FCC PART 15.407

TEST REPORT

For

Shanghai Xiaoyi Technology Co., Ltd.

6F, Building E, No.2889, Jinke Road, Shanghai, China

FCC ID: 2AFIB-YFSF318

Report Type: Original Report	**Product Type:** YI Pixie Drone	
Test Engineer:	Ada Yu	Ada.Yu
Report Number:	RSHA180108001-00B	
Report Date:	2018-03-26	
Reviewed By:	Oscar Ye RF Leader	Oscar.Ye
Test Laboratory:	Bay Area Compliance Laboratories Corp. (Kunshan) No.248 Chenghu Road,Kunshan,Jiangsu province,China Tel: +86-0512-86175000 Fax: +86-0512-88934268 www.baclcorp.com.cn	

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Applicant	Shanghai Xiaoyi Technology Co., Ltd.
Tested Model	YFS.F318
Product Type	YI Pixie Drone
Dimension	159.0 mm(L)*159.0 mm(W)*56.5 mm(H)
Power Supply	DC 7.8V from batteries

**All measurement and test data in this report was gathered from production sample serial number: 20180108001 (Assigned by the BACL. The EUT supplied by the applicant was received on 2018-01-08)*

Objective

This type approval report is prepared on behalf of Shanghai Xiaoyi Technology Co., Ltd.in accordance with Part 2-Subpart J, Part 15-Subparts A and E of the Federal Communication Commissions 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 15.247 DTS submissions with FCC ID: 2AFIB-YFSF318.

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. (Kunshan).

Measurement Uncertainty

Item		Uncertainty
AC Power Lines Conducted Emissions		3.19 dB
RF conducted test with spectrum		0.9dB
RF Output Power with Power meter		0.5dB
Radiated emission	30MHz~1GHz	6.11dB
	1GHz~6GHz	4.45dB
	6GHz~18GHz	5.23dB
	18GHz~40GHz	5.65dB
Occupied Bandwidth		0.5kHz
Temperature		1.0℃
Humidity		6%

Test Facility

The test site used by Bay Area Compliance Laboratories Corp. (Kunshan) to collect test data is located on the No.248 Chenghu Road,Kunshan,Jiangsu province,China.

Bay Area Compliance Laboratories Corp. (Kunshan) Lab is accredited to ISO/IEC 17025 by A2LA (Lab code: 4323.01) and the FCC designation No. CN1185 under the FCC KDB 974614 D01. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2014.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

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

In **5150~5250 MHz** band, test channel list is as below,

for 802.11a and 802.11n-HT20 mode , EUT was tested with channel 36, 40 and 48.
for 802.11n40 mode, EUT was tested with channel 38 and 46.

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

In **5725~5850 MHz** band, test channel list is as below,

for 802.11a and 802.11n-HT20 mode , EUT was tested with channel 149, 157 and 165.
for 802.11n40 mode, EUT was tested with channel 151 and 159.

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

For Conducted Test:

802.11a: each transmit chains were tested
802.11n: each transmit chains were tested

For Radiated Test:

For 802.11a, SISO for each transmit chain
For 802.11n: MIMO for two transmit chains

EUT Exercise Software

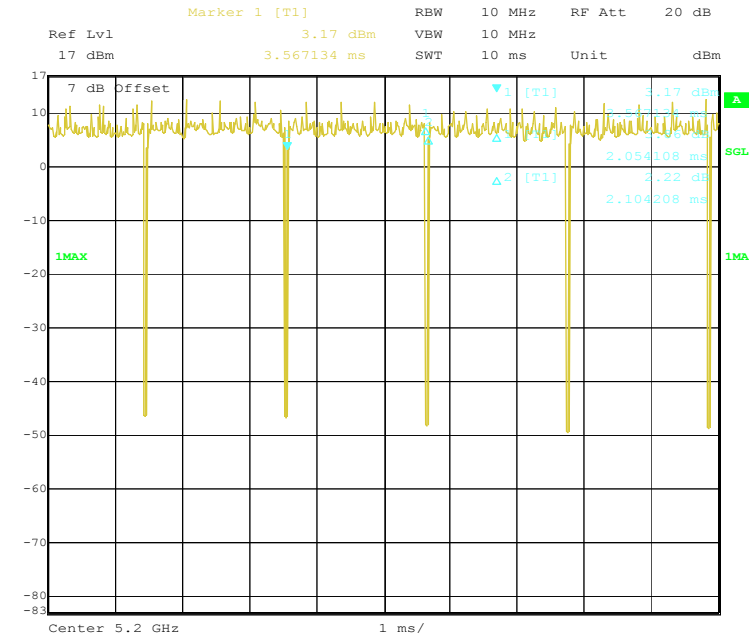
RF test tool: CMD

The worst case was performed under:

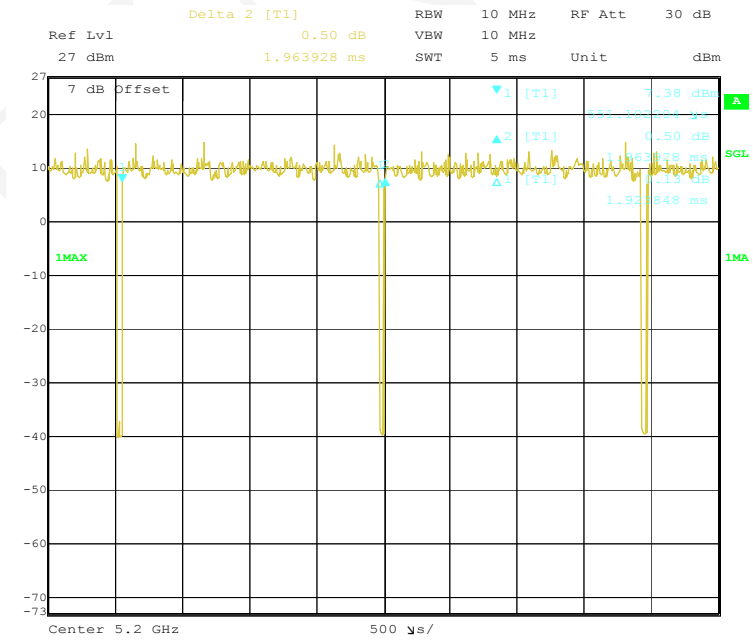
Mode	Data rate	Power level	
		5150-5250 Band	5725-5850 Band
802.11a	6 Mbps	5	7
802.11n-HT20	MCS0	5	7
802.11n-HT40	MCS0	3	5

5150MHz-5250MHz Band:

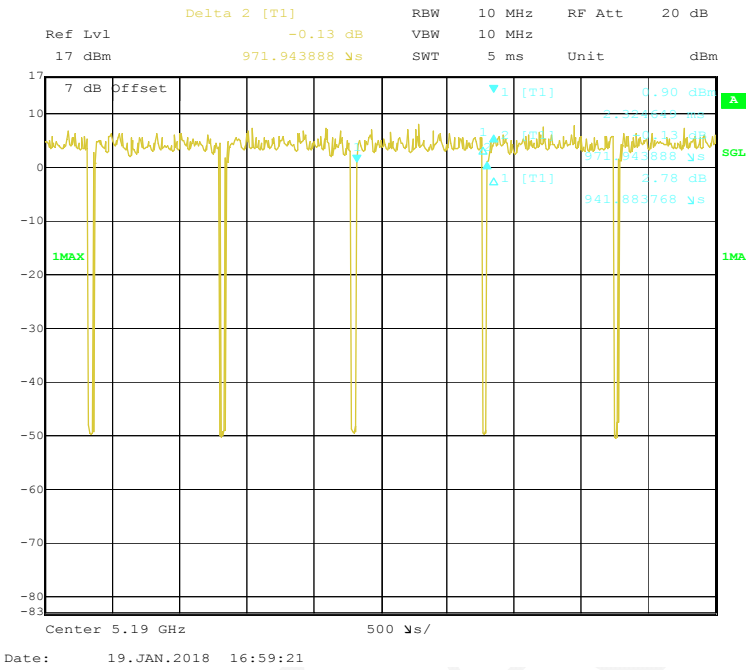
802.11a mode Duty Cycle



802.11n-HT20 mode Duty Cycle

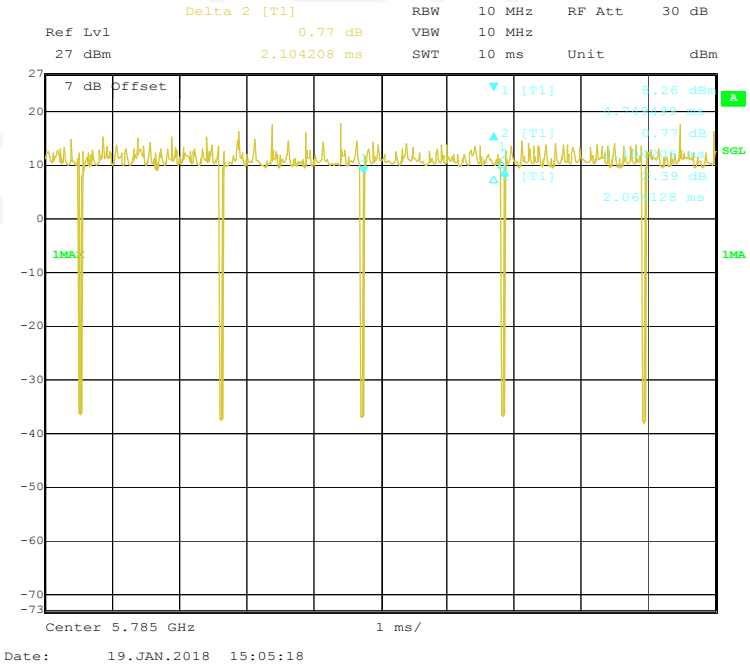


802.11n-HT40 mode Duty Cycle

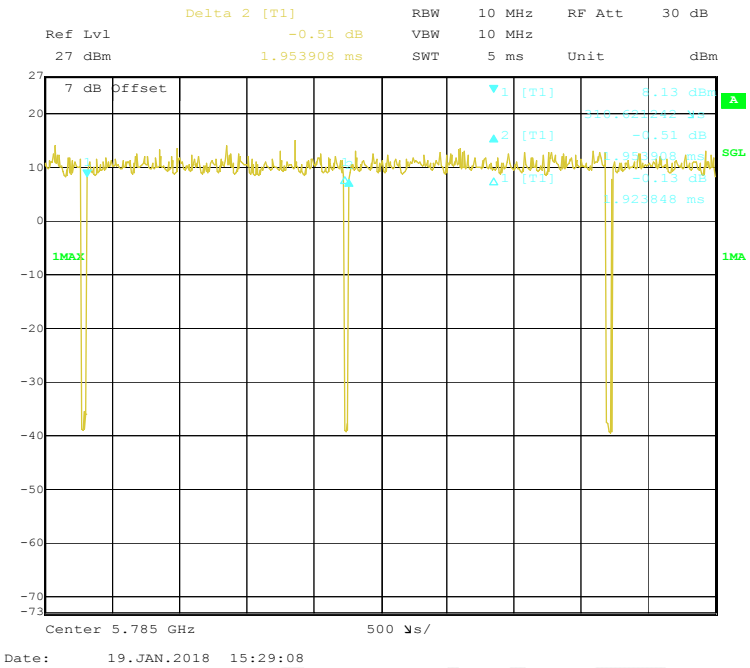


5725MHz-5850MHz Band:

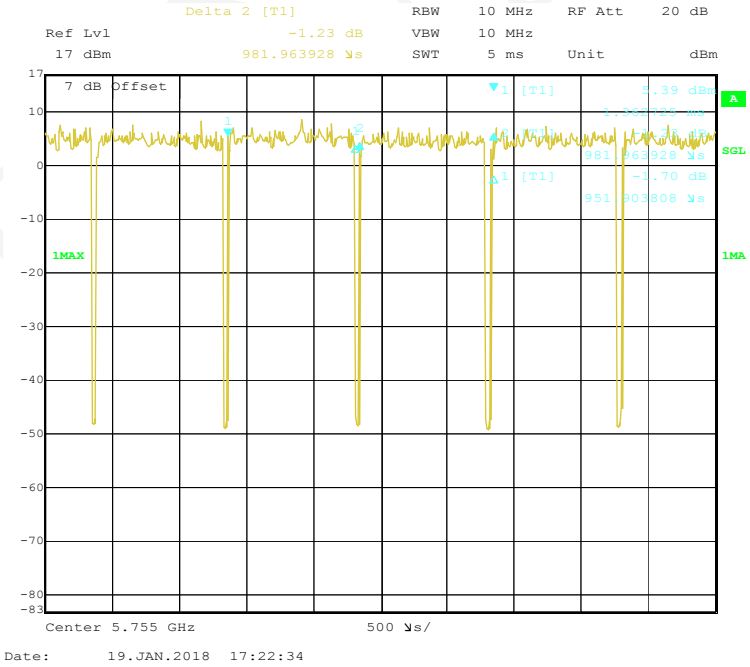
802.11a mode Duty Cycle



802.11n-HT20 mode Duty Cycle



802.11n-HT40 mode Duty Cycle



Mode	Frequency Range (MHz)	Duty Cycle	T (ms)	1/T (kHz)	10log(1/x)
802.11a	5150-5250	97.62%	2.054	0.487	0.10
802.11n-HT20		97.96%	1.924	0.520	0.09
802.11n-HT40		96.91%	0.942	1.062	0.14
802.11a	5725-5850	98.10%	2.064	0.484	0.08
802.11n-HT20		98.46%	1.924	0.520	0.07
802.11n-HT40		96.94%	0.952	1.050	0.13

Note: "x" means duty cycle.

Equipment Modifications

No modification was made to the EUT.

Support Equipment List and Details

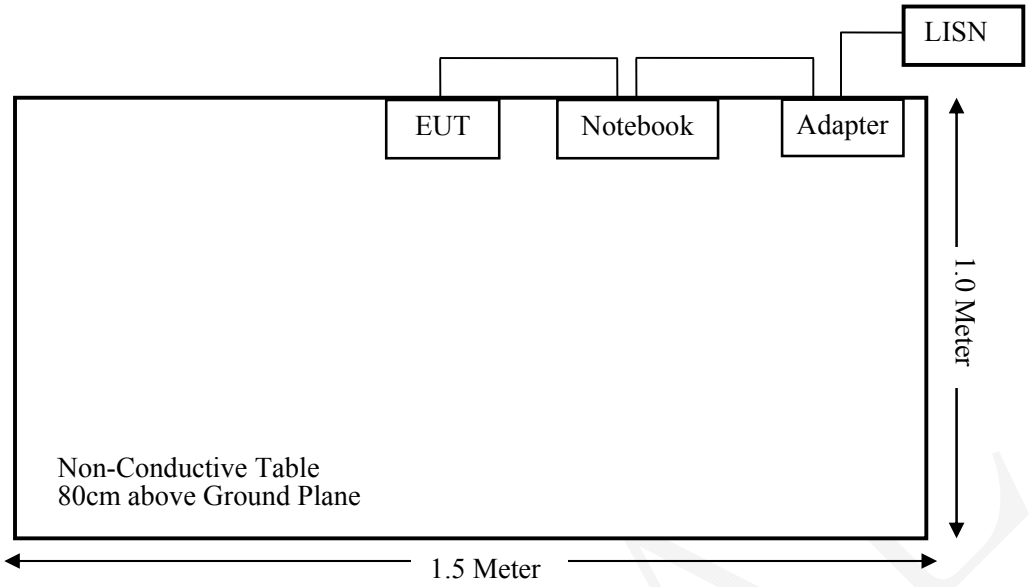
Manufacturer	Description	Model	Serial Number
DELL	Notebook	GX620	D65874152

External I/O Cable

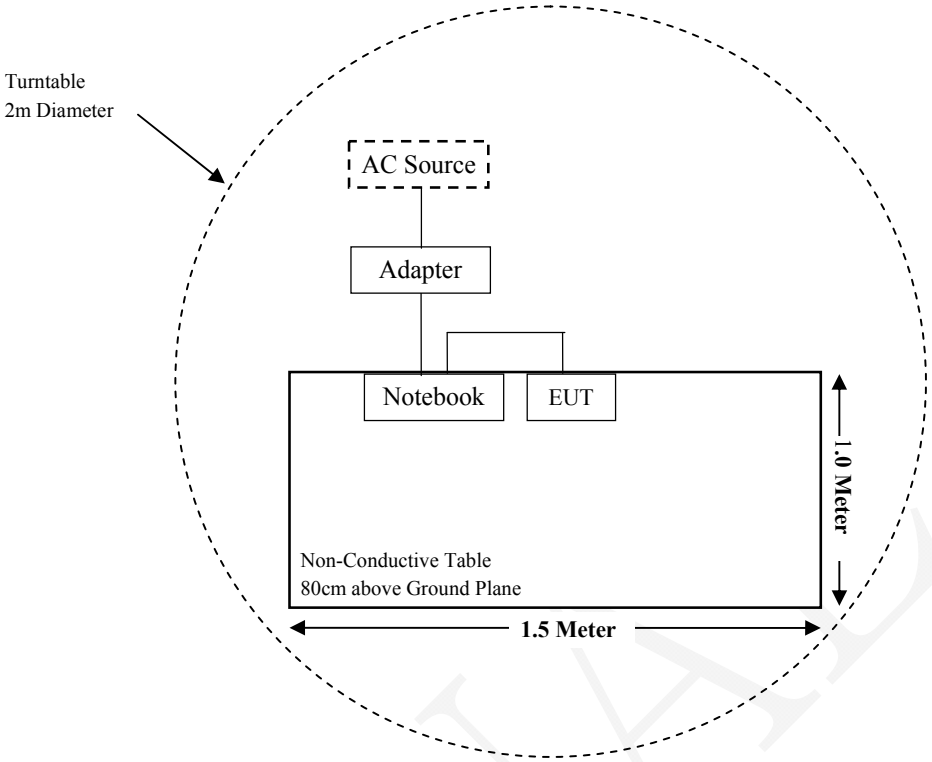
Cable Description	Shielding Type	Length (m)	From Port	To
RJ45 Cable	Un-shielding	1.0	Notebook	EUT

Block Diagram of Test Setup

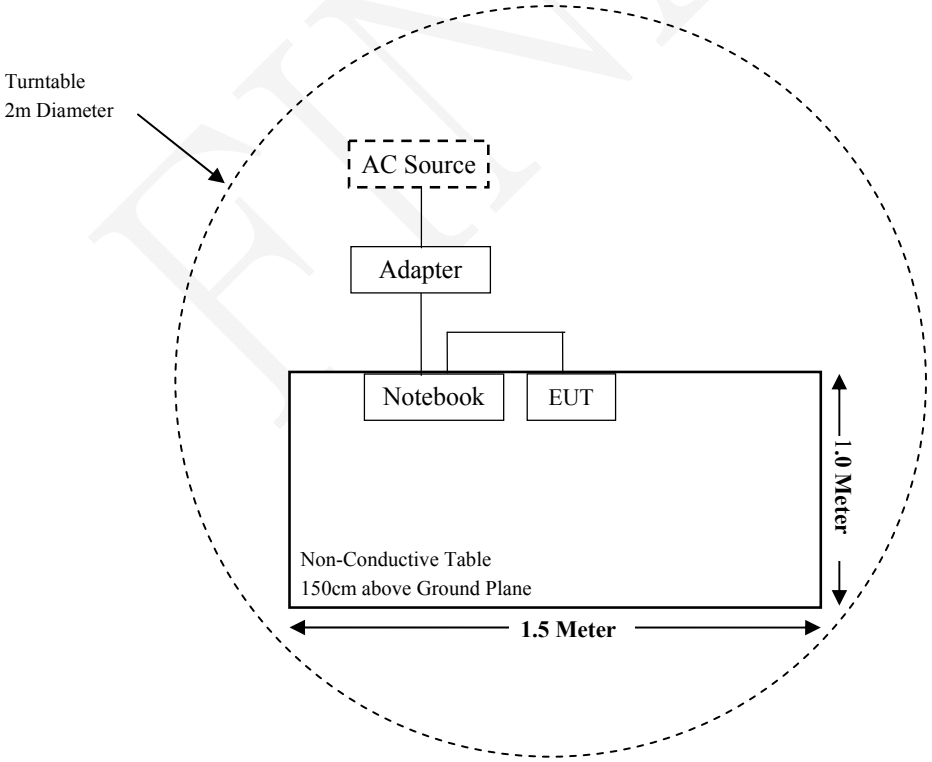
For Conducted Emissions:



For Radiated Emissions(Below 1GHz):



For Radiated Emissions(Above 1GHz):



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§15.407(f) & §2.1091	Maximum Permissible Exposure (MPE)	Compliance
§15.203	Antenna Requirement	Compliance
FCC §15.207 & §15.407(b) (6)	AC Power Line Conducted Emissions	Compliance
§15.205 & §15.209 & §15.407(b) (1) ,(6) ,(7)	Undesirable Emission & Restricted Bands	Compliance
§15.407(b) (1) (4)	Band Edge	Compliance
§15.407(a)(1) (5) & §15.407 (e)	Emission Bandwidth	Compliance
§15.407(g)	Frequency Stability	Compliance
§15.407 (a)(1)	Conducted Transmitter Output Power	Compliance
§15.407 (a)(1) (3)	Power Spectral Density	Compliance

Note: This EUT is a master device.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test（Chamber 1#）					
Rohde & Schwarz	EMI Test Receiver	ESCI	100195	2017-11-12	2018-11-11
Sunol Sciences	Broadband Antenna	JB3	A090413-1	2016-12-26	2019-12-25
Sonoma Instrunent	Pre-amplifier	310N	171205	2017-08-15	2018-08-14
Rohde & Schwarz	Auto test Software	EMC32	100361	/	/
MICRO-COAX	Coaxial Cable	Cable-8	008	2017-08-15	2018-08-14
MICRO-COAX	Coaxial Cable	Cable-9	009	2017-08-15	2018-08-14
MICRO-COAX	Coaxial Cable	Cable-10	010	2017-08-15	2018-08-14
Radiated Emission Test（Chamber 2#）					
Rohde & Schwarz	EMI Test Receiver	ESU40	100207	2017-08-27	2018-08-26
ETS-LINDGREN	Horn Antenna	3115	6229	2016-01-11	2019-01-10
ETS-LINDGREN	Horn Antenna	3116	00084159	2016-10-18	2019-10-17
Narda	Pre-amplifier	AFS42-00101800	2001270	2017-12-12	2018-12-11
Heatsink Required	Amplifier	QLW-18405536-J0	15964001009	2017-12-12	2018-12-11
MICRO-TRONICS	Band Reject Filter	BRC50703	G094	2017-08-05	2018-08-04
MICRO-TRONICS	Band Reject Filter	BRC50705	G085	2017-08-05	2018-08-04
Narda	Attenuator/10dB	10dB	/	2017-12-12	2018-12-11
Rohde & Schwarz	Auto test Software	EMC32	100361	/	/
MICRO-COAX	Coaxial Cable	Cable-6	006	2017-08-15	2018-08-14
MICRO-COAX	Coaxial Cable	Cable-11	011	2017-08-15	2018-08-14
MICRO-COAX	Coaxial Cable	Cable-12	012	2017-08-15	2018-08-14
MICRO-COAX	Coaxial Cable	Cable-13	013	2017-08-15	2018-08-14
RF Conducted Test					
Rohde & Schwarz	Signal Analyzer	FSIQ26	836131/009	2017-09-21	2018-09-20
Rohde & Schwarz	FSV40 Signal Analyzer	FSV40	101116	2017-07-22	2018-07-21
Agilent	Power Meter	N1912A	MY5000492	2017-11-18	2018-11-17
Agilent	Power Sensor	N1921A	MY54210024	2017-11-18	2018-11-17
Narda	Attenuator/6dB	6dB	/	2017-12-12	2018-12-11
BACL	Temperature & Humidity Chamber	BTH-150	30023	2017-07-20	2018-07-19
EAST	Regulated DC Power Supply	MCH-303D-II	14070562	2017-07-20	2018-07-19
Xiaoyi	RF Cable	/	/	/	/

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Conducted Emission Test					
Rohde & Schwarz	EMI Test Receiver	ESCS30	834115/007	2017/11/12	2018/11/11
Rohde & Schwarz	LISN	ESH3-Z5	862770/011	2017-11-12	2018-11-11
Rohde & Schwarz	LISN	ENV216	3560655016	2017-11-12	2018-11-11
BACL	Auto test Software	BACL-EMC	CE001	/	/
Narda	Attenuator/6dB	10690812-2	26850-6	2018-01-10	2019-01-09
MICRO-COAX	Coaxial Cable	Cable-15	015	2017-08-15	2018-08-14

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

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

Applicable Standard

According to §2.1091 and §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

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	*($180/f^2$)	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);

Calculated Data:

Mode	Frequency (MHz)	Antenna Gain		Conducted output power		Evaluation Distance (cm)	Power Density (mW/cm^2)	MPE Limit (mW/cm^2)	MPE ratio
		(dBi)	(numeric)	(dBm)	(mW)				
802.11b	2412-2462	3.00	2.00	17.00	50.12	20	0.0199	1.0	0.0199
802.11g		3.00	2.00	16.00	39.81	20	0.0158	1.0	0.0158
802.11n-HT20		6.00	3.98	15.00	31.62	20	0.0250	1.0	0.0250
802.11n-HT40	2422-2452	6.00	3.98	15.00	31.62	20	0.0250	1.0	0.0250

Mode	Frequency (MHz)	Antenna Gain		Conducted output power		Evaluation Distance (cm)	Power Density (mW/cm^2)	MPE Limit (mW/cm^2)	MPE ratio
		(dBi)	(numeric)	(dBm)	(mW)				
802.11a	5180-5240	3.00	2.00	15.00	31.62	20	0.0126	1.0	0.0126
802.11n-HT20		6.00	3.98	15.00	31.62	20	0.0250	1.0	0.0250
802.11n-HT40		6.00	3.98	13.00	19.95	20	0.0158	1.0	0.0158
802.11a	5745-5825	3.00	2.00	15.00	31.62	20	0.0126	1.0	0.0126
802.11n-HT20		6.00	3.98	15.00	31.62	20	0.0250	1.0	0.0250
802.11n-HT40		6.00	3.98	12.00	15.85	20	0.0126	1.0	0.0126

Note:

(1) The target output powers are declared by the Manufacturer.

(2) 2.4GWi-Fi and 5GWi-Fi cannot transmit simultaneously.

(3) According to 662911 D01 Multiple Transmitter Output v02r01, for 802.11n:
Directional gain = GANT + 10*log(NANT) dBi=3dBi+10lg2=6.0dBi

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 user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

a. Antenna must be permanently attached to the unit.
b. Antenna must use a unique type of connector to attach to the EUT.

Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.
And according to FCC 47 CFR section 15.407, if the transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Antenna Connector Construction

The EUT has two PIFA antennas which used unique couplings to the intentional radiator, fulfill the requirement of this section. Please refer to the EUT photos.

Chain	Antenna Type	Max. Antenna Gain
0	PIFA	3.0 dBi
1	PIFA	3.0 dBi

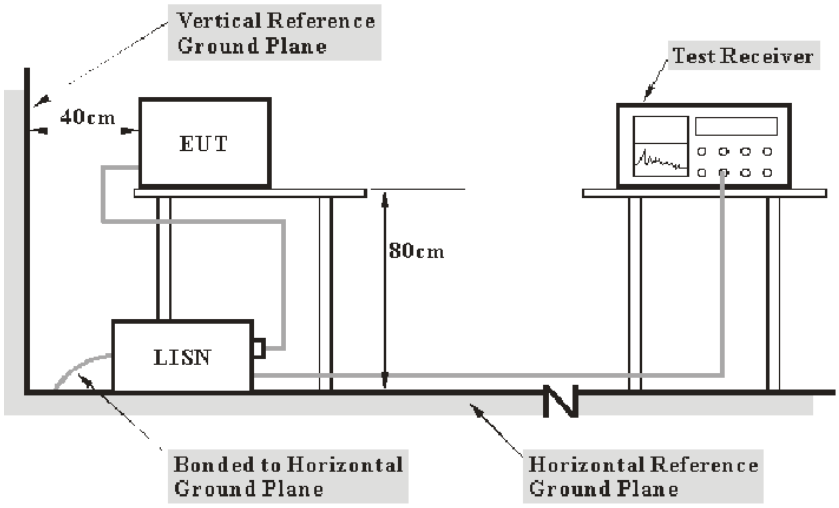
Result: Compliance.

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

Applicable Standard

FCC §15.207, §15.407(b) (6)

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.

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

Test Procedure

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

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

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

Corrected Factor & Margin Calculation

The Corrected factor is calculated by adding LISN VDF (Voltage Division Factor), Cable Loss and Transient Limiter Attenuation. The basic equation is as follows:

Correction Factor = LISN VDF + Cable Loss

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

Margin = Limit – Reading

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Part 15.207.

Test Data

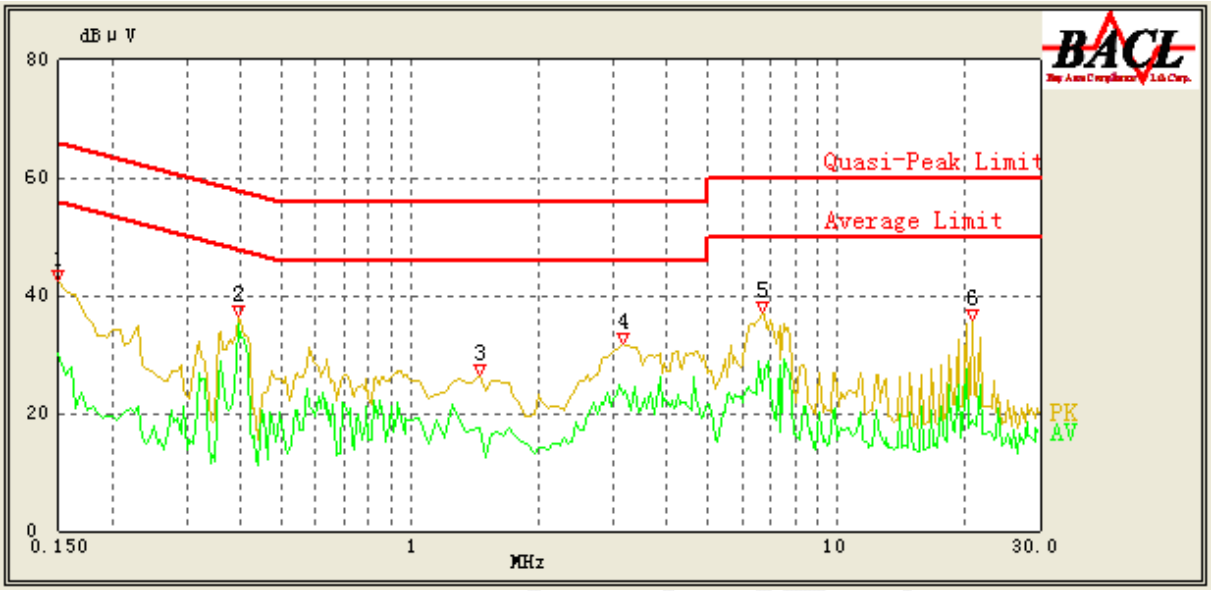
Environmental Conditions

Temperature:	20.2 ℃
Relative Humidity:	51 %
ATM Pressure:	101.3 kPa

The testing was performed by Ada Yu on 2018-01-23

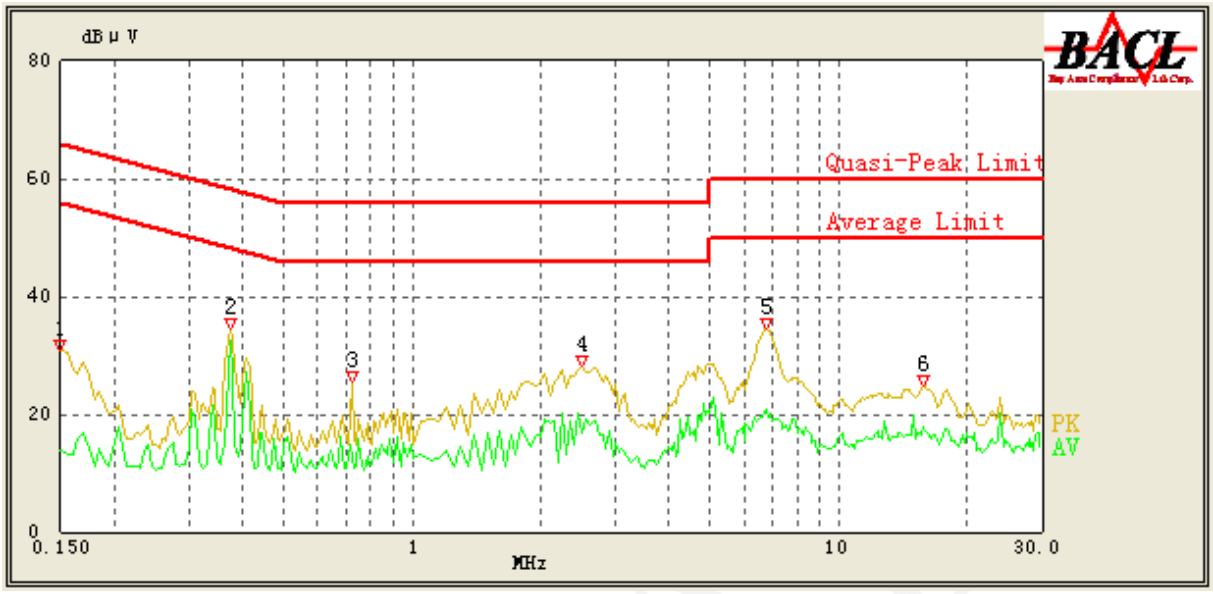
Test Mode: Transmitting in 802.11n40 (5150-5250) mode High channel of chain 1(worst case)

AC 120V/60 Hz, Line



Frequency (MHz)	Reading (dBµV)	Detector (PK/AV/QP)	Bandwidth (kHz)	Line	Corr. (dB)	Limit (dBµV)	Margin (dB)	Comment
0.150	42.53	QP	9.000	L1	16.06	66.00	23.47	Compliance
0.150	30.13	AV	9.000	L1	16.06	56.00	25.87	Compliance
0.395	36.49	QP	9.000	L1	16.06	59.00	22.51	Compliance
0.395	35.02	AV	9.000	L1	16.06	49.00	13.98	Compliance
1.450	26.60	QP	9.000	L1	15.87	56.00	29.40	Compliance
1.450	17.62	AV	9.000	L1	15.87	46.00	28.38	Compliance
3.150	31.68	QP	9.000	L1	15.85	56.00	24.32	Compliance
3.150	23.31	AV	9.000	L1	15.85	46.00	22.69	Compliance
6.700	37.09	QP	9.000	L1	15.96	60.00	22.91	Compliance
6.700	23.93	AV	9.000	L1	15.96	50.00	26.07	Compliance
20.900	35.79	QP	9.000	L1	16.44	60.00	24.21	Compliance
20.800	18.71	AV	9.000	L1	16.44	50.00	31.29	Compliance

AC 120V/60 Hz, Neutral



Frequency (MHz)	Reading (dBµV)	Detector (PK/AV/QP)	Bandwidth (kHz)	Line	Corrected Factor (dB)	Limit (dBµV)	Margin (dB)	Comment
0.150	30.74	QP	9.000	N	16.06	66.00	35.26	Compliance
0.150	13.90	AV	9.000	N	16.06	56.00	42.10	Compliance
0.375	34.65	QP	9.000	N	16.08	59.57	24.92	Compliance
0.375	32.40	AV	9.000	N	16.08	49.57	17.17	Compliance
0.720	25.44	QP	9.000	N	15.99	56.00	30.56	Compliance
0.720	12.37	AV	9.000	N	15.99	46.00	33.63	Compliance
2.500	28.24	QP	9.000	N	15.90	56.00	27.76	Compliance
2.500	16.93	AV	9.000	N	15.90	46.00	29.07	Compliance
6.800	34.57	QP	9.000	N	15.91	60.00	25.43	Compliance
6.750	20.93	AV	9.000	N	15.91	50.00	29.07	Compliance
15.850	24.81	QP	9.000	N	16.04	60.00	35.19	Compliance
15.850	17.83	AV	9.000	N	16.04	50.00	32.17	Compliance

Note:
1) Corr.=LISN VDF (Voltage Division Factor) + Cable Loss
2) Margin = Limit – Reading

§15.205 & §15.209 & §15.407(B) (1),(6),(7) – UNDESIRABLE EMISSION & RESTRICTED BANDS

Applicable Standard

FCC §15.407 (b) (1), (6), (7); §15.209; §15.205;

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 EIRP of –27dBm/MHz

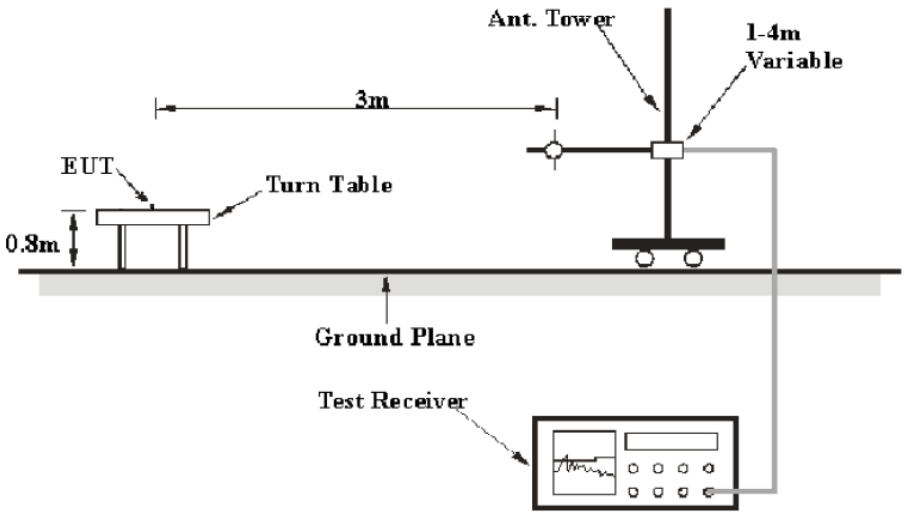
For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to 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.

As per FCC §15.35(d):Unless otherwise specified, on any frenquency or frequencies above 1000MHz,the radiated emission limits are based on the use of measurement instrunmentation employing an average detector function. Unless otherwise specified, measurements above 1000MHz shall be performed using a minimum resolution bandwidth of 1MHz.

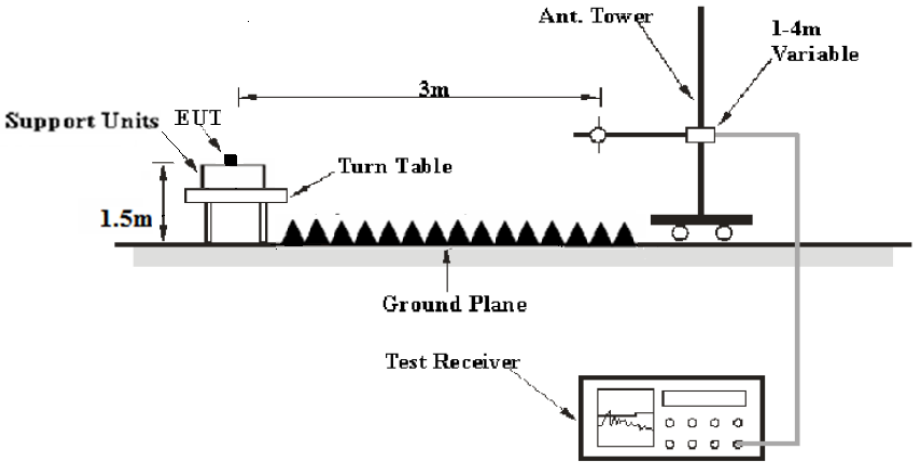
According to 789033 D02 General UNII Test Procedures New Rules v02r01, emission shall be computed as: E [dBµV/m] = EIRP [dBm] + 95.2, for d = 3 meters.

EUT Setup

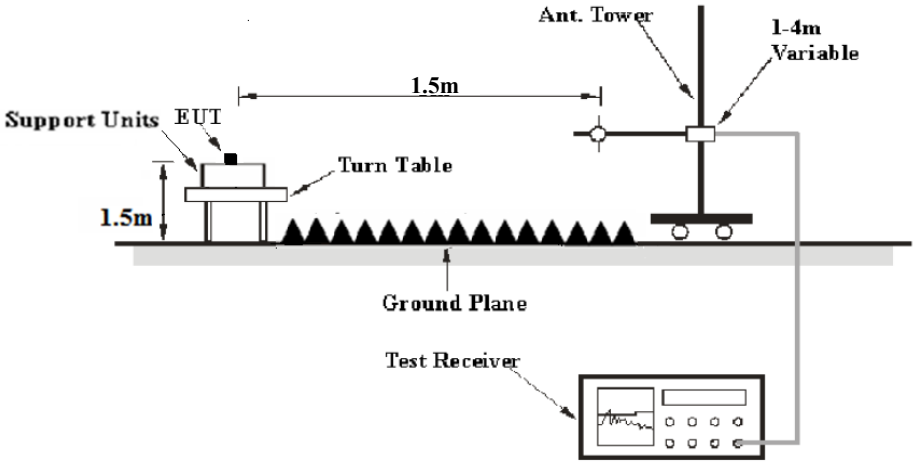
Below 1 GHz:



1 GHz-18GHz:



18 GHz-40GHz:



The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with 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 Setup was set with the following configurations:

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

Test Procedure

During the radiated emission test, the adapter was connected to the first AC floor outlet and the other support equipments were connected to the second AC floor outlet.

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

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

The Radiated measurements was performed, The EIRP converted to field strength as follows:

According to C63.4, 18-40GHz 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)
or Limit line = Specific limits(dBμV) + 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 factor + Cable Loss - Amplifier Gain

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

Margin = Limit –Extrapolation result

Test Data

Environmental Conditions

Temperature:	20.2 ℃
Relative Humidity:	51 %
ATM Pressure:	101.3 kPa

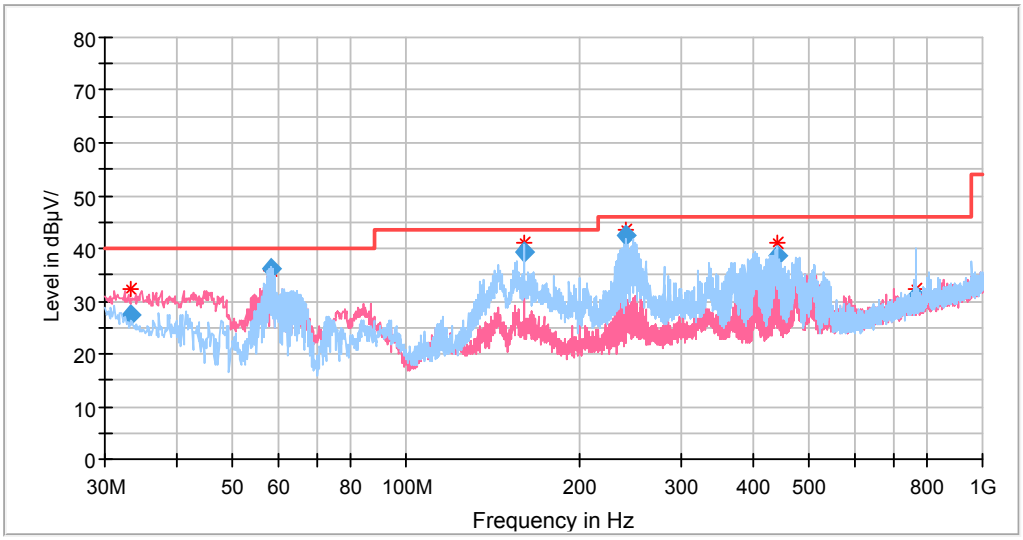
The testing was performed by Ada Yu on 2018-01-20

Mode: Transmitting

Spurious Emission Test

30MHz-1GHz:

Pre-scan with 802.11a, 802.11n-HT20 and 802.11n-HT40 modes of operation in the X,Y and Z axes of orientation, the worst case 802.11n-HT20 mode in channel 5745 in X-axis of orientation was recorded



Frequency (MHz)	Corrected Amplitude	Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	QuasiPeak (dBµV/m)	Height (cm)	Polar (H/V)				
33.320620	27.51	101.0	V	97.0	-6.6	40.00	12.49
58.455000	36.01	199.0	H	170.0	-18.3	40.00	3.99
160.015970	39.16	199.0	H	126.0	-13.2	43.50	4.34
239.984870	42.40	101.0	H	206.0	-12.6	46.00	3.60
441.625600	38.62	199.0	H	227.0	-7.6	46.00	7.38
767.966910	30.88	199.0	H	212.0	-1.9	46.00	15.12

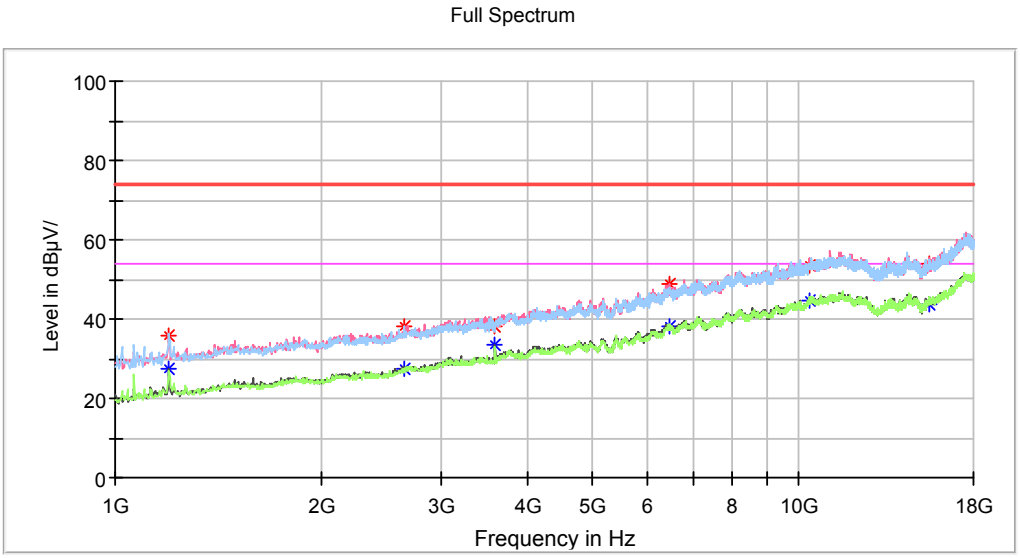
1GHz-18GHz (5150-5250MHz Band):

802.11a Mode(Chain 0):

*(Pre-scan in the X,Y and Z axes of orientation, the worst case **X-axis of orientation** was recorded.)*

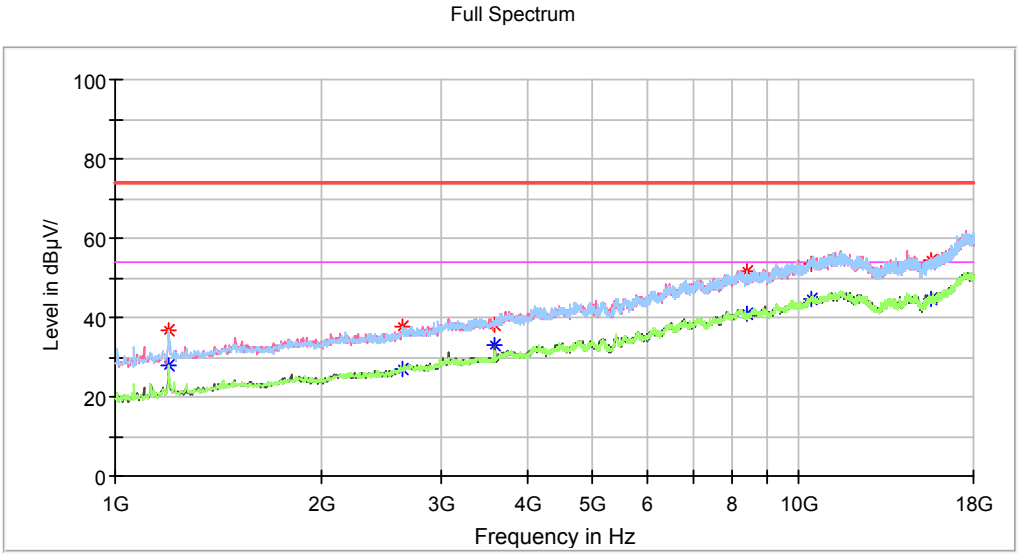
Note:
1. This test was performed with the 5150-5250MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5180MHz



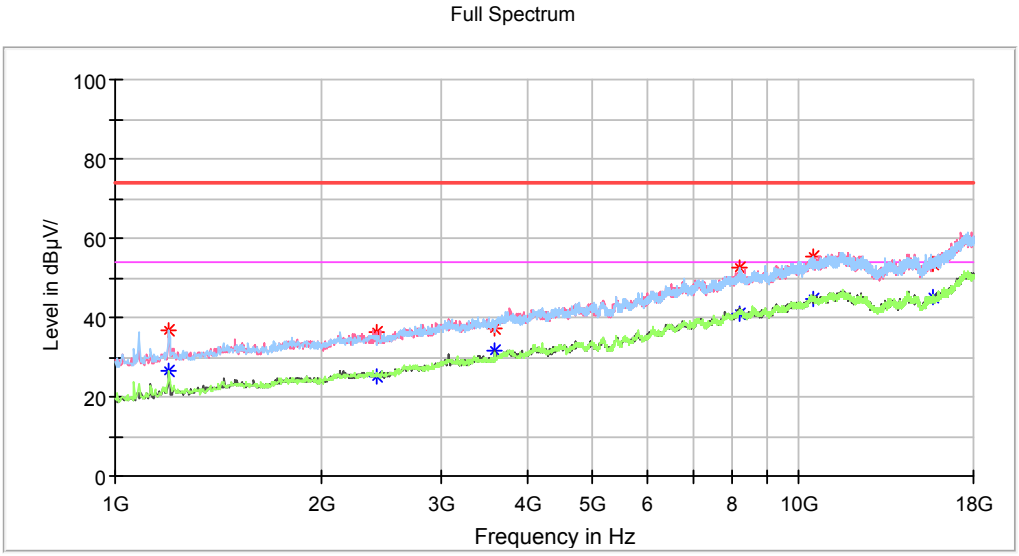
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV /m)	Average (dBµV /m)	Height (cm)	Polar (H/V)				
1200.60	35.86	---	200.0	V	286.0	-10.4	74.00	38.14
1200.60	---	27.43	200.0	V	286.0	-10.4	54.00	26.57
2652.40	38.22	---	250.0	H	150.0	-3.8	74.00	35.78
2652.40	---	27.63	250.0	H	150.0	-3.8	54.00	26.37
3597.60	38.08	---	200.0	V	19.0	-0.6	74.00	35.92
3597.60	---	33.58	200.0	V	19.0	-0.6	54.00	20.42
6453.60	48.85	---	100.0	V	80.0	8.0	74.00	25.15
6453.60	---	38.29	100.0	V	80.0	8.0	54.00	15.71
10360.00	53.49	---	150.0	V	186.0	16.4	74.00	20.51
10360.00	---	44.60	150.0	V	186.0	16.4	54.00	9.40
15540.00	---	43.89	250.0	V	0.0	16.3	54.00	10.11
15540.00	54.08	---	250.0	V	0.0	16.3	74.00	19.92

Middle Channel: 5200MHz



Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV /m)	Average (dBµV /m)	Height (cm)	Polar (H/V)				
1197.20	36.68	---	150.0	H	181.0	-10.4	74.00	37.32
1197.20	---	27.98	150.0	H	181.0	-10.4	54.00	26.02
2632.00	37.68	---	250.0	H	238.0	-3.9	74.00	36.32
2632.00	---	26.87	250.0	H	238.0	-3.9	54.00	27.13
3597.60	37.91	---	200.0	V	198.0	-0.6	74.00	36.09
3597.60	---	32.96	200.0	V	198.0	-0.6	54.00	21.04
8381.40	---	40.73	150.0	V	67.0	12.7	54.00	13.27
8381.40	51.59	---	150.0	V	67.0	12.7	74.00	22.41
10400.00	53.54	---	200.0	V	257.0	16.6	74.00	20.46
10400.00	---	44.70	200.0	V	257.0	16.6	54.00	9.30
15600.00	---	44.59	100.0	V	214.0	16.4	54.00	9.41
15600.00	54.33	---	100.0	V	214.0	16.4	74.00	19.67

High Channel: 5240MHz



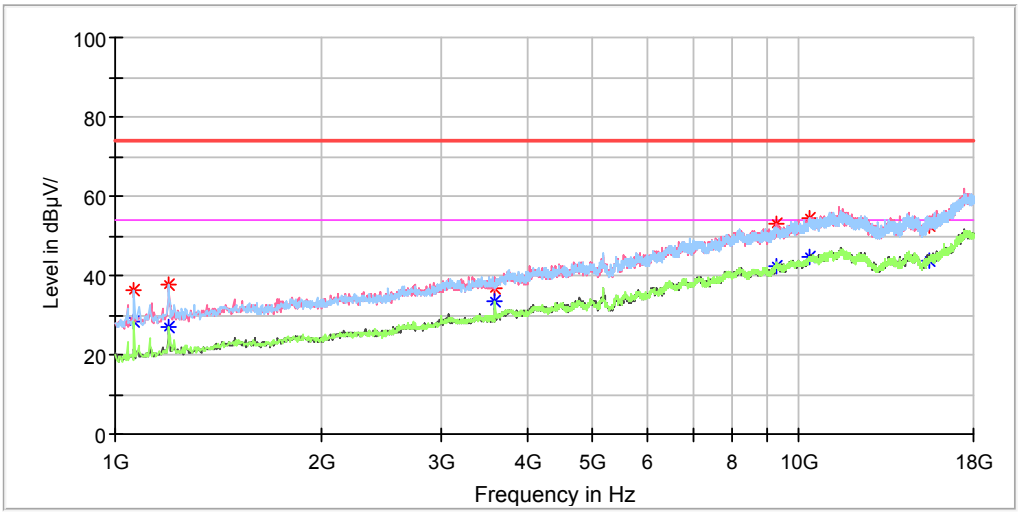
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV /m)	Average (dBµV /m)	Height (cm)	Polar (H/V)				
1197.20	36.77	---	100.0	H	52.0	-10.4	74.00	37.23
1197.20	---	26.65	100.0	H	52.0	-10.4	54.00	27.35
2414.40	36.33	---	150.0	V	120.0	-4.9	74.00	37.67
2414.40	---	25.28	150.0	V	120.0	-4.9	54.00	28.72
3597.60	37.17	---	200.0	V	39.0	-0.6	74.00	36.83
3597.60	---	31.70	200.0	V	39.0	-0.6	54.00	22.30
8211.40	52.72	---	250.0	V	258.0	12.4	74.00	21.28
8211.40	---	41.08	250.0	V	258.0	12.4	54.00	12.92
10480.00	---	44.50	150.0	V	118.0	16.9	54.00	9.50
10480.00	55.38	---	150.0	V	118.0	16.9	74.00	18.62
15720.00	53.52	---	200.0	V	40.0	16.9	74.00	20.48
15720.00	---	44.95	200.0	V	40.0	16.9	54.00	9.05

802.11a Mode(Chain 1):

*(Pre-scan in the X,Y and Z axes of orientation, the worst case **X-axis of orientation** was recorded.)*

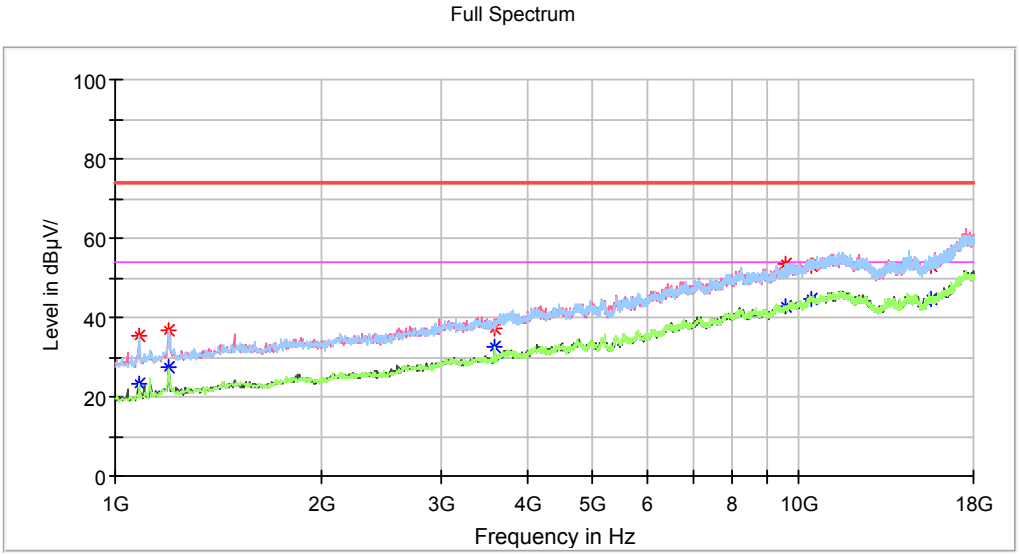
Note:
1. This test was performed with the 5150-5250MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5180MHz



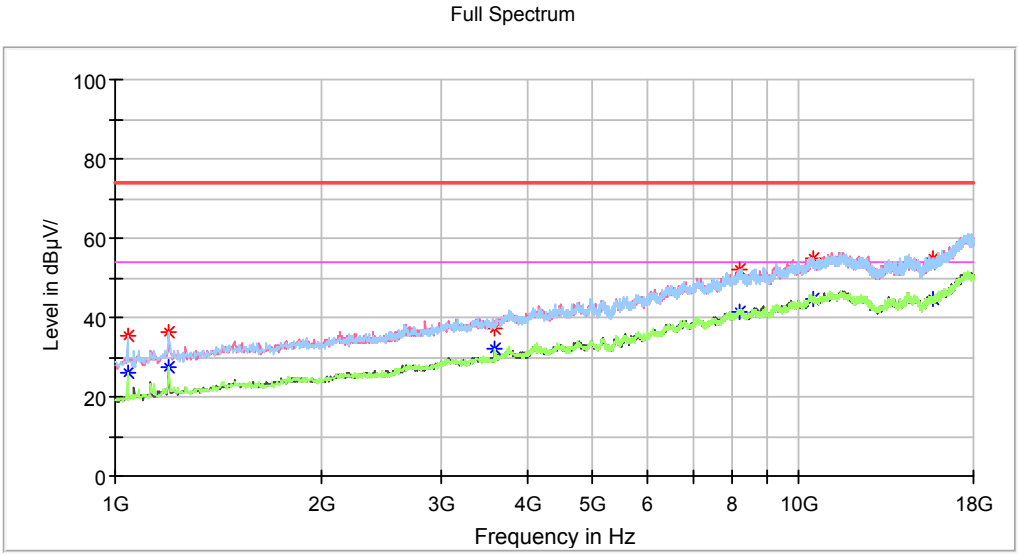
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV /m)	Average (dBµV /m)	Height (cm)	Polar (H/V)				
1064.60	---	28.55	200.0	H	74.0	-11.6	54.00	25.45
1064.60	36.10	---	200.0	H	74.0	-11.6	74.00	37.90
1197.20	---	27.21	150.0	H	72.0	-10.4	54.00	26.79
1197.20	37.66	---	150.0	H	72.0	-10.4	74.00	36.34
3597.60	---	33.39	250.0	H	100.0	-0.6	54.00	20.61
3597.60	36.82	---	250.0	H	100.0	-0.6	74.00	37.18
9292.60	---	42.56	200.0	V	19.0	14.0	54.00	11.44
9292.60	53.13	---	200.0	V	19.0	14.0	74.00	20.87
10360.00	---	44.46	150.0	V	342.0	16.4	54.00	9.54
10360.00	54.55	---	150.0	V	342.0	16.4	74.00	19.45
15540.00	---	43.76	200.0	V	18.0	16.3	54.00	10.24
15540.00	52.63	---	200.0	V	18.0	16.3	74.00	21.37

Middle Channel: 5200MHz



Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV /m)	Average (dBµV /m)	Height (cm)	Polar (H/V)				
1085.00	35.14	---	150.0	H	84.0	-11.4	74.00	38.86
1085.00	---	23.33	150.0	H	84.0	-11.4	54.00	30.67
1200.60	36.61	---	250.0	V	182.0	-10.4	74.00	37.39
1200.60	---	27.34	250.0	V	182.0	-10.4	54.00	26.66
3597.60	37.39	---	200.0	H	272.0	-0.6	74.00	36.61
3597.60	---	32.79	200.0	H	272.0	-0.6	54.00	21.21
9540.80	53.64	---	250.0	H	244.0	14.9	74.00	20.36
9540.80	---	42.57	250.0	H	244.0	14.9	54.00	11.43
10400.00	53.19	---	100.0	V	263.0	16.6	74.00	20.81
10400.00	---	44.80	100.0	V	263.0	16.6	54.00	9.20
15600.00	53.25	---	200.0	V	150.0	16.4	74.00	20.75
15600.00	---	44.80	200.0	V	150.0	16.4	54.00	9.20

High Channel: 5240MHz

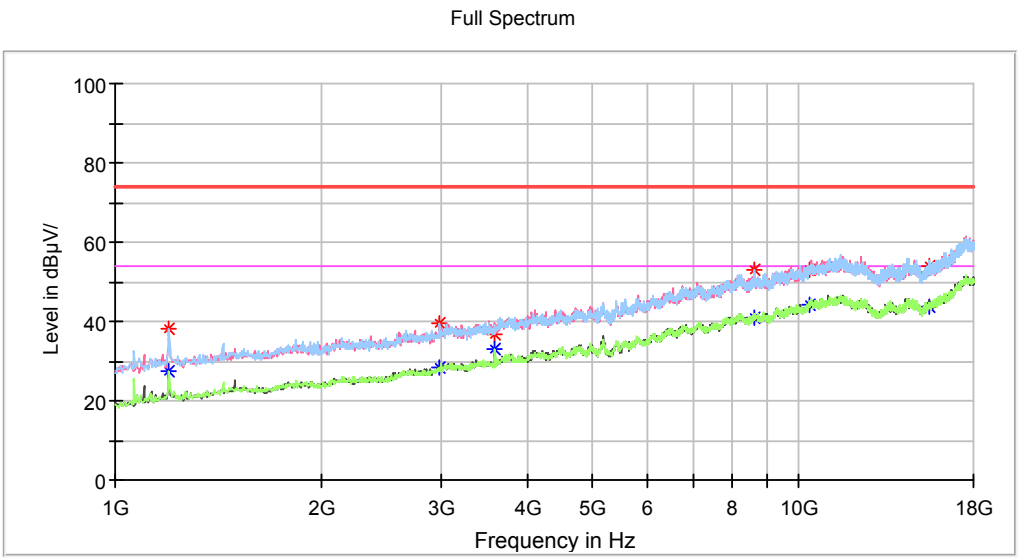


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV /m)	Average (dBµV /m)	Height (cm)	Polar (H/V)				
1044.20	35.58	---	200.0	H	67.0	-11.8	74.00	38.42
1044.20	---	26.27	200.0	H	67.0	-11.8	54.00	27.73
1197.20	36.42	---	150.0	H	65.0	-10.4	74.00	37.58
1197.20	---	27.61	150.0	H	65.0	-10.4	54.00	26.39
3597.60	37.36	---	200.0	H	264.0	-0.6	74.00	36.64
3597.60	---	32.08	200.0	H	264.0	-0.6	54.00	21.92
8204.60	52.32	---	100.0	V	10.0	12.4	74.00	21.68
8204.60	---	41.36	100.0	V	10.0	12.4	54.00	12.64
10480.00	54.87	---	250.0	V	67.0	16.9	74.00	19.13
10480.00	---	44.68	250.0	V	67.0	16.9	54.00	9.32
15720.00	54.70	---	200.0	V	112.0	16.8	74.00	19.30
15720.00	---	44.66	200.0	V	112.0	16.8	54.00	9.34

802.11n-HT20 Mode(Chain0+chain1):
*Pre-scan with X,Y and Z axes of orientation, the worst case **X-axis of orientation** was recorded*

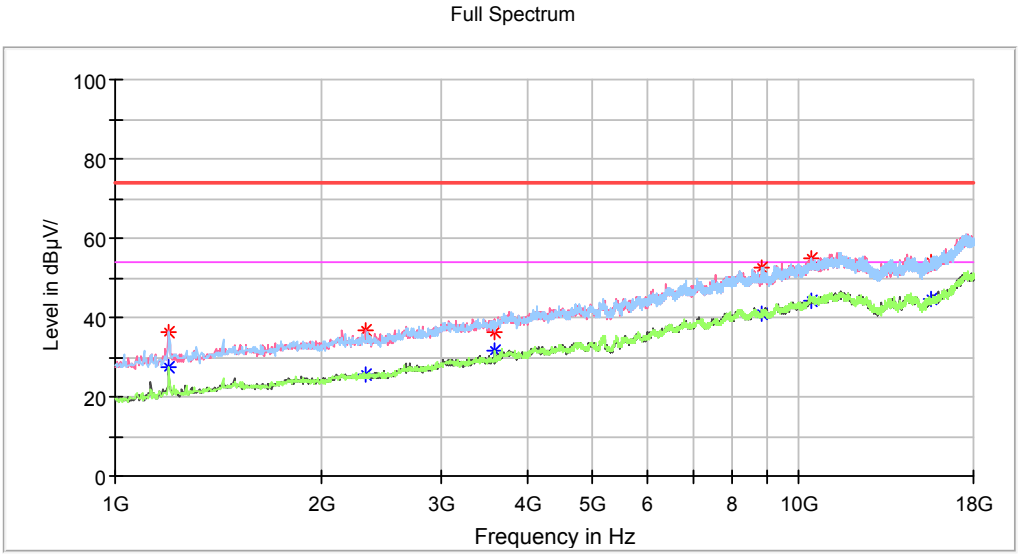
Note:
1. This test was performed with the 5150-5250MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5180MHz



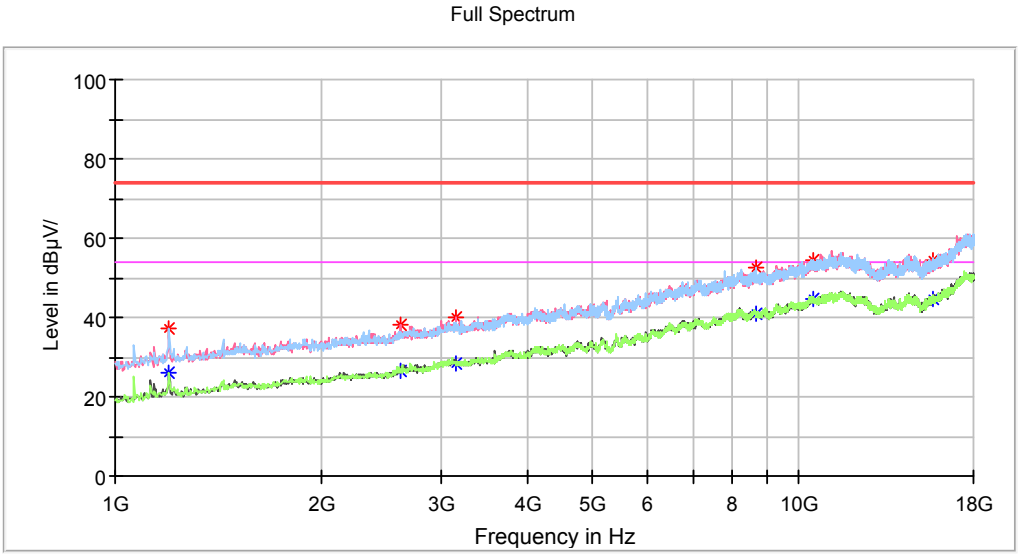
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV /m)	Average (dBµV /m)	Height (cm)	Polar (H/V)				
1200.60	---	27.65	150.0	H	64.0	-10.4	54.00	26.35
1200.60	38.04	---	150.0	H	64.0	-10.4	74.00	35.96
2985.60	---	28.34	250.0	V	18.0	-2.1	54.00	25.66
2985.60	39.53	---	250.0	V	18.0	-2.1	74.00	34.47
3597.60	36.92	---	150.0	V	142.0	-0.6	74.00	37.08
3597.60	---	33.01	150.0	V	142.0	-0.6	54.00	20.99
8602.40	---	40.77	250.0	V	0.0	12.8	54.00	13.23
8602.40	53.05	---	250.0	V	0.0	12.8	74.00	20.95
10360.00	---	44.28	200.0	V	358.0	16.4	54.00	9.72
10360.00	53.11	---	200.0	V	358.0	16.4	74.00	20.89
15540.00	---	43.73	150.0	V	48.0	16.3	54.00	10.27
15540.00	53.78	---	150.0	V	48.0	16.3	74.00	20.22

Middle Channel: 5200MHz



Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV /m)	Average (dBµV /m)	Height (cm)	Polar (H/V)				
1197.20	36.11	---	150.0	H	73.0	-10.4	74.00	37.89
1197.20	---	27.47	150.0	H	73.0	-10.4	54.00	26.53
2322.60	36.90	---	250.0	V	227.0	-5.1	74.00	37.10
2322.60	---	25.76	250.0	V	227.0	-5.1	54.00	28.24
3597.60	36.23	---	150.0	V	305.0	-0.6	74.00	37.77
3597.60	---	31.83	150.0	V	305.0	-0.6	54.00	22.17
8847.20	52.63	---	250.0	V	9.0	12.7	74.00	21.37
8847.20	---	41.10	250.0	V	9.0	12.7	54.00	12.90
10400.00	54.79	---	200.0	V	305.0	16.6	74.00	19.21
10400.00	---	44.21	200.0	V	305.0	16.6	54.00	9.79
15600.00	53.86	---	150.0	V	84.0	16.4	74.00	20.14
15600.00	---	44.75	150.0	V	84.0	16.4	54.00	9.25

High Channel: 5240MHz

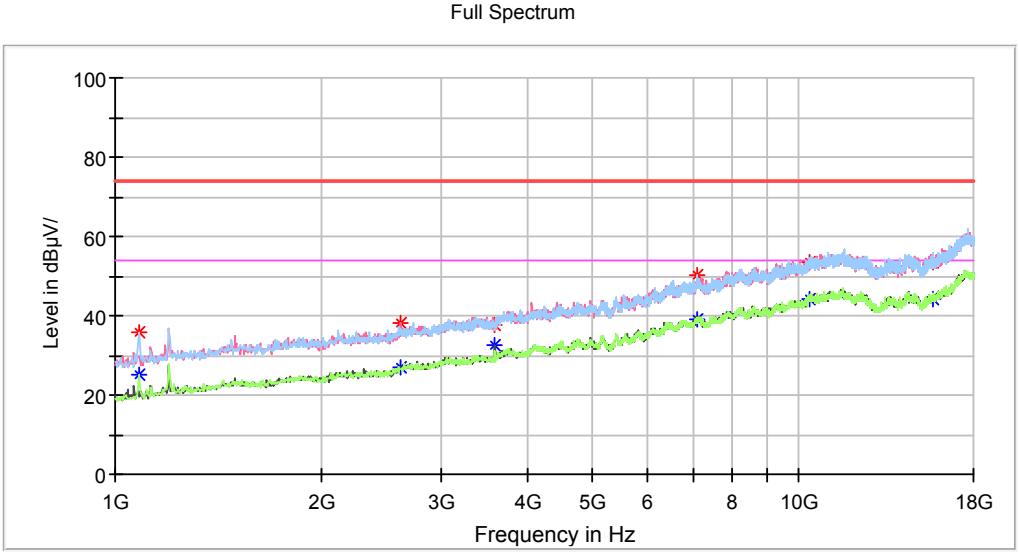


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV /m)	Average (dBµV /m)	Height (cm)	Polar (H/V)				
1200.60	37.08	---	150.0	H	65.0	-10.4	74.00	36.92
1200.60	---	25.99	150.0	H	65.0	-10.4	54.00	28.01
2611.60	37.96	---	250.0	V	227.0	-4.0	74.00	36.04
2611.60	---	26.40	250.0	V	227.0	-4.0	54.00	27.60
3145.40	40.13	---	150.0	V	290.0	-1.7	74.00	33.87
3145.40	---	28.47	150.0	V	290.0	-1.7	54.00	25.53
8670.40	52.49	---	200.0	V	69.0	12.8	74.00	21.51
8670.40	---	41.04	200.0	V	69.0	12.8	54.00	12.96
10480.00	54.25	---	250.0	V	213.0	16.9	74.00	19.75
10480.00	---	44.71	250.0	V	213.0	16.9	54.00	9.29
15720.00	---	44.57	150.0	V	203.0	16.8	54.00	9.43
15720.00	54.48	---	150.0	V	203.0	16.8	74.00	19.52

802.11n-HT40 Mode(Chain0+Chain1):
*(Pre-scan with X,Y and Z axes of orientation, the worst case **X-axis of orientation** was recorded)*

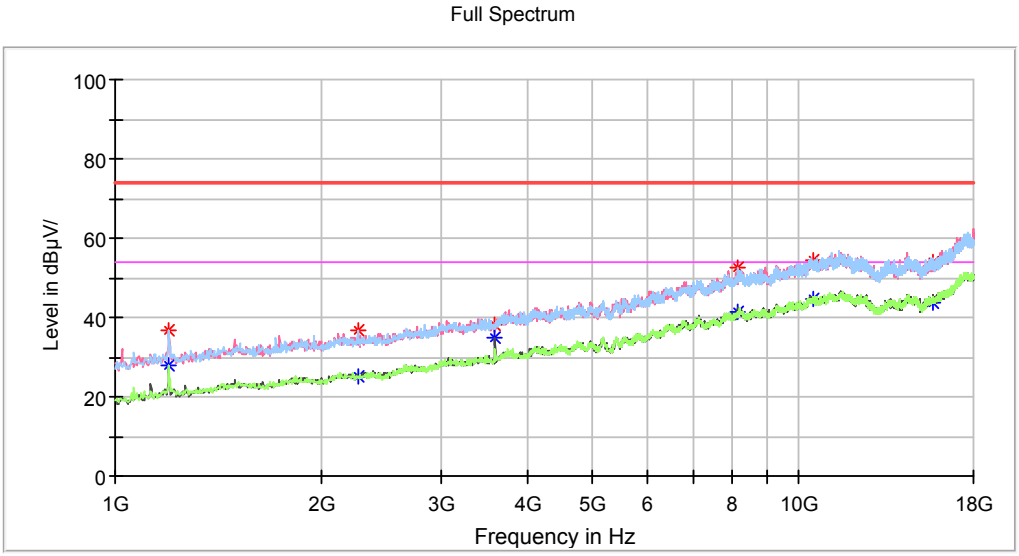
Note:
1. This test was performed with the 5150-5250MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5190MHz



Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV /m)	Average (dBµV /m)	Height (cm)	Polar (H/V)				
1081.60	35.83	---	150.0	H	69.0	-11.4	74.00	38.17
1081.60	---	25.15	150.0	H	69.0	-11.4	54.00	28.85
2615.00	37.96	---	200.0	V	181.0	-4.0	74.00	36.04
2615.00	---	27.01	200.0	V	181.0	-4.0	54.00	26.99
3597.60	37.78	---	150.0	V	335.0	-0.6	74.00	36.22
3597.60	---	32.46	150.0	V	335.0	-0.6	54.00	21.54
7116.60	50.40	---	200.0	V	212.0	9.7	74.00	23.60
7116.60	---	39.08	200.0	V	212.0	9.7	54.00	14.92
10380.00	53.54	---	150.0	V	260.0	16.5	74.00	20.46
10380.00	---	44.29	150.0	V	260.0	16.5	54.00	9.71
15570.00	53.59	---	200.0	V	118.0	16.8	74.00	20.41
15570.00	---	44.16	200.0	V	118.0	16.8	54.00	9.84

High Channel: 5230MHz

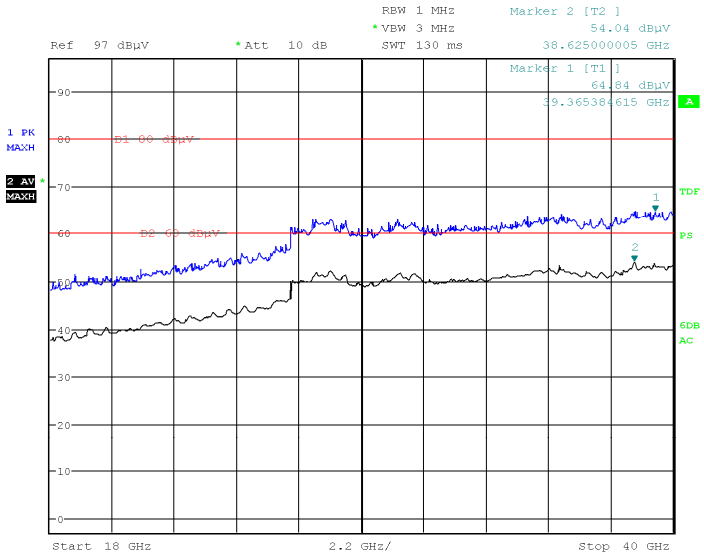


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV /m)	Average (dBµV /m)	Height (cm)	Polar (H/V)				
1197.20	36.93	---	150.0	H	65.0	-10.4	74.00	37.07
1197.20	---	27.87	150.0	H	65.0	-10.4	54.00	26.13
2261.40	---	25.16	250.0	H	150.0	-5.3	54.00	28.84
2261.40	36.61	---	250.0	H	150.0	-5.3	74.00	37.39
3597.60	37.93	---	200.0	V	164.0	-0.6	74.00	36.07
3597.60	---	34.83	200.0	V	164.0	-0.6	54.00	19.17
8160.40	52.51	---	150.0	V	353.0	12.3	74.00	21.49
8160.40	---	41.36	150.0	V	353.0	12.3	54.00	12.64
10460.00	---	44.48	250.0	V	305.0	16.8	54.00	9.52
10460.00	54.56	---	250.0	V	305.0	16.8	74.00	19.44
15690.00	53.95	---	200.0	V	35.0	16.7	74.00	20.05
15690.00	---	43.63	200.0	V	35.0	16.7	54.00	10.37

18GHz-40GHz (5150-5250MHz Band):

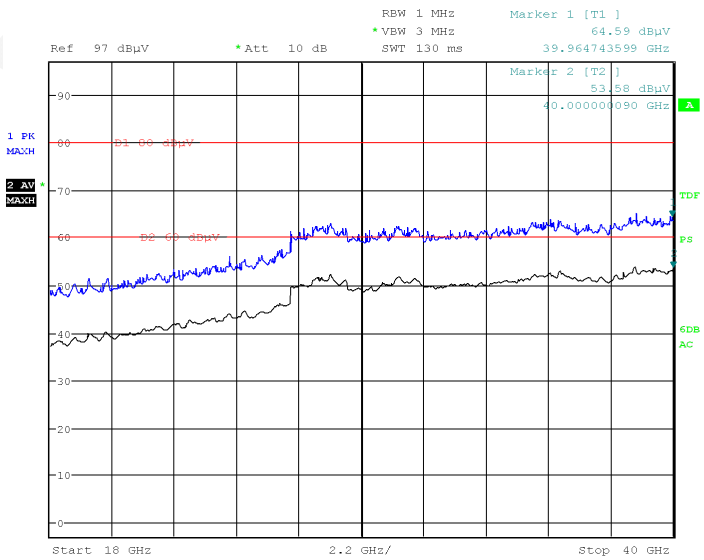
Pre-scan with 802.11a, 802.11n-HT20 and 802.11n-HT40 modes of operation in the X,Y and Z axes of orientation, the worst case ***Low channel of 802.11n-HT20 mode in Y-axis of orientation*** *was recorded*
Note: The test distance is 1.5m, The limit 74dBuV/m@3m= 80 dBuv/m@1.5m

Horizontal



Date: 20.JAN.2018 15:02:17

Vertical



Date: 20.JAN.2018 15:08:15

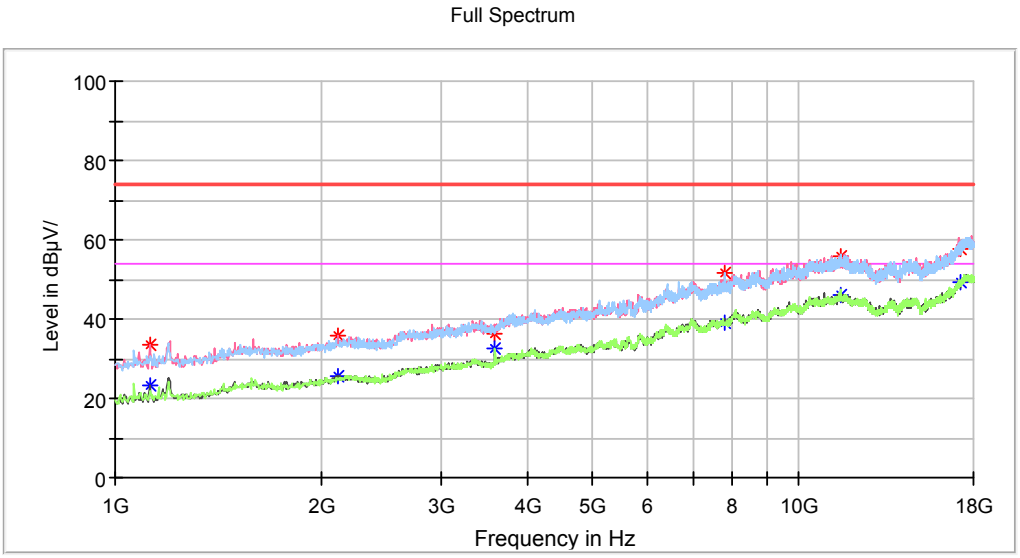
1GHz-18GHz (5745-5825 Band):

802.11a Mode(Chain 0):

*(Pre-scan in the X,Y and Z axes of orientation, the worst case **X-axis of orientation** was recorded.)*

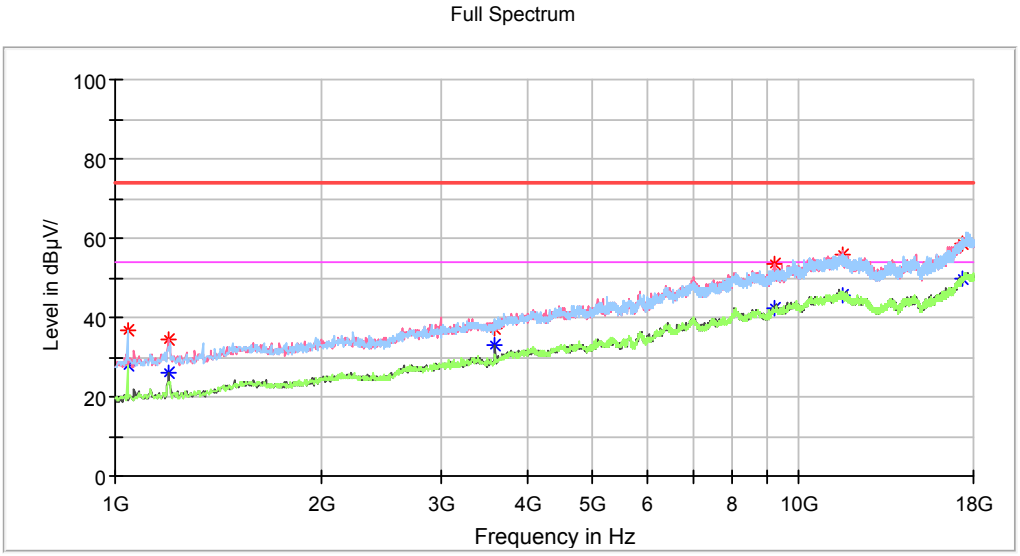
Note:
1. This test was performed with the 5725-5875MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5745MHz



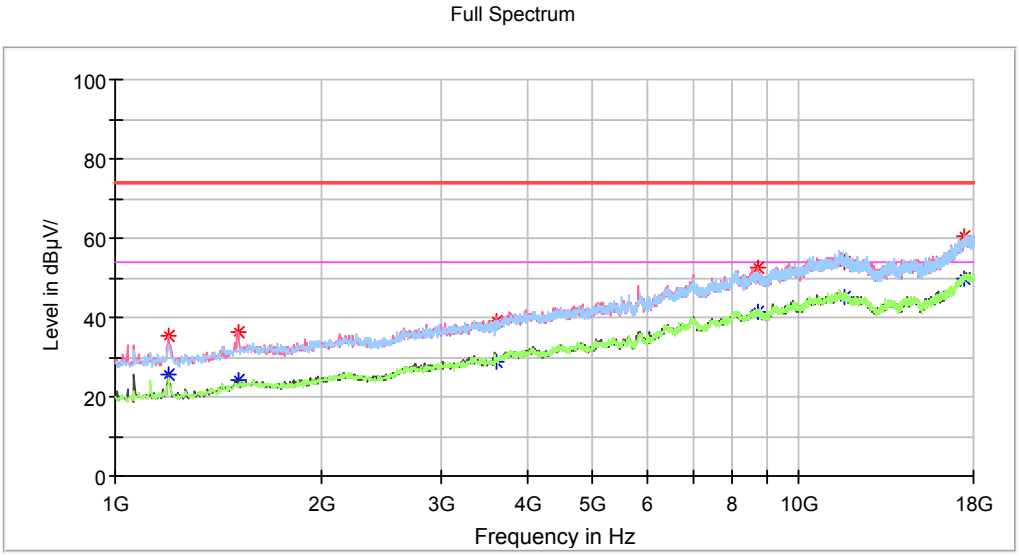
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV /m)	Average (dBµV /m)	Height (cm)	Polar (H/V)				
1122.40	33.63	---	150.0	H	290.0	-11.0	74.00	40.37
1122.40	---	23.22	150.0	H	290.0	-11.0	54.00	30.78
2118.60	36.00	---	200.0	V	242.0	-5.7	74.00	38.00
2118.60	---	25.37	200.0	V	242.0	-5.7	54.00	28.63
3597.60	36.45	---	150.0	V	169.0	-0.6	74.00	37.55
3597.60	---	32.33	150.0	V	169.0	-0.6	54.00	21.67
7803.40	51.84	---	250.0	V	194.0	11.3	74.00	22.16
7803.40	---	39.03	250.0	V	194.0	11.3	54.00	14.97
11490.00	55.91	---	200.0	V	0.0	18.2	74.00	18.09
11490.00	---	46.18	200.0	V	0.0	18.2	54.00	7.82
17235.00	57.45	---	150.0	V	31.0	22.3	74.00	16.55
17235.00	---	49.42	150.0	V	31.0	22.3	54.00	4.58

Middle Channel: 5785MHz



Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV /m)	Average (dBµV /m)	Height (cm)	Polar (H/V)				
1044.20	36.81	---	200.0	H	69.0	-11.8	74.00	37.19
1044.20	---	28.09	200.0	H	69.0	-11.8	54.00	25.91
1197.20	34.20	---	150.0	V	341.0	-10.4	74.00	39.80
1197.20	---	25.89	150.0	V	341.0	-10.4	54.00	28.11
3597.60	37.16	---	200.0	V	38.0	-0.6	74.00	36.84
3597.60	---	32.88	200.0	V	38.0	-0.6	54.00	21.12
9224.60	53.28	---	250.0	V	164.0	13.7	74.00	20.72
9224.60	---	42.18	250.0	V	164.0	13.7	54.00	11.82
11570.00	---	45.43	200.0	V	0.0	18.0	54.00	8.57
11570.00	55.90	---	200.0	V	0.0	18.0	74.00	18.10
17355.00	---	49.69	150.0	V	47.0	22.9	54.00	4.31
17355.00	58.49	---	150.0	V	47.0	22.9	74.00	15.51

High Channel: 5825MHz



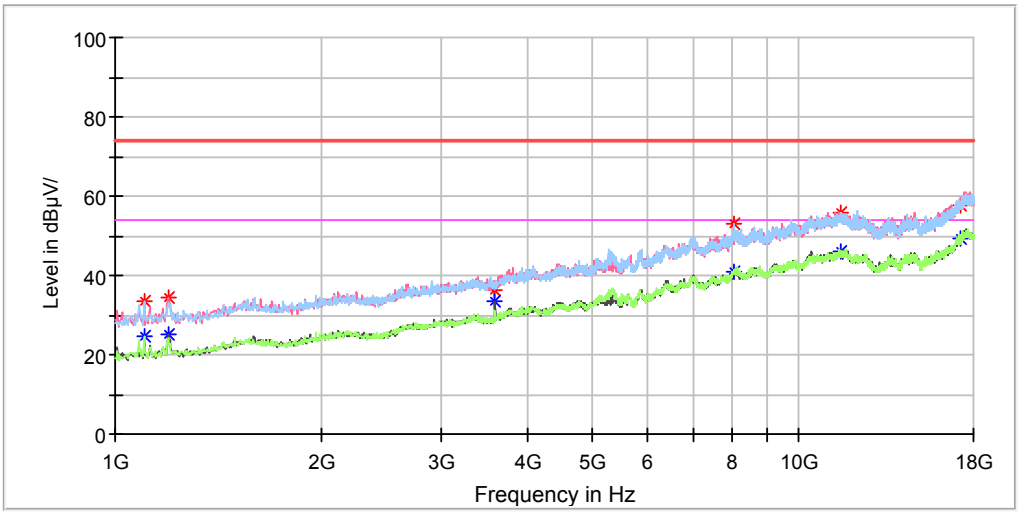
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV /m)	Average (dBµV /m)	Height (cm)	Polar (H/V)				
1197.20	35.30	---	150.0	V	179.0	-10.4	74.00	38.70
1197.20	---	25.78	150.0	V	179.0	-10.4	54.00	28.22
1513.40	36.15	---	250.0	V	38.0	-8.0	74.00	37.85
1513.40	---	24.10	250.0	V	38.0	-8.0	54.00	29.90
3601.00	39.10	---	200.0	H	110.0	-0.6	74.00	34.90
3601.00	---	28.86	200.0	H	110.0	-0.6	54.00	25.14
8687.40	52.51	---	250.0	V	150.0	12.8	74.00	21.49
8687.40	---	41.21	250.0	V	150.0	12.8	54.00	12.79
11650.00	53.80	---	150.0	V	54.0	17.7	74.00	20.20
11650.00	---	45.24	150.0	V	54.0	17.7	54.00	8.76
17475.00	60.46	---	250.0	V	195.0	23.6	74.00	13.54
17475.00	---	49.60	250.0	V	195.0	23.6	54.00	4.40

802.11a Mode(Chain 1):

*(Pre-scan in the X,Y and Z axes of orientation, the worst case **X-axis of orientation** was recorded.)*

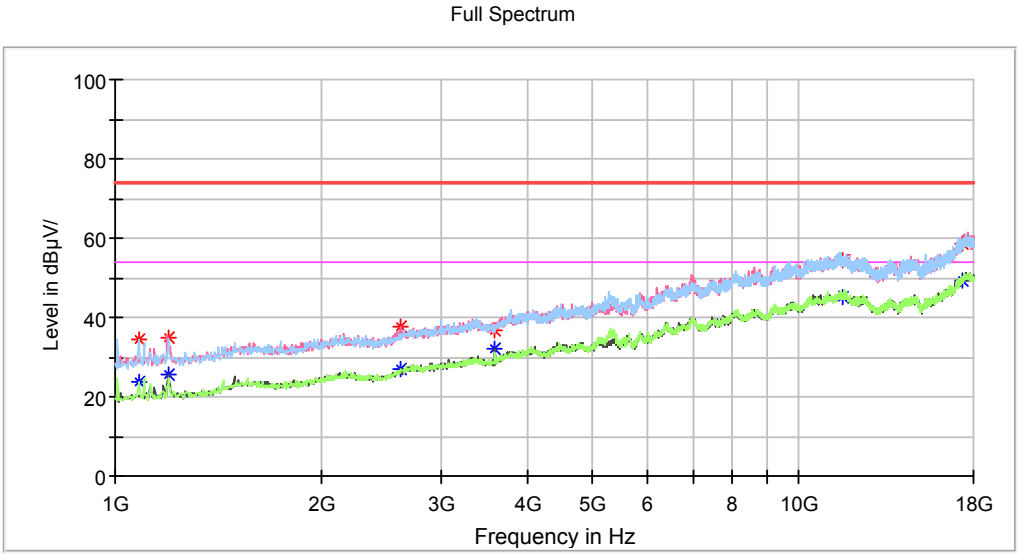
Note:
1. This test was performed with the 5725-5875MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5745MHz



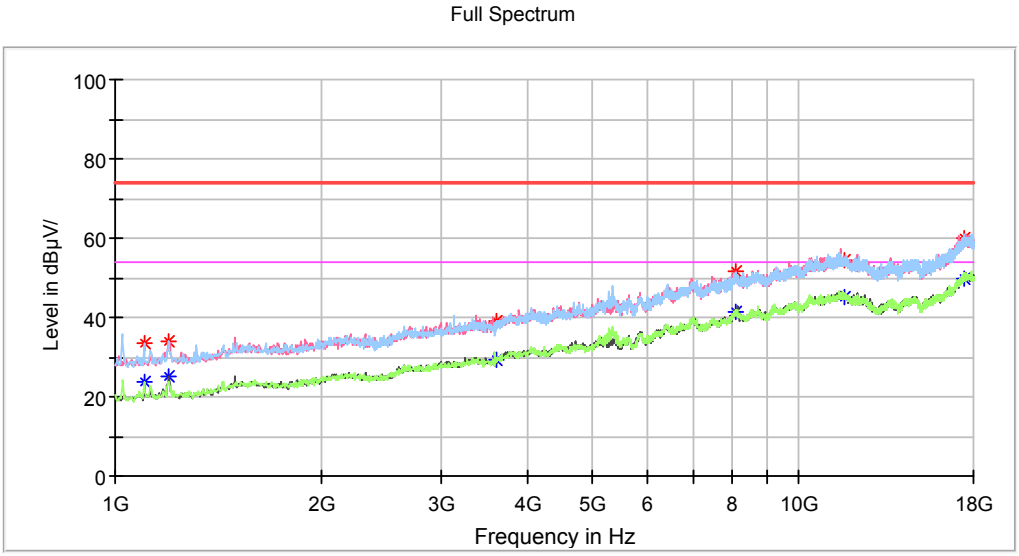
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV /m)	Average (dBµV /m)	Height (cm)	Polar (H/V)				
1102.00	33.27	---	200.0	H	251.0	-11.2	74.00	40.73
1102.00	---	24.75	200.0	H	251.0	-11.2	54.00	29.25
1193.80	34.20	---	150.0	V	328.0	-10.4	74.00	39.80
1193.80	---	24.90	150.0	V	328.0	-10.4	54.00	29.10
3597.60	36.17	---	200.0	V	132.0	-0.6	74.00	37.83
3597.60	---	33.50	200.0	V	132.0	-0.6	54.00	20.50
8058.40	52.80	---	150.0	V	204.0	12.1	74.00	21.20
8058.40	---	41.04	150.0	V	204.0	12.1	54.00	12.96
11490.00	55.69	---	250.0	V	173.0	18.3	74.00	18.31
11490.00	---	45.95	250.0	V	173.0	18.3	54.00	8.05
17235.00	57.58	---	150.0	V	211.0	22.3	74.00	16.42
17235.00	---	49.21	150.0	V	211.0	22.3	54.00	4.79

Middle Channel: 5785MHz



Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV /m)	Average (dBµV /m)	Height (cm)	Polar (H/V)				
1081.60	---	23.88	200.0	H	165.0	-11.4	54.00	30.12
1081.60	34.47	---	200.0	H	165.0	-11.4	74.00	39.53
1193.80	35.09	---	150.0	V	337.0	-10.4	74.00	38.91
1193.80	---	25.57	150.0	V	337.0	-10.4	54.00	28.43
2621.80	37.74	---	200.0	V	102.0	-4.0	74.00	36.26
2621.80	---	26.77	200.0	V	102.0	-4.0	54.00	27.23
3597.60	36.68	---	250.0	V	202.0	-0.6	74.00	37.32
3597.60	---	32.05	250.0	V	202.0	-0.6	54.00	21.95
11570.00	---	45.33	150.0	V	356.0	18.0	54.00	8.67
11570.00	54.49	---	150.0	V	356.0	18.0	74.00	19.51
17355.00	---	49.14	250.0	V	134.0	22.9	54.00	4.86
17355.00	58.69	---	250.0	V	134.0	22.9	74.00	15.31

High Channel: 5825MHz

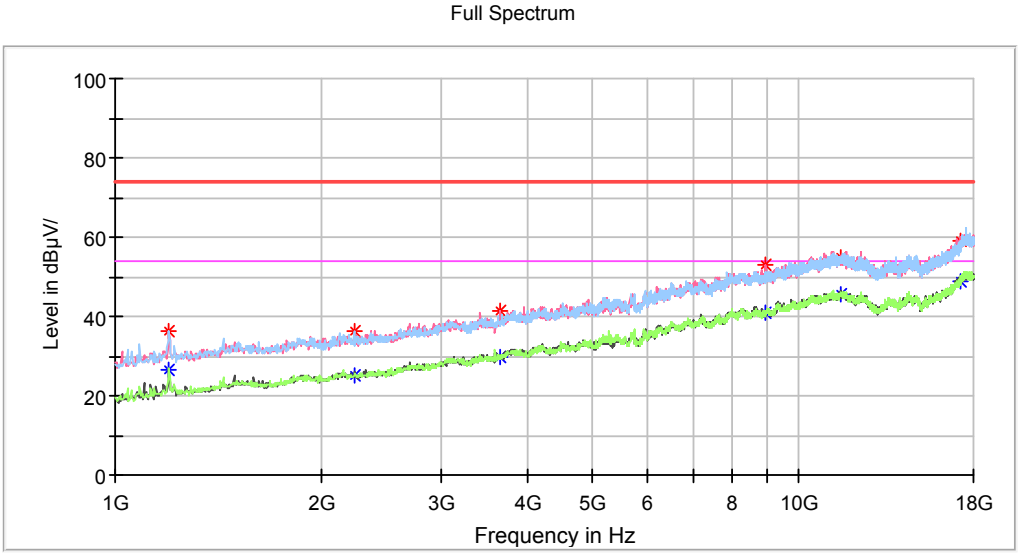


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV /m)	Average (dBµV /m)	Height (cm)	Polar (H/V)				
1102.00	33.68	---	200.0	H	165.0	-11.2	74.00	40.32
1102.00	---	23.55	200.0	H	165.0	-11.2	54.00	30.45
1200.60	33.99	---	150.0	V	337.0	-10.4	74.00	40.01
1200.60	---	25.01	150.0	V	337.0	-10.4	54.00	28.99
3604.40	38.96	---	250.0	H	0.0	-0.5	74.00	35.04
3604.40	---	29.20	250.0	H	0.0	-0.5	54.00	24.80
8065.20	51.54	---	150.0	V	356.0	12.1	74.00	22.46
8065.20	---	41.25	150.0	V	356.0	12.1	54.00	12.75
11650.00	---	45.09	200.0	V	11.0	17.7	54.00	8.91
11650.00	54.42	---	200.0	V	11.0	17.7	74.00	19.58
17475.00	---	49.64	150.0	V	180.0	23.5	54.00	4.36
17475.00	59.98	---	150.0	V	180.0	23.5	74.00	14.02

802.11n-HT20 Mode(Chain0+chain1):
*(Pre-scan with X,Y and Z axes of orientation, the worst case **X-axis of orientation** was recorded)*

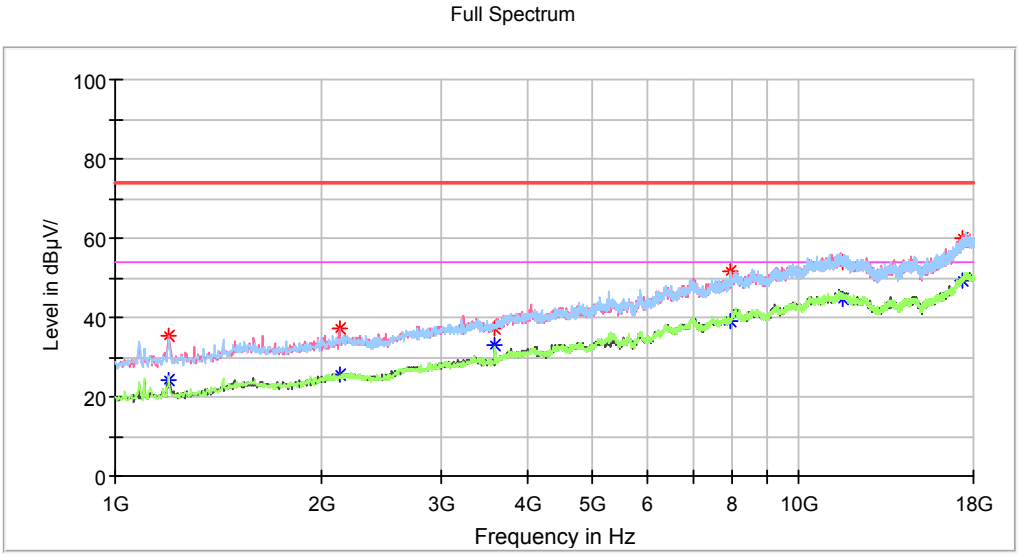
Note:
1. This test was performed with the 5725-5875MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5745MHz



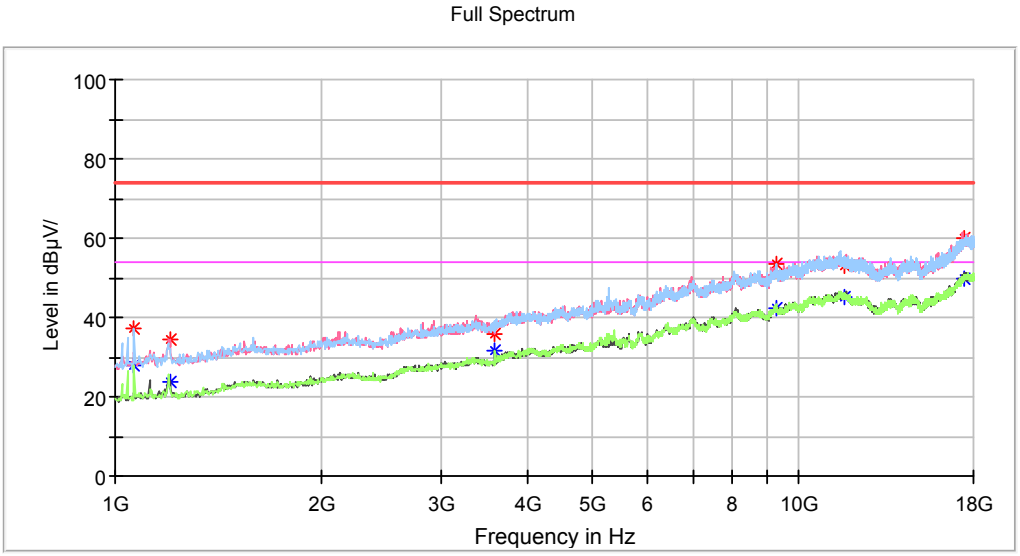
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV /m)	Average (dBµV /m)	Height (cm)	Polar (H/V)				
1200.60	36.26	---	150.0	V	35.0	-10.4	74.00	37.74
1200.60	---	26.59	150.0	V	35.0	-10.4	54.00	27.41
2234.20	36.05	---	200.0	H	135.0	-5.3	74.00	37.95
2234.20	---	25.20	200.0	H	135.0	-5.3	54.00	28.80
3652.00	41.55	---	250.0	V	260.0	-0.4	74.00	32.45
3652.00	---	29.97	250.0	V	260.0	-0.4	54.00	24.03
8956.00	52.93	---	150.0	V	10.0	12.7	74.00	21.07
8956.00	---	40.94	150.0	V	10.0	12.7	54.00	13.06
11490.00	---	45.40	200.0	V	244.0	18.2	54.00	8.60
11490.00	54.99	---	200.0	V	244.0	18.2	74.00	19.01
17235.00	---	48.67	150.0	V	12.0	22.3	54.00	5.33
17235.00	58.99	---	150.0	V	12.0	22.3	74.00	15.01

Middle Channel: 5785MHz



Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV /m)	Average (dBµV /m)	Height (cm)	Polar (H/V)				
1200.60	35.29	---	200.0	V	69.0	-10.4	74.00	38.71
1200.60	---	24.21	200.0	V	69.0	-10.4	54.00	29.79
2125.40	37.03	---	250.0	H	52.0	-5.7	74.00	36.97
2125.40	---	25.52	250.0	H	52.0	-5.7	54.00	28.48
3597.60	---	33.19	150.0	V	175.0	-0.6	54.00	20.81
3597.60	37.31	---	150.0	V	175.0	-0.6	74.00	36.69
7959.80	51.43	---	200.0	V	120.0	11.9	74.00	22.57
7959.80	---	39.25	200.0	V	120.0	11.9	54.00	14.75
11570.00	53.92	---	150.0	V	42.0	18.0	74.00	20.08
11570.00	---	44.88	150.0	V	42.0	18.0	54.00	9.12
17355.00	---	49.44	200.0	V	26.0	22.9	54.00	4.56
17355.00	59.80	---	200.0	V	26.0	22.9	74.00	14.20

High Channel: 5825MHz

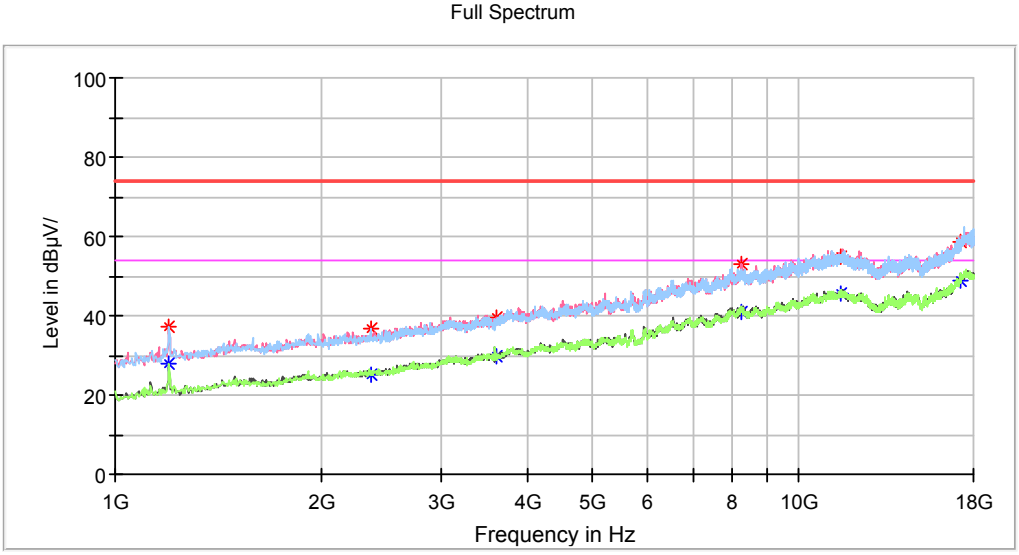


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV /m)	Average (dBµV /m)	Height (cm)	Polar (H/V)				
1064.60	---	28.09	200.0	H	96.0	-11.6	54.00	25.91
1064.60	37.04	---	200.0	H	96.0	-11.6	74.00	36.96
1204.00	---	23.71	250.0	V	253.0	-10.3	54.00	30.29
1204.00	34.64	---	250.0	V	253.0	-10.3	74.00	39.36
3597.60	35.74	---	200.0	V	5.0	-0.6	74.00	38.26
3597.60	---	31.55	200.0	V	5.0	-0.6	54.00	22.45
9282.40	53.62	---	150.0	V	342.0	13.9	74.00	20.38
9282.40	---	42.46	150.0	V	342.0	13.9	54.00	11.54
11650.00	---	45.31	250.0	V	136.0	17.7	54.00	8.69
11650.00	53.24	---	250.0	V	136.0	17.7	74.00	20.76
17475.00	60.22	---	150.0	V	5.0	23.5	74.00	13.78
17475.00	---	49.95	150.0	V	5.0	23.5	54.00	4.05

802.11n-HT40 Mode(Chain0+Chain1):
(*Pre-scan with X,Y and Z axes of orientation, the worst case* ***X-axis of orientation*** *was recorded***)**

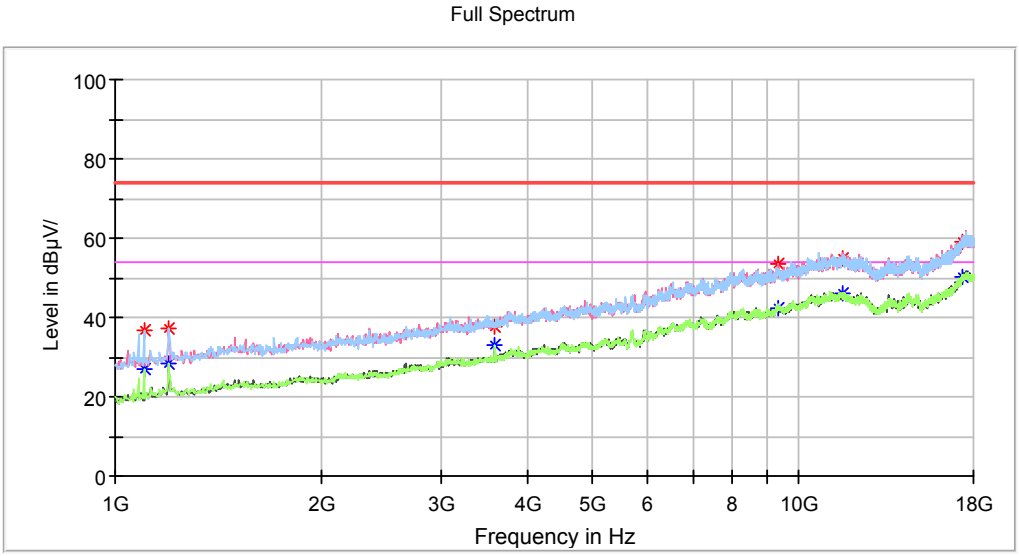
Note:
1. This test was performed with the 5725-5875MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5755MHz



Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV /m)	Average (dBµV /m)	Height (cm)	Polar (H/V)				
1200.60	37.09	---	150.0	H	65.0	-10.4	74.00	36.91
1200.60	---	27.92	150.0	H	65.0	-10.4	54.00	26.08
2363.40	36.55	---	200.0	H	198.0	-5.0	74.00	37.45
2363.40	---	25.26	200.0	H	198.0	-5.0	54.00	28.74
3614.60	39.49	---	150.0	V	210.0	-0.5	74.00	34.51
3614.60	---	29.92	150.0	V	210.0	-0.5	54.00	24.08
8238.60	52.83	---	200.0	V	212.0	12.4	74.00	21.17
8238.60	---	41.09	200.0	V	212.0	12.4	54.00	12.91
11510.00	55.02	---	150.0	V	116.0	18.2	74.00	18.98
11510.00	---	45.80	150.0	V	116.0	18.2	54.00	8.20
17265.00	58.79	---	200.0	V	102.0	22.4	74.00	15.21
17265.00	---	48.90	200.0	V	102.0	22.4	54.00	5.10

High Channel: 5795MHz

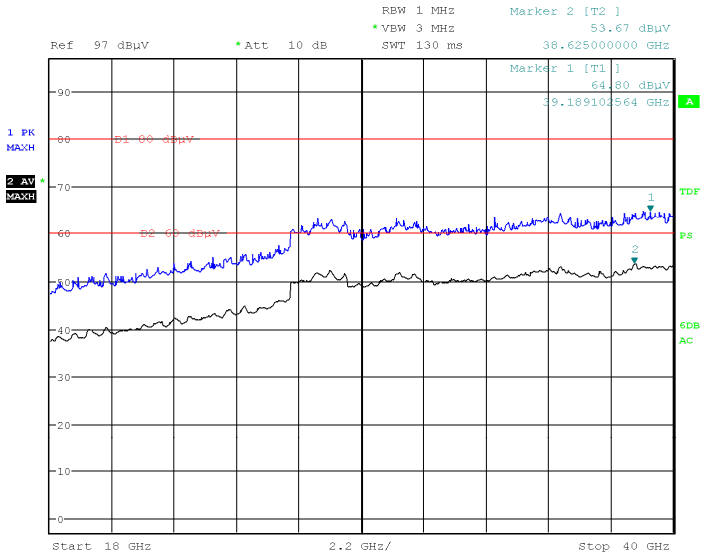


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV /m)	Average (dBµV /m)	Height (cm)	Polar (H/V)				
1102.00	---	27.03	150.0	H	71.0	-11.2	54.00	26.97
1102.00	36.73	---	150.0	H	71.0	-11.2	74.00	37.27
1197.20	37.17	---	250.0	V	271.0	-10.4	74.00	36.83
1197.20	---	28.52	250.0	V	271.0	-10.4	54.00	25.48
3597.60	37.54	---	150.0	V	12.0	-0.6	74.00	36.46
3597.60	---	32.94	150.0	V	12.0	-0.6	54.00	21.06
9350.40	53.29	---	200.0	V	4.0	14.2	74.00	20.71
9350.40	---	42.25	200.0	V	4.0	14.2	54.00	11.75
11590.00	---	46.27	150.0	V	181.0	17.9	54.00	7.73
11590.00	54.99	---	150.0	V	181.0	17.9	74.00	19.01
17385.00	---	50.30	200.0	V	226.0	23.1	54.00	3.70
17385.00	59.14	---	200.0	V	226.0	23.1	74.00	14.86

18GHz-40GHz (5725-5850 Band):

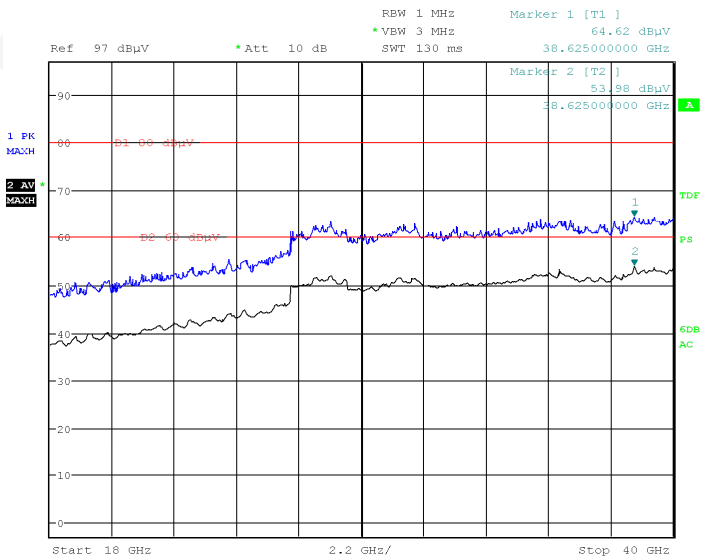
Pre-scan with 802.11a, 802.11n-HT20 and 802.11n-HT40 modes in the X,Y and Z axes of orientation, the worst case ***low channel of 802.11n-HT20 mode of operation in X-axis of orientation*** *was recorded*
Note: The test distance is 1.5m, The limit 74dBuV/m@3m= 80 dBuv/m@1.5m

Horizontal



Date: 20.JAN.2018 15:12:51

Vertical



Date: 20.JAN.2018 15:18:05

Fundamental Test & Restricted Bands Emissions Test (5150-5250MHz Band):

Note:
1. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
2. Corrected Amplitude = Corrected Factor + Reading
3. Margin = Limit - Corrected. Amplitude

802.11a Mode (Chain 0): *(Pre-scan in the X,Y and Z axes of orientation, the worst case in X-axis of orientation was recorded)*

Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Corr. (dB)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV /m)	Average (dBμV /m)	Height (cm)	Polar (H/V)				
Low Channel: 5180MHz								
5180.00	---	87.17	250	V	78	13.31	/	/
5180.00	94.47	---	250	V	78	13.31	/	/
5150.00	---	46.22	200	V	285	13.24	54	7.78
5150.00	56.34	---	200	V	285	13.24	74	17.66
Middle Channel: 5200MHz								
5200.00	94.68	---	200.0	V	166	13.35	/	/
5200.00	---	88.30	200.0	V	166	13.35	/	/
High Channel: 5240MHz								
5240.00	---	88.42	200	V	58	13.44	/	/
5240.00	95.80	---	200	V	58	13.44	/	/
5350.00	---	45.91	150	V	139	13.68	54	8.09
5350.00	56.30	---	150	V	139	13.68	74	17.70

802.11a Mode (Chain 1): *(Pre-scan in the X,Y and Z axes of orientation, the worst case in X-axis of orientation was recorded)*

Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Corr. (dB)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV /m)	Average (dBμV /m)	Height (cm)	Polar (H/V)				
Low Channel: 5180MHz								
5180.00	---	84.21	250	V	42	13.31	/	/
5180.00	91.62	---	250	V	42	13.31	/	/
5150.00	---	45.36	200	V	166	13.24	54	8.64
5150.00	55.34	---	200	V	166	13.24	74	18.66
Middle Channel: 5200MHz								
5200.00	91.37	---	250	V	91	13.35	/	/
5200.00	---	84.15	250	V	91	13.35	/	/
High Channel: 5240MHz								
5240.00	---	84.12	200	V	19	13.44	/	/
5240.00	90.67	---	200	V	19	13.44	/	/
5350.00	---	45.68	150	V	278	13.68	54	8.32
5350.00	56.41	---	150	V	278	13.68	74	17.59

802.11n-HT20 Mode (Chain0+Chain1): *(Pre-scan in the X,Y and Z axes of orientation, the worst case in X-axis of orientation was recorded)*

Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Corr. (dB)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV /m)	Average (dBμV /m)	Height (cm)	Polar (H/V)				
Low Channel: 5180MHz								
5180.00	---	93.65	250	V	141	13.31	/	/
5180.00	100.16	---	250	V	141	13.31	/	/
5150.00	---	43.56	200	V	162	13.24	54	10.44
5150.00	57.69	---	200	V	162	13.24	74	16.31
Middle Channel: 5200MHz								
5200.00	100.67	---	250	V	169	13.35	/	/
5200.00	---	93.17	250	V	169	13.35	/	/
High Channel: 5240MHz								
5240.00	---	92.88	200	V	247	13.44	/	/
5240.00	99.76	---	200	V	247	13.44	/	/
5350.00	---	44.38	150	V	153	13.68	54	9.62
5350.00	58.69	---	150	V	153	13.68	74	15.31

802.11n-HT40 Mode(Chain0+Chain1): *(Pre-scan in the X,Y and Z axes of orientation, the worst case in X-axis of orientation was recorded)*

Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Corr. (dB)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV /m)	Average (dBμV /m)	Height (cm)	Polar (H/V)				
Low Channel: 5190MHz								
5190.00	---	89.79	150	V	97	13.33	/	/
5190.00	94.46	---	150	V	97	13.33	/	/
5150.00	---	44.68	200	V	217	13.24	54	9.32
5150.00	58.46	---	200	V	217	13.24	74	15.54
High Channel: 5230MHz								
5230.00	---	90.27	200	V	275	13.42	/	/
5230.00	95.56	---	200	V	275	13.42	/	/
5350.00	---	47.23	250	V	43	13.68	54	6.77
5350.00	59.89	---	250	V	43	13.68	74	14.11

Fundamental Test & Restricted Bands Emissions Test (5725-5850MHz band):

Note:
1. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
2. Corrected Amplitude = Corrected Factor + Reading
3. Margin = Limit - Corrected. Amplitude

802.11a Mode(Chain 0): *(Pre-scan in the X,Y and Z axes of orientation, the worst case in X-axis of orientation was recorded)*

Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Corr. (dB)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV /m)	Average (dBμV /m)	Height (cm)	Polar (H/V)				
Low Channel: 5745MHz								
5745.00	---	87.54	150	V	142	14.84	/	/
5745.00	94.42	---	150	V	142	14.84	/	/
5725.00	---	41.39	100	V	168	14.77	54	12.61
5725.00	56.11	---	100	V	168	14.77	74	17.89
Middle Channel: 5785MHz								
5785.00	94.58	---	250	V	291	14.97	/	/
5785.00	---	87.37	250	V	291	14.97	/	/
High Channel: 5825MHz								
5825.00	---	87.92	200	V	147	15.11	/	/
5825.00	94.67	---	200	V	147	15.11	/	/
5850.00	---	42.16	150	V	239	15.19	54	11.84
5850.00	57.34	---	150	V	239	15.19	74	16.66

802.11a Mode (Chain 1): *(Pre-scan in the X,Y and Z axes of orientation, the worst case in X-axis of orientation was recorded)*

Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Corr. (dB)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV /m)	Average (dBμV /m)	Height (cm)	Polar (H/V)				
Low Channel: 5745MHz								
5745.00	---	83.68	250	V	18	14.84	/	/
5745.00	91.13	---	250	V	18	14.84	/	/
5725.00	---	42.36	200	V	106	14.77	54	11.64
5725.00	55.69	---	200	V	106	14.77	74	18.31
Middle Channel: 5785MHz								
5785.00	90.97	---	250	V	183	14.97	/	/
5785.00	---	84.15	250	V	183	14.97	/	/
High Channel: 5825MHz								
5825.00	---	83.91	200	V	241	15.11	/	/
5825.00	90.64	---	200	V	241	15.11	/	/
5850.00	---	43.11	150	V	236	15.19	54	10.89
5850.00	56.18	---	150	V	236	15.19	74	17.82

802.11n-HT20 Mode (Chain0+Chain1): *(Pre-scan in the X,Y and Z axes of orientation, the worst case in X-axis of orientation was recorded)*

Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Corr. (dB)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV /m)	Average (dBμV /m)	Height (cm)	Polar (H/V)				
Low Channel: 5745MHz								
5745.00	---	92.05	250	V	180	14.84	/	/
5745.00	99.46	---	250	V	180	14.84	/	/
5725.00	---	42.69	200	V	173	14.77	54	11.31
5725.00	56.42	---	200	V	173	14.77	74	17.58
Middle Channel: 5785MHz								
5785.00	99.67	---	250	V	293	14.97	/	/
5785.00	---	91.67	250	V	293	14.97	/	/
High Channel: 5825MHz								
5825.00	---	91.72	200	V	245	15.11	/	/
5825.00	98.83	---	200	V	245	15.11	/	/
5850.00	---	43.26	150	V	189	15.19	54	10.74
5850.00	57.69	---	150	V	189	15.19	74	16.31

802.11n-HT40 Mode(Chain0+Chain1): *(Pre-scan in the X,Y and Z axes of orientation, the worst case in X-axis of orientation was recorded)*

Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Corr. (dB)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV /m)	Average (dBμV /m)	Height (cm)	Polar (H/V)				
Low Channel: 5755MHz								
5755.00	---	87.49	250	V	242	14.87	/	/
5755.00	93.99	---	250	V	242	14.87	/	/
5725.00	---	43.11	200	V	316	14.77	54	10.89
5725.00	56.13	---	200	V	316	14.77	74	17.87
High Channel: 5795MHz								
5795.00	---	88.13	200	V	287	15.01	/	/
5795.00	93.07	---	200	V	287	15.01	/	/
5850.00	---	45.37	150	V	256	15.19	54	8.63
5850.00	57.62	---	150	V	256	15.19	74	16.38

FCC §15.407(b) (1) (4) –BAND EDGE

Applicable Standard

FCC §15.407 (b) (1), (4);

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 EIRP of -27dBm/MHz

For transmitters operating in the 5.725–5.850 GHz band: 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.

Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibration or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measuremen instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW to 1 MHz and VBW to 3MHz of spectrum analyzer. Offset the antenna gain and cable loss.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

Test Data

Environmental Conditions

Temperature:	23.5 °C
Relative Humidity:	60 %
ATM Pressure:	101.2 kPa

The testing was performed by Ada Yu on 2018-03-26.

5150-5250 MHz Band:

Test mode	Chain	Band (MHz)	BAND EDGE	Reading Level (dBm/MHz)	E.I.R.P (dBm/MHz)	Limits (dBm/MHz)	Result
5150-5250	Chain 0	802.11a	left	-44.82	-41.82	-27	PASS
			right	-49.60	-46.60	-27	PASS
		802.11n20	left	-45.03	-42.03	-27	PASS
			right	-48.94	-45.94	-27	PASS
		802.11n40	left	-45.37	-42.37	-27	PASS
			right	-49.15	-46.15	-27	PASS
	Chain 1	802.11a	left	-49.00	-46.00	-27	PASS
			right	-58.19	-55.19	-27	PASS
		802.11n20	left	-49.19	-46.19	-27	PASS
			right	-58.15	-55.15	-27	PASS
		802.11n40	left	-51.52	-48.52	-27	PASS
			right	-57.39	-54.39	-27	PASS

5725-5850 MHz Band:

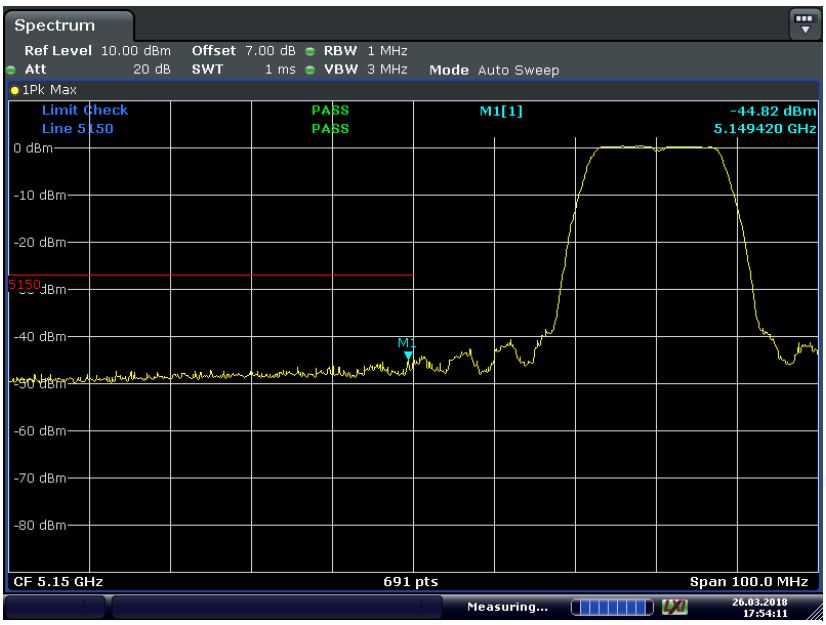
Test mode	Chain	Band (MHz)	BAND EDGE	Reading Level (dBm/MHz)	E.I.R.P (dBm/MHz)	Margin (dB)	Result
5725-5850	Chain 0	802.11a	left	-48.73	-45.73	>10dB	PASS
			right	-47.96	-44.96	>10dB	PASS
		802.11n20	left	-48.37	-45.37	>10dB	PASS
			right	-47.91	-44.91	>10dB	PASS
		802.11n40	left	-48.15	-45.15	>10dB	PASS
			right	-47.76	-44.76	>10dB	PASS
	Chain 1	802.11a	left	-49.23	-46.23	>10dB	PASS
			right	-48.00	-45.00	>10dB	PASS
		802.11n20	left	-48.87	-45.87	>10dB	PASS
			right	-47.50	-44.50	>10dB	PASS
		802.11n40	left	-49.07	-46.07	>10dB	PASS
			right	-47.73	-44.73	>10dB	PASS

Note:

1. The antenna gain is 3.0 dBi.
2. Each transmit chain is under 3dB of the limit, so MIMO mode is compliant with the limit.

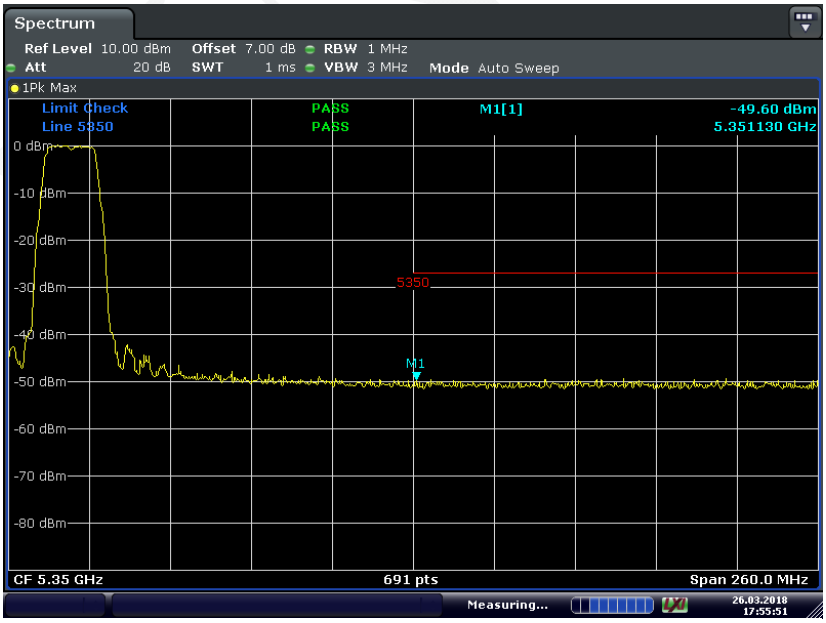
5150-5250 MHz Band:

802.11a Chain0 Band Edge, Left Side



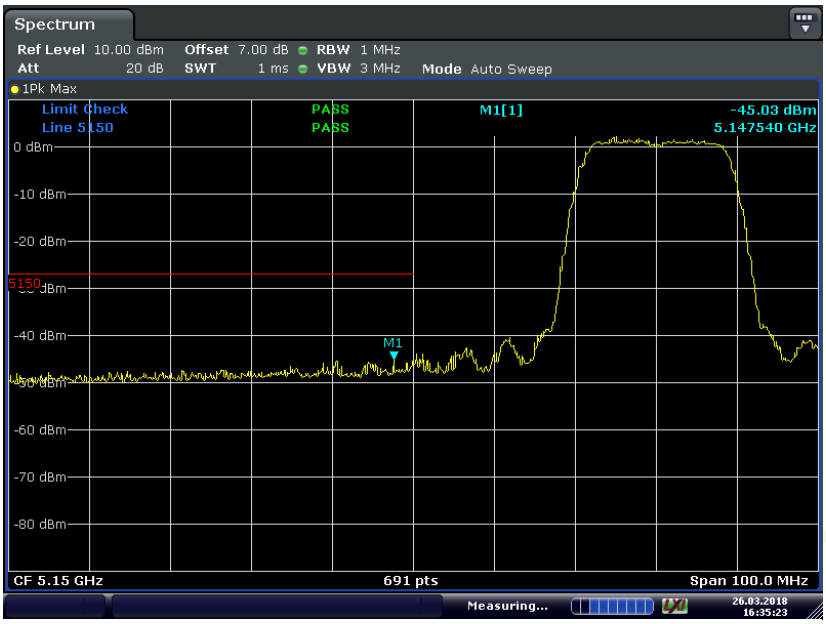
Date: 26.MAR.2018 17:54:12

802.11a Chain0 Band Edge, Right Side



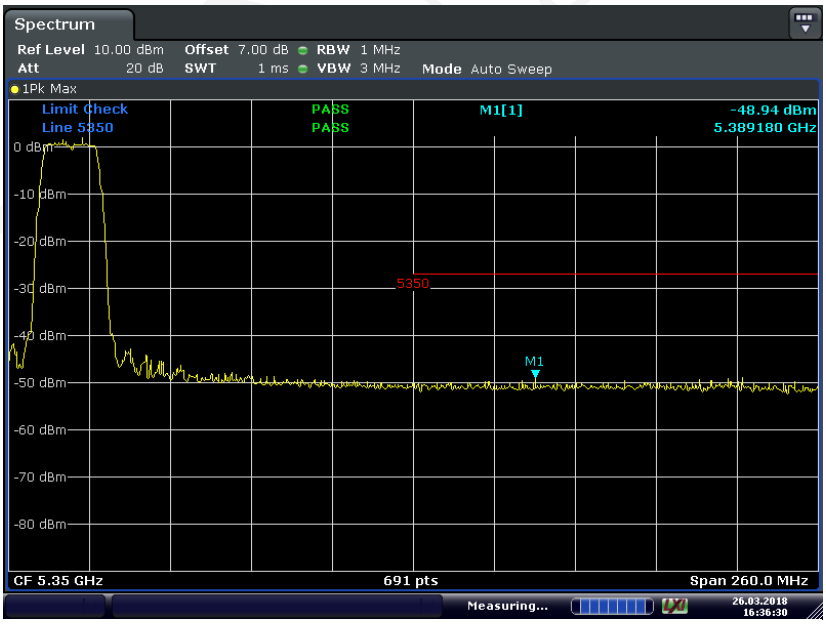
Date: 26.MAR.2018 17:55:51

802.11n-HT20 Chain0 Band Edge, Left Side



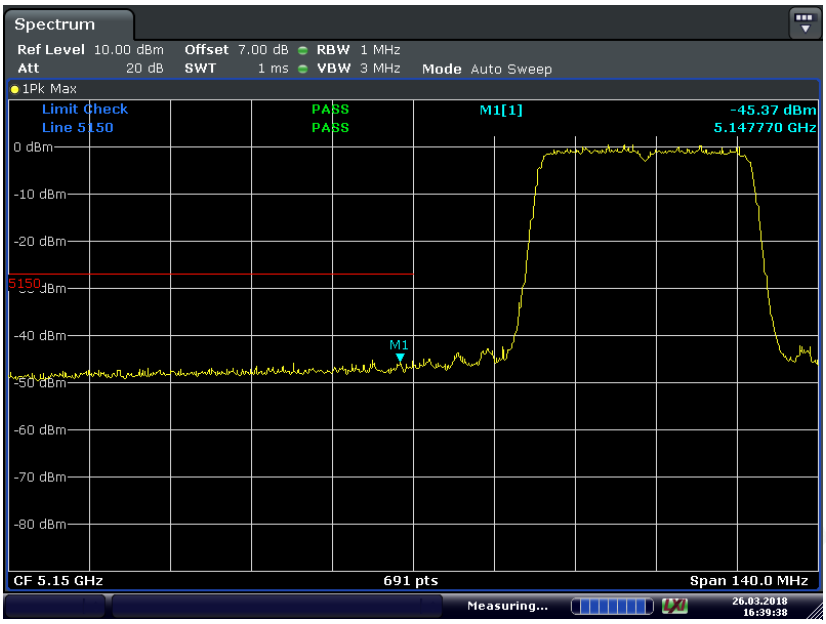
Date: 26.MAR.2018 16:35:23

802.11n-HT20 Chain0 Band Edge, Right Side



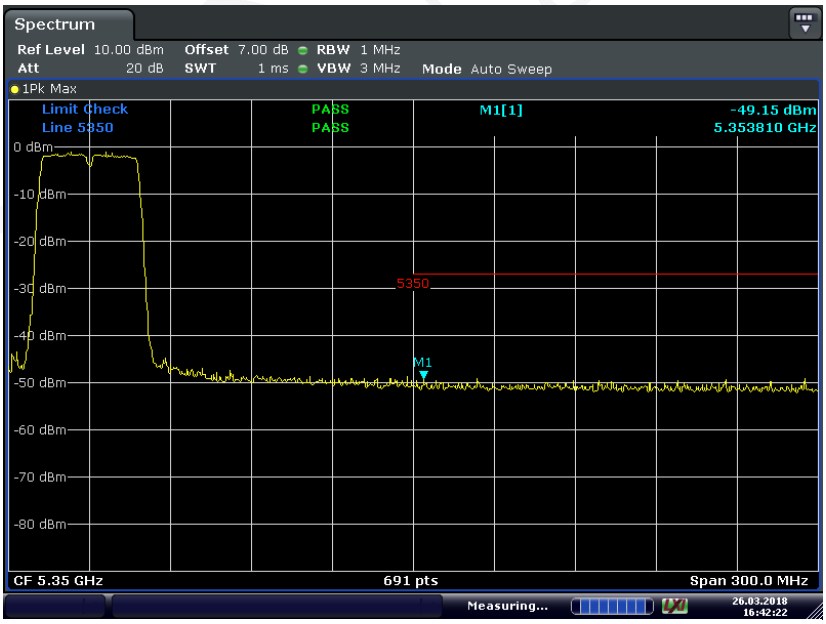
Date: 26.MAR.2018 16:36:31

802.11n-HT40 Chain0 Band Edge, Left Side



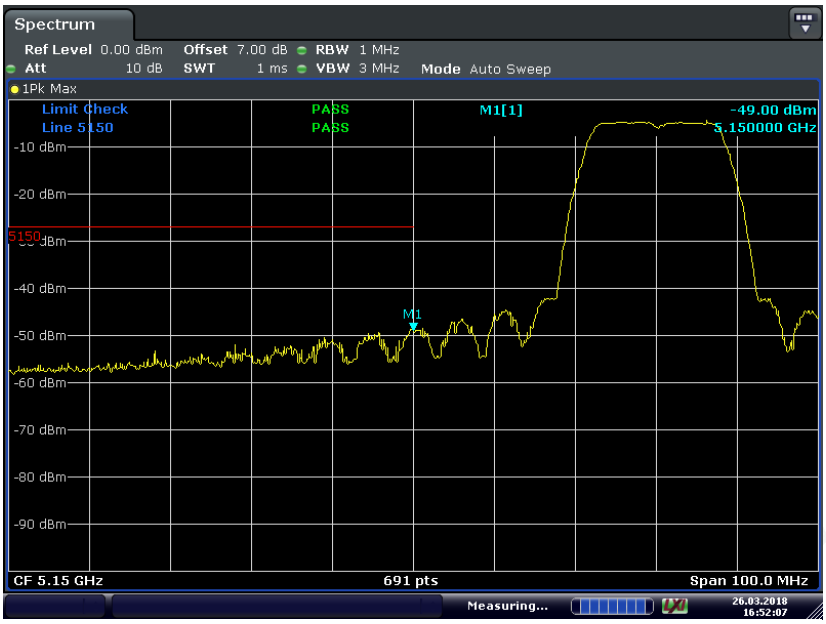
Date: 26.MAR.2018 16:39:38

802.11n-HT40 Chain0 Band Edge, Right Side



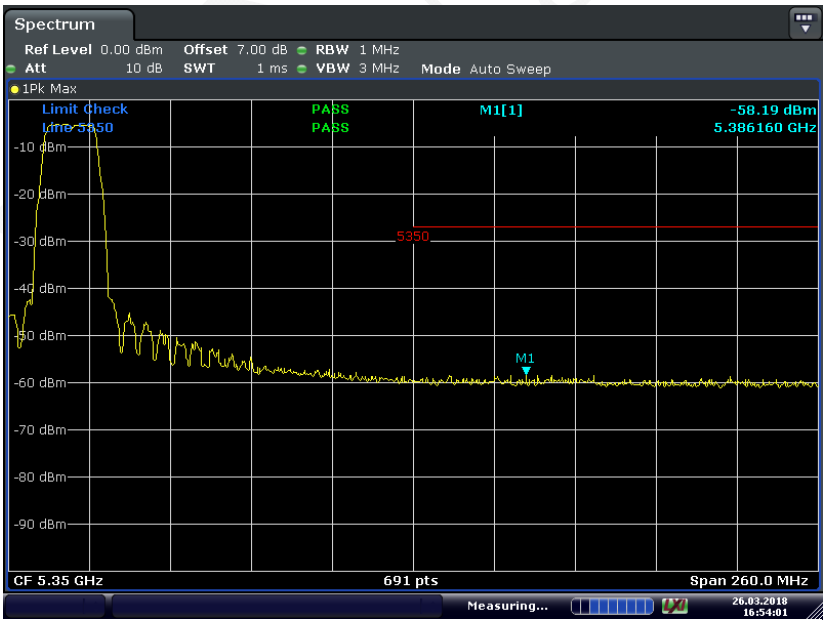
Date: 26.MAR.2018 16:42:22

802.11a Chain1 Band Edge, Left Side



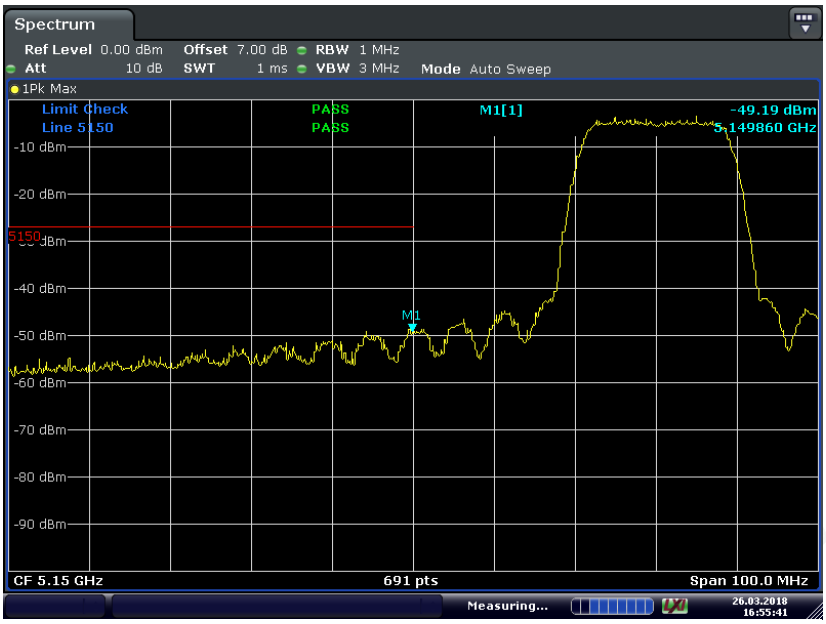
Date: 26.MAR.2018 16:52:07

802.11a Chain1 Band Edge, Right Side



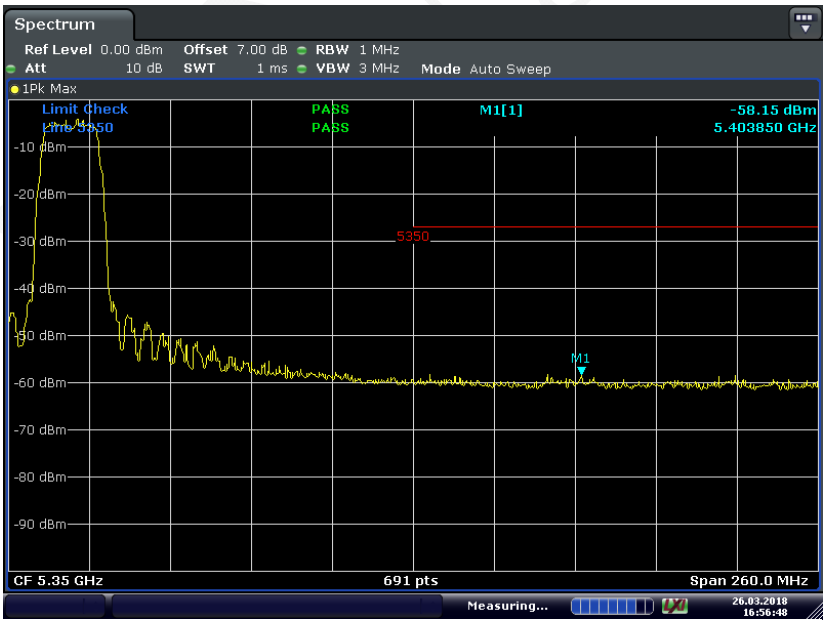
Date: 26.MAR.2018 16:54:00

802.11n-HT20 Chain1 Band Edge, Left Side



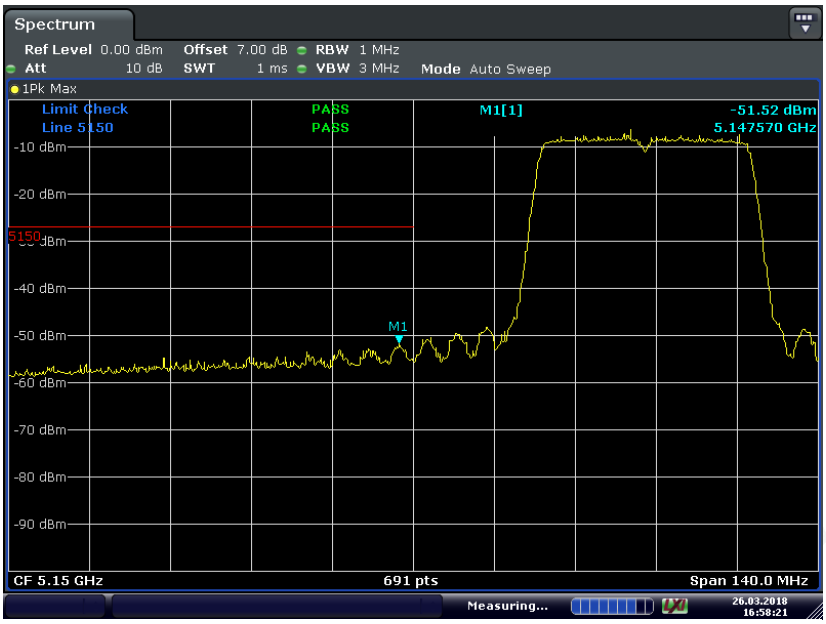
Date:26.MAR.2018 16:55:41

802.11n-HT20 Chain1 Band Edge, Right Side



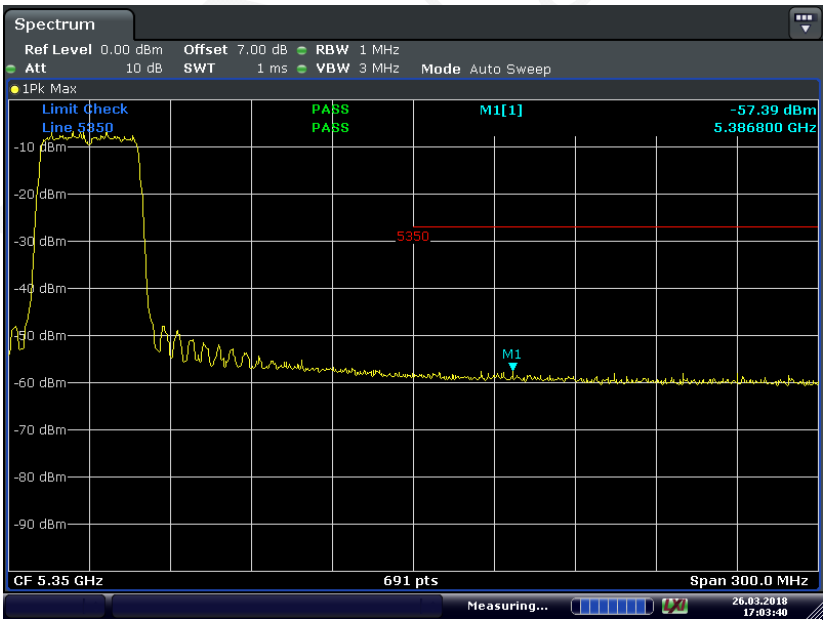
Date:26.MAR.2018 16:56:48

802.11n-HT40 Chain1 Band Edge, Left Side



Date: 26.MAR.2018 16:58:22

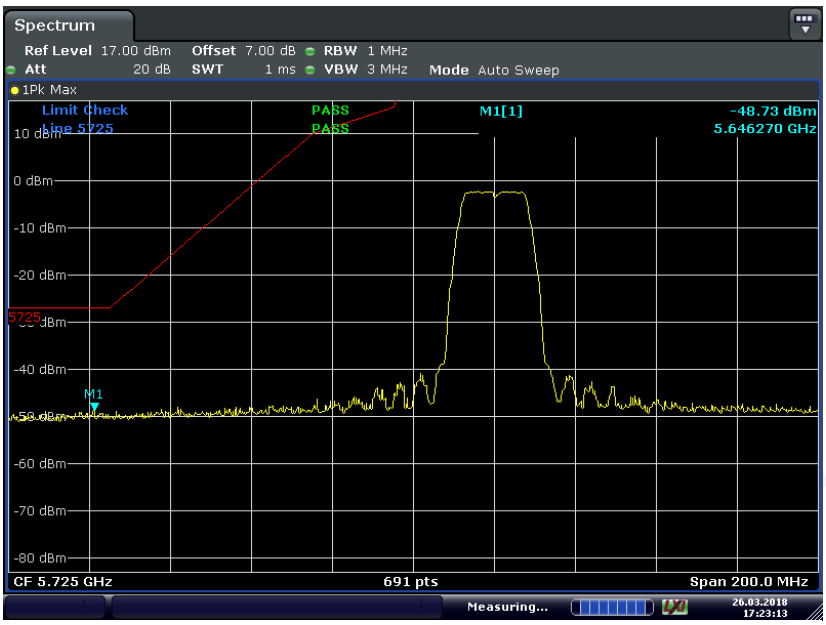
802.11n-HT40 Chain1 Band Edge, Right Side



Date: 26.MAR.2018 17:03:39

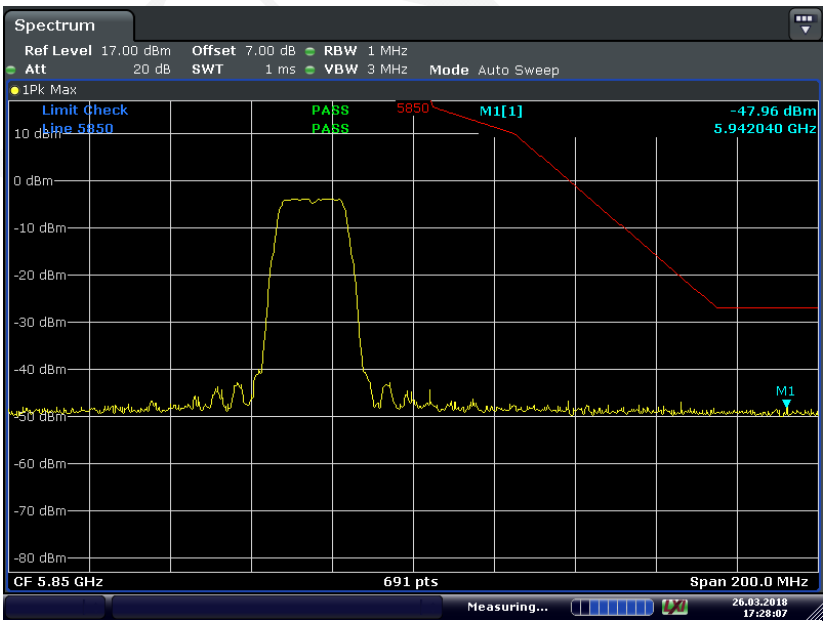
5725-5850 MHz Band:

802.11a Chain0 Band Edge, Left Side



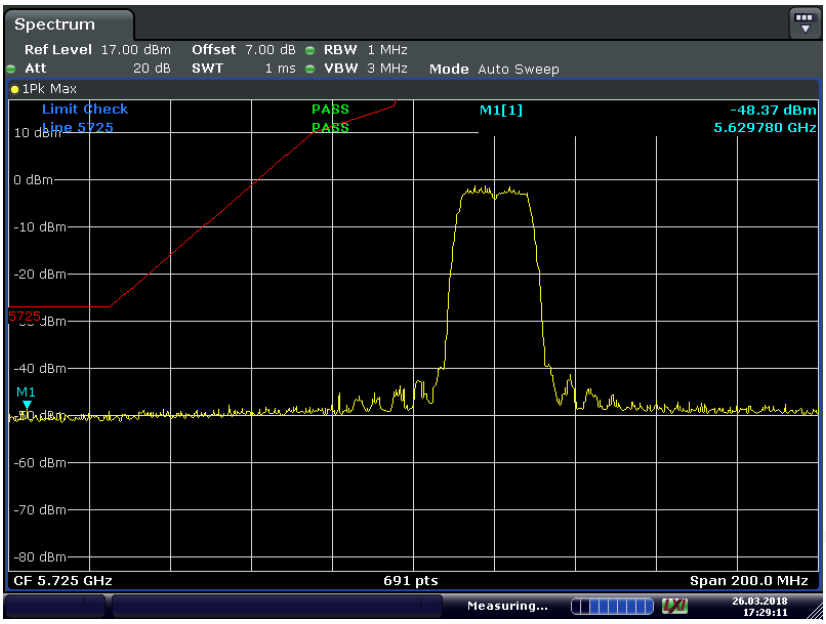
Date: 26.MAR.2018 17:23:13

802.11a Chain0 Band Edge, Right Side



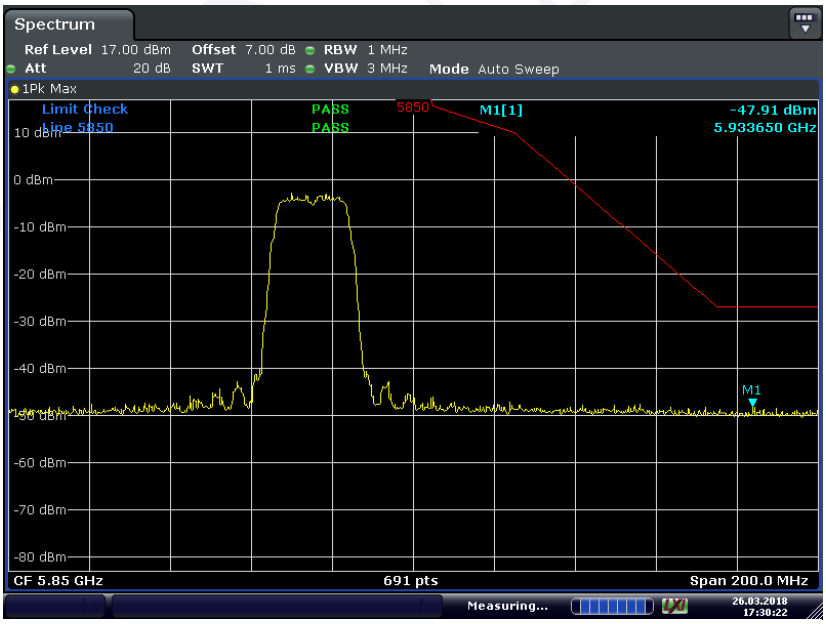
Date: 26.MAR.2018 17:28:07

802.11n-HT20 Chain0 Band Edge, Left Side



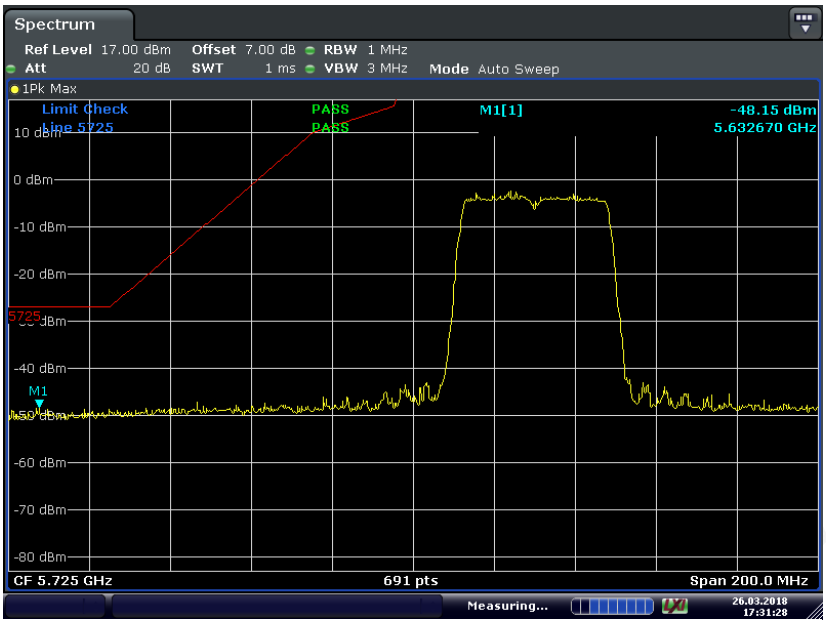
Date: 26.MAR.2018 17:29:11

802.11n-HT20 Chain0 Band Edge, Right Side



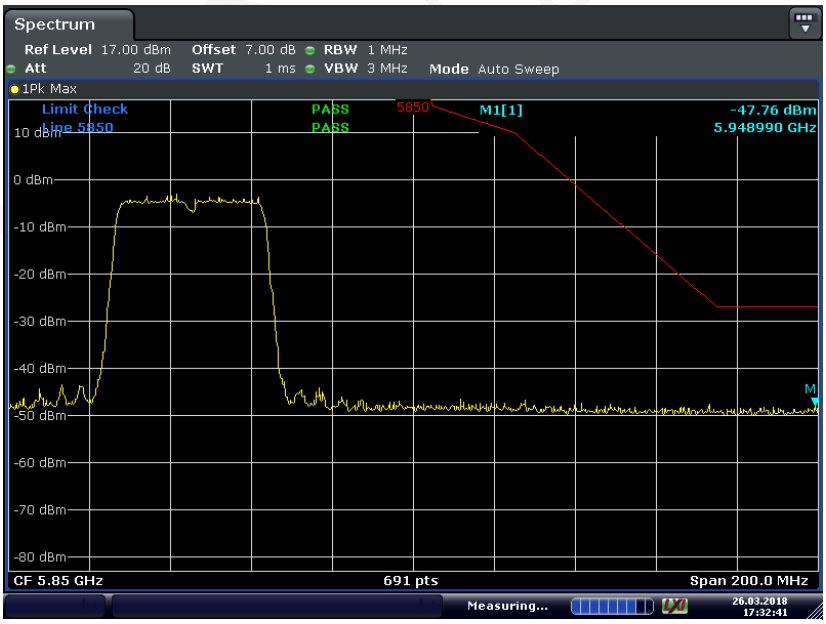
Date: 26.MAR.2018 17:30:22

802.11n-HT40 Chain0 Band Edge, Left Side



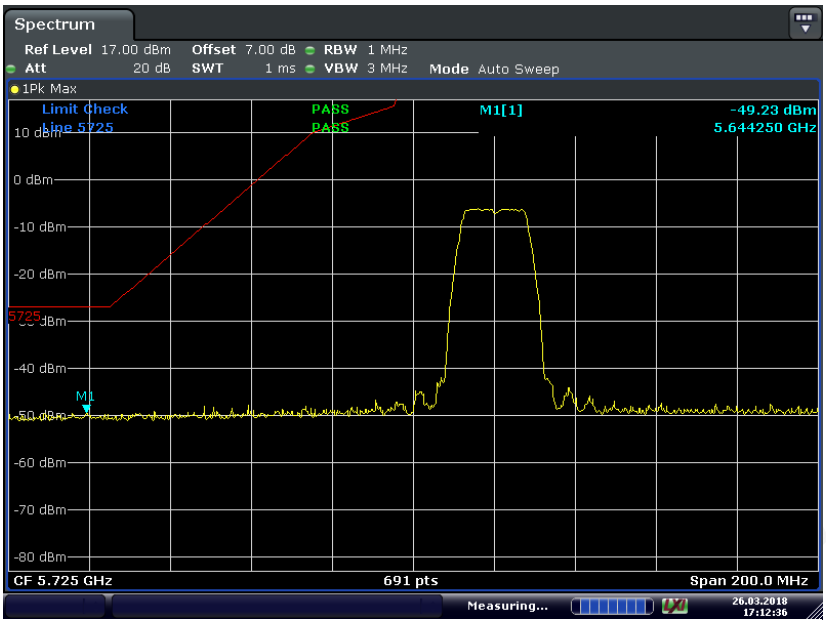
Date: 26.MAR.2018 17:31:27

802.11n-HT40 Chain0 Band Edge, Right Side



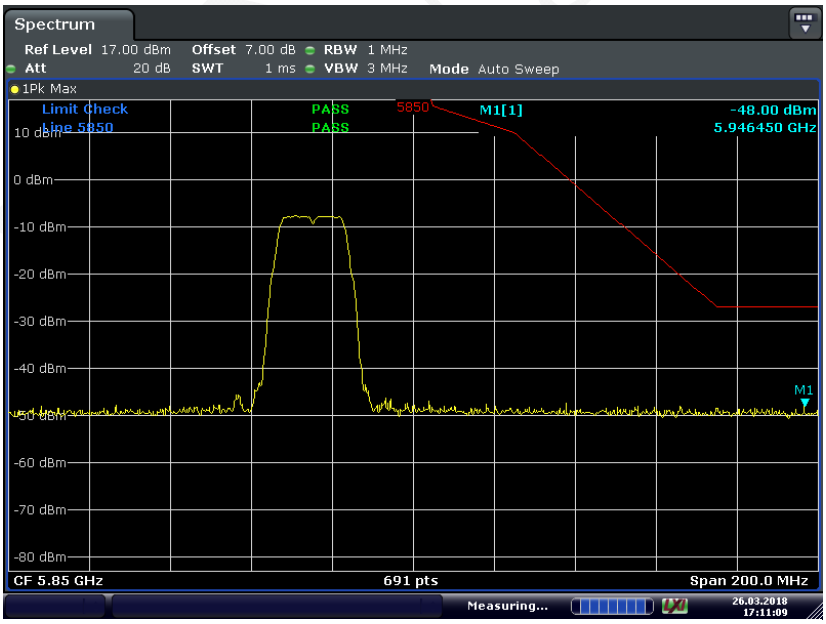
Date: 26.MAR.2018 17:32:41

802.11a Chain1 Band Edge, Left Side



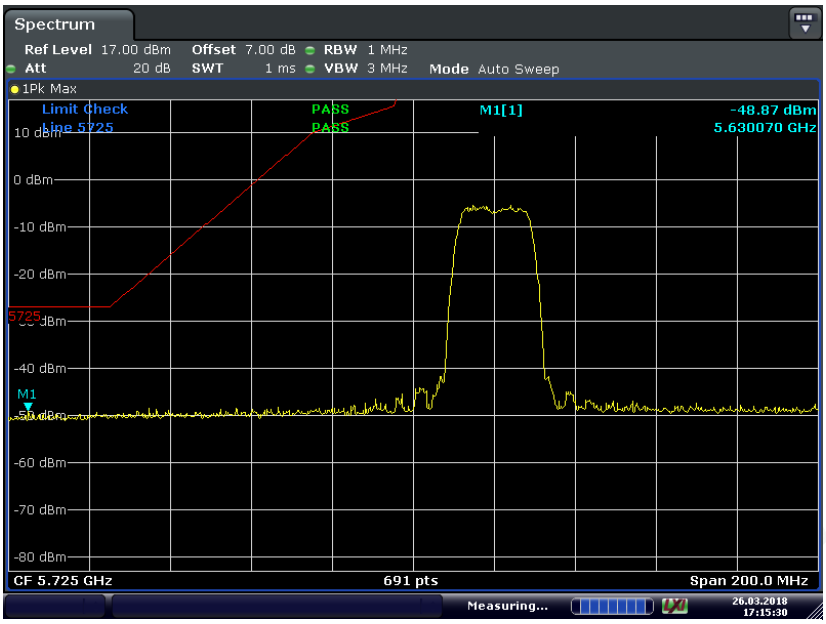
Date: 26.MAR.2018 17:12:36

802.11a Chain1 Band Edge, Right Side



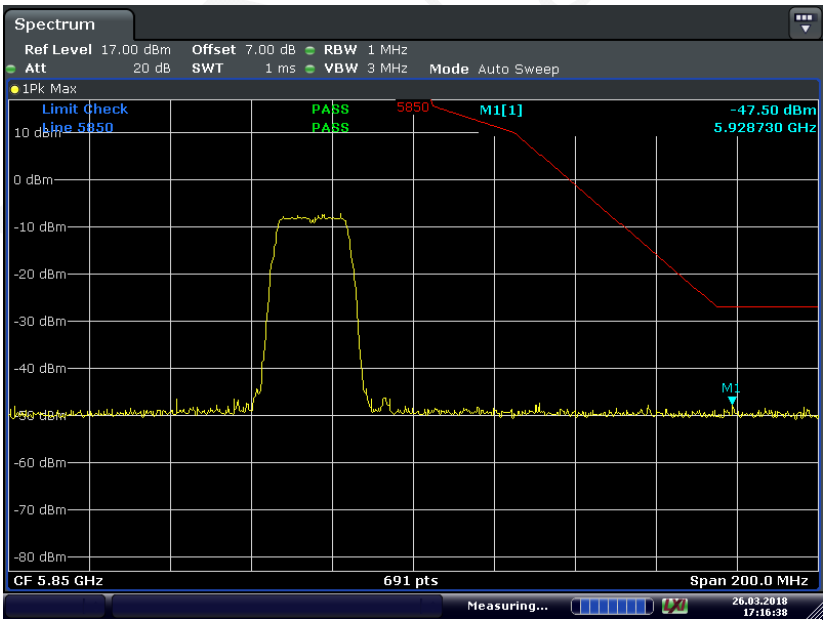
Date: 26.MAR.2018 17:11:09

802.11n-HT20 Chain1 Band Edge, Left Side



Date:26.MAR.2018 17:15:31

802.11n-HT20 Chain1 Band Edge, Right Side



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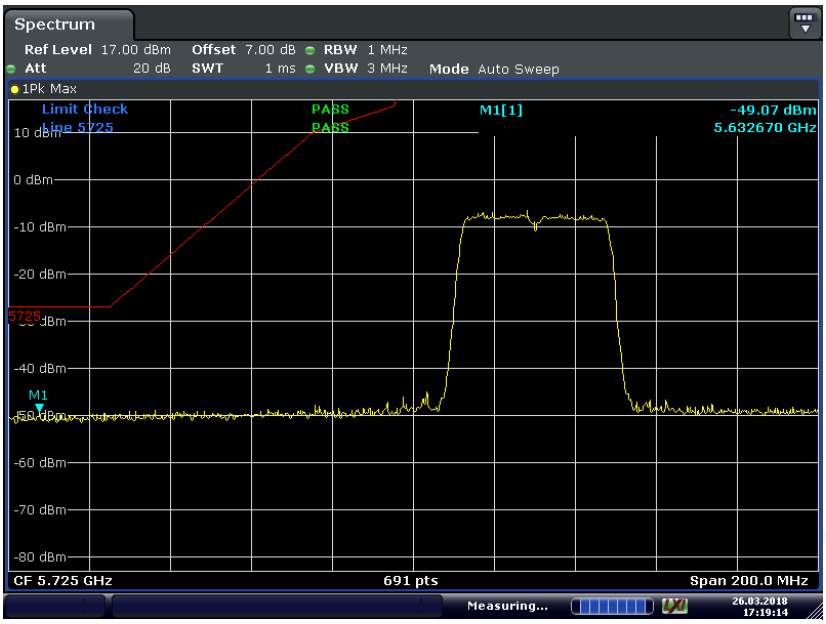
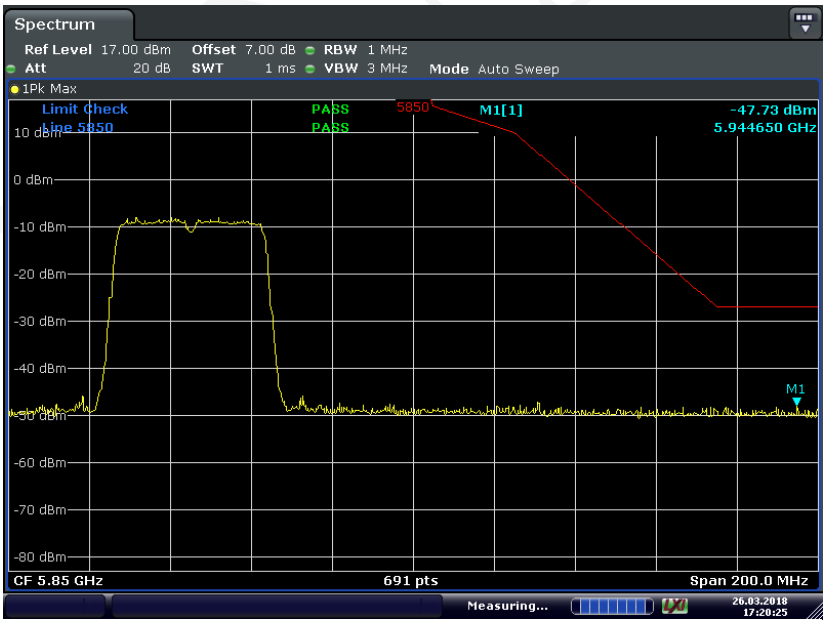
802.11n-HT40 Chain1 Band Edge, Left Side



Date:26.MAR.2018 17:19:15

802.11n-HT40 Chain1 Band Edge, Right Side



Date:26.MAR.2018 17:20:26

FCC §15.407(a) &§15.407(e)–EMISSION BANDWIDTH

Applicable Standard

.
The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. Measurements in the 5.725-5.85 GHz band are made over a reference bandwidth of 500 kHz or the 26 dB emission bandwidth of the device, whichever is less. Measurements in the 5.15-5.25 GHz is made over a bandwidth of 1 MHz or the 26 dB emission bandwidth of the device, whichever is less. A narrower resolution bandwidth can be used, provided that the measured power is integrated over the full reference bandwidth.

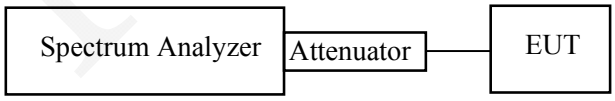
Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

Test Procedure

1. Emission Bandwidth (EBW)
a) Set RBW = approximately 1% of the emission bandwidth.
b) Set the VBW > RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

2. **Minimum Emission Bandwidth for the band 5.725-5.85 GHz**
Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.725-5.85 GHz. The following procedure shall be used for measuring this bandwidth:
a) Set RBW = 100 kHz.
b) Set the video bandwidth (VBW) ≥ 3 × RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Sweep = auto couple.
f) Allow the trace to stabilize.

g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.



Test Data

Environmental Conditions

Temperature:	23.5 °C
Relative Humidity:	50 %
ATM Pressure:	101.2 kPa

The testing was performed by Ada Yu on 2018-01-19 to 2018-01-21.

Test Result: Pass.

5150-5250 MHz:

Test mode	Channel	Frequency (MHz)	26dB Bandwidth (MHz)		99% Bandwidth (MHz)	
			Chain0	Chain1	Chain0	Chain1
802.11a	Low	5180	22.30	21.82	16.53	16.53
	Middle	5200	22.24	22.06	16.53	16.53
	High	5240	22.48	22.00	16.53	16.53
802.11n-HT20	Low	5180	23.09	22.91	17.74	17.74
	Middle	5200	23.21	22.97	17.74	17.68
	High	5240	23.51	23.09	17.74	17.74
802.11n-HT40	Low	5190	45.69	44.97	36.79	36.55
	High	5230	45.93	45.09	36.67	36.55

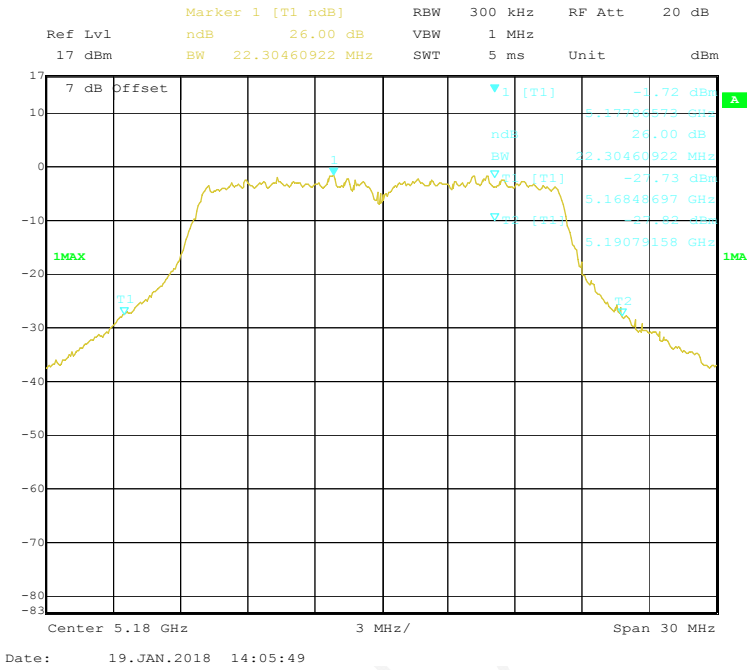
5725-5850MHz:

Test mode	Channel	Frequency (MHz)	6dB Bandwidth (MHz)		99% Bandwidth (MHz)		Limit (MHz)
			Chain0	Chain1	Chain0	Chain1	
802.11a	Low	5745	16.35	16.35	16.59	16.59	≥0.5
	Middle	5785	16.35	16.35	16.59	16.59	≥0.5
	High	5825	16.35	16.35	16.59	16.59	≥0.5
802.11n-HT20	Low	5745	17.07	17.19	17.74	17.74	≥0.5
	Middle	5785	17.31	17.37	17.74	17.74	≥0.5
	High	5825	17.25	17.37	17.74	17.74	≥0.5
802.11n-HT40	Low	5755	35.77	35.71	36.77	36.55	≥0.5
	High	5795	35.75	35.71	36.67	36.67	≥0.5

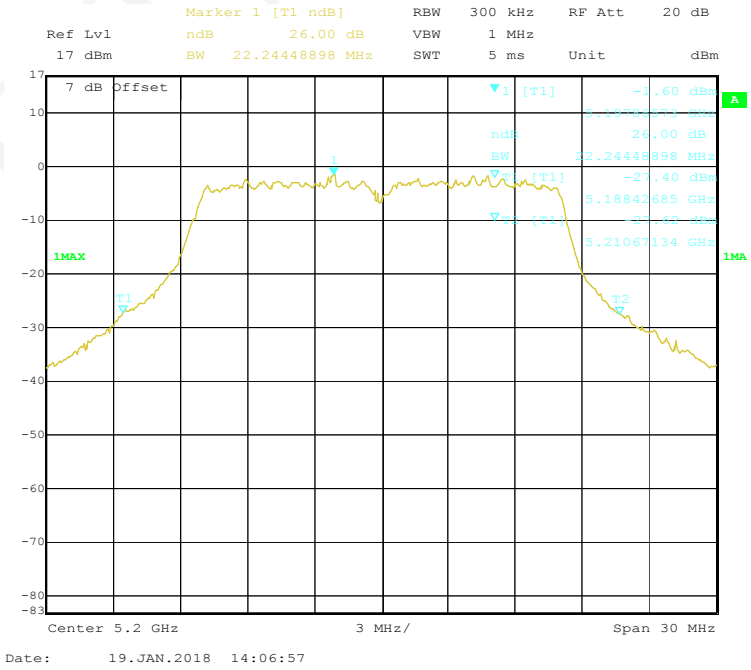
5150-5250 MHz Band:

26 Bandwidth

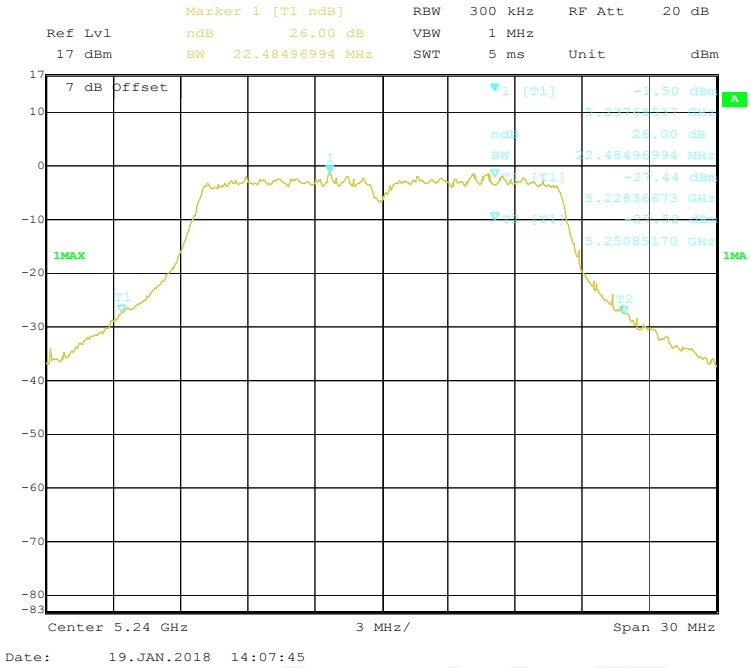
802.11a mode, Chain 0: 5180MHz



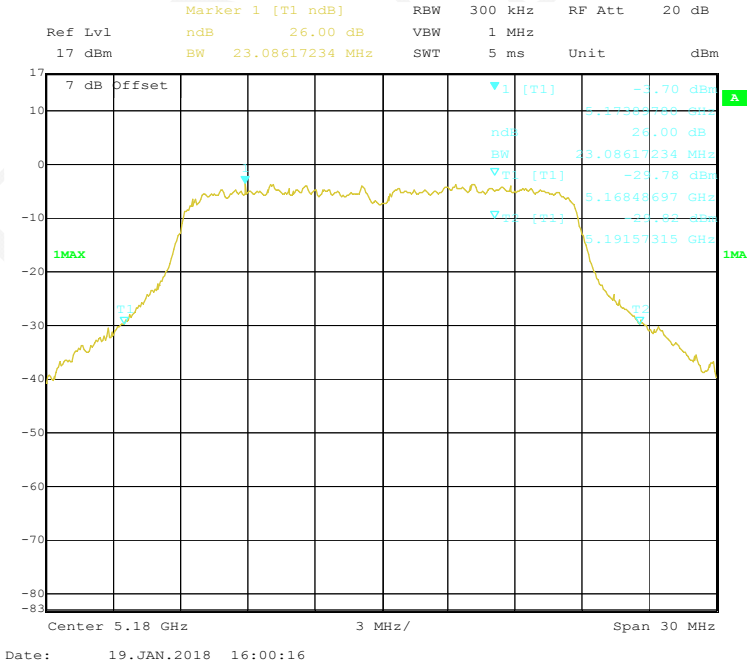
802.11a mode, Chain 0: 5200MHz



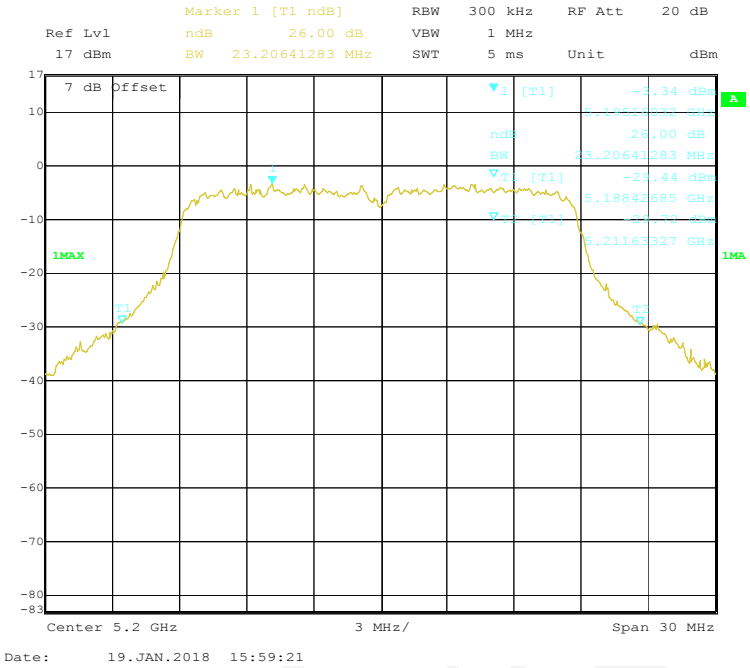
802.11a mode, Chain 0: 5240MHz



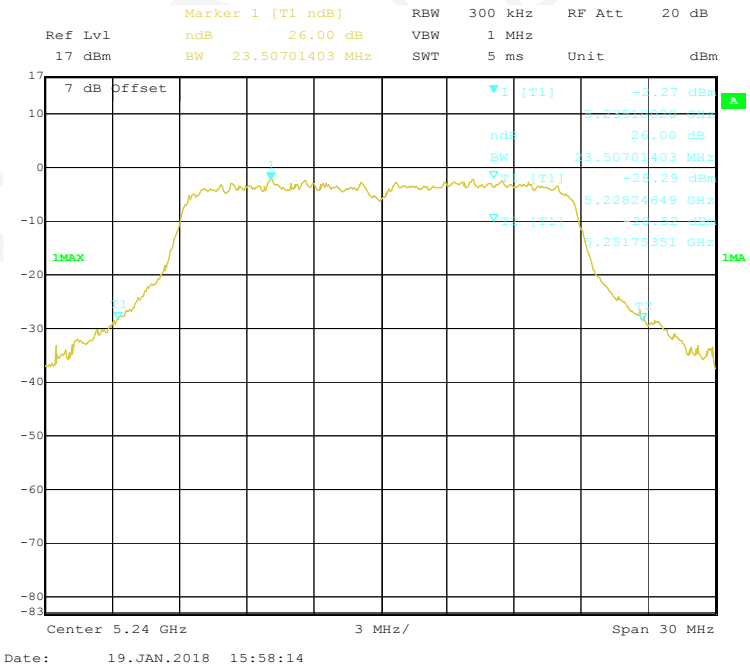
802.11n-HT20 mode, Chain 0: 5180MHz



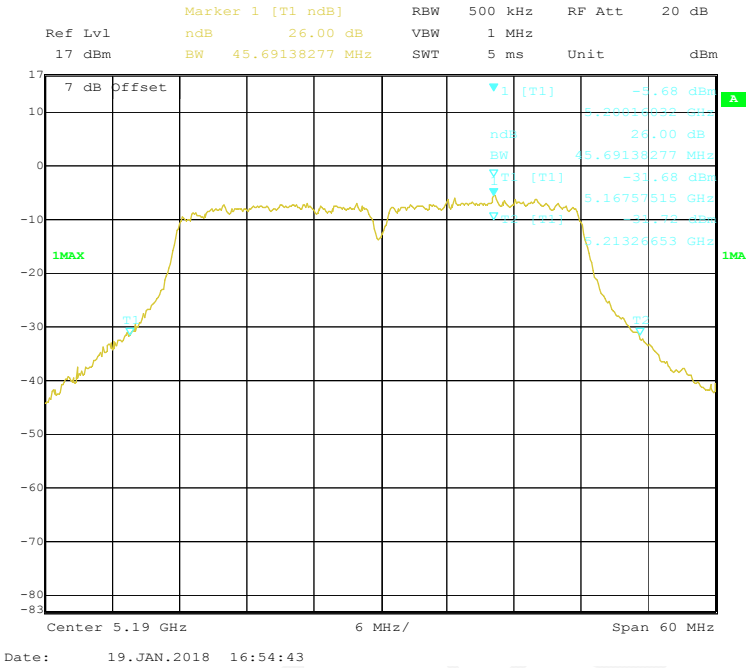
802.11n-HT20 mode, Chain 0: 5200MHz



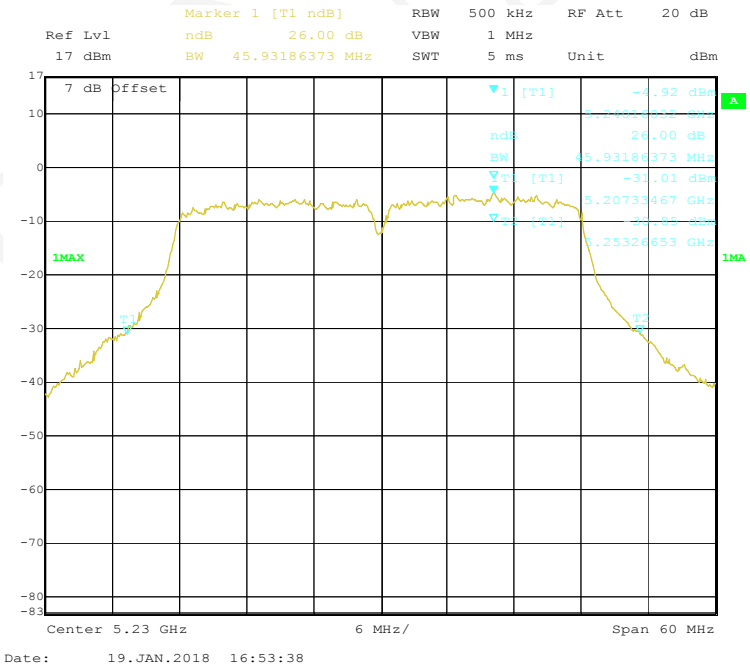
802.11n-HT20 mode, Chain 0: 5240MHz



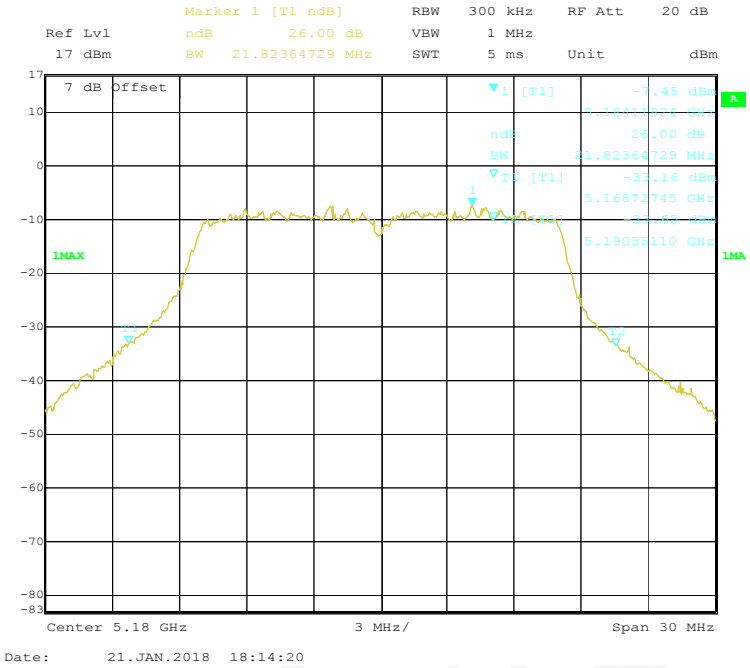
802.11n-HT40 mode, Chain 0: 5190MHz



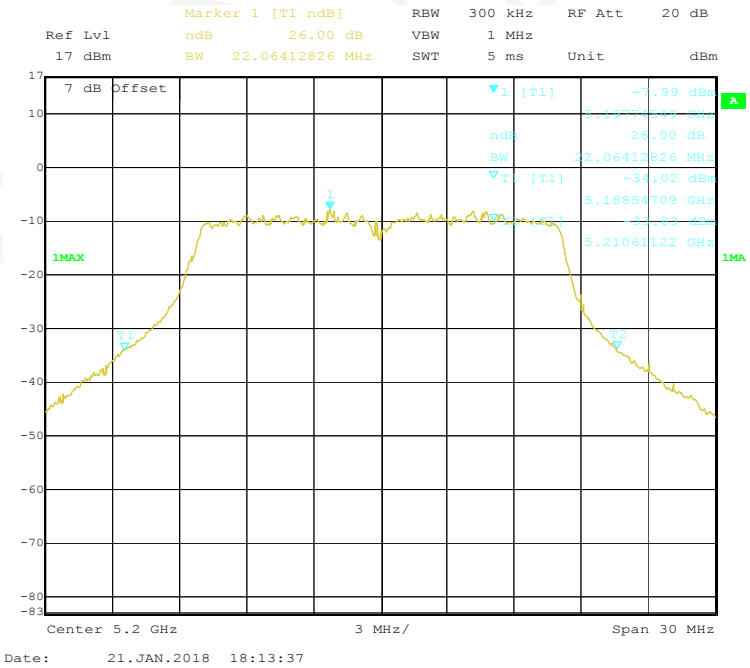
802.11n-HT40 mode, Chain 0: 5230MHz



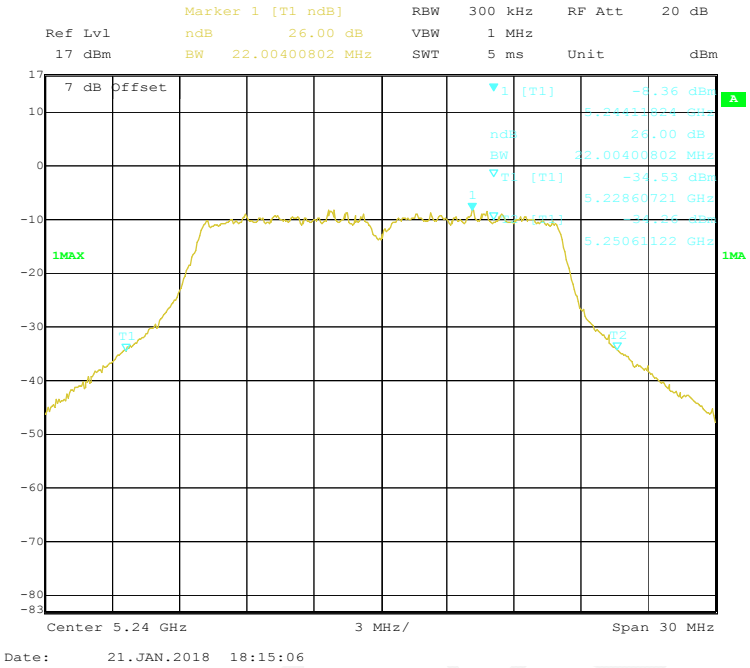
802.11a mode, Chain 1: 5180MHz



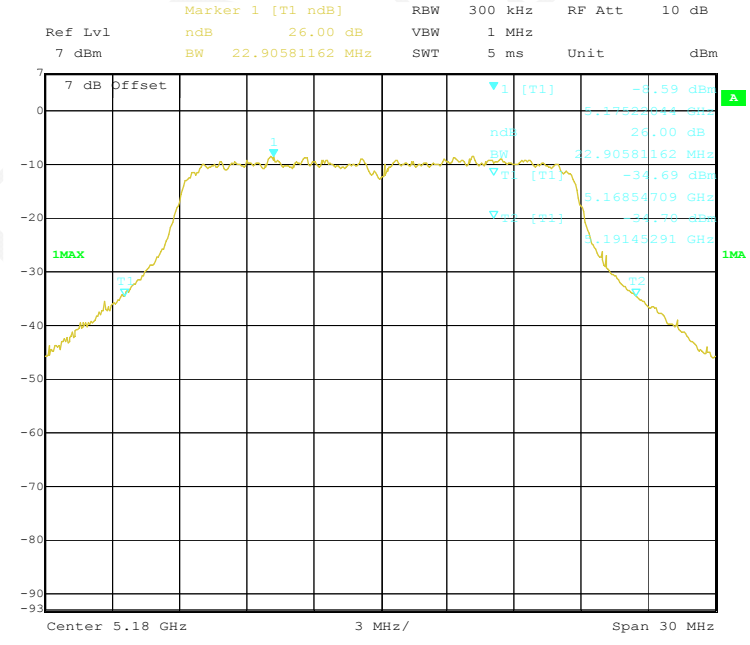
802.11a mode, Chain 1: 5200MHz



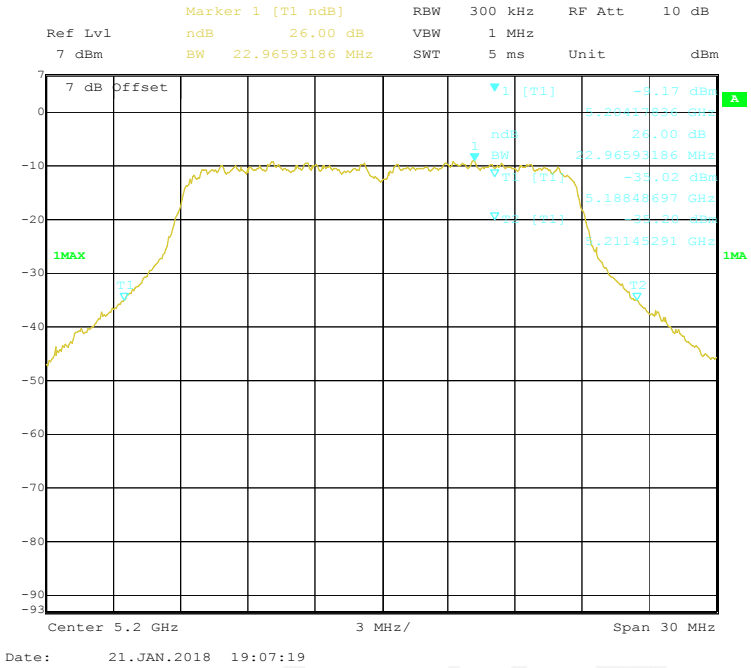
802.11a mode, Chain 1: 5240MHz



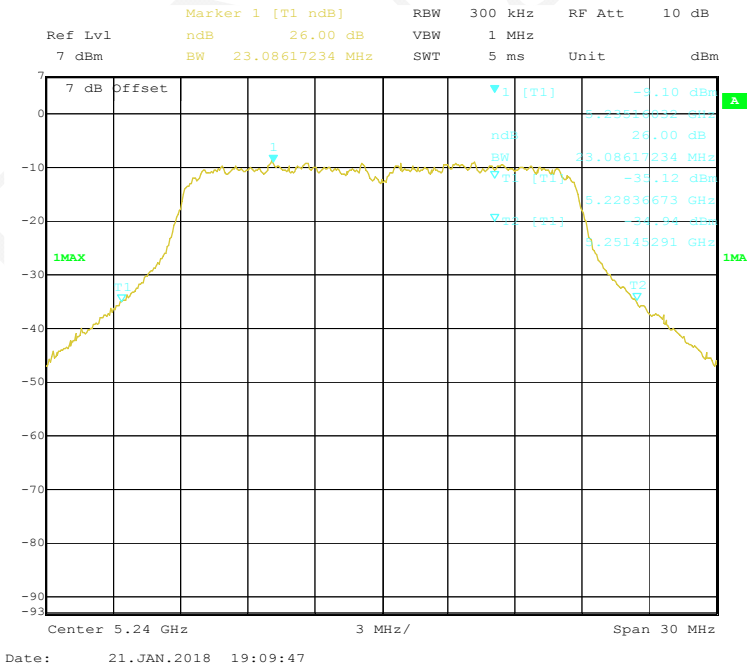
802.11n-HT20 mode, Chain 1: 5180MHz



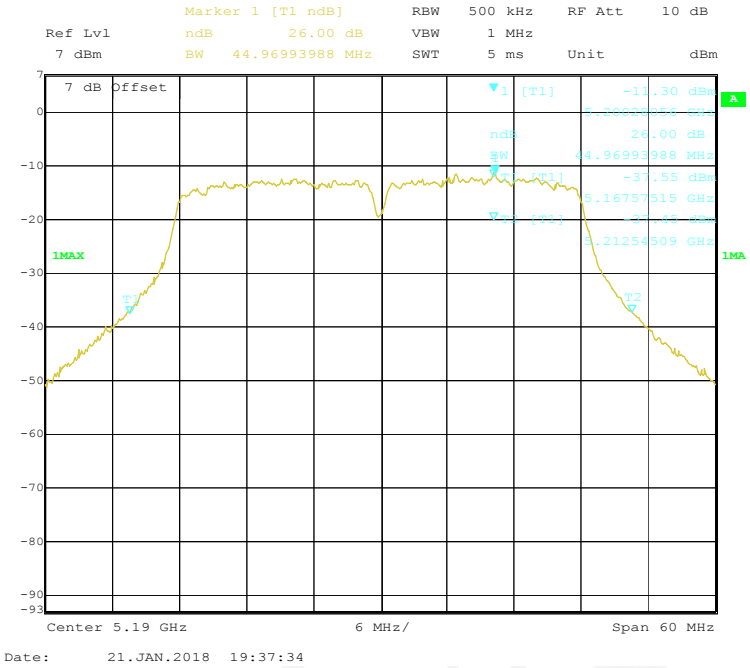
802.11n-HT20 mode, Chain 1: 5200MHz



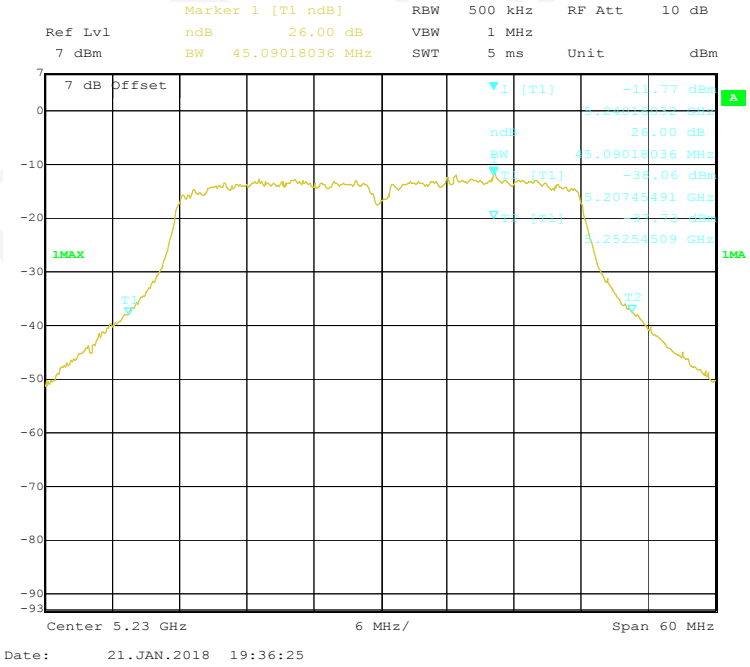
802.11n-HT20 mode, Chain 1: 5240MHz



802.11n-HT40 mode, Chain 1: 5190MHz

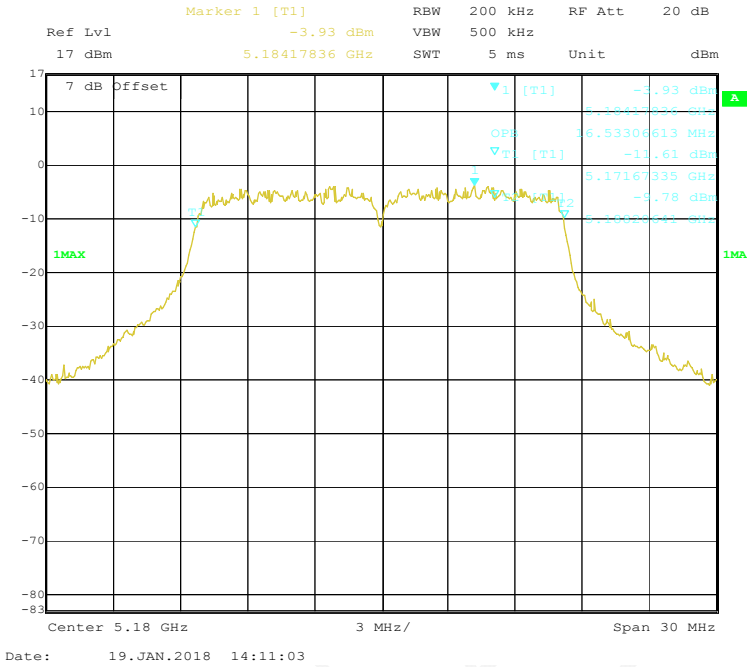


802.11n-HT40 mode, Chain 1: 5230MHz

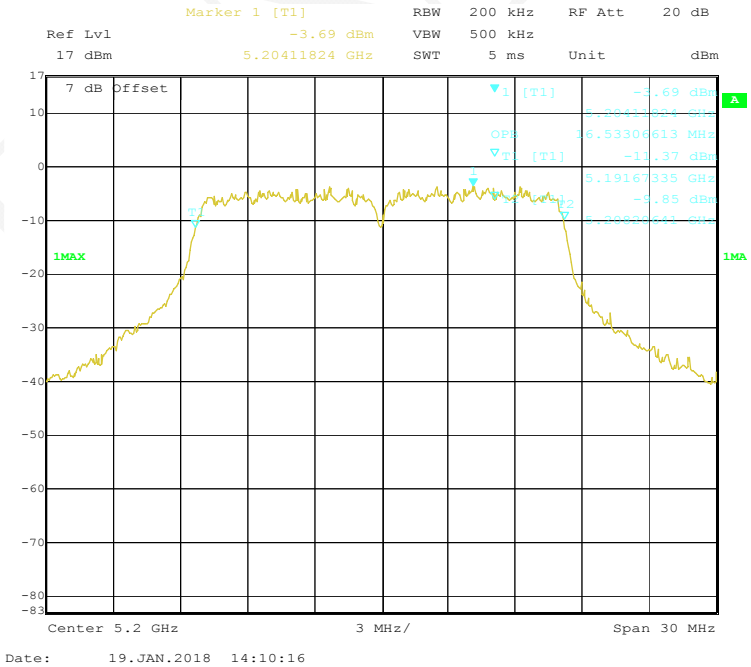


99% Occupied Bandwidth

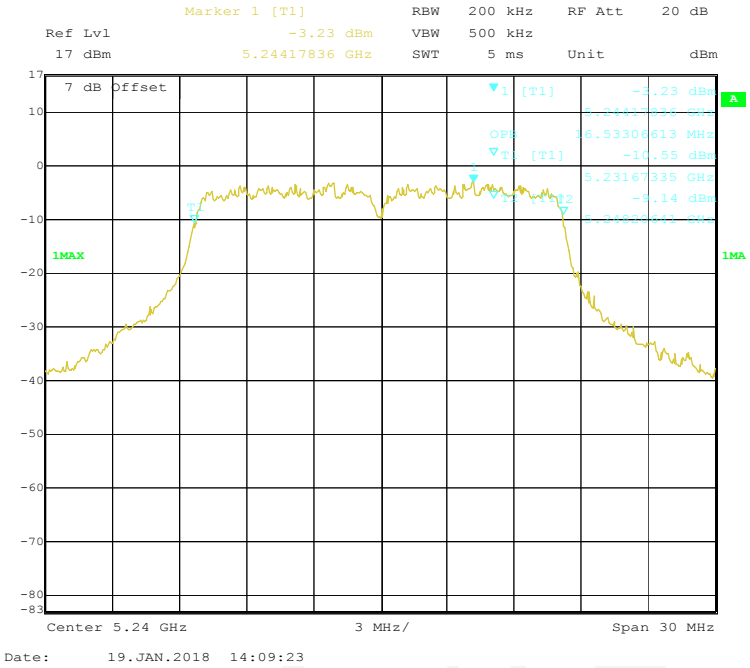
802.11a mode, Chain 0: 5180MHz



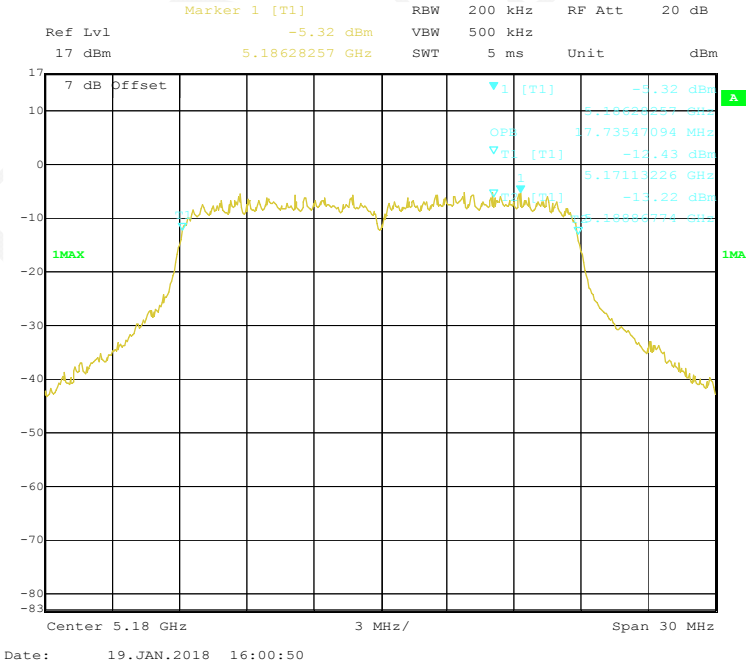
802.11a mode, Chain 0: 5200MHz



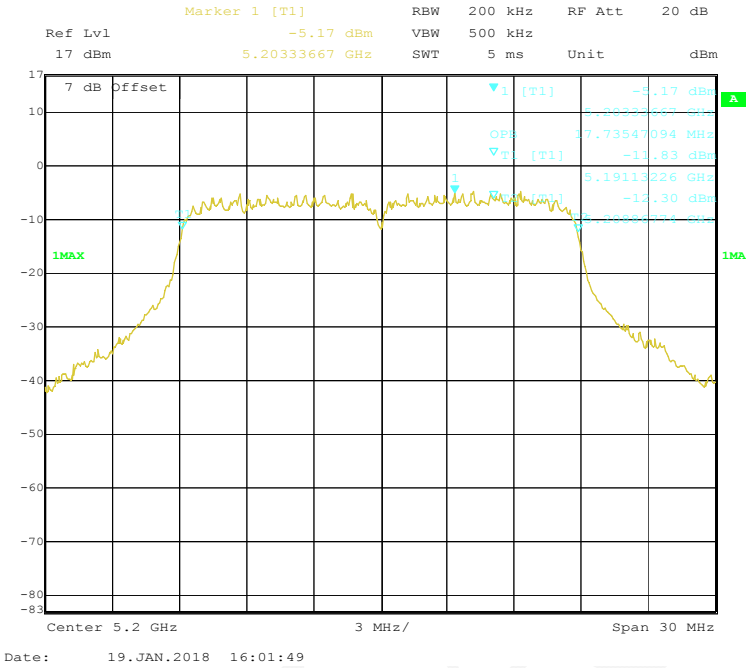
802.11a mode, Chain 0: 5240MHz



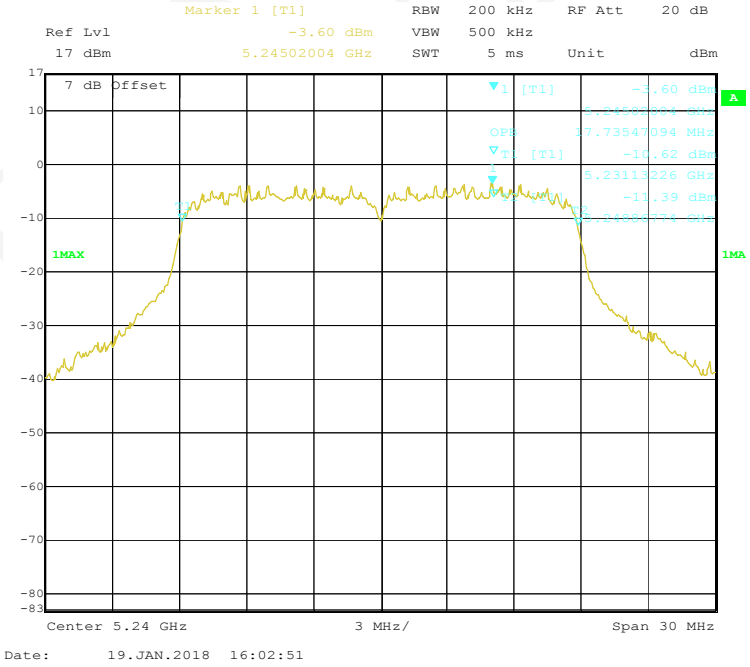
802.11n-HT20 mode, Chain 0: 5180MHz



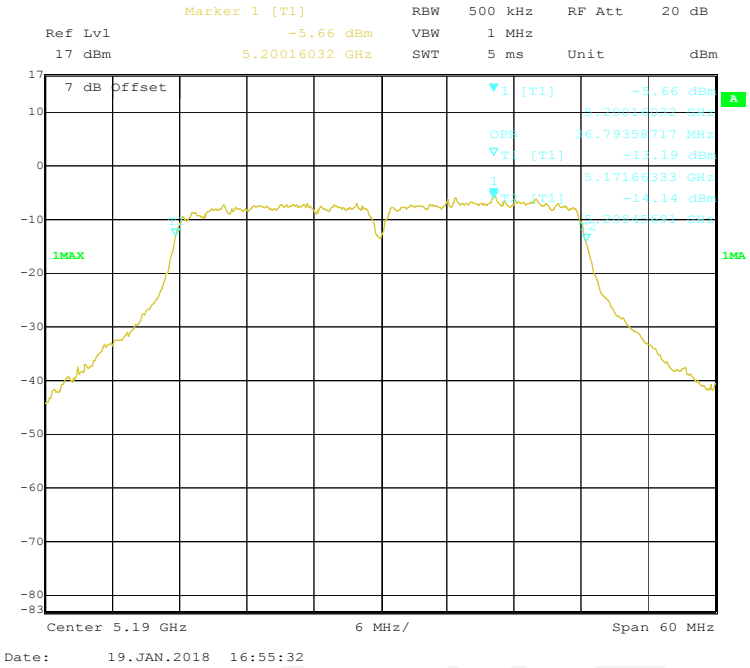
802.11n-HT20 mode, Chain 0: 5200MHz



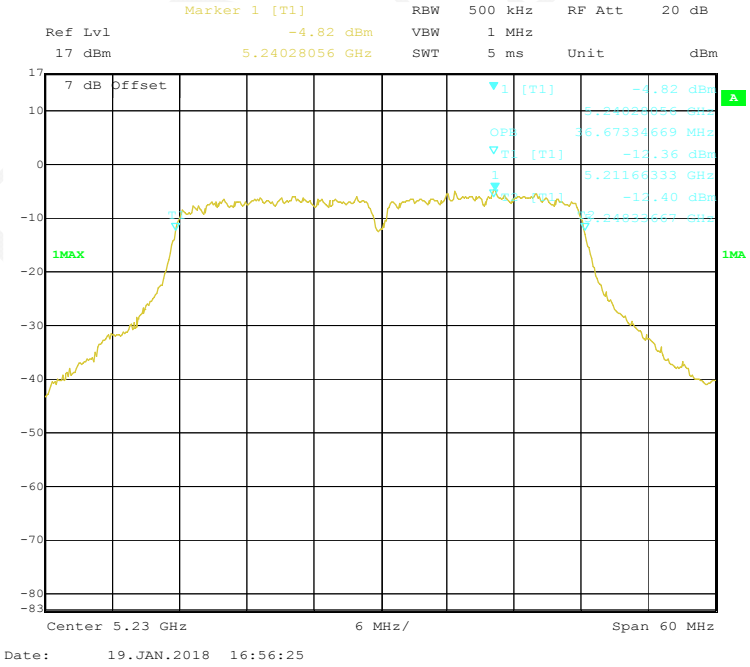
802.11n-HT20 mode, Chain 0: 5240MHz



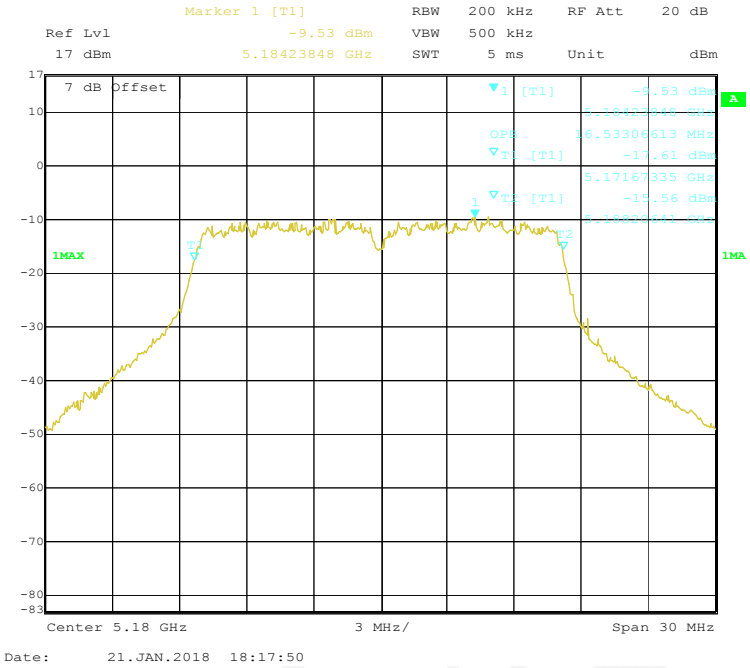
802.11n-HT40 mode, Chain 0: 5190MHz



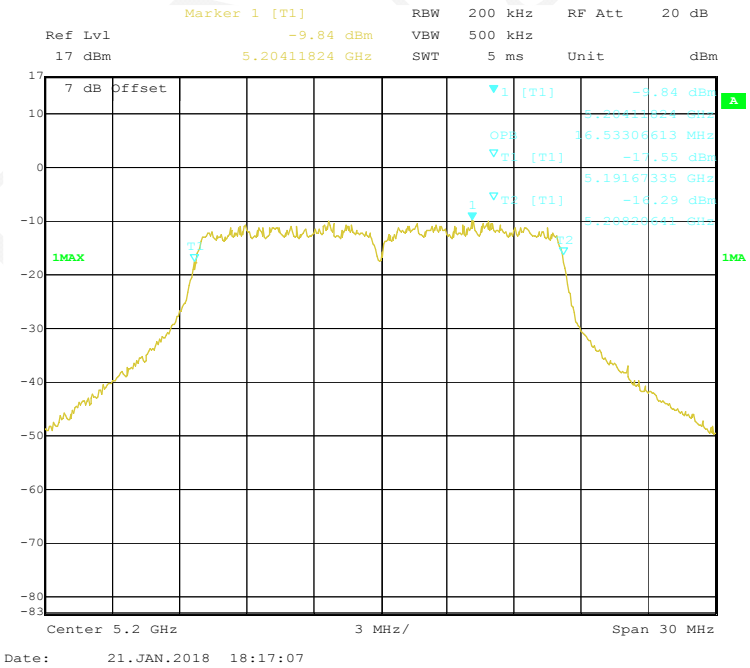
802.11n-HT40 mode, Chain 0: 5230MHz



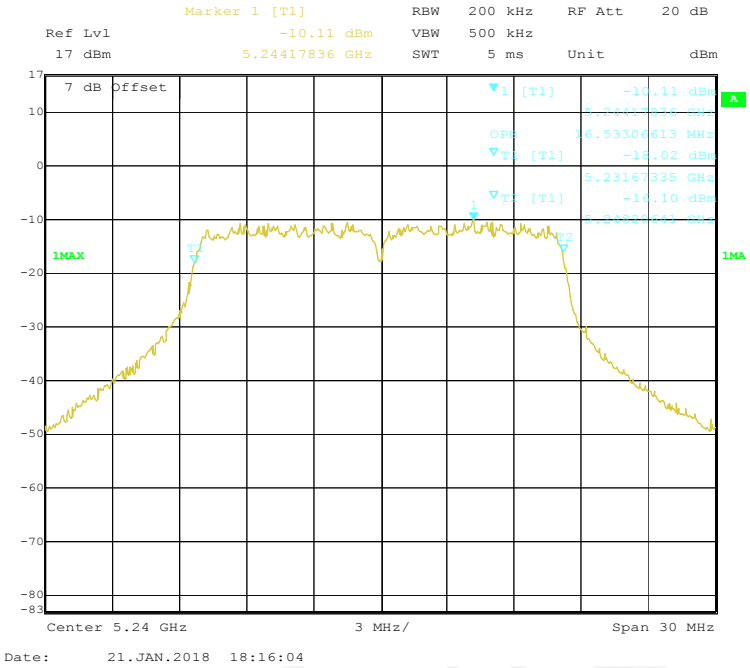
802.11a mode, Chain 1: 5180MHz



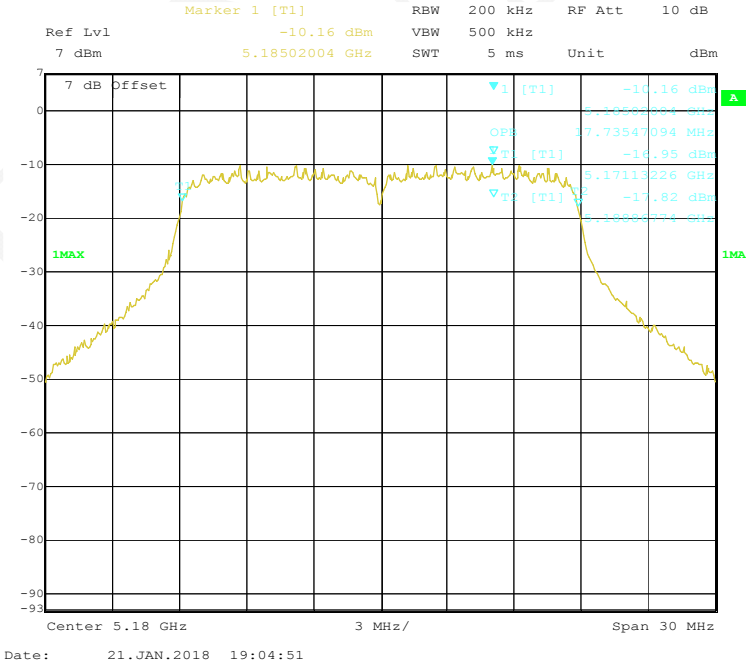
802.11a mode, Chain 1: 5200MHz



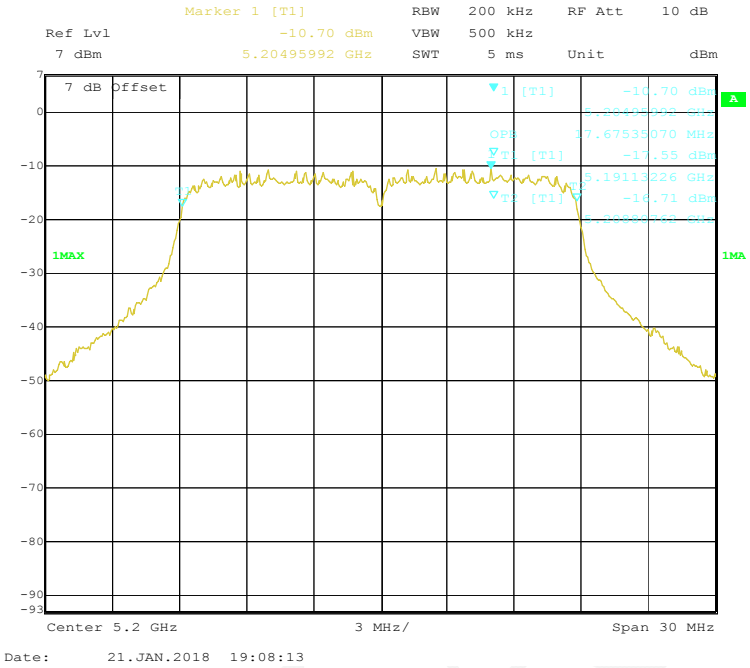
802.11a mode, Chain 1: 5240MHz



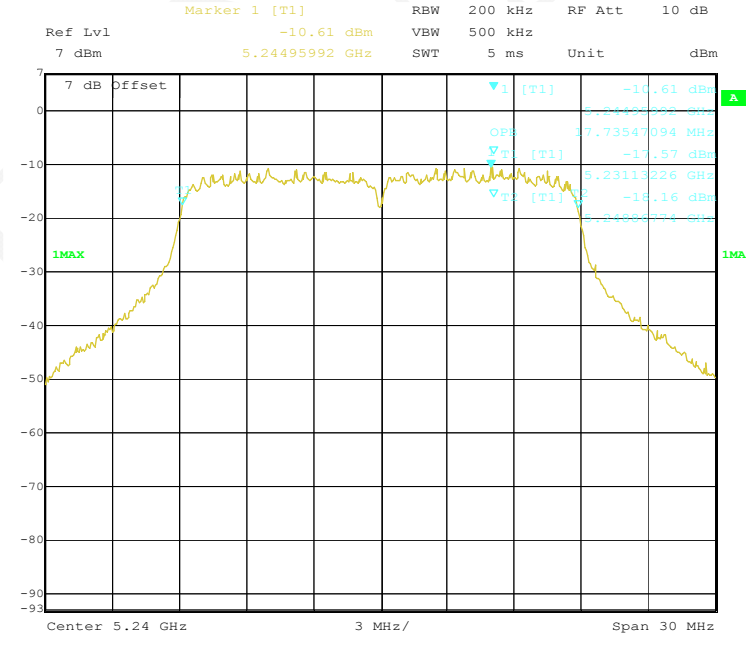
802.11n-HT20 mode, Chain 1: 5180MHz



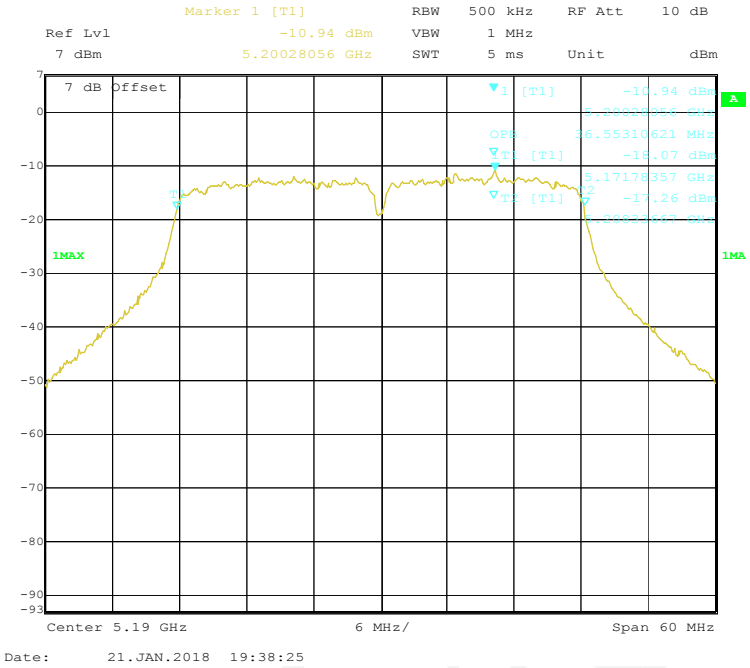
802.11n-HT20 mode, Chain 1: 5200MHz



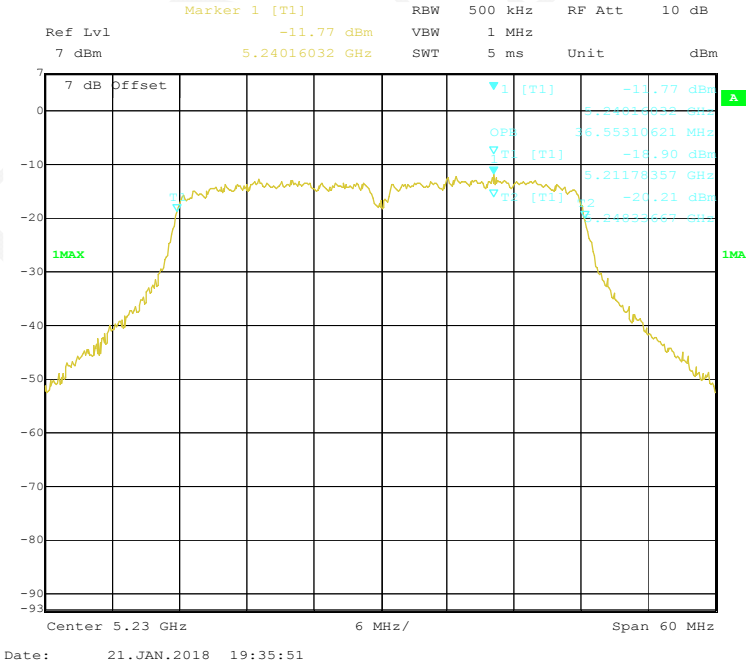
802.11n-HT20 mode, Chain 1: 5240MHz



802.11n-HT40 mode, Chain 1: 5190MHz



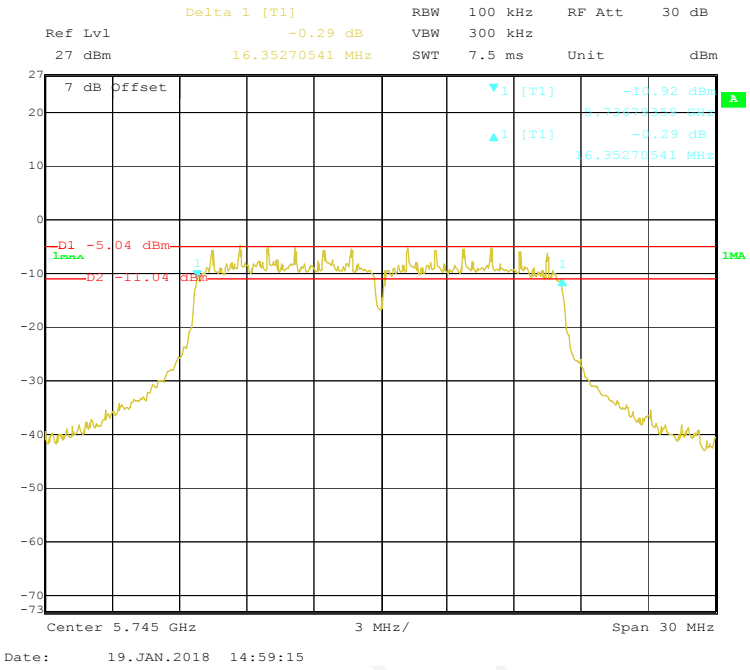
802.11n-HT40 mode, Chain 1: 5230MHz



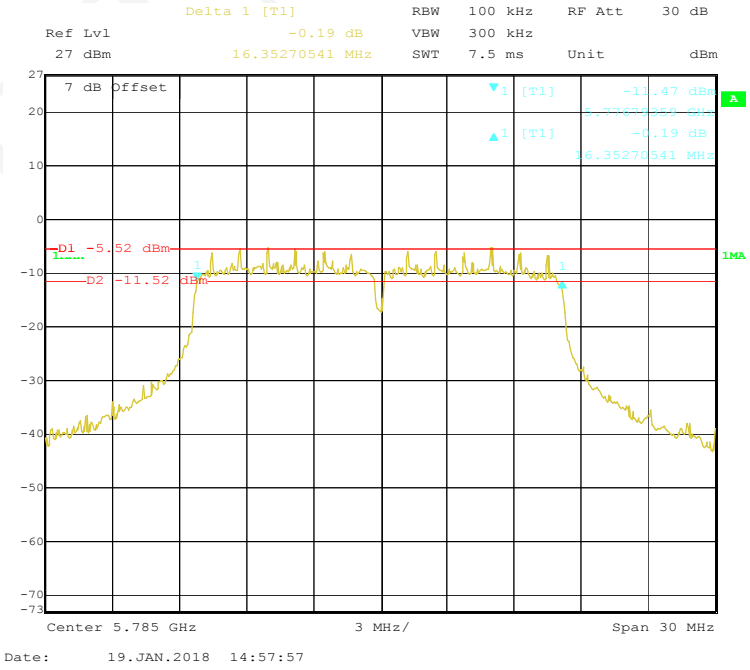
5725-5850 MHz Band:

6 Bandwidth

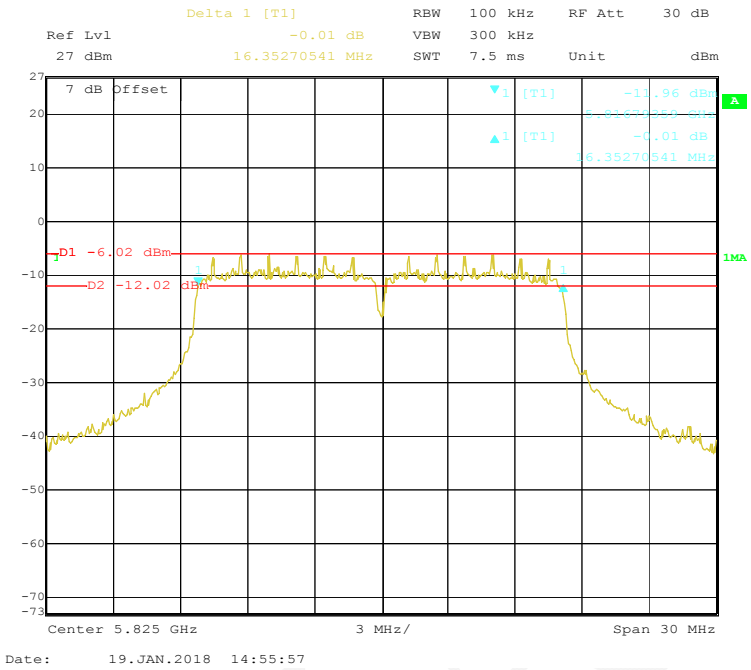
802.11a mode, Chain 0: 5745MHz



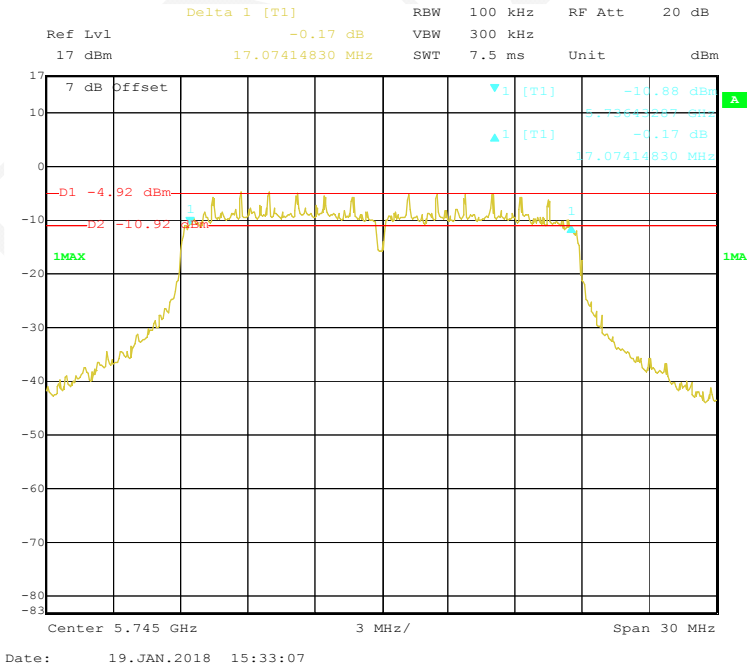
802.11a mode, Chain 0: 5785MHz



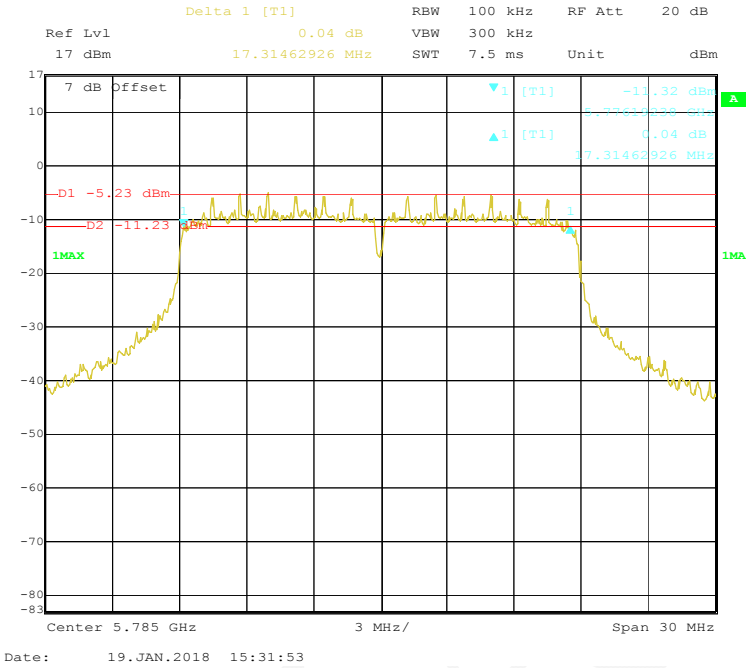
802.11a mode, Chain 0: 5825MHz



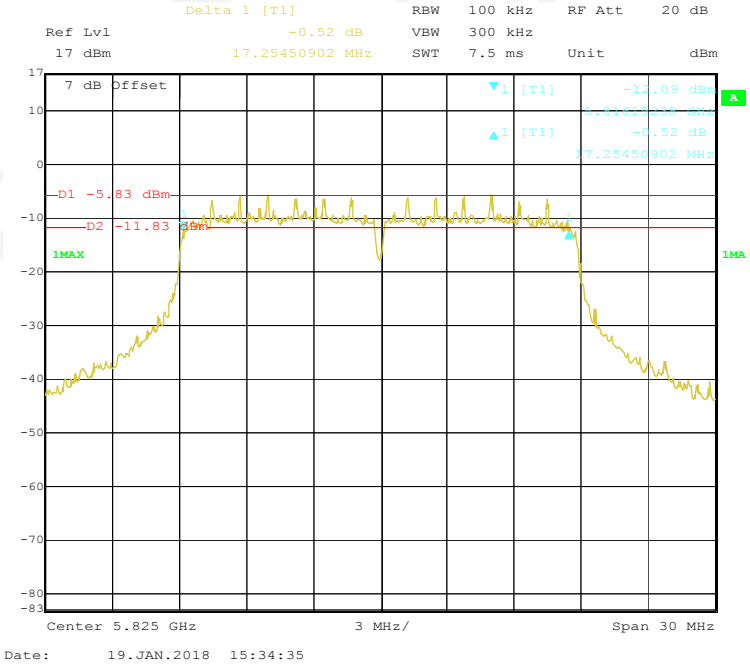
802.11n-HT20 mode, Chain 0: 5745MHz



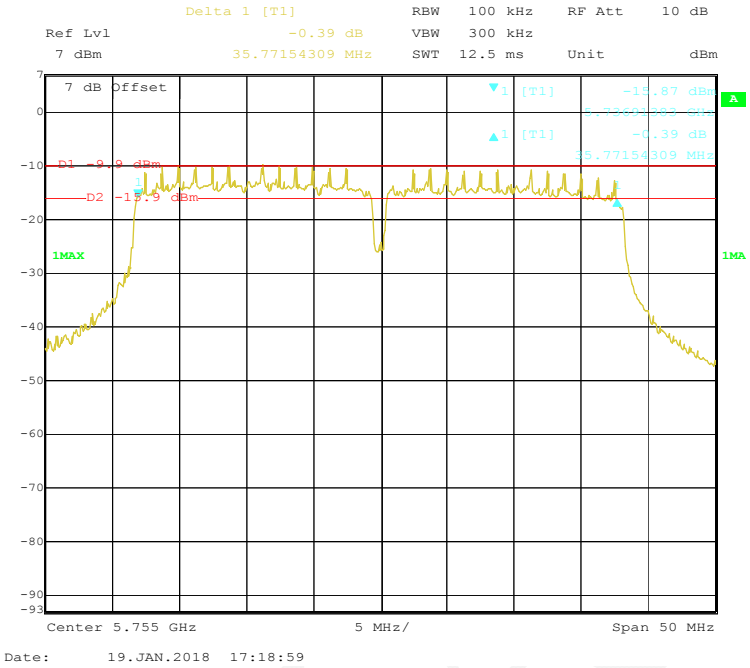
802.11n-HT20 mode, Chain 0: 5785MHz



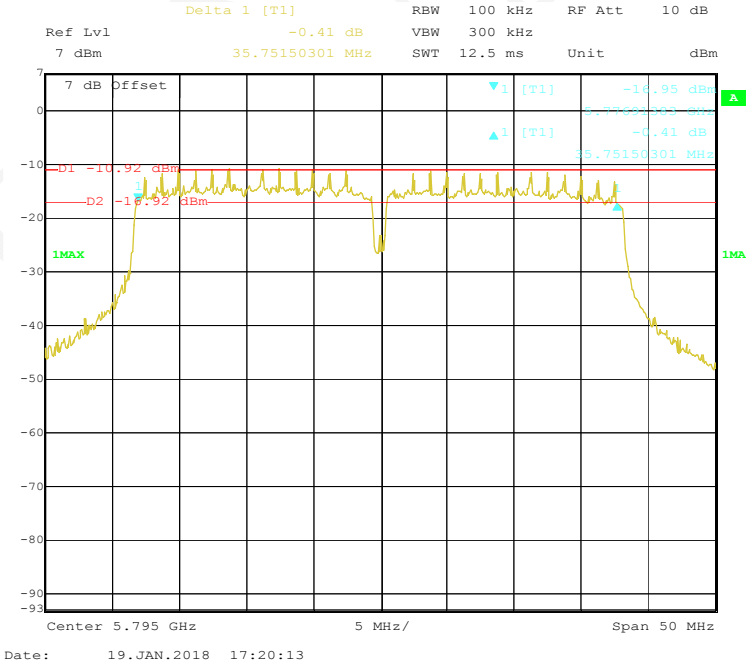
802.11n-HT20 mode, Chain 0: 5825MHz



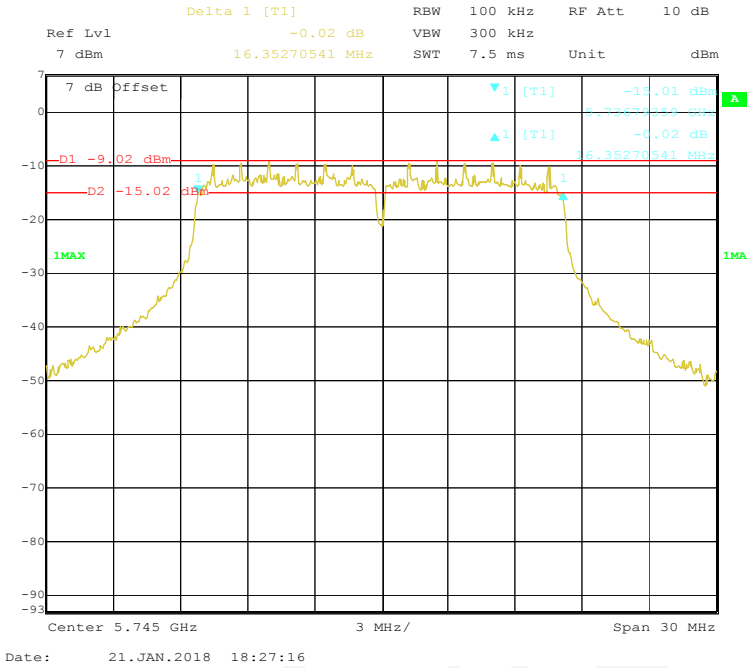
802.11n-HT40 mode, Chain 0: 5755MHz



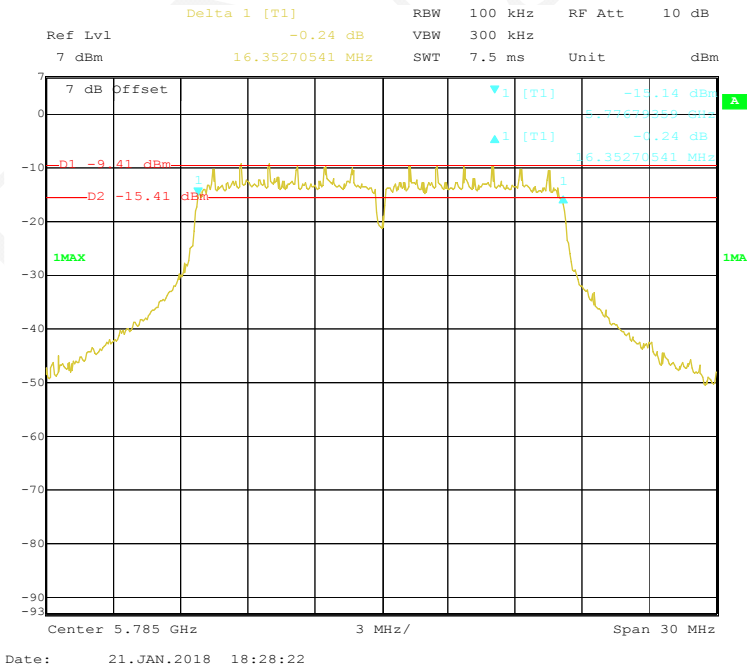
802.11n-HT40 mode, Chain 0: 5795MHz



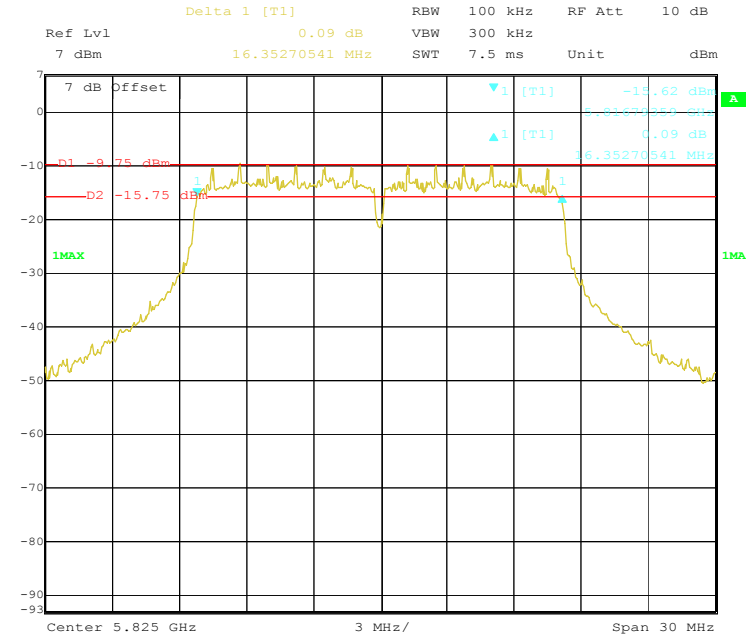
802.11a mode, Chain 1: 5745MHz



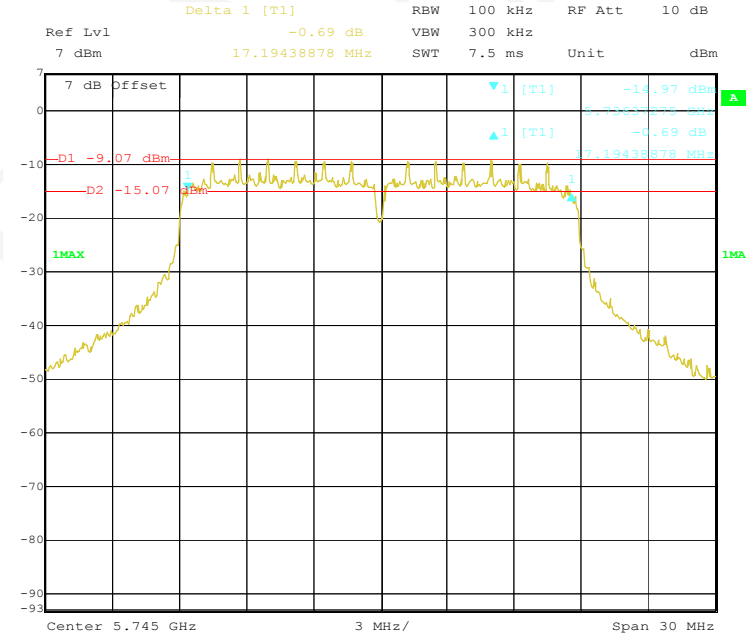
802.11a mode, Chain 1: 5785MHz



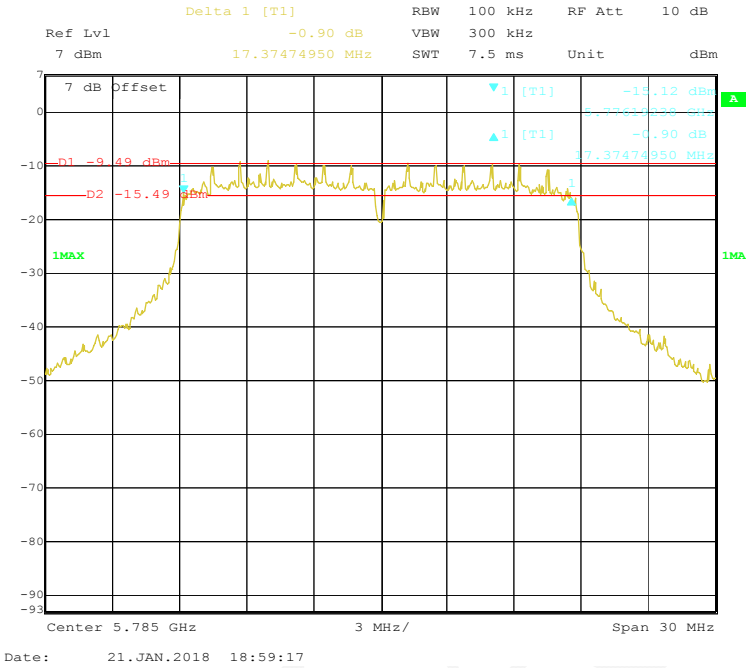
802.11a mode, Chain 1: 5825MHz



802.11n-HT20 mode, Chain 1: 5745MHz

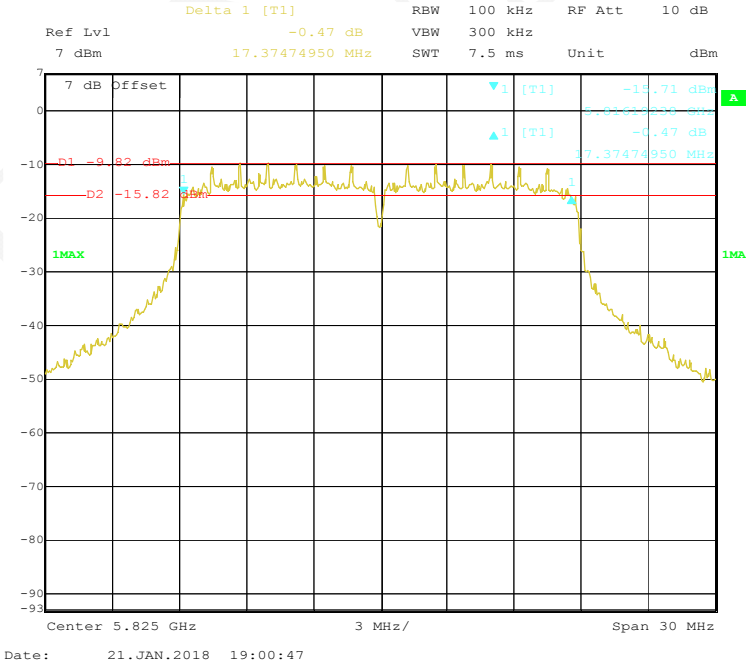


802.11n-HT20 mode, Chain 1: 5785MHz



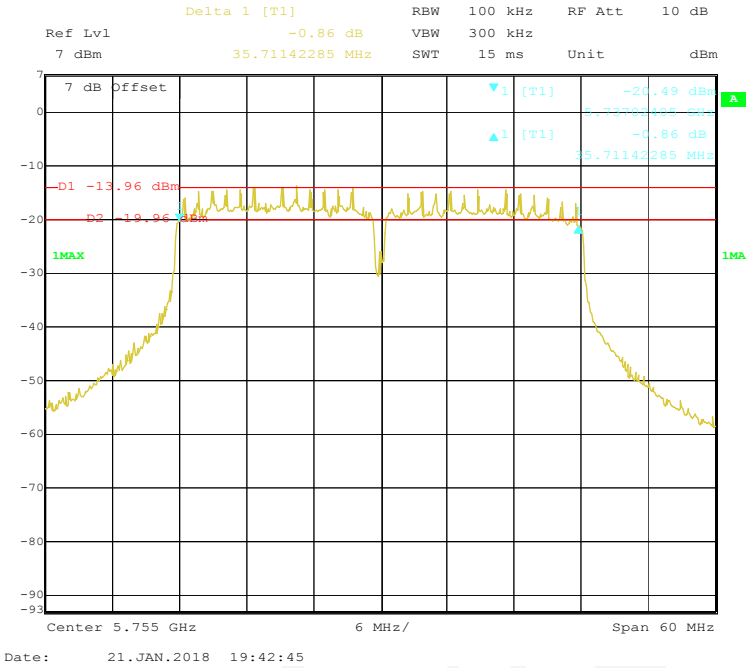
Date: 21.JAN.2018 18:59:17

802.11n-HT20 mode, Chain 1: 5825MHz

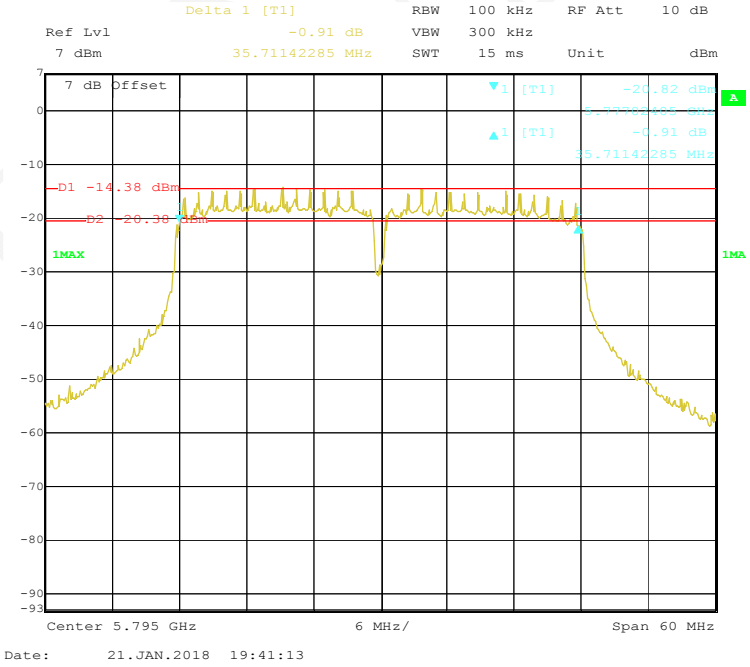


Date: 21.JAN.2018 19:00:47

802.11n-HT40 mode, Chain 1: 5755MHz

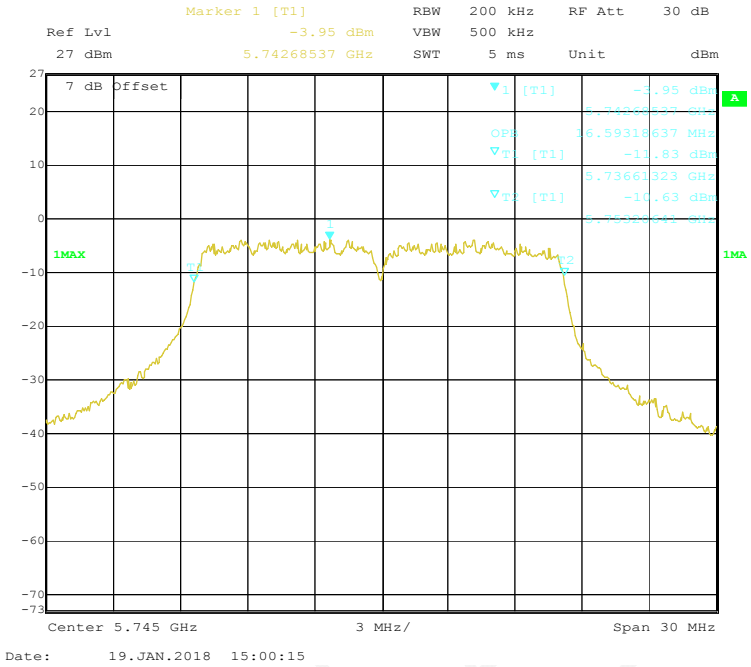


802.11n-HT40 mode, Chain 1: 5795MHz

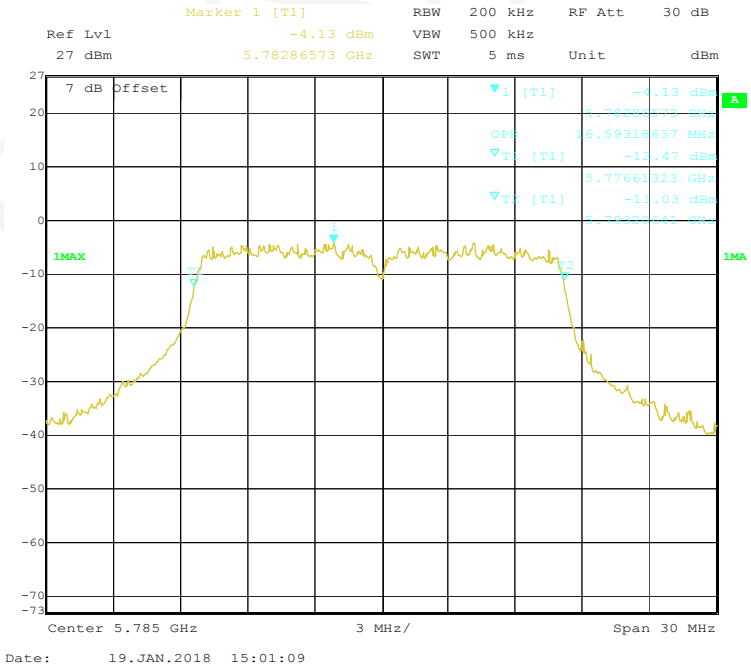


99% Occupied Bandwidth

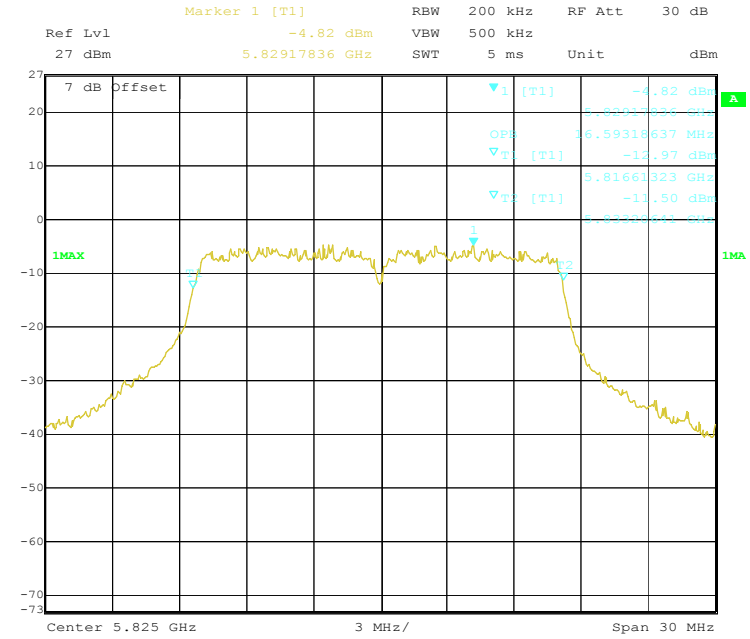
802.11a mode, Chain 0: 5745MHz



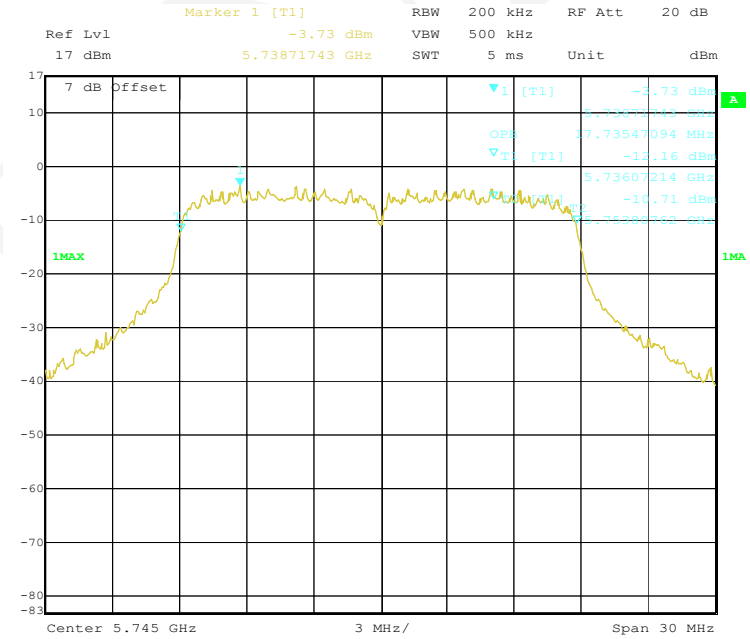
802.11a mode, Chain 0: 5785MHz



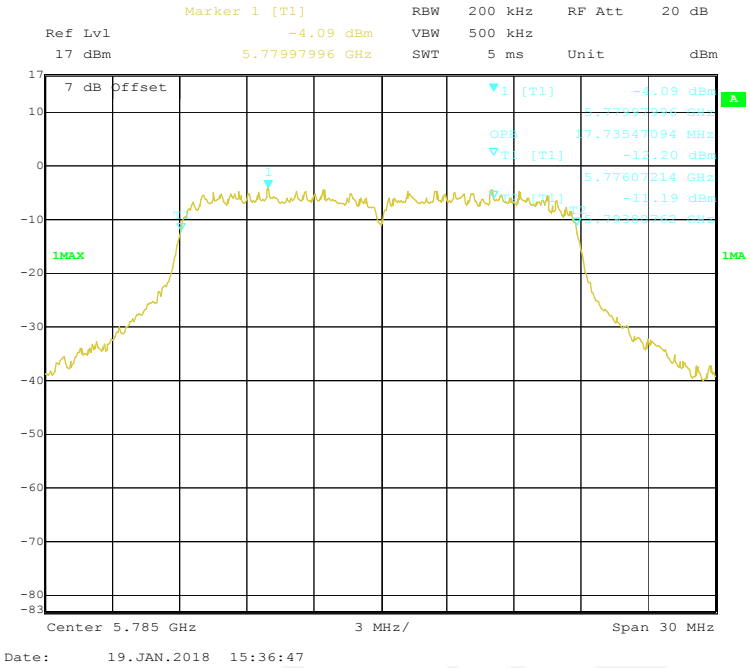
802.11a mode, Chain 0: 5825MHz



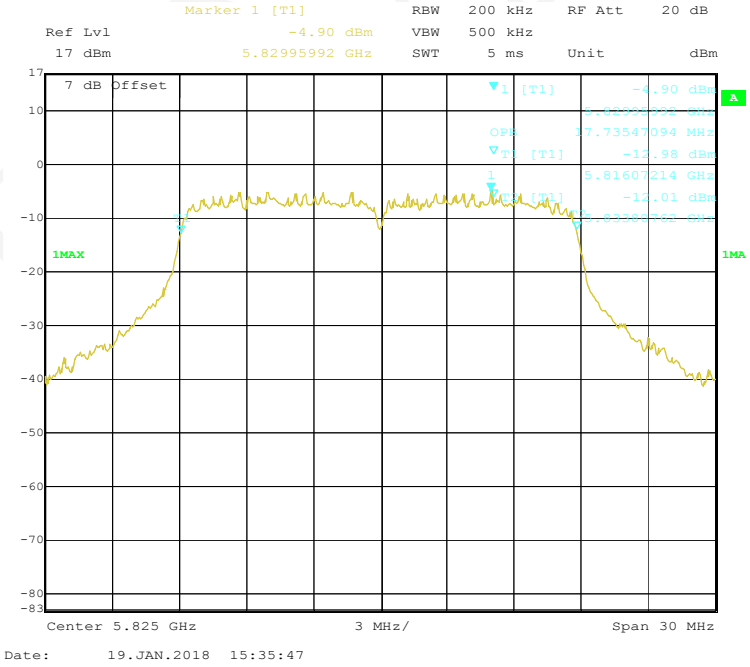
802.11n-HT20 mode, Chain 0: 5745MHz



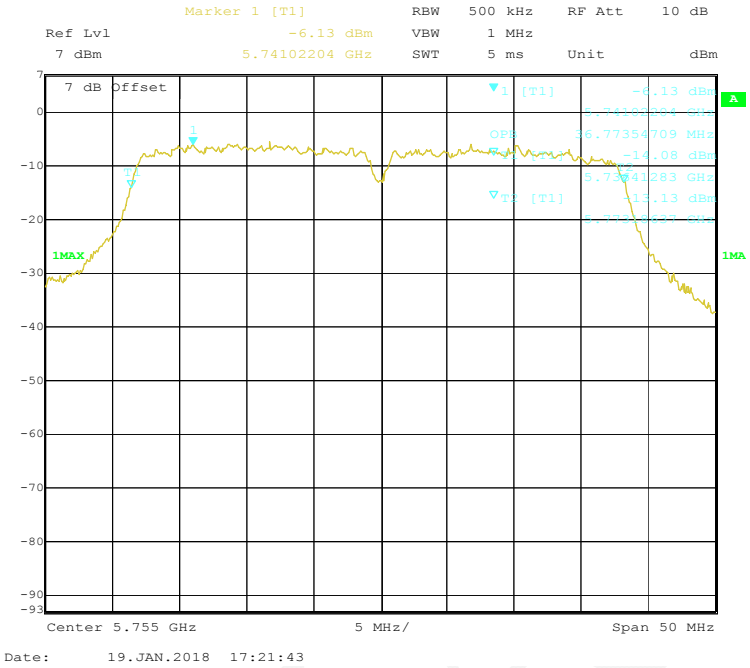
802.11n-HT20 mode, Chain 0: 5785MHz



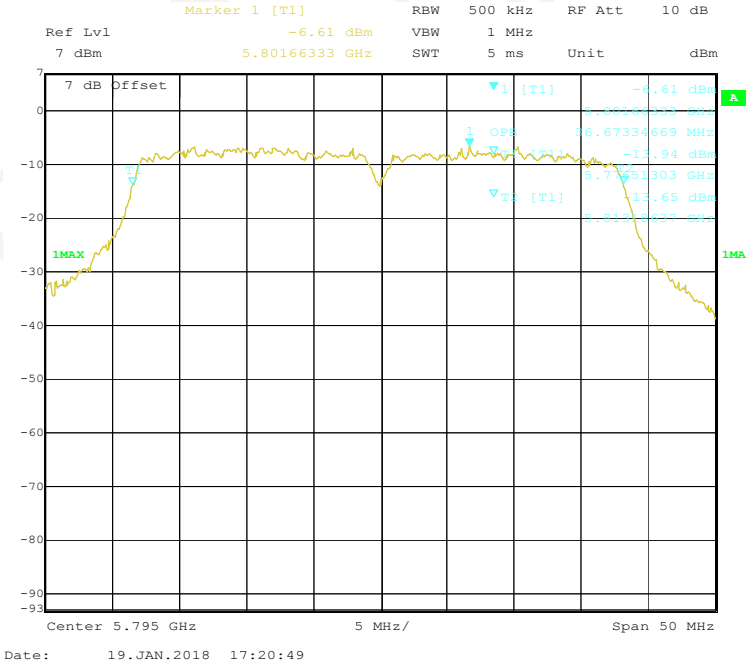
802.11n-HT20 mode, Chain 0: 5825MHz



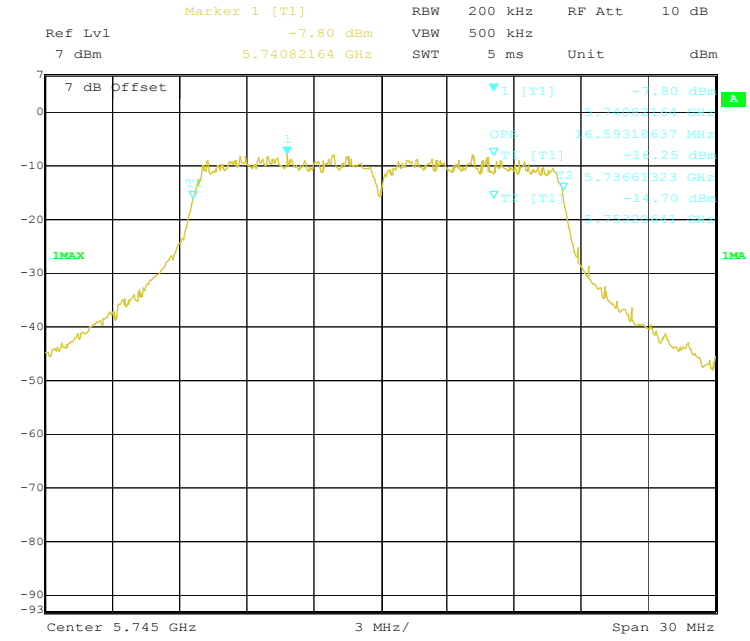
802.11n-HT40 mode, Chain 0: 5755MHz



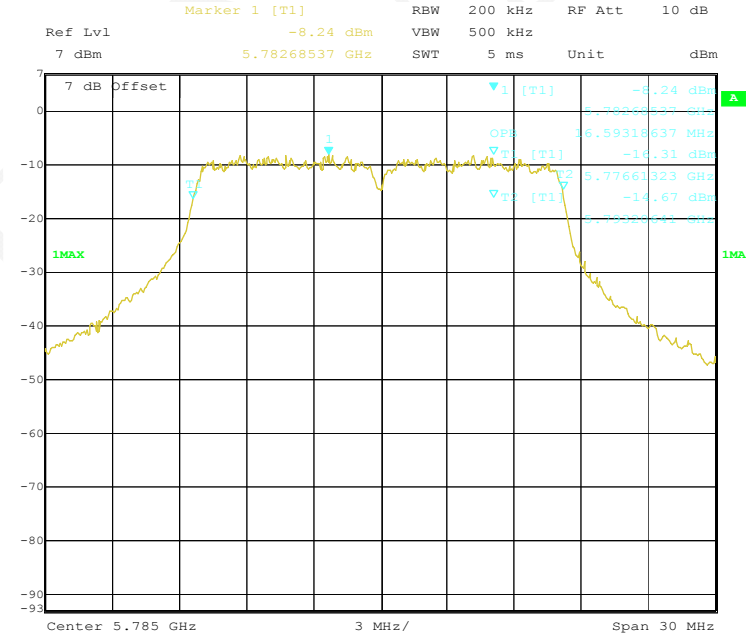
802.11n-HT40 mode, Chain 0: 5795MHz



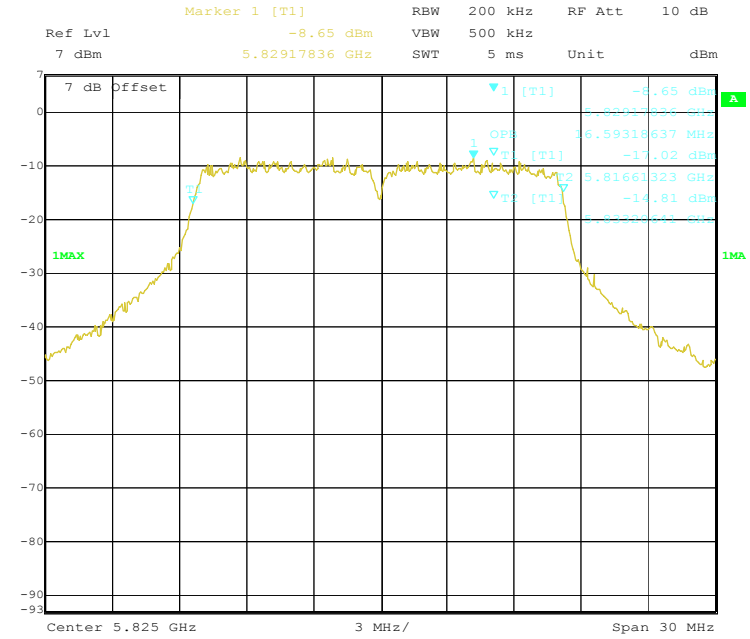
802.11a mode, Chain 1: 5745MHz



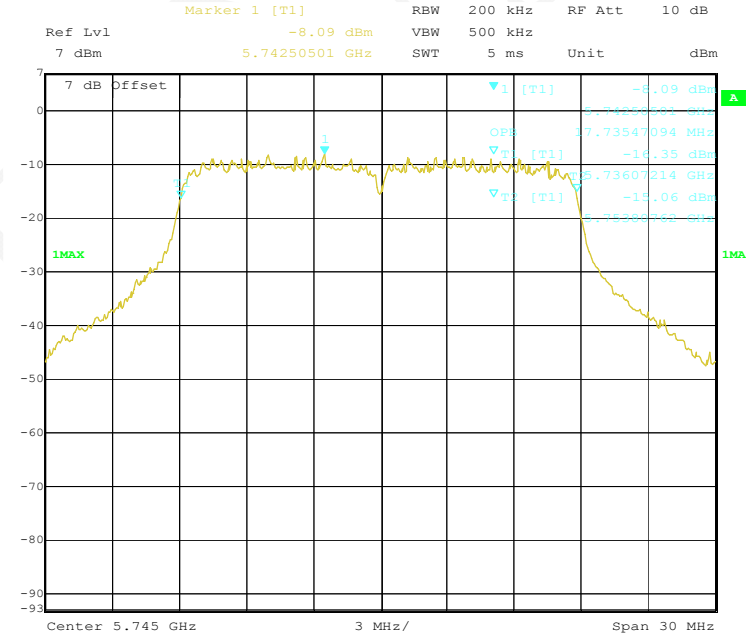
802.11a mode, Chain 1: 5785MHz



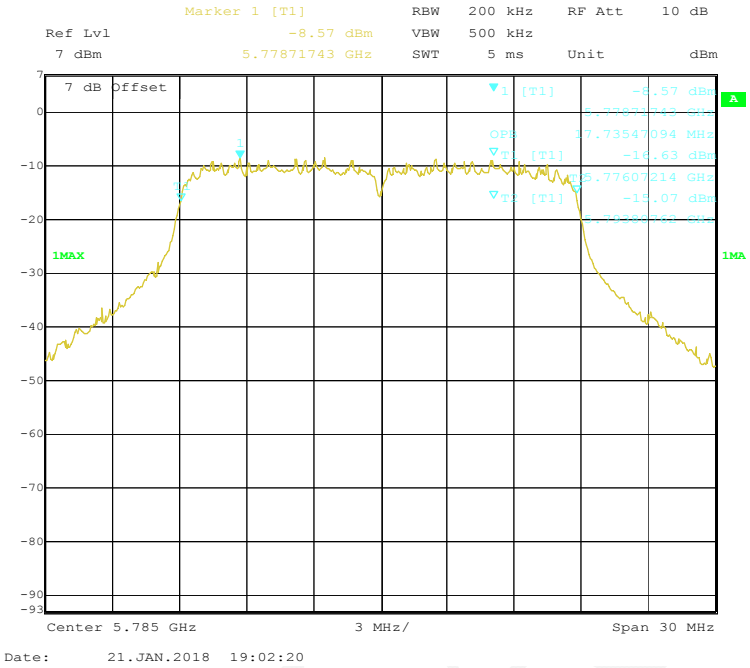
802.11a mode, Chain 1: 5825MHz



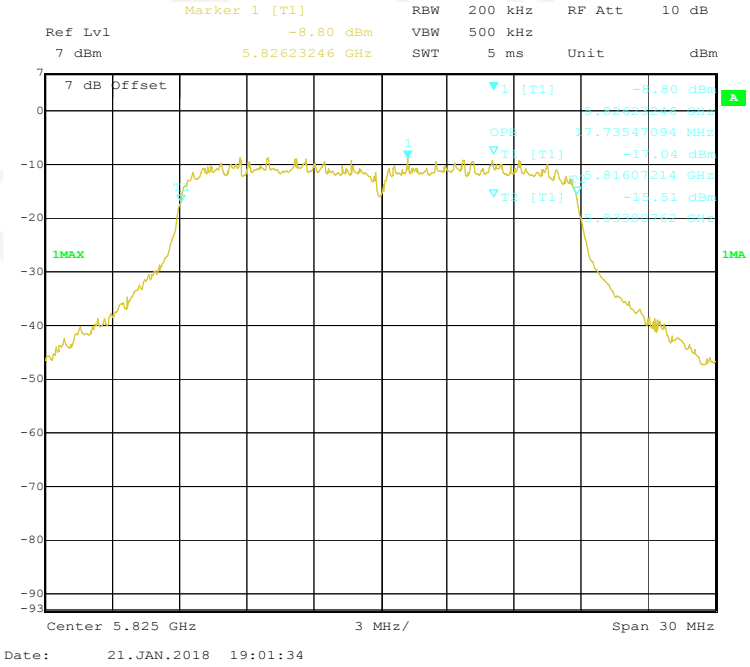
802.11n-HT20 mode, Chain 1: 5745MHz



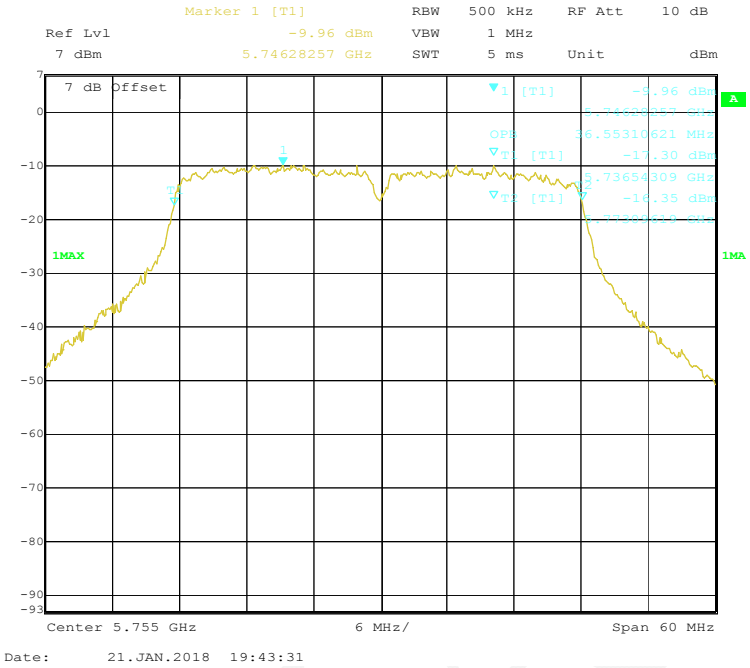
802.11n-HT20 mode, Chain 1: 5785MHz



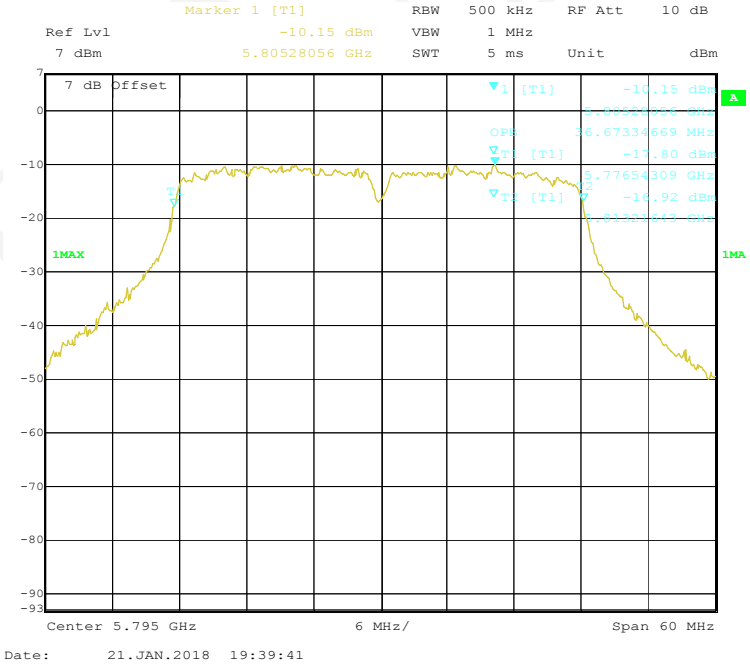
802.11n-HT20 mode, Chain 1: 5825MHz



802.11n-HT40 mode, Chain 1: 5755MHz



802.11n-HT40 mode, Chain 1: 5795MHz



FCC §15.407(g)–FREQUENCY STABILITY

Applicable Standard

FCC §15.407(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 ANSI C63.10-2013 “American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices”.

Test Data

Environmental Conditions

Temperature:	23.5 °C
Relative Humidity:	50 %
ATM Pressure:	101.2 kPa

The testing was performed by Ada Yu on 2018-01-19 to 2018-01-21.

Test Mode: Transmitting(Test was performed at Chain 0 worst case)

Test Result: Pass.

5150-5250MHz:

802.11a:

Temperature (℃)	Voltage (V_{DC})	f_L at Low Test Channel (MHz)	F_H at High Test Channel (MHz)	Limit
-40	7.80	5168.4866	5248.8542	f_L and f_H Within 5150~5250MHz range
-30		5168.4897	5248.8515	
-20		5168.4867	5248.8494	
-10		5168.4888	5248.8529	
0		5168.4894	5248.8525	
10		5168.4885	5248.8540	
20		5168.4869	5248.8517	
30		5168.4882	5248.8556	
40		5168.4837	5248.8544	
50		5168.4865	5248.8553	
60		5168.4897	5248.8558	
70		5168.4827	5248.8506	
75		5168.4911	5248.8476	
25	6.63	5168.4898	5248.8547	
25	8.97	5168.4901	5248.8559	

802.11n-HT20:

Temperature (℃)	Voltage (V_{DC})	f_L at Low Test Channel (MHz)	F_H at High Test Channel (MHz)	Limit
-40	7.80	5168.4827	5248.7558	f_L and f_H Within 5150~5250MHz range
-30		5168.4864	5248.7542	
-20		5168.4854	5248.7497	
-10		5168.4868	5248.7540	
0		5168.4826	5248.7575	
10		5168.4851	5248.7503	
20		5168.4869	5248.7570	
30		5168.4914	5248.7532	
40		5168.4878	5248.7543	
50		5168.4899	5248.7538	
60		5168.4854	5248.7530	
70		5168.4903	5248.7519	
75		5168.4902	5248.7577	
25	6.63	5168.4910	5248.7487	
25	8.97	5168.4912	5248.7550	

802.11n-HT40:

Temperature (℃)	Voltage (V_{DC})	f_L at Low Test Channel (MHz)	F_H at High Test Channel (MHz)	Limit
-40	7.80	5167.5743	5248.2692	f_L and f_H Within 5150~5250MHz range
-30		5167.5778	5248.2676	
-20		5167.5735	5248.2678	
-10		5167.5730	5248.2686	
0		5167.5789	5248.2666	
10		5167.5793	5248.2713	
20		5167.5780	5248.2640	
30		5167.5774	5248.2697	
40		5167.5742	5248.2633	
50		5167.5793	5248.2670	
60		5167.5781	5248.2624	
70		5167.5709	5248.2635	
75		5167.5765	5248.2618	
25	6.63	5167.5777	5248.2635	
25	8.97	5167.5782	5248.2647	

5725-5850MHz:

802.11a:

Temperature (℃)	Voltage (V_{DC})	f_L at Low Test Channel (MHz)	F_H at High Test Channel (MHz)	Limit
-40	7.80	5736.6165	5833.2054	f_L and f_H Within 5725~5850MHz range
-30		5736.6120	5833.2044	
-20		5736.6083	5833.2061	
-10		5736.6171	5833.2040	
0		5736.6149	5833.2052	
10		5736.6149	5833.2042	
20		5736.6167	5833.2087	
30		5736.6117	5833.2071	
40		5736.6120	5833.2075	
50		5736.6094	5833.2058	
60		5736.6180	5833.2086	
70		5736.6139	5833.2084	
75		5736.6119	5833.2027	
25	6.63	5736.6173	5833.2088	
25	8.97	5736.6121	5833.2023	

802.11n-HT20:

Temperature (℃)	Voltage (V_{DC})	f_L at Low Test Channel (MHz)	F_H at High Test Channel (MHz)	Limit
-40	7.80	5736.0681	5833.8097	f_L and f_H Within 5725~5850MHz range
-30		5736.0706	5833.8043	
-20		5736.0730	5833.8057	
-10		5736.0700	5833.8083	
0		5736.0764	5833.8094	
10		5736.0699	5833.8107	
20		5736.0729	5833.8053	
30		5736.0749	5833.8035	
40		5736.0761	5833.8042	
50		5736.0674	5833.8042	
60		5736.0696	5833.8074	
70		5736.0721	5833.8126	
75		5736.0676	5833.8085	
25	6.63	5736.0764	5833.8032	
25	8.97	5736.0767	5833.8067	

802.11n-HT40:

Temperature (℃)	Voltage (V_{DC})	f_L at Low Test Channel (MHz)	F_H at High Test Channel (MHz)	Limit
-40	7.80	5736.4089	5813.1906	f_L and f_H Within 5725~5850MHz range
-30		5736.4114	5813.1884	
-20		5736.4103	5813.1851	
-10		5736.4111	5813.1834	
0		5736.4121	5813.1818	
10		5736.4118	5813.1870	
20		5736.4143	5813.1877	
30		5736.4102	5813.1881	
40		5736.4132	5813.1834	
50		5736.4161	5813.1830	
60		5736.4129	5813.1873	
70		5736.4149	5813.1895	
75		5736.4081	5813.1907	
25	6.63	5736.4148	5813.1839	
25	8.97	5736.4120	5813.1827	

Note: the f_L and f_H determined by 99% Occupied bandwidth low edge at Low test channel and High edge at High test channel.

FCC §15.407(a) (1) – CONDUCTED TRANSMITTER OUTPUT POWER

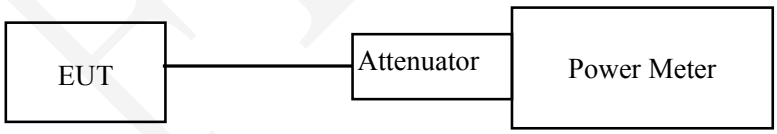
Applicable Standard

According to §15.407(a)(1)
(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).
.

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

1. Place the EUT on a bench and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to one test equipment.
3. Add a correction factor to the display.



Test Data

Environmental Conditions

Temperature:	23.5 °C
Relative Humidity:	50 %
ATM Pressure:	101.2 kPa

The testing was performed by Ada Yu on 2018-01-19 to 2018-01-21.

Test Mode: Transmitting

Test mode	Band	Channel	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)			Limit (dBm)	Result
				Chain0	Chain1	Total		
802.11a	5150-5250 MHz	Low	5180	14.11	8.50	/	30	PASS
		Middle	5200	14.45	7.80	/	30	PASS
		High	5240	14.66	7.85	/	30	PASS
	5725-5850 MHz	Low	5745	14.21	9.83	/	30	PASS
		Middle	5785	13.81	9.58	/	30	PASS
		High	5825	13.17	9.32	/	30	PASS
802.11n-HT20	5150-5250 MHz	Low	5180	14.25	8.38	15.25	30	PASS
		Middle	5200	13.45	7.81	14.50	30	PASS
		High	5240	14.17	7.90	15.09	30	PASS
	5725-5850 MHz	Low	5745	14.18	10.01	15.59	30	PASS
		Middle	5785	14.01	9.89	15.43	30	PASS
		High	5825	13.16	9.49	14.71	30	PASS
802.11n-HT40	5150-5250 MHz	Low	5190	11.56	5.76	12.57	30	PASS
		High	5230	12.11	5.46	12.96	30	PASS
	5725-5850 MHz	Low	5755	11.83	8.07	13.36	30	PASS
		High	5795	11.17	6.64	12.48	30	PASS

Test mode	Band	Channel	Frequency (MHz)	Average Conducted Output Power (dBm)			Limit (dBm)	Result
				Chain0	Chain1	Total		
802.11a	5150-5250 MHz	Low	5180	7.23	1.28	/	30	PASS
		Middle	5200	7.29	0.76	/	30	PASS
		High	5240	7.74	0.62	/	30	PASS
	5725-5850 MHz	Low	5745	7.24	2.95	/	30	PASS
		Middle	5785	6.90	2.69	/	30	PASS
		High	5825	6.09	2.29	/	30	PASS
802.11n-HT20	5150-5250 MHz	Low	5180	6.23	1.31	7.44	30	PASS
		Middle	5200	6.59	0.71	7.59	30	PASS
		High	5240	7.05	0.82	7.98	30	PASS
	5725-5850 MHz	Low	5745	7.09	3.05	8.53	30	PASS
		Middle	5785	6.62	2.75	8.11	30	PASS
		High	5825	6.29	2.27	7.74	30	PASS
802.11n-HT40	5150-5250 MHz	Low	5190	4.32	-1.25	5.38	30	PASS
		High	5230	5.04	-1.62	5.89	30	PASS
	5725-5850 MHz	Low	5755	4.66	0.16	5.98	30	PASS
		High	5795	3.97	-0.24	5.37	30	PASS

Note: The total output power=10Log10(10^(Chain 0/10)+10^(Chain 1/10))
The EUT is an outdoor access point,so the limit shall be 30dBm

FCC §15.407(a) (1) (5) - POWER SPECTRAL DENSITY

Applicable Standard

According to §15.407(a)(1)
(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).

According to §15.407(a)(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

The measurements are base on FCC KDB 789033 D02 General UNII Test Procedyres New Rules v01:Guidelines for Compliance Testing of Unlicensed National Information Infrastructure(U-NII)Devices section F: Maximum power spectral density(PPSD)

Test Data

Environmental Conditions

Temperature:	23.5 °C
Relative Humidity:	50 %
ATM Pressure:	101.2 kPa

The testing was performed by Ada Yu on 2018-01-19 to 2018-01-21.

Test Mode: Transmitting

5150MHz-5250MHz:

Mode	Channel	Frequency (MHz)	PSD (dBm/MHz)			Limit (dBm/MHz)	Result
			Chain0	Chain1	Total		
802.11a	Low	5180	-3.72	-9.57	/	17	PASS
	Middle	5200	-3.56	-9.97	/	17	PASS
	High	5240	-3.32	-10.04	/	17	PASS
802.11n20	Low	5180	-5.01	-9.91	-3.79	17	PASS
	Middle	5200	-4.66	-10.42	-3.64	17	PASS
	High	5240	-3.63	-10.56	-2.83	17	PASS
802.11n40	Low	5190	-9.46	-14.82	-8.35	17	PASS
	High	5230	-8.63	-15.61	-7.84	17	PASS

Note:

The total PSD=10Log10(10^(Chain 0/10)+10^(Chain 1/10))
For 802.11n :
Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
Directional gain = 3dBi + 10log (2) = 6dBi, The EUT is an outdoor access point,so the limit shall be 17dBm/MHz.

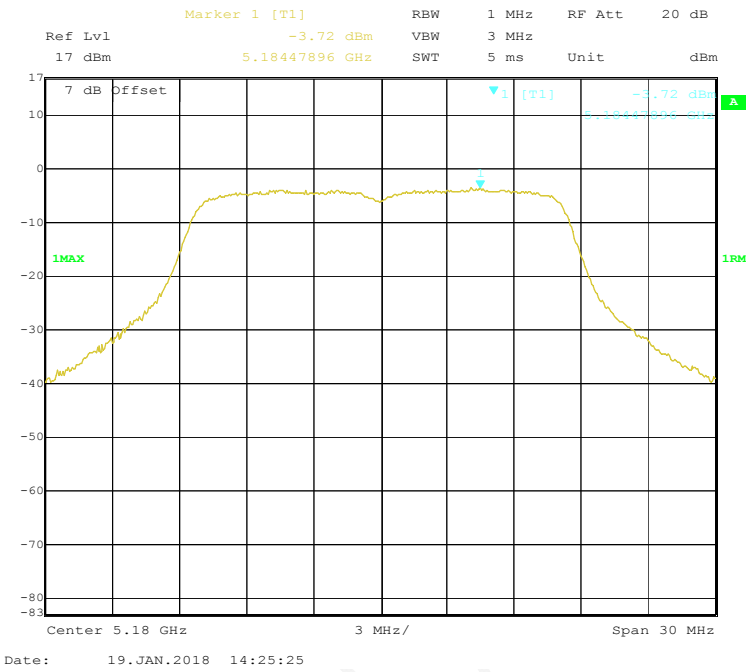
5725MHz-5850MHz:

Mode	Channel	Frequency MHz	PSD (dBm/500kHz)			Limit (dBm/500kHz)	Result
			Chain0	Chain1	Total		
802.11a	Low	5745	-4.54	-9.59	/	30	PASS
	Middle	5785	-5.29	-9.25	/	30	PASS
	High	5825	-6.01	-9.88	/	30	PASS
802.11n20	Low	5745	-4.96	-9.09	-3.54	30	PASS
	Middle	5785	-4.85	-9.37	-3.54	30	PASS
	High	5825	-6.03	-10.01	-4.57	30	PASS
802.11n40	Low	5755	-10.22	-14.33	-8.80	30	PASS
	High	5795	-10.95	-14.18	-9.26	30	PASS

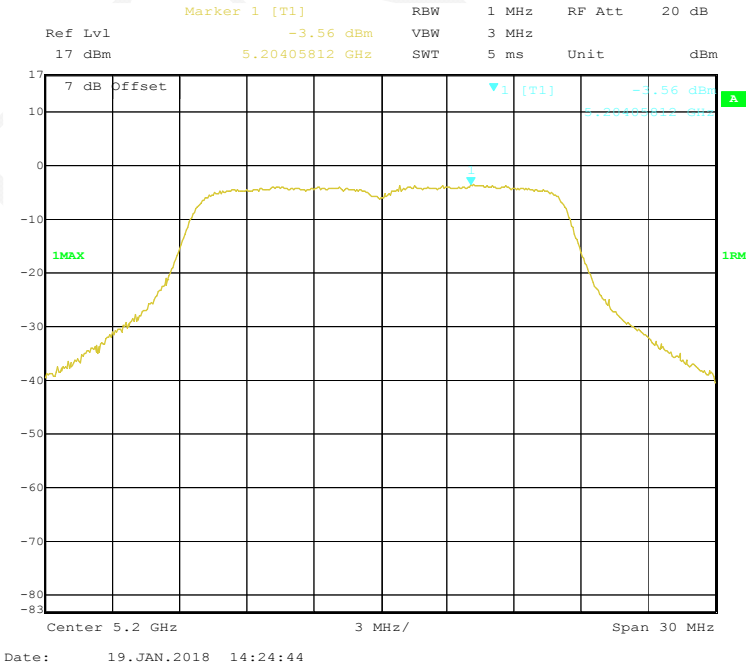
Note:
The total PSD=10Log10(10^(Chain 0/10)+10^(Chain 1/10))
For 802.11n :
Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
Directional gain = 3dBi + 10log (2) = 6dBi, The EUT is an outdoor access point,so the limit shall be 30dBm/500kHz.

5150MHz-5250MHz Band:

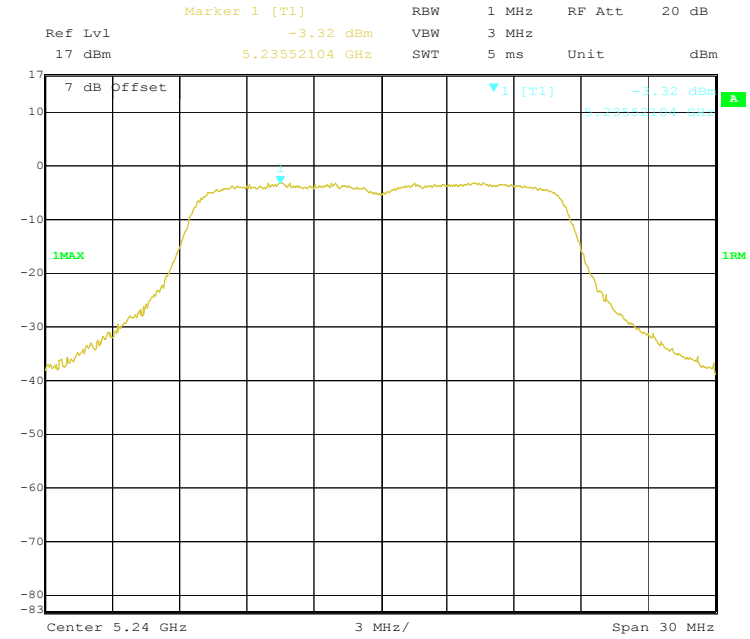
802.11a mode, Chain 0: Power spectral density-5180MHz



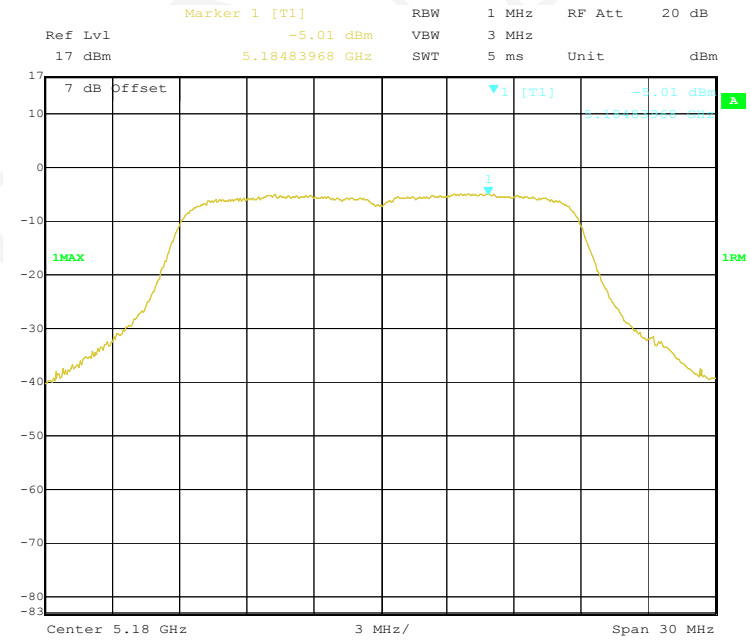
802.11a mode, Chain 0: Power spectral density-5200MHz



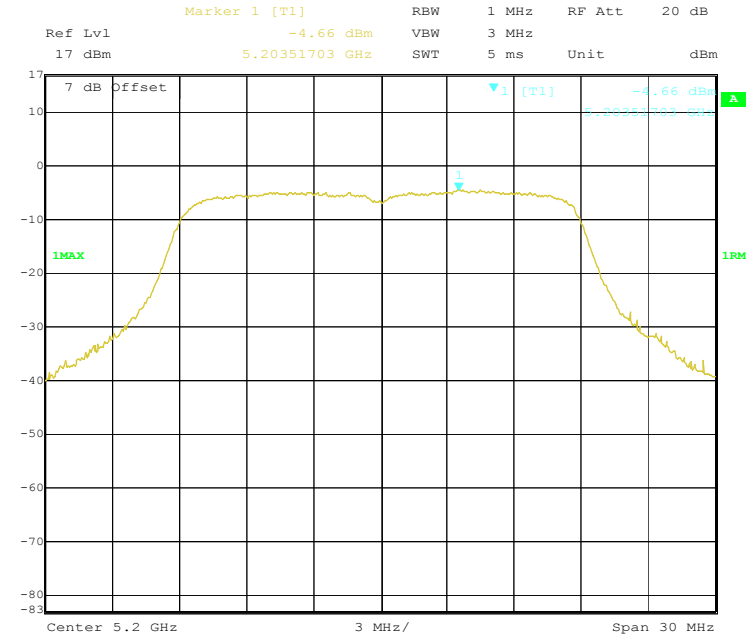
802.11a mode, Chain 0: Power spectral density-5240MHz



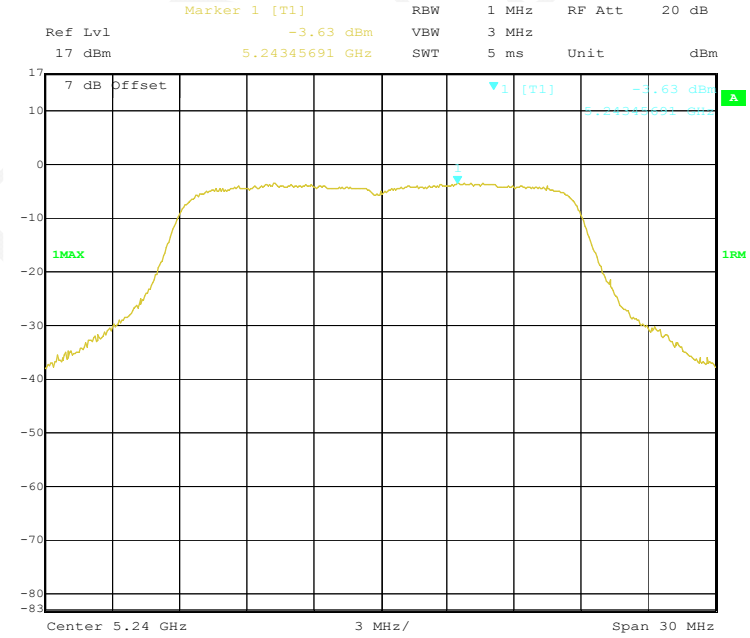
802.11n-HT20 mode, Chain 0: Power spectral density-5180MHz



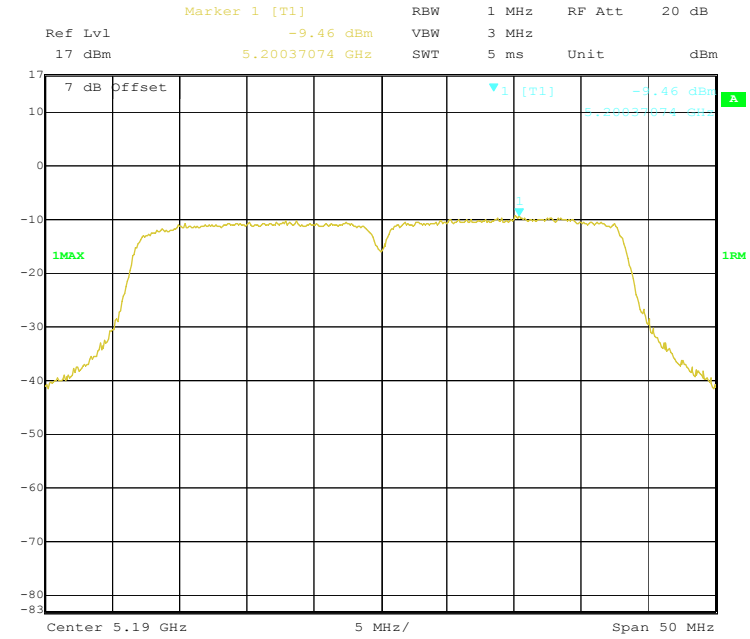
802.11n-HT20 mode, Chain 0: Power spectral density-5200MHz



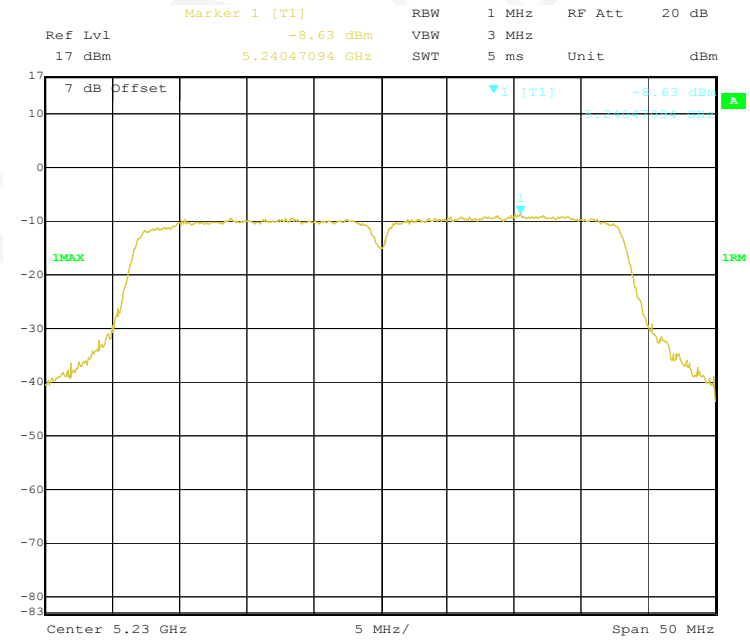
802.11n-HT20 mode, Chain 0: Power spectral density-5240MHz



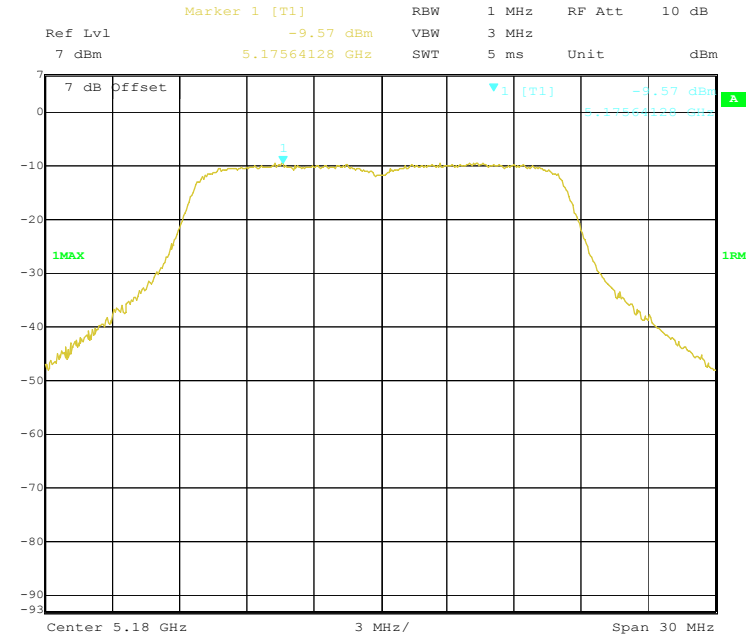
802.11n-HT40 mode, Chain 0: Power spectral density-5190MHz



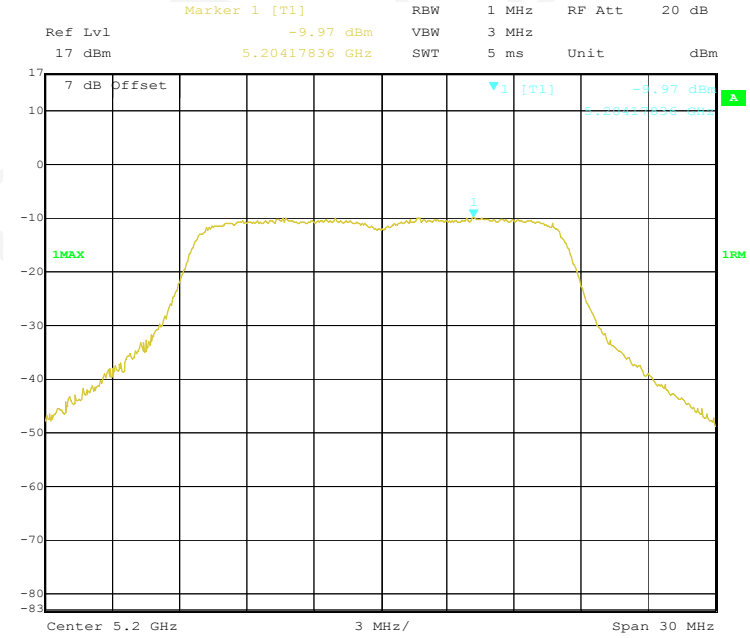
802.11n-HT40 mode, Chain 0: Power spectral density-5230MHz



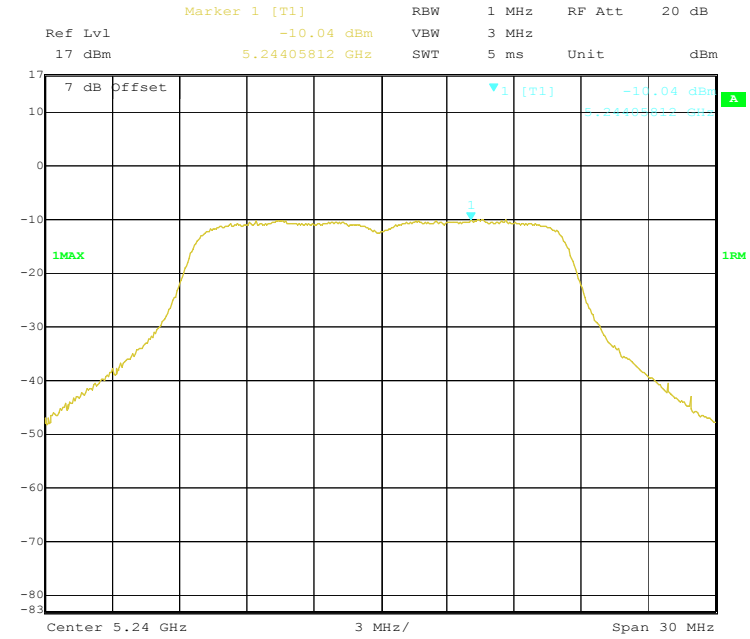
802.11a mode, Chain 1: Power spectral density-5180MHz



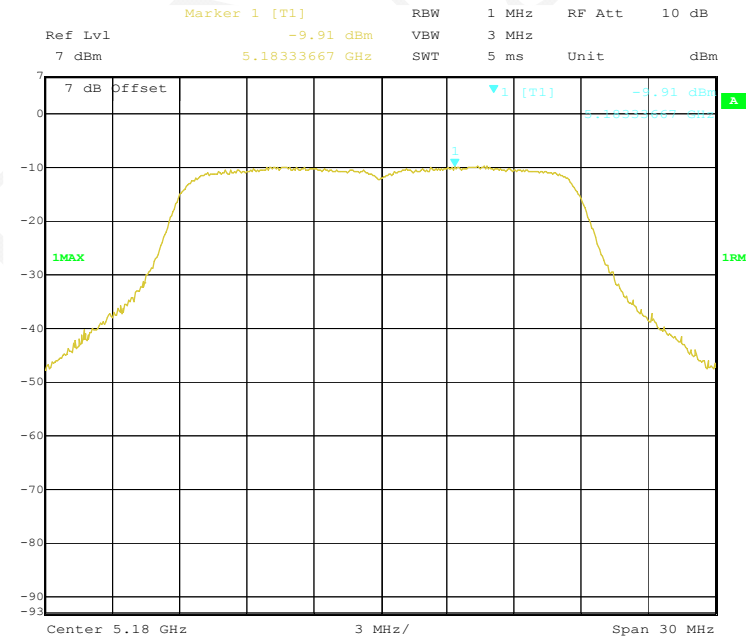
802.11a mode, Chain 1: Power spectral density-5200MHz



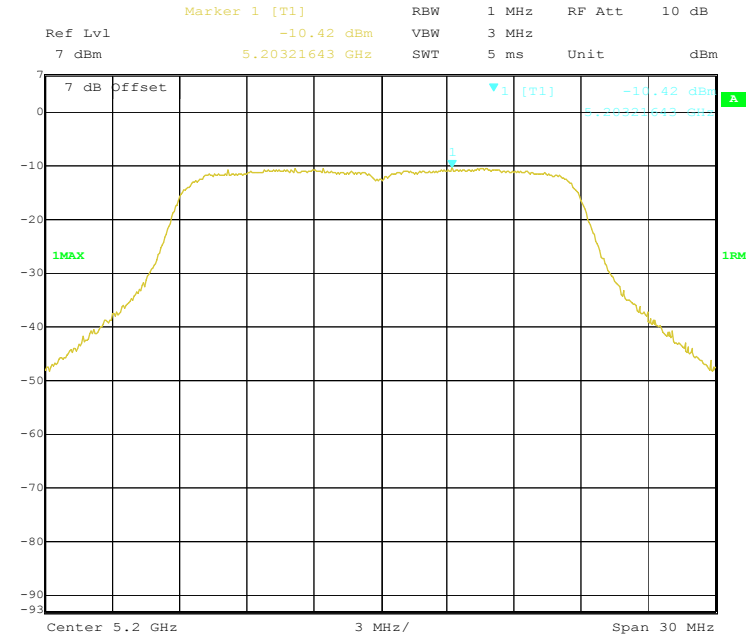
802.11a mode, Chain 1: Power spectral density-5240MHz



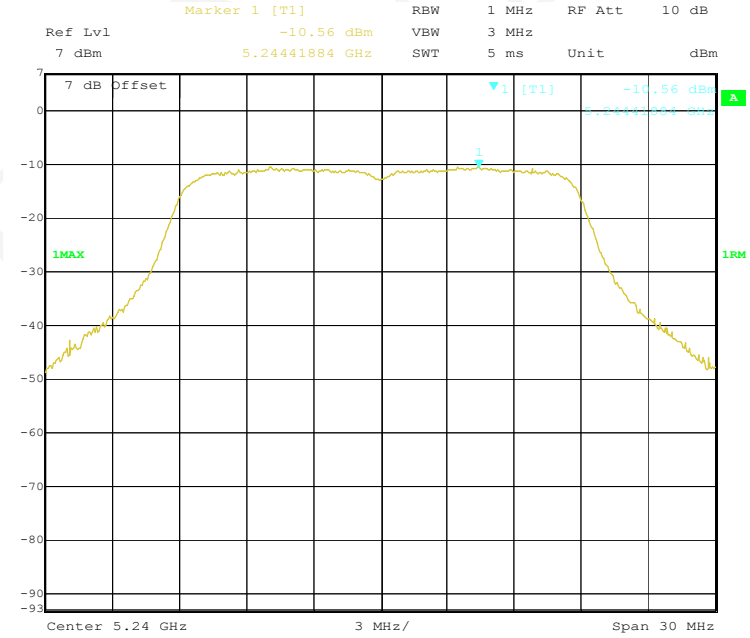
802.11n-HT20 mode, Chain 1: Power spectral density-5180MHz



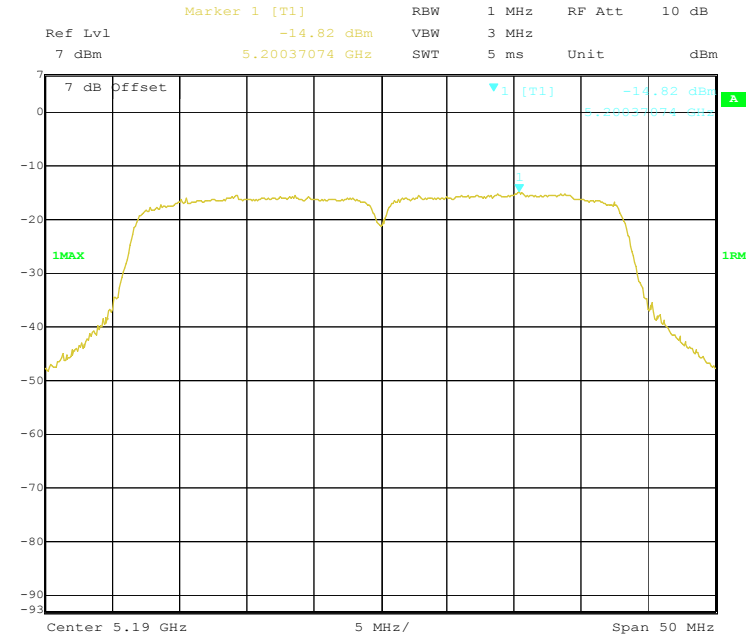
802.11n-HT20 mode, Chain 1: Power spectral density-5200MHz



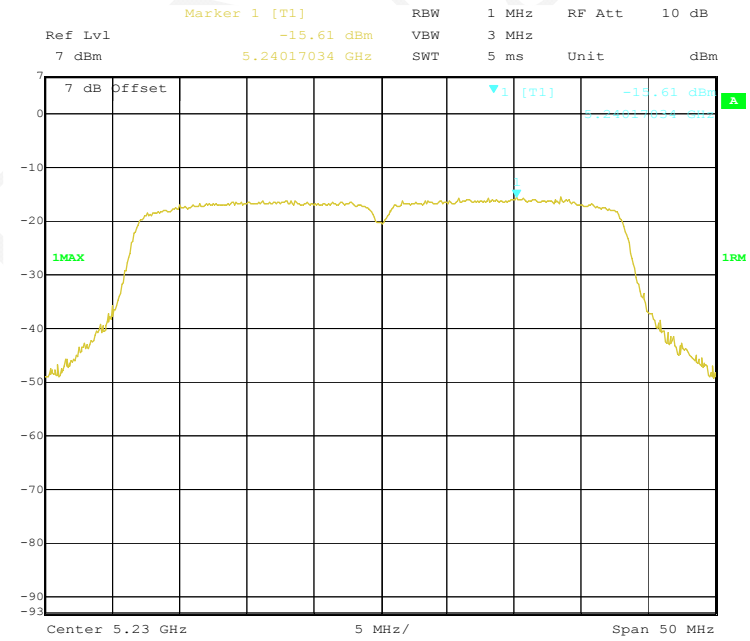
802.11n-HT20 mode, Chain 1: Power spectral density-5240MHz



802.11n-HT40 mode, Chain 1: Power spectral density-5190MHz

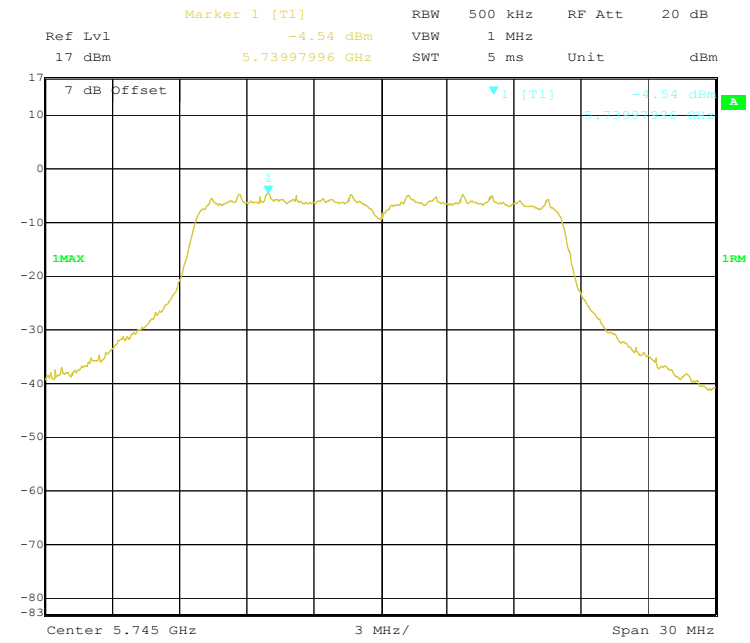


802.11n-HT40 mode, Chain 1: Power spectral density-5230MHz

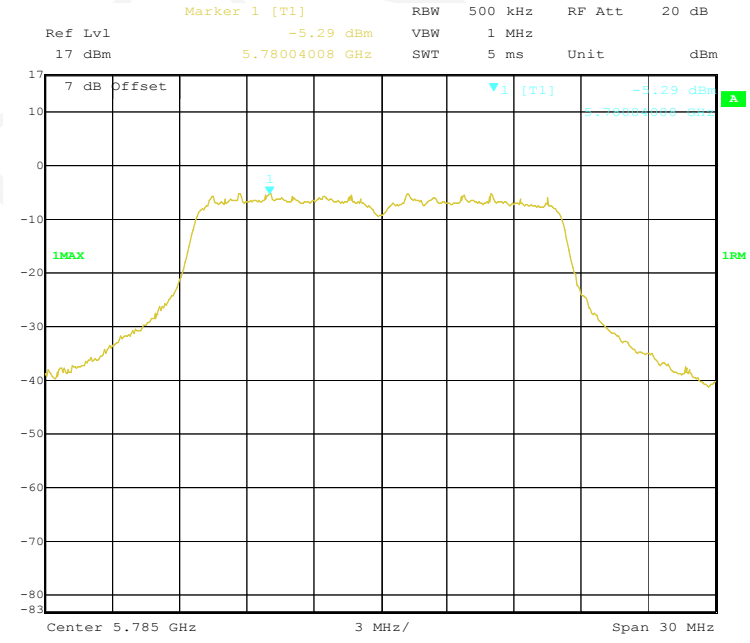


5725-5850 MHz:

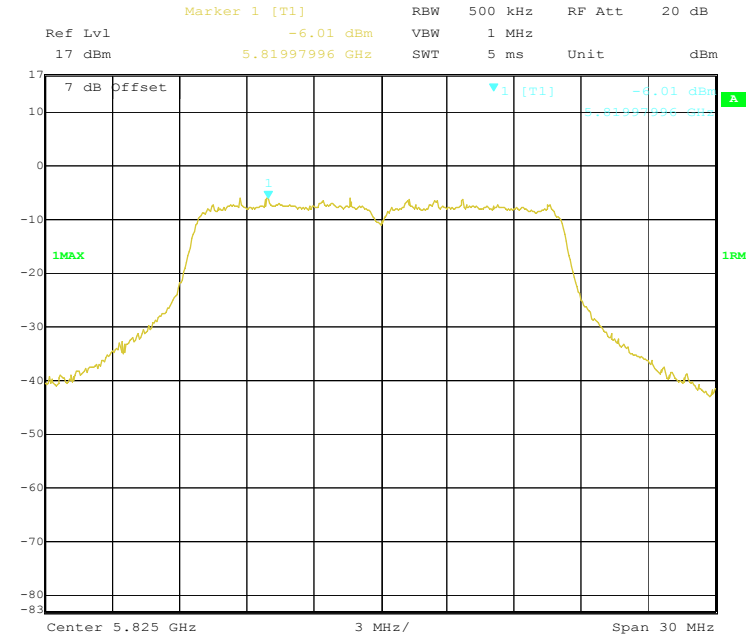
802.11a mode, Chain 0: Power spectral density-5745MHz



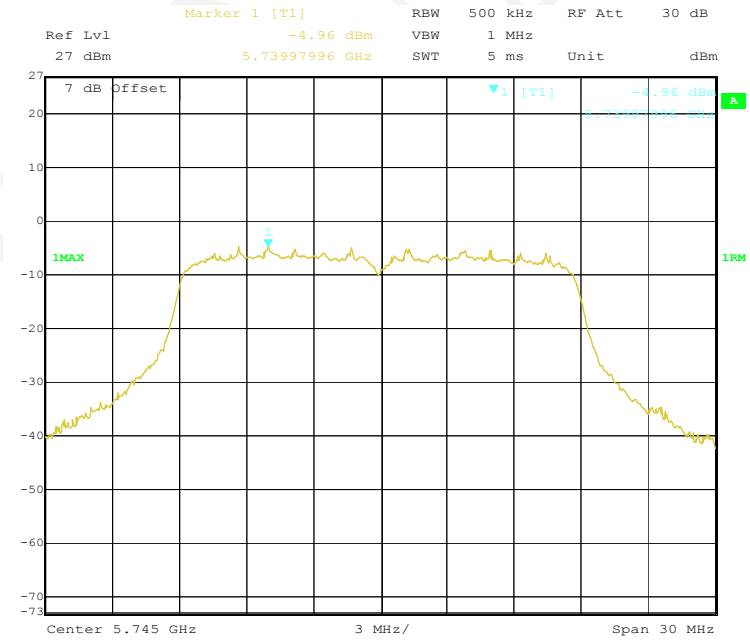
802.11a mode, Chain 0: Power spectral density-5785MHz



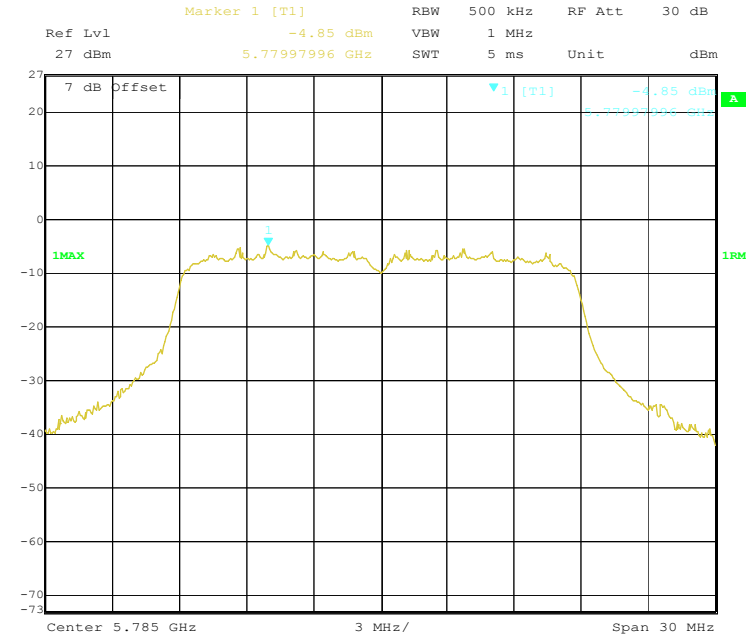
802.11a mode, Chain 0: Power spectral density-5825MHz



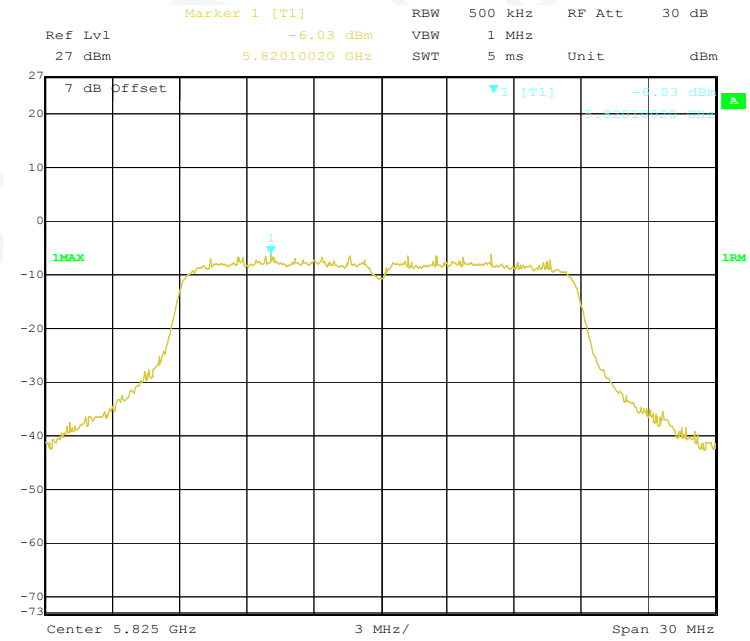
802.11n-HT20 mode, Chain 0: Power spectral density-5745MHz



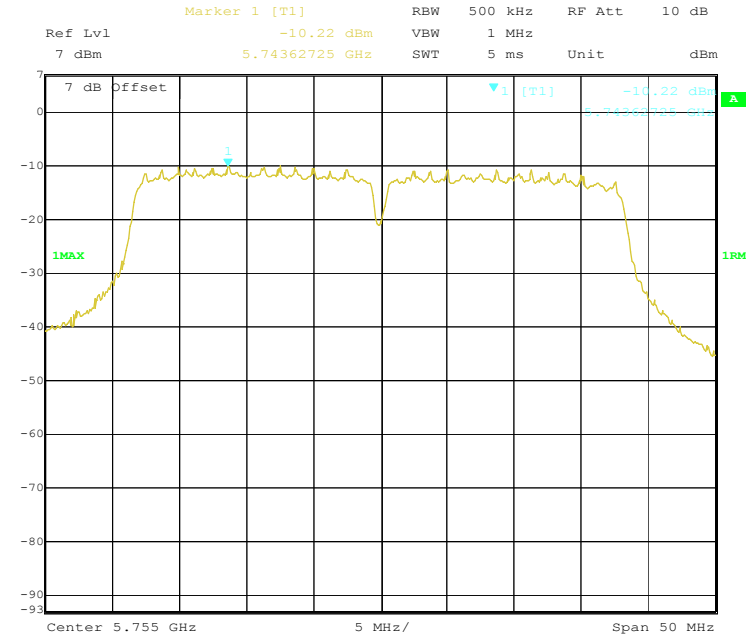
802.11n-HT20 mode, Chain 0: Power spectral density-5785MHz



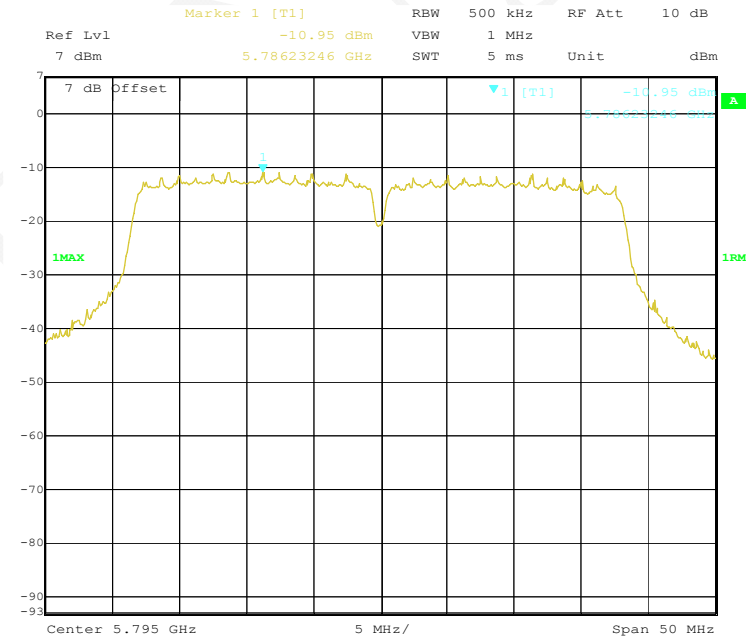
802.11n-HT20 mode, Chain 0: Power spectral density-5825MHz



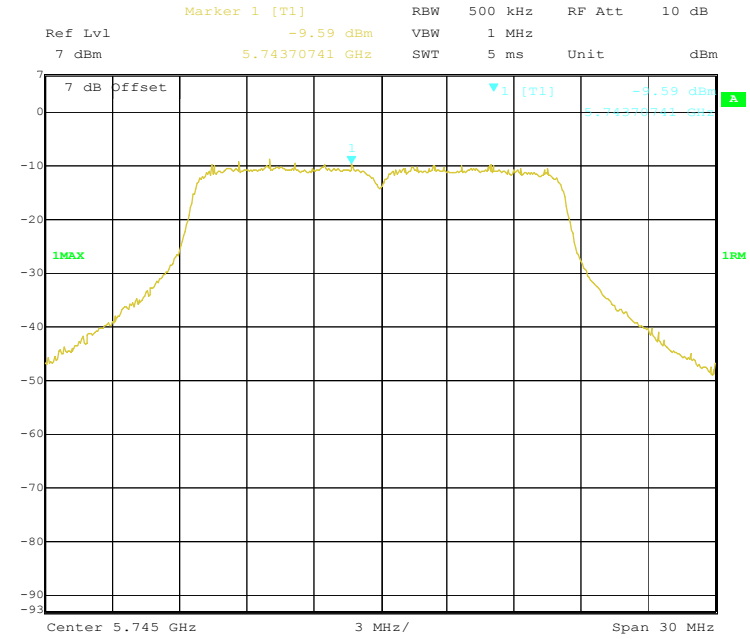
802.11n-HT40 mode, Chain 0: Power spectral density-5755MHz



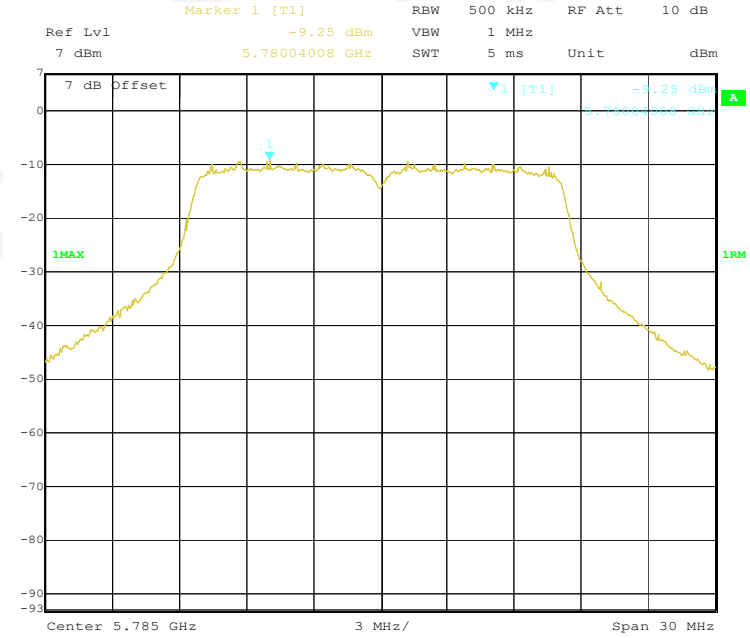
802.11n-HT40 mode, Chain 0: Power spectral density-5795MHz



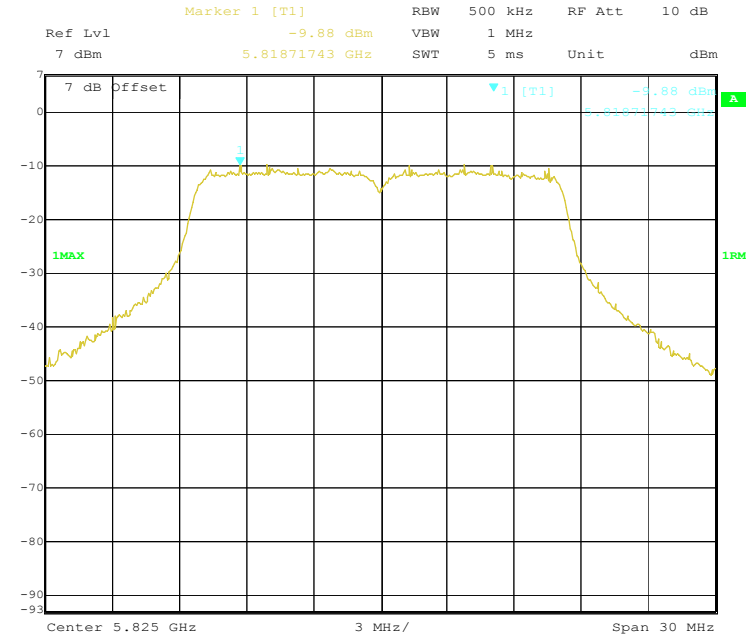
802.11a mode, Chain 1: Power spectral density-5745MHz



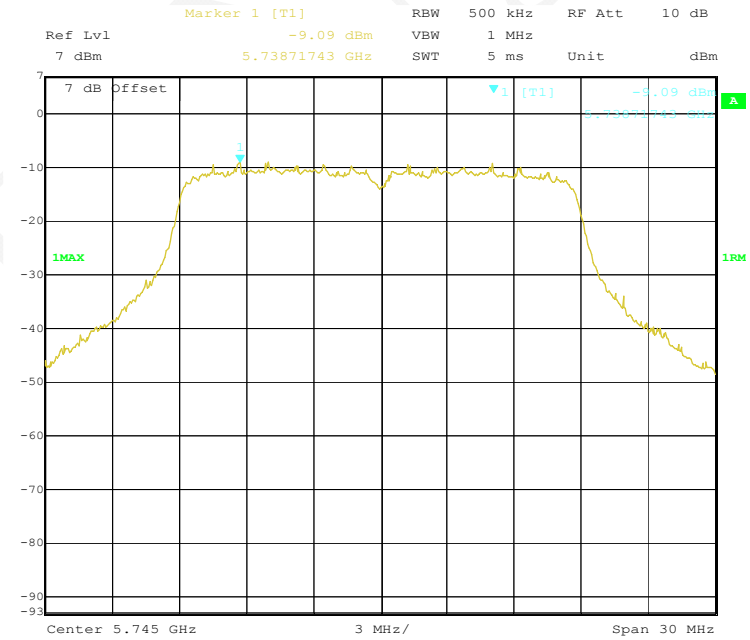
802.11a mode, Chain 1: Power spectral density-5785MHz



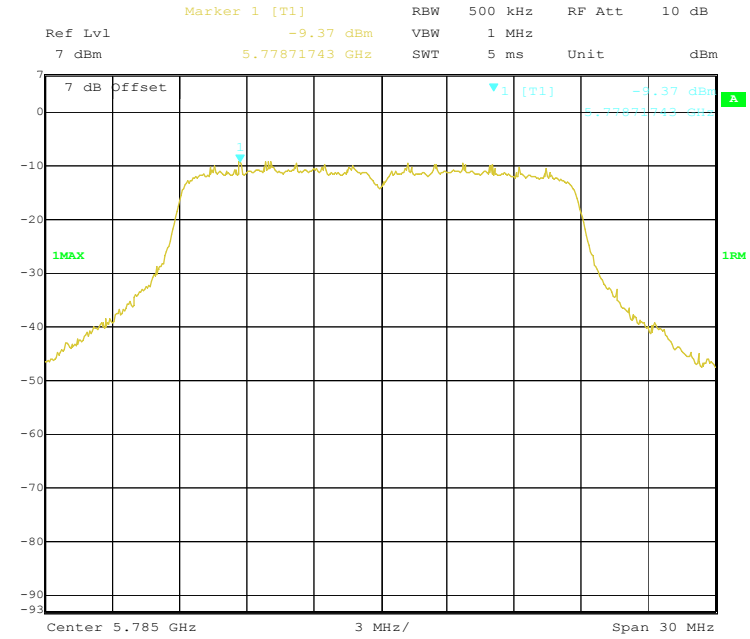
802.11a mode, Chain 1: Power spectral density-5825MHz



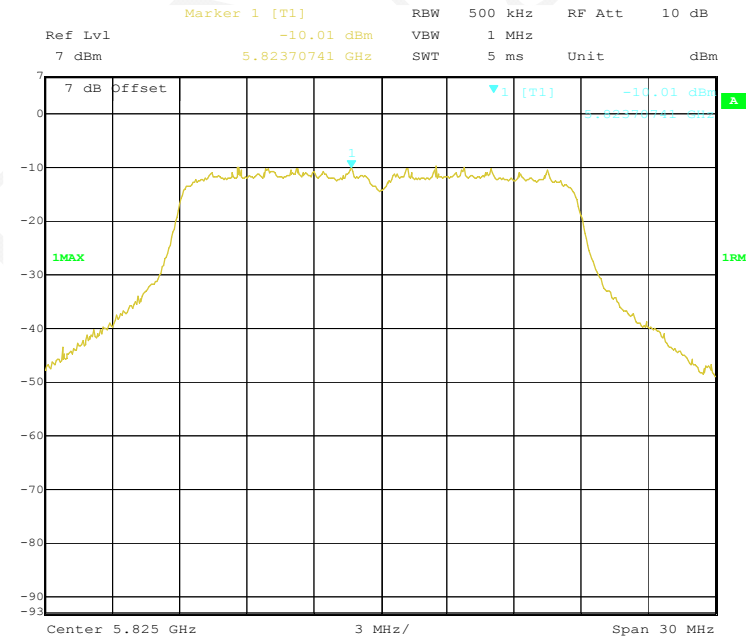
802.11n-HT20 mode, Chain 1: Power spectral density-5745MHz



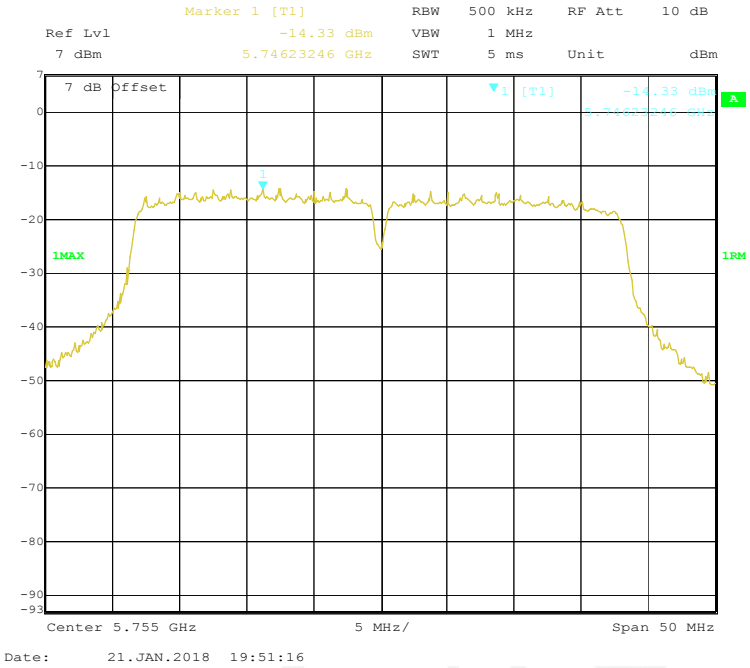
802.11n-HT20 mode, Chain 1: Power spectral density-5785MHz



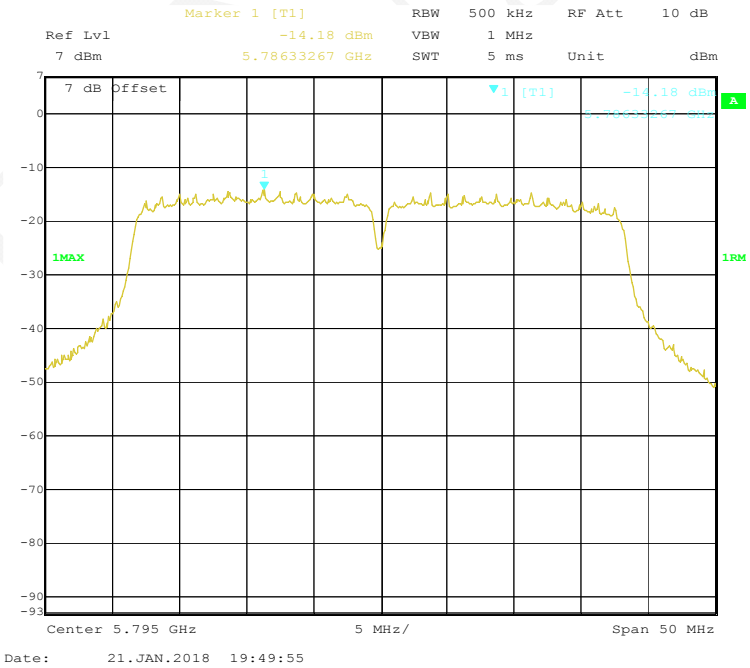
802.11n-HT20 mode, Chain 1: Power spectral density-5825MHz



802.11n-HT40 mode, Chain 1: Power spectral density-5755MHz



802.11n-HT40 mode, Chain 1: Power spectral density-5795MHz



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