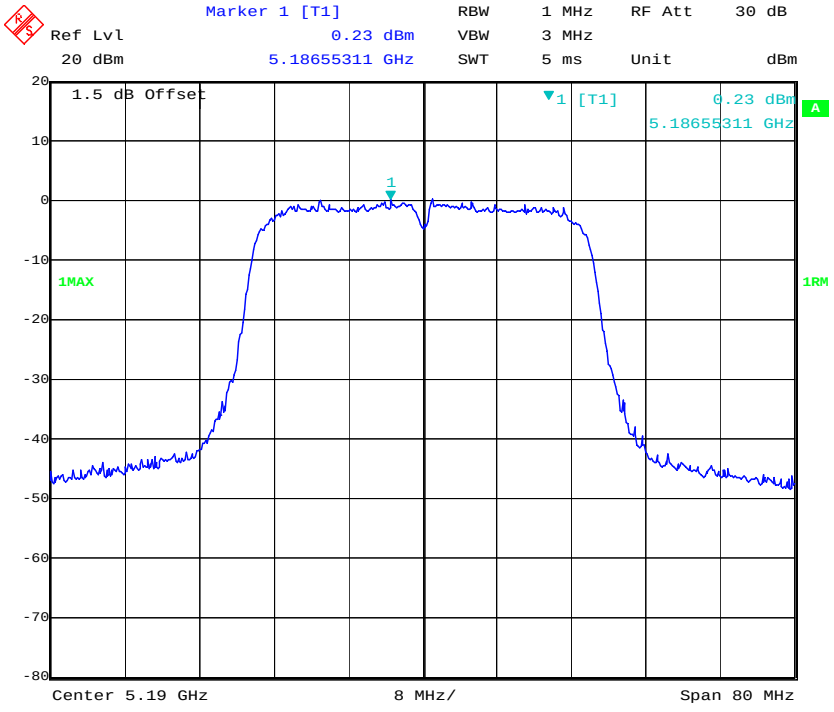
Date: 22.FEB.2017 19:38:04

802.11n ht20 High Channel – Chain1



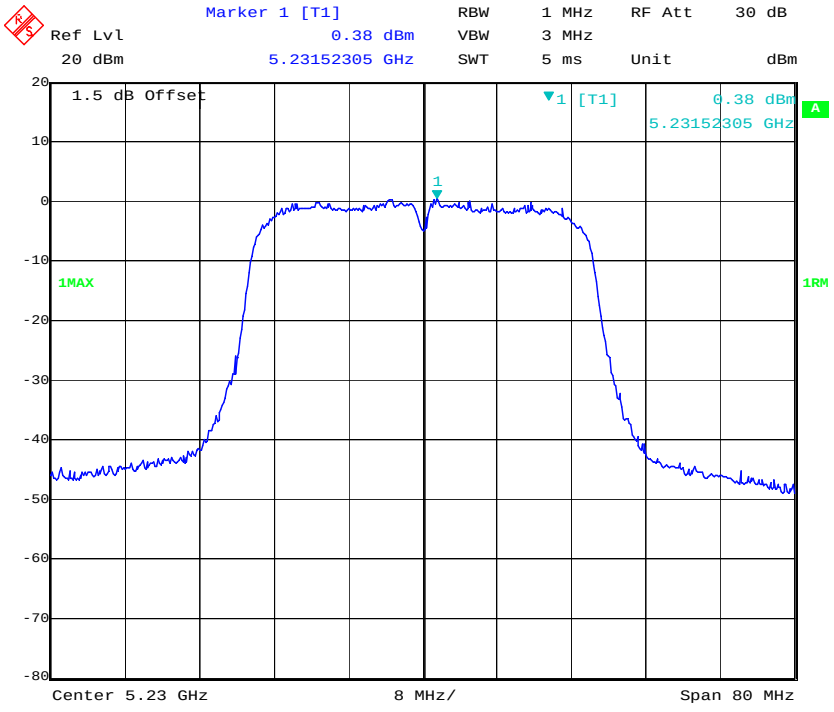
Date: 22.FEB.2017 19:31:15

802.11n ht40 Low Channel – Chain1



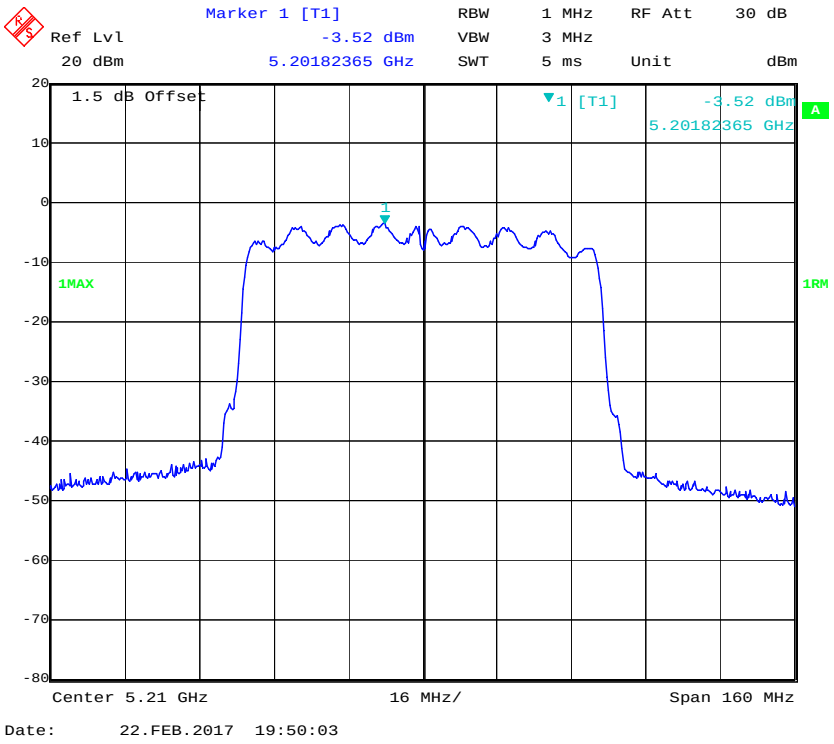
Date: 22.FEB.2017 19:41:26

802.11n ht40 High Channel – Chain1



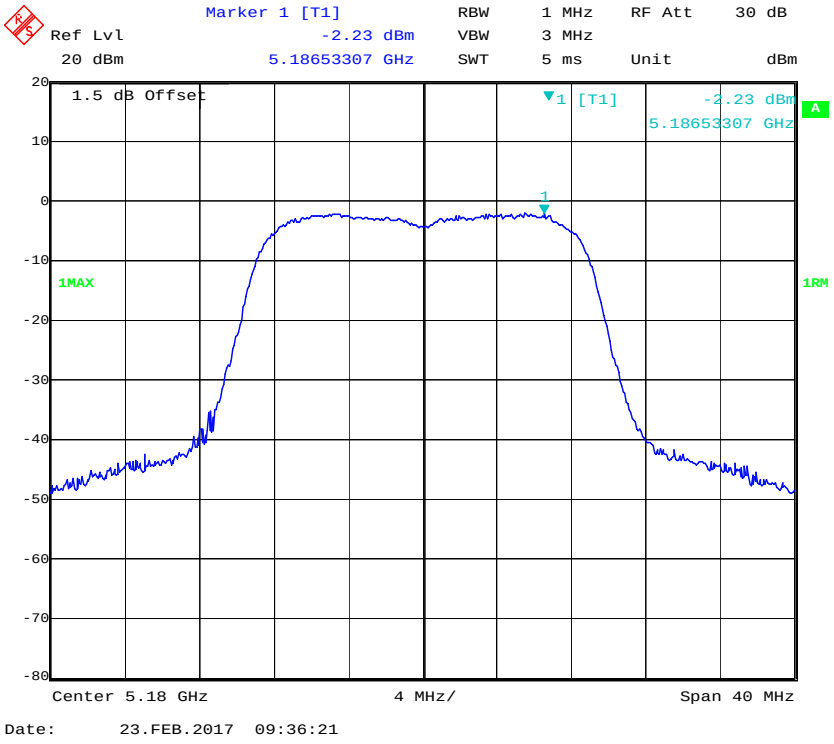
Date: 22.FEB.2017 19:46:12

802.11 ac80 Middle Channel – Chain1

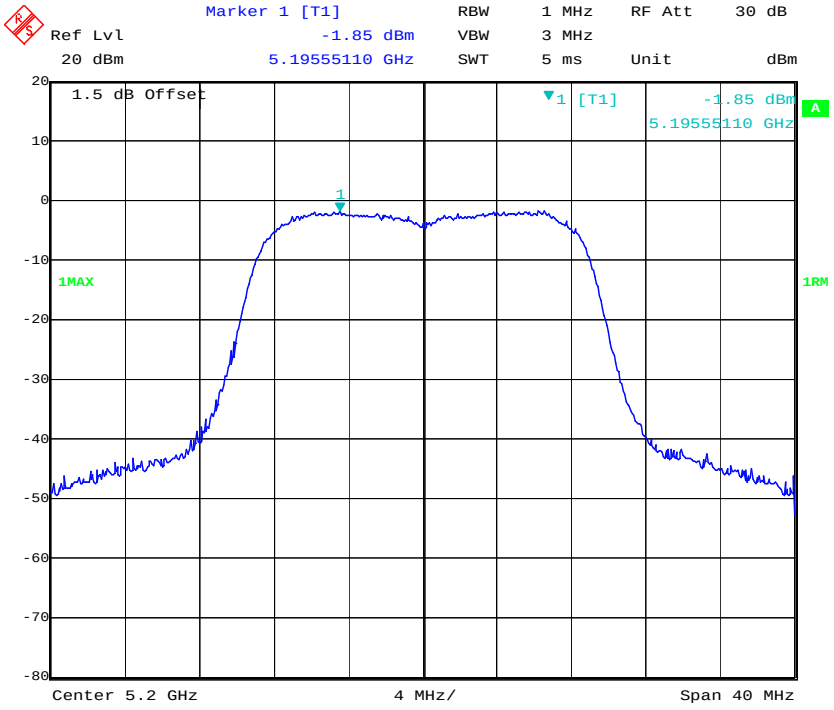


3TX:

802.11n ht20 Low Channel – Chain0

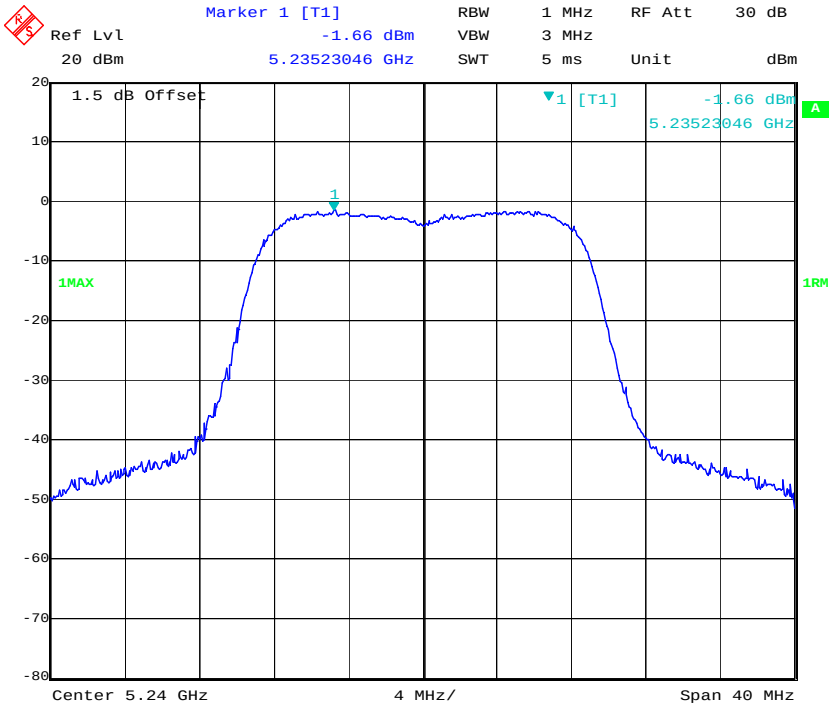


802.11n ht20 Middle Channel – Chain0



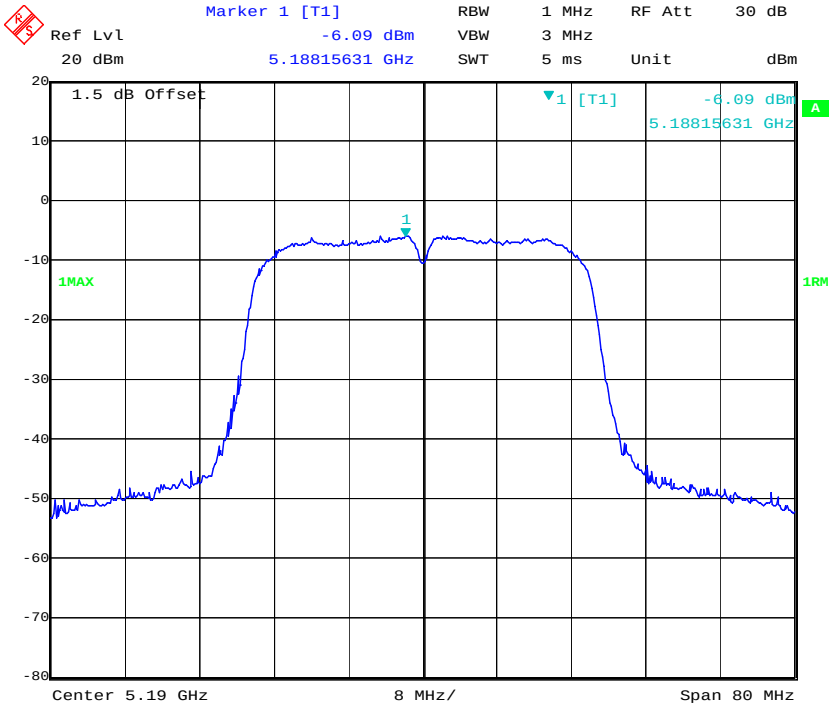
Date: 23.FEB.2017 09:38:39

802.11n ht20 High Channel – Chain0

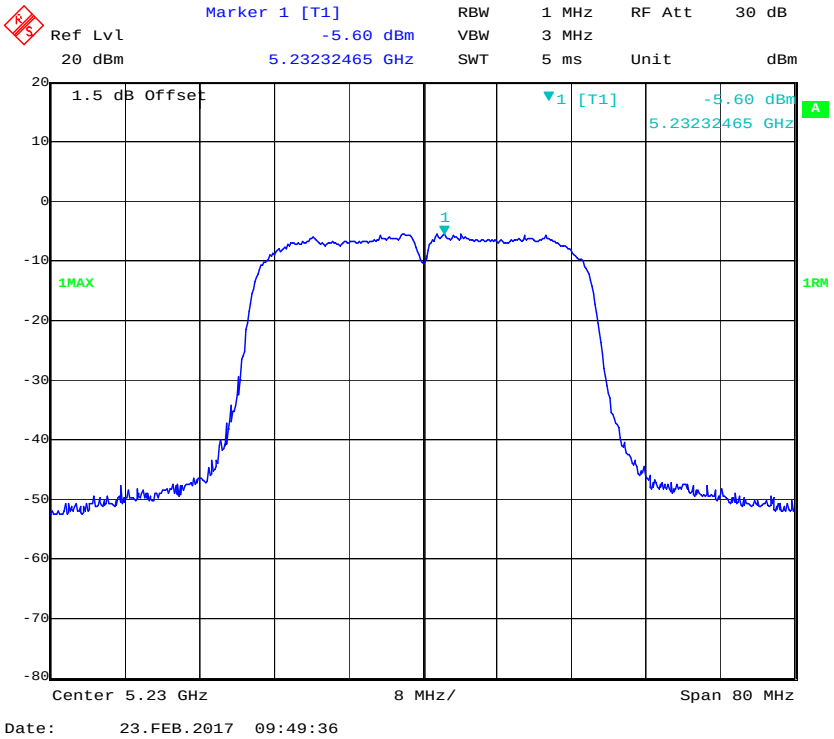


Date: 23.FEB.2017 09:42:35

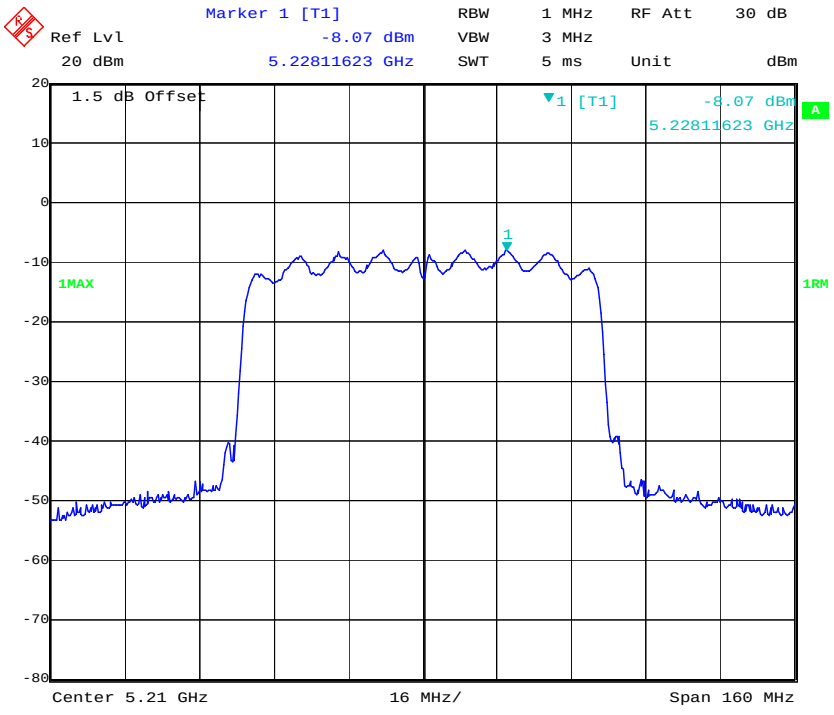
802.11n ht40 Low Channel – Chain0



802.11n ht40 High Channel – Chain0

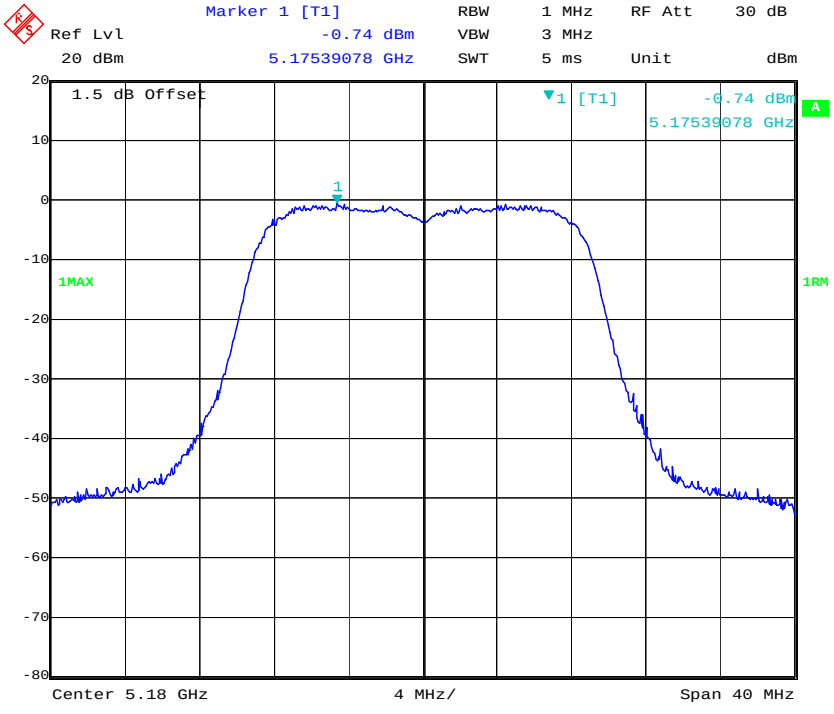


802.11 ac80 Middle Channel – Chain0



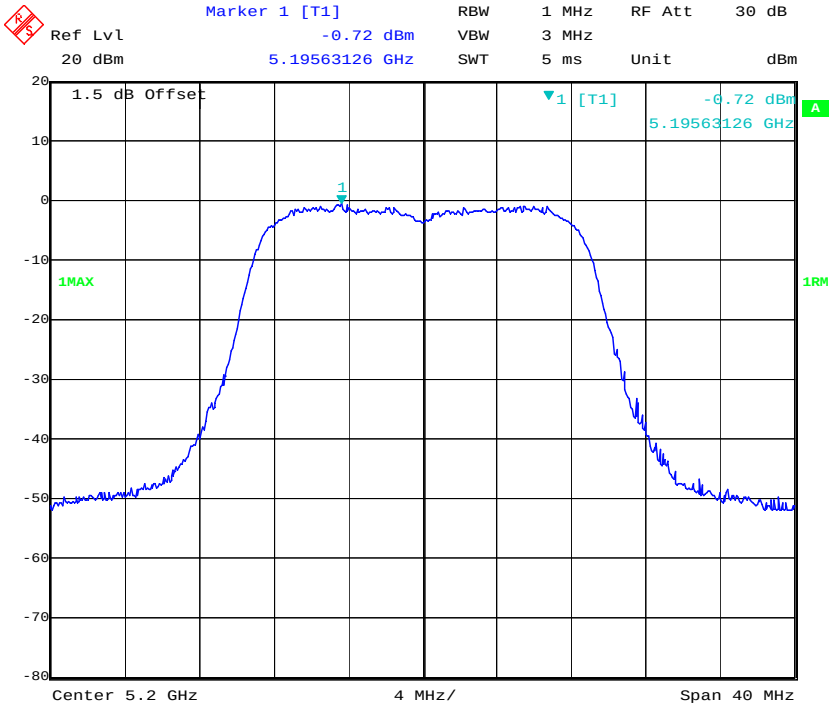
Date: 23.FEB.2017 09:52:46

802.11n ht20 Low Channel – Chain1



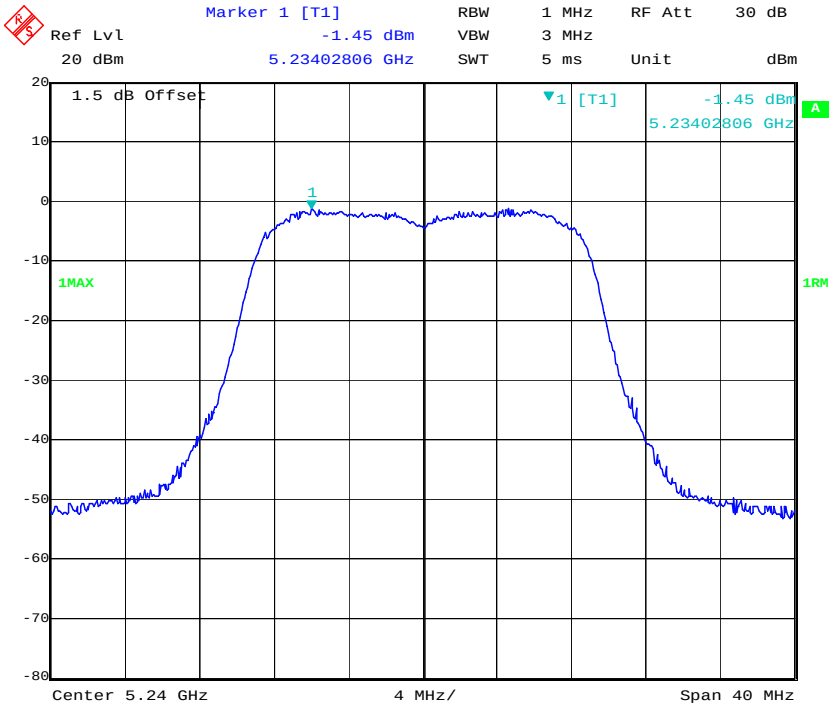
Date: 23.FEB.2017 10:05:17

802.11n ht20 Middle Channel – Chain1



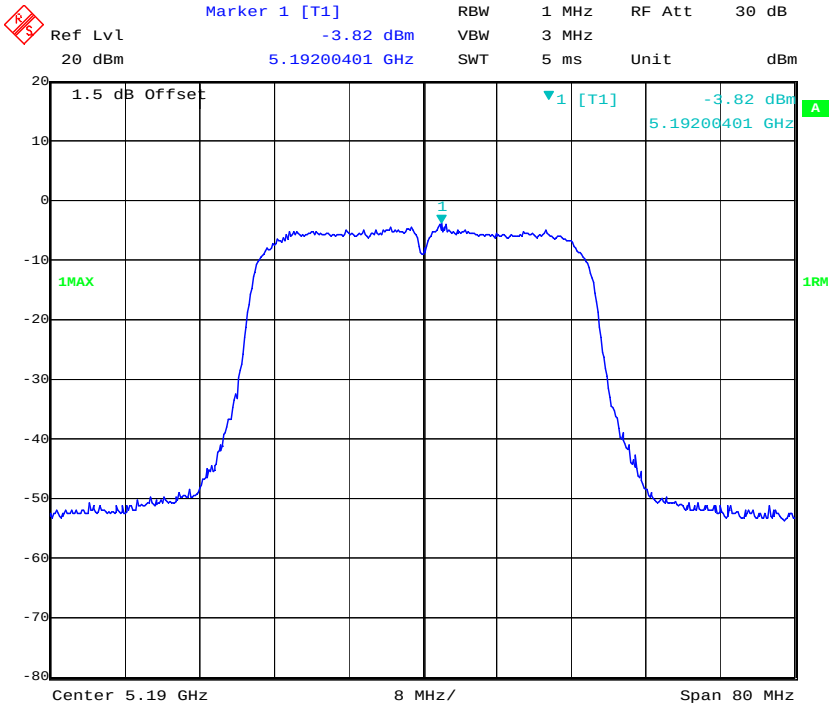
Date: 23.FEB.2017 10:09:41

802.11n ht20 High Channel – Chain1



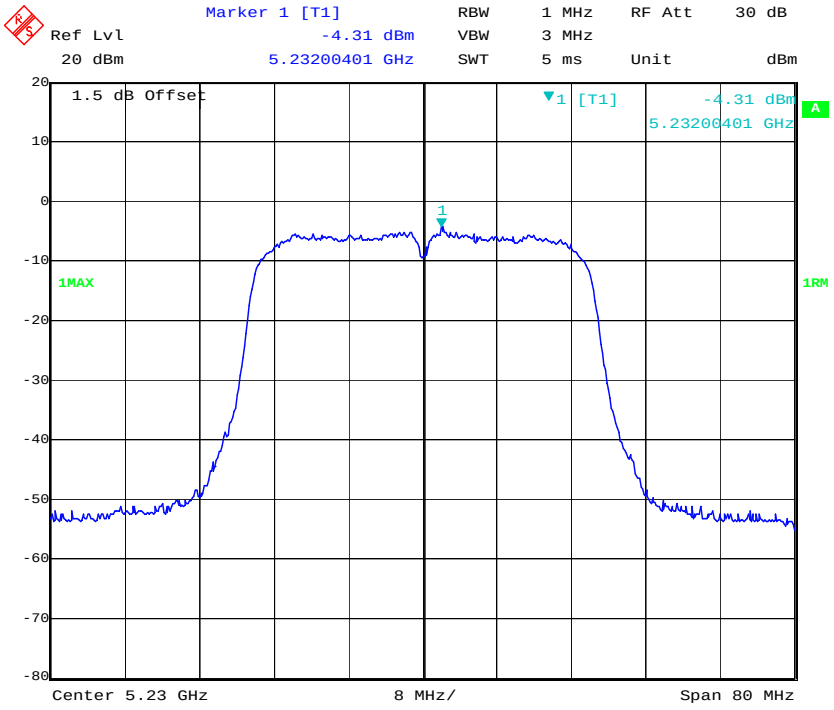
Date: 23.FEB.2017 10:12:45

802.11n ht40 Low Channel – Chain1



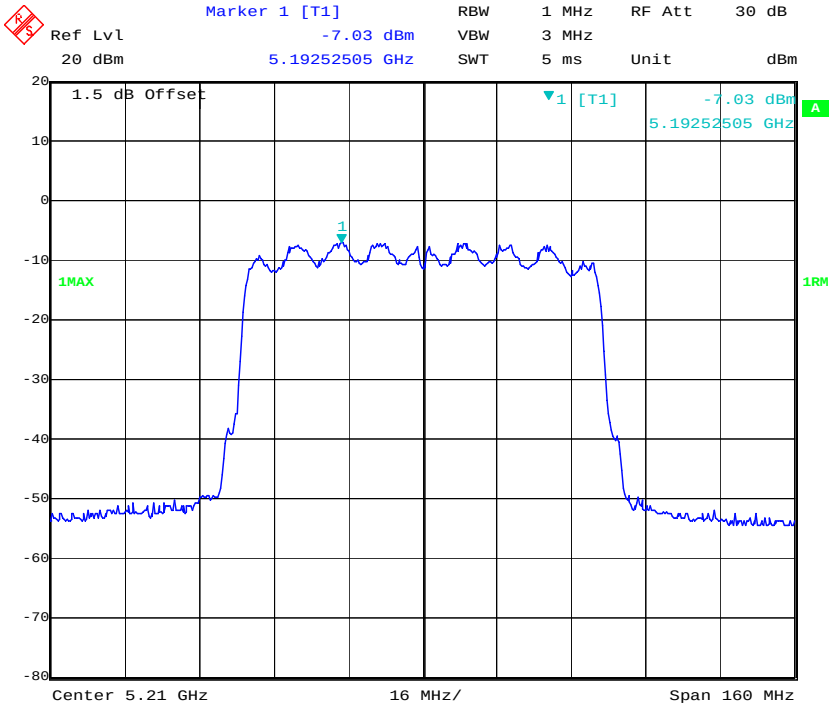
Date: 23.FEB.2017 09:59:32

802.11n ht40 High Channel – Chain1



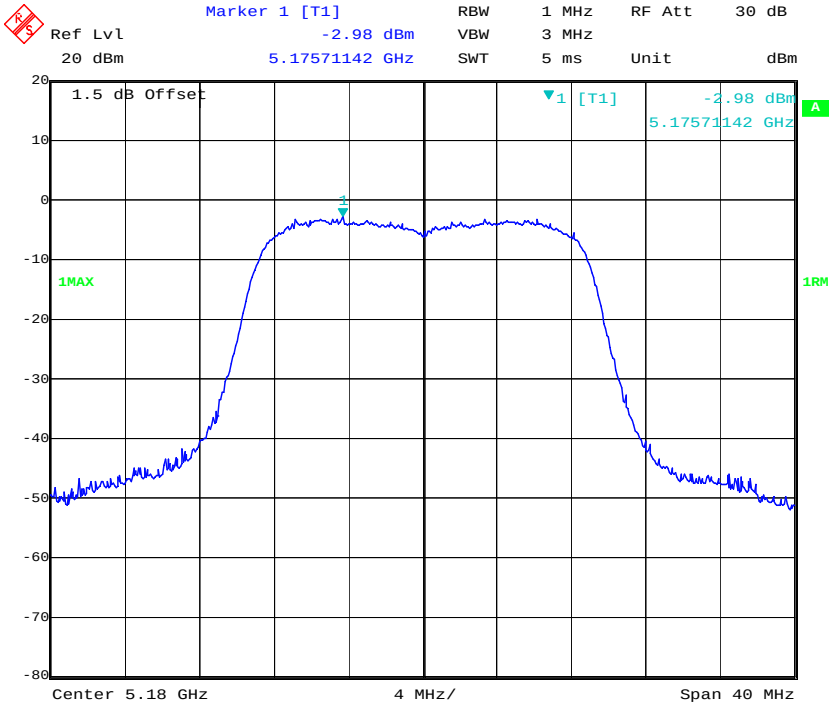
Date: 23.FEB.2017 10:02:13

802.11 ac80 Middle Channel – Chain1



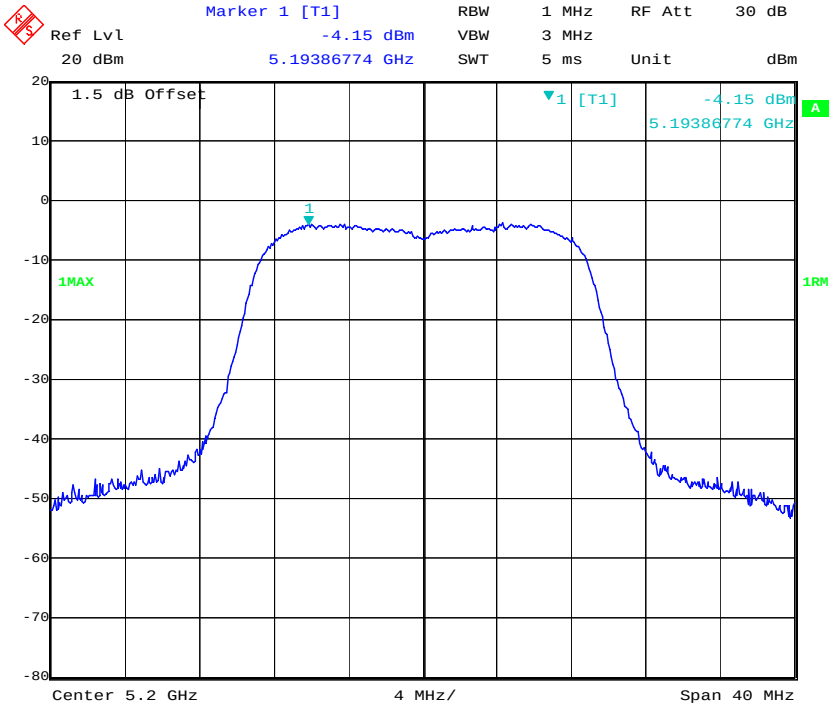
Date: 23.FEB.2017 09:56:19

802.11n ht20 Low Channel – Chain2



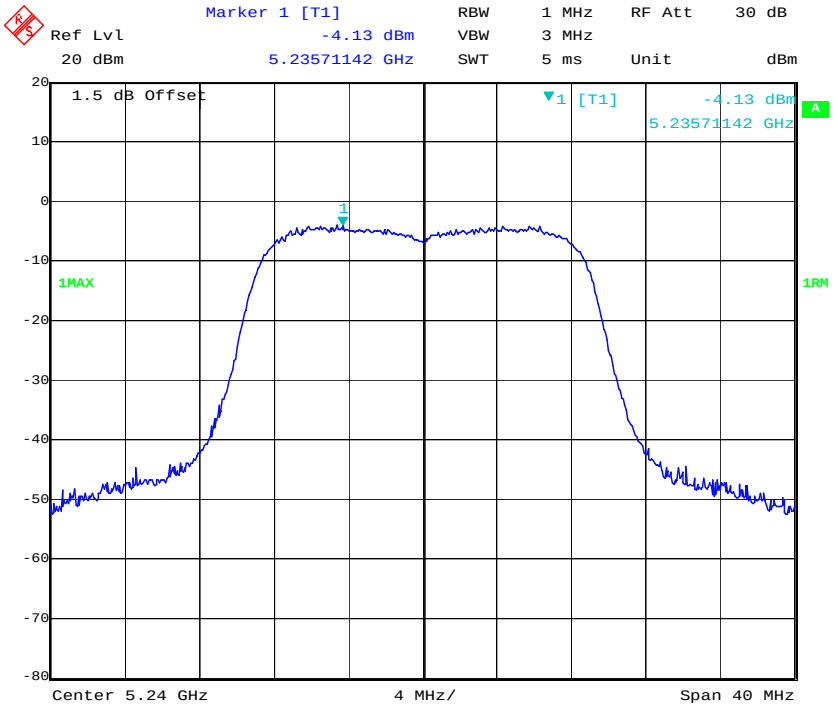
Date: 23.FEB.2017 10:18:49

802.11n ht20 Middle Channel – Chain2



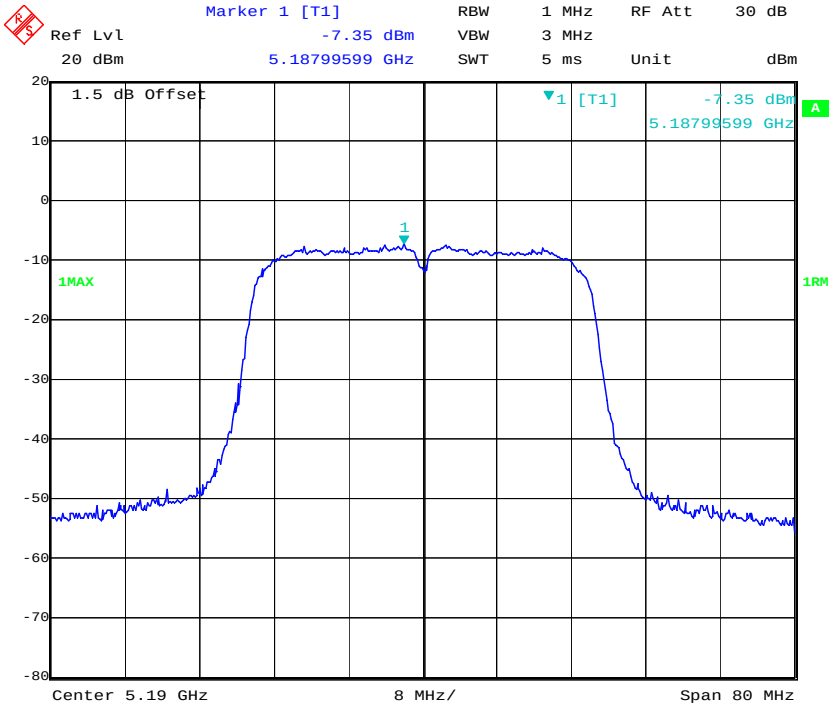
Date: 23.FEB.2017 10:22:10

802.11n ht20 High Channel – Chain2



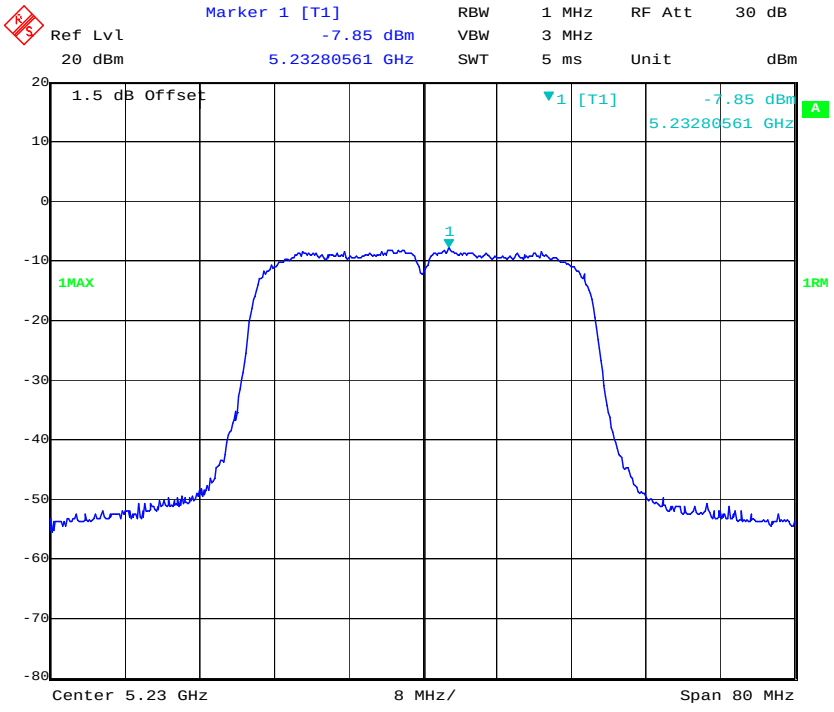
Date: 23.FEB.2017 10:24:24

802.11n ht40 Low Channel – Chain2



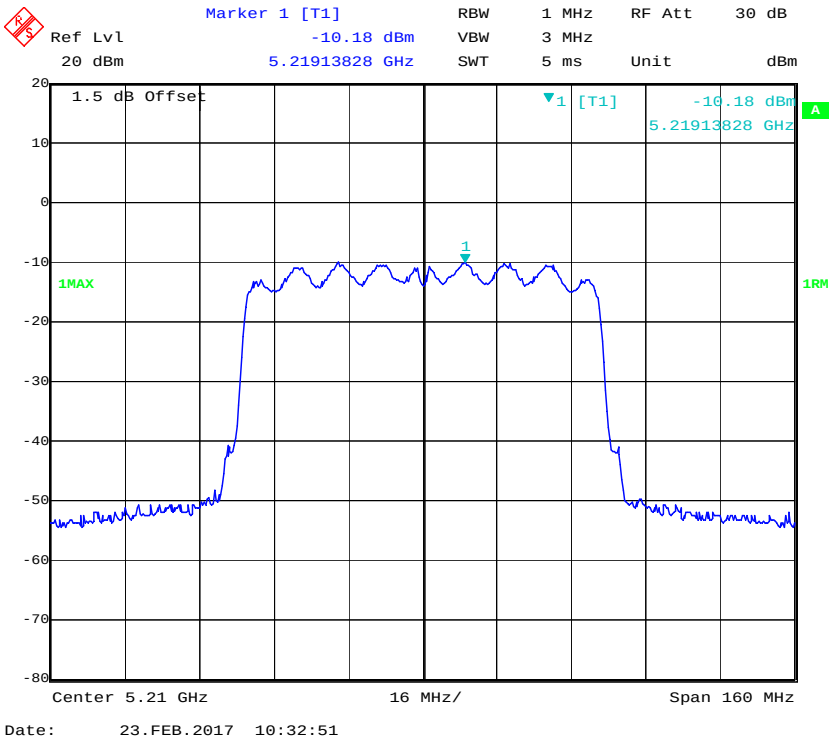
Date: 23.FEB.2017 10:27:17

802.11n ht40 High Channel – Chain2



Date: 23.FEB.2017 10:29:52

802.11 ac80 Middle Channel – Chain2



5725-5850MHz

1Tx:

Mode	Frequency (MHz)	Power Spectral Density (dBm/300kHz)			Power Spectral Density (dBm/500kHz)			
		Chain 0	Chain 1	Chain 2	Chain 0	Chain 1	Chain 2	Limits
802.11a	5745	1.62	0.68	1.91	3.82	2.88	4.11	30
	5785	1.01	0.87	1.82	3.21	3.07	4.02	30
	5825	1.24	1.05	1.93	3.44	3.25	4.13	30
802.11n ht20	5745	1.58	0.79	1.92	3.78	2.99	4.12	30
	5785	1.22	0.6	1.55	3.42	2.8	3.75	30
	5825	1.15	1.09	1.95	3.35	3.29	4.15	30
802.11n ht40	5755	-2.1	-3.29	-1.81	0.1	-1.09	0.39	30
	5795	-2.59	-2.91	-1.23	-0.39	-0.71	0.97	30
802.11 ac80	5775	-4.57	-5.31	-3.76	-2.37	-3.11	-1.56	30

Note 1: If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10log(500kHz/RBW) to the measured result, whereas RBW (< 500 KHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.

2Tx:

Mode	Frequency (MHz)	Power Spectral Density (dBm/300kHz)		Power Spectral Density (dBm/500kHz)			
		Chain 0	Chain 1	Chain 0	Chain 1	Total	Limits
802.11n ht20	5745	3.69	2.83	5.89	5.03	8.49	29
	5785	2.77	2.98	4.97	5.18	8.09	29
	5825	2.52	3.82	4.72	6.02	8.43	29
802.11n ht40	5755	-1.69	-2.28	0.51	-0.08	3.24	29
	5795	-3.66	-1.13	-1.46	1.07	3.00	29
802.11 ac80	5775	-5.64	-5.87	-3.44	-3.67	-0.54	29

Note 1: If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10log(500kHz/RBW) to the measured result, whereas RBW (< 500 KHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
Note 2:. the 2 antenna maximum atenna gain are 4dBi, 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(NANT/NSS) dB.

So:

Directional gain = GANT + Array Gain = 4+10*log(2) =7 dBi > 6dBi
Power density Limit = 30 – (7-6) = 29dBm

3Tx:

Mode	Frequency (MHz)	Power Spectral Density (dBm/300kHz)			Power Spectral Density (dBm/500kHz)				
		Chain 0	Chain 1	Chain 2	Chain 0	Chain 1	Chain 2	Total	Limits
802.11n ht20	5745	1.21	2.65	2.23	3.41	4.85	4.43	11.24	27.23
	5785	0.41	1.1	2.54	2.61	3.3	4.74	10.61	27.23
	5825	0.55	0.99	1.41	2.75	3.19	3.61	10.17	27.23
802.11n ht40	5755	-2.27	-2.15	-1.27	-0.07	0.05	0.93	7.30	27.23
	5795	-2.74	-3.26	-1.5	-0.54	-1.06	0.7	6.74	27.23
802.11 ac80	5775	-5.00	-5.45	-1.31	-2.80	-3.25	0.89	5.67	27.23

Note 1: If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10log(500kHz/RBW) to the measured result, whereas RBW (< 500 KHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
Note 2:. the 3 antenna maximum atenna gain are 4dBi, 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:

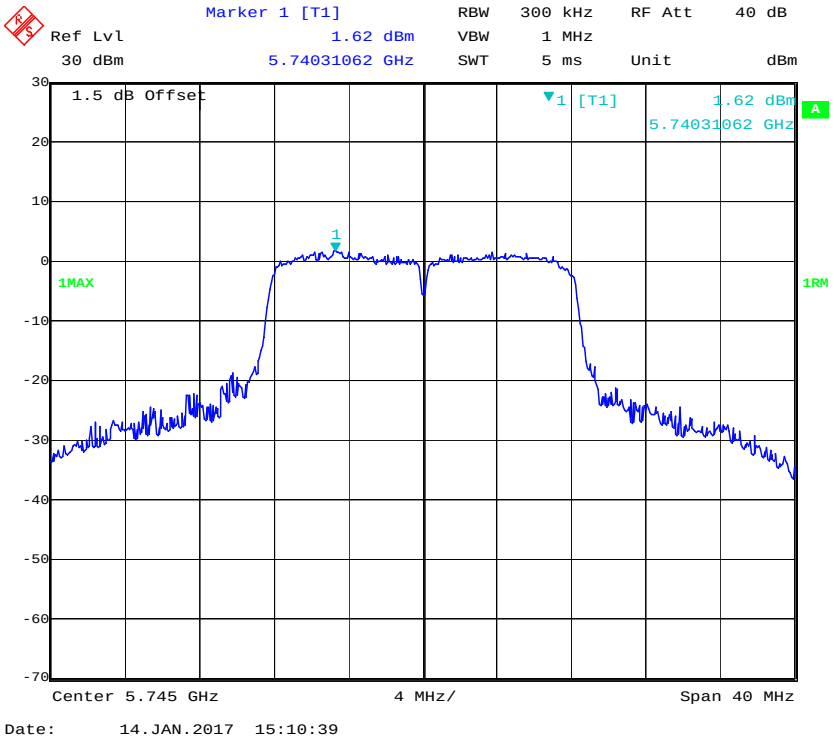
Array Gain = 10 log(NANT/NSS) dB.

So:

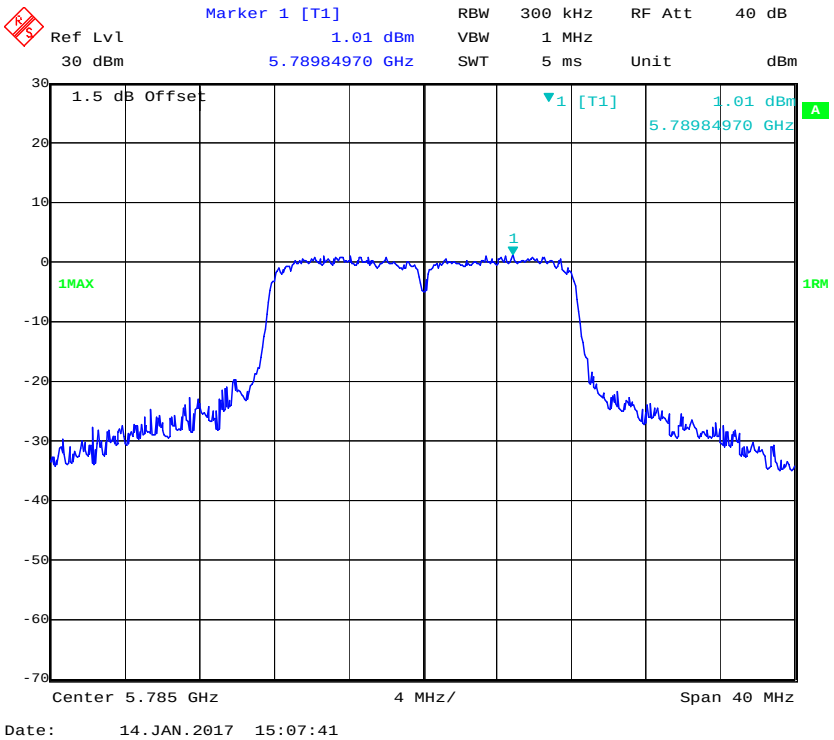
Directional gain = GANT + Array Gain = 4+10*log(3) =8.77 dBi > 6dBi
Power density Limit = 30 – (8.77-6) = 27.23dBm

1TX:

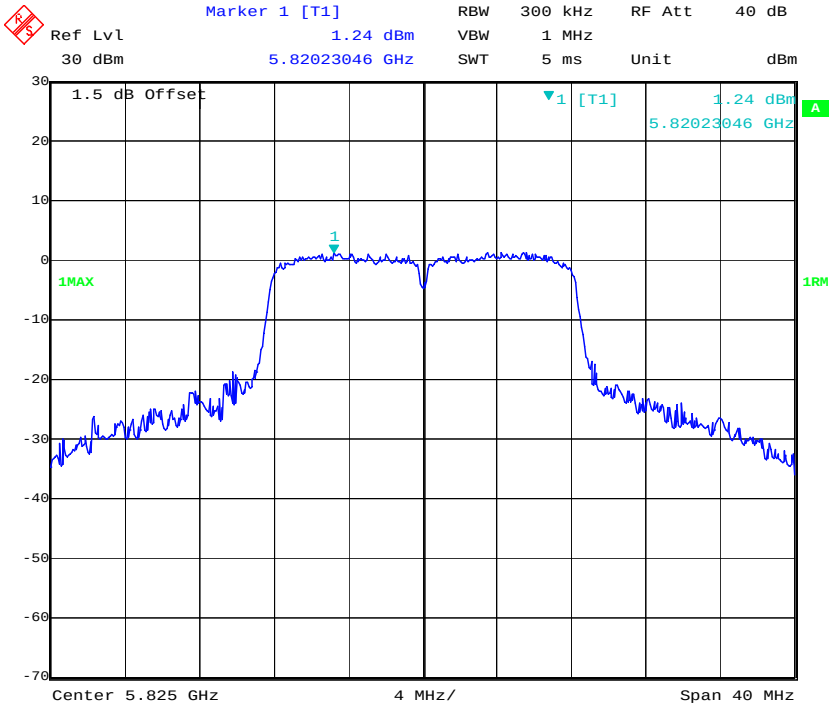
802.11a Low Channel – Chain0



802.11a Middle Channel – Chain0

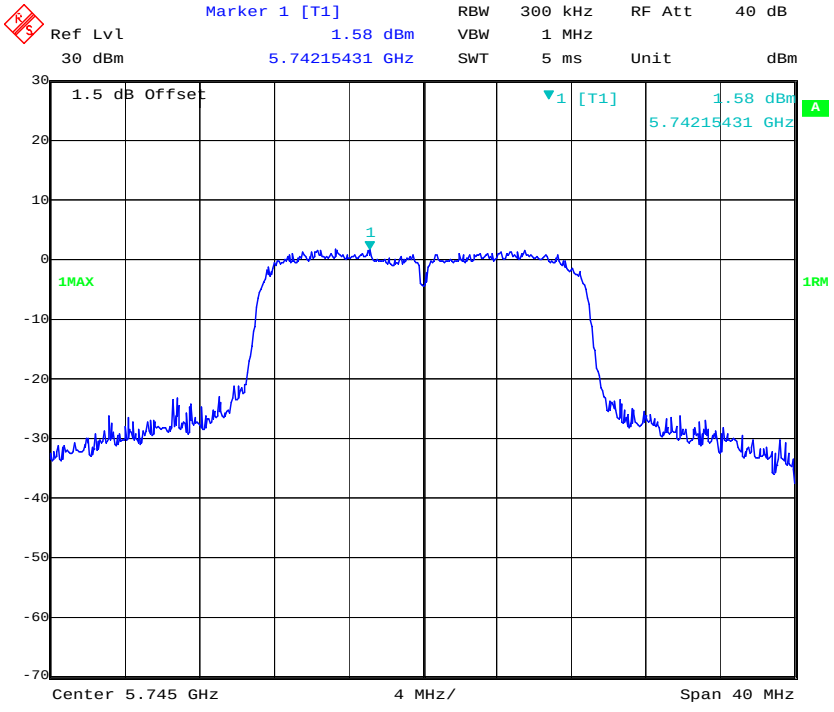


802.11a High Channel – Chain0



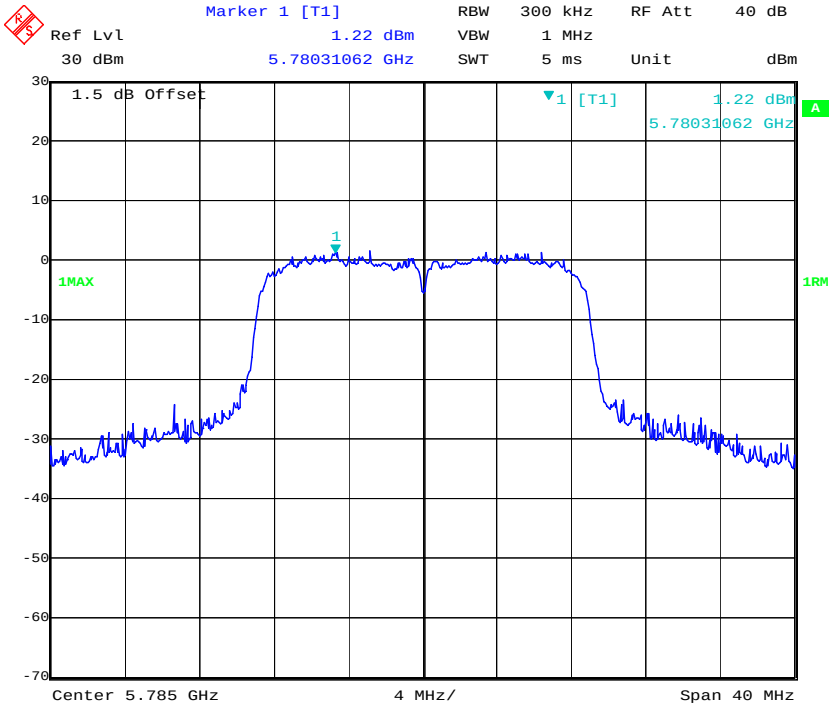
Date: 14.JAN.2017 15:04:36

802.11n ht20 Low Channel – Chain0



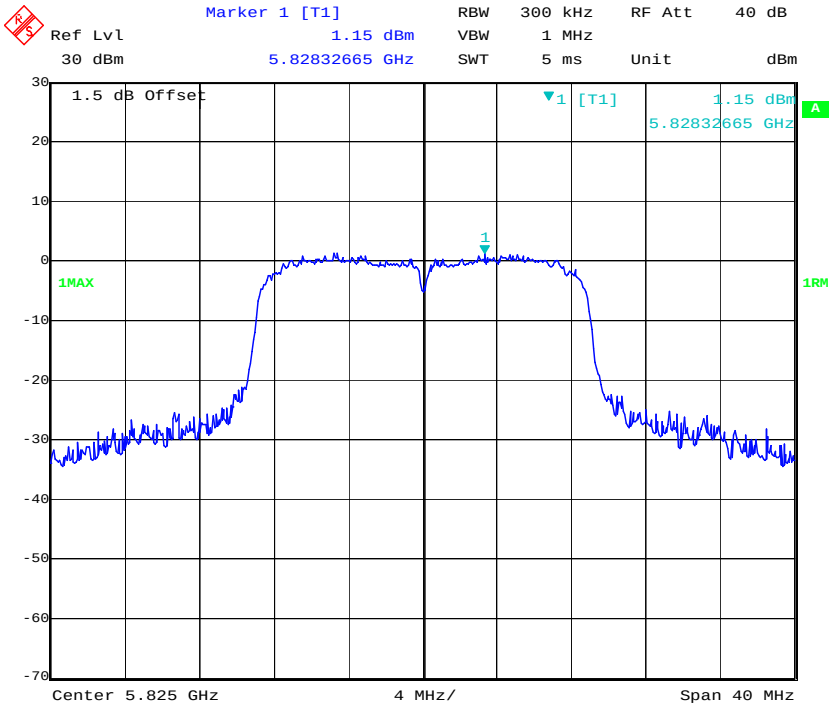
Date: 14.JAN.2017 14:56:32

802.11n ht20 Middle Channel – Chain0



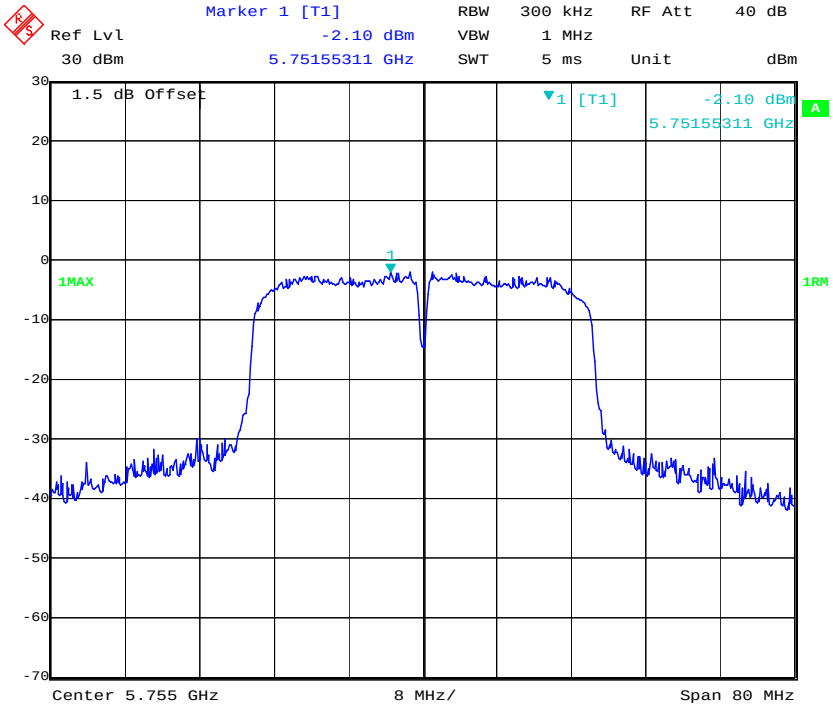
Date: 14.JAN.2017 14:59:15

802.11n ht20 High Channel – Chain0



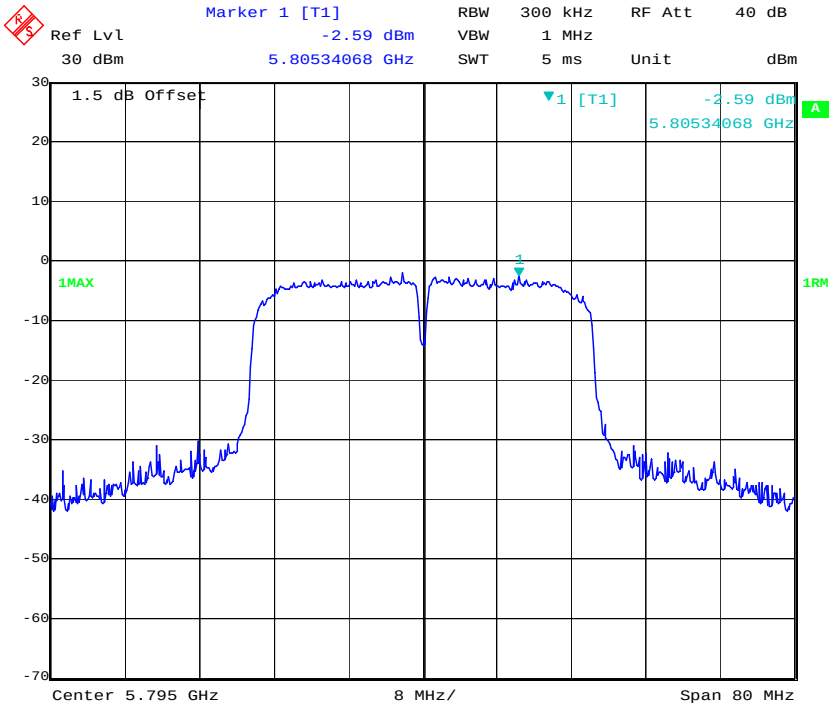
Date: 14.JAN.2017 15:01:42

802.11n ht40 Low Channel – Chain0



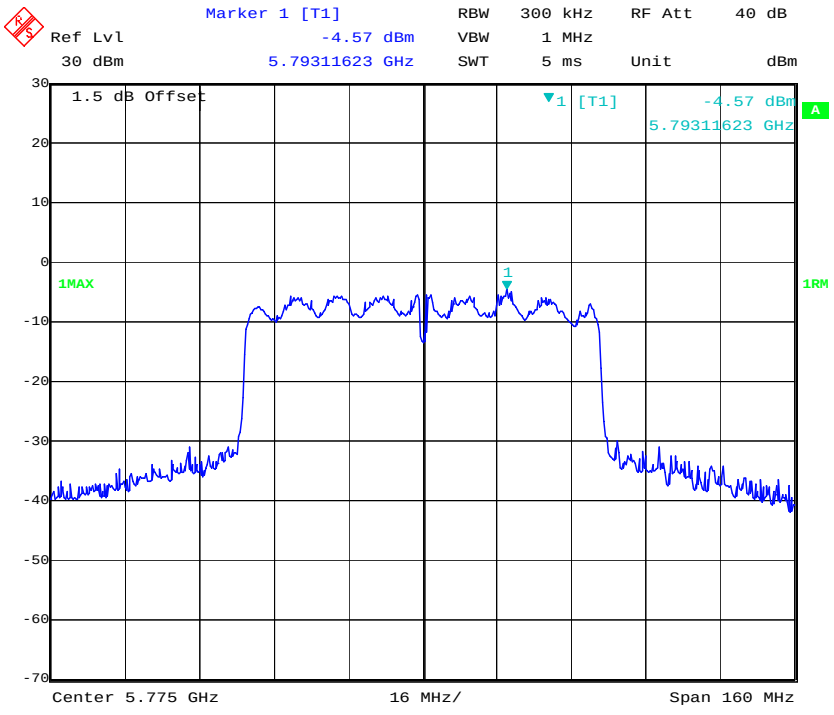
Date: 14.JAN.2017 14:54:03

802.11n ht40 High Channel – Chain0



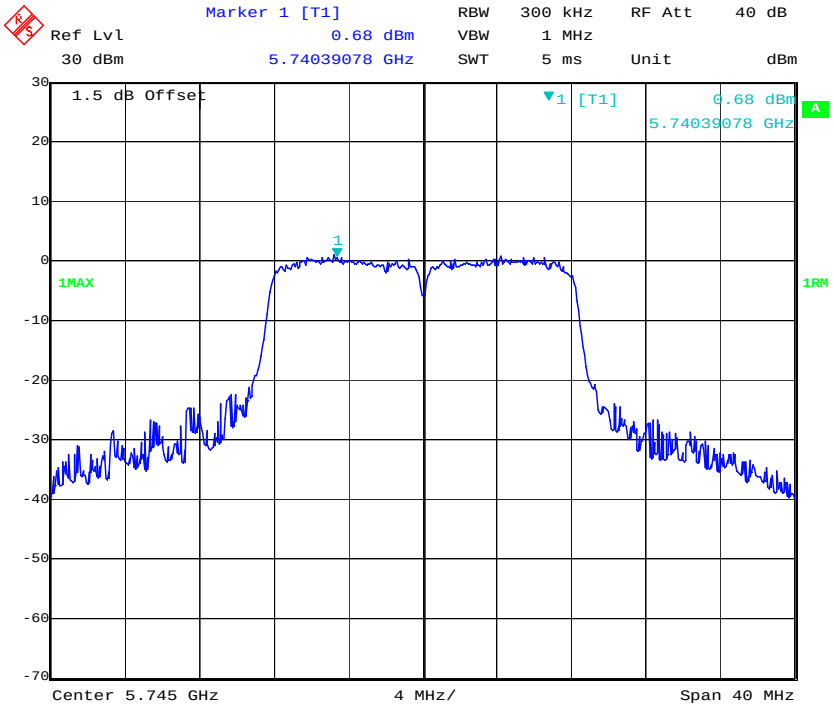
Date: 14.JAN.2017 14:51:58

802.11 ac80 Middle Channel – Chain0



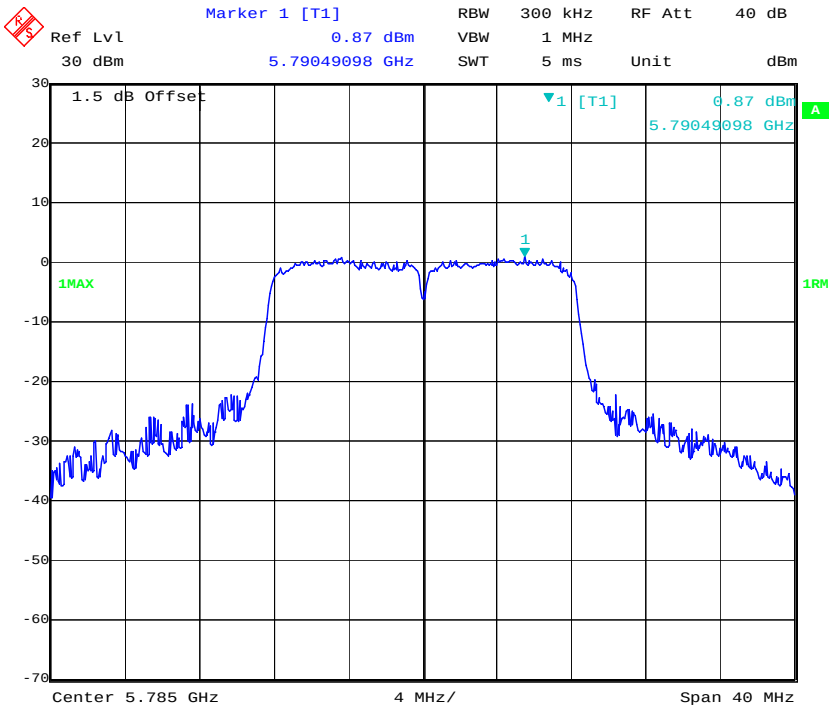
Date: 14.JAN.2017 14:44:56

802.11a Low Channel – Chain1



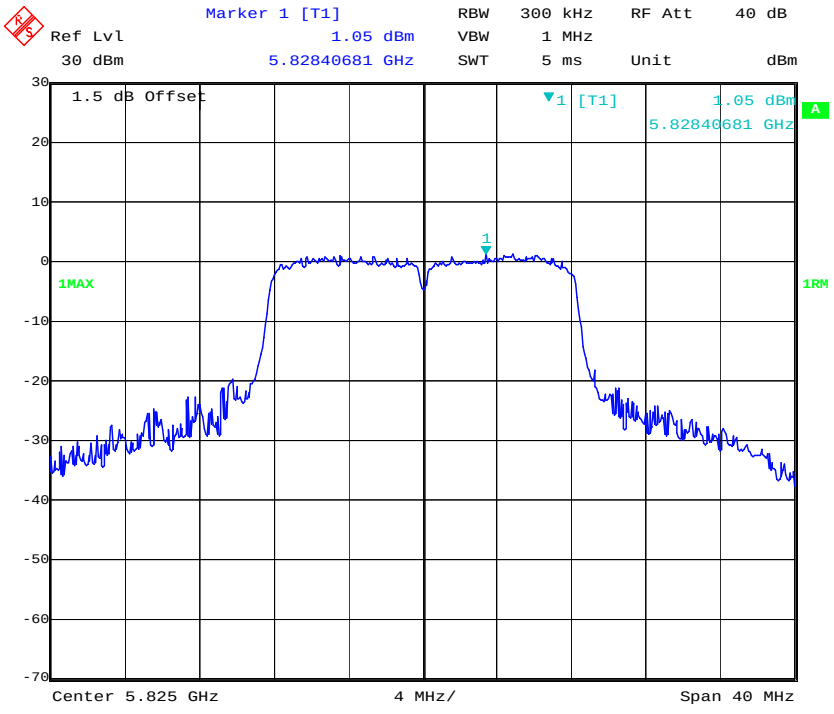
Date: 14.JAN.2017 15:17:08

802.11a Middle Channel – Chain1



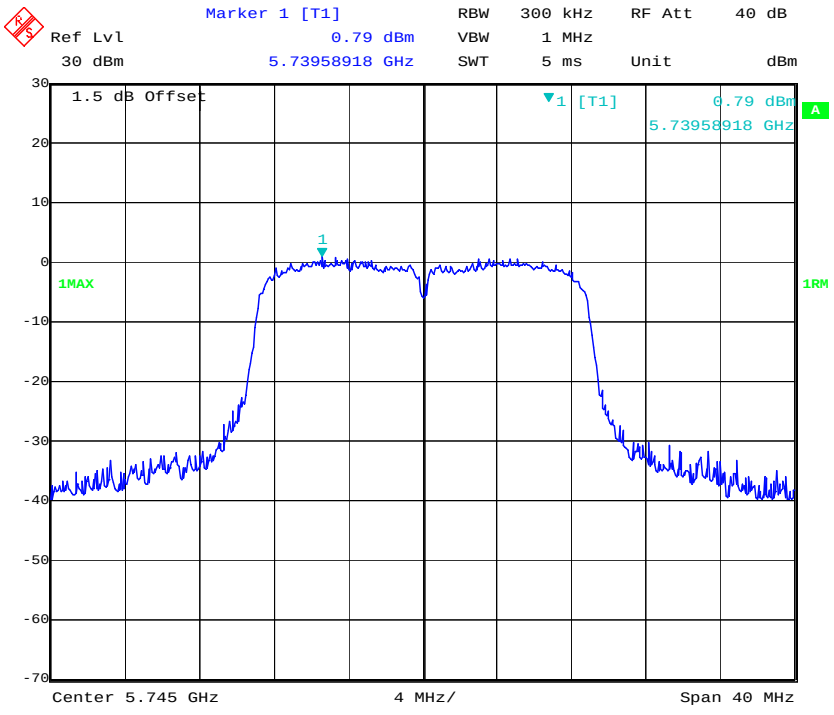
Date: 14.JAN.2017 15:21:17

802.11a High Channel – Chain1



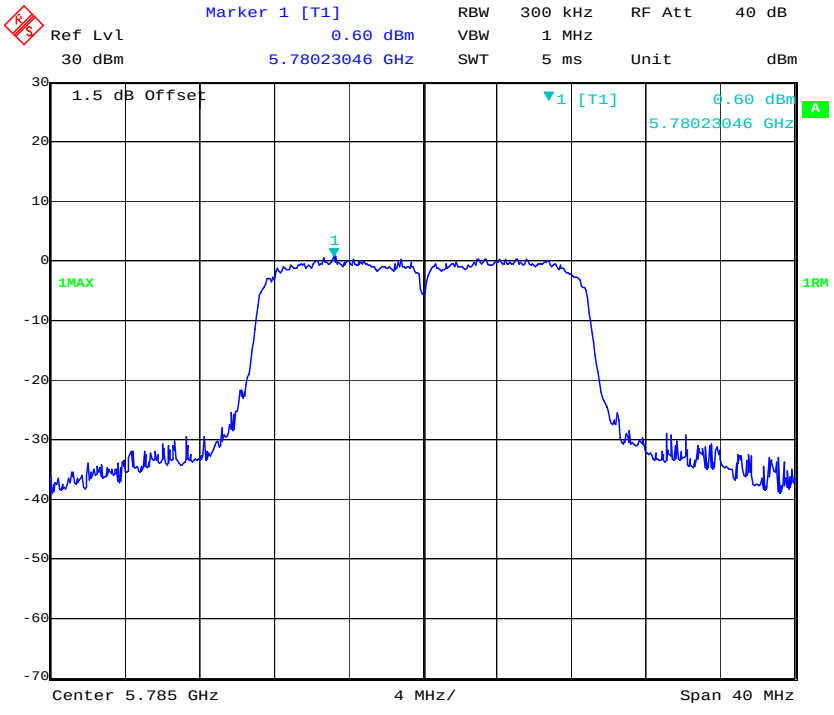
Date: 14.JAN.2017 15:24:31

802.11n ht20 Low Channel – Chain1



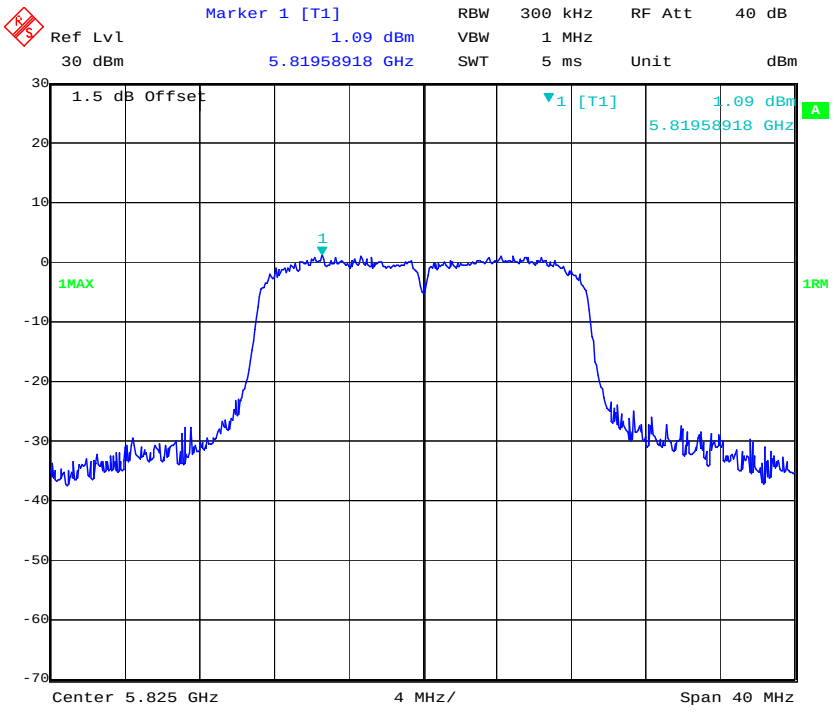
Date: 14.JAN.2017 15:36:31

802.11n ht20 Middle Channel – Chain1



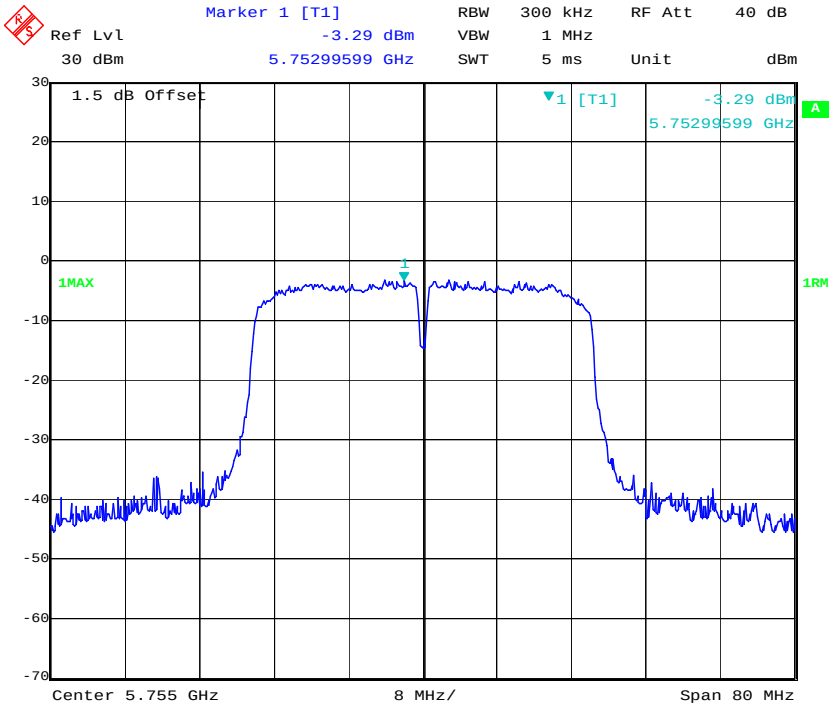
Date: 14.JAN.2017 15:34:10

802.11n ht20 High Channel – Chain1



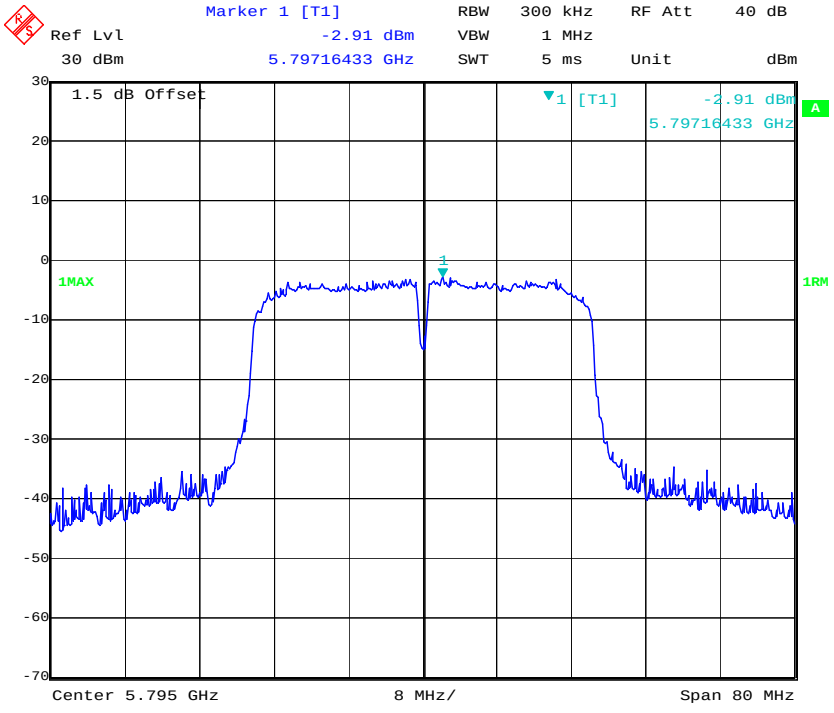
Date: 14.JAN.2017 15:32:03

802.11n ht40 Low Channel – Chain1



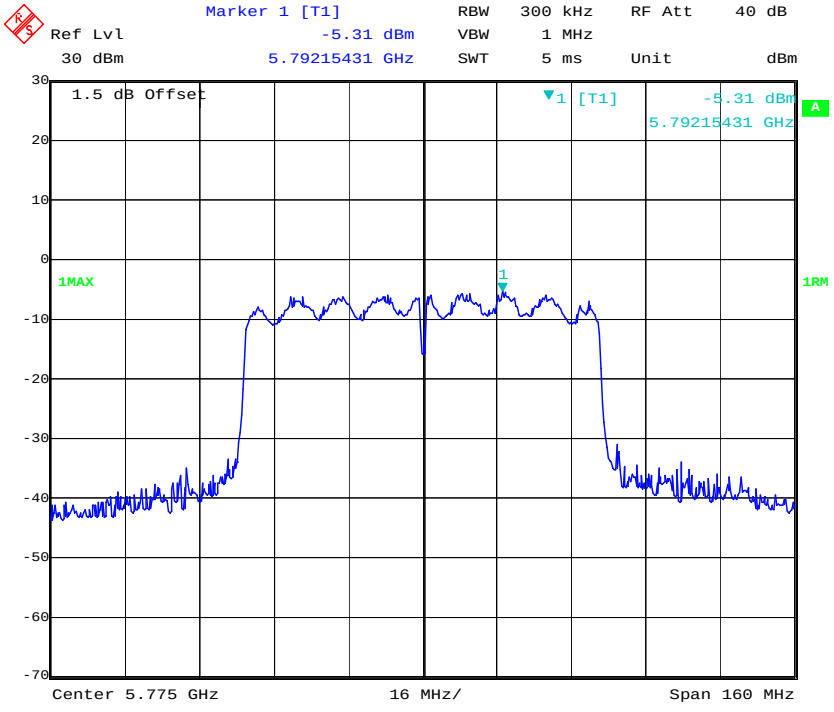
Date: 14.JAN.2017 15:40:28

802.11n ht40 High Channel – Chain1



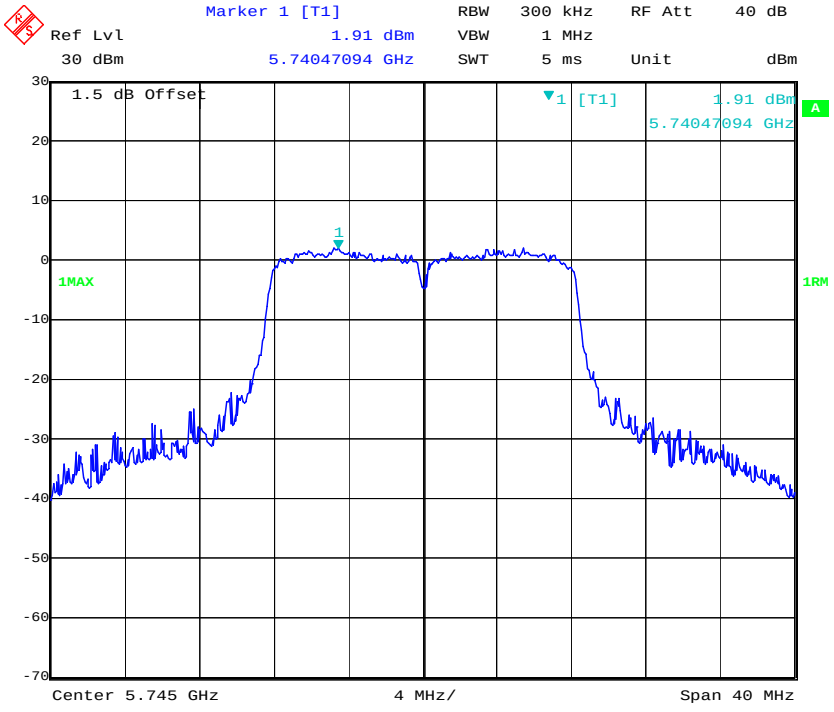
Date: 14.JAN.2017 15:43:28

802.11 ac80 Middle Channel – Chain1



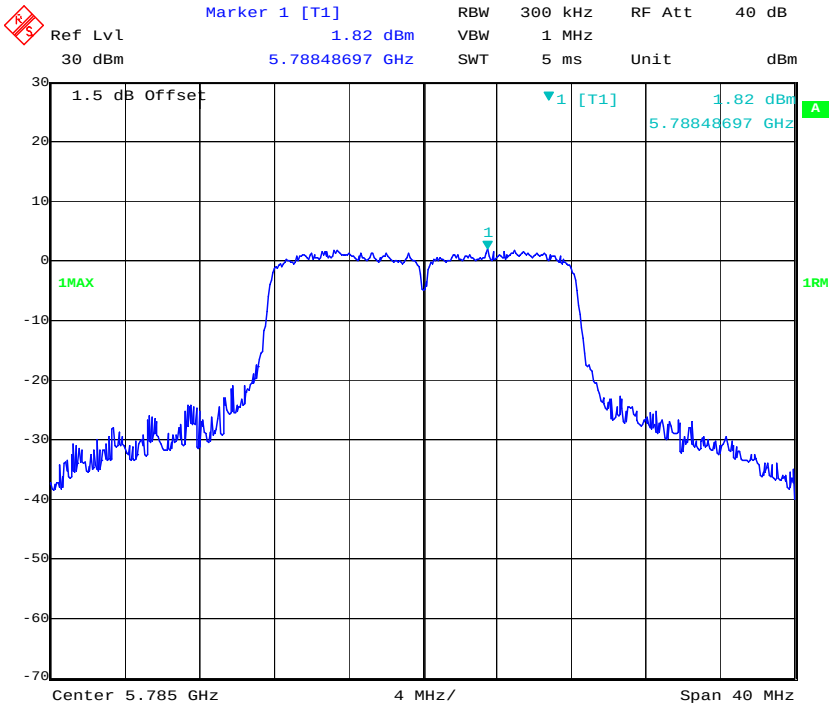
Date: 14.JAN.2017 15:46:12

802.11a Low Channel – Chain2



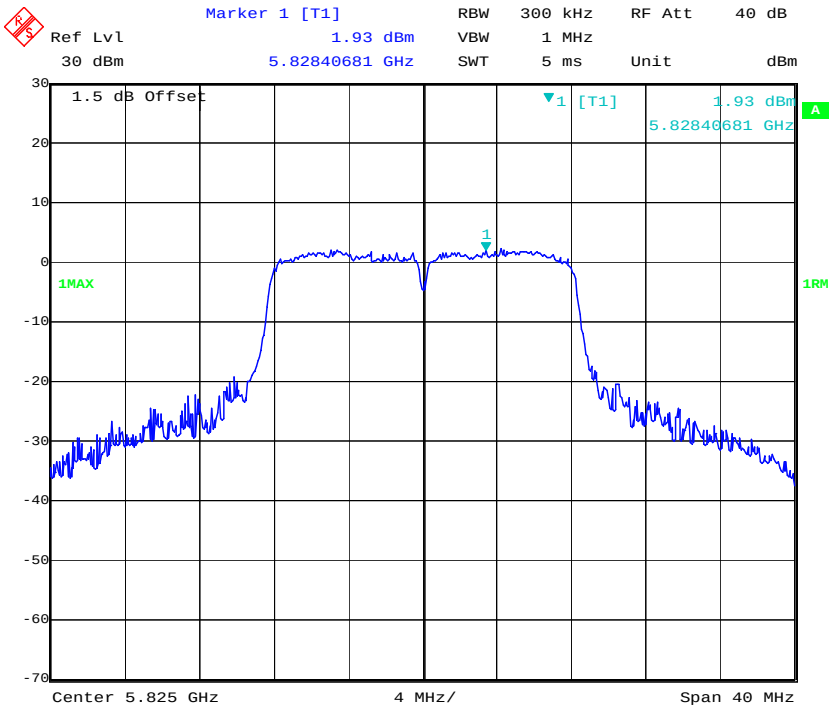
Date: 14.JAN.2017 16:27:12

802.11a Middle Channel – Chain2



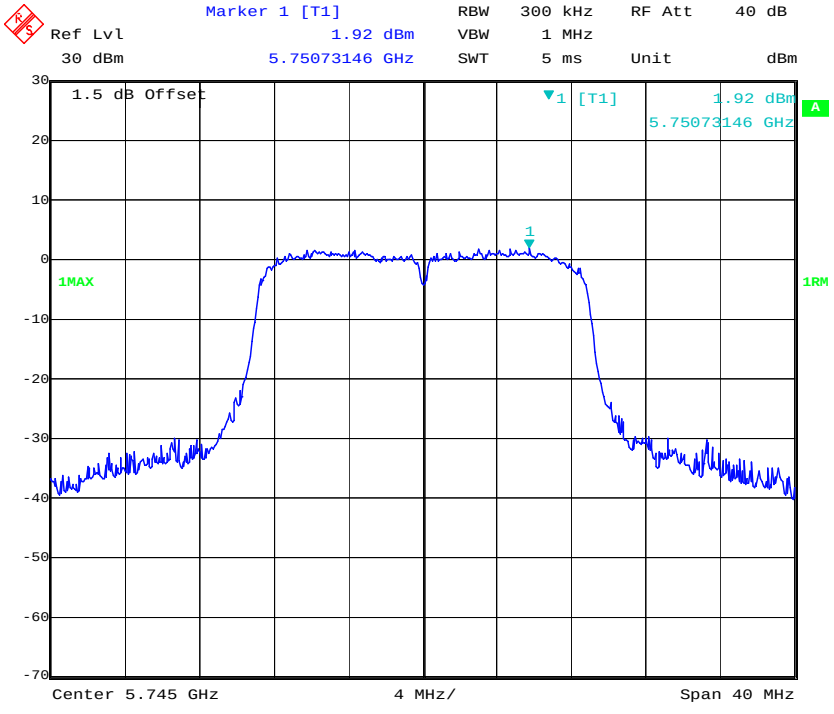
Date: 14.JAN.2017 16:25:02

802.11a High Channel – Chain2



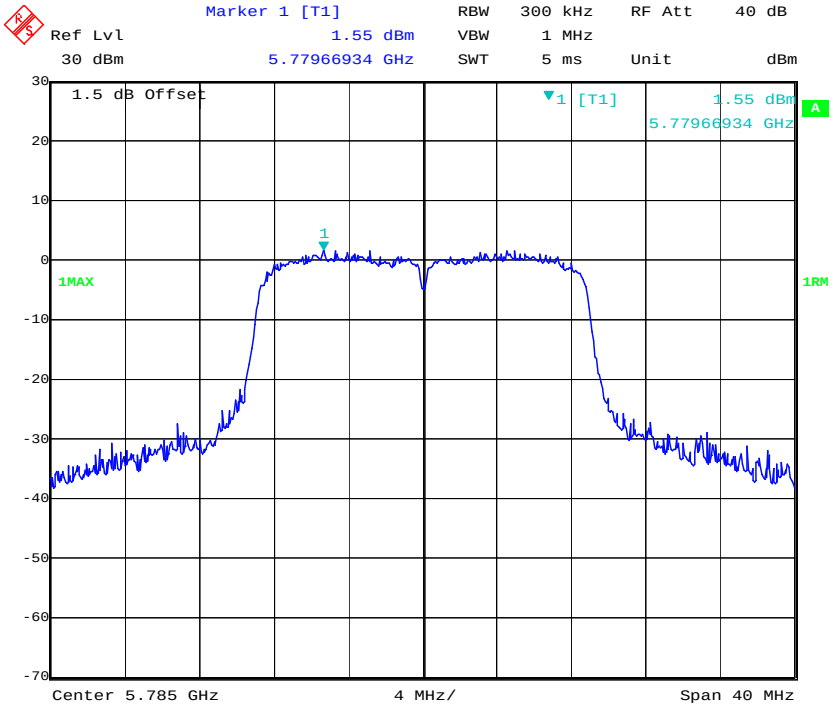
Date: 14.JAN.2017 16:22:57

802.11n ht20 Low Channel – Chain2



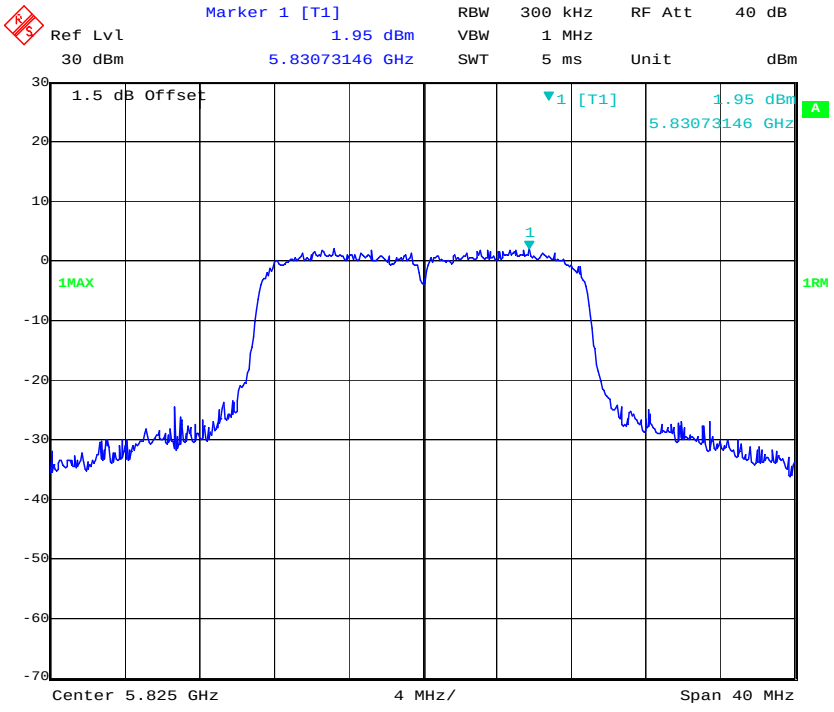
Date: 14.JAN.2017 16:12:03

802.11n ht20 Middle Channel – Chain2



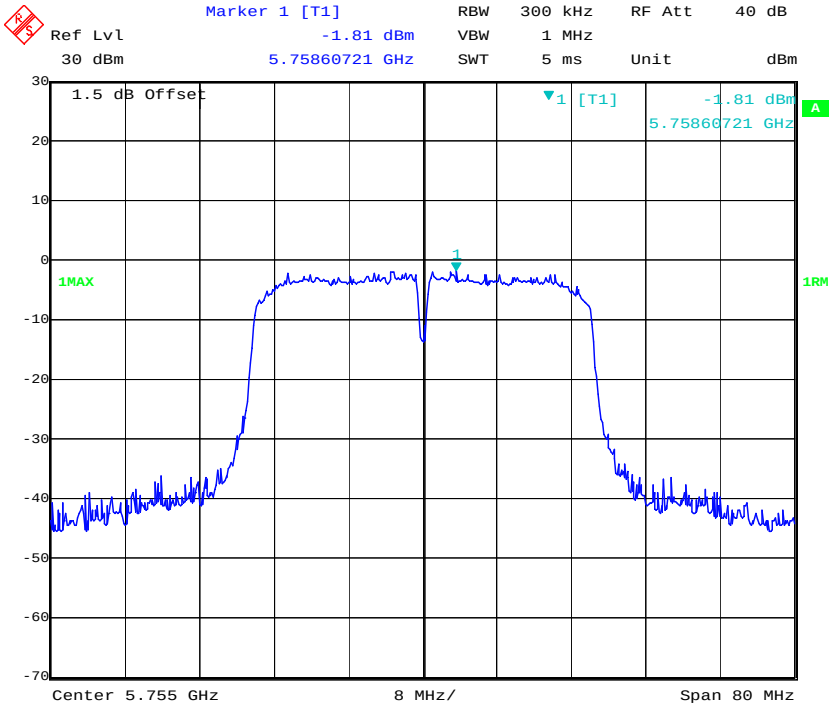
Date: 14.JAN.2017 16:14:42

802.11n ht20 High Channel – Chain2



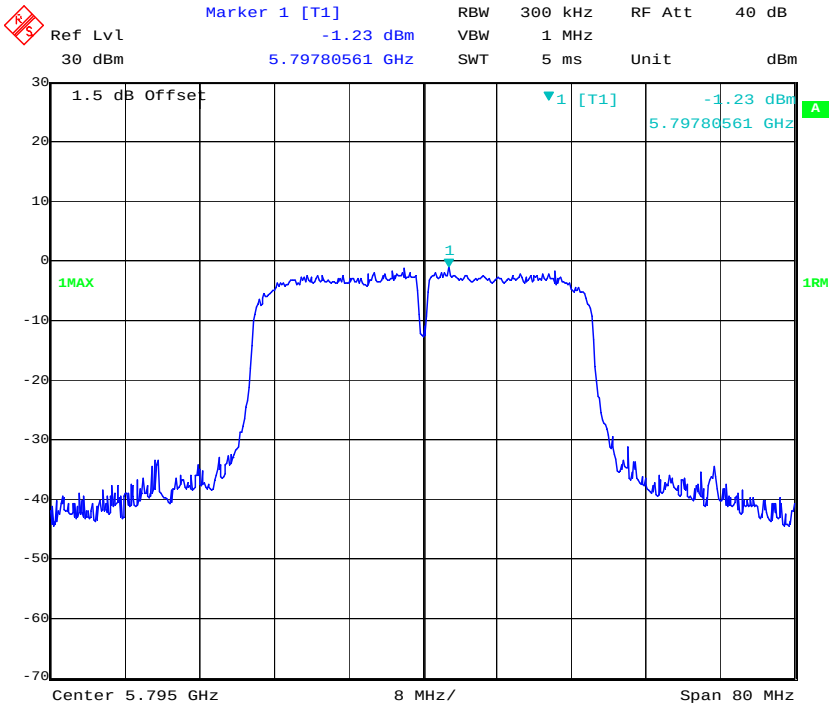
Date: 14.JAN.2017 16:18:21

802.11n ht40 Low Channel – Chain2



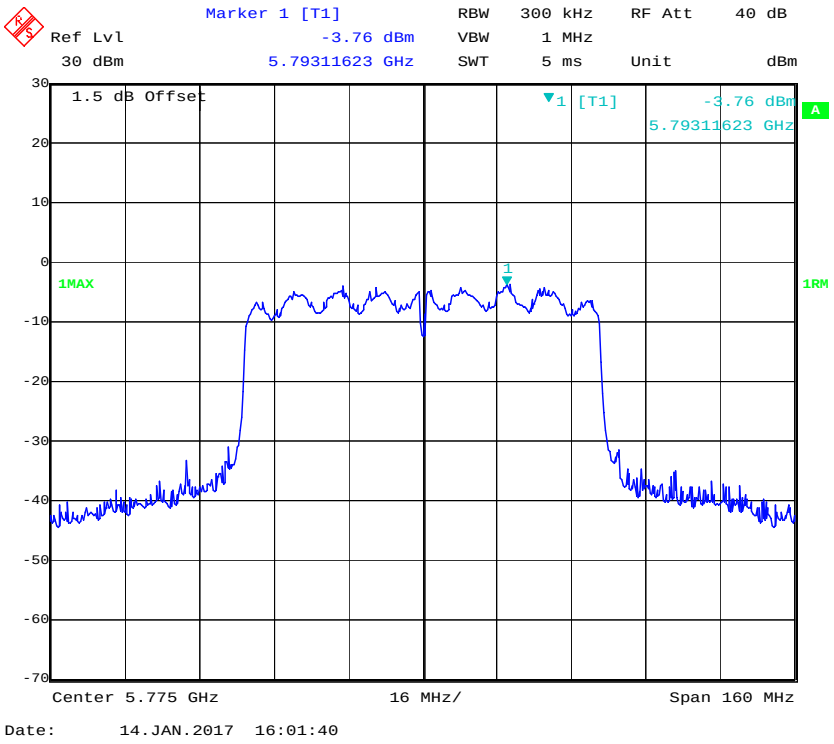
Date: 14.JAN.2017 16:05:12

802.11n ht40 High Channel – Chain2



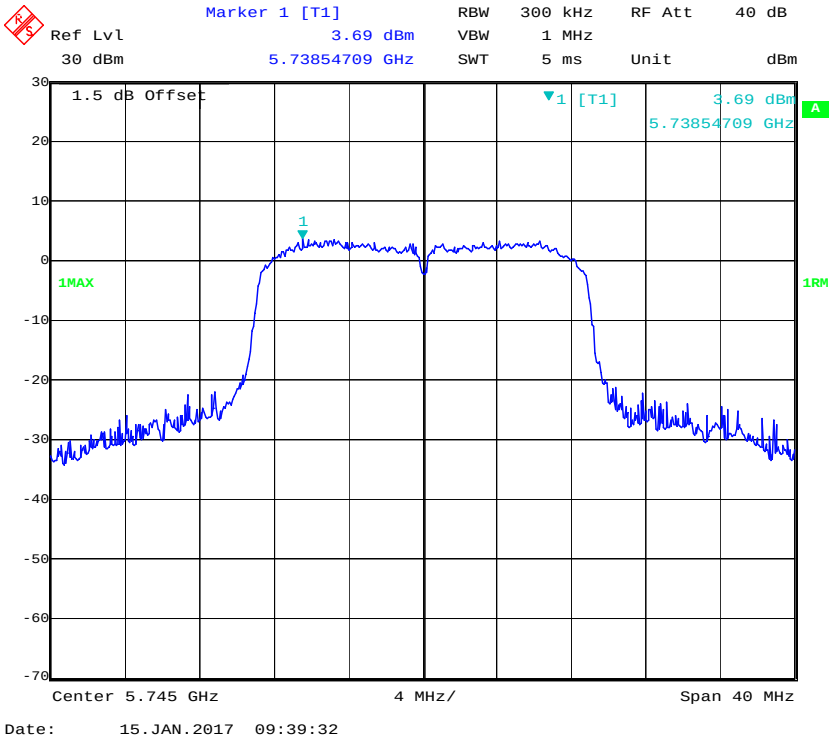
Date: 14.JAN.2017 16:09:43

802.11 ac80 Middle Channel – Chain2

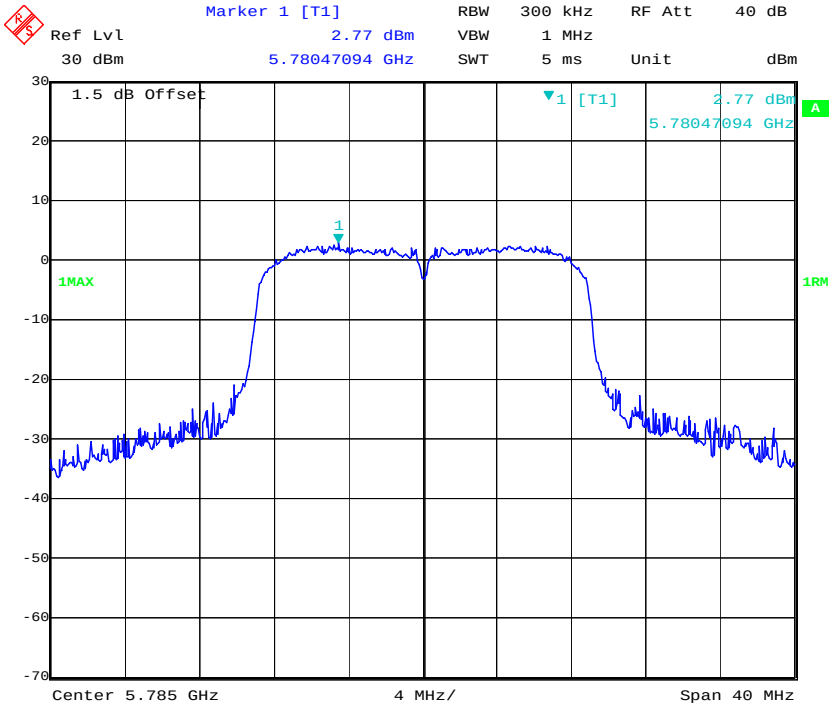


2TX:

802.11n ht20 Low Channel – Chain0

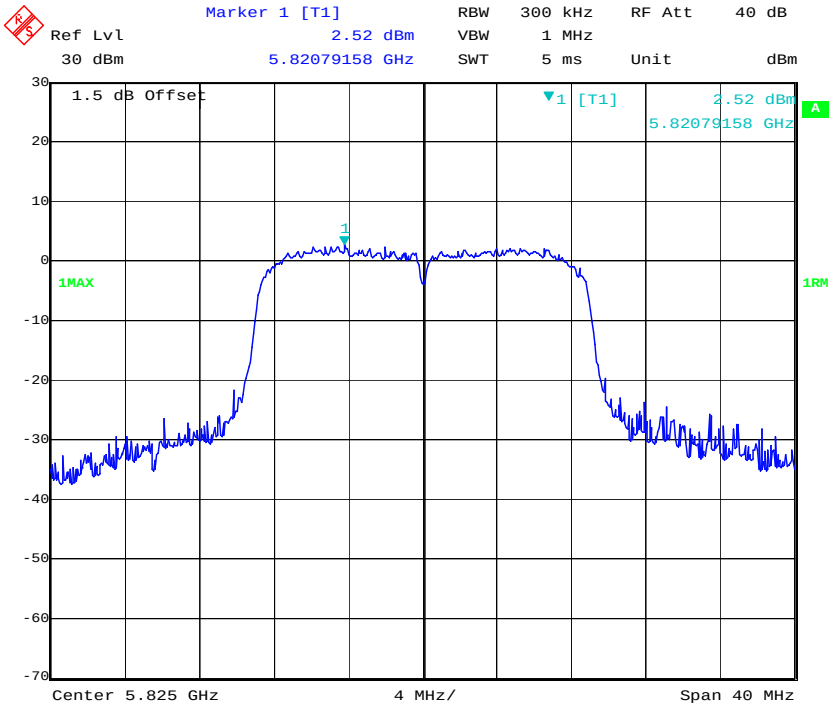


802.11n ht20 Middle Channel – Chain0



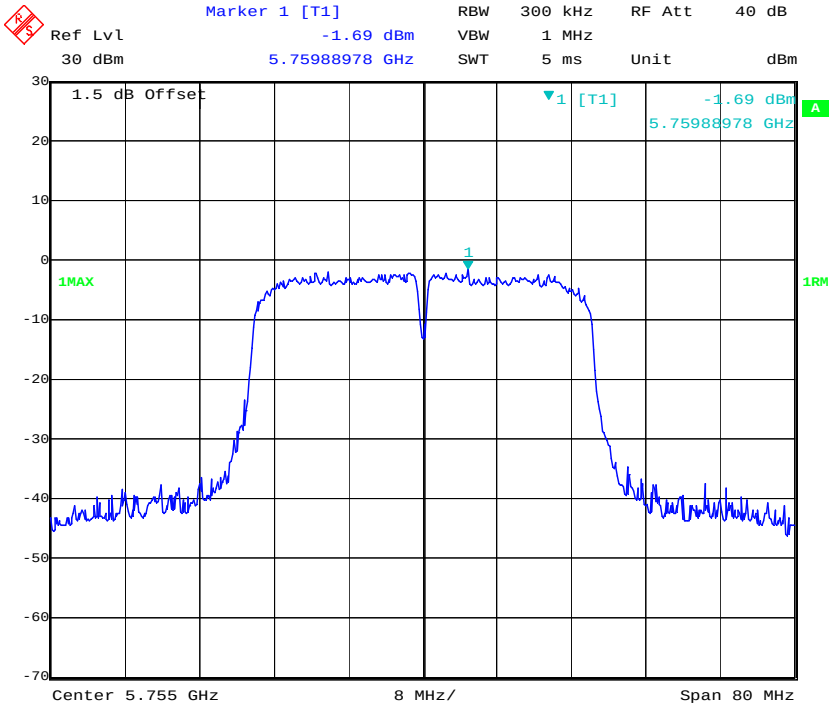
Date: 15.JAN.2017 09:41:11

802.11n ht20 High Channel – Chain0



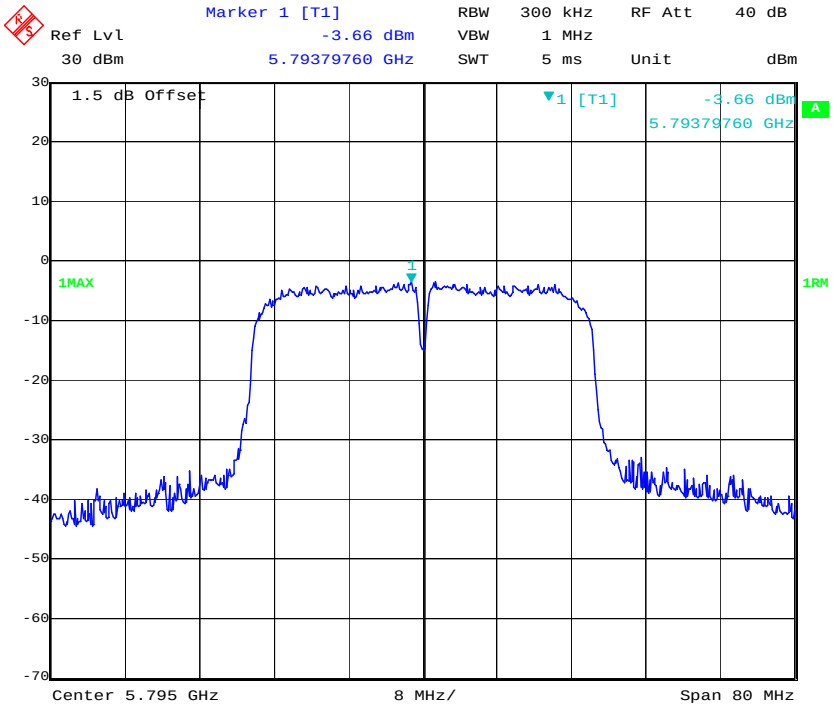
Date: 15.JAN.2017 09:43:52

802.11n ht40 Low Channel – Chain0



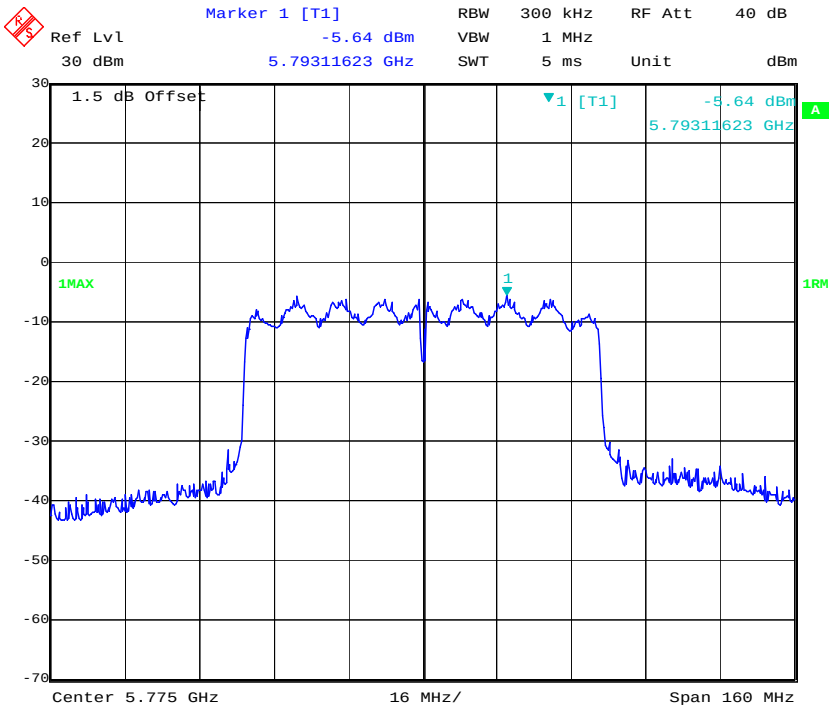
Date: 15.JAN.2017 09:45:29

802.11n ht40 High Channel – Chain0



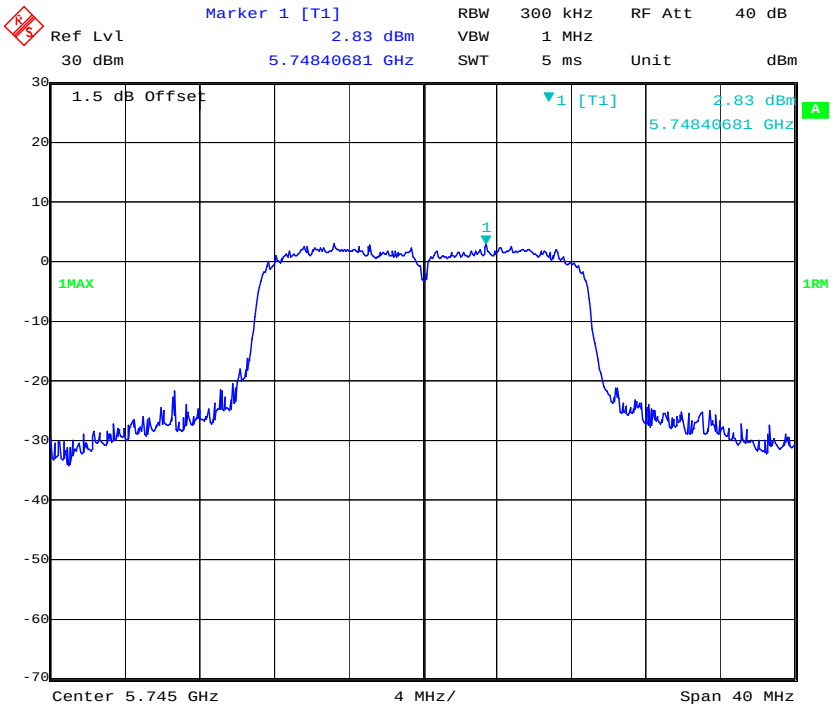
Date: 15.JAN.2017 09:51:01

802.11 ac80 Middle Channel – Chain0



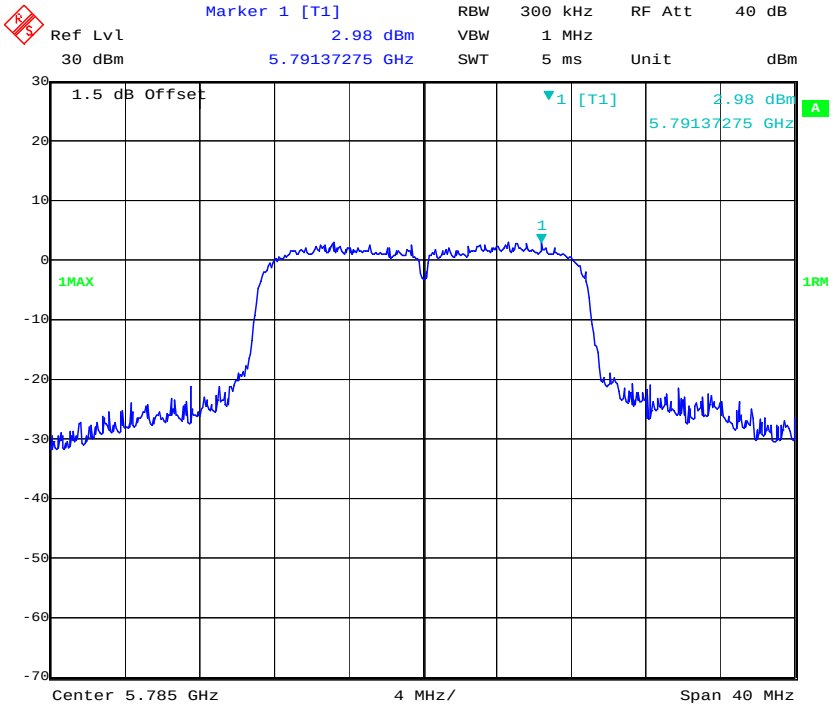
Date: 15.JAN.2017 09:55:07

802.11n ht20 Low Channel – Chain1



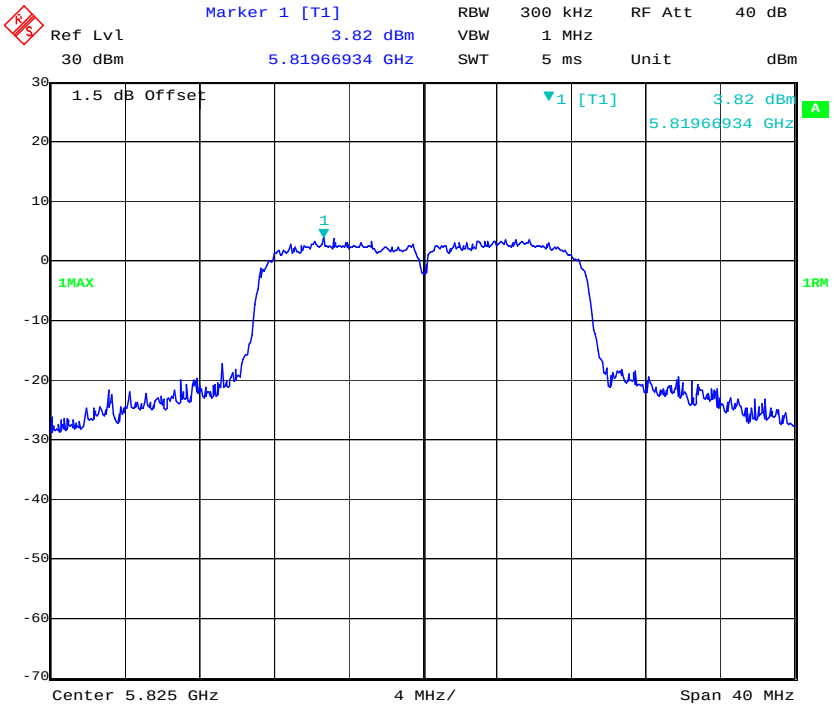
Date: 15.JAN.2017 10:11:06

802.11n ht20 Middle Channel – Chain1



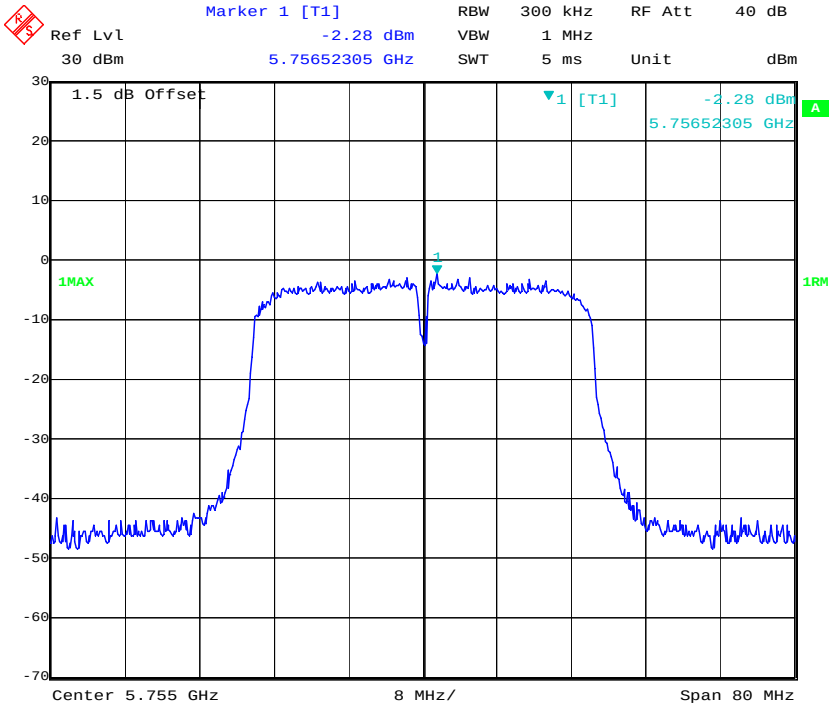
Date: 15.JAN.2017 10:12:34

802.11n ht20 High Channel – Chain1



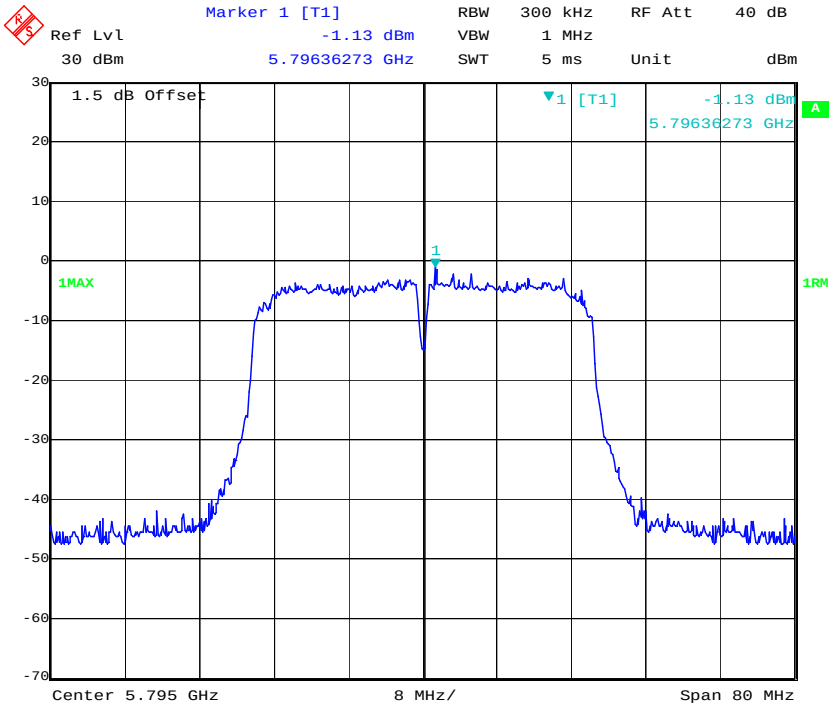
Date: 15.JAN.2017 10:14:08

802.11n ht40 Low Channel – Chain1



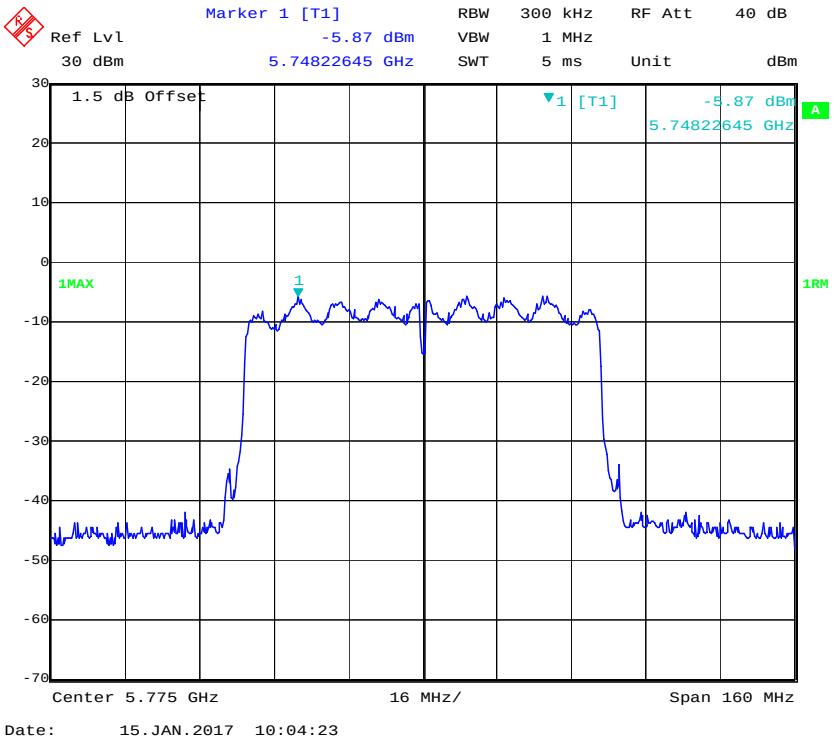
Date: 15.JAN.2017 10:06:40

802.11n ht40 High Channel – Chain1



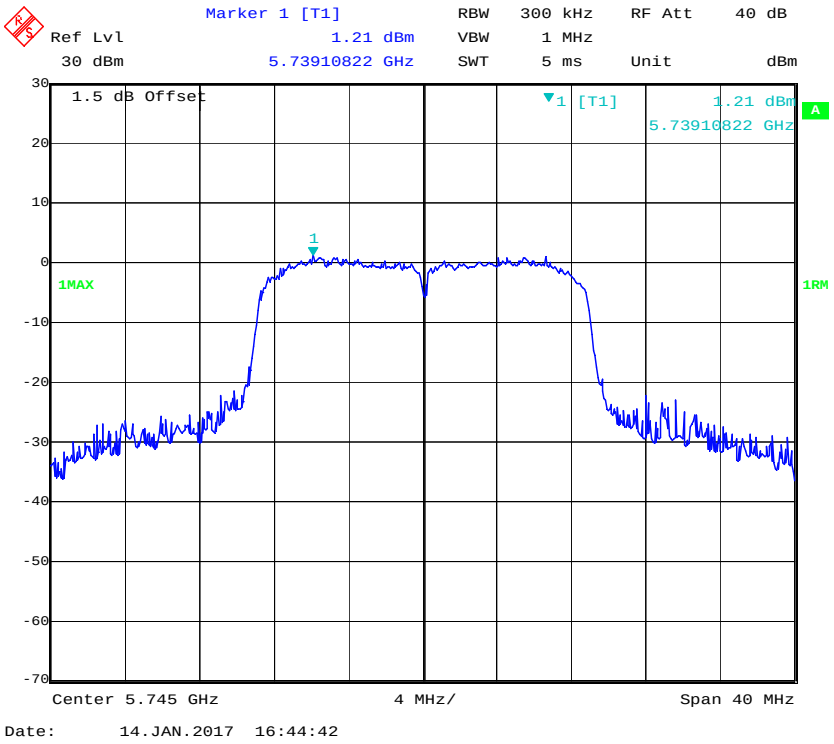
Date: 15.JAN.2017 10:08:07

802.11 ac80 Middle Channel – Chain1

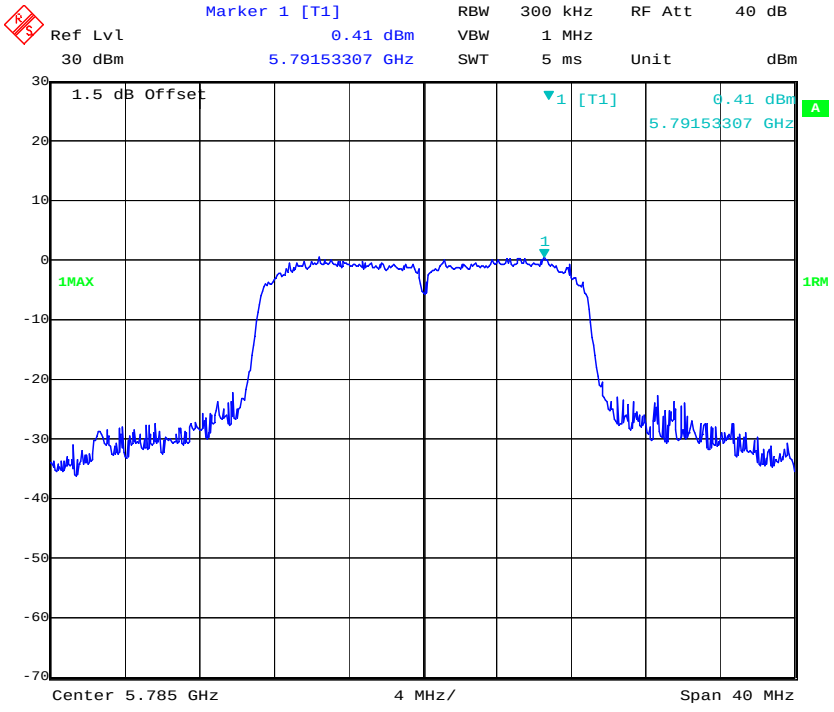


3TX:

802.11n ht20 Low Channel – Chain0

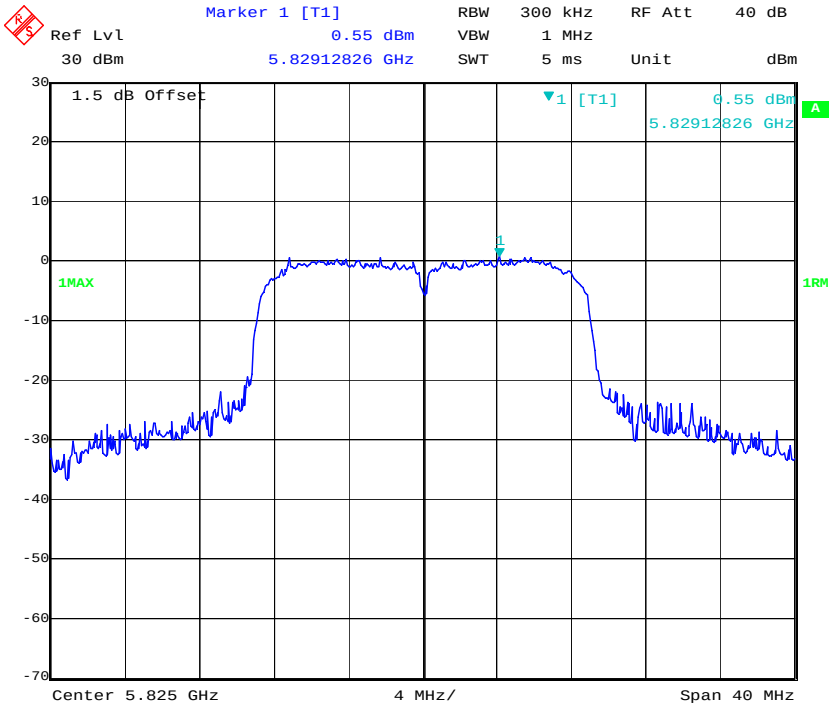


802.11n ht20 Middle Channel – Chain0



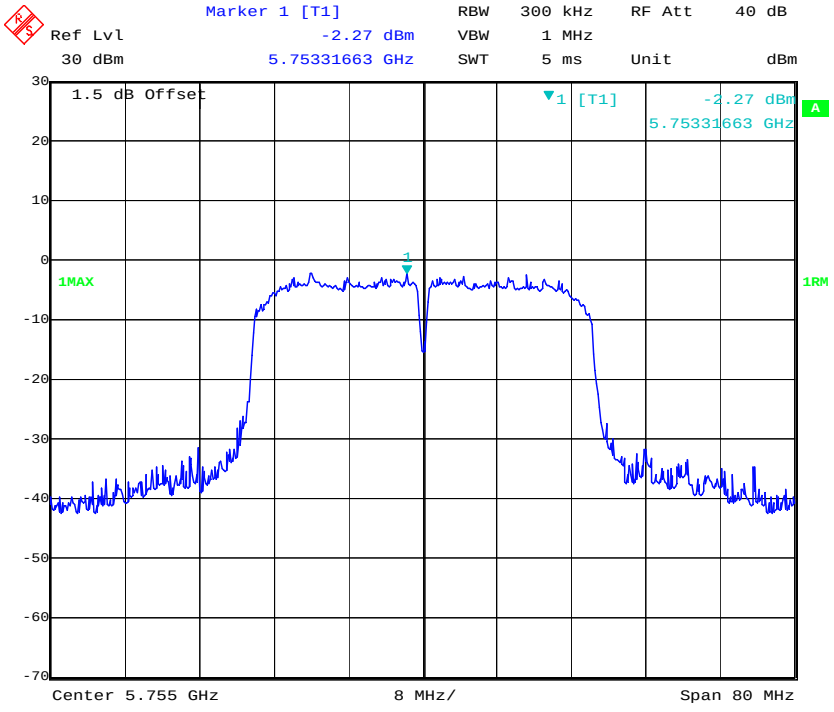
Date: 14.JAN.2017 16:47:16

802.11n ht20 High Channel – Chain0



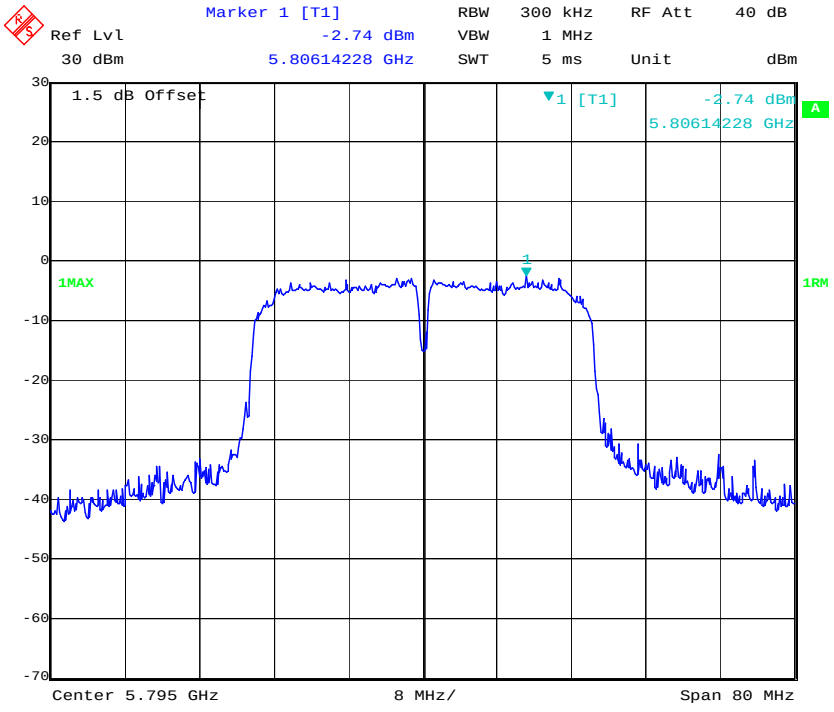
Date: 14.JAN.2017 16:50:05

802.11n ht40 Low Channel – Chain0



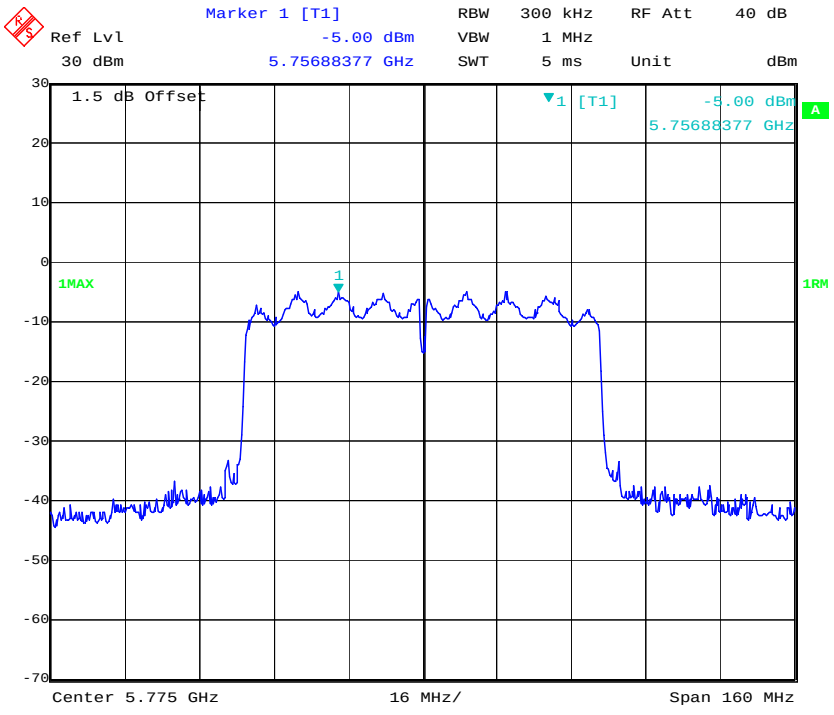
Date: 14.JAN.2017 16:54:02

802.11n ht40 High Channel – Chain0



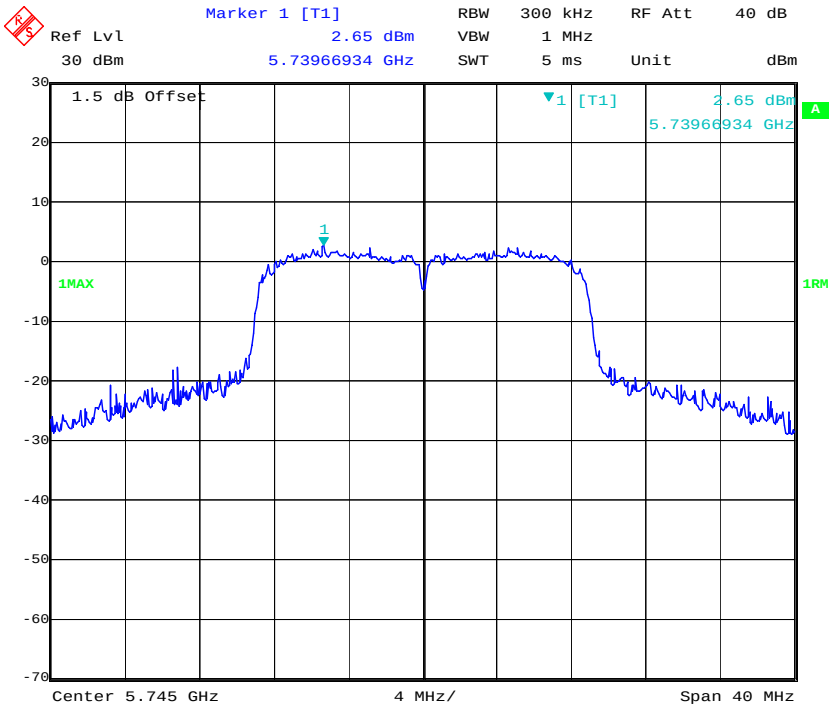
Date: 14.JAN.2017 16:55:37

802.11 ac80 Middle Channel – Chain0



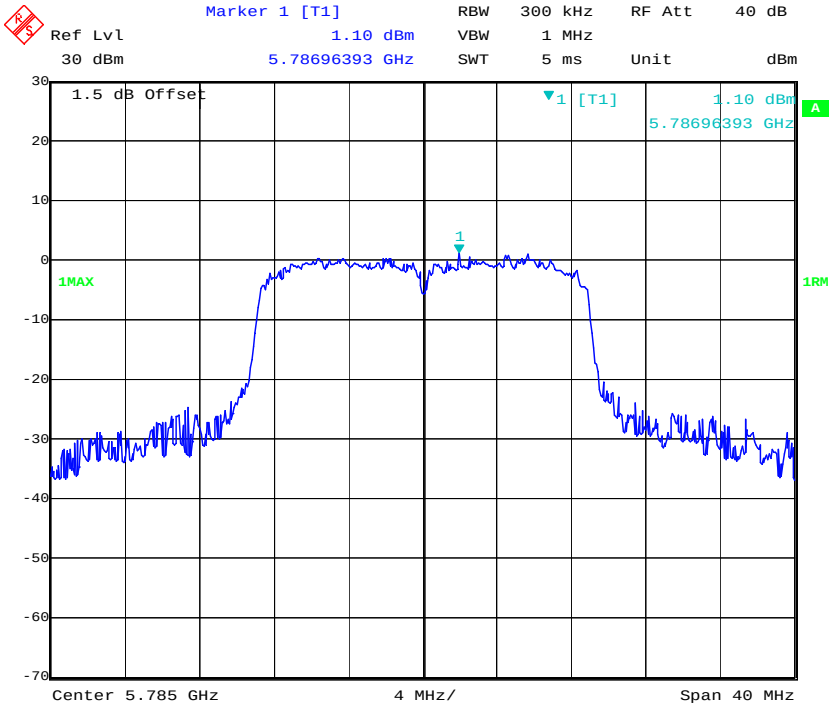
Date: 14.JAN.2017 16:57:43

802.11n ht20 Low Channel – Chain1



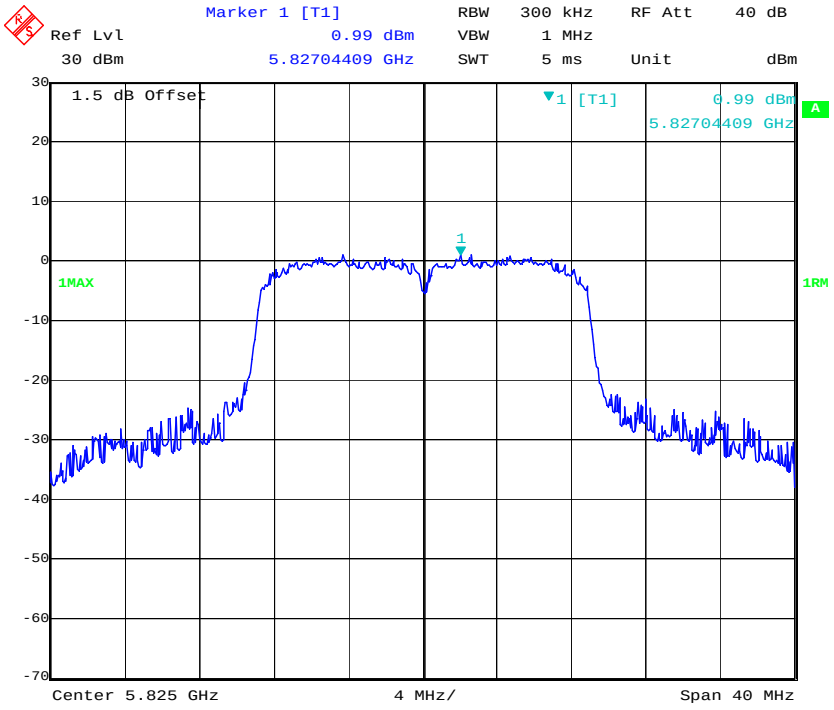
Date: 14.JAN.2017 17:12:57

802.11n ht20 Middle Channel – Chain1



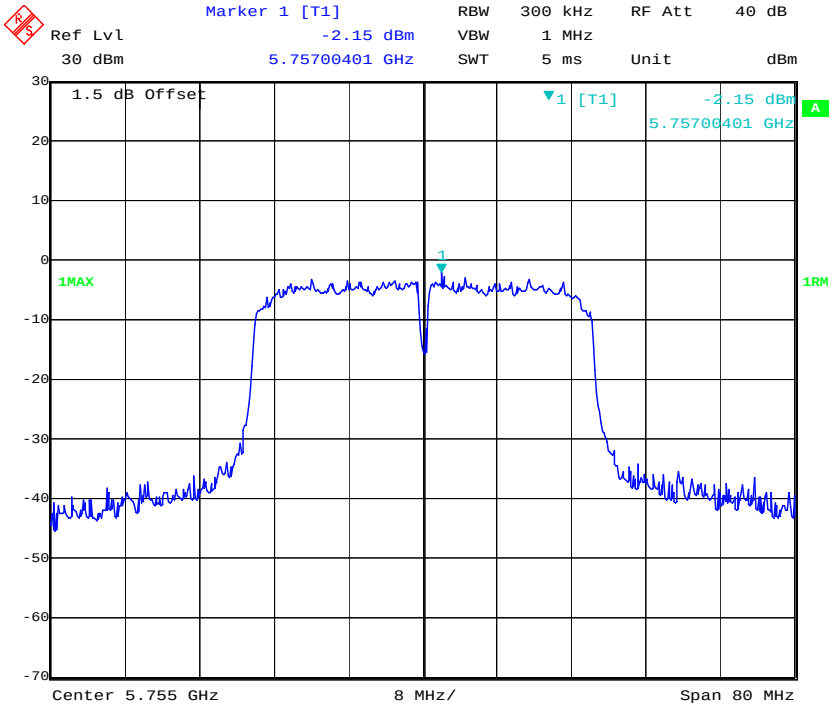
Date: 14.JAN.2017 17:15:16

802.11n ht20 High Channel – Chain1



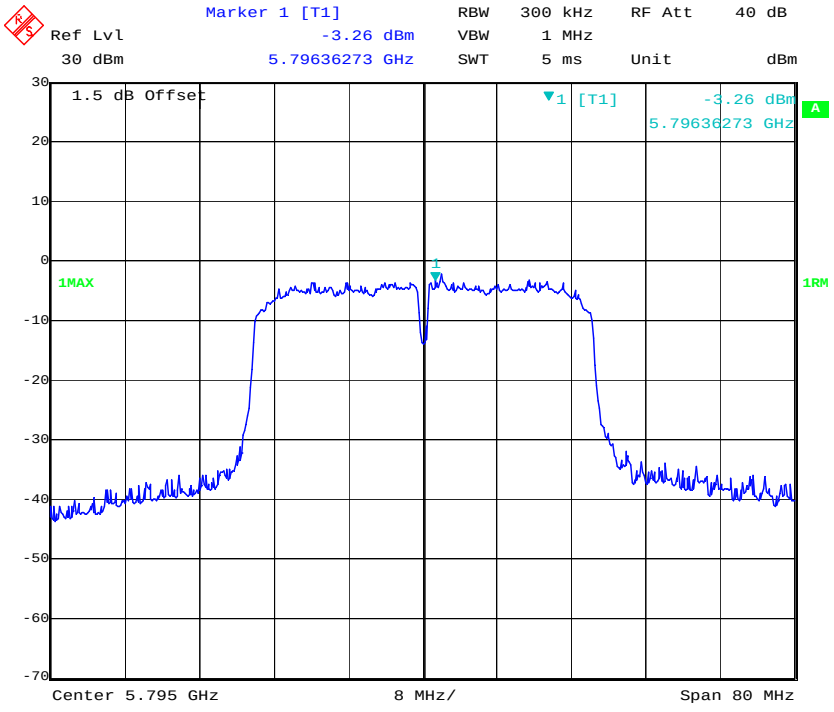
Date: 14.JAN.2017 17:17:01

802.11n ht40 Low Channel – Chain1



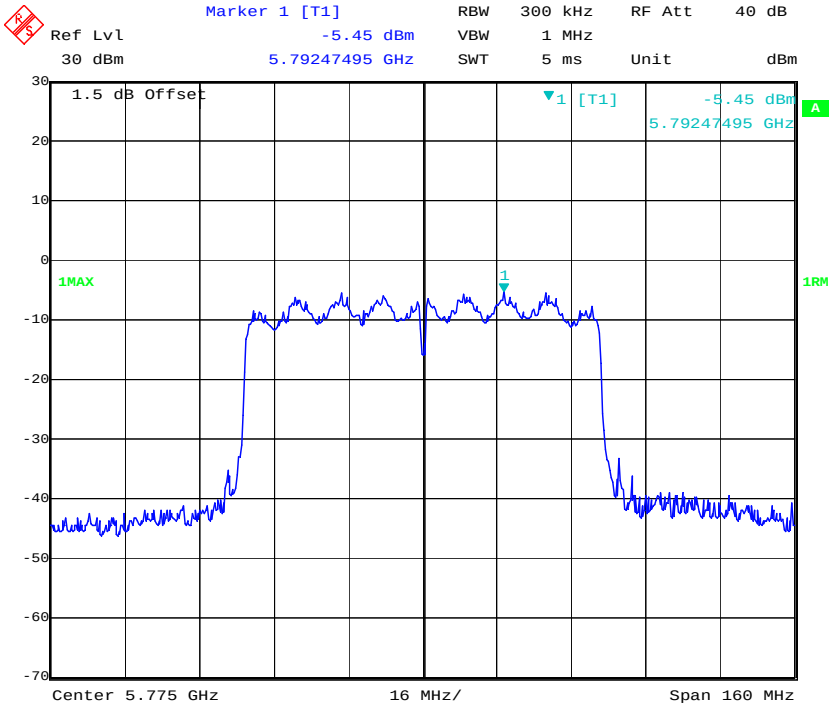
Date: 14.JAN.2017 17:06:37

802.11n ht40 High Channel – Chain1



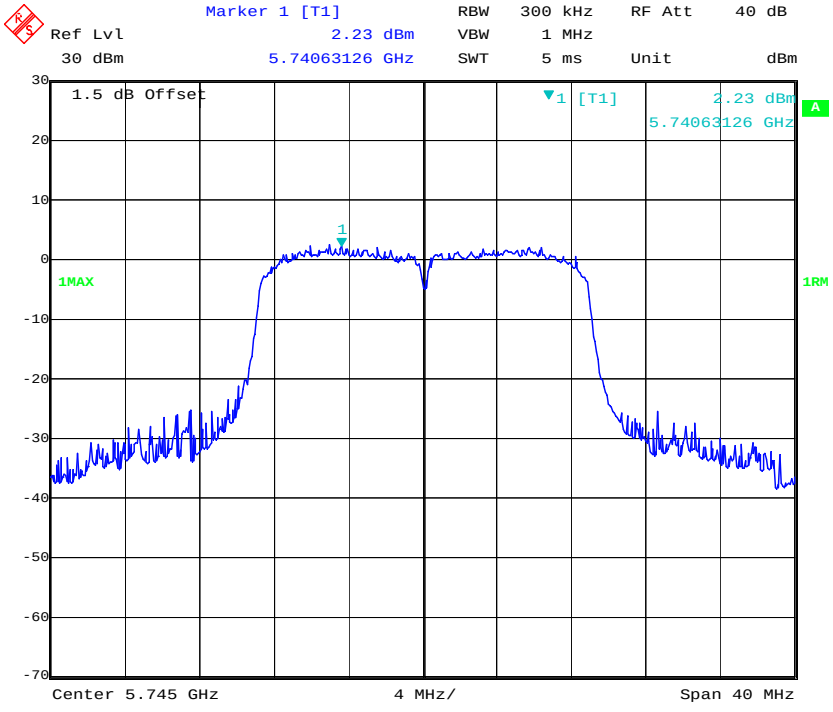
Date: 14.JAN.2017 17:08:18

802.11 ac80 Middle Channel – Chain1



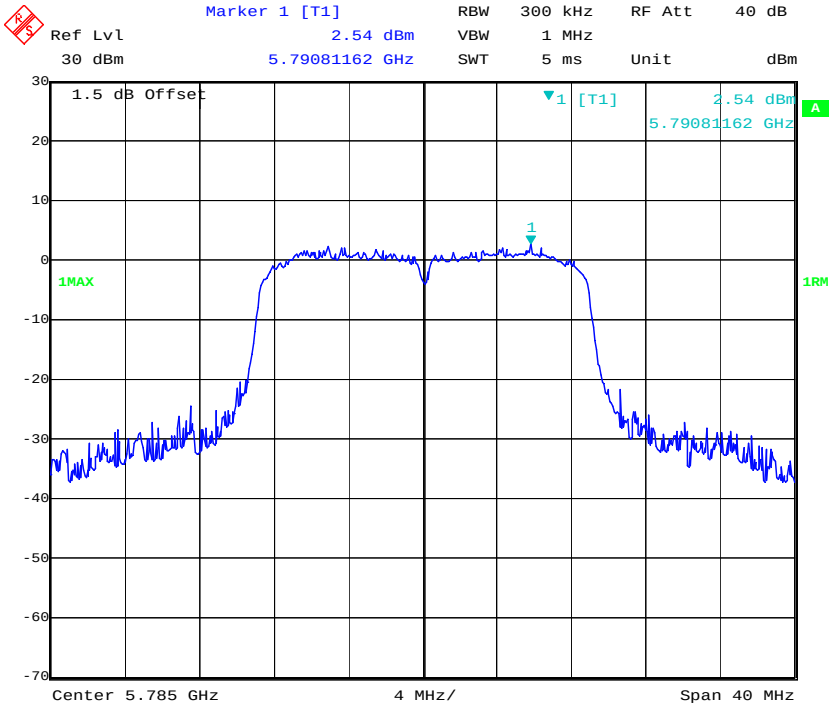
Date: 14.JAN.2017 17:04:38

802.11n ht20 Low Channel – Chain2



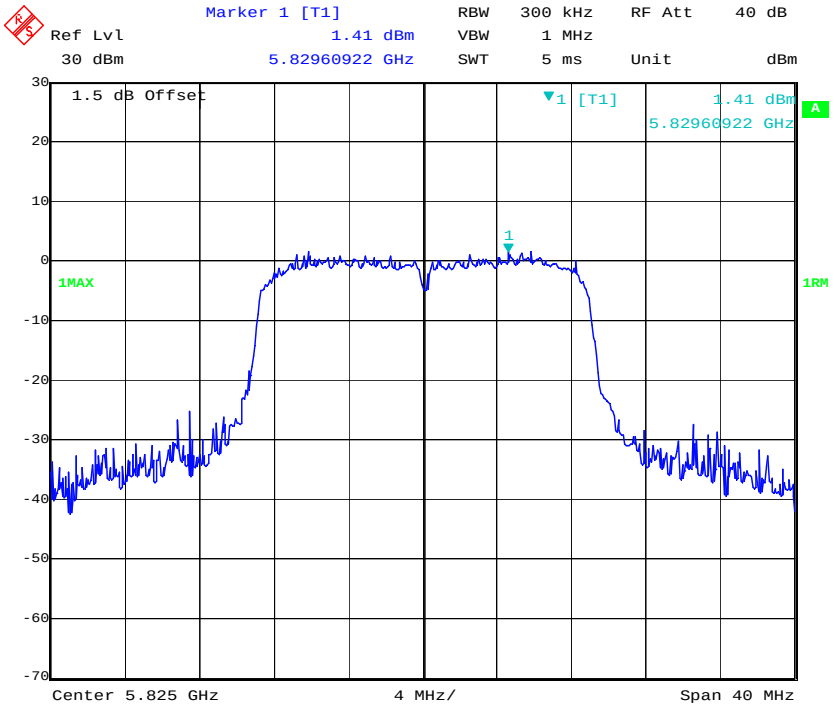
Date: 14.JAN.2017 17:28:23

802.11n ht20 Middle Channel – Chain2



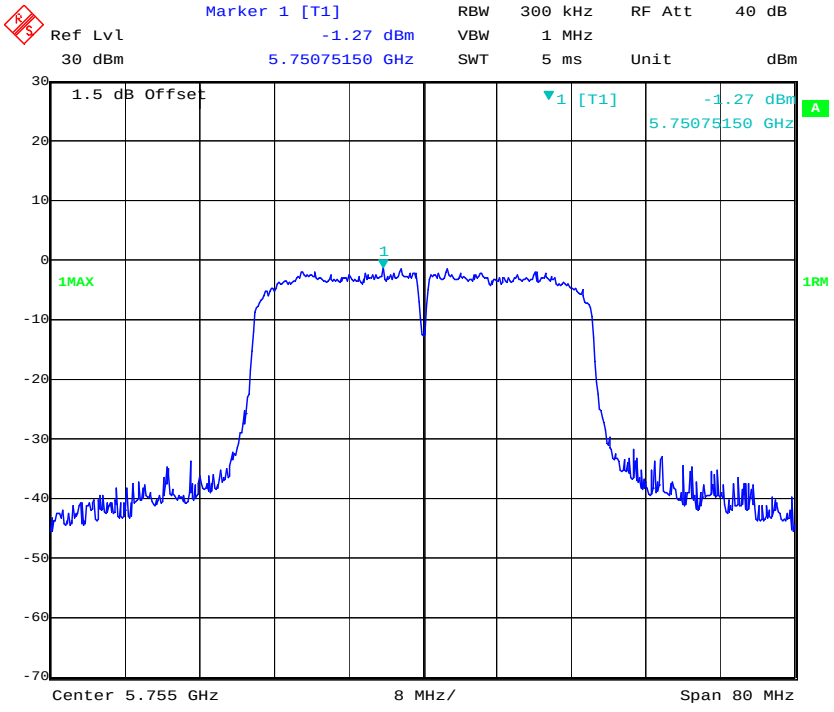
Date: 14.JAN.2017 17:26:46

802.11n ht20 High Channel – Chain2



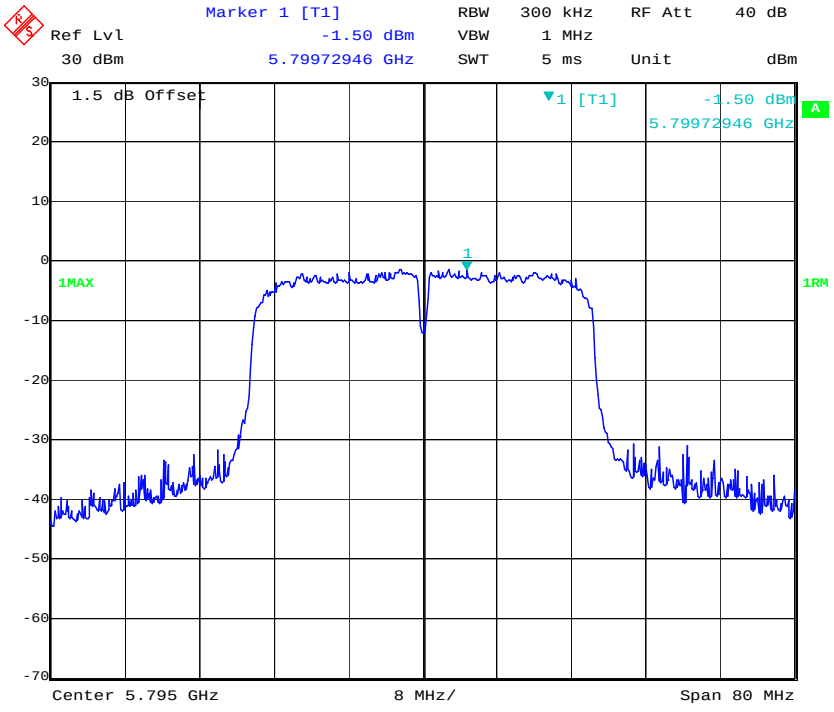
Date: 14.JAN.2017 17:22:14

802.11n ht40 Low Channel – Chain2



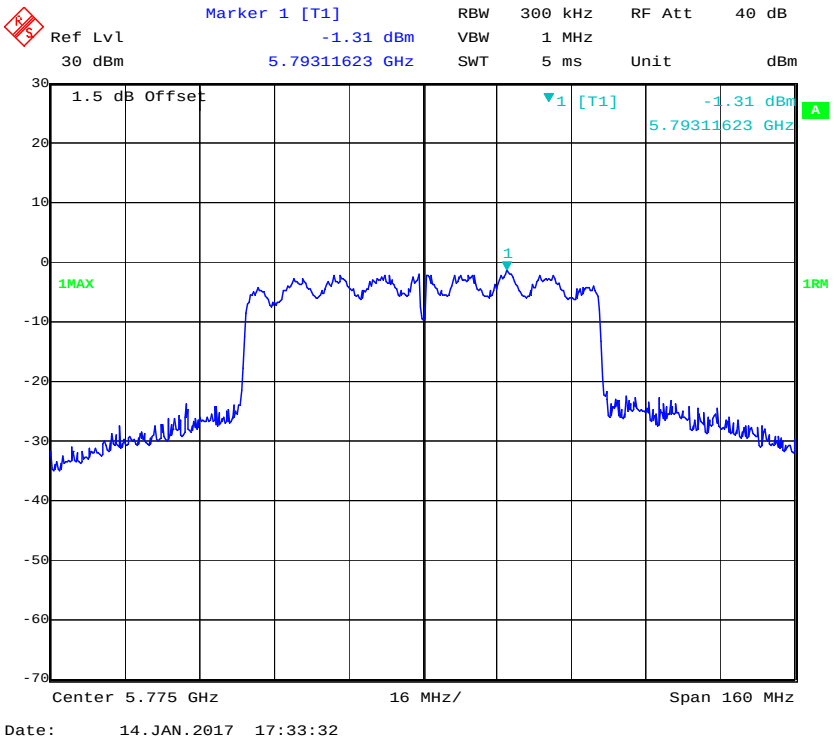
Date: 14.JAN.2017 17:30:21

802.11n ht40 High Channel – Chain2



Date: 14.JAN.2017 17:31:46

802.11 ac80 Middle Channel – Chain2



***** *END OF REPORT* *****