TEST REPORT

Report No.:	BCTC2108807366-4E
Applicant:	RockTek Co., Ltd
Product Name:	Android TV Game Console (Bluetooth/WLAN)
Model/Type reference:	RT-G2
Tested Date:	2021-08-12 to 2021-08-27
Issued Date:	2021-08-28

Shenzhen BCTC Testing Co., Ltd.

FCC ID:2AFIV-RTG2

Product Name:	Android TV Game Console (Bluetooth/WLAN)
Trademark:	RockTek
Model/Type reference:	RT-G2
Prepared For:	RockTek Co., Ltd
Address:	16F-9, NO. 184, ZHONGYANG RD. CHANGHUA CITY 50056 TAIWAN (R.O.C.)
Manufacturer:	Shenzhen SEI Robotics Co.,Ltd.
Address:	4th floor, Productivity Building D, #5 Hi-Tech Middle 2nd Road, Shenzhen Hi-Tech Industrial Park, Nanshan District, Shenzhen, China
Prepared By:	Shenzhen BCTC Testing Co., Ltd.
Address:	1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Tangwei, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China
Sample Received Date:	2021-08-12
Sample tested Date:	2021-08-12 to 2021-08-27
Issue Date:	2021-08-28
Report No.:	BCTC2108807366-4E
Test Standards	FCC Part15 15.407 ANSI C63.10-2013 KDB 662911 D01 v02r01 KDB 789033 D02 v02r01
Test Results	PASS

Tested by:

Kelsey Tan

Kelsey Tan/ Project Handler

Approved by:

Zero Zhou/Reviewer

The test report is effective only with both signature and specialized stamp.This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen BCTC Testing Co., Ltd, this report can't be reproduced except in full.The tested sample(s) and the sample information are provided by the client.

TABLE OF CONTENT

(Note: N/A means not applicable)

1. VERSION

Report No.	Issue Date	Description	Approved
BCTC2108807366-4E	2021-08-28	Original	Valid

2. TEST SUMMARY

The Product has been tested according to the following specifications:

No.	Test Parameter	Clause No	Results
1	Spurious Radiated Emissions	15.209(a), 15.407 (b)(1) 15.407 (b)(4) 15.407 (b)(8)	PASS
2	Conducted Emission	15.207	PASS
3	26 dB and 99% Emission Bandwidth	15.407 (a)(12) 15.1049	PASS
4	Minimum 6 dB bandwidth	15.407(e)	PASS
5	Maximum Conducted Output Power	15.407 (a)(1) 15.407 (a)(3)	PASS
6	Band Edge	2.1051, 15.407(b)(1) 15.407(b)(4)	PASS
7	Power Spectral Density	15.407 (a)(1) 15.407 (a)(3)	PASS
8	Spurious Emissions at Antenna Terminals	2.1051, 15.407(b)	PASS
9	Antenna Requirement	15.203	PASS

3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

No.	Item	Uncertainty
1	3m chamber Radiated spurious emission(9kHz-30MHz)	U=3.7dB
2	3m chamber Radiated spurious emission(30MHz-1GHz)	U=4.3dB
3	3m chamber Radiated spurious emission(1GHz-18GHz)	U=4.5dB
4	3m chamber Radiated spurious emission(18GHz-40GHz)	U=3.34dB
5	Conducted Emission(150kHz-30MHz)	U=3.20dB
6	Conducted Adjacent channel power	U=1.38dB
7	Conducted output power uncertainty Above 1G	U=1.576dB
8	Conducted output power uncertainty below 1G	U=1.28dB
9	humidity uncertainty	U=5.3%
10	Temperature uncertainty	U=0.59℃

4. PRODUCT INFORMATION AND TEST SETUP

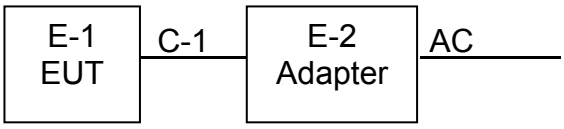
4.1 Product Information

Model/Type reference:	RT-G2
Model differences:	N/A
IEEE 802.11 WLAN Mode Supported	802.11a/n/ac(20MHz channel bandwidth) 802.11n/ac(40MHz channel bandwidth) 802.11ac(80MHz channel bandwidth)
Operation Frequency:	5180-5240MHz for 802.11a/n/ac(HT20); 5190-5230MHz for 802.11n/ac(HT40); 5210MHz for 802.11 ac80; 5745-5825 MHz for 802.11a/n/ac(HT20); 5755-5795 MHz for 802.11a/n/ac(HT40); 5775MHz for 802.11 ac80;
Data Rate	802.11a: 6,9,12,18,24,36,48,54Mbps; 802.11n/ac(HT20/HT40):MCS0-MCS15; 802.11ac(VHT20): NSS1, MCS0-MCS8 802.11ac(VHT40/VHT80):NSS1, MCS0-MCS9
Type of Modulation:	OFDM with BPSK/QPSK/16QAM/64QAM/256QAM for 802.11a/n/ac;
Number Of Channel	4 channels for 802.11a/n20 in the 5180-5240MHz band ; 2 channels for 802.11 n40 in the 5190-5230MHz band ; 1 channels for 802.11 ac80 in the 5210MHz band ; 5 channels for 802.11a/n20 in the 5745-5825MHz band ; 2 channels for 802.11 n40 in the 5755-5795MHz band ; 1 channels for 802.11 ac80 in the 5775MHz band ;
Antenna installation:	Antenna A:FPCB antenna Antenna B:PCB antenna
Antenna Gain:	Antenna A:2.39dBi Antenna B:1.97dBi
Ratings:	DC 12V 1A
Product Type	Client devices
Adapter Information:	Manufacture:CHENZHOU FRECOM ELECTRONICS CO., LTD Model No.:F12L33-120100SPAU Input: AC100-240V 50/60Hz 0.3A Output:DC 12V 1A

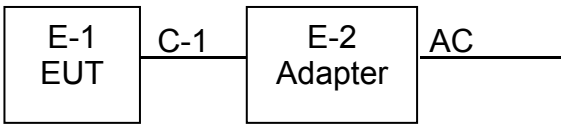
4.2 Test Setup Configuration

See test photographs attached in *EUT TEST SETUP PHOTOGRAPHS* for the actual connections between Product and support equipment.

Conducted Emission:



Radiated Spurious Emission



4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-1	Android TV Game Console (Bluetooth/WLAN)	RockTek	RT-G2	N/A	EUT
E-2	Adapter	N/A	F12L33-120 100SPAU	N/A	EUT

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	NO	0.3M	USB cable unshielded

Notes:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4.4 Channel List

Frequency and Channel list for 802.11a/n/ac(20 MHz) band IV (5180-5240MHz):

802.11a/n/ac(20MHz) Carrier Frequency Channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	44	5220	-	-	-	-
40	5200	48	5240	-	-	-	-

802.11n /ac(40MHz) Carrier Frequency Channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	-	-	-	-	-	-
46	5230	-	-	-	-	-	-

802.11ac (80MHz) Carrier Frequency Channel	
Channel	Frequency (MHz)
42	5210

Frequency and Channel list for 802.11a/n/ac(20 MHz) band IV (5745-5825MHz):

802.11a/n/ac(20 MHz) Carrier Frequency Channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	153	5765	157	5785	161	5805
165	5825	-	-	-	-	-	-

802.11n/ac 40MHz Carrier Frequency Channel					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
151	5755	159	5795	-	-

802.11ac 80MHz Carrier Frequency Channel	
Channel	Frequency (MHz)
155	5775

4.5 Test Mode

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	802.11a / n/ ac 20 CH36/ CH40/ CH 48 802.11a /n/ ac 20 CH149/ CH157/ CH 165
Mode 2	802.11n/ ac40 CH38/ CH 46 802.11n/ ac40 CH 151 / CH 159
Mode 3	802.11 ac80 CH 42/CH 155
Mode 4	802.11a / n/ ac 20 CH36/ CH40/ CH 48 802.11a /n/ ac 20 CH149/ CH157/ CH 165
Mode 5	Link Mode

Conducted Emission	
Final Test Mode	Description
Mode 5	Link Mode

For Radiated Emission	
Final Test Mode	Description
Mode 1	802.11a / n/ ac 20 CH36/ CH40/ CH 48 802.11a /n/ ac 20 CH149/ CH157/ CH 165
Mode 2	802.11n/ ac40 CH38/ CH 46 802.11n/ ac40 CH 151 / CH 159
Mode 3	802.11 ac80 CH 42/CH 155
Mode 4	802.11a / n/ ac 20 CH36/ CH40/ CH 48 802.11a /n/ ac 20 CH149/ CH157/ CH 165

Note:

(1) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported.

4.6 table of parameters of text software setting

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters

Test software Version	CMD		
Parameters	DEF	DEF	DEF

4.7 Antenna

EUT has two External antennas with Max gain GANT 2.39dBi on every antenna, CDD device with two spatial streams, also can operat with one spatial streams according to KDB662911 D01 v02r01,
Directional gain= GANT + Array Gain, where Array Gain is as follows.
1)For power spectral density(PSD) measurements,
Directional gain = $G_{ANT\ MAX}$ + 10 log(NANT/NSS) dBi=$G_{ANT\ MAX}$+10log(2/1)=5.40dBi,
So the directional gain for PSD is 5.40dBi
2)For power measurements,
So the directional gain for Power measurements is 5.40dBi

Antenna	Brand	Model Name	Antenna Type	Gain (dBi)	NOTE
A	N/A	N/A	FPCB antenna	2.39	N/A
B	N/A	N/A	PCB antenna	1.97	N/A

5. TEST FACILITY AND TEST INSTRUMENT USED

5.1 Test Facility

All measurement facilities used to collect the measurement data are located at Shenzhen BCTC Testing Co., Ltd. Address:1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Tangwei, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

FCC Test Firm Registration Number: 712850

IC Registered No.: 23583

5.2 Test Instrument Used

Item	Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	Agilent	E4407B	MY45109572	May 28, 2021	May 27, 2022
2	Test Receiver (9kHz-7GHz)	R&S	ESRP	101154	May 28, 2021	May 27, 2022
3	Bilog Antenna (30MHz-3GHz)	SCHWARZBECK	VULB9163	VULB9163-942	Jun. 01, 2021	May 31, 2022
4	Horn Antenna (1GHz-18GHz)	SCHWARZBECK	BBHA9120D	1541	Jun. 02, 2021	Jun. 01, 2022
5	Horn Antenna (18GHz-40GHz)	SCHWARZBECK	BBHA9170	00822	Jun. 15, 2021	Jun. 14, 2022
6	Amplifier (9KHz-6GHz)	SCHWARZBECK	BBV9744	9744-0037	May 28, 2021	May 27, 2022
7	Amplifier	SKET	LAPA_01G18G-45dB	\	May 28, 2021	May 27, 2022
8	Amplifier (18GHz-40GHz)	MITEQ	TTA1840-35-HG	2034381	May 28, 2021	May 27, 2022
9	Loop Antenna (9KHz-30MHz)	SCHWARZBECK	FMZB1519B	00014	Jun. 02, 2021	Jun. 01, 2022
10	RF cables1 (9kHz-30MHz)	Huber+Suhnar	9kHz-30MHz	B1702988-0008	May 28, 2021	May 27, 2022
11	RF cables2 (30MHz-1GHz)	Huber+Suhnar	30MHz-1GHz	1486150	May 28, 2021	May 27, 2022
12	RF cables3 (1GHz-40GHz)	Huber+Suhnar	1GHz-40GHz	1607106	May 28, 2021	May 27, 2022
13	Power Metter	Keysight	E4419B	\	May 28, 2021	May 27, 2022
14	Power Sensor (AV)	Keysight	E9 300A	\	May 28, 2021	May 27, 2022
15	Signal Analyzer 20kHz-26.5GHz	KEYSIGHT	N9020A	MY49100060	May 28, 2021	May 27, 2022
16	Spectrum Analyzer 9kHz-40GHz	R&S	FSP40	100363	May 28, 2021	May 27, 2022
17	D.C. Power Supply	LongWei	TPR-6405D	\	\	\
18	Software	Frad	EZ-EMC	FA-03A2 RE	\	\

Conduction Test equipment

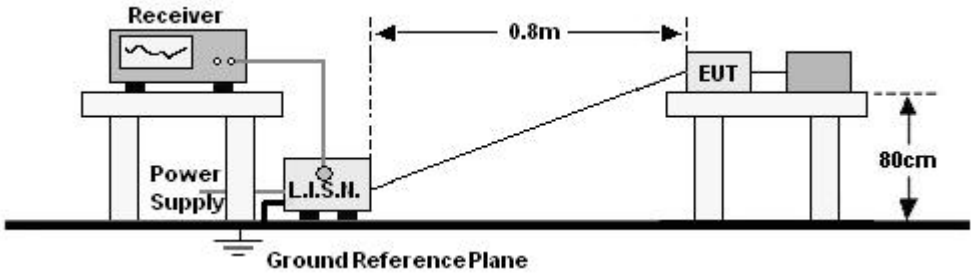
Item	Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	Test Receiver	R&S	ESR3	102075	May 28, 2021	May 27, 2022
2	AMN	SCHWHRZBECK	NNBM8127	8127739	Jun. 03, 2021	Jun. 02, 2022
3	LISN	R&S	ENV216	101375	May 28, 2021	May 27, 2022
4	RF cables	Huber+Suhnar	9kHz-30MHz	B1702988-0008	May 28, 2021	May 27, 2022
5	Software	Frad	EZ-EMC	EMC-CON 3A1	\	\

RF conducted test

Item	Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	Power meter	Keysight	E4419B	GB42421440	May 28, 2021	May 27, 2022
2	Power sensor	Keysight	E9 300A	US39211305	May 28, 2021	May 27, 2022
3	Signal Analyzer 20kHz-26.5GHz	KEYSIGHT	N9020A	MY49100060	May 28, 2021	May 27, 2022
4	Spectrum Analyzer 9kHz-40GHz	R&S	FSP40	100363	May 28, 2021	May 27, 2022

6. CONDUCTED EMISSIONS

6.1 Block Diagram Of Test Setup



6.2 Limit

FREQUENCY (MHz)	Limit (dBuV)	
	Quas-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

Notes:
1. *Decreasing linearly with logarithm of frequency.
2. The lower limit shall apply at the transition frequencies.

6.3 Test procedure

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

a. The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).

b. The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.

c. For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

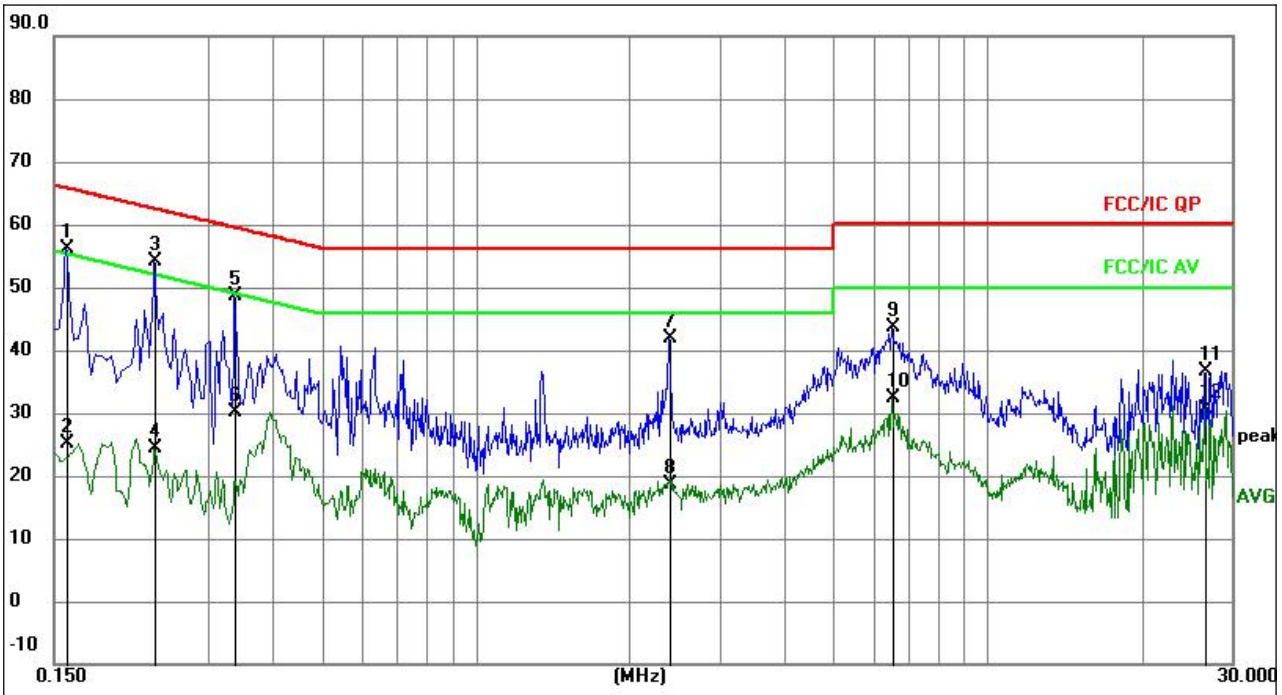
6.4 EUT operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

We pretest AC 120V and AC 240V, the worst voltage was AC 120V and the data recording in the report.

6.5 Test Result

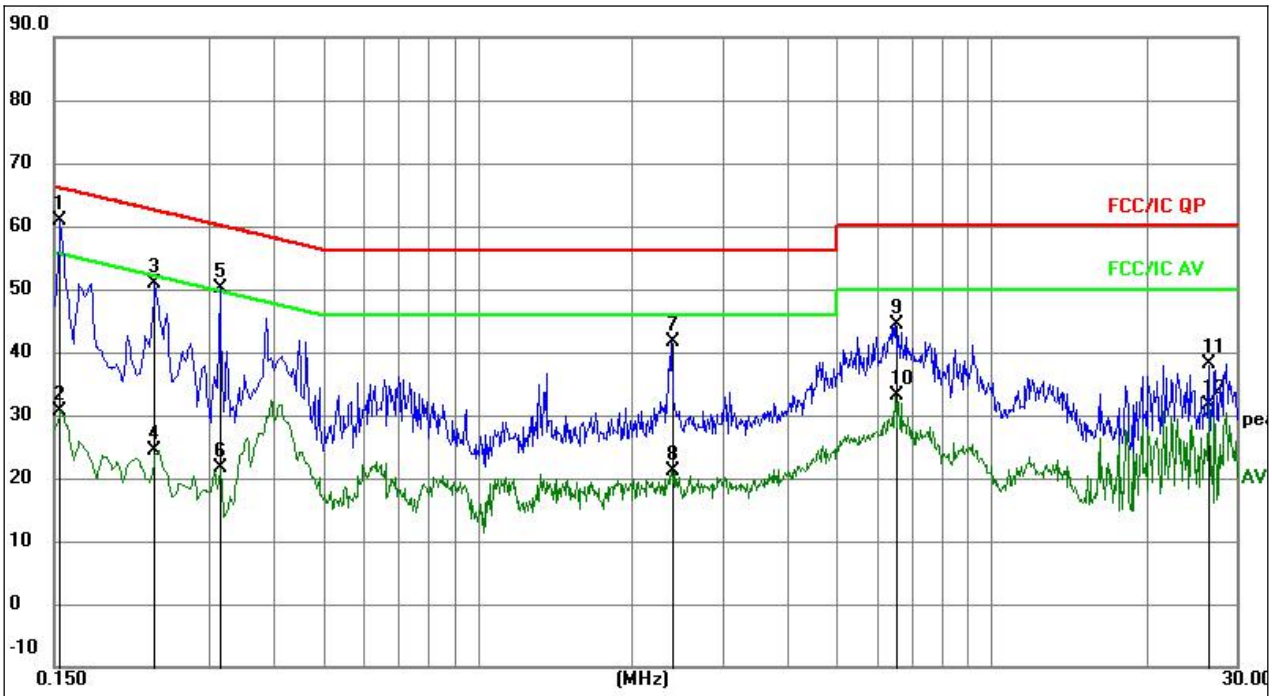
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	101kPa	Phase：	L
Test Voltage ：	AC 120V/60Hz	Test Mode：	Mode 5



Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz		dB	dBuV	dBuV	dB	Detector
1		0.1590	46.58	9.61	56.19	65.52	-9.33	QP
2		0.1590	15.49	9.61	25.10	55.52	-30.42	AVG
3	*	0.2355	44.51	9.61	54.12	62.25	-8.13	QP
4		0.2355	14.73	9.61	24.34	52.25	-27.91	AVG
5		0.3390	39.07	9.61	48.68	59.23	-10.55	QP
6		0.3390	20.41	9.61	30.02	49.23	-19.21	AVG
7		2.3865	32.13	9.64	41.77	56.00	-14.23	QP
8		2.3865	8.91	9.64	18.55	46.00	-27.45	AVG
9		6.5130	33.85	9.73	43.58	60.00	-16.42	QP
10		6.5130	22.54	9.73	32.27	50.00	-17.73	AVG
11		26.6100	26.88	9.74	36.62	60.00	-23.38	QP
12		26.6100	20.91	9.74	30.65	50.00	-19.35	AVG

Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	101kPa	Phase：	N
Test Voltage ：	AC 120V/60Hz	Test Mode：	Mode 5



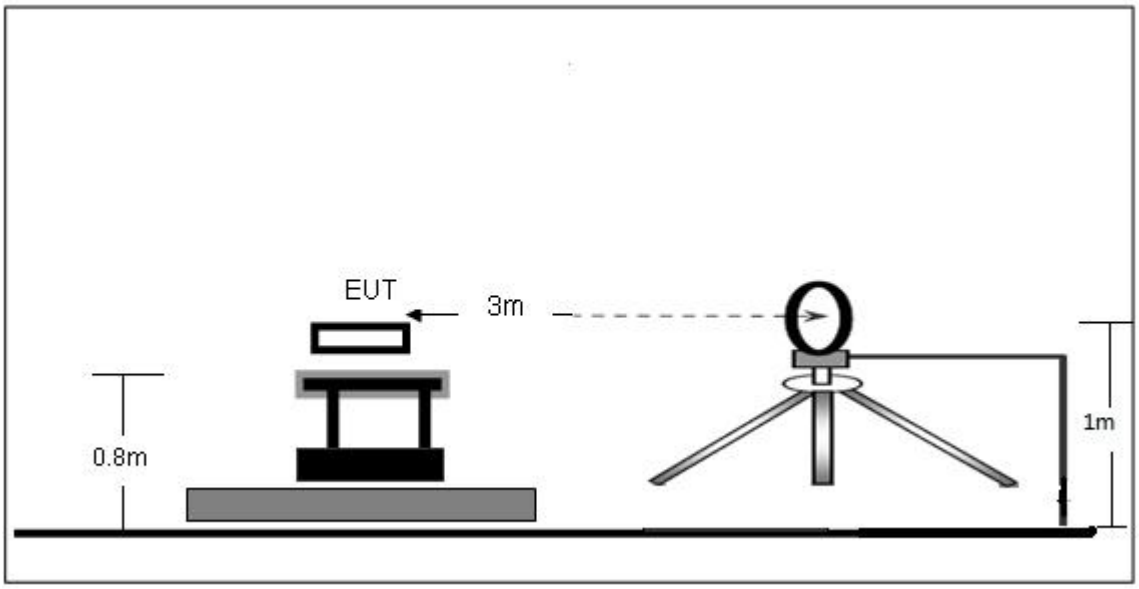
Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz		dB	dBuV	dBuV	dB	Detector
1	*	0.1539	51.37	9.61	60.98	65.79	-4.81	QP
2		0.1539	21.07	9.61	30.68	55.79	-25.11	AVG
3		0.2353	41.33	9.61	50.94	62.26	-11.32	QP
4		0.2353	14.86	9.61	24.47	52.26	-27.79	AVG
5		0.3149	40.42	9.61	50.03	59.84	-9.81	QP
6		0.3149	12.05	9.61	21.66	49.84	-28.18	AVG
7		2.3836	31.87	9.64	41.51	56.00	-14.49	QP
8		2.3836	11.45	9.64	21.09	46.00	-24.91	AVG
9		6.4882	34.55	9.73	44.28	60.00	-15.72	QP
10		6.4882	23.32	9.73	33.05	50.00	-16.95	AVG
11		26.4178	28.34	9.74	38.08	60.00	-21.92	QP
12		26.4178	21.88	9.74	31.62	50.00	-18.38	AVG

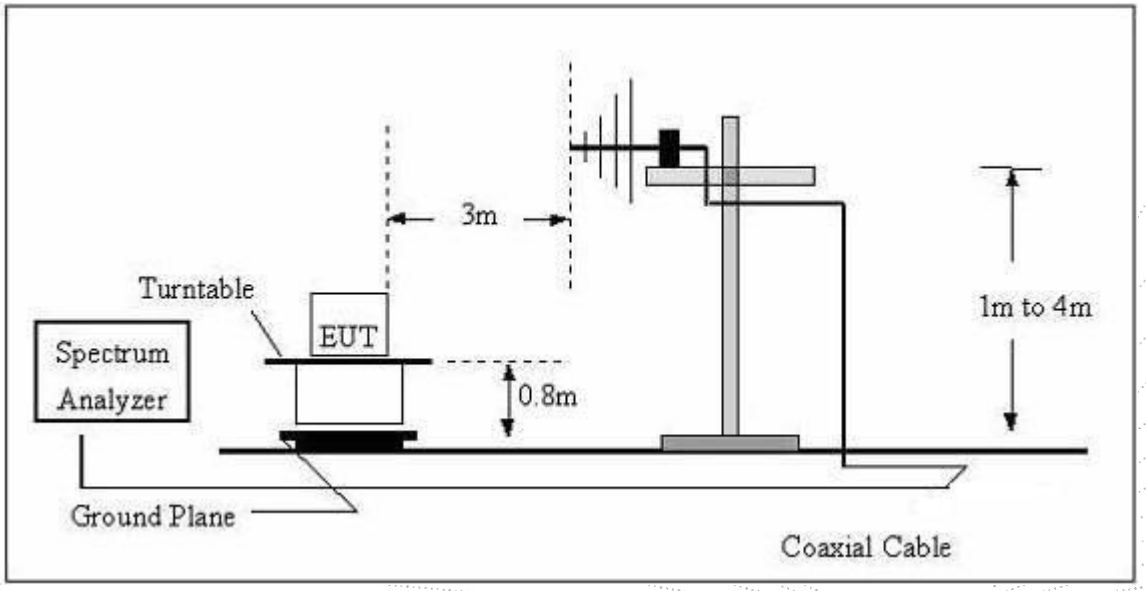
7. RADIATED EMISSIONS

7.1 Block Diagram Of Test Setup

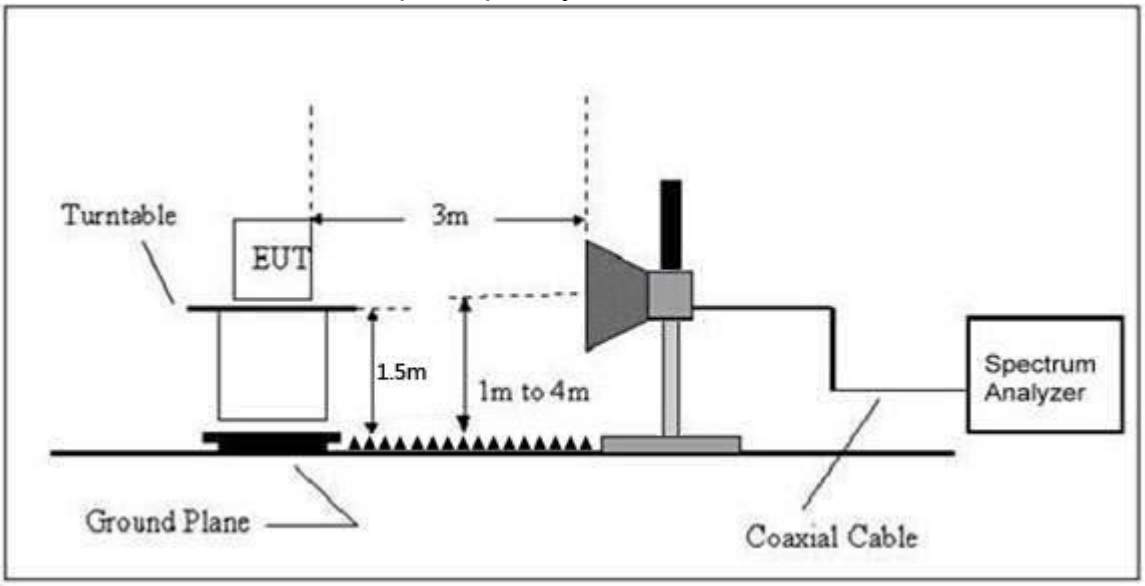
（A）Radiated Emission Test-Up Frequency Below 30MHz



（B）Radiated Emission Test-Up Frequency 30MHz~1GHz



（C）Radiated Emission Test-Up Frequency Above 1GHz



7.2 Limit

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequency	Field Strength	Distance	Field Strength Limit at 3m Distance	
(MHz)	uV/m	(m)	uV/m	dBuV/m
0.009 ~ 0.490	2400/F(kHz)	300	10000 * 2400/F(kHz)	$20\log^{(2400/F(kHz))}$ + 80
0.490 ~ 1.705	24000/F(kHz)	30	100 * 24000/F(kHz)	$20\log^{(24000/F(kHz))}$ + 40
1.705 ~ 30	30	30	100 * 30	$20\log^{(30)}$ + 40
30 ~ 88	100	3	100	$20\log^{(100)}$
88 ~ 216	150	3	150	$20\log^{(150)}$
216 ~ 960	200	3	200	$20\log^{(200)}$
Above 960	500	3	500	$20\log^{(500)}$

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Limit (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:
(1)The limit for radiated test was performed according to FCC PART 15C.
(2)The tighter limit applies at the band edges.
(3) Emission level (dBuV/m)=20log Emission level (uV/m).

7.3 Test procedure

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.10-2013. The test distance is 3m.The setup is according to the requirements in Section 13.1.4.1 of ANSI C63.10-2013 and CAN/CSA-CEI/IEC CISPR 22.
This test is required for any spurious emission that falls in a Restricted Band, as defined in Section 15.205.
It must be performed with the highest gain of each type of antenna proposed for use with the EUT.
Use the following spectrum analyzer settings:

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
b. The EUT was placed on the top of a rotating table 0.8 m for below 1GHz and 1.5m for above 1GHz the ground at a 3 meter. The table was rotated 360 degrees to determine the position of the highest radiation.
c. The height of the equipment or of the substitution antenna shall be 0.8 m for below 1GHz and 1.5m for above 1GHz; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:
Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

During the radiated emission test, the Spectrum Analyzer was set with the following configurations:

Frequency Band (MHz)	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	QP	120 kHz	300 kHz
Above 1000	Peak	1 MHz	1 MHz
	Average	1 MHz	10 Hz

Note: for the frequency ranges below 30 MHz, a narrower RBW is used for these ranges but the measured value should add a RBW correction factor (RBWCF) where RBWCF [dB] =10*lg(100 [kHz]/narrower RBW [kHz]). , the narrower RBW is 1 kHz and RBWCF is 20 dB for the frequency 9 kHz to 150 kHz, and the narrower RBW is 10 kHz and RBWCF is 10 dB for the frequency 150 kHz to 30 MHz.

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7.4 EUT operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

7.5 Test Result

Below 30MHz

Temperature：	26℃	Relative Humidtity：	24%
Pressure：	101 kPa	Test Voltage ：	AC120V/60Hz
Test Mode ：	Mode 5	Polarization :	--

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	PASS
--	--	--	--	PASS

Note:
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
Distance extrapolation factor =40 log (specific distance/test distance)(dB);
Limit line = specific limits(dBuv) + distance extrapolation factor.

Between 30MHz – 1GHz

Temperature：	26℃	Relative Humidtity：	54%
Pressure：	101 kPa	Test Voltage ：	AC120V/60Hz
Test Mode ：	Mode 5	Polarization :	Horizontal

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		147.9214	50.78	-19.35	31.43	43.50	-12.07	QP
2		175.6516	51.16	-17.42	33.74	43.50	-9.76	QP
3		446.4141	46.49	-9.67	36.82	46.00	-9.18	QP
4		595.1329	40.19	-6.13	34.06	46.00	-11.94	QP
5		742.2587	41.55	-2.99	38.56	46.00	-7.44	QP
6	*	890.7278	40.80	0.23	41.03	46.00	-4.97	QP

Temperature：	26℃	Relative Humidtity：	54%
Pressure：	101 kpa	Test Voltage ：	AC120V/60Hz
Test Mode ：	Mode 5	Polarization :	Vertical

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1	*	31.9746	56.83	-18.14	38.69	40.00	-1.31	QP
2	!	72.8466	54.02	-19.21	34.81	40.00	-5.19	QP
3		151.5972	55.67	-19.36	36.31	43.50	-7.19	QP
4		350.4768	42.95	-12.29	30.66	46.00	-15.34	QP
5		595.1329	41.61	-6.13	35.48	46.00	-10.52	QP
6	!	742.2587	44.45	-2.99	41.46	46.00	-4.54	QP

Between 1GHz – 40GHz

The worst case is Antenna A.

Test Mode :	TX(5.1G) - 802.11a

Polar (H/V)	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5180 MHz)-Above 1G									
V	4434.022	64.01	5.94	35.40	44.00	61.35	68.20	-6.85	PK
V	4434.022	43.50	5.94	35.40	44.00	40.84	54.00	-13.16	AV
V	10360.162	60.37	8.46	39.75	44.50	64.08	74.00	-9.92	PK
V	10360.162	43.39	8.46	39.75	44.50	47.10	54.00	-6.90	AV
V	15540.036	60.25	10.12	38.80	44.10	65.07	74.00	-8.93	PK
V	15540.036	43.36	10.12	38.80	42.70	49.58	54.00	-4.42	AV
H	4434.167	63.58	5.94	35.18	44.00	60.70	68.20	-7.50	PK
H	4434.167	43.95	5.94	35.18	44.00	41.07	54.00	-12.93	AV
H	10360.043	51.07	8.46	38.71	44.50	53.74	74.00	-20.26	PK
H	10360.043	42.23	8.46	38.71	44.50	44.90	54.00	-9.10	AV
H	15540.050	52.70	10.12	38.38	44.10	57.10	74.00	-16.90	PK
H	15540.050	44.26	10.12	38.38	44.10	48.66	54.00	-5.34	AV
middle Channel (5200 MHz)-Above 1G									
V	4592.044	60.51	6.48	36.35	44.05	59.29	74.00	-14.71	PK
V	4592.044	43.91	6.48	36.35	44.05	42.69	54.00	-11.31	AV
V	10400.085	63.81	8.47	37.88	44.51	65.65	68.20	-2.55	PK
V	10400.085	43.26	8.47	37.88	44.51	45.10	54.00	-8.90	AV
V	15600.159	61.74	10.12	38.80	44.10	66.56	74.00	-7.44	PK
V	15600.159	43.67	10.12	38.80	42.70	49.89	54.00	-4.11	AV
H	4592.194	62.29	6.48	36.37	44.05	61.09	74.00	-12.91	PK
H	4592.194	43.65	6.48	36.37	44.05	42.45	54.00	-11.55	AV
H	10400.095	50.59	8.47	38.64	44.50	53.20	68.20	-15.00	PK
H	10400.095	43.45	8.47	38.64	44.50	46.06	54.00	-7.94	AV
H	15600.065	51.23	10.12	38.38	44.10	55.63	74.00	-18.37	PK
H	15600.065	41.38	10.12	38.38	44.10	45.78	54.00	-8.22	AV
High Channel (5240 MHz)-Above 1G									
V	4739.130	62.44	7.10	37.24	43.50	63.28	74.00	-10.72	PK
V	4739.130	43.44	7.10	37.24	43.50	44.28	54.00	-9.72	AV
V	10480.052	61.39	8.46	37.68	44.50	63.03	68.20	-5.17	PK
V	10480.052	43.44	8.46	37.68	44.50	45.08	54.00	-8.92	AV
V	15720.008	63.25	10.12	38.80	44.10	68.07	74.00	-5.93	PK
V	15720.008	43.70	10.12	38.80	42.70	49.92	54.00	-4.08	AV
H	4739.138	64.05	7.10	37.24	43.50	64.89	74.00	-9.11	PK
H	4739.138	43.89	7.10	37.24	43.50	44.73	54.00	-9.27	AV
H	10480.134	50.46	8.46	38.57	44.50	52.99	68.20	-15.21	PK
H	10480.134	42.25	8.46	38.57	44.50	44.78	54.00	-9.22	AV
H	15720.145	52.92	10.12	38.38	44.10	57.32	74.00	-16.68	PK
H	15720.145	42.16	10.12	38.38	44.10	46.56	54.00	-7.44	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode :	TX(5.1G) - 802.11n-HT20

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5180 MHz)-Above 1G									
V	4434.185	63.98	5.94	35.40	44.00	61.32	68.20	-6.88	PK
V	4434.185	43.68	5.94	35.40	44.00	41.02	54.00	-12.98	AV
V	10360.121	61.53	8.46	39.75	44.50	65.24	68.20	-2.96	PK
V	10360.121	43.76	8.46	39.75	44.50	47.47	54.00	-6.53	AV
V	15540.027	61.79	10.12	38.80	44.10	66.61	74.00	-7.39	PK
V	15540.027	43.26	10.12	38.80	42.70	49.48	54.00	-4.52	AV
H	4434.069	60.58	5.94	35.18	44.00	57.70	68.20	-10.50	PK
H	4434.069	43.84	5.94	35.18	44.00	40.96	54.00	-13.04	AV
H	10360.182	54.09	8.46	38.71	44.50	56.76	68.20	-11.44	PK
H	10360.182	44.69	8.46	38.71	44.50	47.36	54.00	-6.64	AV
H	15540.177	51.58	10.12	38.38	44.10	55.98	74.00	-18.02	PK
H	15540.177	44.74	10.12	38.38	44.10	49.14	54.00	-4.86	AV
middle Channel (5200 MHz)-Above 1G									
V	4592.084	61.08	6.48	36.35	44.05	59.86	74.00	-14.14	PK
V	4592.084	43.93	6.48	36.35	44.05	42.71	54.00	-11.29	AV
V	10400.061	64.42	8.47	37.88	44.51	66.26	68.20	-1.94	PK
V	10400.061	43.81	8.47	37.88	44.51	45.65	54.00	-8.35	AV
V	15600.106	61.04	10.12	38.80	44.10	65.86	74.00	-8.14	PK
V	15600.106	43.21	10.12	38.80	42.70	49.43	54.00	-4.57	AV
H	4592.039	63.40	6.48	36.37	44.05	62.20	74.00	-11.80	PK
H	4592.039	43.59	6.48	36.37	44.05	42.39	54.00	-11.61	AV
H	10400.031	54.75	8.47	38.64	44.50	57.36	68.20	-10.84	PK
H	10400.031	42.74	8.47	38.64	44.50	45.35	54.00	-8.65	AV
H	15600.028	52.79	10.12	38.38	44.10	57.19	74.00	-16.81	PK
H	15600.028	44.26	10.12	38.38	44.10	48.66	54.00	-5.34	AV
High Channel (5240 MHz)-Above 1G									
V	4739.065	62.31	7.10	37.24	43.50	63.15	74.00	-10.85	PK
V	4739.065	43.55	7.10	37.24	43.50	44.39	54.00	-9.61	AV
V	10480.118	64.25	8.46	37.68	44.50	65.89	68.20	-2.31	PK
V	10480.118	43.51	8.46	37.68	44.50	45.15	54.00	-8.85	AV
V	15720.003	62.33	10.12	38.80	44.10	67.15	74.00	-6.85	PK
V	15720.003	43.21	10.12	38.80	42.70	49.43	54.00	-4.57	AV
H	4739.194	63.25	7.10	37.24	43.50	64.09	74.00	-9.91	PK
H	4739.194	43.87	7.10	37.24	43.50	44.71	54.00	-9.29	AV
H	10480.190	53.37	8.46	38.57	44.50	55.90	68.20	-12.30	PK
H	10480.190	41.20	8.46	38.57	44.50	43.73	54.00	-10.27	AV
H	15720.021	51.24	10.12	38.38	44.10	55.64	74.00	-18.36	PK
H	15720.021	43.12	10.12	38.38	44.10	47.52	54.00	-6.48	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Test Mode is MIMO Mode.

Test Mode :	TX(5.1G) - 802.11n-HT40

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5190 MHz)-Above 1G									
V	4434.195	62.71	5.94	35.40	44.00	60.05	74.00	-13.95	PK
V	4434.195	43.76	5.94	35.40	44.00	41.10	54.00	-12.90	AV
V	10380.190	60.43	8.46	39.75	44.50	64.14	68.20	-4.06	PK
V	10380.190	43.32	8.46	39.75	44.50	47.03	54.00	-6.97	AV
V	15570.197	64.48	10.12	38.80	44.10	69.30	74.00	-4.70	PK
V	15570.197	43.19	10.12	38.80	42.70	49.41	54.00	-4.59	AV
H	4434.186	63.28	5.94	35.18	44.00	60.40	74.00	-13.60	PK
H	4434.186	43.05	5.94	35.18	44.00	40.17	54.00	-13.83	AV
H	10380.022	52.79	8.46	38.71	44.50	55.46	68.20	-12.74	PK
H	10380.022	42.42	8.46	38.71	44.50	45.09	54.00	-8.91	AV
H	15570.036	53.38	10.12	38.38	44.10	57.78	74.00	-16.22	PK
H	15570.036	40.91	10.12	38.38	44.10	45.31	54.00	-8.69	AV
middle Channel (5230 MHz)-Above 1G									
V	4739.069	62.45	6.48	36.35	44.05	61.23	74.00	-12.77	PK
V	4739.069	43.07	6.48	36.35	44.05	41.85	54.00	-12.15	AV
V	10460.126	60.40	8.47	37.88	44.51	62.24	68.20	-5.96	PK
V	10460.126	43.83	8.47	37.88	44.51	45.67	54.00	-8.33	AV
V	15690.141	63.73	10.12	38.80	44.10	68.55	74.00	-5.45	PK
V	15690.141	43.23	10.12	38.80	42.70	49.45	54.00	-4.55	AV
H	4739.193	60.05	6.48	36.37	44.05	58.85	74.00	-15.15	PK
H	4739.193	43.45	6.48	36.37	44.05	42.25	54.00	-11.75	AV
H	10460.162	54.36	8.47	38.64	44.50	56.97	68.20	-11.23	PK
H	10460.162	44.47	8.47	38.64	44.50	47.08	54.00	-6.92	AV
H	15690.060	54.60	10.12	38.38	44.10	59.00	74.00	-15.00	PK
H	15690.060	42.79	10.12	38.38	44.10	47.19	54.00	-6.81	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Test Mode is MIMO Mode.

Test Mode :	TX(5.1G) - 802.11ac-HT20

Polar (H/V)	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5180 MHz)-Above 1G									
V	4434.178	61.70	5.94	35.40	44.00	59.04	68.20	-9.16	PK
V	4434.178	43.91	5.94	35.40	44.00	41.25	54.00	-12.75	AV
V	10360.151	63.58	8.46	39.75	44.50	67.29	74.00	-6.71	PK
V	10360.151	43.10	8.46	39.75	44.50	46.81	54.00	-7.19	AV
V	15540.079	60.47	10.12	38.80	44.10	65.29	74.00	-8.71	PK
V	15540.079	43.64	10.12	38.80	42.70	49.86	54.00	-4.14	AV
H	4434.092	64.63	5.94	35.18	44.00	61.75	68.20	-6.45	PK
H	4434.092	43.49	5.94	35.18	44.00	40.61	54.00	-13.39	AV
H	10360.050	51.42	8.46	38.71	44.50	54.09	74.00	-19.91	PK
H	10360.050	40.69	8.46	38.71	44.50	43.36	54.00	-10.64	AV
H	15540.161	54.74	10.12	38.38	44.10	59.14	74.00	-14.86	PK
H	15540.161	42.52	10.12	38.38	44.10	46.92	54.00	-7.08	AV
middle Channel (5200 MHz)-Above 1G									
V	4592.044	61.26	6.48	36.35	44.05	60.04	74.00	-13.96	PK
V	4592.044	43.22	6.48	36.35	44.05	42.00	54.00	-12.00	AV
V	10400.020	64.78	8.47	37.88	44.51	66.62	68.20	-1.58	PK
V	10400.020	43.50	8.47	37.88	44.51	45.34	54.00	-8.66	AV
V	15600.076	64.67	10.12	38.80	44.10	69.49	74.00	-4.51	PK
V	15600.076	43.44	10.12	38.80	42.70	49.66	54.00	-4.34	AV
H	4592.078	60.36	6.48	36.37	44.05	59.16	74.00	-14.84	PK
H	4592.078	43.62	6.48	36.37	44.05	42.42	54.00	-11.58	AV
H	10400.032	54.91	8.47	38.64	44.50	57.52	68.20	-10.68	PK
H	10400.032	40.18	8.47	38.64	44.50	42.79	54.00	-11.21	AV
H	15600.036	50.73	10.12	38.38	44.10	55.13	74.00	-18.87	PK
H	15600.036	43.43	10.12	38.38	44.10	47.83	54.00	-6.17	AV
High Channel (5240 MHz)-Above 1G									
V	4739.019	63.87	7.10	37.24	43.50	64.71	74.00	-9.29	PK
V	4739.019	43.36	7.10	37.24	43.50	44.20	54.00	-9.80	AV
V	10480.090	63.68	8.46	37.68	44.50	65.32	68.20	-2.88	PK
V	10480.090	43.77	8.46	37.68	44.50	45.41	54.00	-8.59	AV
V	15720.023	64.20	10.12	38.80	44.10	69.02	74.00	-4.98	PK
V	15720.023	43.16	10.12	38.80	42.70	49.38	54.00	-4.62	AV
H	4739.191	62.75	7.10	37.24	43.50	63.59	74.00	-10.41	PK
H	4739.191	43.71	7.10	37.24	43.50	44.55	54.00	-9.45	AV
H	10480.161	50.66	8.46	38.57	44.50	53.19	68.20	-15.01	PK
H	10480.161	43.03	8.46	38.57	44.50	45.56	54.00	-8.44	AV
H	15720.132	54.70	10.12	38.38	44.10	59.10	74.00	-14.90	PK
H	15720.132	40.48	10.12	38.38	44.10	44.88	54.00	-9.12	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Test Mode is MIMO Mode.

Test Mode :	TX(5.1G) - 802.11ac-HT40

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5190 MHz)-Above 1G									
V	4434.148	61.09	5.94	35.40	44.00	58.43	74.00	-15.57	PK
V	4434.148	43.36	5.94	35.40	44.00	40.70	54.00	-13.30	AV
V	10380.139	63.95	8.46	39.75	44.50	67.66	68.20	-0.54	PK
V	10380.139	43.29	8.46	39.75	44.50	47.00	54.00	-7.00	AV
V	15570.004	63.00	10.12	38.80	44.10	67.82	74.00	-6.18	PK
V	15570.004	43.64	10.12	38.80	42.70	49.86	54.00	-4.14	AV
H	4434.036	64.53	5.94	35.18	44.00	61.65	74.00	-12.35	PK
H	4434.036	43.17	5.94	35.18	44.00	40.29	54.00	-13.71	AV
H	10380.090	52.34	8.46	38.71	44.50	55.01	68.20	-13.19	PK
H	10380.090	40.37	8.46	38.71	44.50	43.04	54.00	-10.96	AV
H	15570.024	50.59	10.12	38.38	44.10	54.99	74.00	-19.01	PK
H	15570.024	43.36	10.12	38.38	44.10	47.76	54.00	-6.24	AV
middle Channel (5230 MHz)-Above 1G									
V	4739.110	61.05	6.48	36.35	44.05	59.83	74.00	-14.17	PK
V	4739.110	43.00	6.48	36.35	44.05	41.78	54.00	-12.22	AV
V	10460.160	64.68	8.47	37.88	44.51	66.52	68.20	-1.68	PK
V	10460.160	43.45	8.47	37.88	44.51	45.29	54.00	-8.71	AV
V	15690.166	63.78	10.12	38.80	44.10	68.60	74.00	-5.40	PK
V	15690.166	43.47	10.12	38.80	42.70	49.69	54.00	-4.31	AV
H	4739.166	64.23	6.48	36.37	44.05	63.03	74.00	-10.97	PK
H	4739.166	43.31	6.48	36.37	44.05	42.11	54.00	-11.89	AV
H	10460.074	51.46	8.47	38.64	44.50	54.07	68.20	-14.13	PK
H	10460.074	44.60	8.47	38.64	44.50	47.21	54.00	-6.79	AV
H	15690.147	51.92	10.12	38.38	44.10	56.32	74.00	-17.68	PK
H	15690.147	42.22	10.12	38.38	44.10	46.62	54.00	-7.38	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Test Mode is MIMO Mode.

Test Mode :	TX(5.1G) - 802.11 AC80

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
(5210 MHz)-Above 1G									
V	4434.051	62.09	5.94	35.40	44.00	59.43	74.00	-14.57	PK
V	4434.051	43.20	5.94	35.40	44.00	40.54	54.00	-13.46	AV
V	10420.063	62.78	8.46	39.75	44.50	66.49	68.20	-1.71	PK
V	10420.063	43.94	8.46	39.75	44.50	47.65	54.00	-6.35	AV
V	15630.156	63.72	10.12	38.80	44.10	68.54	74.00	-5.46	PK
V	15630.156	43.41	10.12	38.80	42.70	49.63	54.00	-4.37	AV
H	4434.189	63.24	5.94	35.18	44.00	60.36	74.00	-13.64	PK
H	4434.189	43.22	5.94	35.18	44.00	40.34	54.00	-13.66	AV
H	10420.139	50.34	8.46	38.71	44.50	53.01	68.20	-15.19	PK
H	10420.139	44.90	8.46	38.71	44.50	47.57	54.00	-6.43	AV
H	15630.029	52.79	10.12	38.38	44.10	57.19	74.00	-16.81	PK
H	15630.029	44.24	10.12	38.38	44.10	48.64	54.00	-5.36	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Test Mode is MIMO Mode.

Test Mode :	TX (5.8G) -- 802.11a

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5745 MHz)-Above 1G									
V	4679.072	57.47	5.94	35.40	44.00	54.81	74.00	-19.19	PK
V	4679.072	44.00	5.94	35.40	44.00	41.34	54.00	-12.66	AV
V	11490.138	54.34	8.46	39.75	44.50	58.05	68.20	-10.15	PK
V	11490.138	43.57	8.46	39.75	44.50	47.28	54.00	-6.72	AV
V	17235.109	59.21	10.12	38.80	44.10	64.03	74.00	-9.97	PK
V	17235.109	43.51	10.12	38.80	42.70	49.73	54.00	-4.27	AV
H	4679.095	58.68	5.94	35.18	44.00	55.80	74.00	-18.20	PK
H	4679.095	44.00	5.94	35.18	44.00	41.12	54.00	-12.88	AV
H	11490.052	53.48	8.46	38.71	44.50	56.15	68.20	-12.05	PK
H	11490.052	43.54	8.46	38.71	44.50	46.21	54.00	-7.79	AV
H	17235.140	50.93	10.12	38.38	44.10	55.33	74.00	-18.67	PK
H	17235.140	41.75	10.12	38.38	44.10	46.15	54.00	-7.85	AV
middle Channel (5785 MHz)-Above 1G									
V	4592.199	56.16	6.48	36.35	44.05	54.94	74.00	-19.06	PK
V	4592.199	43.14	6.48	36.35	44.05	41.92	54.00	-12.08	AV
V	11570.115	58.58	8.47	37.88	44.51	60.42	68.20	-7.78	PK
V	11570.115	43.79	8.47	37.88	44.51	45.63	54.00	-8.37	AV
V	17355.075	58.82	10.12	38.80	44.10	63.64	74.00	-10.36	PK
V	17355.075	39.52	10.12	38.80	42.70	45.74	54.00	-8.26	AV
H	4592.032	55.79	6.48	36.37	44.05	54.59	74.00	-19.41	PK
H	4592.032	43.72	6.48	36.37	44.05	42.52	54.00	-11.48	AV
H	11570.148	53.93	8.47	38.64	44.50	56.54	68.20	-11.66	PK
H	11570.148	40.72	8.47	38.64	44.50	43.33	54.00	-10.67	AV
H	17355.177	50.48	10.12	38.38	44.10	54.88	74.00	-19.12	PK
H	17355.177	44.04	10.12	38.38	44.10	48.44	54.00	-5.56	AV
High Channel (5825 MHz)-Above 1G									
V	6039.156	60.52	7.10	37.24	43.50	61.36	68.20	-6.84	PK
V	6039.156	43.40	7.10	37.24	43.50	44.24	54.00	-9.76	AV
V	11650.193	60.36	8.46	37.68	44.50	62.00	74.00	-12.00	PK
V	11650.193	43.27	8.46	37.68	44.50	44.91	54.00	-9.09	AV
V	17475.166	55.68	10.12	38.80	44.10	60.50	68.20	-7.70	PK
V	17475.166	43.41	10.12	38.80	42.70	49.63	54.00	-4.37	AV
H	6039.157	58.83	7.10	37.24	43.50	59.67	68.20	-8.53	PK
H	6039.157	43.96	7.10	37.24	43.50	44.80	54.00	-9.20	AV
H	11650.110	50.11	8.46	38.57	44.50	52.64	74.00	-21.36	PK
H	11650.110	40.10	8.46	38.57	44.50	42.63	54.00	-11.37	AV
H	17475.190	54.09	10.12	38.38	44.10	58.49	68.20	-9.71	PK
H	17475.190	43.40	10.12	38.38	44.10	47.80	54.00	-6.20	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
The Worst mode is Antenna A.

Test Mode :	TX (5.8G) --802.11n-HT20

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5745 MHz)-Above 1G									
V	4679.132	58.93	5.94	35.40	44.00	56.27	74.00	-17.73	PK
V	4679.132	43.38	5.94	35.40	44.00	40.72	54.00	-13.28	AV
V	11490.140	55.84	8.46	39.75	44.50	59.55	68.20	-8.65	PK
V	11490.140	43.19	8.46	39.75	44.50	46.90	54.00	-7.10	AV
V	17235.121	58.75	10.12	38.80	44.10	63.57	74.00	-10.43	PK
V	17235.121	43.07	10.12	38.80	42.70	49.29	54.00	-4.71	AV
H	4679.018	60.68	5.94	35.18	44.00	57.80	74.00	-16.20	PK
H	4679.018	43.40	5.94	35.18	44.00	40.52	54.00	-13.48	AV
H	11490.024	49.71	8.46	38.71	44.50	52.38	68.20	-15.82	PK
H	11490.024	40.68	8.46	38.71	44.50	43.35	54.00	-10.65	AV
H	17235.138	50.50	10.12	38.38	44.10	54.90	74.00	-19.10	PK
H	17235.138	41.69	10.12	38.38	44.10	46.09	54.00	-7.91	AV
middle Channel (5785 MHz)-Above 1G									
V	4592.156	61.00	6.48	36.35	44.05	59.78	74.00	-14.22	PK
V	4592.156	43.54	6.48	36.35	44.05	42.32	54.00	-11.68	AV
V	11570.053	57.06	8.47	37.88	44.51	58.90	68.20	-9.30	PK
V	11570.053	43.98	8.47	37.88	44.51	45.82	54.00	-8.18	AV
V	17355.045	57.78	10.12	38.80	44.10	62.60	74.00	-11.40	PK
V	17355.045	43.33	10.12	38.80	42.70	49.55	54.00	-4.45	AV
H	4592.070	59.54	6.48	36.37	44.05	58.34	74.00	-15.66	PK
H	4592.070	43.92	6.48	36.37	44.05	42.72	54.00	-11.28	AV
H	11570.061	51.83	8.47	38.64	44.50	54.44	68.20	-13.76	PK
H	11570.061	42.56	8.47	38.64	44.50	45.17	54.00	-8.83	AV
H	17355.007	52.41	10.12	38.38	44.10	56.81	74.00	-17.19	PK
H	17355.007	42.62	10.12	38.38	44.10	47.02	54.00	-6.98	AV
High Channel (5825 MHz)-Above 1G									
V	6039.111	58.30	7.10	37.24	43.50	59.14	68.20	-9.06	PK
V	6039.111	43.00	7.10	37.24	43.50	43.84	54.00	-10.16	AV
V	11650.194	57.91	8.46	37.68	44.50	59.55	74.00	-14.45	PK
V	11650.194	43.30	8.46	37.68	44.50	44.94	54.00	-9.06	AV
V	17475.109	57.29	10.12	38.80	44.10	62.11	68.20	-6.09	PK
V	17475.109	43.70	10.12	38.80	42.70	49.92	54.00	-4.08	AV
H	6039.033	58.00	7.10	37.24	43.50	58.84	68.20	-9.36	PK
H	6039.033	43.20	7.10	37.24	43.50	44.04	54.00	-9.96	AV
H	11650.119	51.39	8.46	38.57	44.50	53.92	74.00	-20.08	PK
H	11650.119	41.53	8.46	38.57	44.50	44.06	54.00	-9.94	AV
H	17475.012	51.57	10.12	38.38	44.10	55.97	68.20	-12.23	PK
H	17475.012	43.18	10.12	38.38	44.10	47.58	54.00	-6.42	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Test Mode is MIMO Mode.

Test Mode :	TX (5.8G) -- 802.11n-HT40

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5755 MHz)-Above 1G									
V	4679.012	58.42	5.94	35.40	44.00	55.76	74.00	-18.24	PK
V	4679.012	43.80	5.94	35.40	44.00	41.14	54.00	-12.86	AV
V	11510.130	56.14	8.46	39.75	44.50	59.85	68.20	-8.35	PK
V	11510.130	43.55	8.46	39.75	44.50	47.26	54.00	-6.74	AV
V	17265.165	56.18	10.12	38.80	44.10	61.00	74.00	-13.00	PK
V	17265.165	2.00	10.12	38.80	42.70	8.22	54.00	-45.78	AV
H	4679.194	58.42	5.94	35.18	44.00	55.54	74.00	-18.46	PK
H	4679.194	43.09	5.94	35.18	44.00	40.21	54.00	-13.79	AV
H	11510.079	52.34	8.46	38.71	44.50	55.01	68.20	-13.19	PK
H	11510.079	42.64	8.46	38.71	44.50	45.31	54.00	-8.69	AV
H	17265.118	52.57	10.12	38.38	44.10	56.97	74.00	-17.03	PK
H	17265.118	42.76	10.12	38.38	44.10	47.16	54.00	-6.84	AV
middle Channel (5795 MHz)-Above 1G									
V	6039.173	59.58	6.48	36.35	44.05	58.36	68.20	-9.84	PK
V	6039.173	43.00	6.48	36.35	44.05	41.78	54.00	-12.22	AV
V	11590.021	55.79	8.47	37.88	44.51	57.63	74.00	-16.37	PK
V	11590.021	43.94	8.47	37.88	44.51	45.78	54.00	-8.22	AV
V	17385.136	55.88	10.12	38.80	44.10	60.70	68.20	-7.50	PK
V	17385.136	41.83	10.12	38.80	42.70	48.05	54.00	-5.95	AV
H	6039.104	59.54	6.48	36.37	44.05	58.34	68.20	-9.86	PK
H	6039.104	43.58	6.48	36.37	44.05	42.38	54.00	-11.62	AV
H	11590.008	52.58	8.47	38.64	44.50	55.19	74.00	-18.81	PK
H	11590.008	41.00	8.47	38.64	44.50	43.61	54.00	-10.39	AV
H	17385.161	50.00	10.12	38.38	44.10	54.40	68.20	-13.80	PK
H	17385.161	40.10	10.12	38.38	44.10	44.50	54.00	-9.50	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
The Worst mode is Antenna A.

Test Mode :	TX (5.8G) --802.11ac-HT20

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5745 MHz)-Above 1G									
V	4679.008	59.42	5.94	35.40	44.00	56.76	74.00	-17.24	PK
V	4679.008	43.92	5.94	35.40	44.00	41.26	54.00	-12.74	AV
V	11490.041	56.65	8.46	39.75	44.50	60.36	68.20	-7.84	PK
V	11490.041	43.51	8.46	39.75	44.50	47.22	54.00	-6.78	AV
V	17235.106	60.94	10.12	38.80	44.10	65.76	74.00	-8.24	PK
V	17235.106	43.32	10.12	38.80	42.70	49.54	54.00	-4.46	AV
H	4679.102	58.26	5.94	35.18	44.00	55.38	74.00	-18.62	PK
H	4679.102	43.93	5.94	35.18	44.00	41.05	54.00	-12.95	AV
H	11490.183	52.40	8.46	38.71	44.50	55.07	68.20	-13.13	PK
H	11490.183	42.80	8.46	38.71	44.50	45.47	54.00	-8.53	AV
H	17235.158	51.46	10.12	38.38	44.10	55.86	74.00	-18.14	PK
H	17235.158	40.32	10.12	38.38	44.10	44.72	54.00	-9.28	AV
middle Channel (5785 MHz)-Above 1G									
V	4592.033	57.90	6.48	36.35	44.05	56.68	74.00	-17.32	PK
V	4592.033	43.03	6.48	36.35	44.05	41.81	54.00	-12.19	AV
V	11570.031	56.89	8.47	37.88	44.51	58.73	68.20	-9.47	PK
V	11570.031	43.37	8.47	37.88	44.51	45.21	54.00	-8.79	AV
V	17355.128	57.57	10.12	38.80	44.10	62.39	74.00	-11.61	PK
V	17355.128	39.13	10.12	38.80	42.70	45.35	54.00	-8.65	AV
H	4592.036	58.17	6.48	36.37	44.05	56.97	74.00	-17.03	PK
H	4592.036	43.78	6.48	36.37	44.05	42.58	54.00	-11.42	AV
H	11570.078	50.98	8.47	38.64	44.50	53.59	68.20	-14.61	PK
H	11570.078	40.44	8.47	38.64	44.50	43.05	54.00	-10.95	AV
H	17355.058	53.15	10.12	38.38	44.10	57.55	74.00	-16.45	PK
H	17355.058	40.79	10.12	38.38	44.10	45.19	54.00	-8.81	AV
High Channel (5825 MHz)-Above 1G									
V	6039.144	58.40	7.10	37.24	43.50	59.24	68.20	-8.96	PK
V	6039.144	43.33	7.10	37.24	43.50	44.17	54.00	-9.83	AV
V	11650.079	62.40	8.46	37.68	44.50	64.04	74.00	-9.96	PK
V	11650.079	43.93	8.46	37.68	44.50	45.57	54.00	-8.43	AV
V	17475.040	56.38	10.12	38.80	44.10	61.20	68.20	-7.00	PK
V	17475.040	43.94	10.12	38.80	42.70	50.16	54.00	-3.84	AV
H	6039.120	54.08	7.10	37.24	43.50	54.92	68.20	-13.28	PK
H	6039.120	43.18	7.10	37.24	43.50	44.02	54.00	-9.98	AV
H	11650.115	51.84	8.46	38.57	44.50	54.37	74.00	-19.63	PK
H	11650.115	41.78	8.46	38.57	44.50	44.31	54.00	-9.69	AV
H	17475.105	54.50	10.12	38.38	44.10	58.90	68.20	-9.30	PK
H	17475.105	41.68	10.12	38.38	44.10	46.08	54.00	-7.92	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Test Mode is MIMO Mode.

Test Mode :	TX (5.8G) -- 802.11ac-HT40

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5755 MHz)-Above 1G									
V	4679.190	57.88	5.94	35.40	44.00	55.22	74.00	-18.78	PK
V	4679.190	43.48	5.94	35.40	44.00	40.82	54.00	-13.18	AV
V	11510.008	56.28	8.46	39.75	44.50	59.99	68.20	-8.21	PK
V	11510.008	43.28	8.46	39.75	44.50	46.99	54.00	-7.01	AV
V	17265.031	58.25	10.12	38.80	44.10	63.07	74.00	-10.93	PK
V	17265.031	2.00	10.12	38.80	42.70	8.22	54.00	-45.78	AV
H	4679.148	59.75	5.94	35.18	44.00	56.87	74.00	-17.13	PK
H	4679.148	43.85	5.94	35.18	44.00	40.97	54.00	-13.03	AV
H	11510.024	54.31	8.46	38.71	44.50	56.98	68.20	-11.22	PK
H	11510.024	42.60	8.46	38.71	44.50	45.27	54.00	-8.73	AV
H	17265.155	52.35	10.12	38.38	44.10	56.75	74.00	-17.25	PK
H	17265.155	43.93	10.12	38.38	44.10	48.33	54.00	-5.67	AV
middle Channel (5795 MHz)-Above 1G									
V	6039.197	58.95	6.48	36.35	44.05	57.73	68.20	-10.47	PK
V	6039.197	43.53	6.48	36.35	44.05	42.31	54.00	-11.69	AV
V	11590.110	57.15	8.47	37.88	44.51	58.99	74.00	-15.01	PK
V	11590.110	43.11	8.47	37.88	44.51	44.95	54.00	-9.05	AV
V	17385.067	55.64	10.12	38.80	44.10	60.46	68.20	-7.74	PK
V	17385.067	41.67	10.12	38.80	42.70	47.89	54.00	-6.11	AV
H	6039.187	59.44	6.48	36.37	44.05	58.24	68.20	-9.96	PK
H	6039.187	43.44	6.48	36.37	44.05	42.24	54.00	-11.76	AV
H	11590.027	51.59	8.47	38.64	44.50	54.20	74.00	-19.80	PK
H	11590.027	40.50	8.47	38.64	44.50	43.11	54.00	-10.89	AV
H	17385.112	54.36	10.12	38.38	44.10	58.76	68.20	-9.44	PK
H	17385.112	41.90	10.12	38.38	44.10	46.30	54.00	-7.70	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
The Worst mode is Antenna A.

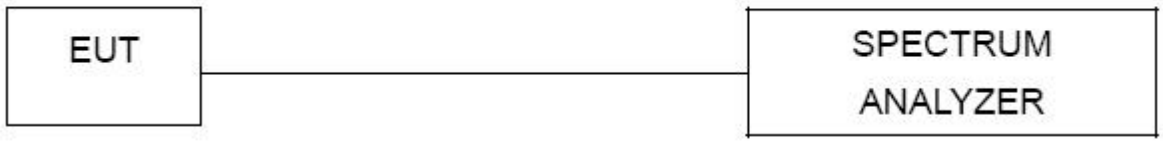
Test Mode :	TX(5.8G) - 802.11 AC80

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
(5775 MHz)-Above 1G									
V	4679.053	59.85	5.94	35.40	44.00	57.19	74.00	-16.81	PK
V	4679.053	43.33	5.94	35.40	44.00	40.67	54.00	-13.33	AV
V	11550.133	59.33	8.46	39.75	44.50	63.04	68.20	-5.16	PK
V	11550.133	42.45	8.46	39.75	44.50	46.16	54.00	-7.84	AV
V	17325.162	56.34	10.12	38.80	44.10	61.16	74.00	-12.84	PK
V	17325.162	41.37	10.12	38.80	42.70	47.59	54.00	-6.41	AV
H	4679.075	58.15	5.94	35.18	44.00	55.27	74.00	-18.73	PK
H	4679.075	43.82	5.94	35.18	44.00	40.94	54.00	-13.06	AV
H	11550.016	51.99	8.46	38.71	44.50	54.66	68.20	-13.54	PK
H	11550.016	43.99	8.46	38.71	44.50	46.66	54.00	-7.34	AV
H	17325.167	54.09	10.12	38.38	44.10	58.49	74.00	-15.51	PK
H	17325.167	40.98	10.12	38.38	44.10	45.38	54.00	-8.62	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Test Mode is MIMO Mode.

8. POWER SPECTRAL DENSITY TEST

8.1 Block Diagram Of Test Setup



8.2 Limit

For the band 5.15-5.25 GHz,

(i) For an outdoor Wifi Repeater operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor Wifi Repeater operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point Wifi Repeaters operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For client devices in the 5.15-5.25 GHz band, 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.

For the band 5.725-5.85 GHz

(3)For the band 5.725-5.85 GHz, 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.

8.3 Test procedure

For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 KHz bandwidth, the following adjustments to the procedures apply:

a) Set RBW ≥ 1/T, where T is defined in section II.B.I.a).

b) Set VBW ≥ 3 RBW.

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

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

e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 KHz for the sections 5.c) and 5.d) above, since RBW=100 KHZ is available on nearly all spectrum analyzers.

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8.4 EUT operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

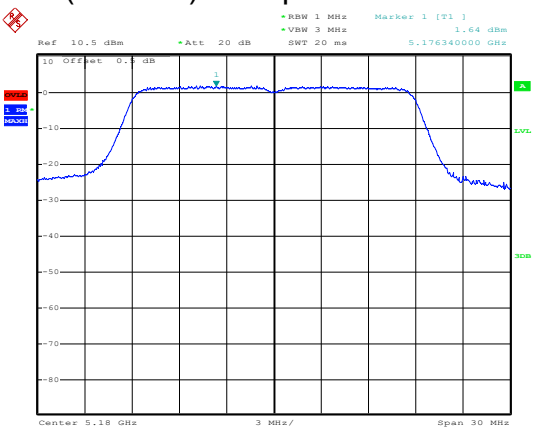
8.5 Test Result

Temperature :	26 ℃	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	DC 12V
Test Mode :	TX Frequency U-NII-1 (5180-5240MHz)		

Note: A(B) Represent the value of antenna A and B, The worst data is Antenna B, only shown Antenna B Plot.

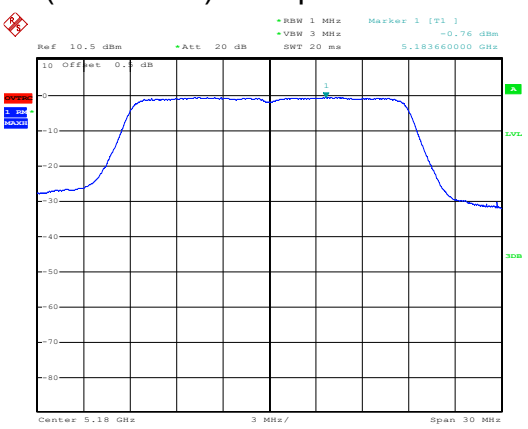
Mode	Frequency	Measured Power Density (dBm/MHz)			Limit (dBm/MHz)	Result
		ANT A	ANT B	Total		
802.11 a	5180 MHz	-1.95	1.64	/	11	PASS
	5200 MHz	-1.59	1.54	/	11	PASS
	5240 MHz	-0.30	2.29	/	11	PASS
802.11 n20	5180 MHz	-1.96	-0.76	1.69	11	PASS
	5200 MHz	-1.57	-0.68	1.91	11	PASS
	5240 MHz	-0.21	0.50	3.17	11	PASS
802.11 n40	5190 MHz	-4.62	-3.58	-1.06	11	PASS
	5230 MHz	-3.79	-3.05	-0.39	11	PASS
802.11 ac20	5180 MHz	-3.92	-4.23	-1.06	11	PASS
	5200 MHz	-3.18	-4.02	-0.57	11	PASS
	5240 MHz	-2.04	-2.95	0.54	11	PASS
802.11 ac40	5190 MHz	-5.76	-4.74	-2.21	11	PASS
	5230 MHz	-4.47	-4.10	-1.27	11	PASS
802.11 AC80	5210 MHz	-5.35	-5.38	-2.36	11	PASS

(802.11a) PSD plot on channel 36



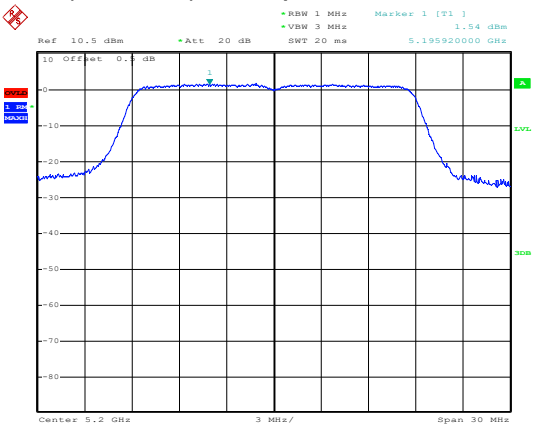
Date: 24.AUG.2021 10:37:17

(802.11n20) PSD plot on channel 36



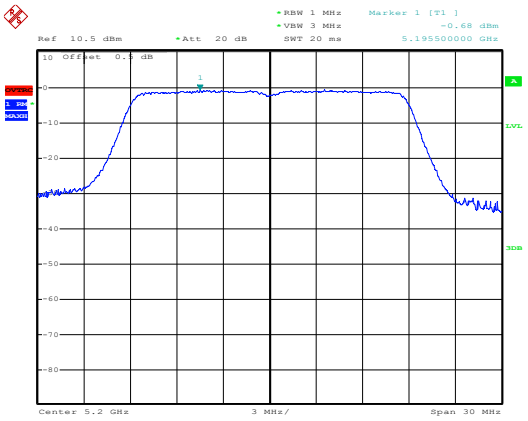
Date: 24.AUG.2021 10:33:31

(802.11a) PSD plot on channel 40



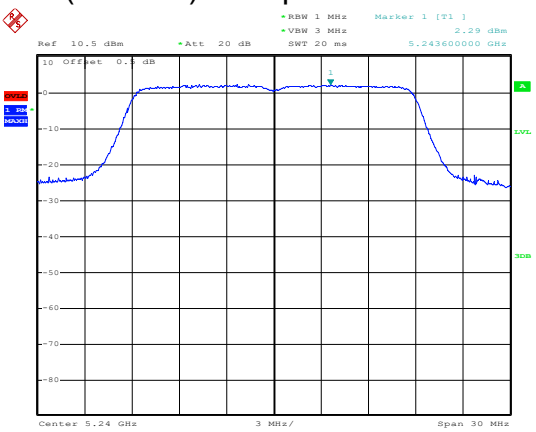
Date: 24.AUG.2021 10:37:59

(802.11n20) PSD plot on channel 40



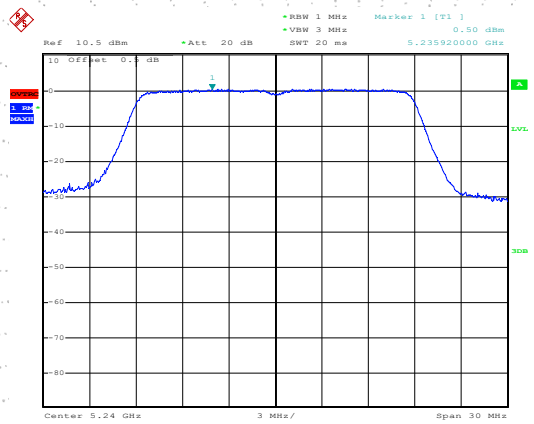
Date: 24.AUG.2021 10:34:46

(802.11a) PSD plot on channel 48



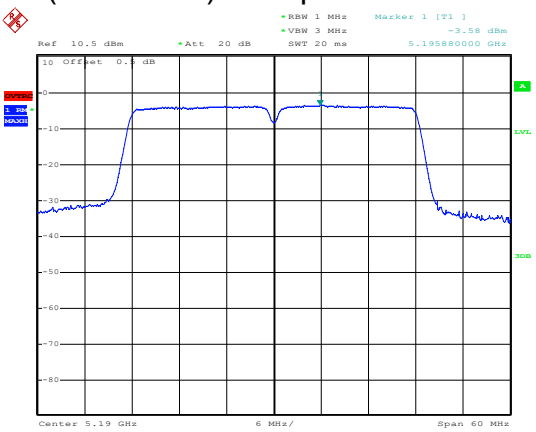
Date: 24.AUG.2021 10:38:45

(802.11n20) PSD plot on channel 48



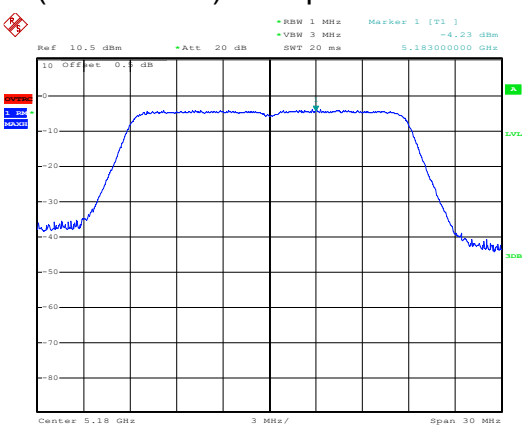
Date: 24.AUG.2021 10:36:06

(802.11n40) PSD plot on channel 38



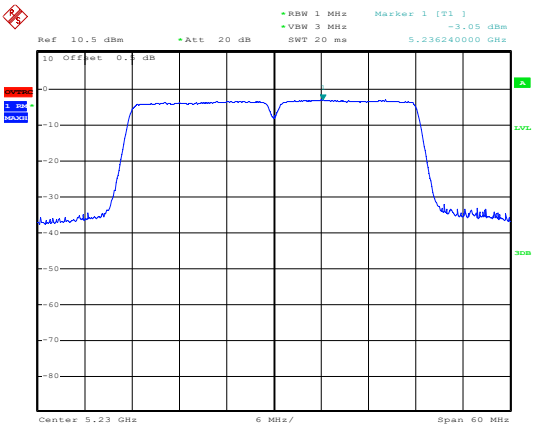
Date: 24.AUG.2021 10:41:33

(802.11ac20) PSD plot on channel 36



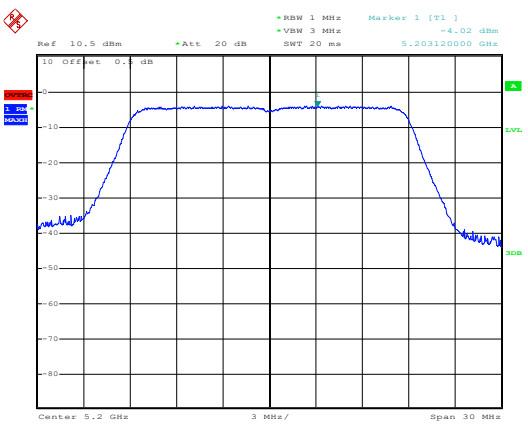
Date: 24.AUG.2021 10:45:08

(802.11n40) PSD plot on channel 46



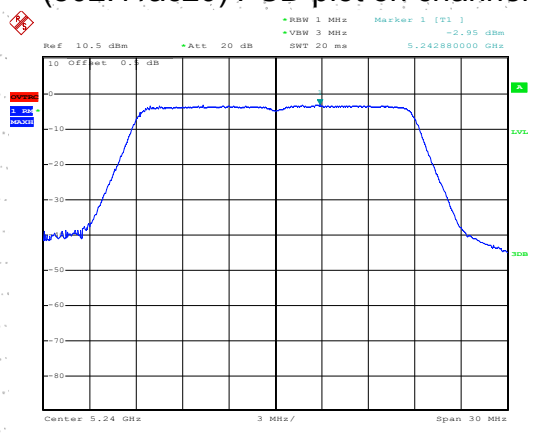
Date: 24.AUG.2021 10:42:20

(802.11ac20) PSD plot on channel 40



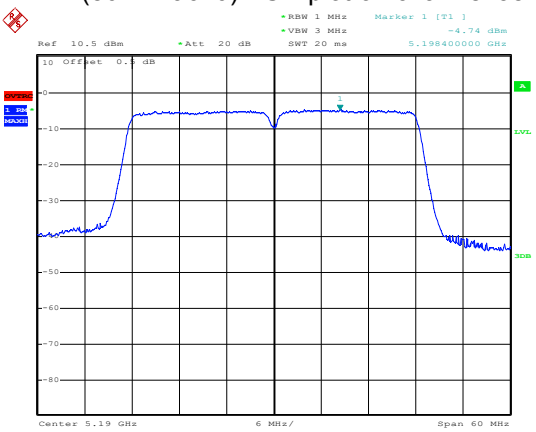
Date: 24.AUG.2021 10:45:56

(802.11ac20) PSD plot on channel 48



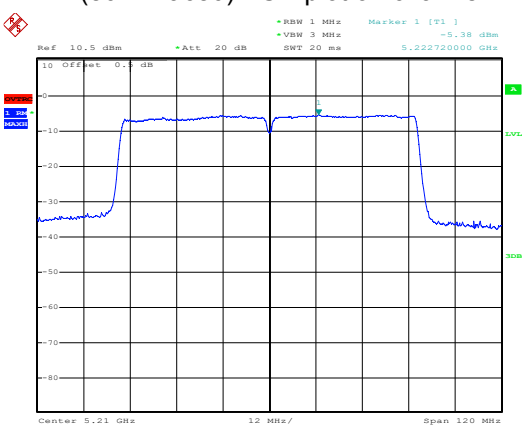
Date: 24.AUG.2021 10:46:51

(802.11ac40) PSD plot on channel 38



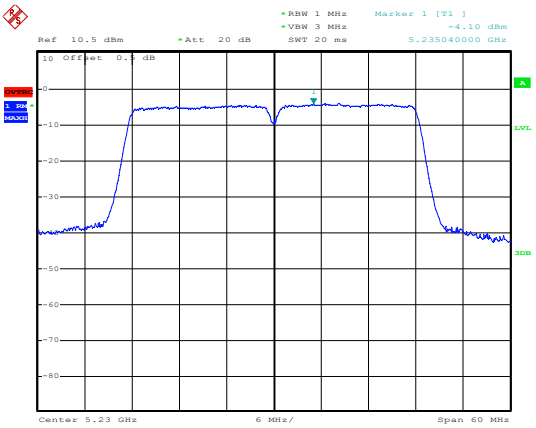
Date: 24.AUG.2021 10:50:48

(802.11ac80) PSD plot on channel 42



Date: 24.AUG.2021 10:53:29

(802.11ac40) PSD plot on channel 46



Date: 24.AUG.2021 10:51:51

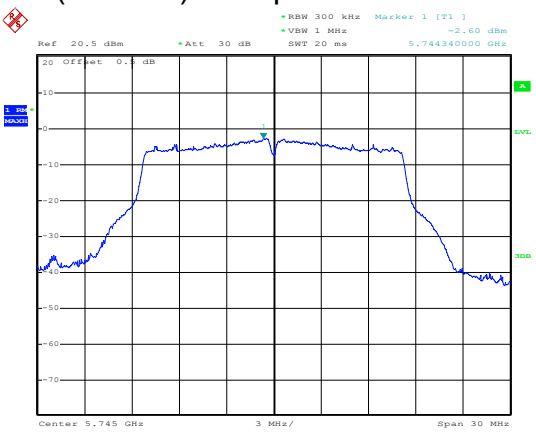
Temperature :	26 ℃	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	DC 12V
Test Mode :	TX Frequency U-NII-3 (5745-5825MHz)		

Note: A(B) Represent the value of antenna A and B, The worst data is Antenna B,only shown Antenna B Plot.

Mode	Frequency	Measured Power Density (dBm/300KHz)		Measured Power Density (dBm/500KHz)			Limit (dBm/500kHz)	Result
		ANT A	ANT B	ANT A	ANT B	Total		
802.11 a	5745 MHz	-3.46	-2.60	-1.24	-0.38	/	30	PASS
	5785 MHz	-3.65	-2.98	-1.43	-0.76	/	30	PASS
	5825 MHz	-4.24	-4.18	-2.02	-1.96	/	30	PASS
802.11 n20	5745 MHz	-3.81	-2.90	-1.59	-0.68	1.90	30	PASS
	5785 MHz	-3.84	-3.69	-1.62	-1.47	1.47	30	PASS
	5825 MHz	-4.01	-4.55	-1.79	-2.33	0.96	30	PASS
802.11 n40	5755 MHz	-6.81	-6.15	-4.59	-3.93	-1.24	30	PASS
	5795 MHz	-6.67	-6.17	-4.45	-3.95	-1.18	30	PASS
802.11 ac20	5745 MHz	-6.65	-7.22	-4.43	-5.00	-1.70	30	PASS
	5785 MHz	-6.94	-7.11	-4.72	-4.89	-1.79	30	PASS
	5825 MHz	-7.23	-7.78	-5.01	-5.56	-2.27	30	PASS
802.11 ac40	5755 MHz	-7.58	-6.95	-5.36	-4.73	-2.02	30	PASS
	5795 MHz	-7.50	-7.54	-5.28	-5.32	-2.29	30	PASS
802.11 AC80	5775 MHz	-8.38	-7.35	-6.16	-5.13	-2.60	30	PASS

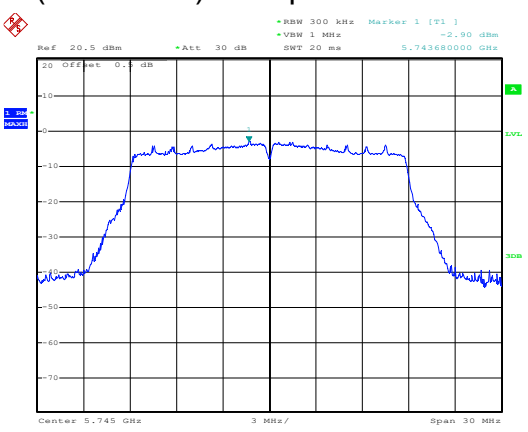
Note : If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10 log (500 kHz/RBW) to the measured result, whereas RBW (<500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.

(802.11a) PSD plot on channel 149



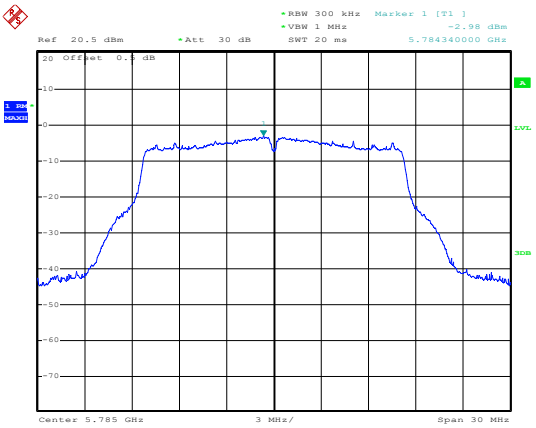
Date: 25.AUG.2021 22:23:17

(802.11n20) PSD plot on channel 149



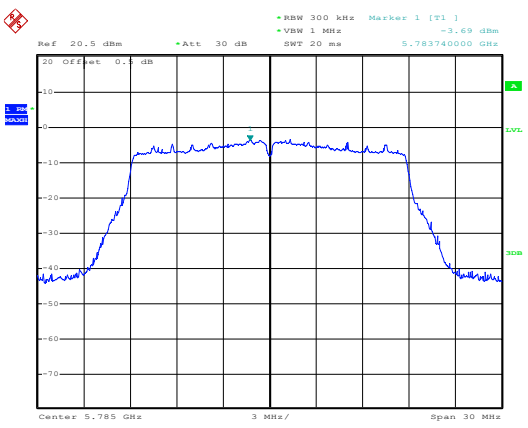
Date: 25.AUG.2021 22:25:24

(802.11a) PSD plot on channel 157



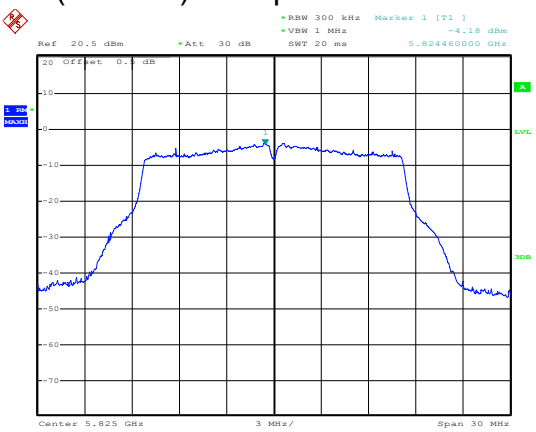
Date: 25.AUG.2021 22:23:56

(802.11n20) PSD plot on channel 157



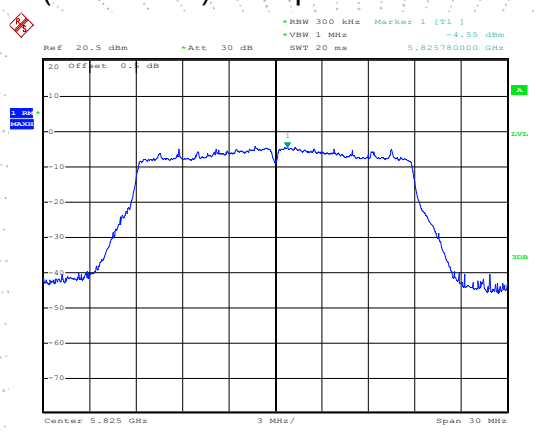
Date: 25.AUG.2021 22:26:11

(802.11a) PSD plot on channel 165



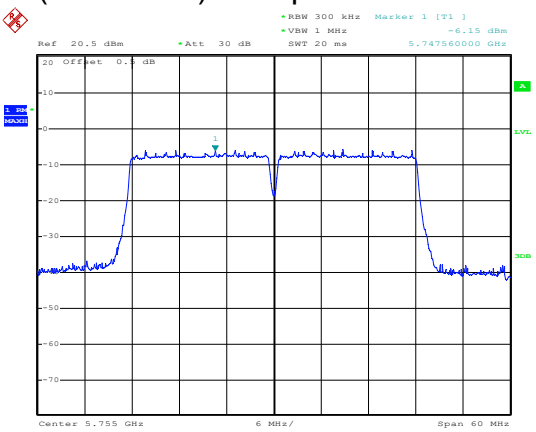
Date: 25.AUG.2021 22:24:31

(802.11n20) PSD plot on channel 165



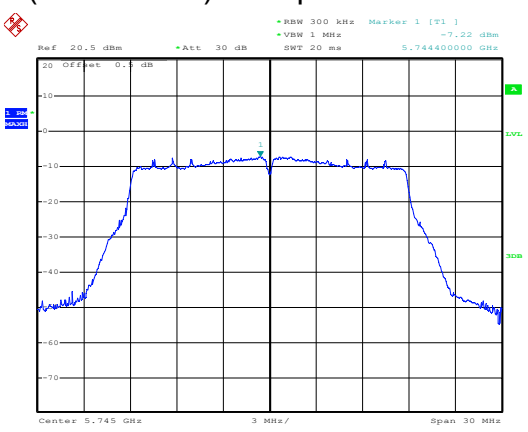
Date: 25.AUG.2021 22:27:02

(802.11n40) PSD plot on channel 151



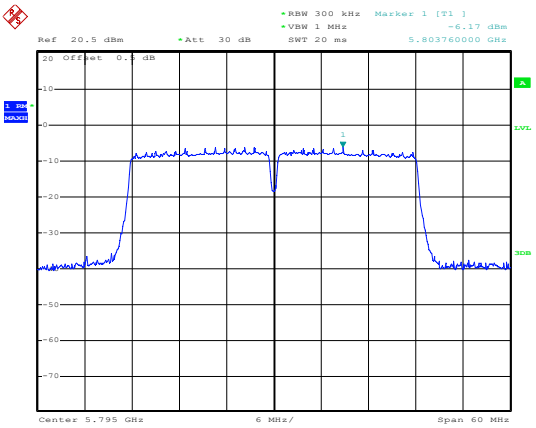
Date: 25.AUG.2021 22:27:52

(802.11ac20) PSD plot on channel 149



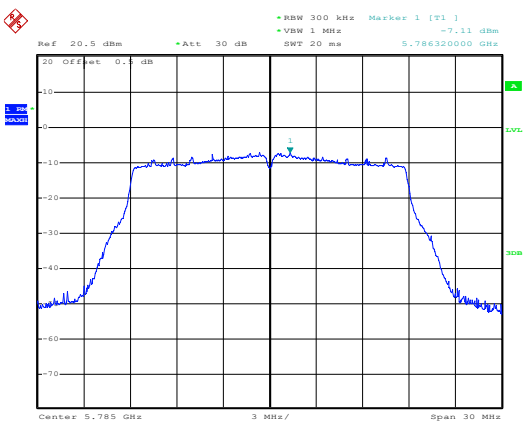
Date: 25.AUG.2021 22:29:12

(802.11n40) PSD plot on channel 159



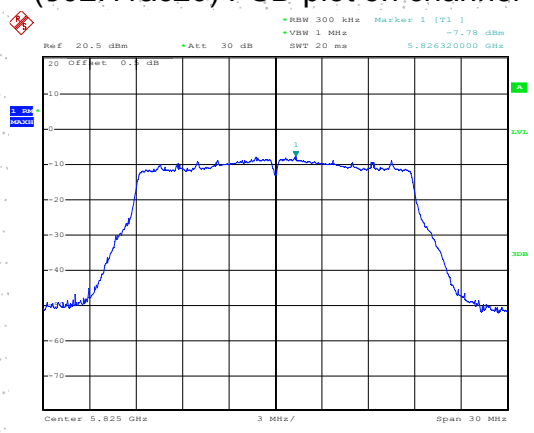
Date: 25.AUG.2021 22:28:28

(802.11ac20) PSD plot on channel 157



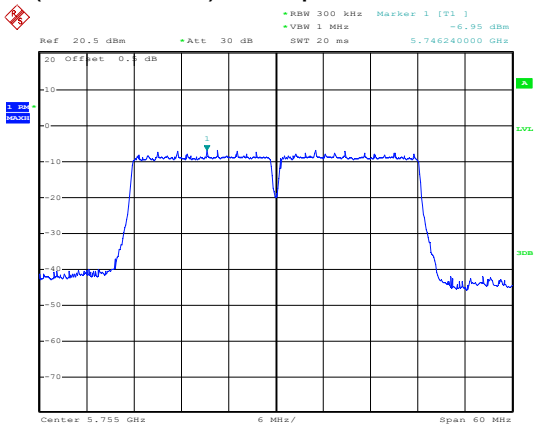
Date: 25.AUG.2021 22:29:56

(802.11ac20) PSD plot on channel 165



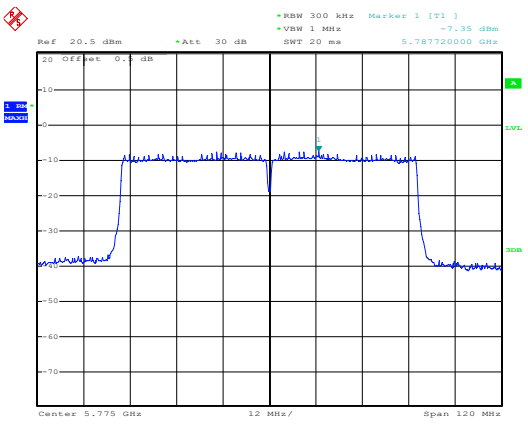
Date: 25.AUG.2021 22:30:35

(802.11ac40) PSD plot on channel 151



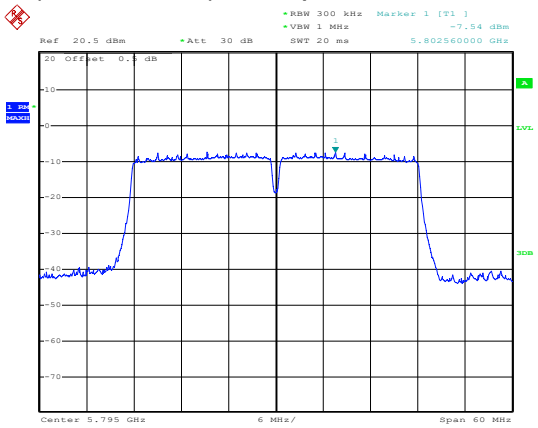
Date: 25.AUG.2021 22:31:35

(802.11ac80) PSD plot on channel 155



Date: 25.AUG.2021 22:33:00

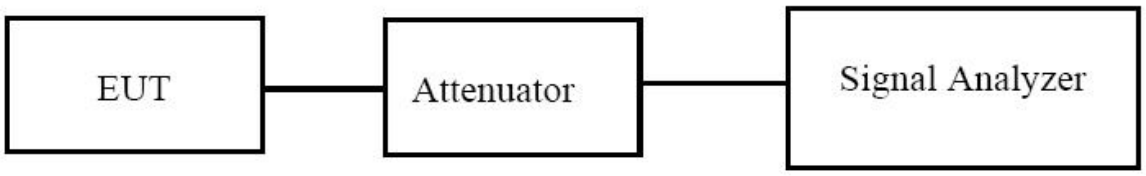
(802.11ac40) PSD plot on channel 159



Date: 25.AUG.2021 22:32:18

9. 26DB & 6DB & 99% EMISSION BANDWIDTH

9.1 Block Diagram Of Test Setup



9.2 Limit

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.

9.3 Test procedure

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%.
The following procedure shall be used for measuring (99 %) power bandwidth:

1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1 % to 5 % of the OBW
4. Set VBW ≥ 3 · RBW
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99 % power bandwidth function of the instrument (if available).
7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

9.4 EUT operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

9.5 Test Result

Temperature :	26 ℃	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	DC 12V
Test Mode :	TX Frequency U-NII-1 (5180-5240MHz)		

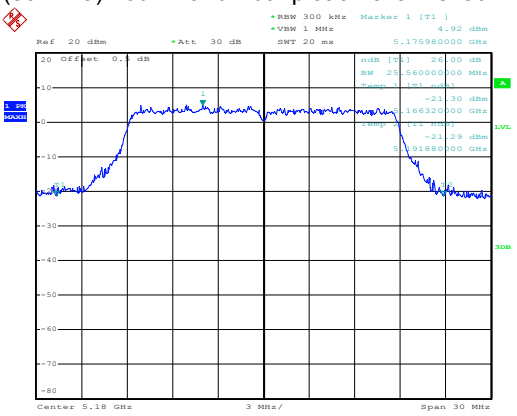
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna B, only shown Antenna B Plot.

Mode	Channel	Frequency (MHz)	99% bandwidth(MHz)	26dB bandwidth (MHz)	Limit MHz	Result
			ANT A	ANT A		
802.11a	CH36	5180	18.18	21.96	N/A	Pass
	CH40	5200	18.18	21.84	N/A	Pass
	CH48	5240	18.18	21.90	N/A	Pass
802.11 n20	CH36	5180	18.12	21.90	N/A	Pass
	CH40	5200	18.18	22.02	N/A	Pass
	CH48	5240	18.18	21.78	N/A	Pass
802.11 n40	CH 38	5190	36.36	40.08	N/A	Pass
	CH 46	5230	36.36	39.96	N/A	Pass
802.11 ac20	CH36	5180	18.24	22.02	N/A	Pass
	CH40	5200	18.12	22.02	N/A	Pass
	CH48	5240	18.18	21.96	N/A	Pass
802.11 ac40	CH 38	5190	36.36	40.20	N/A	Pass
	CH 46	5230	36.36	40.08	N/A	Pass
802.11 AC80	CH 42	5210	76.08	81.60	N/A	Pass

Mode	Channel	Frequency (MHz)	99% bandwidth (MHz)	26dB bandwidth (MHz)	Limit MHz	Result
			ANT B	ANT B		
802.11a	CH36	5180	18.36	25.56	N/A	Pass
	CH40	5200	18.36	24.72	N/A	Pass
	CH48	5240	18.36	27.12	N/A	Pass
802.11 n20	CH36	5180	18.24	22.62	N/A	Pass
	CH40	5200	18.24	22.50	N/A	Pass
	CH48	5240	18.24	22.14	N/A	Pass
802.11 n40	CH 38	5190	37.32	50.28	N/A	Pass
	CH 46	5230	37.44	45.12	N/A	Pass
802.11 ac20	CH36	5180	18.36	22.08	N/A	Pass
	CH40	5200	18.24	22.02	N/A	Pass
	CH48	5240	18.30	22.02	N/A	Pass
802.11 ac40	CH 38	5190	37.08	42.12	N/A	Pass
	CH 46	5230	37.20	42.00	N/A	Pass
802.11 AC80	CH 42	5210	76.56	83.76	N/A	Pass

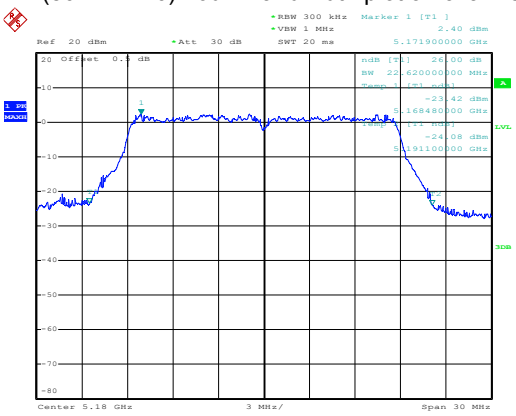
Test plot

(802.11a) 26dB Bandwidth plot on channel 36



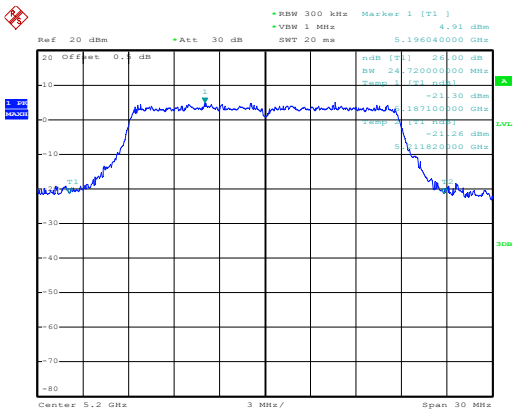
Date: 24.AUG.2021 11:27:27

(802.11 n20) 26dB Bandwidth plot on channel 36



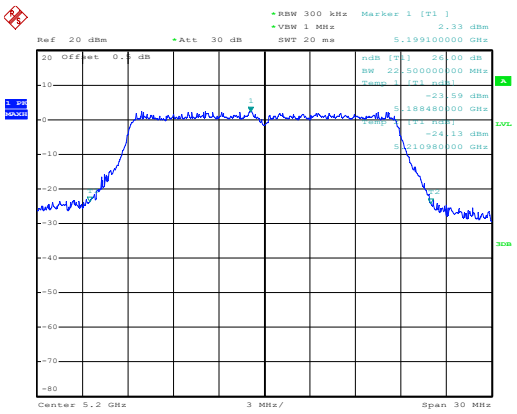
Date: 24.AUG.2021 11:29:39

(802.11a) 26dB Bandwidth plot on channel 40



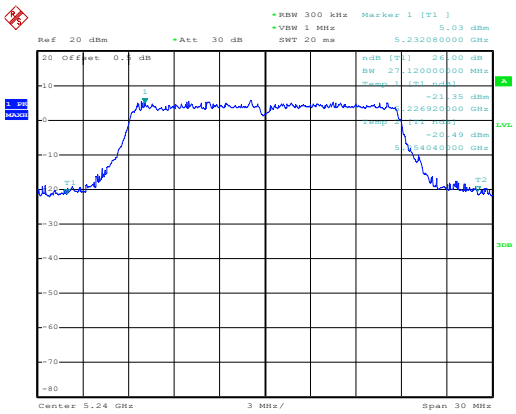
Date: 24.AUG.2021 11:26:14

(802.11 n20) 26dB Bandwidth plot on channel 40



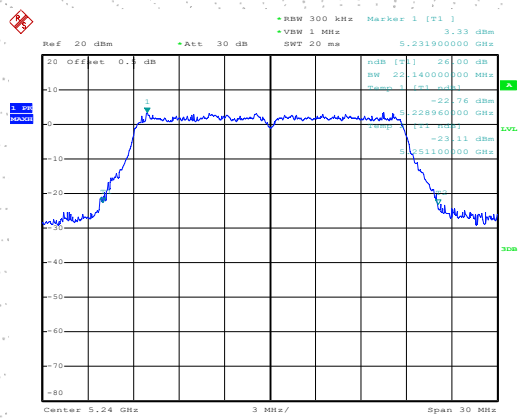
Date: 24.AUG.2021 11:30:18

(802.11a) 26dB Bandwidth plot on channel 48



Date: 24.AUG.2021 11:28:10

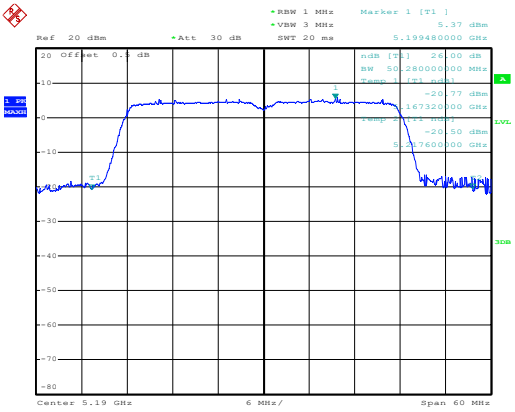
(802.11 n20) 26dB Bandwidth plot on channel 48



Date: 24.AUG.2021 11:31:15

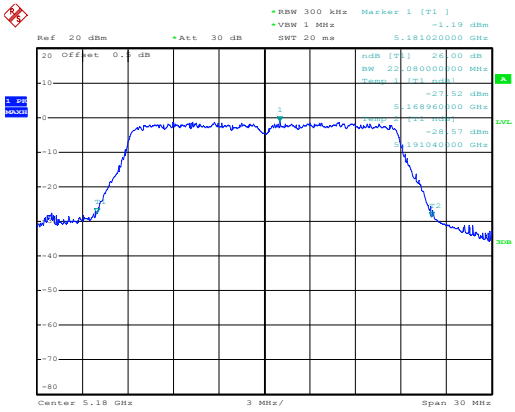
Test plot

(802.11 n40) 26dB Bandwidth plot on channel 38



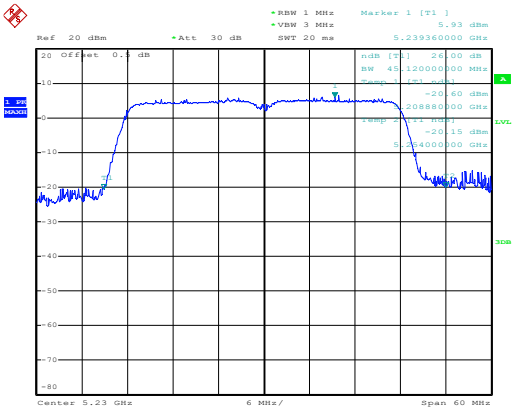
Date: 24.AUG.2021 11:34:10

(802.11 AC20) 26dB Bandwidth plot on channel 36



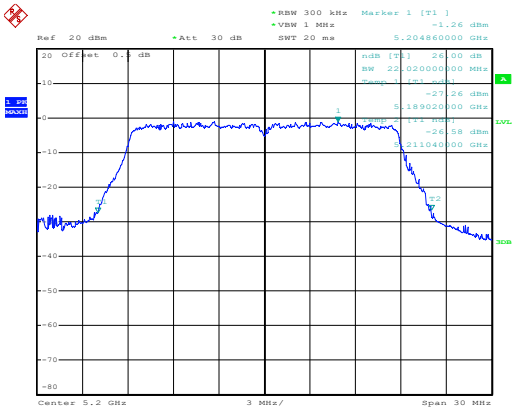
Date: 24.AUG.2021 11:36:39

(802.11 n40) 26dB Bandwidth plot on channel 46



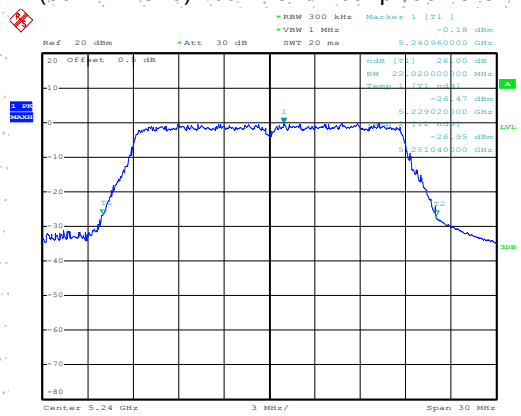
Date: 24.AUG.2021 11:35:19

(802.11 AC20) 26dB Bandwidth plot on channel 40



Date: 24.AUG.2021 11:37:31

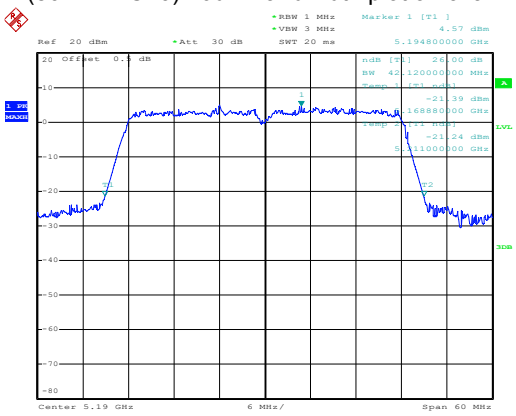
(802.11 AC20) 26dB Bandwidth plot on channel 40



Date: 24.AUG.2021 11:38:31

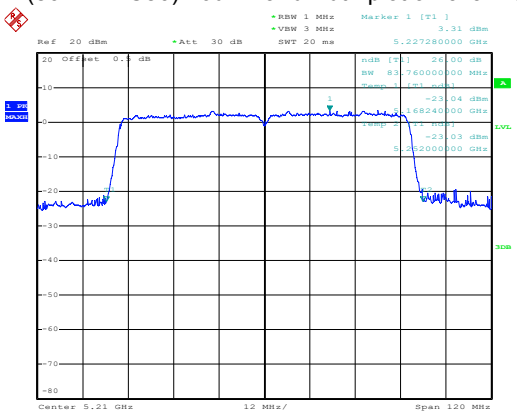
Test plot

(802.11 AC40) 26dB Bandwidth plot on channel 38



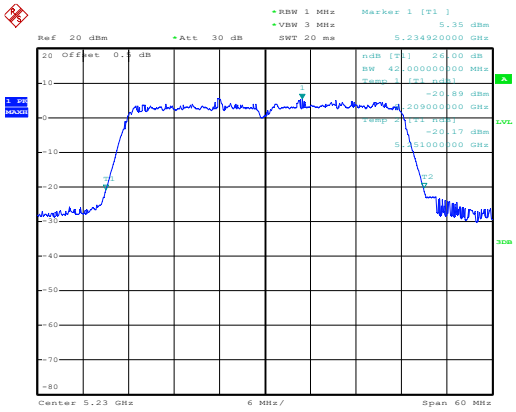
Date: 24.AUG.2021 11:39:27

(802.11 AC80) 26dB Bandwidth plot on channel 42



Date: 24.AUG.2021 11:41:35

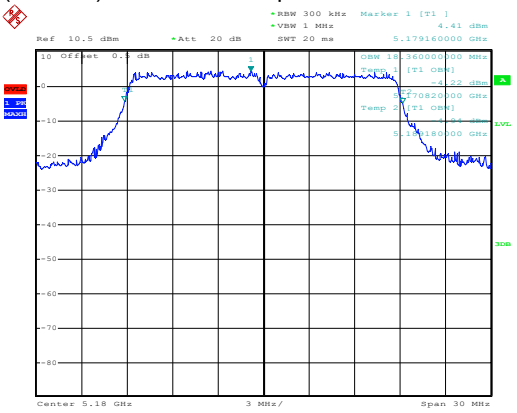
(802.11 AC40) 26dB Bandwidth plot on channel 46



Date: 24.AUG.2021 11:40:13

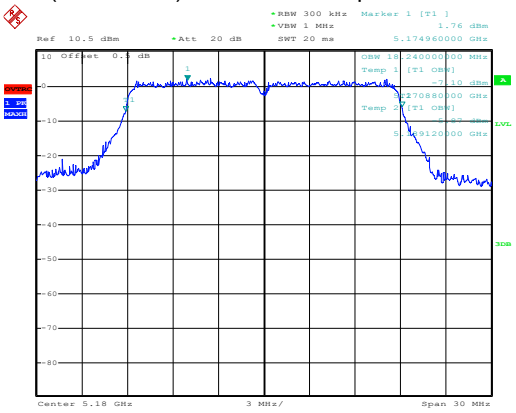
Test plot

(802.11a) 99%Bandwidth plot on channel 36



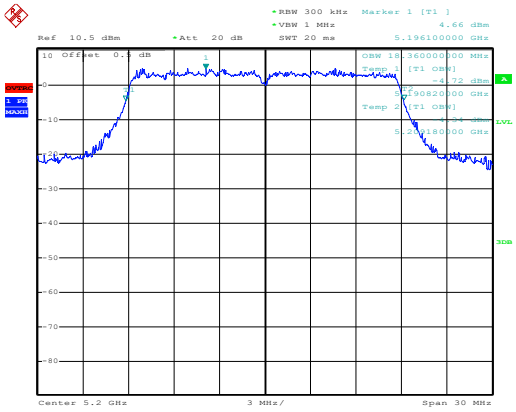
Date: 24.AUG.2021 10:57:31

(802.11 n20) 99%Bandwidth plot on channel 36



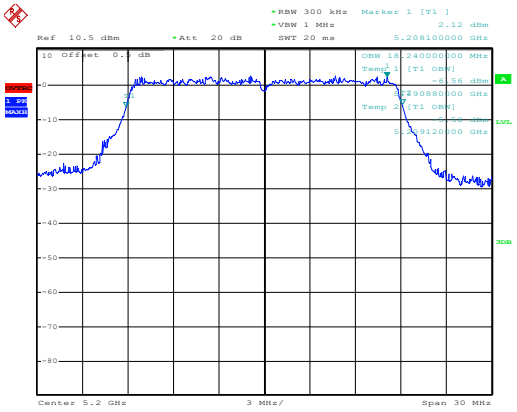
Date: 24.AUG.2021 11:01:29

(802.11a) 99%Bandwidth plot on channel 40



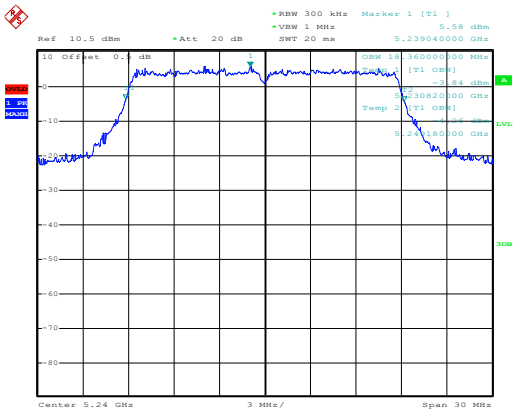
Date: 24.AUG.2021 10:58:20

(802.11 n20) 99%Bandwidth plot on channel 40



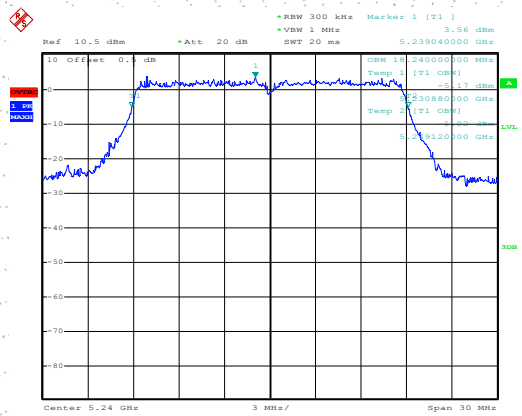
Date: 24.AUG.2021 11:02:28

(802.11a) 99%Bandwidth plot on channel 48



Date: 24.AUG.2021 10:59:09

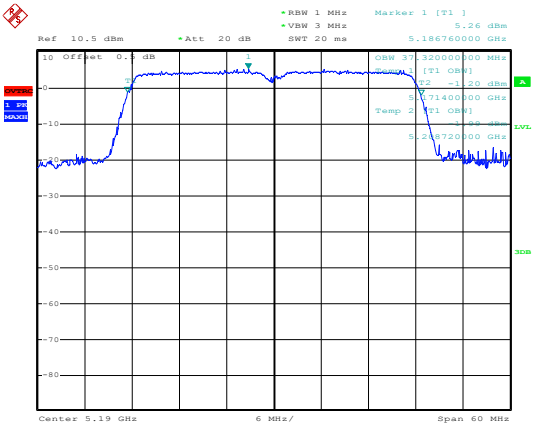
(802.11 n20) 99%Bandwidth plot on channel 48



Date: 24.AUG.2021 11:03:17

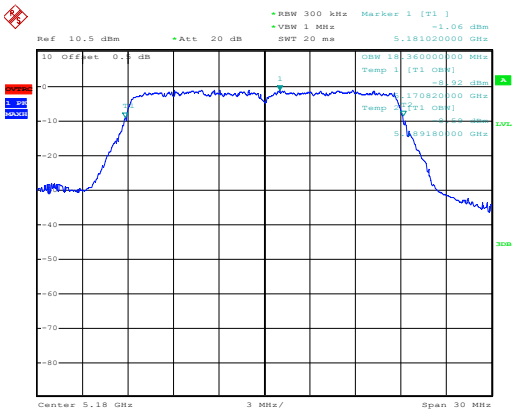
Test plot

(802.11 n40) 99%Bandwidth plot on channel 38



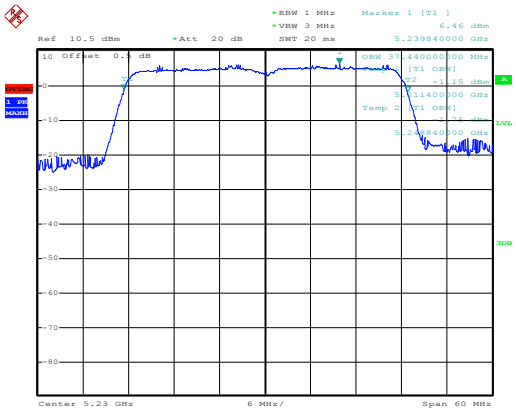
Date: 24.AUG.2021 11:05:23

(802.11 AC20) 99%Bandwidth plot on channel 36



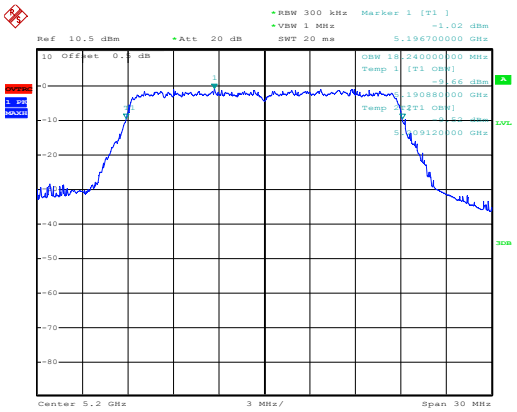
Date: 24.AUG.2021 11:08:27

(802.11 n40) 99%Bandwidth plot on channel 46



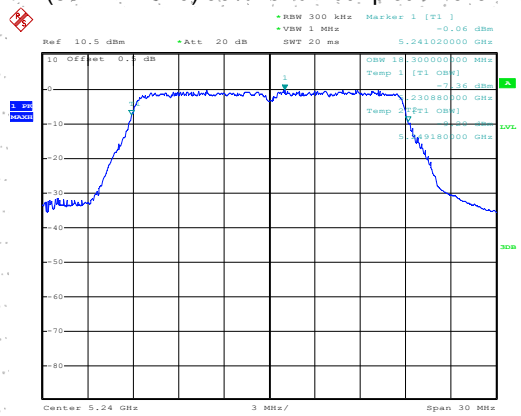
Date: 24.AUG.2021 11:06:39

(802.11 AC20) 99%Bandwidth plot on channel 40



Date: 24.AUG.2021 11:10:19

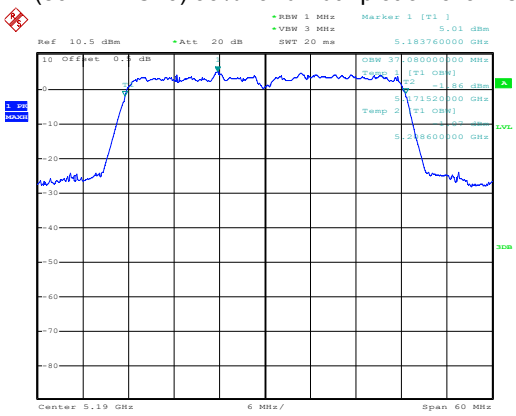
(802.11 AC20) 99%Bandwidth plot on channel 40



Date: 24.AUG.2021 11:11:42

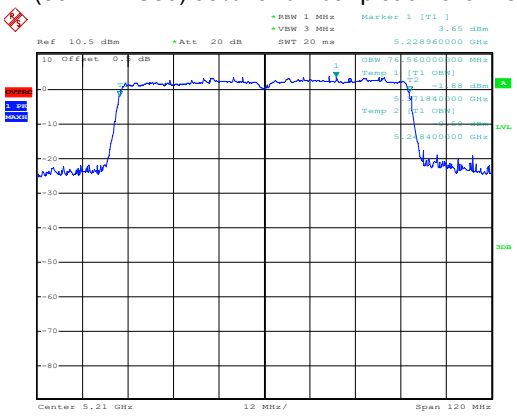
Test plot

(802.11 AC40) 99%Bandwidth plot on channel 38



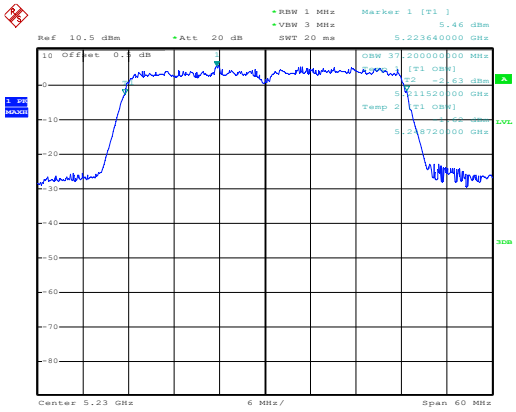
Date: 24.AUG.2021 11:13:23

(802.11 AC80) 99%Bandwidth plot on channel 42



Date: 24.AUG.2021 11:15:50

(802.11 AC40) 99%Bandwidth plot on channel 46



Date: 24.AUG.2021 11:14:37

Temperature :	26 ℃	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	DC 12V
Test Mode :	TX Frequency U-NII-3(5745-5825MHz)		

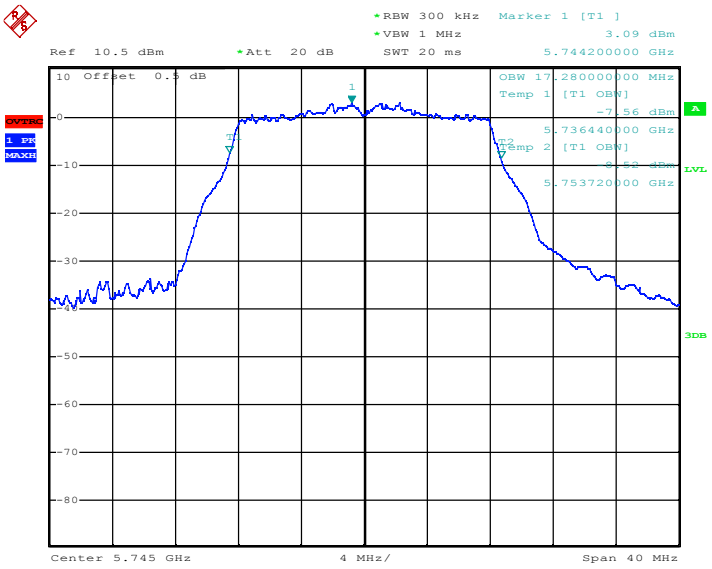
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna A, only shown Antenna A Plot.

Mode	Channel	Frequency (MHz)	99% bandwidth (MHz)	6dB bandwidth (MHz)	Limit MHz	Result
			ANT A	ANT A		
802.11a	CH149	5745	17.28	16.32	≥500	Pass
	CH157	5785	17.20	16.32	≥500	Pass
	CH165	5825	17.20	16.32	≥500	Pass
802.11 n20	CH149	5745	18.32	17.60	≥500	Pass
	CH157	5785	18.24	17.60	≥500	Pass
	CH165	5825	18.32	17.60	≥500	Pass
802.11 n40	CH151	5755	36.36	36.52	≥500	Pass
	CH159	5795	36.36	36.36	≥500	Pass
802.11 ac20	CH149	5745	18.32	17.56	≥500	Pass
	CH157	5785	18.24	17.60	≥500	Pass
	CH165	5825	18.24	17.60	≥500	Pass
802.11 ac40	CH151	5755	36.36	36.48	≥500	Pass
	CH159	5795	36.36	36.36	≥500	Pass
802.11 AC80	CH155	5775	76.08	76.56	≥500	Pass

Mode	Channel	Frequency (MHz)	99% bandwidth (MHz)	6dB bandwidth (MHz)	Limit MHz	Result
			ANT B	ANT B		
802.11a	CH149	5745	17.28	16.32	≥500	Pass
	CH157	5785	17.20	16.32	≥500	Pass
	CH165	5825	17.20	16.32	≥500	Pass
802.11 n20	CH149	5745	18.24	17.60	≥500	Pass
	CH157	5785	18.24	17.44	≥500	Pass
	CH165	5825	18.24	17.52	≥500	Pass
802.11 n40	CH151	5755	36.48	36.44	≥500	Pass
	CH159	5795	36.36	36.36	≥500	Pass
802.11 ac20	CH149	5745	18.24	17.60	≥500	Pass
	CH157	5785	18.24	17.60	≥500	Pass
	CH165	5825	18.24	17.60	≥500	Pass
802.11 ac40	CH151	5755	36.48	36.48	≥500	Pass
	CH159	5795	36.24	36.36	≥500	Pass
802.11 AC80	CH155	5775	75.84	76.36	≥500	Pass

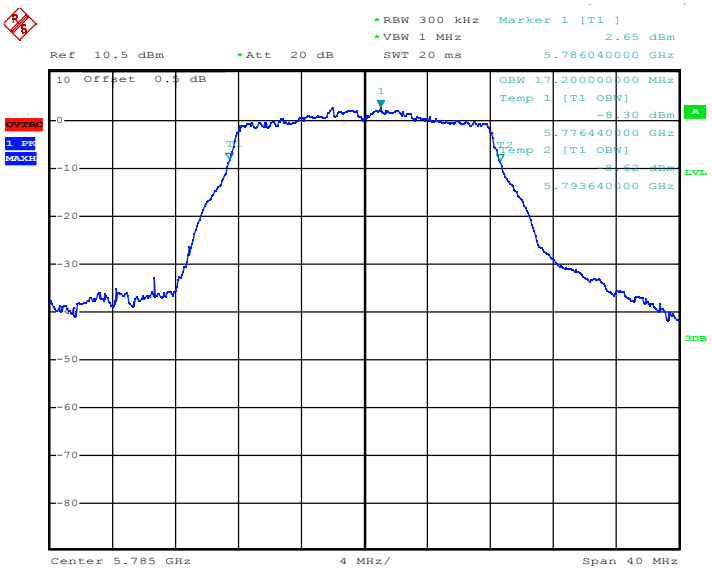
Antenna A: 5725-5850MHz

802.11a 5745MHz 99% bandwidth



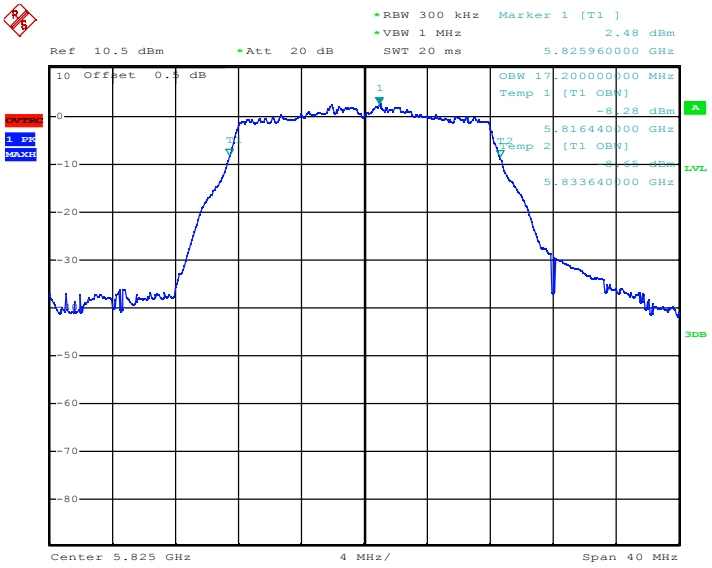
Date: 26.AUG.2021 17:33:03

802.11a 5785MHz 99% bandwidth



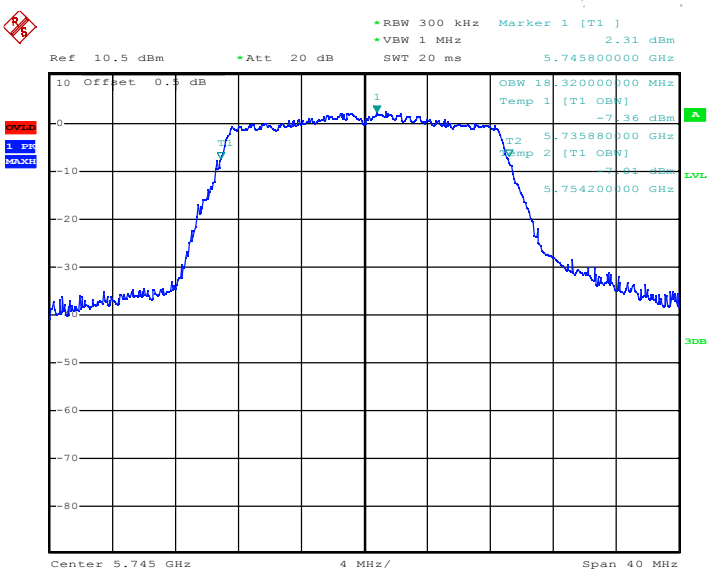
Date: 26.AUG.2021 17:33:48

802.11a 5825MHz 99% bandwidth



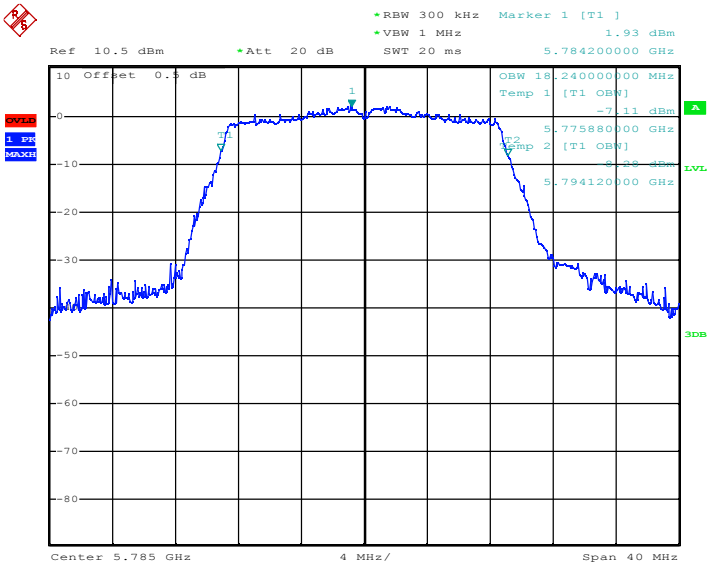
Date: 26.AUG.2021 17:34:37

802.11n20 5745MHz 99% bandwidth



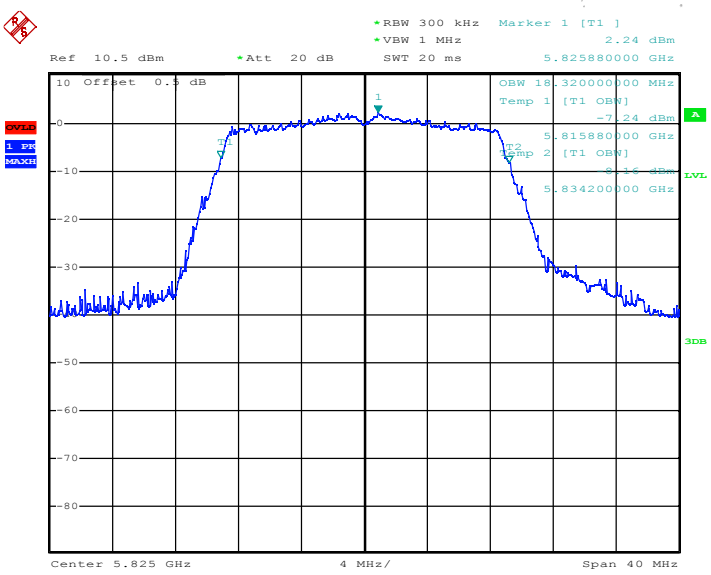
Date: 26.AUG.2021 17:35:26

802.11n20 5785MHz 99% bandwidth



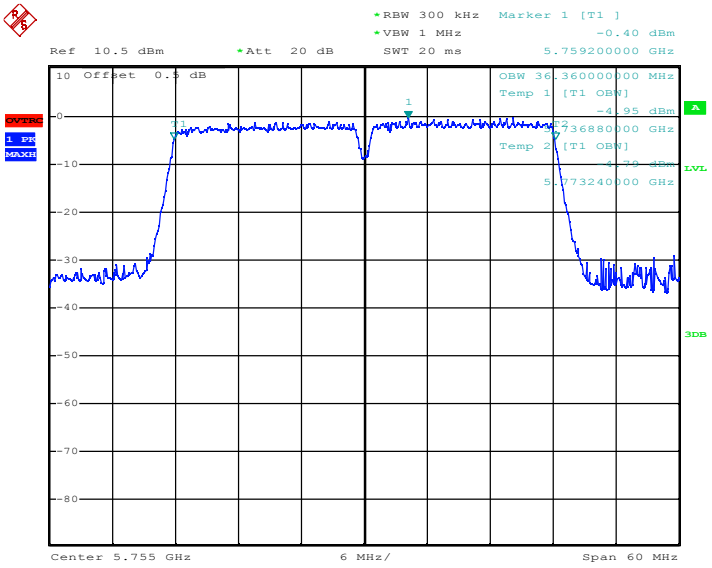
Date: 26.AUG.2021 17:35:58

802.11n20 5825MHz 99% bandwidth



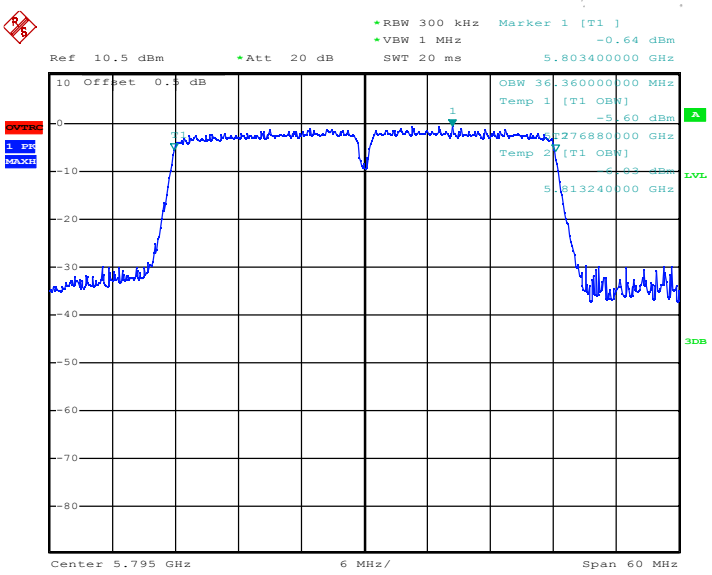
Date: 26.AUG.2021 17:36:37

802.11 n40 5755MHz 99% bandwidth



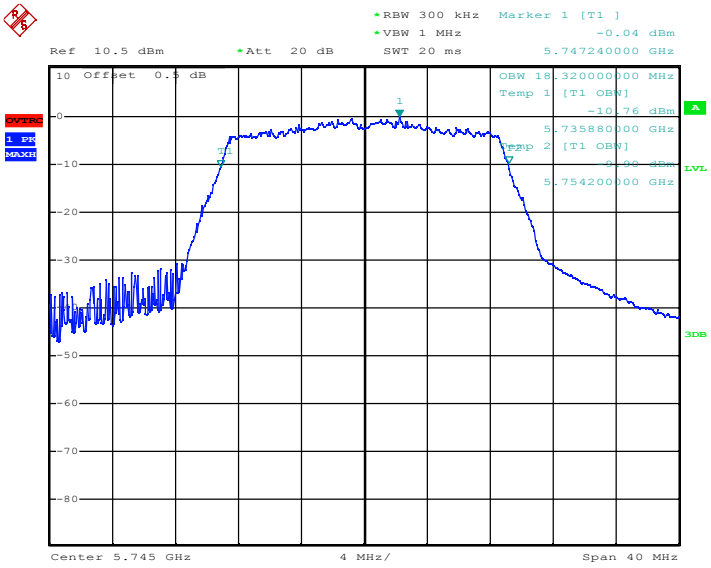
Date: 26.AUG.2021 17:37:21

802.11 n40 5795MHz 99% bandwidth



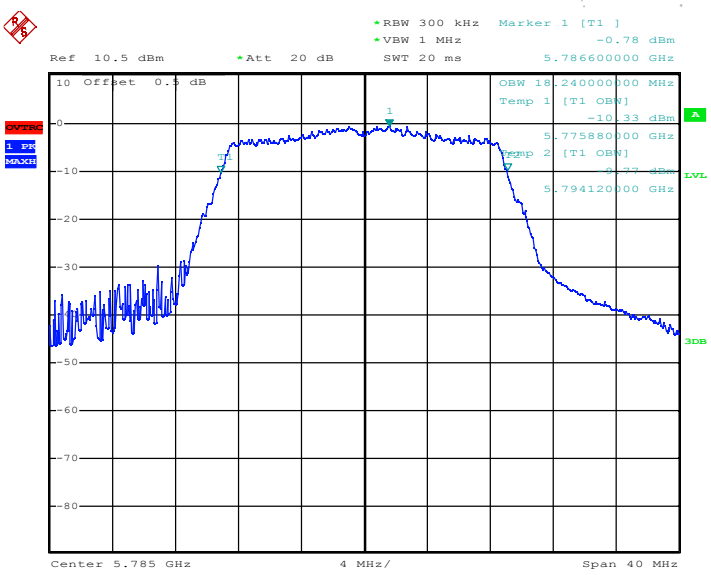
Date: 26.AUG.2021 17:37:52

802.11ac20 5745MHz 99% bandwidth



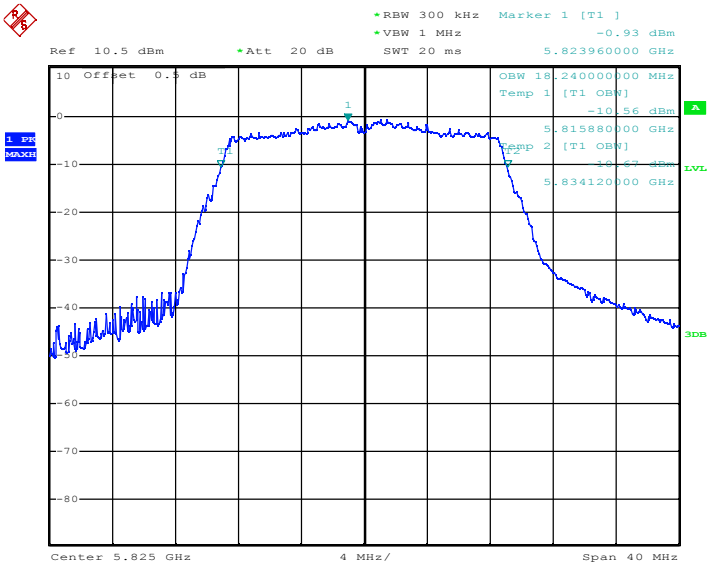
Date: 26.AUG.2021 17:39:00

802.11ac20 5785MHz 99% bandwidth



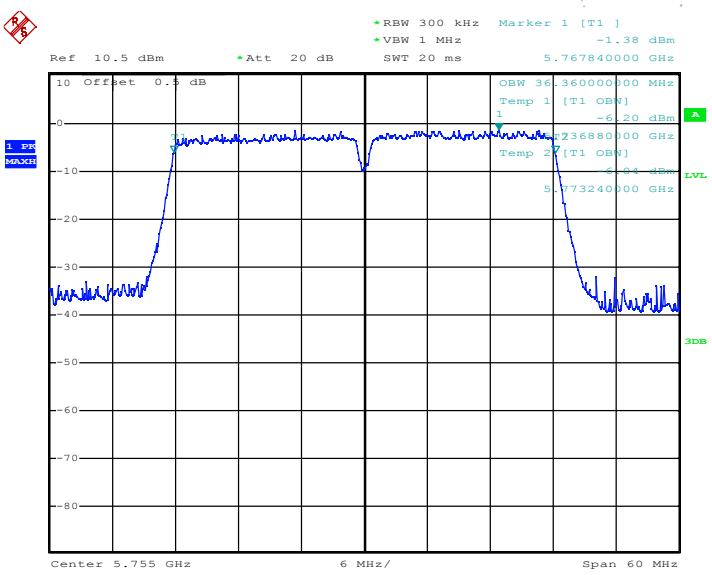
Date: 26.AUG.2021 17:39:43

802.11ac20 5825MHz 99% bandwidth



Date: 26.AUG.2021 17:40:22

802.11 ac40 5755MHz 99% bandwidth



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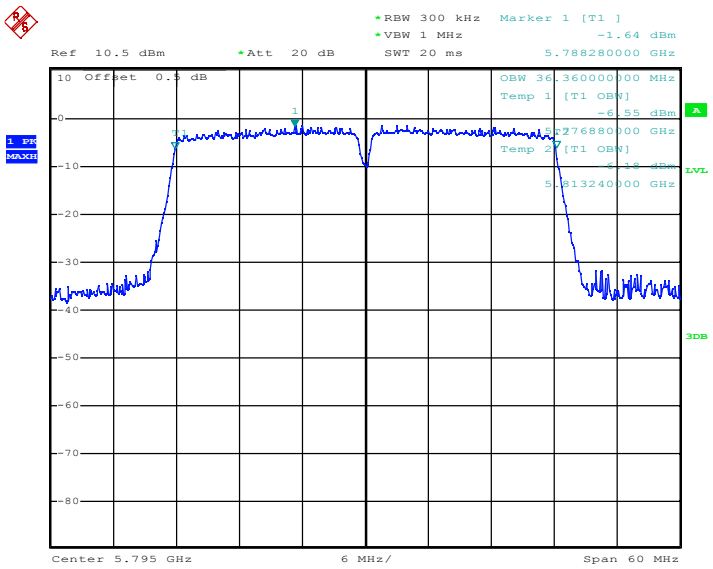
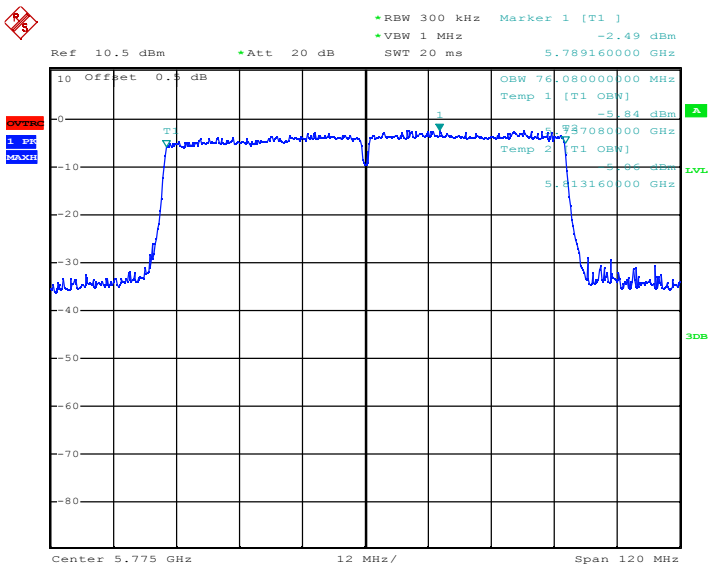
802.11 ac40 5795MHz 99% bandwidth



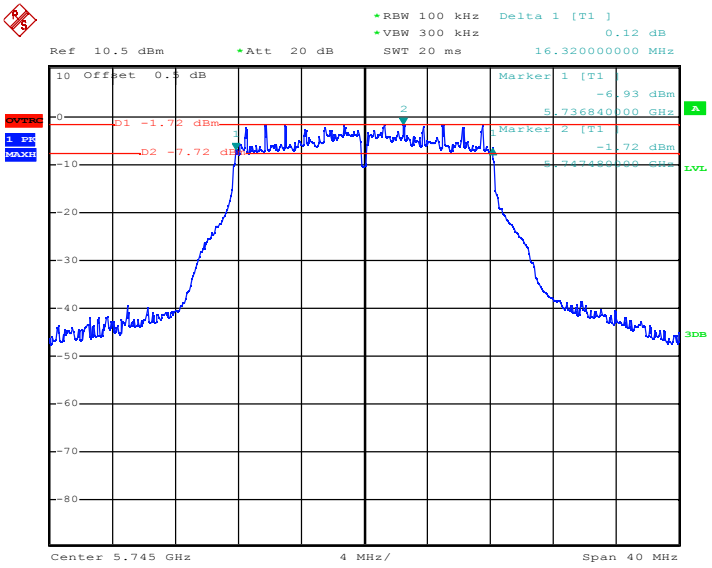
Date: 26.AUG.2021 17:42:01

802.11 ac80 5775MHz 99% bandwidth



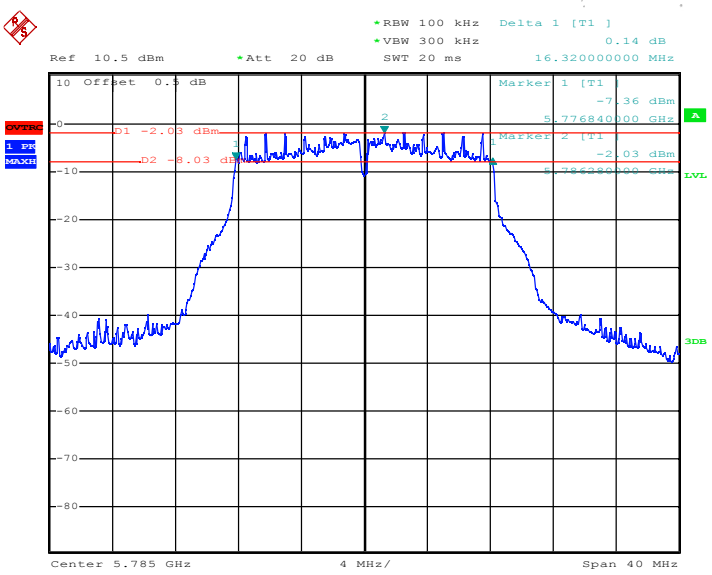
Date: 26.AUG.2021 17:42:39

802.11a 5745MHz 6dB bandwidth



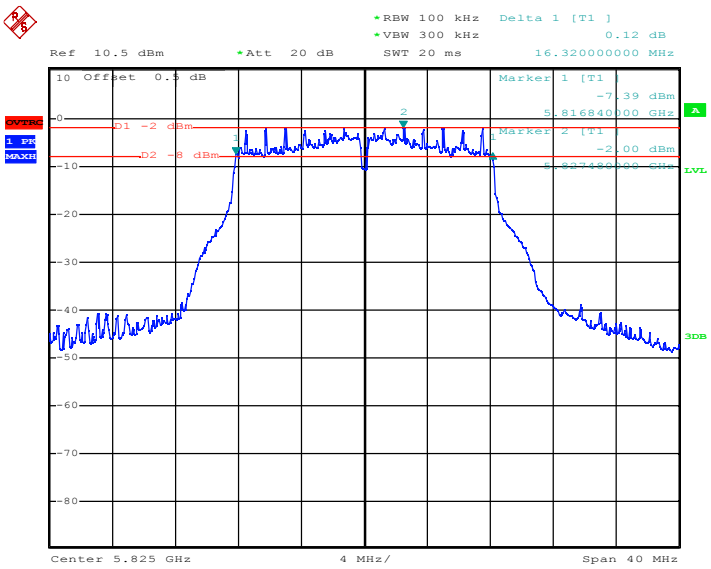
Date: 26.AUG.2021 16:57:07

802.11a 5785MHz 6dB bandwidth



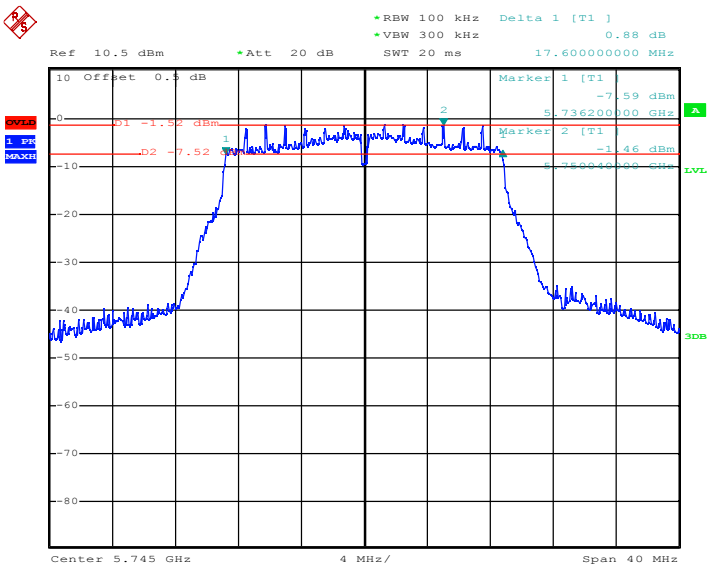
Date: 26.AUG.2021 16:58:23

802.11a 5825MHz 6dB bandwidth



Date: 26.AUG.2021 16:59:57

802.11n20 5745MHz 6dB bandwidth



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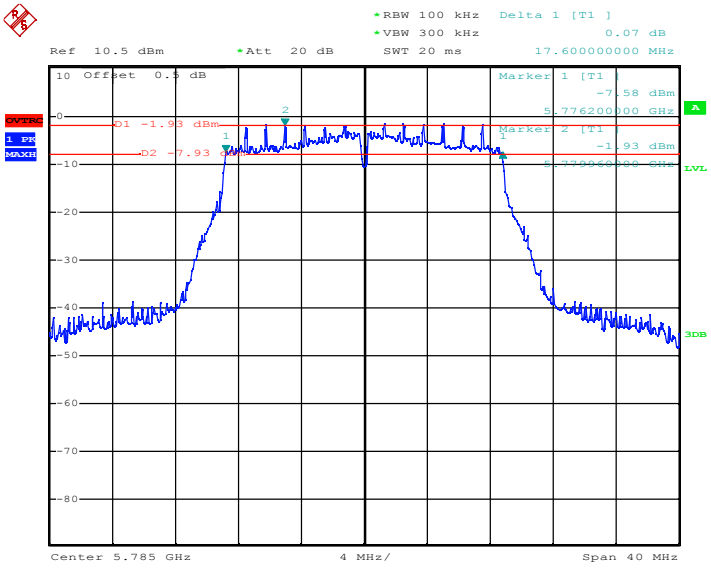
802.11n20 5785MHz 6dB bandwidth



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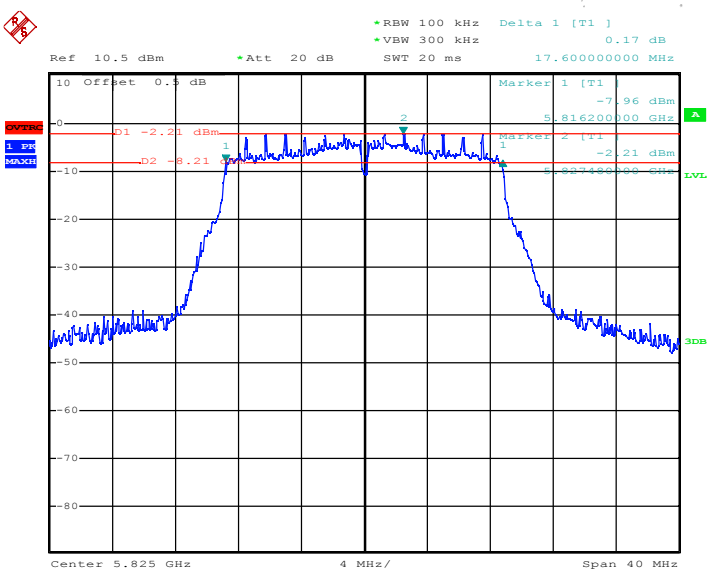
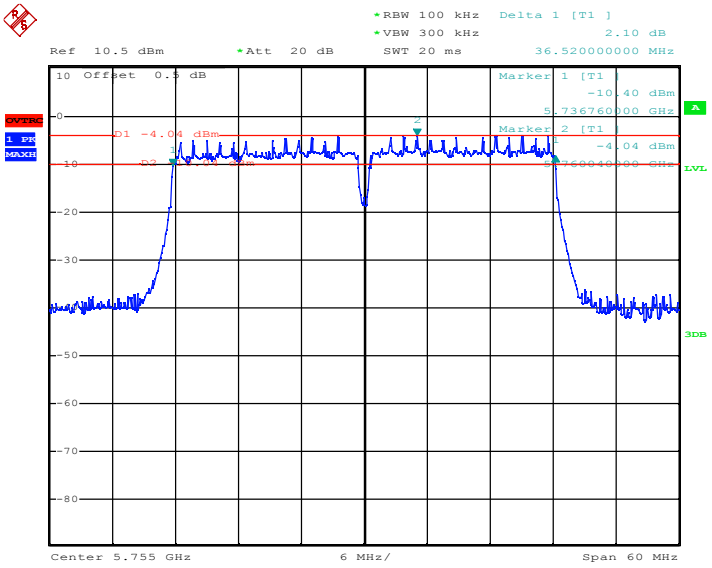
802.11n20 5825MHz 6dB bandwidth



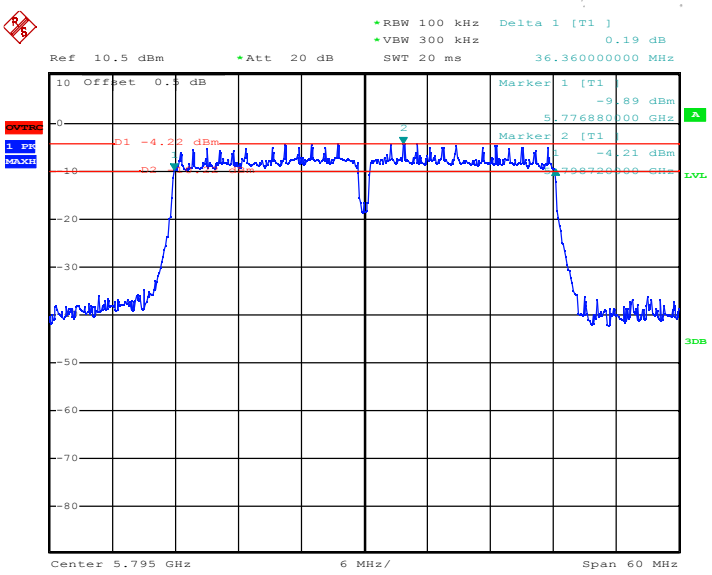
Date: 26.AUG.2021 17:04:21

802.11 n40 5755MHz 6dB bandwidth



Date: 26.AUG.2021 17:06:08

802.11 n40 5795MHz 6dB bandwidth



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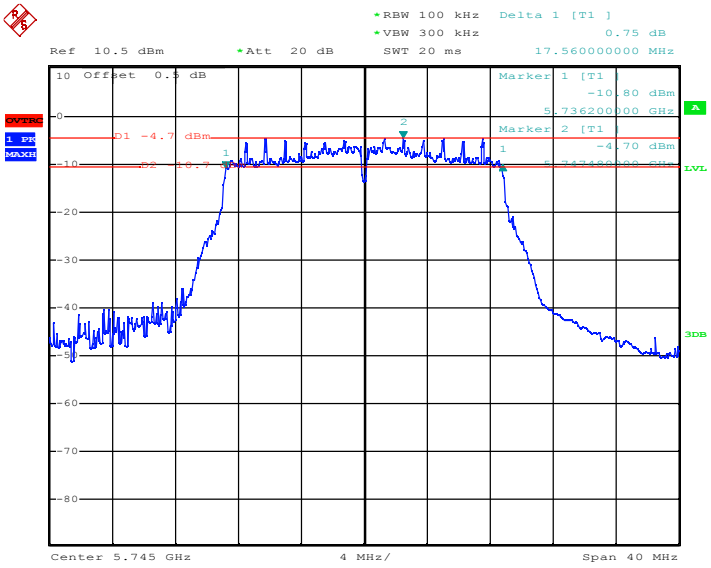
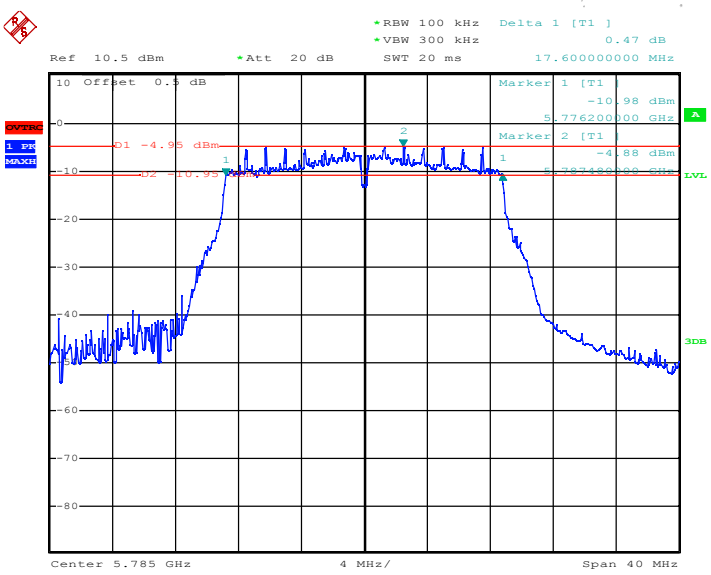
802.11ac20 5745MHz 6dB bandwidth



Date: 26.AUG.2021 17:09:14

802.11ac20 5785MHz 6dB bandwidth



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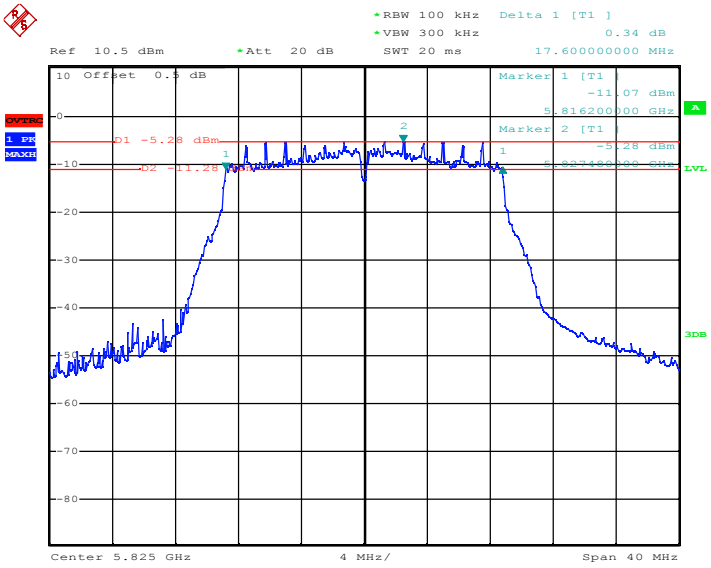
802.11ac20 5825MHz 6dB bandwidth



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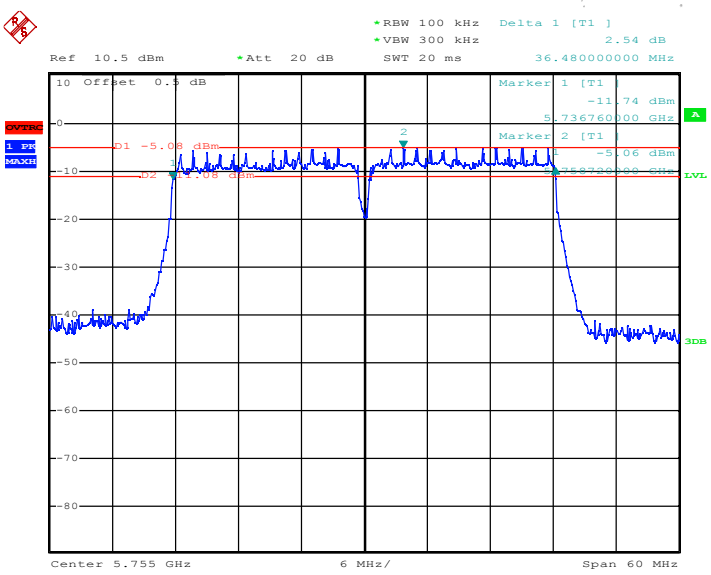
802.11 ac40 5755MHz 6dB bandwidth



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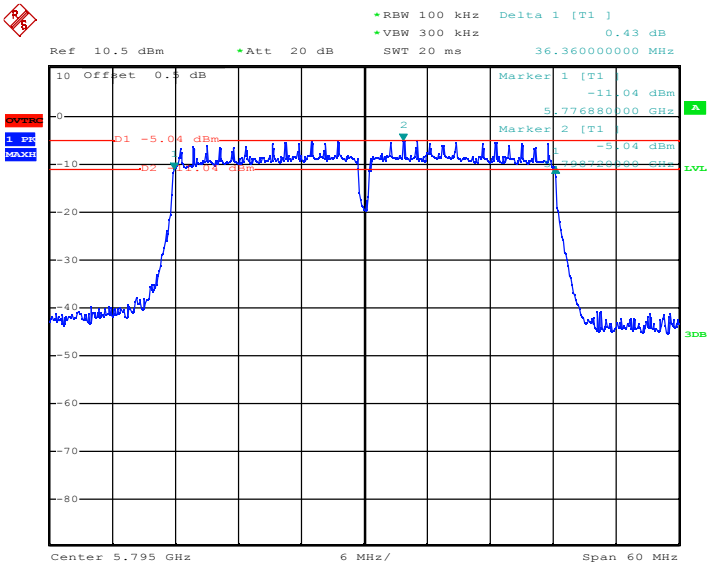
802.11 ac40 5795MHz 6dB bandwidth



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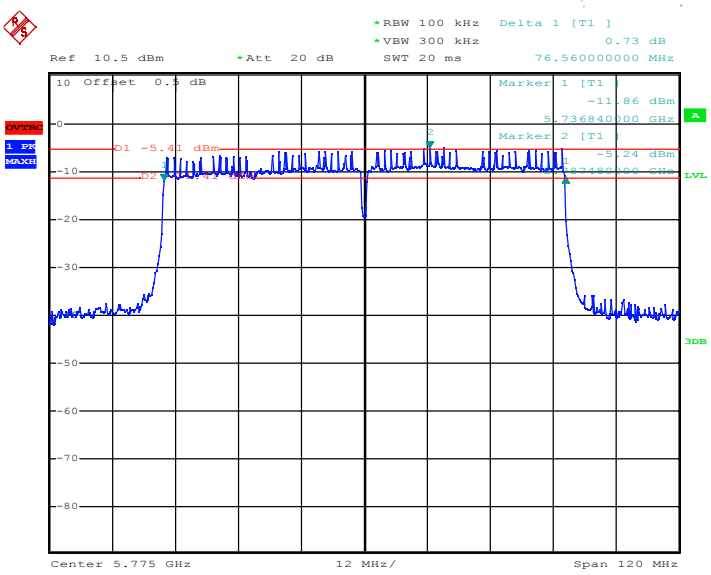
802.11 ac80 5775MHz 6dB bandwidth



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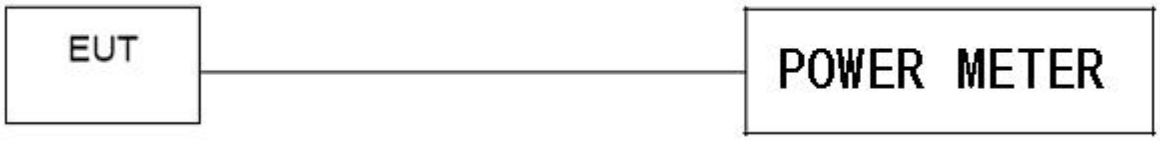
10. MAXIMUM CONDUCTED OUTPUT POWER

10.1 Block Diagram Of Test Setup



10.2 Limit

According to FCC §15.407
The maximum conduced output power should not exceed:

Frequency Band(MHz)	Limit
5150~5250	250mW
5725~5850	1W

10.3 Test procedure

Maximum conducted output power may be measured using a spectrum analyzer/EMI receiver or an RF power meter.

1. Device Configuration
If possible, configure or modify the operation of the EUT so that it transmits continuously at its maximum power control level (see section II.B.).

a) The intent is to test at 100 percent duty cycle; however a small reduction in duty cycle (to no lower than 98 percent) is permitted if required by the EUT for amplitude control purposes. Manufacturers are expected to provide software to the test lab to permit such continuous operation.

b) If continuous transmission (or at least 98 percent duty cycle) cannot be achieved due to hardware limitations (e.g., overheating), the EUT shall be operated at its maximum power control level with the transmit duration as long as possible and the duty cycle as high as possible.

2. Measurement using a Spectrum Analyzer or EMI Receiver (SA)
Measurement of maximum conducted output power using a spectrum analyzer requires integrating the spectrum across a frequency span that encompasses, at a minimum, either the EBW or the 99-percent occupied bandwidth of the signal.1 However, the EBW must be used to determine bandwidth dependent limits on maximum conducted output power in accordance with § 15.407(a).

a) The test method shall be selected as follows: (i) Method SA-1 or SA-1 Alternative (averaging with the EUT transmitting at full power throughout each sweep) shall be applied if either of the following conditions can be satisfied:

- The EUT transmits continuously (or with a duty cycle ≥ 98 percent).
- Sweep triggering or gating can be implemented in a way that the device transmits at

the maximum power control level throughout the duration of each of the instrument sweeps to be averaged. This condition can generally be achieved by triggering the instrument's sweep if the duration of the sweep (with the analyzer configured as in Method SA-1, below) is equal to or shorter than the duration T of each transmission from the EUT and if those transmissions exhibit full power throughout their durations.

(ii) Method SA-2 or SA-2 Alternative (averaging across on and off times of the EUT transmissions, followed by duty cycle correction) shall be applied if the conditions of (i) cannot be achieved and the transmissions exhibit a constant duty cycle during the measurement duration. Duty cycle will be considered to be constant if variations are less than ± 2 percent.

(iii) Method SA-3 (RMS detection with max hold) or SA-3 Alternative (reduced VBW with max hold) shall be applied if the conditions of (i) and (ii) cannot be achieved.

b) Method SA-1 (trace averaging with the EUT transmitting at full power throughout each sweep): (i) Set span to encompass the entire emission bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal.

(ii) Set RBW = 1 MHz.

(iii) Set VBW ≥ 3 MHz.

(iv) Number of points in sweep ≥ 2 Span / RBW. (This ensures that bin-to-bin spacing is ≤ RBW/2, so that narrowband signals are not lost between frequency bins.)

(v) Sweep time = auto.

(vi) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.

(vii) If transmit duty cycle < 98 percent, use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle ≥ 98 percent, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to "free run".

(viii) Trace average at least 100 traces in power averaging (i.e., RMS) mode.

(ix) Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument's band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum

10.4 EUT operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

10.5 Test Result

Temperature :	26 ℃	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	DC 12V
Test Mode :	TX (5.1G) Mode Frequency U-NII-1 (5180-5240MHz)		

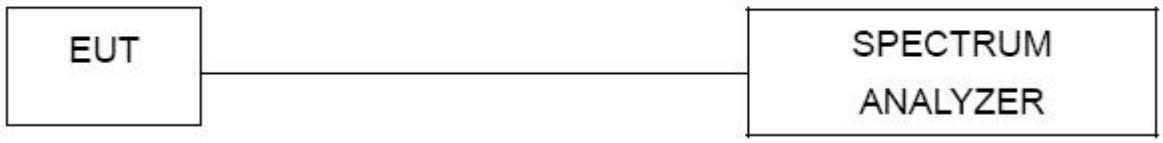
Test Channel	Frequency	Maximum output power. Antenna port (AV)			LIMIT	Result
	(MHz)	ANT A(dBm)	ANT B(dBm)	Total(dBm)	dBm	
TX 802.11a Mode						
CH36	5180	11.50	10.00	/	24	Pass
CH40	5200	11.94	10.10	/	24	Pass
CH48	5240	13.22	10.62	/	24	Pass
TX 802.11 n20M Mode						
CH36	5180	11.40	9.35	13.51	24	Pass
CH40	5200	11.64	9.63	13.76	24	Pass
CH48	5240	13.30	10.31	15.07	24	Pass
TX 802.11 n40M Mode						
CH38	5190	10.18	7.71	12.13	24	Pass
CH46	5230	11.30	8.24	13.04	24	Pass
TX 802.11 AC20M Mode						
CH36	5180	10.14	8.24	12.30	24	Pass
CH40	5200	10.32	8.04	12.34	24	Pass
CH48	5240	11.42	8.37	13.17	24	Pass
TX 802.11 AC40M Mode						
CH38	5190	8.99	7.31	11.24	24	Pass
CH46	5230	10.16	8.00	12.22	24	Pass
TX 802.11 AC80M Mode						
CH42	5210	8.89	7.11	11.10	24	Pass

Temperature :	26 ℃	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	DC 12V
Test Mode :	TX (5.8G) Mode Frequency U-NII-3 (5745-5825MHz)		

Test Channel	Frequency	Maximum output power. Antenna port (AV)			LIMIT	Result
	(MHz)	ANT A(dBm)	ANT B(dBm)	Total(dBm)	dBm	
TX 802.11a Mode						
CH 149	5745	14.43	14.26	/	30	Pass
CH 157	5785	13.56	14.02	/	30	Pass
CH 165	5825	13.79	13.45	/	30	Pass
TX 802.11 n20M Mode						
CH 149	5745	13.98	14.28	17.14	30	Pass
CH 157	5785	14.41	14.27	17.35	30	Pass
CH 165	5825	13.84	13.35	16.61	30	Pass
TX 802.11 n40M Mode						
CH 151	5755	11.51	11.59	14.56	30	Pass
CH 159	5795	11.38	11.68	14.54	30	Pass
TX 802.11 AC20M Mode						
CH 149	5745	11.47	10.68	14.10	30	Pass
CH 157	5785	11.19	10.57	13.90	30	Pass
CH 165	5825	10.76	9.66	13.26	30	Pass
TX 802.11 AC40M Mode						
CH 151	5755	10.54	10.25	13.41	30	Pass
CH 159	5795	10.56	10.09	13.34	30	Pass
TX 802.11 AC80M Mode						
CH 155	5775	9.82	9.91	12.88	30	Pass

11. OUT OF BAND EMISSIONS

11.1 Block Diagram Of Test Setup



11.2 Limit

According to FCC §15.407(b)
Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:
(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
(2) 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.

11.3 Test procedure

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

11.4 EUT operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data

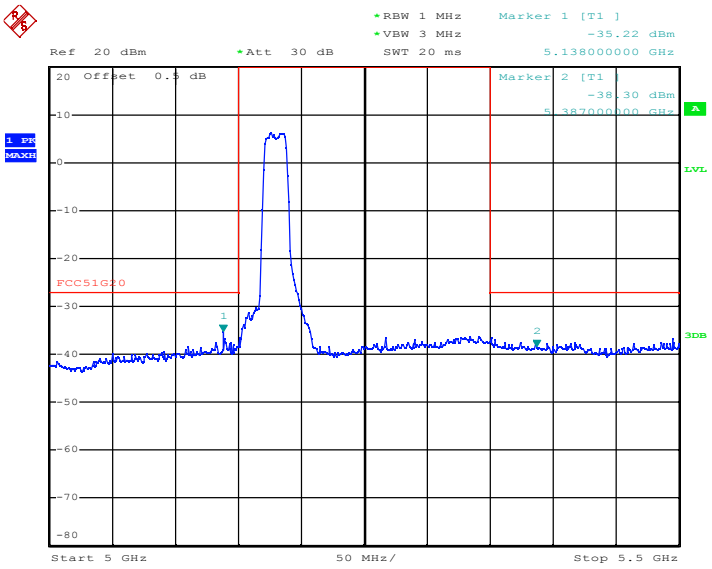
11.5 Test Result

Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	101kPa	Test Voltage ：	DC 12V

Note: A(B) Represent the value of antenna A and B, The worst data is Antenna A,only shown Antenna A Plot.

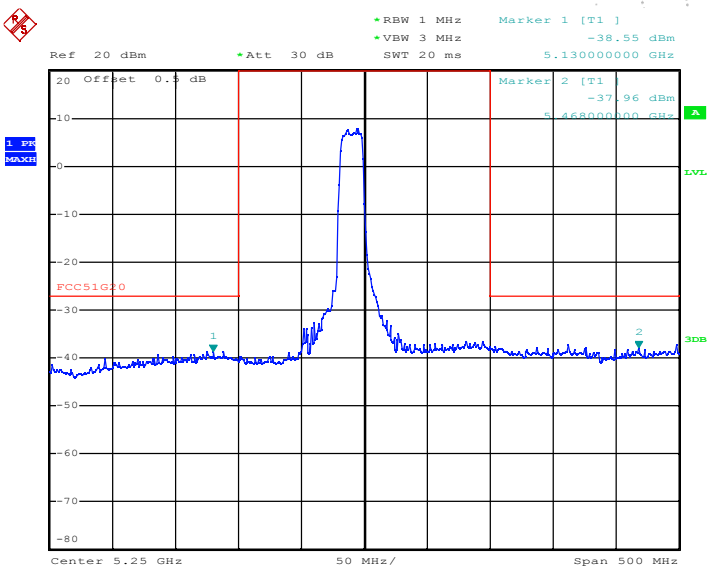
5.180~5.240 GHz

(802.11a) Band Edge, Left Side



Date: 26.AUG.2021 14:52:03

(802.11a) Band Edge, Right Side



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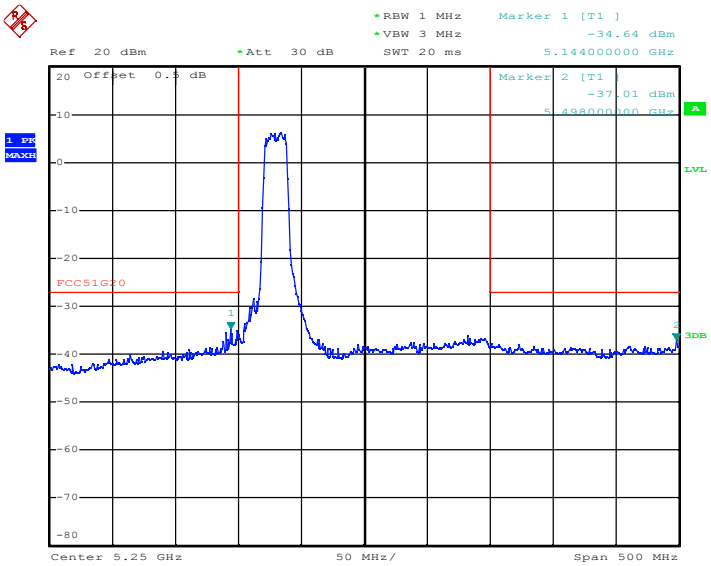
5.180~5.240 GHz

(802.11n20) Band Edge, Left Side



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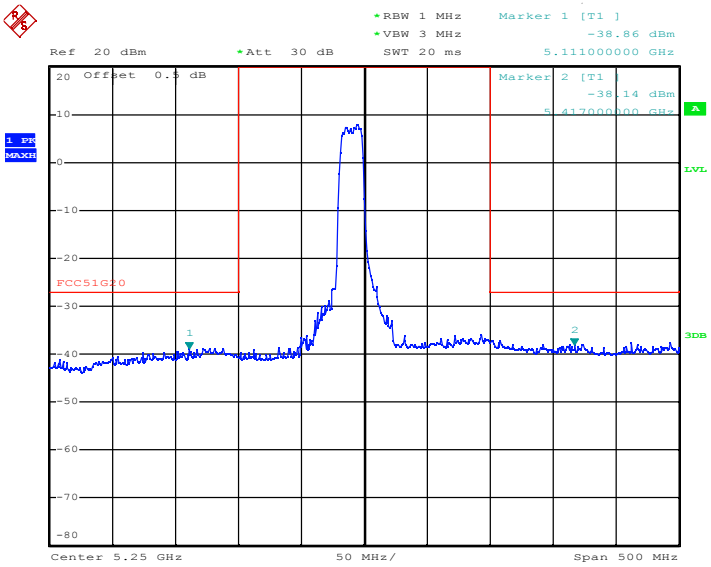
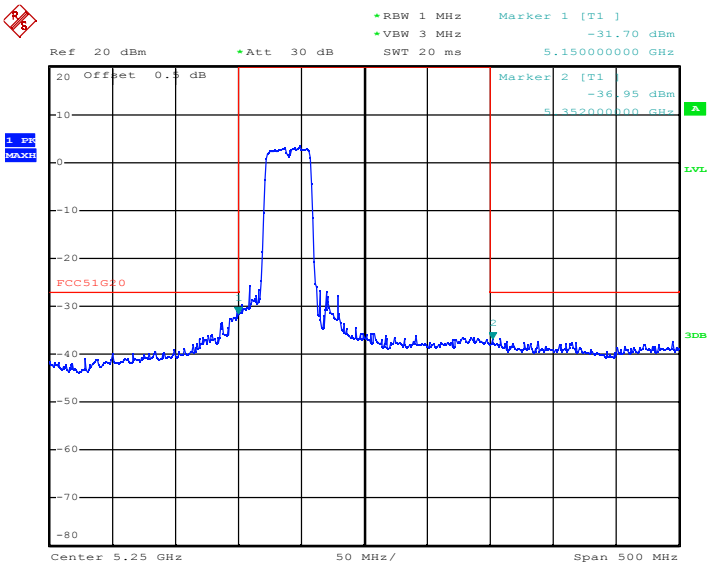
(802.11n20) Band Edge, Right Side



Date: 26.AUG.2021 14:57:16

5.180~5.240 GHz

(802.11n40) Band Edge, Left Side



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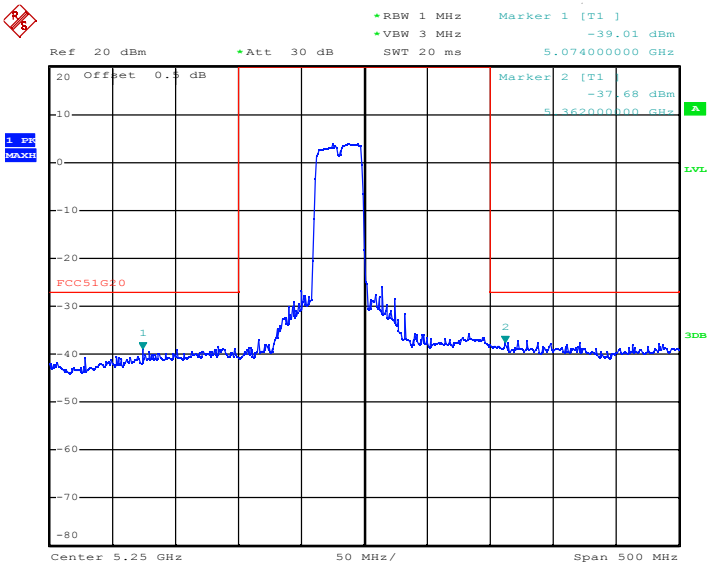
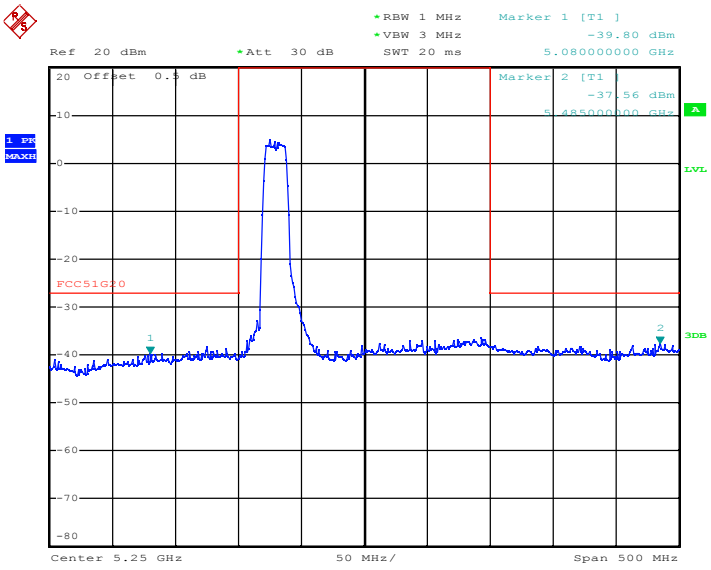
(802.11n40) Band Edge, Right Side



Date: 26.AUG.2021 14:59:28

5.180~5.240 GHz

(802.11ac20) Band Edge, Left Side



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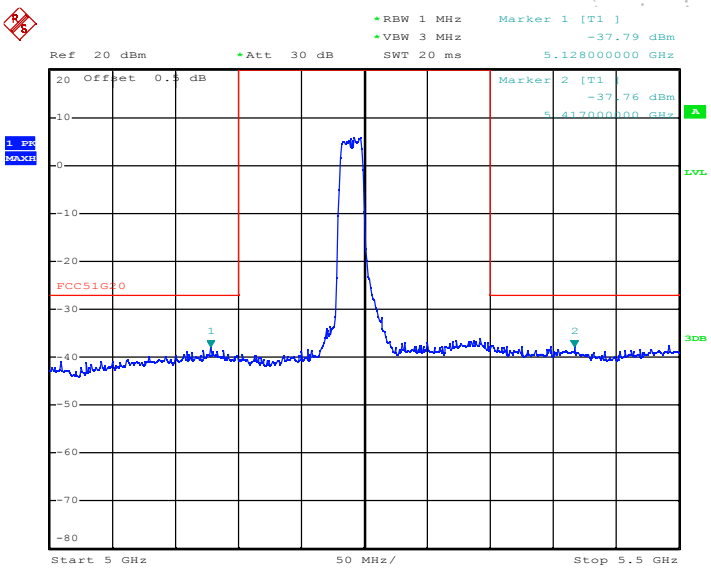
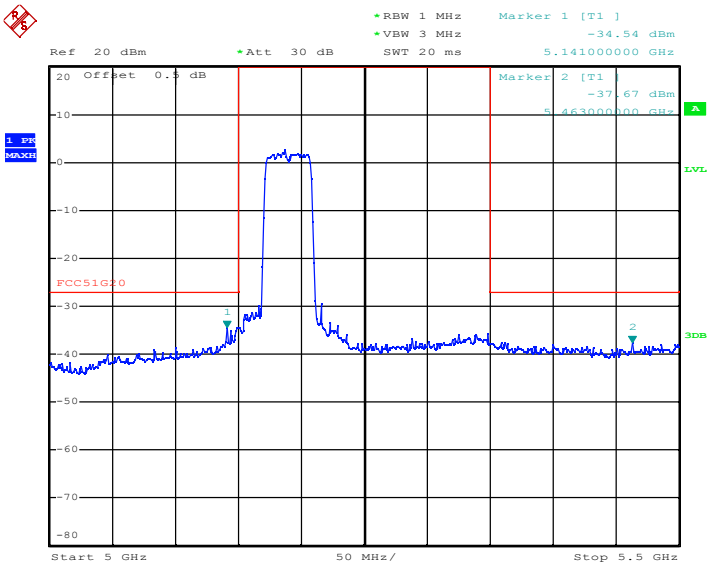
(802.11ac20) Band Edge, Right Side



Date: 26.AUG.2021 15:02:17

5.180~5.240 GHz

(802.11ac40) Band Edge, Left Side



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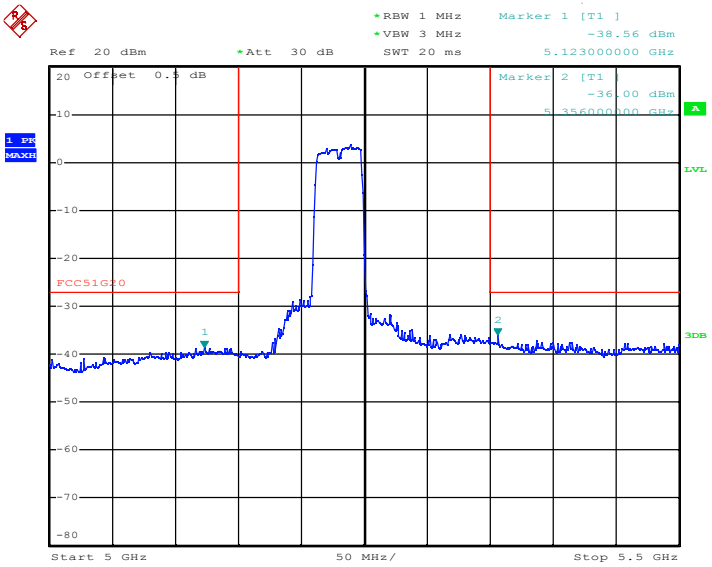
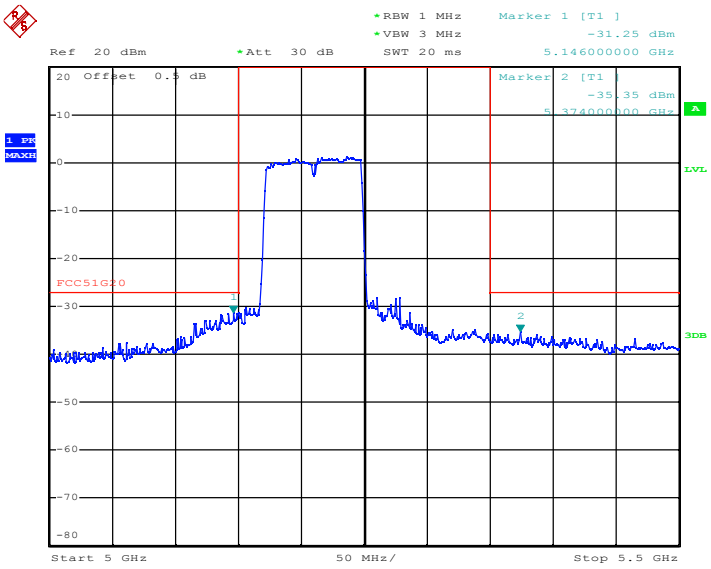
(802.11ac40) Band Edge, Right Side



Date: 26.AUG.2021 15:04:12

5.180~5.240 GHz

(802.11ac80) Band Edge, Left Side



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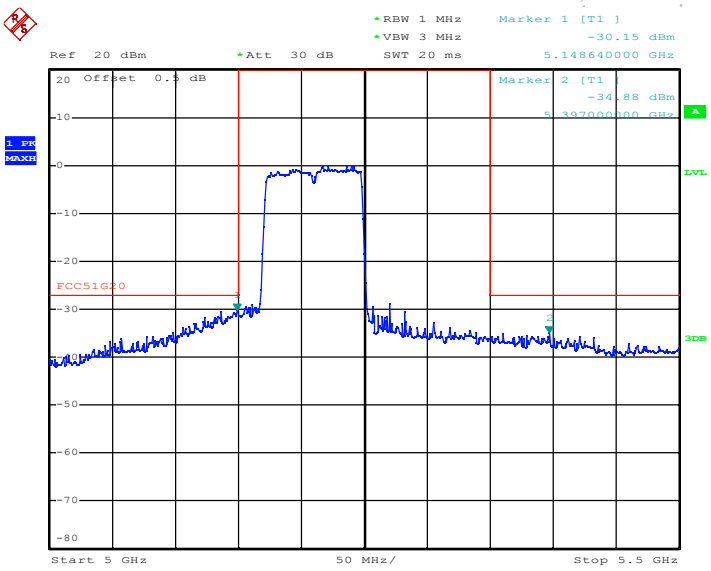
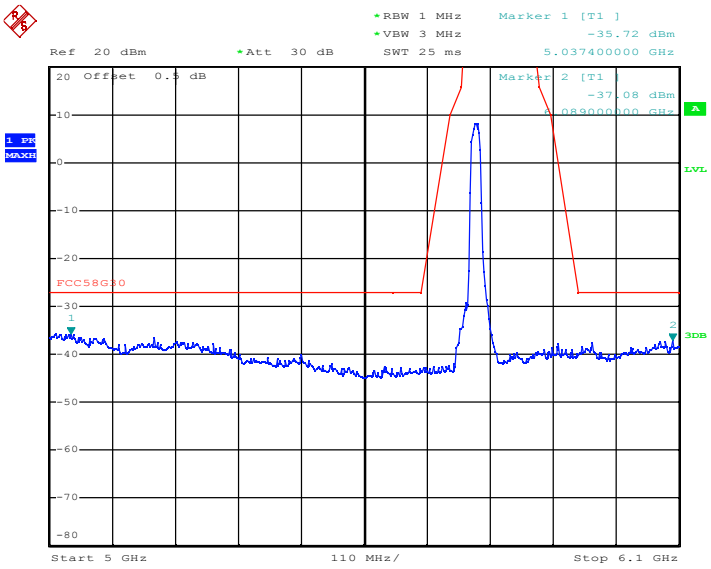
(802.11ac80) Band Edge, Right Side



Date: 26.AUG.2021 19:21:38

5.745~5.825 GHz

(802.11a) Band Edge, Left Side



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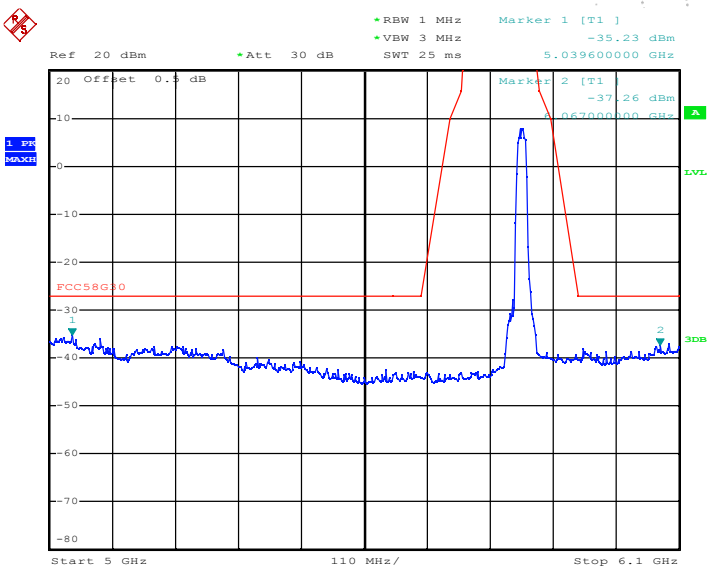
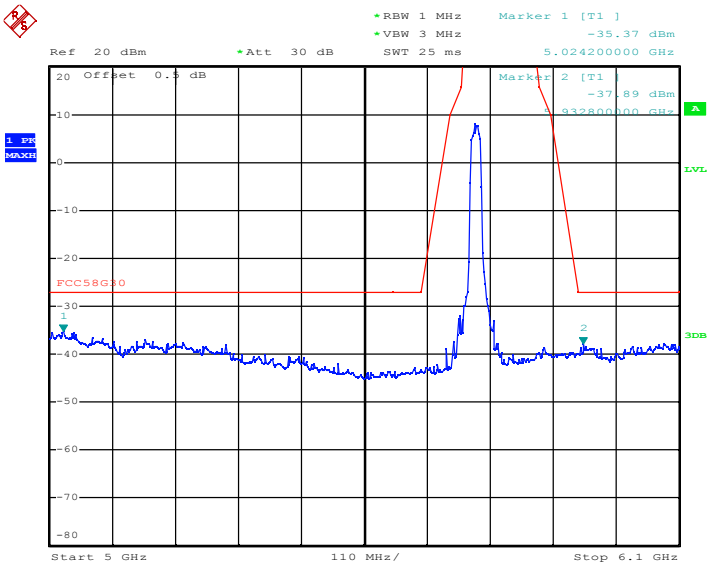
(802.11a) Band Edge, Right Side



Date: 26.AUG.2021 17:46:14

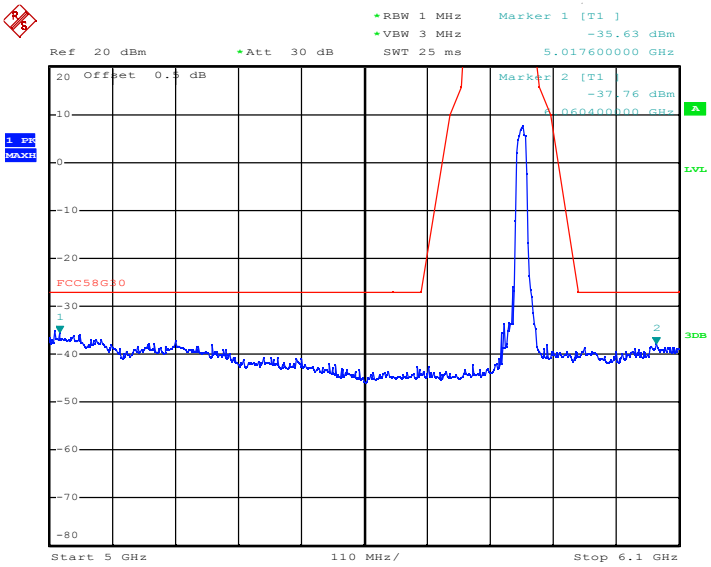
5.745~5.825 GHz

(802.11n20) Band Edge, Left Side



Date: 26.AUG.2021 17:47:13

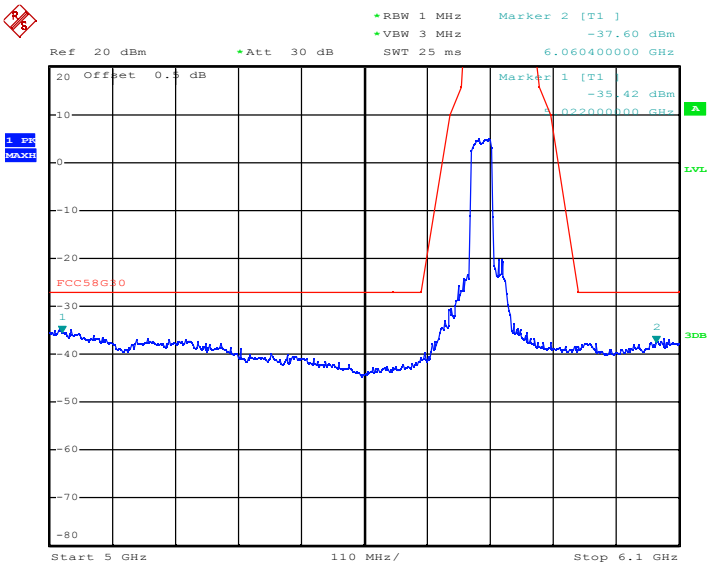
(802.11n20) Band Edge, Right Side



Date: 26.AUG.2021 17:47:46

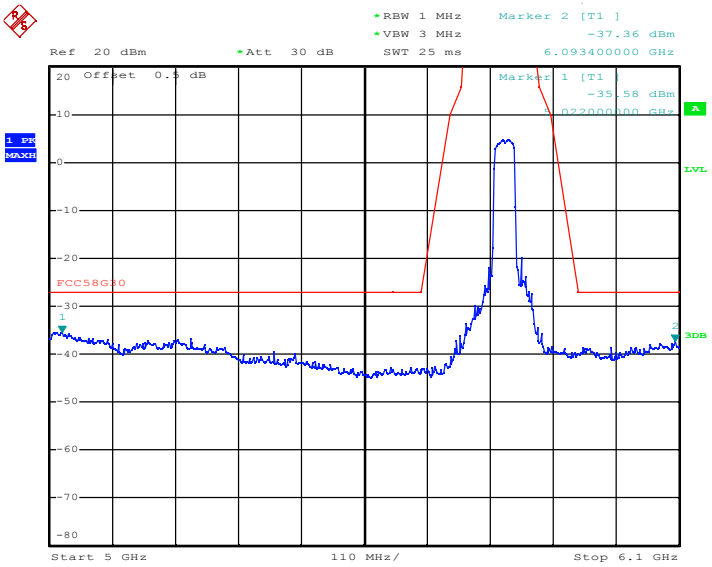
5.745~5.825 GHz

(802.11n40) Band Edge, Left Side



Date: 26.AUG.2021 17:53:55

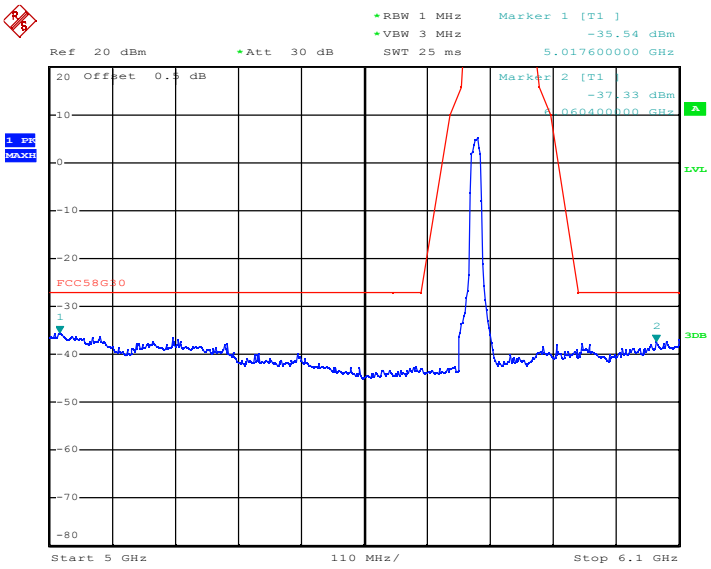
(802.11n40) Band Edge, Right Side



Date: 26.AUG.2021 17:50:06

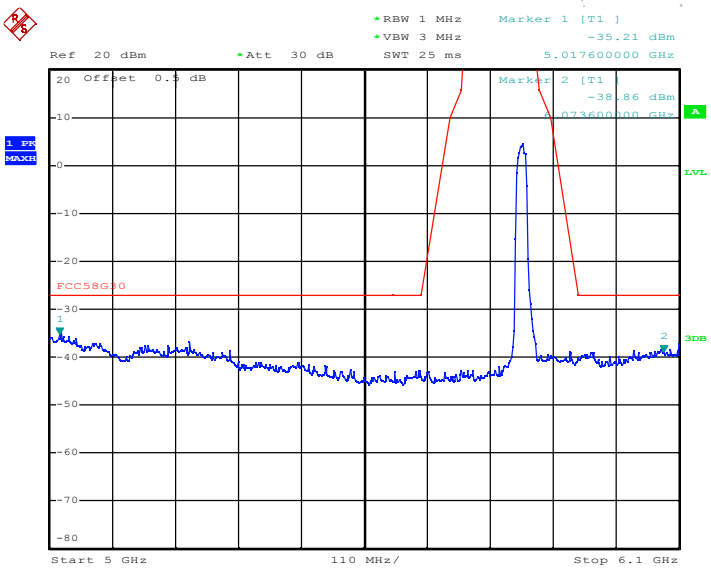
5.745~5.825 GHz

(802.11ac20) Band Edge, Left Side



Date: 26.AUG.2021 17:55:59

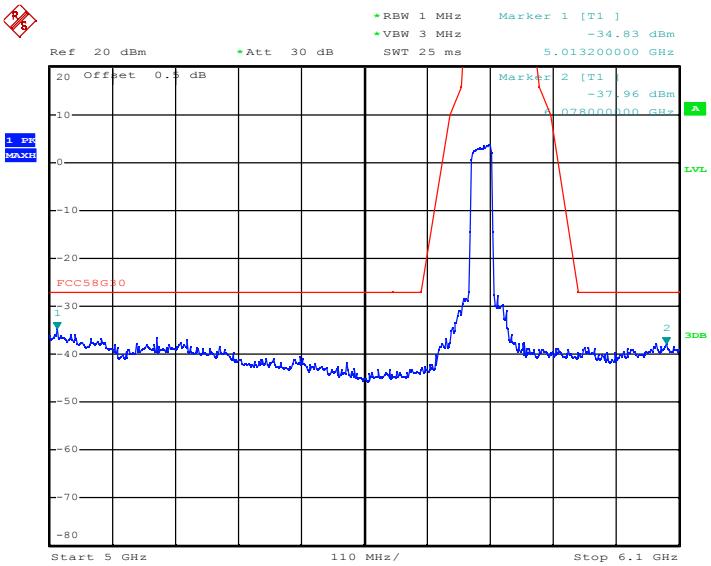
(802.11ac20) Band Edge, Right Side



Date: 26.AUG.2021 17:56:53

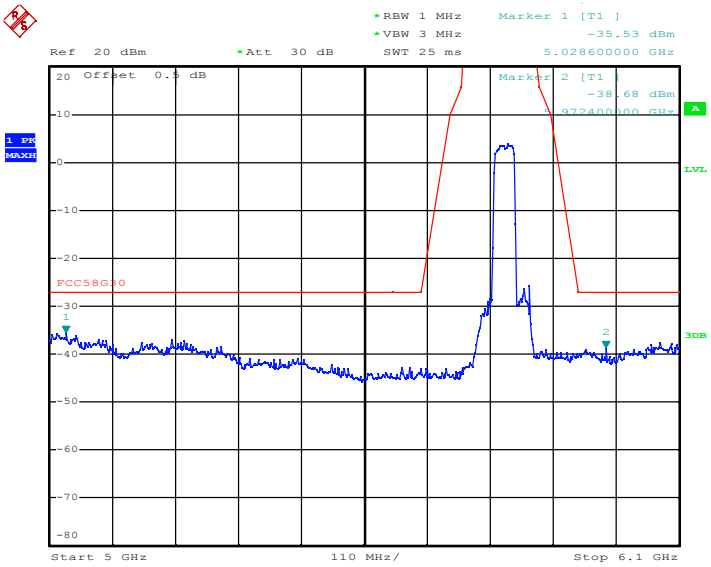
5.745~5.825 GHz

(802.11ac40) Band Edge, Left Side



Date: 26.AUG.2021 17:57:38

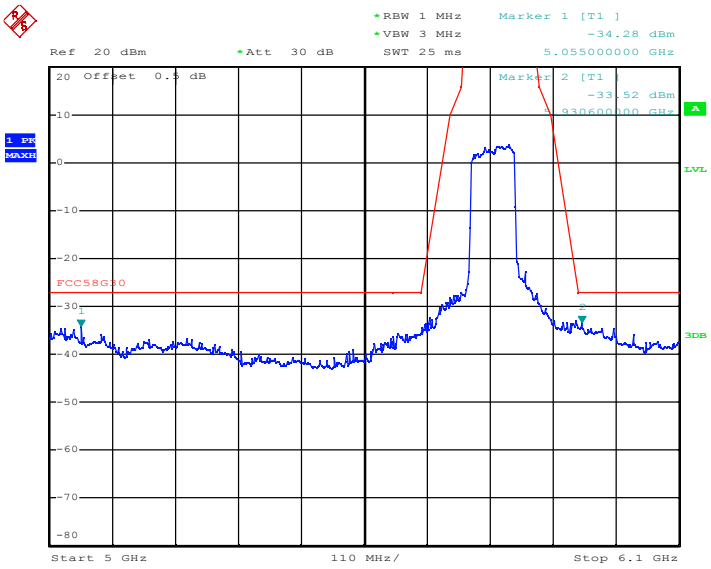
(802.11ac40) Band Edge, Right Side



Date: 26.AUG.2021 17:58:16

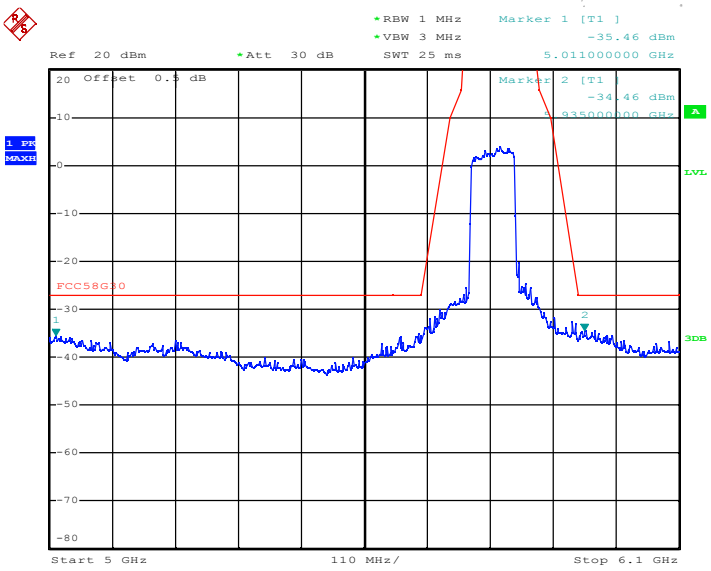
5.745~5.825 GHz

(802.11ac80) Band Edge, Left Side



Date: 26.AUG.2021 17:59:41

(802.11ac80) Band Edge, Right Side



Date: 26.AUG.2021 18:00:12

12. SPURIOUS RF CONDUCTED EMISSIONS

12.1 Block Diagram Of Test Setup

12.2 Limit

Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:
(1)For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
(2)For transmitters operating in the 5.725-5.85 GHz band(i) All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge..

12.3 Test procedure

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

12.4 Test Result

Remark: The measurement frequency range is from 9KHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the spurious emissions and bandege measurement data.

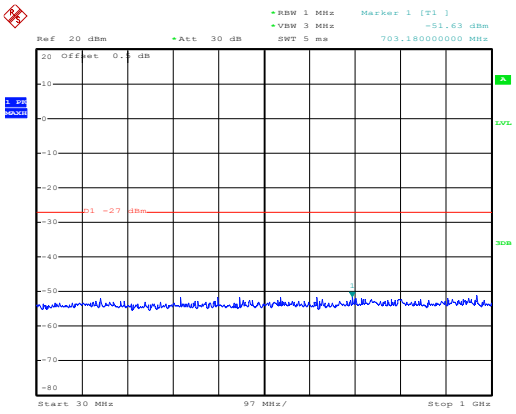
About:26.5GHz-40GHz, The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Note: A(B) Represent the value of antenna A and B, The worst data is Antenna A, only shown Antenna A Plot.

5.1G

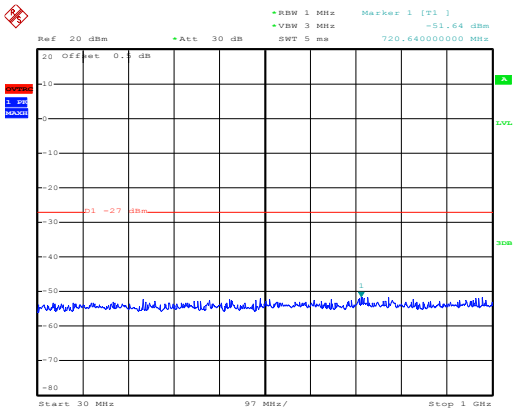
Test Plot

802.11a on channel 36



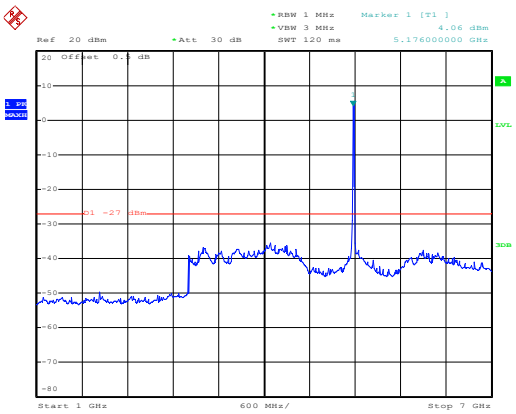
Date: 26.AUG.2021 12:13:46

802.11a on channel 40



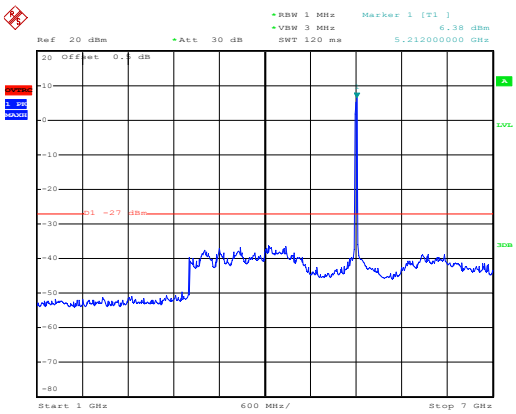
Date: 26.AUG.2021 12:16:05

802.11a on channel 36



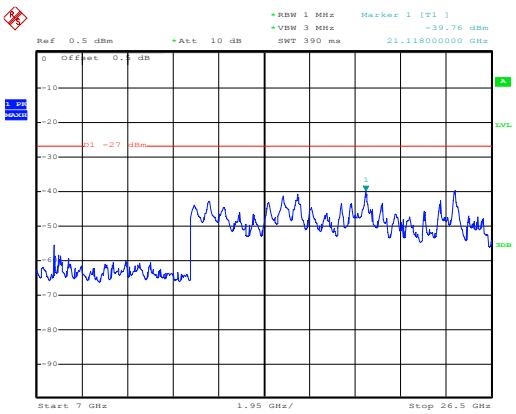
Date: 26.AUG.2021 12:14:21

802.11a on channel 40



Date: 26.AUG.2021 12:16:28

802.11a on channel 36



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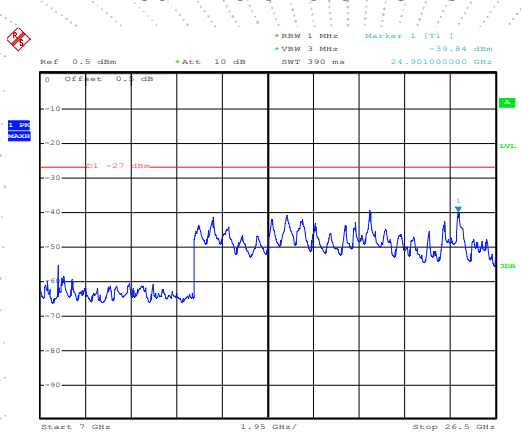
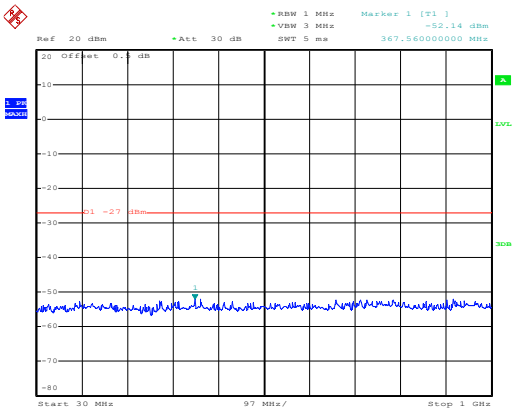
802.11a on channel 40



Date: 26.AUG.2021 12:15:34

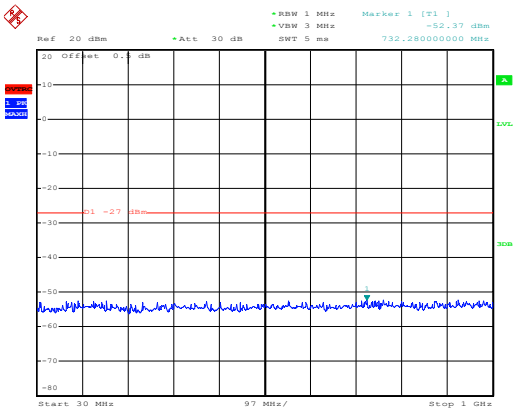
Test Plot

802.11a on channel 48



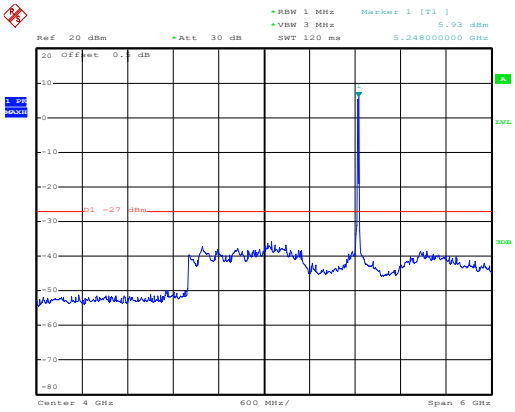
Date: 26.AUG.2021 12:17:28

802.11n20 on channel 36



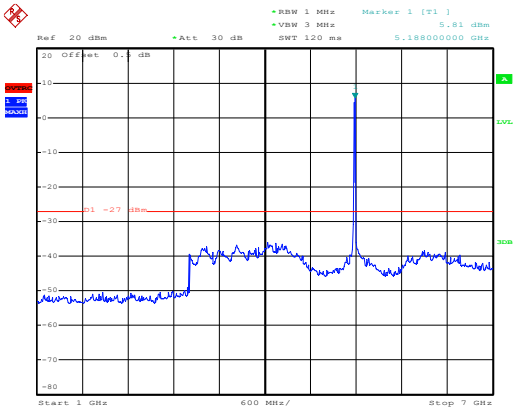
Date: 26.AUG.2021 12:21:16

802.11a on channel 48



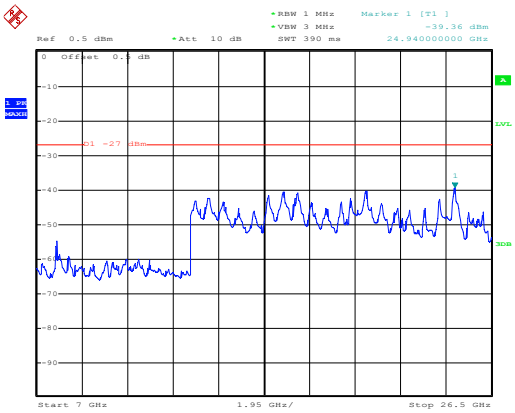
Date: 26.AUG.2021 12:17:10

802.11n20 on channel 36



Date: 26.AUG.2021 12:21:38

802.11a on channel 48



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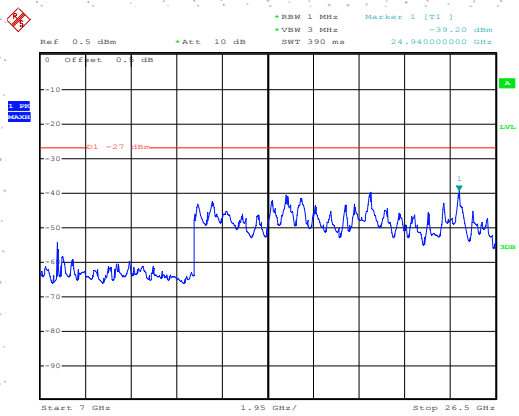
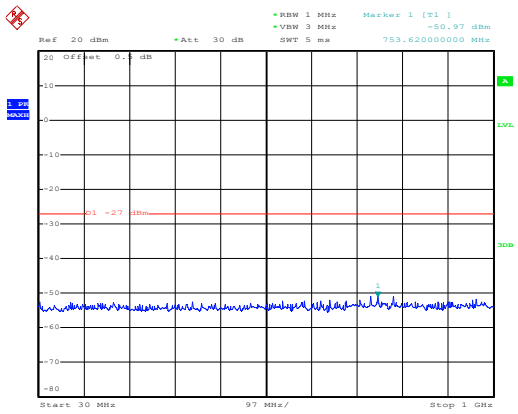
802.11n20 on channel 36



Date: 26.AUG.2021 12:20:39

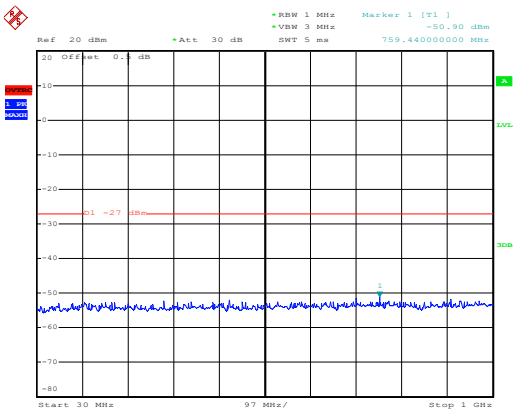
Test Plot

802.11n20 on channel 40



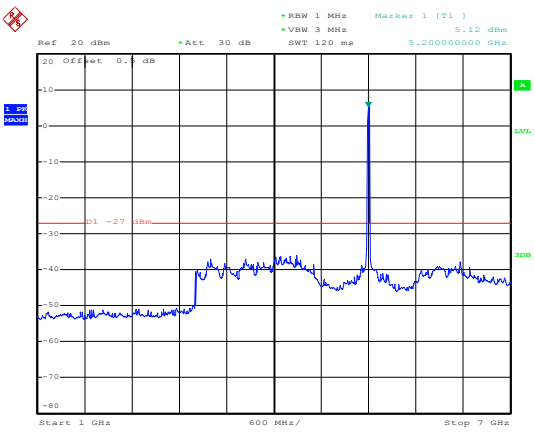
Date: 26.AUG.2021 12:22:47

802.11n20 on channel 48



Date: 26.AUG.2021 12:24:48

802.11n20 on channel 40



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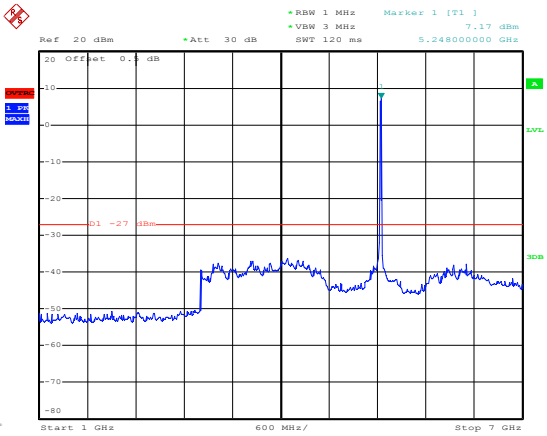
802.11n20 on channel 48



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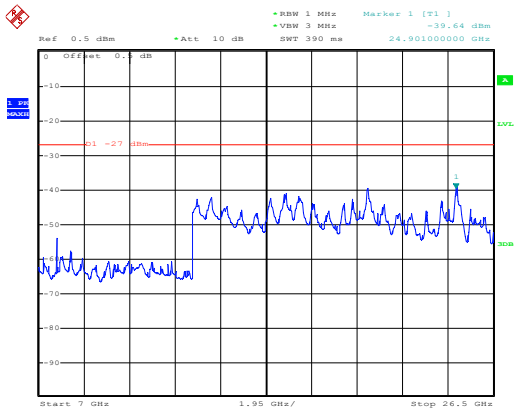
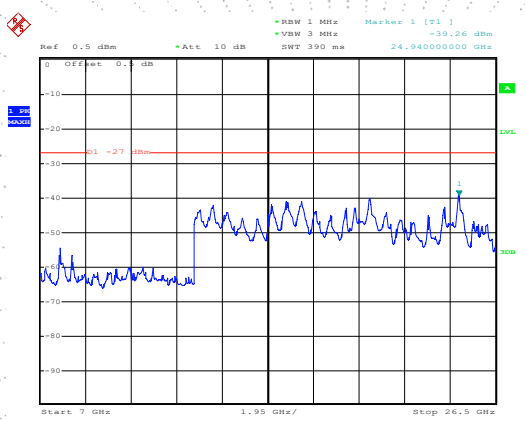
802.11n20 on channel 40



Date: 26.AUG.2021 12:23:19

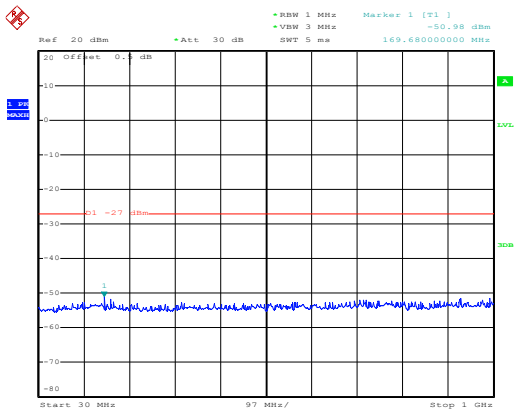
802.11n20 on channel 48



Date: 26.AUG.2021 12:24:09

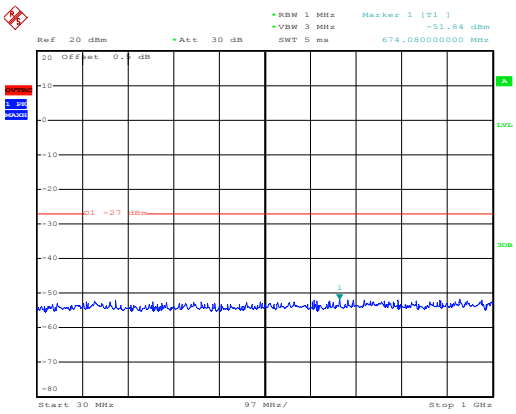
Test Plot

802.11n40 on channel 38



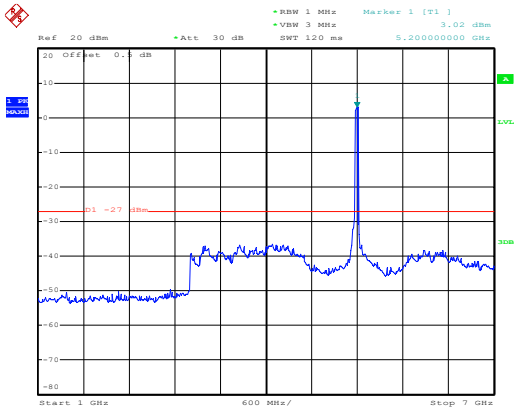
Date: 26.AUG.2021 12:26:47

802.11n40 on channel 46



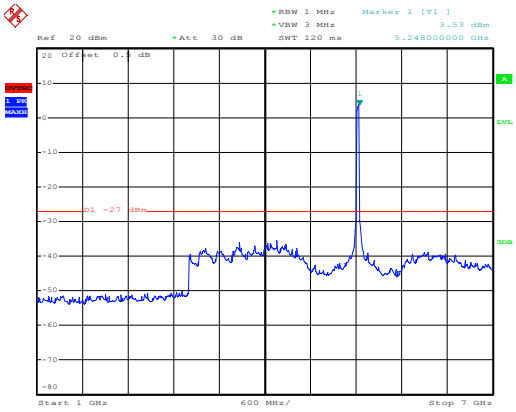
Date: 26.AUG.2021 12:29:10

802.11n40 on channel 38



Date: 26.AUG.2021 12:26:18

802.11n40 on channel 46



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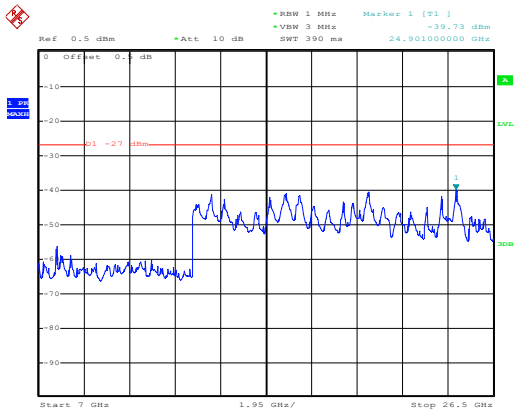
802.11n40 on channel 38



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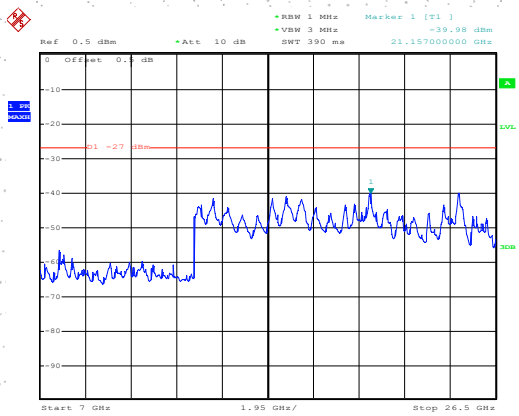
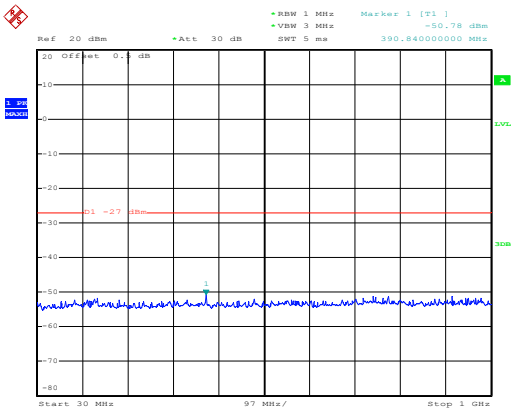
802.11n40 on channel 46



Date: 26.AUG.2021 12:28:18

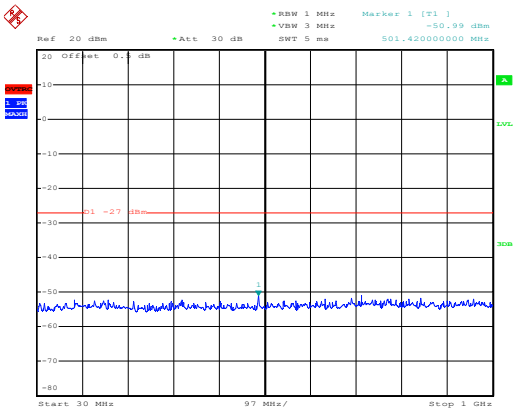
Test Plot

802.11ac20 on channel 36



Date: 26.AUG.2021 12:33:05

802.11ac20 on channel 40



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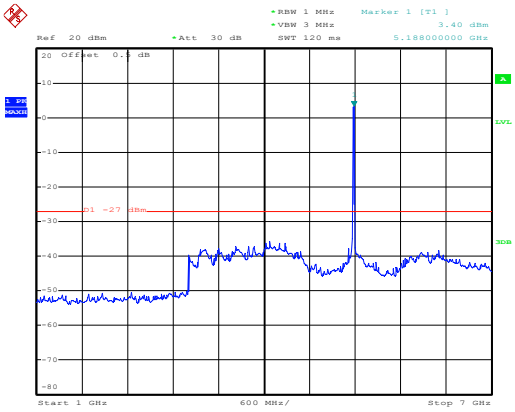
802.11ac20 on channel 36



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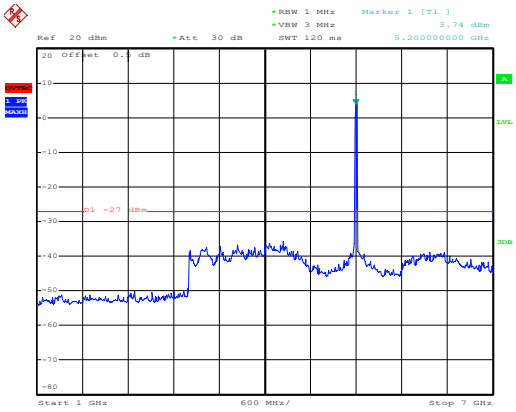
802.11ac20 on channel 40



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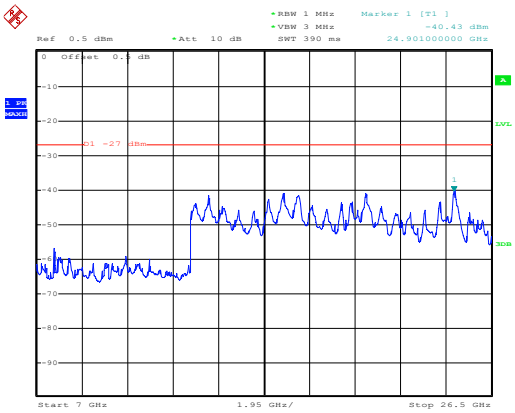
802.11ac20 on channel 36



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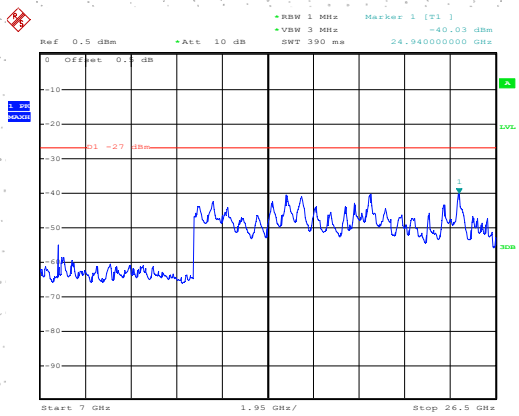
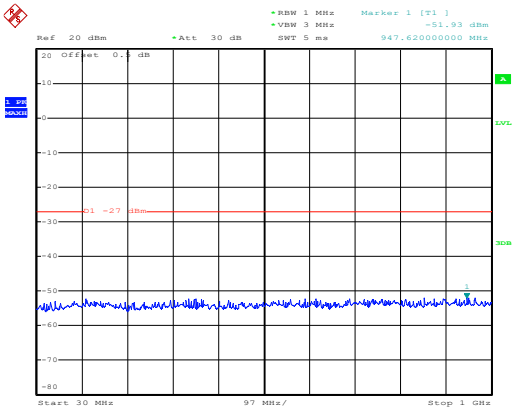


Date: 26.AUG.2021 12:34:38

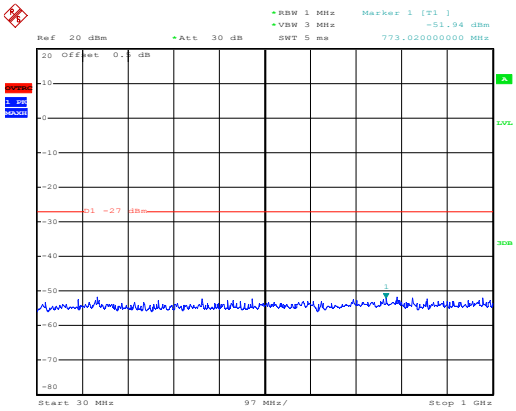
Test Plot

802.11ac20 on channel 48



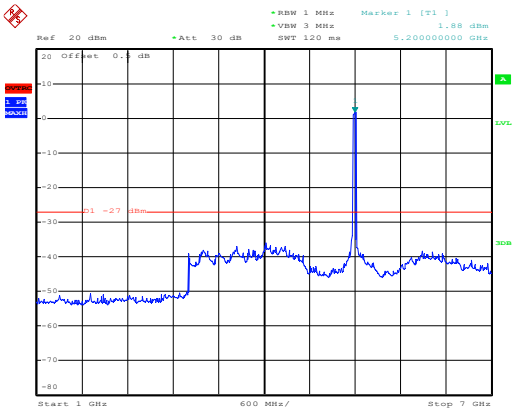
Date: 26.AUG.2021 12:37:40

802.11ac40 on channel 38



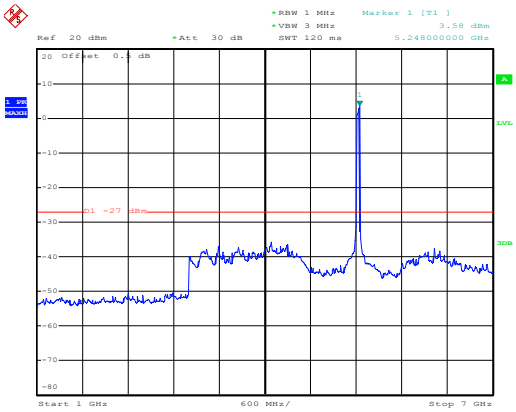
Date: 26.AUG.2021 12:41:00

802.11ac20 on channel 48



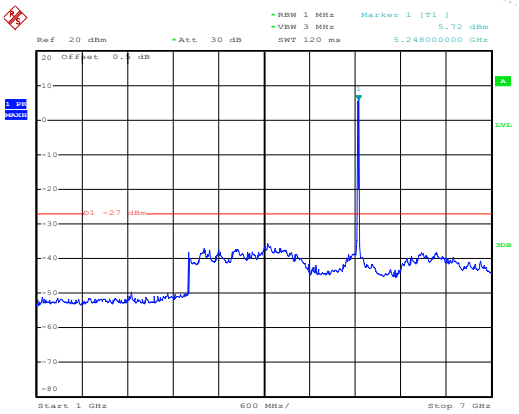
Date: 26.AUG.2021 12:41:23

802.11ac40 on channel 38



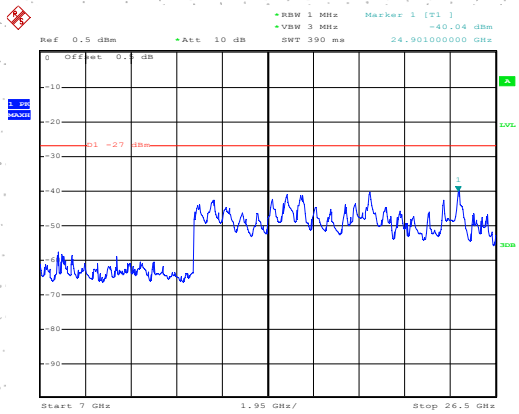
Date: 26.AUG.2021 12:43:19

802.11ac20 on channel 48



Date: 26.AUG.2021 12:37:18

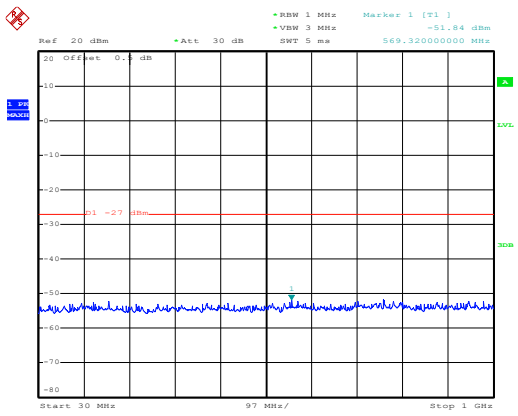
802.11ac40 on channel 38



Date: 26.AUG.2021 12:39:34

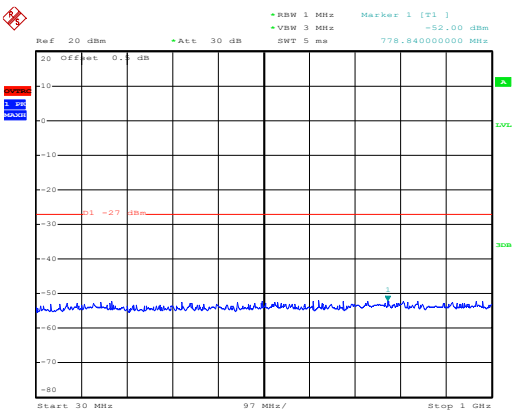
Test Plot

802.11ac40 on channel 46



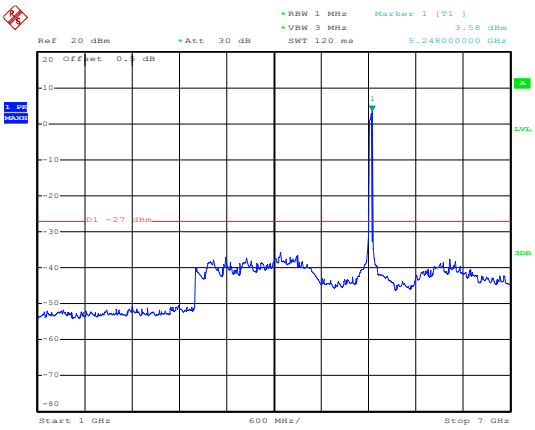
Date: 26.AUG.2021 12:43:39

802.11ac80 on channel 42



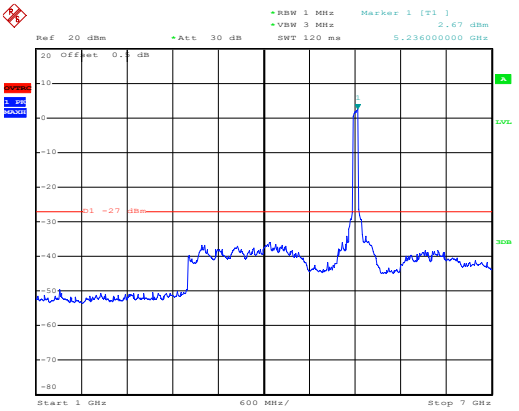
Date: 26.AUG.2021 12:45:23

802.11 ac40 on channel 46



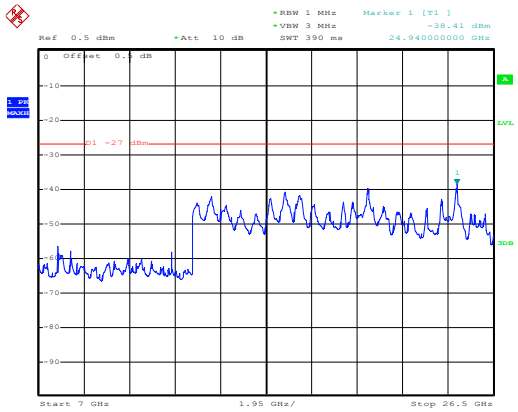
Date: 26.AUG.2021 12:43:19

802.11ac80 on channel 42



Date: 26.AUG.2021 12:46:45

802.11 ac40 on channel 46



Date: 26.AUG.2021 12:44:08

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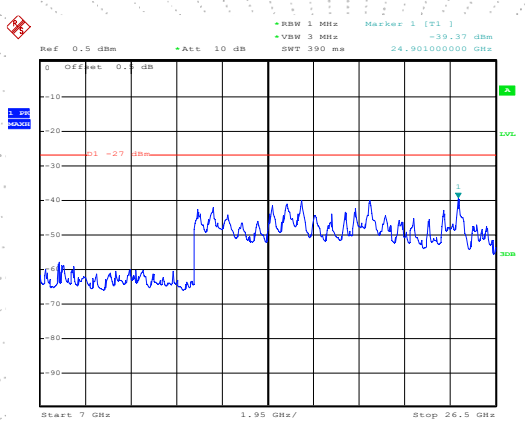
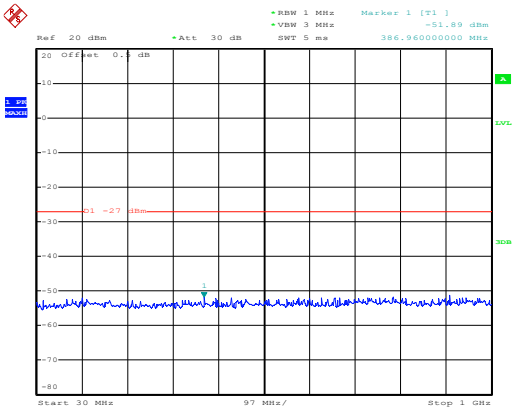


Date: 26.AUG.2021 12:44:46

5.8G

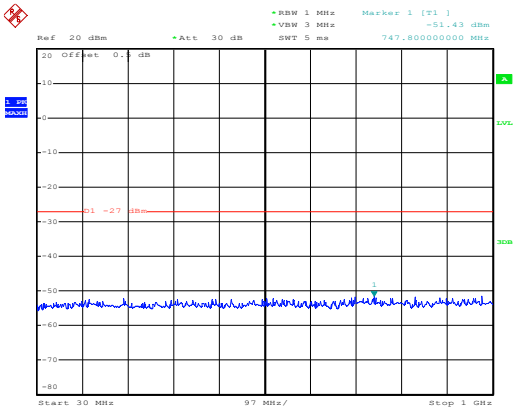
Test Plot

802.11a on channel 149



Date: 26.AUG.2021 16:02:47

802.11a on channel 157



Date: 26.AUG.2021 16:04:53

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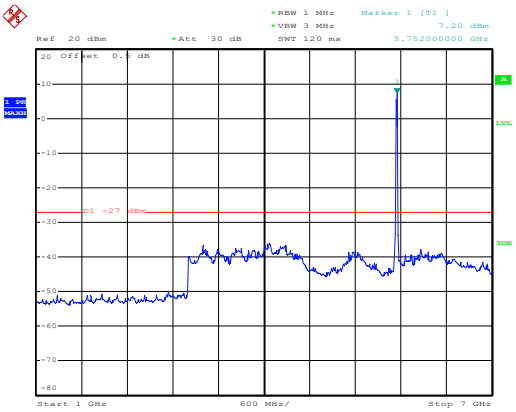

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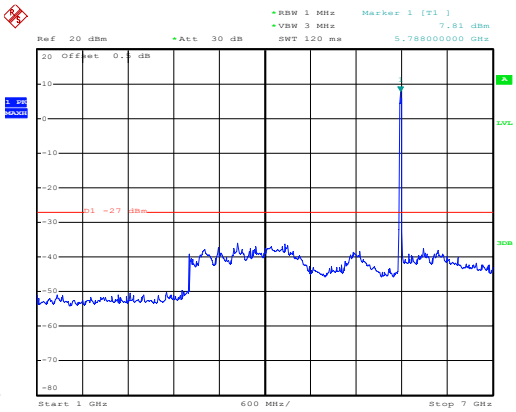

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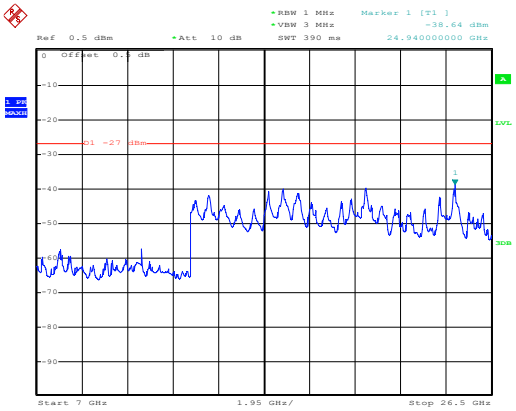

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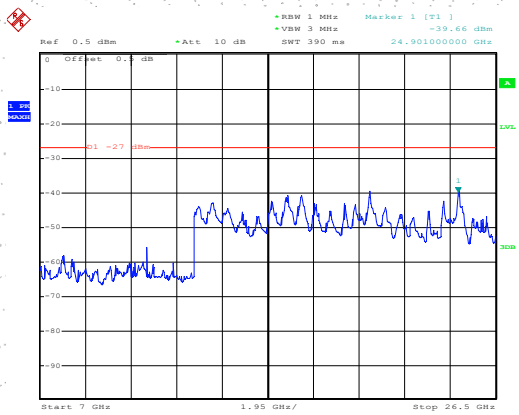
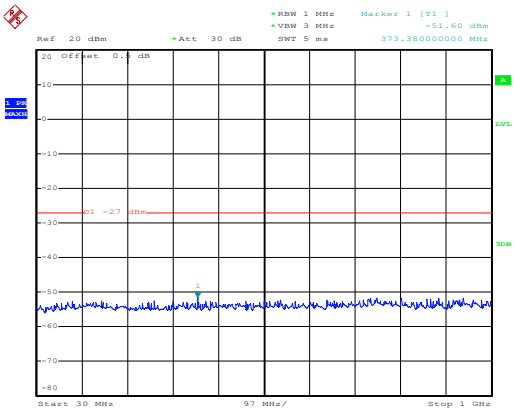


Date: 26.AUG.2021 16:04:23

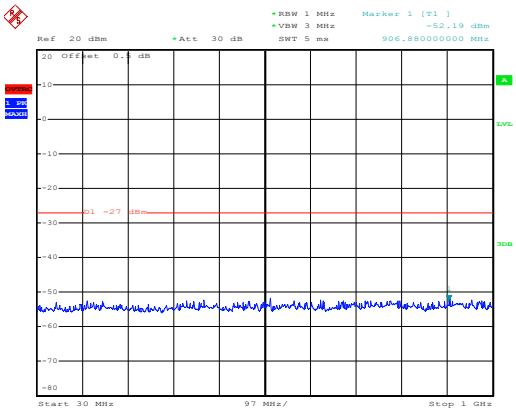
Test Plot

802.11a on channel 165



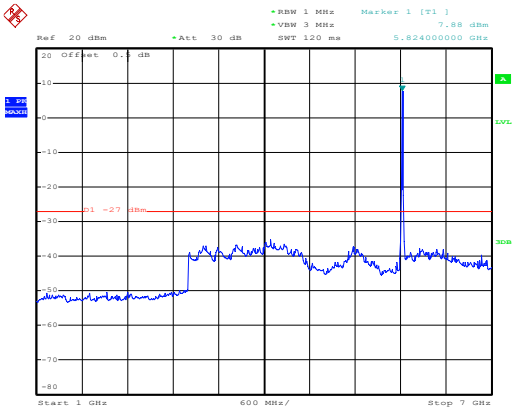
Date: 26.AUG.2021 16:07:14

802.11n20 on channel 149



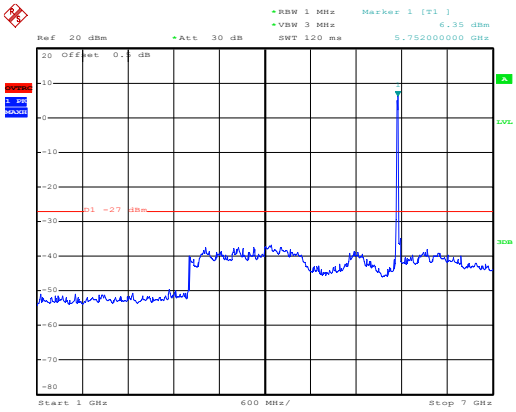
Date: 26.AUG.2021 16:09:53

802.11a on channel 165



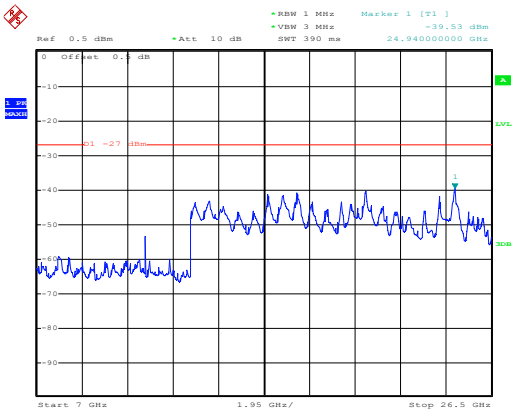
Date: 26.AUG.2021 16:06:11

802.11n20 on channel 149



Date: 26.AUG.2021 16:10:12

802.11a on channel 165



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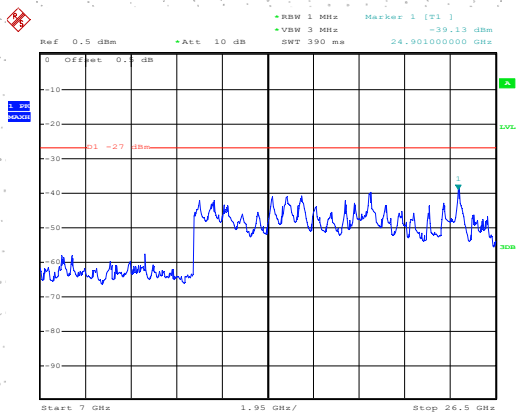
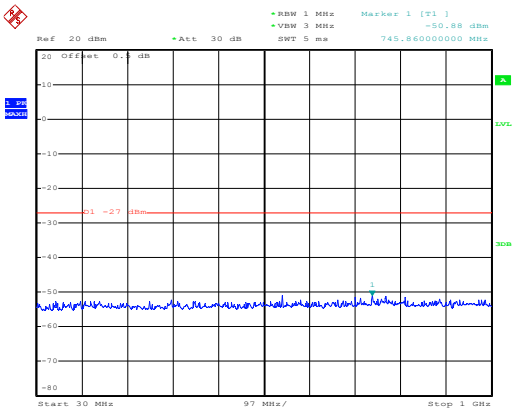


Date: 26.AUG.2021 16:09:08

Test Plot

802.11n20 on channel 157



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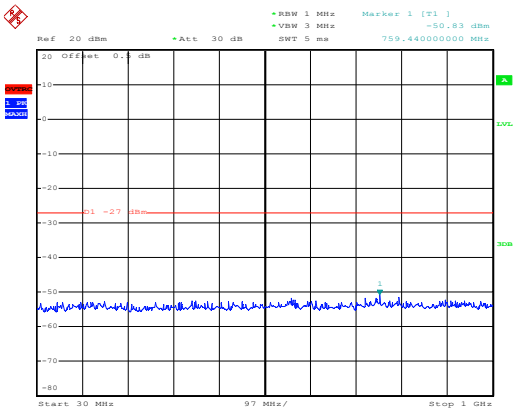
802.11n20 on channel 165



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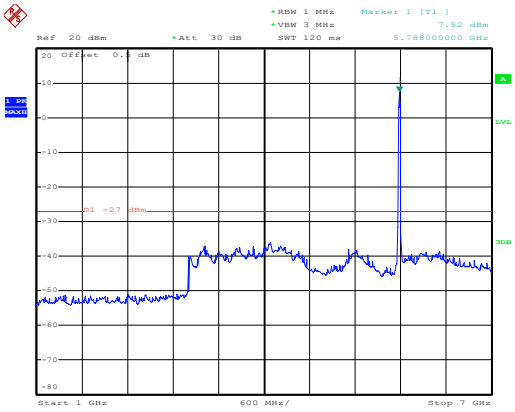

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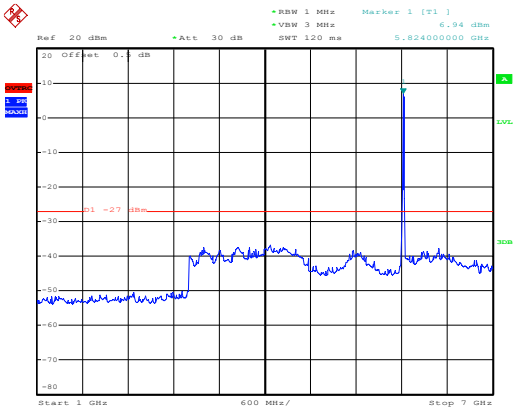
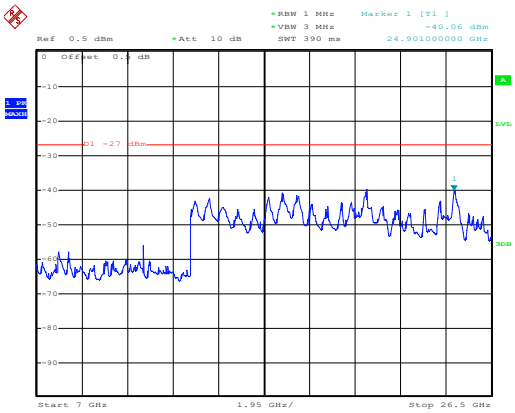
802.11n20 on channel 165



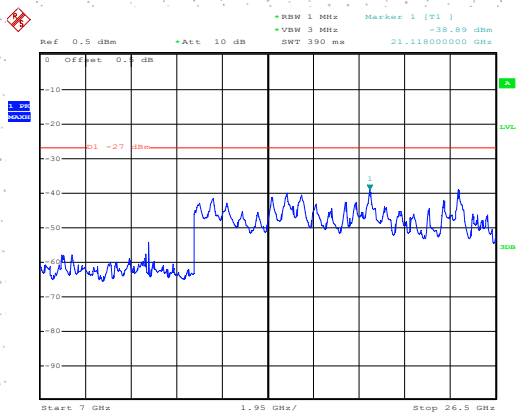
Date: 26.AUG.2021 16:15:33

802.11n20 on channel 157



Date: 26.AUG.2021 16:12:11

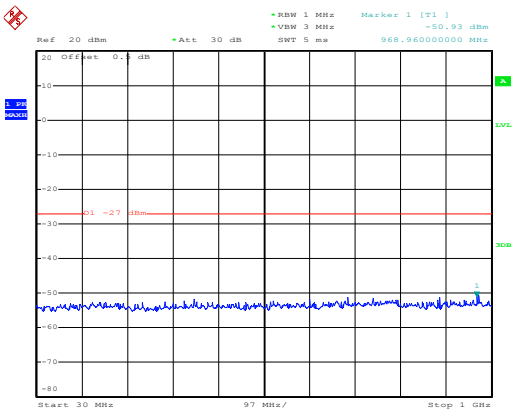
802.11n20 on channel 165



Date: 26.AUG.2021 16:14:38

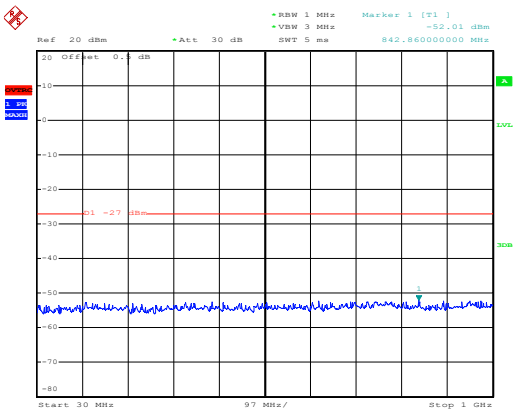
Test Plot

802.11n40 on channel 151



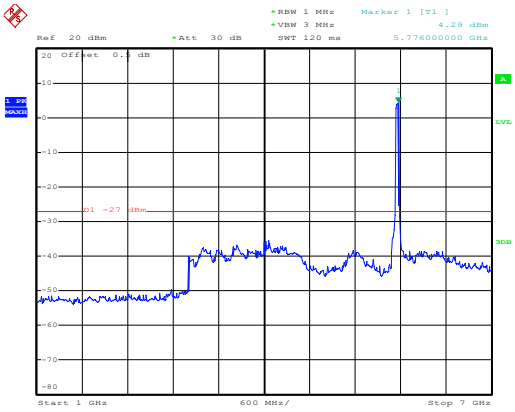
Date: 26.AUG.2021 16:16:37

802.11n40 on channel 159



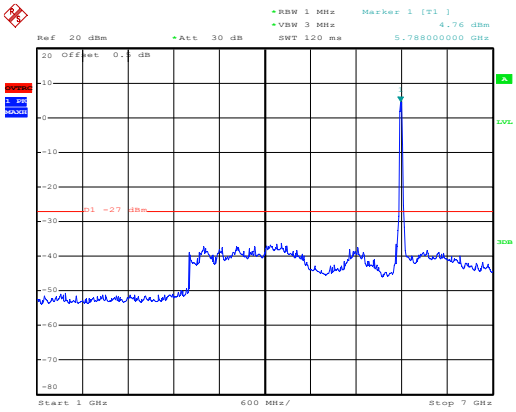
Date: 26.AUG.2021 16:18:38

802.11n40 on channel 151



Date: 26.AUG.2021 16:16:05

802.11n40 on channel 159



Date: 26.AUG.2021 16:18:58

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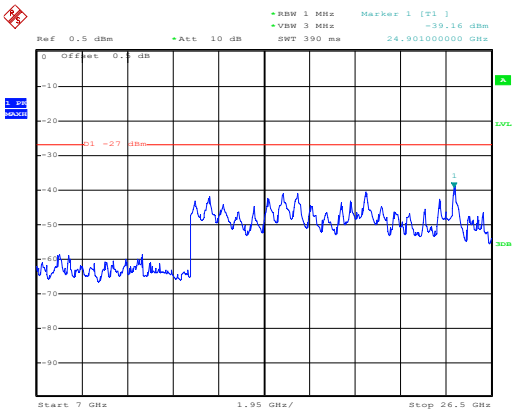

Date: 26.AUG.2021 16:17:05

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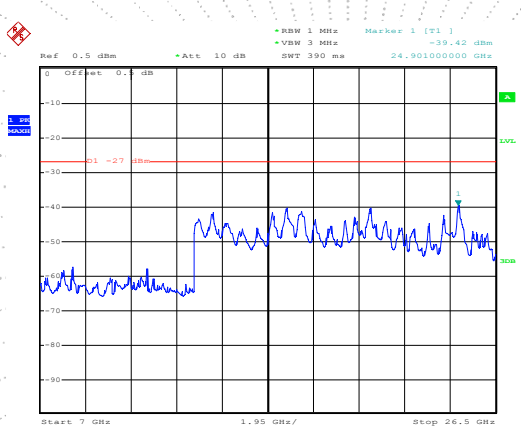
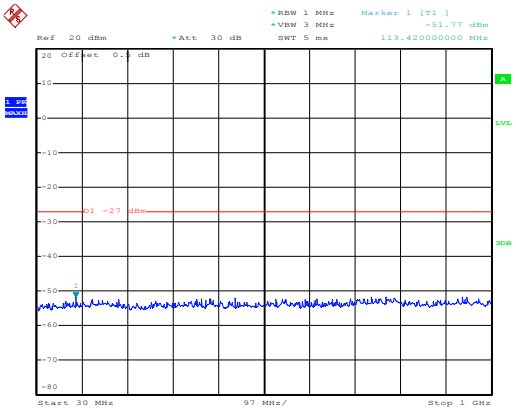


Date: 26.AUG.2021 16:17:47

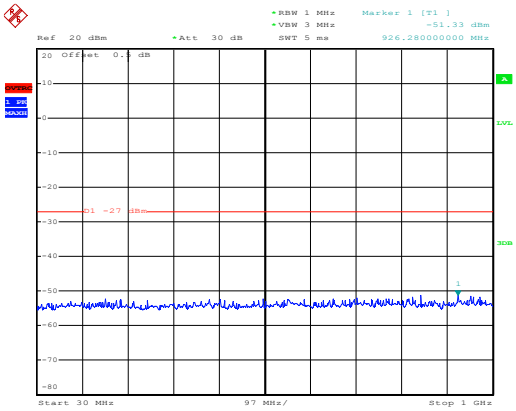
Test Plot

802.11ac20 on channel 149



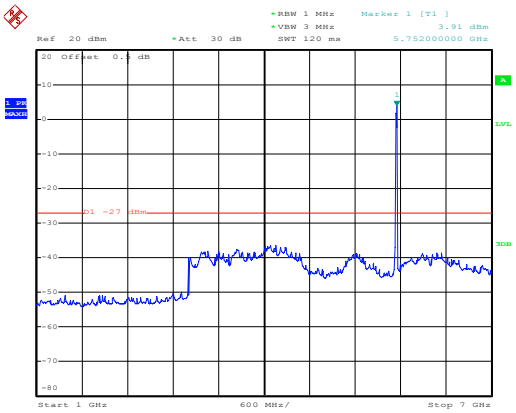
Date: 26.AUG.2021 16:20:20

802.11ac20 on channel 157



Date: 26.AUG.2021 16:22:30

802.11ac20 on channel 149



Date: 26.AUG.2021 16:19:50

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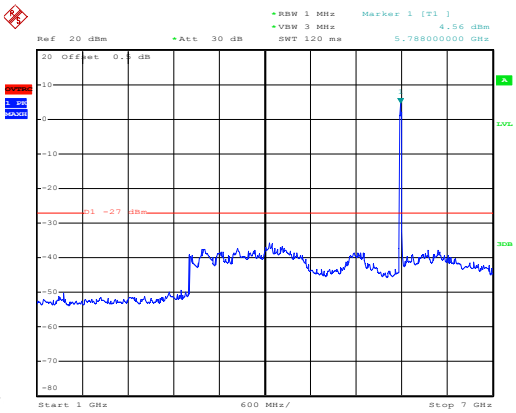

Date: 26.AUG.2021 16:22:54

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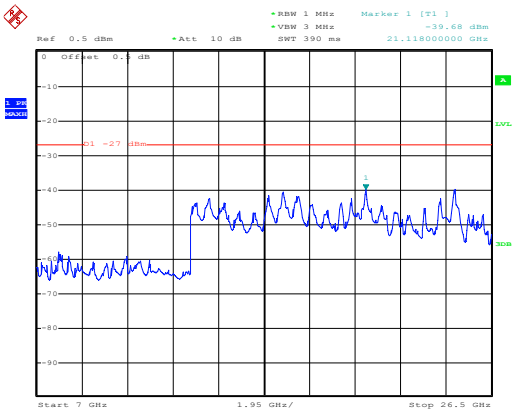

Date: 26.AUG.2021 16:21:00

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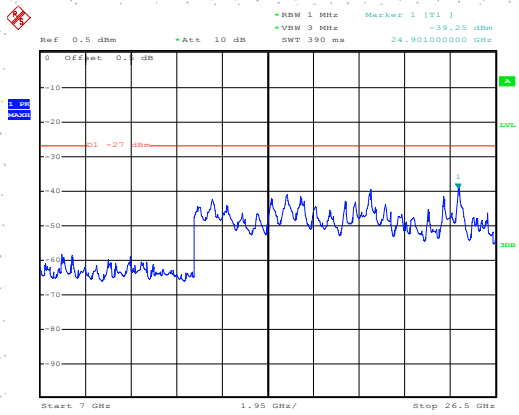
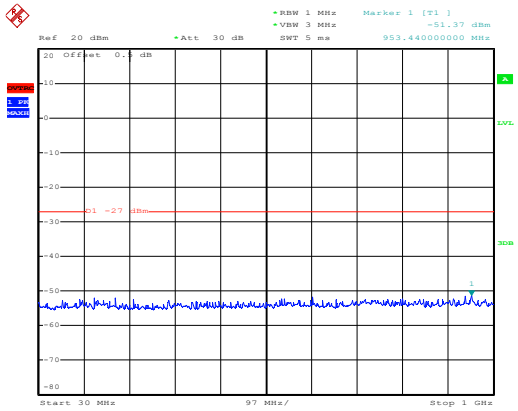


Date: 26.AUG.2021 16:21:40

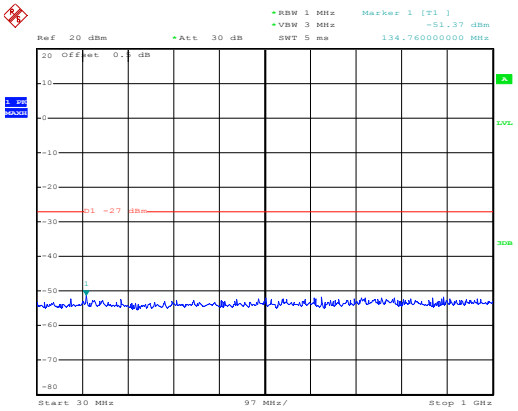
Test Plot

802.11ac20 on channel 165



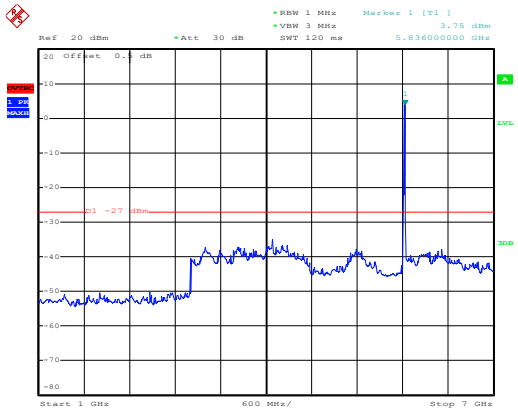
Date: 26.AUG.2021 16:28:39

802.11ac40 on channel 151



Date: 26.AUG.2021 16:30:54

802.11ac20 on channel 165



Date: 26.AUG.2021 16:29:04

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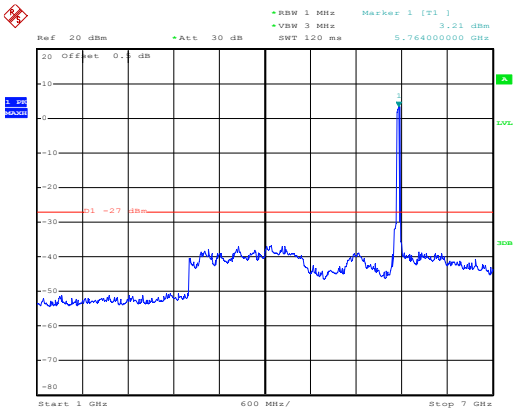

Date: 26.AUG.2021 16:30:26

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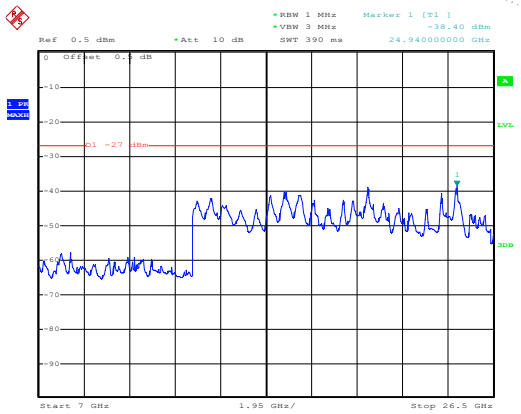

Date: 26.AUG.2021 16:28:07

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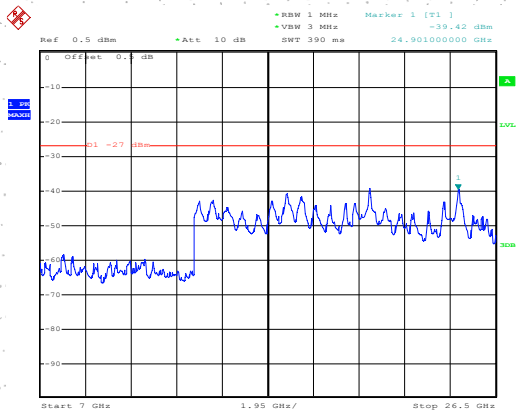

Date: 26.AUG.2021 16:31:33

Test Plot

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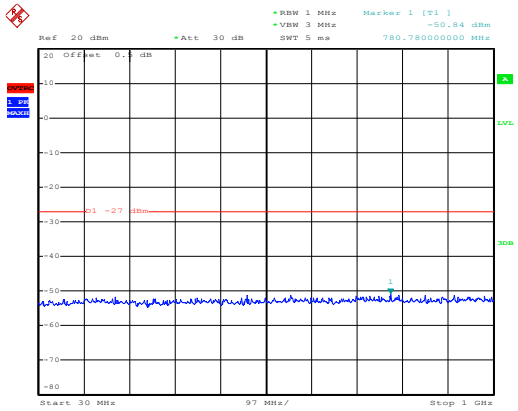
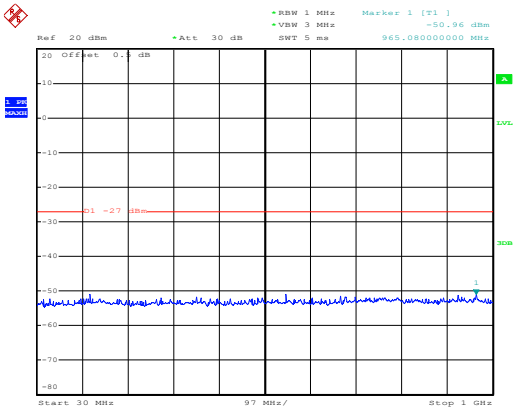


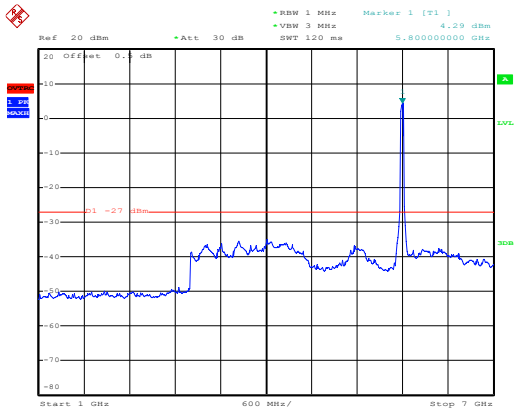
Date: 26.AUG.2021 16:36:28

802.11ac80 on channel 155



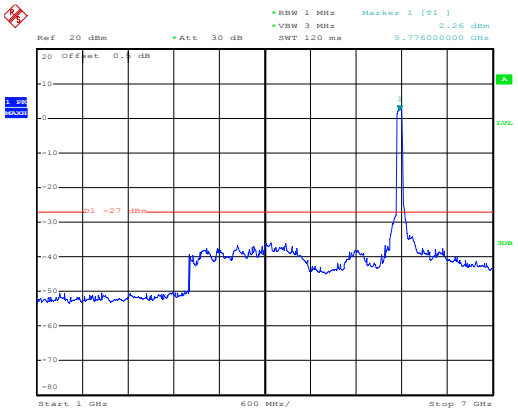
Date: 26.AUG.2021 16:51:35

802.11 ac40 on channel 159



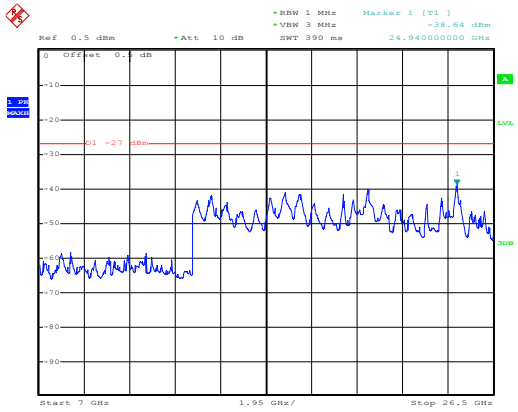
Date: 26.AUG.2021 16:49:30

802.11ac80 on channel 155



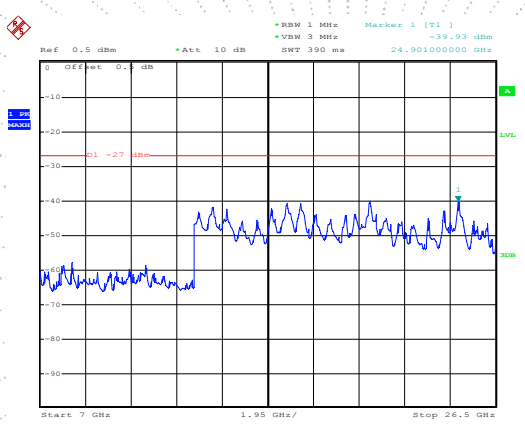
Date: 26.AUG.2021 16:50:34

802.11 ac40 on channel 159



Date: 26.AUG.2021 16:34:38

802.11ac80 on channel 155



Date: 26.AUG.2021 16:52:07

13. FREQUENCY STABILITY MEASUREMENT

13.1 Block Diagram Of Test Setup

13.2 Limit

Manufactures of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.
The transmitter center frequency tolerance shall be ± 20 ppm maximum for the 5 GHz band (IEEE 802.11n specification)..

13.3 Test procedure

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. EUT have transmitted absence of modulation signal and fixed channelize.
3. Set the spectrum analyzer span to view the entire absence of modulation emissions bandwidth.
4. Set RBW = 10 kHz, VBW = 10 kHz with peak detector and maxhold settings.
5. fc is declaring of channel frequency. Then the frequency error formula is (fc-f)/fc × 106 ppm and he limit is less than ±20ppm (IEEE 802.11nspecification).
6. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value
7. Extreme temperature is -20°C~70°C.

13.4 Test Result

Temperature :	26 ℃	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	DC 12V
Test Mode :	TX Frequency U-NII-1 (5180-5240MHz)		

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.00	5180.0051	5180	0.0051	0.9792
		V max (V)	13.80	5180.0184	5180	0.0184	3.5586
		V min (V)	10.20	5180.0144	5180	0.0144	2.7802
Limits				5150-5250 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	-20	5180.0087	5180	0.0087	1.6755
		T (°C)	-10	5180.0060	5180	0.0060	1.1533
		T (°C)	0	5180.0006	5180	0.0006	0.1113
		T (°C)	10	5180.0078	5180	0.0078	1.5042
		T (°C)	20	5180.0028	5180	0.0028	0.5330
		T (°C)	30	5180.0084	5180	0.0084	1.6206
		T (°C)	40	5180.0036	5180	0.0036	0.6866
		T (°C)	50	5180.0083	5180	0.0083	1.6081
		T (°C)	60	5180.0074	5180	0.0074	1.4343
		T (°C)	70	5180.0095	5180	0.0095	1.8350
Limits				5150-5250 MHz			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.00	5200.0041	5200	0.0041	0.7910
		V max (V)	13.80	5200.0077	5200	0.0077	1.4794
		V min (V)	10.20	5200.0117	5200	0.0117	2.2594
Limits				5725-5850 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	-20	5200.00696	5200	0.00696	1.3378
		T (°C)	-10	5200.00265	5200	0.00265	0.5098
		T (°C)	0	5200.00288	5200	0.00288	0.5537
		T (°C)	10	5200.00163	5200	0.00163	0.3128
		T (°C)	20	5200.00824	5200	0.00824	1.5844
		T (°C)	30	5200.00474	5200	0.00474	0.9110
		T (°C)	40	5200.00505	5200	0.00505	0.9702
		T (°C)	50	5200.00138	5200	0.00138	0.2655
		T (°C)	60	5200.00569	5200	0.00569	1.0949
		T (°C)	70	5200.01230	5200	0.01230	2.3644
Limits				5150-5250 MHz			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.00	5240.0042	5240	0.0042	0.8102
		V max (V)	13.80	5240.0041	5240	0.0041	0.7823
		V min (V)	10.20	5240.0058	5240	0.0058	1.1164
Limits				5150-5250 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	-20	5240.0072	5240	0.0072	1.3736
		T (°C)	-10	5240.0029	5240	0.0029	0.5546
		T (°C)	0	5240.0104	5240	0.0104	1.9864
		T (°C)	10	5240.0098	5240	0.0098	1.8630
		T (°C)	20	5240.0110	5240	0.0110	2.0935
		T (°C)	30	5240.0096	5240	0.0096	1.8272
		T (°C)	40	5240.0036	5240	0.0036	0.6948
		T (°C)	50	5240.0068	5240	0.0068	1.2992
		T (°C)	60	5240.0052	5240	0.0052	0.9905
		T (°C)	70	5240.0101	5240	0.0101	1.9221
Limits				5150-5250 MHz			
Result				Complies			

Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	101kPa	Test Voltage ：	DC 12V
Hzst Mode ：	TX Frequency(5745-5825MHz)		

Voltage vs. Frequency Stabilit

TEST CONDITIONS				Reference Frequency：5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.00	5745.01108	5745	0.01108	1.9279
		V max (V)	13.80	5745.01050	5745	0.01050	1.8278
		V min (V)	10.20	5745.00118	5745	0.00118	0.2052
Limits				5725-5850 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	-20	5745.00772	5745	0.00772	1.3431
		T (°C)	-10	5745.01223	5745	0.01223	2.1288
		T (°C)	0	5745.01254	5745	0.01254	2.1828
		T (°C)	10	5745.01062	5745	0.01062	1.8483
		T (°C)	20	5745.00179	5745	0.00179	0.3116
		T (°C)	30	5745.00994	5745	0.00994	1.7310
		T (°C)	40	5745.00665	5745	0.00665	1.1580
		T (°C)	50	5745.01145	5745	0.01145	1.9926
		T (°C)	60	5745.01138	5745	0.01138	1.9806
		T (°C)	70	5745.01146	5745	0.01146	1.9953
Limits				5725-5850 MHz			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.00	5785.00677	5785	0.00677	1.1710
		V max (V)	13.80	5785.00693	5785	0.00693	1.1976
		V min (V)	10.20	5785.01065	5785	0.01065	1.8411
Limits				5725-5850 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	-20	5785.00598	5785	0.00598	1.0334
		T (°C)	-10	5785.00376	5785	0.00376	0.6508
		T (°C)	0	5785.00115	5785	0.00115	0.1994
		T (°C)	10	5785.00556	5785	0.00556	0.9613
		T (°C)	20	5785.00185	5785	0.00185	0.3206
		T (°C)	30	5785.01333	5785	0.01333	2.3042
		T (°C)	40	5785.00432	5785	0.00432	0.7469
		T (°C)	50	5785.01027	5785	0.01027	1.7760
		T (°C)	60	5785.01182	5785	0.01182	2.0428
		T (°C)	70	5785.00321	5785	0.00321	0.5553
Limits				5725-5850 MHz			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.00	5825.00953	5825	0.00953	1.6356
		V max (V)	13.80	5825.00592	5825	0.00592	1.0156
		V min (V)	10.20	5825.00616	5825	0.00616	1.0572
Limits				5725-5850 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	-20	5825.00314	5825	0.00314	0.5394
		T (°C)	-10	5825.01076	5825	0.01076	1.8471
		T (°C)	0	5825.00617	5825	0.00617	1.0597
		T (°C)	10	5825.00105	5825	0.00105	0.1798
		T (°C)	20	5825.01079	5825	0.01079	1.8529
		T (°C)	30	5825.00027	5825	0.00027	0.0457
		T (°C)	40	5825.00862	5825	0.00862	1.4797
		T (°C)	50	5825.00427	5825	0.00427	0.7327
		T (°C)	60	5825.00180	5825	0.00180	0.3096
		T (°C)	70	5825.01059	5825	0.01059	1.8187
Limits				5725-5850 MHz			
Result				Complies			

14. ANTENNA REQUIREMENT

14.1 Limit

15.203 requirement: For intentional device, 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.

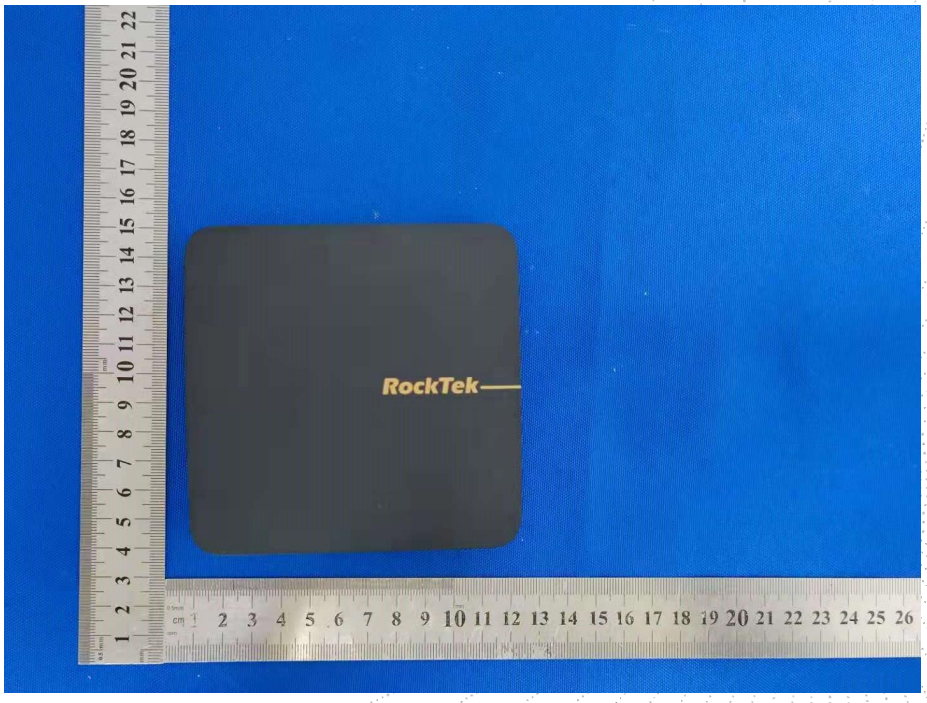
14.2 Test Result

The EUT antenna(A) is FPCB antenna,antenna(B) is PCB antenna,
(antenna gain (A): 2.39dBi; antenna gain (B): 1.97dBi). It comply with the standard requirement.

15. EUT PHOTOGRAPHS

EUT Photo 1

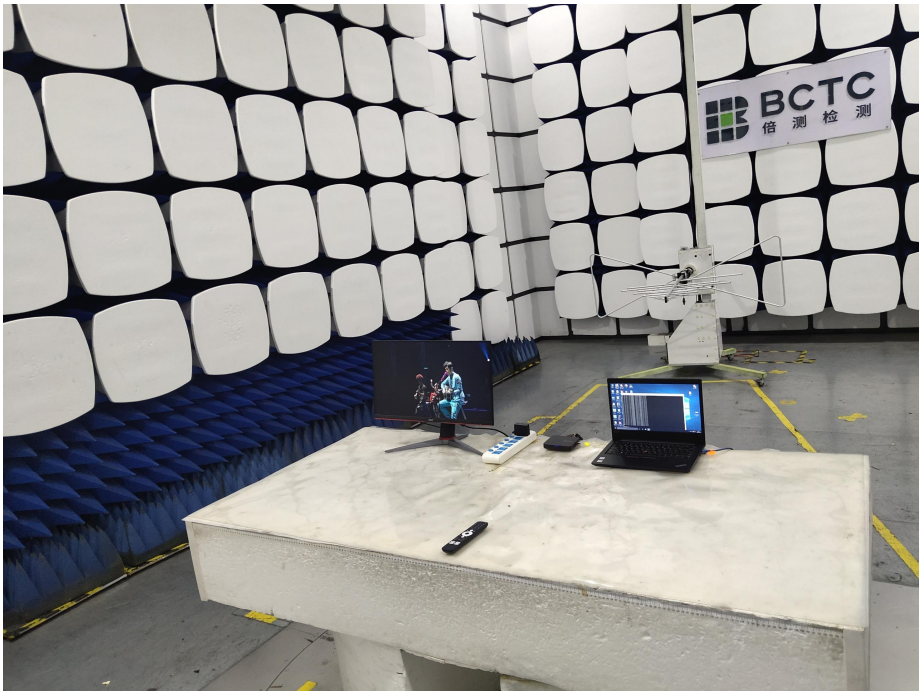
EUT Photo 2

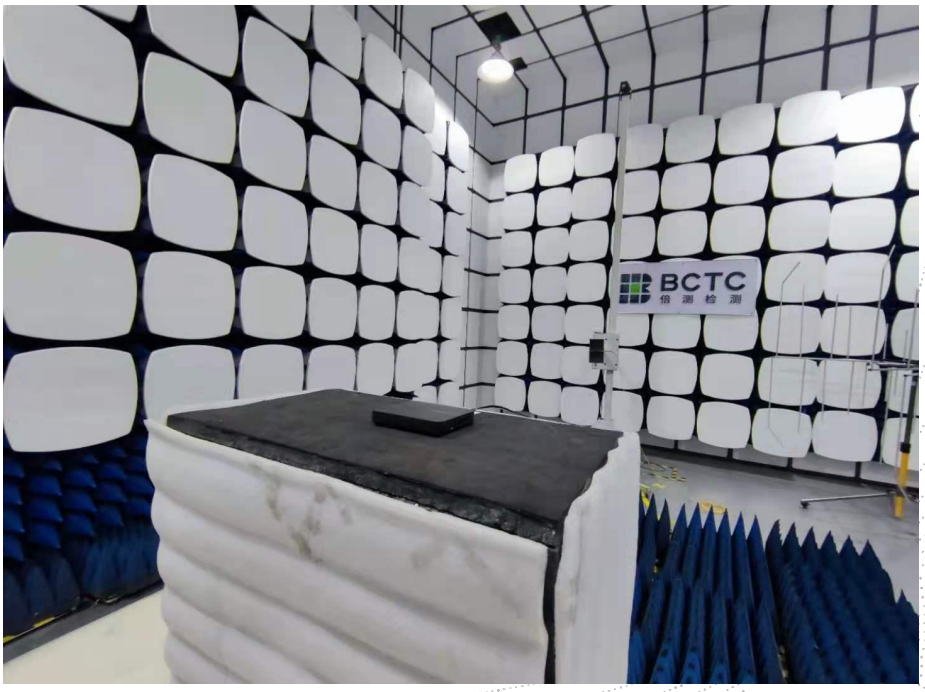


16. EUT TEST SETUP PHOTOGRAPHS

Conducted Measurement Photos

Radiated Measurement Photos





STATEMENT

1.The equipment lists are traceable to the national reference standards.

2.The test report can not be partially copied unless prior written approval is issued from our lab.

3.The test report is invalid without stamp of laboratory.

4.The test report is invalid without signature of person(s) testing and authorizing.

5.The test process and test result is only related to the Unit Under Test.

6.The quality system of our laboratory is in accordance with ISO/IEC17025.

7.If there is any objection to report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

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※※※※※ **END** ※※※※※