TESTING LABORATORY
CERTIFICATE#4323.01

FCC PART 15.407

TEST REPORT

For

Shanghai Sunmi Technology Co.,Ltd.

Room 605, Block 7, KIC Plaza, No.388 Song Hu Road, Yang Pu District, Shanghai 200433 China

FCC ID: 2AH25T2SL

Report Type:	**Product Type:**
Original Report	POS System

Test Engineer:	CK Huang
Report Number:	RKSA200804001-00E
Report Date:	2020-11-06
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:	Shanghai Sunmi Technology Co.,Ltd.
Test Model	L1563, L1573
Series Model:	L1562,L1561,L1572,L1571
Model Difference	See Declaration letter
Product Type:	POS System
Power Supply:	DC 24 V from adapter
RF Function:	5G Wi-Fi
Operating Band/Frequency:	Band 1:5150~5250 MHz, Band 4: 5725~5850 MHz
Channel Number:	Band 1: 7, Band 4: 8
Channel Separation:	802.11a/ac20/n20: 20MHz; 802.11n40/ac40:40 MHz, 802.11ac80: 80 MHz
Modulation Type:	DSSS,OFDM
Antenna Type:	L1563: PCB Antenna; L1573: PCB Antenna
*Maximum Antenna Gain:	L1563: B1/B4: Chain0: 0.05 dBi; Chain1: 0.05 dBi L1573: B1: Chain0: 1.57 dBi; Chain1: -0.69 dBi B4: Chain0: -0.79 dBi; Chain1: -1.66 dBi

Adapter1 Information（L1563/L1562/L1561）:
Model: CYSE65-240250
Input: AC 100-240V 50/60Hz 1.7A
Output: DC 24.0V, 2.5A 60.0W

Adapter2 information（L1573/L1572/L1571）:
Model: CYZS36-240150
Input: AC 100V-240V, 50/60Hz, 1.5A
Output: DC 24.0V, 1.5A

Note1: The Maximum Antenna Gain was declared by the manufacturer.

Note2: According to product differences, choose model L1563 for full test and L1573 for Spurious Emissions & AC Line Conducted Emissions test.

**All measurement and test data in this report was gathered from production sample serial number: 20200804001(L1563)/20200804002(L1573)(Assigned by the BACL). The EUT supplied by the applicant was received on 2020-08-04.*

Objective

This type approval report is prepared on behalf of *Shanghai Sunmi 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 submissions with FCC ID: 2AH25T2SL
FCC Part 15.247 DTS submissions with FCC ID: 2AH25T2SL
FCC Part 22H24E27 PCB submissions with FCC ID: 2AH25T2SL
FCC Part 15B JAB submissions with FCC ID: 2AH25T2SL

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.

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

802.11a/802.11ac20/n20 mode Channel 36, 40, 48 were tested.
802.11n40/802.11ac40 mode Channel 38, 46 were tested.
802.11ac80 mode Channel 42 was tested

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

For **5725~5850 MHz** band,

802.11a/802.11ac20/n20 mode Channel 149, 157, 165 were tested.
802.11n40/802.11ac40 mode Channel 151, 159 were tested.
802.11ac80 mode Channel 155 was tested.

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

For Conducted Test:

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

For Radiated Test:

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

EUT Exercise Software

RF test tool: QRCT 3

The worst case was performed under:

5150MHz-5250MHz Band:

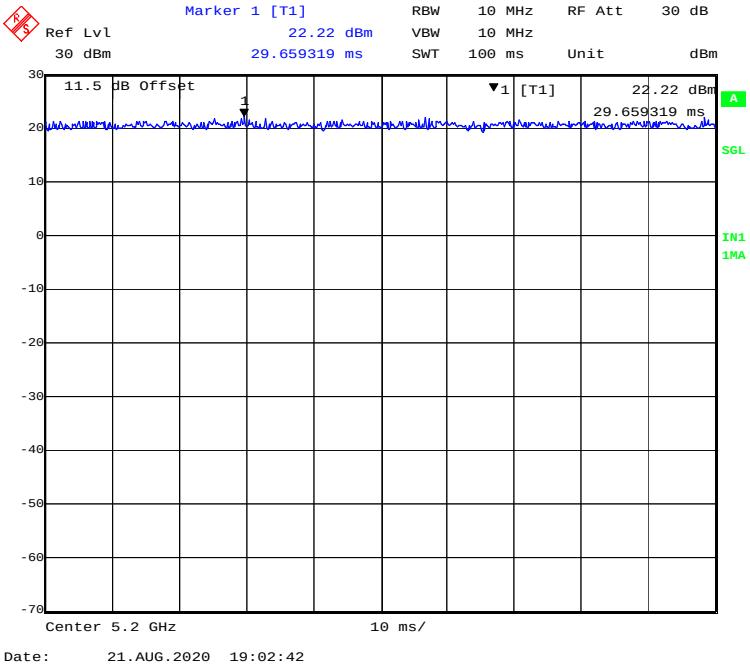
Mode	Data rate	Channel	Power Setting	
			Chain 0	Chain 1
802.11a	6 Mbps	5180	21	21
		5200		
		5240		
802.11ac20	MCS0	5180	21	21
		5200		
		5240		
802.11n-HT20	MCS0	5180	21	21
		5200		
		5240		
802.11ac40	MCS0	5190	15	15
		5230		
802.11n-HT40	MCS0	5190	15	15
		5230		
802.11ac80	MCS0	5210	10	10

5725MHz-5850MHz Band:

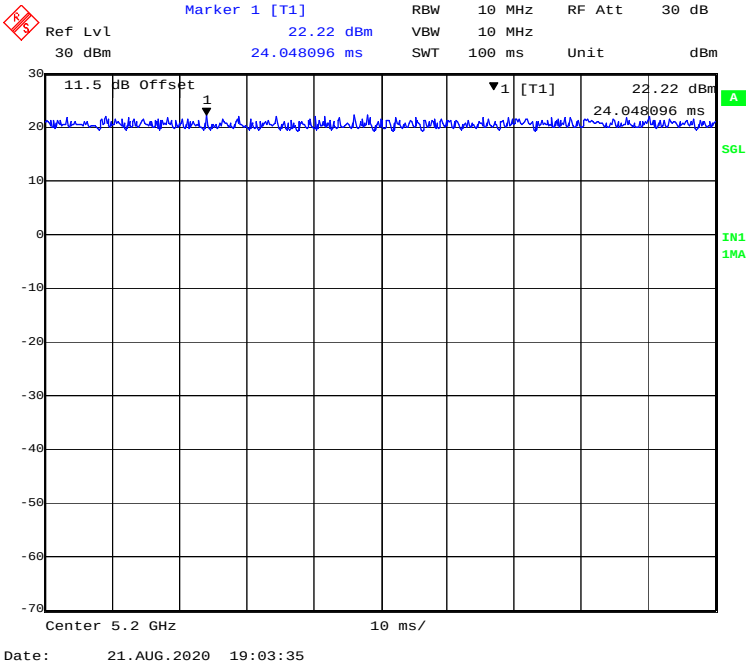
Mode	Data rate	Channel	Power Setting	
			Chain 0	Chain 1
802.11a	6 Mbps	5745	22	22
		5785		
		5825		
802.11ac20	MCS0	5745	22	22
		5785		
		5825		
802.11n-HT20	MCS0	5745	22	22
		5785		
		5825		
802.11ac40	MCS0	5755	22	22
		5795		
802.11n-HT40	MCS0	5755	22	22
		5795		
802.11ac80	MCS0	5775	22	22

Duty Cycle
5150MHz-5250MHz Band-Chain0:

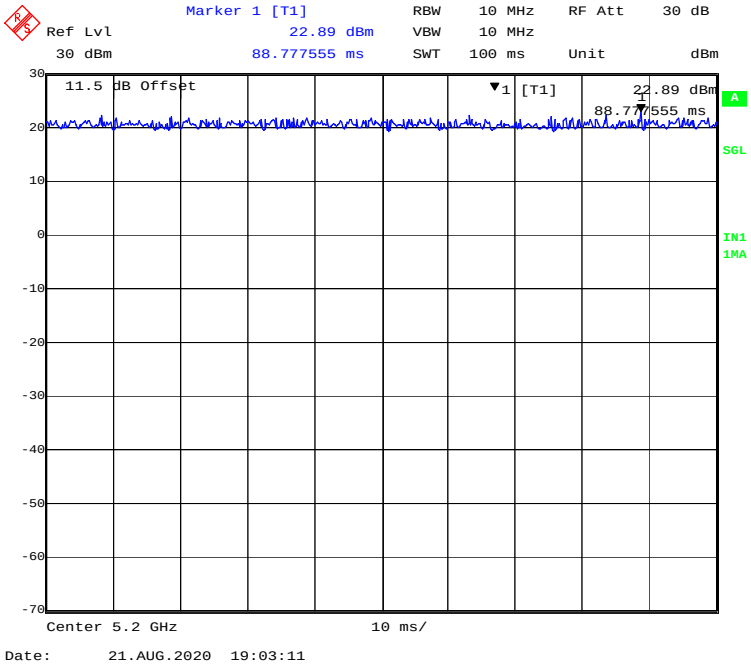
802.11a mode



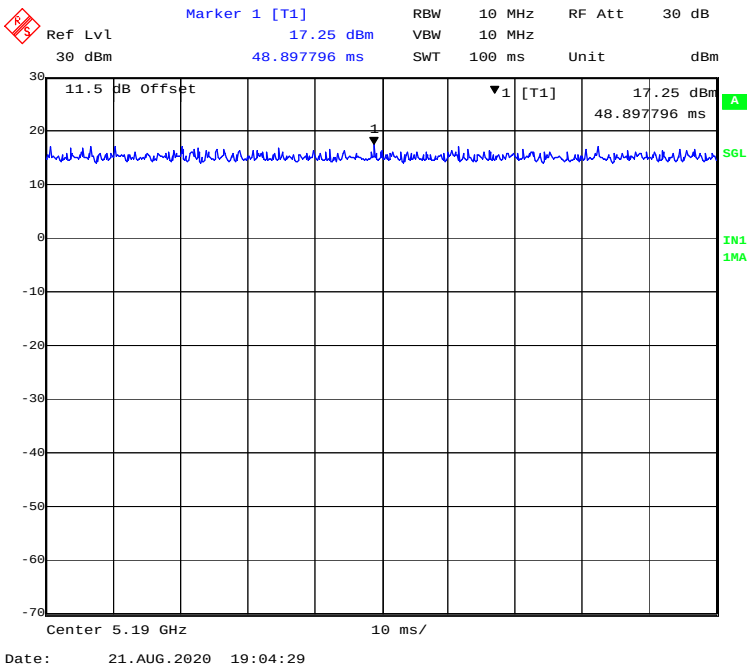
802.11ac20 mode



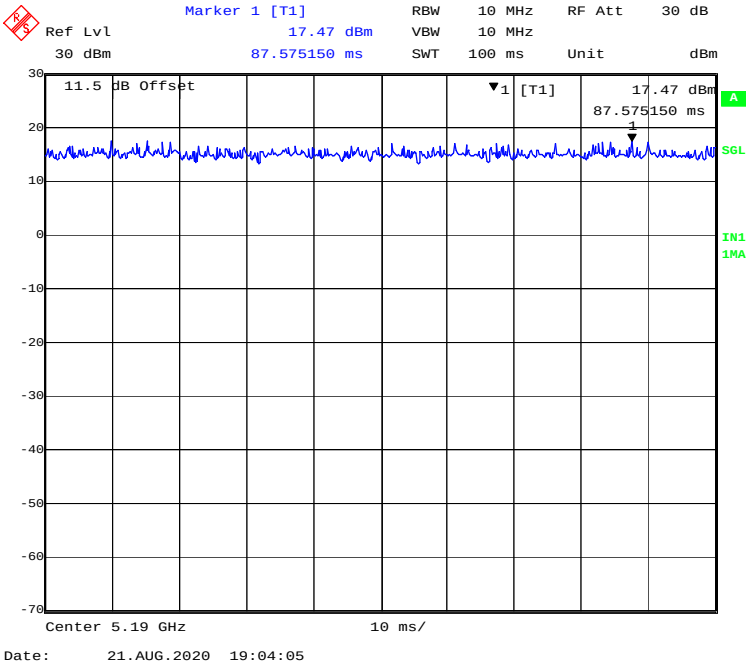
802.11n-HT20 mode



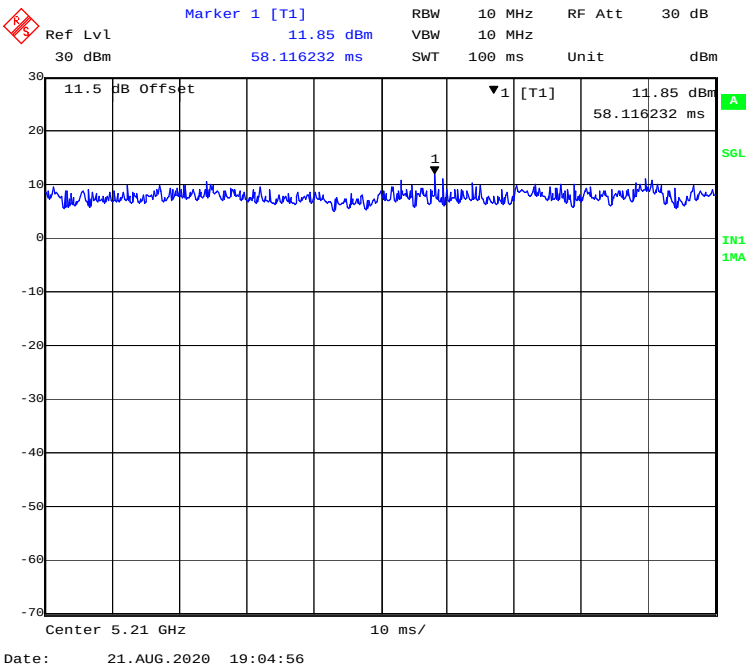
802.11 ac40 mode



802.11n-HT40 mode

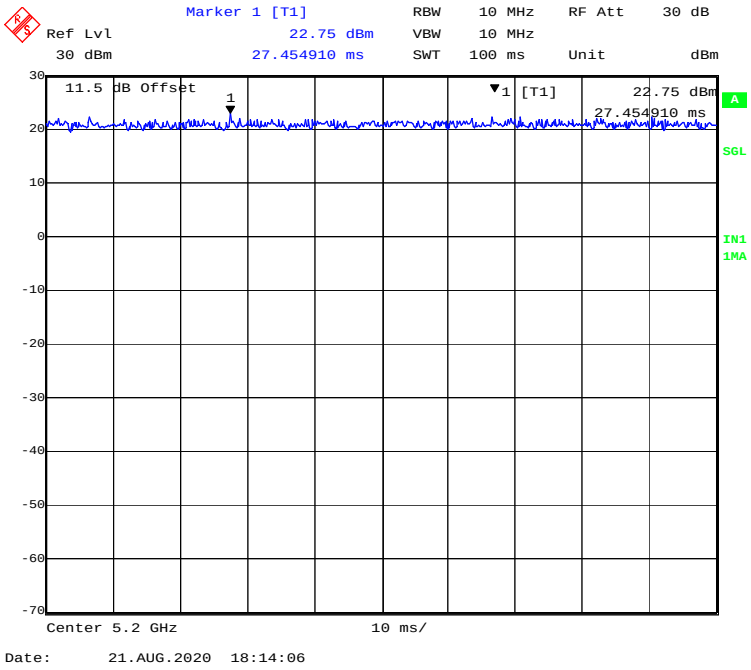


802.11 ac80 mode

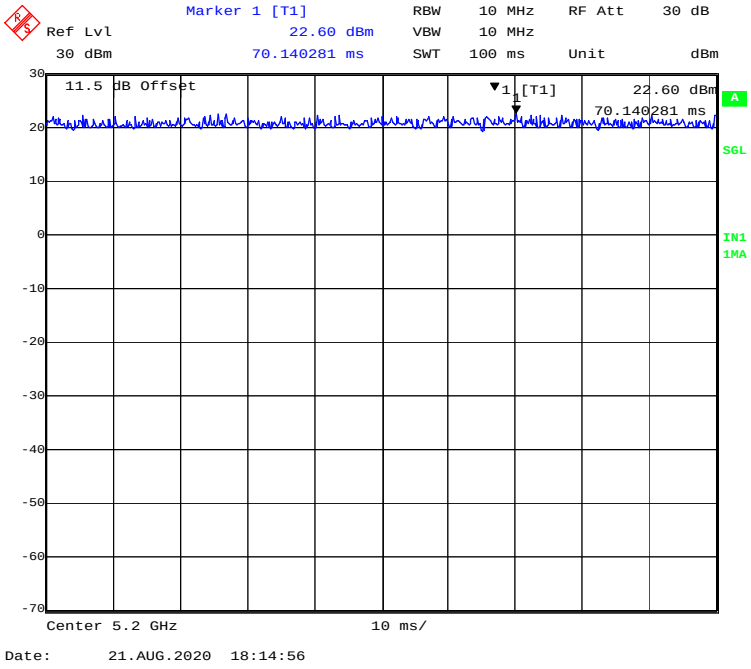


5150MHz-5250MHz Band-Chain1:

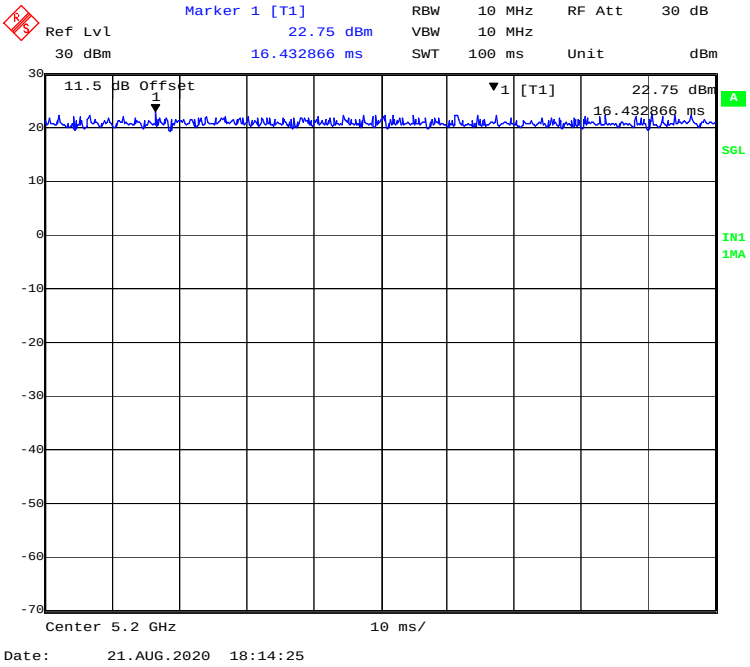
802.11a mode



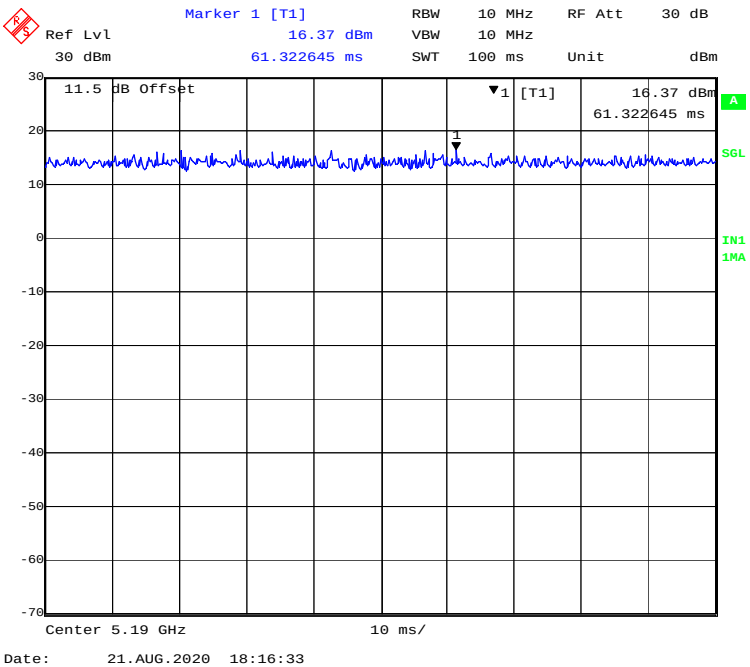
802.11ac20 mode



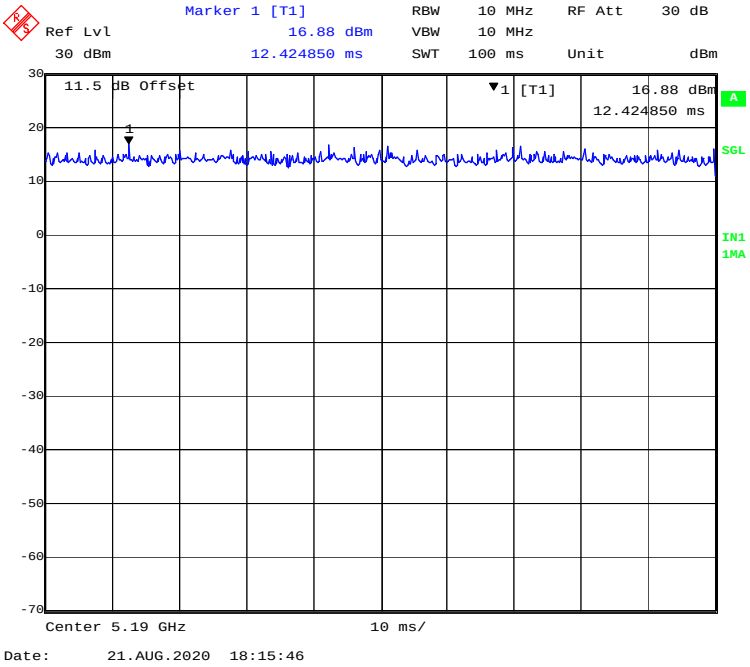
802.11n-HT20 mode



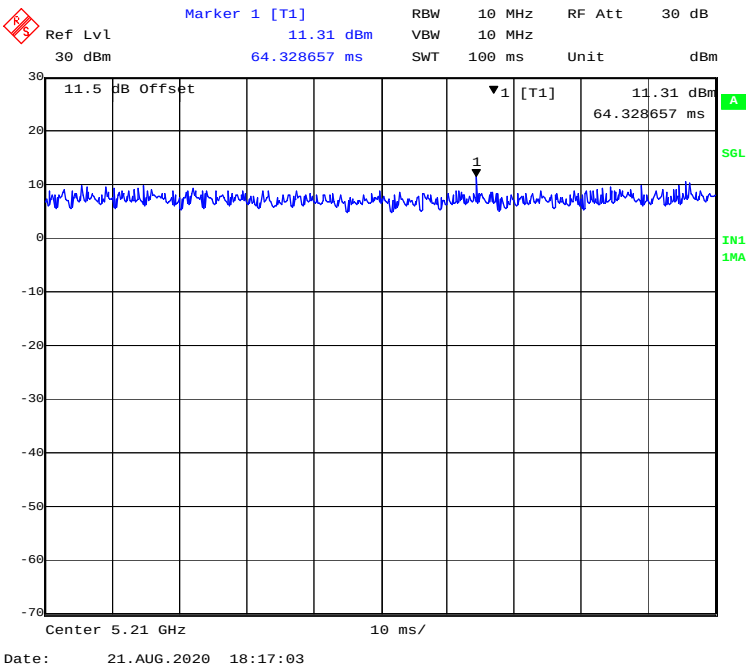
802.11 ac40 mode



802.11n-HT40 mode

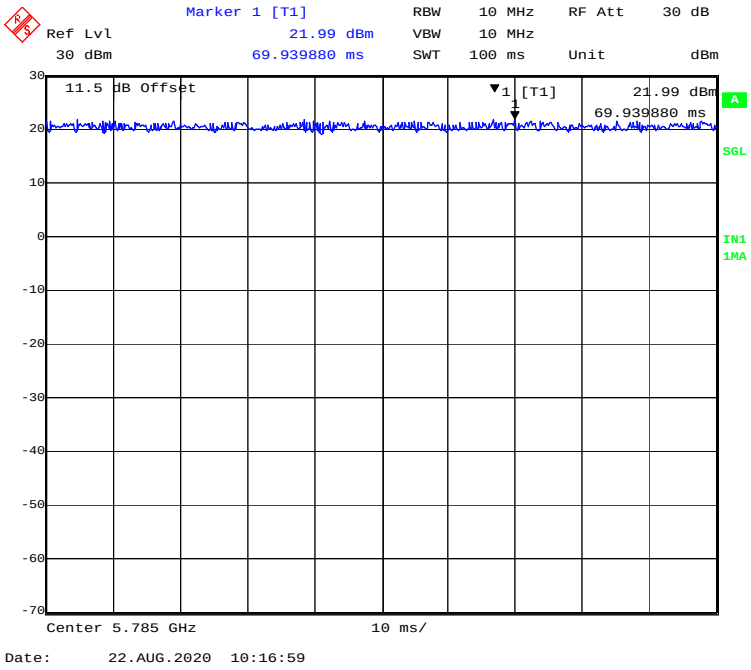


802.11 ac80 mode

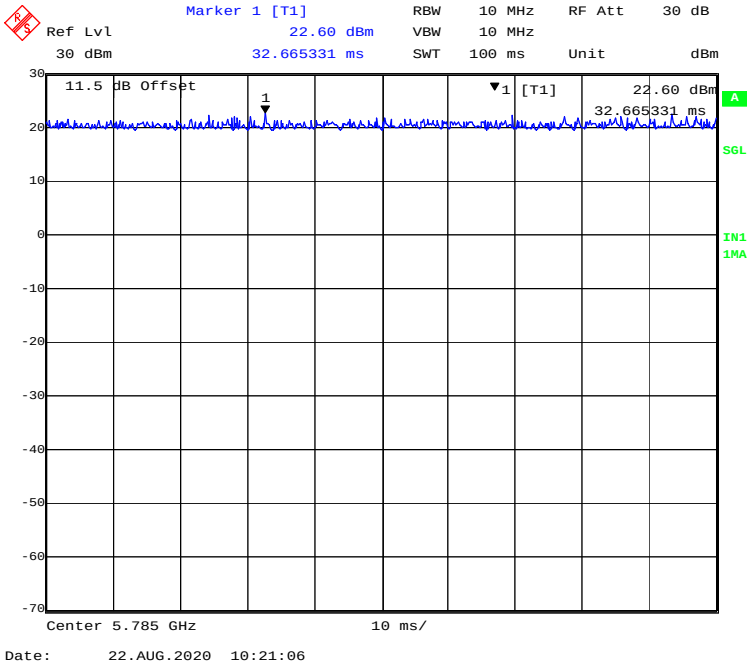


5725MHz-5850MHz Band-Chain0:

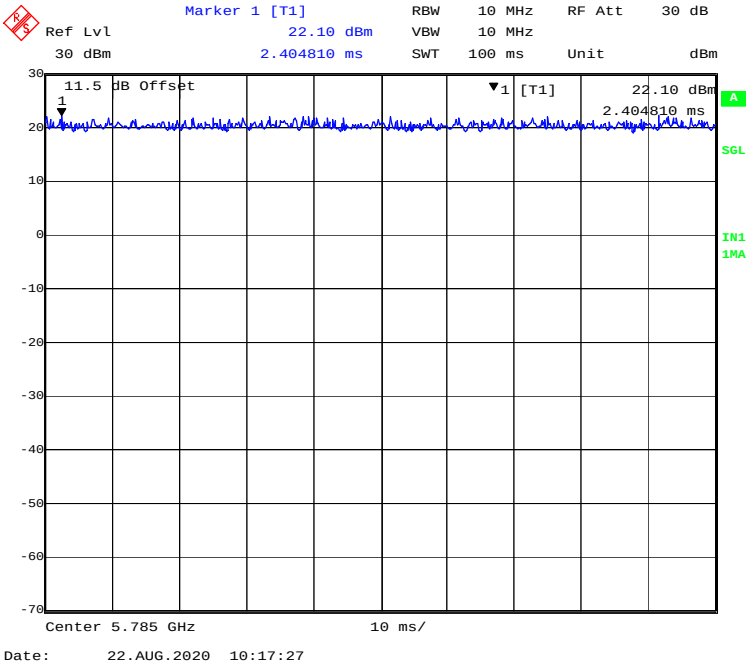
802.11a mode



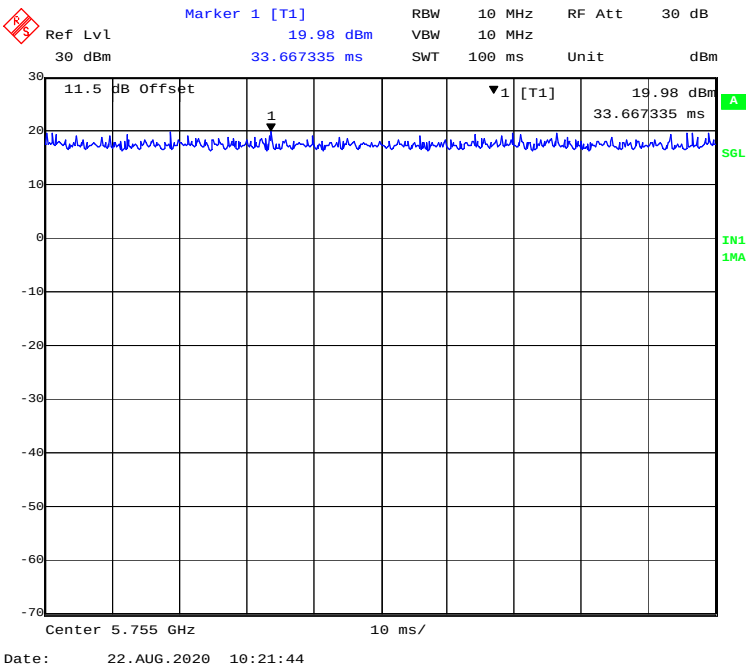
802.11ac20 mode



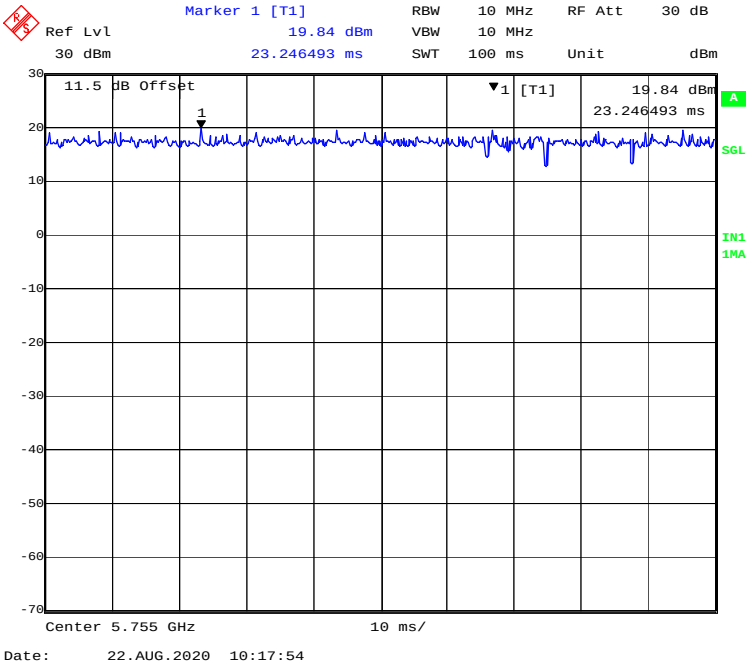
802.11n-HT20 mode



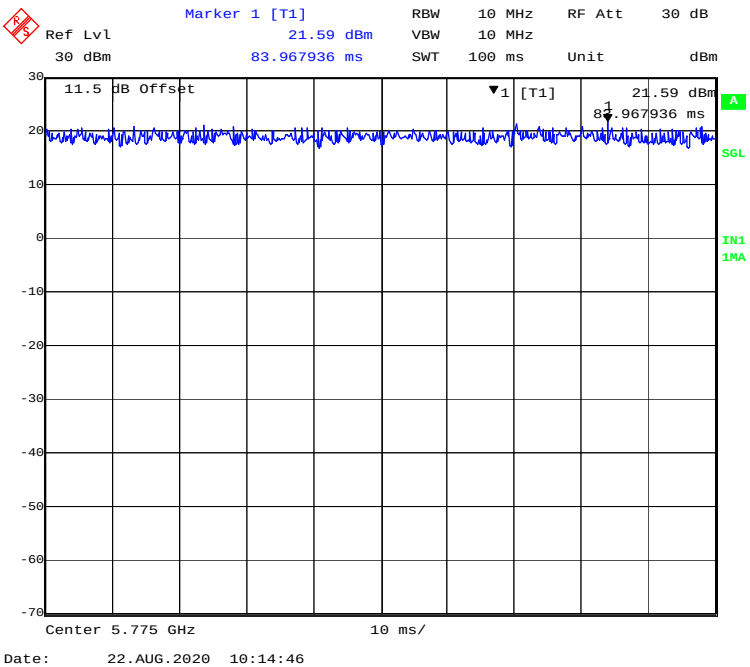
802.11 ac40 mode



802.11n-HT40 mode

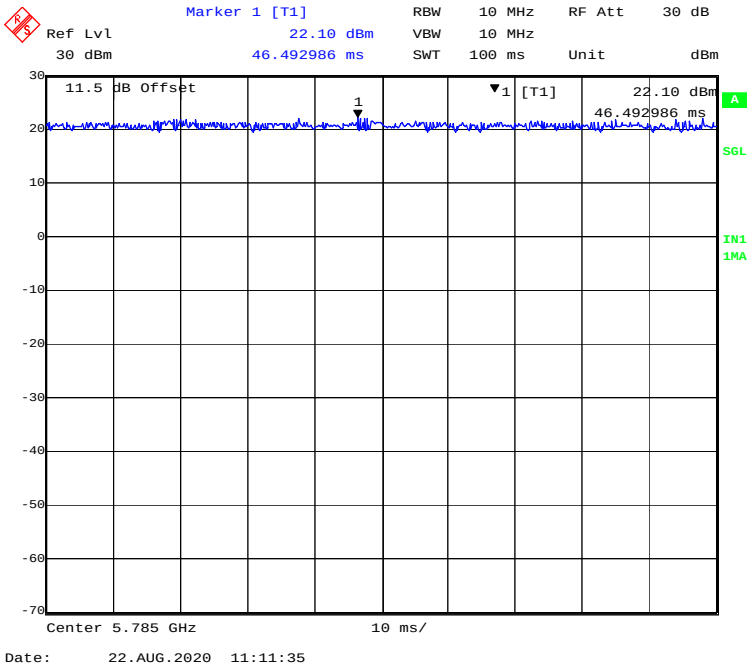


802.11n- ac80 mode

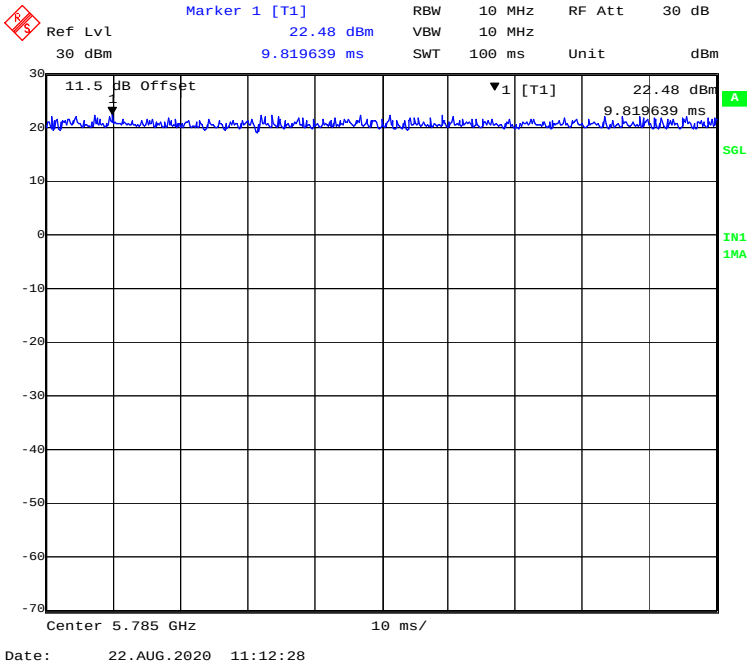


5725MHz-5850MHz Band-Chain1:

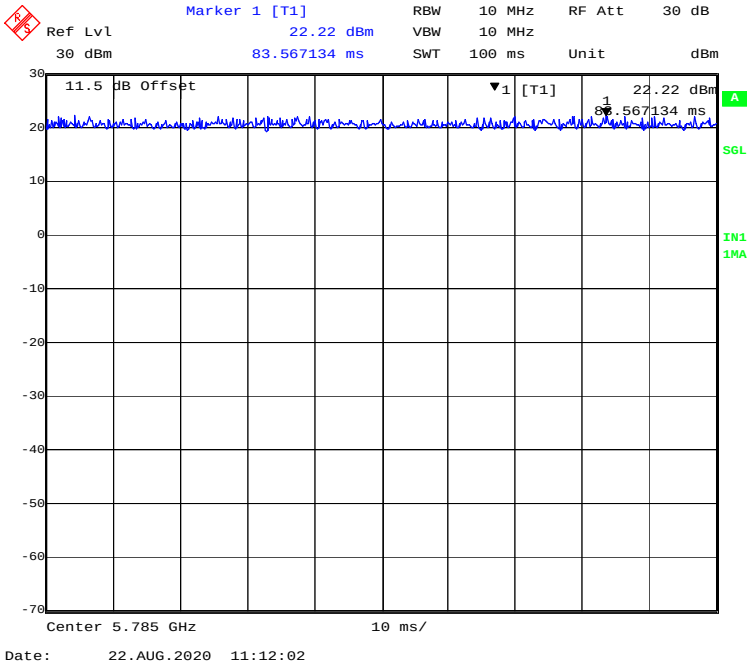
802.11a mode



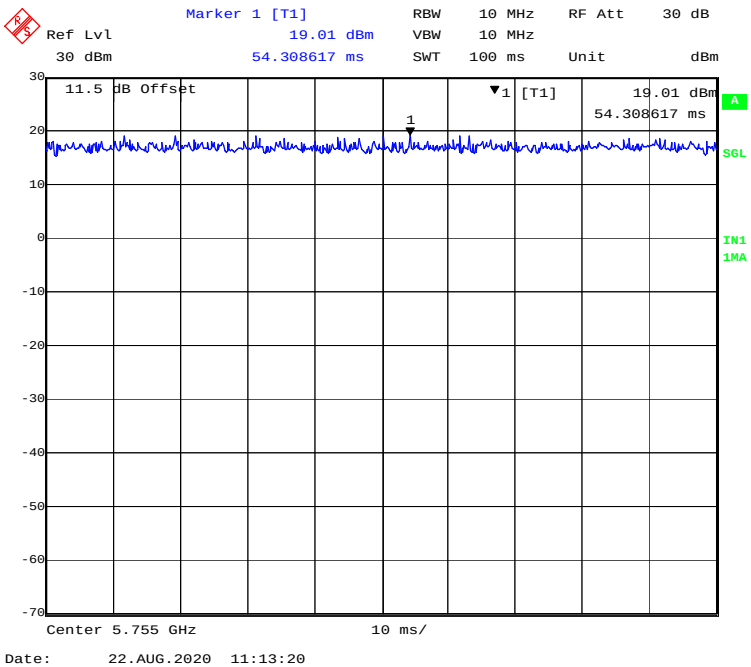
802.11ac20 mode



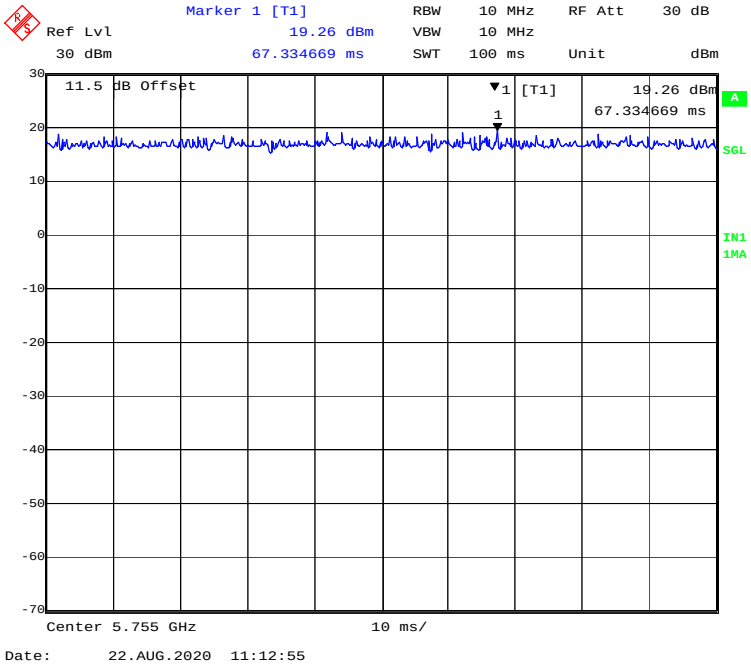
802.11n-HT20 mode



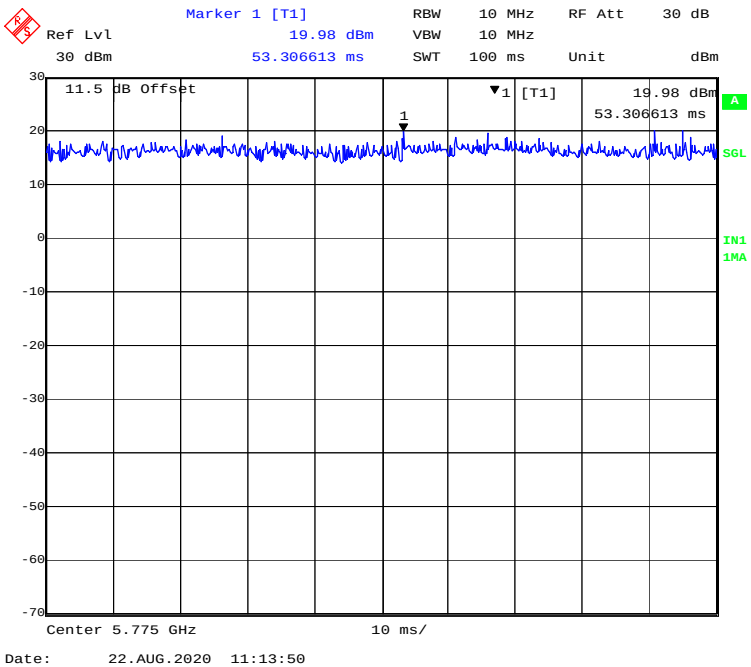
802.11 ac40 mode



802.11n-HT40 mode



802.11n- ac80 mode



Chain 0

Mode	Frequency Range (MHz)	Duty Cycle (%)	T (ms)	1/T (kHz)	10log(1/x)
802.11a	5150-5250	100	/	/	0
802.11ac20		100	/	/	0
802.11n-HT20		100	/	/	0
802.11ac40		100	/	/	0
802.11n-HT40		100	/	/	0
802.11ac80		100	/	/	0
802.11a	5725-5850	100	/	/	0
802.11ac20		100	/	/	0
802.11n-HT20		100	/	/	0
802.11ac40		100	/	/	0
802.11n-HT40		100	/	/	0
802.11ac80		100	/	/	0

Chain 1

Mode	Frequency Range (MHz)	Duty Cycle (%)	T (ms)	1/T (kHz)	10log(1/x)
802.11a	5150-5250	100	/	/	0
802.11ac20		100	/	/	0
802.11n-HT20		100	/	/	0
802.11ac40		100	/	/	0
802.11n-HT40		100	/	/	0
802.11ac80		100	/	/	0
802.11a	5725-5850	100	/	/	0
802.11ac20		100	/	/	0
802.11n-HT20		100	/	/	0
802.11ac40		100	/	/	0
802.11n-HT40		100	/	/	0
802.11ac80		100	/	/	0

Note: "x" means duty cycle.

Equipment Modifications

No modification was made to the EUT.

Support Equipment List and Details

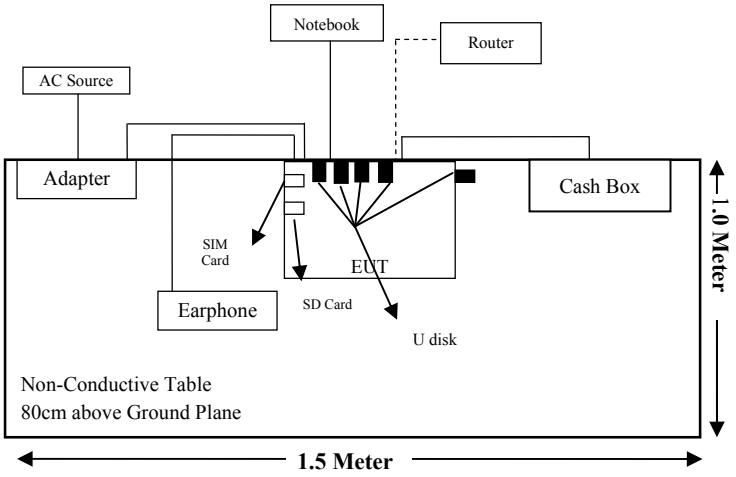
Manufacturer	Description	Model	Serial Number
BOLD	Earphone	/	/
Lenovo	U disk	T180	0A1266865200521
Shanghai Sunmi	Cash Box	/	/
TP-LINK	Router	TL-WDR5620	1188431022424
DELL	Notebook	015K3N	00190-098-766-241
Shanghai Sunmi	Serial Printer	/	/
/	SIM Card	/	/
Sandisk	SD Card	16G	/

External I/O Cable

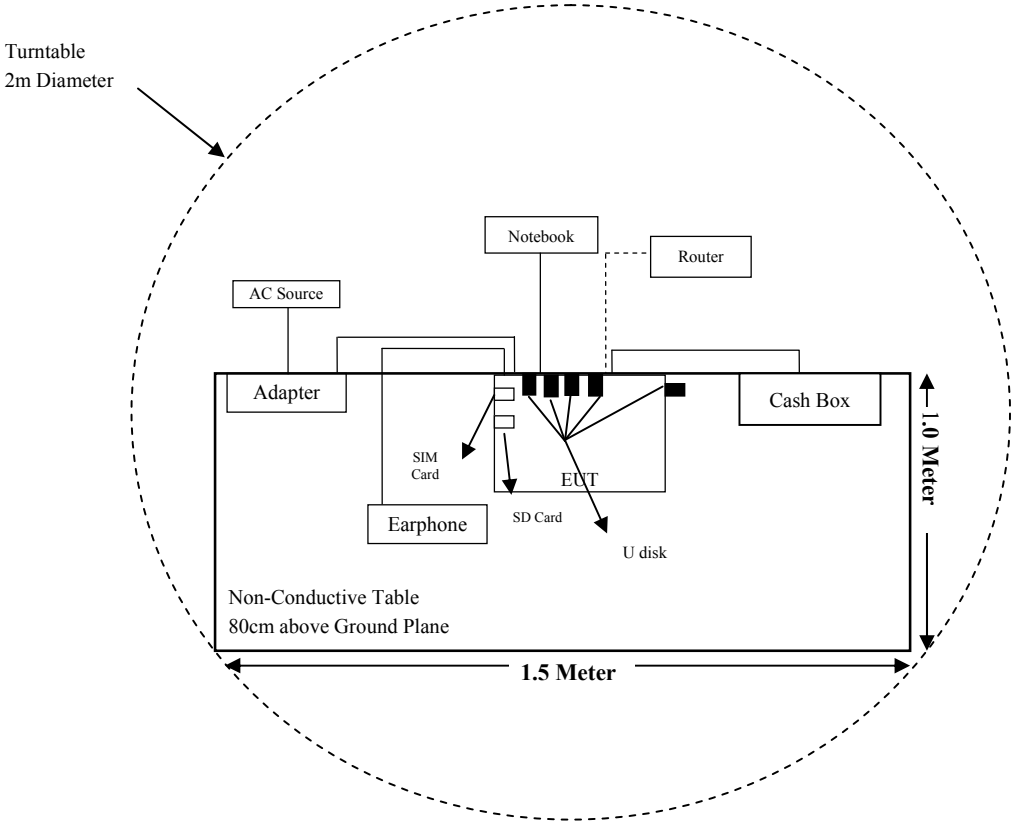
Cable Description	Length (m)	From Port	To
RJ45 Cable	10.0	EUT	Notebook
Audio cable	1.0	EUT	Earphone
RJ11 cable	1.0	EUT	Cash Box
Power cable1	1.2	EUT	Adapter
Power cable2	1.2	Adapter	AC Source

Block Diagram of Test Setup

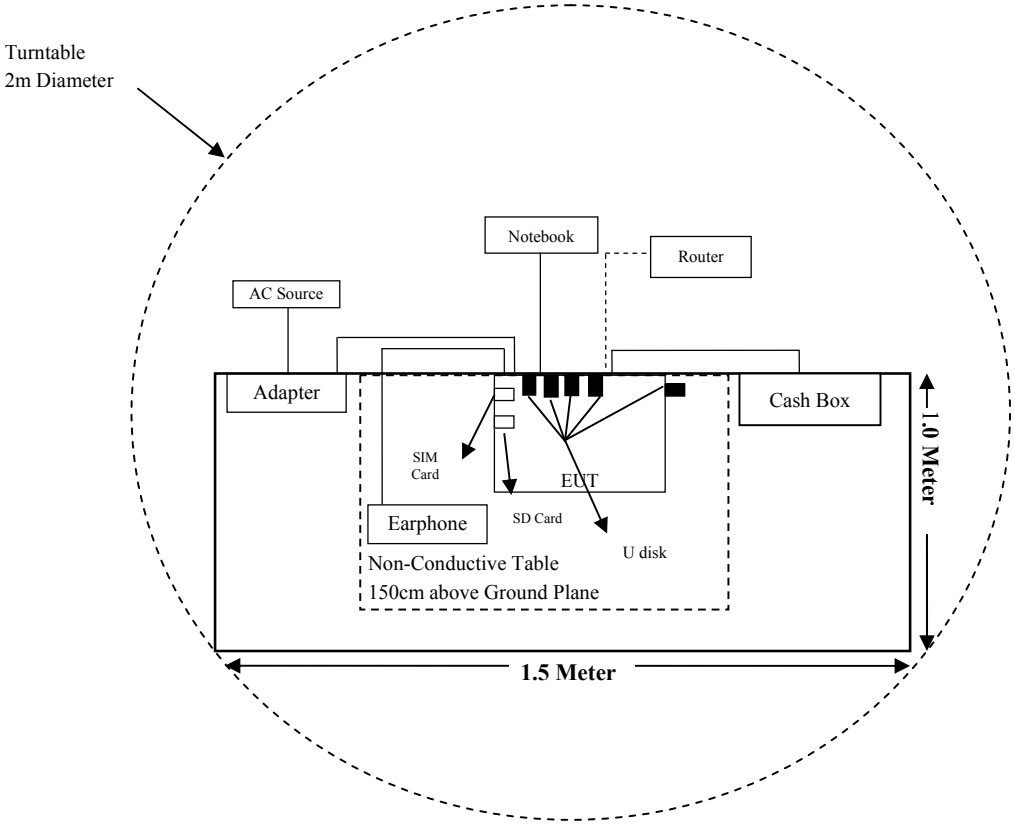
For Conducted Emissions:



For Radiated Emissions(Below 1GHz)



For Radiated Emissions(Above 1GHz)



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1310 & §2.1091	Maximum Permissible Exposure (MPE)	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)(4)(8)(9)	Undesirable Emission & Restricted Bands	Compliant
§15.407(a) & §15.407 (e)	Emission Bandwidth	Compliant
§15.407(a) (1) (3)	Conducted Transmitter Output Power	Compliant
§15.407(a) (1) (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	A090413-1	2017-12-26	2020-12-25
Sonoma Instrunent	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
SELECTOR	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
Narda	Attenuator	10dB	010	2020-08-05	2021-08-04
Rohde & Schwarz	Auto test Software	EMC32	100361	/	/
MICRO-COAX	Coaxial Cable	Cable-6	006	2020-08-15	2021-08-14
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
MICRO-COAX	Coaxial Cable	Cable-13	013	2020-08-15	2021-08-14
RF Conducted Test					
Rohde & Schwarz	EMI Test Receiver	ESIB26	100146	2019-12-14	2020-12-13
Agilent	Power Meter	N1912A	MY5000492	2019-11-18	2020-11-17
Agilent	Power Sensor	N1921A	MY54210024	2019-11-18	2020-11-17
Narda	Attenuator	10dB	010	2020-08-15	2021-08-14
Sunmi	RF Cable	Sunmi 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	3560655016	2019-11-30	2020-11-29
Audix	Test Software	e3	V9	--	--
Rohde & Schwarz	Pulse limiter	ESH3-Z2	0357.8810.54	2020-04-03	2021-04-02
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).

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

Applicable Standard

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

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

(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	**Electric Field Strength (V/m)**	**Magnetic Field Strength (A/m)**	**Power Density (mW/cm^2)**	**Averaging Time (minutes)**
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f^2)	30
30-300	27.5	0.073	0.2	30
300-1500	/		f/1500	30
1500-100,000	/		1.0	30

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

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

Calculated Formulary:

Predication of MPE limit at a given distance
$S = PG/4\pi R^2$ = power density (in appropriate units, e.g. mW/cm^2);
P = power input to the antenna (in appropriate units, e.g., mW);
G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain;
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm);

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

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

Calculated Data:

Model: L1563

2.4G Wi-Fi&BLE&BT:

Mode	Frequency Range (MHz)	Maximum Antenna Gain		Tune-up Conducted Power		Evaluation Distance (cm)	Power Density (mW/cm^2)	MPE Limit (mW/cm^2)
		(dBi)	(numeric)	(dBm)	(mW)			
802.11b	2412-2462	2.19	1.66	25.00	251.19	20	**0.0829**	**1.0**
802.11g		2.19	1.66	24.00	100.00	20	0.0330	1.0
802.11n-HT20		2.19	1.66	20.00	79.43	20	0.0262	1.0
802.11n-HT40	2422-2452	2.19	1.66	19.00	316.23	20	0.1044	1.0
BLE(1Mbps)	2402-2480	2.19	1.66	-0.50	0.89	20	0.0003	1.0
BLE(2Mbps)	2402-2480	2.19	1.66	-0.50	0.89	20	0.0003	1.0
BT	2402-2480	2.19	1.66	10.00	10.00	20	0.0033	1.0

GSM:

Mode	Frequency Range (MHz)	Maximum Antenna Gain		Tune-up Conducted Power		Evaluation Distance (cm)	Power Density (mW/cm^2)	MPE Limit (mW/cm^2)
		(dBi)	(numeric)	(dBm)	(mW)			
GPRS 850	824-849	1.46	1.40	27.50	562.34	20	**0.1566**	**0.55**
EGPRS 850	824-849	1.46	1.40	19.74	94.19	20	0.0262	0.55
GPRS 1900	1850-1910	2.23	1.67	23.50	223.87	20	0.0744	1.00
EGPRS 1900	1850-1910	2.23	1.67	20.24	105.68	20	0.0351	1.00

Note 1:
GPRS 850: Tune-up maximum output power with 1 slot is 33.50 dBm, 2 slots is 33.00 dBm, 3 slots is 31.50 dBm, 4 slots is 30.50 dBm, so the tune-up time based Ave. power compared to sloted Ave. power is 27.50dBm.
EGPRS 850: Tune-up maximum output power with 1 slot is 27.00 dBm, 2 slots is 25.50 dBm, 3 slots is 24.00 dBm, 4 slots is 22.50 dBm, so the tune-up time based Ave. power compared to sloted Ave. power is 19.74dBm.
GPRS 1900: Tune-up maximum output power with 1 slot is 29.50 dBm, 2 slots is 28.50 dBm, 3 slots is 27.50 dBm, 4 slots is 26.50 dBm, so the tune-up time based Ave. power compared to sloted Ave. power is 23.50 dBm.
EGPRS 1900: Tune-up maximum output power with 1 slot is 26.50 dBm, 2 slots is 25.50 dBm, 3 slots is 24.50 dBm, 4 slots is 22.50 dBm, so the tune-up time based Ave. power compared to sloted Ave. power is 20.24 dBm.

Number of Time slot	1	2	3	4
Duty Cycle	1:8	1:4	1:2.66	1:2
Time based Ave. power compared to slotted Ave. power	-9 dB	-6 dB	-4.26 dB	-3 dB

5G Wi-Fi/WCDMA/LTE:

Mode	Frequency Range (MHz)	Antenna Gain		Tune-up Conducted Power		Evaluation Distance (cm)	Power Density (mW/cm^2)	MPE Limit (mW/cm^2)
		(dBi)	(numeric)	(dBm)	(mW)			
802.11a	5150~5250	0.05	1.01	18.50	70.79	20	0.0142	1.0
	5725~5850	0.05	1.01	19.00	79.43	20	0.0160	1.0
802.11ac20	5150~5250	0.05	1.01	21.00	125.89	20	0.0253	1.0
	5725~5850	0.05	1.01	22.00	158.49	20	0.0318	1.0
802.11n20	5150~5250	0.05	1.01	21.50	141.25	20	0.0284	1.0
	5725~5850	0.05	1.01	22.00	158.49	20	0.0318	1.0
802.11ac40	5150~5250	0.05	1.01	15.50	35.48	20	0.0071	1.0
	5725~5850	0.05	1.01	21.00	125.89	20	0.0253	1.0
802.11n40	5150~5250	0.05	1.01	15.50	35.48	20	0.0071	1.0
	5725~5850	0.05	1.01	22.00	158.49	20	0.0318	1.0
802.11ac80	5150~5250	0.05	1.01	11.00	12.59	20	0.0025	1.0
	5725~5850	0.05	1.01	21.50	141.25	20	0.0284	1.0
WCDMA Band II	1850-1910	2.23	1.67	22.50	177.83	20	0.0591	1.0
WCDMA Band V	824-849	1.46	1.40	22.50	177.83	20	0.0495	0.55
LTE Band 2	1850-1910	2.23	1.67	23.50	223.87	20	0.0744	1.0
LTE Band 4	1710-1755	2.23	1.67	23.00	199.53	20	0.0663	1.0
LTE Band 5	824-849	1.46	1.40	23.00	199.53	20	0.0556	0.55
LTE Band 7	2500-2570	2.03	1.60	22.50	177.83	20	0.0566	1.0
LTE Band 38	2570-2620	2.03	1.60	22.50	177.83	20	0.0566	1.0
LTE Band 40 Lower	2305-2315	2.03	1.60	22.50	177.83	20	0.0566	1.0
LTE Band 40 Upperr	2350-2360	2.03	1.60	22.50	177.83	20	0.0566	1.0
LTE Band 41	2555-2655	2.03	1.60	22.50	177.83	20	0.0566	1.0

Note:
1. For the above tune up power were declared by the manufacturer.
2. Wi-Fi and BT/BLE cannot transmit simultaneously.
3. For 802.11b, 802.11g, 802.11a, the tune-up power is base on SISO mode
   For 802.11ac20/n20/n40/ac40/ac80, the tune-up power is base on MIMO mode
4. Wi-Fi & GPRS/WCDMA/LTE or BT/BLE & GPRS/WCDMA/LTE can transmit simultaneously; the worst condition is 2.4G Wi-Fi & GPRS 850 as below:

$$\sum_i \frac{S_i}{S_{Limit,i}} = 0.0829/1.00+0.1566/0.55=0.3676 < 1.0$$

Conclusion: The device meets MPE at distance 20cm.

Model: L1573

2.4G Wi-Fi&BLE&BT:

Mode	Frequency Range (MHz)	Maximum Antenna Gain		Tune-up Conducted Power		Evaluation Distance (cm)	Power Density (mW/cm^2)	MPE Limit (mW/cm^2)
		(dBi)	(numeric)	(dBm)	(mW)			
802.11b	2412-2462	0.66	1.16	25.00	316.23	20	**0.0730**	**1.0**
802.11g		0.66	1.16	24.00	251.19	20	0.0580	1.0
802.11n-HT20		0.66	1.16	20.00	100.00	20	0.0231	1.0
802.11n-HT40	2422-2452	0.66	1.16	19.00	79.43	20	0.0183	1.0
BLE(1Mbps)	2402-2480	0.19	1.04	-0.50	0.89	20	0.0002	1.0
BLE(2Mbps)	2402-2480	0.19	1.04	-0.50	0.89	20	0.0002	1.0
BT	2402-2480	0.19	1.04	10.00	10.00	20	0.0021	1.0

GSM:

Mode	Frequency Range (MHz)	Maximum Antenna Gain		Tune-up Conducted Power		Evaluation Distance (cm)	Power Density (mW/cm^2)	MPE Limit (mW/cm^2)
		(dBi)	(numeric)	(dBm)	(mW)			
GPRS 850	824-849	1.24	1.33	27.50	562.34	20	**0.1488**	**0.55**
EGPRS 850	824-849	1.24	1.33	19.74	94.19	20	0.0249	0.55
GPRS 1900	1850-1910	1.22	1.32	23.50	223.87	20	0.0588	1.00
EGPRS 1900	1850-1910	1.22	1.32	20.24	105.68	20	0.0277	1.00

Note 1:
GPRS 850: Tune-up maximum output power with 1 slot is 33.50 dBm, 2 slots is 33.00 dBm, 3 slots is 31.50 dBm, 4 slots is 30.50 dBm, so the tune-up time based Ave. power compared to sloted Ave. power is 27.50dBm.
EGPRS 850: Tune-up maximum output power with 1 slot is 27.00 dBm, 2 slots is 25.50 dBm, 3 slots is 24.00 dBm, 4 slots is 22.50 dBm, so the tune-up time based Ave. power compared to sloted Ave. power is 19.74dBm.
GPRS 1900: Tune-up maximum output power with 1 slot is 29.50 dBm, 2 slots is 28.50 dBm, 3 slots is 27.50 dBm, 4 slots is 26.50 dBm, so the tune-up time based Ave. power compared to sloted Ave. power is 23.50 dBm.
EGPRS 1900: Tune-up maximum output power with 1 slot is 26.50 dBm, 2 slots is 25.50 dBm, 3 slots is 24.50 dBm, 4 slots is 22.50 dBm, so the tune-up time based Ave. power compared to sloted Ave. power is 20.24 dBm.

Number of Time slot	1	2	3	4
Duty Cycle	1:8	1:4	1:2.66	1:2
Time based Ave. power compared to slotted Ave. power	-9 dB	-6 dB	-4.26 dB	-3 dB

5G Wi-Fi/WCDMA/LTE:

Mode	Frequency Range (MHz)	Antenna Gain		Tune-up Conducted Power		Evaluation Distance (cm)	Power Density (mW/cm^2)	MPE Limit (mW/cm^2)
		(dBi)	(numeric)	(dBm)	(mW)			
802.11a	5150~5250	1.57	1.44	18.50	70.79	20	0.0203	1.0
	5725~5850	-0.79	0.83	19.00	79.43	20	0.0131	1.0
802.11ac20	5150~5250	1.57	1.44	21.00	125.89	20	0.0361	1.0
	5725~5850	-0.79	0.83	22.00	158.49	20	0.0262	1.0
802.11n20	5150~5250	1.57	1.44	21.50	141.25	20	0.0405	1.0
	5725~5850	-0.79	0.83	22.00	158.49	20	0.0262	1.0
802.11ac40	5150~5250	1.57	1.44	15.50	35.48	20	0.0102	1.0
	5725~5850	-0.79	0.83	21.00	125.89	20	0.0208	1.0
802.11n40	5150~5250	1.57	1.44	15.50	35.48	20	0.0102	1.0
	5725~5850	-0.79	0.83	22.00	158.49	20	0.0262	1.0
802.11ac80	5150~5250	1.57	1.44	11.00	12.59	20	0.0036	1.0
	5725~5850	-0.79	0.83	21.50	141.25	20	0.0233	1.0
WCDMA Band II	1850-1910	1.22	1.32	22.50	177.83	20	0.0467	1.0
WCDMA Band V	824-849	1.24	1.33	22.50	177.83	20	0.0470	0.55
LTE Band 2	1850-1910	1.22	1.32	23.50	223.87	20	0.0588	1.0
LTE Band 4	1710-1755	2.19	1.66	23.00	199.53	20	0.0659	1.0
LTE Band 5	824-849	1.24	1.33	23.00	199.53	20	0.0528	0.55
LTE Band 7	2500-2570	2.17	1.65	22.50	177.83	20	0.0584	1.0
LTE Band 38	2570-2620	1.47	1.40	22.50	177.83	20	0.0495	1.0
LTE Band 40 Lower	2305-2315	2.06	1.61	22.50	177.83	20	0.0570	1.0
LTE Band 40 Upperr	2350-2360	2.49	1.77	22.50	177.83	20	0.0626	1.0
LTE Band 41	2555-2655	1.47	1.40	22.50	177.83	20	0.0495	1.0

Note:
1. For the above tune up power were declared by the manufacturer.
2. Wi-Fi and BT/BLE cannot transmit simultaneously.
3. For 802.11b, 802.11g, 802.11a, the tune-up power is base on SISO mode
   For 802.11ac20/n20/n40/ac40/ac80, the tune-up power is base on MIMO mode
4. Wi-Fi & GPRS/WCDMA/LTE or BT/BLE & GPRS/WCDMA/LTE can transmit simultaneously; the worst condition is 2.4G Wi-Fi & GPRS 850 as below:

$$\sum_i \frac{S_i}{S_{Limit,i}} = 0.0730/1.00+0.1488/0.55=0.3436 < 1.0$$

Conclusion: The device meets MPE at distance 20cm.

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 6dBi.

Antenna Connector Construction

The EUT (model: L1563) has two PCB antennas for 5G Wi-Fi and each antenna gain is 0.05 dBi which was permanently attached, fulfill the requirement of this section; The EUT (model: L1573) has a PCB antenna for 5G Wi-Fi and antenna gains are 1.57 dBi of Band 1 chain0 and -0.69 dBi of Band 1 chain1, -0.79 dBi of Band 4 chain0 and -1.66 dBi of Band 4 chain1which was permanently attached, fulfill the requirement of this section. Please refer to the EUT photos.

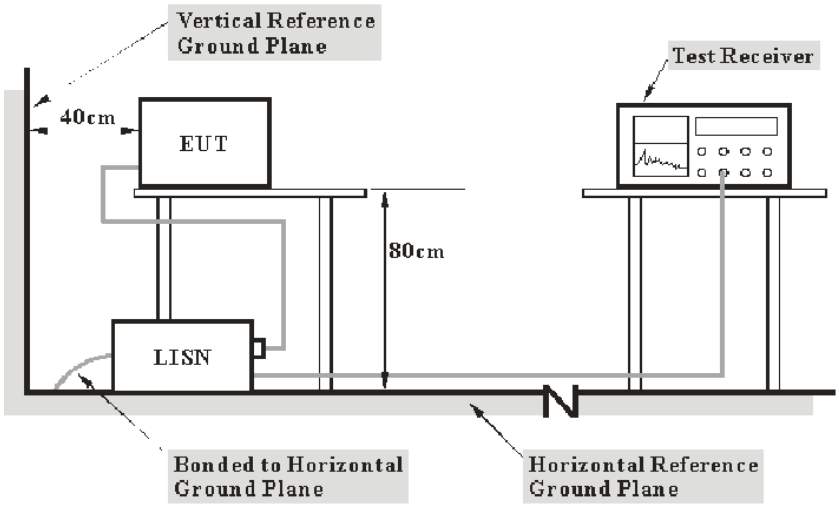
Result: Compliant.

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 outlet of the LISN.

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

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

Factor & Over Limit Calculation – for Below 1GHz

The 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)

Corrected Amplitude & Margin Calculation – for Above 1GHz

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

Corrected Amplitude (dBμV/m) = Meter Reading (dBμV) + Antenna Factor (dB/m) + Cable Loss (dB) - Amplifier Gain (dB)

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 (dB) = Limit (dBμV/m) - Corrected Amplitude (dBμV/m)

Test Results Summary

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

Test Data

Environmental Conditions

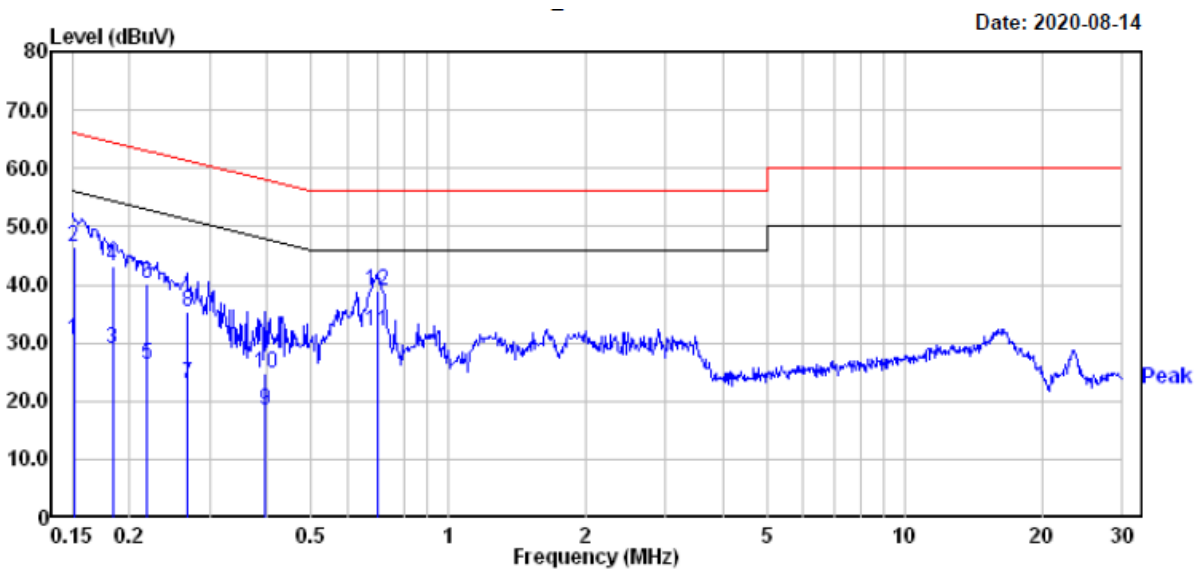
Temperature:	24.5 ℃~25 ℃
Relative Humidity:	49 ~50 %
ATM Pressure:	100.3 kPa ~100.9 kPa

The testing was performed by CK Huang from 2020-08-14 to 2020-10-23.

EUT operation mode: Transmitting in 802.11ac20 mode high channel of 5725-5850MHz (worst case)

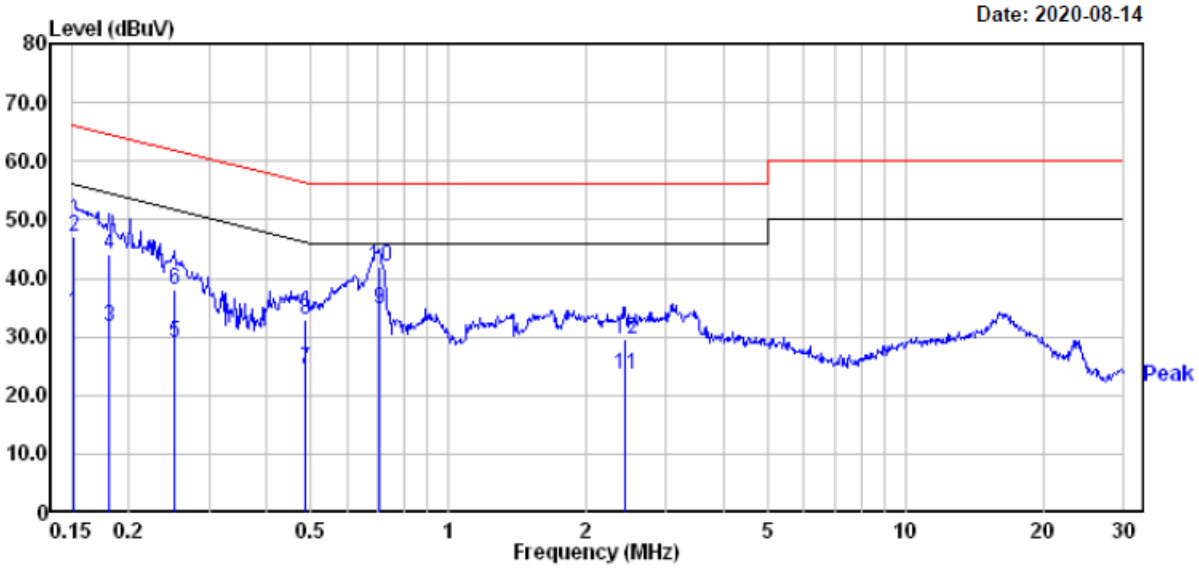
Model: L1563

AC 120V/60 Hz, Line



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.151	10.80	19.82	30.62	55.96	-25.34	Average
2	0.151	26.70	19.82	46.52	65.96	-19.44	QP
3	0.183	9.10	19.83	28.93	54.33	-25.40	Average
4	0.183	23.40	19.83	43.23	64.33	-21.10	QP
5	0.219	6.50	19.82	26.32	52.88	-26.56	Average
6	0.219	20.30	19.82	40.12	62.88	-22.76	QP
7	0.267	3.10	19.82	22.92	51.20	-28.28	Average
8	0.267	15.60	19.82	35.42	61.20	-25.78	QP
9	0.398	-1.20	19.74	18.54	47.90	-29.36	Average
10	0.398	5.00	19.74	24.74	57.90	-33.16	QP
11	0.697	12.30	19.75	32.05	46.00	-13.95	Average
12	0.697	19.30	19.75	39.05	56.00	-16.95	QP

AC 120V/60 Hz, Neutral

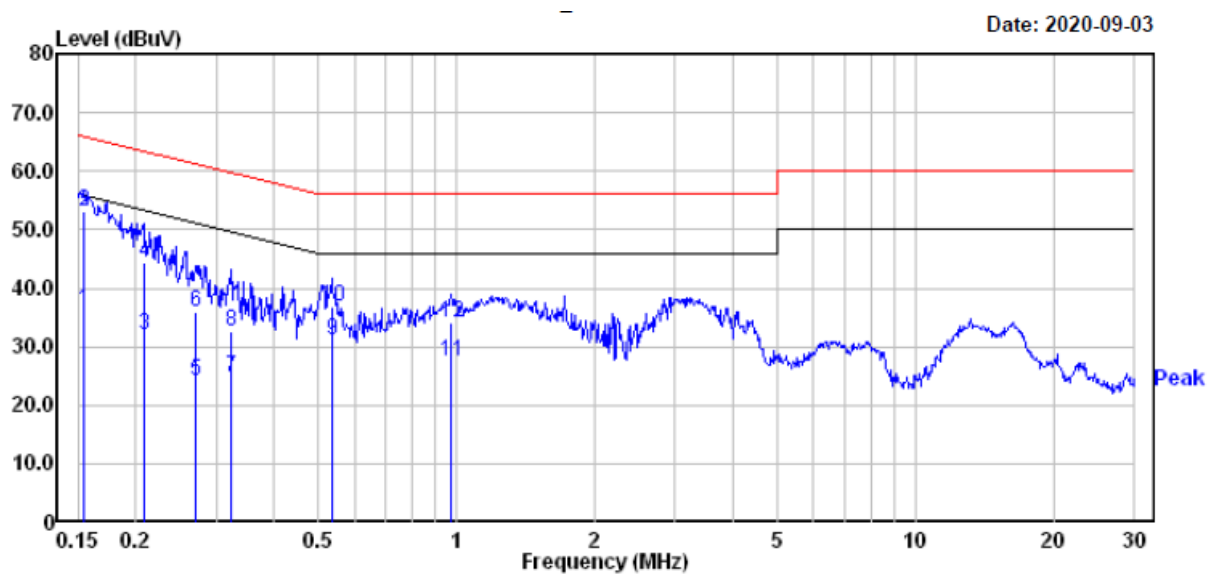


	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.152	14.20	19.82	34.02	55.91	-21.89	Average
2	0.152	27.40	19.82	47.22	65.91	-18.69	QP
3	0.182	11.90	19.83	31.73	54.42	-22.69	Average
4	0.182	24.20	19.83	44.03	64.42	-20.39	QP
5	0.252	9.10	19.82	28.92	51.69	-22.77	Average
6	0.252	18.30	19.82	38.12	61.69	-23.57	QP
7	0.486	4.60	19.76	24.36	46.23	-21.87	Average
8	0.486	13.00	19.76	32.76	56.23	-23.47	QP
9	0.705	14.90	19.75	34.65	46.00	-11.35	Average
10	0.705	22.30	19.75	42.05	56.00	-13.95	QP
11	2.435	4.01	19.51	23.52	46.00	-22.48	Average
12	2.435	10.01	19.51	29.52	56.00	-26.48	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)

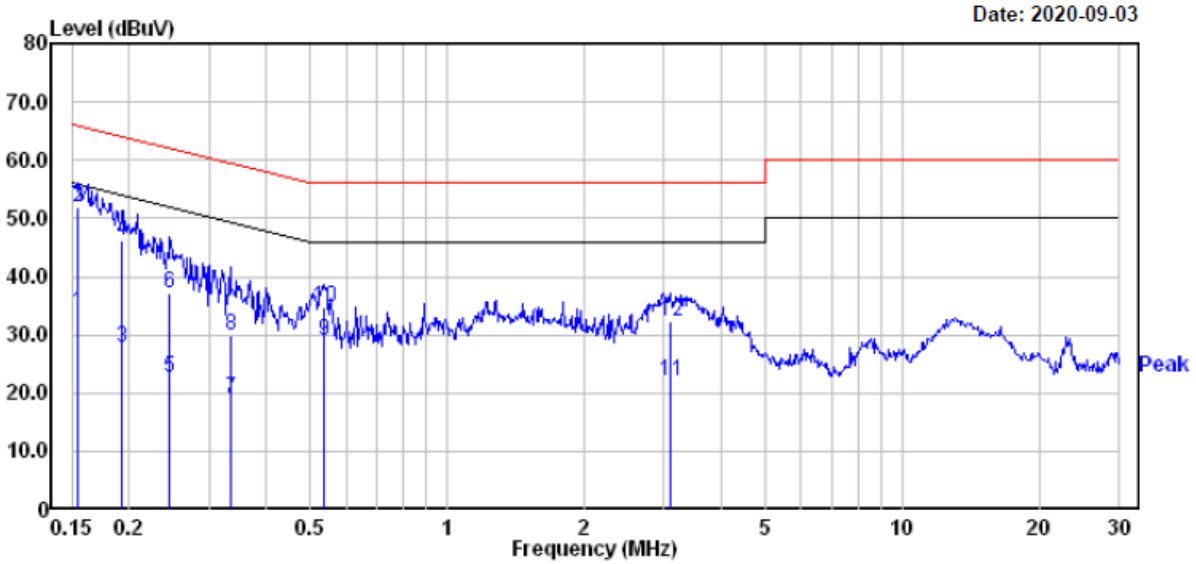
Model: L1573

AC 120V/60 Hz, Line



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.155	16.30	19.82	36.12	55.74	-19.62	Average
2	0.155	33.30	19.82	53.12	65.74	-12.62	QP
3	0.208	12.30	19.82	32.12	53.27	-21.15	Average
4	0.208	24.70	19.82	44.52	63.27	-18.75	QP
5	0.270	4.20	19.82	24.02	51.12	-27.10	Average
6	0.270	16.00	19.82	35.82	61.12	-25.30	QP
7	0.323	4.80	19.82	24.62	49.62	-25.00	Average
8	0.323	12.90	19.82	32.72	59.62	-26.90	QP
9	0.535	11.21	19.75	30.96	46.00	-15.04	Average
10	0.535	17.21	19.75	36.96	56.00	-19.04	QP
11	0.974	7.70	19.80	27.50	46.00	-18.50	Average
12	0.974	14.40	19.80	34.20	56.00	-21.80	QP

AC 120V/60 Hz, Neutral



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.155	14.00	19.82	33.82	55.74	-21.92	Average
2	0.155	32.10	19.82	51.92	65.74	-13.82	QP
3	0.193	7.90	19.82	27.72	53.89	-26.17	Average
4	0.193	26.30	19.82	46.12	63.89	-17.77	QP
5	0.246	2.80	19.82	22.62	51.91	-29.29	Average
6	0.246	17.20	19.82	37.02	61.91	-24.89	QP
7	0.334	-0.71	19.82	19.11	49.35	-30.24	Average
8	0.334	10.19	19.82	30.01	59.35	-29.34	QP
9	0.535	9.11	19.75	28.86	46.00	-17.14	Average
10	0.535	14.91	19.75	34.66	56.00	-21.34	QP
11	3.107	2.60	19.46	22.06	46.00	-23.94	Average
12	3.107	12.80	19.46	32.26	56.00	-23.74	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)(4) (8)(9) – UNDESIRABLE EMISSION & RESTRICTED BANDS

Applicable Standard

FCC §15.407 (b) (1)(4) (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 EIRP of –27dBm/MHz

For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

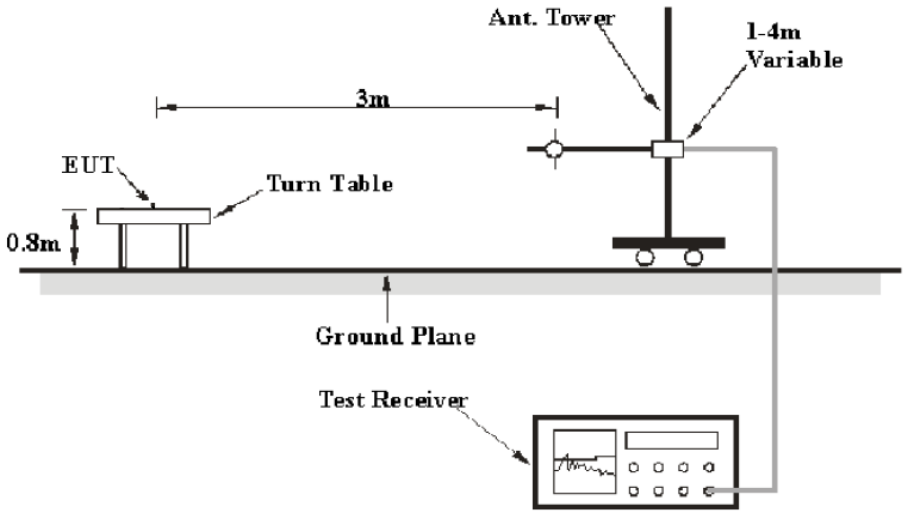
Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209.

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

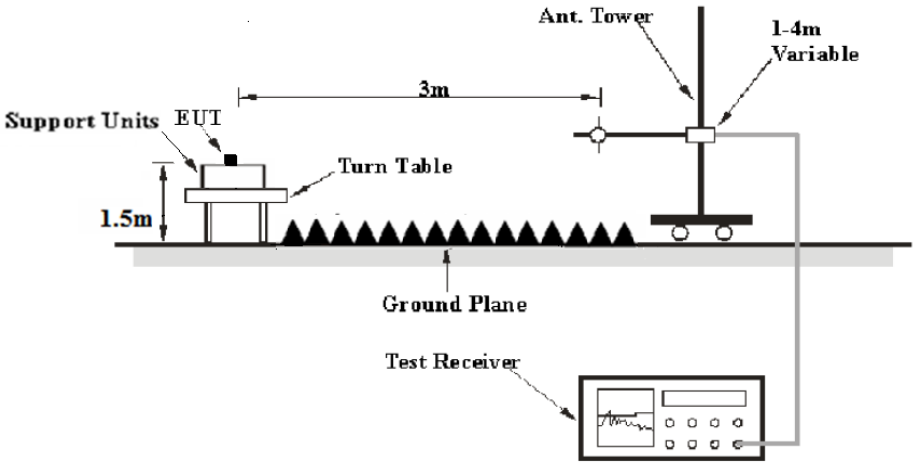
According to 789033 D02 General UNII Test Procedures New Rules v02r01, emission shall be computed as: E [dBμV/m] = EIRP [dBm] + 95.2, for d = 3 meters.

EUT Setup

Below 1 GHz:



Above 1 GHz:



The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC 15.209 and FCC 15.407 limits.

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

The spacing between the peripherals was 10 cm.

EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 30 MHz to 40 GHz.

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

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

Test Procedure

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

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

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

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:	24.6~25.0℃
Relative Humidity:	48~53%
ATM Pressure:	100.7~101.3 kPa

The testing was performed by CK Huang from 2020-08-17 to 2020-09-05.

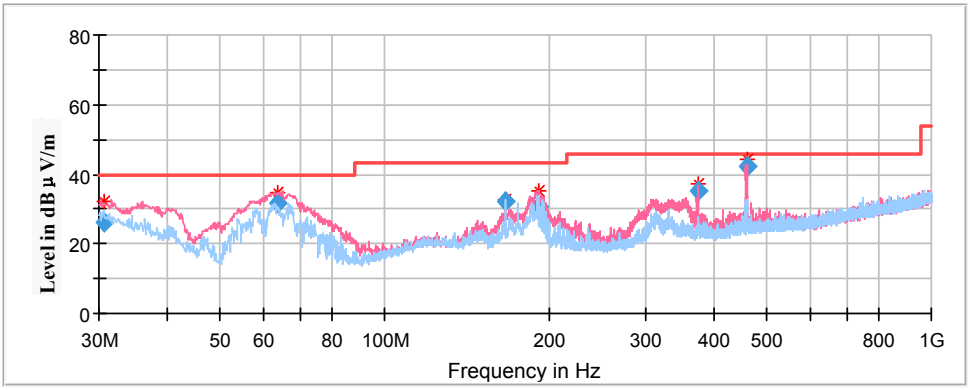
Test Mode: Transmitting

Model: L1563

Spurious Emission Test

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

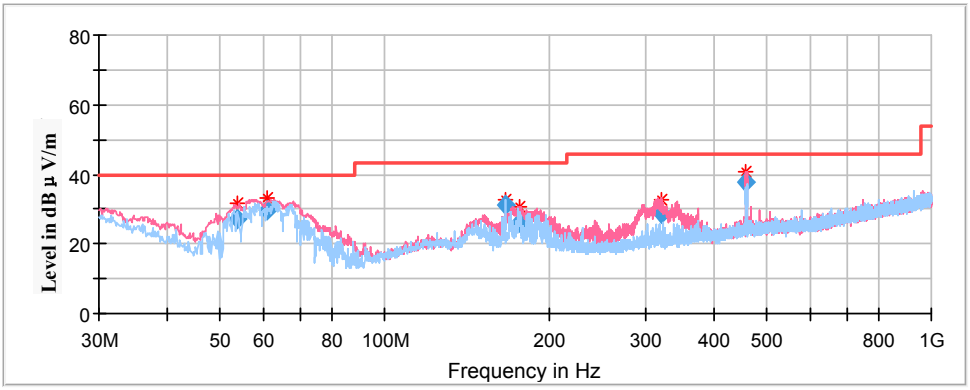
Pre-scan with 802.11a, 802.11ac20, 802.11n-HT20, 802.11ac40, 802.11n-HT40 and 802.11 ac80 modes of operation in the X,Y and Z axes of orientation, ***the worst case 802.11n-HT20 mode low channel*** *in Z-axis of orientation was recorded.*



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)				
30.77	26.31	100.0	V	308.0	-4.9	40.00	13.69
63.74	31.73	100.0	V	0.0	-18.1	40.00	8.27
166.33	32.12	200.0	H	72.0	-13.5	43.50	11.38
190.95	30.85	200.0	V	51.0	-13.4	43.50	12.65
374.24	35.04	100.0	V	193.0	-9.2	46.00	10.96
459.55	42.06	100.0	V	0.0	-7.1	46.00	3.94

30MHz-1GHz(5725-5850MHz Band):

Pre-scan with 802.11a, 802.11ac20, 802.11n-HT20, 802.11ac40, 802.11n-HT40 and 802.11 ac80 modes of operation in the X,Y and Z axes of orientation, ***the worst case 802.11ac20 mode high channel*** *in Z-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)				
53.93	27.05	200.0	V	334.0	-18.1	40.00	12.95
61.11	29.81	200.0	V	292.0	-18.3	40.00	10.19
166.36	31.08	200.0	H	266.0	-13.5	43.50	12.42
176.41	26.06	200.0	V	359.0	-13.9	43.50	17.44
320.54	28.55	200.0	V	271.0	-10.5	46.00	17.45
457.51	37.85	200.0	V	354.0	-7.2	46.00	8.15

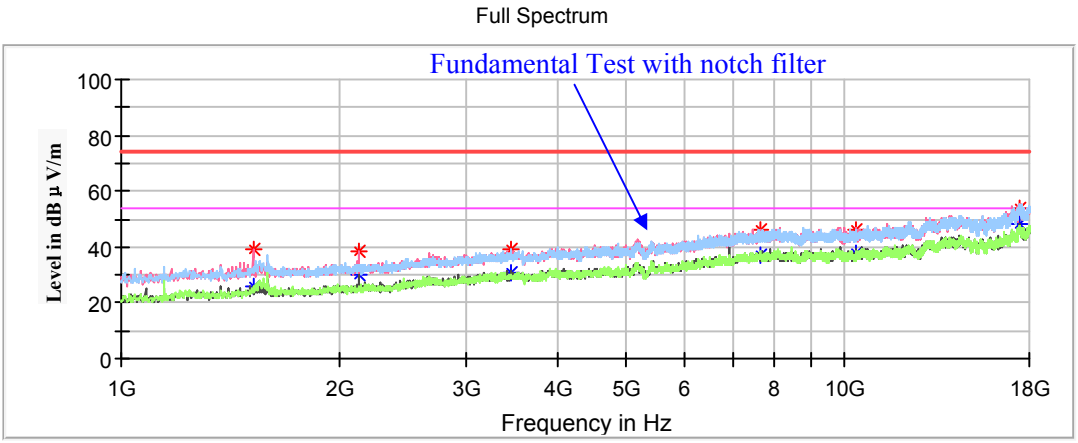
1GHz-18GHz (5150-5250MHz Band):

802.11a Mode(Chain0):

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

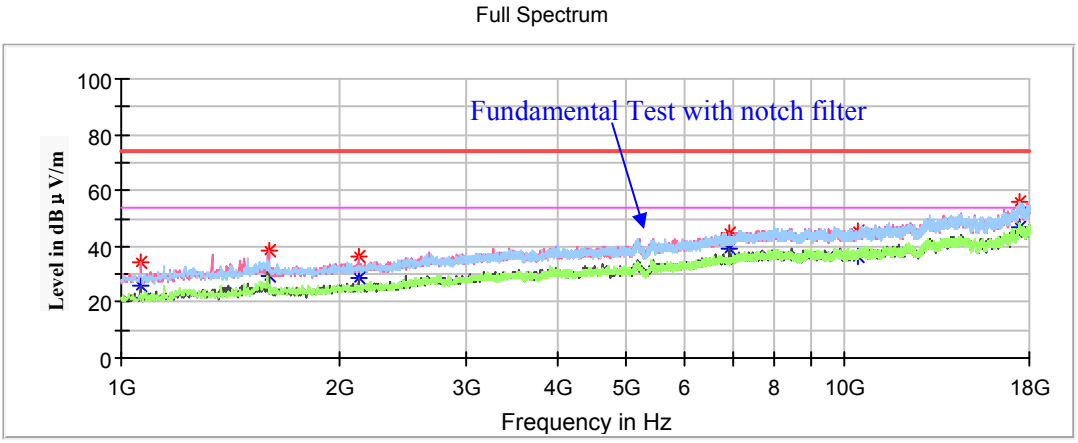
Note:
1. This test was performed with the 5150-5250MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5180MHz



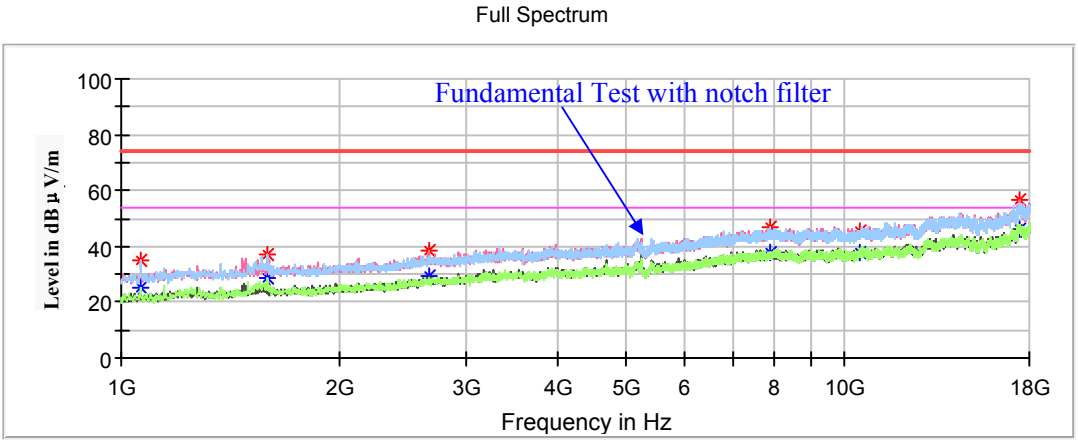
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1520.20	---	25.54	150.0	V	143.0	-16.3	54.00	28.46
1520.20	39.30	---	150.0	V	143.0	-16.3	74.00	34.70
2130.50	38.24	---	200.0	V	195.0	-13.9	68.20	29.96
3451.40	38.95	---	150.0	H	0.0	-8.9	68.20	29.25
7662.30	---	37.40	200.0	V	217.0	1.3	54.00	16.60
7662.30	46.18	---	200.0	V	217.0	1.3	74.00	27.82
10358.50	46.23	---	200.0	V	52.0	2.2	68.20	21.97
17481.50	54.00	---	150.0	V	309.0	8.8	68.20	14.2

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)				
1062.90	34.17	---	150.0	V	0.0	-18.7	74.00	39.83
1062.90	---	25.64	150.0	V	0.0	-18.7	54.00	28.36
1598.40	---	29.49	150.0	V	184.0	-16.0	54.00	24.51
1598.40	38.42	---	150.0	V	184.0	-16.0	74.00	35.58
2130.50	36.22	---	200.0	V	197.0	-13.9	68.20	31.98
6934.70	44.72	---	150.0	V	121.0	-0.2	68.20	23.48
10404.40	45.53	---	150.0	V	15.0	2.2	68.20	22.67
17493.40	55.64	---	150.0	H	236.0	8.9	68.20	12.56

High Channel: 5240MHz



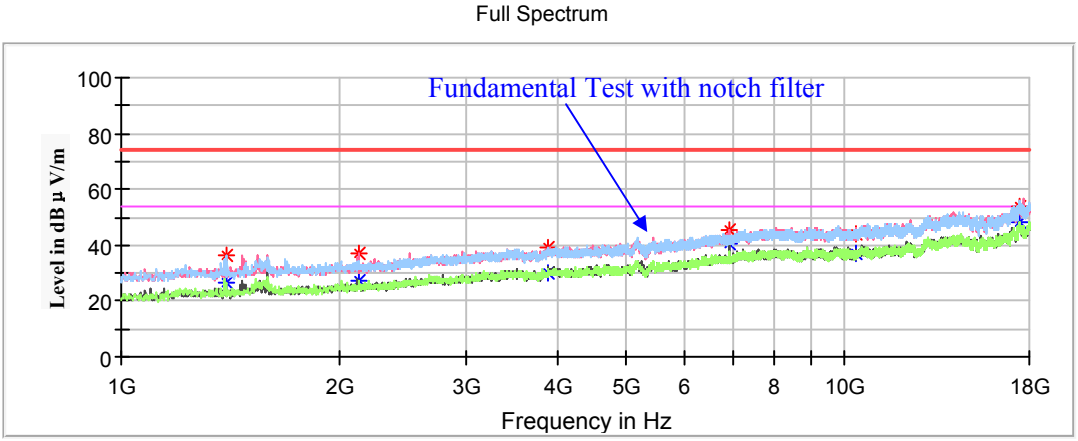
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1062.90	---	24.90	150.0	H	294.0	-18.7	54.00	29.10
1062.90	34.97	---	150.0	H	294.0	-18.7	74.00	39.03
1593.30	---	28.86	150.0	H	173.0	-16.0	54.00	25.14
1593.30	36.90	---	150.0	H	173.0	-16.0	74.00	37.10
2657.50	38.27	---	200.0	V	217.0	-11.7	68.20	29.93
7905.40	46.59	---	200.0	H	339.0	1.7	68.20	21.61
10479.20	45.39	---	150.0	V	0.0	2.3	68.20	22.81
17410.10	56.50	---	150.0	H	2.0	8.6	68.20	11.7

802.11a Mode(Chain1):

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

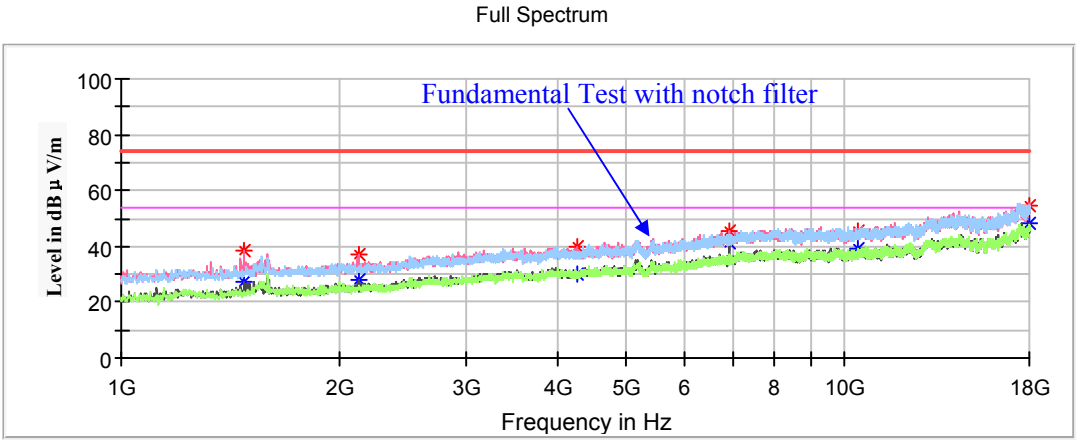
Note:
1. This test was performed with the 5150-5250MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5180MHz



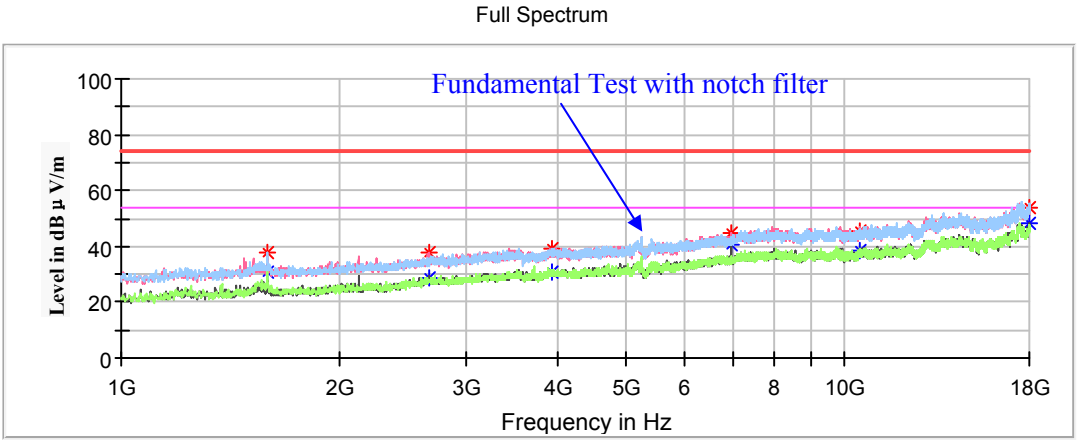
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1394.40	---	26.79	200.0	H	64.0	-16.9	54.00	27.21
1394.40	36.57	---	200.0	H	64.0	-16.9	74.00	37.43
2127.10	37.41	---	150.0	V	171.0	-13.9	68.20	30.79
3878.10	39.06	---	150.0	H	150.0	-7.4	68.20	29.14
6905.80	45.54	---	150.0	V	150.0	-0.3	68.20	22.66
10358.50	44.37	---	150.0	V	213.0	2.2	68.20	23.83
17479.80	53.68	---	150.0	V	254.0	8.8	68.20	30.79

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)				
1477.70	---	27.59	150.0	V	195.0	-16.5	54.00	26.41
1477.70	38.66	---	150.0	V	195.0	-16.5	74.00	35.34
2125.40	37.02	---	150.0	V	174.0	-14.0	68.20	31.18
4257.20	---	29.80	200.0	H	250.0	-6.6	54.00	24.20
4257.20	39.71	---	200.0	H	250.0	-6.6	74.00	34.29
6933.00	45.78	---	200.0	V	164.0	-0.2	68.20	22.42
10407.80	45.16	---	200.0	H	124.0	2.2	68.20	23.04
17991.50	---	48.07	150.0	V	2.0	8.8	54.00	5.93
17991.50	54.83	---	150.0	V	2.0	8.8	74.00	19.17

High Channel: 5240MHz



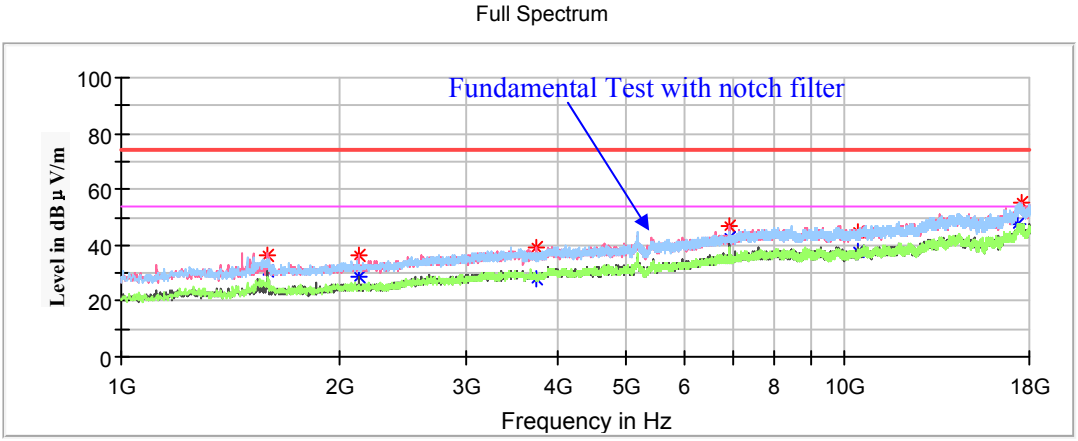
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1593.30	---	30.94	150.0	H	175.0	-16.0	54.00	23.06
1593.30	37.74	---	150.0	H	175.0	-16.0	74.00	36.26
2657.50	37.94	---	200.0	V	255.0	-11.7	68.20	30.26
3937.60	39.41	---	200.0	H	237.0	-7.2	68.20	28.79
6985.70	44.59	---	200.0	V	171.0	-0.1	68.20	23.61
10479.20	45.55	---	150.0	V	49.0	2.3	68.20	22.65
17983.00	53.80	---	200.0	V	39.0	8.8	74.00	20.20
17983.00	---	48.11	200.0	V	39.0	8.8	54.00	5.89

802.11ac20 Mode(Chain0+Chain1):

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

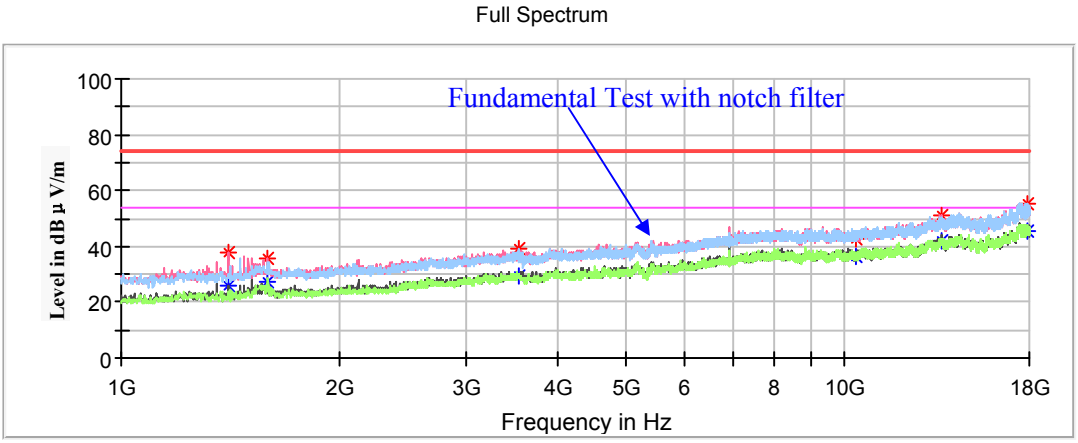
Note:
1. This test was performed with the 5150-5250MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5180MHz



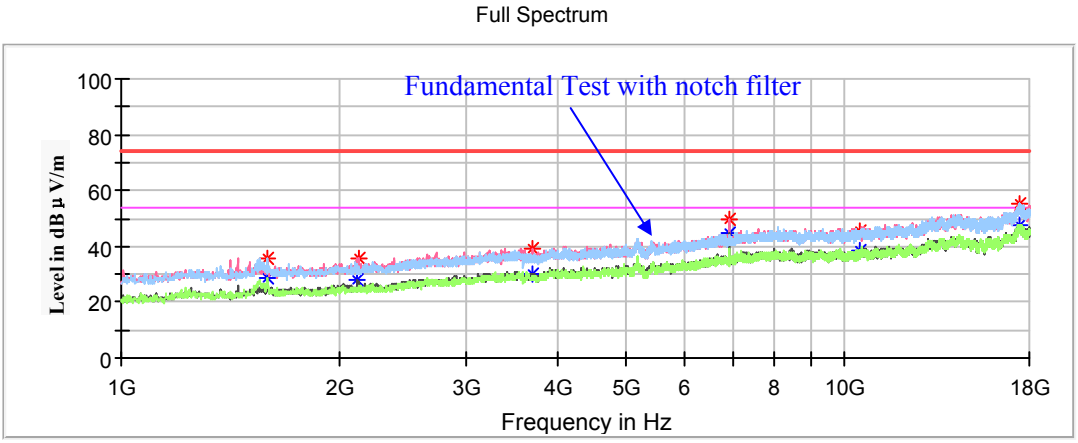
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1591.60	---	30.55	200.0	V	246.0	-16.0	54.00	23.45
1591.60	36.41	---	200.0	V	246.0	-16.0	74.00	37.59
2130.50	36.17	---	200.0	V	273.0	-13.9	68.20	32.03
3742.10	---	28.30	150.0	H	277.0	-7.9	54.00	25.70
3742.10	39.32	---	150.0	H	277.0	-7.9	74.00	34.68
6905.80	46.79	---	150.0	V	133.0	-0.3	68.20	21.41
10401.00	44.54	---	150.0	V	0.0	2.2	68.20	23.66
17512.10	55.10	---	150.0	V	90.0	8.9	68.20	13.1

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)				
1408.00	---	26.09	150.0	V	237.0	-16.9	54.00	27.91
1408.00	38.10	---	150.0	V	237.0	-16.9	74.00	35.90
1595.00	---	27.13	200.0	V	131.0	-16.0	54.00	26.87
1595.00	35.61	---	200.0	V	131.0	-16.0	74.00	38.39
3534.70	38.82	---	200.0	H	16.0	-8.7	68.20	29.38
10360.20	42.84	---	200.0	V	83.0	2.2	68.20	25.36
13648.00	51.33	---	200.0	V	37.0	5.8	68.20	16.87
17915.00	---	45.68	200.0	V	296.0	8.8	54.00	8.32
17915.00	55.31	---	200.0	V	296.0	8.8	74.00	18.69

High Channel: 5240MHz

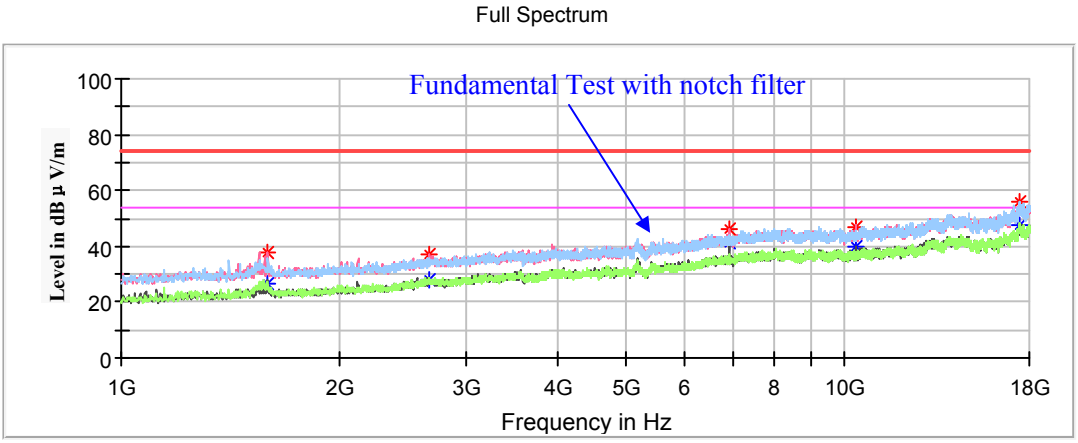


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1593.30	35.95	---	200.0	H	166.0	-16.0	74.00	38.05
1593.30	---	28.87	200.0	H	166.0	-16.0	54.00	25.13
2125.40	35.92	---	150.0	V	255.0	-14.0	68.20	32.28
3711.50	---	30.19	150.0	V	108.0	-8.1	54.00	23.81
3711.50	39.03	---	150.0	V	108.0	-8.1	74.00	34.97
6905.80	49.45	---	150.0	V	151.0	-0.3	68.20	18.75
10477.50	45.31	---	200.0	H	341.0	2.3	68.20	22.89
17483.20	55.51	---	200.0	H	37.0	8.8	68.20	12.69

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

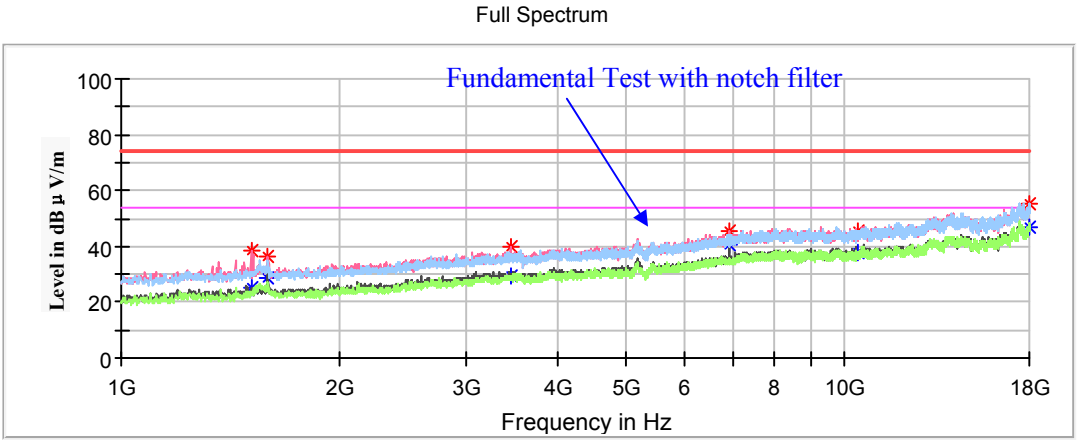
Note:
1. This test was performed with the 5150-5250MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5180MHz



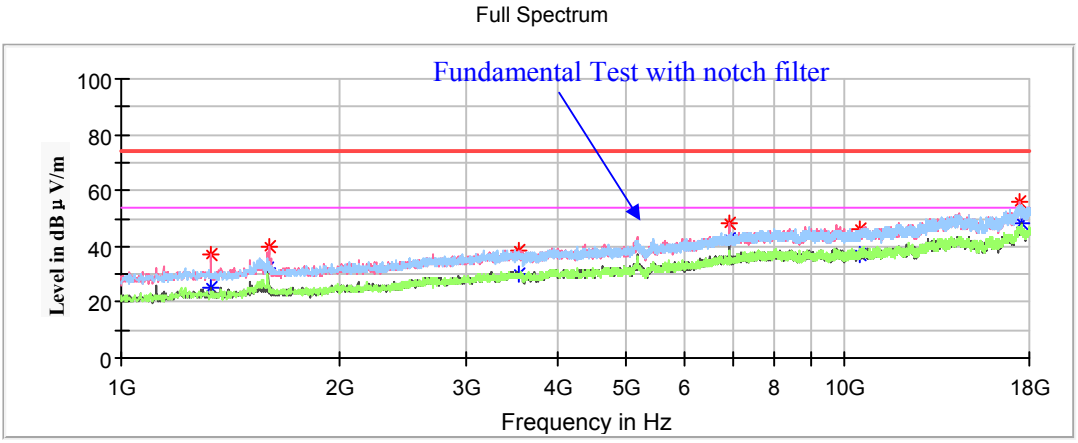
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1593.30	37.65	---	200.0	V	247.0	-16.0	74.00	36.35
1593.30	---	26.53	200.0	V	247.0	-16.0	54.00	27.47
2660.90	36.94	---	200.0	V	267.0	-11.7	68.20	31.26
6905.80	46.23	---	150.0	V	176.0	-0.3	68.20	21.97
10367.00	47.05	---	200.0	V	25.0	2.2	68.20	21.15
17486.60	56.19	---	150.0	H	352.0	8.8	68.20	12.01

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)				
1511.70	38.33	---	200.0	V	165.0	-16.3	74.00	35.67
1511.70	---	24.89	200.0	V	165.0	-16.3	54.00	29.11
1596.70	---	28.55	200.0	V	248.0	-16.0	54.00	25.45
1596.70	36.04	---	200.0	V	248.0	-16.0	74.00	37.96
3448.00	39.66	---	200.0	V	274.0	-9.0	68.20	28.54
6905.80	45.58	---	150.0	V	134.0	-0.3	68.20	22.62
10418.00	45.70	---	150.0	V	196.0	2.2	68.20	22.5
17986.40	---	46.51	200.0	V	269.0	8.8	54.00	7.49
17986.40	55.52	---	200.0	V	269.0	8.8	74.00	18.48

High Channel: 5240MHz



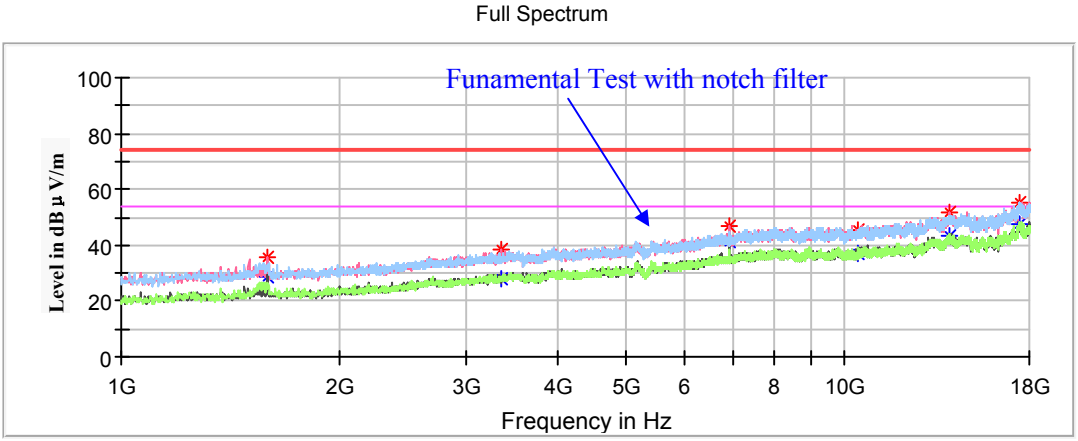
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1331.50	---	25.07	150.0	V	257.0	-17.3	54.00	28.93
1331.50	37.17	---	150.0	V	257.0	-17.3	74.00	36.83
1596.70	---	32.40	150.0	V	238.0	-16.0	54.00	21.60
1601.80	40.01	---	150.0	V	238.0	-16.0	74.00	33.99
3544.90	38.73	---	200.0	V	358.0	-8.7	68.20	29.47
6905.80	47.93	---	200.0	V	177.0	-0.3	68.20	20.27
10463.90	45.87	---	150.0	V	358.0	2.3	68.20	22.33
17476.40	55.61	---	200.0	V	351.0	8.8	68.20	12.59

802.11ac40 Mode(Chain0+Chain1):

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

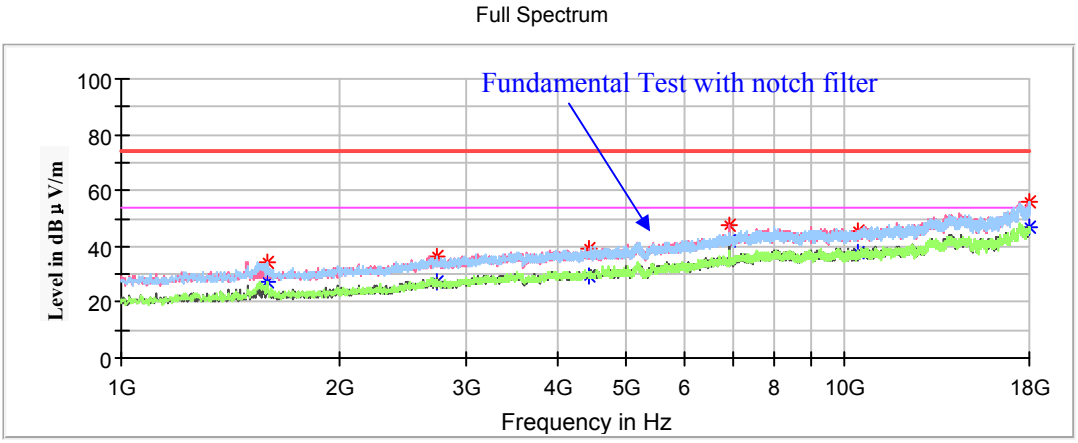
Note:
1. This test was performed with the 5150-5250MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5190MHz



Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1591.60	35.98	---	200.0	V	229.0	-16.0	74.00	38.02
1591.60	---	28.37	200.0	V	229.0	-16.0	54.00	25.63
3359.60	38.37	---	150.0	V	293.0	-9.2	68.20	29.83
6919.40	46.64	---	150.0	V	152.0	-0.2	68.20	21.56
10397.60	45.20	---	150.0	V	19.0	2.2	68.20	23.00
13948.90	51.89	---	200.0	V	341.0	6.1	68.20	16.31
17496.80	55.44	---	150.0	V	309.0	8.9	68.20	12.76

High Channel: 5230MHz

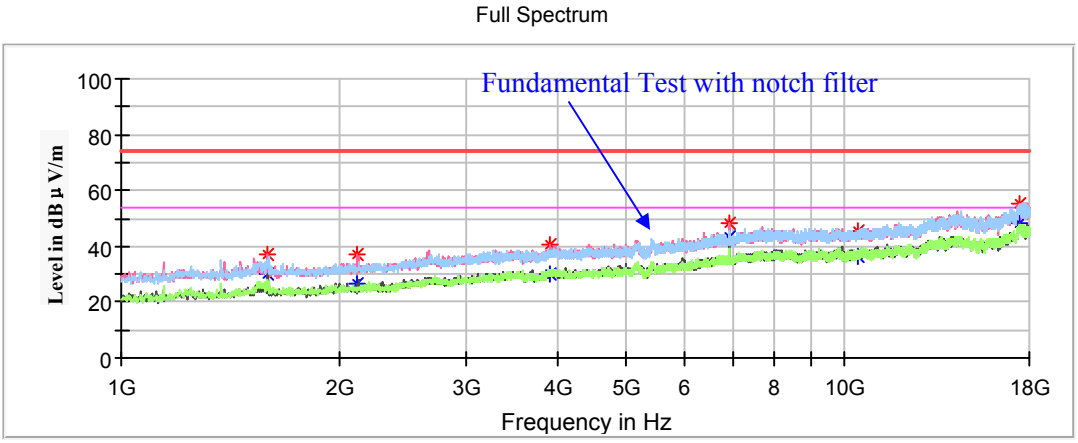


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1591.60	34.29	---	200.0	H	323.0	-16.0	74.00	39.71
1591.60	---	27.14	200.0	H	323.0	-16.0	54.00	26.86
2725.50	---	27.06	150.0	H	314.0	-11.4	54.00	26.94
2725.50	36.56	---	150.0	H	314.0	-11.4	74.00	37.44
4425.50	39.43	---	200.0	V	331.0	-6.3	68.20	28.77
6919.40	47.80	---	150.0	V	154.0	-0.2	68.20	20.4
10441.80	45.65	---	150.0	H	0.0	2.3	68.20	22.55
17976.20	---	46.72	150.0	H	331.0	8.8	54.00	7.28
17976.20	56.09	---	150.0	H	331.0	8.8	74.00	17.91

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

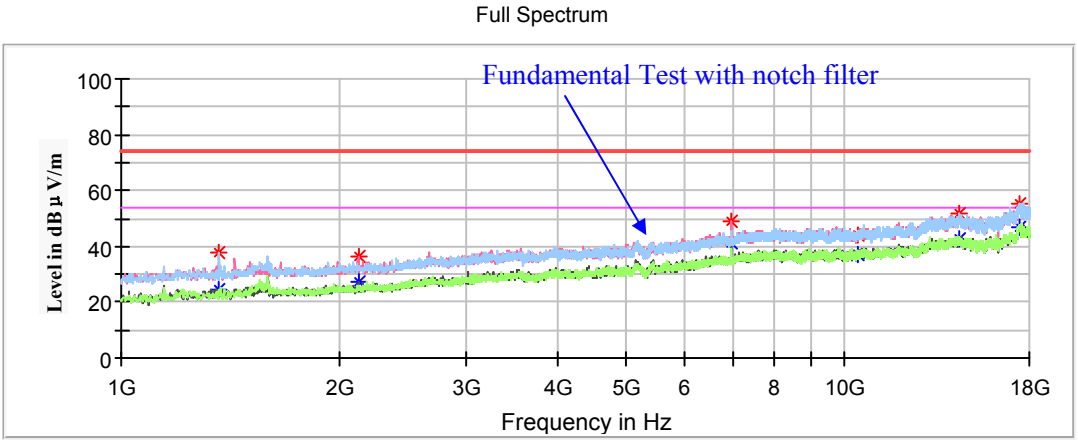
Note:
1. This test was performed with the 5150-5250MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5190MHz



Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1593.30	37.32	---	200.0	V	134.0	-16.0	74.00	36.68
1593.30	---	29.85	200.0	V	134.0	-16.0	54.00	24.15
2123.70	36.74	---	150.0	V	185.0	-14.0	68.20	31.46
3925.70	40.24	---	150.0	V	24.0	-7.3	68.20	27.96
6919.40	48.09	---	200.0	V	114.0	-0.2	68.20	20.11
10412.90	45.79	---	200.0	V	21.0	2.2	68.20	22.41
17469.60	55.25	---	200.0	V	295.0	8.8	68.20	12.95

High Channel: 5230MHz

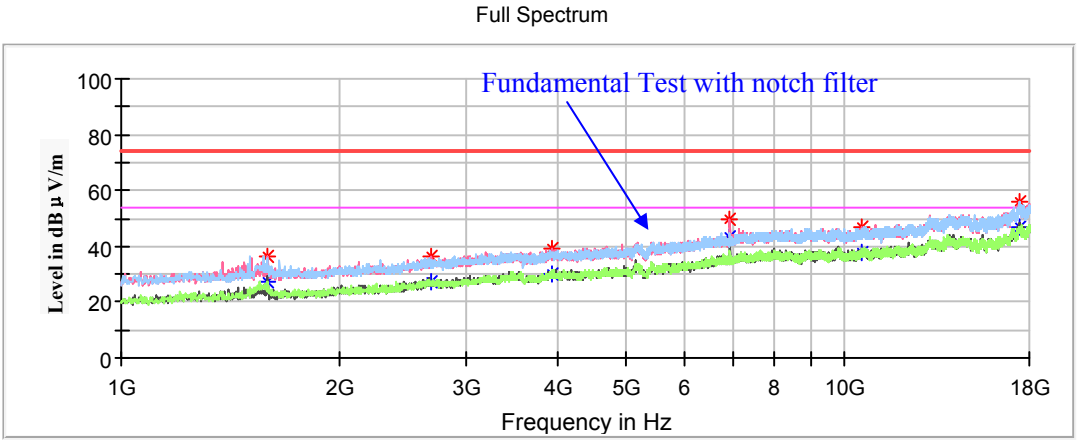


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1367.20	37.60	---	200.0	H	35.0	-17.1	74.00	36.40
1367.20	---	24.69	200.0	H	35.0	-17.1	54.00	29.31
2125.40	36.11	---	200.0	V	0.0	-14.0	68.20	32.09
6972.10	48.88	---	200.0	V	113.0	-0.1	68.20	19.32
10460.50	44.14	---	200.0	H	226.0	2.3	68.20	24.06
14375.60	51.61	---	150.0	H	7.0	6.4	68.20	16.59
17493.40	55.28	---	150.0	V	325.0	8.9	68.20	12.92

802.11ac80 Mode*(Chain0+Chain1)*:
*Pre-scan with X,Y and Z axes of orientation, the worst case **Z-axis of orientation** was recorded*

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

Low Channel: 5210MHz



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)				
1596.70	36.47	---	200.0	V	234.0	-16.0	74.00	37.53
1596.70	---	27.34	200.0	V	234.0	-16.0	54.00	26.66
2688.10	36.19	---	200.0	V	15.0	-11.5	68.20	32.01
3947.80	---	29.97	150.0	H	36.0	-7.2	54.00	24.03
3947.80	38.97	---	150.0	H	36.0	-7.2	74.00	35.03
6946.60	49.84	---	150.0	V	167.0	-0.2	68.20	18.36
10545.50	46.87	---	150.0	V	147.0	2.4	68.20	21.33
17493.40	55.76	---	200.0	V	295.0	8.9	68.20	12.44

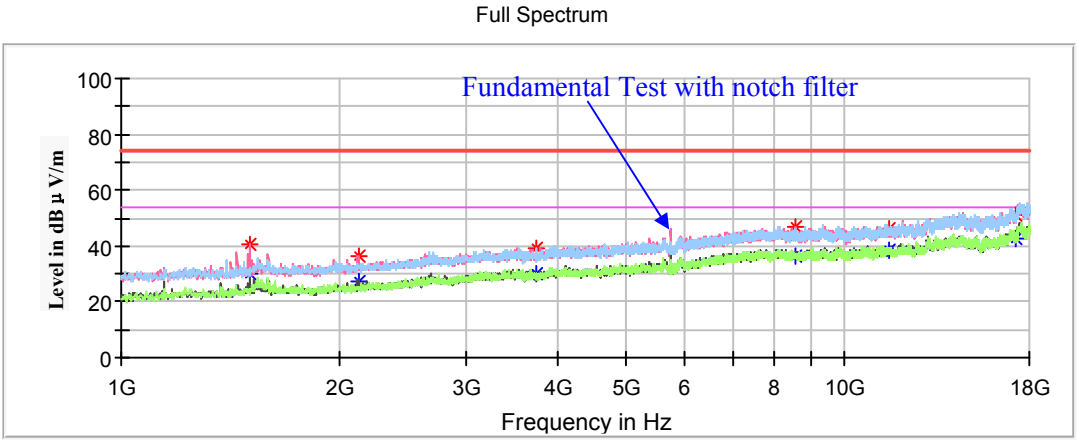
1GHz-18GHz(5725-5850MHz Band):

802.11a Mode(Chain0):

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

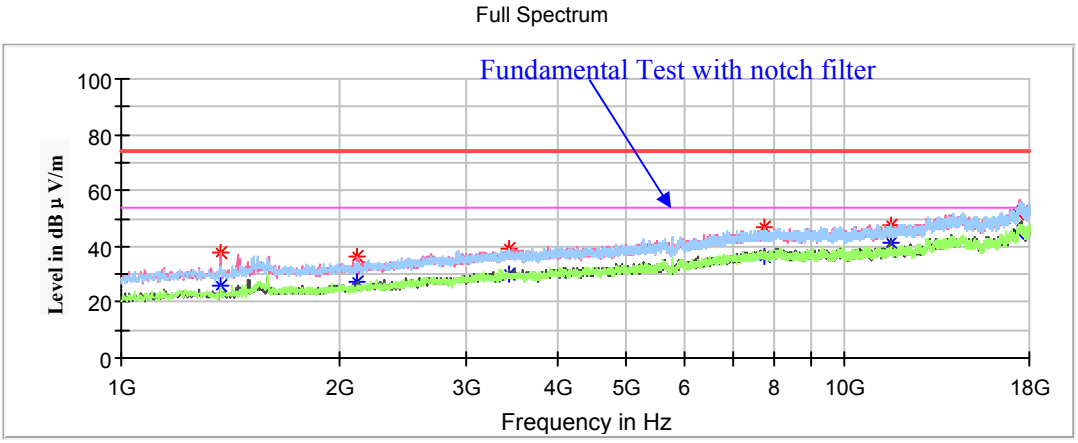
Note:
1. This test was performed with the 5725-5850MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5745MHz



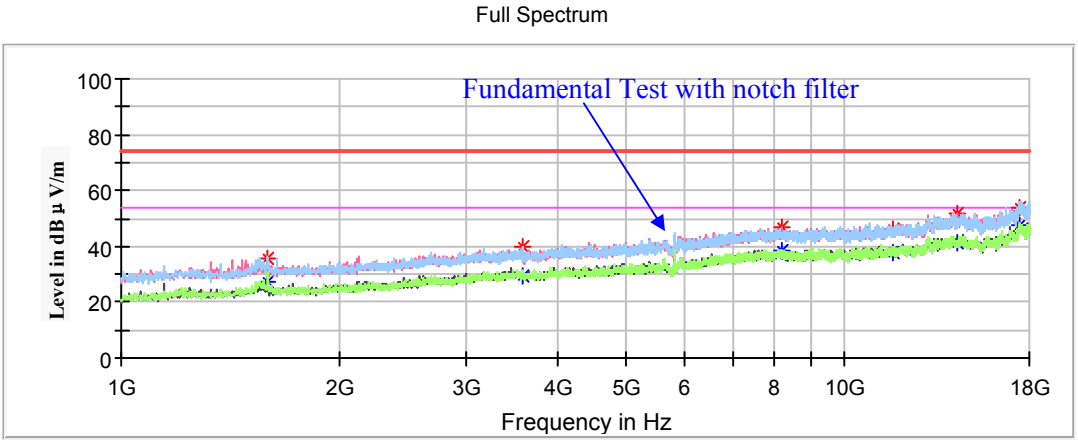
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1503.20	---	29.80	150.0	V	220.0	-16.3	54.00	24.20
1503.20	40.30	---	150.0	V	220.0	-16.3	74.00	33.70
2125.40	36.33	---	150.0	V	241.0	-14.0	68.20	31.87
3754.00	---	29.85	200.0	H	0.0	-7.9	54.00	24.15
3754.00	39.47	---	200.0	H	0.0	-7.9	74.00	34.53
8575.20	46.62	---	150.0	V	241.0	1.4	68.20	21.58
11490.70	---	38.68	200.0	V	65.0	2.8	54.00	15.32
11490.70	45.95	---	200.0	V	65.0	2.8	74.00	28.05
17235.00	50.86	---	200.0	H	308.0	8.0	68.20	17.34

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)				
1374.00	---	25.80	200.0	V	278.0	-17.0	54.00	28.20
1374.00	37.89	---	200.0	V	278.0	-17.0	74.00	36.11
2123.70	36.28	---	150.0	H	65.0	-9.0	68.20	31.92
3446.30	39.10	---	150.0	H	65.0	-9.0	68.20	29.10
7766.00	---	36.57	150.0	V	204.0	1.4	54.00	17.43
7766.00	46.95	---	150.0	V	204.0	1.4	74.00	27.05
11570.60	---	41.36	150.0	V	36.0	2.9	54.00	12.64
11570.60	47.54	---	150.0	V	36.0	2.9	74.00	26.46
17355.70	51.56	---	150.0	H	335.0	8.4	68.20	16.64

High Channel: 5825MHz



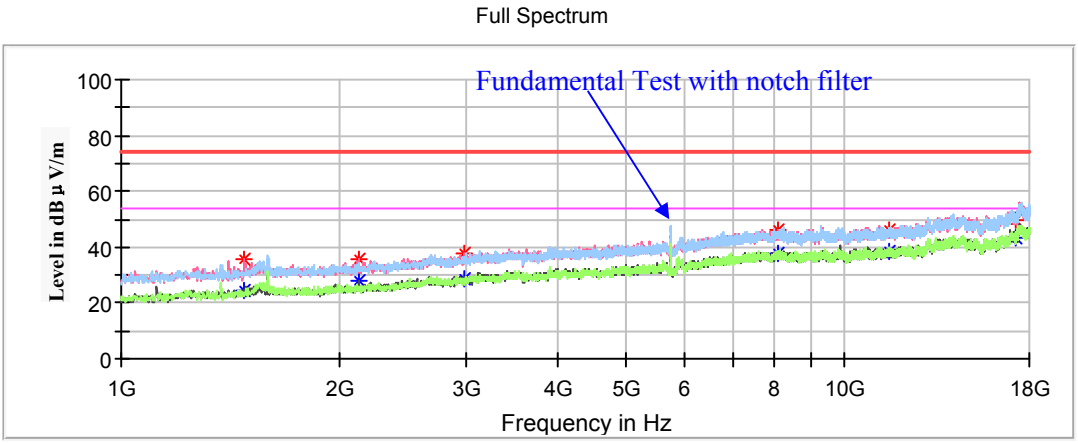
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1595.00	---	27.19	200.0	H	142.0	-16.0	54.00	26.81
1595.00	36.01	---	200.0	H	142.0	-16.0	74.00	37.99
3589.10	40.15	---	200.0	H	163.0	-8.5	68.20	28.05
8168.90	46.54	---	150.0	V	0.0	1.6	74.00	27.46
8170.60	---	38.50	150.0	V	0.0	1.6	54.00	15.50
11650.50	46.38	---	150.0	V	36.0	3.1	74.00	27.62
11650.50	---	38.10	150.0	V	36.0	3.1	54.00	15.90
14326.30	51.87	---	200.0	V	335.0	6.4	68.20	16.33
17474.70	54.06	---	200.0	H	224.0	8.8	68.20	14.14

802.11a Mode(Chain1):

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

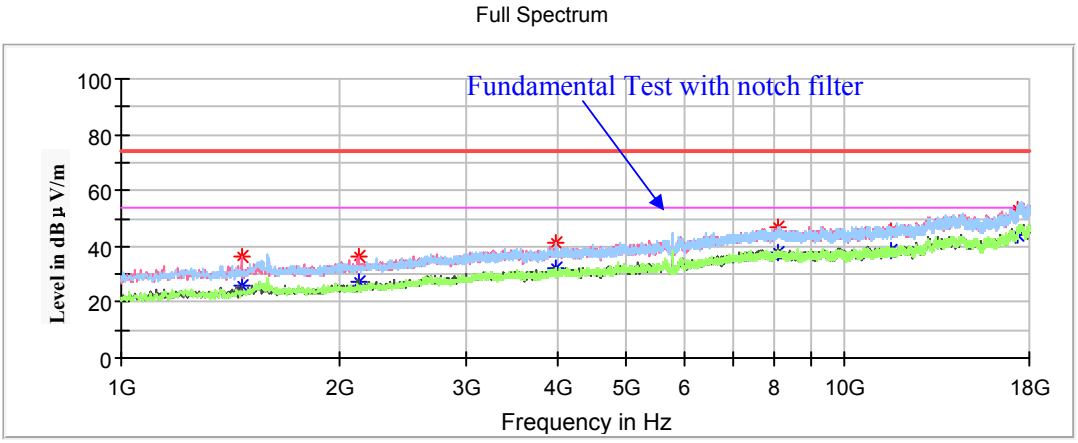
Note:
1. This test was performed with the 5725-5850MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5745MHz



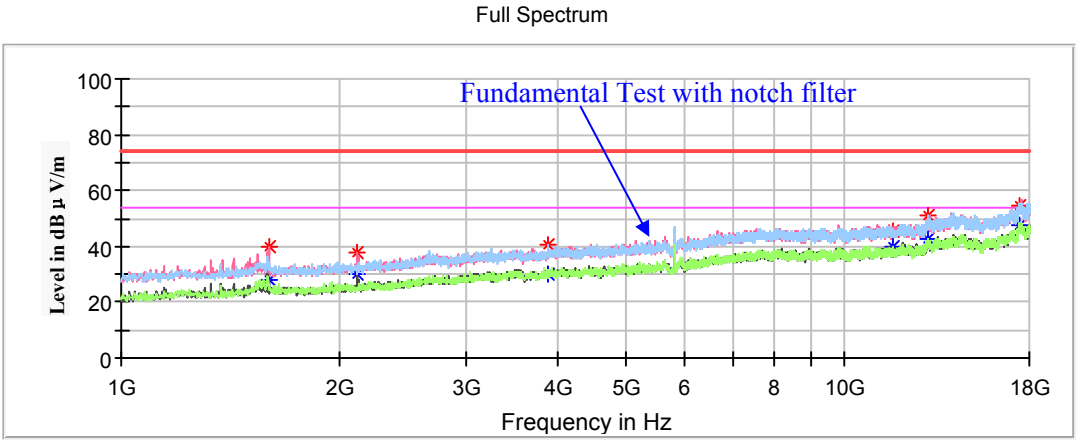
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1479.40	---	24.32	150.0	V	288.0	-16.5	54.00	29.68
1479.40	35.78	---	150.0	V	288.0	-16.5	74.00	38.22
2127.10	35.47	---	150.0	V	288.0	-13.9	68.20	32.73
2985.60	37.91	---	150.0	V	0.0	-10.2	68.20	30.29
8106.00	---	37.73	150.0	V	83.0	1.7	54.00	16.27
8106.00	46.29	---	150.0	V	83.0	1.7	74.00	27.71
11490.70	---	38.78	150.0	H	16.0	2.8	54.00	15.22
11490.70	46.17	---	150.0	H	16.0	2.8	74.00	27.83
17235.00	49.59	---	150.0	H	82.0	8.0	68.20	18.61

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)				
1465.80	36.42	---	150.0	V	268.0	-16.5	74.00	37.58
1465.80	---	26.12	150.0	V	268.0	-16.5	54.00	27.88
2127.10	36.48	---	150.0	V	248.0	-13.9	68.20	31.72
3997.10	---	31.93	150.0	H	126.0	-7.0	54.00	22.07
3997.10	41.37	---	150.0	H	126.0	-7.0	74.00	32.63
8092.40	---	37.86	150.0	H	86.0	1.7	54.00	16.14
8092.40	46.66	---	150.0	H	86.0	1.7	74.00	27.34
11570.60	---	38.24	150.0	H	324.0	2.9	54.00	15.76
11570.60	45.29	---	150.0	H	324.0	2.9	74.00	28.71
17355.70	52.88	---	200.0	V	21.0	8.4	68.20	15.32

High Channel: 5825MHz



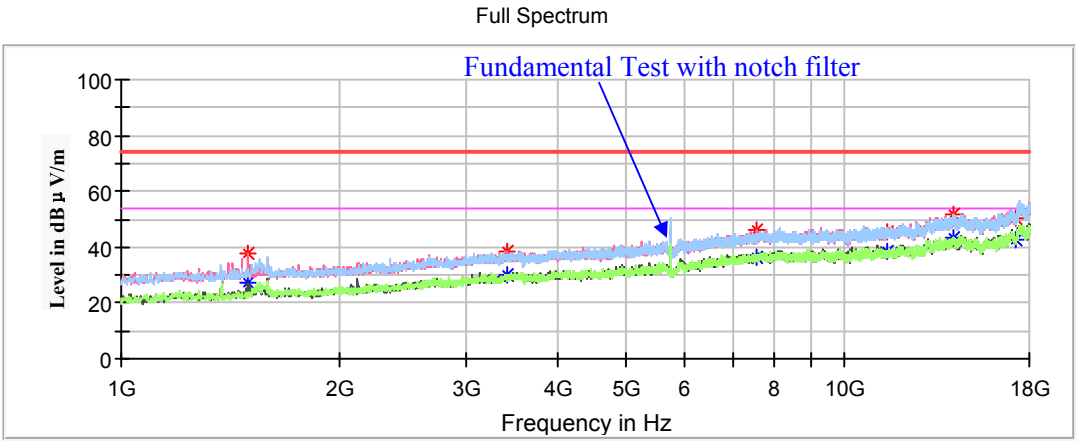
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1598.40	---	28.23	200.0	V	210.0	-16.0	54.00	25.77
1598.40	39.53	---	200.0	V	210.0	-16.0	74.00	34.47
2123.70	37.50	---	150.0	V	234.0	-14.0	68.20	30.70
3886.60	---	29.79	150.0	V	344.0	-7.4	54.00	24.21
3886.60	40.44	---	150.0	V	344.0	-7.4	74.00	33.56
11650.50	---	39.64	150.0	H	294.0	3.1	54.00	14.36
11650.50	45.50	---	150.0	H	294.0	3.1	74.00	28.50
13064.90	50.79	---	150.0	H	91.0	5.3	68.20	17.41
17474.70	54.75	---	150.0	V	15.0	8.8	68.20	13.45

802.11ac20 Mode(Chain0+Chain1):

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

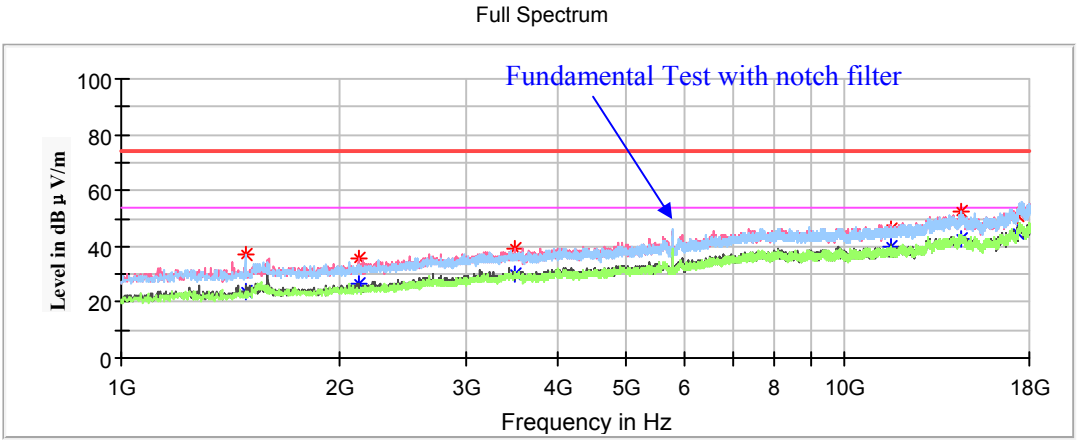
Note:
1. This test was performed with the 5725-5850MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5745MHz



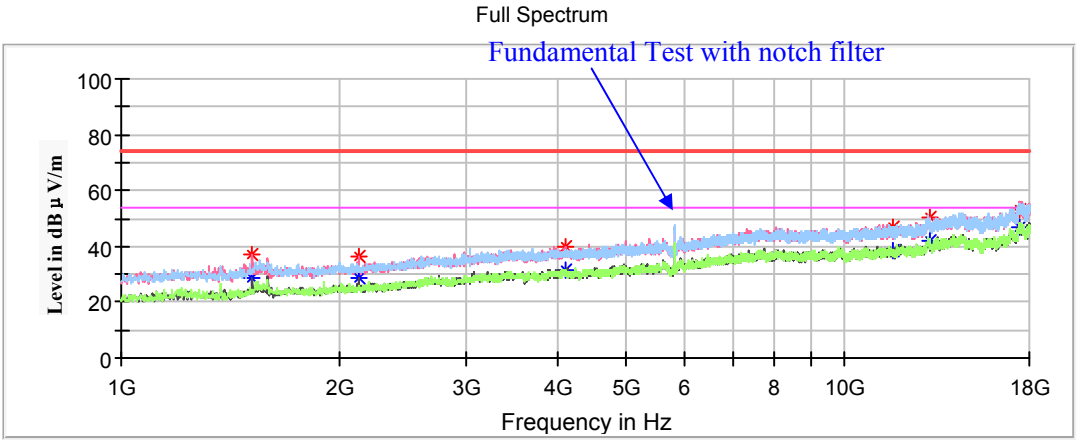
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1494.70	---	27.39	150.0	V	311.0	-16.4	54.00	26.61
1494.70	38.00	---	150.0	V	311.0	-16.4	74.00	36.00
3422.50	38.72	---	200.0	V	134.0	-9.0	68.20	29.48
7558.60	---	36.38	150.0	V	230.0	1.1	54.00	17.62
7558.60	46.31	---	150.0	V	230.0	1.1	74.00	27.69
11470.30	---	38.36	200.0	H	65.0	2.8	54.00	15.64
11470.30	45.11	---	200.0	H	65.0	2.8	74.00	28.89
14100.20	52.01	---	200.0	H	0.0	6.2	68.20	16.19
17235.00	50.04	---	150.0	V	209.0	8.0	68.20	18.16

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)				
1482.80	---	23.75	200.0	H	144.0	-16.5	54.00	30.25
1482.80	36.90	---	200.0	H	144.0	-16.5	74.00	37.10
2127.10	35.36	---	150.0	V	228.0	-13.9	68.20	32.84
3502.40	38.88	---	200.0	V	358.0	-8.8	68.20	29.32
11570.60	---	40.19	150.0	V	327.0	2.9	54.00	13.81
11570.60	46.16	---	150.0	V	327.0	2.9	74.00	27.84
14462.30	52.54	---	200.0	V	158.0	6.5	68.20	15.66
17355.70	51.34	---	150.0	H	145.0	8.4	74.00	22.66
17355.70	---	44.95	150.0	H	145.0	8.4	54.00	9.05

High Channel: 5825MHz

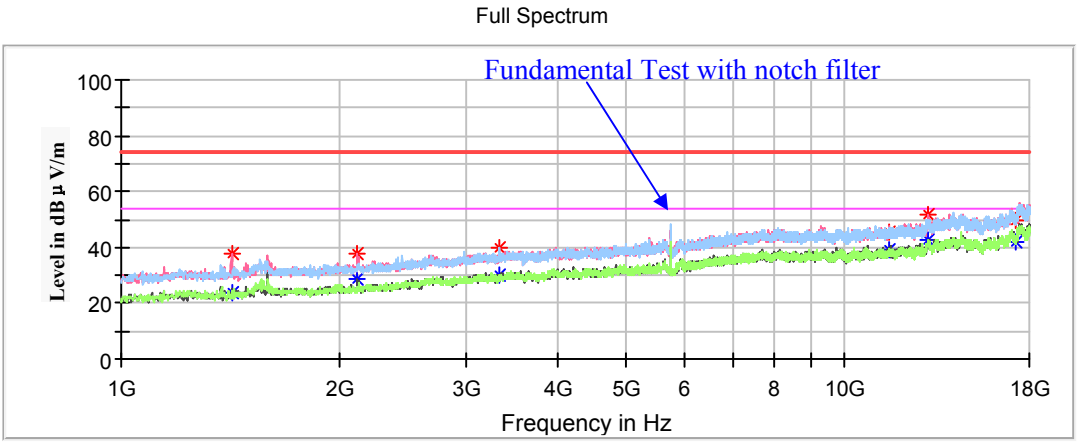


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1518.50	---	28.84	150.0	V	186.0	-16.3	54.00	25.16
1518.50	37.29	---	150.0	V	186.0	-16.3	74.00	36.71
2127.10	36.34	---	150.0	V	227.0	-13.9	68.20	31.86
4112.70	---	31.41	200.0	V	336.0	-6.8	54.00	22.59
4112.70	39.58	---	200.0	V	336.0	-6.8	74.00	34.42
11650.50	---	38.41	150.0	H	21.0	3.1	54.00	15.59
11650.50	46.61	---	150.0	H	21.0	3.1	74.00	27.39
13093.80	50.32	---	150.0	V	122.0	5.3	68.20	17.88
17474.70	53.42	---	150.0	V	288.0	8.8	68.20	14.78

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

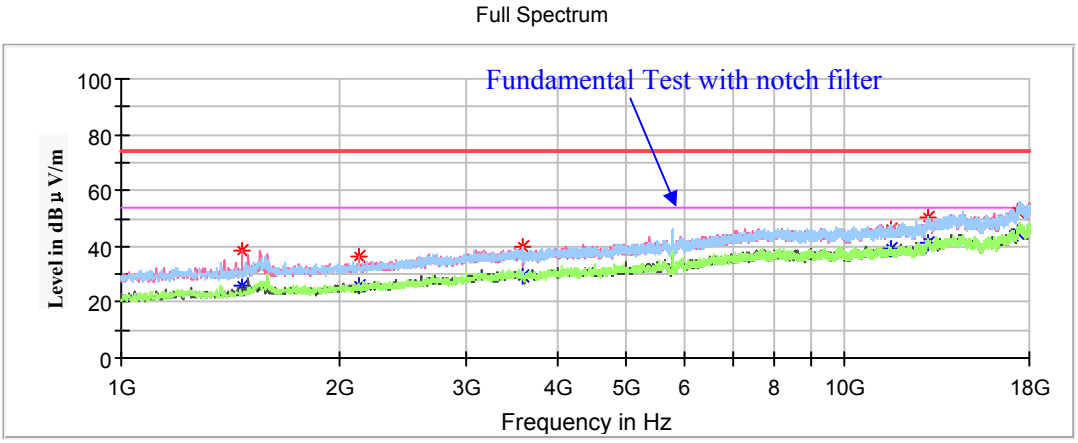
Note:
1. This test was performed with the 5725-5850MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5745MHz



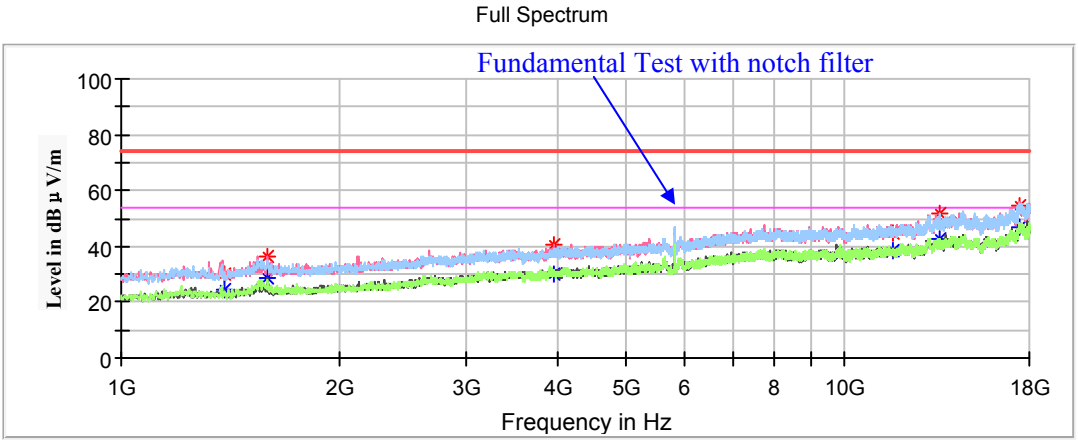
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1419.90	---	23.99	150.0	V	144.0	-16.8	54.00	30.01
1419.90	37.53	---	150.0	V	144.0	-16.8	74.00	36.47
2123.70	37.66	---	150.0	V	269.0	-14.0	68.20	30.54
3329.00	39.62	---	150.0	H	305.0	-9.3	68.20	28.58
11490.70	---	38.81	200.0	H	275.0	2.8	54.00	15.19
11490.70	45.13	---	200.0	H	275.0	2.8	74.00	28.87
13076.80	51.50	---	150.0	V	165.0	5.3	68.20	16.7
17235.00	49.31	---	150.0	H	106.0	8.0	68.20	18.89

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)				
1470.90	---	25.80	150.0	V	273.0	-16.5	54.00	28.20
1470.90	38.64	---	150.0	V	273.0	-16.5	74.00	35.36
2128.80	36.03	---	200.0	V	236.0	-13.9	68.20	32.17
3592.50	39.96	---	200.0	H	101.0	-8.5	68.20	28.24
11570.60	---	39.34	150.0	V	293.0	2.9	54.00	14.66
11570.60	46.45	---	150.0	V	293.0	2.9	74.00	27.55
13000.30	50.50	---	150.0	H	156.0	5.2	68.20	17.7
17355.70	52.80	---	150.0	H	279.0	8.4	68.20	15.4

High Channel: 5825MHz

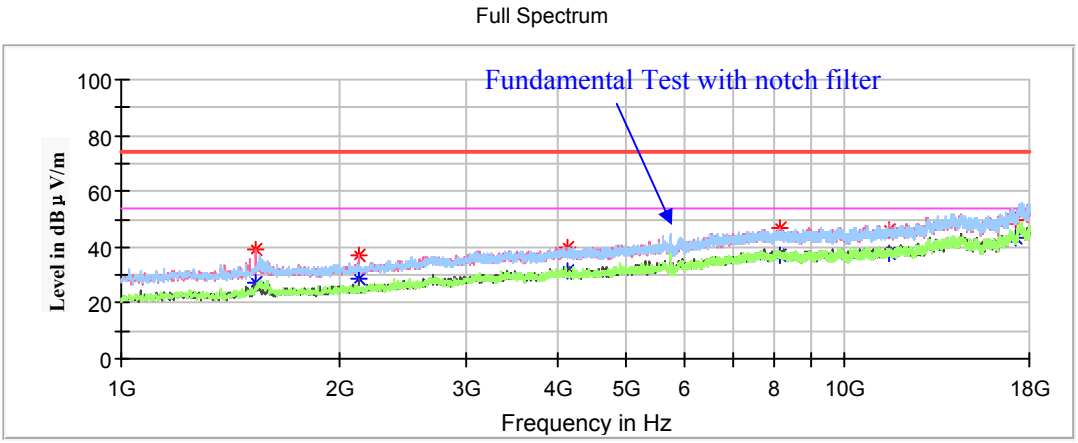


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1385.90	29.98	---	200.0	V	93.0	-17.0	74.00	44.02
1385.90	---	24.13	200.0	V	93.0	-17.0	54.00	29.87
1593.30	---	28.68	150.0	V	248.0	-16.0	54.00	25.32
1593.30	36.19	---	150.0	V	248.0	-16.0	74.00	37.81
3964.80	---	30.08	200.0	V	134.0	-7.1	54.00	23.92
3964.80	40.35	---	200.0	V	134.0	-7.1	74.00	33.65
11650.50	44.68	---	200.0	V	239.0	3.1	74.00	29.32
11650.50	---	38.43	200.0	V	239.0	3.1	54.00	15.57
13510.30	51.73	---	150.0	H	358.0	5.7	68.20	16.47
17474.70	54.81	---	150.0	V	144.0	8.8	68.20	13.39

802.11ac40 Mode(Chain0+Chain1):
*(Pre-scan in the X,Y and Z axes of orientation, the worst case **Z-axis of orientation** was recorded.)*

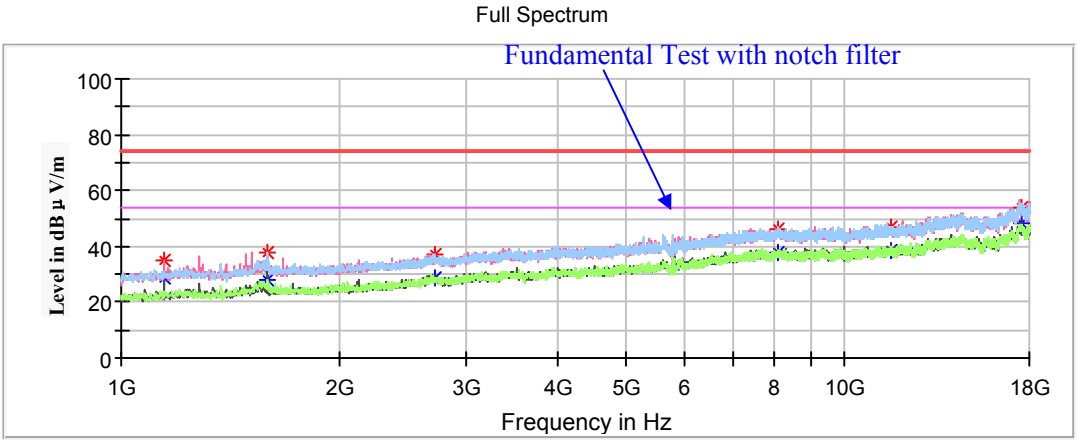
Note:
1. This test was performed with the 5725-5850MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

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)				
1532.10	39.28	---	150.0	V	295.0	-16.2	74.00	34.72
1532.10	---	27.25	150.0	V	295.0	-16.2	54.00	26.75
2130.50	37.30	---	150.0	V	239.0	-13.9	68.20	30.9
4150.10	---	31.25	200.0	V	0.0	-6.8	54.00	22.75
4150.10	39.91	---	200.0	V	0.0	-6.8	74.00	34.09
8112.80	---	37.06	200.0	H	113.0	1.7	54.00	16.94
8112.80	46.92	---	200.0	H	113.0	1.7	74.00	27.08
11519.60	---	38.09	150.0	V	22.0	2.8	54.00	15.91
11519.60	46.28	---	150.0	V	22.0	2.8	74.00	27.72
17265.60	49.45	---	200.0	H	217.0	8.1	68.20	18.75

High Channel: 5795MHz

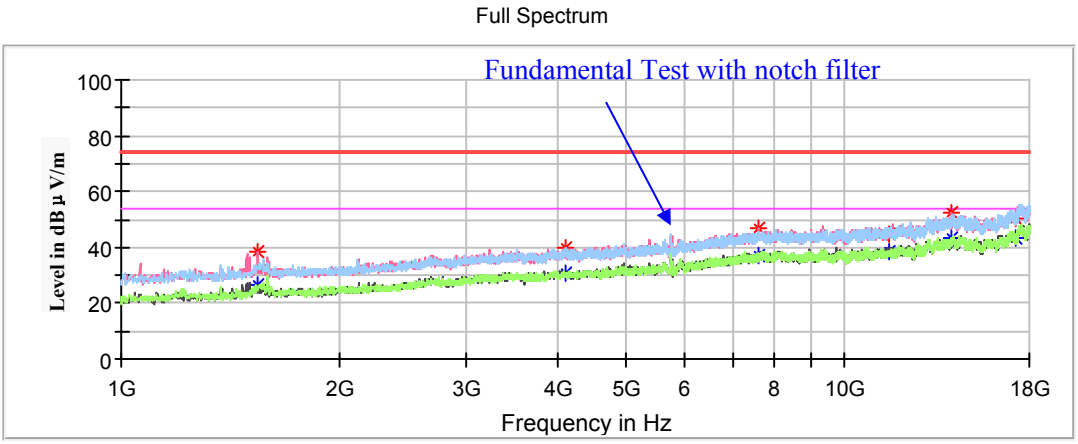


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1144.50	---	28.35	200.0	V	25.0	-18.3	54.00	25.65
1144.50	34.82	---	200.0	V	25.0	-18.3	74.00	39.18
1593.30	---	28.00	150.0	H	228.0	-16.0	54.00	26.00
1593.30	38.03	---	150.0	H	228.0	-16.0	74.00	35.97
2708.50	---	28.43	200.0	H	112.0	-11.5	54.00	25.57
2708.50	37.30	---	200.0	H	112.0	-11.5	74.00	36.70
8102.60	---	37.50	150.0	V	30.0	1.7	54.00	16.50
8102.60	46.32	---	150.0	V	30.0	1.7	74.00	27.68
11589.30	---	38.39	200.0	H	153.0	3.0	54.00	15.61
11589.30	46.55	---	200.0	H	153.0	3.0	74.00	27.45
17558.00	53.59	---	150.0	H	351.0	8.9	68.20	14.61

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

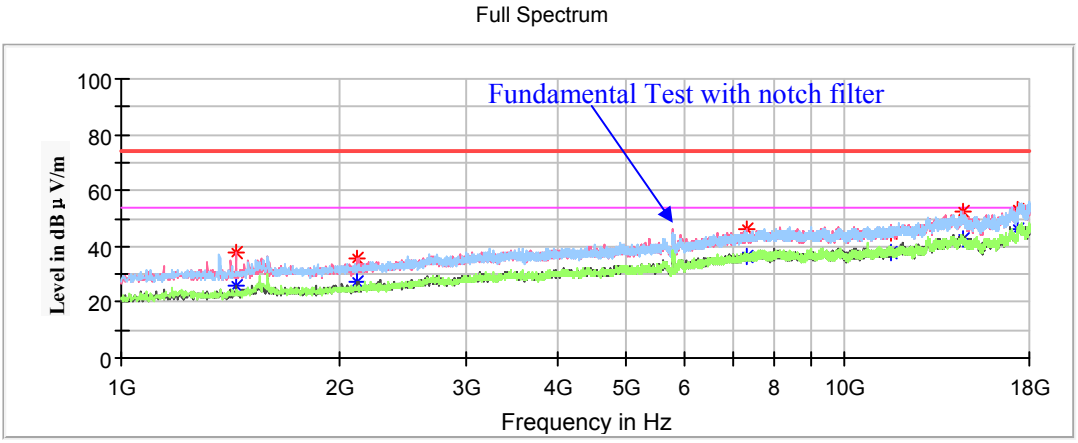
Note:
1. This test was performed with the 5725-5850MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

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)				
1545.70	---	26.90	150.0	V	208.0	-16.2	54.00	27.10
1545.70	38.61	---	150.0	V	208.0	-16.2	74.00	35.39
4117.80	---	30.78	200.0	H	353.0	-6.8	54.00	23.22
4117.80	39.90	---	200.0	H	353.0	-6.8	74.00	34.10
7616.40	---	36.93	150.0	H	311.0	1.2	54.00	17.07
7616.40	46.56	---	150.0	H	311.0	1.2	74.00	27.44
11509.40	44.69	---	150.0	H	0.0	2.8	74.00	29.31
11509.40	---	38.15	150.0	H	0.0	2.8	54.00	15.85
14078.10	52.66	---	200.0	V	45.0	6.2	68.20	15.54
17265.60	50.20	---	150.0	V	359.0	8.1	68.20	18

High Channel: 5795MHz



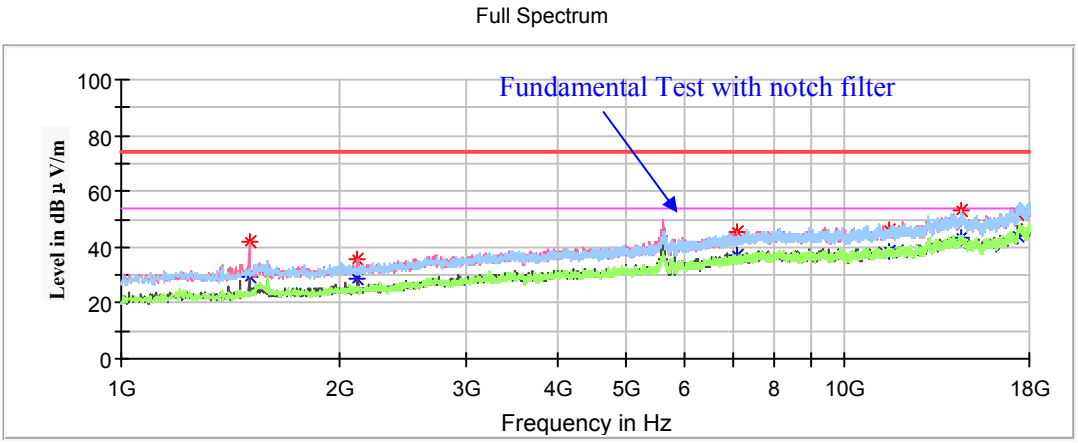
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1443.70	---	25.66	150.0	V	151.0	-16.7	54.00	28.34
1443.70	38.00	---	150.0	V	151.0	-16.7	74.00	36.00
2123.70	35.57	---	150.0	V	234.0	-14.0	68.20	32.63
7330.80	---	36.55	200.0	V	358.0	0.7	54.00	17.45
7330.80	46.20	---	200.0	V	358.0	0.7	74.00	27.80
11589.30	44.94	---	150.0	V	344.0	3.0	74.00	29.06
11589.30	---	37.74	150.0	V	344.0	3.0	54.00	16.26
14562.60	52.20	---	200.0	V	16.0	6.4	68.20	16.00
17384.60	53.37	---	200.0	H	0.0	8.5	68.20	14.83

802.11ac80 Mode(Chain0+Chain1):

*(Pre-scan in the X,Y and Z axes of orientation, the worst case **Z-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: 5775MHz

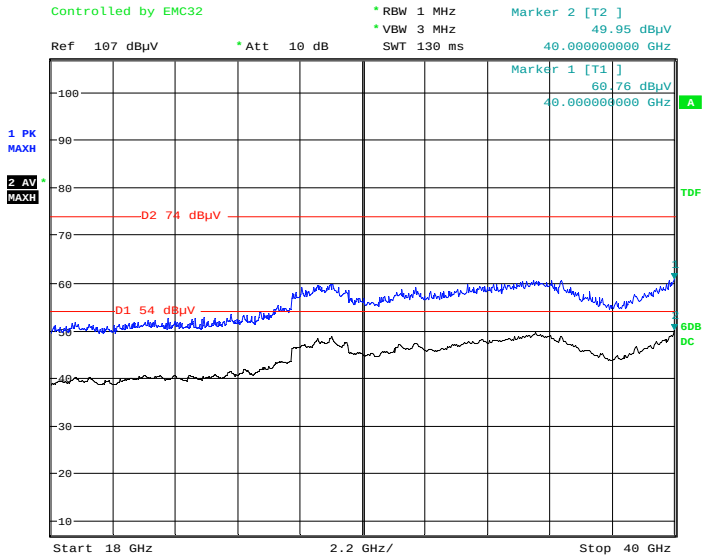


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1501.50	---	29.57	150.0	V	206.0	-16.4	54.00	24.43
1501.50	42.01	---	150.0	V	206.0	-16.4	74.00	31.99
2123.70	35.83	---	150.0	V	226.0	-14.0	68.20	32.37
7113.20	45.22	---	200.0	V	345.0	0.2	68.20	22.98
11550.20	---	38.15	200.0	V	173.0	2.9	54.00	15.85
11550.20	46.00	---	200.0	V	173.0	2.9	74.00	28.00
14518.40	52.90	---	200.0	V	152.0	6.5	68.20	15.3
17325.10	51.99	---	150.0	H	91.0	8.3	68.20	16.21

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

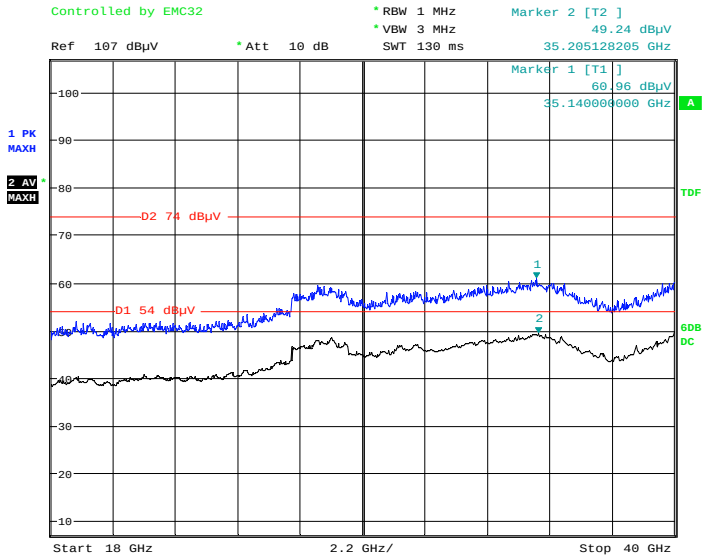
*Pre-scan with 802.11a, 802.11ac20, 802.11n-HT20, 802.11ac40, 802.11n-HT40 and 802.11 ac80 modes of operation in the X,Y and Z axes of orientation, **the worst case 802.11n-HT20 mode low channel** in Z-axis of orientation was recorded.*

Horizontal



Date: 22.OCT.2020 22:29:05

Vertical

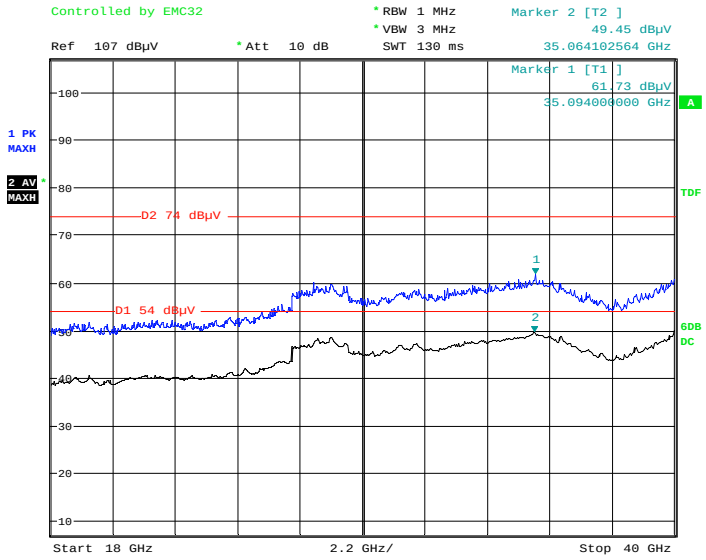


Date: 22.OCT.2020 22:39:30

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

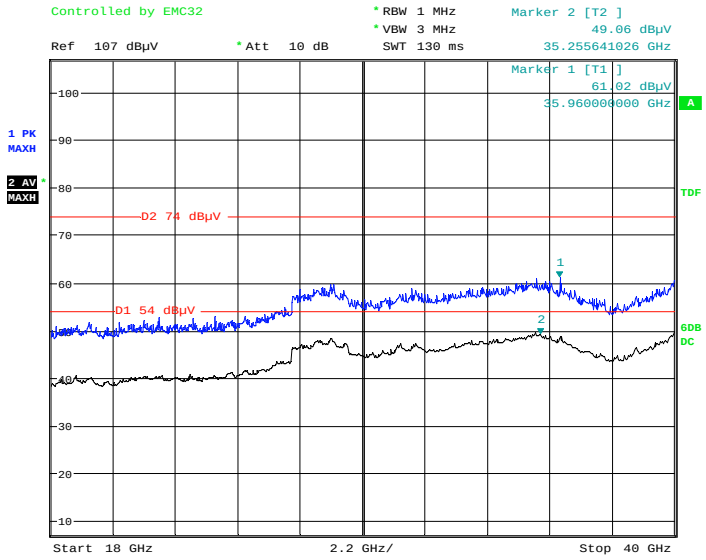
Pre-scan with 802.11a, 802.11ac20, 802.11n-HT20, 802.11ac40, 802.11n-HT40 and 802.11 ac80 modes of operation in the X,Y and Z axes of orientation, ***the worst case 802.11ac20 mode high channel*** *in Z-axis of orientation was recorded.*

Horizontal



Date: 22.OCT.2020 22:58:44

Vertical



Date: 22.OCT.2020 22:10:25

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-Chain0: *(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	Corrected Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5180MHz								
5150.00	54.93	---	150.0	V	22.0	5.2	74.00	19.07
5150.00	---	49.89	150.0	V	22.0	5.2	54.00	4.11
High Channel: 5240MHz								
5350.00	55.23	---	200.0	V	0.0	5.7	74.00	18.77
5350.00	---	50.75	200.0	V	0.0	5.7	54.00	3.25

802.11a Mode-Chain1: *(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	Corrected Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5180MHz								
5150.00	---	50.46	150.0	H	117.0	5.2	54.00	3.54
5150.00	54.77	---	150.0	H	117.0	5.2	74.00	19.23
High Channel: 5240MHz								
5350.00	54.30	---	200.0	H	236.0	5.7	74.00	19.70
5350.00	---	50.95	200.0	H	236.0	5.7	54.00	3.05

802.11ac20 Mode (Chain0+ Chain1): *(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	Corrected Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5180MHz								
5150.00	55.65	---	150.0	V	224.0	5.2	74.00	18.35
5150.00	---	50.64	150.0	V	224.0	5.2	54.00	3.36
High Channel: 5240MHz								
5350.00	---	49.77	200.0	H	168.0	5.7	54.00	4.23
5350.00	55.56	---	200.0	H	168.0	5.7	74.00	18.44

802.11n-HT20 Mode (Chain0+ Chain1): *(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	Corrected Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5180MHz								
5150.00	54.52	---	200.0	V	2.0	5.2	74.00	19.48
5150.00	---	50.48	200.0	V	2.0	5.2	54.00	3.52
High Channel: 5240MHz								
5350.00	54.50	---	200.0	H	69.0	5.7	74.00	19.50
5350.00	---	51.04	200.0	H	69.0	5.7	54.00	2.96

802.11ac40 Mode (Chain0+ Chain1): *(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	Corrected Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5190MHz								
5150.00	57.70	---	200.0	V	165.0	5.2	74.00	16.30
5150.00	---	50.91	200.0	V	165.0	5.2	54.00	3.09
High Channel: 5230MHz								
5350.00	53.27	---	200.0	H	106.0	5.7	74.00	20.73
5350.00	---	50.59	200.0	H	106.0	5.7	54.00	3.41

802.11n-HT40 Mode (Chain0+ Chain1): *(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	Corrected Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5190MHz								
5150.00	53.50	---	200.0	H	55.0	5.2	74.00	20.50
5150.00	---	50.31	200.0	H	55.0	5.2	54.00	3.69
High Channel: 5230MHz								
5350.00	52.81	---	200.0	V	58.0	5.7	74.00	21.19
5350.00	---	49.36	200.0	V	58.0	5.7	54.00	4.64

802.11ac80 Mode (Chain0+ Chain1): *(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	Corrected Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5210MHz								
5150.00	---	50.18	200.0	V	59.0	5.2	54.00	3.82
5150.00	53.47	---	200.0	V	59.0	5.2	74.00	20.53
5350.00	54.40	---	200.0	V	11.0	5.7	74.00	19.60
5350.00	---	51.26	200.0	V	11.0	5.7	54.00	2.74

Band Edge 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-Chain0: *(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: 5745MHz								
5650.00	54.20	---	200.0	H	357.0	6.4	67.80	13.60
5700.00	54.78	---	150.0	H	184.0	6.5	105.20	50.42
5720.00	63.25	---	150.0	V	24.0	6.5	110.80	47.55
5725.00	74.88	---	150.0	V	128.0	6.5	122.20	47.32
High Channel: 5825MHz								
5850.00	64.47	---	150.0	V	41.0	6.7	122.20	57.73
5855.00	60.59	---	200.0	V	38.0	6.7	110.80	50.21
5875.00	55.40	---	150.0	V	0.0	6.8	105.20	49.80
5925.00	54.85	---	150.0	H	0.0	6.9	67.80	12.95

802.11a Mode-Chain1: *(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: 5745MHz								
5650.00	53.43	---	150.0	V	60.0	6.4	67.80	14.37
5700.00	53.43	---	200.0	V	199.0	6.5	105.20	51.77
5720.00	61.31	---	200.0	V	302.0	6.5	110.80	49.49
5725.00	72.14	---	200.0	H	215.0	6.5	122.20	50.06
High Channel: 5825MHz								
5850.00	60.31	---	150.0	H	302.0	6.7	122.20	61.89
5855.00	60.69	---	150.0	H	228.0	6.7	110.80	50.11
5875.00	53.86	---	150.0	H	338.0	6.8	105.20	51.34
5925.00	54.65	---	150.0	V	193.0	6.9	67.80	13.15

802.11ac20 Mode(Chain0+ Chain1): *(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: 5745MHz								
5650.00	53.05	---	200.0	H	359.0	6.4	67.80	14.75
5700.00	55.70	---	150.0	V	209.0	6.5	105.20	49.50
5720.00	64.93	---	200.0	V	19.0	6.5	110.80	45.87
5725.00	75.52	---	150.0	V	127.0	6.5	122.20	46.68
High Channel: 5825MHz								
5850.00	66.10	---	200.0	V	87.0	6.7	122.20	56.10
5855.00	58.81	---	150.0	V	23.0	6.7	110.80	51.99
5875.00	54.11	---	150.0	H	200.0	6.8	105.20	51.09
5925.00	55.19	---	150.0	H	0.0	6.9	67.80	12.61

802.11n-HT20 Mode(Chain0+ Chain1): *(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: 5745MHz								
5650.00	53.88	---	200.0	V	129.0	6.4	67.80	13.92
5700.00	54.98	---	150.0	H	318.0	6.5	105.20	50.22
5720.00	68.65	---	150.0	V	129.0	6.5	110.80	42.15
5725.00	73.57	---	150.0	V	129.0	6.5	122.20	48.63
High Channel: 5825MHz								
5850.00	64.68	---	200.0	V	22.0	6.7	122.20	57.52
5855.00	58.69	---	150.0	V	95.0	6.7	110.80	52.11
5875.00	56.03	---	200.0	V	0.0	6.8	105.20	49.17
5925.00	54.72	---	150.0	V	60.0	6.9	67.80	13.08

802.11ac40 Mode(Chain0+ Chain1): *(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: 5755MHz								
5650.00	55.00	---	150.0	H	124.0	6.4	67.80	13.20
5700.00	61.09	---	200.0	H	270.0	6.5	105.20	44.11
5720.00	76.31	---	200.0	V	98.0	6.5	110.80	34.49
5725.00	78.48	---	150.0	V	120.0	6.5	122.20	43.72
High Channel: 5795MHz								
5850.00	60.96	---	150.0	V	115.0	6.7	122.20	61.24
5855.00	60.22	---	150.0	V	25.0	6.7	110.80	50.58
5875.00	56.82	---	200.0	V	115.0	6.8	105.20	48.38
5925.00	54.11	---	150.0	V	349.0	6.9	67.80	13.69

802.11n-HT40 Mode(Chain0+ Chain1): *(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: 5755MHz								
5650.00	53.84	---	200.0	V	27.0	6.4	68.20	14.36
5700.00	62.22	---	150.0	V	43.0	6.5	105.20	42.98
5720.00	74.59	---	150.0	V	131.0	6.5	110.80	36.21
5725.00	77.30	---	150.0	V	43.0	6.5	122.20	44.90
High Channel: 5795MHz								
5850.00	61.64	---	200.0	V	116.0	6.7	122.20	60.56
5855.00	58.47	---	150.0	H	197.0	6.7	110.80	52.33
5875.00	55.86	---	150.0	V	43.0	6.8	105.20	49.34
5925.00	54.49	---	200.0	V	116.0	6.9	67.80	13.31

802.11ac80 Mode(Chain0+ Chain1): *(Pre-scan in the X, Y and Z axes of orientation, the worst case in Z-axis of orientation was recorded)*

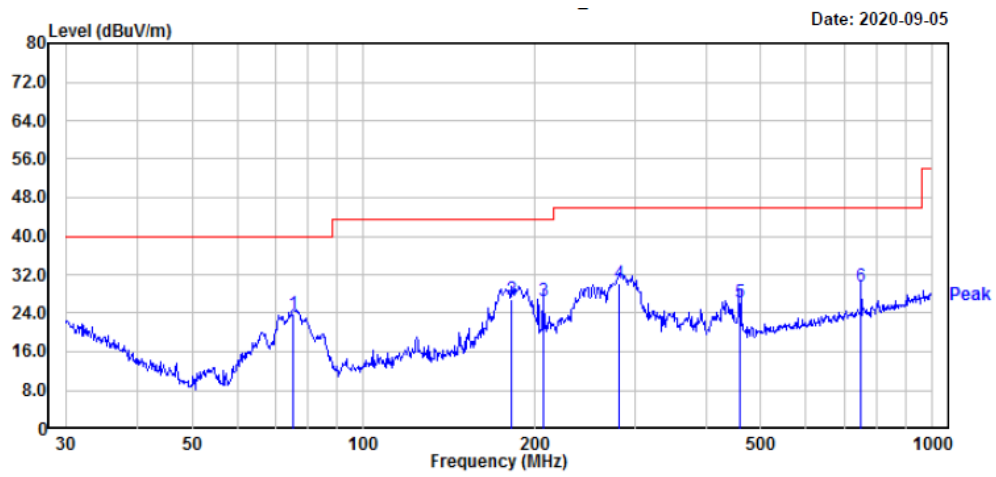
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5775MHz								
5650.00	59.37	---	200.0	V	106.0	6.4	67.80	8.43
5700.00	72.55	---	200.0	V	106.0	6.5	105.20	32.65
5720.00	78.25	---	200.0	V	106.0	6.5	110.80	32.55
5725.00	77.65	---	200.0	V	106.0	6.5	122.20	44.55
5850.00	77.70	---	150.0	V	45.0	6.7	122.20	44.50
5855.00	75.46	---	200.0	V	143.0	6.7	110.80	35.34
5875.00	66.87	---	150.0	V	85.0	6.8	105.20	38.33
5925.00	55.71	---	200.0	V	86.0	6.9	67.80	12.09

Model: L1573

Spurious Emission Test

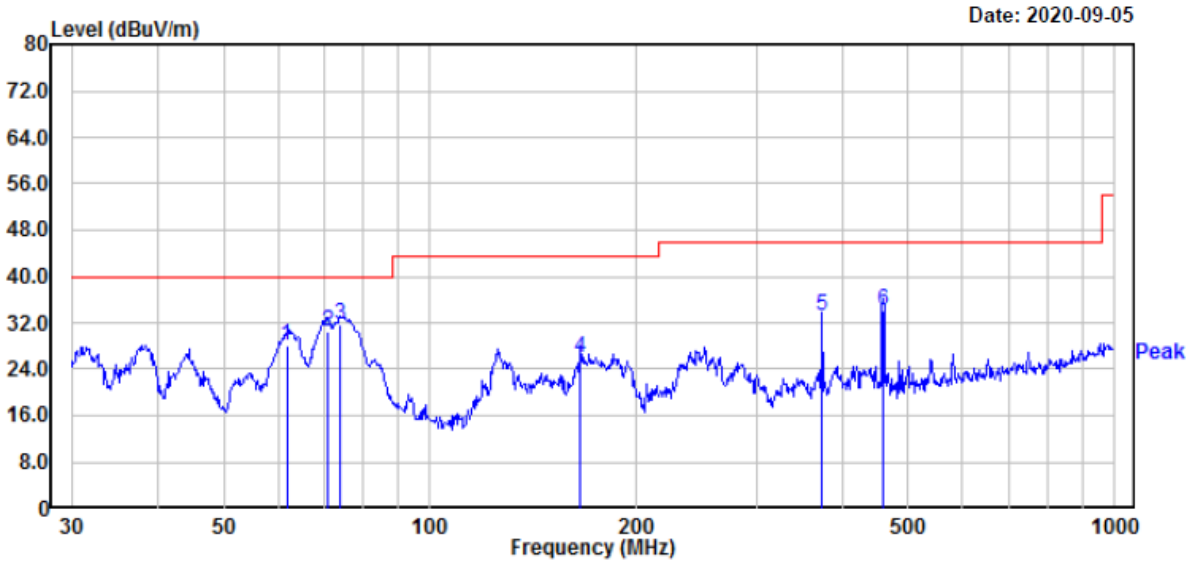
30MHz-1GHz(5150-5250MHz Band):
(Pre-scan with 802.11a, 802.11ac20, 802.11n-HT20, 802.11ac40, 802.11n-HT40 and 802.11 ac80 modes of operation in the X,Y and Z axes of orientation, ***the worst case 802.11n-HT20 mode low channel*** *in Z-axis of orientation was recorded.)*

Horizontal:



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	APos	TPos	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	deg	
1	75.18	40.79	-17.03	23.76	40.00	-16.24	100	2	QP
2	182.56	39.79	-12.82	26.97	43.50	-16.53	100	324	QP
3	207.12	38.78	-12.28	26.50	43.50	-17.00	100	319	QP
4	281.99	40.80	-10.55	30.25	46.00	-15.75	100	319	QP
5	459.11	32.71	-6.42	26.29	46.00	-19.71	100	64	QP
6	750.11	31.00	-1.37	29.63	46.00	-16.37	100	64	QP

Vertical:



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	APos	TPos	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	deg	
1	61.78	45.59	-17.43	28.16	40.00	-11.84	100	335	QP
2	70.83	47.40	-16.91	30.49	40.00	-9.51	100	271	QP
3	74.14	48.70	-17.01	31.69	40.00	-8.31	100	271	QP
4	166.07	38.32	-12.33	25.99	43.50	-17.51	100	322	QP
5	374.62	41.50	-8.41	33.09	46.00	-12.91	100	12	QP
6	459.11	40.61	-6.42	34.19	46.00	-11.81	100	193	QP

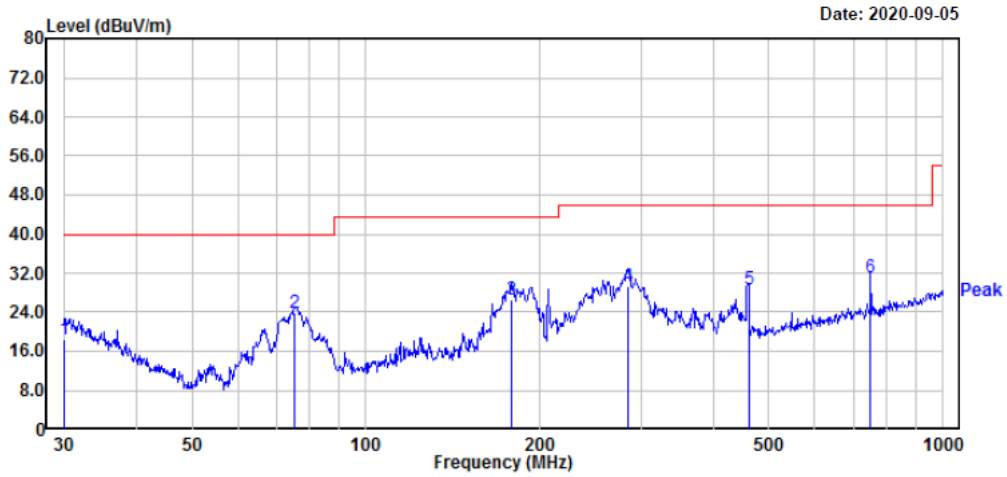
Note:

1) Factor (dB) = Antenna Factor (dB/m) + Cable Loss (dB) - Amplifier Gain (dB)
2) Over Limit (dB) = Read level (dBμV) + Factor (dB) - Limit (dBμV)

30MHz-1GHz(5725-5850MHz Band):

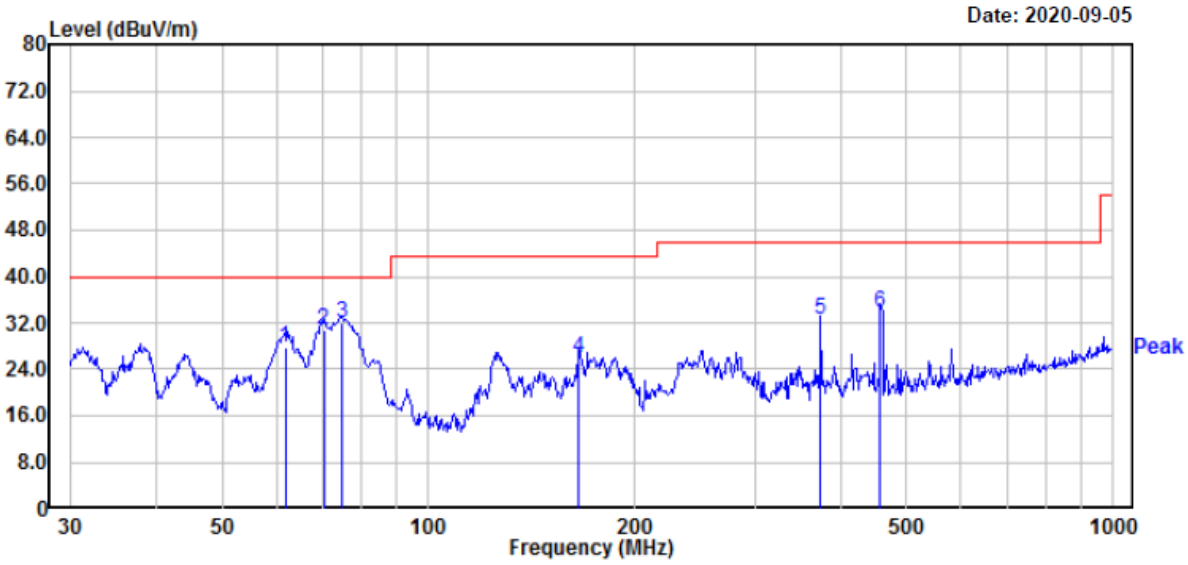
Pre-scan with 802.11a, 802.11ac20, 802.11n-HT20, 802.11ac40, 802.11n-HT40 and 802.11 ac80 modes of operation in the X,Y and Z axes of orientation, ***the worst case 802.11ac20 mode high channel*** *in Z-axis of orientation was recorded*

Horizontal:



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	APos	TPos	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	deg	
1	30.11	21.70	-3.22	18.48	40.00	-21.52	100	98	QP
2	75.45	40.80	-17.04	23.76	40.00	-16.24	100	358	QP
3	178.76	39.60	-12.95	26.65	43.50	-16.85	100	307	QP
4	284.98	39.80	-10.50	29.30	46.00	-16.70	100	338	QP
5	460.73	35.00	-6.38	28.62	46.00	-17.38	100	81	QP
6	750.11	32.60	-1.37	31.23	46.00	-14.77	100	43	QP

Vertical:



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	APos	TPos	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	deg	
1	61.78	45.29	-17.43	27.86	40.00	-12.14	100	255	QP
2	70.34	47.60	-16.90	30.70	40.00	-9.30	100	334	QP
3	74.92	48.91	-17.04	31.87	40.00	-8.13	100	274	QP
4	166.07	38.39	-12.33	26.06	43.50	-17.44	100	327	QP
5	374.62	41.00	-8.41	32.59	46.00	-13.41	100	0	QP
6	457.51	40.20	-6.45	33.75	46.00	-12.25	100	334	QP

Note:

1) Factor (dB) = Antenna Factor (dB/m) + Cable Loss (dB) - Amplifier Gain (dB)
2) Over Limit (dB) = Read level (dBμV) + Factor (dB) - Limit (dBμV)

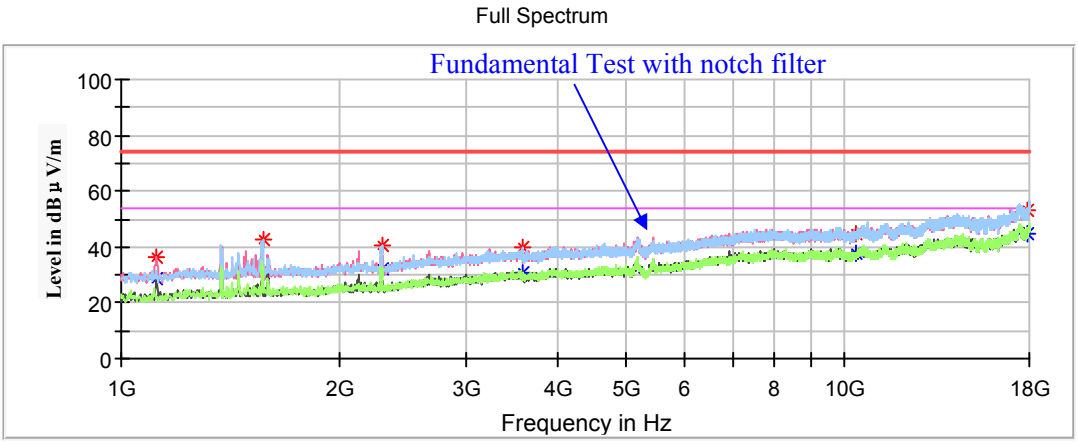
1GHz-18GHz (5150-5250MHz Band):

802.11a Mode(Chain0):

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

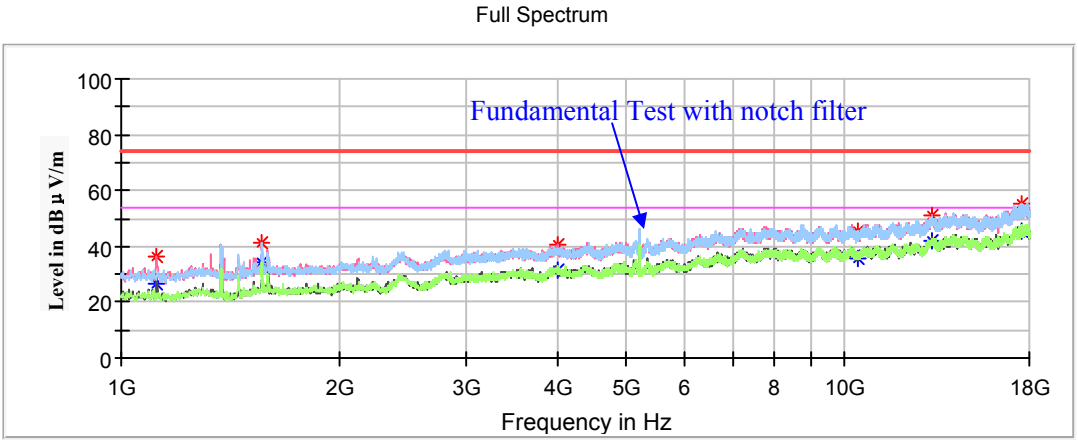
Note:
1. This test was performed with the 5150-5250MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5180MHz



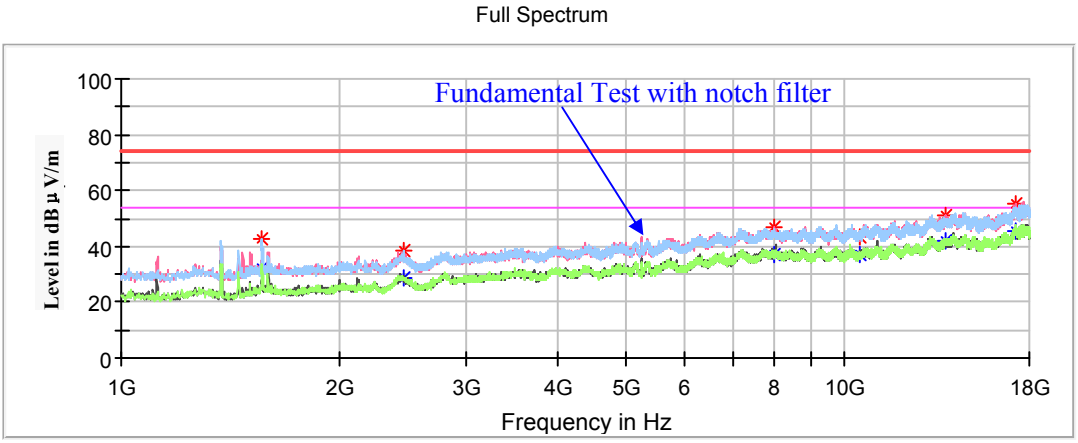
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1119.00	36.12	---	150.0	V	10.0	-18.4	74.00	37.88
1119.00	---	28.44	150.0	V	10.0	-18.4	54.00	25.56
1569.50	42.56	---	150.0	H	307.0	-16.1	74.00	31.44
1569.50	---	30.69	150.0	H	307.0	-16.1	54.00	23.31
2293.70	---	32.40	200.0	H	34.0	-13.3	54.00	21.60
2293.70	40.27	---	150.0	H	0.0	-13.3	74.00	33.73
3578.90	39.68	---	150.0	H	320.0	-8.5	68.20	28.52
10360.20	44.64	---	200.0	H	34.0	2.2	68.20	23.56
17887.80	53.22	---	150.0	H	218.0	8.8	74.00	20.78
17887.80	---	44.92	200.0	H	357.0	8.8	54.00	9.08

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)				
1119.00	36.41	---	150.0	V	8.0	-18.4	74.00	37.59
1119.00	---	26.64	150.0	V	8.0	-18.4	54.00	27.36
1564.40	41.43	---	200.0	H	311.0	-16.1	74.00	32.57
1564.40	---	33.92	200.0	H	311.0	-16.1	54.00	20.08
4003.90	---	31.51	150.0	H	38.0	-7.0	54.00	22.49
4003.90	40.83	---	200.0	V	310.0	-7.0	74.00	33.17
10401.00	45.46	---	150.0	H	178.0	2.2	68.20	22.74
13182.20	51.35	---	150.0	V	322.0	5.4	68.20	16.85
17558.00	55.48	---	200.0	H	355.0	8.9	68.20	12.72

High Channel: 5240MHz



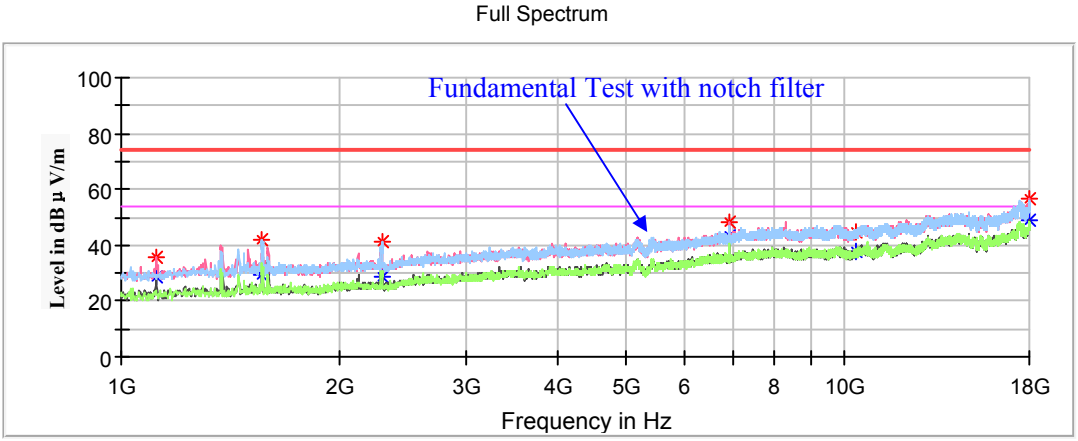
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1561.00	---	32.39	150.0	H	322.0	-16.1	54.00	21.61
1561.00	42.36	---	150.0	H	322.0	-16.1	74.00	31.64
2456.90	38.41	---	150.0	H	8.0	-12.6	68.20	29.79
7975.10	46.72	---	150.0	V	0.0	1.8	68.20	21.48
10479.20	43.40	---	150.0	H	245.0	2.3	68.20	24.8
13812.90	50.99	---	150.0	V	324.0	6.0	68.20	17.21
17226.50	55.08	---	150.0	V	324.0	8.0	68.20	13.12

802.11a Mode(Chain1):

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

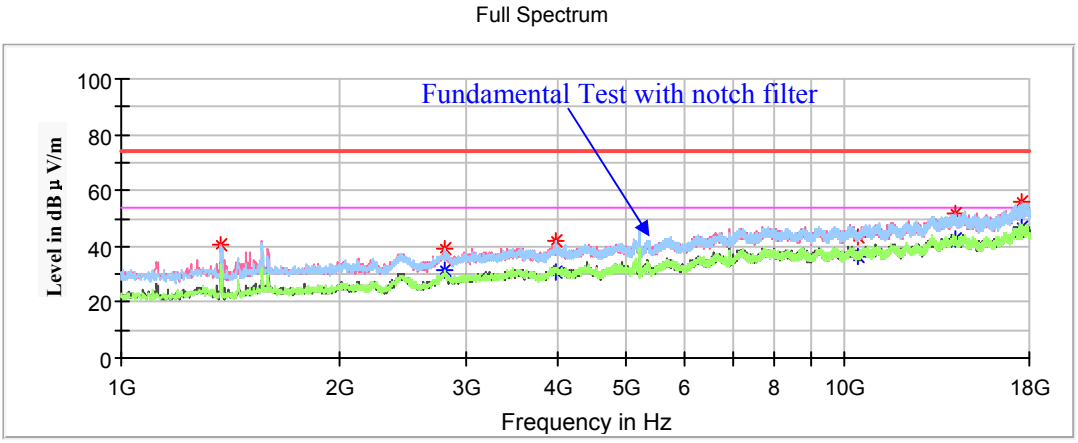
Note:
1. This test was performed with the 5150-5250MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5180MHz



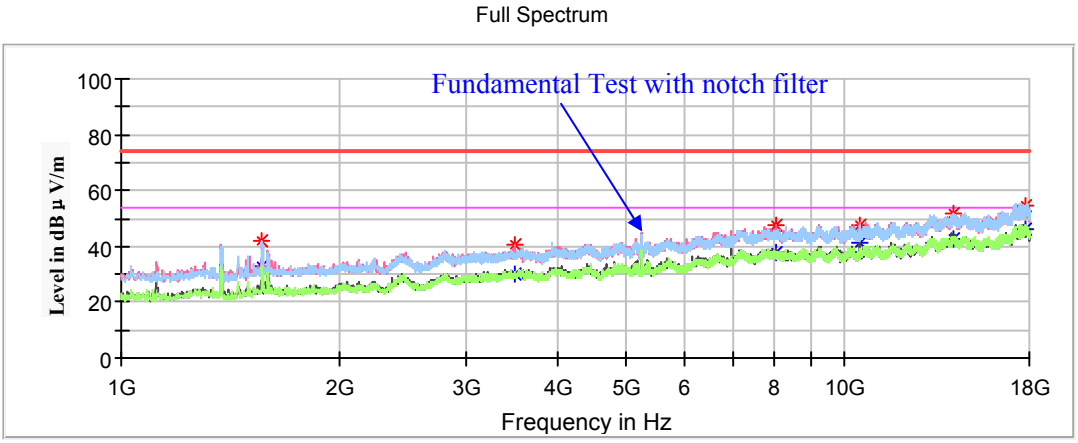
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1119.00	---	28.88	150.0	V	2.0	-18.4	54.00	25.12
1119.00	35.91	---	150.0	V	2.0	-18.4	74.00	38.09
1566.10	---	29.19	200.0	H	76.0	-16.1	54.00	24.81
1566.10	42.26	---	150.0	H	324.0	-16.1	74.00	31.74
2292.00	---	28.85	200.0	H	283.0	-13.3	54.00	25.15
2292.00	41.00	---	150.0	H	4.0	-13.3	74.00	33.00
6905.80	48.26	---	200.0	V	108.0	-0.3	68.20	19.94
10360.20	44.84	---	150.0	V	277.0	2.2	68.20	23.36
17988.10	---	48.68	150.0	V	290.0	8.8	54.00	5.32
17988.10	56.74	---	150.0	V	290.0	8.8	74.00	17.26

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)				
1370.60	---	29.91	200.0	V	86.0	-17.1	54.00	24.09
1370.60	40.27	---	200.0	V	86.0	-17.1	74.00	33.73
2805.40	---	31.43	150.0	H	166.0	-11.0	54.00	22.57
2805.40	38.99	---	200.0	V	353.0	-11.0	74.00	35.01
3986.90	---	31.02	150.0	H	90.0	-7.0	54.00	22.98
3986.90	42.26	---	200.0	H	356.0	-7.0	74.00	31.74
10401.00	43.52	---	150.0	H	204.0	2.2	68.20	24.68
14220.90	51.79	---	200.0	V	136.0	6.3	68.20	16.41
17522.30	56.21	---	150.0	V	270.0	8.9	68.20	11.99

High Channel: 5240MHz



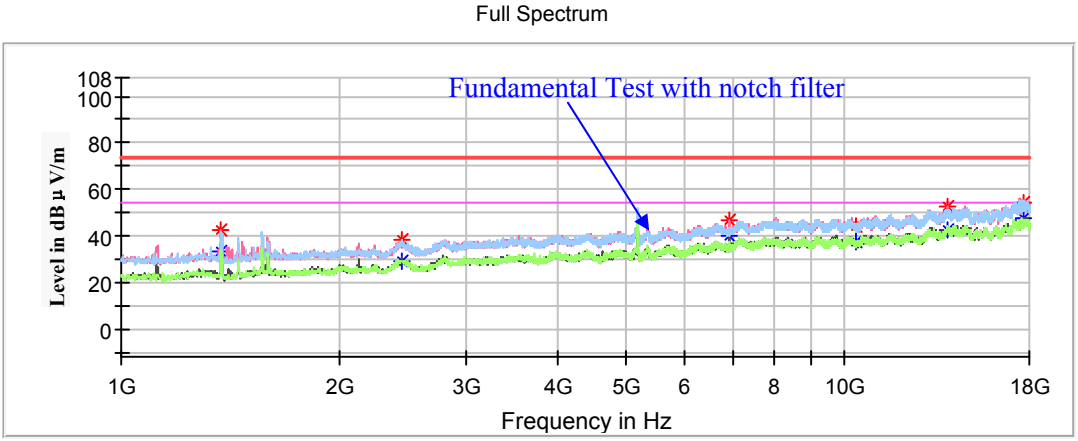
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1564.40	---	32.75	200.0	H	324.0	-16.1	54.00	21.25
1564.40	41.99	---	200.0	H	324.0	-16.1	74.00	32.01
3492.20	40.26	---	200.0	V	224.0	-8.8	68.20	27.94
8024.40	47.46	---	200.0	V	116.0	1.8	68.20	20.74
10479.20	47.60	---	200.0	V	249.0	2.3	68.20	20.6
14130.80	51.78	---	200.0	H	141.0	6.2	68.20	16.42
17801.10	---	46.25	150.0	V	179.0	8.8	54.00	7.75
17801.10	54.88	---	200.0	V	349.0	8.8	74.00	19.12

802.11ac20 Mode(Chain0+Chain1):

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

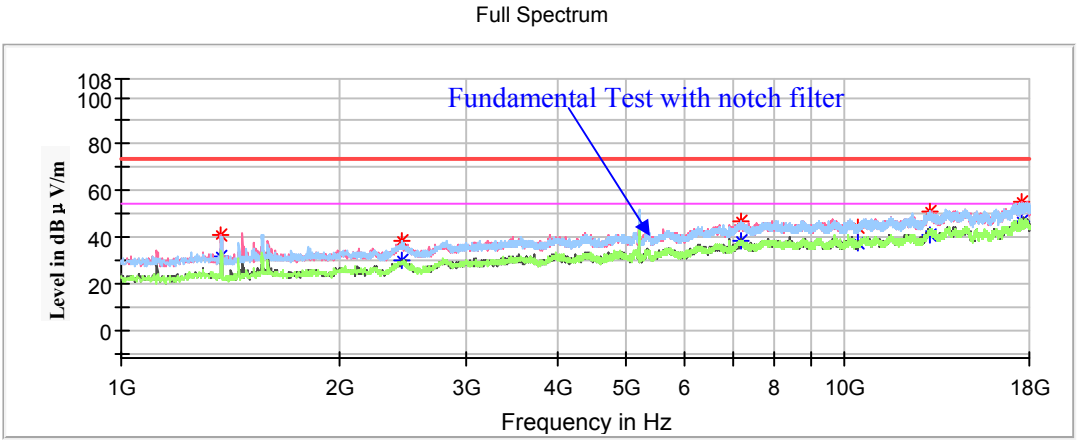
Note:
1. This test was performed with the 5150-5250MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5180MHz



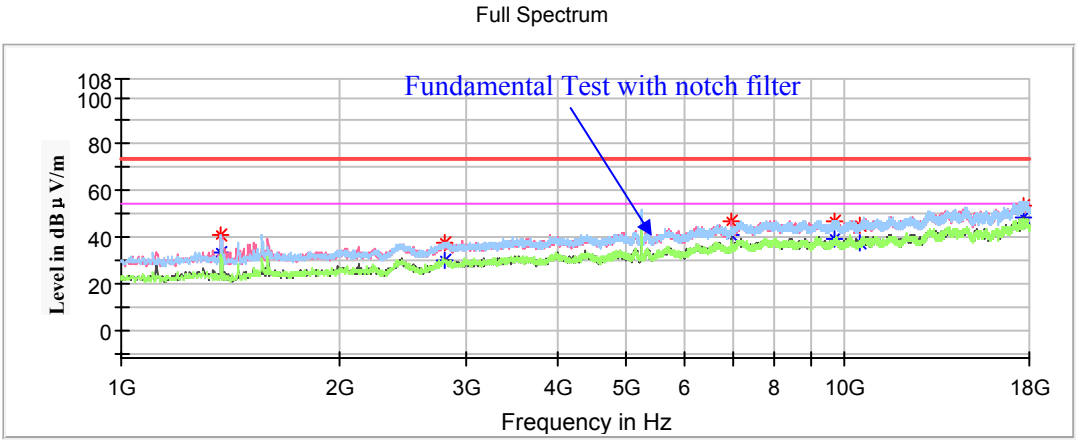
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1374.00	42.24	---	150.0	V	81.0	-17.0	74.00	31.76
1374.00	---	32.95	200.0	V	77.0	-17.0	54.00	21.05
2441.60	38.23	---	150.0	H	0.0	-12.7	68.20	29.97
6905.80	46.75	---	150.0	V	262.0	-0.3	68.20	21.45
10360.20	43.89	---	150.0	H	0.0	2.2	68.20	24.31
13869.00	52.21	---	200.0	V	0.0	6.0	68.20	15.99
17644.70	54.10	---	150.0	V	67.0	8.9	68.20	14.10

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)				
1370.60	---	31.24	200.0	V	111.0	-17.1	54.00	22.76
1370.60	40.60	---	200.0	V	111.0	-17.1	74.00	33.40
2438.20	37.97	---	150.0	H	270.0	-12.7	68.20	30.23
7210.10	47.08	---	200.0	V	270.0	0.4	68.20	21.12
10399.30	44.29	---	200.0	H	193.0	2.2	68.20	23.91
13097.20	51.06	---	200.0	H	359.0	5.3	68.20	17.14
17520.60	55.18	---	150.0	V	193.0	8.9	68.20	13.02

High Channel: 5240MHz

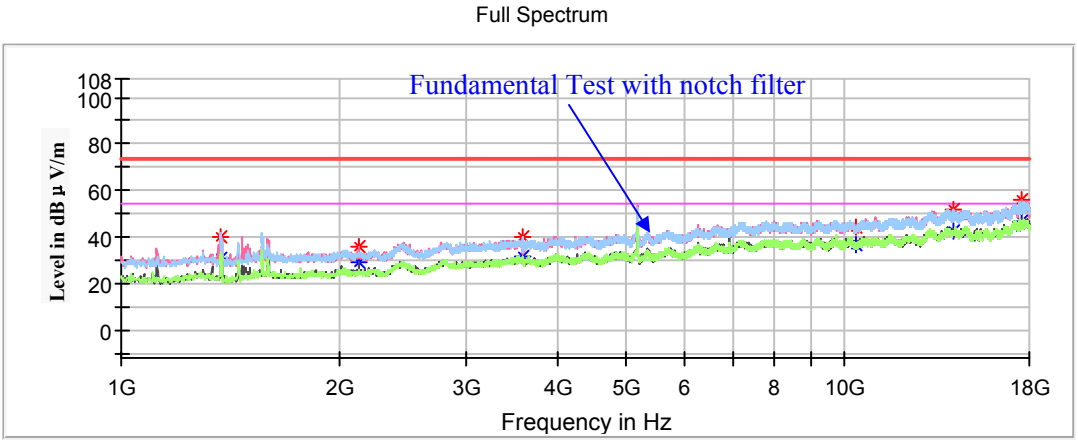


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1370.60	---	33.37	200.0	V	90.0	-17.1	54.00	20.63
1370.60	40.86	---	200.0	V	90.0	-17.1	74.00	33.14
2796.90	---	29.85	200.0	H	116.0	-11.0	54.00	24.15
2796.90	37.73	---	150.0	V	0.0	-11.0	74.00	36.27
6985.70	47.02	---	150.0	V	262.0	-0.1	68.20	21.18
9673.40	47.16	---	200.0	V	77.0	2.1	68.20	21.04
10479.20	44.89	---	150.0	H	188.0	2.3	68.20	23.31
17637.90	53.63	---	200.0	V	310.0	8.9	68.20	14.57

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

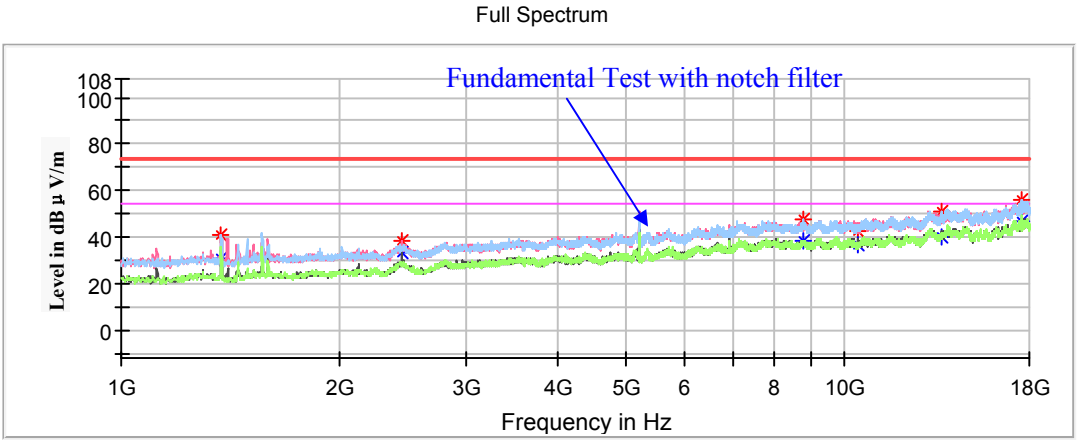
Note:
1. This test was performed with the 5150-5250MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5180MHz



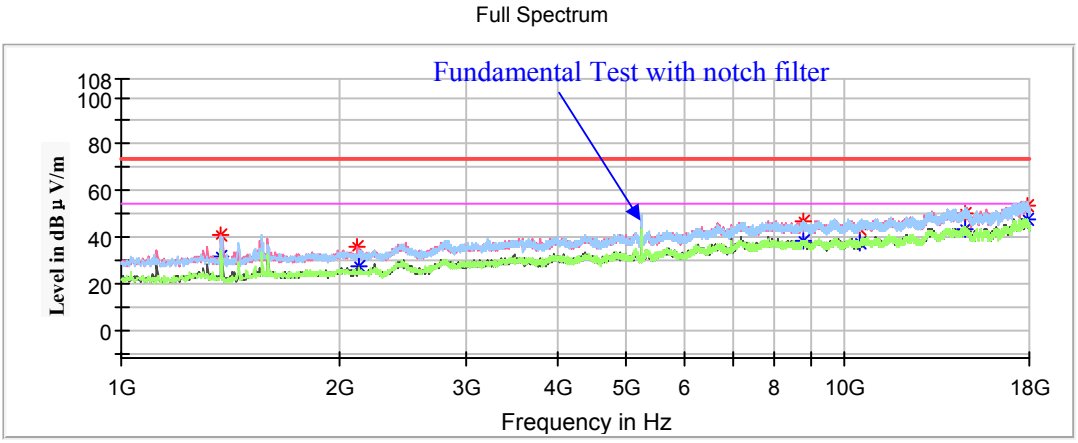
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1370.60	---	31.09	150.0	H	42.0	-17.1	54.00	22.91
1370.60	40.41	---	150.0	H	42.0	-17.1	74.00	33.59
2128.80	35.94	---	150.0	V	251.0	-13.9	68.20	32.26
3580.60	39.61	---	200.0	H	91.0	-8.5	68.20	28.59
10360.20	43.98	---	200.0	H	355.0	2.2	68.20	24.22
14125.70	51.58	---	200.0	H	220.0	6.2	68.20	16.62
17508.70	56.01	---	200.0	V	198.0	8.9	68.20	12.19

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)				
1370.60	---	30.75	200.0	V	97.0	-17.1	54.00	23.25
1370.60	40.79	---	200.0	V	97.0	-17.1	74.00	33.21
2446.70	38.22	---	150.0	V	313.0	-12.6	68.20	29.98
8748.60	47.83	---	200.0	H	15.0	1.6	68.20	20.37
10399.30	42.57	---	200.0	V	4.0	2.2	68.20	25.63
13603.80	51.24	---	200.0	H	0.0	5.8	68.20	16.96
17525.70	56.27	---	150.0	V	356.0	8.9	68.20	11.93

High Channel: 5240MHz



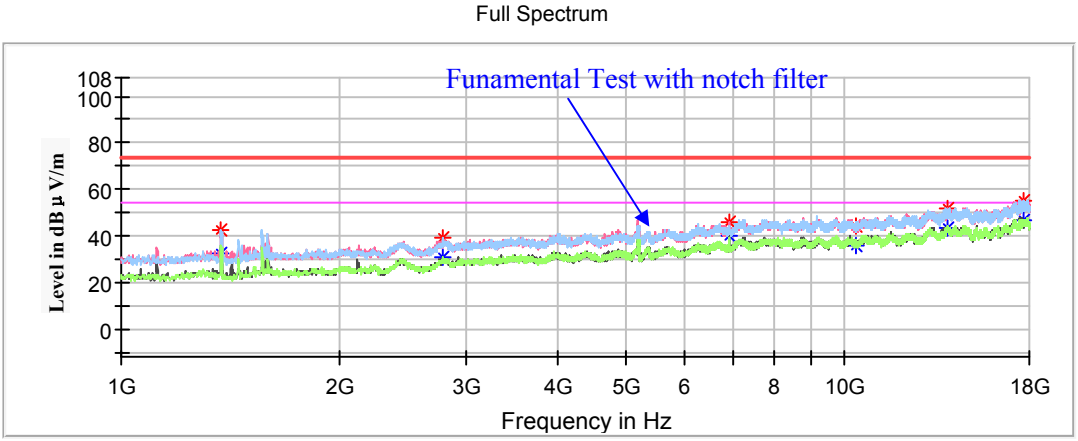
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1370.60	40.46	---	150.0	V	64.0	-17.1	74.00	33.54
1370.60	---	31.25	150.0	V	64.0	-17.1	54.00	22.75
2123.70	35.96	---	150.0	V	233.0	-14.0	68.20	32.24
8748.60	46.88	---	150.0	H	345.0	1.6	68.20	21.32
10480.90	43.46	---	150.0	H	76.0	2.3	68.20	24.74
14642.50	49.85	---	150.0	V	309.0	6.1	68.20	18.35
17920.10	---	47.58	150.0	H	191.0	8.8	54.00	6.42
17920.10	53.04	---	150.0	H	191.0	8.8	74.00	20.96

802.11ac40 Mode(Chain0+Chain1):

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

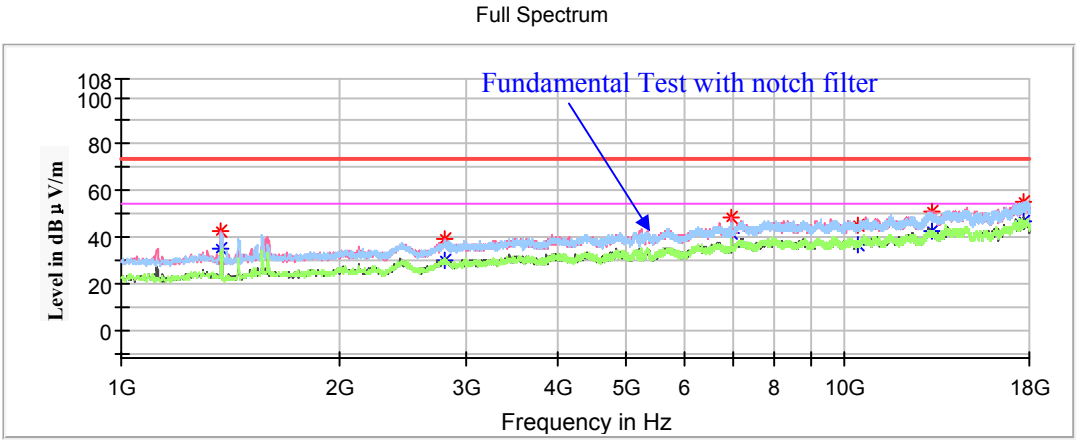
Note:
1. This test was performed with the 5150-5250MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5190MHz



Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1370.60	---	32.40	150.0	V	89.0	-17.1	54.00	21.60
1370.60	42.18	---	150.0	H	34.0	-17.1	74.00	31.82
2781.60	---	30.50	150.0	H	0.0	-11.1	54.00	23.50
2781.60	38.89	---	150.0	H	0.0	-11.1	74.00	35.11
6919.40	45.96	---	200.0	V	157.0	-0.2	68.20	22.24
10380.60	44.60	---	150.0	V	356.0	2.2	68.20	23.6
13852.00	52.17	---	150.0	V	116.0	6.0	68.20	16.03
17651.50	55.43	---	150.0	V	103.0	8.9	68.20	12.77

High Channel: 5230MHz

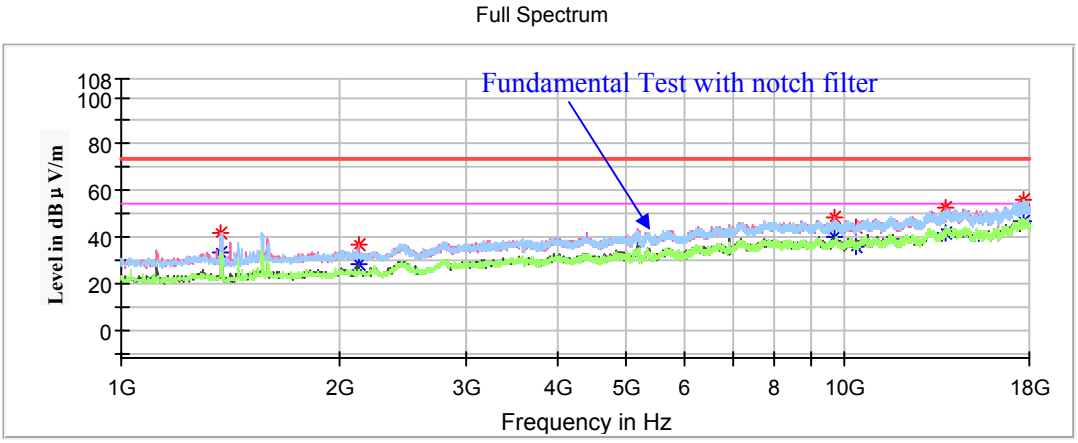


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1372.30	---	35.24	200.0	V	97.0	-17.1	54.00	18.76
1372.30	42.16	---	150.0	V	77.0	-17.1	74.00	31.84
2800.30	---	29.79	200.0	H	354.0	-11.0	54.00	24.21
2800.30	38.92	---	150.0	V	103.0	-11.0	74.00	35.08
6972.10	48.08	---	200.0	V	225.0	-0.1	68.20	20.12
10460.50	44.84	---	200.0	H	36.0	2.3	68.20	23.36
13187.30	51.03	---	200.0	V	110.0	5.4	68.20	17.17
17663.40	55.18	---	150.0	V	249.0	8.9	68.20	13.02

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

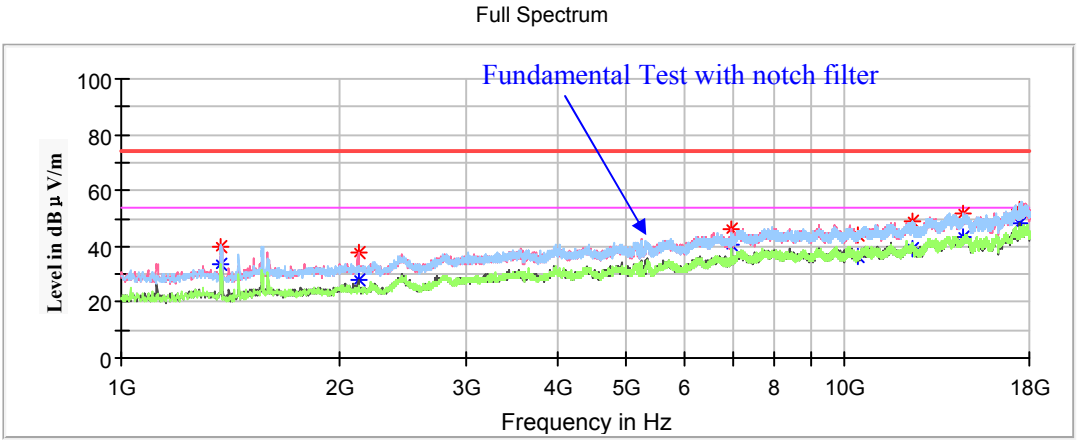
Note:
1. This test was performed with the 5150-5250MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5190MHz



Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1374.00	---	33.43	150.0	H	311.0	-17.0	54.00	20.57
1374.00	41.40	---	150.0	V	76.0	-17.0	74.00	32.60
2127.10	36.75	---	150.0	V	274.0	-13.9	68.20	31.45
9654.70	48.35	---	150.0	V	76.0	2.1	68.20	19.85
10380.60	44.09	---	200.0	H	354.0	2.2	68.20	24.11
13799.30	52.22	---	200.0	V	225.0	6.0	68.20	15.98
17643.00	55.63	---	200.0	H	346.0	8.9	68.20	12.57

High Channel: 5230MHz

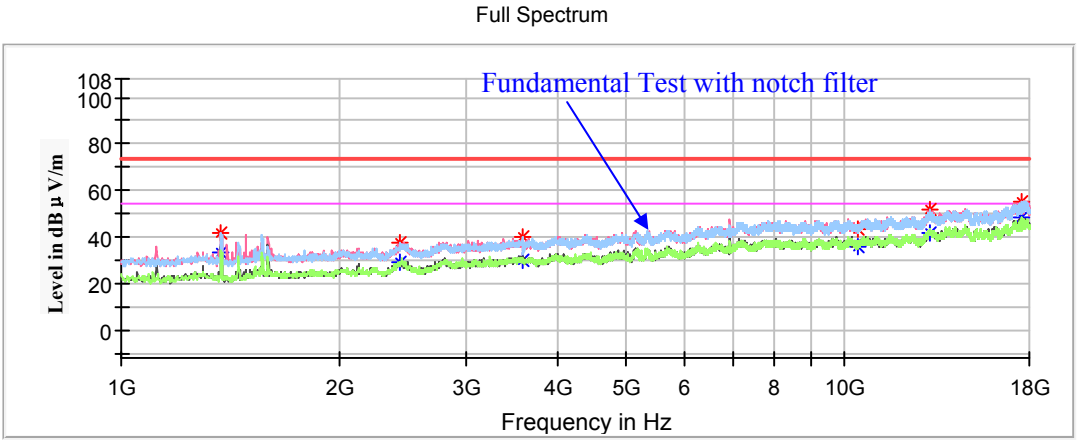


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1372.30	---	33.72	150.0	H	297.0	-17.1	54.00	20.28
1372.30	39.80	---	200.0	V	71.0	-17.1	74.00	34.20
2125.40	37.43	---	150.0	V	257.0	-14.0	68.20	30.77
6972.10	46.16	---	200.0	V	97.0	-0.1	68.20	22.04
10460.50	44.39	---	150.0	H	39.0	2.3	68.20	23.81
12384.90	49.08	---	150.0	H	141.0	3.1	68.20	19.12
14586.40	51.80	---	150.0	H	0.0	6.3	68.20	16.40

802.11ac80 Mode*(Chain0+Chain1)*:
*Pre-scan with X,Y and Z axes of orientation, the worst case **Z-axis of orientation** was recorded*

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

Low Channel: 5210MHz



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)				
1374.00	---	32.97	150.0	H	45.0	-17.0	54.00	21.03
1374.00	41.78	---	150.0	H	45.0	-17.0	74.00	32.22
2424.60	37.17	---	150.0	H	10.0	-12.7	68.20	31.03
3595.90	40.20	---	200.0	H	354.0	-8.5	68.20	28
10419.70	43.27	---	150.0	V	249.0	2.2	68.20	24.93
13114.20	51.52	---	200.0	H	207.0	5.3	68.20	16.68
17525.70	55.36	---	200.0	H	37.0	8.9	68.20	12.84

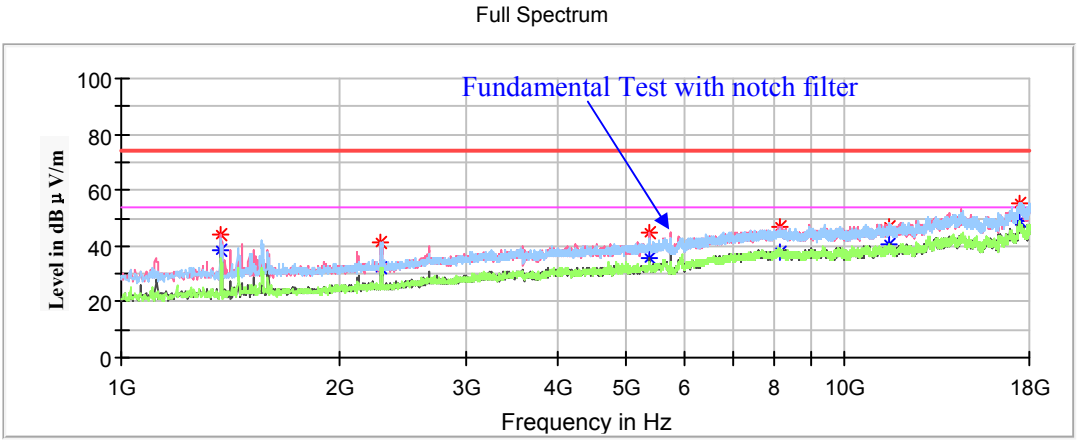
1GHz-18GHz(5725-5850MHz Band):

802.11a Mode(Chain0):

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

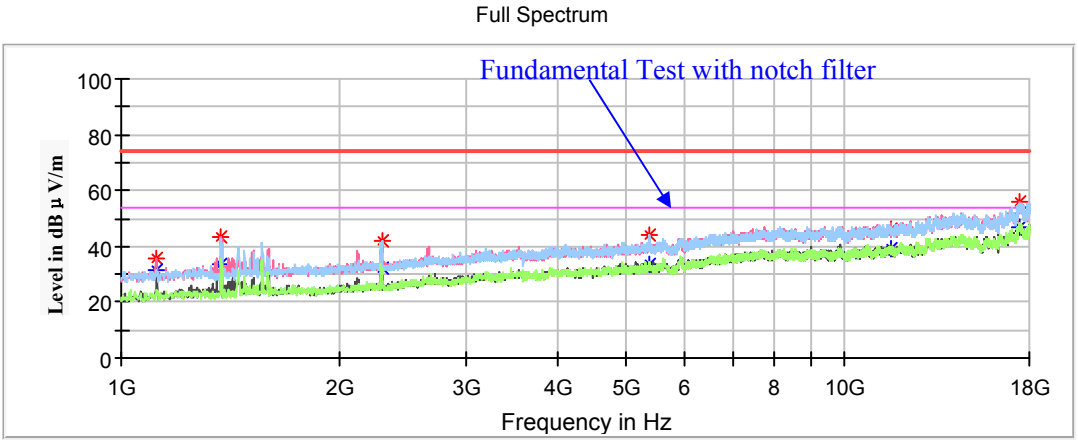
Note:
1. This test was performed with the 5725-5850MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5745MHz



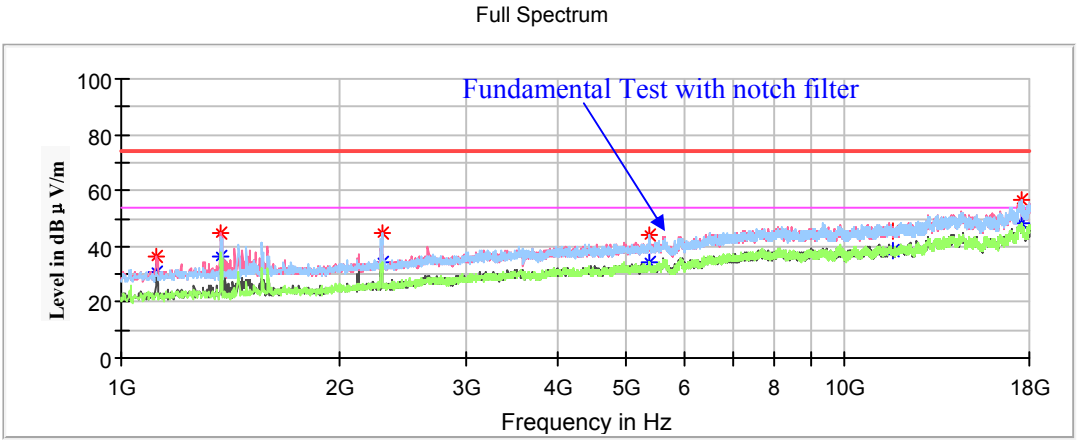
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1372.30	---	38.24	200.0	V	84.0	-17.1	54.00	15.76
1372.30	43.89	---	150.0	V	89.0	-17.1	74.00	30.11
2288.60	---	32.03	200.0	H	283.0	-13.3	54.00	21.97
2288.60	41.18	---	200.0	H	283.0	-13.3	74.00	32.82
5365.60	---	35.49	200.0	V	264.0	-4.3	54.00	18.51
5365.60	44.56	---	200.0	V	264.0	-4.3	74.00	29.44
8145.10	---	38.08	150.0	V	349.0	1.7	54.00	15.92
8145.10	47.02	---	200.0	V	185.0	1.7	74.00	26.98
11490.70	47.06	---	200.0	V	96.0	2.8	74.00	26.94
11490.70	---	40.83	200.0	V	96.0	2.8	54.00	13.17
17486.60	55.41	---	200.0	H	0.0	8.8	68.20	12.79

Middle Channel: 5785MHz



Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1119.00	35.78	---	150.0	V	2.0	-18.4	74.00	38.22
1119.00	---	31.18	150.0	V	2.0	-18.4	54.00	22.82
1370.60	---	33.49	200.0	V	85.0	-17.1	54.00	20.51
1370.60	43.10	---	200.0	V	85.0	-17.1	74.00	30.90
2295.40	---	32.27	200.0	H	282.0	-13.3	54.00	21.73
2295.40	42.28	---	200.0	H	270.0	-13.3	74.00	31.72
5384.30	---	33.42	200.0	H	89.0	-4.2	54.00	20.58
5384.30	43.85	---	200.0	H	89.0	-4.2	74.00	30.15
11570.60	---	39.41	150.0	V	250.0	2.9	54.00	14.59
11570.60	46.03	---	150.0	V	250.0	2.9	74.00	27.97
17433.90	56.06	---	150.0	V	339.0	8.7	68.20	12.14

High Channel: 5825MHz



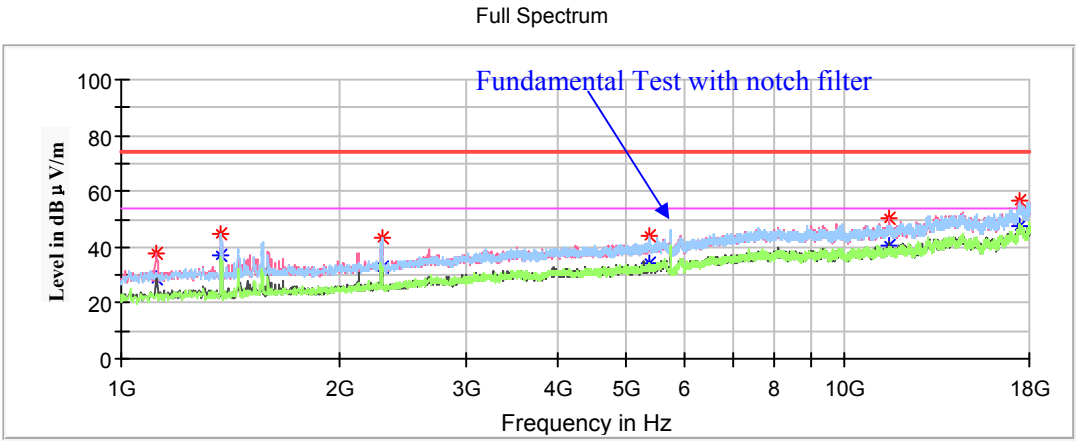
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1119.00	36.19	---	150.0	V	7.0	-18.4	74.00	37.81
1119.00	---	30.78	150.0	V	7.0	-18.4	54.00	23.22
1370.60	44.46	---	150.0	V	76.0	-17.1	74.00	29.54
1370.60	---	36.10	150.0	V	76.0	-17.1	54.00	17.90
2295.40	44.44	---	150.0	H	282.0	-13.3	74.00	29.56
2295.40	---	34.36	150.0	H	282.0	-13.3	54.00	19.64
5365.60	43.79	---	200.0	H	236.0	-4.3	68.20	24.14
11650.50	45.63	---	200.0	V	70.0	3.1	74.00	28.37
11650.50	---	38.61	200.0	V	70.0	3.1	54.00	15.39
17554.60	56.32	---	200.0	H	147.0	8.9	68.20	11.88

802.11a Mode(Chain1):

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

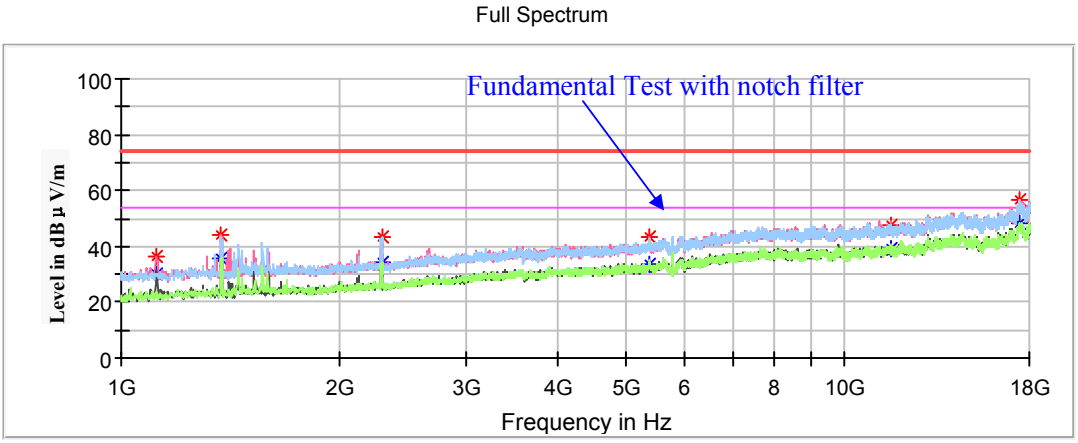
Note:
1. This test was performed with the 5725-5850MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5745MHz



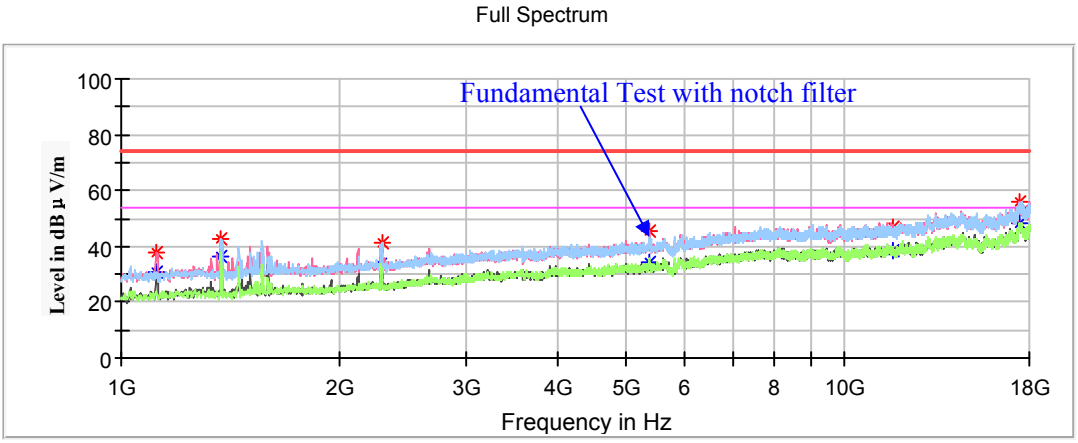
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1119.00	37.87	---	150.0	V	0.0	-18.4	74.00	36.13
1119.00	---	28.84	150.0	V	0.0	-18.4	54.00	25.16
1372.30	45.09	---	150.0	V	81.0	-17.1	74.00	28.91
1372.30	---	36.84	200.0	V	64.0	-17.1	54.00	17.16
2292.00	43.19	---	150.0	H	284.0	-13.3	74.00	30.81
2295.40	---	33.07	150.0	H	271.0	-13.3	54.00	20.93
5360.50	43.81	---	150.0	V	262.0	-4.3	68.20	24.39
11494.10	---	40.48	150.0	V	288.0	2.8	54.00	13.52
11494.10	50.06	---	150.0	V	288.0	2.8	74.00	23.94
17457.70	56.46	---	150.0	V	356.0	8.7	68.20	11.74

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)				
1119.00	36.21	---	150.0	V	7.0	-18.4	74.00	37.79
1119.00	---	29.82	150.0	V	7.0	-18.4	54.00	24.18
1372.30	44.29	---	150.0	V	76.0	-17.1	74.00	29.71
1372.30	---	35.69	150.0	V	76.0	-17.1	54.00	18.31
2295.40	43.21	---	150.0	H	283.0	-13.3	74.00	30.79
2295.40	---	34.24	150.0	H	283.0	-13.3	54.00	19.76
5384.30	---	33.46	200.0	H	82.0	-4.2	54.00	20.54
5384.30	43.44	---	200.0	H	82.0	-4.2	74.00	30.56
11570.60	---	39.42	150.0	V	283.0	2.9	54.00	14.58
11570.60	47.78	---	150.0	V	283.0	2.9	74.00	26.22
17488.30	56.42	---	200.0	V	270.0	8.8	68.20	26.22

High Channel: 5825MHz



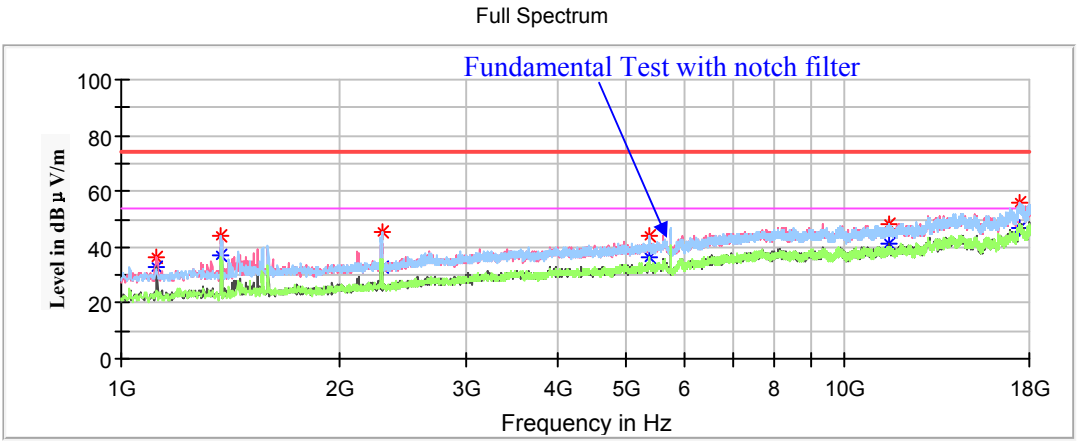
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1120.70	---	30.92	150.0	V	356.0	-18.4	54.00	23.08
1120.70	37.73	---	150.0	V	356.0	-18.4	74.00	36.27
1375.70	---	36.36	200.0	H	50.0	-17.0	54.00	17.64
1375.70	42.58	---	200.0	H	50.0	-17.0	74.00	31.42
2286.90	---	33.67	150.0	H	296.0	-13.3	54.00	20.33
2286.90	41.60	---	150.0	H	296.0	-13.3	74.00	32.40
5377.50	---	34.28	150.0	V	262.0	-4.2	54.00	19.72
5377.50	45.29	---	150.0	V	262.0	-4.2	74.00	28.71
11650.50	---	38.48	200.0	H	258.0	3.1	54.00	15.52
11650.50	46.89	---	200.0	H	258.0	3.1	74.00	27.11
17469.60	55.96	---	200.0	V	305.0	8.8	68.20	12.24

802.11ac20 Mode(Chain0+Chain1):

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

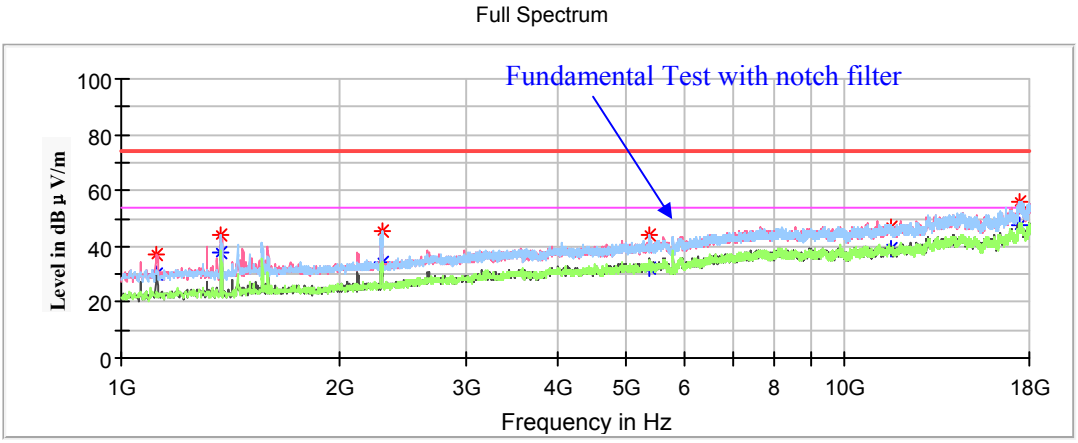
Note:
1. This test was performed with the 5725-5850MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5745MHz



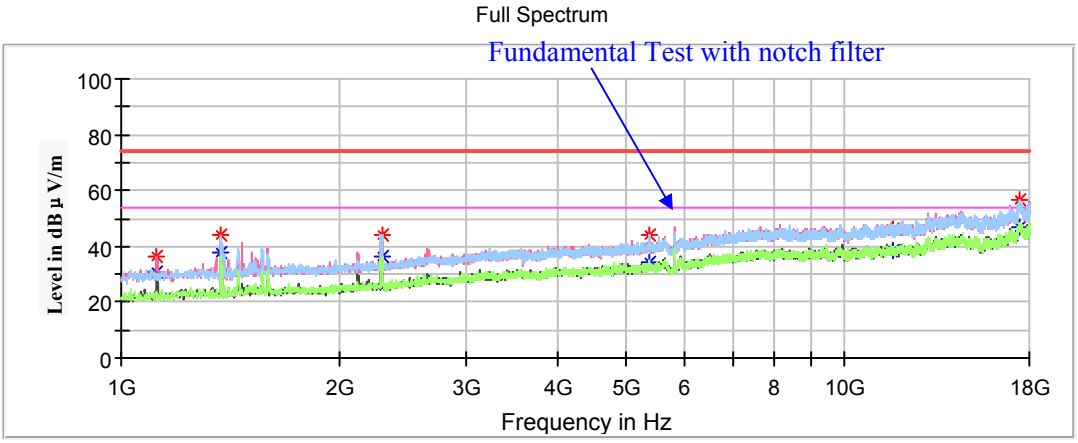
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1120.70	36.21	---	150.0	V	0.0	-18.4	74.00	37.79
1120.70	---	32.54	150.0	V	0.0	-18.4	54.00	21.46
1374.00	44.28	---	200.0	V	121.0	-17.0	74.00	29.72
1374.00	---	37.09	200.0	V	121.0	-17.0	54.00	16.91
2292.00	45.46	---	150.0	H	275.0	-13.3	74.00	28.54
2292.00	---	32.71	150.0	H	275.0	-13.3	54.00	21.29
5365.60	---	36.09	150.0	H	77.0	-4.3	54.00	17.91
5365.60	44.21	---	150.0	H	77.0	-4.3	74.00	29.79
11506.00	---	41.55	200.0	V	301.0	2.8	54.00	12.45
11506.00	48.04	---	200.0	V	301.0	2.8	74.00	25.96
17503.60	56.26	---	150.0	H	350.0	8.9	68.20	11.94

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)				
1120.70	37.25	---	150.0	V	0.0	-18.4	74.00	36.75
1120.70	---	30.33	150.0	V	0.0	-18.4	54.00	23.67
1374.00	44.01	---	150.0	V	90.0	-17.0	74.00	29.99
1374.00	---	37.64	150.0	V	90.0	-17.0	54.00	16.36
2290.30	---	34.41	150.0	H	296.0	-13.3	54.00	19.59
2290.30	45.34	---	150.0	H	296.0	-13.3	74.00	28.66
5379.20	---	31.84	150.0	V	21.0	-4.2	54.00	22.16
5379.20	44.21	---	150.0	V	21.0	-4.2	74.00	29.79
11591.00	---	39.14	200.0	V	257.0	3.0	54.00	14.86
11591.00	46.59	---	200.0	V	257.0	3.0	74.00	27.41
17411.80	56.14	---	150.0	H	323.0	8.6	68.20	12.06

High Channel: 5825MHz

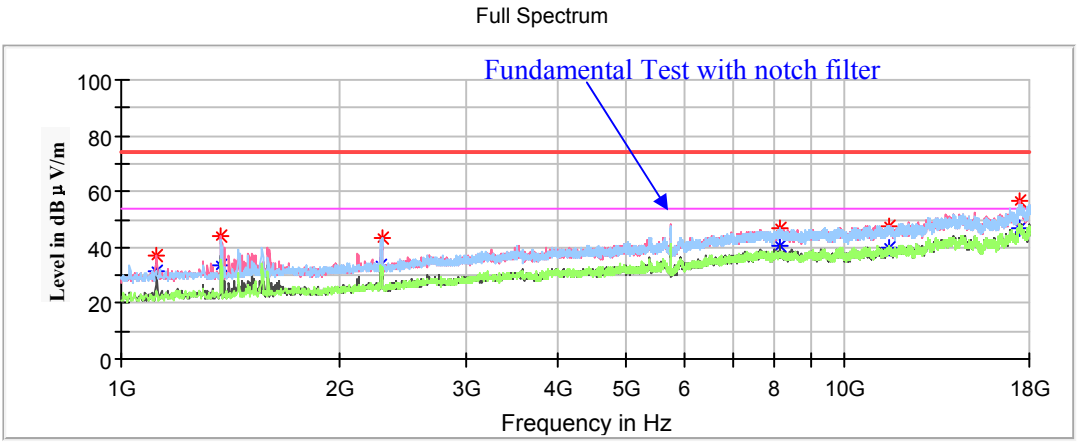


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1120.70	36.31	---	150.0	V	356.0	-18.4	74.00	37.69
1120.70	---	30.51	150.0	V	356.0	-18.4	54.00	23.49
1372.30	---	37.50	150.0	V	63.0	-17.1	54.00	16.50
1372.30	43.97	---	150.0	V	63.0	-17.0	74.00	30.03
2295.40	---	36.39	150.0	H	297.0	-13.3	54.00	17.61
2295.40	44.05	---	150.0	H	297.0	-13.3	74.00	29.95
5365.60	---	34.52	150.0	H	257.0	-4.3	54.00	19.48
5365.60	43.89	---	150.0	H	257.0	-4.3	74.00	30.11
11648.80	46.40	---	200.0	H	271.0	3.1	74.00	27.60
11648.80	---	38.66	200.0	H	271.0	3.1	54.00	15.34
17433.90	56.57	---	200.0	H	346.0	8.7	68.20	11.63

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

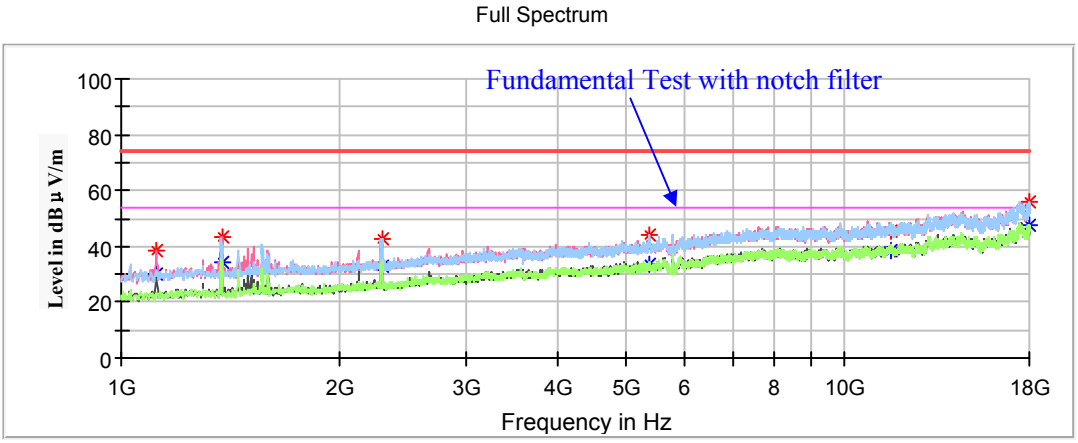
Note:
1. This test was performed with the 5725-5850MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

Low Channel: 5745MHz



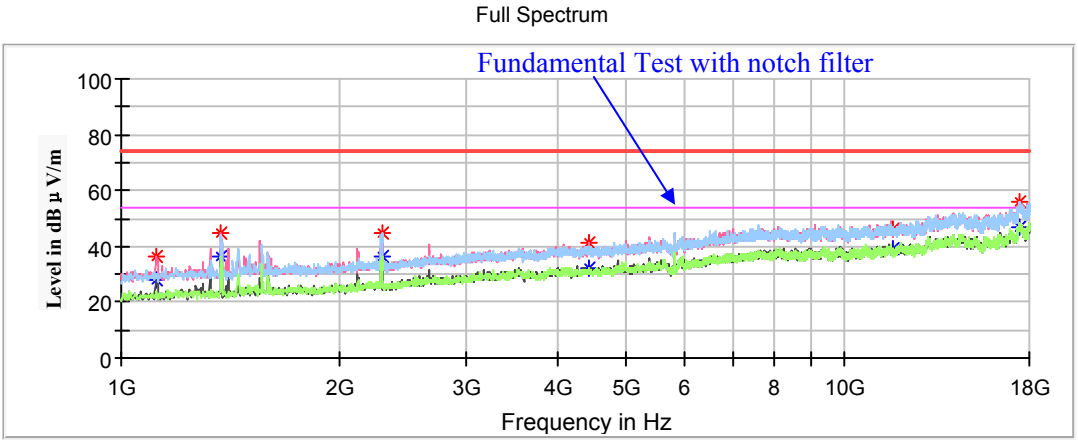
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1119.00	37.22	---	150.0	V	0.0	-18.4	74.00	36.78
1119.00	---	31.42	150.0	V	0.0	-18.4	54.00	22.58
1370.60	44.19	---	150.0	V	76.0	-17.1	74.00	29.81
1370.60	---	33.87	150.0	V	76.0	-17.1	54.00	20.13
2286.90	---	33.62	200.0	H	4.0	-13.3	54.00	20.38
2286.90	43.07	---	200.0	H	4.0	-13.3	74.00	30.93
8114.50	---	40.21	200.0	V	237.0	1.7	54.00	13.79
8114.50	46.56	---	200.0	V	237.0	1.7	74.00	27.44
11489.40	---	39.63	200.0	V	313.0	2.8	54.00	14.37
11489.40	47.51	---	200.0	V	313.0	2.8	74.00	26.49
17423.70	56.35	---	200.0	V	168.0	8.6	68.20	11.85

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)				
1119.00	38.25	---	150.0	V	0.0	-18.4	74.00	35.75
1119.00	---	29.91	150.0	V	0.0	-18.4	54.00	24.09
1377.40	43.08	---	150.0	V	84.0	-17.0	74.00	30.92
1377.40	---	34.07	150.0	V	84.0	-17.0	54.00	19.93
2292.00	42.93	---	200.0	V	77.0	-13.3	74.00	31.07
2292.00	---	33.14	200.0	V	77.0	-13.3	54.00	20.86
5365.60	---	33.56	150.0	V	21.0	-4.3	54.00	20.44
5365.60	44.09	---	150.0	V	21.0	-4.3	74.00	29.91
11571.00	---	38.40	200.0	H	60.0	3.0	54.00	15.60
11571.00	45.63	---	200.0	H	60.0	3.0	74.00	28.37
17971.10	---	47.24	200.0	V	359.0	8.8	54.00	6.76
17971.10	56.07	---	200.0	V	359.0	8.8	74.00	17.93

High Channel: 5825MHz



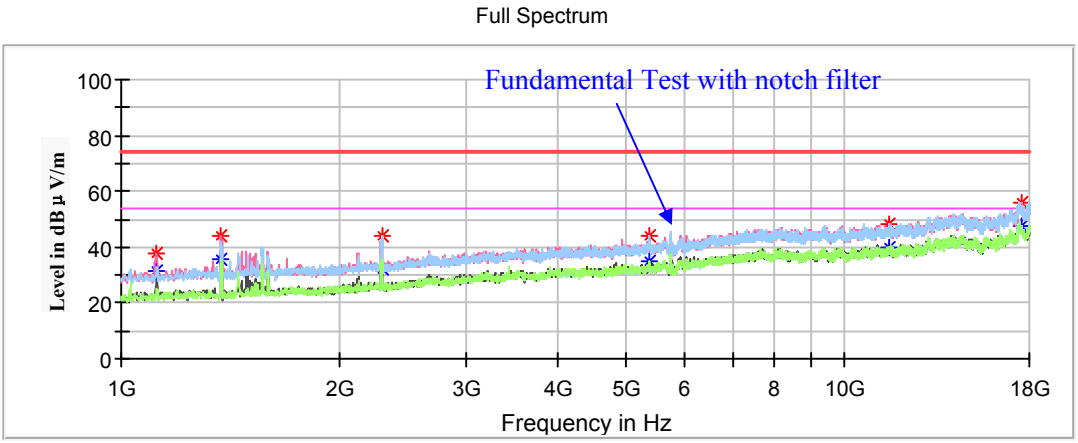
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1117.30	---	28.07	200.0	V	21.0	-18.4	54.00	25.93
1117.30	36.30	---	200.0	V	21.0	-18.4	74.00	37.70
1374.00	---	36.41	150.0	H	46.0	-17.0	54.00	17.59
1374.00	44.60	---	150.0	H	46.0	-17.0	74.00	29.40
2292.00	45.02	---	150.0	H	282.0	-13.3	74.00	28.98
2292.00	---	36.57	150.0	H	282.0	-13.3	54.00	17.43
4430.60	41.32	---	200.0	V	161.0	-6.3	68.20	26.88
11648.80	46.19	---	200.0	V	292.0	3.1	74.00	27.81
11648.80	---	39.44	200.0	V	292.0	3.1	54.00	14.56
17467.90	56.16	---	200.0	V	10.0	8.8	68.20	12.04

802.11ac40 Mode(Chain0+Chain1):

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

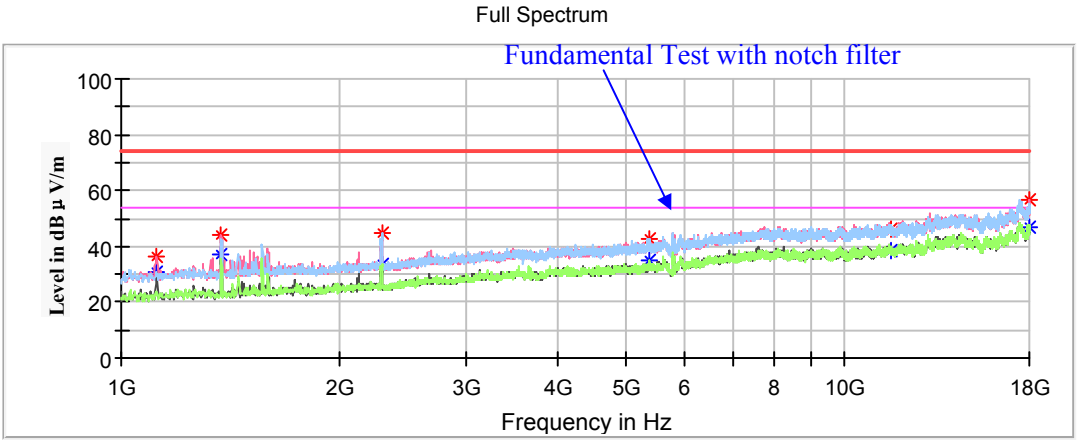
Note:
1. This test was performed with the 5725-5850MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

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)				
1120.70	---	31.55	150.0	V	2.0	-18.4	54.00	22.45
1120.70	37.88	---	150.0	V	2.0	-18.4	74.00	36.12
1374.00	44.15	---	200.0	V	84.0	-17.0	74.00	29.85
1374.00	---	35.33	200.0	V	84.0	-17.0	54.00	18.67
2297.10	44.00	---	150.0	H	283.0	-13.3	74.00	30.00
2297.10	---	31.86	150.0	H	283.0	-13.3	54.00	22.14
5377.50	44.06	---	150.0	H	256.0	-4.2	74.00	29.94
5377.50	---	35.22	150.0	H	256.0	-4.2	54.00	18.78
11512.80	---	40.17	150.0	V	245.0	2.8	54.00	13.83
11512.80	47.91	---	150.0	V	245.0	2.8	74.00	26.09
17554.60	55.97	---	150.0	V	346.0	8.9	68.20	12.23

High Channel: 5795MHz

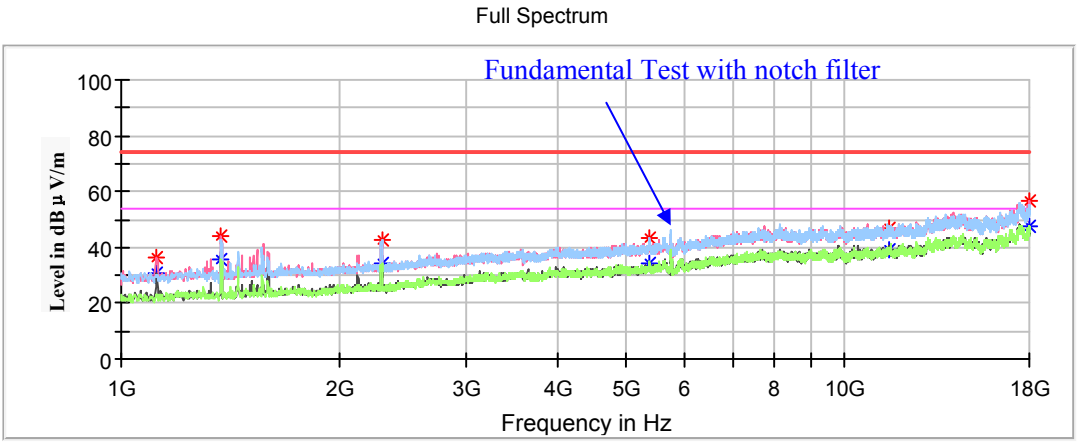


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1120.70	36.65	---	150.0	V	0.0	-18.4	74.00	37.35
1120.70	---	30.74	150.0	V	0.0	-18.4	54.00	23.26
1375.70	43.73	---	150.0	V	77.0	-17.0	74.00	30.27
1375.70	---	37.13	150.0	V	77.0	-17.0	54.00	16.87
2293.70	45.04	---	150.0	H	283.0	-13.3	74.00	28.96
2293.70	---	33.85	150.0	H	283.0	-13.3	54.00	20.15
5384.30	---	35.07	150.0	H	77.0	-4.2	54.00	18.93
5384.30	42.80	---	150.0	H	77.0	-4.2	74.00	31.20
11591.00	---	38.23	200.0	V	324.0	3.0	54.00	15.77
11591.00	46.45	---	200.0	V	324.0	3.0	74.00	27.55
17954.10	---	47.06	150.0	V	270.0	8.8	54.00	6.94
17954.10	56.80	---	150.0	V	270.0	8.8	74.00	17.20

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

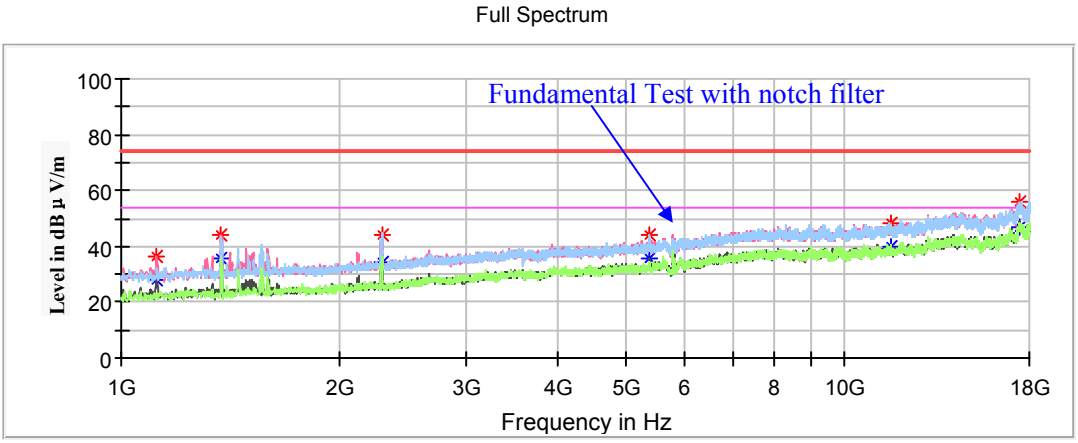
Note:
1. This test was performed with the 5725-5850MHz band reject filter.
2. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
   Corrected Amplitude = Corrected Factor + Reading
   Margin = Limit - Corrected. Amplitude

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)				
1120.70	36.66	---	150.0	V	0.0	-18.4	74.00	37.34
1120.70	---	30.67	150.0	V	0.0	-18.4	54.00	23.33
1375.70	44.13	---	150.0	V	81.0	-17.0	74.00	29.87
1375.70	---	35.90	150.0	V	81.0	-17.0	54.00	18.10
2292.00	42.86	---	200.0	H	275.0	-13.3	74.00	31.14
2292.00	---	34.42	200.0	H	275.0	-13.3	54.00	19.58
5358.80	---	34.11	150.0	V	312.0	-4.3	54.00	19.89
5358.80	43.05	---	150.0	V	312.0	-4.3	74.00	30.95
11511.10	46.86	---	150.0	V	356.0	2.8	74.00	27.14
11511.10	---	39.45	150.0	V	356.0	2.8	54.00	14.55
17967.70	---	47.48	200.0	V	0.0	8.8	54.00	6.52
17967.70	56.30	---	200.0	V	0.0	8.8	74.00	17.70

High Channel: 5795MHz



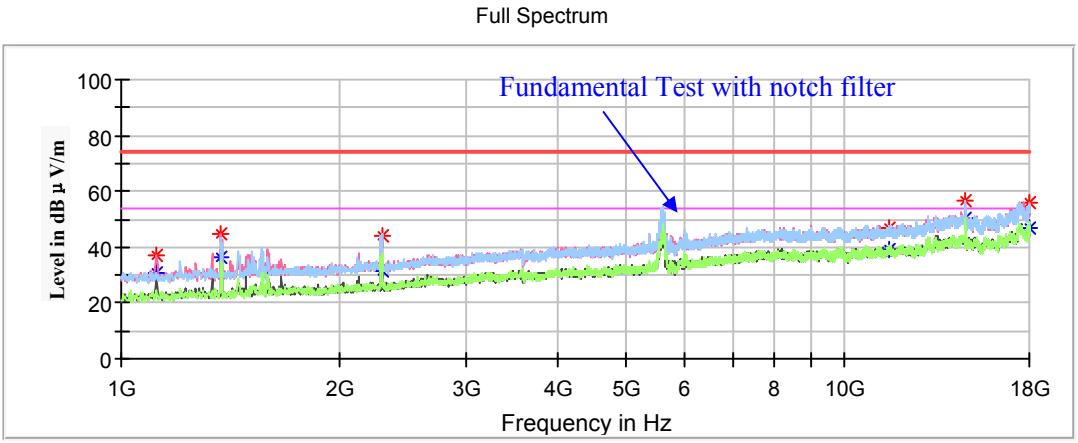
Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1119.00	36.02	---	150.0	V	0.0	-18.4	74.00	37.98
1119.00	---	28.14	150.0	V	0.0	-18.4	54.00	25.86
1374.00	44.14	---	150.0	V	97.0	-17.0	74.00	29.86
1374.00	---	35.91	150.0	V	97.0	-17.0	54.00	18.09
2292.00	44.35	---	150.0	H	288.0	-13.3	74.00	29.65
2292.00	---	34.00	150.0	H	288.0	-13.3	54.00	20.00
5369.00	44.27	---	150.0	H	237.0	-4.2	74.00	29.73
5369.00	---	35.37	150.0	H	237.0	-4.2	54.00	18.63
11587.60	48.29	---	200.0	V	0.0	3.0	74.00	25.71
11587.60	---	40.15	200.0	V	0.0	3.0	54.00	13.85
17484.90	55.95	---	150.0	V	110.0	8.8	68.20	12.25

802.11ac80 Mode(Chain0+Chain1):

*(Pre-scan in the X,Y and Z axes of orientation, the worst case **Z-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: 5775MHz

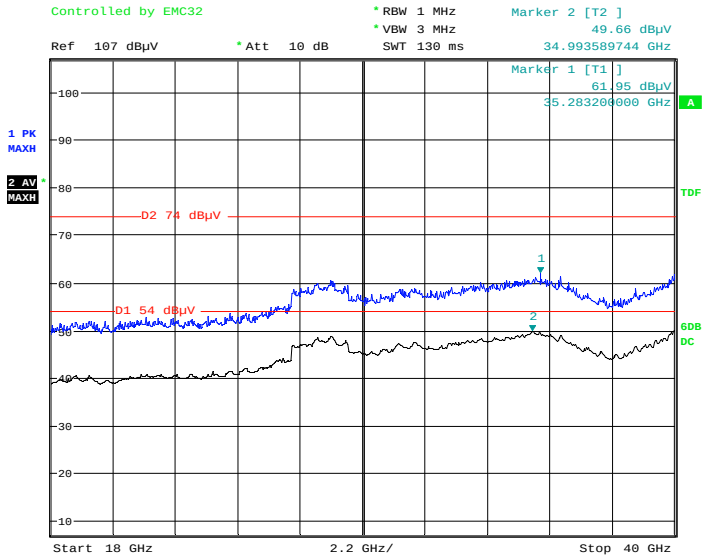


Frequency (MHz)	Corrected Amplitude		Rx Antenna		Turntable Degree	Correct Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
1117.30	---	30.79	150.0	V	0.0	-18.4	54.00	23.21
1117.30	36.87	---	150.0	V	0.0	-18.4	74.00	37.13
1370.60	44.45	---	150.0	V	97.0	-17.1	74.00	29.55
1370.60	---	36.41	150.0	V	97.0	-17.1	54.00	17.59
2290.30	---	31.74	200.0	H	50.0	-13.3	54.00	22.26
2290.30	44.35	---	200.0	H	50.0	-13.3	74.00	29.65
11551.90	---	39.48	150.0	V	4.0	2.9	54.00	14.52
11551.90	47.02	---	150.0	V	4.0	2.9	74.00	26.98
14712.20	56.30	---	150.0	H	0.0	5.9	68.20	11.9
17964.30	---	47.06	150.0	H	350.0	8.8	54.00	6.94
17964.30	56.03	---	150.0	H	350.0	8.8	74.00	17.97

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

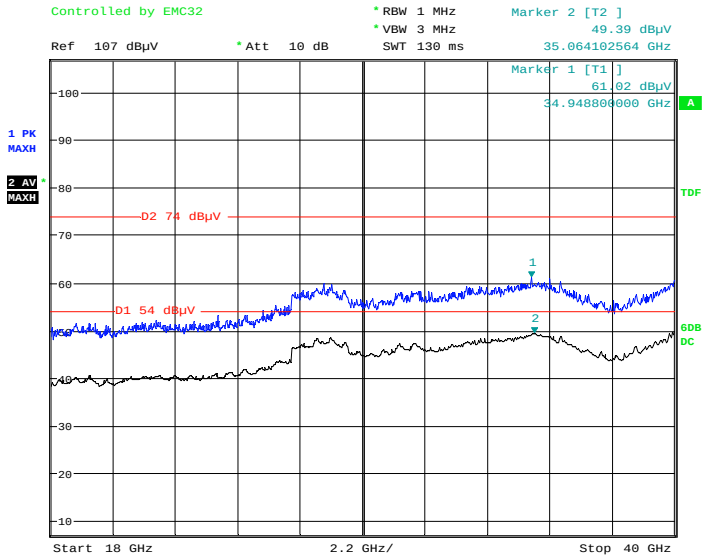
Pre-scan with 802.11a, 802.11ac20, 802.11n-HT20, 802.11ac40, 802.11n-HT40 and 802.11 ac80 modes of operation in the X,Y and Z axes of orientation, ***the worst case 802.11n-HT20 mode low channel*** *in Z-axis of orientation was recorded.*

Horizontal



Date: 23.OCT.2020 23:03:40

Vertical

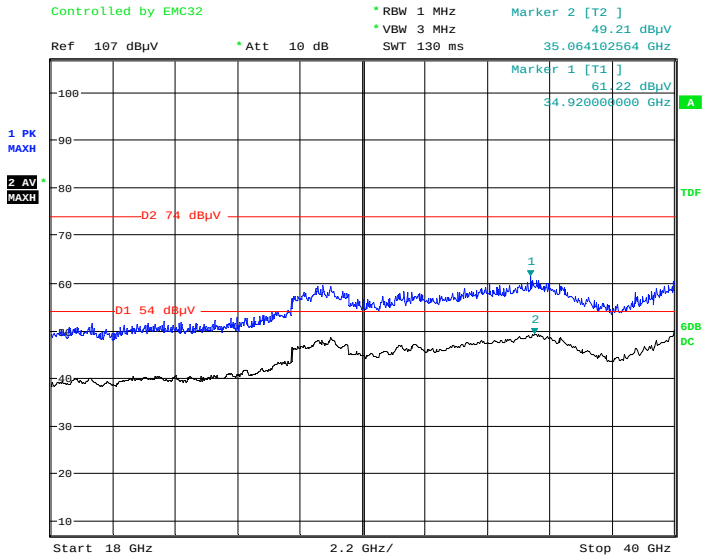


Date: 23.OCT.2020 22:05:43

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

Pre-scan with 802.11a, 802.11ac20, 802.11n-HT20, 802.11ac40, 802.11n-HT40 and 802.11 ac80 modes of operation in the X,Y and Z axes of orientation, ***the worst case 802.11ac20 mode high channel*** *in Z-axis of orientation was recorded.*

Horizontal



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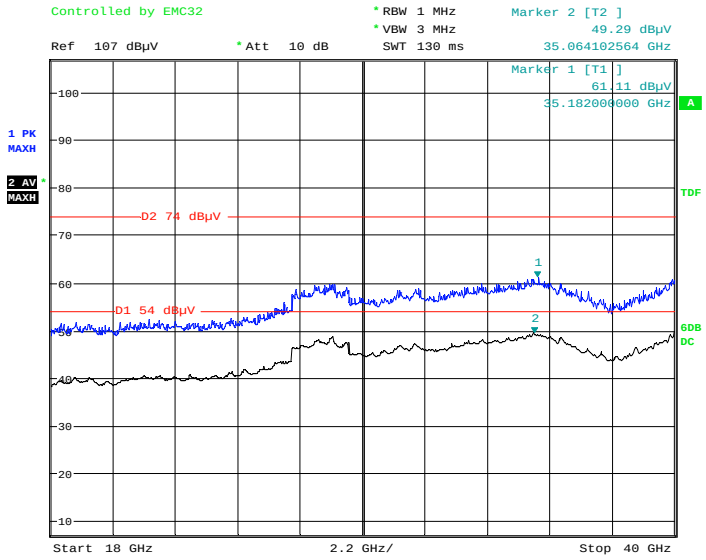
Vertical



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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-Chain0: *(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	Corrected Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5180MHz								
5150.00	54.93	---	150.0	V	22.0	5.2	74.00	19.07
5150.00	---	49.89	150.0	V	22.0	5.2	54.00	4.11
High Channel: 5240MHz								
5350.00	55.23	---	200.0	V	0.0	5.7	74.00	18.77
5350.00	---	50.75	200.0	V	0.0	5.7	54.00	3.25

802.11a Mode-Chain1: *(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	Corrected Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5180MHz								
5150.00	---	50.46	150.0	H	117.0	5.2	54.00	3.54
5150.00	54.77	---	150.0	H	117.0	5.2	74.00	19.23
High Channel: 5240MHz								
5350.00	54.30	---	200.0	H	236.0	5.7	74.00	19.70
5350.00	---	50.95	200.0	H	236.0	5.7	54.00	3.05

802.11ac20 Mode (Chain0+ Chain1): *(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	Corrected Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5180MHz								
5150.00	55.65	---	150.0	V	224.0	5.2	74.00	18.35
5150.00	---	50.64	150.0	V	224.0	5.2	54.00	3.36
High Channel: 5240MHz								
5350.00	54.96	---	200.0	V	2.0	5.7	74.00	19.04
5350.00	---	50.54	200.0	V	2.0	5.7	54.00	3.46

802.11n-HT20 Mode (Chain0+ Chain1): *(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	Corrected Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5180MHz								
5150.00	55.39	---	150.0	V	357.0	5.2	74.00	18.61
5150.00	---	50.85	150.0	V	357.0	5.2	54.00	3.15
High Channel: 5240MHz								
5350.00	54.28	---	150.0	V	92.0	5.7	74.00	19.72
5350.00	---	50.99	150.0	V	92.0	5.7	54.00	3.01

802.11ac40 Mode (Chain0+ Chain1): *(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	Corrected Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5190MHz								
5150.00	53.52	---	200.0	V	101.0	5.2	74.00	20.48
5150.00	---	50.63	200.0	V	101.0	5.2	54.00	3.37
High Channel: 5230MHz								
5350.00	54.11	---	150.0	V	214.0	5.7	74.00	19.89
5350.00	---	50.67	150.0	V	214.0	5.7	54.00	3.33

802.11n-HT40 Mode (Chain0+ Chain1): *(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	Corrected Factor (dB/m)	Limit (dBμV/m)	Margin (dB)
	MaxPeak (dBμV/m)	Average (dBμV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5190MHz								
5150.00	53.58	---	200.0	V	249.0	5.2	74.00	20.42
5150.00	---	50.36	200.0	V	249.0	5.2	54.00	3.64
High Channel: 5230MHz								
5350.00	53.02	---	200.0	V	122.0	5.7	74.00	20.98
5350.00	---	50.63	200.0	V	122.0	5.7	54.00	3.37

802.11ac80 Mode (Chain0+ Chain1): *(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	Corrected Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
	MaxPeak (dBµV/m)	Average (dBµV/m)	Height (cm)	Polar (H/V)				
Low Channel: 5210MHz								
5150.00	55.89	---	100	H	325.0	5.2	74.00	18.11
5150.00	---	50.63	100	V	325.0	5.2	54.00	3.37
5350.00	54.02	---	200.0	H	23.0	5.7	74.00	19.98
5350.00	---	50.25	200.0	V	23.0	5.7	54.00	3.75

Band Edge 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-Chain0: *(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: 5745MHz								
5650.00	53.81	---	150.0	H	1.0	6.4	67.80	13.99
5700.00	54.62	---	150.0	V	206.0	6.5	105.20	50.58
5720.00	66.88	---	150.0	V	57.0	6.5	110.80	43.92
5725.00	78.94	---	150.0	V	57.0	6.5	122.20	43.26
High Channel: 5825MHz								
5850.00	63.18	---	150.0	V	92.0	6.7	122.20	59.02
5855.00	60.83	---	150.0	V	76.0	6.7	110.80	49.97
5875.00	55.48	---	200.0	H	357.0	6.8	105.20	49.72
5925.00	53.91	---	150.0	V	269.0	6.9	67.80	13.89

802.11a Mode-Chain1: *(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: 5745MHz								
5650.00	54.02	---	200.0	H	354.0	6.4	67.80	14.18
5700.00	56.29	---	150.0	H	178.0	6.5	105.20	48.91
5720.00	67.47	---	200.0	H	188.0	6.5	110.80	43.33
5725.00	79.13	---	200.0	H	170.0	6.5	122.20	43.07
High Channel: 5825MHz								
5850.00	70.94	---	150.0	H	179.0	6.7	122.20	51.26
5855.00	63.63	---	150.0	H	179.0	6.7	110.79	47.17
5875.00	56.55	---	150.0	H	197.0	6.8	105.20	48.65
5925.00	54.30	---	150.0	V	201.0	6.9	67.80	13.50

802.11ac20 Mode(Chain0+ Chain1): *(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: 5745MHz								
5650.00	53.88	---	200.0	H	231.0	6.4	67.80	14.32
5700.00	55.59	---	150.0	V	132.0	6.5	105.20	49.61
5720.00	70.79	---	150.0	V	82.0	6.5	110.80	40.01
5725.00	79.85	---	150.0	V	24.0	6.5	122.20	42.35
High Channel: 5825MHz								
5850.00	71.07	---	200.0	H	125.0	6.7	122.20	51.13
5855.00	64.48	---	150.0	H	175.0	6.7	110.80	46.32
5875.00	56.03	---	200.0	H	177.0	6.8	105.20	49.17
5925.00	56.32	---	200.0	H	10.0	6.9	67.80	11.48

802.11n-HT20 Mode(Chain0+ Chain1): *(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: 5745MHz								
5650.00	53.24	---	150.0	V	238.0	6.4	67.80	14.56
5700.00	58.67	---	200.0	H	177.0	6.5	105.20	46.53
5720.00	71.60	---	200.0	V	115.0	6.5	110.80	39.20
5725.00	77.52	---	150.0	H	180.0	6.5	122.20	44.68
High Channel: 5825MHz								
5850.00	72.38	---	150.0	V	111.0	6.7	122.20	49.82
5855.00	64.28	---	150.0	H	193.0	6.7	110.80	46.52
5875.00	57.08	---	200.0	H	160.0	6.8	105.20	48.12
5925.00	54.38	---	150.0	H	250.0	6.9	67.80	13.42

802.11ac40 Mode(Chain0+ Chain1): *(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: 5755MHz								
5650.00	54.23	---	200.0	H	0.0	6.4	67.80	13.57
5700.00	61.64	---	150.0	V	95.0	6.5	105.20	43.56
5720.00	77.92	---	200.0	V	113.0	6.5	110.80	32.88
5725.00	81.65	---	150.0	H	195.0	6.5	122.20	40.55
High Channel: 5795MHz								
5850.00	61.74	---	200.0	H	190.0	6.7	122.20	60.46
5855.00	62.72	---	200.0	V	97.0	6.7	110.80	48.08
5875.00	56.03	---	150.0	V	77.0	6.8	105.20	49.17
5925.00	55.56	---	150.0	H	77.0	6.9	67.80	12.24

802.11n-HT40 Mode(Chain0+ Chain1): *(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: 5755MHz								
5650.00	59.53	---	200.0	H	133.0	6.4	67.80	8.27
5700.00	62.87	---	200.0	V	135.0	6.5	105.20	42.33
5720.00	77.44	---	150.0	V	41.0	6.5	110.80	33.36
5725.00	79.95	---	150.0	H	175.0	6.5	122.20	42.25
High Channel: 5795MHz								
5850.00	63.90	---	150.0	V	112.0	6.7	122.20	58.30
5855.00	61.45	---	150.0	V	94.0	6.7	110.80	49.35
5875.00	60.20	---	200.0	H	198.0	6.8	105.20	45.00
5925.00	54.88	---	150.0	H	74.0	6.9	67.80	12.92

802.11ac80 Mode(Chain0+ Chain1): *(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: 5775MHz								
5650.00	65.69	---	150.0	H	184.0	6.4	67.80	2.11
5700.00	74.67	---	200.0	H	172.0	6.5	105.20	30.53
5720.00	78.86	---	150.0	H	184.0	6.5	110.80	31.94
5725.00	81.56	---	150.0	V	62.0	6.5	122.20	40.64
5850.00	71.82	---	150.0	V	121.0	6.7	122.20	50.38
5855.00	65.69	---	200.0	H	89.0	6.7	110.80	45.11
5875.00	61.90	---	200.0	H	241.0	6.8	105.20	43.30
5925.00	57.23	---	150.0	V	103.0	6.9	67.80	10.57

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.

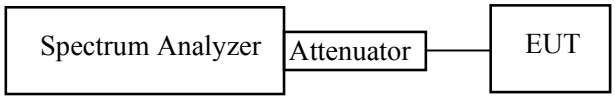
Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

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:	24.8℃~25℃
Relative Humidity:	49%~50%
ATM Pressure:	101.2 kPa ~101.5 kPa

The testing was performed by CK Huang from 2020-08-21 to 2020-08-22.

Test Result: Compliant

5150-5250 MHz:

Test mode	Channel	Frequency (MHz)	26dB Bandwidth (MHz)		99% Bandwidth (MHz)	
			Chain0	Chain1	Chain0	Chain1
802.11a	Low	5180	23.166	23.086	16.914	16.834
	Middle	5200	23.407	22.285	16.754	16.754
	High	5240	23.086	22.124	16.834	16.754
802.11ac20	Low	5180	24.369	23.567	17.956	17.956
	Middle	5200	24.208	23.487	17.956	17.956
	High	5240	24.208	23.567	17.956	17.956
802.11n-HT20	Low	5180	24.369	23.166	17.956	17.956
	Middle	5200	24.208	23.487	17.956	17.956
	High	5240	24.369	23.567	17.956	17.956
802.11ac40	Low	5190	41.844	41.964	36.433	36.433
	High	5230	41.964	41.964	36.313	36.313
802.11n-HT40	Low	5190	41.964	41.723	36.313	36.313
	High	5230	41.964	42.084	36.433	36.313
802.11ac80	Low	5210	84.168	84.890	75.752	75.752

5750-5850 MHz:

Test mode	Channel	Frequency (MHz)	6dB Bandwidth (MHz)		99% Bandwidth (MHz)		Limit (MHz)
			Chain0	Chain1	Chain0	Chain1	
802.11a	Low	5745	15.571	15.391	19.659	17.856	≥0.5
	Middle	5785	15.511	15.571	19.359	17.735	≥0.5
	High	5825	15.511	15.872	18.697	18.036	≥0.5
802.11ac20	Low	5745	17.194	16.533	19.960	18.517	≥0.5
	Middle	5785	17.194	16.954	19.900	18.397	≥0.5
	High	5825	16.954	16.954	19.299	18.998	≥0.5
802.11n-HT20	Low	5745	16.533	16.834	20.020	18.637	≥0.5
	Middle	5785	17.134	16.954	19.659	18.457	≥0.5
	High	5825	16.954	16.774	19.118	18.758	≥0.5
802.11ac40	Low	5755	35.591	35.591	37.515	36.673	≥0.5
	High	5795	35.711	35.952	37.395	36.673	≥0.5
802.11n-HT40	Low	5755	35.471	35.471	37.395	36.673	≥0.5
	High	5795	35.471	35.471	37.395	36.673	≥0.5
802.11ac80	Low	5775	75.511	75.511	79.359	76.713	≥0.5

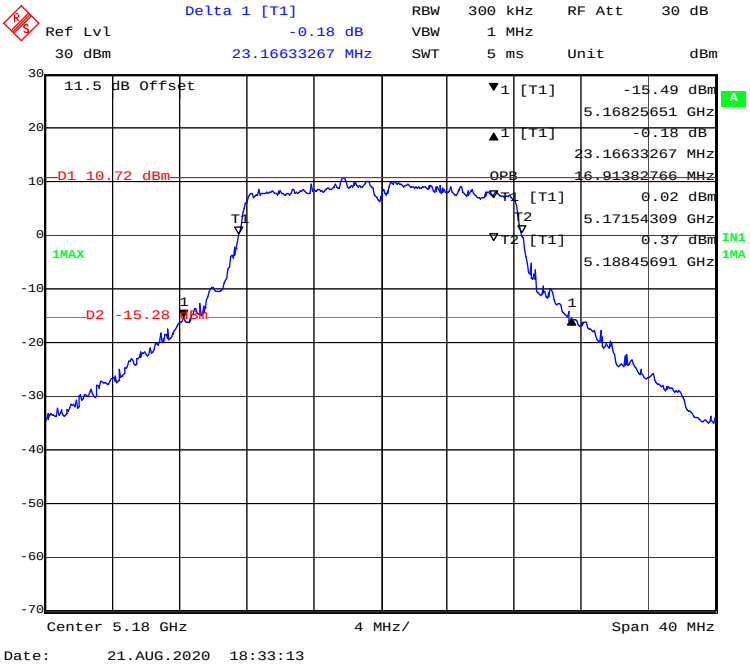
Note: No transmitted signal in the 99% bandwidth extends into the U-NII-2A and U-NII-2C band.

5150-5250 MHz Band:

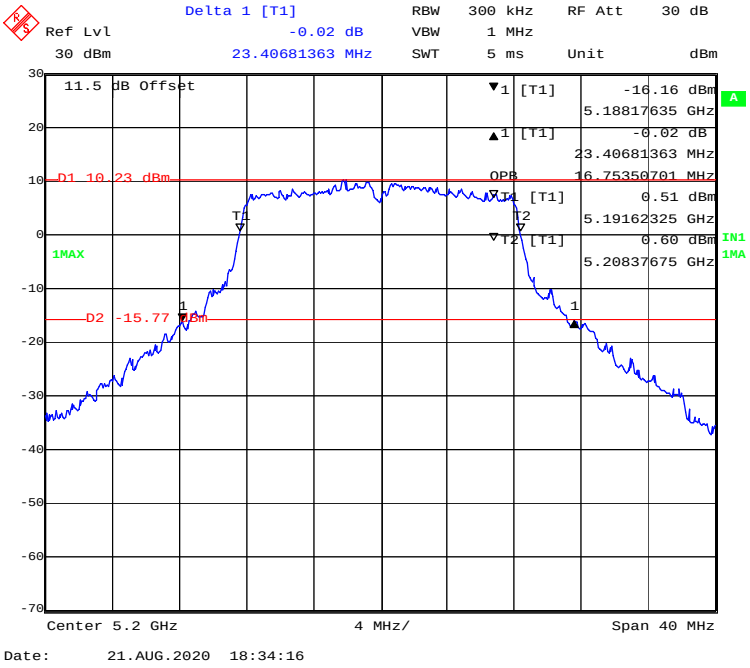
Chain0:

26 Bandwidth&99% Occupied Bandwidth

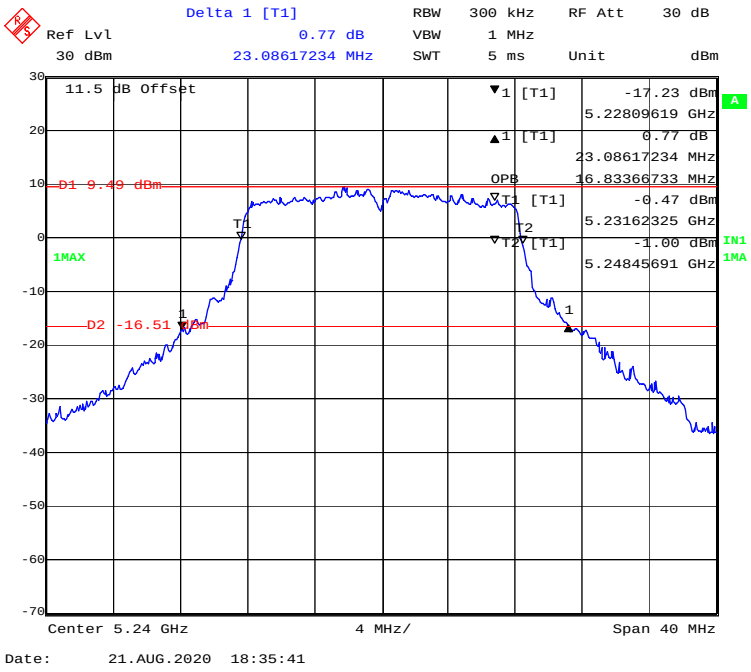
802.11a mode, 5180MHz



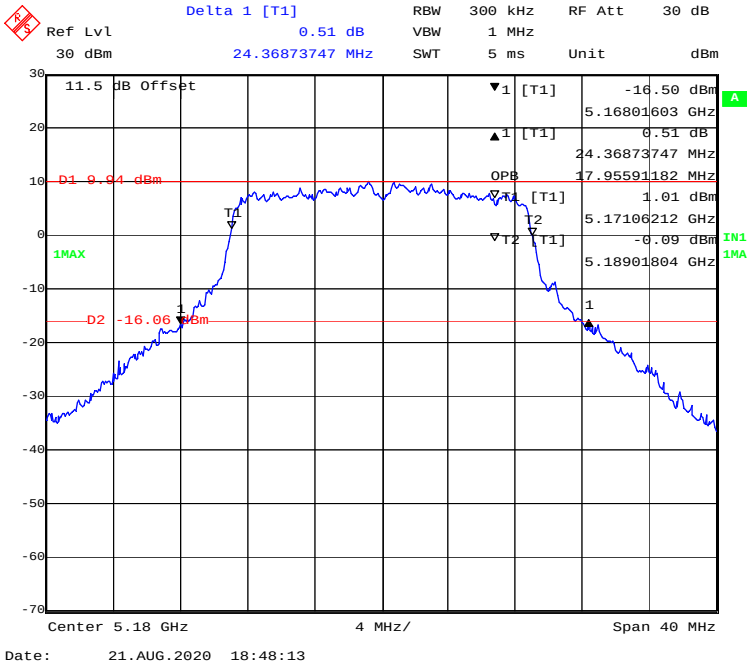
802.11a mode, 5200MHz



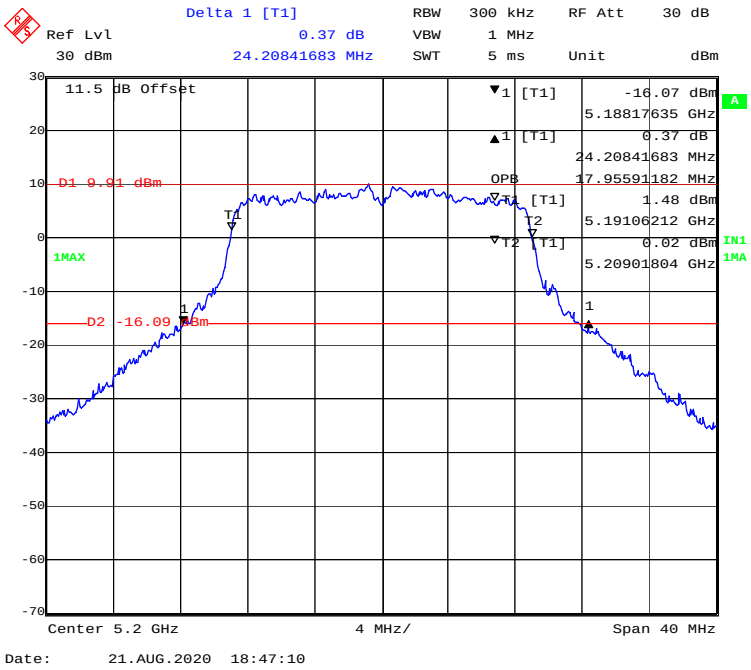
802.11a mode, 5240MHz



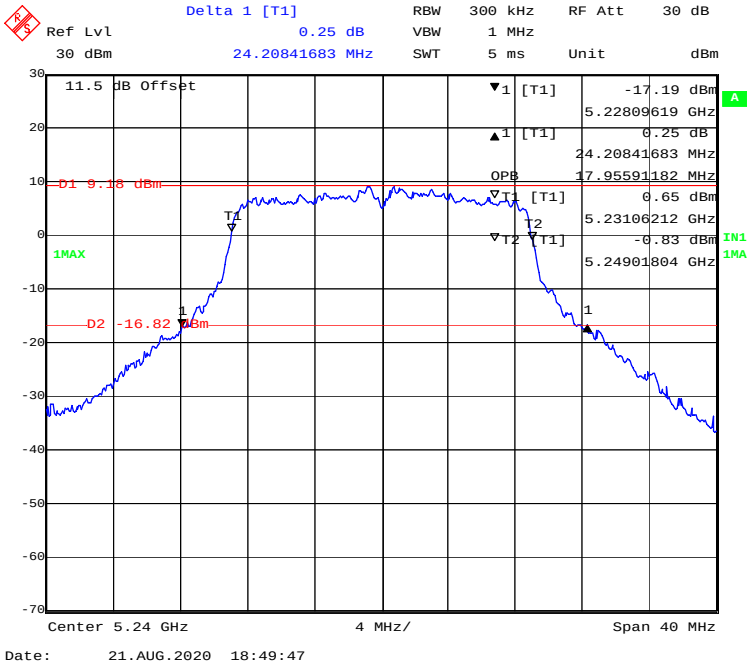
802.11ac20 mode, 5180MHz



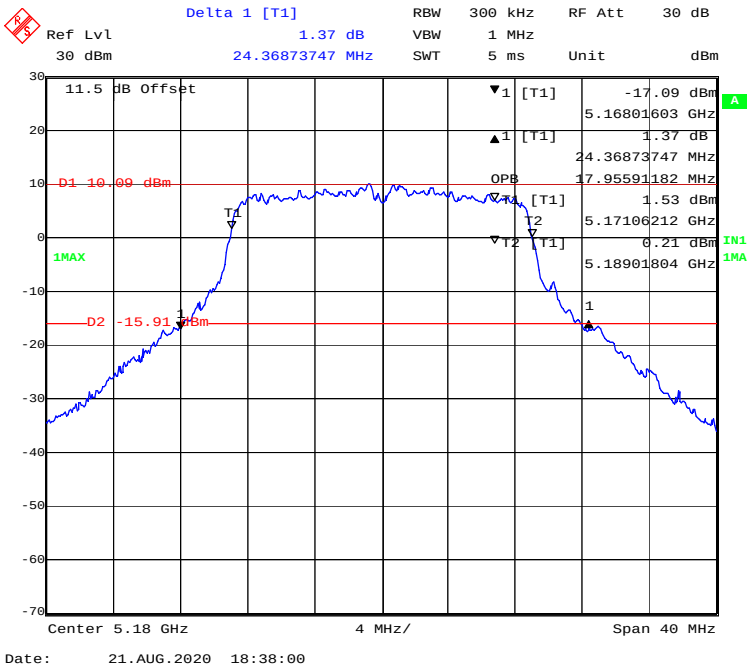
802.11ac20 mode, 5200MHz



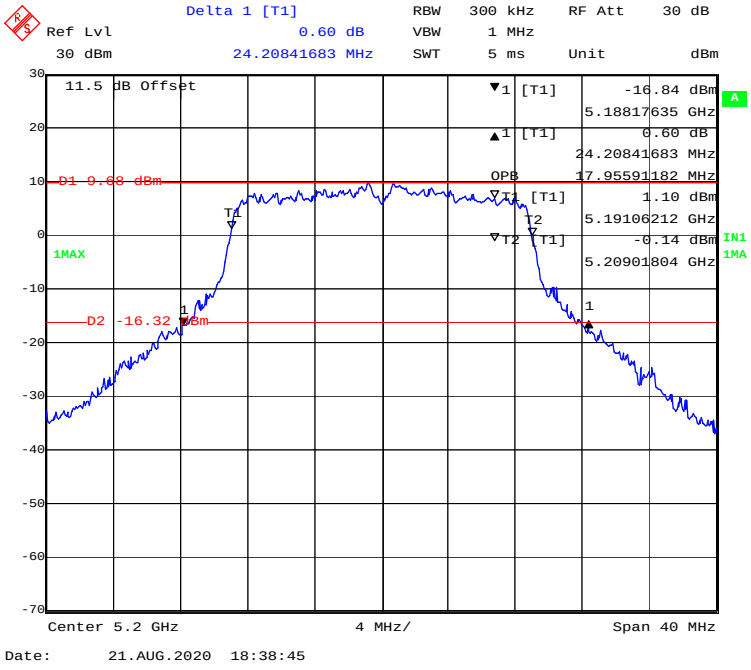
802.11ac20 mode, 5240MHz



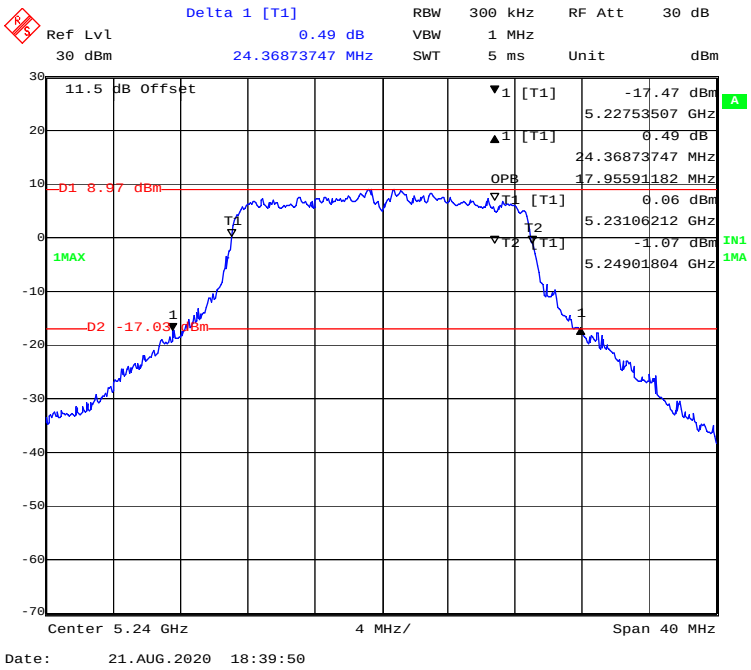
802.11n-HT20 mode, 5180MHz



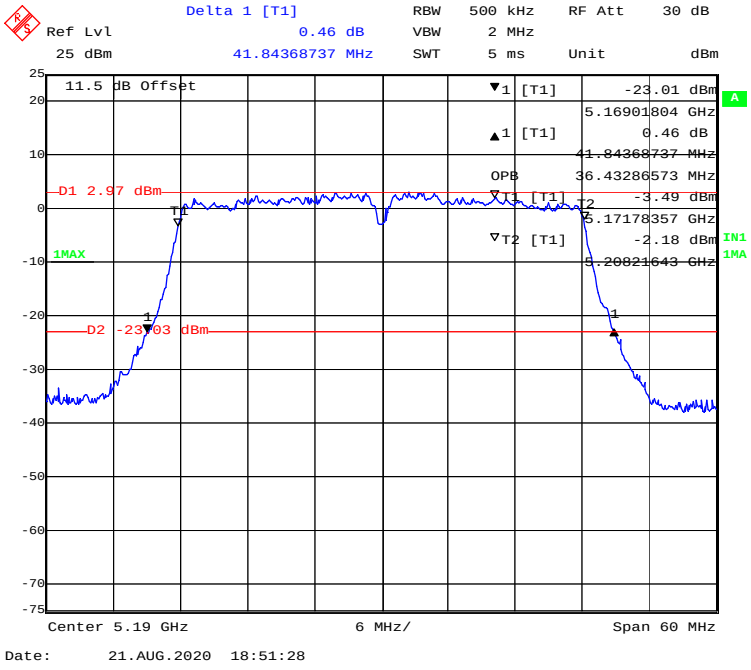
802.11n-HT20 mode, 5200MHz



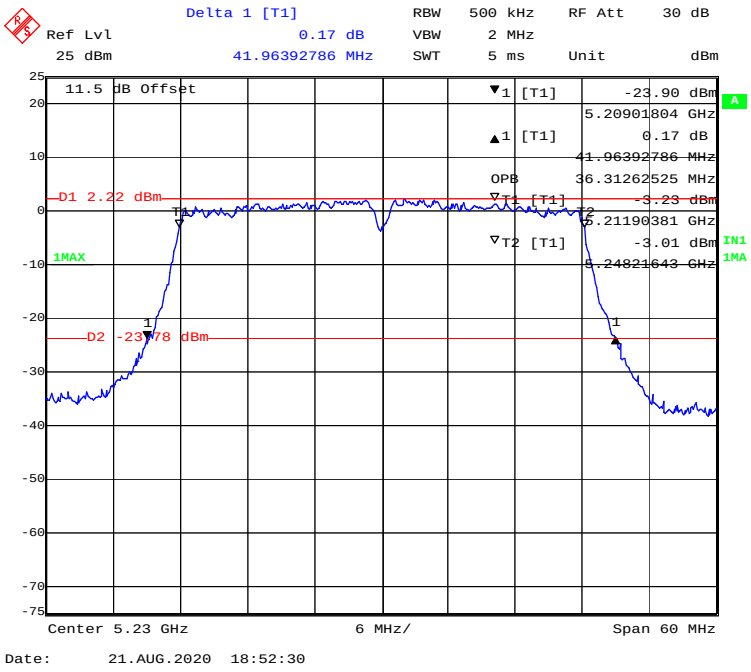
802.11n-HT20 mode, 5240MHz



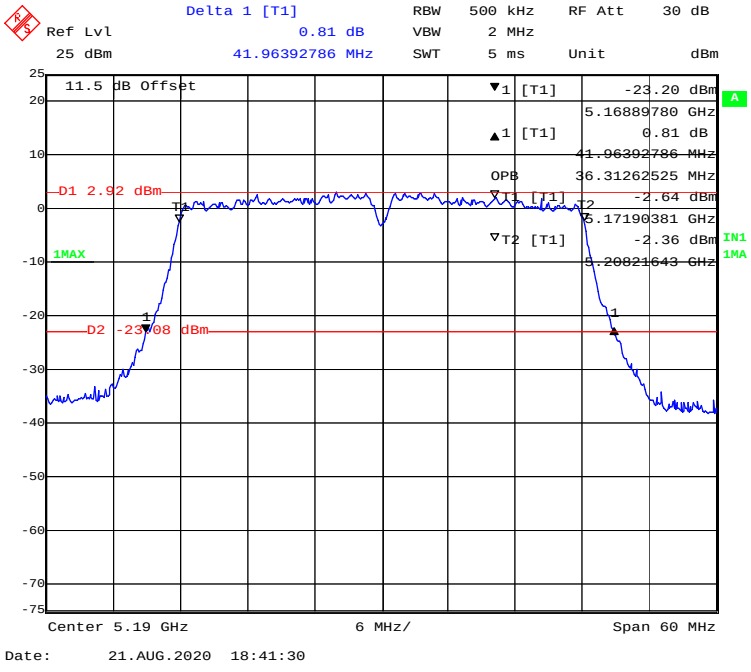
802.11ac40 mode, 5190MHz



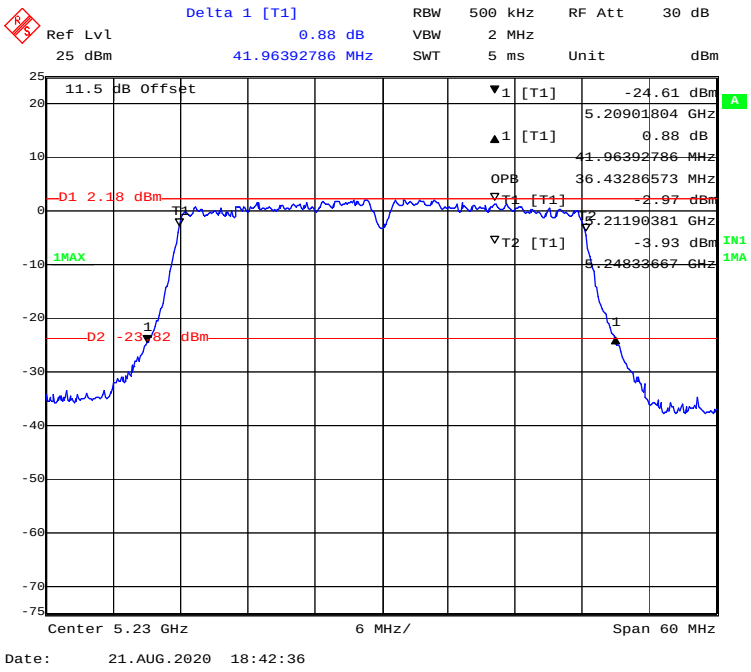
802.11ac40 mode, 5230MHz



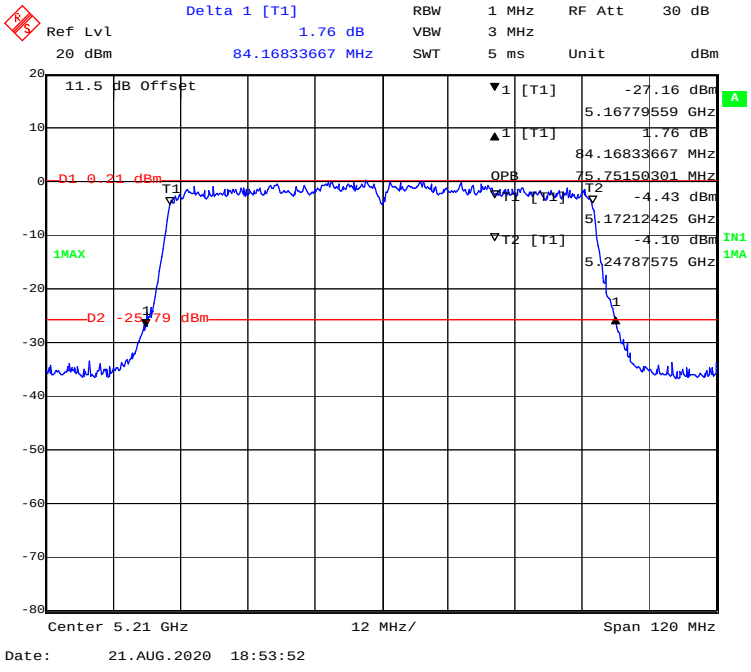
802.11n-HT40 mode, 5190MHz



802.11n-HT40 mode, 5230MHz



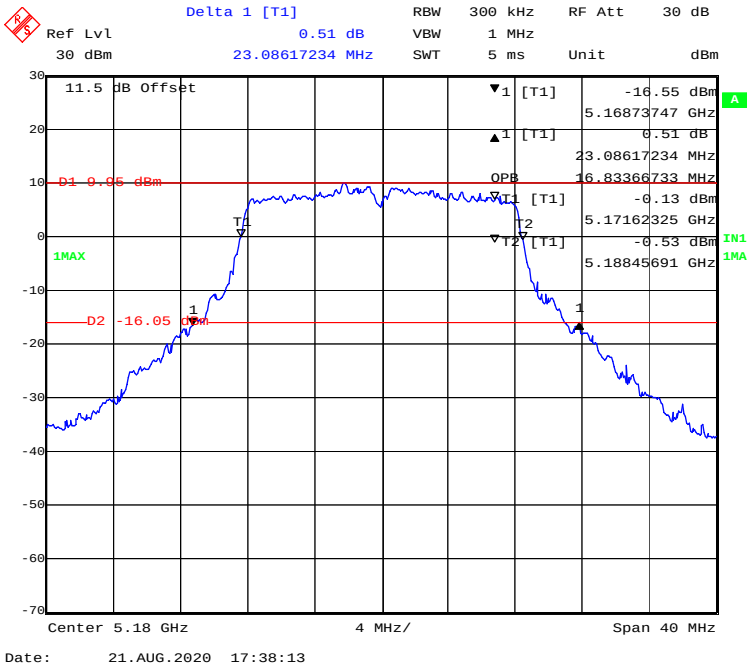
802.11ac80 mode, 5210MHz



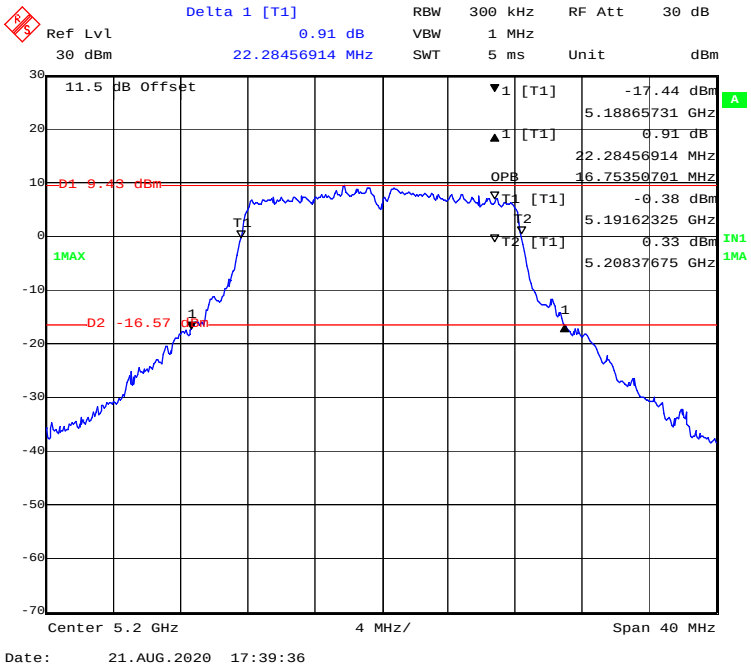
Chain1:

26 Bandwidth&99% Occupied Bandwidth

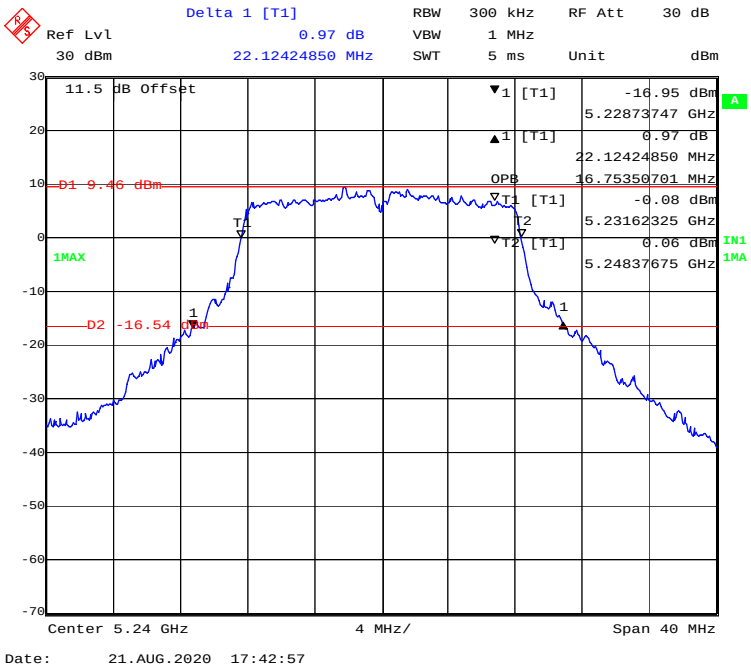
802.11a mode, 5180MHz



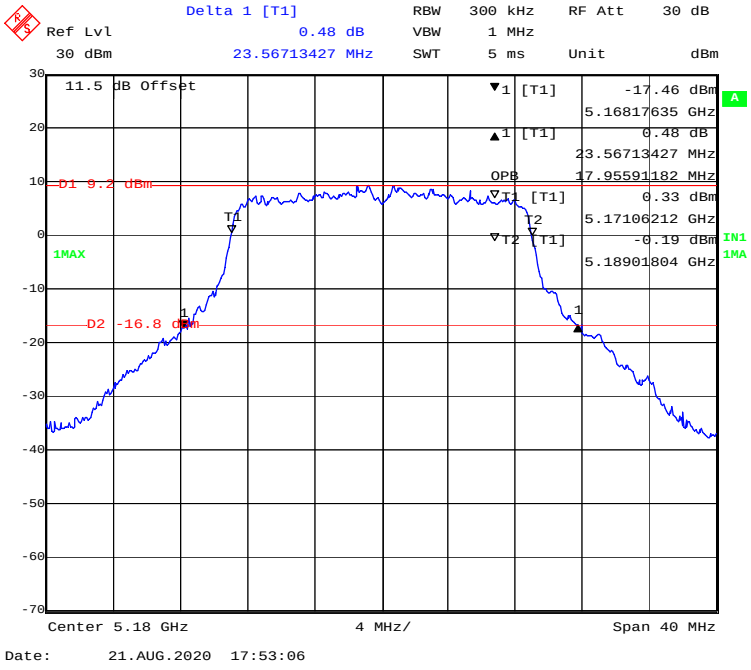
802.11a mode, 5200MHz



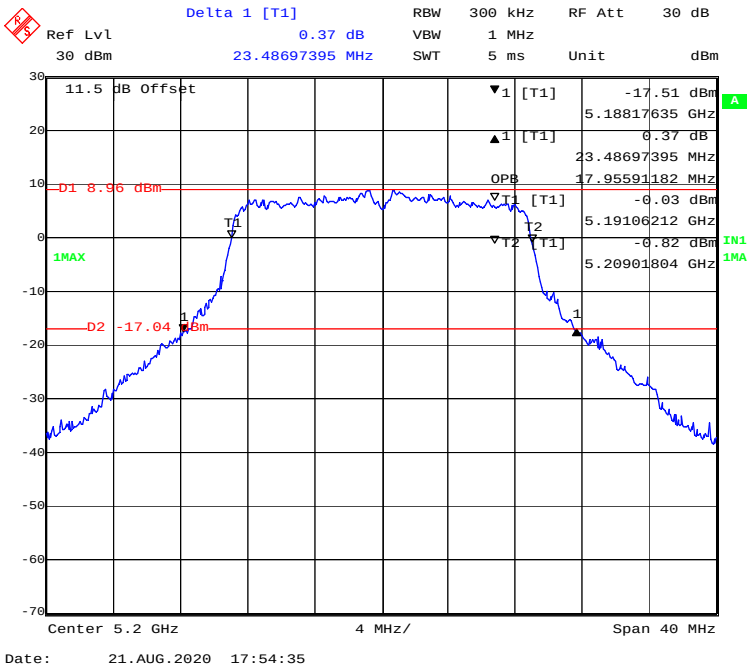
802.11a mode, 5240MHz



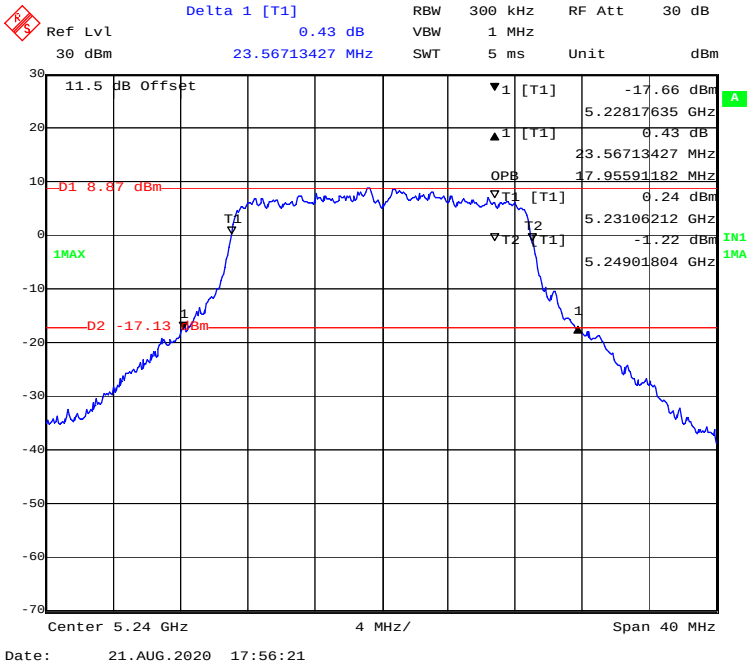
802.11ac20 mode, 5180MHz



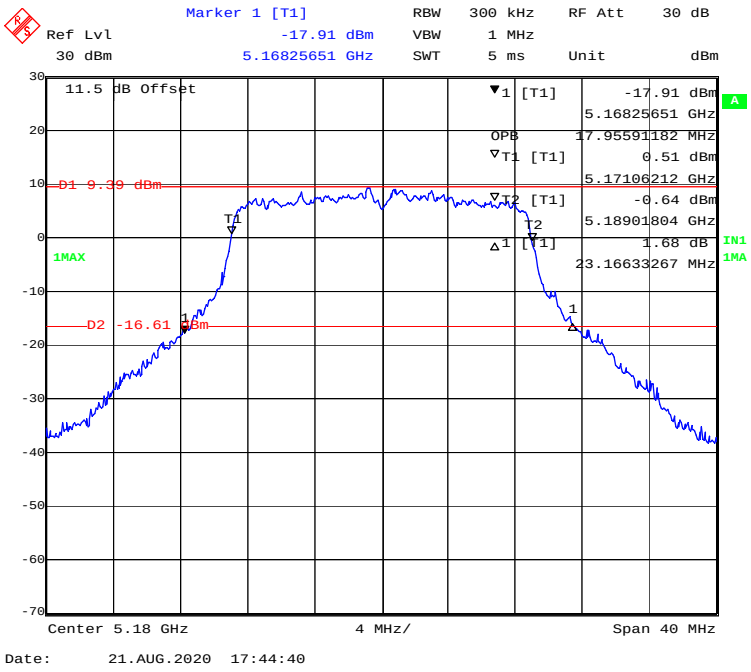
802.11ac20 mode, 5200MHz



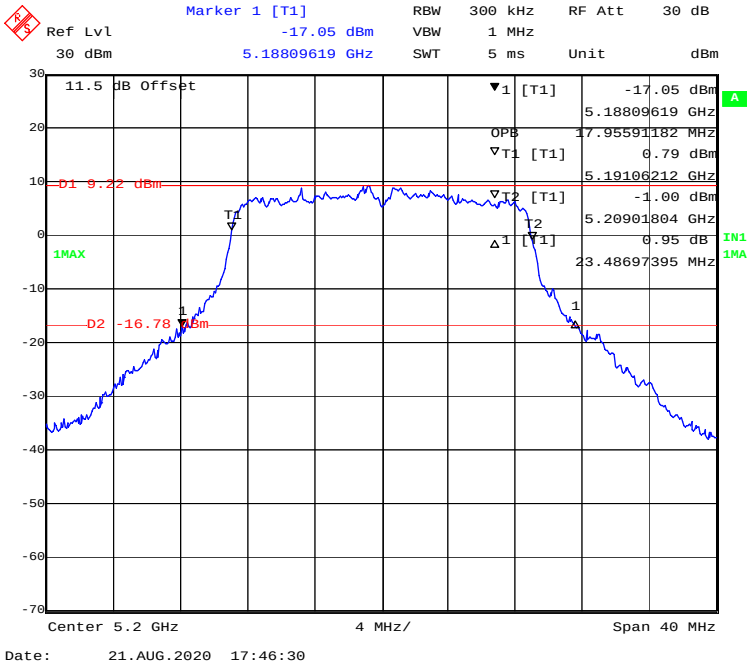
802.11ac20 mode, 5240MHz



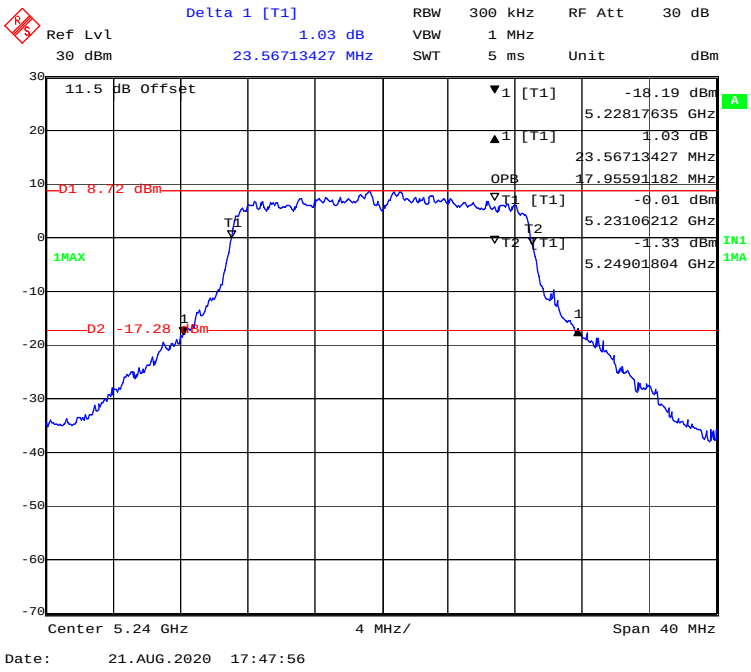
802.11n-HT20 mode, 5180MHz



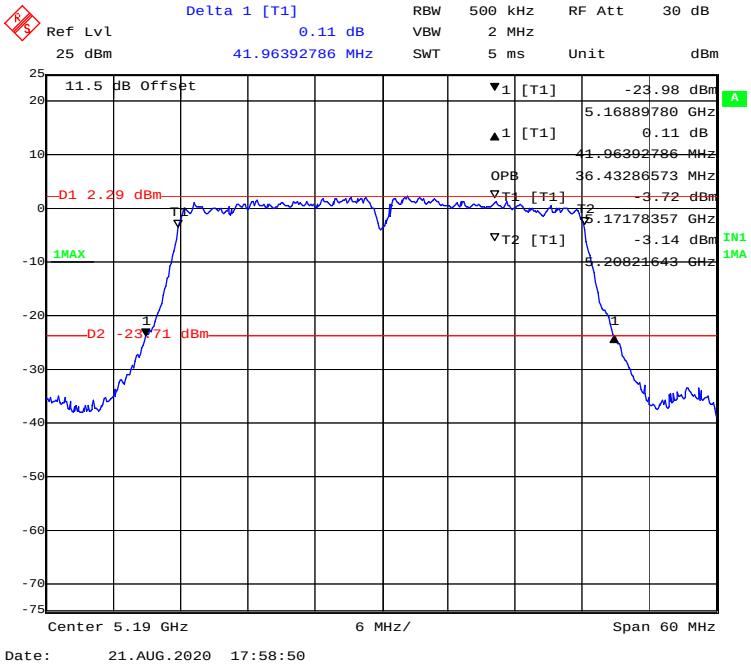
802.11n-HT20 mode, 5200MHz



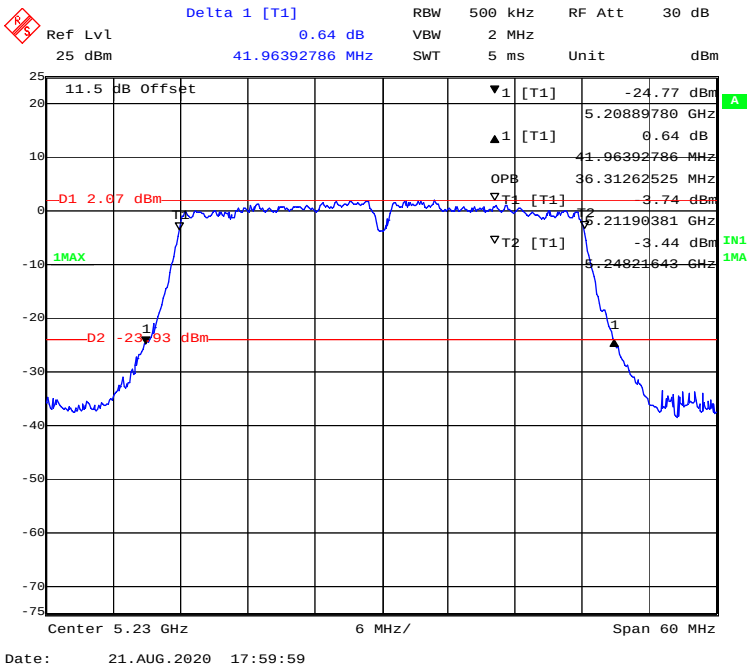
802.11n-HT20 mode, 5240MHz



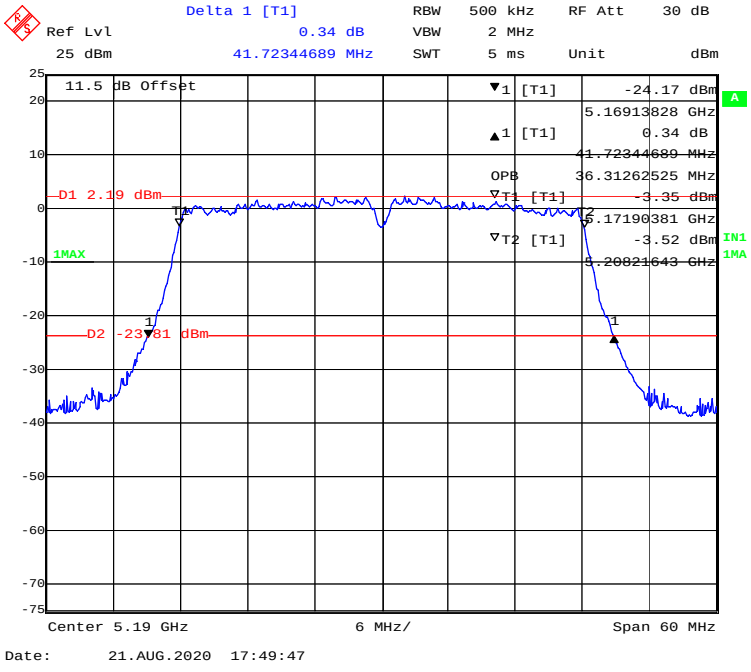
802.11ac40 mode, 5190MHz



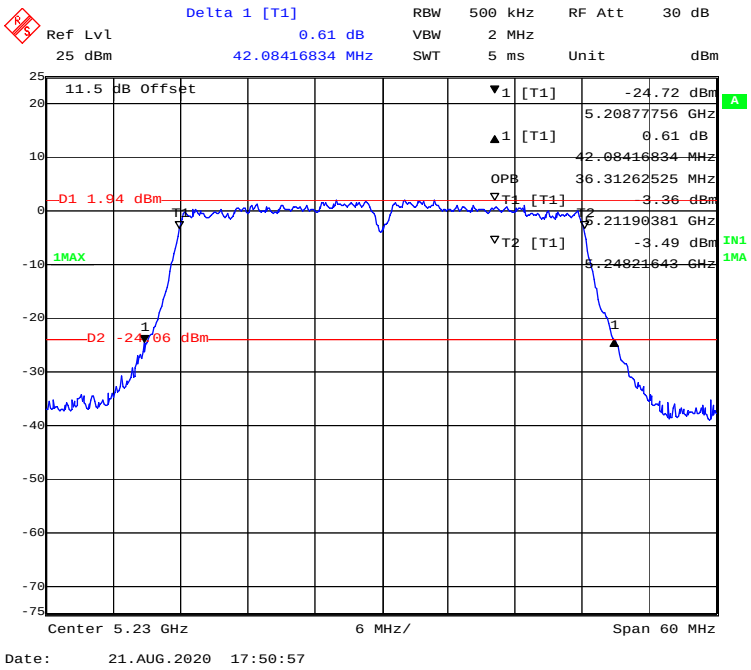
802.11ac40 mode, 5230MHz



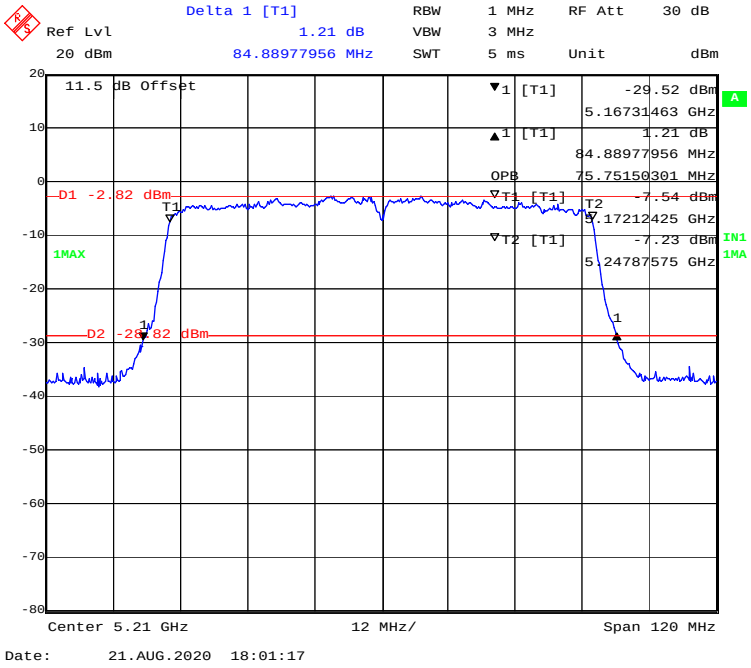
802.11n-HT40 mode, 5190MHz



802.11n-HT40 mode, 5230MHz



802.11ac80 mode, 5210MHz

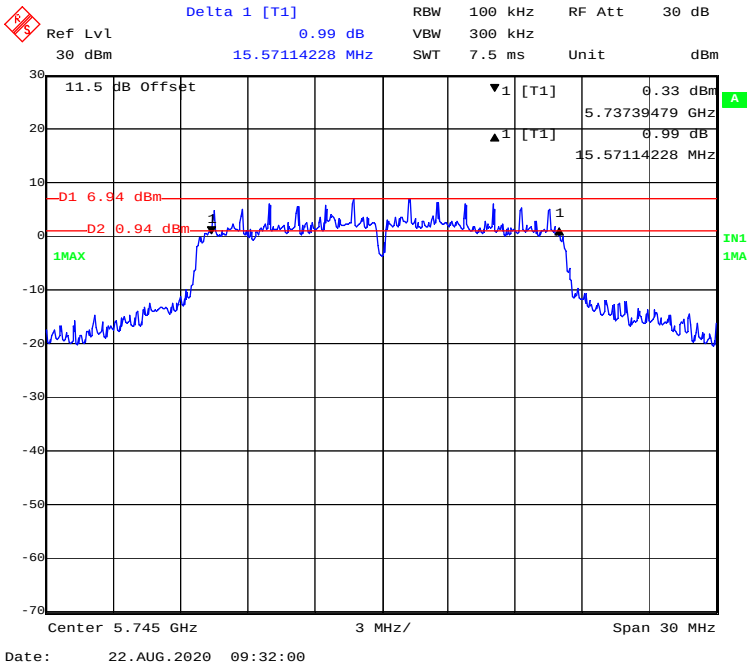


5725-5850 MHz Band

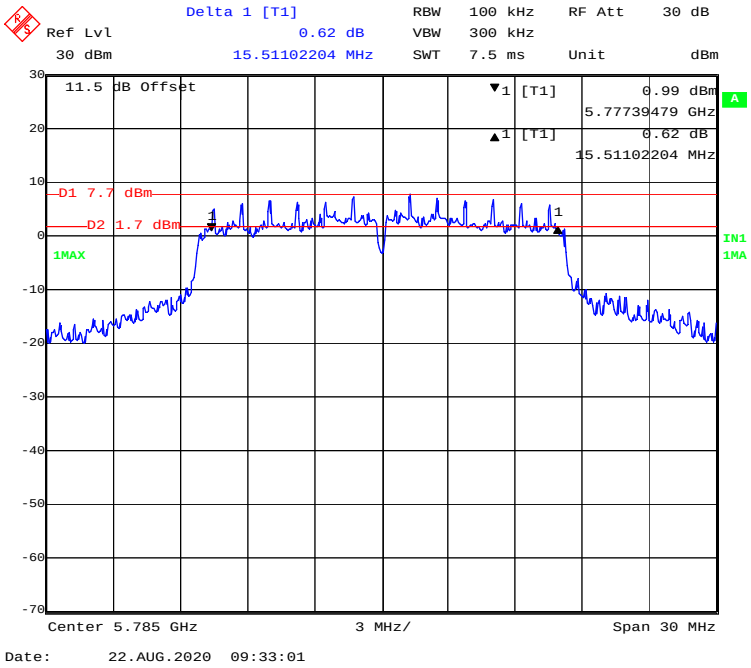
Chain0:

6 Bandwidth

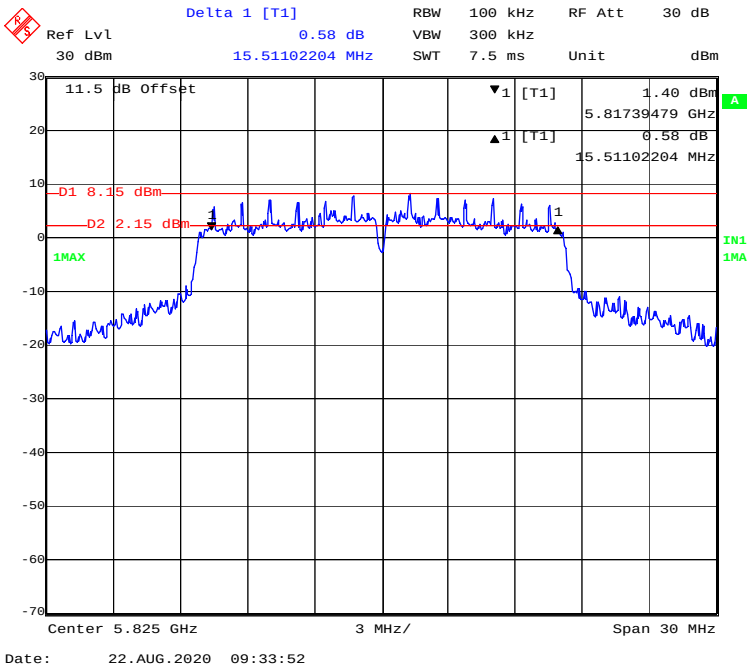
802.11a mode, 5745MHz



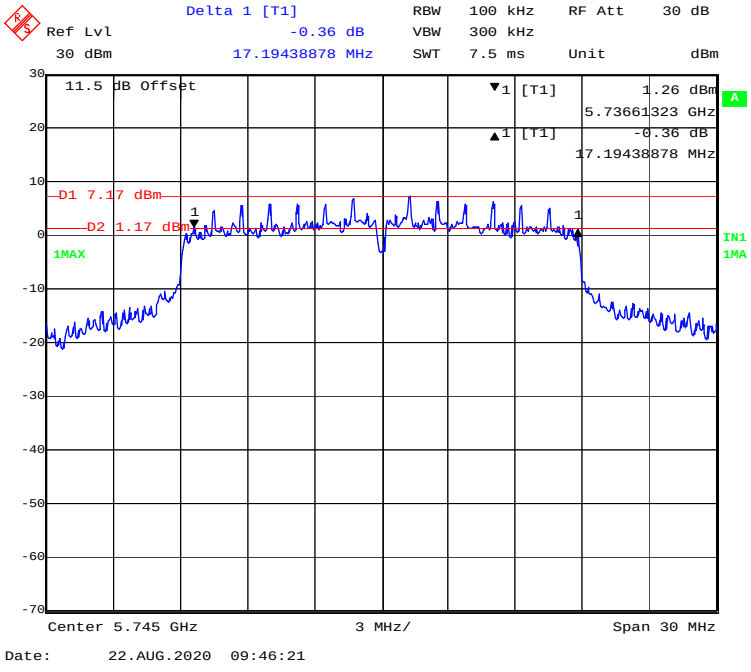
802.11a mode, 5785MHz



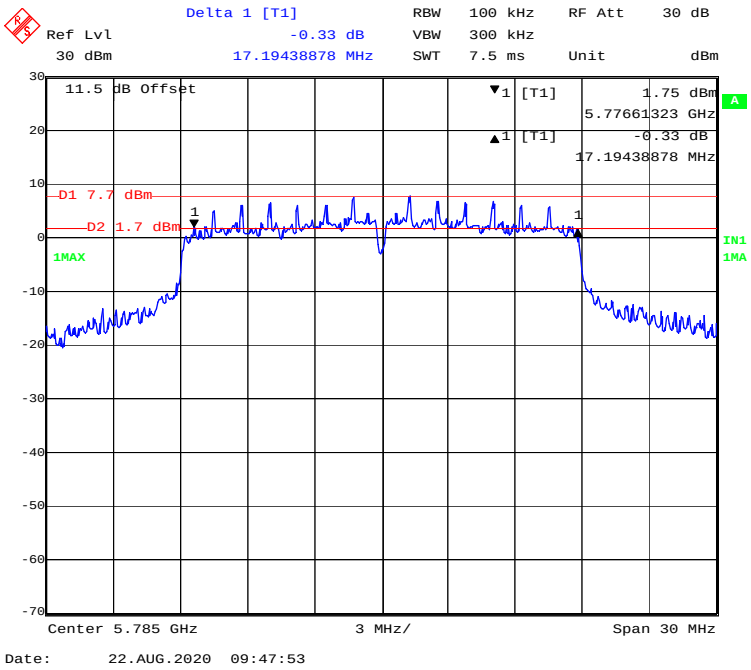
802.11a mode, 5825MHz



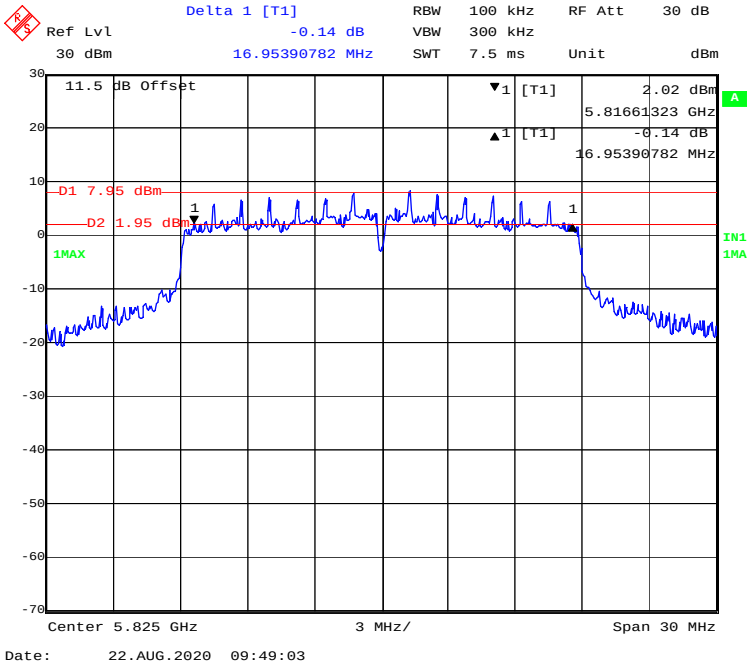
802.11ac20 mode, 5745MHz



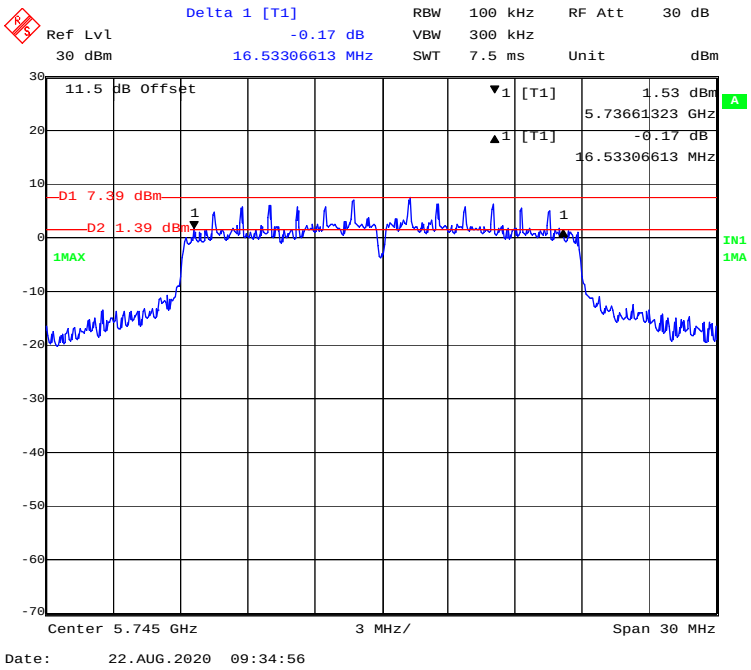
802.11ac20 mode, 5785MHz



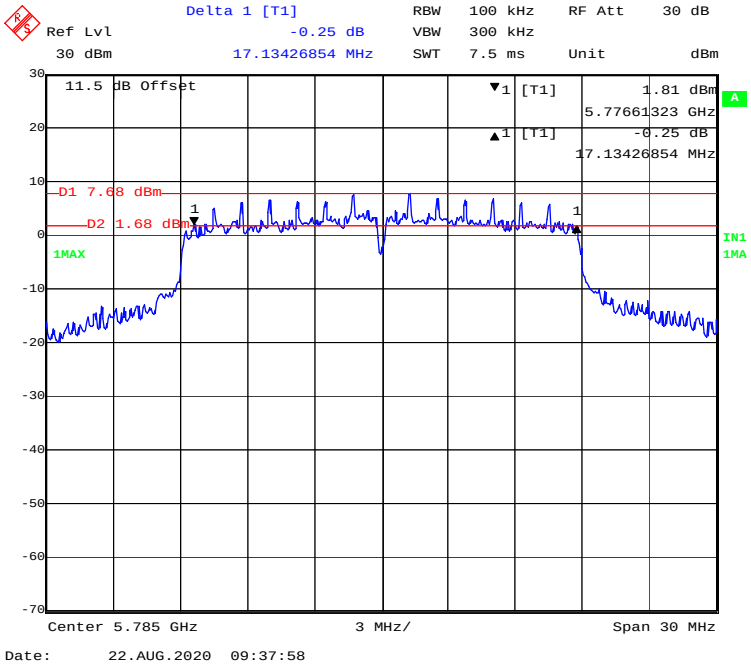
802.11ac20 mode, 5825MHz



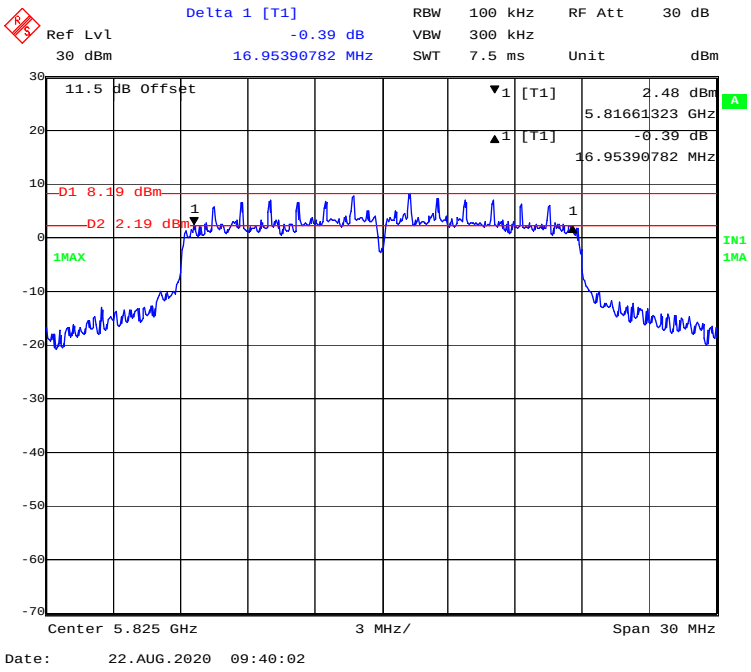
802.11n-HT20 mode, 5745MHz



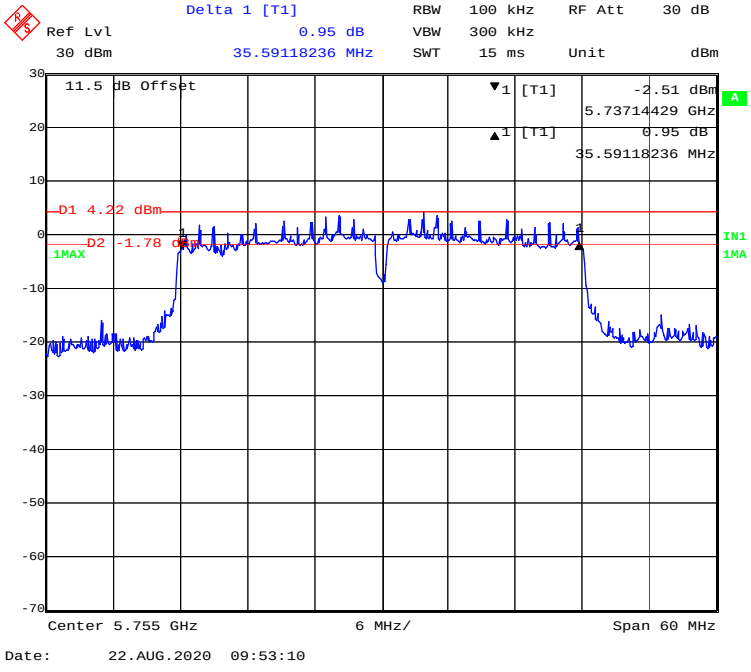
802.11n-HT20 mode, 5785MHz



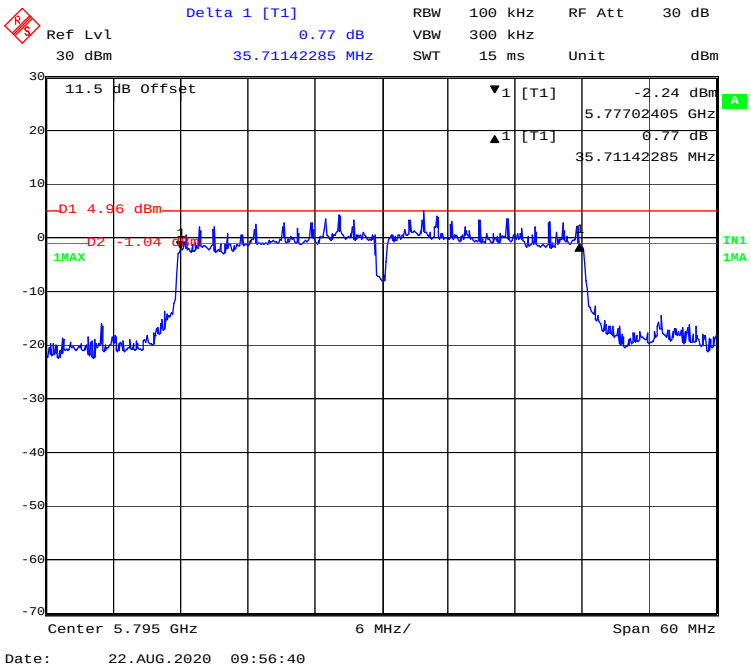
802.11n-HT20 mode, 5825MHz



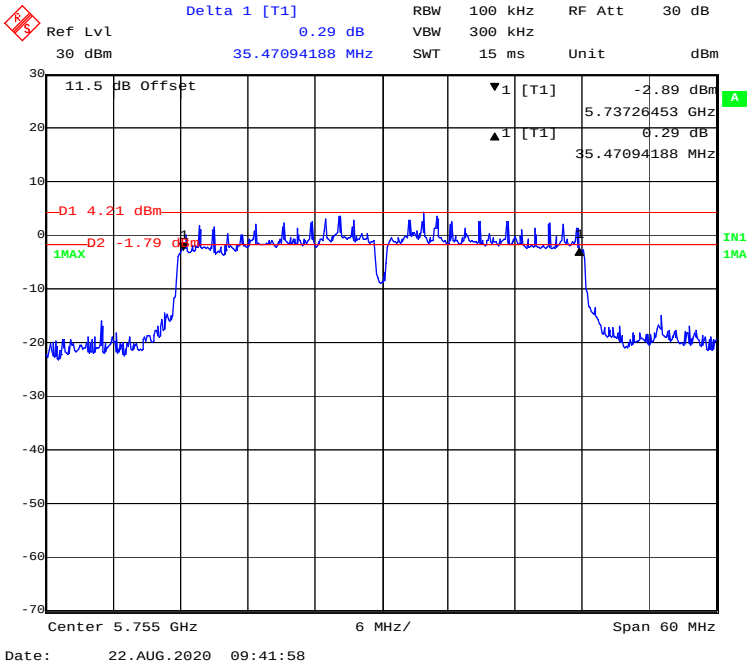
802.11ac40 mode, 5755MHz



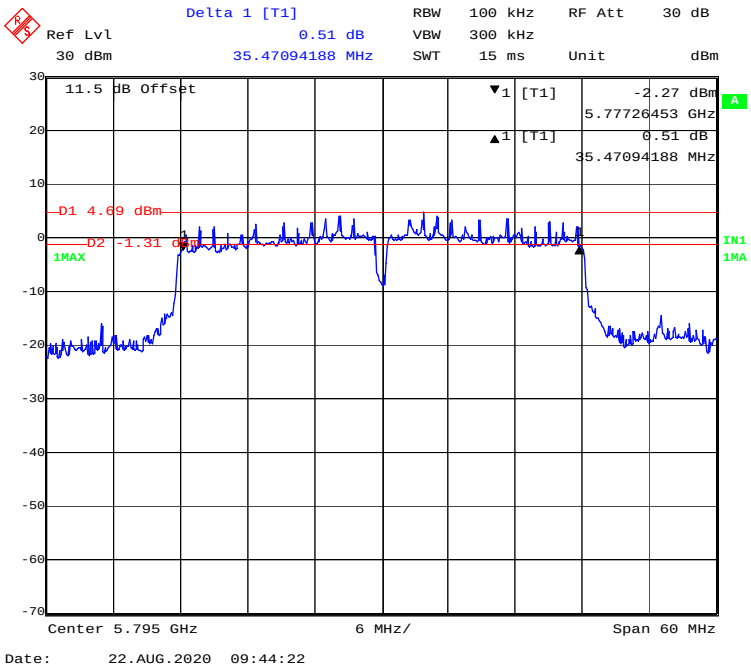
802.11ac40 mode, 5795MHz



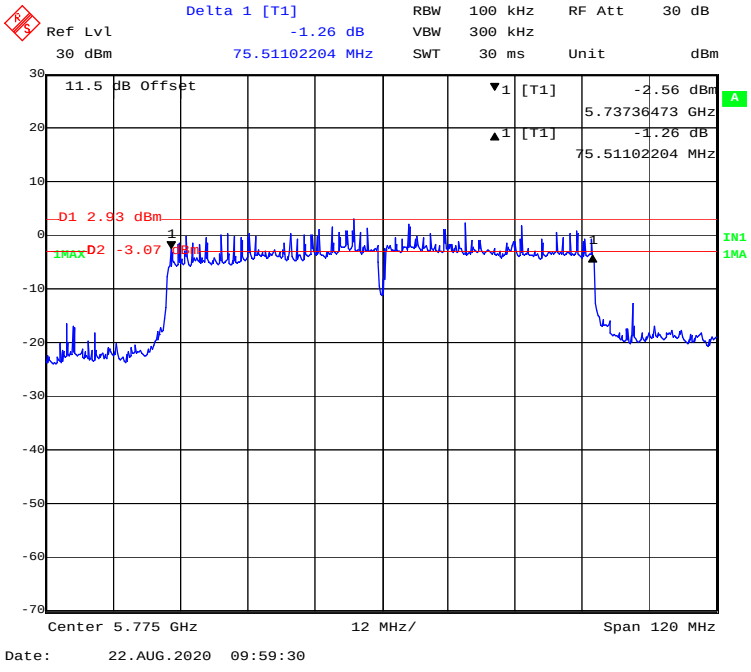
802.11n-HT40 mode, 5755MHz



802.11n-HT40 mode, 5795MHz



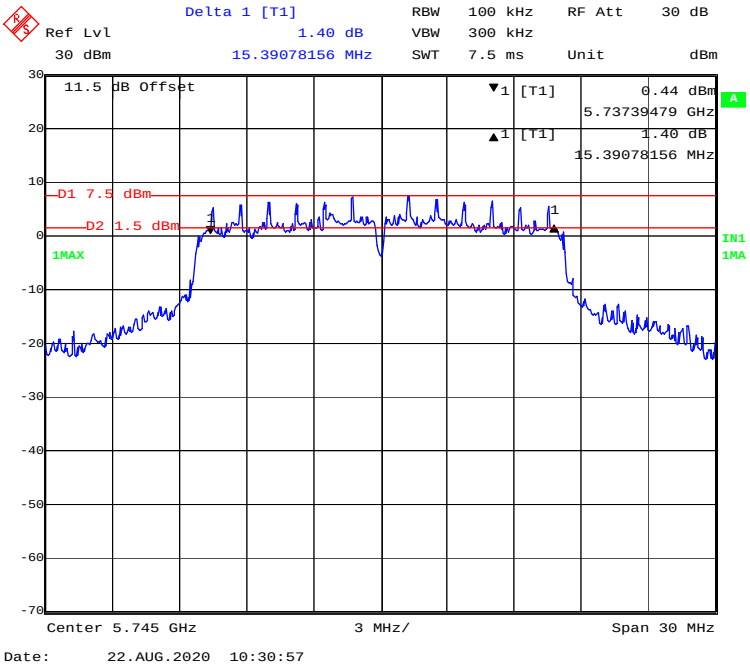
802.11ac80 mode, 5775MHz



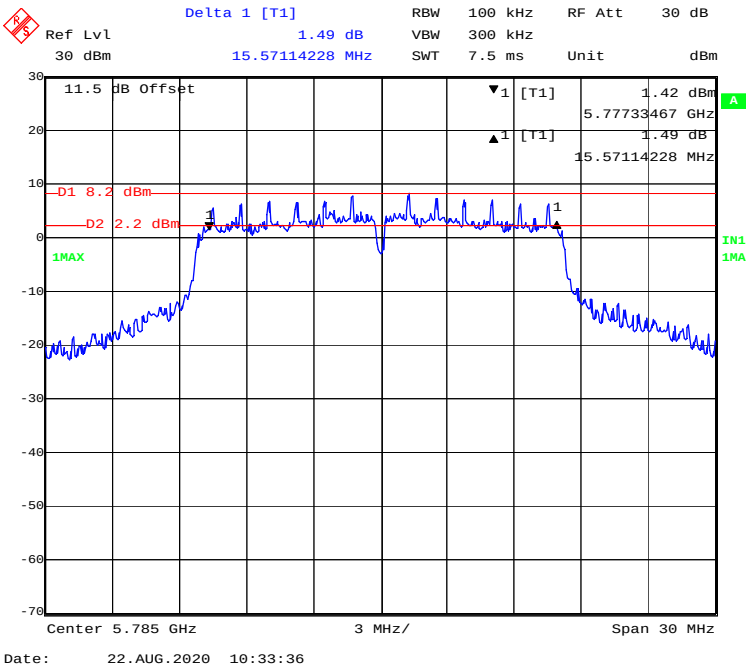
Chain1:

6 Bandwidth

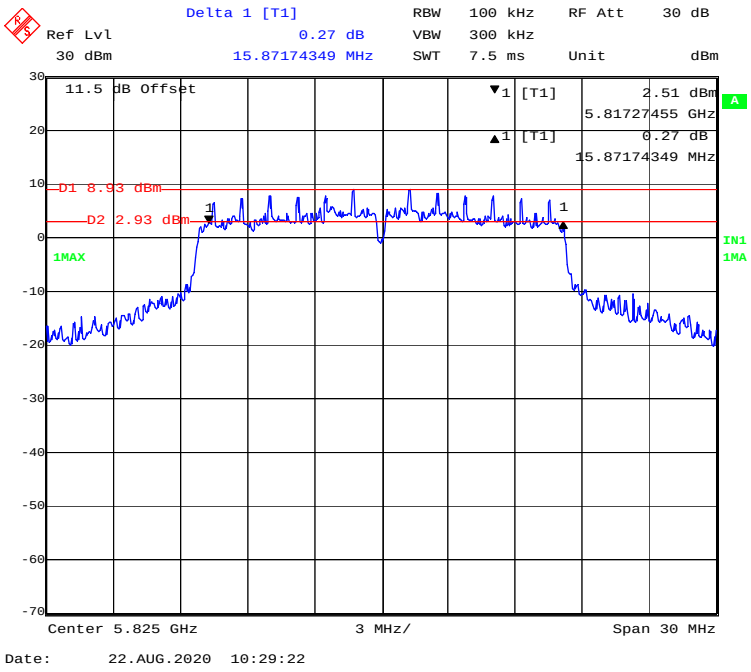
802.11a mode, 5745MHz



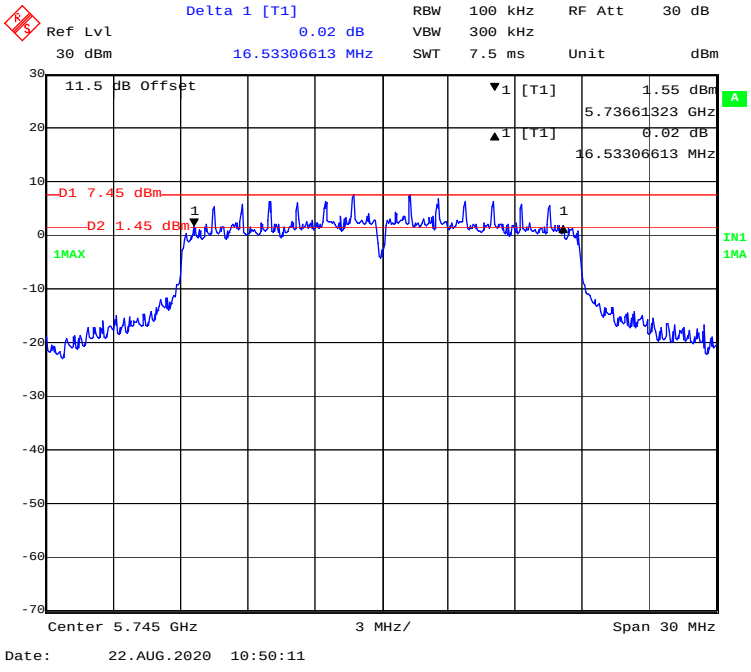
802.11a mode, 5785MHz



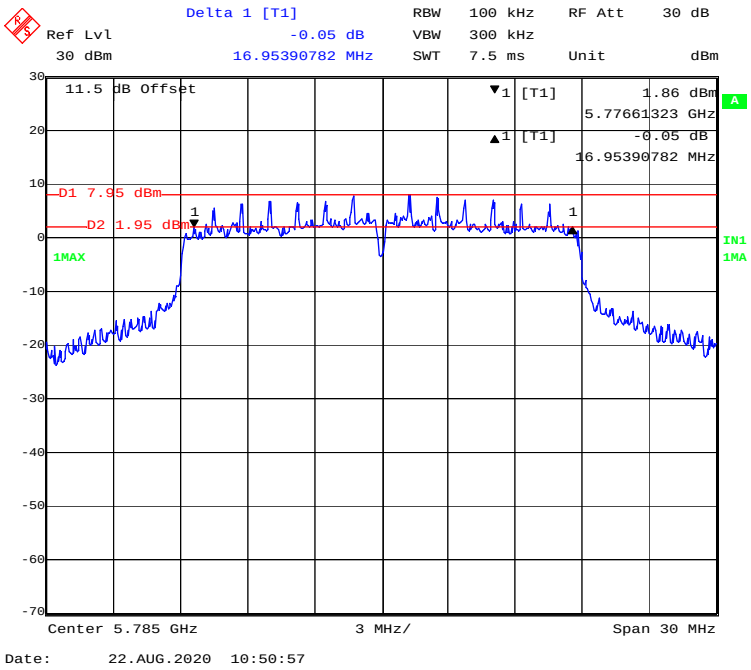
802.11a mode, 5825MHz



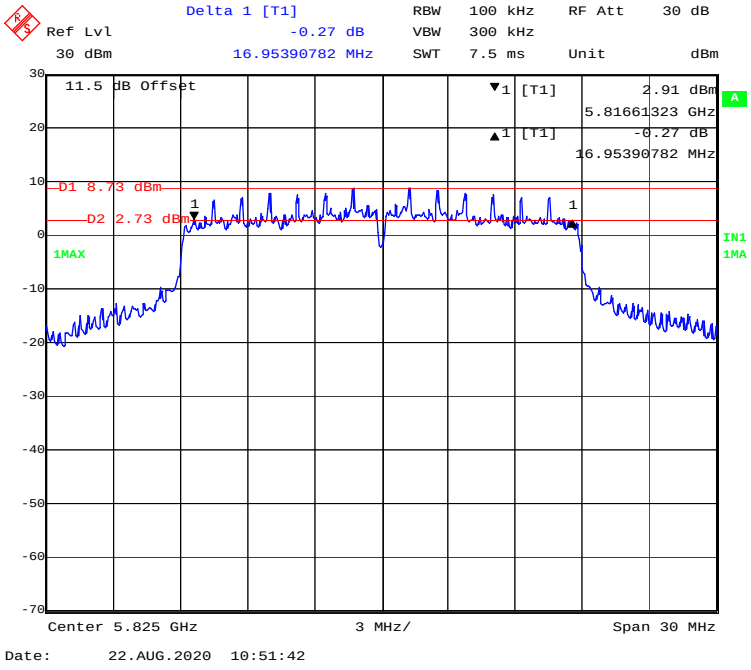
802.11ac20 mode, 5745MHz



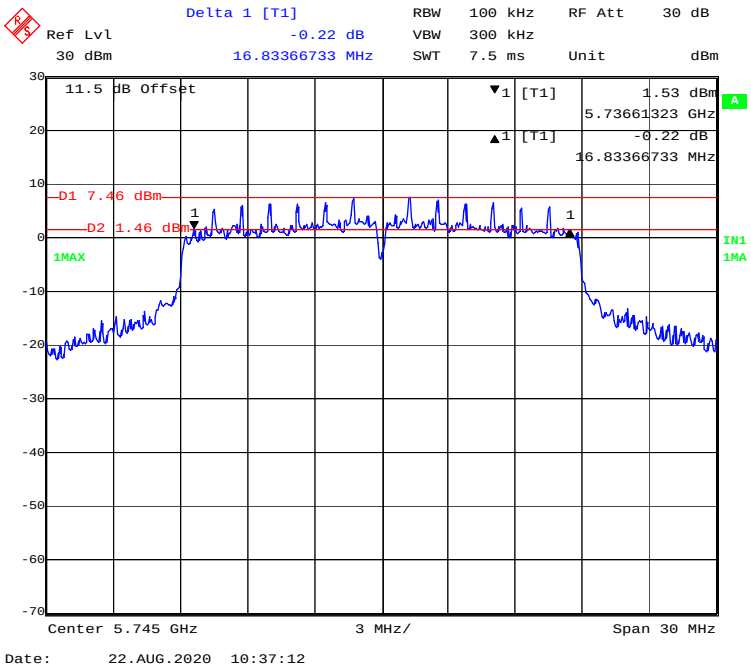
802.11ac20 mode, 5785MHz



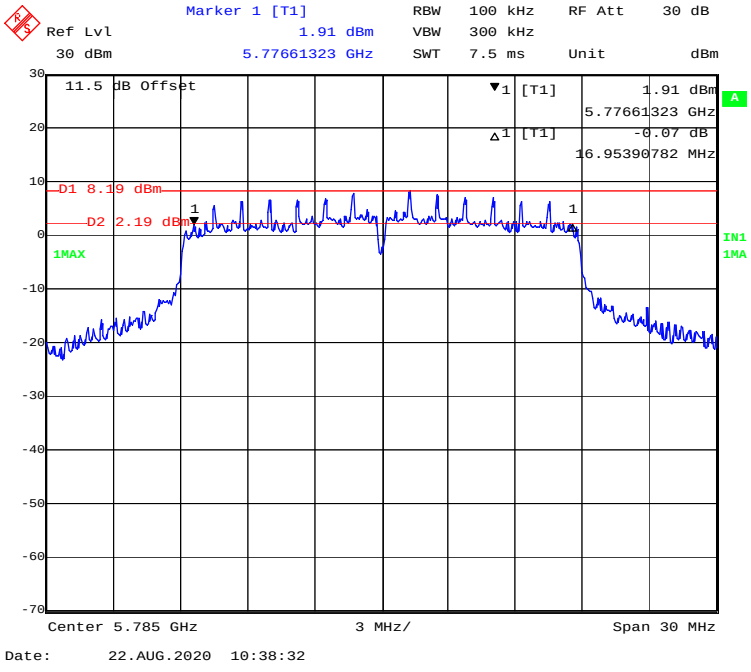
802.11ac20 mode, 5825MHz



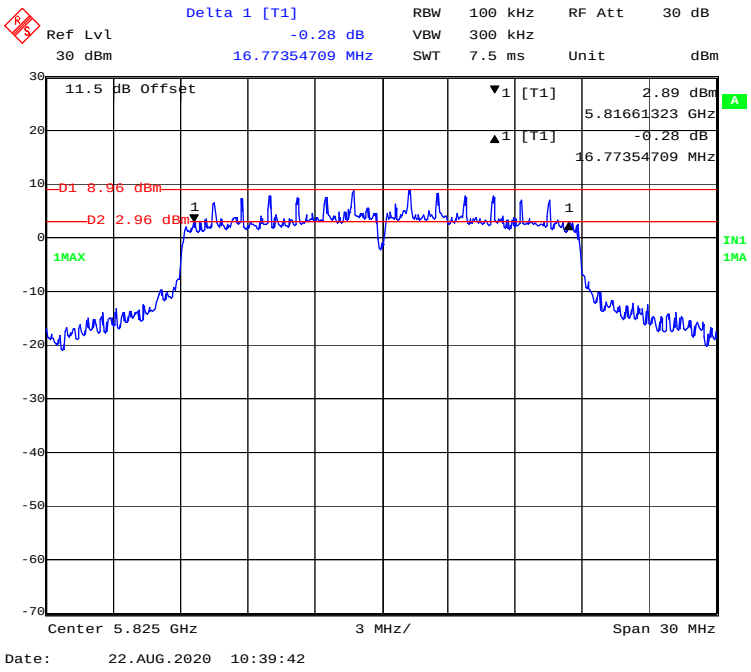
802.11n-HT20 mode, 5745MHz



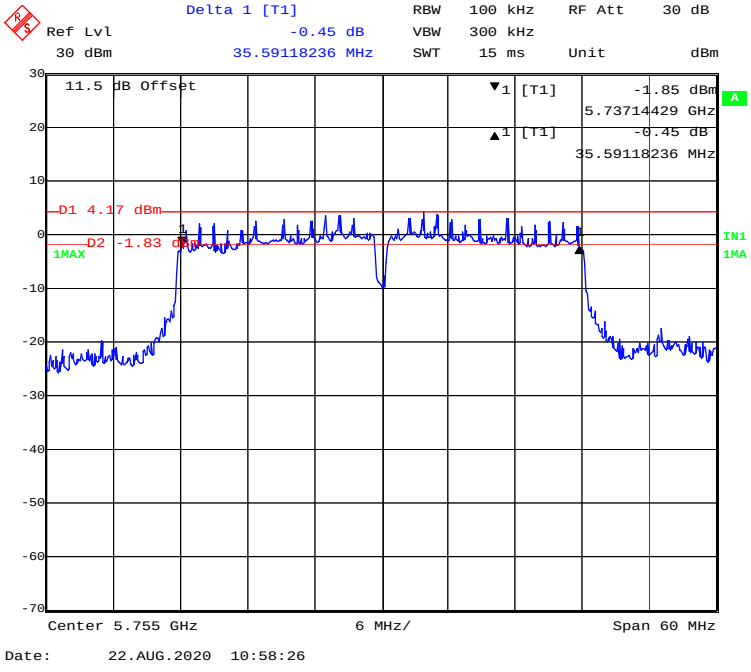
802.11n-HT20 mode, 5785MHz



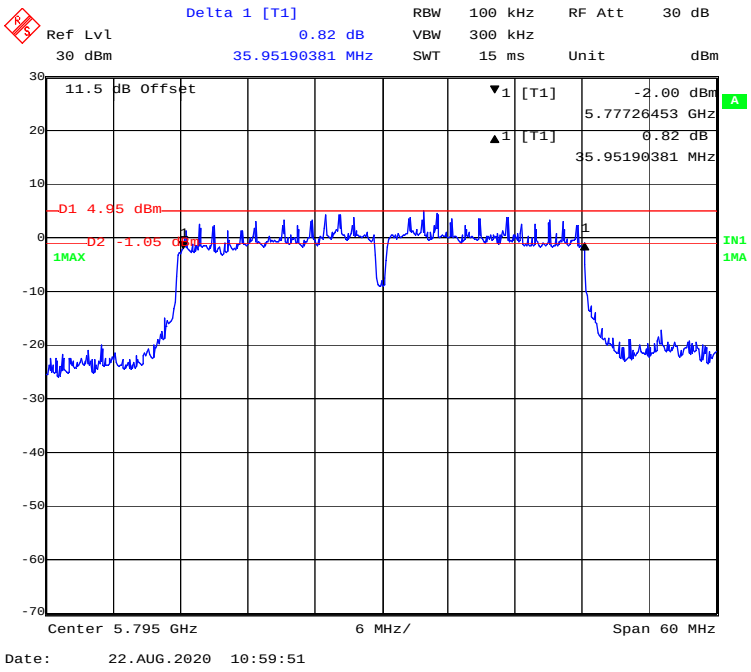
802.11n-HT20 mode, 5825MHz



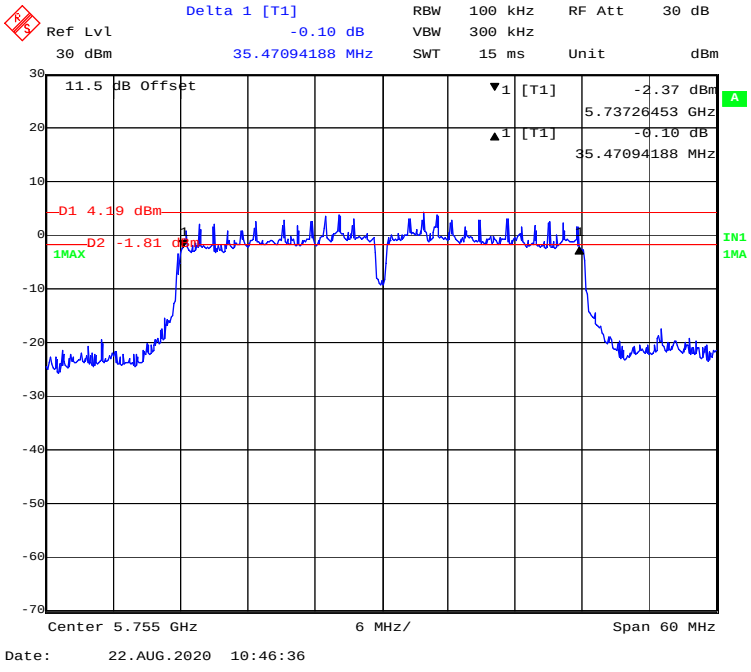
802.11ac40 mode, 5755MHz



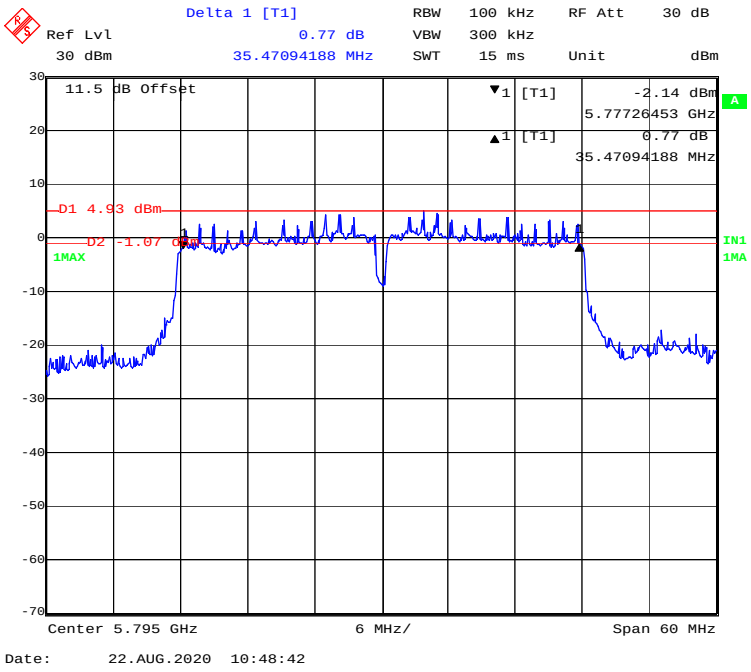
802.11ac40 mode, 5795MHz



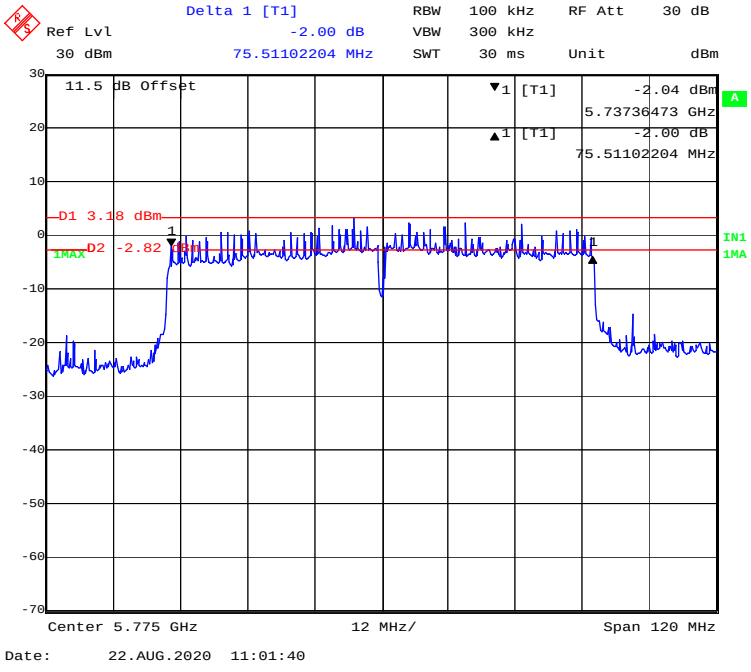
802.11n-HT40 mode, 5755MHz



802.11n-HT40 mode, 5795MHz



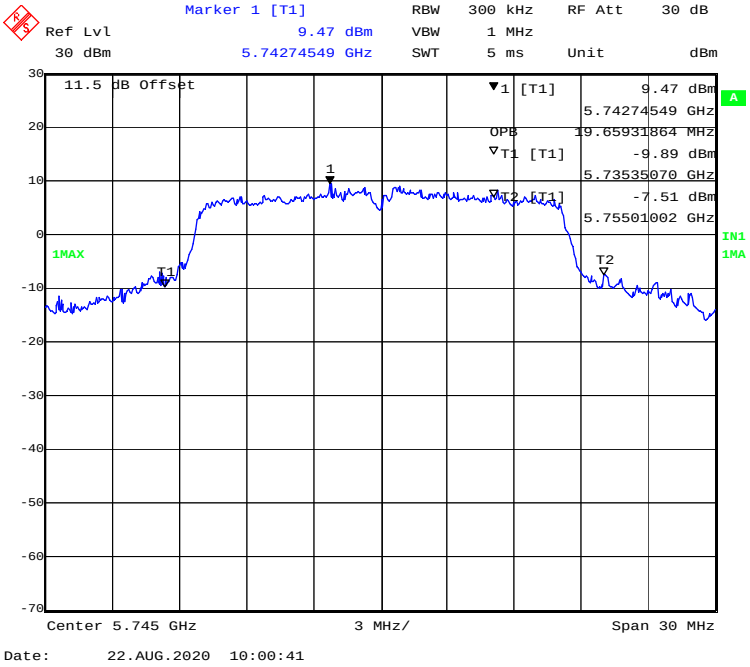
802.11ac80 mode, 5775MHz



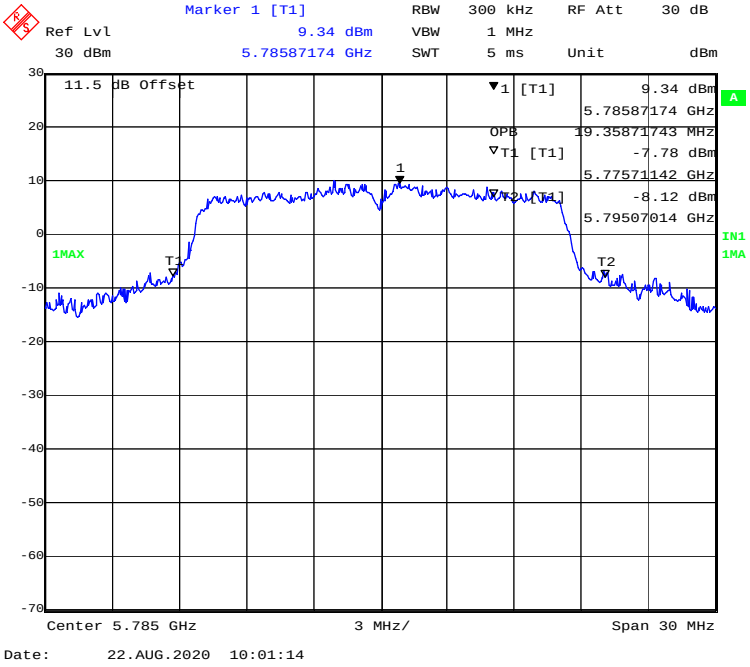
Chain0

99% Occupied Bandwidth

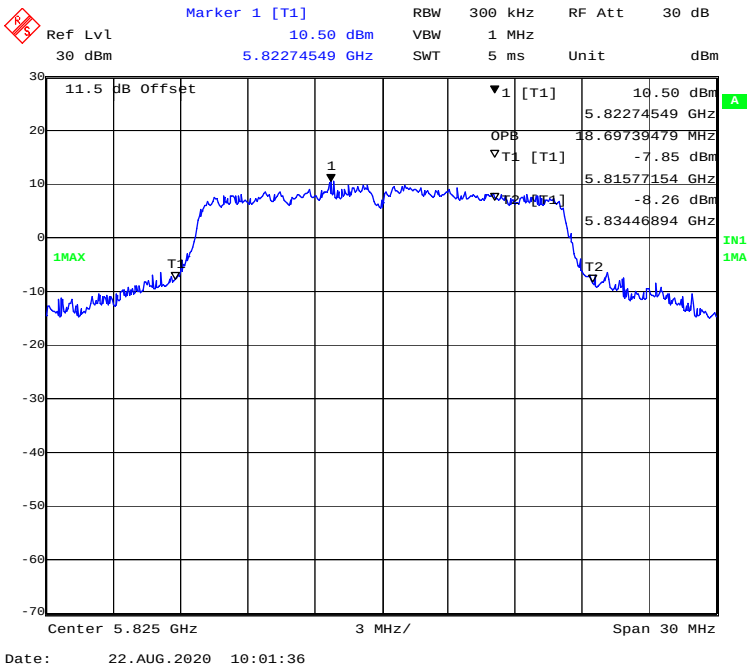
802.11a mode, 5745MHz



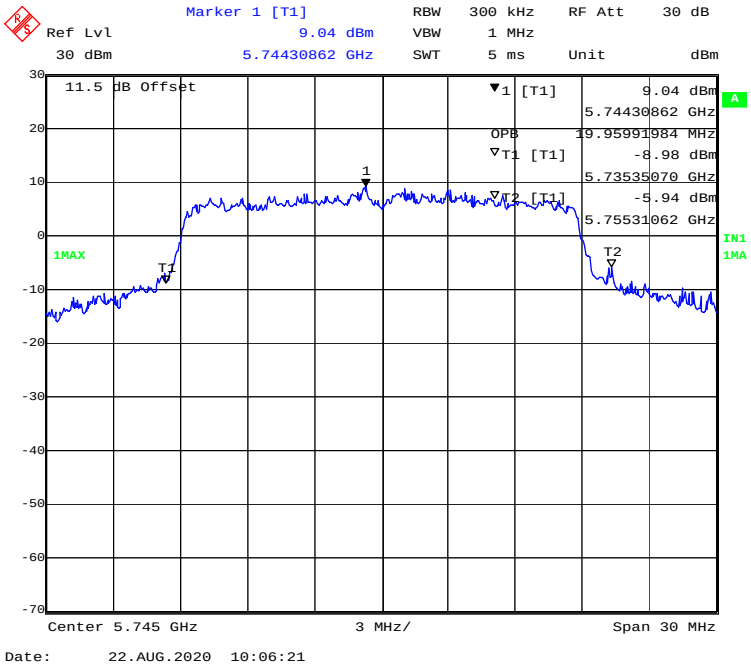
802.11a mode, 5785MHz



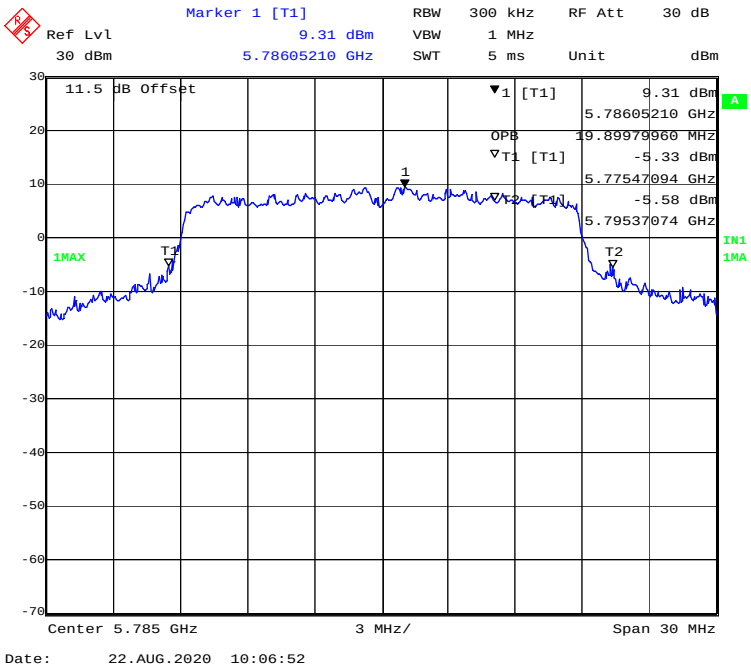
802.11a mode, 5825MHz



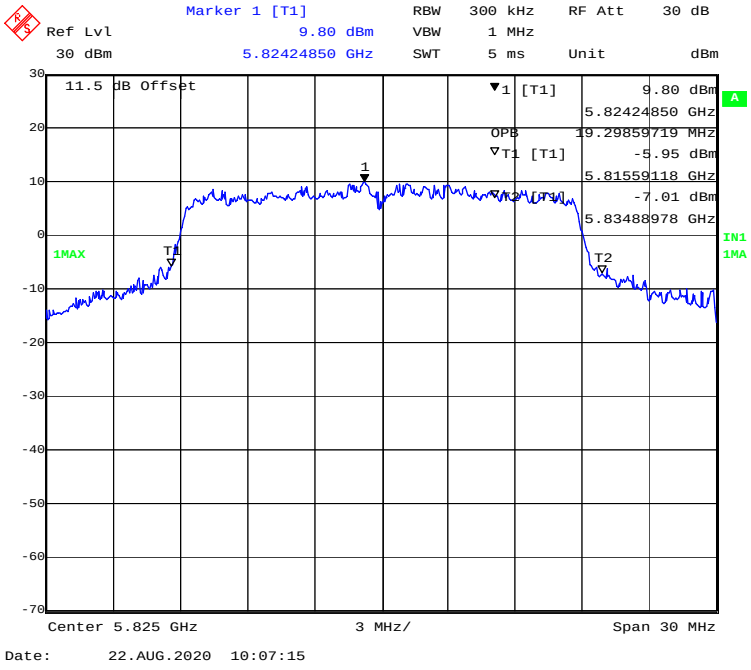
802.11ac20 mode, 5745MHz



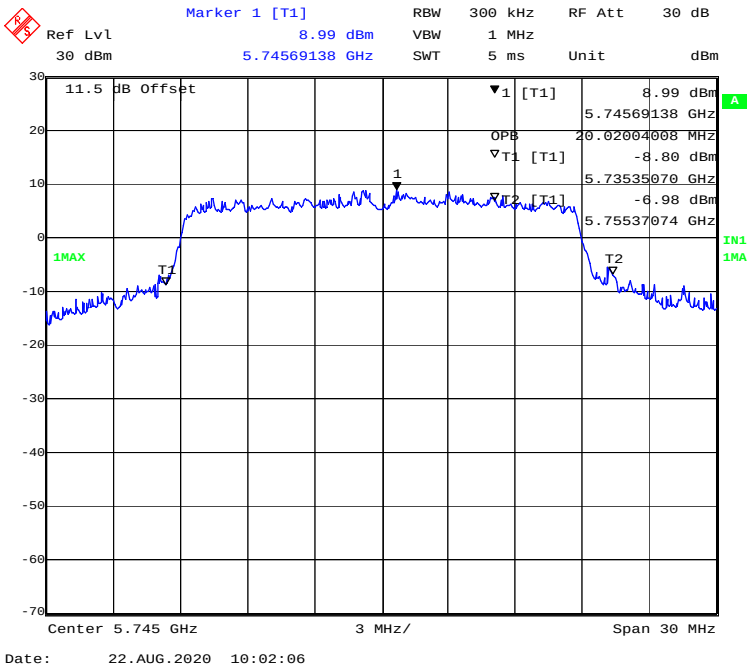
802.11ac20 mode, 5785MHz



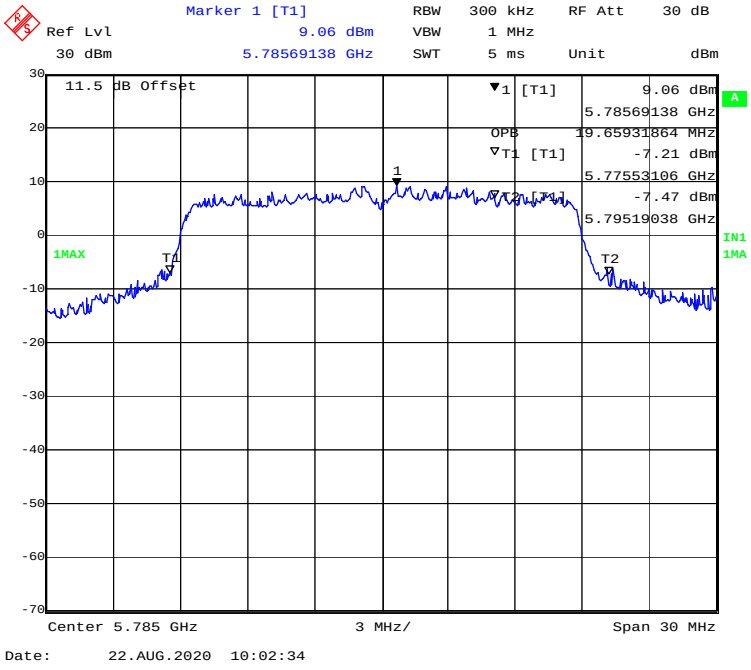
802.11ac20 mode, 5825MHz



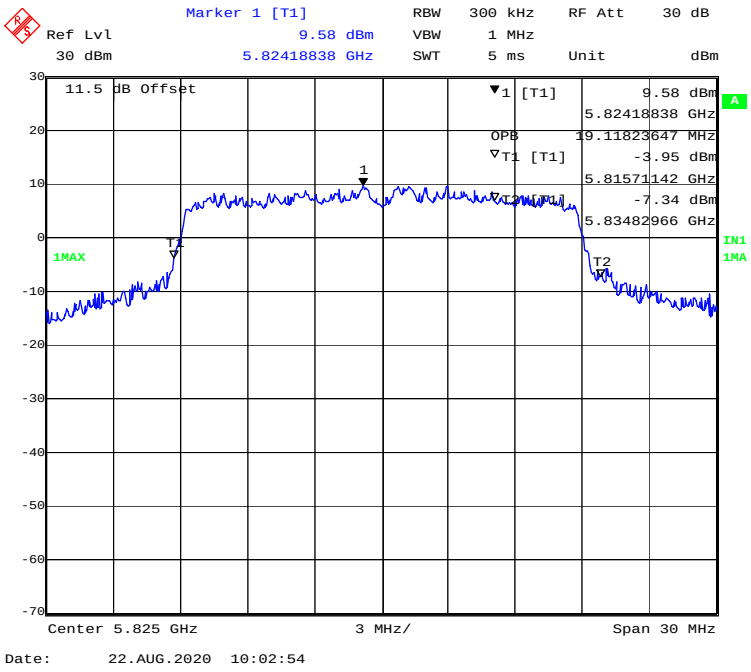
802.11n-HT20 mode, 5745MHz



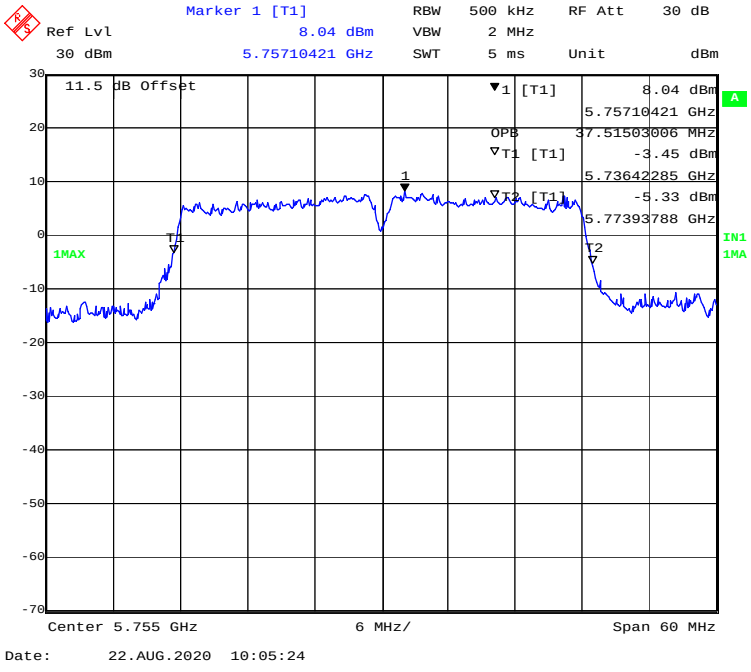
802.11n-HT20 mode, 5785MHz



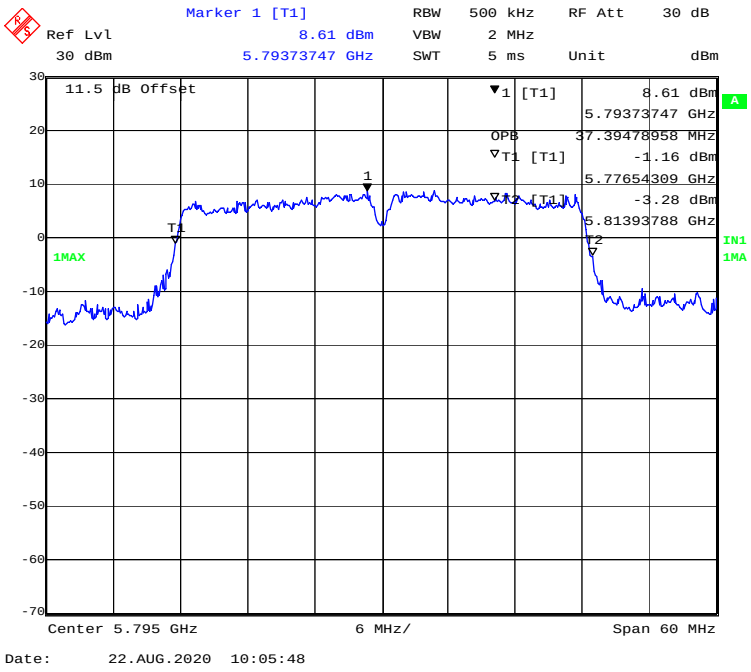
802.11n-HT20 mode, 5825MHz



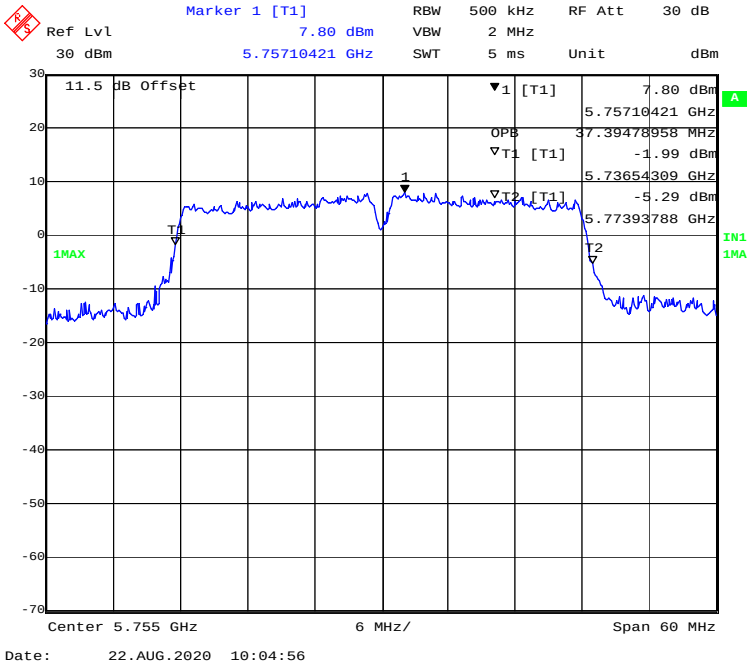
802.11ac40 mode, 5755MHz



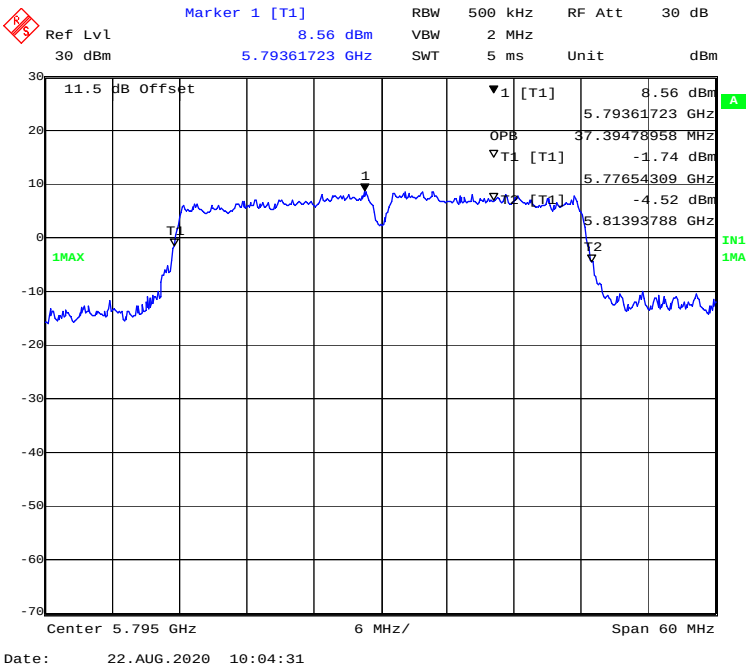
802.11ac40 mode, 5795MHz



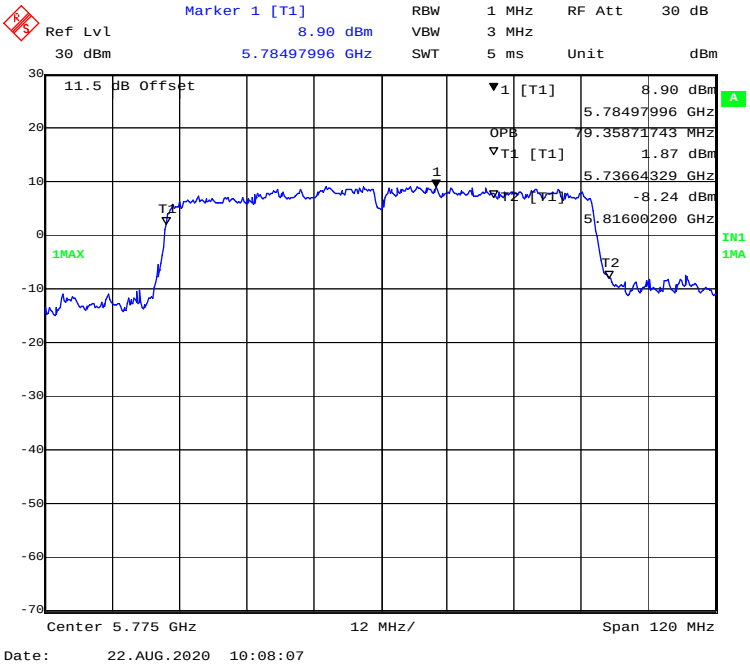
802.11n-HT40 mode, 5755MHz



802.11n-HT40 mode, 5795MHz



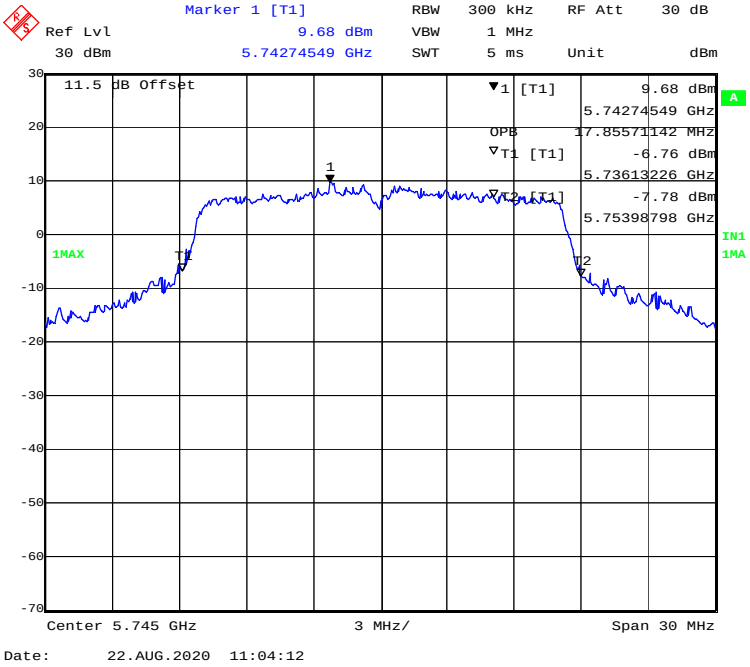
802.11n-ac80 mode, 5775MHz



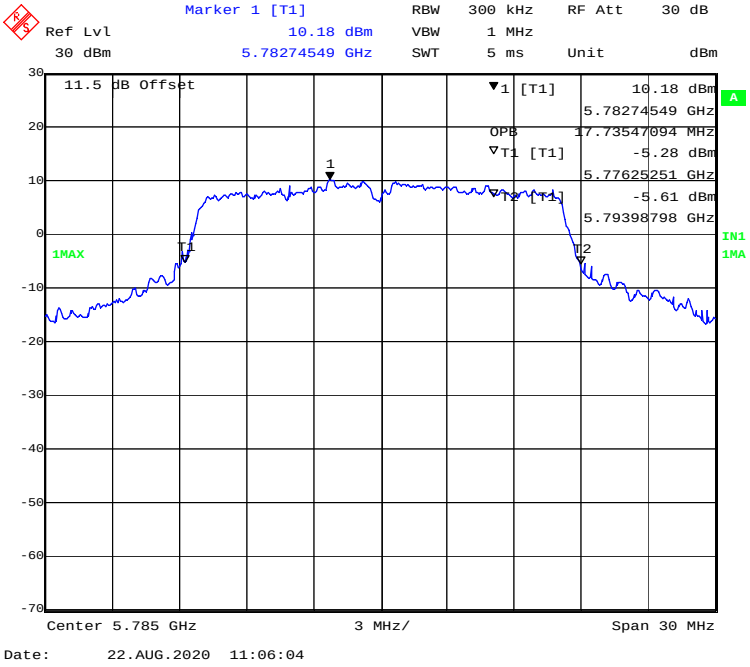
Chain1

99% Occupied Bandwidth

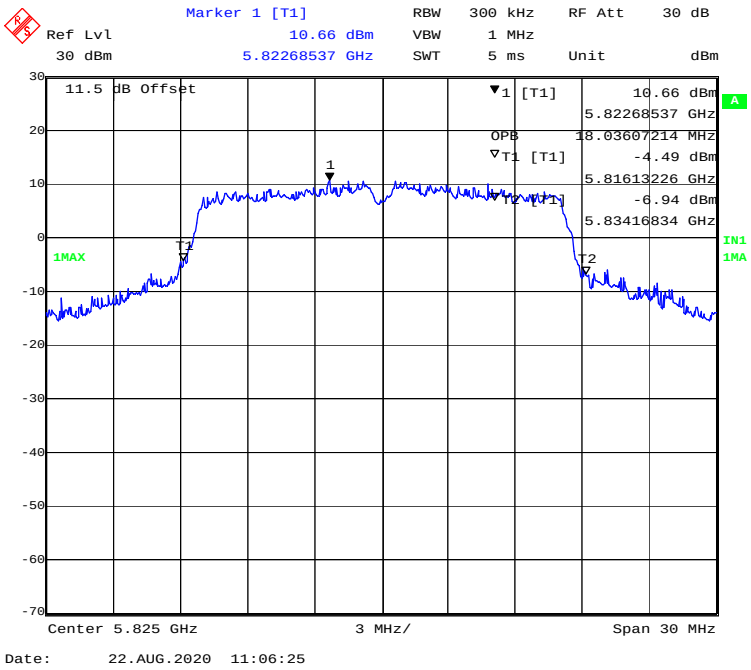
802.11a mode, 5745MHz



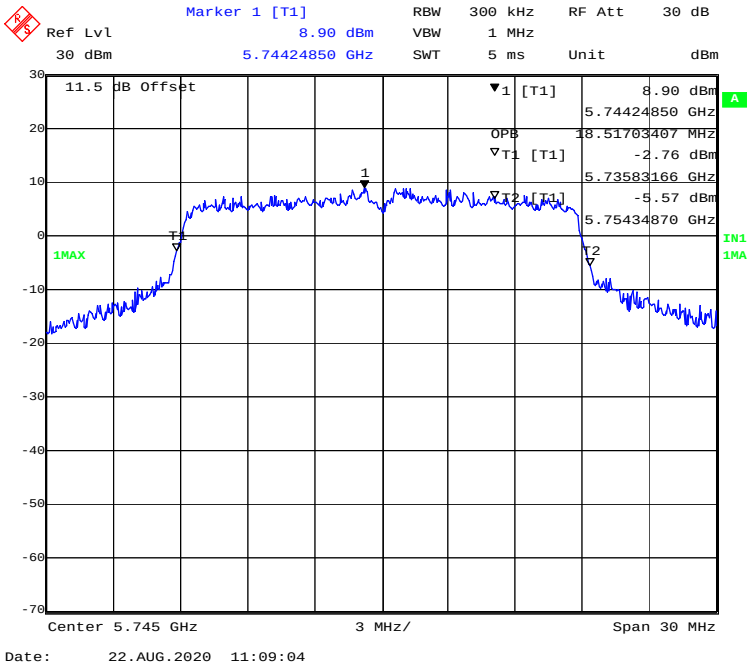
802.11a mode, 5785MHz



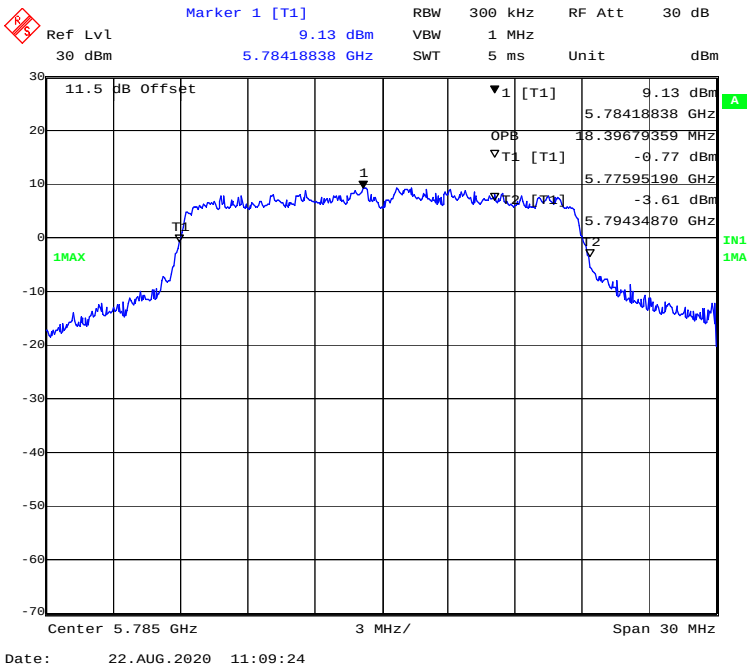
802.11a mode, 5825MHz



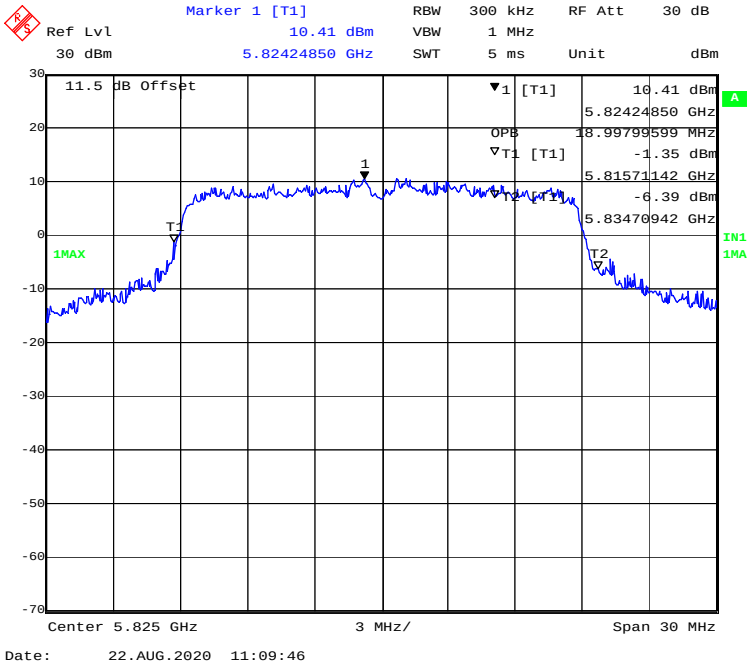
802.11ac20 mode, 5745MHz



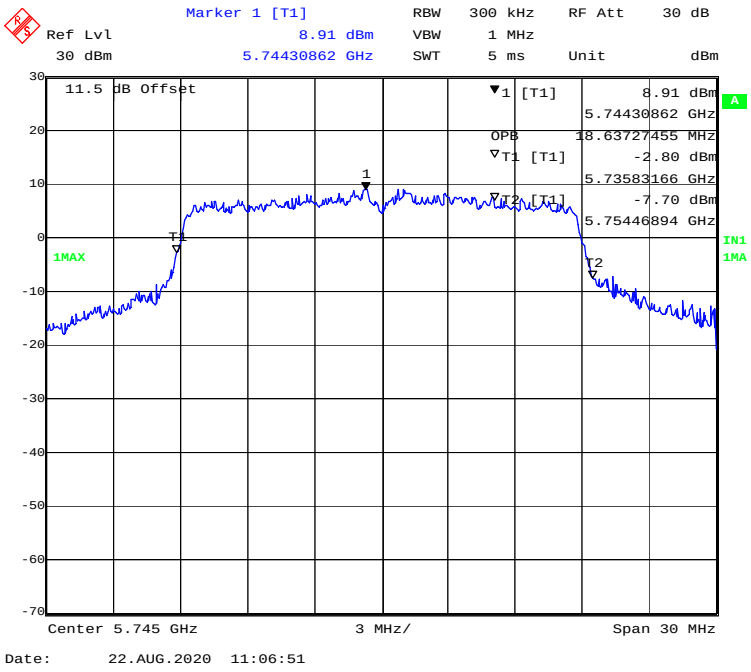
802.11ac20 mode, 5785MHz



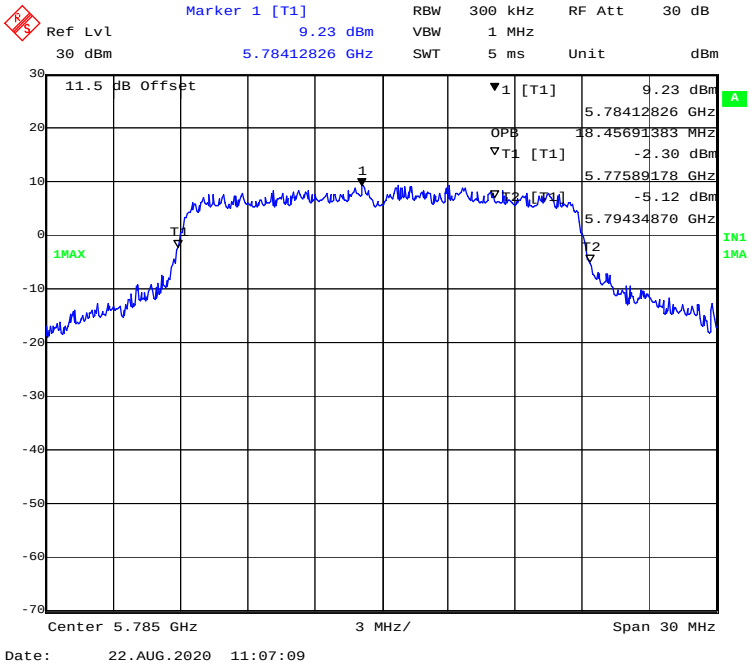
802.11ac20 mode, 5825MHz



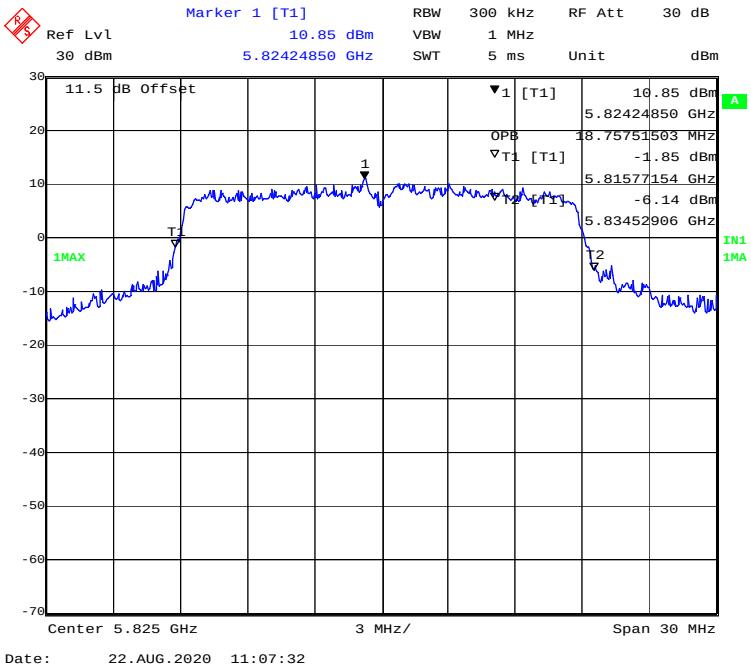
802.11n-HT20 mode, 5745MHz



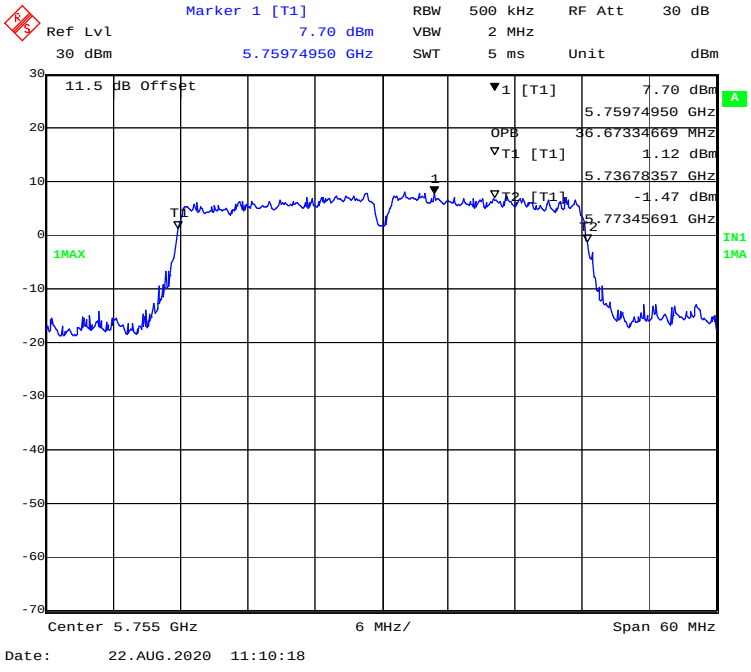
802.11n-HT20 mode, 5785MHz



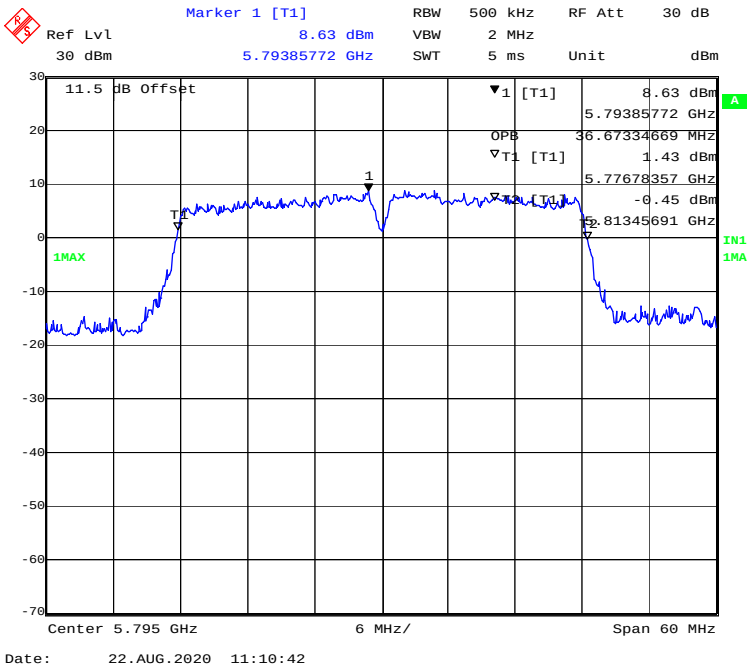
802.11n-HT20 mode, 5825MHz



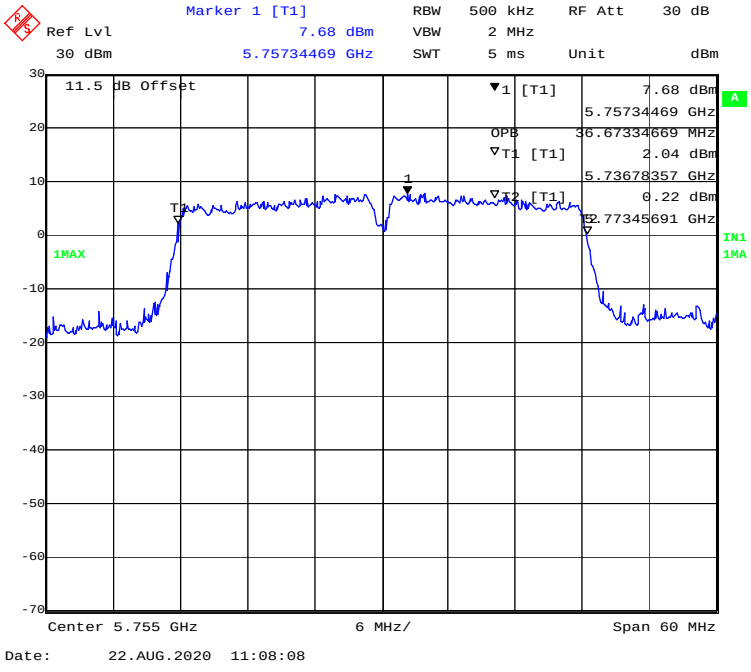
802.11ac40 mode, 5755MHz



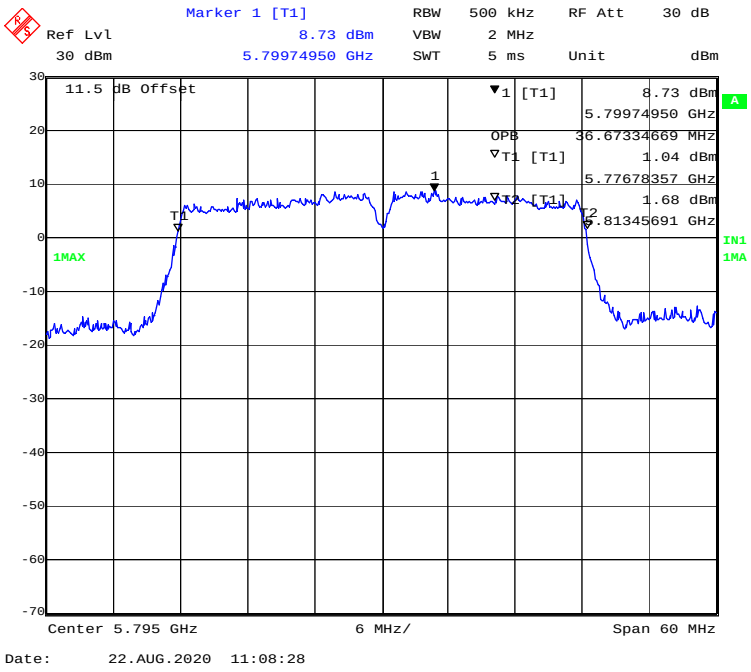
802.11ac40 mode, 5795MHz



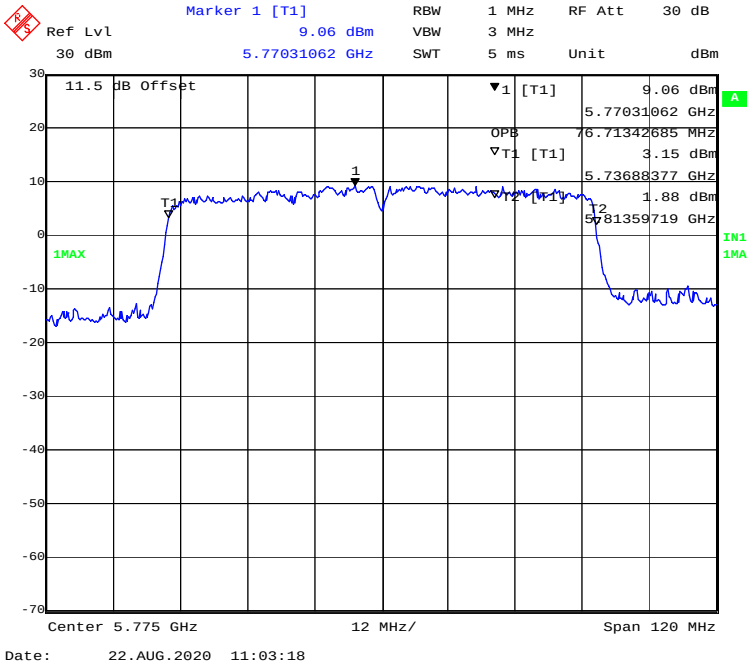
802.11n-HT40 mode, 5755MHz



802.11n-HT40 mode, 5795MHz



802.11n-ac80 mode, 5775MHz



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

Applicable Standard

According to §15.407(a)(1)

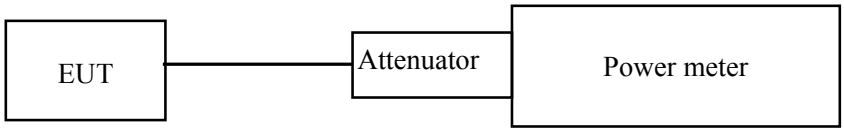
(iv) For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. 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) (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:	24.8℃
Relative Humidity:	50%
ATM Pressure:	101.5 kPa

The testing was performed by CK Huang on 2020-08-22.

Test Mode: Transmitting

Test Mode: Transmitting

Test mode	Band	Channel	Frequency (MHz)	Average Conducted Output Power (dBm)			Limit	Result
				Chain0	Chain1	Total	(dBm)	
802.11a	5150-5250 MHz	Low	5180	18.36	17.84	/	24	PASS
		Middle	5200	18.17	17.30	/	24	PASS
		High	5240	17.68	17.15	/	24	PASS
	5725-5850 MHz	Low	5745	17.83	17.67	/	30	PASS
		Middle	5785	18.12	18.19	/	30	PASS
		High	5825	18.46	18.93	/	30	PASS
802.11n-HT20	5150-5250 MHz	Low	5180	18.49	17.49	21.03	24	PASS
		Middle	5200	18.16	17.35	20.78	24	PASS
		High	5240	17.66	17.16	20.43	24	PASS
	5725-5850 MHz	Low	5745	17.79	17.94	20.88	30	PASS
		Middle	5785	18.17	18.37	21.28	30	PASS
		High	5825	18.66	19.21	21.95	30	PASS
802.11n-HT40	5150-5250 MHz	Low	5190	12.74	11.99	15.39	24	PASS
		High	5230	12.24	11.85	15.06	24	PASS
	5725-5850 MHz	Low	5755	17.99	17.84	20.93	30	PASS
		High	5795	18.55	18.47	21.52	30	PASS
802.11ac20	5150-5250 MHz	Low	5180	18.34	17.47	20.94	24	PASS
		Middle	5200	18.16	17.24	20.73	24	PASS
		High	5240	17.62	17.18	20.42	24	PASS
	5725-5850 MHz	Low	5745	17.84	18.07	20.97	30	PASS
		Middle	5785	18.14	18.39	21.28	30	PASS
		High	5825	18.56	19.28	21.95	30	PASS
802.11ac40	5150-5250 MHz	Low	5190	12.74	11.95	15.37	24	PASS
		High	5230	12.13	11.80	14.98	24	PASS
	5725-5850 MHz	Low	5755	17.93	17.99	20.97	30	PASS
		High	5795	18.39	18.48	21.45	30	PASS
802.11ac80	5150-5250 MHz	/	5210	8.77	6.47	10.78	24	PASS
	5725-5850 MHz	/	5775	18.44	18.31	21.39	30	PASS

Note 1: The total output power=10Log10(10^(Chain0/10)+10^(Chain1/10))
Note 2: The maximum antenna gain is 1.57dBi(Band 1) and 0.05 dBi(Band 4), the device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power measurements on IEEE 802.11 devices:
Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;
So:
Directional gain = G_{ANT} + Array Gain = 1.57dBi < 6dBi

FCC §15.407(a) (1) (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) (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 Procedures 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:	23.1-24.8 ℃
Relative Humidity:	49-54 %
ATM Pressure:	101.1-101.5 kPa

The testing was performed by CK Huang from 2020-08-21 to 2020-11-04.

Test Mode: Transmitting

5150MHz-5250MHz:

Mode	Channel	Frequency (MHz)	PSD (dBm/MHz)			Limit (dBm/MHz)	Result
			Chain0	Chain1	Total		
802.11a	Low	5180	8.83	7.85	/	11	PASS
	Middle	5200	8.49	7.66	/	11	PASS
	High	5240	7.78	7.41	/	11	PASS
802.11ac20	Low	5180	8.02	7.84	10.94	11	PASS
	Middle	5200	7.94	7.68	10.82	11	PASS
	High	5240	7.84	7.57	10.72	11	PASS
802.11n20	Low	5180	7.84	7.85	10.86	11	PASS
	Middle	5200	7.99	7.60	10.81	11	PASS
	High	5240	7.69	7.67	10.69	11	PASS
802.11ac40	Low	5190	-0.52	-1.61	1.98	11	PASS
	High	5230	-1.07	-1.74	1.62	11	PASS
802.11n40	Low	5190	-0.71	-1.39	1.97	11	PASS
	High	5230	-1.01	-1.45	1.79	11	PASS
802.11ac80	/	5210	-7.20	-9.55	-5.21	11	PASS

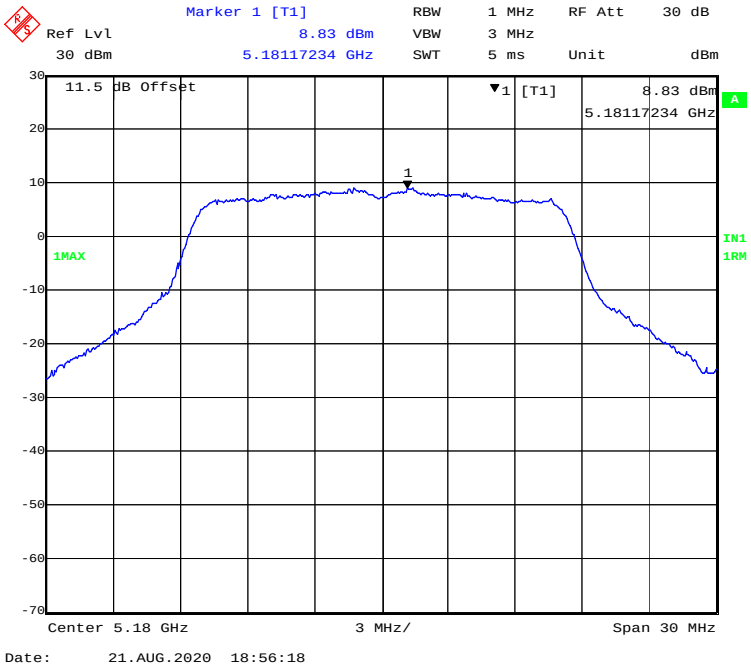
5725MHz-5850MHz:

Mode	Channel	Frequency (MHz)	PSD (dBm/500kHz)			Limit (dBm/500kHz)	Result
			Chain0	Chain1	Total		
802.11a	Low	5745	7.06	7.07	/	30	PASS
	Middle	5785	7.38	7.62	/	30	PASS
	High	5825	7.99	7.99	/	30	PASS
802.11ac20	Low	5745	7.42	7.50	10.47	30	PASS
	Middle	5785	7.70	8.25	10.99	30	PASS
	High	5825	8.40	8.41	11.42	30	PASS
802.11n20	Low	5745	7.48	7.14	10.32	30	PASS
	Middle	5785	7.98	7.95	10.98	30	PASS
	High	5825	8.66	8.41	11.55	30	PASS
802.11ac40	Low	5755	3.95	3.93	6.95	30	PASS
	High	5795	4.33	4.57	7.46	30	PASS
802.11n40	Low	5755	3.93	4.08	7.02	30	PASS
	High	5795	4.10	4.67	7.4	30	PASS
802.11ac80	/	5775	2.01	2.10	5.07	30	PASS

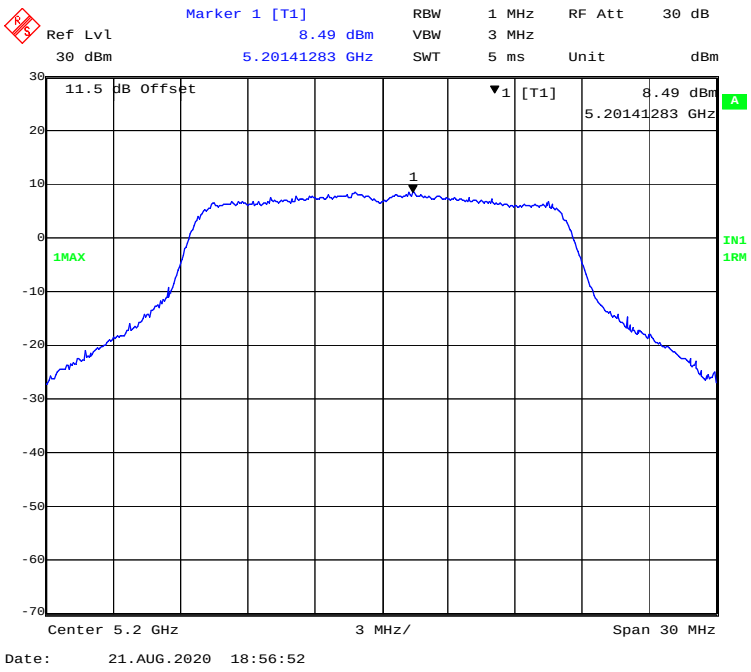
Note1: The total PSD=10Log10(10^(Chain0/10)+10^(Chain1/10))
Note2: The maximum antenna gain is1.57dBi(Band 1) and 0.05 dBi(Band 4). The device employed Cyclic Delay Diversity (CDD) for 802.11MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power spectral density (PSD)measurements on the devices:
Array Gain = 10 log(N_{ANT}/N_{SS}) dB.
So:
Directional gain = G_{ANT} + Array Gain = 1.57+10*log(2/1) =4.57 dBi

5150MHz-5250MHz Band-Chain0 :

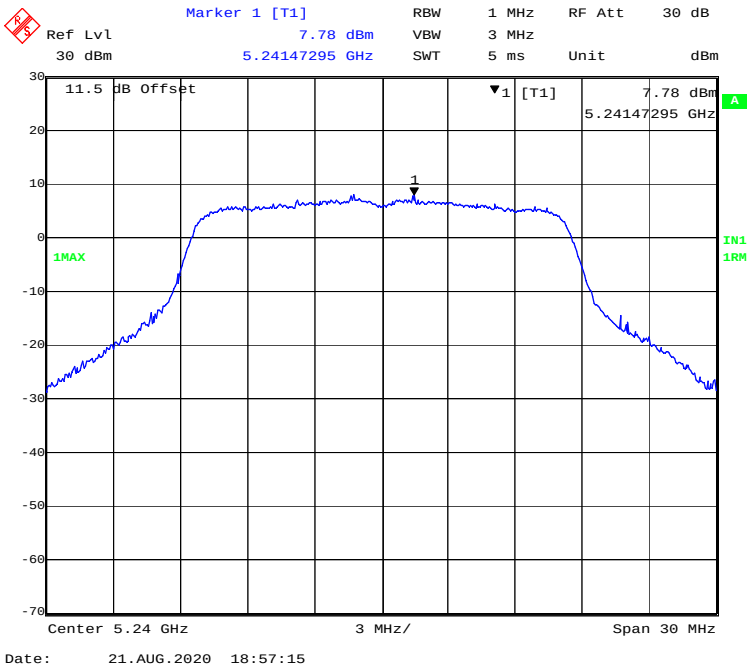
802.11a mode, Power spectral density-5180MHz



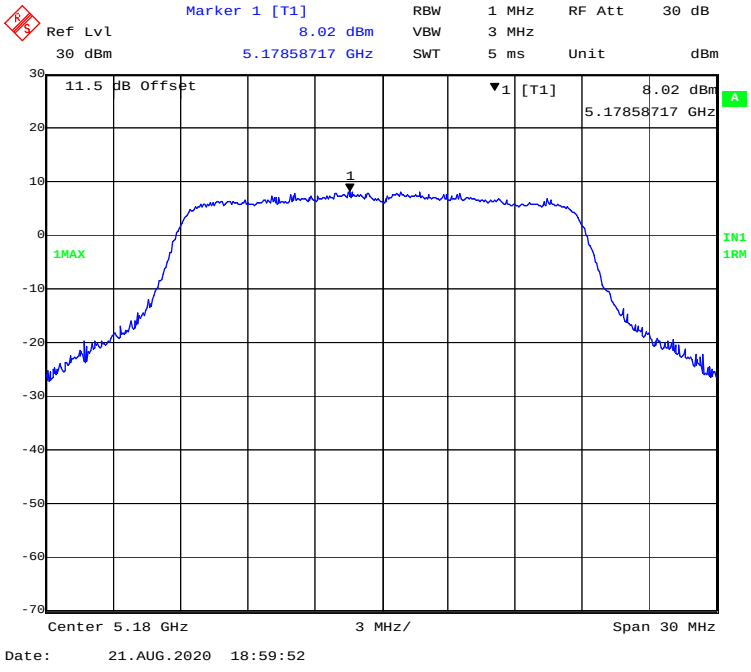
802.11a mode, Power spectral density-5200MHz



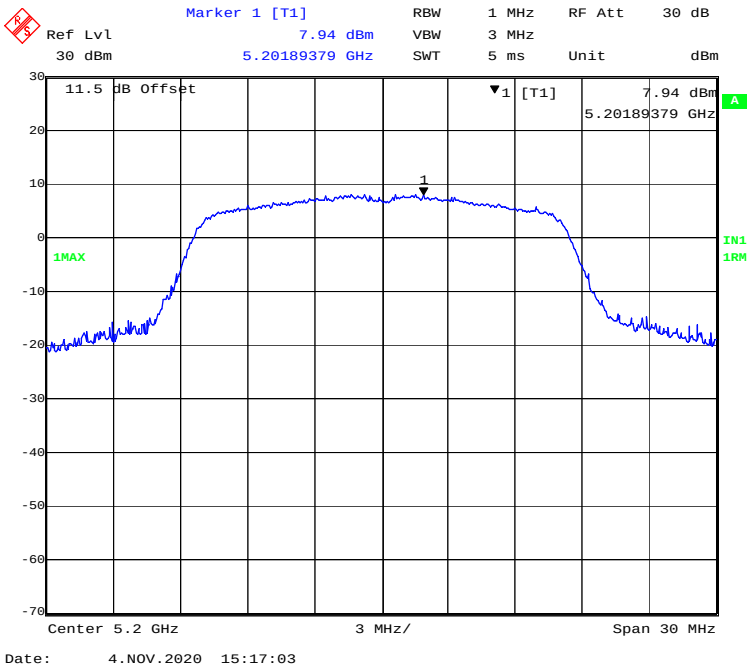
802.11a mode, Power spectral density-5240MHz



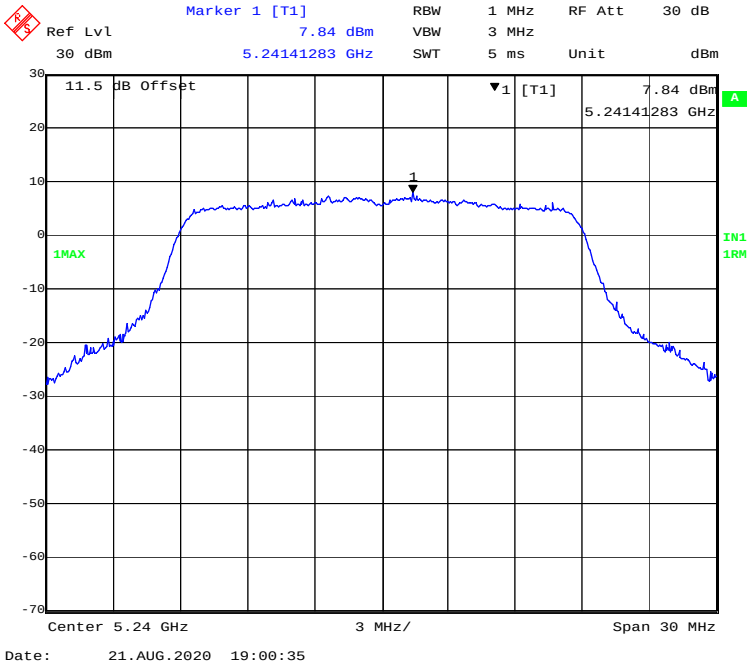
802.11ac20 mode, Power spectral density-5180MHz



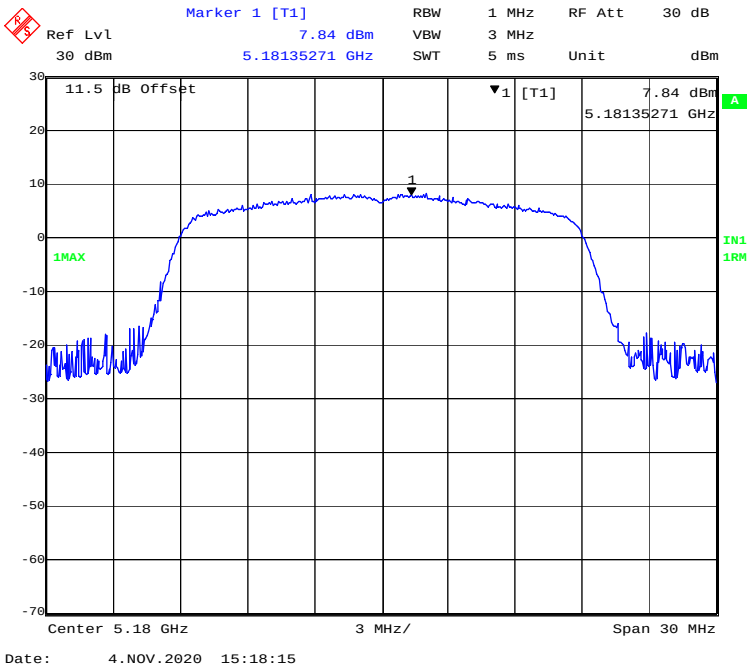
802.11ac20 mode, Power spectral density-5200MHz



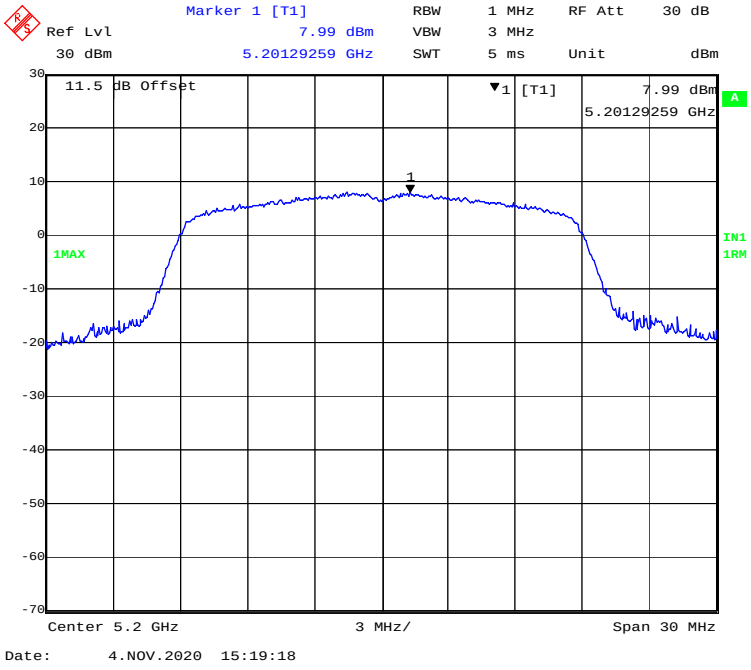
802.11ac20 mode, Power spectral density-5240MHz



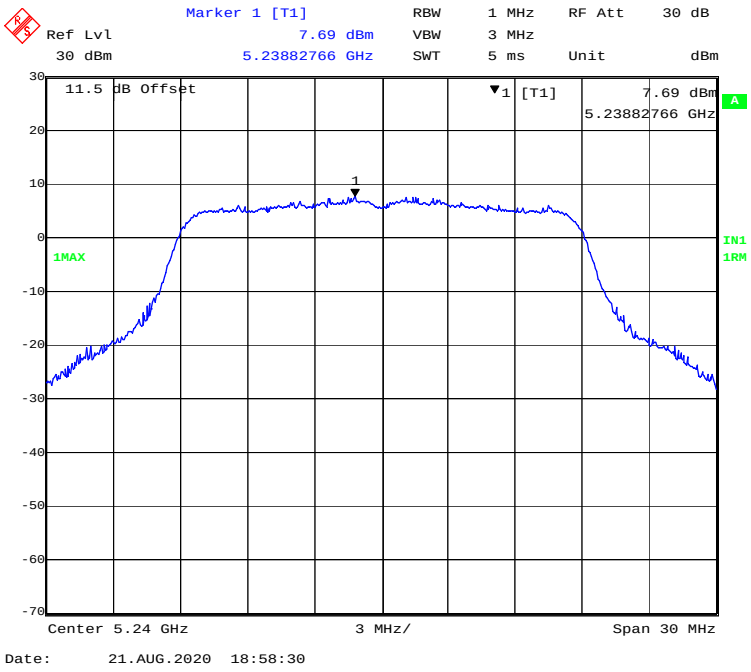
802.11n-HT20 mode, Power spectral density-5180MHz



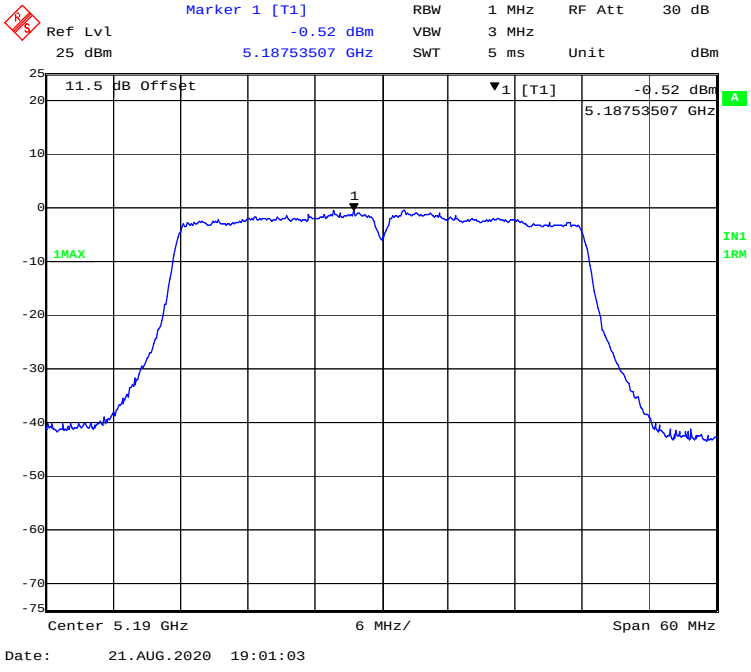
802.11n-HT20 mode, Power spectral density-5200MHz



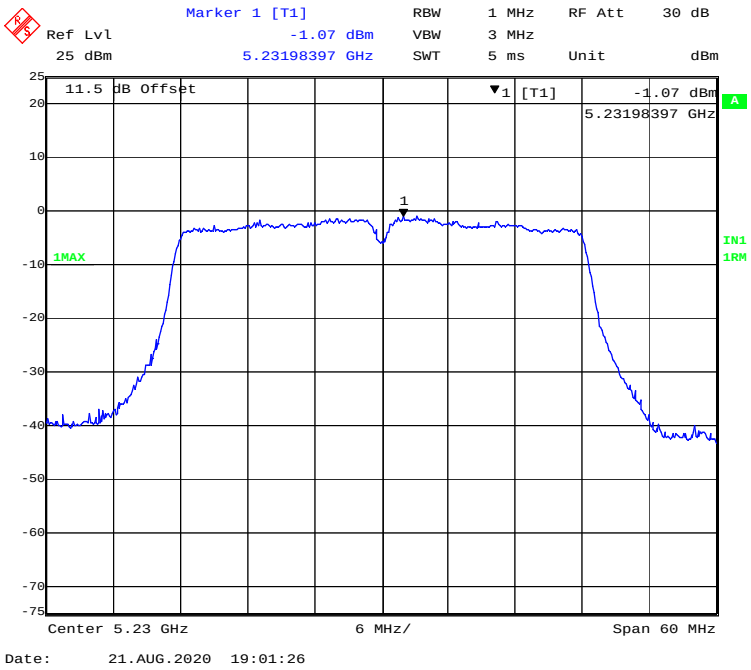
802.11n-HT20 mode, Power spectral density-5240MHz



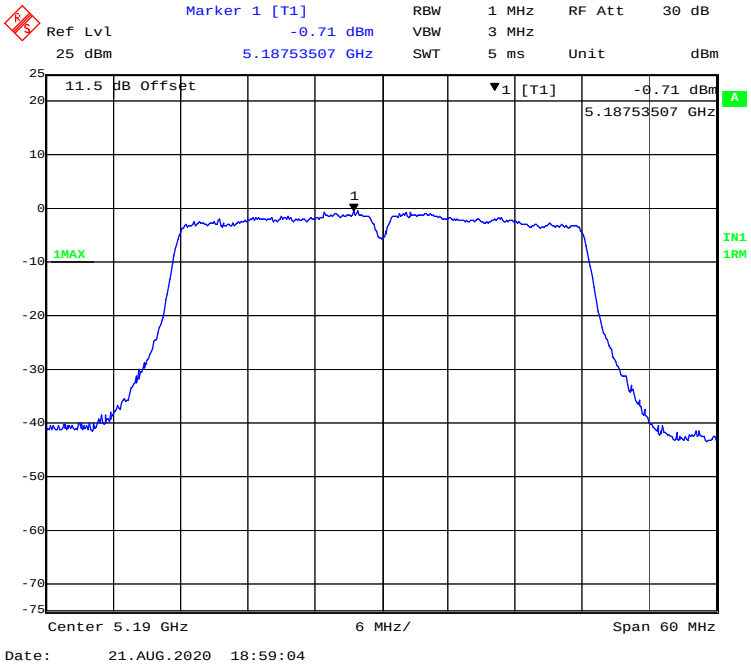
802.11ac40 mode, Power spectral density-5190MHz



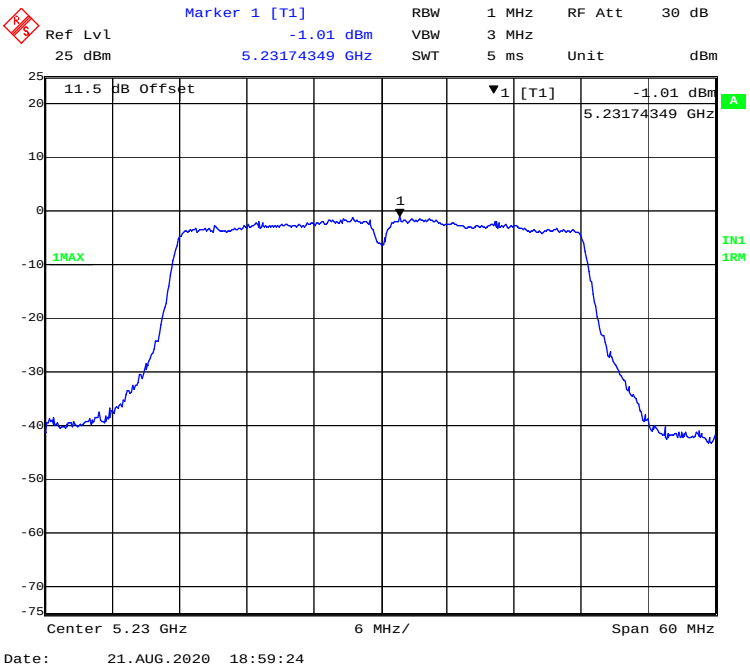
802.11 ac40 mode, Power spectral density-5230MHz



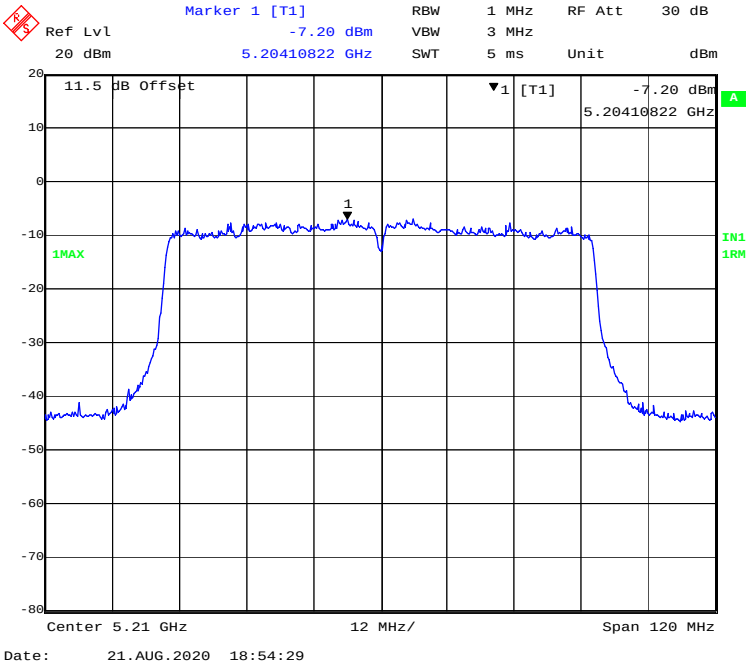
802.11n-HT40 mode, Power spectral density-5190MHz



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

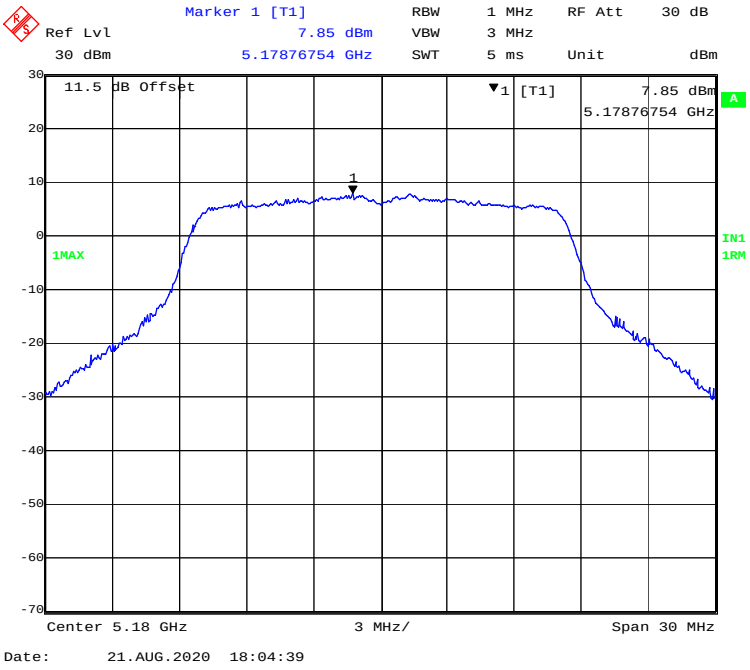


802.11n- ac80 mode, Power spectral density-5210MHz

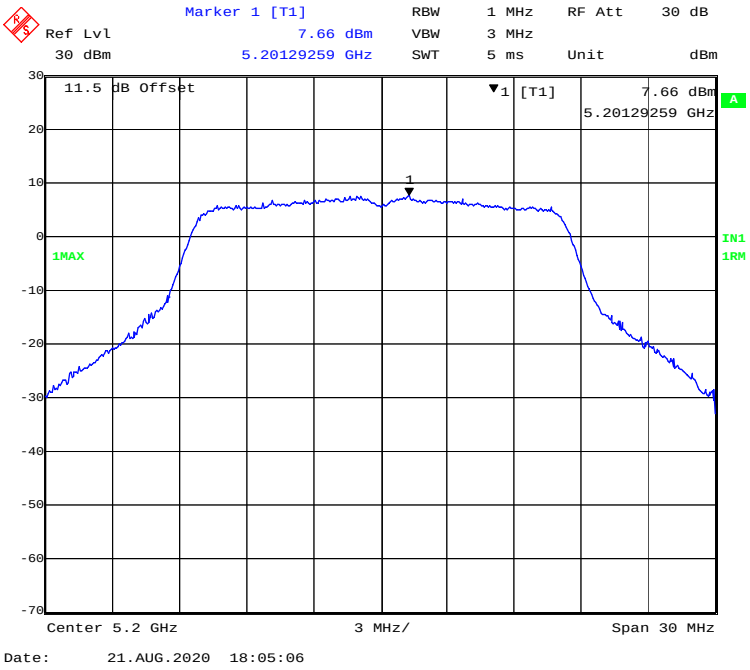


5150MHz-5250MHz Band-Chain1 :

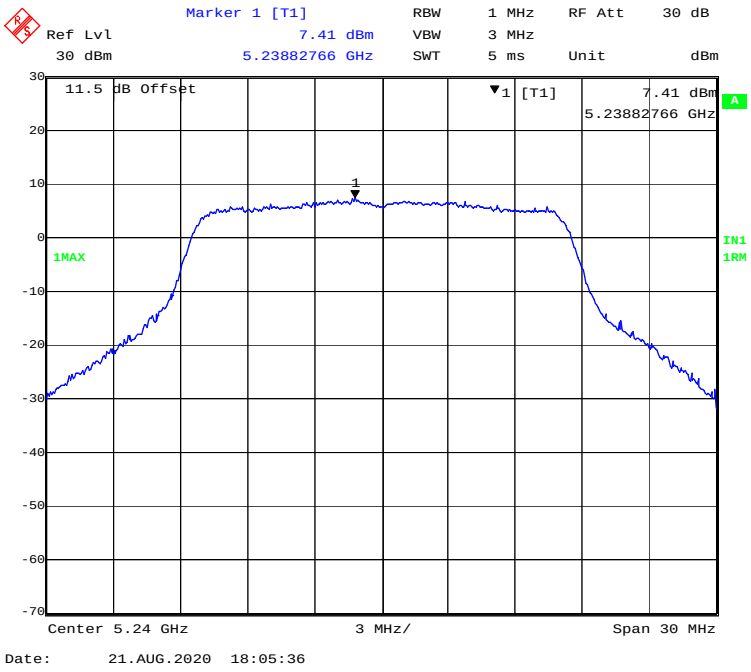
802.11a mode, Power spectral density-5180MHz



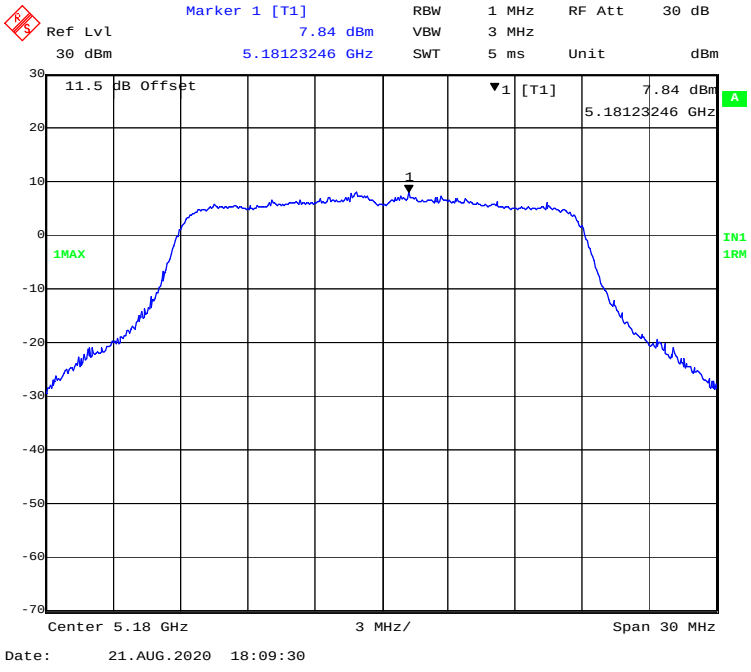
802.11a mode, Power spectral density-5200MHz



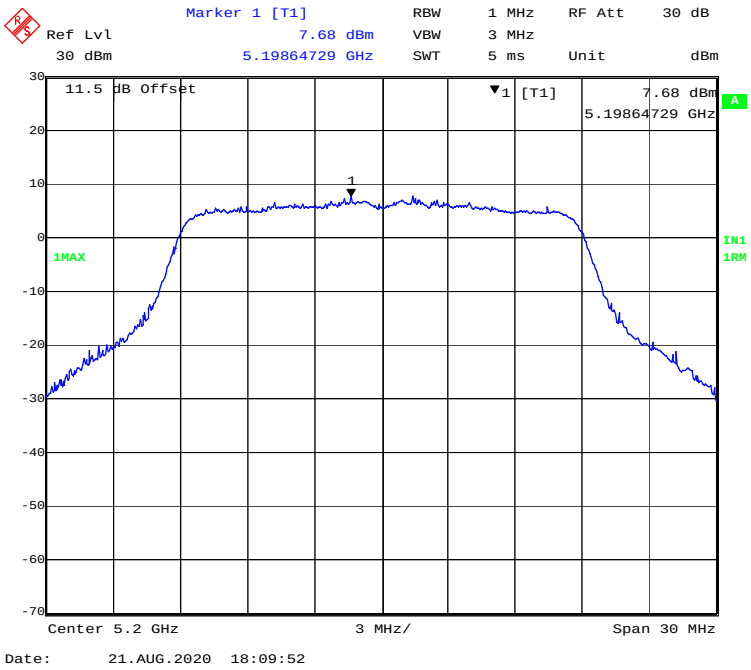
802.11a mode, Power spectral density-5240MHz



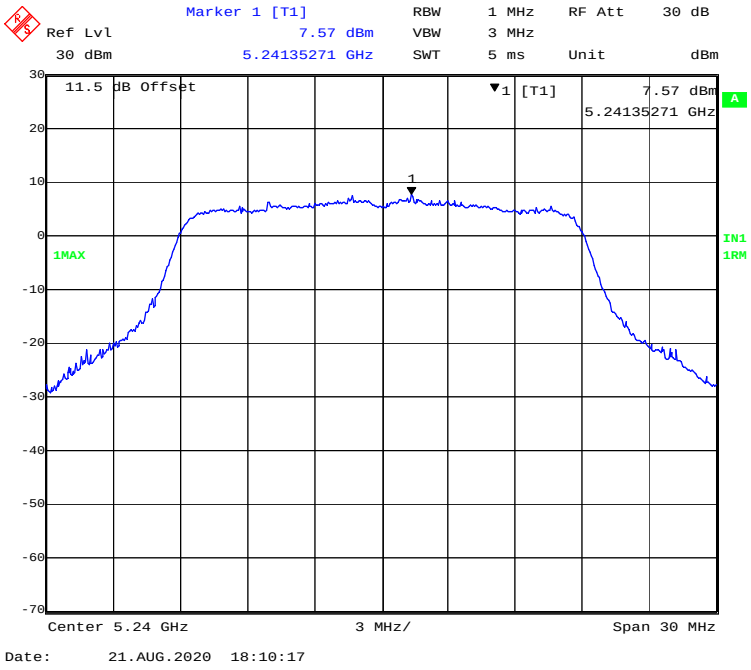
802.11ac20 mode, Power spectral density-5180MHz



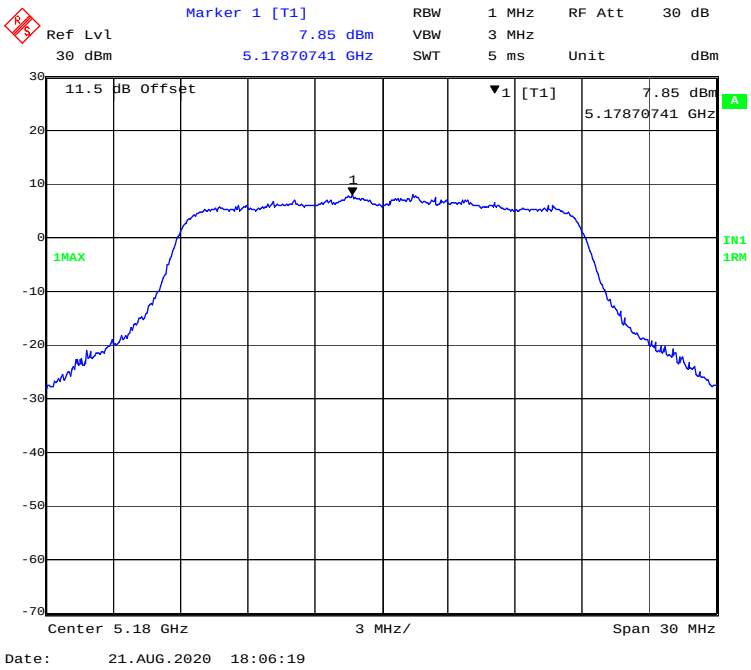
802.11 ac20 mode, Power spectral density-5200MHz



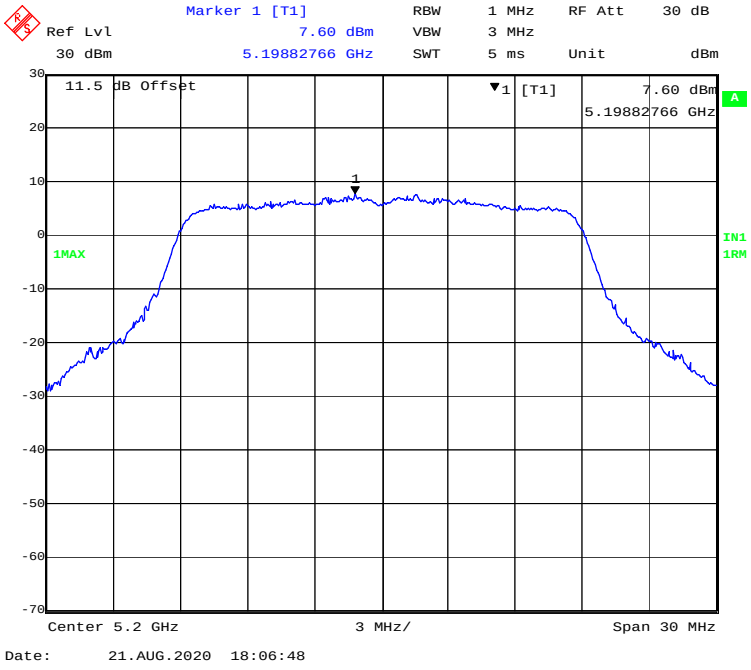
802.11ac20 mode, Power spectral density-5240MHz



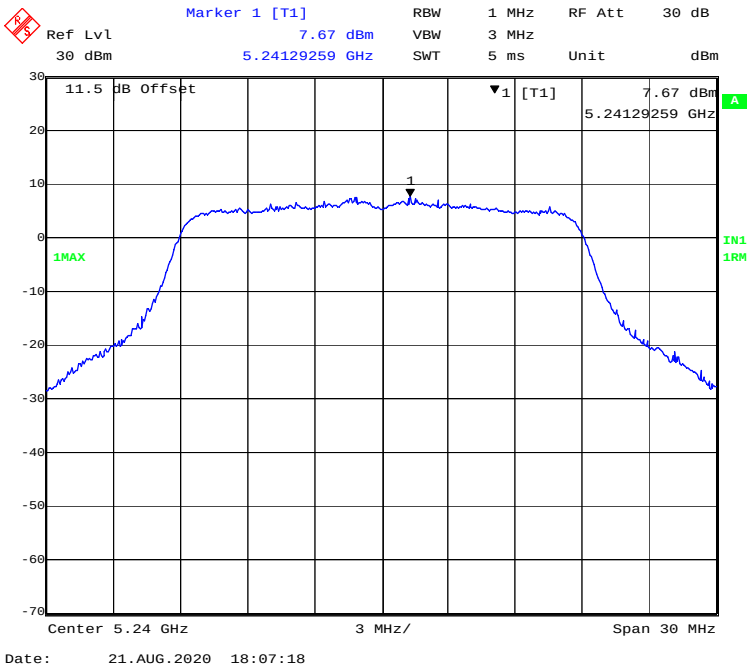
802.11n-HT20 mode, Power spectral density-5180MHz



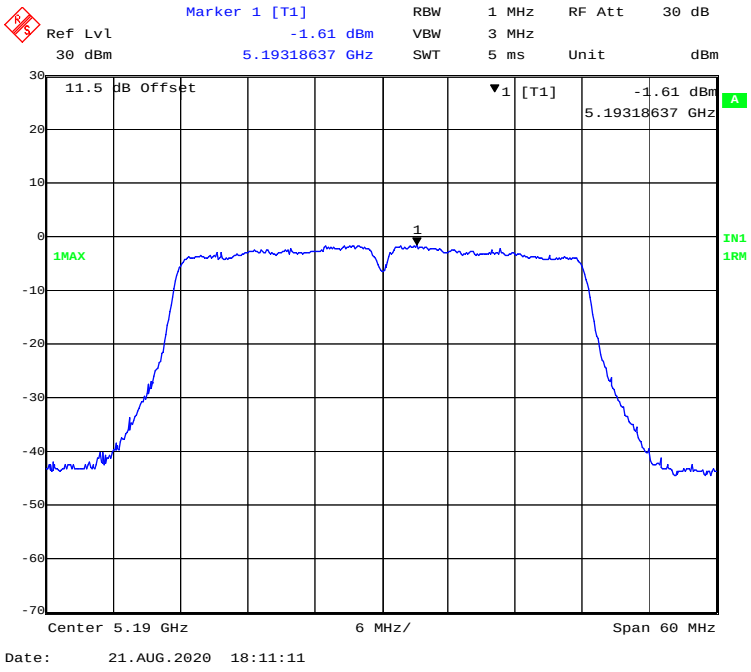
802.11n-HT20 mode, Power spectral density-5200MHz



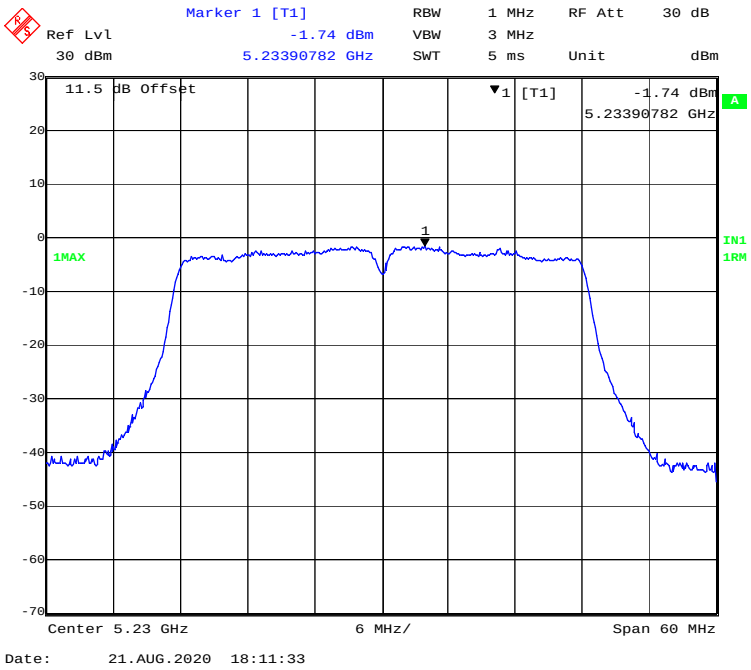
802.11n-HT20 mode, Power spectral density-5240MHz



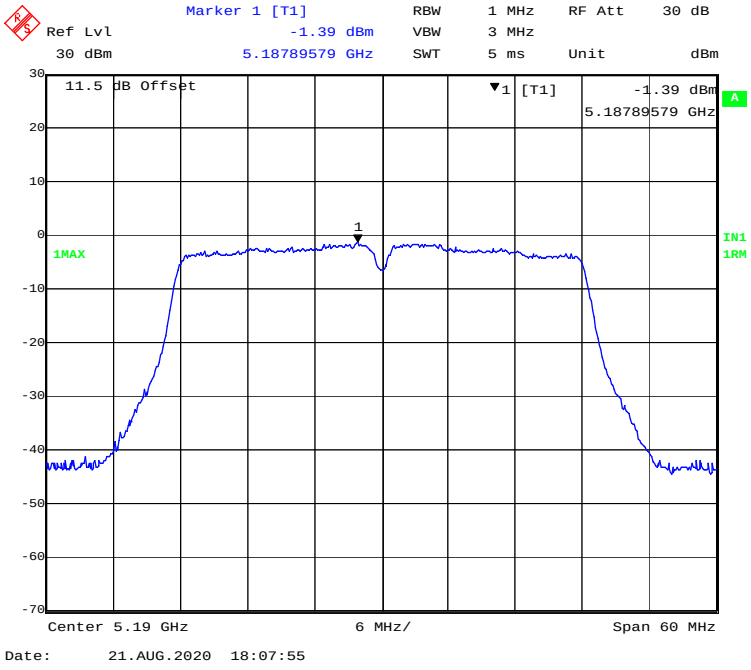
802.11ac40 mode, Power spectral density-5190MHz



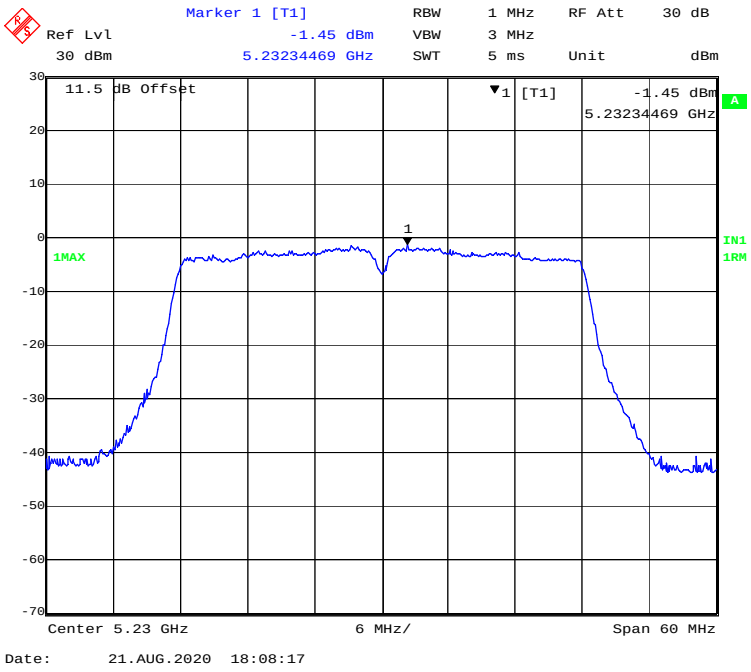
802.11 ac40 mode, Power spectral density-5230MHz



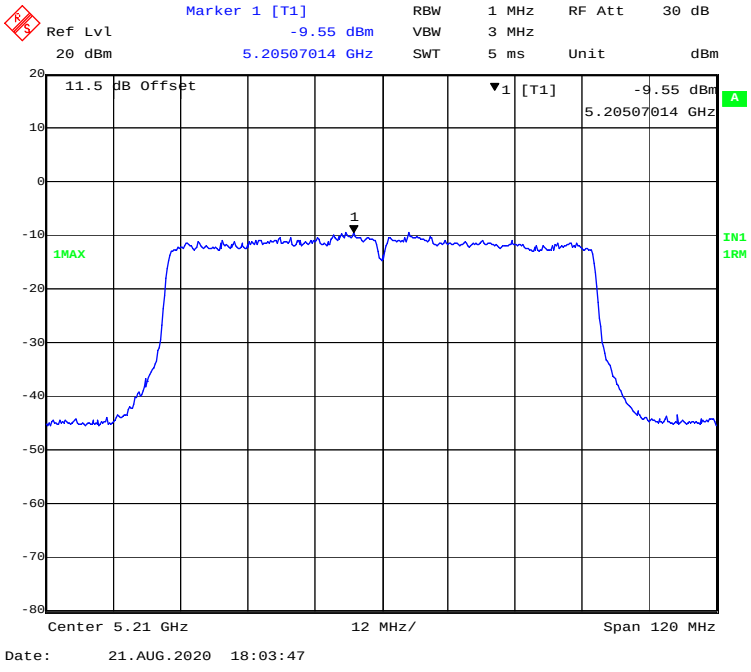
802.11n-HT40 mode, Power spectral density-5190MHz



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

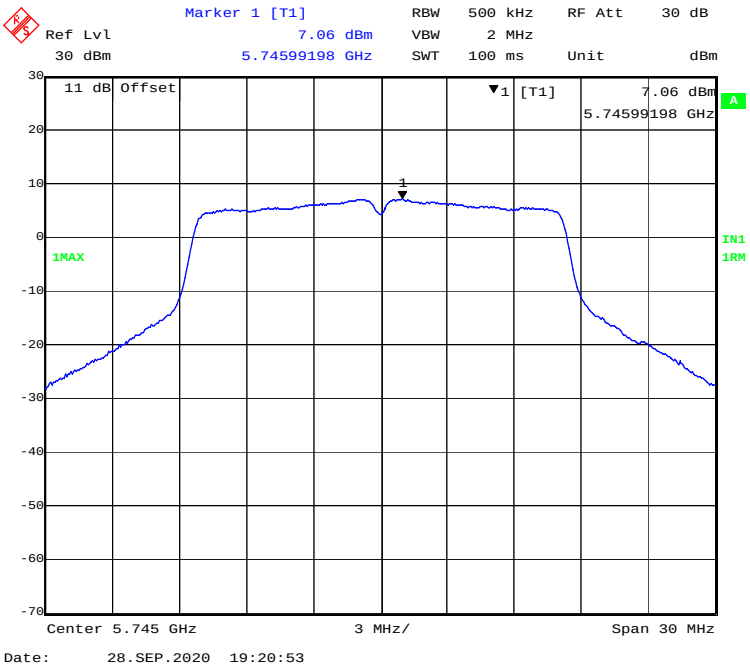


802.11n- ac80 mode, Power spectral density-5210MHz

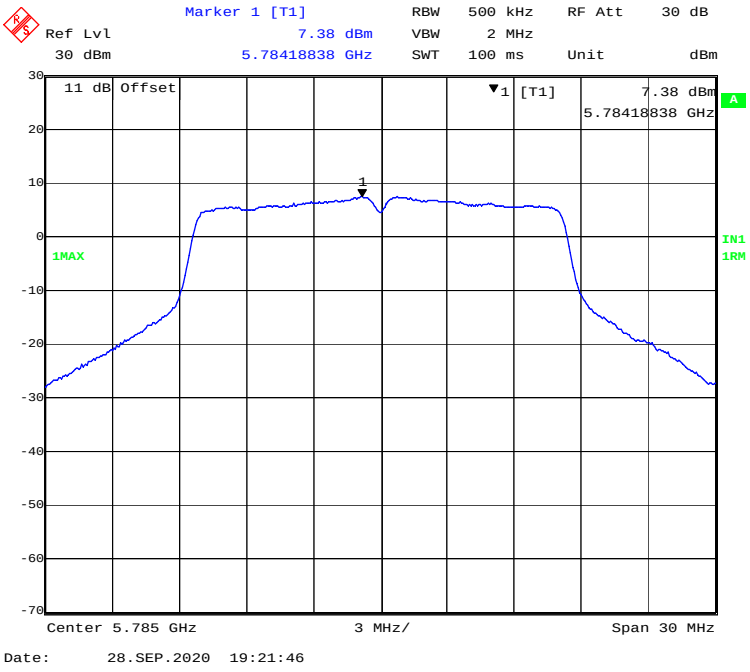


5725MHz-5850MHz Band-Chain0:

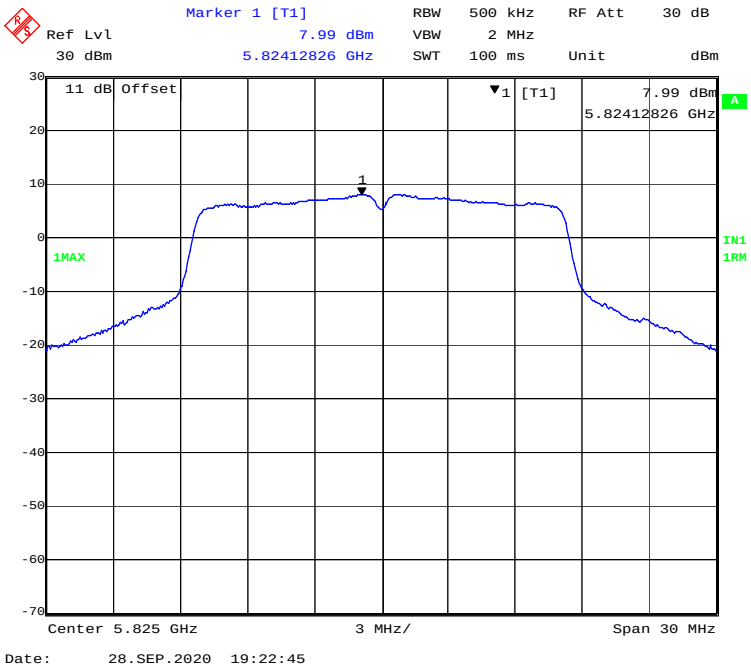
802.11a mode, Power spectral density-5745MHz



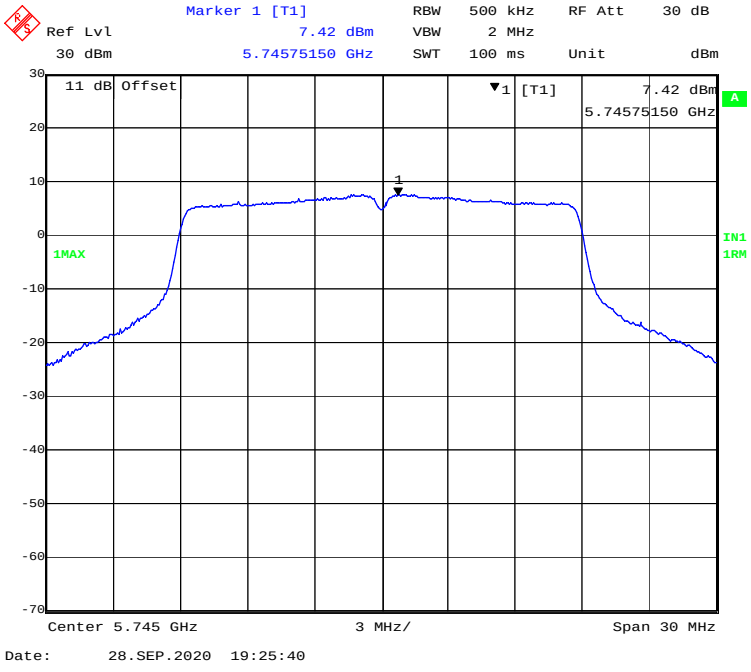
802.11a mode, Power spectral density-5785MHz



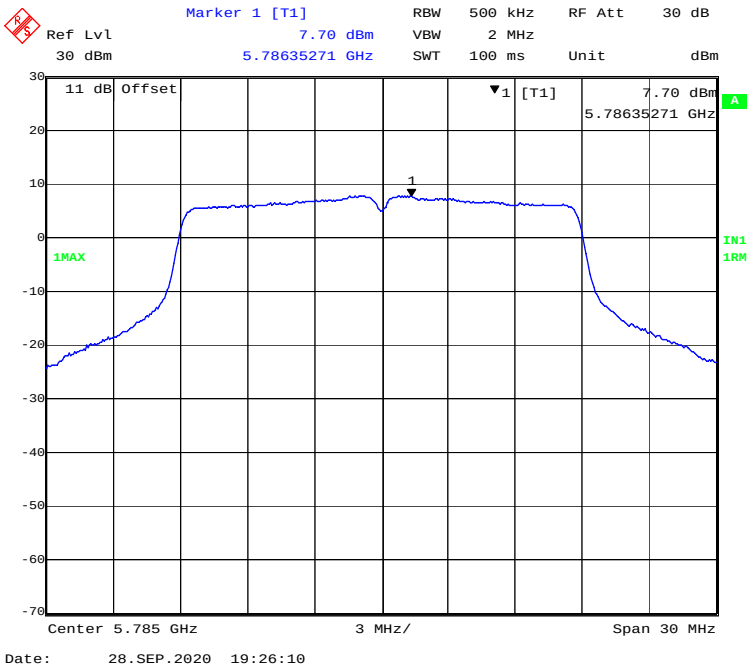
802.11a mode, Power spectral density-5825MHz



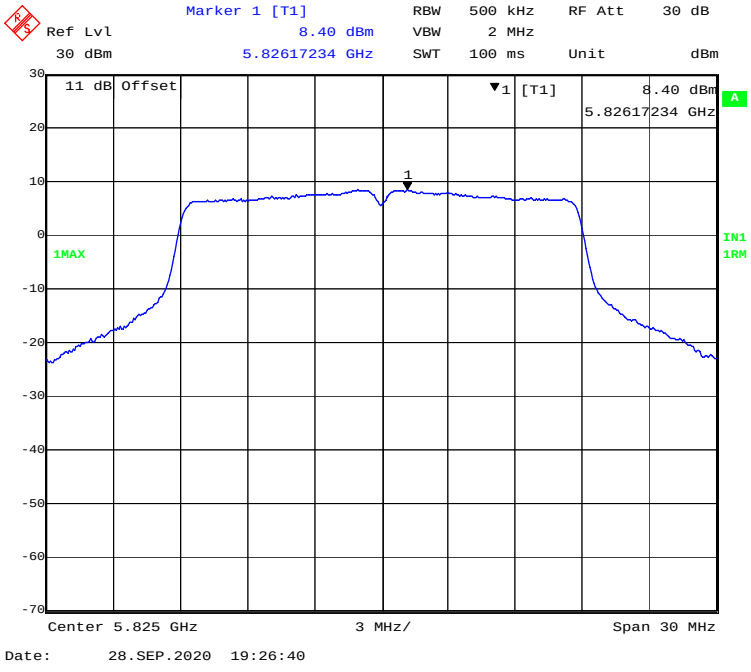
802.11ac20 mode, Power spectral density-5745MHz



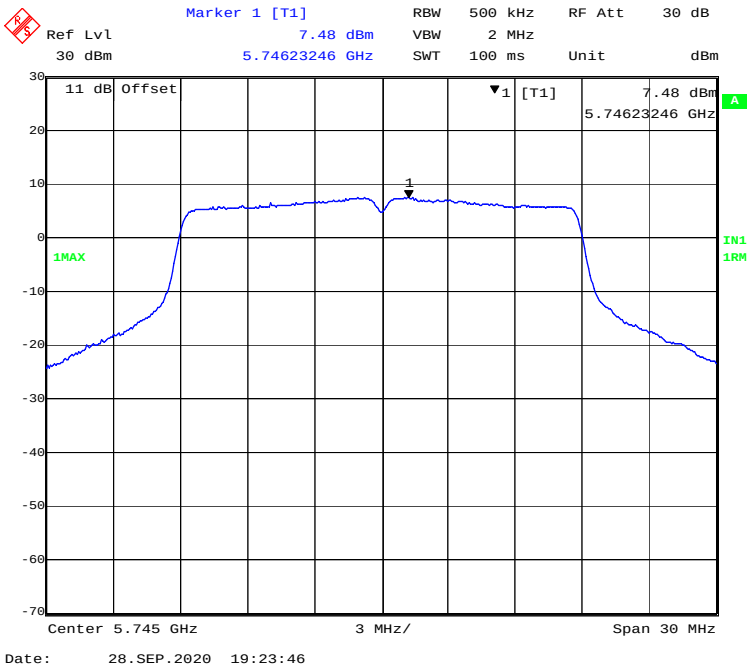
802.11 ac20 mode, Power spectral density-5785MHz



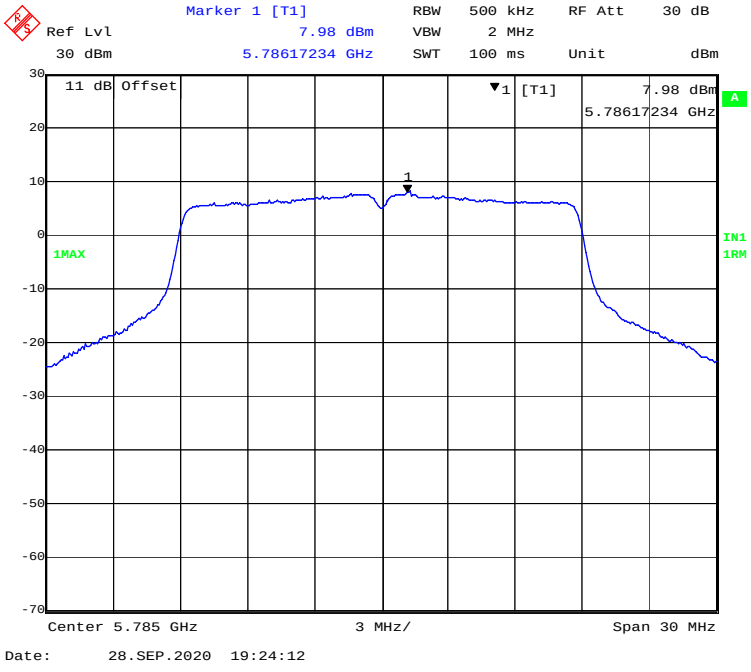
802.11 ac20 mode, Power spectral density-5825MHz



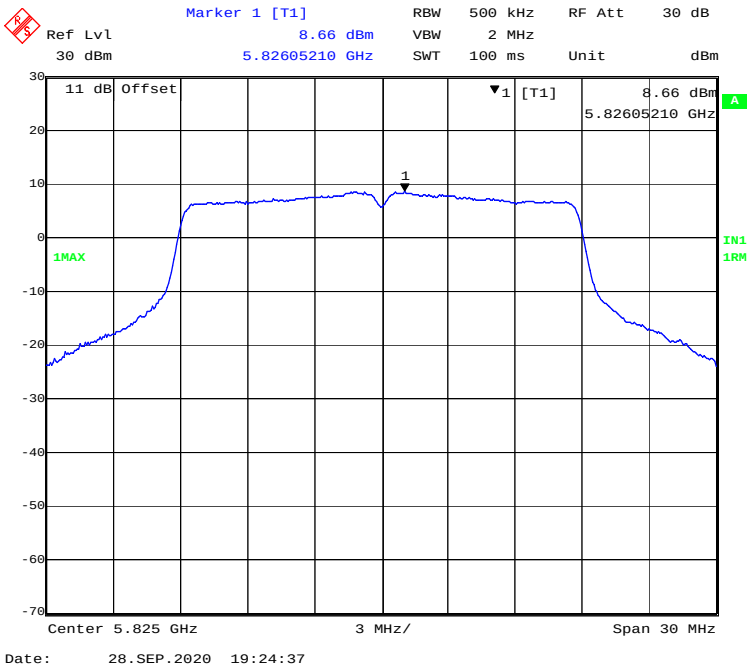
802.11n-HT20 mode, Power spectral density-5745MHz



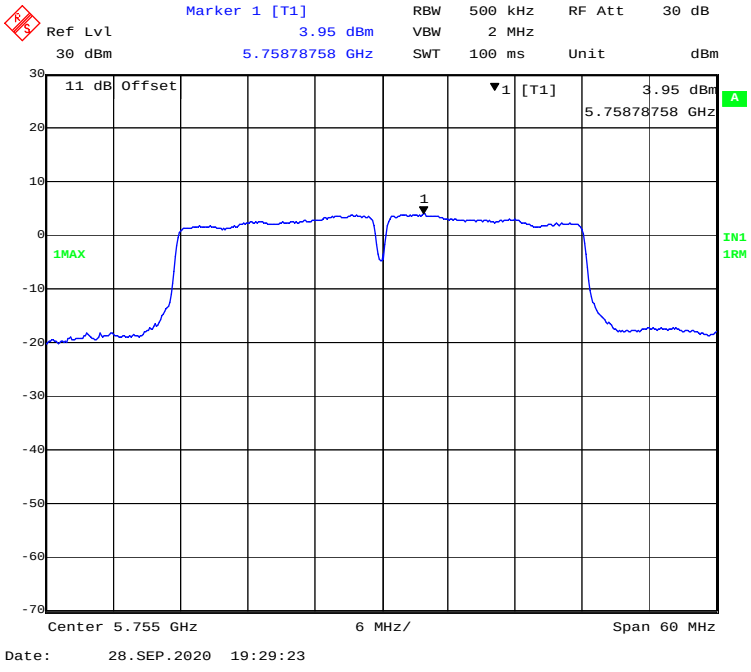
802.11n-HT20 mode, Power spectral density-5785MHz



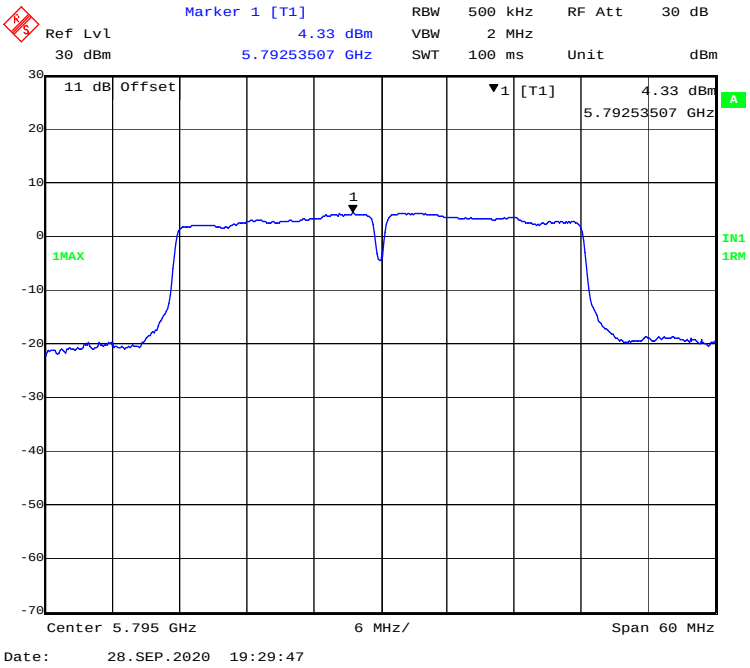
802.11n-HT20 mode, Power spectral density-5825MHz



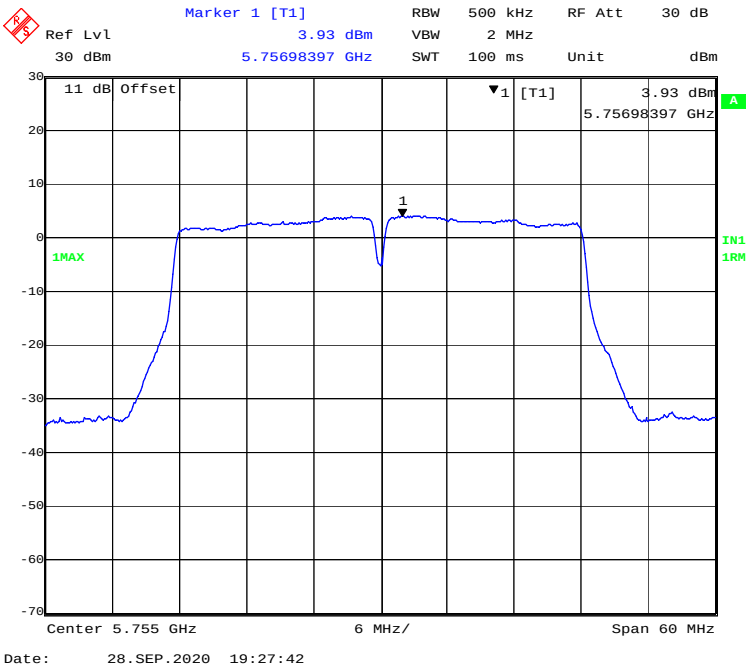
802.11ac40 mode, Power spectral density-5755MHz



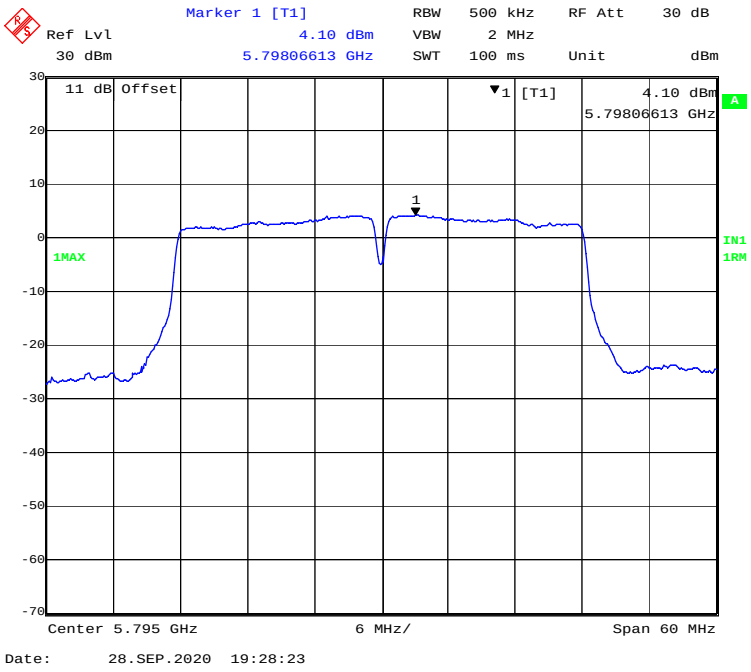
802.11 ac40 mode, Power spectral density-5795MHz



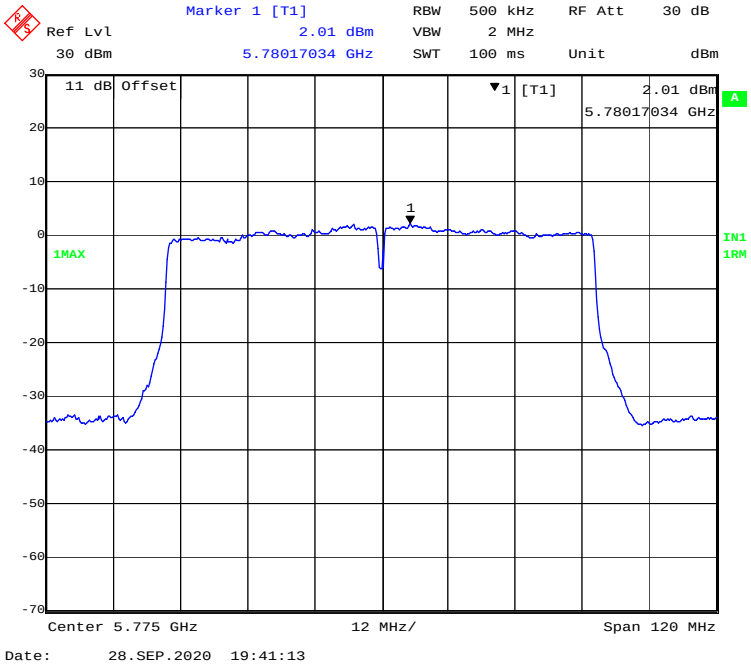
802.11n-HT40 mode, Power spectral density-5755MHz



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

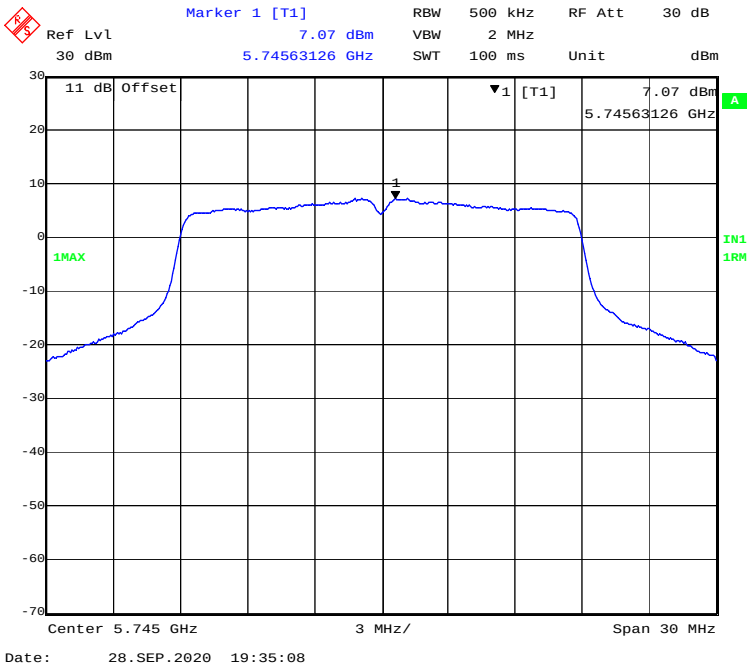


802.11 ac80 mode, Power spectral density-5775MHz

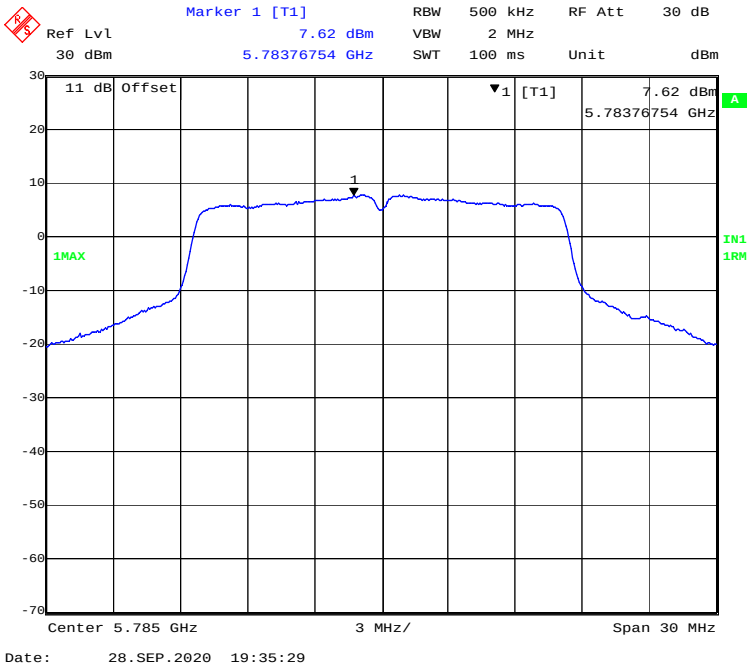


5725MHz-5850 MHz Band-Chain1:

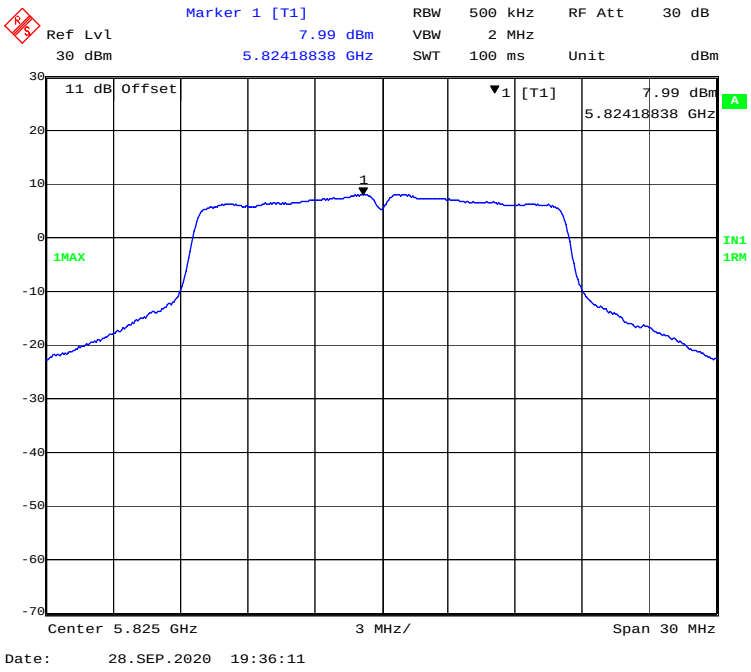
802.11a mode, Power spectral density-5745MHz



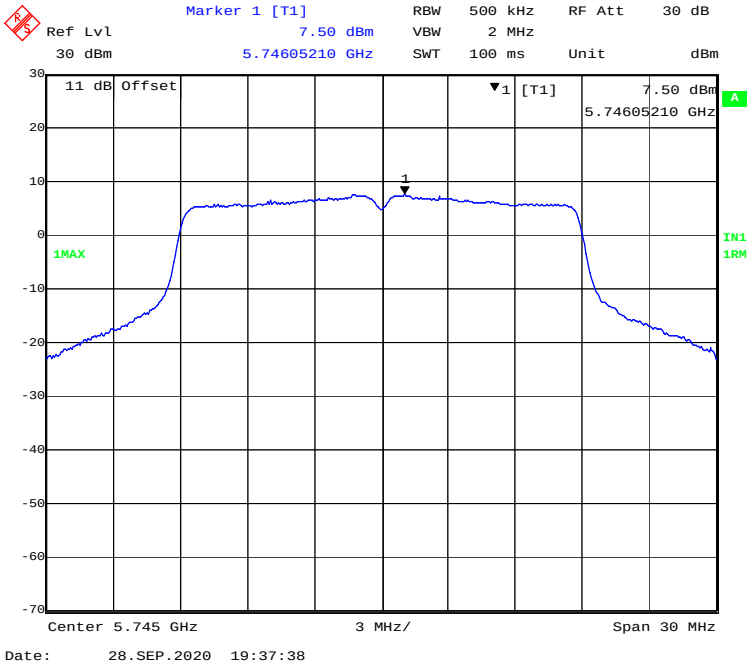
802.11a mode, Power spectral density-5785MHz



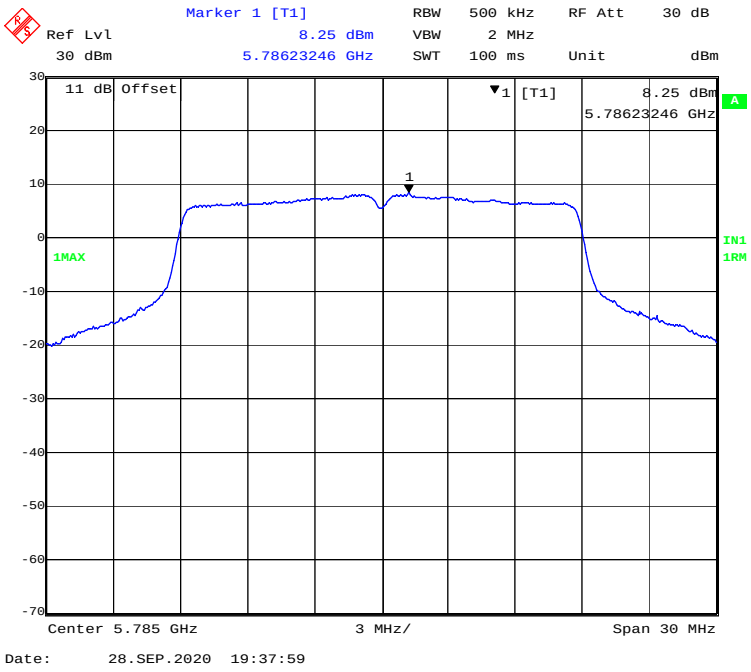
802.11a mode, Power spectral density-5825MHz



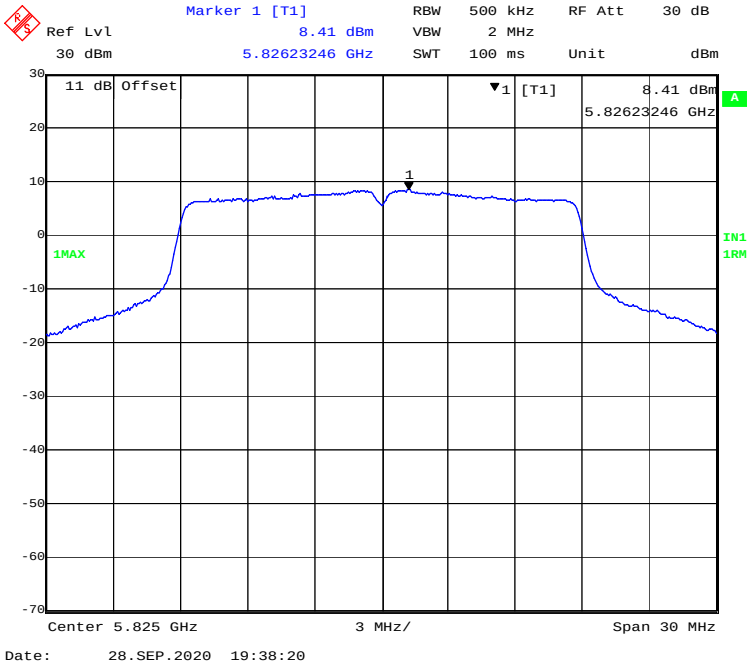
802.11ac20 mode, Power spectral density-5745MHz



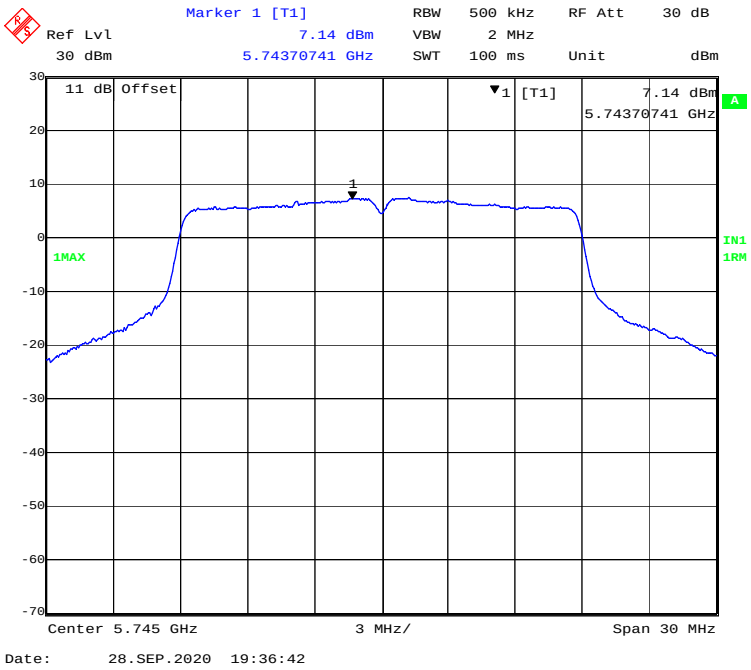
802.11 ac20 mode, Power spectral density-5785MHz



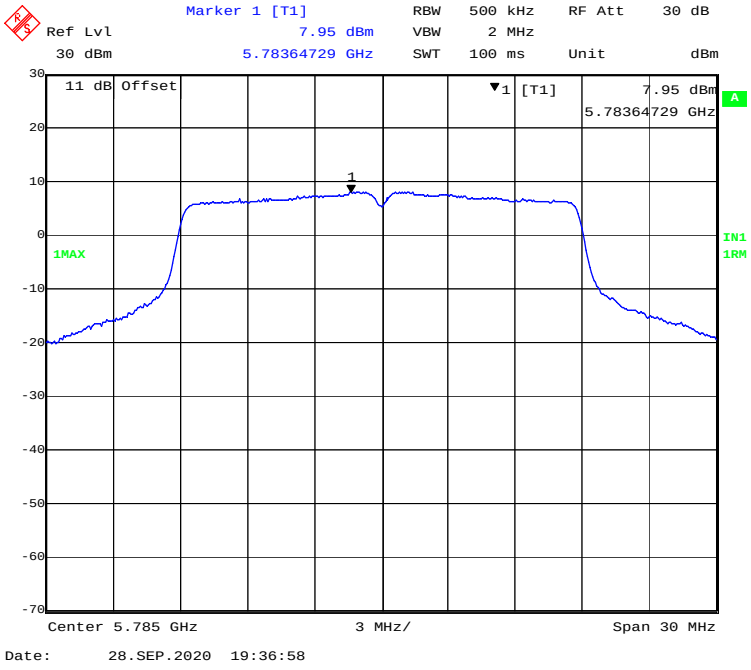
802.11 ac20 mode, Power spectral density-5825MHz



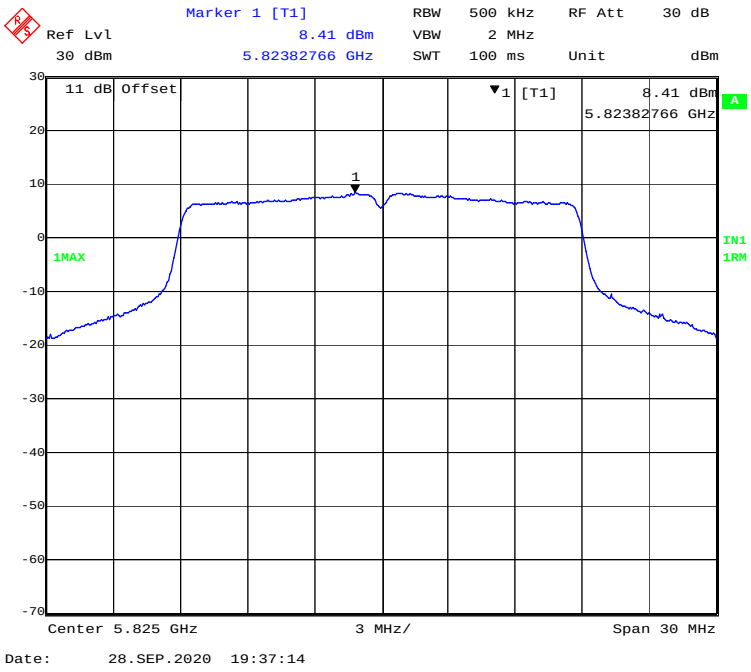
802.11n-HT20 mode, Power spectral density-5745MHz



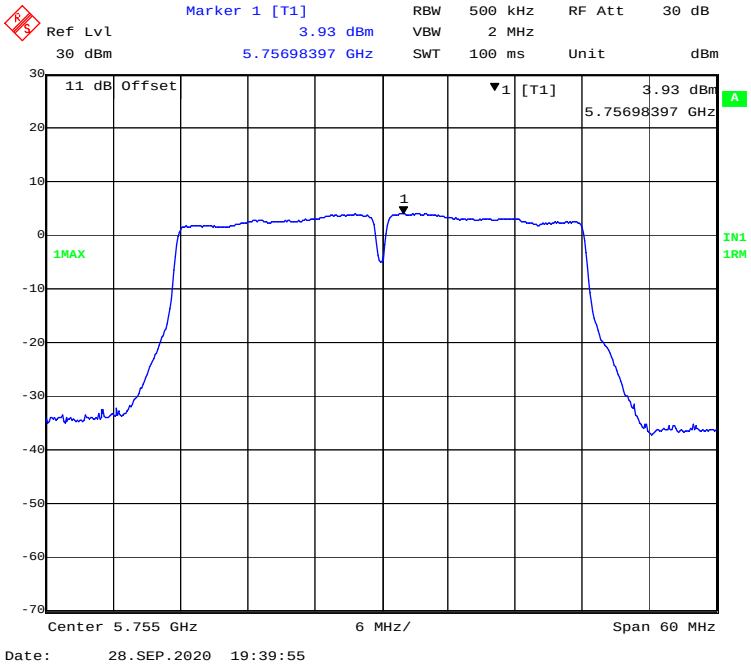
802.11n-HT20 mode, Power spectral density-5785MHz



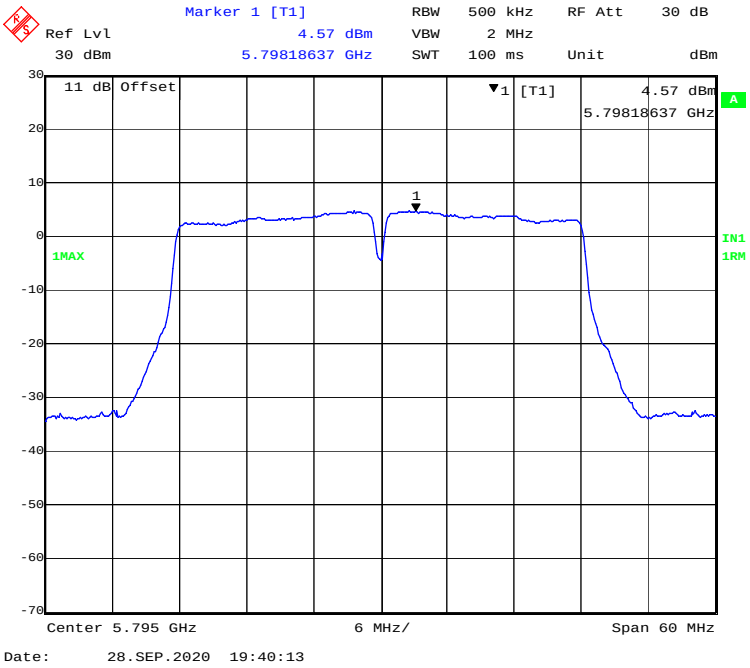
802.11n-HT20 mode, Power spectral density-5825MHz



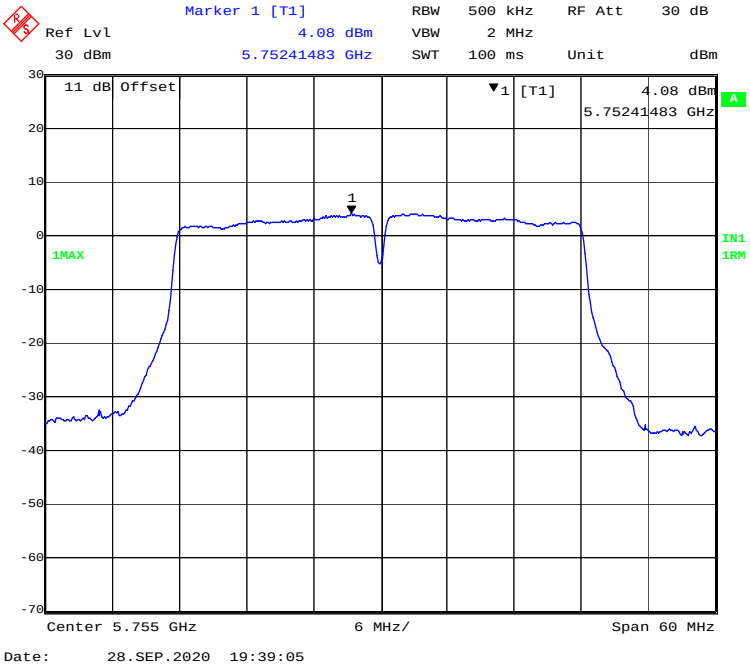
802.11ac40 mode, Power spectral density-5755MHz



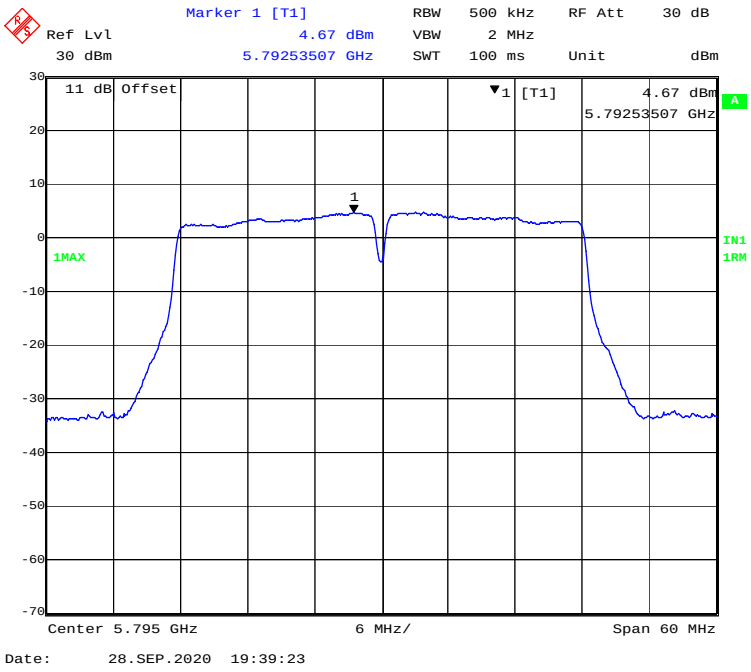
802.11 ac40 mode, Power spectral density-5795MHz



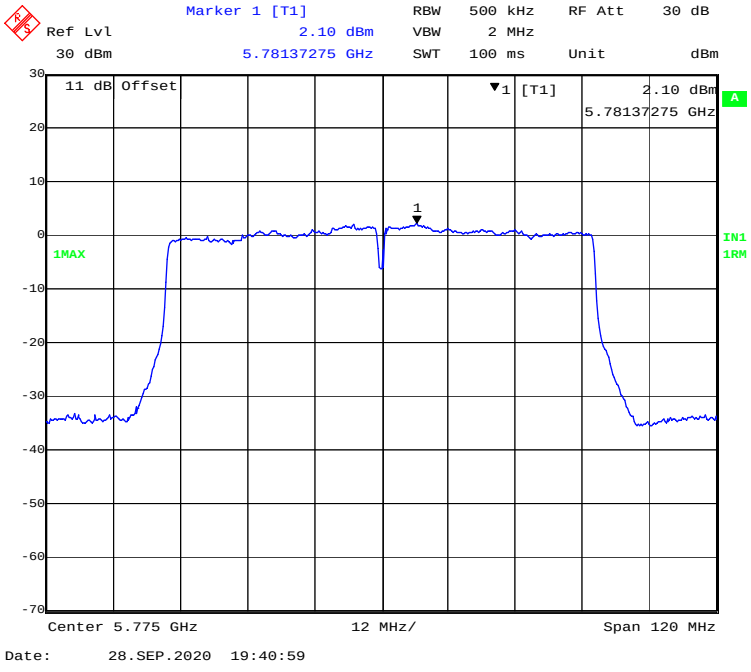
802.11n-HT40 mode, Power spectral density-5755MHz



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



802.11 ac80 mode, Power spectral density-5775MHz



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.

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