TESTING LABORATORY
CERTIFICATE#4323.01

FCC PART 15.407

TEST REPORT

For

Beijing Wiseasy Technology CO., Ltd.

7th Floor, Block B, Wangxin Mansion, No.28 Xiaoyun Road, Chaoyang District, 100027, Beijing, China

FCC ID: 2AXOJ-WPOS-3

Report Type: Original Report	**Product Type:** WPOS Intelligent Business Terminal
Project Engineer:	Jack Jiao
Report Number:	RKSA200927001-00C
Report Date:	2020-12-05
Reviewed By:	Oscar Ye EMC Manager
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	Beijing Wiseasy Technology CO., Ltd.
Tested Model	WPOS-3
Product Type	WPOS Intelligent Business Terminal
Power Supply	DC 5.0V from adapter and DC 3.7V from battery
Operating Frequency	5G Wi-Fi B1: 5150-5250 MHz, B2: 5250-5350 MHz, B3: 5470-5725 MHz, B4: 5725-5850 MHz
Channel Number	5G Wi-Fi B1: 6, B2: 6, B3: 17, B4: 7
Channel Separation	5G Wi-Fi: a/ n20: 20 MHz, n40: 40 MHz
Modulation Type	OFDM
Antenna Type	FPC Antenna
*Maximum Antenna Gain	1.0 dBi

Adapter Information:
Model: ASSA107a-050200
Input: AC 100-240V, 50/60Hz, 0.45A
Output: DC 5.0V, 2.0A

Note: The antenna gain was provided by the applicant.

**All measurement and test data in this report was gathered from production sample serial number: 20200927001. (Assigned by the BACL. The EUT supplied by the applicant was received on 2020-09-27)*

Objective

This type approval report is prepared on behalf of *Beijing Wiseasy 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 DSS Submittal with FCC ID: 2AXOJ-WPOS-3
FCC Part 15.247 DTS Submittal with FCC ID: 2AXOJ-WPOS-3
FCC Part 15.225 DXX submissions with FCC ID: 2AXOJ-WPOS-3
FCC Part 22H24E27 PCB submissions with FCC ID: 2AXOJ-WPOS-3

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), the FCC designation No. CN1185 under the FCC KDB 974614 D01 and CAB identifier CN0004 under the ISED requirement. 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.

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

802.11a/ n20 mode Channel 36, 40, 48 were tested.
802.11n40 mode Channel 38, 46 were tested.

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

For **5250~5350 MHz** band, test channel list is as below,

802.11a/n20 mode Channel 52, 56, 64 were tested.
802.11n40 mode Channel 54, 62 were tested.

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

For **5470~5725 MHz** band, test channel list is as below,

802.11a/n20 mode Channel 100, 120, 140 were tested.
802.11n40 mode Channel 102, 118, 134 were tested.

Channel	Frequency (MHz)	Channel	Frequency (MHz)
100	5500	132	5660
102	5510	134	5670
104	5520	136	5680
108	5540	140	5700
110	5550	144	5720
112	5560	/	/
116	5580	/	/
118	5590	/	/
120	5600	/	/
124	5620	/	/
126	5630	/	/
128	5640	/	/

Note: Channel 144 for 802.11a, n20, the band U-NII-2C to U-NII-3, were crossed to test, and output power and PSD test was performed .

For **5725~5850 MHz** band,

802.11a/ n20 mode Channel 149, 157, 165 were tested.
802.11n40 mode Channel 151, 159 were tested.

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

EUT Exercise Software

RF test tool: QRCT

The worst case was performed under:

5150-5250MHz

Mode	Channel	Data rate	*Power level setting
802.11a	5180	6 Mbps	9
	5200		9
	5240		9
802.11n-HT20	5180	MCS0	9
	5200		9
	5240		9
802.11n-HT40	5190	MCS0	9
	5230		9

5250-5350MHz

Mode	Channel	Data rate	*Power level setting
802.11a	5260	6 Mbps	9
	5280		9
	5320		9
802.11n-HT20	5260	MCS0	9
	5280		9
	5320		9
802.11n-HT40	5270	MCS0	9
	5310		9

5470-5725MHz

Mode	Channel	Data rate	*Power level setting
802.11a	5500	6 Mbps	8
	5600		8
	5700		8
	5720		8
802.11n-HT20	5500	MCS0	8
	5600		8
	5700		8
	5720		8
802.11n-HT40	5510	MCS0	8
	5590		8
	5670		8

5725-5850MHz

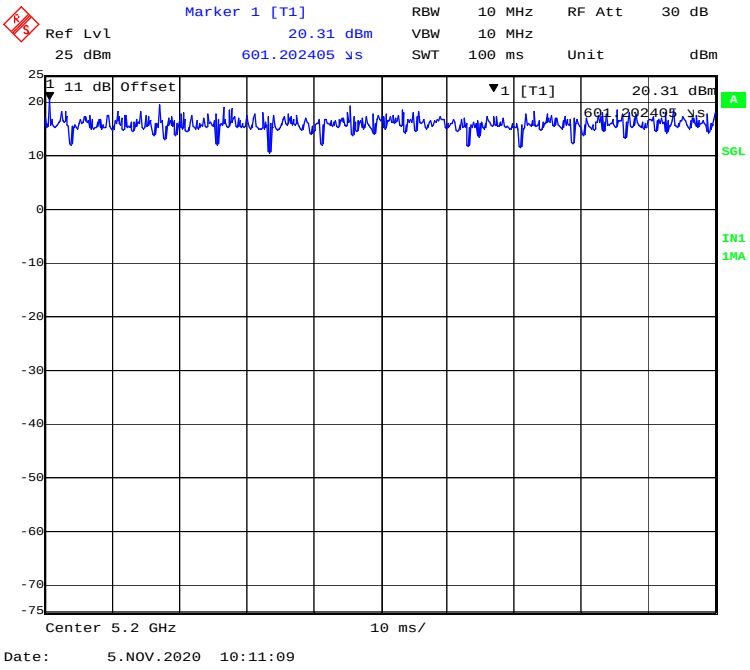
Mode	Channel	Data rate	*Power level setting
802.11a	5745	6 Mbps	9
	5785		9
	5825		9
802.11n-HT20	5745	MCS0	9
	5785		9
	5825		9
802.11n-HT40	5755	MCS0	9
	5795		9

Note: The power level setting was declared by the applicant.

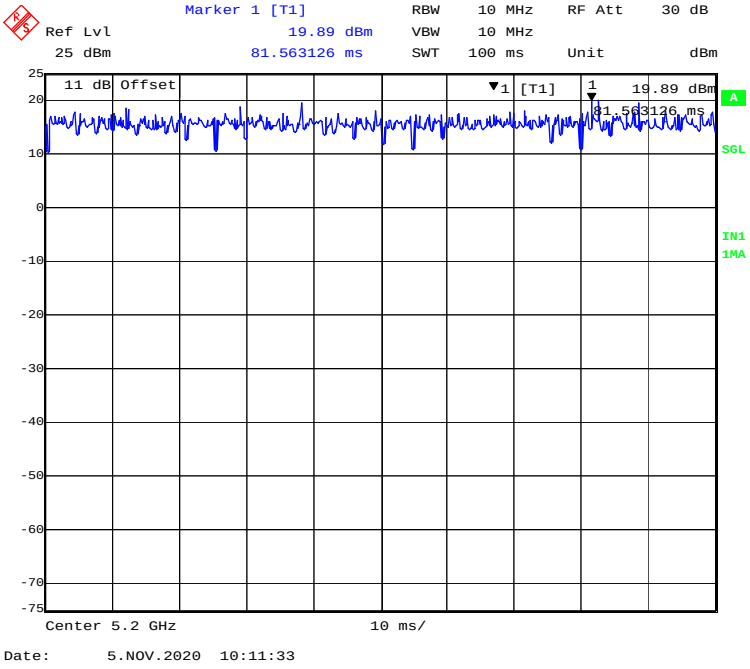
Duty Cycle

5150MHz-5250MHz Band:

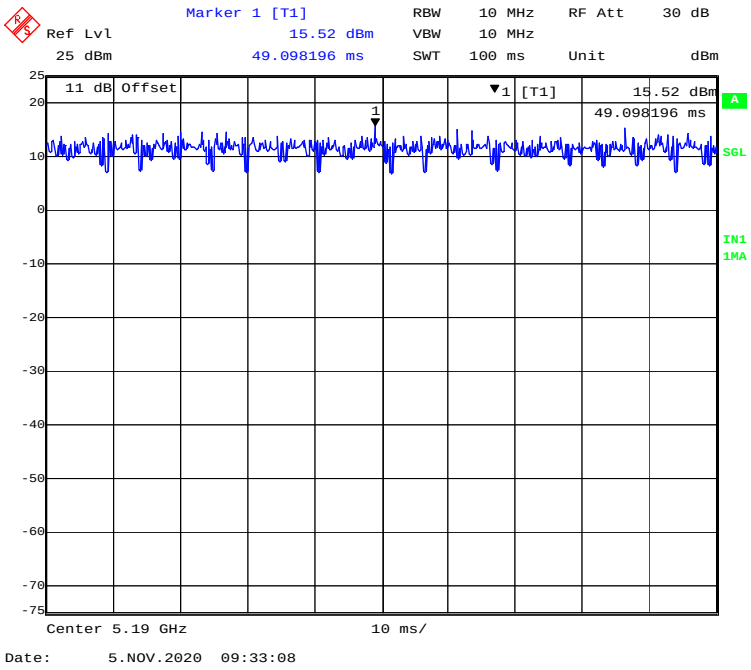
802.11a mode



802.11n-HT20 mode

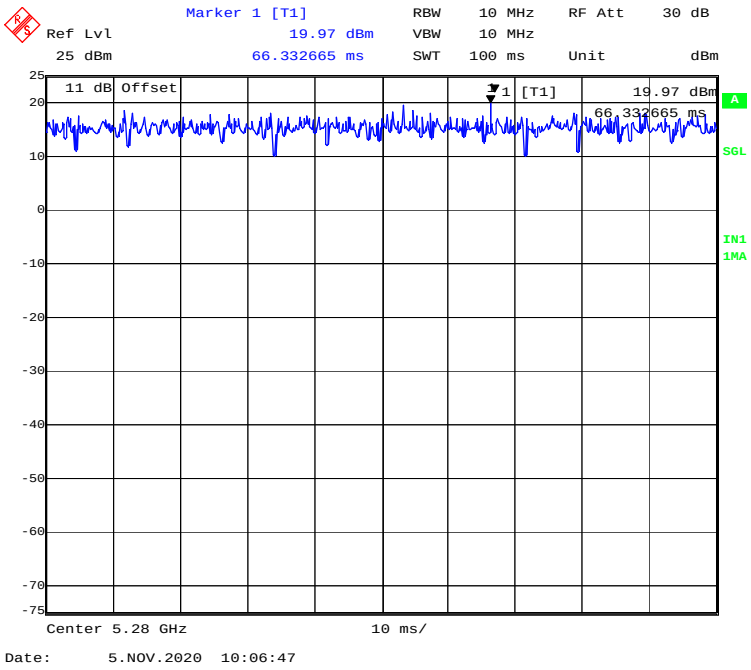


802.11n-HT40 mode

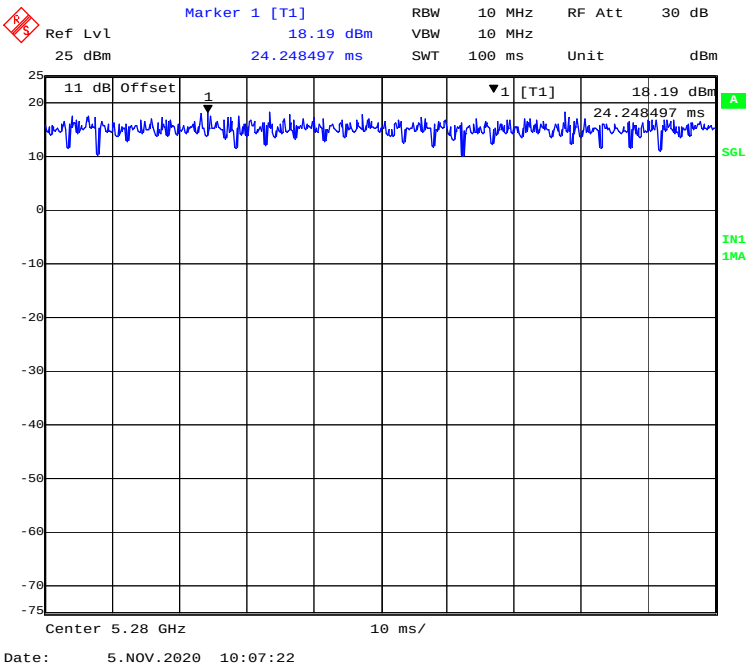


5250MHz-5350MHz Band:

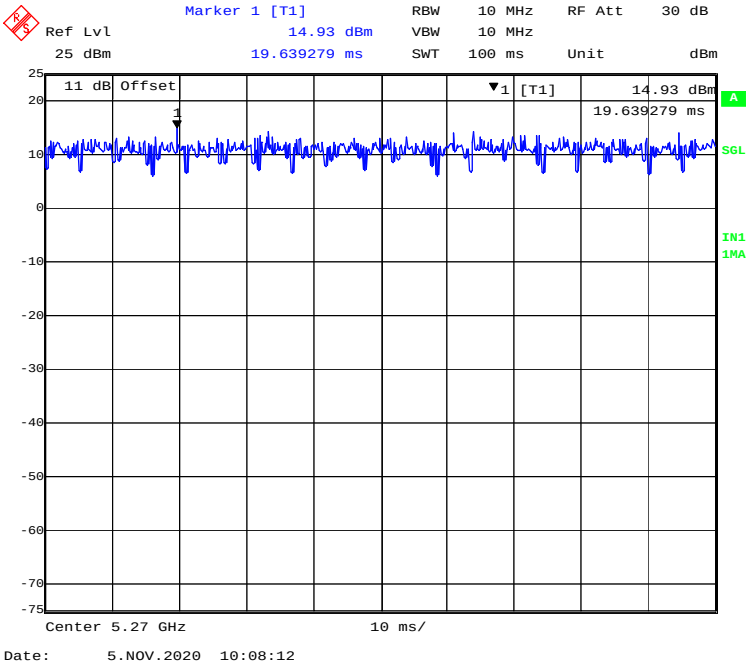
802.11a mode



802.11n-HT20 mode

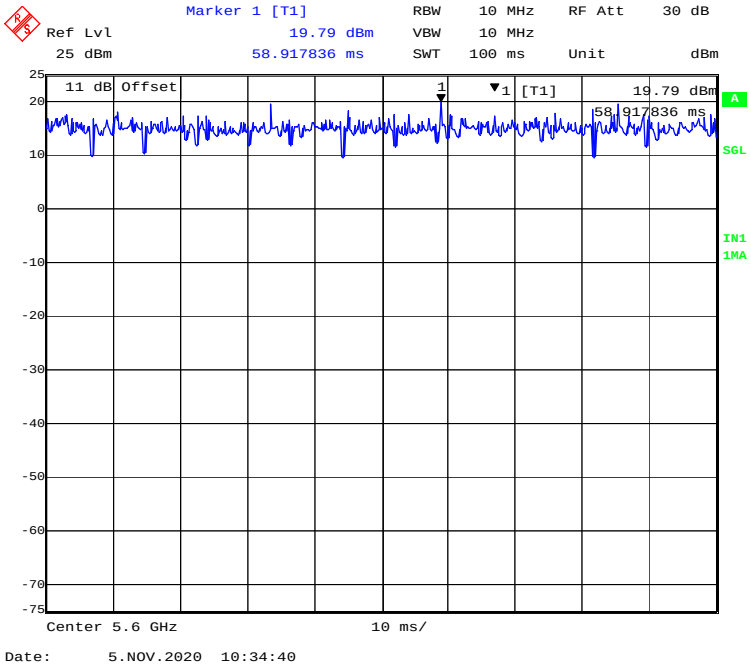


802.11n-HT40 mode

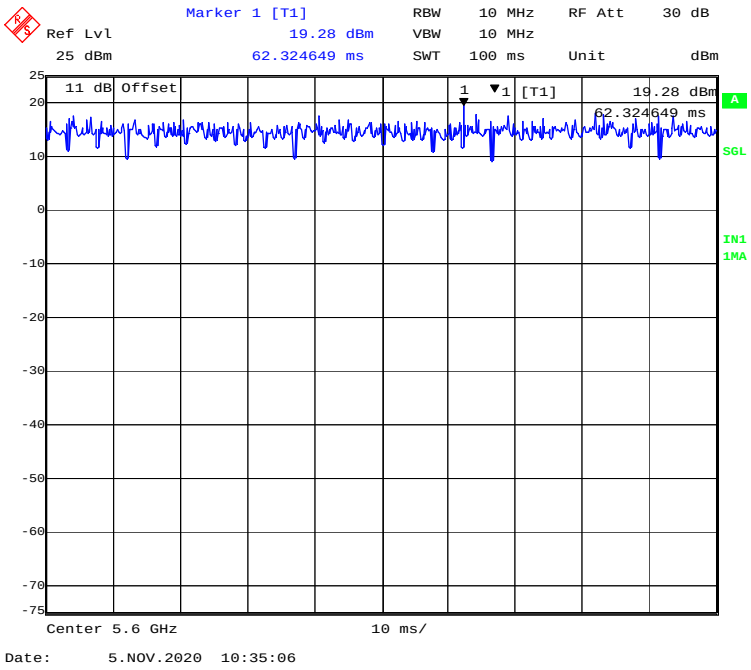


5470MHz-5725MHz Band:

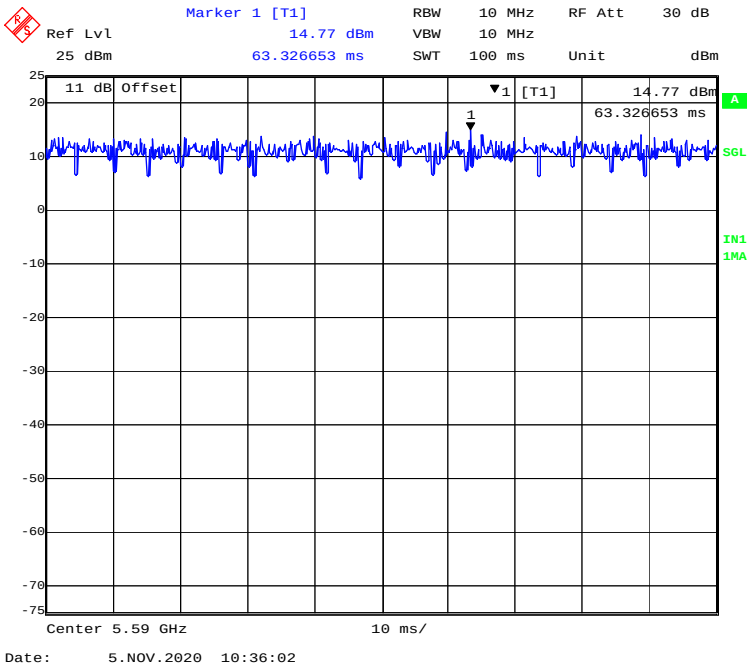
802.11a mode



802.11n-HT20 mode

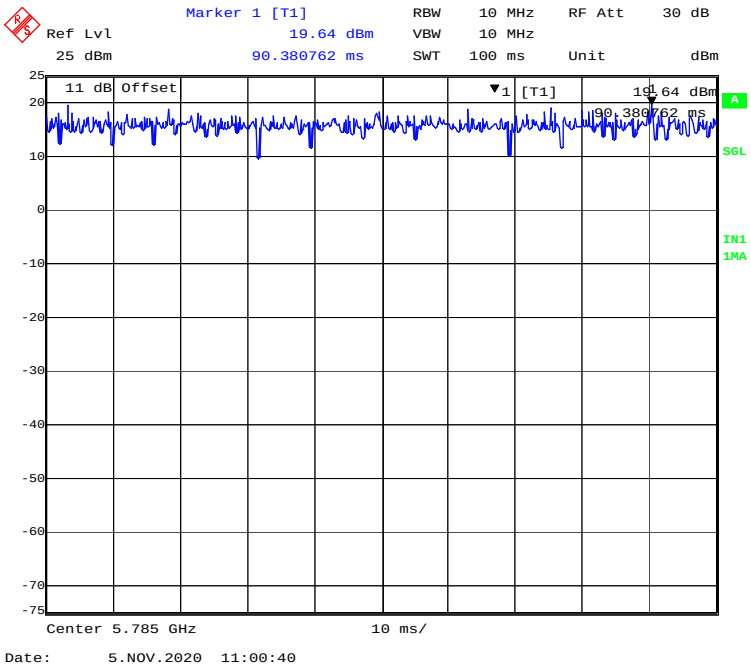


802.11n-HT40 mode

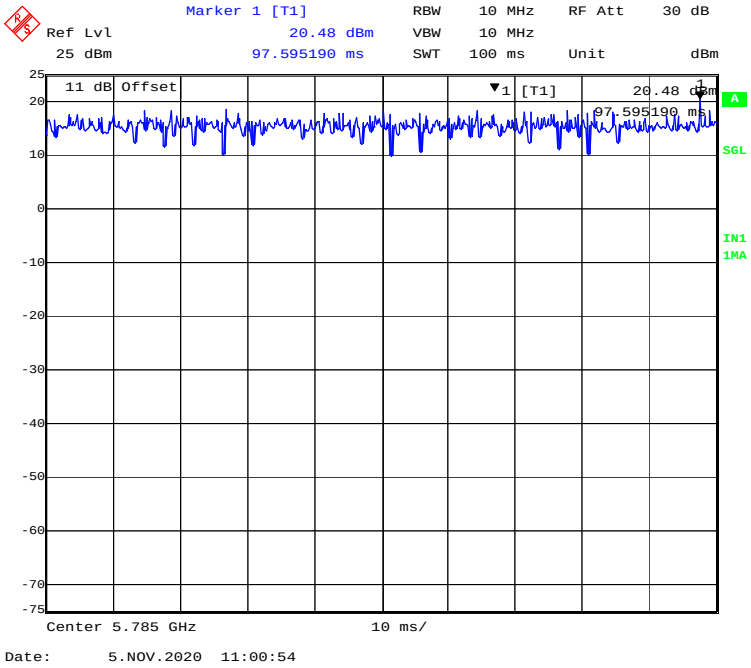


5725MHz-5850MHz Band:

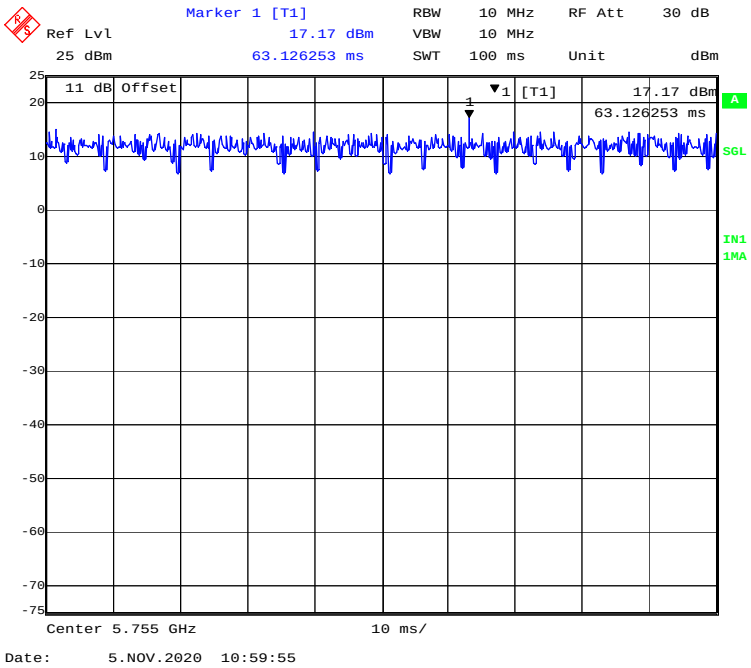
802.11a mode



802.11n-HT20 mode



802.11n-HT40 mode



Mode	Frequency Range (MHz)	Duty Cycle (%)	T (ms)	1/T (kHz)	10log(1/x)
802.11a	5150-5250	100	/	/	0
802.11n-HT20		100	/	/	0
802.11n-HT40		100	/	/	0
802.11a	5250-5350	100	/	/	0
802.11n-HT20		100	/	/	0
802.11n-HT40		100	/	/	0
802.11a	5470-5725	100	/	/	0
802.11n-HT20		100	/	/	0
802.11n-HT40		100	/	/	0
802.11a	5725-5850	100	/	/	0
802.11n-HT20		100	/	/	0
802.11n-HT40		100	/	/	0

Note: "x" means duty cycle.

Equipment Modifications

No modification was made to the EUT.

Support Equipment List and Details

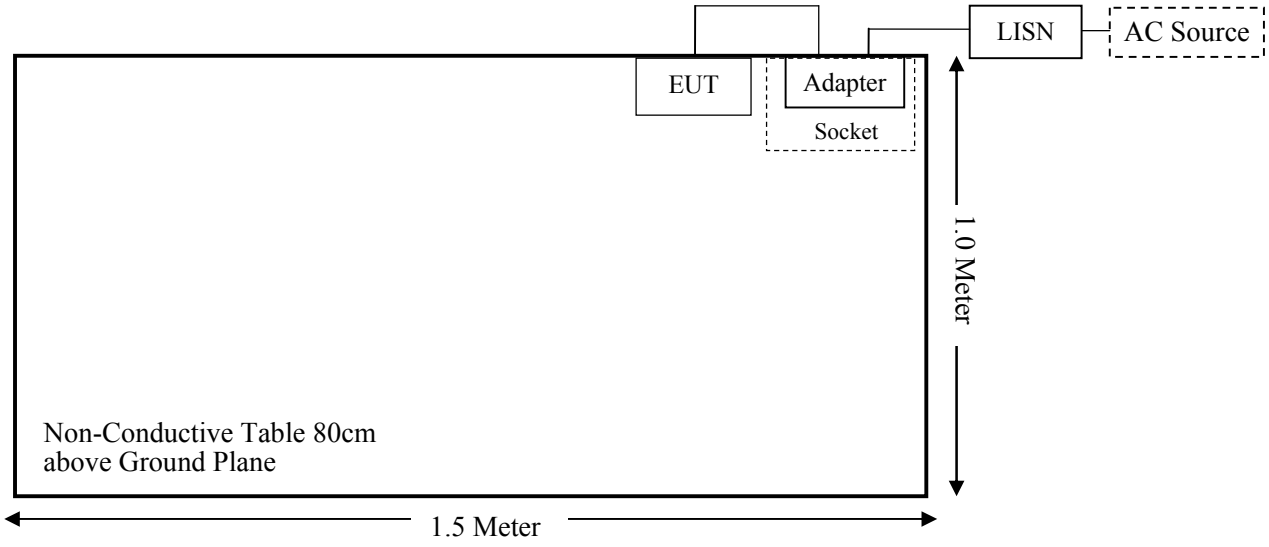
Manufacturer	Description	Model	Serial Number
/	/	/	/

External I/O Cable

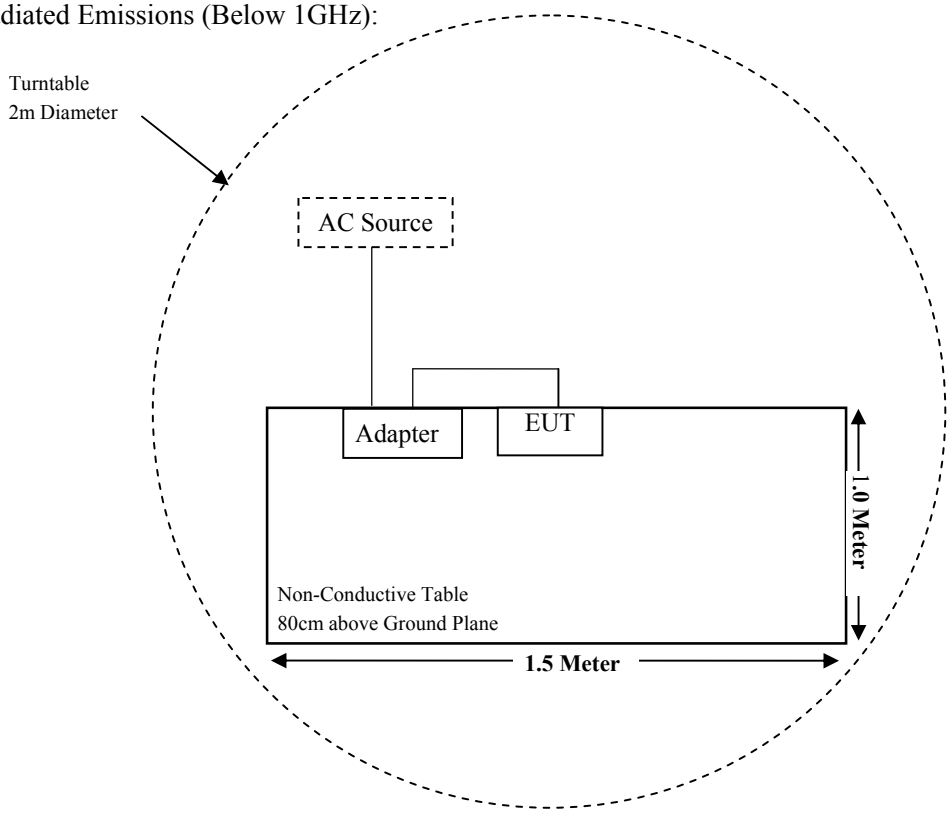
Cable Description	Length (m)	From Port	To
Power Cable	1.0	EUT	Adapter
Power Cable	1.0	Adapter	LISN/AC Source

Block Diagram of Test Setup

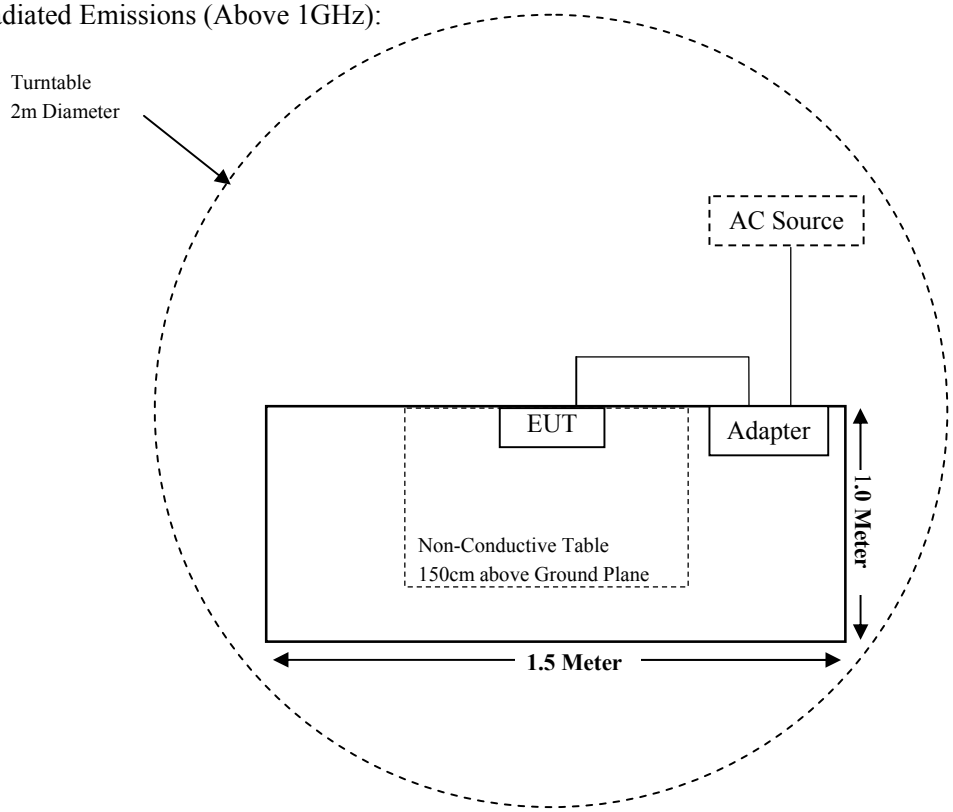
For Conducted Emissions:



For Radiated Emissions (Below 1GHz):



For Radiated Emissions (Above 1GHz):



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1307(b)(1) & §2.1093	RF Exposure Information	Compliant
§15.203	Antenna Requirement	Compliant
§15.207 & §15.407(b) (8)	AC Power Line Conducted Emissions	Compliant
§ 15.205 & §15.209 & §15.407(b) (1), (2), (3), (4), (7), (8),(9)	Undesirable Emission & Restricted Bands	Compliant
§§15.407(a) &§15.407(e)	Emission Bandwidth	Compliant
§15.407(a) (1) (2) (3)	Conducted Transmitter Output Power	Compliant
§15.407(a) (1) (2) (3)	Power Spectral Density	Compliant

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	2019-12-14	2020-12-13
Sunol Sciences	Broadband Antenna	JB3	A090314-1	2020-08-05	2023-08-04
Sonoma Instrument	Pre-amplifier	310N	171205	2020-08-14	2021-08-13
Rohde & Schwarz	Auto test Software	EMC32	100361	/	/
MICRO-COAX	Coaxial Cable	Cable-8	008	2020-08-15	2021-08-14
MICRO-COAX	Coaxial Cable	Cable-9	009	2020-08-15	2021-08-14
MICRO-COAX	Coaxial Cable	Cable-10	010	2020-08-15	2021-08-14
Radiated Emission Test（Chamber 2#）					
Rohde & Schwarz	EMI Test Receiver	ESU40	100207	2020-04-01	2021-03-31
ETS-LINDGREN	Horn Antenna	3115	9207-3900	2020-07-15	2023-07-14
ETS-LINDGREN	Horn Antenna	3116	00084159	2019-12-12	2022-12-11
A.H.Systems,inc	Amplifier	PAM-0118P	512	2020-02-20	2021-02-19
EM Electronics Corporation	Amplifier	EM18G40G	060726	2020-03-22	2021-03-21
MICRO-TRONICS	Band Reject Filter	BRC50703	G094	2020-08-05	2021-08-04
MICRO-TRONICS	Band Reject Filter	BRC50705	G085	2020-08-05	2021-08-04
MICRO-TRONICS	Band Reject Filter	BRC50704	084	2020-08-05	2021-08-04
Narda	Attenuator	10dB	010	2020-08-15	2021-08-14
Rohde & Schwarz	Auto test Software	EMC32	100361	/	/
MICRO-COAX	Coaxial Cable	Cable-6	006	2019-12-12	2020-12-11
MICRO-COAX	Coaxial Cable	Cable-11	011	2020-08-15	2021-08-14
MICRO-COAX	Coaxial Cable	Cable-12	012	2020-08-15	2021-08-14
RF Conducted Test					
Rohde & Schwarz	Signal Analyzer	FSIQ26	836131/0009	2019-12-14	2020-12-13
Rohde & Schwarz	EMI Test Receiver	ESIB26	100146	2019-12-14	2020-12-13
Agilent	Power Meter	N1912A	MY5000492	2020-11-18	2021-11-17
Agilent	Power Sensor	N1921A	MY54210024	2020-11-18	2021-11-17
Narda	Attenuator	10dB	010	2020-08-15	2021-08-14
Beijing Wiseasy	RF Cable	Beijing Wiseasy C01	C01	Each Time	/
Conducted Emission Test					
Rohde & Schwarz	EMI Test Receiver	ESR	1316.3003K03-101746-zn	2020-08-05	2021-08-04
Rohde & Schwarz	LISN	ENV216	101115	2019-12-14	2020-12-13
Audix	Test Software	e3	V9	--	--
Rohde & Schwarz	Pulse limiter	ESH3-Z2	357.8810.52	2020-08-10	2021-08-09
MICRO-COAX	Coaxial Cable	Cable-15	015	2020-08-15	2021-08-14

*** 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 §1.1307(b) & §2.1093 - RF EXPOSURE INFORMATION

Applicable Standard

FCC§1.1307,§2.1093.

Test Result

Compliant, please refer to the SAR report: RKSA200927001-26

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 an FPC antenna for 5G Wi-Fi which the antenna gain is 1.0 dBi, which is permanently attached to the unit, fulfill the requirement of this section. Please refer to the EUT photos.

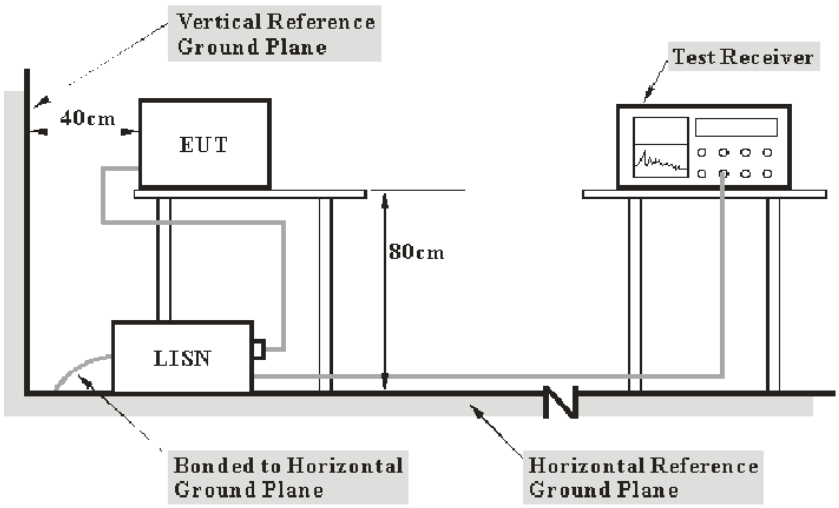
Result: Compliant.

FCC §15.407 (b) (8) §15.207 (a) – AC POWER LINE CONDUCTED EMISSIONS

Applicable Standard

FCC §15.207(a), §15.407(b) (8)

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 LISN.

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

Corrected Factor & Over Limit 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:

Factor (dB) = LISN VDF (dB) + Cable Loss (dB) + Transient Limiter Attenuation (dB)

The "**Over Limit**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over Limit of 7dB means the emission is 7 dB above the limit. The equation for Over Limit calculation is as follows:

Over Limit (dB) = Read level (dBμV) + Factor (dB) - Limit (dBμV)

Test Results Summary

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

Test Data

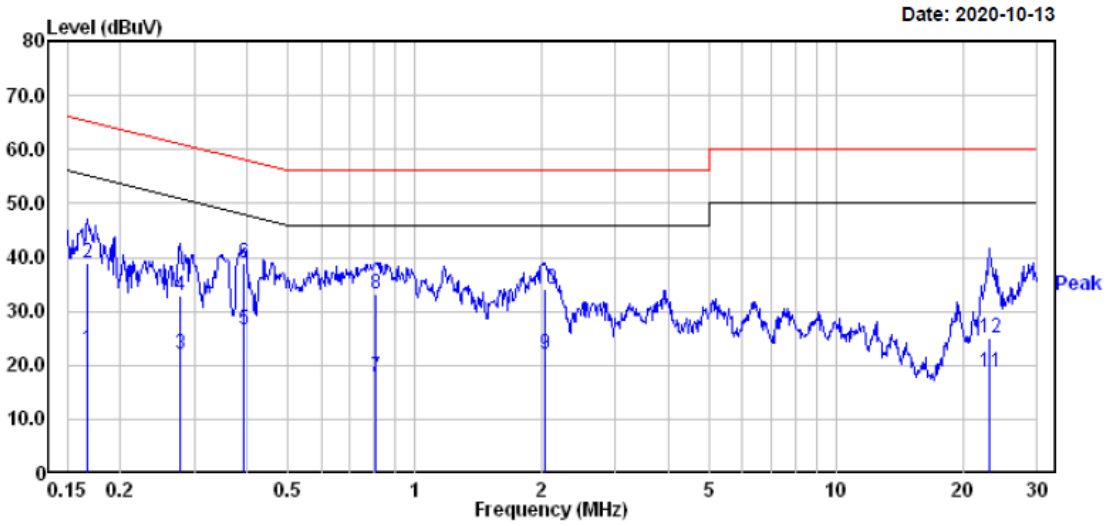
Environmental Conditions

Temperature:	24.7~24.9 ℃
Relative Humidity:	50~52 %
ATM Pressure:	101.0~101.7 kPa

The testing was performed by Jack Jiao from 2020-10-13 to 2020-11-23.

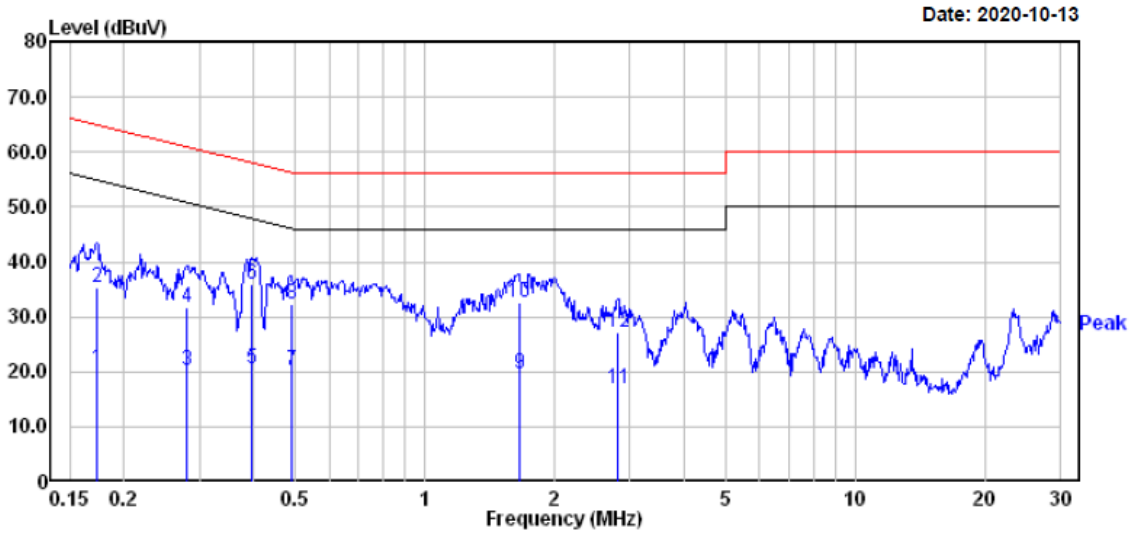
EUT operation mode: Transmitting in 802.11n-HT40 mode low channel of 5150~5250MHz (worst case).

AC 120V/60 Hz, Line



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.168	3.20	19.83	23.03	55.08	-32.05	Average
2	0.168	19.00	19.83	38.83	65.08	-26.25	QP
3	0.277	2.30	19.82	22.12	50.90	-28.78	Average
4	0.277	13.20	19.82	33.02	60.90	-27.88	QP
5	0.393	6.80	19.75	26.55	47.99	-21.44	Average
6	0.393	19.20	19.75	38.95	57.99	-19.04	QP
7	0.804	-2.00	19.70	17.70	46.00	-28.30	Average
8	0.804	13.50	19.70	33.20	56.00	-22.80	QP
9	2.044	2.21	19.79	22.00	46.00	-24.00	Average
10	2.044	14.31	19.79	34.10	56.00	-21.90	QP
11	23.140	-1.01	19.79	18.78	50.00	-31.22	Average
12	23.140	5.19	19.79	24.98	60.00	-35.02	QP

AC 120V/60 Hz, Neutral

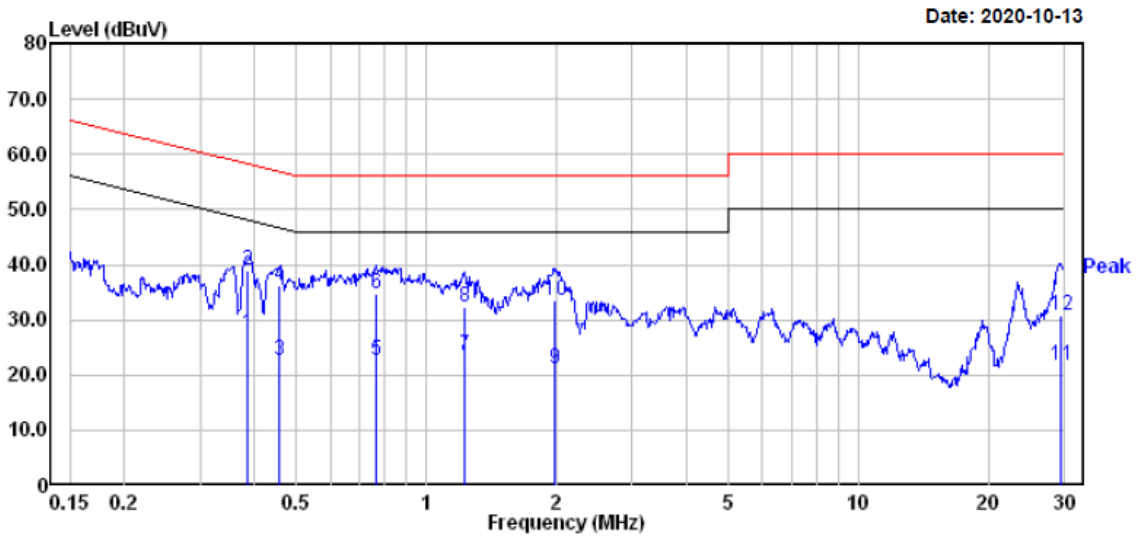


	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.173	0.70	19.83	20.53	54.81	-34.28	Average
2	0.173	15.60	19.83	35.43	64.81	-29.38	QP
3	0.280	0.30	19.82	20.12	50.81	-30.69	Average
4	0.280	11.80	19.82	31.62	60.81	-29.19	QP
5	0.396	0.69	19.75	20.44	47.95	-27.51	Average
6	0.396	16.29	19.75	36.04	57.95	-21.91	QP
7	0.489	0.50	19.76	20.26	46.19	-25.93	Average
8	0.489	12.40	19.76	32.16	56.19	-24.03	QP
9	1.654	-0.20	19.84	19.64	46.00	-26.36	Average
10	1.654	12.70	19.84	32.54	56.00	-23.46	QP
11	2.809	-2.50	19.47	16.97	46.00	-29.03	Average
12	2.809	7.70	19.47	27.17	56.00	-28.83	QP

Note:
1) Factor (dB) = LISN VDF (dB) + Cable Loss (dB) + Transient Limiter Attenuation (dB)
2) Over Limit (dB) = Read level (dBµV) + Factor (dB) - Limit (dBµV)

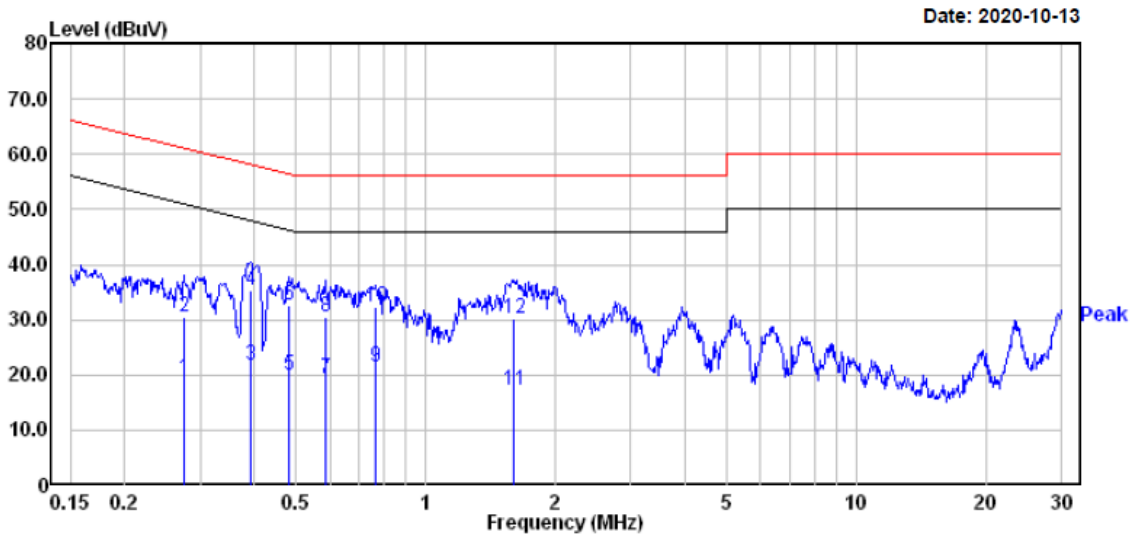
EUT operation mode: Transmitting in 802.11n-HT20 mode high channel of 5250~5350MHz (worst case).

AC 120V/60 Hz, Line



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.385	7.80	19.76	27.56	48.17	-20.61	Average
2	0.385	19.20	19.76	38.96	58.17	-19.21	QP
3	0.459	2.80	19.75	22.55	46.71	-24.16	Average
4	0.459	16.50	19.75	36.25	56.71	-20.46	QP
5	0.763	2.90	19.72	22.62	46.00	-23.38	Average
6	0.763	15.00	19.72	34.72	56.00	-21.28	QP
7	1.229	3.81	19.81	23.62	46.00	-22.38	Average
8	1.229	12.51	19.81	32.32	56.00	-23.68	QP
9	1.980	1.40	19.83	21.23	46.00	-24.77	Average
10	1.980	13.60	19.83	33.43	56.00	-22.57	QP
11	29.527	1.99	19.78	21.77	50.00	-28.23	Average
12	29.527	11.11	19.78	30.89	60.00	-29.11	QP

AC 120V/60 Hz, Neutral

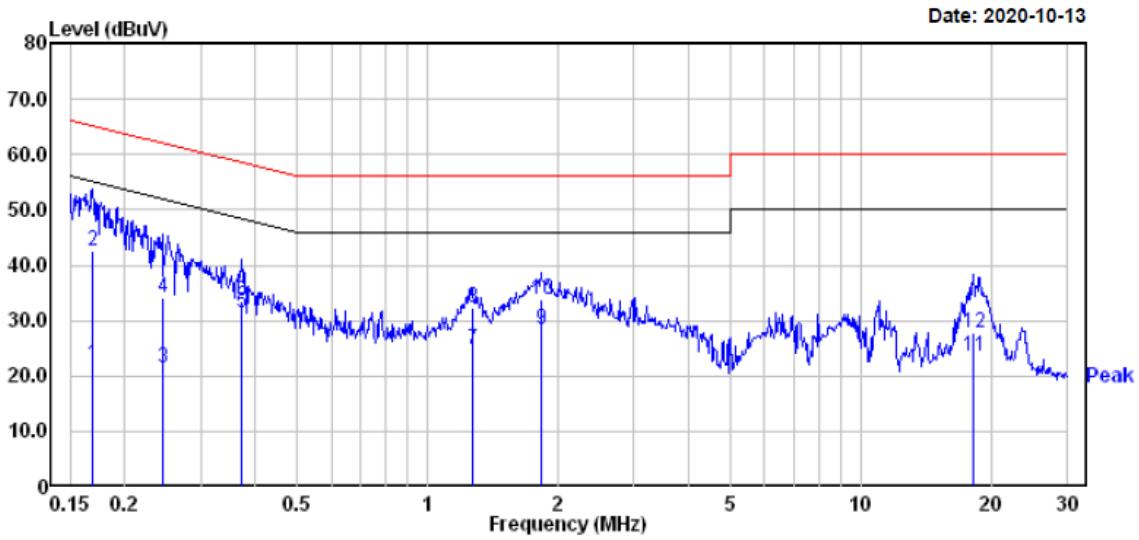


	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.274	-0.50	19.82	19.32	50.98	-31.66	Average
2	0.274	10.70	19.82	30.52	60.98	-30.46	QP
3	0.391	2.10	19.75	21.85	48.03	-26.18	Average
4	0.391	15.70	19.75	35.45	58.03	-22.58	QP
5	0.481	0.10	19.76	19.86	46.32	-26.46	Average
6	0.481	12.90	19.76	32.66	56.32	-23.66	QP
7	0.585	-0.40	19.75	19.35	46.00	-26.65	Average
8	0.585	10.70	19.75	30.45	56.00	-25.55	QP
9	0.767	1.60	19.72	21.32	46.00	-24.68	Average
10	0.767	12.50	19.72	32.22	56.00	-23.78	QP
11	1.602	-2.71	19.85	17.14	46.00	-28.86	Average
12	1.602	10.29	19.85	30.14	56.00	-25.86	QP

Note:
1) Factor (dB) = LISN VDF (dB) + Cable Loss (dB) + Transient Limiter Attenuation (dB)
2) Over Limit (dB) = Read level (dBμV) + Factor (dB) - Limit (dBμV)

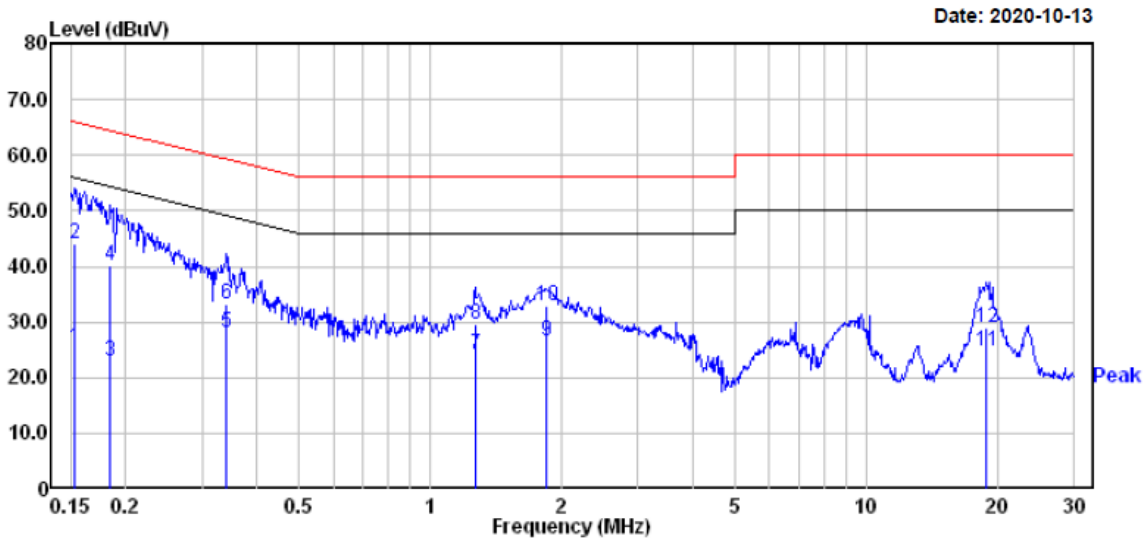
EUT operation mode: Transmitting in 802.11n-HT40 mode low channel of 5470~5725MHz (worst case).

AC 120V/60 Hz, Line



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.169	2.10	19.83	21.93	55.03	-33.10	Average
2	0.169	22.70	19.83	42.53	65.03	-22.50	QP
3	0.244	1.70	19.82	21.52	51.95	-30.43	Average
4	0.244	14.20	19.82	34.02	61.95	-27.93	QP
5	0.373	11.69	19.78	31.47	48.43	-16.96	Average
6	0.373	13.69	19.78	33.47	58.43	-24.96	QP
7	1.269	4.90	19.82	24.72	46.00	-21.28	Average
8	1.269	12.40	19.82	32.22	56.00	-23.78	QP
9	1.829	8.59	19.84	28.43	46.00	-17.57	Average
10	1.829	14.09	19.84	33.93	56.00	-22.07	QP
11	18.232	3.70	19.85	23.55	50.00	-26.45	Average
12	18.232	7.80	19.85	27.65	60.00	-32.35	QP

AC 120V/60 Hz, Neutral

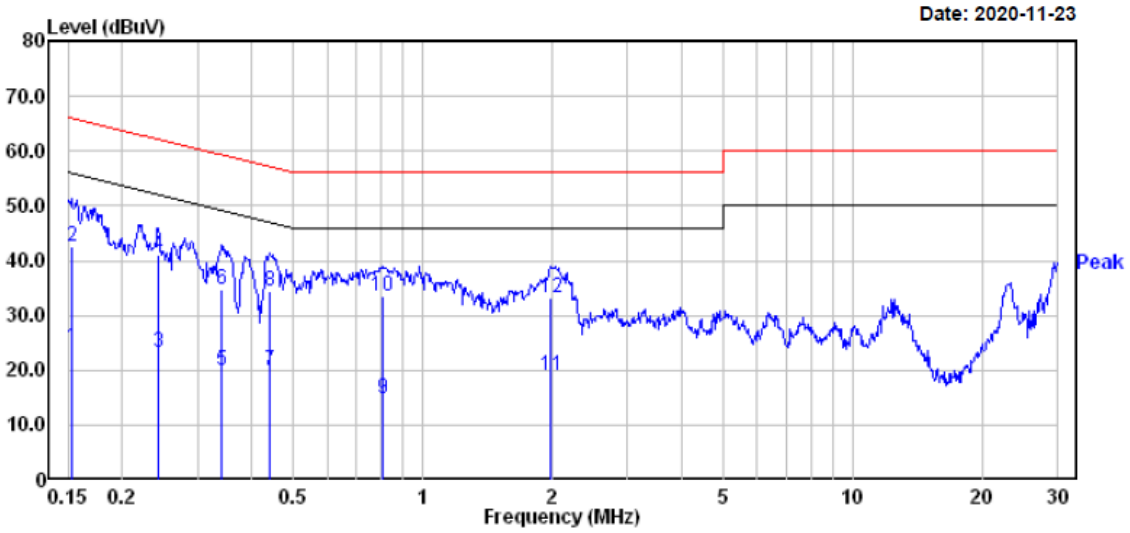


	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.153	5.40	19.82	25.22	55.82	-30.60	Average
2	0.153	24.30	19.82	44.12	65.82	-21.70	QP
3	0.184	2.99	19.82	22.81	54.28	-31.47	Average
4	0.184	20.21	19.82	40.03	64.28	-24.25	QP
5	0.341	8.30	19.81	28.11	49.18	-21.07	Average
6	0.341	13.40	19.81	33.21	59.18	-25.97	QP
7	1.269	4.20	19.82	24.02	46.00	-21.98	Average
8	1.269	9.80	19.82	29.62	56.00	-26.38	QP
9	1.848	6.59	19.84	26.43	46.00	-19.57	Average
10	1.848	13.09	19.84	32.93	56.00	-23.07	QP
11	18.920	4.99	19.90	24.89	50.00	-25.11	Average
12	18.920	9.19	19.90	29.09	60.00	-30.91	QP

Note:
1) Factor (dB) = LISN VDF (dB) + Cable Loss (dB) + Transient Limiter Attenuation (dB)
2) Over Limit (dB) = Read level (dBµV) + Factor (dB) - Limit (dBµV)

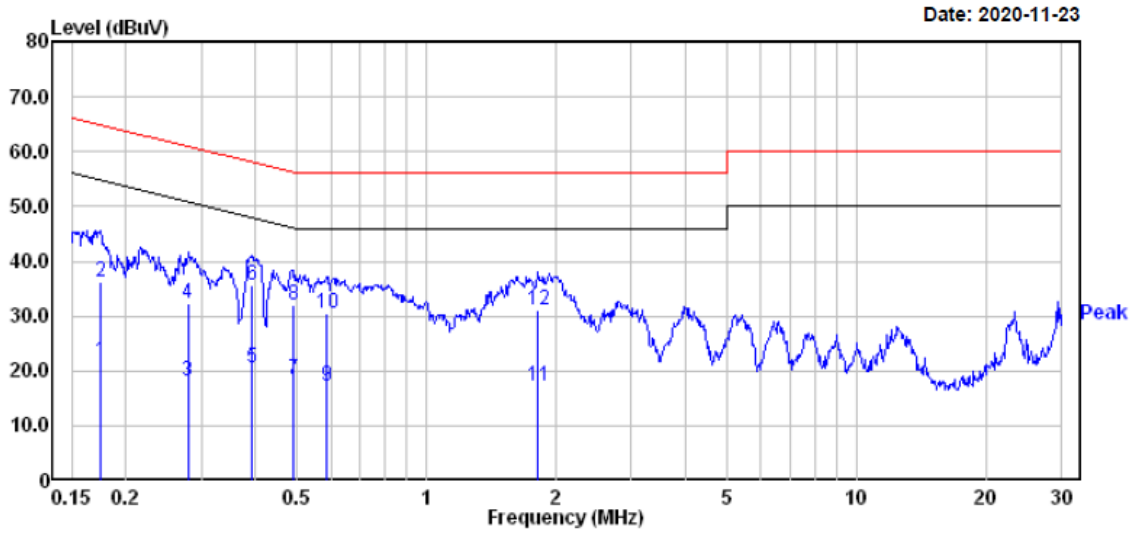
EUT operation mode: Transmitting in 802.11n-HT40 mode high channel of 5725~5850MHz (worst case).

AC 120V/60 Hz, Line



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.152	4.40	19.82	24.22	55.87	-31.65	Average
2	0.152	22.60	19.82	42.42	65.87	-23.45	QP
3	0.243	3.40	19.82	23.22	52.00	-28.78	Average
4	0.243	21.30	19.82	41.12	62.00	-20.88	QP
5	0.341	0.00	19.81	19.81	49.18	-29.37	Average
6	0.341	15.00	19.81	34.81	59.18	-24.37	QP
7	0.442	0.10	19.75	19.85	47.02	-27.17	Average
8	0.442	14.80	19.75	34.55	57.02	-22.47	QP
9	0.804	-4.90	19.70	14.80	46.00	-31.20	Average
10	0.804	13.70	19.70	33.40	56.00	-22.60	QP
11	1.980	-0.90	19.83	18.93	46.00	-27.07	Average
12	1.980	13.50	19.83	33.33	56.00	-22.67	QP

AC 120V/60 Hz, Neutral



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.174	1.80	19.83	21.63	54.77	-33.14	Average
2	0.174	16.40	19.83	36.23	64.77	-28.54	QP
3	0.279	-1.60	19.82	18.22	50.85	-32.63	Average
4	0.279	12.50	19.82	32.32	60.85	-28.53	QP
5	0.391	0.80	19.75	20.55	48.03	-27.48	Average
6	0.391	15.80	19.75	35.55	58.03	-22.48	QP
7	0.489	-1.30	19.76	18.46	46.19	-27.73	Average
8	0.489	12.30	19.76	32.06	56.19	-24.13	QP
9	0.589	-2.50	19.75	17.25	46.00	-28.75	Average
10	0.589	10.70	19.75	30.45	56.00	-25.55	QP
11	1.819	-2.51	19.84	17.33	46.00	-28.67	Average
12	1.819	11.39	19.84	31.23	56.00	-24.77	QP

Note:
1) Factor (dB) = LISN VDF (dB) + Cable Loss (dB) + Transient Limiter Attenuation (dB)
2) Over Limit (dB) = Read level (dBµV) + Factor (dB) - Limit (dBµV)

§15.205 & §15.209 & §15.407(B) (1), (2), (3), (4), (7), (8), (9) – UNDESIRABLE EMISSION & RESTRICTED BANDS

Applicable Standard

FCC §15.407 (b) (1), (2), (3), (4), (7), (8), (9); §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 e.i.r.p. of −27 dBm/MHz.

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

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

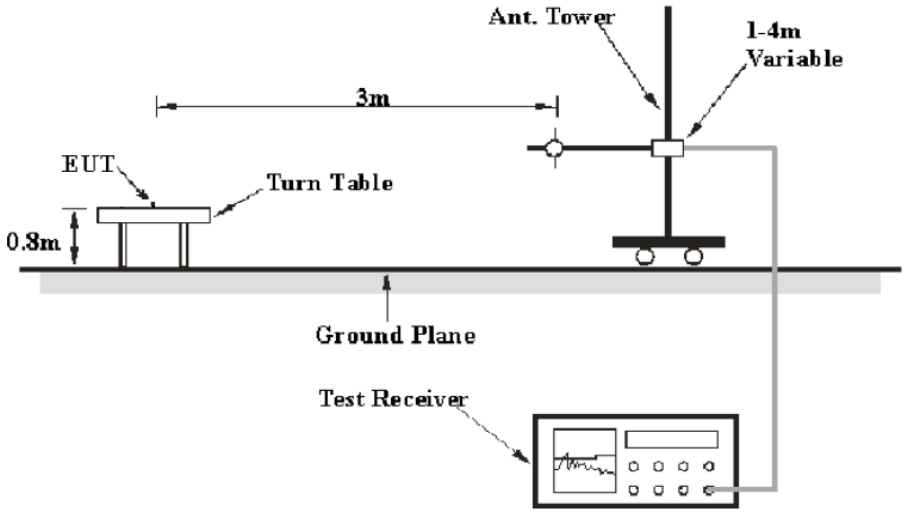
For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to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

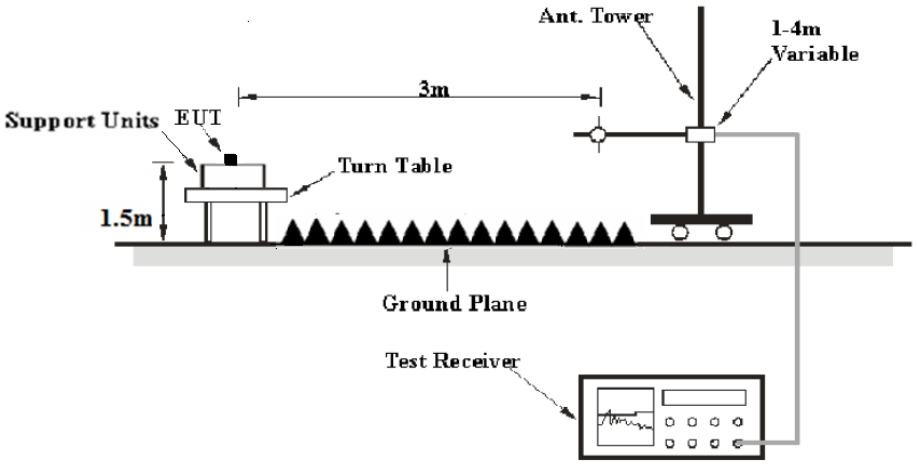
According to 789033 D02 General UNII Test Procedures New Rules v02r01, emission shall be computed as: E [dBμV/m] = EIRP [dBm] + 95.2, for d = 3 meters.

EUT Setup

Below 1 GHz:



1 GHz-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 AC floor outlet.

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

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 –Corrected Amplitude

Test Data

Environmental Conditions

Temperature:	24.7~24.9 ℃
Relative Humidity:	53~54 %
ATM Pressure:	101.1~101.7 kPa

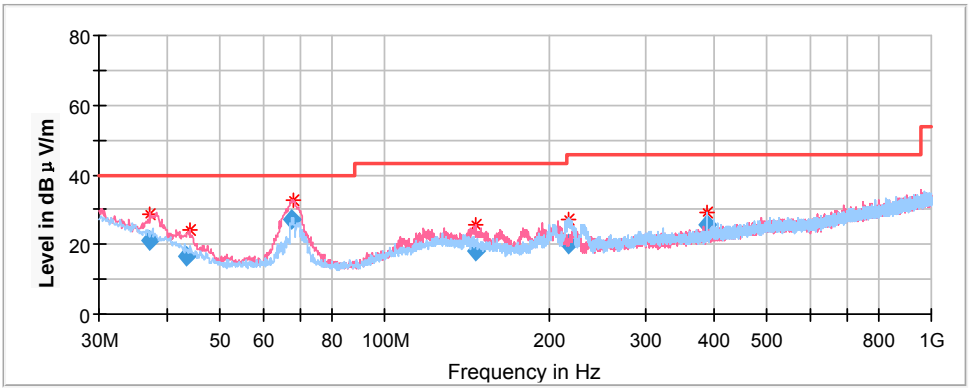
The testing was performed by Jack Jiao from 2020-10-04 to 2020-12-02.

Test Mode: Transmitting

Spurious Emission Test

30MHz-1GHz(5150-5250MHz Band):

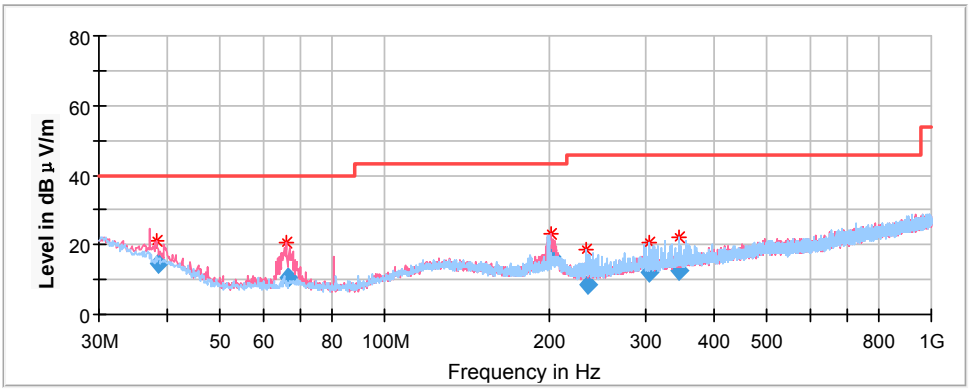
Pre-scan with 802.11a, 802.11n-HT20 and 802.11n-HT40 modes of operation in the X,Y and Z axes of orientation, ***the worst case 802.11n-HT40 mode low channel*** *in X-axis of orientation was recorded*



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)				
37.083700	20.92	100.0	V	180.0	-9.3	40.00	19.08
43.267000	16.81	100.0	V	198.0	-13.5	40.00	23.19
67.798900	27.13	100.0	V	138.0	-17.2	40.00	12.87
146.504600	18.03	100.0	V	265.0	-12.2	43.50	25.47
216.164050	19.96	100.0	H	95.0	-13.1	46.00	26.04
387.816850	25.49	100.0	H	95.0	-8.9	46.00	20.51

30MHz-1GHz(5250-5350MHz Band):

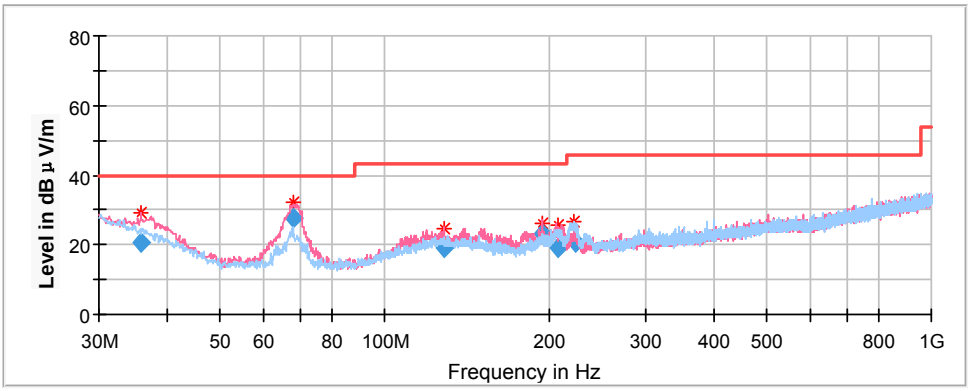
Pre-scan with 802.11a, 802.11n-HT20 and 802.11n-HT40 modes of operation in the X,Y and Z axes of orientation, ***the worst case 802.11n-HT20 mode high channel*** *in X-axis of orientation was recorded*



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)				
38.423200	14.51	100.0	V	241.0	-16.2	40.00	25.49
66.818600	10.70	100.0	V	292.0	-23.3	40.00	29.30
202.024750	16.62	100.0	V	0.0	-17.7	43.50	26.88
234.566000	8.72	200.0	H	191.0	-19.6	46.00	37.28
304.218500	11.87	100.0	H	295.0	-16.9	46.00	34.13
346.275850	12.53	100.0	H	91.0	-15.9	46.00	33.47

30MHz-1GHz(5470-5725MHz Band):

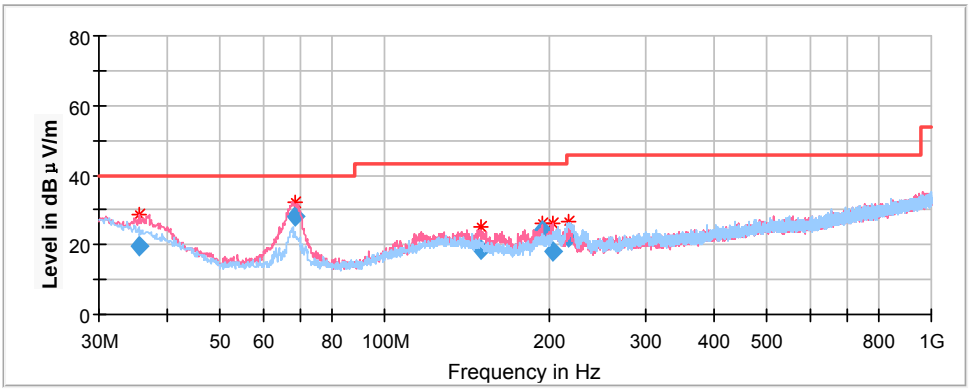
Pre-scan with 802.11a, 802.11n-HT20 and 802.11n-HT40 modes of operation in the X,Y and Z axes of orientation, ***the worst case 802.11n-HT40 mode low channel*** *in X-axis of orientation was recorded*



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)				
35.818850	20.44	100.0	V	167.0	-8.1	40.00	19.56
67.924650	27.82	100.0	V	64.0	-17.2	40.00	12.18
128.088600	19.09	100.0	V	252.0	-11.3	43.50	24.41
193.944050	22.92	100.0	V	270.0	-11.9	43.50	20.58
207.703100	19.01	100.0	V	77.0	-12.2	43.50	24.49
222.741150	20.70	200.0	H	106.0	-13.7	46.00	25.30

30MHz-1GHz(5725-5850MHz 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 802.11n-HT40 mode high channel*** *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)				
35.637000	19.84	100.0	V	41.0	-7.7	40.00	20.16
68.573200	28.03	100.0	V	77.0	-17.2	40.00	11.97
149.894100	18.47	100.0	V	252.0	-12.3	43.50	25.03
193.915550	23.91	100.0	V	36.0	-11.9	43.50	19.59
202.583700	18.23	100.0	V	101.0	-11.7	43.50	25.27
217.188550	22.20	200.0	H	108.0	-13.2	46.00	23.80

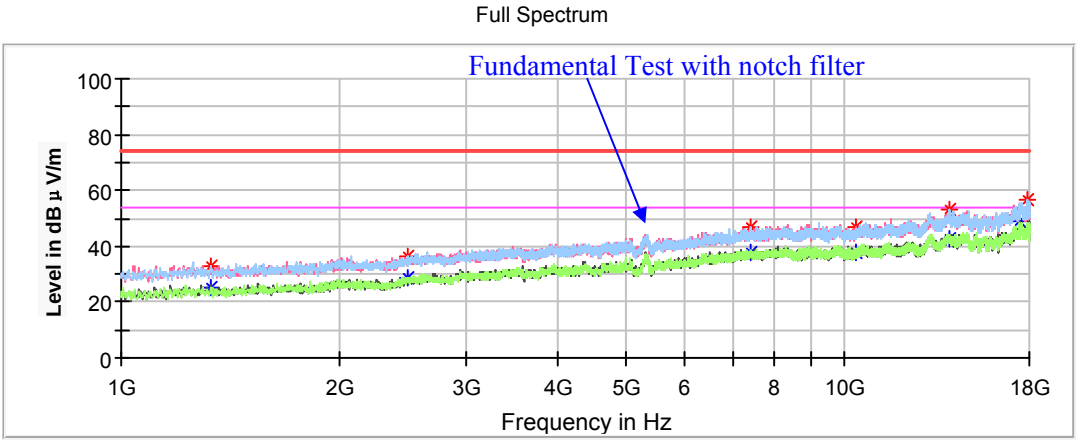
1GHz-18GHz(5150-5250MHz Band):

802.11a Mode:

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

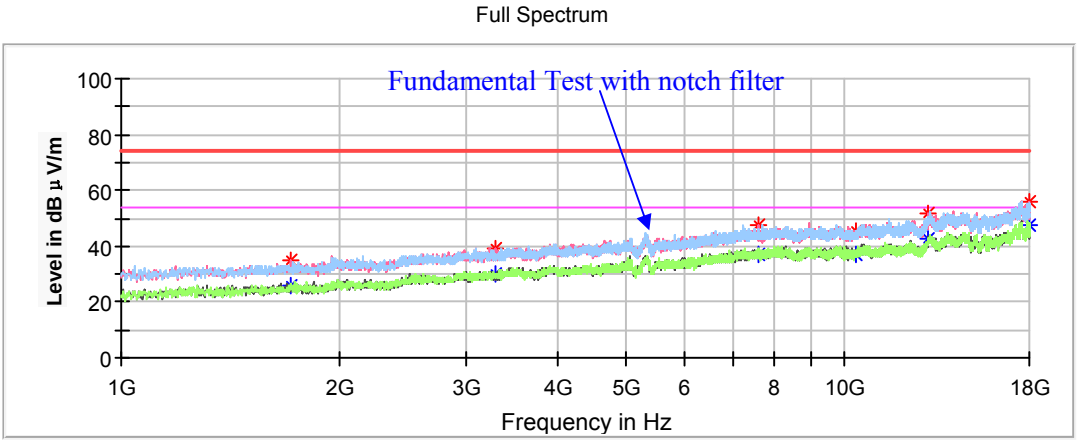
Note:
1. This test was performed with the 5150-5350MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5180MHz



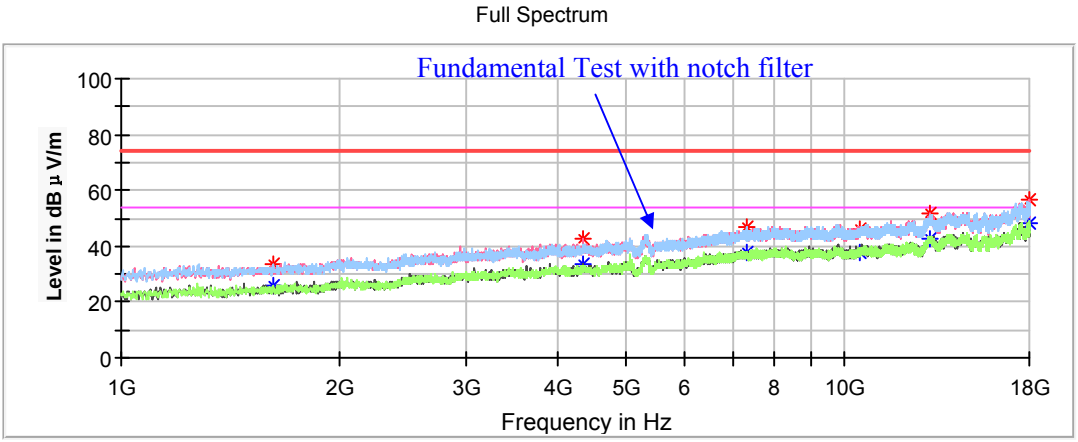
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1328.100000	---	25.38	150.0	H	309.0	-17.3	54.00	28.62
1328.100000	33.11	---	150.0	H	309.0	-17.3	74.00	40.89
2492.600000	---	28.54	150.0	V	297.0	-12.5	54.00	25.46
2492.600000	36.69	---	150.0	V	297.0	-12.5	74.00	37.31
7414.100000	---	38.08	150.0	H	144.0	0.8	54.00	15.92
7414.100000	47.08	---	150.0	H	144.0	0.8	74.00	26.92
10368.700000	46.76	---	150.0	V	0.0	2.2	68.20	21.44
13948.900000	53.33	---	150.0	H	335.0	6.1	68.20	14.87
17937.100000	---	49.30	150.0	V	284.0	8.9	54.00	4.70
17937.100000	56.29	---	150.0	V	284.0	8.9	74.00	17.71

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)				
1717.400000	35.16	---	150.0	V	51.0	-15.5	68.20	33.04
3298.400000	38.84	---	150.0	V	297.0	-9.3	68.20	29.36
7604.500000	---	37.01	150.0	V	165.0	1.2	54.00	16.99
7604.500000	47.33	---	150.0	V	165.0	1.2	74.00	26.67
10394.200000	45.49	---	150.0	V	51.0	2.2	68.20	22.71
13056.400000	51.94	---	150.0	V	26.0	5.3	68.20	16.26
17952.400000	---	47.44	150.0	V	1.0	8.8	54.00	6.56
17952.400000	55.99	---	150.0	V	1.0	8.8	74.00	18.01

High Channel: 5240MHz



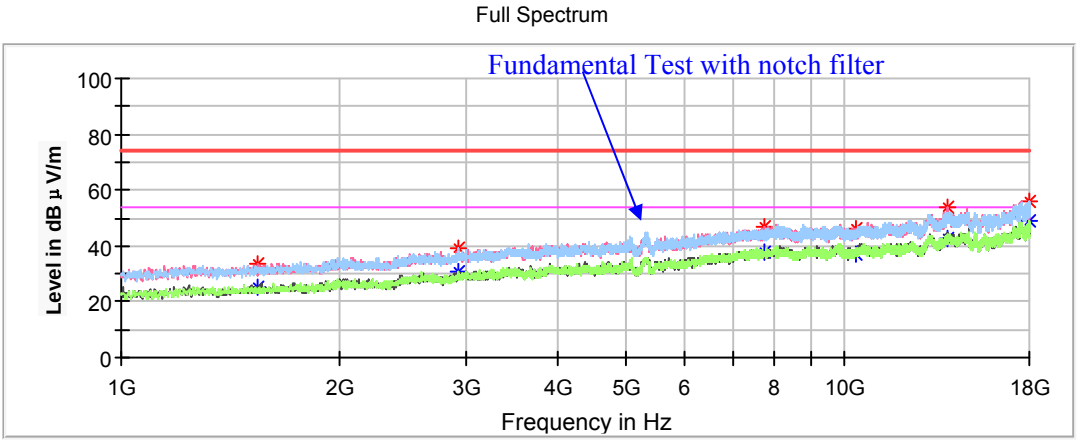
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1618.800000	---	25.91	150.0	H	130.0	-15.9	54.00	28.09
1618.800000	33.82	---	150.0	H	130.0	-15.9	74.00	40.18
4354.100000	---	33.66	150.0	V	21.0	-6.4	54.00	20.34
4354.100000	42.38	---	150.0	V	21.0	-6.4	74.00	31.62
7337.600000	---	37.51	150.0	H	350.0	0.7	54.00	16.49
7337.600000	46.96	---	150.0	H	350.0	0.7	74.00	27.04
10480.900000	46.13	---	150.0	V	64.0	2.3	68.20	22.07
13098.900000	51.68	---	150.0	V	128.0	5.3	68.20	16.52
17949.000000	---	47.92	150.0	V	115.0	8.8	54.00	6.08
17949.000000	56.37	---	150.0	V	115.0	8.8	74.00	17.63

802.11n-HT20 Mode:

*Pre-scan with X,Y and Z axes of orientation, the worst case **X-axis of orientation** was recorded*

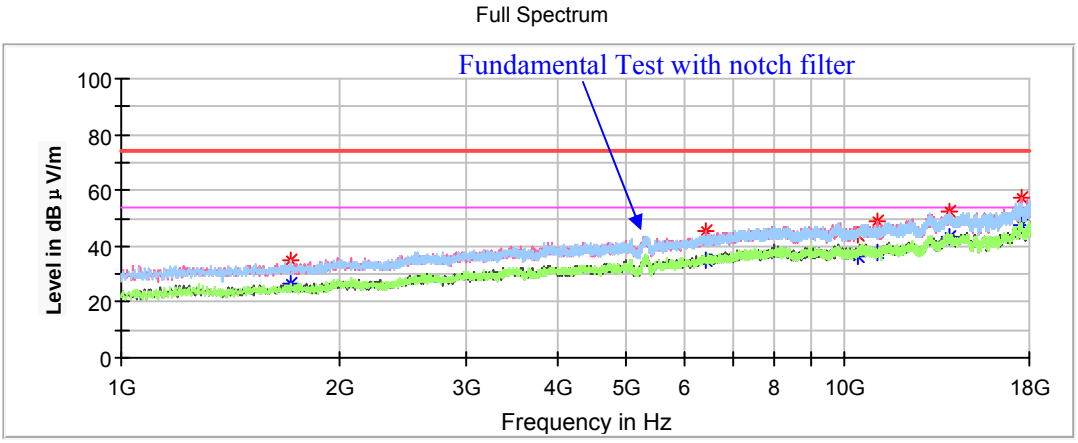
Note:
1. This test was performed with the 5150-5350MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5180MHz



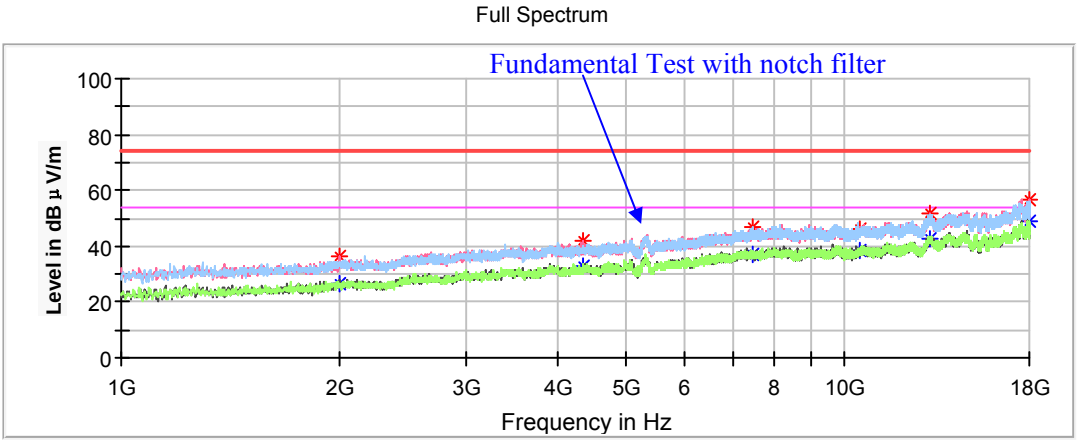
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1547.400000	---	25.07	150.0	V	192.0	-16.2	54.00	28.93
1547.400000	33.27	---	150.0	V	192.0	-16.2	74.00	40.73
2931.200000	39.14	---	150.0	H	245.0	-10.4	68.20	29.06
7733.700000	---	37.75	150.0	V	179.0	1.4	54.00	16.25
7733.700000	47.18	---	150.0	V	179.0	1.4	74.00	26.82
10361.900000	45.85	---	150.0	V	103.0	2.2	68.20	22.35
13889.400000	53.53	---	150.0	V	65.0	6.0	68.20	14.67
17959.200000	---	49.21	150.0	V	15.0	8.8	54.00	4.79
17959.200000	56.06	---	150.0	V	15.0	8.8	74.00	17.94

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)				
1717.400000	35.11	---	150.0	H	64.0	-15.5	68.20	33.09
6431.500000	45.13	---	150.0	V	73.0	-1.4	68.20	23.07
10401.000000	43.89	---	150.0	V	271.0	2.2	68.20	24.31
11111.600000	---	37.95	150.0	H	37.0	2.9	54.00	16.05
11111.600000	48.99	---	150.0	H	37.0	2.9	74.00	25.01
13981.200000	52.11	---	150.0	V	257.0	6.1	68.20	16.09
17534.200000	57.01	---	150.0	V	257.0	8.9	68.20	11.19

High Channel: 5240MHz



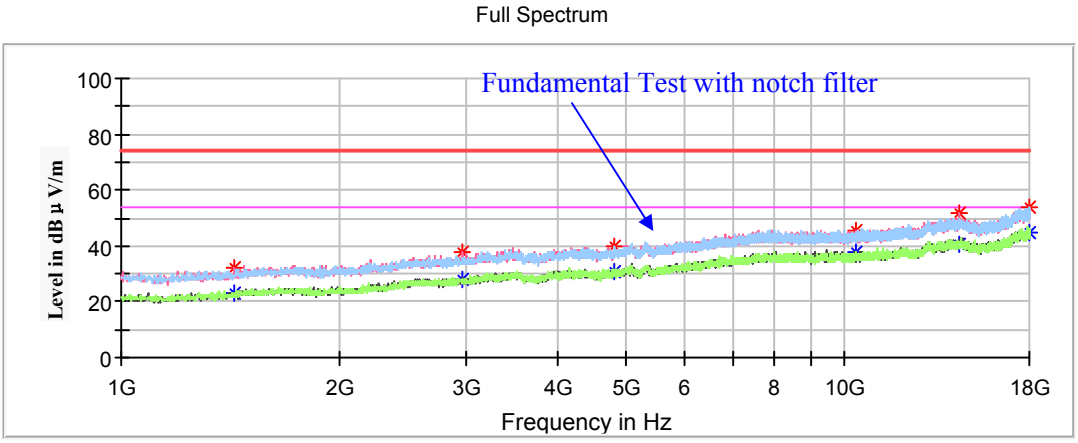
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
2006.400000	36.24	---	150.0	V	270.0	-14.4	68.20	31.96
4350.700000	---	32.71	150.0	H	182.0	-6.4	54.00	21.29
4350.700000	42.09	---	150.0	H	182.0	-6.4	74.00	31.91
7477.000000	---	37.07	150.0	V	345.0	1.0	54.00	16.93
7477.000000	46.68	---	150.0	V	345.0	1.0	74.00	27.32
10477.500000	45.94	---	150.0	V	115.0	2.3	68.20	22.26
13122.700000	51.45	---	150.0	V	166.0	5.3	68.20	16.75
17959.200000	---	48.84	150.0	H	117.0	8.8	54.00	5.16
17959.200000	56.78	---	150.0	H	117.0	8.8	74.00	17.22

802.11n-HT40 Mode:

*Pre-scan with X,Y and Z axes of orientation, the worst case **X-axis of orientation** was recorded*

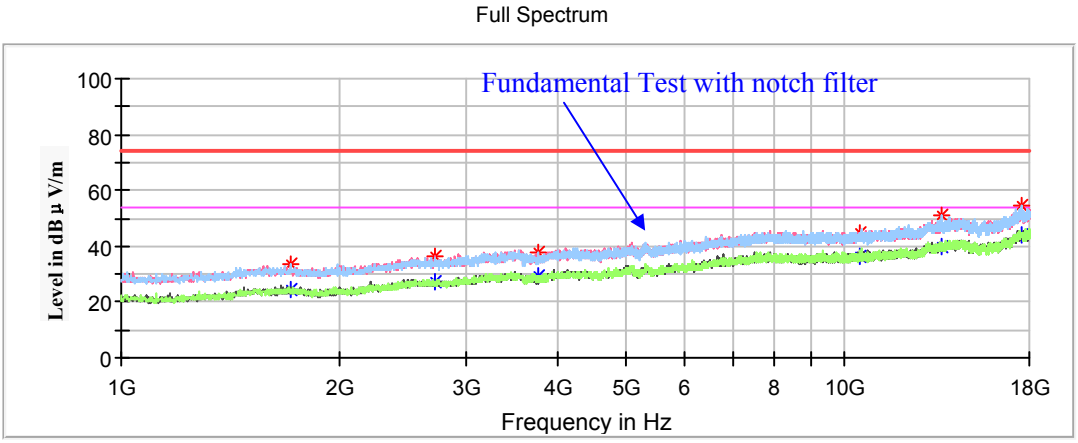
Note:
1. This test was performed with the 5150-5350MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

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)				
1435.200000	31.84	---	200.0	V	276.0	-16.7	74.00	42.16
1435.200000	---	23.08	200.0	V	276.0	-16.7	54.00	30.92
2953.300000	37.67	---	150.0	V	114.0	-10.3	68.20	30.53
4816.500000	---	30.50	150.0	H	218.0	-5.6	54.00	23.50
4816.500000	39.51	---	150.0	H	218.0	-5.6	74.00	34.49
10375.500000	45.30	---	200.0	V	187.0	2.2	68.20	22.90
14385.800000	51.57	---	150.0	V	76.0	6.4	68.20	16.63
17954.100000	---	44.96	200.0	H	154.0	8.8	54.00	9.04
17954.100000	53.81	---	200.0	H	154.0	8.8	74.00	20.19

Middle 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)				
1717.400000	33.58	---	150.0	H	180.0	-15.5	68.20	34.62
2718.700000	---	27.07	200.0	V	296.0	-11.4	54.00	26.93
2718.700000	36.67	---	200.0	V	296.0	-11.4	74.00	37.33
3777.800000	---	29.19	150.0	H	63.0	-7.8	54.00	24.81
3777.800000	37.57	---	150.0	H	63.0	-7.8	74.00	36.43
10462.200000	44.55	---	200.0	H	136.0	2.3	68.20	23.65
13602.100000	50.82	---	200.0	H	244.0	5.8	68.20	17.38
17544.400000	54.37	---	150.0	H	36.0	8.9	68.20	13.83

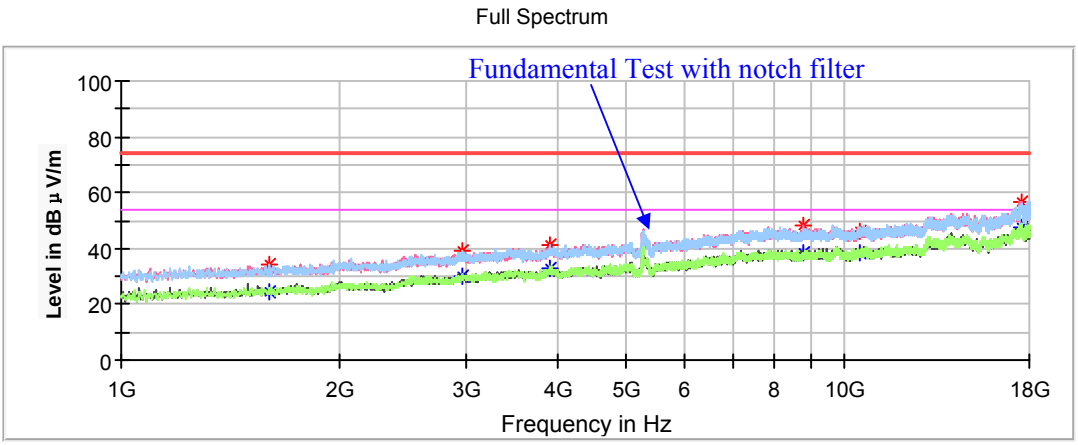
1GHz-18GHz(5250-5350MHz Band):

802.11a Mode:

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

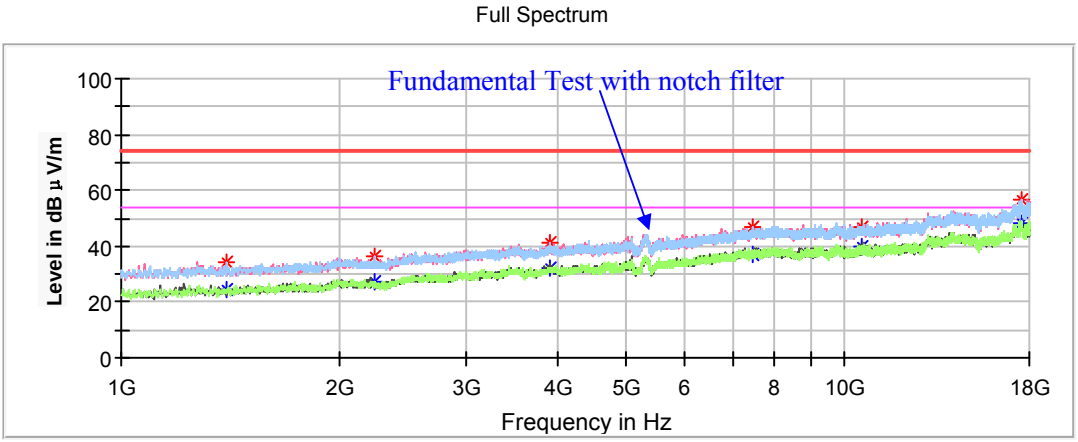
Note:
1. This test was performed with the 5150-5350MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5260MHz



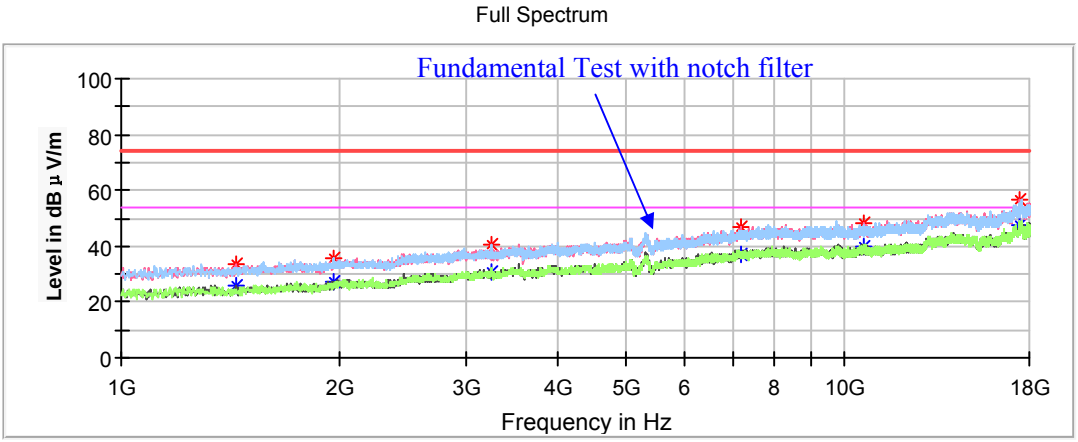
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1603.500000	---	24.66	200.0	H	288.0	-16.0	54.00	29.34
1603.500000	34.16	---	200.0	H	288.0	-16.0	74.00	39.84
2956.700000	39.23	---	150.0	H	179.0	-10.3	68.20	28.97
3912.100000	---	33.11	150.0	H	77.0	-7.3	54.00	20.89
3912.100000	41.33	---	150.0	H	77.0	-7.3	74.00	32.67
8748.600000	48.17	---	200.0	V	0.0	1.6	68.20	20.03
10521.700000	45.88	---	150.0	V	322.0	2.3	68.20	22.32
17576.700000	56.51	---	200.0	V	309.0	8.9	68.20	11.69

Middle Channel: 5280MHz



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)				
1401.200000	---	24.39	150.0	V	283.0	-16.9	54.00	29.61
1401.200000	34.17	---	150.0	V	283.0	-16.9	74.00	39.83
2235.900000	---	26.94	200.0	H	76.0	-13.5	54.00	27.06
2235.900000	36.52	---	200.0	H	76.0	-13.5	74.00	37.48
3922.300000	---	32.43	200.0	H	24.0	-7.3	54.00	21.57
3922.300000	41.30	---	200.0	H	24.0	-7.3	74.00	32.70
7480.400000	---	37.29	200.0	H	322.0	1.0	54.00	16.71
7480.400000	47.05	---	200.0	H	322.0	1.0	74.00	26.95
10560.800000	46.65	---	200.0	V	270.0	2.4	68.20	21.55
17524.000000	56.49	---	150.0	V	116.0	8.9	68.20	11.71

High Channel: 5320MHz



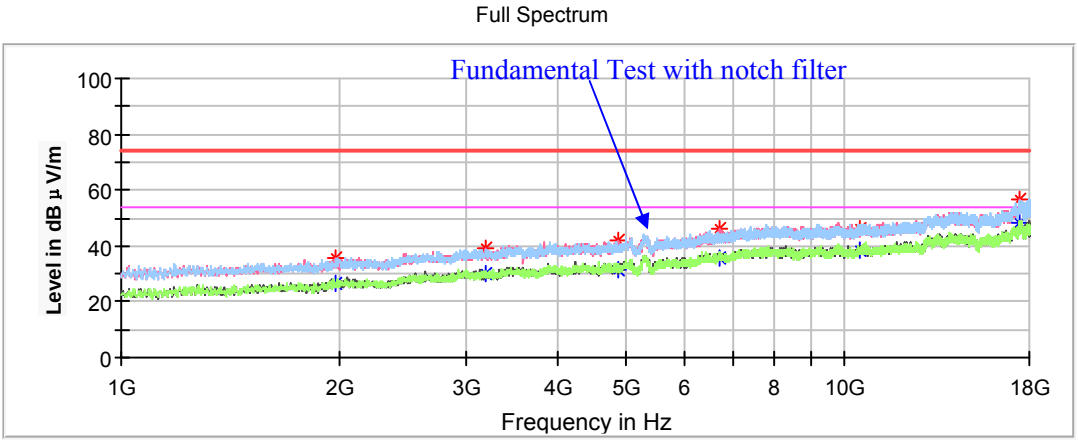
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1438.600000	---	25.73	150.0	V	0.0	-16.7	54.00	28.27
1438.600000	33.38	---	150.0	V	0.0	-16.7	74.00	40.62
1969.000000	35.71	---	150.0	H	335.0	-14.6	68.20	32.49
3252.500000	40.24	---	200.0	H	2.0	-9.5	68.20	27.96
7186.300000	46.51	---	200.0	V	0.0	0.3	68.20	21.69
10635.600000	48.30	---	150.0	V	301.0	2.5	74.00	25.70
10635.600000	---	39.54	150.0	V	301.0	2.5	54.00	14.46
17495.100000	56.72	---	150.0	V	90.0	8.9	68.20	11.48

802.11n-HT20 Mode:

*Pre-scan with X,Y and Z axes of orientation, the worst case **X-axis of orientation** was recorded*

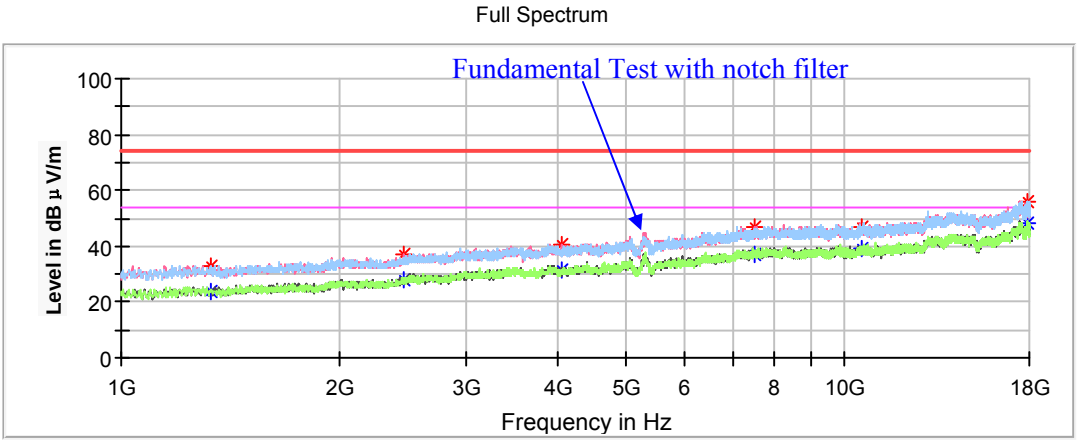
Note:
1. This test was performed with the 5150-5350MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5260MHz



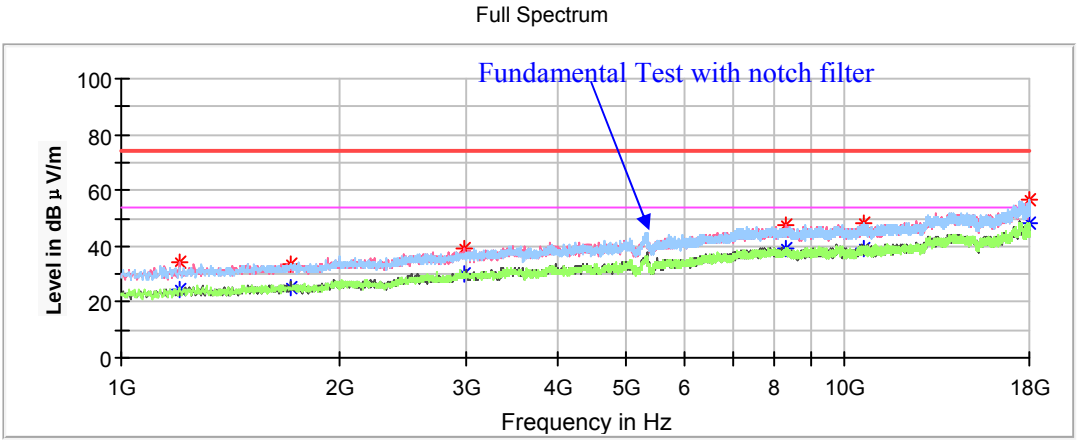
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1972.400000	35.43	---	200.0	V	103.0	-14.6	68.20	32.77
3181.100000	39.22	---	200.0	V	352.0	-9.6	68.20	28.98
4877.700000	---	31.69	150.0	H	0.0	-5.4	54.00	22.31
4877.700000	41.64	---	150.0	H	0.0	-5.4	74.00	32.36
6701.800000	46.37	---	150.0	V	157.0	-0.7	68.20	21.83
10520.000000	46.35	---	150.0	H	335.0	2.3	68.20	21.85
17495.100000	56.79	---	200.0	V	90.0	8.9	68.20	11.41

Middle Channel: 5280MHz



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)				
1329.800000	---	23.95	200.0	V	5.0	-17.3	54.00	30.05
1329.800000	33.20	---	200.0	V	5.0	-17.3	74.00	40.80
2463.700000	37.02	---	200.0	V	152.0	-12.6	68.20	31.18
4066.800000	---	31.12	150.0	H	3.0	-6.9	54.00	22.88
4066.800000	40.32	---	150.0	H	3.0	-6.9	74.00	33.68
7494.000000	---	37.40	150.0	V	277.0	1.0	54.00	16.60
7494.000000	47.03	---	150.0	V	277.0	1.0	74.00	26.97
10554.000000	46.51	---	150.0	H	199.0	2.4	68.20	21.69
17940.500000	55.99	---	200.0	H	350.0	8.8	68.20	12.21

High Channel: 5320MHz



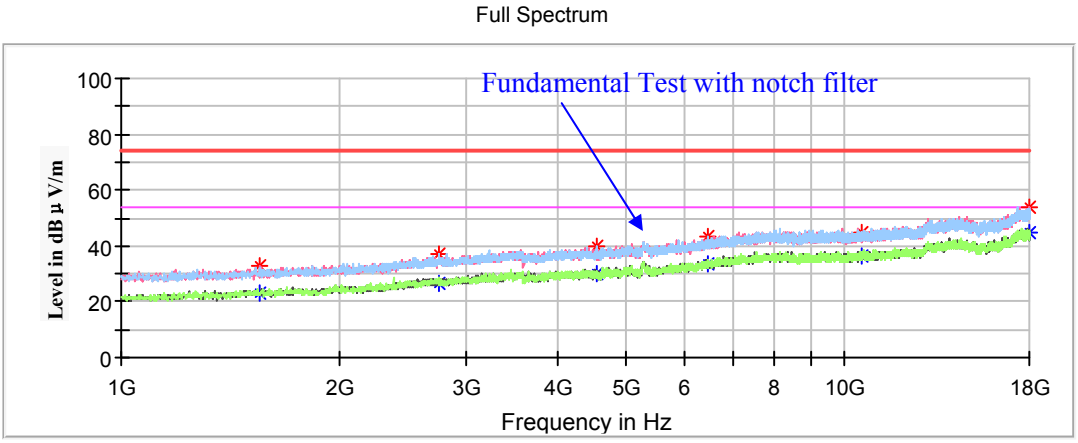
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1204.000000	---	24.49	150.0	V	289.0	-18.0	54.00	29.51
1204.000000	33.94	---	150.0	V	289.0	-18.0	74.00	40.06
1717.400000	33.83	---	200.0	H	0.0	-15.5	68.20	34.37
2973.700000	38.88	---	200.0	V	64.0	-10.2	68.20	29.32
8313.400000	---	38.86	200.0	V	256.0	1.5	54.00	15.14
8313.400000	47.75	---	200.0	V	256.0	1.5	74.00	26.25
10630.500000	---	38.81	150.0	V	357.0	2.5	54.00	15.19
10630.500000	47.90	---	150.0	V	357.0	2.5	74.00	26.10
17949.000000	---	48.16	150.0	H	199.0	8.8	54.00	5.84
17949.000000	56.55	---	150.0	H	199.0	8.8	74.00	17.45

802.11n-HT40 Mode:

*Pre-scan with X,Y and Z axes of orientation, the worst case **X-axis of orientation** was recorded*

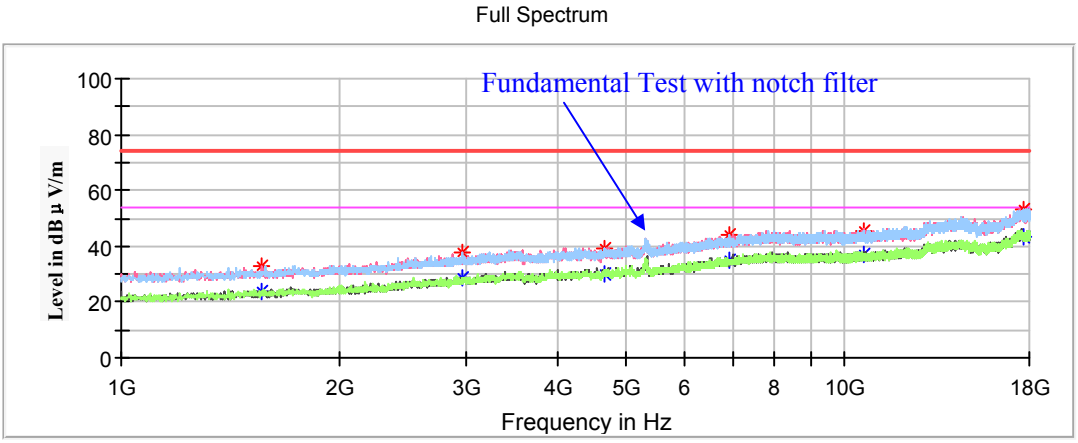
Note:
1. This test was performed with the 5150-5350MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5270MHz



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)				
1557.600000	---	23.28	150.0	H	349.0	-16.1	54.00	30.72
1557.600000	32.52	---	150.0	H	349.0	-16.1	74.00	41.48
2749.300000	---	26.73	200.0	H	345.0	-11.3	54.00	27.27
2749.300000	37.06	---	200.0	H	345.0	-11.3	74.00	36.94
4534.300000	---	30.26	150.0	V	4.0	-6.1	54.00	23.74
4534.300000	39.54	---	150.0	V	4.0	-6.1	74.00	34.46
6468.900000	43.64	---	200.0	H	205.0	-1.3	68.20	24.56
10542.100000	44.53	---	200.0	H	65.0	2.4	68.20	23.67
17950.700000	---	44.70	200.0	V	308.0	8.8	54.00	9.30
17950.700000	53.68	---	200.0	V	308.0	8.8	74.00	20.32

Middle Channel: 5310MHz



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)				
1567.800000	33.08	---	200.0	V	207.0	-16.1	74.00	40.92
1567.800000	---	23.61	200.0	V	207.0	-16.1	54.00	30.39
2955.000000	37.67	---	150.0	H	283.0	-10.3	68.20	30.53
4644.800000	---	30.35	200.0	V	116.0	-5.9	54.00	23.65
4644.800000	39.49	---	200.0	V	116.0	-5.9	74.00	34.51
6927.900000	44.17	---	200.0	H	324.0	-0.2	68.20	24.03
10620.300000	---	36.96	150.0	H	346.0	2.5	54.00	17.04
10620.300000	45.64	---	150.0	H	346.0	2.5	74.00	28.36
17626.000000	53.38	---	150.0	H	219.0	8.9	74.00	20.62

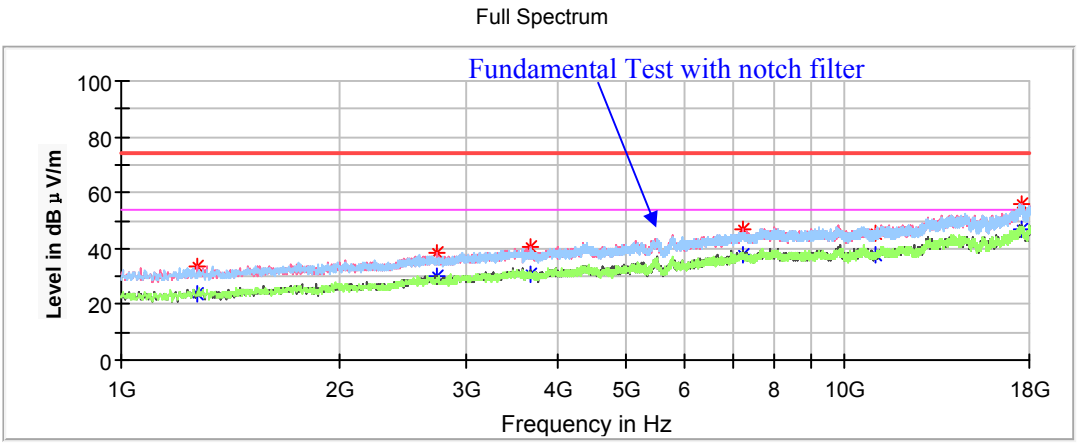
1GHz-18GHz(5470-5725MHz Band):

802.11a Mode:

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

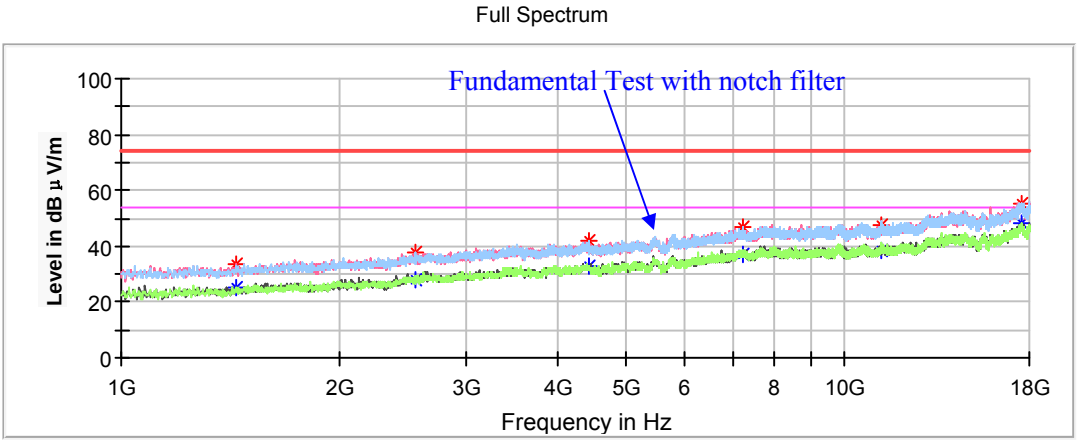
Note:
1. This test was performed with the 5470-5725MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5500MHz



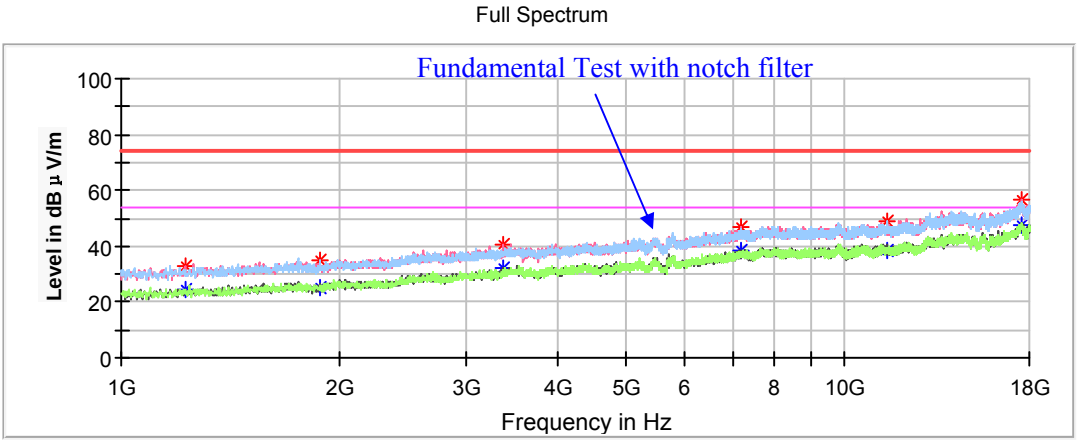
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1275.400000	33.32	---	150.0	V	24.0	-17.6	68.20	34.88
2734.000000	---	30.13	150.0	V	230.0	-11.3	54.00	23.87
2734.000000	38.39	---	150.0	V	230.0	-11.3	74.00	35.61
3687.700000	---	30.90	200.0	H	144.0	-8.1	54.00	23.10
3687.700000	40.54	---	200.0	H	144.0	-8.1	74.00	33.46
7228.800000	47.06	---	150.0	V	324.0	0.4	68.20	21.14
10999.400000	---	37.72	150.0	V	2.0	2.9	54.00	16.28
10999.400000	45.49	---	150.0	V	2.0	2.9	74.00	28.51
17549.500000	55.72	---	200.0	V	271.0	8.9	68.20	12.48

Middle Channel: 5600MHz



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)				
1440.300000	---	25.48	200.0	V	310.0	-16.7	54.00	28.52
1440.300000	33.36	---	200.0	V	310.0	-16.7	74.00	40.64
2548.700000	37.62	---	200.0	H	142.0	-12.2	68.20	30.58
4427.200000	41.69	---	150.0	H	187.0	-6.3	68.20	26.51
7216.900000	46.68	---	200.0	H	76.0	0.4	68.20	21.52
11201.700000	---	38.68	200.0	H	89.0	2.9	54.00	15.32
11201.700000	47.42	---	200.0	H	89.0	2.9	74.00	26.58
17603.900000	55.37	---	150.0	V	149.0	8.9	68.20	12.83

High Channel: 5700MHz



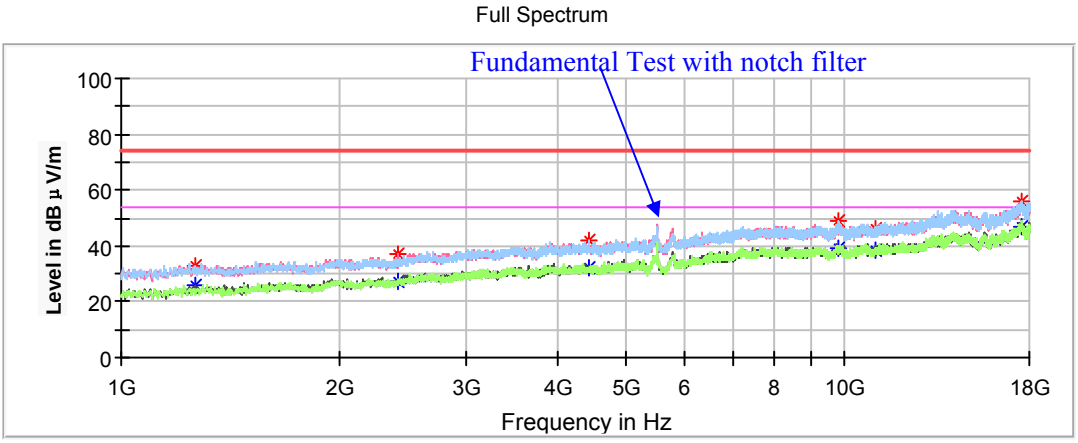
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1224.400000	---	24.57	150.0	V	345.0	-17.9	54.00	29.43
1224.400000	32.98	---	150.0	V	345.0	-17.9	74.00	41.02
1882.300000	35.31	---	200.0	H	238.0	-14.9	68.20	32.89
3371.500000	40.50	---	150.0	V	231.0	-9.1	68.20	27.70
7188.000000	46.78	---	200.0	V	0.0	0.3	68.20	21.42
11463.500000	---	38.13	150.0	H	77.0	2.8	54.00	15.87
11463.500000	48.88	---	150.0	H	77.0	2.8	74.00	25.12
17590.300000	56.36	---	200.0	V	0.0	8.9	68.20	11.84

802.11n-HT20 Mode:

*Pre-scan with X,Y and Z axes of orientation, the worst case **X-axis of orientation** was recorded*

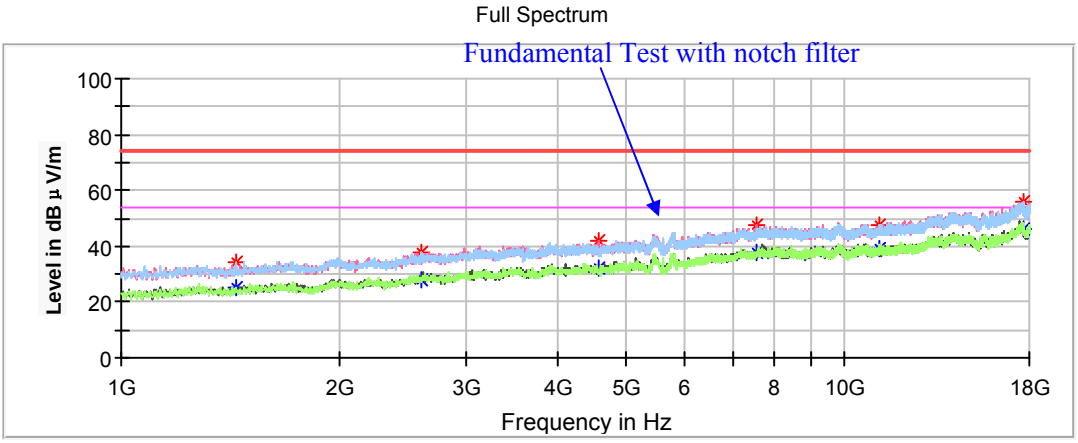
Note:
1. This test was performed with the 5470-5725MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5500MHz



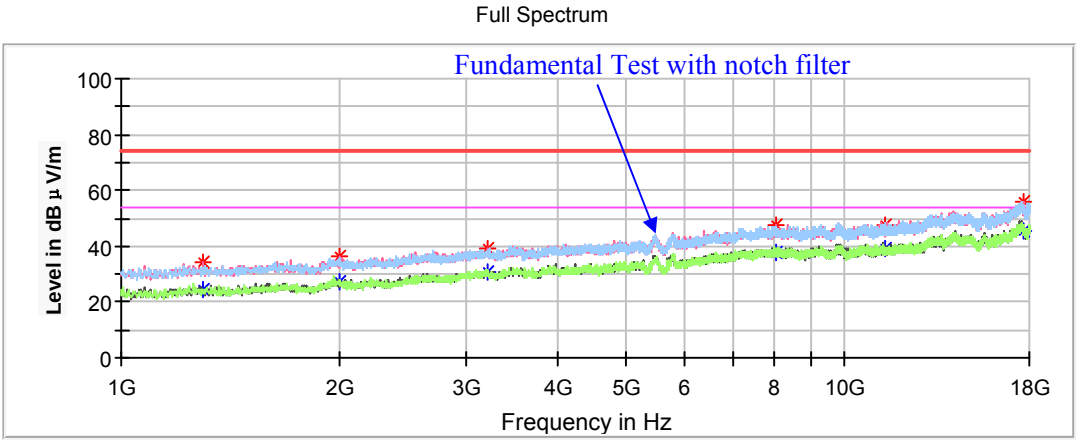
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1263.500000	32.93	---	150.0	H	174.0	-17.6	68.20	35.27
2407.600000	36.81	---	150.0	V	326.0	-12.8	68.20	31.39
4440.800000	41.73	---	200.0	H	89.0	-6.3	68.20	26.47
9831.500000	48.68	---	200.0	H	168.0	2.0	68.20	19.52
10999.400000	---	38.59	200.0	V	72.0	2.9	54.00	15.41
10999.400000	46.08	---	200.0	V	72.0	2.9	74.00	27.92
17592.000000	56.28	---	200.0	V	345.0	8.9	68.20	11.92

Middle Channel: 5600MHz



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)				
1438.600000	---	25.45	150.0	H	165.0	-16.7	54.00	28.55
1438.600000	34.05	---	150.0	H	165.0	-16.7	74.00	39.95
2603.100000	37.88	---	200.0	V	352.0	-11.9	68.20	30.32
4570.000000	---	31.97	200.0	V	160.0	-6.1	54.00	22.03
4570.000000	41.71	---	200.0	V	160.0	-6.1	74.00	32.29
7575.600000	---	37.60	150.0	V	276.0	1.1	54.00	16.40
7575.600000	47.77	---	150.0	V	276.0	1.1	74.00	26.23
11181.300000	---	38.85	150.0	V	276.0	2.9	54.00	15.15
11181.300000	47.72	---	150.0	V	276.0	2.9	74.00	26.28
17619.200000	56.03	---	150.0	H	0.0	8.9	68.20	12.17

High Channel: 5700MHz



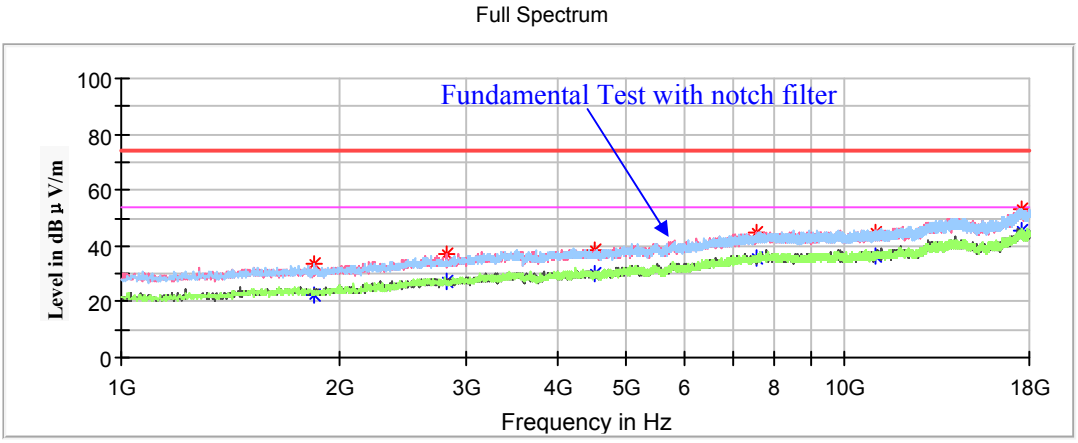
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1299.200000	33.99	---	200.0	V	1.0	-17.4	68.20	34.21
2008.100000	36.39	---	150.0	V	326.0	-14.4	68.20	31.81
3210.000000	39.44	---	150.0	V	67.0	-9.6	68.20	28.76
8046.500000	47.59	---	150.0	H	115.0	1.8	74.00	26.41
8046.500000	---	37.53	150.0	H	115.0	1.8	54.00	16.47
11392.100000	---	38.98	150.0	H	230.0	2.8	54.00	15.02
11392.100000	47.54	---	150.0	H	230.0	2.8	74.00	26.46
17699.100000	55.97	---	200.0	V	65.0	8.9	68.20	12.23

802.11n-HT40 Mode:

*Pre-scan with X,Y and Z axes of orientation, the worst case **X-axis of orientation** was recorded*

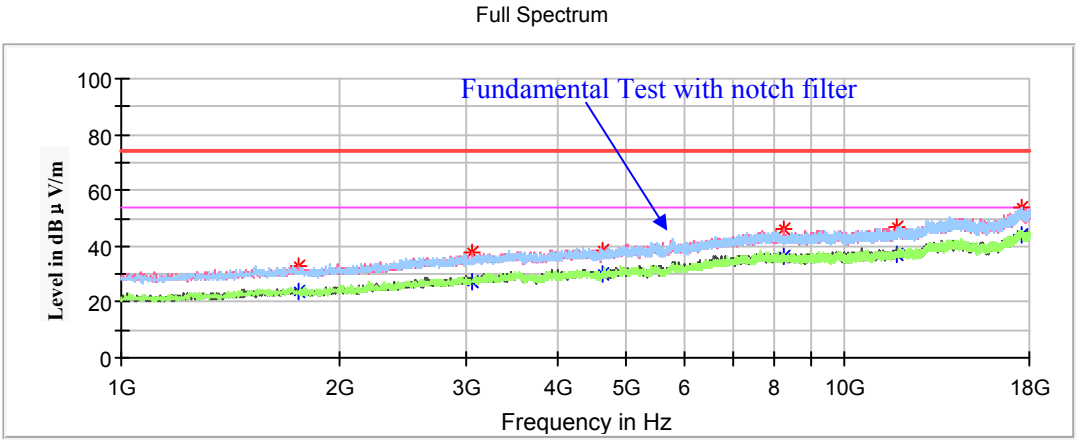
Note:
1. This test was performed with the 5470-5725MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5510MHz



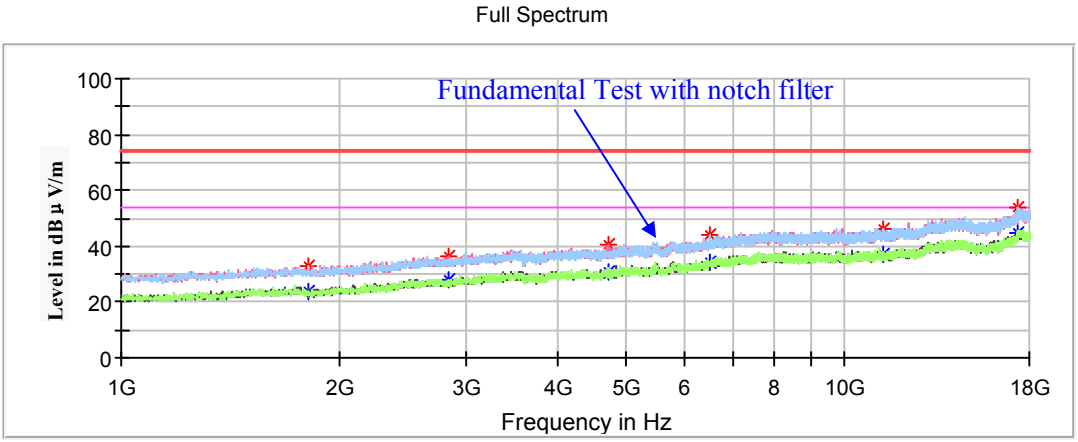
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1846.600000	33.87	---	200.0	H	322.0	-15.0	68.20	34.33
2819.000000	36.99	---	200.0	V	337.0	-10.9	68.20	31.21
4502.000000	38.61	---	150.0	V	4.0	-6.2	68.20	29.59
7560.300000	---	35.46	200.0	V	337.0	1.1	54.00	18.54
7560.300000	44.92	---	200.0	V	337.0	1.1	74.00	29.08
11014.700000	---	36.42	200.0	H	164.0	2.9	54.00	17.58
11014.700000	44.76	---	200.0	H	164.0	2.9	74.00	29.24
17520.600000	53.21	---	200.0	H	139.0	8.9	68.20	14.99

Middle Channel: 5590MHz



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)				
1754.800000	32.91	---	200.0	V	155.0	-15.4	68.20	35.29
3062.100000	37.90	---	150.0	V	205.0	-9.9	68.20	30.30
4624.400000	---	30.04	200.0	V	349.0	-6.0	54.00	23.96
4624.400000	38.77	---	200.0	V	349.0	-6.0	74.00	35.23
8262.400000	45.80	---	150.0	V	53.0	1.6	74.00	28.20
8262.400000	---	36.04	150.0	V	53.0	1.6	54.00	17.96
11781.400000	---	37.04	200.0	V	0.0	3.4	54.00	16.96
11781.400000	46.92	---	200.0	V	0.0	3.4	74.00	27.08
17515.500000	54.11	---	200.0	H	136.0	8.9	68.20	14.09

High Channel: 5670MHz



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)				
1810.900000	32.75	---	200.0	H	1.0	-15.2	68.20	35.45
2827.500000	---	27.68	150.0	H	155.0	-10.9	54.00	26.32
2827.500000	36.09	---	150.0	H	155.0	-10.9	74.00	37.91
4716.200000	---	31.05	200.0	H	231.0	-5.8	54.00	22.95
4716.200000	40.59	---	200.0	H	231.0	-5.8	74.00	33.41
6504.600000	44.20	---	200.0	H	90.0	-1.2	68.20	24.00
11310.500000	---	36.73	150.0	H	143.0	2.8	54.00	17.27
11310.500000	46.30	---	150.0	H	143.0	2.8	74.00	27.70
17377.800000	53.78	---	150.0	H	249.0	8.5	68.20	21.90

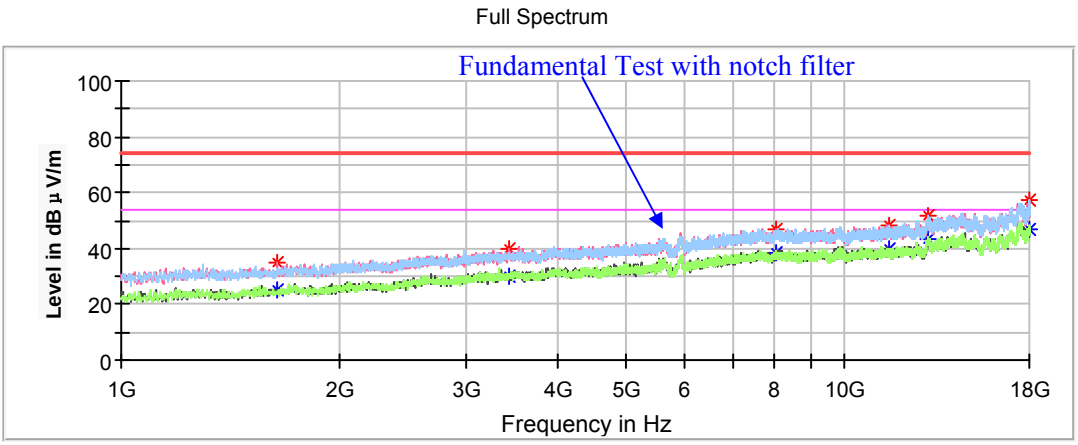
1GHz-18GHz(5725-5850MHz Band):

802.11a Mode:

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

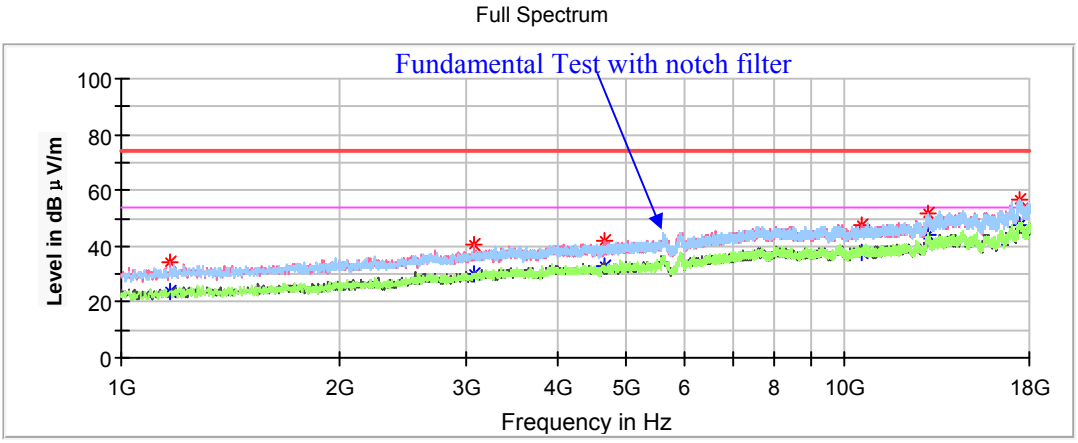
Note:
1. This test was performed with the 5725-5850MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5745MHz



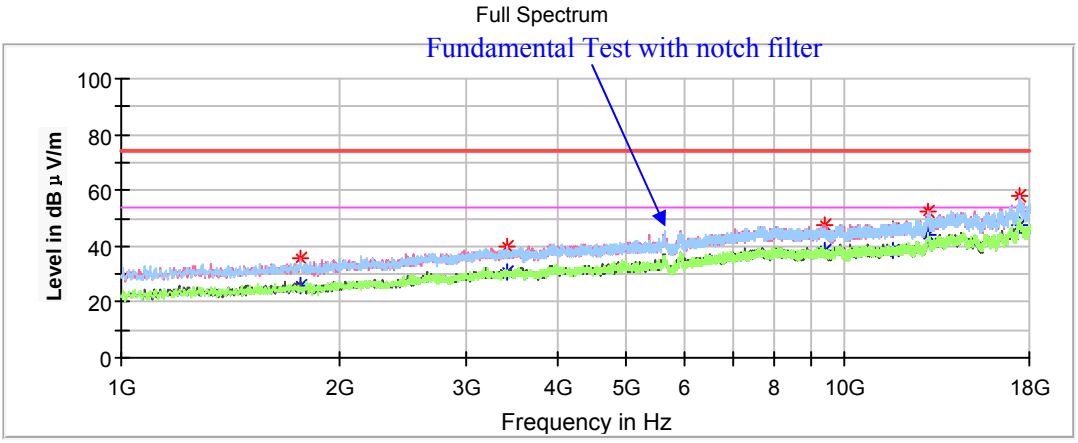
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1642.600000	35.17	---	150.0	V	231.0	-15.8	68.20	33.03
3442.900000	39.81	---	150.0	V	257.0	-9.0	68.20	28.39
8046.500000	---	38.48	150.0	H	51.0	1.8	54.00	15.52
8046.500000	47.01	---	150.0	H	51.0	1.8	74.00	26.99
11490.700000	---	39.75	150.0	H	6.0	2.8	54.00	14.25
11490.700000	48.05	---	150.0	H	6.0	2.8	74.00	25.95
13046.200000	51.69	---	150.0	H	127.0	5.3	68.20	16.51
17960.900000	---	47.05	150.0	H	191.0	8.8	54.00	6.95
17960.900000	57.53	---	150.0	H	191.0	8.8	74.00	16.47

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)				
1166.600000	---	23.54	150.0	H	166.0	-18.2	54.00	30.46
1166.600000	34.32	---	150.0	H	166.0	-18.2	74.00	39.68
3068.900000	40.38	---	150.0	V	68.0	-9.9	68.20	27.82
4646.500000	---	32.74	150.0	H	140.0	-5.9	54.00	21.26
4646.500000	41.88	---	150.0	H	140.0	-5.9	74.00	32.12
10562.500000	47.32	---	150.0	V	224.0	2.4	68.20	20.88
13073.400000	52.03	---	150.0	V	313.0	5.3	68.20	16.17
17496.800000	56.82	---	150.0	H	125.0	8.9	68.20	11.38

High Channel: 5825MHz



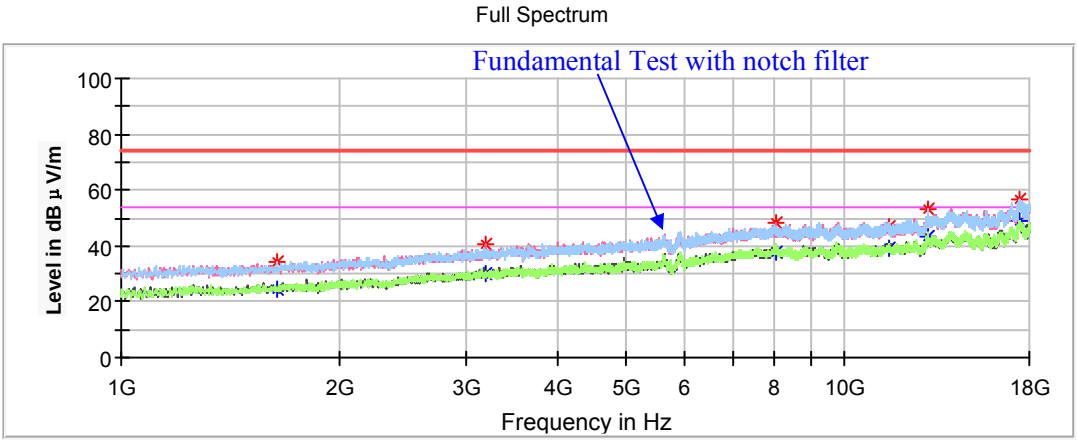
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1771.800000	35.37	---	150.0	V	180.0	-15.3	68.20	32.83
3419.100000	39.66	---	150.0	H	141.0	-9.0	68.20	28.54
9362.300000	---	38.16	150.0	V	0.0	2.1	54.00	15.84
9362.300000	47.70	---	150.0	V	0.0	2.1	74.00	26.30
11648.800000	---	38.46	150.0	V	320.0	3.1	54.00	15.54
11648.800000	46.45	---	150.0	V	320.0	3.1	74.00	27.55
13063.200000	52.74	---	150.0	H	154.0	5.3	68.20	15.46
17488.300000	58.06	---	150.0	H	11.0	8.8	68.20	10.14

802.11n-HT20 Mode:

*Pre-scan with X,Y and Z axes of orientation, the worst case **X-axis of orientation** was recorded*

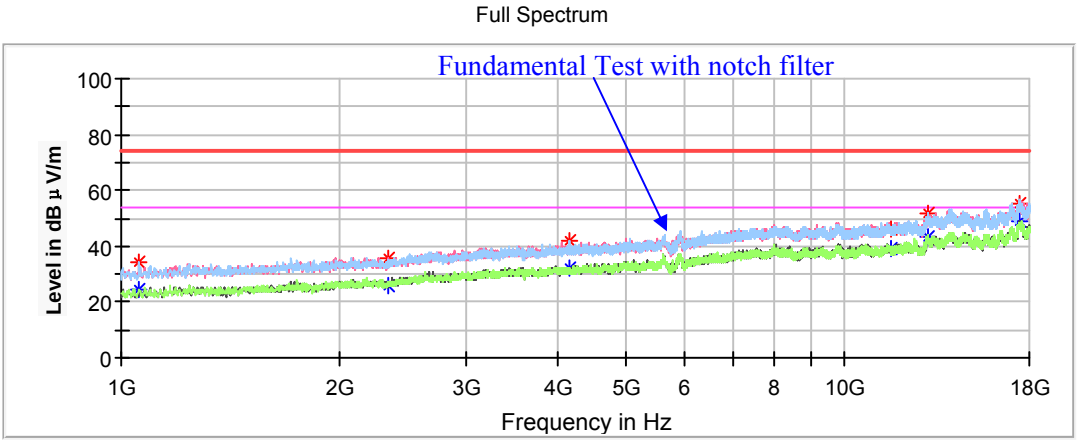
Note:
1. This test was performed with the 5725-5850 MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5745MHz



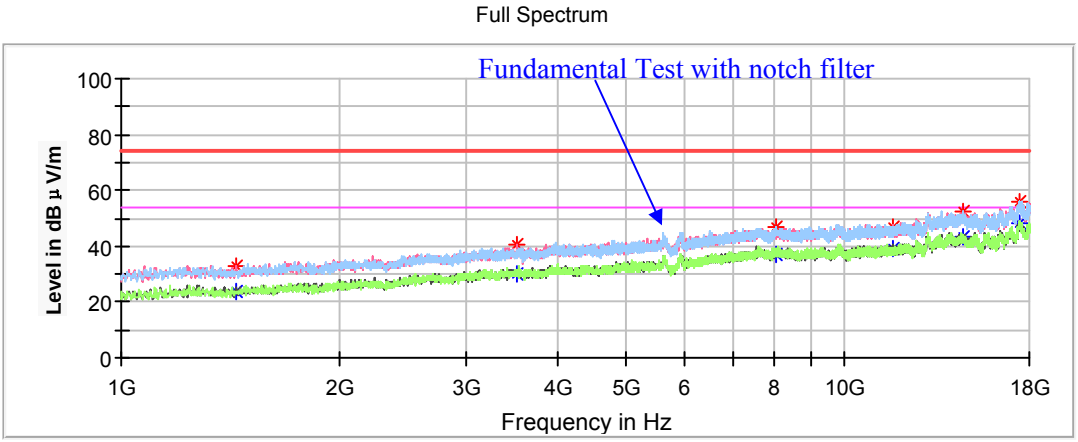
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1637.500000	34.26	---	200.0	H	82.0	-15.8	68.20	33.94
3193.000000	40.24	---	200.0	V	231.0	-9.6	68.20	27.96
8029.500000	---	38.11	150.0	H	0.0	1.8	54.00	15.89
8029.500000	47.95	---	150.0	H	0.0	1.8	74.00	26.05
11489.000000	---	39.29	200.0	V	231.0	2.8	54.00	14.71
11489.000000	46.55	---	200.0	V	231.0	2.8	74.00	27.45
13017.300000	53.33	---	200.0	H	29.0	5.2	68.20	14.87
17479.800000	56.75	---	200.0	H	276.0	8.8	68.20	11.45

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)				
1057.800000	33.98	---	150.0	H	345.0	-18.8	74.00	40.02
1057.800000	---	24.39	150.0	H	345.0	-18.8	54.00	29.61
2334.500000	---	26.08	200.0	V	135.0	-13.1	54.00	27.92
2334.500000	35.76	---	200.0	V	135.0	-13.1	74.00	38.24
4168.800000	41.82	---	200.0	H	169.0	-6.7	74.00	32.18
4168.800000	---	32.45	200.0	H	169.0	-6.7	54.00	21.55
11570.600000	46.49	---	200.0	H	194.0	2.9	74.00	27.51
11570.600000	---	38.82	200.0	H	194.0	2.9	54.00	15.18
13027.500000	51.83	---	200.0	V	122.0	5.2	68.20	16.37
17461.100000	55.11	---	150.0	V	339.0	8.8	68.20	13.09

High Channel: 5825MHz



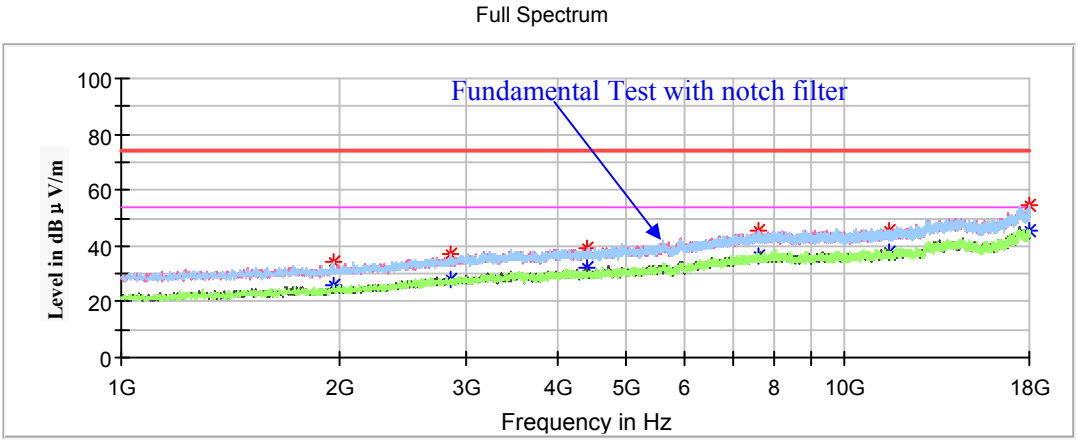
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1443.700000	---	23.82	150.0	V	313.0	-16.7	54.00	30.18
1443.700000	32.94	---	150.0	V	313.0	-16.7	74.00	41.06
3526.200000	40.43	---	150.0	V	181.0	-8.7	68.20	27.77
8043.100000	---	37.14	150.0	H	336.0	1.8	54.00	16.86
8043.100000	46.81	---	150.0	H	336.0	1.8	74.00	27.19
11650.500000	---	38.90	150.0	V	232.0	3.1	54.00	15.10
11650.500000	46.73	---	150.0	V	232.0	3.1	74.00	27.27
14576.200000	52.52	---	150.0	H	48.0	6.3	68.20	15.68
17445.800000	56.26	---	150.0	V	116.0	8.7	68.20	11.94

802.11n-HT40 Mode:

*Pre-scan with X,Y and Z axes of orientation, the worst case **X-axis of orientation** was recorded*

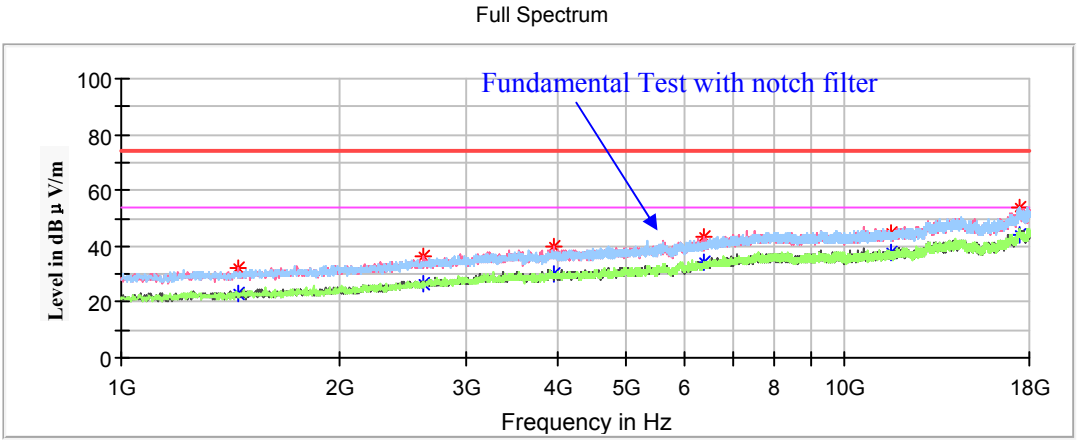
Note:
1. This test was performed with the 5725-5850MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

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)				
1963.900000	34.13	---	200.0	H	47.0	-14.6	68.20	34.07
2846.200000	---	28.07	200.0	H	352.0	-10.8	54.00	25.93
2846.200000	36.92	---	200.0	H	352.0	-10.8	74.00	37.08
4410.200000	39.29	---	150.0	V	86.0	-6.4	68.20	28.91
7590.900000	---	36.15	150.0	V	336.0	1.2	54.00	17.85
7590.900000	45.34	---	150.0	V	336.0	1.2	74.00	28.66
11533.200000	---	37.47	200.0	V	308.0	2.9	54.00	16.53
11533.200000	45.74	---	200.0	V	308.0	2.9	74.00	28.26
17957.500000	---	45.14	200.0	V	333.0	8.8	54.00	8.86
17957.500000	54.81	---	200.0	V	333.0	8.8	74.00	19.19

Middle Channel: 5795MHz

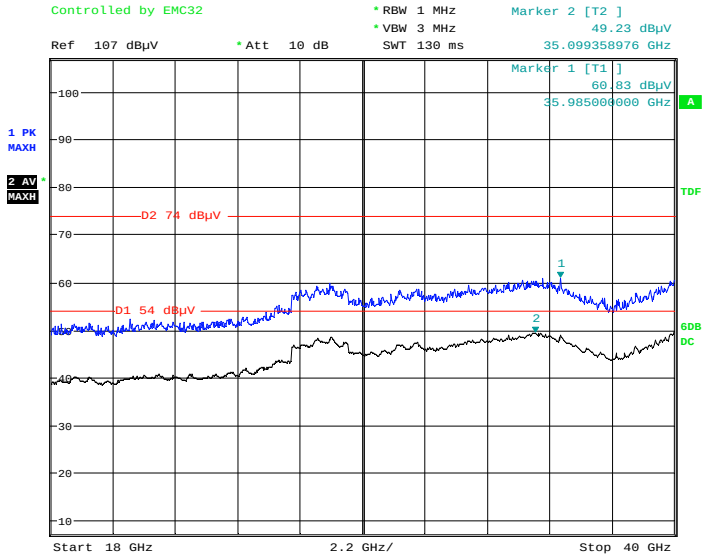


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1448.800000	---	23.28	200.0	H	149.0	-16.6	54.00	30.72
1448.800000	32.06	---	200.0	H	149.0	-16.6	74.00	41.94
2615.000000	36.11	---	150.0	V	218.0	-11.9	68.20	32.09
3963.100000	---	30.20	150.0	V	91.0	-7.1	54.00	23.80
3963.100000	39.75	---	150.0	V	91.0	-7.1	74.00	34.25
6400.900000	43.41	---	150.0	V	91.0	-1.5	68.20	24.79
11587.600000	---	37.72	200.0	H	22.0	3.0	54.00	16.28
11587.600000	44.51	---	200.0	H	22.0	3.0	74.00	29.49
17491.700000	53.78	---	200.0	H	212.0	8.9	68.20	14.42

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

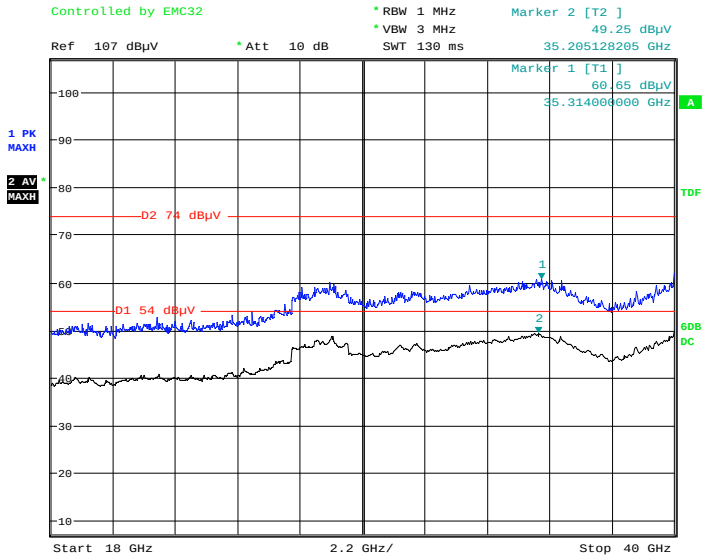
*Pre-scan with 802.11a, 802.11n-HT20 and 802.11n-HT40 modes of operation in the X,Y and Z axes of orientation, the worst case **802.11n-HT40 mode low channel** in X-axis of orientation was recorded*

Horizontal



Date: 5.OCT.2020 14:02:42

Vertical

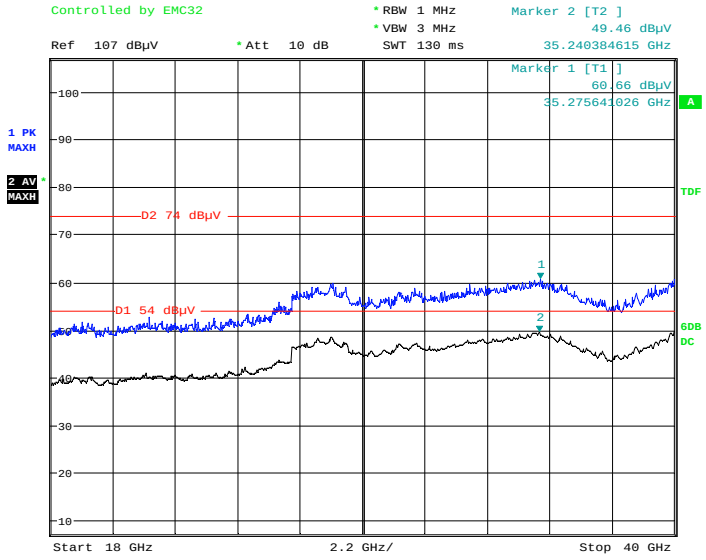


Date: 5.OCT.2020 14:14:27

18GHz-40GHz(5250-5350MHz Band):

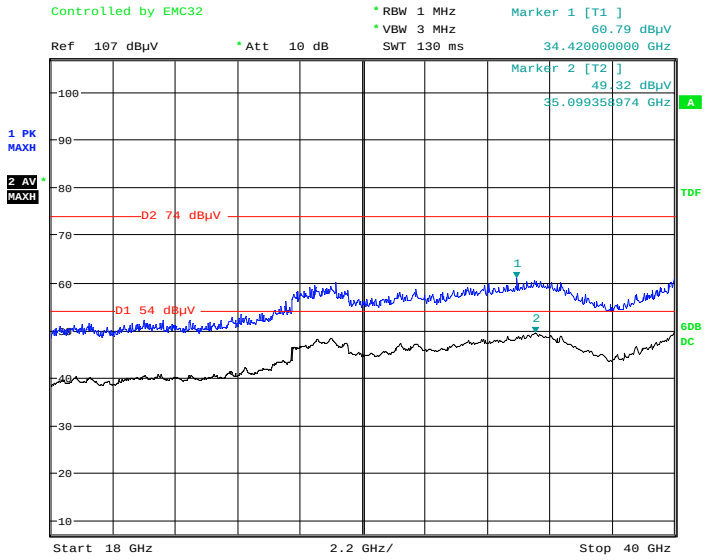
*Pre-scan with 802.11a, 802.11n-HT20 and 802.11n-HT40 modes of operation in the X,Y and Z axes of orientation, the worst case **802.11n-HT20 mode high channel** in X-axis of orientation was recorded*

Horizontal



Date: 5.OCT.2020 14:28:08

Vertical

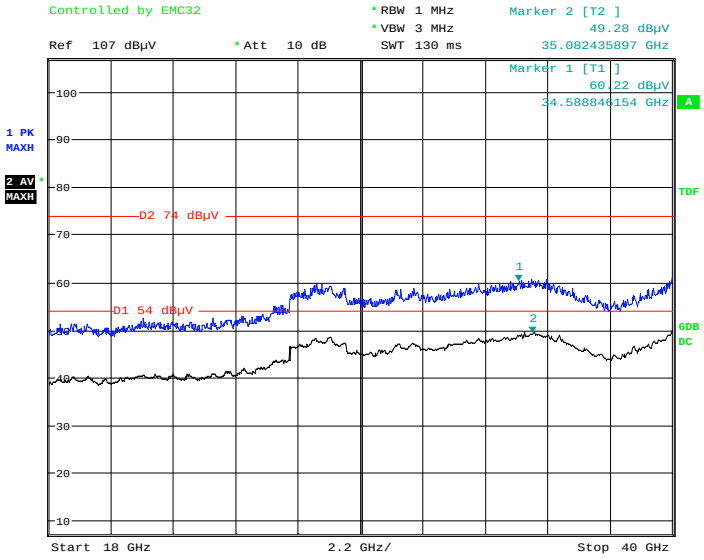


Date: 5.OCT.2020 14:37:11

18GHz-40GHz(5470-5725MHz Band):

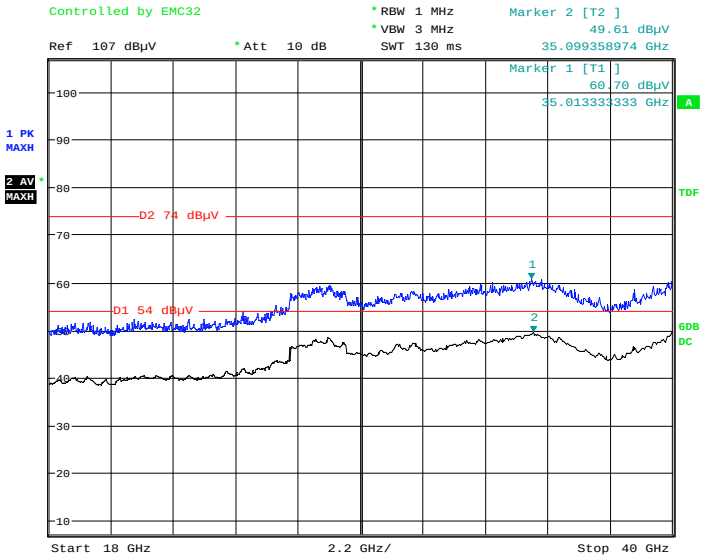
*Pre-scan with 802.11a, 802.11n-HT20 and 802.11n-HT40 modes of operation in the X,Y and Z axes of orientation, the worst case **802.11n-HT40 mode low channel** in X-axis of orientation was recorded*

Horizontal



Date: 5.OCT.2020 14:45:32

Vertical

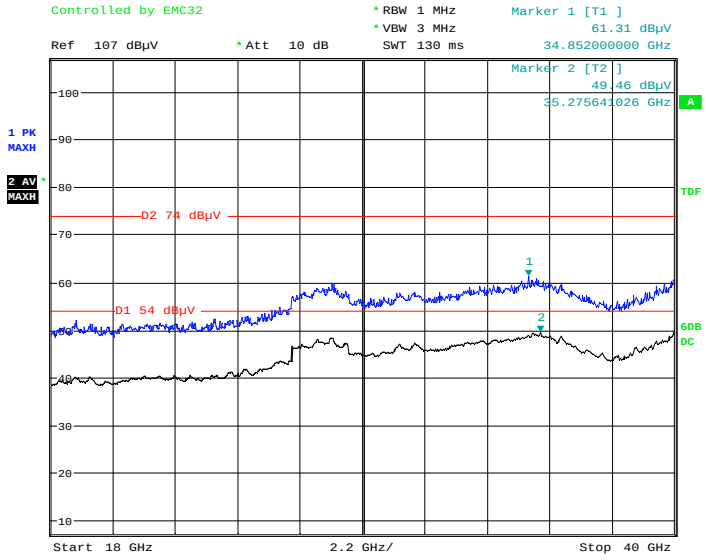


Date: 5.OCT.2020 14:58:11

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

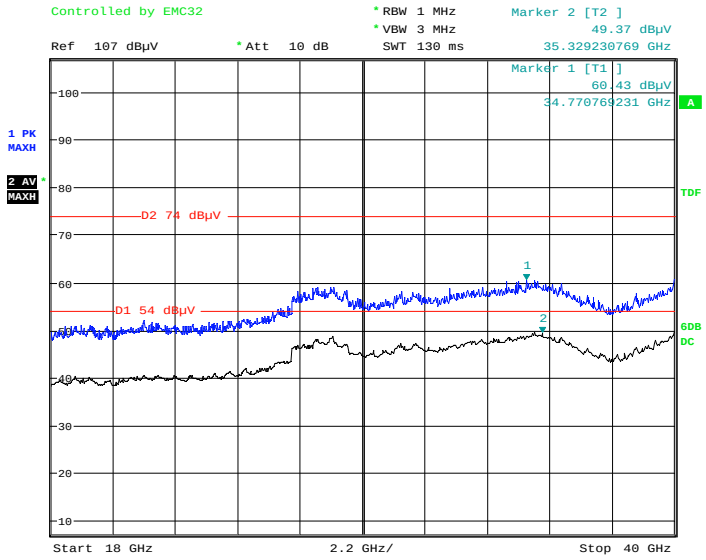
*Pre-scan with 802.11a, 802.11n-HT20 and 802.11n-HT40 modes of operation in the X,Y and Z axes of orientation, the worst case **802.11n-HT40 mode high channel** in X-axis of orientation was recorded*

Horizontal



Date: 5.OCT.2020 17:00:27

Vertical



Date: 5.OCT.2020 17:15:52

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: *(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	Correct Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5180MHz								
5150.00	58.40	---	150.0	H	0.0	5.2	74.00	15.60
5150.00	---	52.48	150.0	H	0.0	5.2	54.00	1.52
High Channel: 5240MHz								
5350.00	55.34	---	150.0	H	102.0	5.8	74.00	18.66
5350.00	---	51.19	150.0	H	102.0	5.8	54.00	2.81

802.11n-HT20 Mode: *(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	Correct Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5180MHz								
5150.00	53.94	---	150.0	V	252.0	5.2	74.00	20.06
5150.00	---	50.18	150.0	V	252.0	5.2	54.00	3.82
High Channel: 5240MHz								
5350.00	54.30	---	150.0	V	11.0	5.8	74.00	19.70
5350.00	---	51.07	150.0	V	11.0	5.8	54.00	2.93

802.11n-HT40 Mode: *(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	Correct Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5190MHz								
5150.00	56.22	---	150.0	H	0.0	5.2	74.00	17.78
5150.00	---	51.43	150.0	H	0.0	5.2	54.00	2.57
High Channel: 5230MHz								
5350.00	53.17	---	150.0	H	306.0	5.8	74.00	20.83
5350.00	---	51.19	150.0	H	306.0	5.8	54.00	2.81

Restricted Bands Emissions Test (5250-5350MHz 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: *(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	Correct Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5260MHz								
5150.00	52.86	---	150.0	V	159.0	5.2	74.00	21.14
5150.00	---	49.03	150.0	V	159.0	5.2	54.00	4.97
High Channel: 5320MHz								
5350.00	53.12	---	150.0	V	284.0	5.7	74.00	20.88
5350.00	---	50.28	150.0	V	284.0	5.7	54.00	3.72

802.11n-HT20 Mode: *(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	Correct Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5260MHz								
5150.00	55.38	---	150.0	V	102.0	5.2	74.00	18.62
5150.00	---	50.22	150.0	V	102.0	5.2	54.00	3.78
High Channel: 5320MHz								
5350.00	54.74	---	150.0	V	187.0	5.7	74.00	19.26
5350.00	---	51.89	150.0	V	187.0	5.7	54.00	2.11

802.11n-HT40 Mode: *(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	Correct Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5270MHz								
5150.00	54.57	---	150.0	H	233.0	5.2	74.00	19.43
5150.00	---	49.48	150.0	H	233.0	5.2	54.00	4.52
High Channel: 5310MHz								
5350.00	53.98	---	200.0	H	338.0	5.7	74.00	20.02
5350.00	---	51.58	200.0	H	338.0	5.7	54.00	2.42

Restricted Bands Emissions Test (5470-5725MHz 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: *(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	Correct Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5500MHz								
5460.00	54.21	---	150.0	H	159.0	6.0	74.00	19.79
5460.00	---	47.69	150.0	H	159.0	6.0	54.00	6.31
5470.00	53.42	---	150.0	H	357.0	6.0	68.20	14.78
High Channel: 5700MHz								
5725.00	55.69	---	150.0	H	142.0	6.5	68.20	12.51

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

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)				
Low Channel: 5500MHz								
5460.00	53.67	---	150.0	H	11.0	6.0	74.00	20.33
5460.00	---	47.24	150.0	H	11.0	6.0	54.00	6.76
5470.00	53.30	---	150.0	V	228.0	6.0	68.20	14.90
High Channel: 5700MHz								
5725.00	53.26	---	150.0	V	119.0	6.5	68.20	14.94

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

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)				
Low Channel: 5510MHz								
5460.00	53.16	---	200.0	V	69.0	6.0	74.00	20.84
5460.00	---	47.98	200.0	V	69.0	6.0	54.00	6.02
5470.00	53.52	---	150.0	H	86.0	6.0	68.20	14.68
Middle Channel: 5670MHz								
5725.00	53.79	---	150.0	V	320.0	6.5	68.20	14.41

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: *(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	Correct Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5745MHz								
5650.00	55.21	---	150.0	H	286.0	6.4	68.20	12.99
5700.00	53.90	---	150.0	H	4.0	6.5	105.20	51.30
5720.00	66.42	---	150.0	V	336.0	6.5	110.77	44.35
5725.00	78.43	---	150.0	H	4.0	6.5	122.20	43.77
High Channel: 5825MHz								
5850.00	66.66	---	150.0	H	3.0	6.7	122.20	55.54
5855.00	61.18	---	150.0	H	13.0	6.7	110.80	49.62
5875.00	57.08	---	150.0	H	85.0	6.8	105.20	48.12
5925.00	54.49	---	150.0	V	262.0	6.9	68.20	13.71

802.11n-HT20 Mode: *(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	Correct Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5745MHz								
5650.00	55.99	---	150.0	H	26.0	6.4	68.20	12.21
5700.00	58.26	---	150.0	H	2.0	6.5	105.16	46.90
5720.00	71.59	---	150.0	H	0.0	6.5	110.80	39.21
5725.00	81.72	---	150.0	H	358.0	6.5	122.20	40.48
High Channel: 5825MHz								
5850.00	71.46	---	150.0	V	336.0	6.7	122.20	50.74
5855.00	65.48	---	150.0	H	0.0	6.7	110.80	45.32
5875.00	53.76	---	150.0	V	0.0	6.8	105.18	51.42
5925.00	54.62	---	150.0	V	358.0	6.9	68.20	13.58

802.11n-HT40 Mode: *(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	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5755MHz								
5650.00	54.63	---	200.0	H	315.0	6.4	68.20	13.57
5700.00	53.44	---	200.0	H	93.0	6.5	105.20	51.76
5720.00	58.60	---	150.0	V	0.0	6.5	110.80	52.20
5725.00	59.32	---	200.0	H	0.0	6.5	122.20	62.88
High Channel: 5795MHz								
5850.00	54.36	---	200.0	V	55.0	6.7	122.20	67.84
5855.00	53.98	---	200.0	H	302.0	6.7	110.80	56.82
5875.00	54.70	---	150.0	V	175.0	6.8	105.20	50.50
5925.00	56.19	---	200.0	V	11.0	6.9	68.20	12.01

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, 5.25-5.35 GHz, and the 5.47-5.725 GHz bands are 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.

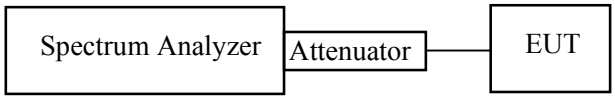
Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

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:	24.3 °C
Relative Humidity:	50 %
ATM Pressure:	101.3 kPa

The testing was performed by Jack Jiao on 2020-11-05.

Test Result: Compliant

5150-5250 MHz:

Test mode	Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
802.11a	Low	5180	22.926	17.315
	Middle	5200	22.846	17.395
	High	5240	22.766	17.395
802.11n-HT20	Low	5180	23.647	17.956
	Middle	5200	23.086	18.357
	High	5240	22.685	18.196
802.11n-HT40	Low	5190	45.371	36.553
	High	5230	45.050	36.713

5250-5350 MHz:

Test mode	Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
802.11a	Low	5260	23.006	17.395
	Middle	5280	23.888	17.475
	High	5320	28.377	17.635
802.11n-HT20	Low	5260	23.327	18.357
	Middle	5280	23.487	18.357
	High	5320	32.224	18.597
802.11n-HT40	Low	5270	51.303	36.713
	High	5310	50.982	36.874

5470-5725 MHz:

Test mode	Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
802.11a	Low	5500	24.289	17.475
	Middle	5600	23.487	17.475
	High	5700	24.048	17.475
802.11n-HT20	Low	5500	23.006	18.357
	Middle	5600	25.491	18.437
	High	5700	25.731	18.437
802.11n-HT40	Low	5510	51.784	36.713
	Middle	5590	51.463	36.877
	High	5670	52.745	36.874

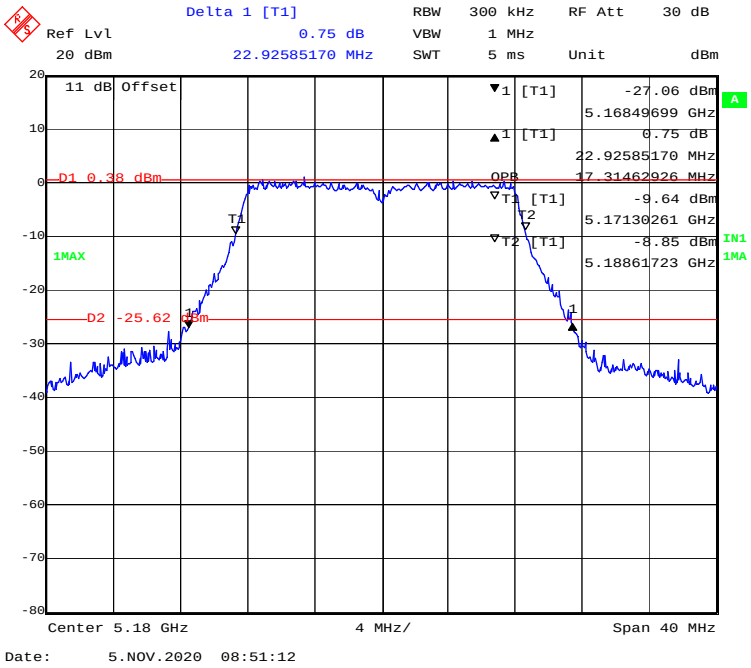
5725-5850 MHz:

Test mode	Channel	Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)
802.11a	Low	5745	16.593	17.234	≥0.5
	Middle	5785	16.593	17.234	≥0.5
	High	5825	16.513	17.234	≥0.5
802.11n-HT20	Low	5745	17.715	18.196	≥0.5
	Middle	5785	17.715	18.196	≥0.5
	High	5825	17.715	18.196	≥0.5
802.11n-HT40	Low	5755	35.591	36.393	≥0.5
	High	5795	35.591	36.553	≥0.5

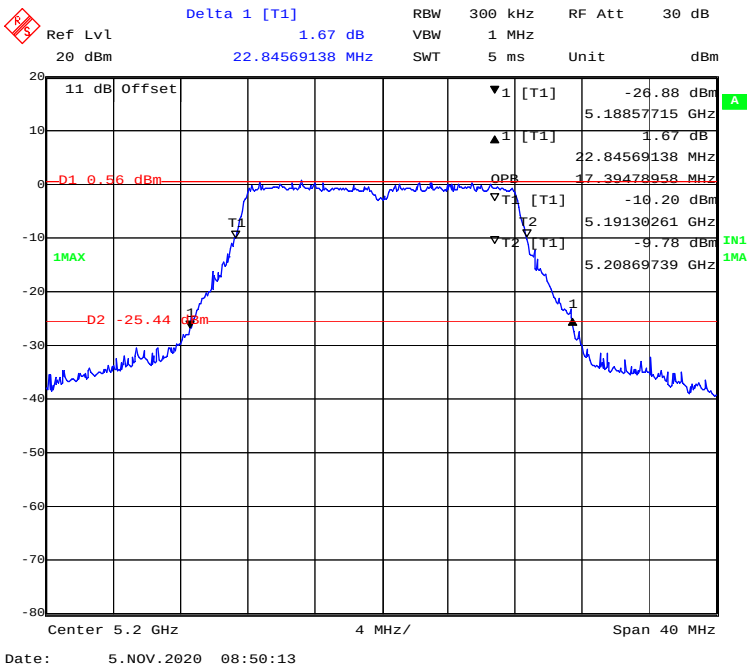
5150-5250 MHz Band:

26 Bandwidth&99% Occupied Bandwidth

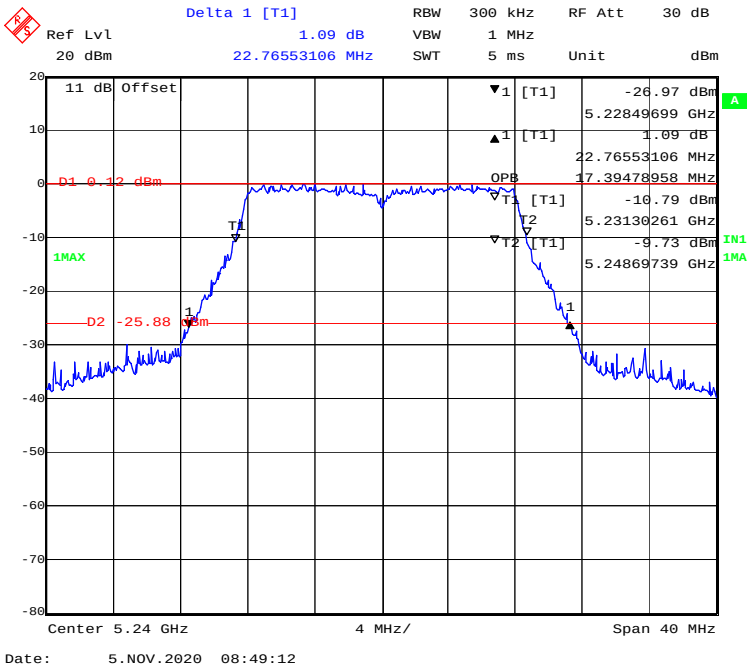
802.11a mode, 5180MHz



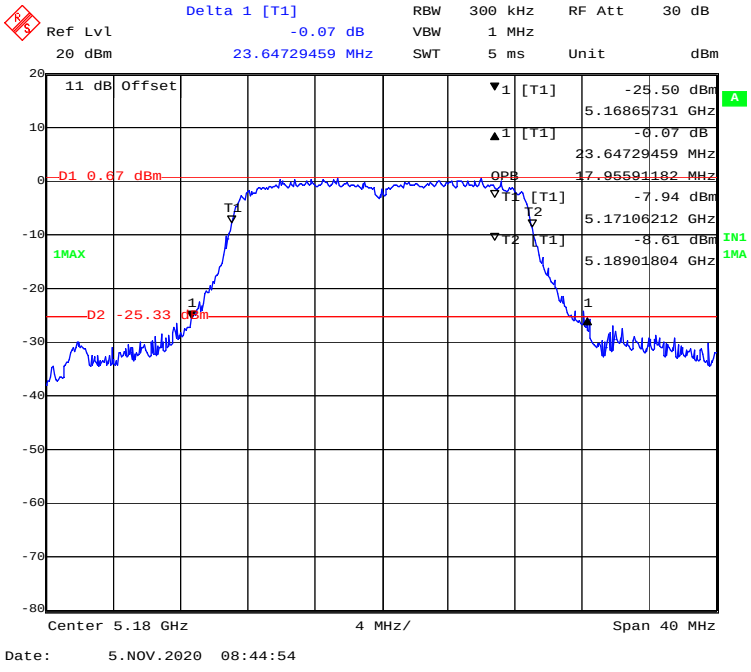
802.11a mode, 5200MHz



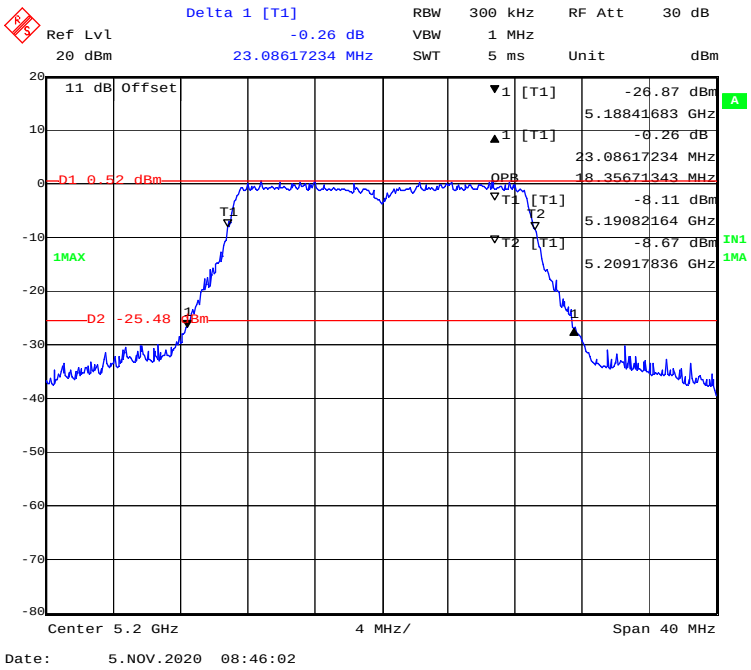
802.11a mode, 5240MHz



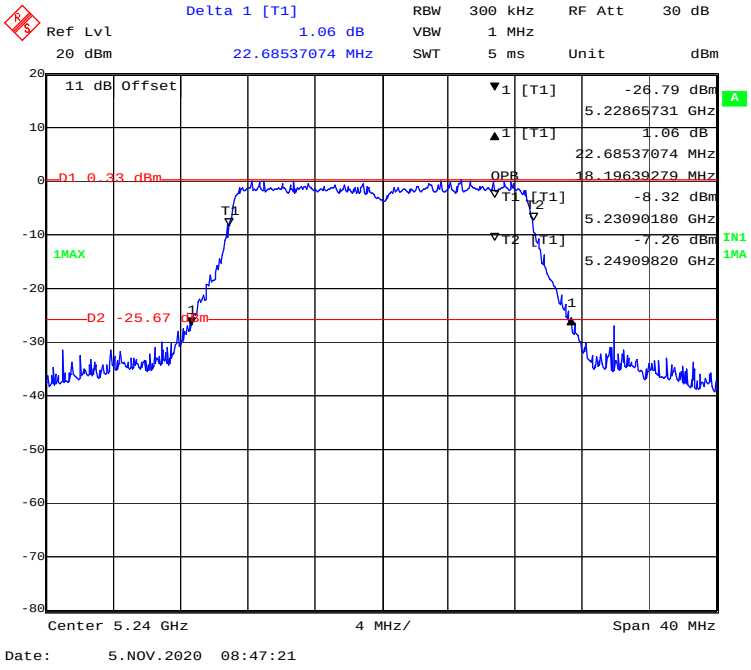
802.11n-HT20 mode, 5180MHz



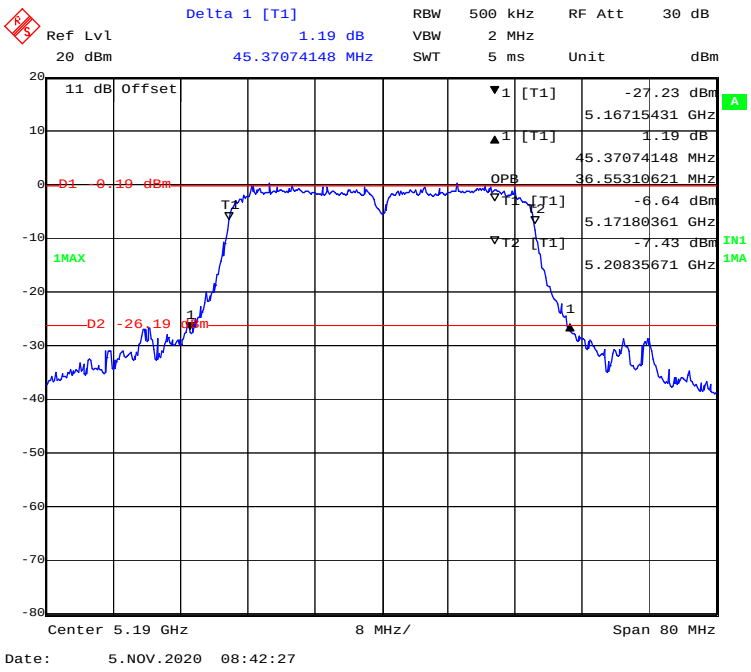
802.11n-HT20 mode, 5200MHz



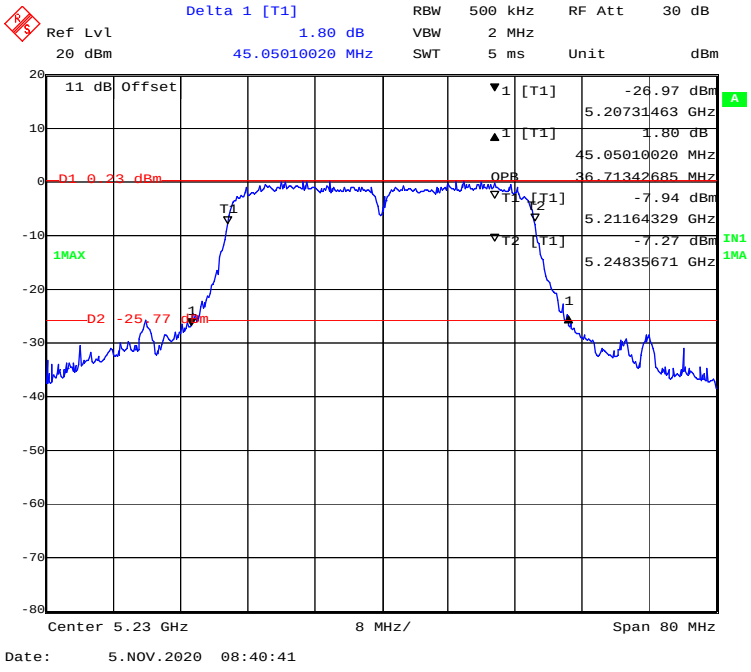
802.11n-HT20 mode, 5240MHz



802.11n-HT40 mode, 5190MHz



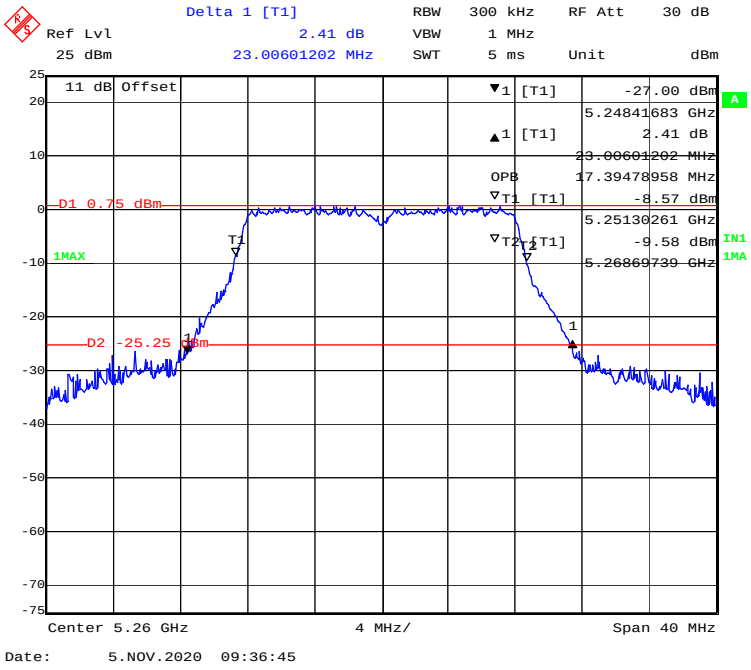
802.11n-HT40 mode, 5230MHz



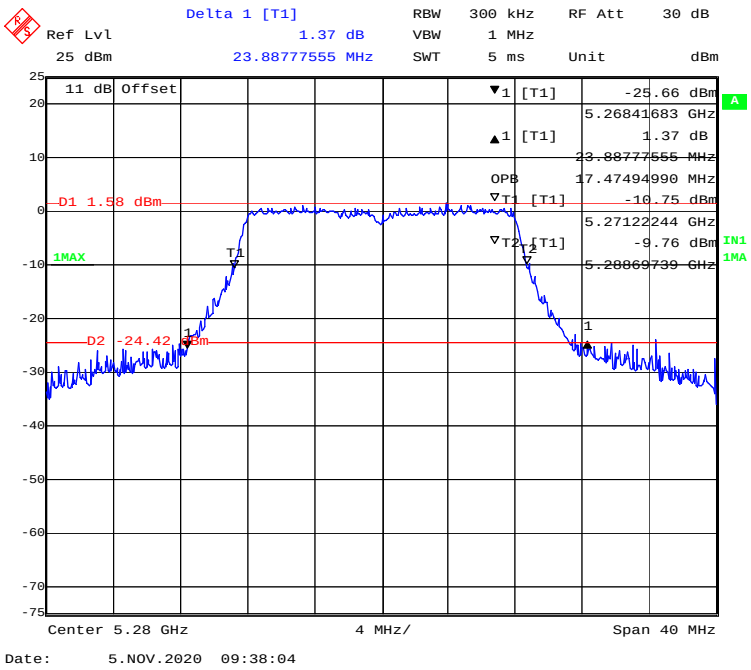
5250-5350 MHz Band:

26 Bandwidth&99% Occupied Bandwidth

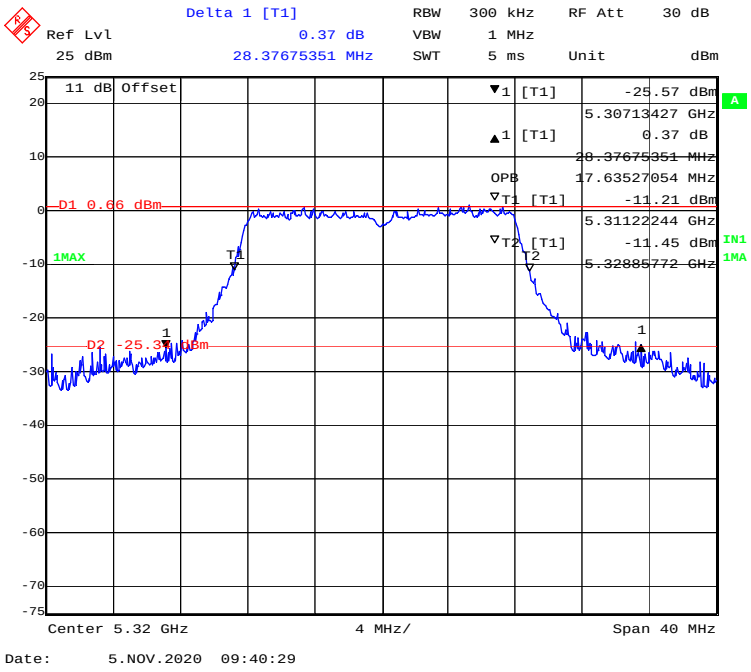
802.11a mode, 5260MHz



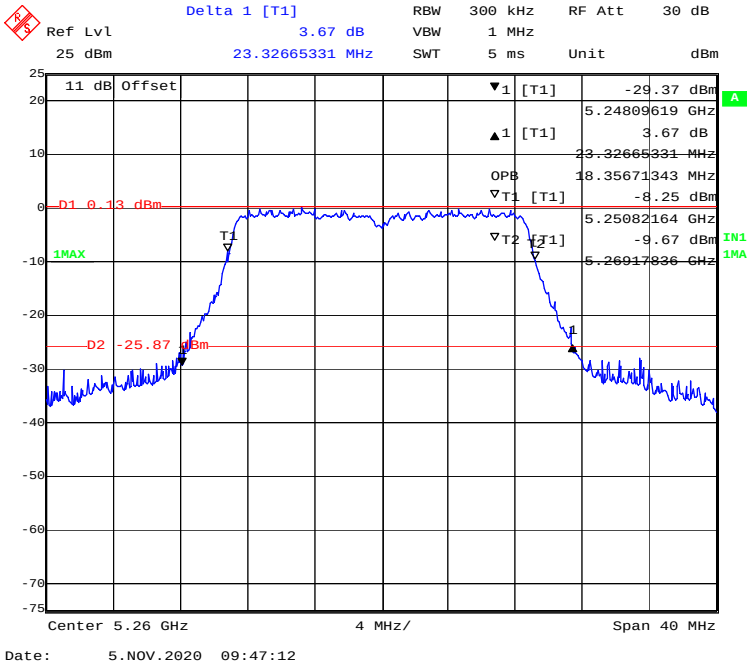
802.11a mode, 5280MHz



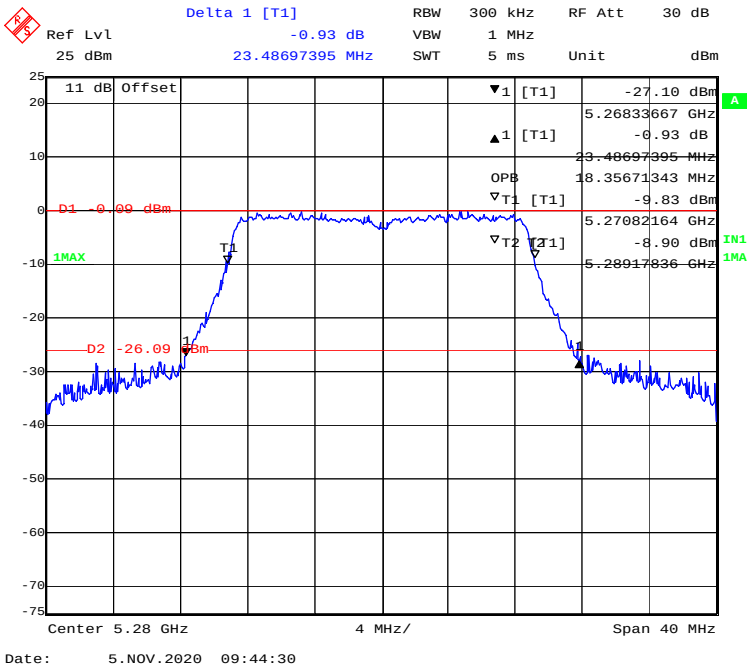
802.11a mode, 5320MHz



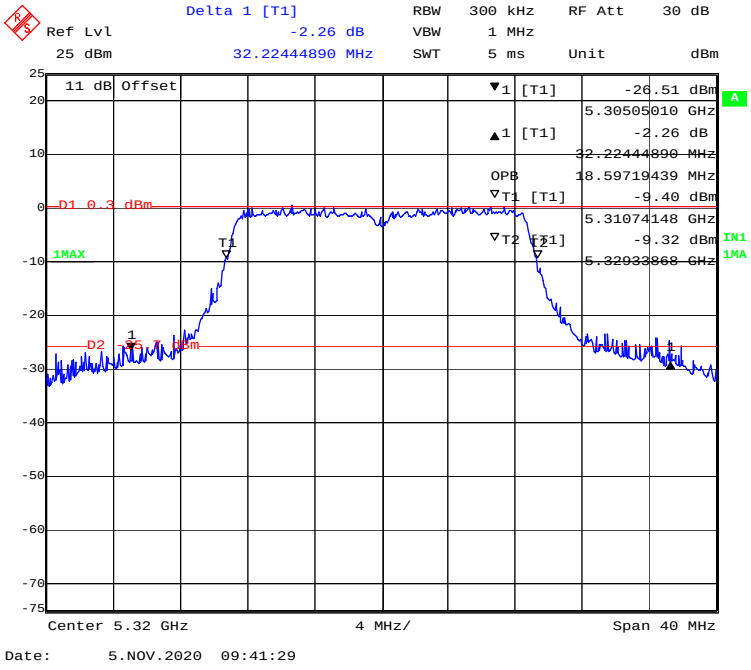
802.11n-HT20 mode, 5260MHz



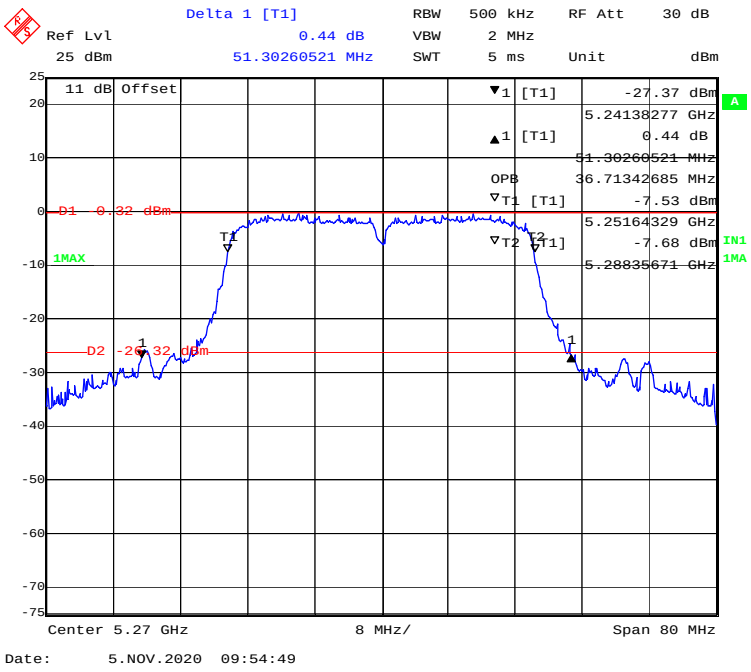
802.11n-HT20 mode, 5280MHz



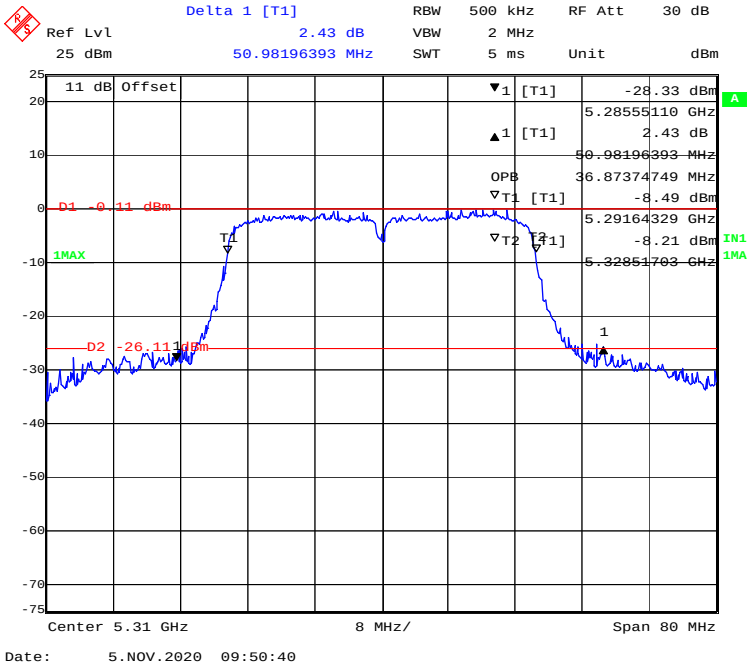
802.11n-HT20 mode, 5320MHz



802.11n-HT40 mode, 5270MHz



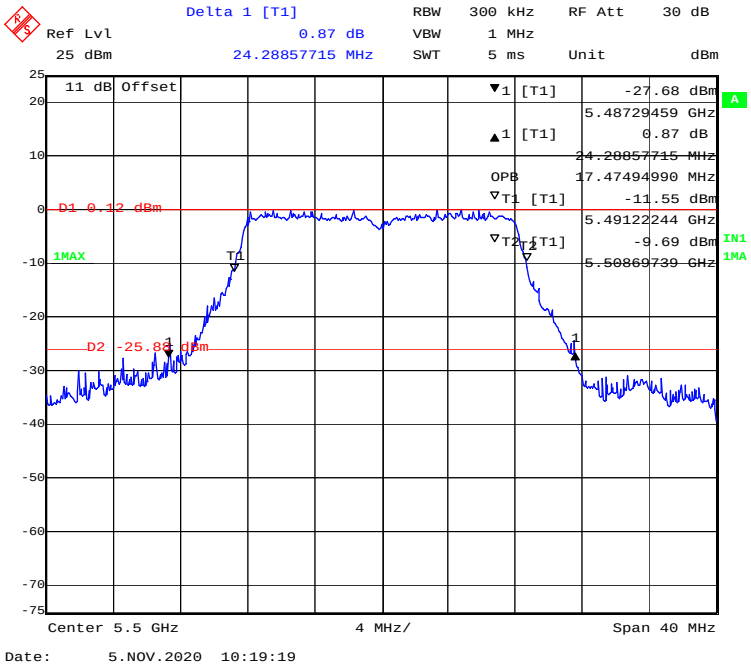
802.11n-HT40 mode, 5310MHz



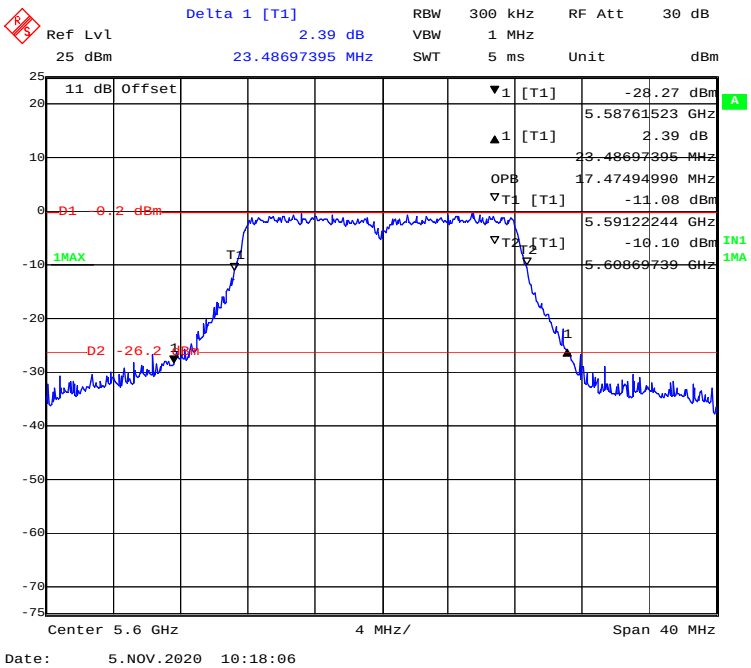
5470-5725 MHz Band:

26 Bandwidth&99% Occupied Bandwidth

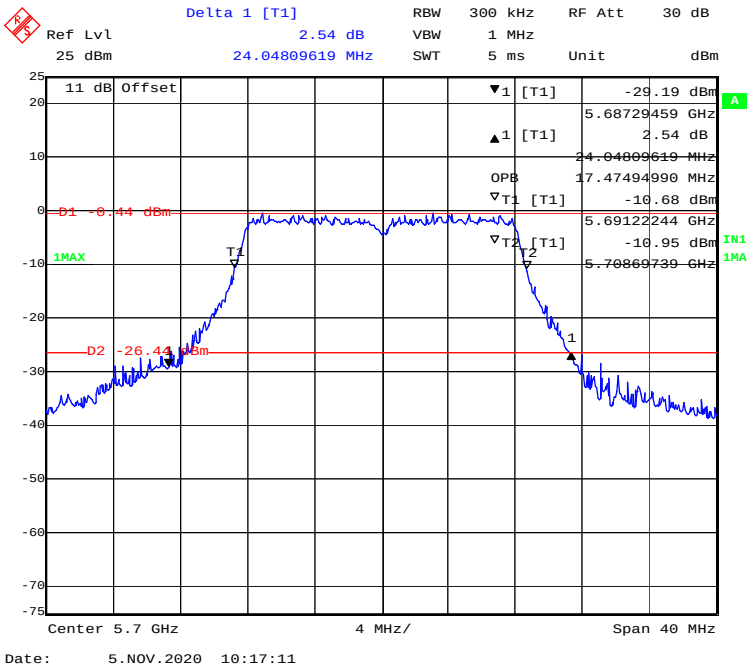
802.11a mode, 5500MHz



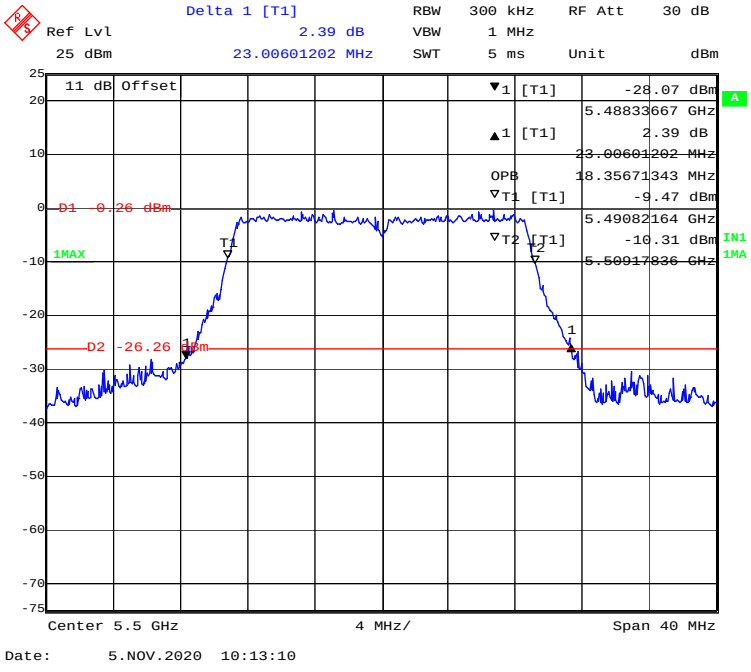
802.11a mode, 5600MHz



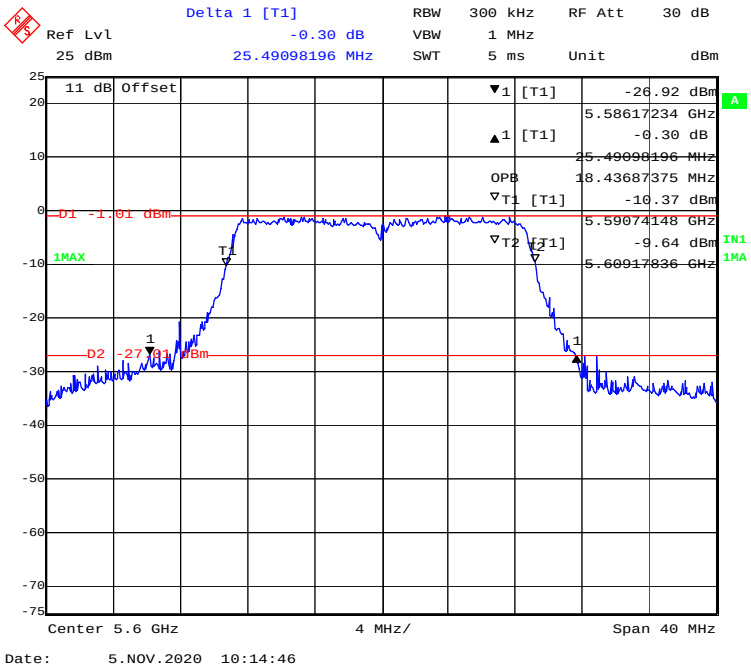
802.11a mode, 5700MHz



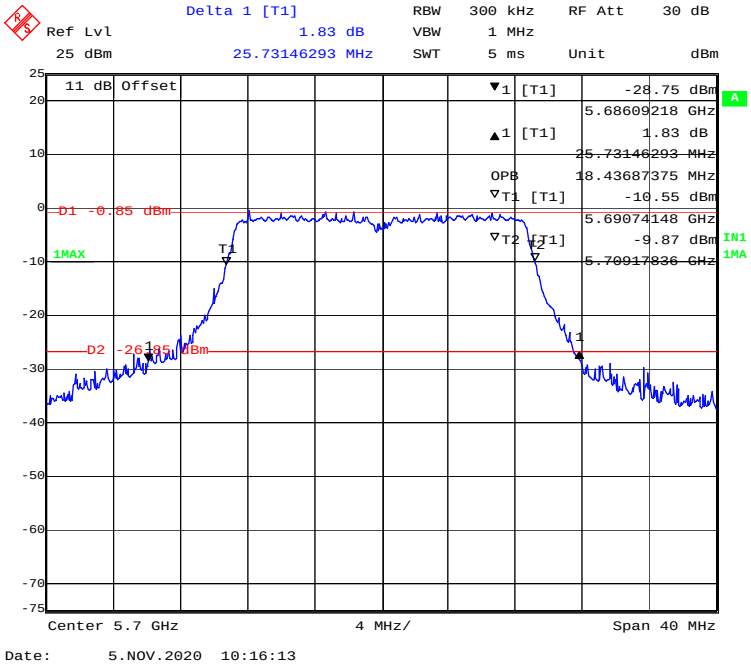
802.11n-HT20 mode, 5500MHz



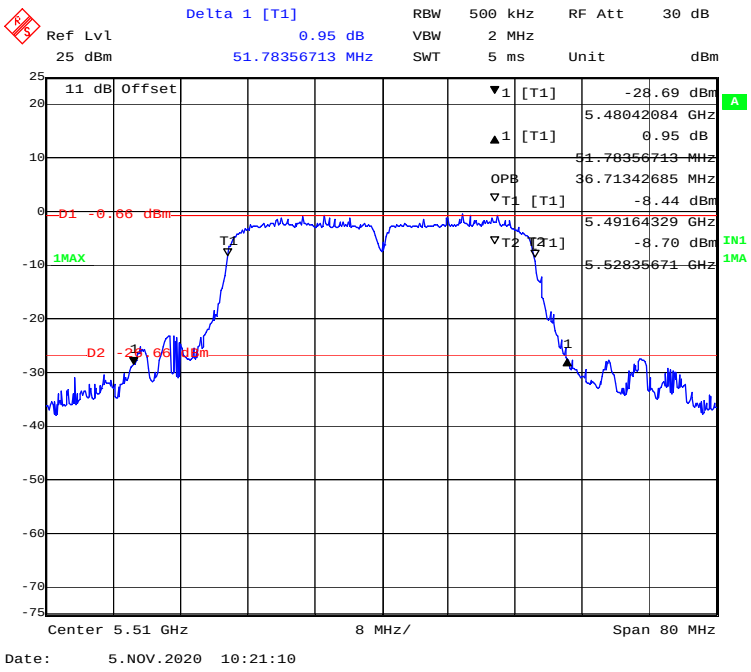
802.11n-HT20 mode, 5600MHz



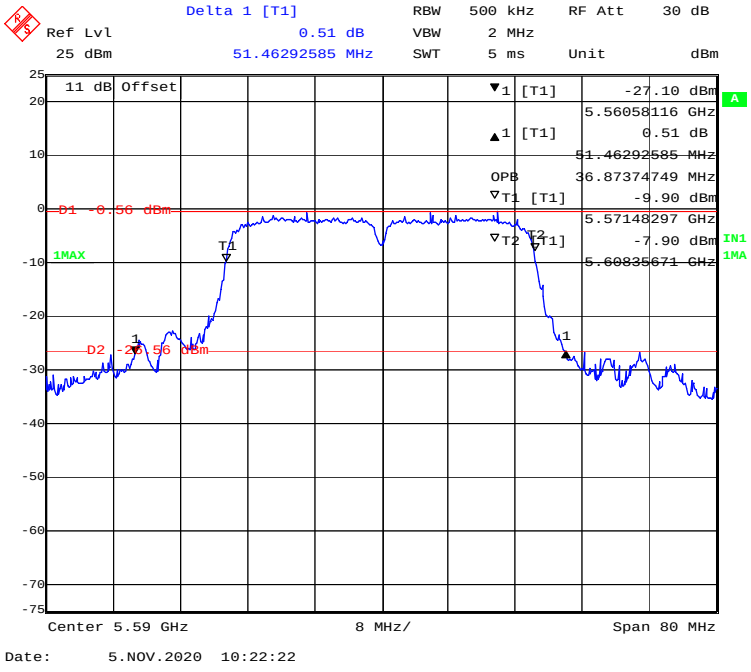
802.11n-HT20 mode, 5700MHz



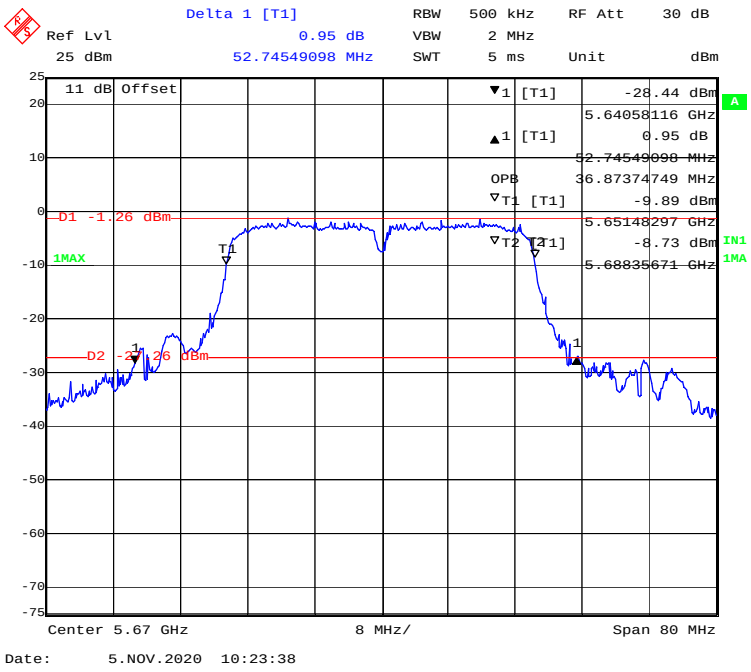
802.11n-HT40 mode, 5510MHz



802.11n-HT40 mode, 5590MHz



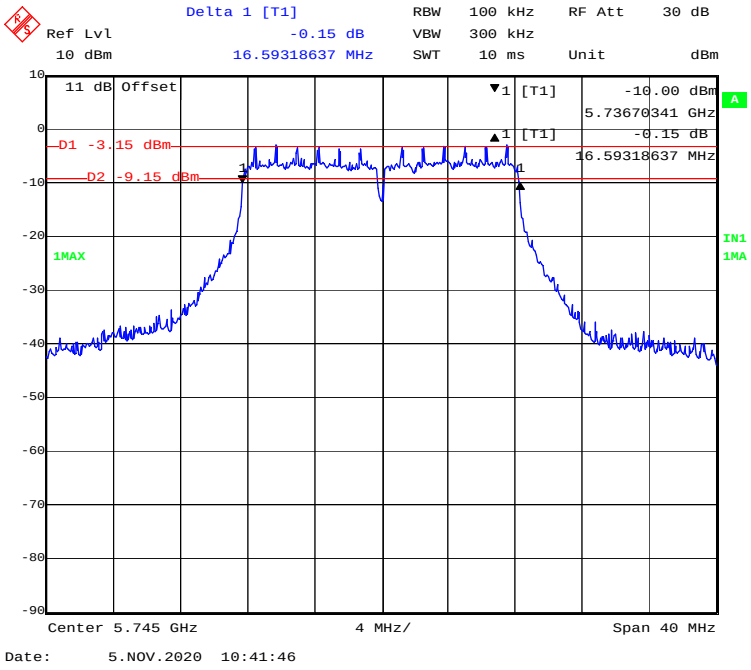
802.11n-HT40 mode, 5670MHz



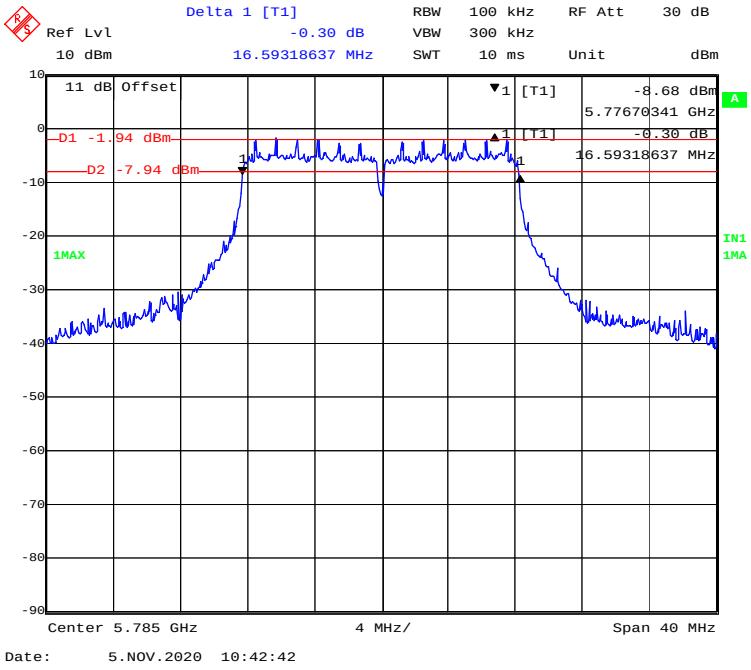
5725-5850 MHz Band

6dB Bandwidth

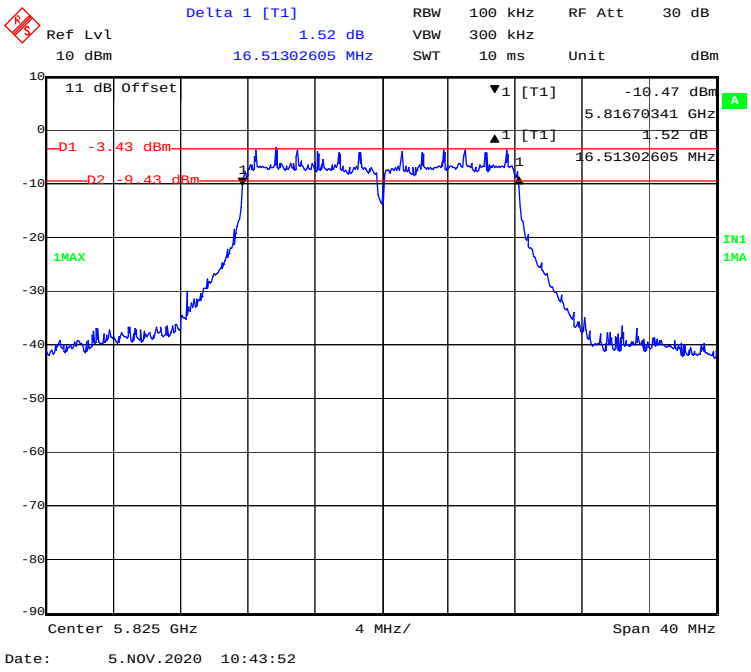
802.11a mode, 5745MHz



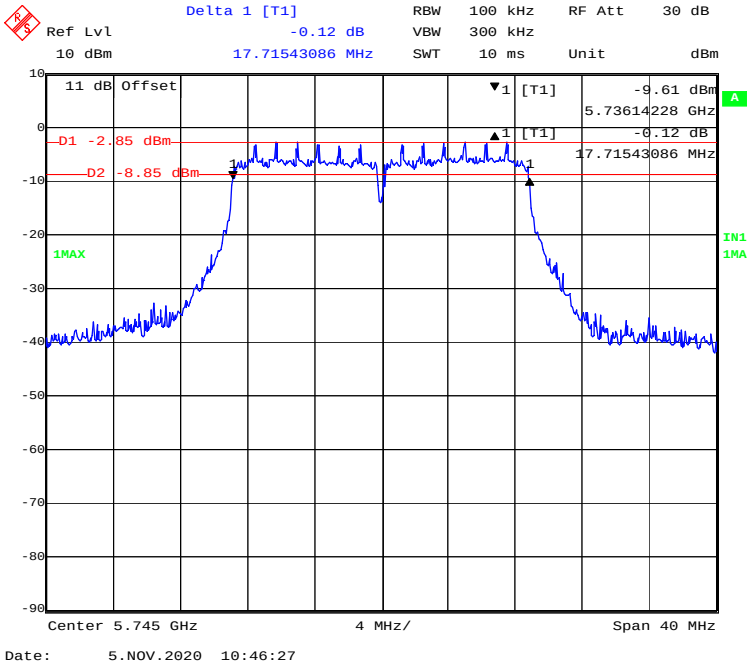
802.11a mode, 5785MHz



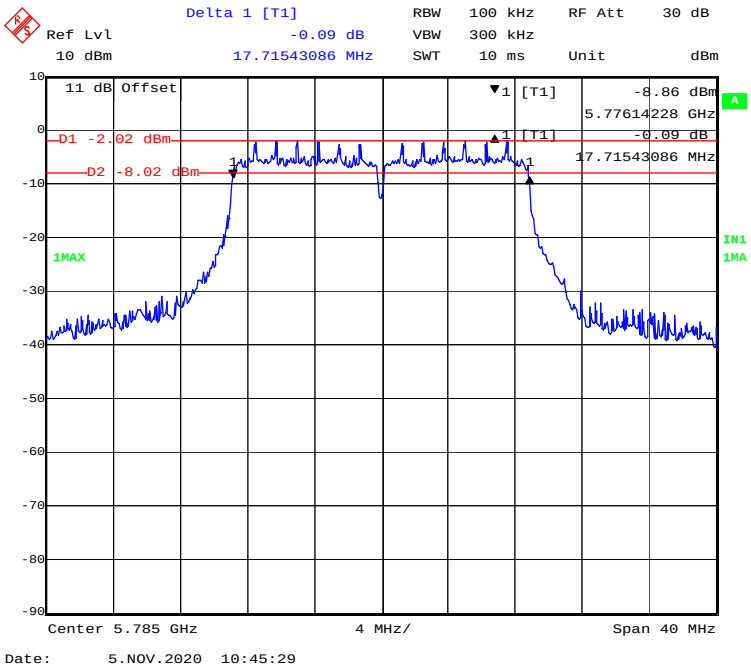
802.11a mode, 5825MHz



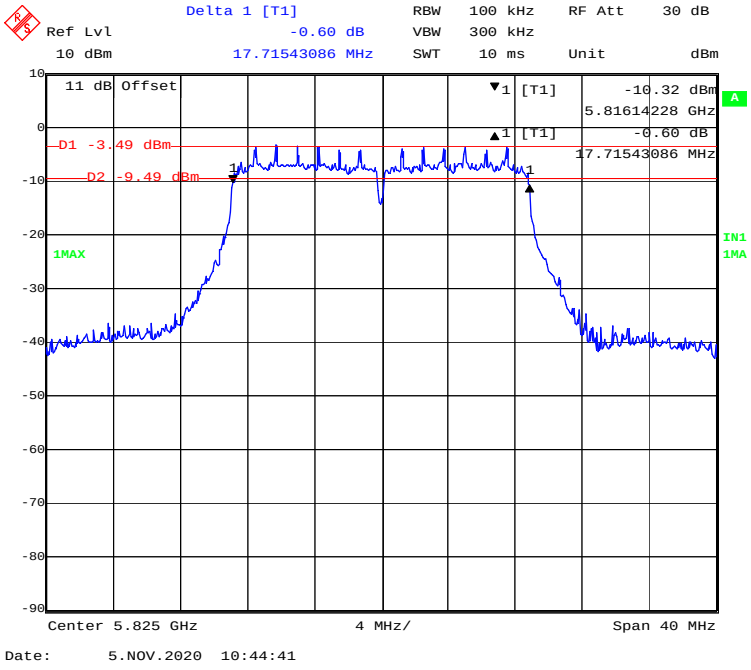
802.11n-HT20 mode, 5745MHz



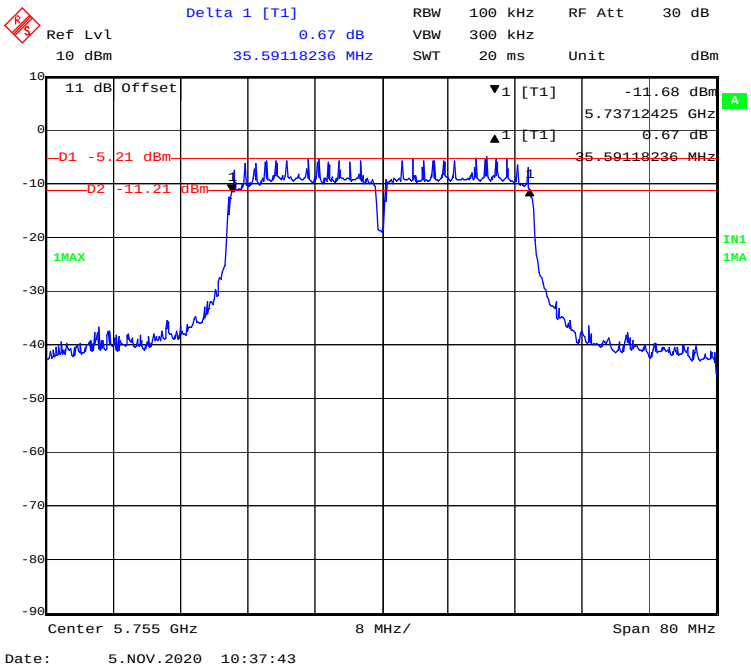
802.11n-HT20 mode, 5785MHz



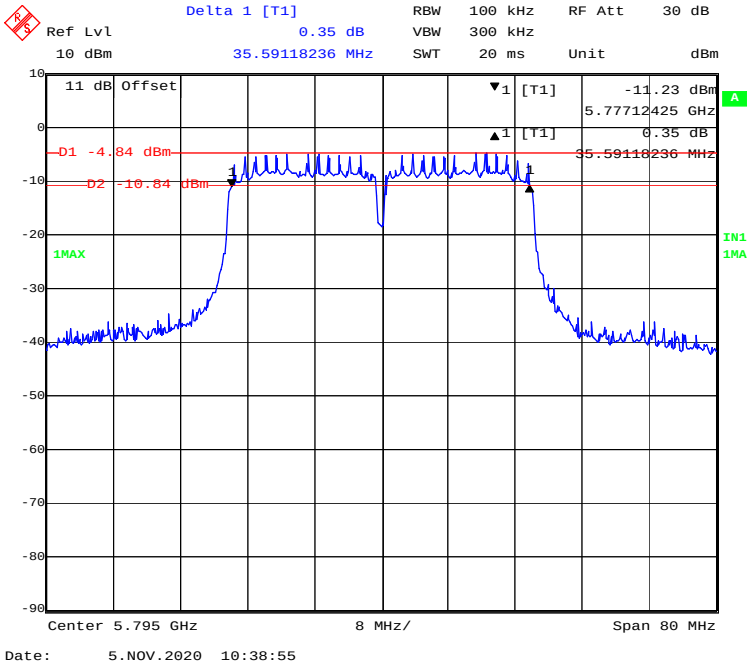
802.11n-HT20 mode, 5825MHz



802.11n-HT40 mode, 5755MHz

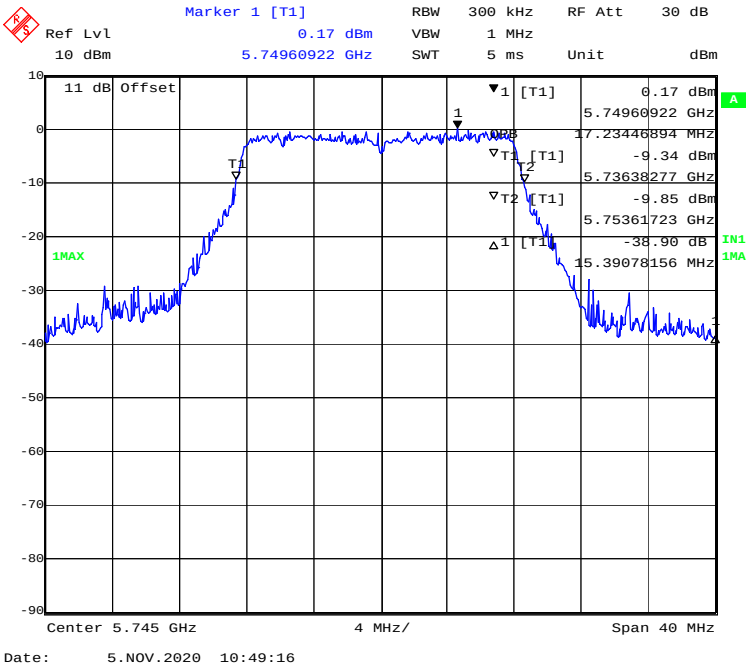


802.11n-HT40 mode, 5795MHz

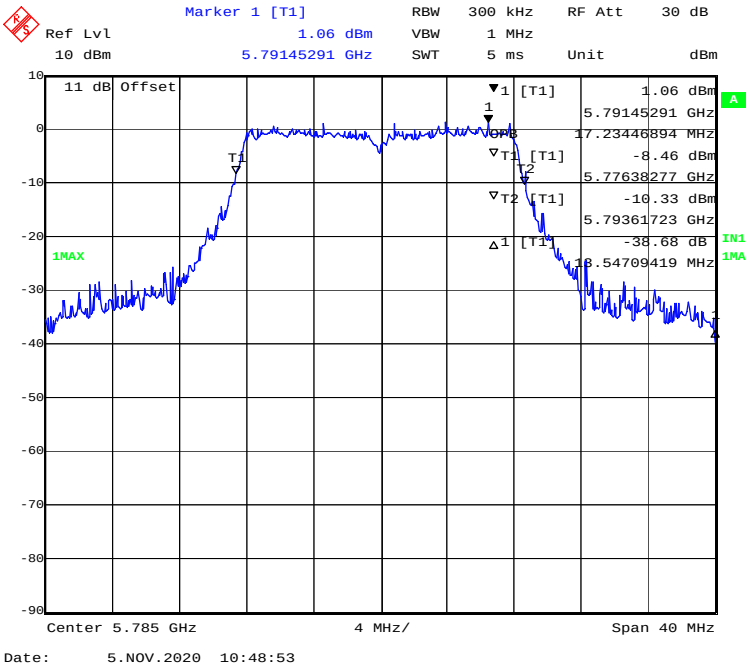


99% Occupied Bandwidth:

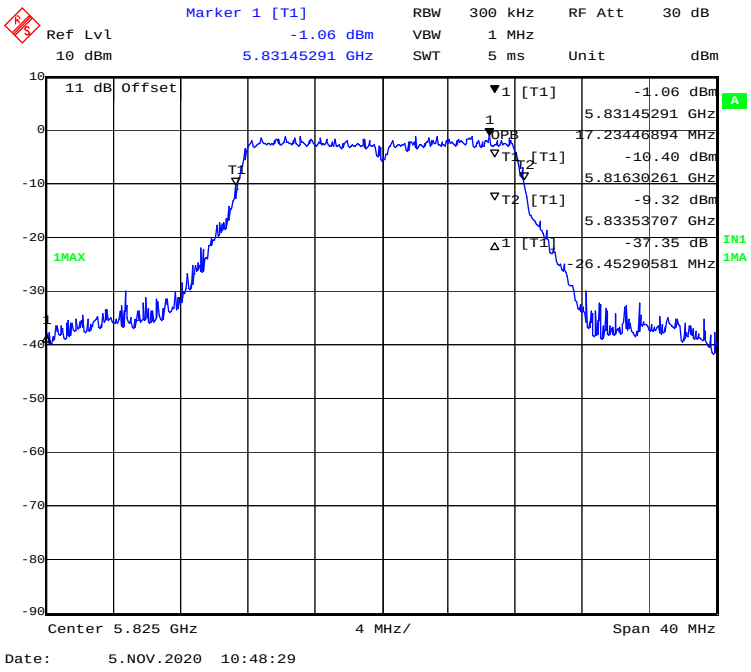
802.11a mode, 5745MHz



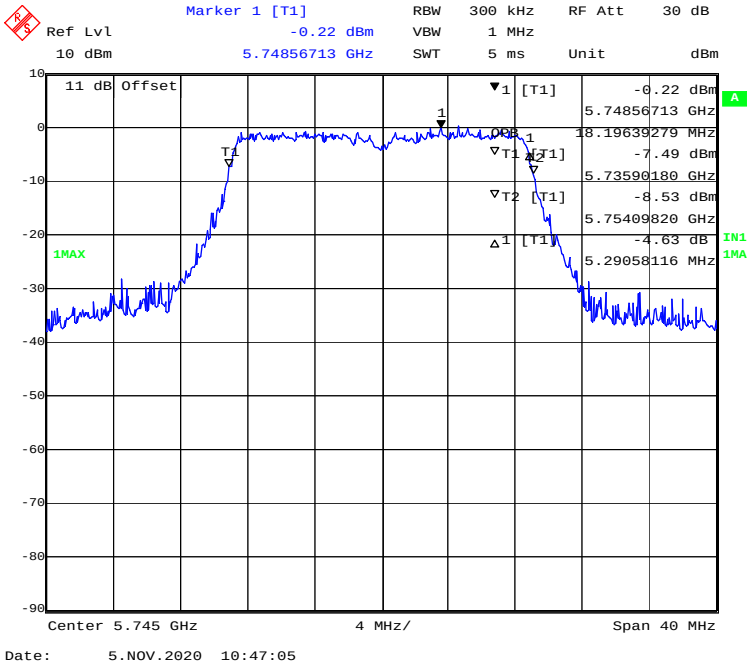
802.11a mode, 5785MHz



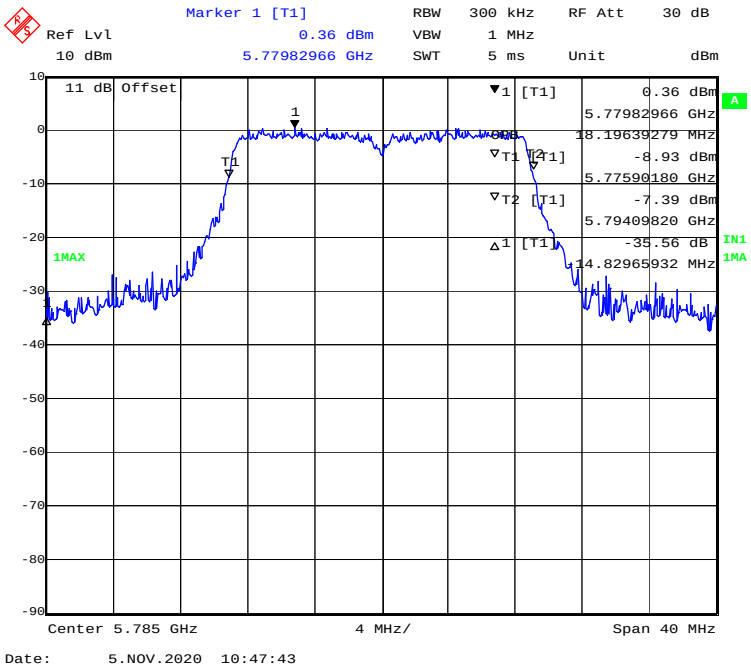
802.11a mode, 5825MHz



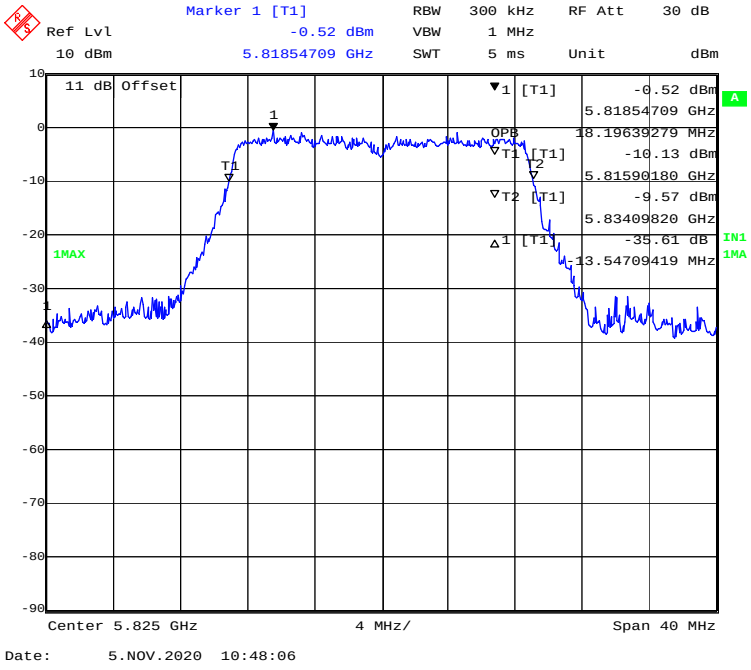
802.11n-HT20 mode, 5745MHz



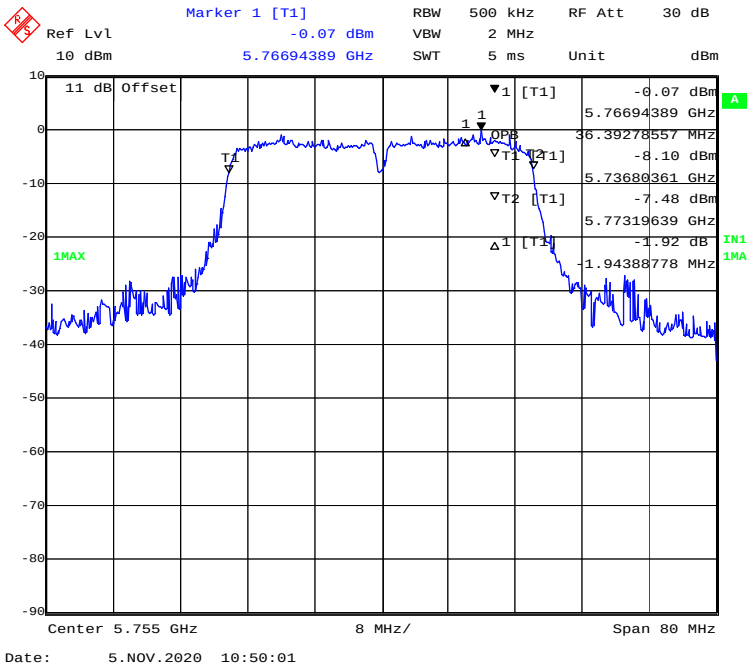
802.11n-HT20 mode, 5785MHz



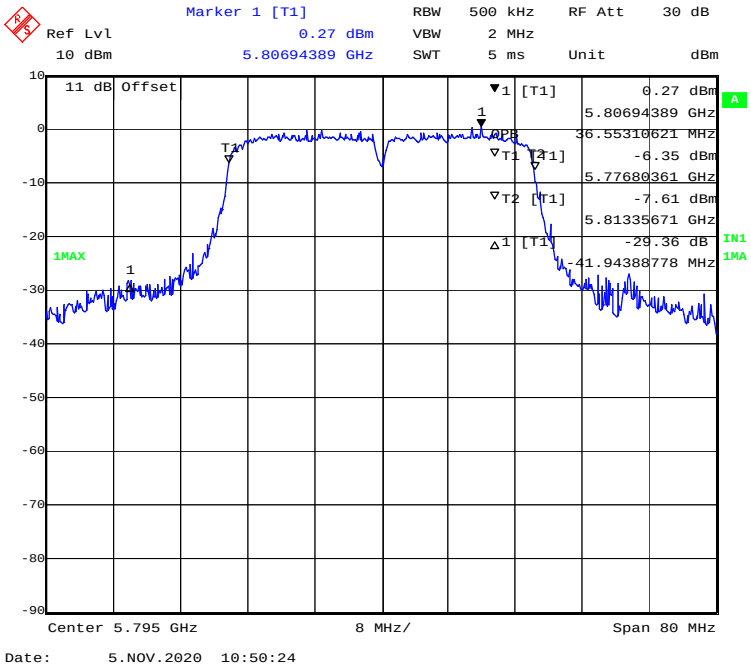
802.11n-HT20 mode, 5825MHz



802.11n-HT40 mode, 5755MHz



802.11n-HT40 mode, 5795MHz



FCC §15.407(a) (1) (2) (3) – CONDUCTED TRANSMITTER OUTPUT POWER

Applicable Standard

According to §15.407(a)(1)

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

According to §15.407(a)(2)

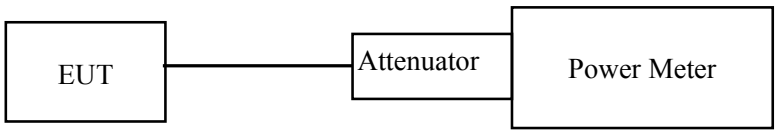
For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11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

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

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:	24.3~24.7 °C
Relative Humidity:	50~52 %
ATM Pressure:	101.7~101.9 kPa

The testing was performed by Jack Jiao from 2020-11-05 to 2020-12-02.

Test Mode: Transmitting

Test mode	Band	Frequency (MHz)	Average Conducted Output Power (dBm)	Limit (dBm)	Result
802.11a	5150-5250 MHz	5180	9.76	24	PASS
		5200	9.61	24	PASS
		5240	9.62	24	PASS
802.11n-HT20	5150-5250 MHz	5180	9.71	24	PASS
		5200	9.74	24	PASS
		5240	9.42	24	PASS
802.11n-HT40	5150-5250 MHz	5190	9.85	24	PASS
		5230	9.77	24	PASS

Test mode	Band	Frequency (MHz)	Average Conducted Output Power (dBm)	Limit (dBm)	Result
802.11a	5250-5350 MHz	5260	9.15	24	PASS
		5280	9.23	24	PASS
		5320	9.68	24	PASS
802.11n-HT20	5250-5350 MHz	5260	9.10	24	PASS
		5280	9.44	24	PASS
		5320	9.71	24	PASS
802.11n-HT40	5250-5350 MHz	5270	9.37	24	PASS
		5310	9.66	24	PASS

Test mode	Band	Frequency (MHz)	Average Conducted Output Power (dBm)	Limit (dBm)	Result
802.11a	5470-5725 MHz	5500	8.66	24	PASS
		5600	8.63	24	PASS
		5700	8.53	24	PASS
		5720	7.69	24	PASS
802.11n-HT20	5470-5725 MHz	5500	9.07	24	PASS
		5600	8.53	24	PASS
		5700	8.57	24	PASS
		5720	7.48	24	PASS
802.11n-HT40	5470-5725 MHz	5510	9.11	24	PASS
		5590	8.84	24	PASS
		5670	8.43	24	PASS

Test mode	Band	Frequency (MHz)	Average Conducted Output Power (dBm)	Limit (dBm)	Result
802.11a	5725-5850 MHz	5745	9.38	30	PASS
		5785	9.66	30	PASS
		5825	8.61	30	PASS
802.11n-HT20	5725-5850 MHz	5745	9.08	30	PASS
		5785	9.70	30	PASS
		5825	8.62	30	PASS
802.11n-HT40	5725-5850 MHz	5755	9.48	30	PASS
		5795	10.35	30	PASS

Note: The maximum antenna gain is 1.0 dBi.

FCC §15.407(a) (1) (2) (3) - POWER SPECTRAL DENSITY

Applicable Standard

According to §15.407(a) (1)

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

According to §15.407(a)(2)

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

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 v02r01: Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices section F: Maximum power spectral density (PPSD)

Test Data

Environmental Conditions

Temperature:	24.3~24.9 °C
Relative Humidity:	50~52 %
ATM Pressure:	101.6~101.9 kPa

The testing was performed by Jack Jiao from 2020-11-05 to 2020-12-02.

Test Mode: Transmitting

5150MHz-5250MHz:

Mode	Channel	Frequency (MHz)	PSD (dBm/MHz)	Limit (dBm/MHz)	Result
802.11a	Low	5180	-1.42	11	PASS
	Middle	5200	-0.73	11	PASS
	High	5240	-1.24	11	PASS
802.11n-HT20	Low	5180	-1.30	11	PASS
	Middle	5200	-1.67	11	PASS
	High	5240	-1.59	11	PASS
802.11n-HT40	Low	5190	-4.16	11	PASS
	High	5230	-4.03	11	PASS

5250MHz-5350MHz:

Mode	Channel	Frequency (MHz)	PSD (dBm/MHz)	Limit (dBm/MHz)	Result
802.11a	Low	5260	-1.80	11	PASS
	Middle	5280	-1.99	11	PASS
	High	5320	-0.89	11	PASS
802.11n-HT20	Low	5260	-2.08	11	PASS
	Middle	5280	-1.70	11	PASS
	High	5320	-1.15	11	PASS
802.11n-HT40	Low	5270	-4.46	11	PASS
	High	5310	-3.94	11	PASS

5470MHz-5725MHz:

Mode	Frequency (MHz)	PSD (dBm/MHz)	Limit (dBm/MHz)	Result
802.11a	5500	-1.94	11	PASS
	5600	-1.94	11	PASS
	5700	-2.34	11	PASS
	5720	-2.73	11	PASS
802.11n-HT20	5500	-2.01	11	PASS
	5600	-2.41	11	PASS
	5700	-2.23	11	PASS
	5720	-2.70	11	PASS
802.11n-HT40	5510	-4.82	11	PASS
	5590	-5.18	11	PASS
	5670	-5.35	11	PASS

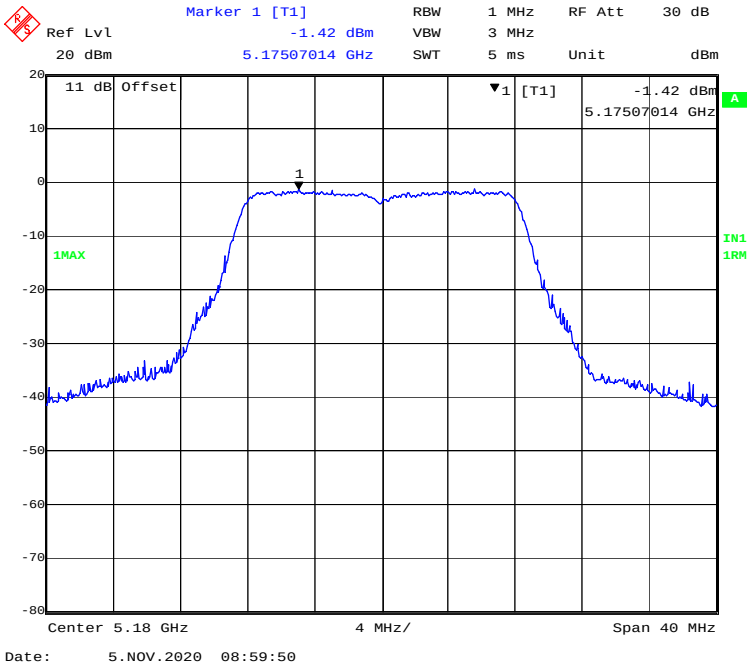
5725MHz-5850MHz:

Mode	Channel	Frequency (MHz)	PSD (dBm/500kHz)	Limit (dBm/500kHz)	Result
802.11a	Low	5745	-2.63	30	PASS
	Middle	5785	-2.47	30	PASS
	High	5825	-4.05	30	PASS
802.11n-HT20	Low	5745	-3.00	30	PASS
	Middle	5785	-2.50	30	PASS
	High	5825	-3.82	30	PASS
802.11n-HT40	Low	5755	-5.53	30	PASS
	High	5795	-5.27	30	PASS

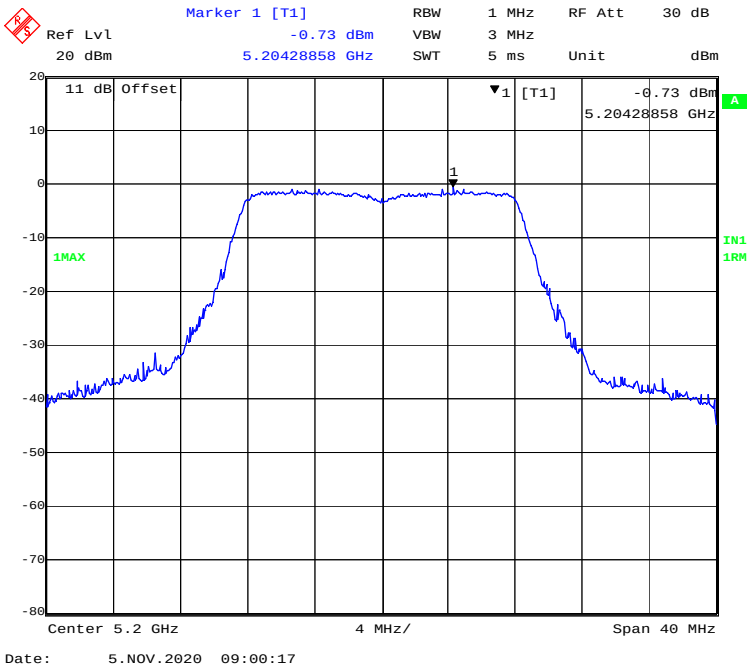
Note: The maximum antenna gain is 1.0 dBi.

5150MHz-5250MHz Band:

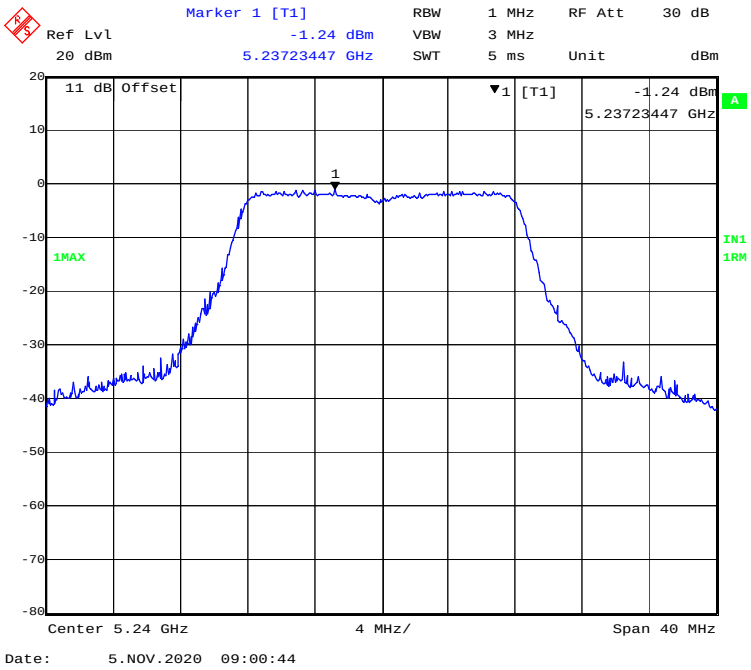
802.11a mode, Power spectral density-5180MHz



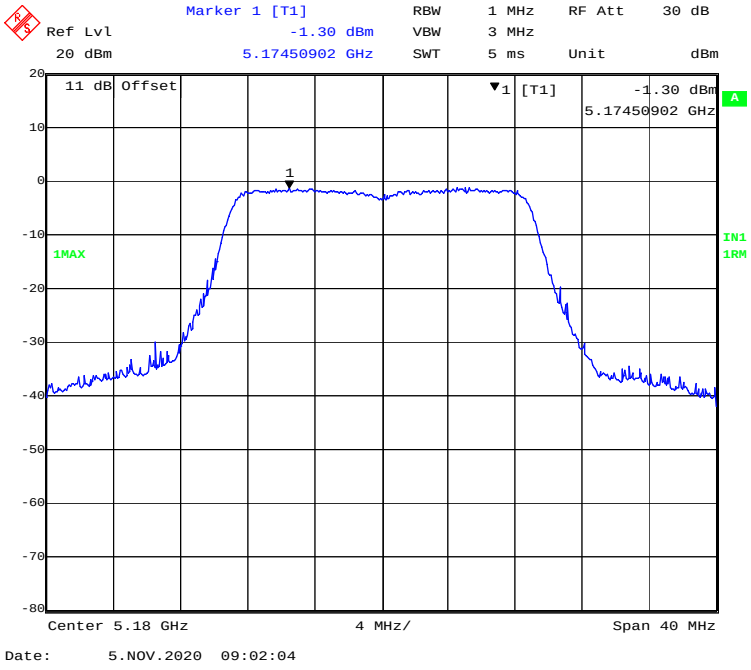
802.11a mode, Power spectral density-5200MHz



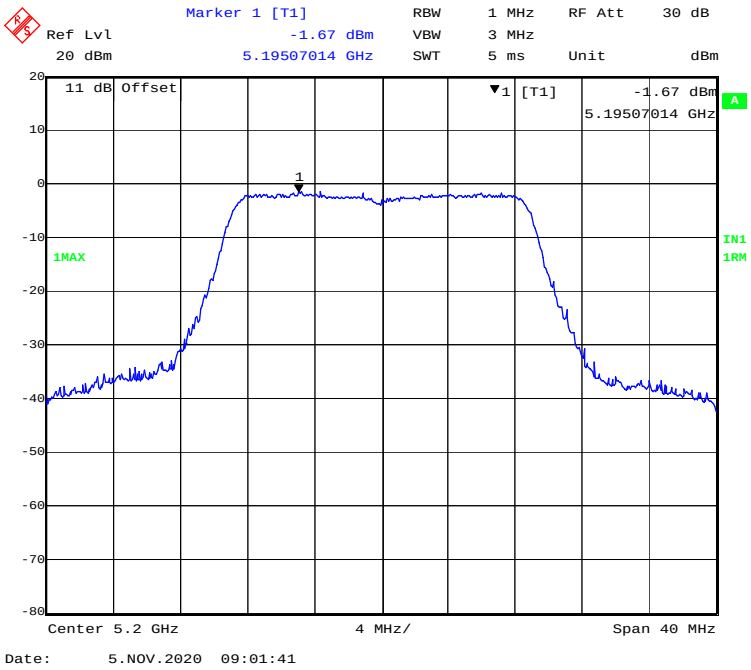
802.11a mode, Power spectral density-5240MHz



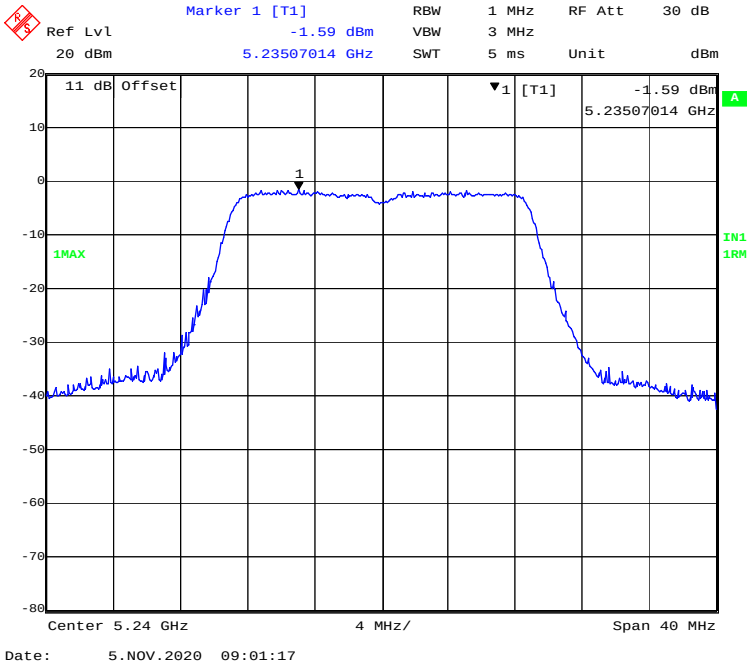
802.11n-HT20 mode, Power spectral density-5180MHz



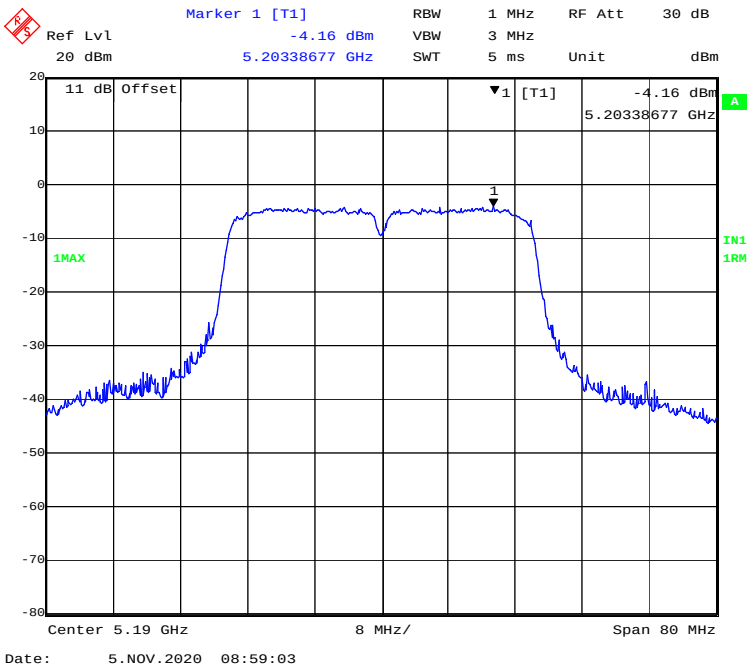
802.11n-HT20 mode, Power spectral density-5200MHz



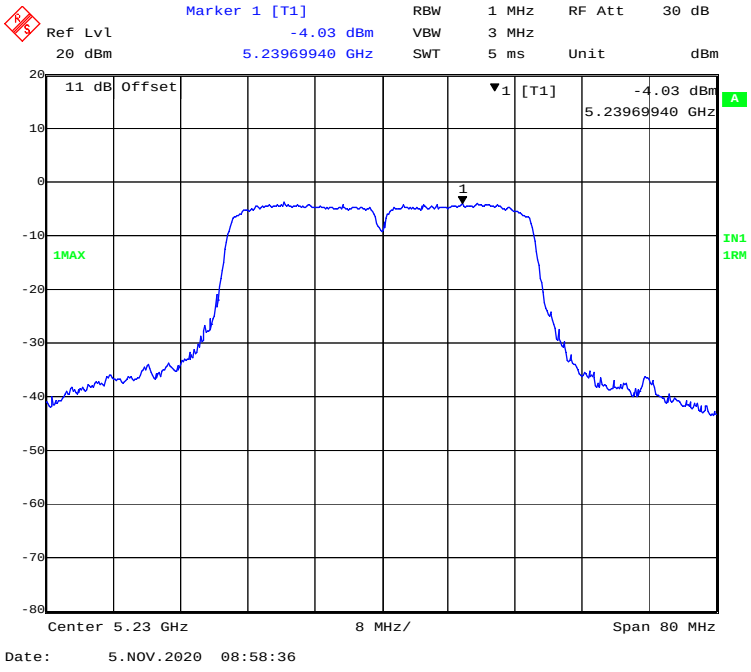
802.11n-HT20 mode, Power spectral density-5240MHz



802.11n-HT40 mode, Power spectral density-5190MHz

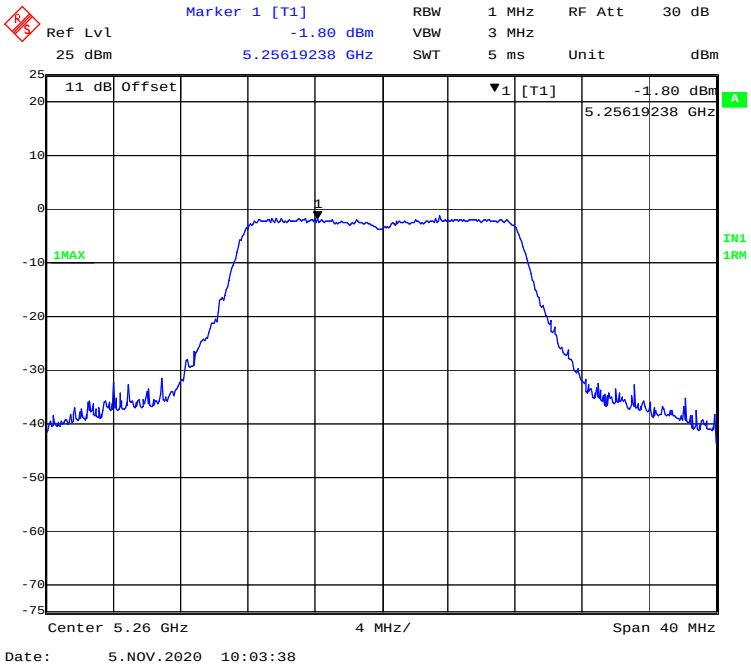


802.11n-HT40 mode, Power spectral density-5230MHz

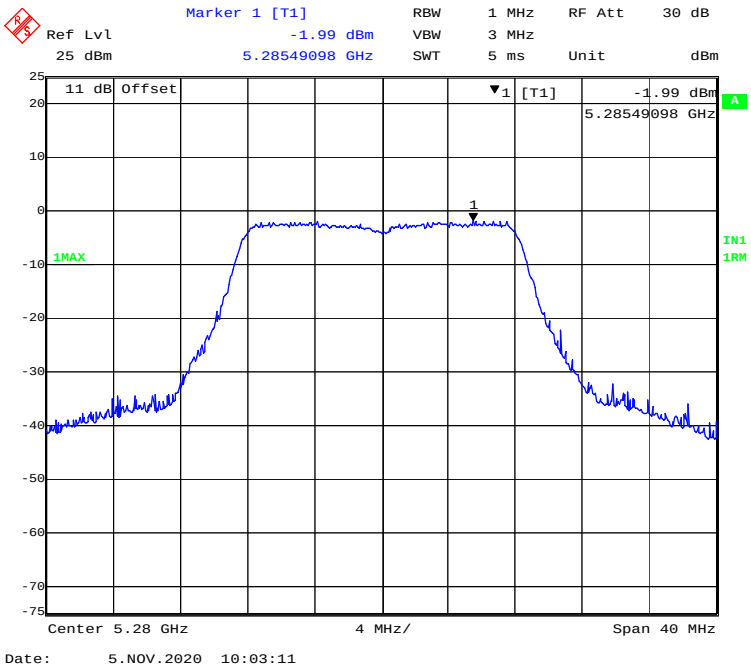


5250MHz-5350MHz Band:

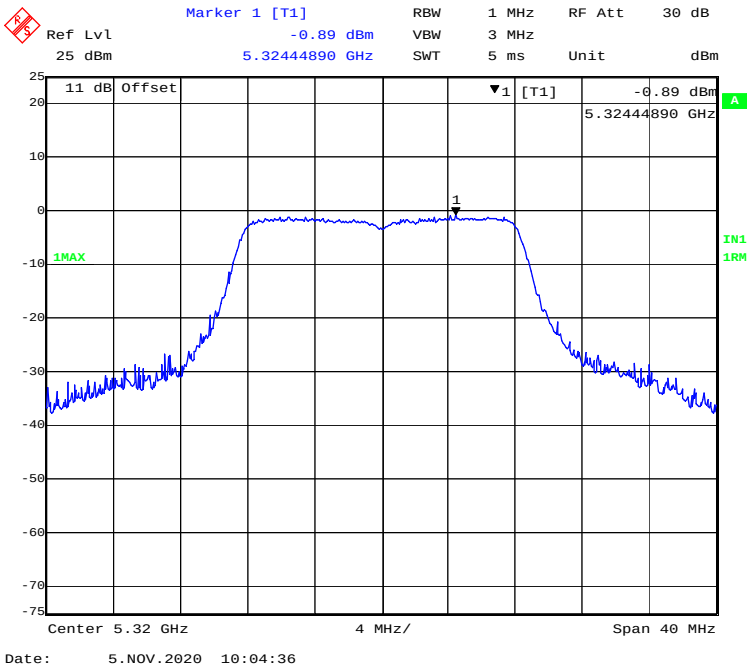
802.11a mode, Power spectral density-5260MHz



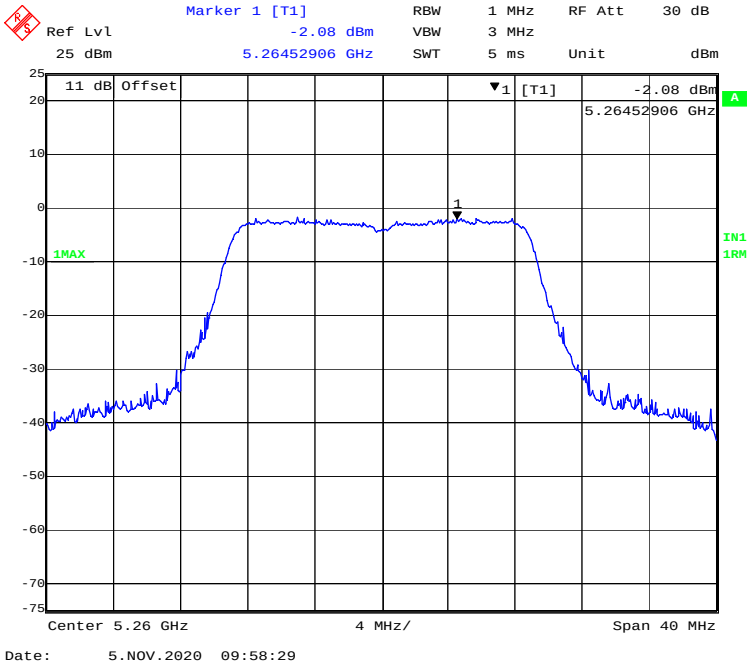
802.11a mode, Power spectral density-5280MHz



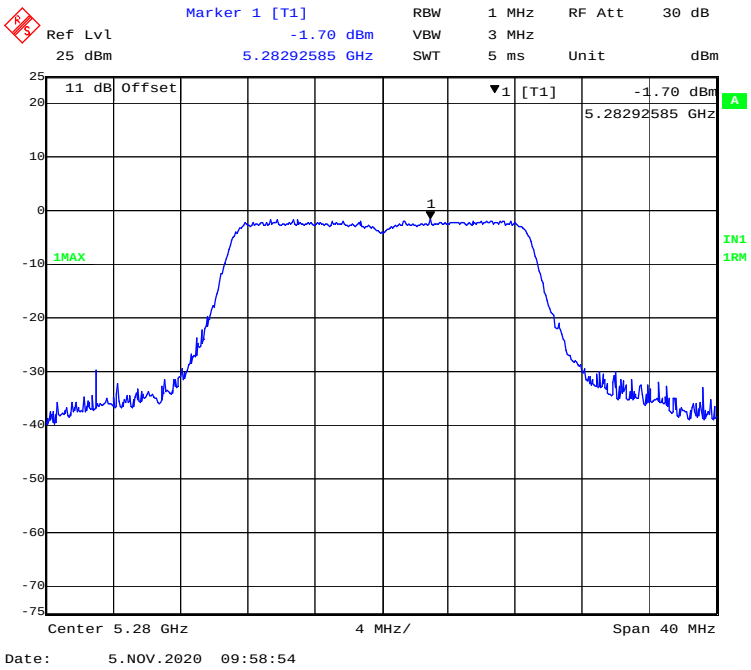
802.11a mode, Power spectral density-5320MHz



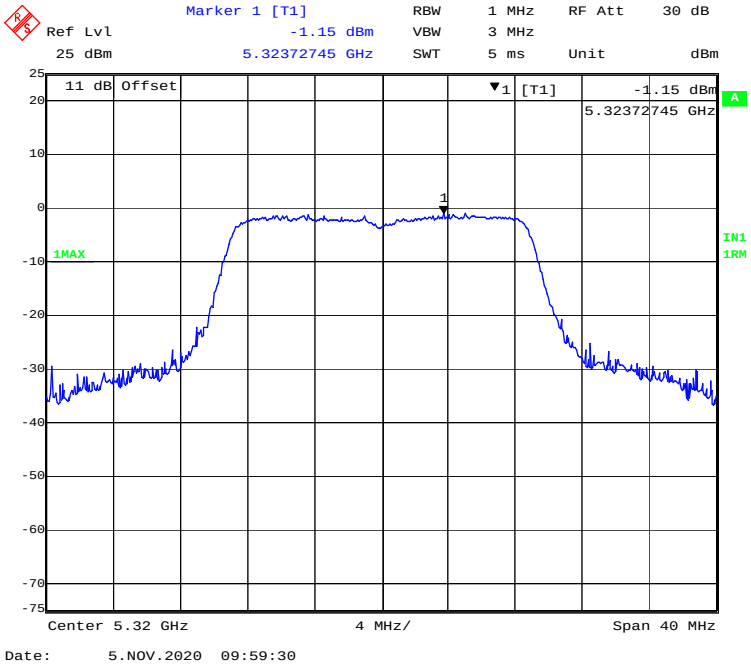
802.11n-HT20 mode, Power spectral density-5260MHz



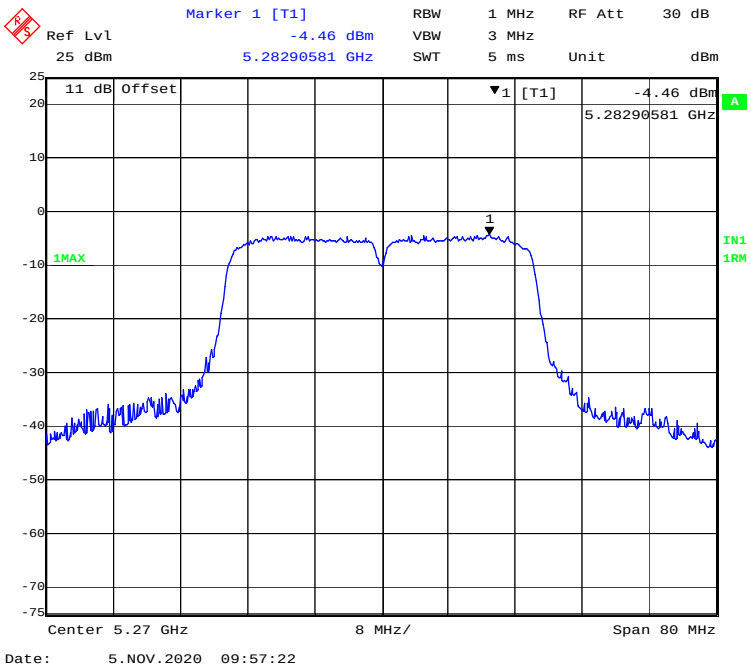
802.11n-HT20 mode, Power spectral density-5280MHz



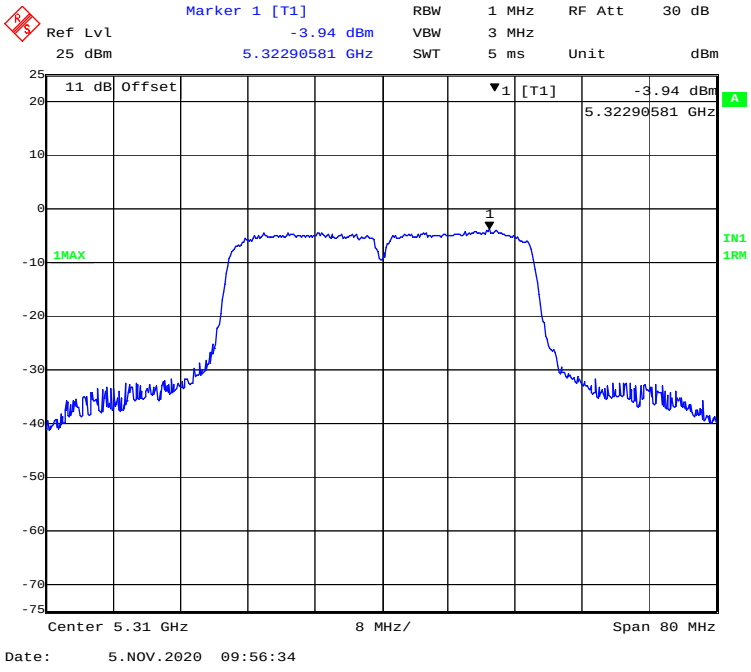
802.11n-HT20 mode, Power spectral density-5320MHz



802.11n-HT40 mode, Power spectral density-5270MHz

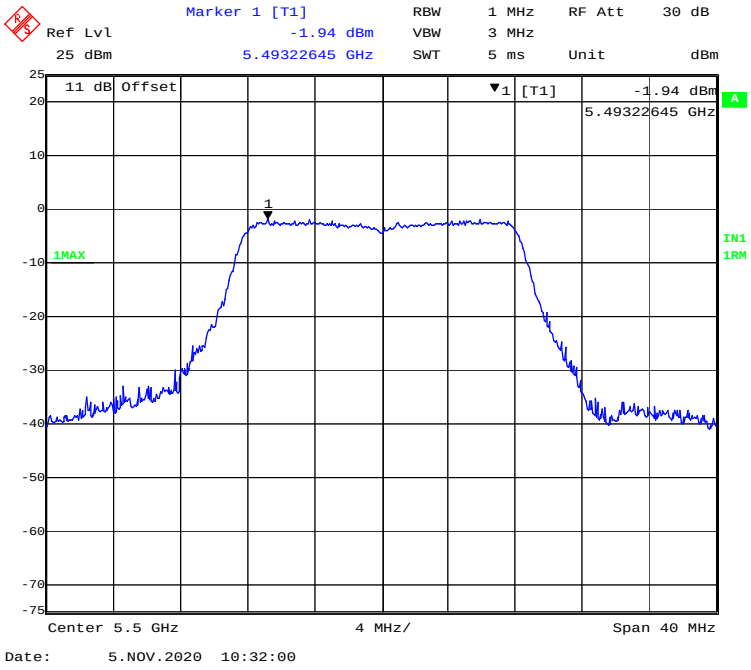


802.11n-HT40 mode, Power spectral density-5310MHz

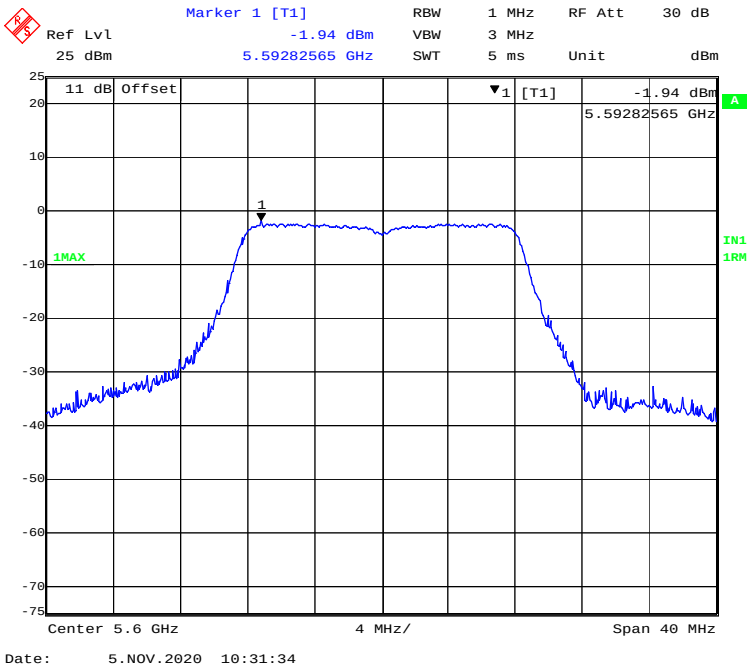


5470MHz-5725MHz Band:

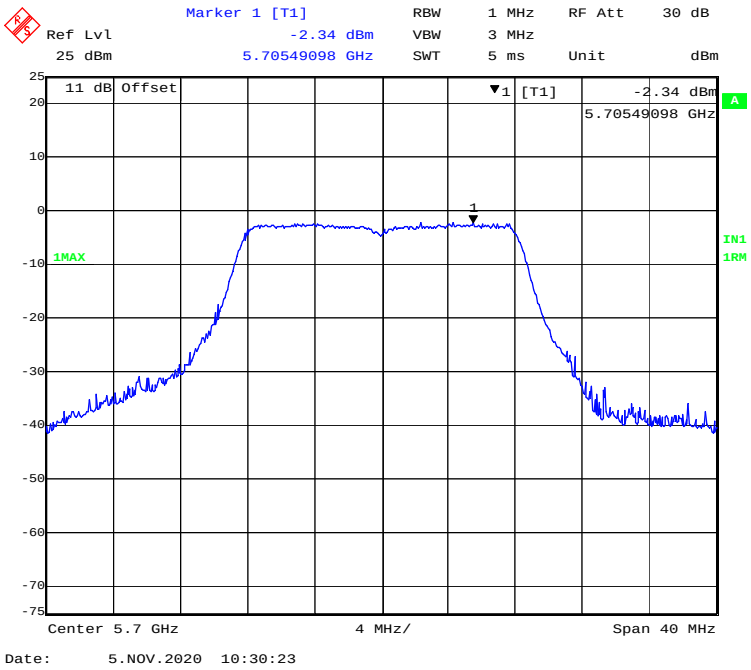
802.11a mode, Power spectral density-5500MHz



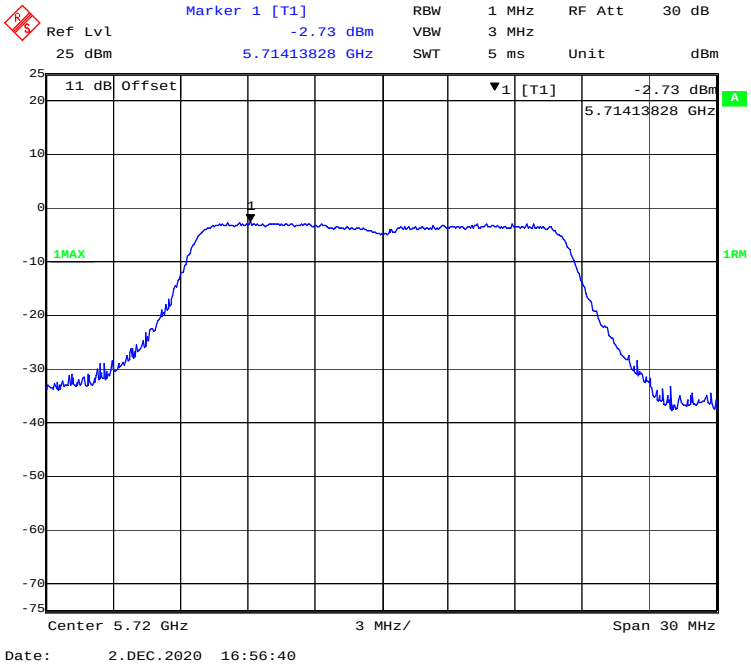
802.11a mode, Power spectral density-5600MHz



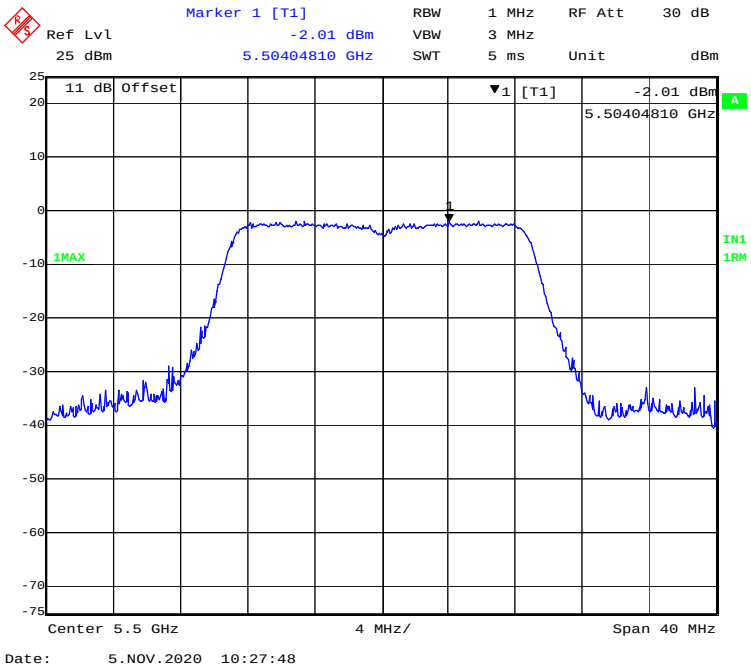
802.11a mode, Power spectral density-5700MHz



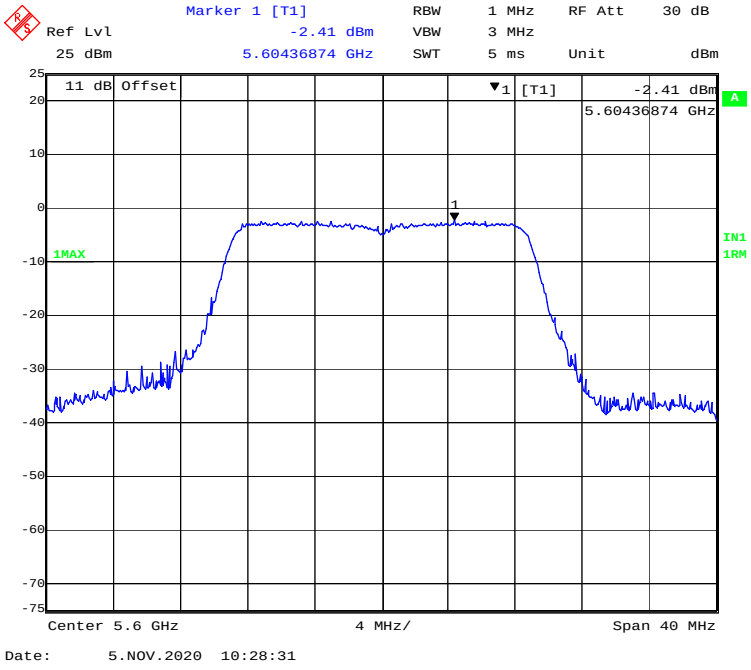
802.11a mode, Power spectral density-5720MHz



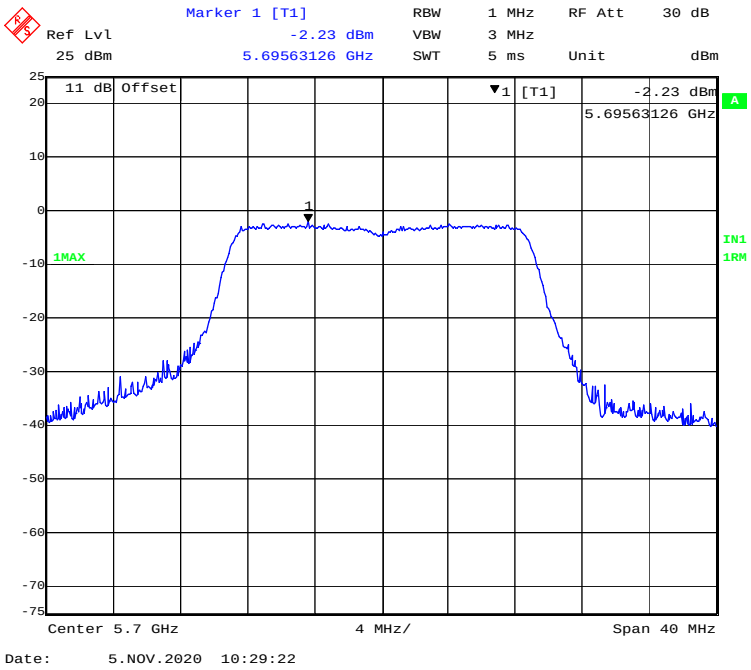
802.11n-HT20 mode, Power spectral density-5500MHz



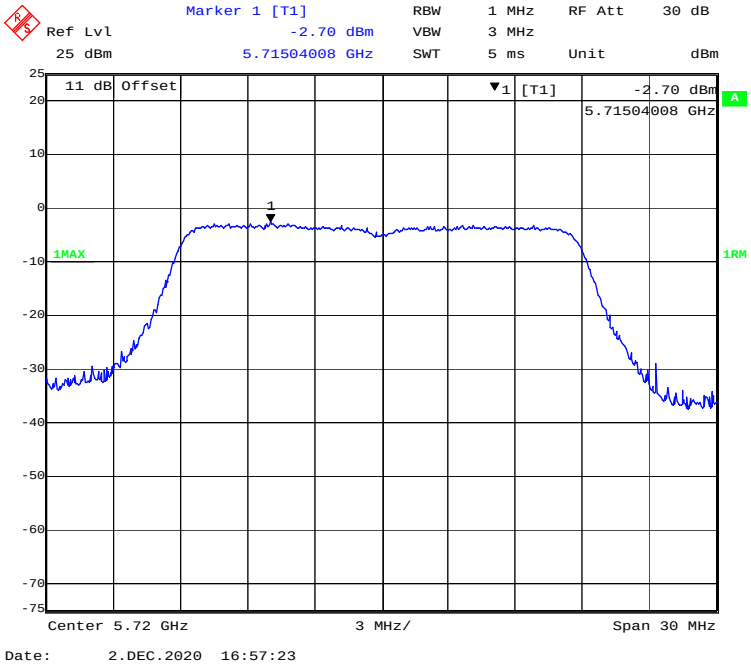
802.11n-HT20 mode, Power spectral density-5600MHz



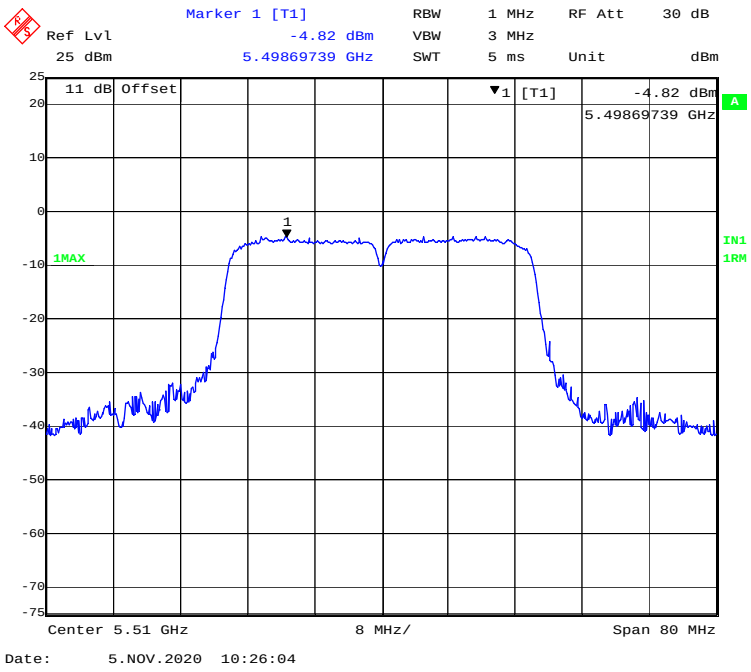
802.11n-HT20 mode, Power spectral density-5700MHz



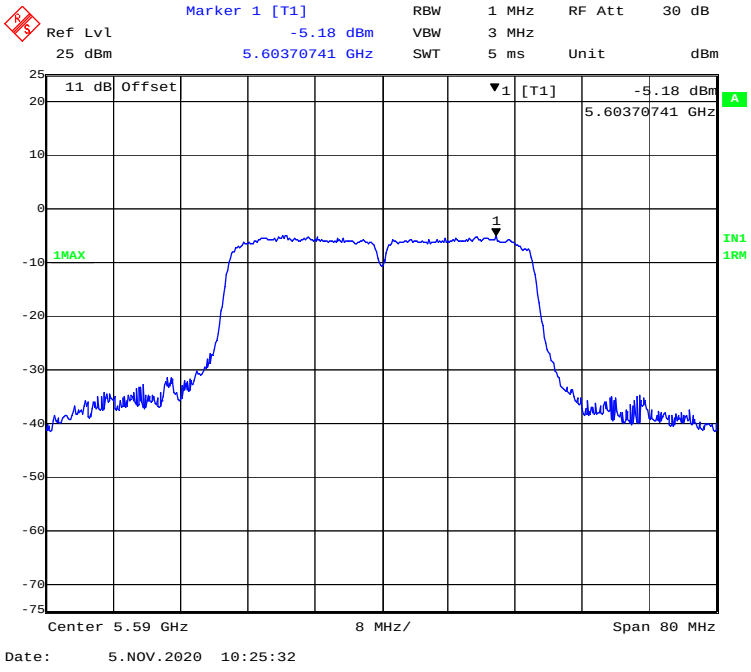
802.11n-HT20 mode, Power spectral density-5720MHz



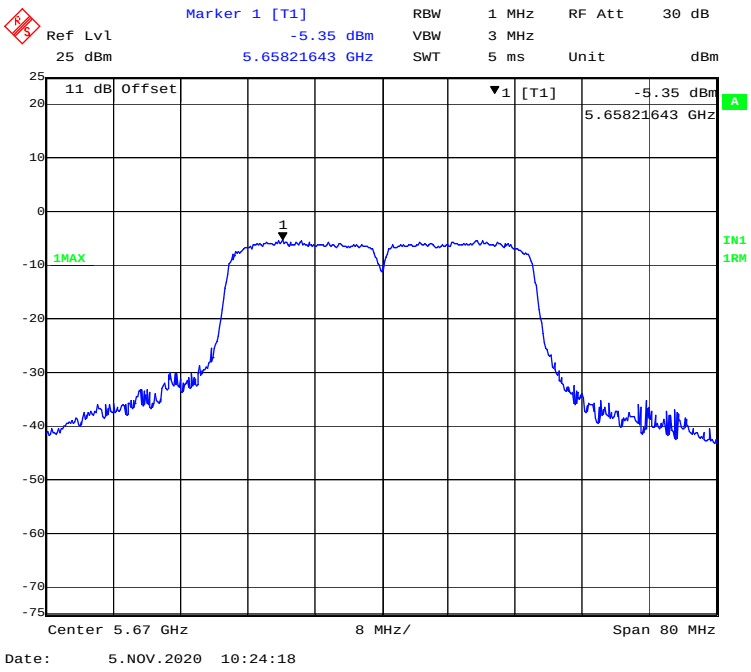
802.11n-HT40 mode, Power spectral density-5510MHz



802.11n-HT40 mode, Power spectral density-5590MHz

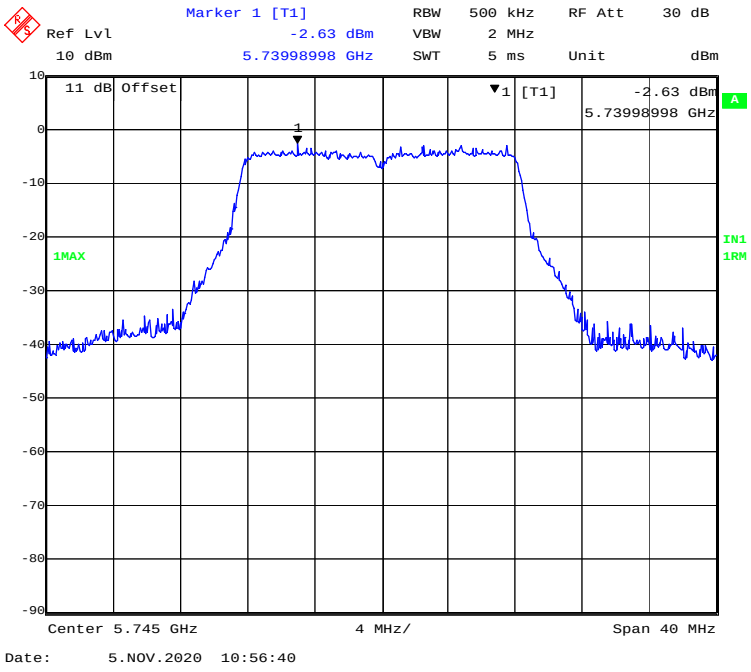


802.11n-HT40 mode, Power spectral density-5670MHz

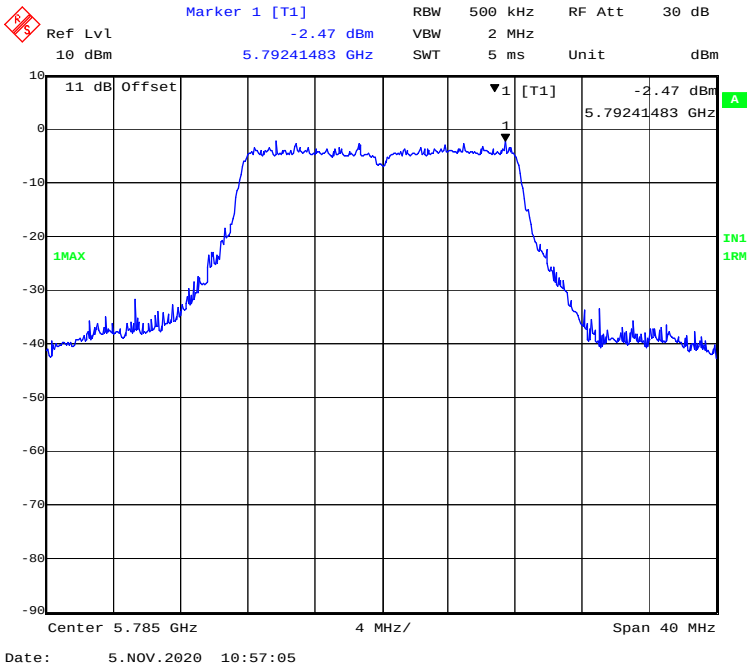


5725MHz-5850 MHz Band:

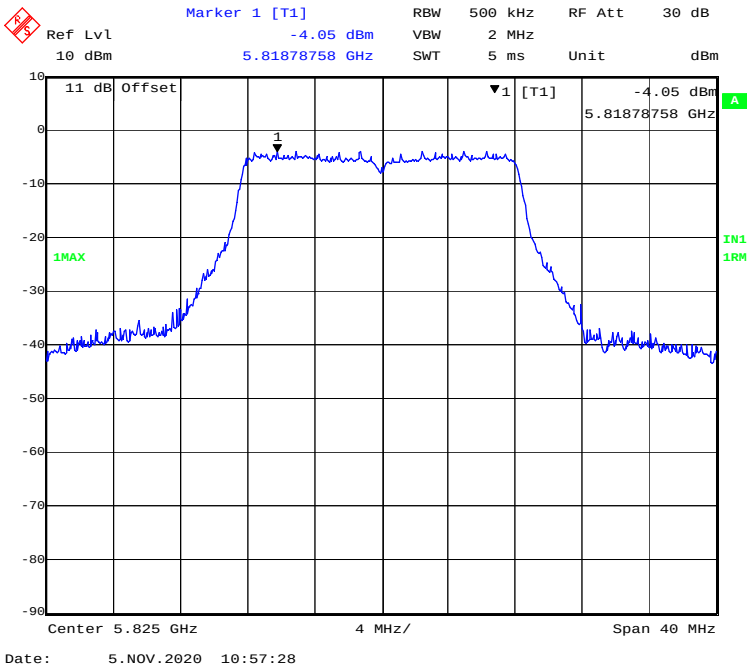
802.11a mode, Power spectral density-5745MHz



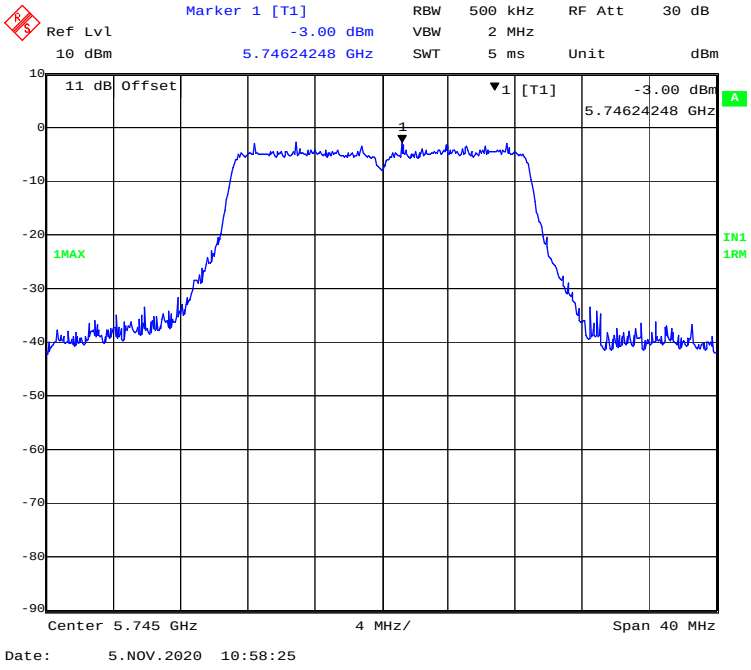
802.11a mode, Power spectral density-5785MHz



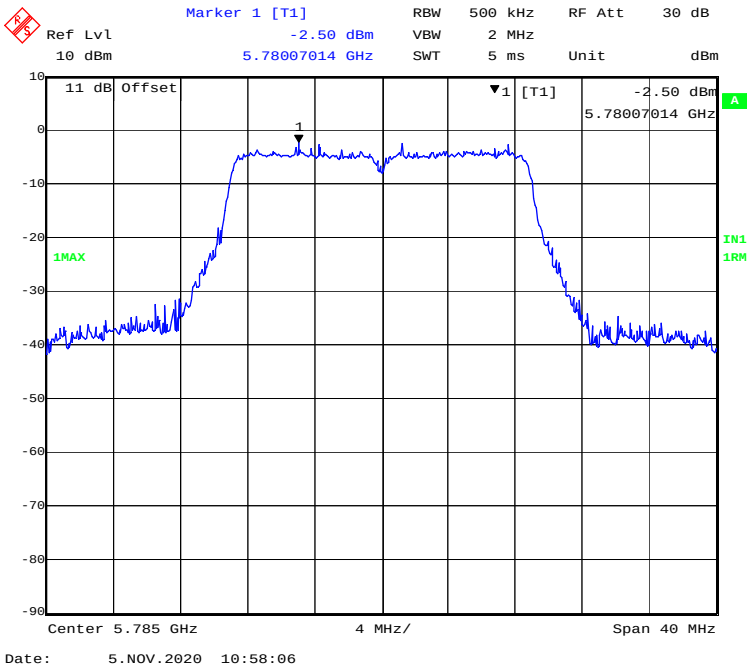
802.11a mode, Power spectral density-5825MHz



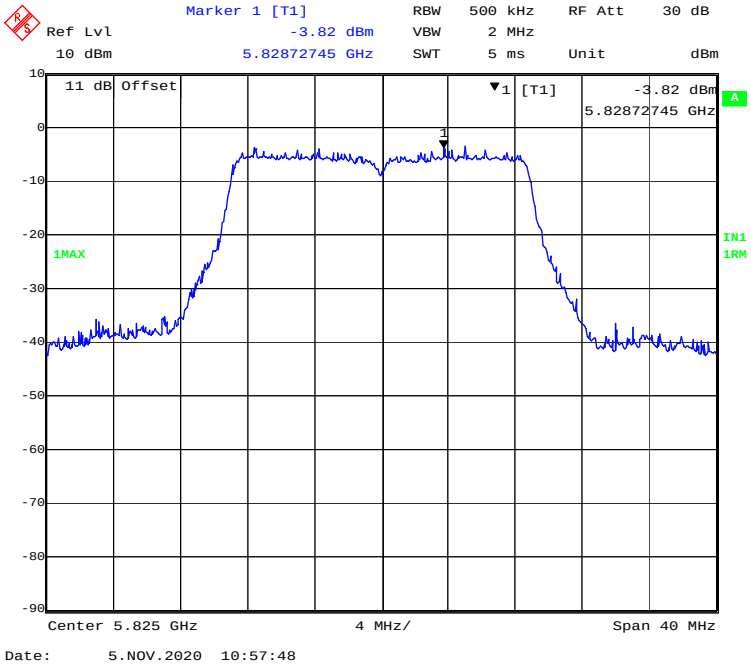
802.11n-HT20 mode, Power spectral density-5745MHz



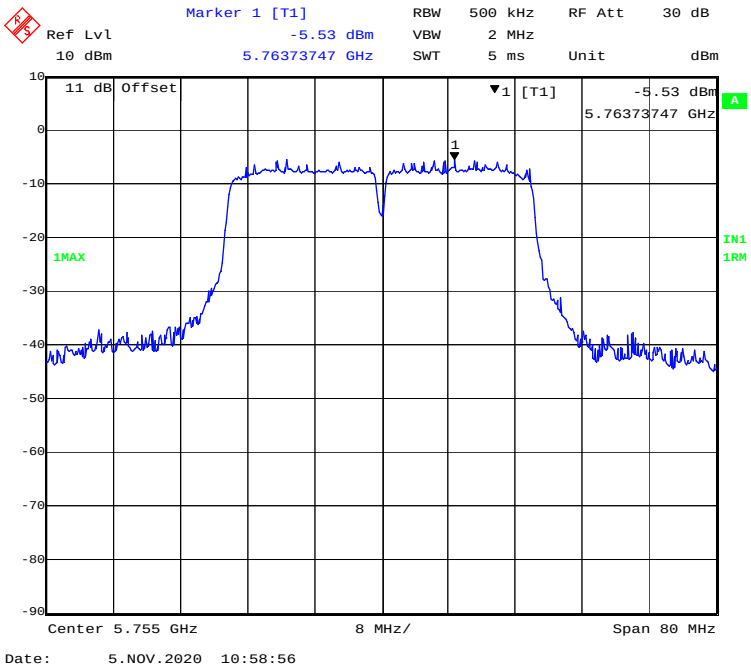
802.11n-HT20 mode, Power spectral density-5785MHz



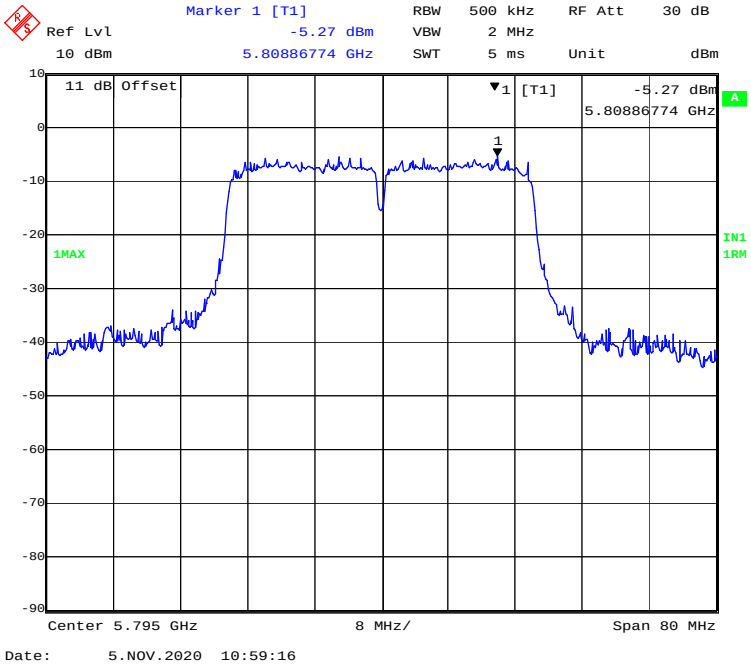
802.11n-HT20 mode, Power spectral density-5825MHz



802.11n-HT40 mode, Power spectral density-5755MHz



802.11n-HT40 mode, Power spectral density-5795MHz



Declarations

1: BACL is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with an asterisk '*'. Customer model name, addresses, names, trademarks etc. are not considered data.

2: Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

3: Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

4: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.

5: This report cannot be reproduced except in full, without prior written approval of the Company.

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